

Measurement Protocol

Measurement Object	23T04Z80629 VoWifi EVS	23T04Z80629 VoWifi AMR
Description	FCC Volume control	FCC Volume control
Model Name	B160V	B160V
Sample Number	UT92a	UT92a
IMEI	356197680012147	356197680012147
Test Band	802.11g/802.11ac	802.11g/802.11ac
Test Date	20240102	20240102
Tester	Zhu Hongye	Zhu Hongye
Test System (ACQUA System)	ACQUA V5.1.200,CMW500 (SN:170430),Labcore (SN:77000136)	ACQUA V5.1.200,CMW500 (SN:170430),Labcore (SN:77000136)
HATS Type	HEAD HATS (HMS II.3, SN: 12306194(torso13740182))(0,0,5)	HEAD HATS (HMS II.3, SN: 12306194(torso13740182))(0,0,5)
Environment	Temp.15~35 'C, 20~75%RH, Acoustic Chamber	Temp.15~35 'C, 20~75%RH, Acoustic Chamber
Location	The NO.52 of Huayuan North Road	The NO.52 of Huayuan North Road

Project	TIA 5050 v1
Report Generation Date	2024/1/2 16:14
Responsible Person	STA

Status Overview

SMD	Status	Single Value Description	Single Value	Object
5.1 Receive Volume Control Performance 8N BPSK;6Mbps	Done	Speech Level [dB[SPL]]	84.87	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N BPSK;9Mbps	Done	Speech Level [dB[SPL]]	84.69	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N QPSK;12Mbps	Done	Speech Level [dB[SPL]]	84.66	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N QPSK;18Mbps	Done	Speech Level [dB[SPL]]	84.55	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N 16QAM;24Mbps	Done	Speech Level [dB[SPL]]	84.69	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N 16QAM;36Mbps	Done	Speech Level [dB[SPL]]	84.57	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N 64QAM;48Mbps	Done	Speech Level [dB[SPL]]	84.85	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N 64QAM;54Mbps	Done	Speech Level [dB[SPL]]	84.45	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N DSSS;1Mbps	Done	Speech Level [dB[SPL]]	84.89	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N DSSS;2Mbps	Done	Speech Level [dB[SPL]]	84.82	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N CCK;5.5Mbps	Done	Speech Level [dB[SPL]]	84.97	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 8N CCK;11Mbps	Done	Speech Level [dB[SPL]]	84.71	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N BPSK;6Mbps	Ok	Calculated Value [dB]	14.87	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N BPSK;9Mbps	Ok	Calculated Value [dB]	14.69	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N QPSK;12Mbps	Ok	Calculated Value [dB]	14.66	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N QPSK;18Mbps	Ok	Calculated Value [dB]	14.55	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N 16QAM;24Mbps	Ok	Calculated Value [dB]	14.69	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N 16QAM;36Mbps	Ok	Calculated Value [dB]	14.57	23T04Z80629 VoWifi EVS

5.1.1 -1 Conversation Gain 8N 64QAM;48Mbps	Ok	Calculated Value [dB]	14.85	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N 64QAM;54Mbps	Ok	Calculated Value [dB]	14.45	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N DSSS;1Mbps	Ok	Calculated Value [dB]	14.89	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N DSSS;2Mbps	Ok	Calculated Value [dB]	14.82	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N CCK;5.5Mbps	Ok	Calculated Value [dB]	14.97	23T04Z80629 VoWifi EVS
5.1.1 -1 Conversation Gain 8N CCK;11Mbps	Ok	Calculated Value [dB]	14.71	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.08	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB BPSK;9Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.95	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	29.22	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	35.28	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	35.43	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.33	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.16	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB 64QAM;54Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.77	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	26.38	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	28.57	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	27.72	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 400Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	28.29	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.93	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB	Done	Distortion (Noise) [dB], 0.0 dB	31.74	23T04Z80629 VoWifi EVS

BPSK;9Mbps				
Receive path - distortion and noise 500Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.54	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.50	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.57	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	35.24	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.37	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB 64QAM;54Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.80	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	27.50	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	25.67	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	25.25	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 500Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	28.04	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.78	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB BPSK;9Mbps	Done	Distortion (Noise) [dB], 0.0 dB	39.38	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	35.58	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	39.18	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.16	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	39.07	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.97	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB	Done	Distortion (Noise) [dB], 0.0 dB	37.10	23T04Z80629 VoWifi EVS

64QAM;54Mbps				
Receive path - distortion and noise 630Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	25.45	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	24.90	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	25.76	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 630Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	25.52	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.66	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB BPSK;9Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.18	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.87	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.61	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.10	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.93	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.23	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB 64QAM;54Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.43	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	23.13	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	22.97	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	24.18	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 800Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	24.16	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.94	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB	Done	Distortion (Noise) [dB], 0.0 dB	38.16	23T04Z80629 VoWifi EVS

BPSK;9Mbps				
Receive path - distortion and noise 1000Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.46	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.91	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.18	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.78	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.88	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB 64QAM;54Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.43	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	28.84	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.00	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	28.33	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1000Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.73	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	30.88	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB BPSK;9Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.44	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	30.26	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	30.48	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	29.96	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	29.44	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.14	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB	Done	Distortion (Noise) [dB], 0.0 dB	30.71	23T04Z80629 VoWifi EVS

64QAM;54Mbps				
Receive path - distortion and noise 1250Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	29.55	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	30.26	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	29.90	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1250Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	29.11	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.08	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB BPSK;9Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.32	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.31	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.41	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.55	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.90	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.01	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB 64QAM;54Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.44	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	36.15	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.47	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	35.77	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 1600Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	35.67	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.16	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB	Done	Distortion (Noise) [dB], 0.0 dB	37.79	23T04Z80629 VoWifi EVS

BPSK;9Mbps				
Receive path - distortion and noise 2000Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.87	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.04	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.90	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.74	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	37.91	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB 64QAM;54Mbps	Done	Distortion (Noise) [dB], 0.0 dB	38.42	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.99	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	35.05	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.44	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2000Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	35.06	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.40	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB BPSK;9Mbps	Done	Distortion (Noise) [dB], 0.0 dB	33.86	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.54	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.64	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.67	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.11	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	34.18	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB	Done	Distortion (Noise) [dB], 0.0 dB	34.52	23T04Z80629 VoWifi EVS

64QAM;54Mbps				
Receive path - distortion and noise 2500Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	28.21	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.44	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.95	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 2500Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.80	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB BPSK;6Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.85	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB BPSK;9Mbps	Done	Distortion (Noise) [dB], 0.0 dB	30.94	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB QPSK;12Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.94	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB QPSK;18Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.81	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB 16QAM;24Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.85	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB 16QAM;36Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.32	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB 64QAM;48Mbps	Done	Distortion (Noise) [dB], 0.0 dB	32.62	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB 64QAM;54Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.82	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB DSSS;1Mbps	Done	Distortion (Noise) [dB], 0.0 dB	29.07	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB DSSS;2Mbps	Done	Distortion (Noise) [dB], 0.0 dB	31.66	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB CCK;5.5Mbps	Done	Distortion (Noise) [dB], 0.0 dB	27.67	23T04Z80629 VoWifi EVS
Receive path - distortion and noise 3150Hz WB&NB CCK;11Mbps	Done	Distortion (Noise) [dB], 0.0 dB	29.99	23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise BPSK;6Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise	Ok			23T04Z80629 VoWifi EVS

BPSK;9Mbps				
5.2 Receive path – distortion and noise QPSK;12Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise QPSK;18Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise 16QAM;24Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise 16QAM;36Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise 64QAM;48Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise 64QAM;54Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise DSSS;1Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise DSSS;2Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise CCK;5.5Mbps	Ok			23T04Z80629 VoWifi EVS
5.2 Receive path – distortion and noise CCK;11Mbps	Ok			23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance BPSK;6Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	2.38	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance BPSK;9Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	3.01	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance QPSK;12Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	2.20	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance QPSK;18Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	2.69	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance 16QAM;24Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	2.78	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance 16QAM;36Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	3.43	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance 64QAM;48Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	3.18	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	3.21	23T04Z80629 VoWifi EVS

64QAM;54Mbps				
5.3 Receive Acoustic Frequency response Performance DSSS;1Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	4.05	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance DSSS;2Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	4.22	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance CCK;5.5Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	4.40	23T04Z80629 VoWifi EVS
5.3 Receive Acoustic Frequency response Performance CCK;11Mbps	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	4.03	23T04Z80629 VoWifi EVS
5.1 Receive Volume Control Performance 2N DSSS;1Mbps	Done	Speech Level [dB[SPL]]	81.17	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N DSSS;2Mbps	Done	Speech Level [dB[SPL]]	80.87	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N CCK;5.5Mbps	Done	Speech Level [dB[SPL]]	81.01	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N CCK;11Mbps	Done	Speech Level [dB[SPL]]	81.07	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N DSSS;1Mbps	Ok	Calculated Value [dB]	11.17	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N DSSS;2Mbps	Ok	Calculated Value [dB]	10.87	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N CCK;5.5Mbps	Ok	Calculated Value [dB]	11.01	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N CCK;11Mbps	Ok	Calculated Value [dB]	11.07	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N BPSK;6Mbps	Done	Speech Level [dB[SPL]]	81.30	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N BPSK;9Mbps	Done	Speech Level [dB[SPL]]	81.14	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N QPSK;12Mbps	Done	Speech Level [dB[SPL]]	81.00	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N QPSK;18Mbps	Done	Speech Level [dB[SPL]]	81.05	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N 16QAM;24Mbps	Done	Speech Level [dB[SPL]]	81.21	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N 16QAM;36Mbps	Done	Speech Level [dB[SPL]]	81.17	23T04Z80629 VoWifi AMR
5.1 Receive Volume Control Performance 2N 64QAM;48Mbps	Done	Speech Level [dB[SPL]]	81.16	23T04Z80629 VoWifi AMR

5.1 Receive Volume Control Performance 2N 64QAM;54Mbps	Done	Speech Level [dB[SPL]]	81.03	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N BPSK;6Mbps	Ok	Calculated Value [dB]	11.30	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N BPSK;9Mbps	Ok	Calculated Value [dB]	11.14	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N QPSK;12Mbps	Ok	Calculated Value [dB]	11.00	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N QPSK;18Mbps	Ok	Calculated Value [dB]	11.05	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N 16QAM;24Mbps	Ok	Calculated Value [dB]	11.21	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N 16QAM;36Mbps	Ok	Calculated Value [dB]	11.17	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N 64QAM;48Mbps	Ok	Calculated Value [dB]	11.16	23T04Z80629 VoWifi AMR
5.1.1 -1 Conversation Gain 2N 64QAM;54Mbps	Ok	Calculated Value [dB]	11.03	23T04Z80629 VoWifi AMR

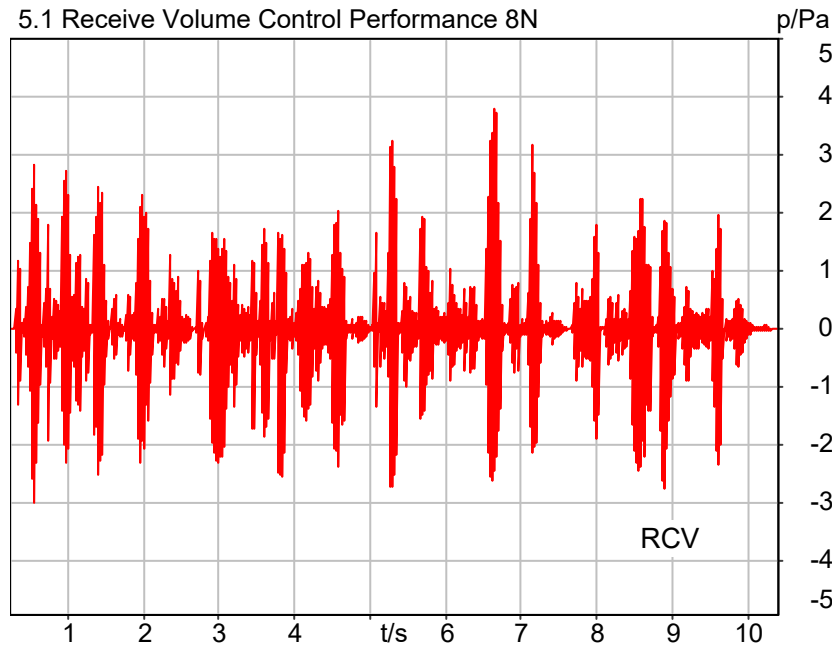
5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)	300
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

BPSK;6Mbps



Speech Level RCV: 84.87 dB[SPL], Act.: 93.29%

2024/1/2 8:51 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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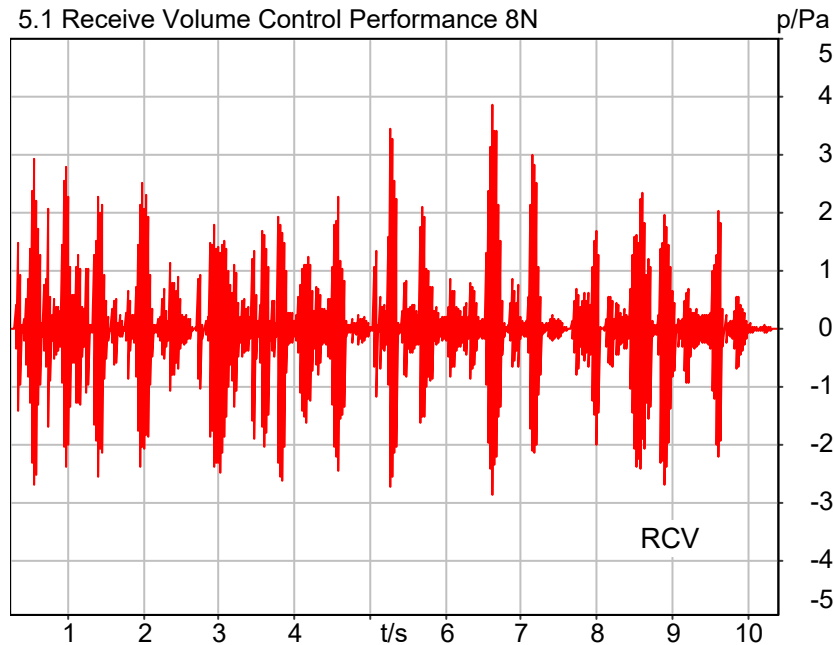
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

BPSK;9Mbps



Speech Level RCV: 84.69 dB[SPL], Act.: 93.27%

2024/1/2 8:58 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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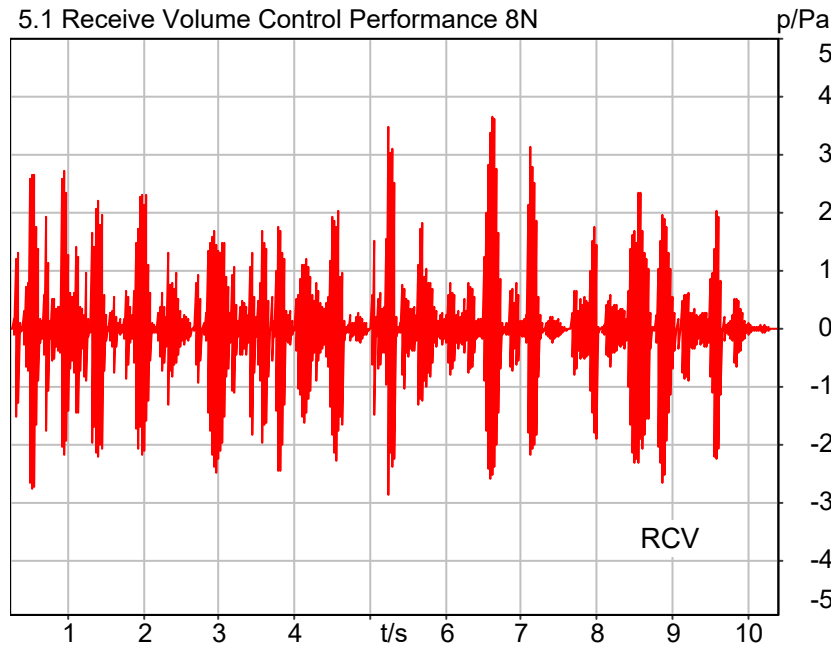
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

QPSK;12Mbps



Speech Level RCV: 84.66 dB[SPL], Act.: 93.41%

2024/1/2 9:03 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Bandpass filter Narrow Band Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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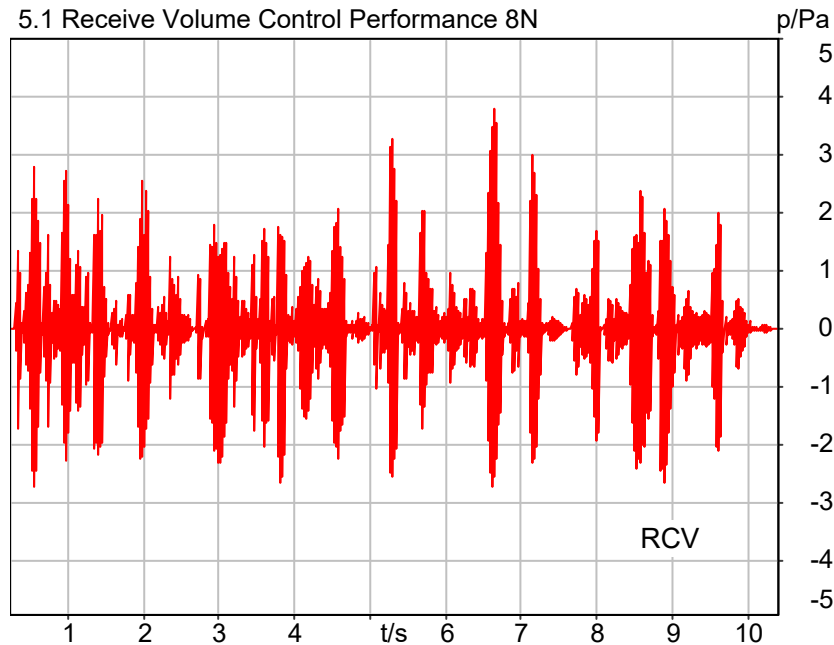
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

QPSK;18Mbps



Speech Level RCV: 84.55 dB[SPL], Act.: 93.59%

2024/1/2 9:09 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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Artificial Head Settings (HATS 3 (HMS II.3))

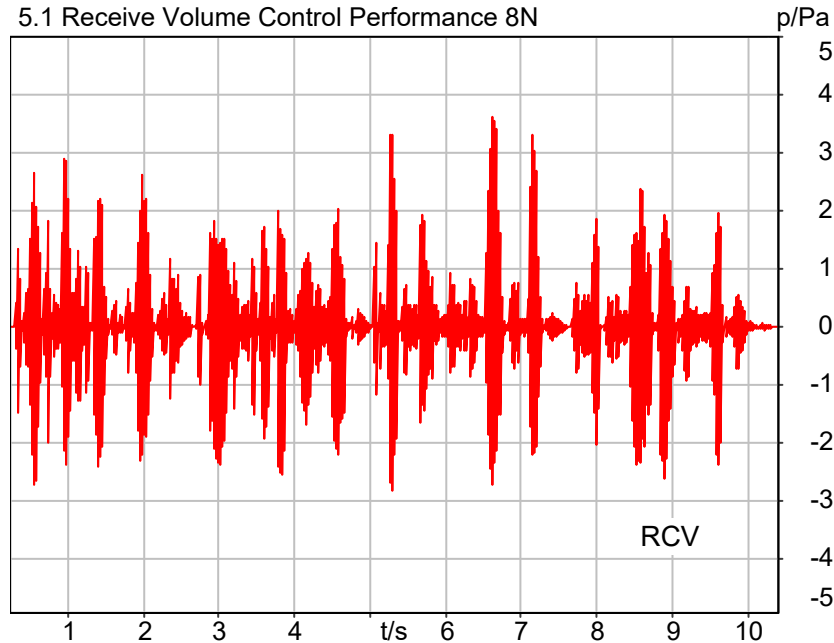
Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

16QAM;24Mbps

5.1 Receive Volume Control Performance 8N



Speech Level RCV: 84.69 dB[SPL], Act.: 93.34%

2024/1/2 9:14 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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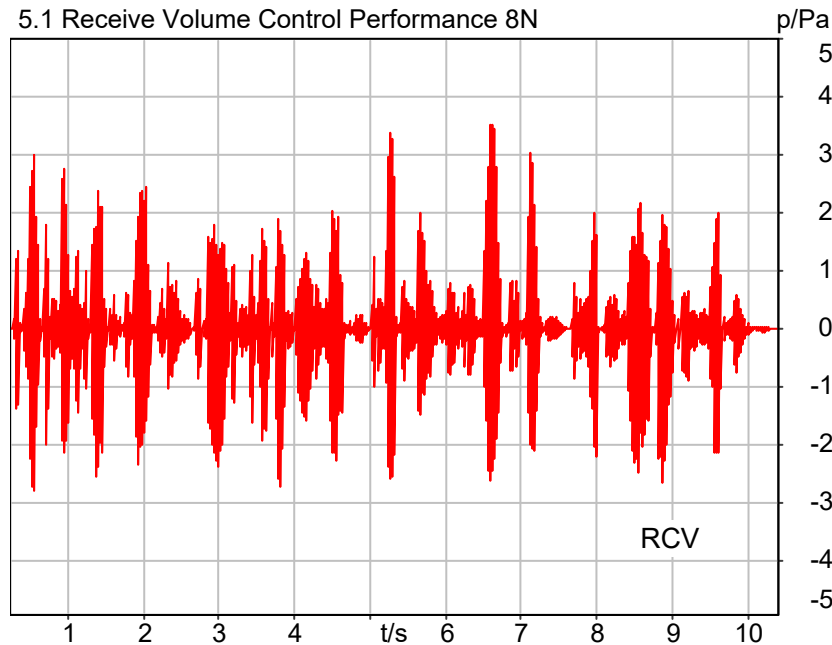
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

16QAM;36Mbps



Speech Level RCV: 84.57 dB[SPL], Act.: 93.48%

2024/1/2 9:19 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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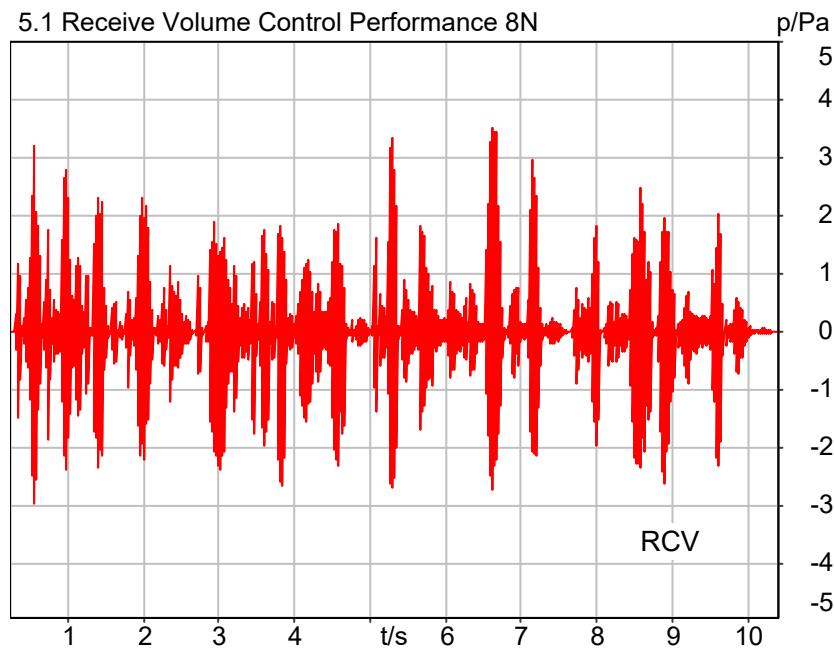
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

64QAM;48Mbps



Speech Level RCV: 84.85 dB[SPL], Act.: 93.50%

2024/1/2 9:25 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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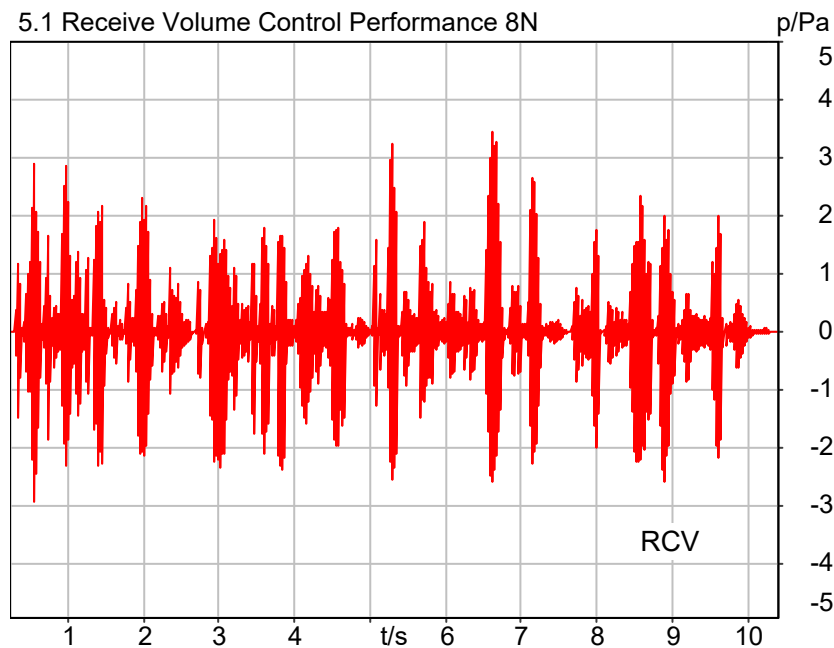
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

64QAM;54Mbps



Speech Level RCV: 84.45 dB[SPL], Act.: 93.60%

2024/1/2 14:34 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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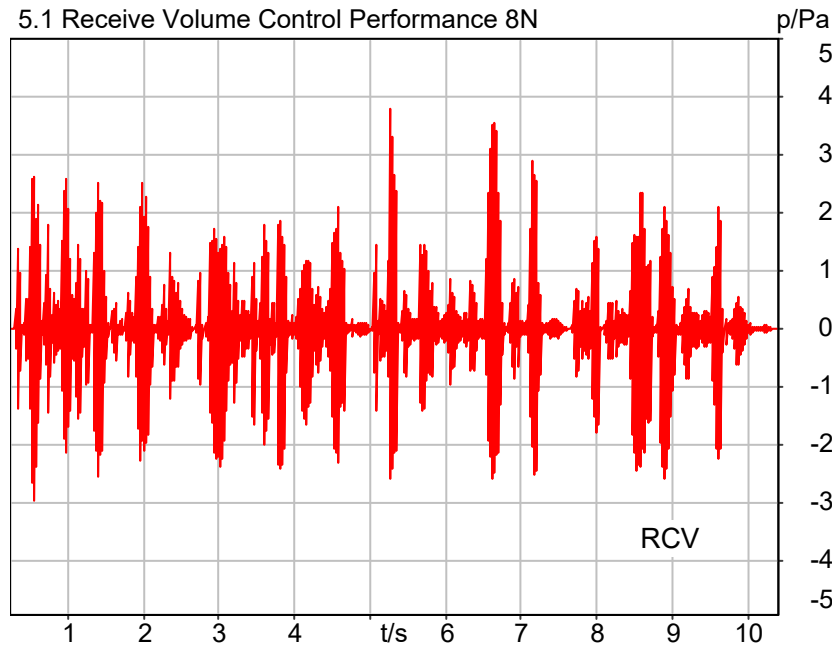
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

DSSS;1Mbps



Speech Level RCV: 84.89 dB[SPL], Act.: 93.42%

2024/1/2 14:56 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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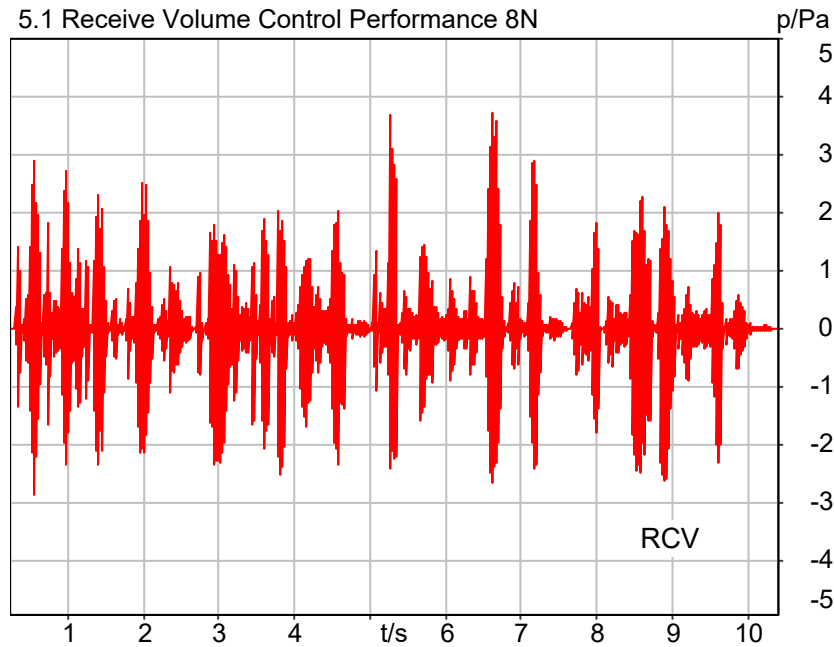
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

DSSS;2Mbps



Speech Level RCV: 84.82 dB[SPL], Act.: 93.01%

2024/1/2 15:03 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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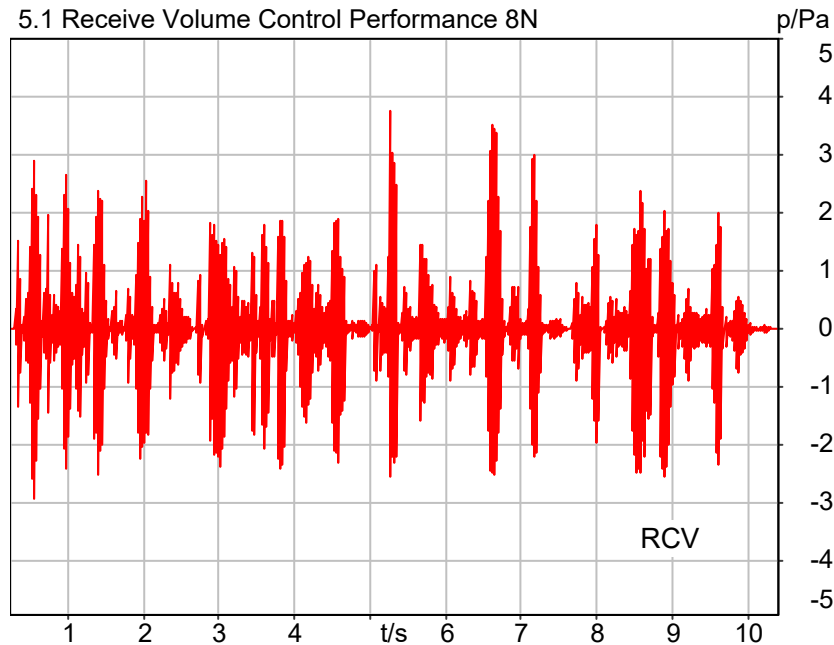
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

CCK;5.5Mbps



Speech Level RCV: 84.97 dB[SPL], Act.: 93.49%

2024/1/2 15:09 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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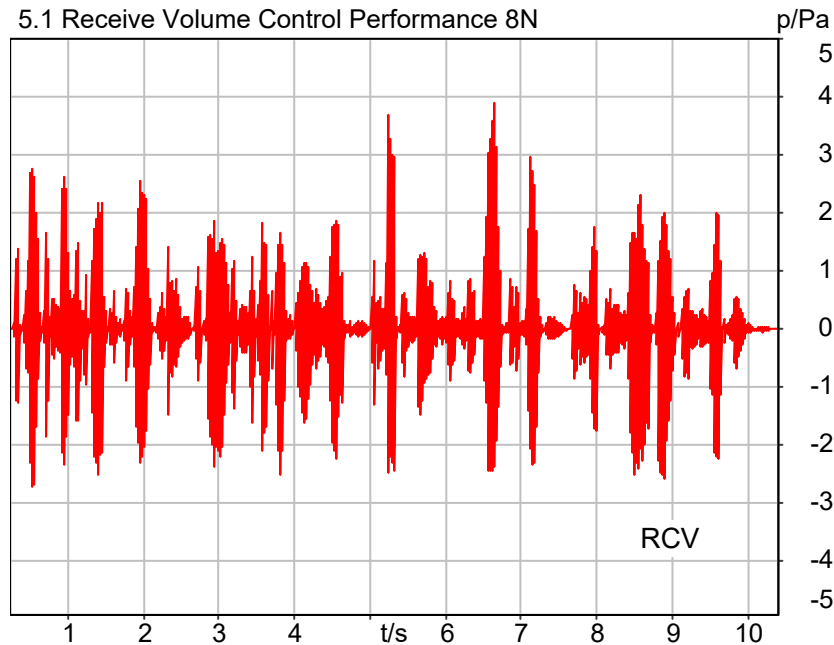
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

CCK;11Mbps



Speech Level RCV: 84.71 dB[SPL], Act.: 93.27%

2024/1/2 15:15 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

BPSK;6Mbps

Correction

rcv_vol_nb	84.870 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.87 dB Ok

Ok

2024/1/2 8:51 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

BPSK;9Mbps

Correction

rcv_vol_nb	84.690 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.69 dB Ok

Ok2024/1/2 8:58 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

QPSK;12Mbps

Correction

rcv_vol_nb	84.660 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.66 dB Ok

Ok2024/1/2 9:03 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

QPSK;18Mbps

Correction

rcv_vol_nb	84.550 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.55 dB Ok

Ok2024/1/2 9:09 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

16QAM;24Mbps

Correction

rcv_vol_nb	84.690 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.69 dB Ok

Ok2024/1/2 9:14 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

16QAM;36Mbps

Correction

rcv_vol_nb	84.570 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.57 dB Ok

Ok2024/1/2 9:19 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

64QAM;48Mbps

Correction

rcv_vol_nb	84.850 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.85 dB Ok

Ok2024/1/2 9:25 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

64QAM;54Mbps

Correction

rcv_vol_nb	84.450 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.45 dB Ok

Ok2024/1/2 14:34 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

DSSS;1Mbps

Correction

rcv_vol_nb	84.890 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.89 dB Ok

Ok2024/1/2 14:56 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

DSSS;2Mbps

Correction

rcv_vol_nb	84.820 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.82 dB Ok

Ok2024/1/2 15:03 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

CCK;5.5Mbps

Correction

rcv_vol_nb	84.970 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.97 dB Ok

Ok2024/1/2 15:09 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 8N (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB

CCK;11Mbps

Correction

rcv_vol_nb	84.710 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 8N
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rcv_vol_nb-70

Calculated Value: 14.71 dB Ok

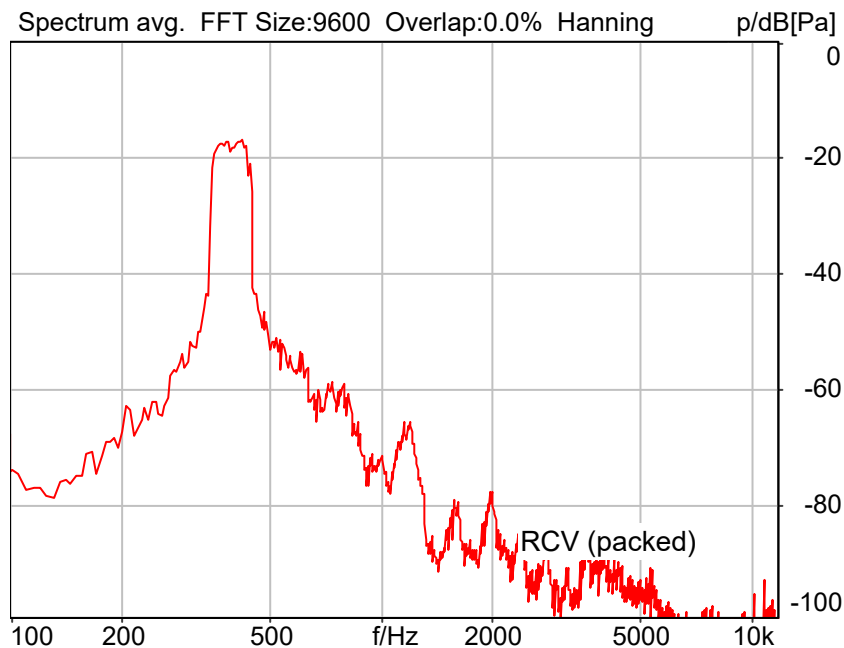
Ok2024/1/2 15:15 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 34.08 dB (1.98%)

2024/1/2 8:51 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	320.0 Hz
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

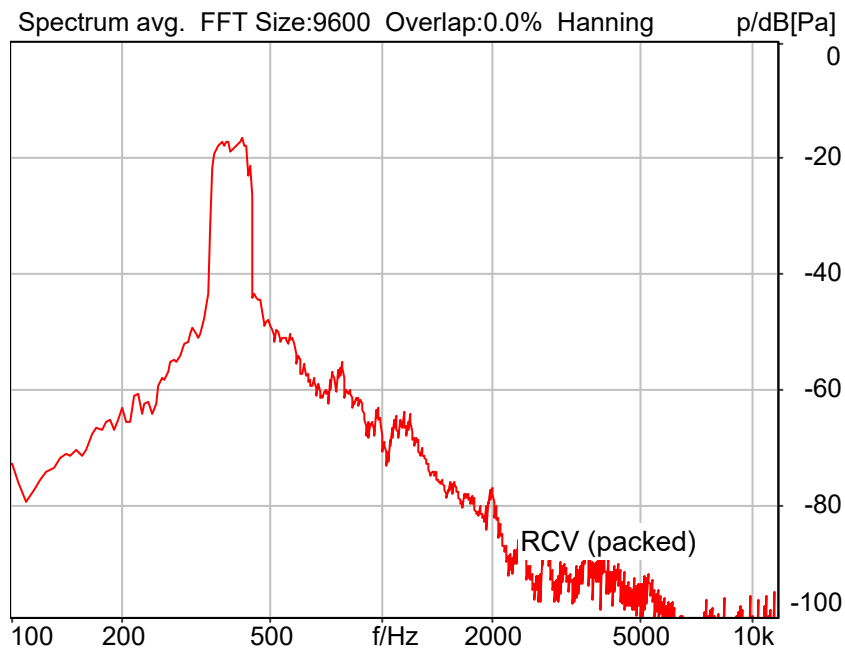
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 31.95 dB (2.53%)

2024/1/2 8:59 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	320.0 Hz
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

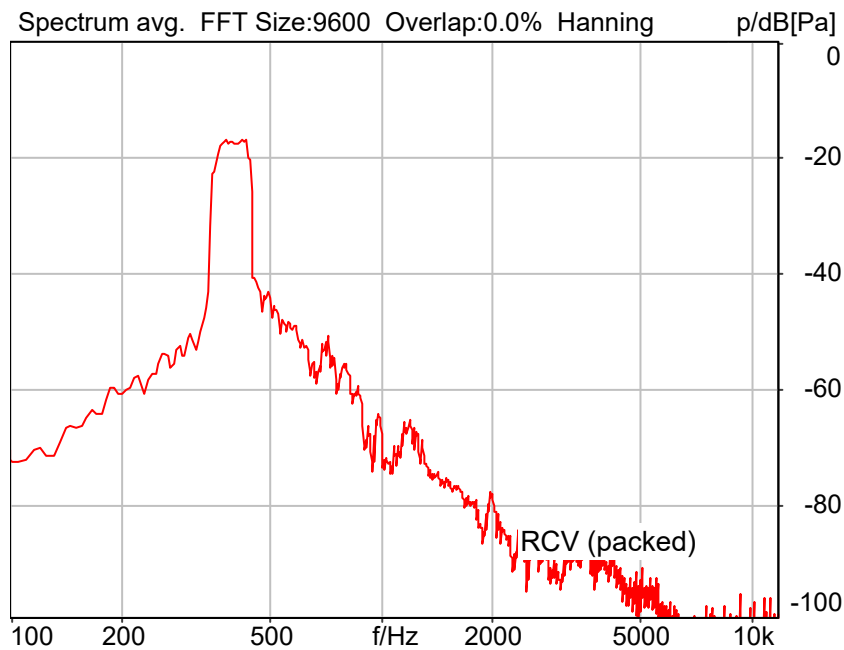
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 29.22 dB (3.46%)

2024/1/2 9:04 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	320.0 Hz
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

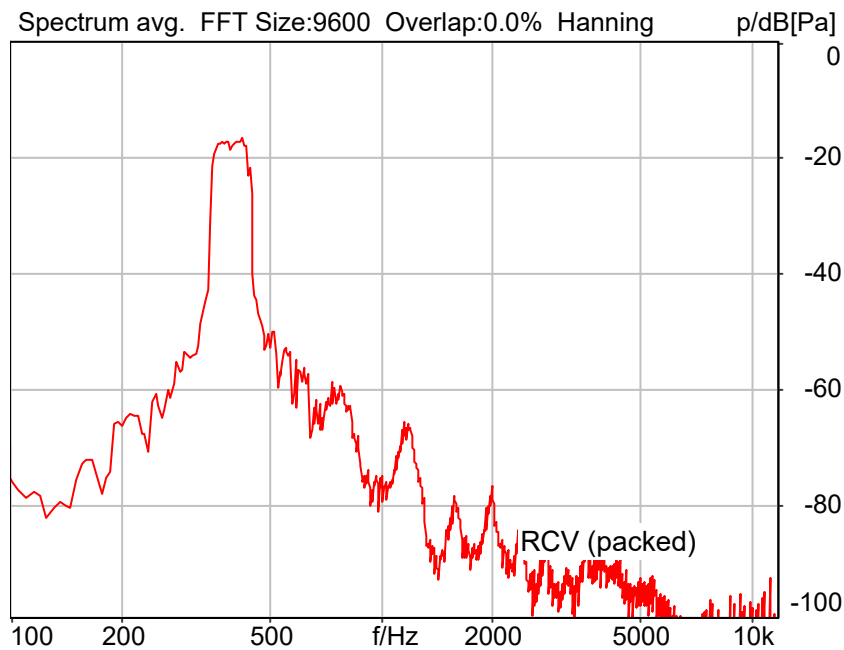
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 35.28 dB (1.72%)

2024/1/2 9:09 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	320.0 Hz
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

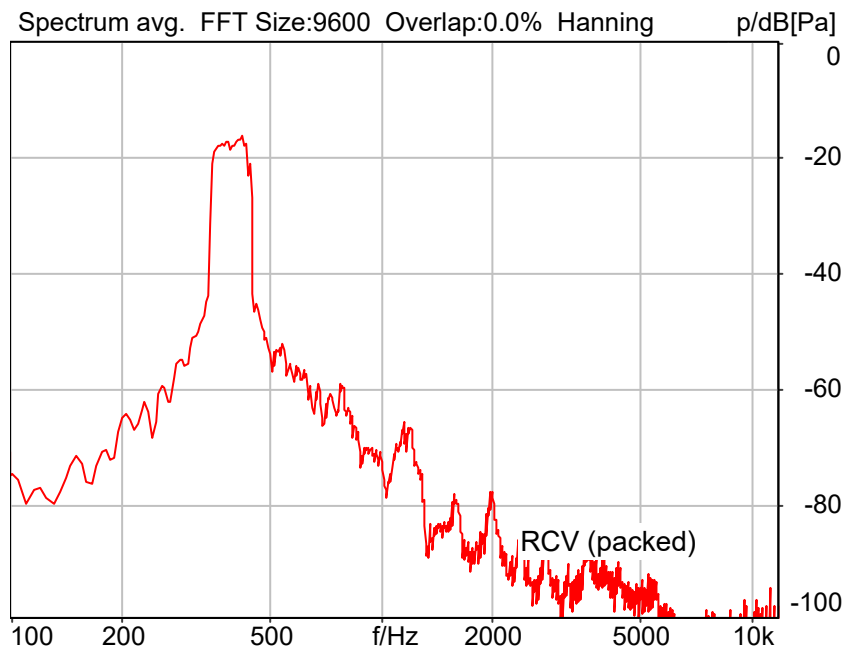
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 35.43 dB (1.69%)

2024/1/2 9:14 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

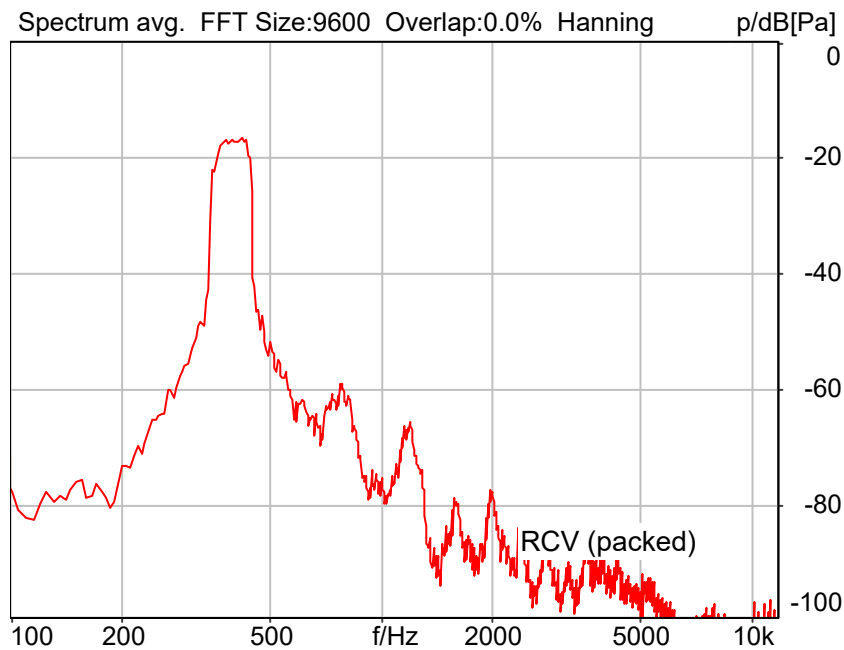
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 37.33 dB (1.36%)

2024/1/2 9:20 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	320.0 Hz
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

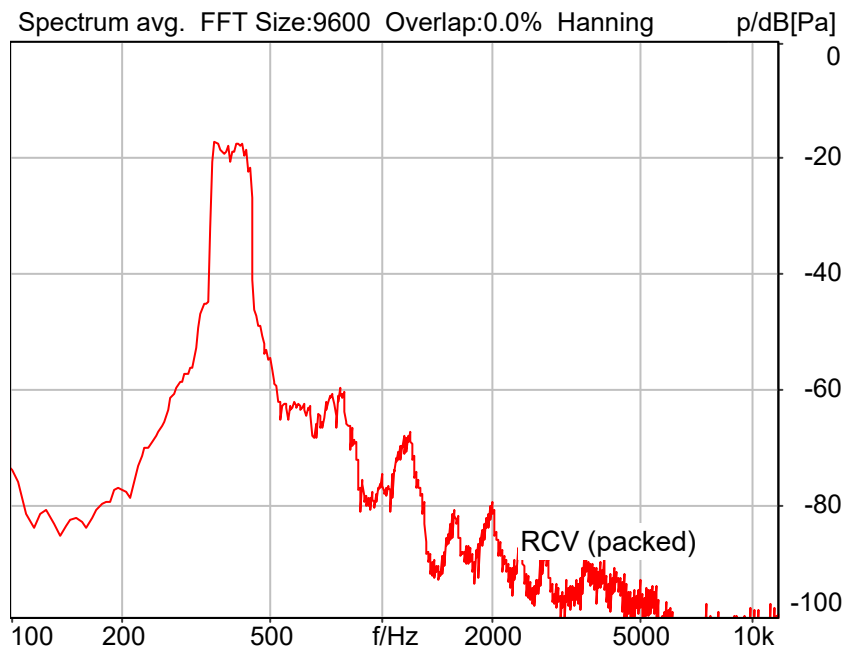
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 38.16 dB (1.24%)

2024/1/2 9:25 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	320.0 Hz
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

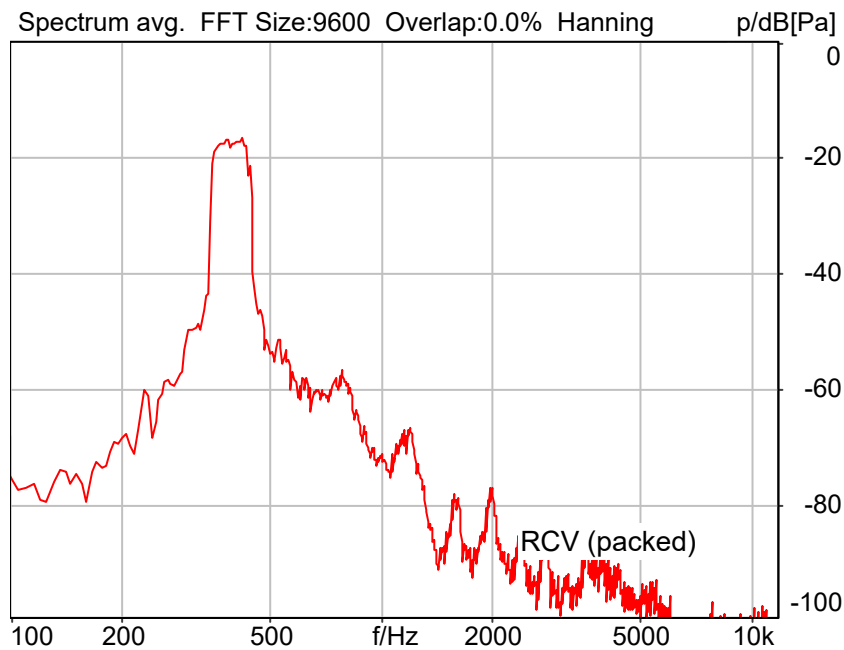
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 34.77 dB (1.83%)

2024/1/2 14:34 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	320.0 Hz
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

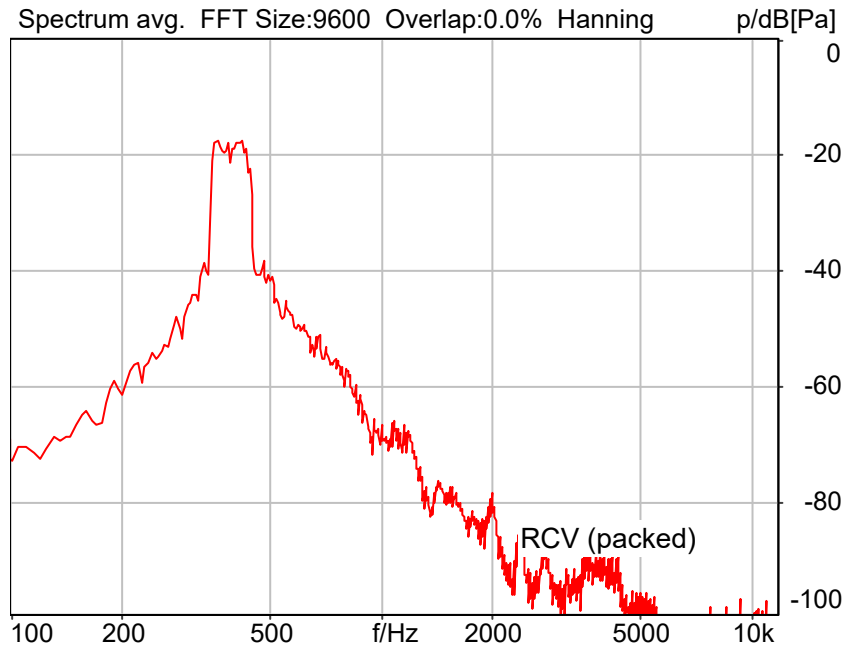
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



Distortion (Noise) RCV (packed): 26.38 dB (4.80%)

2024/1/2 14:57 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	320.0 Hz
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

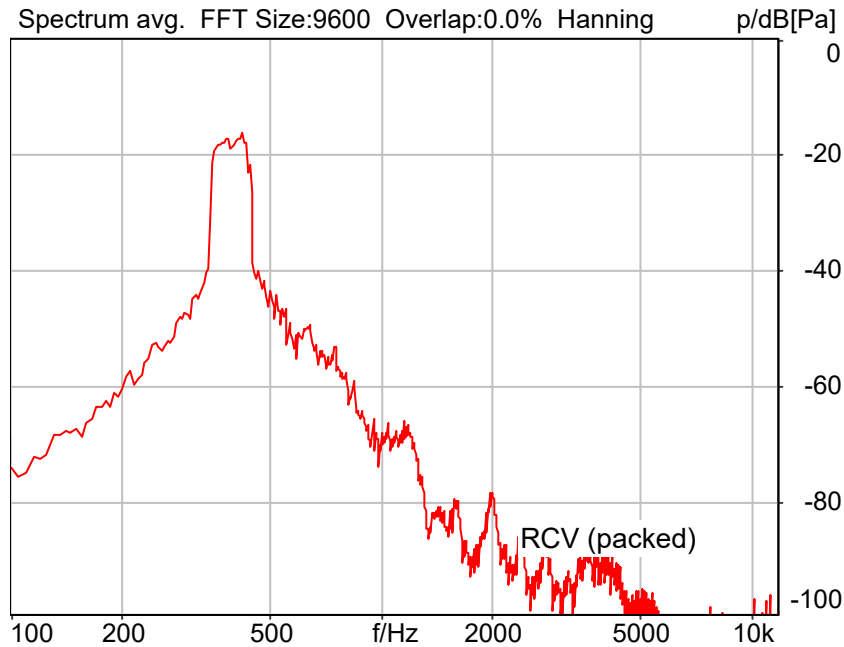
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
DSSS;2Mbps



Distortion (Noise) RCV (packed): 28.57 dB (3.73%)

2024/1/2 15:03 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

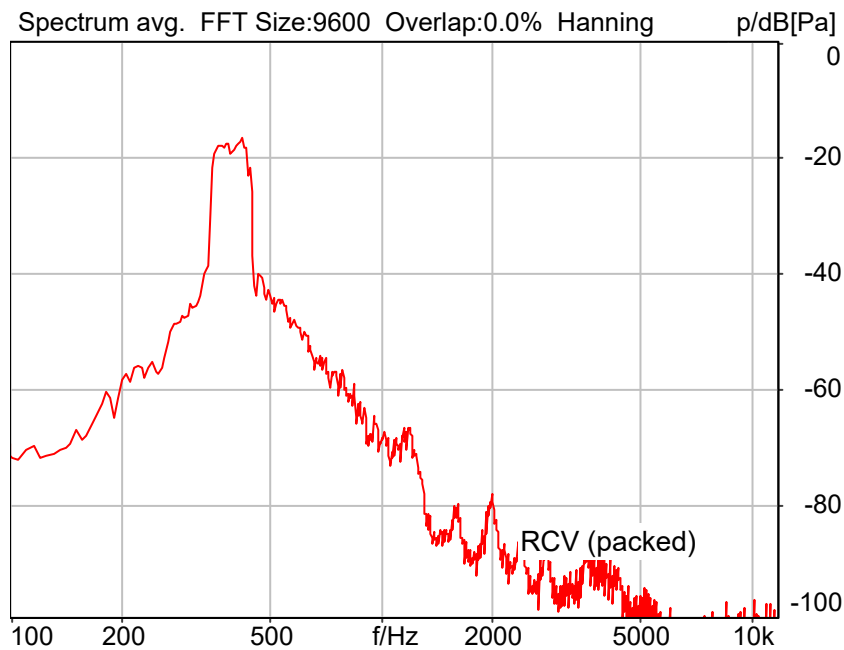
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 27.72 dB (4.11%)

2024/1/2 15:09 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

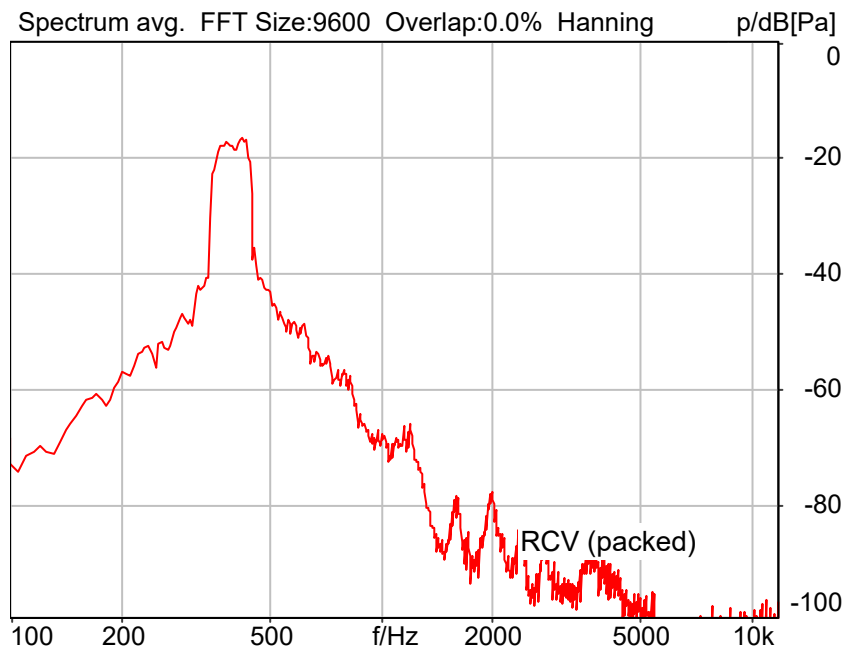
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 400Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 28.29 dB (3.85%)

2024/1/2 15:15 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_400hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	320.0 Hz	Stimulus max.	480.0 Hz

Analysis min.	100.0 Hz	Analysis max.	315.0 Hz
Analysis (2) min.	485.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO26_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

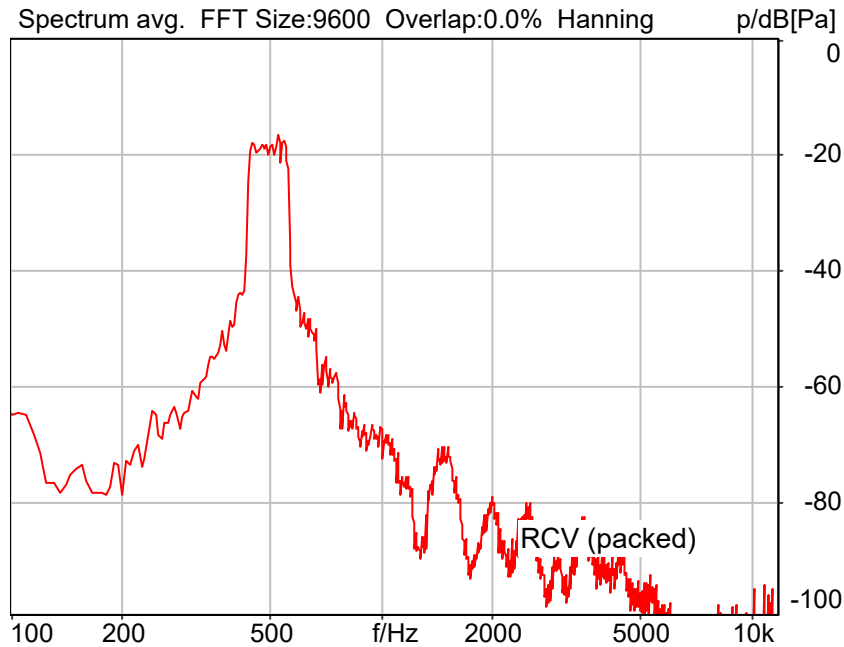
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 32.93 dB (2.26%)

2024/1/2 8:52 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

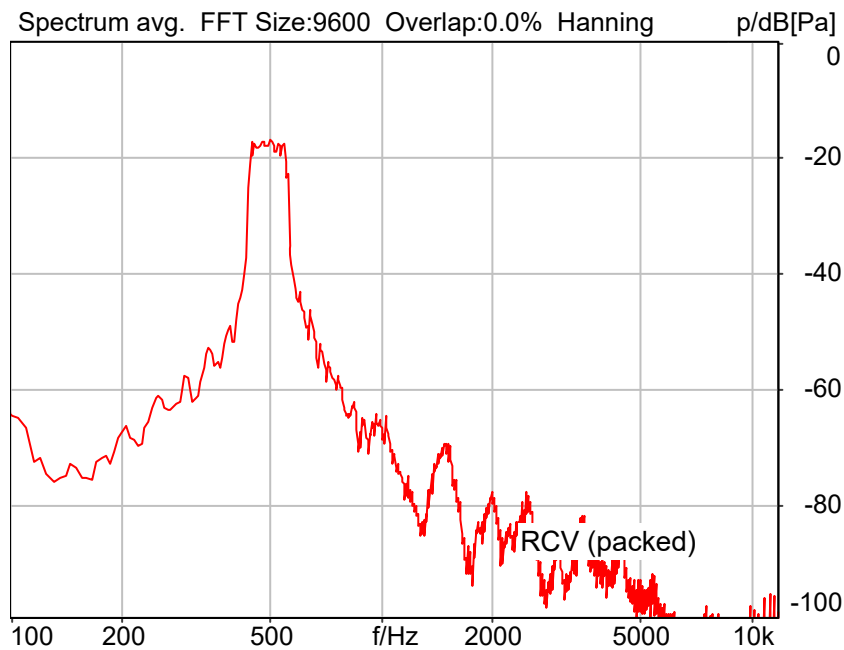
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 31.74 dB (2.59%)

2024/1/2 8:59 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

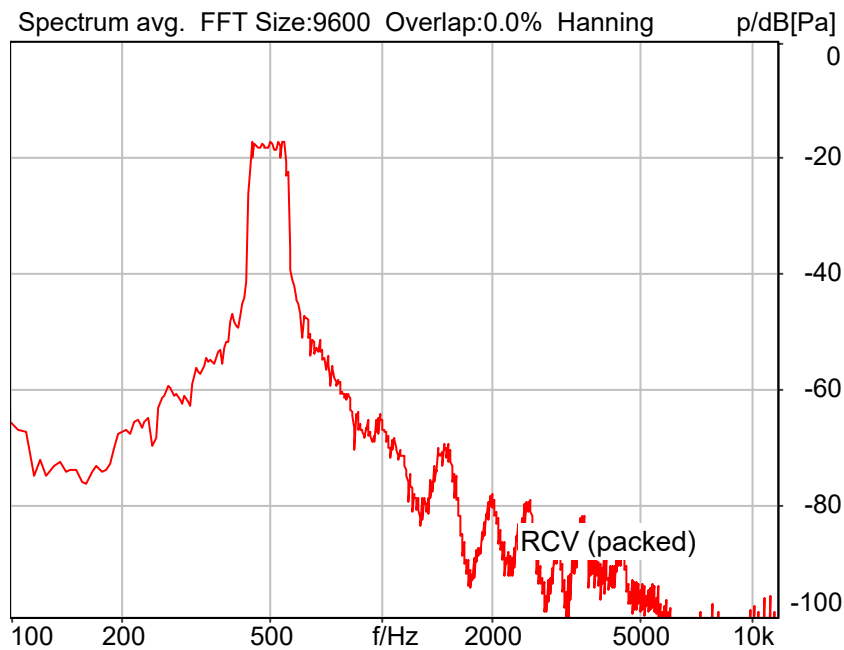
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 32.54 dB (2.36%)

2024/1/2 9:04 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

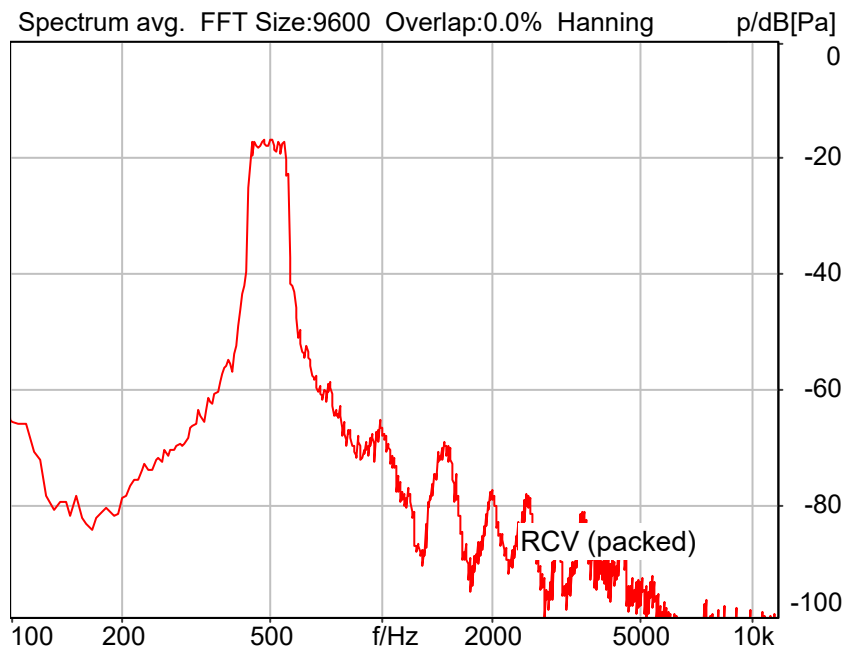
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 37.50 dB (1.33%)

2024/1/2 9:09 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

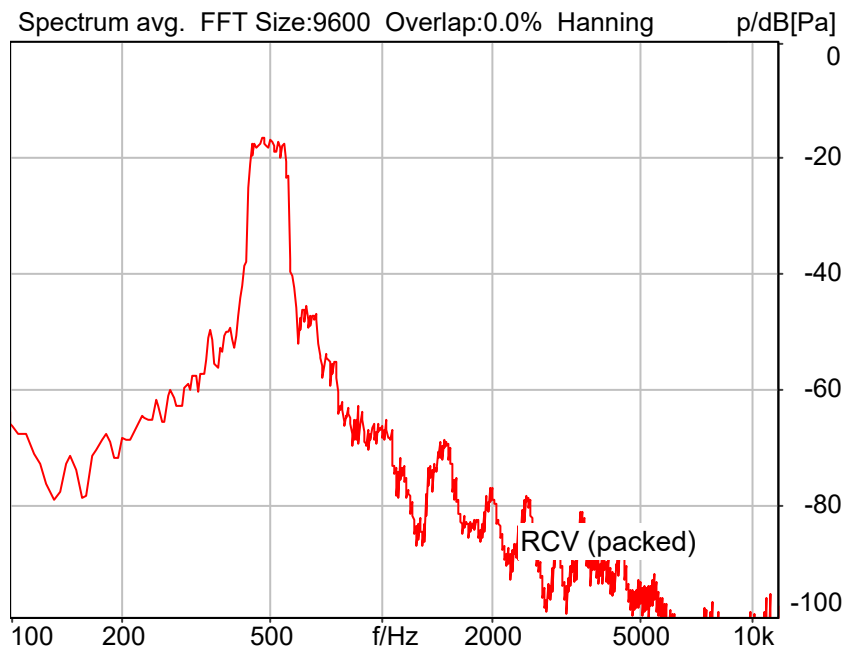
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 31.57 dB (2.64%)

2024/1/2 9:15 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	410.0 Hz
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

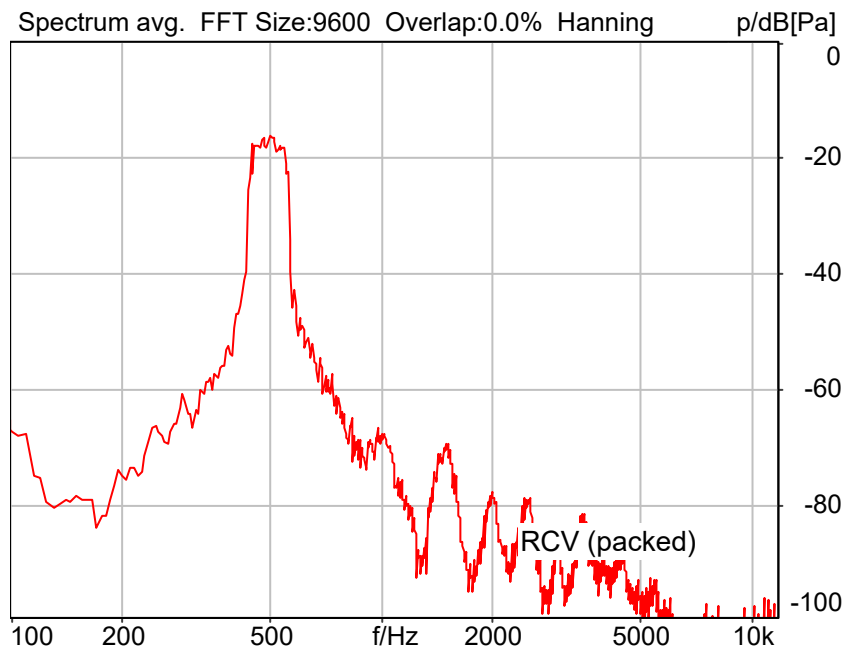
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 35.24 dB (1.73%)

2024/1/2 9:20 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

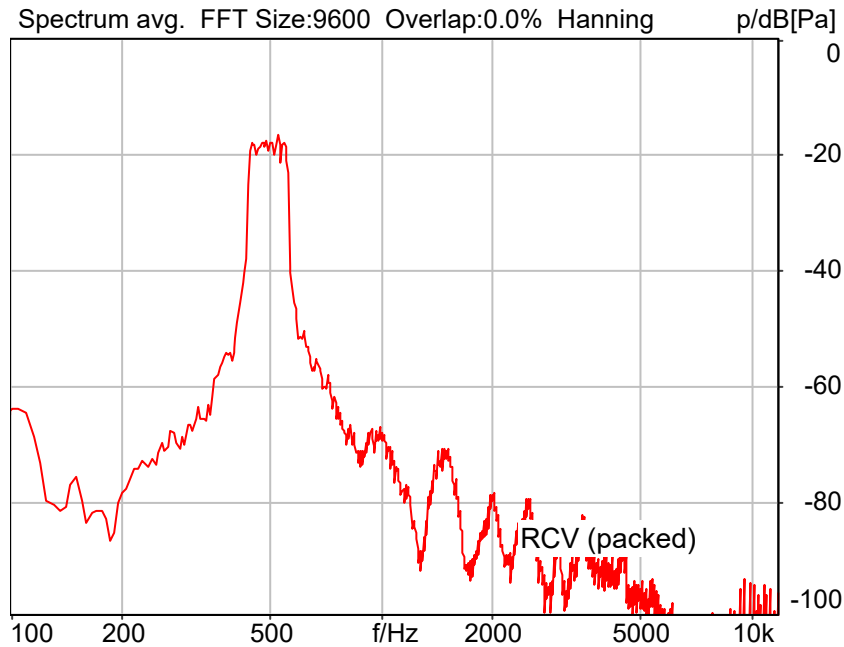
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 36.37 dB (1.52%)

2024/1/2 9:25 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

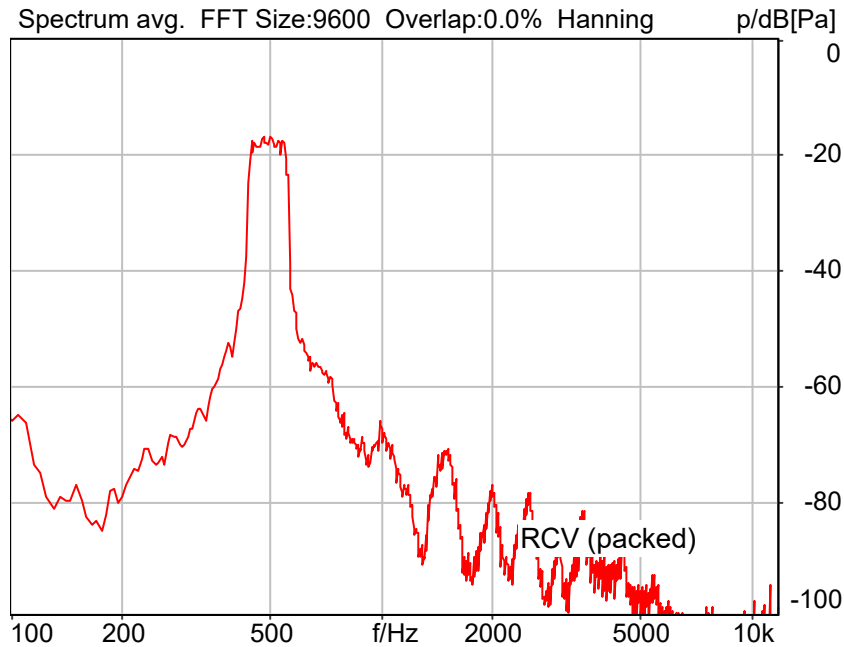
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 36.80 dB (1.45%)

2024/1/2 14:35 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

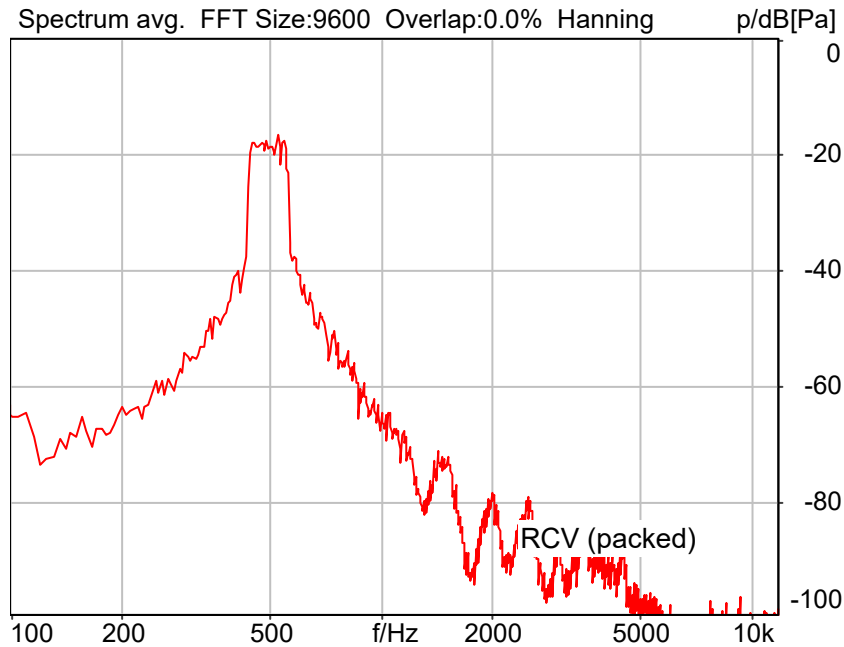
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



Distortion (Noise) RCV (packed): 27.50 dB (4.22%)

2024/1/2 14:57 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Stimulus min.	410.0 Hz
Frequency base	Transformation	Stimulus max.	595.0 Hz
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

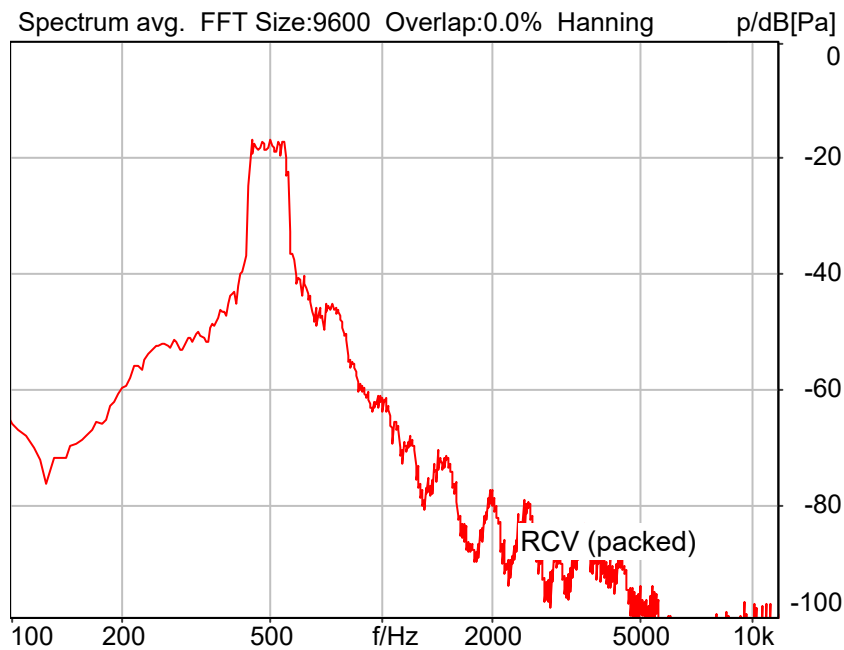
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
DSSS;2Mbps



Distortion (Noise) RCV (packed): 25.67 dB (5.21%)

2024/1/2 15:03 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	410.0 Hz
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

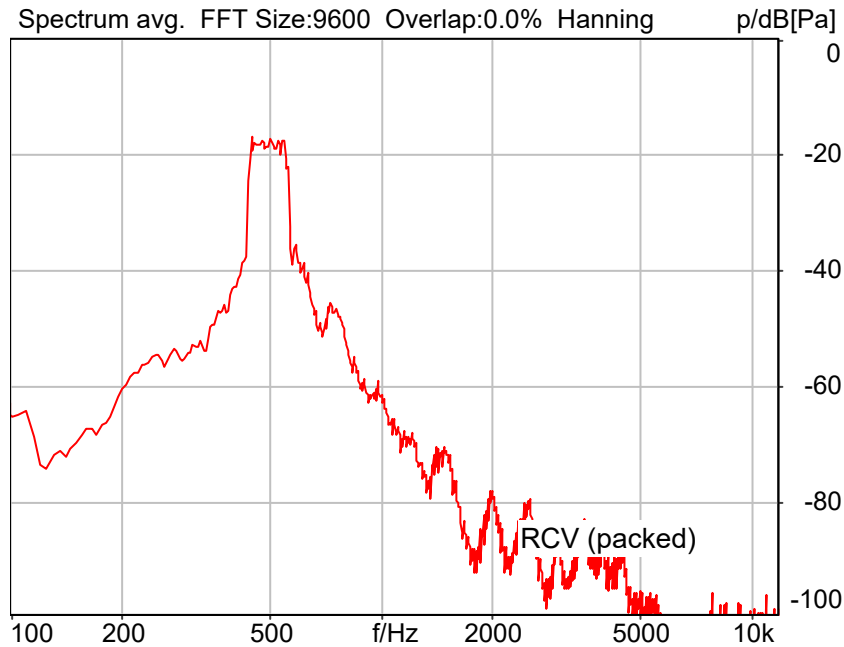
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 25.25 dB (5.46%)

2024/1/2 15:10 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	410.0 Hz
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

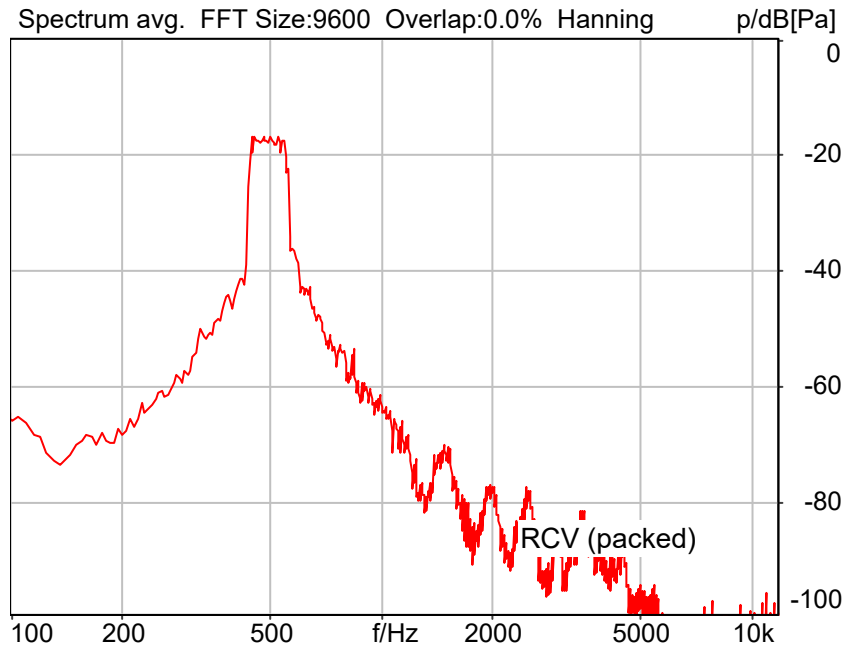
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 28.04 dB (3.96%)

2024/1/2 15:16 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_500hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	410.0 Hz	Stimulus max.	595.0 Hz

Analysis min.	100.0 Hz	Analysis max.	405.0 Hz
Analysis (2) min.	600.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO27_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

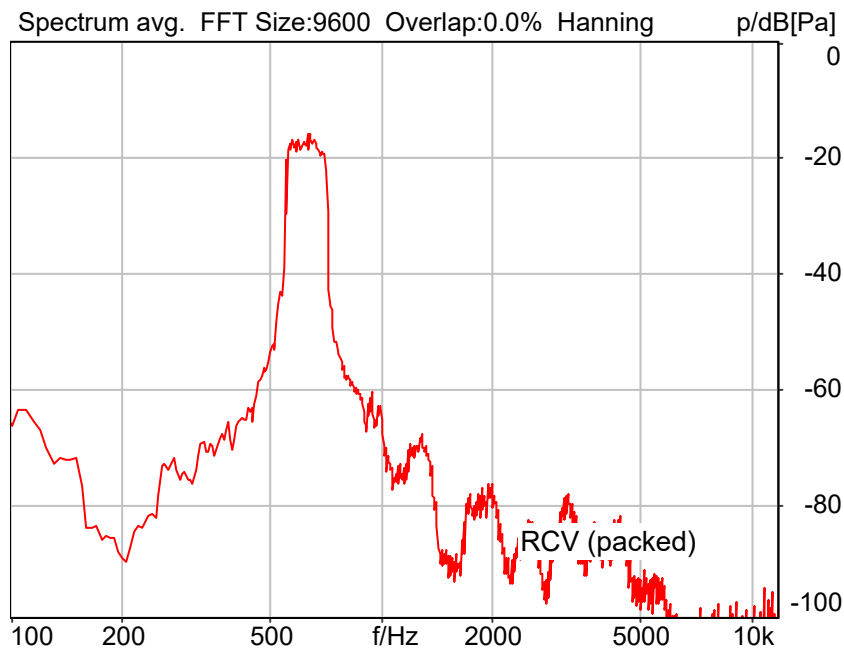
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 37.78 dB (1.29%)

2024/1/2 8:52 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

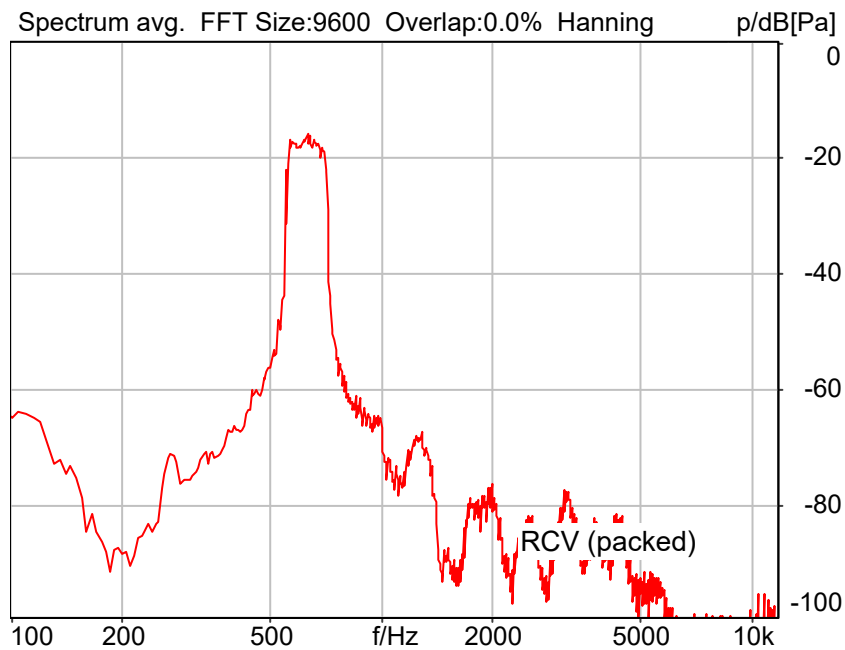
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 39.38 dB (1.07%)

2024/1/2 8:59 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

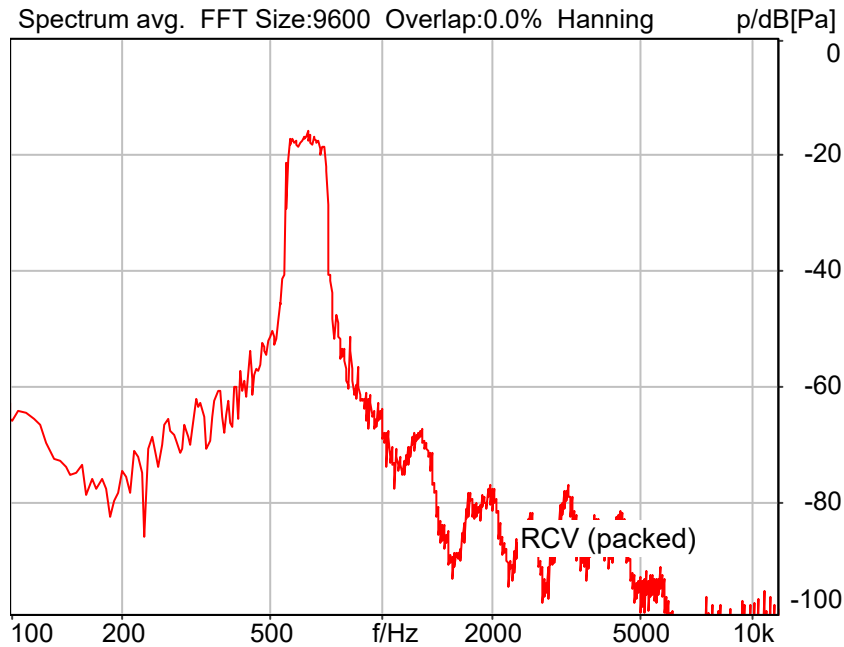
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 35.58 dB (1.66%)

2024/1/2 9:05 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

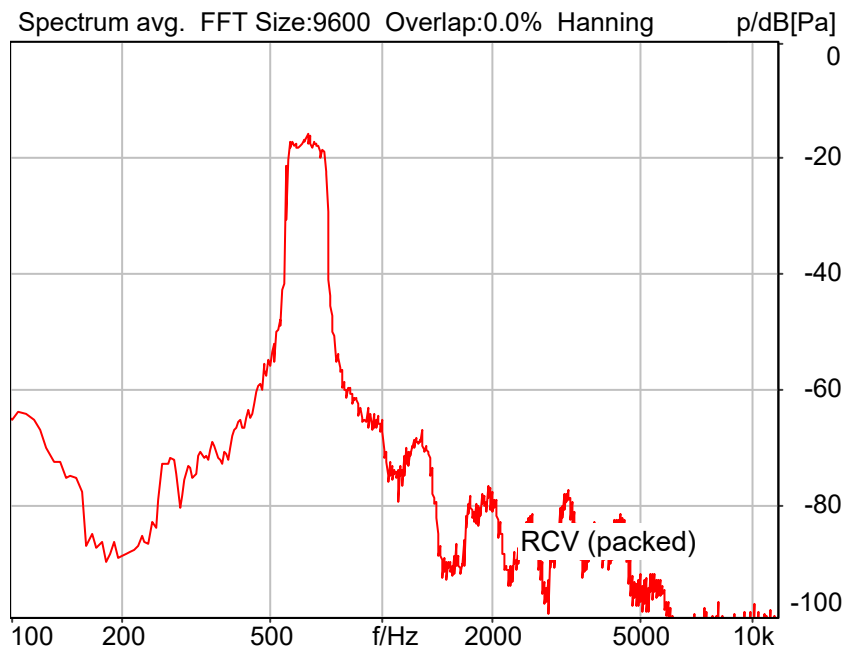
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 39.18 dB (1.10%)

2024/1/2 9:10 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

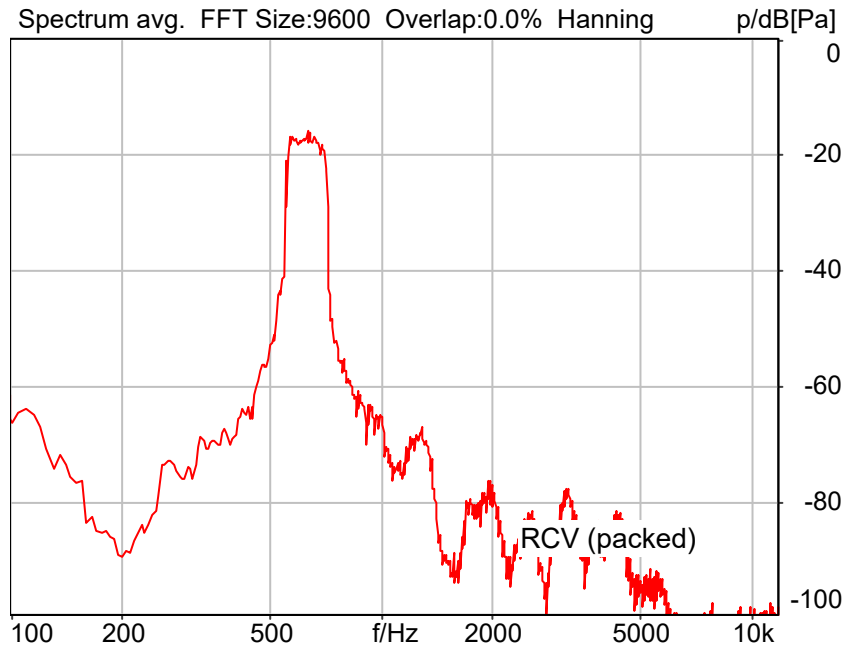
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 38.16 dB (1.24%)

2024/1/2 9:15 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

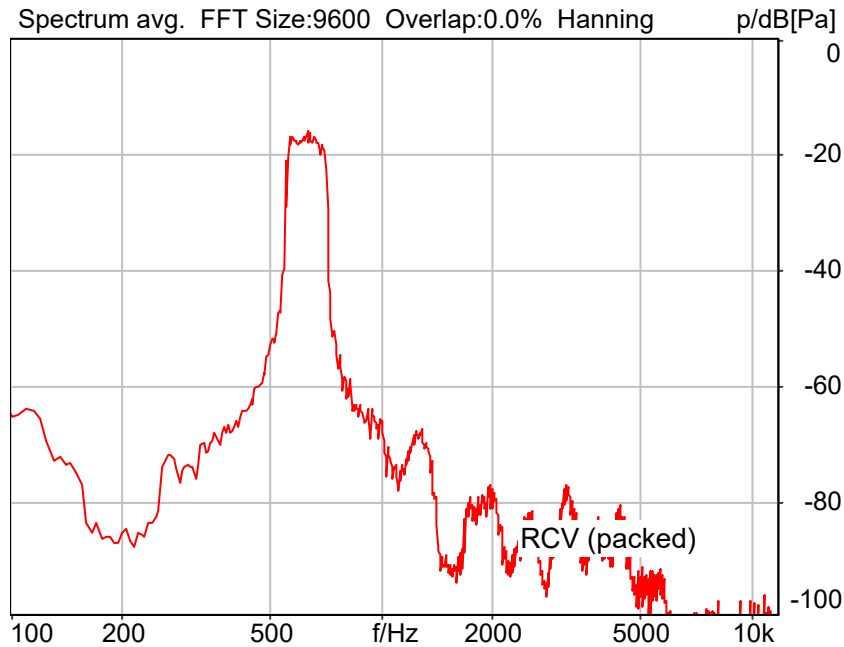
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 39.07 dB (1.11%)

2024/1/2 9:20 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

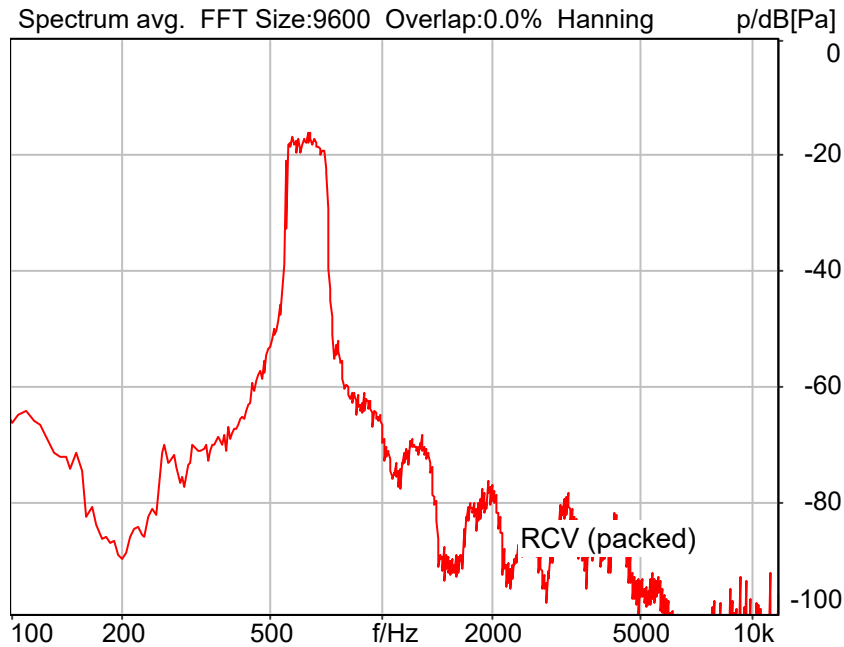
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 37.97 dB (1.26%)

2024/1/2 9:26 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

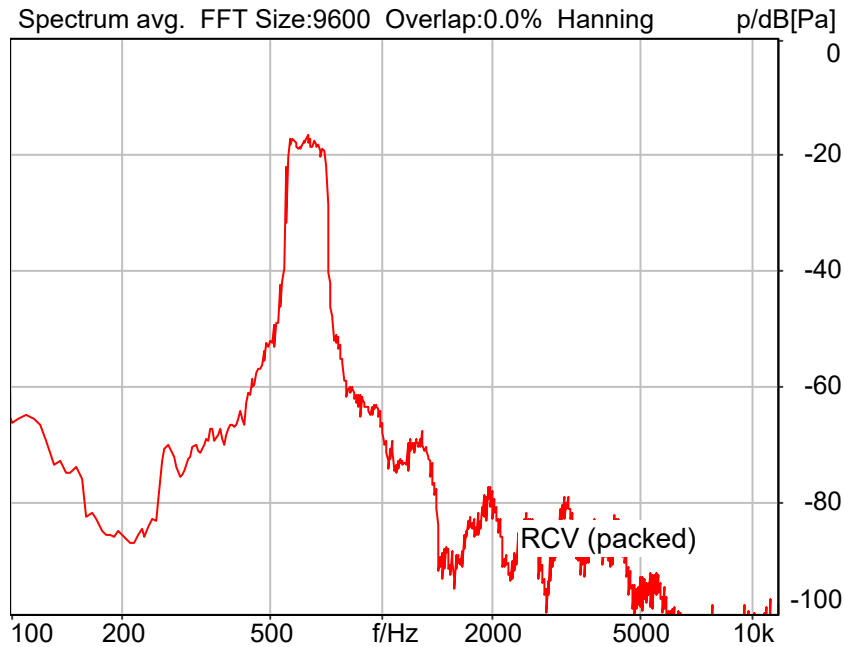
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 37.10 dB (1.40%)

2024/1/2 14:35 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

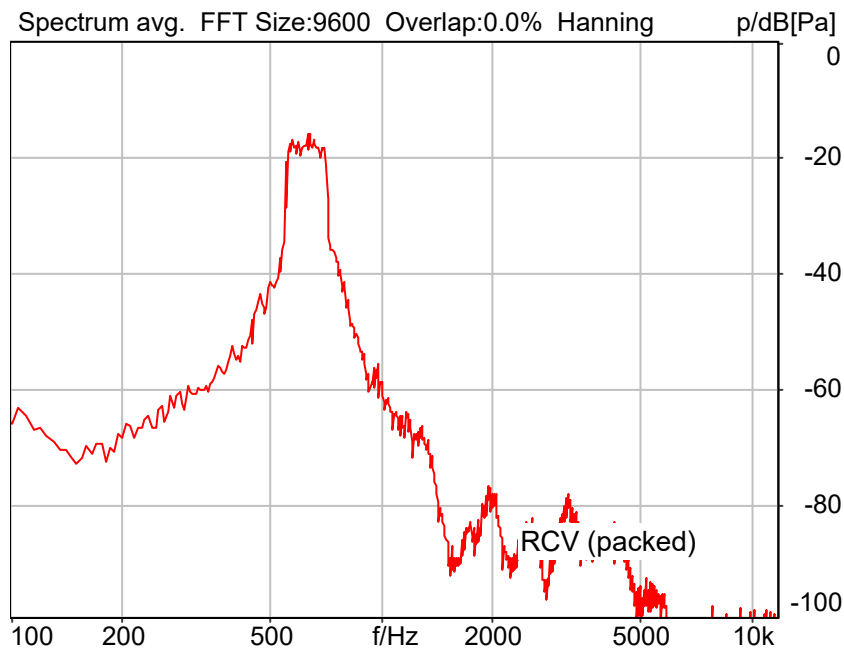
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



2024/1/2 14:58 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

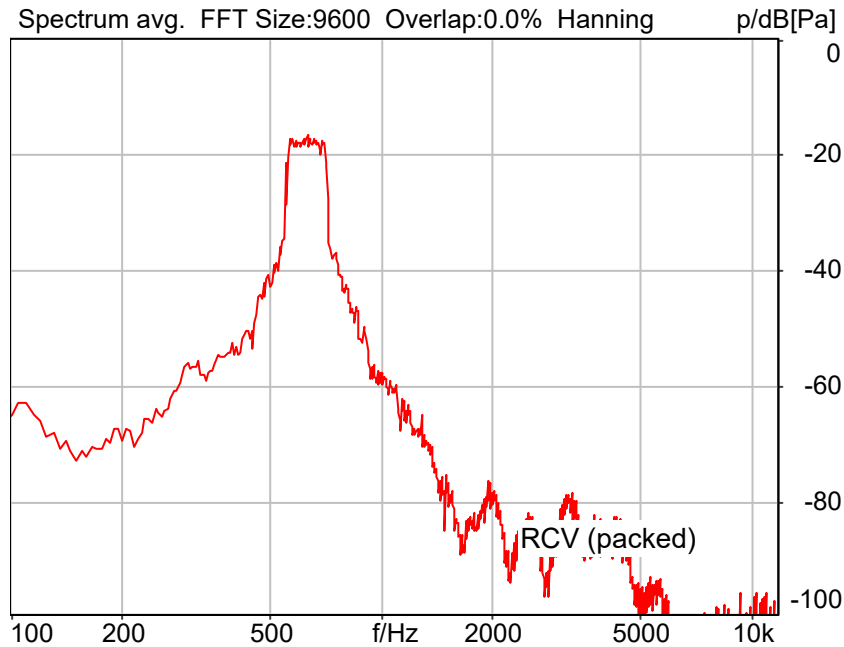
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;2Mbps



Distortion (Noise) RCV (packed): 24.90 dB (5.69%)

2024/1/2 15:04 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

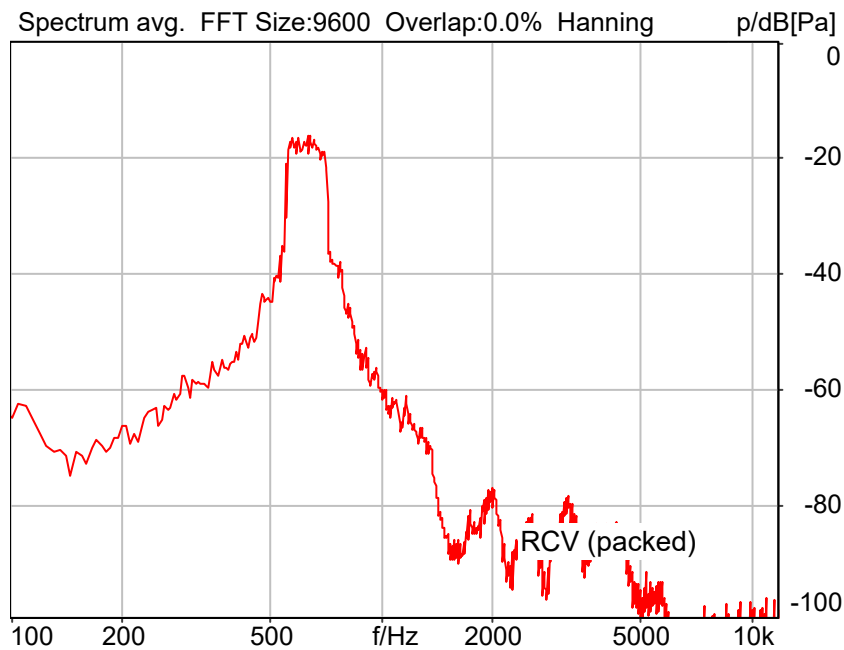
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



2024/1/2 15:10 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Stimulus min.	525.0 Hz
Frequency base	Transformation	Stimulus max.	745.0 Hz
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

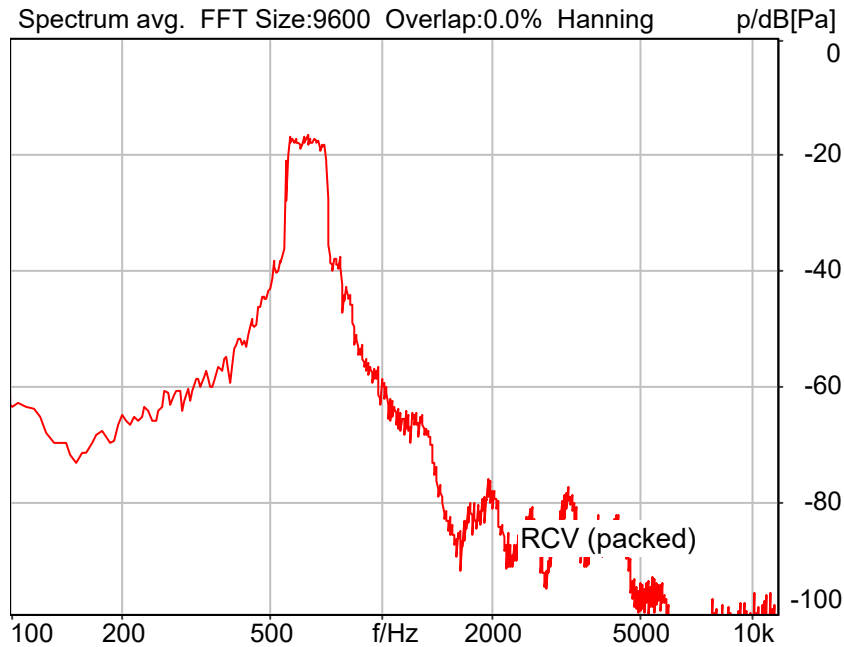
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 630Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 25.52 dB (5.29%)

2024/1/2 15:16 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_630hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	525.0 Hz
Stimulus min.	525.0 Hz	Stimulus max.	745.0 Hz

Analysis min.	100.0 Hz	Analysis max.	520.0 Hz
Analysis (2) min.	750.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
Store to variable ISO28_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

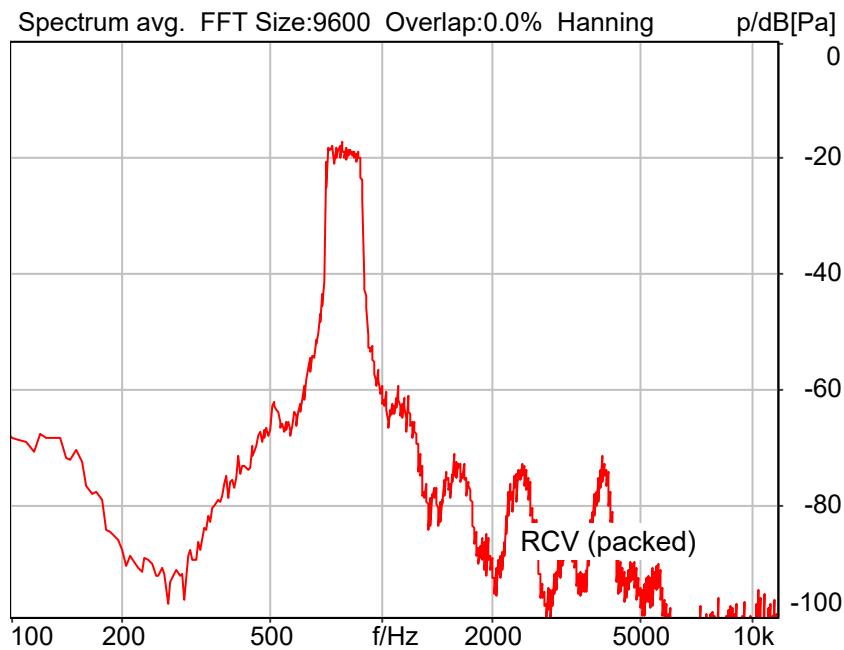
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 36.66 dB (1.47%)

2024/1/2 8:52 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	675.0 Hz
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

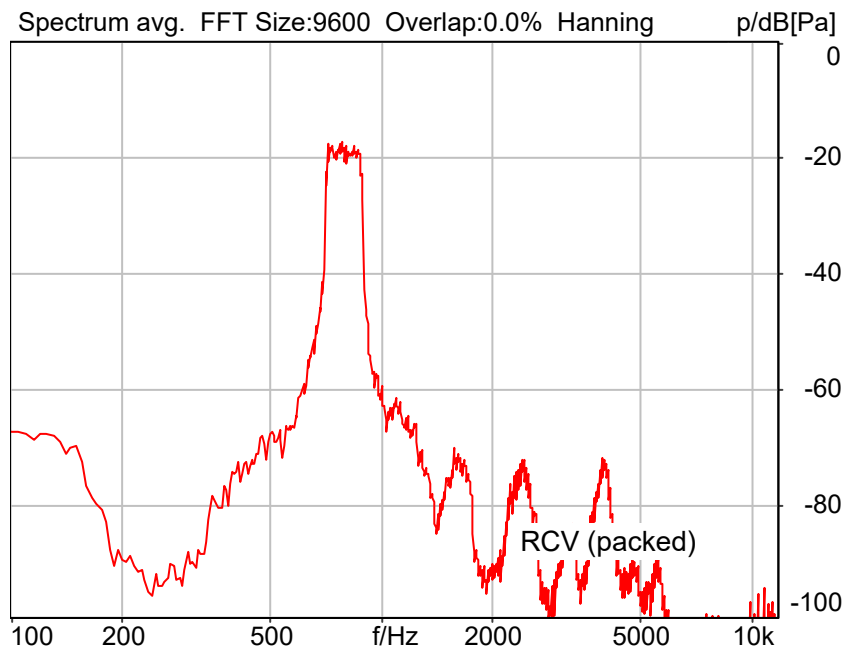
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 37.18 dB (1.38%)

2024/1/2 9:00 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	675.0 Hz
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

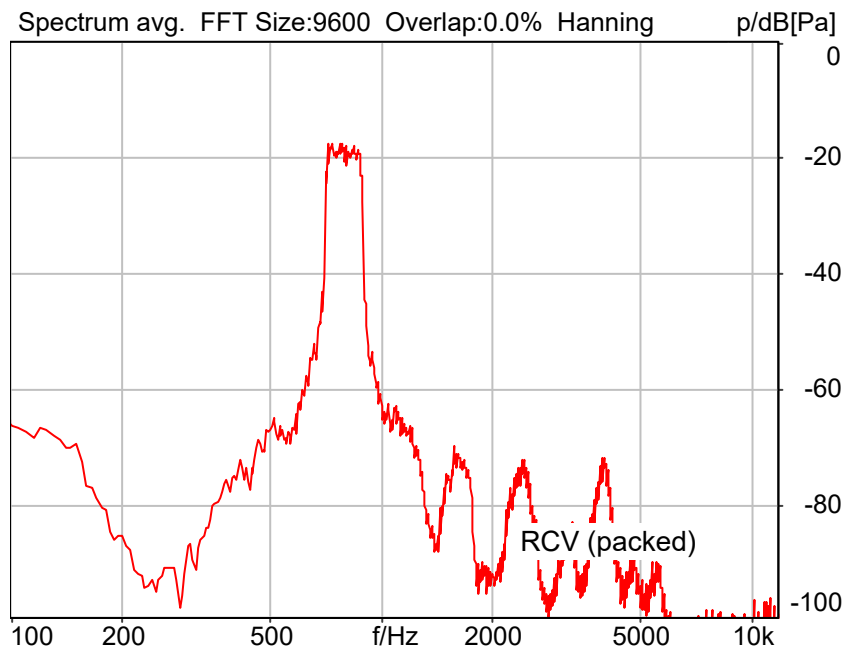
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 37.87 dB (1.28%)

2024/1/2 9:05 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	675.0 Hz
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

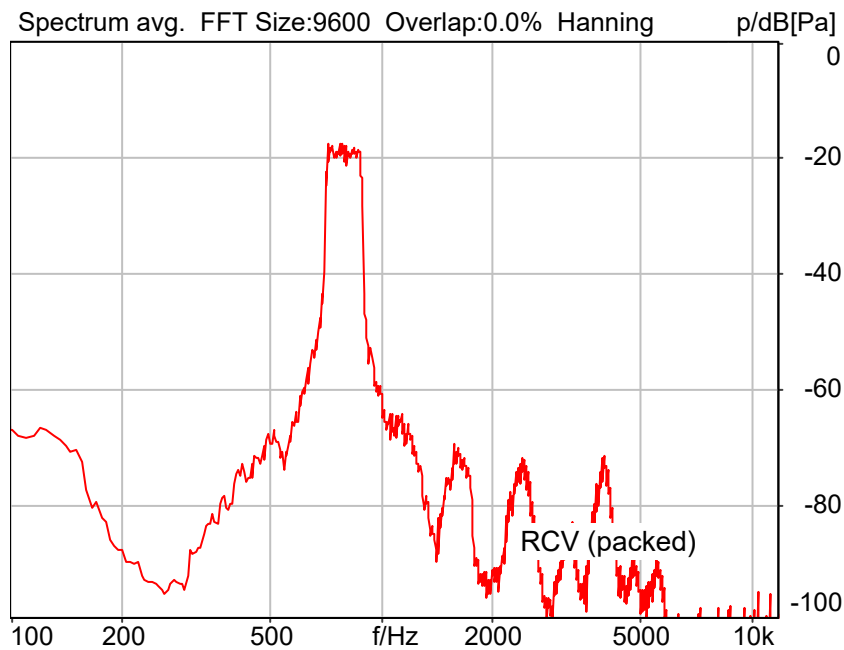
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 37.61 dB (1.32%)

2024/1/2 9:10 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

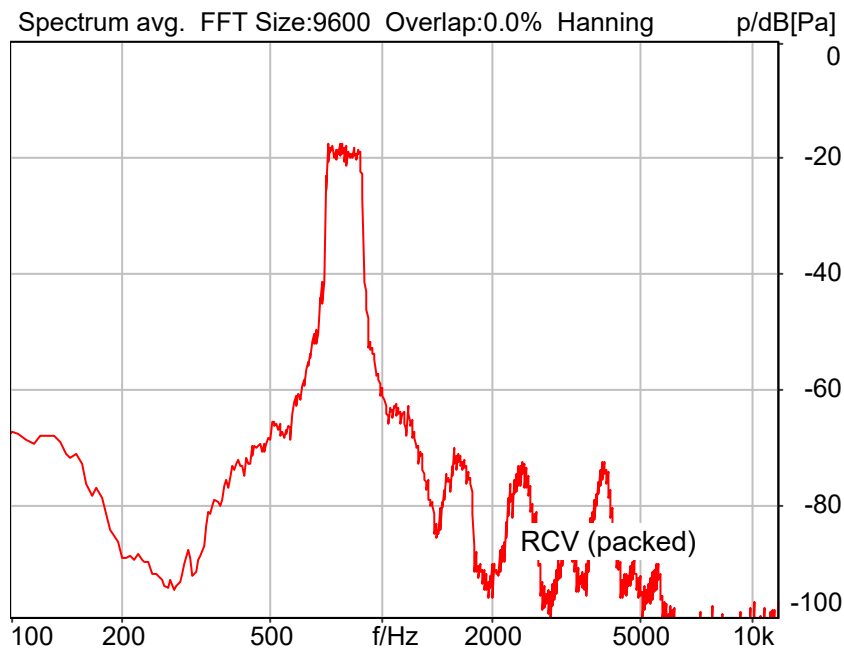
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 36.10 dB (1.57%)

2024/1/2 9:15 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	675.0 Hz
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

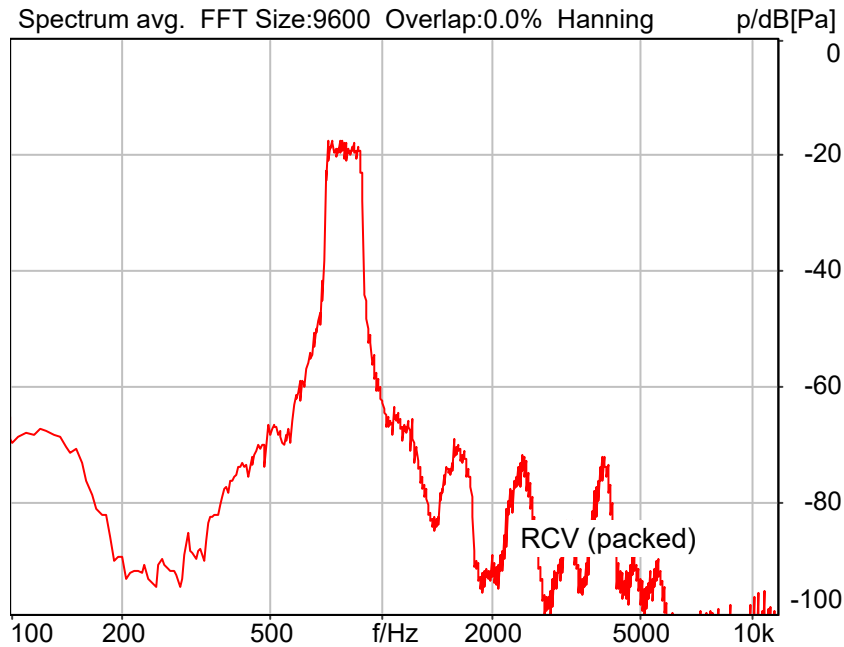
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 36.93 dB (1.42%)

2024/1/2 9:21 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

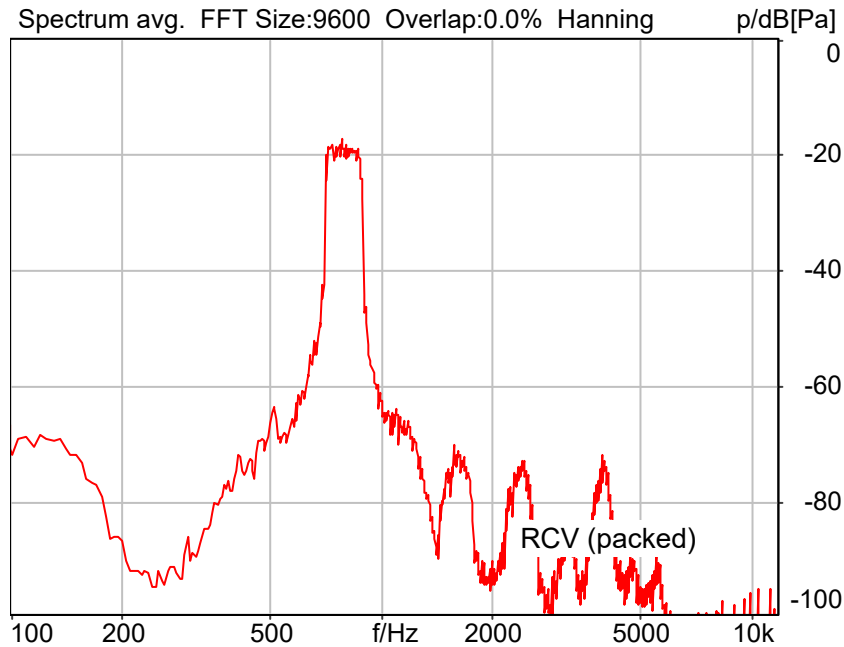
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 38.23 dB (1.23%)

2024/1/2 9:26 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

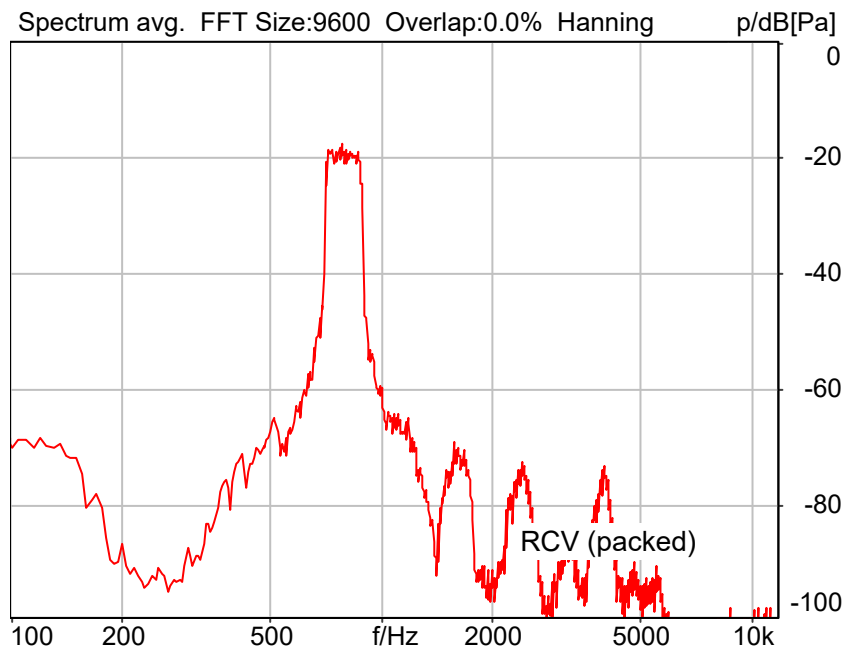
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 37.43 dB (1.34%)

2024/1/2 14:35 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	675.0 Hz
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

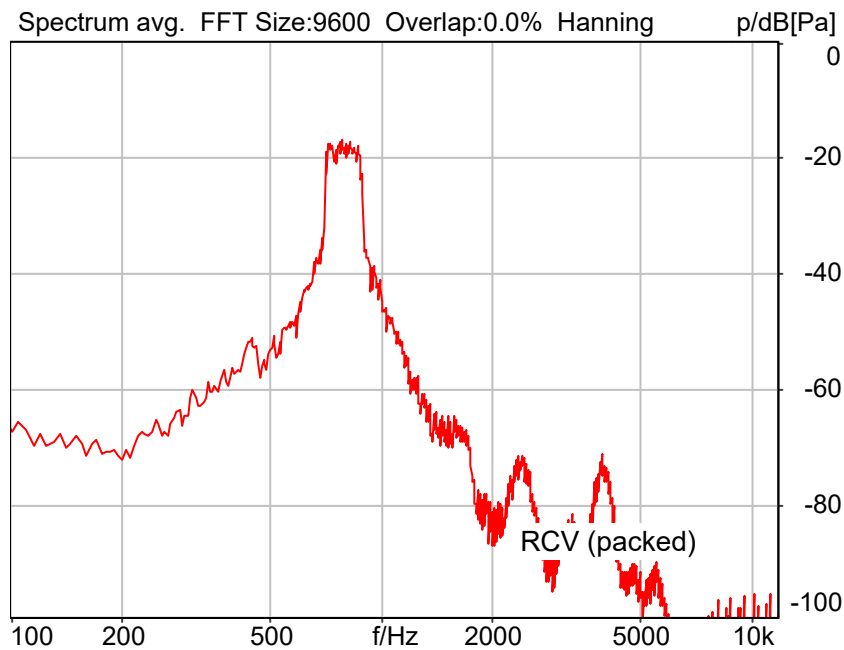
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



Distortion (Noise) RCV (packed): 23.13 dB (6.98%)

2024/1/2 14:58 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	675.0 Hz
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

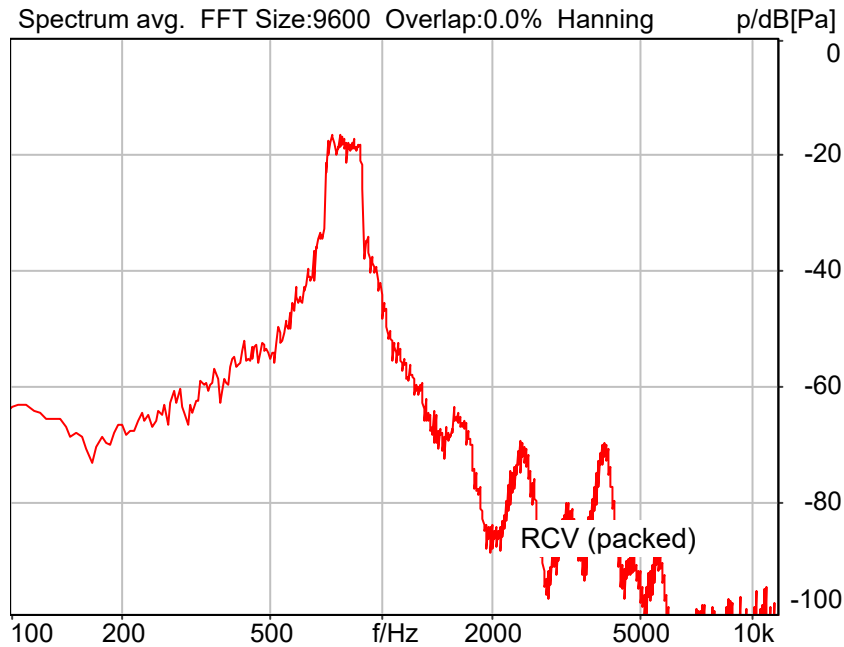
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
DSSS;2Mbps



Distortion (Noise) RCV (packed): 22.97 dB (7.10%)

2024/1/2 15:04 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

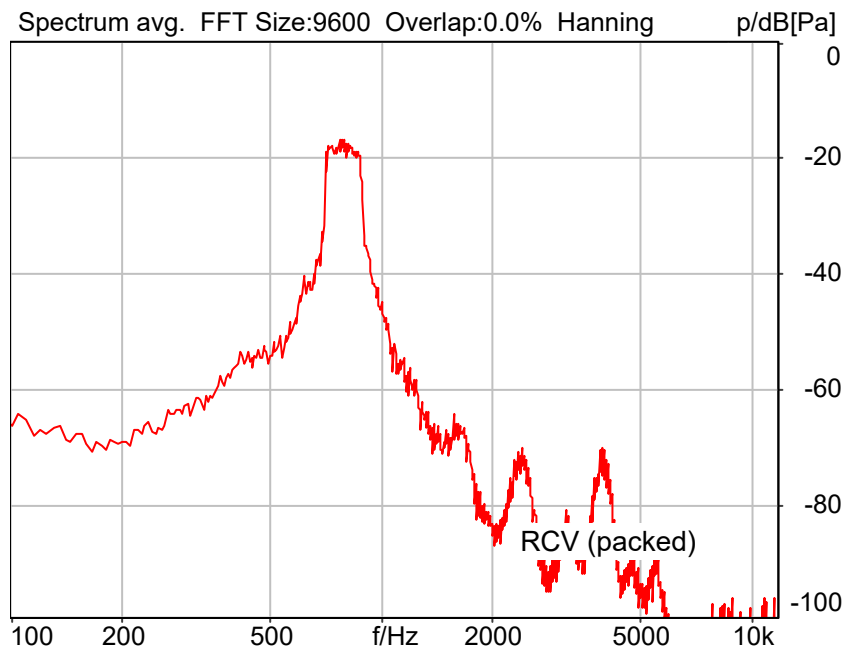
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 24.18 dB (6.18%)

2024/1/2 15:10 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

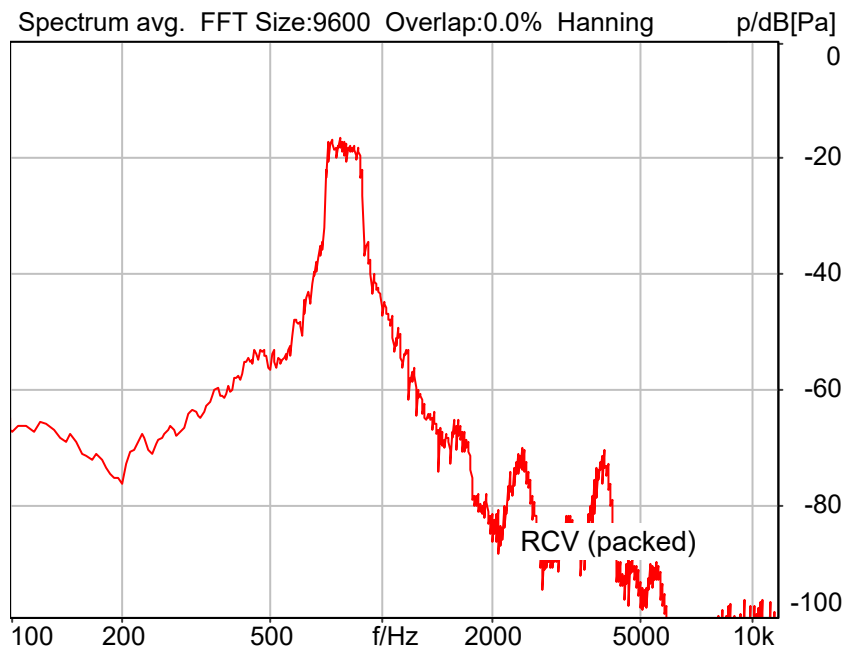
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 800Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 24.16 dB (6.19%)

2024/1/2 15:16 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_800hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	675.0 Hz
Stimulus min.	675.0 Hz	Stimulus max.	925.0 Hz

Analysis min.	100.0 Hz	Analysis max.	670.0 Hz
Analysis (2) min.	930.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO29_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

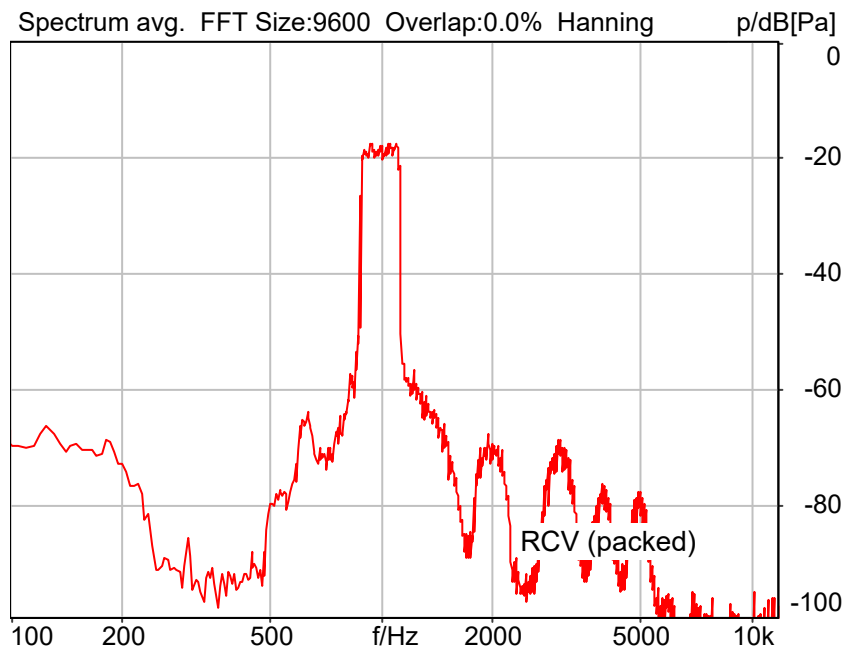
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 38.94 dB (1.13%)

2024/1/2 8:53 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

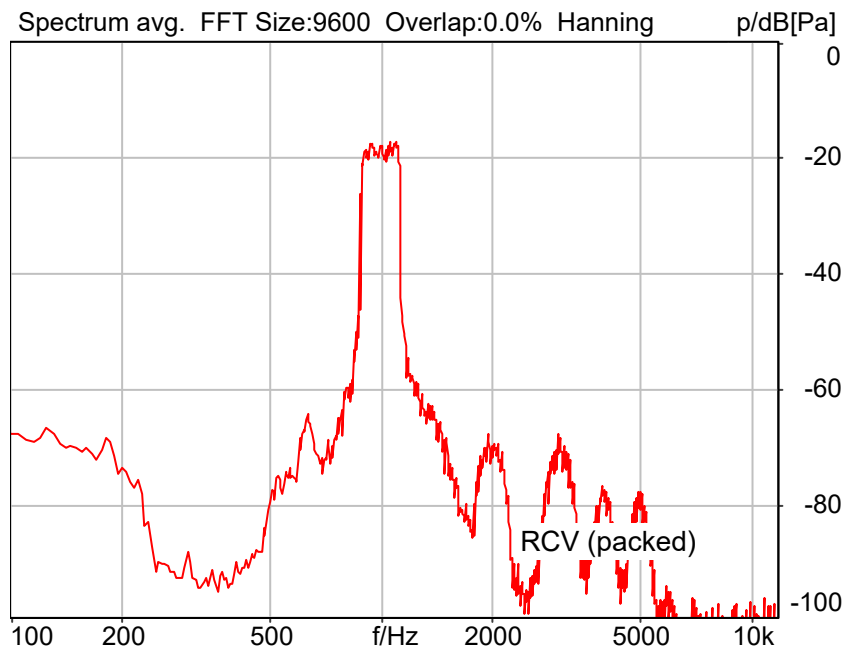
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 38.16 dB (1.24%)

2024/1/2 9:00 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	855.0 Hz
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

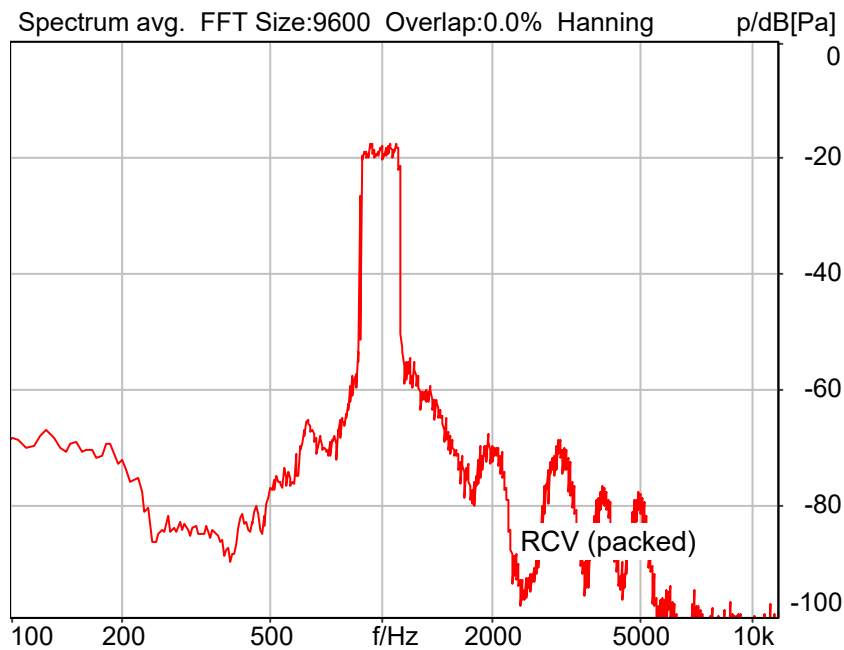
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 37.46 dB (1.34%)

2024/1/2 9:05 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

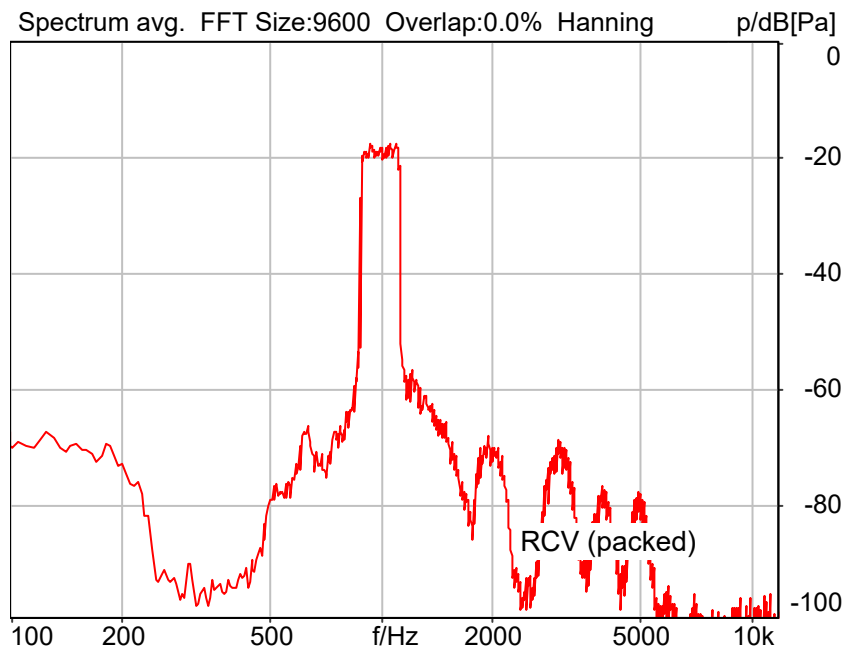
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 38.91 dB (1.13%)

2024/1/2 9:10 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

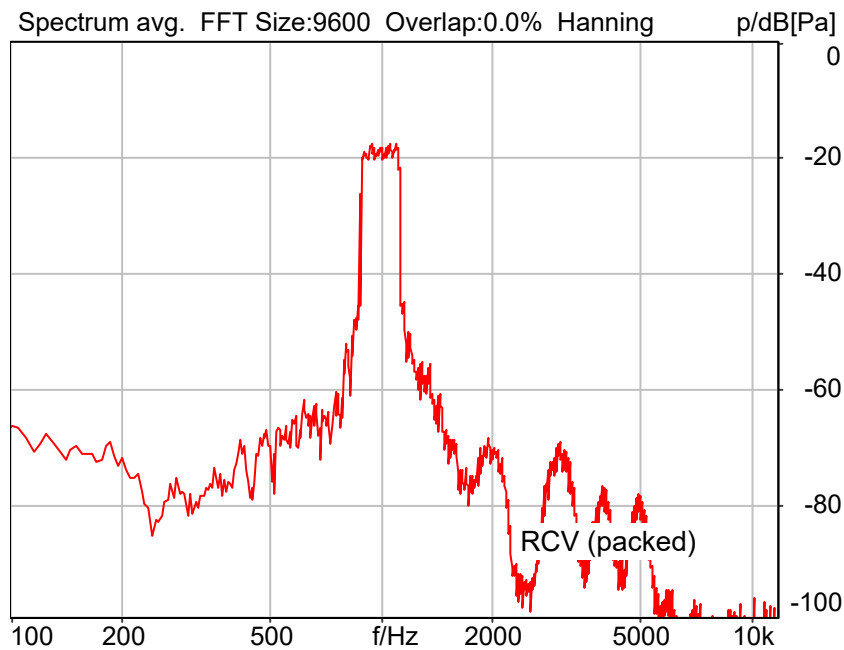
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 34.18 dB (1.96%)

2024/1/2 9:16 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

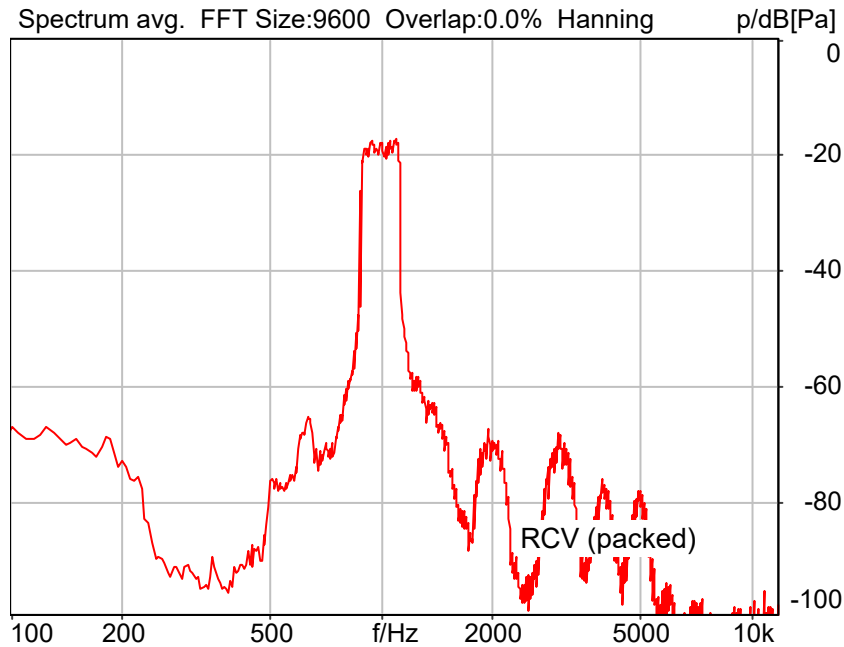
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 37.78 dB (1.29%)

2024/1/2 9:21 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

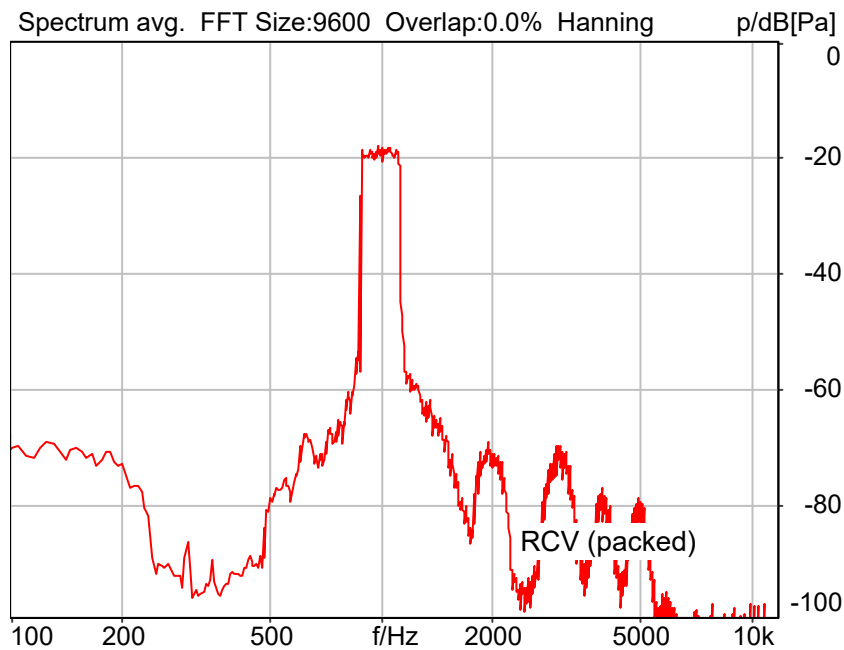
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 38.88 dB (1.14%)

2024/1/2 9:26 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

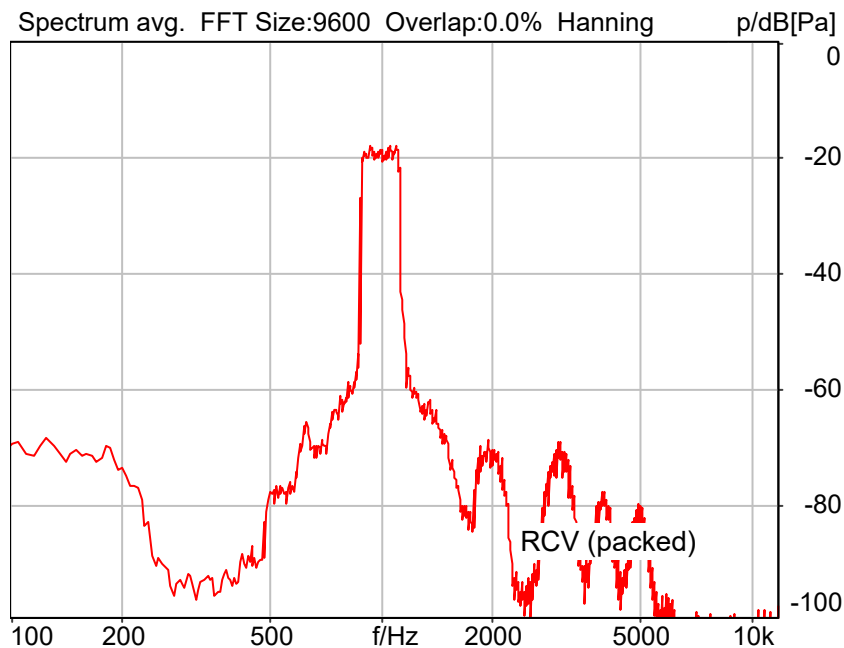
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 38.43 dB (1.20%)

2024/1/2 14:36 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

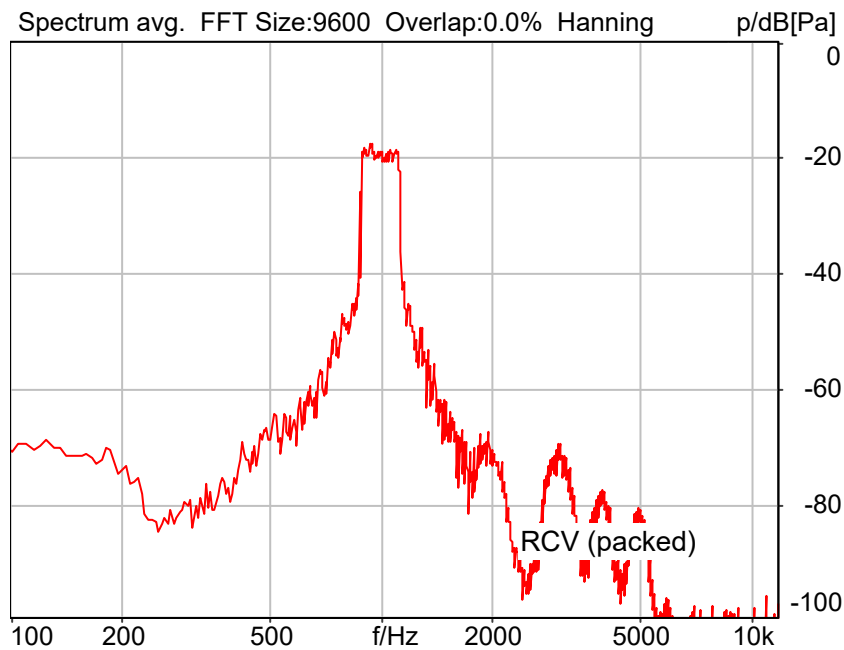
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



Distortion (Noise) RCV (packed): 28.84 dB (3.61%)

2024/1/2 14:58 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

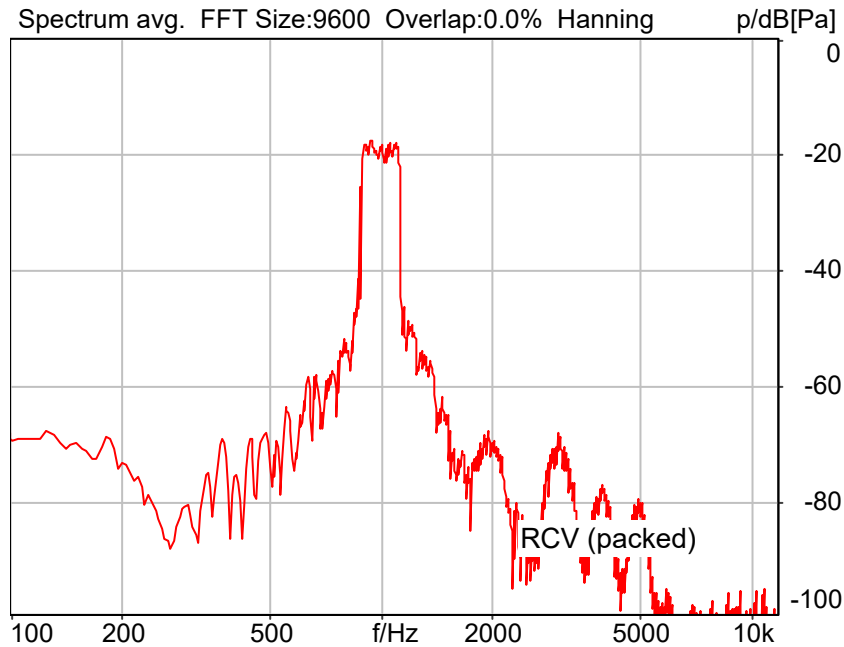
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
DSSS;2Mbps



Distortion (Noise) RCV (packed): 32.00 dB (2.51%)

2024/1/2 15:04 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

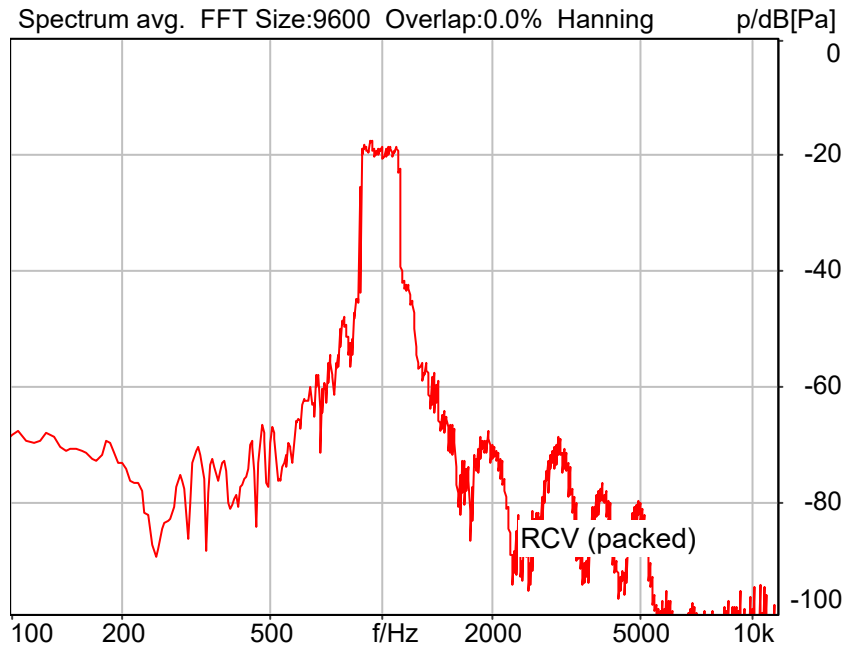
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 28.33 dB (3.83%)

2024/1/2 15:11 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

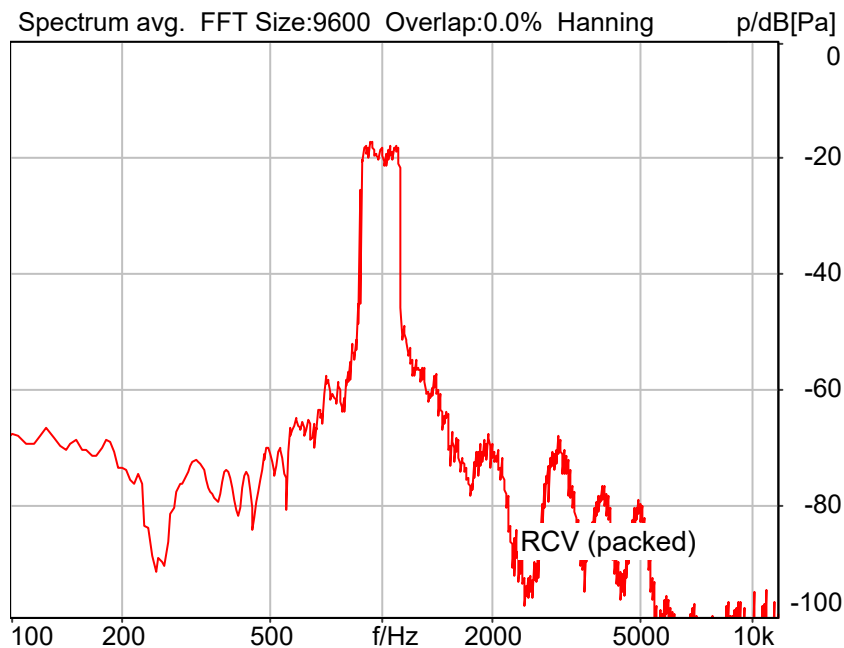
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 34.73 dB (1.83%)

2024/1/2 15:17 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	855.0 Hz
Stimulus min.	855.0 Hz	Stimulus max.	1155.0 Hz

Analysis min.	100.0 Hz	Analysis max.	850.0 Hz
Analysis (2) min.	1160.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO30_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

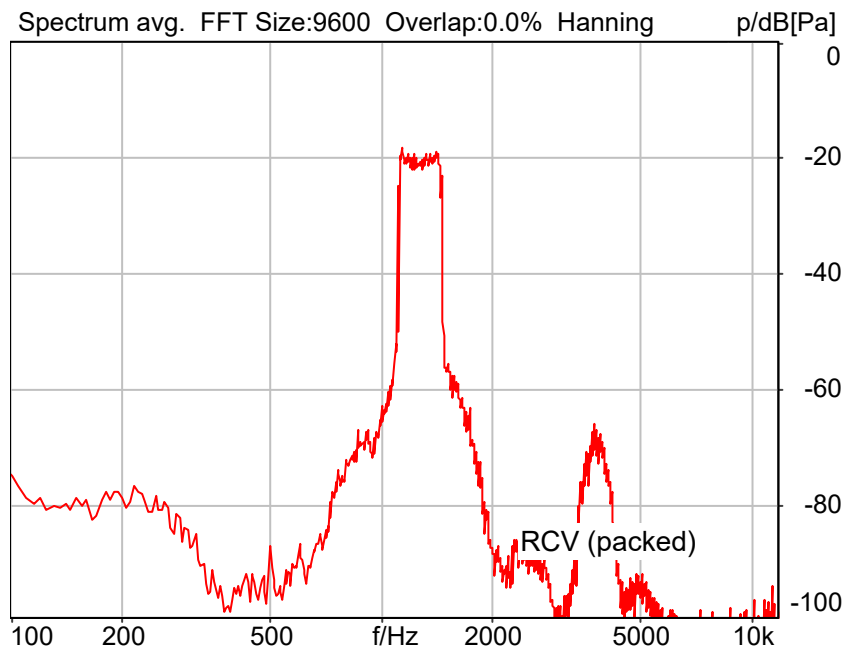
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 30.88 dB (2.86%)

2024/1/2 8:53 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

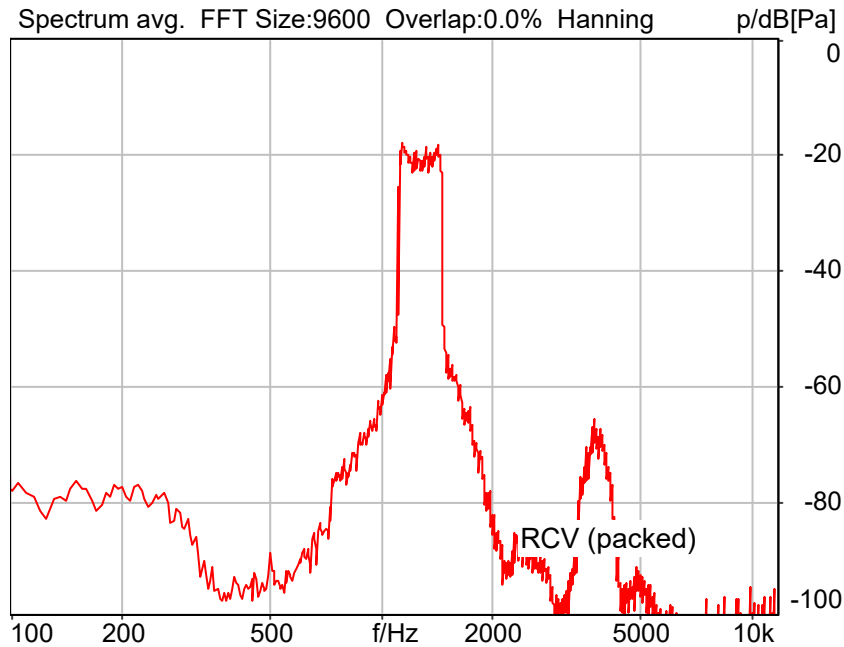
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 31.44 dB (2.68%)

2024/1/2 9:00 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

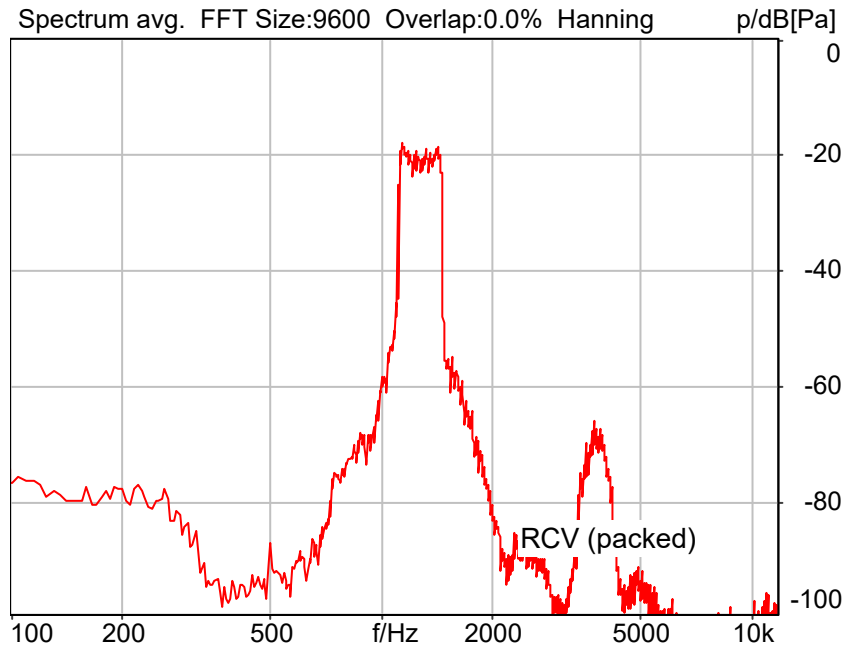
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 30.26 dB (3.07%)

2024/1/2 9:06 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

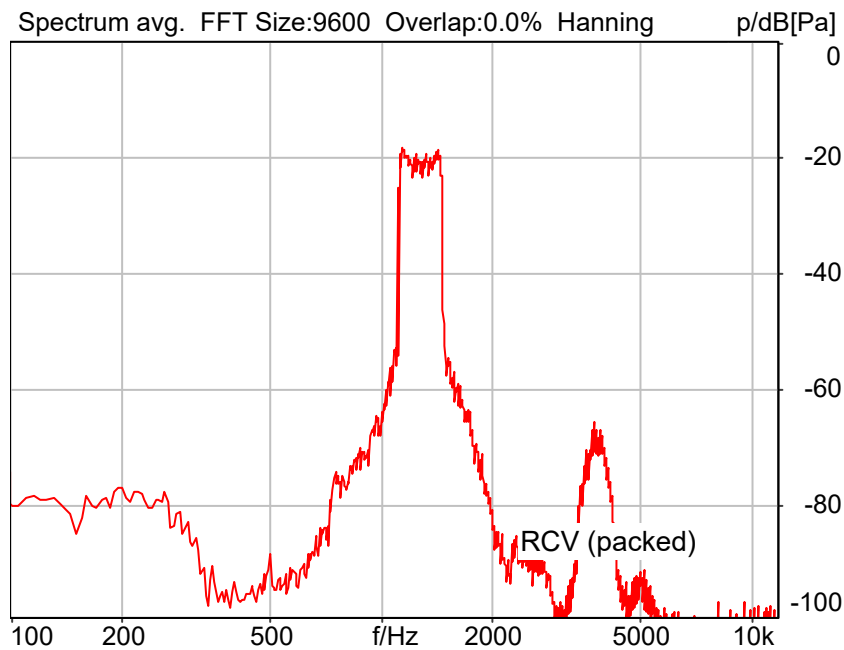
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 30.48 dB (2.99%)

2024/1/2 9:11 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

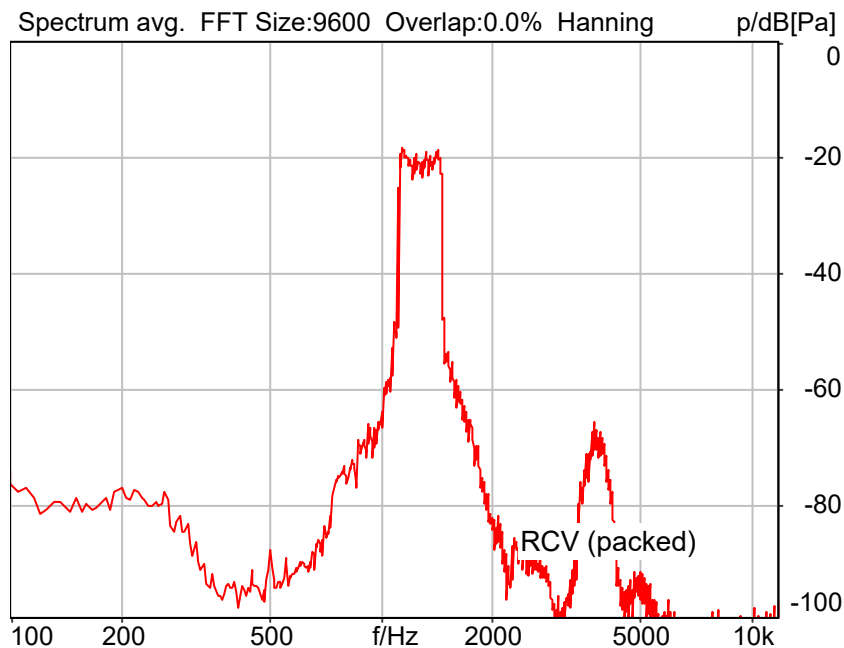
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 29.96 dB (3.18%)

2024/1/2 9:16 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

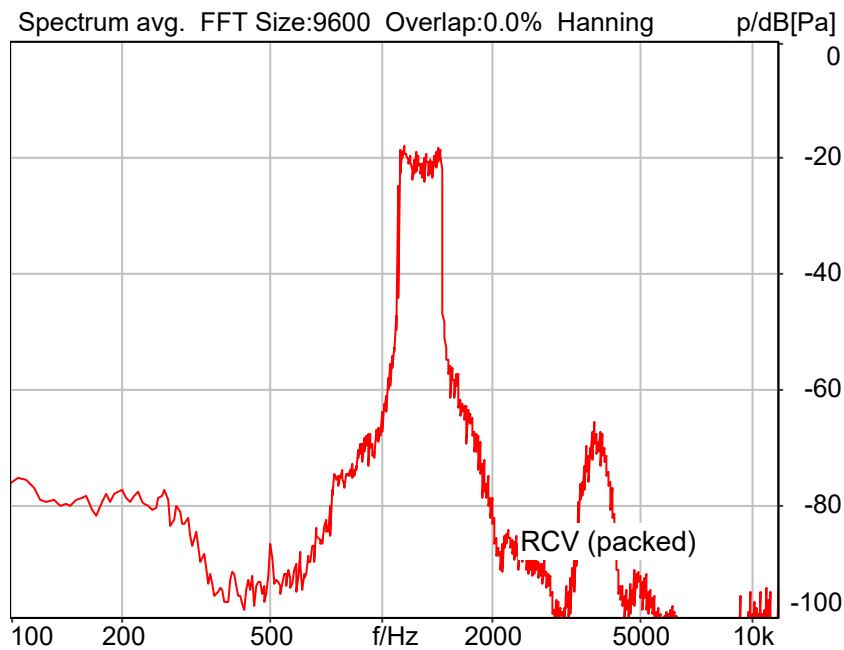
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 29.44 dB (3.37%)

2024/1/2 9:22 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

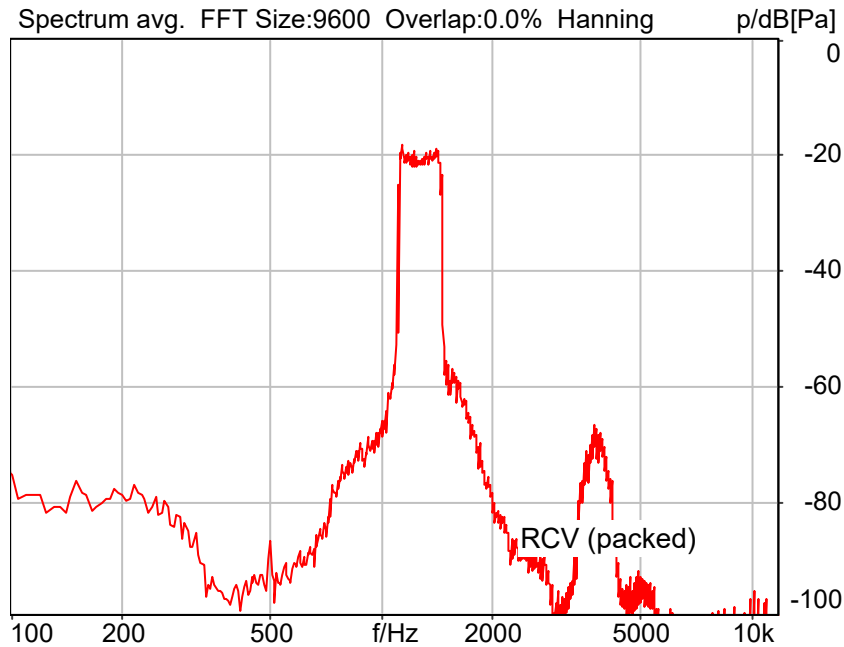
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 31.14 dB (2.77%)

2024/1/2 9:27 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

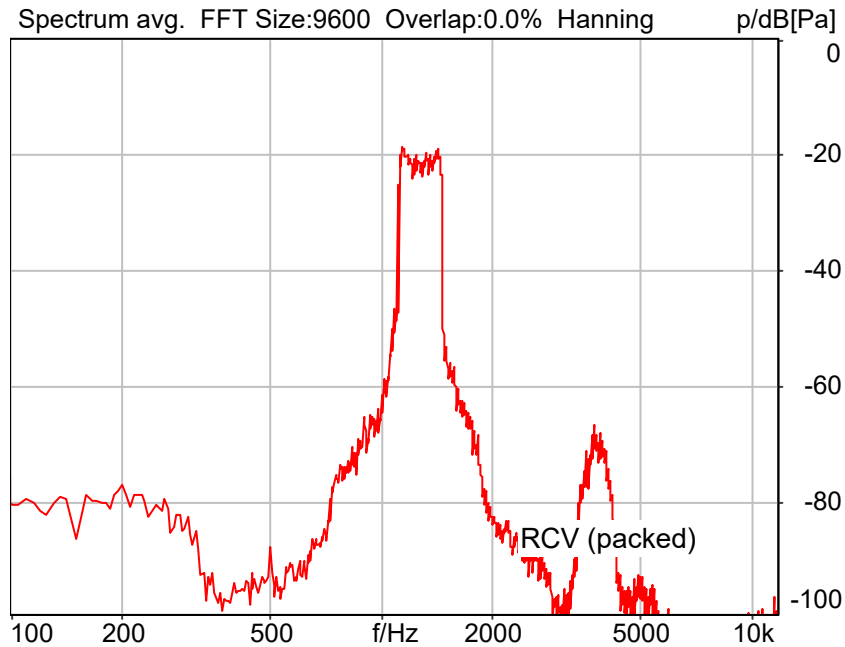
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 30.71 dB (2.91%)

2024/1/2 14:36 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

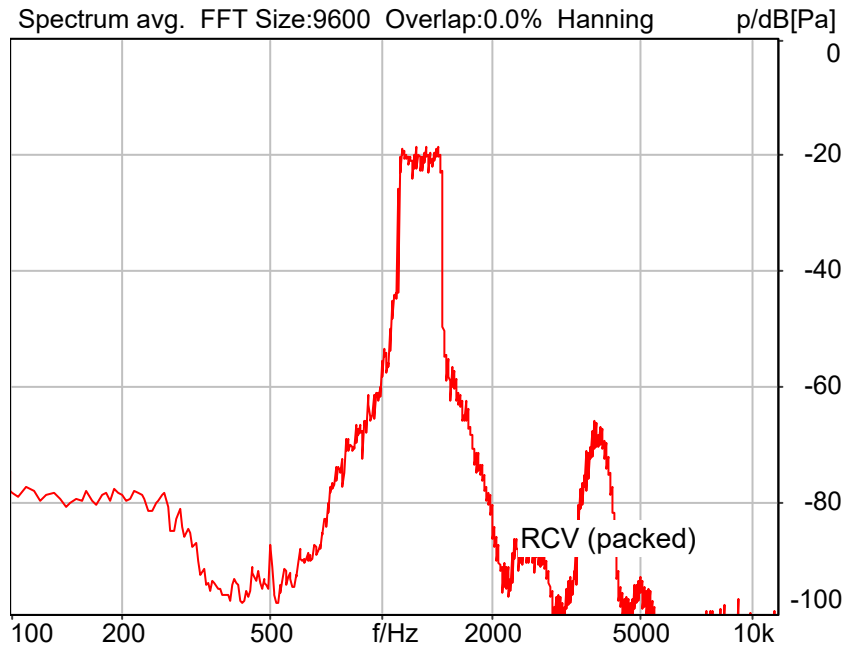
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



Distortion (Noise) RCV (packed): 29.55 dB (3.33%)

2024/1/2 14:59 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

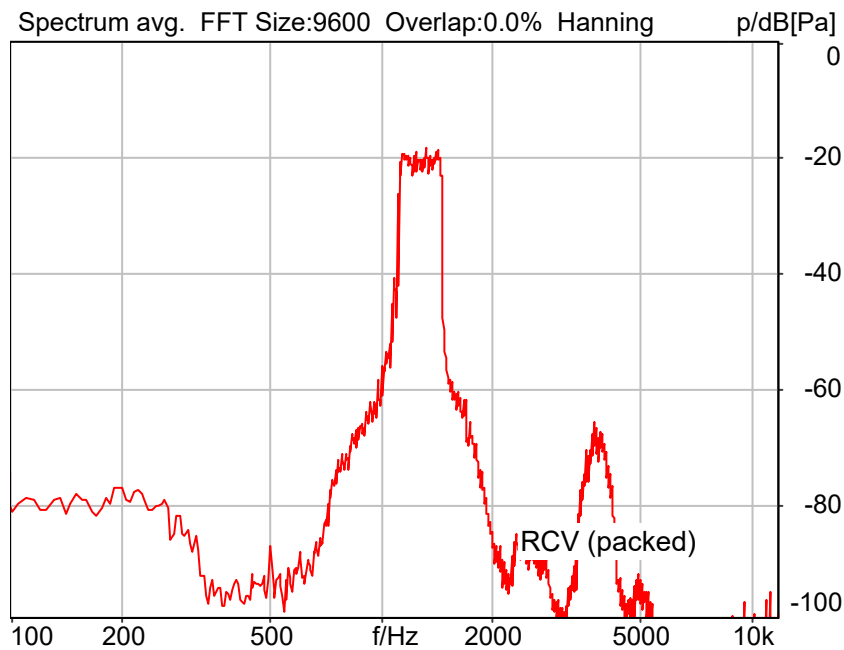
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;2Mbps



Distortion (Noise) RCV (packed): 30.26 dB (3.07%)

2024/1/2 15:05 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

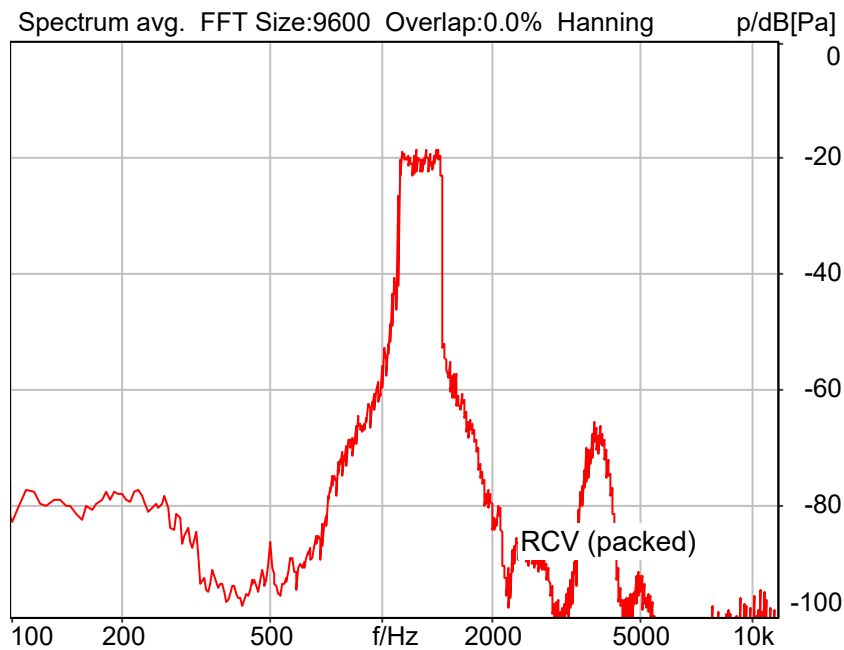
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 29.90 dB (3.20%)

2024/1/2 15:11 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

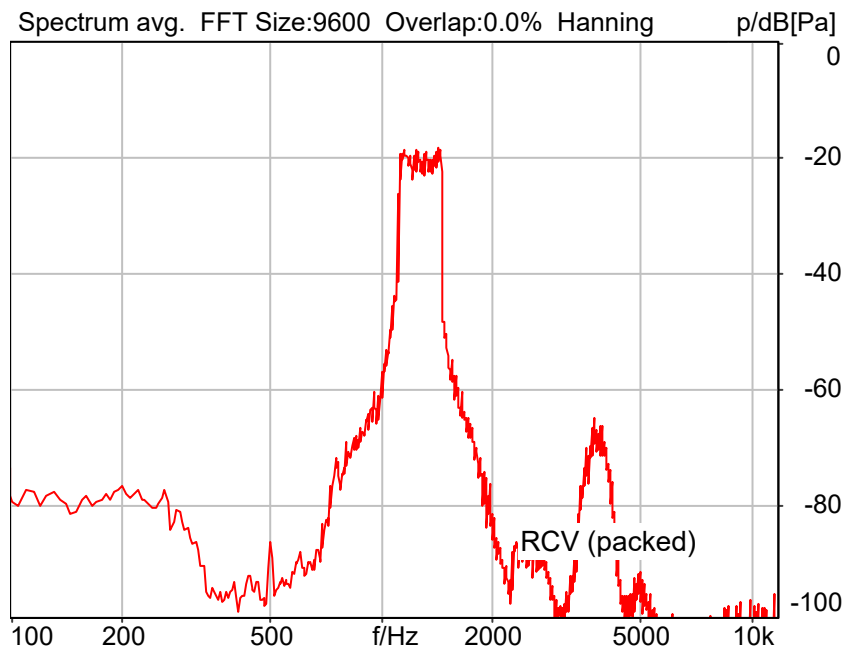
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1250Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 29.11 dB (3.51%)

2024/1/2 15:17 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1250hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1085.0 Hz
Stimulus min.	1085.0 Hz	Stimulus max.	1450.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1080.0 Hz
Analysis (2) min.	1455.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO31_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

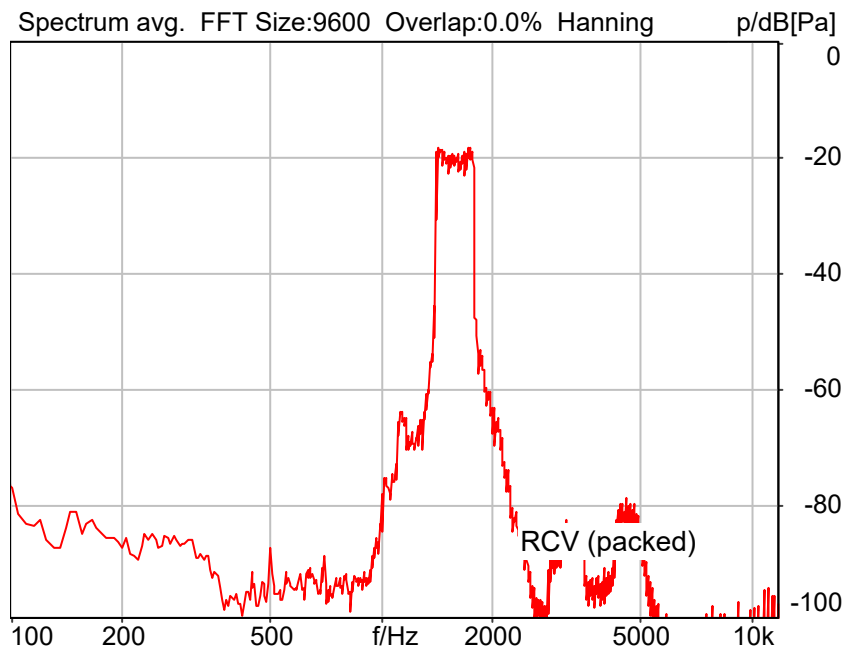
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 38.08 dB (1.25%)

2024/1/2 8:53 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

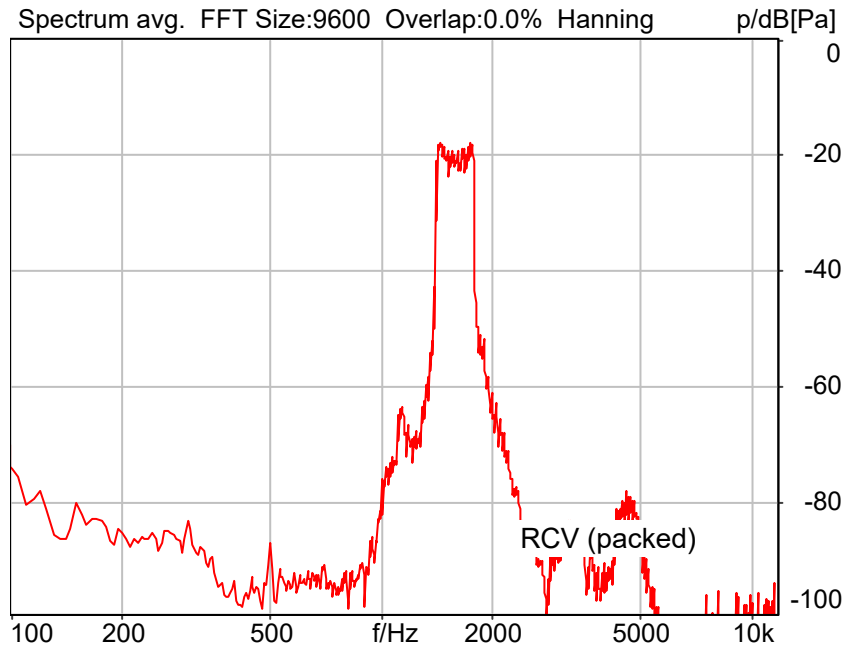
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 36.32 dB (1.53%)

2024/1/2 9:01 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

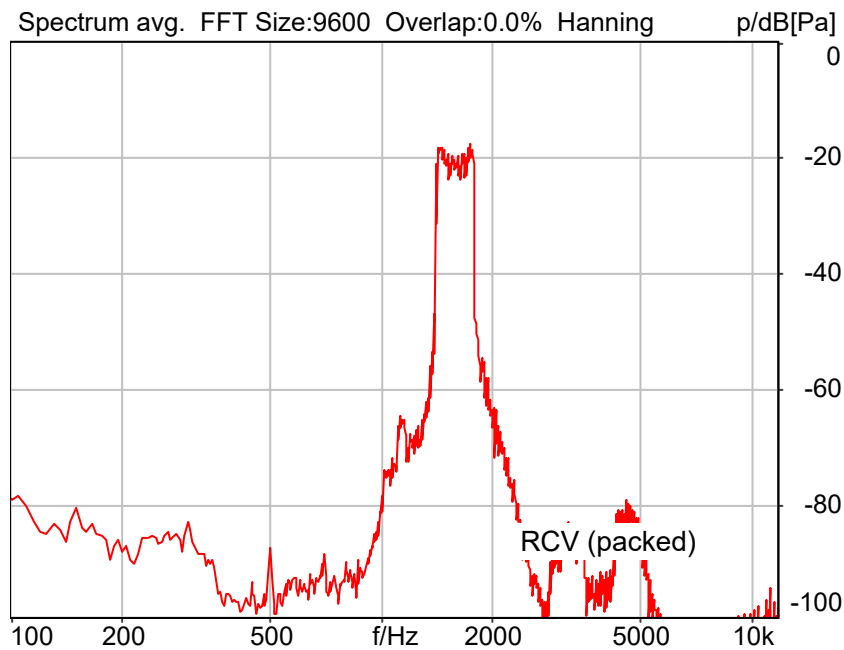
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 38.31 dB (1.22%)

2024/1/2 9:06 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1375.0 Hz
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

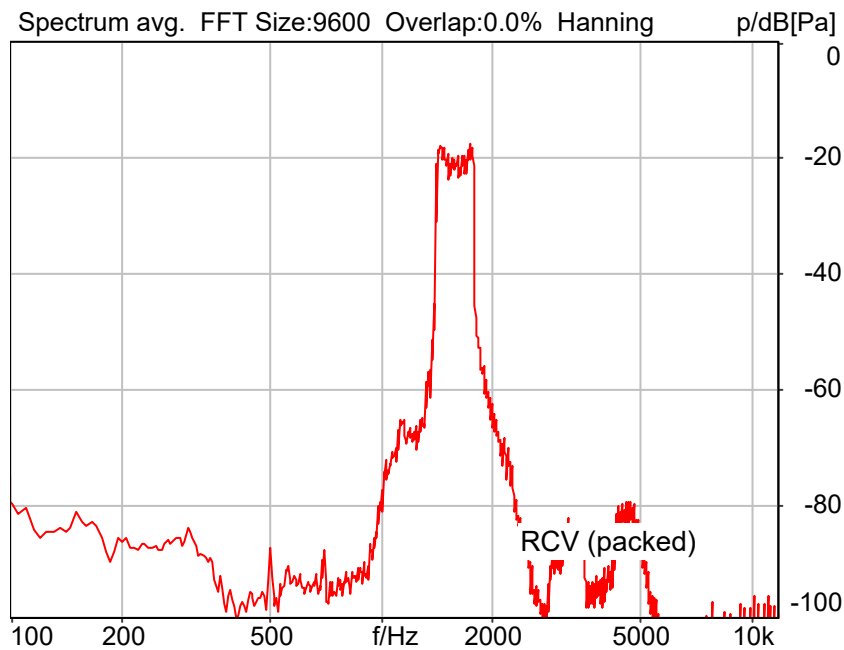
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 37.41 dB (1.35%)

2024/1/2 9:11 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1375.0 Hz
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

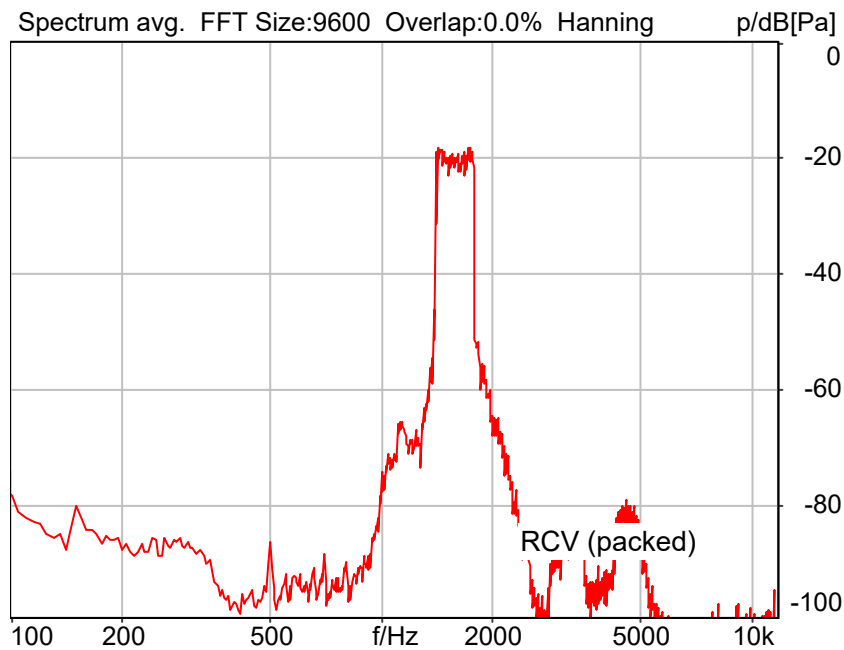
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 38.55 dB (1.18%)

2024/1/2 9:17 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

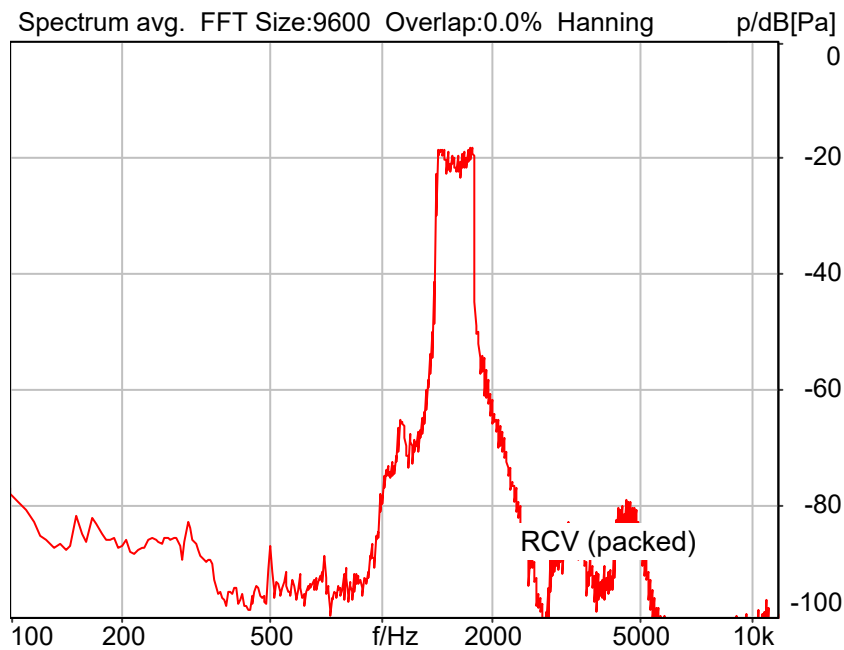
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 36.90 dB (1.43%)

2024/1/2 9:22 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

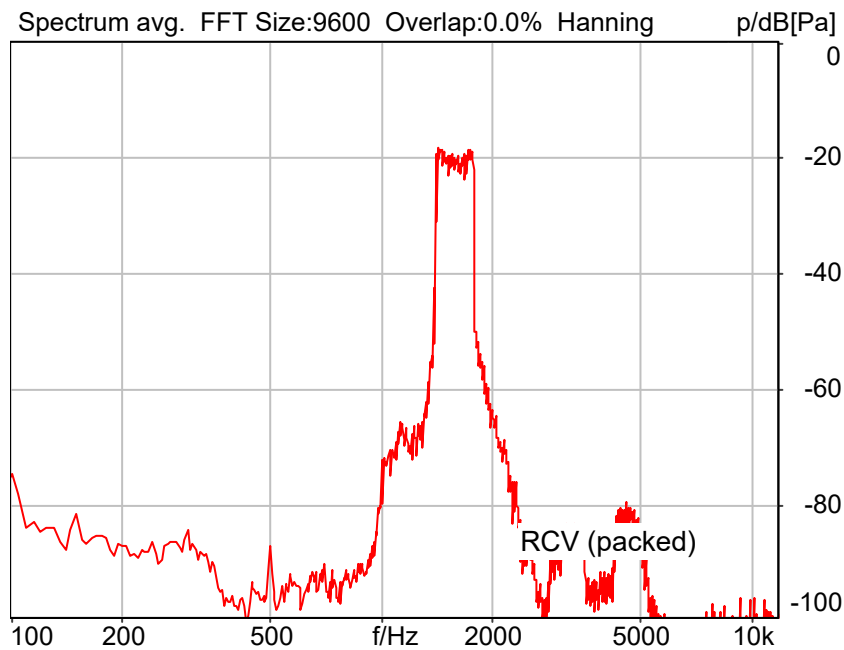
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 38.01 dB (1.26%)

2024/1/2 9:27 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1375.0 Hz
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

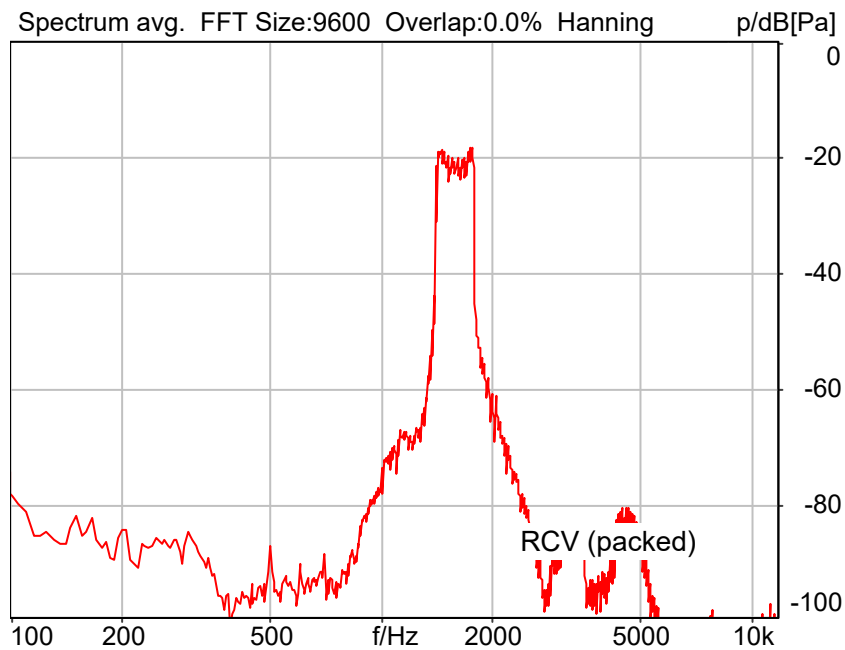
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 36.44 dB (1.51%)

2024/1/2 14:36 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1375.0 Hz
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

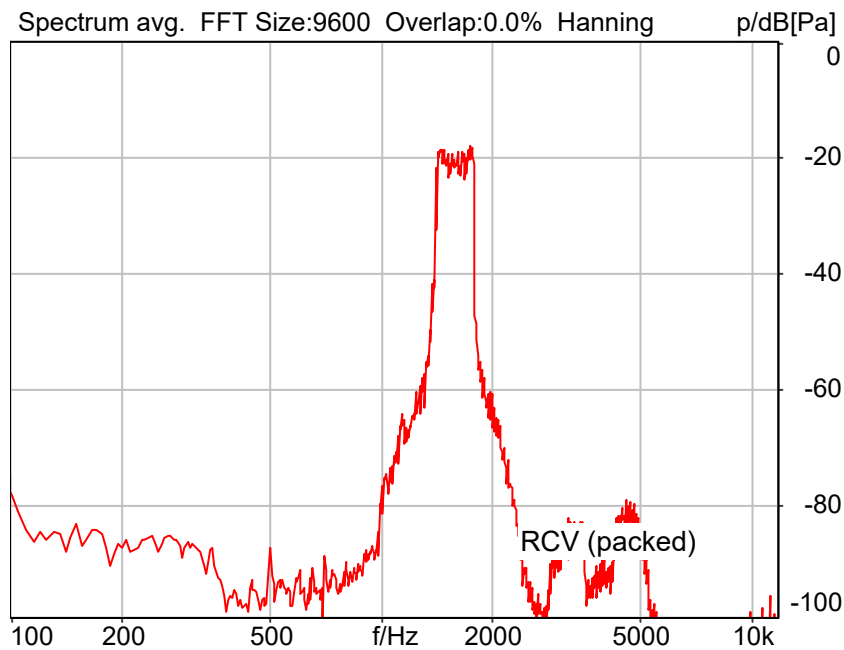
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



Distortion (Noise) RCV (packed): 36.15 dB (1.56%)

2024/1/2 14:59 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1375.0 Hz
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

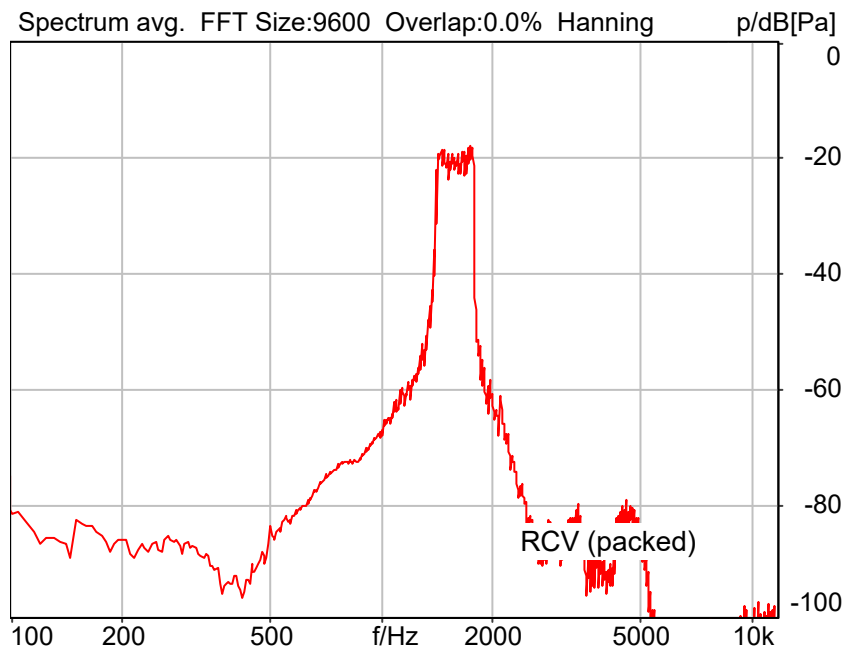
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
DSSS;2Mbps



Distortion (Noise) RCV (packed): 32.47 dB (2.38%)

2024/1/2 15:05 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

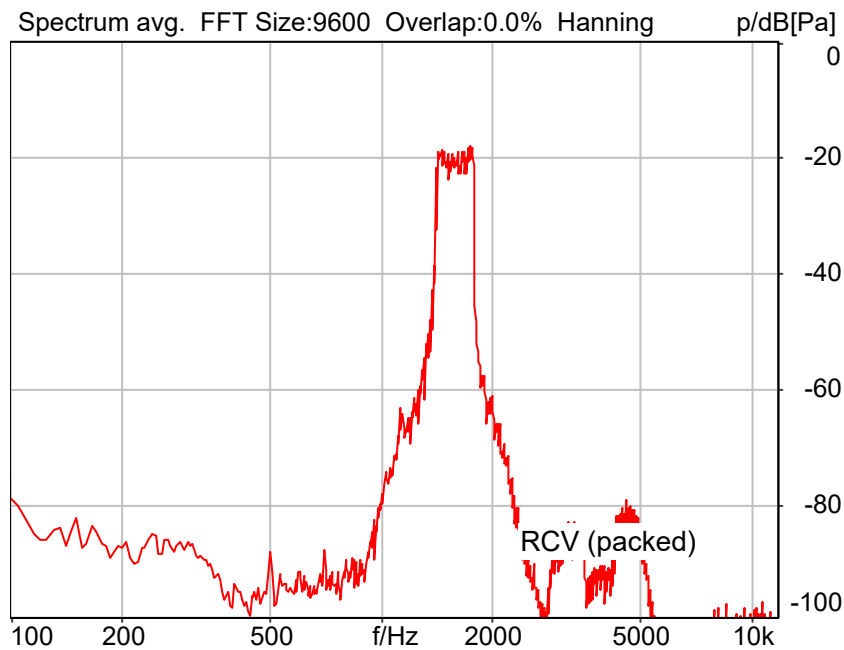
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 35.77 dB (1.63%)

2024/1/2 15:11 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1375.0 Hz
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

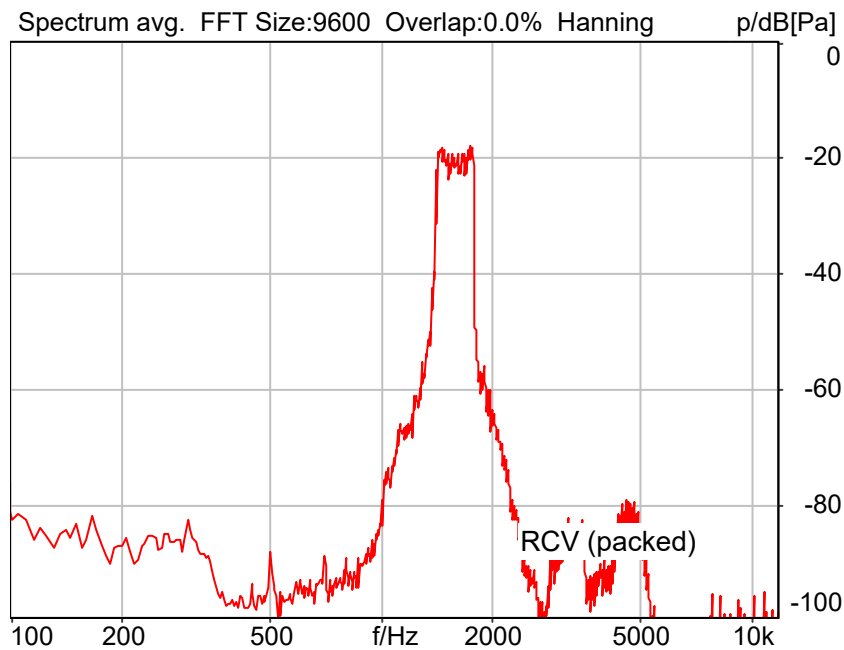
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 1600Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 35.67 dB (1.65%)

2024/1/2 15:18 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_1600hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	1375.0 Hz	Stimulus max.	1815.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1370.0 Hz
Analysis (2) min.	1820.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO32_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

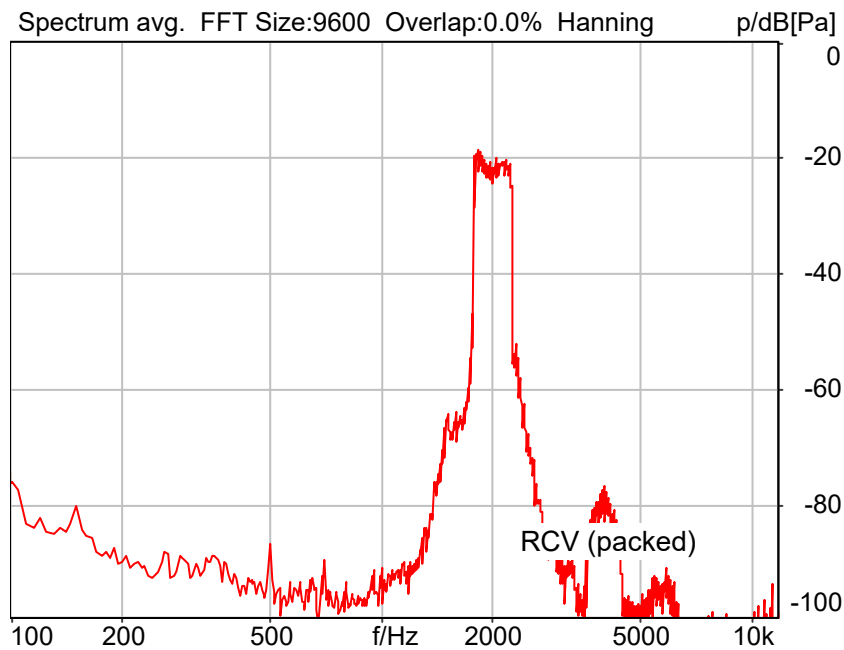
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 38.16 dB (1.24%)

2024/1/2 8:54 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

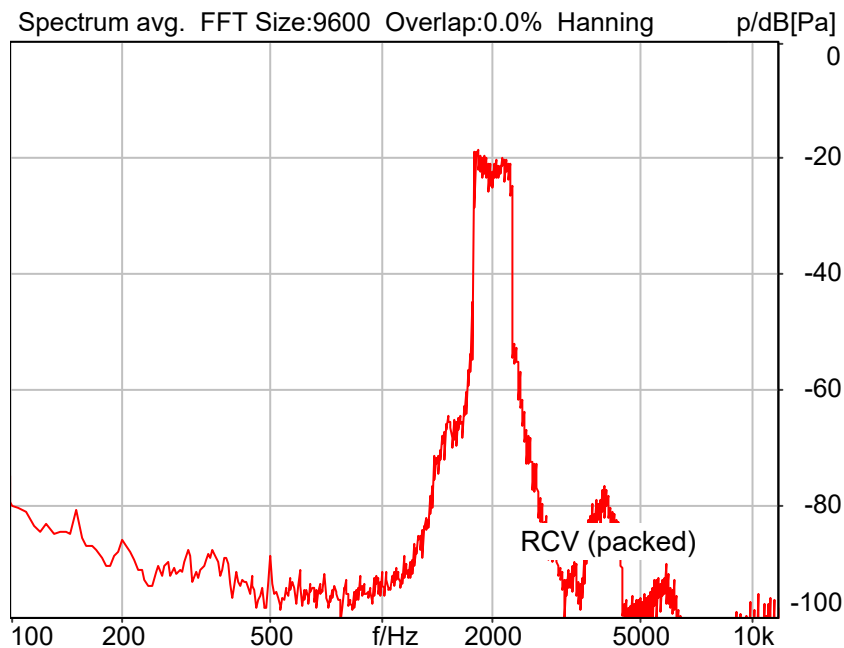
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 37.79 dB (1.29%)

2024/1/2 9:01 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

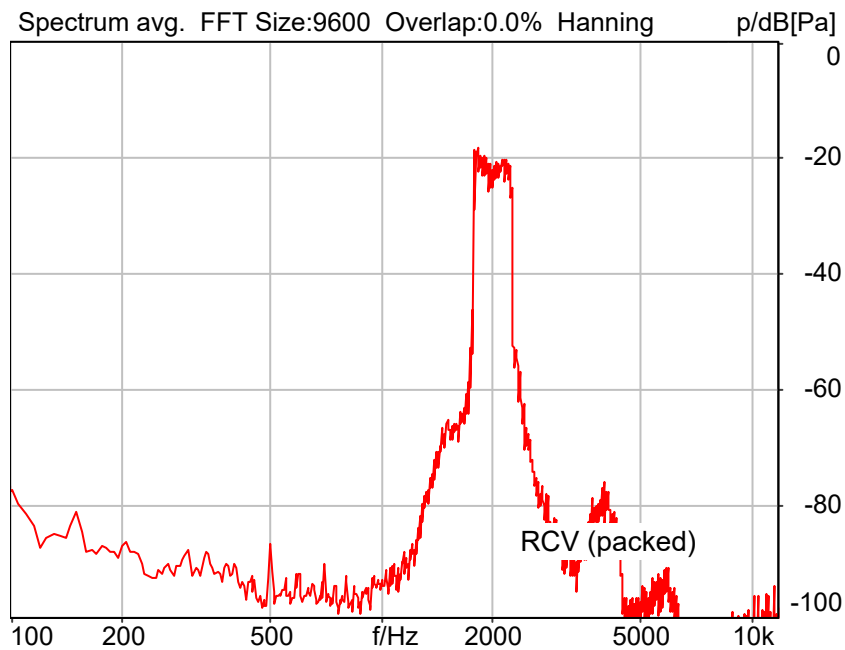
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 37.87 dB (1.28%)

2024/1/2 9:06 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

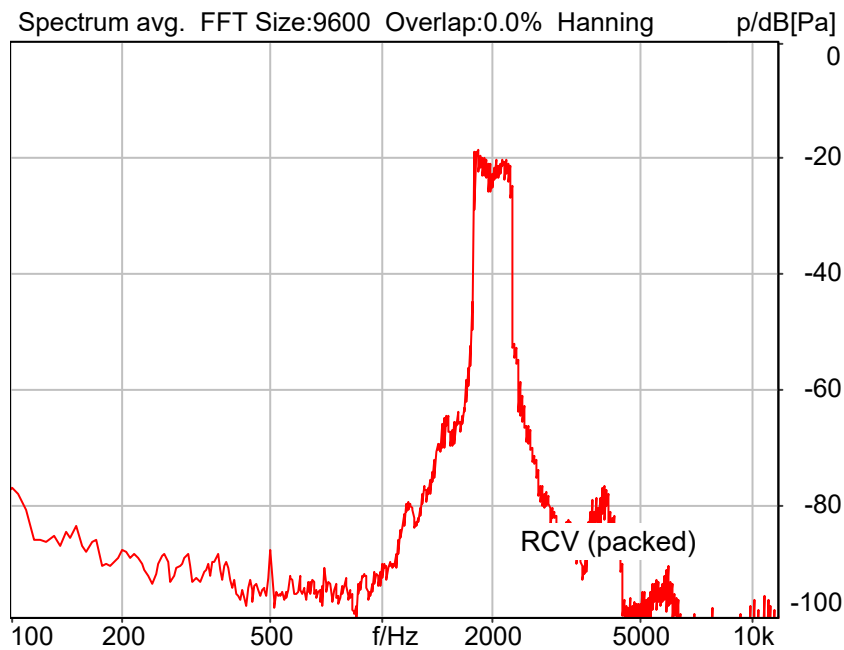
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 37.04 dB (1.41%)

2024/1/2 9:12 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

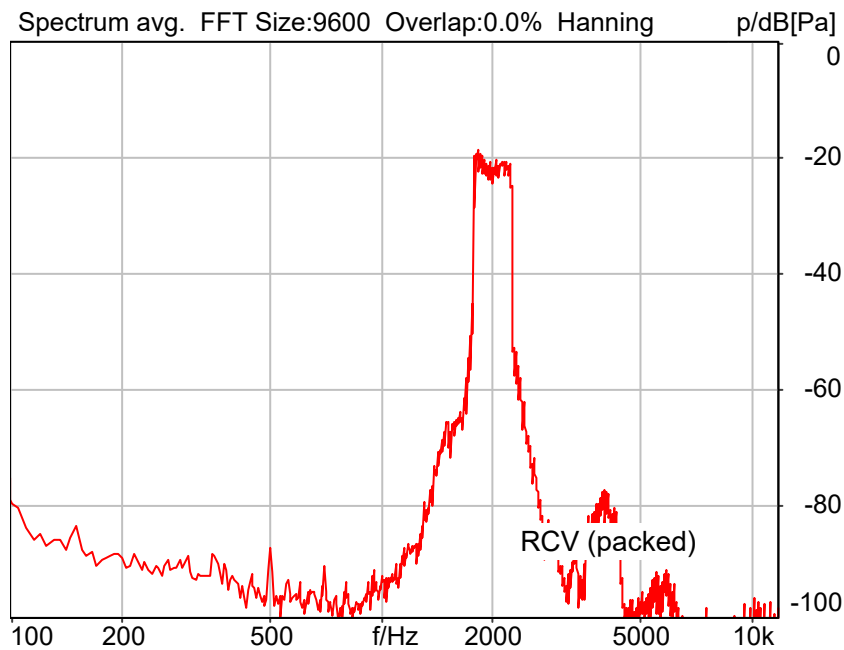
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 37.90 dB (1.27%)

2024/1/2 9:17 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

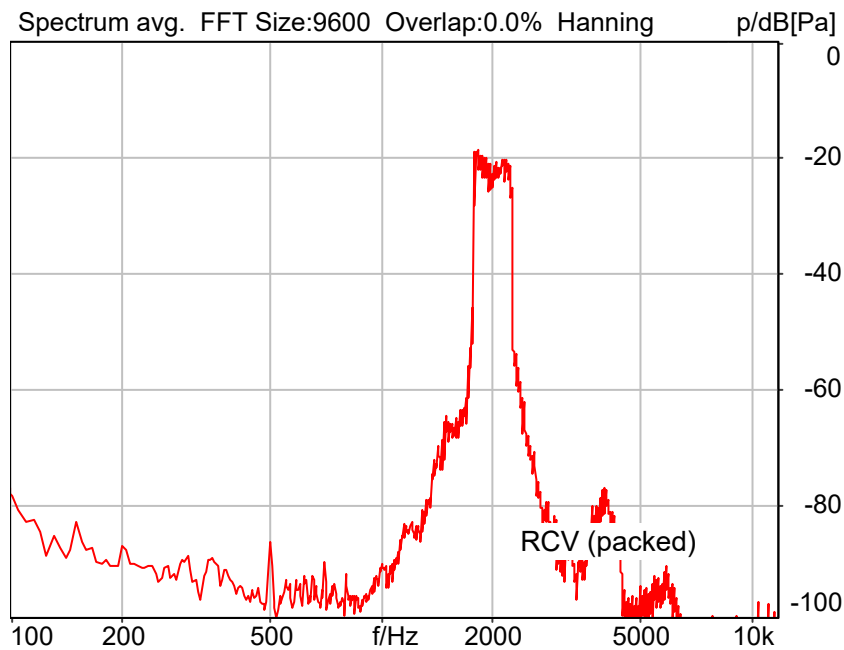
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 37.74 dB (1.30%)

2024/1/2 9:22 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

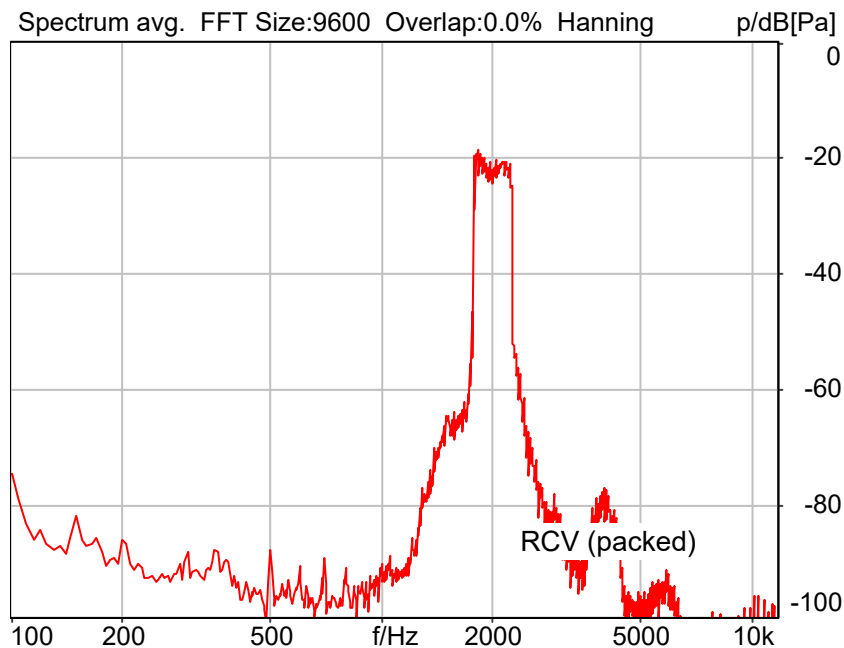
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 37.91 dB (1.27%)

2024/1/2 9:28 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

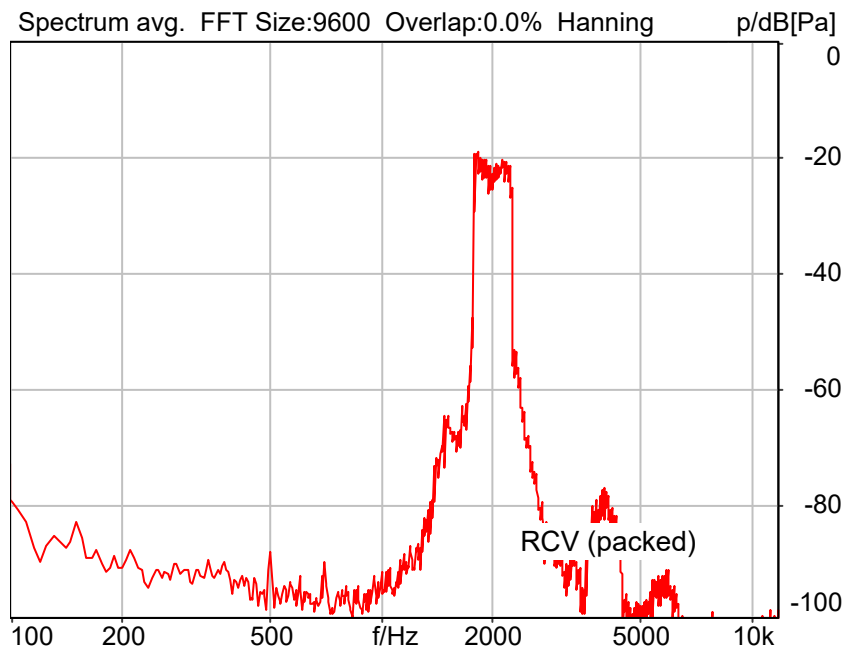
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 38.42 dB (1.20%)

2024/1/2 14:37 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

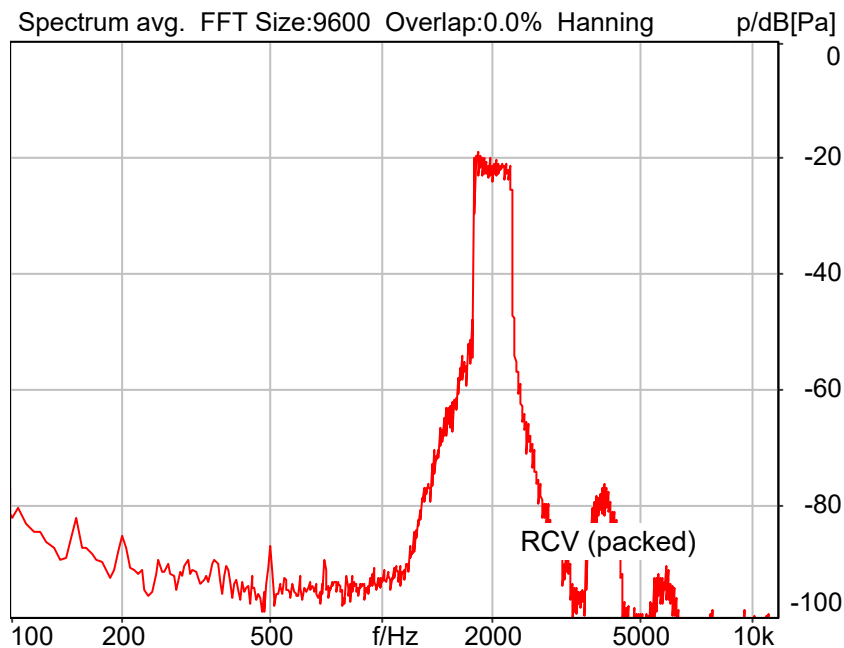
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



Distortion (Noise) RCV (packed): 34.99 dB (1.78%)

2024/1/2 14:59 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

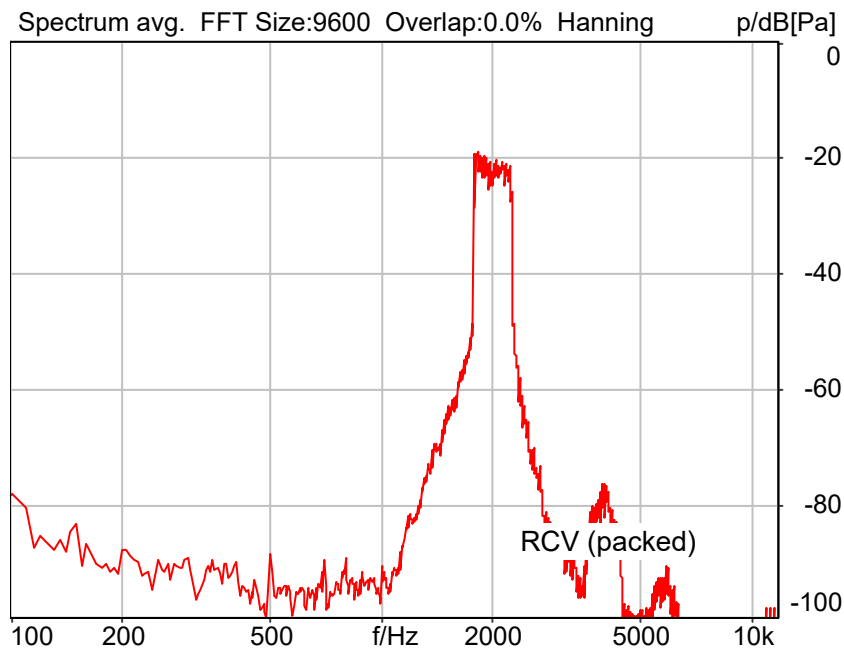
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
DSSS;2Mbps



Distortion (Noise) RCV (packed): 35.05 dB (1.77%)

2024/1/2 15:06 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

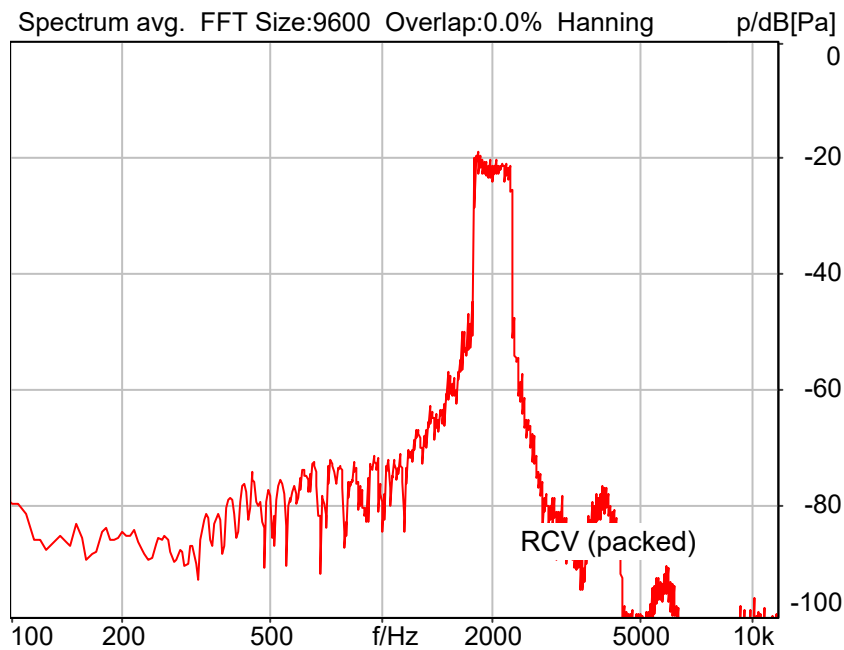
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 32.44 dB (2.39%)

2024/1/2 15:12 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

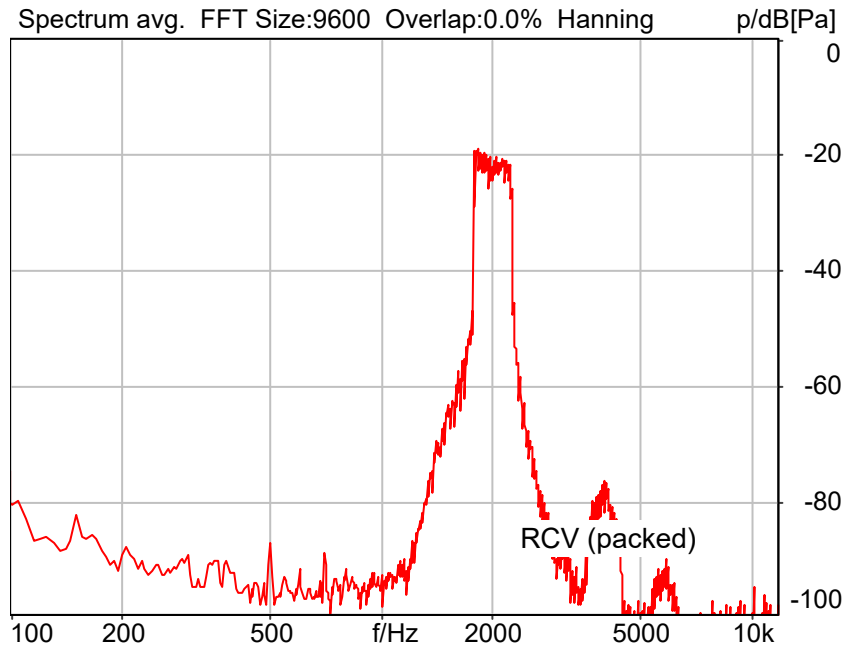
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2000Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 35.06 dB (1.77%)

2024/1/2 15:18 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2000hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	1745.0 Hz
Stimulus min.	1745.0 Hz	Stimulus max.	2275.0 Hz

Analysis min.	100.0 Hz	Analysis max.	1740.0 Hz
Analysis (2) min.	2280.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO33_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

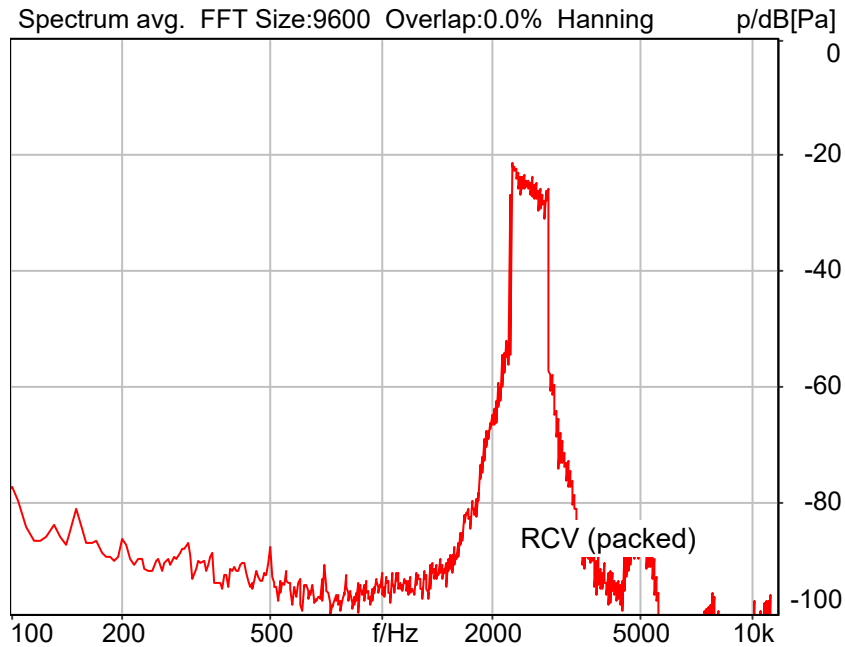
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 34.40 dB (1.90%)

2024/1/2 8:54 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

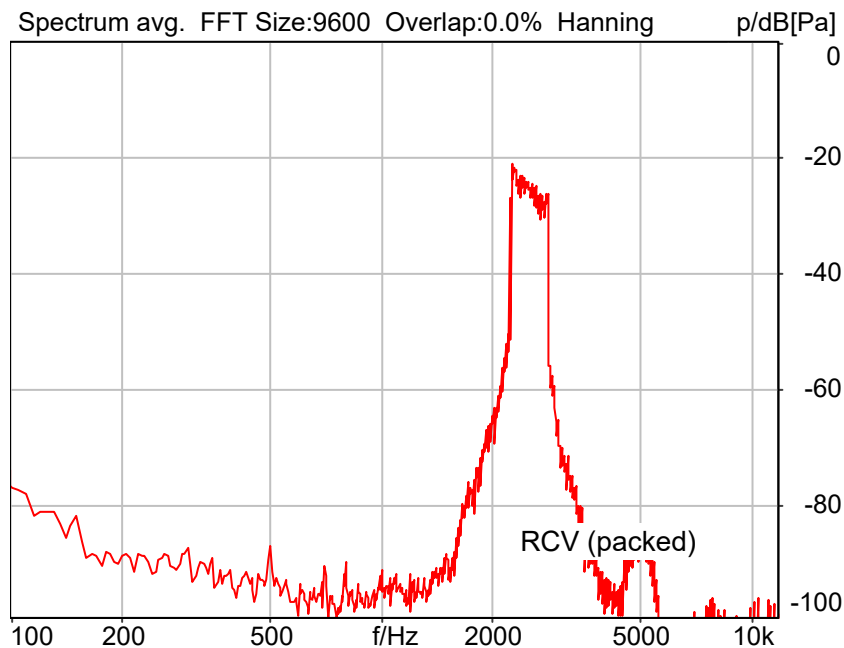
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



Distortion (Noise) RCV (packed): 33.86 dB (2.03%)

2024/1/2 9:01 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

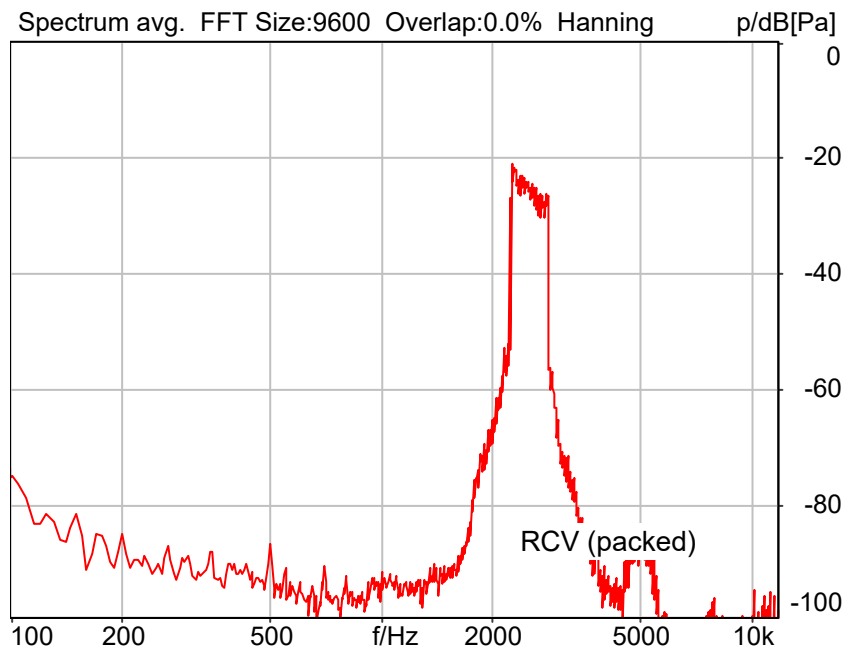
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 34.54 dB (1.88%)

2024/1/2 9:07 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2205.0 Hz
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

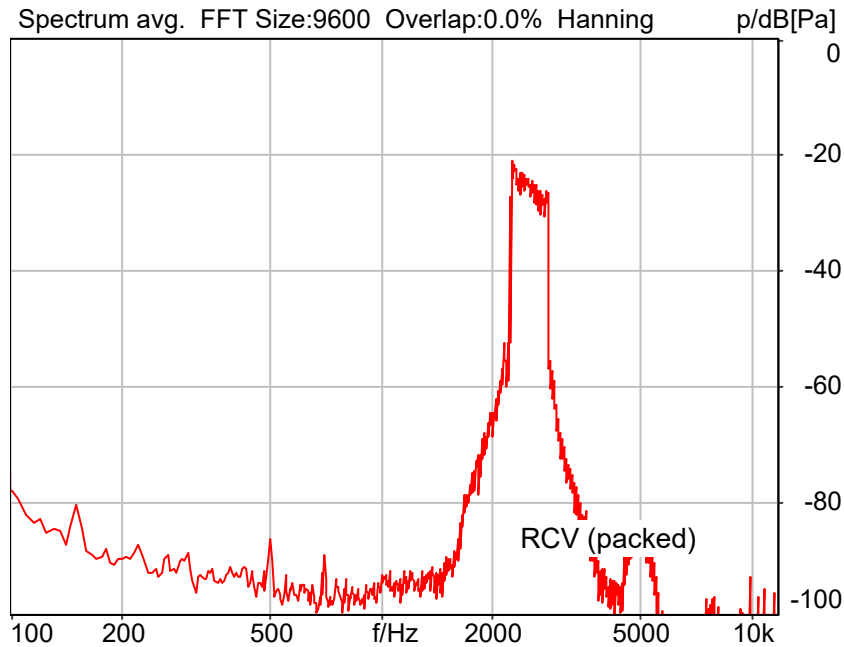
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 34.64 dB (1.85%)

2024/1/2 9:12 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2205.0 Hz
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

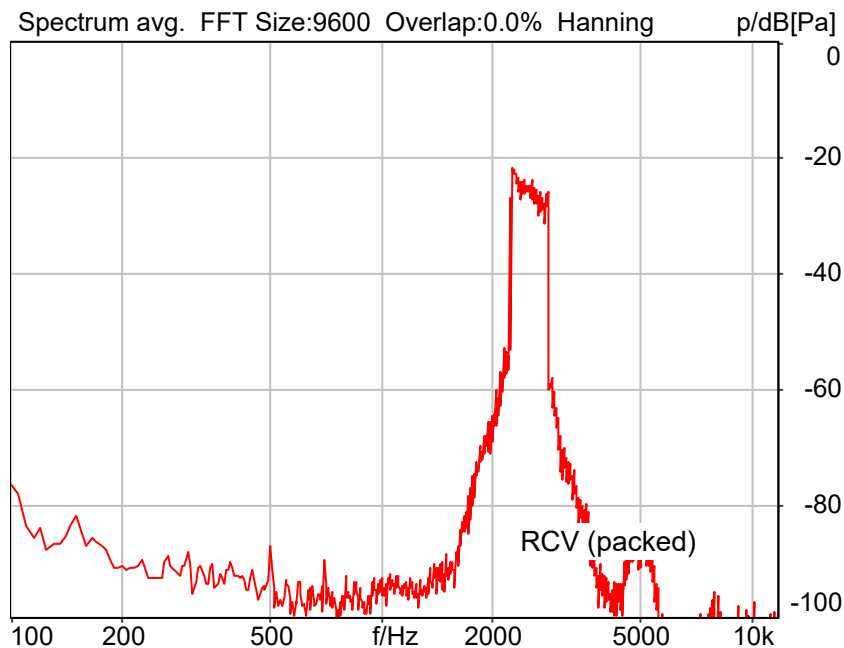
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



Distortion (Noise) RCV (packed): 34.67 dB (1.85%)

2024/1/2 9:17 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

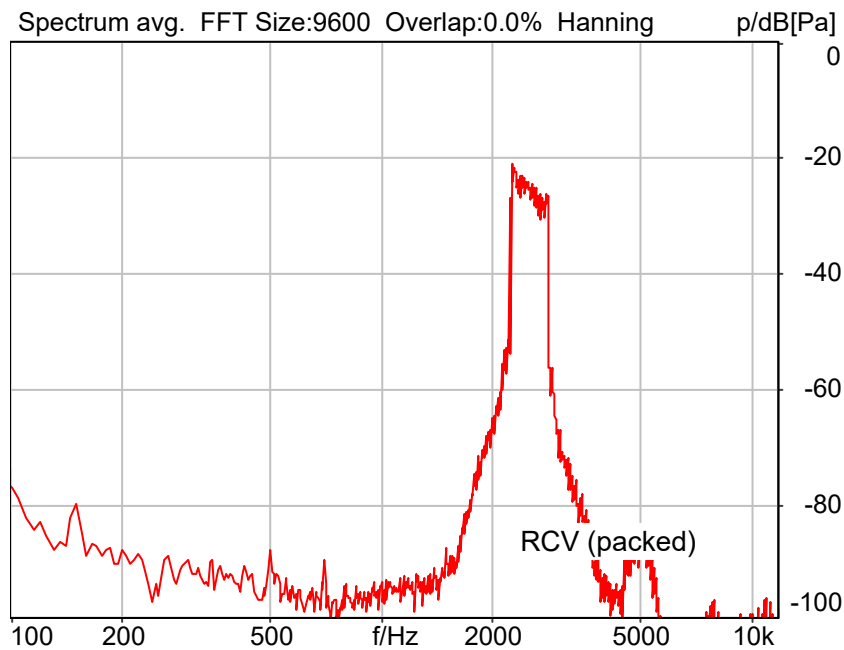
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



Distortion (Noise) RCV (packed): 34.11 dB (1.97%)

2024/1/2 9:23 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2205.0 Hz
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

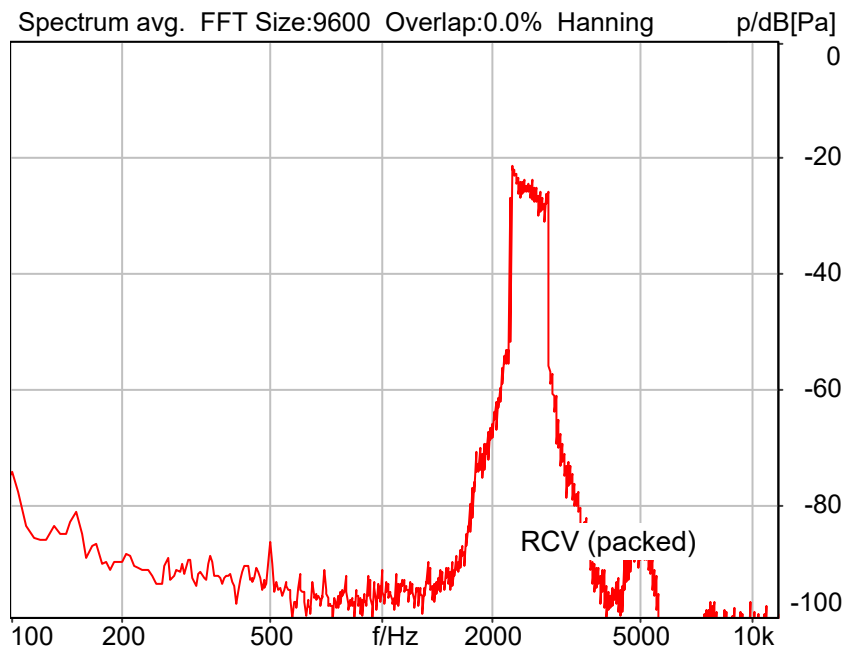
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



Distortion (Noise) RCV (packed): 34.18 dB (1.95%)

2024/1/2 9:28 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

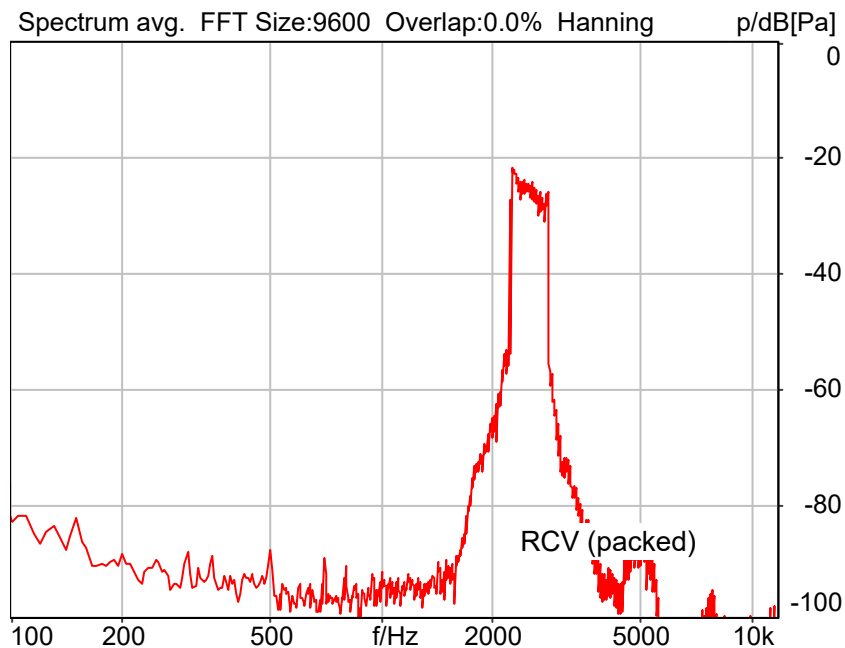
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 34.52 dB (1.88%)

2024/1/2 14:37 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2205.0 Hz
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

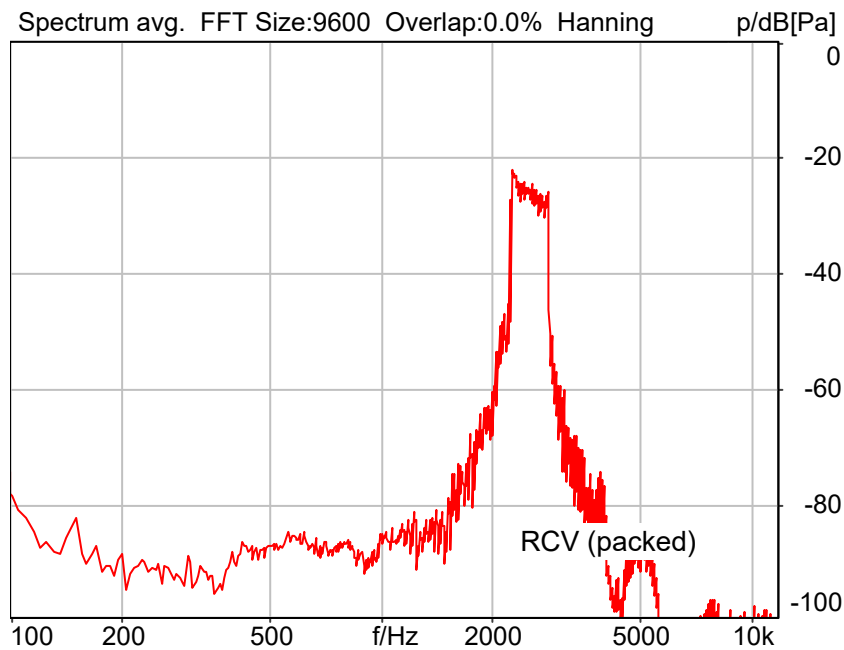
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



Distortion (Noise) RCV (packed): 28.21 dB (3.89%)

2024/1/2 15:00 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2205.0 Hz
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

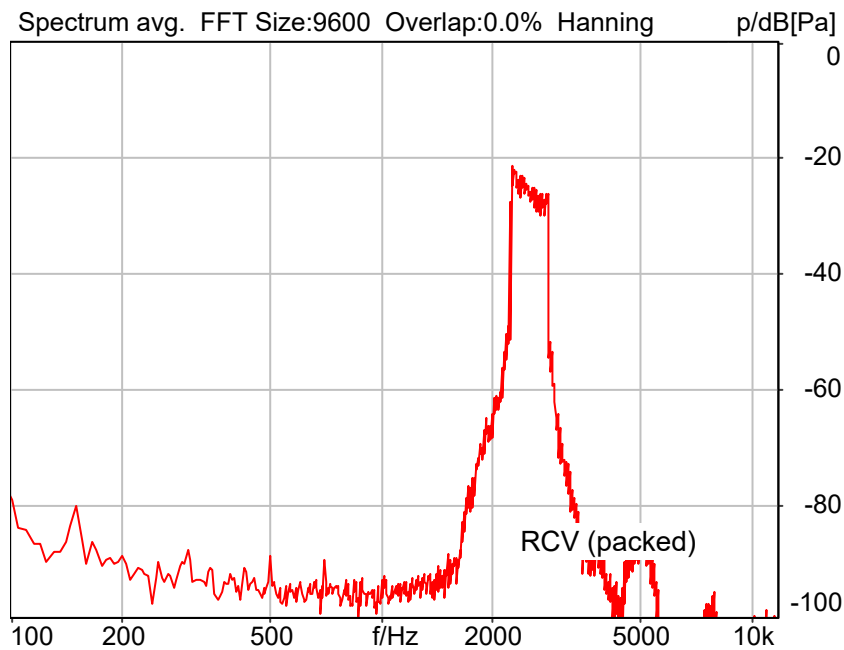
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
DSSS;2Mbps



Distortion (Noise) RCV (packed): 32.44 dB (2.39%)

2024/1/2 15:06 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2205.0 Hz
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

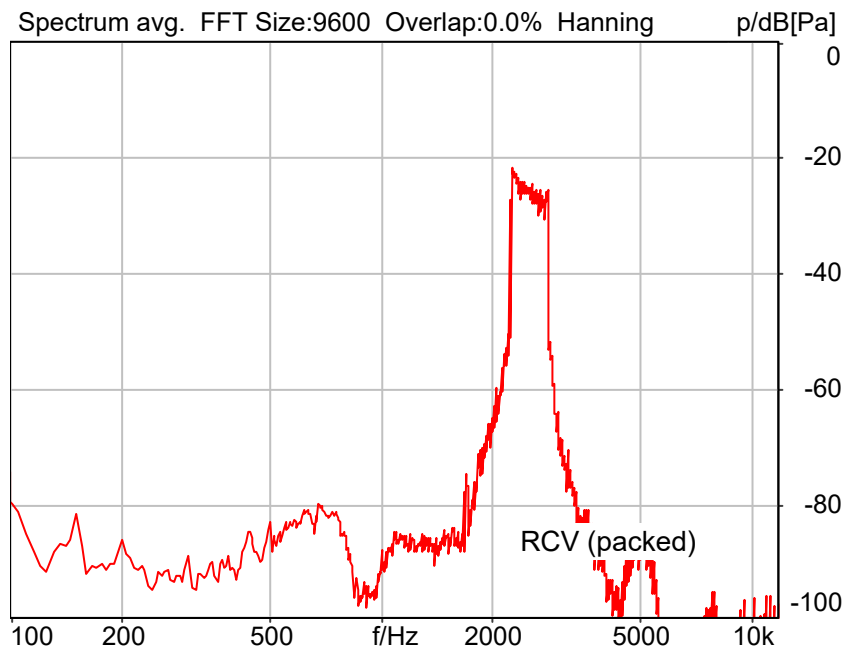
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 32.95 dB (2.25%)

2024/1/2 15:12 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2205.0 Hz
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

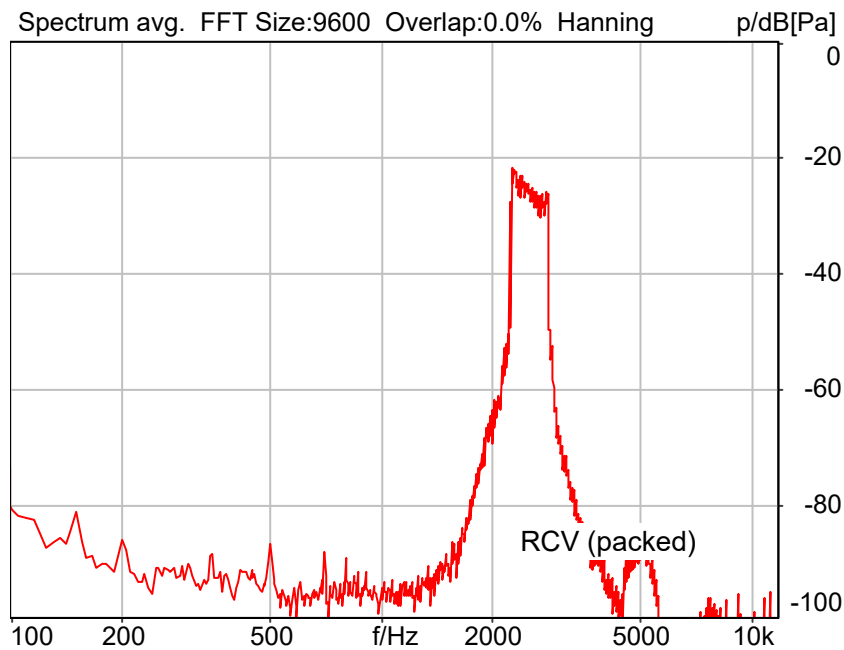
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 2500Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 32.80 dB (2.29%)

2024/1/2 15:18 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_2500hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2205.0 Hz
Stimulus min.	2205.0 Hz	Stimulus max.	2855.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2200.0 Hz
Analysis (2) min.	2860.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO34_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

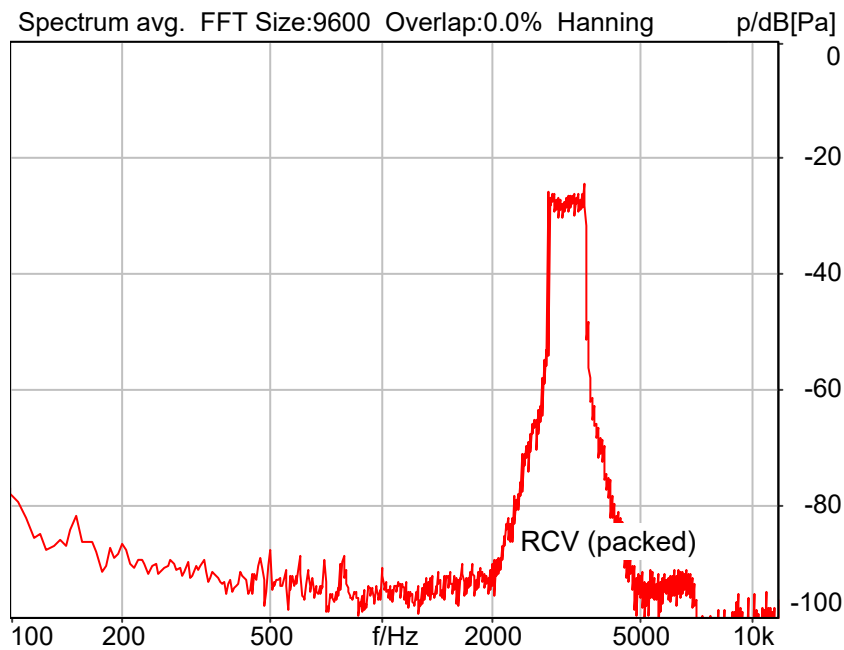
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;6Mbps



Distortion (Noise) RCV (packed): 31.85 dB (2.56%)

2024/1/2 8:55 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

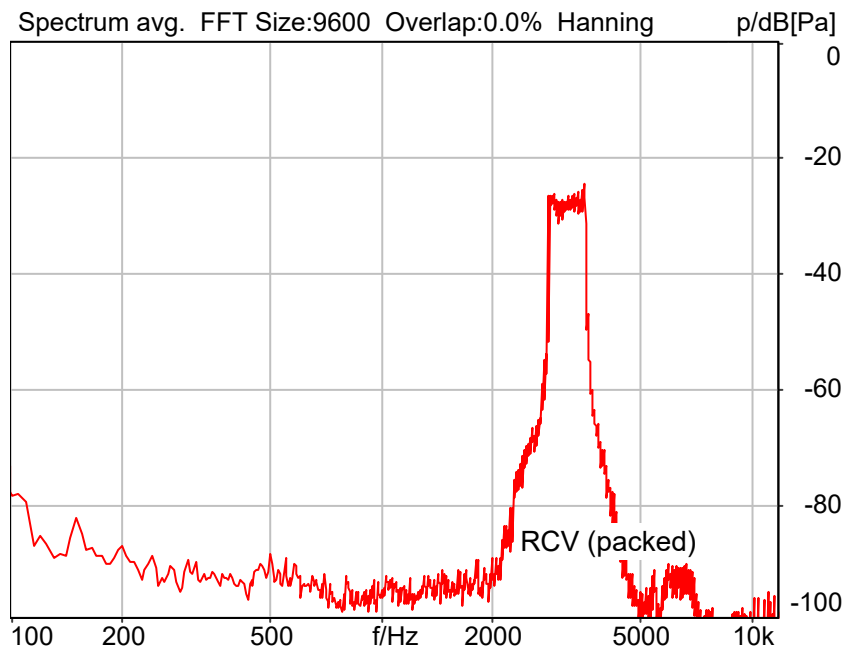
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
BPSK;9Mbps



2024/1/2 9:02 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat
Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))
Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

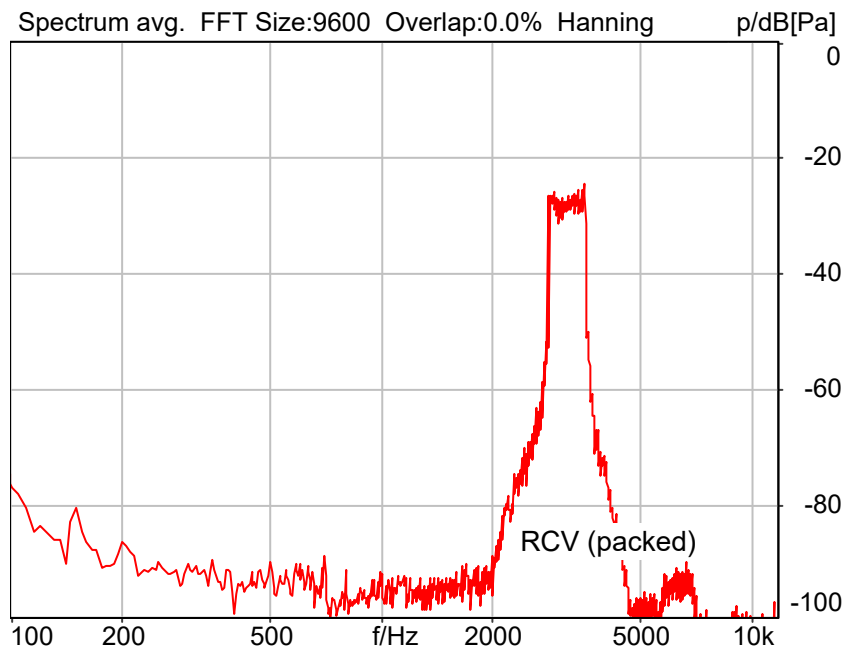
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;12Mbps



Distortion (Noise) RCV (packed): 31.94 dB (2.53%)

2024/1/2 9:07 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2785.0 Hz
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

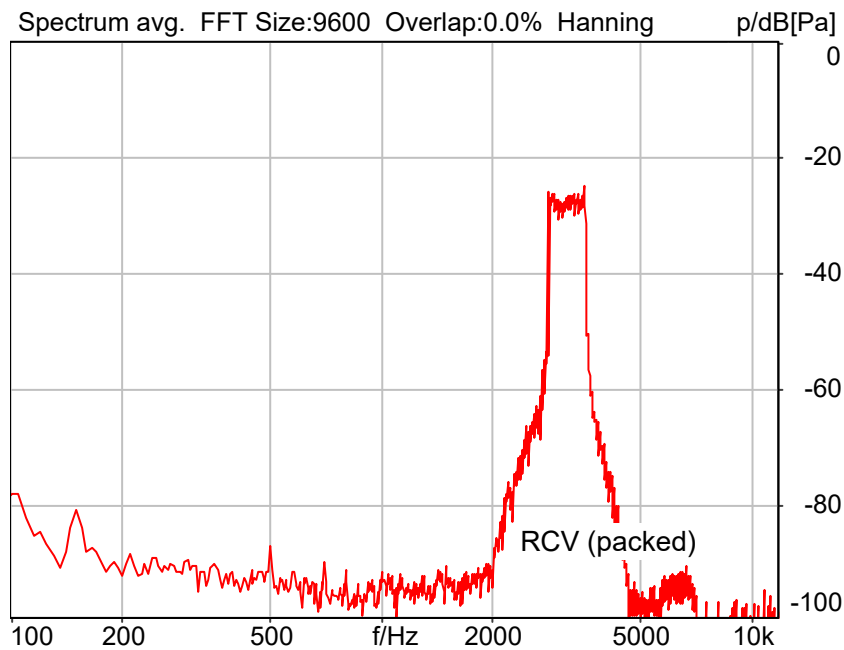
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
QPSK;18Mbps



Distortion (Noise) RCV (packed): 31.81 dB (2.57%)

2024/1/2 9:12 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

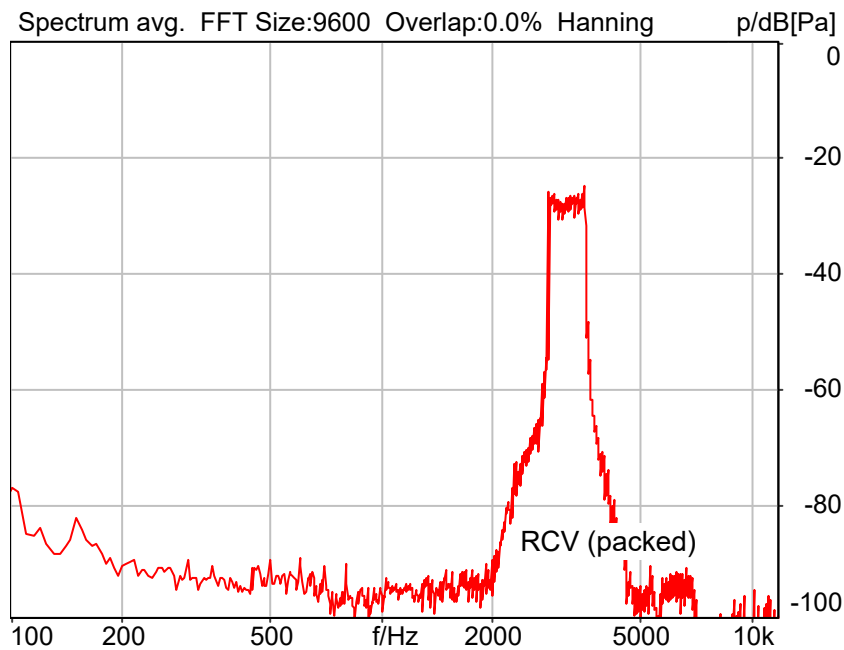
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;24Mbps



2024/1/2 9:18 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2785.0 Hz
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

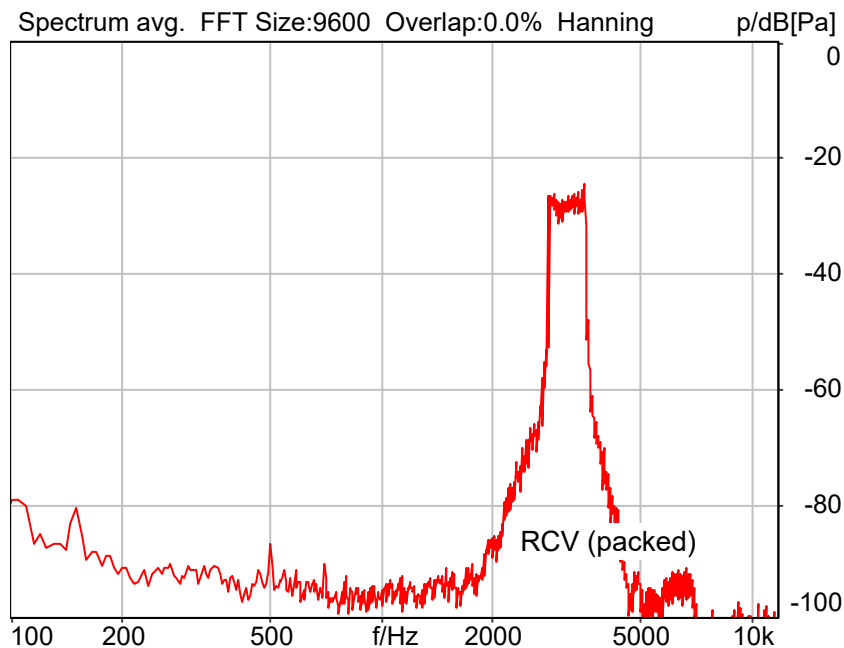
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
16QAM;36Mbps



2024/1/2 9:23 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2785.0 Hz
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

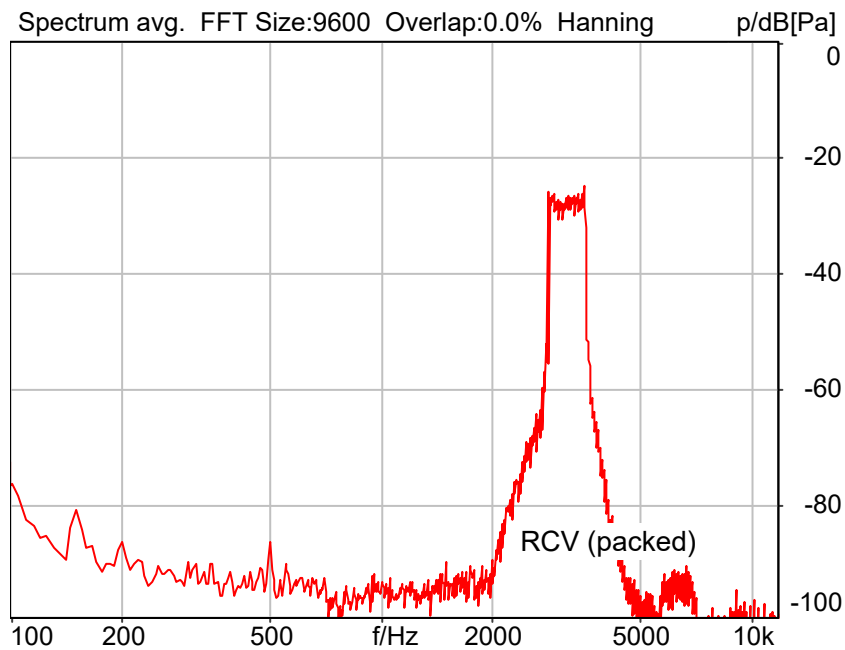
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;48Mbps



2024/1/2 9:28 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2785.0 Hz
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

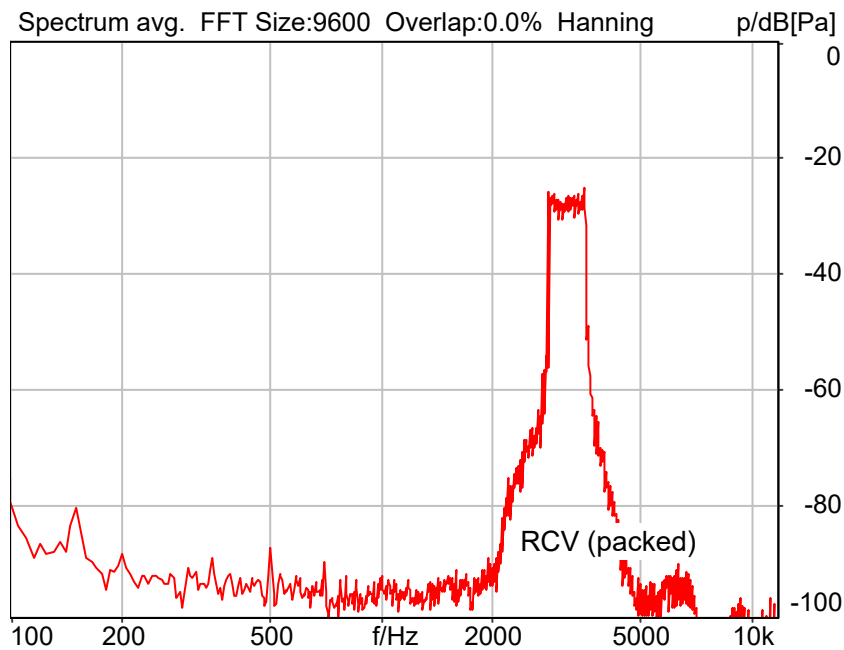
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
64QAM;54Mbps



Distortion (Noise) RCV (packed): 31.82 dB (2.56%)

2024/1/2 14:37 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

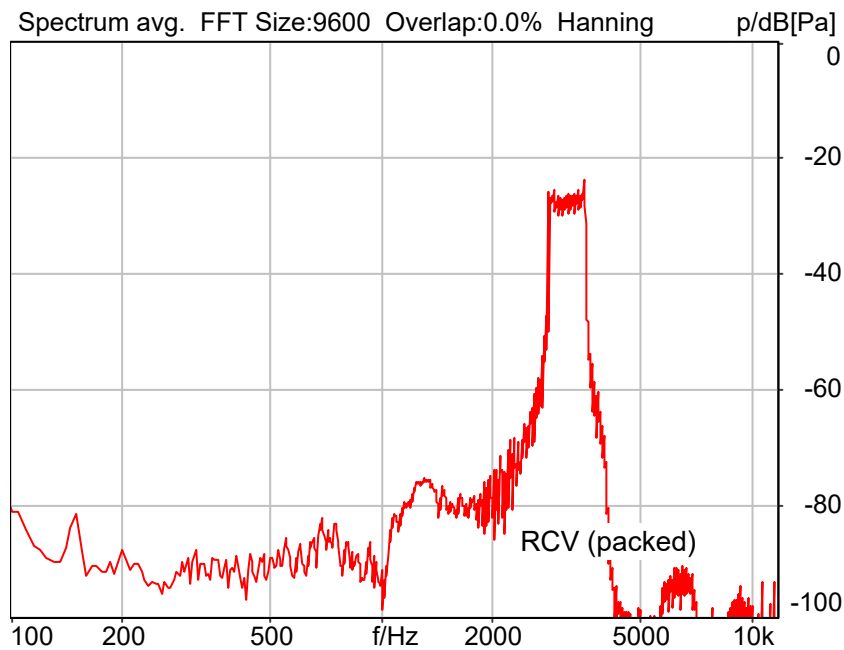
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps



2024/1/2 15:00 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2785.0 Hz
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

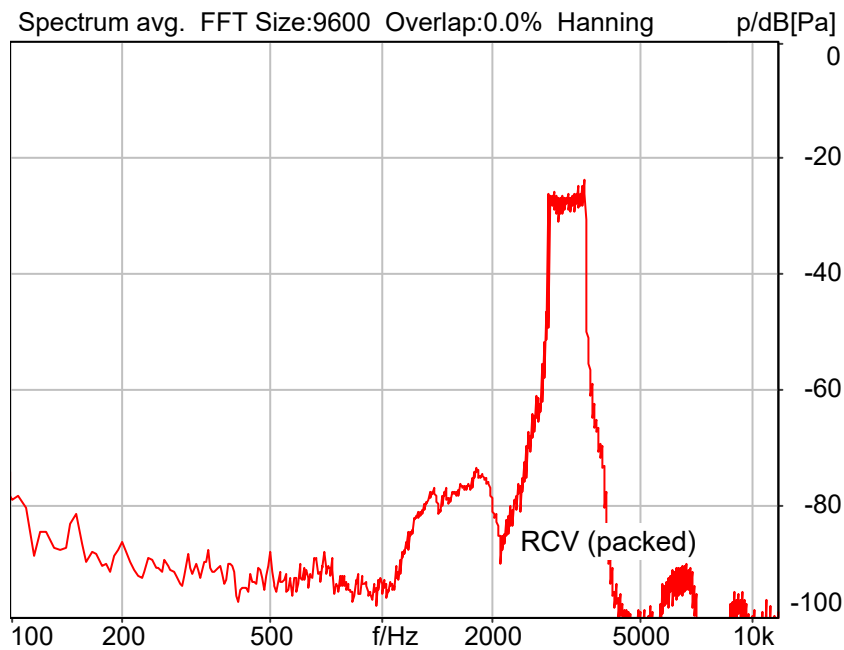
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;2Mbps



Distortion (Noise) RCV (packed): 31.66 dB (2.61%)

2024/1/2 15:06 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2	Range length	200.00 ms
Range start	13550.00 ms	Sequence length	400.00 ms
Number of seq.	10	FIR filter	drp2ff_ieee1652
Use FIR Filter	Ch2	DRP/ERP Ch.2:	Off
DRP/ERP Ch.1:	Off	Frequency base	Transformation
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting	Stimulus min.	2785.0 Hz
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

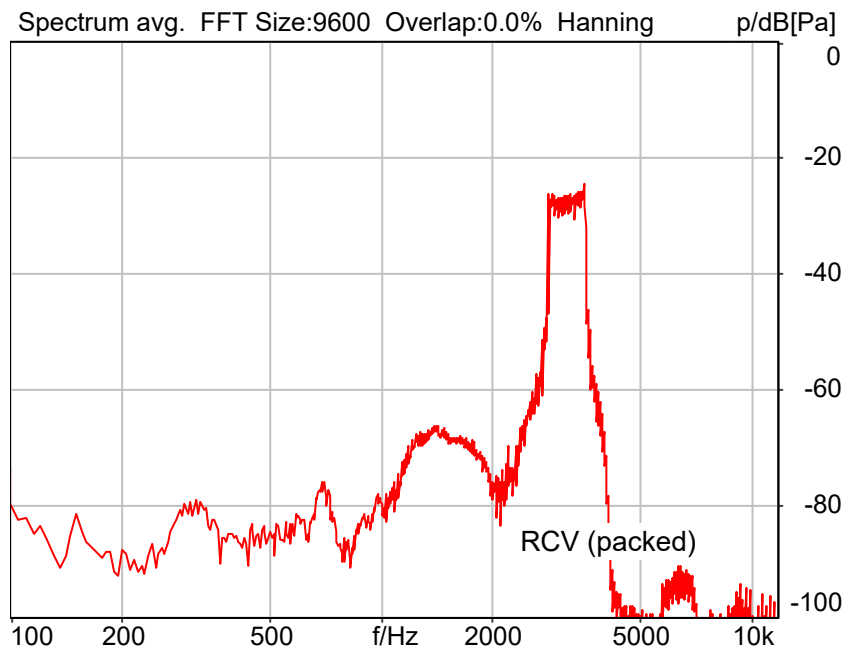
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;5.5Mbps



Distortion (Noise) RCV (packed): 27.67 dB (4.14%)

2024/1/2 15:12 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

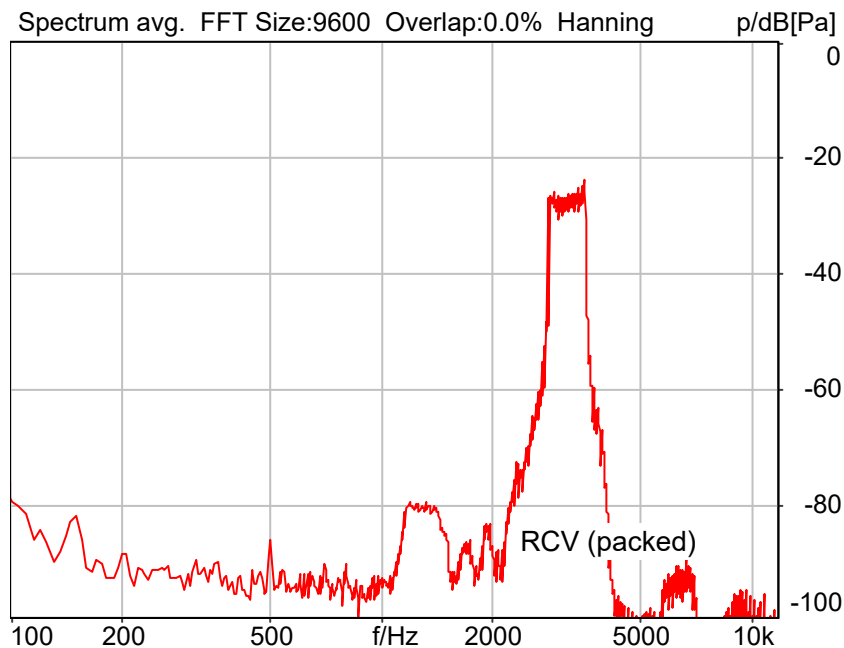
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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Receive path - distortion and noise 3150Hz WB&NB (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise
CCK;11Mbps



Distortion (Noise) RCV (packed): 29.99 dB (3.17%)

2024/1/2 15:19 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: act_rpn_b250ms_3150hz_sr20dbm0_v02.dat

Level adj. Ch1 -90.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction	Out 2 -> In 2		
Range start	13550.00 ms	Range length	200.00 ms
Number of seq.	10	Sequence length	400.00 ms
Use FIR Filter	Ch2	FIR filter	drp2ff_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	Transformation		
FFT size	9600	Overlap	0 %
Window function.	Hanning	Smooth	Off
dB weighting	A Weighting		
Stimulus min.	2785.0 Hz	Stimulus max.	3585.0 Hz

Analysis min.	100.0 Hz	Analysis max.	2780.0 Hz
Analysis (2) min.	3590.0 Hz	Analysis (2) max.	8000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
 Store to variable ISO35_16_SDNR

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

BPSK;6Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	34.08	20	320...480 Hz	Pass
4	iso27_16_SDNR	32.93	20	410...595 Hz	Pass
5	iso28_16_SDNR	37.78	20	525...745 Hz	Pass
6	iso29_16_SDNR	36.66	20	675...925 Hz	Pass
7	iso30_16_SDNR	38.94	20	855...1155 Hz	Pass
8	iso31_16_SDNR	30.88	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	38.08	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	38.16	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	34.4	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	31.85	20	2785...3585 Hz	Pass

2024/1/2 8:55 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

BPSK;9Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	31.95	20	320...480 Hz	Pass
4	iso27_16_SDNR	31.74	20	410...595 Hz	Pass
5	iso28_16_SDNR	39.38	20	525...745 Hz	Pass
6	iso29_16_SDNR	37.18	20	675...925 Hz	Pass
7	iso30_16_SDNR	38.16	20	855...1155 Hz	Pass
8	iso31_16_SDNR	31.44	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	36.32	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	37.79	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	33.86	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	30.94	20	2785...3585 Hz	Pass

2024/1/2 9:02 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

QPSK;12Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	29.22	20	320...480 Hz	Pass
4	iso27_16_SDNR	32.54	20	410...595 Hz	Pass
5	iso28_16_SDNR	35.58	20	525...745 Hz	Pass
6	iso29_16_SDNR	37.87	20	675...925 Hz	Pass
7	iso30_16_SDNR	37.46	20	855...1155 Hz	Pass
8	iso31_16_SDNR	30.26	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	38.31	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	37.87	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	34.54	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	31.94	20	2785...3585 Hz	Pass

2024/1/2 9:07 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

QPSK;18Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	35.28	20	320...480 Hz	Pass
4	iso27_16_SDNR	37.5	20	410...595 Hz	Pass
5	iso28_16_SDNR	39.18	20	525...745 Hz	Pass
6	iso29_16_SDNR	37.61	20	675...925 Hz	Pass
7	iso30_16_SDNR	38.91	20	855...1155 Hz	Pass
8	iso31_16_SDNR	30.48	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	37.41	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	37.04	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	34.64	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	31.81	20	2785...3585 Hz	Pass

2024/1/2 9:12 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

16QAM;24Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	35.43	20	320...480 Hz	Pass
4	iso27_16_SDNR	31.57	20	410...595 Hz	Pass
5	iso28_16_SDNR	38.16	20	525...745 Hz	Pass
6	iso29_16_SDNR	36.1	20	675...925 Hz	Pass
7	iso30_16_SDNR	34.18	20	855...1155 Hz	Pass
8	iso31_16_SDNR	29.96	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	38.55	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	37.9	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	34.67	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	31.85	20	2785...3585 Hz	Pass

2024/1/2 9:18 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

16QAM;36Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	37.33	20	320...480 Hz	Pass
4	iso27_16_SDNR	35.24	20	410...595 Hz	Pass
5	iso28_16_SDNR	39.07	20	525...745 Hz	Pass
6	iso29_16_SDNR	36.93	20	675...925 Hz	Pass
7	iso30_16_SDNR	37.78	20	855...1155 Hz	Pass
8	iso31_16_SDNR	29.44	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	36.9	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	37.74	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	34.11	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	31.32	20	2785...3585 Hz	Pass

2024/1/2 9:23 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

64QAM;48Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	38.16	20	320...480 Hz	Pass
4	iso27_16_SDNR	36.37	20	410...595 Hz	Pass
5	iso28_16_SDNR	37.97	20	525...745 Hz	Pass
6	iso29_16_SDNR	38.23	20	675...925 Hz	Pass
7	iso30_16_SDNR	38.88	20	855...1155 Hz	Pass
8	iso31_16_SDNR	31.14	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	38.01	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	37.91	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	34.18	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	32.62	20	2785...3585 Hz	Pass

2024/1/2 9:28 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

64QAM;54Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	34.77	20	320...480 Hz	Pass
4	iso27_16_SDNR	36.8	20	410...595 Hz	Pass
5	iso28_16_SDNR	37.1	20	525...745 Hz	Pass
6	iso29_16_SDNR	37.43	20	675...925 Hz	Pass
7	iso30_16_SDNR	38.43	20	855...1155 Hz	Pass
8	iso31_16_SDNR	30.71	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	36.44	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	38.42	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	34.52	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	31.82	20	2785...3585 Hz	Pass

2024/1/2 14:37 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;1Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	26.38	20	320...480 Hz	Pass
4	iso27_16_SDNR	27.5	20	410...595 Hz	Pass
5	iso28_16_SDNR	25.45	20	525...745 Hz	Pass
6	iso29_16_SDNR	23.13	20	675...925 Hz	Pass
7	iso30_16_SDNR	28.84	20	855...1155 Hz	Pass
8	iso31_16_SDNR	29.55	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	36.15	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	34.99	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	28.21	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	29.07	20	2785...3585 Hz	Pass

2024/1/2 15:00 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

DSSS;2Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	28.57	20	320...480 Hz	Pass
4	iso27_16_SDNR	25.67	20	410...595 Hz	Pass
5	iso28_16_SDNR	24.9	20	525...745 Hz	Pass
6	iso29_16_SDNR	22.97	20	675...925 Hz	Pass
7	iso30_16_SDNR	32.0	20	855...1155 Hz	Pass
8	iso31_16_SDNR	30.26	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	32.47	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	35.05	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	32.44	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	31.66	20	2785...3585 Hz	Pass

2024/1/2 15:06 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

CCK;5.5Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	27.72	20	320...480 Hz	Pass
4	iso27_16_SDNR	25.25	20	410...595 Hz	Pass
5	iso28_16_SDNR	25.76	20	525...745 Hz	Pass
6	iso29_16_SDNR	24.18	20	675...925 Hz	Pass
7	iso30_16_SDNR	28.33	20	855...1155 Hz	Pass
8	iso31_16_SDNR	29.9	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	35.77	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	32.44	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	32.95	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	27.67	20	2785...3585 Hz	Pass

2024/1/2 15:12 ACQUA

5.2 Receive path – distortion and noise (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB \ 5.2 Receive path – distortion and noise

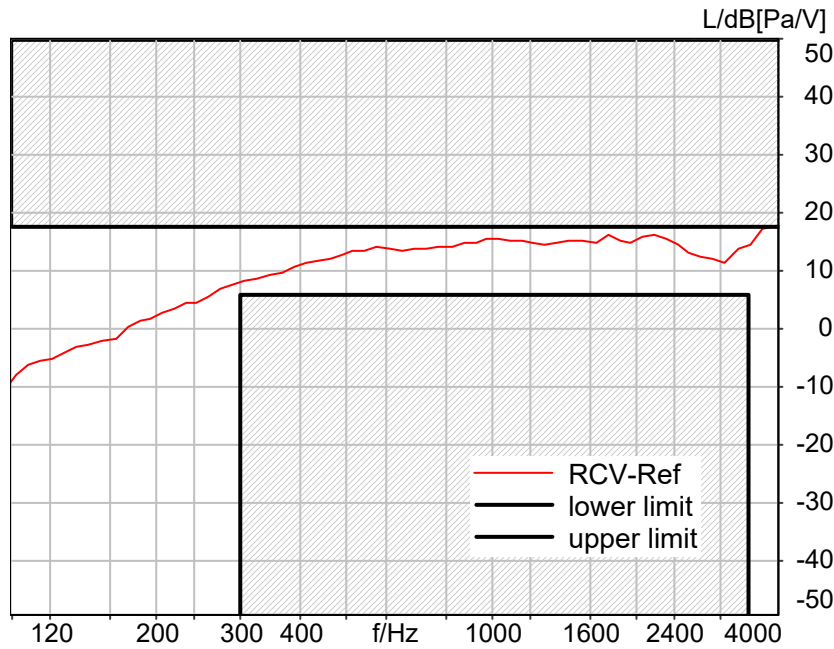
CCK;11Mbps

ID	Variable Name	Distortion Value	LowerLimit	Frequency Range	Pass/Fail
3	iso26_16_SDNR	28.29	20	320...480 Hz	Pass
4	iso27_16_SDNR	28.04	20	410...595 Hz	Pass
5	iso28_16_SDNR	25.52	20	525...745 Hz	Pass
6	iso29_16_SDNR	24.16	20	675...925 Hz	Pass
7	iso30_16_SDNR	34.73	20	855...1155 Hz	Pass
8	iso31_16_SDNR	29.11	20	1085...1450 Hz	Pass
9	iso32_16_SDNR	35.67	20	1375...1815 Hz	Pass
10	iso33_16_SDNR	35.06	20	1745...2275 Hz	Pass
11	iso34_16_SDNR	32.8	20	2205...2855 Hz	Pass
12	iso35_16_SDNR	29.99	20	2785...3585 Hz	Pass

2024/1/2 15:19 ACQUA

5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
BPSK;6Mbps



Absolute minimal distance
2.38 dB at 305.9 Hz Ok

Ok

2024/1/2 8:55 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 121.6000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

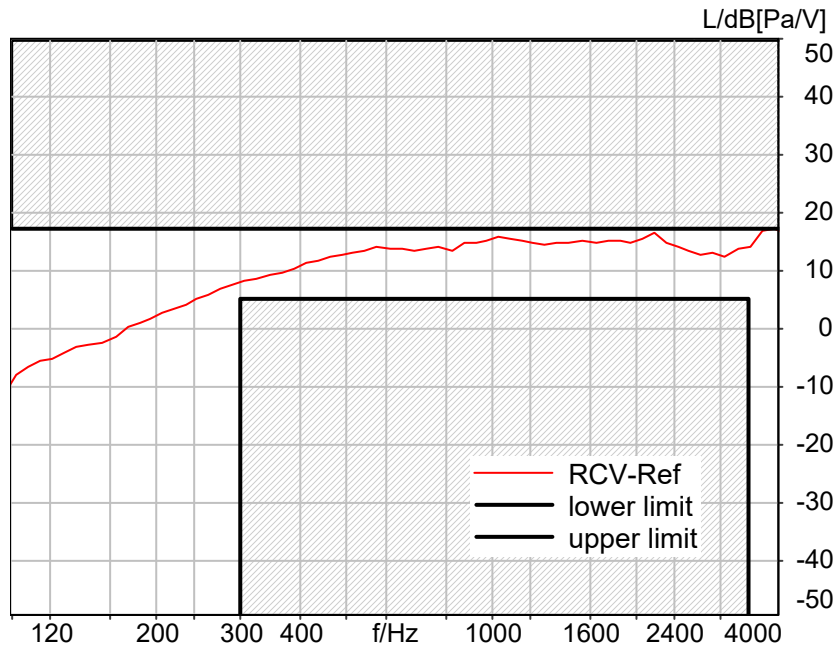
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
BPSK;9Mbps



Absolute minimal distance
3.01 dB at 305.9 Hz Ok

Ok

2024/1/2 9:02 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: **ieee_male_dual_nb.dat**

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 132.3000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

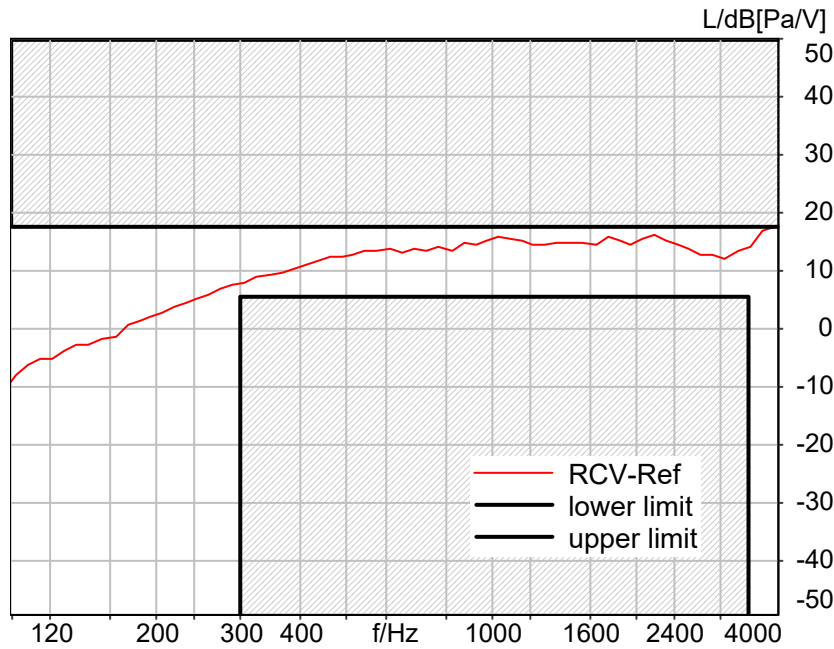
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
QPSK;12Mbps



Absolute minimal distance
2.20 dB at 305.9 Hz Ok

Ok

2024/1/2 9:07 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: **ieee_male_dual_nb.dat**

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 137.0000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

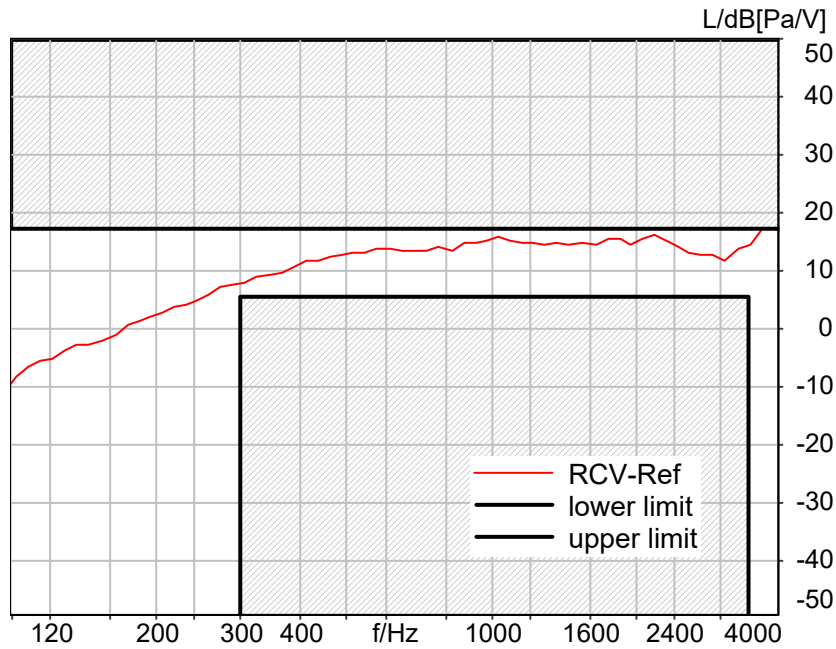
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
QPSK;18Mbps



Absolute minimal distance
2.69 dB at 305.9 Hz Ok

Ok

2024/1/2 9:13 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: **ieee_male_dual_nb.dat**

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 131.8000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

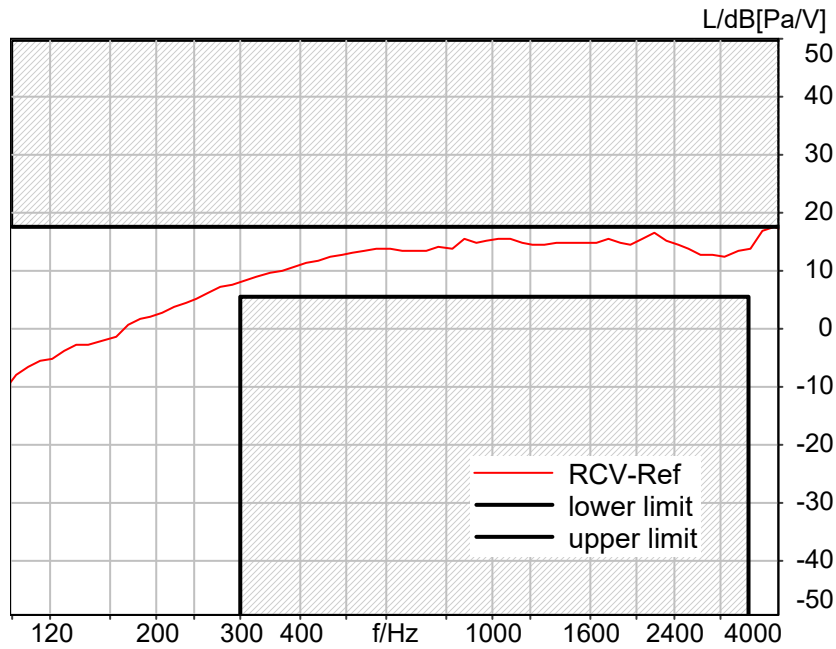
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
16QAM;24Mbps



Absolute minimal distance
2.78 dB at 305.9 Hz Ok

Ok

2024/1/2 9:18 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 129.1000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

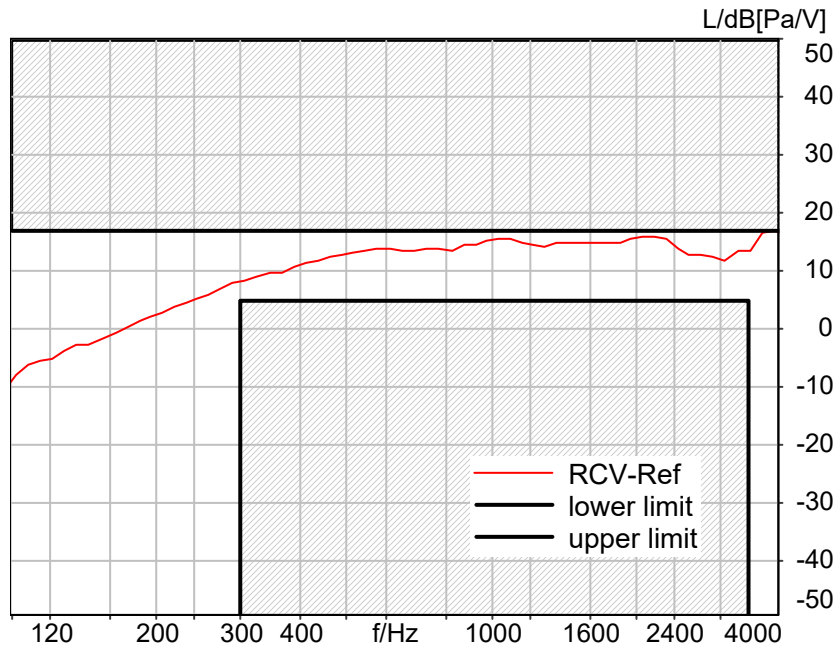
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
16QAM;36Mbps



Absolute minimal distance
3.43 dB at 305.9 Hz Ok

Ok

2024/1/2 9:23 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 153.9000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

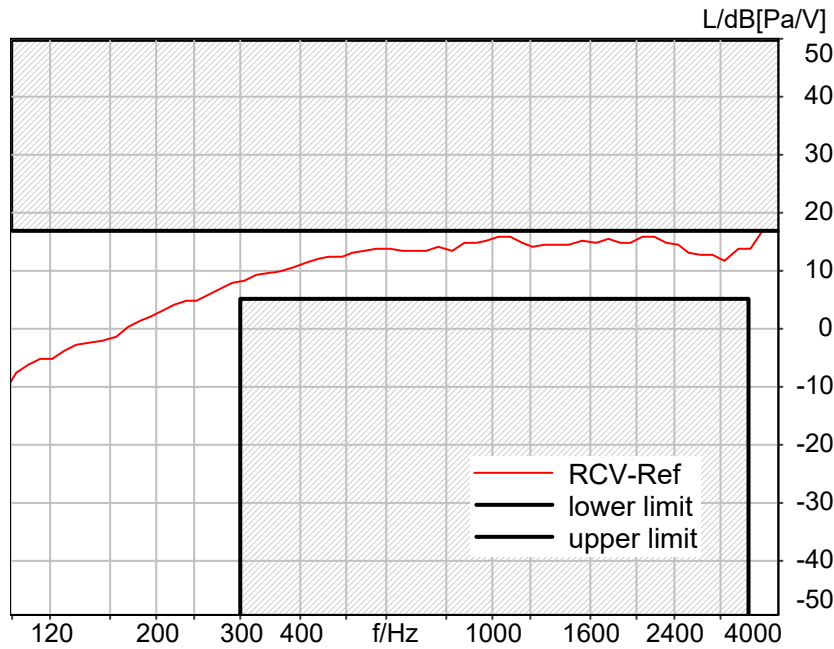
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
64QAM;48Mbps



Absolute minimal distance
3.18 dB at 305.9 Hz Ok

Ok

2024/1/2 9:28 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: **ieee_male_dual_nb.dat**

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 125.5000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

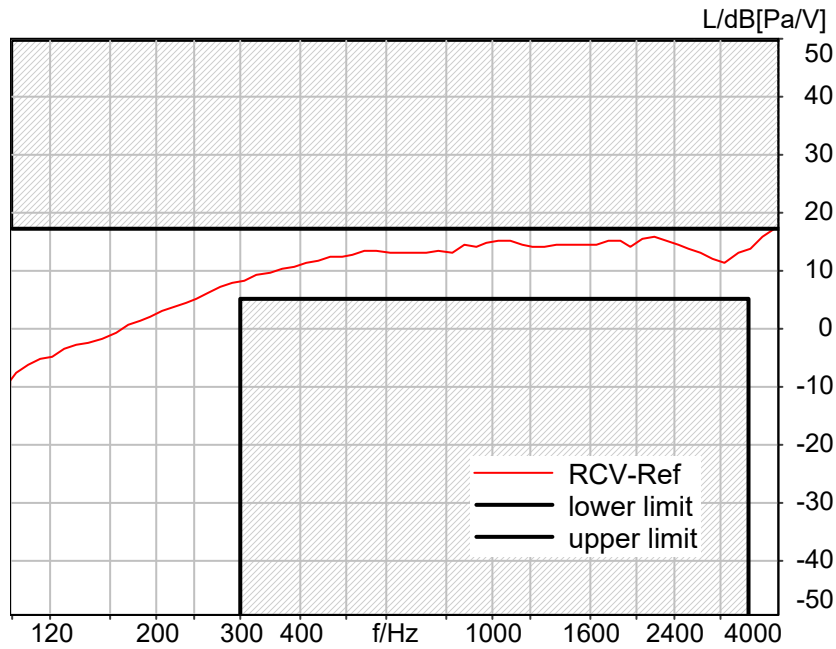
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
64QAM;54Mbps



Absolute minimal distance
3.21 dB at 305.9 Hz Ok

Ok

2024/1/2 14:38 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: **ieee_male_dual_nb.dat**

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 125.1000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

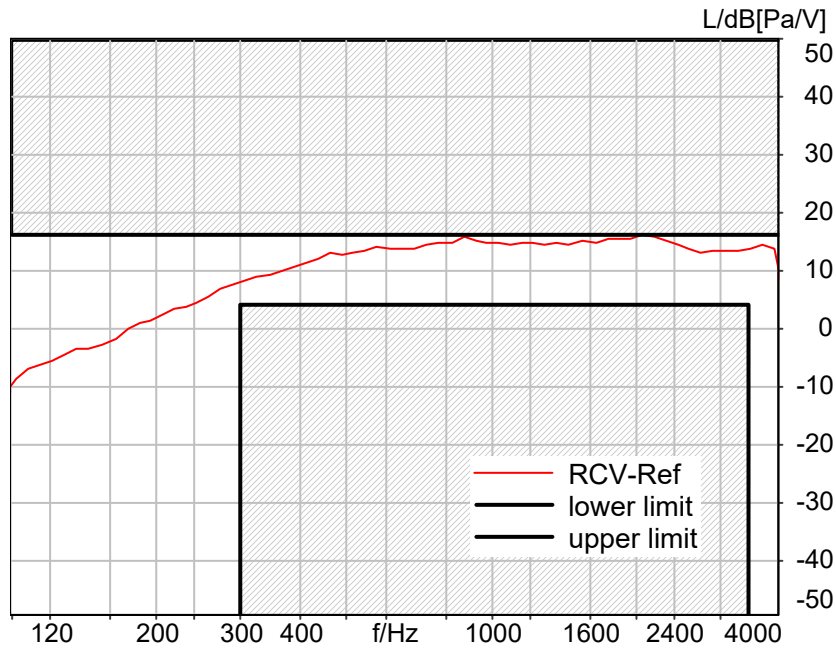
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
DSSS;1Mbps



Absolute minimal distance
4.05 dB at 305.9 Hz Ok

Ok

2024/1/2 15:00 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 120.0000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

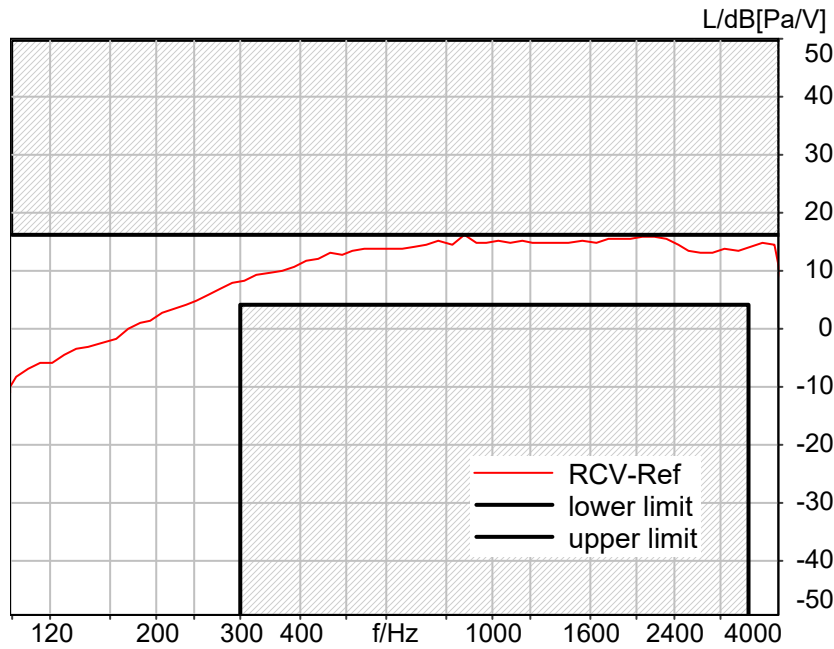
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
DSSS;2Mbps



Absolute minimal distance
4.22 dB at 305.9 Hz Ok

Ok

2024/1/2 15:07 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: **ieee_male_dual_nb.dat**

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 133.8000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

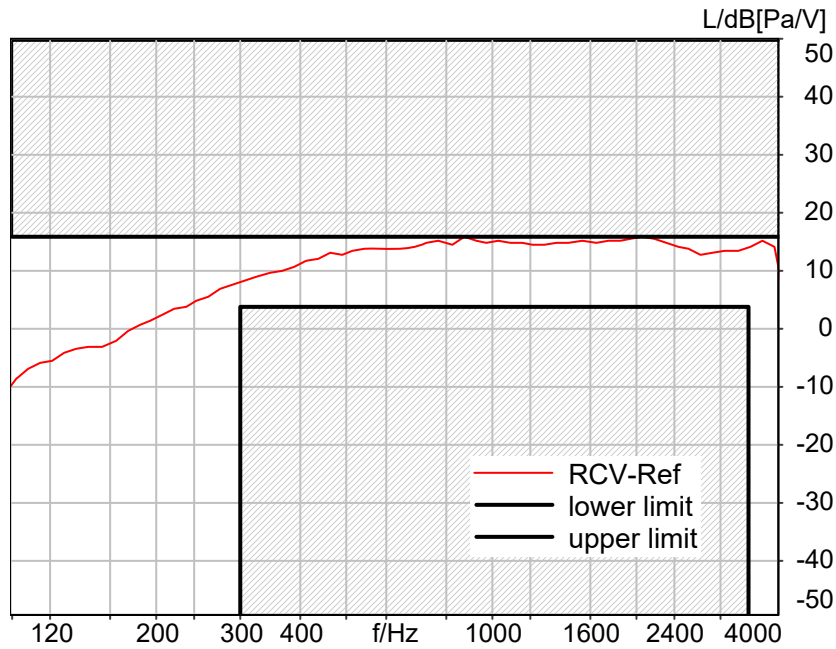
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
CCK;5.5Mbps



Absolute minimal distance
4.40 dB at 305.9 Hz Ok

Ok

2024/1/2 15:13 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: **ieee_male_dual_nb.dat**

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 120.6000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

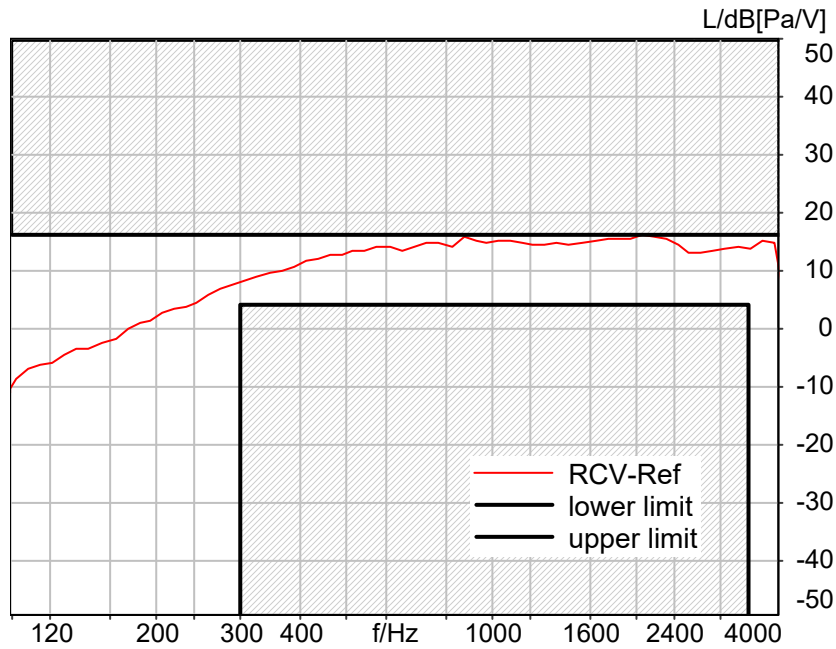
Block mode Bypass

Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.3 Receive Acoustic Frequency response Performance (23T04Z80629 VoWifi EVS)

ANSI/TIA 5050-2018 \ 8N HAC OFF \ NB
CCK;11Mbps



Absolute minimal distance
4.03 dB at 305.9 Hz Ok

Ok

2024/1/2 15:19 ACQUA 5.1.200

Limits

	lower
Run 1	Fit into tolerance

Meas. Setting STD:DRP/ERP OFF

Source: **ieee_male_dual_nb.dat**

Level adj. Ch1 -90.0 dB Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms Range length 10200.00 ms

Use FIR Filter	Ch2	FIR filter	drp2df_ieee1652
DRP/ERP Ch.1:	Off	DRP/ERP Ch.2:	Off
Frequency base	12th octave	DIN Row	Row A
Method	FFT		
FFT size	16384	Overlap	75 %
Window function.	Hanning		
Reference file	rcv_nb_ref1.fft		
Tol. scheme file	nb_fr_tol.tol	Min. freq. for tol.	100.0 Hz
Auto adjust	To upper scheme	Max. freq. for tol.	4000.0 Hz

Special Features

Compensate delay 136.0000 ms (D_RCV_NB, Delay (Cross))
Store to file rcv_fr

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode Bypass

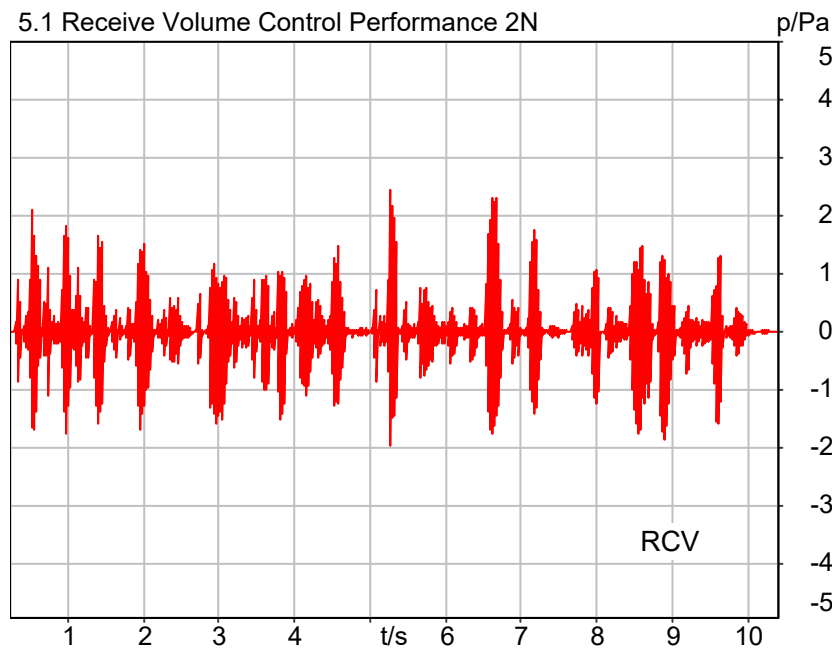
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

DSSS;1Mbps



Speech Level RCV: 81.17 dB[SPL], Act.: 93.45%

2024/1/2 15:56 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
 Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
 In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
 In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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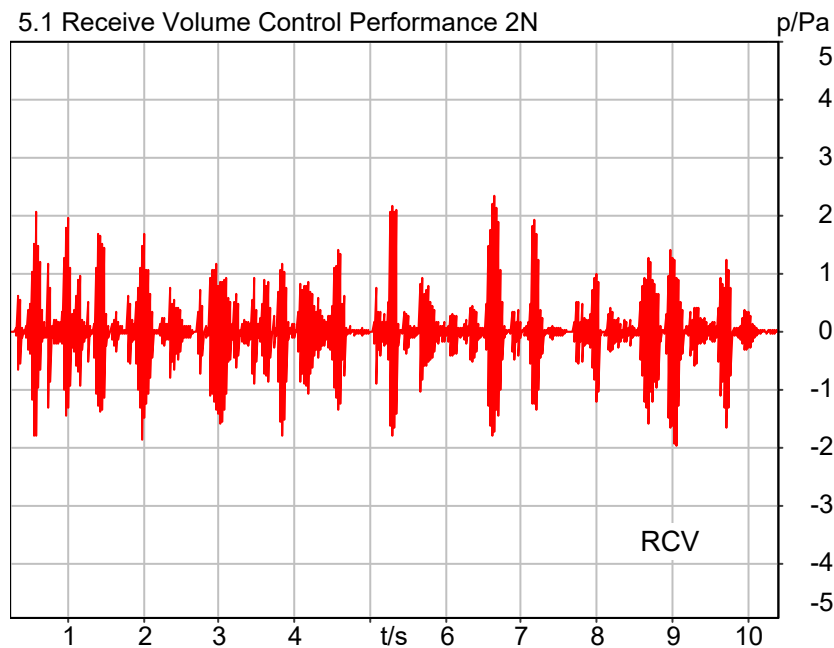
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

DSSS;2Mbps



Speech Level RCV: 80.87 dB[SPL], Act.: 93.73%

2024/1/2 15:57 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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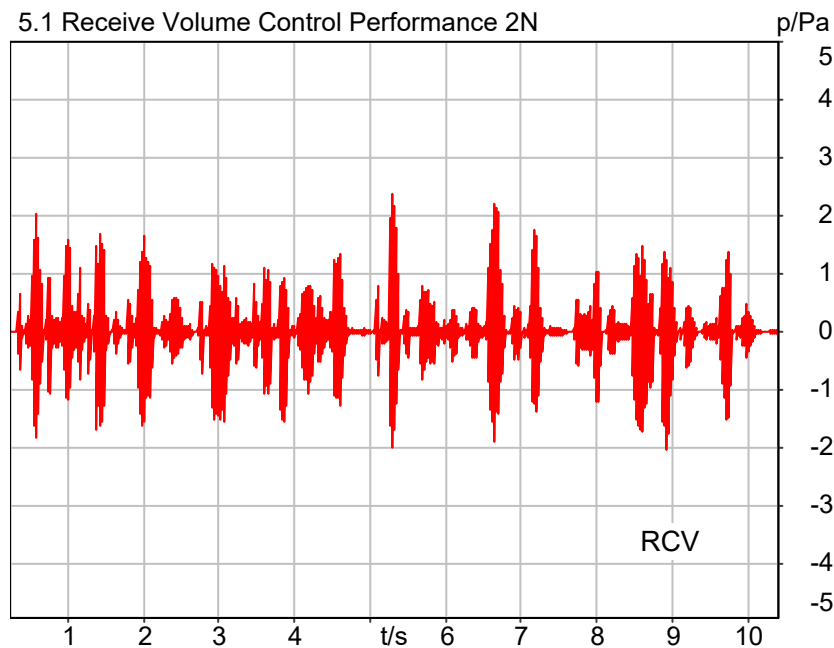
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

CCK;5.5Mbps



Speech Level RCV: 81.01 dB[SPL], Act.: 93.08%

2024/1/2 15:58 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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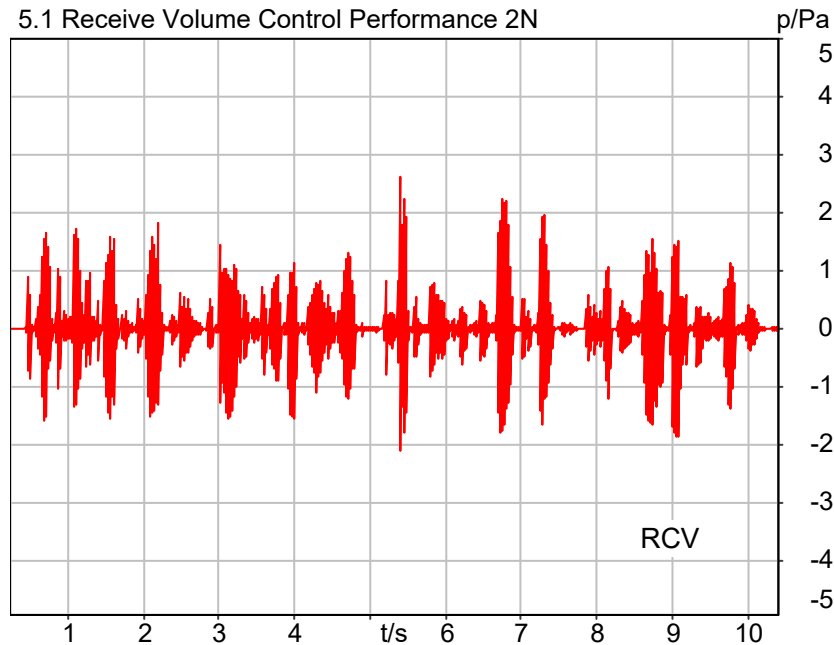
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

CCK;11Mbps



Speech Level RCV: 81.07 dB[SPL], Act.: 93.49%

2024/1/2 15:59 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

DSSS;1Mbps

Correction

rcv_vol_nb	81.170 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.17 dB Ok

Ok

2024/1/2 15:56 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

DSSS;2Mbps

Correction

rcv_vol_nb	80.870 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 10.87 dB Ok

Ok2024/1/2 15:57 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

CCK;5.5Mbps

Correction

rcv_vol_nb	81.010 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.01 dB Ok

Ok2024/1/2 15:58 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

CCK;11Mbps

Correction

rcv_vol_nb	81.070 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.07 dB Ok

Ok2024/1/2 15:59 ACQUA 5.1.200

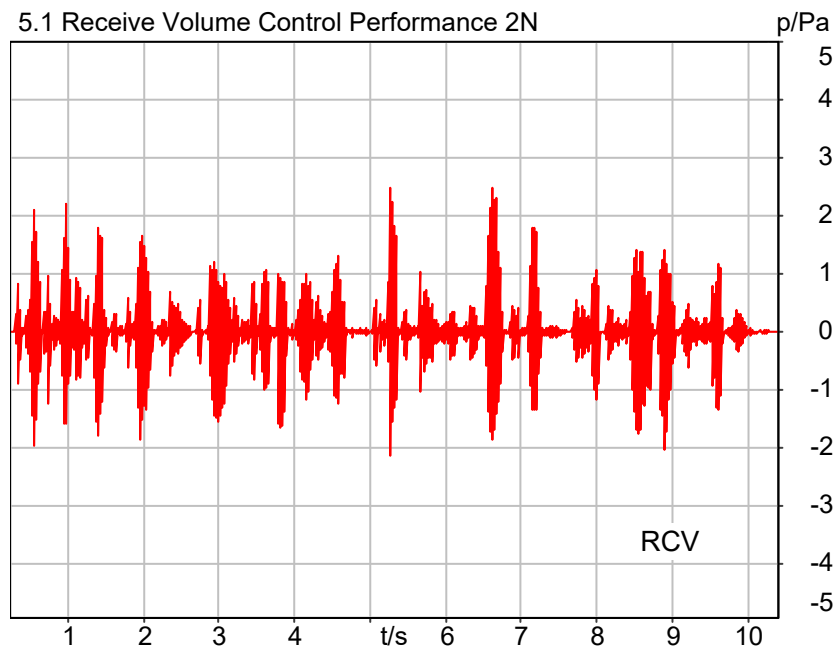
Limits

	lower
Run 1	6.00 dB

5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

BPSK;6Mbps



Speech Level RCV: 81.30 dB[SPL], Act.: 93.50%

2024/1/2 15:43 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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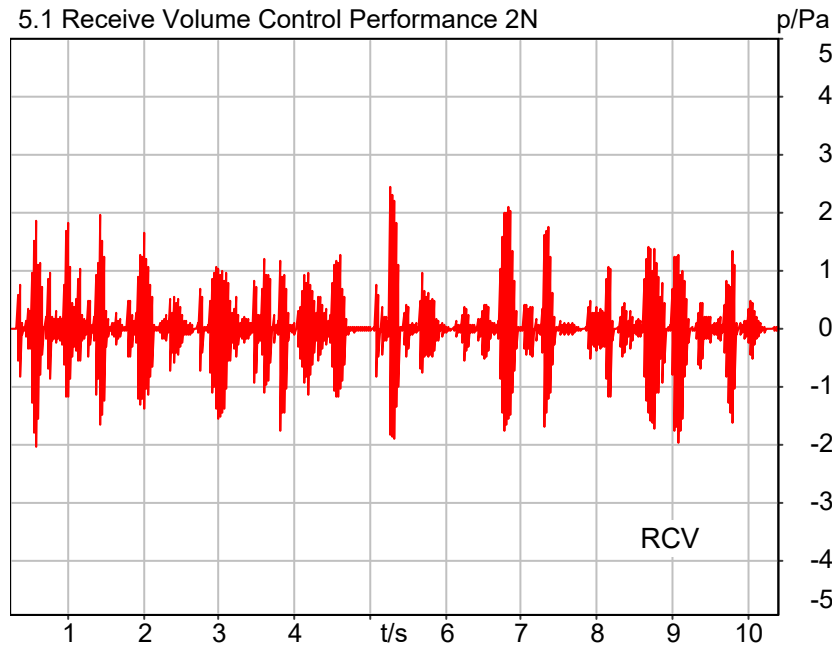
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

BPSK;9Mbps



Speech Level RCV: 81.14 dB[SPL], Act.: 94.03%

2024/1/2 15:45 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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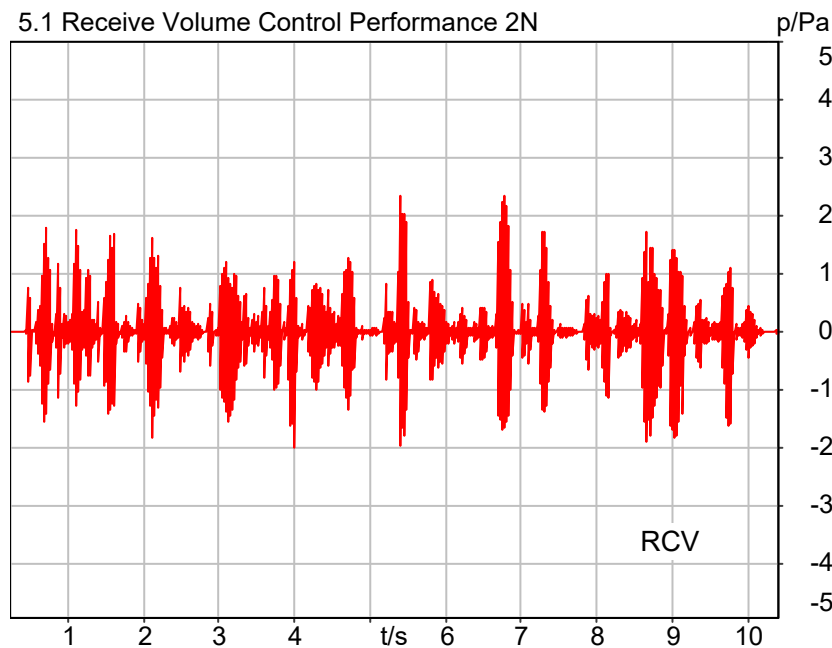
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

QPSK;12Mbps



Speech Level RCV: 81.00 dB[SPL], Act.: 93.29%

2024/1/2 15:46 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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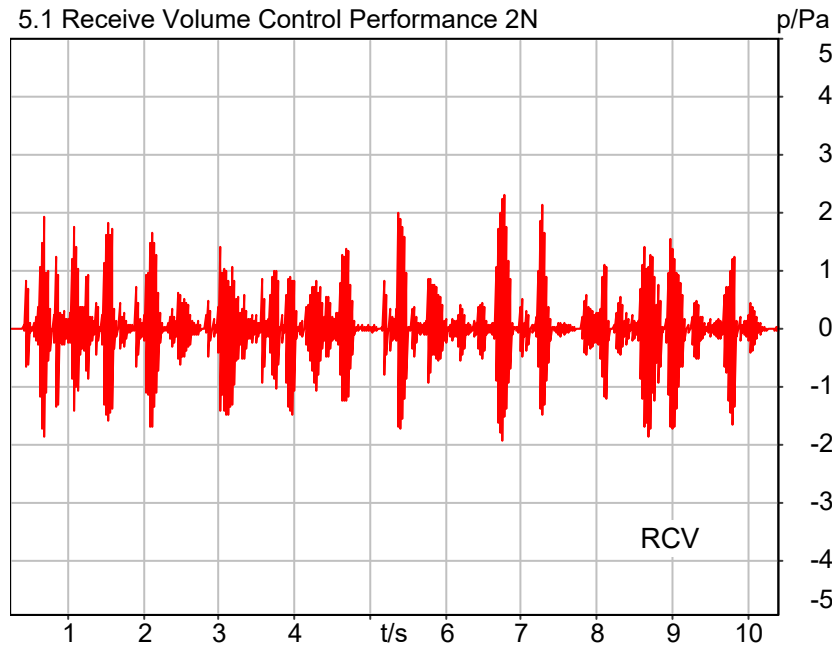
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

QPSK;18Mbps



Speech Level RCV: 81.05 dB[SPL], Act.: 93.22%

2024/1/2 15:47 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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Artificial Head Settings (HATS 3 (HMS II.3))

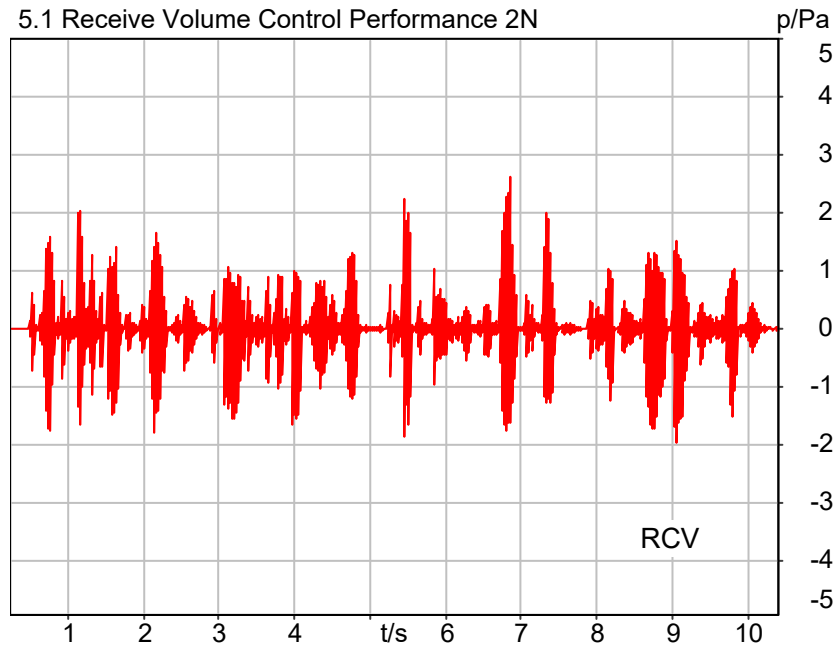
Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

16QAM;24Mbps

5.1 Receive Volume Control Performance 2N



Speech Level RCV: 81.21 dB[SPL], Act.: 93.46%

2024/1/2 15:48 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 -> Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 -> Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <- BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <- BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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Artificial Head Settings (HATS 3 (HMS II.3))

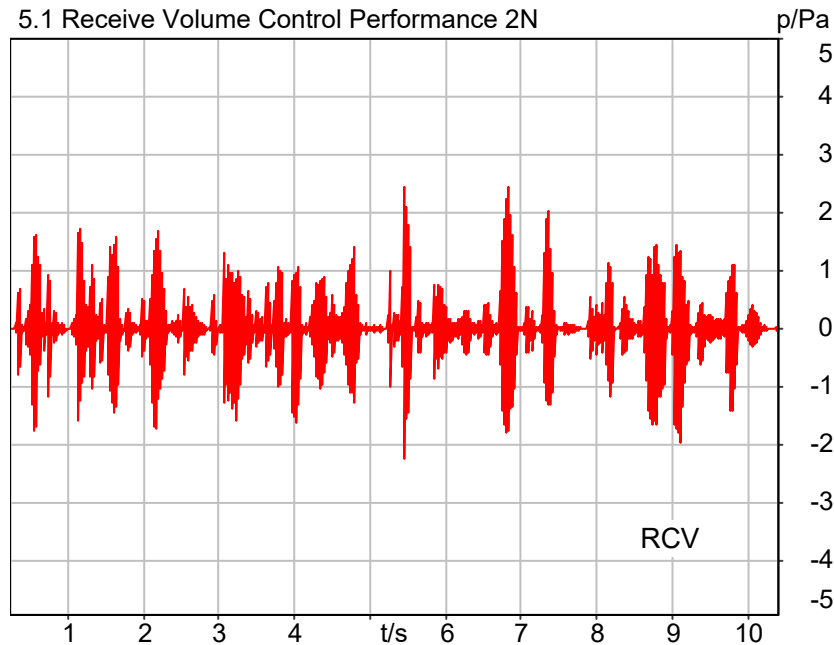
Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

16QAM;36Mbps

5.1 Receive Volume Control Performance 2N



Speech Level RCV: 81.17 dB[SPL], Act.: 94.79%

2024/1/2 15:49 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)

Channel In 1 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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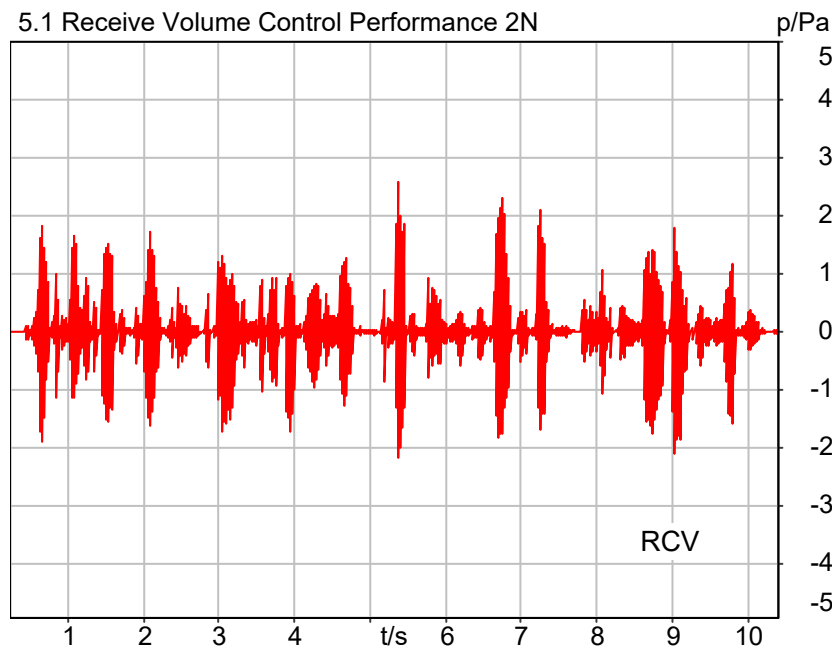
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

64QAM;48Mbps



Speech Level RCV: 81.16 dB[SPL], Act.: 92.36%

2024/1/2 15:50 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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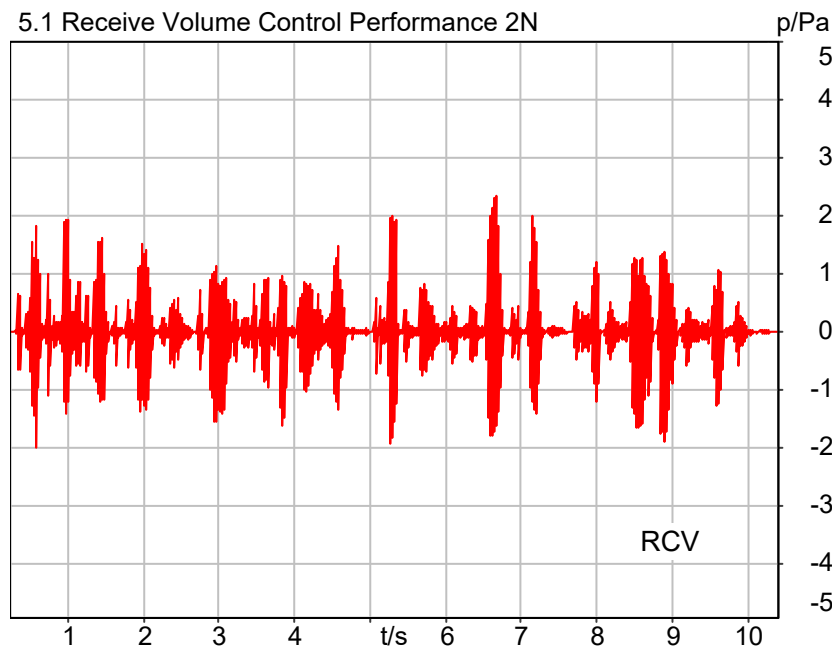
Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1 Receive Volume Control Performance 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

64QAM;54Mbps



Speech Level RCV: 81.03 dB[SPL], Act.: 93.31%

2024/1/2 15:53 ACQUA 5.1.200

Meas. Setting STD:DRP/ERP OFF

Source: ieee_male_dual_nb.dat

Level adj. Ch1 -90.0 dB

Level adj. Ch2 -4.0 dB

Calibration

Input ch.2: 1.37 dB 2023/11/29 (HATS 3 (HMS II.3))

Output ch.2: 0.00 dB (Radio Tester 1 (CMW500))

Output Equalization/Filter

Mouth Eq. Ch.1: HATS 3 (HMS II.3)

Analysis

Direction Out 2 -> In 2

Range start 250.00 ms

Range length 10200.00 ms

Bandpass filter Narrow Band

Margin (15.9dB nom) 15.90 dB

Special Features

Compensate delay 121.3000 ms (D_RCV_NB, Delay (Cross))

Store to variable rcv_vol_nb

Hardware Config Settings

Used Setting STD:Mobile test both channels

labCORE Settings

labCORE Serial	77000136	Nickname	
Firmware	3.2.46	Sync Source	Internal
Clock Pitch	0.00 ppm		

labCORE Routing

Out Channel 1 ->	Power Amp. 1/2 1 -> HATS 3 (HMS II.3) Speaker
Out Channel 2 ->	Analog Out 1/2 1 -> Radio Tester 1 (CMW500) In
In Channel 1 <-	BEQ Filter 1 L <- Mic Amp. 1..4 In 1 <- HATS 3 (HMS II.3) Mic. Left
In Channel 2 <-	BEQ Filter 1 R <- Mic Amp. 1..4 In 2 <- HATS 3 (HMS II.3) Mic. Right

Analog In Mainboard Settings (Analog In 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
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Analog Out Mainboard Settings (Analog Out 1/2)

Range Ch. 1	0.00 dB	Range Ch. 2	0.00 dB
-------------	---------	-------------	---------

Microphone Settings (Mic Amp. 1..4)**Channel In 1 Settings**

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 2 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	200V	Supply Voltage	±60V

Channel In 3 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

Channel In 4 Settings

Range	114 dB[SPL] @ 12.5 mV/Pa	Highpass	20Hz
Polarisation Voltage	Off	Supply Voltage	±60V

BEQ Settings (BEQ Filter 1)

Block mode	Bypass
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Artificial Head Settings (HATS 3 (HMS II.3))

Ser. Nr.	12306194	Pinna Type	Type 3.3
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5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

BPSK;6Mbps

Correction

rcv_vol_nb	81.300 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.30 dB Ok

Ok2024/1/2 15:44 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

BPSK;9Mbps

Correction

rcv_vol_nb	81.140 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.14 dB Ok

Ok

2024/1/2 15:45 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

QPSK;12Mbps

Correction

rcv_vol_nb	81.000 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.00 dB Ok

Ok2024/1/2 15:46 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

QPSK;18Mbps

Correction

rcv_vol_nb	81.050 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.05 dB Ok

Ok2024/1/2 15:47 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

16QAM;24Mbps

Correction

rcv_vol_nb	81.210 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.21 dB Ok

Ok2024/1/2 15:48 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

16QAM;36Mbps

Correction

rcv_vol_nb	81.170 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.17 dB Ok

Ok2024/1/2 15:49 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

64QAM;48Mbps

Correction

rcv_vol_nb	81.160 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.16 dB Ok

Ok2024/1/2 15:50 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB

5.1.1 -1 Conversation Gain 2N (23T04Z80629 VoWifi AMR)

ANSI/TIA 5050-2018 \ 2N HAC ON \ NB

64QAM;54Mbps

Correction

rcv_vol_nb	81.030 dB[SPL]	2024/1/2	Measured	5.1 Receive Volume Control Performance 2N
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rcv_vol_nb-70

Calculated Value: 11.03 dB Ok

Ok2024/1/2 15:53 ACQUA 5.1.200

Limits

	lower
Run 1	6.00 dB