

Reference No	Function	Part No
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MOBILE STATION MODEM

IC210	MOBILE STATION MODEM	MSM5105-208FBGA-TR
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FLASH/SRAM

IC240	32MFLASH,4MSRAM	M6MGT321S4TP
IC241	32MFLASH,4MSRAM	M6MGT321S4TP
Q2401	SWITCHING	DTC114YE
Q2402	SWITCHING	DTC114YE

LCD BACKLIGHT, KEY BACKLIGHT CONTROL CIRCUIT

IC215	2-Input AND Gate	TC7S08FU
IC224	DC/DC CONVERTER	LTC3200ES6
Q2207	SWITCHING	DTC124XE or RN1108

POWER & CHARGER CIRCUIT

IC220	Power & Chrager	BH6082KU
IC221	D-Flip Flop	TC7W74FK
IC222	2.6V Regulator	R1121N261B
IC223	2.9V Regulator	R1121N291B
Q2201	SWITCHING	DTC124XE or RN1108
Q2202	SWITCHING	SI3443DV
Q2203	SWITCHING	2SA1774 or 2SA1832
Q2204	SWITCHING	2SC4617 or 2SC4738
Q2205	SWITCHING	MCH3301
Q2206	SWITCHING	2SC4617 or 2SC4738
Q2209	SWITCHING	2SK3019

SPEAKER AMP

IC230	SPEAKER AMP	LM4864IMM
Q2301	SWITCHING	DTC124XE or RN1108

TCXO ON CONTROL CIRCUIT

IC211	2-Input AND Gate(High Speed)	TC7SH08FU or SN74AHC1G08HDCK or NC7SZ08P5X
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EARPHONE JACK SWITCH

IC231	INVERTER	TC7S04FU or SN74AHC1G04H or NC7S04P5X
IC232	Schmitt INVERTER	TC7S14FU or

		SN74AHC1G14H or NC7S14
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SRAM/LCD CONTROL CIRCUIT

IC213	DUAL 2-Input OR Gate(High Speed)	TC7WH32FK or SN74AHC2G32H or NC7WZ32K8X
IC214	DUAL 2-Input OR Gate(High Speed)	TC7WH32FK or SN74AHC2G32H or NC7WZ32K8X
IC212	DUAL INVERTER(High Speed)	TC7WH04FK or SN74AHC2G04H or NC7NZ04K8X

SUB LCD BACKLIGHT CONTROL CIRCUIT

Q2601	SWITCHING	DTC143TE
Q2602	SWITCHING	DTC143TE

LED CONTROL CIRCUIT

Q2603	SWITCHING	2SK3019 or 2SK2035
Q2604	SWITCHING	MCH3301

INTERFACE CIRCUIT

Q2701	SWITCHING	HAT1043M or TPC6101
Q2702	SWITCHING	2SK3019 or 2SK2035
Q2703	SWITCHING	DTC124XE or RN1108
Q2704	SWITCHING	DTC124XE or RN1108
Q2705	SWITCHING	DTC124XE or RN1108
Q2706	SWITCHING	DTC124XE or RN1108
Q2707	SWITCHING	DTC124XE or RN1108
Q2808	SWITCHING	DTC124XE or RN1108

LCD/SUB LCD MODULE

LCD01	MAIN LCD Driver	
	SUB LCD Driver	MN86520

DESCRIPTIVE INFORMATION

Parts List

<u>Reference No.</u>	<u>Function</u>	<u>Part No.</u>
	<u>PLL Synthesizer</u>	
IC 141	PLL IC	MB15F73SP
X 1401	PCS/AMPS VCO	VC-2R8A26-0967/1750C
Q 1402	Transister	HN7G03FU
	<u>Transmitter</u>	
IC 133	PCS Power Amplifier	RF2153
IC 134	AMPS Power Amplifier	PA3100-2
IC 131	Switch	UPG158TB
IC 132	Invert IC	TC7SU04FU
Q 1302,1303	Transister	HN7G03FU
D 1304,1305	Diode	HSC88
XF 110	Diplexer	LFDP15N0040A
XF 112	PCS Duplexer	DFYK1R88C1R96HHJ
XF 111	AMPS Duplexer	EFSD836MB1Z1
XF 132	PCS Isolator	CE0401R88DCB
XF 134	AMPS Isolator	CE053R836DCA
XF 131	PCS Couper	LDC10B190J1880
XF 133	AMPS Couper	LDC10B150J0836
XF 130	PCS RF SAW Filter	SAFC1867.5T1897.5ML1D0T
XF 135	AMPS RF SAW Filter	SRF836NJC31
	<u>Regulator</u>	
IC 150,151	Regulator(3.0V/3.0V)	R5321D003A
IC 152	Regulator(2.9V)	R1121N291B
	<u>Receiver</u>	
IC 122	LNA/Mixer	RFR3100
IC 121	PCS LNA	NE34018
Q 1201	Transister	HN7G03FU
XF 121	PCS RF SAW Filter	TSM196NW2B
XF 120	AMPS RF SAW Filter	SAFS881.5MF1A0T
XF 123	PCS IF SAW Filter	OFWB4910
XF 122	AMPS IF SAW Filter	SAFC85.380MA15X
	<u>IF AGC Circuit</u>	
IC 130	TX AGC+Mixer IC	RFT3100
IC 123	RX AGC IC	IFR3000
D 1202,1203,1301,1302	Diode	HVC202A
D 1201,D1303	Diode	DAN235E
Q 1203,Q1301	Transistor	DTC144EE
	<u>TCXO Circuit</u>	
X 1400	TCXO	KT18B-CCV30A-19.200M-T
Q 1401	Transistor	2SC4649

PCS/AMPS-Mode RF Block/Parts List

MODEL NO. SCP-5150

FCC USE ONLY

Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description
C1101	1P	C1270	0.1U	C1356	15P				
C1102	100P	C1271	100P	C1357	2P				
C1104	15P	C1272	1000P	C1358	1000P				
C1105	1P	C1273	1000P	C1359	1000P				
C1106	3P	C1274	1000P	C1360	2.5P				
C1107	100P	C1275	68P	C1361	1U				
C1206	1P	C1276	68P	C1362	1U				
C1207	1000P	C1301	390P	C1364	10P				
C1208	1000P	C1302	390P	C1365	10P				
C1209	1000P	C1303	390P	C1366	0.01U				
C1210	2P	C1304	390P	C1368	2.2P				
C1211	100P	C1305	22P	C1370	100P				
C1212	0.1U	C1308	1000P	C1371	10U				
C1213	0.1U	C1309	0.1U	C1374	100P				
C1215	1000P	C1310	4700P	C1401	0.01U				
C1216	100P	C1311	0.1U	C1403	100P				
C1217	1000P	C1312	0.01U	C1404	1U				
C1218	33P	C1313	100P	C1405	0.1U				
C1219	1000P	C1314	0.01U	C1406	0.1U				
C1220	100P	C1315	47P	C1407	1000P				
C1221	0.1U	C1316	47P	C1408	10U				
C1222	3P	C1317	47P	C1410	2200P				
C1223	1.5P	C1318	100P	C1411	0.22U				
C1224	0.01U	C1319	4P	C1412	1200P				
C1229	100P	C1320	4P	C1413	10U				
C1230	10P	C1321	8P	C1414	0.01U				
C1231	100P	C1322	3300P	C1415	1000P				
C1232	56P	C1323	3300P	C1416	100P				
C1233	0.1U	C1324	100P	C1417	4700P				
C1234	1.5P	C1325	1000P	C1418	0.47U				
C1235	18P	C1326	0.01U	C1419	0.022U				
C1236	100P	C1327	0.01U	C1420	0.01U				
C1237	0.01U	C1328	1000P	C1421	1000P				
C1238	1000P	C1329	1000P	C1422	1000P				
C1239	1000P	C1330	0.12U	C1423	1000P				
C1240	22P	C1331	560P	C1424	100P				
C1241	100P	C1332	1000P	C1425	100P				
C1242	100P	C1333	100P	C1426	27P				
C1243	2P	C1334	100P	C1501	100P				
C1245	10P	C1335	12P	C1502	100P				
C1246	100P	C1336	0.1U	C1503	1U				
C1248	0.01U	C1337	100P	C1504	2.2U				
C1249	0.01U	C1338	100P	C1505	2.2U				
C1250	0.01U	C1339	1000P	C1506	100P				
C1251	4700P	C1340	10P	C1507	1U				
C1252	1000P	C1341	4P	C1508	2.2U				
C1253	0.01U	C1342	1000P	C1509	2.2U				
C1254	0.01U	C1343	1000P	C1510	10U				
C1255	0.01U	C1344	1000P	C1511	1U				
C1256	1000P	C1345	15P	C1601	1000P				
C1257	22P	C1346	15P						
C1259	22P	C1347	10P						
C1260	0.22U	C1348	0.01U						
C1261	1000P	C1349	8.5P						
C1262	1000P	C1350	15P						
C1263	0.01U	C1351	15P						
C1264	100P	C1352	4.7U						
C1265	0.01U	C1354	5.6P						

SCP-5150 Adjustment Discription for Mass production.

1-163-415-00	SCP-5150/H.US

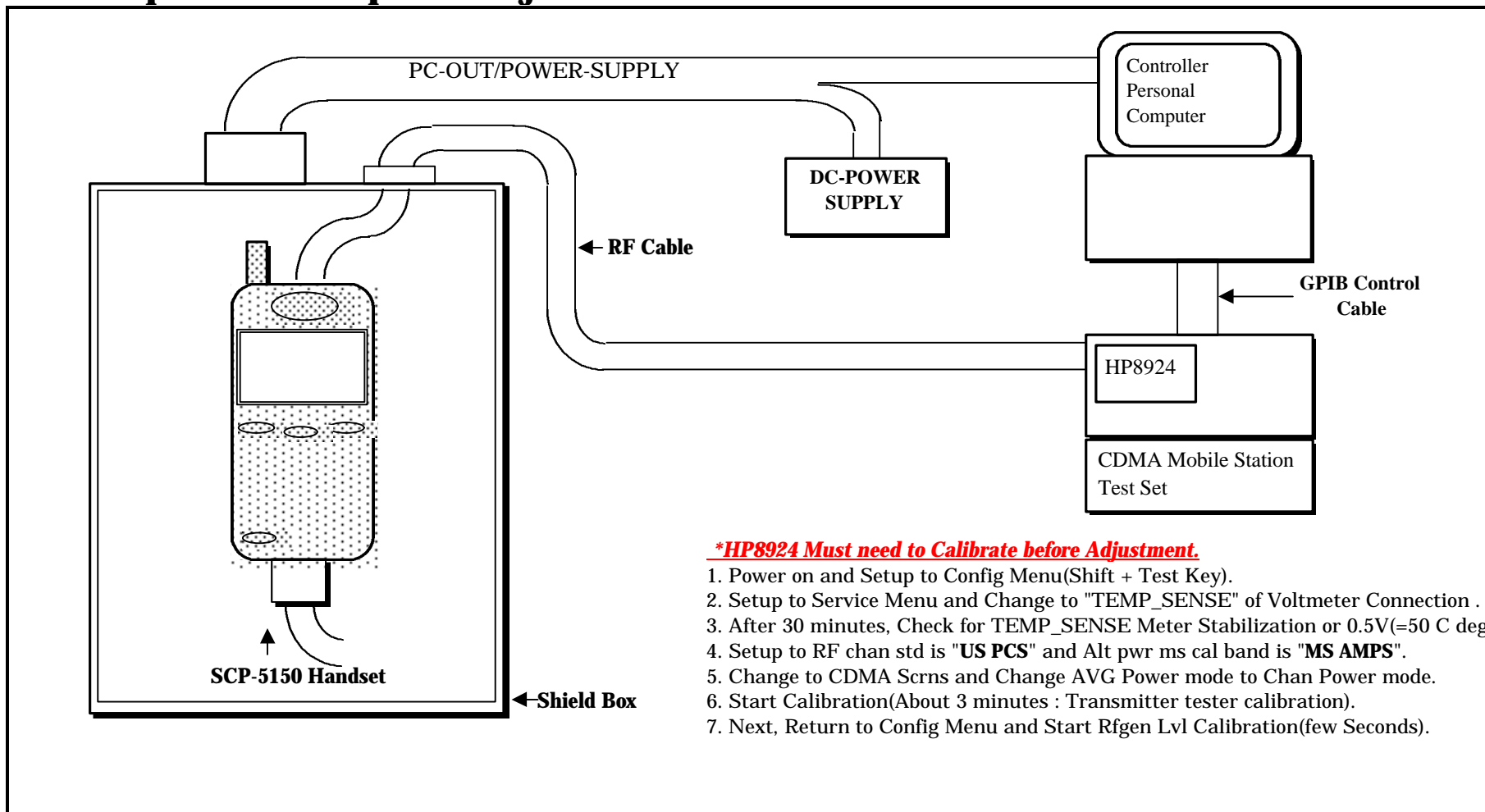
APPROVE	CHECK	ISSUE

Eng. Section	Personal Telecommunication Division Technical Engineering Department RF Group
NAME	H.Araki A.Shimahara

No.	Contents
1	Set-Up for Tune-Up and Adjustment of Transmitter
2	Alignment Procedure
3	Adjust Value
4	Measurement Specification of Adjustment

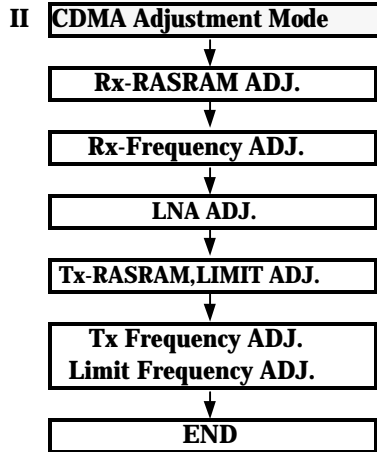
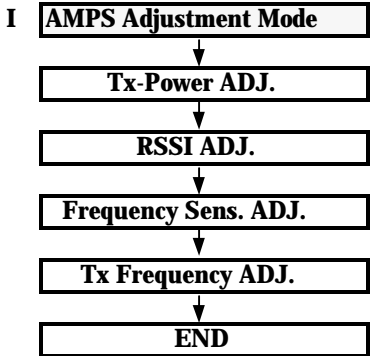
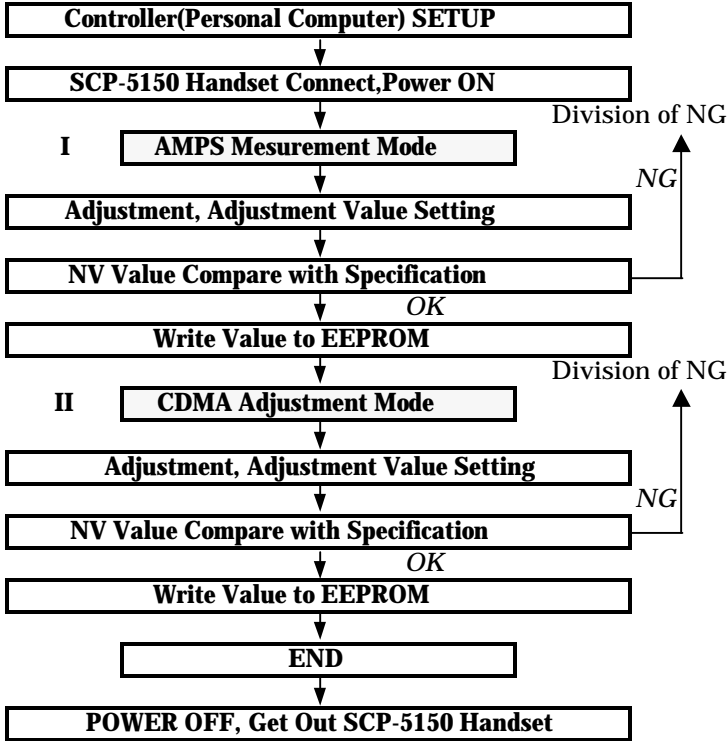
Minor Change Version

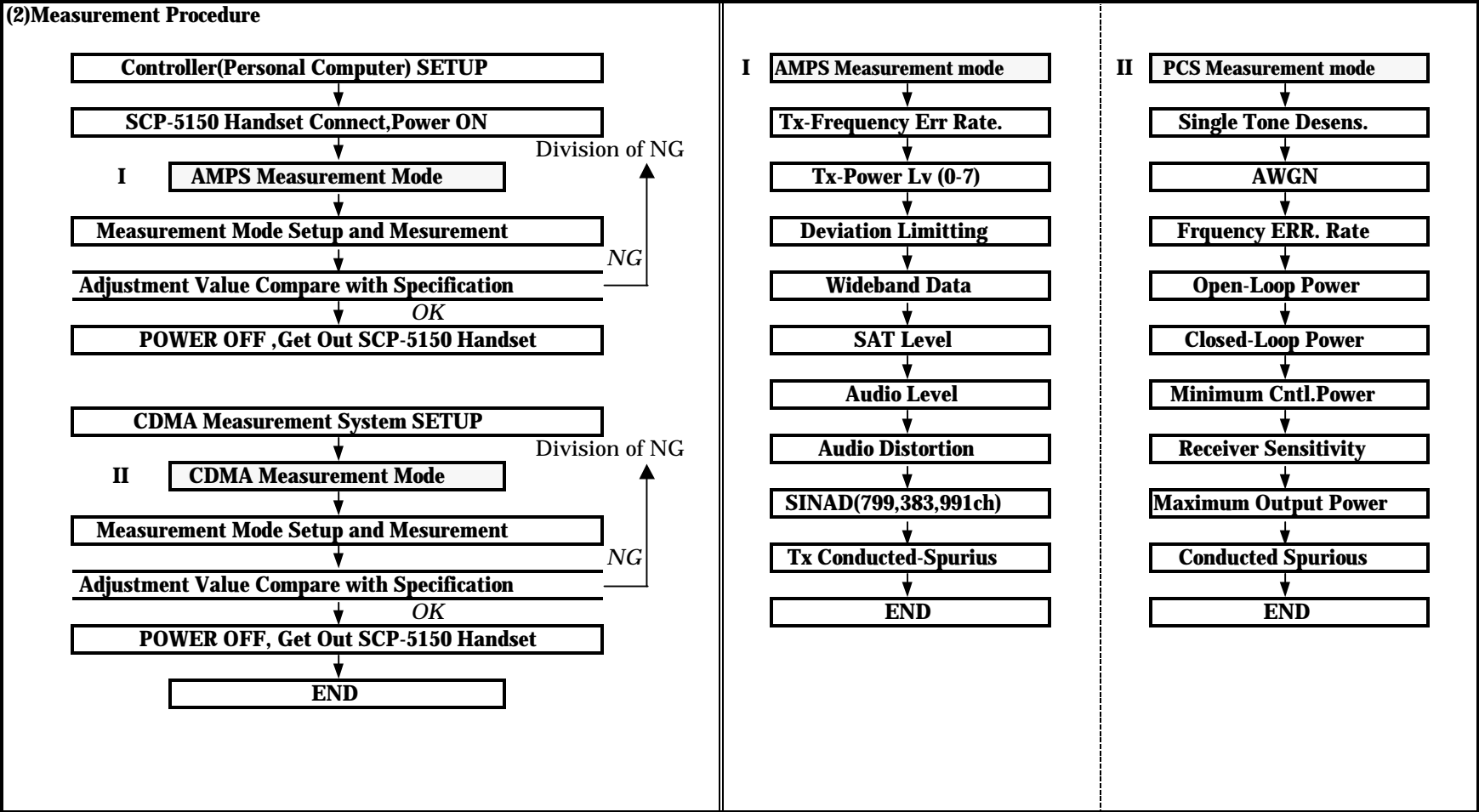
1.Set-Up for Tune-Up and Adjustment of Transmitter



2 Alignment Procedure

(1) Adjustment Procedure





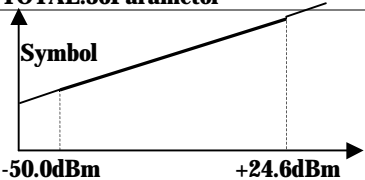
3.Adjustment Value

1.AMPS Adjustment

ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Tx-Power Adjustment	PL=0,1,2	<u>Normal Test Mode</u>	<u>AMPS Mode</u>	+24.4dBm	
	PL=3	Tx AGC SET : 3-2-3-2	Txpower :dBm Mode	+23.0dBm	
	PL=4			+19.0dBm	
	PL=5			+15.0dBm	
	PL=6			+11.0dBm	
	PL=7			+ 7.0dBm	
Tx-Power Frequency Adjustment	Bk 0=1017ch	<u>FCC Test Mode</u>	<u>PL=0 Setting</u>	+24.4dBm	
	Bk 1=46ch			+24.4dBm	
	Bk 2=98ch			+24.4dBm	
	Bk 3=150ch			+24.1dBm	
	Bk 4=202ch			+24.1dBm	
	Bk 5=254ch			+24.1dBm	
	Bk 6=306ch			+24.1dBm	
	Bk 7=358ch			+24.1dBm	
	Bk 8=410ch			+24.1dBm	
	Bk 9=462ch			+24.1dBm	
	Bk10=514ch			+24.1dBm	
	Bk11=566ch			+24.1dBm	
	Bk12=618ch			+24.1dBm	
	Bk13=670ch			+24.0dBm	
	Bk14=722ch			+24.0dBm	
Bk15=774ch			+24.0dBm		
Frequency Sensibility Adjustment		<u>FCC Test Mode : AMPS</u> Tx : ST,CH : 358	<u>AF ANL Mode</u> Detector : Pk±Max DE-EMPH:750us Fil1:>300Hz,Fil2:<15kHz pass	7.7KHz dev.	dev. 7.7kHz±0.1kHz ↓ NV_FM_FREQ_SENSE_GAIN_I
RSSI Adjustment	-60dBm In -113dBm In	<u>FCC TEST Mode</u> RSSI=Filter*116+AgcRSSI*47	-60dBm RFinput -113dBm RFinput	-60dBm : BAR4 BAR1	<u>NV FM RSSI I</u>

*Handset SETUP & HP8923 SETUP is Auto Set by Controller(Personal Computer).

ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Rx-RASRAM Adjustment	Table 1	Normal Mode	CDMA Ch=563 :SG LV=-106.0dBm	-106.0dBm	
	Table 2	OFF Line Mode	SG LV=-100.6dBm	-100.6dBm	
	Table 3		SG LV=-95.3dBm	-95.3dBm	
	Table 4		SG LV=-90.0dBm	-90.0dBm	
	Table 5		SG LV=-84.7dBm	-84.7dBm	
	Table 6		SG LV=-79.4dBm	-79.4dBm	
	Table 7		SG LV=-74.1dBm	-74.1dBm	
	Table 8		SG LV=-68.8dBm	-68.8dBm	
	Table 9		SG LV=-63.5dBm	-63.5dBm	
	Table 10		SG LV=-58.1dBm	-58.1dBm	
	Table 11		SG LV=-52.8dBm	-52.8dBm	
	Table 12		SG LV=-47.5dBm	-47.5dBm	
	Table 13		SG LV=-42.2dBm	-42.2dBm	
	Table 14		SG LV=-36.9dBm	-36.9dBm	
	Table 15		SG LV=-31.6dBm	-31.6dBm	
	Table 16		SG LV=-26.3dBm	-26.3dBm	
	Table 17		SG LV=-21.0dBm	-21.0dBm	
RX AGC Frequency Adjustment	Bk 0=38ch	Normal Mode	RF INPUT(SG) LV=-63.5dBm	AGC DIFF.	
	Bk 1=113ch	Reference ch :1163ch	Change to Channel 16 Time.	AGC DIFF.	
	Bk 2=188ch	Deference of Center ch AGCsym.		AGC DIFF.	
	Bk 3=263ch	Change to Channel 16 Time.		AGC DIFF.	
	Bk 4=338ch	OFF Line Mode		AGC DIFF.	
	Bk 5=413ch			AGC DIFF.	
	Bk 6=488ch			AGC DIFF.	
	Bk 7=563ch			AGC DIFF.	
	Bk 8=638ch			AGC DIFF.	
	Bk 9=713ch			AGC DIFF.	
	Bk10=788ch			AGC DIFF.	
	Bk11=863ch			AGC DIFF.	
	Bk12=938ch			AGC DIFF.	
	Bk13=1013ch			AGC DIFF.	
	Bk14=1088ch			AGC DIFF.	
Bk15=1163ch			REF CH.		

ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Tx-RASRAM Adjustment →		<u>Nomal Test Mode</u>	PCS Ch=1163ch	+25.0dBm	
			SG level is cording to the transmission power level of MS	-50.0dBm	
&		TOTAL:36Parametor			
		Symbol			
					
		-50.0dBm	+24.6dBm		
Tx-Limit Adjustment →	Table 1		PCS Ch=1163ch	+8.75dBm	
	Table 2			+10.1dBm	
	Table 3			+11.4dBm	
	Table 4			+12.7dBm	
	Table 5			+14.1dBm	
	Table 6			+15.4dBm	
	Table 7			+16.7dBm	
	Table 8			+18.1dBm	
	Table 9			+19.4dBm	
	Table 10			+20.7dBm	
	Table 11			+22.1dBm	
	Table 12			+23.4dBm	
	Table 13			+24.7dBm	
	Table 14			+25.0dBm	
	Table 15			+25.0dBm	
	Table 16			+25.0dBm	
	OFFSET	Offset : 16.7dB(Table 7)			+16.7dBm
SPN	Spn : 25.0dBm(Table 14)			+25.0dBm	

4. Tx AGC Frequency Adjustment and Tx Limit Frequency Adjustment.

TX AGC Frequency Adjustment	Bk 0=38ch	Nomal Test Mode	RF INPUT(SG) LV=-92.0dBm	Tx-Pow diff.	
	Bk 1=113ch	Reference ch :1163ch	Change to Channel 16 Time.	Tx-Pow diff.	
	Bk 2=188ch	Difference of Center ch AGCsym.		Tx-Pow diff.	
	Bk 3=263ch	Change to Channel 16 Time.		Tx-Pow diff.	
	Bk 4=338ch			Tx-Pow diff.	
	Bk 5=413ch			Tx-Pow diff.	
	Bk 6=488ch			Tx-Pow diff.	
	Bk 7=563ch			Tx-Pow diff.	
	Bk 8=638ch			Tx-Pow diff.	
	Bk 9=713ch			Tx-Pow diff.	
	Bk10=788ch			Tx-Pow diff.	
	Bk11=863ch			Tx-Pow diff.	
	Bk12=938ch			Tx-Pow diff.	
	Bk13=1013ch			Tx-Pow diff.	
	Bk14=1088ch			Tx-Pow diff.	
Bk15=1163ch			REF. CH		
TX Limit Frequency Adjustment	Bk 0=38ch	Nomal Test Mode	RF INPUT(SG) LV=-92.0dBm	*	
	Bk 1=113ch	Reference ch :1163ch	Change to Channel 16 Time.	*	
	Bk 2=188ch	Difference of Center ch AGCsym.		*	
	Bk 3=263ch	Change to Channel 16 Time.		*	
	Bk 4=338ch			*	
	Bk 5=413ch			*	
	Bk 6=488ch			*	
	Bk 7=563ch	12Symb=1.0dB		*	
	Bk 8=638ch			*	
	Bk 9=713ch			*	
	Bk10=788ch			*	
	Bk11=863ch			*	
	Bk12=938ch			*	
	Bk13=1013ch			*	
	Bk14=1088ch			*	
Bk15=1163ch			REF. CH		

*TX-Power Diffrencial + ADC Diffrencial×Limit Table Value