DESCPRIPTIVE INFORMATION
Parts List

Reference No.	Function	Part No.
	PLL Synthesizer	
IC 141	PLL IC	MB15F73SP
X 1401	PCS/AMPS VCO	VC-2R8A26-0967/1750C
	Transmitter	
IC 133	PCS Power Amplifier	RF5154
IC 134	AMPS Power Amplifier	RF2192
IC 131	Switch	UPG2008TK
Q 1312,1314	Transister	DTC144EE
Q 1313,1314	Transister	DTA124XE
D 1304,1305	Diode	HSC88
XF 110	Diplexer	LFDP15N0040A
XF 112	PCS Duplexer	DFYK91G88LDGAA
XF 111	AMPS Duplexer	FAR-D5CN-881M50-D1N4
XF 132	PCS Isolator	CE0411G88DCA
XF 134	AMPS Isolator	CE053R836DCB
XF 131	PCS Couper	LDC10B190J1880
XF 133	AMPS Couper	LDC10B150J0836
XF 130	PCS RF SAW Filter	SF25-1880H8UU04
XF 135	AMPS RF SAW Filter	SAFSE836MAL0T
	Regulator	
IC 151	Regulator(3.0V)	R1140Q301B
IC 153	Regulator(2.9V)	R1141Q291B
	Receiver	
IC 122	LNA/Mixer	RF2496
IC 121	PCS LNA	NE34018
Q 1205	Transister	2SC4617
XF 121	PCS/AMPS RF SAW Filter	SAWCD881MFA0T
XF 123	PCS IF SAW Filter	B4915
XF 122	AMPS IF SAW Filter	SAFC85.380MA15X
	IF AGC Circuit	
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
	TCXO Circuit	
X 1400	TCXO	KT18B-CCV30A-19.200M-T
Q 1401	Transistor	2SC4649

PCS/AMPS-Mode RF Block/Parts List

MODEL NO. SCP-6200 **FCC USE ONIY**

Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description
C1102	3P	C1280	33P	C1362	2.5P	C2398	33P		
C1104	12P	C1281	33P	C1365	10P	C2399	33P		
C1107	100P	C1282	0.01U	C1366	0.01U	C2660	22P		
C1120	100P	C1283	1000P	C1370	1U	C2661	7P		
C1204	1P	C1285	3P	C1371	1U	C2662	7P		
C1205	100P	C1286	0.033U	C1373	100P	C2663	7P		
C1208	56P	C1287	8P	C1374	8P	C2664	7P		
C1211	2.5P	C1290	2.2U	C1375	100P	C2665	7P		
C1213	0.5P	C1301	390P	C1376	100P	C2666	7P		
C1215	1000P	C1302	390P	C1378	7P	C2667	7P		
C1216	100P	C1303	390P	C1379	100P	C2668	7P		
C1217	33P	C1304	390P	C1380	4.7U	C2669	7P		
C1218	1000P	C1305	22P	C1381	100P	C2671	7P		
C1219	1000P	C1308	1000P	C1382	0.01U	C2672	7P		
C1220	100P	C1309	0.1U	C1383	100P	C2673	7P		
C1221	0.1U	C1310	4700P	C1384	100P	C2674	22P		
C1222	2P	C1311	0.1U	C1385	0.01U	C2675	22P		
C1224	0.01U	C1312	0.01U	C1401	0.01U	C2676	1U		
C1225	0.01U	C1313	100P	C1406	0.1U	C2677	1U		
C1230	0.033U	C1314	0.01U	C1407	1000P	C2678	1U		
C1231	1000P	C1315	47P	C1408	10U	C2679	1U		
C1232	0.033U	C1316	47P	C1410	2200P	C2681	1U		
C1234	2P	C1317	47P	C1411	0.22U	C2682	1U		
C1236	1000P	C1318	100P	C1412	1200P	C2683	0.47U		
C1237	0.01U	C1319	4P	C1413	10U	C2684	0.47U		
C1238	1000P	C1320	4P	C1414	0.01U	C2685	0.22U		
C1239	1000P	C1321	8P	C1415	1000P	C2686	0.22U		
C1240	0.01U	C1322	3300P	C1416	100P	C2687	0.22U		
C1241	8P	C1323	3300P	C1417	4700P	C2688	0.22U		
C1242	8P	C1324	100P	C1418	0.47U	C2689	0.22U		
C1243	0.5P	C1325	0.1U	C1419	0.022U	C2691	0.22U		
C1245	5P	C1326	0.01U	C1420	0.01U	C2692	0.47U		
C1246	0.01U	C1327	0.01U	C1421	1000P	C2693	0.47U		
C1248	0.01U	C1328	1000P	C1422	1000P	C2694	0.47U		
C1249	0.01U	C1329	1000P	C1423	1000P	C2696	0.1U		
C1250	0.01U	C1330	0.12U	C1424	100P	C2697	0.1U		
C1251	4700P	C1331	560P	C1425	100P	C2698	0.1U		
C1252	1000P	C1332	1000P	C1426	27P	C2699	0.1U		
C1253	0.01U	C1333	82P	C1427	0.01U				
C1254	0.01U	C1334	82P	C1501	10U				
C1255	0.01U	C1335	7P	C1502	1U				
C1256	1000P	C1336	0.01U	C1506	2.2U				
C1257	22P	C1337	100P	C1507	1U				
C1259	22P	C1338	100P	C1508	100P				
C1260	0.1U	C1339	56P						
C1261	1000P	C1340	2P						
C1262	1000P	C1341	100P						
C1263	0.01U	C1342	1000P						
C1264	100P	C1343	1000P						
C1265	0.01U	C1344	15P						
C1266	0.1U	C1345	15P						
C1267	0.01U	C1346	6P						
C1270	0.1U	C1348	15P						
C1271	100P	C1350	15P						
C1273	1000P	C1351	0.01U						
C1275	1000P	C1352	12P						
C1276	1000P	C1353	4.7U						
C1277	1000P	C1357	3P						

PCS/AMPS-Mode RF Block/Parts List

MODEL NO. SCP-6200 **FCC USE ONIY**

Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description
R1101	0	R1350	22	R2396	10				
R1103	0	R1352	0	R2397	10				
R1107	0	R1360	47k	R2398	1k				
R1206	10k	R1401	680	R2683	100k				
R1207	10k	R1402	15k	R2684	150				
R1208	10k	R1403	47k	R2685	150				
R1209	47	R1409	27	R2688	1k				
R1210	100	R1410	0	R2689	330k				
R1211	10k	R1411	10k	R2692	150				
R1212	10k	R1412	0	R2693	68				
R1217	10k	R1413	1.8k	R2694	150				
R1219	10k	R1414	0	R2695	68				
R1220	13k	R1415	1k	R2696	150				
R1221	6.8k	R1416	1k	R2697	68				
R1222	1k	R1417	51	R2698	150				
R1223	3.3	R1418	1k	R2699	330				
R1224	3.3	R1419	1k	RB121	1kX4				
R1225	1k	R1420	1k	RB122	1kX4				
R1226	10k	R1425	10	TH161	68k				
R1227	10k	R1510	0						
R1228	10k	R1601	18k						
R1229	4.7k	R1602	68k						
R1230	10								
R1233	8.2k								
R1234	100								
R1245	22								
R1247	2.7k								
R1248	100								
R1249	5.1k								
R1250	15k								
R1251	6.8k								
R1255	10								
R1260	0								
R1290	56								
R1301	1k								
R1302	1k								
R1303	0								
R1304	47								
R1305	10k								
R1306	0								
R1307	12k								
R1308	3.6k								
R1309	10k								
R1310	10k								
R1311	10k								
R1314	100								
R1315	1.5k								
R1316	1k								
R1321	56								
R1323	270								
R1324	0								
R1325	120								
R1329	1k								
R1330	1.8k								
R1331	10k								
R1332	56k								
R1333	56								
R1335	0								

PCS/AMPS-Mode RF Block/Parts List

MODEL NO. SCP-6200 **FCC USE ONIY**

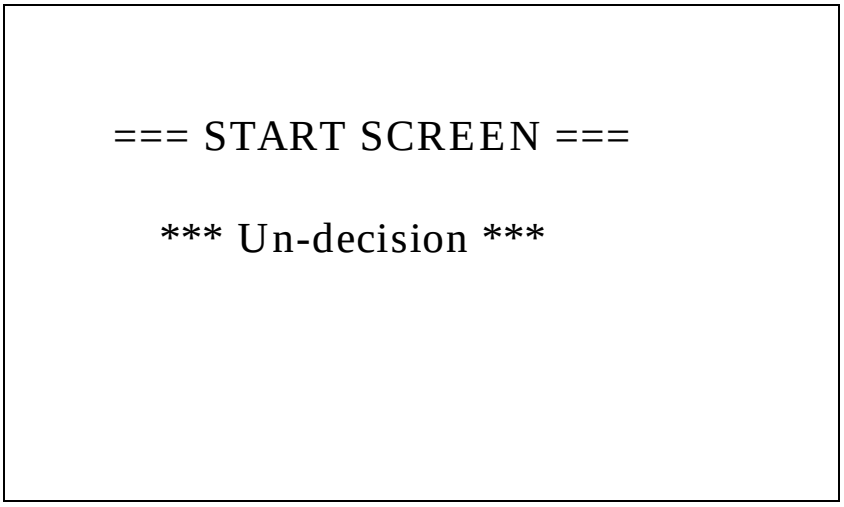
Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description
L1100	3.3n	L2396	220n						
L1102	8.2n	L2397	220n						
L1103	3.9n	L2398	220n						
L1105	18n	L2399	220n						
L1108	1.8n								
L1109	12n								
L1202	10n								
L1203	82n								
L1205	1n								
L1207	1.5n								
L1208	4.7n								
L1209	22n								
L1210	3.3n								
L1212	5.6n								
L1213	120n								
L1214	43n								
L1215	43n								
L1216	270n								
L1217	68n								
L1218	270n								
L1219	47n								
L1220	12n								
L1221	12n								
L1222	56n								
L1223	56n								
L1224	1.5n								
L1226	27n								
L1251	220n								
L1301	27n								
L1302	27n								
L1303	4.7n								
L1304	4.7n								
L1305	10n								
L1306	27n								
L1307	8.2n								
L1308	12n								
L1309	8.2n								
L1310	4.7n								
L1311	1.5n								
L1312	15n								
L1313	2.2n								
L1316	4.7n								
L1318	5.6n								
L1320	600 Ohm								
L1321	600 Ohm								
L1322	600 Ohm								
L1330	5.6n								
L1331	39n								
L1332	22n								
L1334	3.9n								
L1336	1n								

FCC TEST MODE OPERATION MANUAL

[FCC TEST Start Up]

1): Push the "POWER" Key.

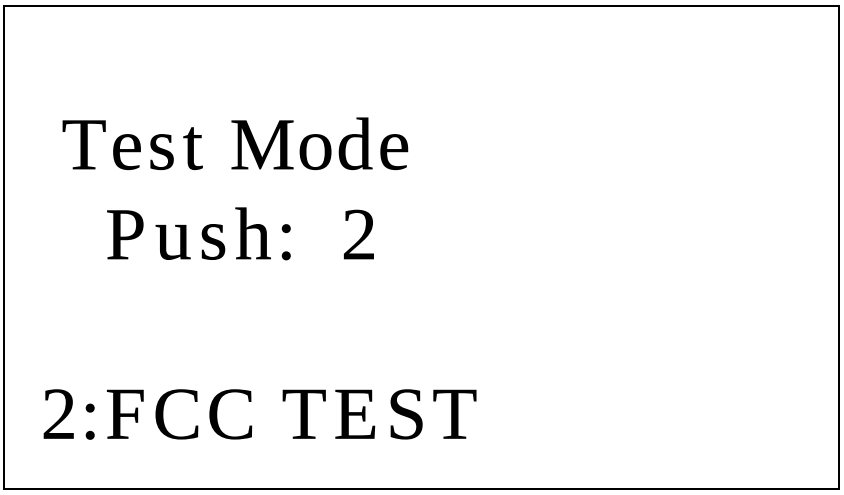
(LCD Display)



2): It transits to "Test_Mode" .

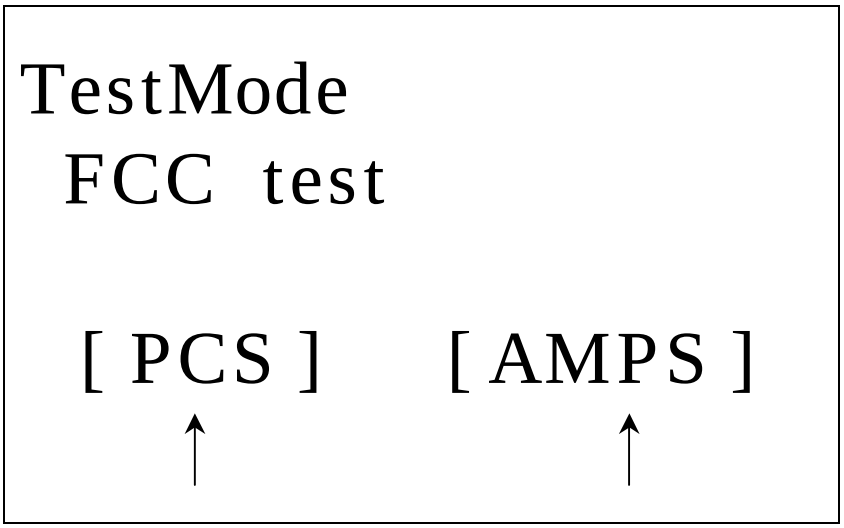
Push the "menu" Key and Push the "Left" Key .

(LCD Display)



3): Push the "2" Key, then entered the FCC TEST Mode.

(LCD Display)



[PCS Inspection Mode] [AMPS Inspection Mode]

When the above screen, push either the " ◀ (left)" Key or the " ▶ (right)" Key.

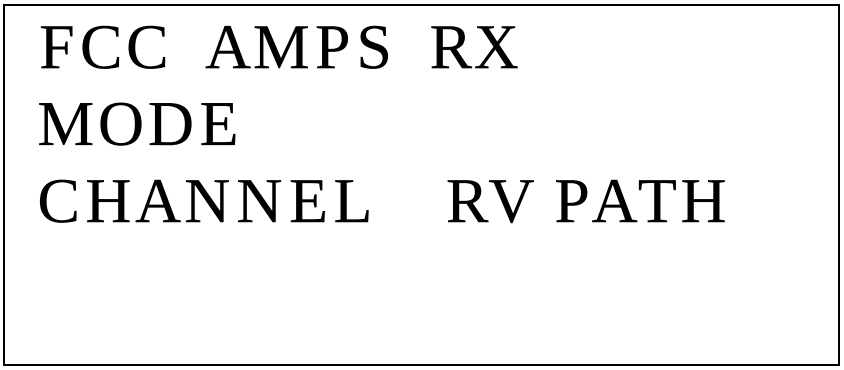
Push the " ◀ (left)" Key, then switched PCS mode
(Displayed the Initial Screen of PCS Mode)
(The Initial Screen of PCS Mode is TX setting screen; See Page 7)

Push the " ▶ (right)" Key, then switched AMPS Mode
(Displayed the Initial Screen of AMPS Mode)
(The Initial Screen of AMPS Mode is RX setting screen; See Page 3)

[AMPS Mode]

1) RX Mode (Receiving only)

(LCD Display)

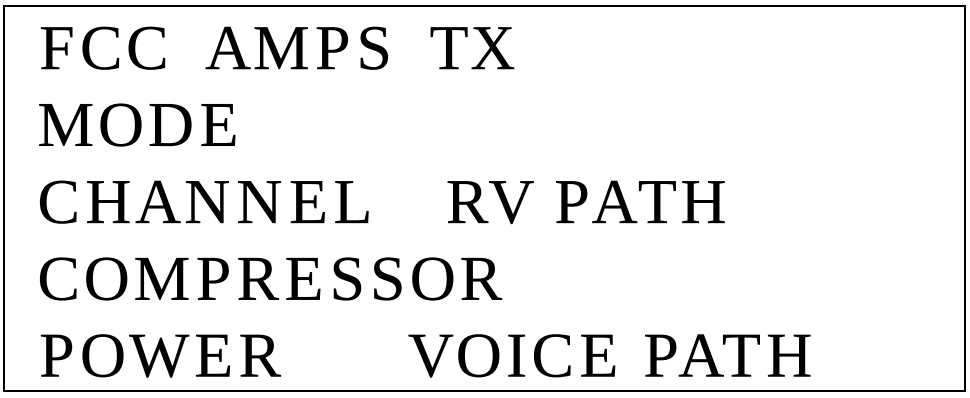


MODE : **"RX"**
CHANNEL : **"CH: Current Channel Number"**
RV PATH : **"Dis or Ena"**
(Dis =Disable Receiving voice path)
(Ena =Enable Receiving voice path)

2) RX and TX mode

1) Push "TALK" Key.

(LCD Display)



MODE : **"TX"**
CHANNEL : **"CH: Current Channel Number"**
COMPRESSOR : **"Comp : ON" or "Comp : OFF"**

POWER : **"Tx Pwr : Number** of **0** to **7"**

The target Tx power is as followers .

0 =1 = 2 = 24.3 dBm

3 = 23.0 dBm

4 = 19.0 dBm

5 = 15.0 dBm

6 = 11.0 dBm

7 = 7.0 dBm

RV PATH : **"Dis or Ena"**

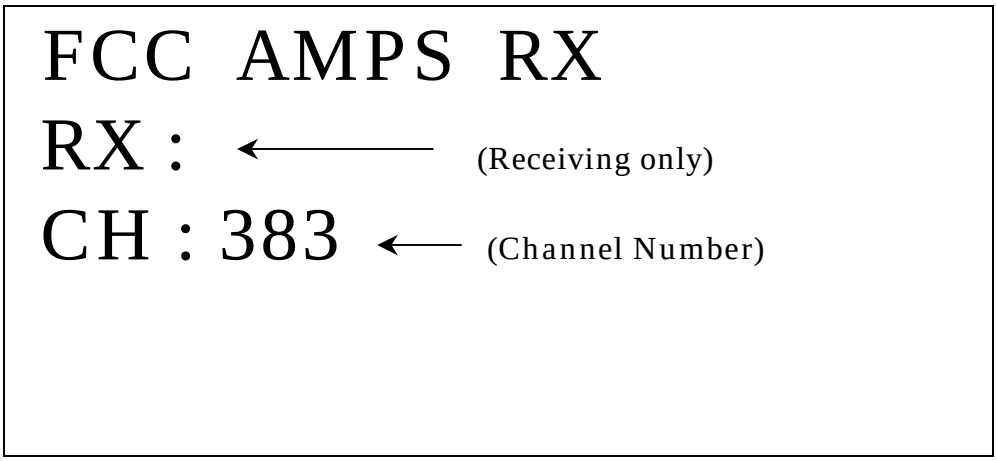
(Dis =Disable Receiving voice path)

(Ena =Enable Receiving voice path)

VOICE PATH : **"FREE, HAND** or **HEAD"**

3) RX Mode (default)

(LCD Display)



1) Setting the channel

Push the " ***** " Key.

(Sequentially switched " **383 → 799 → 991** ")

2) Switch the mod. (RX mode to RX/TX Mode)

Push the "**TALK**" Key. (Switched to RX/TX Mode)

<RX Mode Parameter>

TX/RX Voice Path : Dis **TX : OFF**

Mic : OFF **RX : ON**

Speaker : OFF **ANT : Inner Antenna active**

4) RX / TX Mode

(LCD Display)

FCC AMPS TX
TX : VOICE ← (Modulation)
CH : 383 ← (current Channel No.)
Comp : OFF ← (Compressor Off)
Tx Pwr : 0 ← (Transmission Power level)

1) Setting the Channel

Push the "*****" Key

(Sequentially switched " **383 → 799 → 991** ")

Note : If displayed TX : SAT+DTMF, can not set the Channel.
Please change another modulation. (See next section)

2) Setting the Modulation

Push the " ▲ (Up) " Key

(Sequentially switched " **No Modula → VOICE → WBD → SAT → ST → SAT+VOICE → SAT+ST → SAT+DTMF**)

No Modula	: No Modulation
VOICE	: Mic ON, that is, activated Audio path.
WBD	: Activated Wide Band Data
SAT	: Output SAT
ST	: Output ST
SAT+VOICE	: Mic. ON, modulation signal is Voice added SAT.
SAT+ST	: the modulation signal is SAT added ST.
SAT+DTMF	: the modulation signal is SAT added DTMF.

3) Setting the compressor

Push the "3" Key : Compressor ON (displayed **"Comp : ON"**)

Push the "**CLR**" Key : Compressor OFF (displayed **"Comp: OFF"**)

Note: When set the **SAT+DTMF** Mode, then can not to set the compresor.

4) Setting the transmission power level.

Displayed the transmission level No, that is, 0 to 7.

Push the "**4**" Key. (Up the transmission level, decrement a number)

Push the "**6**" Key. (Down the transmission level, increment a number)

Note: When set the **SAT+DTMF** Mode, then can not to set the **power level**.

5) Switch the Mode. (TX Mode → RX Mode)

Push the "**END**" Key.

Note: When set the **SAT+DTMF** Mode, then can not to switch the **RX Mode**.

6) Setting the Voice path

Push the "**1**" Key. (Enable the receiving voice path)

Push the "**2**" Key. (Disable the receiving voice path)

Note: When set the **SAT+DTMF** Mode, then can not to set the receiving voice path.

7) Change the CODEC path.

Push the "**#**" Key.

(Sequentially switched " **FREE → HAND → HEAD** ")

Note: Except **VOICE** and **SAT+VOICE** modes, can not change the voice path.

FREE: External I/F active

HAND: Internal Mic active

HEAD: Ear/Mic active

When input the voice signal, let you set the "FREE" and use the External I/F.

8) Quit.

Push the "**END**" Key . (**TX Mode → RX Mode**)

Push the "**END**" Key . (Exit FCC AMPS Test Mode.)

(Display change the initial Screen, see page 2)

Push the "**END**" Key . (Exit FCC Test Mode.)

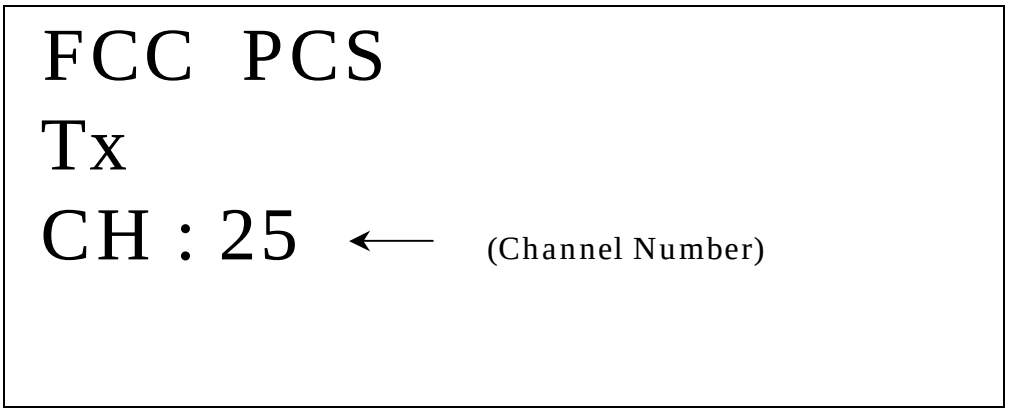
(Display change the initial Screen, see page 1)

[PCS Mode]

1) Tx, TRx and Rx Mode

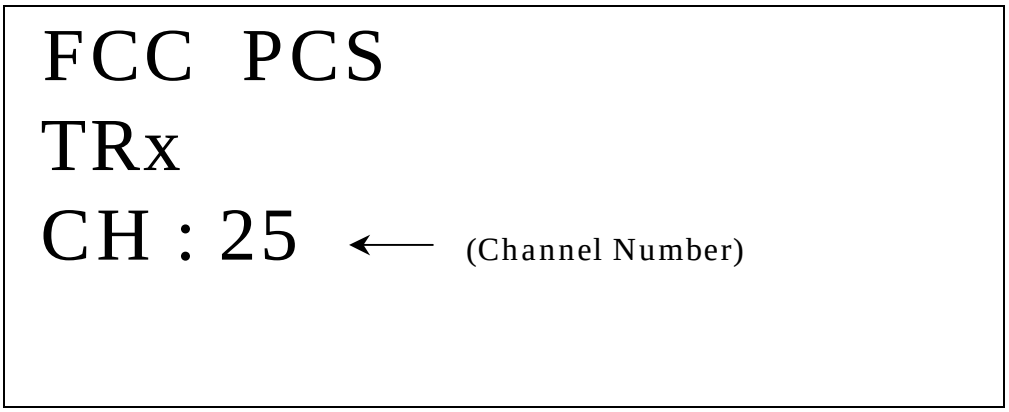
(Tx mode)

(LCD Display)



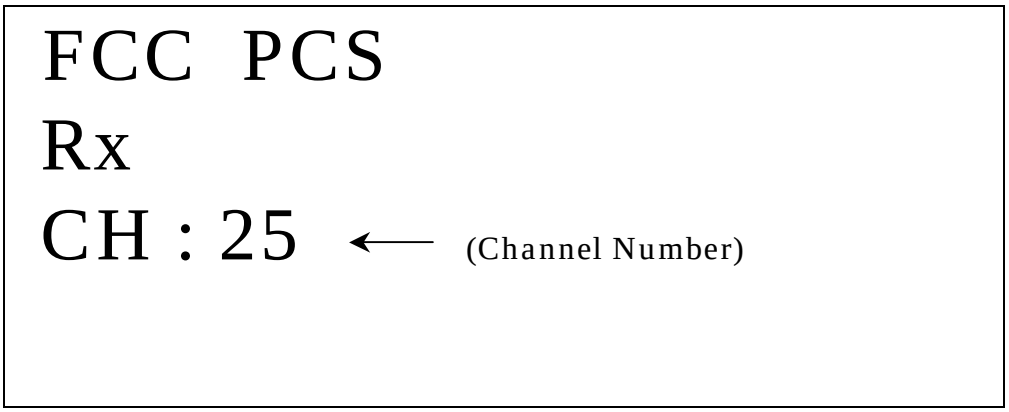
(Tx/Rx mode)

(LCD Display)



(Rx Mode)

(LCD Display)



PCS Initial screen is Tx mode.

1) Mode switch

Push the **"#"** Key.

(Sequentially switched " **Tx** mode→ **TRx** mode → **Rx** mode ")

2) Channel Number setting

Push the " ***** " Key.

(Sequentially switched " **25 → 600 → 1175** ")

3) Quit

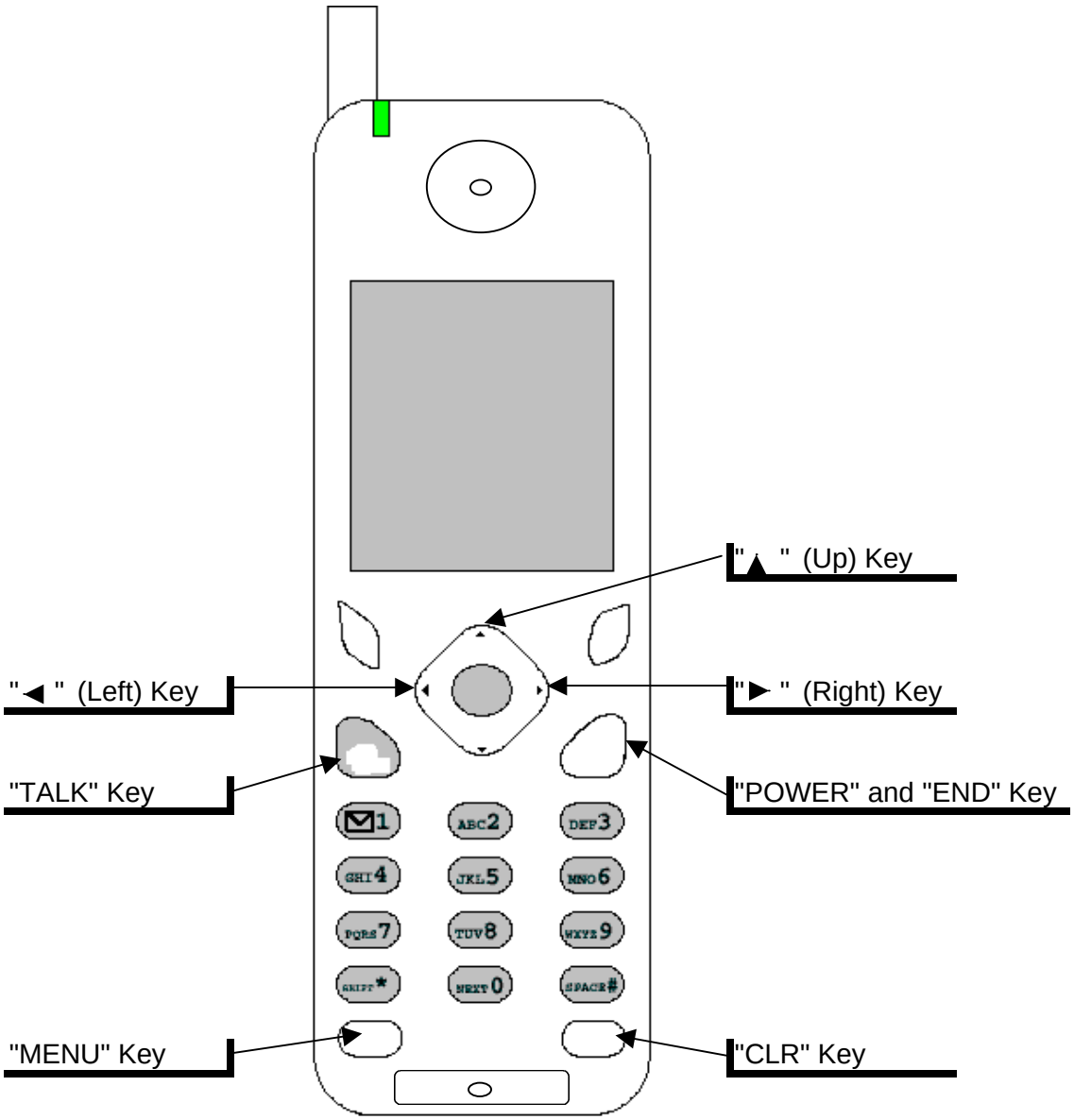
Push the "**END**" Key . (Exit FCC PCS Test Mode.)

(Display change the initial Screen, see page 2)

Push the "**END**" Key . (Exit FCC Test Mode.)

(Display change the initial Screen, see page 1)

AEZSCP-62H


" ▲ " (Up) Key
" ◀ " (Left) Key
" ▶ " (Right) Key
"TALK" Key
"POWER" and "END" Key
"MENU" Key
"CLR" Key

SCP-6200 Adjustment Discription for Mass production.

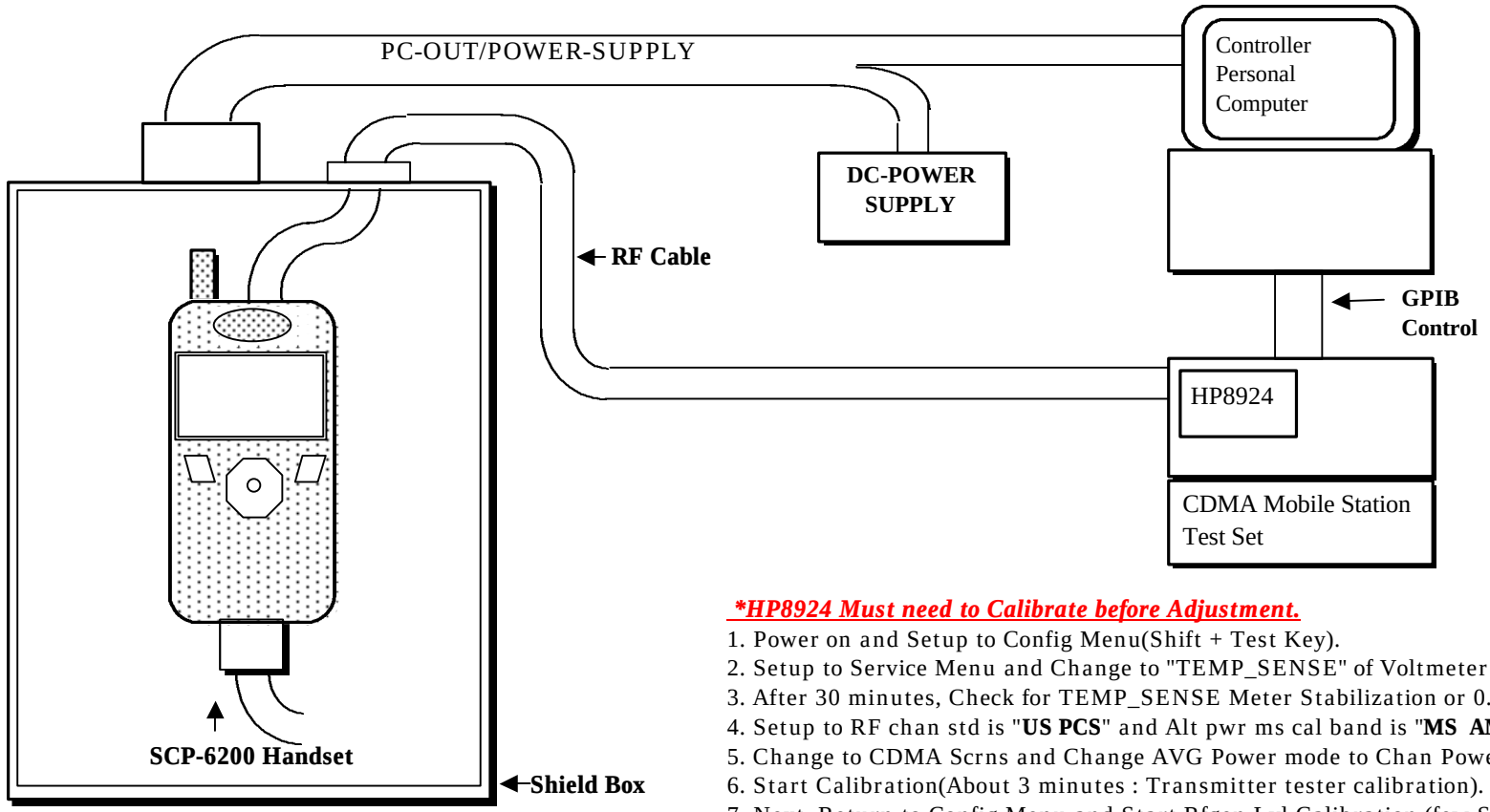
APPROVE	CHECK	ISSUE

1-163-417-00	SCP-6200/H.US

Eng. Section	**Personal Telecommunication Division Technical Engineering Department RF Group**
NAME	**M.Ichi T.Taniguchi**

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

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

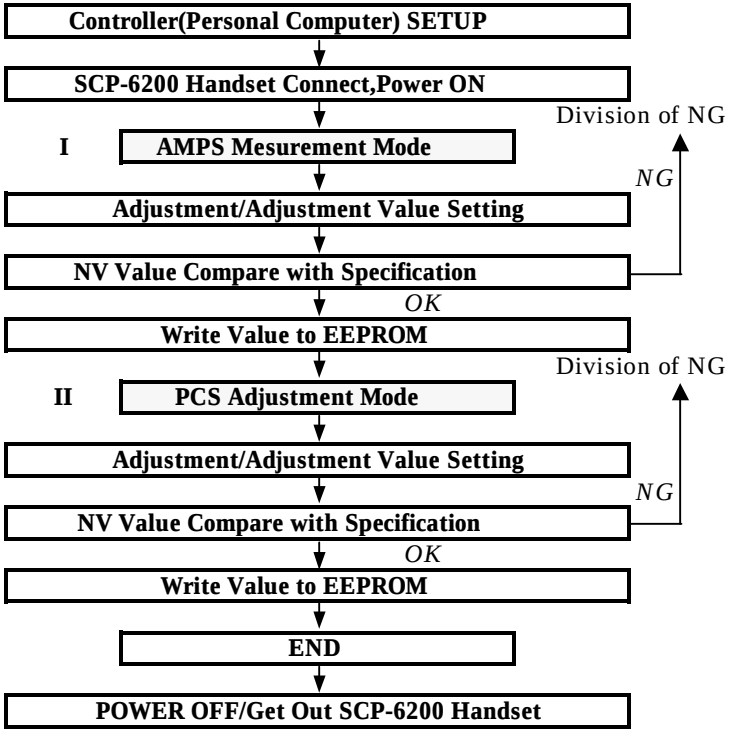


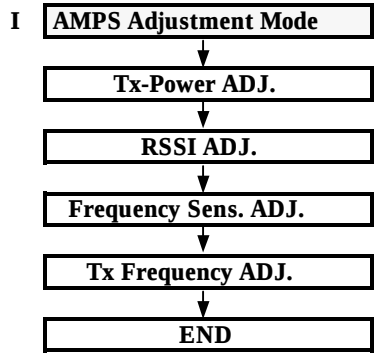
HP8924 Must need to Calibrate before Adjustment.

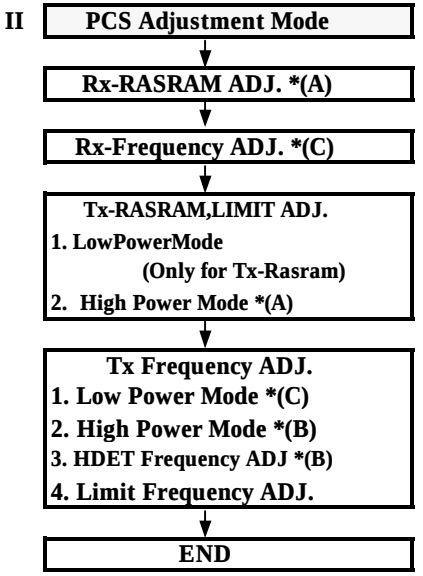
1. Power on and Setup to Config Menu(Shift + Test Key).
2. Setup to Service Menu and Change to "TEMP_SENSE" of Voltmeter Connection .
3. After 30 minutes, Check for TEMP_SENSE Meter Stabilization or 0.5V(=50 degreeC). .
4. Setup to RF chan std is "**US PCS**" and Alt pwr ms cal band is "**MS AMPS**" .
5. Change to CDMA Scrns and Change AVG Power mode to Chan Power mode.
6. Start Calibration(About 3 minutes : Transmitter tester calibration).
7. Next, Return to Config Menu and Start Rfgen Lvl Calibration (few Seconds).

2 Alignment Procedure

(1)Adjustment Procedure

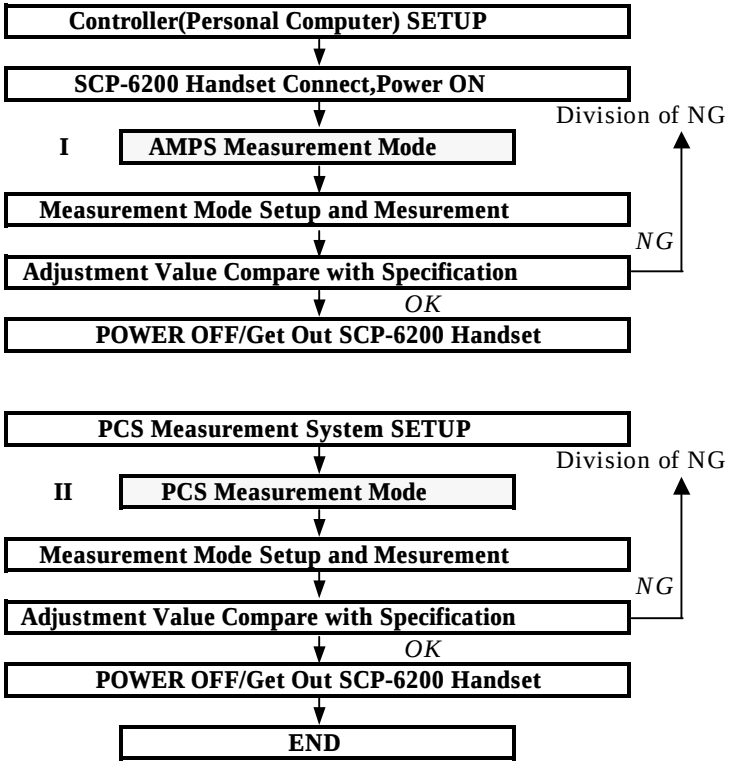


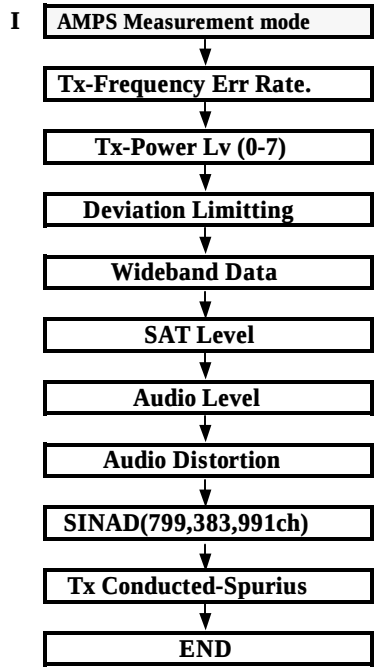


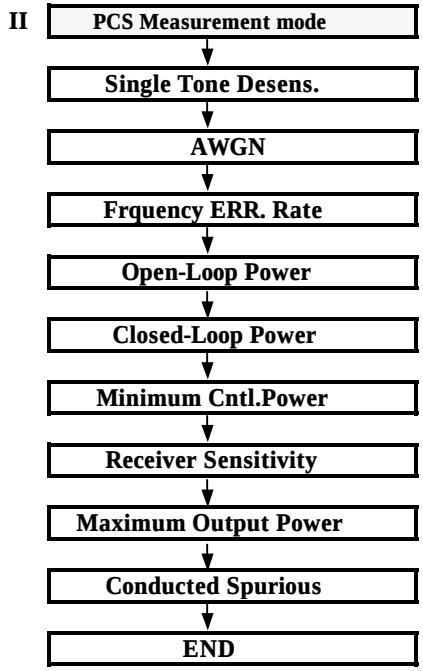


When use the program for reduction of adjustment, each (A),(B) and (C) are adjusted at the same time.

(2)Measurement Procedure







3.Adjustment Value

1.AMPS Adjustment

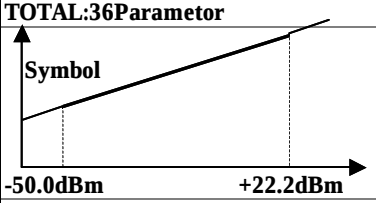
ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Tx-Power Adjustment	PL=0,1,2	Normal Test Mode	AMPS Mode	+24.3dBm	
	PL=3	Tx AGC SET : 3-2-3-2	Txpower :dBm Mode	+23.0dBm	
	PL=4			+19.0dBm	
	PL=5			+15.0dBm	
	PL=6			+11.0dBm	
	PL=7			+ 7.0dBm	
Tx-Power Frequency Adjustment	Bk 0=1017ch	FCC Test Mode	PL=0	+23.8dBm	
	Bk 1=46ch			+23.8dBm	
	Bk 2=98ch			+23.8dBm	
	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		FCC Test Mode : AMPS Tx : ST,CH : 358	AF ANL Mode 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	FCC TEST Mode RSSI=Filter*116+AgcRSSI*47	-60dBm RFinput -113dBm RFinput	-60dBm : BAR4 BAR1	NV_FM_RSSI_I

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

2.PCS RX Adjustment

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.	

3.PCS TX & TX-LIMIT Adjustment

ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Tx-RASRAM →		Nomal Test Mode	PCS Ch=1163ch	+22.2dBm	
Adjustment			SG level is ccording to the transmission	-50.0dBm	
			power level of MS		
Adjusted by					
Low Power Mode &					
High Power Mode					
&		TOTAL:36Parametor			
					
		-50.0dBm +22.2dBm			
Tx-Limit →	Table 1		PCS Ch=1163ch	+8.75dBm	
Adjustment	Table 2			+10.1dBm	
	Table 3			+11.4dBm	
*Only for	Table 4			+12.7dBm	
High Power Mode	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			+22.2dBm	
	Table 13			+22.2dBm	
	Table 14			+22.2dBm	
	Table 15			+22.2dBm	
	Table 16			+22.2dBm	
	OFFSET	Offset : 16.7dB(Table 7)		+16.7dBm	
	SPN	Spn : 22.2dBm(Table 14)		+22.2dBm	

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

TX AGC Frequency Adjustment **Adjusted by Low Power Mode & High Power Mode**	**BK 0~14 *1 (ch)**	**Nomal Test Mode**	**RF INPUT(SG) LV=Low:-63.5dBm**	**Tx-Pow diff.**	
		Reference ch :1163ch	**High:-92.0dBm**		
		Difference of Center ch AGCsym.	**Change to Channel 16 Time.**		
		Change to Channel 16 Time.			
		note: 12Symb=1.0dBm **Supplementary value:Difference of TX-power change to symb.**			
	Bk15=1163ch				
HDET Frequency Adjustment	**BK 0~14 *1 (ch)**	**Nomal Test Mode**	**RF INPUT(SG) LV=HDET:-92dBm**	**Tx-Pow diff.**	**HDET diff.**
		Reference ch :1163ch	**Change to Channel 16 Time.**		
		Difference of Center ch AGCsym.			
		Change to Channel 16 Time.			
		HDET: difference of HDET			
		Difference of HDET			
	Bk15=1163ch				
TX Limit Frequency Adjustment	**BK 0~14 *1 (ch)**	**Nomal Test Mode**	**RF INPUT(SG) LV=-92.0dBm**	***2**	
		Reference ch : 1163ch	**Change to Channel 16 Time.**		
		Difference of Center ch AGCsym.			
		Change to Channel 16 Time.			
		Note: convert the difference to AGC value **Supplementary value: Difference of HDET value change to AGC**			
	Bk15=1175ch			***3**	