NO	SEC-CODE.	DESCRIPTION	COUNT	REFERENCE
1	0404-000121	DIODE	1	D204
2	0404-001093	PIN DIODE	1	D302
3	0405-001035	DIODE	4	D303 D304 D401
				D402
4	0406-001005	ZENER DIODE-ARRAY	1	ZD202
5	0406-001084	EMD	9	ZD101 ZD102 ZD103
				ZD104 ZD105 ZD106
				ZD107 ZD108 ZD201
6	0407-000115	DIODE-ARRAY	1	D203
7	0409-001016	DIODE-PIN	1	D403
8	0409-001025	DIODE-PIN	1	D301
9	0501-000162	TR-SMALL SIGNAL	3	Q109 Q201 Q402
10	0501-000218	TR-SMALL SIGNAL	1	Q106
11	0501-002096	TX DRIVE AMP	1	Q303
12	0501-002277	PCS LNA	1	Q401
13	0504-000167	TR-DIGITAL	4	Q108 Q306 Q307
				Q403
14	0504-000168	TR-DIGITAL	3	Q107 Q110 Q202
15	0504-000172	TR-DIGITAL	2	Q111 Q308
16	0505-001037	SWITCHING IC	2	U111 U304
17	0505-001376	SWITCHING IC	3	U114 U115 U119
18	0505-001408	SWITCHING IC	1	U108
19	0801-000794	LOGIC IC	2	U118 U405
20	0801-002345	LOGIC IC	1	U102
21	1002-001183	DAC	1	U203
22	1103-001147	IC-EEPROM	1	U117
23	1109-001133	IC-ETC.MEMORY	1	U103
24	1201-001348	IC-OP AMP	2	U306 U307
25	1201-001517	IC-LNA	1	U404
26	1201-001591	AMPS RX MIXER	1	U403
27	1203-001256	3.3V 전원 IC	1	U204
28	1203-001285	3.3V 전원 IC	4	U112 U113 U116
				U210
29	1203-001511	IC-RESET	1	U109
30	1203-001720	3.0V 전원IC	1	U110
31	1204-001013	AMPS TX MIXER	1	U302
32	1204-001562	MP3 DECODER	1	U202
33	1204-001581	IFR3000	1	U402
34	1204-001582	IFT3000	1	U308
35	1204-001709	CODEC IC	1	U211
36	1205-001670	MSM3000	1	U106
37	1205-001775	PCS TX MIXER	1	U301
38	1205-001710	PCS RX MIXER	1	U401
39	1404-001040	THERMISTOR	1	TH301
40	2007-000137	R-CHIP	1	R224
41	2007-000138	R-CHIP	8	R133 R134 R135

NO	SEC-CODE.	DESCRIPTION	COUNT	REFERENCE
				R330 R423 R426
				R427 R463
42	2007-000140	R-CHIP	9	R129 R157 R160
				R162 R170 R227
				R228 R324 R435
43	2007-000141	R-CHIP	7	R139 R152 R153
				R173 R218 R221
				R327
44	2007-000142	R-CHIP	1	R372
45	2007-000143	R-CHIP	3	R120 R122 U411
46	2007-000147	R-CHIP	1	R350
47	2007-000148	R-CHIP	17	R111 R117 R118
				R119 R125 R130
				R156 R168 R169
				R333 R343 R359
				R360 R418 R419
				R436 R445
48	2007-000151	R-CHIP	4	R161 R204 R208
				R319
49	2007-000153	R-CHIP	2	R131 R402
50	2007-000154	R-CHIP	1	R270
51	2007-000157	R-CHIP	4	R128 R321 R345
				R417
52	2007-000159	R-CHIP	6	R141 R150 R151
				R171 R325 R357
53	2007-000161	R-CHIP	1	R147
54	2007-000162	R-CHIP	13	R107 R143 R145
				R146 R158 R202
				R234 R241 R262
				R317 R328 R344
				R356
55	2007-000164	R-CHIP	5	R138 R144 R174
				R230 R346
56	2007-000169	R-CHIP	1	R140
57	2007-000170	R-CHIP	1	R240
58	2007-000172	R-CHIP	3	R216 R217 R416
59	2007-000242	R-CHIP	5	R214 R215 R219
				R222 R432
60	2007-000566	R-CHIP	1	R142
61	2007-000690	R-CHIP	2	R238 R239
62	2007-000932	R-CHIP	1	R136
63	2007-001119	R-CHIP	2	R408 R457
64	2007-001156	R-CHIP	1	R112
65	2007-001288	R-CHIP	2	R364 R440
66	2007-001217	R-CHIP	1	R405
67	2007-001290	R-CHIP	2	R231 R232
68	2007-001301	R-CHIP	2	R309 R401
69	2007-001306	R-CHIP	1	R229
70	2007-001307	R-CHIP	1	R415
71	2007-001311	R-CHIP	2	R314 R323
72	2007-001317	R-CHIP	1	R320
73	2007-001320	R-CHIP	3	R307 R322 R335

NO	SEC-CODE.	DESCRIPTION	COUNT	REFERENCE
74	2007-001325	R-CHIP	2	R220 R223
75	2007-001329	R-CHIP	6	R205 R206 R207
				R209 R210 R211
76	2007-001335	R-CHIP	1	R349
77	2007-002796	R-CHIP	2	R338 R341
78	2007-002797	R-CHIP	1	R315
79	2007-003019	R-CHIP	2	R339 R403
80	2007-003023	R-CHIP	2	R260 R337
81	2007-007001	R-CHIP	2	R316 R431
82	2007-007107	R-CHIP	1	R329
83	2007-007133	R-CHIP	4	R365 R366 R441
				R442
84	2007-007137	R-CHIP	2	R332 R430
85	2007-007142	R-CHIP	6	R154 R155 R172
				R261 R331 R334
86	2007-007309	R-CHIP	1	R340
87	2007-007517	R-CHIP	1	R404
88	2007-007528	R-CHIP	1	R236
89	2007-007588	R-CHIP	2	R355 R420
90	2007-007771	R-CHIP	21	L422 R159 R233
				R235 R237 R305
				R311 R336 R325
				R353 R354 R369
				R371 R374 R409
				R413 R421 R425
				R428 R429 R443
91	2203-000233	CHIP-CAP	36	C105 C116 C118
				C127 C309 C318
				C324 C331 C341
				C347 C349 C350
				C351 C355 C362
				C374 C389 C401
				C408 C412 C420
				C426 C427 C428
				C430 C445 C447
				C474 C481 C483
				C484 C485 C495
				C496 C506 C510
92	2203-000254	CHIP-CAP	46	C120 C129 C137
				C142 C144 C149
				C150 C151 C154
				C169 C171 C173
				C192 C219 C241
				C246 C250 C251
				C313 C315 C316
				C321 C322 C326
				C335 C337 C342
				C345 C354 C367
				C373 C376 C378
				C379 C391 C403
				C406 C424 C425
				C444 C454 C456

NO	SEC-CODE.	DESCRIPTION	COUNT	REFERENCE
				C493 C497 C499
				C501
93	2203-000278	CHIP-CAP	7	C111 C432 C328
				C431 C452 C491
				C492
94	2203-000311	CHIP-CAP	2	C208 C211
95	2203-000330	CHIP-CAP	4	C203 C204 C446
				C472
96	2203-000386	CHIP-CAP	3	C243 C252 C405
97	2203-000425	CHIP-CAP	3	C436 C440 C471
98	2203-000438	CHIP-CAP	48	C122 C128 C133
				C143 C193 C206
				C240 C301 C304 C30
				C307 C308 C314
				C319 C329 C344 C35
				C353 C356 C359
				C360 C372 C375
				C380 C381 C382
				C383 C415 C429
				C433 C443 C453
				C457 C458 C459
				C460 C465 C466
				C467 C468 C469
				C470 C473 C475
				C488 C498 C500
				C502
99	2203-000466	CHIP-CAP	1	C390
100	2203-000489	CHIP-CAP	1	C462
101	2203-000585	CHIP-CAP	2	C207 C490
102	2203-000628	CHIP-CAP	4	C312 C451 C463
				C464
103	2203-000679	CHIP-CAP	2	C109 C110
104	2203-000696	CHIP-CAP	1	C503
105	2203-000812	CHIP-CAP	8	C140 C323 C32 5
				C332 C334 C336
				C346 C392
106	2203-000836	CHIP-CAP	1	C363
107	2203-000870	CHIP-CAP	1	C507
108	2203-000885	CHIP-CAP	3	C132 C369 C370
109	2203-000940	CHIP-CAP	6	C115 C119 C126
				C131 C239 C242
110	2203-000955	CHIP-CAP	1	C327
111	2203-001017	CHIP-CAP	1	C421
112	2203-001072	CHIP-CAP	1	C448
113	2203-001178	CHIP-CAP	1	C358
114	2203-001259	CHIP-CAP	3	C311 C419 C434
115	2203-001383	CHIP-CAP	1	C388
116	2203-001385	CHIP-CAP	1	C409
117	2203-001405	CHIP-CAP	3	C271 C368 C461
118	2203-001432	CHIP-CAP	3	C357 C402 C404
119	2203-001437	CHIP-CAP	2	C330 C371
120	2203-002525	CHIP-CAP	4	C145 C148 C194

NO	SEC-CODE.	DESCRIPTION	COUNT	REFERENCE
				C432
121	2203-002668	CHIP-CAP	1	C442
122	2203-005055	CHIP-CAP	1	C437
123	2203-005056	CHIP-CAP	1	C407
124	2203-005061	CHIP-CAP	24	C106 C124 C153
				C174 C175 C221
				C222 C224 C225
				C227 C231 C233
				C237 C245 C248
				C273 C275 C276
				C320 C364 C366
				C479 C482 C504
125	2203-005065	CHIP-CAP	2	C152 C255
126	2203-005138	CHIP-CAP	4	C209 C210 C213
				C214
127	2203-005281	CHIP-CAP	1	C511
128	2203-005288	CHIP-CAP	1	C317
129	2203-005393	CHIP-CAP	1	C393
130	2203-005480	CHIP-CAP	1	C166
131	2203-005481	CHIP-CAP	4	C167 C168 C170
				C190
132	2203-005493	CHIP-CAP	1	C202
133	2404-001017	TANTAL-CAP	1	C489
134	2404-001086	TANTAL-CAP	2	C513 C514
135	2404-001087	TANTAL-CAP	1	C249
136	2404-001088	TANTAL-CAP	2	C270 C361
137	2404-001100	TANTAL-CAP	1	C247
138	2404-001105	TANTAL-CAP	20	C121 C123 C130
				C134 C138 C141
				C146 C147 C215
				C220 C223 C236
				C238 C274 C343
				C477 C478 C480
				C486 C487
139	2404-001134	TANTAL-CAP	2	C217 C218
140	2404-001151	TANTAL-CAP	1	C125
141	2703-000109	INDUCTOR	1	L319
142	2703-000175	INDUCTOR	1	L437
143	2703-000295	INDUCTOR	1	L417
144	2703-000299	INDUCTOR	1	L411
145	2703-000300	INDUCTOR	5	L201 L202 L327
				L328 L429
146	2703-001079	INDUCTOR	1	L306
147	2703-001178	INDUCTOR	4	L304 L310 L311 L320
148	2703-001179	INDUCTOR	1	L317
149	2703-001221	INDUCTOR	1	L421
150	2703-001263	INDUCTOR	2	L321 L402
151	2703-001293	INDUCTOR	1	L414
152	2703-001408	INDUCTOR	1	L401
153	2703-001409	INDUCTOR	1	L420
154	2703-001512	INDUCTOR	2	L326 L419
155	2703-001595	INDUCTOR	3	L318 L410 L413

NO	SEC-CODE.	DESCRIPTION	COUNT	REFERENCE
156	2703-001701	INDUCTOR	2	L303 L403
157	2703-001708	INDUCTOR	1	L405
158	2703-001723	INDUCTOR	1	L416
159	2703-001726	INDUCTOR	1	L409
160	2703-001727	INDUCTOR	4	L324 L336 L438
				L439
161	2703-001728	INDUCTOR	2	L302 L441
162	2703-001729	INDUCTOR	1	L436
163	2703-001734	INDUCTOR	1	L316
164	2703-001747	INDUCTOR	1	L443
165	2703-001748	INDUCTOR	1	L442
166	2703-001750	INDUCTOR	1	U440
167	2703-001752	INDUCTOR	2	L322 L412
168	2703-001868	INDUCTOR	3	L305 L309 L407
169	2703-001913	INDUCTOR	1	L337
170	2703-001953	INDUCTOR	1	L338
171	2703-001970	INDUCTOR	1	L418
172	2801-003747	32.768KHZ OSC	1	OSC102
173	2801-003814	14.725MHZ OSC	1	OSC201
174	2802-001104	27MHZ OSC	1	OSC101
175	2809-001226	TCXO	1	U407
176	2904-001109	PCS LOCAL SAW FILTER	1	F308
177	2904-001148	AMPS RX IF SAW FILTER	1	F406
178	2904-001171	AMPS TX SAW FILTER	1	F304
179	2904-001172	AMPS TX SAW FILTER	1	F305
180	2904-001173	AMPS RX SAW FILTER	1	F405
181	2904-001192	TX IF SAW FILTER	1	F302
182	2904-001213	PCS SAW FILTER	1	F402
183	2904-001214	PCS SAW FILTER	2	F301 F303
184	2909-001115	PCS DUPLEXER	1	F404
185	2909-001119	AMPS DUPLEXER	1	F408
186	3002-001062	BUZZER	1	BU201
187	3301-001105	INDUCTOR	4	L102 L332 L333
				L415
188	3301-001105	INDUCTOR	13	L104 L308 L314 L323
				L325 L331 L404
				L423 L424 L425
				L430 L432 L433
189	3301-001120	INDUCTOR	1	L315
190	3705-001163	CONNECTOR-COAXIAL	1	CN401
191	3710-001416	CONNECTOR	1	CN202
192	3710-001457	CONNECTOR	1	CN102
193	3710-001517	CONNECTOR	1	CN201
194	3710-001634	I/F CONNECTOR	1	CN101
195	3710-001162	PCS ISOLATOR	1	F306
196	4709-001203	PCS DIVIDER	1	U430
197	4709-001212	AMPS DIVIDER	1	U431
198	4719-001049	PLL MODULE	1	U406
199	GH09-00001A	MP3 MICOM	1	U201
200	khrf-130NH-1608	INDUCTOR	1	L427
201	khrf-24NH-1608	INDUCTOR	1	L428
202	khrf-B4929	PCS RX IF SAW FILTER	1	F403

NO	SEC-CODE.	DESCRIPTION	COUNT	REFERENCE
203	khrf-RI23110U	PCS POWER AMP	1	U311
204	khrf-RM914	AMPS POWER AMP	1	U312
205	f-SI-5BBL0836M01	AMPS ISOLATOR	1	F307
206	khrf-SLF-080EB	DIPLEXER	1	F407
207	khrf-SQ6U012000	12M CRYSTAL	1	OSC202
208	khrf-USS-820TC	USB IC	1	U205
209	GH07-00042A	LCD	1	
210	GH71-10728	ANT. CONTACT	1	

NAM features can be programmed as follows:

Notes:

- If you enter the NAM program mode, each item shows the currently stored data. Go to the next item by pressing **<OK/ >**.
- You can modify the data by entering a new data.
- If you enter a wrong digit, press **<CLR>** to delete the last digit. Press and hold **<CLR>** to delete all digits.
- To scroll items backwards or forwards, press the **VOLUME** button on the left side of the phone.

4-1. General Setup

LCD Display	Key in	Function
	MENU,9,2,0	-selects NAM programming
Enter Lock	222222	
SVC Menu ↑ ↓ 1:Phone# 2:General 3:NAM	**2**	-choose 'GENERAL'
ESN B0000000	Volume ▲	-Electronic Serial Number of the phone is displayed.
CAI version 1	Volume ▲	-Common Air Interface version is displayed
SCM 10101010	Volume ▲	-Station Class Mark displays the power class, transmission, slotted class, dual mode.
Lock Code 0000	 4-digit code **OK/**	Lock code, current status is displayed. -to change, enter new code. -stores it
Slot Mode Yes	 ↑ or ↓ **OK/**	Slot mode. 'Yes' indicates the slot mode. -changes the status. -stores it.
Slot Index 2	 **0-7** **OK/**	Slot mode index. The higher, the longer sleeping time -to change,enter new one. -stores it.

4-2. Setting Up NAM1

LCD Display	Key in	Function
Svc Menu ↑ ↓ 1:PCS Phone # 2:General 3:NAM	Volume ▲	NAM Programming Menu is displayed
Svc Menu ↑ ↓ 3:NAM	**3**	choose 'Setup NAM'
IMSI_MCC		IMSI Mobile Country Code, current code is displayed.
310	number	-to change,enter new one.
	OK/	-stores it.
IMSI_MNC		IMSI Mobile Network Code, current code is displayed.
00	number	-to change, enter new one.
	OK/	-stores it.
CDMA ACCOLC		CDMA Access Overload Class, current status is displayed.
0	class number	-to change, enter new one.
	OK/	-stores it.
CDMA Home SID		CDMA Home system ID, current status is displayed
Yes	↑ or ↓	-changes the status.
	OK/	-stores it.
CDMA fSID		CDMA foreign SID, current status is displayed.
Yes	↑ or ↓	-changes the system.
	OK/	-stores it.
CDMA fNID		CDMA foreign NID, current status is displayed.
Yes	↑ or ↓	-changes the system.
	OK/	-stores it.
Home SID		first SID written in the list, current status is displayed.
4120	number	-to change, enter new one.
	OK/	-stores it.
NID		first NID written in the list, current status is displayed.
65535	number	-to change, enter new one.
	OK/	-stores it.

Test Command Table

To change the phone from normal mode to test mode, you should enter the following keys :

Press [47*869#1235]

Command No	Command SW Name	Description
01(1F,0,0)	T_SUSPEND_I	Enter to test menu
02(3F,0,0)	T_RESTART_I	Escape from test menu
03(FD,0,0)	T_SAVE_VAL_I	Save values in EEPROM
04(1D,0,1)	T_GET_MODE_I	Get mode CDMA/FM
05(1C,1,0)	T_SET_MODE_I	Set mode CDMA/FM
06(1E,0,0)	T_WRITE_NV_I	Write the EEPROM item
07(81,0,0)	T_CARRIERON_I	Turn on the carrier
08(82,0,0)	T_CARRIEROFF_I	Turn off the carrier
09(83,4,0)	T_LOADSYN_I	Load the synthesizer for locking
10(84,1,0)	T_PWRLEVEL_I	Change RF power level
11(85,0,0)	T_RXMUTE_I	Mute rx audio
12(86,0,0)	T_RXUNMUTE_I	Unmute rx audio
13(87,0,0)	T_TXMUTE_I	Mute tx audio
14(88,0,0)	T_TXUNMUTE_I	Unmute tx audio
16(8F,0,0)	T_STON_I	Turn on ST
17(90,0,0)	T_STOFF_I	Turn off ST
18(AE,2,0)	T_LCD_CONTRAST_I	LCD contrast
19(2F,1,0)	T_SIO_I	Change SIO mode(To HF:0, DM:1)
20(94,5,0)	T_TEST_SYS_I	DBDM roam
21(89,7,8)	T_SNDPINFO_I	Send product information 8 char's
22(91,96,96)	T_SNDNAM_I	Send NAM Information
23(95,3,4)	T_SNDVERSION_I	Send Software Version
24(9F,7,8)	T_SNDESN_I	Send ESN
25(92,0,0)	T_BACKLIGHT_ON_I	Backlight on
26(93,0,0)	T_BACKLIGHT_OFF_I	Backlight off
27(96,0,0)	T_LAMP_ON_I	LAMP on
28(97,0,0)	T_LAMP_OFF_I	LAMP off
29(9A,0,0)	T_REBUILD_I	Rebuilding EEPROM
30(9D,0,0)	T_PLINE_I	Save product information
31(AF,1,0)	T_AUTOANSWER_I	Auto Answer
32(A0,1,0)	T_SATON_I	Turn on SAT
33(A1,0,0)	T_SATOFF_I	Turn off SAT
34(A2,0,0)	T_CDATA_I	Continuously send TX Control data
35(A3,3,0)	T_VOLUME_UP_I	Electric volume up
36(A4,3,0)	T_VOLUME_DOWN_I	Electric volume down
37(A5,3,3)	T_FM_TEST_I	Read adjusted FM data by index
38(A6,3,0)	T_PCS_TX_CH_FLAT_PA_R0_ON_I	Adjust PCS Tx CH flatness - PA ON
39(F8,3,0)	T_PCS_TX_CH_FLAT_PA_R0_OFF_I	Adjust PCS Tx CH flatness - PA OFF
40(A8,1,3)	T_PCS_RX_CH_FLAT_AUTO_I	Adjust PCS Tx CH flatness - Auto
41(A9,3,0)	T_PCS_RX_CH_FLAT_MANUAL_I	Adjust PCS Tx CH flatness - Manual
42(AA,1,0)	T_DTMFON_I	Turn on DTMF
43(AB,0,0)	T_DTMFOFF_I	Turn off DTMF
44(B0,0,0)	T_COMPANDORON_I	Turn on compandor
45(B1,0,0)	T_COMPANDOROF_I	Turn off compandor

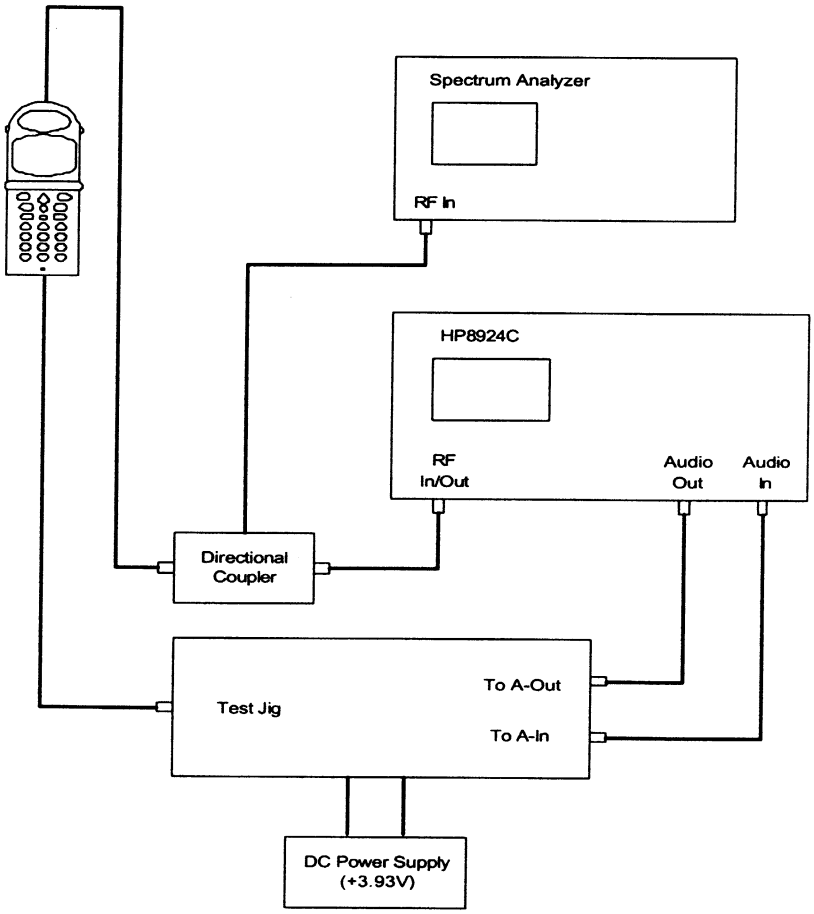
Command No	Command SW Name	Description
46(B2,0,0)	T_FM_VCLINE_I	Enter FM voice state
47(B3,3,0)	T_FM_AUD_GAIN_I	Set FM audio gain
48(B4,0,0)	T_VIBRATOR_ON_I	Activate a vibrator
49(B5,0,0)	T_VIBRATOR_OFF_I	Inactivate a vibrator
50(B6,0,4)	T_BATT_TYPE_I	Set Battery Type
51(B7,3,3)	T_CDMA_TEST_I	Read adjusted CDMA data by index
52(B9,2,2)	T_HW_VERSION_I	HW version
53(CE,3,0)	T_SET_PDM1_I	Set PDM1
54(CF,3,0)	T_SET_PDM2_I	Set PDM2
55(AC,1,0)	T_EXT_AUDIO_I	External Audio Path On/Off
57(BC,0,0)	T_MIC_ON_I	Unmute MIC Path
58(BD,0,0)	T_MIC_OFF_I	Mute MIC Path
59(BE,0,0)	T_ALLPATH_I	Tune on the all audio path
60(BF,3,0)	T_FM_TX_GAIN_I	Set FM tx gain
61(C0,3,0)	T_FM_RX_GAIN_I	Set FM rx gain
62(C1,3,0)	T_DTMF_VOL_TX_I	Set DTMF volume
63(C2,3,0)	T_TX_LIMITER_I	Set tx power timit
64(C3,3,0)	T_FM_SAT_LEVEL_I	Set SAT level
65(C4,3,0)	T_FM_FREQ_SGAIN_I	Set Frequency gain
66(C5,3,0)	T_FM_ST_GAIN_I	Set ST level
67(C6,3,6)	T_READ_BATT_I	Saved low battery value read
68(C8,0,3)	T_VBATT1_I	Set the low battery position in the standby
69(C9,0,3)	T_VBATT2_I	Set the low battery position in the talking
70(CA,3,0)	T_WRITE_BATT_I	write a BATT
71(D1,3,0)	T_CDMA_TXADJ_I	Sets tx_agc_adj for CDMA mode
72(D2,3,0)	T_FM_TXADJ_I	Sets tx_agc_adj for FM mode
73(A7,3,0)	T_PCS_TXRAS_ADJ_R0_ON_I	Adjust PCS Tx RAS - PA ON
74(D4,3,0)	T_PCS_TXRAS_ADJ_R0_OFF_I	Adjust PCS Tx RAS - PA OFF
75(D5,0,3)	T_READ_RSSI_I	Read a RSSI
76(D6,3,0)	T_WRITE_RSSI_I	Write a RSSI
77(D7,0,3)	T_READ_TEMP_I	Read a temperature
79(D9,0,1)	T_BUZZER_ON_I	Buzzer On
80(DA,0,0)	T_BUZZER_OFF_I	Buzzer Off
81(E3,0,0)	T_VOC_PCMLPON_I	Turn on to play a PCM LOOP BACK
82(E4,0,0)	T_VOC_PCMLPOFF_I	Turn off to play a PCM LOOP BACK
83(D3,1,0)	T_SET_PA_R_I	Turn on PA_R0
85(E7,0,0)	T_SPEAKER_ON_I	Turn on the speaker path
86(E8,0,0)	T_SPEAKER_OFF_I	Turn off the speaker path
87(E9,0,0)	T_FM_LOOP_TEST_I	FM LOOP BACK
88(EA,3,0)	T_TRK_ADJ_I	FM Channel tracking
89(EB,3,0)	T_CDTRK_ADJ_I	PCS Channel tracking
90(F0,4,0)	T_HW_CHANFLAT_I	H/W channel flatness
91(F1,4,0)	T_SW_CHANFLAT_I	S/W channel flatness
92(F2,3,0)	T_FM_TX_PWR_I	Setting the volume for FM power level 2~7
93(F3,3,0)	T_AMPS_TX_CH_FLAT_I	FM Channel flatness
94(F5,3,0)	T_PCS_CH_MAX_MIN_I	Edge channel max/min power code
95(F6,0,0)	T_DATASVC_ON_I	Data service on

Command No	Command SW Name	Description
96(F7,0,0)	T_DATASVC_OFF_I	Data service off
97(D8,0,3)	T_PCS_RXRAS_ADJ_AUTO_I	Adjust PCS Rx RAS - Auto
98(EF,3,0)	T_PCS_RXRAS_ADJ_MANUAL_I	Adjust PCS Rx RAS - Manual
99(FC,3,0)	T_SND_GAIN_I	Sound Gain

List of Equipment

- DC Power Supply
- Test Jig
- Test Cable
- CDMA Mobile Station Test Set HP8924C, HP83236A, CMD-80, etc
- Spectrum Analyzer(include CDMA Test Mode) HP8596E

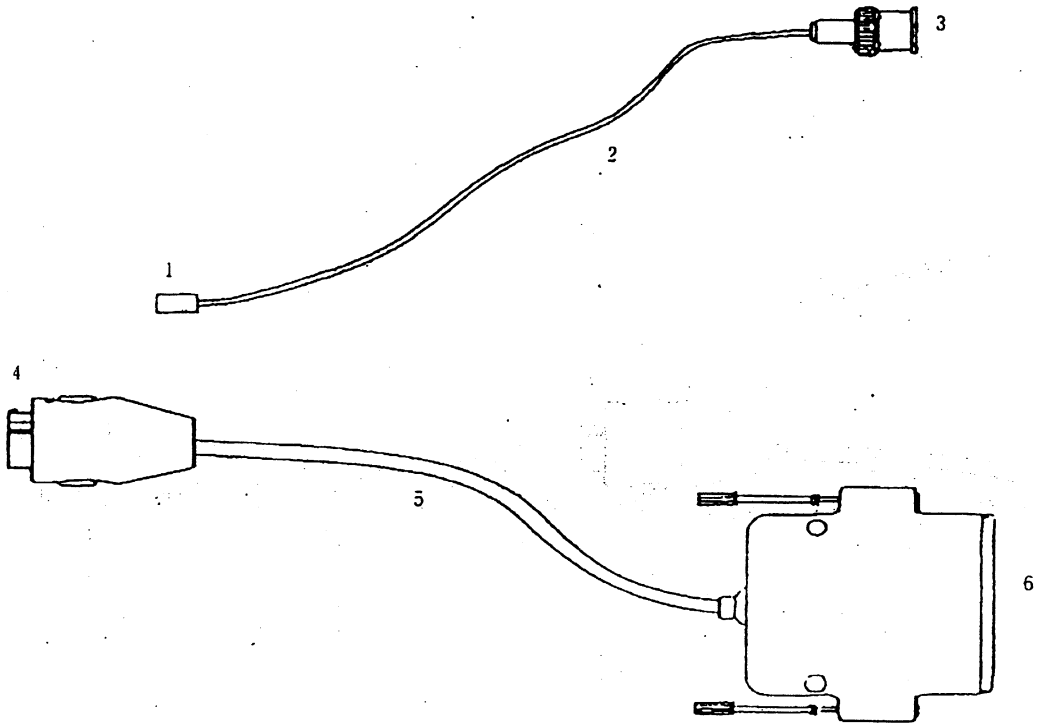
Configuration of Test



※ CAUTION : The test jig and data cable has a voltage drop of 0.33V at FM Max power output, you'd better set the DC power supply to 3.93V for normal test condition.
(Nominal voltage of battery is 3.6V at cellular phone)

TEST CABLE DESCRIPTION FOR SPH-M100

1. TEST CABLE

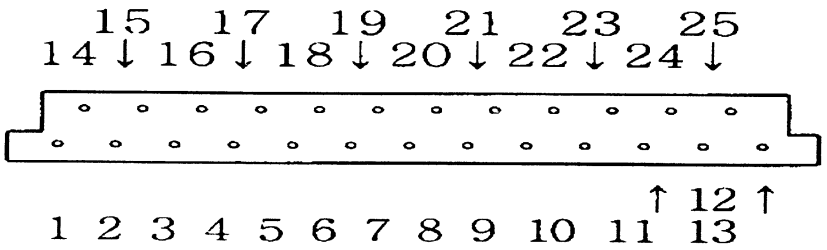


2. TEST CABLE CONNECTIONS

1	MHC 172
2	RF CABLE (1.4 dB Loss for AMPS and 2.1 dB Loss for PCS)
3	BNC CONNECTOR (RF)
4	PLUG CONNECT TO SPH-M100
5	DATA CABLE
6	Dsub 25PIN CONNECTOR (DATA)

3. Dsub 25 PIN CONNECTOR PIN DESCRIPTION (TEST CABLE 1, BACK SIDE)

DATA DESCRIPTION	Dsub CONN. PIN NO.	DATA DESCRIPTION	Dsub CONN. PIN NO.
V_F	18,27	DP_RX_DATA	13
DGND	8,10,12,19,25	HP_PWR	15
BATT	28	RI	16
C_F	9,26	CD	17
TX_AUDIO	11	RTS	20
DP_TX_DATA	14	CTS	23
RX_AUDIO	7	DTR	24



Change to Test Mode

A. To change the phone's state from Normal Mode to Test Mode, You should enter the following keys.
"4 7 * 8 6 9 # 1 2 3 5"

B. The command "0 1" is Suspend.

C.The command "20" is mode and channel change , press "OK" to save.
"10000" or "10001" : AMPS's Sytem A or Sytem B
"30600"
Channel number
Mode:PCS

D. To finish the Test Mode, You should enter the command "0 2".

Channel Selection and Tx Power Output Level Control

1. AMPS(FM)

A. Enter to Test Mode ("4 7 * 8 6 9 # 1 2 3 5").

B. "0 1" : Suspend.

C.The command "21" is mode and channel change
"10000" or "10001" : AMPS's Sytem A and Sytem B

D. To finish the Test Mode, You should enter the command "0 2".

E. "4 6" : Vocoder initial to Analog mode.

F. "0 9 0 3 6 3 #" : Set to '0363' channel.

G. "0 7" : Carrier On.

H. "7 2 * * * " : Output RF power level is set as power level
"* * *" means AGC level and AGC level range is from 0 to 511.

I. "1 0 2" : RF Power level control, 2(0~7) means power level .

2. PCS(CDMA)

A. Enter to Test Mode ("4 7 * 8 6 9 # 1 2 3 5").

B. "0 1" : Suspend.

C. "0 9 0 3 6 3 #" : Set to '0363' channel.

D. "0 7" : Carrier On.

E. "3 4" : Spread spectrum to 1.23MHz band width.

F. "7 1 * * * " : Output RF power level is set max power
"* * *" means AGC level and AGC level range is from 000 to 511.

1. AMPS(FM)

TEST ITEMS	PROCEDURE
1. PREPARATION	Set test equipments up. "4 7 * 8 6 9 # 1 2 3 5" : Enter the Test Mode "0 1" : Suspend Confirm that the phone is in the Analog Mode! ("10000" or "10001" at Test Command "20".) "4 6" : Initialize Vocoder in Analog mode If a wrong key would be selected, press "#", and then enter new command. To exit the Test Mode at any time, just press [0 2].
2. RF POWER	"0 1" : Suspend. "4 6" : Initialize Vocoder in Analog mode. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "1 0 2" : RF Power level selection, "2" means one of the power levels (0~7). Measurement of the Power Output Levels Level — RF Power 0 ~ 2 — + 28 dBm +2/-4 dB 3 — + 24 dBm +2/-4 dB 4 — + 20 dBm +2/-4 dB 5 — + 16 dBm +2/-4 dB 6 — + 12 dBm +2/-4 dB 7 — + 8 dBm +2/-4 dB "0 8" : Carrier off Note 1 : In case of using the antenna cable, compensation for the cable loss should be added (about 1.4dB). Note 2 : To prevent phones from being damaged, they must be measured only by calibrated test equipments. Warning ! Adjustments without calibrated equipments can cause phones to be heated excessively and would void the warranty.
3. TX FREQUENCY	"0 1" : Suspend. "4 6" : Initialize Vocoder in Analog mode. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. Measure the TX frequency : 835.89 MHz±2.5ppm.

TEST ITEMS	PROCEDURE
4. VOICE DEVIATION	"0 1" : Suspend. "4 6" : Initialize Vocoder in Analog mode. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "1 4" : TX Audio unmute. Set the audio generator output to 1kHz, 3.0Vrms. Measure the Tx voice deviation by using the HPF of 20Hz and the LPF of 99kHz (spec : less than ±12kHz).
5. ST DEVIATION	"0 1" : Suspend. "4 6" : Initialize Vocoder in Analog mode. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "1 6" : ST on. Measure the Tx ST deviation by using the HPF of 50Hz (spec : 8kHz±10%). "1 7" : ST off.
6. SAT DEVIATION	"0 1" : Suspend. "4 6" : Initialize Vocoder in Analog mode. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "3 2" : SAT on. Set the equipment as following. RF frequency : 880.89MHz Input RF level : -80dBm Modulation frequency : 6kHz Frequency deviation : 2kHz Measure the Tx SAT deviation by using the HPF of 50Hz and the LPF of 6kHz (spec : 2kHz±10%). "3 3" : SAT off.

TEST ITEMS	PROCEDURE
7. WBD DEVIATION	"0 1" : Suspend. "4 6" : Initialize Vocoder in Analog mode. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "3 4" : WBD on. Measure the WBD deviation by using the HPF of 50Hz and the LPF of 20kHz (spec : 8kHz±10%).
8. RX AUDIO	"0 1" : Suspend. "4 6" : Initialize Vocoder in Analog mode. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "1 2" : RX Audio unmute. Set the equipment as following. RF frequency : 880.89MHz Input RF level : -80dBm Modulation frequency : 1kHz Frequency deviation : ±8kHz Measure audio AC level.

2. PCS(CDMA)

TEST ITEMS	PROCEDURE
1. PREPARANCE	Set test equipments up. "4 7 * 8 6 9 # 1 2 3 5" : Enter the Test Mode "0 1" : Suspend Confirm that the phone is in the CDMA Mode. ("2XXXX" at Test Command "20") If you select a wrong key, press "#", then enter new command. To exit the Test Mode at any time, just press [0 2].
2. FREQUENCY ACCURACY	"0 1" : Suspend. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "7 1" : Set AGC level
3. OCCUPIED CDMA BANDWIDTH	"0 1" : Suspend. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "3 4" : Spread spectrum. "7 1" : Set AGC level.
4. LIMITATIONS ON EMISSIONS	"0 1" : Suspend. "0 9 0 3 6 3 #" : Set channel to 363. "0 7" : Carrier On. "3 4" : Spread spectrum. "7 1" : Set AGC level. Measure the spurious
5. GATED POWER & TIME	Set the service option 2. Set the data rate Eighth (1200bps). Registering: HHP → HP8924C. Call : HP8924C → HHP. Measure the Gated Power & Time.