

ATTACHMENT K – PARTS LIST / TUNE UP PROCEDURES

MODEL CODE : GH92-00939A

Level	Location	SEC-Code	Component name	Quantity	RC
1	D507	0401-001110	DIODE;SDS511Q	2.000000	SM
1	D501	0402-000306	DIODE;PRLL5817	1.000000	SM
1	D315	0404-000161	DIODE;1SS315(TPH3)	1.000000	SM
1	D112,D113	0405-001035	DIODE;1SV279-TPH3	2.000000	SM
1	D503,D504,D505	0406-001084	DIODE;SMF05.TB	3.000000	SM
1	D111	0407-000115	DIODE;DAN202UT106	1.000000	SM
1	D110	0407-001002	DIODE;DAN222TL	1.000000	SM
1	D710,D711	0407-001006	DIODE;DA221TL	2.000000	SM
1	D311	0409-000108	DIODE;RN731V	1.000000	SM
1	Q312	0501-000162	TR-SMALL SIGNAL;2SA1576FRT106	1.000000	SM
1	Q310,Q314,Q501,Q504	0504-000168	TR-SMALL SIGNAL;DTC144EE/TR	4.000000	SM
1	Q506,Q508	0504-000168	TR-SMALL SIGNAL;DTC144EE/TR	2.000000	SM
1	Q502,Q503	0505-001165	TR-SMALL SIGNAL;S13443DV-T1	2.000000	SM
1	Q311,Q313	0505-001484	TR-SMALL SIGNAL;2SK2035	2.000000	SM
1	U113,U311,U316	0506-001004	TR-SMALL SIGNAL;UMC5NTL	3.000000	SM
1	D510,D511,D512,D513	0601-000273	LED;CL-190YG-CD-T	4.000000	SM
1	D514,D515,D516,D517	0601-000273	LED;CL-190YG-CD-T	4.000000	SM
1	D518,D519,D520,D521	0601-000273	LED;CL-190YG-CD-T	4.000000	SM
1	LED505	0601-001402	LED;CL-165HR/YG-D	1.000000	SM
1	U318	0801-000796	IC;TC7S32FU	1.000000	SM
1	U701,U709	0801-002345	IC;TC7S04FU(TE85L)	2.000000	SM
1	U314	1001-001151	IC;SW-437	1.000000	SM
1	U710	1001-001161	IC;MAX4642EUA-T	1.000000	SM
1	U505	1009-001006	IC;A3210ELH	1.000000	SM
1	U700	1103-001217	IC;X84256BI-2.5	1.000000	SM
1	U706	1106-001274	IC;KM616U4110CLZI-7L	1.000000	SM
1	U707	1106-001350	IC;K6F2016U4D-FF70	1.000000	SM
1	U703	1107-001111	IC;AM29LV800BT90WB I	1.000000	SM
1	U704	1107-001181	IC;AM29DL163CT90WC I	1.000000	SM
1	U319	1201-001006	IC;LMC7101ATM5	1.000000	SM
1	U310	1201-001449	IC;LMV358MMX	1.000000	SM
1	U317	1201-001491	IC;RM912	1.000000	SM
1	U708	1201-001725	IC;LM4890MM	1.000000	SM
1	U500	1203-002278	IC;MAX1869EGL-T	1.000000	SM
1	U312	1204-001682	IC;RFT3100-32BCCPF-MT	1.000000	SM

1	TH710, TH711	1404-001152	R-CHIP;NTH5G1M33B103J04TH	2.000000	SM
1	R742	2007-000137	R-CHIP;2K,5%	1.000000	SM
1	R126,R134,R143,R527	2007-000138	R-CHIP;100,5%	4.000000	SM
1	R528,R529,R533,R534	2007-000138	R-CHIP;100,5%	4.000000	SM
1	R536,R537,R539,R550	2007-000138	R-CHIP;100,5%	4.000000	SM
1	R119,R137,R139,R141	2007-000140	R-CHIP;1K,5%	4.000000	SM
1	R336,R535,R715,R720	2007-000140	R-CHIP;1K,5%	4.000000	SM
1	R721,R741,R744	2007-000140	R-CHIP;1K,5%	3.000000	SM
1	R728,R729,R740	2007-000141	R-CHIP;2.2K,5%	3.000000	SM
1	R753	2007-000147	R-CHIP;8.2K,5%	1.000000	SM
1	R129,R130,R131,R140	2007-000148	R-CHIP;10K,5%	4.000000	SM
1	R325,R714,R716,R717	2007-000148	R-CHIP;10K,5%	4.000000	SM
1	R724,R726,R750,R760	2007-000148	R-CHIP;10K,5%	4.000000	SM
1	R762,R763,R769	2007-000148	R-CHIP;10K,5%	3.000000	SM
1	R311	2007-000149	R-CHIP;12K,5%	1.000000	SM
1	R324	2007-000151	R-CHIP;15K,5%	1.000000	SM
1	R337,R551	2007-000153	R-CHIP;22K,5%	2.000000	SM
1	R127,R321,R503	2007-000157	R-CHIP;47K,5%	3.000000	SM
1	R509,R747	2007-000159	R-CHIP;56K,5%	2.000000	SM
1	R340,R712,R738,R739	2007-000162	R-CHIP;100K,5%	4.000000	SM
1	R752,R764,R765	2007-000162	R-CHIP;100K,5%	3.000000	SM
1	R342	2007-000164	R-CHIP;150K,5%	1.000000	SM
1	R743	2007-000165	R-CHIP;200K,5%	1.000000	SM
1	R526	2007-000167	R-CHIP;390K,5%	1.000000	SM
1	R508,R725	2007-000168	R-CHIP;470K,5%	2.000000	SM
1	R557	2007-000170	R-CHIP;1M,5%	1.000000	SM
1	R136,R310,R328,R329	2007-000172	R-CHIP;10,5%	4.000000	SM
1	R736,R737	2007-000172	R-CHIP;10,5%	2.000000	SM
1	R745	2007-000242	R-CHIP;1.5K,5%	1.000000	SM
1	R505	2007-000566	R-CHIP;220K,5%	1.000000	SM
1	R317,R746	2007-000831	R-CHIP;39K,5%	2.000000	SM
1	R548	2007-000932	R-CHIP;470,5%	1.000000	SM
1	R525	2007-001244	R-CHIP;91K,5%	1.000000	SM
1	R110,R118	2007-001298	R-CHIP;51,5%	2.000000	SM
1	R515,R558,R559	2007-001301	R-CHIP;68,5%	3.000000	SM
1	R514	2007-001305	R-CHIP;120,5%	1.000000	SM
1	R540,R541,R542,R543	2007-001306	R-CHIP;150,5%	4.000000	SM
1	R544,R545,R546,R547	2007-001306	R-CHIP;150,5%	4.000000	SM
1	R500,R501,R502	2007-001307	R-CHIP;180,5%	3.000000	SM

1	R338	2007-001311	R-CHIP;270,5%	1.000000	SM
1	R335	2007-001313	R-CHIP;330,5%	1.000000	SM
1	R421	2007-001319	R-CHIP;1.2K,5%	1.000000	SM
1	R142	2007-001329	R-CHIP;7.5K,5%	1.000000	SM
1	R135,R713	2007-001333	R-CHIP;18K,5%	2.000000	SM
1	R723,R727	2007-001339	R-CHIP;180K,5%	2.000000	SM
1	R710	2007-002796	R-CHIP;510,5%	1.000000	SM
1	R132,R320	2007-002965	R-CHIP;15,5%	2.000000	SM
1	R120,R122	2007-003013	R-CHIP;2.4K,5%	2.000000	SM
1	R341	2007-007014	R-CHIP;51K,5%	1.000000	SM
1	R339,R555,R758	2007-007107	R-CHIP;100K,1%	3.000000	SM
1	R314	2007-007135	R-CHIP;18K,1%	1.000000	SM
1	R312,R316,R403	2007-007139	R-CHIP;47K,1%	3.000000	SM
1	R330,R332	2007-007142	R-CHIP;10K,1%	2.000000	SM
1	R313,R754,R771	2007-007308	R-CHIP;33K,1%	3.000000	SM
1	R399,R552	2007-007309	R-CHIP;12K,1%	2.000000	SM
1	R125	2007-007310	R-CHIP;8.2K,1%	1.000000	SM
1	R732,R733,R734,R735	2007-007312	R-CHIP;20K,1%	4.000000	SM
1	R124,R751,R770	2007-007313	R-CHIP;6.8K,1%	3.000000	SM
1	R138	2007-007316	R-CHIP;3.3K,1%	1.000000	SM
1	R756	2007-007529	R-CHIP;91K,1%	1.000000	SM
1	R315	2007-007538	R-CHIP;56K,1%	1.000000	SM
1	R168,R318,R323,R331	2007-007771	R-CHIP;0,5%	4.000000	SM
1	R390,R517,R518,R519	2007-007771	R-CHIP;0,5%	4.000000	SM
1	R556,R560,R561,R564	2007-007771	R-CHIP;0,5%	4.000000	SM
1	R722,R730,R731,R748	2007-007771	R-CHIP;0,5%	4.000000	SM
1	R749,R766,R767,R768	2007-007771	R-CHIP;0,5%	4.000000	SM
1	R800	2007-007771	R-CHIP;0,5%	1.000000	SM
1	C177,C343	2203-000138	C-CERAMIC,CHIP;C152K,1.5NF,50V	2.000000	SM
1	C101,C103,C105,C107	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C109,C115,C122,C134	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C147,C165,C171,C182	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C183,C184,C225,C300	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C311,C318,C354,C355	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C362,C363,C364,C365	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C367,C371,C375,C378	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C527,C528,C531,C533	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C534,C535,C543,C715	2203-000233	C-CERAMIC,CHIP;C101J,100PF,50V	4.000000	SM
1	C159,C162,C169,C174	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM

1	C175,C211,C213,C215	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM
1	C217,C222,C302,C304	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM
1	C306,C509,C536,C537	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM
1	C538,C711,C723,C726	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM
1	C728,C729,C737,C738	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM
1	C758,C770,C772,C774	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM
1	C776,C778,C780,C782	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM
1	C784,C786,C788,C790	2203-000254	C-CERAMIC,CHIP;C103K,10NF,16V	4.000000	SM
1	C555	2203-000257	C-CERAMIC,CHIP;C103K,10NF,50V	1.000000	SM
1	C303	2203-000311	C-CERAMIC,CHIP;C121J,120PF,50V	1.000000	SM
1	C224	2203-000330	C-CERAMIC,CHIP;C120J,12PF,50V	1.000000	SM
1	C316,C350	2203-000359	C-CERAMIC,CHIP;C151J,150PF,50V	2.000000	SM
1	C104,C106,C108,C111	2203-000386	C-CERAMIC,CHIP;C150J,15PF,50V	4.000000	SM
1	C118,C125,C128,C325	2203-000386	C-CERAMIC,CHIP;C150J,15PF,50V	4.000000	SM
1	C326,C328,C331,C333	2203-000386	C-CERAMIC,CHIP;C150J,15PF,50V	4.000000	SM
1	C356,C360,C740,C741	2203-000386	C-CERAMIC,CHIP;C150J,15PF,50V	4.000000	SM
1	C112,C114,C117,C138	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C139,C143,C144,C150	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C158,C164,C180,C212	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C214,C216,C218,C219	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C220,C221,C308,C309	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C310,C312,C313,C322	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C346,C357,C358,C361	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C374,C380,C500,C501	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C502,C510,C511,C512	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C513,C514,C515,C516	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	4.000000	SM
1	C517,C518,C580	2203-000438	C-CERAMIC,CHIP;C102K,1NF,50V	3.000000	SM
1	C540,C541	2203-000489	C-CERAMIC,CHIP;C222K,2.2NF,50V	2.000000	SM
1	C317,C320,C748	2203-000585	C-CERAMIC,CHIP;C221K,220PF,50V	3.000000	SM
1	C160,C163,C166,C168	2203-000628	C-CERAMIC,CHIP;C220J,22PF,50V	4.000000	SM
1	C170,C172,C335,C336	2203-000628	C-CERAMIC,CHIP;C220J,22PF,50V	4.000000	SM
1	C714,C718	2203-000679	C-CERAMIC,CHIP;C270J,27PF,50V	2.000000	SM
1	C110,C119,C135,C142	2203-000696	C-CERAMIC,CHIP;C020C,2PF,50V	4.000000	SM
1	C155,C186	2203-000696	C-CERAMIC,CHIP;C020C,2PF,50V	2.000000	SM
1	C800	2203-000714	C-CERAMIC,CHIP;C332K,3.3NF,50V	1.000000	SM
1	C126	2203-000812	C-CERAMIC,CHIP;C330J,33PF,50V	1.000000	SM
1	C181	2203-000836	C-CERAMIC,CHIP;C391K,390PF,50V	1.000000	SM
1	C129,C329,C332	2203-000854	C-CERAMIC,CHIP;C390J,39PF,50V	3.000000	SM
1	C178,C223	2203-000885	C-CERAMIC,CHIP;C472K,4.7NF,25V	2.000000	SM

1	C529,C532,C542	2203-000940	C-CERAMIC,CHIP;C471K,470PF,50V	3.000000	SM
1	C120,C133,C173,C179	2203-000995	C-CERAMIC,CHIP;C470J,47PF,50V	4.000000	SM
1	C323,C324,C338,C353	2203-000995	C-CERAMIC,CHIP;C470J,47PF,50V	4.000000	SM
1	C366,C373,C379,C717	2203-000995	C-CERAMIC,CHIP;C470J,47PF,50V	4.000000	SM
1	C802,C803,U894	2203-000995	C-CERAMIC,CHIP;C470J,47PF,50V	3.000000	SM
1	C725	2203-001033	C-CERAMIC,CHIP;C562K,5.6NF,25V	1.000000	SM
1	C340	2203-001072	C-CERAMIC,CHIP;C560J,56PF,50V	1.000000	SM
1	C546,C549,C550,C552	2203-001103	C-CERAMIC,CHIP;C682K,6.8NF,50V	4.000000	SM
1	C227,C229	2203-001153	C-CERAMIC,CHIP;C680J,68PF,50V	2.000000	SM
1	L117	2203-001178	C-CERAMIC,CHIP;C060D,6PF,50V	1.000000	SM
1	C116,C334	2203-001259	C-CERAMIC,CHIP;C080D,8PF,50V	2.000000	SM
1	C226,C709,C710,C734	2203-001405	C-CERAMIC,CHIP;C223Z,22NF,25V	4.000000	SM
1	C736	2203-001405	C-CERAMIC,CHIP;C223Z,22NF,25V	1.000000	SM
1	C321	2203-001412	C-CERAMIC,CHIP;C300J,30PF,50V	1.000000	SM
1	C372,C754	2203-001432	C-CERAMIC,CHIP;C473K,47NF,16V	2.000000	SM
1	C131	2203-001437	C-CERAMIC,CHIP;C050C,5PF,50V	1.000000	SM
1	C113,C140,C327,C342	2203-002668	C-CERAMIC,CHIP;C0R5C,0.5PF,50V	4.000000	SM
1	C161,C210,C301,C315	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C347,C349,C376,C377	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C506,C525,C539,C545	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C547,C548,C553,C712	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C713,C716,C719,C720	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C721,C724,C727,C730	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C731,C732,C733,C735	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C739,C750,C751,C752	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C753,C755,C757,C771	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C773,C775,C777,C779	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C781,C783,C785,C787	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	4.000000	SM
1	C789,C791,C792	2203-005061	C-CERAMIC,CHIP;C104Z,100NF,16V	3.000000	SM
1	C305,C742	2203-005065	C-CERAMIC,CHIP;C105Z,1UF,10V	2.000000	SM
1	C521,C522,C523,C524	2203-005144	C-CERAMIC,CHIP;C105K,1UF,10V	4.000000	SM
1	C507	2203-005148	C-CERAMIC,CHIP;C104K,100NF,16V	1.000000	SM
1	C508	2203-005171	C-CERAMIC,CHIP;C105K,1UF16V	1.000000	SM
1	C127,C130,C149,C370	2203-005288	C-CERAMIC,CHIP;C010B,1PF,50V	4.000000	SM
1	C146,C148,C151,C152	2203-005393	C-CERAMIC,CHIP;C050B,5PF,50V	4.000000	SM
1	C153,C154	2203-005393	C-CERAMIC,CHIP;C050B,5PF,50V	2.000000	SM
1	C141	2203-005444	C-CERAMIC,CHIP;C030B,3PF,50V	1.000000	SM
1	C557	2203-005482	C-CERAMIC,CHIP;C104K,100NF,10V	1.000000	SM
1	C722	2203-005483	C-CERAMIC,CHIP;C683K,68NF,10V	1.000000	SM

1	C743,C745	2203-005496	C-CERAMIC,CHIP;C224Z,220NF,10V	2.000000	SM
1	C319,C359,C504	2203-005664	C-CERAMIC,CHIP;C475K,4.7UF,6.3V	3.000000	SM
1	C505,C519,C520	2203-005796	C-CERAMIC,CHIP;C2012JB1A225KT	3.000000	SM
1	C428	2404-001017	C-TA,CHIP;1UF/10V	1.000000	SM
1	C185	2404-001092	C-TA,CHIP;220NF/20V	1.000000	SM
1	C544,C551,C554,C556	2404-001101	C-TA,CHIP;1UF/16V	4.000000	SM
1	C156,C157,C167,C307	2404-001105	C-TA,CHIP;10UF/6.3V	4.000000	SM
1	C314,C526,C747,C756	2404-001105	C-TA,CHIP;10UF/6.3V	4.000000	SM
1	C100,C744,C746	2404-001151	C-TA,CHIP;33UF/6.3V	3.000000	SM
1	L135	2703-001175	INDUCTOR-SMD;LL1608-FH56NJ	1.000000	SM
1	L147	2703-001178	INDUCTOR-SMD;LL1005-F3N3K	1.000000	SM
1	L322,L323,L327	2703-001190	INDUCTOR-SMD;LL1608-FH15NJ	3.000000	SM
1	L115,L116	2703-001293	INDUCTOR-SMD;HK1608-82NJ-T	2.000000	SM
1	L136	2703-001425	INDUCTOR-SMD;LL1608-FH68NJ	1.000000	SM
1	L140,L141	2703-001514	INDUCTOR-SMD;0603CS-68NXJBC	2.000000	SM
1	L127	2703-001545	INDUCTOR-SMD;0603CS-47NXJBC	1.000000	SM
1	L328	2703-001547	INDUCTOR-SMD;0603CS-10NXJBC	1.000000	SM
1	L121	2703-001595	INDUCTOR-SMD;HK1005-47NJ-T	1.000000	SM
1	L122	2703-001673	INDUCTOR-SMD;0603CS-R12XJBC	1.000000	SM
1	L112	2703-001722	INDUCTOR-SMD;LL1005-FH18NJ	1.000000	SM
1	L138,L148	2703-001724	INDUCTOR-SMD;LL1005-FH1N2S	2.000000	SM
1	L123	2703-001728	INDUCTOR-SMD;HK1005-1N5S-T	1.000000	SM
1	L144	2703-001731	INDUCTOR-SMD;0603CS-22NXJBC	1.000000	SM
1	L137,L146	2703-001737	INDUCTOR-SMD;HK1005-2N7S-T	2.000000	SM
1	L314,L315	2703-001748	INDUCTOR-SMD;LL1005-FH5N6S	2.000000	SM
1	L125	2703-001751	INDUCTOR-SMD;LL1005-FH3N9S	1.000000	SM
1	L120	2703-001786	INDUCTOR-SMD;LL1005-FH10NJ	1.000000	SM
1	L111,L124,L128,L131	2703-001868	INDUCTOR-SMD;LL1005-FH82NJ	4.000000	SM
1	L139,L330	2703-001868	INDUCTOR-SMD;LL1005-FH82NJ	2.000000	SM
1	L133,L134	2703-001876	INDUCTOR-SMD;LL1005-FH68NJ	2.000000	SM
1	L114	2703-001943	INDUCTOR-SMD;HK1005-10NJ-T	1.000000	SM
1	OSC700	2801-003856	OSCILLATOR;MC-146(32.768KHz,20ppm)	1.000000	SM
1	OSC110	2809-001245	OSCILLATOR;TC0-5812U1(19.68MHZ)	1.000000	SM
1	F315	2904-001171	OSCILLATOR;D836LH	1.000000	SM
1	F110	2904-001173	OSCILLATOR;D881LH	1.000000	SM
1	F311	2904-001304	OSCILLATOR;855833	1.000000	SM
1	F310	2909-001137	OSCILLATOR;DFX1880J1960H	1.000000	SM
1	L503	3301-001120	INDUCTOR-SMD;BLM21P300SPT	1.000000	SM
1	L326,L500	3301-001336	INDUCTOR-SMD;BLM21P221SG	2.000000	SM

1	L110,L113,L142,L143	3301-001342	INDUCTOR-SMD;ACZ1005M-152-T	4.000000	SM
1	L145,L310,L311,L312	3301-001342	INDUCTOR-SMD;ACZ1005M-152-T	4.000000	SM
1	L313,L331,L501,L502	3301-001342	INDUCTOR-SMD;ACZ1005M-152-T	4.000000	SM
1	CN310	3705-001163	CONNECTOR;MHC-173	1.000000	SM
1	CN100	3705-001235	CONNECTOR;CRS5001-1003	1.000000	SM
1	CN530	3710-001105	CONNECTOR;24-8005-002-000-867	1.000000	SM
1	CN501	3710-001634	CONNECTOR;1000-0024-301	1.000000	SM
1	CN710	3722-001456	CONNECTOR;EPJ1-5-A-D1	1.000000	SM
1	F314	4709-001202	IC;CE053R836DCB-TA2	1.000000	SM
1	C176	NEW-L0001	;100NF	1.000000	SM
1	D310,D312,D313,D314	NEW-D0001	;1SV305	4.000000	SM
1	F313	NEW-ETC01	;855904	1.000000	SM
1	F115	NEW-ETC02	;855969	1.000000	SM
1	ANT110	NEW-ETC03	;ANCG11G57SAA065TT1	1.000000	SM
1	AN310	NEW-ETC04	;ANT-CONTACT	1.000000	SM
1	F111	NEW-ETC05	;B4864	1.000000	SM
1	F113	NEW-ETC06	;DFM2R1575MDA	1.000000	SM
1	F112	NEW-ETC07	;DG60GH	1.000000	SM
1	F312	NEW-IC001	;DX21TFAP01	1.000000	SM
1	U111	NEW-IC002	;IFR3300	1.000000	SM
1	MIC1	NEW-ETC10	;KUB4223-015030	1.000000	SM
1	U112	NEW-IC003	;LMX2330LSLB	1.000000	SM
1	F114	NEW-OSC01	;MSFC22-183-001M0	1.000000	SM
1	U705	NEW-IC004	;MSM3300	1.000000	SM
1	U110	NEW-IC005	;RFR3300	1.000000	SM
1	SPK1	NEW-ETC11	;SDRH-1526L-032	1.000000	SM
1	U501	NEW-ETC12	;UFP_1	1.000000	SM
1	OSC112	NEW-OSC02	;VOD2144D29KRE	1.000000	SM
1	U313	NEW-IC006	;RM913	1.000000	SM

Notes:

- * In the NAM program mode, each item show you the currently stored data. you can modify the data by entering a new data.
- * You can move to next window by pressing "OK" key.
- * When you press a wrong number, press "CLR" key to delete the last number or press and hold
- * "CLR" key to delete all number

General Setup

LCD Display	Key in	Funtion
	MENU+9+1+0	- Enter the NAM Mode
Enter Lock ??????	222222	- Enter random 6-digit code(msL)
SVC Menu ↑↓ 1: Phone # 2: General 3: NAM 4: A Key	1	- Choose 'Phone#'
Phone # 1234567890	OK	- Phone number setup - To change phone number, enter phone # - Store it
MobileID # 1234567890	OK	- Mobile ID setup - To change phone number, enter phone # - Store it
SVC Menu ↑↓ 1: Phone # 2: General 3: NAM 4: A Key	2	- Choose 'General'
ESN B0000000	OK	- Electronic Serial Number of the phone is displayed
CAI version 1	OK	- Common Air Interface version is displayed
SCM 00001010	OK	- 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 Lock Code, enter a new code - Store it
Slot Mode No	* or #, OK	- Slot mode. 'Yes' indicates the slot mode. - Change status - Store it
Slot Index 2	0~7, OK	- Slot mode index. The high number means longer sleeping time - To change Slot Index, enter new one - Store it

NAM Mode Setup

LCD Display	Key in	Funtion
SVC Menu ↑↓ 1: Phone # 2: General 3: NAM 4: A Key	3	Choose 'NAM'
IMSI_MCC 310	number OK	ImSI Mobile Country Code, current code is displayed. - Enter new one to change code - Store it
IMSI_MNC 00	number OK	ImSI Mobile Network Code, current code is displayed. - Enter new one to change code - Store it
CDMA ACCOLC 0	class number OK	CDMA Access Overload Class, current status is displayed - Enter new one to change code - Store it
CDMA Home SID Yes	* or # OK	CDMA Home system ID, current status is displayed - Enter new one to change code - Store it
CDMA fSID Yes	* or # OK	CDMA foreign SID, current status is displayed. - Enter new one to change code - Store it
CDMA fNID Yes	* or # OK	CDMA foreign NID,current status is displayed. - Enter new one to change code - Store it
HOME SID 1700	number OK	SID written in the list,current status is displayed. - Enter new one to change code - Store it
NID 1	number OK	NID written in the list,current status is displayed. - Enter new one to change code - Store it
AMPS ACCOLC 0	class number OK	AMPS Access Overload Class,current status is displayed. - Enter new one to change code - Store it

Definition of Test Commands

- Press following key to enter the test mode ; "47*869#12358"

Command No.	Command SW Name	Description
001	T_SUSPEND_I	Enter to TestMode
002	T_RESTART_I	Escape from TestMode */
003	T_SAVE_VAL_I	Save values to EEPROM */
004	T_GET_MODE_I	Get mode CDMA/FM in Auto TestMode */
005	T_SET_MODE_I	Set mode CDMA/FM in Auto TestMode */
006	T_WRITE_NV_I	Write the EEPROM item */
007	T_VOLUME_UP_I	Electric Volume Up */
008	T_VOLUME_DOWN_I	Electric Volume Down */
011	T_CARRIERON_I	Turn on the carrier */
012	T_CARRIEROFF_I	Turn off the carrier */
013	T_LOADSYN_I	Load the synthesizer for locking */
014	T_CDATA_I	Send TX Control data continuously */
015	T_CDTRK_ADJ_I	Adjust CDMA tracking local */
016	T_CDMA_TXADJ_I	Set CDMA/PCS Tx AGC code */
017	T_TRK_ADJ_I	TRK LOCAL ADJUST */
018	T_FM_TXADJ_I	sets tx_agc_adj for fm mode */
019	T_LNA_GAIN_WR_I	Adjust LNA gain */
020	T_LNA_RAS_ADJ_I	Adjust LNA Ras code in array */
021	T_SIO_MODE_I	Change SIO mode */
022	T_TEST_SYS_I	Change band & channel */
023	T_DATASVC_ON_I	Data Service ON for Manufacturing Test */
024	T_DATASVC_OFF_I	Data Service OFF for Manufacturing Test */
031	T_MRU2_TABLE_I	Reset MRU */
032	T_SNDNAM_I	Send NAM Information */
033	T_SNDVERSION_I	Send Software Version */
034	T_SNDESN_I	Send ESN */
035	T_PLINE_I	Send Product line information */
036	T_REBUILD_I	Rebuilding EEPROM */
041	T_BACKLIGHT_ON_I	Backlight on */
042	T_BACKLIGHT_OFF_I	Backlight off */
043	T_LAMP_ON_I	LAMP on */
044	T_LAMP_OFF_I	LAMP off */
045	T_VIBRATOR_ON_I	Activate a vibrator */
046	T_VIBRATOR_OFF_I	Inactivate a vibrator */
047	T_DTMFON_I	Turn on DTMF */
048	T_DTMFOFF_I	Turn off DTMF */
049	T_LCD_CONTRAST_I	Change LCD CONTRAST */
051	T_BATT_TYPE_I	Check battery type */
052	T_READ_BATT_I	Saved low battery value read */
053	T_VBATT1_I	Set low battey value in the standby */
054	T_VBATT2_I	Set low battey value in the talking */
055	T_WRITE_BATT_I	Write a battery value */
056	T_DETECT_CHARGER_I	Detect the battery charging */

Command No.	Command SW Name	Description
057	T_THERM_READ_I	Read a thermister */
060	T_READ_RSSI_I	Read Rssi */
061	T_PCS_RXRAS_ADJ_M_I	Adjust PCS Rx Ras code in array */
062	T_PCS_RXRAS_ADJ_AI	Adjust PCS Rx Ras code in array */
063	T_PCS_TXRAS_ADJ_I	Adjust PCS Tx Ras code in array */
064	T_PCS_CH_FLATNESS_I	Adjust PCS Tx Ras channel flatness : dBm */
065	T_PCS_PWR_LIMIT_I	Limit PCS Tx power */
066	T_PCS_TEMPCOMP_I	Compensate PCS Tx Ras code at any temperature */
071	T_CDMA_RXRAS_ADJ_M_I	Adjust CDMA Rx Ras code in array */
072	T_CDMA_RXRAS_ADJ_AI	Adjust CDMA Tx Ras code in array */
073	T_CDMA_TXRAS_ADJ_I	Adjust CDMA Tx Ras code in array */
074	T_CDMA_CH_FLATNESS_I	Adjust CDMA Tx Ras channel flatness : 23dBm */
075	T_CDMA_PWR_LIMIT_I	Limit CDMA Tx power */
076	T_CDMA_TEMPCOMP_I	Compensate CDMA Tx Ras code at any temperature */
081	T_FM_TX_PWR_I	Adjust AMPS Tx power level(2-7) */
082	T_FM_CHAN_FLAT_I	Adjust AMPS Tx power channel flatness */
083	T_FM_TEMPCOMP_I	Compensate AMPS Tx power at any temperature */
084	T_FM_PWRLEVEL_I	Change AMPS power level */
091	T_GPSONE_MODE_I	Set single/continuous mode */
092	T_GPSONE_START_APP_I	Start MS initiated position */
093	T_GPSONE_LAST_APP_I	Send last position */
094	T_GPSONE_ACCURACY_I	Send accuracy Max/Min */
095	T_GPSONE_LOCK_STAT_I	Reserved */
096	T_GPSONE_TEST_NO_SA_I	Test sensitivity in no SA */
097	T_GPSONE_TEST_WITH_SA_I	Test sensitivity with SA */
098	T_GPSONE_GPS_RF_LOSS_I	Set gps rf loss *
099	T_GPSONE_GPS_RF_DELAY_I	Set gps rf delay *
100	T_GPSONE_CDMA_RF_DELAY_I	Set cdma rf delay *
101	T_SET_EXT_AUDIO_I	External audio path on/off */
102	T_FM_VCLINE_I	Enetr FM voice state */
103	T_ALLPATH_I	Tune on the all audio path */
104	T_RXMUTE_I	Mute rx audio */
105	T_RXUNMUTE_I	Unmute rx audio */
106	T_TXMUTE_I	Mute tx audio */
107	T_TXUNMUTE_I	Unmute tx audio */
108	T_LOOPBACK_I	
109	T_STON_I	Turn on ST */
110	T_STOFF_I	Turn off ST */
111	T_SATON_I	Turn on SAT */
112	T_SATOFF_I	Turn off SAT */
113	T_COMPANDORON_I	Turn on compandor */
114	T_COMPANDOROFF_I	Turn off compandor */
115	T_FM_ST_GAIN_I	Adjust FM ST gain */
116	T_FM_SAT_LEVEL_I	Adjust FM SAT level */

Command No.	Command SW Name	Description
117	T_FM_FREQ_SGAIN_I	Adjust FM frequency sense gain */
121	T_TX_LIMITER_I	Adjust Tx Limiter */
122	T_VOC_PCMLPON_I	Turn on to play a PCM LOOP BACK */
123	T_VOC_PCMLPOFF_I	Turn off to play a PCM LOOP BACK */
124	T_PCM_FORMAT_	*/
125	T_SND_VOC_CAL_I	*/
131	T_GET_PCS_DATA1_I	Get Adjusted PCS Data */
132	T_GET_PCS_DATA2_I	Get Adjusted PCS Data */
133	T_GET_PCS_DATA3_I	Get Adjusted PCS Data */
134	T_GET_CDMA_DATA1_I	Get Adjusted CDMA Data */
135	T_GET_CDMA_DATA2_I	Get Adjusted CDMA Data */
136	T_GET_CDMA_DATA3_I	Get Adjusted CDMA Data */
137	T_GET_FM_DATA_I	Get Adjusted AMPS Data */
138	T_GET_AUDIO_DATA1_I	Get Adjusted Audio Data */
139	T_GET_AUDIO_DATA2_I	Get Adjusted Audio Data */
140	T_GET_AUDIO_DATA3_	Get Adjusted Audio Data */
141	T_MAX_I	

1) Commands in Test Mode

Phone Mode Selection

- * Press "001" : "001" is suspend command
- * Press "022" : "022" is mode selection command
 - PCS: 3XXXX(XXXX : Channel number)
 - CDMA : 2XXXX(XXXX : Channel number)
 - AMPS : 10000 : AMPS A-Band
 - 10001 : AMPS B-Band
 - 10002 : AMPS A-Band external audio
 - 10003 : AMPS B-Band external audio
- * Press "*" button to save changed mode
- * Press "002" to escape from test mode

GPS Receiver Mode Selection

* Press "001" : "001" is suspend command.

* Press "091" : "091" is GPS mode command.

In GPS mode, GPS LNA is turned on, and PLL and VCO are configured to be in GPS mode.

GPS mode is maintained until it exits test mode

Channel Change and Tx Power Control

* PCS

a. Press "001" : Suspend

b. Press "013" : Chan____XXXX

Enter the channel number(4-digit), ex) "0600" : set to 600 Ch.

Press "#" : Move to next window

c. Press "011" : Carrier On

d. Press "014" : CDATA(spread spectrum to 1.23MHz bandwidth)

e. Press "016" : CD TXagc_XXX

Enter the AGC code number(3-digit)

(XXX means AGC code, AGC code range is from 000 to 511)

AGC code control Tx output power

*. CDMA

a. Press "001" : Suspend

b. Press "013" : Chan____XXXX

Enter the channel number(4-digit), ex) "0363" : set to 363 Ch.

Press "#" : Move to next window

c. Press "011" : Carrier On

d. Press "014" : CDATA(spread spectrum to 1.23MHz bandwidth)

e. Press "016" : CD TXagc_XXX

Enter the AGC code number(3-digit)

(XXX means AGC code, AGC code range is from 000 to 511)

AGC code controls Tx output power

* AMPS

a. Press "001" : Suspend

b. Press "013" : Chan____XXXX

Enter the channel number(4-digit), ex) "0363" : set to 363 Ch.

Press "#" : Move to next window

c. Press "011" : Carrier On

e. Press "018" : FM TXagc_XXX

Enter the AGC code number(3-digit)

(XXX means AGC code, AGC code range is from 000 to 511)

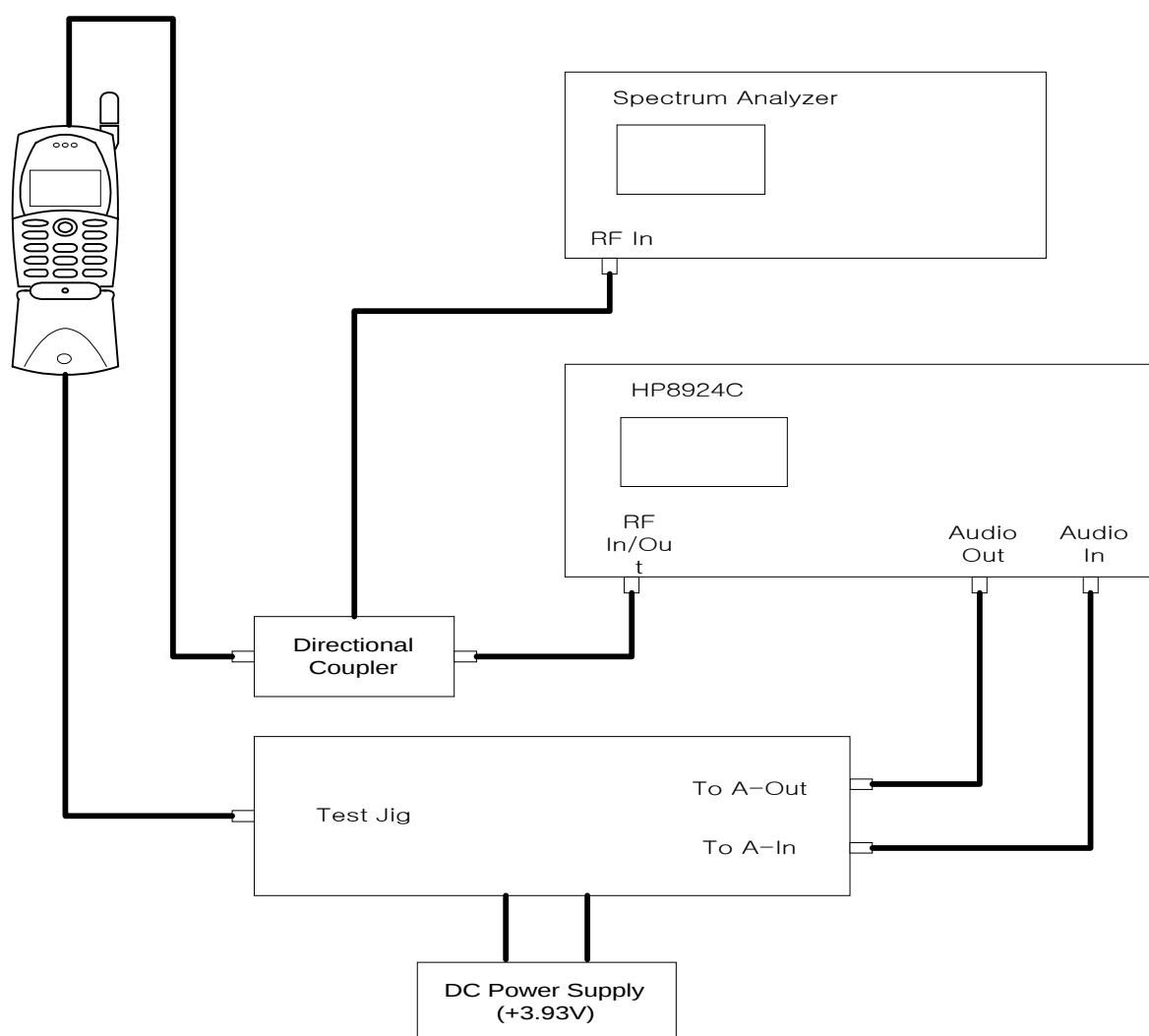
AGC code controls Tx output power

2. Test Procedure

1) Phone Part Test Equipment

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

2) Phone Part Test Configuration

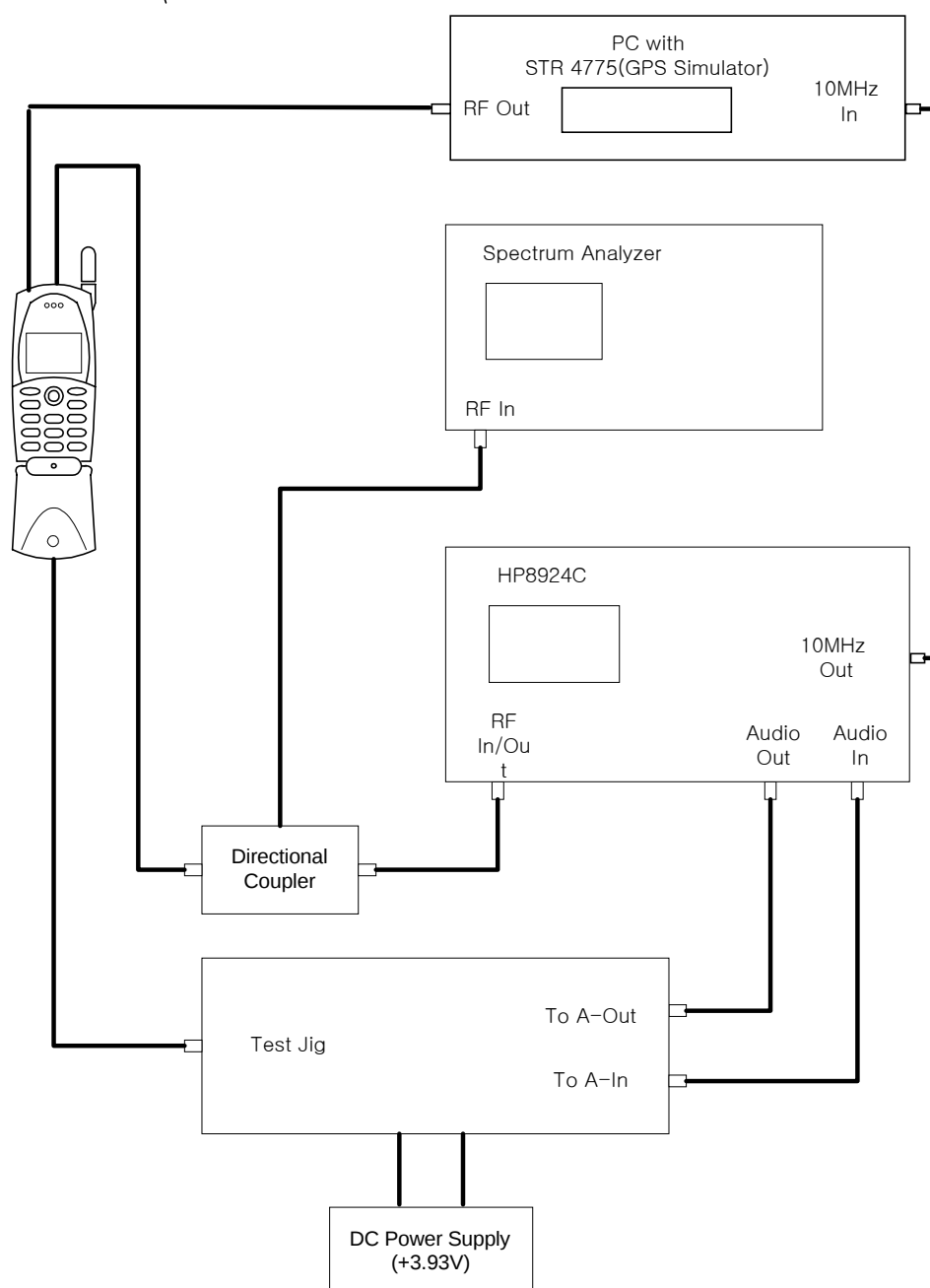


※ CAUTION : The test jig and data cable has a voltage drop of 0.33V at FM Max power output, you'd better set the DC power supply to 3.93V for normal test condition.
(Nominal voltage of battery is 3.6V at cellular phone)

3) GPS Part Test Equipment

- DC Power Supply
- Test Jig
- Test Cable
- CDMA and GPS Mobile Station Test Set : HP8924C, HP83236A, CMD-80,
PC STR 4775(GPS simulator), etc.
- Spectrum Analyzer(including CDMA Test Mode) HP8596E

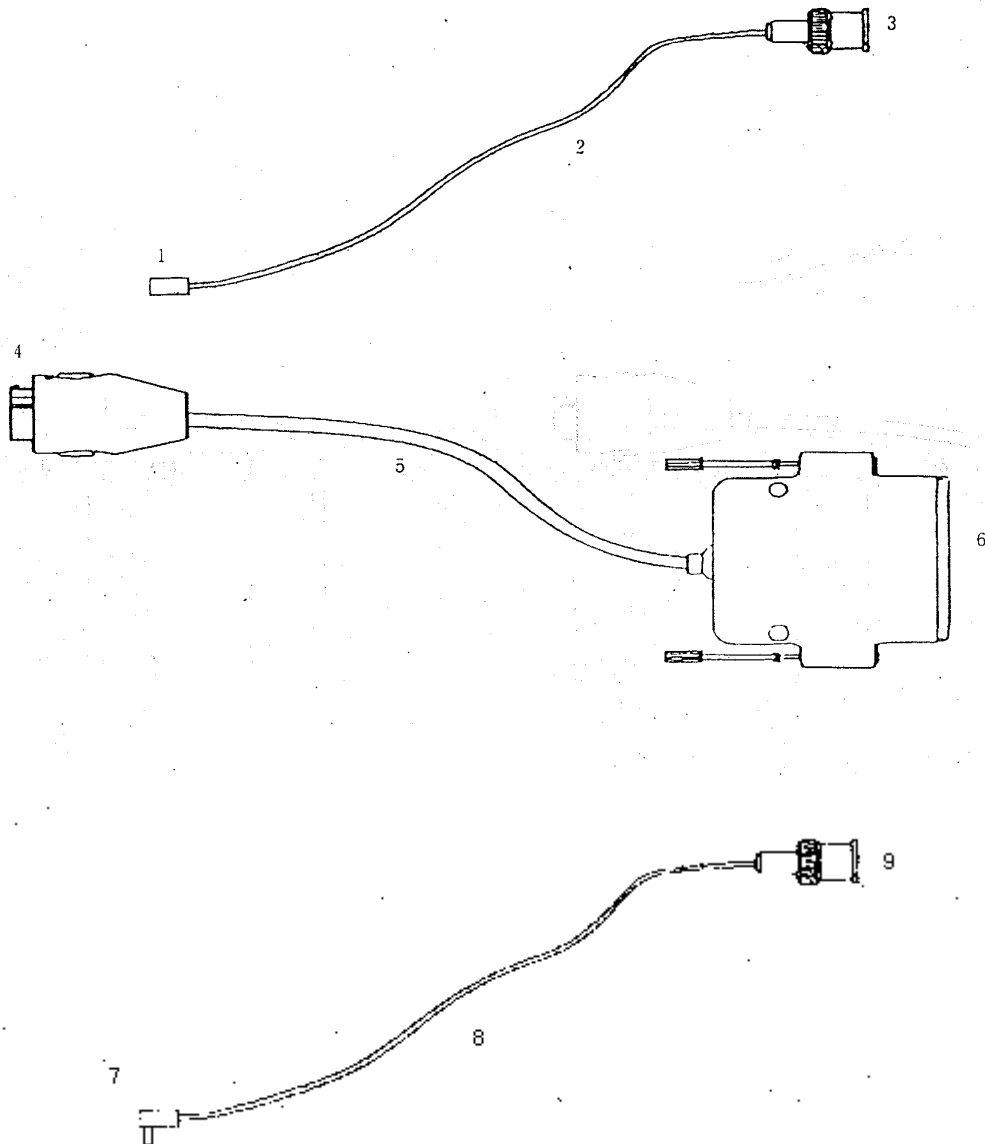
4) GPS Part Test Configuration



※Note : As far as GPS test is concerned, since the power amp. become off during GPS search, the GPS parts have little effect on emission. **Test Cable Description**

5) Test Cable Description

A. Test Cable

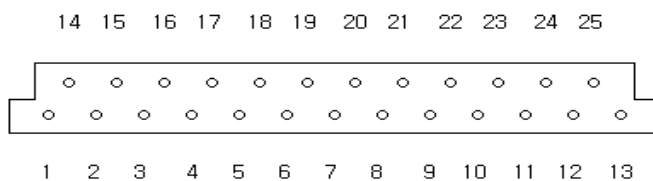


B. Test Cable Name

No.	Name
1	MHC 172
2	RF CABLE (1.4dB Loss for AMPS, 2.1dB for PCS)
3	BNC CONNECTOR (RF)
4	PLUG CONNECT TO SPH-N300
5	DATA CABLE
6	Dsub 25PIN CONNECTOR (DATA)
7	CRS5001-1002
8	RF CABLE (3.2dB Loss for GPS)
9	BNC CONNECTOR (RF)

C. 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	12,21	DP_RX_DATA	8
DGND	2,4,6,13,19	HP_PWR	9
BATT	15,16,22	RI	10
C_F	3,20	CD	11
TX_AUDIO	5	RTS	14
DP_TX_DATA	7	CTS	17
RX_AUDIO	1	DTR	18



D. Conversion Table of Frequency vs Channel

Type	Channel	Conversion Equation	Remark
Tx Freq.	$1 \leq N \leq 799$ $990 \leq N \leq 1023$	$F = 0.03 \times N + 825.00$ $F = 0.03 \times (N - 1023) + 825.00$	N : Ch Number F : Freq. (CDMA/AMPS)
Rx Freq.	$1 \leq N \leq 799$ $990 \leq N \leq 1023$	$F = 0.03 \times N + 870.00$ $F = 0.03 \times (N - 1023) + 870.00$	
Tx Freq.	$0 \leq N \leq 1199$	$F = 0.05 \times N + 1850.00$	N : Ch. Number F ; Freq. (PCS)
Rx Freq.	$0 \leq N \leq 1199$	$F = 0.05 \times N + 1930.00$	
Rx Freq.	none	none	GPS only uses 1575.42 MHz

A. Test