

SAMSUNG

GSM TELEPHONE

SGH-I620

SERVICE *Manual*

GSM TELEPHONE



CONTENTS

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**SAMSUNG
ELECTRONICS**



GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
CIS	cis.samsungportal.com
Europe	europe.samsungportal.com
China	china.samsungportal.com
Asia	asia.samsungportal.com
Mideast & Africa	mea.samsungportal.com

2. Specification

2-1. GSM/WCDMA General Specification

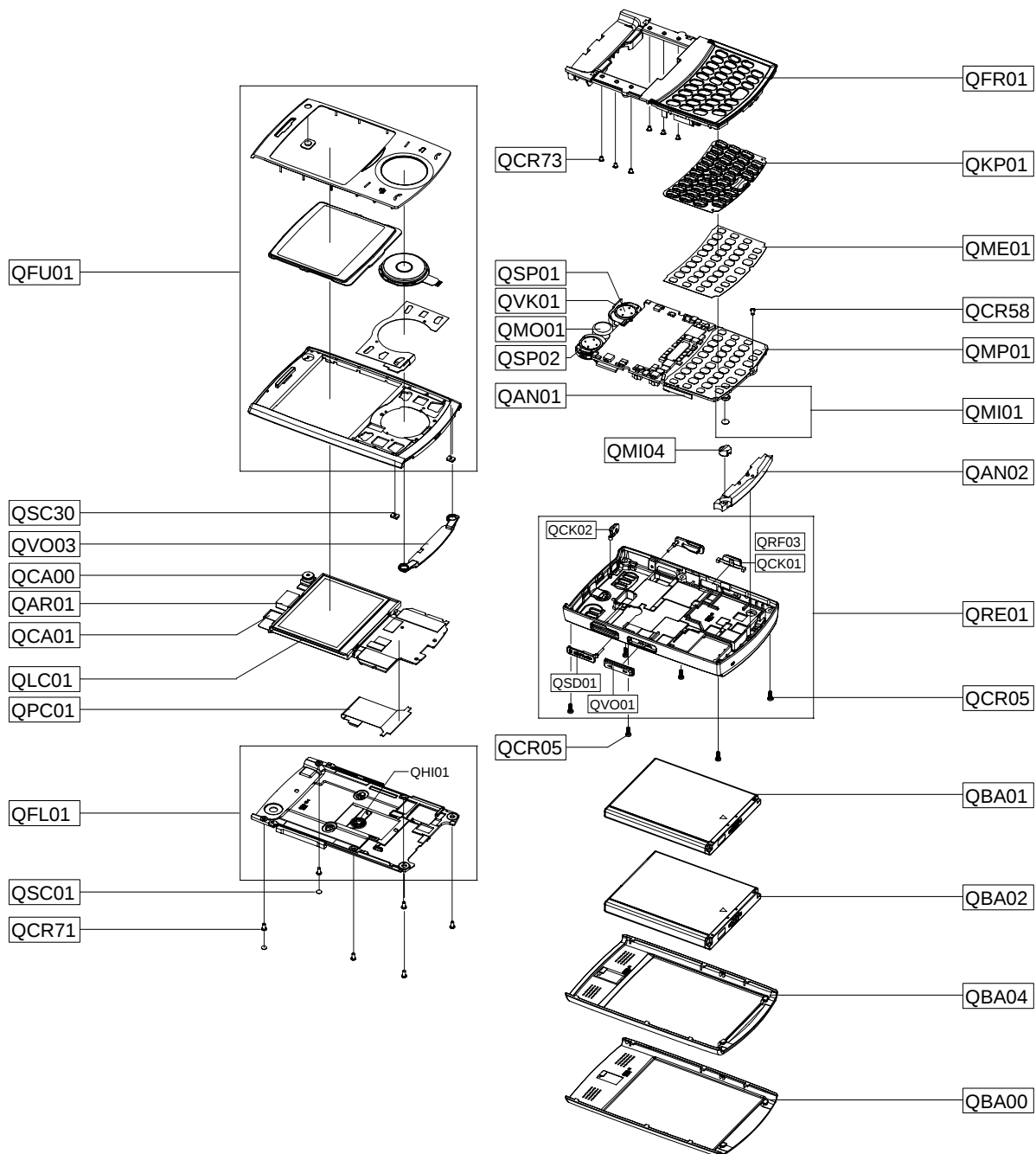
	EGSM 900 Phase 2	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing	45 MHz	95 MHz	80 MHz
Mod. Bit rate/ Bit Period	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us
Time Slot Period/Frame Period	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms
Modulation	0.3 GMSK	0.3 GMSK	0.3 GMSK
MS Power	33 dBm~5 dBm	30 dBm~0 dBm	30 dBm~0 dBm
Power Class	5 pcl ~ 19 pcl	0 pcl ~ 15 pcl	0 pcl ~ 15 pcl
Sensitivity	-102 dBm	-100 dBm	-100 dBm
TDMA Mux	8	8	8
Cell Radius	35 Km	2 Km	-

2-2. GSM TX power class

TX Power control level	EGSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9± 3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

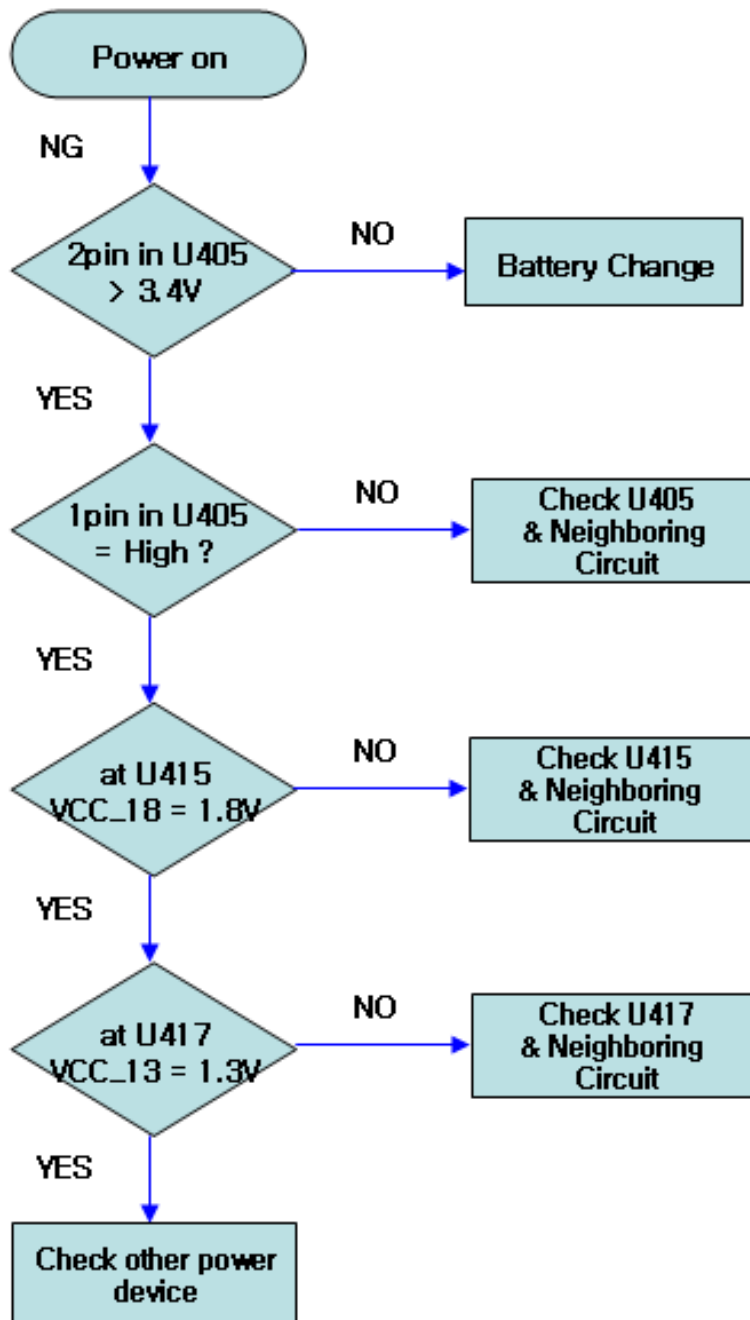
Design LOC	Description	SEC CODE
QAN01	ANTENNA-BLUETOOTH FPCB	GH42-01242A
QAN02	ANTENNA-SGHI620	GH42-01164A
QAR01	AUDIO-RECEIVER	3009-001276
QBA00	ASSY COVER-STD BATT	GH98-06204B
QBA01	INNER BATTERY PACK-1200MAH,BLK	GH43-02821A
QBA02	INNER BATTERY PACK-1500MAH,BLK	GH43-02888A
QBA04	ASSY COVER-EXT BATT	GH98-06205B
QCA00	CAMERA MODULE	GH59-04159A
QCA01	CAMERA MODULE-SELF-I620	GH59-04489A
QCK01	PMO KEY-CAMERA	GH72-42863B
QCK02	PMO KEY-POWER	GH72-42861B
QCR05	SCREW-MACHINE	6001-001478
QCR58	SCREW-MACHINE	6001-001870
QCR71	SCREW-MACHINE	6001-002095
QCR73	SCREW-MACHINE	6001-002102
QFL01	ASSY COVER-SLIDE LOWER	GH98-03976B
QFR01	ASSY CASE-FRONT	GH98-03978B
QFU01	ASSY COVER-SLIDE UPPER	GH98-05641B
QHI01	ASSY HINGE-SLIDE	GH98-04165B
QKP01	ASSY KEYPAD-(FRAN/BLK)	GH98-06189B
QLC01	MEA-LCD MODULE KIT	GH97-07916A
QME01	DOME SHEET-DOME SHEET 37 KEY,I	GH59-04350A
QMI01	MICROPHONE-ASSY-SGHI620	GH30-00353A
QMI04	RMO RUBBER-MIC HOLDER	GH73-09899A
QMO01	MOTOR DC-SGHI620	GH31-00354A
QMP01	PBA MAIN-SGHI620	GH92-03450A
QPC01	MEA-SLIDE FPCB KIT	GH97-07917A
QRE01	ASSY CASE-REAR	GH98-03979B
QRF03	PMO COVER-EAR/IF	GH72-37817B
QSC01	TAPE-SCREW	GH74-32764B
QSC30	PMO-DAMPER BTM	GH72-39894A
QSD01	PMO COVER-MICRO SD	GH72-37830B
QSP01	SPEAKER	3001-002181
QSP02	SPEAKER	3001-002183
QVK01	KEY FPCB-POWER 1 KEY FPC, I620	GH59-04346A
QVO01	PMO KEY-VOLUME	GH72-42862B
QVO03	PMO DECO-SIDE	GH72-37853B

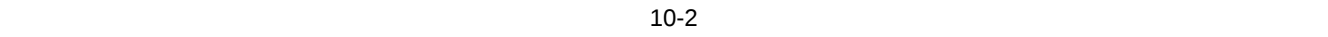
Description	SEC CODE
CBF INTERFACE-DLC,X830,BLK,PCB	GH39-00720A
ADAPTOR-SGHE690,BLK,EU,A_TYPE	GH44-01361A
CHARGER-BTC,BLK,I620	GH44-01732A
EARPHONE-EARPHONE,20P,B-TYPE	GH59-03883A
TAPE-REAR A	GH74-32822B
TAPE-REAR B	GH74-32823B
LABEL(R)-WATER SOAK	GH68-09361A
TAPE-DOME SHHET A	GH74-33527A
TAPE-DOME SHHET B	GH74-33528A
TAPE GASK	GH74-33482A
TAPE-LCD PCB	GH74-33526A
TAPE GASK	GH74-33529A
TAPE GASK	GH74-33715A
LABEL(R)-WATER SOAK	GH68-09361A
BAG PE	6902-000634
LABEL(P)-UNIT SEAL	GH68-00518B
LABEL(P)-OPEN MP3	GH68-11246A
LABEL(R)-MAIN(XEF)	GH68-15474G
CUSHION-CASE(EU)	GH69-05645A
BOX(P)-UNIT MAIN(EU)	GH69-05656A
S/W CD-MS COMPANION,I620(OPEN)	GH46-00492A
MANUAL USERS-QRG FRENCH	GH68-16226A
AS-IC-MCP UMTS	GH81-06872A

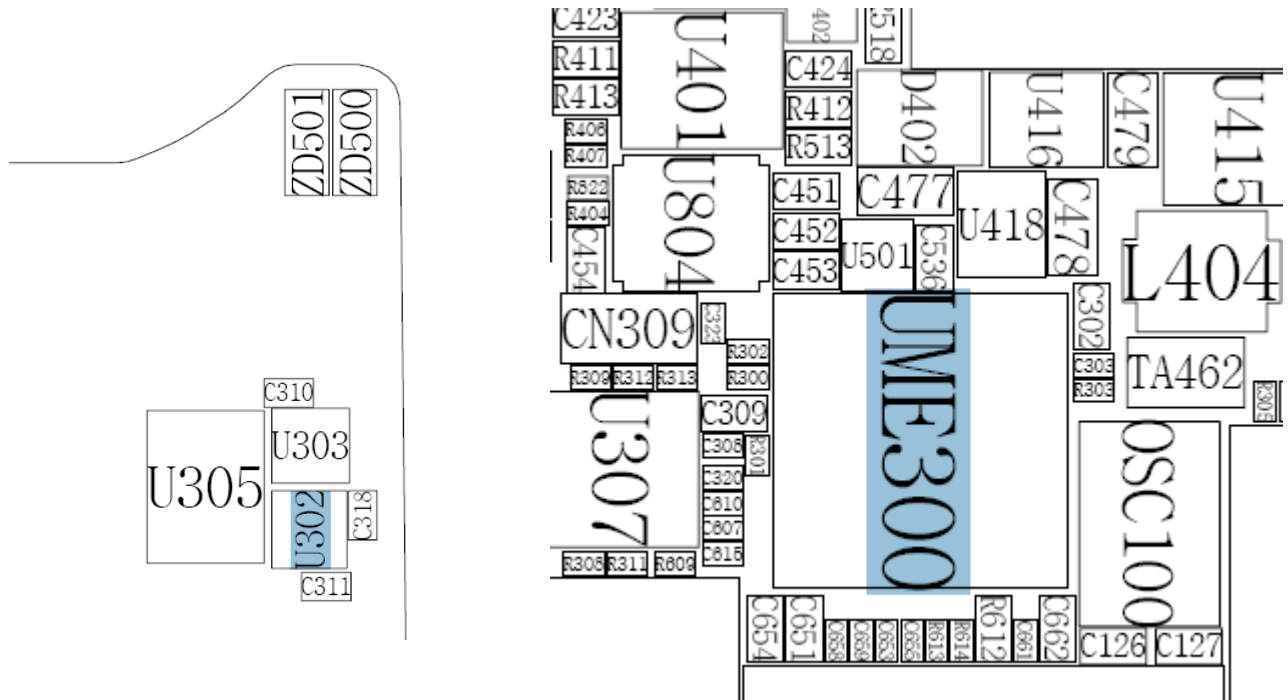
10. Flow Chart of TroubleShooting

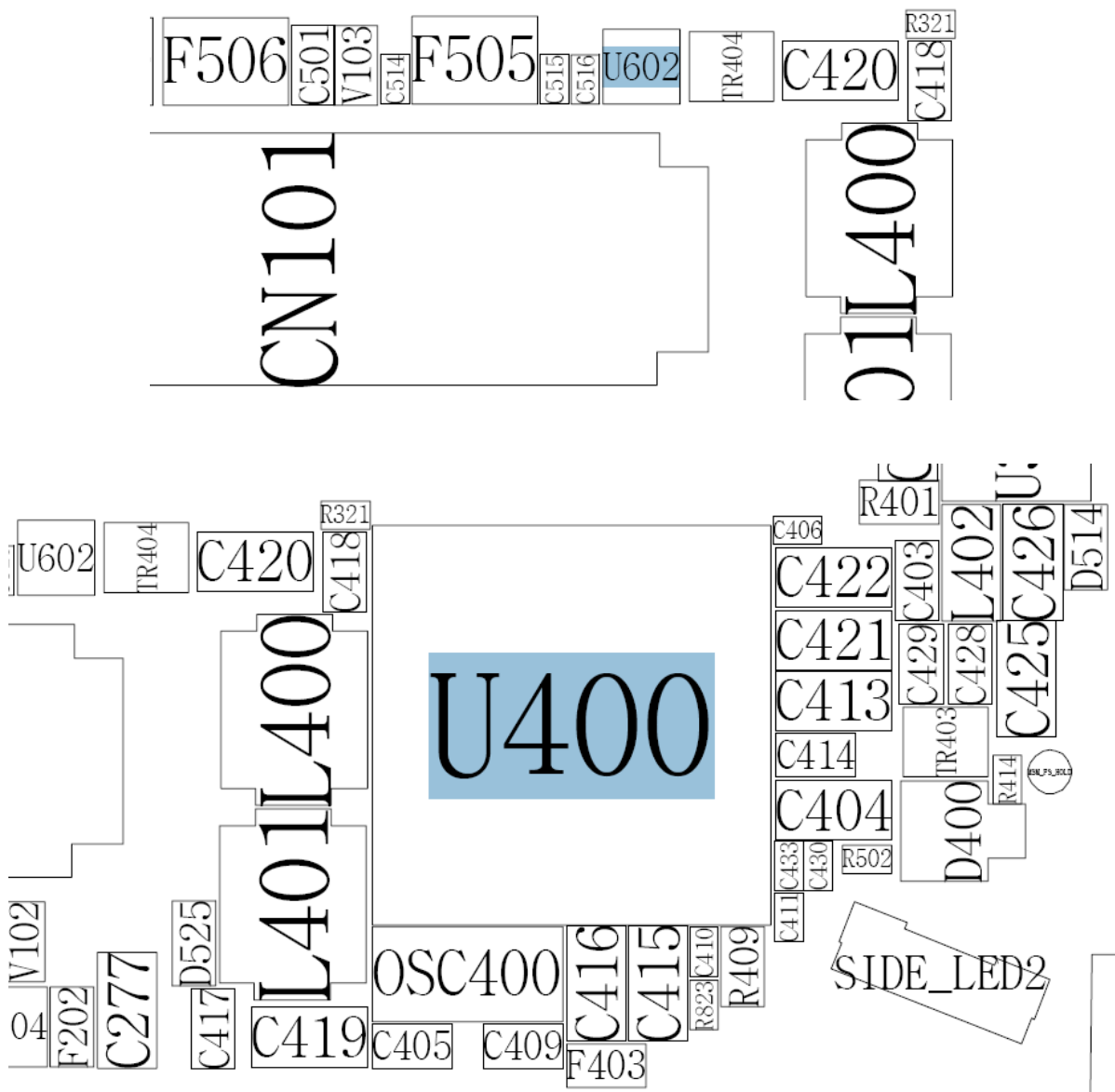
10-1. Power On

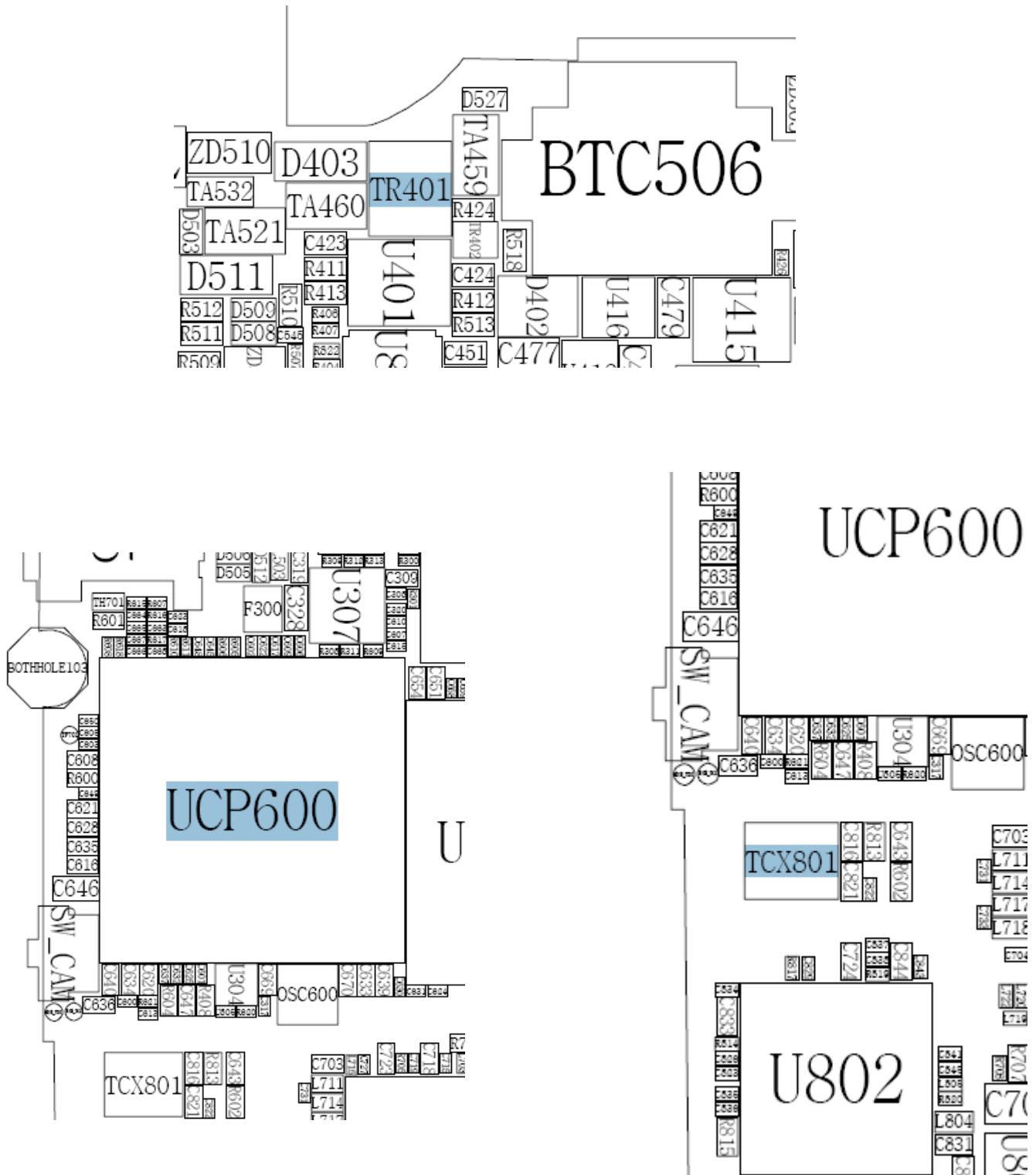
- PDA Part



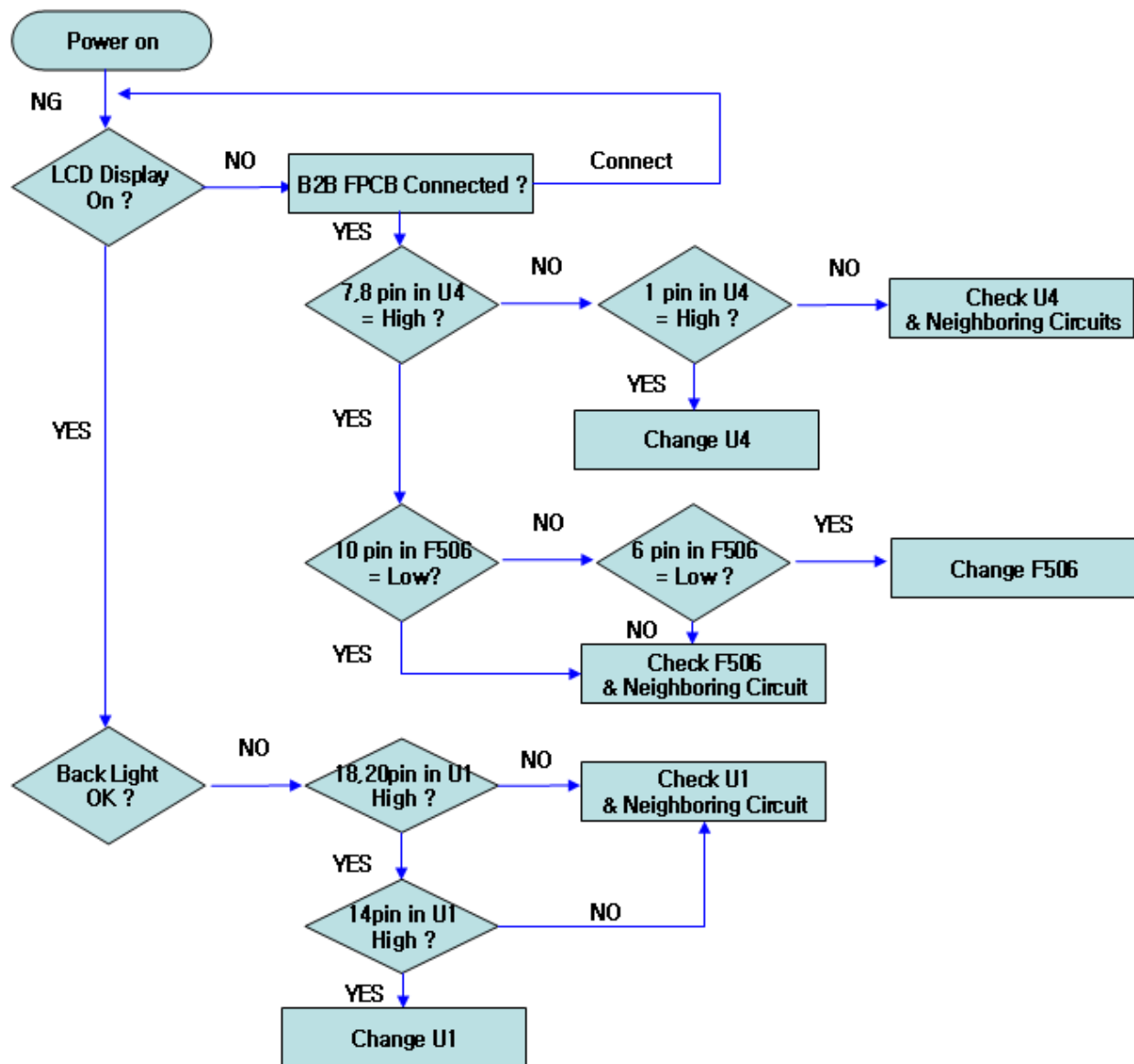






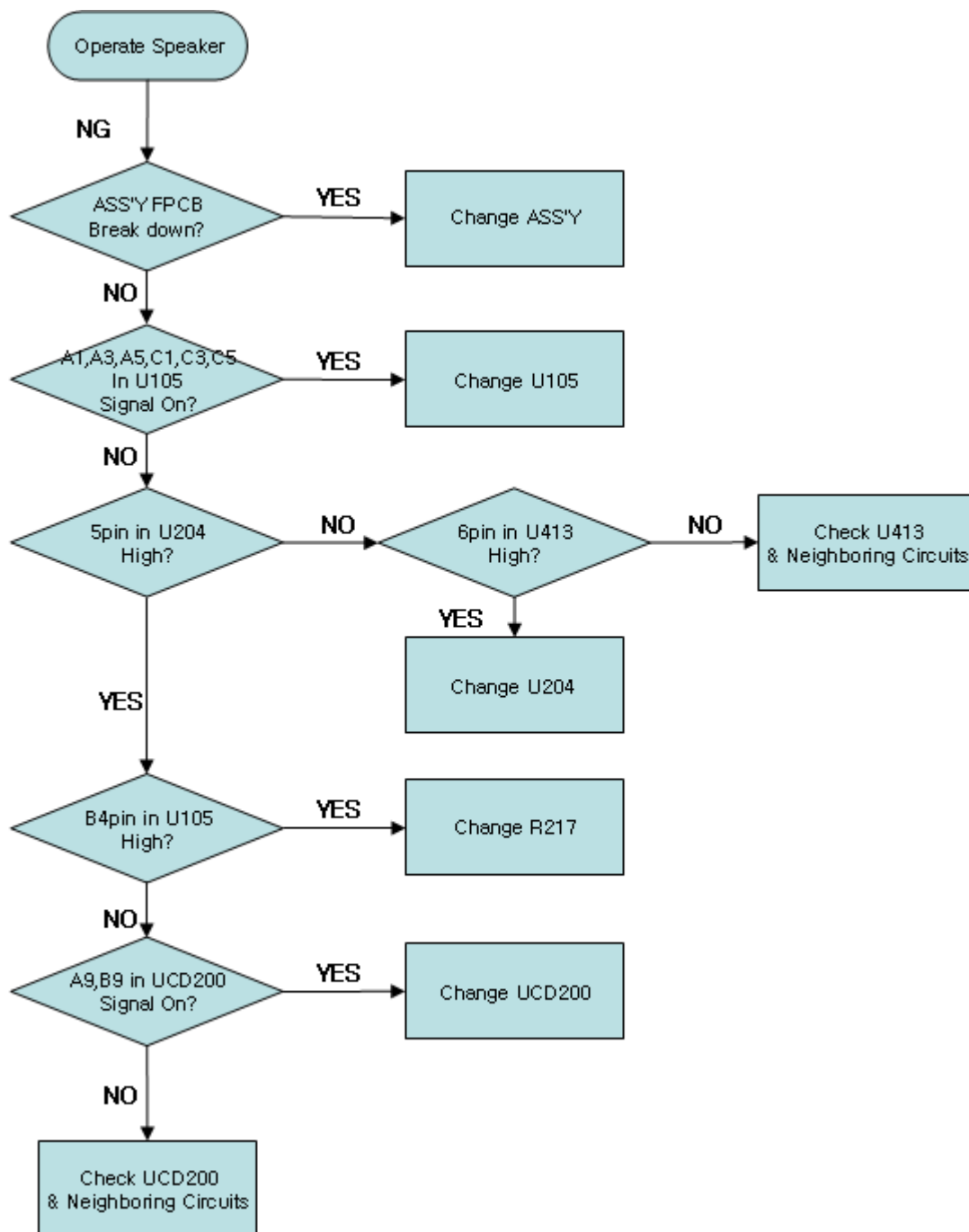


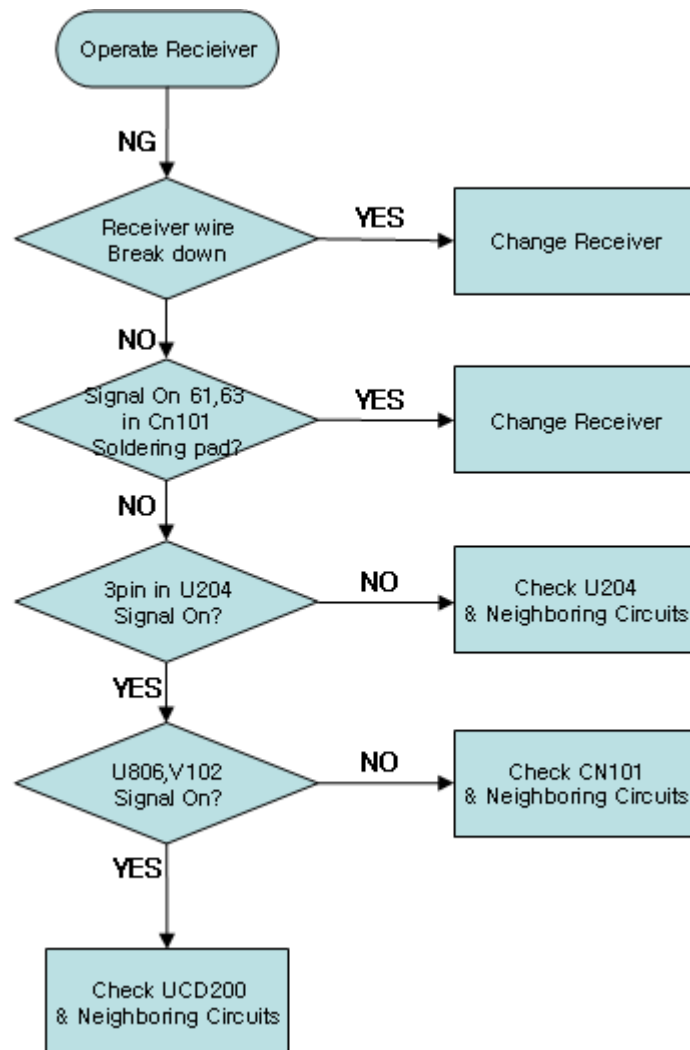
10-2. LCD Working



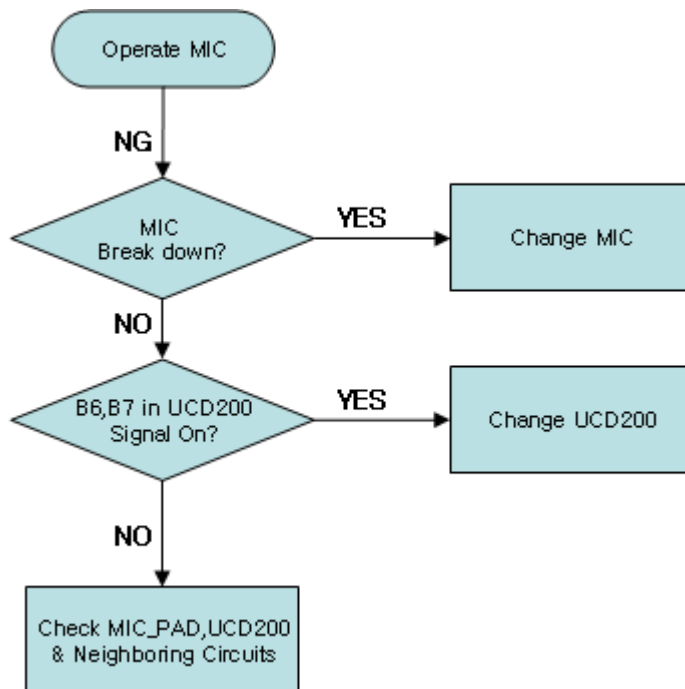
10-3. Audio Working

- Speaker Working

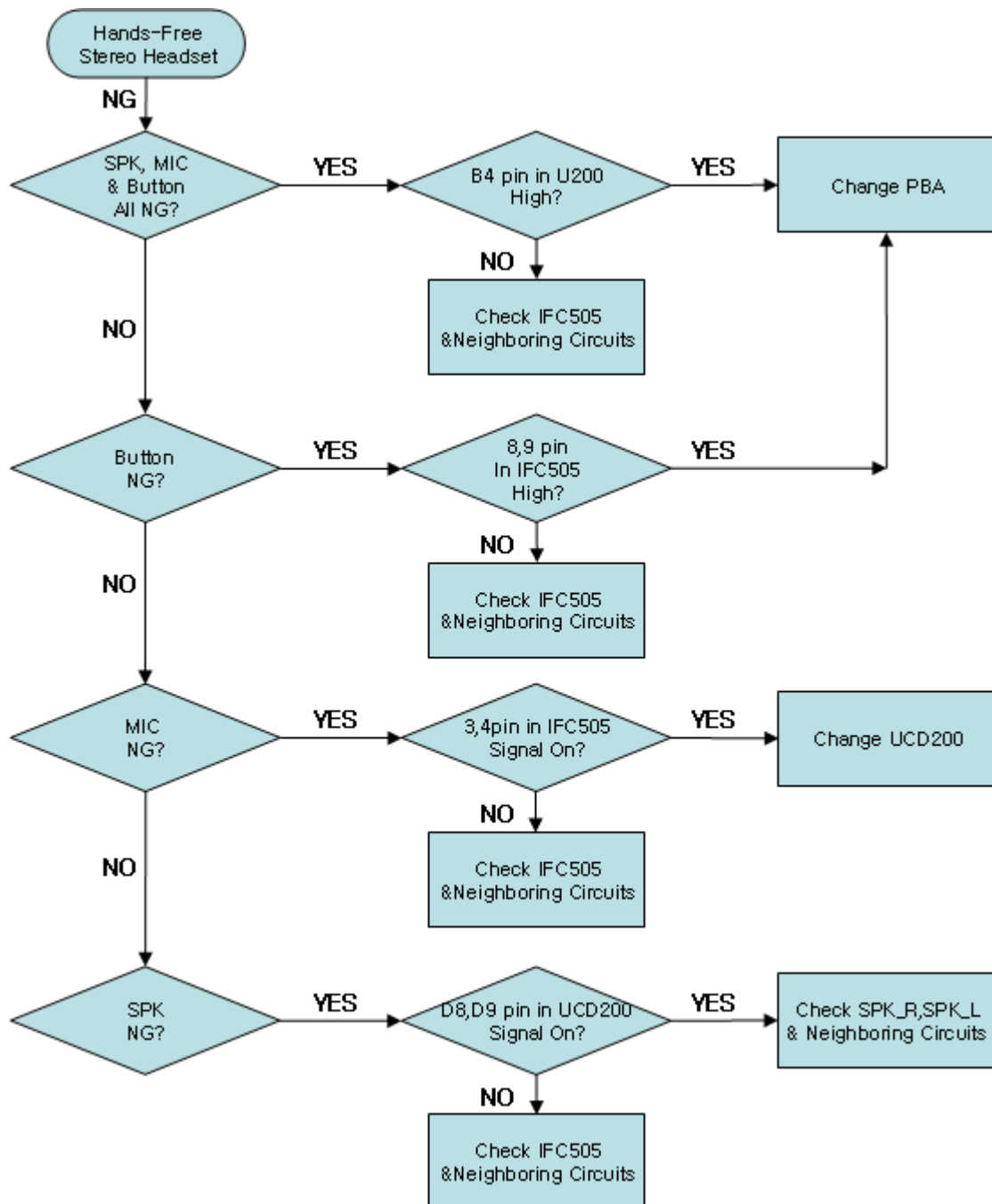


● Receiver Working

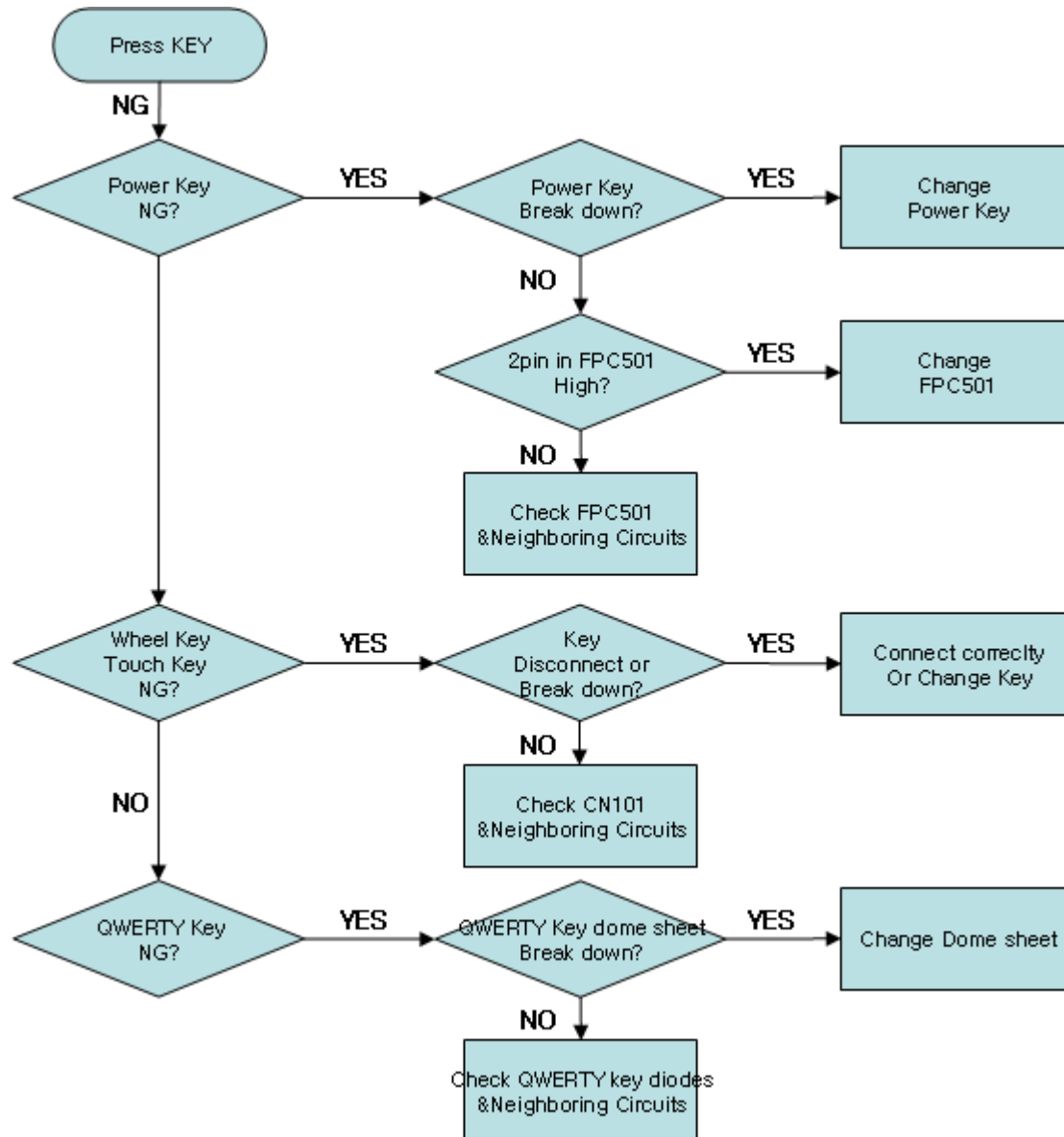
- MIC Working

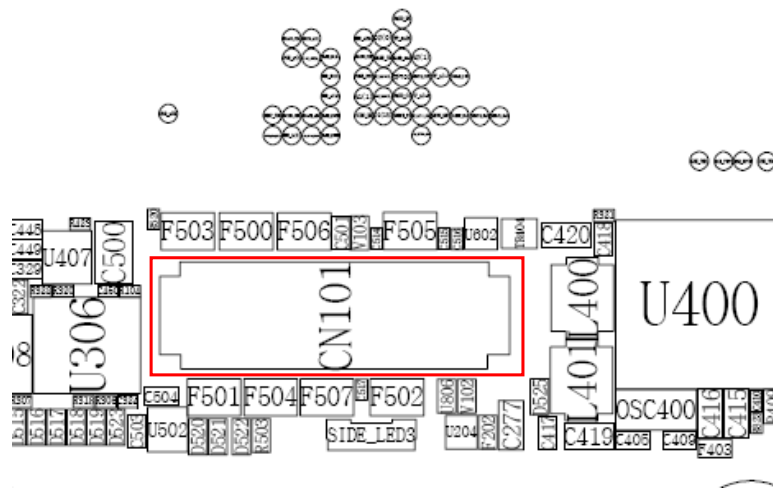


● Hands-Free Stereo Headset Working

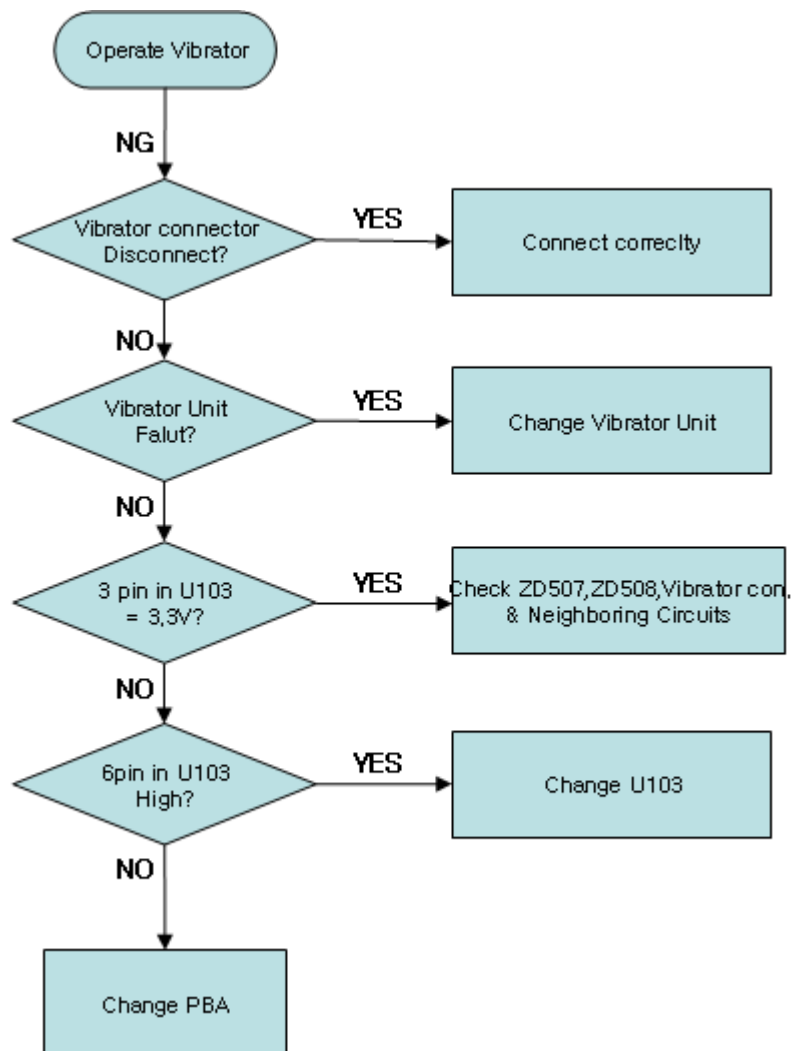


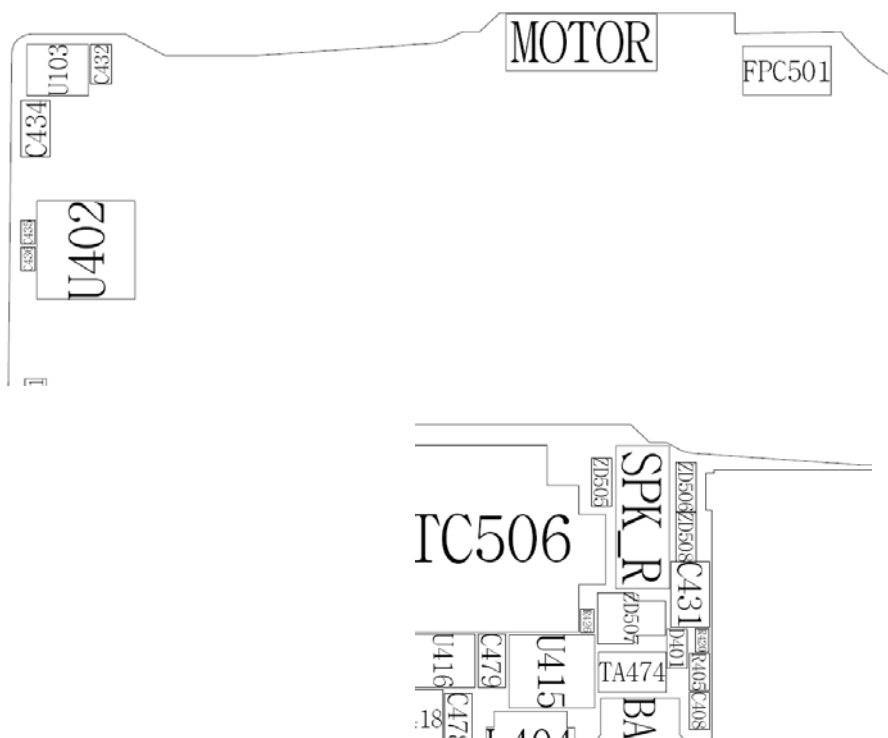
10-4. KEY Working



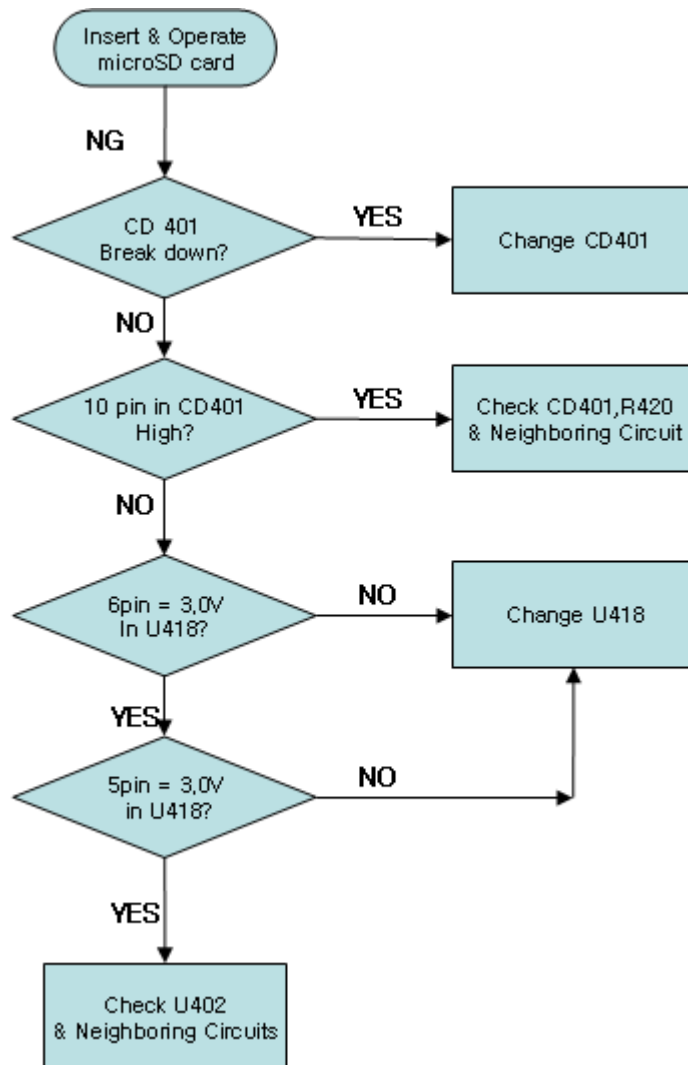


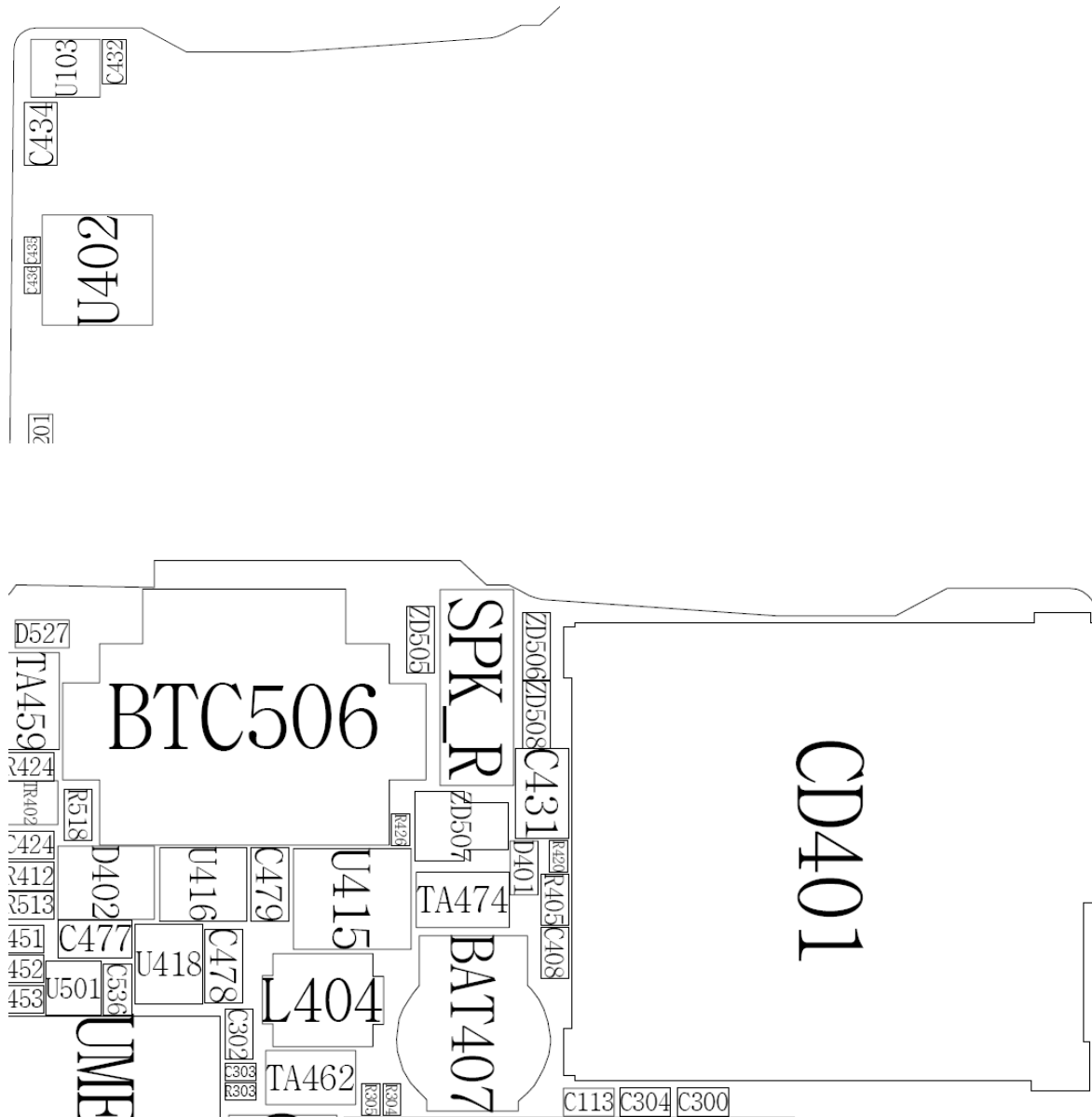
10-5. Vibrator Working





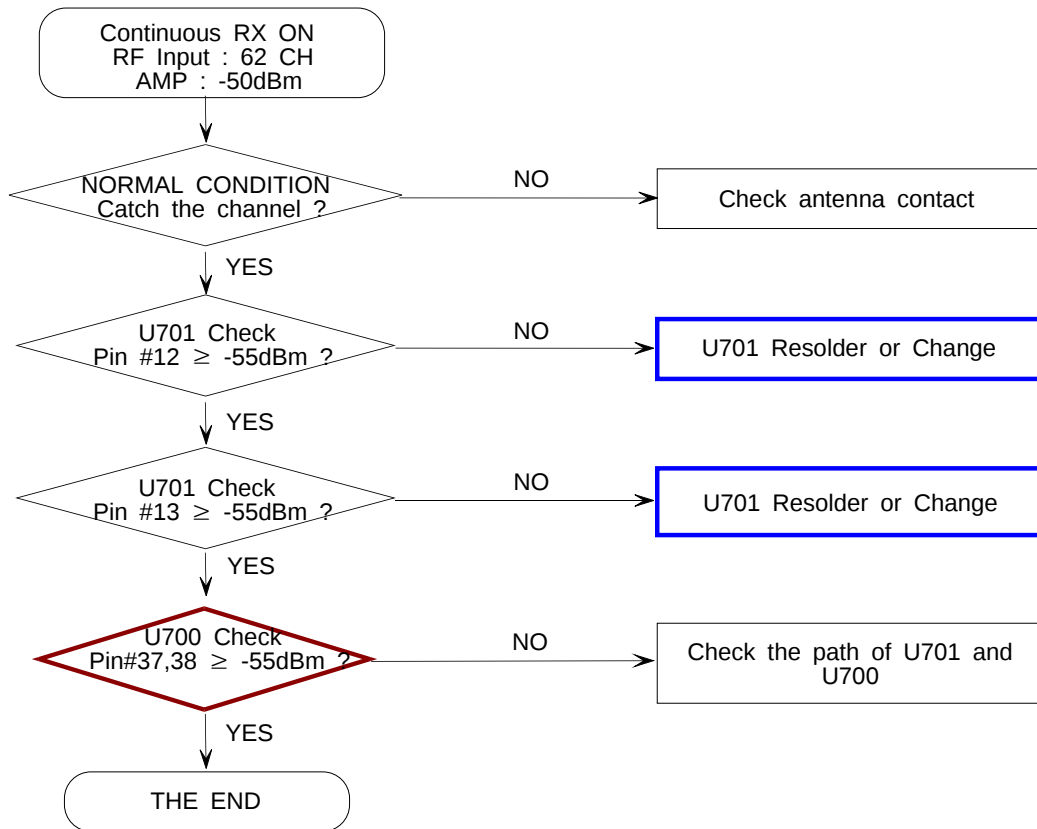
10-6. T-Flash Card Working



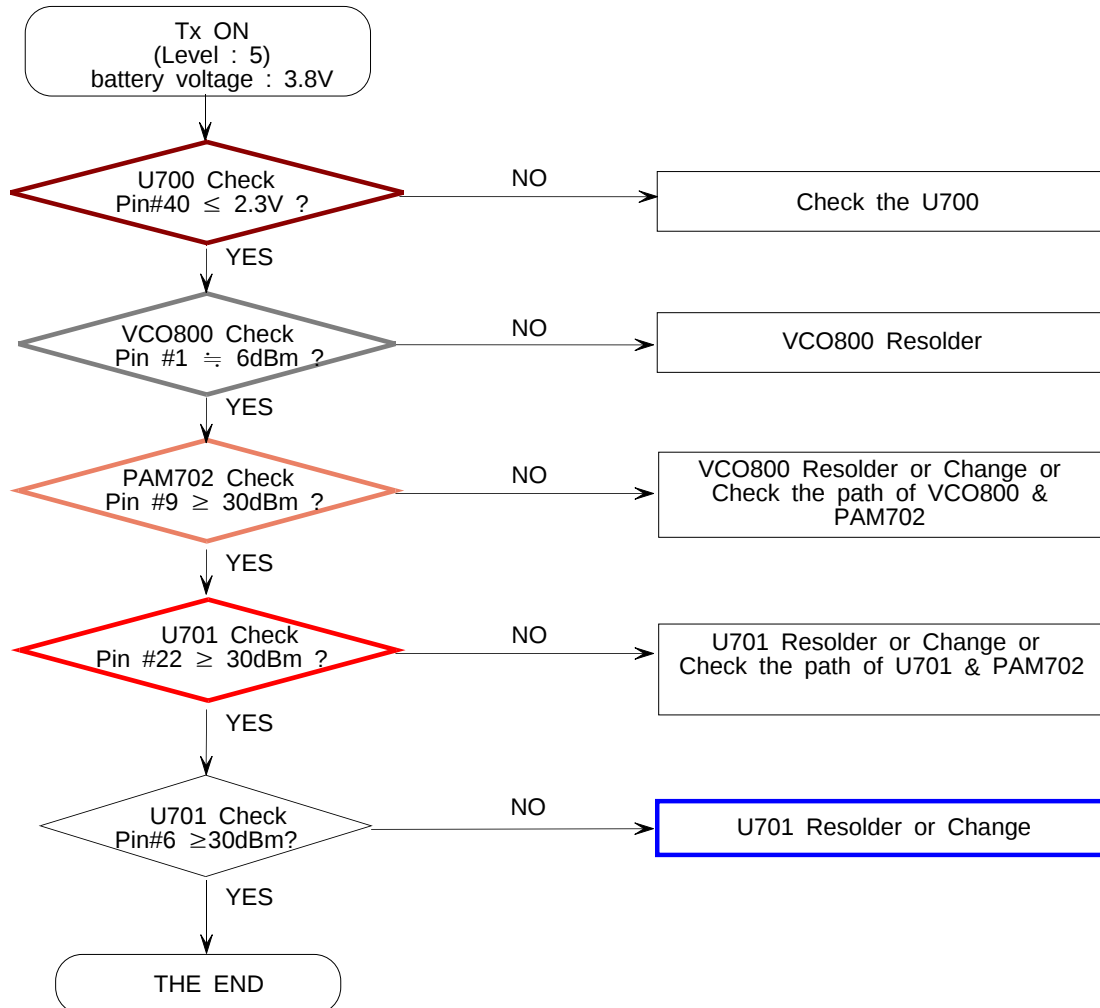


10-7.RF

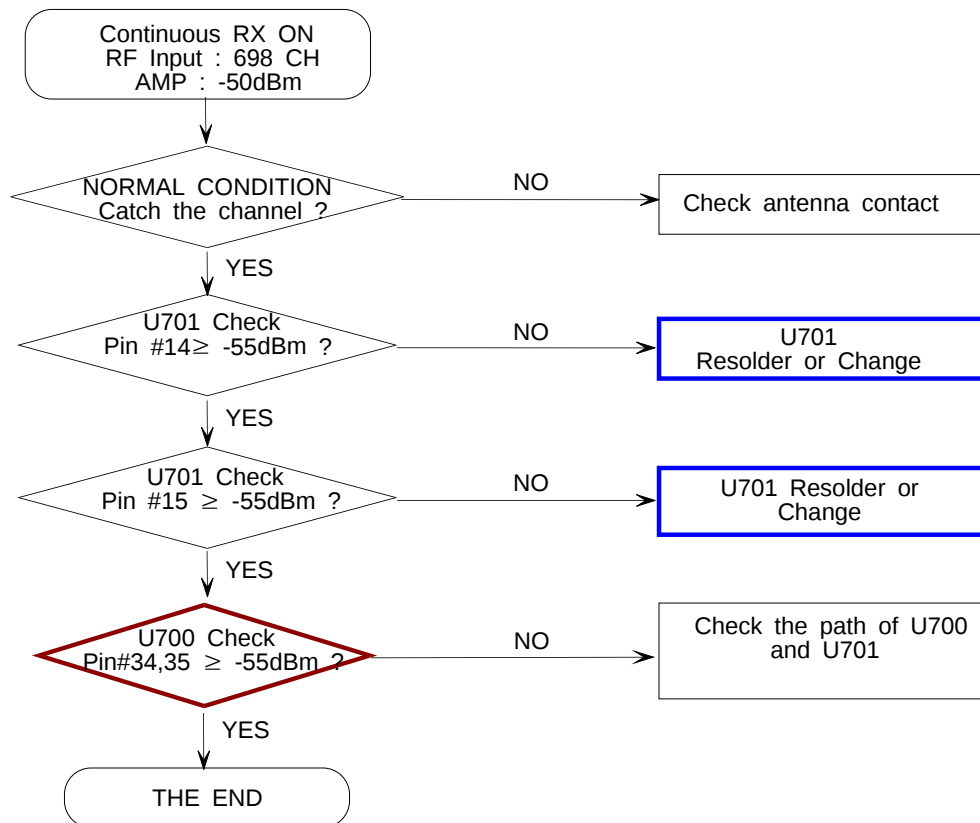
10-7-1. EGSM Receiver



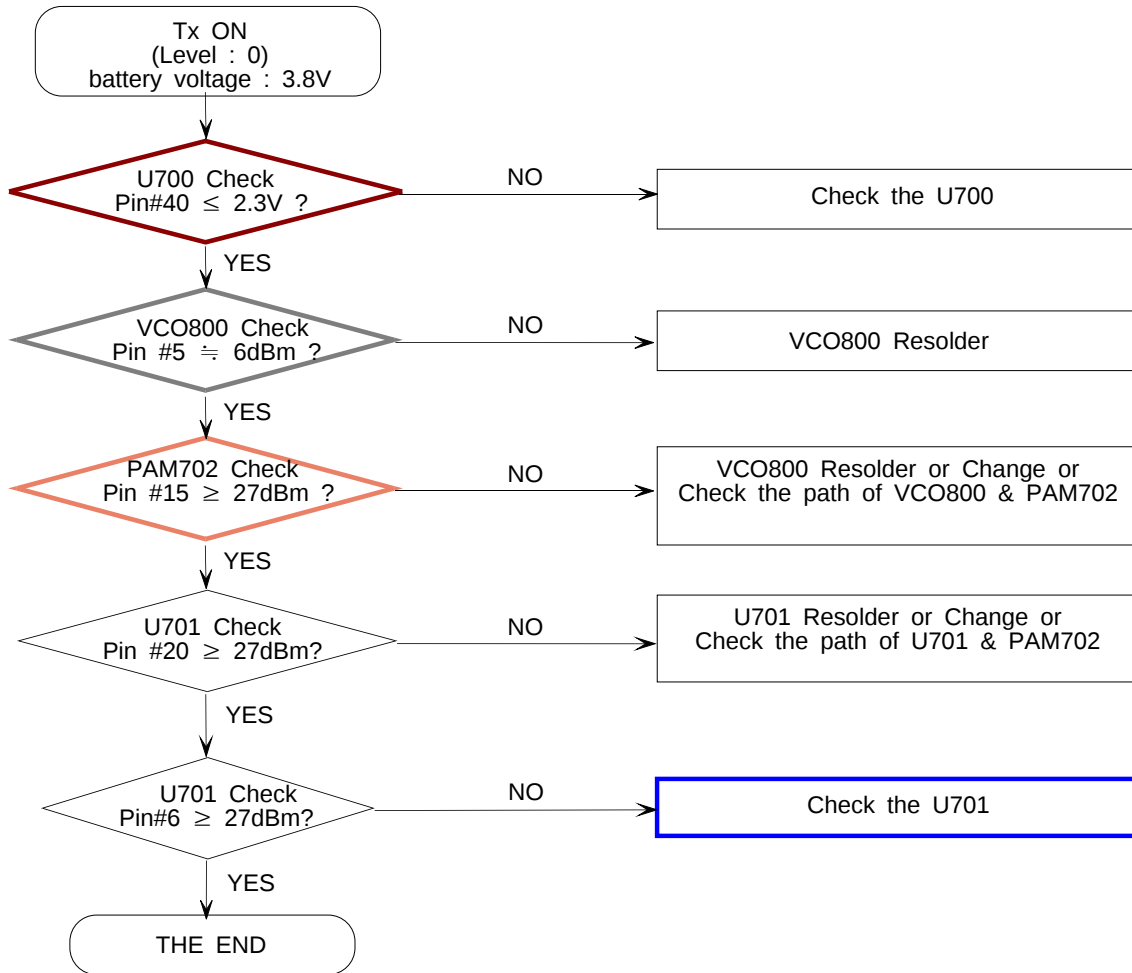
10-7-2. EGSM Transmitter



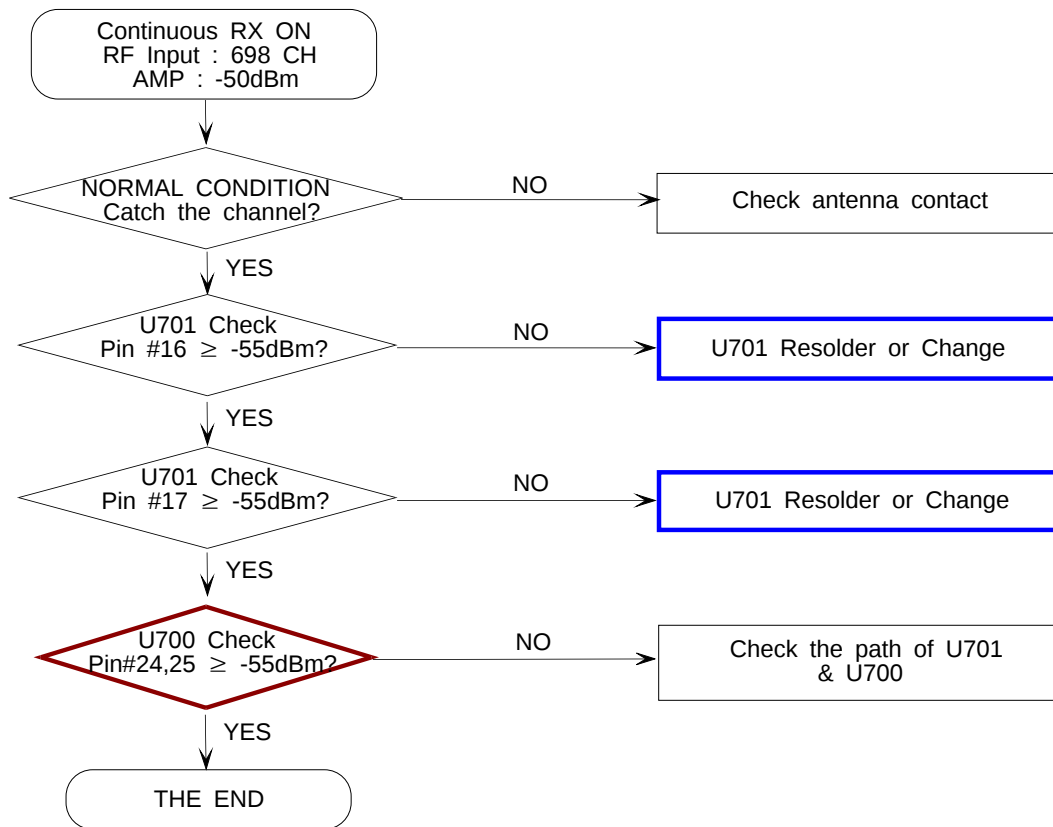
10-7-3. DCS Receiver



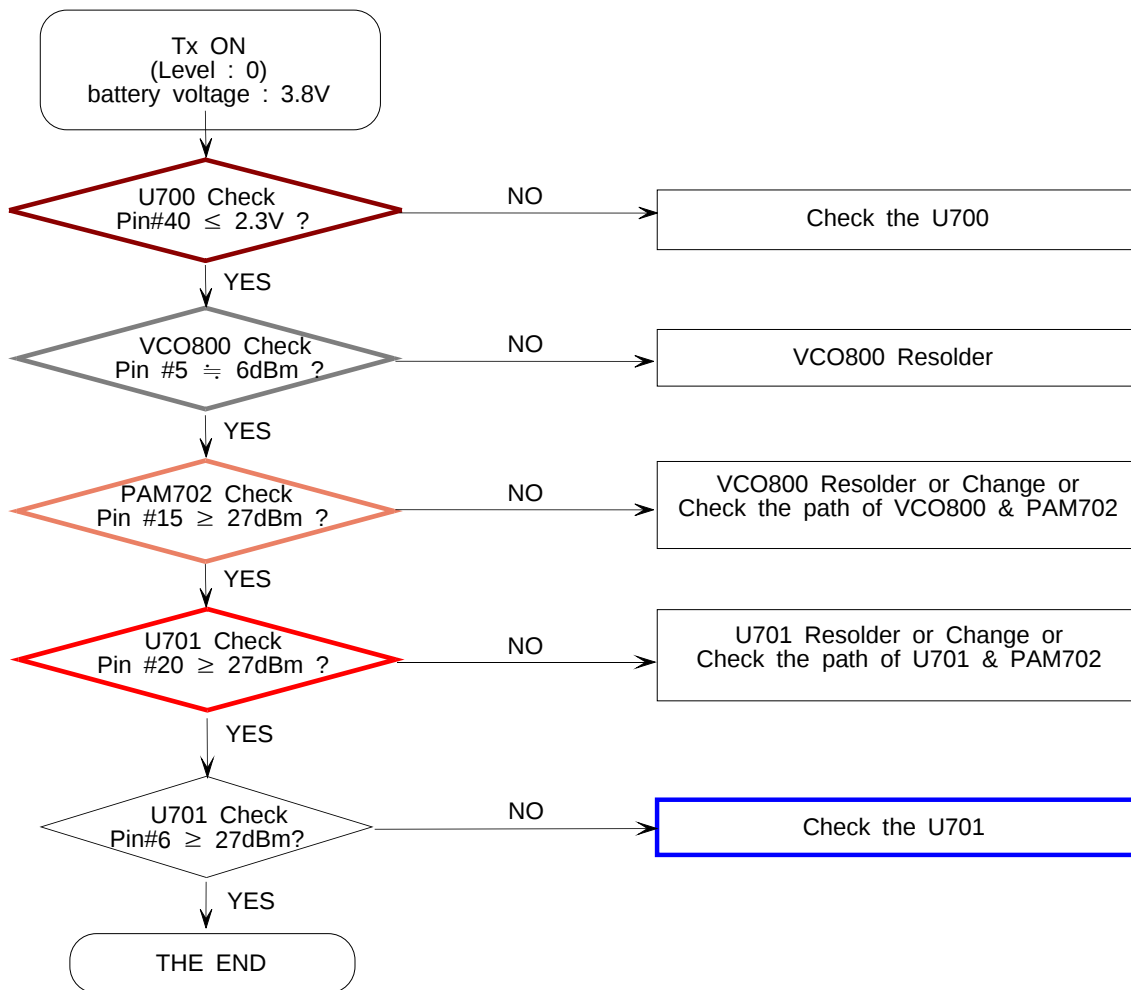
10-7-4. DCS Transmitter

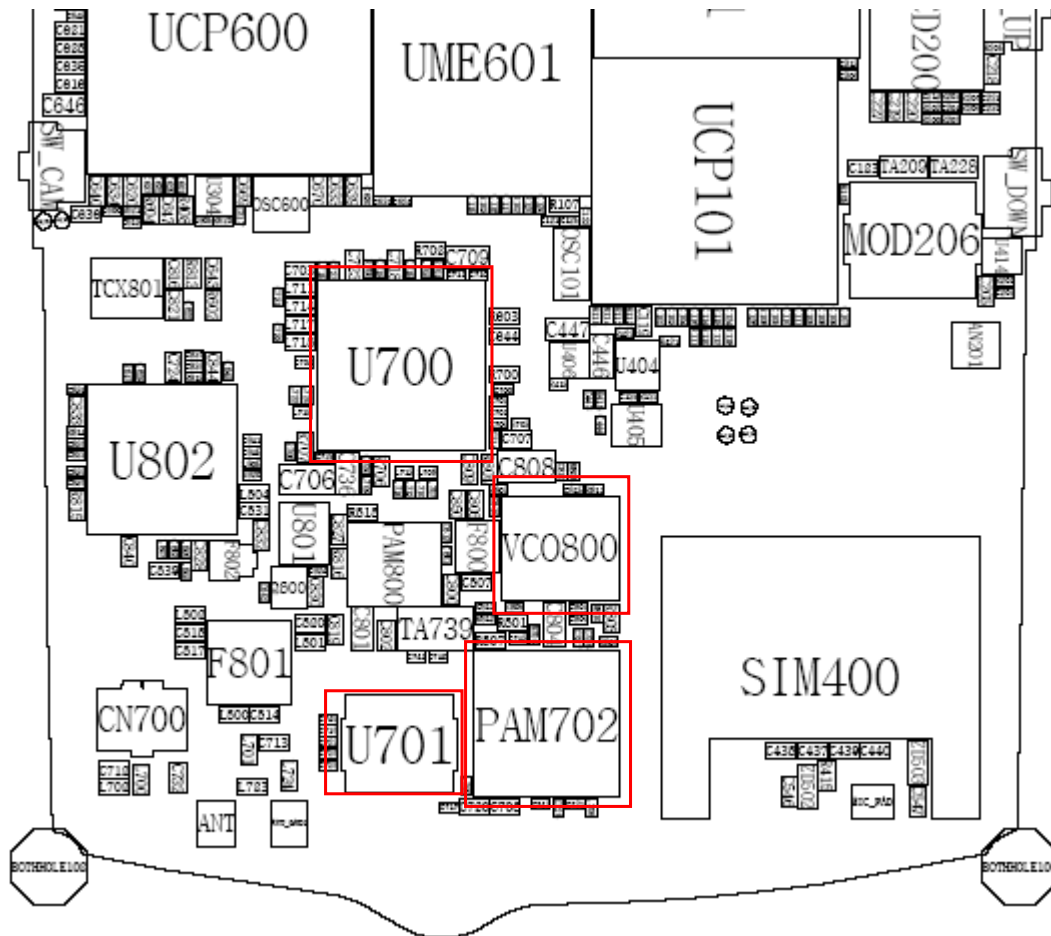


10-7-5. PCS Receiver

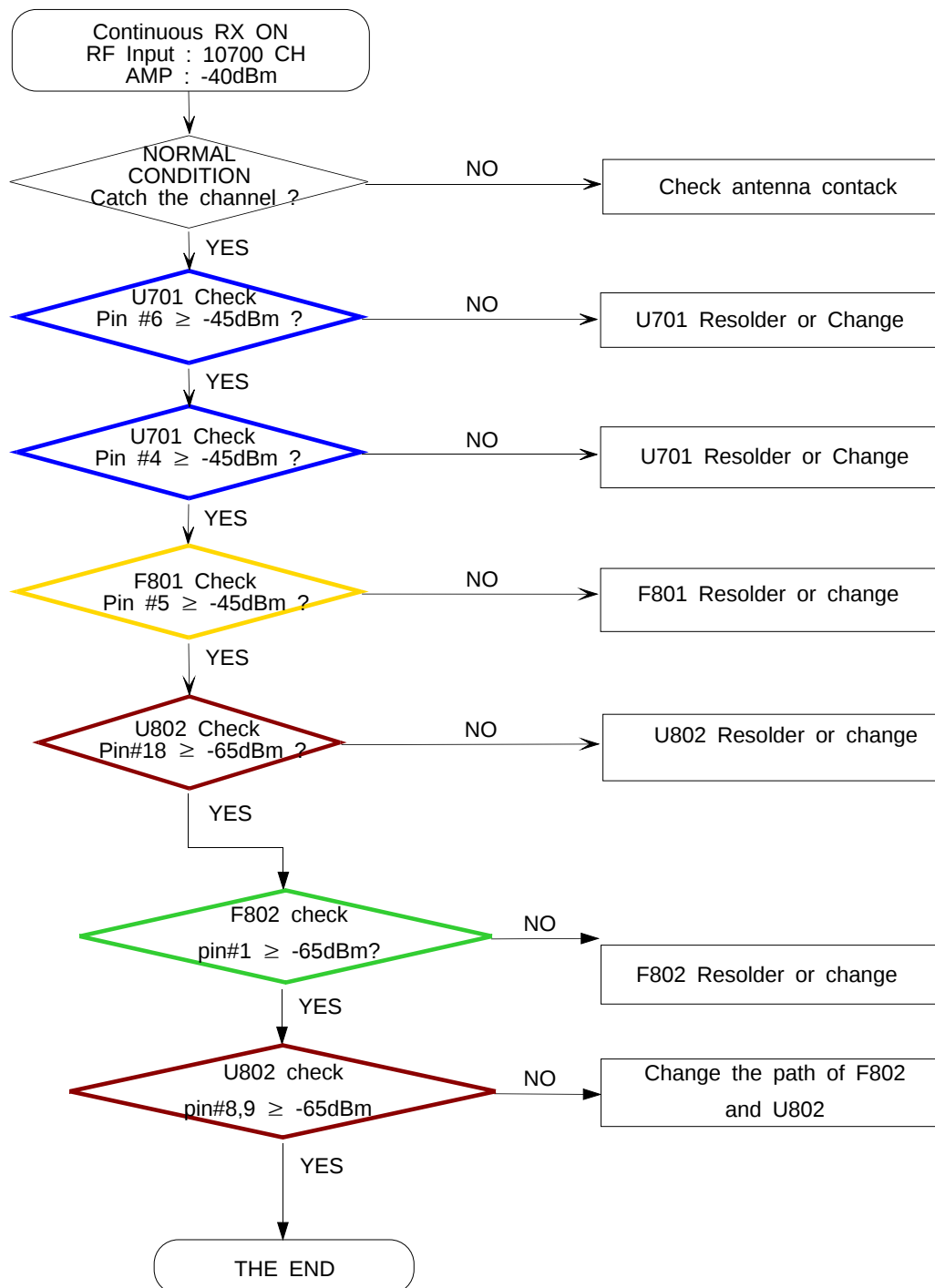


10-7-6. PCS Transmitter

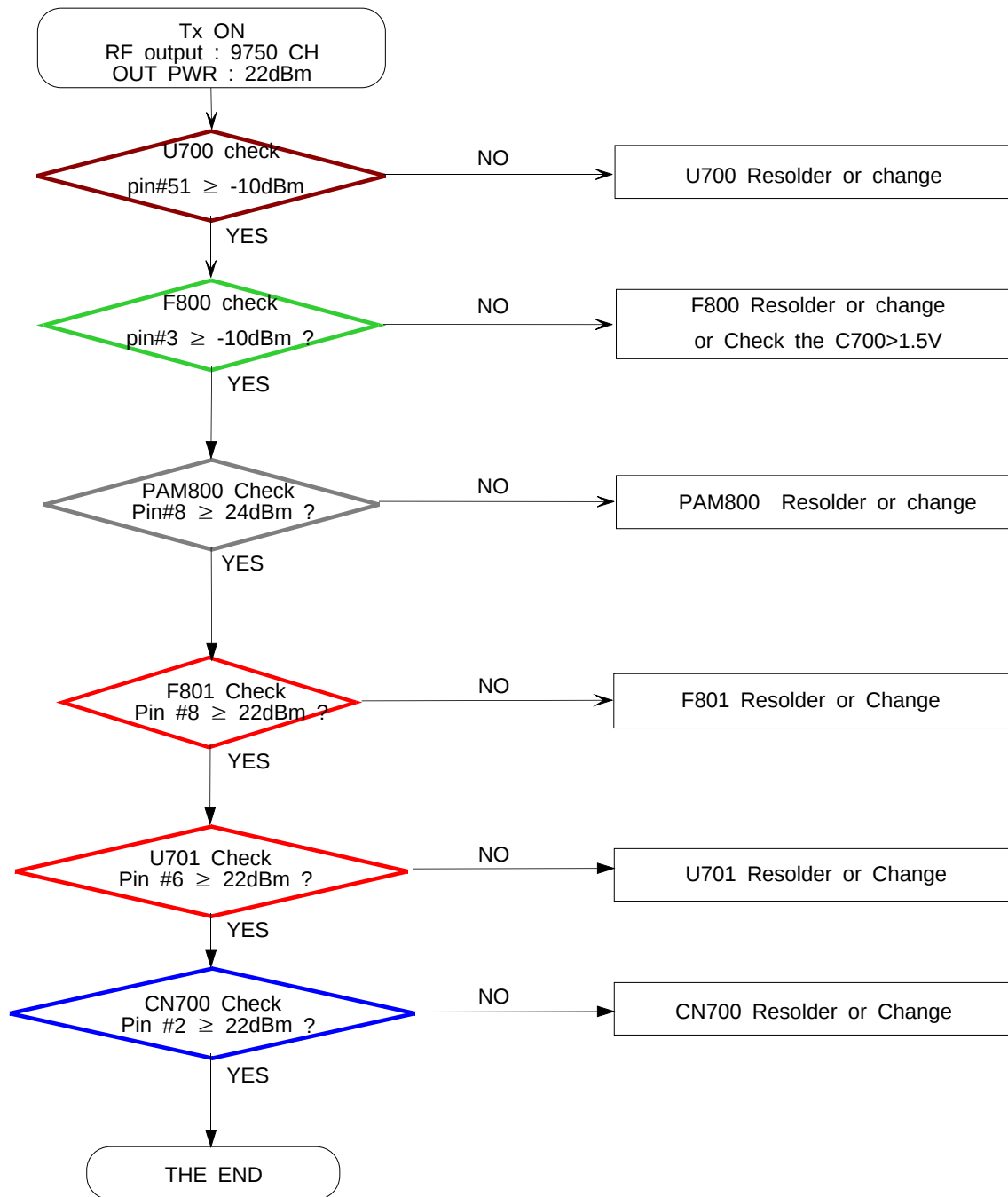


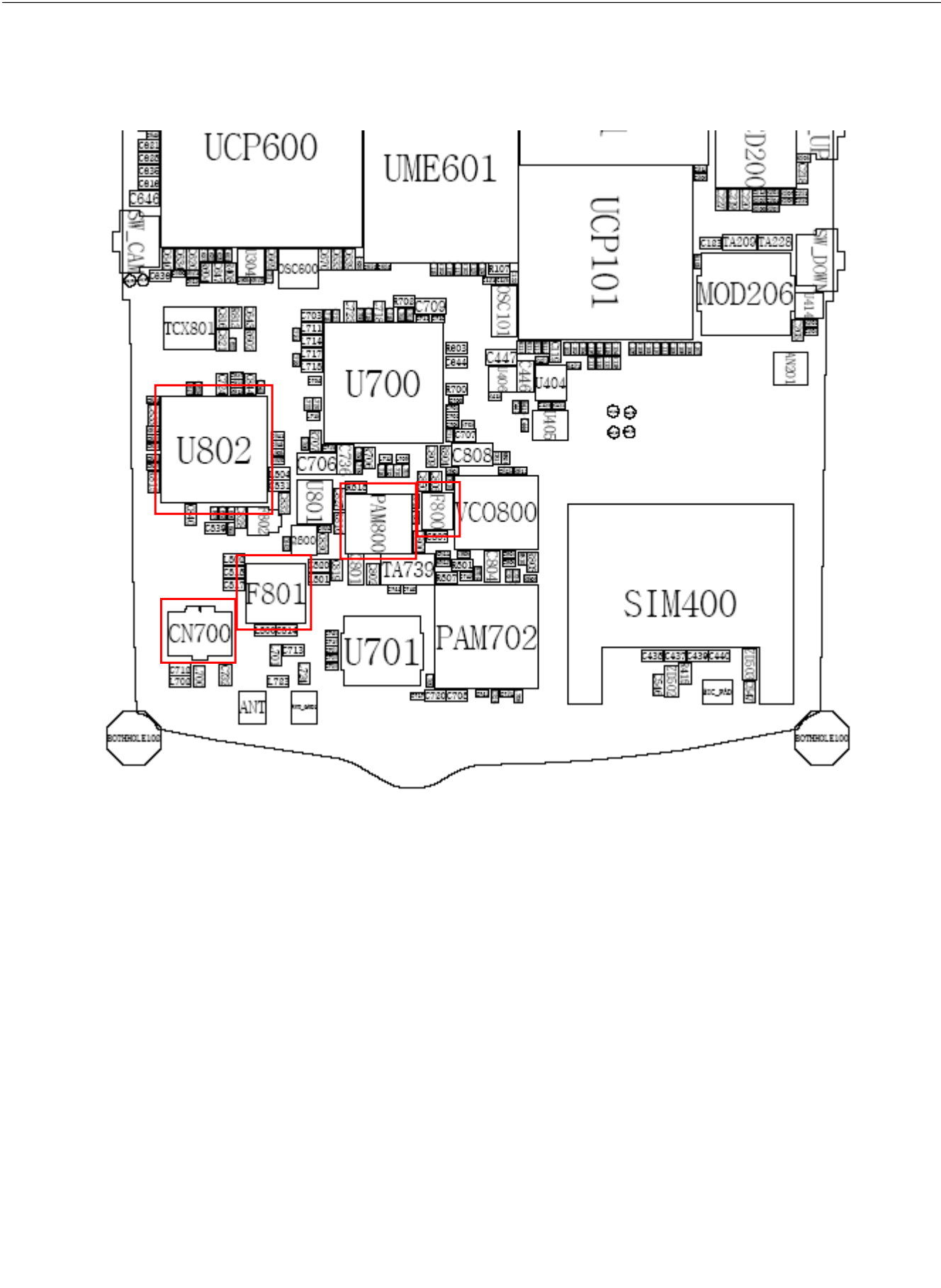


10-7-7. UMTS Receiver



10-7-8. UMTS Transmitter

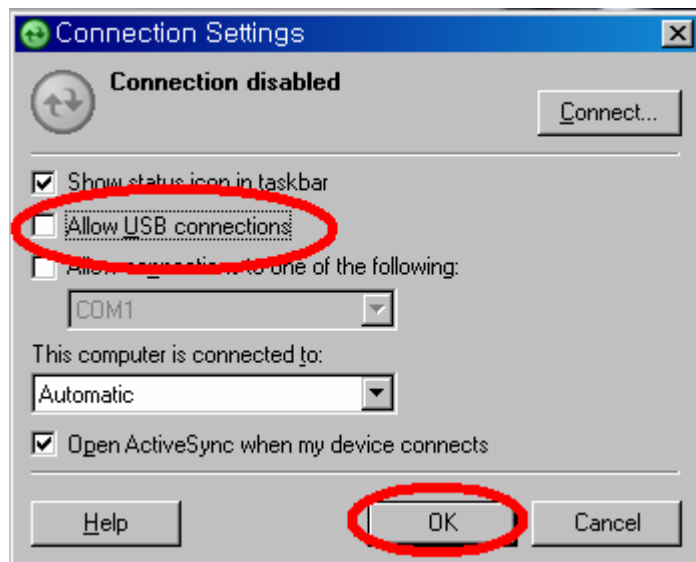




4. Array course control

◆ Pre - Built (For Zigbox Users)

1. Install the [SAMSUNG Mobile USB Driver](#)
 - 1.1 Unzip the [Samsung Mobile USB Driver](#)
 - 1.2 Execute “[setup.exe](#)” to install the [SAMSUNG USB Driver](#)
2. Install the [PHONE Driver](#)
 - 1.1 Unzip the [Phone Driver](#)
 - 1.2 Execute “[setup.exe](#)” to install the [PHONE Driver](#)
3. Install the [ACTIVESYNC 4.5](#)
 - 1.1 Unzip the [ActiveSync 4.5](#)
 - 1.2 Execute “[setup.exe](#)” to install the [ActiveSync 4.5](#)
 - 1.3 Uncheck the [Allow USB connections](#) and press “OK”



◆ Physical Settings

1. Setting Physical Environment



1.1 Connect the USB cable to PC



1.2 Set the both JIG and PWR switch to OFF



1.3 Connect the Data Cable to Device



◆ Downloading the Image

1. Execute the [WCEDownloader v1.1Single](#)
 - 1.1 Unzip the [WCEDownloader](#)
 - 1.2 Execute [WCEDownloader v1.1Single.exe](#) to Run Program



1.3 Download wave image from our FTP site.



I620V_rev08_eboot.nb0
NB0 파일
3,712KB



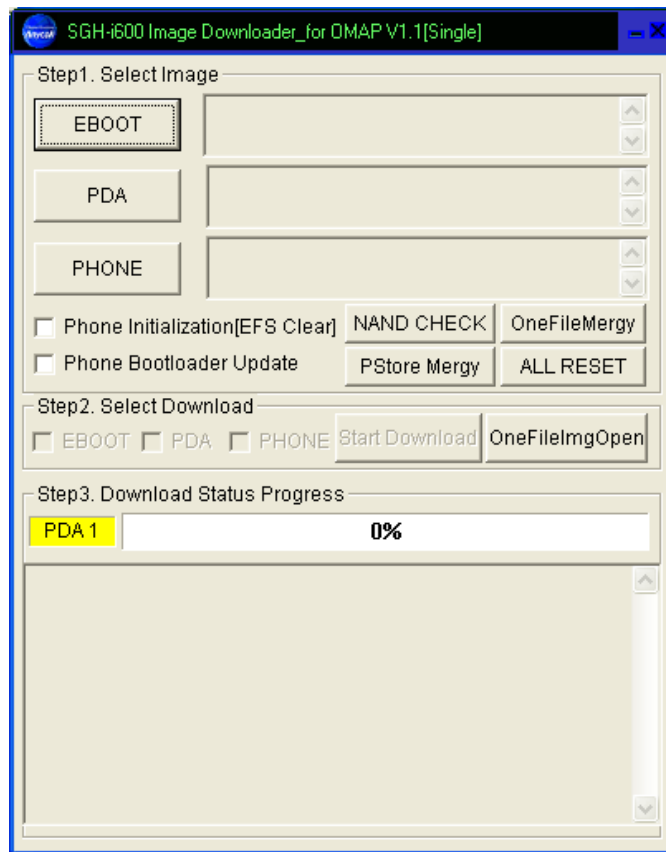
ONENAND
BIN 파일
81,652KB



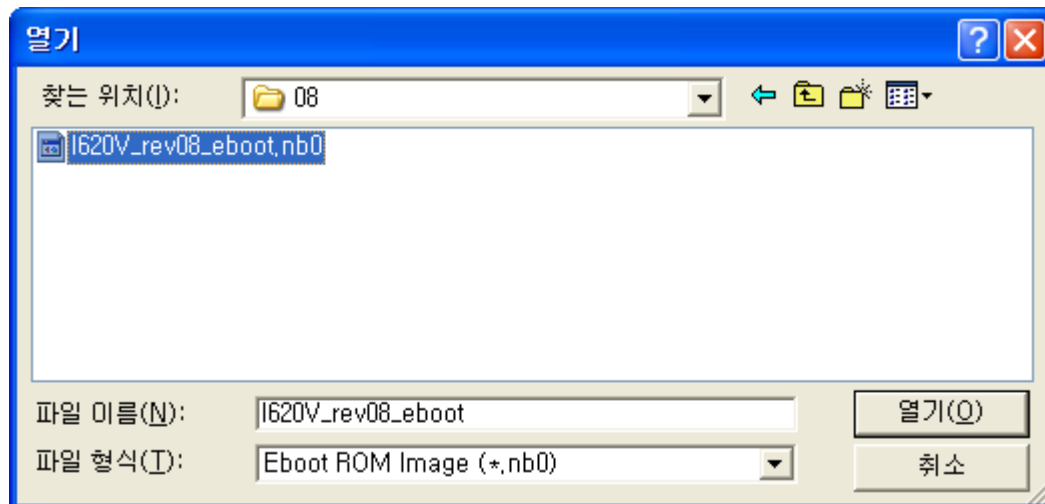
I620BUGD5_CP_2007-04-30
BIN 파일
14,221KB

- I620V_rev08_eboot.nb0 : Eboot ROM Image
- ONENAND.bin : PDA ROM Image
- I620BUGD5_CP_yyyy-mm-dd.bin : Phone Binary

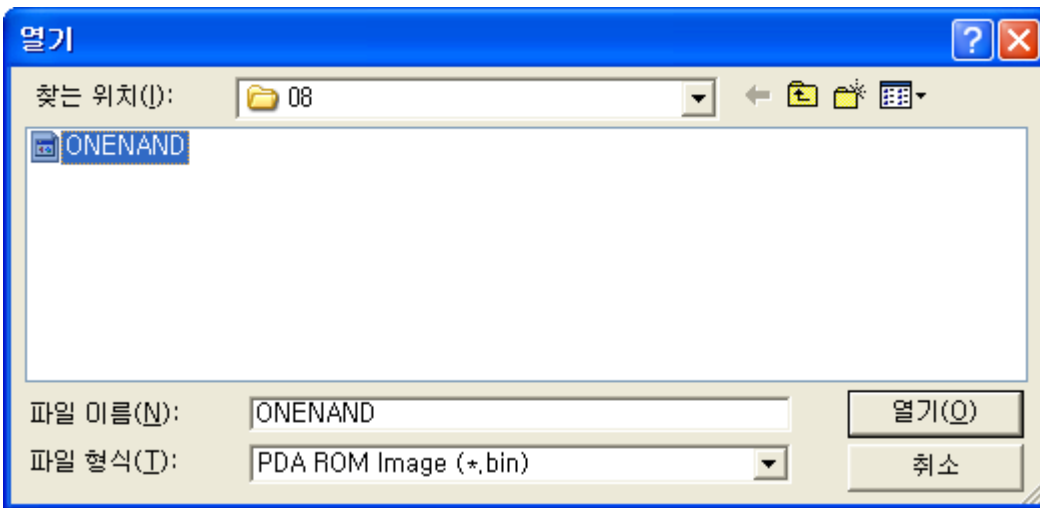
1.4 Load the [Image File](#) to Download



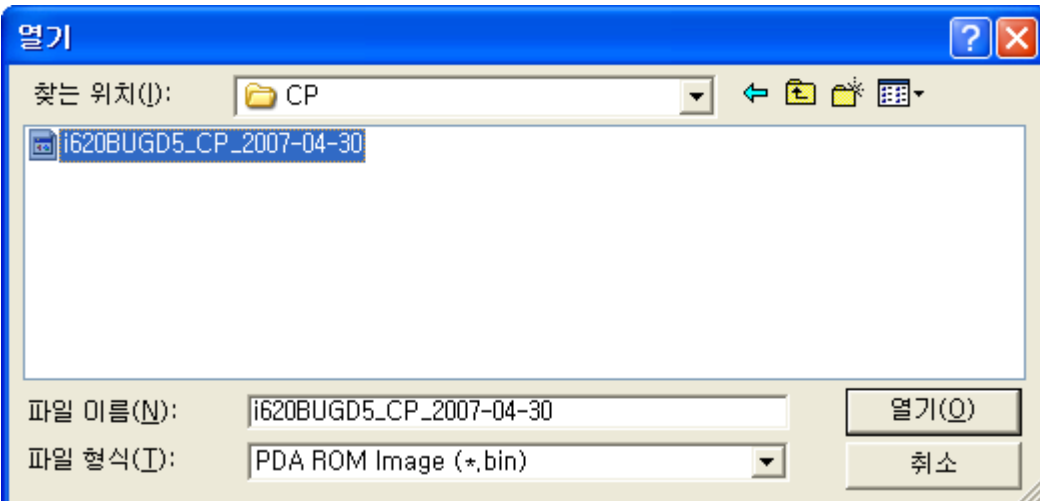
- Press "EBOOT" and Select [i620V_rev08_eboot.nb0](#) to download



- Press "PDA" and Select [ONENAND.bin](#) to download



- Press "PHONE" and Select [i620BUGD5_CP_yyyy-mm-dd.bin](#) to download



1.5 Press the ENTER Button



Press the **ENTER** Button.

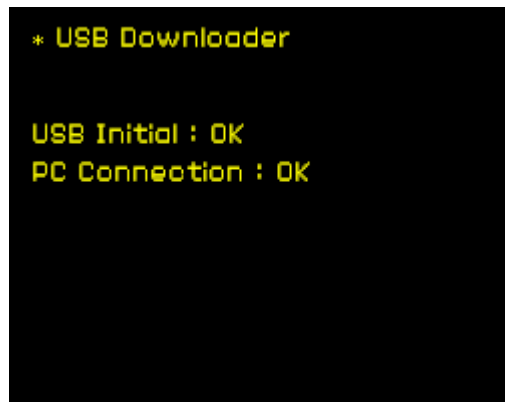
While pressing the Enter button, set the both JIG and PWR switch to ON.

Do not release the Enter button yet!!

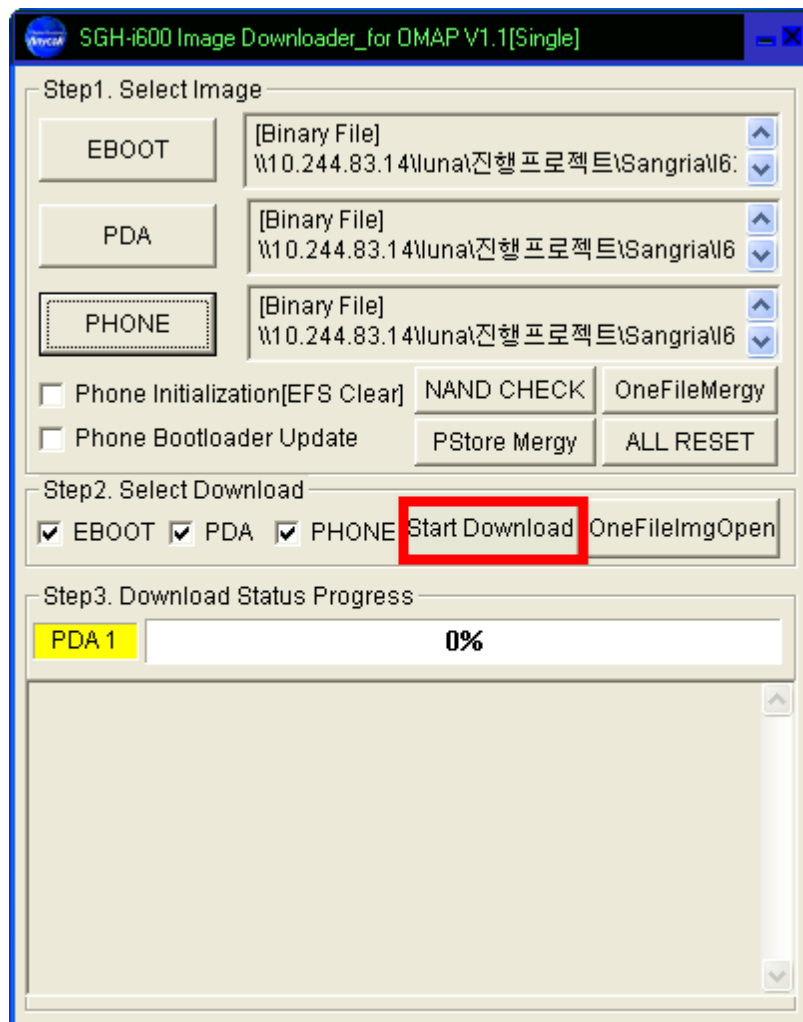


Do not release the Enter button yet!!

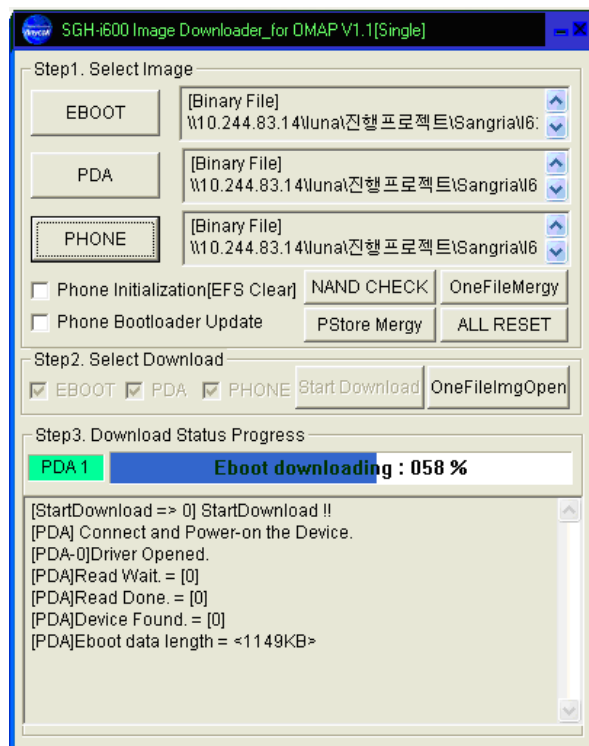
Following paragraph is seen in your device, then you can **release the Enter button**.



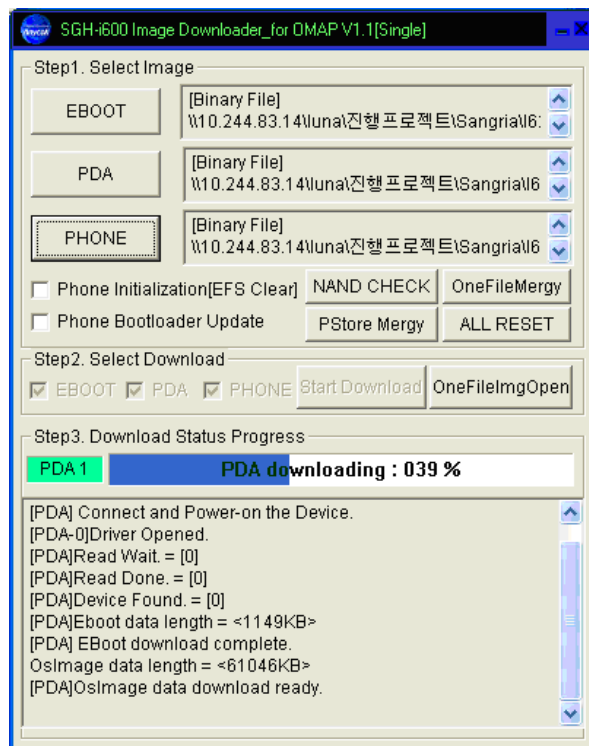
1.6 Click the [Start Download](#) Button



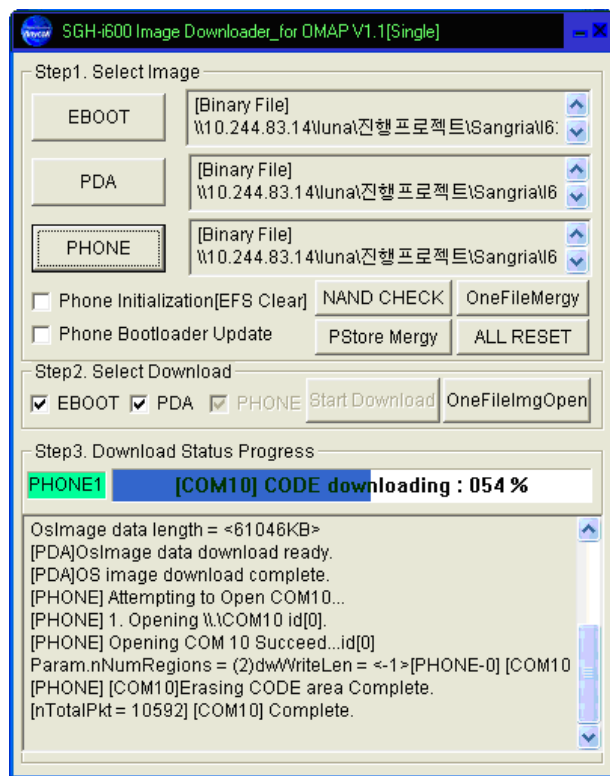
1.7 The download process starts sequentially



< Eboot Downloading >



< PDA Downloading >



< PHONE Downloading >

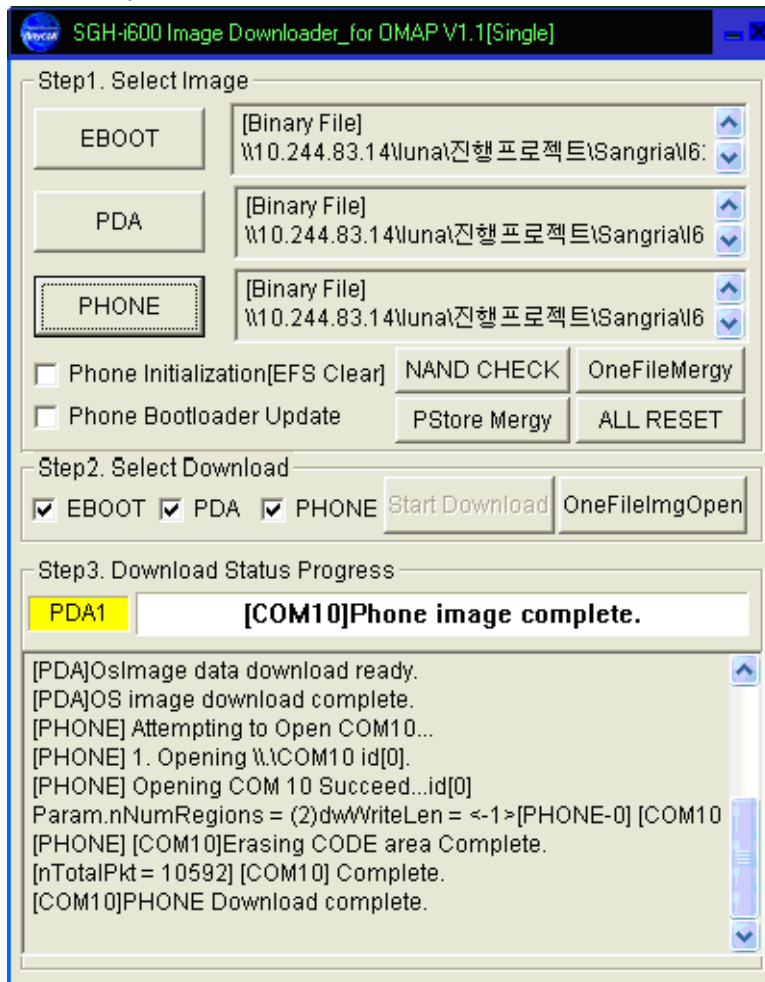
※ Sometimes you can see the following message when you are downloading the Phone Image. If you see the "Port open fail" message, you make a try to use another USB ports.

```
[PHONE] COM[10] Port open fail.id[0]
[PHONE] Attempting to Open COM8...
[PHONE] 1. Opening COM8: id[0].
[PHONE] Opening COM 8 Succeed...id[0]
Param.nNumRegions = (2)dwWriteLen = <-1>[PHONE-0] [COM8]
[PHONE] [COM8]Erasing CODE area Complete.
[nTotalPkt= 10617] [COM8] Complete.
```

When the Eboot & PDA download process starts, you can see the following progress bar.
But Phone download process starts, progress bar can't seen in your device.



3. 7 Completed Download.



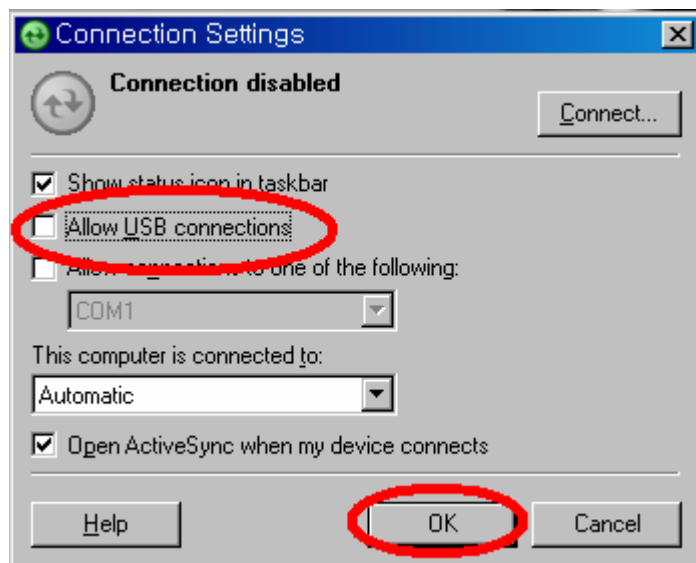
If the download finishes successfully, device resetting performs automatically.



Congratulations~! All processes are completed.

◆ Pre - Built (For USB Cable Users)

1. Install the [SAMSUNG Mobile USB Driver](#)
 - 1.1 Unzip the [Samsung Mobile USB Driver](#)
 - 1.2 Execute “setup.exe” to install the [SAMSUNG USB Driver](#)
2. Install the [PHONE Driver](#)
 - 1.1 Unzip the [Phone Driver](#)
 - 1.2 Execute “setup.exe” to install the [PHONE Driver](#)
3. Install the [ACTIVESYNC 4.5](#)
 - 1.1 Unzip the [ActiveSync 4.5](#)
 - 1.2 Execute “setup.exe” to install the [ActiveSync 4.5](#)
 - 1.3 Uncheck the [Allow USB connections](#) and press “OK”



◆ Physical Settings

1. Setting Physical Environment
 - 1.1 Connect the USB cable to PC



1.2 Connect the Data Cable to Device



◆ Downloading the Image

1. Execute the [WCEDownloader v1.1Single](#)
 - 1.1 Unzip the [WCEDownloader](#)
 - 1.2 Execute [WCEDownloader v1.1Single.exe](#) to Run Program



1.3 Download wave image from our FTP site.



I620V_rev06_eboot.nb0
NB0 파일
1,296KB



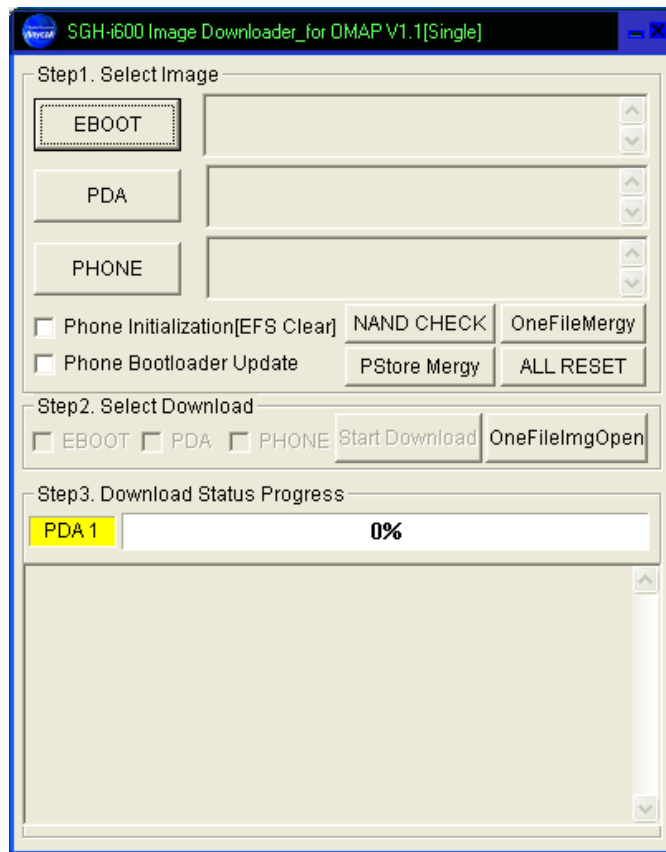
ONENAND
BIN 파일
76,789KB



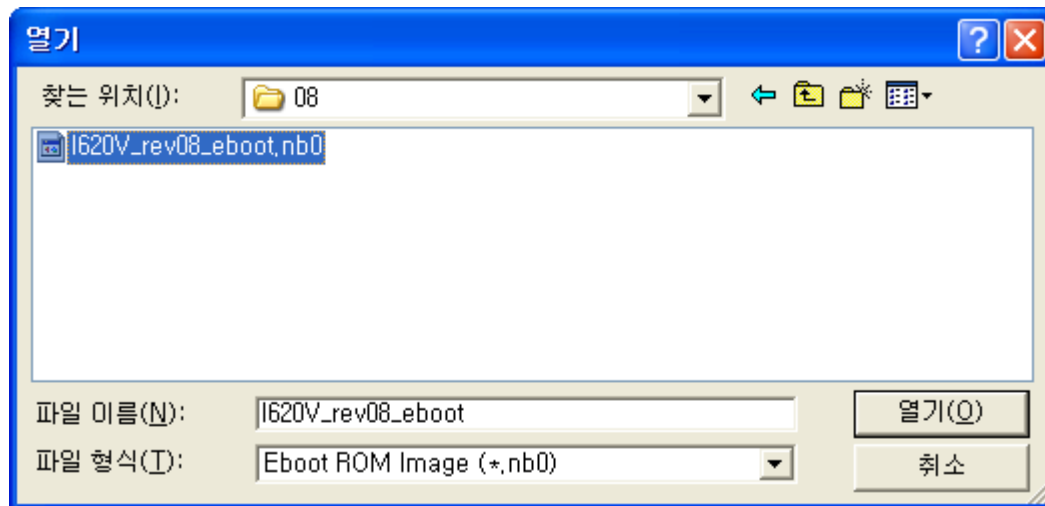
I620BUGC2_CP
BIN 파일
14,201KB

- I620V_rev01_eboot.nb0 : Eboot ROM Image
- ONENAND.bin : PDA ROM Image
- I620BUGC2_CP.bin : Phone Binary

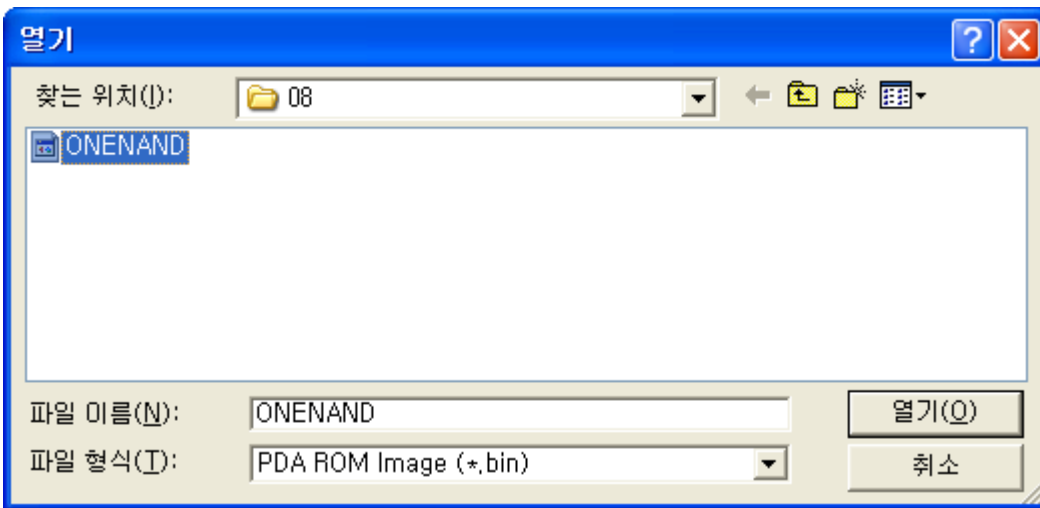
1.4 Load the [Image File](#) to Download



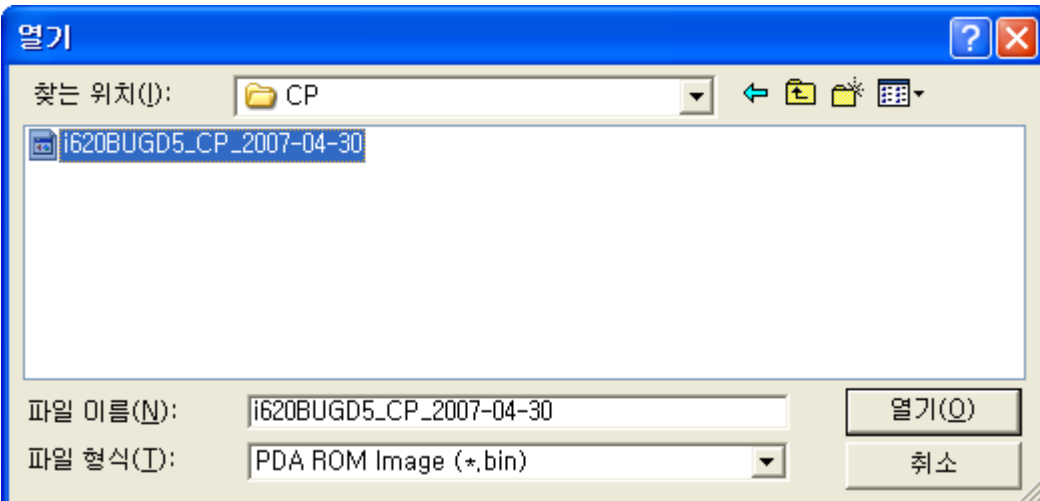
- Press "EBOOT" and Select [i620V_rev08_eboot.nb0](#) to download



- Press "PDA" and Select [ONENAND.bin](#) to download



- Press "PHONE" and Select [i620BUGD5_CP_yyyy-mm-dd.bin](#) to download



1.5 Press the ENTER Button



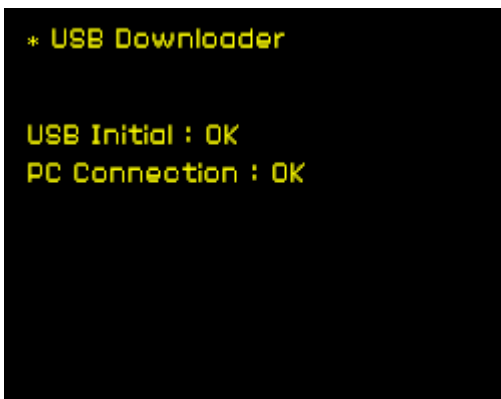
Press the **ENTER** Button.

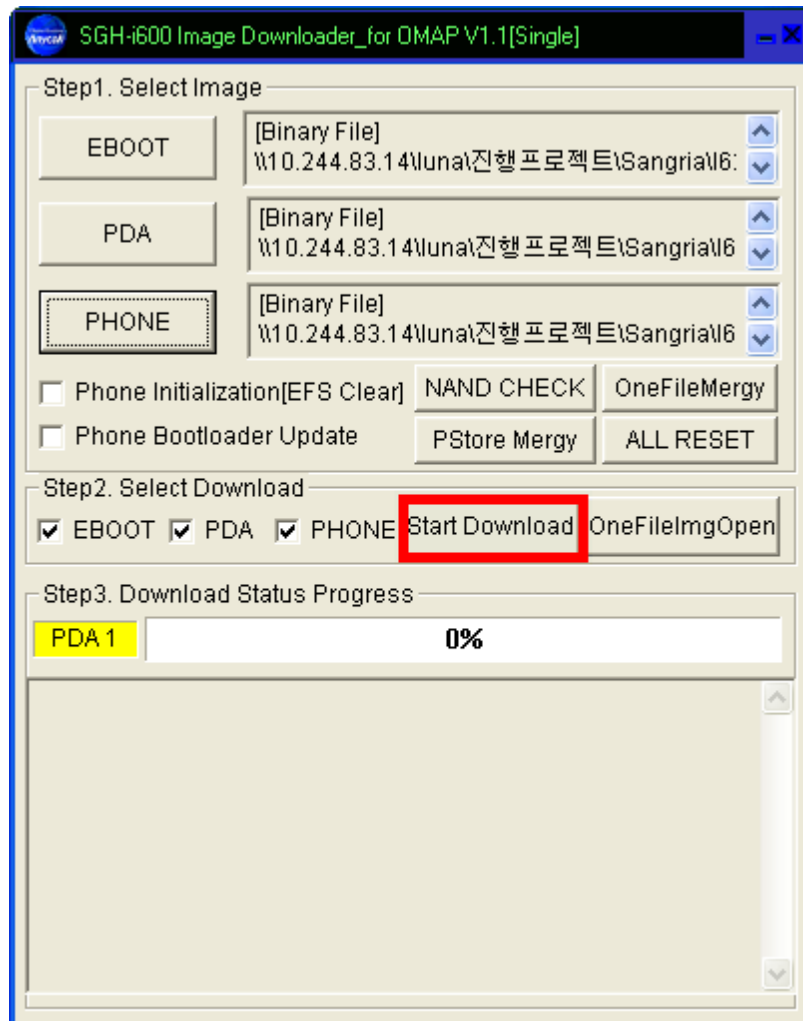
While pressing the **Enter** button, press the **POWER** Button.



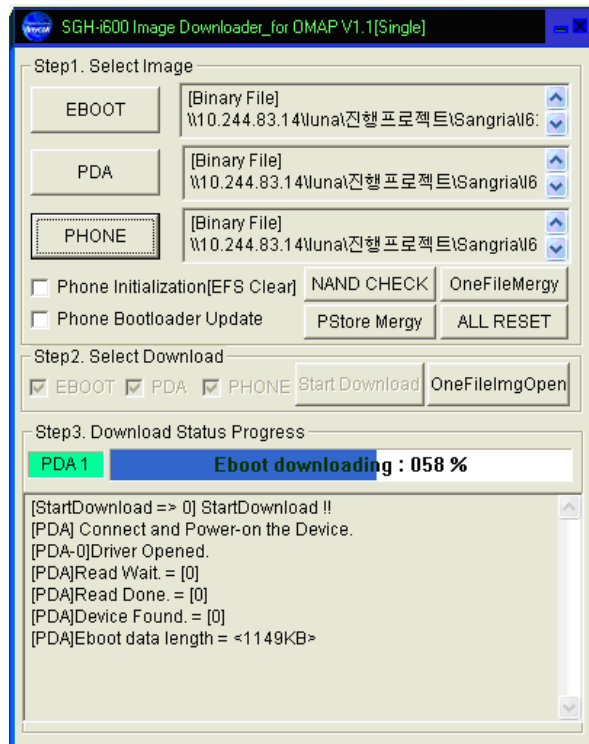
Do not release the Enter button yet!!

Following paragraph is seen in your device, then you can **release the Enter** button.

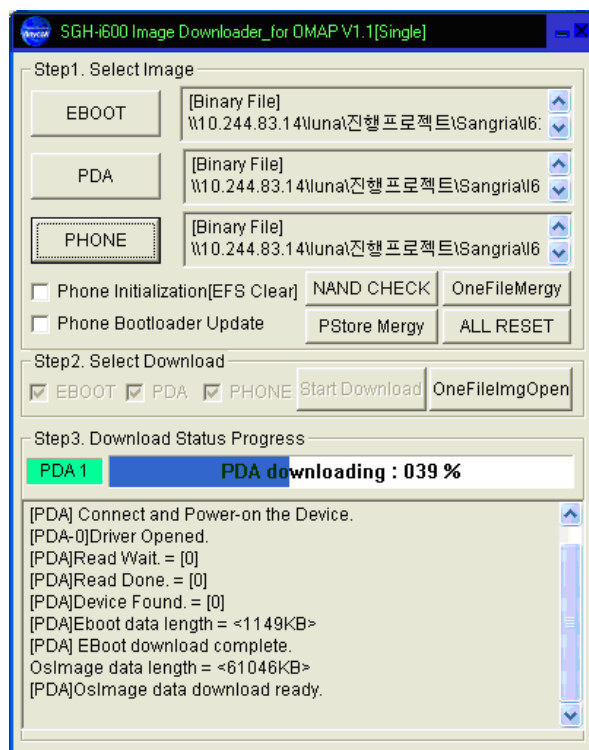


1.6 Click the **Start Download** Button

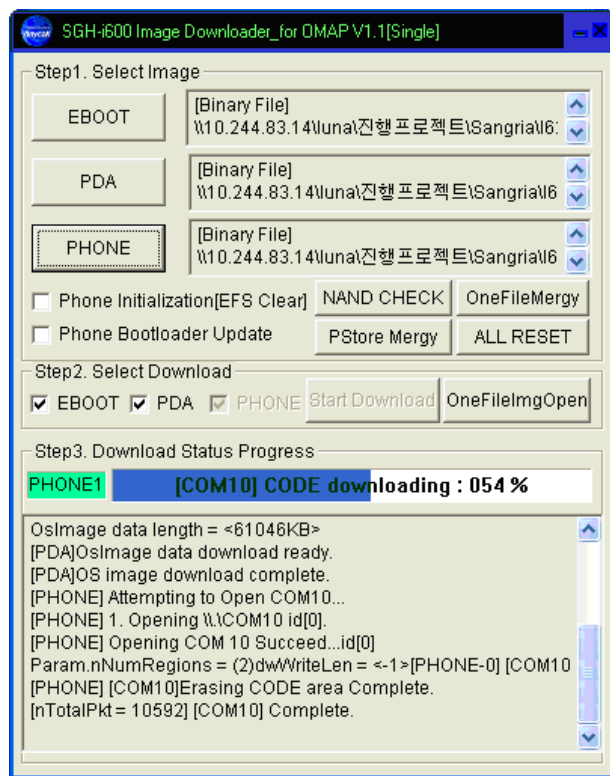
1.7 The download process starts sequentially



< Eboot Downloading >



< PDA Downloading >



< PHONE Downloading >

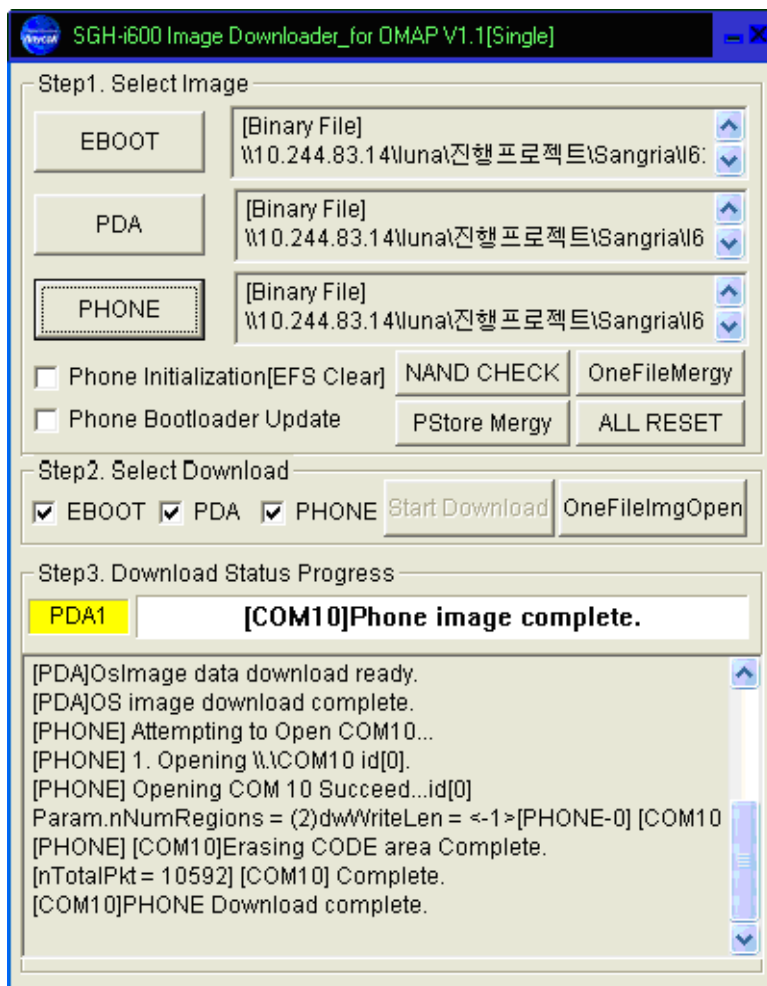
※ Sometimes you can see the following message when you are downloading the Phone Image. If you see the "Port open fail" message, you make a try to use another USB ports.

```
[PHONE] COM[10] Port open fail.id[0]
[PHONE] Attempting to Open COM8...
[PHONE] 1. Opening COM8: id[0].
[PHONE] Opening COM 8 Succeed...id[0]
Param.nNumRegions = (2)dwWriteLen = <-1>[PHONE-0] [COM8]
[PHONE] [COM8]Erasing CODE area Complete.
[nTotalPkt= 10617] [COM8] Complete.
```

When the Eboot & PDA download process starts, you can see the following progress bar.
But Phone download process starts, progress bar can't seen in your device.



3. 7Completed Download.

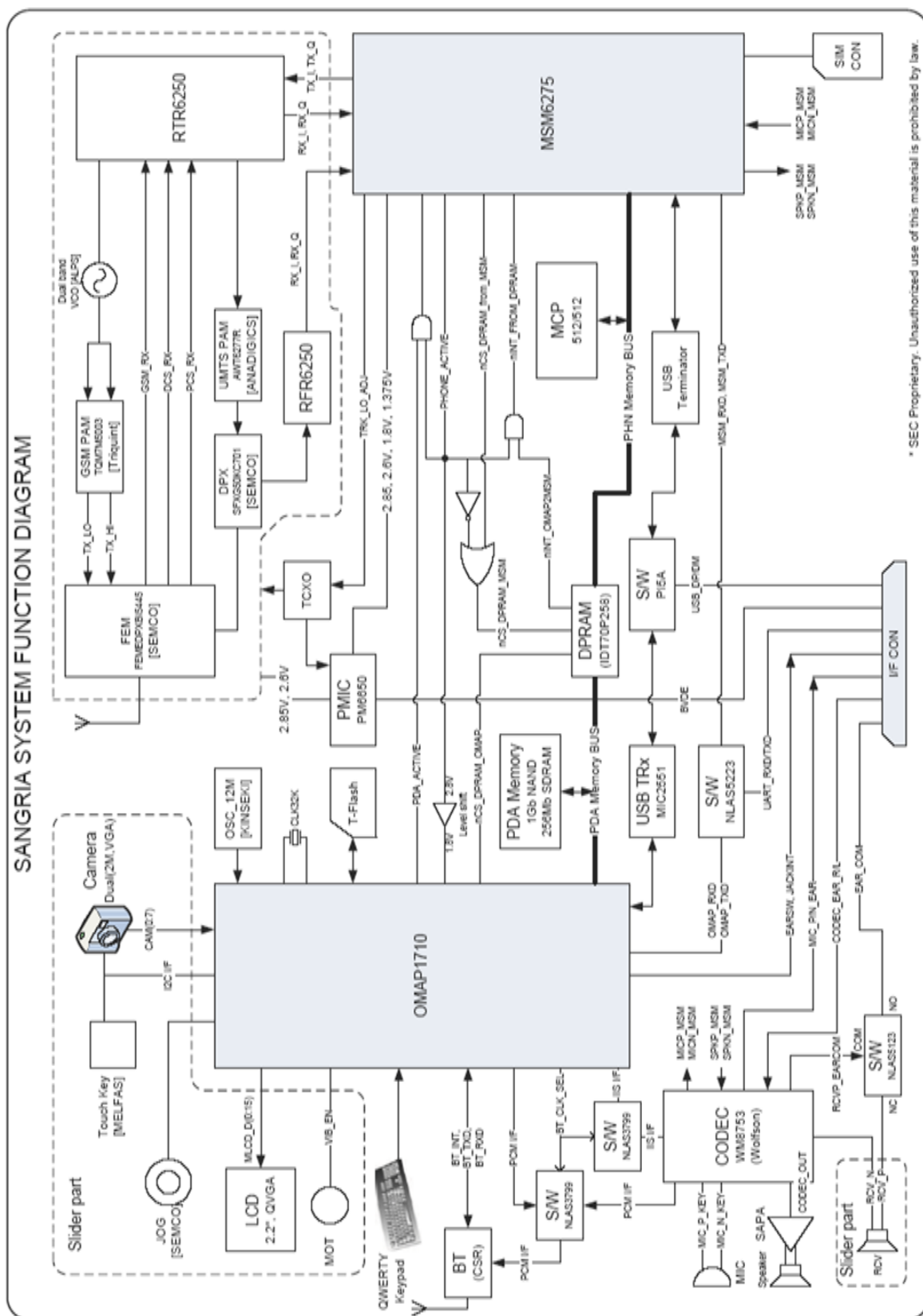


If the download finishes successfully, device resetting performs automatically.

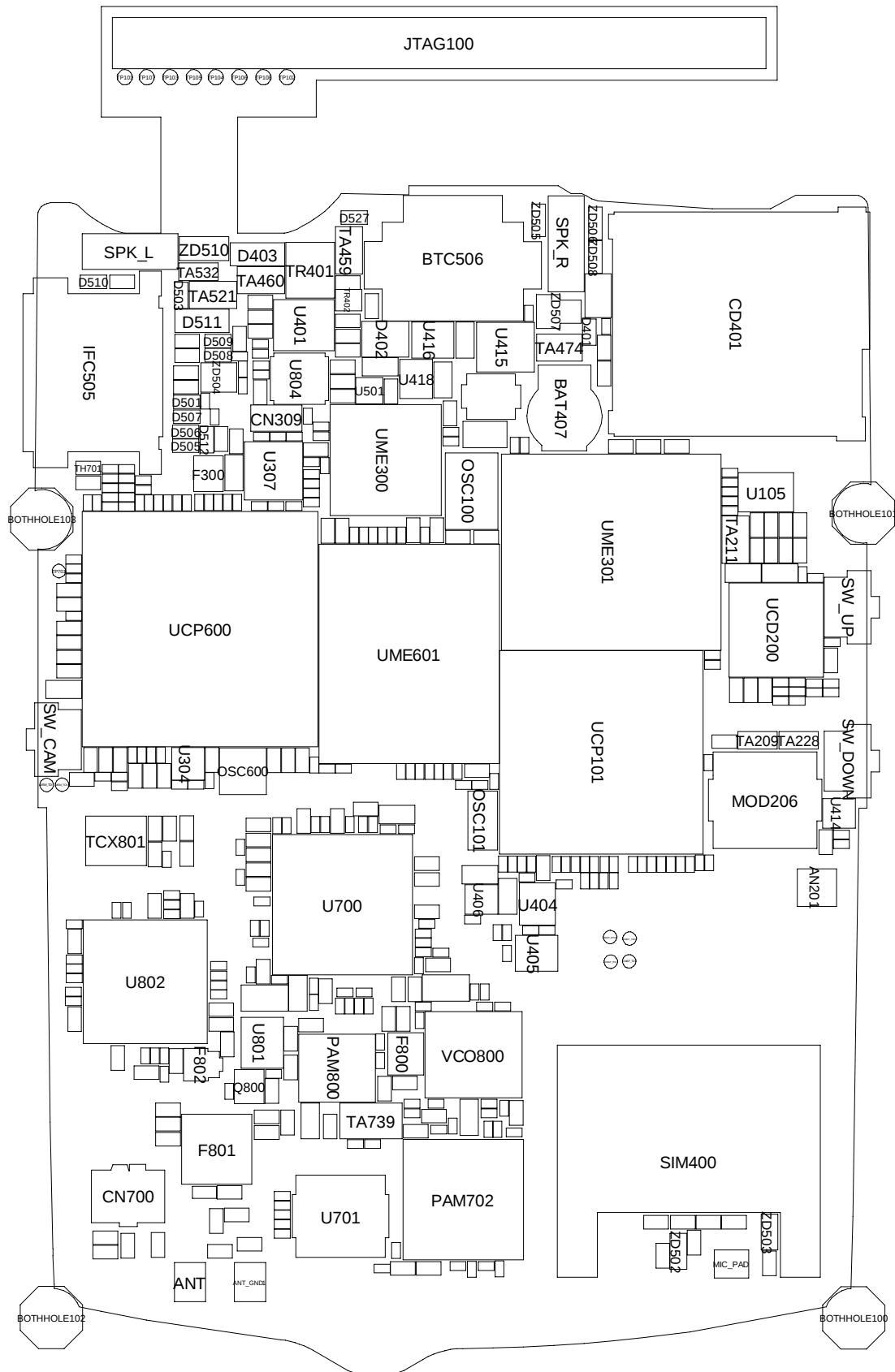


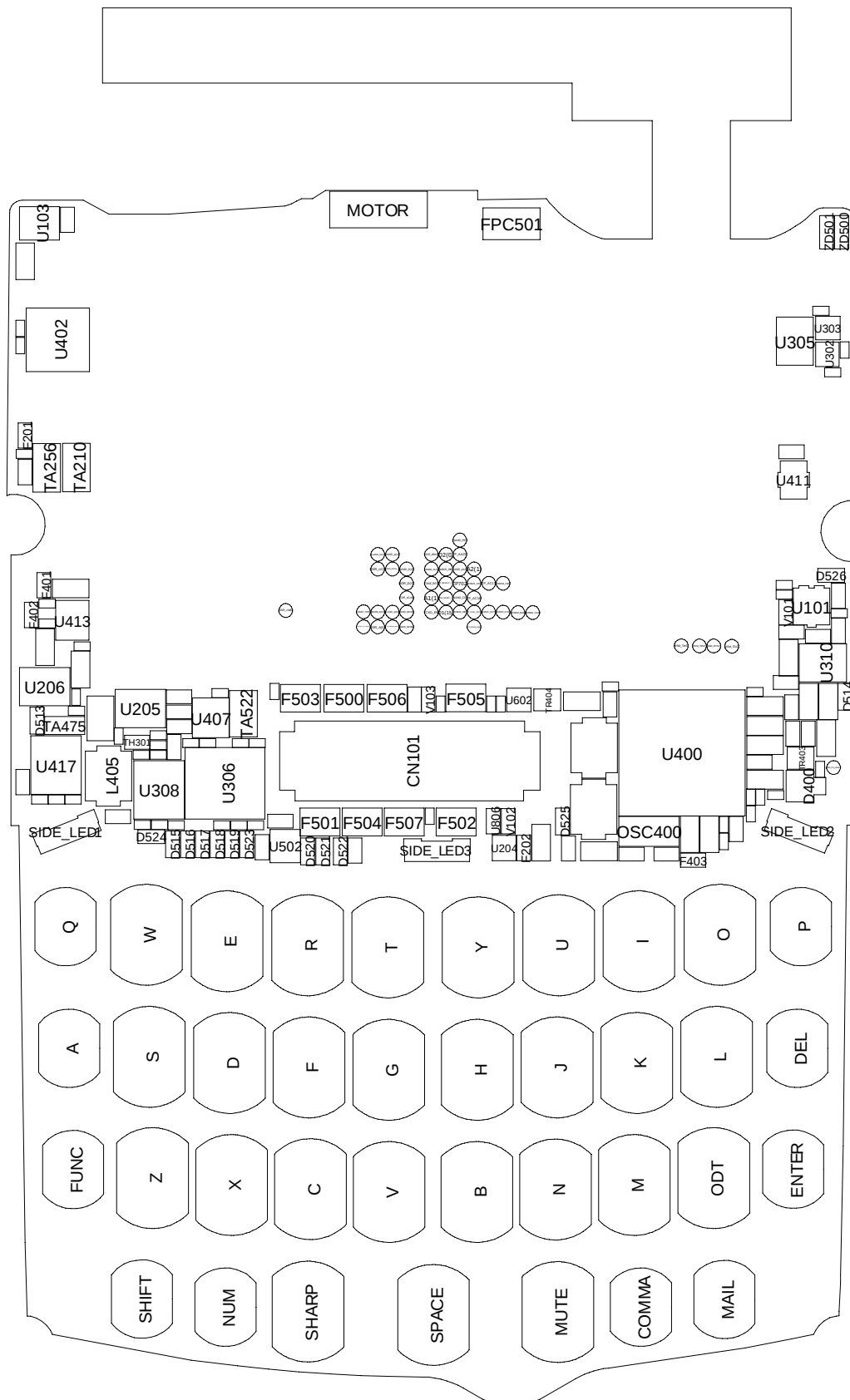
Congratulations~! All processes are completed.

8. Block Diagrams



9. PCB Diagrams





6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0401-001144	D402	DIODE-SWITCHING	SA
0403-001427	ZD510	DIODE-ZENER	SA
0403-001547	D403	DIODE-ZENER	SA
0403-001547	D511	DIODE-ZENER	SA
0406-001167	ZD504	DIODE-TVS	SA
0406-001201	ZD502	DIODE-TVS	SA
0406-001201	ZD503	DIODE-TVS	SA
0406-001210	ZD500	DIODE-TVS	SA
0406-001210	ZD501	DIODE-TVS	SA
0406-001210	ZD505	DIODE-TVS	SA
0406-001210	ZD506	DIODE-TVS	SA
0406-001210	ZD508	DIODE-TVS	SA
0406-001231	D401	DIODE-TVS	SA
0406-001231	D501	DIODE-TVS	SA
0406-001231	D503	DIODE-TVS	SA
0406-001231	D505	DIODE-TVS	SA
0406-001231	D506	DIODE-TVS	SA
0406-001231	D507	DIODE-TVS	SA
0406-001231	D508	DIODE-TVS	SA
0406-001231	D509	DIODE-TVS	SA
0406-001231	D510	DIODE-TVS	SA
0406-001231	D512	DIODE-TVS	SA
0406-001231	D513	DIODE-TVS	SA
0406-001231	D514	DIODE-TVS	SA
0406-001231	D515	DIODE-TVS	SA
0406-001231	D516	DIODE-TVS	SA
0406-001231	D517	DIODE-TVS	SA
0406-001231	D518	DIODE-TVS	SA
0406-001231	D519	DIODE-TVS	SA
0406-001231	D520	DIODE-TVS	SA
0406-001231	D521	DIODE-TVS	SA
0406-001231	D522	DIODE-TVS	SA
0406-001231	D523	DIODE-TVS	SA
0406-001231	D524	DIODE-TVS	SA
0406-001231	D525	DIODE-TVS	SA
0406-001231	D526	DIODE-TVS	SA

SEC CODE	Design LOC	Discription	STATUS
0406-001231	D527	DIODE-TVS	SA
0407-000115	ZD507	DIODE-ARRAY	SA
0407-001002	D400	DIODE-ARRAY	SA
0504-001151	Q800	TR-DIGITAL	SA
0504-001171	TR402	TR-DIGITAL	SA
0504-001171	TR403	TR-DIGITAL	SA
0504-001171	TR404	TR-DIGITAL	SA
0505-001165	TR401	FET-SILICON	SA
0601-002268	SIDE_LED1	LED	SA
0601-002268	SIDE_LED2	LED	SA
0601-002268	SIDE_LED3	LED	SA
0801-002321	U306	IC-CMOS LOGIC	SA
0801-002529	U305	IC-CMOS LOGIC	SA
0801-003016	U302	IC-CMOS LOGIC	SA
0801-003016	U602	IC-CMOS LOGIC	SA
0801-003022	U303	IC-CMOS LOGIC	SA
0801-003052	U304	IC-CMOS LOGIC	SA
0801-003136	U501	IC-CMOS LOGIC	SA
0904-002074	UCP101	IC-DSP	SA
1001-001351	CN309	IC-ANALOG MULTIPLEX	SA
1001-001394	U204	IC-ANALOG SWITCH	SA
1001-001405	U205	IC-ANALOG MULTIPLEX	SA
1001-001405	U206	IC-ANALOG MULTIPLEX	SA
1001-001410	U411	IC-ANALOG SWITCH	SA
1002-001488	U308	IC-D/A CONVERTER	SA
1003-001984	U402	IC-LEVEL DRIVER	SA
1009-001023	U101	IC-HALL EFFECT S/W	SA
1106-001511	UME300	IC-SRAM	SA
1108-000043	UME301	IC-MCP	SA
1108-000088	UME601	IC-MCP	SA
1201-002232	U105	IC-AUDIO AMP	SA
1201-002288	PAM702	IC-POWER AMP	SA
1201-002347	PAM800	IC-POWER AMP	SA
1203-002716	U416	IC-VOL. DETECTOR	SA
1203-003531	U103	IC-POSI.FIXED REG.	SA
1203-003538	U415	IC-DC/DC CONVERTER	SA

SEC CODE	Design LOC	Discription	STATUS
1203-003688	U414	IC-POSI.FIXED REG.	SA
1203-003737	U502	IC-POSI.FIXED REG.	SA
1203-003787	U406	IC-POSI.FIXED REG.	SA
1203-003823	U401	IC-BATTERY	SA
1203-003919	U417	IC-DC/DC CONVERTER	SA
1203-003924	U405	IC-VOL. DETECTOR	SA
1203-004102	U400	IC-POWER SUPERVISOR	SA
1203-004120	U413	IC-MULTI REG.	SA
1203-004120	U418	IC-MULTI REG.	SA
1203-004142	U404	IC-RESET	SA
1203-004458	U407	IC-POSI.FIXED REG.	SA
1205-002272	U307	IC-TRANSCEIVER	SA
1205-002645	U700	IC-TRANSCEIVER	SA
1205-002719	UCD200	IC-CODEC	SA
1205-002781	U802	IC-RECEIVER	SA
1205-002784	U310	IC-SWITCH	SA
1205-002874	U804	IC-SWITCH	SA
1205-003243	UCP600	IC-MODEM	SA
1209-001577	U801	IC-DETECTOR	SA
1404-001221	TH301	THERMISTOR-NTC	SA
1404-001221	TH701	THERMISTOR-NTC	SA
1405-001082	U806	VARISTOR	SA
1405-001082	V101	VARISTOR	SA
1405-001082	V102	VARISTOR	SA
1405-001082	V103	VARISTOR	SA
2007-000137	R602	R-CHIP	SA
2007-000140	R603	R-CHIP	SA
2007-000141	R511	R-CHIP	SA
2007-000141	R512	R-CHIP	SA
2007-000145	R702	R-CHIP	SA
2007-000157	R403	R-CHIP	SA
2007-000162	R518	R-CHIP	SA
2007-000166	R513	R-CHIP	SA
2007-000167	R107	R-CHIP	SA
2007-000170	R424	R-CHIP	SA
2007-000171	L802	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-000172	R803	R-CHIP	SA
2007-000831	R211	R-CHIP	SA
2007-000831	R212	R-CHIP	SA
2007-000831	R214	R-CHIP	SA
2007-000831	R216	R-CHIP	SA
2007-001119	R413	R-CHIP	SA
2007-001284	R801	R-CHIP	SA
2007-001292	R804	R-CHIP	SA
2007-001298	R408	R-CHIP	SA
2007-001298	R604	R-CHIP	SA
2007-001313	R807	R-CHIP	SA
2007-003010	R508	R-CHIP	SA
2007-003010	R509	R-CHIP	SA
2007-007013	R415	R-CHIP	SA
2007-007107	R600	R-CHIP	SA
2007-007107	R601	R-CHIP	SA
2007-007137	R510	R-CHIP	SA
2007-007142	R401	R-CHIP	SA
2007-007306	R813	R-CHIP	SA
2007-007306	R818	R-CHIP	SA
2007-007316	R411	R-CHIP	SA
2007-007316	R612	R-CHIP	SA
2007-007318	R700	R-CHIP	SA
2007-007318	R816	R-CHIP	SA
2007-007468	R409	R-CHIP	SA
2007-007491	R706	R-CHIP	SA
2007-007491	R815	R-CHIP	SA
2007-007698	R405	R-CHIP	SA
2007-007741	R220	R-CHIP	SA
2007-007741	R221	R-CHIP	SA
2007-007741	R222	R-CHIP	SA
2007-007741	R223	R-CHIP	SA
2007-007741	R322	R-CHIP	SA
2007-007741	R616	R-CHIP	SA
2007-007741	R617	R-CHIP	SA
2007-007798	R501	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-007798	R503	R-CHIP	SA
2007-008045	R122	R-CHIP	SA
2007-008045	R703	R-CHIP	SA
2007-008045	R802	R-CHIP	SA
2007-008045	R805	R-CHIP	SA
2007-008045	R811	R-CHIP	SA
2007-008045	R814	R-CHIP	SA
2007-008051	R701	R-CHIP	SA
2007-008052	R112	R-CHIP	SA
2007-008052	R113	R-CHIP	SA
2007-008052	R114	R-CHIP	SA
2007-008052	R115	R-CHIP	SA
2007-008052	R708	R-CHIP	SA
2007-008055	R101	R-CHIP	SA
2007-008055	R108	R-CHIP	SA
2007-008055	R110	R-CHIP	SA
2007-008055	R111	R-CHIP	SA
2007-008055	R119	R-CHIP	SA
2007-008055	R120	R-CHIP	SA
2007-008055	R300	R-CHIP	SA
2007-008055	R301	R-CHIP	SA
2007-008055	R302	R-CHIP	SA
2007-008055	R303	R-CHIP	SA
2007-008055	R305	R-CHIP	SA
2007-008055	R306	R-CHIP	SA
2007-008055	R307	R-CHIP	SA
2007-008055	R310	R-CHIP	SA
2007-008055	R315	R-CHIP	SA
2007-008055	R316	R-CHIP	SA
2007-008055	R318	R-CHIP	SA
2007-008055	R406	R-CHIP	SA
2007-008055	R407	R-CHIP	SA
2007-008055	R414	R-CHIP	SA
2007-008055	R418	R-CHIP	SA
2007-008055	R420	R-CHIP	SA
2007-008055	R506	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008055	R614	R-CHIP	SA
2007-008055	R620	R-CHIP	SA
2007-008055	U805	R-CHIP	SA
2007-008135	R430	R-CHIP	SA
2007-008213	R707	R-CHIP	SA
2007-008478	R202	R-CHIP	SA
2007-008478	R203	R-CHIP	SA
2007-008478	R207	R-CHIP	SA
2007-008478	R208	R-CHIP	SA
2007-008483	R205	R-CHIP	SA
2007-008483	R426	R-CHIP	SA
2007-008483	R428	R-CHIP	SA
2007-008486	R217	R-CHIP	SA
2007-008486	R421	R-CHIP	SA
2007-008486	R431	R-CHIP	SA
2007-008516	R104	R-CHIP	SA
2007-008516	R118	R-CHIP	SA
2007-008516	R201	R-CHIP	SA
2007-008516	R304	R-CHIP	SA
2007-008516	R320	R-CHIP	SA
2007-008516	R419	R-CHIP	SA
2007-008516	R423	R-CHIP	SA
2007-008516	R425	R-CHIP	SA
2007-008516	R605	R-CHIP	SA
2007-008516	R606	R-CHIP	SA
2007-008516	R607	R-CHIP	SA
2007-008516	R608	R-CHIP	SA
2007-008516	R609	R-CHIP	SA
2007-008516	R610	R-CHIP	SA
2007-008516	R611	R-CHIP	SA
2007-008531	R105	R-CHIP	SA
2007-008531	R502	R-CHIP	SA
2007-008531	R705	R-CHIP	SA
2007-008531	R817	R-CHIP	SA
2007-008531	R819	R-CHIP	SA
2007-008542	C721	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008542	R520	R-CHIP	SA
2007-008544	R200	R-CHIP	SA
2007-008544	R206	R-CHIP	SA
2007-008579	R809	R-CHIP	SA
2007-008579	R810	R-CHIP	SA
2007-008581	R806	R-CHIP	SNA
2007-008588	R102	R-CHIP	SA
2007-008588	R103	R-CHIP	SA
2007-008588	R709	R-CHIP	SA
2007-008616	R412	R-CHIP	SA
2007-008806	R812	R-CHIP	SA
2007-009108	R317	R-CHIP	SA
2007-009111	R308	R-CHIP	SA
2007-009111	R311	R-CHIP	SA
2007-009115	R312	R-CHIP	SA
2007-009115	R313	R-CHIP	SA
2007-009155	R404	R-CHIP	SNA
2007-009155	R422	R-CHIP	SNA
2007-009155	R822	R-CHIP	SNA
2007-009170	R507	R-CHIP	SA
2007-009170	R615	R-CHIP	SA
2007-009170	R618	R-CHIP	SA
2007-009170	R823	R-CHIP	SA
2007-009402	R309	R-CHIP	SA
2007-009402	R321	R-CHIP	SA
2203-000233	C408	C-CER,CHIP	SA
2203-000233	C437	C-CER,CHIP	SA
2203-000233	C546	C-CER,CHIP	SA
2203-000233	C547	C-CER,CHIP	SA
2203-000233	C827	C-CER,CHIP	SA
2203-000254	C644	C-CER,CHIP	SA
2203-000254	C802	C-CER,CHIP	SA
2203-000254	C816	C-CER,CHIP	SA
2203-000425	C405	C-CER,CHIP	SA
2203-000425	C409	C-CER,CHIP	SA
2203-000489	C639	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-000550	C123	C-CER,CHIP	SA
2203-000550	C126	C-CER,CHIP	SA
2203-000550	C127	C-CER,CHIP	SA
2203-000627	C669	C-CER,CHIP	SNA
2203-000627	C670	C-CER,CHIP	SNA
2203-000679	C438	C-CER,CHIP	SA
2203-000812	C707	C-CER,CHIP	SA
2203-000812	C713	C-CER,CHIP	SA
2203-000812	C814	C-CER,CHIP	SA
2203-000812	C817	C-CER,CHIP	SA
2203-000995	C647	C-CER,CHIP	SA
2203-000995	C734	C-CER,CHIP	SA
2203-000995	C806	C-CER,CHIP	SA
2203-001101	C240	C-CER,CHIP	SA
2203-001101	C241	C-CER,CHIP	SA
2203-001101	C261	C-CER,CHIP	SA
2203-001101	C264	C-CER,CHIP	SA
2203-001259	C832	C-CER,CHIP	SA
2203-002443	C809	C-CER,CHIP	SA
2203-002668	C712	C-CER,CHIP	SA
2203-002709	C840	C-CER,CHIP	SA
2203-005053	C724	C-CER,CHIP	SA
2203-005053	C828	C-CER,CHIP	SA
2203-005053	C839	C-CER,CHIP	SA
2203-005390	C820	C-CER,CHIP	SA
2203-005395	C807	C-CER,CHIP	SA
2203-005450	C720	C-CER,CHIP	SA
2203-005480	C643	C-CER,CHIP	SA
2203-005482	C254	C-CER,CHIP	SA
2203-005482	C533	C-CER,CHIP	SA
2203-005571	C401	C-CER,CHIP	SA
2203-005571	C412	C-CER,CHIP	SA
2203-005571	C431	C-CER,CHIP	SA
2203-005682	C252	C-CER,CHIP	SA
2203-005682	C716	C-CER,CHIP	SA
2203-005682	C719	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-005682	C722	C-CER,CHIP	SA
2203-005682	C726	C-CER,CHIP	SA
2203-005682	C728	C-CER,CHIP	SA
2203-005682	C730	C-CER,CHIP	SA
2203-005682	C742	C-CER,CHIP	SA
2203-005682	C813	C-CER,CHIP	SA
2203-005682	C851	C-CER,CHIP	SA
2203-005682	C852	C-CER,CHIP	SA
2203-005682	L705	C-CER,CHIP	SA
2203-005683	C465	C-CER,CHIP	SA
2203-005683	C467	C-CER,CHIP	SA
2203-005683	C541	C-CER,CHIP	SA
2203-005683	C544	C-CER,CHIP	SA
2203-005717	C131	C-CER,CHIP	SA
2203-005725	C476	C-CER,CHIP	SA
2203-005729	C812	C-CER,CHIP	SA
2203-005729	C815	C-CER,CHIP	SA
2203-005731	C121	C-CER,CHIP	SA
2203-005731	C122	C-CER,CHIP	SA
2203-005732	C743	C-CER,CHIP	SA
2203-005736	C410	C-CER,CHIP	SA
2203-005736	C803	C-CER,CHIP	SA
2203-005736	C811	C-CER,CHIP	SA
2203-005736	C823	C-CER,CHIP	SA
2203-005736	C834	C-CER,CHIP	SA
2203-005736	C835	C-CER,CHIP	SA
2203-005736	C841	C-CER,CHIP	SA
2203-005736	C843	C-CER,CHIP	SA
2203-005777	L708	C-CER,CHIP	SA
2203-005779	C514	C-CER,CHIP	SA
2203-005779	C515	C-CER,CHIP	SA
2203-005779	C516	C-CER,CHIP	SA
2203-005779	C517	C-CER,CHIP	SA
2203-005789	L713	C-CER,CHIP	SA
2203-005806	C116	C-CER,CHIP	SNA
2203-005806	C655	C-CER,CHIP	SNA

SEC CODE	Design LOC	Discription	STATUS
2203-005806	C701	C-CER,CHIP	SNA
2203-005806	C715	C-CER,CHIP	SNA
2203-005806	C727	C-CER,CHIP	SNA
2203-005806	C822	C-CER,CHIP	SNA
2203-005806	C829	C-CER,CHIP	SNA
2203-005808	C705	C-CER,CHIP	SA
2203-005808	C714	C-CER,CHIP	SA
2203-005808	C826	C-CER,CHIP	SA
2203-006048	C432	C-CER,CHIP	SA
2203-006194	C102	C-CER,CHIP	SA
2203-006194	C103	C-CER,CHIP	SA
2203-006194	C306	C-CER,CHIP	SA
2203-006194	C443	C-CER,CHIP	SA
2203-006194	C602	C-CER,CHIP	SA
2203-006194	C605	C-CER,CHIP	SA
2203-006194	C610	C-CER,CHIP	SA
2203-006194	C617	C-CER,CHIP	SA
2203-006194	C618	C-CER,CHIP	SA
2203-006194	C630	C-CER,CHIP	SA
2203-006194	C631	C-CER,CHIP	SA
2203-006194	C632	C-CER,CHIP	SA
2203-006194	C637	C-CER,CHIP	SA
2203-006194	C653	C-CER,CHIP	SA
2203-006194	C658	C-CER,CHIP	SA
2203-006194	C710	C-CER,CHIP	SA
2203-006194	C729	C-CER,CHIP	SA
2203-006194	C737	C-CER,CHIP	SA
2203-006194	C738	C-CER,CHIP	SA
2203-006194	C824	C-CER,CHIP	SA
2203-006257	C501	C-CER,CHIP	SA
2203-006260	C439	C-CER,CHIP	SA
2203-006260	C440	C-CER,CHIP	SA
2203-006305	C125	C-CER,CHIP	SA
2203-006305	C481	C-CER,CHIP	SA
2203-006305	C740	C-CER,CHIP	SA
2203-006305	C741	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006324	C404	C-CER,CHIP	SA
2203-006324	C413	C-CER,CHIP	SA
2203-006324	C421	C-CER,CHIP	SA
2203-006324	C422	C-CER,CHIP	SA
2203-006324	C434	C-CER,CHIP	SA
2203-006324	C801	C-CER,CHIP	SA
2203-006324	C804	C-CER,CHIP	SA
2203-006379	C700	C-CER,CHIP	SA
2203-006423	C101	C-CER,CHIP	SA
2203-006423	C104	C-CER,CHIP	SA
2203-006423	C105	C-CER,CHIP	SA
2203-006423	C106	C-CER,CHIP	SA
2203-006423	C107	C-CER,CHIP	SA
2203-006423	C108	C-CER,CHIP	SA
2203-006423	C109	C-CER,CHIP	SA
2203-006423	C110	C-CER,CHIP	SA
2203-006423	C111	C-CER,CHIP	SA
2203-006423	C112	C-CER,CHIP	SA
2203-006423	C114	C-CER,CHIP	SA
2203-006423	C115	C-CER,CHIP	SA
2203-006423	C117	C-CER,CHIP	SA
2203-006423	C118	C-CER,CHIP	SA
2203-006423	C124	C-CER,CHIP	SA
2203-006423	C128	C-CER,CHIP	SA
2203-006423	C129	C-CER,CHIP	SA
2203-006423	C130	C-CER,CHIP	SA
2203-006423	C203	C-CER,CHIP	SA
2203-006423	C204	C-CER,CHIP	SA
2203-006423	C212	C-CER,CHIP	SA
2203-006423	C213	C-CER,CHIP	SA
2203-006423	C215	C-CER,CHIP	SA
2203-006423	C224	C-CER,CHIP	SA
2203-006423	C231	C-CER,CHIP	SA
2203-006423	C234	C-CER,CHIP	SA
2203-006423	C235	C-CER,CHIP	SA
2203-006423	C303	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006423	C308	C-CER,CHIP	SA
2203-006423	C310	C-CER,CHIP	SA
2203-006423	C311	C-CER,CHIP	SA
2203-006423	C313	C-CER,CHIP	SA
2203-006423	C317	C-CER,CHIP	SA
2203-006423	C318	C-CER,CHIP	SA
2203-006423	C320	C-CER,CHIP	SA
2203-006423	C321	C-CER,CHIP	SA
2203-006423	C323	C-CER,CHIP	SA
2203-006423	C324	C-CER,CHIP	SA
2203-006423	C325	C-CER,CHIP	SA
2203-006423	C406	C-CER,CHIP	SA
2203-006423	C411	C-CER,CHIP	SA
2203-006423	C430	C-CER,CHIP	SA
2203-006423	C433	C-CER,CHIP	SA
2203-006423	C435	C-CER,CHIP	SA
2203-006423	C436	C-CER,CHIP	SA
2203-006423	C444	C-CER,CHIP	SA
2203-006423	C450	C-CER,CHIP	SA
2203-006423	C600	C-CER,CHIP	SA
2203-006423	C601	C-CER,CHIP	SA
2203-006423	C603	C-CER,CHIP	SA
2203-006423	C606	C-CER,CHIP	SA
2203-006423	C607	C-CER,CHIP	SA
2203-006423	C609	C-CER,CHIP	SA
2203-006423	C613	C-CER,CHIP	SA
2203-006423	C615	C-CER,CHIP	SA
2203-006423	C622	C-CER,CHIP	SA
2203-006423	C623	C-CER,CHIP	SA
2203-006423	C624	C-CER,CHIP	SA
2203-006423	C625	C-CER,CHIP	SA
2203-006423	C645	C-CER,CHIP	SA
2203-006423	C648	C-CER,CHIP	SA
2203-006423	C649	C-CER,CHIP	SA
2203-006423	C650	C-CER,CHIP	SA
2203-006423	C659	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006423	C661	C-CER,CHIP	SA
2203-006423	C663	C-CER,CHIP	SA
2203-006423	C665	C-CER,CHIP	SA
2203-006423	C666	C-CER,CHIP	SA
2203-006423	C668	C-CER,CHIP	SA
2203-006423	C702	C-CER,CHIP	SA
2203-006423	C704	C-CER,CHIP	SA
2203-006423	C745	C-CER,CHIP	SA
2203-006423	C805	C-CER,CHIP	SA
2203-006423	C836	C-CER,CHIP	SA
2203-006423	C837	C-CER,CHIP	SA
2203-006423	C838	C-CER,CHIP	SA
2203-006423	C853	C-CER,CHIP	SA
2203-006426	C845	C-CER,CHIP	SNA
2203-006556	C731	C-CER,CHIP	SA
2203-006556	C733	C-CER,CHIP	SA
2203-006562	C113	C-CER,CHIP	SA
2203-006562	C119	C-CER,CHIP	SA
2203-006562	C218	C-CER,CHIP	SA
2203-006562	C227	C-CER,CHIP	SA
2203-006562	C300	C-CER,CHIP	SA
2203-006562	C302	C-CER,CHIP	SA
2203-006562	C309	C-CER,CHIP	SA
2203-006562	C319	C-CER,CHIP	SA
2203-006562	C322	C-CER,CHIP	SA
2203-006562	C326	C-CER,CHIP	SA
2203-006562	C327	C-CER,CHIP	SA
2203-006562	C329	C-CER,CHIP	SA
2203-006562	C403	C-CER,CHIP	SA
2203-006562	C414	C-CER,CHIP	SA
2203-006562	C423	C-CER,CHIP	SA
2203-006562	C424	C-CER,CHIP	SA
2203-006562	C448	C-CER,CHIP	SA
2203-006562	C451	C-CER,CHIP	SA
2203-006562	C452	C-CER,CHIP	SA
2203-006562	C453	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006562	C454	C-CER,CHIP	SA
2203-006562	C461	C-CER,CHIP	SA
2203-006562	C503	C-CER,CHIP	SA
2203-006562	C504	C-CER,CHIP	SA
2203-006562	C536	C-CER,CHIP	SA
2203-006562	C608	C-CER,CHIP	SA
2203-006562	C616	C-CER,CHIP	SA
2203-006562	C620	C-CER,CHIP	SA
2203-006562	C621	C-CER,CHIP	SA
2203-006562	C628	C-CER,CHIP	SA
2203-006562	C633	C-CER,CHIP	SA
2203-006562	C634	C-CER,CHIP	SA
2203-006562	C635	C-CER,CHIP	SA
2203-006562	C640	C-CER,CHIP	SA
2203-006562	C651	C-CER,CHIP	SA
2203-006562	C654	C-CER,CHIP	SA
2203-006562	C662	C-CER,CHIP	SA
2203-006562	C703	C-CER,CHIP	SA
2203-006562	C718	C-CER,CHIP	SA
2203-006562	C723	C-CER,CHIP	SA
2203-006562	C833	C-CER,CHIP	SA
2203-006562	C844	C-CER,CHIP	SA
2203-006617	C664	C-CER,CHIP	SA
2203-006617	C667	C-CER,CHIP	SA
2203-006648	C545	C-CER,CHIP	SA
2203-006681	C830	C-CER,CHIP	SA
2203-006824	C229	C-CER,CHIP	SA
2203-006824	C230	C-CER,CHIP	SA
2203-006824	C277	C-CER,CHIP	SA
2203-006824	C328	C-CER,CHIP	SA
2203-006824	C402	C-CER,CHIP	SA
2203-006824	C407	C-CER,CHIP	SA
2203-006824	C415	C-CER,CHIP	SA
2203-006824	C416	C-CER,CHIP	SA
2203-006824	C419	C-CER,CHIP	SA
2203-006824	C420	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006824	C425	C-CER,CHIP	SA
2203-006824	C426	C-CER,CHIP	SA
2203-006824	C446	C-CER,CHIP	SA
2203-006824	C447	C-CER,CHIP	SA
2203-006824	C468	C-CER,CHIP	SA
2203-006824	C471	C-CER,CHIP	SA
2203-006824	C477	C-CER,CHIP	SA
2203-006824	C478	C-CER,CHIP	SA
2203-006824	C479	C-CER,CHIP	SA
2203-006824	C646	C-CER,CHIP	SA
2203-006838	C205	C-CER,CHIP	SA
2203-006838	C219	C-CER,CHIP	SA
2203-006838	C220	C-CER,CHIP	SA
2203-006838	C304	C-CER,CHIP	SA
2203-006838	C417	C-CER,CHIP	SA
2203-006838	C418	C-CER,CHIP	SA
2203-006838	C428	C-CER,CHIP	SA
2203-006838	C429	C-CER,CHIP	SA
2203-006838	C449	C-CER,CHIP	SA
2203-006838	C636	C-CER,CHIP	SA
2203-006838	C821	C-CER,CHIP	SA
2203-006847	C711	C-CER,CHIP	SA
2203-006896	C810	C-CER,CHIP	SA
2301-001200	C808	C-FILM,SMD-PPS	SA
2301-001213	C706	C-FILM,SMD-PPS	SA
2301-001735	C736	C-FILM,SMD	SA
2301-001807	C709	C-FILM,SMD	SA
2404-001274	TA739	C-TA,CHIP	SA
2404-001281	TA210	C-TA,CHIP	SA
2404-001281	TA211	C-TA,CHIP	SA
2404-001377	TA209	C-TA,CHIP	SA
2404-001377	TA228	C-TA,CHIP	SA
2404-001381	TA532	C-TA,CHIP	SA
2404-001396	TA475	C-TA,CHIP	SA
2404-001411	TA474	C-TA,CHIP	SA
2404-001411	TA522	C-TA,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2404-001474	TA256	C-TA,CHIP	SA
2404-001474	TA459	C-TA,CHIP	SA
2404-001474	TA460	C-TA,CHIP	SA
2404-001474	TA521	C-TA,CHIP	SA
2703-001734	C850	INDUCTOR-SMD	SA
2703-001748	L724	INDUCTOR-SMD	SA
2703-001750	L804	INDUCTOR-SMD	SA
2703-001938	L701	INDUCTOR-SMD	SA
2703-001990	L702	INDUCTOR-SMD	SA
2703-002207	C800	INDUCTOR-SMD	SA
2703-002597	L800	INDUCTOR-SMD	SA
2703-002768	L404	INDUCTOR-SMD	SNA
2703-002768	L405	INDUCTOR-SMD	SNA
2703-002782	L400	INDUCTOR-SMD	SA
2703-002782	L401	INDUCTOR-SMD	SA
2703-002794	L803	INDUCTOR-SMD	SA
2703-002795	R820	INDUCTOR-SMD	SNA
2703-002798	L712	INDUCTOR-SMD	SNA
2703-002798	L716	INDUCTOR-SMD	SNA
2703-002798	L719	INDUCTOR-SMD	SNA
2703-002798	L722	INDUCTOR-SMD	SNA
2703-002819	L711	INDUCTOR-SMD	SA
2703-002819	L714	INDUCTOR-SMD	SA
2703-002819	L717	INDUCTOR-SMD	SA
2703-002819	L718	INDUCTOR-SMD	SA
2703-002858	L805	INDUCTOR-SMD	SA
2703-002870	L703	INDUCTOR-SMD	SA
2703-002870	L709	INDUCTOR-SMD	SA
2703-002870	L715	INDUCTOR-SMD	SA
2703-002901	L706	INDUCTOR-SMD	SNA
2703-002906	L806	INDUCTOR-SMD	SA
2703-002906	L807	INDUCTOR-SMD	SA
2703-002907	L707	INDUCTOR-SMD	SNA
2703-002907	L710	INDUCTOR-SMD	SNA
2703-002919	C717	INDUCTOR-SMD	SA
2801-004318	OSC100	CRYSTAL-SMD	SA

SEC CODE	Design LOC	Discription	STATUS
2801-004466	OSC101	CRYSTAL-SMD	SA
2801-004466	OSC400	CRYSTAL-SMD	SA
2802-001182	OSC600	RESONATOR-CERAMIC	SA
2806-001377	VCO800	OSCILLATOR-VCO	SA
2809-001280	TCX801	OSCILLATOR-VCTCXO	SA
2901-001283	F300	FILTER-EMI SMD	SA
2901-001286	F500	FILTER-EMI SMD	SA
2901-001286	F501	FILTER-EMI SMD	SA
2901-001286	F503	FILTER-EMI SMD	SA
2901-001286	F504	FILTER-EMI SMD	SA
2901-001286	F506	FILTER-EMI SMD	SA
2901-001286	F507	FILTER-EMI SMD	SA
2901-001353	F502	FILTER-EMI/ESD	SA
2901-001353	F505	FILTER-EMI/ESD	SA
2904-001622	F802	FILTER-SAW	SA
2904-001704	F800	FILTER-SAW	SA
2910-000010	F801	DUPLEXER-SAW	SA
2911-000048	U701	DUPLEXER-FEM	SA
3301-001208	L402	BEAD-SMD	SA
3301-001342	F201	BEAD-SMD	SA
3301-001342	F202	BEAD-SMD	SA
3301-001342	F401	BEAD-SMD	SA
3301-001342	F402	BEAD-SMD	SA
3301-001342	F403	BEAD-SMD	SA
3301-001342	L101	BEAD-SMD	SA
3301-001729	L503	BEAD-SMD	SA
3404-001303	SW_CAM	SWITCH-TACT	SA
3404-001303	SW_DOWN	SWITCH-TACT	SA
3404-001303	SW_UP	SWITCH-TACT	SA
3705-001421	CN700	CONNECTOR-COAXIAL	SA
3709-001448	CD401	CONNECTOR-CARD EDGE	SA
3709-001493	SIM400	CONNECTOR-CARD EDGE	SA
3710-002442	IFC505	SOCKET-INTERFACE	SA
3710-002467	MOTOR	SOCKET-BOARD TO BOARD	SA
3710-002467	SPK_L	SOCKET-BOARD TO BOARD	SA
3710-002467	SPK_R	SOCKET-BOARD TO BOARD	SA

SEC CODE	Design LOC	Discription	STATUS
3711-005945	CN101	HEADER-BOARD TO BOARD	SA
3711-006137	BTC506	HEADER-BATTERY	SA
4302-001181	BAT407	BATTERY-LI(2ND)	SA
4709-001413	MOD206	BLUETOOTH MODULE	SA

11. Reference data

11-1. Reference Abbreviate

AAC: Advanced Audio Coding.

AVC : Advanced Video Coding.

BER : Bit Error Rate

BPSK: Binary Phase Shift Keying

CA : Conditional Access

CDM : Code Division Multiplexing

C/I : Carrier to Interference

DMB : Digital Multimedia Broadcasting

EN : European Standard

ES : Elementary Stream

ETSI: European Telecommunications Standards Institute

MPEG: Moving Picture Experts Group

PN : Pseudo-random Noise

PS : Pilot Symbol

QPSK: Quadrature Phase Shift Keying

RS : Reed-Solomon

SI : Service Information

TDM : Time Division Multiplexing

TS : Transport Stream

1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test,
because specipicty of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool,
because performance of parts is damaged by the influence of manetic force.
- Surely use a standard screwdriver when you disassemble this product,
otherwise screw will be worn away.
- Use a thicken twisted wire when you measure level.
A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an
overcurrent and furious flames of parts etc) when you repair board in condition of
connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is
dangerous when tuning ON/OFF PBA and Connector after disassembling charger.
- Don't use as you pleases after change other material than replacement registered on SEC
System.
Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easily by static electricity. Such parts are called by ESD(Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below. You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.
- Use earthed soldering steel when you connect or disconnect ESD.
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.
- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.
- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

3. Product Function

Main Function

- Message, Internet, Messenger
- Camera
- Windows Media Player
- Google Maps
- Bluetooth