

2. Specification

2-1. GSM & WCDMA General Specification

	GSM850	EGSM 900	DCS1800	PCS1900	WCDMA 2100	WCDMA 1900	WCDMA 850
Freq. Band[MHz] Uplink/ Downlink	824.2~848.8 869.2~893.8	876.2~914.8 921.2~959.8	1710.2~1784.8 1805.2~1879.8	1850.2~1909.8 1930.2~1989.8	1922.4~1977.6 2112.4~2167.6	1852.4~1907.6 1932.4~1987.6	826.4~846.6 871.4~891.6
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL: 9612~9888 DL: 10562~10838	UL: 9262~9538 DL: 9662~9938	UL: 4132~4233 DL: 4357~4458
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz	190MHz	80MHz	45MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps	3.84Mcps	3.84Mcps
Time Slot Period/ Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSK/16QAM	QPSK/16QAM	QPSK/16QAM
MS Power	33dBm~5dBm	32.5dBm~5dBm	29.5dBm~0dBm	29.5dBm~0dBm	24dBm~ -50dBm	24dBm~ -50dBm	24dBm~ -50dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm	-106.7dBm	-104.7dBm	-104.7dBm
TDMA Mux	8	8	8	8			
Cell Radius	35Km	35Km	35Km	35Km	2Km	2Km	2Km

2. Specification

	WCDMA 1700	WCDMA 900	TDSCDMA 2000	TDSCDMA 1900
Freq. Band[MHz] Uplink/ Downlink	1712.4~1752.6 2112.4~2152.6	882.4~912.6 927.4~957.6	2010 ~ 2025	1880 ~ 1920
ARFCN range	UL: 9612~9888 DL: 10562~10838	UL: 9262~9538 DL: 9662~9938	10050 ~ 10125	9400 ~ 9600
Tx/Rx spacing	400MHz	45MHz	-	-
Mod. Bit rate/ Bit Period	3.84Mcps	3.84Mcps	1.28Mcps	1.28Mcps
Time Slot Period/ Frame Period	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.675ms	FrameLength: 10ms Slotlength: 0.675ms
Modulation	QPSK/16QAM	QPSK/16QAM	QPSK/8PSK	QPSK/8PSK
MS Power	24dBm~ -50dBm	24dBm~ -50dBm	24dBm~ -48dBm	24dBm~ -48dBm
Power Class	3(max+24dBm)	3(max+24dBm)	2(max+24dBm)	2(max+24dBm)
Sensitivity	-106.7dBm	-103.7dBm	-107.3dBm	-107.3dBm
TDMA Mux				
Cell Radius	2Km	2Km	11.25Km	11.25Km

2. Specification

2-2. LTE General Specification

	LTE Band1	LTE Band2	LTE Band3	LTE Band4	LTE Band5
Freq. Band[MHz] Uplink/ Downlink	1920~1980 2110~2170	1850~1910 1930~1990	1710~1785 1805~1880	1710~1755 2110~2155	824~849 869~894
ARFCN range	UL: 18000~18599 DL: 0~599	UL: 18600~19199 DL: 600~1199	UL: 19200~19949 DL: 1200~1949	UL: 19950~20399 DL: 1950~2399	UL: 20400~20649 DL: 2400~2649
Tx/Rx spacing	190MHz	80MHz	95MHz	400MHz	45MHz
Channel Bandwidth	5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	1.4/3/5/10 MHz
Modulation	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM
MS Power (MPR)	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm
Sensitivit (QPSK) (BW 10MHz)	-96.3 dBm	-94.3 dBm	-93.3 dBm	-96.3 dBm	-94.3 dBm
Cell Radius	>5Km	>5Km	>5Km	>5Km	>5Km

2. Specification

	LTE Band7	LTE Band8	LTE Band12	LTE Band13	LTE Band17
Freq. Band[MHz] Uplink/ Downlink	2500~2570 2620~2690	880~915 925~960	699~716 729~746	777~787 746~756	704~716 734~746
ARFCN range	UL: 20750~21449 DL: 2750~3449	UL: 2712~2863 DL: 2937~3088	UL: 23010~23179 DL: 5010~5179	UL: 23180~23279 DL: 5180~5279	UL: 23730~23849 DL: 5730~5849
Tx/Rx spacing	120MHz	45MHz	30MHz	-31MHz	30MHz
Channel Bandwidth	5/10/15/20 MHz	1.4/3/5/10 MHz	1.4/3/5/10 MHz	5/10 MHz	5/10 MHz
Modulation	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM
MS Power (MPR)	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm
Sensitivit (QPSK) (BW 10MHz)	-94.3 dBm	-93.3 dBm	-93.3 dBm	-93.3 dBm	-93.3 dBm
Cell Radius	>5Km	>5Km	>5Km	>5Km	>5Km

2. Specification

	LTE Band18	LTE Band19	LTE Band20	LTE Band25	LTE Band26
Freq. Band[MHz] Uplink/ Downlink	815~830 860~875	830~845 875~890	832~862 791~821	1850~1915 1930~1995	814~849 859~894
ARFCN range	UL: 23850~23999 DL: 5850~5999	UL: 24000~24190 DL: 6000~6149	UL: 24150~24449 DL: 6150~6449	UL: 26040~26689 DL: 8040~8689	UL: 26690~27039 DL: 8690~9039
Tx/Rx spacing	45MHz	45MHz	-41MHz	80MHz	45MHz
Channel Bandwidth	5/10/15 MHz	5/10/15 MHz	5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15 MHz
Modulation	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM
MS Power (MPR)	-35~25.7 dBm				
Sensitivit (QPSK) (BW 10MHz)	-96.3 dBm	-96.3 dBm	-93.3dBm	-92.8 dBm	-93.8dBm
Cell Radius	>5Km	>5Km	>5Km	>5Km	>5Km

2. Specification

	LTE Band28	LTE Band38	LTE Band39	LTE Band40	LTE Band41
Freq. Band[MHz] Uplink/ Downlink	703~748 758~803	2570~2620	1880~1920	2300~2400	2496~2690
ARFCN range	UL: 27210~27659 DL: 9210~9659	37750~38249	38250~38649	38650~39649	39650~41589
Tx/Rx spacing	55MHz	—	—	—	—
Channel Bandwidth	3/5/10/15/20 MHz	5/10/15/20 MHz	5/10/15/20 MHz	5/10/15/20 MHz	5/10/15/20 MHz
Modulation	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM
MS Power (MPR)	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm	-35~25.7 dBm
Sensitivit (QPSK) (BW 10MHz)	-94.8 dBm	-96.3 dBm	-96.3dBm	-96.3 dBm	-94.3dBm
Cell Radius	>5Km	>5Km	>5Km	>5Km	>5Km

3. Operation Instruction and Installation

Main Function

Item	Description
OS	Android V6.0.1 (Marshmallow)
RF	2G : 850/900/1800/1900 3G : 850/900/1700/1900/2100 TDSCDMA : 34/39 LTE : Band 1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28/38/39/40/41
Battery	3,000mAh
Base Band	Exynos8890 2.3GHz Octa-Core
Other RF	GPS, Glonass, Beidou, BT 4.2, USB 2.0, NFC, WIFI 802.11 a/b/g/n/ac MIMO, MST
Camera	12.0MP Rear, 5.0MP Front
LCD	5.1", On-Cell Touch AMOLED, 2560 x 1440(QHD)
RAM	4GB RAM + 32GB eMMC
Sensor	Accelerometer, Barometer, Fingerprint Sensor, Gyro Sensor, Geomagnetic Sensor, Hall Sensor, HR Sensor, Proximity Sensor, RGB Light Sensor
Accessory	Charger: 5V/2A (AFC: 9V/1.67A) Data cable: 2.7pi, 1.2m OTG gender Ear phone: 3.5pi, 4pin

9. Reference Abbreviate

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

Before attempting any repair or detailed tuning, shield the device from RF noise or static electricity discharges.

Use only demagnetized tools that are specifically designed for small electronic repairs, as most electronic parts are sensitive to electromagnetic forces.

Use only high quality screwdrivers when servicing products. Low quality screwdrivers can easily damage the heads of screws.

Use only conductor wire of the properly gauge and insulation for low resistance, because of the low margin of error of most testing equipment.

We recommend 22-gauge twisted copper wire.

Hand-soldering is not recommended, because printed circuit boards (PCBs) can be easily damaged, even with relatively low heat. Never use a soldering iron with a power rating of more than 100 watts and use only lead-free solder with a melting point below 250°C (482°F).

Prior to disassembling the battery charger for repair, ensure that the AC power is disconnected.

Always use the replacement parts that are registered in the SEC system. Third-party replacement parts may not function properly.

1.Safety Precautions

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Many semiconductors and ESDs in electronic devices are particularly sensitive to static discharge and can be easily damaged by it. We recommend protecting these components with conductive anti-static bags when you store or transport them.

Always use an anti-static strap or wristband and remove electrostatic buildup or dissipate static electricity from your body before repairing ESDs.

Ensure that soldering irons have AC adapter with ground wires and that the ground wires are properly connected.

Use only desoldering tools with plastic tips to prevent static discharge.

Properly shield the work environment from accidental electrostatic discharge before opening packages containing ESDs.

The potential for static electricity discharge may be increased in low humidity environments, such as air-conditioned rooms. Increase the airflow to the working area to decrease the chance of accidental static electricity discharges.

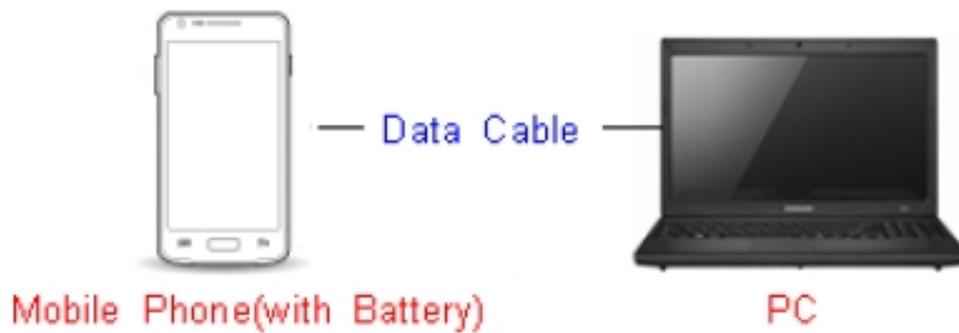
6. Level 1 Repair

6-1. S/W installation

6-1-1. Required items in order to install S/W

- Installation program: Downloader Program ([Odin3 v3.11.1.exe](#))
- Mobile Phone
- Data Cable
- Mobile device specific S/W: Binary files

※ Settings

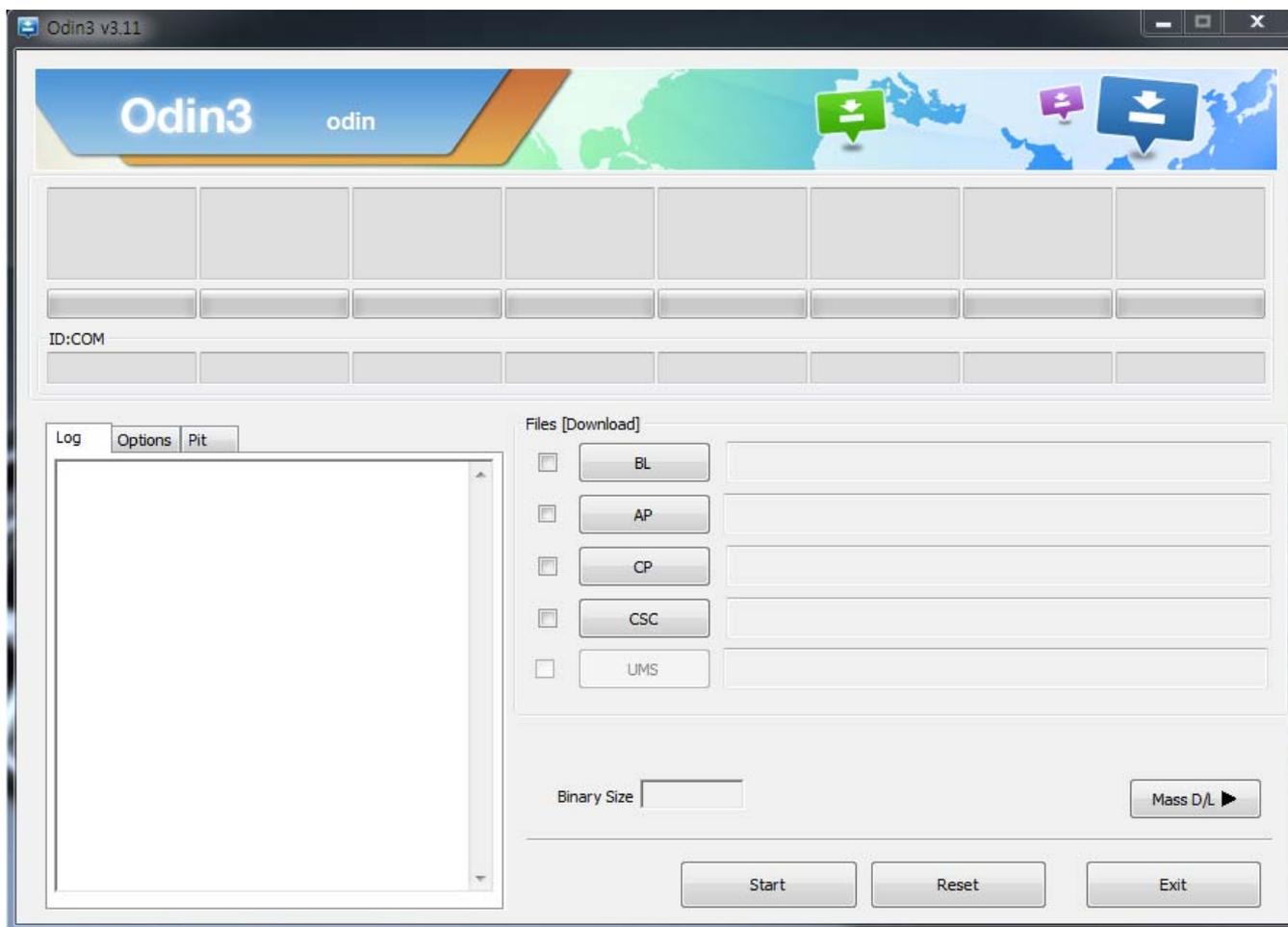


Data Cable : GH-01801B

6. Level 1 Repair

6-1-2. S/W Installation Program (Downloader program)

- Open up the S/W Installation Program by executing the "**Odin3 v3.11.1.exe**"

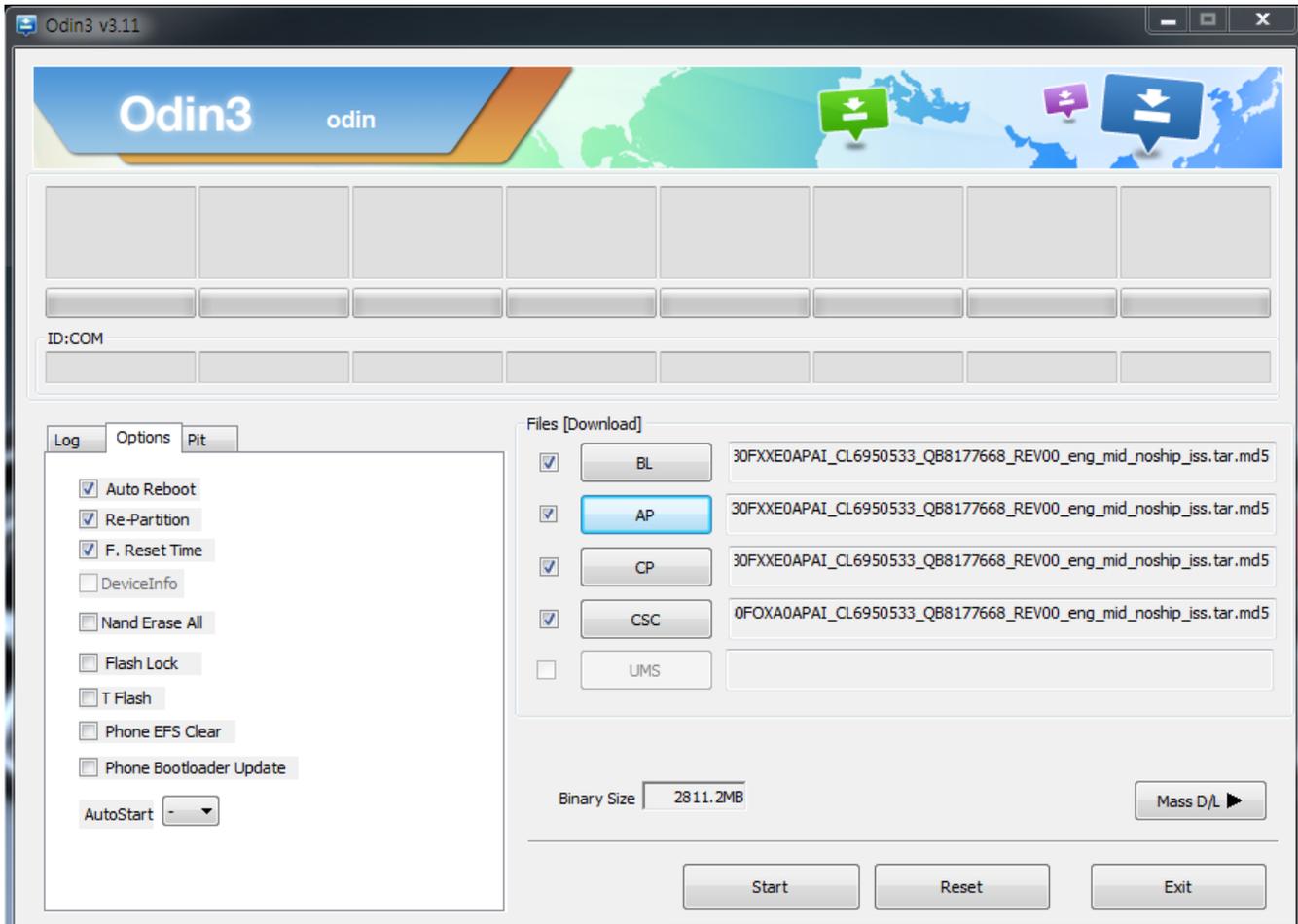


6. Level 1 Repair

1. Enable the check mark by click on the following options,

- Check Auto Reboot, Re-Partition, and F. Reset Time
- Check PIT
- Check BL, AP, CP, and CSC Files

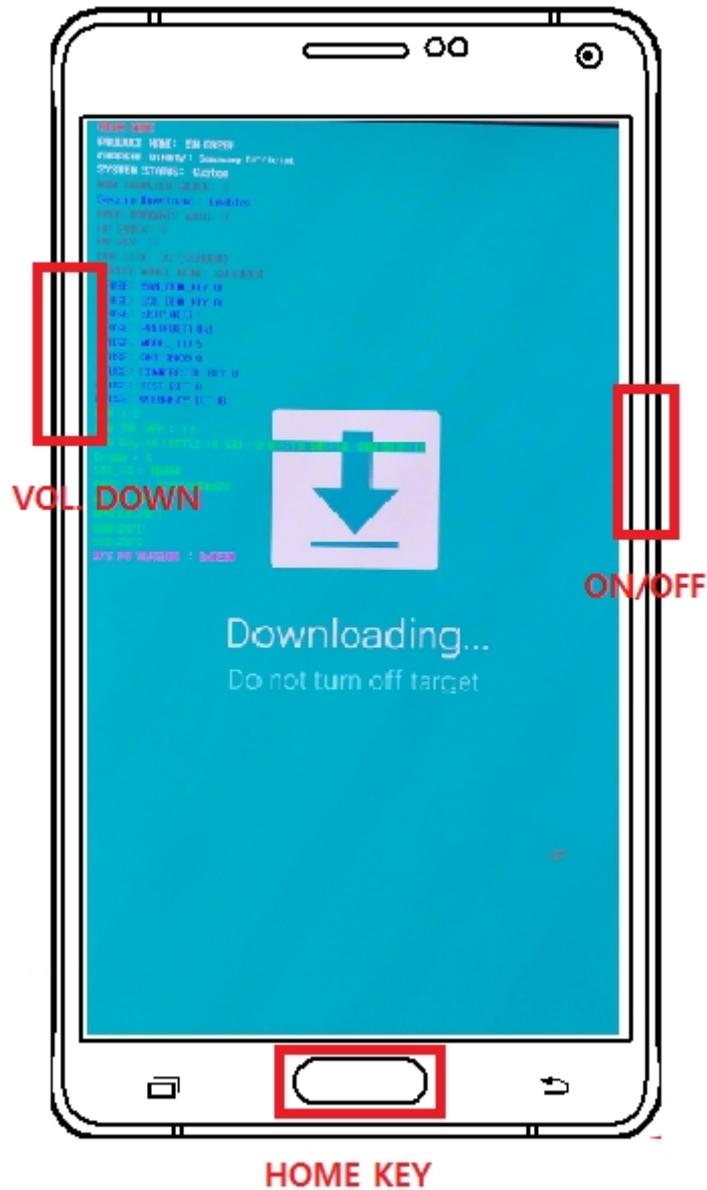
* Note : "Odin v3.10 or above" checks MD5 checksum just after file selection.



6. Level 1 Repair

2. Enter into Download Mode

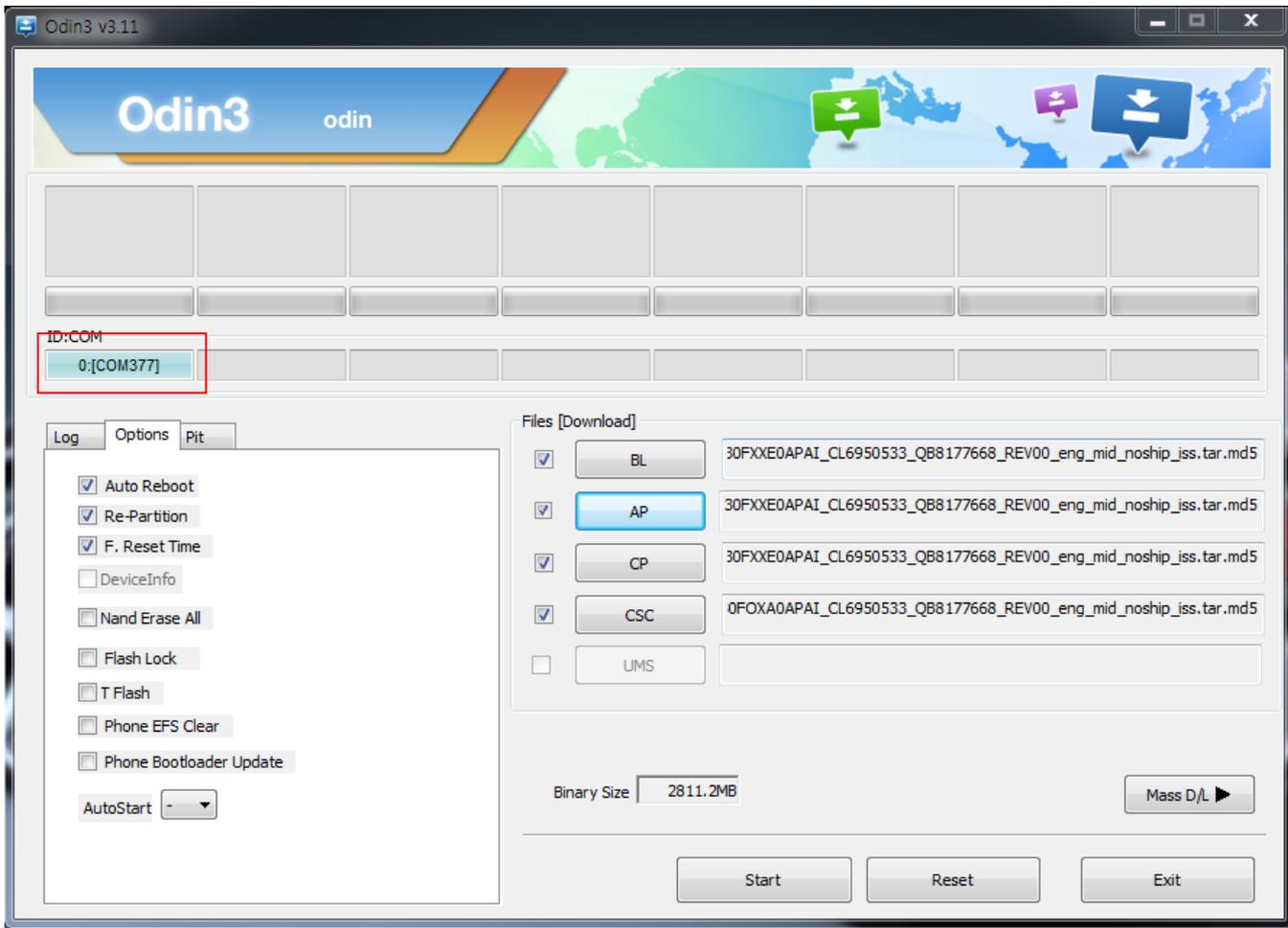
- Enter into Download Mode by pressing Home button, Volume Down button and Power On/Off Button simultaneously followed by pressing Volume up button as a direction of the phone.



6. Level 1 Repair

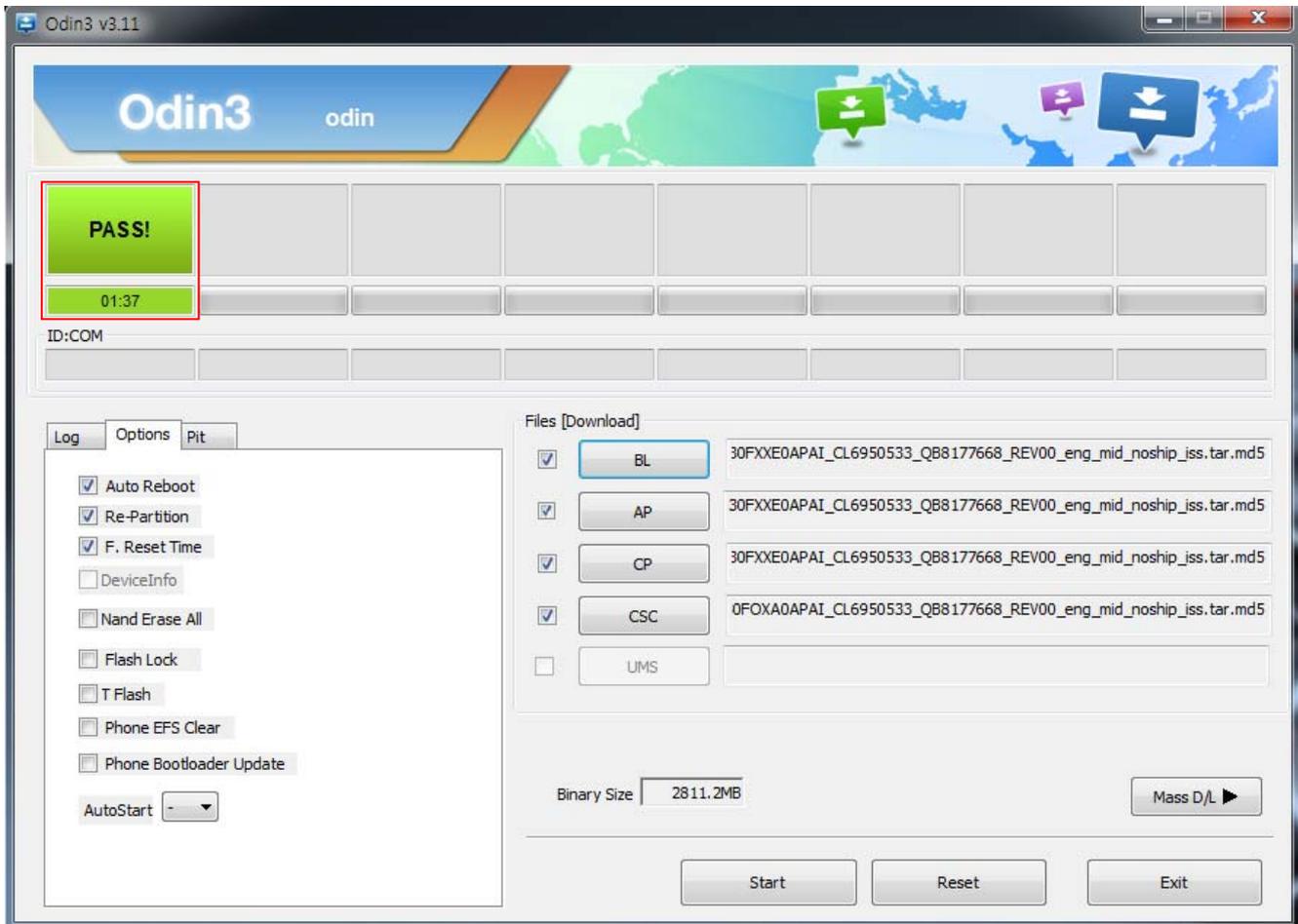
3. Connect the device to PC via Data Cable.

Make sure that the one of communication ports [ID:COM] box is highlighted in sky blue. The device is now connected with the PC and ready to download the binary files in it.



6. Level 1 Repair

4. Start downloading the binary files into the device by clicking Start button on the screen. The green colored "PASS!" sign will appear on the upper-left box if the binary files have been successfully downloaded into the device.



5. Disconnect the device from the Data cable.
6. Once the device boots up, you can check the version of the binary file or name by pressing the following code in sequence;
***#1234#**

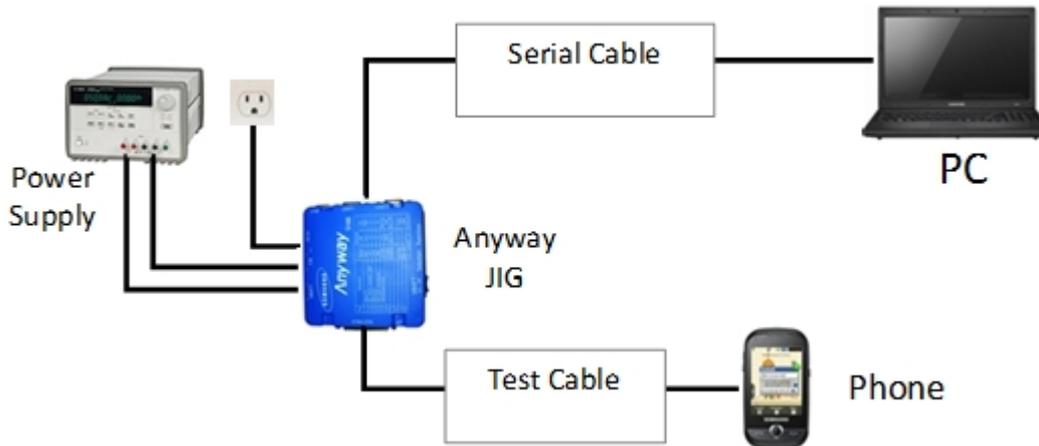
You can perform Factory Reset by Settings → Accounts → Backup and reset

6. Level 1 Repair

6-2 IMEI writing

6-2-1 Preparation

- New IMEI writing Program has been released.
- Supported Model : Models which CAB files are uploaded on HHPsvc INI File category, instead of ini file.
- Refer to below IMEI writing procedure.
- **H/W**



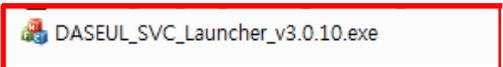
- S/W

① Library Install	To use Daseul, library files should be installed. Refer to SVC Bulletin “(11-82) Daseul (New IMEI writing Program) Library Install guide_rev1.0”
② Launcher	DASEUL_SVC_Launcher_v3_0_25 or higher -Uploaded on HHPsvc Notice
③ Runtime File	1. DASEUL_Runtime_Ver_3.1.139.0.CAB or higher -Uploaded on HHPsvc Notice 2. Make ‘ModelName’ folder at the same position with launcher & Runtime file.
④ Model File	Copy Model File under the ‘Model Name’ folder

6. Level 1 Repair

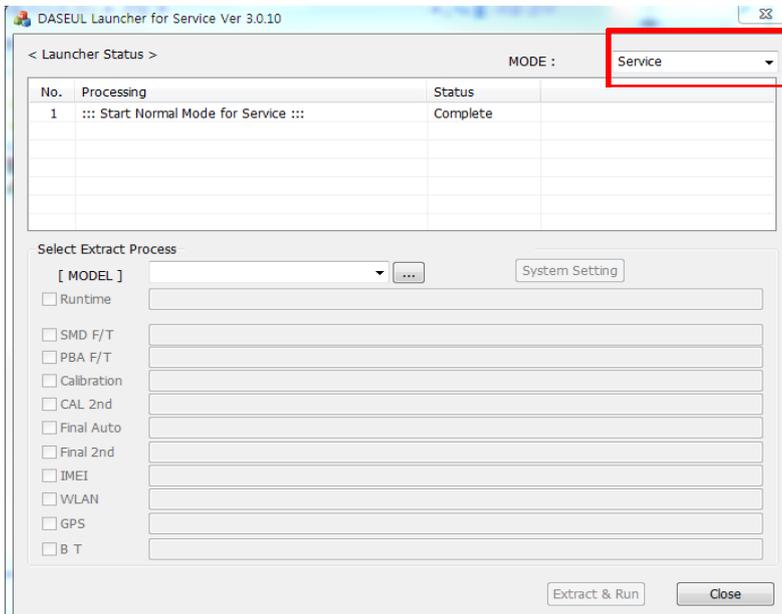
6-2-2 IMEI writing Process

1. Run DASEUL_SVC_Launcher_v3.0.10.exe

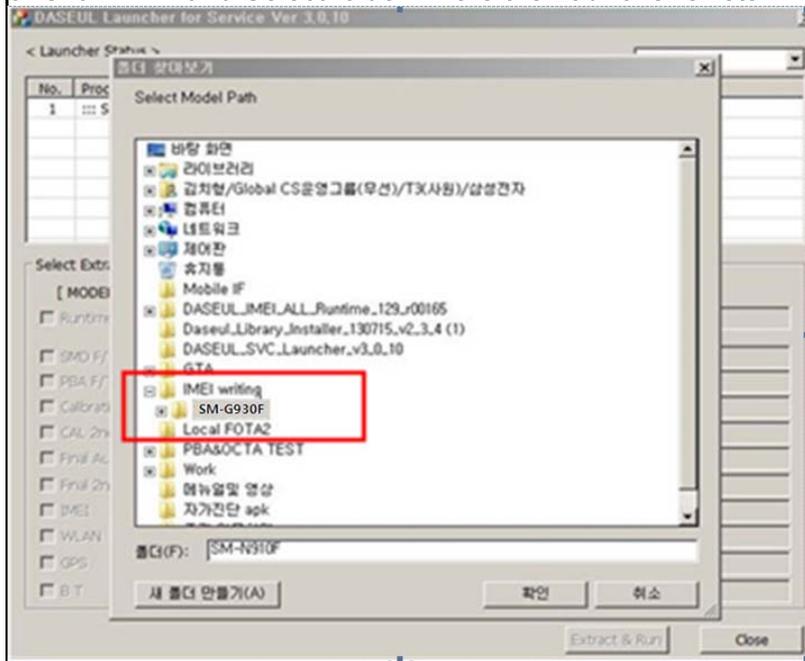


DASEUL_SVC_Launcher_v3.0.10.exe

2. Select Service Mode

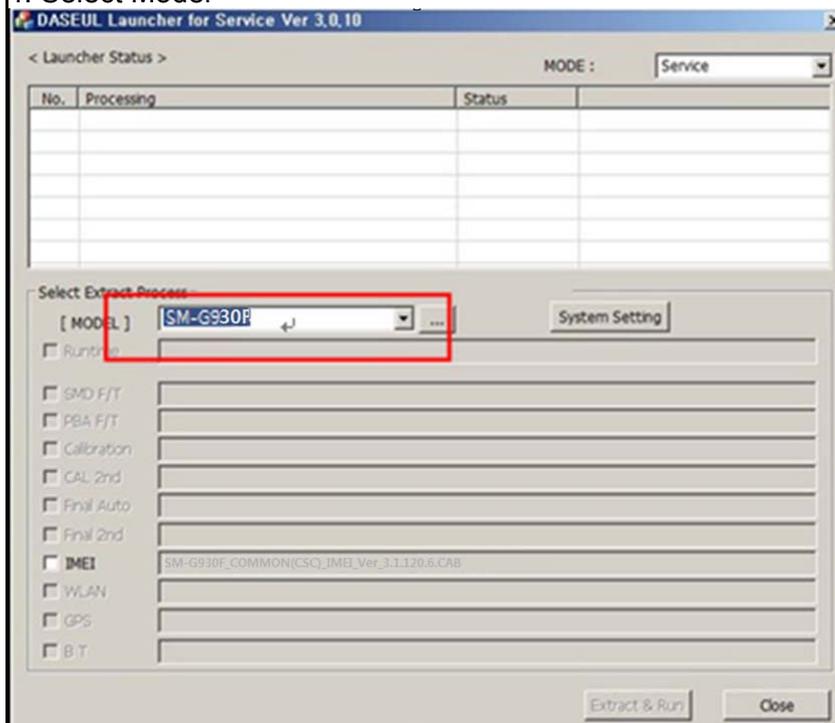


3. Click [IMEI] and Select folder where the Launcher exists



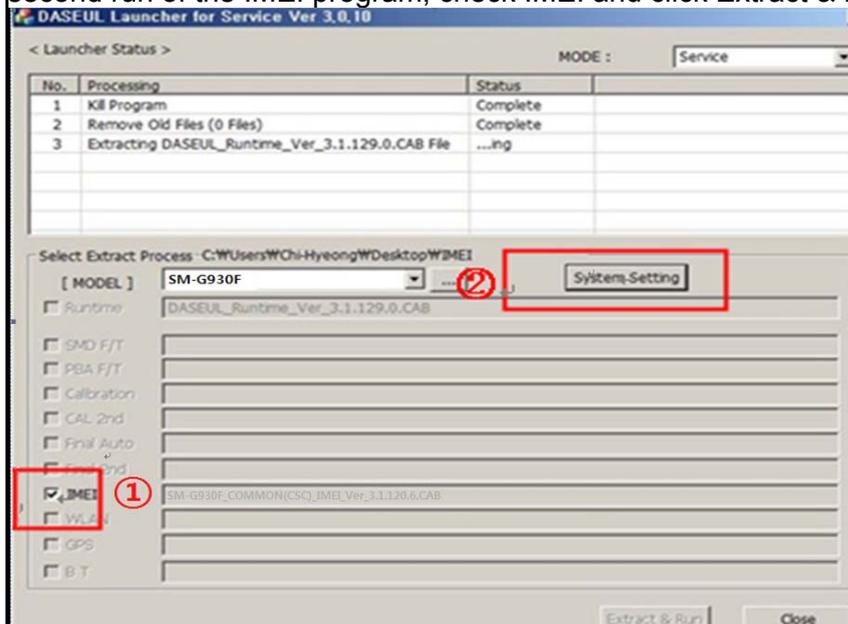
6. Level 1 Repair

4. Select Model



5. Check IMEI and click System Setting

※Once you setup the setting, you don't have to do it again, unless there is change. From second run of the IMEI program, check IMEI and click Extract & Run.



6. Level 1 Repair

6. Check IMEI Write / IMEI Check and click IMEI SVC & Repair Option.

Set System Configuration
Set System Configuration Dialog...

Test Process

[Process]	[Master]	[Slave]
SMD F/T	<input type="checkbox"/>	<input type="checkbox"/>
PBA F/T	<input type="checkbox"/>	<input type="checkbox"/>
Calibration	<input type="checkbox"/>	<input type="checkbox"/>
Calibration 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Manual	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Write	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IMEI Check	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDL +2nd Check	<input type="checkbox"/>	<input type="checkbox"/>
MDL Rework	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Read	<input type="checkbox"/>	<input type="checkbox"/>
STA Write	<input type="checkbox"/>	<input type="checkbox"/>
STA Check	<input type="checkbox"/>	<input type="checkbox"/>
STA Reset	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
GPS	<input type="checkbox"/>	<input type="checkbox"/>
BT	<input type="checkbox"/>	<input type="checkbox"/>
WLAN Power Off-On before WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Bluetooth	<input type="checkbox"/>	<input type="checkbox"/>
LCIA	<input type="checkbox"/>	<input type="checkbox"/>
Merge 2G3G Block Rad.	<input type="checkbox"/>	<input type="checkbox"/>

Test Condition

Calibration
Real CAL Cycle: on every default: CALs

Calibration Mode :

CAL2nd Mode :

Final
Supply RF Signal by :

Reset Loss Correction Count

Test Mode :

WLAN
Test Mode :

IMEI
Use RFSM
Use Second PC
Save ODS
Merge Felica Cal
OQC Reset
IBI Reset

System Config.

Language :

Line Name :

Line Type :

Smart Cloud Cell

of Phone :

Start Number of UI :

Start Number of Jig :

IP Address : 10.244.246.156

SKD Mode

MultiSharing(CMWS)

Developer Mode

Advanced Separating(ADS)

Operation Condition

7. Check SVC , User Ticket No and click OK

IMEI SVC && Repair Option

FTR

Rework

Korean SVC

SVC

SELA MIAMI

Local FOTA Check

DEVELOPE

Repair Board

SVC Factory Reset

Romania SVC

Argentina SKD

Initial PGM(SVC)

Turkey

ATT Rework

Slovakia SVC

IMEI Clear(Factory)

GED 2nd Inspection

Outgoing Inspection Check

SBSC(PBA) SVC

6. Level 1 Repair

8. Click Hardware Config

Set System Configuration
Set System Configuration Dialog...

Test Process

[Process]	[Master]	[Slave]
SMD F/T	<input type="checkbox"/>	<input type="checkbox"/>
PBA F/T	<input type="checkbox"/>	<input type="checkbox"/>
Calibration	<input type="checkbox"/>	<input type="checkbox"/>
Calibration 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Manual	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Write	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IMEI Check	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SVC Board	<input type="checkbox"/>	<input type="checkbox"/>
MDL Rework	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Read	<input type="checkbox"/>	<input type="checkbox"/>
STA Write	<input type="checkbox"/>	<input type="checkbox"/>
STA Check	<input type="checkbox"/>	<input type="checkbox"/>
STA Reset	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
GPS	<input type="checkbox"/>	<input type="checkbox"/>
BT	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Power Off-On before WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Bluetooth	<input type="checkbox"/>	<input type="checkbox"/>
LCIA	<input type="checkbox"/>	<input type="checkbox"/>
Merge 2G3G Block Rad.	<input type="checkbox"/>	<input type="checkbox"/>

Test Condition

Calibration
Real CAL Cycle: on every default: CALs

Calibration Mode:

CAL2nd Mode:

Final
Supply RF Signal by:

Reset Loss Correction Count

Test Mode:

WLAN
Test Mode:

IMEI
Use RFSM
Use Second PC
Save ODS
Merge Felica Cal
OQC Reset
IBI Reset

System Config.

Language:

Line Name:

Line Type:

Smart Cloud Cell

of Phone:

Start Number of UI:

Start Number of Jig:

IP Address: 10.244.246.165

SKD Mode

MultiSharing(CMWS)

Developer Mode

Advanced Separating(ADS)

Operation Condition

Model Information

9. Click Port Setting

Hardware Component Configuration
Controller Type, IO Bus Type, Port Setting,....

Phone
Count:
I/F - 1 Type:
I/F - 2 Type:

IF Jig Type:
 Use ID Check JIG

MSTS Sharing Controller
Count:
Control Type:
I/F Type:

Robot / ShieldBox
Control Type:
I/F Type:

Power Supply
I/F Type:

MSTS
Count:
I/F Type:

DBMS
Server:
Type:
Barcode Reader
Type:
I/F Type:

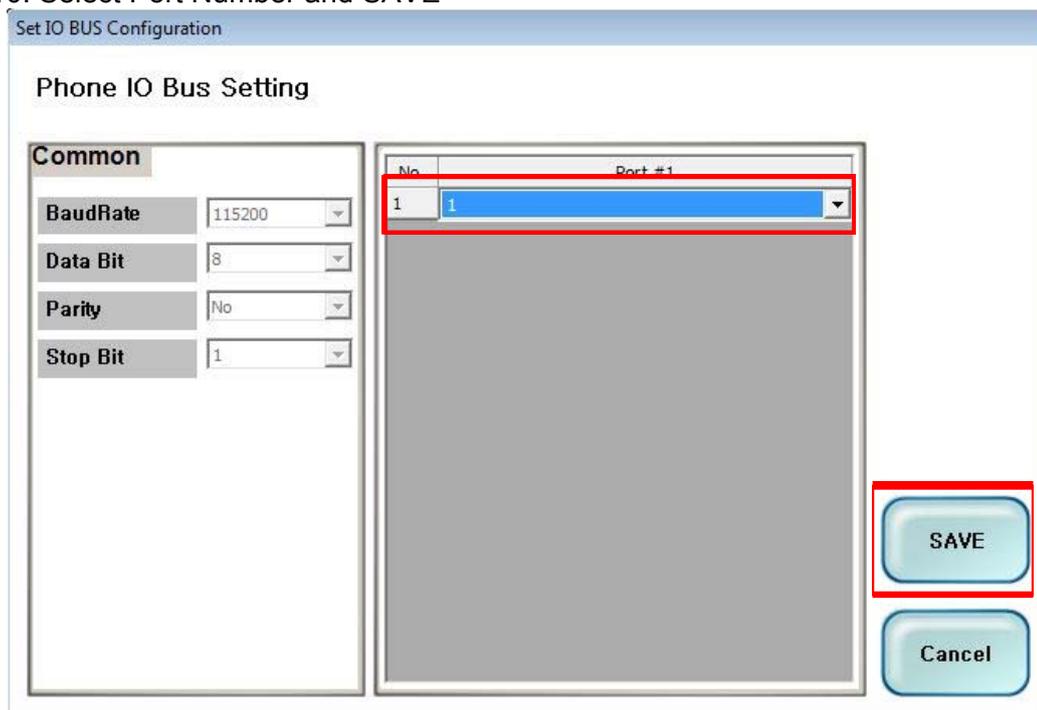
MES PN Sender
Type:

PBA F/T
Function Test Jig:
NI-DAQ:
Power Detector:
HDMI JIG:

SMD F/T
Type:
B'd Address:

6. Level 1 Repair

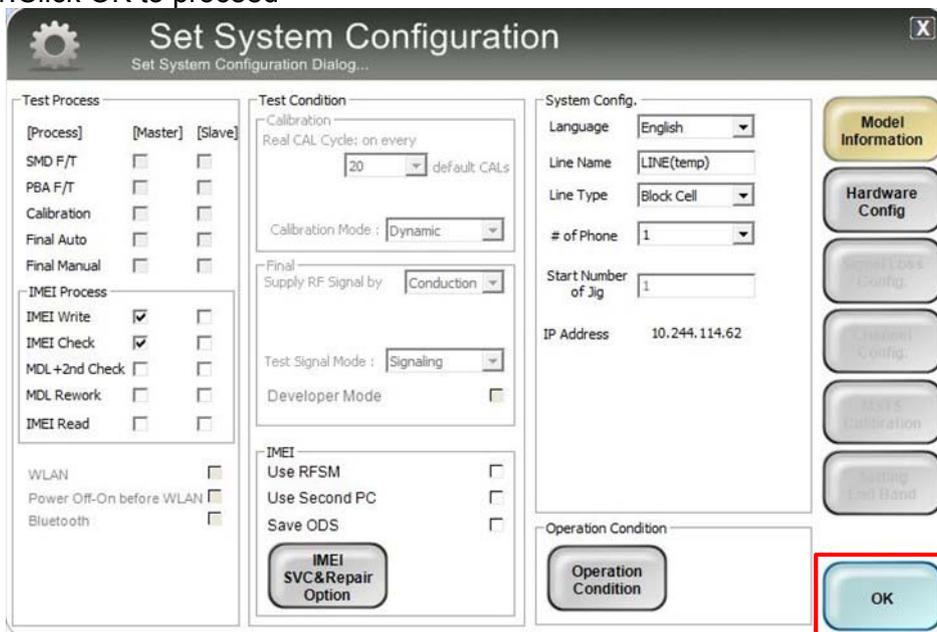
10. Select Port Number and SAVE



The image shows a dialog box titled "Set IO BUS Configuration" with a sub-section "Phone IO Bus Setting". On the left, there are four dropdown menus: "BaudRate" (115200), "Data Bit" (8), "Parity" (No), and "Stop Bit" (1). On the right, there is a table with two columns: "No." and "Port #1". The first row of the table has "1" in both columns and is highlighted with a blue background and a red border. Below the table are two buttons: "SAVE" and "Cancel". The "SAVE" button is highlighted with a red border.

No.	Port #1
1	1

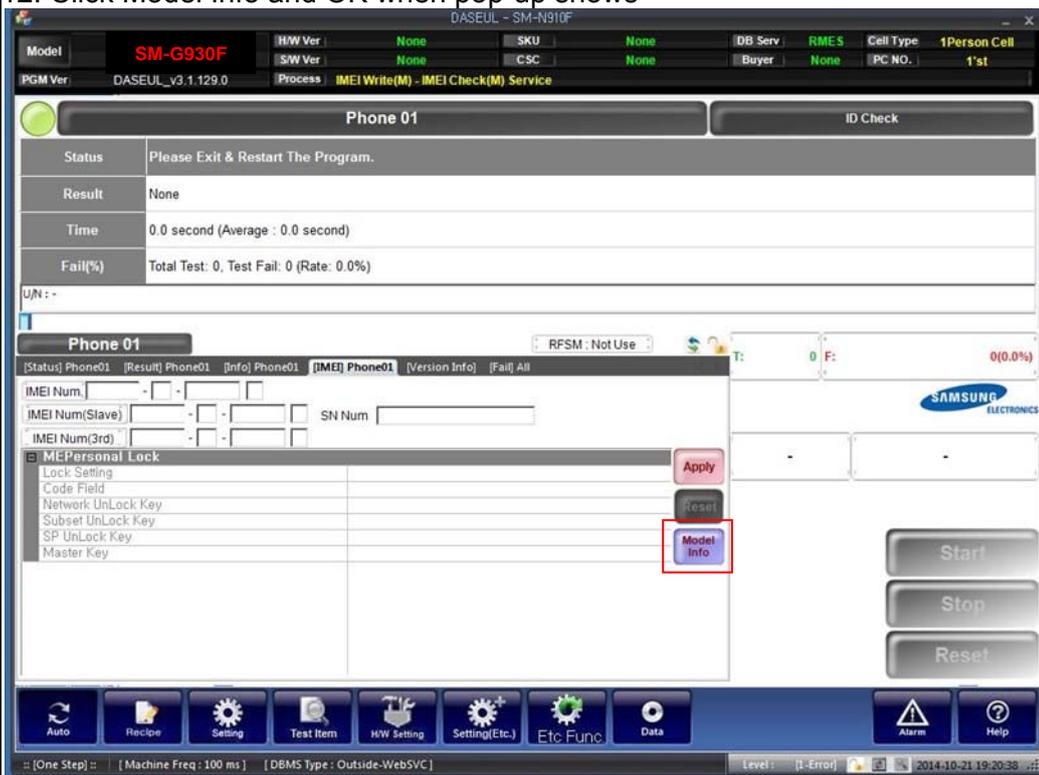
11. Click OK to proceed



The image shows a dialog box titled "Set System Configuration" with a sub-section "Set System Configuration Dialog...". It contains several sections: "Test Process" with checkboxes for [Process], [Master], and [Slave]; "Test Condition" with a "Real CAL Cycle" dropdown (20) and "Calibration Mode" (Dynamic); "System Config." with fields for Language (English), Line Name (LINE(temp)), Line Type (Block Cell), # of Phone (1), Start Number of Jig (1), and IP Address (10.244.114.62); and "Operation Condition" with an "Operation Condition" button. On the right side, there are several buttons: "Model Information", "Hardware Config", "Signal Coes Config", "Channel Config", "Start Calibration", and "Setting Test Band". At the bottom right, there is an "OK" button highlighted with a red border.

6. Level 1 Repair

12. Click Model Info and OK when pop-up shows



13. Click OK



6. Level 1 Repair

14. Input SKU_CODE and BUYER, then click Save button.

※ Refer to HHPsvc→IMEI Review to check SKU Code and buyer

CSC	G930FXXE0APAI
PDA	G930FXXE0APAI
Software2	1
LPD	
Contents	
DMB	
SKU_CODE	SM-G930FZKACPW
BUYER	DBT
Material_Code	
Boot	
Factory Software	N0980MI11&NR1

2nd Func Test (AT&T)
 FactoryReset+Check
 Pre Product
 Main Repair

STA Option
 Don't DB Upload Tizen Download
 Packing Rework Android Download

Save Load Cancel

15. Input IMEI Number and click Apply

Model: SM-G930F HW Ver: None SKU: None DB Serv: RMES Cell Type: 1Person Cell
PGM Ver: DASEUL_v3.1.129.0 Process: IMEI Write(M) - IMEI Check(M) Service Buyer: None PC NO.: 1'st

Phone 01 ID Check

Status: Please Exit & Restart The Program.
Result: None
Time: 0.0 second (Average : 0.0 second)
Fail(%): Total Test: 0, Test Fail: 0 (Rate: 0.0%)

UN: -

Phone 01 RFSM: Not Use T: 0 F: 0 (0.0%)

IMEI Num: 111111 IMEI Num(3rd):
IMEI Num(Slave): SN Num:

IMEI Personal Lock
Lock Setting
Code Field
Network UnLock Key
Subset UnLock Key
SP UnLock Key
Master Key

Apply Model Info

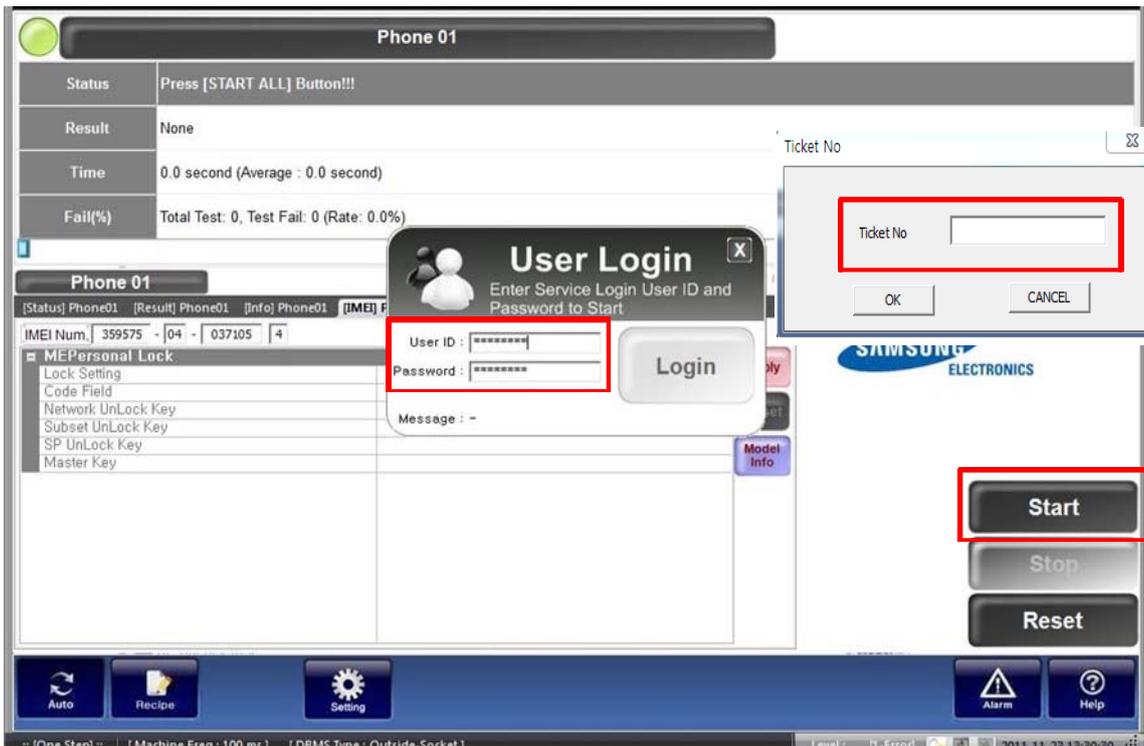
Start
Stop
Reset

Auto Recipe Setting Test Item HW Setting Setting(Etc.) Etc Func Data

[One Step] [Machine Freq: 100 ms] [DBMS Type: Outside-WebSVC] Level: [Error] 2014-10-31 19:21:08

6. Level 1 Repair

16. ① Click Start, and input IMEI writing ID and Password → ② input Ticket No

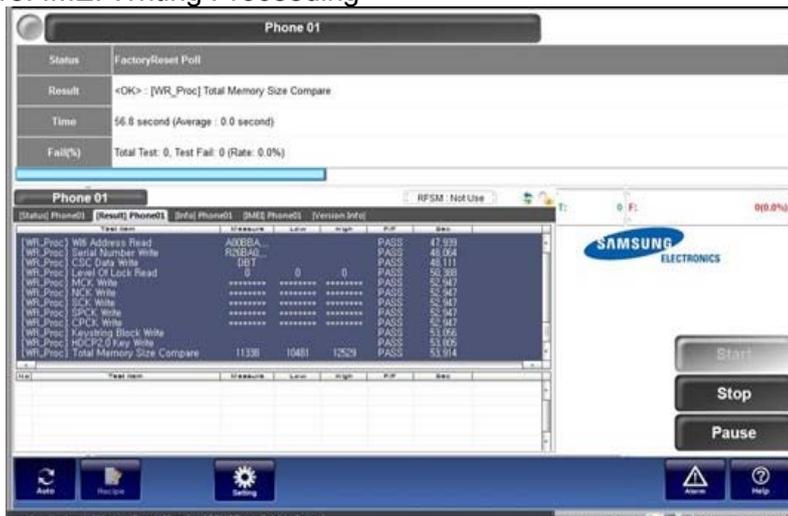


17. Connect the phone to Anyway JIG

※ When you connect the phone, the phone should be turned off.

After connecting the phone, the phone will be booted automatically.

18. IMEI Writing Proceeding



6. Level 1 Repair

19. IMEI Writing Success

The screenshot displays the Samsung Electronics software interface for testing a phone. The top section shows the test results for 'Phone 01':

- Status: [TEST END]
- Result: <Test Pass> - 037105
- Time: 215.0 second (Average : 215.6 second)
- Fall(%): Total Test: 1, Test Fail: 0 (Rate: 0.0%)

The main window shows a list of test items and their results:

Test Item	Measure	Unit	High	Low	Pass
[CH_Proc] AK Authenticate Check					PASS 213.519
[CH_Proc] IMEI Compare	99970...	99975...	99976...		PASS 213.581
[CH_Proc] Bluetooth ID Compare	3EEFE4...	3EEC...	3EEC...		PASS 214.203
[CH_Proc] Serial Number Compare	FD9DA...	FD9DA...	FD9DA...		PASS 214.365
[CH_Proc] MCK Compare	*****	*****	*****		PASS 214.655
[CH_Proc] NCK Compare	*****	*****	*****		PASS 214.655
[CH_Proc] SCK Compare	*****	*****	*****		PASS 214.655
[CH_Proc] SPCK Compare	*****	*****	*****		PASS 214.655
[CH_Proc] SPCL Compare	*****	*****	*****		PASS 214.655
[CH_Proc] PCL Compare	*****	*****	*****		PASS 214.655
[CH_Proc] Keystroke Block Compare	ON	ON	ON		PASS 214.502
[CH_Proc] HDD/2.0 Key Check	OK	OK	OK		PASS 214.673

The interface includes a 'SAMSUNG ELECTRONICS' logo, 'Start', 'Stop', and 'Reset' buttons, and a 'Settings' icon. The bottom status bar shows 'Voice Start', 'Market Price (100 ms)', 'IDBMS Tool (Outside Socket)', and 'Level: 1'.

6. Level 1 Repair

6-4. RF Calibration

6-1-1. Required items in order to calibrate RF

- Installation program: RF Calibration Program
 - DASEUL_Launcher_v4.0.0.exe
 - DASEUL_CAL_ALL_Runtime_3.1.185.0_r00351.CAB
 - Model File (SM-G930F_OPEN_CALIBRATION_Ver_3.1.185.6.CAB)

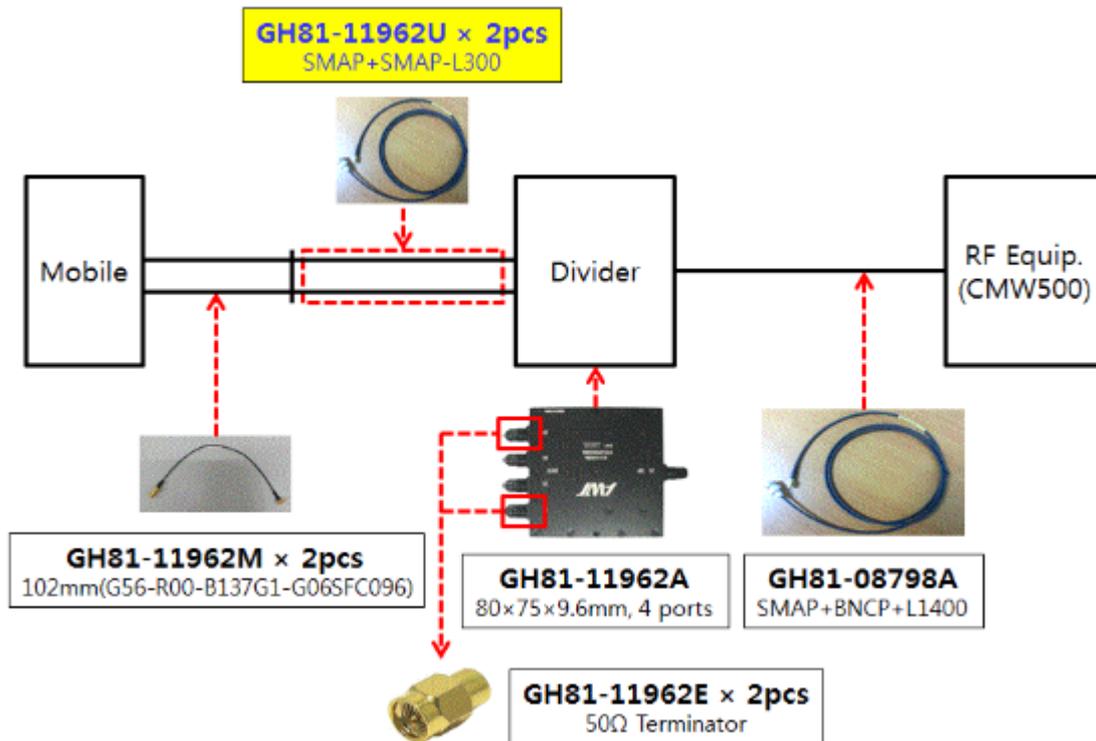
※ It is required to use the latest program.

- Mobile Phone
- E3632A Power Supply
- JIG BOX (GH81-11888A)
- UART Serial Cable
- Table of test cables
- R&S CMW500
- GPIB Cable (2ea)
- Adapter (GH81-11888K)

RF Cable (Manual)	GH81-11962M	GH81-11962U	
	1.2T, 102mm 	1.2T, 102mm 	
4 Port Divider	GH81-11962A	GH81-08798A	GH81-11962E
	Divider 	Divider Cable 	50Ω terminator 

6. Level 1 Repair

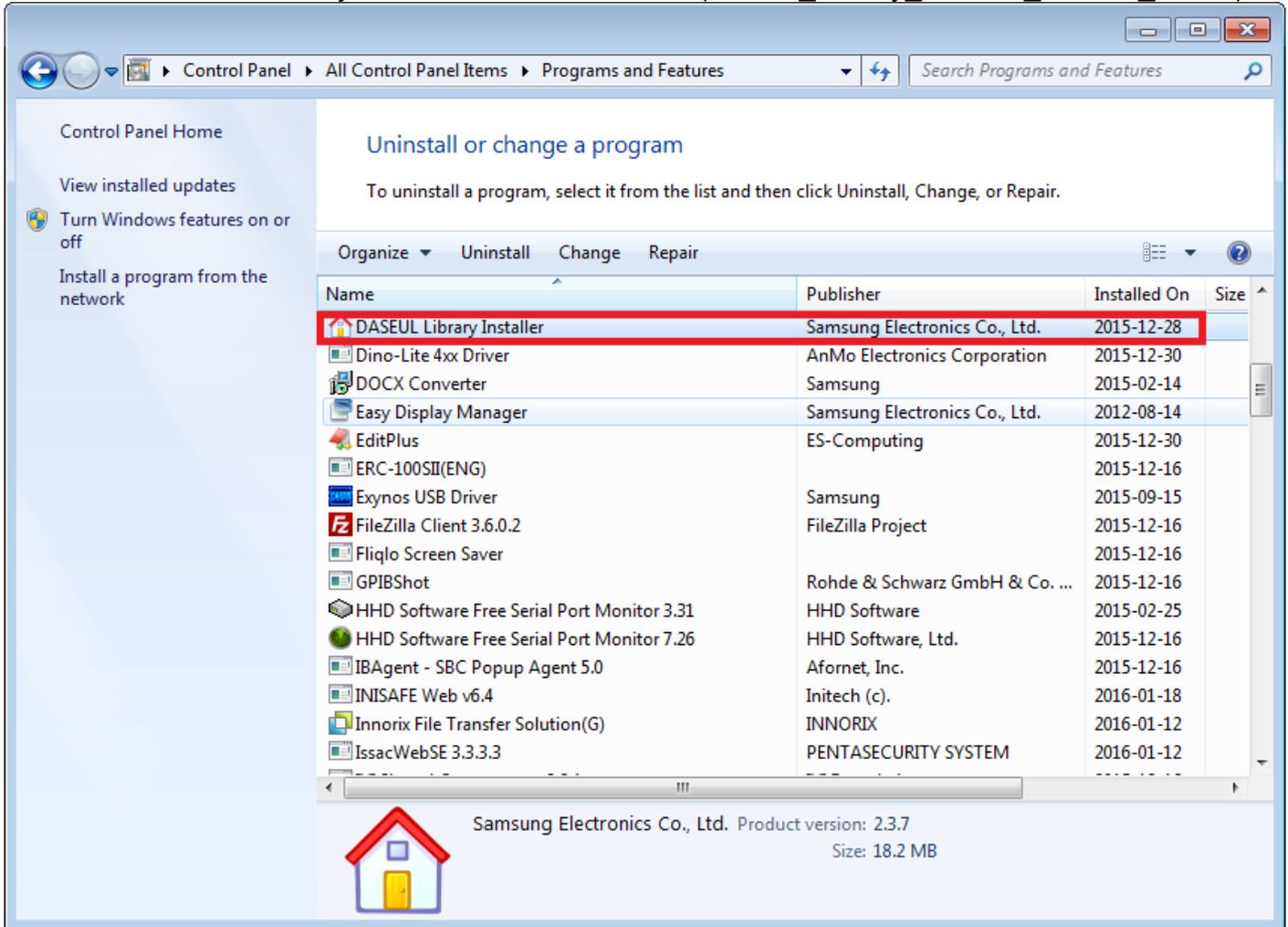
- SETTING



6. Level 1 Repair

6-1-2. RF Calibration Program

1. Uninstall DASEL Library and install a new version. (Daseul_Library_Installer_151217_v2.3.7)

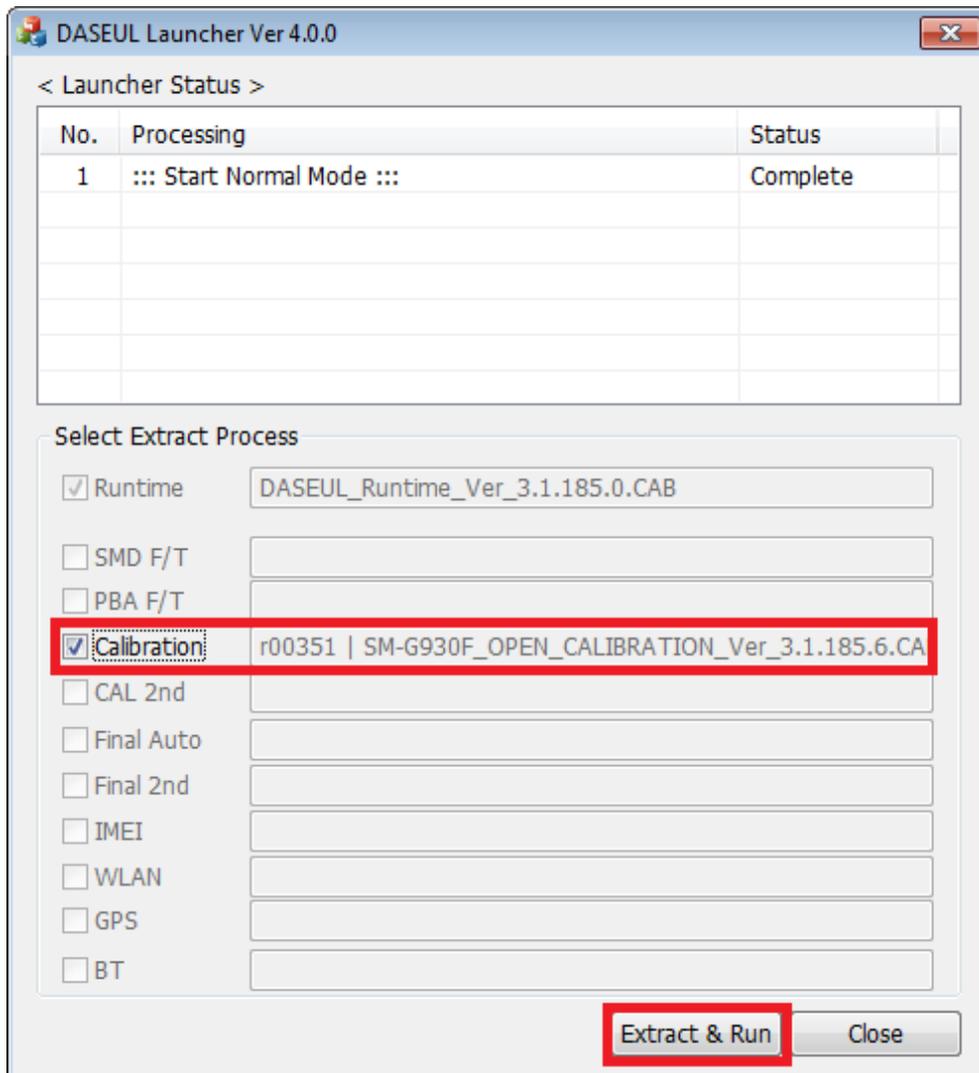


2. Run the RF Calibration Program Launcher, 'DASEUL_Launcher_v4.0.0.exe'.

-  DASEUL_CAL_ALL_Runtime_3.1.185.0_r00351.CAB
-  DASEUL_Launcher_v4.0.0.exe
-  SM-G930F_OPEN_CALIBRATION_Ver_3.1.185.6.CAB

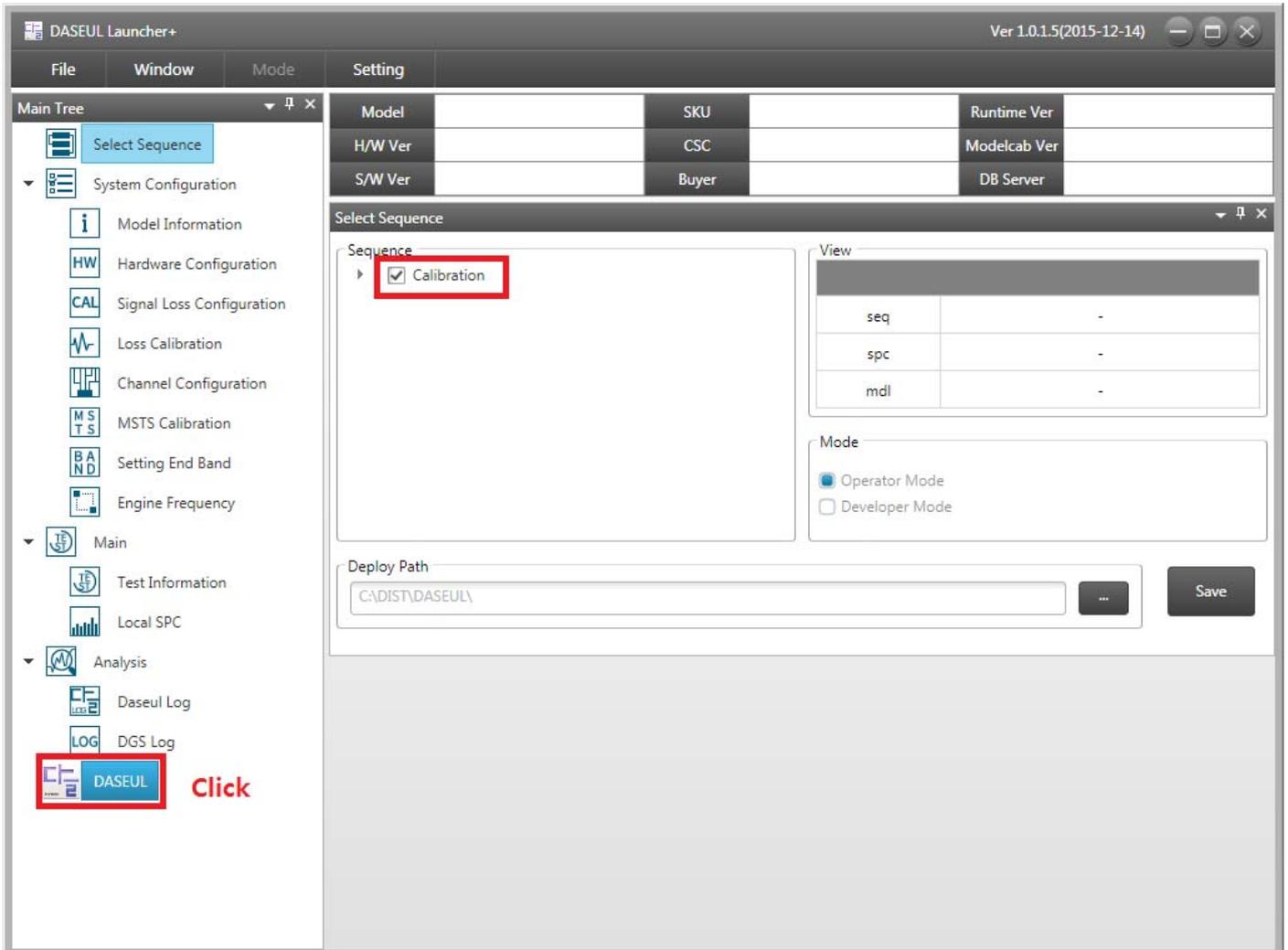
6. Level 1 Repair

3. Check the 'Calibration' menu, and select 'Extract & Run'.



6. Level 1 Repair

4. Check the 'Calibration' option and Click **DASEUL** Icon on your left side.



6. Level 1 Repair

5. Change the Resolution setting and select a [sequence file](#) and [Click Start Button](#).

The image shows two screenshots from a software interface. The top screenshot is a dialog box titled "Select Sequence Files & Login" with the subtitle "Select sequence files & the resolution. Change the permission, Join, etc". It features a "Deploy Path" of "C:\WDIST\WDASEUL" and a list of sequence file options. The "CAL" option is selected, and its corresponding dropdown menu shows "SM-G930F_OPEN_CALIBRATION_Ver_3.1.185.6.seq". Below the list, there are checkboxes for "Skip Configuration Dialog" and "Permission : Operator". The "Resolution" is set to "1024 x 768". There are buttons for "Change Permission", "Exit", and "Start". The bottom screenshot is an "Open" file explorer window showing the directory "SM-G930F_OPEN_CALIBRATION_Ver_3.1.1". A file named "SM-G930F_OPEN_CALIBRATION_Ver_3.1.185..." is selected. The "File name" field at the bottom contains "SM-G930F_OPEN_CALIBRATION_Ver_3.1.185..." and the "Files of type" is set to "Sequence Files (*.seq.enc)".

Select Sequence Files & Login
Select sequence files & the resolution. Change the permission, Join, etc

Select The Sequence File

Deploy Path : C:\WDIST\WDASEUL

- SMD F/T
- PBA F/T
- CAL
- CAL2nd
- FINAL
- FINAL2nd
- FINAL MANUAL
- IMEI
- WLAN
- GPS
- BT

Skip Configuration Dialog Permission : Operator

Resolution : 1024 x 768 Change Permission Exit Start

Open

Look in: SM-G930F_OPEN_CALIBRATION_Ver_3.1.1

Name	Date modified	Type
SM-G930F_OPEN_CALIBRATION_Ver_3.1.185...	2016-01-29 오후 1:...	ENC File

File name: SM-G930F_OPEN_CALIBRATION_Ver_3.1.185... Open

Files of type: Sequence Files (*.seq.enc) Cancel

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6. Level 1 Repair

6. Select Master Calibration Process and Change the Line Type to 'Block Cell' and disable 'Smart Cloud Cell'.

The screenshot shows the 'Set System Configuration' dialog box with the following settings:

- Test Process:** Calibration is selected as the Master process.
- Test Condition:** Real CAL Cycle: on every 20 default CALs. Calibration Mode: FDT. CAL2nd Mode: FDT. Final Supply RF Signal by: Radiation. - Loss Cal: checked. Test Mode: Signaling.
- System Config.:** Language: Korean. Line Name: LINE(temp). Line Type: Block Cell. NP Cell: unchecked. Smart Cloud Cell: unchecked. # of Phone: 1. Start Number of UI: 1. Start Number of Jig: 1. IP Address: 10.253.38.99. SKD Mode: unchecked. MultiSharing(CMWS): unchecked. Developer Mode: unchecked. Advanced Separating(ADS): unchecked.
- Operation Condition:** Operation Condition and RUN SeeLog buttons are visible.
- IMEI:** Use RFSM, Use Second PC, Save ODS, Merge Felica Cal, OQC Reset, IBI Reset, OQC SKD USER D/L are all unchecked.

On the right side, there is a vertical stack of buttons: Model Information, Hardware Config, Signal Loss Config., Loss Calibration, Channel Config., MSTS Calibration, Setting End Band, Engine Freq., and OK.

6. Level 1 Repair

7. Set the GPIB address of MSTs(CMW500) and Power Supply(E3632A) to enter 'Hardware Config' and 'Save'. (Check the GPIB address of equipments in advance)

Set System Configuration
Set System Configuration Dialog...

Test Process

[Process]	[Master]	[Slave]
SMD F/T	<input type="checkbox"/>	<input type="checkbox"/>
PBA F/T	<input type="checkbox"/>	<input type="checkbox"/>
Calibration	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Calibration 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Manual	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Write	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Check	<input type="checkbox"/>	<input type="checkbox"/>
MDL+2nd Check	<input type="checkbox"/>	<input type="checkbox"/>
MDL Rework	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Read	<input type="checkbox"/>	<input type="checkbox"/>
STA Write	<input type="checkbox"/>	<input type="checkbox"/>
STA Check	<input type="checkbox"/>	<input type="checkbox"/>
STA Reset	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
GPS	<input type="checkbox"/>	<input type="checkbox"/>
BT	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Power Off-On before WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Bluetooth	<input type="checkbox"/>	<input type="checkbox"/>
LCIA	<input type="checkbox"/>	<input type="checkbox"/>
Merge 2G3G Block Rad.	<input type="checkbox"/>	<input type="checkbox"/>

Test Condition

Calibration
Real CAL Cycle: on every default CALs
Calibration Mode :
CAL2nd Mode :

Final
Supply RF Signal by
- Loss Cal
Reset Loss Correction Count
Test Mode :

WLAN
Test Mode :

IMEI
Use RFSM
Use Second PC
Save ODS
Merge Felica Cal
OQC Reset
IBI Reset
OQC SKD USER D/L

System Config.

Language
Line Name
Line Type
 NP Cell Smart Cloud Cell
of Phone
Start Number of UI
Start Number of Jig
IP Address
SKD Mode
MultiSharing(CMWS)
Developer Mode
Advanced Separating(ADS)

Operation Condition

Model Information
Hardware Config
Signal Loss Config.
Loss Calibration
Channel Config.
MSTS Calibration
Setting End Band
Engine Freq.

6. Level 1 Repair

8. Press 'OK' to start RF Calibration after completing all settings.

Set System Configuration
Set System Configuration Dialog...

Test Process

[Process]	[Master]	[Slave]
SMD F/T	<input type="checkbox"/>	<input type="checkbox"/>
PBA F/T	<input type="checkbox"/>	<input type="checkbox"/>
Calibration	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Calibration 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Manual	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Write	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Check	<input type="checkbox"/>	<input type="checkbox"/>
MDL+2nd Check	<input type="checkbox"/>	<input type="checkbox"/>
MDL Rework	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Read	<input type="checkbox"/>	<input type="checkbox"/>
STA Write	<input type="checkbox"/>	<input type="checkbox"/>
STA Check	<input type="checkbox"/>	<input type="checkbox"/>
STA Reset	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
GPS	<input type="checkbox"/>	<input type="checkbox"/>
BT	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Power Off-On before WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Bluetooth	<input type="checkbox"/>	<input type="checkbox"/>
LCIA	<input type="checkbox"/>	<input type="checkbox"/>
Merge 2G3G Block Rad.	<input type="checkbox"/>	<input type="checkbox"/>

Test Condition

Calibration
Real CAL Cycle: on every
20 default CALs
Calibration Mode : FDT
CAL2nd Mode : FDT

Final
Supply RF Signal by Radiation
- Loss Cal
Reset Loss Correction Count
Test Mode : Signaling

WLAN
Test Mode : WLAN

IMEI
Use RFSM
Use Second PC
Save ODS
Merge Felica Cal
OQC Reset
IBI Reset
OQC SKD USER D/L

System Config.

Language Korean
Line Name LINE(temp)
Line Type Block Cell
 NP Cell Smart Cloud Cell
of Phone 1
Start Number of UI 1
Start Number of Jig 1
IP Address 10.253.38.99
SKD Mode
MultiSharing(CMWS)
Developer Mode
Advanced Separating(ADS)

Operation Condition
Operation Condition **RUN SeeLog**
IMEI SVC&Repair Option

Model Information
Hardware Config
Signal Loss Config.
Loss Calibration
Channel Config.
MSTS Calibration
Setting End Band
Engine Freq.
OK

6. Level 1 Repair

9. Use Start Button to Calibrate

DASEUL - SM-G930F

Model	SM-G930F	H/W Ver	G930F	SKU	xx	DB Serv	HOME(GUMI)	Cell Type	Block Cell
		SW Ver	None	CSC	1	Buyer	XX	PC NO.	NONE

Process: **Calibration(M)**
 PGM Ver: DASEUL_v3.1.185.0 / Calibration(r00351)

Phone 01 Path Loss Measure Mode

Status: Press [START ALL] Button!!!
 Result: None
 Time: 0.0 second (Average : 0.0 second)
 Fail(%): Total Test: 0, Test Fail: 0 (Rate: 0.0%)

U/N: -

Phone 01 T: 0 F: 0(0.0%)

Time	No.	Item	Status
19:32:18	01	RTCRead	RTC Verification Init Complete
19:32:18	01	BatteryVoltageC...	BatteryVoltageCheck Init Complete
19:32:18	01	SetTestNV	SetTestNV Init Complete
19:32:18	01	MD5_Enable	MD5_Enable Init Complete
19:32:18	01	FactoryTestLog...	FactoryTestLog_Disable Init Complete
19:32:18	01	BackUp	BackUp Init Complete
19:32:18	01	SleepCurrent	Sleep Current Init Complete
19:32:18	01	EndCalibration	EndCalibration Init
19:32:18	01	UUnitTestStep	UUnitTestStep MSTS Init Start
19:32:19	01	UUnitTestStep	JIG Open IOBus
19:32:20	01	UUnitTestStep	Set JIG Solution
19:32:20	01	UUnitTestStep	Get Reference Current
19:32:26	01	Instrument	RefCurrent[0] = -0.29876[mA]
19:32:26	01	UUnitTestStep	Reference Current = -0.3
19:32:26	01	Instrument	MSTS License Info
19:32:27	01	UUnitTestStep	Get MSTS License
19:32:27	01	UUnitTestStep	MSTS License Info
19:32:27	01	UUnitTestStep	Get MSTS Reset
19:32:29	01	UUnitTestStep	Initial Step End. TEST READY!
19:32:29	01	UUnitTestStep	Press [START ALL] Button!!!

SAMSUNG ELECTRONICS

Start
 Stop
 Reset

Auto Recipe Setting Test Item H/W Setting Setting(Etc.) Etc Func. Data Alarm Help

:: [One Step] :: [Machine Freq : 100 ms] [DBMS Type : Inside-Oracle] Level : [01-Error] 2016-02-02 19:32:30

6. Level 1 Repair

7-1. Speaker Calibration

7-1-1 Notice

- It is necessary to calibrate the speaker for all cases of replacing the speakers.

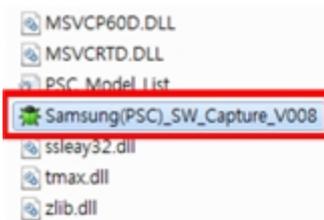
7-1-2 You need :

- Mobile device
- Laptop or Note PC
- Anyway Jig
- UART Serial Cable
- IF Test Cable (Different by models)

7-1-3 Lay-out



7-1-4 How to Calibrate Speaker



① Run 'Samsung(PSC)_SW_Capture_V008.exe'.

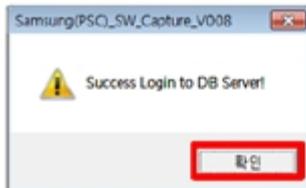


② Check 'SPK' item in the box.

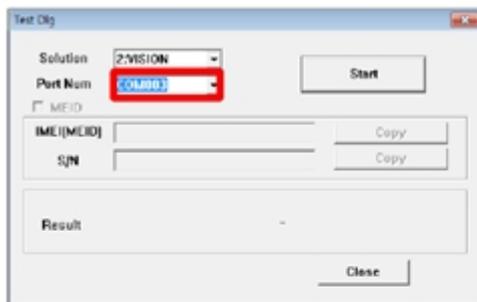
6. Level 1 Repair



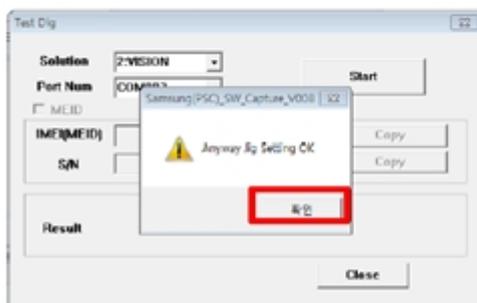
③ Input GSPN ID and Password, then press 'OK'.



④ Confirm Login to DB Server to press '확인'.



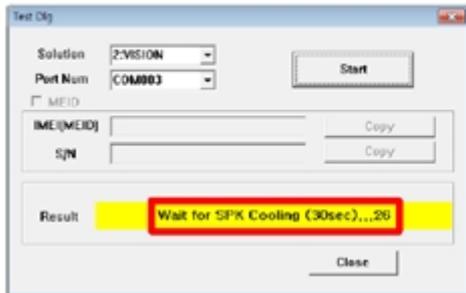
⑤ Set Port Number and press 'Start'.



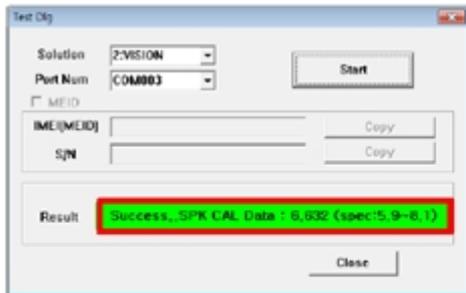
⑥ Confirm the Anyway Jig Setting to press '확인'.

⑦ Connect Mobile device to IF Test cable,
then power on to press power key.
※ Phone should be powered off before test.

6. Level 1 Repair



- ⑦ Speaker Calibration will start within 30 seconds after Booting complete.
※ LCD must be turned on in order to test properly.



- ⑧ Confirm whether the Speaker Calibration is done successfully.

6. Level 1 Repair

7-2. Battery Accumulated Usage Initialization

7-2-1 Notice

- It is necessary to initialize the battery accumulated usage for all cases of replacing the batteries.

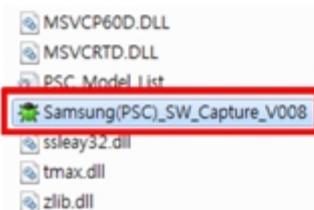
7-2-2 You need :

- Mobile device
- Laptop or Note PC
- Anyway Jig
- UART Serial Cable
- IF Test Cable (Different by models)

7-2-3 Lay-out



7-2-4 How to Initialize Battery Accumulated Usage



① Run 'Samsung(PSC)_SW_Capture_V008.exe'.

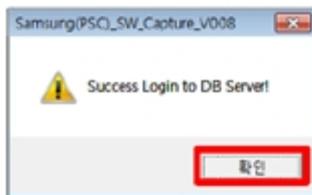


② Check 'Battery' item in the box.

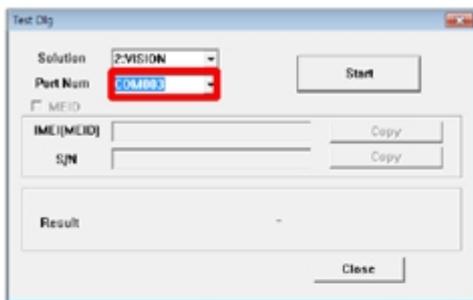
6. Level 1 Repair



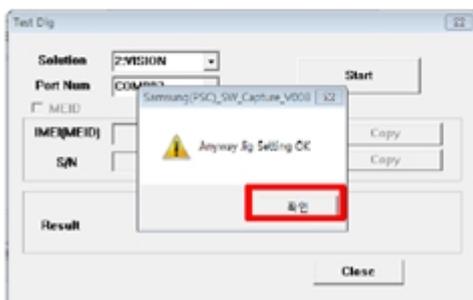
③ Input GSPN ID and Password, then press 'OK'.



④ Confirm Login to DB Server to press '확인'.



⑤ Set Port Number and press 'Start'.



⑥ Confirm the Anyway Jig Setting to press '확인'.

⑦ Connect Mobile device to IF Test cable,
then power on to press power key.
※ Phone should be powered off before test.



⑧ Battery Accumulated Usage Initialization will start
as soon as Booting complete.

※ LCD must be turned on in order to test properly.