

Service Manual



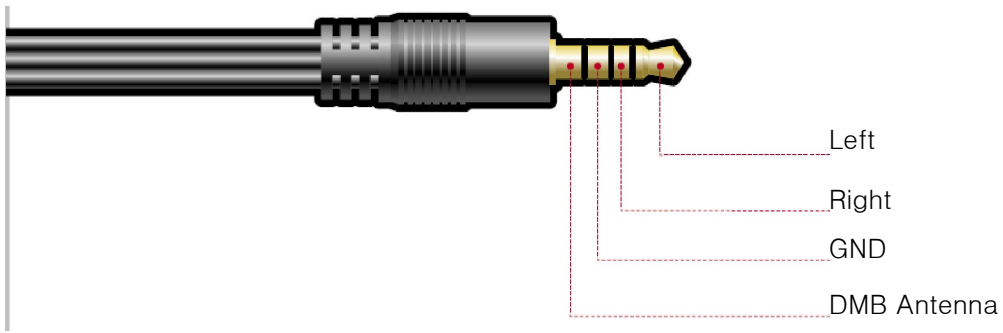
COWON D2

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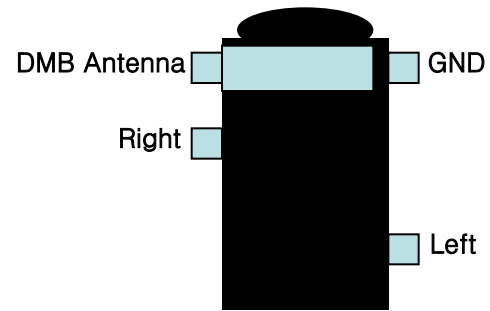
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3. Components (2/2)

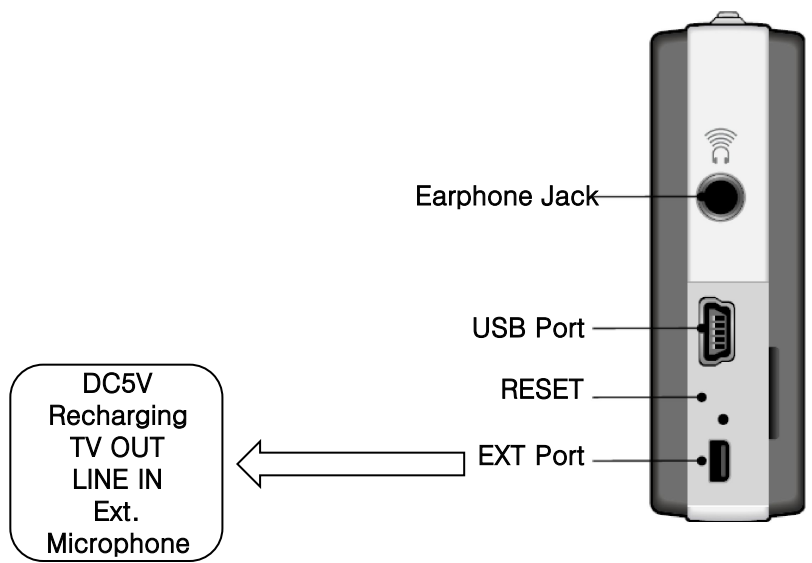
Phone-jack Polarity



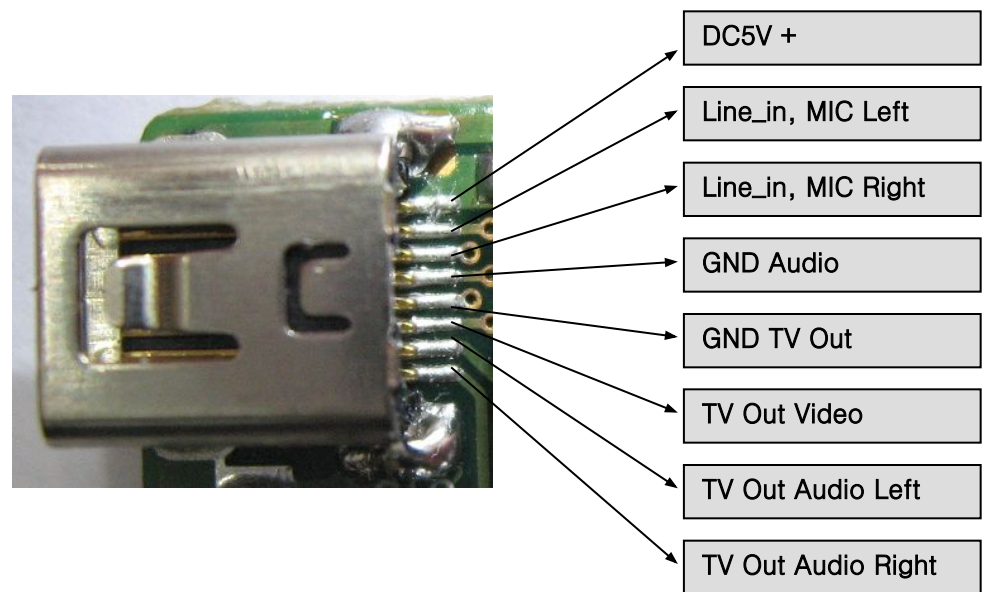
Phone-jack Port Polarity



I/O Configuration



EXT Port Polarity



Subject: How to Use D2 Recovery Program v0.27

Step 1. Install the provided driver on the PC.(※ You don't need to re-install the driver on a PC where it is already installed)

- How To: ① Press and hold the M button on the top of the player while connecting it to the PC.
② When the Find New Hardware Wizard is launched, select "install from a list of specific location".
③ Specify the provided driver installation folder using Browse.
④ You can check the installation when you find "Telechips Firmware Download Driver" in the Device Manager.

Step 2. Recovery Firmware V0.27 Configuration(※ specify the latest firmware when you specify the installation path)

How To: ① Run FWDN.exe. (In the early process of installation, an error can occur due to unspecified firmware (ROM) path. However, you can ignore it and proceed)

② Select Options->Preferences..Open->

- .
- .
- .
- .

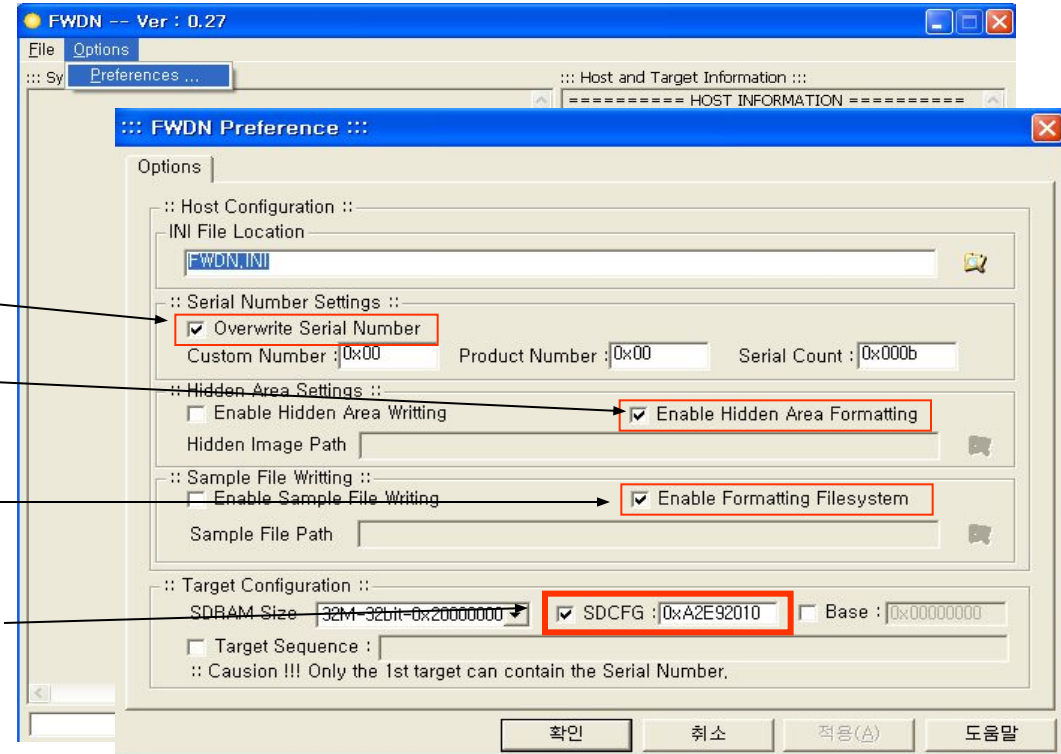
[Serial Number Settings] Check "Overwrite Serial Number"

[Hidden Area Settings] Check "Enable Hidden Area Formatting"

[Sample File Writing] Check "Enable Formatting Filesystem"

[Target Configuration] Check "SDCFG", Text Marking: 0xA2E92010

Apply>OK.



Subject: How to Use D2 Recovery Program v0.27

③ Click File > Open ROM File and select the firmware file, “d2.bin”. (Select the latest firmware)

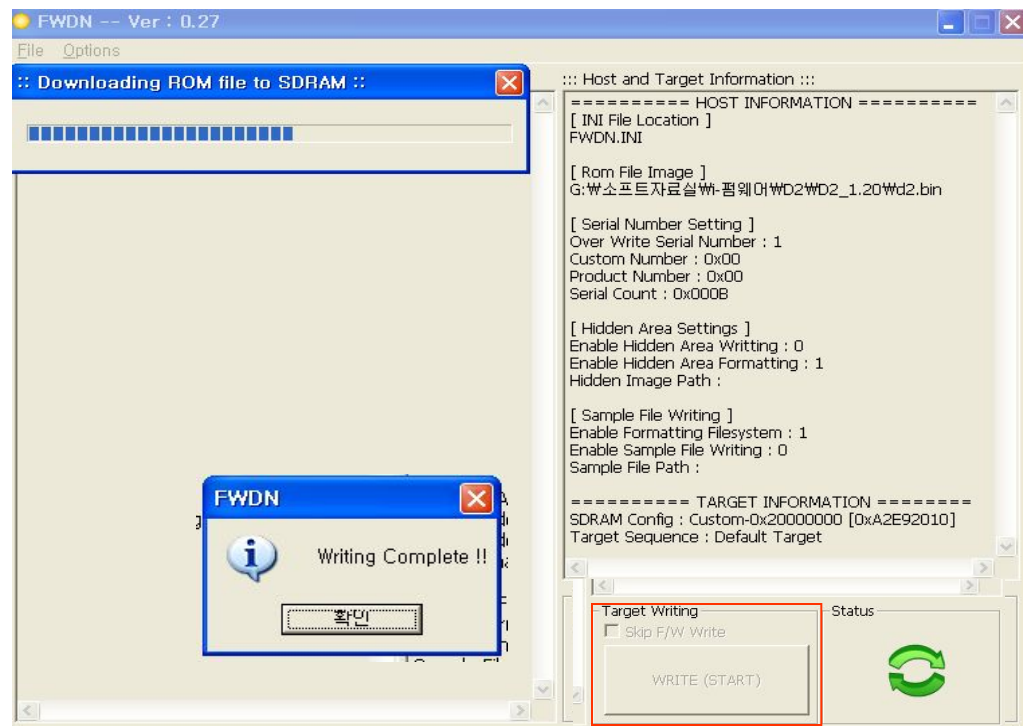
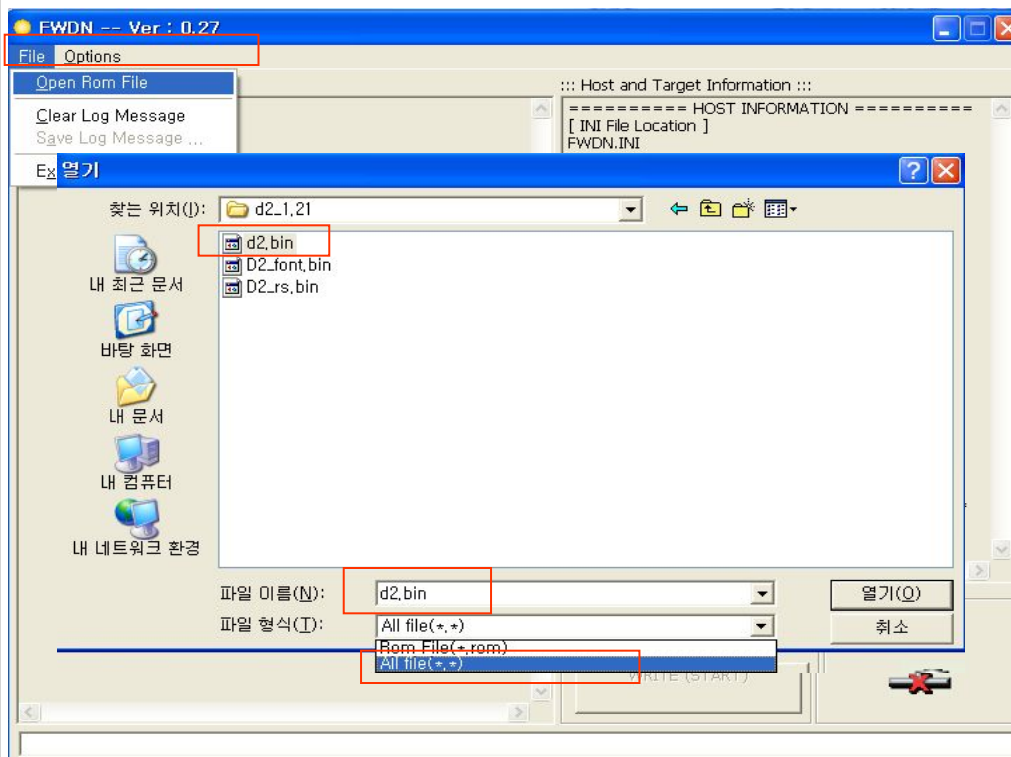
You can not find the file until you select “All file(*.*)” for the file format.

Step 3. WRITE

How To: ① Download the firmware file and you can check the status as in the figure and find the WRITE button in the right bottom is activated.

② Press the WRITE button to start writing.

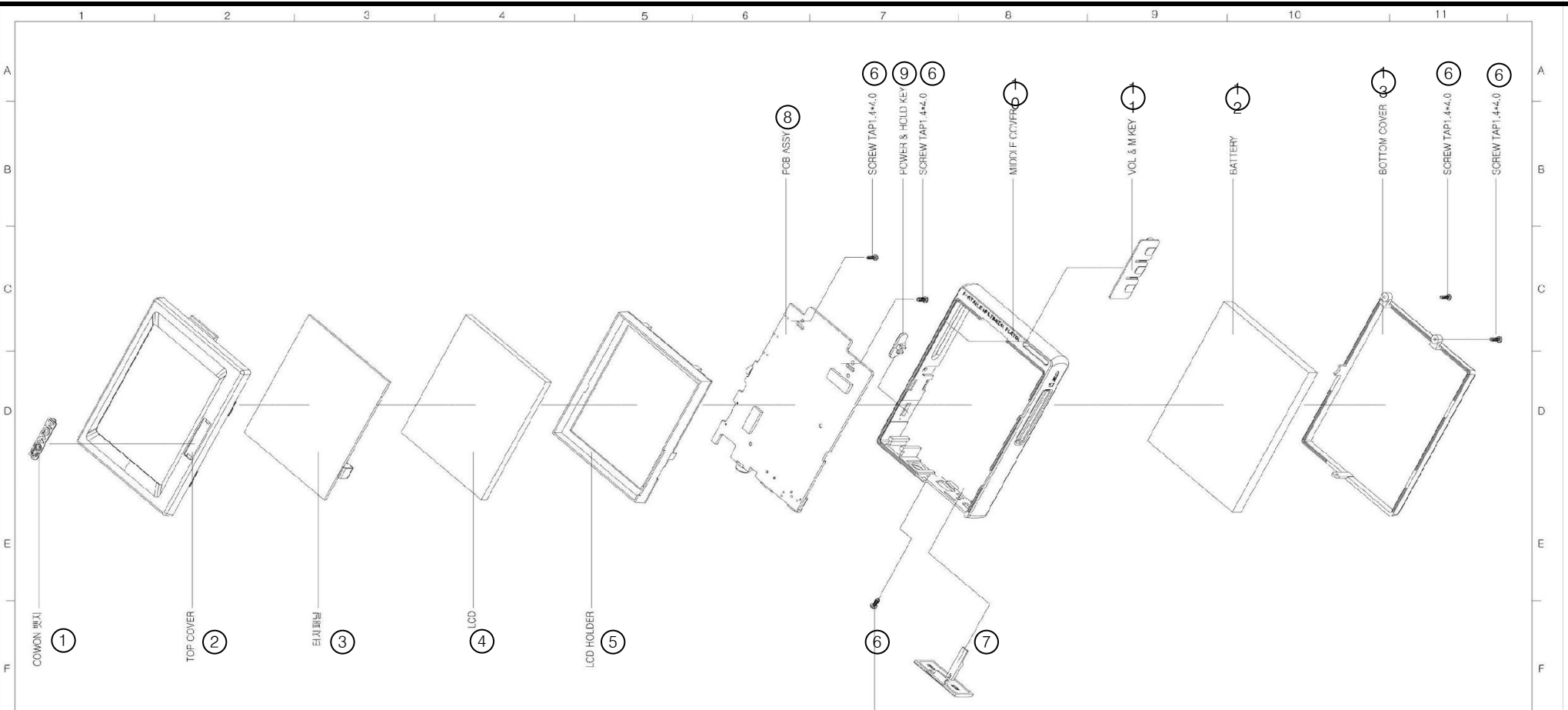
③ When done, the Writing Complete message pops up. Click OK to finish.



※ ※ When it failed, close the window and restart the player before repeating steps 2 .

4Step 4. If you encounter noise on the display after the recovery, copy D2_font and bin and D2_rs.bin files to the loot folder and proceed with the upgrade

6. Case Perspective View



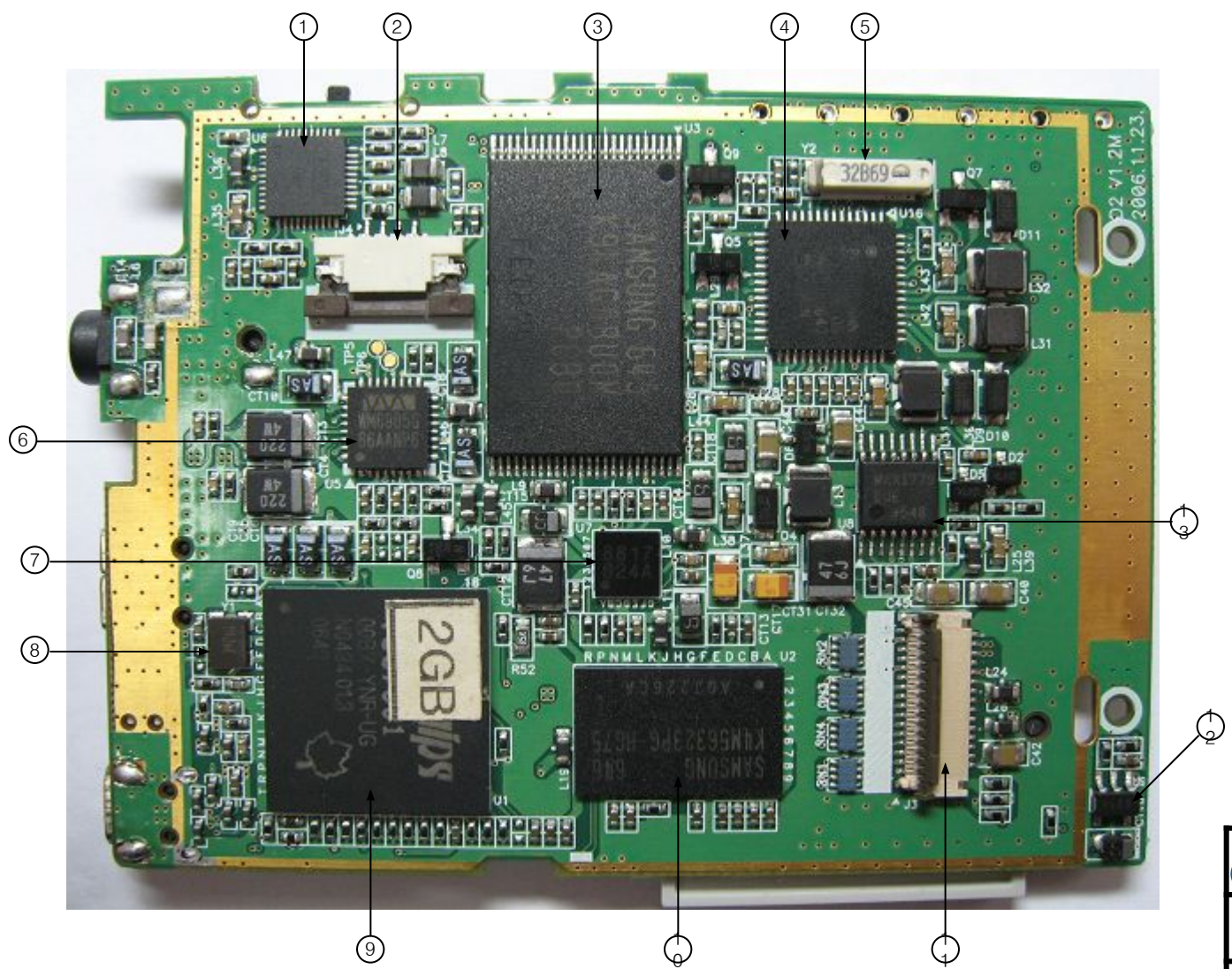
No	PART CODE	PART NAME	Q`TY
1	D2-KNOB005	COWON 배지	1
2	D2-CASE001~5	CASE UPPER WH, LM, RD, PK, BK	1
3	D2-LCD0001	D2 TOUCH LCD ASS`Y	1
4	D2-LCD0001	DE TOUCH LCD ASS`Y	
5	D2-LCD0002	LCD HOLDER	1
6	U2-TAP0009	SCREW1.4*4 Common:U2,M3,X5,M5,A2,F1	5
7	D2-KNOB001	IO COVER	1

No	PART CODE	PART NAME	Q`TY
8	D2-PCB0001	MAIN BOARD ASS`Y	1
9	I6-KNOB001	Power/HOLD KEY knob (common:i6)	1
10	D2-CASE006	SILVER MIDDLE CASE	1
11	D2-KNOB002	VOL KEY Knob	1
12	D2-BAT0001	BATTERY PACK (1600mAh)	1
13	D2-CASE007	CASE BOTTOM WH	1

D2 분해도
* 일부 참고용

7. Circuit Parts List (1/3)

(1) Main Board Front



No.	PART CODE	PART NAME
1	D2-CHIP004	FM IC
2	D2-CO00004	TOUCH PADCONN
3		MEMORY(MLC TYPE)
4	A2-CHIP003	POWER IC (common:A2,U3,i6)
5	F2-CHIP003	X_TAL 32.768KHz(common:U3,F2)
6	D2-CH00004	CODEC IC
7	D2-CH00005	TV Out IC
8	T2-CHIP002	X_TAL 12MHz(common:U3,T2,F2)
9		TELECHIPS 7801
10		SDRAM
11	D2-CO00003	LCD CONN
12	D2-CH00006	LED DRIVER IC
13	D2-CH00003	CONVERTER IC

DIGITAL PRIDE

COWON COWON D2
MAIN BOARD PHOTOGRAPH FRONT

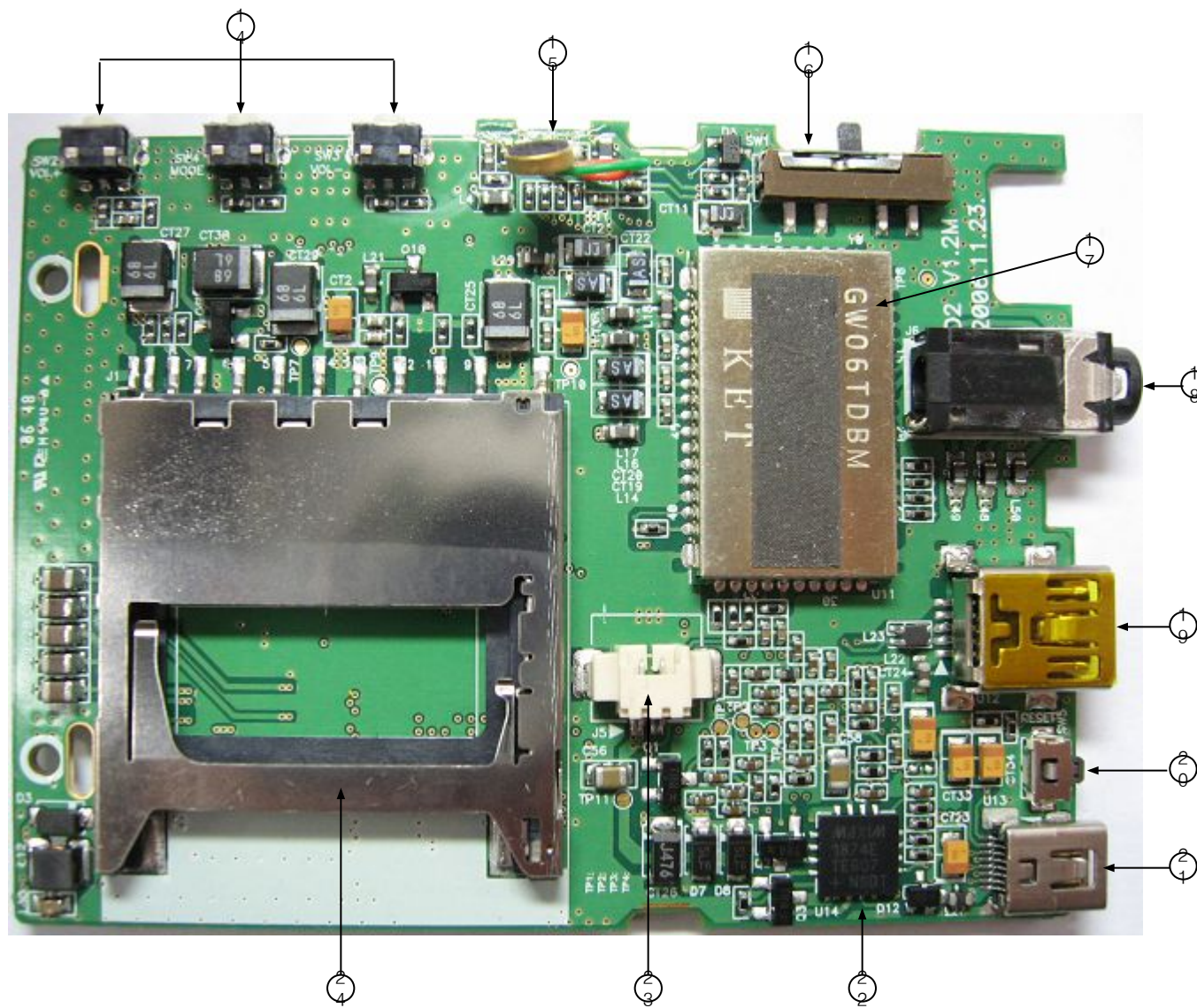
Customer Service Center,
Strategic Planning Dept, COWON SYSTEMS, Inc.

Date: Thursday, December 21, 2006
Rev:1.0

Sheet 1 of 3

PART NAME : COWON D2 MAIN BOARD Front

(2) Main Board Rear



No.	PART CODE	PART NAME
14	A2-CON0011	TACK SW(common:A2)
15	D2-AS00001	MICROPHONE
16	X5-CON0003	POWER/HOLD SW
17	D2-CH00001	DMB TUNER
18	D2-CO00001	PHONE JACK
19	A2-CON0003	USB CONN
20	CW200-CO05	TACK SW
21	T2-CON0001	MINI USB CON (common: T2)
22	D2-CH00002	CHAGE IC
23	D2-CO00005	BATT CONN
24	D2-CO00002	SDIO CARD

PART NAME : COWON D2 MAIN BOARD Rear

DIGITAL PRIDE

COWON COWON D2
MAIN BOARD PHOTOGRAPH Rear

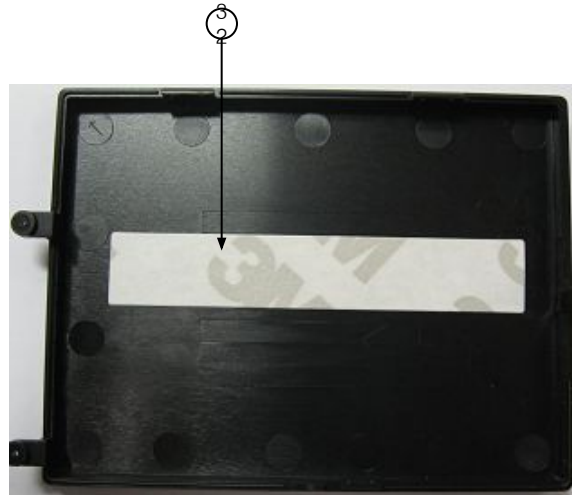
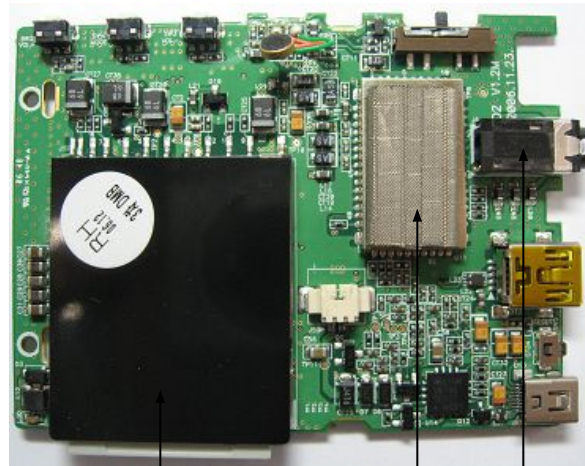
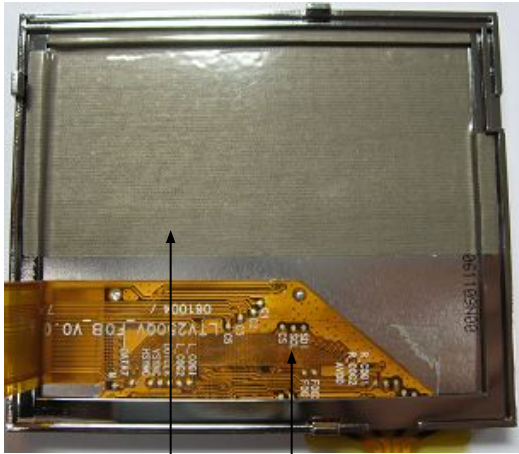
Custmer Service Center,
Strategic Planning Dept, COWON SYSTEMS, Inc.

Date: Thursday, December 21, 2006
Rev1.0

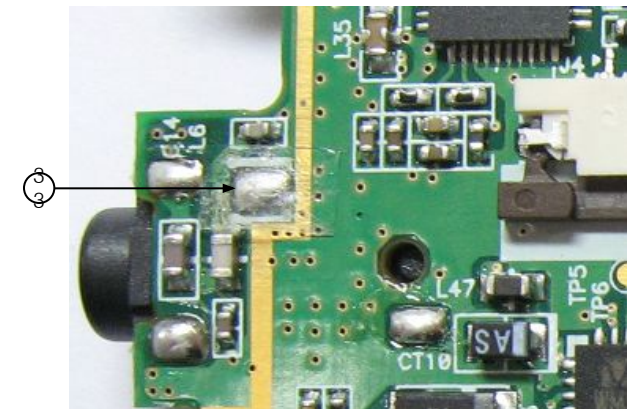
Sheet 2 of 3

COWON D2

(3) EMI CUSHION / SHEET



No.	PART CODE	PART NAME
25	D2-TA00005	LCD BRKT TAPE
26	D2-TA00003	FPCB TAPE
27	D2-TA00009	SD CARDPLATE
28	D2-TA00004	DMB GASKET
29	D2-TA00002	PHONE TAPE
30	D2-TA00008	PCB EMI TAPE B
31	D2-TA00007	PCB EMI TAPE A
32	D2-TA00010	BATT TAPE
33	D2-TA00006	INSULATION A (attached to the phone-jack soldering point)



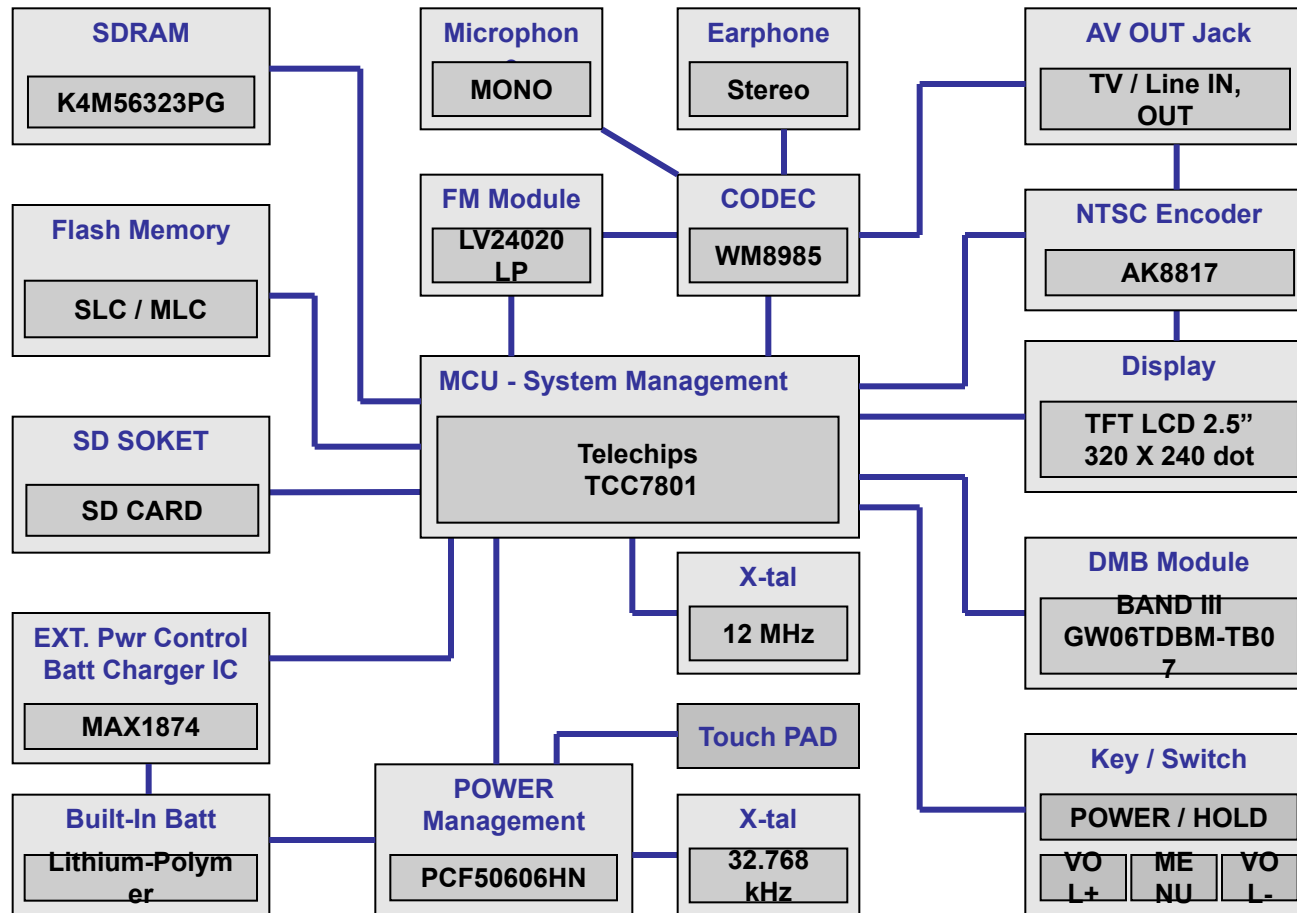
DIGITAL PRIDE COWON D2

COWON MAIN BOARD PHOTOGRAPH Sheet

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Date: Tuesday, September 12, 2006	Sheet 3 of 3
Rev:1.0	

8. COWON D2 Block Diagram



	D2 PMU Power Terminal	Reset	Set
①	IOVDD	3.3V	3.0V
②	D1VDD	1.1V	3.0V
③	D2VDD	1.8V	1.8V
④	D3VDD	1.3V	3.3V
⑤	DCD	1.3V	1.2~1.1V
⑥	DCUD	3.3V	3.0V
⑦	DCDE	3.3V	3.3V (USB Connected: 3.3V, Normal: 2.1V)
	LCD Backlight	If any LCD: 12V, If no LCD: 36V	

① IOVDD (Regulator / LDO)

– Used in I/O transaction between PMU and external device (s) : Use 7801 IO, PMU IO, 7801_ADC(Analog Digital Converter)

② D1VDD (Regulator / LDO)

– Supplies power for FM reception. (Check this out if FM reception is not working)

③ D2VDD (Regulator / LDO)

– Used for SDRAM, DMB(RF terminal), Codec Core and 7801_MEM.

④ D3VDD (Regulator / LDO)

– Supplies power solely for Codec AVDD. (Check this out if no sound is output)

⑤ DCD

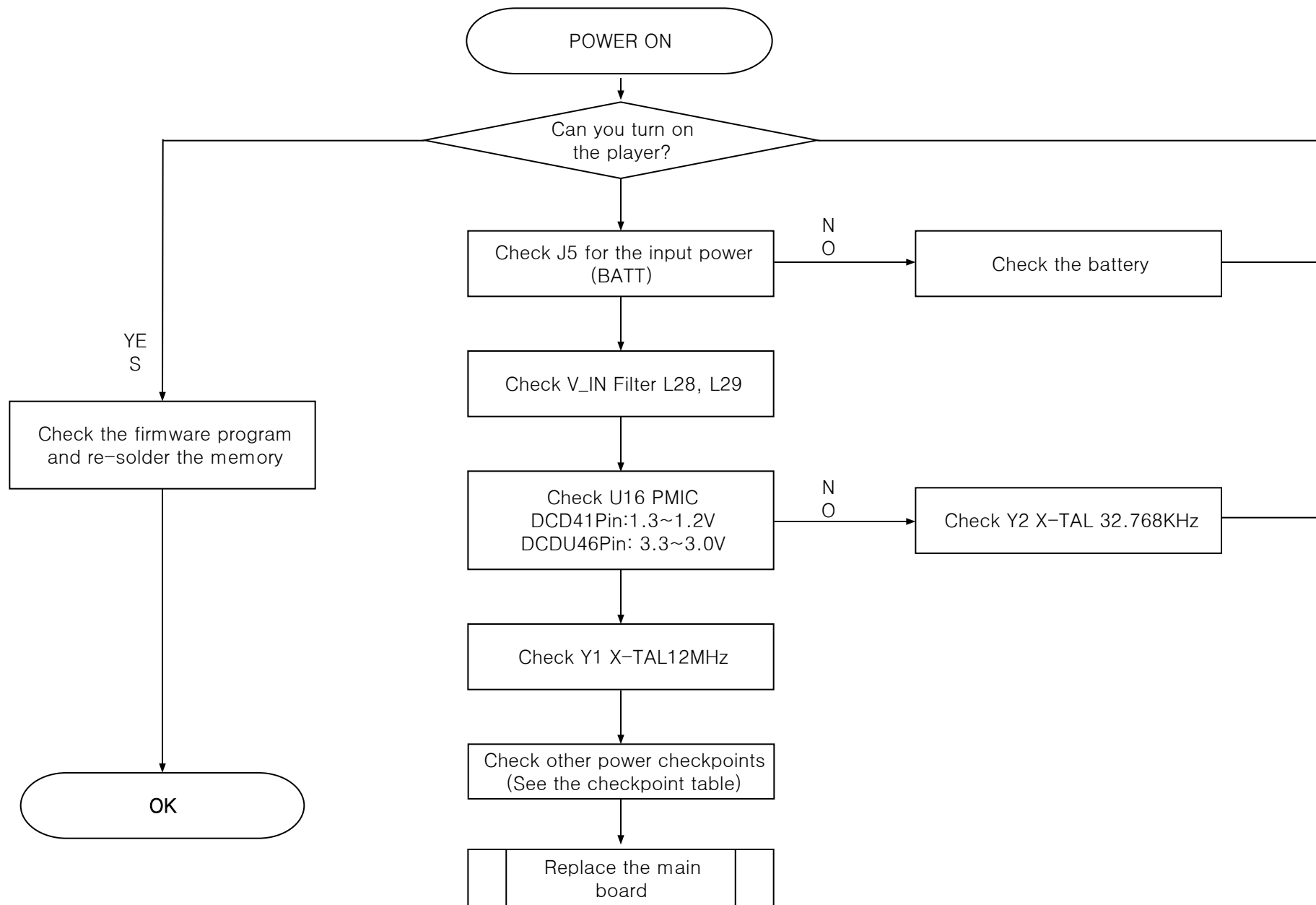
– 7801 Core, DMB core

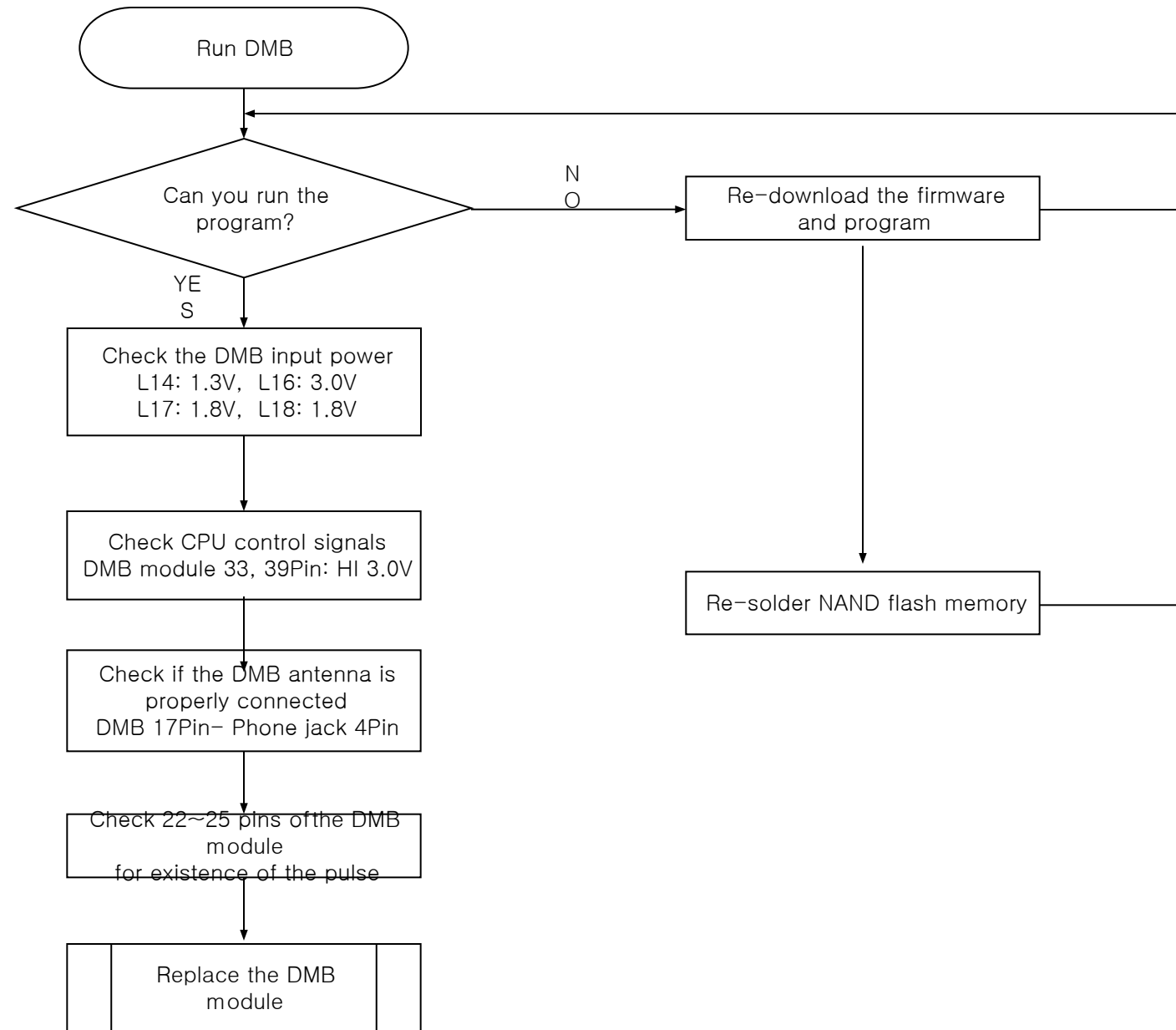
⑥ DCUD

– 7801 Various IO, NAND, LCD, TVOUT, DMB IO

⑦ DCDE

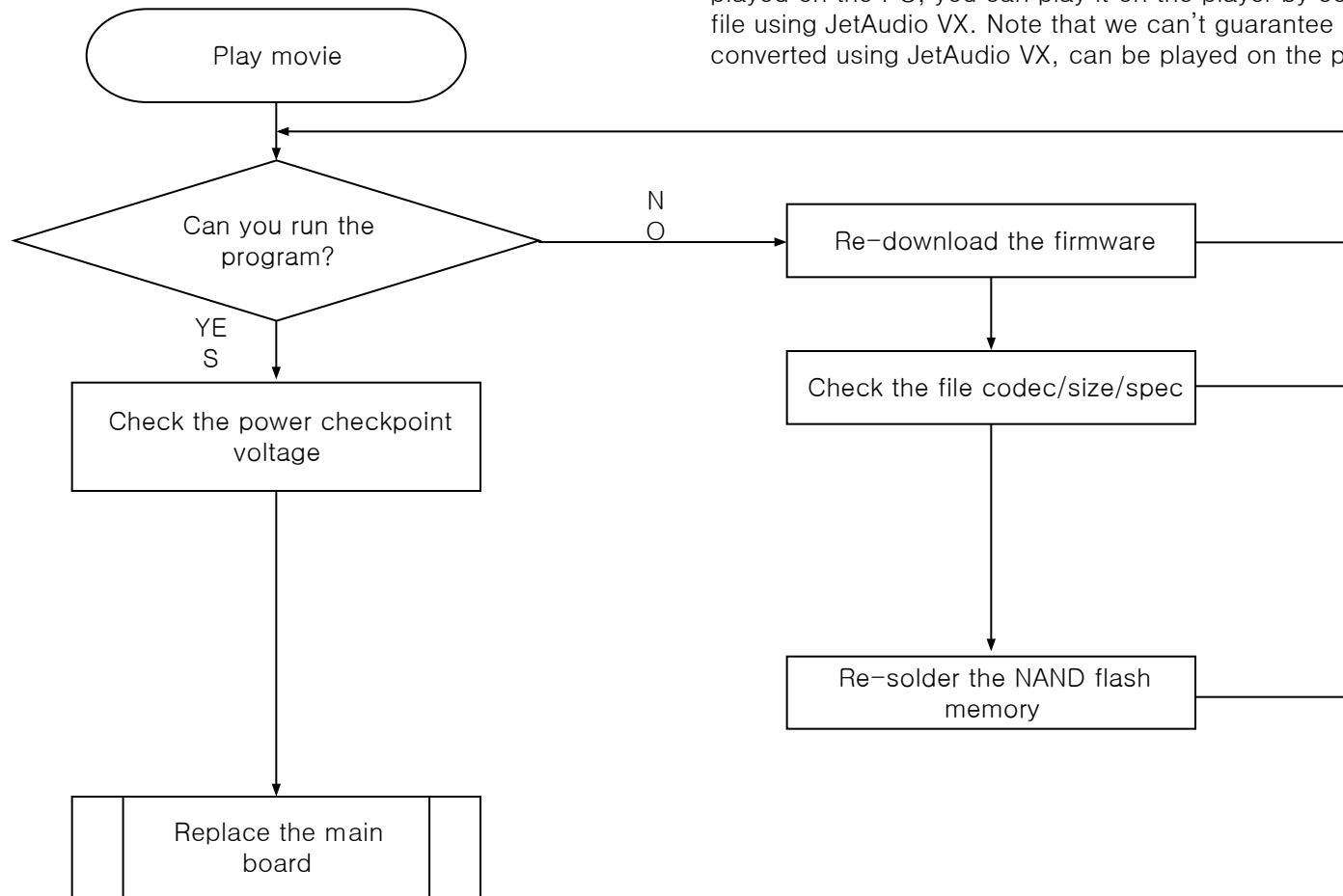
– 7801_UTC단(Check if it measures 3.3V only under USB connection .)

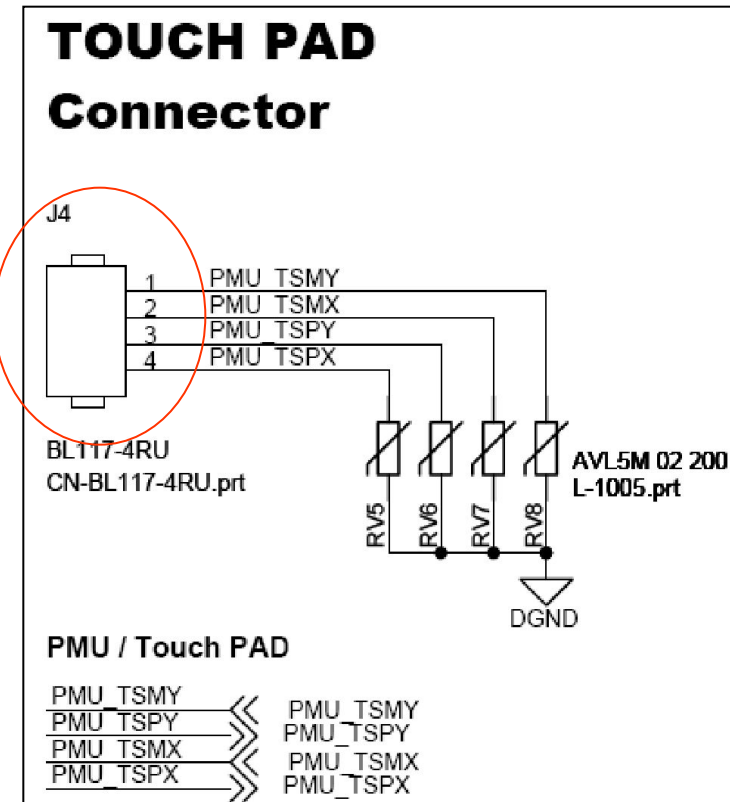
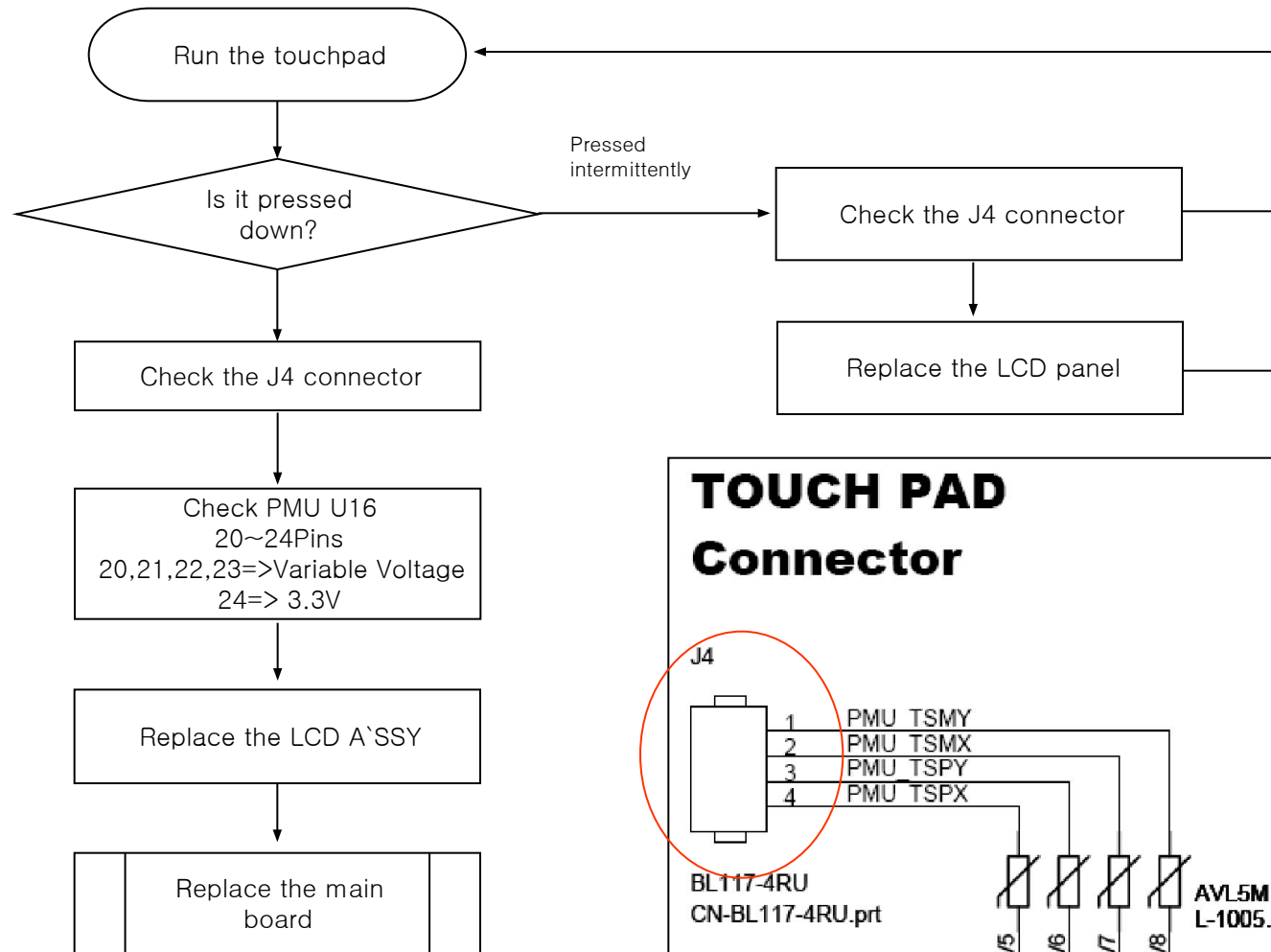




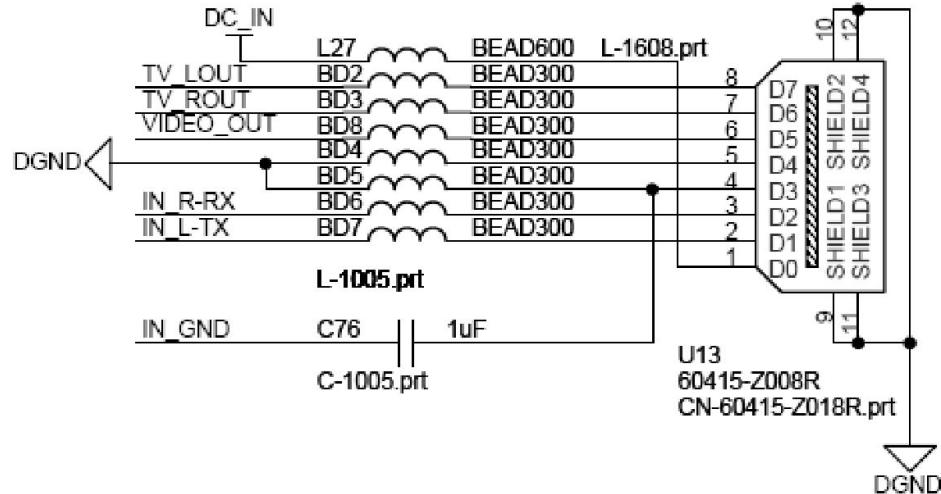
※ Movie is not played.

□ Copy the movie to the PC before playing it. If the movie is properly played on the PC, you can play it on the player by converting the movie file using JetAudio VX. Note that we can't guarantee all movie files, once converted using JetAudio VX, can be played on the player.

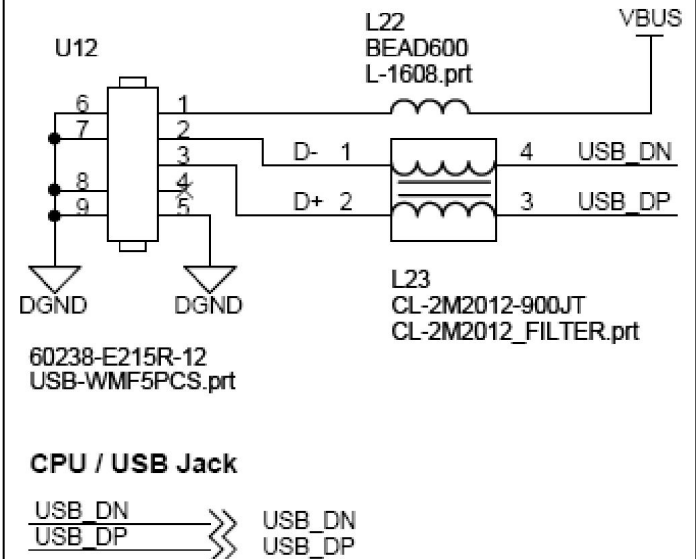




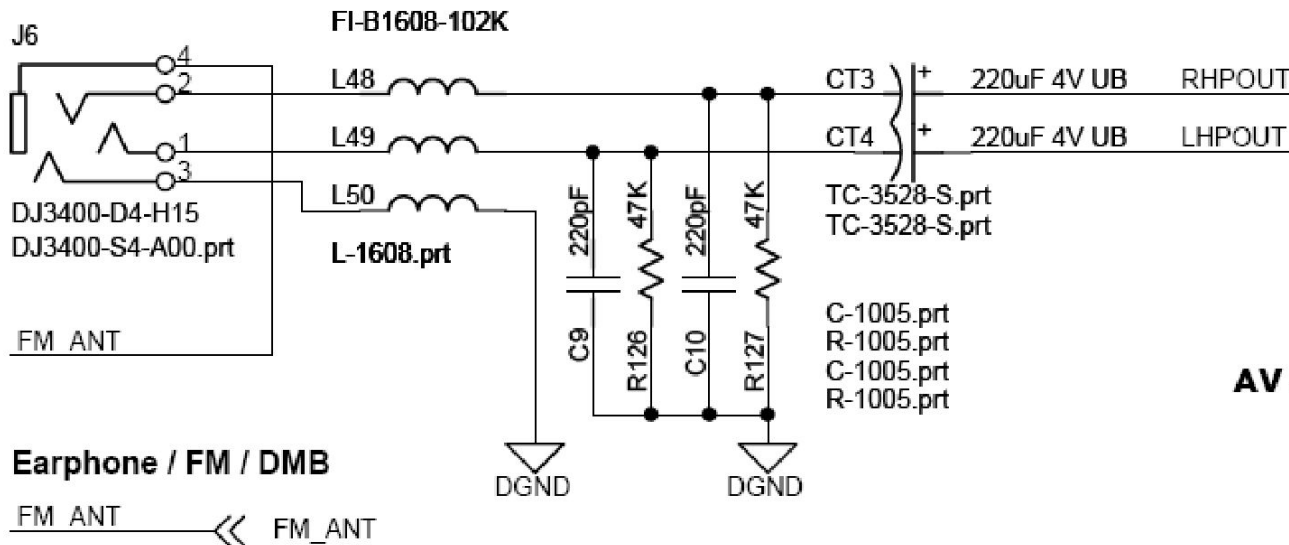
AVOUT Jack (AVout / Remocon / Line in)

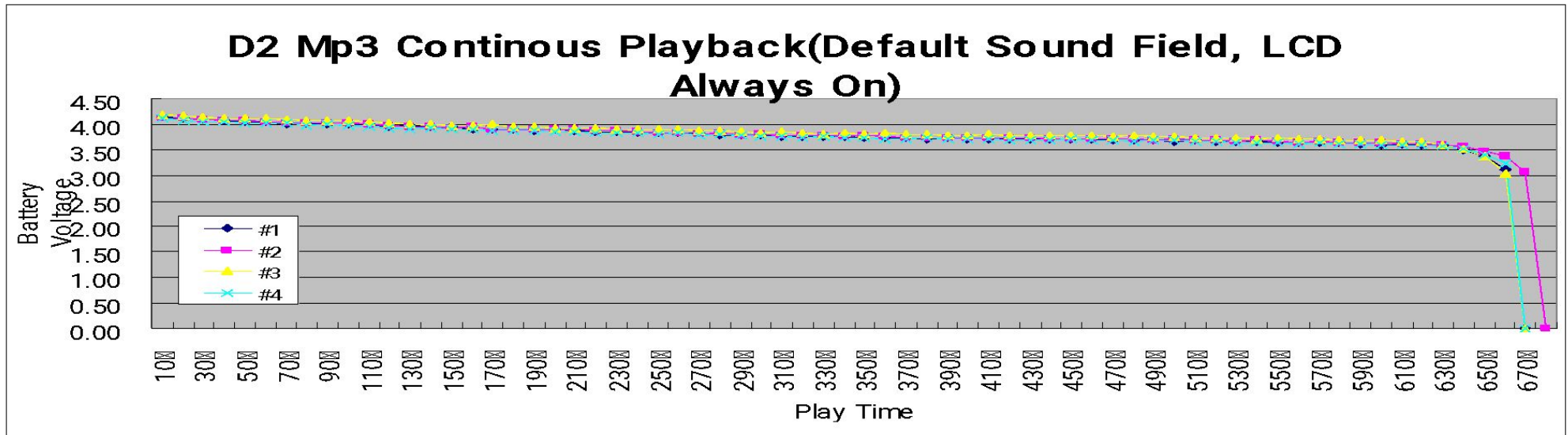


USB JACK

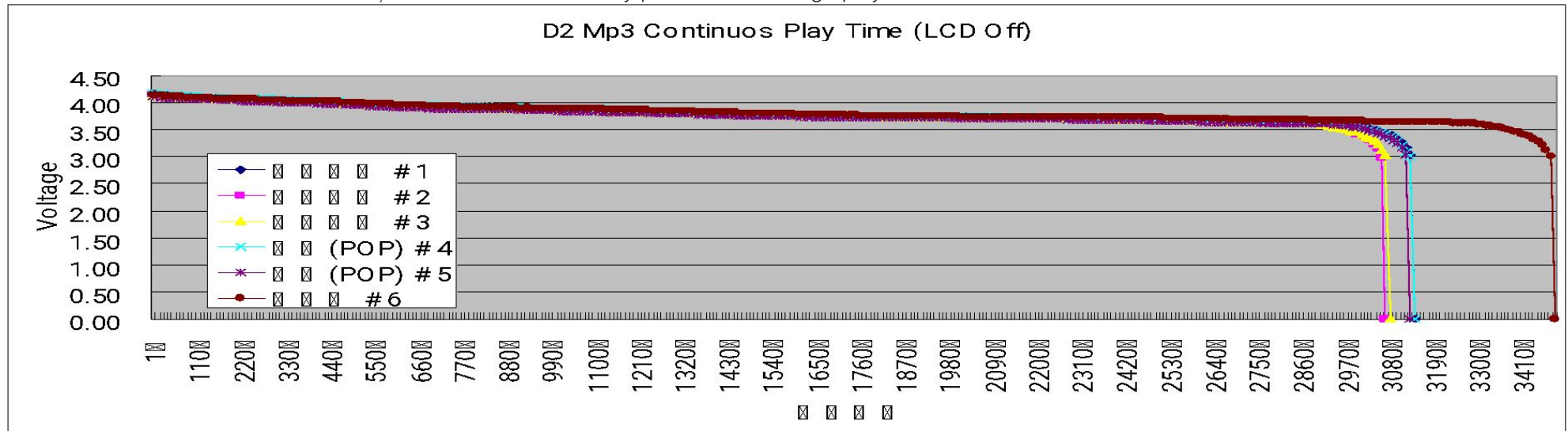


AUDIO OUT





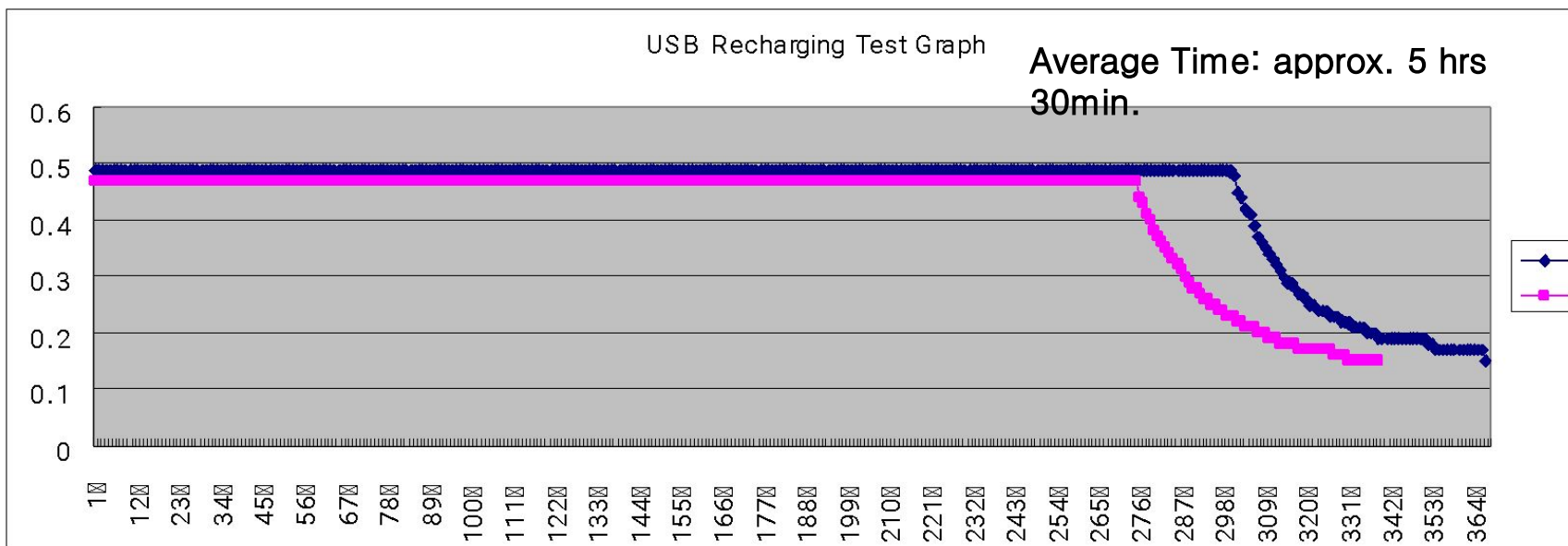
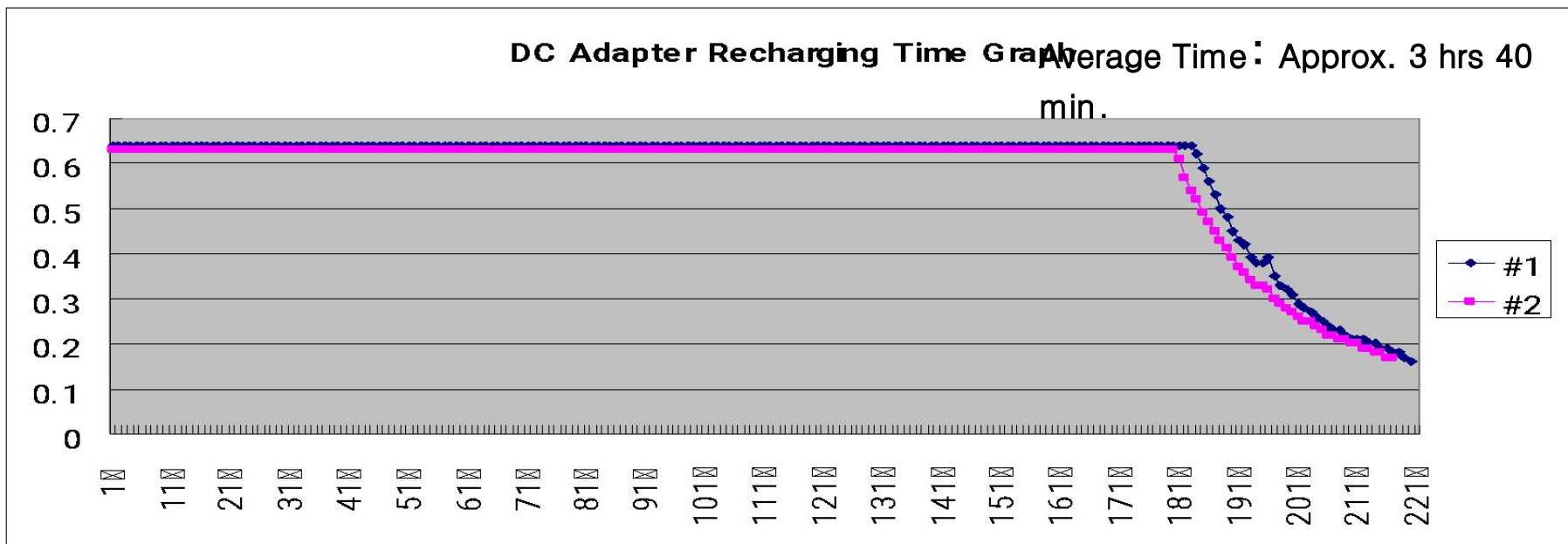
* The first data is recorded one minute after the sample boot / since then, recorded every 10 minutes That's why we deduct 10 min from the final end time. And the measurement time is decided, based on 3.5V in battery power. The average play time is **50 hrs and 37.5 min**.



*The first data is recorded one minute after the sample boot / since then, recorded every 10 minutes / The end time is based on 3.5V in battery power

* The average play time in the default sound fields (#1, #2, #3) is 49 hrs and 50 min.

*Play time in no sound field (#6) is 56 hrs and 10 min . / Played for additional 1 hr and 50 min , up to 3.0V.



■ iAUDIO Power Consumption Analysis			(061030) D2 V1.0 Core 1.10V/DCDE 2.10V		
Item	Standard (Unit: mA)		Volume = 15 (Default)		
			Default	No Sound Filed	
Peak current at boot mode			In the Main Menu		
Quiescent Current in power-off			Power Consumption to the Backlight value		
Quiescent Current in power-on					
MP3	128Kbps (iAUDIO Friends & Lovers.mp3)	BL on	Screen Brightness	Total Power Consumption	Backlight Current
		BL off	10	161 mA	103 mA
WMA	wma _9.1_VBR_128		9	155 mA	97 mA
OGG	OGG_VBR_450		8	148 mA	90 mA
FLAC	44100Khz - 16bit - Stereo - Compression Ratio 0		7	141 mA	83 mA
MPEG4	128Kbps 16 bit, MPEG Layer-3 / 12 frame, 72kbps		6	134 mA	76 mA
Listen to FM Radio			5	129 mA	71 mA
Record FM radio program			4	124 mA	66 mA
Voice Record			3	118 mA	60 mA
Play Voice Record			2	112 mA	54 mA
Line-in Record			1	108 mA	50 mA
Line-in Play			0	58 mA	

13. COWON D2 Bill of Material

	Part No.	Item	Description (Spec)	Applied
D e v i c e	D2-CA00001	CASE UPPER	TOP WHITE	D2
	D2-CA00002	CASE UPPER	TOP LIME	D2
	D2-CA00003	CASE UPPER	TOP RED	D2
	D2-CA00004	CASE UPPER	TOP PINK	D2
	D2-CA00005	CASE UPPER	TOP BLACK	D2
	D2-CA00006	CASE MIDDLE	MIDDLE SILVER	D2
	D2-CA00007	CASE BOTTOM	DMB WHITE 2G	D2
	D2-CA00008	CASE BOTTOM	DMB LIME 2G	D2
	D2-CA00009	CASE BOTTOM	DMB RED 2G	D2
	D2-CA00010	CASE BOTTOM	DMB PINK 2G	D2
	D2-CA00011	CASE BOTTOM	DMB BLACK 2G	D2
	D2-CA00012	CASE BOTTOM	REAR WHITE 2G	D2
	D2-CA00013	CASE BOTTOM	REAR BLACK 2G	D2
	D2-KN00001	USB COVER	IO COVER	D2
	D2-KN00002	KNOB VOL KEY	VOL KEY ASSY	D2
	D2-KN00003	KNOB BADGE	COWON LOGO	D2
	I6-KNOB001	KNOB POWER	Power Hold Knob	I6,D2
C i r c u i t	D2-CO00001	PHONE JACK	DJ3400-S4-H15	D2
	D2-CO00002	SDIO CARD	FPS009_2405	D2
	D2-CO00003	LCD CONN	54809-3198	D2
	D2-CO00004	TOUCH PAD CONN	BL117-4RU	D2
	D2-CO00005	BATT CONN	53261-02-H3.4-0271	D2
	D2-CH00001	DMB TUNER	GW06TDBM-TB07	D2
	D2-CH00002	CHAGE IC	MAX1874_QFN	D2
	D2-CH00003	CONVERTER IC	MAX1779	D2
	D2-CH00004	CODEC IC	WM8985	D2
	D2-CH00005	TV OUT IC	AK8817	D2
	D2-CH00006	LED DRIVER IC	SM8121A	D2

	Part No.	Item	Description (Spec)	Applied
M a n u a l I n s e r t	A2-CON0003	USB CONN	60238-R215-12	I4,U2,G3,F2,A2,D2
	A2-CON0011	TACT SW	SKRTLAE010	A2,D2
	T2-CON0001	USB CONN	60415-Z008R	T2,D2
	X5-CON0003	POWER HOLD SW	SSSS7A0101	X5,M5,i6,F2,D2
	T2-CHIP002	X-TAL_12MHz	DSX321G_12MHz	U3,T2,F2,D2
	T2-CHIP004	FM IC	LV24020LP	T2,D2
	F2-CHIP003	X-TAL_32.768KHz	SSP-T6_32.768KHz	U3,F2,D2
	A2-CHIP003	POWER IC	PCF50606HN	A2,U3,i6,D2
	D2-LC00001	LCD	2.5 " TOUCH LCD ASSY	D2
	D2-LC00002	LCD HOLDER	LCD Holder	D2
	D2-AS00001	MIC	MICROPHONE	D2
D2-AS00002	SD CARD COVER	SD CARD Dummy	D2	
D2-BA00001	BATT PACK	455066_1600MAH	D2	
C i r c u i t	D2-TA00001	BADGE TAPE	3M	D2
	D2-TA00002	PHONE TAPE	INSU TAPE 12 * 10 0.05T	D2
	D2-TA00003	F PCB TAPE	INSU TAPE 40 * 10 0.1T	D2
	D2-TA00004	DMB GASKET	FORM GASKET 2T	D2
	D2-TA00005	LCD BRKT TAPE	0.05T Conductivity+0.04T INSU TAPE	D2
	D2-TA00006	INSULATION A	5 * 3	D2
	D2-TA00007	PCB EMI TAPE A	Conductive One-sided TAPE 0.1T	D2
	D2-TA00008	PCB EMI TAPE B	Conductive One-sided TAPE 0.1T	D2
	D2-TA00009	SD CARD PLATE	PET FILM 0.3T	D2
	D2-TA00010	BATT TAPE	3M	D2
	D2-TA00011	PEACE TAPE	Piece Tape	D2
U2-TAPE000	SCREW	1.4 * 4	U2,M2,Y5,M5,A2,E1	