

Service Service Service



Service Manual

TABLE OF CONTENTS

	Chapter
Technical Specification and Service hints.....	1
Safety Instructions.....	2
Instructions for Use.....	3
Mechanical Instructions.....	4
Exploded view and Service parts list.....	5
Troubleshooting flow.....	6
Overall Block diagram.....	7
Overall Electrical diagram.....	8
Revision list.....	9

©Copyright 2005 Philips Consumer Electronics B.V. Eindhoven, The Netherlands
All rights reserved. No part of this publication may be reproduced, stored in a
retrieval system or transmitted, in any form or by any means, electronics,
mechanical, photocopying, or otherwise without the prior permission of Philips

3141 785 30710

1.0 TECHNICAL SPECIFICATION and SERVICE HINTS

General

Dimensions (WxLx H) :	64 x 104 x 16.8 mm (2.52 x 4.09 x 0.66 inch)
Weight :	150g
Output power :	2 x 5 mW (16 Ohm)
Frequency response :	20 – 16000 Hz
Equalizer :	5-bands
Hard disk :	1.8" 30GB HDD
Capacity :	30GB
Display :	220 x 176 pixels, 65K color
Backlight :	White
Battery :	830 mAh Li-ion internal rechargeable battery
Battery life time:	>15 hours
File transfer rate using USB :	>4MB/s
Battery charging current	450mA
Maximum charging time :	4 hours (Full)
Battery cutoff voltage:	<3.5V
Connections:	Stereo headphone DC charger input

Battery level detection

Detection Level	Typ.
4-step to 3-step voltage	3.6V ~3.7V
3-step to 2-step voltage	3.53V~3.6V
2-step to 1-step voltage	3.48V~3.53V
Force Power Off voltage	<3.5V

Current consumption

DC-IN SUPPLY (4.5V)	
Battery Charging Current	450mA
BATT. SUPPLY (3.7V)	
Power Off	300uA
Idle	3mA
Playback without HDD reading	41mA
Playback with HDD reading	390mA
File transfer using USB2.0	400mA

Headphone out (headphone output load 2x16 ohm)

Maximum output power :	10mW
Frequency response :	45Hz-16kHz 16Ω load 20Hz-16kHz 15kΩ load
SNR (A-wght) :	85dB
THD (1kHz) :	0.1% – 0.6%
Left-Right Channel	40dB
Separation :	
Left-Right Channel	<1.0dB
Balance :	

Supported playback format

MP3 :	8 - 320 Kbps and VBR
WMA :	32 - 192 Kbps
Sample rates :	8, 11.025, 16, 22.050 32, 44.1, 48
ID3-tag support :	Yes
PC Connectivity :	USB
File Transfer	
via Windows Media Player 10 for music or picture playback or Windows Explorer for general data (music playback disabled)	

Firmware and software upgrades

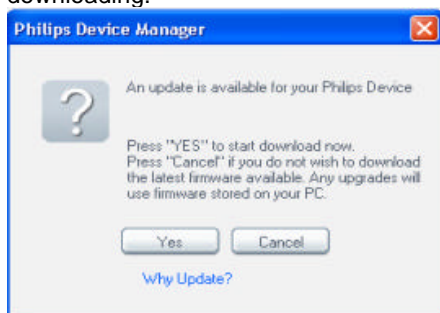
1. If you have not already installed the Device Manager download the latest version of the Device Manager from <http://www.philips.com/support>. You may need to enter your language preference and the model number e.g.HDD1630, to access the Device/Firmware Manager upgrade file.
2. Download the zip file into a temp folder in your computer. Unzip the file and then double click the Setup.exe file to start the installation of the Device Manager.
3. Once the installation is complete, connect the GoGear to the power supply with the AC/DC adapter.
4. Make sure all other applications such as Philips Device plug-in, Windows Media Player or Windows Explorer that accessing the device are closed or else Device Manager will not recognize the device. Launch the **Philips Device Manager** at **Start->Programs->Philips Device Manager->Philips Device Manager** on your PC
5. Click Update in the dialogue box



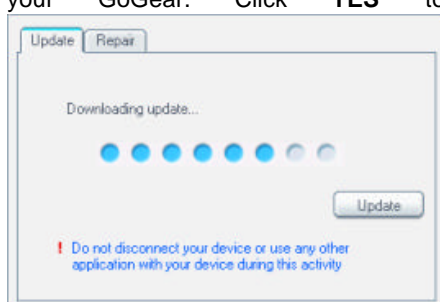
the **Philips Device Manager** will detect the connection of your GoGear and the application will automatically check on the server to see if an update

1.0 TECHNICAL SPECIFICATION and SERVICE HINTS

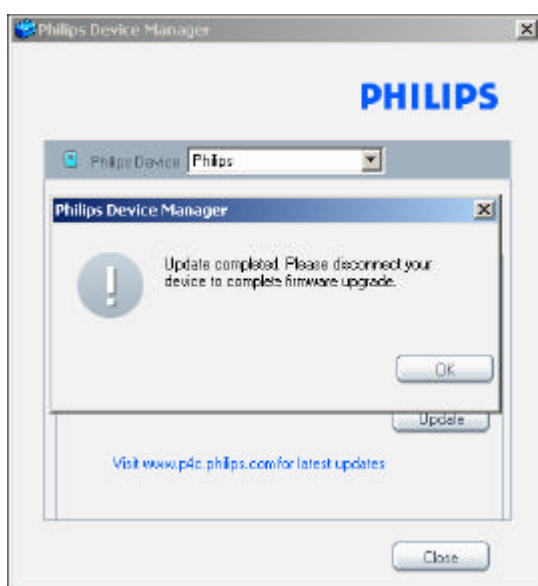
is available and prompt user to download the updated firmware. Click **YES** to start the downloading.



- A status bar will show the downloading progress of the firmware. Once the downloading is complete the application will prompt you to install the update onto your GoGear. Click **YES** to confirm



- The application will show the status of updating and at the end you need to click OK to complete the



update. (Please do not disconnect the jukebox during the upgrading process as this interruption

may damage the firmware!)

- Follow all screen instructions to complete the firmware upgrade.
- The Device Manager will close automatically once the success message is displayed. Close all opened application and then unplug your GoGear.
- Once the GoGear micro jukebox is disconnected from the computer, the display will show "Firmware Upgrading" for a couple of seconds and then start up as usual. If the message does not disappear after 2 minutes, do a soft reset by pressing and holding the Power on/off key and the volume + key for a couple of seconds.

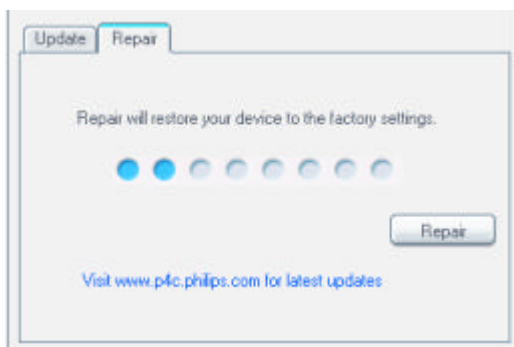
Repair the firmware with Device Manager

- If you have not already installed the Device Manager download the latest version of the Device Manager from <http://www.philips.com/support>. You may need to enter your language preference and the model number e.g.HDD1630, to access the Device/Firmware Manager upgrade file.
- Download the zip file into a temp folder in your computer. Unzip the file and then double click the Setup.exe file to start the installation of the Device Manager.
- Once the installation is complete, connect the GoGear to the power supply with the AC/DC adapter.
- Make sure all other applications such as Philips Device plug-in, Windows Media Player or Windows Explorer that accessing the device are closed or else Device Manager will not recognize the device. Launch the **Philips Device Manager** at **Start->Programs->Philips Device Manager->Philips Device Manager** on your PC.

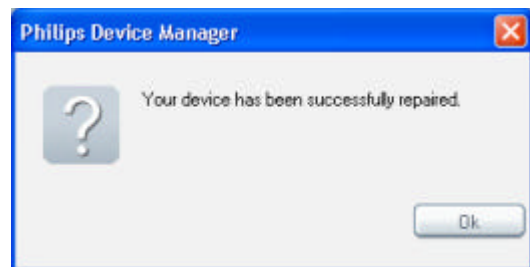
1.0 TECHNICAL SPECIFICATION and SERVICE HINTS



5. Click YES to start the downloading. A status bar will show the downloading progress of the firmware. Once the downloading is complete the application will prompt you to install the update onto your GoGear.



6. Once the repair is complete a dialogue box will pop up; click OK and unplug the GoGear from the computer.



IMPORTANT: All music & content of your micro jukebox will be erased once the factory setting is restored.

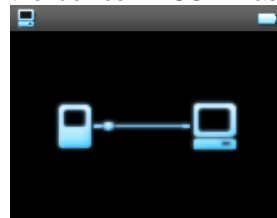
7. Follow all screen instructions to complete the repair.
8. The Device Manager will close automatically once the success message is displayed. Close all opened application and then unplug your micro jukebox.
9. Once the GoGear micro jukebox is disconnected from the computer, the display will show "Firmware Upgrading" for a couple of seconds and then start up as usual.

Service Hints

Rebuild database, firmware and Microsoft (Plays For Sure) copy protection key after replacement of hard disk or PCBA

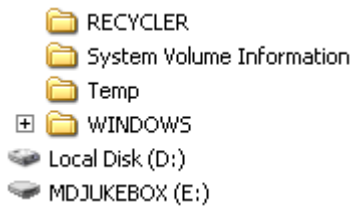
IMPORTANT: All devices having the hard disk or PCBA replaced must have the firmware image, database and the Plays For Sure key rebuilt before returning to customers.

1. Connect the GoGear to the power supply and the computer with the combined charger and USB cable.
2. Reset the device by pressing and holding down the Volume + and the power on/off slider switch until the display turns off.
3. While the device restart, press and hold the volume – key until the Philips splash screen disappear and showing the connection icon to put the device in USB Mass Storage Device mode.

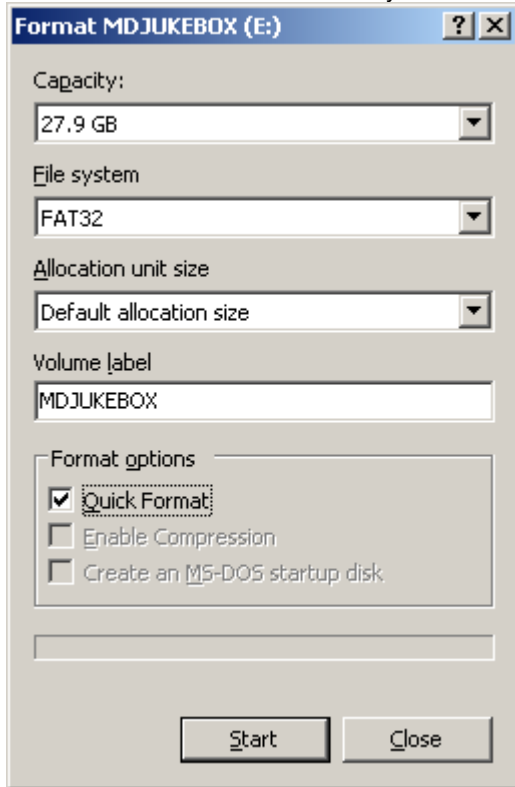


4. The device will be listed as a new drive named GOGEAR or MDJUKEBOX in Windows Explorer.


1.0 TECHNICAL SPECIFICATION and SERVICE HINTS



5. Launch Windows Explorer and then quick format the new drive to the file system FAT32



IMPORTANT: All music & content of your micro jukebox will be erased once the device is formatted.

6. Unzip and copy all the content of the shipment ui files of the corresponding model version into the root directory of the device. **(CD ROM with the Shipment ui files will be provided to repair workshops.)**
7. Disconnect the GoGear from the computer by clicking on the safely remove hardware  icon on the task tray.
8. Wait until the display shows "Burn success".
9. Reset the device again by pressing and holding down the Volume + and the power on/off slider switch until the display turns off.
10. Upgrade the firmware of the device to the latest version by following the procedure as mentioned under "Firmware software upgrades"

2.0 SAFETY INSTRUCTIONS

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD



NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

NL

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."



GB Warning !

Invisible laser radiation when open.
Avoid direct exposure to beam.

S Varning !

Osynlig laserstrålning när apparaten är öppnad och spårren är urkopplad. Betrakta ej strålen.

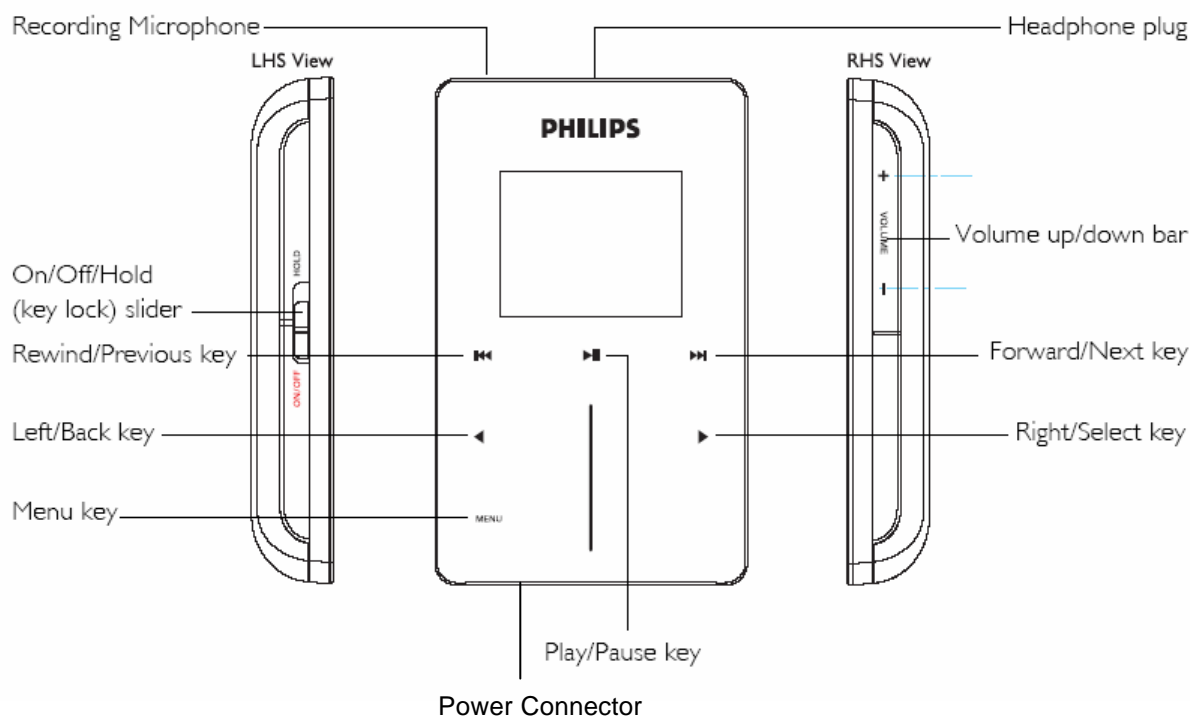
SF Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Advarse !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

3.0 INSTRUCTIONS FOR USE



Press	To
ON/OFF HOLD (slide down and hold for about 3 seconds)	Power on/off
ON/OFF HOLD (slide up)	Lock all touch control keys
▶▶	Play/Pause songs Stop radio playback
◀◀	Move back to previous song Fast rewind
▶▶	Jump to next song Fast forward
+ VOLUME -	Control volume
◀	Return to previous menu/option
▶	Select option Go to next option
VERTICAL TOUCH STRIP	Scroll through lists
MENU	Access list of menu options

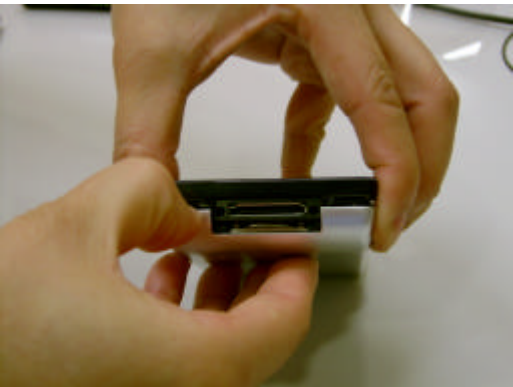
4.0 MECHANICAL INTRUCTIONS

Set Disassembly

1. Remove 2 screws at the bottom by screwdriver.



2. Use finger nail or screwdriver to carefully lift up the back cover of the device.



3. Gently open up the back cover.



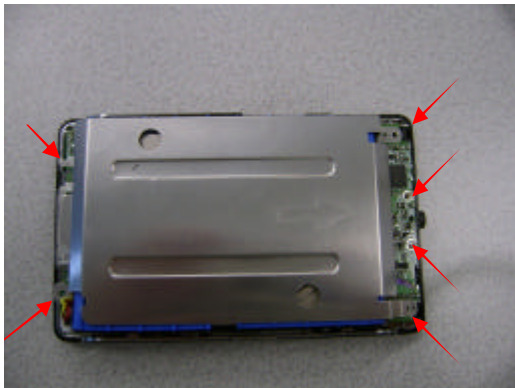
4. Remove the volume button.



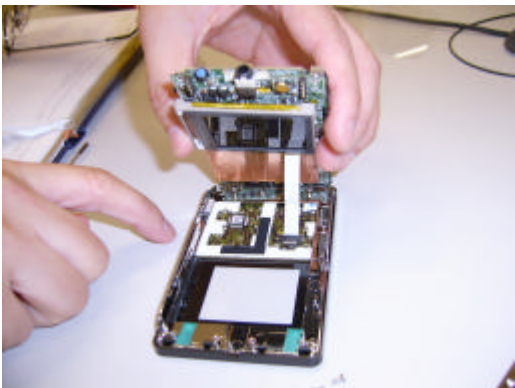
4.0 MECHANICAL INTRUCTIONS



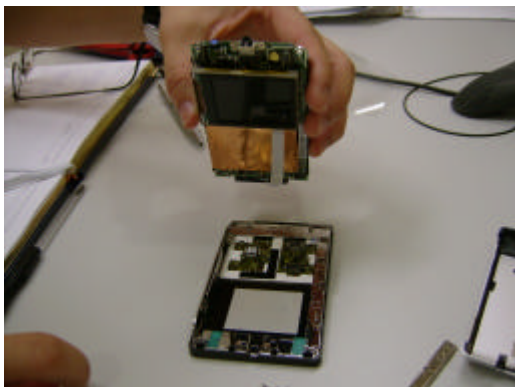
5. Remove the 6 screws on two sides.



6. See pointed arrow. There are 2 screws at the bottom side and 4 screws at the top side.

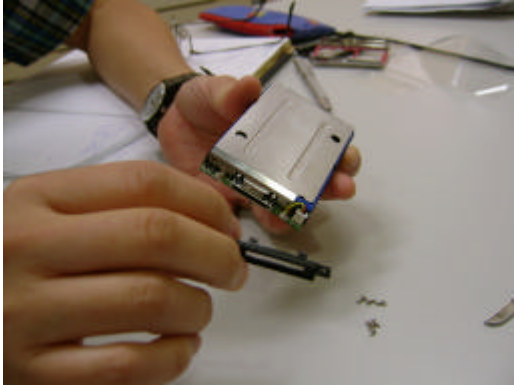


7. Open up and remove the bottom part.

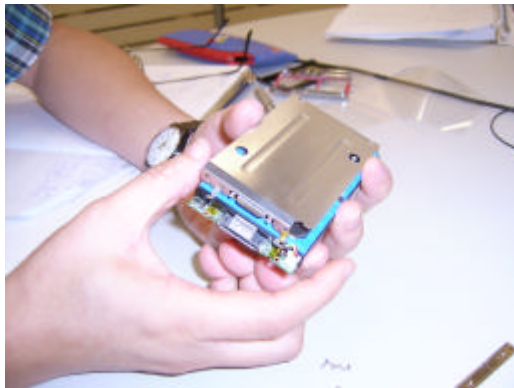


8. Disconnect the flex cable from the front touch screen module carefully.

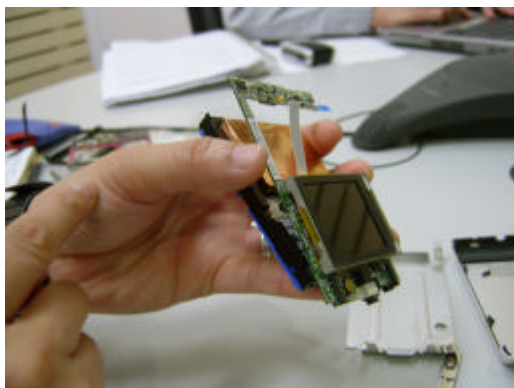
4.0 MECHANICAL INTRUCTIONS



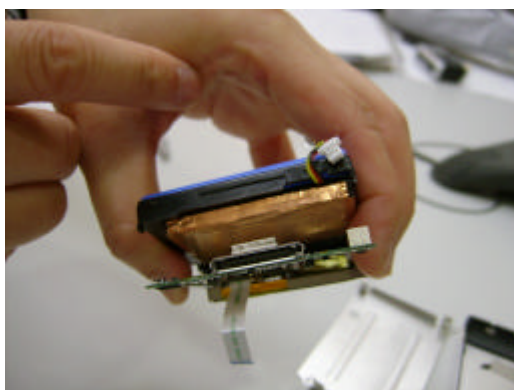
9. Turn to the back.



10. Open up the shielding carefully.



11. Be careful on the L-shape PCBA / LCD module.



12. Disconnect the flex cable of battery part from PCBA module.

4.0 MECHANICAL INTRUCTIONS



13. Disconnect the flex cable of hard disk from PCBA module.

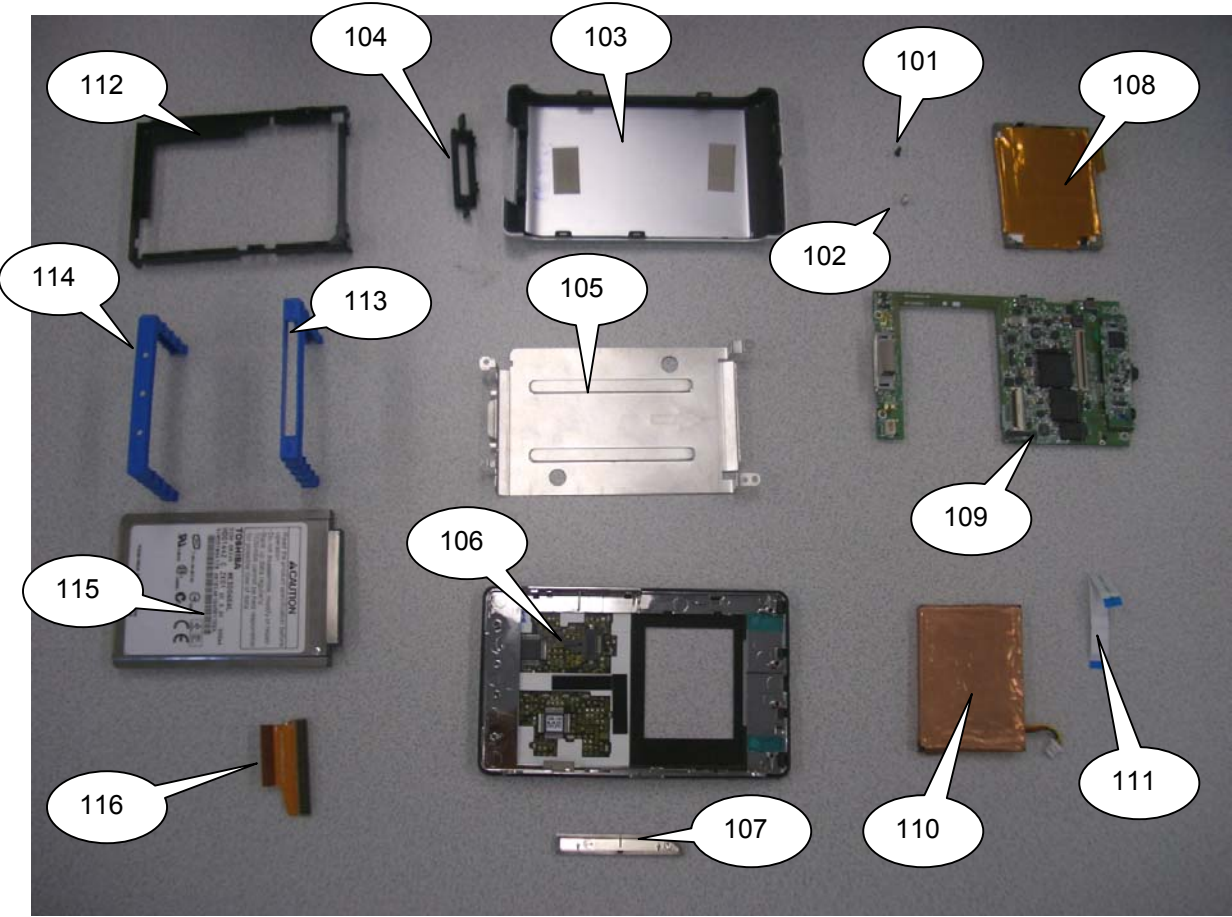


14. Remove the PCBA module.



15. Separate the battery from the hard disk.

5.0 EXPLODED VIEW & SERVICE PARTS LIST



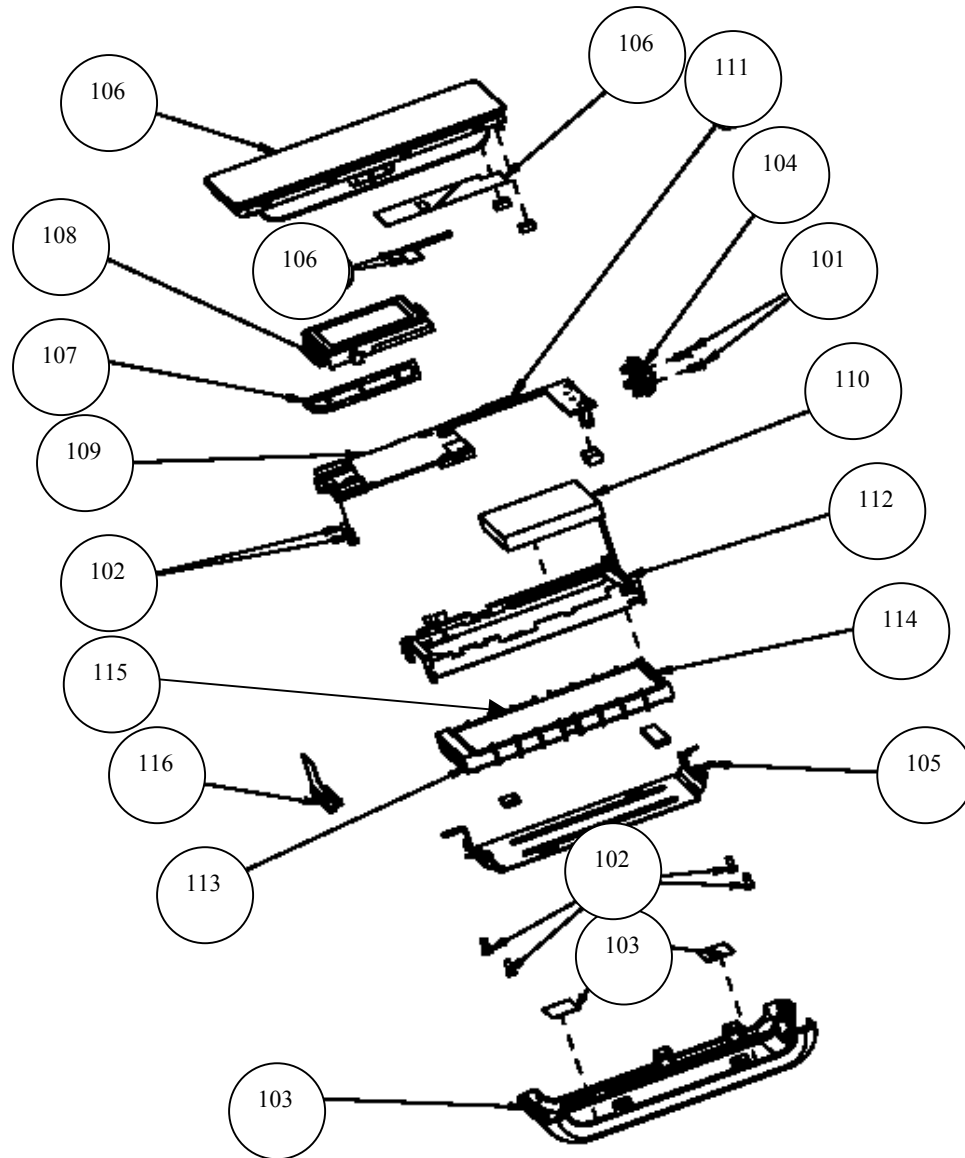
MECHANICAL PARTS

100	994000003526	T-ADHESIVE TAPE HDD SPACER
101	994000003528	SCREW M1,7L4WH CBZ
102	994000003529	SCREW M1.7L4WH FM CBZ
103	994000003562	BACK CABINET ASSY
104	994000003536	CRADLE HOLDER ARIZONA
105	994000003533	SHIELDING ARIZONA
106	994000003531	HOUSING TOUCHPAD ARIZONA
107	994000003548	TACT TOPPER ARIZONA
108	994000003534	LCD ASSY ARIZONA
109	994000003539	PCBA W/Z RADIO ARIZONA (HDD6330/17)
	994000003541	PCBA W/O RADIO ARIZONA (HDD6320/00/05)
110	994000003546	BATTERY PACK 840MAH ARIZONA
111	994000003549	FFC ARIZONA
112	994000003535	HDD SPACER ARIZONA
113	994000003537	HDD TOP DAMPER ARIZONA
114	994000003538	HDD BOTTOM DAMPER ARIZONA
115	282206200102	HDD 1.8" 30GB ARIZONA
116	994000003542	HDD FPC ARIZONA

MISCELLENEOUS

994000003543	AC ADAPTOR AD7130/00
994000003544	AC ADAPTOR AD7133/17
994000003545	AC ADAPTOR AD713B/05
994000003527	EARPHONE SHE9500

5.0 EXPLODED VIEW & SERVICE PARTS LIST



MECHANICAL PARTS

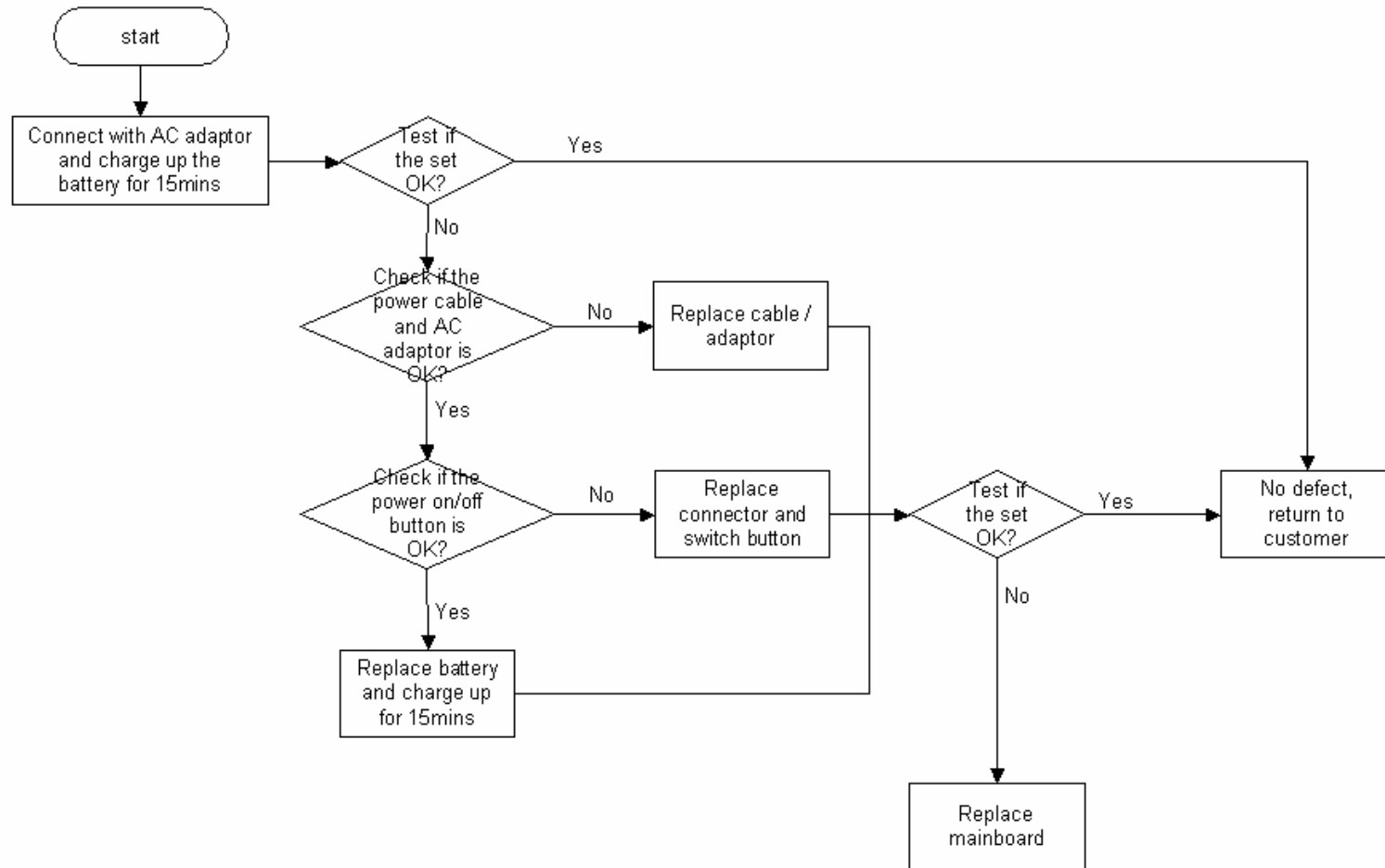
100	994000003526	T-ADHESIVE TAPE HDD SPACER
101	994000003528	SCREW M1,7L4WH CBZ
102	994000003529	SCREW M1.7L4WH FM CBZ
103	994000003562	BACK CABINET ASSY BOTTOM
104	994000003536	CRADLE HOLDER ARIZONA
105	994000003533	SHIELDING ARIZONA
106	994000003531	HOUSING TOUCHPAD ARIZONA
107	994000003548	TACT TOPPER ARIZONA
108	994000003534	LCD ASSY ARIZONA
109	994000003539	PCBA W/Z RADIO ARIZONA (HDD6330/17)
	994000003541	PCBA W/O RADIO ARIZONA (HDD6320/00/05)
110	994000003546	BATTERY PACK 840MAH ARIZONA
111	994000003549	FFC ARIZONA
112	994000003535	HDD SPACER ARIZONA
113	994000003537	HDD TOP DAMPER ARIZONA
114	994000003538	HDD BOTTOM DAMPER ARIZONA
115	282206200102	HDD 1.8" 30GB ARIZONA
116	994000003542	HDD FPC ARIZONA

MISCELLANEOUS

994000003543	AC ADAPTOR AD7130/00
994000003544	AC ADAPTOR AD7133/17
994000003545	AC ADAPTOR AD713B/05
994000003527	EARPHONE SHE9500

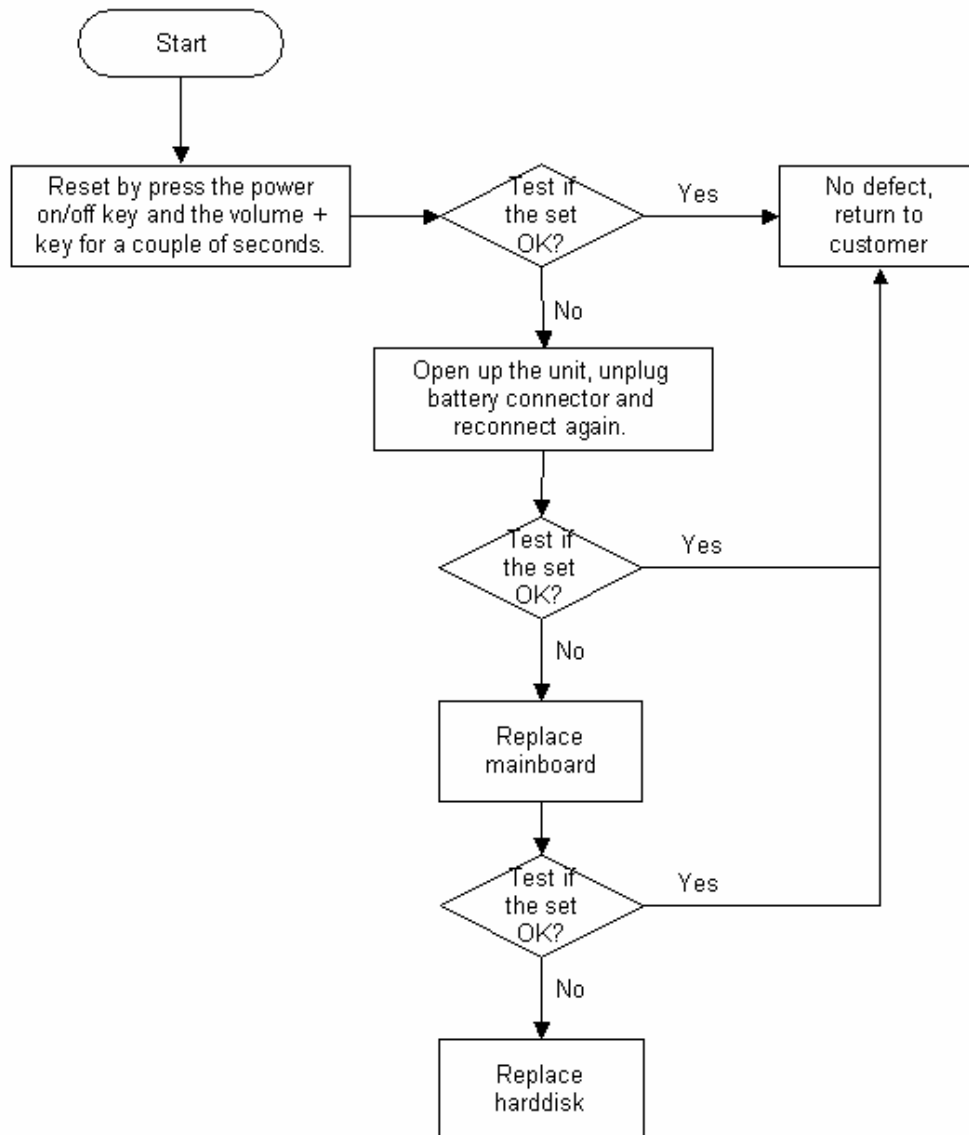
6.0 TROUBLESHOOTING FLOW

SYMPTOM 1: NO POWER



6.0 TROUBLESHOOTING FLOW

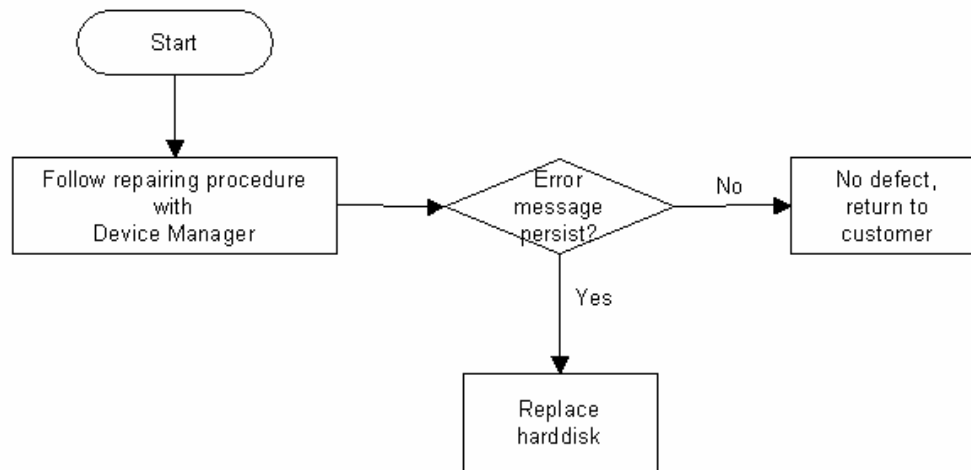
SYMPTOM 2: JUKEBOX FREEZES / HANGS UP



Open up the unit, unplug battery connector and reconnect again

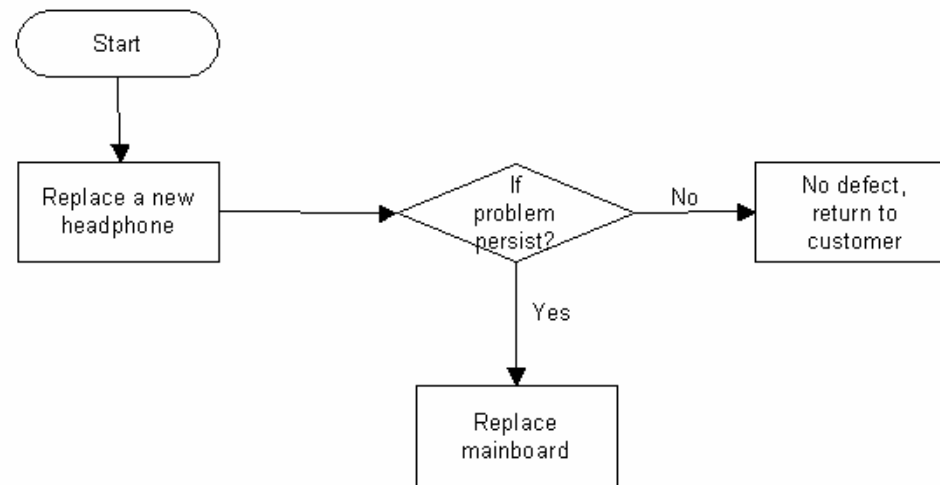
6.0 TROUBLESHOOTING FLOW

SYMPTOM 3: ERROR MESSAGE SCROLLS ON THE DISPLAY

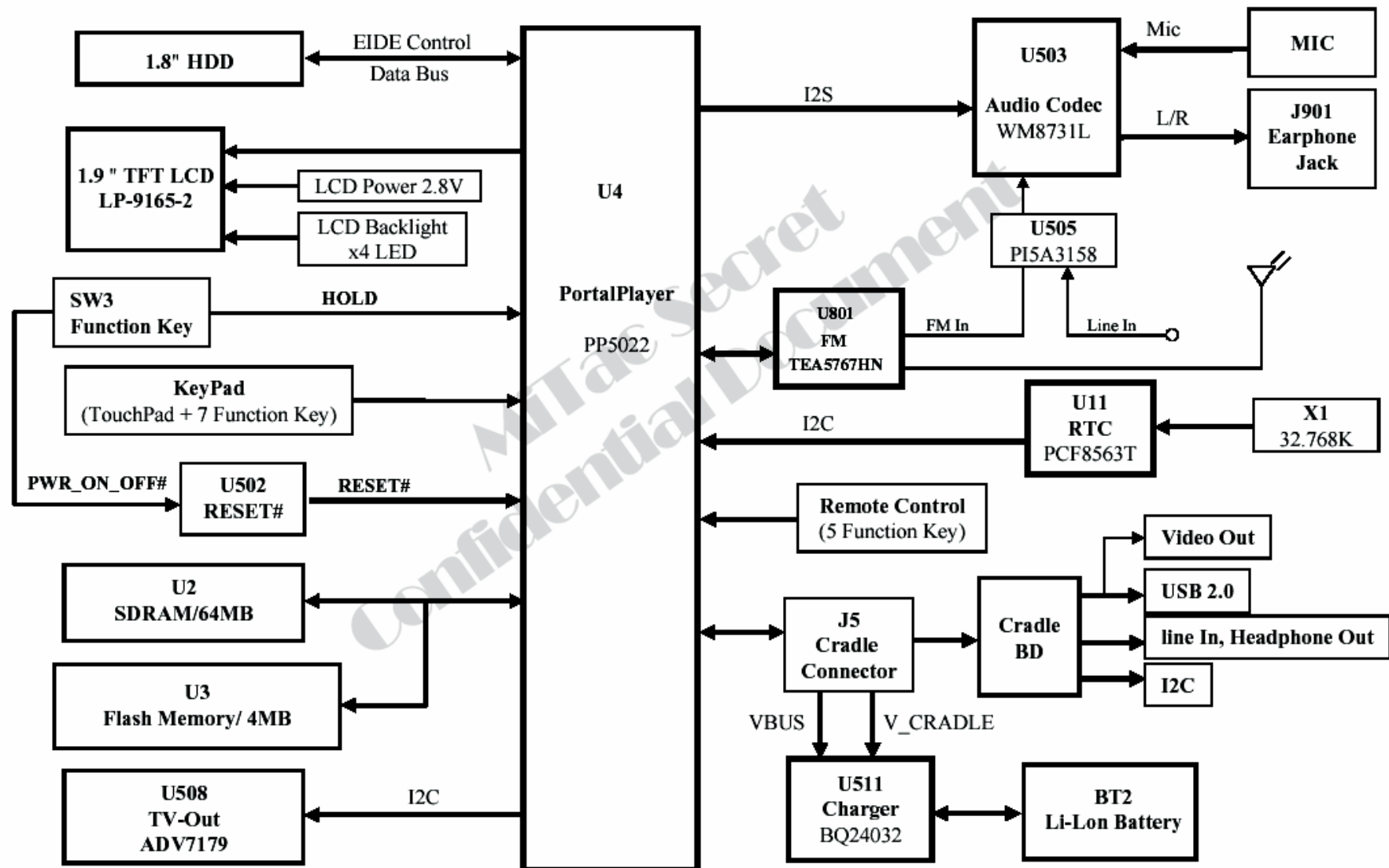


6.0 TROUBLESHOOTING FLOW

SYMPTOM 4: NO SOUND



7.0 OVERALL BLOCK DIAGRAM





FLASH MEMORY 256Kx16-Bit => 4 Megabit

SDRAM 32Mx16-Bit => 64 Megabit

ADDRESS	DESCRIPTION	DEFAULT
A7 A6 A5		
0 X 0	SRAM 16-BIT	
0 X 1	SRAM 32-BIT	
1 X 0	SDRAM 16-BIT	
1 X 1	SDRAM 32-BIT	X X 0

ADDRESS	DESCRIPTION
A15 A14	
0 0	EXT ROM0 (0000:0000) (DEFAULT)
0 1	EXT ROM1 (0800:0000)
1 0	BOOTROM UART
1 1	BOOTROM OTHER

ADDRESS	DESCRIPTION
A17 A16	
0 0	24.000MHz (DEFAULT)
0 1	24.576MHz
1 0	48.000MHz
1 1	RESERVED

ADDRESS	DESCRIPTION
A19	
0	0 = ID0 (DEFAULT)
1	1 = IDE 1

ADDRESS	DESCRIPTION
A26 A25	
0 0	00 = Serial (CPU->COP) (DEFAULT)
0 1	01 = CPU only (CPU)
1 0	10 = COP only (COP)
1 1	11 = Parallel (CPU) (COP)

ADDRESS	DESCRIPTION
A1	
0	0 = 16 BIT
1	1 = 8 BIT

REAL TIME CLOCK

SYSTEM CLOCK CRYSTAL

FLASH MEMORY 256Kx16-Bit => 4 Megabit

SDRAM 32Mx16-Bit => 64 Megabit

ADDRESS	DESCRIPTION	DEFAULT
A7 A6 A5		
0 X 0	SRAM 16-BIT	
0 X 1	SRAM 32-BIT	
1 X 0	SDRAM 16-BIT	
1 X 1	SDRAM 32-BIT	X X 0

ADDRESS	DESCRIPTION
A15 A14	
0 0	EXT ROM0 (0000:0000) (DEFAULT)
0 1	EXT ROM1 (0800:0000)
1 0	BOOTROM UART
1 1	BOOTROM OTHER

ADDRESS	DESCRIPTION
A17 A16	
0 0	24.000MHz (DEFAULT)
0 1	24.576MHz
1 0	48.000MHz
1 1	RESERVED

ADDRESS	DESCRIPTION
A19	
0	0 = ID0 (DEFAULT)
1	1 = IDE 1

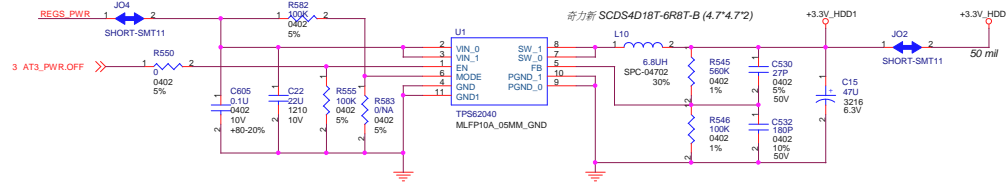
ADDRESS	DESCRIPTION
A26 A25	
0 0	00 = Serial (CPU->COP) (DEFAULT)
0 1	01 = CPU only (CPU)
1 0	10 = COP only (COP)
1 1	11 = Parallel (CPU) (COP)

ADDRESS	DESCRIPTION
A1	
0	0 = 16 BIT
1	1 = 8 BIT

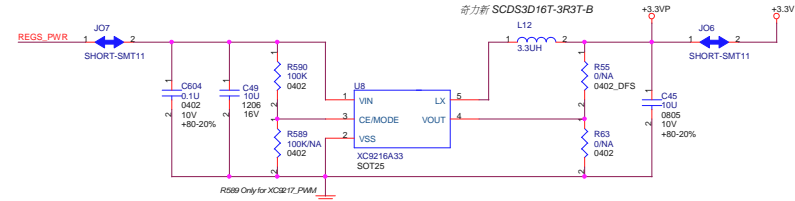
REAL TIME CLOCK

SYSTEM CLOCK CRYSTAL

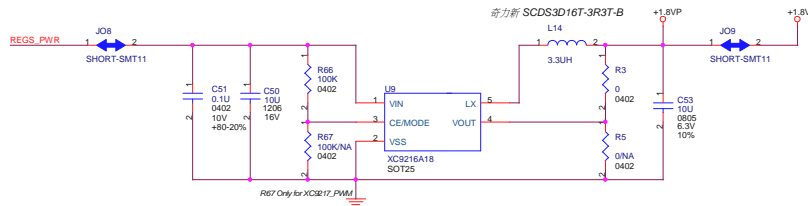
1.8" HDD POWER SUPPLY



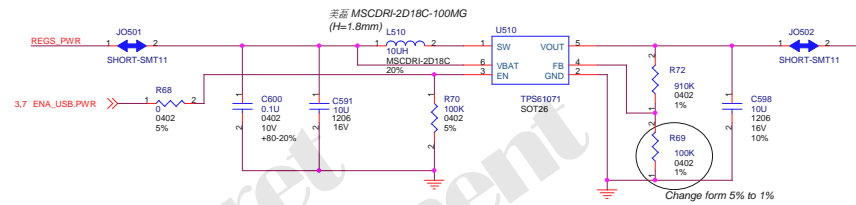
+3.3V POWER SUPPLY



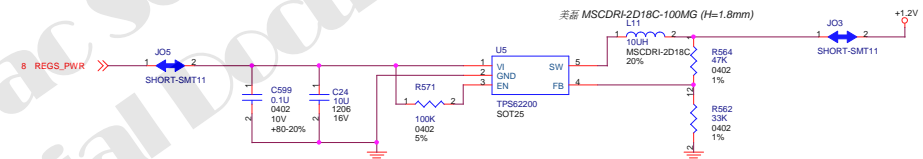
+1.8V POWER SUPPLY



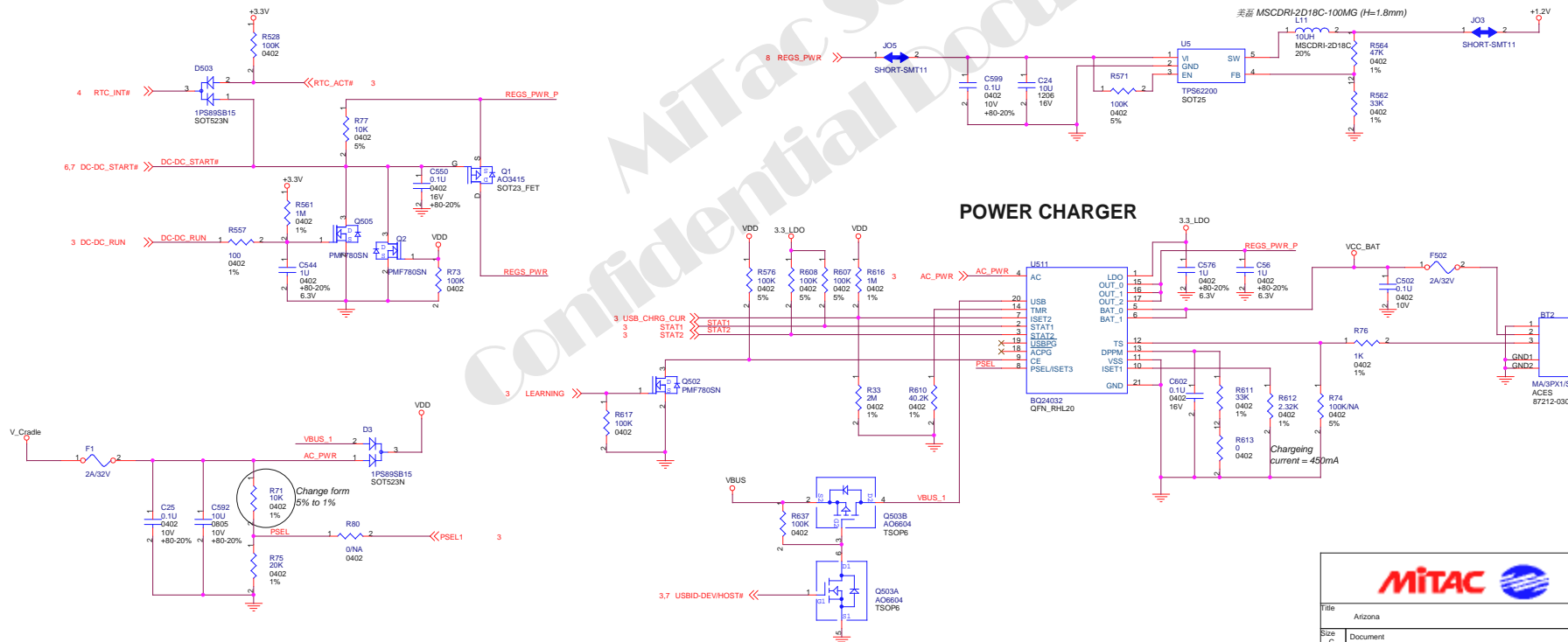
+5V POWER SUPPLY



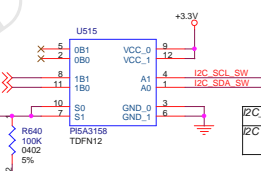
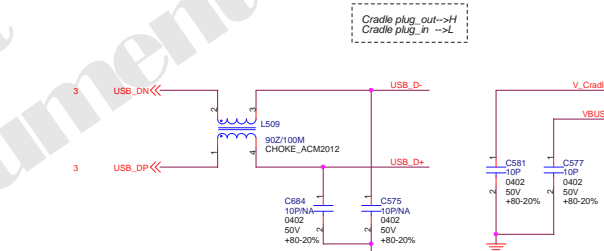
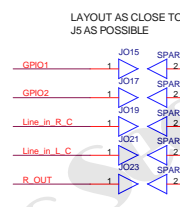
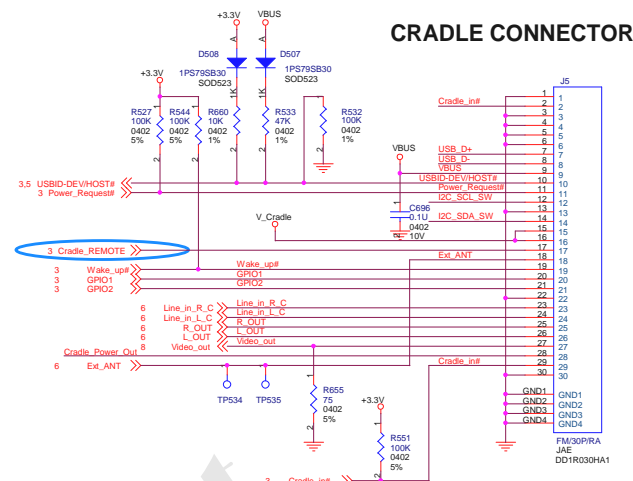
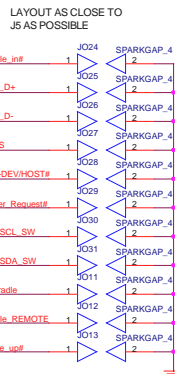
+1.2V POWER SUPPLY



POWER CHARGER



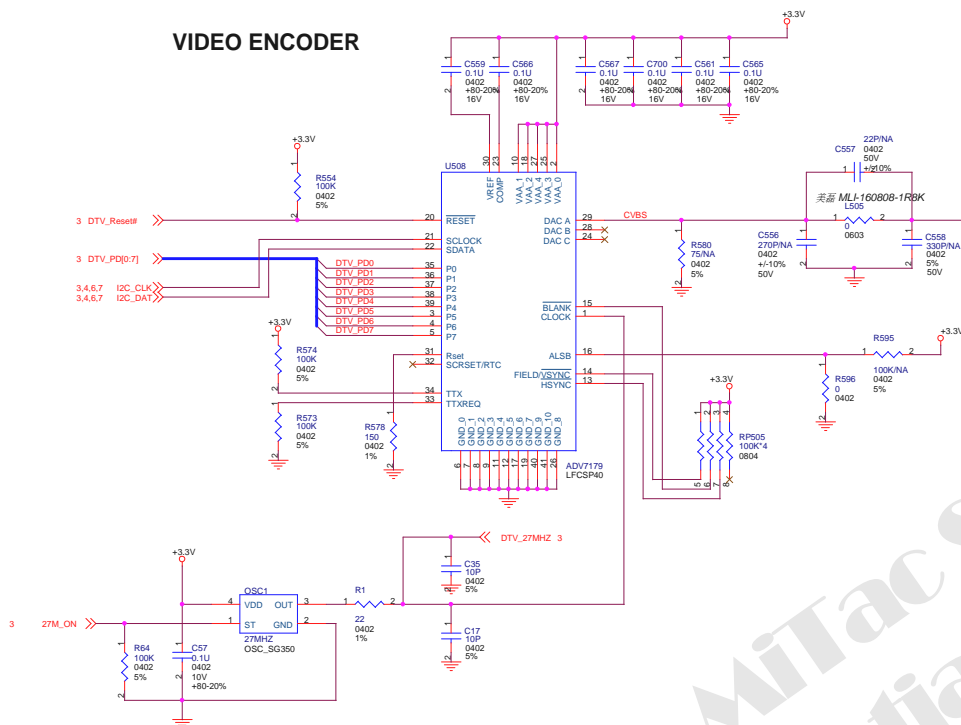
Title		Arizona	Rev R01
Size	C	Document	
Date	Thursday, August 04, 2005	Sheet	5 of 9



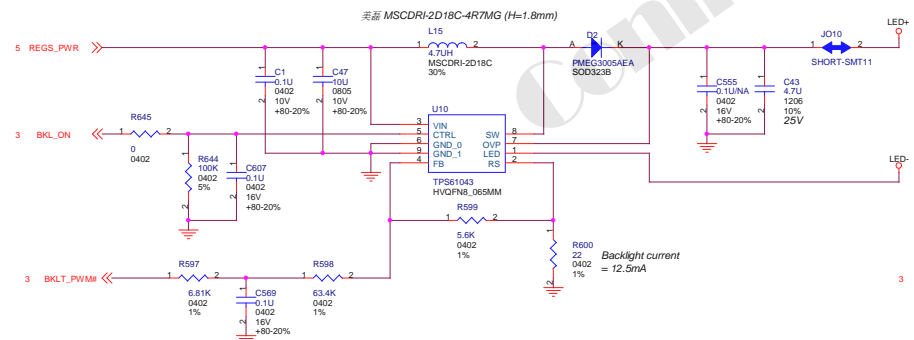
I2C_C_EN	Logic 0	Logic 1
I2C for Cradle	CUT	PASS



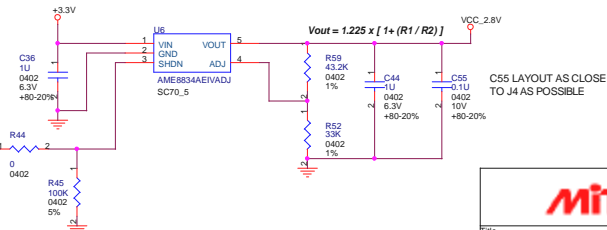
VIDEO ENCODER



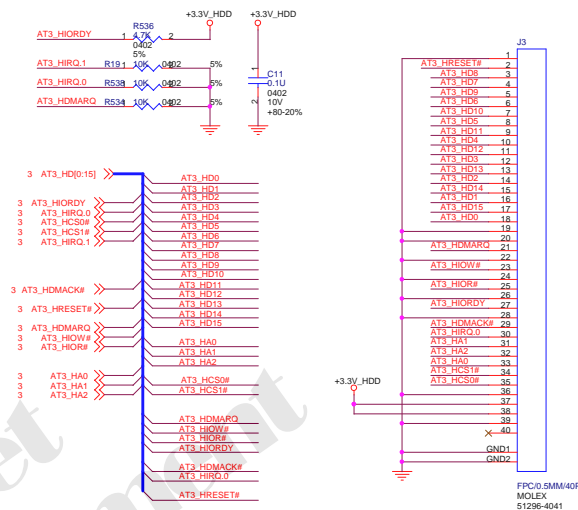
LCD BACKLIGHT POWER



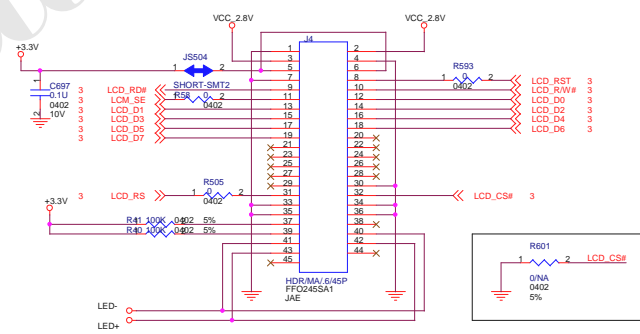
LCD ANALOG POWER



1.8" HDD FPC CONNECTOR

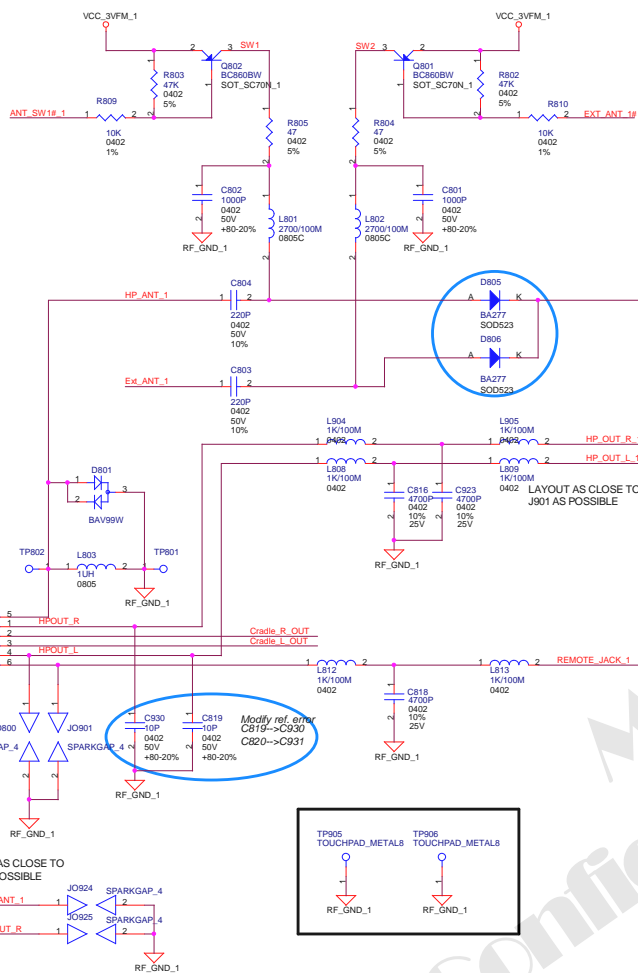


1.9" QCIF COLOR TFT LCD

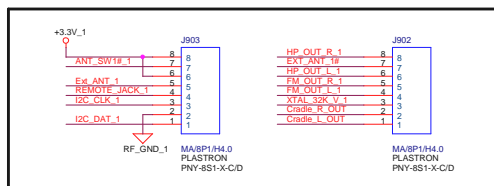


File	Arizona
Size	C
Document	Display Interface / 1.8" HDD
Number	Rev R01
Date	Thursday, August 14, 2008 12:05 PM

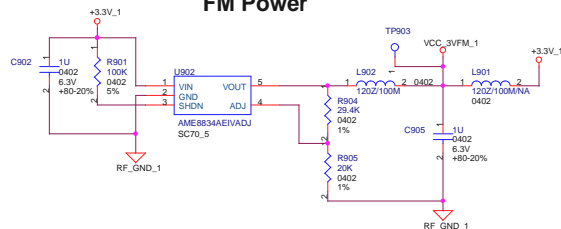
ANTENNA SWITCH



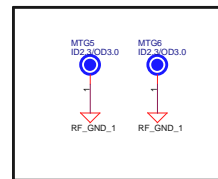
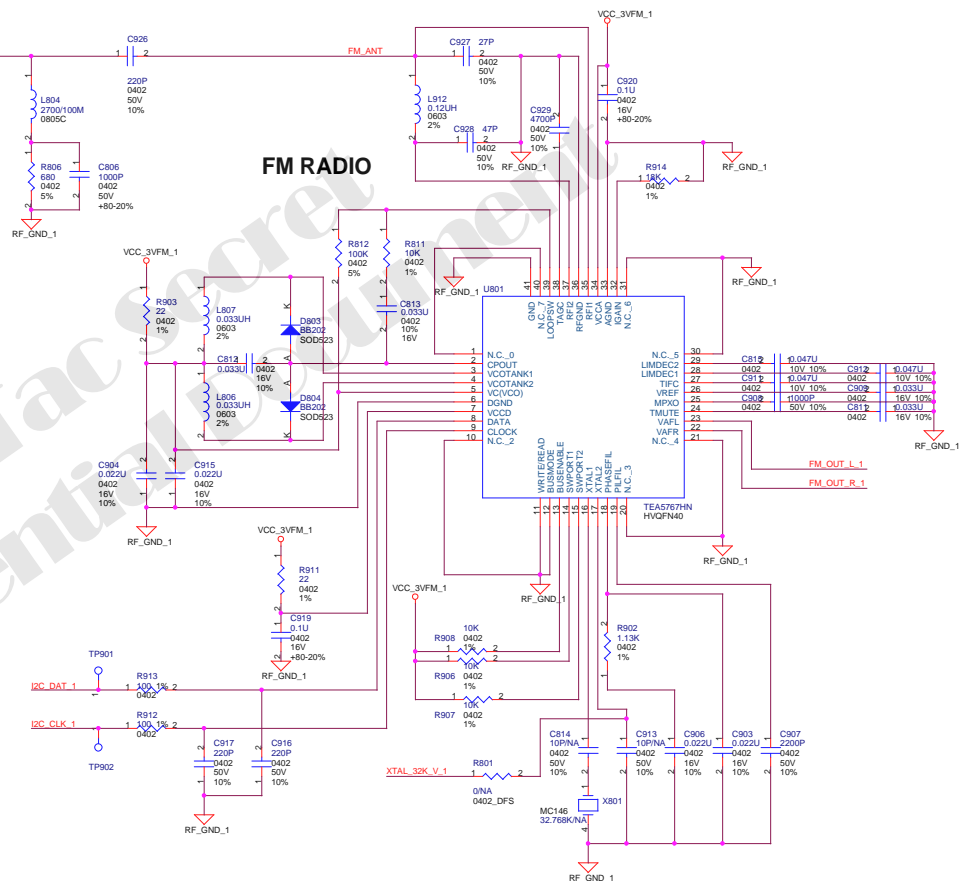
BOARD TO BOARD CONNECTOR



FM Power



FM RADIO



File	Arizona
Size	C
Document	Display Interface / 1.8" HDD
Number	Rev R01
Date	Thursday, August 14, 2008 10:08:00

9.0 REVISION LIST

Version 1.0 (3141 785 30710)

- Initial release HDD6320/00/05 and HDD6330/17