

Service
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Service Manual

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3141 785 32541

1.0 TECHNICAL SPECIFICATION

Service Policy on PCBA of PET737

Type	/12	/93	/98
Main PCBA	MLR	MLR	MLR
TFT PCBA	MLR	MLR	MLR
BATTERY PCBA	MLR	MLR	MLR
KEY PCBA	MLR	MLR	MLR

MLR = module swap

1.0 TECHNICAL SPECIFICATION

General

Dimensions (W x H x D):	158 x 210 x 39.5 mm
Bear Unit Weight:	0.48 kg +/- 5%
Power supply:	
Supply voltage (AC adaptor 90~264)	AC 100~240V + / - 10%
Supply Power consumption (AC adaptor 100/240VAC)	9W + 10%
DC Power supply	DC 6.3-15.49V
Standby Power (AC adaptor, no load) 264VAC	<0.45W
Audio System	
Output voltage 1kHz:	2+/-0.2V
THD 20-20kHz (%):	</=2%
Dynamic range 1kHz	>/=80dB
Signal/Noise ratio:	>/=80dB
Frequency response (20-20kHz):	+/-3dB
Channel Separation 1kHz	>=80dB
Channel Balance 1kHz	<1.0dB

Playback disc type:	DVD, Picture-CD, SVCD, Video CD, MP3-CD, CD-R/CD-RW, WMA-CD, DVD-R, DVD-RW, DVD+R, DVD+RW
Video Playback Format:	DVD / VCD / SVCD / CD / JPEG
Audio Playback Format:	CD/MP3, MP3-DVD, DVD
Disc Diameter	8cm / 12cm

Pixel specification

Max. 0 bright-dot & max. 3 dark-dots

Current consumption

Playback time	
Battery Capacity – Lithium-ion 7.4V	≥1900mAh
Discharge cut-off voltage(3.0 V for single cell)	</=6.3V
Battery discharge cut-off current	</=40mA
Battery Charge voltage(1.2V for single cell)	</=8.7V
Charging time	4 +/- 1hr

Factory Service Mode (FSM)

Headphone out (headphone output load 2x16 ohm)

Maximum output power:	2.0mW (typical)
Frequency response:	+/-3dB
SNR (A-wght):	>/=70dB (20Hz, 20kHz)
THD (0.2-20kHz):	1.5%
Dynamic range 1kHz	>/=65dB
Left-Right Channel	>/=55dB
Separation:	
Left-Right Channel	</=2dB
Balance:	

Supported disc type

Video Playback Formats:



Audio Playback Formats:



1.0 TECHNICAL SPECIFICATION

To check the software version and change region code of your DVD Portable

1. Power ON the DVD player and open the DVD door
2. Press the "SETUP" button on remote control, then select the "Preference MENU"
3. Press the remote button in the sequence as 9 -> 6 -> 5 -> 3
4. The LCD display showed the existing region code. Press ▲ (navigation up) or ▼ (navigation down) repeatedly to select the number from 0 to 6.
5. Refer below table for your region code setting

Region Code	Region
1	USA
2	EUROPE
3	ASIA PACIFIC
4	AUSTRALIA, NEW ZEALAND, LATAM
5	RUSSIA, INDIA
6	CHINA

Select "0" setting = Region Free (confidential)

Procedure on how to upgrade the software of the DVD Portable

For the best performance of your DVD Portable. Check www.philips.com/support for latest software upgrades available.

A) By CD-ROM

1. Download the "PHILIPS.BIN" file from the Philips support site
2. Unzip the file and then burn it into a CD-ROM to make a disc for upgrade
3. CD-ROM disc name must be "PHILIPS" (otherwise it will not be recognized as a disc for upgrade)
4. Power on the Portable DVD Player with AC/DC adaptor
5. Play CD-ROM for firmware upgrade

Warning: Do not unplug the AC adaptor during firmware upgrade to prevent flash corrupt of the set!!

6. Once upgrade is completed, the player will restart automatically and observed PHILIPS LOGO on the screen.
7. Open the DVD door to remove the disc

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 ditzelfde 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 enfilez 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 ridotta 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 utilisés 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 spärrar är urkopplad. Betrakta ej strålen.

(SF) Varoitus !

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

(DK) Advarse !

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

2.1 ESD PROTECTION

- レンズには絶対に触れないでください。
- DO NOT TOUCH THE LENS.
- LINSE NICHT BRÜHREN.
- NE PAS TOUCHER LA LENTILLE.

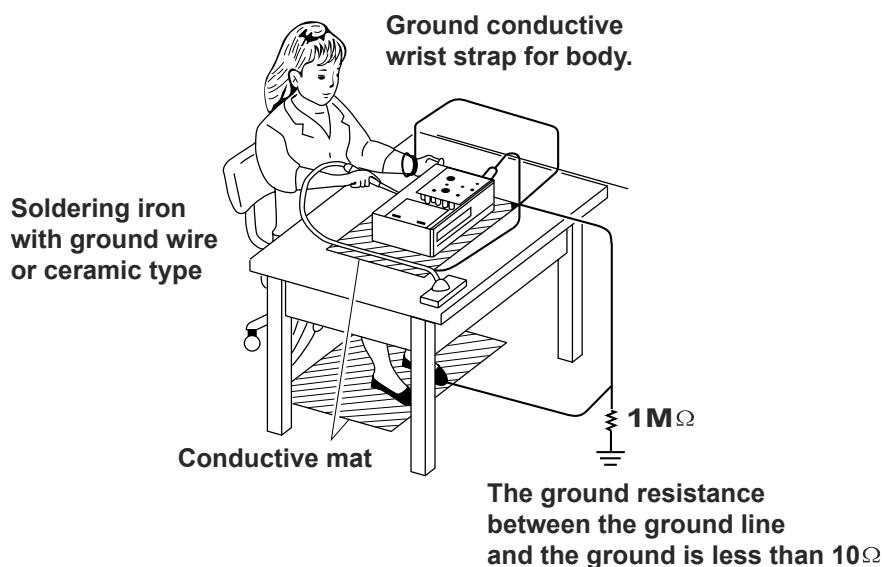
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electricity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity.

And also, the LSI and IC are same as above.



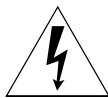
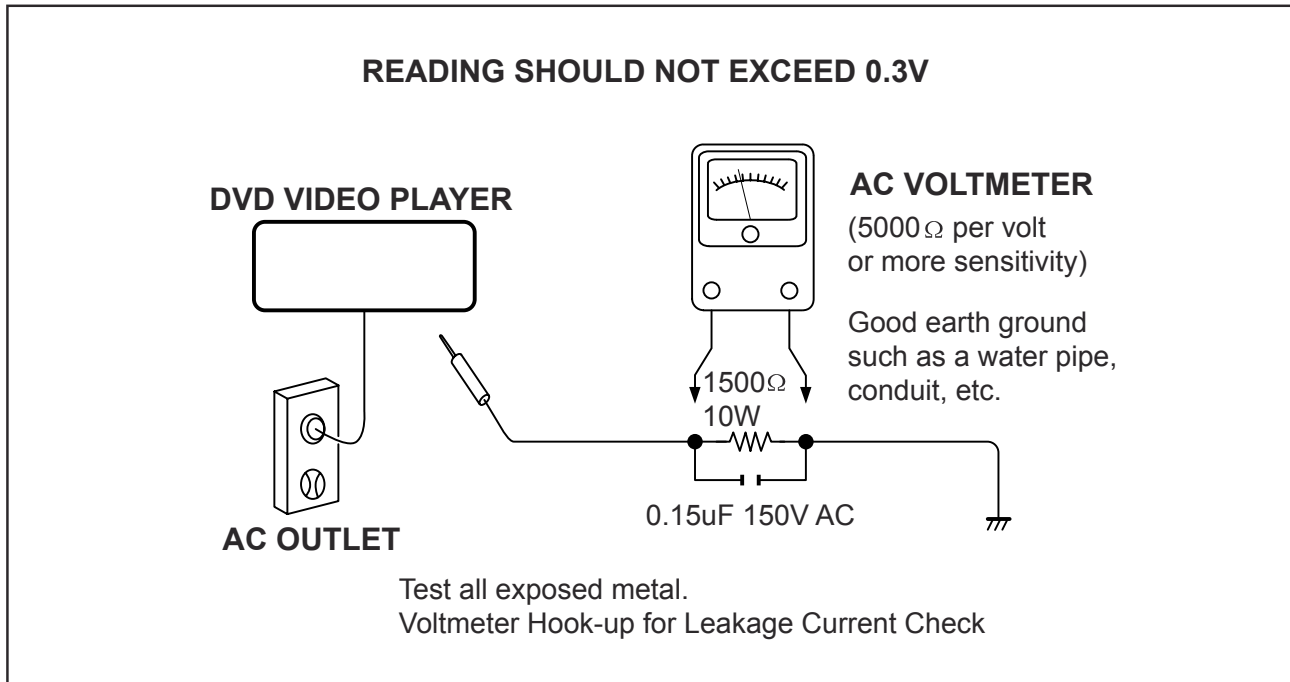
SAFTY NOTICE

SAFTY PRECAUTIONS

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having 5000Ω per volt or more sensitivity. Connect a 1500Ω 10W resistor, paralleled by a $0.15\mu\text{F}$ 150V AC capacitor between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

Measure the AC voltage across the 1500Ω resistor. The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3V. A reading exceeding 0.3V indicates that a dangerous potential exists, the fault must be located and corrected. Repeat the above test with the DVD VIDEO PLAYER power plug reversed. NEVER RETURN A DVD VIDEO PLAYER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

2.2 SAFETY INSTRUCTIONS

Battery Handling Guideline

Since the battery is packed in soft package, to ensure its better performance, it's very important to carefully handle the battery

2.2.1 Soft Aluminium foil

The soft aluminum packing foil is very easily damaged by sharp edge parts such as Ni-tabs, pins and needles.

- Don't strike battery with any sharp edge parts
- Trim your nail or wear glove before taking battery
- Clean worktable to make sure no any sharp particle



2.2.2 Sealed edge

Sealing edge is very flimsy

- Don't bend or fold sealing edge



2.2.3 Folding edge

The folding edge is form in battery process and passed all hermetic test.

- Don't open or deform folding edge



2.2.4 Tabs

The battery tabs are not so stubborn especially for aluminum tab.

- Don't bend tab



2.2.5 Mechanical shock

- Don't Fall, hit, bend battery body



2.2.6 Short

Short terminals of battery is strictly prohibited, it may damage battery.

3.0 INSTRUCTION FOR USE

中文 功能概览

感谢您的惠顾。欢迎光临飞利浦！

为了您能充分享受飞利浦提供的支持，请在下面的页面注册您的产品：
www.philips.com/welcome.

主装置控制

- ① DVD/TV 在 DVD 和 TV 模式之间切换。
- ② MENU 显示 MENU (菜单) 页。
- ③ ■ 停止播放。
- ④ ◀▶ / ▶▶ 跳至上/下一个章节、目或标题。
- ⑤ ▲, ▼, ◀, ▶ 浏览菜单。
- ⑥ ◀▶ / ▶▶ 以各种速度在光碟中快转 / 倒转搜寻。
- ⑦ ▲ / ▼ 选择电视频道。
- ⑧ ▶|| 开始 / 暂停播放。
- ⑨ 确认选择。
- ⑩ OPEN 开启光碟盖以放入或移除光碟。

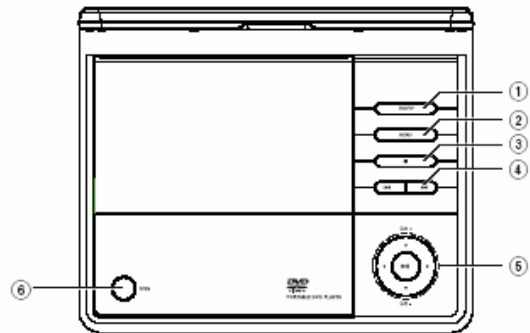
播放器左侧

- ⑦ DC 9V 电源供应插孔。
- ⑧ 耳机插孔。
- ⑨ AV OUT 音频 / 视频输出插孔。
- ⑩ VOL +/- 音量控制。
- ⑪ OFF ON 开启 / 关闭播放器电源。

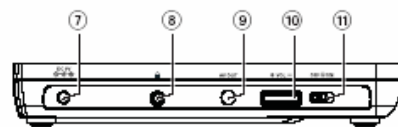
播放器右侧

- ⑫ TV ANTENNA (75 Ω) 电视天线插孔。

1



2



3

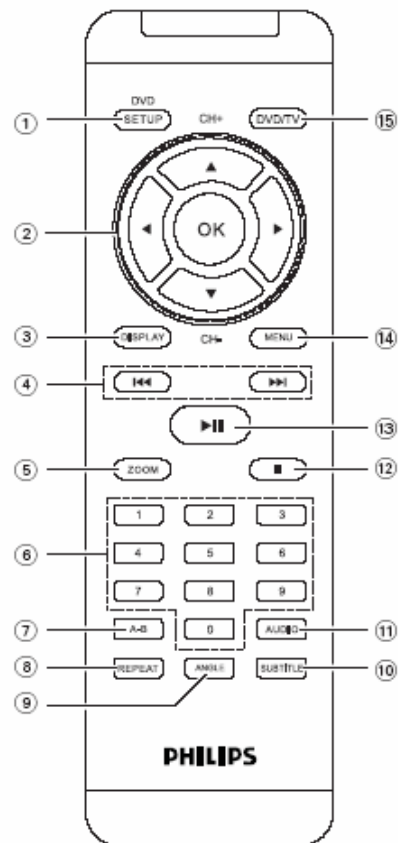


功能概览

遥控器

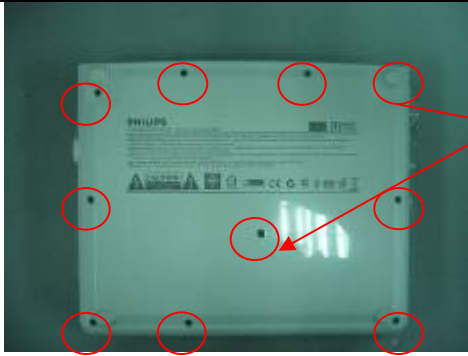
- ① DVD SETUP (DVD模式下) 进入或离开系统菜单。
- ② ▲, ▼, ◀, ▶ 浏览选单。
- ③ ◀▶ / ▶▶ 以各种速度在光碟中快转 / 倒转搜寻。
- ④ ▲ / ▼ 选择电视频道。
- ⑤ OK 确认选项。
- ⑥ DISPLAY 播放时在 TFT 上显示资讯。
- ⑦ ◀▶ / ▶▶ 跳至上/下一个章节、目或标题。
- ⑧ ZOOM 在 TFT 上放大或缩小图片或动态影像。
- ⑨ 0-9 数字键。
- ⑩ A-B 重复播放光碟上的特定区段。
- ⑪ REPEAT 重复章节 / 目 / 标题。
- ⑫ ANGLE 选择 DVD 摄影机角度。
- ⑬ SUBTITLE 选择字幕语言。
- ⑭ AUDIO 播放 DVD 光碟时选择音频语言，或在播放 VCD/CD 光碟时，选择音频模式 (立体声、左单声道或右单声道)
- ⑮ ■ 停止播放。
- ⑯ ▶|| 开始 / 暂停播放。
- ⑰ MENU 进入或离开光碟内容菜单。
- ⑱ (TV模式下) 进入或离开电视菜单。
- ⑲ DVD/TV 在 DVD 和 TV 模式之间切换。

警告
使用控制钮或调整或执行其他作业时若不依此处所载步骤，可能造成危险辐射传递或其他不安全运作。



4.0 MECHANICAL INSTRUCTION

Disassembly Procedure



1. Remove 9pcs of screws on the side of bottom cabinet.
Include the 1pcs of screw in CD cabinet;



2. Open the bottom cabinet carefully;
First, unplug the wire connector of key board from the main board. (left bottom side);





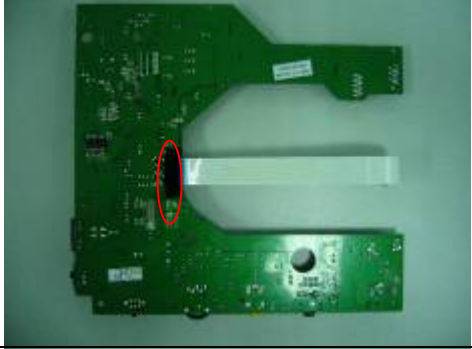



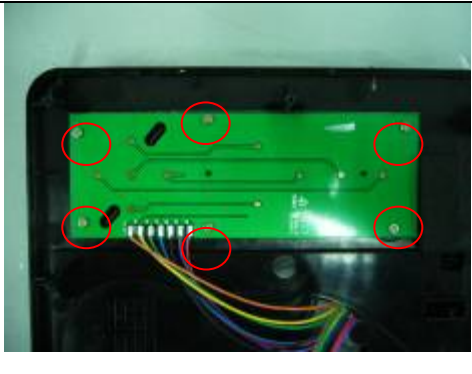

3. unplug all the wire connector from main board,
The wire connector is for: DVD loader, battery board and TFT driver board, and speaker.



Unplug the FFC from DVD loader, and unplug the housing which connect DVD loader and main board then you can take out the DVD loader.



4.0 MECHANICAL INSTRUCTION

	<p>Remove 4pcs screws from the main board and unplug all the housing, then you can take the main board out from bottom cabinet.</p> 
	<p>4. Remove the flex cable on the bottom side behind the black flannel..</p>
 	<p>5. Remove all the screws on the buttery board(3pcs);</p> <p>and unplug the housing which connect the battery board and main board;</p> <p>Then take out the buttery with buttery board.</p> 
	<p>6. Remove 6pcs screws from key board.</p> <p>You can get the key board from the DVD top cabinet</p> 

4.0 MECHANICAL INSTRUCTION



7. Remove 6pcs of screws on the display frame behind black TFT corner-rubber. Carefully open the display frame with the catches by screwdriver. Then you can see next picture.



8. To remove the TFT, de-soldering the wire connected between PANEL and TFT board first. (Please note the wire location as shown in picture during re-assembly)
And unplug wire connector from TFT board and main board.
Take out the TFT board from cabinet using eradicator.



Don't forget unplug the FFC of panel from the TFT board; it is behind the black flannel.



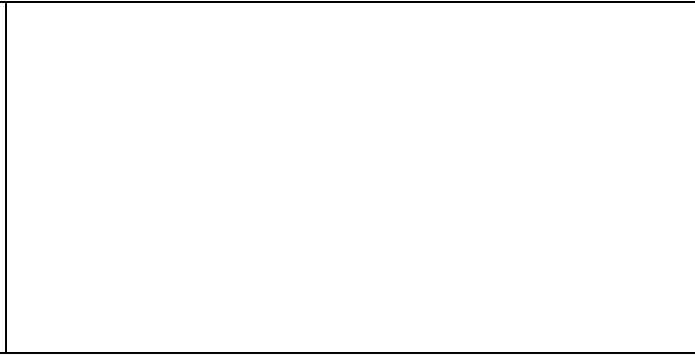
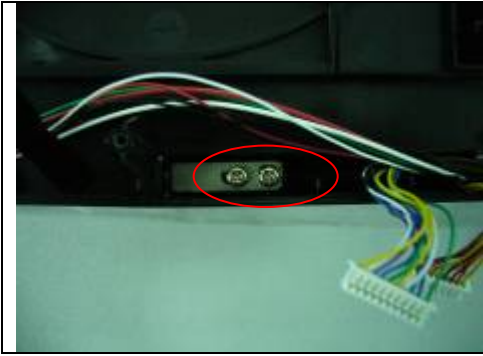
After this you can take the panel from the monitor back cabinet, you'd better be-careful, There are three two side tape rubbers as shown in the pictures



9. To remove the hinge, remove 4pcs screws on the hinge.

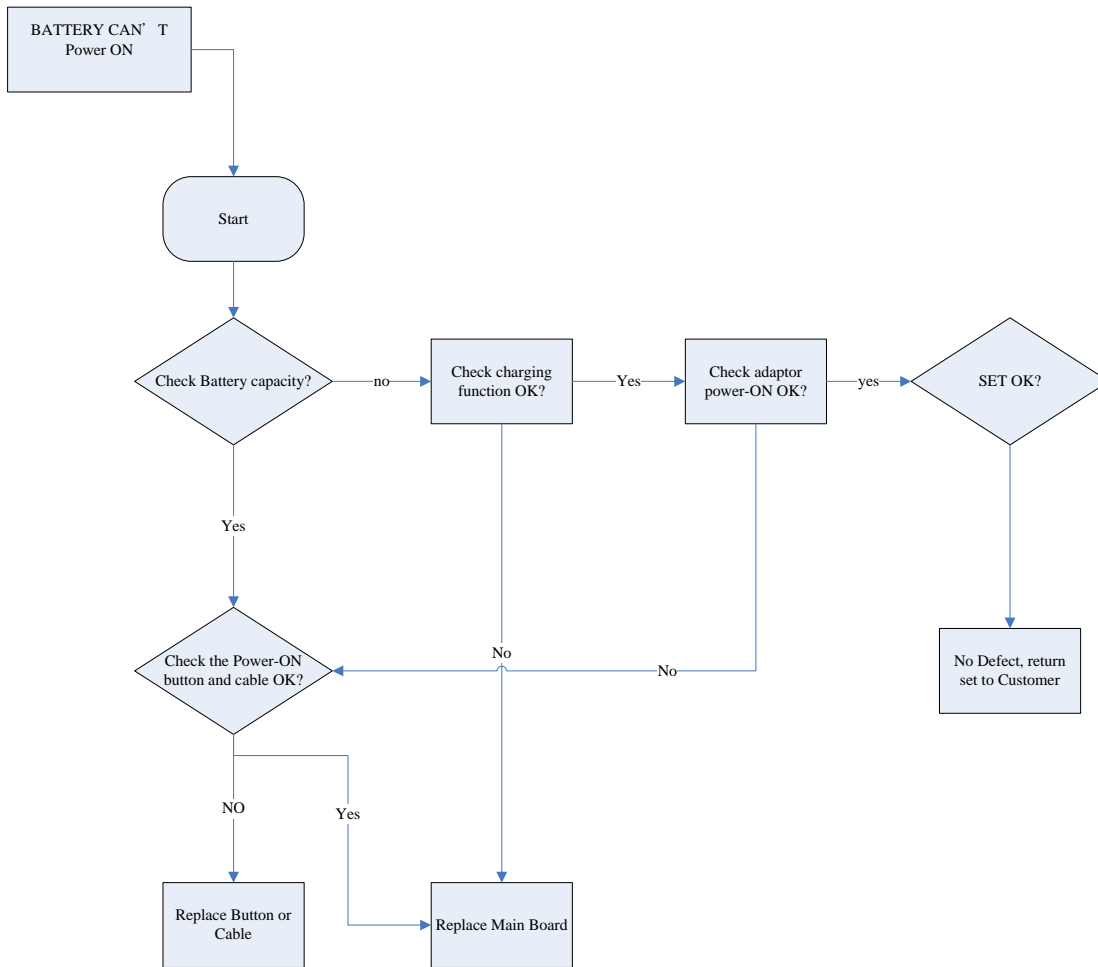


4.0 MECHANICAL INSTRUCTION



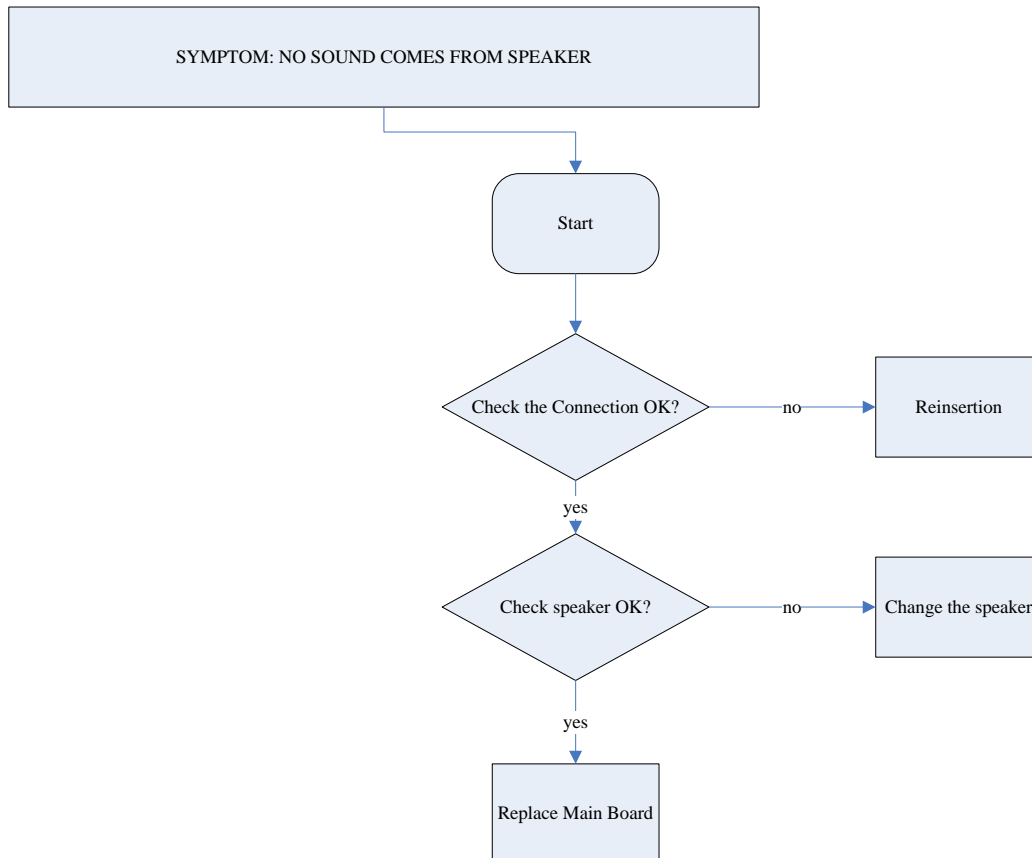
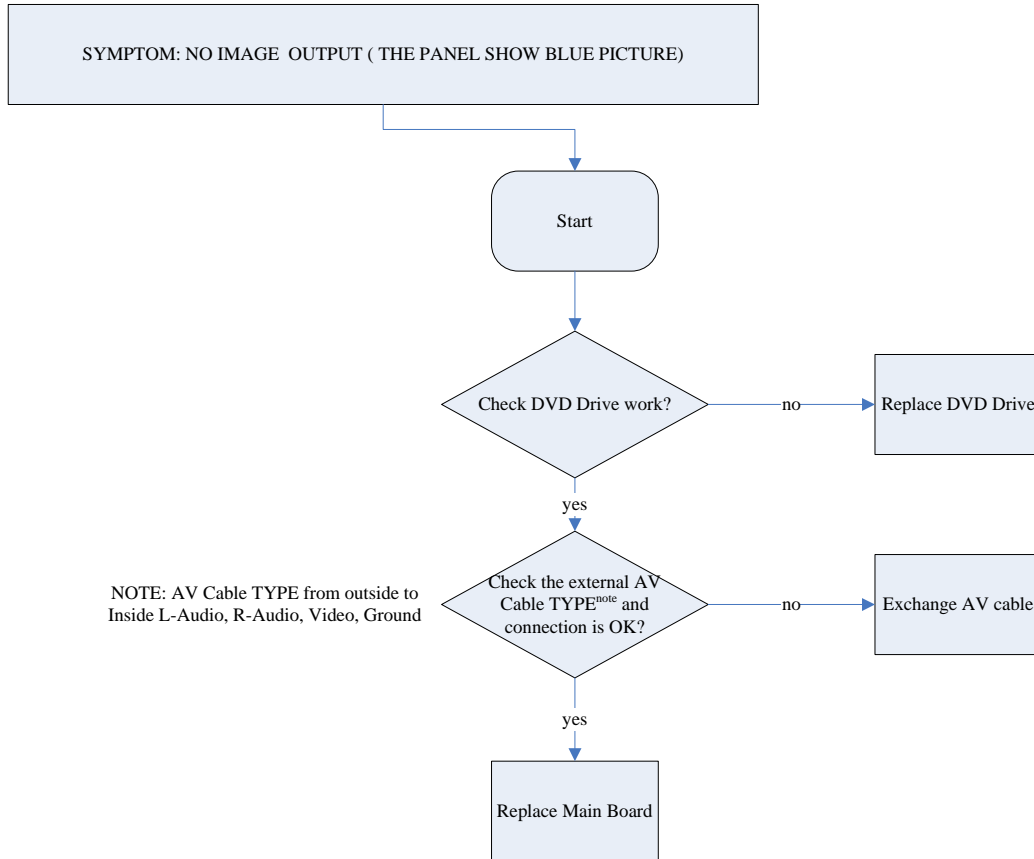
5.0 TROUBLESHOOTING

SYMPTOM: BATTERY NO POWER



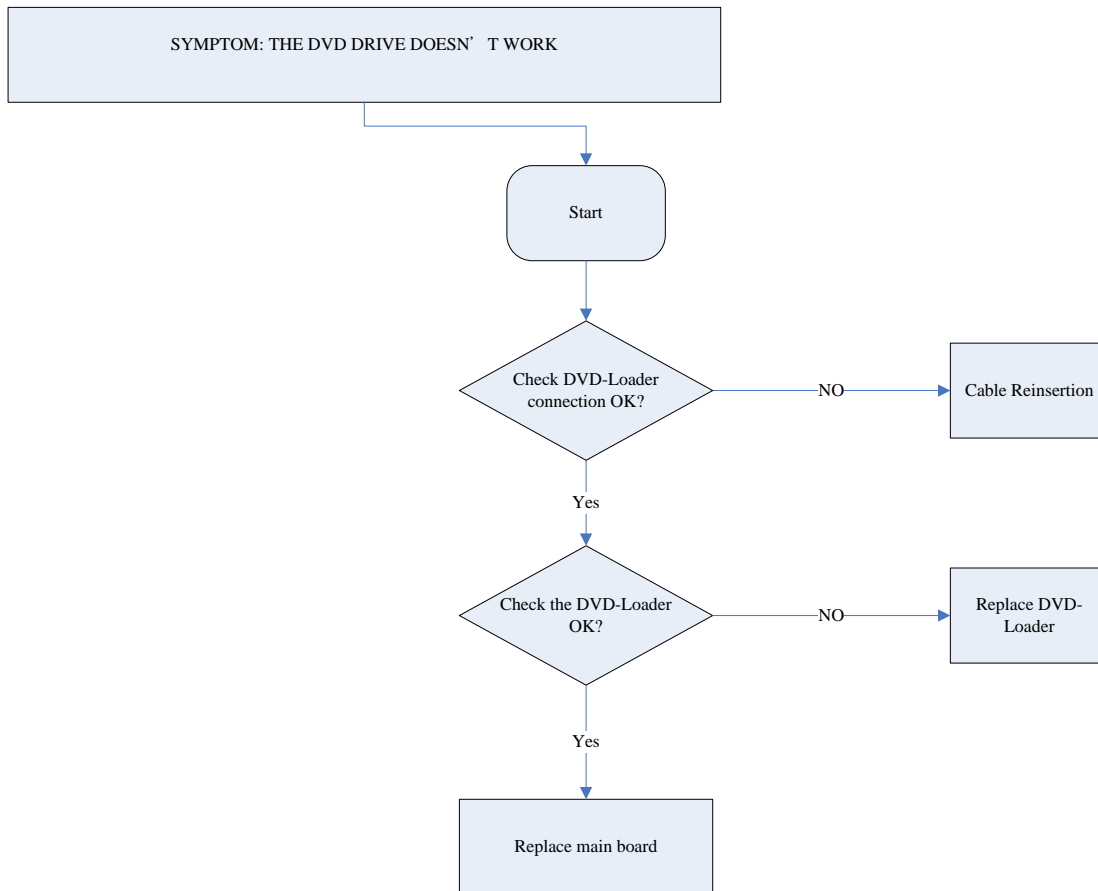
5.0 TROUBLESHOOTING

SYMPTOM: NO IMAGE / NO SOUND



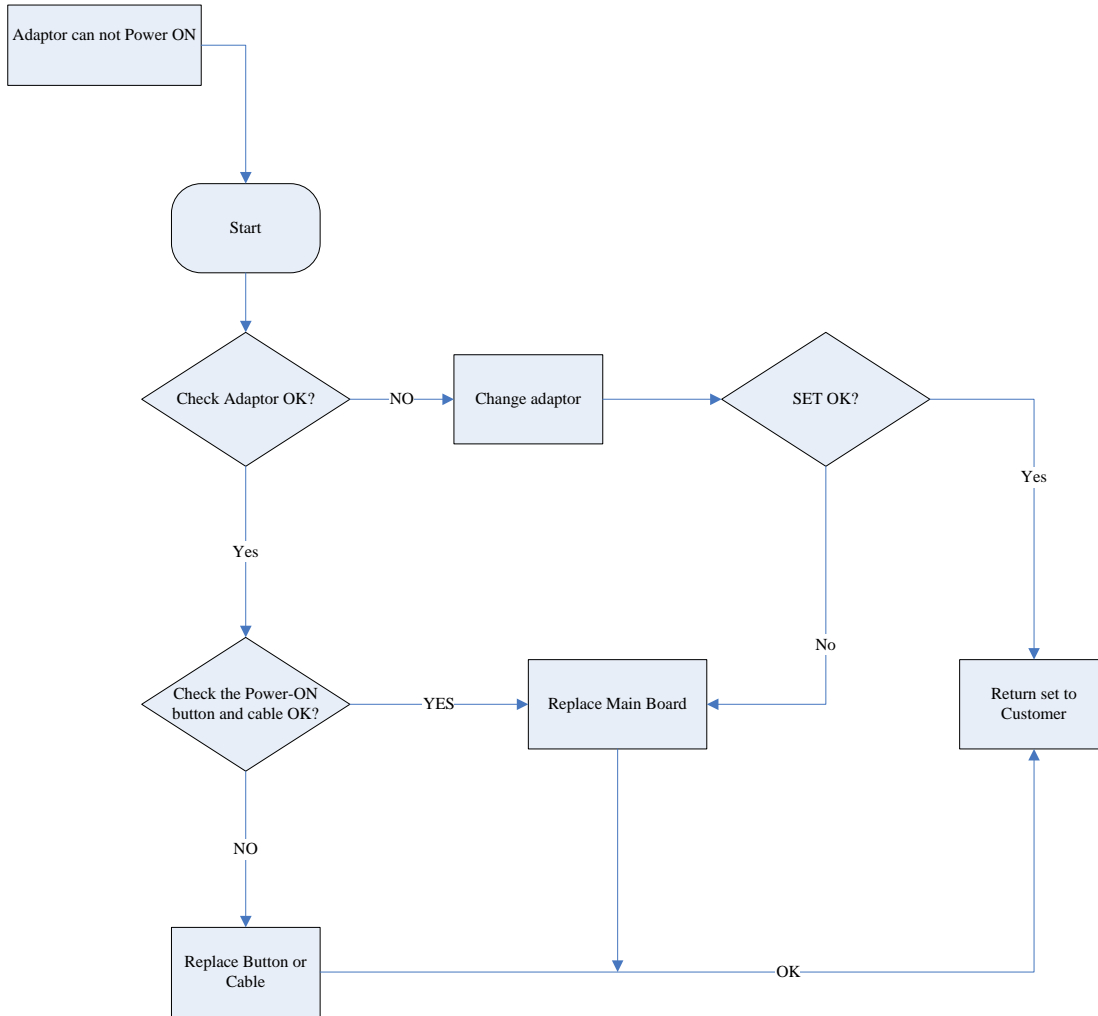
5.0 TROUBLESHOOTING

SYMPTOM: THE DVD DRIVE DOES NOT WORK



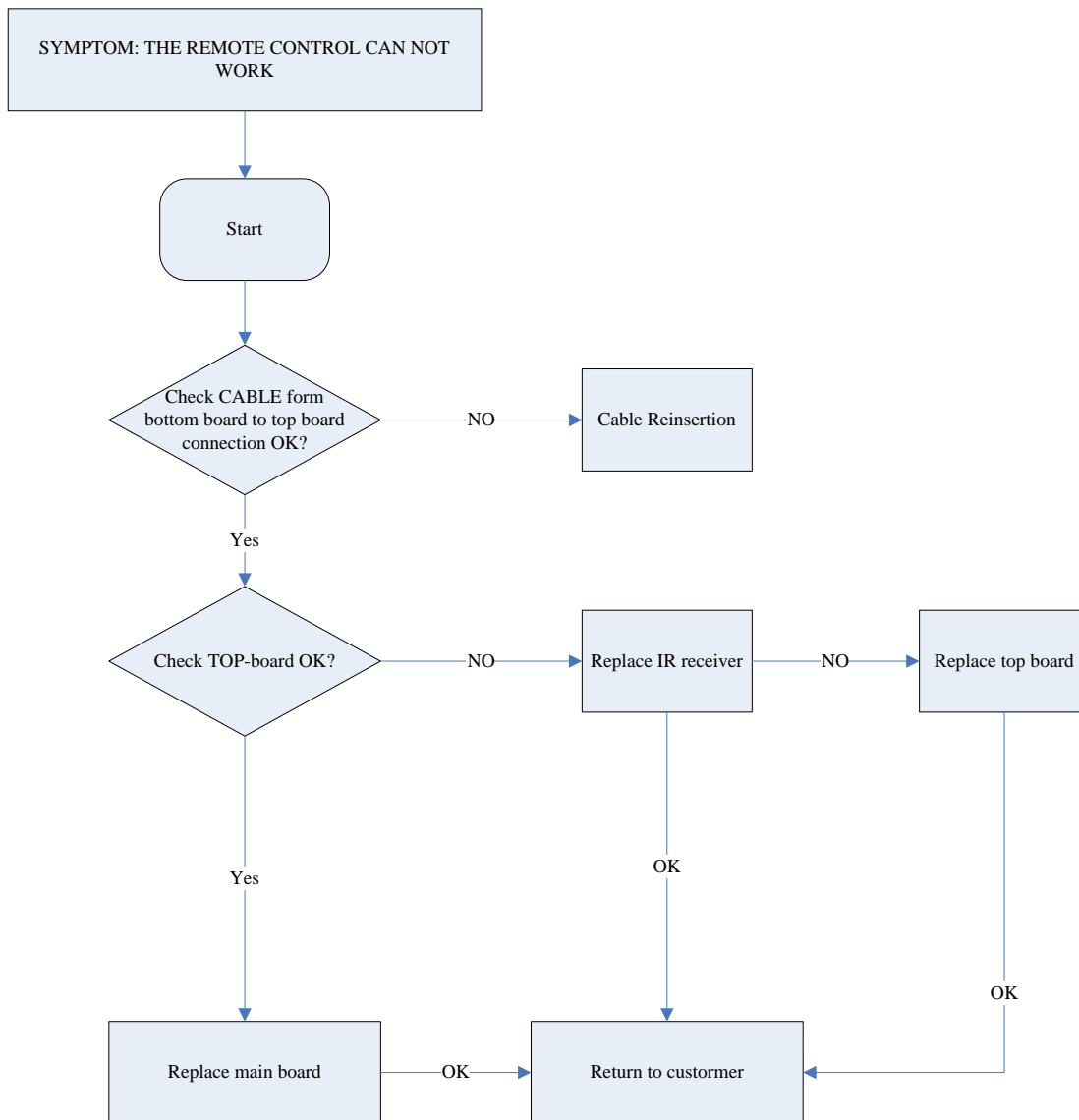
5.0 TROUBLESHOOTING

SYMPTOM: ADAPTOR CANNOT POWER ON



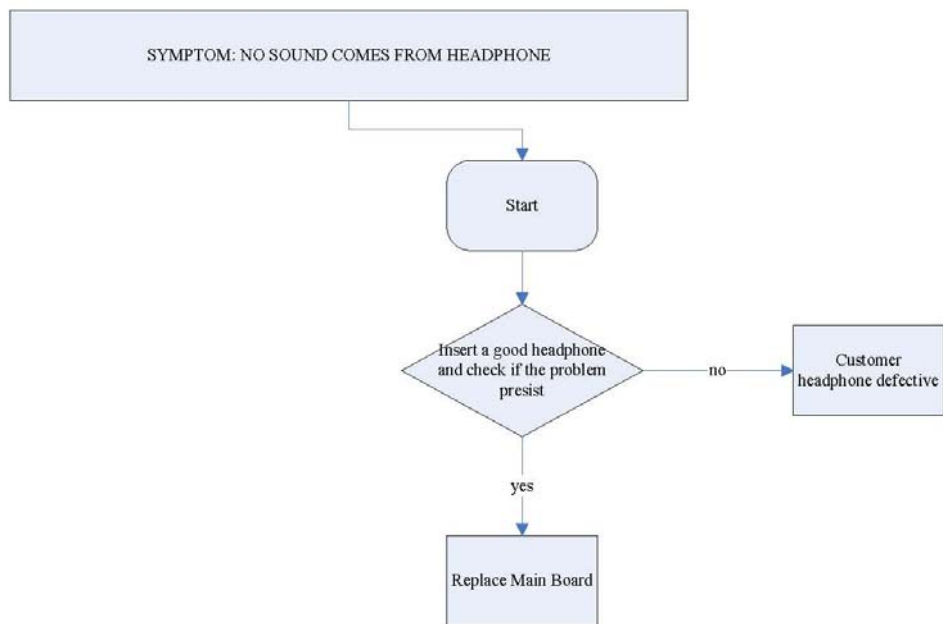
5.0 TROUBLESHOOTING

SYMPTOM: REMOTE CONTROL CANNOT WORK



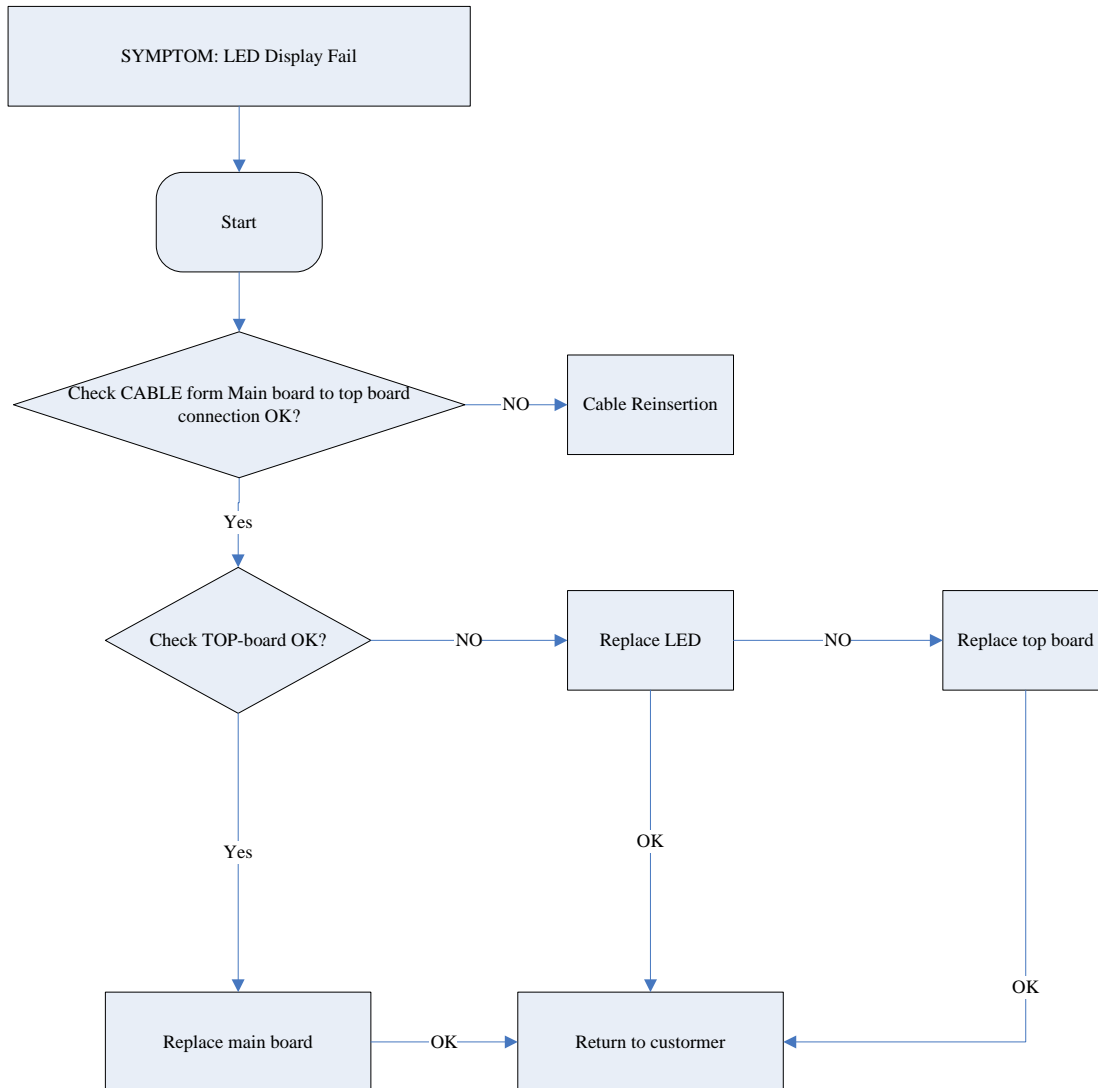
5.0 TROUBLESHOOTING

SYMPTOM: NO SOUND FROM HEADPHONE



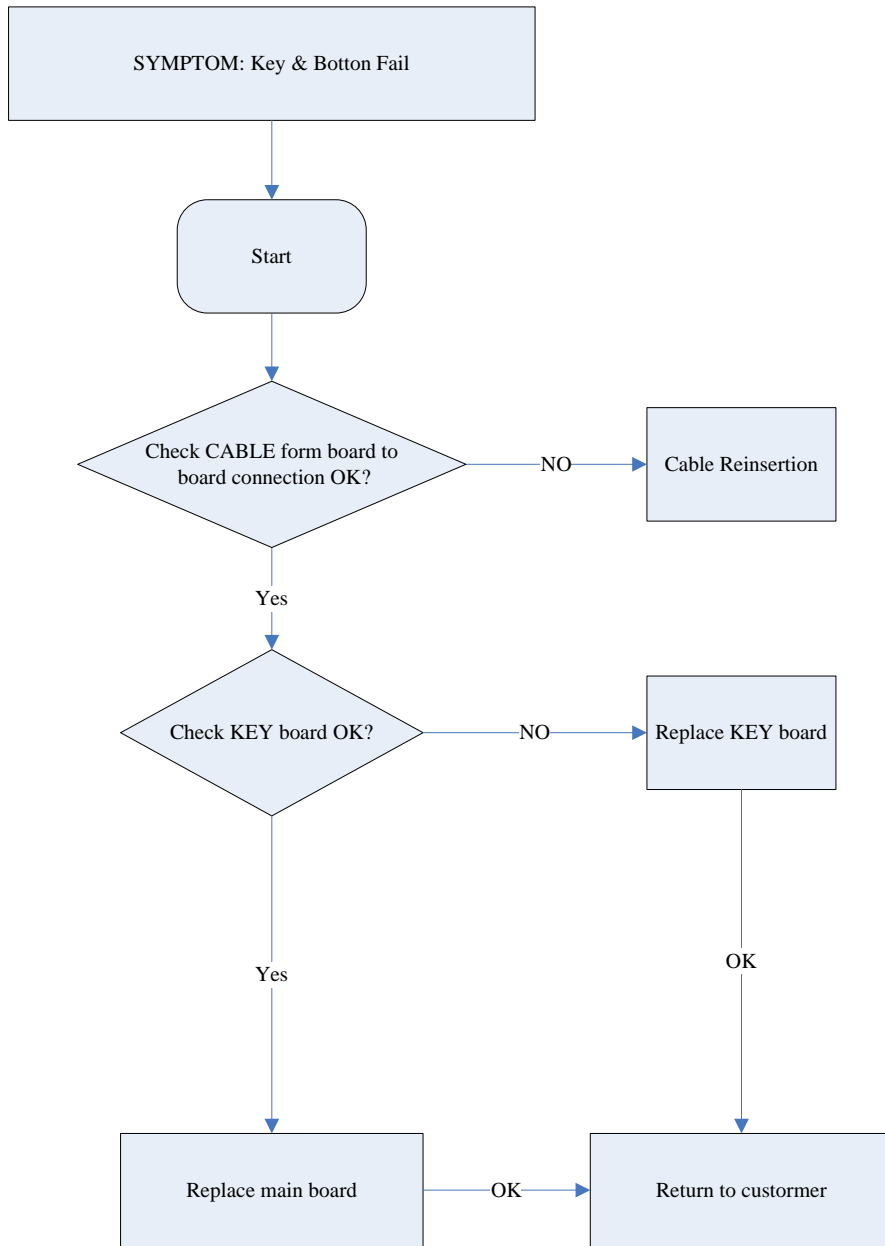
5.0 TROUBLESHOOTING

SYMPTOM: LED DISPLAY FAILURE

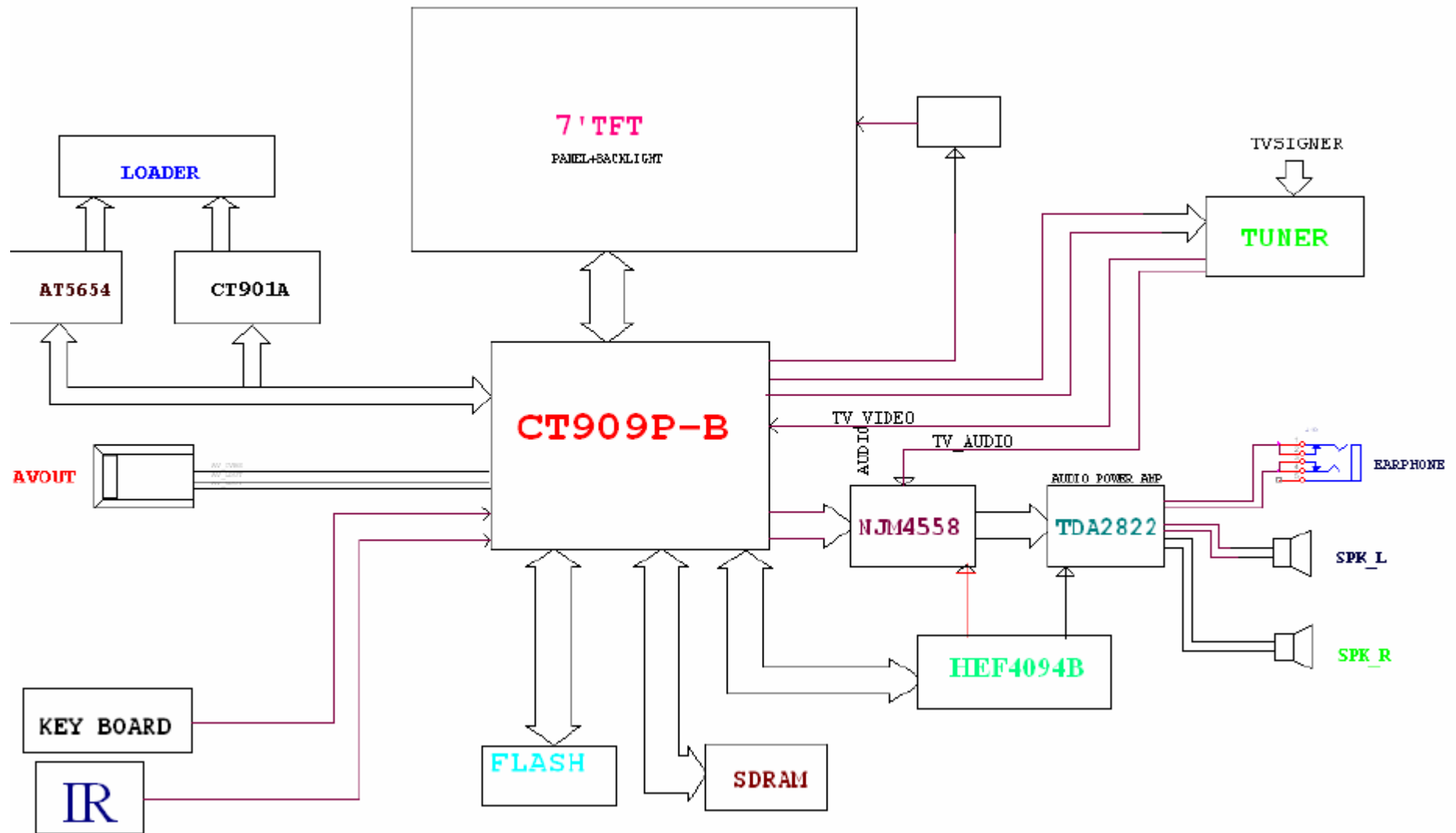


5.0 TROUBLESHOOTING

SYMPTOM: KEY & BOTTON FAILURE



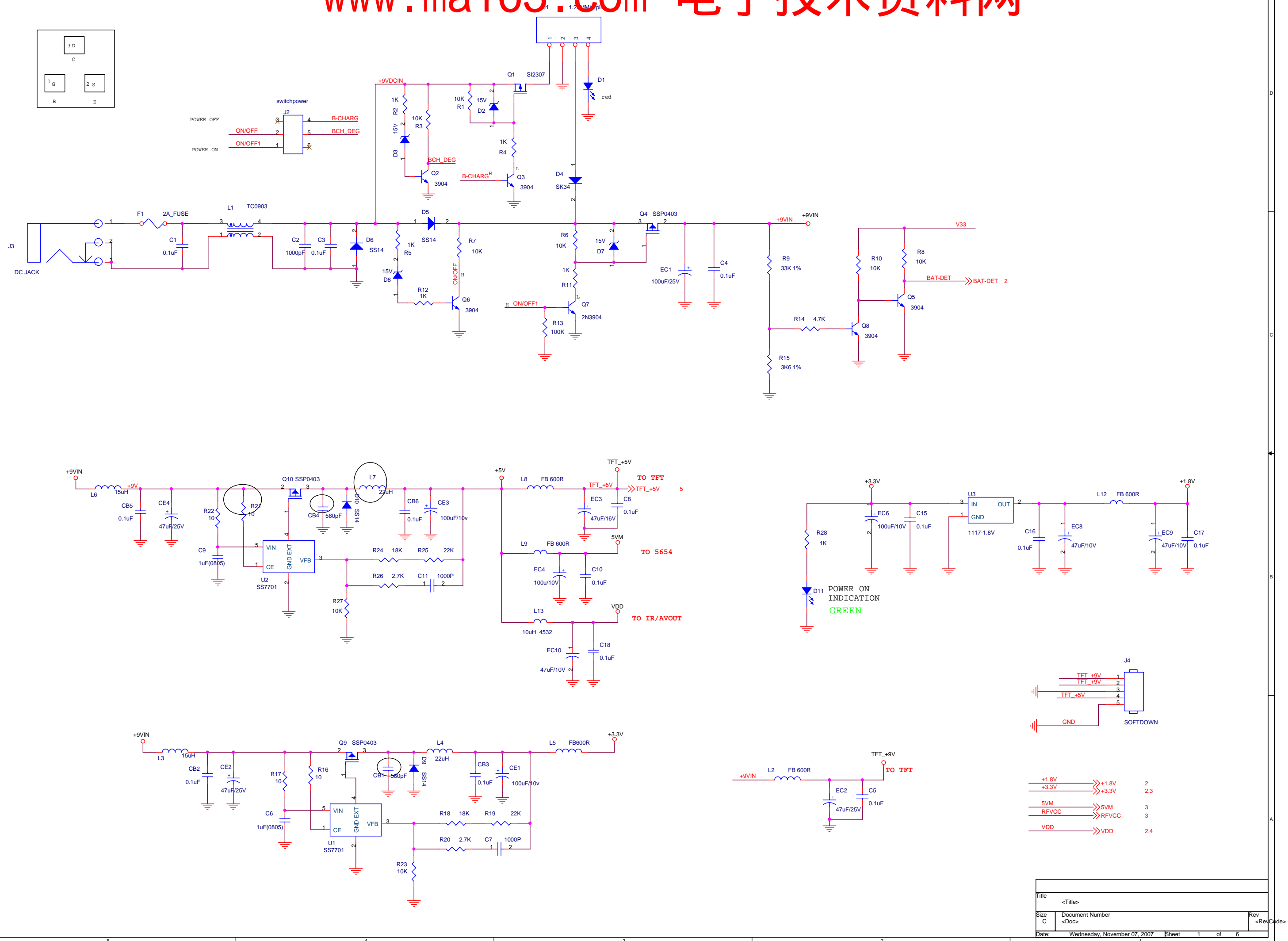
6.0 BLOCK DIAGRAM



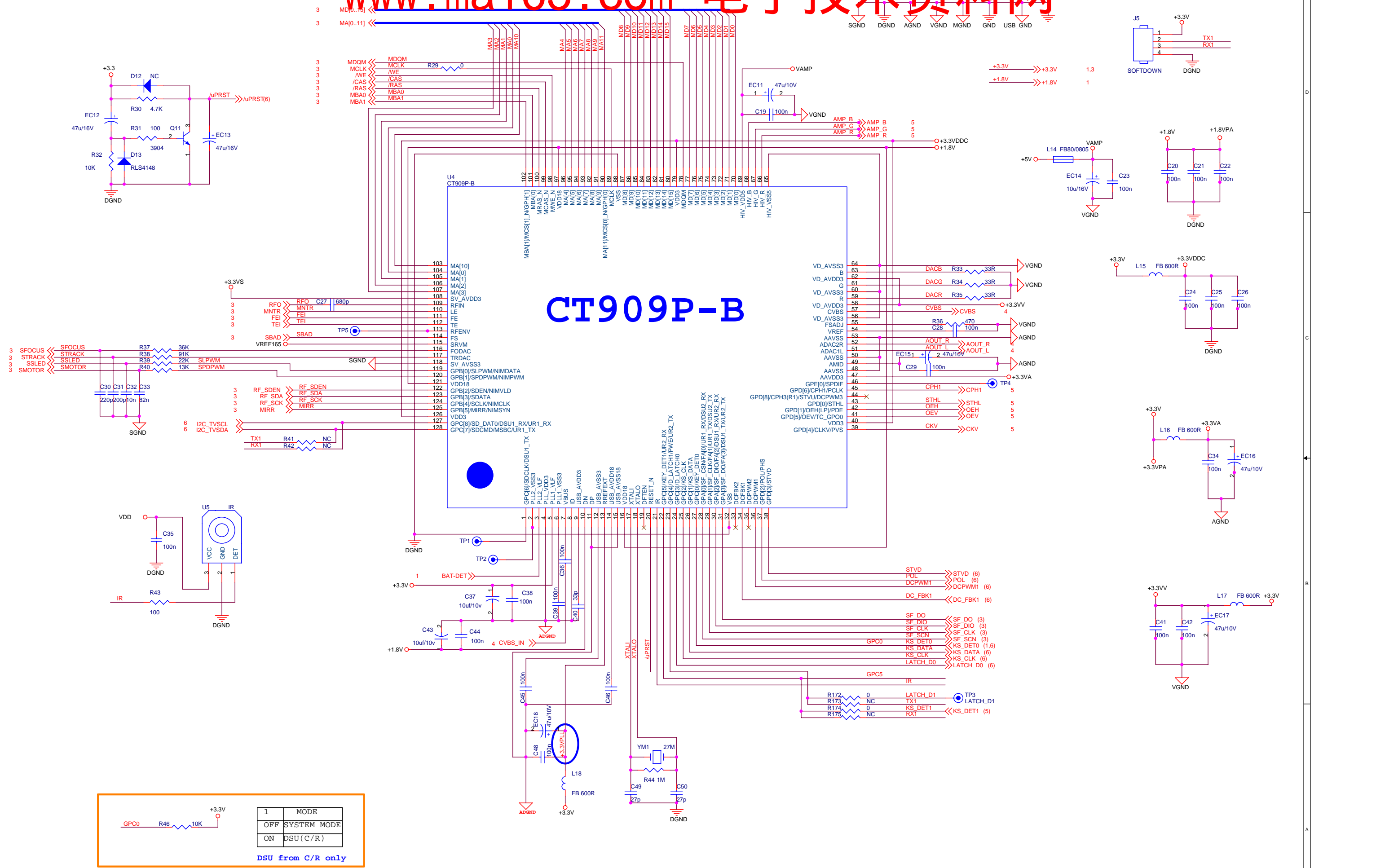
7.0 ELECTRICAL DIAGRAM

The following pages contain electrical diagram in below sequence:

1. Main board (6pages)
2. TFT board (2pages)



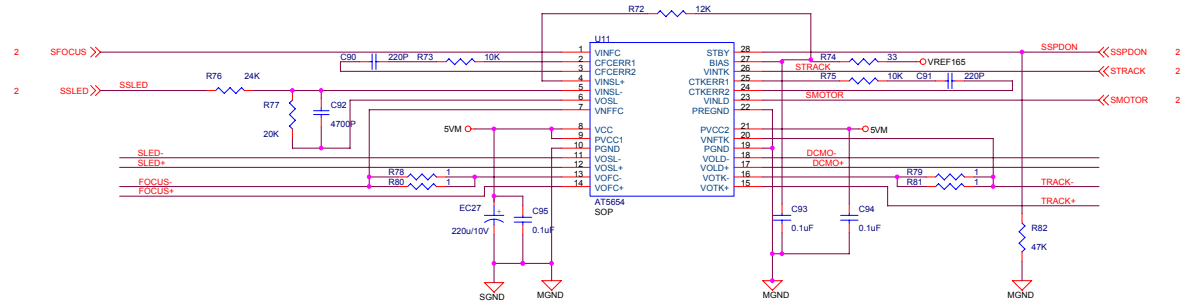
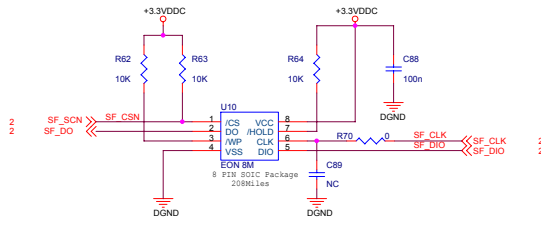
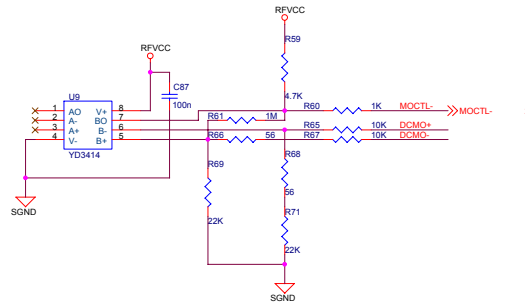
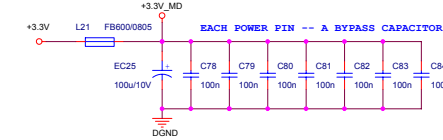
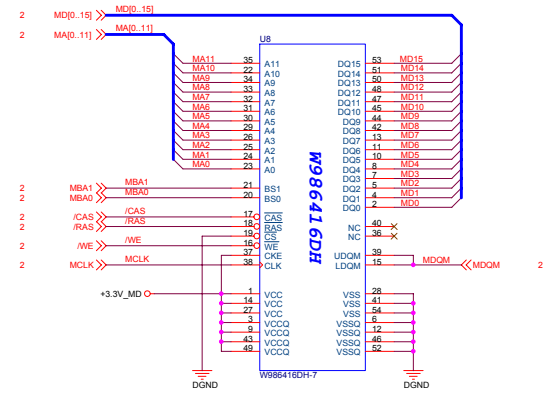
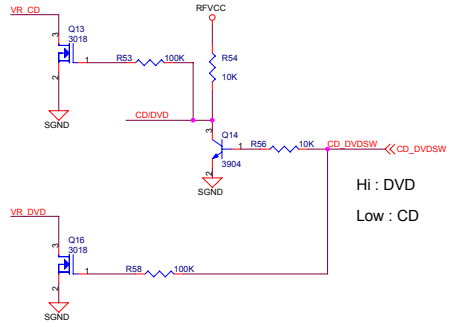
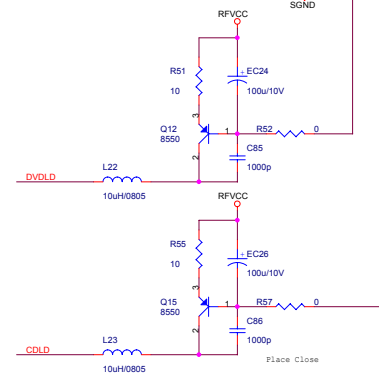
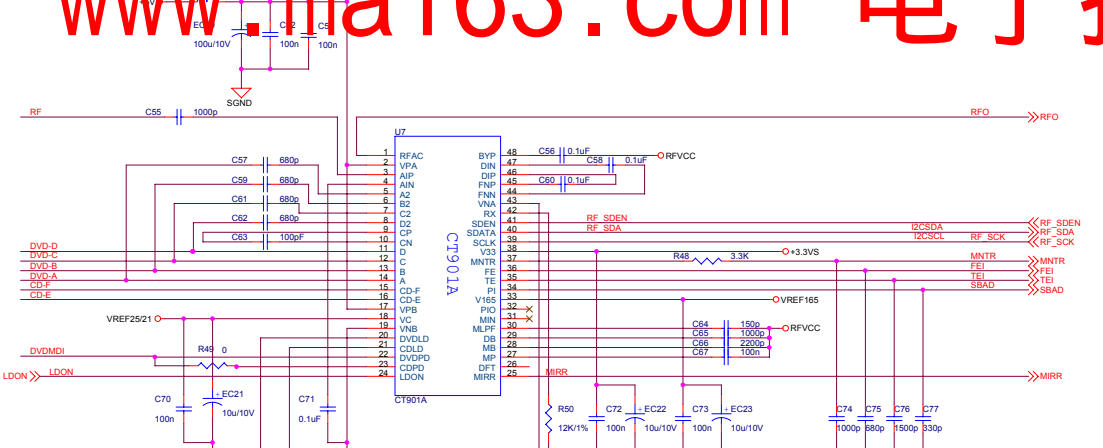
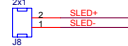
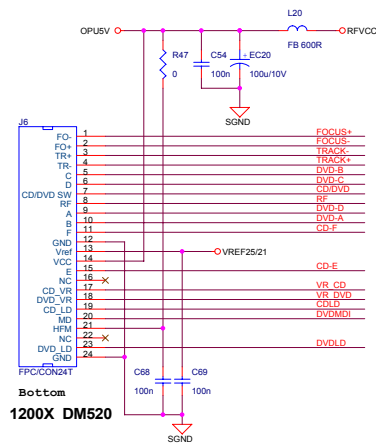
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Date: Wednesday, November 07, 2007	Sheet 1 of 6	

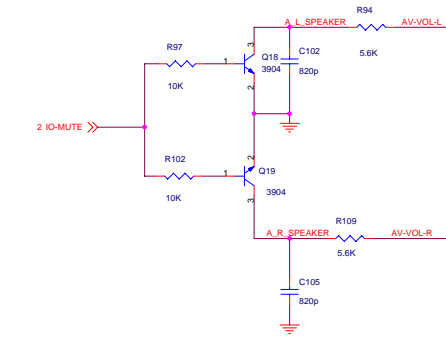
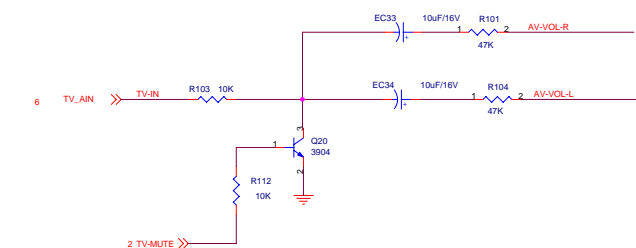
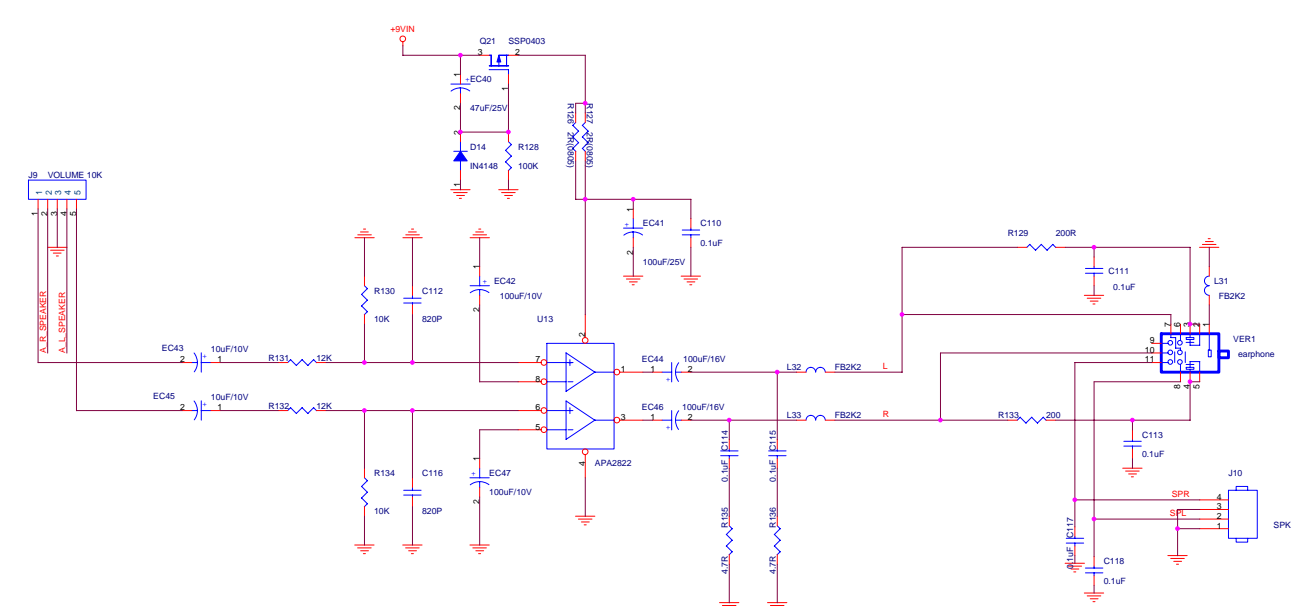
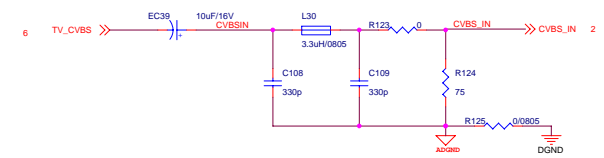
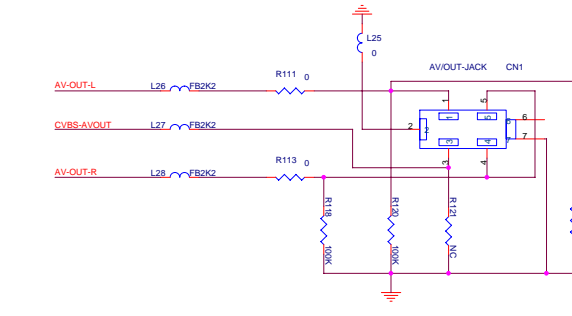
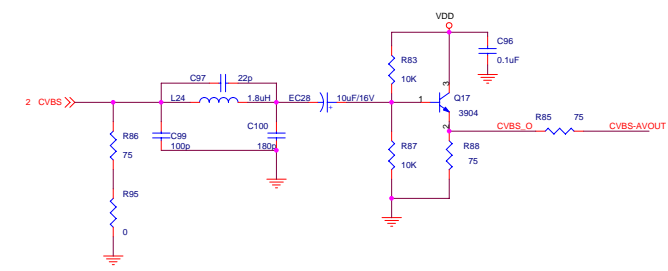
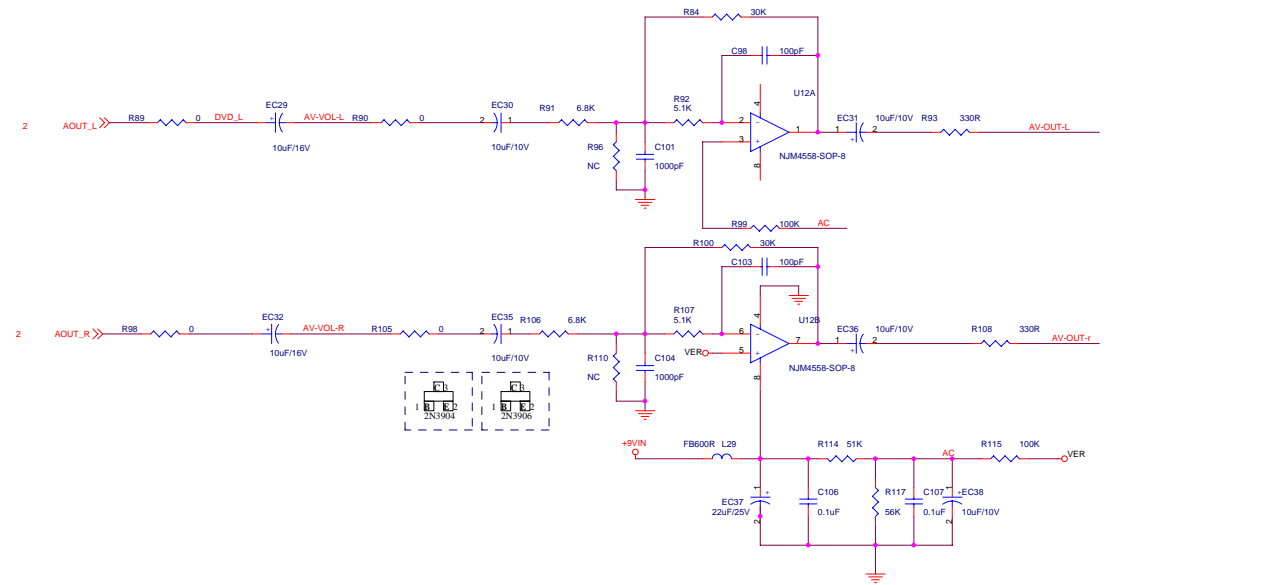


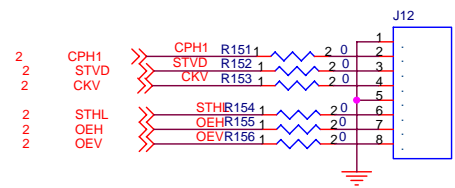
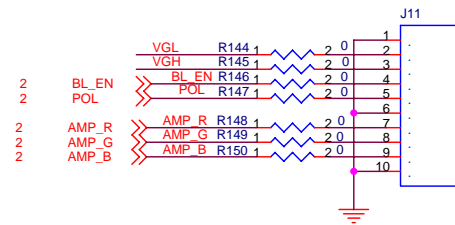
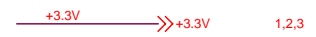
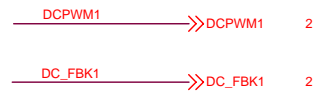
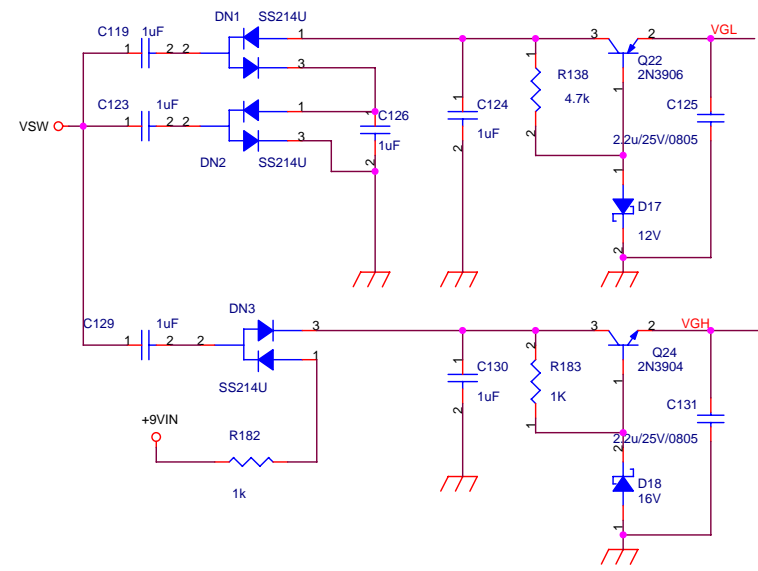
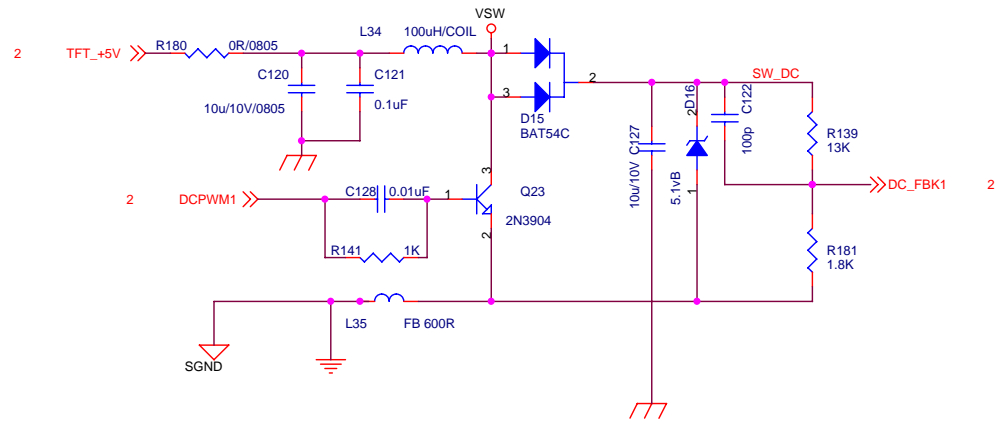
CT909P-B

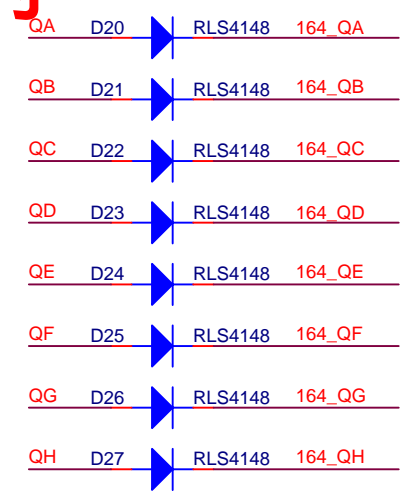
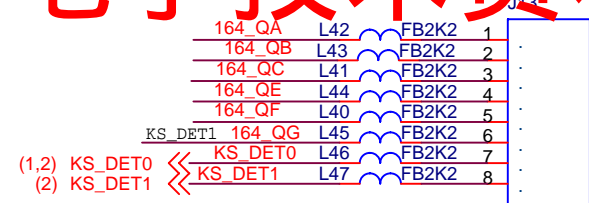
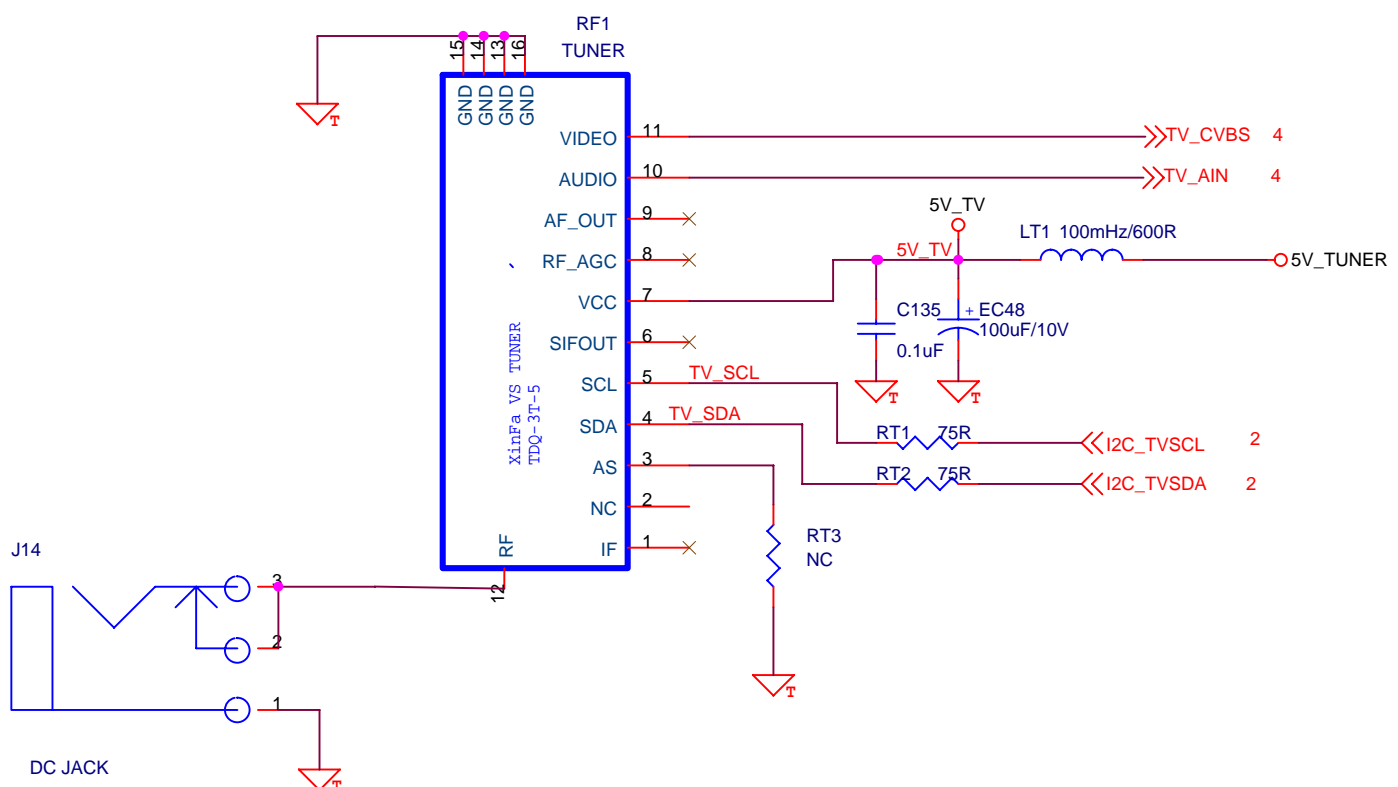
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ON	DSU(C/R)

DSU from C/R only

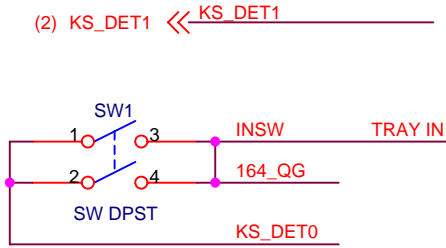
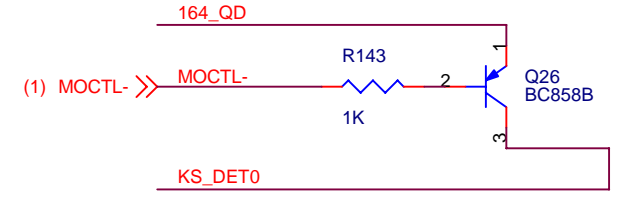




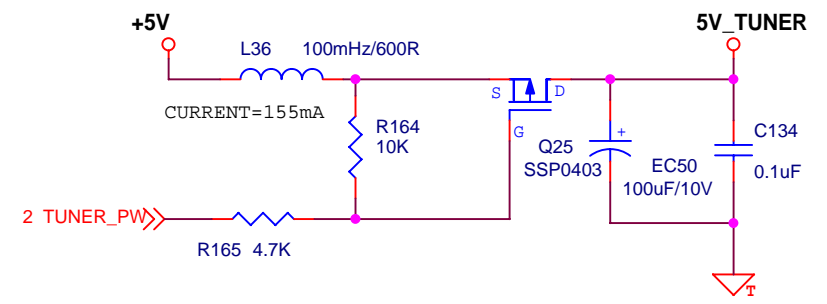
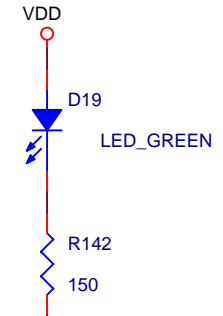
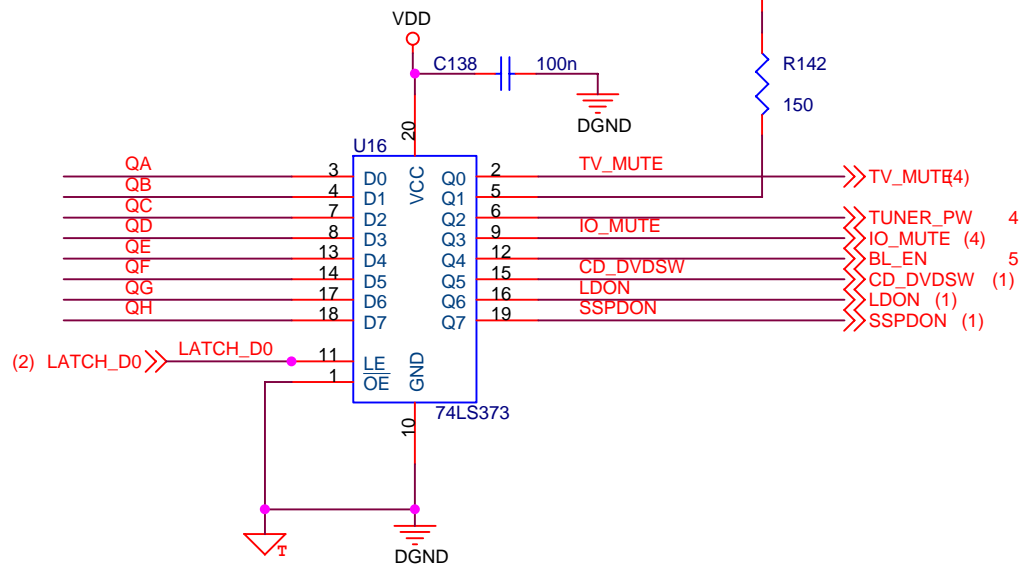
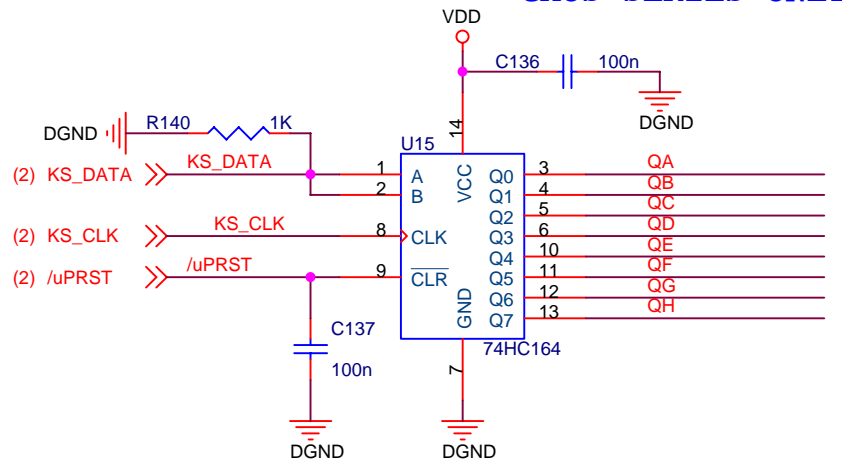




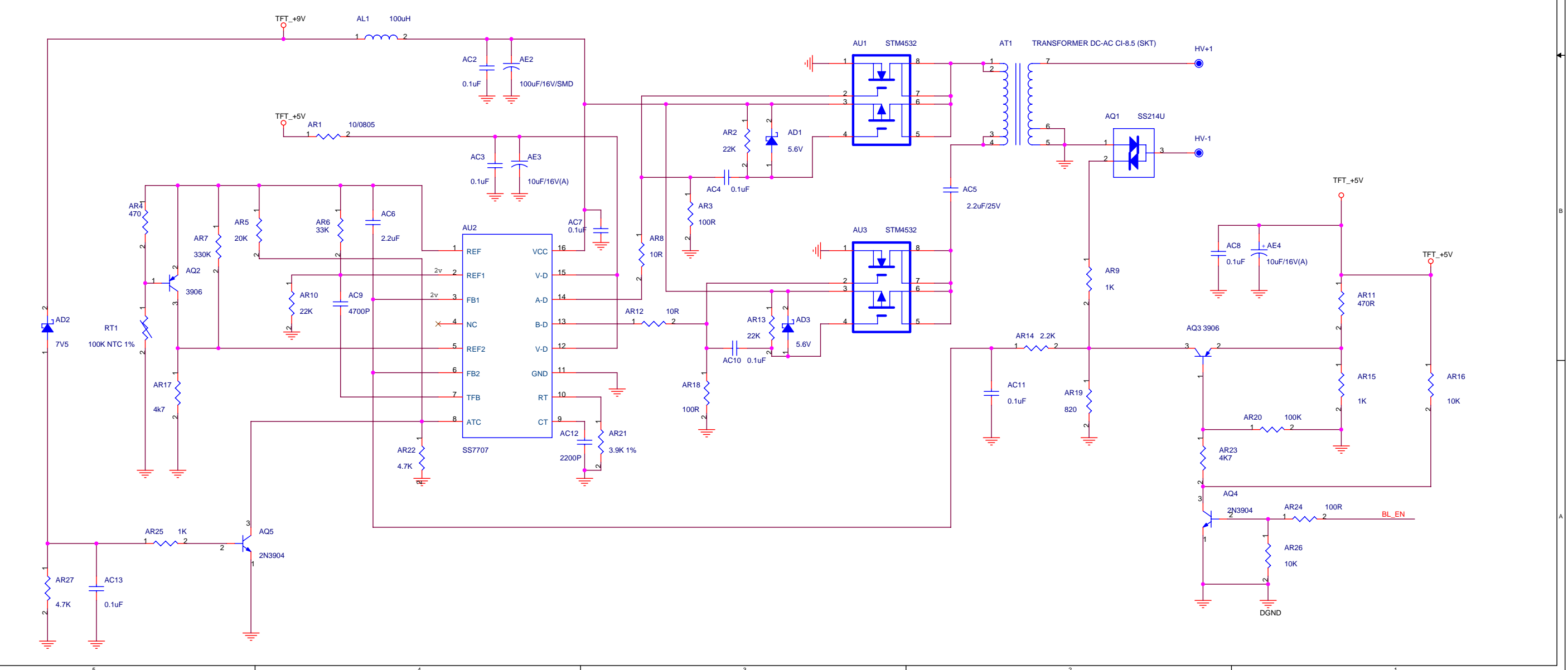
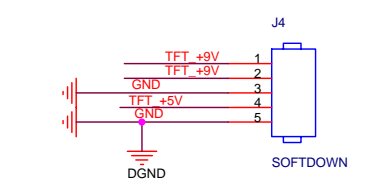
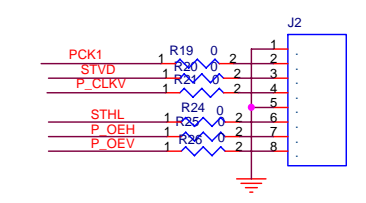
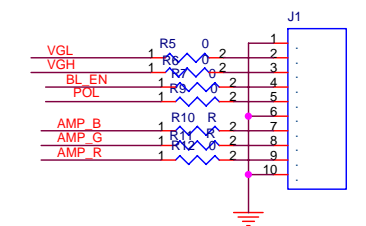
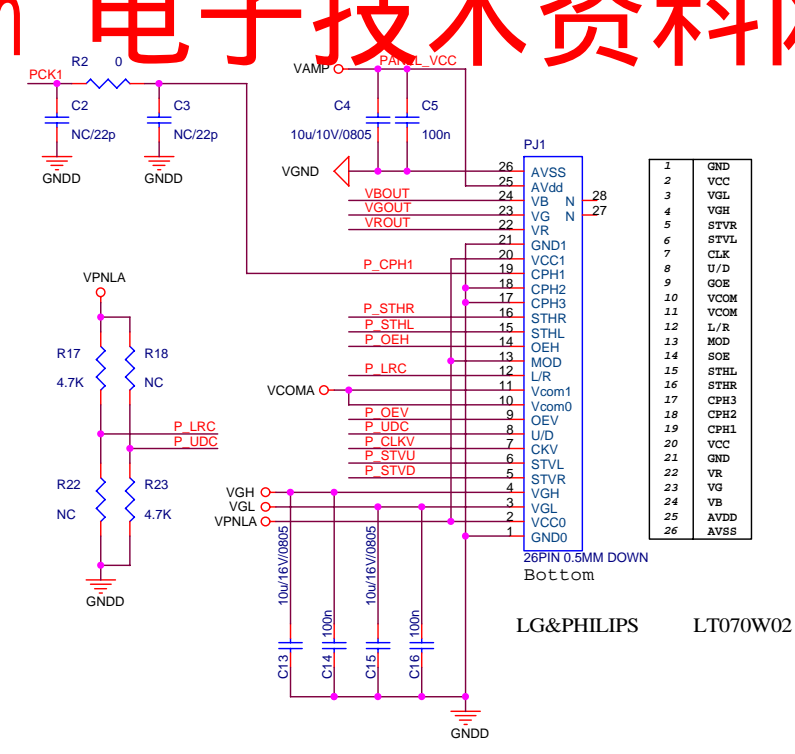
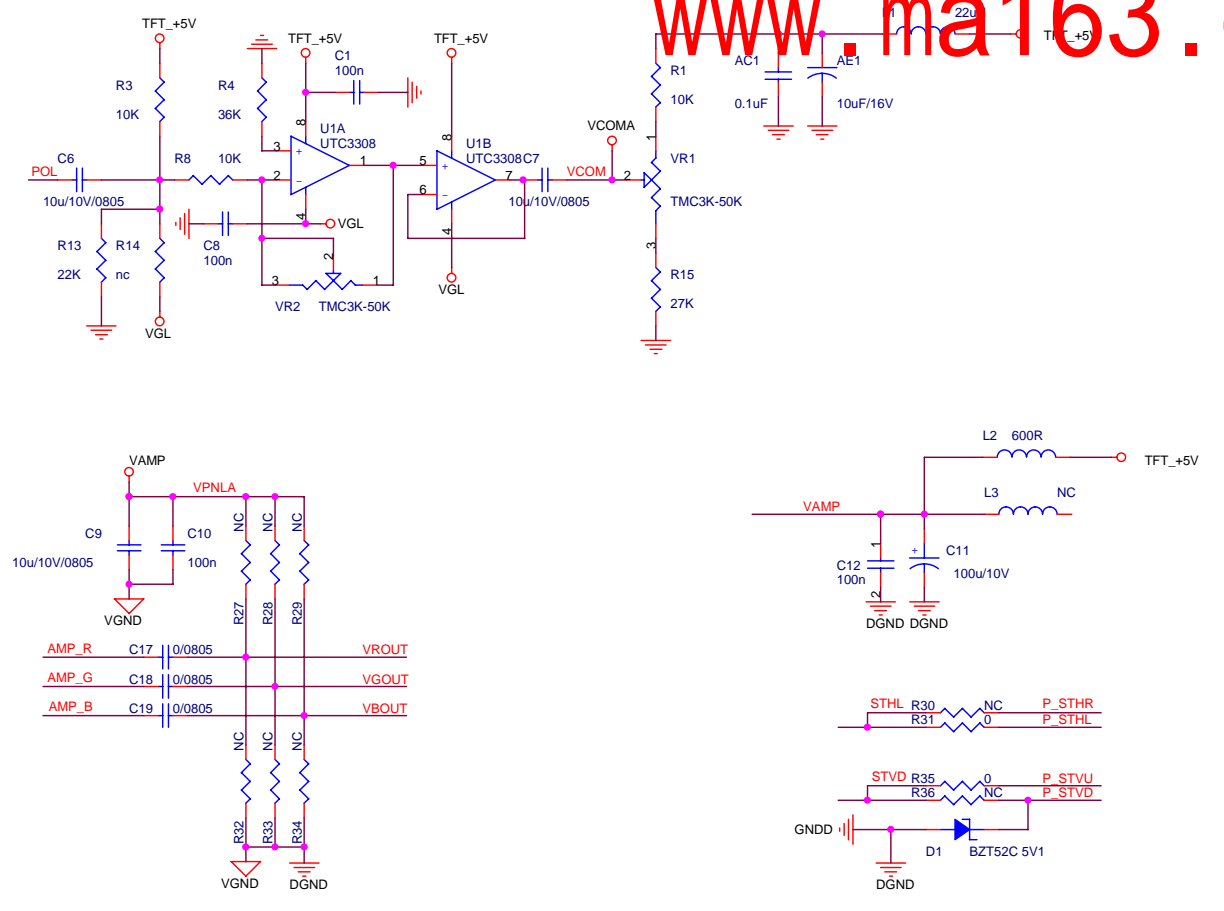
Key Board



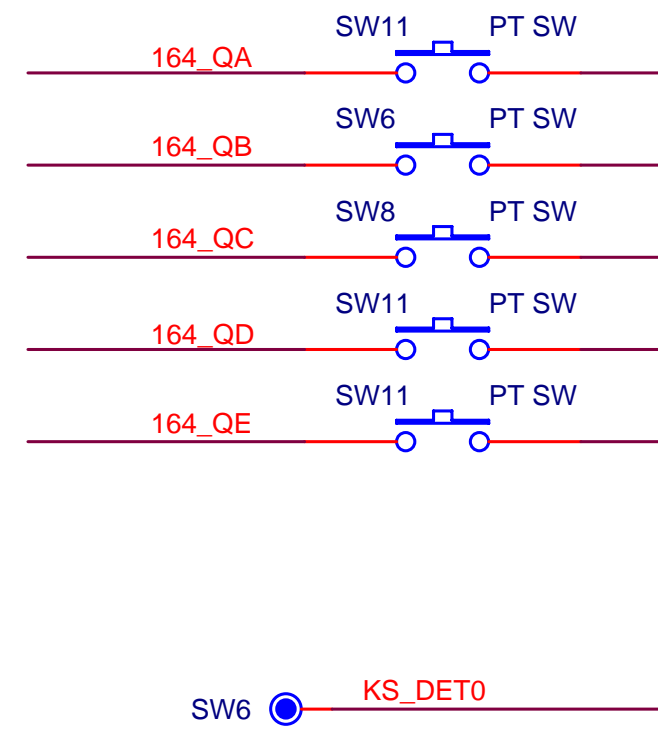
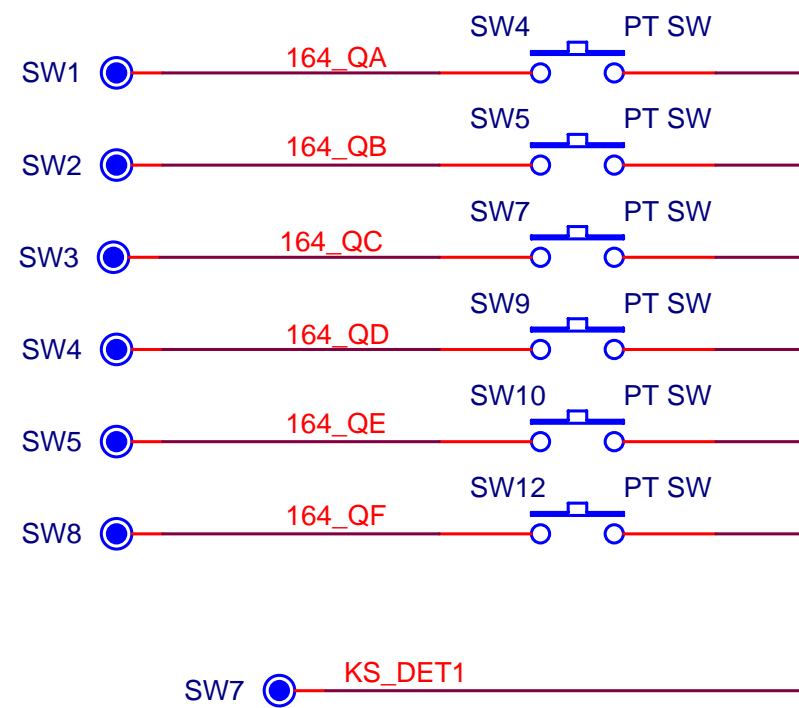
CMOS SERIES ONLY.



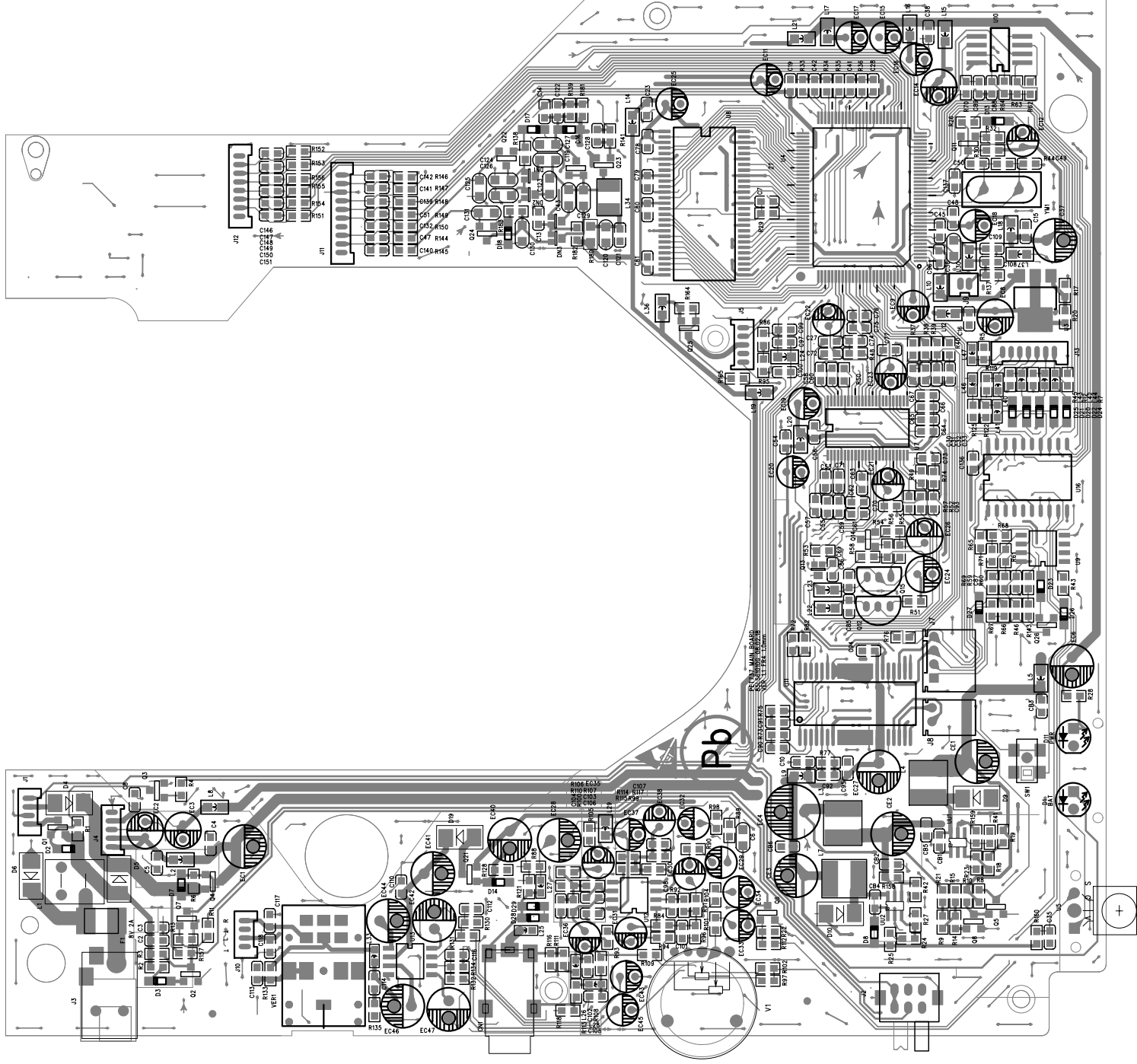
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Date:	Wednesday, November 07, 2007	Sheet 6 of 6



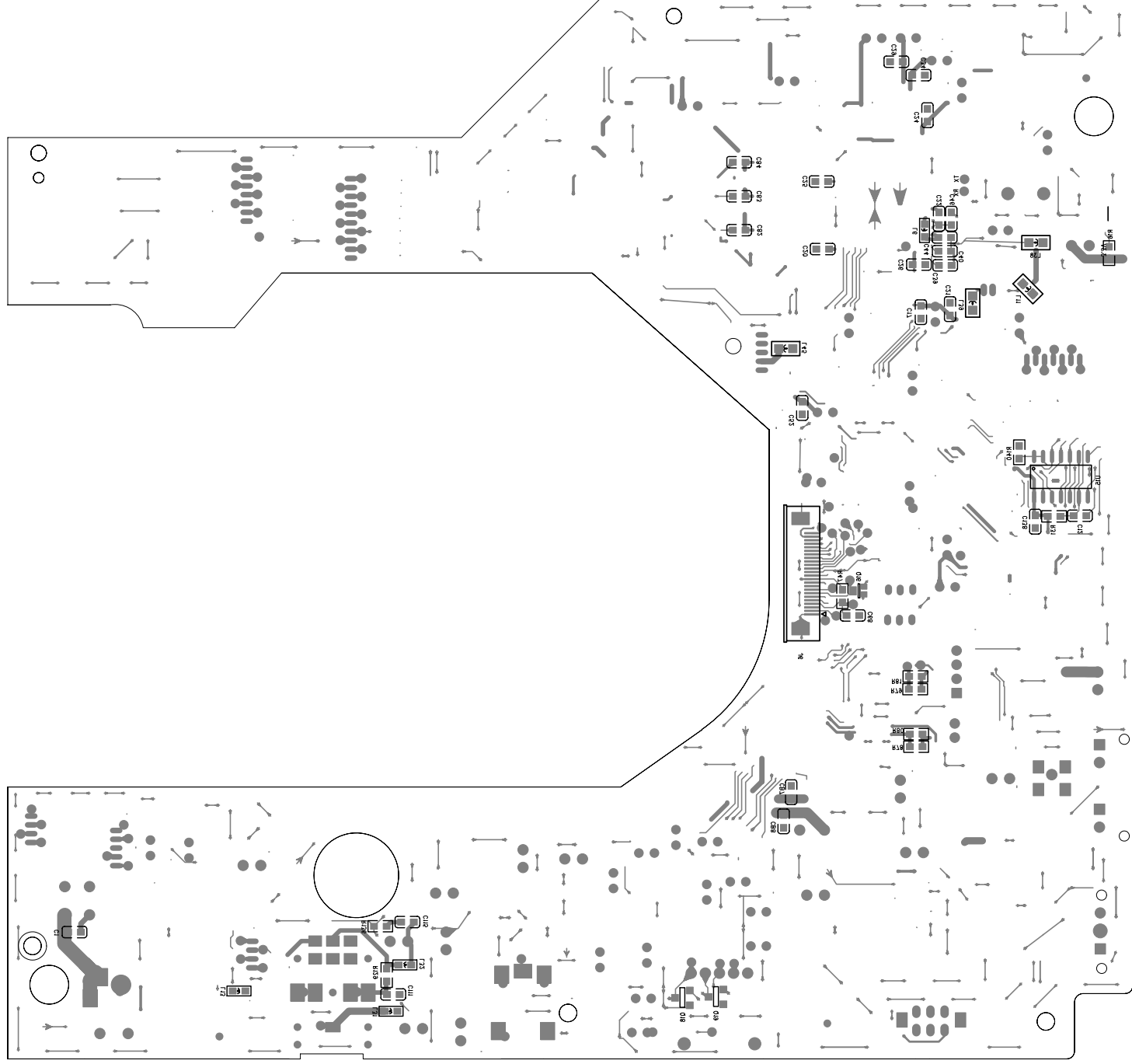
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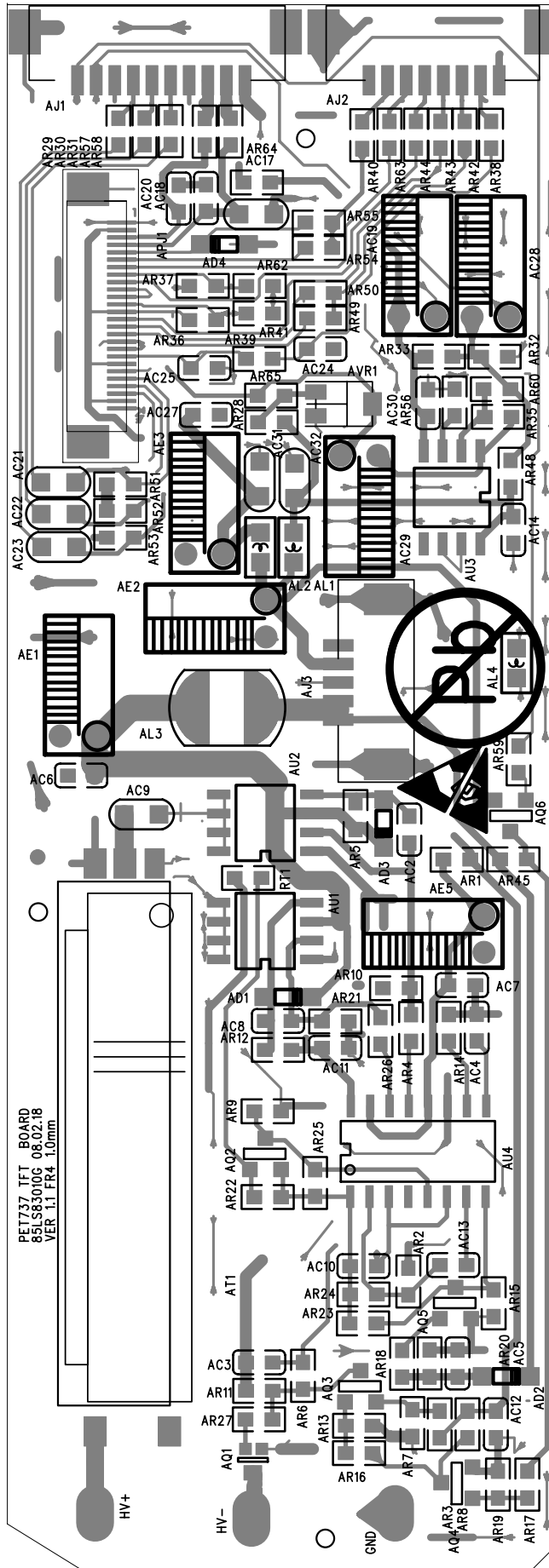
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Date:	Wednesday, November 07, 2007	Sheet 2 of 2



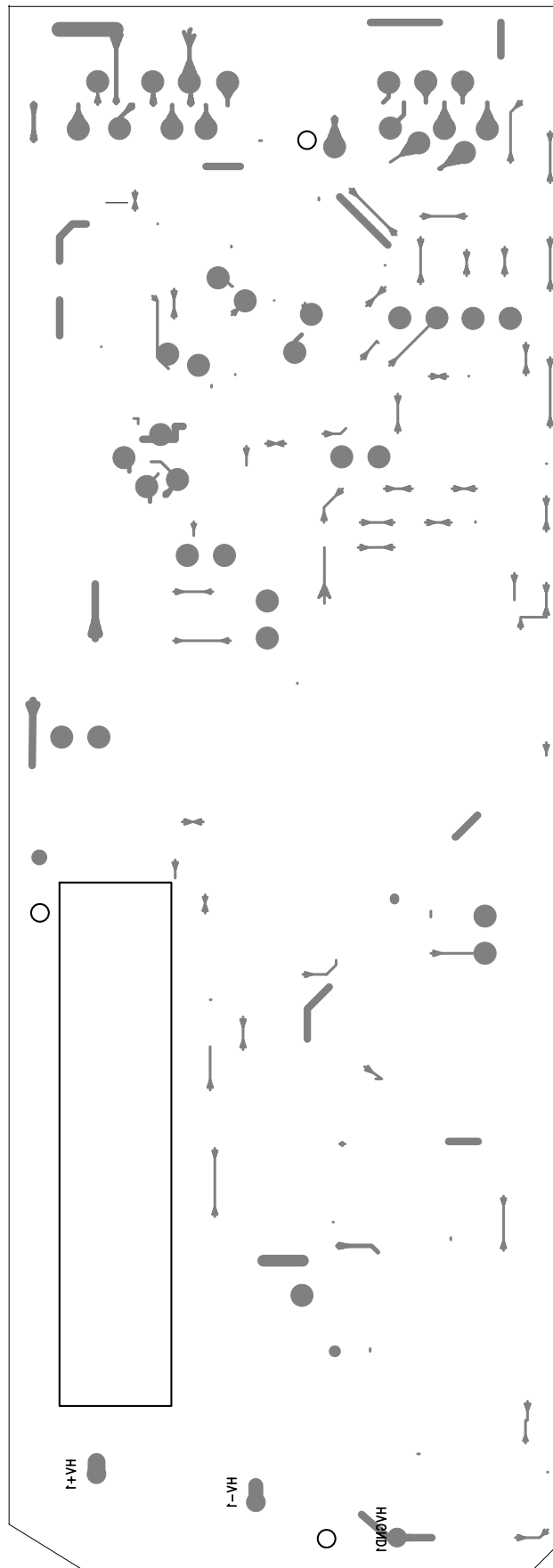
PET737 MAIN TOP



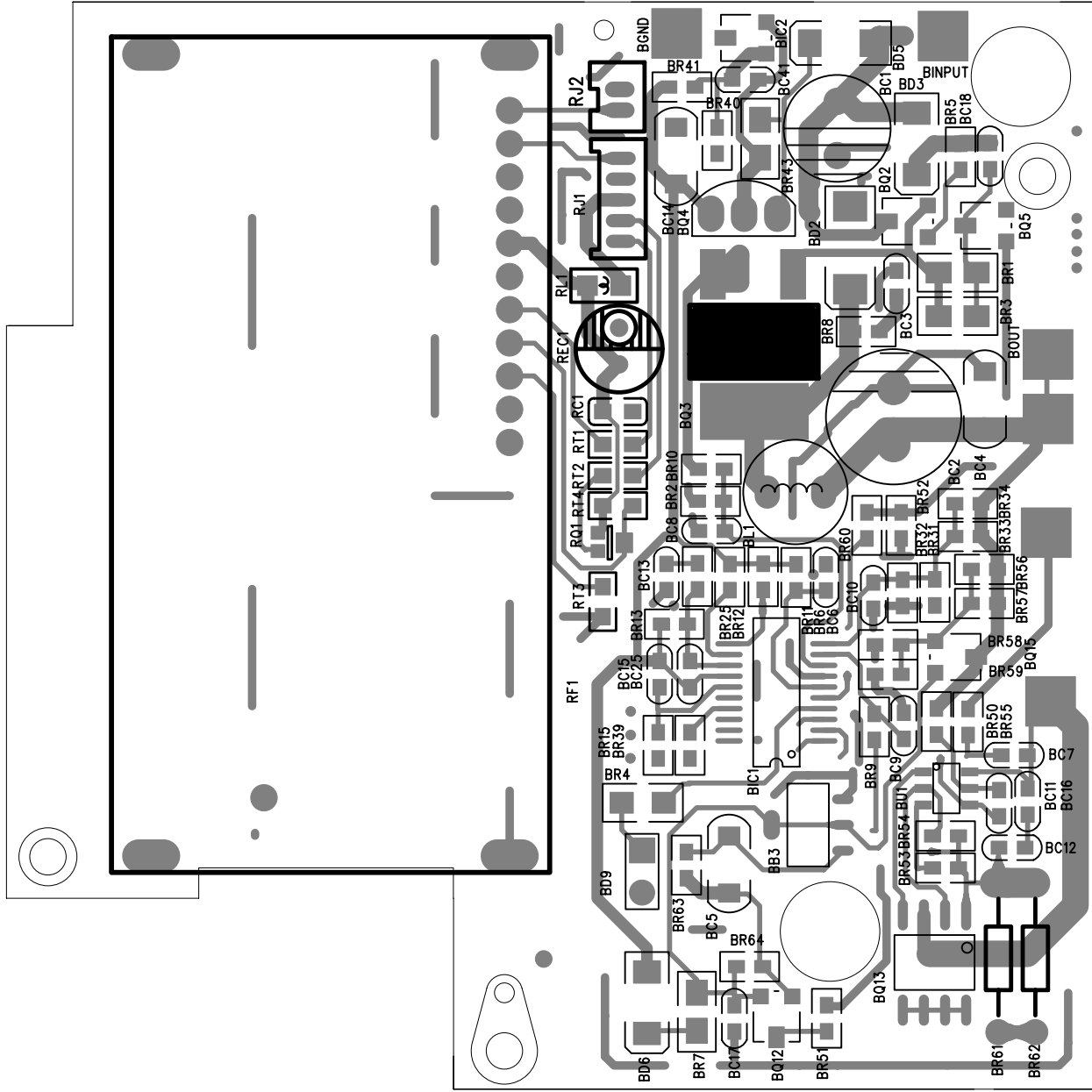
PET737 MAIN BOTTOM



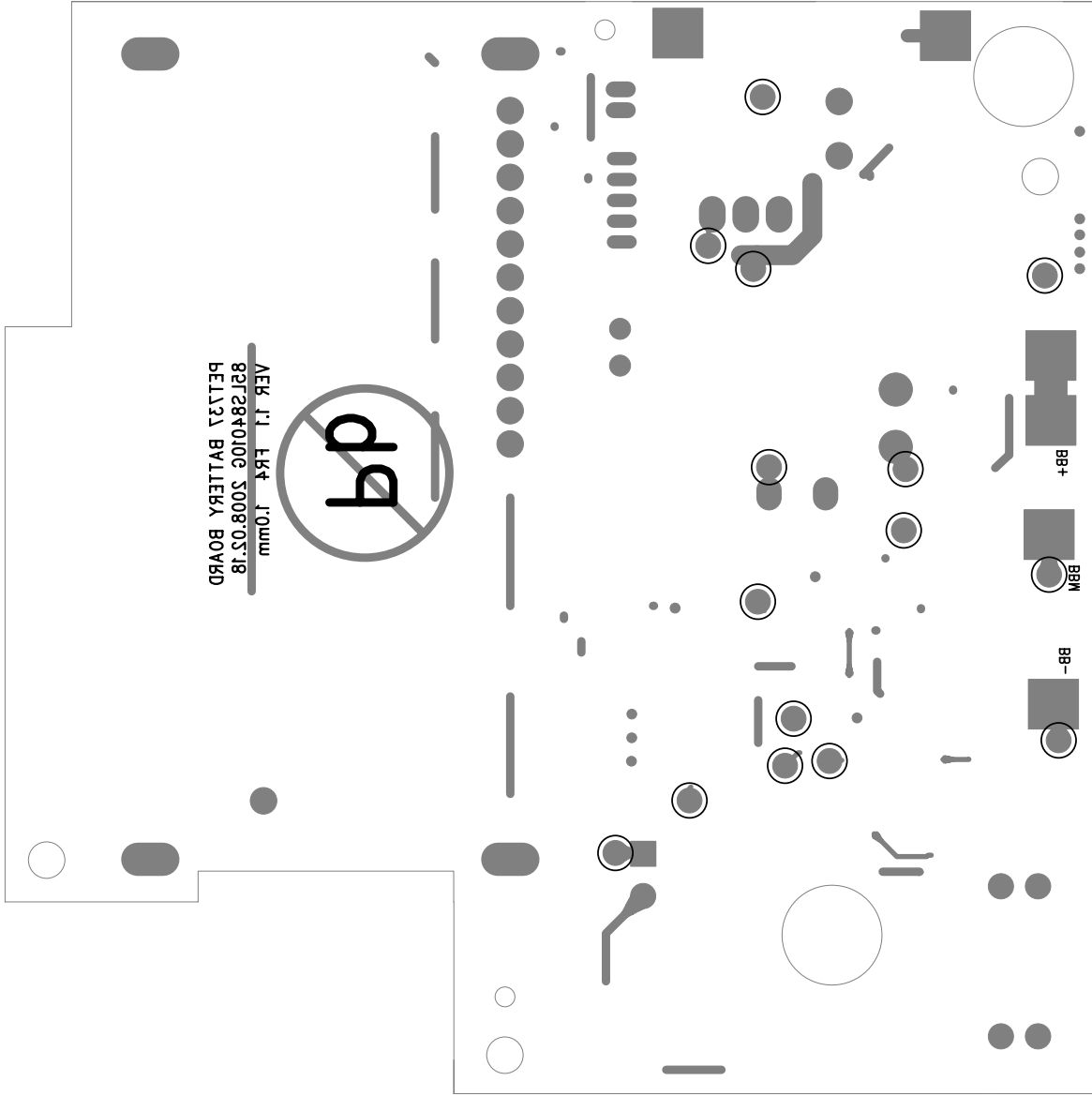
PET737 DRIVER TOP



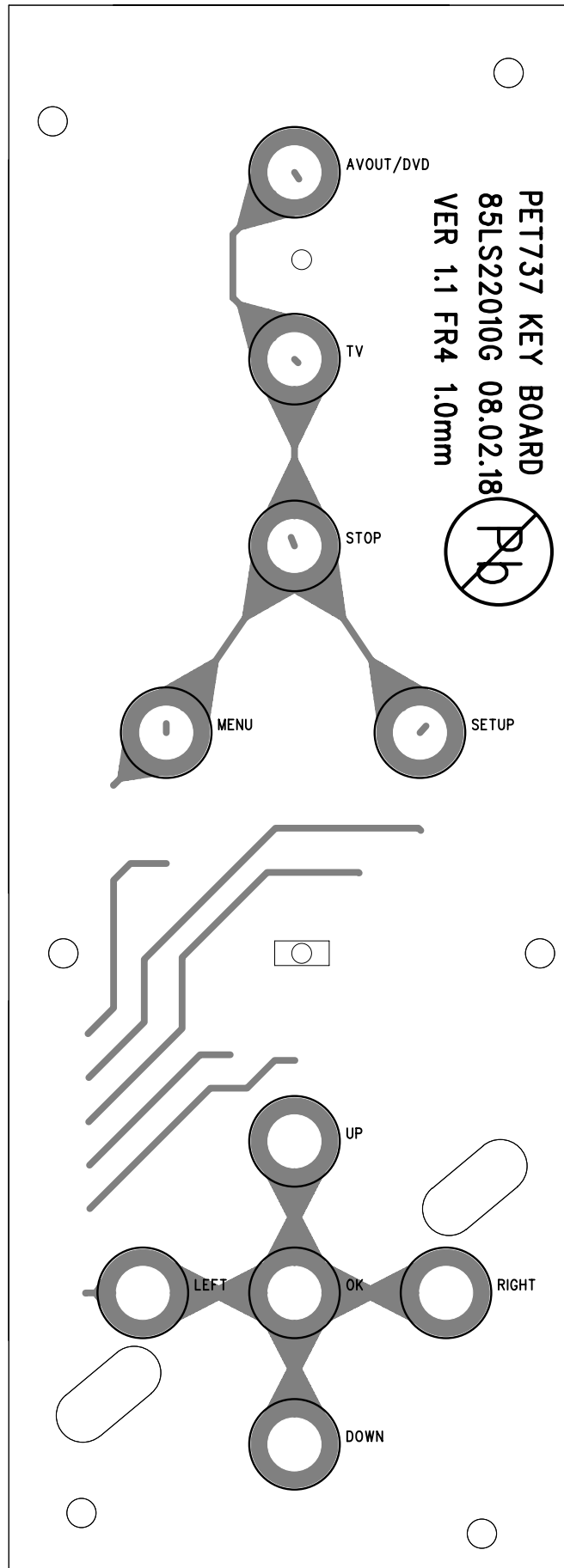
PET737 DRIVER BOTTOM



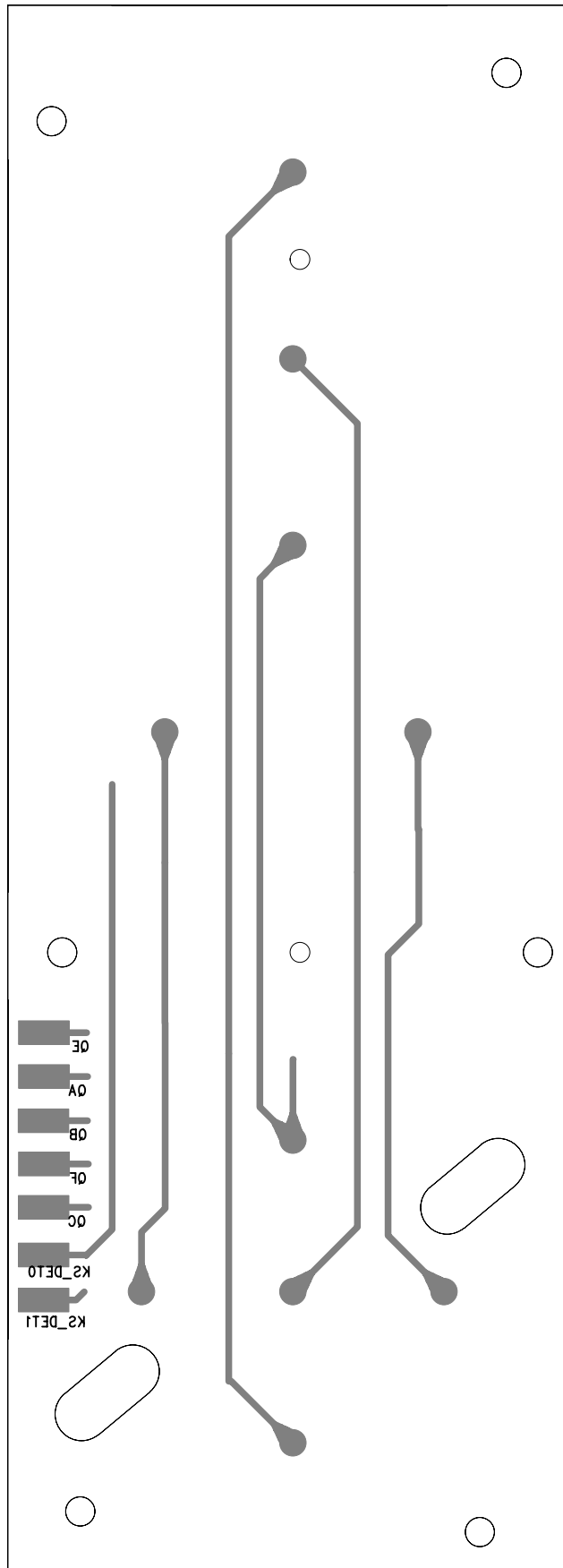
PET737 BATTERY TOP



PET737 BATTERY BOTTOM





PET737 KEY TOP



PET737 KEY BOTTOM

8.0 SERVICE PART LIST

Electrical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET737/93 PET737/98 PET737/12 PET737/58	996510013821	MAIN PCBA		100
PET737/93 PET737/98 PET737/12 PET737/58	996510013822	TFT DRIVER PCBA		110
PET737/93 PET737/98 PET737/12 PET737/58	996510013823	BATT & BATT PCBA ASSY		120
PET737/93 PET737/98 PET737/12 PET737/58	996510013824	KEY PCBA		130



8.0 SERVICE PART LIST

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET737/93 PET737/98 PET737/12 PET737/58	996510013825	7" LCD PANEL ASSY LG E2		200
PET737/93 PET737/98 PET737/12 PET737/58	996510007686	DVD LOADER 1200X		210
PET737/93 PET737/98 PET737/12 PET737/58	996510002384	FFC 24PIN		220
PET737/93 PET737/98 PET737/12 PET737/58	996510013826	2P HOUSING		230
PET737/93 PET737/98 PET737/12 PET737/58	996510013827	5P HOUSING		240
PET737/93 PET737/98 PET737/12 PET737/58	996510013828	5P HOUSING & 4P SPEAKER LING		250
PET737/93 PET737/98 PET737/12 PET737/58	996510013829	8P HOUSING & 10P HOUSING		260








8.0 SERVICE PART LIST

Mechanical Part List:

No.	Service 12NC	Service Description	Photo	Pos. No.
PET737/93 PET737/98	996510013830	FRONT CABINET ASSY		300
PET737/12 PET737/58	996510019983	FRONT CABINET ASSY PET737		
PET737/93 PET737/98 PET737/12 PET737/58	996510013831	DISPLAY FRAME & SPEAKER ASSY		310
PET737/93 PET737/98 PET737/12 PET737/58	996510013832	MIDDLE CABINET ASSY		320
PET737/93 PET737/98	996510013833	BOTTOM CABINET ASSY		330
PET737/12 PET737/58	996510019986	BOTTOM CABINET ASSY PET737		
PET737/93 PET737/98	996510010225	CD DOOR		340
PET737/12 PET737/58	996510019987	CD DOOR PET737		
PET737/93 PET737/98 PET737/12 PET737/58	996510010229	OPEN KNOB / DOOR EJECT BUTTON		350

8.0 SERVICE PART LIST

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET737/93 PET737/98 PET737/12 PET737/58	996510013834	KEY BUTTON ASSY		360
PET737/93 PET737/98 PET737/12 PET737/58	996510009481	NAVIGATION BUTTON		370
PET737/93 PET737/98 PET737/12 PET737/58	99651009483	OK BUTTON		380
PET737/93 PET737/98 PET737/12 PET737/58	996510010463	POWER BUTTON		390
PET737/93 PET737/98 PET737/12 PET737/58	996510010230	DOOR EJECT SPRING		400
PET737/93 PET737/98 PET737/12 PET737/58	996510010231	DOOR SLIPE		410
PET737/93 PET737/98 PET737/12 PET737/58	996510010232	DOOR SLIPE SRPING		420






8.0 SERVICE PART LIST

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET737/93 PET737/98 PET737/12 PET737/58	996510010233	DOOR SLIPE COVER		430
PET737/93 PET737/98 PET737/12 PET737/58	996510010234	CD DOOR SPRING		440
PET737/93 PET737/98 PET737/12 PET737/58	996510010235	HINGE		450
PET737/93 PET737/98 PET737/12 PET737/58	996510010236	LENS		460

8.0 SERVICE PART LIST

Accessories Part List:

Service 12NC	Service Description	Photo	Pos. No.
996510010378	AC/DC ADAPTER FOR PET737/98		ACAPT
996510012875	AC/DC ADAPTER FOR PET737/93		
996510002353	AC/DC ADAPTER FOR PET737/12, PET737/58		
996510004975	AV CABLE		AVCABLE
996510010991	CAR ADAPTER		CARAPT
996510013836	REMOTE CONTROL AY5508		RC
996510013835	ANTENNA (PET737/93 & /98)		ANT

9.0 REVISION LIST

Version 1.0 (3141 785 32540)

- Initial release PET737/93, PET737/98

Version 1.1 (3141 785 32541)

- Initial release PET737/12, PET737/58