

Service
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Service Manual

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1.0 TECHNICAL SPECIFICATION

General

Dimensions (W x H x D):	195 x 154x 38.2 mm
Bear Unit Weight:	675g
Power supply:	
Supply voltage	AC 100~240V (adapter) DC 9V/1A
Supply Power consumption	7W
Operating Temp & RH	0~ 50degC / 40-90% RH
Audio System	
Output voltage 1kHz:	2V +/-0.2V
THD 20-20kHz (%):	≤1%
Dynamic range 1kHz	>/=80dB
Signal/Noise ratio:	>/=80dB
Frequency response (20-20kHz):	+/-1dB
Channel Separation 1kHz	>=80dB
Channel Balance 1kHz	<1dB

Playback disc type:	CD,+/- R/RW,DVD,DVD +/-R/RW
Video Playback Format:	DVD / VCD /MP3,JPEG Image,
Audio Playback Format:	CD/MP3, DVD,Divx5
Disc Diameter	8cm/12cm

Pixel specification

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

Current consumption

DC Supply	DC6.3V-15.5V
Standby Power off	<0.45W
Battery	
Voltage	≤6.3V
Capacity	1000mAH
Battery playtime	
Charging time	5.5h
Standby Power off	

Headphone out (headphone output load 2x16 ohm)

Maximum output power:	≥1.5mW
Frequency response:	+/-1dB
SNR (A-wght):	≥70dB
THD (w/16 ohm loading):	1.0%
Left-Right Channel Separation:	≥55dB
Left-Right Channel Balance:	≤2.0dB

Supported disc type

Video Playback Formats:



Audio Playback Formats:



1.0 TECHNICAL SPECIFICATION

Factory Service Mode (FSM)

Procedure to change region code of your DVD Portable

1. Power ON the DVD player and do not insert DISC inside player
2. Setup→Prefer
Press ►(next) -> ◀(previous) -> ►(next) -> ◀(previous) -> ►(next) -> ►(next) -> ◀(previous)

The LCD display showed the existing region Code.

3. Press ▲ (navigation up) or ▼ (navigation down) repeatedly to select the number from 0 to 6.
4. Then press OK to confirm your region code.
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 for SW upgrade

1. Download the "PHILIPS.BIN" file from the Philips support site
2. Power on PET721C with AC/DC adapter
3. The set will detect the upgraded SW
4. Press "OK" to confirm and proceed
5. The set will reset once finished upgrade

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

Procedure to check SW version of your DVD Portable

1. Setup→General
Press IR in the sequence as
3→3→0→8
Then a menu will be show XX-YY-MM-DD

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.

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.

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.

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.

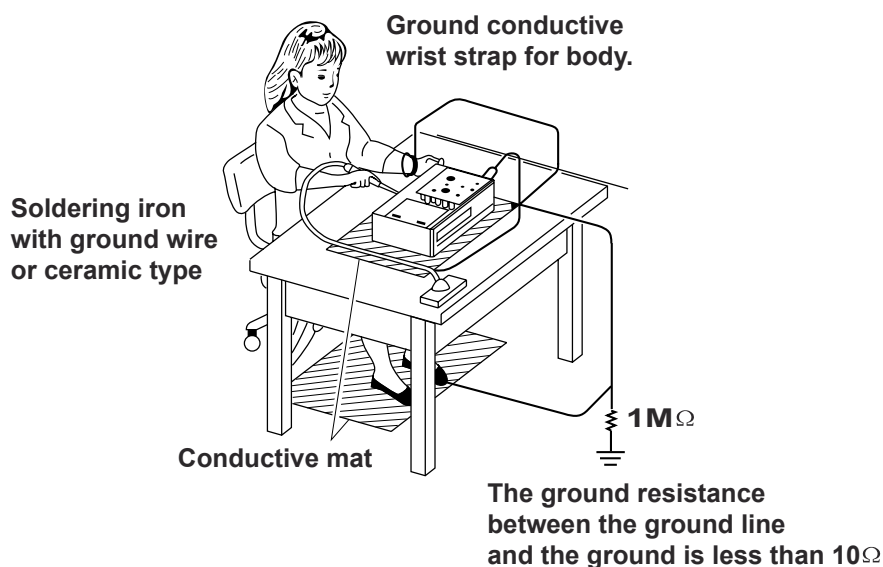
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

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.



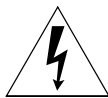
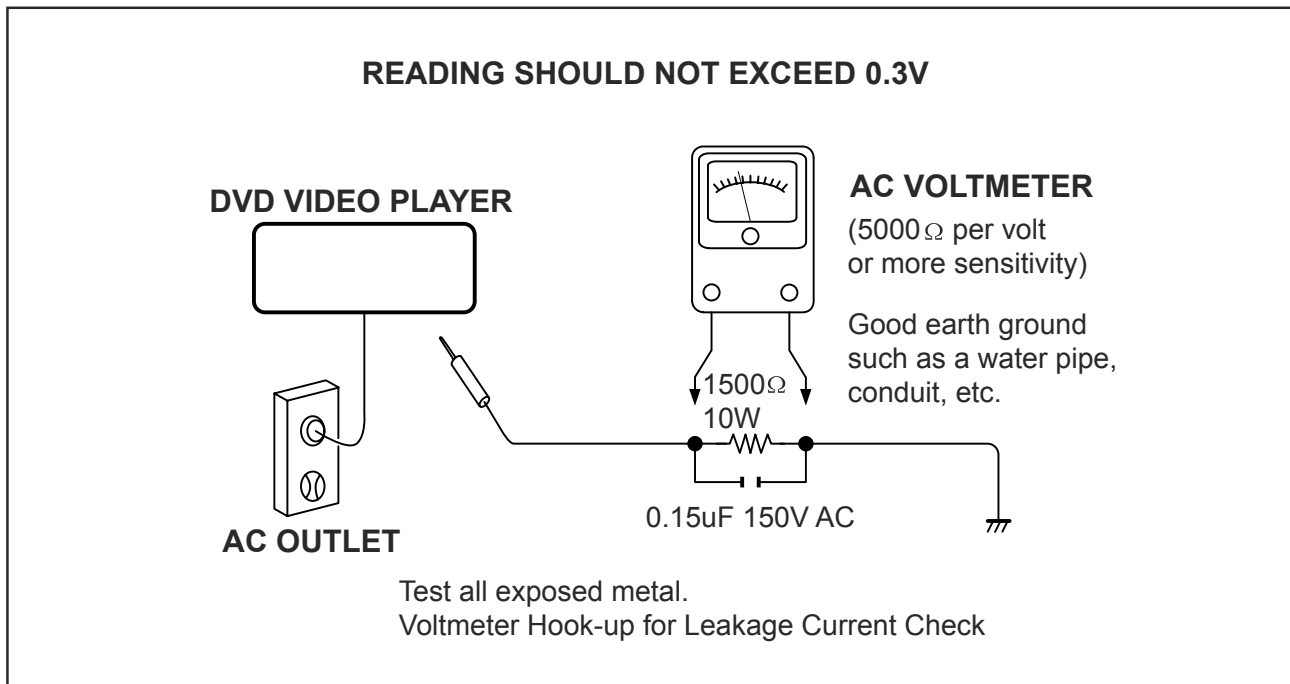
SAFTY NOTICE

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.



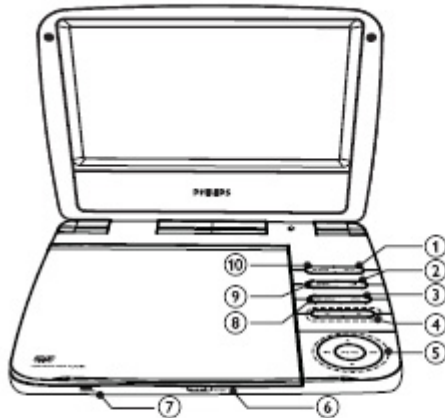
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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.

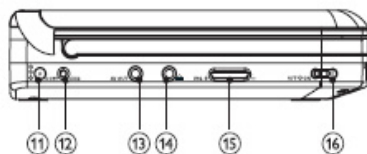
3.0 INSTRUCTION FOR USE

Oversigt over hovedenheden



- ⑭ Hovedtelefonstik.
 - Hovedtelefonstik.
- ⑮ VOL +/-
 - Skruer op eller ned for lydstyrken.
- ⑯ OFF ON
 - Tænder/slukker DVD-afspilleren.

- ① **SETUP**
 - Åbner eller lukker opsætningsmenuen.
- ② **Light**
 - Justerer lysstyrken for skærmens baggrundsls.
- ③ **STOP**
 - Stop afspilning af disk.
- ④ **Navigation**
 - Springer til forrige eller næste titel, kapitel eller spor.
- ⑤ **Play/Pause/OK**
 - Navigerer gennem menuerne.
 - Søger tilbage/fremad ved forskellige hastigheder.
 - **OK**
 - Bekræfter en indtastning eller et valg.
 - Start eller sæt disken på pause.
- ⑥ **OPEN**
 - Åbner diskuffen.
- ⑦ **POWER**
 - Strømindikator.
- ⑧ **DISC MENU**
 - Ved DVD, åbner eller lukker diskmenuen.
 - Ved VCD: Tænder eller slukker for PBC-tilstand (Playback Control).
 - Ved VCD version 2.0 eller SVCD med PBC slået til, skiftes tilbage til menuen.
- ⑨ **OPTION**
 - Åbner indstillingerne for den aktuelle aktivitet eller det aktuelle valg.
- ⑩ **AV MODE**
 - Slukker frontpanelets display, når afspilleren er forbundet til et TV.



- ⑪ **DC IN**
 - Stik til strømforsyning
- ⑫ **CHG**
 - Opladeindikator.
- ⑬ **AV OUT**
 - Lyd-/videoudgangstik.

4.0 MECHANICAL INSTRUCTION

Disassembly Procedure on PET721D

	<p>Remove eight screws on back cabinet to separate top cabinet and back cabinet.</p>	<p>screws 8pcs</p>
	<p>Generally open the front cabinet.</p>	
	<p>Disassemble the connector on DVD top cabinet.</p>	
	<p>Remove two screws on the battery and battery board.</p>	<p>screws 2pcs</p>
	<p>Remove three screws on the Main board.</p>	<p>screws 3pcs</p>
	<p>Disassemble the black cloth on the DVD LOADER.</p>	

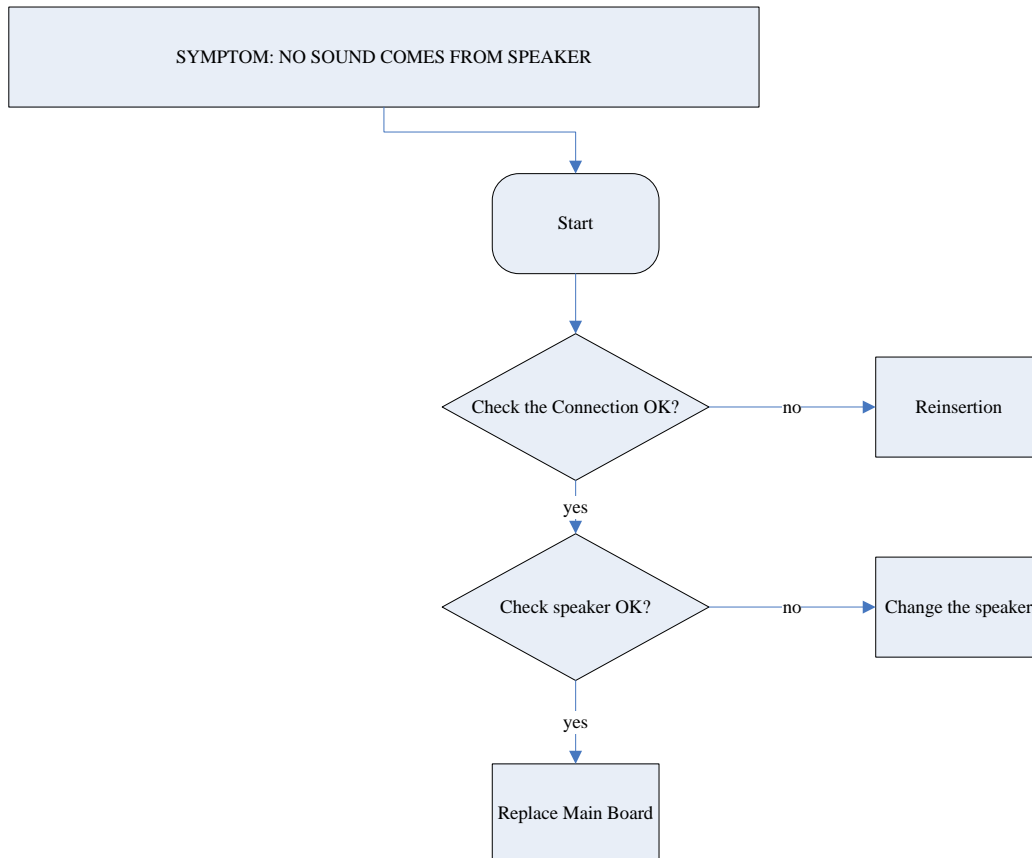
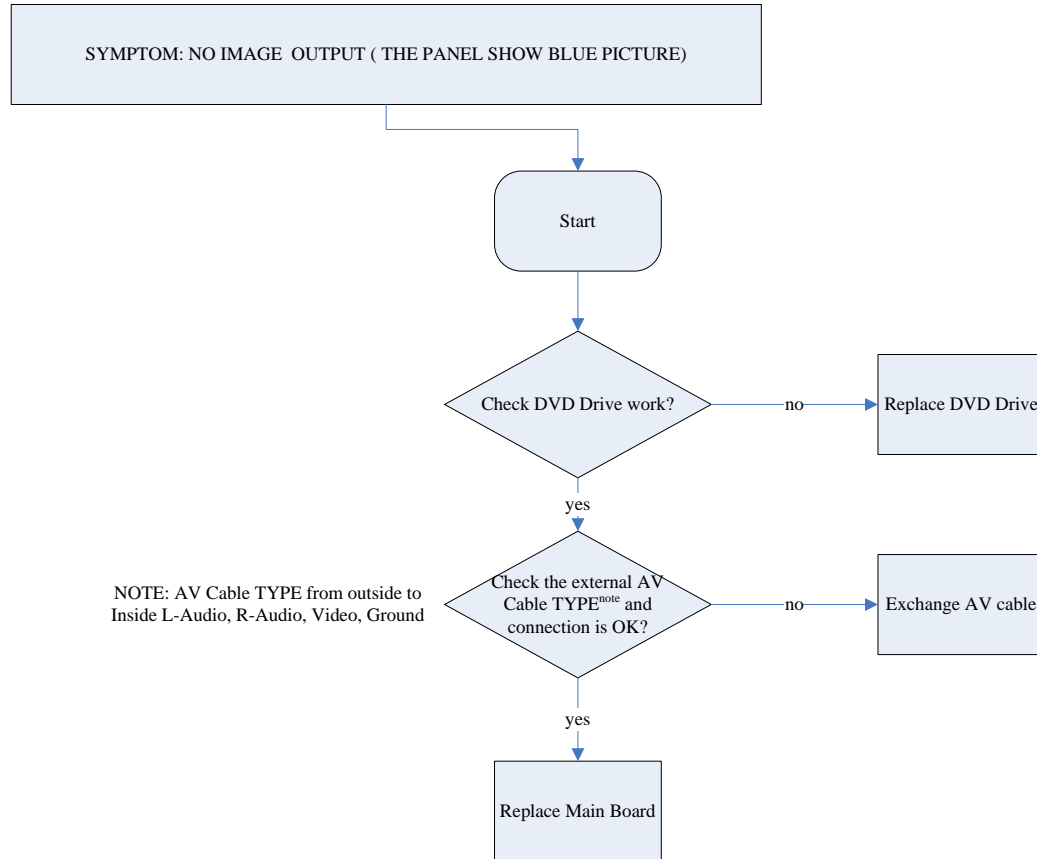


Disassemble the connector and black cloth on the TFT board.



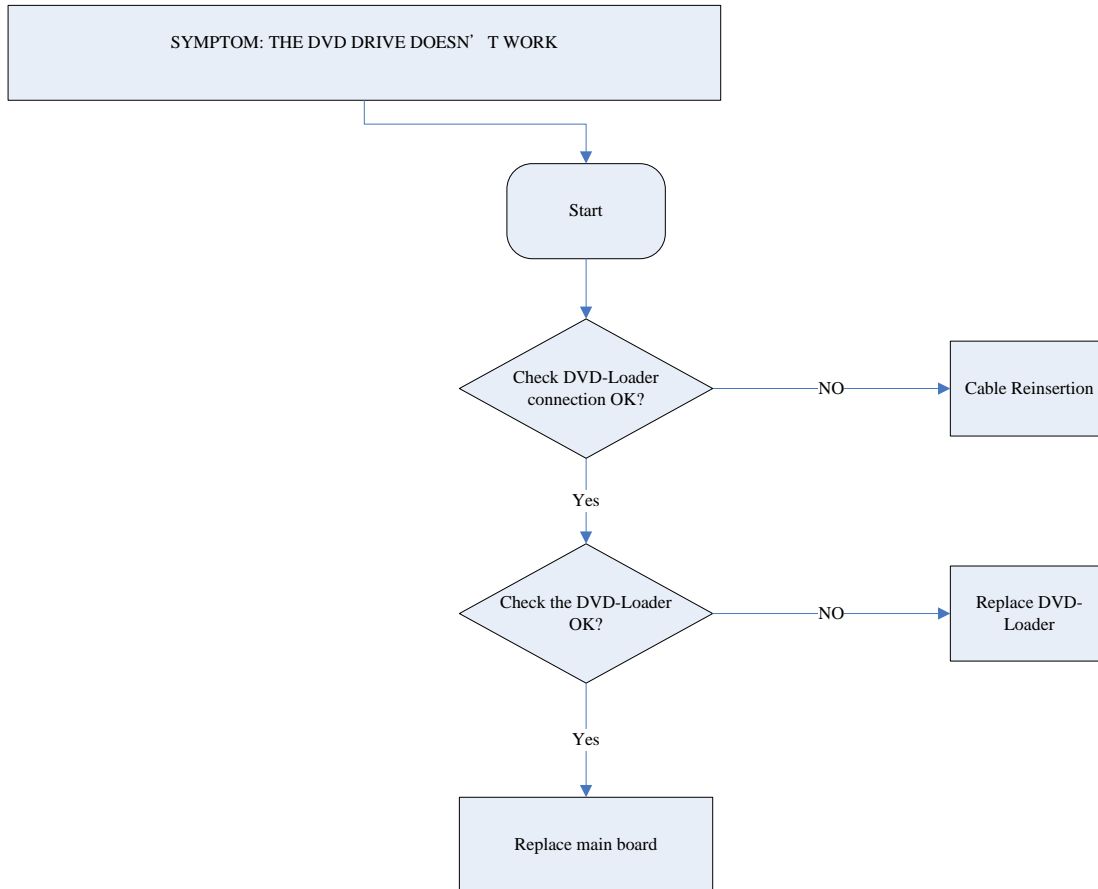
5.0 TROUBLESHOOTING

SYMPTOM: NO IMAGE / NO SOUND



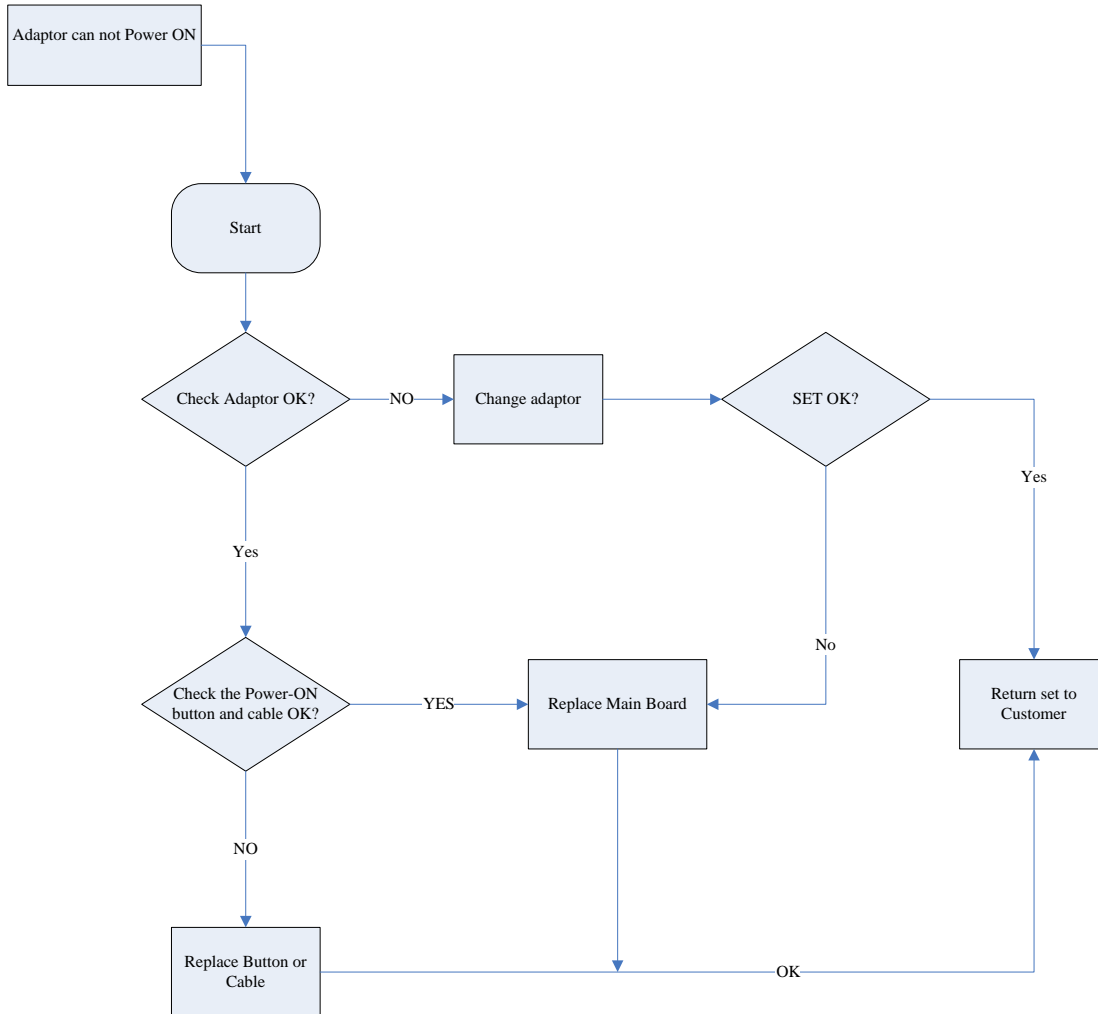
5.0 TROUBLESHOOTING

SYMPTOM: THE DVD DRIVE DOES NOT WORK



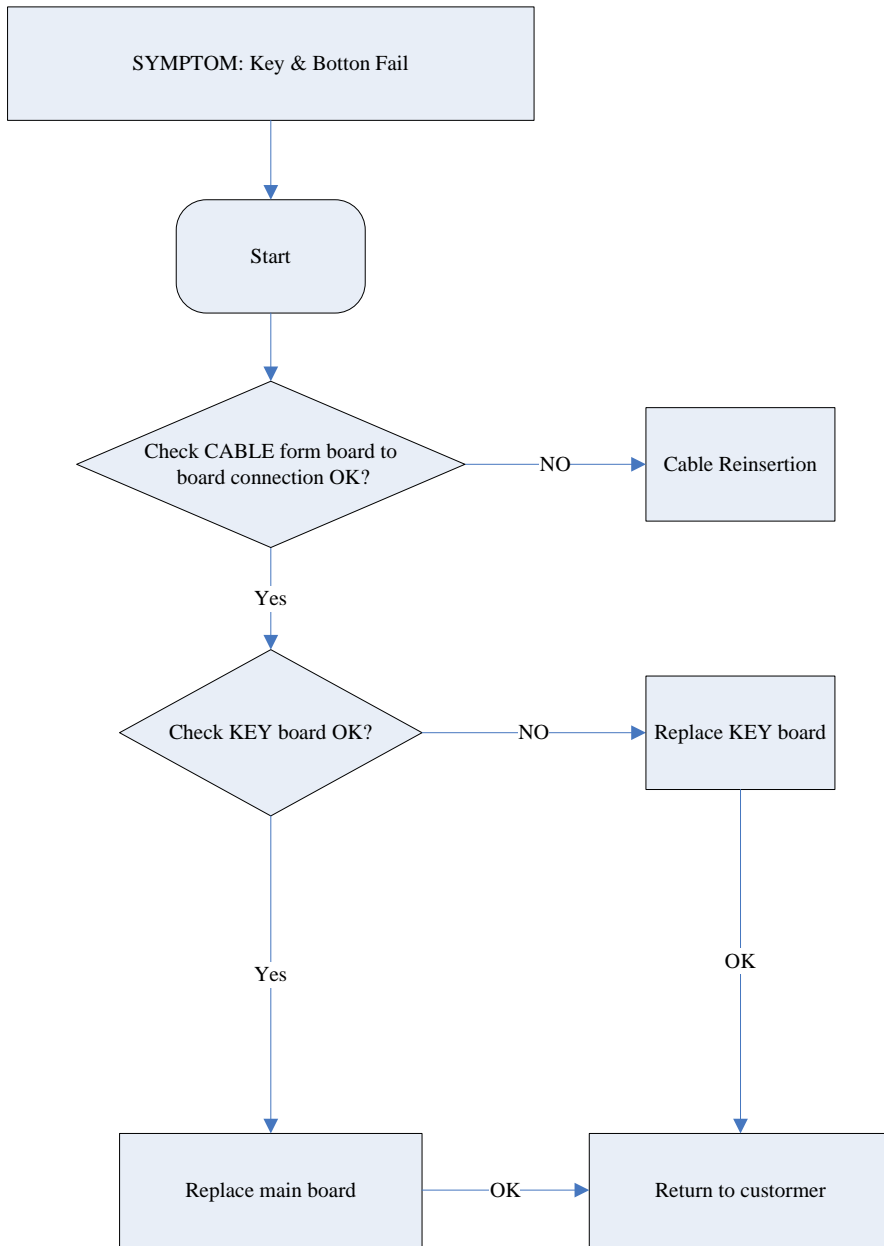
5.0 TROUBLESHOOTING

SYMPTOM: ADAPTOR CANNOT POWER ON

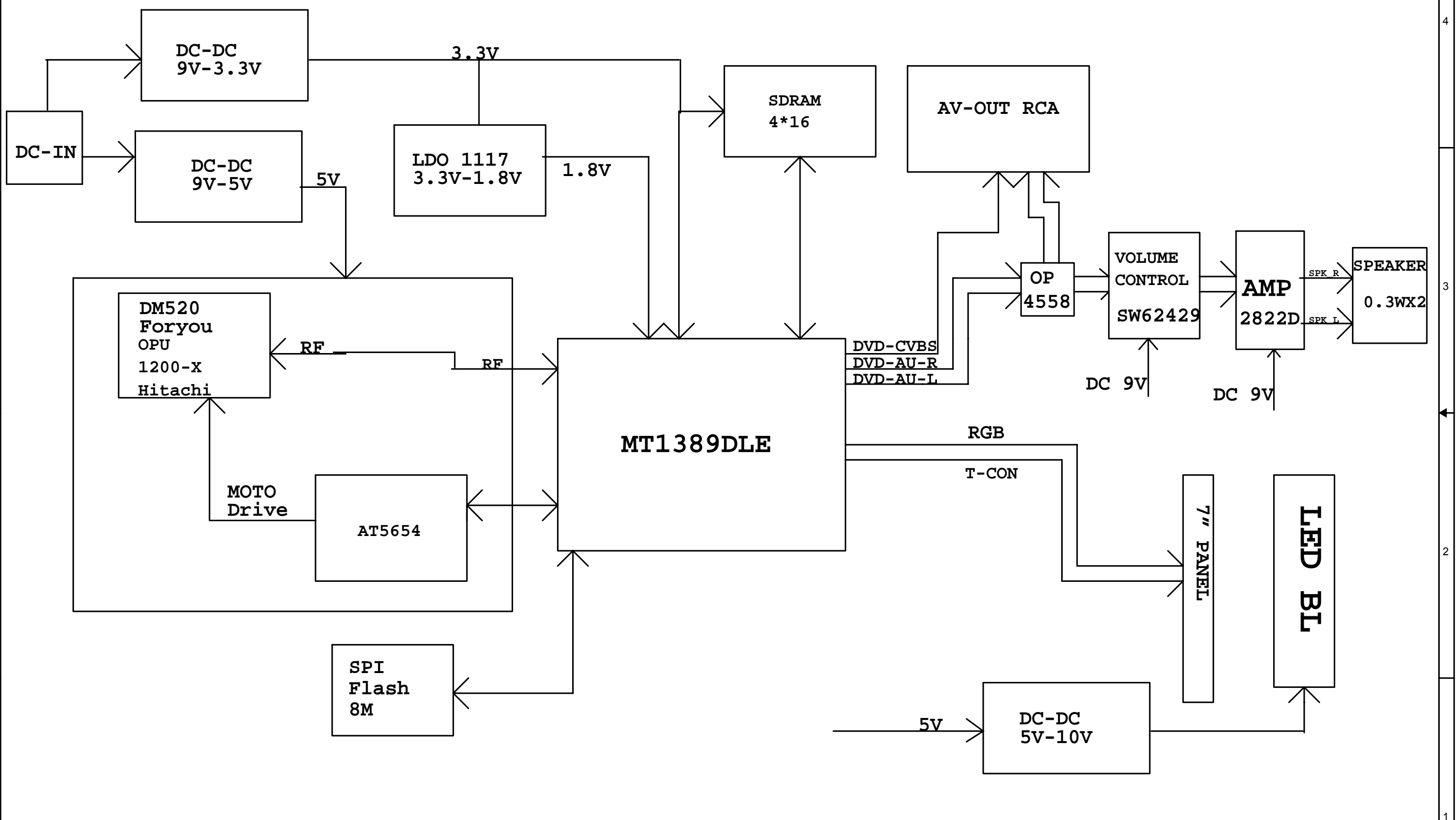


5.0 TROUBLESHOOTING

SYMPTOM: KEY & BOTTON FAILURE

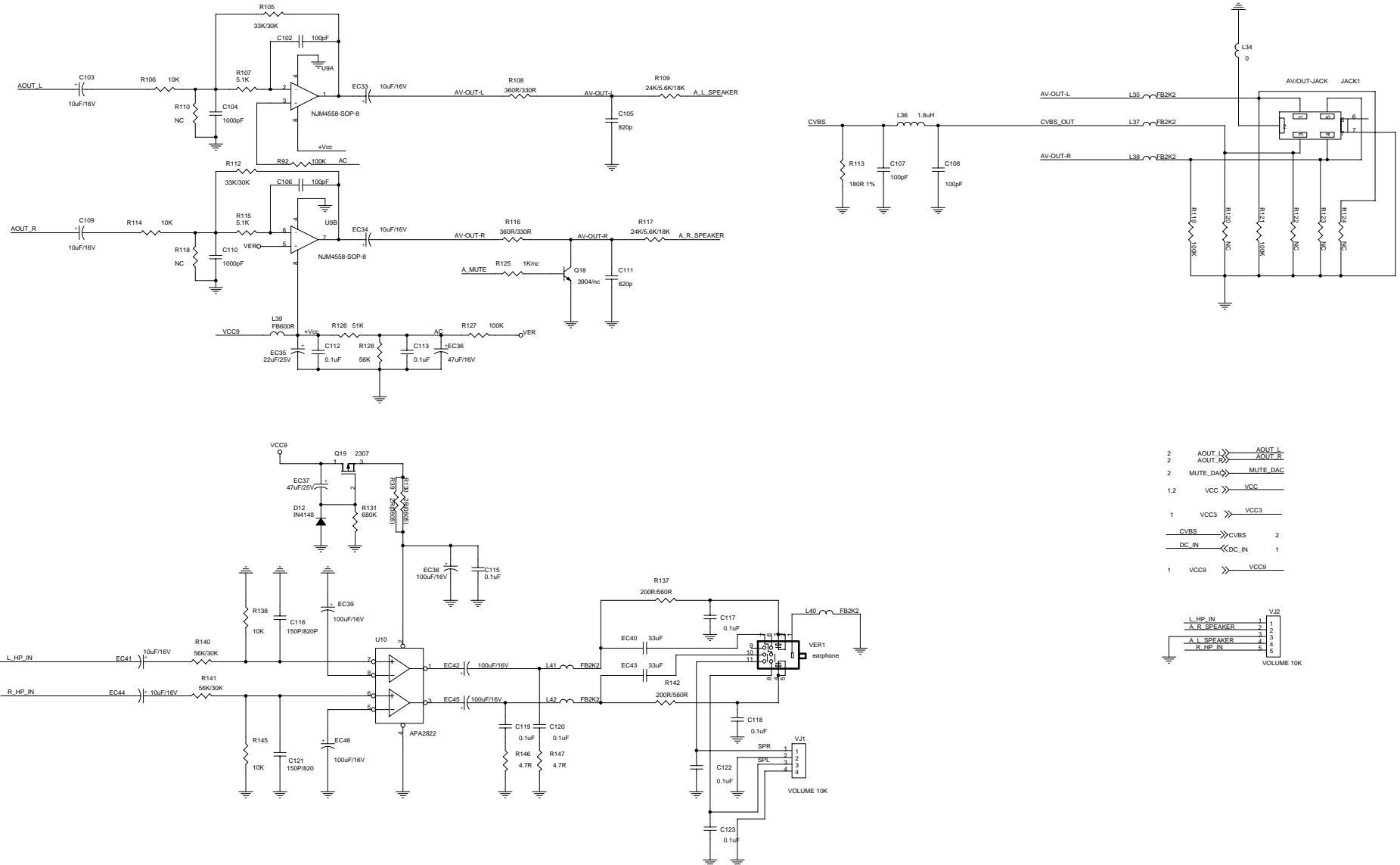


PET741D CIRCUIT BLOCK



7.0 ELECTRICAL DIAGRAM

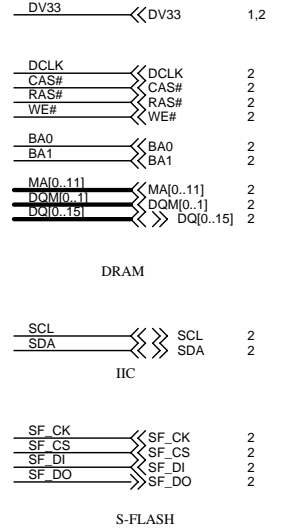
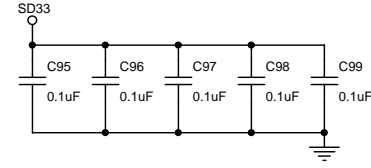
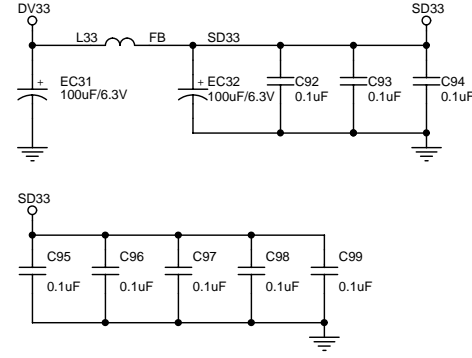
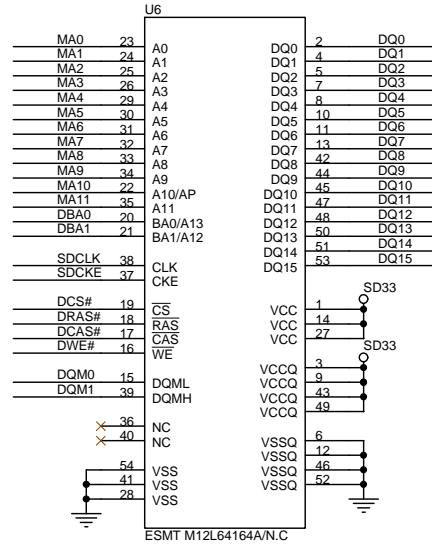
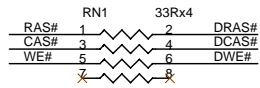
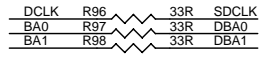
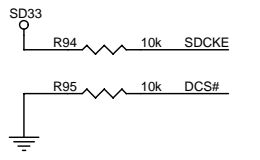
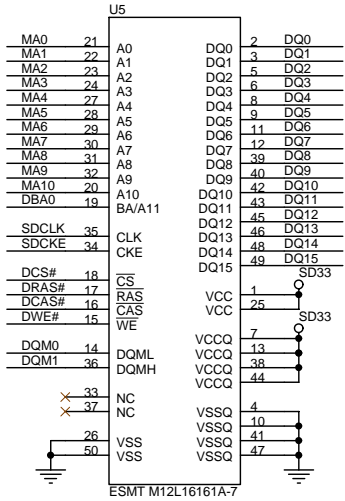
CIRCUIT DIAGRAM-VIDEO & VIDEO OUTPUT



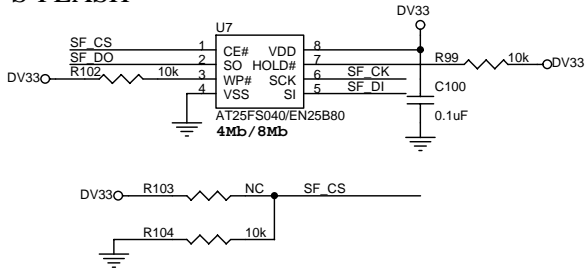
7.0 ELECTRICAL DIAGRAM

CIRCUIT DIAGRAM-FLASH & SDRAM % EEPROM

SDRAM (Dual Layout)

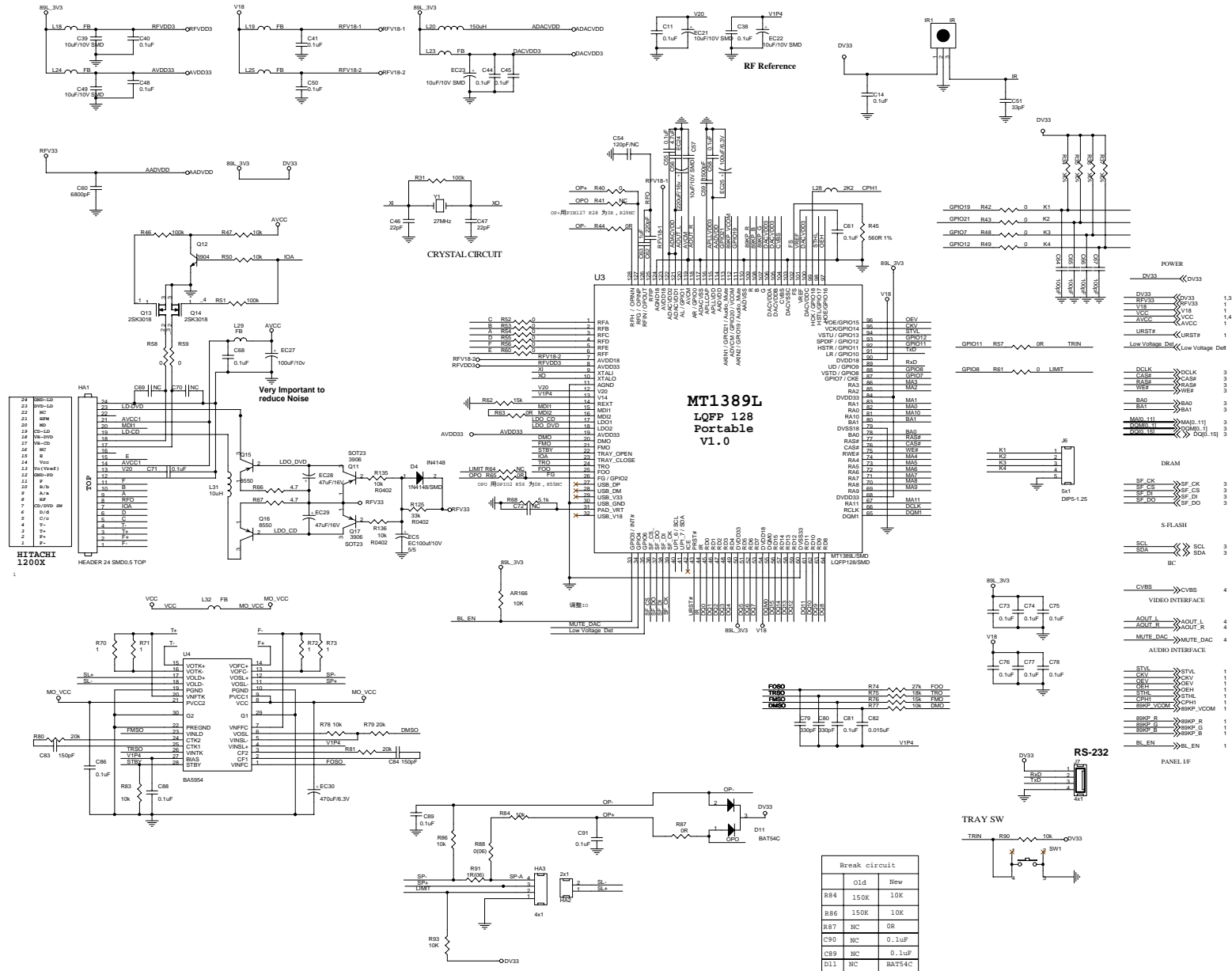


S-FLASH



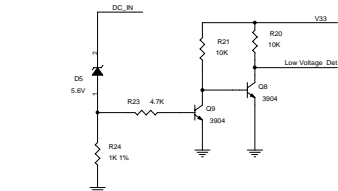
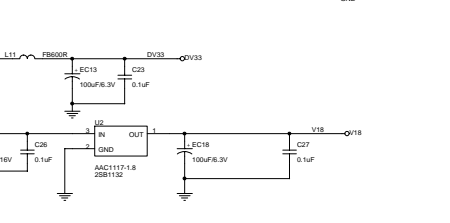
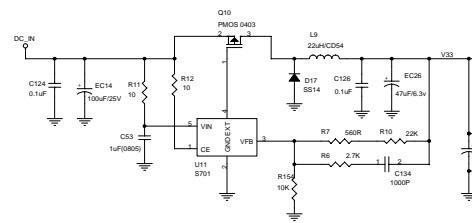
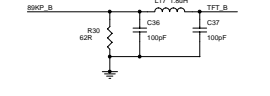
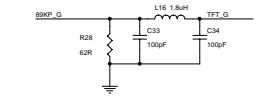
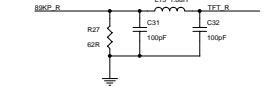
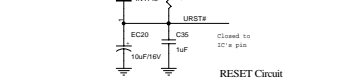
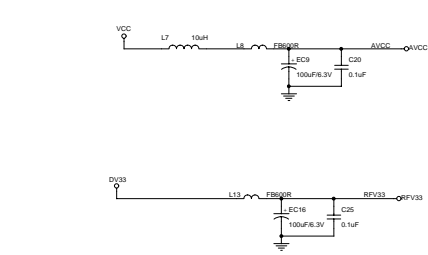
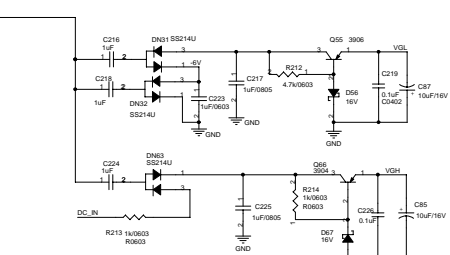
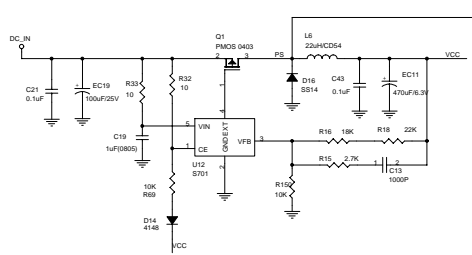
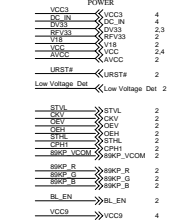
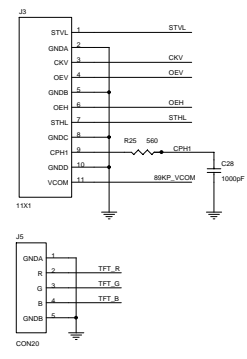
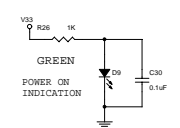
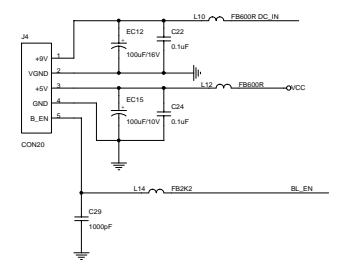
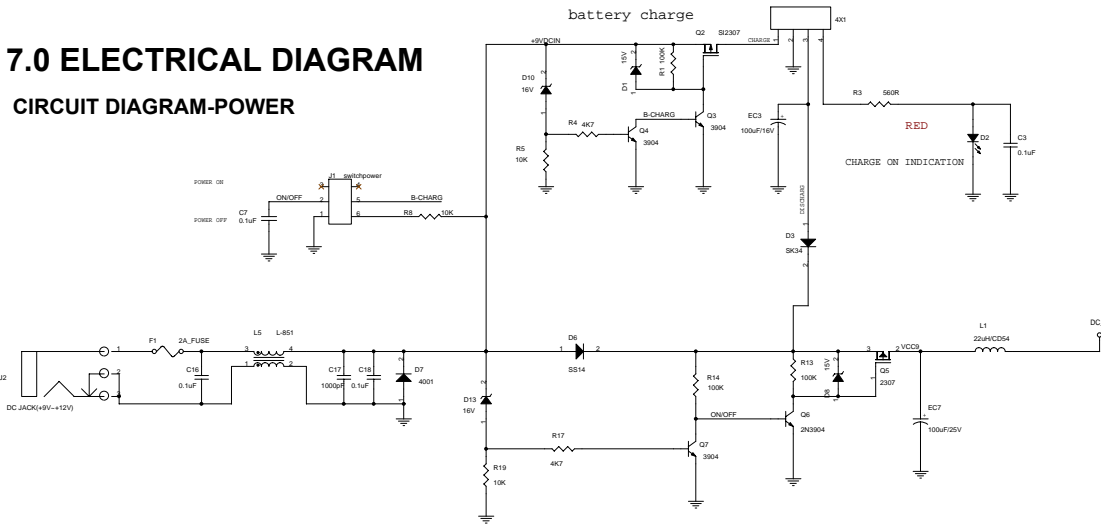
7.0 ELECTRICAL DIAGRAM

CIRCUIT DIAGRAM-MT1389



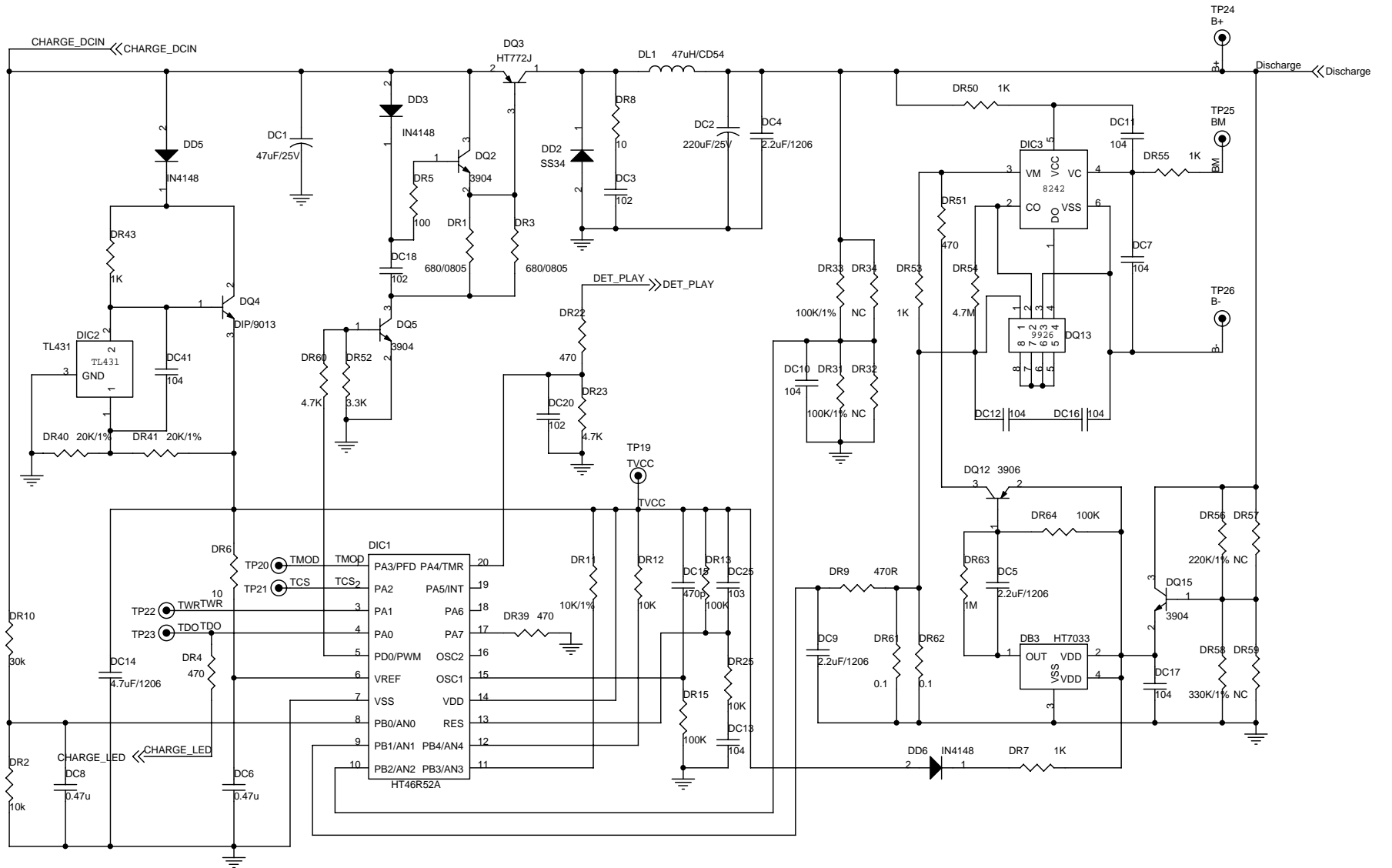
7.0 ELECTRICAL DIAGRAM

CIRCUIT DIAGRAM-POWER



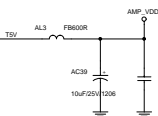
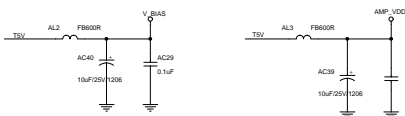
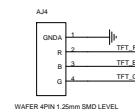
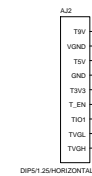
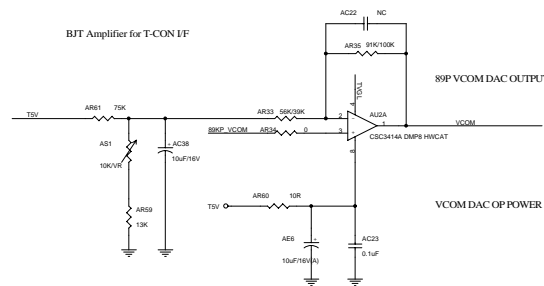
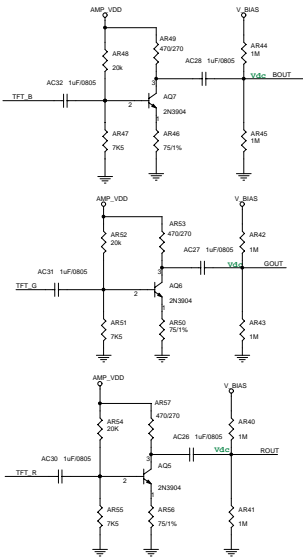
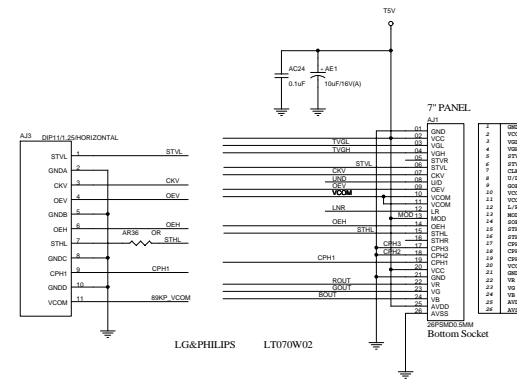
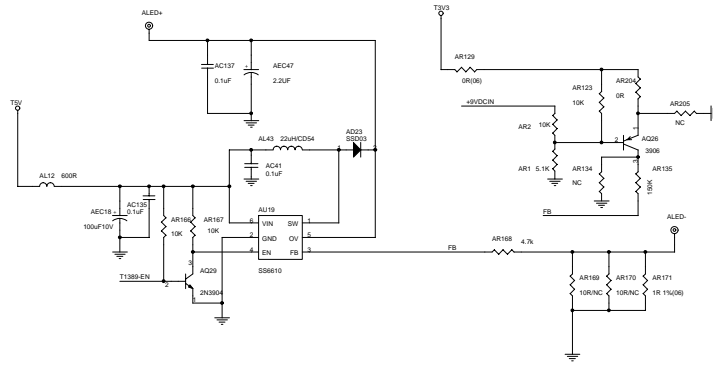
7.0 ELECTRICAL DIAGRAM

CIRCUIT DIAGRAM-BATTERY

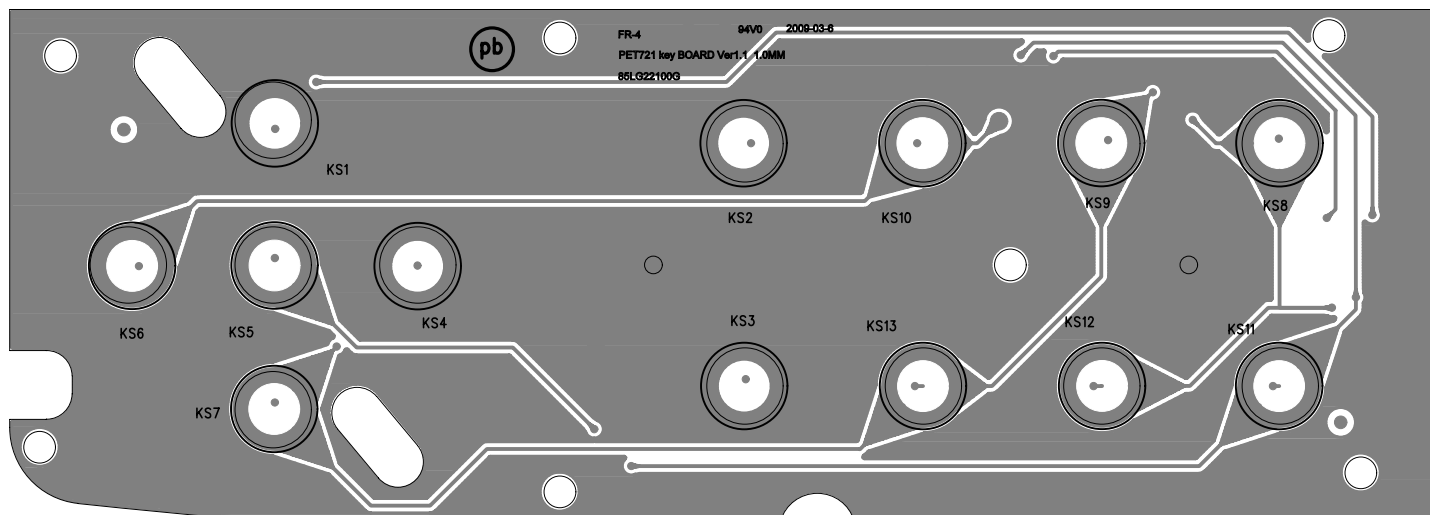


7.0 ELECTRICAL DIAGRAM

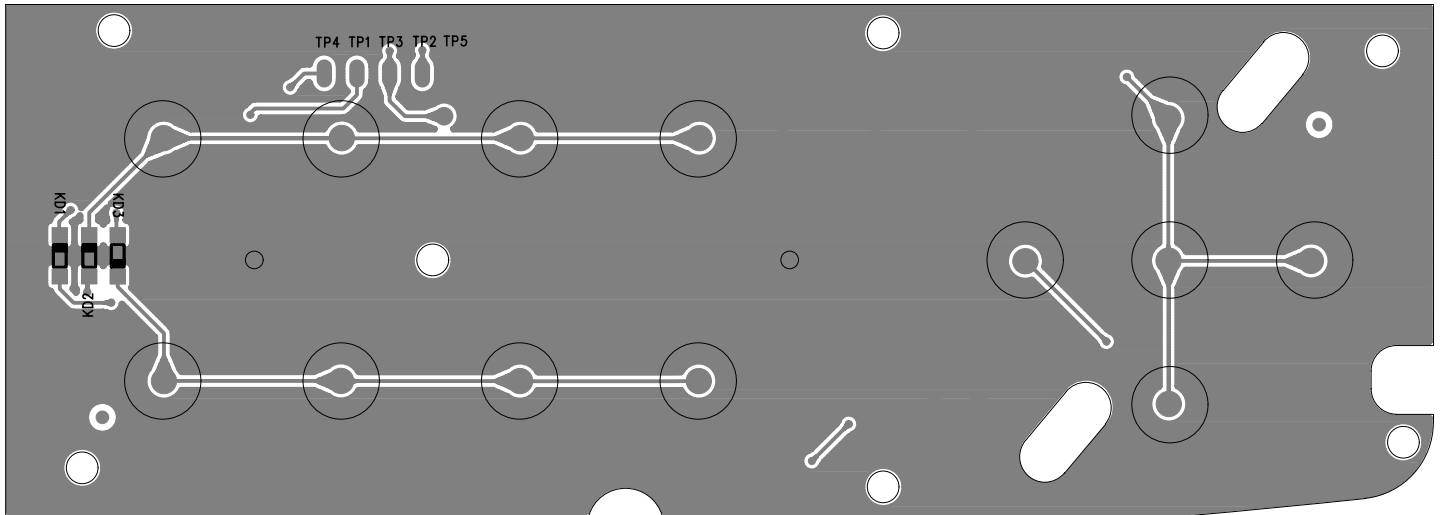
CIRCUIT DIAGRAM-DRIVER



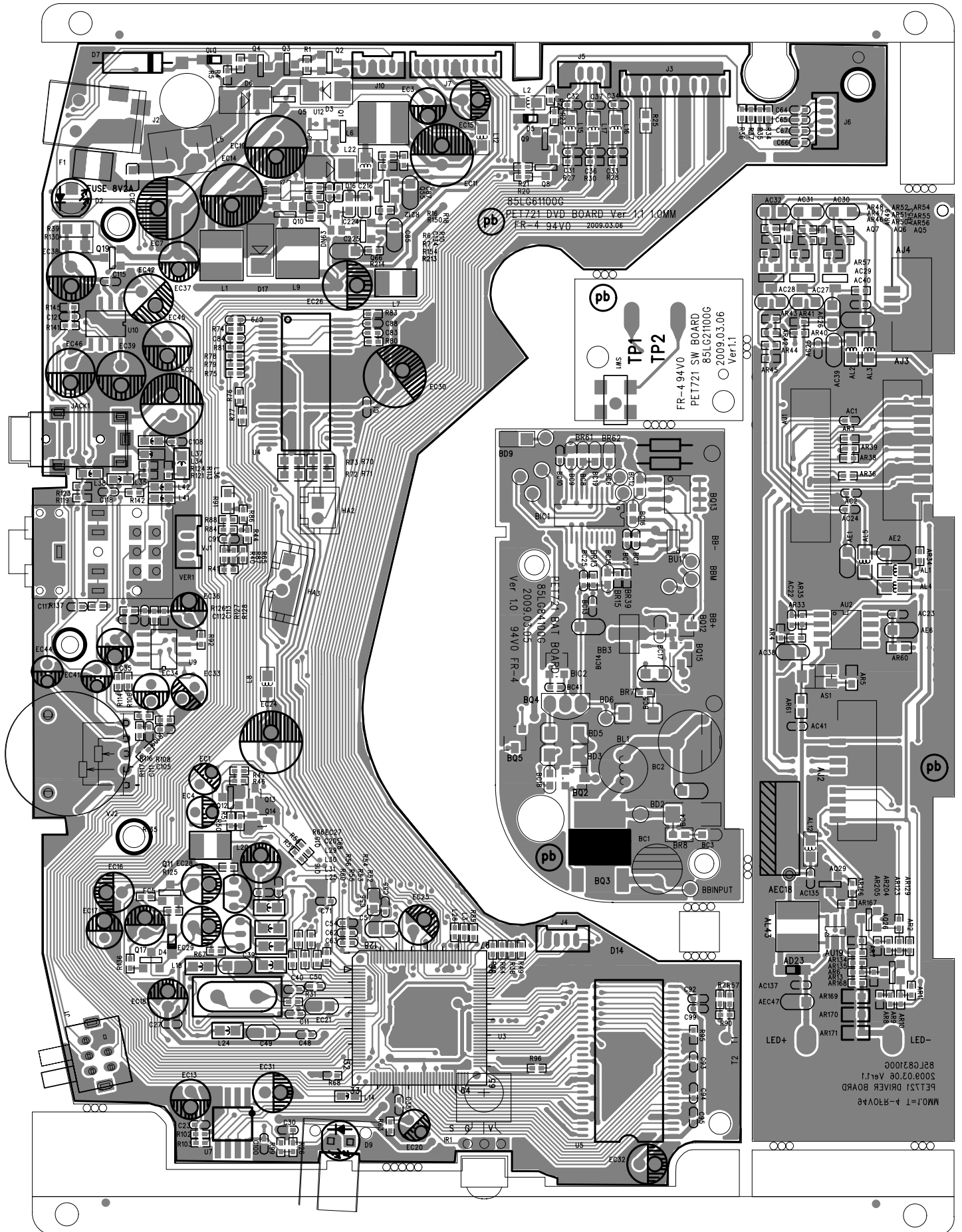
KEY TOP PCB-COMPONENT LAYOUT



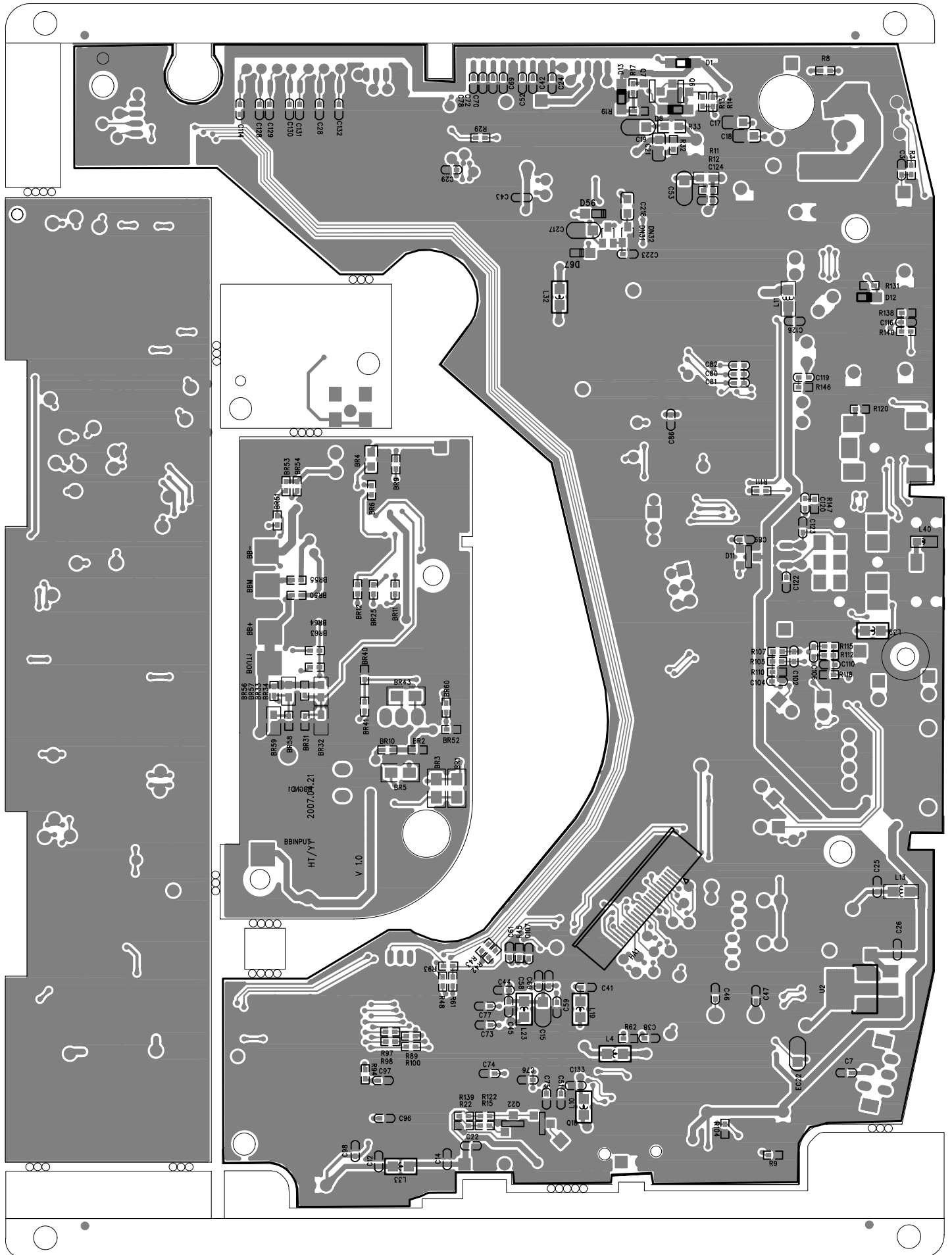
KEY BOTTOM PCB-COMPONENT LAYOUT



MAIN TFT BATTERY SW TOP PCB-COMPONENT LAYOUT



MAIN TFT BATTERY SW BOTTOM PCB-COMPONENT LAYOUT




8.0 SERVICE PARTLIST

Electrical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12 PET721S/05 PET721S/12	996510022944	KEY PCBA ASS'Y PET721D		100
PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/79 PET721D/98 PET721S/12	996510022947 If EOL, refer to service solutions AM-09-043	DVD MAIN PCBA ASS'Y of ASA- Hitachi loader (for GS1A)		110
PET721D/58 PET721DIS/05 PET721DIS/12 PET721S/05 PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/79 PET721D/98 PET721S/12	996510026556	DVD MAIN PCBA ASS'Y of ASA- Sanyo loader (for GS2B or VN1A and above)		110
PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12 PET721S/05 PET721S/12	996510022946	TFT PCBA ASS'Y PET721D		120
PET721C/05	996510024428	BAT PCBA &BAT PET721C/05		130
PET721C/12	996510024441	BAT PCBA & BAT PET721C/12		130
PET721D/05	996510024144	BAT PCBA & BAT PET721D/05		130

8.0 SERVICE PARTLIST

PET721D/12 PET721D/58	996510022941	BAT PCBA & BAT PET721D/12		130
PET721D/79	996510025558	BAT PCBA & BAT PET721D/79		130
PET721D/98	996510025323	BAT PCBA & BAT PET721D/98		130
PET721DIS/05 PET721DIS/12	996510025947	BAT PCBA & BAT PET721DIS		130
PET721S/05	996510025728	BAT PCBA & BAT PET721S/.05		130
PET721S/12	996510024789	BAT PCBA & BAT PET721S/12		130
PET721C/05	996510024551	7" TFT PANEL ASS'Y PET721C/05		200
PET721C/12	996510024561	7" TFT PANEL ASS'Y PET721C/12		200
PET721D/05	996510024442	7" TFT PANEL ASS'Y PET721D/05		200
PET721D/12 PET721D/58	996510022951	7" TFT PANEL ASS'Y PET721D/12		200
PET721D/79	996510025583	7" TFT PANEL ASS'Y PET721D/79		200
PET721D/98	996510025346	7" TFT PANEL ASS'Y PET721D/98		200
PET721DIS/05 PET721DIS/12	996510025959	7" TFT PANEL ASS'Y PET721DIS		200
PET721S/05	996510025731	7" TFT PANEL ASS'Y PET721S/05		200
PET721S/12	996510024809	7" TFT PANEL ASS'Y PET721S/12		200
PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/79 PET721D/98 PET721S/12	996510024145 If EOL, refer to service solutions AM-09-043	DVD DECK PM 2313D(HOP1200X) ASA-Hitachi (for GS1A)		210

8.0 SERVICE PARTLIST

<p>PET721D/58 PET721DIS/05 PET721DIS/12 PET721S/05 PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/79 PET721D/98 PET721S/12</p>	<p>996510025884</p>	<p>DVD DECK PM 2381D(SFHD850) ASA-Sanyo (for GS2B or VN1A and above)</p>		<p>210</p>
<p>PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12 PET721S/05 PET721S/12</p>	<p>996510002384</p>	<p>FFC 24P/0.5mm L130mm</p>		<p>400</p>
<p>PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12 PET721S/05 PET721S/12</p>	<p>996510002356</p>	<p>HINGE RIGHT TURN LMD2708E</p>		<p>410</p>

8.0 SERVICE PARTLIST

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET721C/05 PET721C12	996510024433	OPEN KNOB PINK		300
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510019408	OPEN KNOB BLACK		300
PET721S/05 PET721S/12	996510024782	OPEN KNOB SILVER		300
PET721C/05 PET721C/12	996510024429	POWER KNOB PINK		310
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510019407	POWER KNOB BLACK		310
PET721S/05 PET721S/12	996510024793	POWER KNOB SILVER		310
PET721C/05 PET721C/12	996510024439	LENS PINK		320
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510007690	LENS BLACK		320

8.0 SERVICE PARTLIST

PET721S/05 PET721S/12	996510024791	LENS SILVER		320
PET721C/05 PET721C/12	996510024437	MONITOR PEAR PINK		330
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510022943	MONITOR PEAR BLACK		330
PET721S/05 PET721S/12	996510024786	MONITOR PERA SILVER		330
PET721C/05 PET721C/12	996510024432	DVD TOP CABINET PET721C SILVER		340
PET721D/05 PET721D/12 PET721D/79 PET721D/98	996510022942	DVD TOP CABINET PET721D BLACK		340
PET721S/05 PET721S/12	996510024792	DVD TOP CABINET PET721S WHITE		340
PET721C/05 PET721C/12	996510024435	BOTTOM PET721C PINK		350
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510022949	BOTTOM PET721D BLACK		350
PET721S/05 PET721S/12	996510024787	BOTTOM PET721S WHITE		350

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PET721C/05 PET721C/12	996510024431	DVD DOOR PET721C SILVER		360
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510022945	DVD DOOR PET721D BLACK		360
PET721S/05 PET721S/12	996510024784	DVD DOOR PET721S WHITE		360
PET721C/05 PET721C/12	996510024438	PLAY KEY PET721C SILVER		370
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510022952	PLAY KEY PET721D BLACK		370
PET721S/05 PET721S/12	996510024788	PLAY KEY PET721S WHITE		370
PET721C/05 PET721C/12	996510024434	OK BUTTON PET721C SILVER		380
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510022948	OK BUTTON PET721D BLACK		380
PET721S/05 PET721S/12	996510024785	OK BUTTON PET721S WHITE		380

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PET721C/05 PET721C/12	996510024436	DIR BUTTON PET721D SILVERE		390
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510022939	DIR BUTTON PET721D BLACK		390
PET721S/05 PET721S/12	996510024783	DIR BUTTON PET721S WHITE		390
PET721C/05 PET721C/12	996510024851	DISPLAY FRAME & SPK PET721C		395
PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12	996510024849	DISPLAY FRAME & SPK PET721D		395
PET721S/05 PET721S/12	996510024848	DISPLAY FRAME & SPK PET721S		395

8.0 SERVICE PARTLIST

Accessories Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET721C/05 PET721C/12 PET721D/05 PET721D/12 PET721D/58 PET721D/79 PET721D/98 PET721DIS/05 PET721DIS/12 PET721S/05 PET721S/12	996510021031	CAR CORD 1.5A UL1.8m 4*1.7*11mm LY		CARAPT
PET721C/12 PET721D/12 PET721D/58 PET721D/98 PET721DIS/12 PET721S/12	996510022078	SW ADP 9V/1A VDE 4.0 BLACK DVE (EU VERSION)		ADAPT
PET721C/05 PET721D/05 PET721DIS/05 PET721S/05	996510004261	SW ADP 9V/1A VDE 4.0 BLACK DVE (UK VERSION)		ADAPT
PET721D/79	996510024146	SW ADP 9V/1A VDE 4.0 BLACK DVE (/79 VERSION)		ADAPT

9.0 REVISION LIST

Version 1.0

- Initial release PET721D/05/12

Version 1.1

- Initial release PET721C/05/12, PET721D/58/98/79, PET721DIS/05/12, PET721S/05/12

Version 1.2

- Update partlist for running change of ASA-Hitachi loader to ASA-Sanyo loader.
- Correct region code change procedure in page 3