

TOSHIBA

SERVICE MANUAL

LCD Color Television

32AV733G

Ver. 2.00

This model is classified as a green product (*1), as indicated by the underlined serial number. This Service Manual describes replacement parts for the green product. When repairing this green product, use the part(s) described in this manual and lead-free solder (*2). For (*1) and (*2), refer to **GREEN PRODUCT PROCUREMENT** and **LEAD-FREE SOLDER**.

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IMPORTANT NOTICE

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IMPORTANT NOTICE

User's Guide

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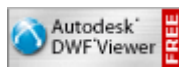
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Install Autodesk DWF Viewer

Autodesk DWF Viewer is necessary to view drawings and to activate the functions of this system. Please download and install.

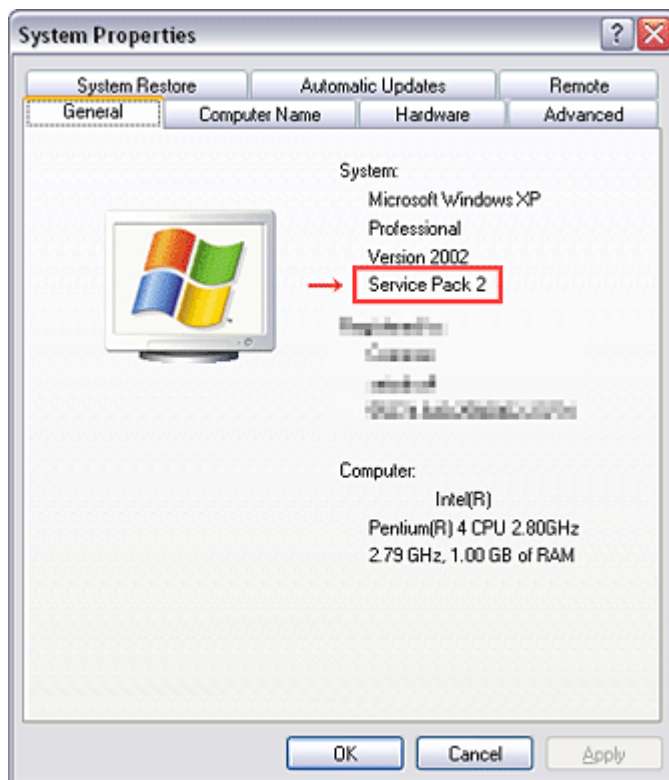


Internet Explorer Settings

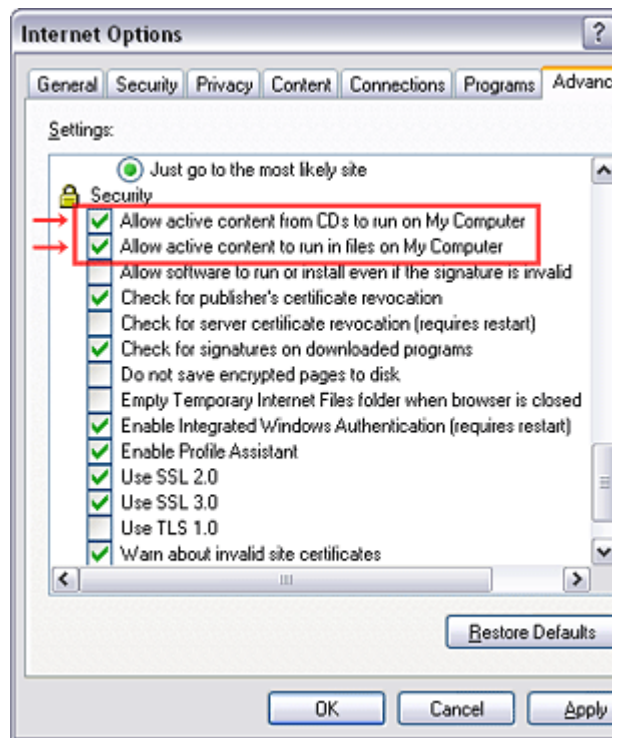
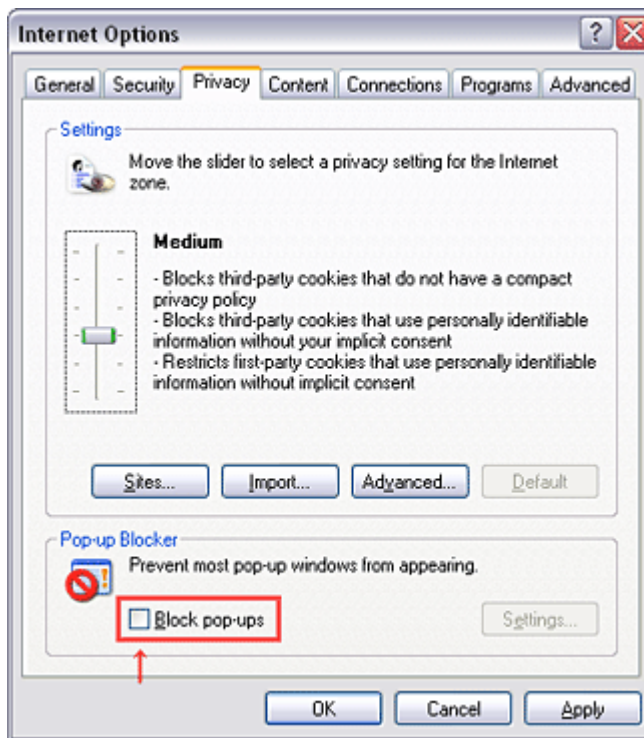
When **Windows XP SP2** or **Windows Vista** is used, ActiveX control and pop-up windows are limited by the enhanced security function and this system may not work. In that case, perform the Internet Explorer setting using the following procedure to restore normal operation.

1. Windows version check

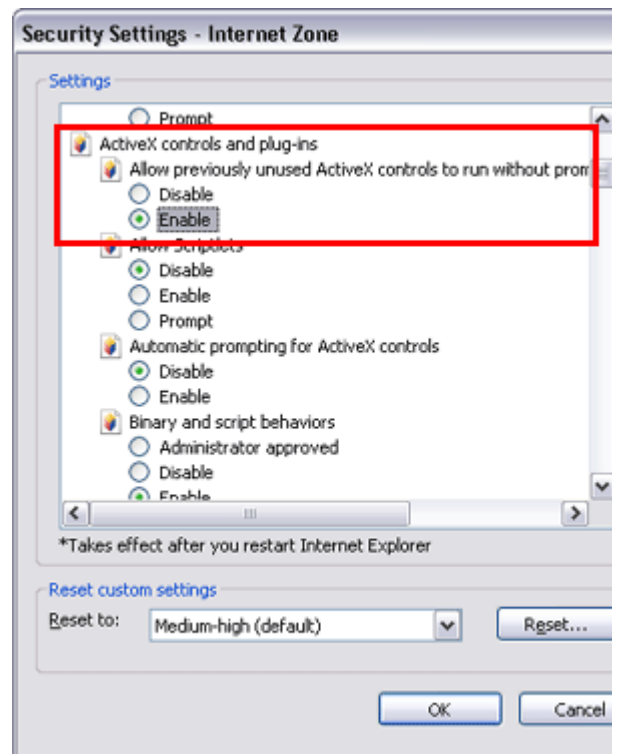
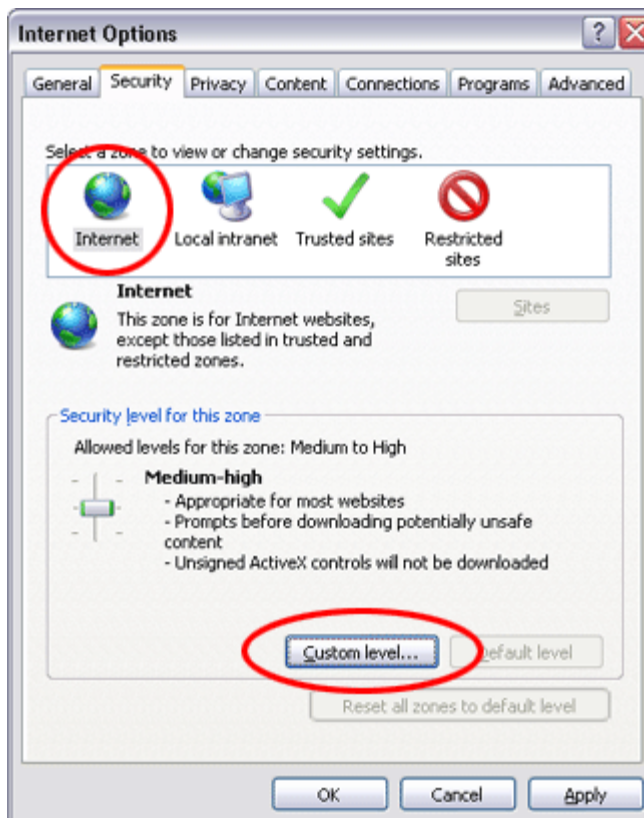
[My Computer (right-click)] - [Properties]



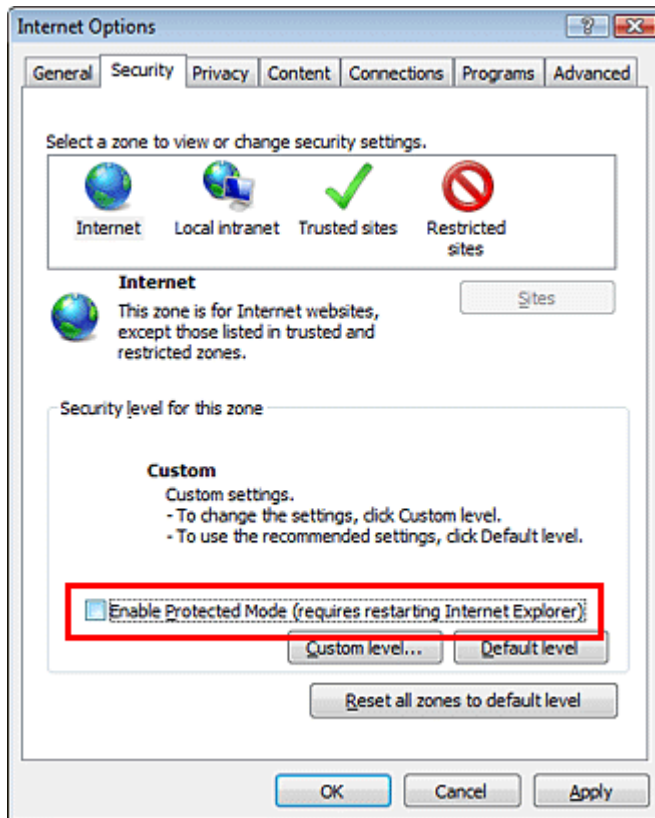
2. Internet Explorer setting
[Tools] - [Internet Options]



for Internet Explorer 7



for Windows Vista



Operating Environment

PC	: Pentium III or higher recommended
Monitor	: 1024 x 768 or higher resolution recommended
Mouse	: A mouse with wheel recommended
OS	: Microsoft Windows 2000 SP4 / XP / Vista
Browser	: Microsoft Internet Explorer 6.0 / 7.0
Drawing viewer	: Autodesk DWF Viewer 6.0 / 7.0

* Use the software following respective license terms and conditions.

Functions Provided on Each Drawing Page

Parts Information Reference Function

When the character string of a part on the drawing is clicked, its information is popped up at the location. You can get any parts information immediately on the screen without referring to the maintenance parts list.



Parts Search Function

You can search any part within the displayed drawing or within the whole schematic diagram/board view specifying a location number. The pop-up window displayed by clicking a part's character string allows you to search the part within the applicable schematic diagram, board view or spare parts list.



A circle appears when the part is found, showing the part's location within the drawing.



Signal Line/Connector Destination Display Function

When a name at the end of a signal line in a divided schematic diagram is clicked, the destination of the signal is searched and the display changes to the destination. Connector destinations can also be searched the same way.



When two or more search results are provided, their drawing names are displayed, allowing you to choose the desired drawing to display.



Layer Display Changing Function

When any of the color buttons on the toolbar is clicked, it can be selected to display desired layer in its color or not to display each layer. This allows you to see the pattern layer only by setting other layers to "non-display".



PC Board View Pattern Highlighting Function

When a pattern on a board view is clicked, it is highlighted in green. This allows easy pattern tracing.



Specified Area Printing Function

The Autodesk DWF Viewer enables to print the displayed drawing region as it is on a printer. It also allows to print a large-sized drawing in multiple pieces (tile printing).



Using with Network

PRECAUTION

To use ZEUS Service Manual Ver.2 with network, the file-path names written on the source files of each ZEUS Engine Program Ver.2 and ZEUS Service Manual Ver.2 are to be modified.

Perform the procedure described below.

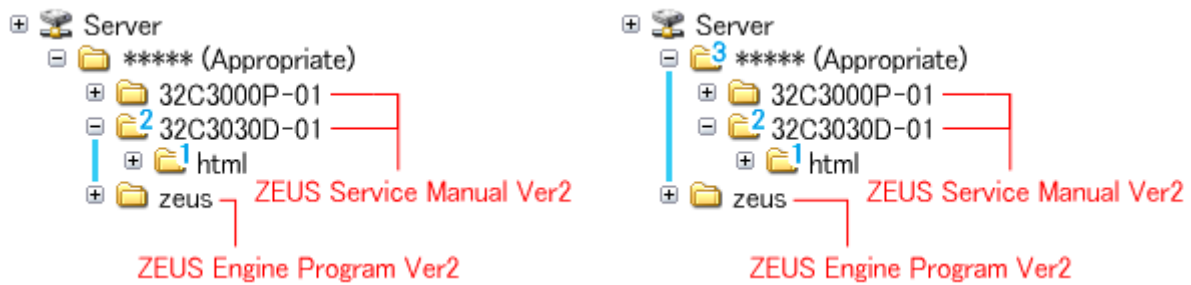
Preparation

1. Run the program file zuesFPch.exe to install the program file for File-Path to the Local PC.

-> [Download zeusFPch_setup.zip \(2.3MB\)](#)

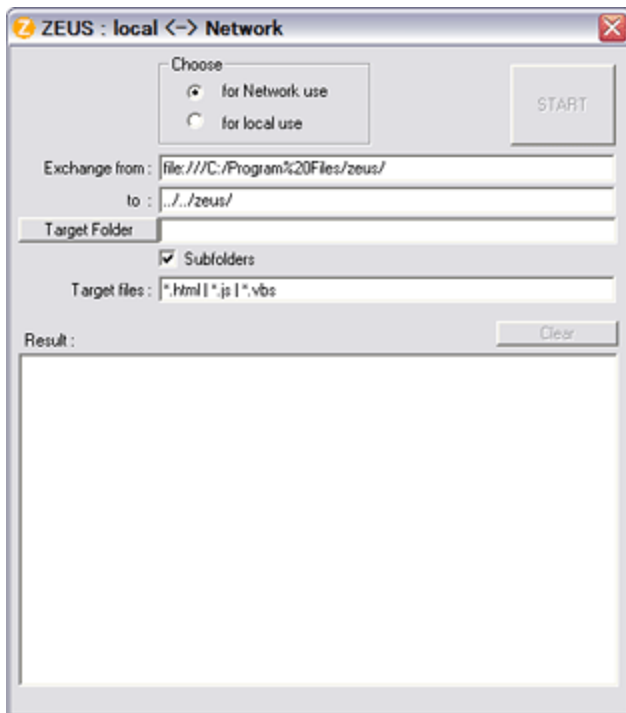
2. Run the program file ZeusSetup_v2.0.exe to install the ZEUS Engine Program in C:\Program Files\zeus of the local PC. This can be done by running the installer program provided.
3. Create the appropriate folder where the ZEUS Engine Program Ver.2 and the ZEUS Service Manual Ver.2 to be stored in the server.
4. Move the ZEUS Engine Program of step 2 to the folder created at step 3 in the Server.
5. Detach the ZEUS Service Manual Ver.2 to the folder created at step 3 in the Server.
6. Unzip the ZEUS Service Manual Ver.2 within the folder in the Server.

Example of folder



Procedure of File-Path

The zeusFPch is the exclusive program to exchange the file-path names written in both source files of ZE Manual and ZEUS Engine program into those applicable to the network use.



1. Whenever changing the file-path of both ZEUS Engine Program and ZEUS Service Manual to use network, pay the attention to set the "Exchange to" column that should have a proper relation between ZEUS Engine Program and ZEUS Service Manual with referring the following.

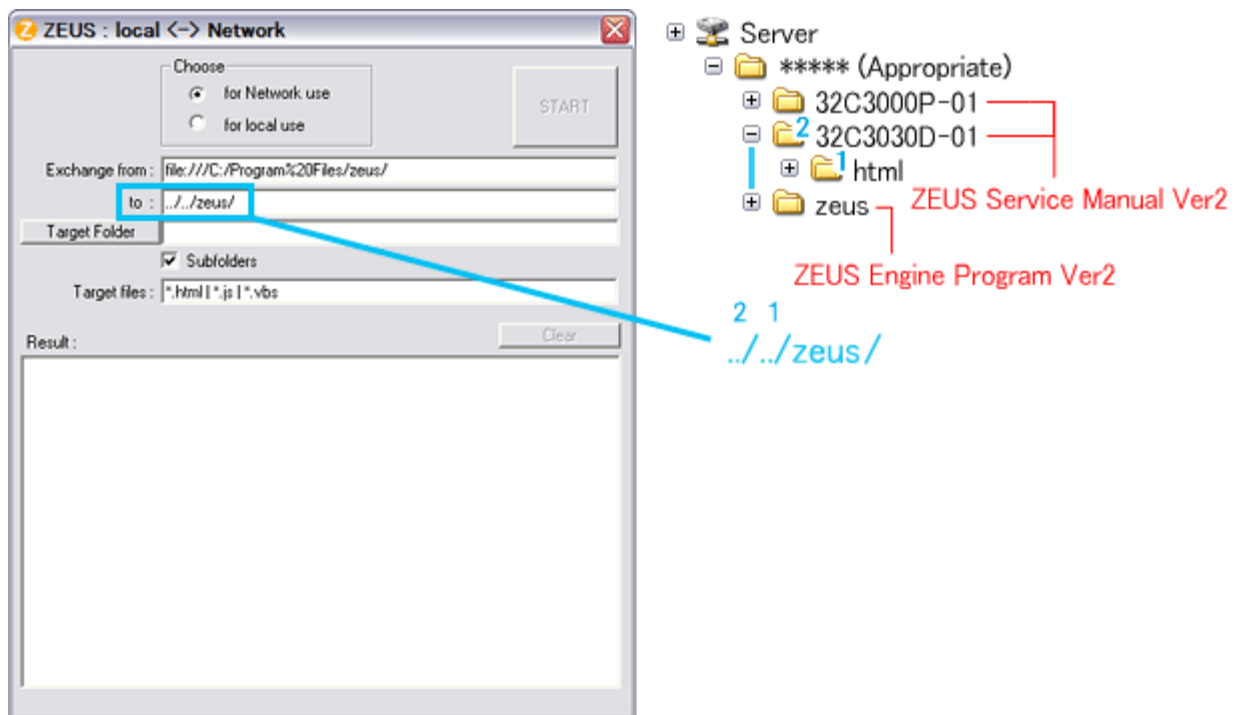
Run the zeusFPch and set "Exchange to" by referring to the examples below.

Example 1 :

In the "Exchange to" column shows the relation between ZEUS Service Manual and ZEUS Engine Program.

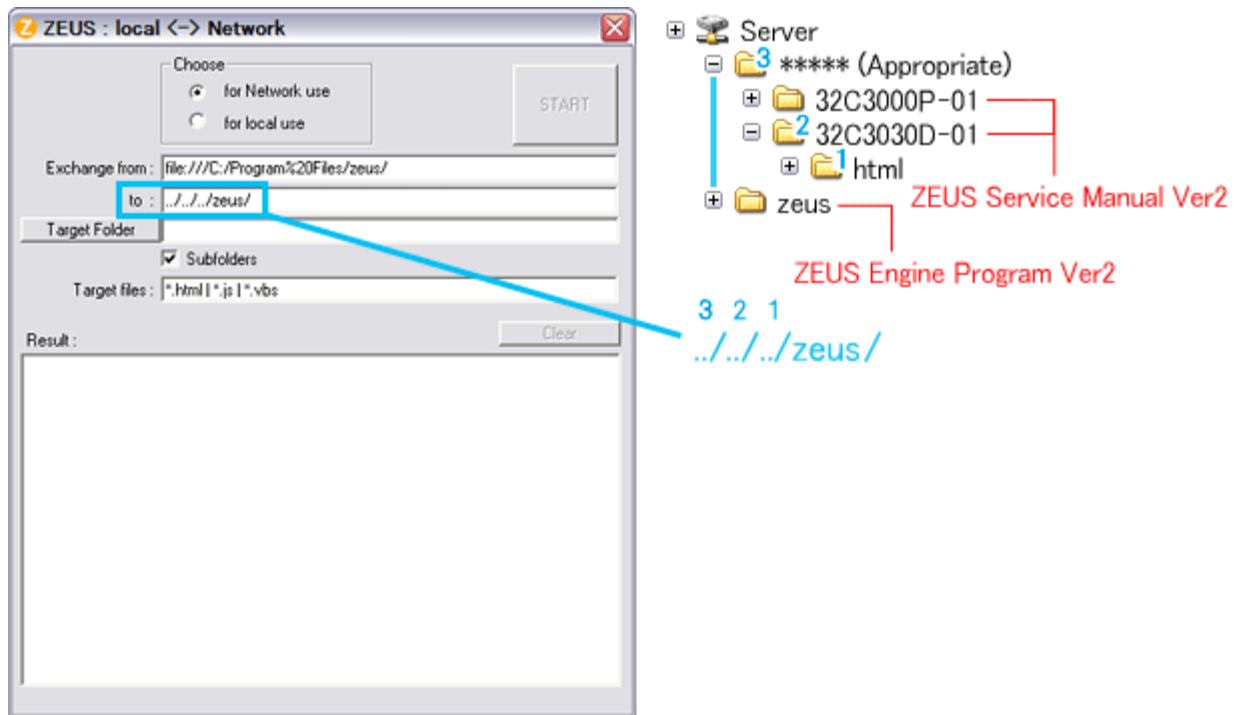
../ counts the relation between.

Thus in this case, it must be **../../zeus/** (2 counts).

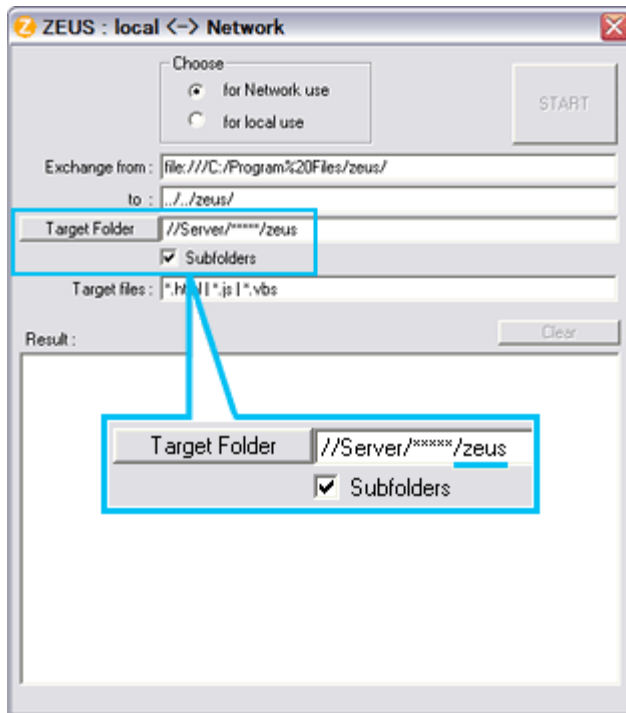


Example 2 :

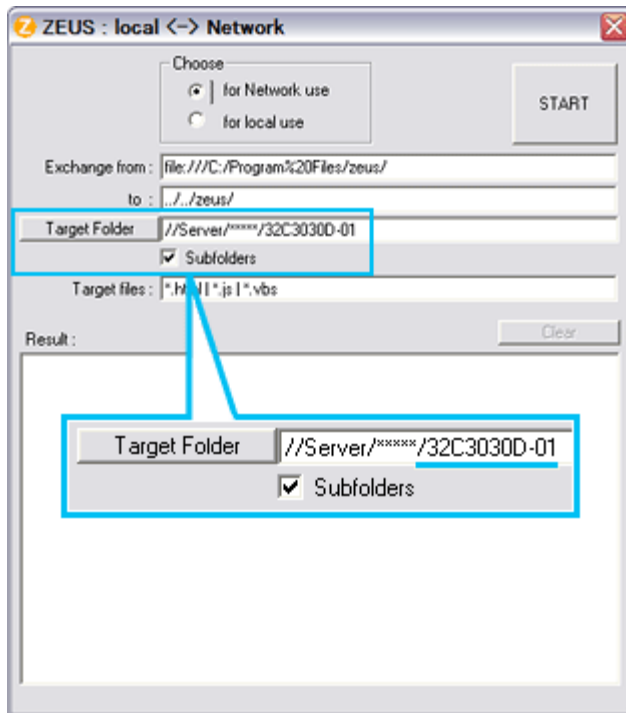
In this case, it must be **../../../zeus/** (3 counts).



2. Run the zeusFPch to change the path in the ZEUS Engine Program Ver.2.
3. Set ZEUS Engine Program in the created folder in the server to the "Target Folder", and then press "START".
(This procedure is one time only)



4. Run the ZeusFPch to change the path in the ZEUS Service Manual Ver2.
5. Set unzipped ZEUS Service Manual in the created folder in the server to the "Target Folder", and then press "START".
(This procedure is required whenever placing service manual.)



Confirmation

Confirm that service manual on the server can be operated normally by client PC.

Note:

In case of accessing the ZEUS Manual through WEB site, the small pop-up window appears at the left bottom corner on the screen whenever searching the location links. This is not malfunction.

IMPORTANT NOTICE

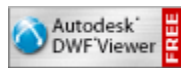
A Known Malfunction

Autodesk® DWF™ Viewer version (Free software provided through WEB)

Use Autodesk DWF Viewer ver. 6.0.

Through WEB, ver. 6.5 has been released but with it, the linking function in this manual may not work properly.

If ver. 6.5 has been installed, uninstall it and reinstall ver. 6.0.



To get ver. 6.0, click the icon, or contact to the nearest Toshiba Service Centre for further assistance.

Freezing windows opened (Cannot close the open windows)

This may happen occasionally.

In case of encountering this, follow the procedure below.

1. Press [Ctrl], [Alt] and [Delete] keys at the same time to engage windows security windows.
2. Then, choose TASK manager and Application tab, and select TOSHIBA SERVICE MANUAL-Microsoft Internet Explorer. 
3. Click TASK-end.

Main Window back forwarded

The real cause has not been found yet but with this condition, nothing disturbs the service manual operation.

Continue to use by operating the windows.

Precaution when opening the diagrams

While opening the diagrams, the menu in the left frame changes its color to GRAY. This is an indication that the viewer is processing.

With this condition, the menu indication color may stick to the GRAY color or Windows may freeze if clicking other menu.

To avoid such things, do not operate any others while menu turns GRAY color.

If entering this, re-open the service manual or refresh the left frame.

GREEN PRODUCT PROCUREMENT

The EC is actively promoting the WEEE & RoHS Directives that define standards for recycling and reuse of Waste Electrical and Electronic Equipment and for the Restriction of the use of certain Hazardous Substances. From July 1, 2006, the RoHS Directive will prohibit any marketing of new products containing the restricted substances.

Increasing attention is given to issues related to the global environmental. Toshiba Corporation recognizes environmental protection as a key management tasks, and is doing its utmost to enhance and improve the quality and scope of its environmental activities. In line with this, Toshiba proactively promotes Green Procurement, and seeks to purchase and use products, parts and materials that have low environmental impacts.

Green procurement of parts is not only confined to manufacture. The same green parts used in manufacture must also be used as replacement parts.

LEAD-FREE SOLDER

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

**WARNING: This product is manufactured using lead free solder.
DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT!**

The melting temperature of lead-free solder is higher than that of leaded solder by 86°F to 104°F (30°C to 40°C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product especially when soldering large components, through-hole pins, and on PCBs as the level of heat required to melt lead-free solder is high.

SAFETY INSTRUCTION

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

Safety Precaution

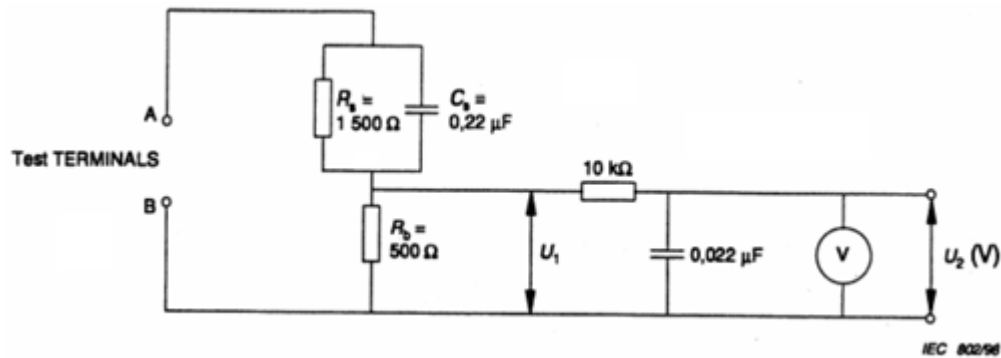
WARNING: SERVICING SHOULD NOT BE ATTEMPTED BY ANYONE UNFAMILIAR WITH THE NECESSARY PRECAUTIONS ON THIS RECEIVER. THE FOLLOWING ARE THE NECESSARY PRECAUTIONS TO BE OBSERVED BEFORE SERVICING THIS CHASSIS.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always disconnect the power plug before any disassembling of the product. It may result in electrical shock.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as nonmetallic control knobs, insulating covers, shields, isolation resistor-capacitor network, etc.
4. Always keep tools, components of the product, etc away from the children, These items may cause injury to children.
5. Depending on the model, use an isolation transformer or wear suitable gloves when servicing with the power on, and disconnect the power plug to avoid electrical shock when replacing parts. In some cases, alternating current is also impressed in the chassis, so electrical shock is possible if the chassis is contacted with the power on.

6. Always use the replacement parts specified for the particular model when making repairs. The parts used in products require special safety characteristics such as inflammability, voltage resistance, etc. therefore, use only replacement parts that have these same characteristics. Use only the specified parts when the ⚠ mark is indicated in the circuit diagram or parts list.
7. Parts mounting and routing dressing of wirings should be the same as that used originally. For safety purposes, insulating materials such as isolation tube or tape are sometimes used and printed circuit boards are sometimes mounted floating. Also make sure that wirings is routed and clamped to avoid parts that generate heat and which use high voltage. Always follow the manufactured wiring routes / dressings.
8. Always ensure that all internal wirings are in accordance before re-assembling the external casing after a repairing completed. Do not allow internal wiring to be pinched by cabinets, panels, etc. Any error in reassembly or wiring can result in electrical leakage, flame, etc., and may be hazardous.
9. NEVER remodel the product in any way. Remodeling can result in improper operation, malfunction, or electrical leakage and flame, which may be hazardous.
10. Touch current check. (After completing the work, measure touch current to prevent an electric shock.)
 - Plug the AC cord directly into the AC outlet. Do NOT use an isolation transformer for this check.
 - Connect a measuring network for touch currents between each exposed metallic part on the set and a good earth ground such as a water pipe.

Annex D
(normative)

Measuring network for TOUCH CURRENTS



Resistance values in ohms (Ω).

V: Voltmeter or oscilloscope
(r.m.s. or peak reading)

Input resistance : $\geq 1 \text{ M}\Omega$

Input capacitance : $\leq 200 \text{ pF}$

Frequency range : 15 Hz to 1 MHz and d.c. respectively

Note: Appropriate measures should be taken to obtain the correct value in case of non sinusoidal waveforms.

The measuring instrument is calibrated by comparing the frequency factor of U_2 with the solid line in figure F.2 of IEC 60990 at various frequencies. A calibration curve is constructed showing the deviation of U_2 from the ideal curve as a function of frequency.

TOUCH CURRENT = $U_2/500$ (peak value).

- The potential at any point (TOUCH CURRENT) expressed as voltage U_1 and U_2 does not exceed the following value:

The part or contact of a TERMINAL is not HAZARDOUS LIVE if:

- The open-circuit voltage should not exceed 35 V (peak) a.c. or 60 V d.c. or, if a) is not met.
- The measurement of the TOUCH CURRENT shall be carried out in accordance with IEC 60990, with the measuring network described in **Annex D** of this standard.

The TOUCH CURRENT expressed as voltages U_1 and U_2 , does not exceed the following values:

- for a.c. : $U_1 = 35 \text{ V}$ (peak) and $U_2 = 0.35 \text{ V}$ (peak);

- for d.c. : $U_1 = 1.0 \text{ V}$

Note: The limit values of $U_2 = 0.35 \text{ V}$ (peak) for a.c. and $U_1 = 1.0 \text{ V}$ for d.c. correspond to the values 0.7 mA (peak) a.c. and 2.0 mA d.c.

Product Safety Notice

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create electrical shock, fire, or other hazards.

SAFETY INSTRUCTION

Handling the LCD Module

Safety Precaution

In the event that the screen is damaged or the liquid crystal (fluid) leaks, do not breathe in or drink this fluid.

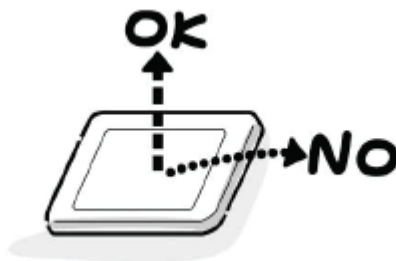
Also, never touch this fluid. Such actions could cause toxicity or skin irritation. If this fluid should enter the mouth, rinse the mouth thoroughly with water. If the fluid should contact the skin or clothing, wipe off with alcohol, etc., and rinse thoroughly with water. If the fluid should enter the eyes, immediately rinse the eyes thoroughly with running water.

Precautions for Handling the LCD Module

CAUTION: The metal edges of the LCD module are sharp, handle it with care.

The LCD module can easily be damaged during disassembly or reassembly; therefore, always observe the following precautions when handling the module.

1. When attaching the LCD module to the LCD cover, position it appropriately and fasten at the position where the display can be viewed most conveniently.



2. Carefully align the holes at all four corners of the LCD module with the corresponding holes in the LCD cover and fasten with screws. Do not strongly push on the module

because any impact can adversely affect the performance. Also use caution when handling the polarized screen because it can easily be damaged.



3. If the panel surface becomes soiled, wipe with cotton or a soft cloth. If this does not remove the soiling, breathe on the surface and then wipe again.

If the panel surface is extremely soiled, use a CRT cleaner as a cleaner. Wipe off the panel surface by drop the cleaner on the cloth. Do not drop the cleaner on the panel. Pay attention not to scratch the panel surface.



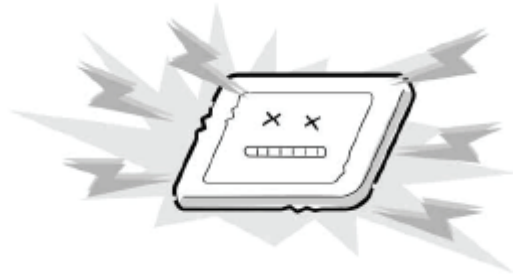
4. Leaving water or other fluids on the panel screen for an extended period of time can result in discoloration or stripes. Immediately remove any type of fluid from the screen.



5. Glass is used in the panel, so do not drop or strike with hard objects. Such actions can damage the panel.



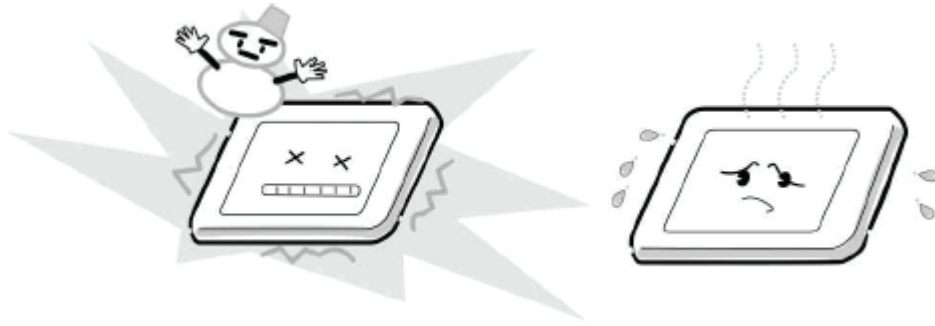
6. CMOS-LSI circuitry is used in the LCD module, so avoid damage due to static electricity. When handling the module, use a wrist ground or anchor ground.



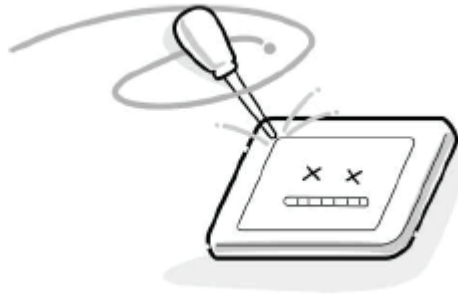
7. Do not expose the LCD module to direct sunlight or strong ultraviolet rays for an extended period of time.



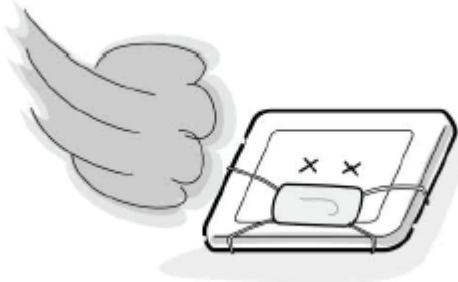
8. Do not store the LCD module below the temperature conditions described in the specifications. Failure to do so could result in freezing of the liquid crystal due to cold air or loss of resilience or other damage.

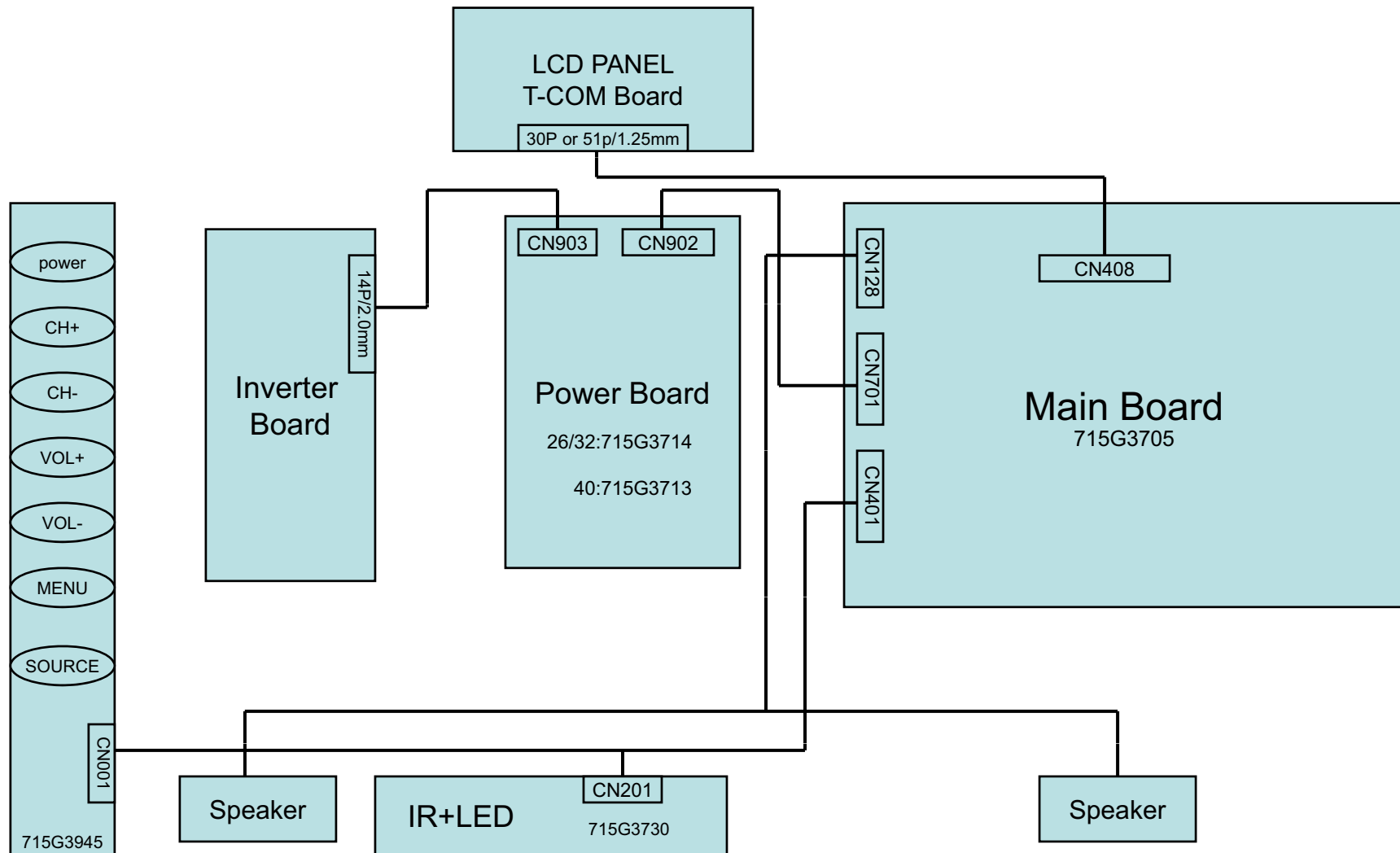


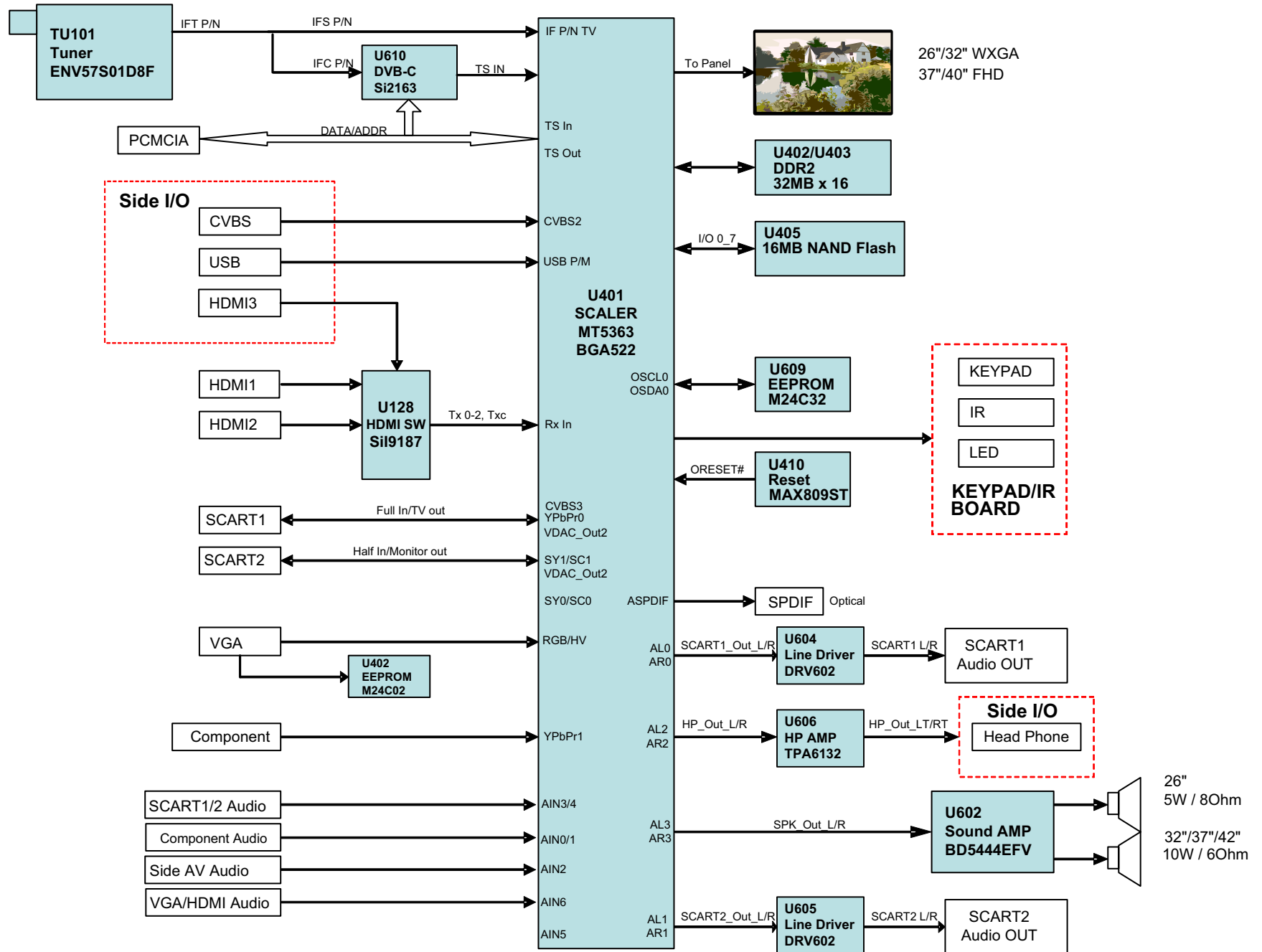
9. Do not disassemble the LCD module. Such actions could result in improper operation.



10. When transporting the LCD module, do not use packing containing epoxy resin (amine) or silicon resin (alcohol or oxim). The gas generated by these materials can cause loss of polarity.







SCHEMATIC DIAGRAM

Precaution

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" FOR DIRECT VIEW CTV ONLY, "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" OF THIS MANUAL.

CAUTION: The international hazard symbols "" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the SAFETY PRECAUTION and PRODUCT SAFETY NOTICE.

Do not degrade the safety of the receiver through improper servicing.

Note:

1. RESISTOR

Resistance is shown in ohm [K=1,000, M=1,000,000]. All resistors are 1/6 W and 5 % tolerance carbon resistor, unless otherwise noted as the following marks.

1/2R : Metal or Metal oxide of 1/2 watt

1/2S : Carbon composition of 1/2 watt

1RF : Fuse resistor of 1 watt

10 W : Cement of 10 watt

K : $\pm 10\%$

G : $\pm 2\%$

F : $\pm 1\%$

2. CAPACITOR

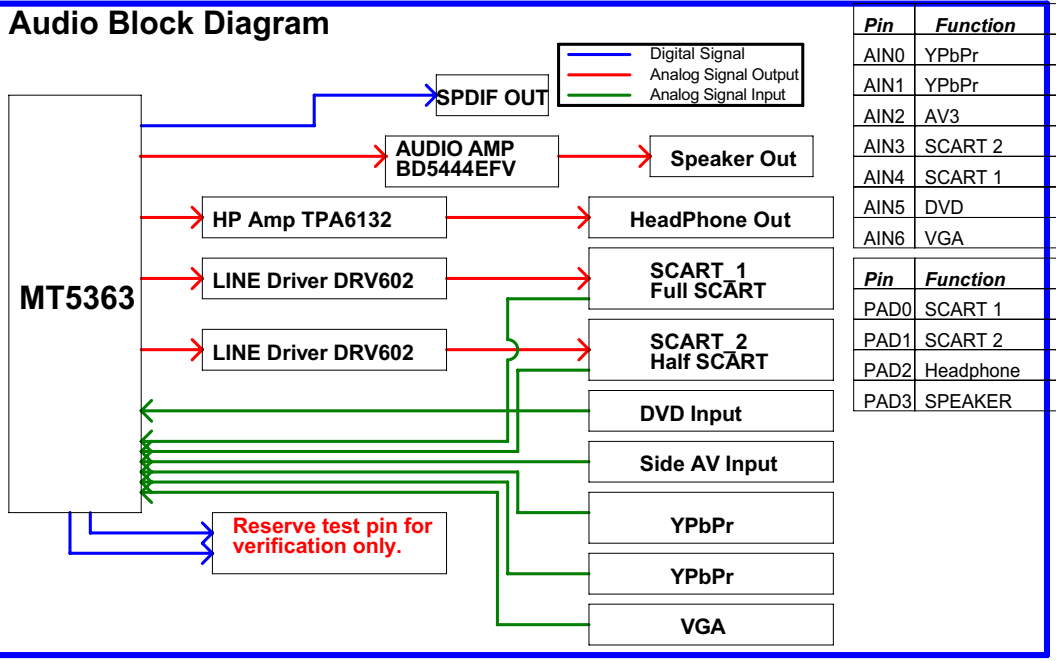
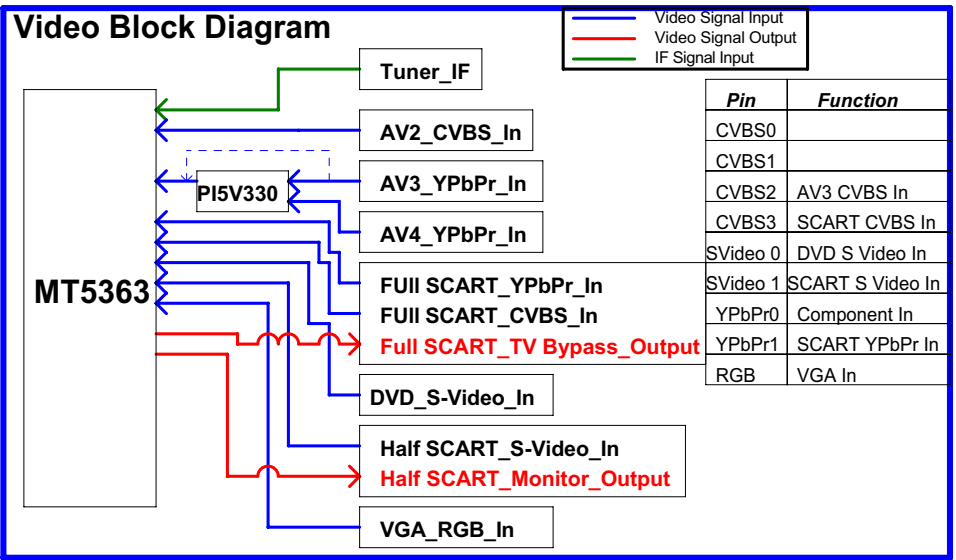
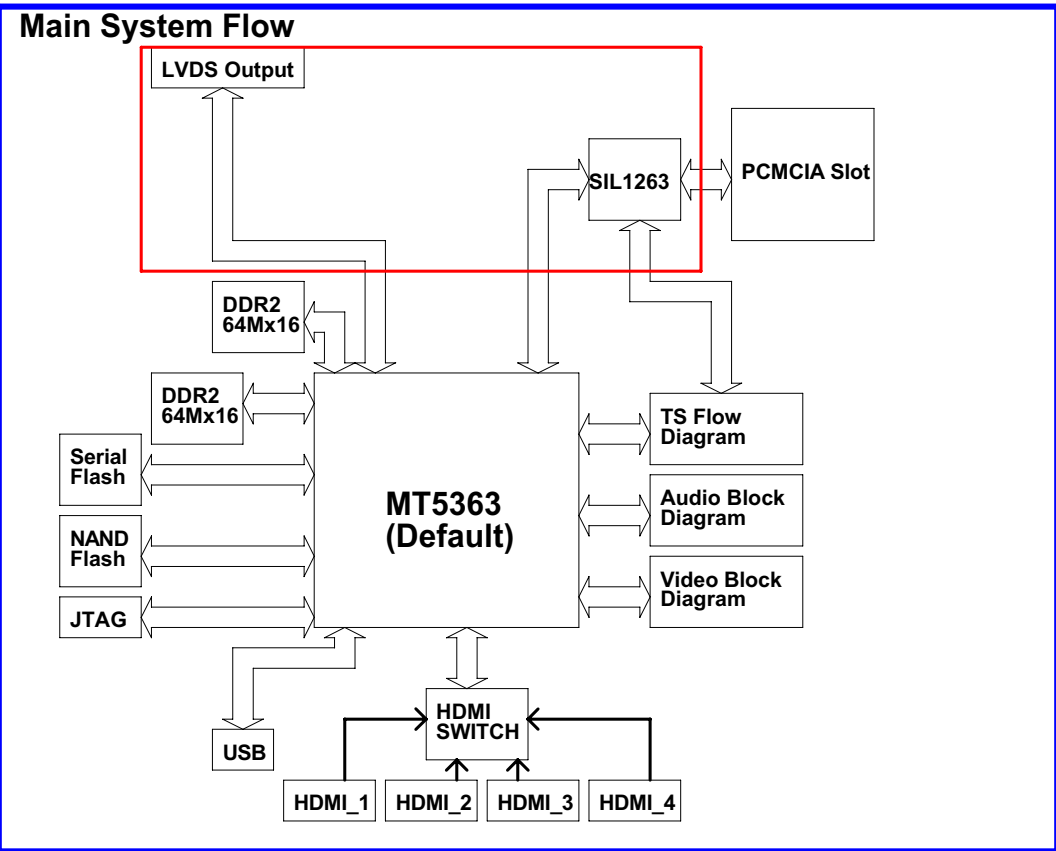
Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF , and the values more than 1 in pF.

All capacitors are ceramic 50 V, unless otherwise noted as the following marks.

 = Electrolytic capacitor

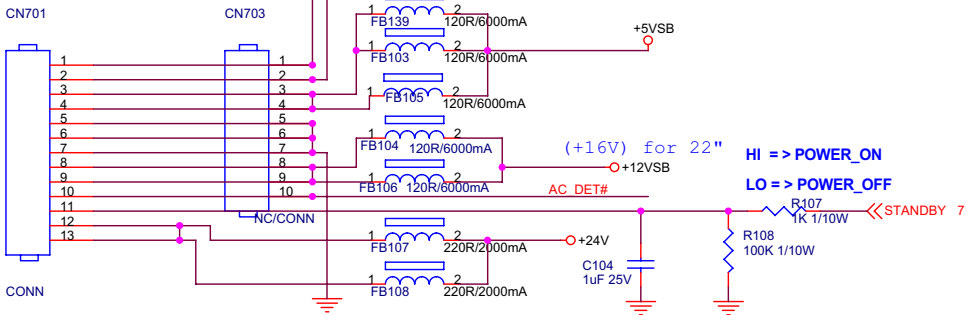
 = Mylar capacitor

3. The parts indicated with " " have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassis ground, using a color bar signal with all controls at normal, line voltage at nominal AC volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary $\pm 20\%$ except H.V.

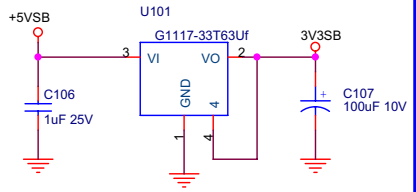


MAIN [2] BLOCK DIAGRAM

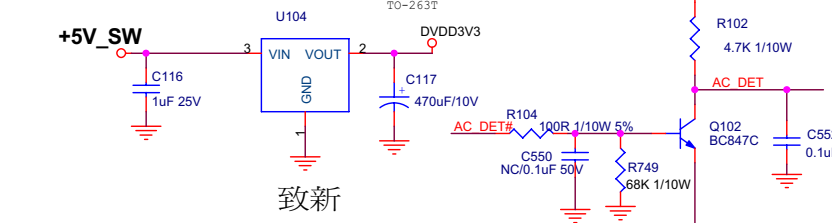
MAIN POWER



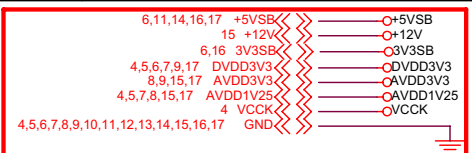
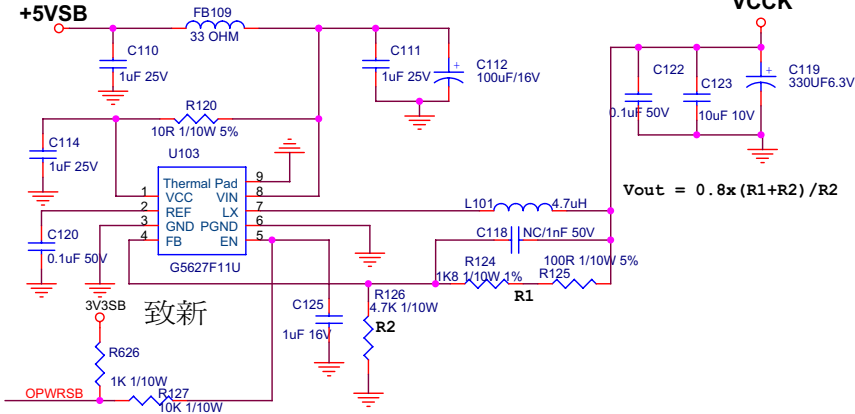
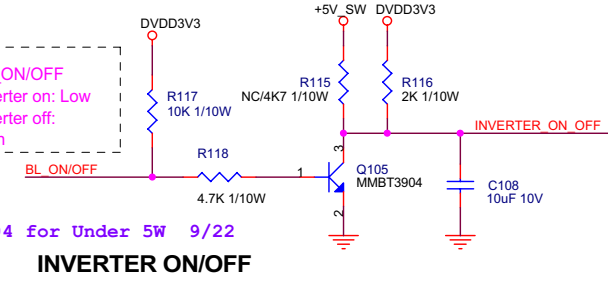
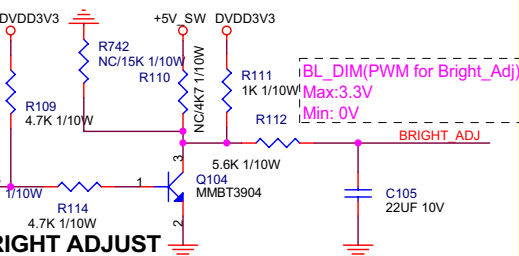
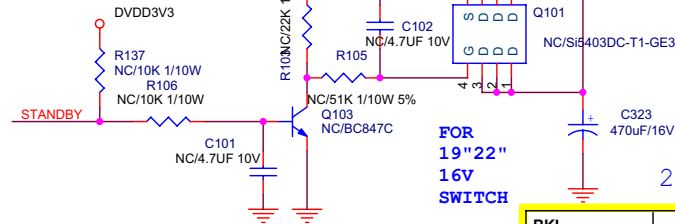
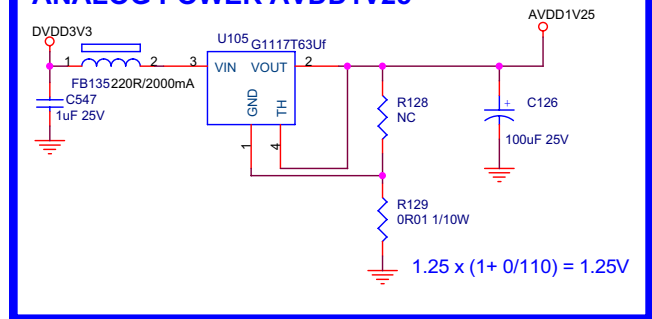
STANDBY POWER 3V3SB



DIGITAL POWER DVDD3V3

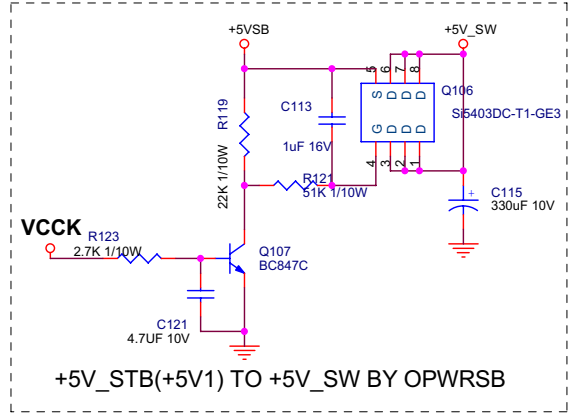


ANALOG POWER AVDD1V25



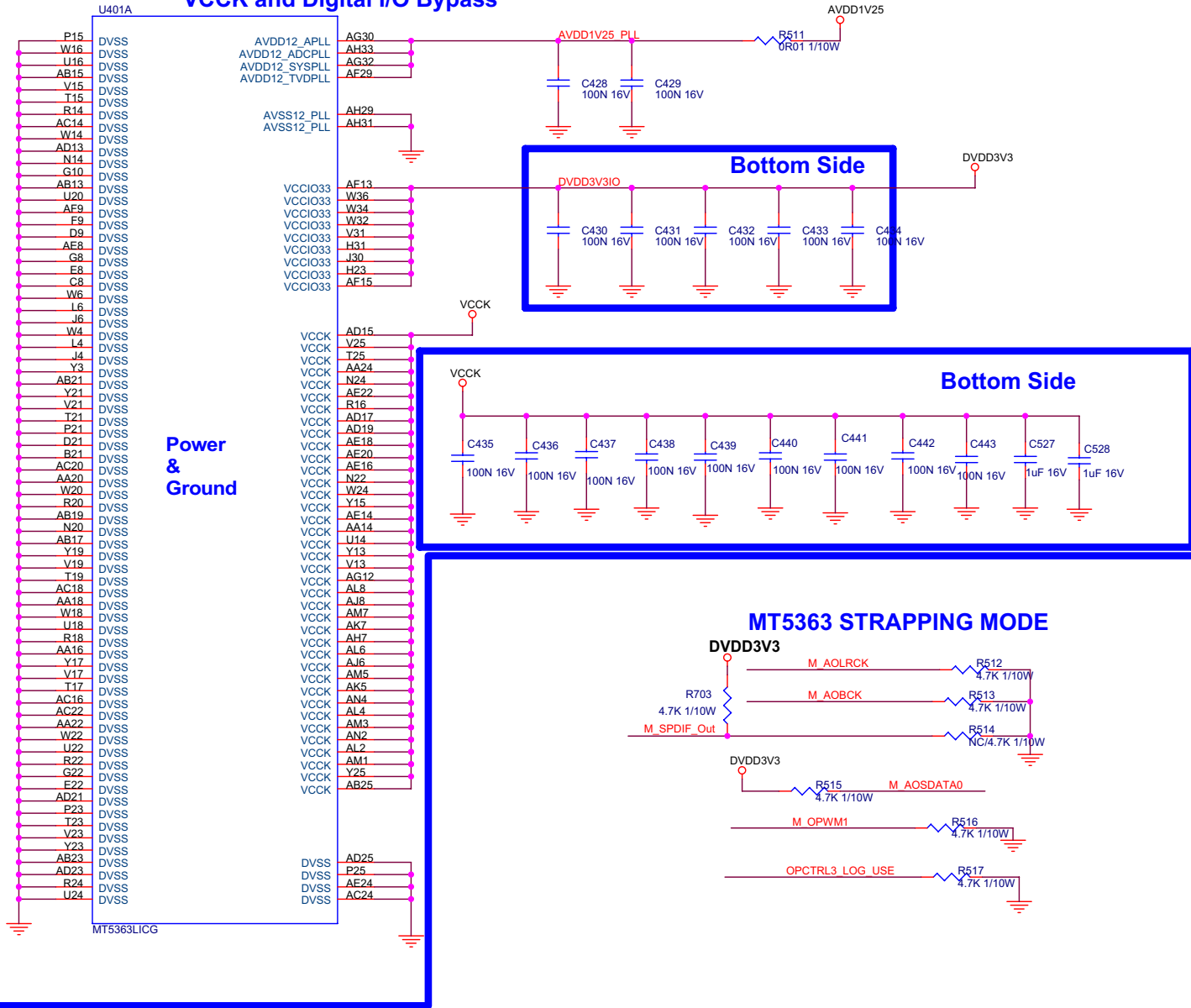
BKL CONTROL TYPE	R110	R111	R112	R742	C105	REMARK
PWM CONTROL	N/C	4K7	100R	N/C	N/C	
CMO26W/ SEC32F/SEC40F DC-CONTROL (3V3)	N/C	1K	5K6	N/C	22U	SEC32W AP12 OLD Inverter Imp 260K
SEC32W AP12 DC-CONTROL (5V)	4K7	N/C	5K6	15K	22U	NEW Inverter Imp 28K

INVERTER ON/OFF	R115	R116
3V3	N/C	2K
5V	4K7	N/C

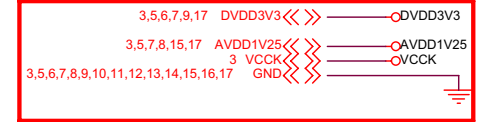


MAIN [3] SYSTEM POWER

VCCCK and Digital I/O Bypass



Power
&
Ground

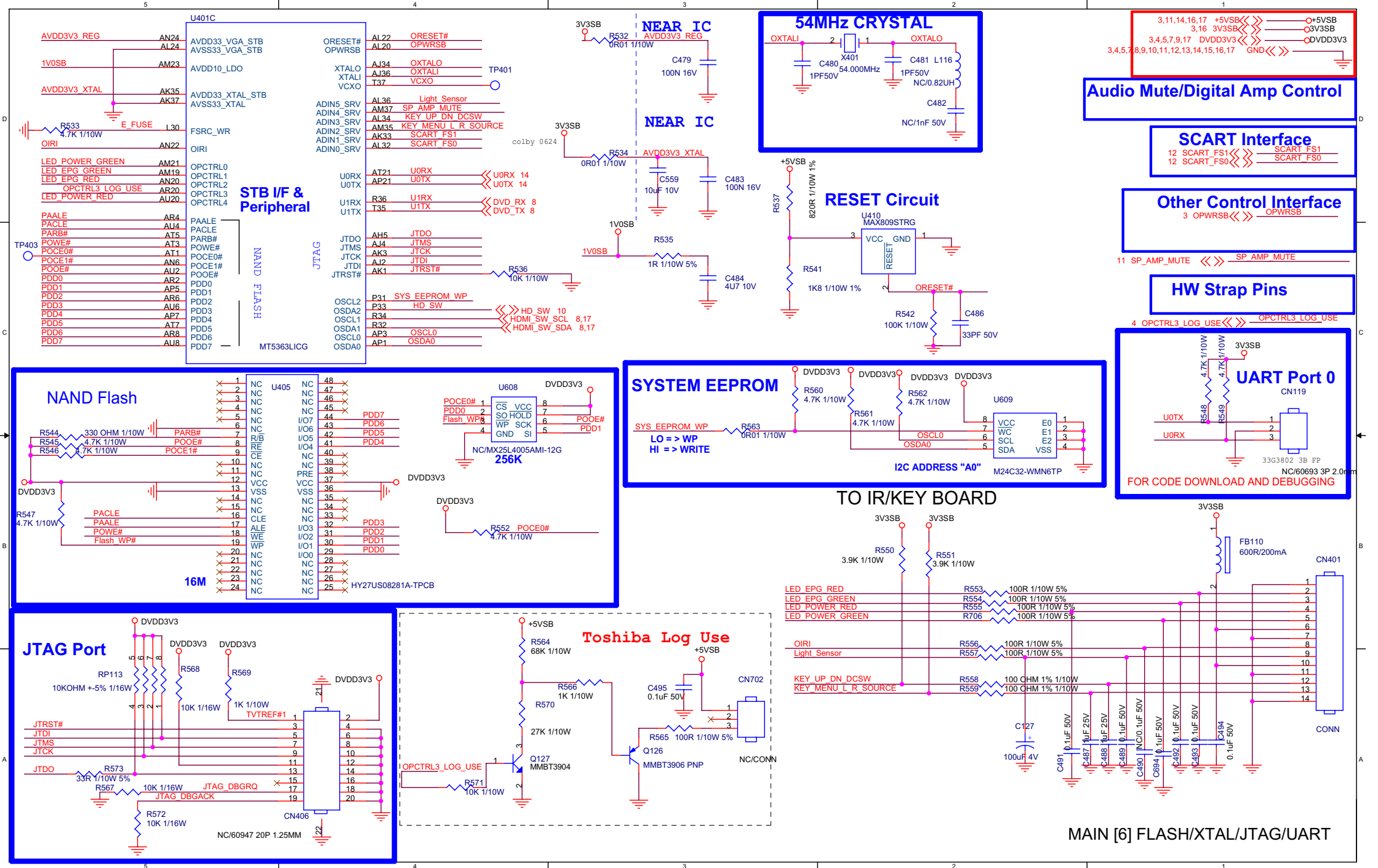


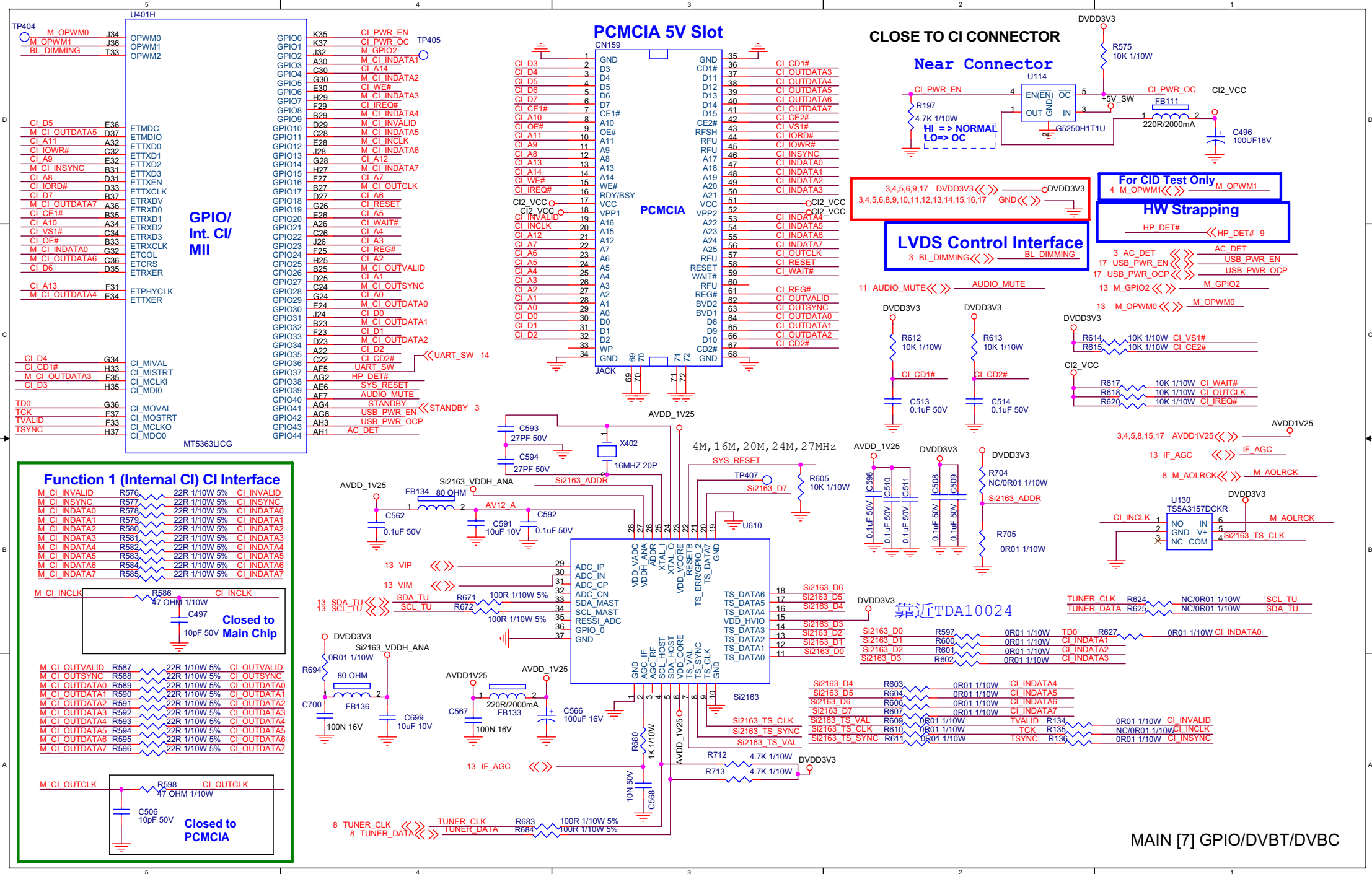
Strapping	AOLRCK	AOBCK	ASPDIF
ICE mode + serial boot	0	0	0
ICE mode + ROM boot	0	0	1
CPU model mode	0	1	1
Scan mode	1	0	0
OLT mode	1	0	1
Boundary scan mode	1	1	0

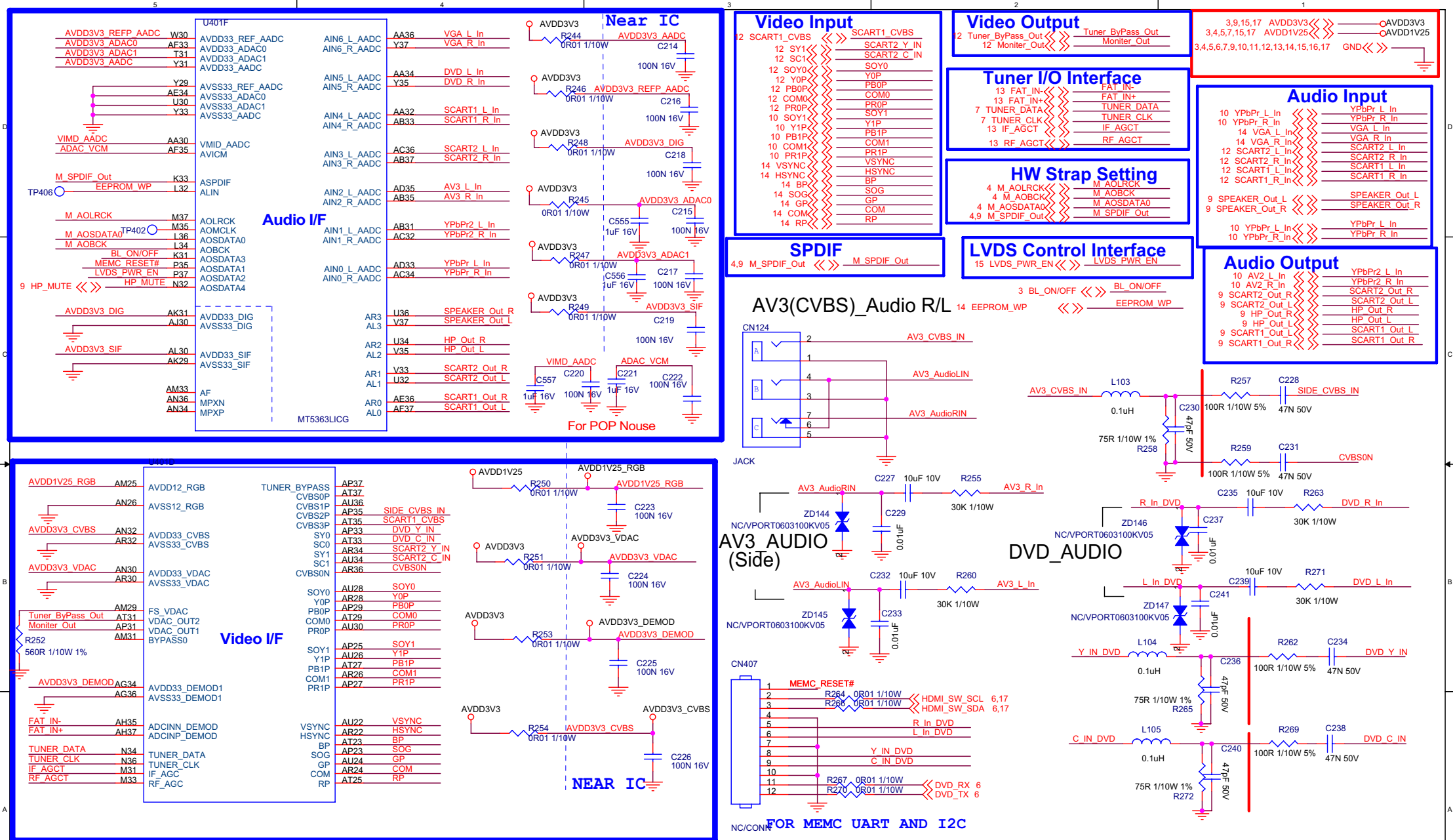
Strapping	AOSDATA0	OPWM1
XTAL 27M + MT8225	1	1
XTAL 54M	1	0
XTAL 60M	0	1
XTAL 27M	0	0

Strapping	OPCTRL3(0)
PDWNC Normal	0
PDWNC SCAN	1

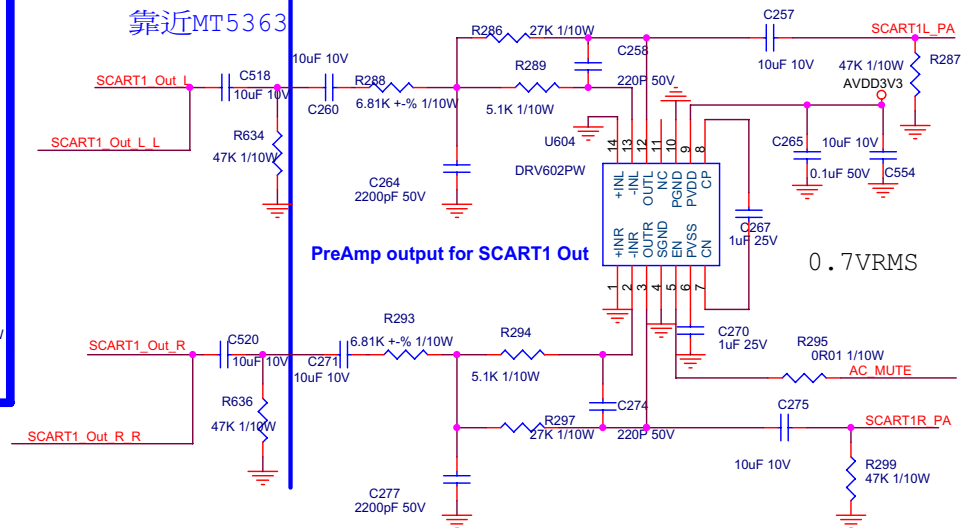
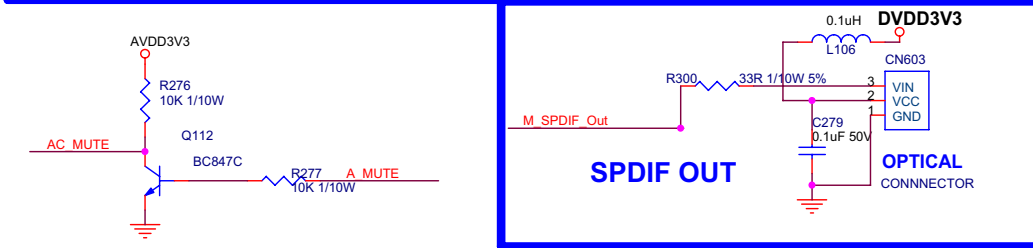
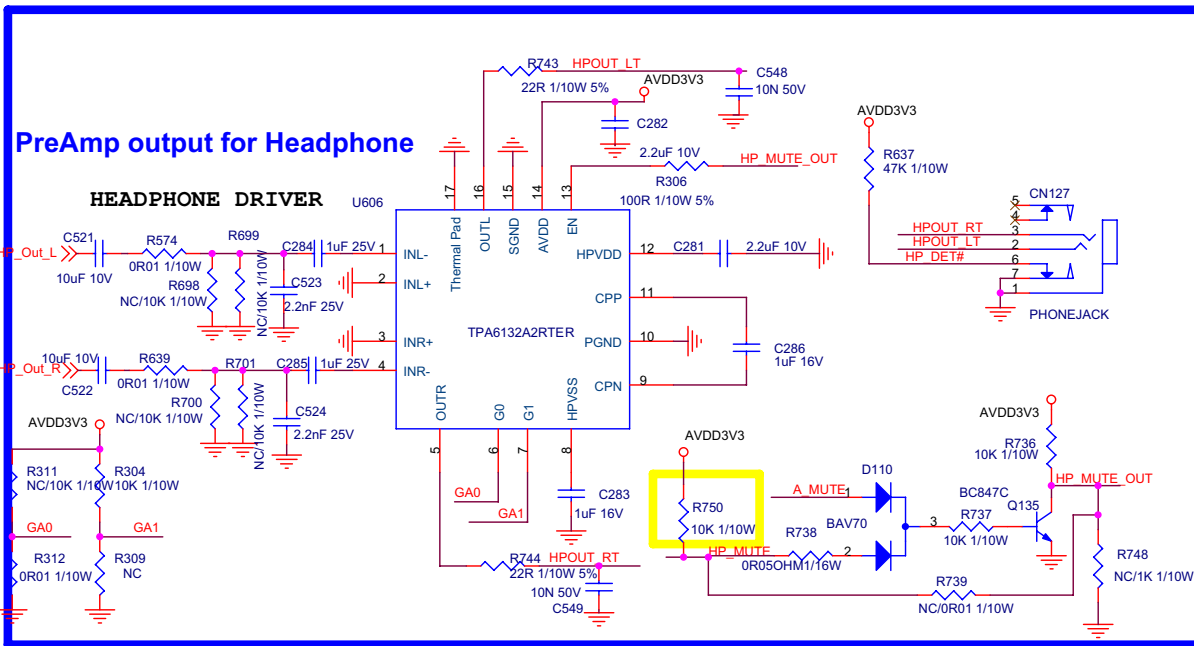
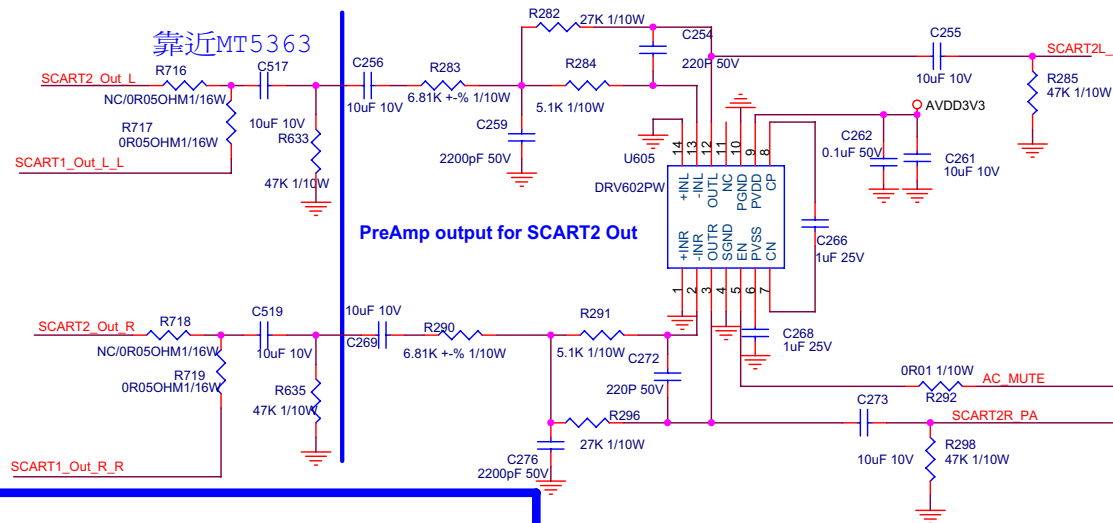
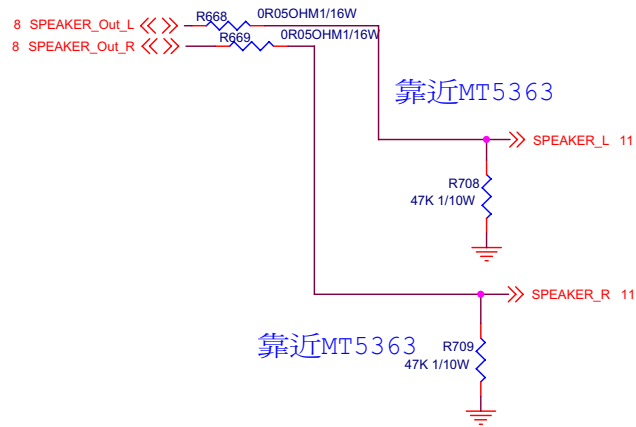
MAIN [4] BYPASS/TRAP





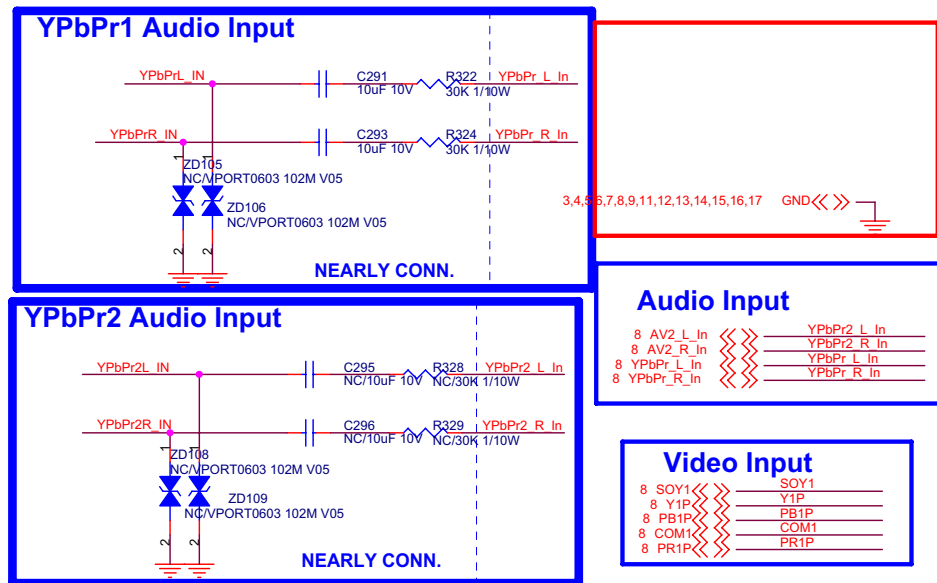


MAIN [8] A/V INTERFACE

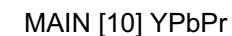


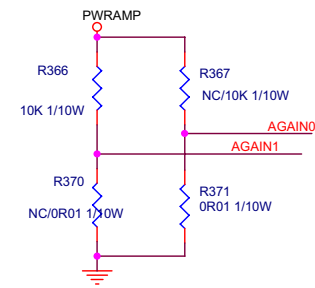
MAIN [9] LINE OUT/HEADPHONE OUT

NEARLY YPBPR CON.

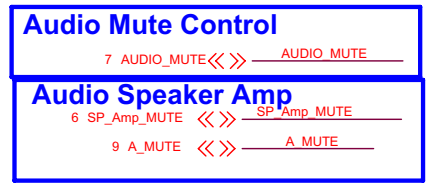
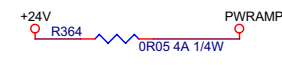


FB115 NC/80 OHM



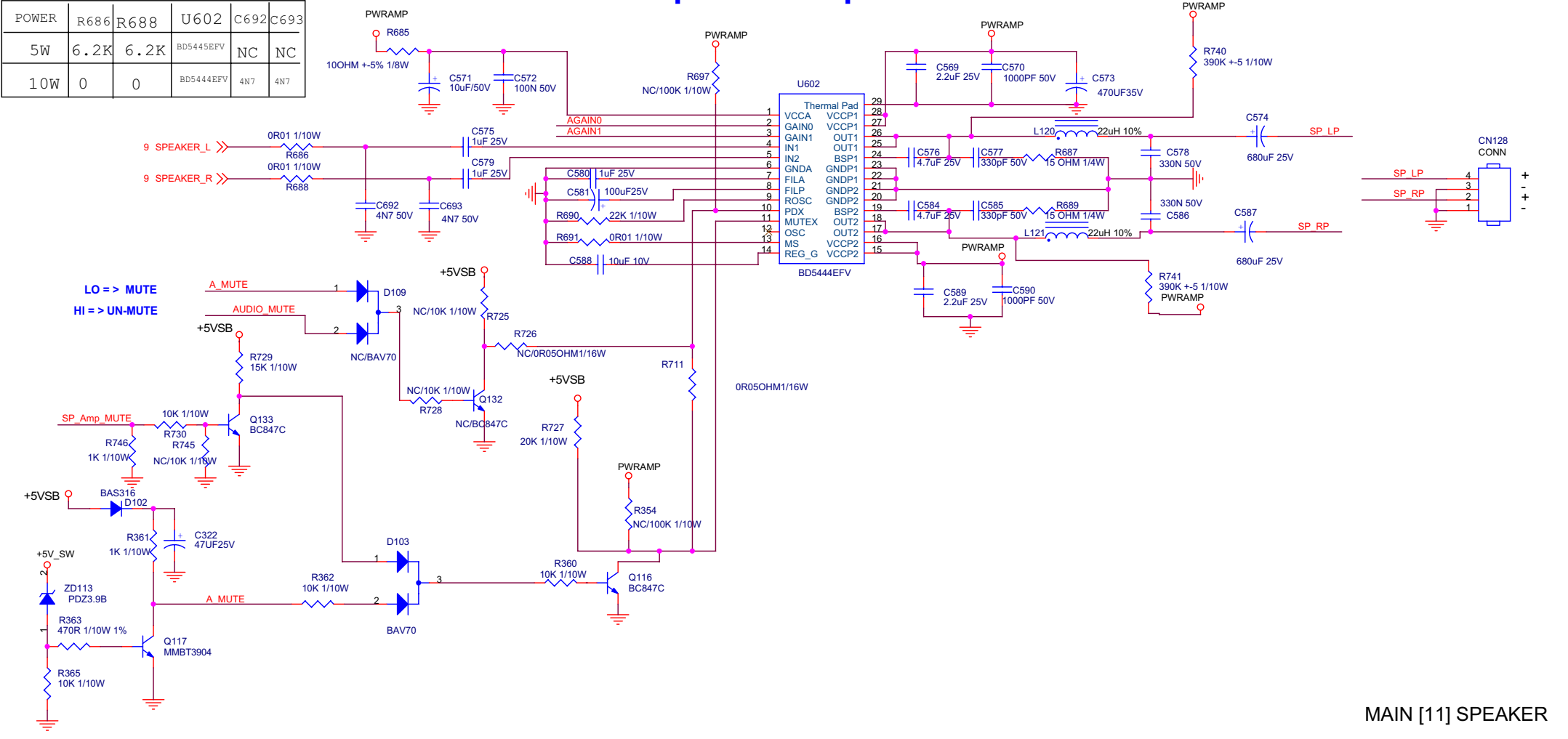


AGAIN1	AGAIN0	GAIN
0	0	14dB
0	1	20dB
1	0	26dB
1	1	32dB



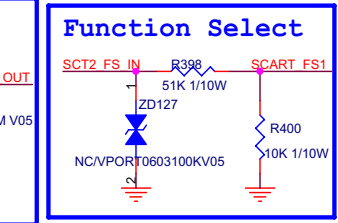
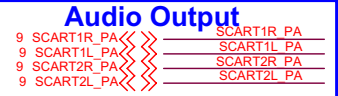
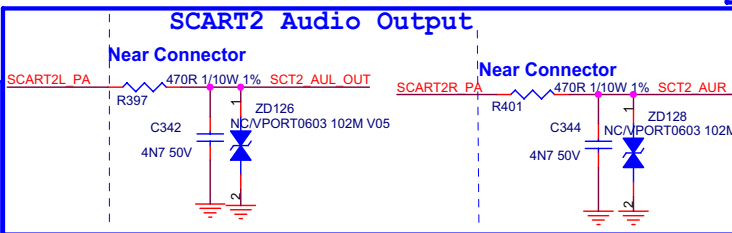
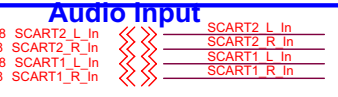
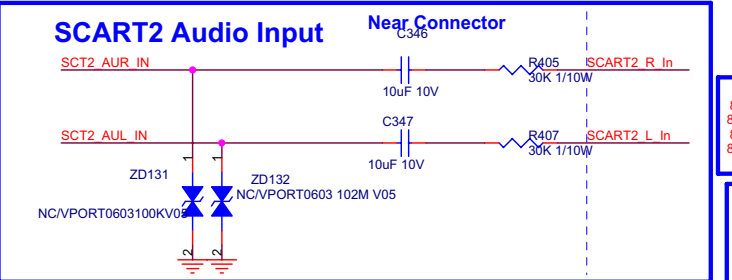
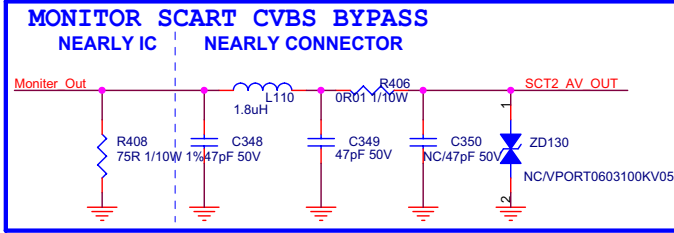
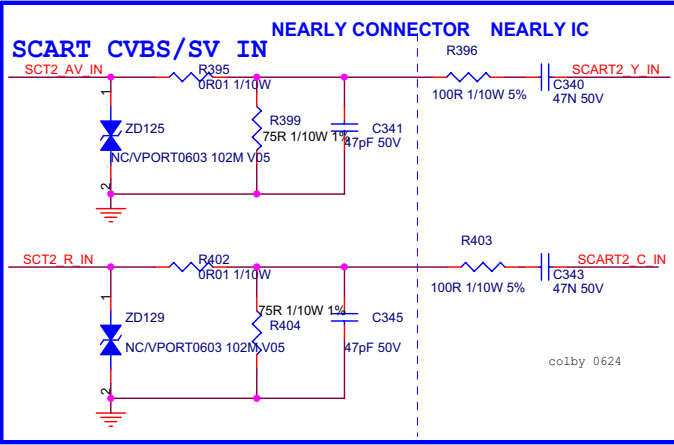
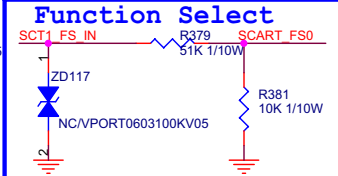
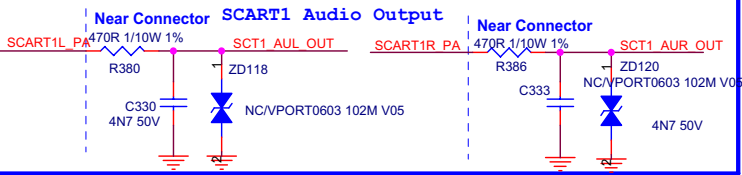
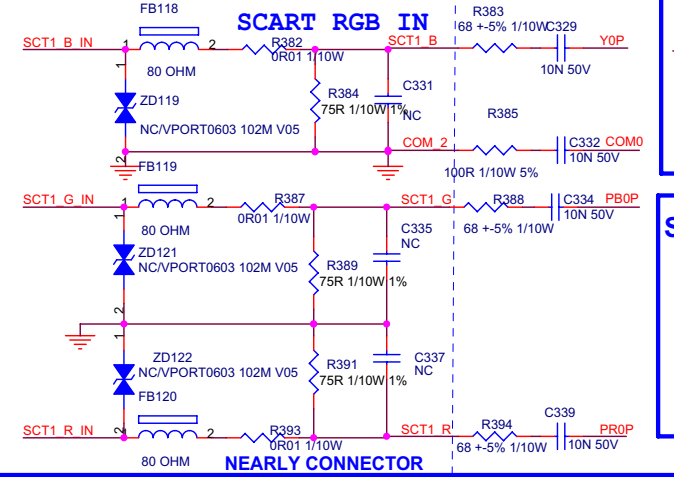
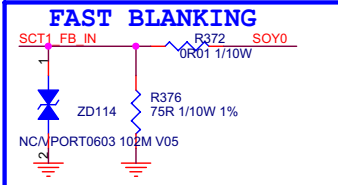
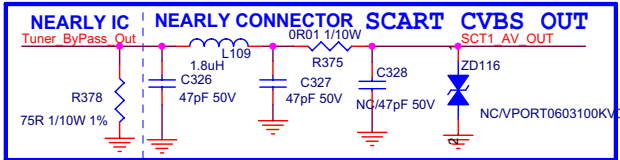
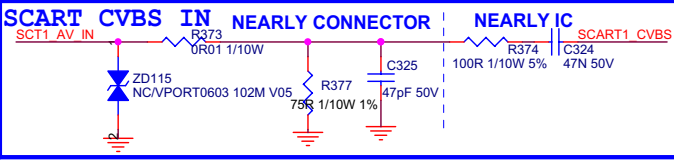
POWER	R686	R688	U602	C692	C693
5W	6.2K	6.2K	BD5445EFV	NC	NC
10W	0	0	BD5444EFV	4N7	4N7

Speaker Amplifier



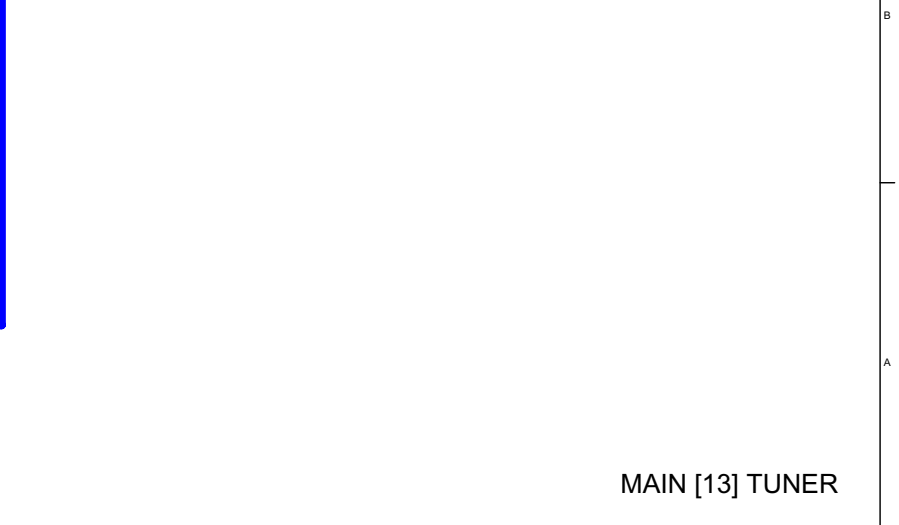
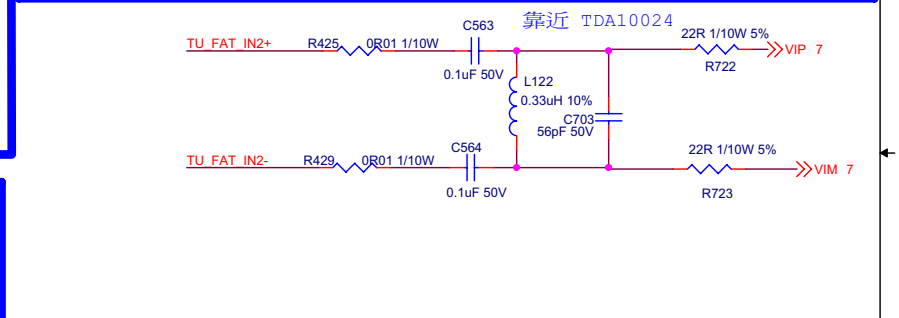
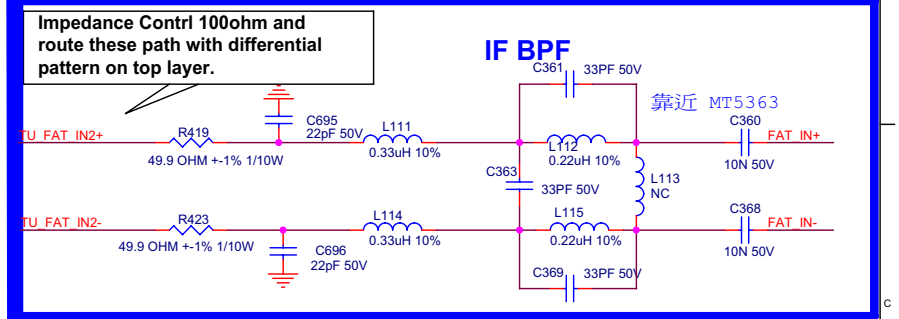
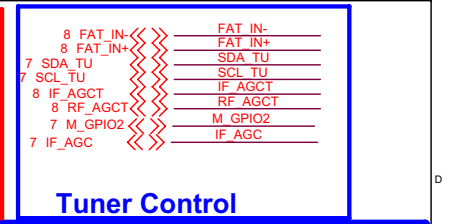
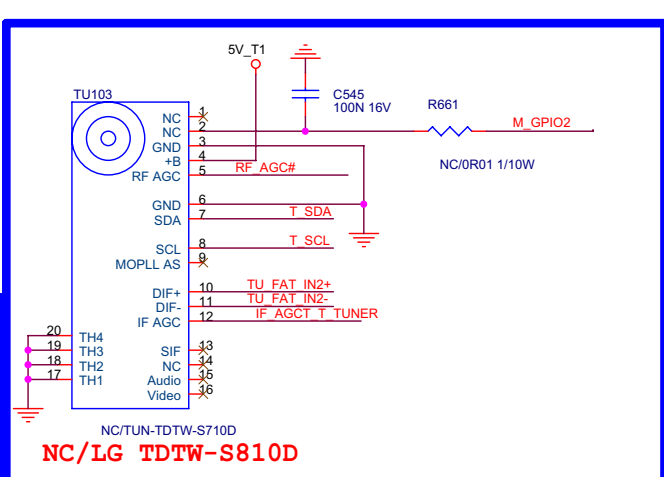
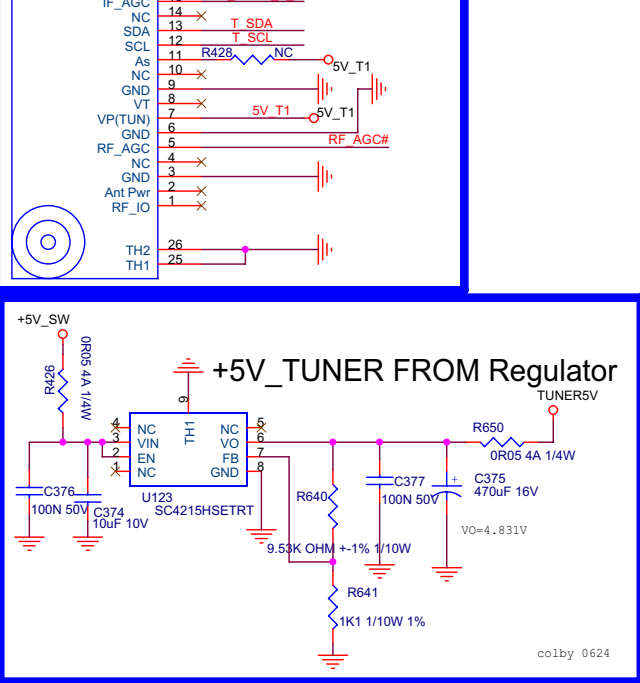
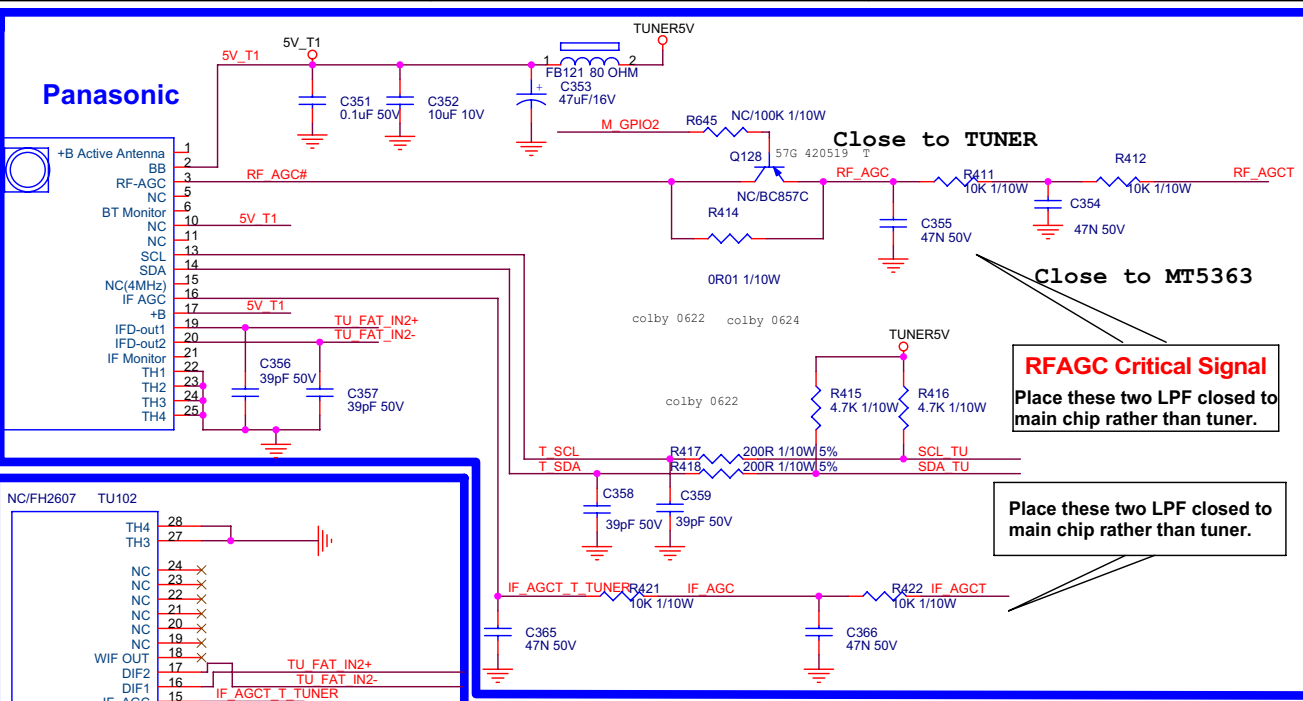
MAIN [11] SPEAKER

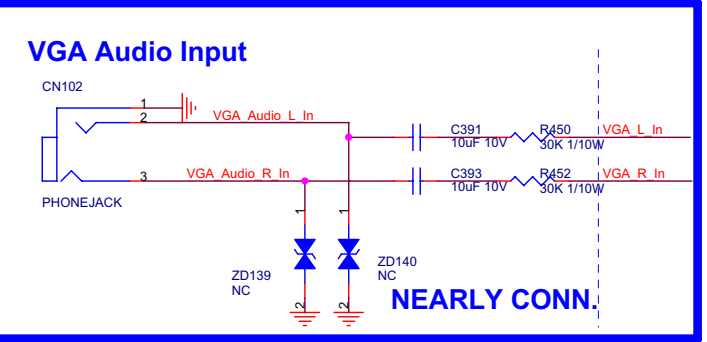
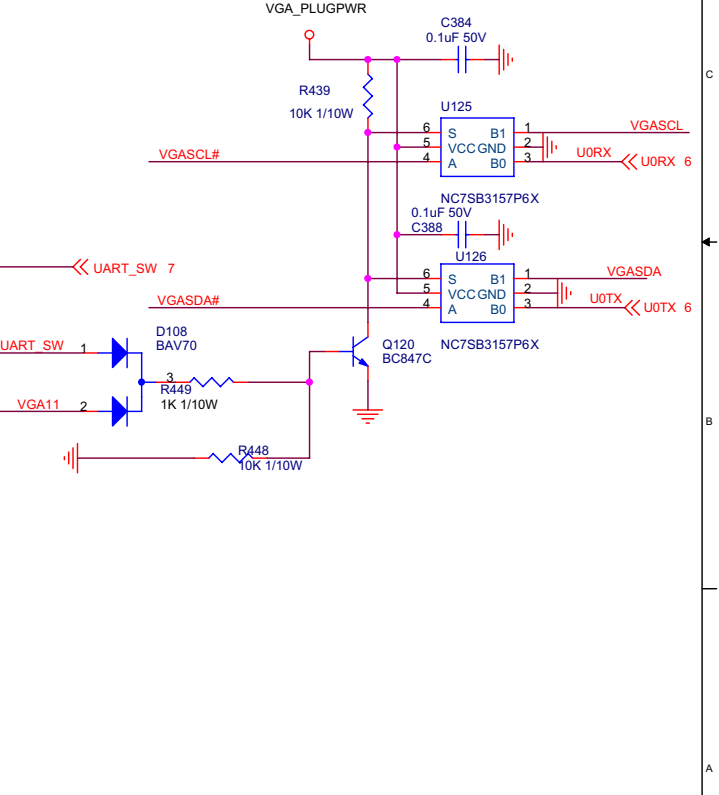
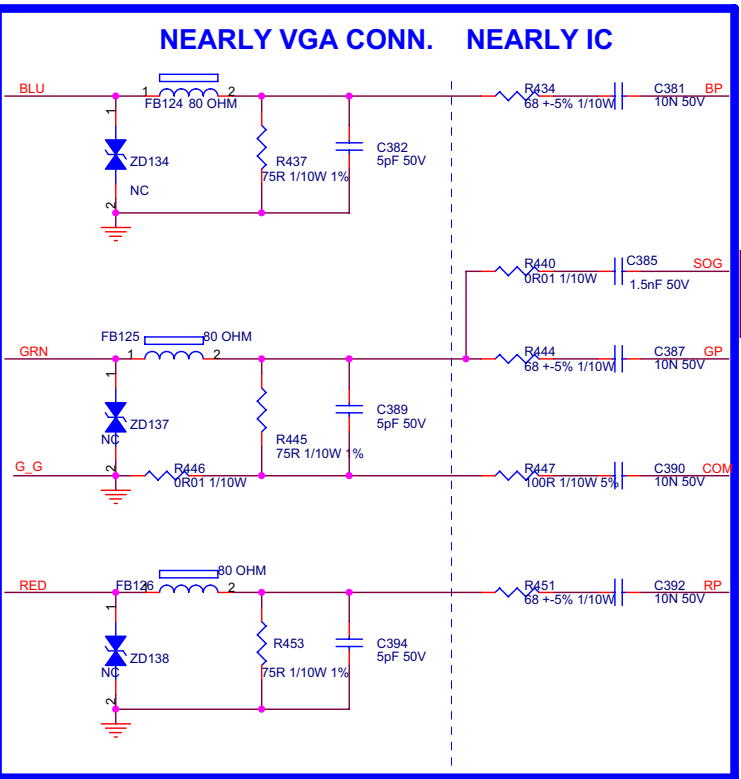
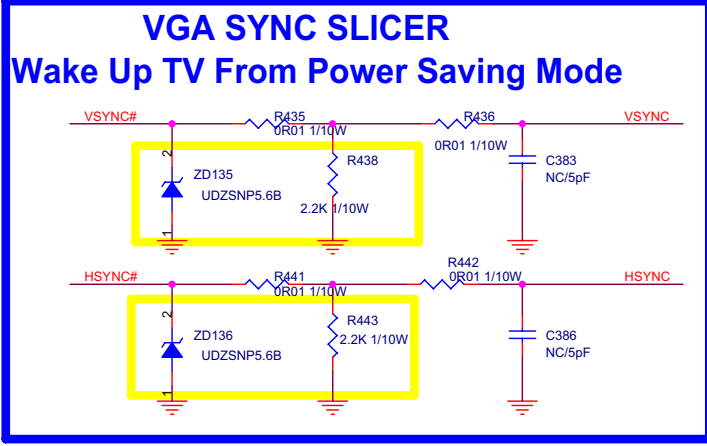
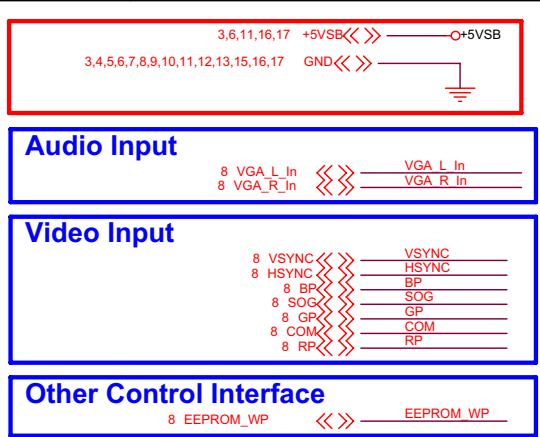
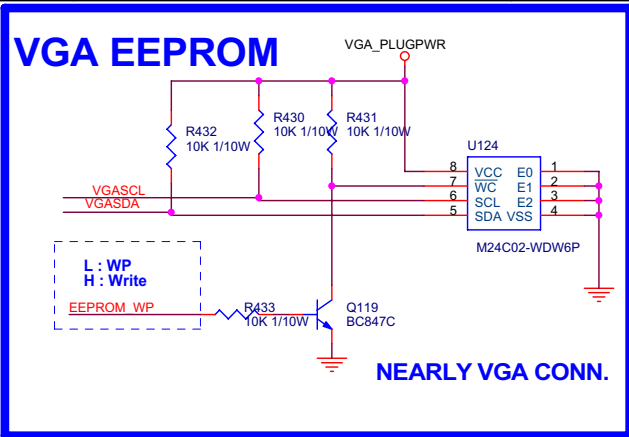
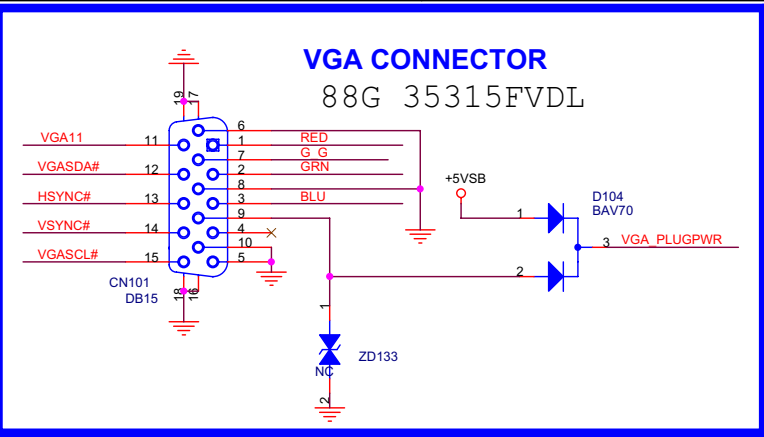
SCART 1(Full SCART)
-- CVBS+SV+RGB+TV
OUT

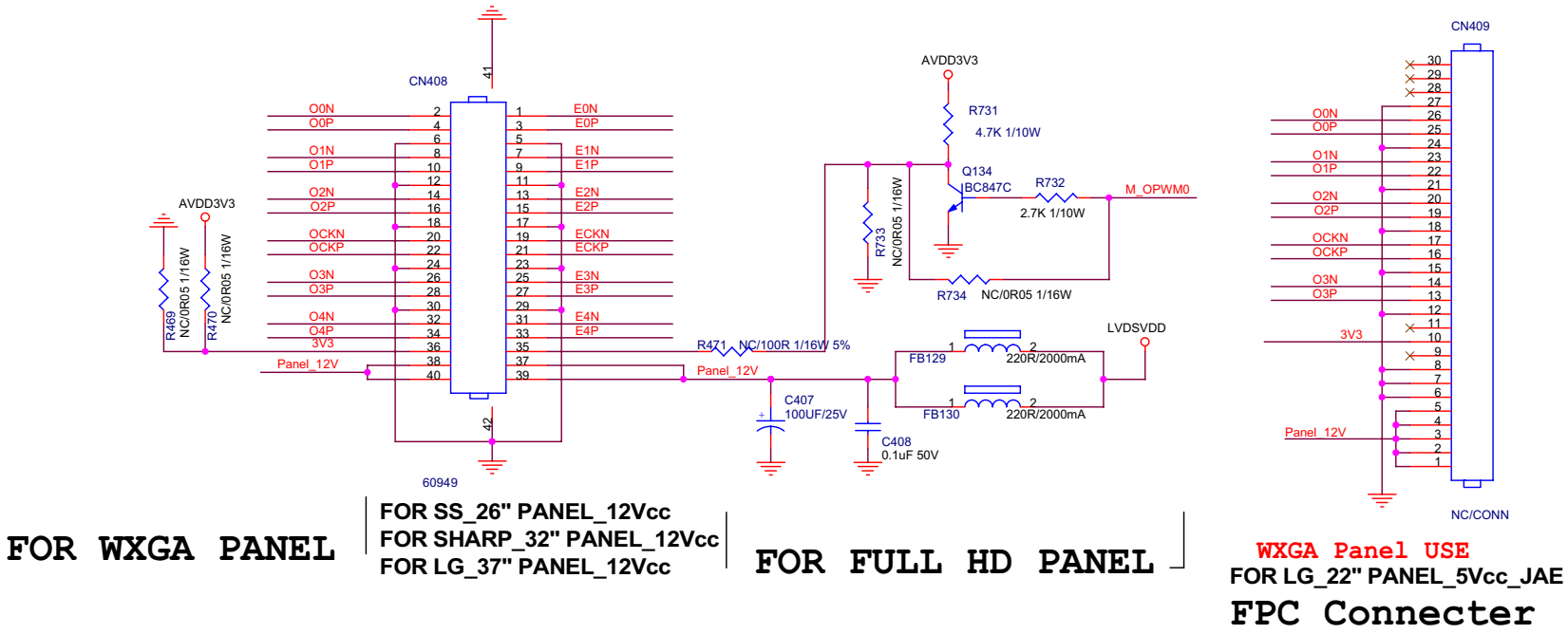
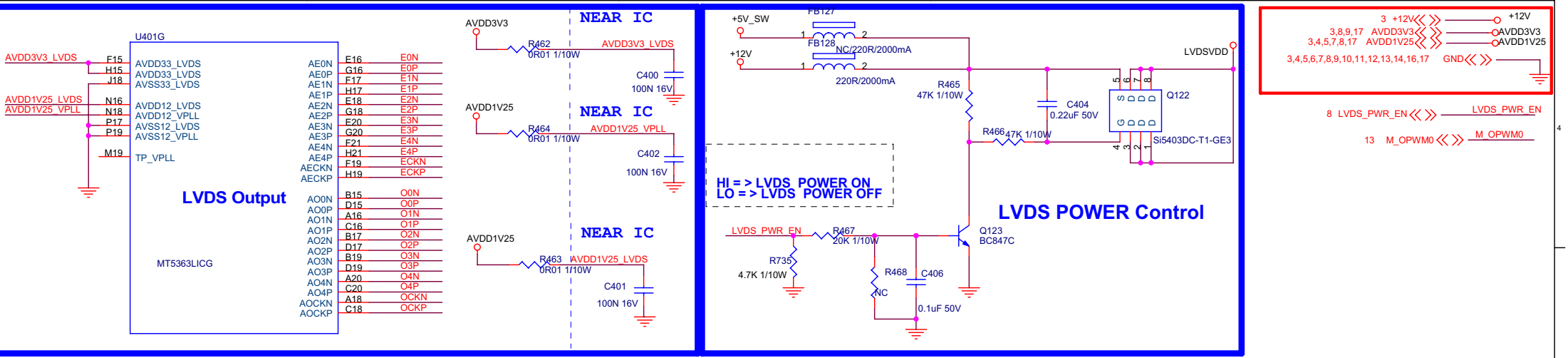


MAIN [12] SCART

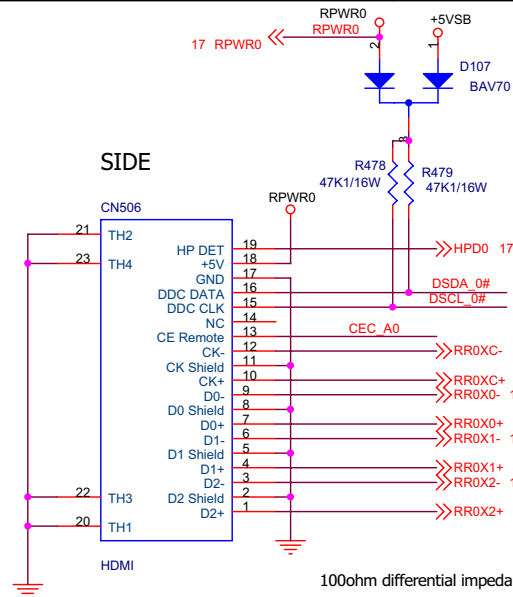
Panasonic





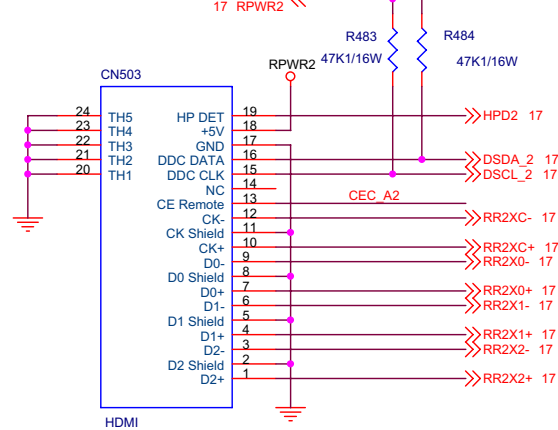


MAIN [15] LVDS



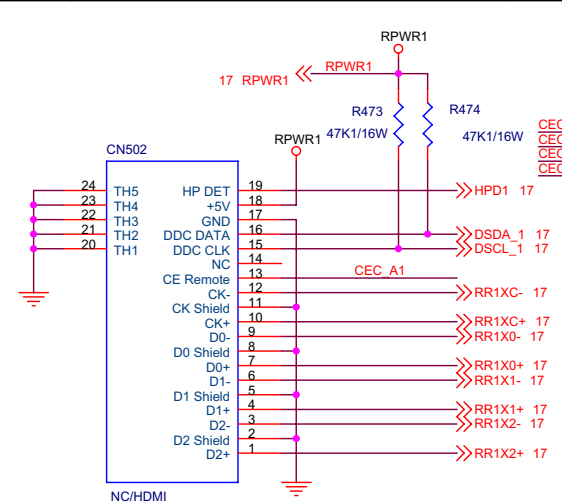
100ohm differential impedance for TMDS traces.

Add silk screen port0



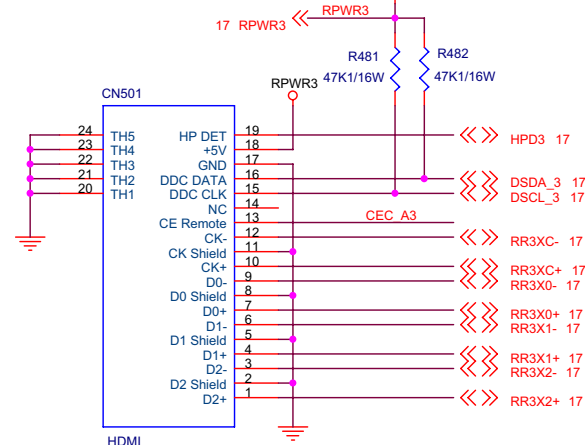
100ohm differential impedance for TMDS traces.

Add silk screen port0



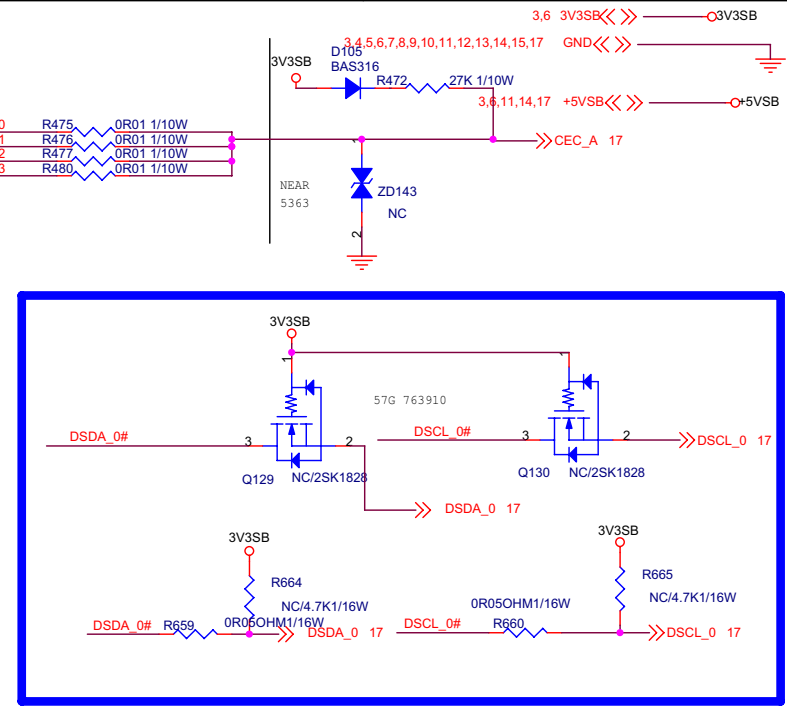
PORT 1 100ohm differential impedance for TMDS traces.

Add silk screen port0

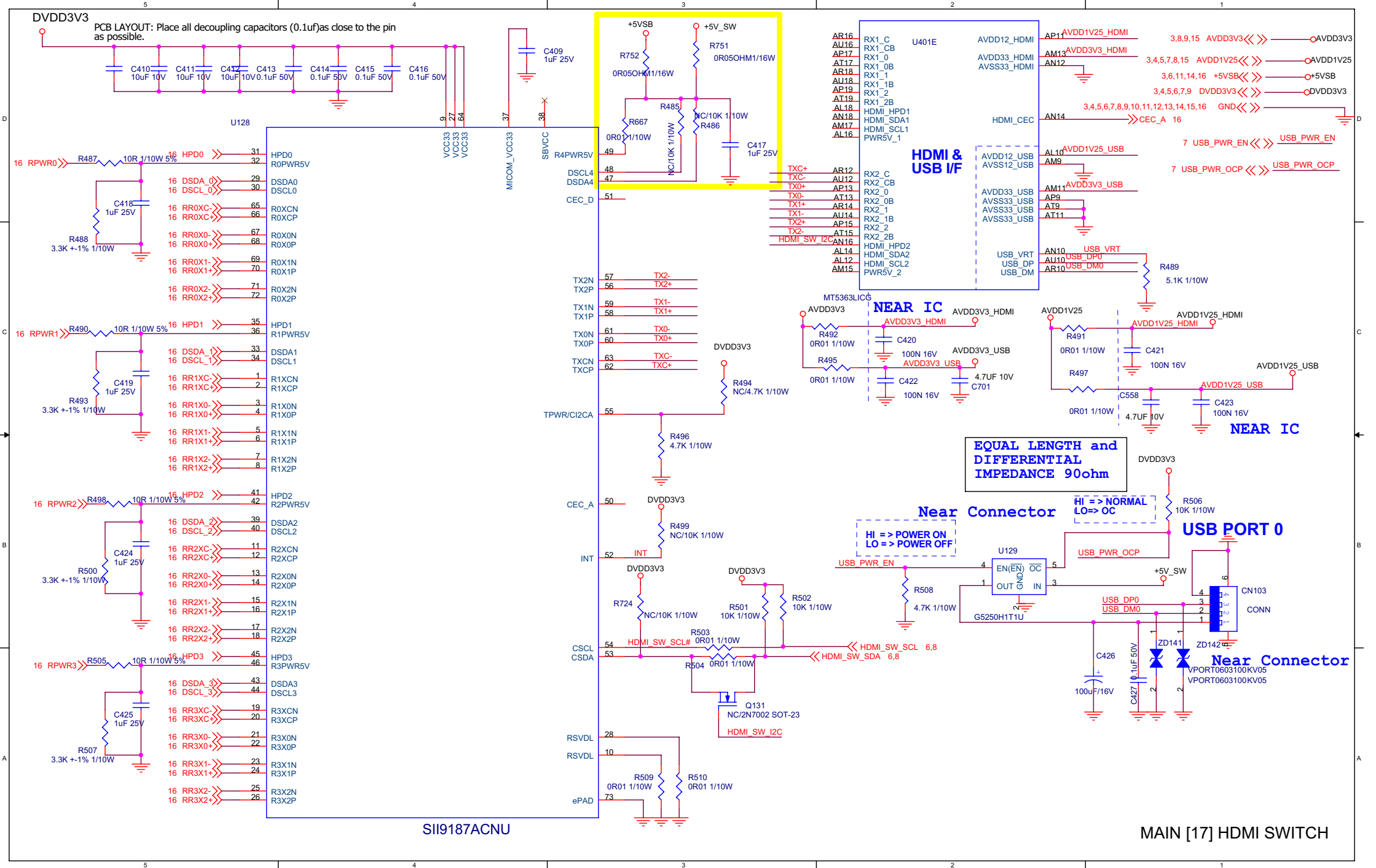


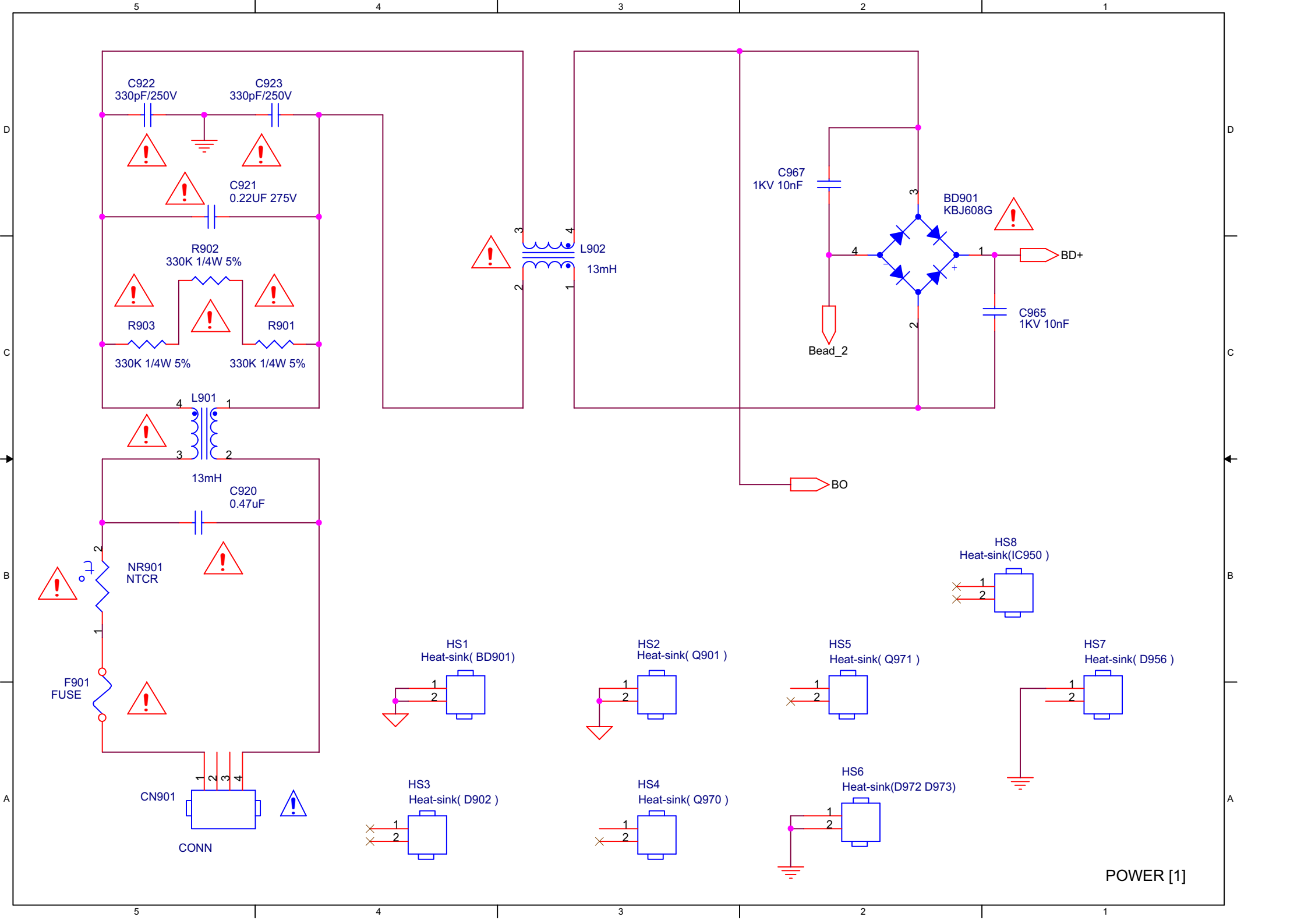
100ohm differential impedance for TMDS traces.

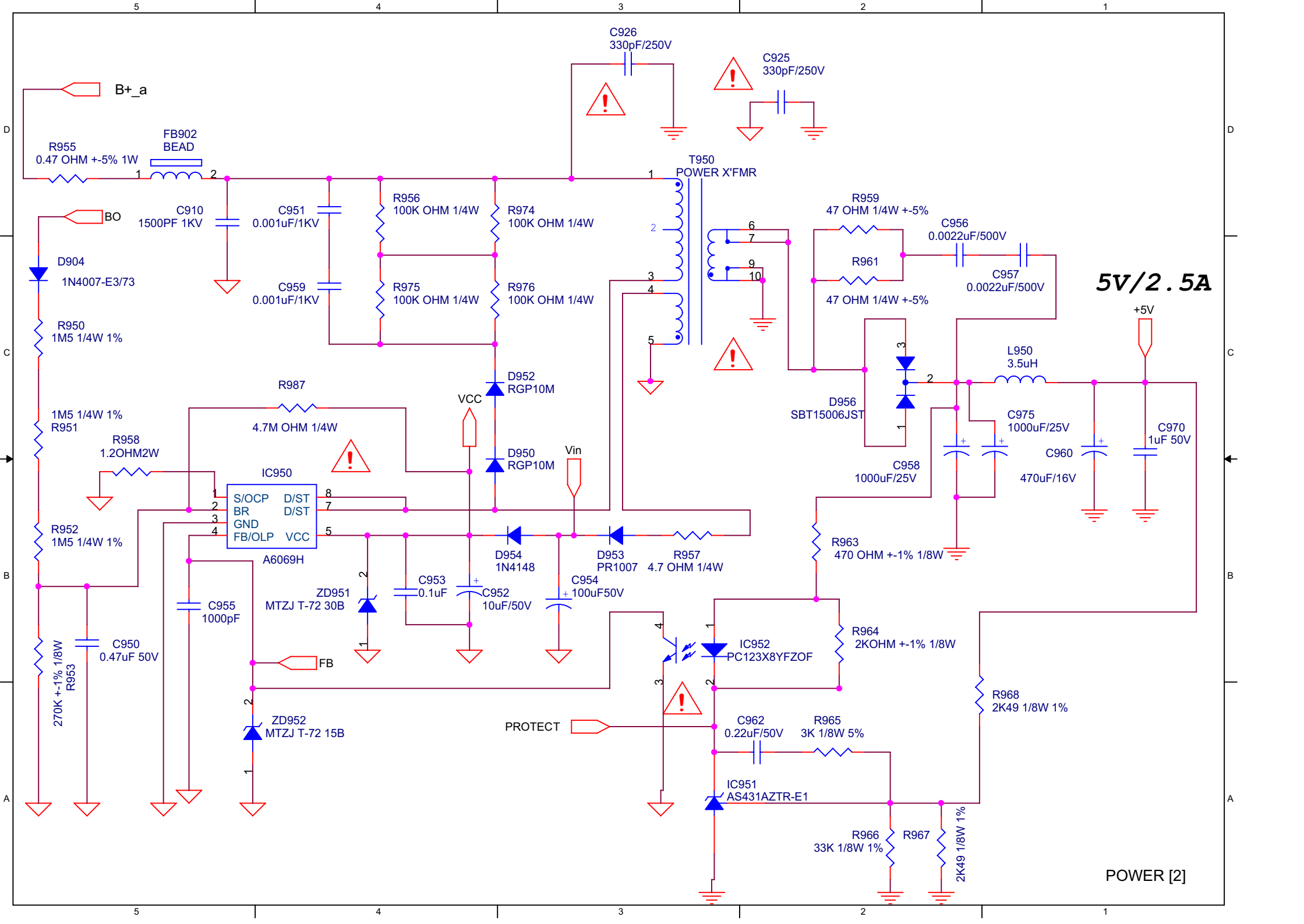
PORT 3

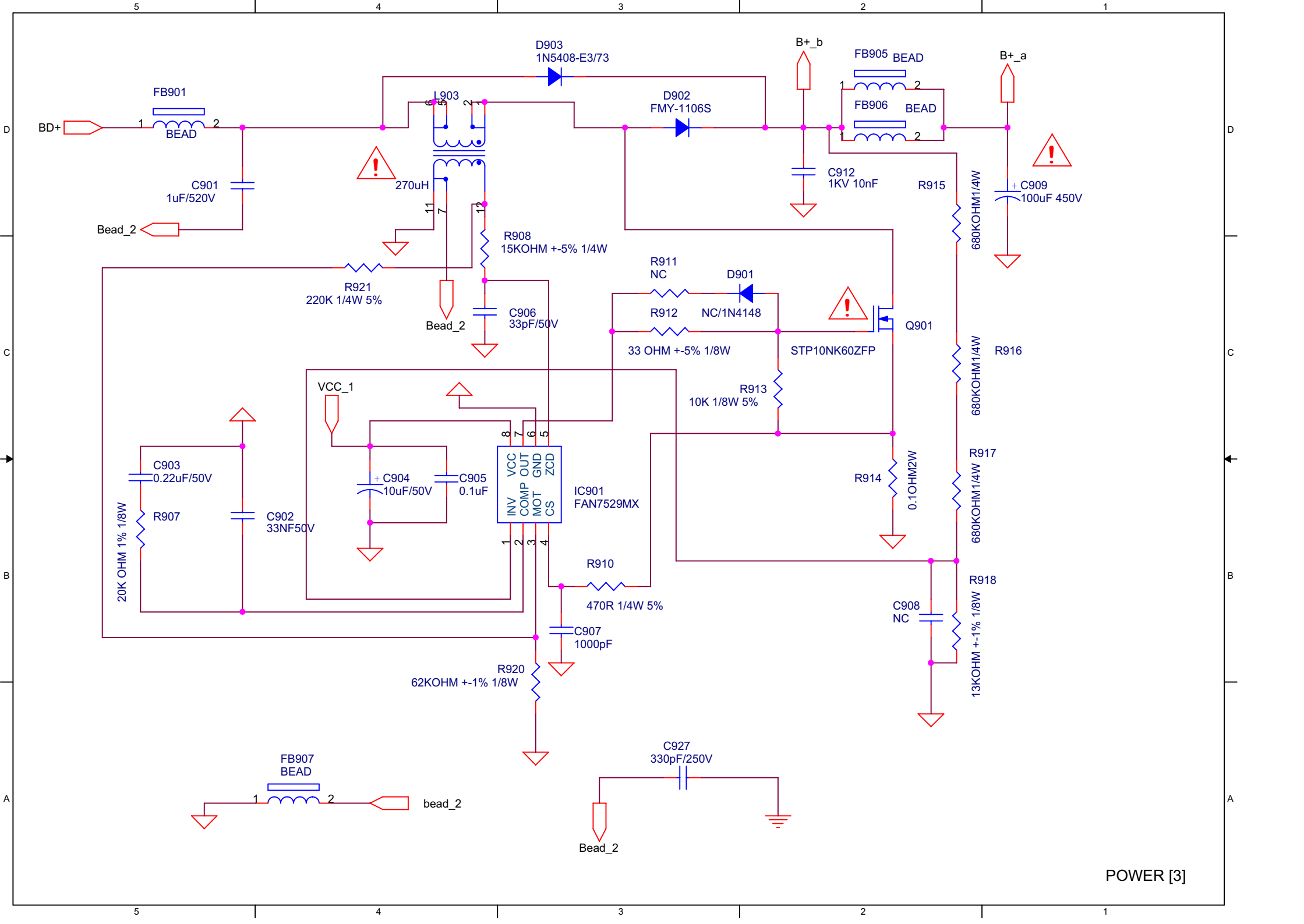


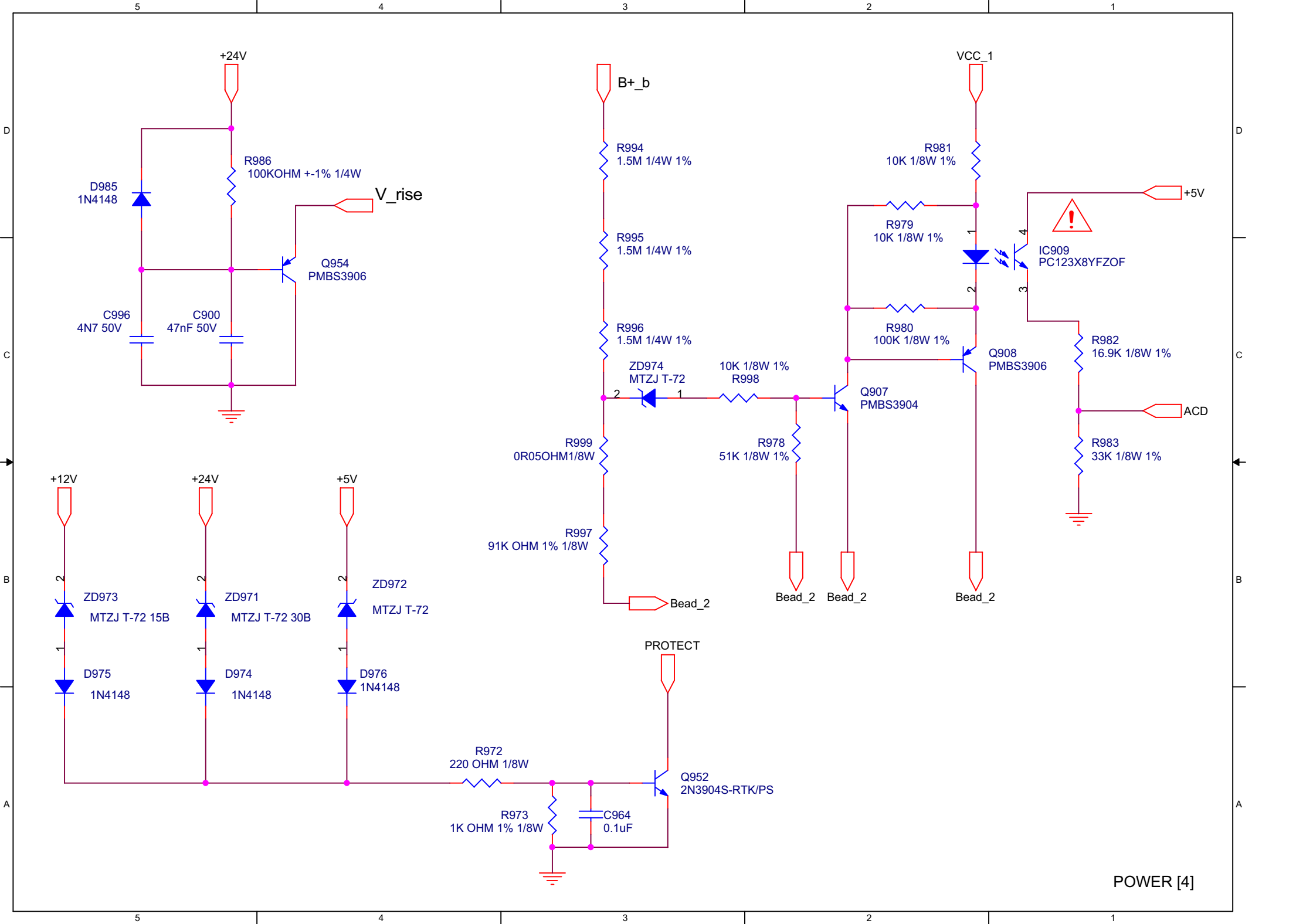
MAIN [16] HDMI CONNECTOR

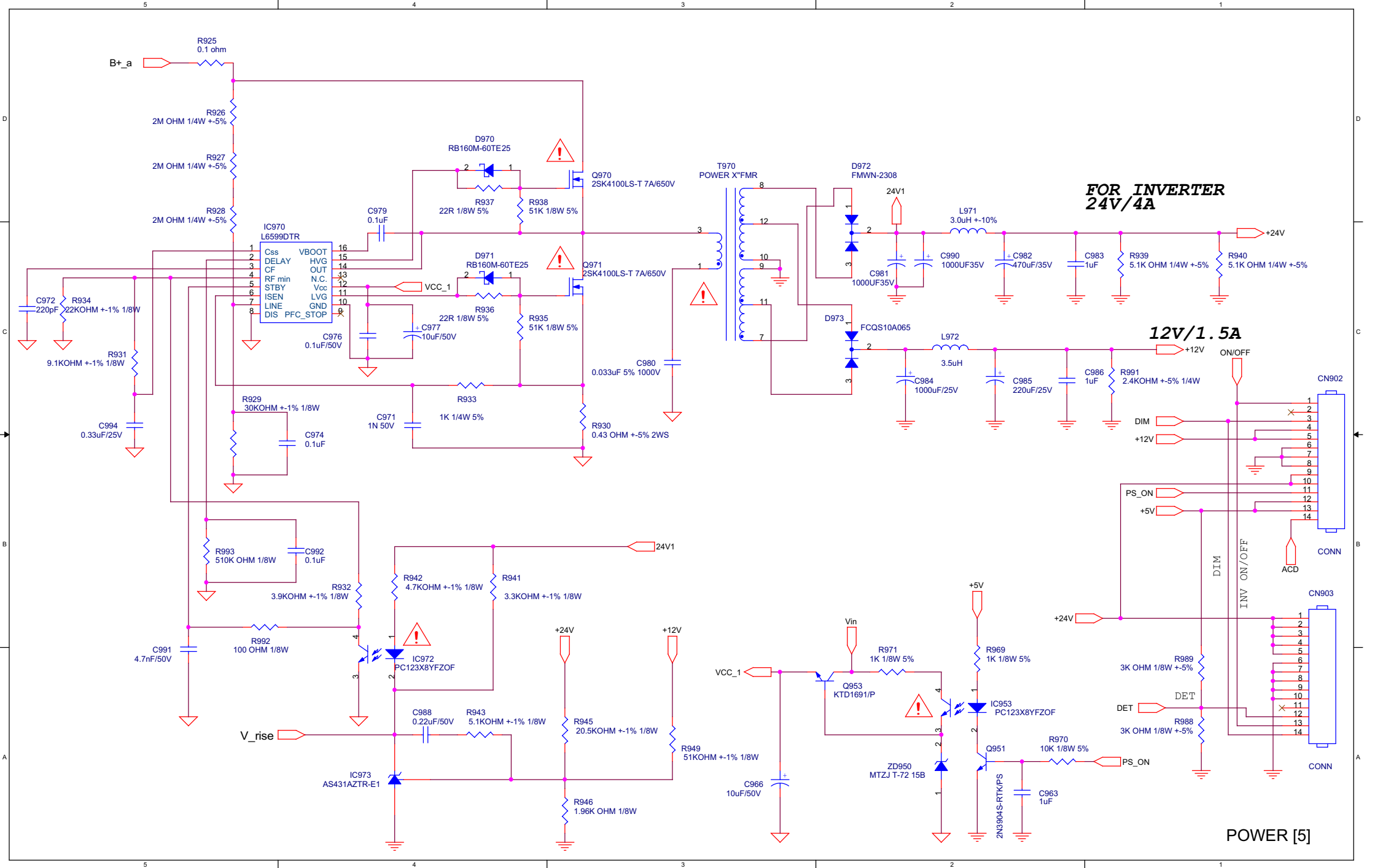


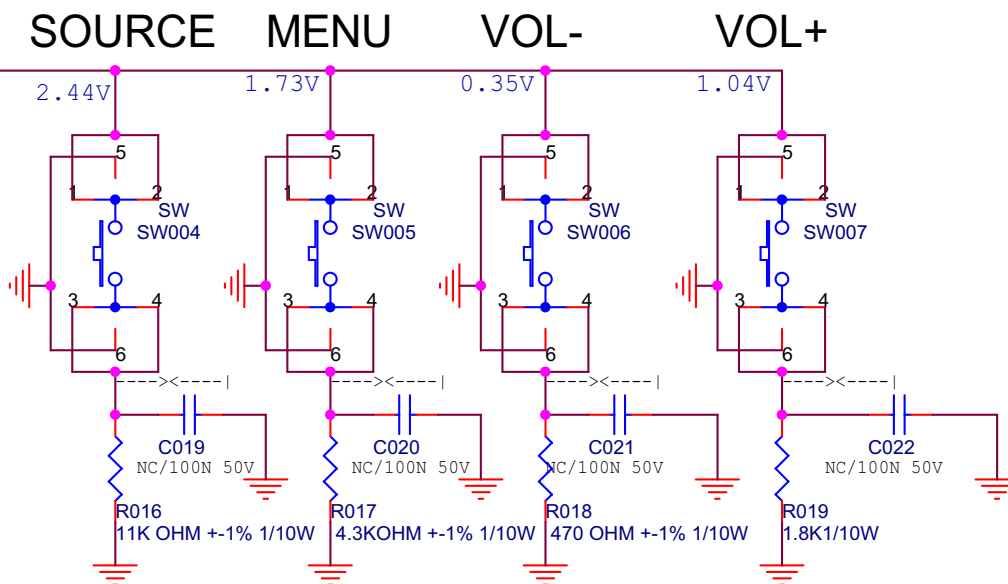
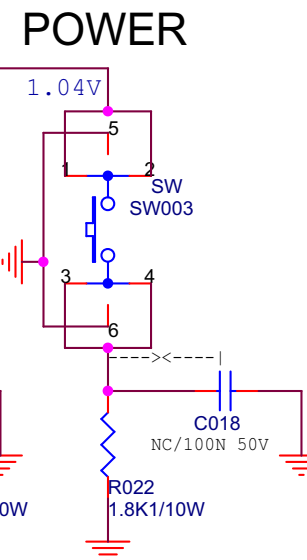
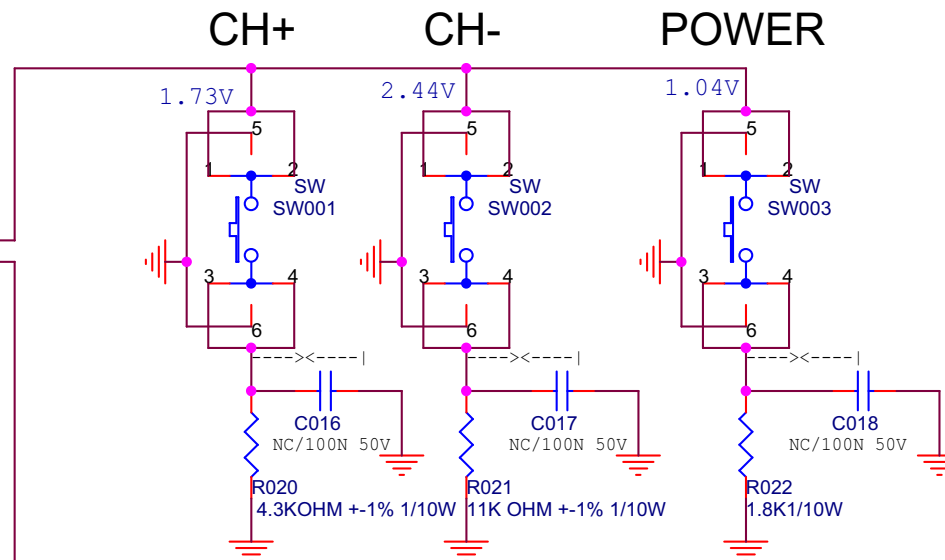
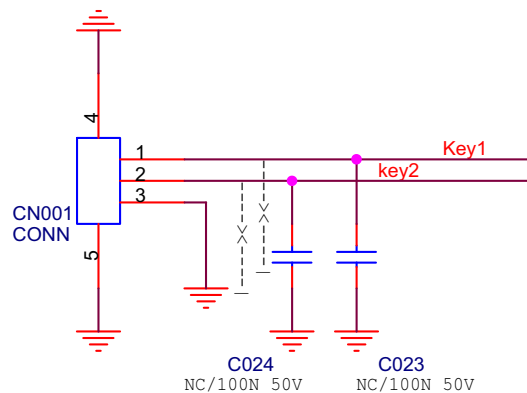




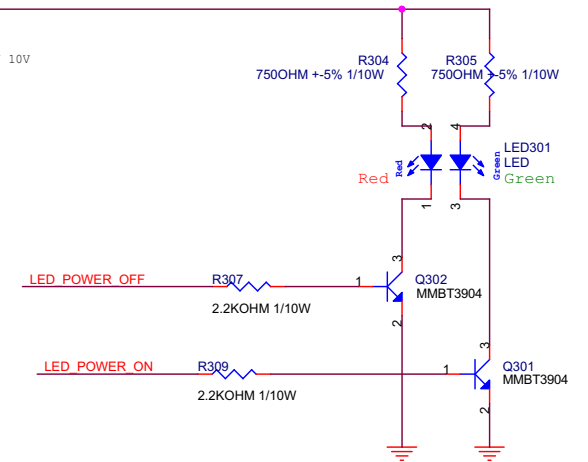
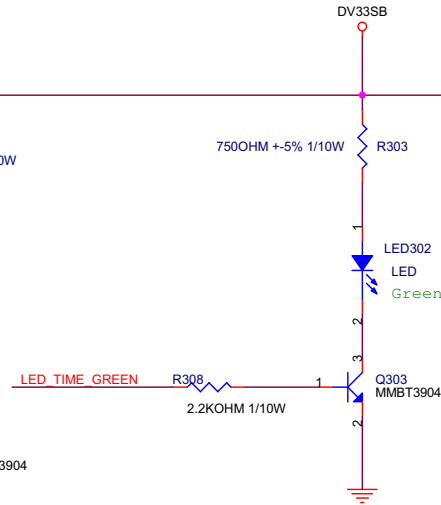
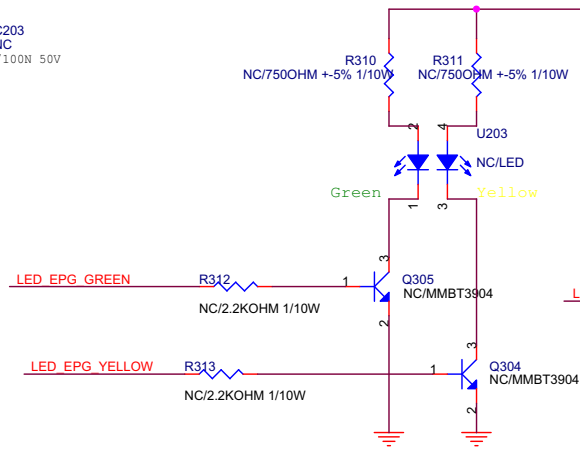
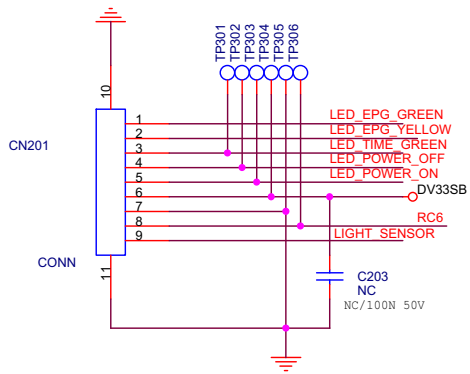




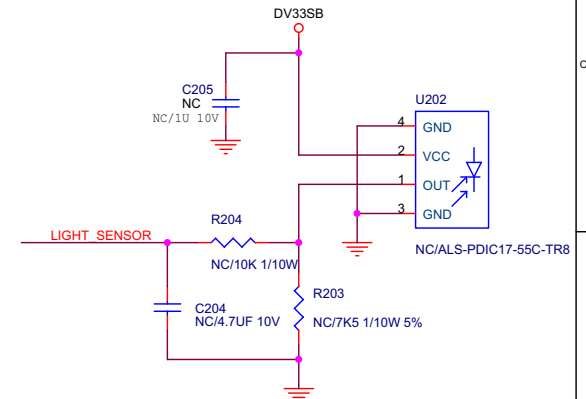
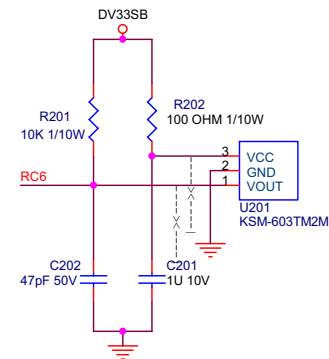




KEY [2] Key

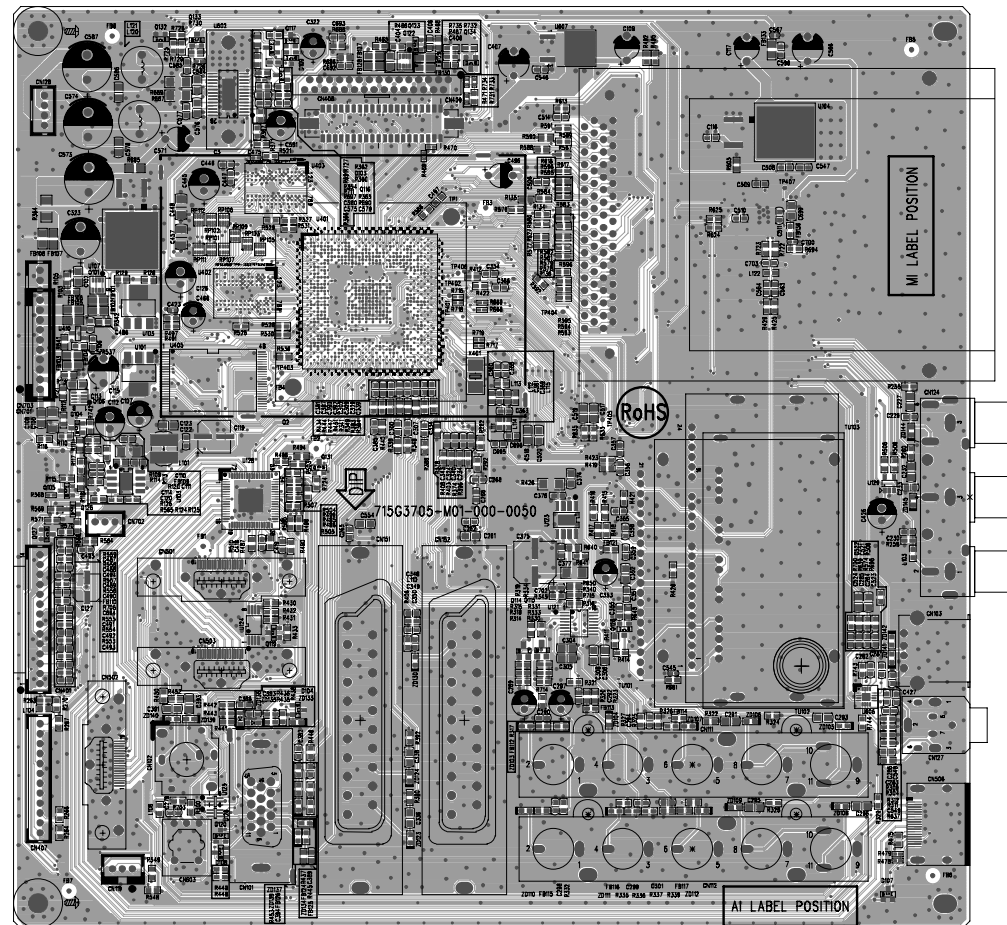


Function	LED 1		LED 2 Green	
	Red	Green	TIMER ON	LED_TIME_GREEN="H"
Control method	LED_POWER_OFF="H"	LED_POWER_ON="H"	EPG ON	LED_TIME_GREEN="H"
	LED_POWER_ON="L"	LED_POWER_OFF="L"	TIMER OFF	LED_TIME_GREEN="L"
	LED 3			
	Green	Yellow		
	LED_EPG_GREEN="H"	LED_EPG_YELLOW="H"		
	LED_EPG_YELLOW="L"	LED_EPG_GREEN="L"		

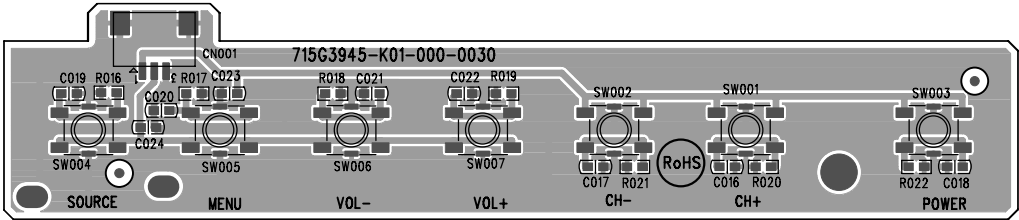


IR AND LED [1] IR & LED

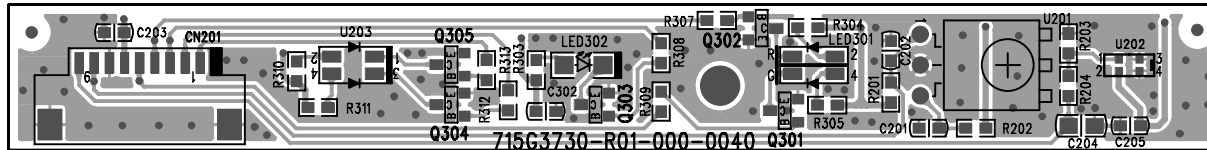
MAIN [Top]



KEY [Top]



IR AND LED [Top]



FIRMWARE UPDATING

Software updating procedure (using USB Mass-storage device)

1. Copy APP code upgrade.pkg to USB flash disk (root folder).



Figure 1 USB Mass-storage device

2. Plug the USB device into the USB slot on the TV.



Figure 2 USB slot

3. Software updating wizard will be displayed. Select "YES" and press "OK" button on the remote control to start the updating.

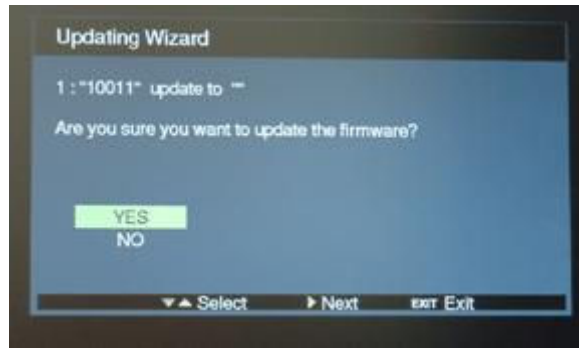


Figure 3 Updating wizard 1

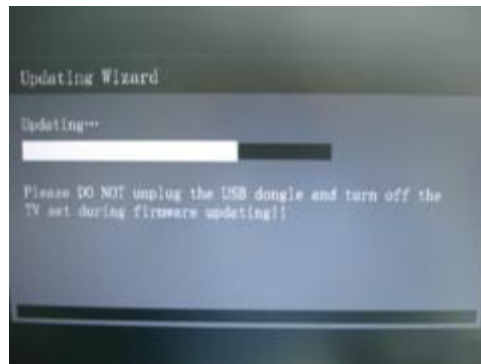


Figure 4 Updating wizard 2

4. Turn the TV off/on to install the software automatically.
5. Unplug USB flash disk and Turn the TV off/on again.



Figure 5 Unplug USB flash disk

6. Press "MENU" button, then press "0000" on the remote control to check the firmware

version.



Figure 6 Software version checking display

TECHNICAL BULLETIN

File Name Title issuing date

PARTS LIST

Precaution

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE".

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the "SAFETY PRECAUTION" and "PRODUCT SAFETY NOTICE".

Do not degrade the safety of the receiver through improper servicing.

Note:

- The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.
- The PC board assembly with * mark is no longer available after the end of the production.

Abbreviations

Capacitors CD : Ceramic Disk

Resistors CF : Carbon film
OMF : Oxide Metal Film
PF : Plastic Film
CC : Carbon Composition

VR : Variable Resistor

EL : Electrolytic

MF : Metal Film

FR : Fusible Resistor

All CD and PF capacitors are $\pm 5\%$, 50 V and all resistor, $\pm 5\%$, 1/6 W unless otherwise noted.

PARTS LIST

Block :

Location : 

Parts No. : 

Page : / 1

PARTS LIST

Block :

Location : 

Page : / 2

Parts No. : 

Block		Location	Parts No.	Description	AA	S	M	L		
Electric Parts		E200	75018408	PC BOARD ASSY, MAIN WITH FW, CBPF94ABA8						
Electric Parts		E250	75018391	PC BOARD ASSY, POWER, ADTV92416AC1						
Electric Parts		E260	75018392	PC BOARD ASSY, KEY, KEPF9AB2						
Electric Parts		E270	75018393	PC BOARD ASSY, IR AND LED, IRPF9AB3						
Electric Parts		E300	75017869	LCD PANEL, LTA320AP12						
Electric Parts		E310	75018394	HARNESS, 30P-20*2P 350MM S-LVDSXTF9928, 095G801840X909						
Electric Parts		E320	75018402	POWER CORD, 1.8M VA37B201312180TP, 089G204A18N-IS						
Electric Parts		E330	75018395	SPEAKER, 6 OHM 12W 630/340MM 150X47MM, 078G0120-12--Y						
Electric Parts		E340	75018396	HARNESS, 14P-9P+3P 870MM S-LCDXXTF9802, 095G801414X951						
Electric Parts		E350	75018874	HARNESS, AC INLET-4P 180MM, 095G8021-4F911						
Accessory		E400	75014827	REMOCON HAND UNIT, CT-90326						
Accessory		E410	75018409	DFU ASSY, 705TZ94117A						
Cabinet		E100	75018950	FRONT BEZEL ASSY, 705TZA3426A						
Cabinet		E110	75018387	BACK COVER ASSY, 705TZ93410A						
Cabinet		E112	75018873	SCREW, (BC TO FB SCREW), 0Q1T-940-14-47-CR3						
Cabinet		E114	75015193	SCREW, (BC TO FB SCREW TYPE 2), 0Q1T-330--8-47-CR3						

PARTS LIST

Block :

Location : 

Page : / 1

Parts No. : 

Block		Location	Parts No.	Description	AA	S	M	L		
Electric Parts		E200	75018408	PC BOARD ASSY, MAIN WITH FW, CBPF94ABA8						
Electric Parts		E250	75018391	PC BOARD ASSY, POWER, ADTV92416AC1						
Electric Parts		E260	75018392	PC BOARD ASSY, KEY, KEPF9AB2						
Electric Parts		E270	75018393	PC BOARD ASSY, IR AND LED, IRPF9AB3						
Electric Parts		E300	75017869	LCD PANEL, LTA320AP12						
Electric Parts		E310	75018394	HARNESS, 30P-20*2P 350MM S-LVDSXTF9928, 095G801840X909						
Electric Parts		E320	75018402	POWER CORD, 1.8M VA37B201312180TP, 089G204A18N-IS						
Electric Parts		E330	75018395	SPEAKER, 6 OHM 12W 630/340MM 150X47MM, 078G0120-12--Y						
Electric Parts		E340	75018396	HARNESS, 14P-9P+3P 870MM S-LCDXXTF9802, 095G801414X951						
Electric Parts		E350	75018874	HARNESS, AC INLET-4P 180MM, 095G8021-4F911						

PARTS LIST

Block :

Accessory

Location :

Search

Page :

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Jump

Parts No. :

Search

Block	Location	Parts No.	Description	AA	S	M	L		
Accessory	E400	75014827	REMOCON HAND UNIT, CT-90326						
Accessory	E410	75018409	DFU ASSY, 705TZ94117A						

PARTS LIST

Block :

Cabinet

Location :

Search

Page :

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Jump

Parts No. :

Search

Block		Location	Parts No.	Description	AA	S	M	L		
Cabinet		E100	75018950	FRONT BEZEL ASSY, 705TZA3426A						
Cabinet		E110	75018387	BACK COVER ASSY, 705TZ93410A						
Cabinet		E112	75018873	SCREW, (BC TO FB SCREW), 0Q1T-940-14-47-CR3						
Cabinet		E114	75015193	SCREW, (BC TO FB SCREW TYPE 2), 0Q1T-330--8-47-CR3						
Cabinet		E116	75016017	SCREW, (BC TO FB SCREW TYPE 3), 0M1G-130--6-47-CR3						
Cabinet		E120	75018388	BASE ASSY, 705TZA3407A						
Cabinet		E125	75014951	SCREW, (BASE TO STAND), 0M1T1740-10-47-CR3						
Cabinet		E130	75018389	SIDE KEY ASSY, 705TZ93411A						
Cabinet		E140	75018390	COVER ASSY, SIDE-I/O, 705TZ93447A						

PARTS LIST

Block :

Packing

Location :

Search

Page :

1

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Jump

Parts No. :

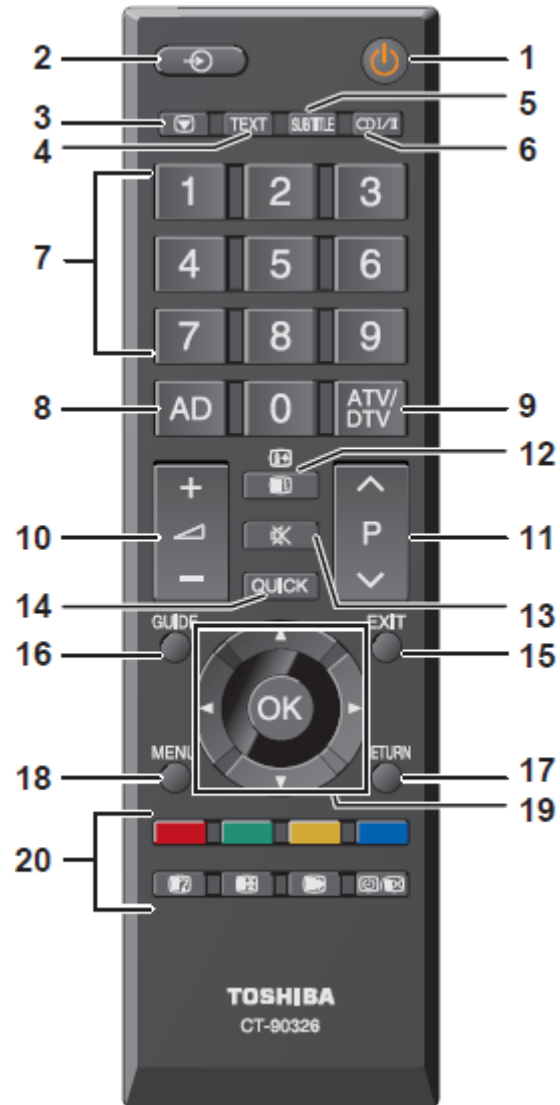
Search

Block		Location	Parts No.	Description	AA	S	M	L		
Packing		E500	75018560	CARTON BOX, FOR 32, Z44GJ047939-1A						
Packing		E510	75018398	CUSHION-TL, Z44GJ014101						
Packing		E511	75018399	CUSHION-TR, Z44GJ014201						
Packing		E512	75018400	CUSHION-BL, Z44GJ014301						
Packing		E513	75018401	CUSHION-BR, Z44GJ014401						
Packing		E520	75014965	PE BAG (680X1000), 32AV615DB, P45G9901005						

FUNCTION AND OPERATION

The Remote Control

Simple at-a-glance reference of your remote control.



- 1 For On/Standby mode
- 2 To select input from external sources
- 3 Still Picture
- 4 To call up text services in analogue mode
and interactive services in digital mode
- 5 To turn the subtitle On/Off
- 6 Stereo/Bilingual transmissions
- 7 Number buttons
- 8 Switch the Audio Description On/Off
- 9 To toggle between ATV and DTV mode
- 10 To alter the volume
- 11 To change programme
- 12 In TV mode: To display on-screen information
In Text mode: To access index page
- 13 To mute the sound
- 14 To display Quick access menu
- 15 To exit menus
- 16 To display the programme guide
- 17 To return to the previous level of the on-
screen menu
- 18 To display the on-screen menu
- 19 ▲, ▼, ◀, ▶: To move up, down, left or right
in the on-screen menu
OK: To confirm the selection
- 20 Colour button: Text control buttons
 -  To reveal concealed text
 -  To hold a wanted page
 -  To enlarge text display size
 -  In normal picture mode: To
display clock on TV screen
 -  In Teletext mode: To toggle
between Teletext and normal
picture mode

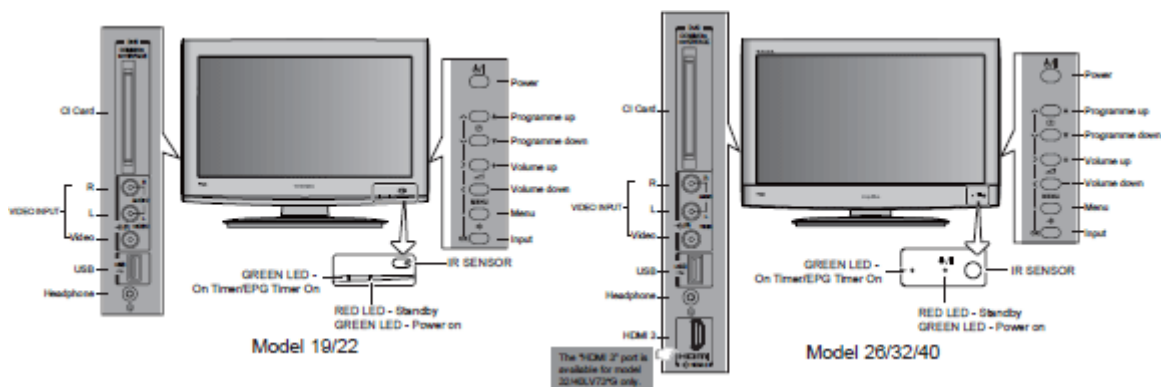
FUNCTION AND OPERATION

Using the Controls

While all the necessary adjustments and controls for the television are done using the remote control, the buttons on the television may be used for some functions.

NOTE: COMMON INTERFACE (CI)

The common interface is for a Conditional Access Module (CAM). Contact a service provider for details.



Switching On

If the RED LED is unlit check that the mains plug is connected to the power supply. If the picture does not appear press  on the remote control, it may take a few moments.

To put the television into Standby press  on the remote control. To view the television press  again. The picture may take a few seconds to appear.

Using the Remote Control

To set up the television you will now need to use the on screen menus. Press  on the remote control to see the menus.

The on-screen menu appears as a list of five topics. As each symbol is selected by pressing  or  on the navigation ring on the remote control, its respective options will appear below.

To use the options, press  or  on the navigation ring to move up and down through them and use ,  or  to select the required choice. Follow the on-screen instructions.

Using the Side-panel Controls

To alter the volume, press –  +.

To alter the programme position press  P .

Press **MENU** and , ,  or  to control the sound and picture options. Press **MENU** to finish.

To select the external input, press  to move through the list until the appropriate input source is selected.

Please always refer to the owner's manual of the equipment to be connected for full details.

FUNCTION AND OPERATION

Tuning the Television

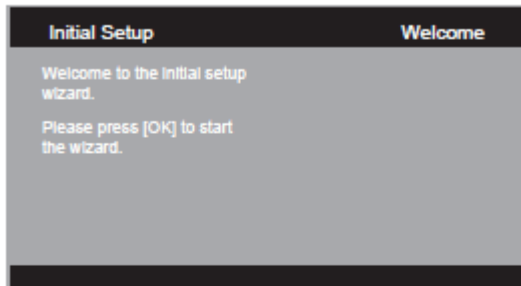
Before switching on the television, put your decoder and media recorder to **Standby** if they are connected.

Make sure to connect the aerial cable, and select TV as the input source.

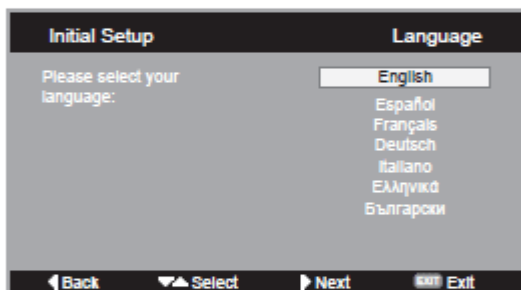
To set up the television, use the buttons on the remote control.

Initial Setup

- 1 Connect the television to the main power and press the  button. The **Initial Setup** screen will appear at the first use. Press  to start the initial setup.

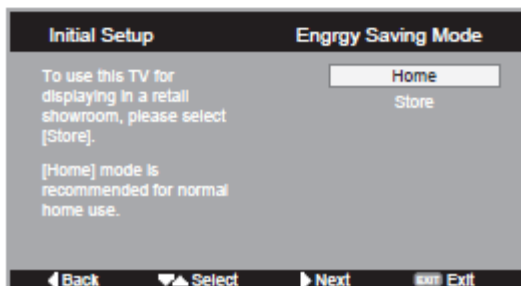


- 2 Using  or  to select your language, and then press .

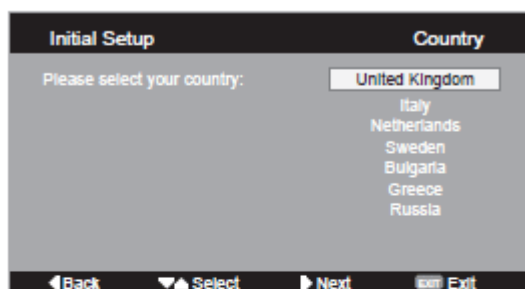


- 3 Using  or  to select between Home or Store mode (for normal home use, select Home), and then press .

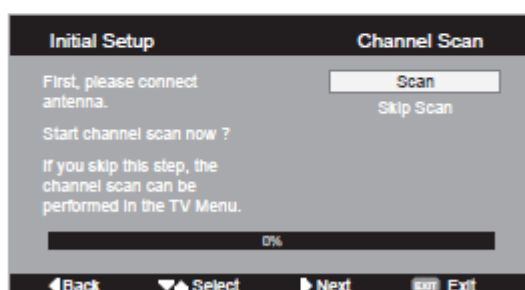
If Home mode is selected, the **Standard** picture mode will be selected.



- 4 Press ▲ or ▼ to select your country and press ► to the next step.

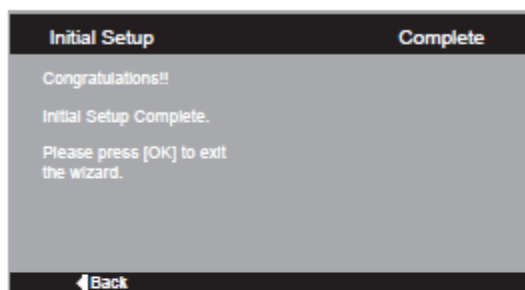


- 5 To start channel scan press ►.



The search will begin for all available stations. The slide bar will move along the line as the search progresses.

- 6 The initial setup is now complete. Press OK to exit the wizard.



NOTE: If you skip this step, the channel scan can be performed in the TV Menu.

NOTE: The time will be set automatically using the broadcaster data but can be advanced or decreased by from -12 to +13 hours using Time Zone in Timer Setup.

PLEASE NOTE

The **Factory Default** menu can also be accessed at any time in the Parental from the FUNCTION menu.

SPECIFICATION

- This television complies with the specification listed below.
- Design and specifications are subject to change without notice.

DVB-T Broadcast systems/channels		Broadcast systems/channels	
UK	UHF 21-68	PAL-I	UHF UK21-UK89
France	VHF 05-10 (VHF 01-05) UHF 21-69	PAL-B/G	UHF E21-E89 VHF E2-E12, S1-S41
Germany	VHF 05-12 UHF 21-69	SECAM-L	UHF F21-F89 VHF F1-F10, B-Q
Austria	VHF 05-12 UHF 21-69	SECAM-D/K	UHF R21-R89 VHF R1-R12
Switzerland	VHF 05-12 UHF 21-69		
Italia	VHF 05-12 (D,E,F,G,H,H1,H2) UHF 21-69		
Spain	UHF 21-69		
Netherlands	VHF 05-12 UHF 21-69		
Sweden	VHF 05-12 UHF 21-69		
Finland	VHF 05-12 UHF 21-69		
Greece	VHF 05-12 UHF 21-69		
Video Input PAL, SECAM, NTSC 3.58/4.43			
External connections			
Model 19/22			
EXT1	Input	Phono jacks Phono jacks	Y, P _B /C _B , P _R /C _R Audio L + R
EXT2	Input	Phono jack Phono jacks	Video Audio L + R
EXT3	nput/Output	21-pin SCART	Auto, Mixed, RGB, Composite, S-Video / TV Out
PC	Input	D-sub	RGB
HDMI 1/2	Input	HDMI®	
PC/HDMI1 Audio		Phono jacks	Audio L + R
Component		Phono jack	Audio L + R
Digital Audio		Output (S/PDIF)	Optical

Model 26/32/40

EXT1	Input	Phono jacks Phono jacks	Y, P _B /C _B , P _R /C _R Audio L + R
EXT2	Input	Phono jack Phono jacks	Vídeo Audio L + R
EXT3	Input/Output	21-pin SCART 1	Auto, Mixed, RGB, Composite, S-Vídeo / TV Out
EXT4	Input/Output	21-pin SCART 2	Auto, Mixed, RGB, Composite, S-Vídeo / TV Out
PC	Input	D-Sub	RGB
HDMI1/2/3	Input	HDMI®	
PC/HDMI1 Audio		3.5mm	Audio L + R
Component		Phono jacks	Audio L + R
Digital Audio	Output (S/PDIF)		Optical
USB Port	Interface version: USB Class: File system:	USB 2.0 Mass Storage FAT12, FAT16 and FAT32	

Stereo Nicam
2 carrier system

Visible Screen Size (H x V mm)(approx.)	Model	19	409.80 x 230.40
		22	477.42 x 268.42
		26	575.77 x 323.71
		32	698.40 x 392.85
		40	885.60 x 498.15

Display 16:9

Sound output (at 10% distortion)	Model	19	3.5W + 3.5W
		22	3.5W + 3.5W
		26	5W + 5W
		32	10W + 10W
		40	10W + 10W

Power consumption as specified in EN60065:2002	Model	19	40W
		22	55W
		26	90W
		32	105W
		40	160W

Standby (approx.)	Model	19	0.5W
		22	0.5W
		26	0.5W
		32	0.5W
		40	0.5W
Dimensions (H x W x D mm) (approx.)	Model	19	365.8 x 480.5 x 192.8
		22	408.7 x 555.3 x 212.0
		26	474.6 x 665.4 x 265.2
		32	578.2 x 798.9 x 271.4
		40	703.0 x 992.8 x 282.9 (Height dimension includes foot stand)
Weight (approx.)	Model	19	5.0 kg
		22	5.5 kg
		26	9.0 kg
		32	12.5 kg
		40	16.5 kg (weight includes foot stand)
Headphone socket		R3.5mm stereo	
Operating condition		Temperature 5 °C - 35 °C (41 °F - 94 °F)	
		Humidity : 20 - 80% (non-condensing)	