

14VL43 / 20VL43 series

TAOSC

Toshiba Asia Oceania

If you need more information on Computer and Electronic Repair, please visit these websites to improve yourself.

<http://www.fastrepairguide.com>

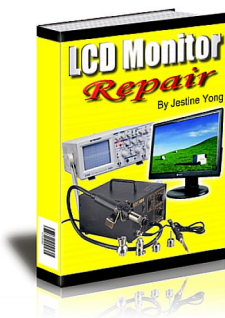
<http://www.protech2u.com>

<http://www.plasma-television-repair.com>

<http://www.lcd-television-repair.com>

Happy Repairing!!

Highly Recommended Repair Ebook:

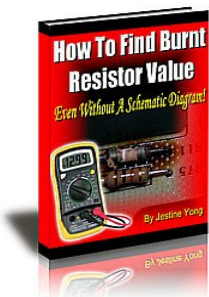


If you're a LCD Monitor repairer, then this is the best guide for you. Why? Because, the author revealed all his LCD Monitor Repairing secrets for you. I think, with just few Repair tips you learned from this guide you will get back your investment!

[Click Here to read](#) more.



This eBook will show you how to test the electronic component correctly and accurately. Some of you may say that I don't need this eBook because it is too simple! Do you know that, in fact there is lots of testing electronic components secrets I have learned from this guide? Do you know how to test a 'TRIAC' correctly and accurately? If you answer no then I guess you have to get this eBook. [Click Here to read more.](#)



Are you tired of searching the service manuals to look for the value of a burnt resistor? If the answer is YES, then this eBook is a 'must have' guide for you. You can save a lot of time and be able to repair customer's Electronic equipment with burnt resistors in it.

[Click here to read more.](#)

Agenda

- Specification
- Board layout
- Block diagram explanation
- Disassembling and assembling

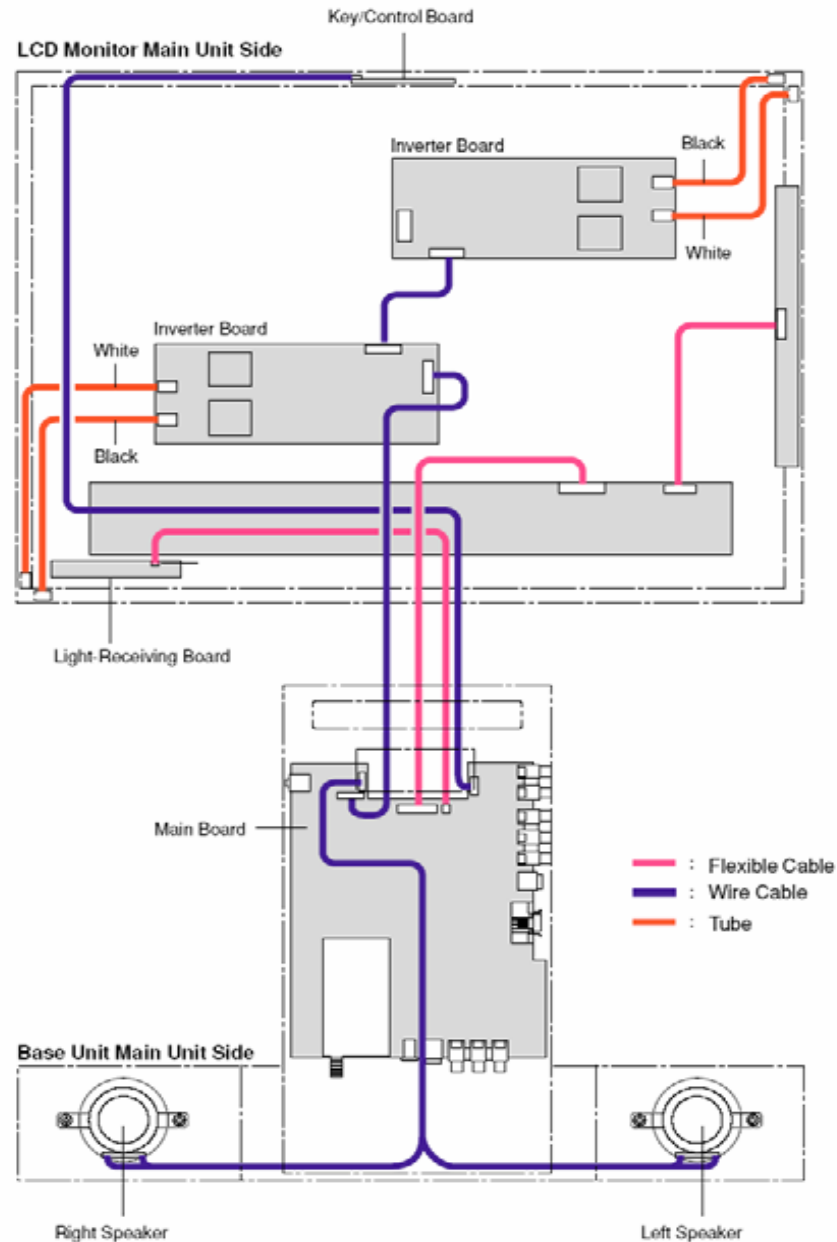
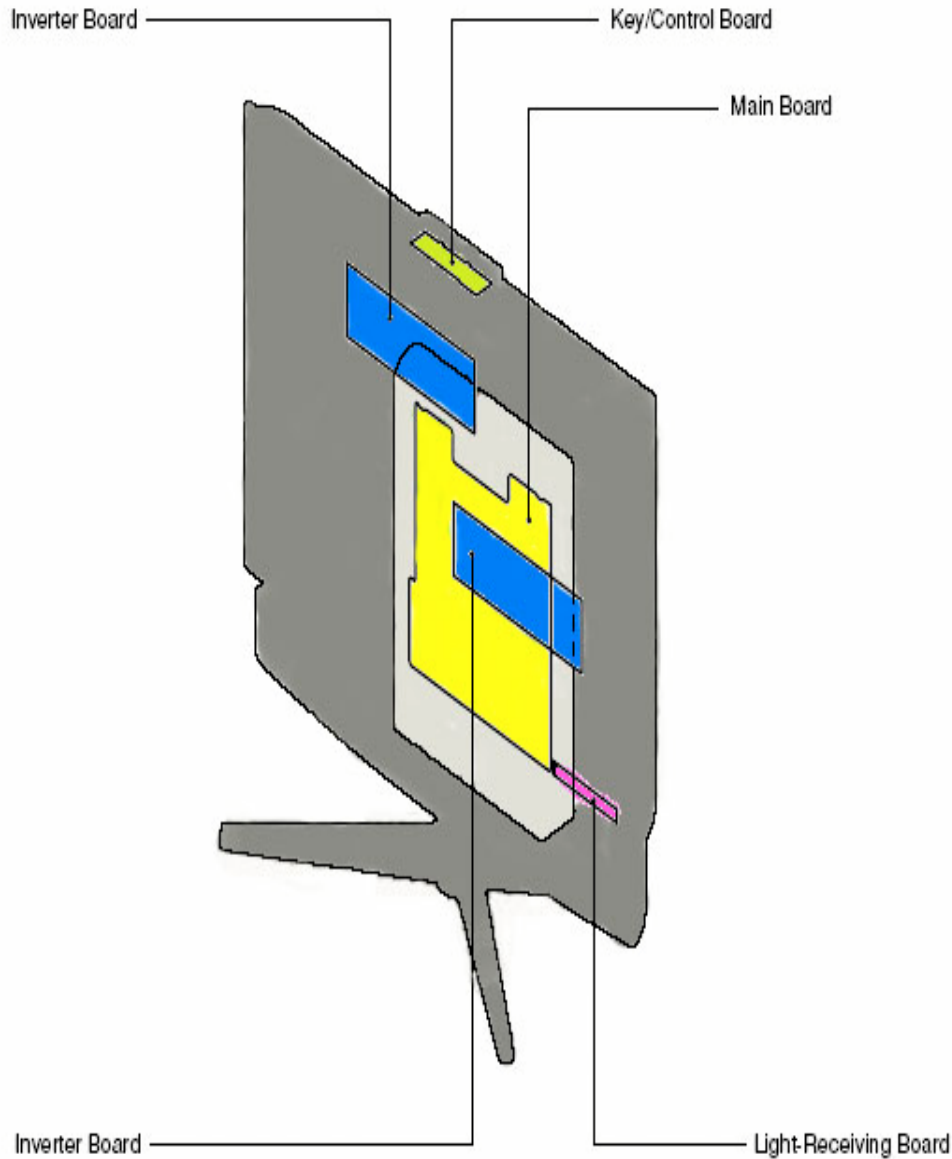
Specification

Color system:	PAL/SECAM/NTSC4.43/NTSC3.58
Sound system:	BG/I/DK/M
Power source:	100V-240VAC 50/60 Hz. DC16V (TV input)
Power consumption:	14VL43C: 45W 20VL43C: 60W
Display:	TFT Active Matrix LCD VGA: 640(H) dots x 480(V) dots
Audio power:	2.5W + 2.5W
Speaker type:	45 mm round 2pcs.
Headphones jack:	3.5 mm (Stereo-mini type), Impedance 8-32 ohm
Video/Audio Terminals:	S-VIDEO INPUT Y: 1 V(p-p), 75 ohm, negative sync. C: 0.286 V(p-p) (burst signal), 75 ohm

Specification

VIDEO/AUDIO INPUT:	(1, 2)VIDEO: 1 V(p-p), 75 ohm, negative sync.
AUDIO:	150 mV(rms) (Impedance 22k ohm or above)
Component video INPUT	Y: 1V(p-p), 75 ohm, CB: 0.7 V(p-p), 75 ohm CR: 0.7 V(p-p), 75 ohm
AUDIO OUTPUT:	150mv(rms)(Impedance 22k ohm or above)
Dimensions: 14VL43C:	Width 358mm, Height 416.5mm,Depth 177mm
20VL43C:	Width 493mm, Height 523mm, Depth 198mm
Mass 14VL43C:	4.2kg
20VL43C:	6.4kg
Accessories:	Remote control (CT-90166) with two batteries.

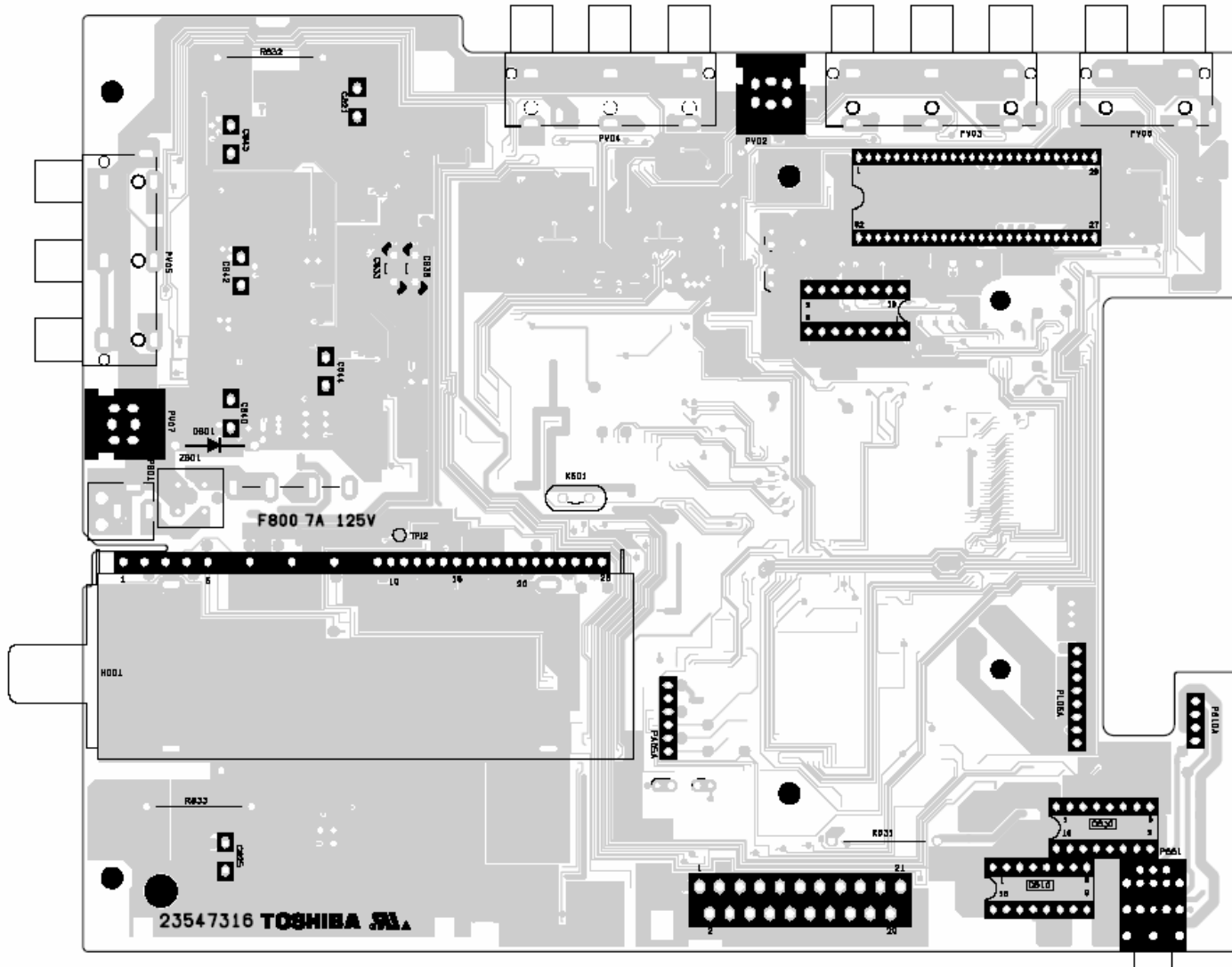
Board Layout



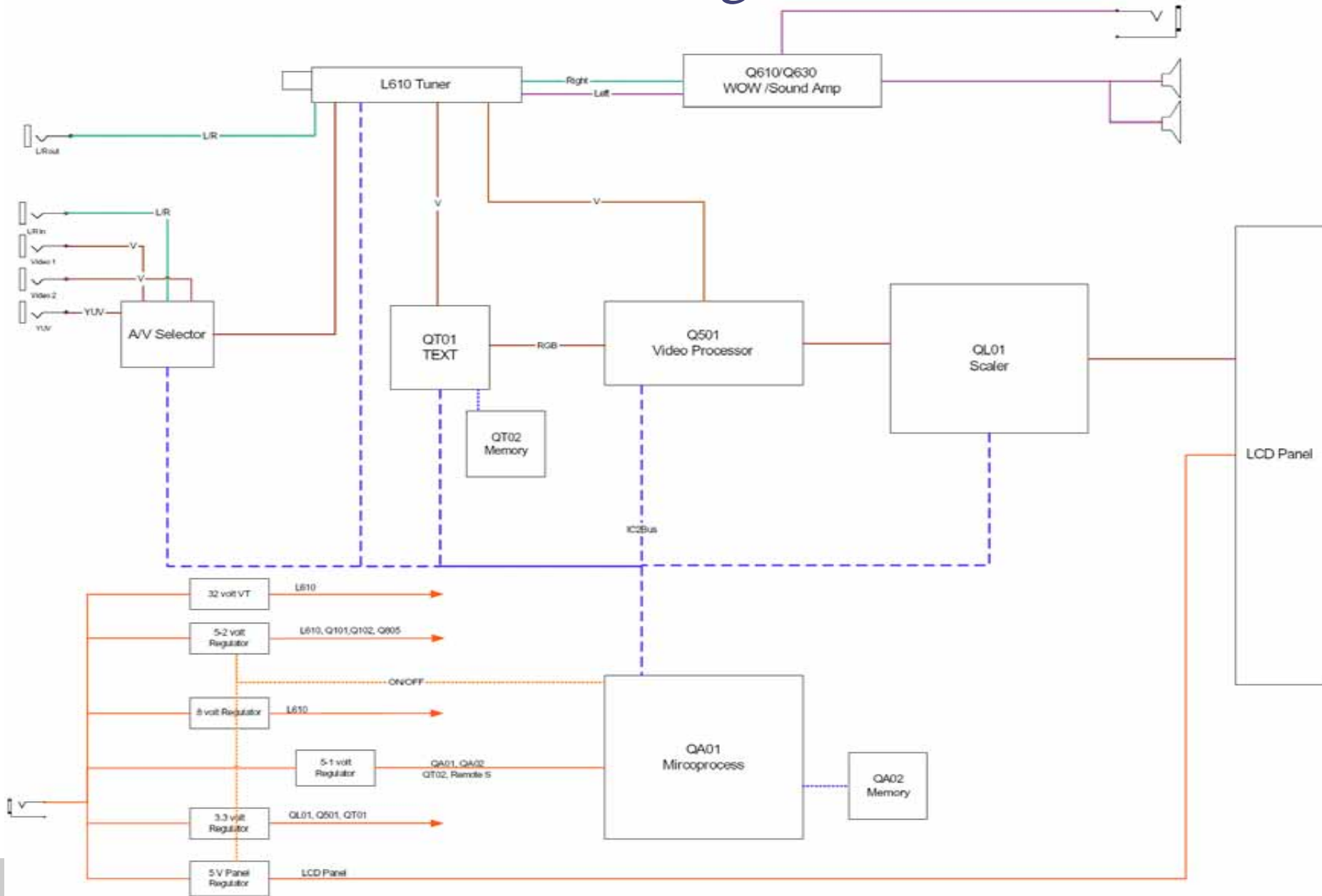
PCB Main

MAIN BOARD PD1367-1

BOTTOM (FOIL) SIDE



Block Diagram



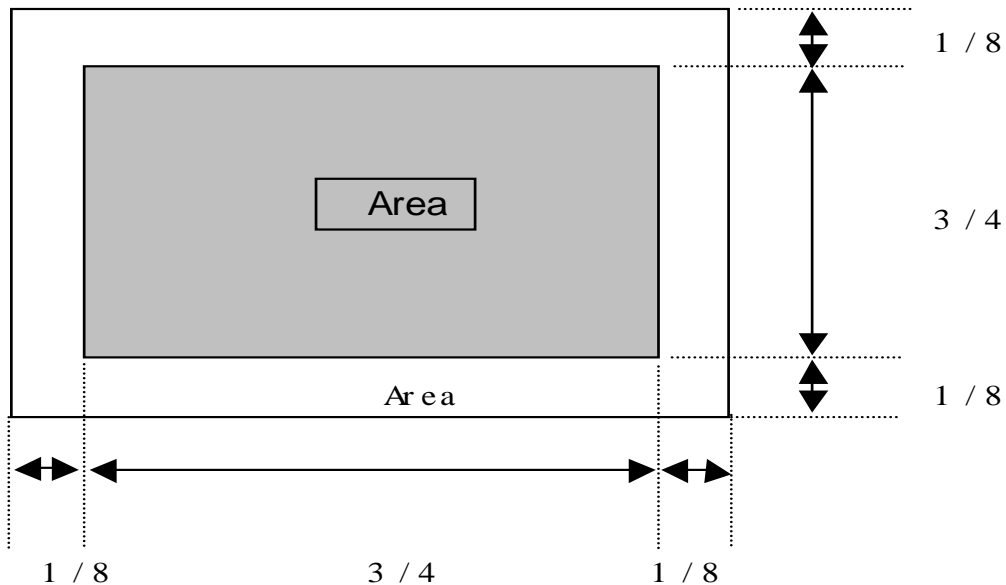
LCD pixel failure Specification

Dot specification

Dot Type	Area	Pixel				Single Dot
Bright Dot		Pixel 1	0	0	2	Within Spec
Low bright dot		Pixel 1	3			
Total bright Dot			4			
Black Dot		1 Pixel	Unlimited			Within Spec
		1 2Pixel	Area A = 2	Area B = 4		
		2 Pixel	0			
Total Black Dot			4			

Distant (More than

Low bright to low bright 10 Low bright to high bright 10 Low bright to high bright 15
 Black dot to Black Dot : 10



Service Mode

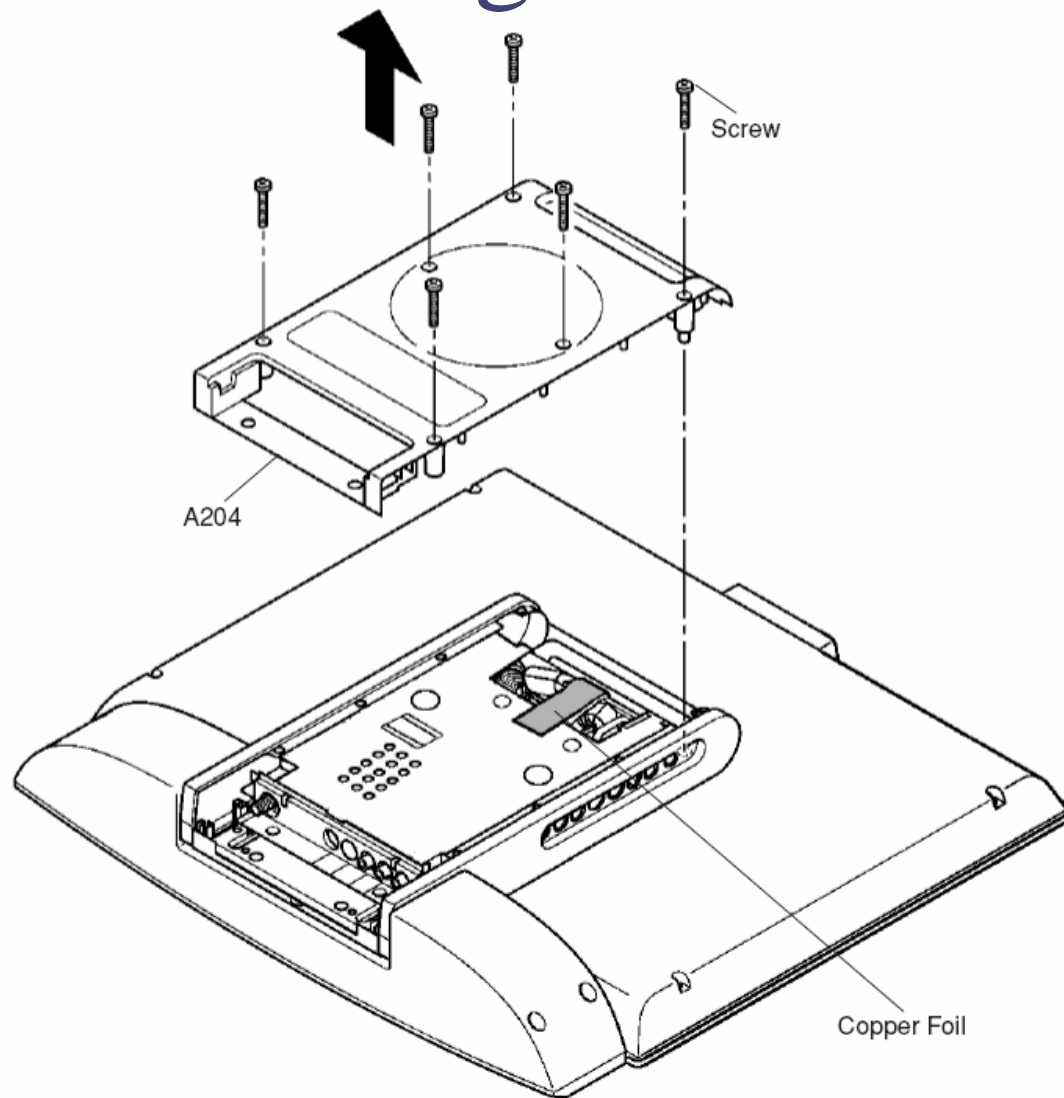
- **Press mute button once on Remote Control.**
- **Press mute button again to keep pressing.(Until Mute sign go off)**
- **While pressing the mute button, Press TV/VIDEO button on TV set.**

Design Mode

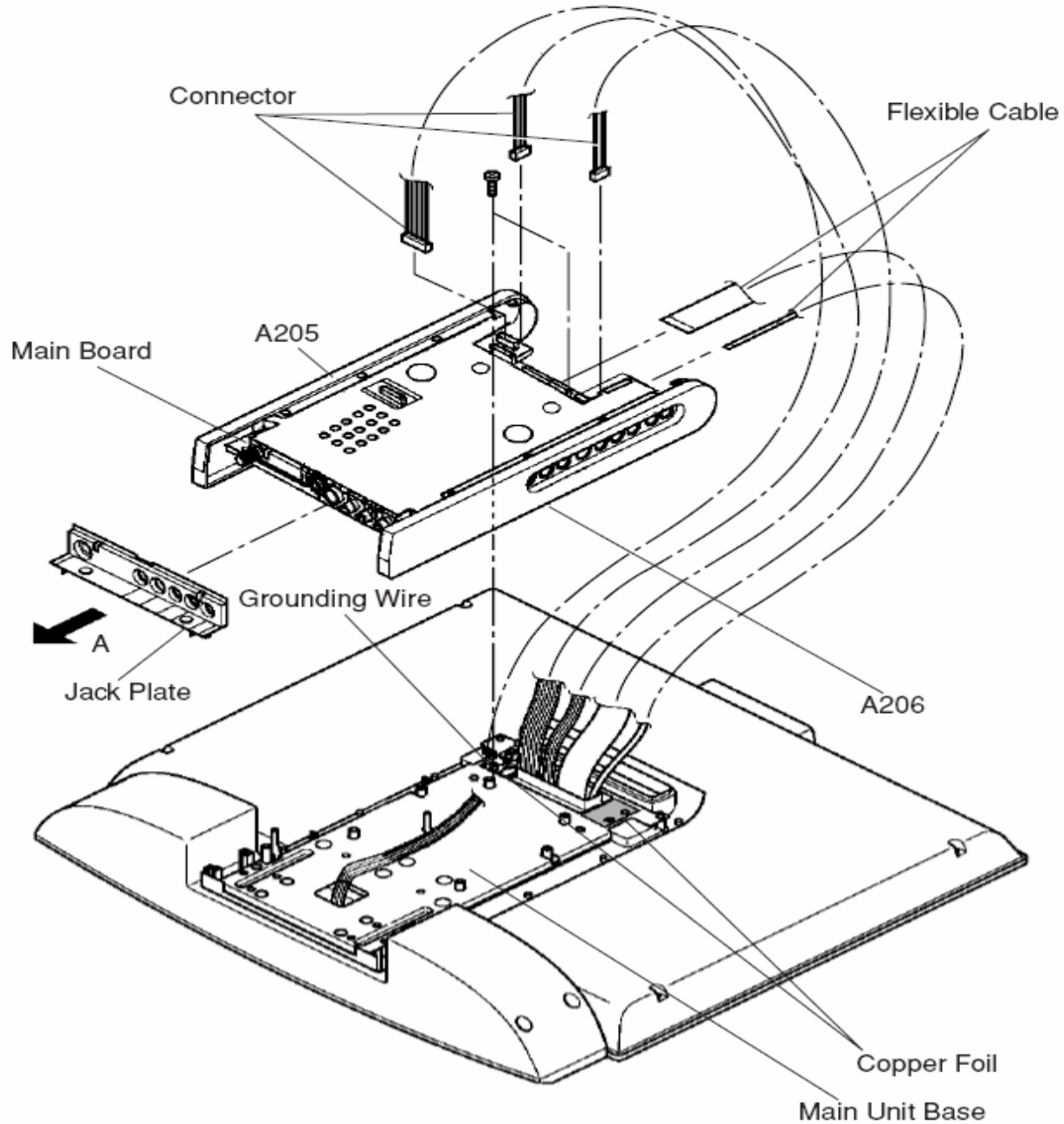
- **In service press CALL on remote**
- **While pressing the Call button, Press TV/VIDEO button on TV set.**

Disassembling and assembling

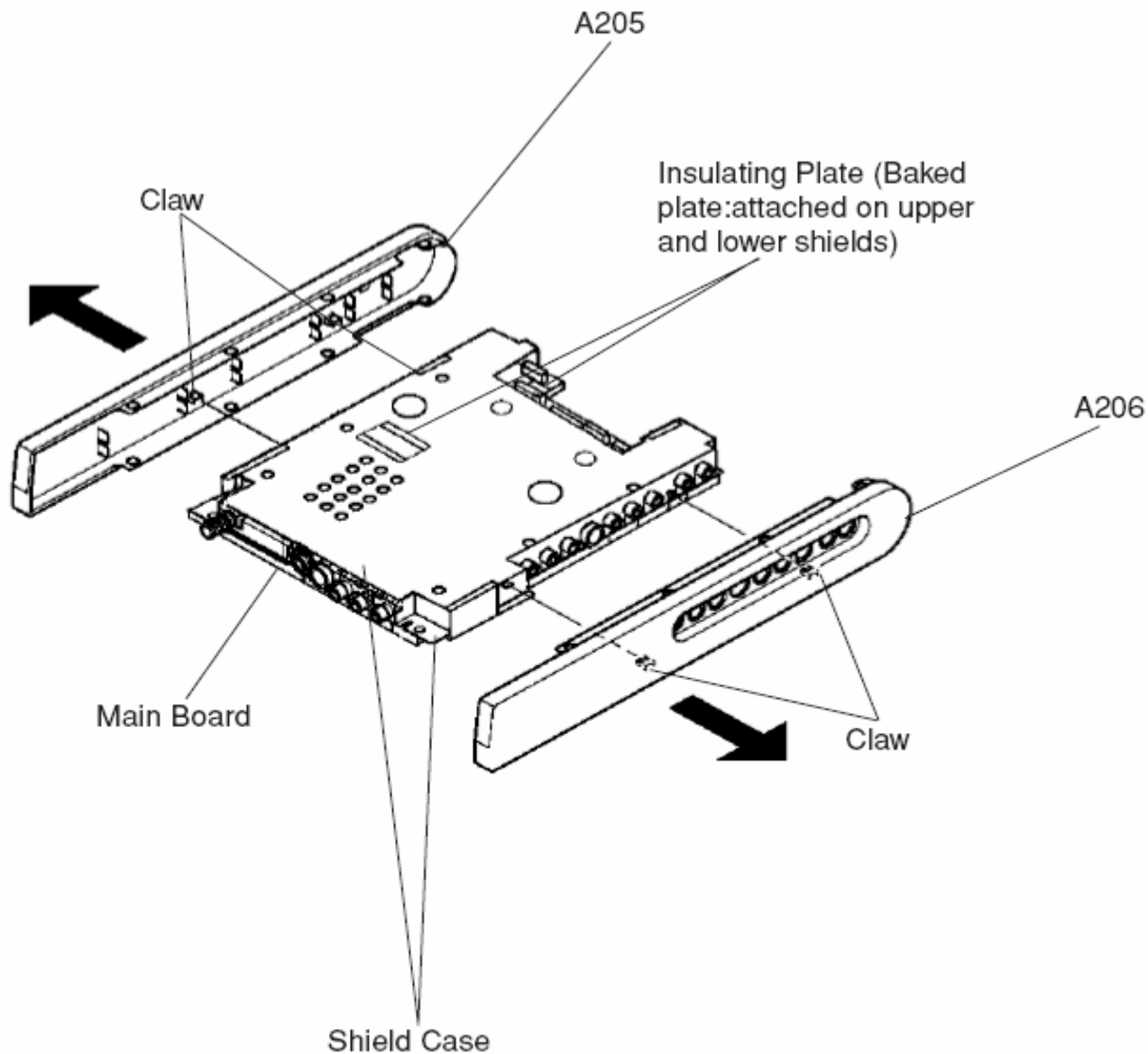
Disassembling and assembling



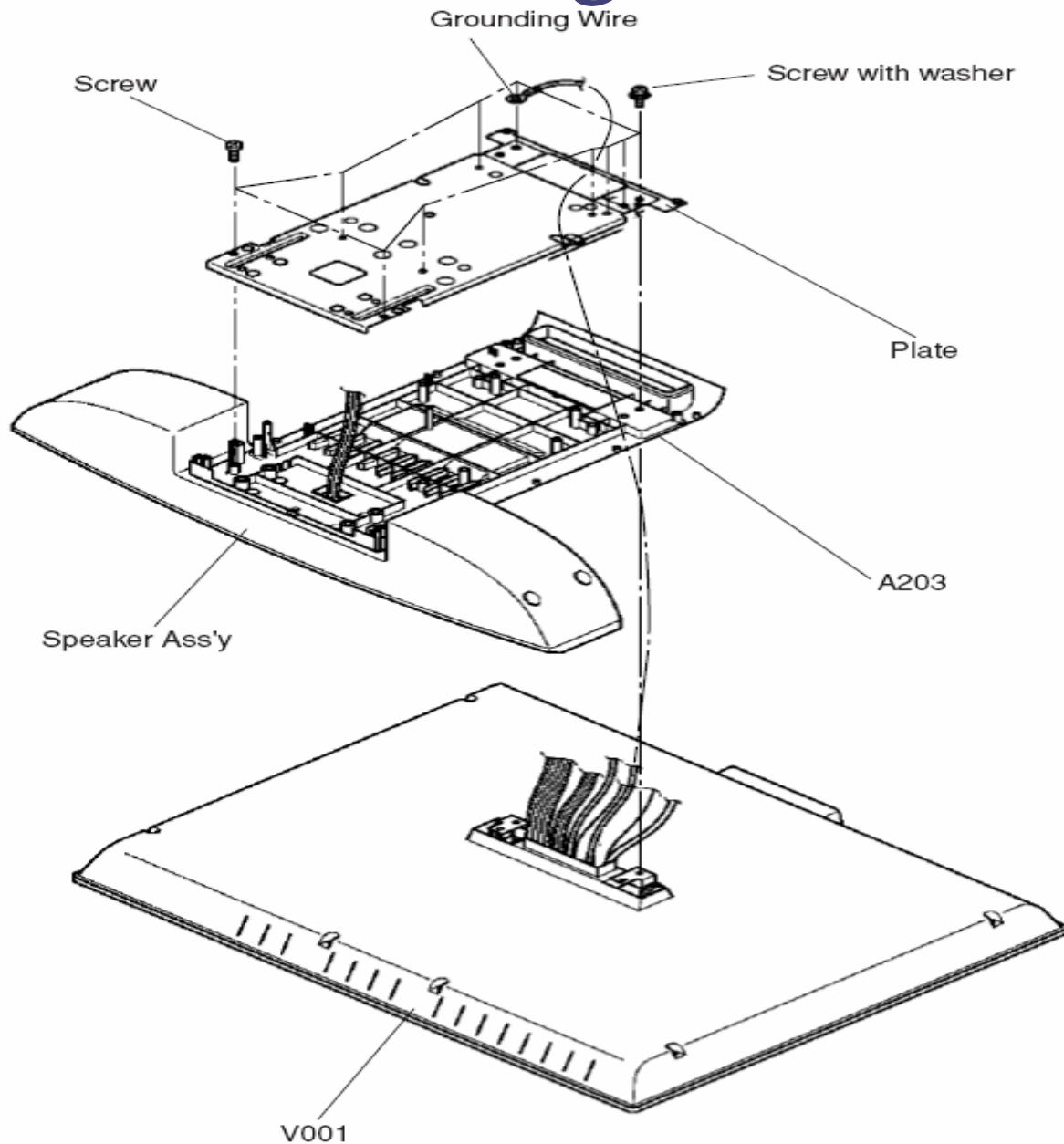
Disassembling and assembling



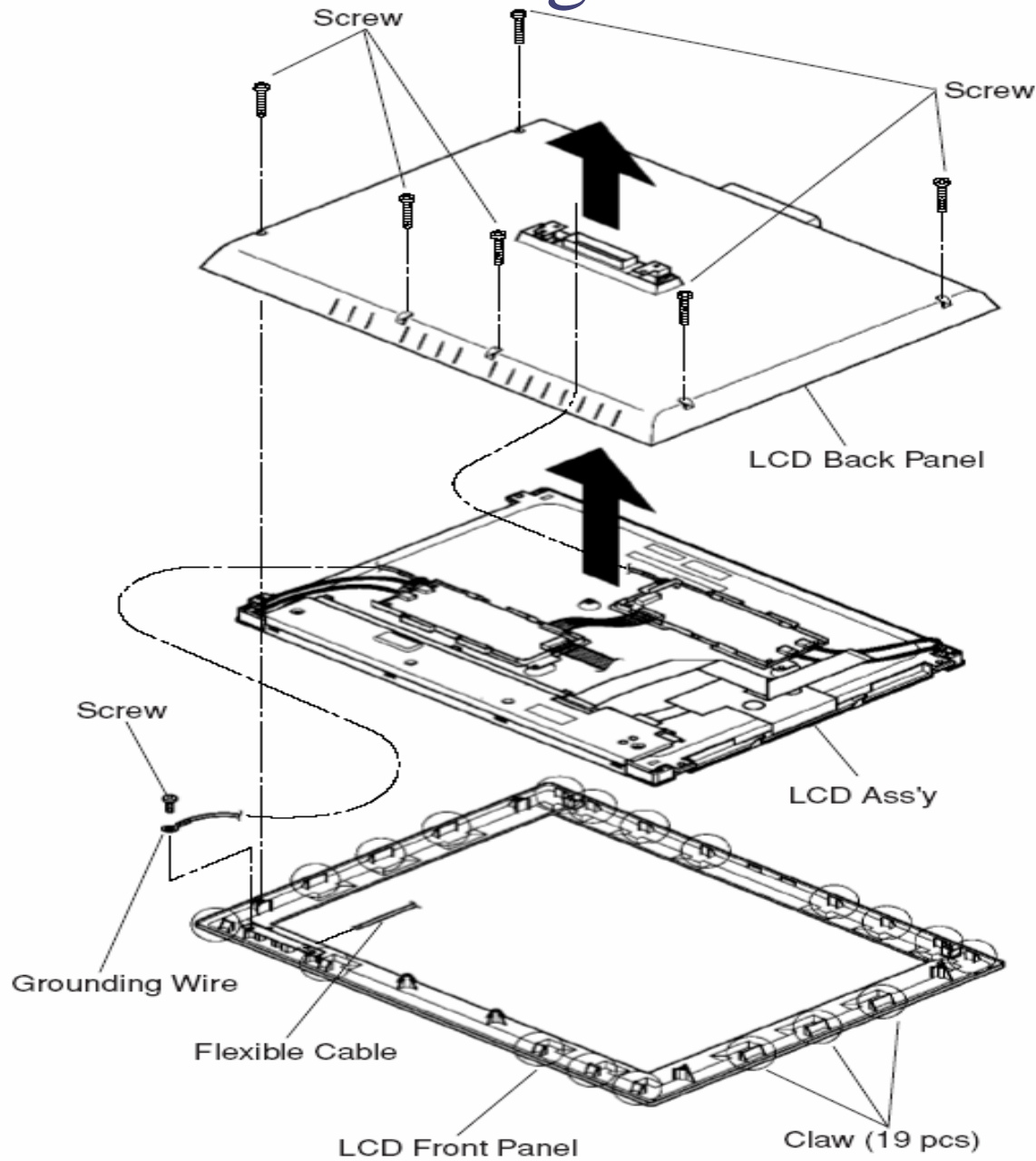
Disassembling and assembling



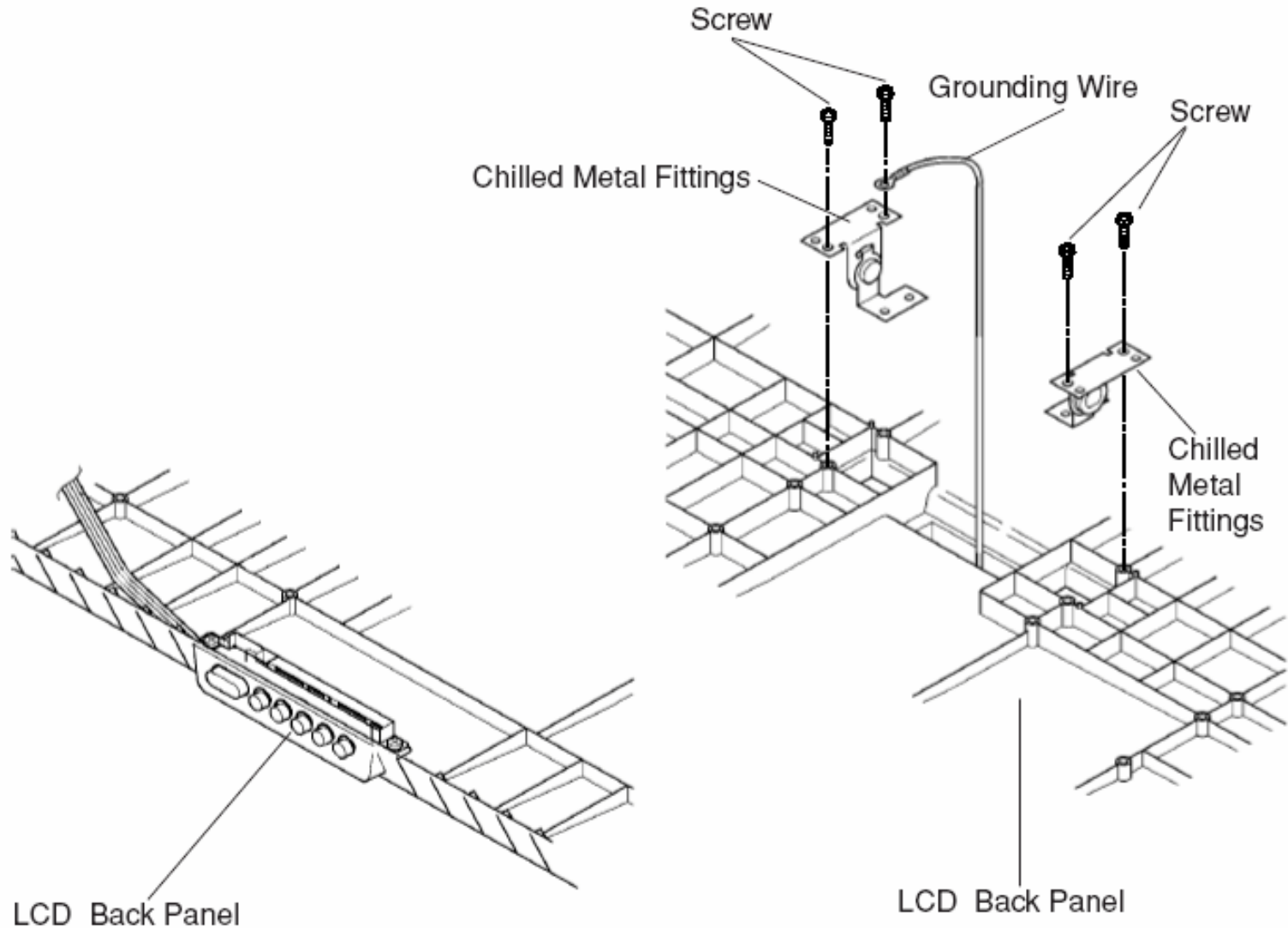
Disassembling and assembling



Disassembling and assembling



Disassembling and assembling



Any Question?

Thank You



SCHEMATIC DIAGRAM

MODEL : 20VL43P / 14VL43P

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

CAUTION: The international hazard symbols " \triangle " 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 PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

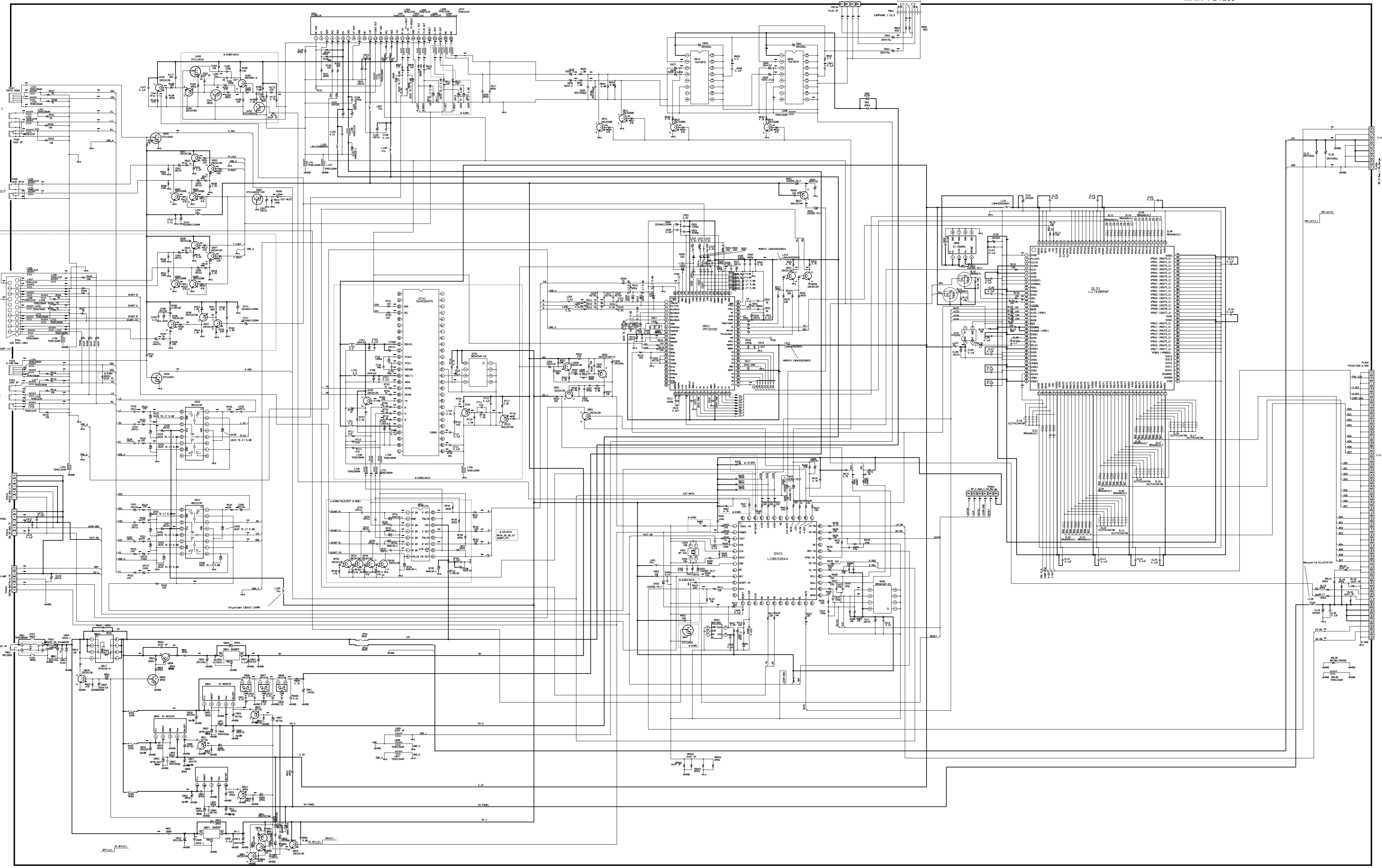
NOTE:

- RESISTOR** Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W 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 10W = Cement of 10 watt
K = $\pm 10\%$ G = $\pm 2\%$ F = $\pm 1\%$
- 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 50V, unless otherwise noted as the following marks.
 Electrolytic capacitor  Mylar capacitor
- The parts indicated with " \triangle " have special characteristics, and should be replaced with identical parts only.
- Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage 220 volts.
- Waveforms are taken receiving color bar signal with enough sensitivity.
- Voltage reading shown are nominal values and may vary $\pm 20\%$ except H.V.

■ SCHEMATIC DIAGRAM STRUCTURE:

┌ MAIN Circuit	1/2
└ ALL CONTROL Circuit	2/2

MAIN PD1268



A

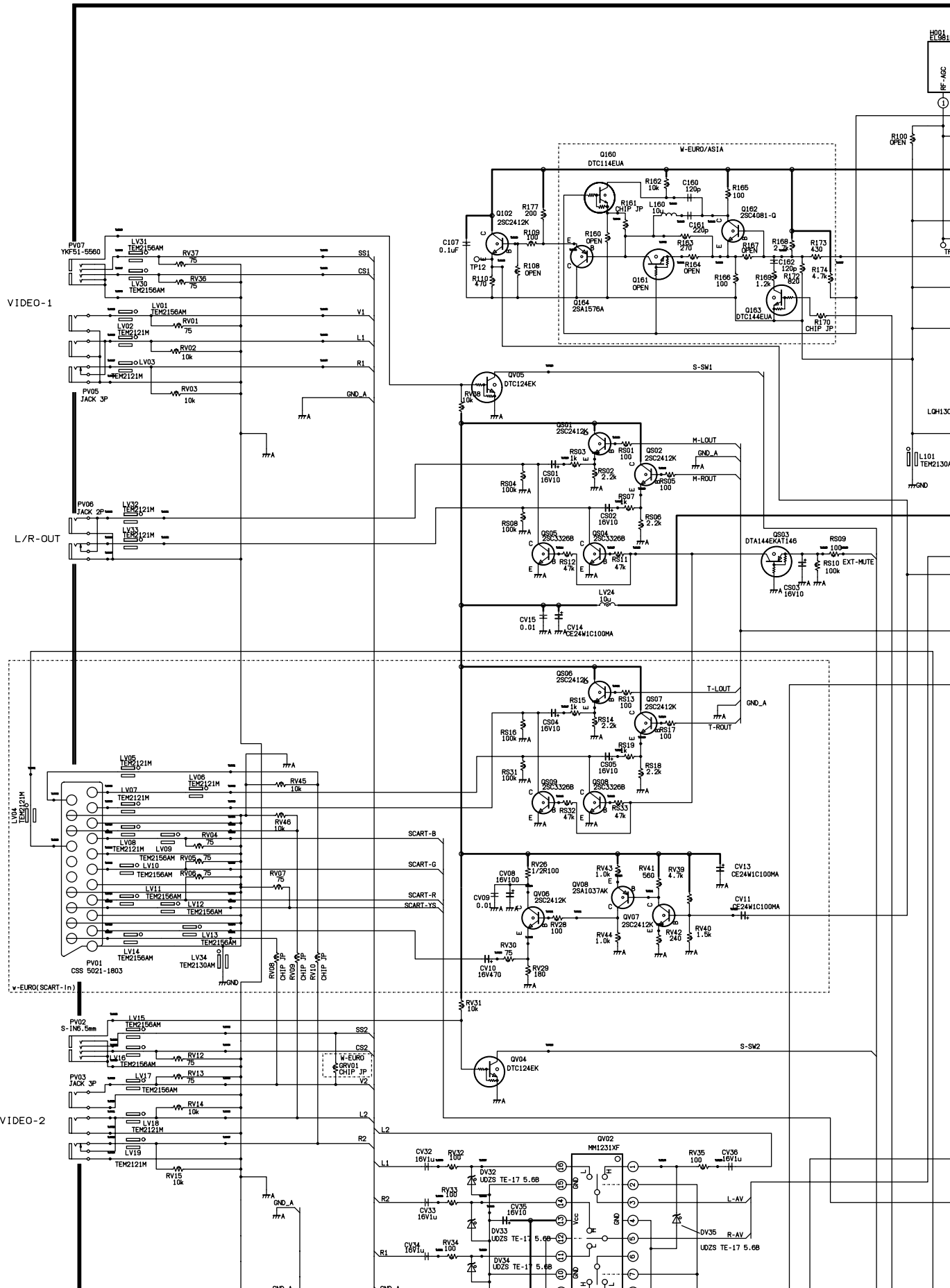
B

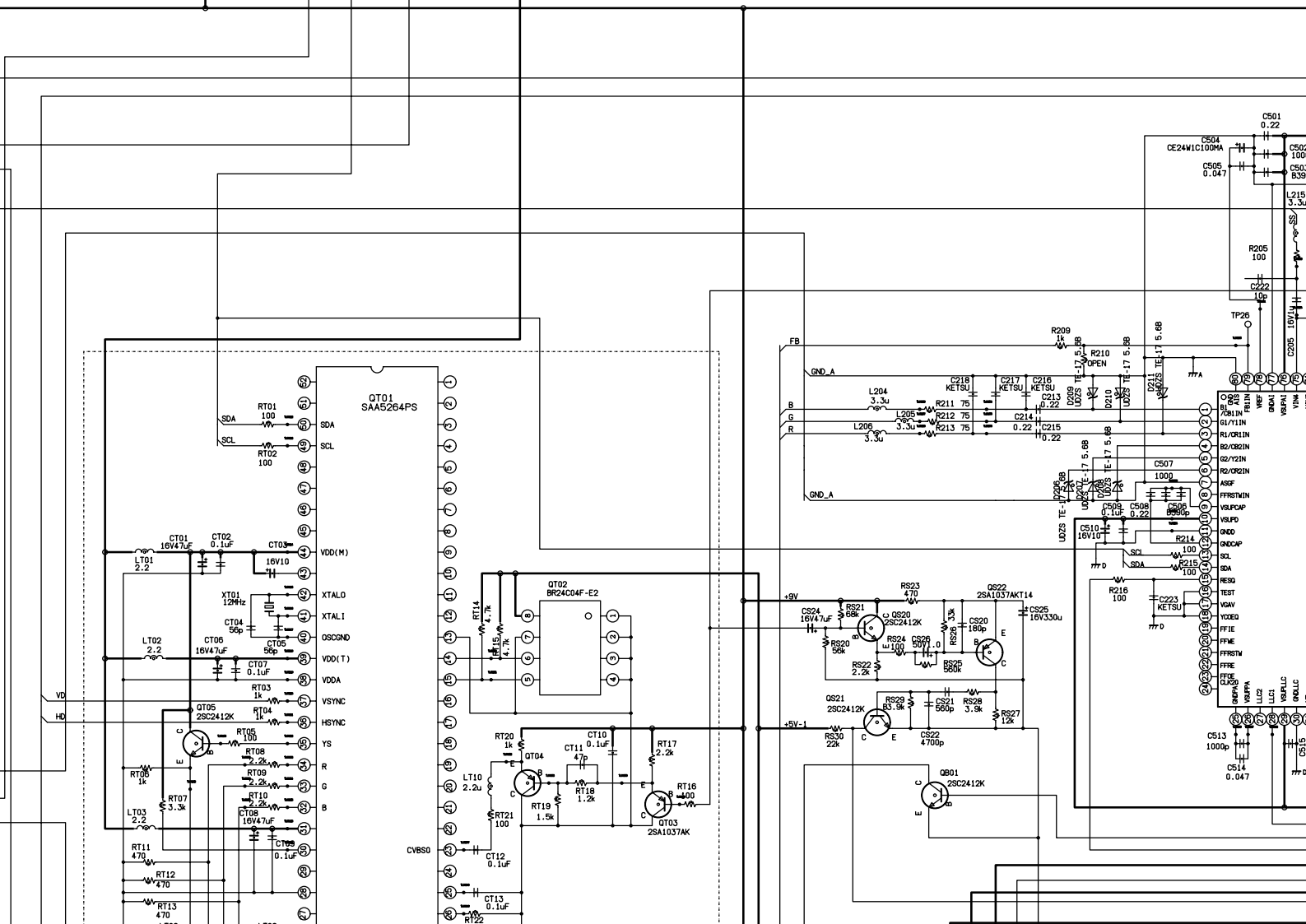
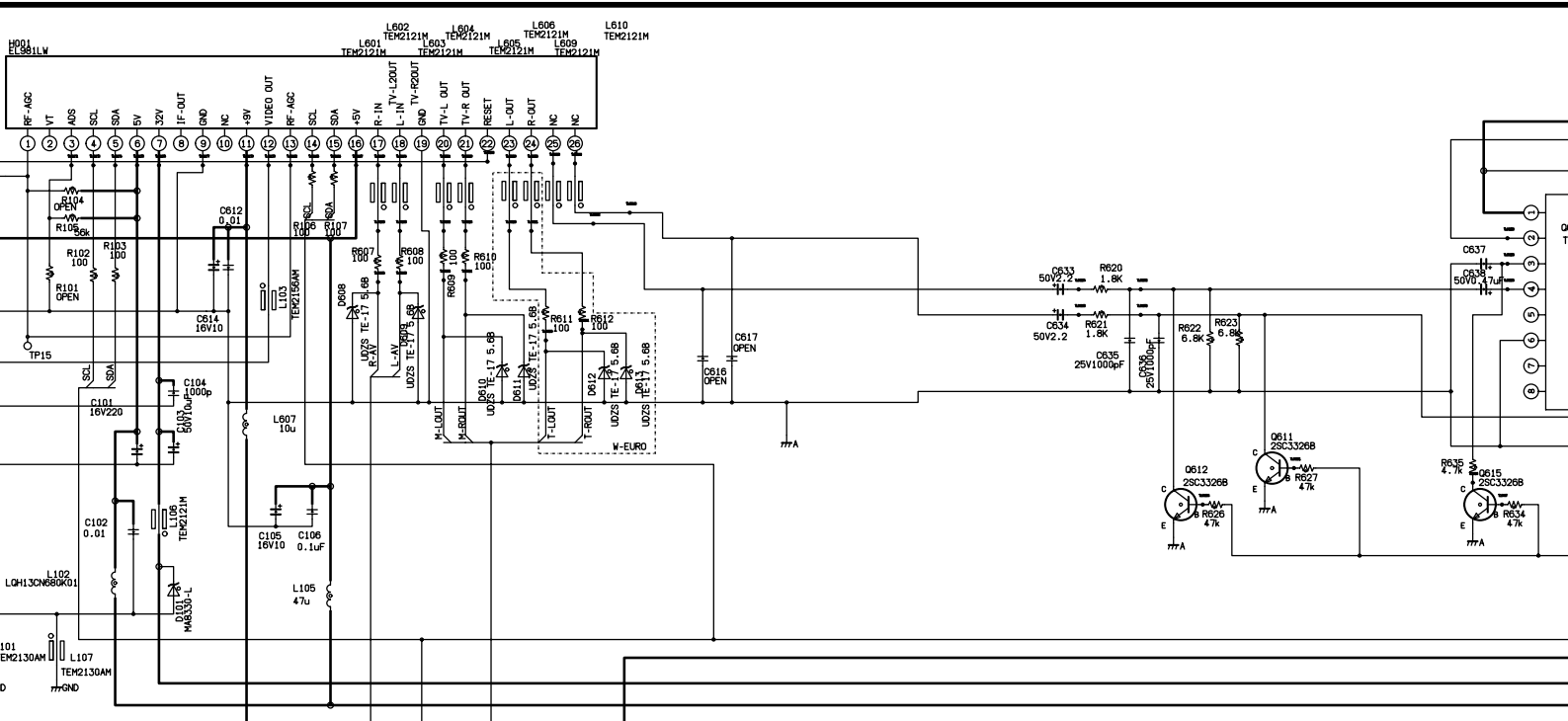
C

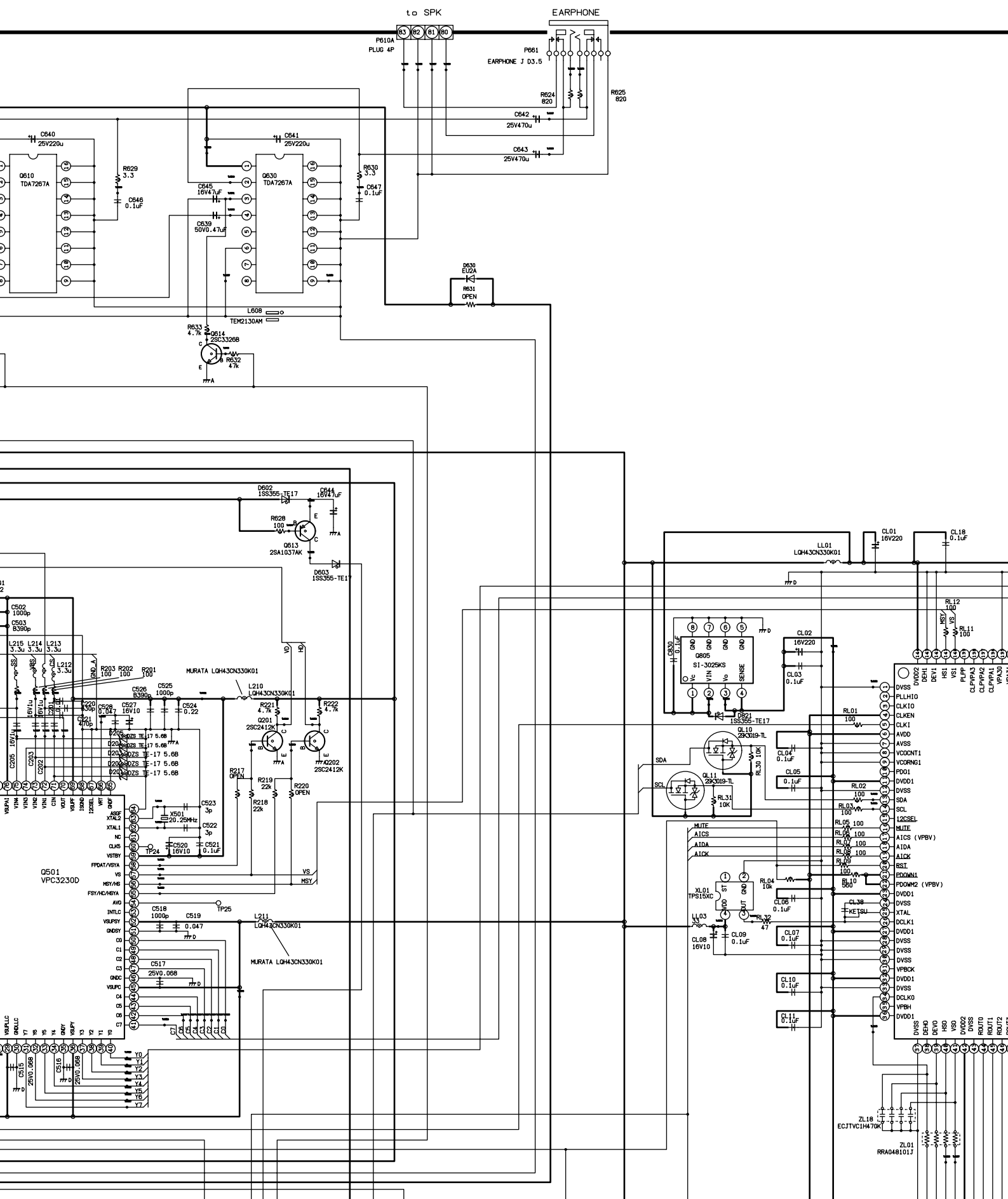
D

E

F







MAIN PD1268

A

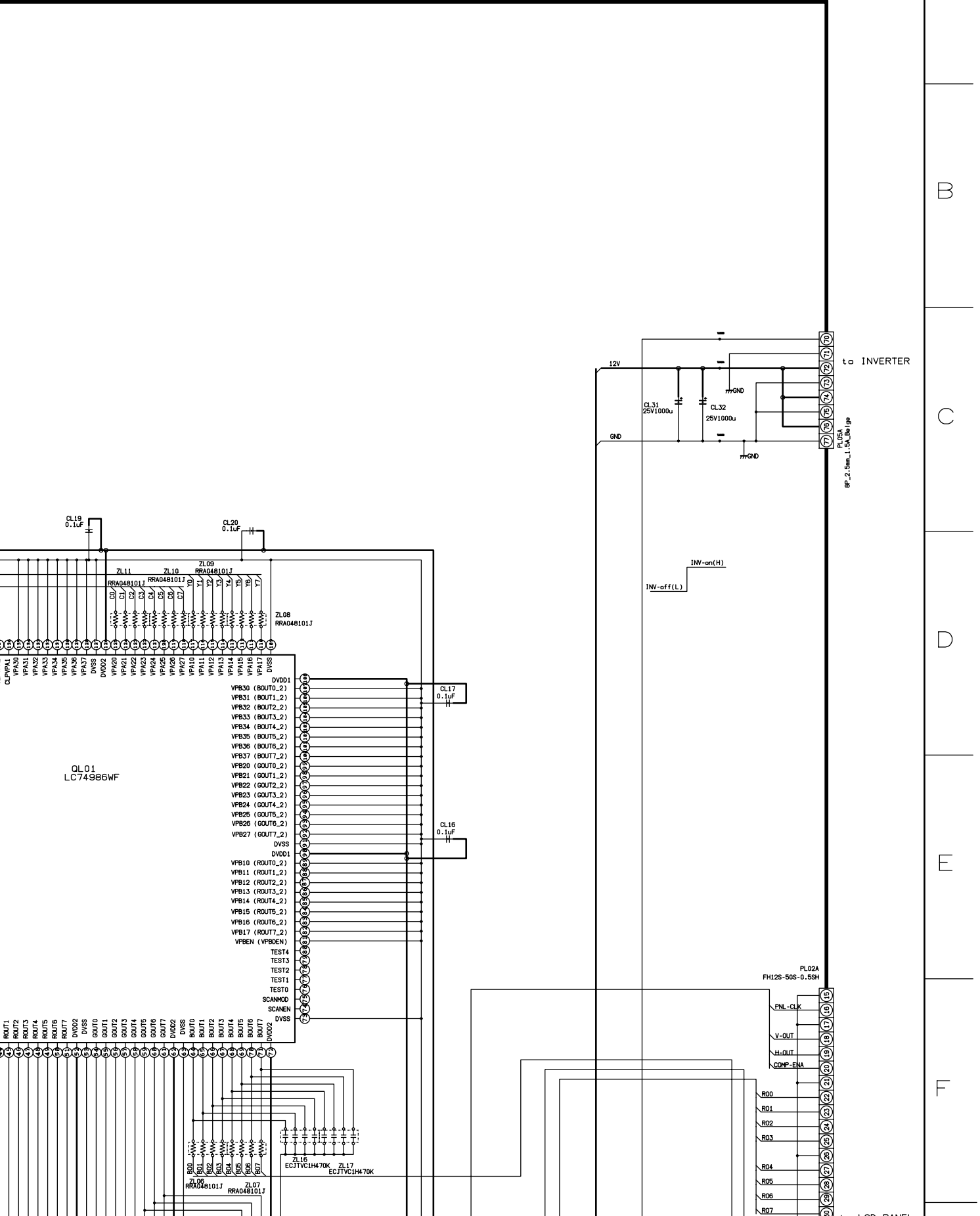
B

C

D

E

F



G

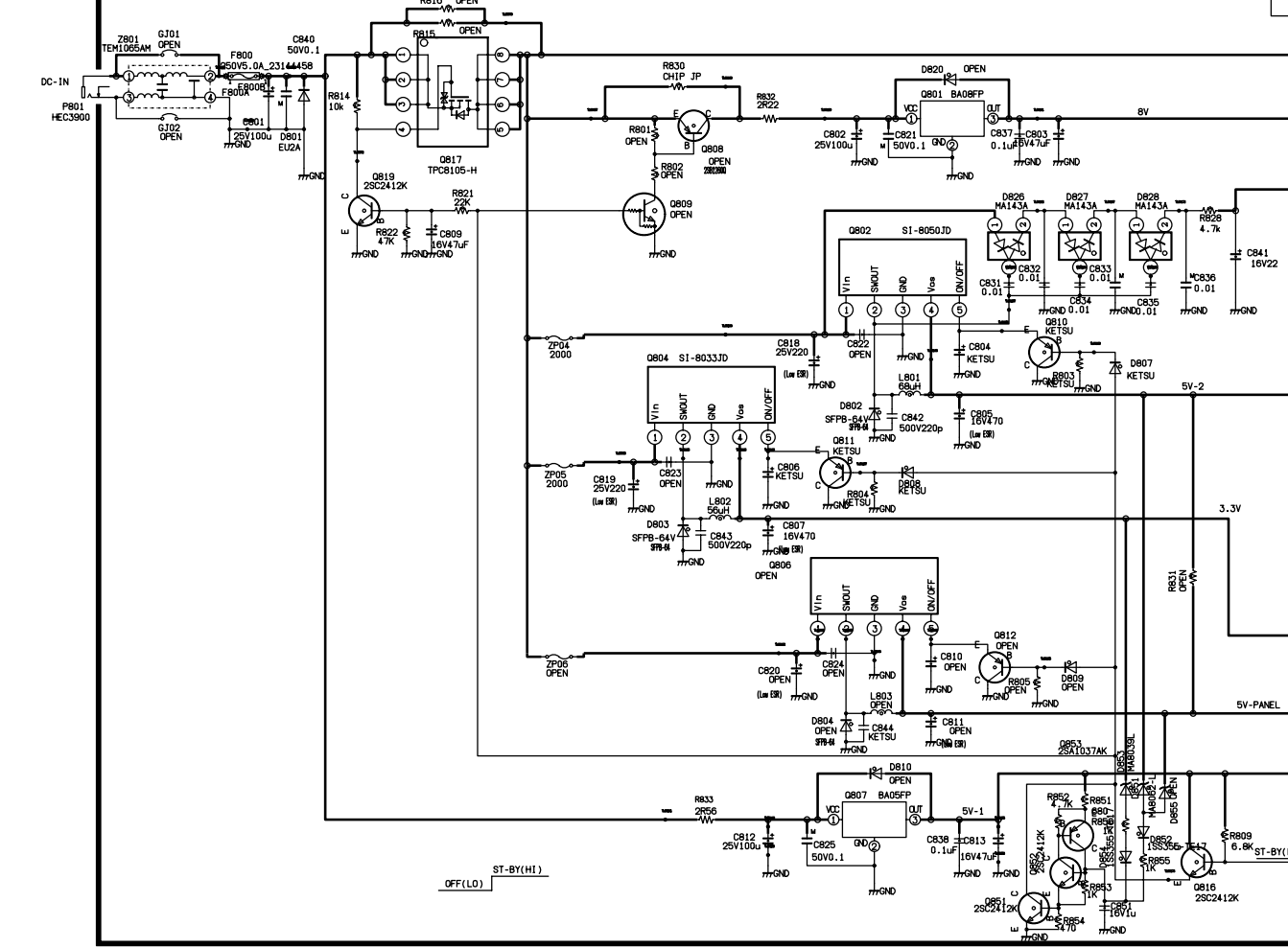
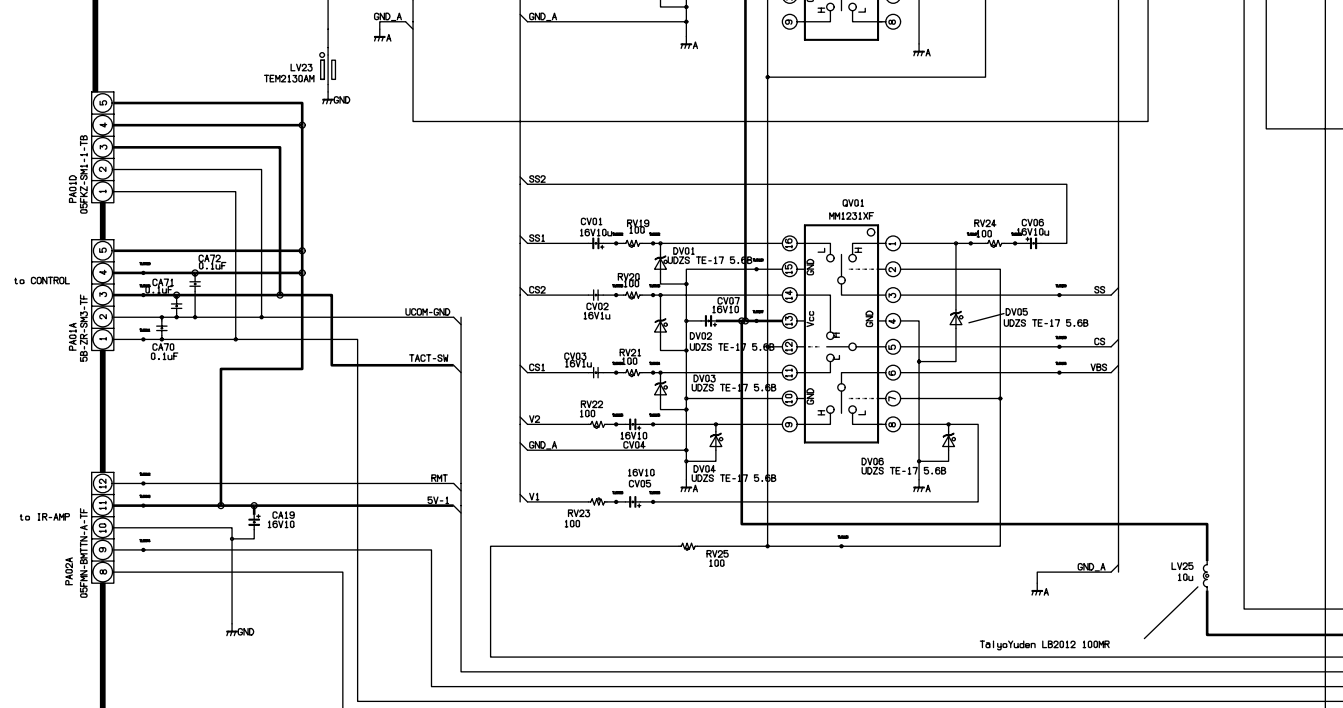
H

I

J

K

L

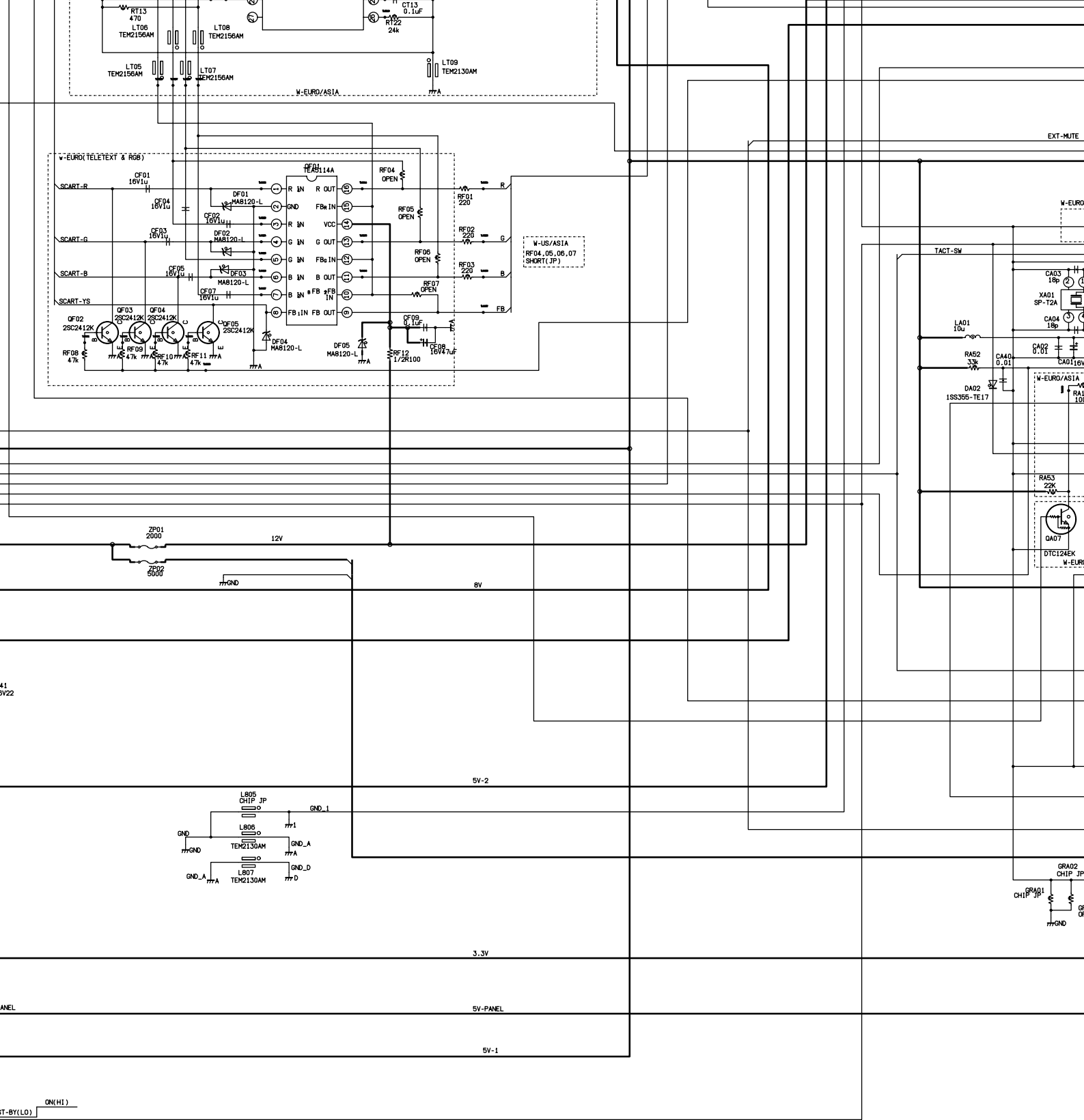


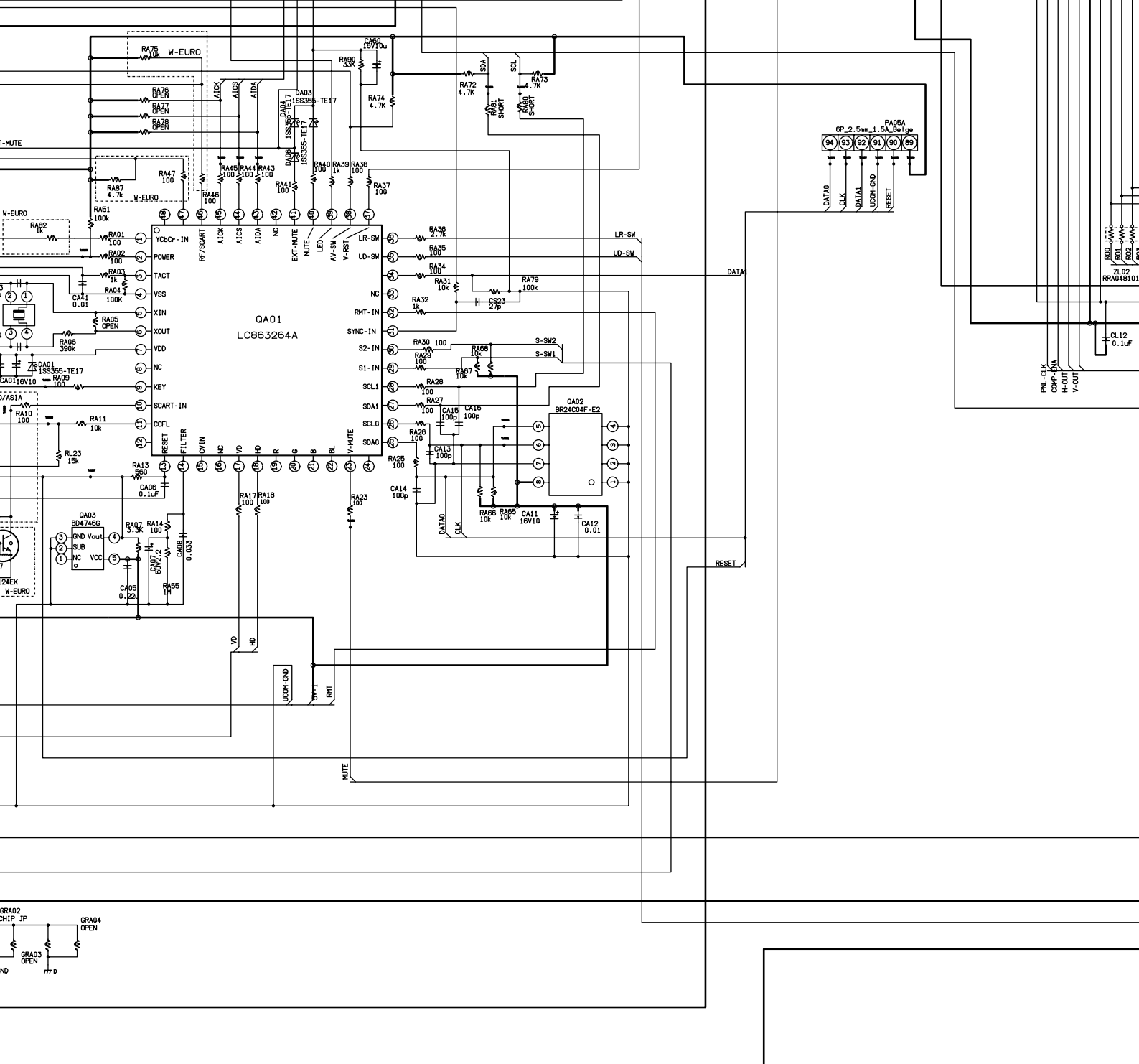
1

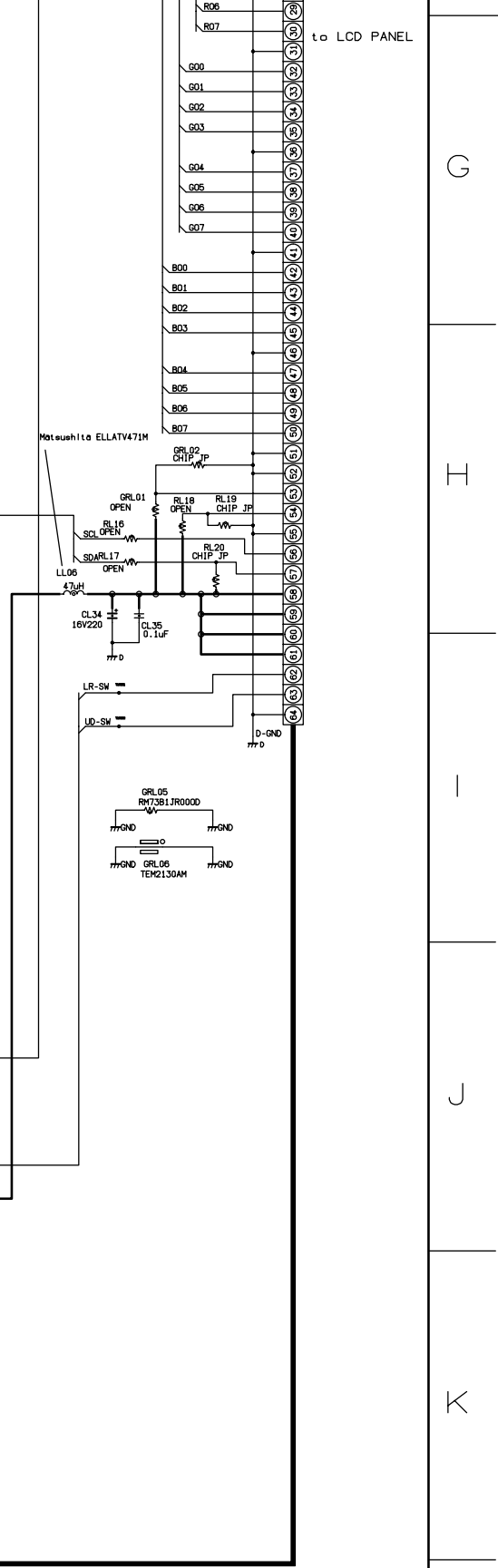
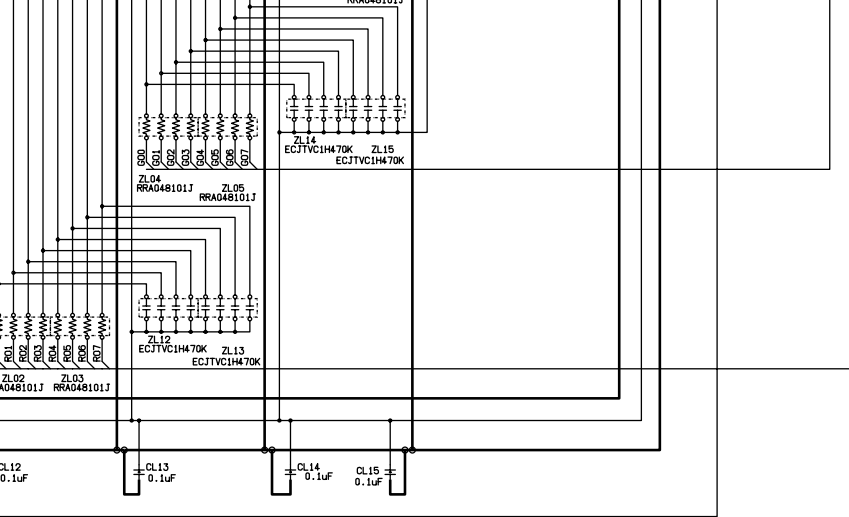
2

3

4







G

H

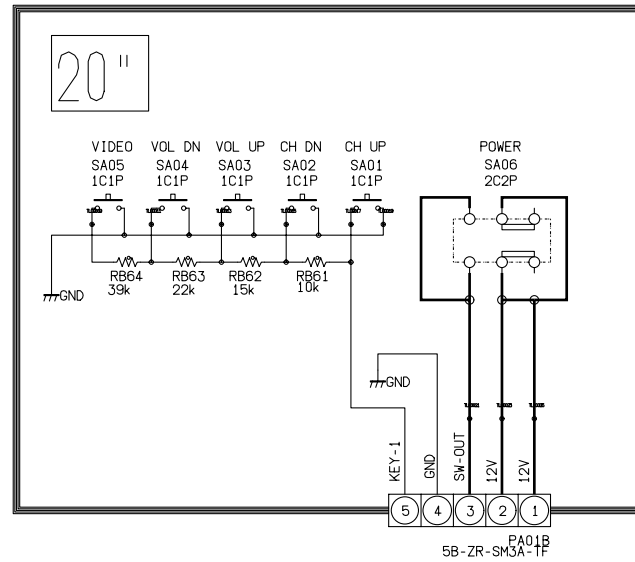
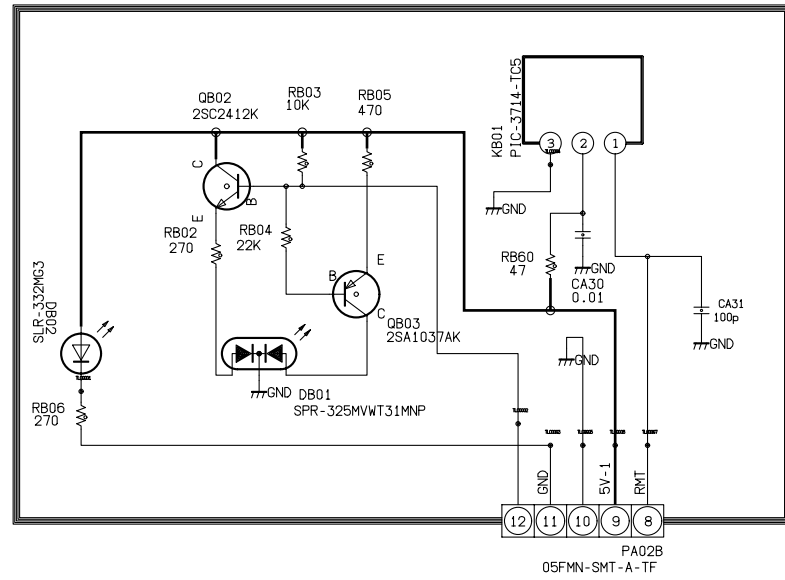
J

K

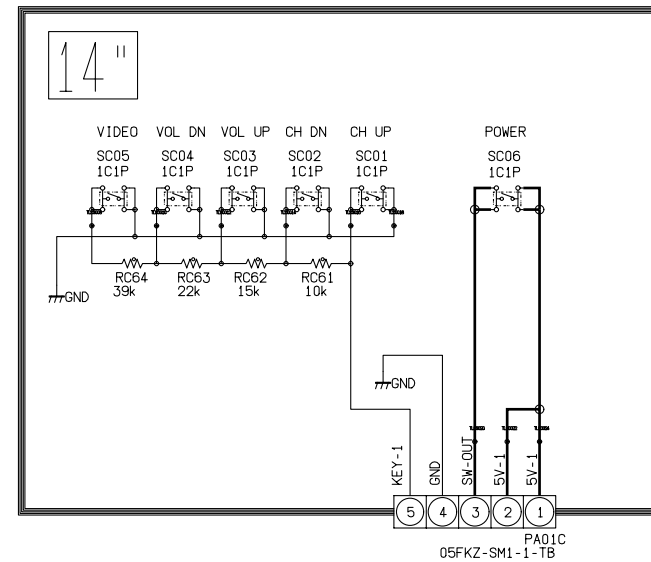
L

20VL43P
14VL43P
MAIN

LED PD1268



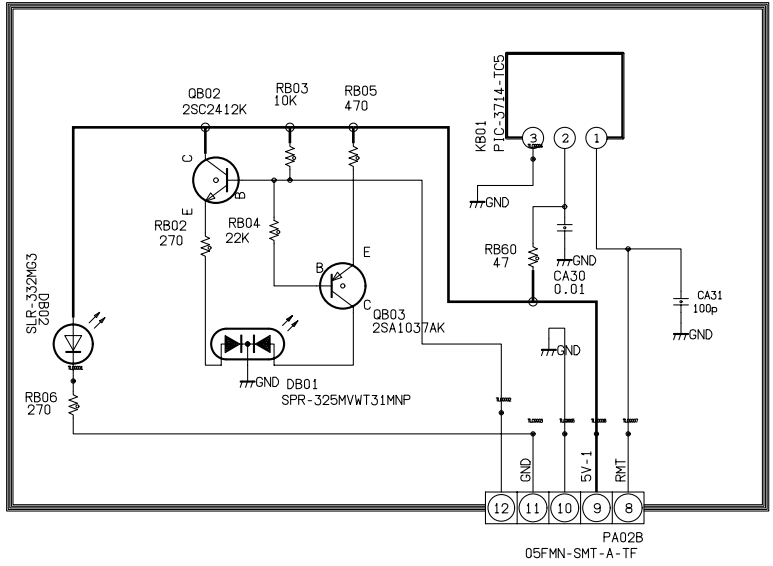
CONTROL PD1268
20VL43P



CONTROL PD1268
14VL43P

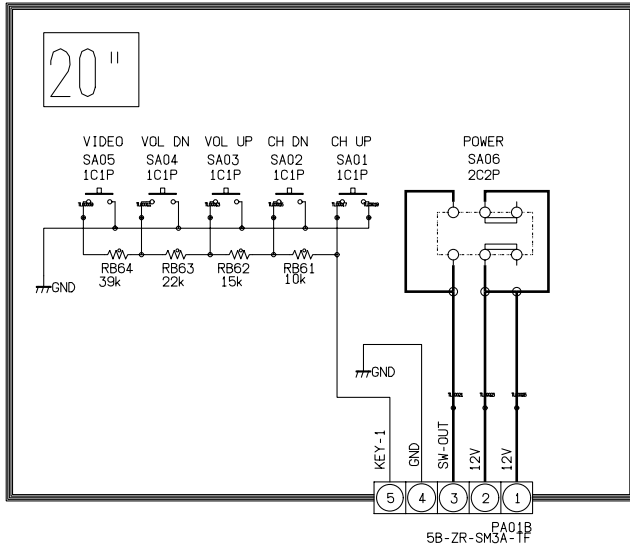
20VL43P
14VL43P
ALL CONTROL

LED PD1268



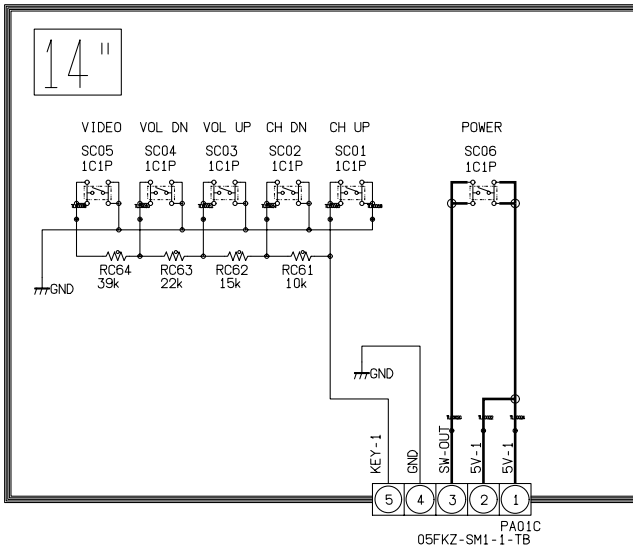
A

B



CONTROL PD1268
20VL43P

A



CONTROL PD1268
14VL43P

B

20VL43P
14VL43P
ALL CONTROL

TOSHIBA

FILE NO. 010-200306

SERVICE MANUAL

LCD TELEVISION



20VL43P, 14VL43P

TABLE OF CONTENTS

SERVICE SAFETY PRECAUTIONS	3
HANDLING THE LCD MODULE	5
LOCATION OF CONTROLS	7
LAYOUT OF MAJOR BOARDS	9
MECHANICAL DISASSEMBLY	10
PACKING DISASSEMBLY	13
WIRING CONNECTION DIAGRAM	15
CHASSIS AND CABINET REPLACEMENT PARTS LIST	16
PC BOARDS BOTTOM VIEW	23
SPECIFICATIONS	END
APPENDIX:	
CIRCUIT DIAGRAM	




SERVICE SAFETY PRECAUTIONS










- The caution items shown here describe major safety issues and should always be observed.
- The meanings of the various indications are as follows.

 WARNING	Indicates a hypothetical situation in which service personnel and nearby third parties, or even end users due to a product defect after the service operation is completed, could possibly be in danger of injury or even death in the event of operational error.
 CAUTION	Indicates a hypothetical situation in which service personnel and nearby third parties, or even end users after the service operation is completed, could possibly be in danger of injury, or where there could be physical damage in the event of operational error.

* Physical damage means major damage to a home, furnishings and other possessions.

Examples of marks

 SHOCK HAZARD	The Δ indicates caution (including danger and warning). The actual meaning of this caution is indicated inside the Δ or nearby illustrations or text. The example shown to the left indicates the danger of "electrical shock".
 PROHIBIT DISASSEMBLING	The \ominus indicates a forbidden action. The actual meaning of this caution is indicated inside the \ominus or nearby illustrations or text. The example shown to the left indicates that disassembly is forbidden.
 UNPULUG	The \bullet indicates a forced action (an action that must be performed). The actual meaning of this forced action is indicated by \bullet or nearby illustrations or text. The example shown to the left indicates that the power plug must be disconnected.

	 WARNING
 KEEP CHILDREN AWAY	<ul style="list-style-type: none"> • Always advise users to keep children away. There is danger of injury to children from tools, disassembled products, etc.
 UNPLUG	<ul style="list-style-type: none"> • Always disconnect the power plug before starting work whenever power is not required. Failure to disconnect the power plug before starting work can result in electrical shock.
 SHOCK HAZARD	<ul style="list-style-type: none"> • Depending on the model, use an insulation transformer or wear 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.
 USE SPECIFIED PARTS	<ul style="list-style-type: none"> • Always use the replacement parts specified for the particular model when making repairs. The parts used in products have the necessary 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 \triangle mark is included in a circuit diagram or parts list.
 CAUTION FOR WIRING	<ul style="list-style-type: none"> • Parts mounting and routing of the wiring should be the same as that used originally. For safety purposes, insulating materials such as tubing or tape is sometimes used and printed circuit boards are sometimes mounted floating. Also make sure that wiring is routed and clamped to avoid parts that generate heat and which use high voltage. Always follow the original scheme.
 CAUTION FOR ASSEMBLING / WIRING	<ul style="list-style-type: none"> • After a repair has been completed, reassemble all disassembled parts, and route and reconnect the wiring, in accordance with the original scheme. 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.
 CHECK INSULATION RESISTANCE	<ul style="list-style-type: none"> • After completing the work, disconnect the power plug from the outlet, remove the antenna, turn on the power switch. Then, use a 500V insulation resistance meter to check the insulation resistance of the antenna terminal, other metallic parts and between the prongs of the power plug to make sure that the insulation resistance is 1M Ω or more. The set will require inspection and repair if the insulation resistance is below this value.
 PROHIBIT REMODELING	<ul style="list-style-type: none"> • Never remodel the product in any way. Remodeling can result in improper operation, malfunction, or electrical leakage and flame, which may be hazardous

HANDLING THE LCD MODULE

Safety Precautions

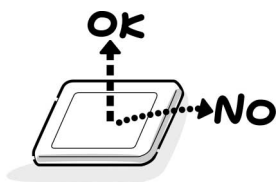
In the event that the screen is damaged or the liquid crystal (fluid) leaks, do not breathe in or drink this fluid. Also, never touch this fluid.

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

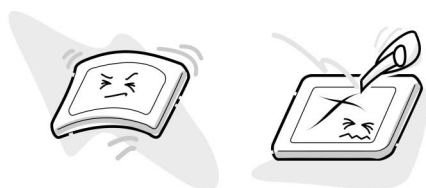
The LCD module can easily be damaged during disassembly or reassembly; therefore, always observe the following precautions when handling the module.

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.

CAUTION The metal edges of the LCD module are sharp, so use caution to avoid injury.



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.



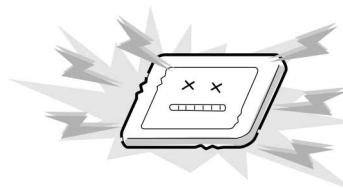
4. Leaving water or other fluids on the panel screen for an extended period of time can result in discoloration or stripes. Immediately remove any type of fluid from the screen.



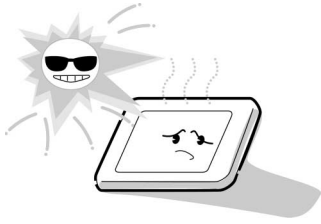
5. Glass is used in the panel, so do not drop or strike with hard objects. Such actions can damage the panel.



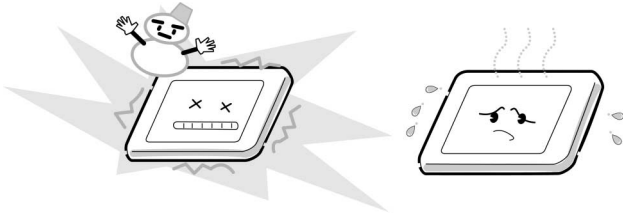
6. CMOS-LSI circuitry is used in the LCD module, so avoid damage due to static electricity. When handling the module, use a wrist ground or anchor ground.



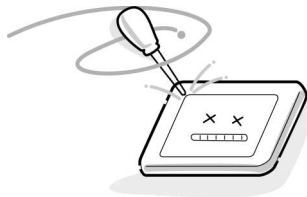
7. Do not expose the LCD module to direct sunlight or strong ultraviolet rays for an extended period of time.



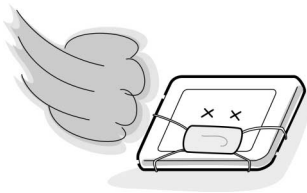
8. Do not store the LCD module below the temperature conditions described in the specifications. Failure to do so could result in freezing of the liquid crystal due to cold air or loss of resilience or other damage.



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

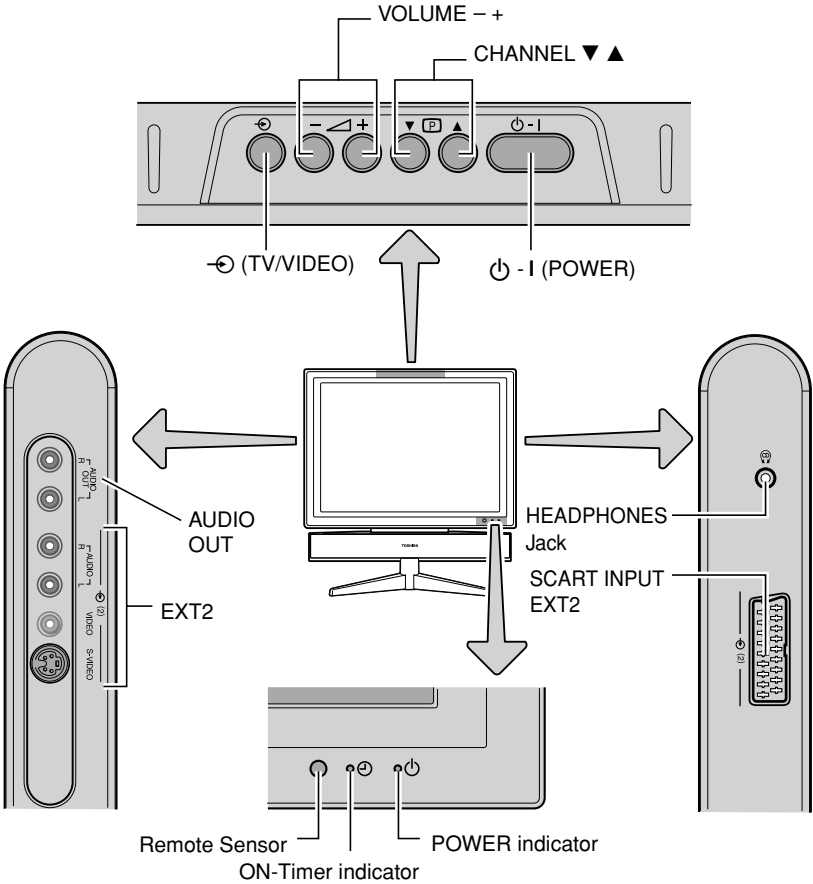


10. When transporting the LCD module, do not use packing containing epoxy resin (amine) or silicon resin (alcohol or oxim). The gas generated by these materials can cause loss of polarity.

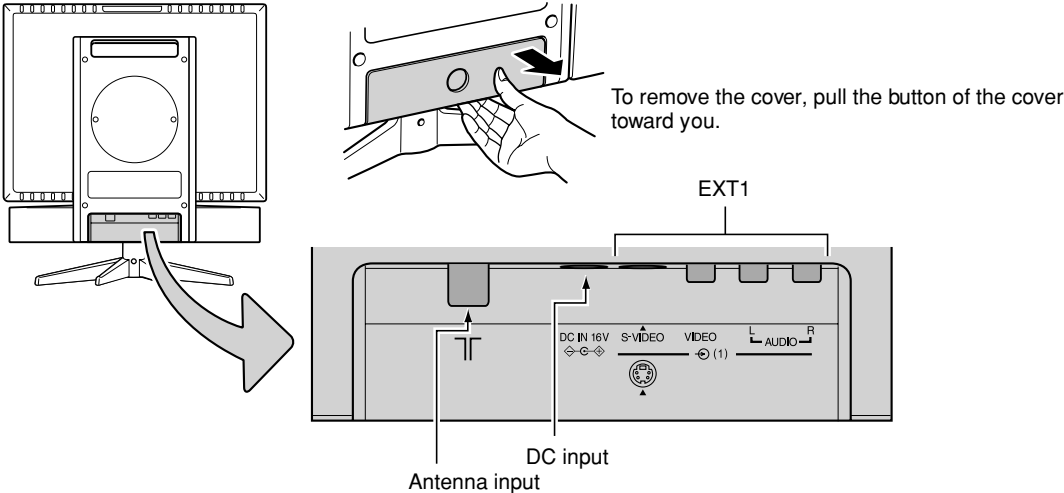


LOCATION OF CONTROLS (Representative: 20VL43P)

TV front



TV rear



Remote Control

Learning about the Remote Control

CALL displays screen information. (TV)

displays teletext initial/index. (TTX)

selects teletext/TV mode.

(**POWER**) turns the TV on and off.

POSITION NUMBERS allows direct access to channel positions.

returns to the last viewed channel.

selects the signal input source.

press to display a four digit sub-page number. (TTX)

MENU allows access to programming menus.

adjusts the TV picture by selecting one of the preset factory settings.

EXIT sets menu information and closes menus.

P () cycles through programmed channels.

() Also used to highlight selections on the on-screen menus.

adjusts the volume level. Also used to increase or () reduce the value of a menu option.

OK sets programmed menu information.

Teletext Coloured Buttons directly access teletext linked page.

selects stereo, bilingual sound mode.

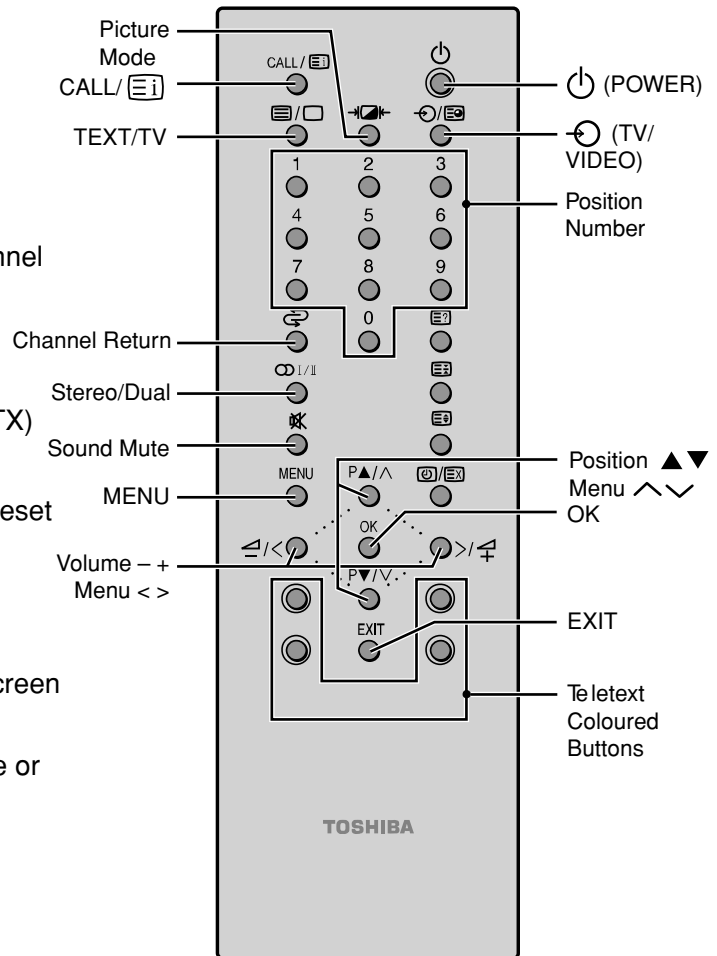
mutes the sound.

selects hidden content during teletext display. (TTX)

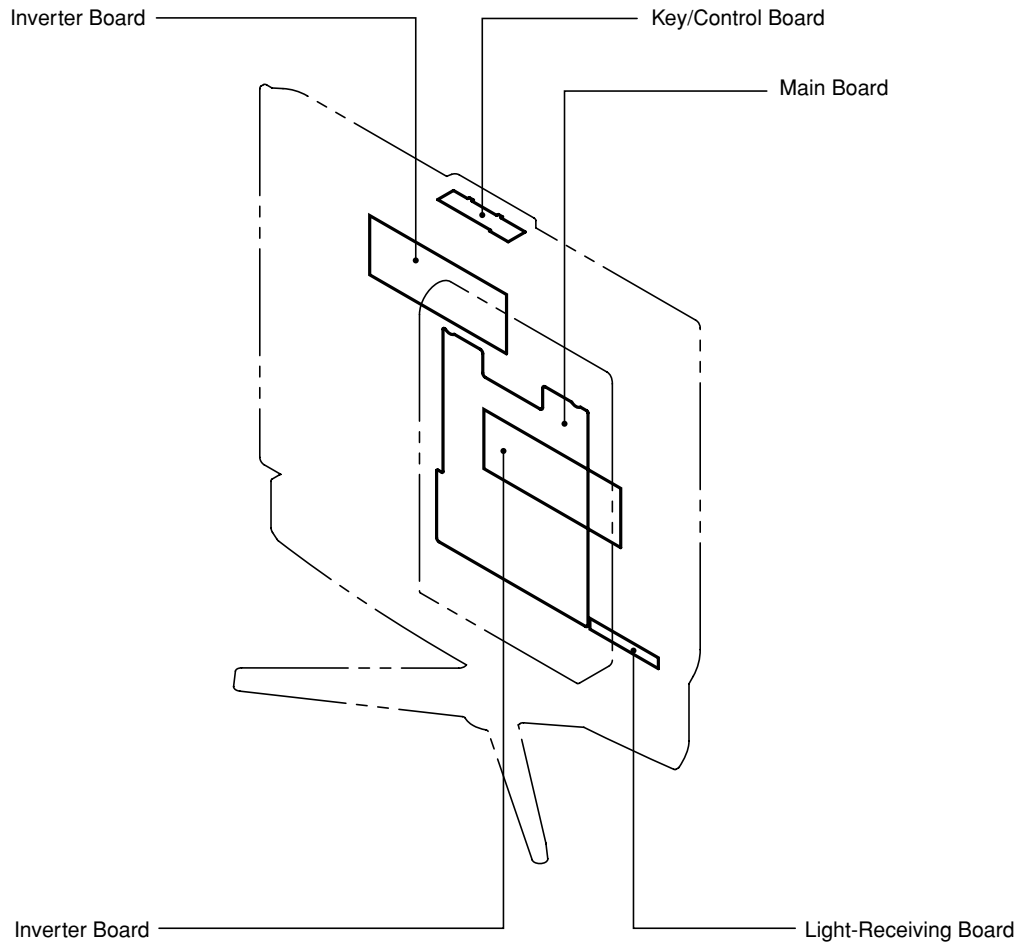
holds function during teletext display. (TTX)

press to change double-size letters. (TTX)

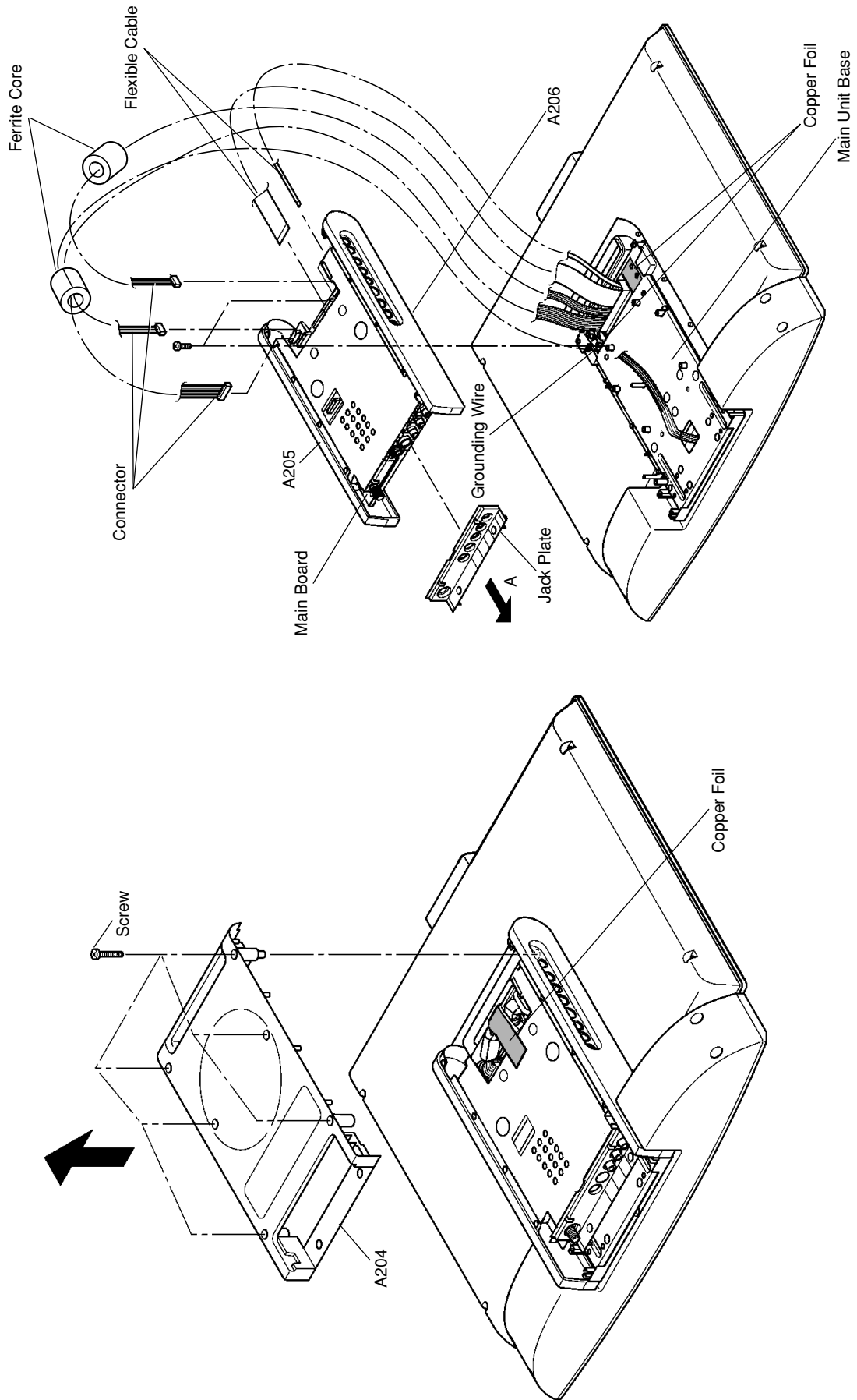
press to cancel the TTX mode or display the accurate time. (TTX)

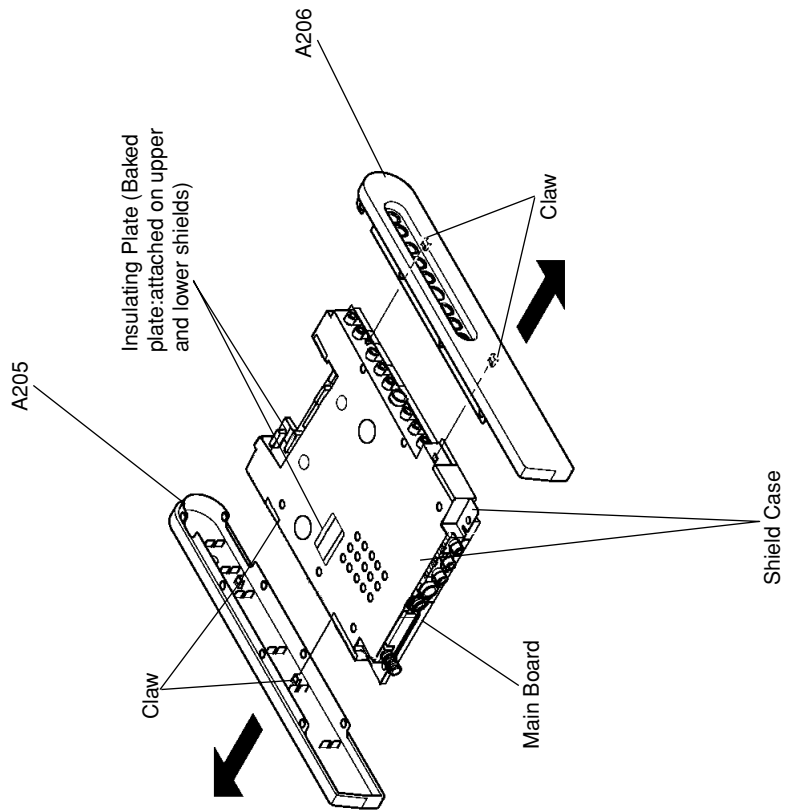
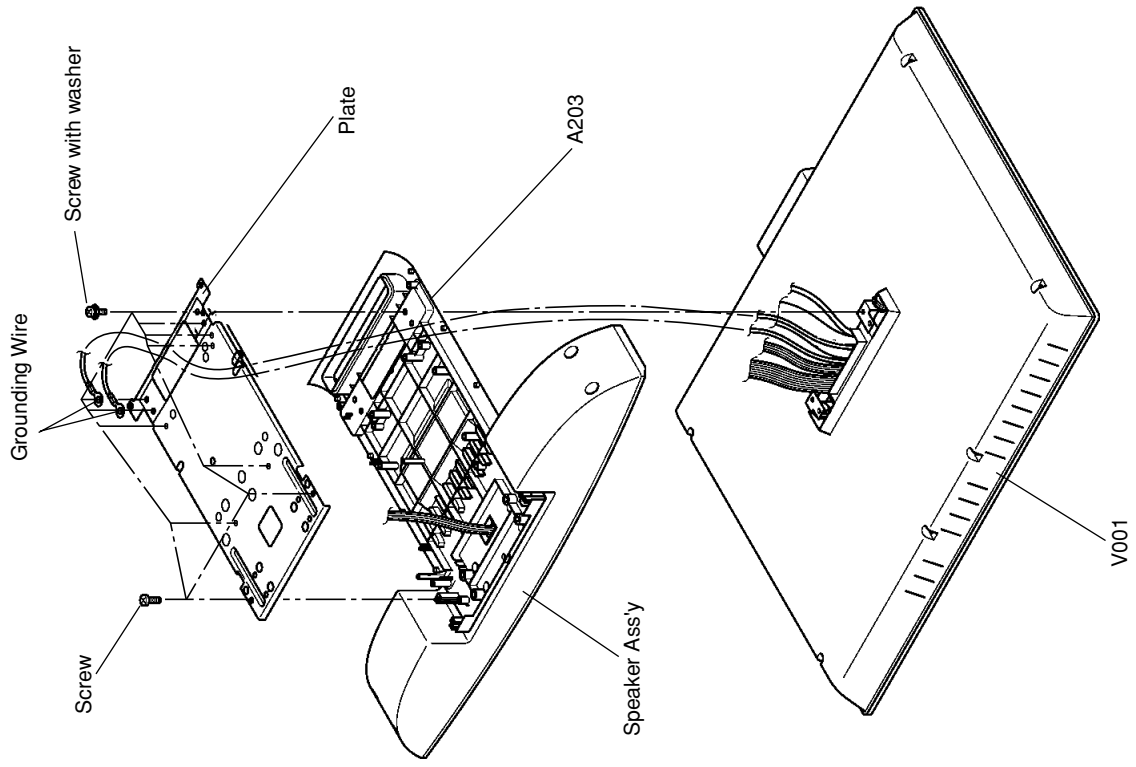


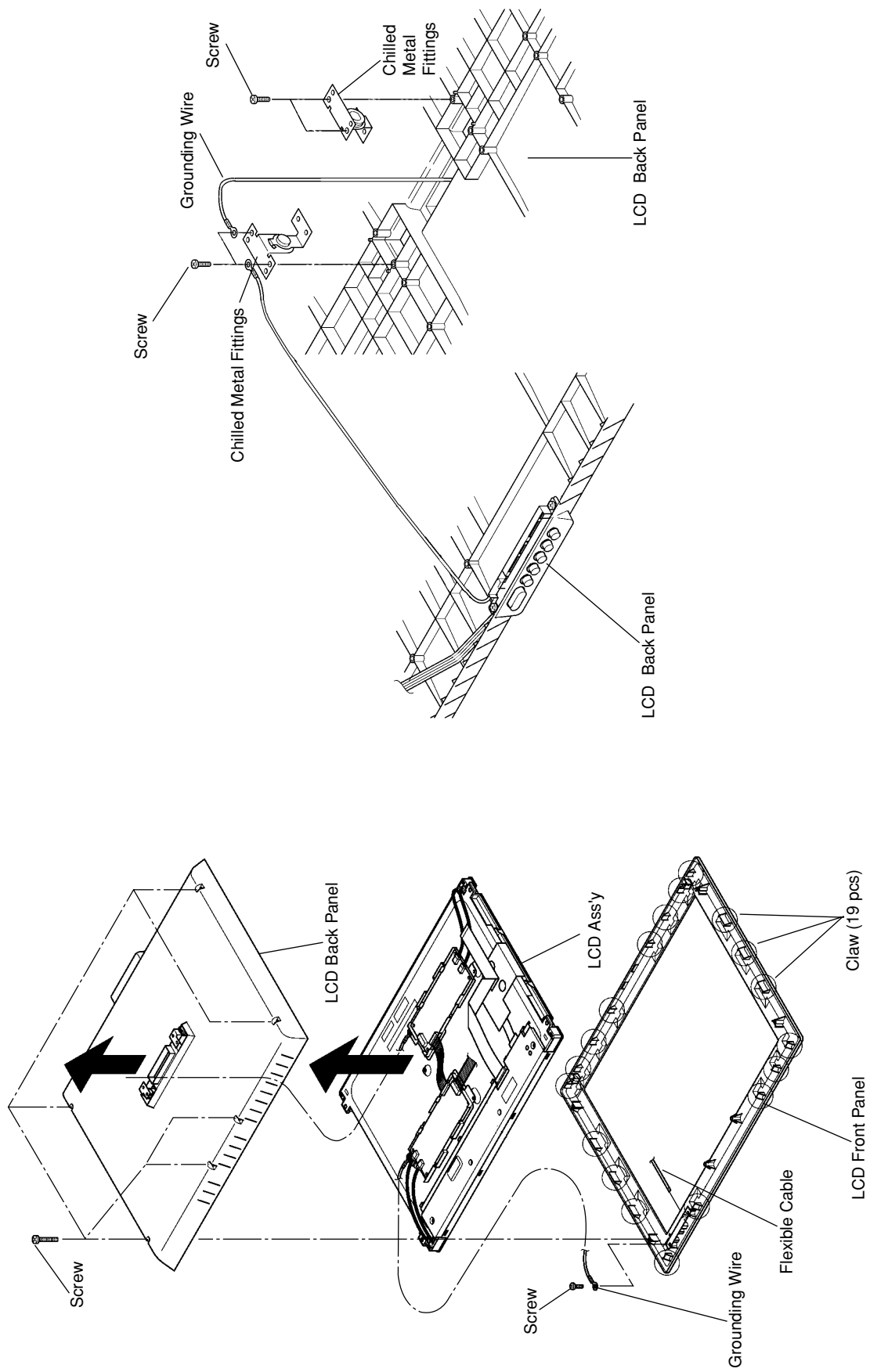
LAYOUT OF MAJOR BOARDS



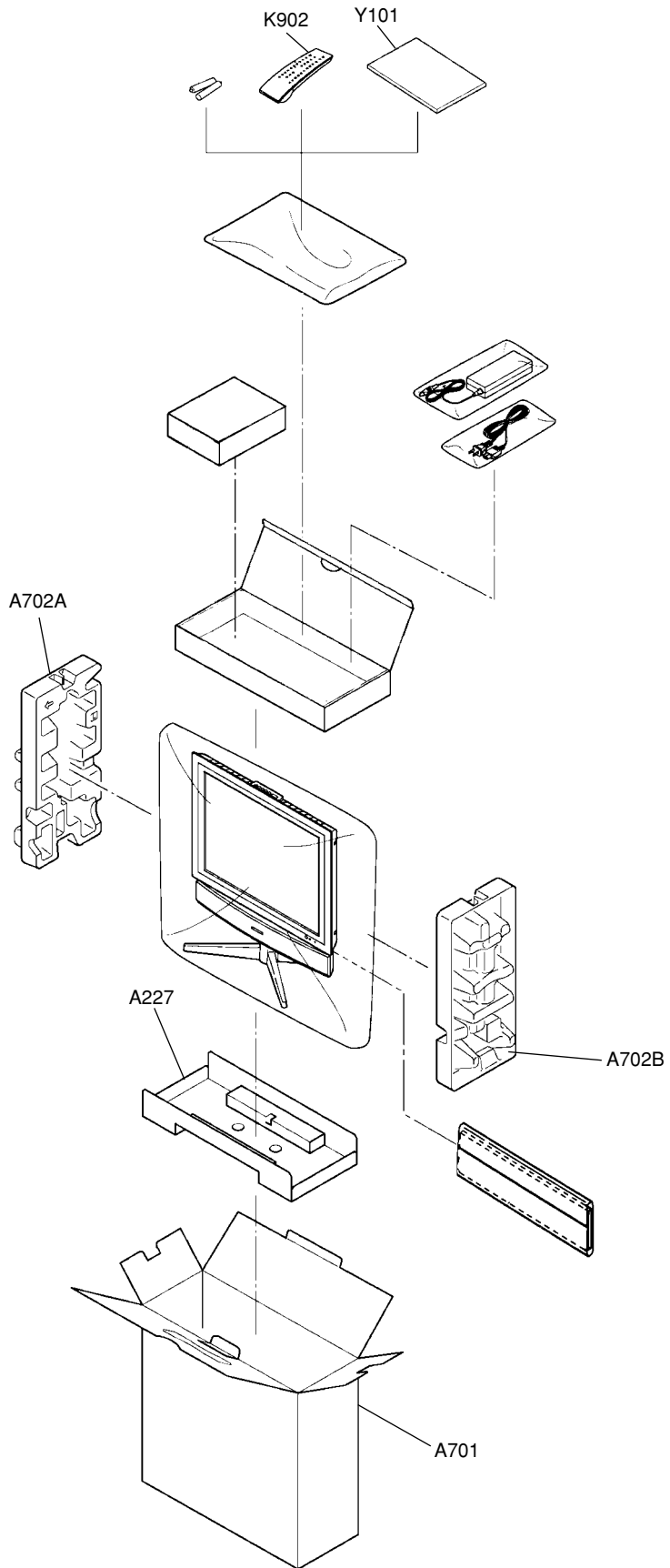
MECHANICAL DISASSEMBLY (Representative:20VL43P)



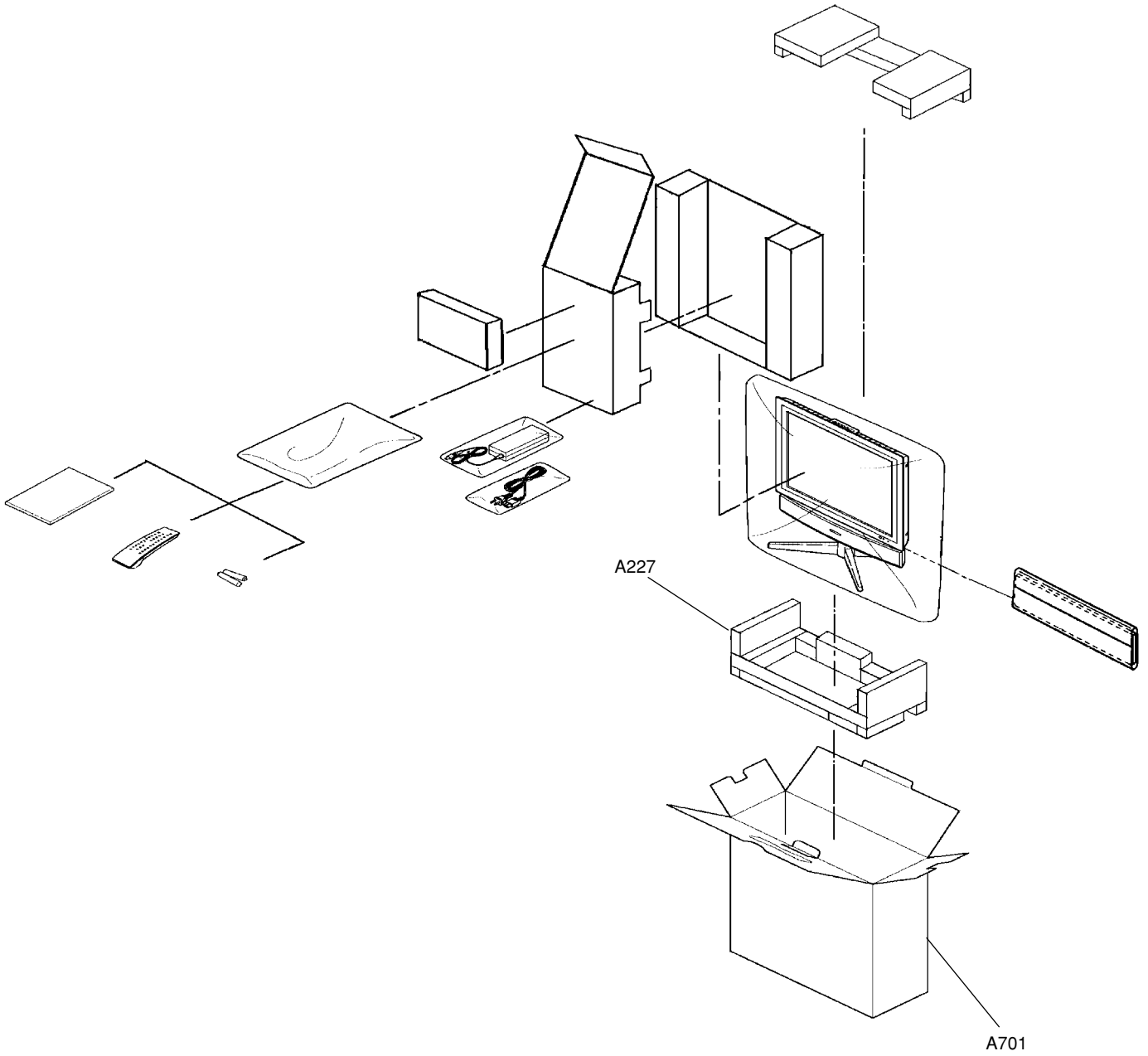




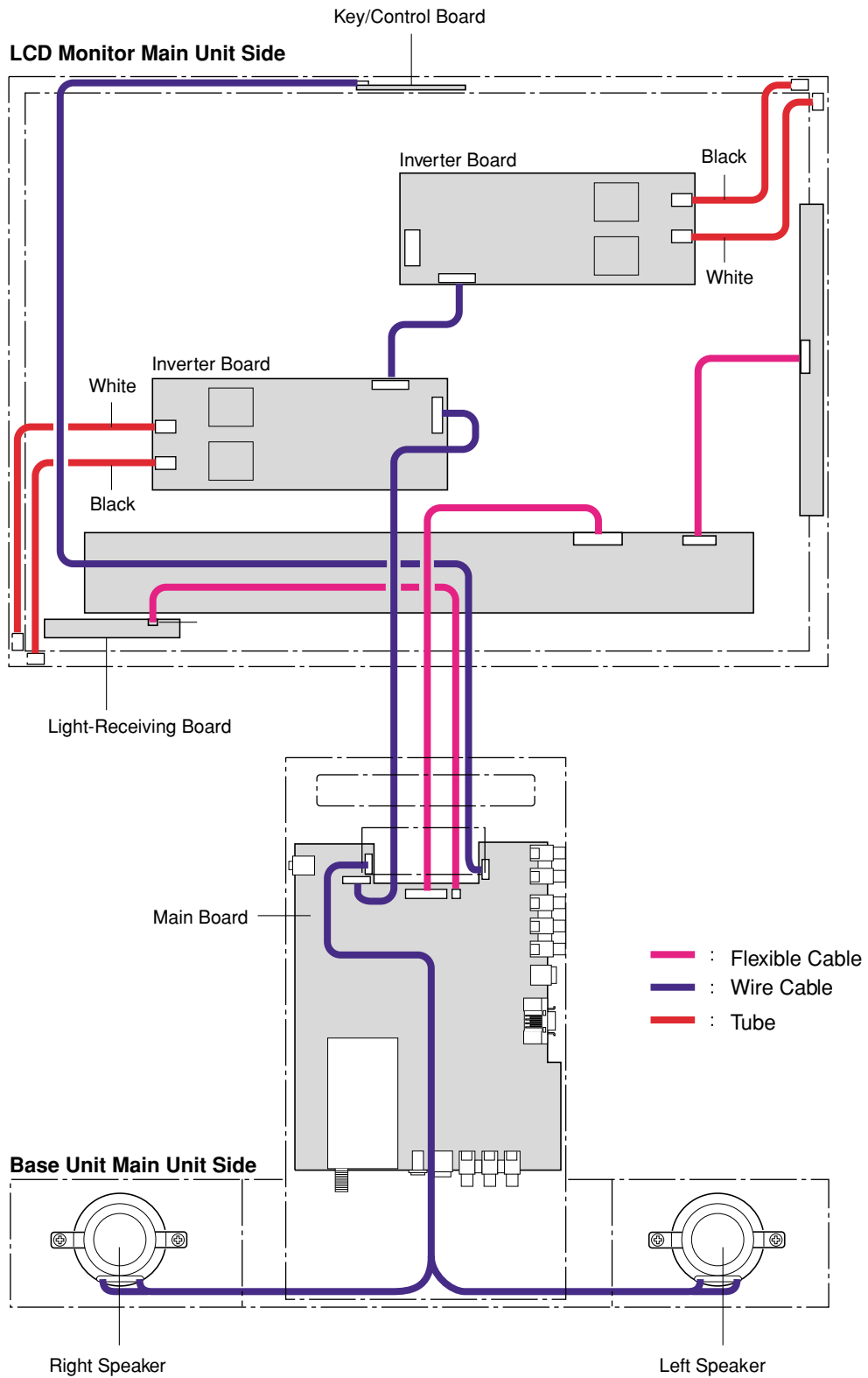
PACKING DISASSEMBLY (20VL43P)



PACKING DISASSEMBLY (14VL43P)



WIRING CONNECTION DIAGRAM



(Wiring connection diagram viewed from the rear side)

CHASSIS AND CABINET REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 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 PRODUCT SAFETY NOTICE. Do not degrade the safety of the receiver through improper servicing.

NOTICE:

- 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.

Model : 20VL43P/14VL43P

Capacitors CD : Ceramic Disk PF : Plastic Film EL : Electrolytic
 Resistors CF : Carbon Film CC : Carbon Composition MF : Metal Film
 OMF : Oxide Metal Film VR : Variable Resistor FR : Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Parts No.	Description
CAPACITORS		
C102	24100103	CERAMIC CHIP, 50V F 0.01UF Z
C104	24100102	CERAMIC CHIP, 50V F 1000PF Z
C105	24619040	ELEC. CHIP, 16V 10UF M 3A
C106	24092730	CERAMIC CHIP, 16V B 0.1UF K
C107	24092730	CERAMIC CHIP, 16V B 0.1UF K
C160	24105121	CERAMIC CHIP, 50V CH 120PF J
C161	24105221	CERAMIC CHIP, 50V CH 220PF J
C162	24105121	CERAMIC CHIP, 50V CH 120PF J
C201	24100103	CERAMIC CHIP, 50V F 0.01UF Z
C202	24092441	CERAMIC CHIP, 16V F 1UF Z
C203	24092441	CERAMIC CHIP, 16V F 1UF Z
C205	24092441	CERAMIC CHIP, 16V F 1UF Z
C213	24092753	CERAMIC CHIP, 10V B 0.22UF K
C214	24092753	CERAMIC CHIP, 10V B 0.22UF K
C215	24092753	CERAMIC CHIP, 10V B 0.22UF K
C220	24105331	CERAMIC CHIP, 50V CH 330PF J
C221	24105471	CERAMIC CHIP, 50V CH 470PF J
C222	24105100	CERAMIC CHIP, 50V CH 10PF D
C501	24092753	CERAMIC CHIP, 10V B 0.22UF K
C502	24100102	CERAMIC CHIP, 50V F 1000PF Z
C503	24109391	CERAMIC CHIP CK73B 50V 390PF K
C504	24619040	ELEC. CHIP, 16V 10UF M 3A
C505	24109473	CERAMIC CHIP, 25V B 0.047UF K
C506	24109391	CERAMIC CHIP CK73B 50V 390PF K
C507	24105102	CERAMIC CHIP, 25V CH 1000PF J
C508	24092753	CERAMIC CHIP, 10V B 0.22UF K
C509	24092730	CERAMIC CHIP, 16V B 0.1UF K
C510	24619040	ELEC. CHIP, 16V 10UF M 3A
C513	24100102	CERAMIC CHIP, 50V F 1000PF Z
C514	24109473	CERAMIC CHIP, 25V B 0.047UF K
C515	24100683	CHIP, CERA CAP F 25V 683Z
C516	24100683	CHIP, CERA CAP F 25V 683Z
C517	24100683	CHIP, CERA CAP F 25V 683Z
C518	24100102	CERAMIC CHIP, 50V F 1000PF Z
C519	24109473	CERAMIC CHIP, 25V B 0.047UF K
C520	24619040	ELEC. CHIP, 16V 10UF M 3A
C521	24092730	CERAMIC CHIP, 16V B 0.1UF K
C522	24105030	CERAMIC CHIP, 50V CJ 3PF C
C523	24105030	CERAMIC CHIP, 50V CJ 3PF C
C524	24092753	CERAMIC CHIP, 10V B 0.22UF K
C525	24100102	CERAMIC CHIP, 50V F 1000PF Z

Location No.	Parts No.	Description
C526	24109391	CERAMIC CHIP CK73B 50V 390PF K
C527	24619040	ELEC. CHIP, 16V 10UF M 3A
C528	24109473	CERAMIC CHIP, 25V B 0.047UF K
C612	24100103	CERAMIC CHIP, 50V F 0.01UF Z
C614	24619040	ELEC. CHIP, 16V 10UF M 3A
C633	24619071	ELECTROLYTIC, 50V 2.2UF
C634	24619071	ELECTROLYTIC, 50V 2.2UF
C635	24105102	CERAMIC CHIP, 25V CH 1000PF J
C636	24105102	CERAMIC CHIP, 25V CH 1000PF J
C637	24619046	ELECTROLYTIC, 16V 470UF
C638	24619068	ELECTROLYTIC, 50V 0.47UF
C639	24619068	ELECTROLYTIC, 50V 0.47UF
C644	24619046	ELECTROLYTIC, 16V 470UF
C645	24619046	ELECTROLYTIC, 16V 470UF
C646	24092730	CERAMIC CHIP, 16V B 0.1UF K
C647	24092730	CERAMIC CHIP, 16V B 0.1UF K
C803	24619046	ELECTROLYTIC, 16V 470UF
C809	24619046	ELECTROLYTIC, 16V 470UF
C813	24619046	ELECTROLYTIC, 16V 470UF
C821	24567104	PLASTIC FILM, 50V 0.1UF J
C825	24567104	PLASTIC FILM, 50V 0.1UF J
C830	24092730	CERAMIC CHIP, 16V B 0.1UF K
C831	24100103	CERAMIC CHIP, 50V F 0.01UF Z
C832	24100103	CERAMIC CHIP, 50V F 0.01UF Z
C833	24082041	PLASTIC FILM CF922 M 100V 10000PF J
C834	24100103	CERAMIC CHIP, 50V F 0.01UF Z
C835	24100103	CERAMIC CHIP, 50V F 0.01UF Z
C836	24082041	PLASTIC FILM CF922 M 100V 10000PF J
C837	24092730	CERAMIC CHIP, 16V B 0.1UF K
C838	24092730	CERAMIC CHIP, 16V B 0.1UF K
C840	24567104	PLASTIC FILM, 50V 0.1UF J
C842	24214221	CERAMIC DISC, 500V B 220PF K
C843	24214221	CERAMIC DISC, 500V B 220PF K
C851	24092441	CERAMIC CHIP, 16V F 1UF Z
CA01	24619040	ELEC. CHIP, 16V 10UF M 3A
CA02	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA03	24105180	CERAMIC CHIP, 50V CH 18PF J
CA04	24105180	CERAMIC CHIP, 50V CH 18PF J
CA05	24092753	CERAMIC CHIP, 10V B 0.22UF K
CA06	24092730	CERAMIC CHIP, 16V B 0.1UF K
CA07	24619071	ELECTROLYTIC, 50V 2.2UF
CA08	24100333	CERAMIC CHIP, 25V F 33000PF Z

Location No.	Parts No.	Description
CA11	24619040	ELEC. CHIP, 16V 10UF M 3A
CA12	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA13	24105101	CERAMIC CHIP, 50V CH 100PF J
CA14	24105101	CERAMIC CHIP, 50V CH 100PF J
CA15	24105101	CERAMIC CHIP, 50V CH 100PF J
CA16	24105101	CERAMIC CHIP, 50V CH 100PF J
CA19	24619040	ELEC. CHIP, 16V 10UF M 3A
CA30	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA31	24105101	CERAMIC CHIP, 50V CH 100PF J
CA40	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA41	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA60	24619040	ELEC. CHIP, 16V 10UF M 3A
CA70	24092730	CERAMIC CHIP, 16V B 0.1UF K
CA71	24092730	CERAMIC CHIP, 16V B 0.1UF K
CA72	24092730	CERAMIC CHIP, 16V B 0.1UF K
CF01	24092441	CERAMIC CHIP, 16V F 1UF Z
CF02	24092441	CERAMIC CHIP, 16V F 1UF Z
CF03	24092441	CERAMIC CHIP, 16V F 1UF Z
CF04	24092441	CERAMIC CHIP, 16V F 1UF Z
CF05	24092441	CERAMIC CHIP, 16V F 1UF Z
CF07	24092441	CERAMIC CHIP, 16V F 1UF Z
CF08	24619046	ELECTROLYTIC, 16V 470UF
CF09	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL03	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL04	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL05	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL06	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL07	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL08	24619040	ELEC. CHIP, 16V 10UF M 3A
CL09	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL10	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL11	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL12	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL13	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL14	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL15	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL16	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL17	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL18	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL19	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL20	24092730	CERAMIC CHIP, 16V B 0.1UF K
CL35	24092730	CERAMIC CHIP, 16V B 0.1UF K
CS01	24619040	ELEC. CHIP, 16V 10UF M 3A
CS02	24619040	ELEC. CHIP, 16V 10UF M 3A
CS03	24619040	ELEC. CHIP, 16V 10UF M 3A
CS04	24619040	ELEC. CHIP, 16V 10UF M 3A
CS05	24619040	ELEC. CHIP, 16V 10UF M 3A
CS20	24105181	CERAMIC CHIP, 50V CH 180PF J
CS21	24105561	CERAMIC CHIP, 50V CH 560PF J
CS22	24109472	CERAMIC CHIP, 50V B 4700PF K
CS23	24105270	CERAMIC CHIP, 50V CH 27PF J
CS24	24619046	ELECTROLYTIC, 16V 470UF
CS25	24619046	ELECTROLYTIC, 16V 470UF
CS26	24619070	CERAMIC CHIP, 50V 1PF
CT01	24619046	ELECTROLYTIC, 16V 470UF
CT02	24092730	CERAMIC CHIP, 16V B 0.1UF K
CT03	24619040	ELEC. CHIP, 16V 10UF M 3A
CT04	24105560	CERAMIC CHIP, 50V CH 56PF J
CT05	24105560	CERAMIC CHIP, 50V CH 56PF J
CT06	24619046	ELECTROLYTIC, 16V 470UF
CT07	24092730	CERAMIC CHIP, 16V B 0.1UF K
CT08	24619046	ELECTROLYTIC, 16V 470UF
CT09	24092730	CERAMIC CHIP, 16V B 0.1UF K
CT10	24092730	CERAMIC CHIP, 16V B 0.1UF K
CT11	24105470	CERAMIC CHIP, 50V CH 47PF J
CT12	24092730	CERAMIC CHIP, 16V B 0.1UF K
CT13	24092730	CERAMIC CHIP, 16V B 0.1UF K

Location No.	Parts No.	Description
CV01	24619040	ELEC. CHIP, 16V 10UF M 3A
CV02	24092441	CERAMIC CHIP, 16V F 1UF Z
CV03	24092441	CERAMIC CHIP, 16V F 1UF Z
CV04	24619040	ELEC. CHIP, 16V 10UF M 3A
CV05	24619040	ELEC. CHIP, 16V 10UF M 3A
CV06	24619040	ELEC. CHIP, 16V 10UF M 3A
CV07	24619040	ELEC. CHIP, 16V 10UF M 3A
CV08	24619157	MENJISSOU TYP, 16V100U
CV09	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CV11	24619040	ELEC. CHIP, 16V 10UF M 3A
CV13	24619040	ELEC. CHIP, 16V 10UF M 3A
CV14	24619040	ELEC. CHIP, 16V 10UF M 3A
CV15	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CV32	24092441	CERAMIC CHIP, 16V F 1UF Z
CV33	24092441	CERAMIC CHIP, 16V F 1UF Z
CV34	24092441	CERAMIC CHIP, 16V F 1UF Z
CV35	24619040	ELEC. CHIP, 16V 10UF M 3A
CV36	24092441	CERAMIC CHIP, 16V F 1UF Z
RESISTORS		
R102	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R103	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R105	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
R106	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R107	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R109	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R110	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R161	24000445	CHIP JUMPER, 1608TYPE
R162	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R163	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
R165	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R166	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R168	24011272	CHIP, METAL FILM, 1/20W 2.7K OHM J
R169	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
R170	24000445	CHIP JUMPER, 1608TYPE
R172	24011821	CHIP, METAL FILM, 1/20W 820 OHM J
R173	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
R174	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R177	24011201	CHIP, METAL FILM, 1/20W 200 OHM J
R178	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
R201	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R202	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R203	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R205	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R209	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R211	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
R212	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
R213	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
R214	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R215	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R216	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R218	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R219	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R221	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R222	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R607	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R608	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R609	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R610	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R611	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R612	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R620	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R621	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R622	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
R623	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
R624	24011821	CHIP, METAL FILM, 1/20W 820 OHM J
R625	24011821	CHIP, METAL FILM, 1/20W 820 OHM J

Location No.	Parts No.	Description
R626	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R627	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R628	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R629	24011339	CHIP, METAL FILM, 1/20W 3.3 OHM J
R630	24011339	CHIP, METAL FILM, 1/20W 3.3 OHM J
R632	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R633	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R634	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R635	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R809	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
R814	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R821	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R822	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R828	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R830	24000445	CHIP JUMPER, 1608TYPE
R831	24000445	CHIP JUMPER, 1608TYPE
R832	24383220	OXIDE METAL FILM, 2W 22 OHM J
R833	24383560	OXIDE METAL FILM, 2W 56 OHM J
R851	24011681	CHIP, METAL FILM, 1/20W 680 OHM J
R852	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R853	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R854	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R855	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R856	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA01	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA02	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA03	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA04	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RA06	24011394	CHIP, METAL FILM, 1/20W 390K OHM J
RA07	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA09	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA10	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA11	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA13	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RA14	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA17	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA18	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA23	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA25	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA26	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA27	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA28	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA29	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA30	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA31	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA32	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA34	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA35	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA36	24011272	CHIP, METAL FILM, 1/20W 2.7K OHM J
RA37	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA38	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA39	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA40	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA41	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA43	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA44	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA45	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA46	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA47	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA51	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RA52	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA53	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RA55	24011105	CHIP, METAL FILM, 1/20W 1M OHM J
RA65	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA66	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA67	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA68	24011103	CHIP, METAL FILM, 1/20W 10K OHM J

Location No.	Parts No.	Description
RA72	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA73	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA74	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA75	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RA79	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RA80	24000445	CHIP JUMPER, 1608TYPE
RA81	24000445	CHIP JUMPER, 1608TYPE
RA82	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA87	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA90	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RB02	24872271	CHIP, METAL FILM, 1/16W 270 OHM J
RB03	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB04	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RB05	24872471	CHIP, METAL FILM, 1/16W 470 OHM J
RB06	24872271	CHIP, METAL FILM, 1/16W 270 OHM J
RB60	24872470	CHIP, METAL FILM, 1/16W 47 OHM J
RB61	24011103	CHIP, METAL FILM, 1/20W 10K OHM J (20VL43P)
RB62	24011153	CHIP, METAL FILM, 1/20W 15K OHM J (20VL43P)
RB63	24011223	CHIP, METAL FILM, 1/20W 22K OHM J (20VL43P)
RB64	24011393	CHIP, METAL FILM, 1/20W 39K OHM J (20VL43P)
RC61	24011103	CHIP, METAL FILM, 1/20W 10K OHM J (14VL43P)
RC62	24011153	CHIP, METAL FILM, 1/20W 15K OHM J (14VL43P)
RC63	24011223	CHIP, METAL FILM, 1/20W 22K OHM J (14VL43P)
RC64	24011393	CHIP, METAL FILM, 1/20W 39K OHM J (14VL43P)
RF01	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RF02	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RF03	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RF08	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RF09	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RF10	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RF11	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RF12	24552101	OXIDE METAL FILM, 1/2W 100 OHM J
RL01	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL02	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL03	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL04	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RL05	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL06	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL07	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL08	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL09	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL10	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RL11	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL12	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RL16	24000445	CHIP JUMPER, 1608TYPE (14VL43P)
RL17	24000445	CHIP JUMPER, 1608TYPE (14VL43P)
RL19	24000445	CHIP JUMPER, 1608TYPE
RL20	24000445	CHIP JUMPER, 1608TYPE (20VL43P)
RL23	24011153	CHIP, METAL FILM, 1/20W 15K OHM J
RL30	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RL31	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RL32	24011470	CHIP, METAL FILM, 1/20W 47 OHM J
RS01	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS02	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS03	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS04	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS05	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS06	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS07	24011102	CHIP, METAL FILM, 1/20W 1K OHM J

Location No.	Parts No.	Description
RS08	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS09	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS10	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS11	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS12	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS13	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS14	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS15	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS16	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS17	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS18	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS19	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS20	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RS21	24011683	CHIP, METAL FILM, 1/20W 68K OHM J
RS22	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS23	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RS24	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS25	24011564	CHIP, METAL FILM, 1/20W 560K OHM J
RS26	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RS27	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RS28	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RS29	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RS30	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RS31	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS32	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS33	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RT01	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RT02	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RT03	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RT04	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RT05	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RT06	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RT07	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RT08	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RT09	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RT10	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RT11	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RT12	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RT13	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RT14	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RT15	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RT16	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RT17	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RT18	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
RT19	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RT20	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RT21	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RT22	24011243	CHIP, METAL FILM, 1/20W 24K OHM J
RV01	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV02	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV03	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV04	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV05	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV06	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV07	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV08	24000445	CHIP JUMPER, 1608TYPE
RV09	24000445	CHIP JUMPER, 1608TYPE
RV10	24000445	CHIP JUMPER, 1608TYPE
RV12	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV13	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV14	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV15	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV19	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV20	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV21	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV22	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV23	24011101	CHIP, METAL FILM, 1/20W 100 OHM J

Location No.	Parts No.	Description
RV24	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV25	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV26	24552101	OXIDE METAL FILM, 1/2W 100 OHM J
RV28	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV29	24011181	CHIP, METAL FILM, 1/20W 180 OHM J
RV30	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV31	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV32	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV33	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV34	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV35	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV36	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV37	24872750	CHIP, METAL FILM, 1/16W 75 OHM J
RV38	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV39	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RV40	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RV41	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RV42	24011241	CHIP, METAL FILM, 1/20W 240 OHM J
RV43	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV44	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV45	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV46	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
COILS & TRANSFORMERS		
L101	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
L106	23103828	INDUCTOR, BEAD, TEM2121M
L107	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
L160	23289100	COIL, PEAKING, TRF4100AF
L204	23245856	COIL, CHIP INDUCTOR, TRF43R3CC
L205	23245856	COIL, CHIP INDUCTOR, TRF43R3CC
L206	23245856	COIL, CHIP INDUCTOR, TRF43R3CC
L212	23245856	COIL, CHIP INDUCTOR, TRF43R3CC
L213	23245856	COIL, CHIP INDUCTOR, TRF43R3CC
L214	23245856	COIL, CHIP INDUCTOR, TRF43R3CC
L215	23245856	COIL, CHIP INDUCTOR, TRF43R3CC
L601	23103828	INDUCTOR, BEAD, TEM2121M
L602	23103828	INDUCTOR, BEAD, TEM2121M
L603	23103828	INDUCTOR, BEAD, TEM2121M
L604	23103828	INDUCTOR, BEAD, TEM2121M
L605	23103828	INDUCTOR, BEAD, TEM2121M
L606	23103828	INDUCTOR, BEAD, TEM2121M
L607	23245858	COIL, CHIP INDUCTOR, TRF4100CC
L608	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
L609	23103828	INDUCTOR, BEAD, TEM2121M
L610	23103828	INDUCTOR, BEAD, TEM2121M
L805	24000824	CHIP JUMPER, 2125TYPE
L806	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
L807	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LA01	23245858	COIL, CHIP INDUCTOR, TRF4100CC
LL03	23246223	COIL, CHIP INDUCTOR, TRF4330CG
LT01	23246199	COIL, CHIP-INDUCTOR-2R2MMHJ, COLTRF42R2CG
LT02	23246199	COIL, CHIP-INDUCTOR-2R2MMHJ, COLTRF42R2CG
LT03	23246199	COIL, CHIP-INDUCTOR-2R2MMHJ, COLTRF42R2CG
LT09	24000824	CHIP JUMPER, 2125TYPE
LT10	23245854	COIL, CHIP, TRF42R2CC
LV02	23103828	INDUCTOR, BEAD, TEM2121M
LV03	23103828	INDUCTOR, BEAD, TEM2121M
LV04	23103828	INDUCTOR, BEAD, TEM2121M
LV05	23103828	INDUCTOR, BEAD, TEM2121M
LV06	23103828	INDUCTOR, BEAD, TEM2121M
LV07	23103828	INDUCTOR, BEAD, TEM2121M
LV08	23103828	INDUCTOR, BEAD, TEM2121M
LV18	23103828	INDUCTOR, BEAD, TEM2121M
LV19	23103828	INDUCTOR, BEAD, TEM2121M

Location No.	Parts No.	Description
LV23	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LV24	23245858	COIL, CHIP INDUCTOR, TRF4100CC
LV25	23245858	COIL, CHIP INDUCTOR, TRF4100CC
LV32	23103828	INDUCTOR, BEAD, TEM2121M
LV33	23103828	INDUCTOR, BEAD, TEM2121M
LV34	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
SEMICONDUCTORS		
Q102	23314204	TRANSISTOR, 2SC2412K,Q
Q160	23205140	TRANSISTOR, CHIP R1=R2=10K, DTC114EUAT106
Q162	23314993	TRANSISTOR, 2SC4081 Q
Q163	23205144	TRANSISTOR, CHIP R1=R2=47K, DTC144EUAT106
Q164	23314994	TRANSISTOR, 2SA1576A106
Q201	23314204	TRANSISTOR, 2SC2412K,Q
Q202	23314204	TRANSISTOR, 2SC2412K,Q
Q501	23000384	IC, COMBFILTER VIDEO PROCESSOR, VPC3230D
Q610	23009574	IC, AUDIO AMP 16P DIP ST, TDA7267A
Q611	70114396	TRANSISTOR, 2SC3326B
Q612	70114396	TRANSISTOR, 2SC3326B
Q613	23205045	TRANSISTOR, 2SA1037AKQ
Q614	70114396	TRANSISTOR, 2SC3326B
Q615	70114396	TRANSISTOR, 2SC3326B
Q630	23009574	IC, AUDIO AMP 16P DIP ST, TDA7267A
Q801	23009575	IC, DROP REGU TO252-3 ROHM, BA09FP-E2
Q802	23009576	IC, SW. REGU TO263-5 SANKEN, SI-8050JD
Q804	23009577	IC, SW. REGU TO263-5 SANKEN, SI-8033JD
Q805	23009578	IC, REGULATOR SOP8 SANKEN, SI-3025KS
Q807	23906441	IC, BA05FP
Q816	23314204	TRANSISTOR, 2SC2412K,Q
Q817	23205191	TRANSISTOR, FET, TPC8105-H(TE12L)
Q819	23314204	TRANSISTOR, 2SC2412K,Q
Q851	23314204	TRANSISTOR, 2SC2412K,Q
Q852	23314204	TRANSISTOR, 2SC2412K,Q
Q853	23205045	TRANSISTOR, 2SA1037AKQ
QA01	23009619	IC, MICON SQFP48P SANYO, LC863864A EU/ASIA
QA02	23009679	IC, 8192BITS CMOS EEPROM, BR24L08F-WE2
QA03	23009114	IC, BD4746G
QA07	23205142	TRANSISTOR, DTC124EKAT146
QB01	23314204	TRANSISTOR, 2SC2412K,Q
QB02	23314204	TRANSISTOR, 2SC2412K,Q
QB03	23205045	TRANSISTOR, 2SA1037AKQ
QF01	23009620	IC, RGB-SW DIP-16 ST, TEA5114A
QF02	70114396	TRANSISTOR, 2SC3326B
QF03	70114396	TRANSISTOR, 2SC3326B
QF04	70114396	TRANSISTOR, 2SC3326B
QF05	70114396	TRANSISTOR, 2SC3326B
QL01	23009611	IC, IC SCALER SQFP144 SANYO, LC74986W-8B12F-E
QL10	23205192	TRANSISTOR, FET EMT3 ROHM, 2SK3019__TL
QL11	23205192	TRANSISTOR, FET EMT3 ROHM, 2SK3019__TL
QS01	23314204	TRANSISTOR, 2SC2412K,Q
QS02	23314204	TRANSISTOR, 2SC2412K,Q
QS03	23205137	TRANSISTOR, CHIP R1=R2=47K, DTA144EKAT146
QS04	70114396	TRANSISTOR, 2SC3326B
QS05	70114396	TRANSISTOR, 2SC3326B
QS06	23314204	TRANSISTOR, 2SC2412K,Q
QS07	23314204	TRANSISTOR, 2SC2412K,Q
QS08	70114396	TRANSISTOR, 2SC3326B
QS09	70114396	TRANSISTOR, 2SC3326B

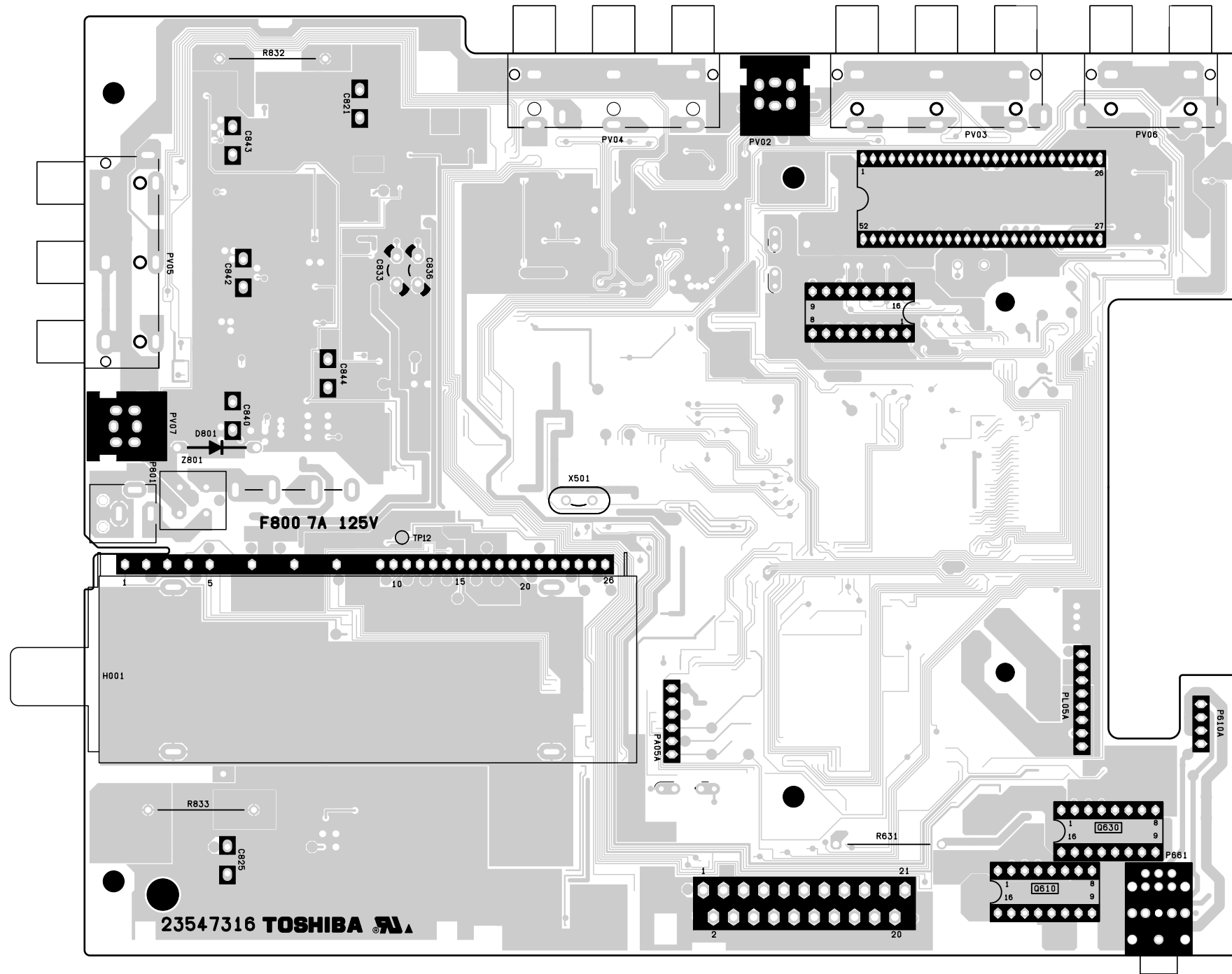
Location No.	Parts No.	Description
QS20	23314204	TRANSISTOR, 2SC2412K,Q
QS21	23314204	TRANSISTOR, 2SC2412K,Q
QS22	23205045	TRANSISTOR, 2SA1037AKQ
QT01	23000994	IC, SAA5264PS
QT02	23009581	IC, 4096BITS CMOS EEPROM, BR24L04F-WE2
QT03	23205045	TRANSISTOR, 2SA1037AKQ
QT04	23205045	TRANSISTOR, 2SA1037AKQ
QT05	23314204	TRANSISTOR, 2SC2412K,Q
QV01	70129558	IC, MM1231XF
QV02	70129558	IC, MM1231XF
QV04	23205142	TRANSISTOR, DTC124EKAT146
QV05	23205142	TRANSISTOR, DTC124EKAT146
QV06	23314204	TRANSISTOR, 2SC2412K,Q
QV07	23314204	TRANSISTOR, 2SC2412K,Q
QV08	23205045	TRANSISTOR, 2SA1037AKQ
D101	23357378	DIODE, ZENER VZ=32.15-33.79, UDZS TE-17 33B
D201	23357037	DIODE, ZENER, UDZS5.6B
D202	23357037	DIODE, ZENER, UDZS5.6B
D203	23357037	DIODE, ZENER, UDZS5.6B
D204	23357037	DIODE, ZENER, UDZS5.6B
D205	23357037	DIODE, ZENER, UDZS5.6B
D206	23357037	DIODE, ZENER, UDZS5.6B
D207	23357037	DIODE, ZENER, UDZS5.6B
D208	23357037	DIODE, ZENER, UDZS5.6B
D209	23357037	DIODE, ZENER, UDZS5.6B
D210	23357037	DIODE, ZENER, UDZS5.6B
D211	23357037	DIODE, ZENER, UDZS5.6B
D602	23316231	DIODE, 1SS355
D603	23316231	DIODE, 1SS355
D608	23357037	DIODE, ZENER, UDZS5.6B
D609	23357037	DIODE, ZENER, UDZS5.6B
D610	23357037	DIODE, ZENER, UDZS5.6B
D611	23357037	DIODE, ZENER, UDZS5.6B
D612	23357037	DIODE, ZENER, UDZS5.6B
D613	23357037	DIODE, ZENER, UDZS5.6B
D801	23118094	DIODE, EU2A
D802	23316382	DIODE, SFPB-64V
D803	23316382	DIODE, SFPB-64V
D821	23316231	DIODE, 1SS355
D826	23118048	DIODE, CHIP VRM80V 100MA SER USMMA143A
D827	23118048	DIODE, CHIP VRM80V 100MA SER USMMA143A
D828	23118048	DIODE, CHIP VRM80V 100MA SER USMMA143A
D851	23316573	DIODE, ZENER, MA8062-L
D852	23316231	DIODE, 1SS355
D853	23316542	DIODE, ZENER CHIP VZ3.70-3.97V, MA8039-L, TX
D854	23316231	DIODE, 1SS355
DA01	23316231	DIODE, 1SS355
DA02	23316231	DIODE, 1SS355
DA03	23316231	DIODE, 1SS355
DA04	23316231	DIODE, 1SS355
DA06	23316231	DIODE, 1SS355
DB01	23358535	DIODE, LED, SPR-325MVWMNP
DB02	23358536	DIODE, LED, SLR-332MG3FMNP
DF01	23357384	DIODE, ZENER VZ=11.74-12.24, UDZS TE-17 12B
DF02	23357384	DIODE, ZENER VZ=11.74-12.24, UDZS TE-17 12B
DF03	23357384	DIODE, ZENER VZ=11.74-12.24, UDZS TE-17 12B
DF04	23357384	DIODE, ZENER VZ=11.74-12.24, UDZS TE-17 12B

Location No.	Parts No.	Description
DF05	23357384	DIODE, ZENER VZ=11.74-12.24, UDZS TE-17 12B
DV01	23357037	DIODE, ZENER, UDZS5.6B
DV02	23357037	DIODE, ZENER, UDZS5.6B
DV03	23357037	DIODE, ZENER, UDZS5.6B
DV04	23357037	DIODE, ZENER, UDZS5.6B
DV05	23357037	DIODE, ZENER, UDZS5.6B
DV06	23357037	DIODE, ZENER, UDZS5.6B
DV32	23357037	DIODE, ZENER, UDZS5.6B
DV33	23357037	DIODE, ZENER, UDZS5.6B
DV34	23357037	DIODE, ZENER, UDZS5.6B
DV35	23357037	DIODE, ZENER, UDZS5.6B
MISCELLANEOUS		
B205	23721308	SCREW, PP+SW+2W SZN
F800	23144458	FUSE, 5.0A 250V
F800A	23165433	FUSE HOLDER, 5.2 SOC
F800B	23165433	FUSE HOLDER, 5.2 SOC
GRA01	24000445	CHIP JUMPER, 1608TYPE
GRA02	24000445	CHIP JUMPER, 1608TYPE
GRL01	24000445	CHIP JUMPER, 1608TYPE (14VL43P)
GRL02	24000445	CHIP JUMPER, 1608TYPE (20VL43P)
GRL05	24000824	CHIP JUMPER, 2125TYPE
GRL06	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
GRV01	24000445	CHIP JUMPER, 1608TYPE
KB01	70113206	REMOCON RECEIVER, PIC-37143TC5
MA02	23389171	CABLE, FFC P1.0-5-380
ML02	23389172	CABLE, FFC P0.5-50-320
SA01	23344489	SWITCH, TACT SW A/I VERT PANA, EVQ11L07K (20VL43P)
SA02	23344489	SWITCH, TACT SW A/I VERT PANA, EVQ11L07K (20VL43P)
SA03	23344489	SWITCH, TACT SW A/I VERT PANA, EVQ11L07K (20VL43P)
SA04	23344489	SWITCH, TACT SW A/I VERT PANA, EVQ11L07K (20VL43P)
SA05	23344489	SWITCH, TACT SW A/I VERT PANA, EVQ11L07K (20VL43P)
SA06	23344491	SWITCH, POWER PUSH 1C1P MAT, ESB64807 (20VL43P)
SC01	23344490	SWITCH, TACT SW A/I VERT PANA, EVQPLHA15 (14VL43P)
SC02	23344490	SWITCH, TACT SW A/I VERT PANA, EVQPLHA15 (14VL43P)
SC03	23344490	SWITCH, TACT SW A/I VERT PANA, EVQPLHA15 (14VL43P)
SC04	23344490	SWITCH, TACT SW A/I VERT PANA, EVQPLHA15 (14VL43P)
SC05	23344490	SWITCH, TACT SW A/I VERT PANA, EVQPLHA15 (14VL43P)
SC06	23344490	SWITCH, TACT SW A/I VERT PANA, EVQPLHA15 (14VL43P)
X501	23153545	CRYSTAL RESONATOR, 20.25 20PPM CRYSTAL
XA01	23153566	CRYSTAL RESONATOR, 32.768KHZ, SP-T2A 20PPM 6.0PF
XL01	23153565	CRYSTAL RESONATOR, TPS15XC VXO, TPS15XC(TPS23)
XT01	23153930	CRYSTAL, 12.000 25PPM 40OHM 7PF
ZP01	23144718	FUSE, PROTECT 2000 11CT, PRF2000 11CT
ZP02	23144719	FUSE, PROTECT 5000 11CT, PRF5000 11CT
ZP04	23144718	FUSE, PROTECT 2000 11CT, PRF2000 11CT
ZP05	23144718	FUSE, PROTECT 2000 11CT, PRF2000 11CT
PC BOARD ASSEMBLIES		
* U001	72790545	INVERTER BOARD, DS-1020WF-1, 20LF10 (20VL43P)

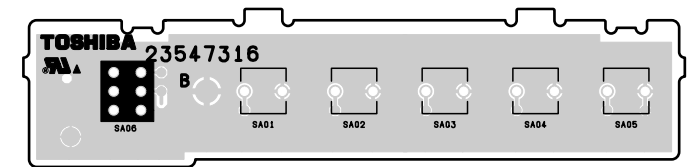
Location No.	Parts No.	Description
* U001	72790542	INVERTER BOARD, DS-1044WF, 14LF10 (14VL43P)
* U002	72790546	INVERTER BOARD, DS-1020WF-2, 20LF10 (20VL43P)
* U902A	23788776	MAIN BOARD, PD1268A-1 (20VL43P)
* U902A	23788780	MAIN BOARD, PD1268B-1 (14VL43P)
* U902B	23788777	CONT-SW BOARD, PD1268A-2 (20VL43P)
* U902B	23788781	CONT-SW BOARD, PD1268B-2 (14VL43P)
* U902C	23788778	CONT-LED BOARD, PD1268A-3 (20VL43P)
* U902C	23788782	CONT-LED BOARD, PD1268B-3 (14VL43P)
* U902D	23788779	CONT-SW BOARD, PD1268A-4 (20VL43P)
* U902D	23788783	CONT-SW BOARD, PD1268B-4 (14VL43P)
LCD PANEL		
△ V001	23301522	DISPLAY, A-SITFT 20 450CD, LTA200A030F (20VL43P)
△ V001	23301518	DISPLAY, LTA140C060F (14VL43P)
TUNER		
H001	23321468	TUNER, HYP.MULT FS 38.9M TIM, EG981LW
ACCESSORIES		
K902	23306498	REMOCON HAND UNIT IR, CTVUSA, CT-90160
Y101	23565967	OWNER'S MANUAL, LCD-TV EURO, 20VL43P
Y120	23945015	BAG, POLYETHYLENE COVER 250X400
CABINET PARTS		
△ A201	23450654	PANEL, FRONT 20VL73P (20VL43P)
△ A201	23450657	PANEL, FRONT 14VL73P (14VL43P)
△ A202	23450669	PANEL, BACK 20VL43P (20VL43P)
△ A202	23450670	PANEL, BACK 14VL43P (14VL43P)
A203	23448674	CASE, FRONT 20VL43U
A204	23448675	CASE, BACK 20VL43U
A205	23530830	COVER, SIDE-L 20VL73P
A206	23530833	COVER, SIDE R 20VL73P
A207	23351211	SPEAKER, BLOCK 20VL (20VL43P)
A208	23445712	BUTTON, POWER 20VL (20VL43P)
A209	23445713	BUTTON, OPERATION 20VL (20VL43P)
A209	23445714	BUTTON, OPERATION 14VL
A215	23436810	FOOT, STAND 20VL (20VL43P)
A215	23436811	FOOT, STAND 14VL (14VL43P)
A223	23467755	HINGE, TILT PANEL L 20VL
A224	23467756	HINGE, TILT PANEL R 20VL
A227	23466189	CUSHION, LEG 20VL (20VL43P)
A227	23466192	CUSHION, LEG 14VL43 (14VL43P)
A231	23974994	BAND, KESSOKU
A419	23950113	LABEL, SERIAL NUMBER, TTX3
A700	23067285	CARTON, BOX_20VL43P (20VL43P)
A700	23067288	CARTON, BOX_14VL43P (14VL43P)
A701	23518330	PACKING, UNT 20VL43P (20VL43P)
A701	23518334	PACKING, UNT 14VL43P (14VL43P)
A702A	23946520	PACKING, PAD L 20VL43 (20VL43P)
A702B	23946521	PACKING, PAD R 20VL43 (20VL43P)
A705	23943618	POLYETHYLENE BAG (20VL43P)
A705	23943871	COVER, POLY BAG (14VL43P)

**THIS PAGE IS
INTENTIONALLY LEFT
BLANK.**

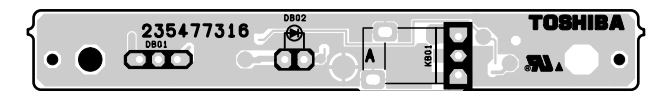
MAIN BOARD PD1268-1
BOTTOM (FOIL) SIDE



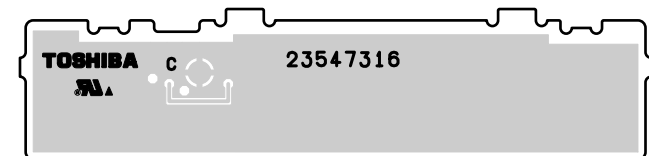
CONT-SW BOARD PD1268-2
BOTTOM (FOIL) SIDE



CONT-LED BOARD PD1268-3
BOTTOM (FOIL) SIDE



CONT-SW BOARD PD1268-4
BOTTOM (FOIL) SIDE



SCHEMATIC DIAGRAM

MODEL : 20VL43P / 14VL43P

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

CAUTION: The international hazard symbols " Δ " 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 PRODUCT SAFETY NOTICE on the MANUAL for this model. 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 1/6W 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 10W = 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 50V, unless otherwise noted as the following marks.
—|+|— Electrolytic capacitor —|@|— Mylar capacitor
- 3.** The parts indicated with " Δ " 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 220 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.

■ SCHEMATIC DIAGRAM STRUCTURE:

AC INPUT Circuit	1/2
ALL CONTROL Circuit	2/2

SPECIFICATIONS

Colour system	PAL/SECAM/NTSC4.43/NTSC3.58* *EXT input only	
Sound system	BG/DK/I/L	
Rated voltage	100V-240VAC 50/60 Hz.	
Power consumption	14VL43P: 45W 20VL43P: 60W	
Display	TFT Active Matrix LCD VGA: 640(H) dots ~ 480(V) dots	
Audio power	2.5W + 2.5W	
Speaker type	45 mm round 2pcs.	
External Connections	EXT1:	Video input + S-Video input + Audio (L+R) input
	EXT2:	21pin SCART (RGB input, A/V input, TV out) Video input + S-Video input + Audio (L+R) input
	OUTPUT:	Audio (L+R), Phone jack
Dimensions	14VL43P:	Width 358mm Height 416.5mm Depth 177mm
	20VL43P:	Width 493mm Height 523mm Depth 198mm
Mass	14VL43P:	9.1lbs. (4.15kg)
	20VL43P:	13.9lbs. (6.3kg)
Accessories	Remote control with two batteries. (R03 size "AAA") Power cord, AC Adaptor (This AC adaptor can be only used for this LCD TV. Do not use for other apparatus.)	

* Please refer to owner's manual in detail.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

If you need more information on Computer and Electronic Repair, please visit these websites to improve yourself.

<http://www.fastrepairguide.com>

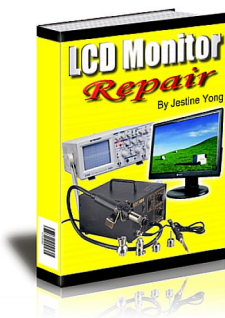
<http://www.protech2u.com>

<http://www.plasma-television-repair.com>

<http://www.lcd-television-repair.com>

Happy Repairing!!

Highly Recommended Repair Ebook:

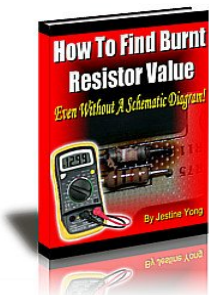


If you're a LCD Monitor repairer, then this is the best guide for you. Why? Because, the author revealed all his LCD Monitor Repairing secrets for you. I think, with just few Repair tips you learned from this guide you will get back your investment!

[Click Here to read](#) more.



This eBook will show you how to test the electronic component correctly and accurately. Some of you may say that I don't need this eBook because it is too simple! Do you know that, in fact there is lots of testing electronic components secrets I have learned from this guide? Do you know how to test a 'TRIAC' correctly and accurately? If you answer no then I guess you have to get this eBook. [Click Here to read more.](#)



Are you tired of searching the service manuals to look for the value of a burnt resistor? If the answer is YES, then this eBook is a 'must have' guide for you. You can save a lot of time and be able to repair customer's Electronic equipment with burnt resistors in it.

[Click here to read more.](#)