

SYLVANIA

SERVICE MANUAL

Sec. 1: Main Section

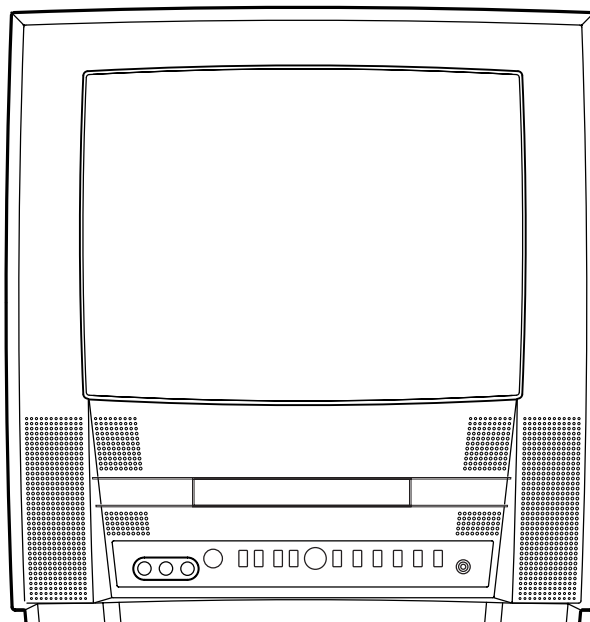
- Specifications
- Adjustment Procedures
- Schematic Diagrams
- CBA's

**Sec. 2: Exploded views
and Parts List Section**

- Exploded views
- Parts List

13" COLOR TV/DVD

C6513DD



IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.

It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

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MAIN SECTION

13" COLOR TV/DVD

C6513DD

Sec. 1: Main Section

- Specifications
- Adjustment Procedures
- Schematic Diagrams
- CBA's

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SPECIFICATIONS

< TV Section >

✳Test input terminal

<Except Tuner>-----Video input (1Vp-p)
Audio input (-10dB)

<Tuner>-----Ant. input (80dB μ V) Video: 87.5%
Audio: 25kHz dev (1kHz Sin)

<DEFLECTION>

Description	Condition	Unit	Nominal	Limit
1. Over Scan	—	%	90	—
2. Linearity	Horizontal	%	—	15
	Vertical	%	—	10
3. High Voltage	—	kV	22	—

<VIDEO & CHROMA>

Description	Condition	Unit	Nominal	Limit
1. Misconvergence	Center	m/m	—	0.4
	Corner	m/m	—	1.9
	Side	m/m	—	1.4
2. Tint Control Range	—	deg	± 30	—
3. Contrast Control Range	—	dB	6	2
4. Brightness (100% White Full Field)	Contrast: Max	ft-L	55	40
5. Color Temperature	—	K	9200	—

<TUNER>

Description	Condition	Unit	Nominal	Limit
1. Video S/N (80dB μ V, TV4ch)	—	dB	45	40
2. Audio S/N (W/LPF)	—	dB	45	40
3. Audio Output Power at Speaker	—	W	1	0.8

Note: Nominal specifications represent the design specifications. All units should be able to approximate these. Some will exceed and some may drop slightly below these specifications. Limit specifications represent the absolute worst condition that still might be considered acceptable. In no case should a unit fail to meet limit specifications.

<DVD Section>

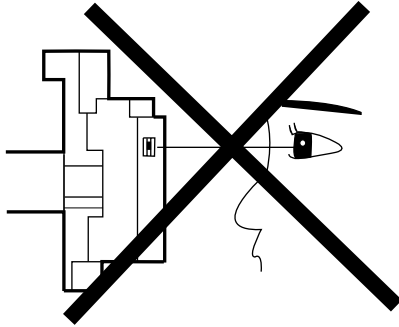
ITEM	CONDITIONS	UNIT	NOMINAL	LIMIT
1. Video Output	75 ohm load	Vpp	1.0	± 0.1
2. Coaxial Digital Out	75 ohm load	mVpp	500	± 100
3. Audio (PCM)				
3-1. Output Level	1kHz 0dB	Vrms	2.0	
3-2. S/N		dB	85	
3-3. Freq. Response				
DVD	fs=48kHz 20~22kHz	dB	± 0.5	
CD	fs=44.1kHz 20~20 kHz	dB	± 0.5	
3-4. THD+N				
DVD	1 kHz 0dB	%	0.0025	
CD	1 kHz 0dB	%	0.003	

NOTES:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply : AC120 V 60 Hz
3. Load imp. : 100 K ohm
4. Room ambient temperature: +25 °C

LASER BEAM SAFETY PRECAUTIONS

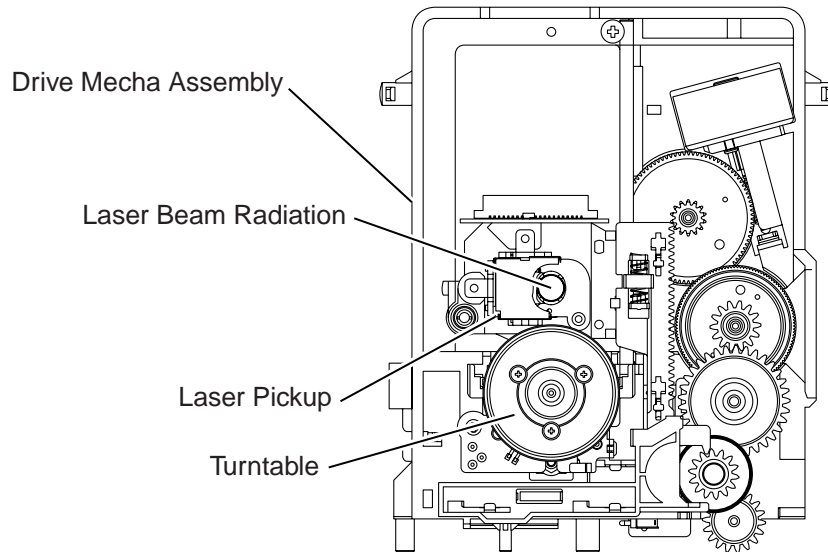
This DVD player uses a pickup that emits a laser beam.



Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

Caution: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.



CAUTION
LASER RADIATION
WHEN OPEN. DO NOT
STARE INTO BEAM.

Location: Inside Top of DVD mechanism.

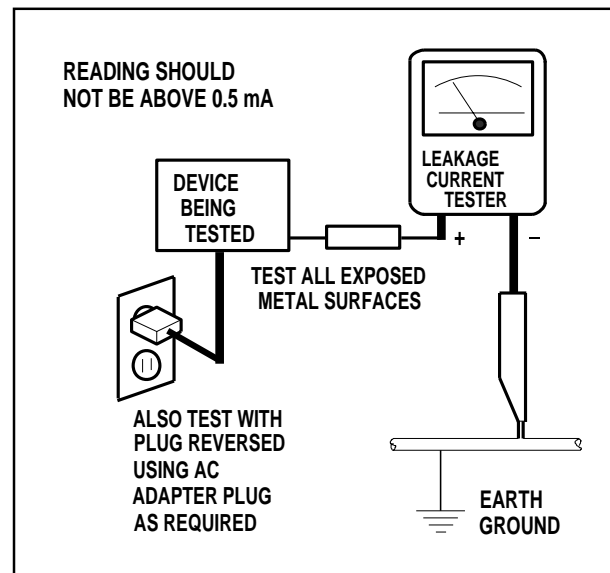
IMPORTANT SAFETY PRECAUTIONS

Prior to shipment from the factory, our products are strictly inspected for recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Safety Precautions for TV Circuit

1. **Before returning an instrument to the customer**, always make a safety check of the entire instrument, including, but not limited to, the following items:
 - a. Be sure that no built-in protective devices are defective and have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**
 - b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.
 - c. **Antenna Cold Check** - With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.
 - d. **Leakage Current Hot Check** - With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leak-

age current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal water pipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle brackets, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milli-ampere. Reverse the instrument power cord plug in the outlet and repeat the test.



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.

- e. **X-Radiation and High Voltage Limits** - Because the picture tube is the primary potential source of X-radiation in solid-state TV receivers, it is specially constructed to prohibit X-radiation emissions. For continued X-radiation protection, the replacement picture tube must be the same type as the original. Also, because the picture tube shields and mounting hardware perform an X-radiation protection function, they must be correctly in place. High voltage must be measured each time servic-

ing is performed that involves B+, horizontal deflection or high voltage. Correct operation of the X-radiation protection circuits also must be reconfirmed each time they are serviced. (X-radiation protection circuits also may be called "horizontal disable" or "hold down.") Read and apply the high voltage limits and, if the chassis is so equipped, the X-radiation protection circuit specifications given on instrument labels and in the Product Safety & X-Radiation Warning note on the service data chassis schematic. High voltage is maintained within specified limits by close tolerance safety-related components/adjustments in the high-voltage circuit. If high voltage exceeds specified limits, check each component specified on the chassis schematic and take corrective action.

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.

3. **Design Alteration Warning** - Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and may make you, the servicer, responsible for personal injury or property damage resulting therefrom.

4. **Picture Tube Implosion Protection Warning** - The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; because of potential hazard, do not try to remove such "permanently attached" yokes from the picture tube.

5. **Hot Chassis Warning** -

a. Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safety-serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter, measure between the chassis and a known

earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground.

b. Some TV receiver chassis normally have 85V AC(RMS) between chassis and earth ground regardless of the AC plug polarity. This chassis can be safety-serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection.

c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulation material that must not be defeated or altered.

6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges, b. near thermally hot parts-be sure that leads and components do not touch thermally hot parts, c. the AC supply, d. high voltage, and e. antenna wiring. Always inspect in all areas for pinched, out of place, or frayed wiring. Check AC power cord for damage.

7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

8. **Product Safety Notice** - Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc.. Parts that have special safety characteristics are identified by a (▲) on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are strictly inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

- A.** Parts identified by the (▲) symbol are critical for safety.
Replace only with part number specified.
- B.** In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.
- C.** Use specified internal wiring. Note especially:
- 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
- D.** Use specified insulating materials for hazardous live parts. Note especially:
- 1) Insulation Tape
 - 2) PVC tubing
 - 3) Spacers
 - 4) Insulators for transistors.
- E.** When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.
- F.** Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)
- G.** Check that replaced wires do not contact sharp edged or pointed parts.
- H.** When a power cord has been replaced, check that 5~6 kg of force in any direction will not loosen it.
- I.** Also check areas surrounding repaired locations.
- J.** Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.
- K.** Crimp type wire connector
When replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, in order to prevent shock hazards, perform carefully and precisely the following steps.
Replacement procedure
- 1) Remove the old connector by cutting the wires at a point close to the connector.
Important: Do not re-use a connector (discard it).
 - 2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
 - 3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
 - 4) Use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.
- L.** When connecting or disconnecting the TV/DVD connectors, first, disconnect the AC plug from AC supply socket.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1: Ratings for selected area

AC Line Voltage	Region	Clearance Distance (d) (d')
110 to 130 V	USA or CANADA	≥ 3.2 mm (0.126 inches)

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method: (Power ON)

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z . See Fig. 2 and following table.

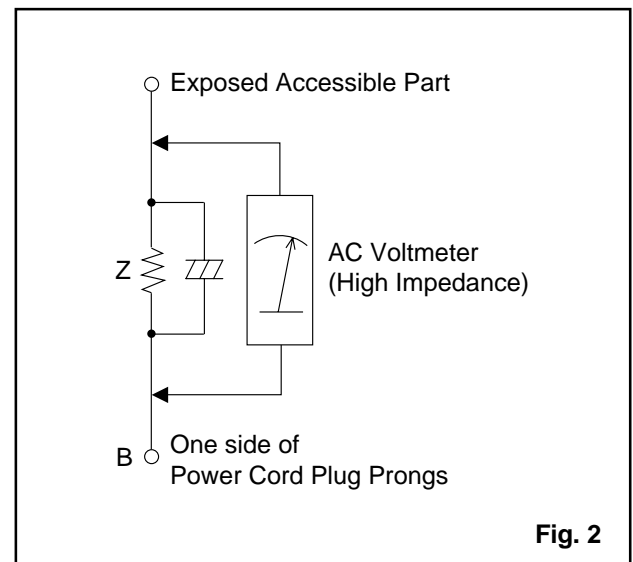
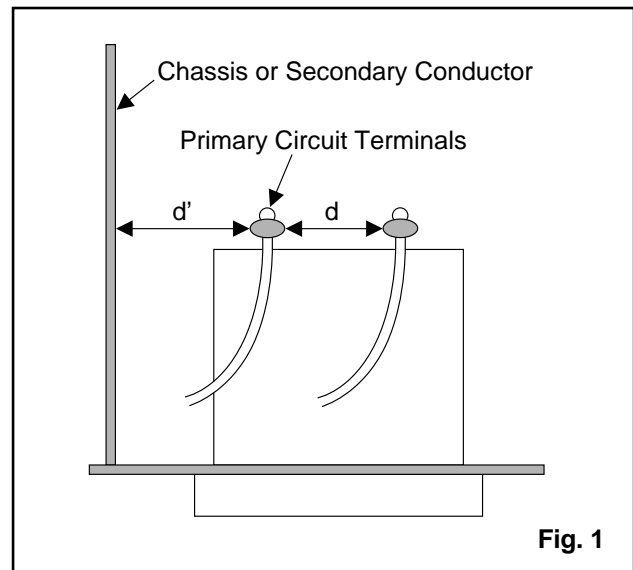


Table 2: Leakage current ratings for selected areas

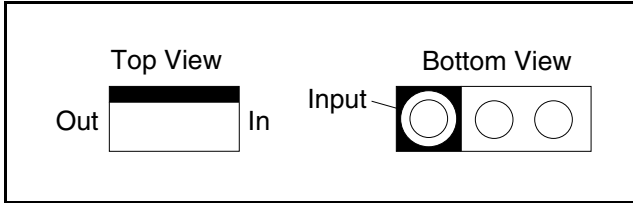
AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
110 to 130 V	USA or CANADA	0.15 μ F CAP. & 1.5k Ω RES. connected in parallel	$i \leq 0.5$ mA rms	Exposed accessible parts

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

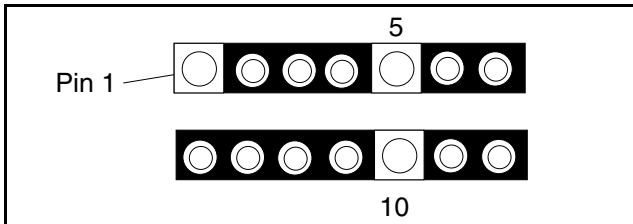
STANDARD NOTES FOR SERVICING

Circuit Board Indications

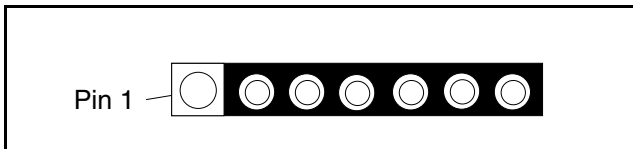
1. The output pin of the 3 pin Regulator ICs is indicated as shown:



2. For other ICs, pin 1 and every 5th pin is indicated as shown:

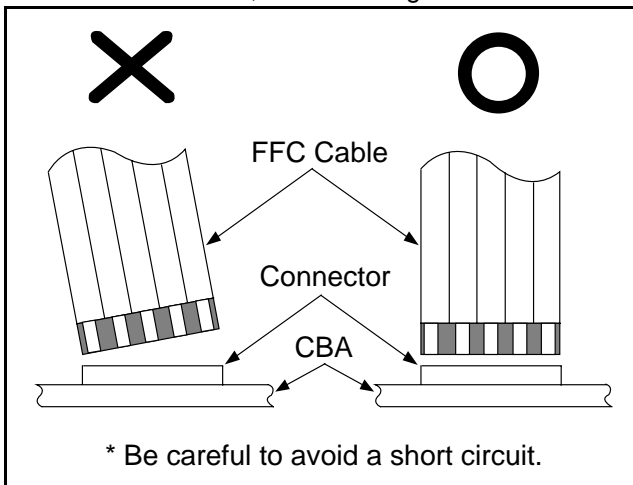


3. The 1st pin of every pin connector are indicated as shown:



Instructions for Connectors

1. When you connect or disconnect FFC cable (connector), be sure to disconnect the AC cord.
2. FFC cable (connector) should be inserted parallel into the connector, not at an angle.



[CBA= Circuit Board Assembly]

How to Remove / Install Flat Pack IC

Caution:

3. Do not apply the hot air to the chip parts around the Flat Pack-IC for over 6 seconds as damage may occur to the chip parts. Put Masking Tape around the Flat Pack-IC to protect other parts from damage. (Fig. S-1-2)
4. The Flat Pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or solder lands under the IC when removing it.

1. Removal

With Hot - Air Flat Pack - IC Desoldering Machine:

- a. Prepare the Hot - Air Flat Pack - IC Desoldering Machine, then apply hot air to Flat Pack - IC (about 5~6 seconds). (Fig. S-1-1)
- b. Remove the Flat Pack- IC with tweezers while applying the hot air.

With Soldering Iron:

- a. Using desoldering braid, remove the solder from all pins of the Flat Pack - IC. When you use solder flux which is applied to all pins of the Flat Pack - IC, you can remove it easily. (Fig. S-1-3)
- b. Lift each lead of the Flat Pack - IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air Desoldering Machine. (Fig. S-1-4)

With Iron Wire:

- a. Using desoldering braid, remove the solder from all pins of the Flat Pack - IC. When you use solder flux which is applied to all pins of the Flat Pack - IC, you can remove it easily. (Fig. S-1-3)
- b. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
- c. Pull up on the wire as the solder melts so as to lift the IC leads from the CBA contact pads, while heating the pins using a fine tip soldering iron or hot air blower.

Note:

When using a soldering iron, care must be taken to ensure that the Flat Pack - IC is not being held by glue, or when it is removed from the CBA, it may be damaged if force is used.

2. Installation

- a. Using desoldering braid, remove the solder from the foil of each pin of the Flat Pack - IC on the CBA, so you can install a replacement Flat Pack - IC more easily.

- b. The "●" mark on the Flat Pack - IC indicates pin 1 (See Fig. S-1-6). Make sure this mark matches the 1 on the CBA when positioning for installation. Then pre - solder the four corners of the Flat Pack-IC (See Fig. S-1-7).
- c. Solder all pins of the Flat Pack - IC. Make sure that none of the pins have solder bridges.

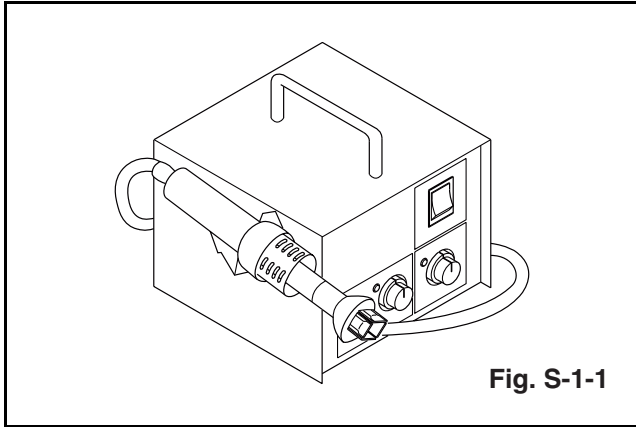


Fig. S-1-1

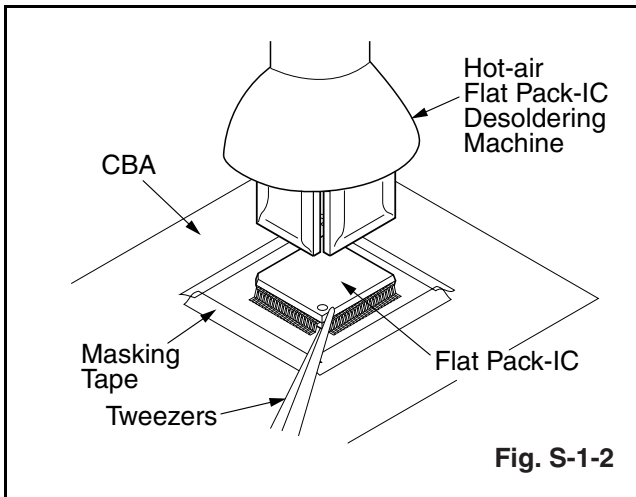


Fig. S-1-2

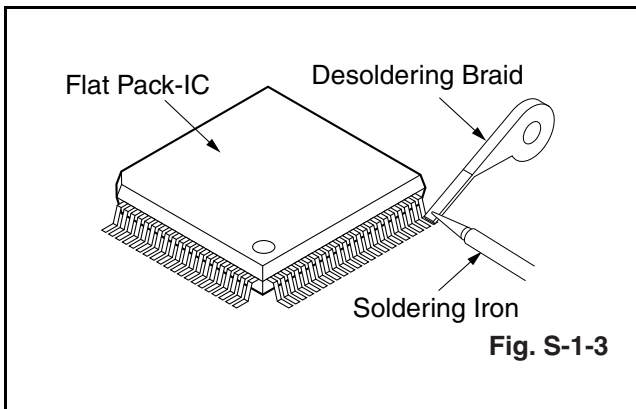


Fig. S-1-3

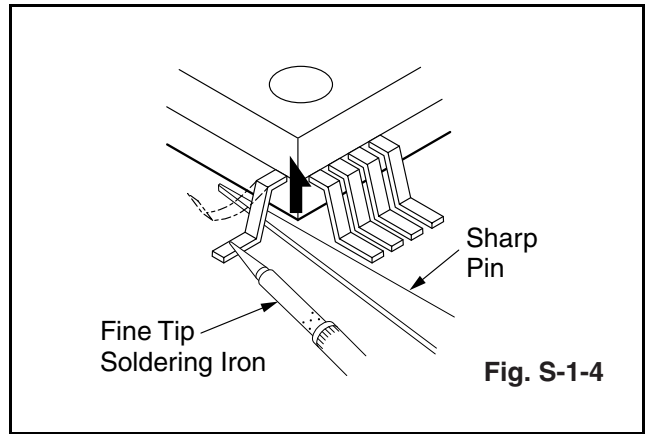


Fig. S-1-4

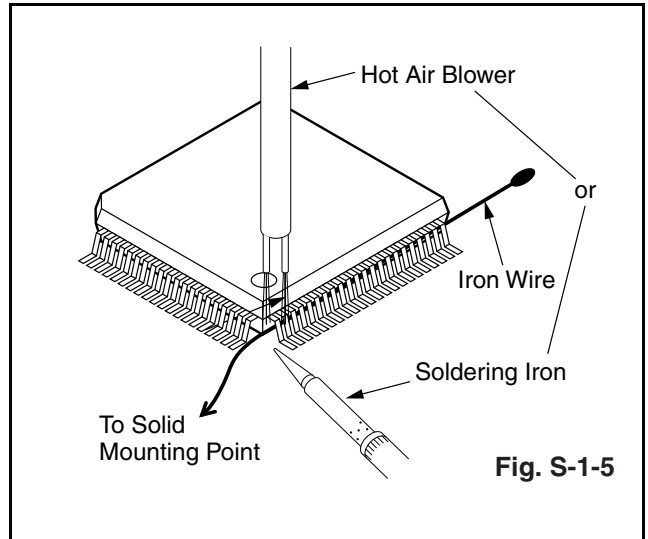
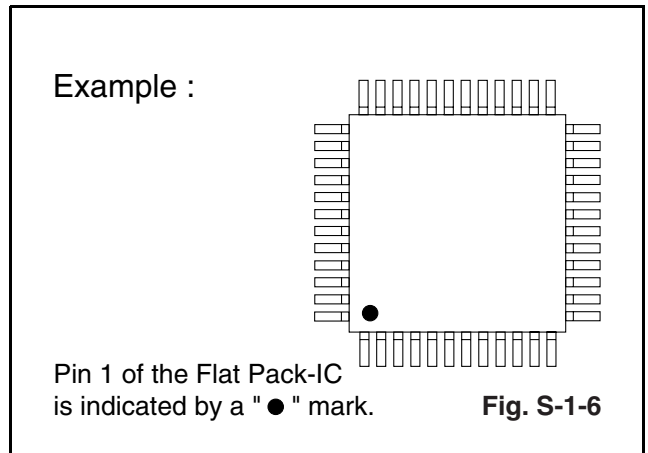


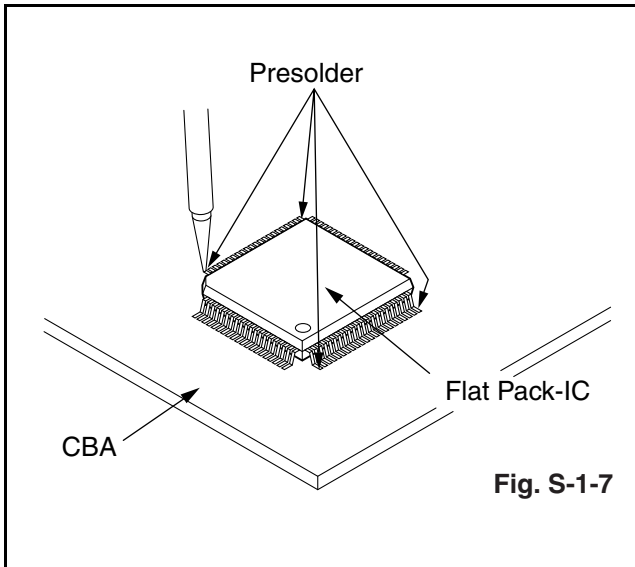
Fig. S-1-5



Example :

Pin 1 of the Flat Pack-IC is indicated by a "●" mark.

Fig. S-1-6



Instructions for Handling Semiconductors

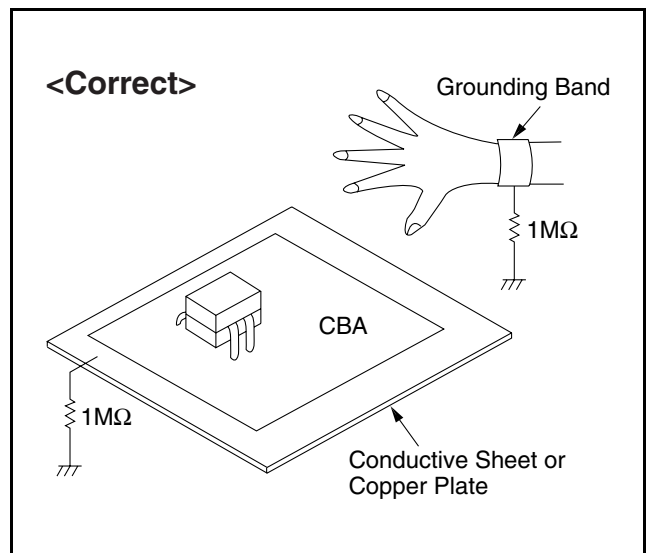
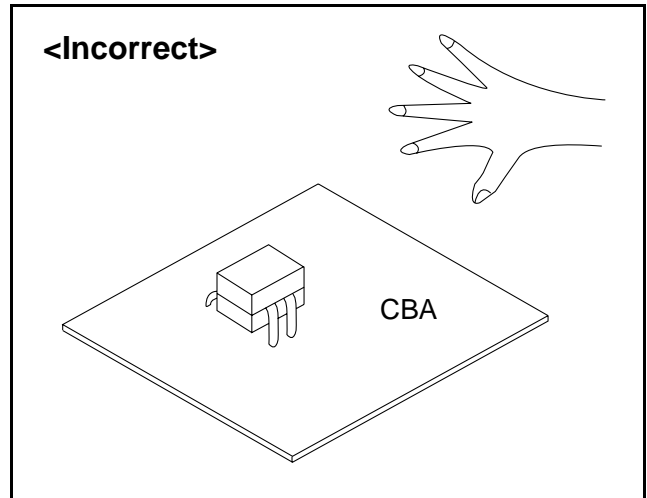
Electrostatic breakdown of the semiconductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

Ground for Human Body

Be sure to wear a grounding band ($1M\Omega$) that is properly grounded to remove any static electricity that may be charged on the body.

Ground for Work Bench

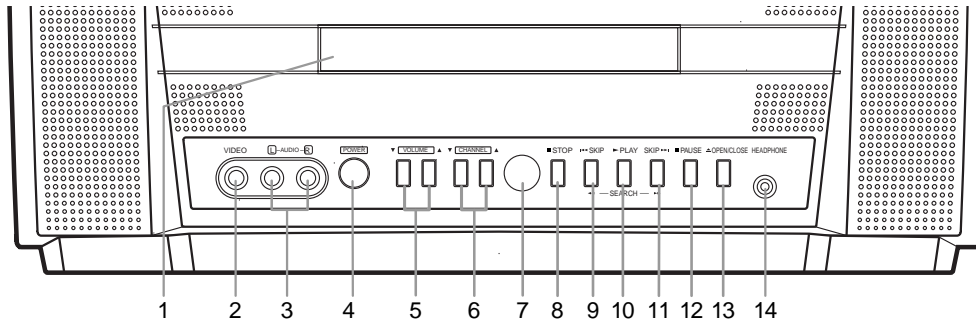
Be sure to place a conductive sheet or copper plate with proper grounding ($1M\Omega$) on the work bench or other surface, where the semiconductors are to be placed. Because the static electricity charge on the clothing will not escape through the body grounding band, be careful to avoid contacting semiconductors to clothing.



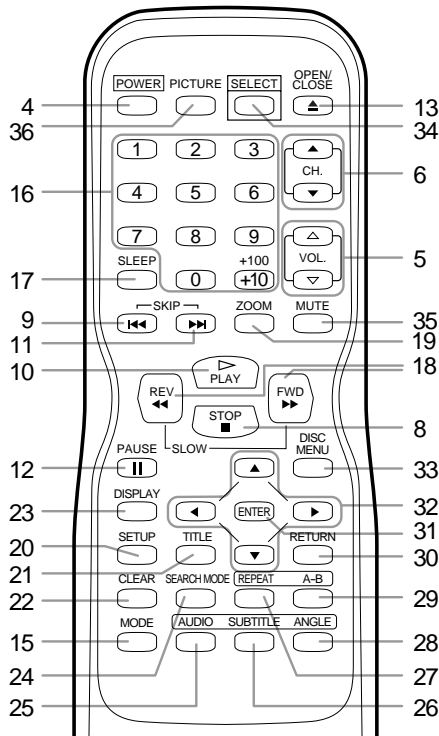
OPERATING CONTROLS AND FUNCTIONS

This manual covers 13" and 19". The operation of the two models are exactly the same except the appearance. 13" model is illustrated in this manual.

TV/DVD FRONT PANEL



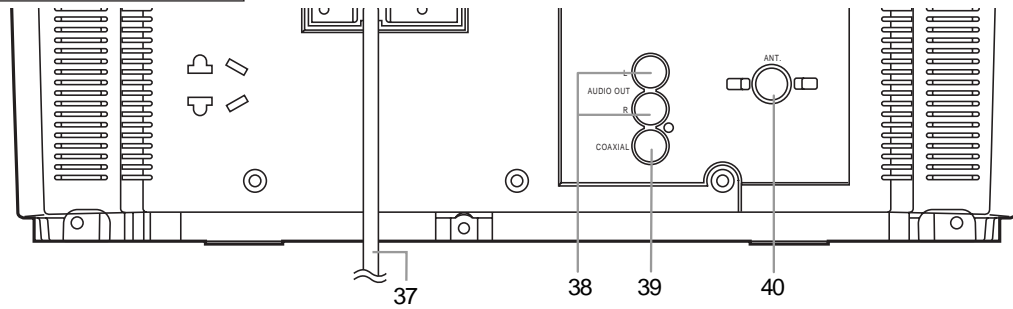
REMOTE CONTROL



1. **Disc loading tray**
2. **VIDEO input Jack**
Connect to the video output jack of a video camera or VCR.
3. **AUDIO L/R input Jacks**
Connect to the audio output jacks of a video camera or VCR.
4. **POWER Button**
Press to turn the power on and off.
5. **VOLUME ▲/▼ (VOL. ▲/▼) Buttons**
Press to control the volume level for the DVD and TV.
6. **CHANNEL ▲/▼ (CH. ▲/▼) Buttons**
Press to select memorized channel.
Press to change to TV mode when DVD mode.
7. **Remote Sensor Window**

8. **STOP Button**
Stops operation of the disc.
9. **SKIP ◀◀ Button**
Plays back from the beginning of the current chapter or track.
SEARCH (REV) ◀◀ Button (Front Panel)
During playback or in the pause mode, press and hold button down for a few seconds to change reverse playback speed.
10. **PLAY Button**
Starts playback of the disc contents.
Press to change to DVD mode when TV mode.
11. **SKIP ▶▶ Button**
Plays back from the beginning of the next chapter or track.
SEARCH (FWD) ▶▶ Button (Front Panel)
During playback or in the pause mode, press and hold button down for a few seconds to change forward playback speed.
12. **PAUSE Button**
Pauses the current disc operation.
13. **OPEN/CLOSE Button**
Press to insert discs into or remove them from the tray.
14. **HEADPHONE Jack**
To connect headphone (not supplied) for personal listening.
15. **MODE Button**
Activates program playback or random playback mode when playing CDs or MP3.
16. **Number Button**
TV Mode:
Press two digits to directly access the desired channel.
Remember to press a "0" before a single digit channel.
+100 Button-
Press to select cable channels which are equal or greater than number 100.
DVD Mode:
Press to enter the desired number.
+10 Button-
Press to enter the desired numbers which are equal or greater than number 10.

TV/DVD REAR VIEW



17. SLEEP Button

Press SLEEP to display the sleep timer and start the function. The shut off time can be determined by the number of times you press this button. (0, 30, 60, 90, or 120 minutes)

18. REV ◀◀ Button

Press to view the DVD picture in fast reverse motion. Press PAUSE, then press this button to begin slow motion playback. Press this button repeatedly to change the reverse speed of slow motion.

FWD ▶▶ Button

Press to fast forward the Disc. Press PAUSE, then press this button to begin slow motion playback. Press this button repeatedly to change the forward speed of slow motion.

19. ZOOM Button

Expands the picture to fill the entire screen.

20. SETUP Button

Press to enter or exit the TV menu or DVD setup mode.

21. TITLE Button

Displays the title menu.

22. CLEAR Button

Resets a setting.

23. DISPLAY Button

TV Mode:

Press to display the channel number on the screen. If you press it again, the channel number will disappear.

DVD Mode:

Displays the current status on the TV screen for checking purposes.

24. SEARCH MODE Button

Press to locate a desired point.

25. AUDIO Button

Press to select a desired audio language or sound mode.

26. SUBTITLE Button

Press to select a desired subtitle language.

27. REPEAT Button

Repeats playback of the current disc, title, chapter or track.

28. ANGLE Button

Press to change the camera angle to see the sequence being played back from a different angle.

29. REPEAT A-B Button

Repeats playback of a selected section.

30. RETURN Button

Returns to the previous operation.

31. ENTER Button

Press to accept a setting.

32. Arrow Buttons

TV Mode:

Press to select a setting mode from the menu on the TV screen.

Press to select or adjust from a particular menu.

DVD Mode:

Use when making settings while watching the display on a TV screen.

33. DISC MENU Button

Displays the menus in the DVD.

34. SELECT Button

Press to change to TV mode, external input mode or DVD mode.

NOTE: When you select the DVD mode by this button, press PLAY or OPEN/CLOSE first. Otherwise, the DVD features are not operated.

35. MUTE Button

Press MUTE to turn off the sound portion of the TV program. (Volume level display turns LIGHT RED from LIGHT BLUE.) Press MUTE again or press VOL. Δ or ∇ to restore sound.

36. PICTURE Button

Press to enter picture adjustment mode.

37. Power cord

Connect to a standard AC outlet (120V/60Hz).

NOTE: Remove the power cord from the hook to avoid breaking a wire before you connect to a standard AC outlet.

38. AUDIO L/R output Jack

Connect to the analog audio input of an external amplifier or decoder.

39. COAXIAL digital audio out Jack (DVD Audio Only)

Connect to the digital input of an external amplifier or decoder.

40. ANT. in Jack

Connect to an antenna, cable system, or satellite system.

INSTALLING THE BATTERIES

- 1) Open the battery compartment cover by pressing the cover on the remote unit in the direction of the arrow.
- 2) Insert 2 "AA" penlight batteries into the battery compartment in the direction indicated by the polarity (+/-) markings.
- 3) Replace the cover.



NOTES

- Do not mix alkaline and manganese batteries.
- Do not mix old and new batteries.

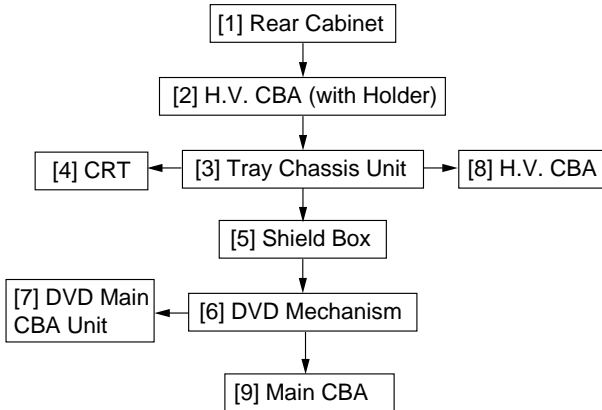
CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps for the cabinet parts, and the CBA in order to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route and dress the cables as they were.

Caution !!

When removing the CRT, be sure to discharge the Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.



2. Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/ *UNHOOK/UNLOCK/ RELEASE/UNPLUG/ DESOLDER	Note
[1]	Rear Cabinet	1	4(S-1), 1(S-2), 2(S-3)	-
[2]	H.V. CBA (With Holder)	3, 5	4(S-4), Anode Cap, CN501, CRT CBA, CN571, WH552, WH554	1
[3]	Tray Chassis Unit	3, 5	CN1802, CN1801	-
[4]	CRT	2	4(S-5)	-
[5]	Shield Box	3	5(S-6)	-
[6]	DVD Mechanism	3, 5	3(S-7), CN401, CN601	-
[7]	DVD Main CBA Unit	4	2(S-8), CN201, CN301	2-1 2-2 2-3 3
[8]	H.V. CBA	3	3(S-9)	-
[9]	Main CBA	3	3(S-10)	-

↓ ↓ ↓ ↓ ↓
 (1) (2) (3) (4) (5)

(1): Order of steps in Procedure. When reassembling, follow the steps in reverse order. These numbers are also used as the identification (location) No. of parts in Figures.

(2): Parts to be removed or installed.

(3): Fig. No. showing Procedure of Part Location.

(4): Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.

S=Screw, P=Spring, L=Locking Tab, CN=Connector, *=Unhook, Unlock, Release, Unplug, or Desolder

2(S-2) = two Screw (S-2)

(5): Refer to the following "Reference Notes in the Table."

Reference Notes in the Table

Caution !

When removing the CRT, be sure to discharge the Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.

CAUTION 1: Discharge the Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.

1. Disconnect the following: Anode Cap, CN501, CRT CBA, CN571, WH552, WH554.

Then remove H.V. CBA (with Holder).

CAUTION 2: Electrostatic breakdown of the laser diode in the optical system block may occur as a potential difference caused by electrostatic charge accumulated on cloth, human body etc., during unpacking or repair work.

To avoid damage of pickup follow next procedures.

2-1. Disconnect Connector (CN301). Remove three Screws (S-7) and lift the DVD Mechanism. (Fig. 3)

2-2. Slide out the pickup unit as shown in Fig. 4.

2-3. Short the three short lands of FPC cable with solder before removing the FFC cable (CN201) from it. If you disconnect the FFC cable (CN201), the laser diode of pickup will be destroyed. (Fig. 4)

CAUTION 3: When reassembling, confirm the FFC cable (CN201) is connected completely. Then remove the solder from the three short lands of FPC cable. (Fig. 4)

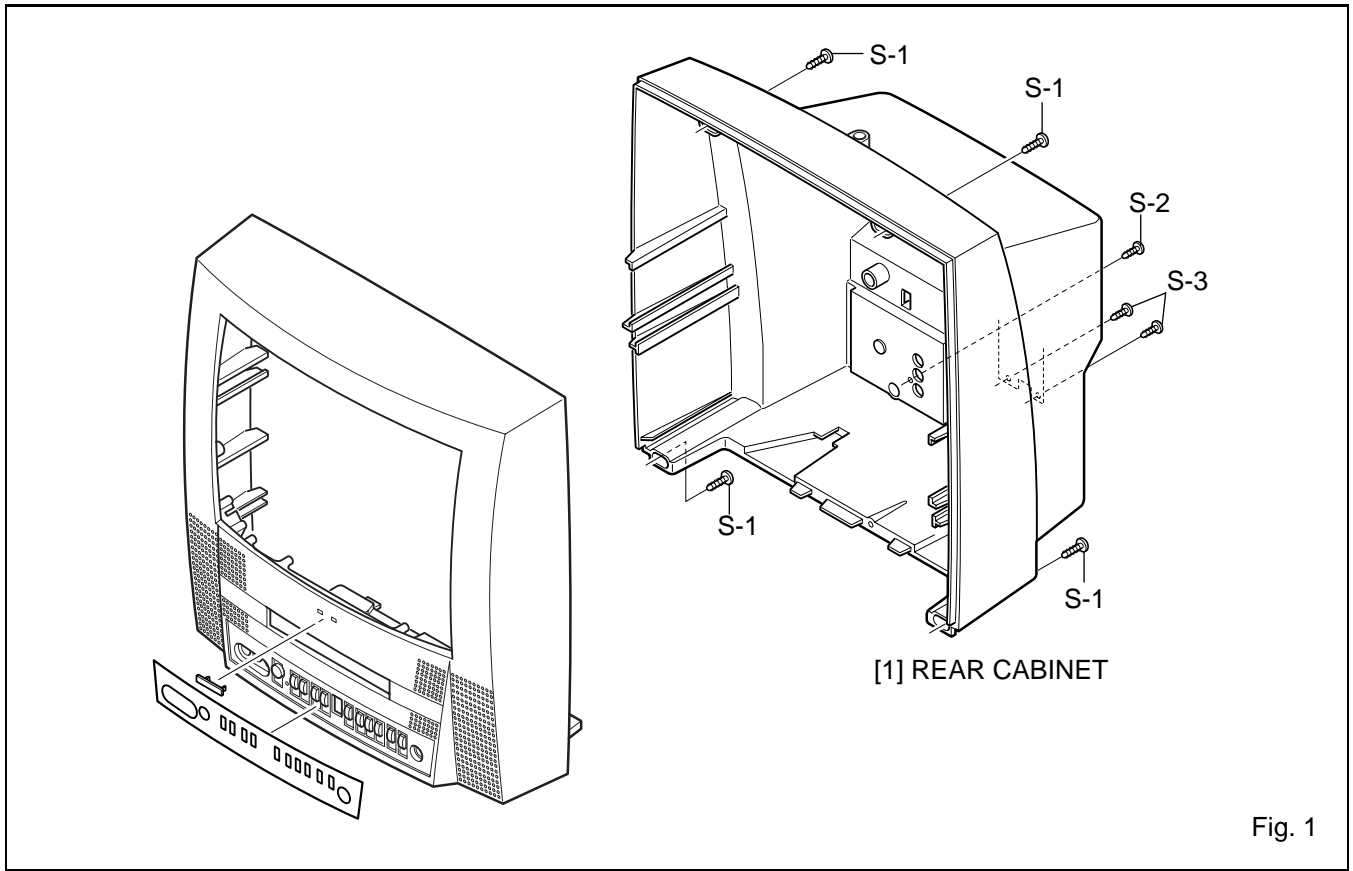


Fig. 1

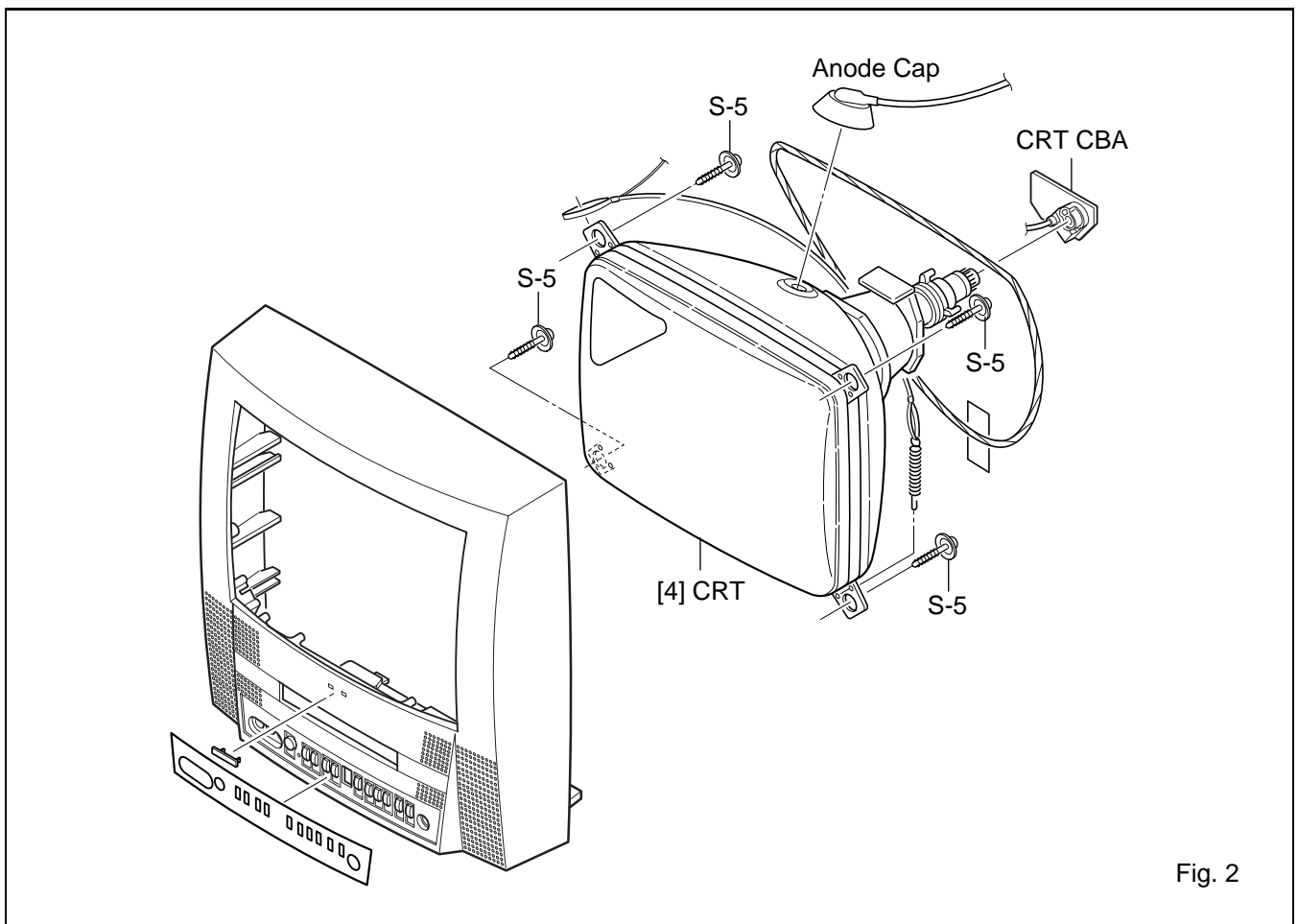


Fig. 2

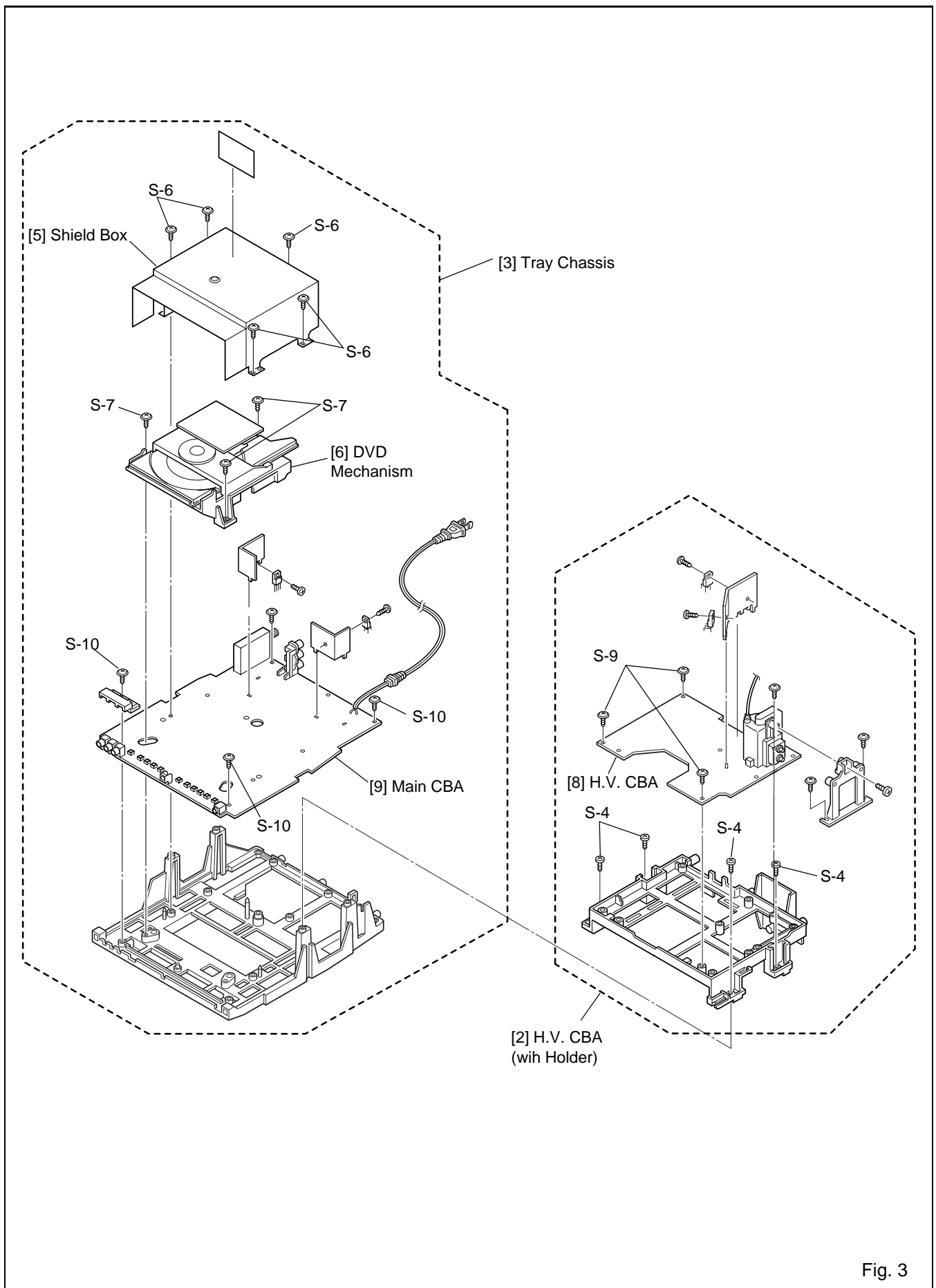


Fig. 3

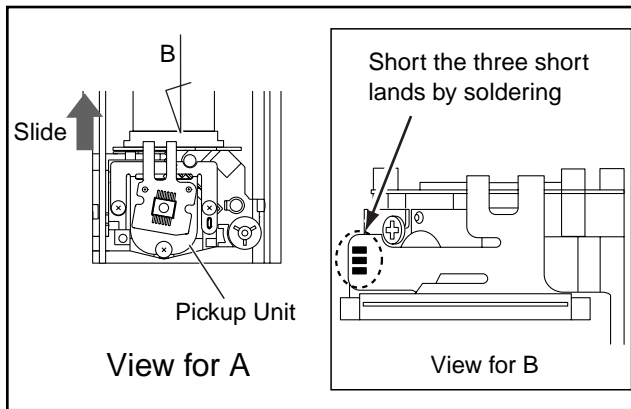
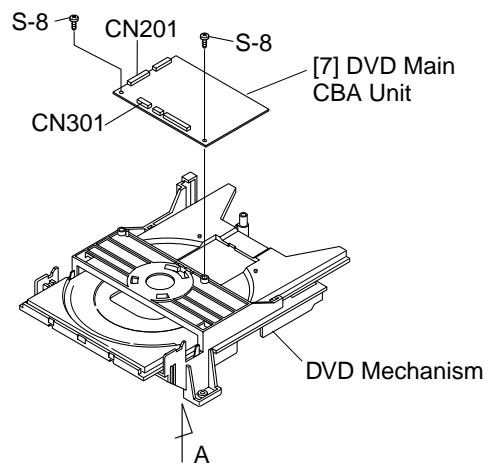


Fig. 4

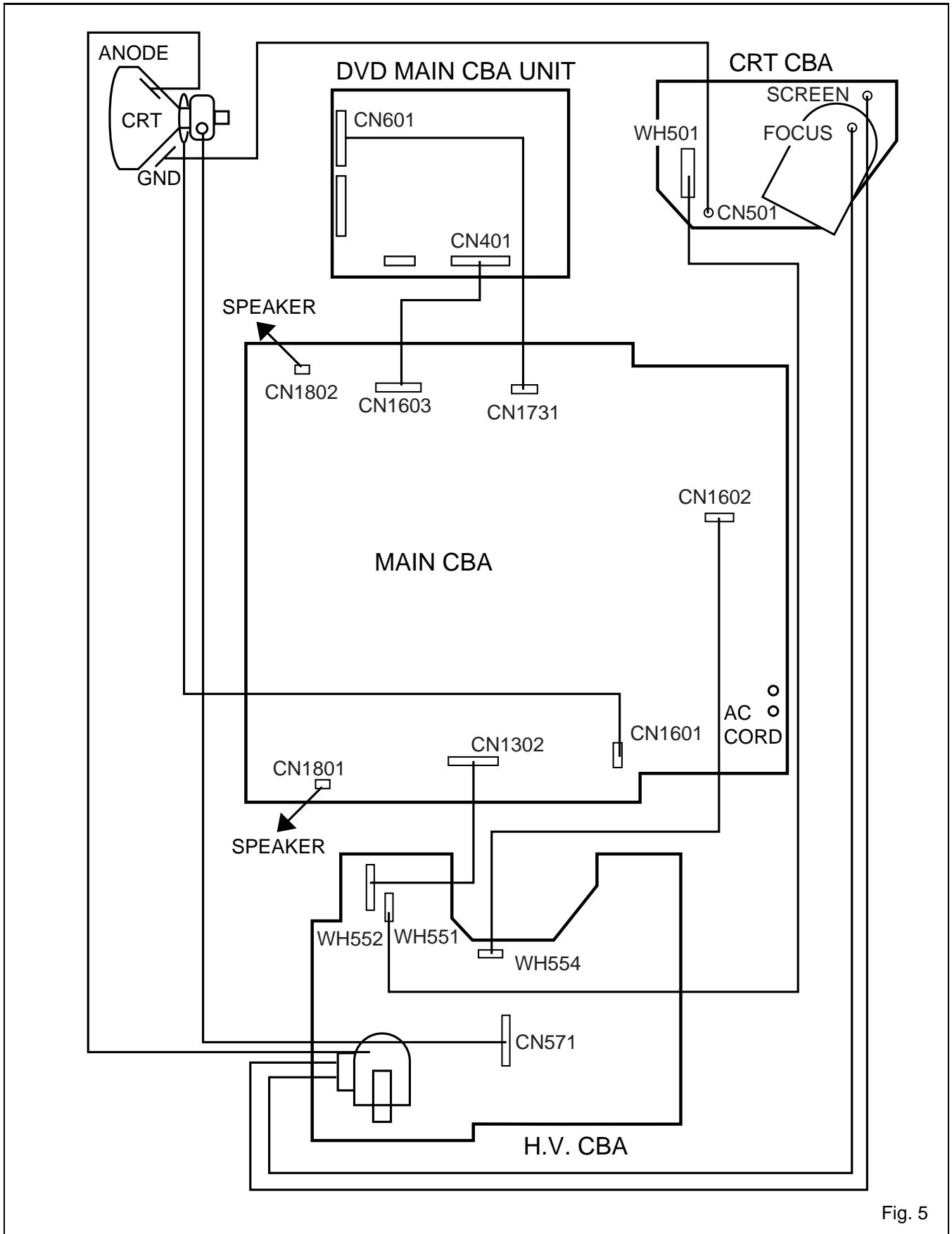


Fig. 5

ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note:

"CBA" is abbreviation for "Circuit Board Assembly."

NOTE:

Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed.

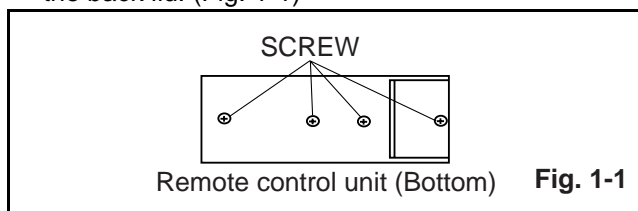
Also, do not attempt these adjustments unless the proper equipment is available.

Test Equipment Required

1. NTSC Pattern Generator (Color Bar W/White Window, Red Color, Dot Pattern, Gray Scale, Monoscope, Multi-Burst)
2. AC Milli Voltmeter (RMS)
3. DC Voltmeter
4. Oscilloscope: Dual-trace with 10:1 probe, V-Range: 0.001~50V/Div, F-Range: DC~AC-60MHz
5. Frequency Counter
6. Plastic Tip Driver

How to make service remote control unit:

1. Prepare normal remote control unit. (Part No. NE200UD or NE207UD) Remove 4 screws from the back lid. (Fig. 1-1)



2. Remote control unit: Part No. NE200UD or NE207UD
Cut off pin 10 of the remote control microprocessor and short circuit pins 10 and 17 of the microprocessor with a jumper wire

How to Set up the Service mode:

Service Mode:

1. Use the service remote control unit.
2. Turn the power on.
3. Press "DISC MENU" button on the service remote control unit.

1. DC 105V (+B) Adjustment

Purpose: To obtain correct operation.

Symptom of Misadjustment: The picture is dark and unit does not operate correctly.

Test point	Adj. Point	Mode	Input
J109 (+B) TP1303 (GND)	VR1601	---	----
Tape	M. EQ.	Spec.	
---	DC Voltmeter Plastic Tip Driver	+105±0.5V DC	

Note: J109 (+B) --- H.V. CBA

TP1303 (GND), VR1601 --- Main CBA

1. Connect the unit to AC Power Outlet.
2. Connect DC Volt Meter to J109 (+B) and TP1303 (GND).
3. Adjust VR1601 so that the voltage of J109 (+B) becomes +105±0.5V DC.

2. Black Stretch Control Adjustment

Purpose: To show the fine black color.

Symptom of Misadjustment: Black color will not appear correctly.

Note: Use service remote control unit.

1. Enter the Service mode. (See page 1-7-1)
2. Press "6" button on the service remote control unit. "B-S" is indicated.
3. Press "CH ▲ / ▼" buttons on the service remote control unit so that display will change "OFF," "0," "1," "2" and "3." Then choose "B-S OFF."
4. Press "6" button on the service remote control unit. "BS-2" is indicated.
5. Press "CH ▲ / ▼" buttons on the service remote control unit so that display will change "0," "1," "2" and "3." Then choose "BS-2 0."
6. Turn the power off and on again, using the main power button on the TV unit.

3-1. Setting for Data Values

General

1. Enter the Service mode. (See page 1-7-1)
2. To select the Data Value, press "VOL ▼" button on the service remote control unit.
3. To set the following each data value, press "CH ▲ / ▼" buttons on the service remote control unit.

7F --- set to FF

3-2. Setting for CONTRAST, COLOR, TINT and V-TINT data Values

General

1. Enter the Service mode. (See page 1-7-1)
2. Press "PICTURE" button on the service remote control unit. Display changes "BRIGHT," "CONTRAST," "COLOR," "TINT," and "V-TINT" cyclically when "PICTURE" button is pressed.

CONTRAST (CNT)

1. Press "PICTURE" button on the service remote control unit. Then select "CONTRAST" (CNT) display.
2. Press "CH ▲ / ▼" buttons on the service remote control unit so that the value of "CONTRAST" (CNT) becomes 90.

COLOR (CLR)

1. Press "PICTURE" button on the service remote control unit. Then select "COLOR" (CLR) display.
2. Press "CH ▲ / ▼" buttons on the service remote control unit so that the value of "COLOR" (CLR) becomes 55.

TINT (TNT)

1. Press "PICTURE" button on the service remote control unit. Then select "TINT" (TNT) display.
2. Press "CH ▲ / ▼" buttons on the service remote control unit so that the value of "TINT" (TNT) becomes 64.

V-TINT (V-TNT)

1. Press "PICTURE" button on the service remote control unit. Then select "V-TINT" (V-TNT) display.
2. Press "CH ▲ / ▼" buttons on the service remote control unit so that the value of "V-TINT" (V-TNT) becomes 57.

Note: BRIGHT data value does not need to be adjusted at this moment.

4. V. Size Adjustment

Purpose: To obtain correct vertical height of screen image.

Symptom of Misadjustment: If V. Size is incorrect, vertical height of image on the screen may not be properly displayed.

Test point	Adj. Point	Mode	Input
---	CH ▲ / ▼ buttons	---	Monoscope
Tape	M. EQ.	Spec.	
---	Pattern Generator	90±5%	

1. Enter the Service mode. (See page 1-7-1.)
Press "9" button on the remote control unit and select V-S Mode. (Press "9" button then display will change to V-P and V-S).
2. Input monoscope pattern.
3. Press "CH ▲ / ▼" buttons on the remote control unit so that the monoscope pattern is 90±5% of display size and the circle is round.

5. V. Position Adjustment

Purpose: To obtain correct vertical width of screen image.

Symptom of misadjustment: If V. Position is incorrect, vertical height of image on the screen may not be properly displayed.

Test point	Adj. Point	Mode	Input
---	Screen Control, CH ▲ / ▼ buttons	RF	Monoscope
Tape	M. EQ.	Spec.	
---	Pattern Generator	90±5%	

Note: Use service remote control unit

1. Operate the unit for at least 20 minutes.
2. Enter the Service Mode. (See page 1-7-1)
3. Receive the Monoscope Pattern.
4. Press "9" button on the service remote control unit and select "V-P" mode. (Display change "V-S" and "V-P" cyclically when "9" button is pressed.)
5. Press "CH ▲ / ▼" buttons on the service remote control unit so that the top and bottom of the monoscope pattern will be equal of each other.
6. Turn the power off and on again, using the main power button on the TV unit.

6. H. Position Adjustment

Purpose: To obtain correct horizontal position of screen image.

Symptom of Misadjustment: If H. Position is incorrect, horizontal position of image on the screen may not be properly displayed.

Test Point	Adj. Point	Mode	Input
---	CH ▲ / ▼ buttons [H-P] Mode	RF	Monoscope
Tape	M. EQ.	Spec.	
---	Monoscope	90±5%	

Note: Use service remote control unit

1. Operate the unit for at least 20 minutes.
2. Enter the Service mode. (See page 1-7-1)
3. Receive the Monoscope Pattern.
4. Press "8" button on the remote control unit and select "H-P" mode.
5. Press "CH ▲ / ▼" buttons on the service remote control unit so that the monoscope pattern will be 90±5% of display size and the circle is round.
6. Turn the power off and on again, using the main power button on the TV unit.

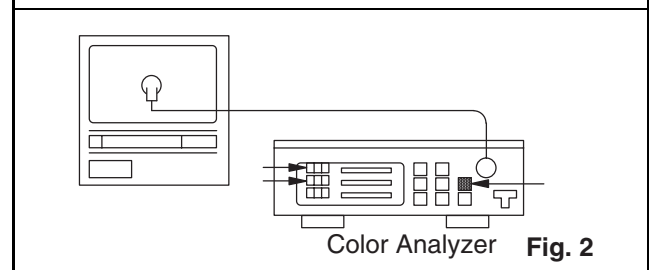
7. White Balance Adjustment

Purpose: To mix red, green and blue beams correctly for pure white.

Symptom of Misadjustment: White becomes bluish or reddish.

Test Point	Adj. Point	Mode	Input
Screen	CH ▲ / ▼ buttons	RF	White Raster (APL 100%)
Tape	M. EQ.	Spec.	
	Pattern Generator, Color analyzer	See below	

Figure



Note: Use service remote control unit

1. Operate the unit more than 20 minutes.
2. Face the unit to east. Degauss the CRT using Degaussing Coil.
3. Input the White Raster (APL 100%).
4. Set the color analyzer to the CHROMA mode and after zero point calibration, bring the optical receptor to the center on the tube surface (CRT).
5. Enter the Service mode. Press "VOL ▼" button on the service remote control unit and select "C/D" mode. (Display changes "C/D," "7F," and "DVD-KEY" cyclically when "VOL ▼" button is pressed.) Then press "8" button on the Service remote control Unit.
6. Press "4" button on the service remote control unit for Red adjustment. Press "5" button on the service remote control unit for Blue adjustment.
7. In each color mode, press "CH ▲ / ▼" button to adjust the values of color.
8. Adjusting Red and Blue color so that the temperature becomes 9200K (x: 286 / y: 294) ±3%.
9. At this time, re-check that Horizontal line is white. If not, Re-adjust Cut-off Adjustment until the Horizontal Line becomes pure white.
10. Turn off and on again to return to normal mode. Receive APL 100% white signal and Check Chroma temperatures become 9200K (x: 286 / y: 294) ±3%.

Note: Confirm that Cut Off Adj. is correct after this adjustment, and attempt Cut Off Adj. if needed.

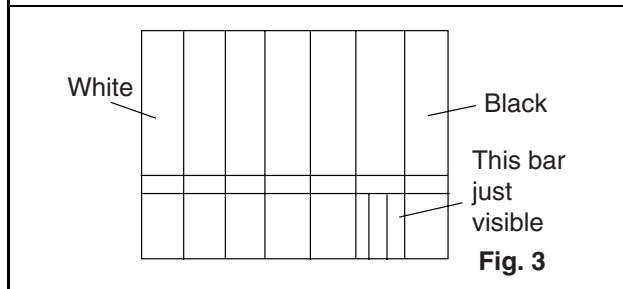
8. Sub-Brightness Adjustment

Purpose: To get proper brightness.

Symptom of Misadjustment: If Sub-Brightness is incorrect, proper brightness cannot be obtained by adjusting the Brightness Control.

Test Point	Adj. Point	Mode	Input
---	CH ▲ / ▼ buttons	RF	IQW
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below	

Figure



Note: IQW Setup level --- 7.5 IRE

Use service remote control unit

1. Enter the Service mode. (See page 1-7-1) Then input IQW signal from RF Input.
2. Press "PICTURE" button on the service remote control unit and Select "BRT" mode. (Display changes "BRT," "CNT," "CLR," "TNT," and "V-TINT" cyclically when PICTURE button is pressed.) Press "CH ▲ / ▼" buttons so that the bar is just visible (See above figure).
3. Turn the power off and on again, using the main power button on the TV unit.

9. Focus Adjustment

Purpose: Set the optimum Focus.

Symptom of Misadjustment: If Focus Adjustment is incorrect, blurred images are shown on the display.

Test Point	Adj. Point	Mode	Input
---	Focus Control	RF	Monoscope
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below	

Note: Focus VR (FBT) --- H.V. CBA,
FBT= Fly Back Transformer

1. Operate the unit more than 30 minutes
2. Face the unit to the East and degauss the CRT using a degaussing coil.
3. Input the Monoscope Pattern.
4. Adjust the Focus Control on the FBT to obtain clear picture.

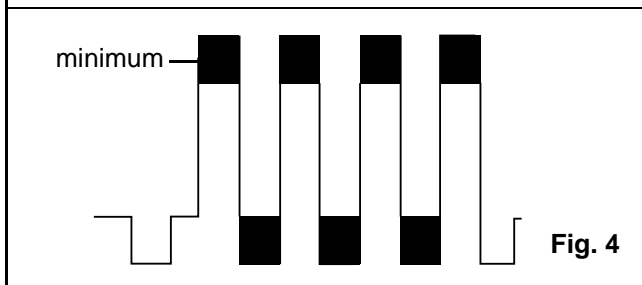
10. C-Trap Adjustment

Purpose: To get minimum leakage of the color signal carrier.

Symptom of Misadjustment: If C-Trap Adjustment is incorrect, stripes will appear on the screen.

Test point	Adj. Point	Mode	Input
D1311 Cathode (B-OUT)	CH ▲ / ▼ buttons	---	Color Bar
Tape	M. EQ.	Spec.	
---	Oscilloscope Pattern Generator	---	

Figure



Note: D1311 Cathode (B-Out)--- Main CBA

1. Connect Oscilloscope to D1311 Cathode.
2. Input a color bar signal from RF input. Enter the Service mode. (See page 1-7-1.)
3. Press "0" button on the remote control unit and select C-TRAP Mode.
4. Press "CH ▲ / ▼" buttons on the remote control unit so that the carrier leakage B-Out (3.58MHz) value becomes minimum on the oscilloscope.
5. Turn the power off and on again.

11. H fo Adjustment

Purpose: To get correct horizontal frequency.

Symptom of Misadjustment: If H f0 adjustment is incorrect, skew distortion will appear on the screen.

Test Point	Adj. Point	Mode	Input
R583	CH ▲ / ▼ button ["H-ADJ"] MODE		---
Tape	M. EQ.	Spec.	
---	Frequency Counter	15.734kHz±300Hz	

Note: R583 --- H.V. CBA

Use Service remote control unit.

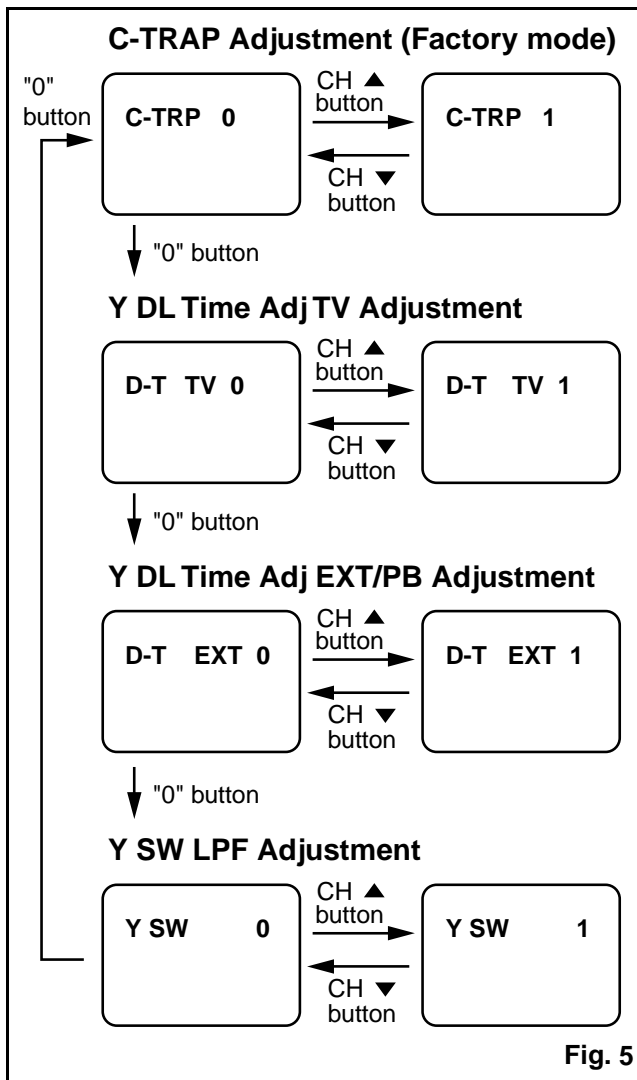
1. Connect Frequency Counter to R583 and ground.
2. Set the unit to the VIDEO mode which is located before CH2 and no input is necessary. Enter the Service mode. (See page 1-7-1)
3. Operate the unit for at least 20 minutes.
4. Press "2" button on the Service remote control unit and select H-ADJ Mode. (By pressing "2" button the display will change from TV AGC to H-ADJ.)
5. Press "CH ▲ / ▼" button on the Service remote control unit so that the display will change "0" ~ "7." At this moment, Choose display one of them from "0" ~ "7" when the Frequency Counter shows 15.734 kHz±300Hz or closer.
6. Turn the power off and on again. (Main Power button on the TV unit.)

12. Y DL Time/Y SW LPF Adjustment

Purpose: To get minimum leakage of the color signal carrier.

Symptom of Misadjustment: If Y DL Time Adjustment is incorrect, stripes will appear on the screen.

1. Enter the Service Mode. (See page 1-7-1.)
2. **Y DL Time Adjustment:** Press "0" button on the service remote control unit twice to show "D-T" on the display.
Y SW LPF Adjustment: Press "0" button on the service remote control unit four times to show "Y SW" on the display.
3. **Y DL Time Adjustment:** Select "2" by pressing "CH ▲ / ▼" buttons on the service remote control to enter Y DL Time Adjustment mode.
Y SW LPF Adjustment: Select "1" by pressing "CH ▲ / ▼" buttons on the service remote control to enter Y SW LPF Adjustment mode.
4. If needed, perform the following.



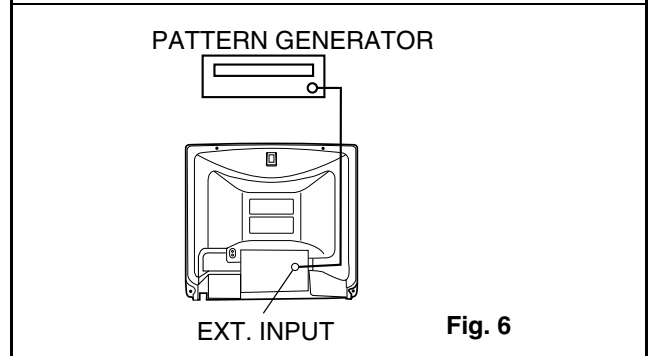
13. Cut-off Adjustment

Purpose: To adjust the beam current of R, G, B, and screen voltage.

Symptom of Misadjustment: White color may be reddish, greenish or bluish.

Test Point	Adj. Point	Mode	Input
---	Screen-Control CH ▲ / ▼ buttons	RF	Black Raster
Tape	M. EQ.	Spec.	
---	Pattern Generator	See Reference Notes below.	

Figure



Note: Screen Control FBT --- Main CBA
FBT= Fly Back Transformer
Use service remote control unit

1. Degauss the CRT and allow CRT to operate for 20 minutes before starting the alignment.
2. Input the Black Raster Signal from RF Input.
3. Enter the Service mode. (See page 1-7-1)
4. Press "VOL ▼" button on the service remote control unit and select "C/D" mode. (Display changes "C/D," "7F," and "DVD-KEY" cyclically when "VOL ▼" button is pressed.) then press "1." The display will momentarily show "CUT OFF R" (R= Red.) Now there should be a horizontal line across the center of the picture tube. If needed gradually turn the screen control on the flyback, clockwise until the horizontal line appears. Adjust the Red Cut off by pressing the "CH ▲ / ▼" buttons. Proceed to Step 5 when the Red Cut off adjustment is done.
5. Press the "2" button. The display will momentarily show "CUT OFF G" (G=Green.) Adjust the Green Cut off by pressing the "CH ▲ / ▼" buttons. Proceed to step 6 when the Green Cut off adjustment is done.
6. Press the "3" button. The display will momentarily show "CUT OFF B" (B=Blue.) Adjust the Blue cut off by pressing the "CH ▲ / ▼" buttons. When done with steps 4, 5 and 6 the horizontal line should be pure white if not, then attempt the Cut off adjustment again.

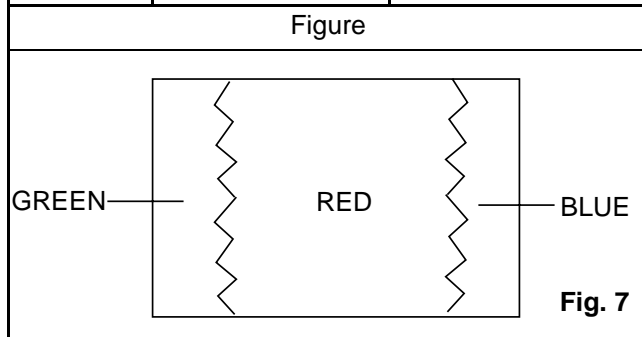
The following 2 adjustments normally are not attempted in the field. They should be done only when replacing the CRT then adjust as a preparation.

14. Purity Adjustment

Purpose: To obtain pure color.

Symptom of Misadjustment: If Color Purity Adjustment is incorrect, large areas of color may not be properly displayed.

Test point	Adj. Point	Mode	Input
---	Deflection Yoke Purity Magnet	---	*Red Color
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below.	



* This becomes RED COLOR if push 7KEY with a service mode.

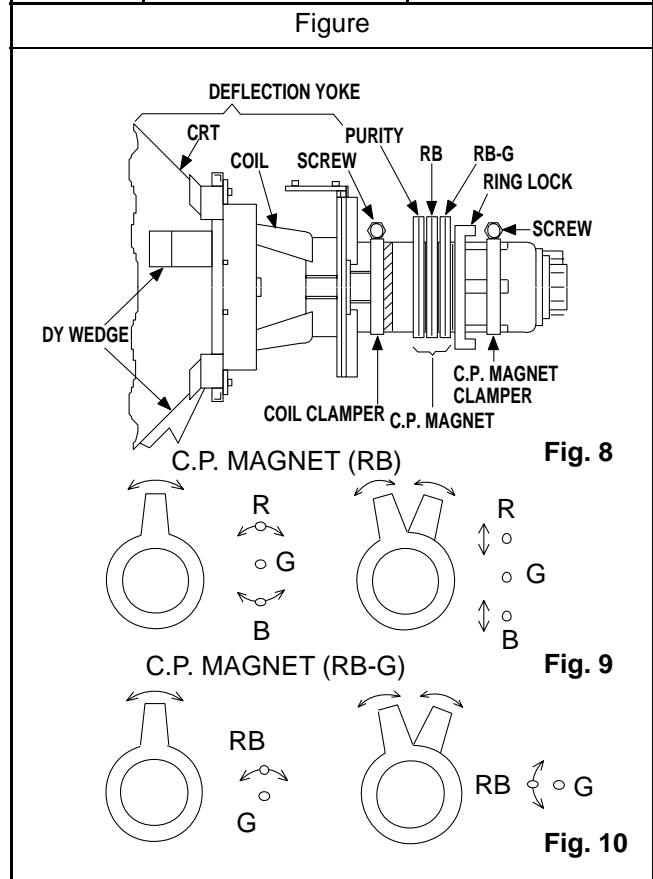
1. Set the unit facing east.
2. Operate the unit for over 30 minutes before adjusting.
3. Fully degauss the unit using an external degaussing coil.
4. Set the unit to the AUX Mode which is located before CH2 then input a red raster from video in.
5. Loosen the screw on the Deflection Yoke Clamper and pull the Deflection Yoke back away from the screen. (See Fig. 8.)
6. Loosen the Ring Lock and adjust the Purity Magnets so that a red field is obtained at the center of the screen. Tighten Ring Lock. (See Fig. 7,8.)
7. Slowly push the Deflection Yoke toward the bell of the CRT and set it where a uniform red field is obtained.
8. Tighten the clamp screw on the Deflection Yoke.

15. Convergence Adjustment

Purpose: To obtain proper convergence of red, green and blue beams.

Symptom of Misadjustment: If Convergence Adjustment is incorrect, the edge of white letters may have color edges.

Test point	Adj. Point	Mode	Input
---	C.P. Magnet (RB), C.P. Magnet (RB-G), Deflection Yoke	---	Dot Pattern or Crosshatch
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below.	



1. Set the unit to the AUX Mode which is located before CH2 then input a Dot or crosshatch pattern.
2. Loosen the Ring Lock and align red with blue dots or Crosshatch at the center of the screen by rotating (RB) C.P. Magnets. (See Fig. 9.)
3. Align red / blue with green dots at the center of the screen by rotating (RB-G) C.P. Magnet. (See Fig. 10.)
4. Fix the C.P. Magnets by tightening the Ring Lock.
5. Remove the DY Wedges and slightly tilt the Deflection Yoke horizontally and vertically to obtain the best overall convergence.
6. Fix the Deflection Yoke by carefully inserting the DY Wedges between CRT and Deflection Yoke.

FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the DVD player into version up mode, press [9], [8], [7], [6], and [SEARCH MODE] buttons on the remote control unit in that order. The tray will open automatically.
Fig. a appears on the screen.

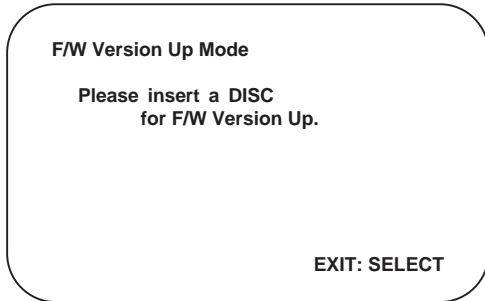


Fig. a Version Up Mode Screen

The DVD player can also enter the version up mode with the tray open. In this case, Fig. a will be shown on the screen while the tray is open.

3. Load the disc for version up.
4. The DVD player enters the F/W version up mode automatically. Fig. b appears on the screen.

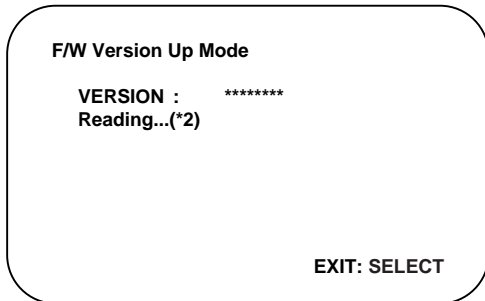


Fig. b Programming Mode Screen

The appearance shown in (*2) of Fig. b is described as follows:

No.	Appearance	State
1	Reading...	Sending files into the memory
2	Erasing...	Erasing previous version data
3	Programming...	Writing new version data

5. After programming is finished, the tray opens automatically. Fig. c appears on the screen.

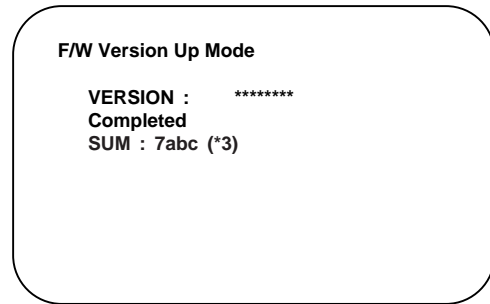


Fig. c Completed Program Mode Screen

At this time, no buttons are available.

6. Unplug the AC cord from the AC outlet. Then plug it again.
7. Turn the power on by pressing the power button and the tray will close.
8. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.
Fig. d appears on the screen.

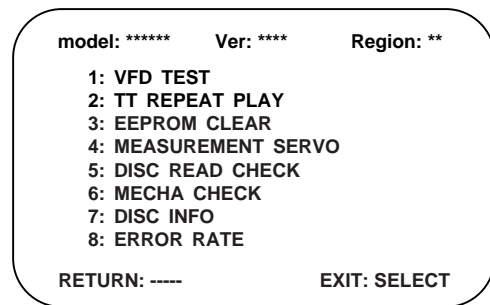


Fig. d

9. Press [3] button on the remote control unit.
Fig. e appears on the screen.

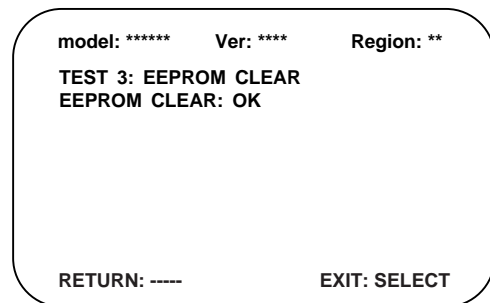
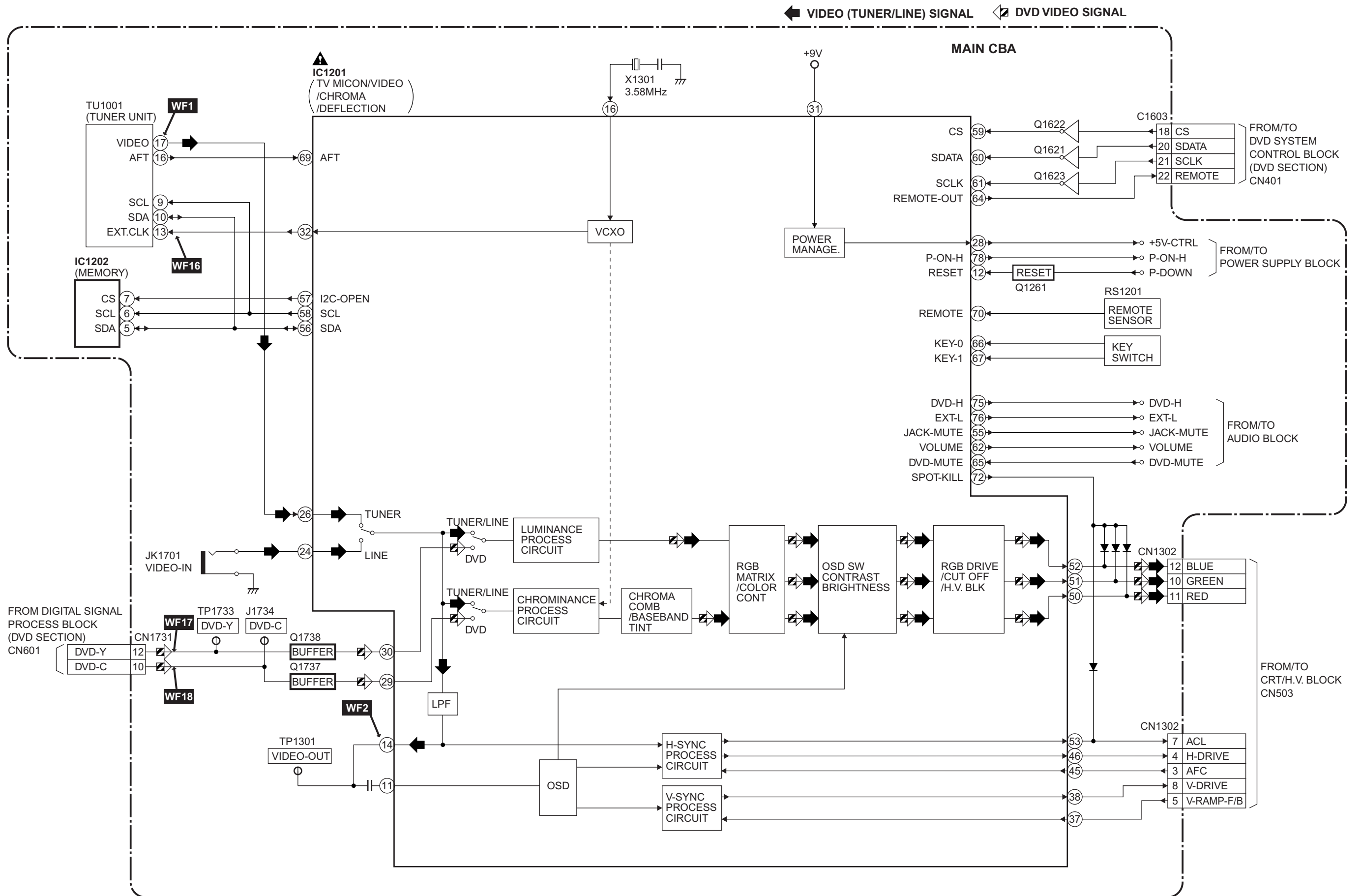


Fig. e

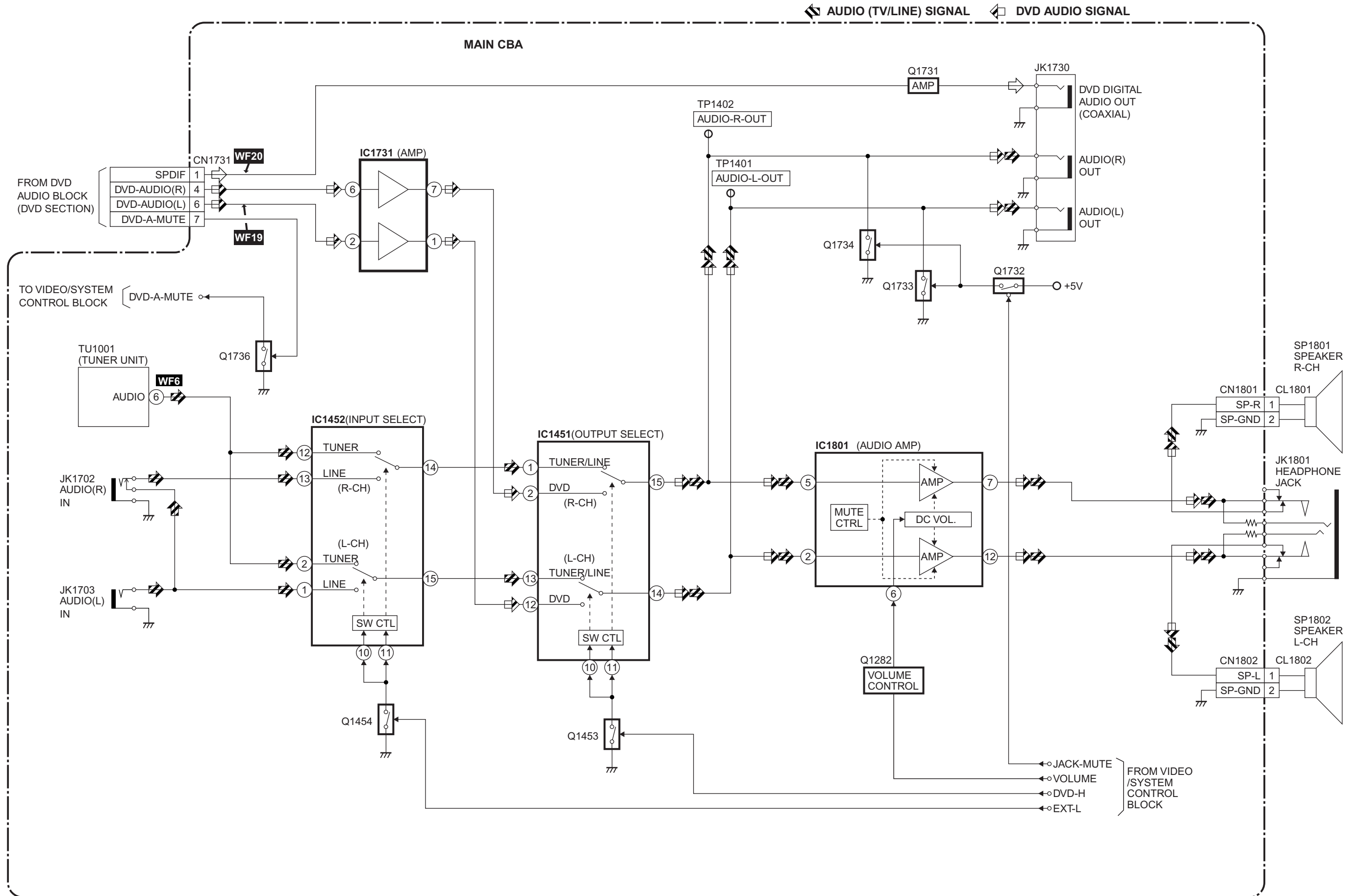
10. To finish this mode, press [POWER] button.

BLOCK DIAGRAMS < TV SECTION >

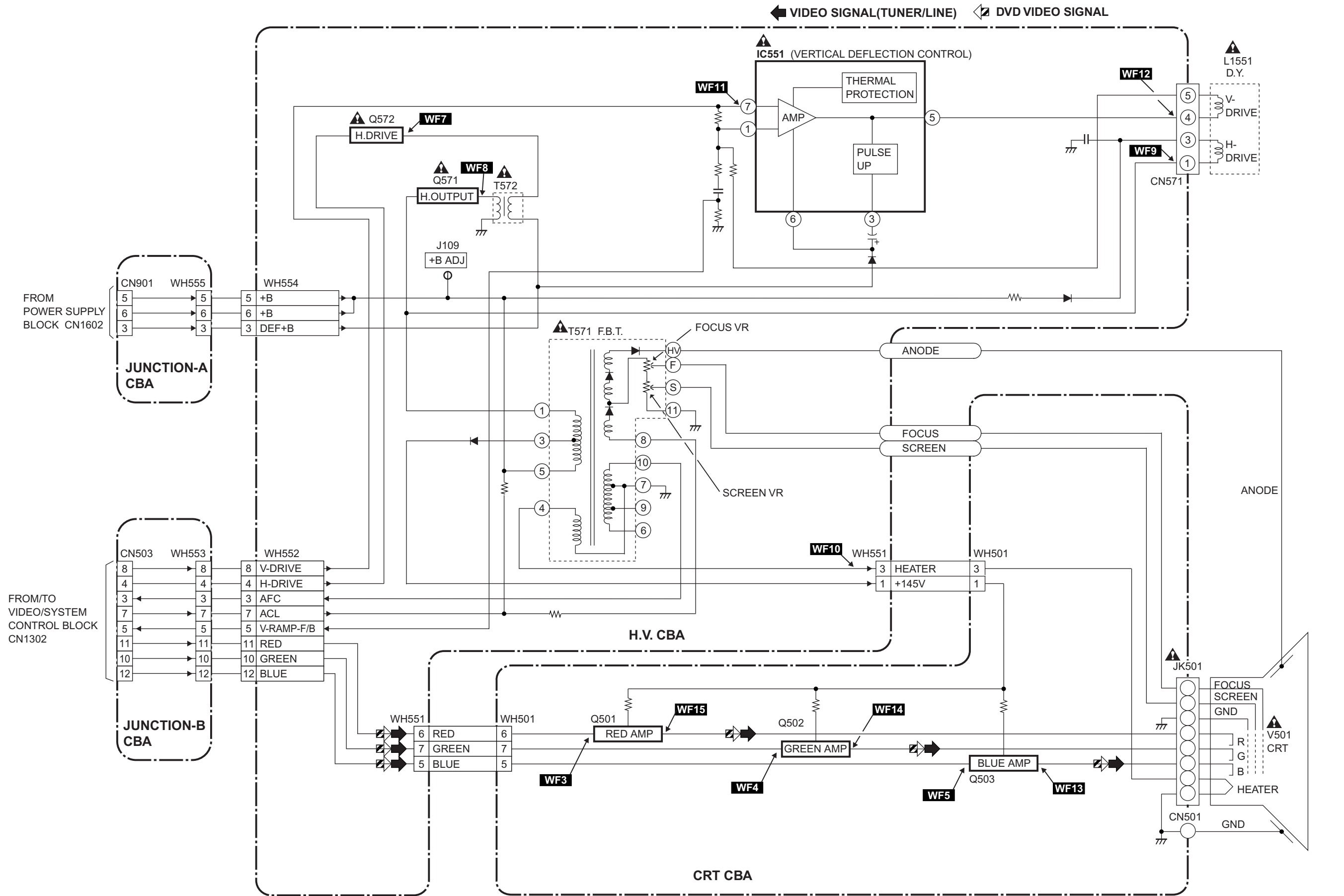
Video/System Control Block Diagram



Audio Block Diagram



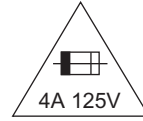
CRT/H.V. Block Diagram



Power Supply Block Diagram

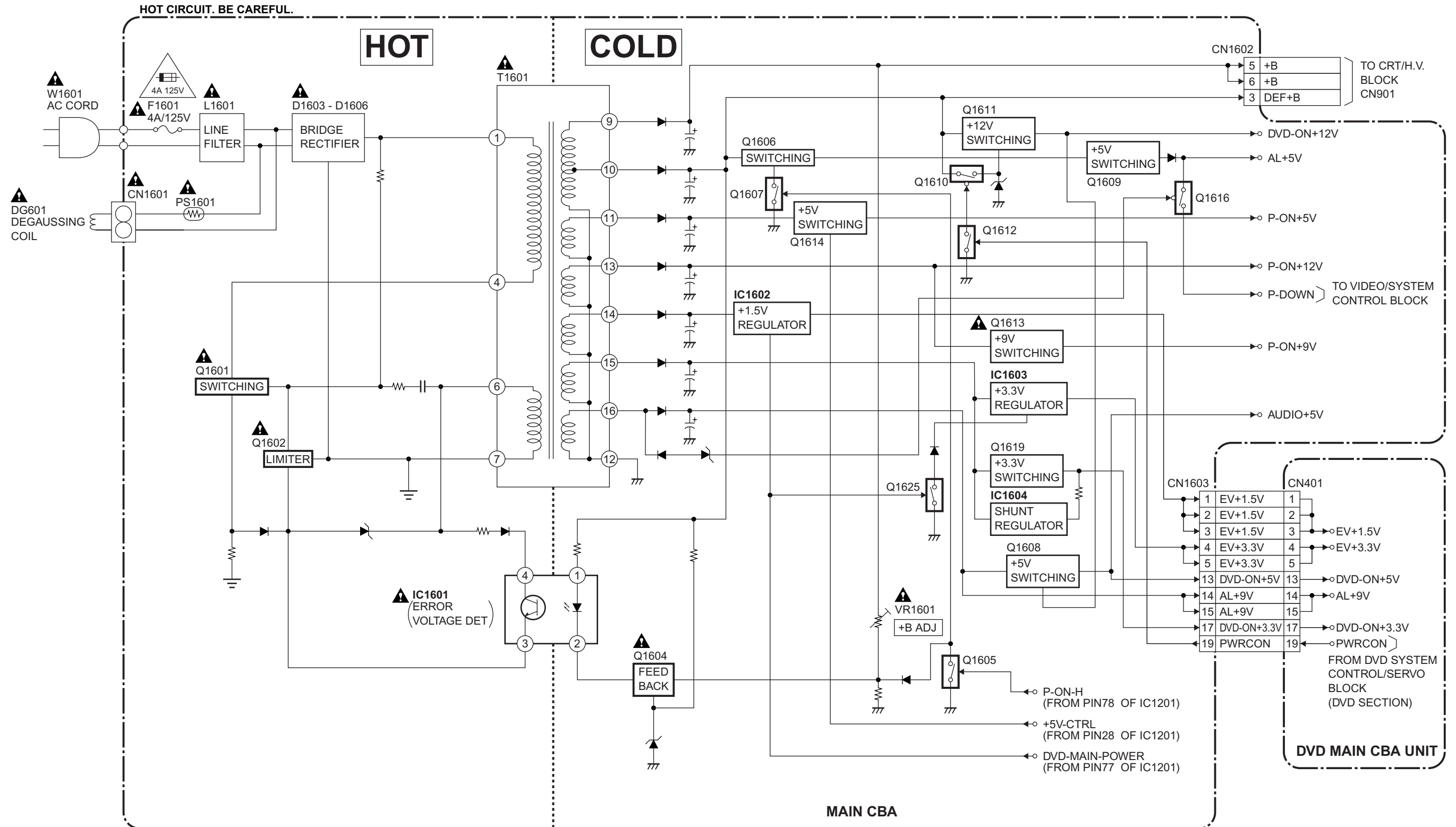
CAUTION !

Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.



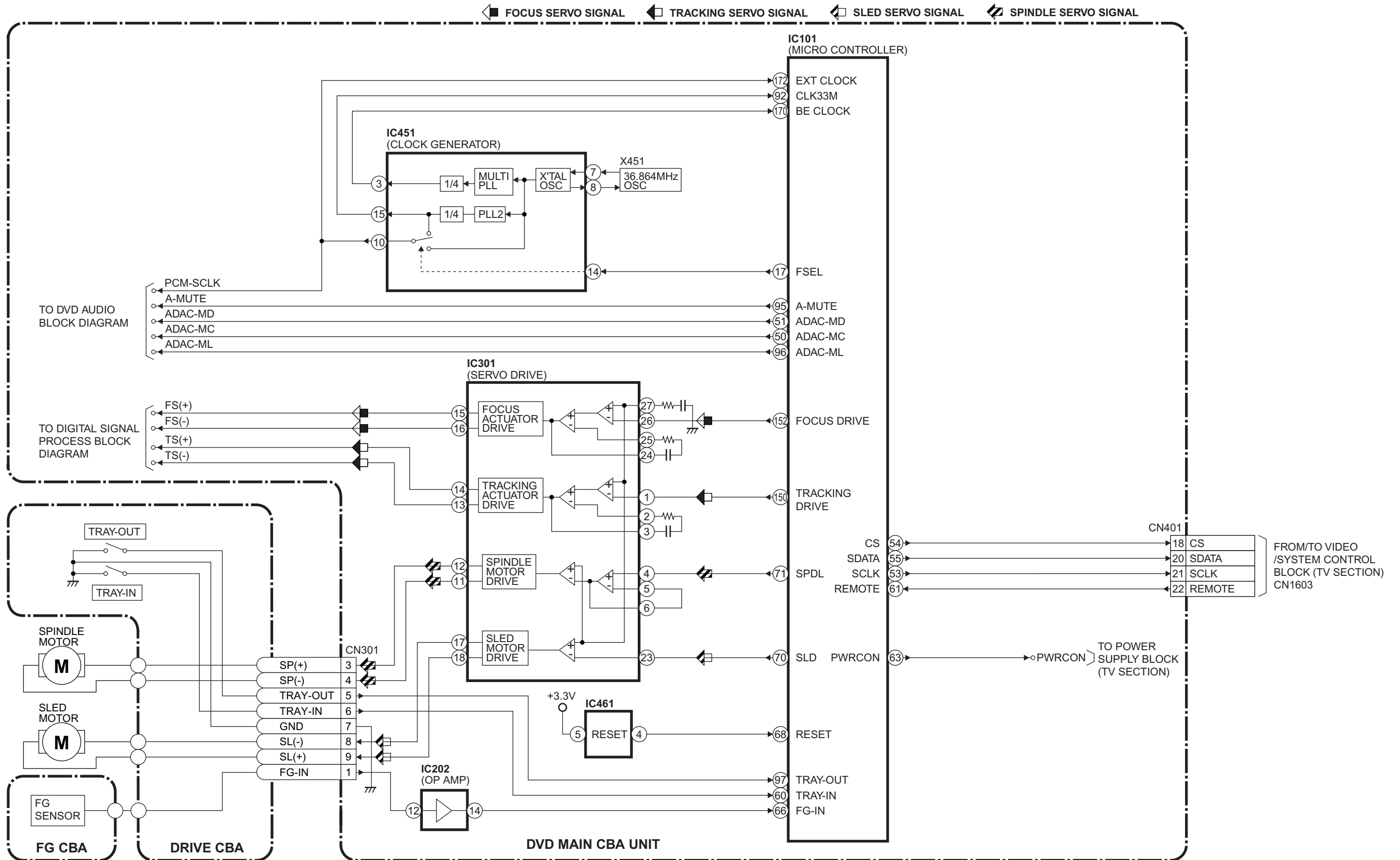
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
REPLACE ONLY WITH SAME TYPE 4 A, 125V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 4A, 125V.

NOTE :
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



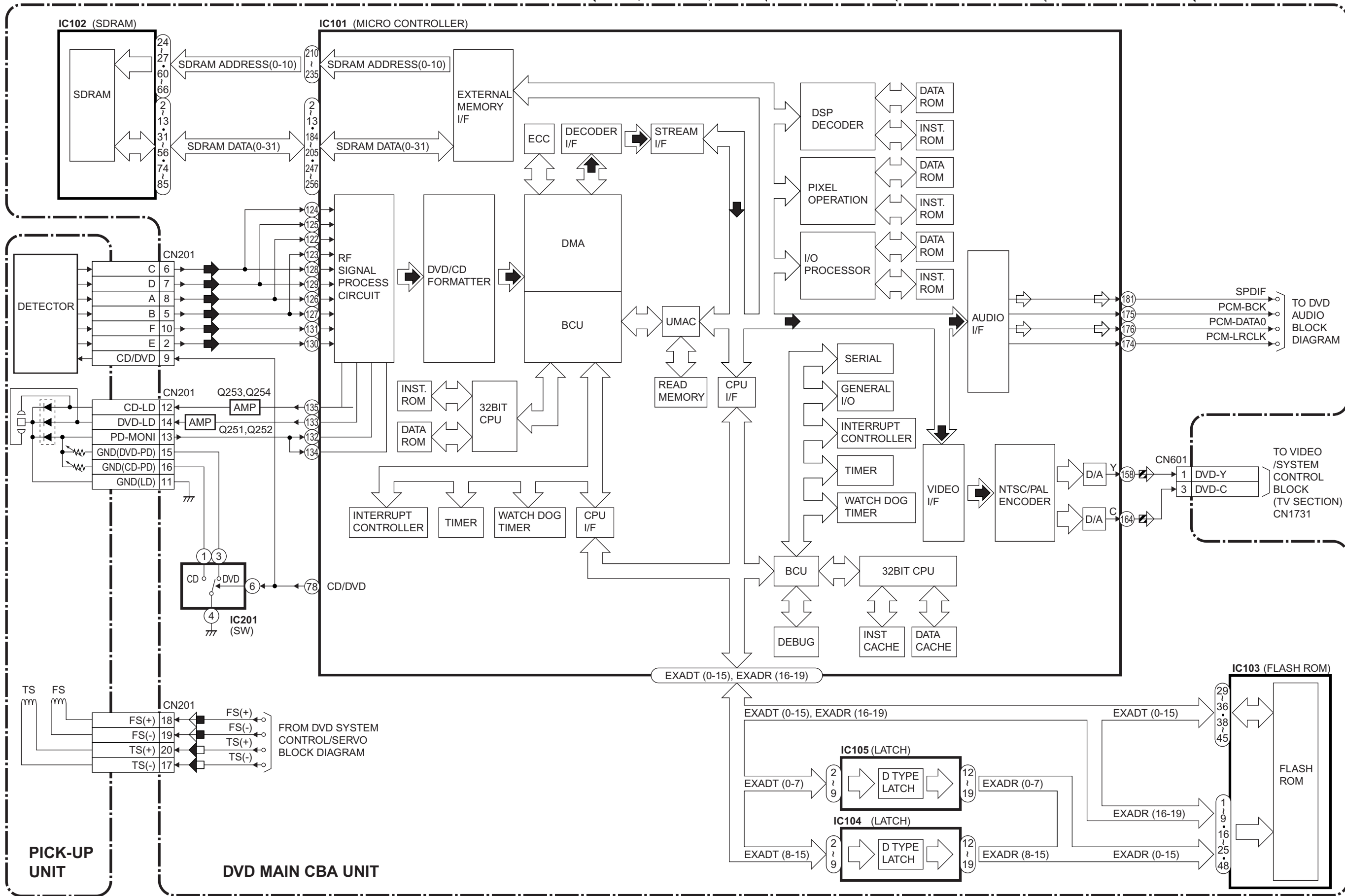
BLOCK DIAGRAMS < DVD Section >

DVD System Control/Servo Block Diagram

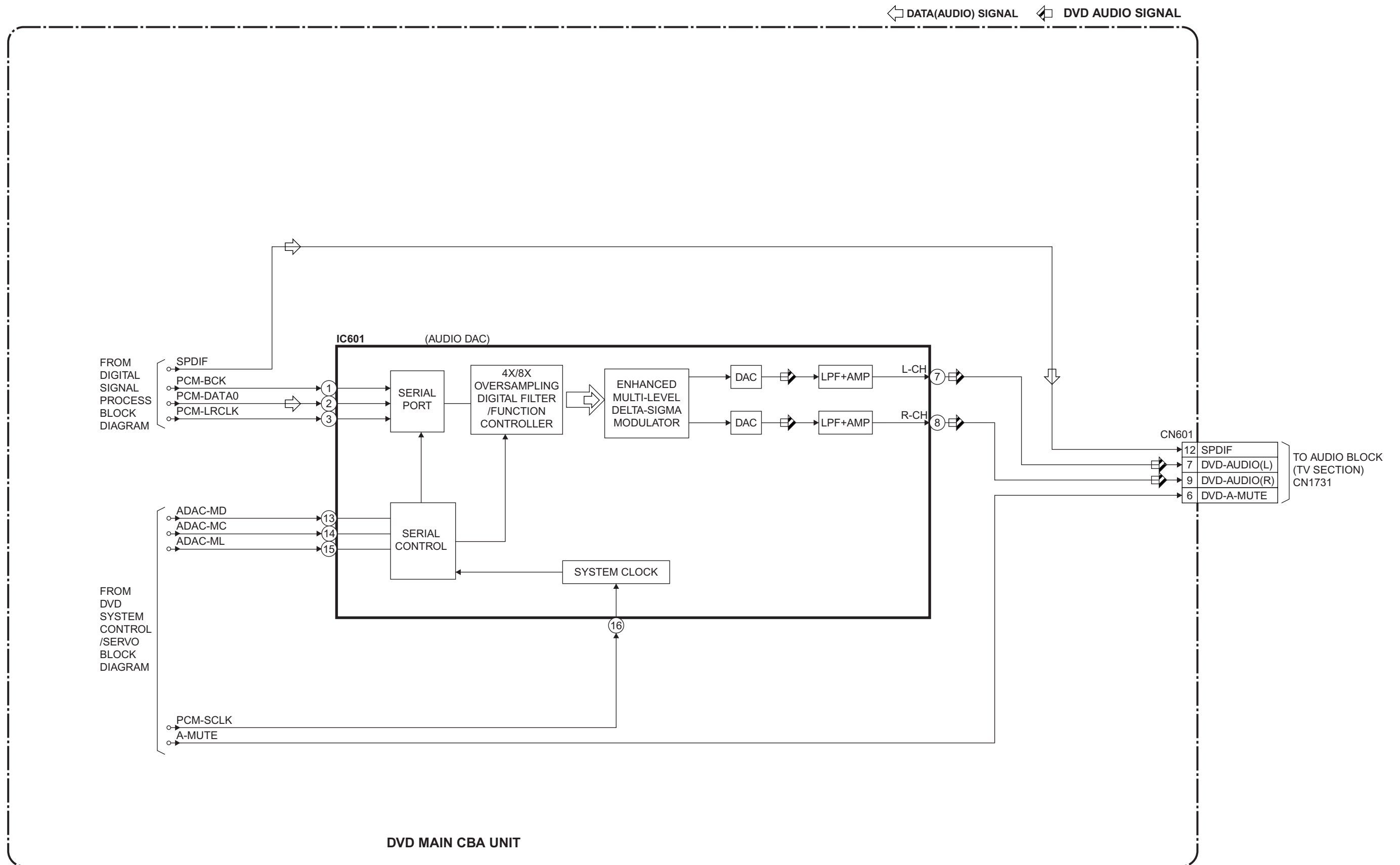


Digital Signal Process Block Diagram

▶ DATA(VIDEO/AUDIO) SIGNAL
 ◀ DVD VIDEO SIGNAL
 ◀ DATA(AUDIO) SIGNAL
 ▶ FOCUS SERVO SIGNAL
 ▶ TRACKING SERVO SIGNAL



DVD Audio Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

Warning

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "▲" in 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 that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Note:

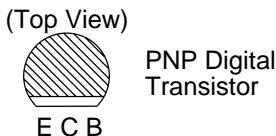
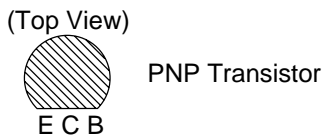
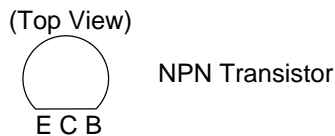
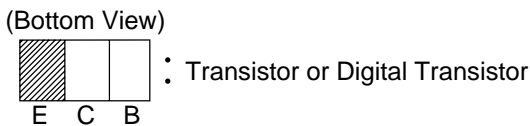
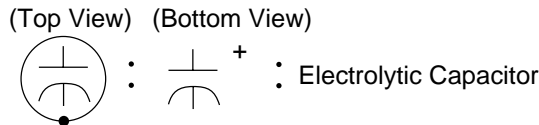
1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P=10^{-6}\mu F$).
5. All voltages are DC voltages unless otherwise specified.

Capacitor Temperature Markings

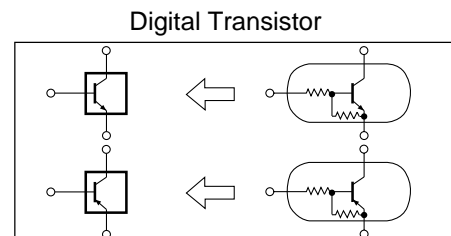
Mark	Capacity change rate	Standard temperature	Temperature range
(B)	$\pm 10\%$	20°C	-25~+85°C
(F)	+30 -80%	20°C	-25~+85°C
(SR)	$\pm 15\%$	20°C	-25~+85°C
(Z)	+30 -80%	20°C	-10~+70°C

Capacitors and transistors are represented by the following symbols.

CBA Symbols



Schematic Diagram Symbols



LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE_A,_V FUSE.

ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE_A,_V.

2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

If Main Fuse (F1601) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

(1) Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.

(2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Wire Connectors

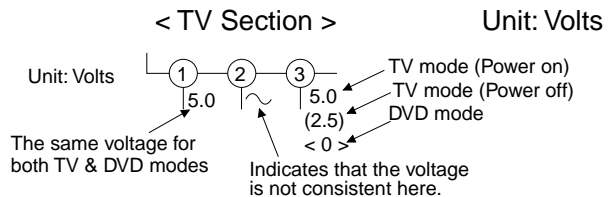
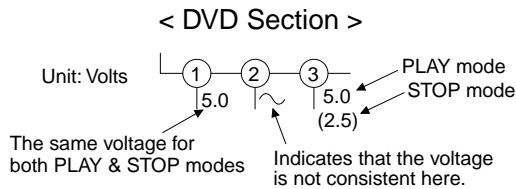
(1) Prefix symbol "CN" means "connector" (can disconnect and reconnect).

(2) Prefix symbol "CL" means "wire-solder holes of the PCB" (wire is soldered directly).

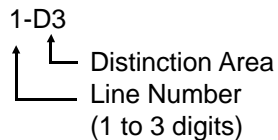
5. Mode: SP/REC

6. Voltage indications on the schematics are as shown below:

Plug the TV power cord into a standard AC outlet.:

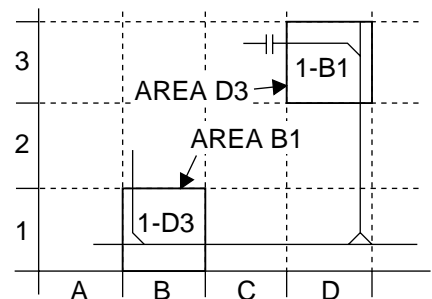


7. How to read converged lines



Examples:

- "1-D3" means that line number "1" goes to area "D3".
- "1-B1" means that line number "1" goes to area "B1".



8. Test Point Information

⊙ : Indicates a test point with a jumper wire across a hole in the PCB.

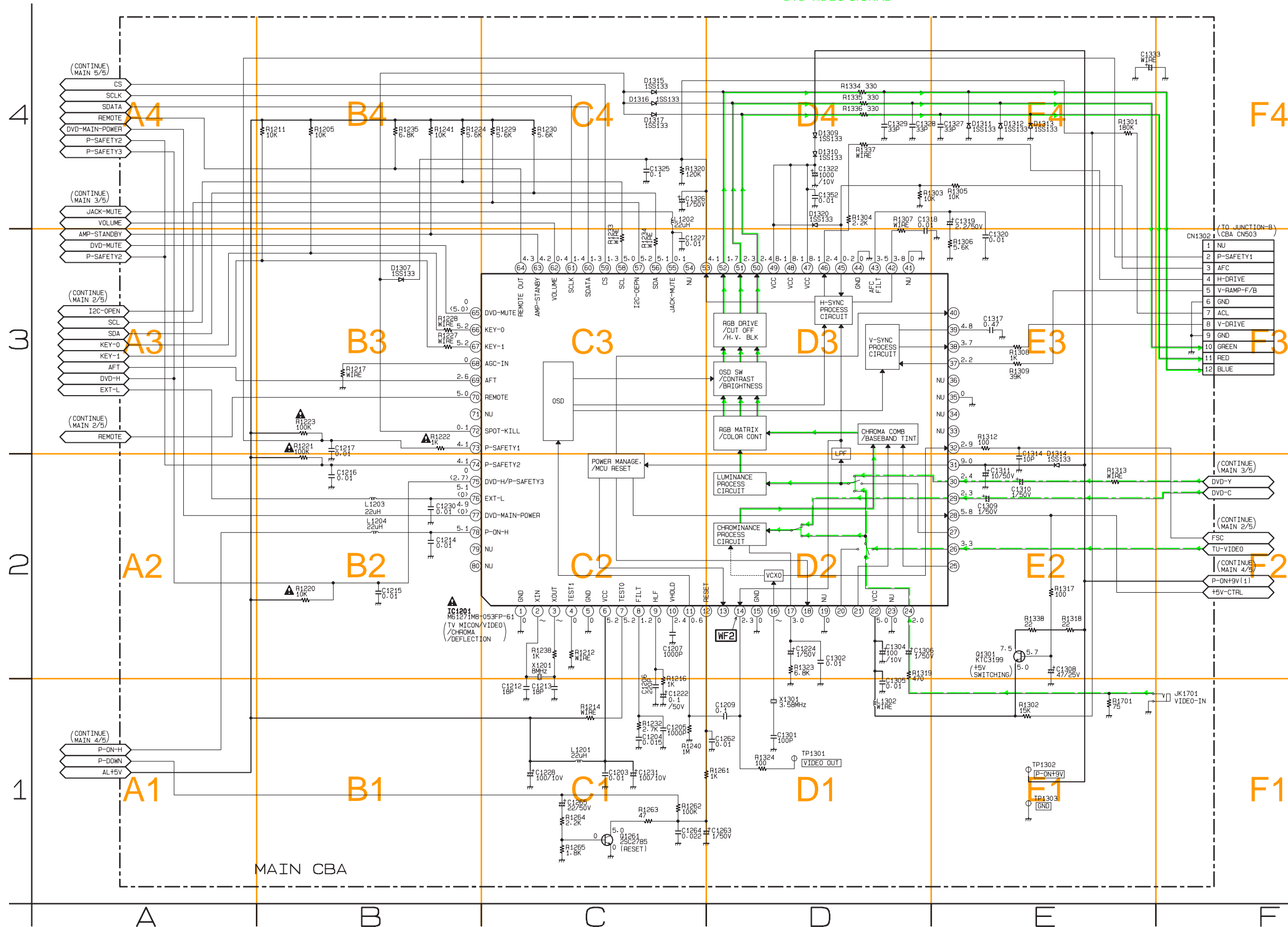
□→ : Used to indicate a test point with a component lead on foil side.

⊘ : Used to indicate a test point with no test pin.

● : Used to indicate a test point with a test pin.

Main 1/5 Schematic Diagram < TV Section >

- VIDEO (TV/LINE) + DVD VIDEO SIGNAL
- - - VIDEO (TV/LINE) SIGNAL
- · · DVD VIDEO SIGNAL

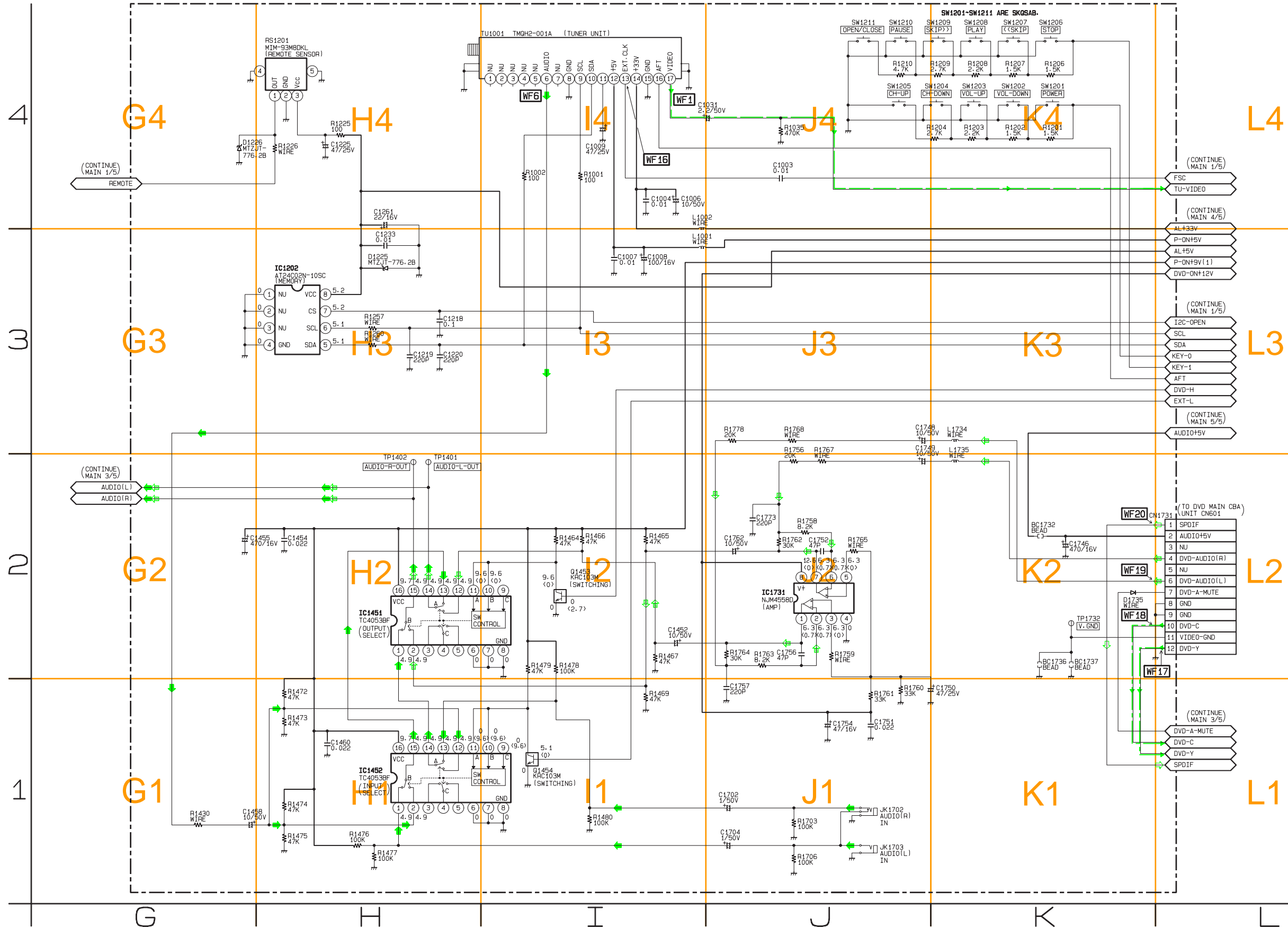


MAIN 1/5

Ref No.	Position
IC	
IC1201	B-2
TRANSISTORS	
Q1261	C-1
Q1301	E-2
CONNECTOR	
CN1302	F-3
TEST POINTS	
TP1301	D-1
TP1302	E-1
TP1303	E-1

Main 2/5 Schematic Diagram < TV Section >

——— VIDEO (TV/LINE) + DVD VIDEO SIGNAL
- - - - - VIDEO (TV/LINE) SIGNAL
- · - · - DVD VIDEO SIGNAL
← AUDIO (TV/LINE) SIGNAL
← DVD AUDIO SIGNAL

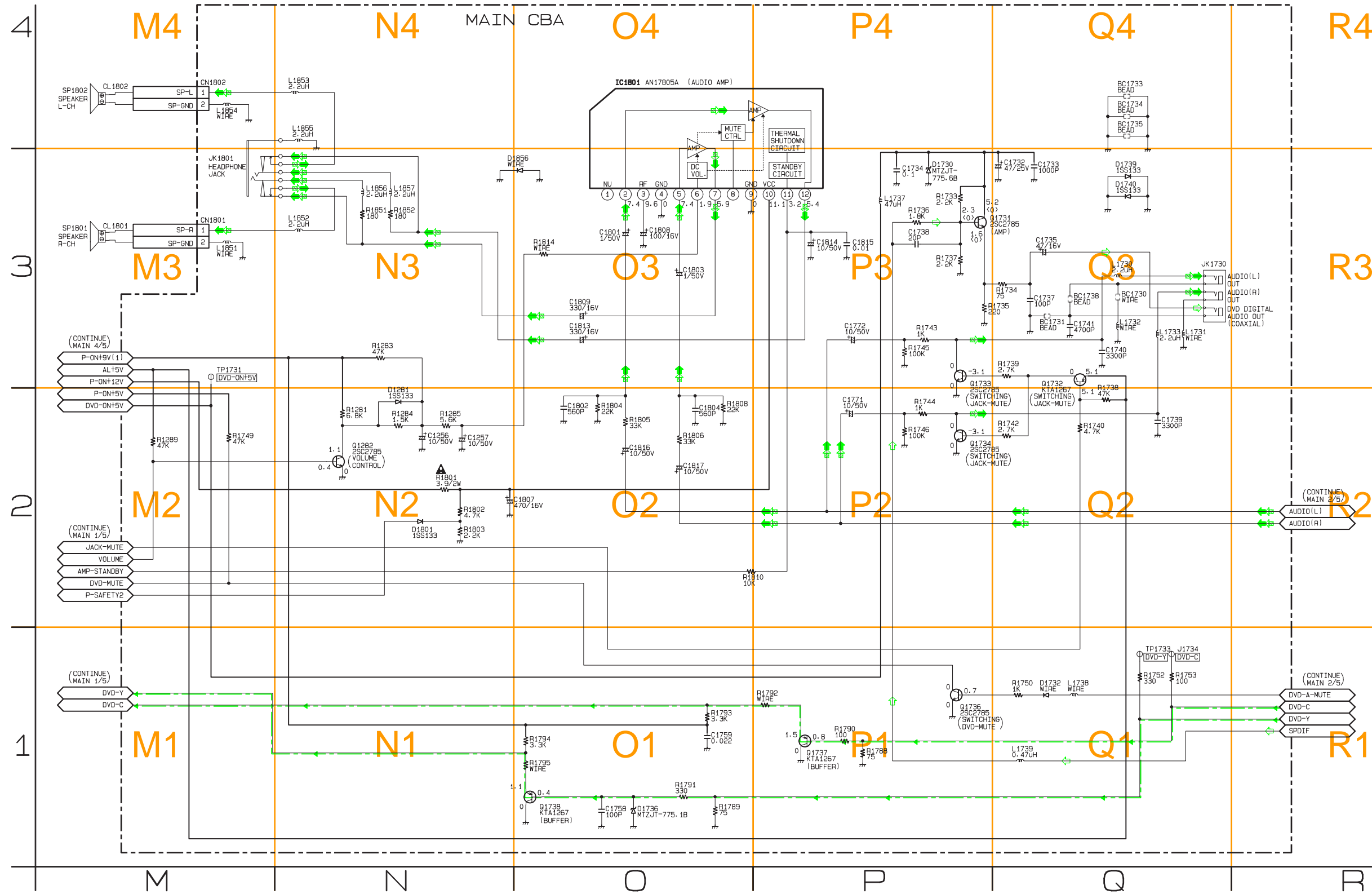


MAIN 2/5

Ref No.	Position
ICS	
IC1202	H-3
IC1451	H-2
IC1452	H-1
IC1731	J-2
TRANSISTORS	
Q1453	I-2
Q1454	I-1
CONNECTOR	
CN1731	L-2
TEST POINTS	
TP1401	H-2
TP1402	H-2
TP1732	K-2

Main 3/5 Schematic Diagram < TV Section >

- DVD VIDEO SIGNAL
- ← AUDIO (TV/LINE) SIGNAL
- ◀ DVD AUDIO SIGNAL



MAIN 3/5	
Ref No.	Position
IC	
IC1801	O-4
TRANSISTORS	
Q1282	N-2
Q1731	P-3
Q1732	Q-3
Q1733	P-3
Q1734	P-2
Q1736	P-1
Q1737	P-1
Q1738	O-1
CONNECTORS	
CN1801	M-3
CN1802	M-4
TEST POINTS	
J1734	Q-1
TP1731	M-3
TP1733	Q-1

Main 4/5 Schematic Diagram < TV Section >

CAUTION !

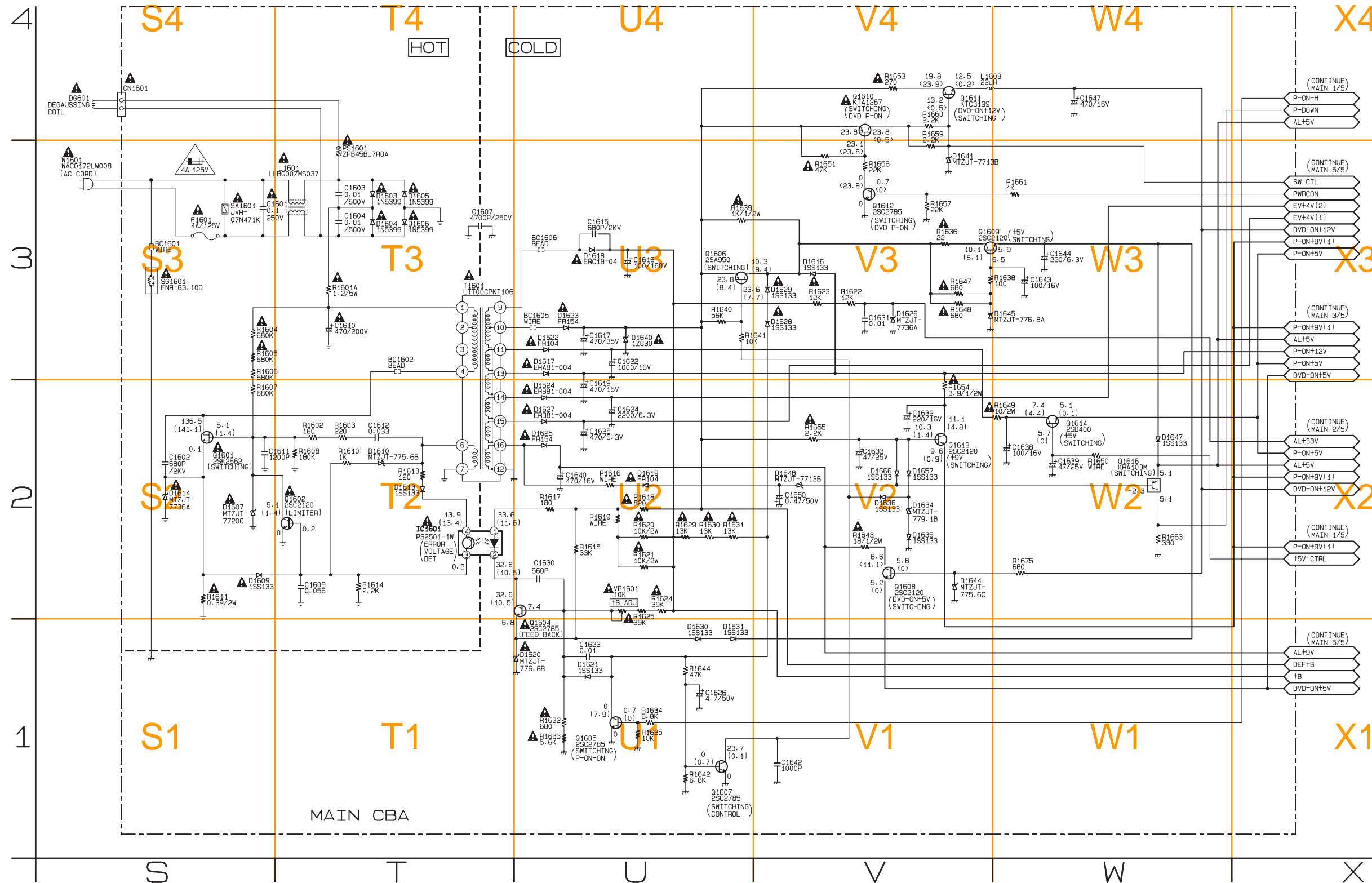
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
 If Main Fuse (F1601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
 Otherwise it may cause some components in the power supply circuit to fail.



CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A, 125V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 4A, 125V.

NOTE :

The voltage for parts in hot circuit is measured using hot GND as a common terminal.

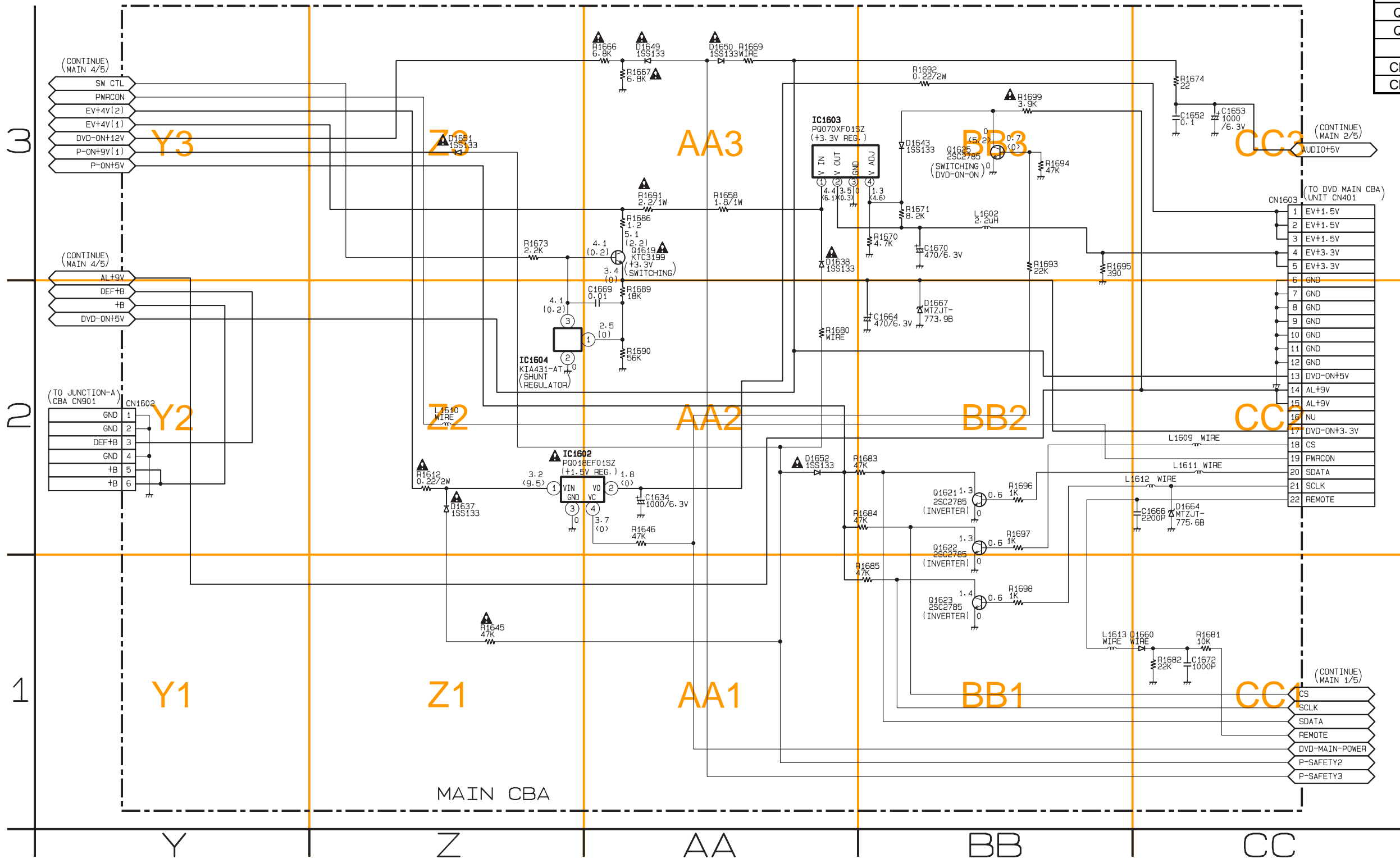


MAIN 4/5	
Ref No.	Position
IC	
IC1601	T-2
TRANSISTORS	
Q1601	S-2
Q1602	T-2
Q1604	U-2
Q1605	U-1
Q1606	U-3
Q1607	U-1
Q1608	V-2
Q1609	V-3
Q1610	V-4
Q1611	V-4
Q1612	V-3
Q1613	V-2
Q1614	W-2
Q1616	W-2
CONNECTOR	
CN1601	S-4
VARIABLE RESISTOR	
VR1601	U-2

Main 5/5 Schematic Diagram < TV Section >

MAIN 5/5

Ref No.	Position
ICS	
IC1602	Z-2
IC1603	AA-3
IC1604	Z-2
TRANSISTORS	
Q1619	AA-3
Q1621	BB-2
Q1622	BB-2
Q1623	BB-1
Q1625	BB-3
CONNECTORS	
CN1602	Y-2
CN1603	CC-3



H.V. & CRT Schematic Diagram < TV Section >

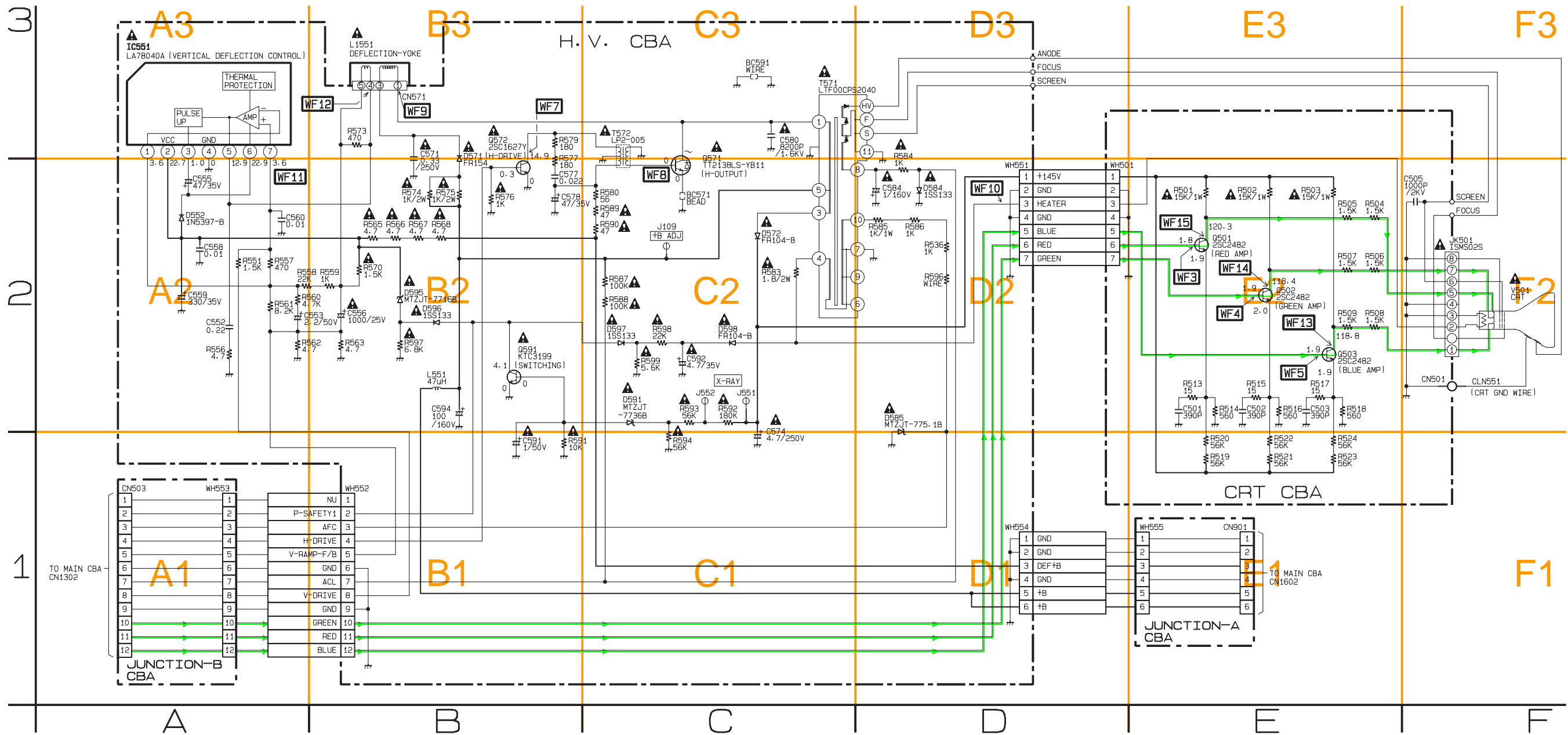
H.V.

Ref No.	Position
IC	
IC551	A-3
TRANSISTORS	
Q571	C-2
Q572	B-2
Q591	B-2
CONNECTORS	
CN571	B-3
WH551	D-2
WH552	B-1
WH554	D-1
TEST POINTS	
J109	C-2
J551	C-2
J552	C-2

CRT

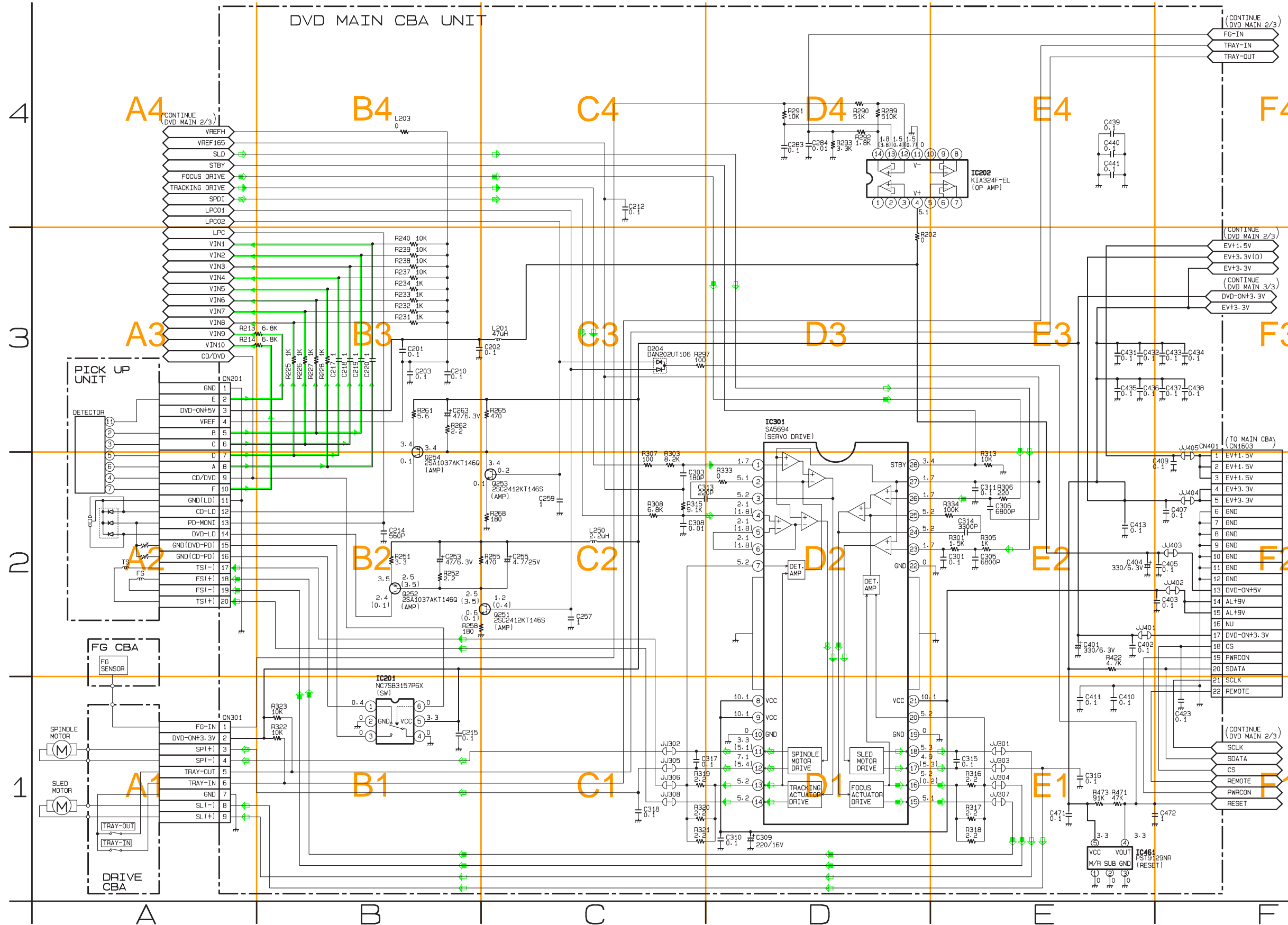
Ref No.	Position
TRANSISTORS	
Q501	E-2
Q502	E-2
Q503	E-2
CONNECTORS	
CN501	F-2
WH501	D-2

VIDEO (TV/LINE) + DVD VIDEO SIGNAL



DVD Main 1/3 Schematic Diagram < DVD Section >

— DATA(VIDEO+AUDIO)
 ◀ FOCUS SERVO SIGNAL
 ◀ SPINDLE SERVO SIGNAL
◀ TRACKING SERVO SIGNAL
◀ SLED SERVO SIGNAL

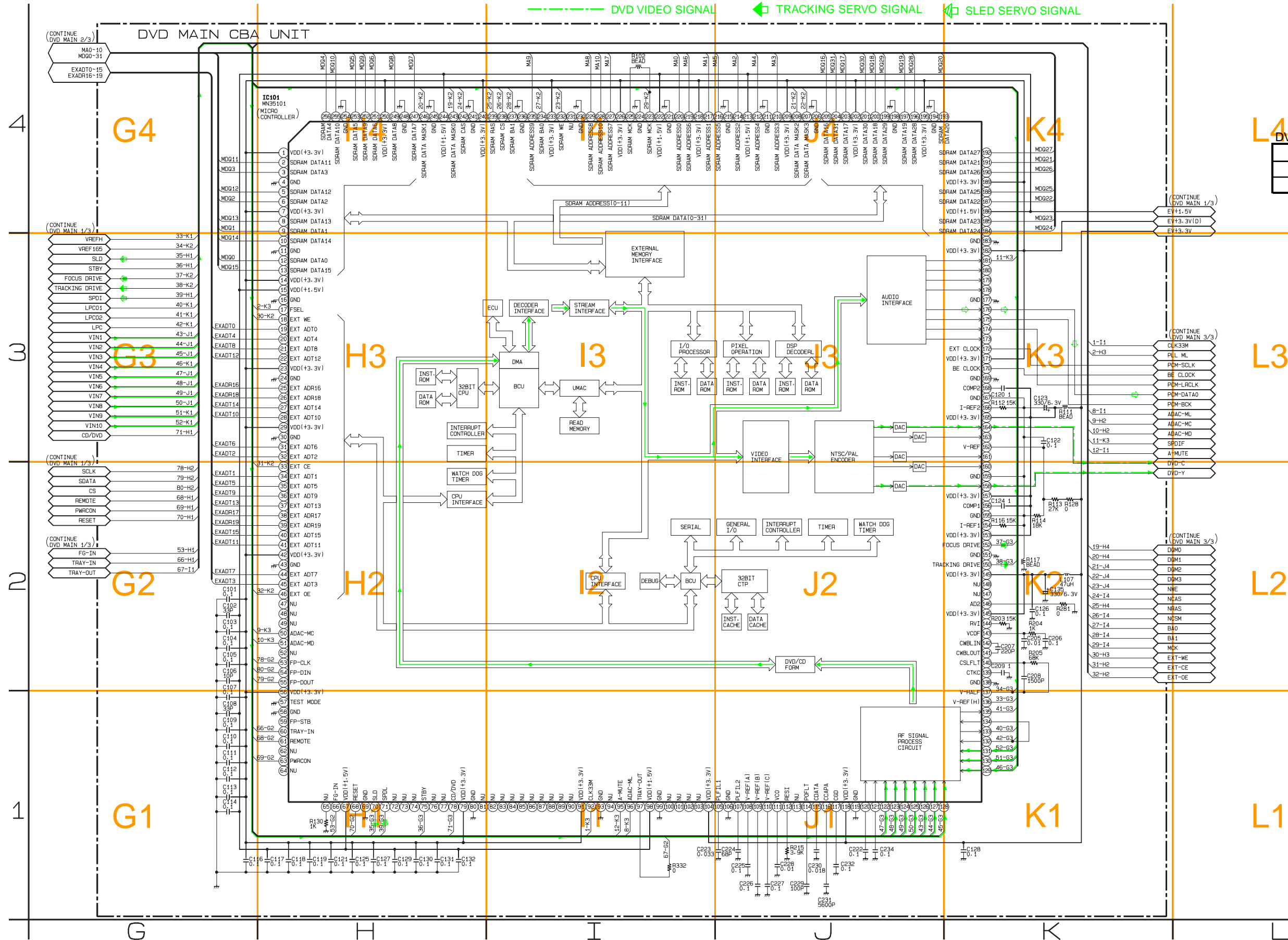


DVD MAIN 1/3

Ref No.	Position
ICS	
IC201	B-1
IC202	E-4
IC301	D-3
IC461	E-1
TRANSISTORS	
Q251	C-2
Q252	B-2
Q253	C-2
Q254	B-2
CONNECTORS	
CN201	A-3
CN301	A-1
CN401	F-2

DVD Main 2/3 Schematic Diagram < DVD Section >

——— DATA (VIDEO+AUDIO) ◀ FOCUS SERVO SIGNAL ◀ SPINDLE SERVO SIGNAL
- - - - - DVD VIDEO SIGNAL ◀ TRACKING SERVO SIGNAL ◀ SLED SERVO SIGNAL



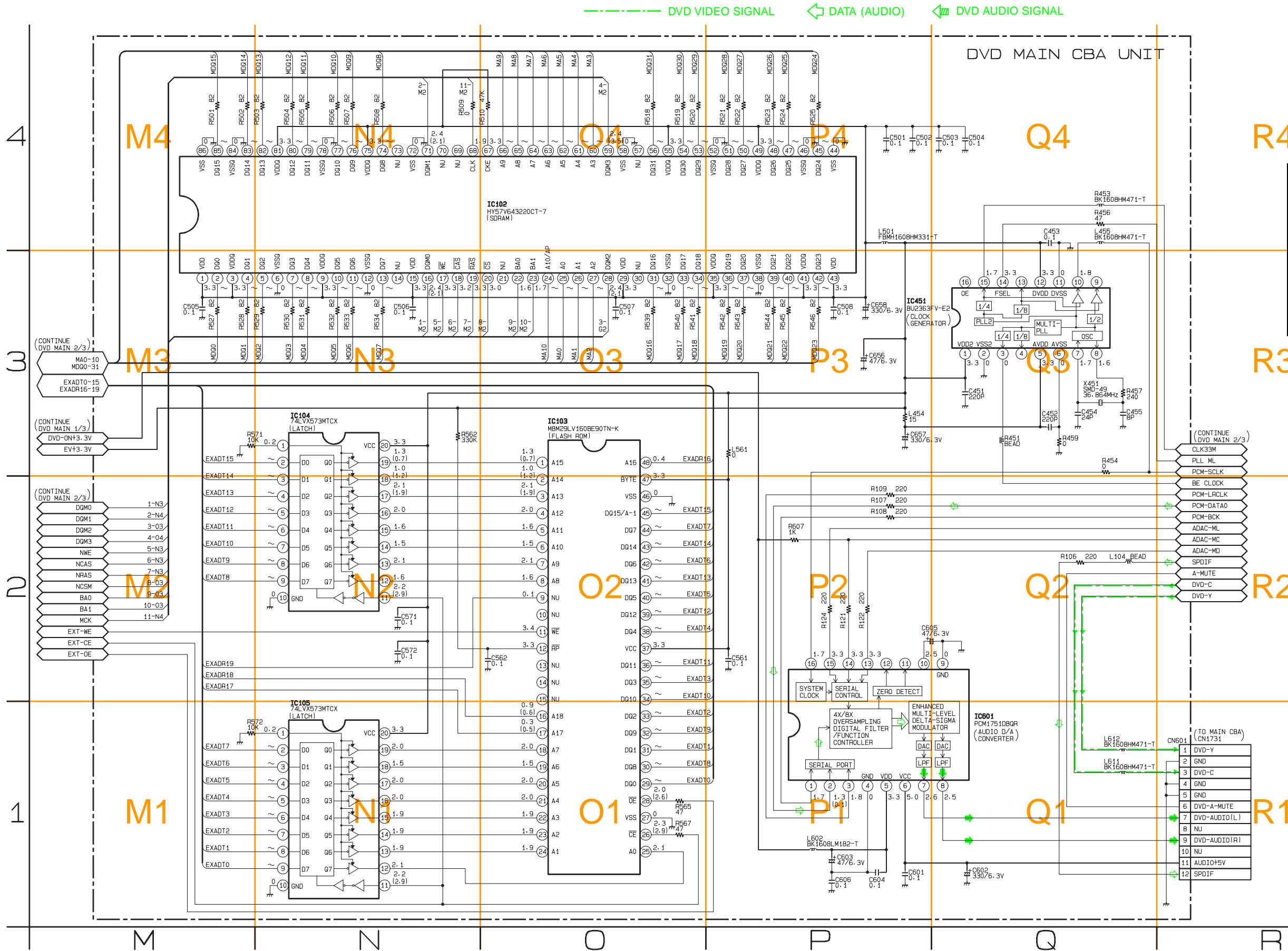
L4 DVD MAIN 2/3

Ref No.	Position
IC	
IC101	H-4

IC101 VOLTAGE CHART

PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP
1	3.3	3.3	33	2.2	2.9	65	0.1	0.1	97	3.4	3.4	129	2.0	2.0	161	----	----	193	~	~	225	1.9	1.9
2	~	~	34	~	~	66	1.2	2.5	98	1.6	1.6	130	2.2	2.2	162	1.4	1.4	194	0	0	226	3.3	3.3
3	~	~	35	~	~	67	1.6	1.6	99	0	0	131	2.3	2.3	163	----	----	195	3.3	3.3	227	~	~
4	0	0	36	~	~	68	3.4	3.4	100	----	----	132	0.4	0.1	164	0.9	0.9	196	~	~	228	~	~
5	~	~	37	~	~	69	0	0	101	----	----	133	1.2	0.4	165	3.3	3.3	197	~	~	229	~	~
6	~	~	38	0.3	0.5	70	1.7	1.7	102	----	----	134	0.4	0.1	166	1.5	1.5	198	0	0	230	0	0
7	3.3	3.3	39	0.1	0.1	71	2.4	1.7	103	----	----	135	0.2	0.2	167	0	0	199	~	~	231	----	----
8	~	~	40	~	~	72	----	----	104	3.3	3.3	136	2.3	2.3	168	2.1	2.1	200	~	~	232	3.3	3.3
9	~	~	41	~	~	73	----	----	105	0.9	0.9	137	1.7	1.7	169	0	0	201	~	~	233	3.3	3.3
10	~	~	42	3.3	3.3	74	----	----	106	0	0	138	0	0	170	0.8	0.8	202	3.3	3.3	234	1.6	1.6
11	0	0	43	0	0	75	3.4	3.4	107	0.8	0.8	139	1.7	1.7	171	3.3	3.3	203	~	~	235	~	~
12	~	~	44	~	~	76	----	----	108	1.6	1.6	140	1.7	1.7	172	1.6	1.6	204	~	~	236	0	0
13	~	~	45	~	~	77	----	----	109	2.1	2.1	141	1.7	1.7	173	----	----	205	~	~	237	1.7	1.7
14	3.3	3.3	46	2.0	2.6	78	0.1	0.1	110	2.6	2.6	142	1.7	1.7	174	1.8	1.8	206	0	0	238	3.0	3.0
15	1.5	1.5	47	----	----	79	3.3	3.3	111	2.0	2.0	143	0.5	0.5	175	1.7	1.7	207	2.4	3.5	239	3.3	3.3
16	0	0	48	----	----	80	0	0	112	0.7	0.9	144	1.6	1.6	176	1.4	0.1	208	2.4	2.1	240	3.3	3.3
17	3.4	3.4	49	----	----	81	----	----	113	----	----	145	3.3	3.3	177	0	0	209	3.3	3.3	241	0	0
18	3.4	3.4	50	3.4	3.4	82	----	----	114	1.8	1.8	146	1.8	1.8	178	----	----	210	~	~	242	3.2	3.2
19	~	~	51	3.4	3.4	83	----	----	115	1.4	1.4	147	----	----	179	----	----	211	0	0	243	2.4	2.1
20	~	~	52	----	----	84	----	----	116	0.3	0.3	148	----	----	180	----	----	212	~	~	244	1.5	1.5
21	~	~	53	3.4	3.4	85	----	----	117	1.6	1.6	149	3.3	3.3	181	1.7	1.7	213	1.5	1.5	245	0	0
22	~	~	54	3.4	3.4	86	----	----	118	3.3	3.3	150	1.7	1.7	182	3.3	3.3	214	~	~	246	2.4	2.1
23	3.3	3.3	55	3.3	3.3	87	----	----	119	0	0	151	0	0	183	0	0	215	0	0	247	~	~
24	0	0	56	3.3	3.3	88	----	----	120	1.9	1.9	152	1.7	1.7	184	~	~	216	~	~	248	0	0
25	0.4	0.4	57	0	0	89	----	----	121	1.9	1.9	153	3.3	3.3	185	~	~	217	~	~	249	~	~
26	0.9	0.6	58	0	0	90	----	----	122	2.4	2.4	154	1.4	1.4	186	1.5	1.5	218	3.3	3.3	250	3.3	3.3
27	~	~	59	----	----	91	3.3	3.3	123	2.4	2.4	155	0	0	187	~	~	219	~	~	251	~	~
28	~	~	60	3.4	3.4	92	1.7	1.5	124	2.4	2.4	156	2.2	2.2	188	~	~	220	~	~	252	~	~
29	3.3	3.3	61	3.1	3.1	93	0	0	125	2.4	2.4	157	3.3	3.3	189	3.3	3.3	221	0	0	253	~	~
30	0	0	62	----	----	94	----	----	126	2.0	2.0	158	0.7	0.7	190	~	~	222	1.5	1.5	254	0	0
31	~	~	63	3.4	3.4	95	3.4	0.1	127	2.0	2.0	159	0	0	191	~	~	223	1.9	1.9	255	~	~
32	~	~	64	----	----	96	3.4	3.4	128	2.0	2.0	160	----	----	192	~	~	224	0	0	256	~	~

DVD Main 3/3 Schematic Diagram < DVD Section >



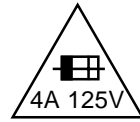
DVD MAIN 3/3

Ref No.	Position
ICS	
IC102	O-4
IC103	O-3
IC104	N-3
IC105	N-1
IC451	Q-3
IC601	Q-1
CONNECTOR	
CN601	R-1

Main CBA Top View < TV Section >

CAUTION!

Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

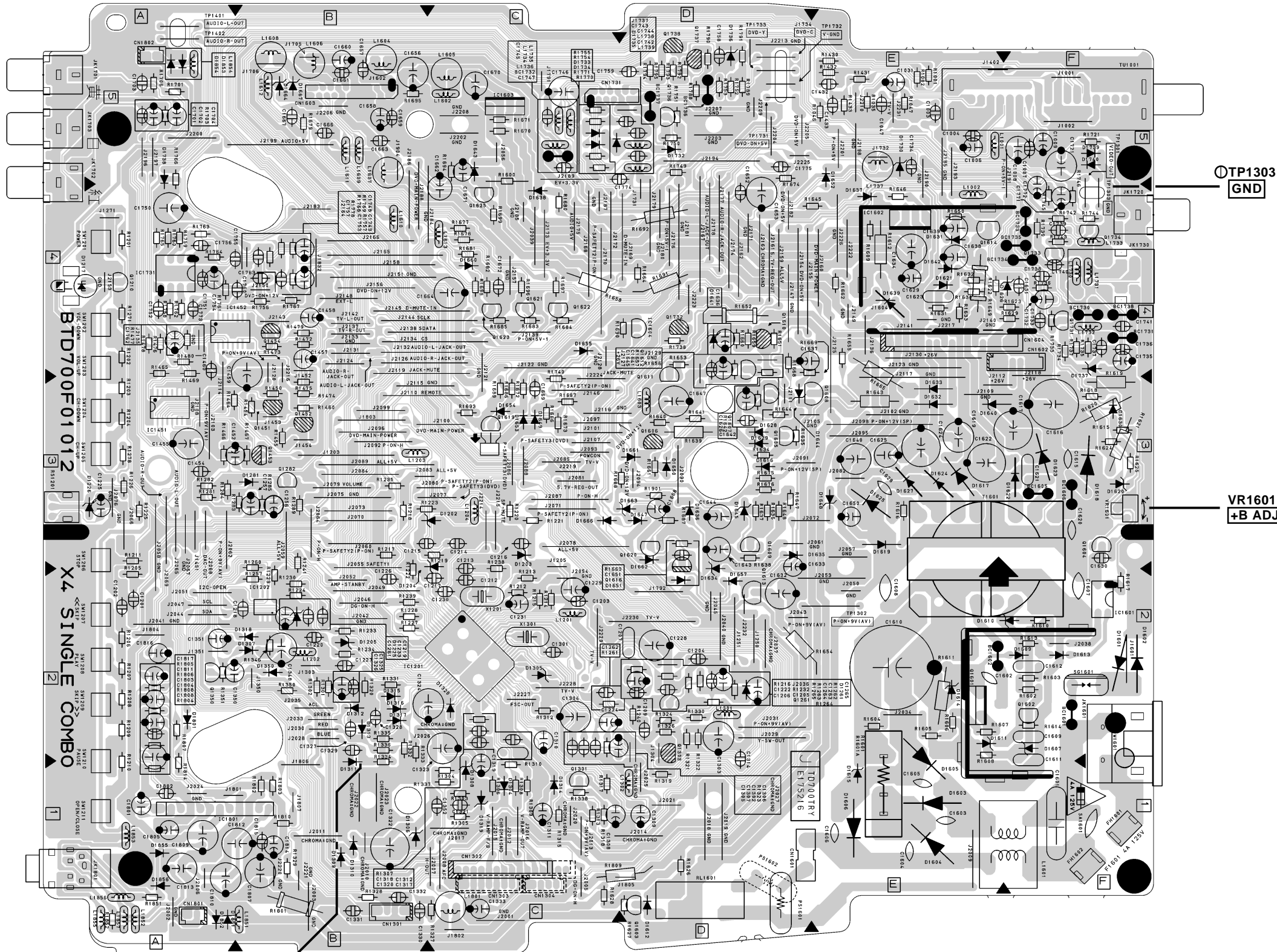


CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A, 125V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE REMPLACEMENT DE MÊME TYPE DE 4A, 125V.

NOTE:

The voltage for parts in hot circuit is measured using hot GND as a common terminal.

BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER SUPPLY CIRCUIT, AN ISOLATION TRANSFORMER MUST BE USED. ALSO, IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT SLOWLY, WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY CIRCUIT, A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.



MAIN CBA

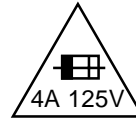
Ref No.	Position	Ref No.	Position
ICS		TRANSISTORS	
IC1201	B-2	Q1621	C-4
IC1202	B-2	Q1622	C-4
IC1451	A-3	Q1623	C-4
IC1452	A-4	Q1625	C-4
IC1601	F-2	Q1731	F-4
IC1602	E-4	Q1732	D-4
IC1603	C-5	Q1733	F-4
IC1604	D-4	Q1734	F-4
IC1731	A-4	Q1736	D-5
IC1801	A-1	Q1737	D-5
TRANSISTORS		Q1738	D-5
CONNECTORS			
Q1261	D-2		
Q1282	B-3	CN1302	C-1
Q1301	C-1	CN1601	D-1
Q1453	B-3	CN1602	F-4
Q1454	B-4	CN1603	B-5
Q1601	E-2	CN1731	C-5
Q1602	F-2	CN1801	A-1
Q1604	F-3	CN1802	A-5
TEST POINTS			
Q1605	D-3	J1734	D-5
Q1606	D-3	TP1301	F-5
Q1607	D-3	TP1302	E-2
Q1608	E-3	TP1303	F-4
Q1609	D-3	TP1401	A-5
Q1610	D-4	TP1402	A-5
Q1611	D-3	TP1731	D-5
Q1612	D-4	TP1732	E-5
Q1613	D-2	TP1733	D-5
Q1614	E-4	VARIABLE RESISTOR	
Q1616	D-2	VR1601	F-3
Q1619	C-3		

D1311 Cathode
(C-Trap Adjustment)

Main CBA Bottom View < TV Section >

CAUTION !

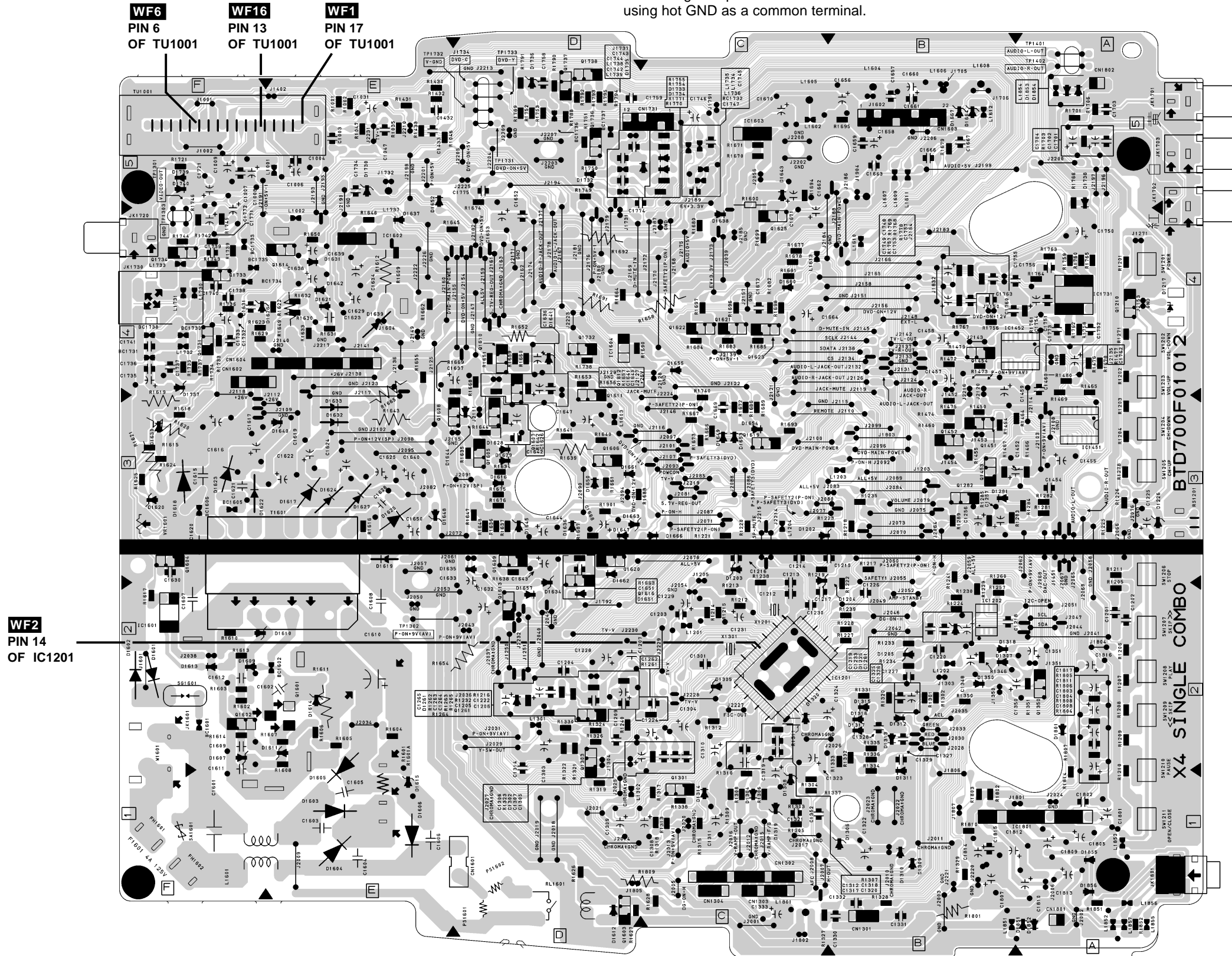
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
 If Main Fuse (F1601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
 Otherwise it may cause some components in the power supply circuit to fail.



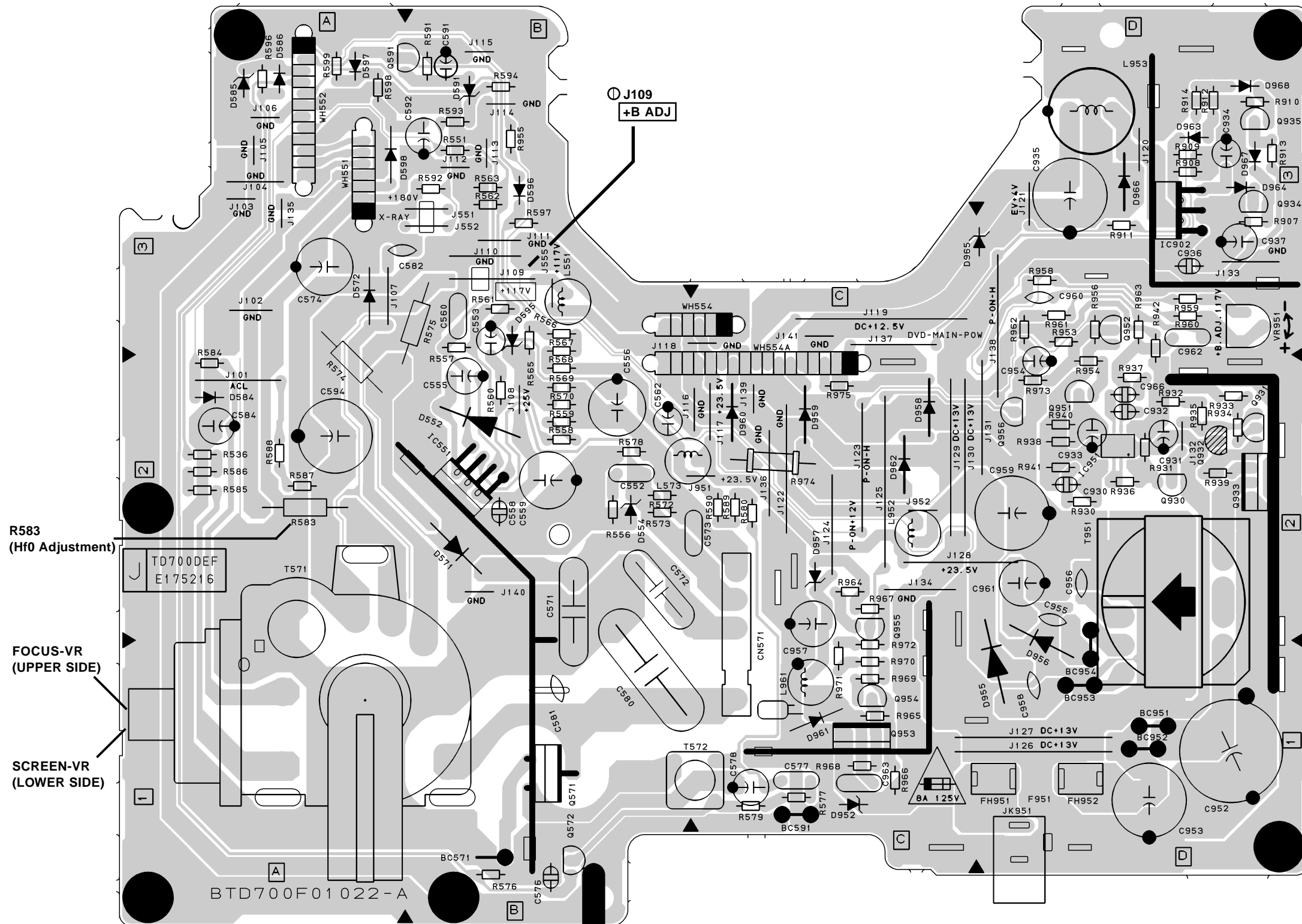
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A, 125V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 4A, 125V.

BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER SUPPLY CIRCUIT, AN ISOLATION TRANSFORMER MUST BE USED. ALSO, IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT SLOWLY, WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY CIRCUIT, A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.

NOTE:
 The voltage for parts in hot circuit is measured using hot GND as a common terminal.



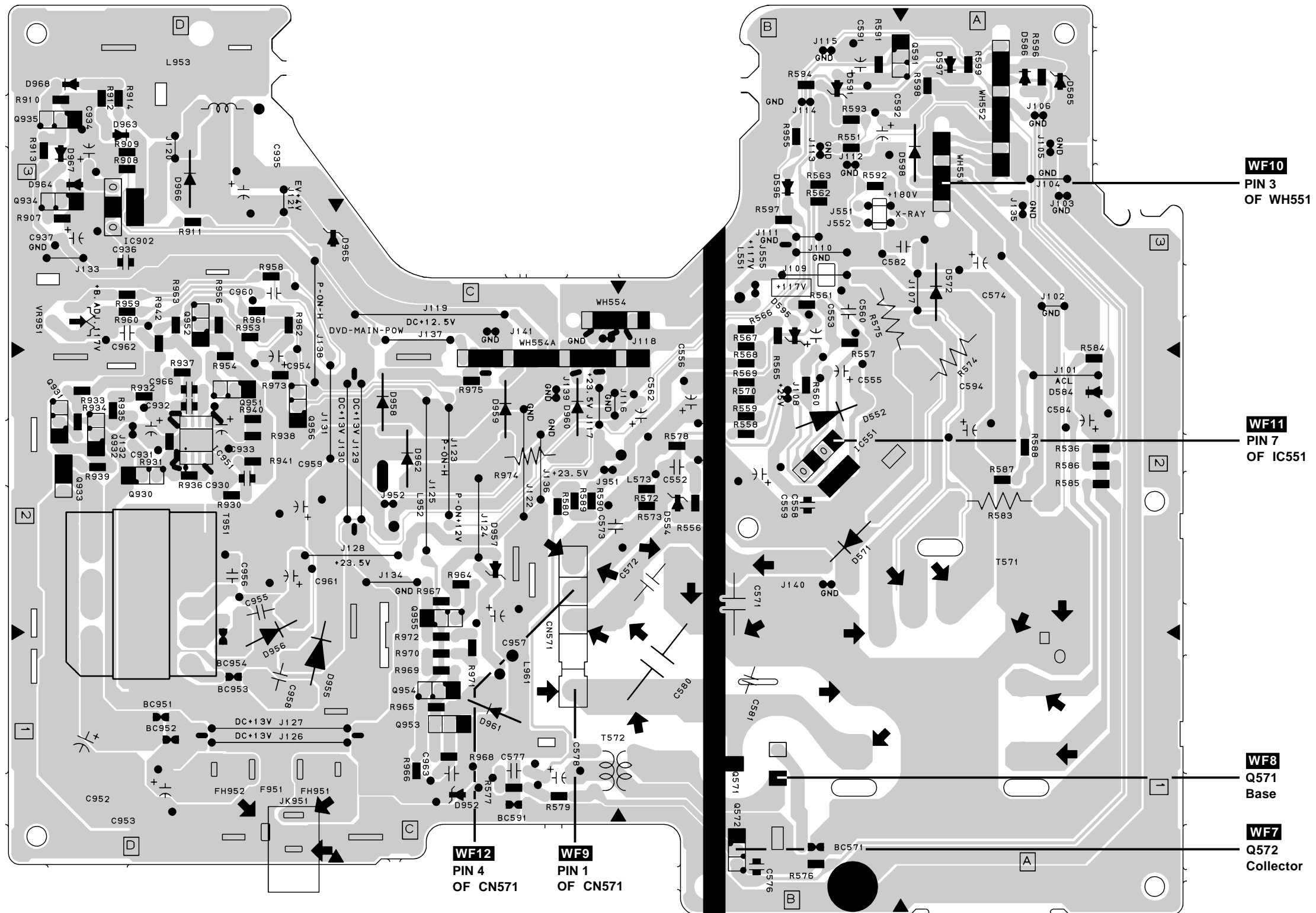
H.V. CBA Top View < TV Section >



H.V. CBA

Ref No.	Position
IC	
IC551	B-2
TRANSISTORS	
Q571	B-1
Q572	B-1
Q591	A-3
CONNECTORS	
CN571	C-1
WH551	A-3
WH552	A-3
WH554	C-3
TEST POINTS	
J109	B-3
J551	B-3
J552	B-3

H.V. CBA Bottom View < TV Section >

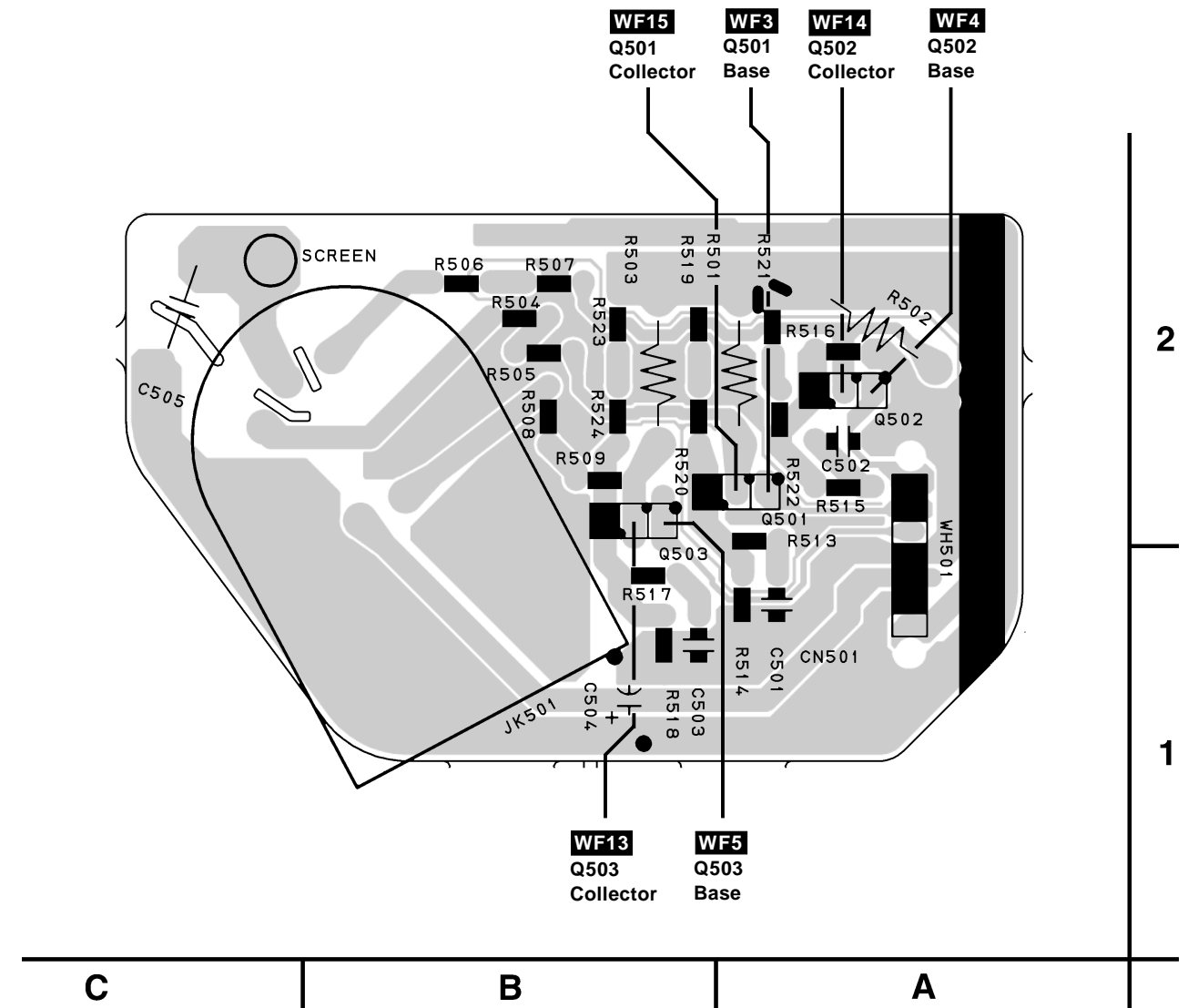
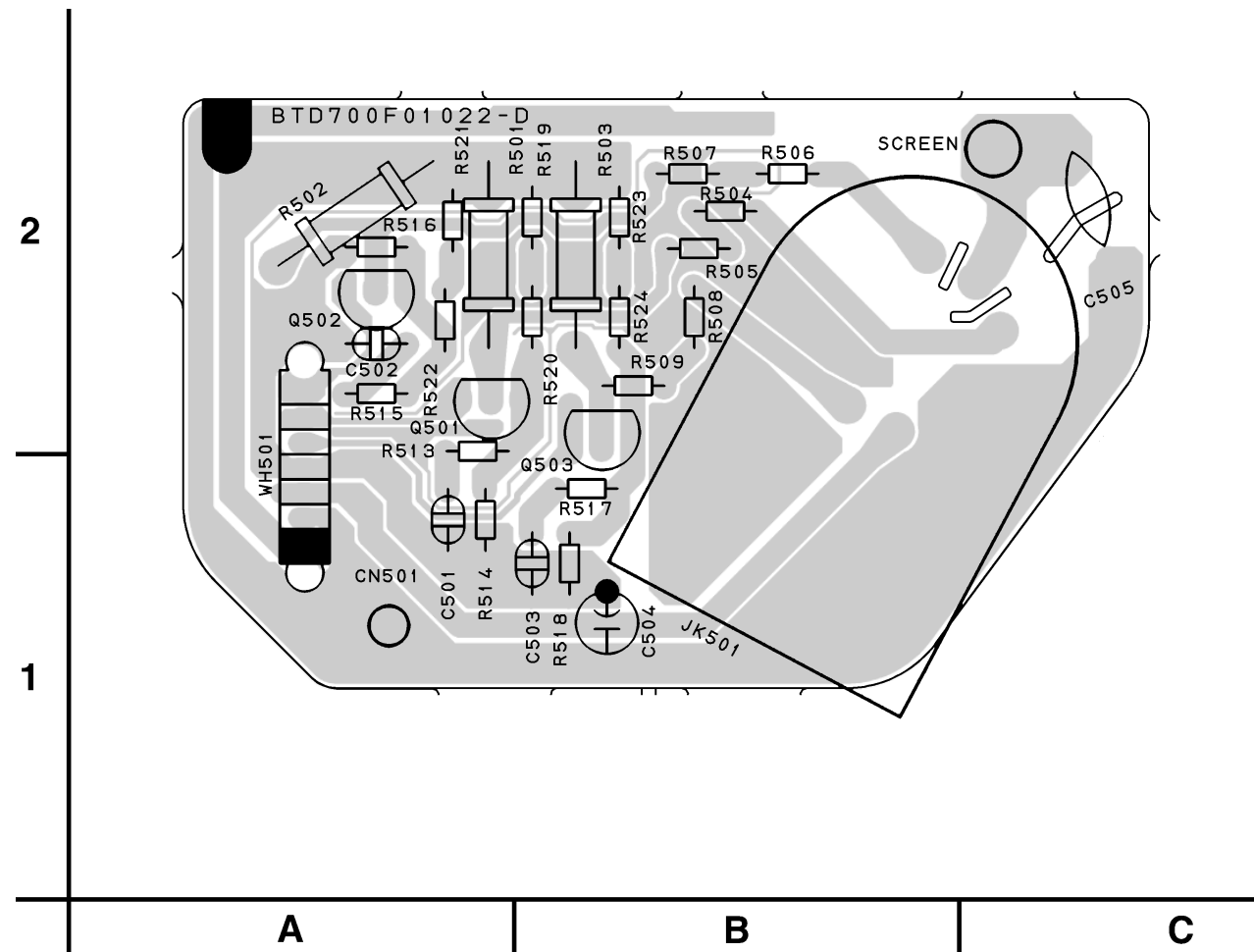


CRT CBA Top View < TV Section >

CRT CBA Bottom View < TV Section >

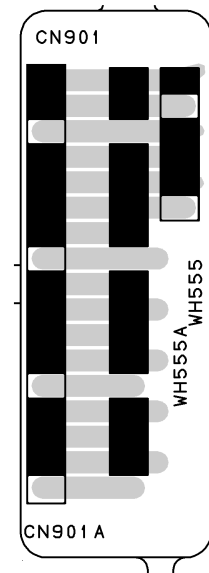
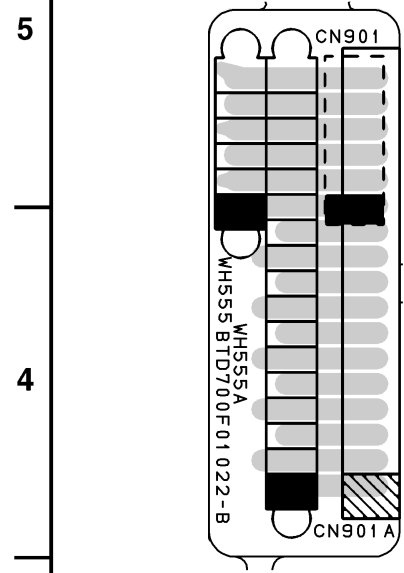
CRT CBA

Ref No.	Position
TRANSISTORS	
Q501	A-1
Q502	A-1
Q503	A-1
CONNECTORS	
CN501	A-1
WH501	A-1



Junction-A CBA
Top View < TV Section >

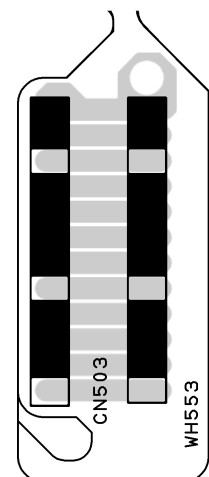
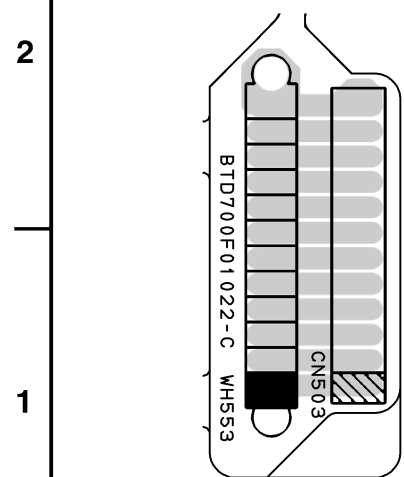
Junction-A CBA
Bottom View < TV Section >



BT700F01022-B

Junction-B CBA
Top View < TV Section >

Junction-B CBA
Bottom View < TV Section >



BT700F01022-C

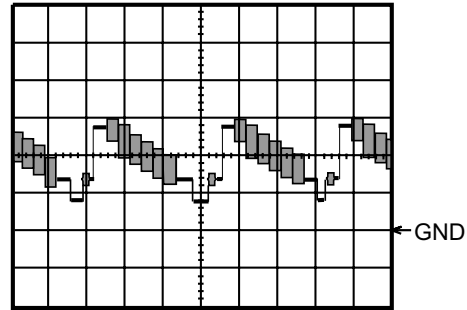
5
4
3
2
1

A B C D

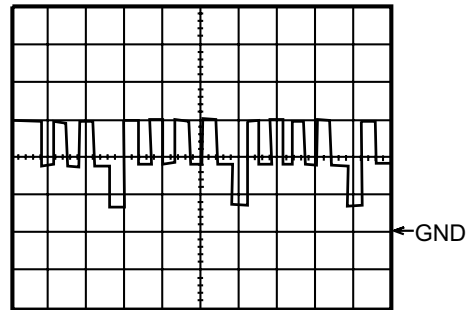
WAVEFORMS

WF1 ~ WF20 = Waveforms to be observed at Waveform check points. (Shown in Schematic Diagram.)

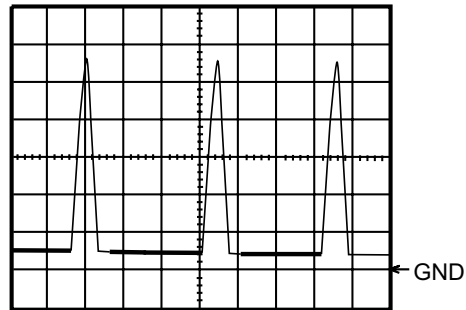
Input: NTSC Color Bar Signal (with 1kHz Audio Signal) --- WF1~WF16
 DVD Video (Power on (Stop) MODE) --- WF17, WF18
 CD (1KHz Play) --- WF19, WF20
INITIAL POSITION: Unplug unit from AC outlet for at least 5 minutes. reconnect to AC outlet and then turn power on.
(Brightness---Center Color---Center Tint --- Center Contrast---Approx 70%)



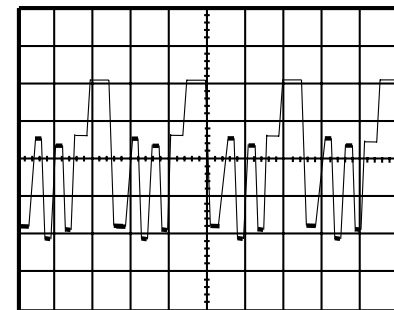
WF1 1DIV: 0.5V 20μsec
TU1001 Pin 17



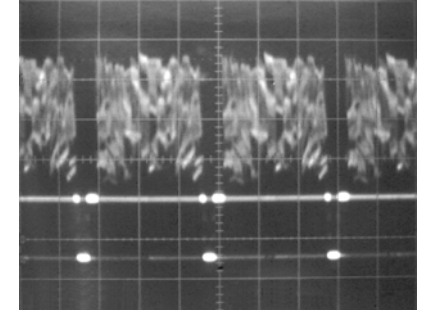
WF5 1DIV: 2V 20μsec
Q 503 Base



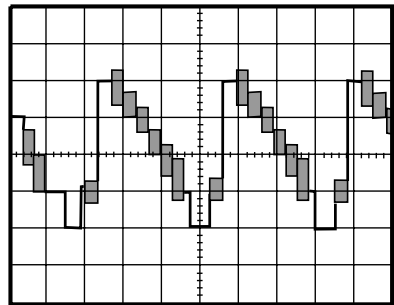
WF9 1DIV: 200V 20μsec
CN 571 Pin 1



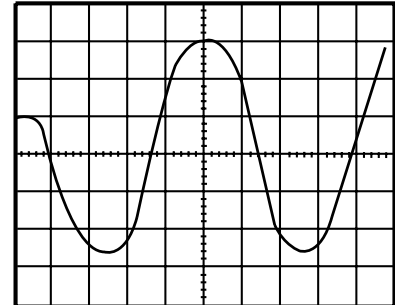
WF13 1DIV: 20V 20μsec
Q503 Collector



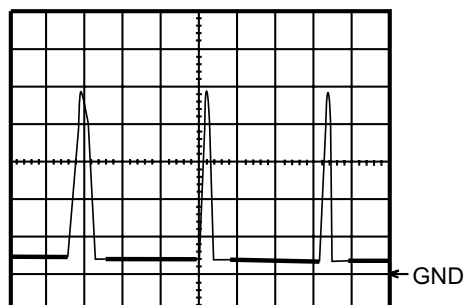
WF17 1DIV: 0.2V 20μsec
CN1731 Pin 12



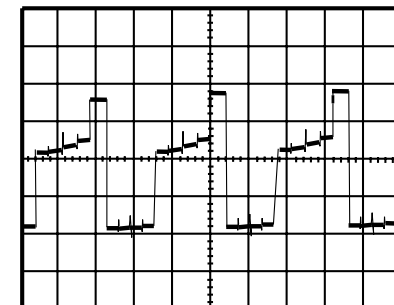
WF2 1DIV: 0.5V 20μsec
IC 1201 Pin 14



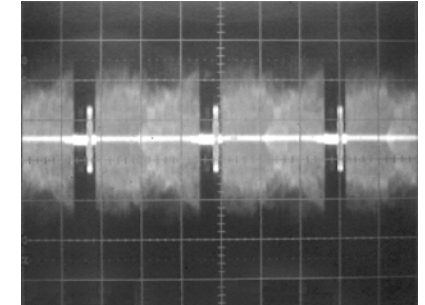
WF6 1DIV: 0.2V 20msec
TU1001 Pin 6



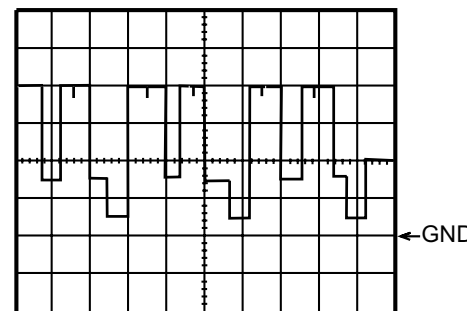
WF10 1DIV: 5V 20μsec
WH551 Pin 3



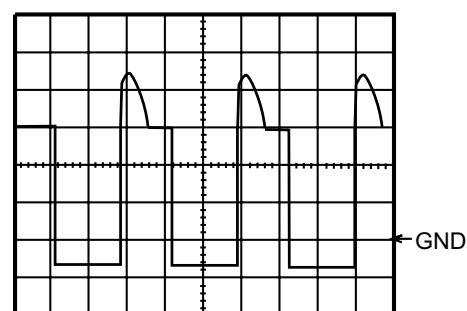
WF14 1DIV: 20V 20μsec
Q 502 Collector



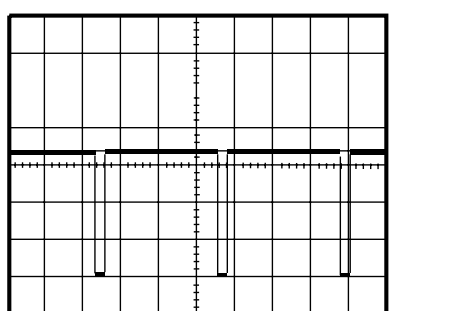
WF18 1DIV: 0.2V 20μsec
CN1731 Pin 10



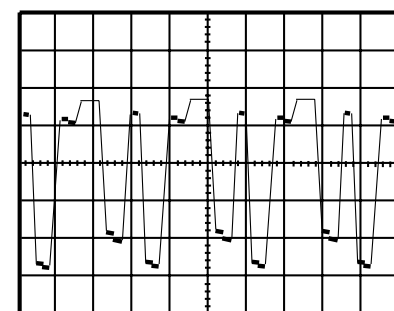
WF3 1DIV: 2V 20μsec
Q501 Base



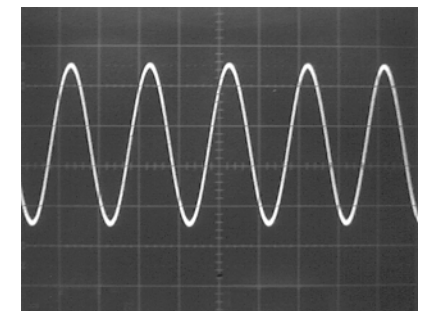
WF7 1DIV: 10V 20μsec
Q 572 Collector



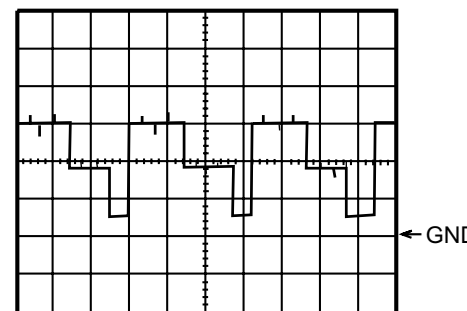
WF11 1DIV: 2V 5msec
IC 551 Pin 7



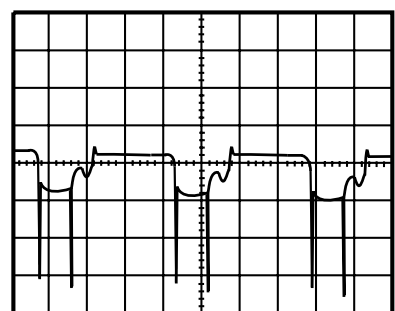
WF15 1DIV: 20V 20μsec
Q 501 Collector



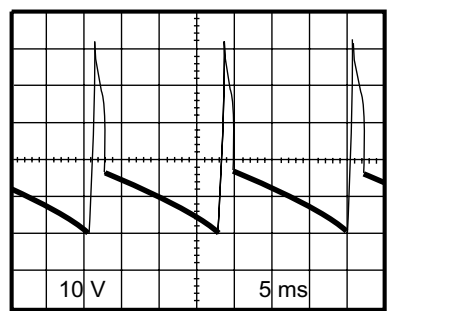
WF19 1DIV: 1V 0.5msec
CN1731 Pin 6



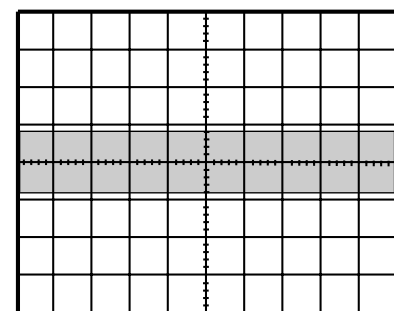
WF4 1DIV: 2V 20μsec
Q 502 Base



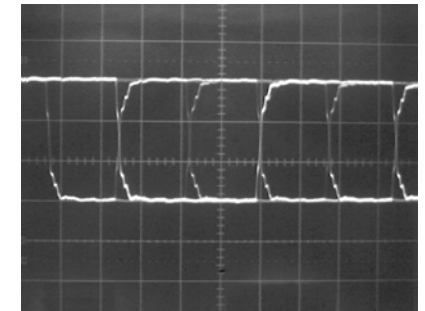
WF8 1DIV: 5V 20μsec
Q 571 Base



WF12 1DIV: 10V 5msec
CN 571 Pin 4

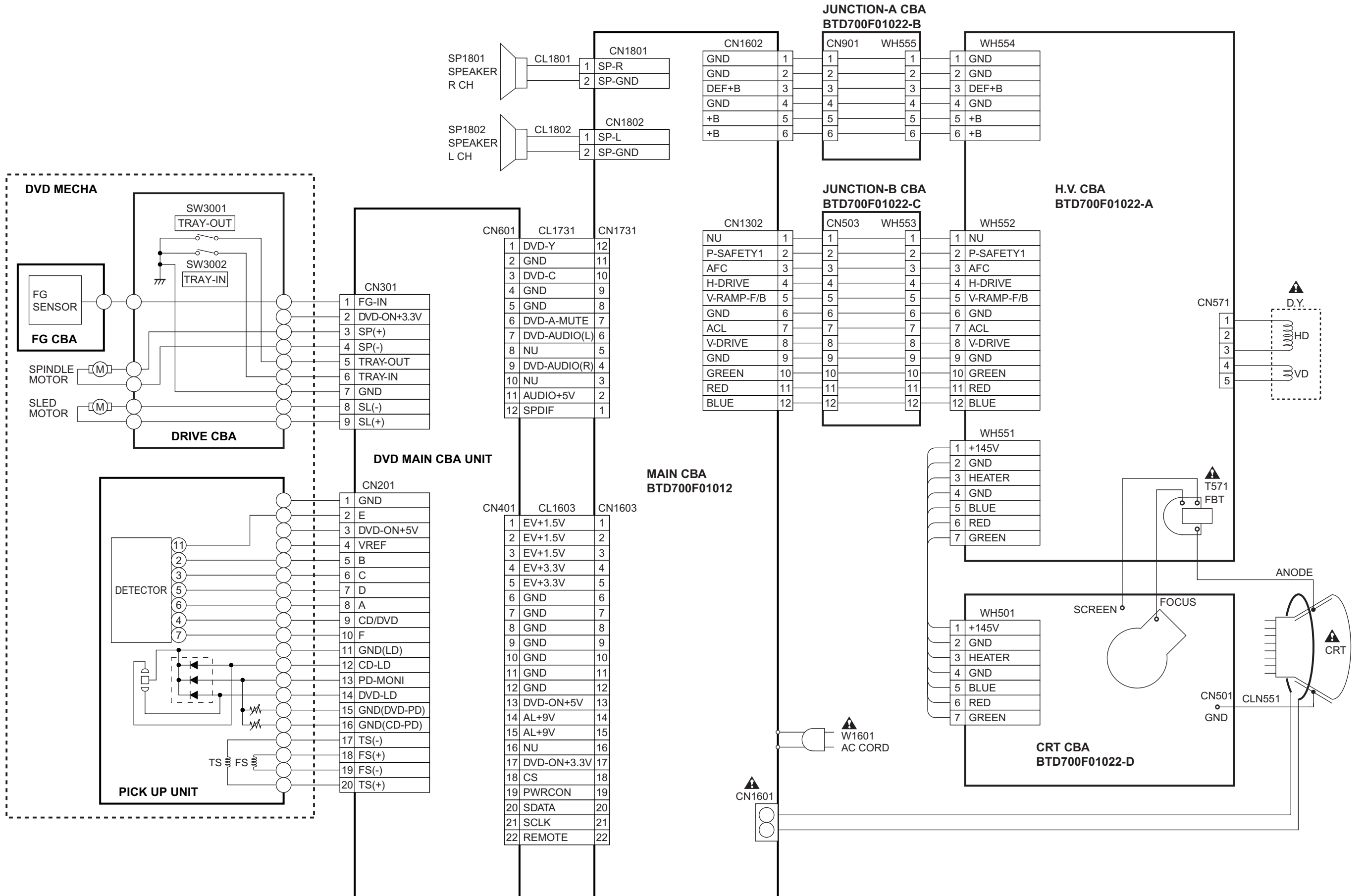


WF16 1DIV: 0.2V 20μsec
TU 1001 Pin 13



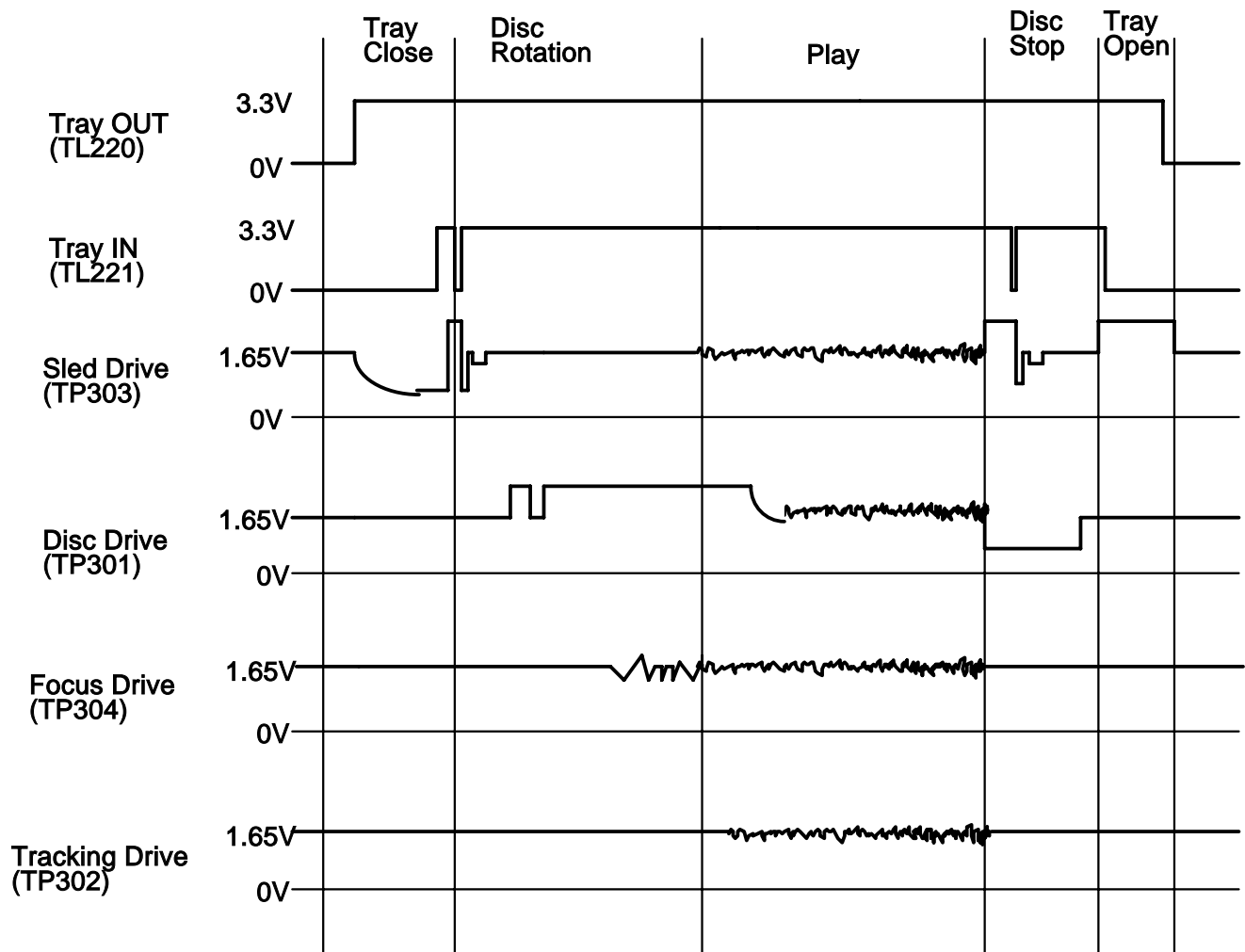
WF20 1DIV: 1V 0.1μsec
CN1731 Pin 1

WIRING DIAGRAM



SYSTEM CONTROL TIMING CHARTS

Tray Close ~ Play / Play ~ Tray Open



IC PIN FUNCTIONS

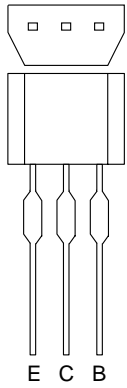
IC1201 (TV Micro Computer)

Pin No.	Signal Name	Function
1	GND	GND
2	XIN	Input for Oscillator
3	XOUT	Output for Oscillator
4	TEST 1	TEST 1
5	GND	GND
6	VCC	AL+5V
7	TEST 0	TEST 0
8	FILT	FILT
9	HLF	Filter for CCD
10	VHOLD	VHOLD
11	CVIN	Input for Video Signal
12	RESET	RESET
13	N.U.	Not Used
14	Y-SW OUT	Composite Signal Output
15	GND	GND
16	3.58 X'TAL	3.58MHz Crystal
17	C-APC	CHROMINANCE APC
18	N.U.	Not Used
19	N.U.	Not Used
20	N.U.	Not Used
21	N.U.	Not Used
22	VCC	VCC
23	N.U.	(GND)
24	CVBS IN2	Composite Signal Input 2 (LINE)
25	N.U.	Not Used
26	CVBS IN1	Composite Signal Input 1 (TUNER)
27	N.U.	Not Used
28	5.7V REG OUT	5.7V Output
29	C IN	DVD Chrominance Signal
30	Y IN	DVD Luminance Signal
31	V REG VCC	DC 8.7V Input
32	FSC OUT	Clock Output 3.58MHz
33	N.U.	Not Used
34	N.U.	Not Used

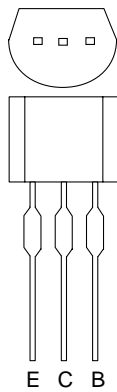
Pin No.	Signal Name	Function
35	N.U.	Not Used
36	N.U.	Not Used
37	V RAMP F/B	V Ramp Feed Back
38	V RAMP OUT	Vertical Output
39	V RAMP CAP	V Ramp OSC Capacitor
40	N.U.	Not Used
41	N.U.	Not Used
42	H VCO F/B	H Vco Feed Back
43	AFC FILT	Horizontal AFC Filter
44	GND	GND
45	FBP IN	Flyback Pulse Input
46	H-OUT	H Pulse Output
47	VCC	Vcc
48	VCC	Vcc
49	VCC	Vcc
50	R OUT	Red Output
51	G OUT	Green Output
52	B OUT	Blue Output
53	ACL	IB-Input
54	N.U.	Not Used
55	JACK-MUTE	Muting Signal to Audio Output Terminal
56	SDA	I2C-BUS Controller Interface (Data)
57	I2C-OPEN	White Balance Adjustment Judgement
58	SCL	I2C-BUS Controller Interface (Clock)
59	CS	DVD Interface Chip Select
60	SDATA	DVD Interface Data
61	SCLK	DVD Interface Clock
62	VOLUME	Volume Control
63	AMP-STANDBY	Speaker Amp. ON/OFF Output Signal
64	REMOTE OUT	DVD Control Key Code Output
65	DVD -MUTE	DVD Mute Signal Input
66	KEY-IN 0	Key Input 0
67	KEY-IN 1	Key Input 1

Pin No.	Signal Name	Function
68	AGC-IN	AGC Voltage Input
69	AFT	AFT Voltage Input
70	REMOTE	Input for Remote Control
71	N.U.	Not Used
72	SPOT-KILL	Spot Countermeasure
73	P-SAFETY 1	Power Supply Protection
74	P-SAFETY 2	Power Supply Protection
75	DVD-H/ P-SAFETY 3	DVD at High/Power Supply Protection
76	EXT-L	Switching External Input
77	DVD-MAIN- POWER	Power On Signal to High for DVD
78	P-ON-H	Output for P-ON-H
79	N.U.	Not Used
80	N.U.	Not Used

LEAD IDENTIFICATIONS

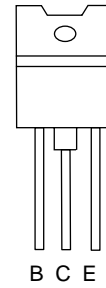


2SC3400
KTA1266(GR)
BN1F4M-T
KTC3199(BR)
2SC2785(J,H,F)
KRC103M



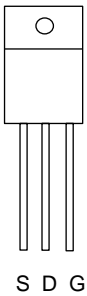
2SA950(Y,O)
KTA1271(Y)
2SA1175(F)
KTA1267(GR)
2SA1015-GR(TPE2)
2SC2482 TPE6
2SC3468(E,D)-AE
2SC2120-(O,Y)(TPE2)
2SC1815-GR(TPE2)
KTC3198(GR)
2SC1627Y-TPE2

TT2138LS-YB11
T2SC5884000RF



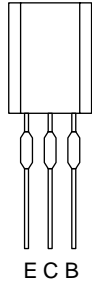
E: Emitter
C: Collector
B: Base

2SK2662



S: Source
D: Drain
G: Gate

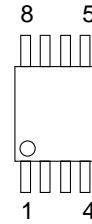
2SD400(F)



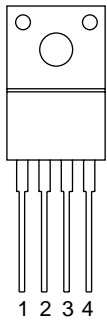
KIA431-AT



NJM4558D

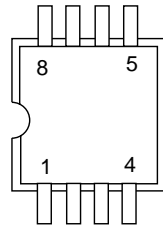


PQ070XF01SZ
PQ018EF01SZ

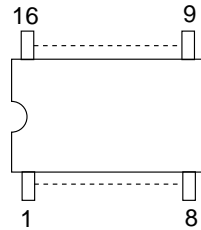


1: Vin
2: Vo
3: GND
4: Vc

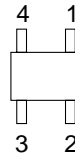
BR24C02F-W
AT24C02N-10SC
M24C02-MN6
BR24C02F
CAT24WC02JI
M24C02-WMN6



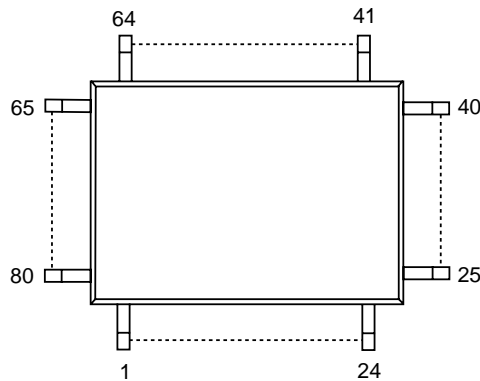
TC4053BF(N)
CD4053BCSJX



PS2501-1W
PS2501-1L



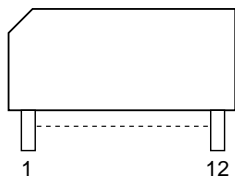
M61271M8-053FP-61



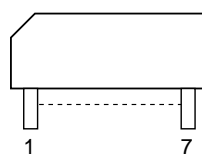
Note:

A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
S: Source
G: Gate
D: Drain

AN17805A



AN5522
LA78040A



EXPLODED VIEWS AND PARTS LIST SECTION

13" COLOR TV/DVD C6513DD

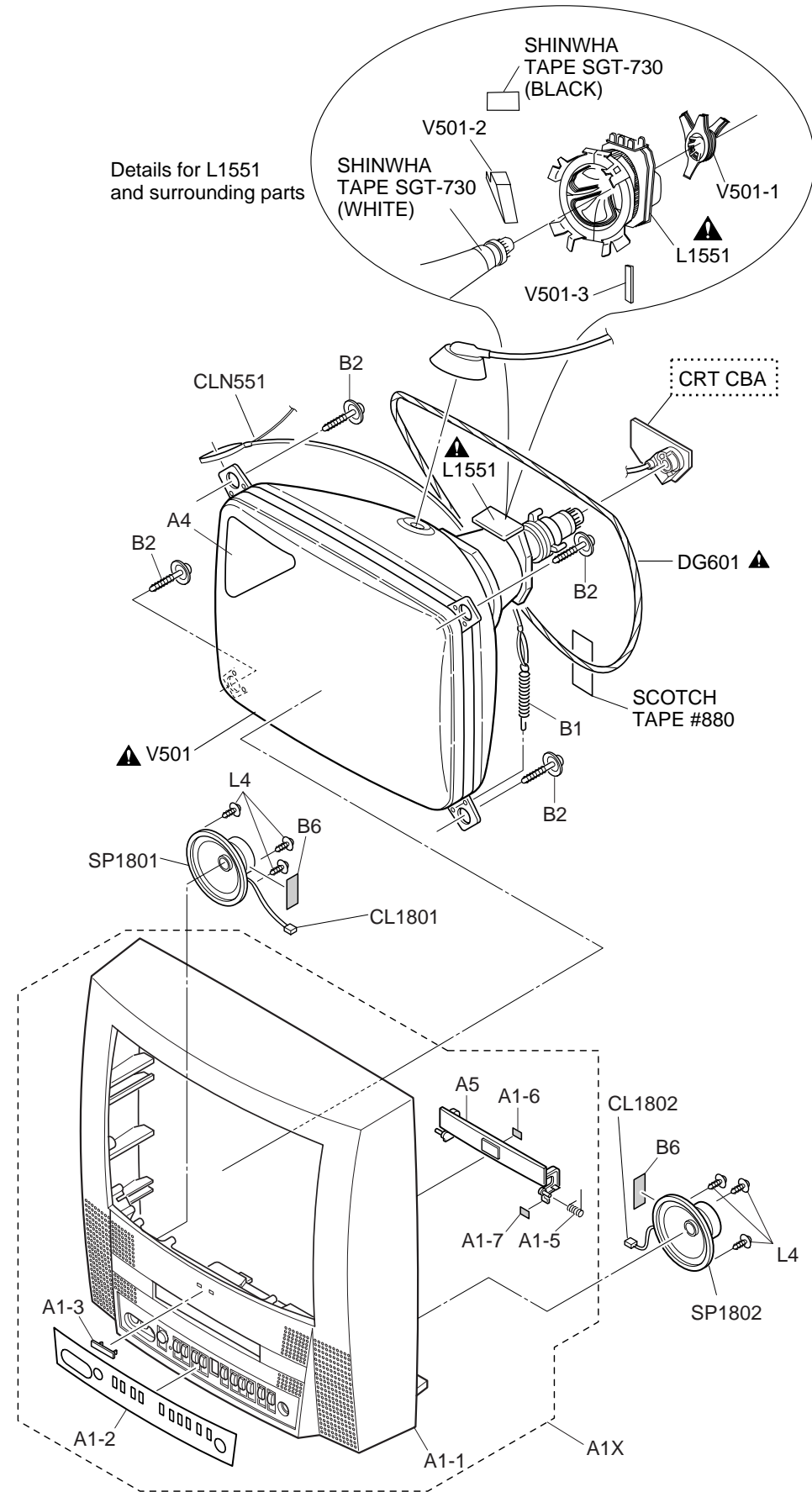
**Sec. 2: Exploded views
and Parts List Section**
● Exploded views
● Parts List

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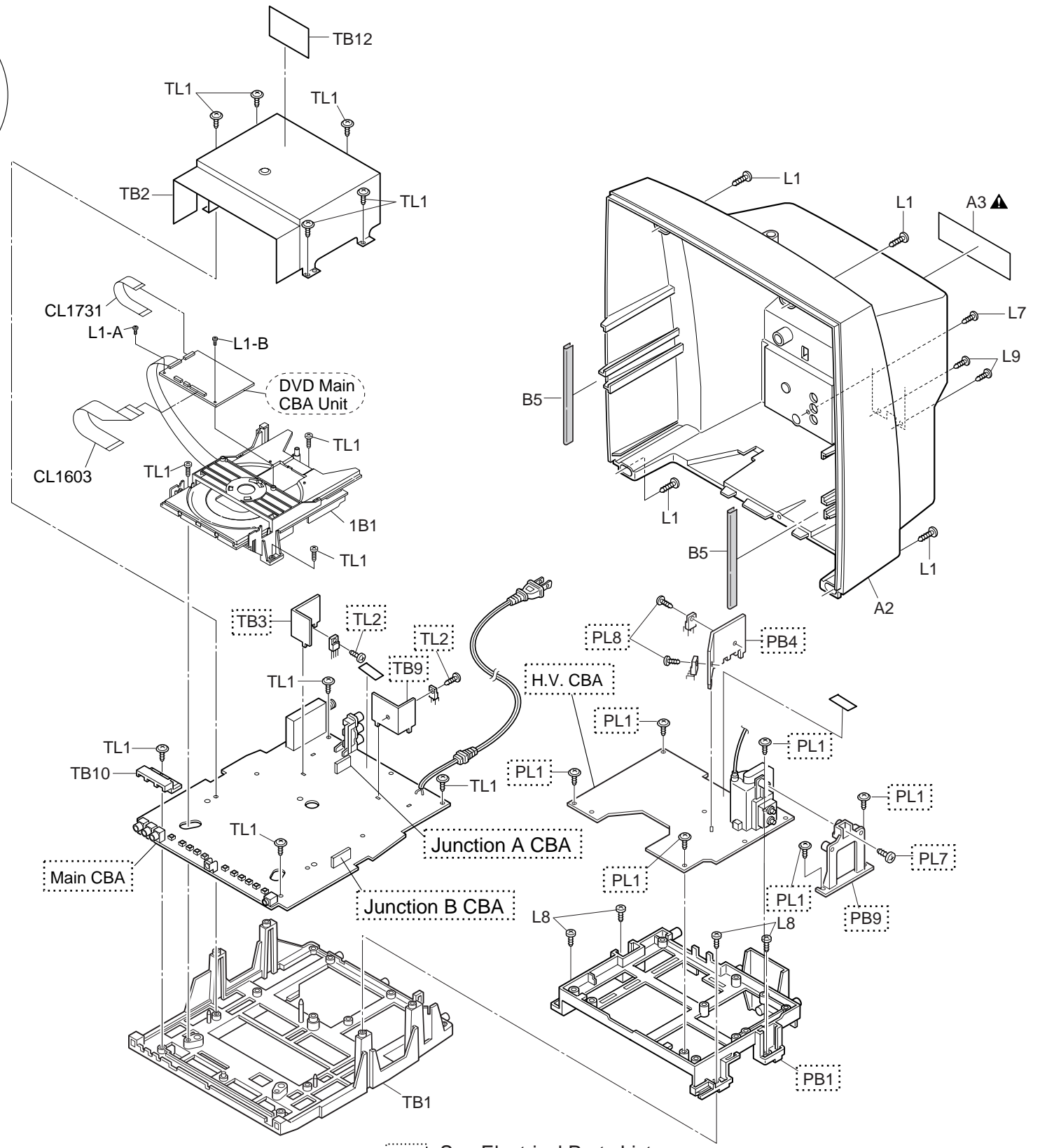
Cabinet Exploded Views	2-1-1
Packing Exploded Views	2-1-3
Mechanical Parts List	2-2-1
Electrical Parts List	2-3-1

Cabinet

EXPLODED VIEWS



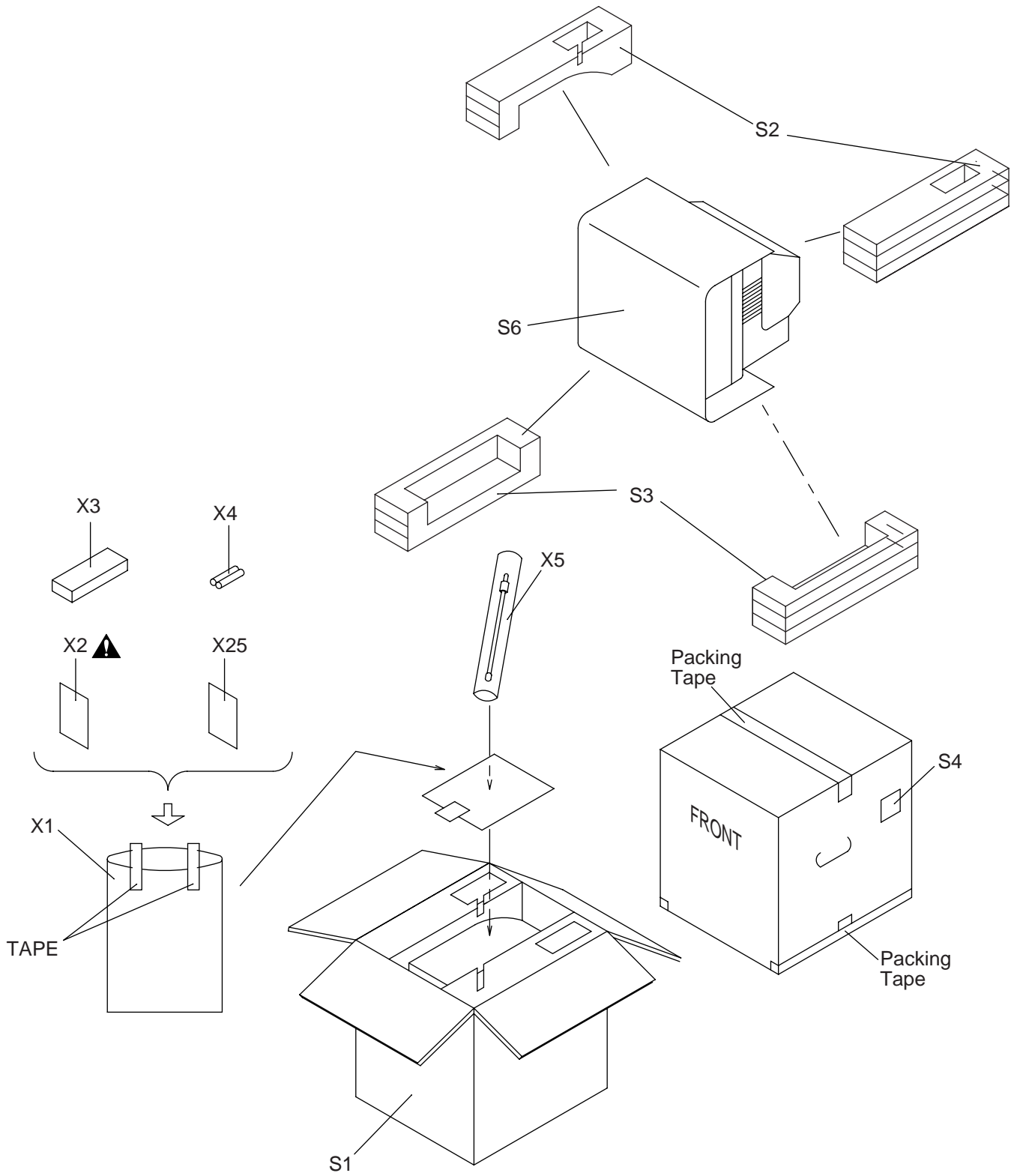
2-1-1



2-1-2

See Electrical Parts List for parts with this mark.

Packing



		20030311	
		C6513DD (TD704CE)	
Ref. No.	Description	Parts No.	
MECHANICAL PARTS			
A1X	FRONT CABINET ASSEMBLY TD701UB	0EM101281	
A1-1	FRONT CABINET TD701UB	0EM000734	
A1-2	CONTROL PLATE TD701UB	0EM201689	
A1-3	BRAND BADGE B4816US:SYLVANIA	0EM403953	
A1-5	TRAY SPRING TD250UA	0EM406504	
A1-6	CLOTH(B) L5201U0:15X10X1.0T	0EM400076	
A1-7	CLOTH(4X7X0.3T) TD250UA	0EM407578	
A2	REAR CABINET TD701UB	0EM000735	
A3!	RATING LABEL TD704CE	-----	
A4	POP LABEL TD704CE	-----	
A5	TRAY PANEL TD701UB	0EM301766	
1B1	DVD MECHA 0838 VCDVM040	N79F0GVM	
B1	TENSION SPRING B0080B0:EM40808	26WH006	
B2	M5 CRT SCREW(B) B4000UA	0VM403923	
B5	CLOTH 190X15XT0.5	TS7623	
B6	CLOTH(10X30XT0.5) B5900UA	0EM404486	
CL1603	FFC WIRE FFC22P	WX1TD800-004	
CL1731	FFC WIRE FFC12P	WX1TD800-003	
CL1801	WIRE ASSEMBLY SPEAKER WIRE(180MM)	WX1L9800-001	
CL1802	WIRE ASSEMBLY SPEAKER WIRE(180MM)	WX1L9800-001	
CLN551	CRT GND WIRE CRT GND	WX1L7720-001	
DG601!	DEGAUSSING COIL F-019	LLBH00ZTM019	
DG601!	DEGAUSSING COIL AVDG016	LLBH00ZWR016	
SP1801	SPEAKER S08F02B	DSD0808XQ010	
SP1801	SPEAKER J-F097-C5	DSD0808DCP01	
SP1802	SPEAKER S08F02B	DSD0808XQ010	
SP1802	SPEAKER J-F097-C5	DSD0808DCP01	
L1	SCREW, P-TIGHT 4X18 BIND HEAD +	GBMP4180	
L4	SCREW, ASSEMBLED 12:M3X12	0EM406746	
L7	SCREW, P-TIGHT 3X10 BIND HEAD+	GBKP3100	
L8	SCREW, P-TIGHT 3X12 WASHER HEAD+	GCMP3120	
L9	SCREW, P-TIGHT M4X12 BIND HEAD+	GBKP4120	
TB1	TRAY CHASSIS TD001UB	0EM000727	
TB2	SHIELD BOX(X4) TD801UB	0EM101275	
TB10	RCA HOLDER TD001UB	0EM407842	
TB12	LABEL, LASER CAUTION (C) TD100UA	-----	
TL1	SCREW, P-TIGHT 3X12 WASHER HEAD+	GCMP3120	
S1	CARTON TD704CE	0EM408327	
S2	STYROFOAM TOP ASSEMBLY TD701UB	0EM407940	
S3	STYROFOAM BOTTOM ASSEMBLY TD701UB	0EM407941	
S4	SERIAL NO. LABEL TD704CE	-----	
S6	SET SHEET B5506UG:800X1500	0EM402369	
X1	POLYETHYLENE BAG B5310UL	Z223380	
X2!	OWNER'S MANUAL TD704CE	0EMN02209	
X3	REMOTE CONTROL 182/ERC001/N0287UD	N0287UD	
X4	DRY BATTERY R6P UM3	XB0M451GH001	
X4	DRY BATTERY R6P(AR)2PX	XB0M451HU002	
X4	DRY BATTERY R6P(AR)2P X ICI	XB0M451HU003	
X4	DRY BATTERY(SUNRISE) R6SSE/2S	XB0M451MS002	
X4	DRY BATTERY R6P/2S	XB0M451T0001	
X5	ROD ANTENNA T5200UA	0EMN01755	

X5	ROD ANTENNA L7720UA:NTSC W/COO	0EMN00673
X5	ROD ANTENNA T5000UA	0EMN01599
X25	QUICK SETUP GUIDE TD704CE	0EMN02210
	CRT TYPE A	
L1551!	DEFLECTION YOKE LLBY00ZSY005	LLBY00ZSY005
L1551!	DEFLECTION YOKE KDY3GDA82X	LLBY00ZMS011
V501!	CRT A34AGT13X	TCRT190CP036
V501-1	C.P.MAGNET JH225-FN-00	XM04000BV003
V501-2	WEDGE FT-00110W	XV10000T4001
V501-2	WEDGE DB25SR	XV10000D9001
V501-3	RUBBER MAGNET 20X10X1.2	XM05000BV001
	CRT TYPE B	
L1551!	DEFLECTION YOKE LLBY00ZSY002	LLBY00ZSY002
L1551!	DEFLECTION YOKE KDY3GCE83X	LLBY00ZMS027
V501!	CRT A34JQQ993X	TCRT190MS010
V501-1	C.P.MAGNET JH225-FN-00	XM04000BV003
V501-2	WEDGE FT-00110W	XV10000T4001
V501-2	WEDGE DB25SR	XV10000D9001
V501-3	RUBBER MAGNET 20X10X1.2	XM05000BV001
	CRT TYPE C	
L1551!	DEFLECTION YOKE KDY3GCE83X	LLBY00ZMS027
L1551!	DEFLECTION YOKE LLBY00ZSY002	LLBY00ZSY002
L1551!	DEFLECTION YOKE CDY-M1456S	LLBY00ZQS008
L1551!	DEFLECTION YOKE DSE1493FU(S)	LLBY00ZSM008
V501!	CRT A34KQW42X	TCRT190SM013
V501-1	C.P.MAGNET JH225-FN-00	XM04000BV003
V501-2	WEDGE FT-00110W	XV10000T4001
V501-2	WEDGE DB25SR	XV10000D9001
V501-3	RUBBER MAGNET 20X10X1.2	XM05000BV001
	CRT TYPE D	
L1551!	DEFLECTION YOKE CDY-M1422F	LLBY00ZQS001
V501!	CRT A34JLL90X(W)	TCRT190QS015
V501-1	C.P.MAGNET JH225-FN-00	XM04000BV003
V501-2	WEDGE FT-00110W	XV10000T4001
V501-2	WEDGE DB25SR	XV10000D9001
V501-3	RUBBER MAGNET 20X10X1.2	XM05000BV001
	CRT TYPE E	
L1551!	DEFLECTION YOKE CDY-M1455F	LLBY00ZQS007
L1551!	DEFLECTION YOKE LLBY00ZSY003	LLBY00ZSY003
L1551!	DEFLECTION YOKE KDY3GD592X	LLBY00ZMS004
V501!	CRT A34LRQ90X(VW)	TCRT190P7003
V501-1	C.P.MAGNET JH225-FN-00	XM04000BV003
V501-2	WEDGE FT-00110W	XV10000T4001
V501-2	WEDGE DB25SR	XV10000D9001
V501-3	RUBBER MAGNET 20X10X1.2	XM05000BV001
	CRT TYPE F	
L1551!	DEFLECTION YOKE LLBY00ZSY002	LLBY00ZSY002
L1551!	DEFLECTION YOKE KDY3GCE83X	LLBY00ZMS027
L1551!	DEFLECTION YOKE CDY-M1456S	LLBY00ZQS008
V501!	CRT A34KPU02XX	TCRT190GS016
V501-1	C.P.MAGNET JH225-FN-00	XM04000BV003
V501-2	WEDGE FT-00110W	XV10000T4001
V501-2	WEDGE DB25SR	XV10000D9001
V501-3	RUBBER MAGNET 20X10X1.2	XM05000BV001
	CRT TYPE H	
L1551!	DEFLECTION YOKE LLBY00ZSY002	LLBY00ZSY002

L1551!	DEFLECTION YOKE KDY3GCE83X	LLBY00ZMS027
L1551!	DEFLECTION YOKE CDY-M1456S	LLBY00ZQS008
V501!	CRT A34JXV70X	TCRT190THA02
V501-1	C.P.MAGNET JH225-FN-00	XM04000BV003
V501-2	WEDGE FT-00110W	XV10000T4001
V501-2	WEDGE DB25SR	XV10000D9001
V501-3	RUBBER MAGNET 20X10X1.2	XM05000BV001
ELECTRICAL PARTS		
	DVD MAIN CBA UNIT	N79T0GUP
	MAIN CBA	0ESA05270
BC1601	PCB JUMPER D0.6-P5.0	JW5.0T
BC1602	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1605	PCB JUMPER D0.6-P5.0	JW5.0T
BC1606	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1730	PCB JUMPER D0.6-P5.0	JW5.0T
BC1731	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1732	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1733	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1734	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1735	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1736	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1737	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC1738	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
C1003	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1004	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1006	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1006	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1007	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1008	ELECTROLYTIC CAP. 100UF/16V M	CE1CMASDL101
C1008	ELECTROLYTIC CAP. 100UF/16V M	CE1CMASDL101
C1009	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASDL470
C1009	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASDL470
C1031	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1031	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1203	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1204	CERAMIC CAP.(AX) B K 0.015UF/50V	CA1J153TU011
C1205	CERAMIC CAP.(AX) B K 1000PF/50V	CCA1JKTOB102
C1206	CERAMIC CAP.(AX) B K 220PF/50V	CCA1JKTOB221
C1207	FILM CAP.(P) 0.001UF/50V J	CMA1JJS00102
C1207	FILM CAP.(P) 0.001UF/50V J	CA1J102MS029
C1209	CERAMIC CAP.(AX) F Z 0.1UF/50V	CCA1JZTFZ104
C1212	CERAMIC CAP.(AX) CH J 18PF/50V	CCA1JJTCH180
C1213	CERAMIC CAP.(AX) CH J 18PF/50V	CCA1JJTCH180
C1214	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1215	CERAMIC CAP.(AX) Y M 0.01UF/16V	CCA1CMT0Y103
C1216	CERAMIC CAP.(AX) Y M 0.01UF/16V	CCA1CMT0Y103
C1217	CERAMIC CAP.(AX) Y M 0.01UF/16V	CCA1CMT0Y103
C1218	CERAMIC CAP.(AX) F Z 0.1UF/50V	CCA1JZTFZ104
C1219	CERAMIC CAP.(AX) B K 220PF/50V	CCA1JKTOB221
C1220	CERAMIC CAP.(AX) B K 220PF/50V	CCA1JKTOB221
C1221	ELECTROLYTIC CAP. 100UF/10V M	CE1AMASDL101
C1221	ELECTROLYTIC CAP. 100UF/10V M	CE1AMASTL101
C1222	ELECTROLYTIC CAP. 0.1UF/50V M	CE1JMASDL0R1
C1222	ELECTROLYTIC CAP. 0.1UF/50V M	CE1JMASTL0R1

C1224	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1224	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C1224	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1225	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASDL470
C1225	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASTL470
C1227	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1230	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1231	ELECTROLYTIC CAP. 100UF/10V M	CE1AMASDL101
C1231	ELECTROLYTIC CAP. 100UF/10V M	CE1AMASTL101
C1233	CERAMIC CAP.(AX) Y M 0.01UF/16V	CCA1CMT0Y103
C1256	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1256	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1257	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1257	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1261	ELECTROLYTIC CAP. 22UF/16V M	CE1CMASDL220
C1261	ELECTROLYTIC CAP. 22UF/16V M	CE1CMASDL220
C1262	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1263	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1263	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C1263	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1264	CERAMIC CAP.(AX) Y N 0.022UF/6V	CCAOKNT0Y223
C1265	ELECTROLYTIC CAP. 22UF/50V M	CE1JMASDL220
C1265	ELECTROLYTIC CAP. 22UF/50V M	CE1JMASTL220
C1301	CERAMIC CAP.(AX) CH J 100PF/50V	CA1J101TU008
C1302	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1304	ELECTROLYTIC CAP. 100UF/10V M	CE1AMASDL101
C1304	ELECTROLYTIC CAP. 100UF/10V M	CE1AMASTL101
C1305	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1306	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1306	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C1306	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1308	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASDL470
C1308	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASTL470
C1309	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1309	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C1309	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1310	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1310	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C1310	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1311	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1311	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1314	CERAMIC CAP.(AX) CH J 10PF/50V	CCA1JJTCH100
C1317	TF CAP. 0.47UF/50V J	CT1J474MS045
C1317	FILM CAP. 0.47UF/50V J	122Z317S
C1318	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1319	ELECTROLYTIC CAP. 2.2UF/50V M	CE1JMASDL2R2
C1319	ELECTROLYTIC CAP. 2.2UF/50V M	CE1JMASTL2R2
C1320	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C1322	ELECTROLYTIC CAP. 1000UF/10V M	CE1AMASDL102
C1322	ELECTROLYTIC CAP. 1000UF/10V M	CE1AMASTL102
C1325	CERAMIC CAP.(AX) F Z 0.1UF/50V	CCA1JZTFZ104
C1326	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1326	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C1326	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1327	CERAMIC CAP.(AX) SL J 33PF/50V	CCA1JJTSL330
C1328	CERAMIC CAP.(AX) SL J 33PF/50V	CCA1JJTSL330
C1329	CERAMIC CAP.(AX) SL J 33PF/50V	CCA1JJTSL330

C1333	PCB JUMPER D0.6-P5.0	JW5.0T
C1352	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKT0B103
C1452	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1452	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1454	CERAMIC CAP.(AX) F Z 0.022UF/25V	CCA1EZTFZ223
C1455	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASDL471
C1455	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASTL471
C1458	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1458	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1460	CERAMIC CAP.(AX) F Z 0.022UF/25V	CCA1EZTFZ223
C1601!	METALLIZED FILM CAP. 0.1UF/250V	CT2E104MS037
C1601!	FILM CAP.(MP) 0.1UF/250V K	CT2E104DC011
C1601!	METALLIZED FILM CAP. 0.1UF/275V K	CT2E104HJE06
C1602	CERAMIC CAP. BN 680PF/2KV	CCD3DKA0B681
C1602	CERAMIC CAP. LB 680PF/2K	CA3D681KG004
C1602	CERAMIC CAP. 680PF/2KV	CA3D681PAN04
C1603	CERAMIC CAP. F Z 0.01UF/500V	CCD2JZP0F103
C1603	CERAMIC CAP. 0.01UF/AC250V	CCD2EZA0F103
C1604	CERAMIC CAP. F Z 0.01UF/500V	CCD2JZP0F103
C1604	CERAMIC CAP. 0.01UF/AC250V	CCD2EZA0F103
C1607!	SAFETY CAP. 4700PF/250V KX	CA2E472MR050
C1609	FILM CAP.(P) 0.056UF/50V J	CMA1JJS00563
C1609	FILM CAP.(P) 0.056UF/50V J	CA1J563MS029
C1610!	ELECTROLYTIC CAP. 470UF/200V	CA2D471NC013
C1610!	ELECTROLYTIC CAP. 470UF/200V M W/F	CA2D471EA029
C1611	FILM CAP.(P) 0.0012UF/50V J	CMA1JJS00122
C1611	FILM CAP.(P) 0.0012UF/50V J	CA1J122MS029
C1612	FILM CAP.(P) 0.033UF/50V J	CMA1JJS00333
C1612	FILM CAP.(P) 0.033UF/50V J	CA1J333MS029
C1615	CERAMIC CAP. BN 680PF/2KV	CCD3DKA0B681
C1615	CERAMIC CAP. LB 680PF/2K	CA3D681KG004
C1615	CERAMIC CAP. 680PF/2KV	CA3D681PAN04
C1616	ELECTROLYTIC CAP. 100UF/160V M	CE2CMZPDL101
C1616	ELECTROLYTIC CAP. 100UF/160V M	CE2CMZPTL101
C1616	ELECTROLYTIC CAP. 100UF/160V M W/F	CE2CMZNTL101
C1617	ELECTROLYTIC CAP. 470UF/35V M	CE1GMASDL471
C1617	ELECTROLYTIC CAP. 470UF/35V M	CE1GMASTL471
C1619	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASDL471
C1619	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASTL471
C1622	ELECTROLYTIC CAP. 1000UF/16V M	CE1CMZPDL102
C1622	ELECTROLYTIC CAP. 1000UF/16V M(VR/HC)	CE1CMZNTL102
C1623	FILM CAP.(P) 0.01UF/50V J	CMA1JJS00103
C1623	FILM CAP.(P) 0.01UF/50V J	CA1J103MS029
C1624	ELECTROLYTIC CAP. 2200UF/6.3V M	CE0KMZPDL222
C1624	ELECTROLYTIC CAP. 2200UF/6.3V M	CE0KMZPTL222
C1625	ELECTROLYTIC CAP. 470UF/6.3V M	CE0KMASTL471
C1626	ELECTROLYTIC CAP. 4.7UF/50V M	CE1JMASDL4R7
C1626	ELECTROLYTIC CAP. 4.7UF/50V M	CE1JMASTL4R7
C1630	CERAMIC CAP.(AX) B K 560PF/50V	CCA1JKT0B561
C1631	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKT0B103
C1632	ELECTROLYTIC CAP. 220UF/16V M	CE1CMASDL221
C1632	ELECTROLYTIC CAP. 220UF/16V M	CE1CMASTL221
C1633	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASDL470
C1633	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASTL470
C1634	ELECTROLYTIC CAP. 1000UF/6.3V M	CE0KMASDL102
C1634	ELECTROLYTIC CAP. 1000UF/6.3V M	CE0KMASTL102
C1638	ELECTROLYTIC CAP. 100UF/16V M	CE1CMASDL101

C1638	ELECTROLYTIC CAP. 100UF/16V M	CE1CMASTL101
C1639	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASDL470
C1639	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASTL470
C1640	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASDL471
C1640	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASTL471
C1642	CERAMIC CAP.(AX) B K 1000PF/50V	CCA1JKT0B102
C1643	ELECTROLYTIC CAP. 100UF/16V M H7	CE1CMASDL101
C1644	ELECTROLYTIC CAP. 220UF/6.3V M H7	CE0KMASDL221
C1647	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASDL471
C1647	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASTL471
C1650	ELECTROLYTIC CAP. 0.47UF/50V M	CE1JMASDLR47
C1650	ELECTROLYTIC CAP. 0.47UF/50V M	CE1JMASTLR47
C1652	CERAMIC CAP.(AX) F Z 0.1UF/50V	CCA1JZTFZ104
C1653	ELECTROLYTIC CAP. 1000UF/6.3V M	CE0KMASDL102
C1653	ELECTROLYTIC CAP. 1000UF/6.3V M	CE0KMASTL102
C1664	ELECTROLYTIC CAP. 470UF/6.3V M	CE0KMASDL471
C1664	ELECTROLYTIC CAP. 470UF/6.3V M	CE0KMASTL471
C1665	ZENER DIODE MTZJT-773.9B	QDTBOMTJ3R9
C1665	ZENER DIODE DZ-3.9BSBT265	NDTB0DZ3R9BS
C1666	CERAMIC CAP.(AX) X M 2200PF/16V	CCA1CMT0X222
C1669	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKT0B103
C1670	ELECTROLYTIC CAP. 220UF/6.3V M	CE0KMASDL221
C1670	ELECTROLYTIC CAP. 220UF/6.3V M	CE0KMASTL221
C1672	CERAMIC CAP.(AX) B K 1000PF/50V	CCA1JKT0B102
C1702	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1702	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL010
C1702	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1704	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1704	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL010
C1704	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1732	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASDL470
C1732	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASTL470
C1733	CERAMIC CAP.(AX) B K 1000PF/50V	CCA1JKT0B102
C1734	CERAMIC CAP.(AX) F Z 0.1UF/50V	CCA1JZTFZ104
C1735	ELECTROLYTIC CAP. 47UF/16V M	CE1CMASDL470
C1735	ELECTROLYTIC CAP. 47UF/16V M	CE1CMASTL470
C1737	CERAMIC CAP.(AX) B K 100PF/50V	CCA1JKT0B101
C1738	CERAMIC CAP.(AX) CH J 20PF/50V	CCA1JTTCH200
C1739	CERAMIC CAP.(AX) X K 3300PF/16V	CCA1CKT0X332
C1740	CERAMIC CAP.(AX) X K 3300PF/16V	CCA1CKT0X332
C1741	CERAMIC CAP.(AX) X K 4700PF/16V	CCA1CKT0X472
C1746	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASDL471
C1746	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASTL471
C1748	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1748	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1749	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1749	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1750	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASDL470
C1750	ELECTROLYTIC CAP. 47UF/25V M	CE1EMASTL470
C1751	CERAMIC CAP.(AX) F Z 0.022UF/25V	CCA1EZTFZ223
C1752	CERAMIC CAP.(AX) SL J 47PF/50V	CCA1JTTSL470
C1754	ELECTROLYTIC CAP. 47UF/16V M	CE1CMASDL470
C1754	ELECTROLYTIC CAP. 47UF/16V M	CE1CMASTL470
C1756	CERAMIC CAP.(AX) SL J 47PF/50V	CCA1JTTSL470
C1757	CERAMIC CAP.(AX) B K 220PF/50V	CCA1JKT0B221
C1758	CERAMIC CAP.(AX) B K 100PF/50V	CCA1JKT0B101
C1759	CERAMIC CAP.(AX) F Z 0.022UF/25V	CCA1EZTFZ223

C1762	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1762	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1771	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1771	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1772	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1772	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1773	CERAMIC CAP.(AX) B K 220PF/50V	CCA1JKT0B221
C1801	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1801	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C1801	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1802	CERAMIC CAP.(AX) B K 560PF/50V	CCA1JKT0B561
C1803	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C1803	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C1803	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C1804	CERAMIC CAP.(AX) B K 560PF/50V	CCA1JKT0B561
C1807	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASDL471
C1807	ELECTROLYTIC CAP. 470UF/16V M	CE1CMASTL471
C1808	ELECTROLYTIC CAP. 100UF/16V M	CE1CMASDL101
C1808	ELECTROLYTIC CAP. 100UF/16V M	CE1CMASTL101
C1809	ELECTROLYTIC CAP. 330UF/16V M	CE1CMASDL331
C1809	ELECTROLYTIC CAP. 330UF/16V M	CE1CMASTL331
C1813	ELECTROLYTIC CAP. 330UF/16V M	CE1CMASDL331
C1813	ELECTROLYTIC CAP. 330UF/16V M	CE1CMASTL331
C1814	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1814	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1815	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKT0B103
C1816	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1816	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
C1817	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASDL100
C1817	ELECTROLYTIC CAP. 10UF/50V M	CE1JMASTL100
CN1302	CONNECTOR BASE 12P TUC-P12P-B1	J3TUA12TG001
CN1601	CONNECTOR BASE, 2P TV-50P-02-V3	J3TVC02TG002
CN1601	CONNECTOR BASE, 2P RTB-1.5-2P	J3RTC02JG001
CN1602	CONNECTOR BASE, 6P TUC-P06P-B1	J3TUA06TG001
CN1603	FMN CONNECTOR, TOP 22P 22FMN-BTRK	JCFNG22JG002
CN1731	FMN CONNECTOR, TOP 12P 12FMN-BTRK	JCFNG12JG002
CN1801	STRAIGHT CONNECTOR BASE 00 8283 0212 00 000	J383C02UG002
CN1801	STRAIGHT PIN HEADER, 2P 173981-2	1770258
CN1802	STRAIGHT CONNECTOR BASE 00 8283 0212 00 000	J383C02UG002
CN1802	STRAIGHT PIN HEADER, 2P 173981-2	1770258
D1225	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1225	ZENER DIODE DZ-6.2BSBT265	NDTB0DZ6R2BS
D1226	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1226	ZENER DIODE DZ-6.2BSBT265	NDTB0DZ6R2BS
D1281	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1281	SWITCHING DIODE 1N4148	NDTZ001N4148
D1307	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1307	SWITCHING DIODE 1N4148	NDTZ001N4148
D1309	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1309	SWITCHING DIODE 1N4148	NDTZ001N4148
D1310	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1310	SWITCHING DIODE 1N4148	NDTZ001N4148
D1311	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1311	SWITCHING DIODE 1N4148	NDTZ001N4148
D1312	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1312	SWITCHING DIODE 1N4148	NDTZ001N4148
D1313	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133

D1313	SWITCHING DIODE 1N4148	NDTZ001N4148
D1314	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1314	SWITCHING DIODE 1N4148	NDTZ001N4148
D1315	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1315	SWITCHING DIODE 1N4148	NDTZ001N4148
D1316	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1316	SWITCHING DIODE 1N4148	NDTZ001N4148
D1317	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1317	SWITCHING DIODE 1N4148	NDTZ001N4148
D1320	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1320	SWITCHING DIODE 1N4148	NDTZ001N4148
D1603!	DIODE 1N5399-B/P	NDLZ001N5399
D1603!	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D1604!	DIODE 1N5399-B/P	NDLZ001N5399
D1604!	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D1605	DIODE 1N5399-B/P	NDLZ001N5399
D1605	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D1606!	DIODE 1N5399-B/P	NDLZ001N5399
D1606!	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D1607!	ZENER DIODE MTZJT-7720C	QDTC00MTZJ20
D1607!	ZENER DIODE DZ-20BSCT265	NDTC00DZ20BS
D1609!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1609!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1610	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D1610	ZENER DIODE DZ-5.6BSBT265	NDTB0DZ5R6BS
D1613	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1613	SWITCHING DIODE 1N4148	NDTZ001N4148
D1614!	ZENER DIODE MTZJT-7736A	QDTA00MTZJ36
D1614!	ZENER DIODE DZ-36BSAT265	NDTA00DZ36BS
D1616	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1616	SWITCHING DIODE 1N4148	NDTZ001N4148
D1617!	SCHOTTKY BARRIER DIODE 11EQS04	QD4Z011EQS04
D1617!	SCHOTTKY BARRIER DIODE ERA81-004	QDPZERA81004
D1618	RECOVERY DIODE ERC18-04	QDZZ0ERC1804
D1619	DIODE FR104-B	NDLZ000FR104
D1620	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D1620	ZENER DIODE DZ-6.8BSBT265	NDTB0DZ6R8BS
D1621	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1621	SWITCHING DIODE 1N4148	NDTZ001N4148
D1622	DIODE FR104-B	NDLZ000FR104
D1623	DIODE FR154	NDLZ000FR154
D1623	FAST RECOVERY DIODE ERB44-02	QDPZ0ERB4402
D1624	SCHOTTKY BARRIER DIODE 21DQ04	QDQZ0021DQ04
D1624	SCHOTTKY BARRIER DIODE ERB81-004	AERB81004***
D1625!	DIODE FR154	NDLZ000FR154
D1625!	FAST RECOVERY DIODE ERB44-02	QDPZ0ERB4402
D1626	ZENER DIODE MTZJT-7736A	QDTA00MTZJ36
D1626	ZENER DIODE DZ-36BSAT265	NDTA00DZ36BS
D1627!	SCHOTTKY BARRIER DIODE 21DQ04	QDQZ0021DQ04
D1627!	SCHOTTKY BARRIER DIODE ERB81-004	AERB81004***
D1628!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1628!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1629!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1629!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1630	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1630	SWITCHING DIODE 1N4148	NDTZ001N4148
D1631	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133

D1631	SWITCHING DIODE 1N4148	NDTZ001N4148
D1634	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D1634	ZENER DIODE DZ-9.1BSBT265	NDTB0DZ9R1BS
D1635	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1635	SWITCHING DIODE 1N4148	NDTZ001N4148
D1636	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1636	SWITCHING DIODE 1N4148	NDTZ001N4148
D1637!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1637!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1638!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1638!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1640!	DIODE 1ZC33	QDQZ0001ZC33
D1640!	ZENER DIODE RD33FB	QDQZ000RD33F
D1641	ZENER DIODE MTZJT-7713B	QDTB00MTZJ13
D1641	ZENER DIODE DZ-13BSBT265	NDTB00DZ13BS
D1643	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1643	SWITCHING DIODE 1N4148	NDTZ001N4148
D1644	ZENER DIODE MTZJT-775.6C	QDTC0MTZJ5R6
D1644	ZENER DIODE DZ-5.6BSCT265	NDTC0DZ5R6BS
D1645	ZENER DIODE MTZJT-776.8A	QDTA0MTZJ6R8
D1645	ZENER DIODE DZ-6.8BSAT265	NDTA0DZ6R8BS
D1647	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1647	SWITCHING DIODE 1N4148	NDTZ001N4148
D1648	ZENER DIODE MTZJT-7713B	QDTB00MTZJ13
D1648	ZENER DIODE DZ-13BSBT265	NDTB00DZ13BS
D1649!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1649!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1650!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1650!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1651!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1651!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1652!	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1652!	SWITCHING DIODE 1N4148	NDTZ001N4148
D1657	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1657	SWITCHING DIODE 1N4148	NDTZ001N4148
D1660	PCB JUMPER D0.6-P5.0	JW5.0T
D1664	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D1664	ZENER DIODE DZ-5.6BSBT265	NDTB0DZ5R6BS
D1665	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1665	SWITCHING DIODE 1N4148	NDTZ001N4148
D1730	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D1730	ZENER DIODE DZ-5.6BSBT265	NDTB0DZ5R6BS
D1732	PCB JUMPER D0.6-P5.0	JW5.0T
D1735	PCB JUMPER D0.6-P5.0	JW5.0T
D1736	ZENER DIODE MTZJT-775.1B	QDTB0MTZJ5R1
D1736	ZENER DIODE DZ-5.1BSBT265	NDTB0DZ5R1BS
D1739	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1739	SWITCHING DIODE 1N4148	NDTZ001N4148
D1740	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1740	SWITCHING DIODE 1N4148	NDTZ001N4148
D1801	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1801	SWITCHING DIODE 1N4148	NDTZ001N4148
D1856	PCB JUMPER D0.6-P5.0	JW5.0T
F1601!	FUSE 4.00A/125V	PAGU20CAG402
F1601!	FUSE 51MS040L	PAFC20CHV402
F1601!	FUSE 4A/125V 237 TYPE	PAGJ20CAG402
F1601!	FUSE STC4A125V U/CT	PAGE20CW3402

F1601!	FUSE 4.00A/125V	PAGG20CNG402
FH1601	FUSE HOLDER MSF-015	XH01Z00LY001
FH1601	FUSE HOLDER FH-V-03078	XH01Z00DK001
FH1602	FUSE HOLDER MSF-015	XH01Z00LY001
FH1602	FUSE HOLDER FH-V-03078	XH01Z00DK001
IC1201!	MICRO-COMPUTER/VCD M61271M8-053FP-61	QSZAB0RMB150
IC1202	IC:MEMORY BR24C02F-W	QSMA0SRM003
IC1202	IC:MEMORY AT24C02N-10SC	NSMMA0SAZ012
IC1202	IC(EEPROM) M24C02-MN6	NSMMA0SSS028
IC1202	IC:MEMORY BR24C02F	QSMMA0SRM003
IC1202	IC:EEPROM CAT24WC02JI	NSZBA0SBG001
IC1202	IC(EEP-ROM) M24C02-WMN6	NSZAA0SSS004
IC1451	IC:SWITCH TC4053BF(N)	QSMBA0STS002
IC1451	IC:ANALOG MULTIPLEXERS CD4053BCSJX	NSZBA0TF3071
IC1452	IC:SWITCH TC4053BF(N)	QSMBA0STS002
IC1452	IC:ANALOG MULTIPLEXERS CD4053BCSJX	NSZBA0TF3071
IC1601!	PHOTOCOUPLER PS2501-1W	QPEW0PS25011
IC1601!	PHOTO COUPLER PS2501-1L	QPEL0PS25011
IC1602!	1.8V REGULATOR PQ018EF01SZ	QSZBA0SSH012
IC1603	VOLTAGE REGULATOR PQ070XF01SZ	QSZBA0SSH026
IC1604	IC KIA431-AT	NSZLA0TJY001
IC1731	IC:OP AMP NJM4558D	QSZBA0SJR006
IC1801	AUDIO POWER IC AN17805A	QSZBA0SMS007
JK1701	RCA JACK(YELLOW) MTJ-032-05B-20	JXRL010LY038
JK1702	RCA JACK(RED) MTJ-032-05A-21	JYRL010LY010
JK1703	RCA JACK(WHITE) MTJ-032-05B-22	JXRL010LY039
JK1730	3PIN JACK AV MSP-243VS-23	JXRL030LY037
JK1801	MINI JACK HSJ2000-01-010	JYSL010HD002
JK1801	MINI JACK MSJ-2000	JYSL010LY003
L1001	PCB JUMPER D0.6-P5.0	JW5.0T
L1002	PCB JUMPER D0.6-P5.0	JW5.0T
L1201	INDUCTOR 22UH-K-5FT	LLARKBSTU220
L1201	INDUCTOR 22UH-K-5FT	LLARKDSKA220
L1202	INDUCTOR 22UH-J-26T	LLAXJATTU220
L1202	INDUCTOR 22UH-K-26T	LLAXKDTKA220
L1203	INDUCTOR 22UH-J-26T	LLAXJATTU220
L1203	INDUCTOR 22UH-K-26T	LLAXKDTKA220
L1204	INDUCTOR 22UH-J-26T	LLAXJATTU220
L1204	INDUCTOR 22UH-K-26T	LLAXKDTKA220
L1302	PCB JUMPER D0.6-P5.0	JW5.0T
L1601!	LINE FILTER 2.7MH ELF15N013A	LLBG00ZMS037
L1602	INDUCTOR 2.2UH-K-5FT	LLARKBSTU2R2
L1602	INDUCTOR 2.2UH-K-5FT	LLARKDSKA2R2
L1603	INDUCTOR 22UH-K-5FT	LLARKBSTU220
L1603	INDUCTOR 22UH-K-5FT	LLARKDSKA220
L1609	PCB JUMPER D0.6-P5.0	JW5.0T
L1610	PCB JUMPER D0.6-P5.0	JW5.0T
L1611	PCB JUMPER D0.6-P5.0	JW5.0T
L1612	PCB JUMPER D0.6-P5.0	JW5.0T
L1613	PCB JUMPER D0.6-P5.0	JW5.0T
L1730	INDUCTOR 2.2UH-J-26T	LLAXJATTU2R2
L1730	INDUCTOR 2.2UH-K-26T	LLAXKDTKA2R2
L1731	PCB JUMPER D0.6-P5.0	JW5.0T
L1732	PCB JUMPER D0.6-P5.0	JW5.0T
L1733	INDUCTOR 2.2UH-J-26T	LLAXJATTU2R2
L1733	INDUCTOR 2.2UH-K-26T	LLAXKDTKA2R2
L1734	PCB JUMPER D0.6-P5.0	JW5.0T

L1735	PCB JUMPER D0.6-P5.0	JW5.0T
L1737	CHOKE COIL 47UH-K	LLBD00PKV007
L1737	CHOKE COIL 47UH-K	LLBD00PKV005
L1738	PCB JUMPER D0.6-P5.0	JW5.0T
L1739	INDUCTOR 0.47UH-J-26T	LLAXJATTUR47
L1739	INDUCTOR 0.47UH-K-26T	LLAXKDTKAR47
L1851	PCB JUMPER D0.6-P5.0	JW5.0T
L1852	INDUCTOR 2.2UH-K-5FT	LLARKBSTU2R2
L1852	INDUCTOR 2.2UH-K-5FT	LLARKDSKA2R2
L1853	INDUCTOR 2.2UH-K-5FT	LLARKBSTU2R2
L1853	INDUCTOR 2.2UH-K-5FT	LLARKDSKA2R2
L1854	PCB JUMPER D0.6-P5.0	JW5.0T
L1855	INDUCTOR 2.2UH-K-5FT	LLARKBSTU2R2
L1855	INDUCTOR 2.2UH-K-5FT	LLARKDSKA2R2
L1856	INDUCTOR 2.2UH-J-26T	LLAXJATTU2R2
L1856	INDUCTOR 2.2UH-K-26T	LLAXKDTKA2R2
L1857	INDUCTOR 2.2UH-J-26T	LLAXJATTU2R2
L1857	INDUCTOR 2.2UH-K-26T	LLAXKDTKA2R2
PS1601!	THERMISTOR ZPB45BL7R0A	QNZZ45BL7R0A
Q1261	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1261	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1261	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1261	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1261	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1261	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1282	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1282	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1282	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1282	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1282	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1282	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1301	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1301	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1301	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1301	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1301	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1301	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1453	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q1453	RES. BUILT-IN TRANSISTOR 2SC3400	2SC3400Z
Q1453	RES. BUILT-IN TRANSISTOR BA1F4M-T	QSQZ00BA1F4M
Q1454	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q1454	RES. BUILT-IN TRANSISTOR 2SC3400	2SC3400Z
Q1454	RES. BUILT-IN TRANSISTOR BA1F4M-T	QSQZ00BA1F4M
Q1601	MOS FET 2SK2662	QF5Z02SK2662
Q1602!	TRANSISTOR 2SC2120-O-TPE2	QSQ002SC2120
Q1602!	TRANSISTOR 2SC2120-Y(TPE2)	QSQY02SC2120
Q1604!	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1604!	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1604!	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1604!	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1605	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1605	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1605	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1605	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1605	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1605	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1606	TRANSISTOR 2SA950(O)	Q2SA9500TPE2

Q1606	TRANSISTOR 2SA950(Y)	Q2SA950YTPE2
Q1606	TRANSISTOR KTA1271(Y)	NQSY0KTA1271
Q1607	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1607	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1607	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1607	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1607	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1607	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1608	TRANSISTOR 2SC2120-O-TPE2	QSQ002SC2120
Q1608	TRANSISTOR 2SC2120-Y(TPE2)	QSQY02SC2120
Q1609	TRANSISTOR 2SC2120-O-TPE2	QSQ002SC2120
Q1609	TRANSISTOR 2SC2120-Y(TPE2)	QSQY02SC2120
Q1610!	TRANSISTOR 2SA1175(F)	QSQF02SA1175
Q1610!	TRANSISTOR KTA1267(GR)	NQS10KTA1267
Q1610!	TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q1610!	TRANSISTOR 2SA1015-GR(TPE2)	QSQ102SA1015
Q1611	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1611	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1611	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1611	TRANSISTOR 2SC3331(T)	QSC3331TNPAA
Q1611	TRANSISTOR 2SC3331(U)	QSC3331UNPAA
Q1612	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1612	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1612	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1612	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1612	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1612	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1613	TRANSISTOR 2SC2120-O-TPE2	QSQ002SC2120
Q1613	TRANSISTOR 2SC2120-Y(TPE2)	QSQY02SC2120
Q1614	TRANSISTOR 2SD400(F)	QQUF002SD400
Q1616	RES. BUILT-IN TRANSISTOR KRA103M	NQSZ0KRA103M
Q1616	RES. BUILT-IN TRANSISTOR BN1F4M-T	QSQZ00BN1F4M
Q1619	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1619	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1619	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1619	TRANSISTOR 2SC3331(T)	QSC3331TNPAA
Q1619	TRANSISTOR 2SC3331(U)	QSC3331UNPAA
Q1621	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1621	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1621	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1621	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1621	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1621	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1622	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1622	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1622	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1622	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1622	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1622	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1623	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1623	TRANSISTOR 2SC2785(H)	QSH02SC2785
Q1623	TRANSISTOR 2SC2785(J)	QSQJ02SC2785
Q1623	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1623	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1623	TRANSISTOR 2SC1815-GR(TPE2)	QSQ102SC1815
Q1625	TRANSISTOR 2SC2785(F)	QSF02SC2785
Q1625	TRANSISTOR 2SC2785(H)	QSH02SC2785

Q1625	TRANSISTOR 2SC2785(J)	QQSJ02SC2785
Q1625	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1625	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1625	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1731	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q1731	TRANSISTOR 2SC2785(H)	QQSH02SC2785
Q1731	TRANSISTOR 2SC2785(J)	QQSJ02SC2785
Q1731	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1731	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1731	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1732	TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q1732	TRANSISTOR KTA1267(GR)	NQS10KTA1267
Q1732	TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q1732	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q1733	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q1733	TRANSISTOR 2SC2785(H)	QQSH02SC2785
Q1733	TRANSISTOR 2SC2785(J)	QQSJ02SC2785
Q1733	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1733	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1733	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1734	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q1734	TRANSISTOR 2SC2785(H)	QQSH02SC2785
Q1734	TRANSISTOR 2SC2785(J)	QQSJ02SC2785
Q1734	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1734	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1734	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1736	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q1736	TRANSISTOR 2SC2785(H)	QQSH02SC2785
Q1736	TRANSISTOR 2SC2785(J)	QQSJ02SC2785
Q1736	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q1736	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q1736	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1737	TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q1737	TRANSISTOR KTA1267(GR)	NQS10KTA1267
Q1737	TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q1737	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q1738	TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q1738	TRANSISTOR KTA1267(GR)	NQS10KTA1267
Q1738	TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q1738	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
R1001	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1001	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1002	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1002	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1032	PCB JUMPER D0.6-P5.0	JW5.0T
R1035	CARBON RES. 1/4W J 470K OHM	RCX4JATZ0474
R1035	CARBON RES. 1/6W J 470K OHM	RCX6JATZ0474
R1201	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R1201	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R1202	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R1202	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R1203	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1203	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1204	CARBON RES. 1/4W J 2.7K OHM	RCX4JATZ0272
R1204	CARBON RES. 1/6W J 2.7K OHM	RCX6JATZ0272
R1205	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1205	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103

R1206	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R1206	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R1207	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R1207	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R1208	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1208	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1209	CARBON RES. 1/4W J 2.7K OHM	RCX4JATZ0272
R1209	CARBON RES. 1/6W J 2.7K OHM	RCX6JATZ0272
R1210	CARBON RES. 1/4W J 4.7K OHM	RCX4JATZ0472
R1210	CARBON RES. 1/6W J 4.7K OHM	RCX6JATZ0472
R1211	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1211	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1212	PCB JUMPER D0.6-P5.0	JW5.0T
R1214	PCB JUMPER D0.6-P5.0	JW5.0T
R1216	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1216	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1217	PCB JUMPER D0.6-P5.0	JW5.0T
R1220!	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1220!	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1221!	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1221!	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1222!	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1222!	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1223!	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1223!	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1224	CARBON RES. 1/4W J 5.6K OHM	RCX4JATZ0562
R1224	CARBON RES. 1/6W J 5.6K OHM	RCX6JATZ0562
R1225	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1225	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1226	PCB JUMPER D0.6-P5.0	JW5.0T
R1227	PCB JUMPER D0.6-P5.0	JW5.0T
R1228	PCB JUMPER D0.6-P5.0	JW5.0T
R1229	CARBON RES. 1/4W J 5.6K OHM	RCX4JATZ0562
R1229	CARBON RES. 1/6W J 5.6K OHM	RCX6JATZ0562
R1230	CARBON RES. 1/4W J 5.6K OHM	RCX4JATZ0562
R1230	CARBON RES. 1/6W J 5.6K OHM	RCX6JATZ0562
R1232	CARBON RES. 1/4W J 2.7K OHM	RCX4JATZ0272
R1232	CARBON RES. 1/6W J 2.7K OHM	RCX6JATZ0272
R1233	PCB JUMPER D0.6-P5.0	JW5.0T
R1234	PCB JUMPER D0.6-P5.0	JW5.0T
R1235	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R1235	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R1238	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1238	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1240	CARBON RES. 1/4W J 1M OHM	RCX4JATZ0105
R1240	CARBON RES. 1/6W J 1M OHM	RCX6JATZ0105
R1241	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1241	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1257	PCB JUMPER D0.6-P5.0	JW5.0T
R1260	PCB JUMPER D0.6-P5.0	JW5.0T
R1261	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1261	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1262	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1262	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1263	CARBON RES. 1/4W J 47 OHM	RCX4JATZ0470
R1263	CARBON RES. 1/6W J 47 OHM	RCX6JATZ0470
R1264	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222

R1264	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1265	CARBON RES. 1/4W J 1.8K OHM	RCX4JATZ0182
R1265	CARBON RES. 1/6W J 1.8K OHM	RCX6JATZ0182
R1281	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R1281	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R1283	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1283	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1284	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R1284	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R1285	CARBON RES. 1/4W J 5.6K OHM	RCX4JATZ0562
R1285	CARBON RES. 1/6W J 5.6K OHM	RCX6JATZ0562
R1289	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1289	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1301	CARBON RES. 1/4W J 180K OHM	RCX4JATZ0184
R1301	CARBON RES. 1/6W J 180K OHM	RCX6JATZ0184
R1302	CARBON RES. 1/4W J 15K OHM	RCX4JATZ0153
R1302	CARBON RES. 1/6W J 15K OHM	RCX6JATZ0153
R1303	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1303	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1304	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1304	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1305	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1305	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1306	CARBON RES. 1/4W J 5.6K OHM	RCX4JATZ0562
R1306	CARBON RES. 1/6W J 5.6K OHM	RCX6JATZ0562
R1307	PCB JUMPER D0.6-P5.0	JW5.0T
R1308	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1308	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1309	CARBON RES. 1/4W J 39K OHM	RCX4JATZ0393
R1309	CARBON RES. 1/6W J 39K OHM	RCX6JATZ0393
R1312	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1312	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1313	PCB JUMPER D0.6-P5.0	JW5.0T
R1314	PCB JUMPER D0.6-P5.0	JW5.0T
R1317	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1317	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1318	CARBON RES. 1/4W J 22 OHM	RCX4JATZ0220
R1318	CARBON RES. 1/6W J 22 OHM	RCX6JATZ0220
R1319	CARBON RES. 1/4W J 470 OHM	RCX4JATZ0471
R1319	CARBON RES. 1/6W J 470 OHM	RCX6JATZ0471
R1320	CARBON RES. 1/4W J 120K OHM	RCX4JATZ0124
R1320	CARBON RES. 1/6W J 120K OHM	RCX6JATZ0124
R1323	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R1323	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R1324	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1324	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1334	CARBON RES. 1/4W J 330 OHM	RCX4JATZ0331
R1334	CARBON RES. 1/6W J 330 OHM	RCX6JATZ0331
R1335	CARBON RES. 1/4W J 330 OHM	RCX4JATZ0331
R1335	CARBON RES. 1/6W J 330 OHM	RCX6JATZ0331
R1336	CARBON RES. 1/4W J 330 OHM	RCX4JATZ0331
R1336	CARBON RES. 1/6W J 330 OHM	RCX6JATZ0331
R1337	PCB JUMPER D0.6-P5.0	JW5.0T
R1338	CARBON RES. 1/4W J 22 OHM	RCX4JATZ0220
R1338	CARBON RES. 1/6W J 22 OHM	RCX6JATZ0220
R1430	PCB JUMPER D0.6-P5.0	JW5.0T
R1464	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473

R1464	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1465	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1465	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1466	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1466	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1467	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1467	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1469	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1469	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1472	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1472	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1473	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1473	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1474	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1474	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1475	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1475	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1476	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1476	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1477	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1477	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1478	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1478	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1479	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1479	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1480	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1480	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1602	CARBON RES. 1/4W J 180 OHM	RCX4JATZ0181
R1602	CARBON RES. 1/6W J 180 OHM	RCX6JATZ0181
R1603	CARBON RES. 1/4W J 220 OHM	RCX4JATZ0221
R1603	CARBON RES. 1/6W J 220 OHM	RCX6JATZ0221
R1604	CARBON RES. 1/4W J 680K OHM	RCX4JATZ0684
R1604	CARBON RES. 1/6W J 680K OHM	RCX6JATZ0684
R1605	CARBON RES. 1/4W J 680K OHM	RCX4JATZ0684
R1606	CARBON RES. 1/4W J 680K OHM	RCX4JATZ0684
R1607	CARBON RES. 1/4W J 680K OHM	RCX4JATZ0684
R1608	CARBON RES. 1/4W J 180K OHM	RCX4JATZ0184
R1608	CARBON RES. 1/6W J 180K OHM	RCX6JATZ0184
R1610	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1610	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1611!	METAL OXIDE FILM RES. 2W J 0.39 OHM	RN02R39ZU001
R1611!	METAL OXIDE FILM RES. 2W J 0.39 OHM	RN02R39DP004
R1612!	METAL OXIDE FILM RES. 2W J 0.22 OHM	RN02R22ZU001
R1612!	METAL OXIDE FILM RES. 2W J 0.22 OHM	RN02R22DP004
R1613	CARBON RES. 1/4W J 120 OHM	RCX4JATZ0121
R1613	CARBON RES. 1/6W J 120 OHM	RCX6JATZ0121
R1614	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1614	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1615	CARBON RES. 1/4W J 33K OHM	RCX4JATZ0333
R1615	CARBON RES. 1/6W J 33K OHM	RCX6JATZ0333
R1616	PCB JUMPER D0.6-P5.0	JW5.0T
R1617	CARBON RES. 1/4W J 180 OHM	RCX4JATZ0181
R1617	CARBON RES. 1/6W J 180 OHM	RCX6JATZ0181
R1618!	CARBON RES. 1/4W J 820 OHM	RCX4JATZ0821
R1618!	CARBON RES. 1/6W J 820 OHM	RCX6JATZ0821
R1619	PCB JUMPER D0.6-P12.5	JW12.5T
R1620!	METAL OXIDE FILM RES. 2W J 10K OHM	RN02103ZU001

R1620!	METAL OXIDE FILM RES. 2W J 10K OHM	RN02103DP004
R1621!	METAL OXIDE FILM RES. 2W J 10K OHM	RN02103ZU001
R1621!	METAL OXIDE FILM RES. 2W J 10K OHM	RN02103DP004
R1622	CARBON RES. 1/4W J 12K OHM	RCX4JATZ0123
R1622	CARBON RES. 1/6W J 12K OHM	RCX6JATZ0123
R1623!	CARBON RES. 1/4W J 12K OHM	RCX4JATZ0123
R1623!	CARBON RES. 1/6W J 12K OHM	RCX6JATZ0123
R1624!	CARBON RES. 1/4W J 39K OHM	RCX4JATZ0393
R1625!	CARBON RES. 1/4W J 39K OHM	RCX4JATZ0393
R1629!	CARBON RES. 1/4W J 13K OHM	RCX4JATZ0133
R1629!	CARBON RES. 1/6W J 13K OHM	RCX6JATZ0133
R1630!	CARBON RES. 1/4W J 13K OHM	RCX4JATZ0133
R1630!	CARBON RES. 1/6W J 13K OHM	RCX6JATZ0133
R1631!	CARBON RES. 1/4W J 13K OHM	RCX4JATZ0133
R1631!	CARBON RES. 1/6W J 13K OHM	RCX6JATZ0133
R1632!	CARBON RES. 1/4W J 680 OHM	RCX4JATZ0681
R1632!	CARBON RES. 1/6W J 680 OHM	RCX6JATZ0681
R1633!	CARBON RES. 1/4W J 5.6K OHM	RCX4JATZ0562
R1633!	CARBON RES. 1/6W J 5.6K OHM	RCX6JATZ0562
R1634	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R1634	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R1635	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1635	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1636!	CARBON RES. 1/4W J 22 OHM	RCX4JATZ0220
R1636!	CARBON RES. 1/6W J 22 OHM	RCX6JATZ0220
R1638	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1638	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1639	CARBON RES. 1/2W J 1K OHM	RCX2JZQZ0102
R1639	CARBON RES. 1/2W J 1K OHM	RCX2102KA013
R1639	CARBON RES. 1/2W J 1K OHM	RCX2JZPZ0102
R1640	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
R1640	CARBON RES. 1/6W J 56K OHM	RCX6JATZ0563
R1641	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1641	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1642	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R1642	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R1643	CARBON RES. 1/2W J 18 OHM	RCX2JZQZ0180
R1643	CARBON RES. 1/2W J 18 OHM	RCX2180KA013
R1643	CARBON RES. 1/2W J 18 OHM	RCX2JZPZ0180
R1644	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1644	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1645!	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1645!	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1646	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1646	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1647!	CARBON RES. 1/4W J 680 OHM	RCX4JATZ0681
R1647!	CARBON RES. 1/6W J 680 OHM	RCX6JATZ0681
R1648!	CARBON RES. 1/4W J 680 OHM	RCX4JATZ0681
R1648!	CARBON RES. 1/6W J 680 OHM	RCX6JATZ0681
R1649!	METAL OXIDE FILM RES. 2W J 10 OHM	RN02100ZU001
R1649!	METAL OXIDE FILM RES. 2W J 10 OHM	RN02100DP004
R1650	PCB JUMPER D0.6-P5.0	JW5.0T
R1651!	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1651!	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1653!	CARBON RES. 1/4W J 270 OHM	RCX4JATZ0271
R1653!	CARBON RES. 1/6W J 270 OHM	RCX6JATZ0271
R1654!	CARBON RES. 1/2W J 3.9 OHM	RCX2JZQZ03R9

R1654!	CARBON RES. 1/2W J 3.9 OHM	RCX23R9KA013
R1654!	CARBON RES. 1/2W J 3.9 OHM	RCX2JZPZ03R9
R1655!	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1655!	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1656	CARBON RES. 1/4W J 22K OHM	RCX4JATZ0223
R1656	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R1657	CARBON RES. 1/4W J 22K OHM	RCX4JATZ0223
R1657	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R1658	METAL OXIDE FILM RES. 1W J 1.8 OHM	RN011R8ZU001
R1658	METAL OXIDE FILM RES. 1W J 1.8 OHM	RN011R8DP003
R1659	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1659	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1660	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1660	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1661	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1661	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1663	CARBON RES. 1/4W J 330 OHM	RCX4JATZ0331
R1663	CARBON RES. 1/6W J 330 OHM	RCX6JATZ0331
R1666!	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R1666!	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R1667!	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R1667!	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R1669!	PCB JUMPER D0.6-P5.0	JW5.0T
R1670	CARBON RES. 1/4W G 4.7K OHM	RCX4GATZ0472
R1670	CARBON RES. 1/6W G 4.7K OHM	RCX6GATZ0472
R1671	CARBON RES. 1/4W G 8.2K OHM	RCX4GATZ0822
R1671	CARBON RES. 1/6W G 8.2K OHM	RCX6GATZ0822
R1673	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1673	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1674	CARBON RES. 1/4W J 22 OHM	RCX4JATZ0220
R1674	CARBON RES. 1/6W J 22 OHM	RCX6JATZ0220
R1675	CARBON RES. 1/4W J 680 OHM	RCX4JATZ0681
R1675	CARBON RES. 1/6W J 680 OHM	RCX6JATZ0681
R1680	PCB JUMPER D0.6-P5.0	JW5.0T
R1681	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1681	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1682	CARBON RES. 1/4W J 22K OHM	RCX4JATZ0223
R1682	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R1683	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1683	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1684	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1684	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1685	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1685	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1686!	CARBON RES. 1/4W J 1.2 OHM	RCX4JATZ01R2
R1686!	CARBON RES. 1/6W J 1.2 OHM	RCX6JATZ01R2
R1689	CARBON RES. 1/4W G 18K OHM	RCX4GATZ0183
R1689	CARBON RES. 1/6W G 18K OHM	RCX6GATZ0183
R1690	CARBON RES. 1/4W G 56K OHM	RCX4GATZ0563
R1690	CARBON RES. 1/6W G 56K OHM	RCX6GATZ0563
R1691!	METAL OXIDE FILM RES. 1W J 2.2 OHM	RN012R2ZU001
R1691!	METAL OXIDE FILM RES. 1W J 2.2 OHM	RN012R2DP003
R1692	METAL OXIDE FILM RES. 2W J 0.22 OHM	RN02R22ZU001
R1692	METAL OXIDE FILM RES. 2W J 0.22 OHM	RN02R22DP004
R1693	CARBON RES. 1/4W J 22K OHM	RCX4JATZ0223
R1693	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R1694	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473

R1694	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1695	CARBON RES. 1/4W J 390 OHM	RCX4JATZ0391
R1695	CARBON RES. 1/6W J 390 OHM	RCX6JATZ0391
R1696	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1696	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1697	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1697	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1698	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1698	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1699!	CARBON RES. 1/4W J 3.9K OHM	RCX4JATZ0392
R1699!	CARBON RES. 1/6W J 3.9K OHM	RCX6JATZ0392
R1701	CARBON RES. 1/4W J 75 OHM	RCX4JATZ0750
R1701	CARBON RES. 1/6W J 75 OHM	RCX6JATZ0750
R1703	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1703	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1706	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1706	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1733	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1733	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1734	CARBON RES. 1/4W J 75 OHM	RCX4JATZ0750
R1734	CARBON RES. 1/6W J 75 OHM	RCX6JATZ0750
R1735	CARBON RES. 1/4W J 220 OHM	RCX4JATZ0221
R1735	CARBON RES. 1/6W J 220 OHM	RCX6JATZ0221
R1736	CARBON RES. 1/4W J 1.8K OHM	RCX4JATZ0182
R1736	CARBON RES. 1/6W J 1.8K OHM	RCX6JATZ0182
R1737	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1737	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1738	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1738	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1739	CARBON RES. 1/4W J 2.7K OHM	RCX4JATZ0272
R1739	CARBON RES. 1/6W J 2.7K OHM	RCX6JATZ0272
R1740	CARBON RES. 1/4W J 4.7K OHM	RCX4JATZ0472
R1740	CARBON RES. 1/6W J 4.7K OHM	RCX6JATZ0472
R1742	CARBON RES. 1/4W J 2.7K OHM	RCX4JATZ0272
R1742	CARBON RES. 1/6W J 2.7K OHM	RCX6JATZ0272
R1743	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1743	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1744	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1744	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1745	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1745	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1746	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R1746	CARBON RES. 1/6W J 100K OHM	RCX6JATZ0104
R1749	CARBON RES. 1/4W J 47K OHM	RCX4JATZ0473
R1749	CARBON RES. 1/6W J 47K OHM	RCX6JATZ0473
R1750	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R1750	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R1752	CARBON RES. 1/4W J 330 OHM	RCX4JATZ0331
R1752	CARBON RES. 1/6W J 330 OHM	RCX6JATZ0331
R1753	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1753	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1756	CARBON RES. 1/4W J 20K OHM	RCX4JATZ0203
R1756	CARBON RES. 1/6W J 20K OHM	RCX6JATZ0203
R1758	CARBON RES. 1/4W J 8.2K OHM	RCX4JATZ0822
R1758	CARBON RES. 1/6W J 8.2K OHM	RCX6JATZ0822
R1759	PCB JUMPER D0.6-P5.0	JW5.0T
R1760	CARBON RES. 1/4W J 33K OHM	RCX4JATZ0333

R1760	CARBON RES. 1/6W J 33K OHM	RCX6JATZ0333
R1761	CARBON RES. 1/4W J 33K OHM	RCX4JATZ0333
R1761	CARBON RES. 1/6W J 33K OHM	RCX6JATZ0333
R1762	CARBON RES. 1/4W J 30K OHM	RCX4JATZ0303
R1762	CARBON RES. 1/6W J 30K OHM	RCX6JATZ0303
R1763	CARBON RES. 1/4W J 8.2K OHM	RCX4JATZ0822
R1763	CARBON RES. 1/6W J 8.2K OHM	RCX6JATZ0822
R1764	CARBON RES. 1/4W J 30K OHM	RCX4JATZ0303
R1764	CARBON RES. 1/6W J 30K OHM	RCX6JATZ0303
R1765	PCB JUMPER D0.6-P5.0	JW5.0T
R1767	PCB JUMPER D0.6-P5.0	JW5.0T
R1768	PCB JUMPER D0.6-P5.0	JW5.0T
R1778	CARBON RES. 1/4W J 20K OHM	RCX4JATZ0203
R1778	CARBON RES. 1/6W J 20K OHM	RCX6JATZ0203
R1788	CARBON RES. 1/4W J 75 OHM	RCX4JATZ0750
R1788	CARBON RES. 1/6W J 75 OHM	RCX6JATZ0750
R1789	CARBON RES. 1/4W J 75 OHM	RCX4JATZ0750
R1789	CARBON RES. 1/6W J 75 OHM	RCX6JATZ0750
R1790	CARBON RES. 1/4W J 100 OHM	RCX4JATZ0101
R1790	CARBON RES. 1/6W J 100 OHM	RCX6JATZ0101
R1791	CARBON RES. 1/4W J 330 OHM	RCX4JATZ0331
R1791	CARBON RES. 1/6W J 330 OHM	RCX6JATZ0331
R1792	PCB JUMPER D0.6-P5.0	JW5.0T
R1793	CARBON RES. 1/4W J 3.3K OHM	RCX4JATZ0332
R1793	CARBON RES. 1/6W J 3.3K OHM	RCX6JATZ0332
R1794	CARBON RES. 1/4W J 3.3K OHM	RCX4JATZ0332
R1794	CARBON RES. 1/6W J 3.3K OHM	RCX6JATZ0332
R1795	PCB JUMPER D0.6-P5.0	JW5.0T
R1801!	METAL OXIDE FILM RES. 2W J 3.9 OHM	RN023R9ZU001
R1801!	METAL OXIDE FILM RES. 2W J 3.9 OHM	RN023R9DP004
R1802	CARBON RES. 1/4W J 4.7K OHM	RCX4JATZ0472
R1802	CARBON RES. 1/6W J 4.7K OHM	RCX6JATZ0472
R1803	CARBON RES. 1/4W J 2.2K OHM	RCX4JATZ0222
R1803	CARBON RES. 1/6W J 2.2K OHM	RCX6JATZ0222
R1804	CARBON RES. 1/4W J 22K OHM	RCX4JATZ0223
R1804	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R1805	CARBON RES. 1/4W J 33K OHM	RCX4JATZ0333
R1805	CARBON RES. 1/6W J 33K OHM	RCX6JATZ0333
R1806	CARBON RES. 1/4W J 33K OHM	RCX4JATZ0333
R1806	CARBON RES. 1/6W J 33K OHM	RCX6JATZ0333
R1808	CARBON RES. 1/4W J 22K OHM	RCX4JATZ0223
R1808	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R1810	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R1810	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R1814	PCB JUMPER D0.6-P5.0	JW5.0T
R1851	CARBON RES. 1/4W J 180 OHM	RCX4JATZ0181
R1851	CARBON RES. 1/6W J 180 OHM	RCX6JATZ0181
R1852	CARBON RES. 1/4W J 180 OHM	RCX4JATZ0181
R1852	CARBON RES. 1/6W J 180 OHM	RCX6JATZ0181
R1601A!	CEMENT RES. 5W K 1.2 OHM	RW051R2DP005
R1601A	CEMENT RESISTOR 5W K 1.2 OHM	RW051R2PG001
R1601A	CEMENT RESISTOR 5W J 1.2 OHM	RW051R2Y4001
RS1201	REMOCON REVERSE MIM-93M8DKL-C	USESJRSUNT05
RS1201	REMOCON RECEIVE UNIT PIC-37042SR	USESJRSKK034
RS1201	REMOCON RECEIVE UNIT PIC-26042SR-2	USESJRSKK032
SA1601!	SURGE ABSORBER JVR-07N471K	NVQZVR07N471
SA1601!	SURGE ABSORBER CNR-10D471K	NVQZR10D471K

SA1601!	SURGE ABSORBER CNR-07D471K	NVQZR07D471K
SA1601!	SURGE ABSORBER PVR-07D471KB	NVQZ07D471KB
SG1601!	GAP. FNR-G3.10D	FAZ000LD6005
SW1201	TACT SWITCH SKQSAB	SST0101AL038
SW1201	TACT SWITCH SKHHAM	SST0101AL029
SW1201	TACT SWITCH KSM0612B	SST0101HH003
SW1202	TACT SWITCH SKQSAB	SST0101AL038
SW1202	TACT SWITCH SKHHAM	SST0101AL029
SW1202	TACT SWITCH KSM0612B	SST0101HH003
SW1203	TACT SWITCH SKQSAB	SST0101AL038
SW1203	TACT SWITCH SKHHAM	SST0101AL029
SW1203	TACT SWITCH KSM0612B	SST0101HH003
SW1204	TACT SWITCH SKQSAB	SST0101AL038
SW1204	TACT SWITCH SKHHAM	SST0101AL029
SW1204	TACT SWITCH KSM0612B	SST0101HH003
SW1205	TACT SWITCH SKQSAB	SST0101AL038
SW1205	TACT SWITCH SKHHAM	SST0101AL029
SW1205	TACT SWITCH KSM0612B	SST0101HH003
SW1206	TACT SWITCH SKQSAB	SST0101AL038
SW1206	TACT SWITCH SKHHAM	SST0101AL029
SW1206	TACT SWITCH KSM0612B	SST0101HH003
SW1207	TACT SWITCH SKQSAB	SST0101AL038
SW1207	TACT SWITCH SKHHAM	SST0101AL029
SW1207	TACT SWITCH KSM0612B	SST0101HH003
SW1208	TACT SWITCH SKQSAB	SST0101AL038
SW1208	TACT SWITCH SKHHAM	SST0101AL029
SW1208	TACT SWITCH KSM0612B	SST0101HH003
SW1209	TACT SWITCH SKQSAB	SST0101AL038
SW1209	TACT SWITCH SKHHAM	SST0101AL029
SW1209	TACT SWITCH KSM0612B	SST0101HH003
SW1210	TACT SWITCH SKQSAB	SST0101AL038
SW1210	TACT SWITCH SKHHAM	SST0101AL029
SW1210	TACT SWITCH KSM0612B	SST0101HH003
SW1211	TACT SWITCH SKQSAB	SST0101AL038
SW1211	TACT SWITCH SKHHAM	SST0101AL029
SW1211	TACT SWITCH KSM0612B	SST0101HH003
T1601!	SWITCHING TRANS 02715	LTT00CPKT106
TB3	X3 FILTER HEAT SINK PGL TD500UA	0EM407094
TB9	13V HEAT SINK PHQ TD701UB	0EM407765
TL2	SCREW, B-TIGHT M3X8 BIND HEAD+	GBMB3080
TL2	SCREW, B-TIGHT M3X8 BIND HEAD+	GBMB3080
TP1301	PCB JUMPER D0.6-P7.5	JW7.5T
TP1302	PCB JUMPER D0.6-P15.0	JW15.0T
TP1303	PCB JUMPER D0.6-P7.5	JW7.5T
TP1401	PCB JUMPER D0.6-P10.0	JW10.0T
TP1402	PCB JUMPER D0.6-P10.0	JW10.0T
TP1731	PCB JUMPER D0.6-P7.5	JW7.5T
TP1732	PCB JUMPER D0.6-P7.5	JW7.5T
TP1733	PCB JUMPER D0.6-P10.0	JW10.0T
TU1001	TUNER TMQH2-001A	UTUNNTUAL036
VR1601!	CARBON P.O.T. 10K OHM B	VRCB103KA012
VR1601!	CARBON P.O.T. 10K OHM B	VRCB103HH002
W1601!	AC CORD PB8K9F9110A-057	WAC0172LW008
W1601!	AC CORD WAC0172LTE01	WAC0172LTE01
W1601!	AC CORD WAC0172AS006	WAC0172AS006
W1601!	AC CORD LA-2366	WAC0172LW006
W1601!	AC CORD A0A0280-007	WAC0172LTE04

X1201	X'TAL 8.00MHZ	FXD805LLN001
X1301	X'TAL 3.579545 MHZ	FXD355LLN003
X1301	X'TAL 3.579545MHZ(30PPM)	FXD355LCHE01
	H.V. CBA ASSEMBLY	X4S13HV1
	Consists of the following	
	H.V. CBA	-----
	CRT CBA	-----
	JUNCTION A CBA	-----
	JUNCTION B CBA	-----
	H.V. CBA	-----
BC571	BEAD INDUCTORS FBA04HA600VB-00	LLBF00STU026
BC591	PCB JUMPER D0.6-P5.0	JW5.0T
C552	MYLAR CAP. 0.22UF/50V J	CMA1JJS00224
C552	FILM CAP.(P) 0.22UF/50V J	CA1J224MS029
C553	ELECTROLYTIC CAP. 2.2UF/50V M LL	CE1JMASLL2R2
C553	ELECTROLYTIC CAP. 2.2UF/50V LL	CE1JMASLH2R2
C555	ELECTROLYTIC CAP. 47UF/35V M	CE1GMASDL470
C555	ELECTROLYTIC CAP. 47UF/35V M	CE1GMASTL470
C556	ELECTROLYTIC CAP. 1000UF/25V M	CE1EMZPDL102
C556	ELECTROLYTIC CAP. 1000UF/25V M	CE1EMZPTL102
C558	CERAMIC CAP.(AX) B K 0.01UF/50V	CCA1JKTOB103
C559	ELECTROLYTIC CAP. 330UF/35V M	CE1GMASDL331
C559	ELECTROLYTIC CAP. 330UF/35V M	CE1GMASTL331
C560	FILM CAP.(P) 0.01UF/50V J	CMA1JJS00103
C560	FILM CAP.(P) 0.01UF/50V J	CA1J103MS029
C571	P.P. CAP 0.33UF/200V J	CA2D334VC012
C571	PP CAP. 0.33UF/250V J	CT2E334MS041
C574	ELECTROLYTIC CAP. 4.7UF/250V M	CE2EMASDL4R7
C574	ELECTROLYTIC CAP. 4.7UF/250V M	CE2EMASTL4R7
C577	FILM CAP.(P) 0.022UF/50V J	CMA1JJS00223
C577	FILM CAP.(P) 0.022UF/50V J	CA1J223MS029
C578	ELECTROLYTIC CAP. 47UF/35V M	CE1GMASDL470
C578	ELECTROLYTIC CAP. 47UF/35V M	CE1GMASTL470
C580	P.P. CAP 0.0082UF/1.6K J	CA3C822VC011
C580	PP CAP. 0.0082UF/1.6KV J	CT3C822MS039
C580	PP CAP. 0.0082UF/1.6KV J	CBH3CJQ00822
C584	ELECTROLYTIC CAP. 1UF/160V M	CE2CMASDL1R0
C584	ELECTROLYTIC CAP. 1UF/160V M	CE2CMASTL010
C584	ELECTROLYTIC CAP. 1UF/160V M	CE2CMASSTL1R0
C591	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL1R0
C591	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASDL010
C591	ELECTROLYTIC CAP. 1UF/50V M	CE1JMASTL1R0
C592	ELECTROLYTIC CAP. 4.7UF/35V M	CE1GMASDL4R7
C592	ELECTROLYTIC CAP. 4.7UF/35V M	CE1GMASTL4R7
C594	ELECTROLYTIC CAP. 100UF/160V M	CE2CMZPDL101
C594	ELECTROLYTIC CAP. 100UF/160V M	CE2CMZPTL101
C594	ELECTROLYTIC CAP. 100UF/160V M W/F	CE2CMZNTL101
CN571	CONNECTOR BASE, 5P TV-50P-05-V3	J3TVC05TG002
CN571	CONNECTOR BASE, 5P RTB-1.5-5P	J3RTC05JG001
D552	DIODE 1N5397-B	NDLZ001N5397
D552	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D571	DIODE FR154	NDLZ000FR154
D571	FAST RECOVERY DIODE ERB44-02	QDPZ0ERB4402
D572	DIODE FR104-B	NDLZ000FR104
D584	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133

D584	SWITCHING DIODE 1N4148	NDTZ001N4148
D585	ZENER DIODE MTZJT-775.1B	QDTB0MTZJ5R1
D585	ZENER DIODE DZ-5.1BSBT265	NDTB0DZ5R1BS
D591	ZENER DIODE MTZJT-7736B	QDTB00MTZJ36
D591	ZENER DIODE DZ-36BSBT265	NDTB00DZ36BS
D595	ZENER DIODE MTZJT-7716B	QDTB00MTZJ16
D595	ZENER DIODE DZ-16BSBT265	NDTB00DZ16BS
D596	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D596	SWITCHING DIODE 1N4148	NDTZ001N4148
D597	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D597	SWITCHING DIODE 1N4148	NDTZ001N4148
D598	DIODE FR104-B	NDLZ000FR104
IC551	VERTICAL OUTPUT IC AN5522	QSZBA0SMS002
IC551	VERTICAL OUTPUT IC LA78040A	QSBBA0SSY003
L551	CHOKE COIL 47UH-K	LLBD00PKV007
L551	CHOKE COIL 47UH-K	LLBD00PKV005
PB1	9V POWER PCB HOLDER TD001UB	0EM000728
PB4	X4 H/V HEAT SINK(PHJ) TD801UB	0EM301754
PB9	FBT HOLDER TD001UB	0EM407841
PL1	SCREW, P-TIGHT 3X12 WASHER HEAD+	GCMP3120
PL7	SCREW TAPPING M4X14	DBU14140
PL8	SCREW, B-TIGHT M3X8 BIND HEAD+	GBMB3080
Q571	TRANSISTOR TT2138LS-YB11	QQZZ00TT2138
Q571	TRANSISTOR 2SC5884000RF	QQZZ02SC5884
Q572	TRANSISTOR 2SC1627Y-TPE2	QQSY02SC1627
Q591	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q591	TRANSISTOR 2SC2785(H)	QQSH02SC2785
Q591	TRANSISTOR 2SC2785(J)	QQSJ02SC2785
Q591	TRANSISTOR KTC3199(GR)	NQS10KTC3199
Q591	TRANSISTOR KTC3198(GR)	NQS40KTC3198
Q591	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
R536	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R536	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R551	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R551	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R556	CARBON RES. 1/4W J 4.7 OHM	RCX4JATZ04R7
R556	CARBON RES. 1/6W J 4.7 OHM	RCX6JATZ04R7
R557	CARBON RES. 1/4W J 470 OHM	RCX4JATZ0471
R557	CARBON RES. 1/6W J 470 OHM	RCX6JATZ0471
R558	CARBON RES. 1/4W J 22K OHM	RCX4JATZ0223
R558	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R559	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R559	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R560	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R560	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R561	CARBON RES. 1/4W J 8.2K OHM	RCX4JATZ0822
R561	CARBON RES. 1/6W J 8.2K OHM	RCX6JATZ0822
R562	CARBON RES. 1/4W J 4.7 OHM	RCX4JATZ04R7
R563	CARBON RES. 1/4W J 4.7 OHM	RCX4JATZ04R7
R565!	CARBON RES. 1/4W J 4.7 OHM	RCX4JATZ04R7
R566!	CARBON RES. 1/4W J 4.7 OHM	RCX4JATZ04R7
R567!	CARBON RES. 1/4W J 4.7 OHM	RCX4JATZ04R7
R568!	CARBON RES. 1/4W J 4.7 OHM	RCX4JATZ04R7
R570	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R573	CARBON RES. 1/4W J 470 OHM	RCX4JATZ0471
R573	CARBON RES. 1/6W J 470 OHM	RCX6JATZ0471
R574	METAL OXIDE FILM RES. 2W J 1K OHM	RN02102ZU001

R574	METAL OXIDE FILM RES. 2W J 1K OHM	RN02102DP004
R575	METAL OXIDE FILM RES. 2W J 1K OHM	RN02102ZU001
R575	METAL OXIDE FILM RES. 2W J 1K OHM	RN02102DP004
R576	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R576	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R577	CARBON RES. 1/4W J 180 OHM	RCX4JATZ0181
R577	CARBON RES. 1/6W J 180 OHM	RCX6JATZ0181
R579	CARBON RES. 1/4W J 180 OHM	RCX4JATZ0181
R579	CARBON RES. 1/6W J 180 OHM	RCX6JATZ0181
R580	CARBON RES. 1/4W J 56 OHM	RCX4JATZ0560
R583!	METAL OXIDE FILM RES. 2W J 1.8 OHM	RN021R8ZU001
R583!	METAL OXIDE FILM RES. 2W J 1.8 OHM	RN021R8DP004
R584	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R584	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R585	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R585	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R586	CARBON RES. 1/4W J 1K OHM	RCX4JATZ0102
R586	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R587!	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R588!	CARBON RES. 1/4W J 100K OHM	RCX4JATZ0104
R589!	DBU14140	RCX4JATZ0470
R590!	CARBON RES. 1/4W J 47 OHM	RCX4JATZ0470
R591	CARBON RES. 1/4W J 10K OHM	RCX4JATZ0103
R591	CARBON RES. 1/6W J 10K OHM	RCX6JATZ0103
R592	CARBON RES. 1/4W J 180K OHM	RCX4JATZ0184
R593	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
R593	CARBON RES. 1/6W J 56K OHM	RCX6JATZ0563
R594	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
R594	CARBON RES. 1/6W J 56K OHM	RCX6JATZ0563
R596	PCB JUMPER D0.6-P5.0	JW5.0T
R597	CARBON RES. 1/4W J 6.8K OHM	RCX4JATZ0682
R597	CARBON RES. 1/6W J 6.8K OHM	RCX6JATZ0682
R598	CARBON RES. 1/4W J 22K OHM	RCX4JATZ0223
R598	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R599	CARBON RES. 1/4W J 5.6K OHM	RCX4JATZ0562
R599	CARBON RES. 1/6W J 5.6K OHM	RCX6JATZ0562
T571!	FLYBACK TRANS BSC21-2016S	LTF00CPS2040
T571!	FLYBACK TRANSFORMER JF0501-2418	LTF00CPXB026
T572	HORIZONTAL DRIVE TRANS LP2-005	LTH00CPA5005
WH501	LEAD WIRE 7P/	WX1TD700-002
WH553	LEAD WIRE 12P/	WX1TD800-001
WH554	LEAD WIRE 6P/	WX1TD700-001
	CRT CBA	-----
C501	CERAMIC CAP.(AX) B K 390PF/50V	CCA1JKTOB391
C502	CERAMIC CAP.(AX) B K 390PF/50V	CCA1JKTOB391
C503	CERAMIC CAP.(AX) B K 390PF/50V	CCA1JKTOB391
C505	CERAMIC CAP. B K 1000PF/2KV	CCD3DKP0B102
C505	CERAMIC CAP. B K 1000PF/2KV	CA3D102MR030
C505	CERAMIC CAP. B K 1000PF/2KV	CCD3DKD0B102
CN501	PIN CONNECTOR 005P-5100	JTEA001TG001
CN501	CONNECTOR PIN, 1P LV	1700576
CN501	CONNECTOR PIN, 1P RT-01N-2.3A	1730688
JK501!	CRT SOCKET ISMS02S	JSCC220PK003
Q501	TRANSISTOR 2SC2482 TPE6	QQSZ02SC2482
Q501	TRANSISTOR 2SC3468(E)-AE	QQSE02SC3468
Q501	TRANSISTOR 2SC3468(D)-AE	QQSD02SC3468

Q502	TRANSISTOR 2SC2482 TPE6	QQSZ02SC2482
Q502	TRANSISTOR 2SC3468(E)-AE	QQSE02SC3468
Q502	TRANSISTOR 2SC3468(D)-AE	QQSD02SC3468
Q503	TRANSISTOR 2SC2482 TPE6	QQSZ02SC2482
Q503	TRANSISTOR 2SC3468(E)-AE	QQSE02SC3468
Q503	TRANSISTOR 2SC3468(D)-AE	QQSD02SC3468
R501	METAL OXIDE FILM RES. 1W J 15K OHM	RN01153ZU001
R501	METAL OXIDE FILM RES. 1W J 15K OHM	RN01153DP003
R502	METAL OXIDE FILM RES. 1W J 15K OHM	RN01153ZU001
R502	METAL OXIDE FILM RES. 1W J 15K OHM	RN01153DP003
R503	METAL OXIDE FILM RES. 1W J 15K OHM	RN01153ZU001
R503	METAL OXIDE FILM RES. 1W J 15K OHM	RN01153DP003
R504	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R504	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R505	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R505	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R506	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R506	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R507	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R507	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R508	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R508	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R509	CARBON RES. 1/4W J 1.5K OHM	RCX4JATZ0152
R509	CARBON RES. 1/6W J 1.5K OHM	RCX6JATZ0152
R513	CARBON RES. 1/4W J 15 OHM	RCX4JATZ0150
R513	CARBON RES. 1/6W J 15 OHM	RCX6JATZ0150
R514	CARBON RES. 1/4W J 560 OHM	RCX4JATZ0561
R514	CARBON RES. 1/6W J 560 OHM	RCX6JATZ0561
R515	CARBON RES. 1/4W J 15 OHM	RCX4JATZ0150
R515	CARBON RES. 1/6W J 15 OHM	RCX6JATZ0150
R516	CARBON RES. 1/4W J 560 OHM	RCX4JATZ0561
R516	CARBON RES. 1/6W J 560 OHM	RCX6JATZ0561
R517	CARBON RES. 1/4W J 15 OHM	RCX4JATZ0150
R517	CARBON RES. 1/6W J 15 OHM	RCX6JATZ0150
R518	CARBON RES. 1/4W J 560 OHM	RCX4JATZ0561
R518	CARBON RES. 1/6W J 560 OHM	RCX6JATZ0561
R519	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
R520	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
R521	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
R522	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
R523	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
R524	CARBON RES. 1/4W J 56K OHM	RCX4JATZ0563
	JUNCTION A CBA	-----
CN901	CONNECTOR, 6P TUC-P06X-B1	JCTUS06TG001
	JUNCTION B CBA	-----
CN503	CONNECTOR 12P TUC-P12X-B1	JCTUS12TG001

