

HITACHI

PA

No. 0109

SERVICE MANUAL

NTSC

AP84 Chassis

50SBX78B

60SBX78B

R/C: CLU-613MP

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CAUTION: Before servicing this chassis, it is important that the service technician read the "Safety Precaution" and "Product Safety Notices" in this service manual.

**SAFETY NOTICE
USE ISOLATION TRANSFORMER WHEN SERVICING**

Components having special safety characteristics are identified by a Δ on the schematics and on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notices" in this Service Manual.

*For continued x-radiation protection, replace picture tube with original type of Hitachi approved equivalent type.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PROJECTION COLOR TELEVISION

SEPTEMBER 1998

HHEA-MANUFACTURING

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For continued X-Radiation protection, replace picture tube with original type or Hitachi approved equivalent type.

This Service Manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

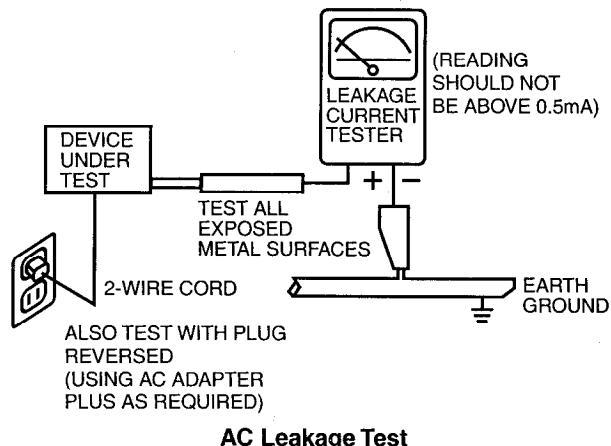
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health and Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with solder. Also, when soldering do not inhale any smoke or fumes produced.

This television receiver provides display of television closed captioning in accordance with section 15.119 of the FCC rules.

SAFETY PRECAUTIONS

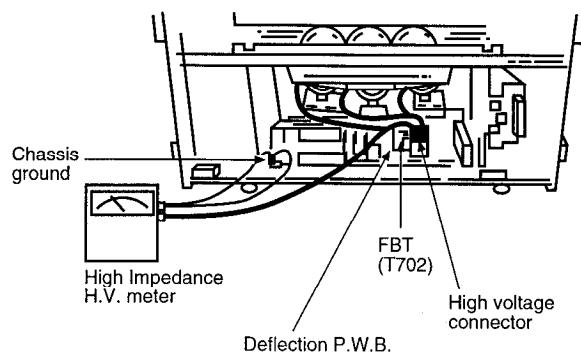
1. Before returning an instrument to the customer, always make a safety check of the entire instrument, including but not limited to the following items.
 - a. Be sure that no built-in protective devices are defective and/or have been deleted during servicing. (1) Protective shields are provided on this 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 fishpaper, 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 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 megohms or greater than 5.2 megohms, 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 leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.0 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 waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, 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 milliamperes. Reverse the instrument power cord plug in the outlet and repeat 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. **High Voltage** – This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply will all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit may correctly be operated.
- f. **Service Warning** – With maximum contrast, operating high voltage in this receiver is lower than **33.0 kV**. In case any component having influence on high voltage is replaced, confirm that the high voltage with maximum contrast is lower than **33.0 kV**. To measure H.V. use a high impedance H.V. meter. Connect (-) to chassis earth and (+) to the CRT anode button. (See the following connection diagram.)

Note: Turn power switch off without fail before the connection to the anode button is made.



g. **X-radiation – TUBE:** The primary source of X-radiation in this receiver is the picture tube. The tube utilized for the above mentioned function in this chassis is specially constructed to limit X-radiation emissions.

For continued X-radiation protection, the replacement tube must be the same type as the original, Hitachi approved type.

When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage component.

Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.

h. **X-radiation Shield –**

1. This receiver is provided with X-ray shield plates for protection against X-radiation. Do not remove X-ray shield plates A, B, C, or D shown in Fig. 1 unnecessarily, when troubleshooting and/or making test measurements.

2. To prevent X-radiation, after replacement of picture tube and lens, confirm these components to be fixed correctly to bracket and cabinet, and not to be taken off easily.

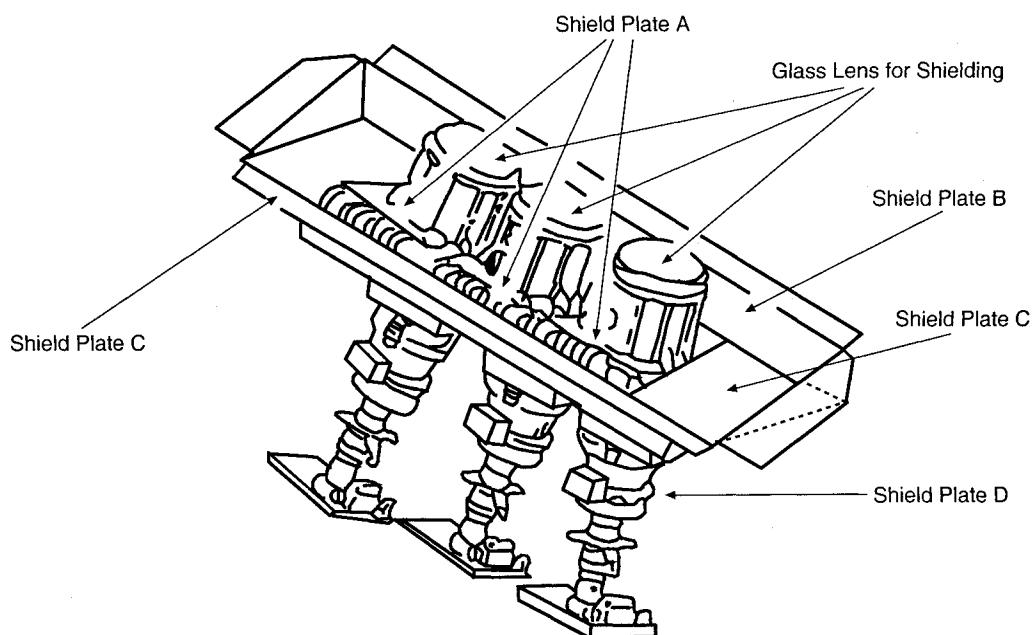
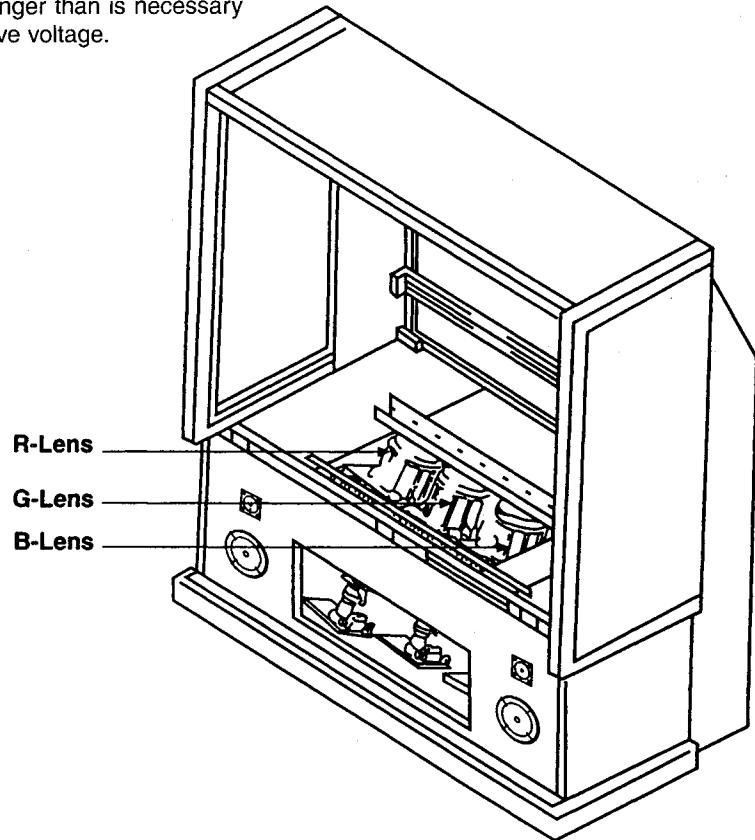


Fig. 1. Detailing X-radiation Shield

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 connectors, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions may 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.
5. **Hot Chassis Warning** – **a.** Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safely 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. Confirm that the AC power plug is inserted correctly with an AC voltmeter by measuring 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. These chassis can be safely 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 insulating 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-plane, or frayed wiring. Do not change spacing between components and the printed circuit board. 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** – Many TV electrical and mechanical parts have special safety-related characteristics some of 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 in Hitachi service data by shading on schematics and by a in the parts list. Use of substitute replacement that does not have the same safety characteristics as the recommended replacement part in Hitachi service data parts list might create shock, fire, and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current Hitachi service literature. A subscription to, or additional copies of service literature may be obtained at a nominal charge from Hitachi.

SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addenda, read and follow the SAFETY PRECAUTIONS on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
 - a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.
 - b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.
 - c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.
- CAUTION:** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
- d. Discharging the picture tube anode.
2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc.) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc." The H.V. Distribution Box has an internal $400M\Omega$ resistor (bleeder resistor) connected from the high voltage to ground. After power is removed from the instrument the high voltage will discharge through the high voltage bleeder resistor. If the tubes have high voltage after power is removed, then the bleeder resistor is defective or the bleeder ground is disconnected.
3. Discharge the picture tube's anode at any of the R, G, or B outputs on the H.V. Distribution Box only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube high voltage distribution box R, G, or B output, using an insulated handle to avoid personal contact with high voltage.
4. Do not spray chemicals on or near this instrument or any of its assemblies.
5. Unless specified otherwise in these service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).
CAUTION: This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.
6. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service data might be equipped.

7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heatsinks are correctly installed.

8. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

9. Use with this instrument only the test fixtures specified in this service data.

CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

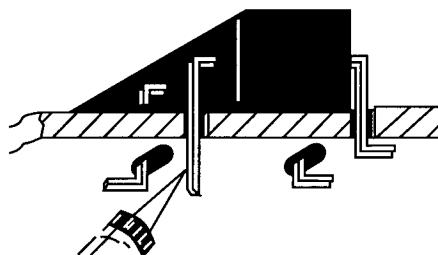
Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or desolder ES devices.
4. Use only can anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES device.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.
2. Use an appropriate gauge of resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well-tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following desoldering technique.
 - a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
 - b. Heat the component lead until the solder melts. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.
- CAUTION:** Work quickly to avoid overheating the circuit board printed foil.
6. Use the following soldering technique.
 - a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
 - b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.
 - c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
- CAUTION:** Work quickly to avoid overheating the circuit board printed foil or components.
- d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use Solder Iron to Pry Leads

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.

2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect to replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacements

1. Heat and remove all solder from around the transistor leads.
2. Remove the heatsink mounting screw (if so equipped).
3. Carefully remove the transistor from the circuit board.
4. Insert new transistor in circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicularly to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original leads". If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuses and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.
2. Securely crimp leads of replacement component around stake 1/8 inch from top.
3. Solder the connections.

CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off," the board. The following guidelines and procedures should be followed whenever this condition is encountered.

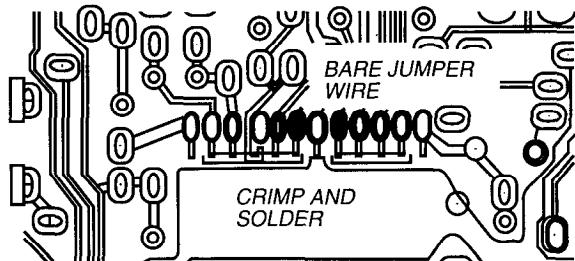
In Critical Copper Pattern Areas

High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as Critical Copper Pattern. Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)
2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.

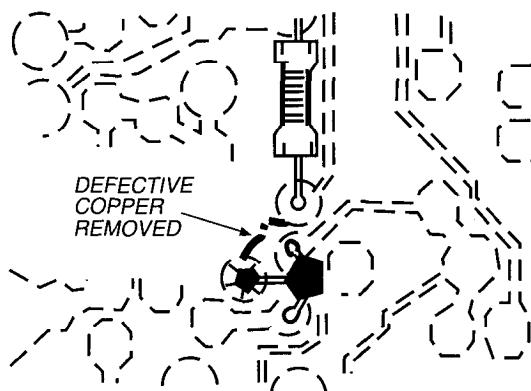


Install Jumper Wire and Solder

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated Jumper Wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both wire sides of the pattern break and locate the nearest component directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.
CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

Frequency Synthesis (FS) Tuning Systems

1. Always unplug the instrument AC power cord before disconnecting or reconnecting FS tuning system cables and before removing or inserting FS tuning system modules.
2. The FS tuner must never be disconnected from the FS tuning control module while power is applied to the instrument.
3. When troubleshooting intermittent problems that might be caused by defective cable connection(s) to the FS tuning system, remove the instrument AC power as soon as the defective connector is found and finish confirming the bad connection with a continuity test. This procedure will reduce the probability of electrical overstress of the FS system semi-conductor components.

NOTE: These components are affixed with glue. Be careful not to break or damage any foil under the component or at the pins of the ICs when removing. Usually applying heat to the component for a short time while twisting with tweezers will break the component loose.

Leadless Chip Components (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chip capacitor or resistor board solder pads may have holes through the board, however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitors may also be limited for the same reason. It is recommended that identical chip components be used..

Chip resistors have a three digit numerical resistance code -1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6K resistor, 0 = 0 (jumper). Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

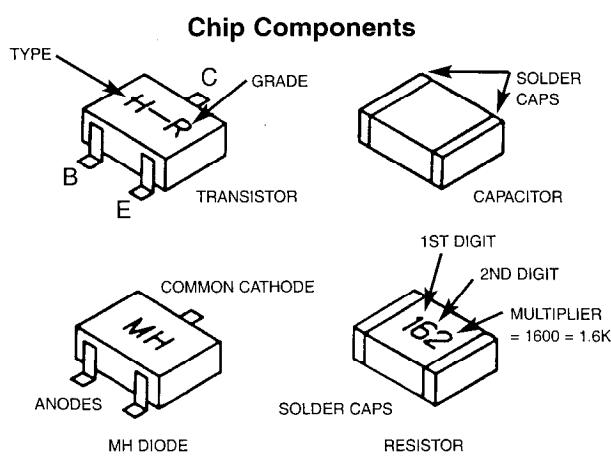
Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

Component Removal

1. Use solder wick to remove solder from component end caps or terminals.
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.
3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal .

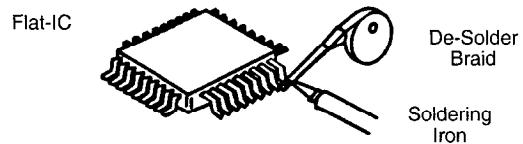
Chip Component Installation

1. Put a small amount of solder on the board soldering pads.
2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds

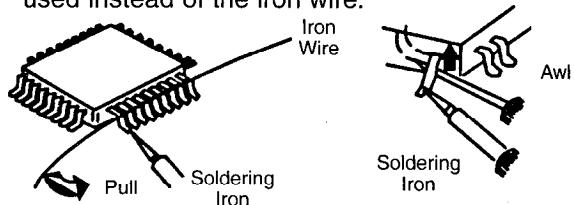


How to Replace Flat-IC —Required Tools—

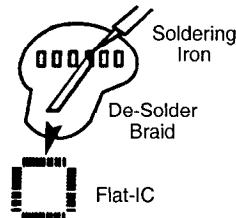
- Soldering iron
 - De-solder braids
 - • iron wire or small awl
 - Magnifier
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



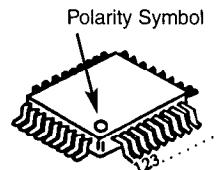
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



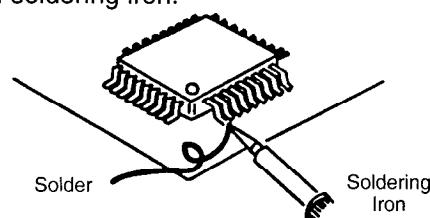
3. Remove the solder from all of the pads of the Flat-IC by using a de-solder braid.



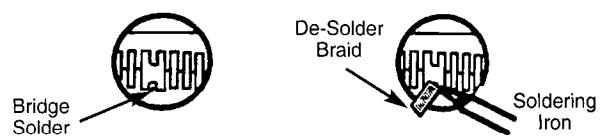
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



5. Solder all pins to the soldering pads using a fine tipped soldering iron.



6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de-solder braid as shown in the figure below.



TECHNICAL CAUTIONS

High Voltage limiter circuit operation check.

1. Turn off TV and connect jig as shown in Figure 2. Adjust jig fully counter-clockwise for minimum resistance.
2. Set the AC input to 120V AC and turn on TV.
3. Confirm test pattern on CRT is a usable picture, then slowly adjust jig until the picture disappears and TV shuts down.
4. When the limiter circuit is operating properly, High Voltage will be less than 36.5 kV at 0.6mA when TV shuts down.
5. Turn off set immediately after checking circuit operation.
6. Unplug set for one minute to reset shutdown circuit. Remove jig and voltmeter.

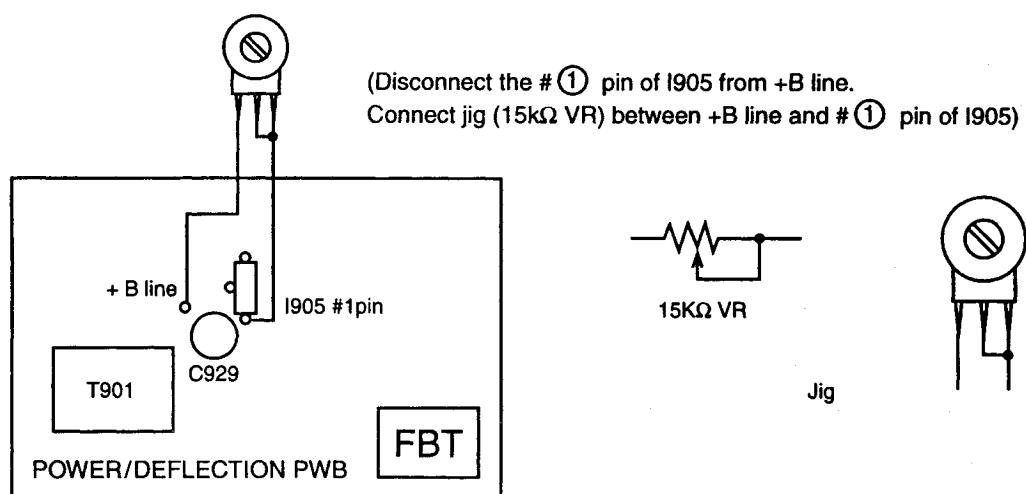
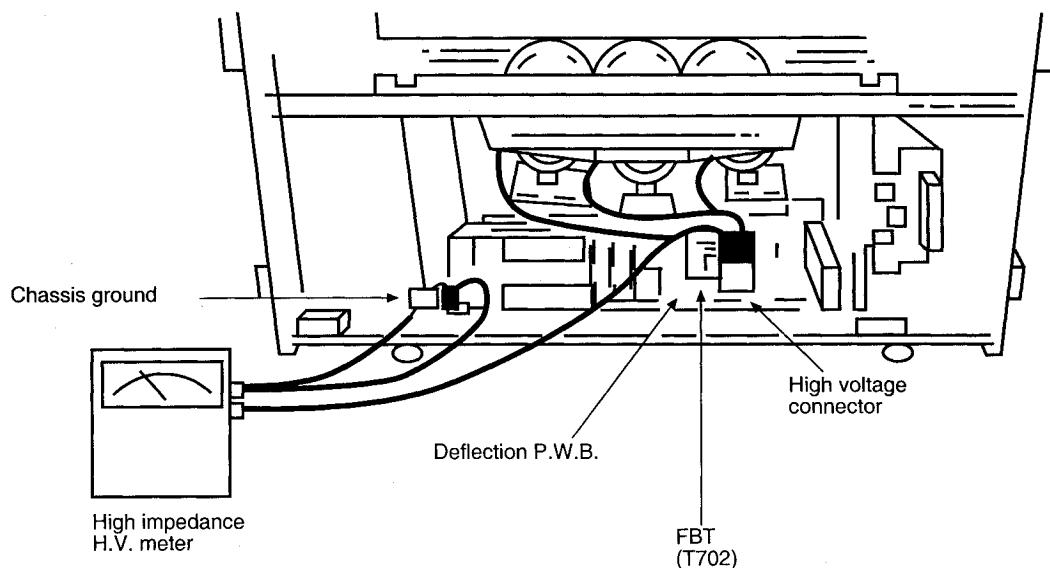


Fig. 2. Deflection/Power P.C.B.

SPECIFICATIONS

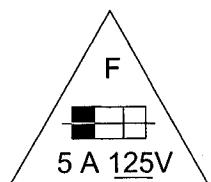
Model:	50SBX78B 60SBX78B														
Cathode-Ray Tube:															
	R=P16LFT00RFA G=P16LFT00HLA B=P16LFT00BMB														
Power Input:	120 volts AC, 60 Hz														
Power Consumption:	240 Watts - Maximum 212 Watts - Operating														
Antenna Impedence:	75 Ohm Unbalanced VHF / UHF / CATV														
Receiving Channel:	<table> <thead> <tr> <th>BAND</th> <th>CH</th> </tr> </thead> <tbody> <tr> <td>VHF</td> <td>2~13</td> </tr> <tr> <td>UHF</td> <td>14~69</td> </tr> <tr> <td>EXT. Mid</td> <td>(A-5)~(A-1), 4+</td> </tr> <tr> <td>CATV Mid.</td> <td>A~I</td> </tr> <tr> <td>CATV Super</td> <td>J~W</td> </tr> <tr> <td>CATV Hyper</td> <td>(W+1)~(W+28)</td> </tr> </tbody> </table>	BAND	CH	VHF	2~13	UHF	14~69	EXT. Mid	(A-5)~(A-1), 4+	CATV Mid.	A~I	CATV Super	J~W	CATV Hyper	(W+1)~(W+28)
BAND	CH														
VHF	2~13														
UHF	14~69														
EXT. Mid	(A-5)~(A-1), 4+														
CATV Mid.	A~I														
CATV Super	J~W														
CATV Hyper	(W+1)~(W+28)														
Intermediate Frequency:	Picture I-F Carrier 45.75 MHz Sound I-F Carrier 41.25 MHz Color Sub Carrier 42.17 MHz														
Video Input:	1 Volt p-p, 75 Ohm 1 Volt p-p, 75 Ohm (Y) 0.7 Volt p-p, 75 Ohm, (Cb, Cr)														
Video Output:	1 Volt p-p, 75 Ohm														

Audio Input:	470 mVrms, 47 k Ohm															
Stereo Audio Output:	470 mVrms, 1 k Ohm															
Audio Output Power:																
Front:	15 Watts per channel at 10% distortion, 8 Ohm impedance. Max. output - 18 Watts.															
Rear:	7.5 Watts per channel at 10% distortion, 8 Ohm impedance. Max output - 10 Watts.															
Center:	7.5 Watts per channel at 10% distortion, 8 Ohm impedance. Max output - 10 Watts															
Anode Voltage	31.5 kV (Zero Beam Current)															
Brightness:	50SBX78B - 250 cd/m ² 60SBX78B - 170 cd/m ² (white screen)															
Speakers:	2 Woofers - 5 inch (12 mm) round 2 Tweeters - 2 inch (5 mm) round 2 Center Speakers - 4 inch (10 mm) round															
Dimension:	<table> <thead> <tr> <th></th> <th>50SBX78B</th> <th>60SBX78B</th> </tr> </thead> <tbody> <tr> <td>Height (in.)</td> <td>51 $\frac{13}{16}$</td> <td>60 $\frac{13}{32}$</td> </tr> <tr> <td>Width (in.)</td> <td>47 $\frac{7}{32}$</td> <td>51 $\frac{11}{32}$</td> </tr> <tr> <td>Depth (in.)</td> <td>24 $\frac{21}{32}$</td> <td>27 $\frac{1}{2}$</td> </tr> <tr> <td>Weight (lbs.)</td> <td>195</td> <td>255</td> </tr> </tbody> </table>		50SBX78B	60SBX78B	Height (in.)	51 $\frac{13}{16}$	60 $\frac{13}{32}$	Width (in.)	47 $\frac{7}{32}$	51 $\frac{11}{32}$	Depth (in.)	24 $\frac{21}{32}$	27 $\frac{1}{2}$	Weight (lbs.)	195	255
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Width (in.)	47 $\frac{7}{32}$	51 $\frac{11}{32}$														
Depth (in.)	24 $\frac{21}{32}$	27 $\frac{1}{2}$														
Weight (lbs.)	195	255														
Circuit Board Assemblies:																
C.P.T. (B) P.W.B.	Terminal P.W.B.															
C.P.T. (G) P.W.B.	VM P.W.B.															
C.P.T. (R) P.W.B.	Surround P.W.B.															
Signal P.W.B.	Power/Deflection P.W.B.															
Signal Sub P.W.B.	Control P.W.B.															
	Sensor Distribution P.W.B.															

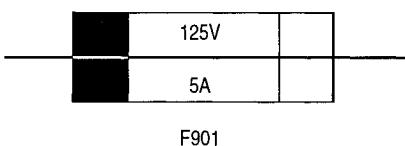
CIRCUIT PROTECTION

CAUTION: Below is an EXAMPLE only. See Replacement Parts List for details. The following symbol near the fuse indicates fast operation fuse (to be replaced). Fuse ratings appear within the symbol.

Example:



"RISK OF FIRE - REPLACE FUSE AS MARKED"



F901

The rating of fuse F901 is 5.0A - 125V.
Replace with the same type fuse for continued protection against fire.

GENERAL INFORMATION

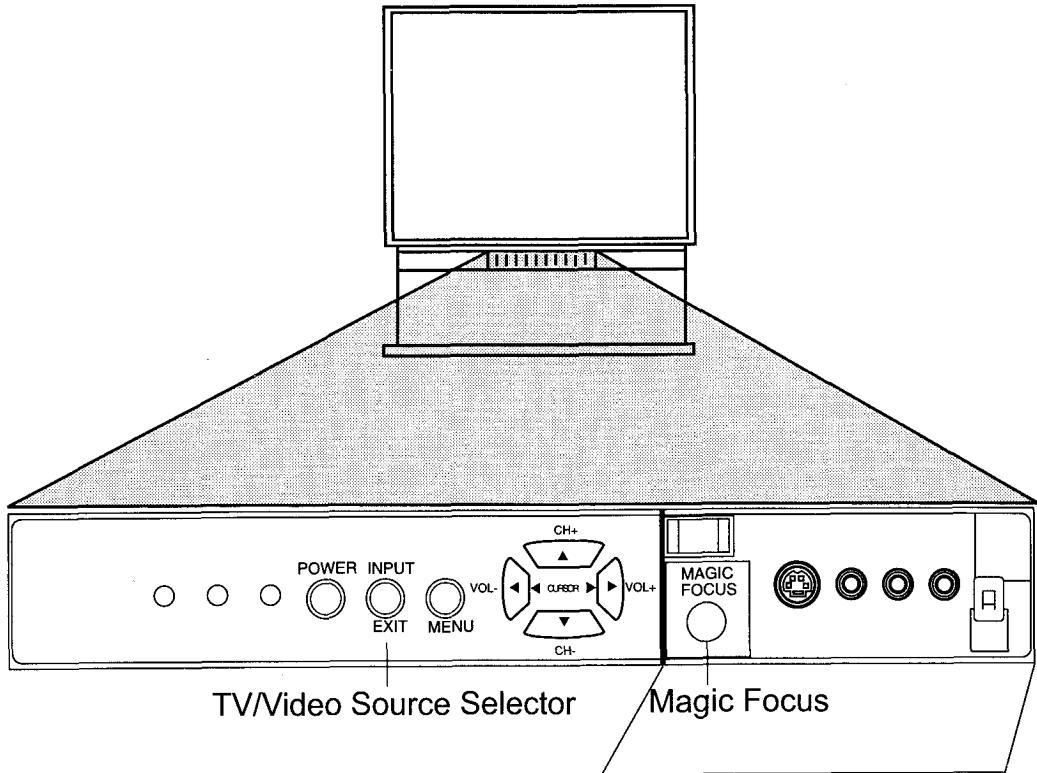


Fig. 3. Control Panel

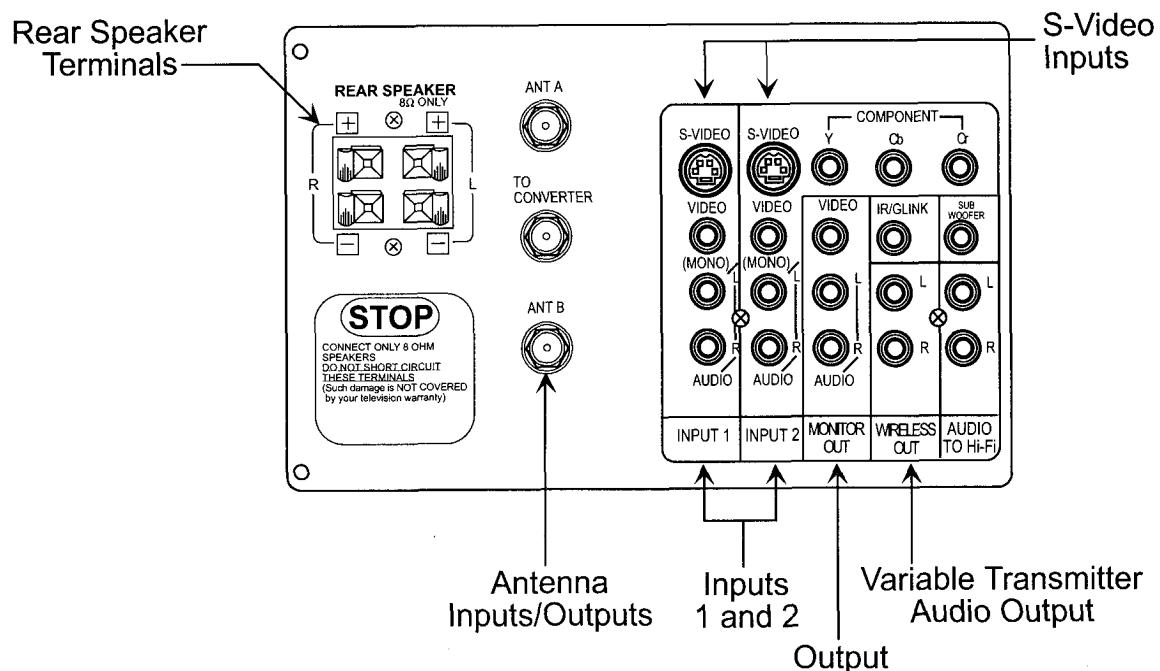
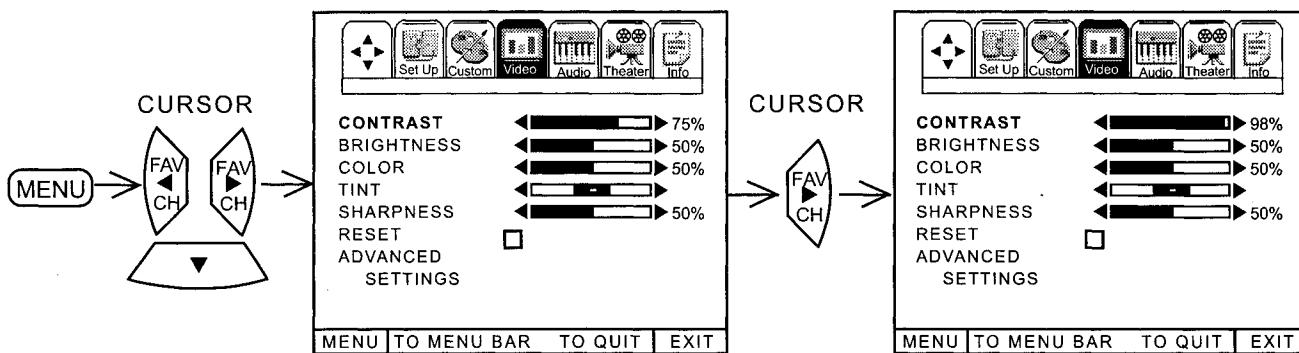


Fig. 4. Rear Connections Panel

CUSTOMIZED PICTURE AND SOUND ADJUSTMENTS



Select VIDEO to adjust picture settings and improve picture quality.



Use the CURSOR ▲ or ▼ buttons to highlight the function to be adjusted.

Press the CURSOR ◀ or ▶ buttons to adjust the function.

Press EXIT to quit menu.

NOTE:

- If CONTRAST is selected, you are adjusting CONTRAST. The additional menu items BRIGHTNESS, COLOR, TINT, and SHARPNESS can be selected and adjusted in the same manner.
- Contrast and Brightness adjustments will affect only the main picture. These adjustments will not affect the sub-picture.

CONTRAST

Use this function to change the contrast between black and white levels in the picture. This adjustment will only affect the picture when ADVANCED SETTINGS ULTRA AI is OFF.

BRIGHTNESS

Use this function to adjust overall picture brightness.

COLOR

Use this function to adjust the level of color in the picture.

TINT

Use this function to adjust flesh tones so they appear natural. (It may be necessary to adjust TINT to obtain optimum picture quality when using the COMPONENT: Y-C_bC_r Input 2 jacks).

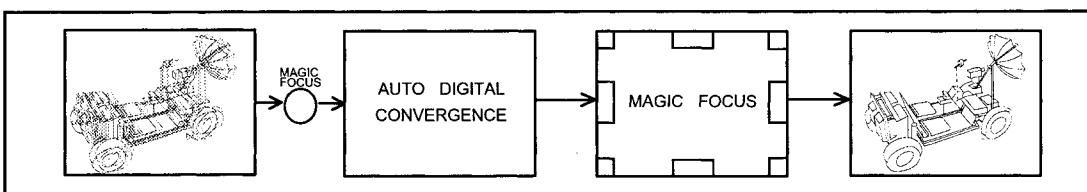
SHARPNESS

Use this function to adjust the amount of fine detail in the picture.

RESET

When RESET is selected, press CURSOR ▶ to return video adjustments to factory preset conditions.

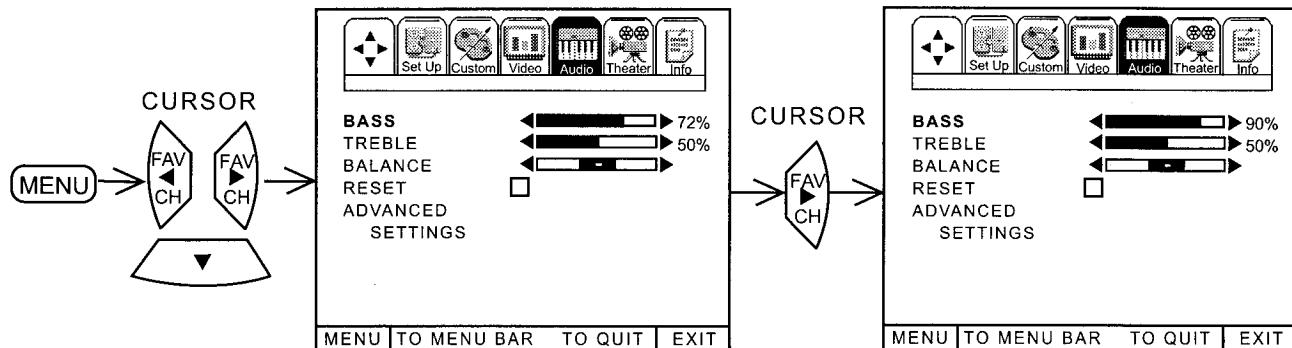
Press the front panel MAGIC FOCUS button momentarily for auto setup.



To adjust manually, press and hold the MAGIC FOCUS button until CENTER MODE or STATIC MODE is displayed. Press EXIT on the remote to select red or blue. Green is stationary. Use the cursor buttons to adjust. Center mode only adjusts the center section. Static mode adjusts the entire screen. **Note:** This new data is in RAM memory only and will be lost if the MAGIC FOCUS button is pressed again.



Select AUDIO SETTINGS to adjust the TV to your preference and to improve the sound quality.



Use CURSOR ▲ or ▼ to highlight the function to be adjusted.

Press CURSOR ◀ or ▶ to adjust the function.

Press EXIT to quit menu.

NOTE: If BASS is selected you are adjusting BASS. The additional menu items TREBLE and BALANCE can be selected and adjusted in the same manner.

BASS

This function controls the low frequency audio to all speakers.

TREBLE

This function controls the high frequency audio to all speakers.

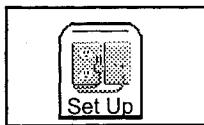
BALANCE

This function will control the left to right balance of the TV internal speakers, the AUDIO TO HI FI output, and WIRELESS OUT output.

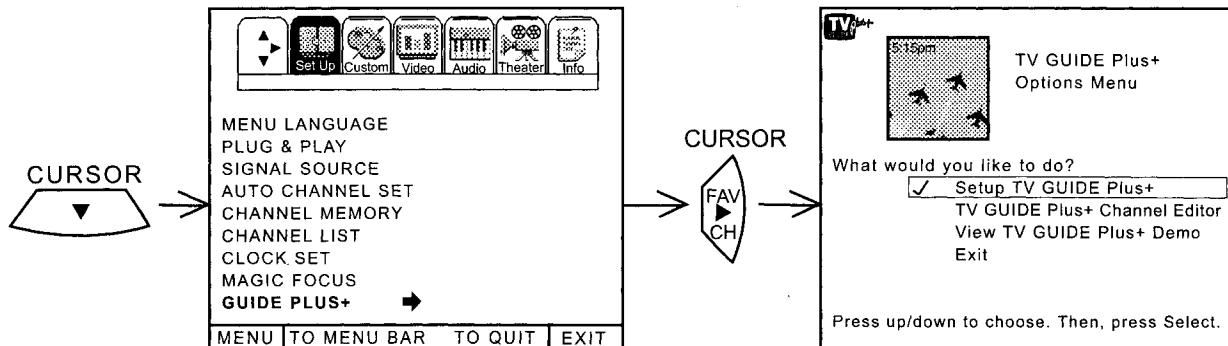
RESET

When RESET is selected, press CURSOR ▶ to return audio adjustments to factory preset conditions.

TV GUIDE PLUS+



This feature allows you to view program information for up to 1 week in the future. It also allows you to control your cable box and VCR with your TV.



Use CURSOR ▲ or ▼ to select the TV GUIDE Plus+ Option of your choice, then press SELECT.

Setup TV GUIDE Plus+:

This allows you to set up TV GUIDE Plus+ so your TV can download data, control your cable box and control your VCR.

TV GUIDE Plus+ Channel Editor:

This allows you to change channel numbers in the guide (using the number buttons) as well as enable or disable channels from the guide. You can enable up to 100 channels in the Channel Editor.

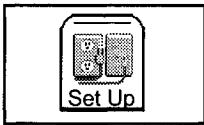
View TV GUIDE Plus+ DEMO:

This will start the TV GUIDE Plus+ demonstration, allowing you to understand the features and operation of this system.

Press EXIT or CURSOR ▼ to highlight EXIT then press SELECT to quit menu.

- NOTES:**
1. It is recommended that you first select View TV GUIDE Plus+ Demo to gain an understanding of what the system can do and how it operates. Then select Setup TV GUIDE Plus+ so that you can set your TV to download data and control your cable box and VCR. Finally, select TV GUIDE Plus+ Channel Editor to customize your TV GUIDE Plus+ system.
 2. If a channel is set to OFF in the Channel Editor, that channel cannot be recorded to a VCR.

SET UP TV GUIDE Plus+

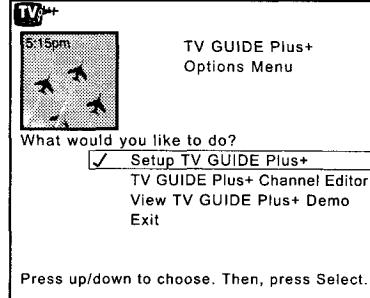


Before you can use TV GUIDE Plus+ you must perform the setup. Simply use your illuminated remote control to enter the information provided here. Screens very similar to those you will see as you perform each step are shown here.

STEP 1

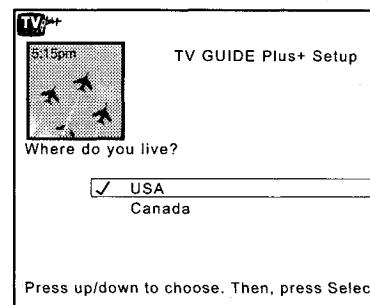
1. From the Hitachi on screen display menu, enter the SETUP-GUIDE Plus+ menu.
2. Use the CURSOR buttons to select Setup TV GUIDE Plus+, then press the SELECT button on your remote.

NOTE: Completing Setup clears previously downloaded TV GUIDE Plus+ Setup data. Only enter this section after TV GUIDE Plus+ is setup if you intend to change your setup (ie. for new zipcode, new VCR, or new cable box).



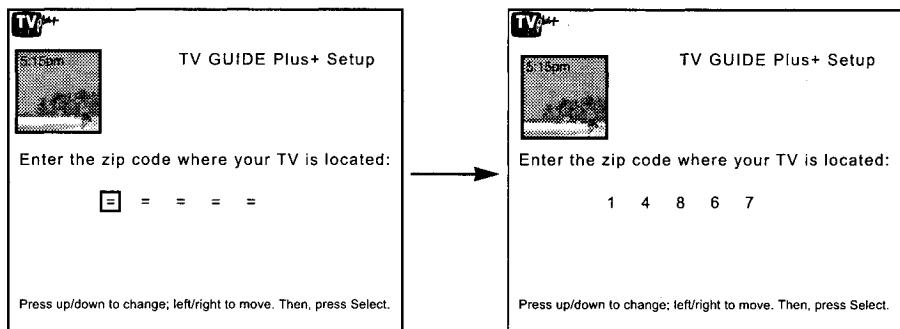
STEP 2

1. Use the CURSOR buttons to select U.S.A. or CANADA, then press SELECT.

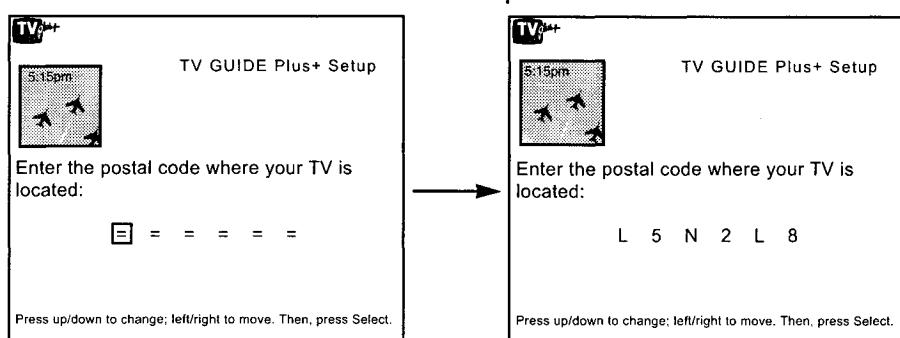


STEP 3

- U
S
A
1. Using the number buttons on your remote, enter your zipcode. You may also use the CURSOR buttons to enter your zipcode or to make a correction.
 2. When finished, press SELECT.

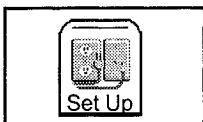


- C
A
N
A
D
A
1. Use the CURSOR ▲, ▼ buttons to input the first number or letter of your postal code.
 2. When you have selected the letter or number, press the CURSOR ► button to move to the next position. (Press CURSOR ◀ to make a correction.)
 3. Repeat steps 1 and 2 for all six spaces.
 4. When finished, press SELECT.



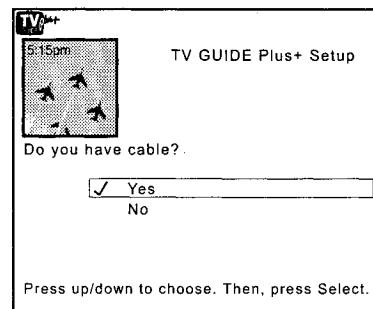
Canada Example

SET UP TV GUIDE Plus+



STEP 4

1. Use the CURSOR button to select YES or NO, then press SELECT.
2. If you select YES, you will go to step 5. If you select NO, you will go to step 9.

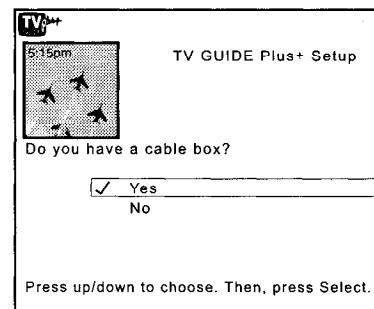


STEP 5

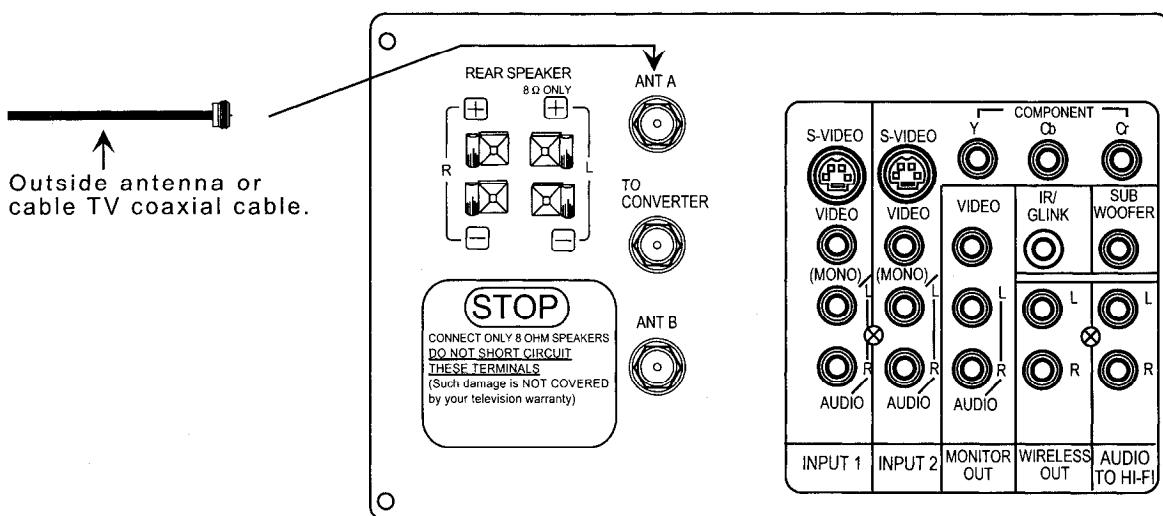
1. Use the CURSOR buttons to SELECT YES or NO, then press SELECT.
2. If you select YES, you will go to step 6. If you select NO, you will go to step 9.

NOTES:

- A. As indicated on page 13 of this guide, you must connect your cable box RF Out to TV ANT A in order for TV GUIDE Plus+ to download data.
- B. The cable box must always be left on.
- C. The TV will download TV GUIDE Plus+ data only when it is off. During this time, you will notice the cable box changing channels without any user input. This is normal. The TV is searching for the Host channel.



Basic connection for TV GUIDE Plus+ setup with no cable box and no VCR.



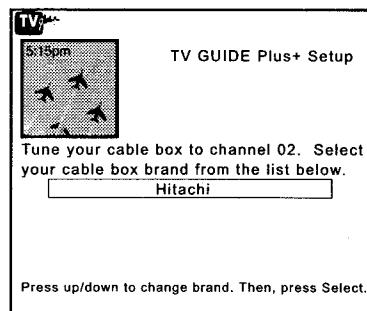
TV GUIDE is a registered trademark of TV Guide Financial, Inc. VCR Plus+, C³, PlusCode and GUIDE Plus+ are trademarks of Gemstar Development Corporation. The VCR Plus+ and GUIDE Plus+ systems are manufactured under license from Gemstar Development Corporation and VCR Index Systems B.V., respectively.

SET UP TV GUIDE Plus+



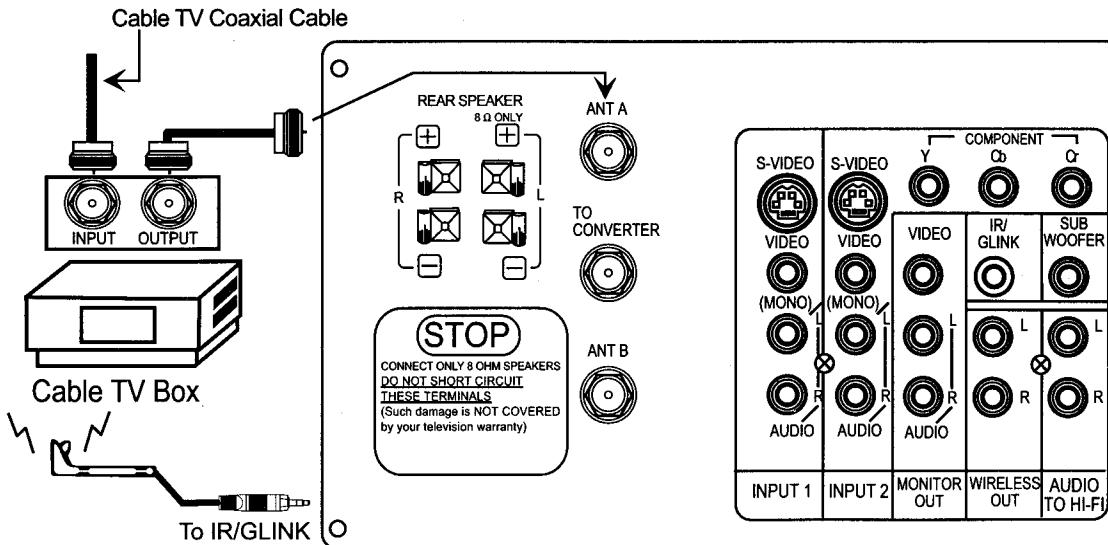
STEP 6

1. Turn your cable box ON and tune it to channel 02.
2. Use the CURSOR buttons to select your cable box brand from the list, then press SELECT. (It will take a few seconds for TV GUIDE Plus+ to check the cable box code.)



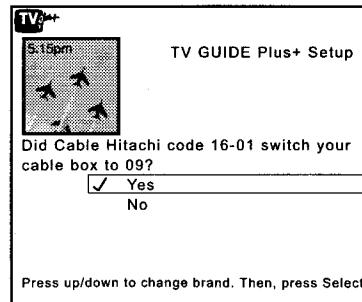
NOTE: When using a cable box with TV Guide Plus+, set your remote to TV mode. This allows your IR Blaster connector to control your cable box, enabling you to see channel call letters when changing channels or pressing RECALL.

Basic connection for TV GUIDE Plus+ setup with cable box and without VCR.



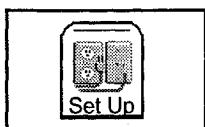
STEP 7

1. If your cable box switches to Channel 09, use the CURSOR buttons to select YES. Then press SELECT.
2. If your cable box does not switch to Channel 09, use the CURSOR buttons to select NO. Then press SELECT. TV GUIDE Plus+ will try another version of cable box code (ie. 16-02.)



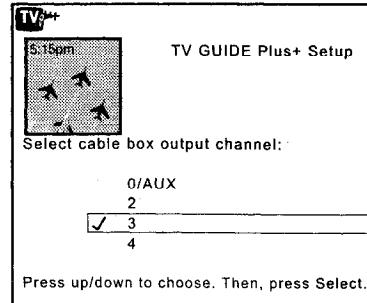
(If TV GUIDE Plus+ does not recognize your cable box after several tries, a screen stating, "Cable box test failed. Please consult your manual and try again" will appear. You should check the CATV brand again and repeat these steps. Also, check that the IR Mouse is in front of the cable box's IR receiver window.)

SET UP TV GUIDE Plus+



STEP 8

1. Using the CURSOR buttons, select the channel number to which your cable box Output is set. It is usually set to Channel 3 or Channel 4.
2. Then press the SELECT button on your remote.

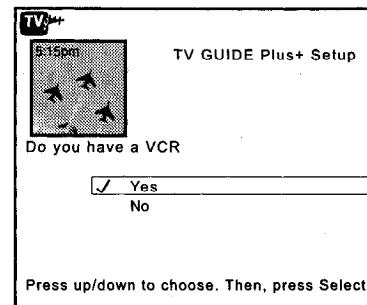


STEP 9

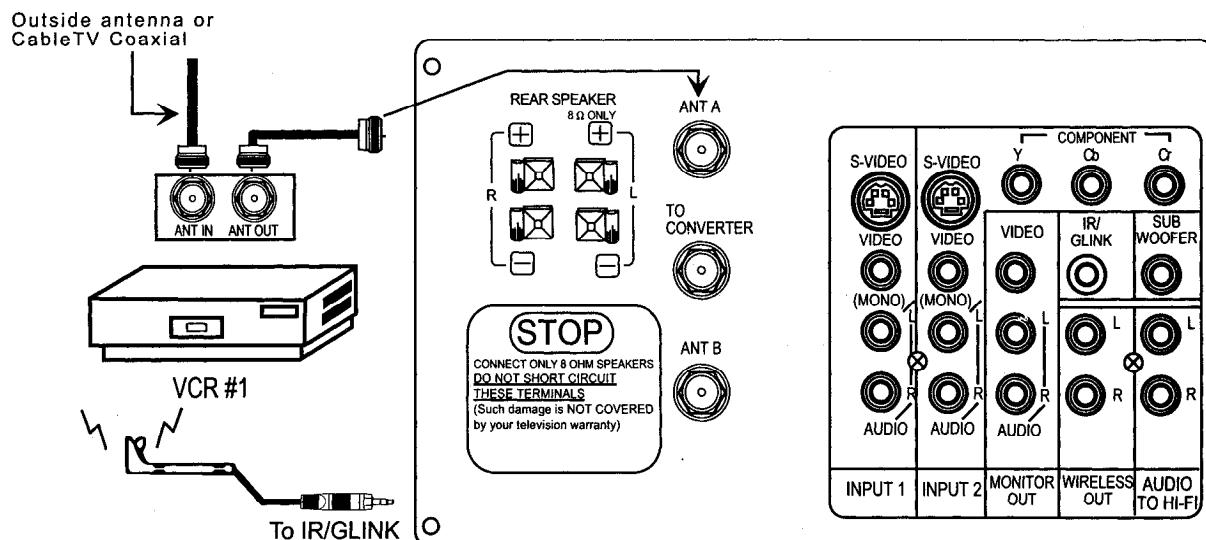
1. Use the CURSOR buttons to select YES or NO, then press SELECT.
2. If you select YES, you will go to step 10. If you select NO, you will go to end of setup.

NOTE:

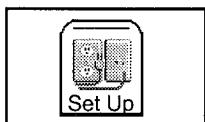
You must connect your VCR RF Out to TV ANT A in order for TV GUIDE Plus+ to download data and control your VCR for recording. (See below).



Basic connection for TV GUIDE Plus+ setup without cable box and with VCR.

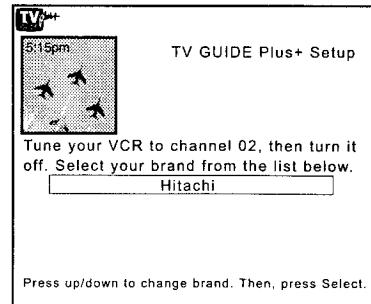


SET UP TV GUIDE Plus+

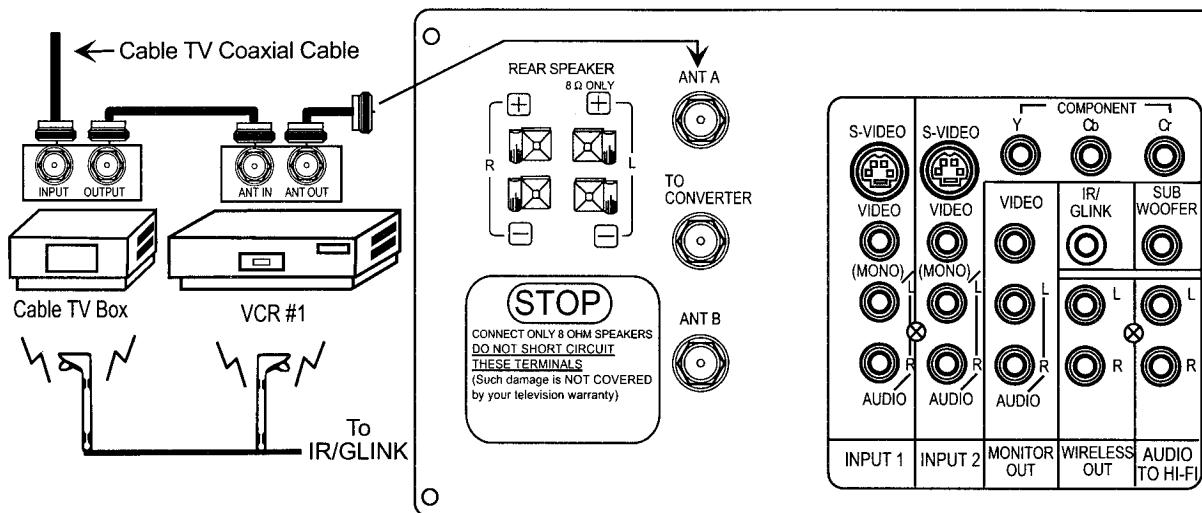


STEP 10

1. Tune your VCR to channel 02, then turn it OFF.
2. Use the CURSOR buttons to select your VCR brand from the list, then press SELECT. (It will take a few seconds for TV GUIDE Plus+ to check the VCR code.)

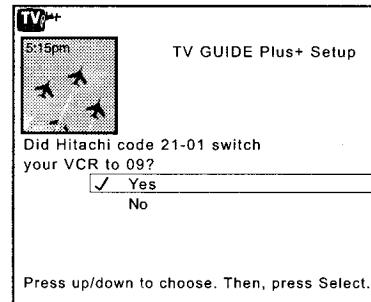


Basic connection for TV GUIDE Plus+ setup with cable box and VCR.



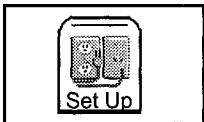
STEP 11

1. If your VCR turns on and switches to Channel 09, use the CURSOR buttons to select YES. Then press SELECT.
2. If your VCR does not turn on and switch to Channel 09, use the CURSOR buttons to select NO. Then press SELECT. TV GUIDE Plus+ will try another version of VCR code (ie. 21-02.)



(If TV GUIDE Plus+ does not recognize your VCR after several tries, a screen stating, "VCR test failed, please consult your manual and try again" will appear. You should check the VCR brand again and repeat these steps. Also, check that the IR Mouse is in front of the VCR's IR receiver window.)

END OF SET UP

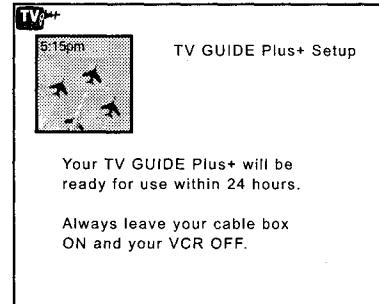


1. A screen telling you that TV GUIDE Plus+ will be ready for use within 24 hours appears. Make sure that you turn the cable box ON and the VCR OFF.

NOTE:

If you have a system with a cable box, make sure you change the VCR channel back to where you normally watch or record from the cable box (typically Channel 03 or 04).

2. Press the SELECT button to return to the TV GUIDE Plus+ options menu.
3. Press the EXIT button to exit Setup.
4. If you have a cable box turn the TV off.
5. The TV will begin searching for the channel that contains the TV GUIDE Plus+ data (host channel). When it locates the host channel, it starts to download the Setup Information. This download usually takes less than 15 minutes. However, on some cable systems, this download may take as much as three hours.
6. If you have a cable box, you should allow the TV to control your cable box until Host Search and data Download are complete.



- NOTES:**
- 1) If you do not have a cable box, you can watch TV while the Host Search and Channel Map Download are in progress. PIP, however, will not be available until the Host Search and Channel Map Download are complete because the TV uses the PIP tuner to receive the TV GUIDE Plus+ information. Also, note that TV GUIDE Plus+ will not be available until Host Search and download functions are complete.
 - 2) For TV GUIDE Plus+ to download Program Information, the TV must be off, regardless of TV GUIDE Plus+ settings.

CAUTIONS WHEN CONNECTING / DISCONNECTING THE HV CONNECTOR

Perform the following when the HV connector (anode connector) is removed or inserted for CPT replacement, etc.

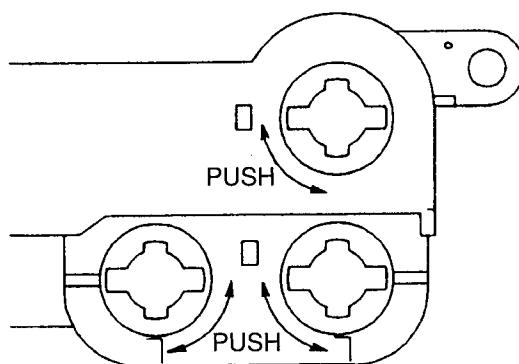
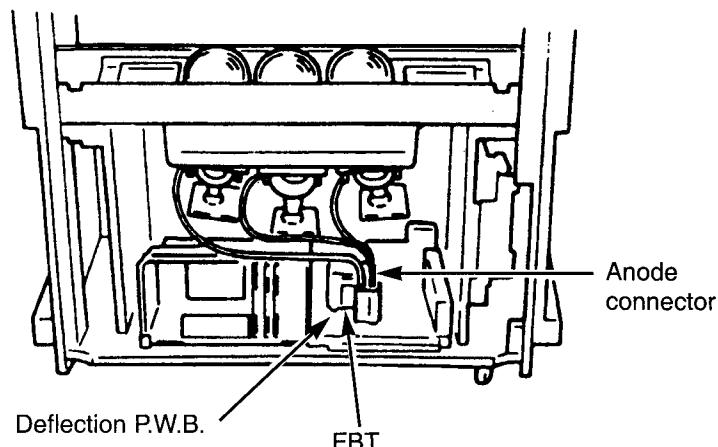


Fig. A

During Removal

1. Roll out silicon cover from FBT's contact area slowly.
2. While turning the connector about 90 degrees following the arrow (0 position), push the connector slightly towards the case. (Fig. A)

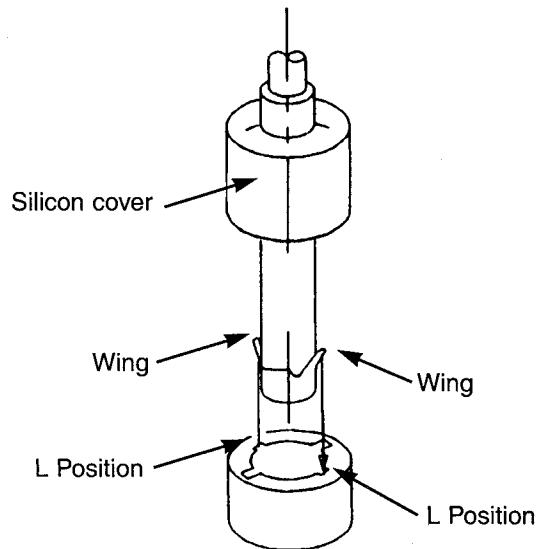


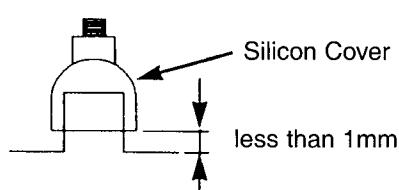
Fig. B

During Insertion

1. Please refer to direction for insertion as shown in Fig. B (L position). Insert connector until "CLICK" sound is heard.
2. Make sure the connector is pressed right in, so that it has a good contact with the spring.
3. Confirm the contact by pulling the connector slightly. (Don't pull hard because it may damage the connector).
4. Cover the high voltage output by carefully pushing silicon cover onto it. (Don't turn the connector).

(REMARK)

1. Make sure the silicon cover is covering the high voltage output.



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1. ASSEMBLED P.W.B. ADJUSTMENT

1.1 Memory Initialization

Adjustment procedure

- (1) Press INPUT key on Control Panel and then Power On to access Video Chroma adjustment mode.
- (2) Receive signal on main picture.
- (3) Check the OSD according to table below, using **▲▼** buttons on Remote Control.

P.01	AP84
SERVICE	0
SUB CONT	14
SUB COLOR	10
SUB TINT	45
SUB SHARP	38
EXT RGB BRIGHT	40
EXT RGB CONT	60
BRIGHTNESS	80
* SUB BRIGHT ADJ.	□
INITIAL SET	□

P.02	AP84
G DRIVE GAIN	40
B DRIVE GAIN	40
H POSITION	12
AFC G	0
H BLK END PHASE	0
V BLK PHASE	0
V FREQUENCY	1
V POSITION	0
R-Y POSITION	3
R-Y LEVEL	0
G-Y LEVEL	0
GPPHS	1

P.03	AP84
S-TRAC	1
YA	0
Y DL	0
TXACL	1
COLOR A	0
CTL	0
CDE	1
C TRAP	0
TOF FQ	0
TOF Q	0
COLOR SYSTEM	0
DY GAIN	9

*: Adjustable data.

Others: Fixed data (be careful not to change)

- (4) Check MENU key to exit VIDEO CHROMA ADJUST mode.

NOTE: (1) If there is a different value than shown in table above, for fixed data, adjust it using **◀▶** buttons (only in this case).

- (2) When exchanging microprocessor and TV is turned on for first time, it requires initialization of VIDEO CHROMA ADJ on P1 and P6.
- (3) Should be changed to OFF for FIRST TIME TOUR at first Power ON by pressing MENU key during FIRST TIME TOUR running.

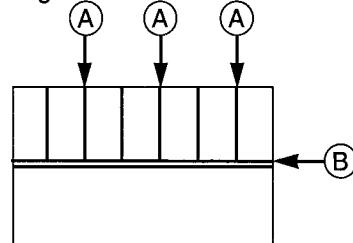
1.2 Comb filter operation check

Adjustment preparation

- (1) Receive the color bar signal at the regular tuning point.
- (2) Set the CONTRAST control to MAX and the other controls to center.
- (3) Set the AI to OFF, and 3D Y/C to ON in Advanced Settings.

Adjustment procedure

- (1) Check that between the color bars there are not line dots every second color bar as shown in the drawing.



Check **(A)** and **(B)** line dots.

	AP84
	DOTS
(A)	None
(B)	None

1.3 Sub-picture position adjustment

Adjustment preparation

- (1) Select signal on main picture.
- (2) Video settings have to be at normal condition.

Adjustment procedure

- (1) Press the INPUT and POWER button on Control Panel at same time to access VIDEO CHROMA ADJUST mode.
- (2) Select H POSI and V POSI using **▲▼** buttons.
- (3) Adjust the H POSI (HORIZONTAL) and V POSI (VERTICAL) position using **◀▶** buttons.
- (4) Press MENU button to exit VIDEO CHROMA ADJUST mode.
- (5) Select single PINP mode and move the sub picture, using the MOVE button. Distance between PINP and edge of screen should be equal when moved. If it is not, repeat (1) ~ (5).

NOTE: Check the position of MULTI PINP mode. Check the right edge of the sub pictures for MV-4 to make sure there is no separation between the MULTI PINP and the edge of the screen.

2. FINAL ASSEMBLY ADJUSTMENT

2.1 Focus adjustment

Adjustment preparation

- (1) The set can face in any direction: west, east, north or south.
- (2) Receive the cross-hatch pattern signal.
CONTRAST : HALF

BRIGHTNESS : MINIMUM

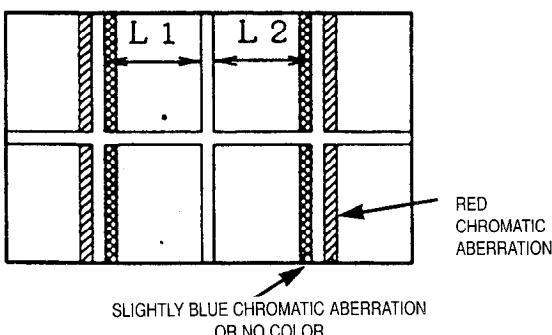
- (3) The electrical focus adjustment should have been completed.
- (4) The centering DY inclination should have been adjusted.

Adjustment procedure

- (1) Loosen the fixing screw on the lens cylinder so that the lens cylinder can be turned. (Be careful not to loosen too much. If it is loosened too much, rattling when tightening becomes greater and the focus may drift). After completing steps (5), (6) and (7) below, tighten the fixing screws for each lens with a torque of 12~17 Kgf cm.
- (2) Apply covers to 2 of R, G and B lenses, and project a single color on the screen and adjust in sequence.
(The adjustment order of R, G and B is only an example.)
- (3) For each of the R, G and B lenses, observe the color aberration generated on the outer circumference of the cross-hatch bright line at the center section ± 3 pitches vertically and horizontally from the center.
- (4) If the lens adjustment knob is turned clockwise, viewed from the front, the color aberration changes as follows.

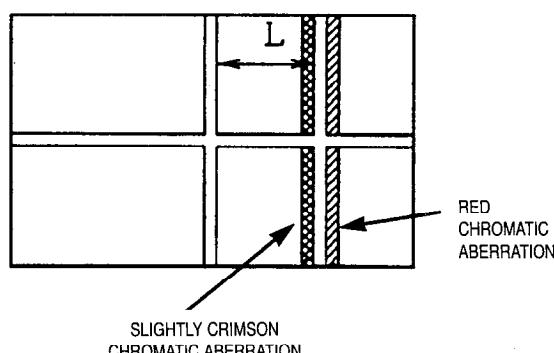
Lens	Change of color aberration
R lens	Red \rightarrow Crimson
G lens	Blue \rightarrow Red
B lens	Purple \rightarrow Green

- (5) In case of G lens, set to the point where the chromatic aberration switches from blue to red. If the chromatic aberration appearing all over the screen is not the same, observe the vertical bright line at the center of the screen and set to the position where red chromatic aberration slightly appears inside and blue outside (reference value: 1~3mm) within the cross-hatch pitches specified in next table. When the red chromatic aberration appearing at both sides of the bright line is not equal, observe the side with larger chromatic aberration when adjusting.



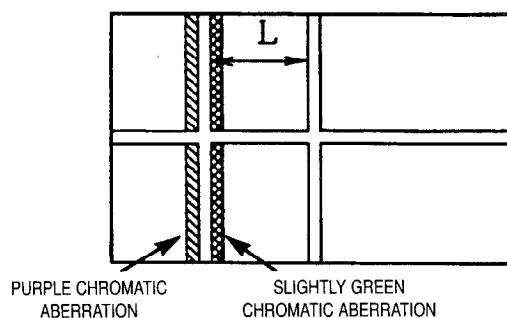
Set Size	Pitch between L1 & L2
50"	3.0 cross-hatch pitches
60"	3.0 cross-hatch pitches

- (6) In case of R lens, set to the position where the chromatic aberration changes from red to crimson. As shown below, observe the vertical bright line at the center and set to the position where the crimson chromatic aberration slightly appears inside and red outside (reference value: 1~3mm) within the cross-hatch pitches specified in next table.



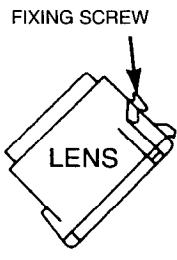
Set Size	Pitch between L
50"	3.0 cross-hatch pitches
60"	3.0 cross-hatch pitches

- (7) In case of B lens, set to the position where the chromatic aberration changes from purple to green. As shown below, observe the vertical bright line at the center and set to the position where green chromatic aberration slightly appears inside and purple outside (reference value: 1~3mm) within the cross-hatch pitches specified in next table.

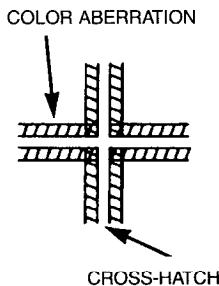


Set Size	Pitch between L
50"	3.0 cross-hatch pitches
60"	3.0 cross-hatch pitches

Notes: (1) Fixing screw



(2) Color aberration



- (3) Since the G light is very important for picture quality and performance, pay special attention in its adjustment.

- Note:** Be careful not to touch the lens with your fingers when adjusting.
- (4) For red, setting to the center between red and crimson is optimum.
- (5) For blue, setting to the center between purple and green is optimum.

2.2 White balance adjustment

- (1) Screen adjustment
 (2) High brightness white balance.
 (3) Low brightness balance.

Screen adjustment VRs	Drive adjustment VRs
Red: on FOCUS PACK	Red: R873 on CPT P.W.B.
Green: on FOCUS PACK	Green: R843 on CPT P.W.B.
Blue: on FOCUS PACK	

Adjustment preparation

- (1) Start adjustment 20 minutes or more after the power is turned on.
- (2) The vertical incident illumination on the screen should be 20 lux or less.
- (3) Set the video settings (CONTRAST: MAX, others: center) to standard condition
- (4) For low brightness white balance adjustment, input a white raster signal level of 0.145 Vp-p (Video input level).
- (5) For high brightness white balance adjustment, input a white raster signal level of 0.715Vp-p (Video input level).
- (6) Set the drive adjustment VRs (red and green) to 12 - 2 o'clock position.
- (7) Turn the screen adjustment VRs (red, green and blue) fully counterclockwise.
- (8) Set video advanced setting white control to COOL position.

Adjustment procedure

- (1) Go to VIDEO CHROMA ADJUST mode by pressing INPUT and Power button on Control Panel at the same time.
- (2) In "SERVICE" mode push **►** button and screen turns to black. Gradually turn the screen adjustment VRs (red, green, blue) clockwise and set them where the red, green and blue slightly bright lines just appear evenly on the screen.
- (3) Push the **►** button again to return to "Normal" side.
- (4) Press "MENU" button to exit VIDEO CHROMA ADJUST.

- (5) Select the input signal for high brightness (Video level = 0.715Vpp).
- (6) Adjust the high brightness white balance using the drive adjustment VRs (red, green).
- (7) Select the signal for low brightness (Video level = 0.145Vpp)
- (8) Adjust the low brightness white balance using the screen adjustment VRs (red, green, blue). (Visually adjust).
- (9) Check that high brightness white balance is obtained. If it does not, return to step (7).

NOTE: Before adjusting the White Balance, check that the screen adjustment VRs are turned fully counterclockwise. Since the phosphorescent surface of the CRT is likely to be burned, be careful.

$$\begin{aligned} \text{White balance} &= 9300^{\circ}\text{K} \pm 0\text{MPCD} \\ \text{Color coordinate} &= x \dots 0.285 \\ &\quad y \dots 0.295 \end{aligned}$$

2.3 Sub brightness adjustment

Adjustment preparation

- (1) Start adjustment 20 minutes or more after the power is turned ON. Receive the color bar signal.
- (2) Set the contrast and color controls to minimum.
- (3) The vertical incident illumination on the screen should be 20 lux or less.

W	Y	CY	G	MG	R	BL
75%	A6	A5	A4	A3	A2	A1
A7						
	b					
	c					
	d					
Q	I		W 100%		BLK	

Should sink to black
 Should rise slightly from black

Adjustment procedure

- (1) Go to "Sub Brightness" adjustment in VIDEO CHROMA ADJUST mode (press Input and Power button on Control panel at same time), using **▲▼** buttons and then **►** button.
- (2) Then adjust "Sub Brightness" using **◀▶** buttons to increase or decrease the value, according to figure. (Visually adjust).
- (3) After adjustment, press MENU button to exit VIDEO CHROMA ADJUST mode. (Data is stored in memory).

Note: When selecting SUB-BRIGHTNESS mode the mcon sets the CONTRAST and COLOR to MIN. automatically, but make sure that the other conditions are center. Directly observe the screen by eye without using a mirror.

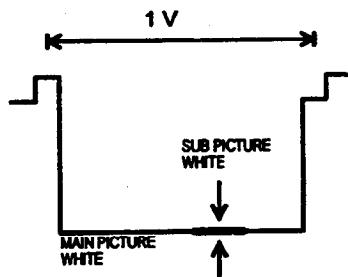
2.4 Sub picture white balance adjustment (ROM4, ROM6, ROM8)

Adjustment preparation

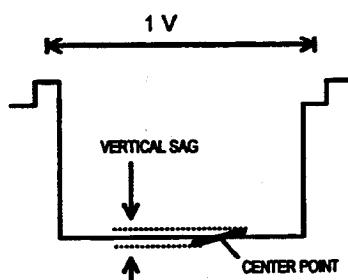
- (1) Start adjustment after power is ON for 20 minutes.
- (2) Use a white raster signal for adjustment.
- (3) Press "FREEZE" on the remote control and select "SINGLE" freeze mode to display the sub picture.
- (4) Set CONTRAST to Maximum, Other conditions to center.

Adjustment procedure

- (1) Connect oscilloscope to P802 and adjust R0M8 to match blue level of main and sub pictures.
- (2) Repeat for P832 and R0M6 Green, P862 and R0M4 for Red.



Note: If the sub picture has a signal sag, adjust level at center point.



2.5 Surround Check

Adjustment preparation

- (1) Input the following audio signals to the audio input of the VIDEO INPUT terminals.

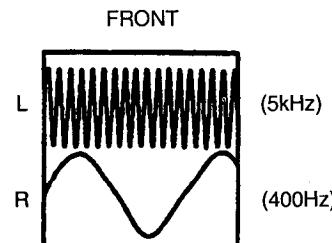
 - When checking surround:
 - ① L CH: No signal
 - ② R CH: 400Hz sine wave 1 Vpp.
 - Set the AUDIO ADVANCED SETTING for INT. SPEAKERS ON, DYNAMIC BASS OFF, LOUDNESS OFF and PERFECT VOLUME OFF.
 - Set the volume control of FRONT to around the center.
 - Set the BASS, TREBLE and BALANCE to center.

Note: Front waveform: Front speaker output of the set.

2.5.1 Surround off check

Adjustment procedure

- (1) Set to SURROUND: OFF and check that the waveform shown below is obtained (Input signal ① and ②).

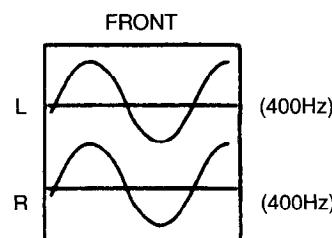


Note: The rear and center will have no output.

2.5.2 Surround off/monaural check

Adjustment procedure

Check that the following waveform is obtained. The amplitudes of 2 channels are equal. (Input signal ① only).

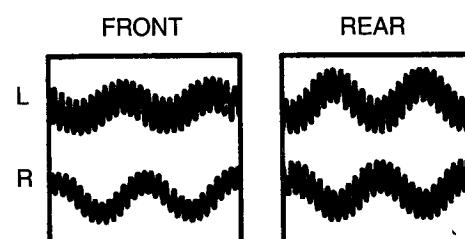


Note: Monaural check can be omitted. The rear and center have no output.

2.5.3 Matrix surround check

Adjustment procedure

- (1) Set to SURROUND: MATRIX
- Check that the following waveforms are obtained. (Input signal ① and ②).
- Front: Check that the phases of R and L are different and 400Hz is superimposed on 5kHz. The amplitudes of R and L are different.
- Rear: Check that the phases of R and L are opposite and 400Hz is superimposed on 5kHz. The amplitudes of R and L are different.

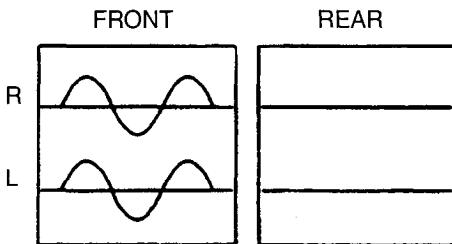


Note: Center has no output.

2.5.4 Matrix surround/monaural check

Adjustment procedure

- Check that the following waveforms are obtained. (Input signal ① only)
- Front: R and L waveforms are almost equal.
- Rear: R and L waveforms are almost Zero.



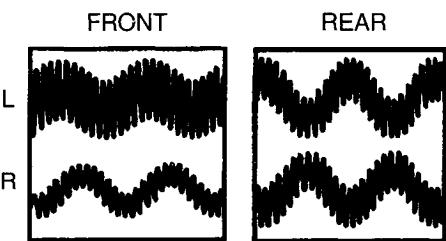
Note: Center has no output.

2.5.5 Hall surround check

Adjustment procedure

- (1) Set to SURROUND: HALL.
(Input signal ① and ②).

- Front: Check that the phases of R and L signals are different and 400 Hz is superimposed on 5kHz.
- Rear: Check that the R and L are opposite and 400Hz is superimposed on 5kHz. The R and L amplitudes are equal.

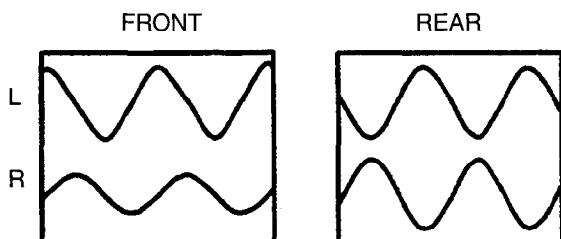


Note: Amplitude levels of front R and L are not even depending on P.W.B. Center has no output.

2.5.6 Hall surround/monaural check

Adjustment procedure

- Check that the following waveforms are obtained. (Input signal ① only)
- Front: The phases of R and L are different. The amplitudes are different.
- Rear: The phases of R and L are opposite. The amplitudes of R and L are equal.

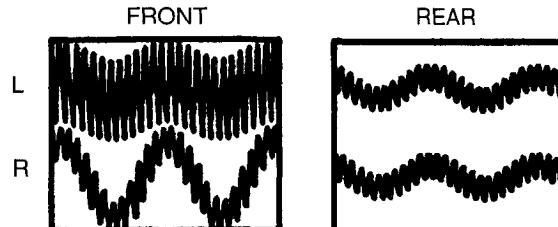


Note: The monaural check can be omitted. Amplitude levels of front R and L are not even depending on the P.W.B. Center has no output.

2.5.7 Dolby surround check

Adjustment procedure

- (1) Set to SURROUND: DOLBY-NORMAL
 - Check that the following waveforms are obtained. (Input Signal ① and ②)
 - Front: 400 Hz is superimposed on 5kHz.
 - Rear: R and L are the same signal and 400Hz is superimposed on 5kHz.

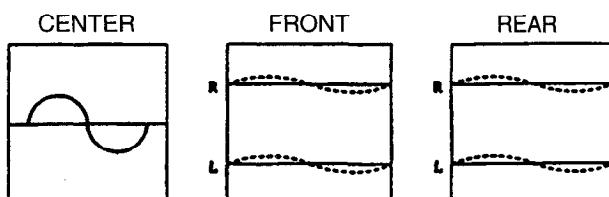


Note: MODE: PRO LOGIC (NORMAL)

2.5.8 Dolby surround/monaural check

Adjustment procedure

- (1) Set to SURROUND: DOLBY-NORMAL
 - Check that the following waveforms are obtained. (Input signal ① only).
 - Front: Almost no output from both R and L.
 - Center: Same as the audio input signal.
 - Rear: Almost no output from both R and L.



2.6 Raster Inclination adjustment (Deflection yoke)

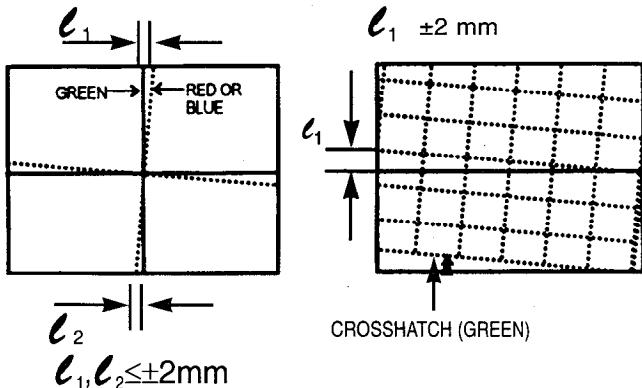
Adjustment preparation

- (1) The set can face east or west.
- (2) Input the single cross test signal.
- (3) Set video conditions to factory reset.
- (4) The lens focus adjustment should have been completed.
- (5) The electric focus should have been coarse adjusted.
- (6) The digital convergence RAM should be cleared (uncorrected state). With the TV set off, press and hold the service switch located on the Power/Deflection PWB and then press the power button.
- (7) Start adjustment 20 minutes or more after TV is turned on.

Adjustment procedure

- (1) Apply covers to the R and B lenses and project only green light.
- (2) Turn the G deflection yoke and adjust the vertical raster inclination.
- (3) Then, remove the cover of R or B lens and project red or blue light and green light together on the screen.

- (4) Turn the deflection yoke of R or B and set so that the inclination of R or B with respect to the green light is as shown below on the top and bottom sides.
- (5) After raster inclination adjustment, fixing screw of DY should be screwed with $12 \pm 2 \text{ kg-cm}$ torque.



Notes: (1) If internal cross-hatch does not appear after clearing RAM data, press service switch again, on POWER/DEFLECTION PWB.
(2) To restore old RAM data, turn TV off and on.

2.7 Raster position adjustment

Adjustment preparation

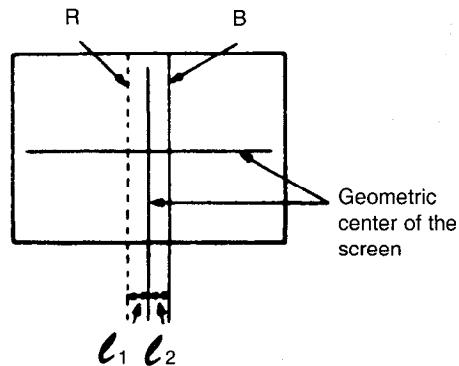
- (1) The set can face east or west.
- (2) Input the single cross test signal.
- (3) Set video conditions to factory reset.
- (4) The lens focus adjustment should have been completed.
- (5) The electric focus should have been coarse adjusted.
- (6) The digital convergence RAM should be cleared (uncorrected state). With the TV set off, press and hold the service switch located on the Power/Deflection PWB and then press the power button.
- (7) Start adjustment 20 minutes or more after TV is turned on.

Adjustment procedure

- (1) Turn the centering magnets for red, green, and blue to satisfy the condition below. The red and blue horizontal lines should match with green.

AP84

	ℓ_1 (RED)	ℓ_2 (BLUE)
60"	0	25
50"	0	30



NOTES: (1) If internal cross-hatch does not appear after clearing RAM data, press service switch again.
(2) To restore old RAM data, turn TV off and on.

2.8 Vertical size adjustment (R630)

Adjustment preparation

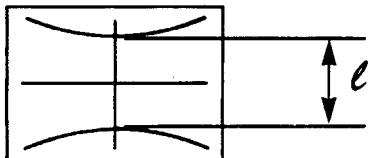
- (1) The set can face east or west.
- (2) Input the single cross test signal.
- (3) Set video conditions to factory reset.
- (4) The lens focus adjustment should have been completed.
- (5) The electric focus should have been coarse adjusted.
- (6) The digital convergence RAM should be cleared (uncorrected state). With the TV set off, press and hold the service switch located on the POWER/DEFLECTION PWB and then press the power button.
- (7) Start adjustment 20 minutes or more after TV is turned on.

Adjustment procedure

- (1) Turn only the green by applying covers to the red and blue lens or shorting the 2 pin TS connectors on the red and blue CPT P.W.B.
- (2) Count the vertical lines of the DCU cross hatch. If the number of vertical lines is 9, go to step (3). If the number of vertical lines is 8, push "HELP" key and then "5" key on the R/C so the number of vertical lines becomes "9".
- (3) Turn vertical amplitude adjustment VR (R630) so that the distance between the top and bottom horizontal lines is equal to the size shown in the table.

ℓ :	Size	AP84
60"	$800 \pm 5 \text{ mm}$	
50"	$650 \pm 5 \text{ mm}$	

Note: (1) If internal cross-hatch does not appear after clearing RAM data, press service switch again (on POWER/DEFLECTION PWB).
(2) To restore old RAM data, turn TV off and on.



2.9 Horizontal size adjustment (R603)

Adjustment preparation

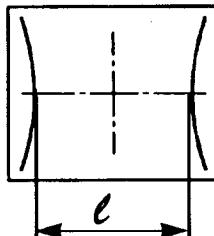
- (1) The set can face east or west.
- (2) Input the single cross test signal.
- (3) Set video conditions to factory reset.
- (4) The lens focus adjustment should have been completed.
- (5) The electric focus should have been coarse adjusted.
- (6) The digital convergence RAM should be cleared (uncorrected state). With the TV set off, press and hold the service switch located on the POWER/DEFLECTION PWB and then press the power button.
- (7) Start adjustment 20 minutes or more after TV is turned on.

Adjustment procedure

- (1) Project only green, the same as Vertical size adjustment.
- (2) Turn horizontal amplitude adjustment VR (R603) so distance between the left and right vertical lines is equal to the size shown in the table.

l :

Size	AP84
60"	1180 ± 5mm
50"	970 ± 5mm



Note: (1) If internal cross-hatch does not appear after clearing RAM data, press service switch again.
(2) To restore old RAM data, turn TV off and on.

2.10 Beam alignment

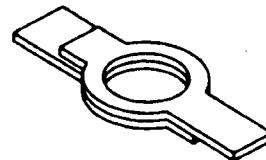
Adjustment preparation

- (1) Adjust at least 30 minutes after turning on power switch.
- (2) Raster inclination, centering, horizontal and vertical amplitudes and optical focus adjustments should be completed.
- (3) Set video conditions to factory reset.
- (4) Receive cross-hatch signals. (Use of internal cross-hatch signals allowed.)

- (5) Short-circuit all metal parts (metal fittings, centering magnet) installed on the projection tubes to GND's of the projection tubes. Since metal parts are charged with electricity, shocks may be caused if they are not short circuited.

Adjustment procedure

- (1) Green (G) tube beam alignment adjustment. Short-circuit 2P subminiature connector plug pins of Red (R) and Blue (B) on the CPT boards and project only Green (G) tube.
- (2) Put Green (G) tube beam alignment magnet to the cancel state as shown below.



- (3) Turn the Green (G) static focus (Focus Pack) counterclockwise all the way and make sure of position of cross-hatch center on screen. (Halo state.)
- (4) Turn the Green (G) static focus (Focus Pack) clockwise all the way. (Blooming state.)
- (5) Turn two magnets forming alignment magnet in any desired direction and move cross-hatch center to position found in (3).
- (6) If image position does not shift when Green (G) static focus (Focus Pack) is turned, Green (G) beam alignment has been completed.
- (7) If image position shifts when Green (G) static focus (Focus Pack) is turned, repeat (2)-(6).
- (8) Conduct beam alignment for red (R) focus: Focus Pack UFPK Blue (B) focus: Focus Pack UFPK.
- (9) Upon completion of adjustment, fix beam alignment magnets with white paint.

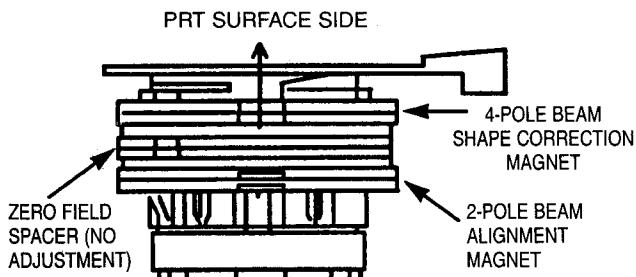
2.11 Beam shape adjustment

Adjustment preparation

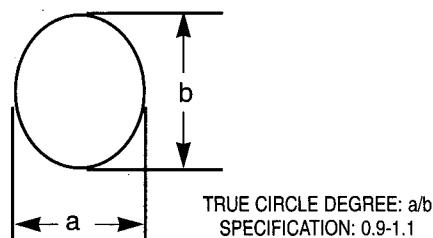
- (1) The beam alignment should have been completed.
- (2) The raster inclination, centering, horizontal/vertical amplitude and optical focus adjustments should have been completed.
- (3) Set video conditions to factory reset.
- (4) Input the dot signal.

Adjustment procedure

- (1) Green PRT beam shape adjustment. Short-circuit 2P sub-mini connectors on Red and Blue CPT P.W.B.s to project only the Green beam.
- (2) Turn the green static focus fully clockwise. (Blooming.)
- (3) Make the dot at the screen center a true circle using the 4-pole magnet as shown below.
- (4) Also adjust the Red and Blue PRT beam shapes according to the steps (1) to (3).
- (5) After the adjustment has been completed, return R, G and B static VRs to the just focus point.



TRUE CIRCLE SPECIFICATION



2.12 Static focus adjustment

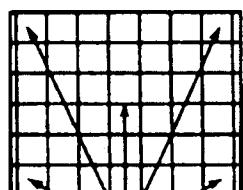
Adjustment preparation

- (1) The raster inclination, centering, horizontal/vertical amplitude and optical/electrical focus beam alignment should have been adjusted.
- (2) The static convergence data should be cleared.
- (3) Set video conditions to factory reset.
- (4) Receive the cross-hatch pattern signal.
- (5) Apply covers to the lenses of colors other than the color to be adjusted and project a single color.

Adjustment procedure

- (1) Red (R), Green (G) and Blue (B) static focus adjustment. Vary the static focus VR (focus pack UFPK) and make the center of the cross-hatch pattern clearest.
- (2) Observe the corners of the picture and check that the focus does not get conspicuously worse.

OBSERVING POINTS OF THE CORNER OF THE PICTURE



OBSERVING POINTS

2.13 Blue defocus adjustment

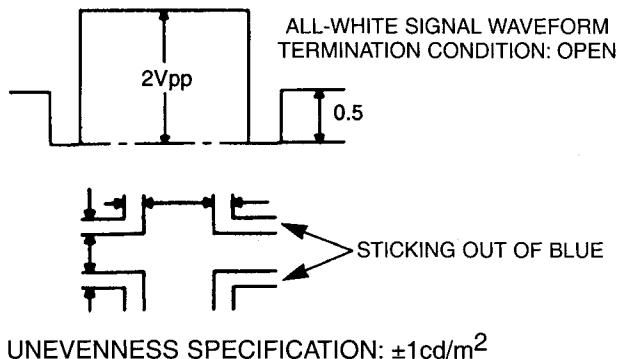
Adjustment Preparation

- (1) Optical and electrical focus adjustment should have been completed.
- (2) The convergence adjustment should have been completed.
- (3) Set Video conditions to factory reset.

Adjustment procedure

- (1) Input an all-white signal shown below to VIDEO input.
- (2) Short-circuit 2P sub-mini connectors on the red and green CPT P.W.Bs. to display only the blue beam.

- (3) Turn the B Focus VR (Focus Pack) fully clockwise.
- (4) Measure the brightness at the center of the screen and turn the B FOCUS VR (Focus Pack) counterclockwise to adjust the brightness of blue.
- (5) After the adjustment is completed, if blue exceeds the specification, turn and adjust focus so that the sticking out part of blue satisfies the specification.



UNEVENNESS SPECIFICATION: $\pm 1\text{cd}/\text{m}^2$

Defocus sticking out specification

Screen Size	Blue sticking out
50"	1.0mm
60"	1.0mm

Condition: User controls are set to the initial set positions (for shipment) Measuring point Screen center.

Cautions: Correct the brightness gauge and amplitude of the all-white signal periodically. The aperture angle of the brightness gauge is 1° .

Use a cross-hatch pattern to check.

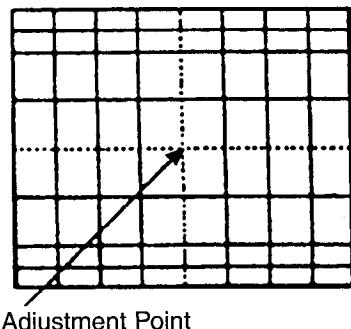
2.14 Digital convergence adjustment

Note: If replacing a PRT, DY, etc. perform auto-digital convergence first. (Press front panel MAGIC FOCUS switch when in normal customer mode). This can eliminate the need for a complete digital convergence alignment.

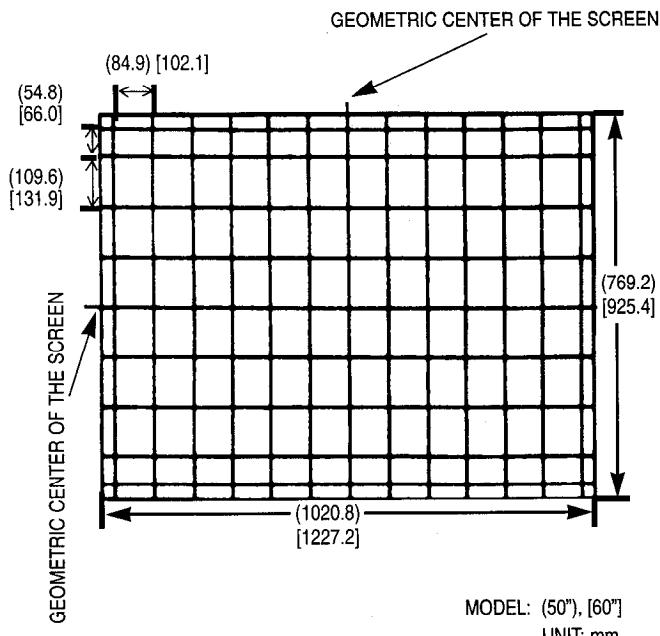
Adjustment preparation

- (1) Receive an RF or video signal.
- (2) Set controls to factory preset.
- (3) Install jig screen on the set.
- (4) Note the center of the video pattern displayed. This is necessary to match dotted lines (adjustment point viewed) and actual point that is adjusted and displayed by the video signal.

- (5) Press the service only switch (on POWER/DEFLECTION PWB). The pattern displayed is now the digital convergence mode.
- (6) When performing a complete digital convergence adjustment CLEAR DATA in RAM. See 2.6. (1) - (7).



JIG SCREEN SPECIFICATION



Note: If only minor adjustments to convergence are needed, the jig screen is not necessary. Use digital data stored in memory and one color as a reference (red, green, or blue). DO NOT CLEAR DATA and WRITE to ROM memory.

2.14.1 Phase adjustment (service mode)

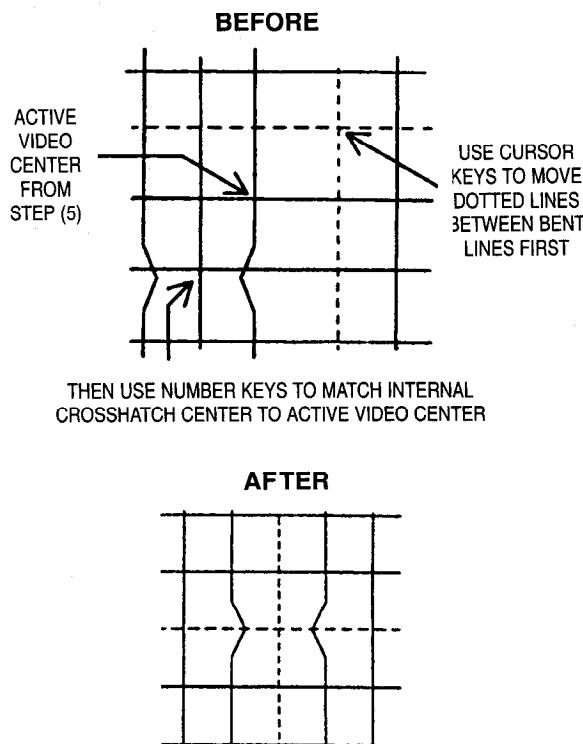
Adjustment preparation

- (1) PHASE adjustment - This is to match the digital convergence cursor position to the video image displayed, and to match the digital convergence cursor position (dotted lines) to digital convergence data position (bent lines).

Adjustment procedure

- (1) Press the HELP button on the remote to select phase adjustment. (Only Green displayed).

- (2) Identify the bent lines and use the cursor buttons to move the dotted lines in between as shown.
- (3) Press HELP to exit PHASE mode.
- (4) Press ENTER 5 times to display external signal.
- (5) Identify center of active video, then press ENTER 5 times to return to internal cross-hatch.
- (6) Press HELP (phase adj.), and use 2, 4, 5 and 6 to position internal cross-hatch center on active video center identified in step (5).
- (7) Press HELP to exit PHASE mode.



2.14.2 Raster position adjustment

Adjustment preparation

- (1) Position adjustment - This will move an entire color. Use this adjustment to match colors at the center of the screen. (Active video center from external signal and physical screen center should now match from phase adj. 2.15.1.).
- (2) Use the buttons below to switch color to adjust.
"RECALL" - Green
"0" - Red
"INPUT" - Blue

Adjustment procedure

- (1) Press the FRZ button. Extra horizontal lines appear to confirm raster position mode.
- (2) Use the cursor buttons to adjust position.
- (3) Press FRZ again to exit raster position mode.

- Notes:**
- (1) Other functions cannot be accessed when in raster position adjustment mode. Press FRZ and confirm extra horizontal lines disappear to exit raster position mode.
 - (2) Press MENU to switch between all colors displayed or adjustment color and Green only.

2.14.3 Convergence point adjustment

Adjustment preparation

- (1) Select color to adjust.
"RECALL" - Green
"0" - Red
"INPUT" - Blue
- (2) Use 4, 6, 2, and 5 to move the cursor position (dotted lines).
- (3) Use cursor buttons to move the convergence point.
- (4) Three adjustment modes are available:
 1. (3x3) Press "RECALL" 5 times
 2. (7x5) Press "0" 5 times
 3. (13x9) Press "INPUT" 5 times

For touch-up, only the (13x9) mode is necessary. This will adjust every cross-hatch intersection point on the screen.

For complete adjustment, start with (3x3) mode. This will adjust center point and eight edge points only, but will greatly reduce adjustment time. Then use (7x5) mode, and finally (13x9) mode to finish convergence.

If "S" distortion appears between cross-hatch lines repeat (7x5) mode to change calculation process while adjusting to remove distortion, then return to (13x9) mode to finish touch-up convergence.

Adjustment procedure

- (1) Start adjustment at the center of the screen.
- (2) Continue adjustment at next closest position.
- (3) Adjust center area first, ending with edge sections.
- (4) Press INFO button to perform interpolation operation. This process will take about 15 seconds and no picture will be seen at this time.
- (5) After interpolation, check convergence again and repeat (1)-(5) if necessary.
- (6) When convergence is acceptable, press MOVE to write data to ROM memory. ROM WRITE? is displayed to alarm system that ROM will be overwritten with new data. Press the MOVE button again to write displayed data to ROM.
- (7) DATA WRITE TO ROM will take approximately 20 seconds and no picture will be displayed.
- (8) Green dots will be displayed when operation is complete.
- (9) Press MUTE to return to convergence pattern, then confirm again convergence is acceptable.
- (10) Press MOVE (ROM WRITE) mode, then press PIP CH to initialize sensor data positions.

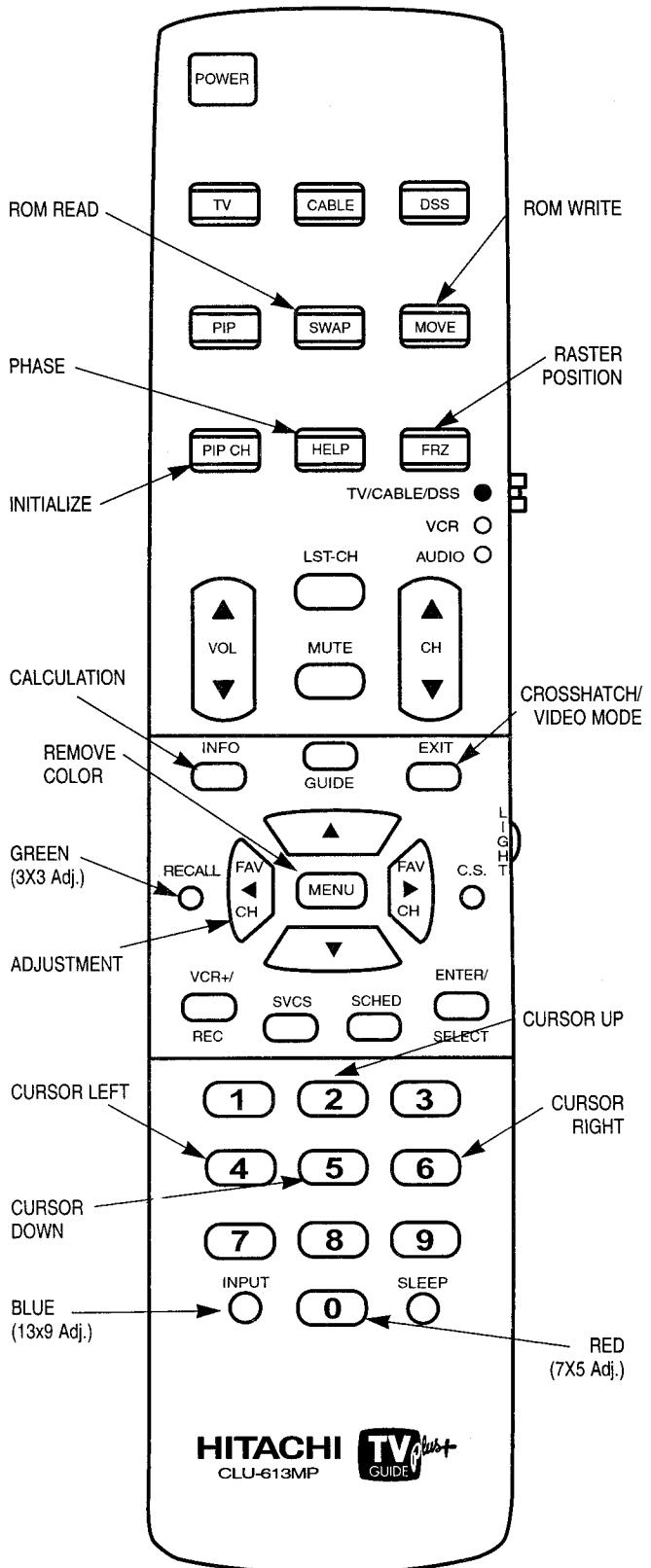
Notes:

- (1) Display only green for easier adjustment and match to jig screen. Press "MENU", THEN PRESS "RECALL".
- (2) Perform interpolation and data write to ROM after green adjustment. Once green has been confirmed to match jig screen, the jig screen can be removed. Do not readjust the green color after jig screen has been removed. This is now your reference color.
- (3) Display green and red only and match red to green.
- (4) Display all colors and match blue to green and red. Touch-up red color if necessary.

(5) Existing DATA in ROM can be read by pressing the SWAP button 2 times. This data can be used after replacing a component (CRT, DY, etc.) Where complete convergence adjustment is not necessary be careful not to overwrite this data.

DO NOT write cleared RAM data into ROM or a complete convergence adjustment will be necessary. Remember to try MAGIC FOCUS before starting convergence adjustment to minimize adjustment time.

2.14.4 Digital Convergence Remote Control



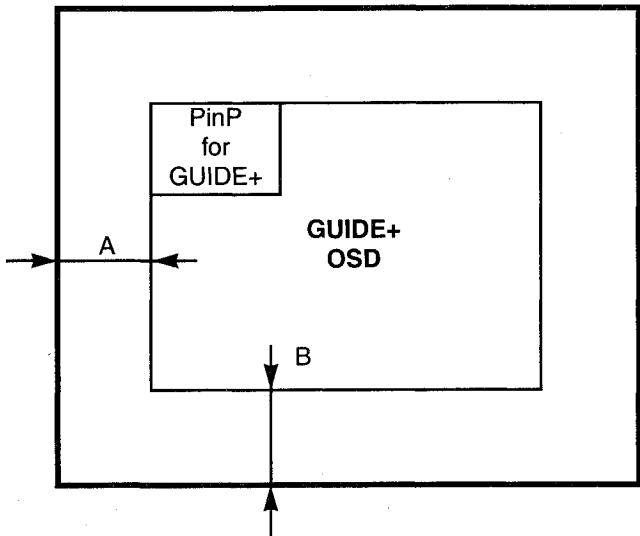
2.15 GUIDE+ OSD Adjustment

Adjustment preparation

- (1) Receive any signal in ANT A.
- (2) Set picture controls to shipping conditions.
- (3) Convergence Adjustment must be completed.

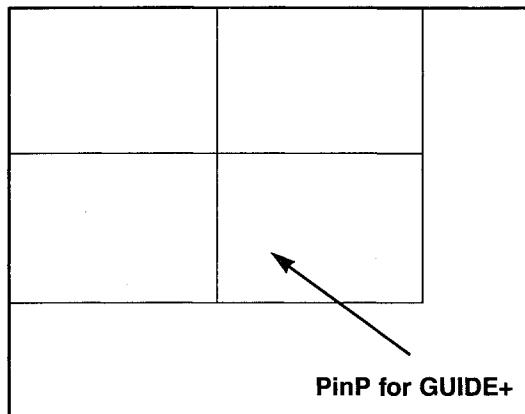
Adjustment procedure

- (1) Go to VIDEO CHROMA ADJUST mode by pressing INPUT and Power button on Control Panel at the same time.
- (2) Go to GUIDE+ mode using $\blacktriangle, \blacktriangledown$ buttons on R/C.
- (3) By using VOL $\blacktriangle, \blacktriangledown$ buttons move the GUIDE+ OSD to the left or right and adjust so that OSD is in the A position according to next table for each PTV size.
- (4) By using CH $\blacktriangle, \blacktriangledown$ buttons move the GUIDE+ OSD up or down and adjust so the OSD is in the B position according to next table for each PTV size.



	50"	60"
A	45+/-5mm	45+/-5mm
B	45+/-5mm	50+/-5mm

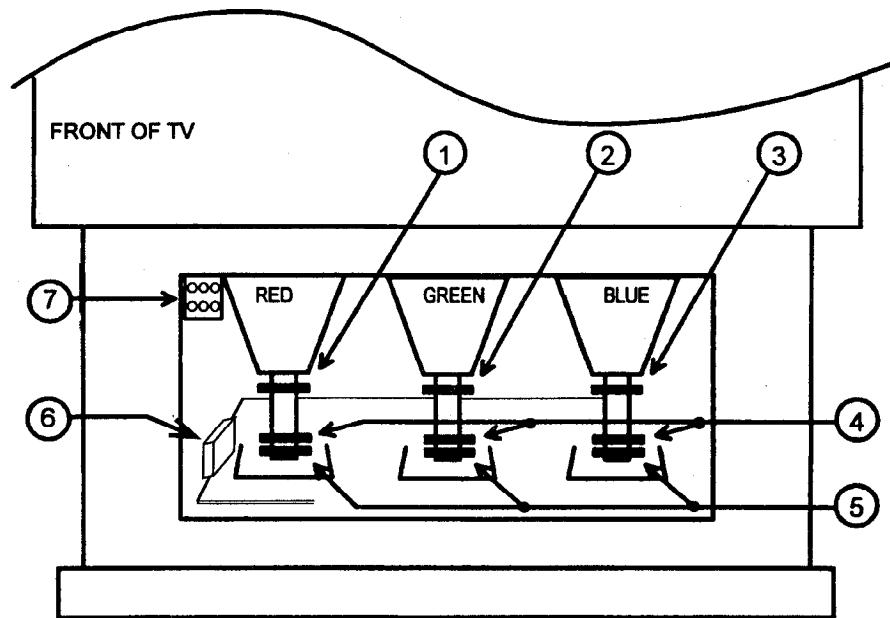
- (5) When GUIDE+ OSD is adjusted then adjust the PinP inside the OSD box by using the CURSOR buttons on the R/C to move PinP up or down and left or right so the PinP is inside the OSD box position according to next reference.



NOTE: Use a Crosshatch signal or Single Cross signal to make this adjustment and be sure the pattern signal used is equal for upper, bottom, left and right sides of PinP for GUIDE+. (Center as reference.)

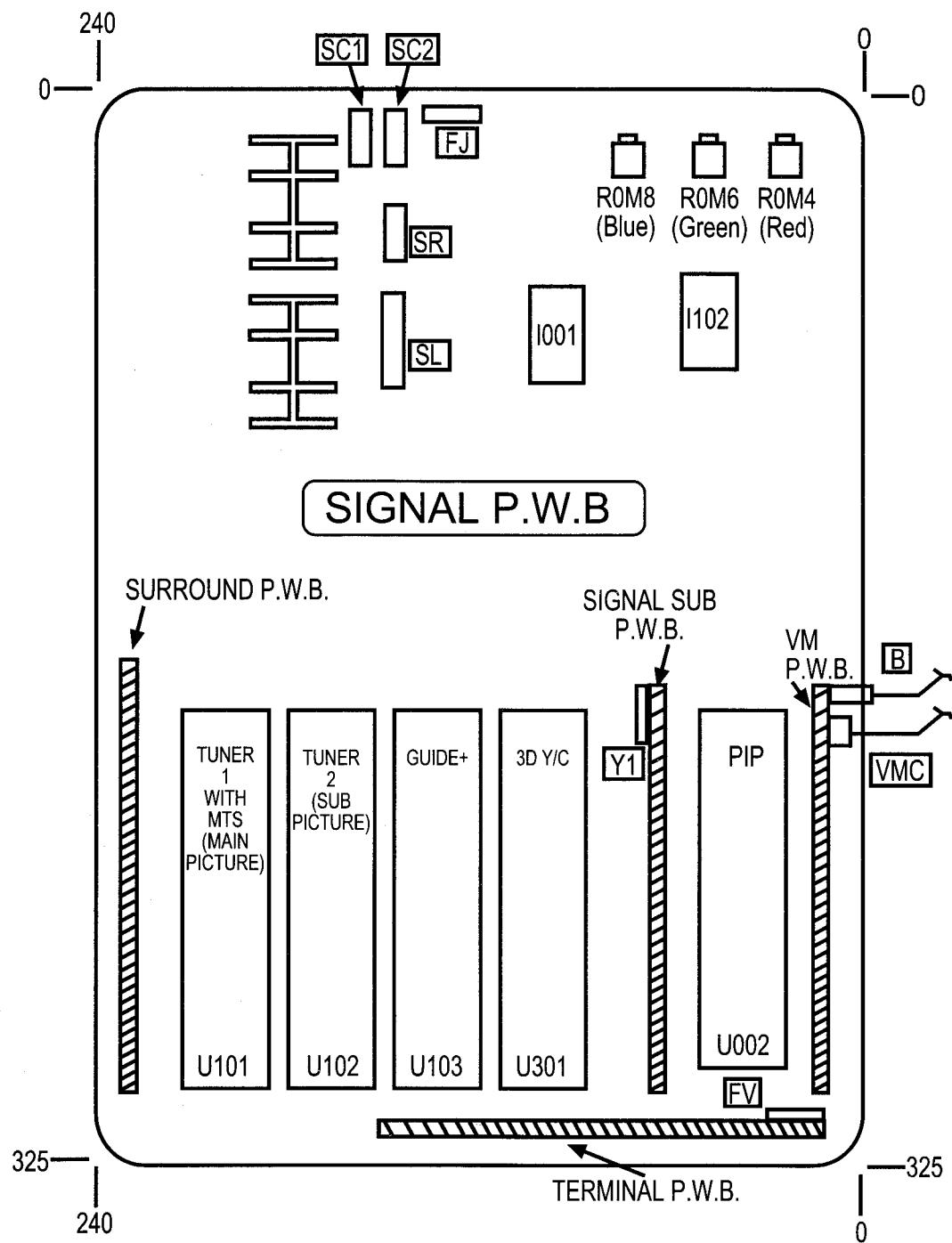
3. ADJUSTMENT POINT

3.1 CRT, cabinet locations

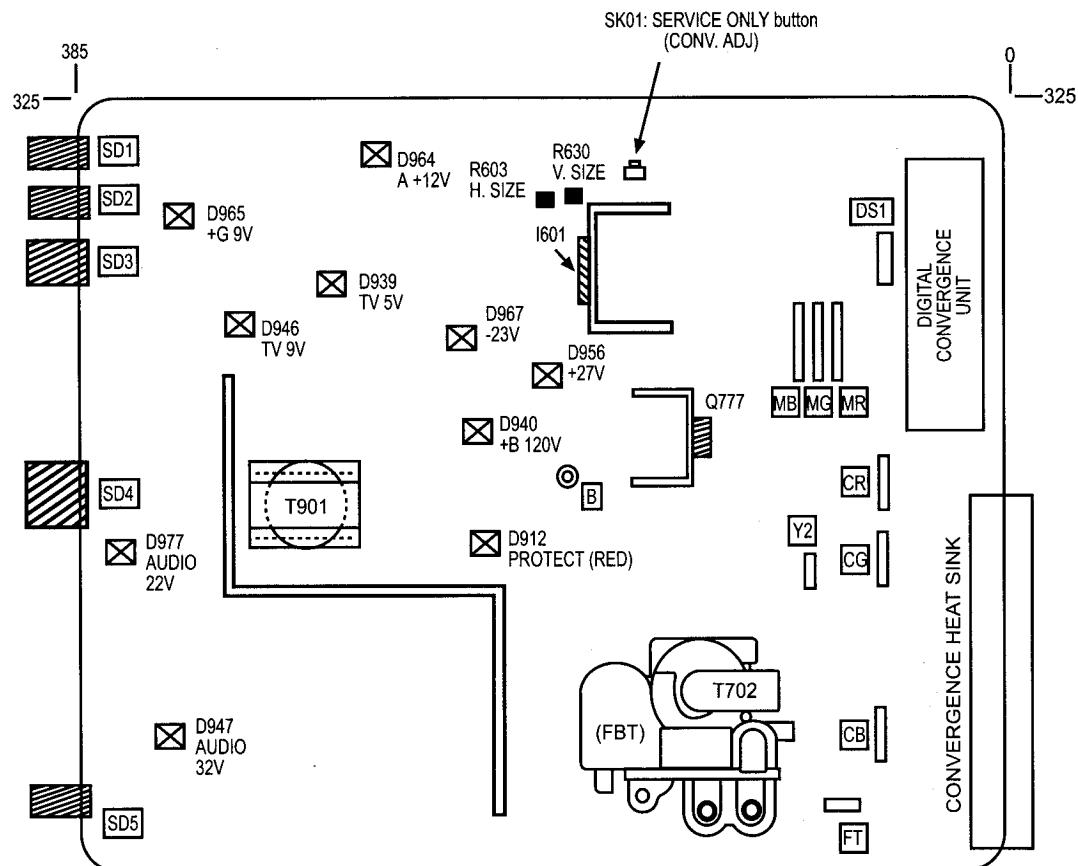


1. CENTERING MAGNET FOR RED PRT
2. CENTERING MAGNET FOR GREEN PRT
3. CENTERING MAGNET FOR BLUE PRT
4. 4-POLE MAGNET FOR BEAM FORM ADJUSTMENT
5. BEAM ALIGNMENT MAGNET
6. DIGITAL CONVERGENCE MODULE (On Power/Deflection Board)
7. FOCUS PACK (Top Adjustments for Screen, Bottom for Focus)

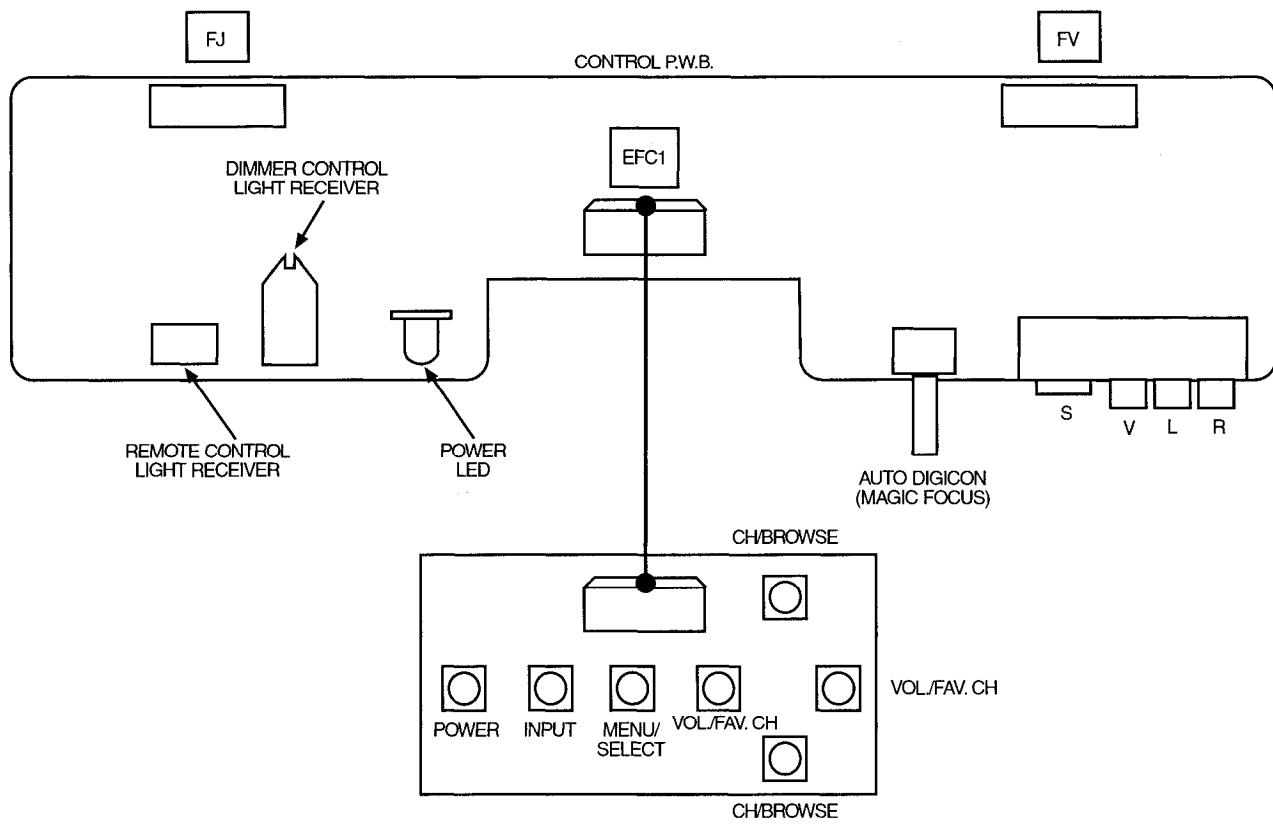
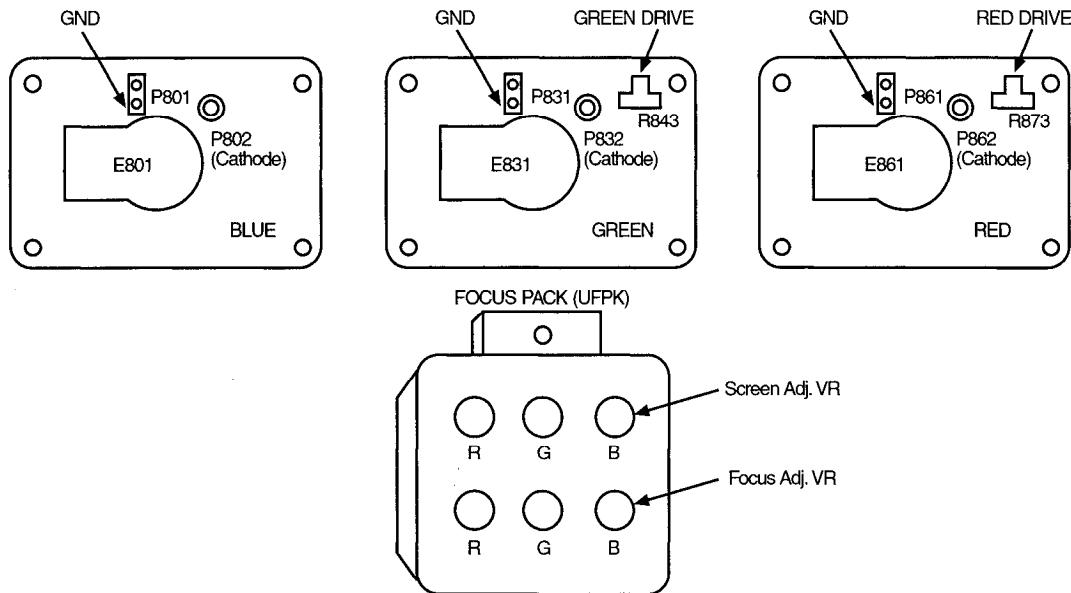
**3.2 MAIN CHASSIS
(Signal P.W.B.)**



3.3 MAIN CHASSIS
(Power/Deflection P.W.B.)

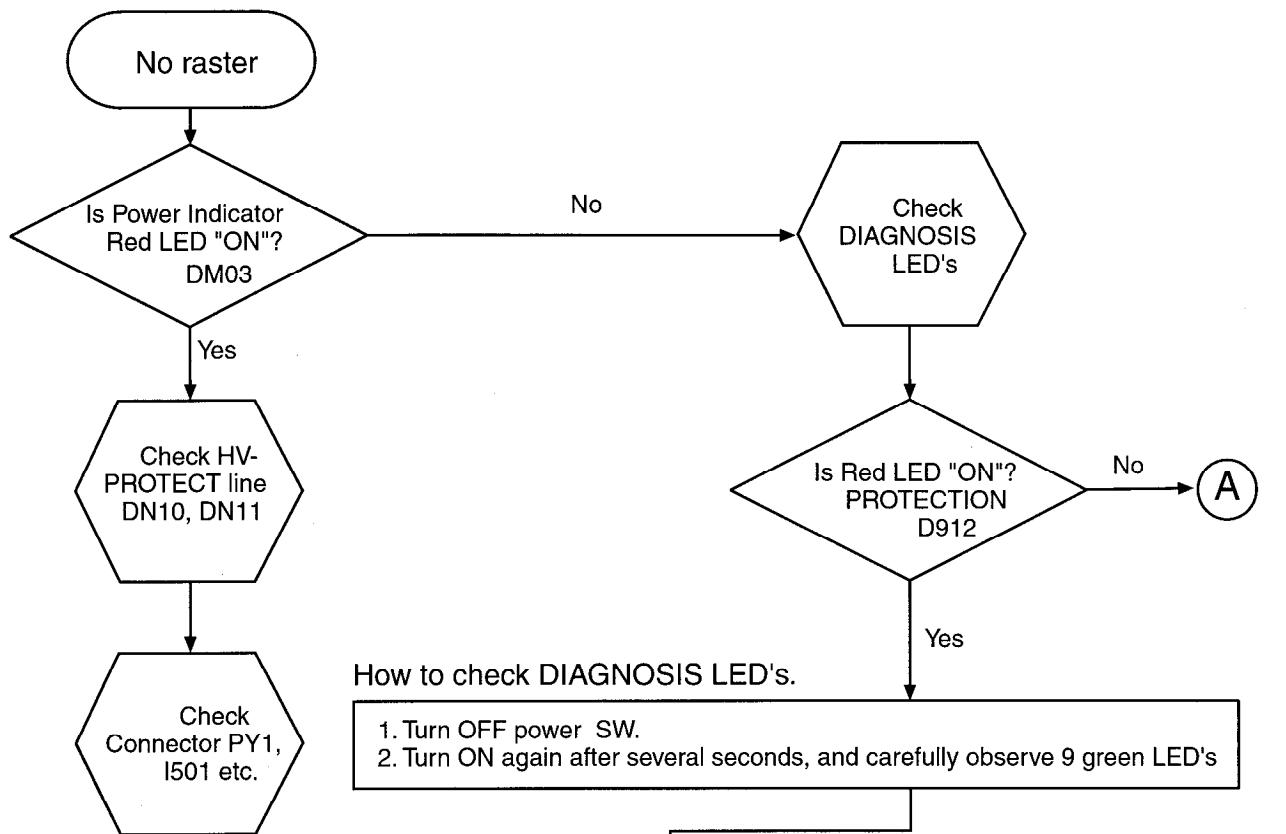


3.4 CPT (R) (G) (B), Focus Pack, Control P.W.B.



TROUBLESHOOTING

1. No Raster and No Power (REPAIR METHOD)



How to check DIAGNOSIS LED's.

1. Turn OFF power SW.
2. Turn ON again after several seconds, and carefully observe 9 green LED's

Did 9 green LED's turn OFF same time?

Yes

No

B

Find which LED's is going to dark or OFF.
(Other LED's are going to OFF little bit later same time.)

D964 (A12V)
Check
A12V line
I910, Q926,
I001, I102,
IY01, IY02,
HM01 etc.

D940(+B)
Check
+B 120V line
E994, Q777,
T702, C701
etc.

D965 (G+9V)
Check
G+9V line
I911, D927
L908, L923

D939 (TV5V)
Check
TV5V line
I913, Q905
D938, L911
L114, D116
etc.

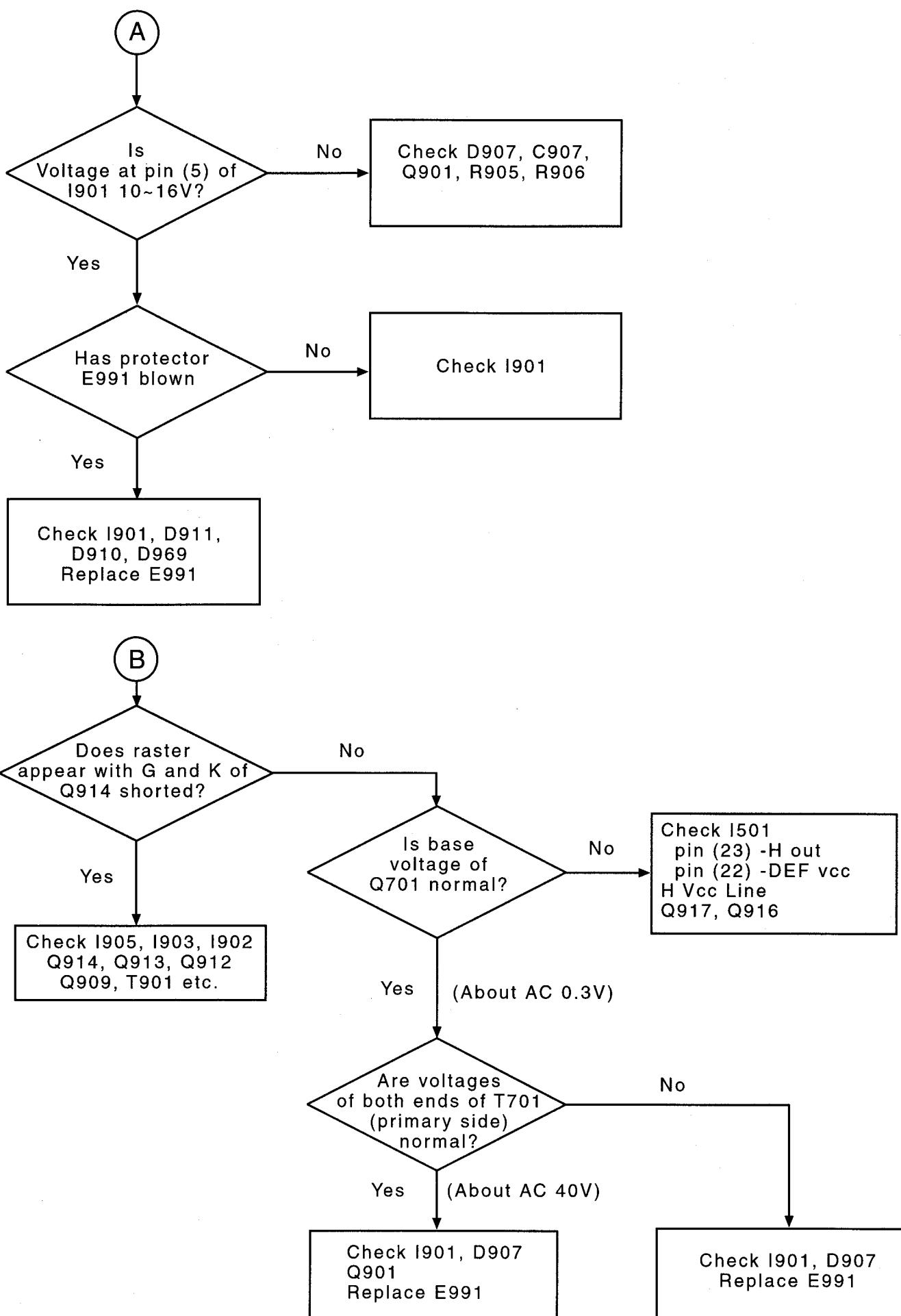
D946 (TV9V)
Check
TV9V line
I912, Q905
D928, L909
L922 etc.

D966 (+27V)
Check
+27V line
E995, Q902
IK04, IK05
etc.

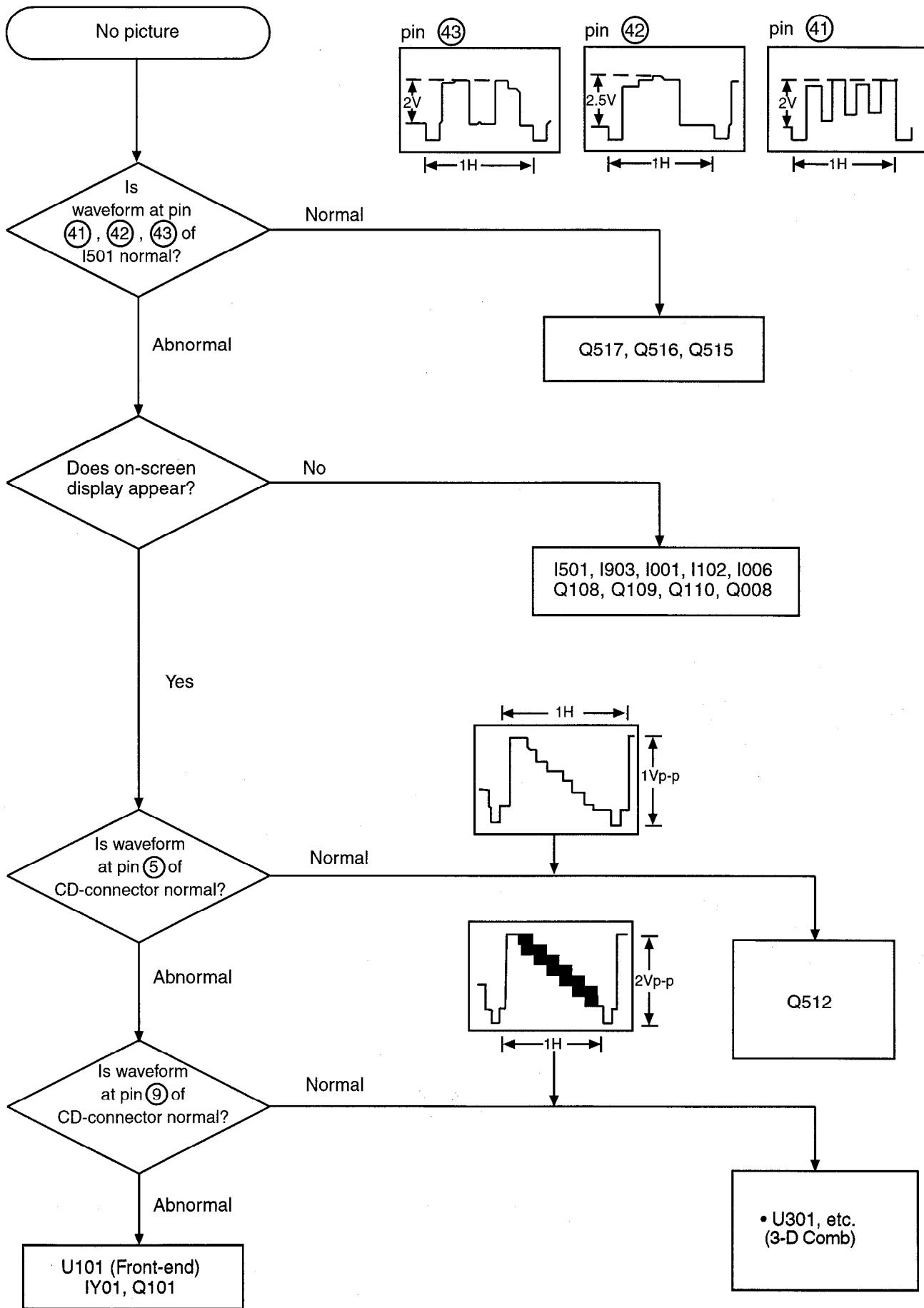
D967 (-23V)
Check
-23V line
E996, I909
IK04, IK05
etc.

D947 (32V)
Check
Audio32V
line
E992, E997
I401 etc.

D977 (22V)
Check
Audio22V
line
E993, E998
I402, IS11
etc.

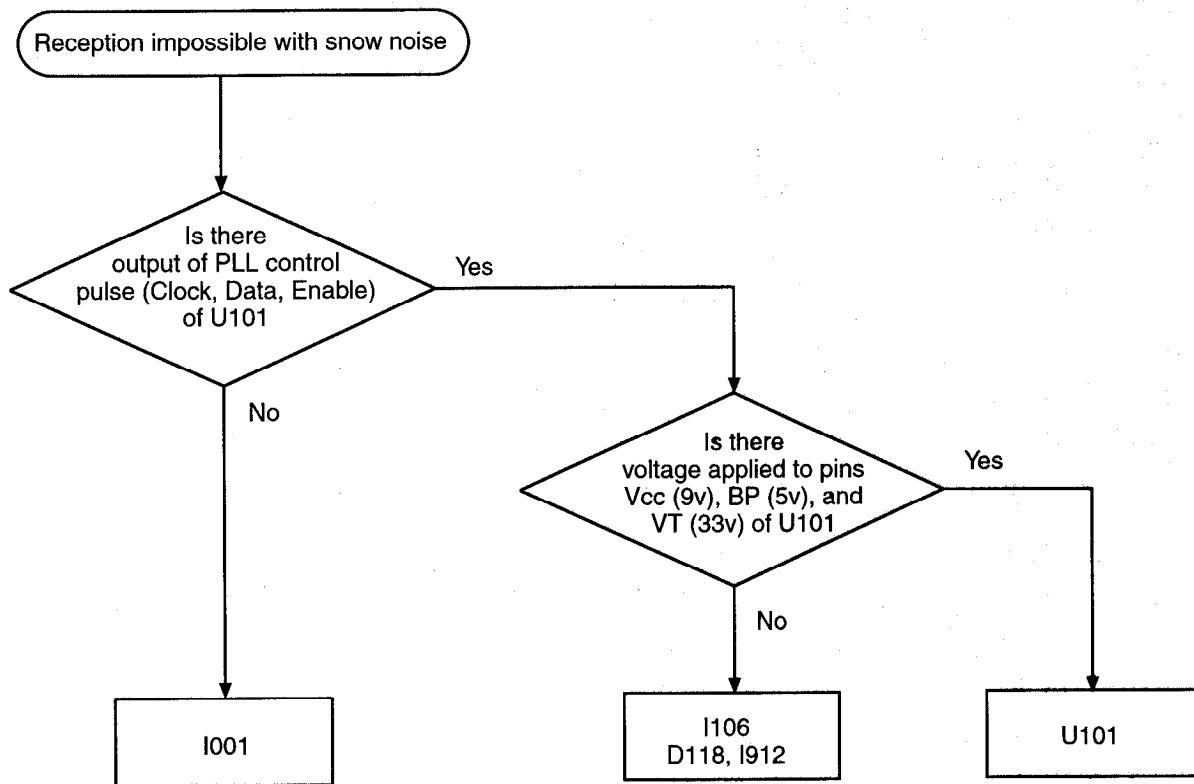


2. No Picture

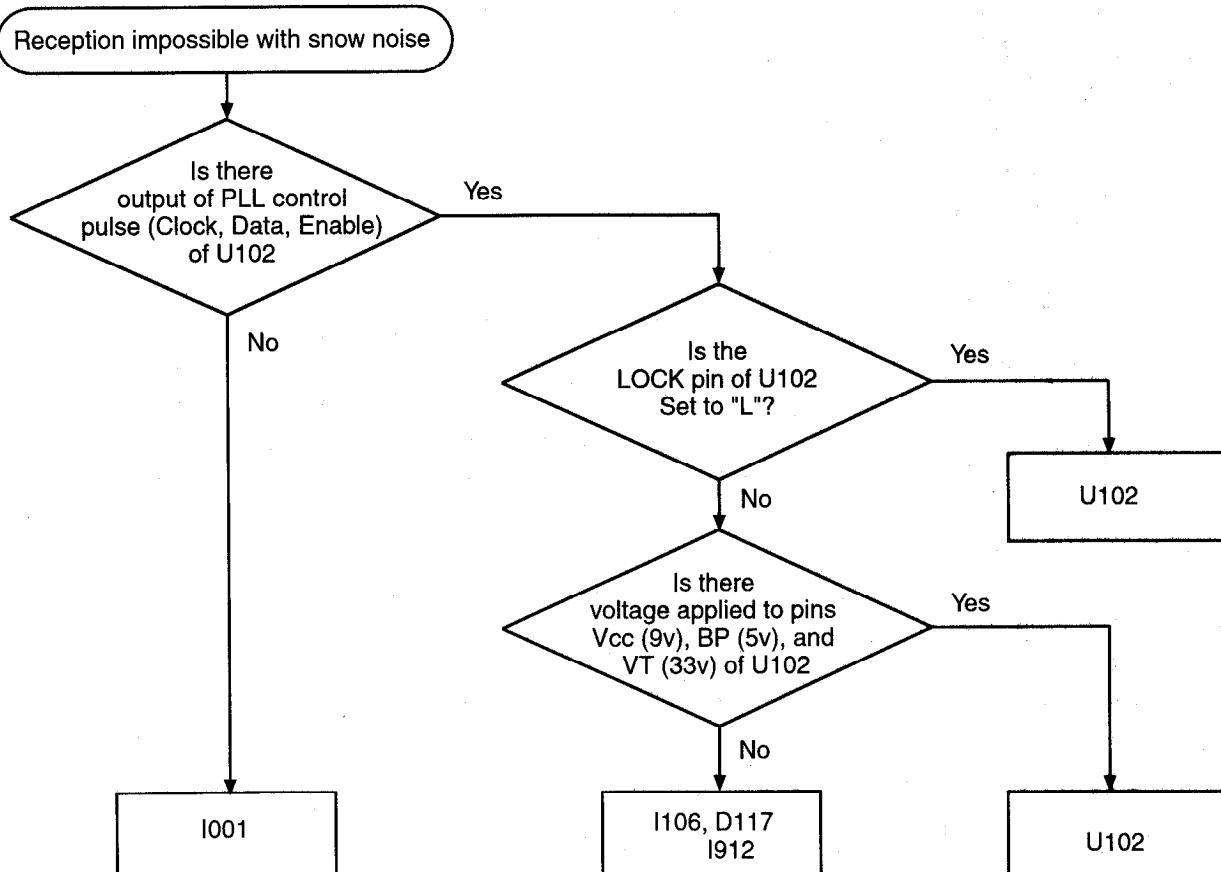


3. Reception Impossible with Snow Noise

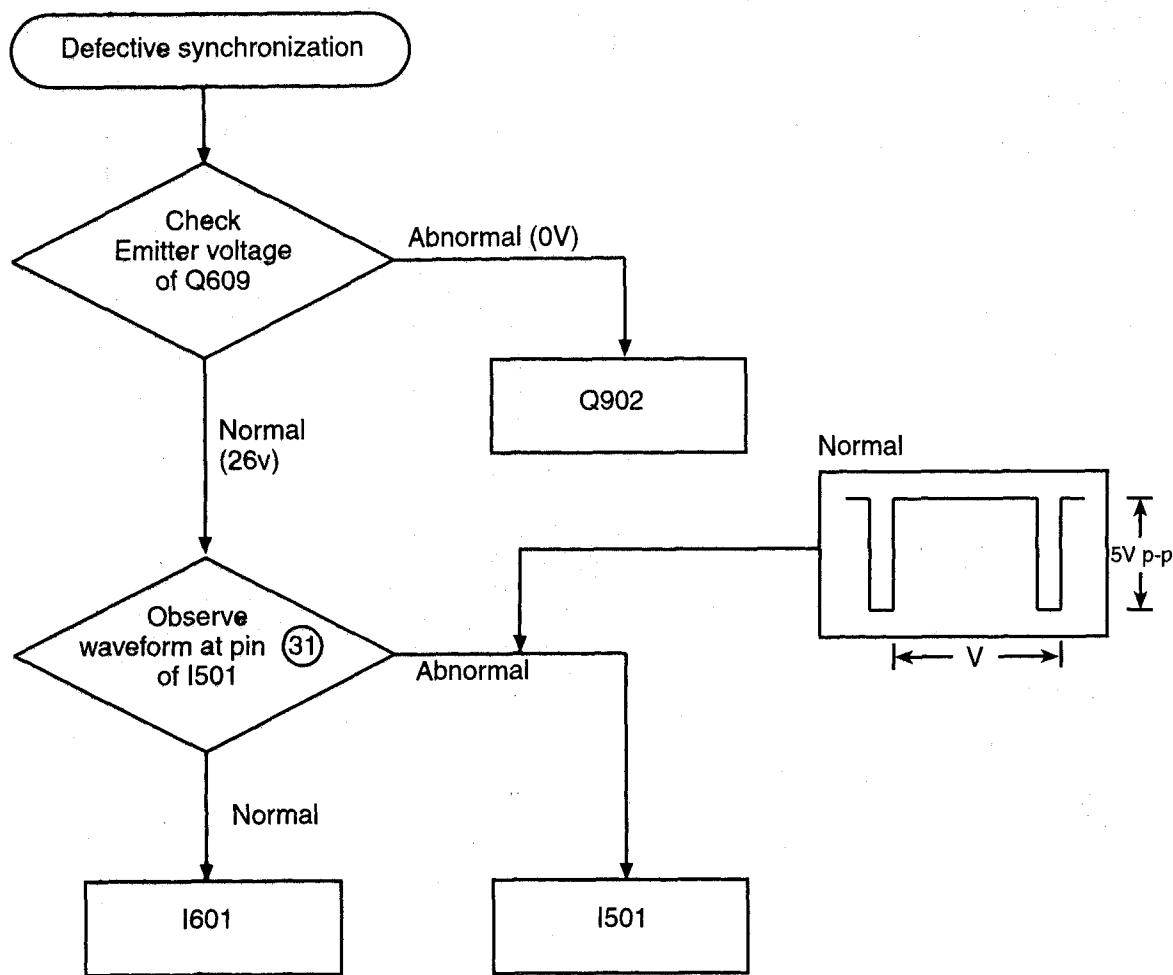
Main Picture



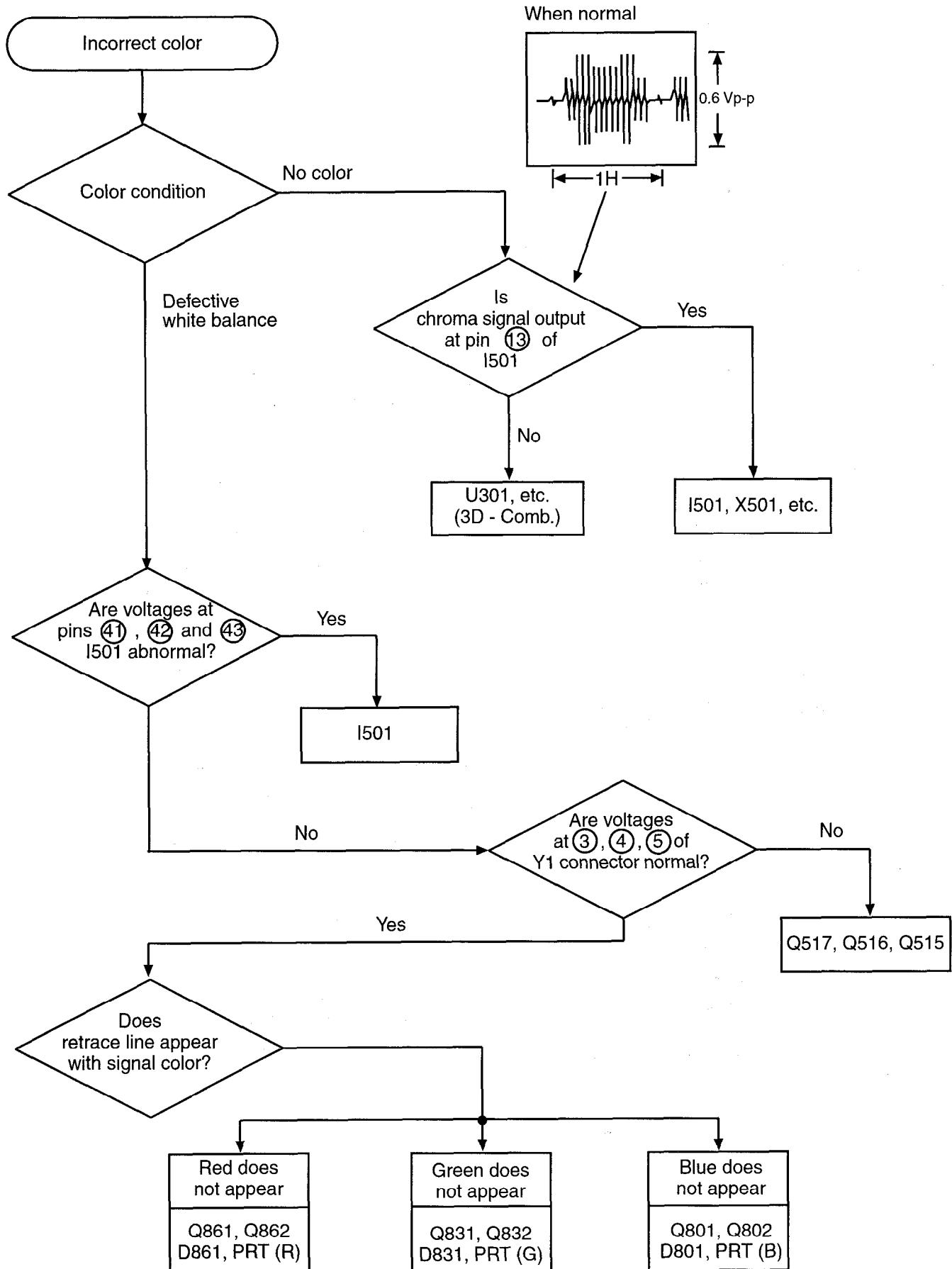
Sub Picture



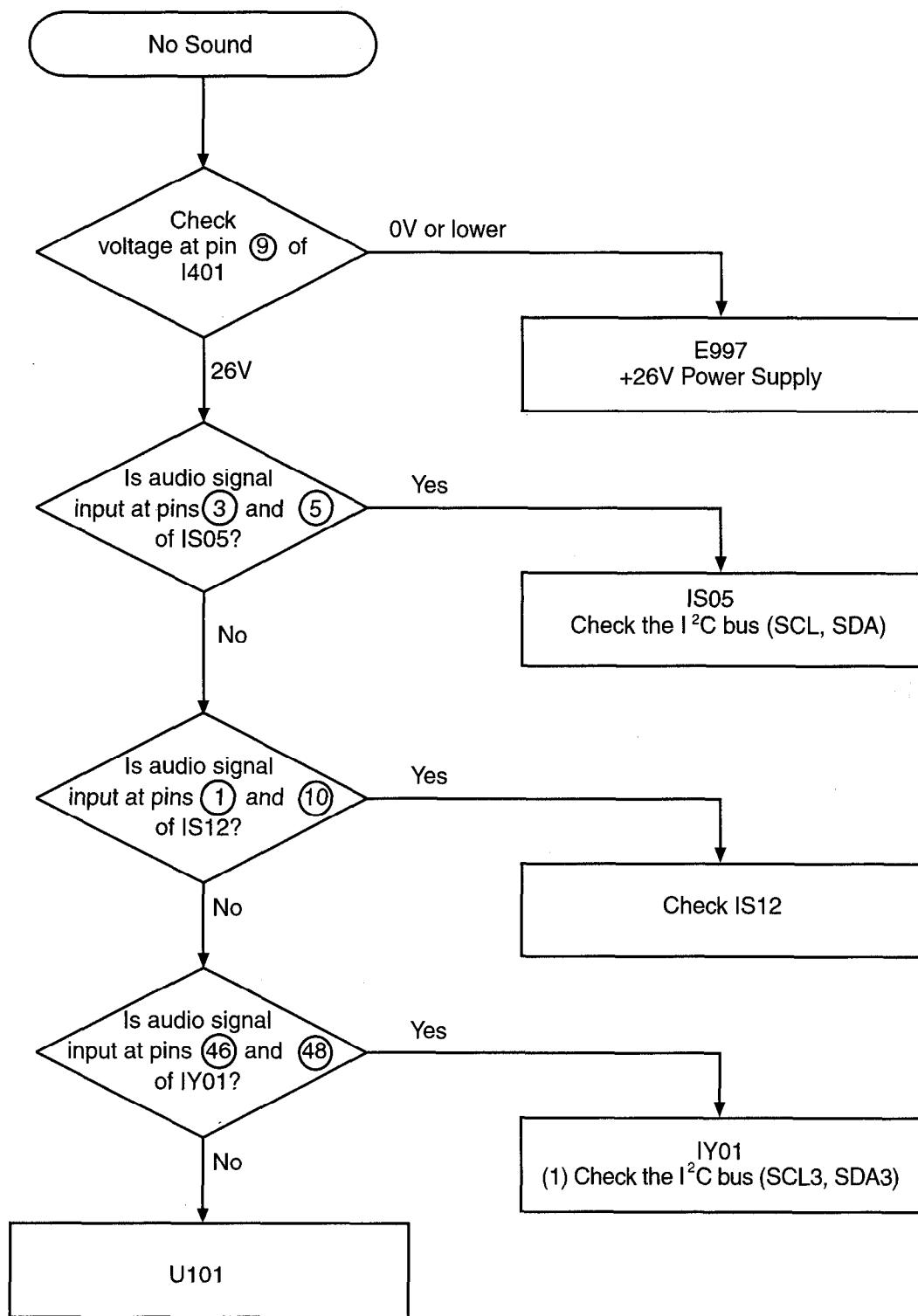
4. Defective Synchronization



5. Incorrect Color



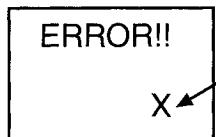
6. No Sound



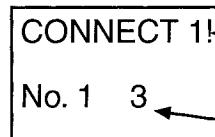
7. Convergence Errors.

If an error message or code appears while performing MAGIC FOCUS or Initialize (MOVE, PIP CH in service mode) follow this confirmation and repair method.

1. Turn on power and receive any signal.
2. Press service switch on Power/Deflection board.
3. Press "SWAP" then "PIP CH" on remote control.
4. Error code will be displayed in bottom right corner of screen. If there is no error, and "INITIAL OK" message will appear on screen.



Error code



Error message

No. 1 3

Sensor position

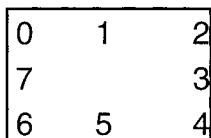
5. Follow repair table for errors.

DCU REPAIR TABLE

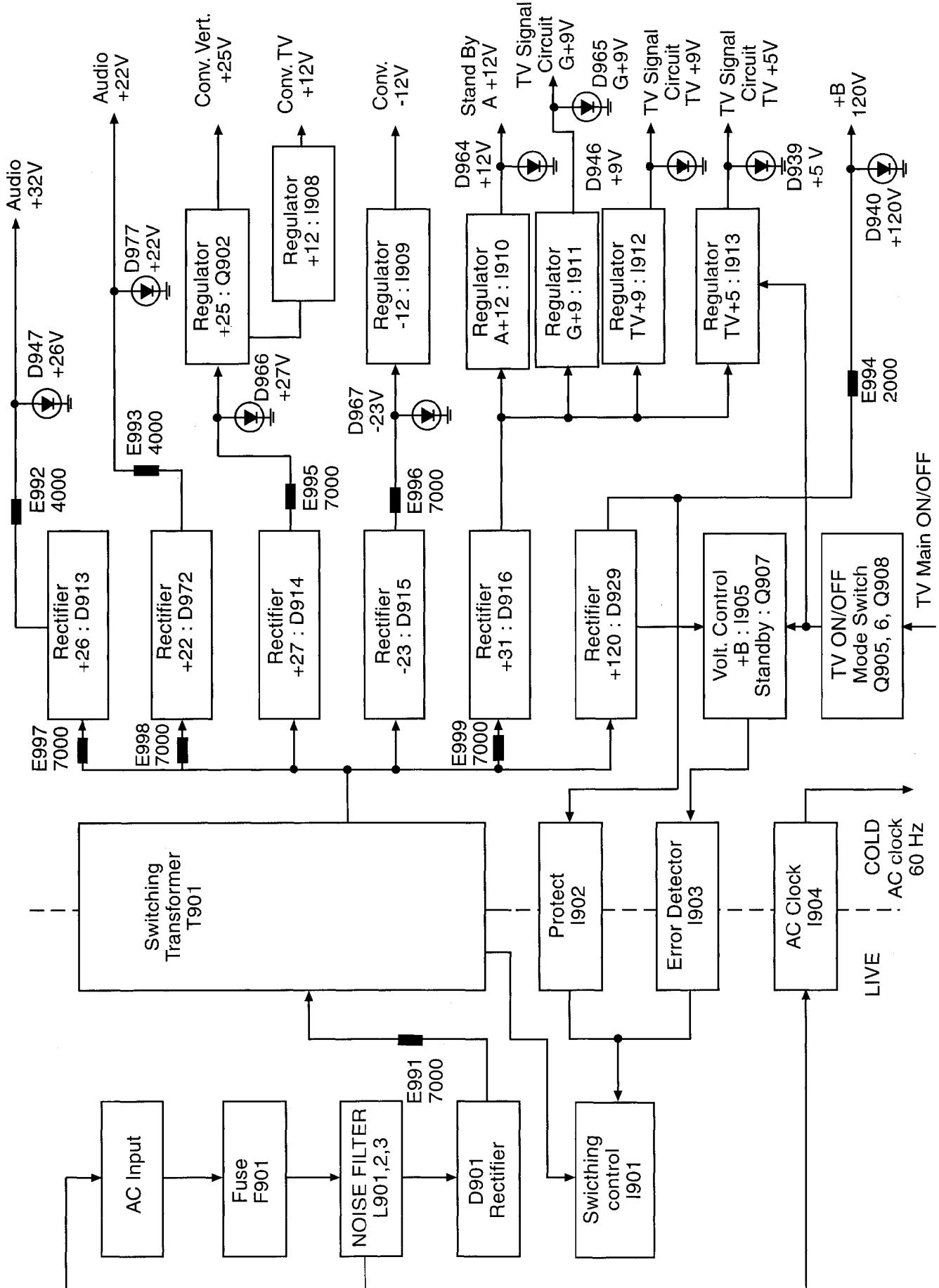
Error Code	Error Message	Countermeasure	Application	
			Initialize	Magic Focus
1	VF Error	Replace DCU	X	X
2 *2	Connect 1	1. Darken Outside light 2. Placing of sensor 3. Is pattern hitting sensor 4. Check connection and solder bridge of sensor 5. Replace sensor 6. Replace sensor P.W.B. 7. Sensor Connector check 8. Replace DCU 9. Adjustment check (H/V size, centering)	X	--
3*2	A/D Level	Same as Error Code 2	X	X
4	Over Flow	1. Check the placement of sensor 2. Adjustment check (H/V size, centering) 3. Conv. amp. gain check *1 (check resistor values only)	X	X
5	Convergence	Same as Error Code 4	X	X
7	Operation	Same as Error Code 4	--	X
9	Connect 2	Same as Error Code 2	X	X
10	Noise	Input strong field strength signal Check the wiring of connector between sensor and DCU	X	X
11	Sync	Input strong field strength signal Input standard signal NTSC	X	X

*1 -- RK 42, 46, 50, 54, 58, 62 check these resistors.

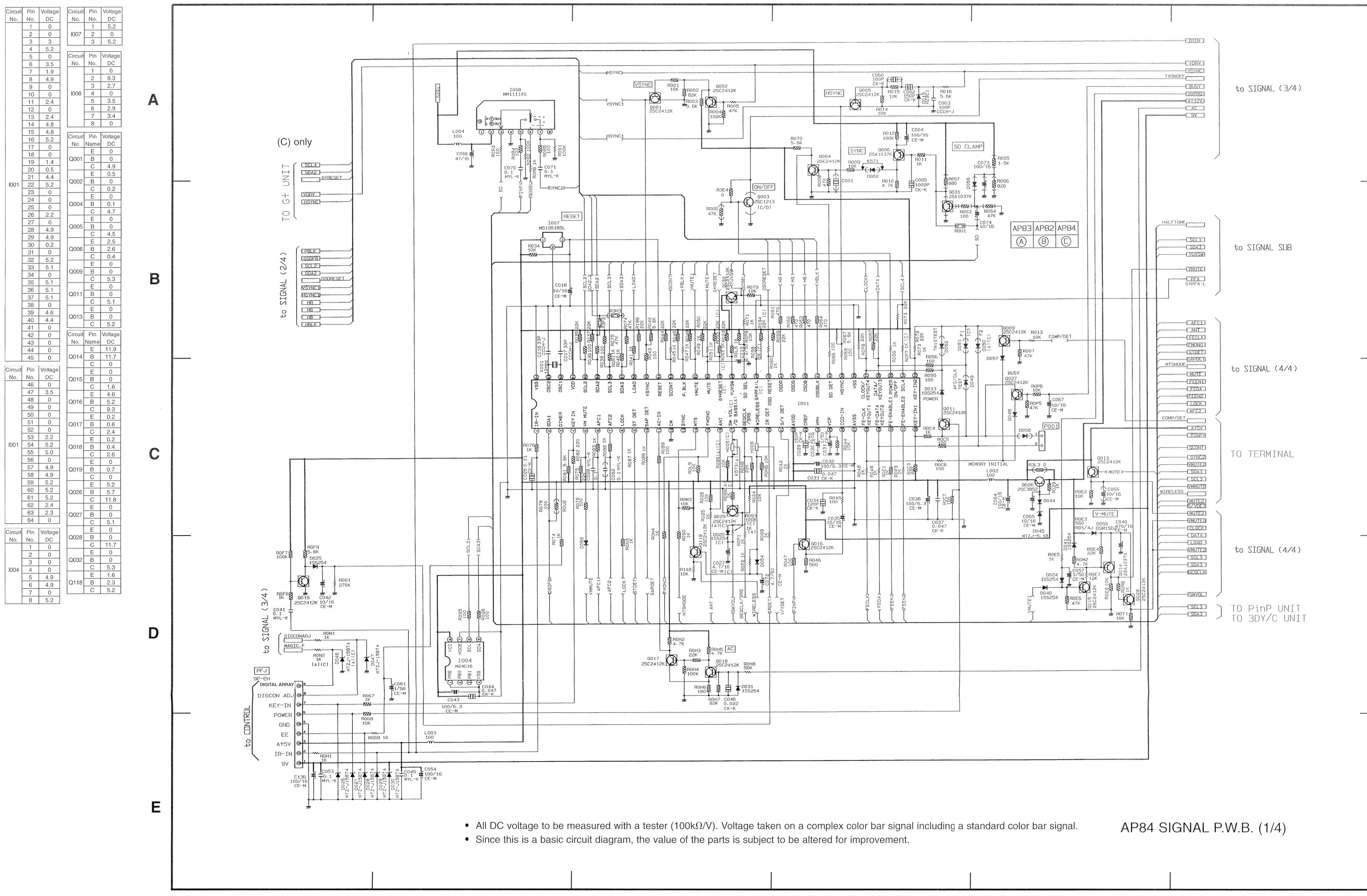
*2 Sensor Position



(View from front side)

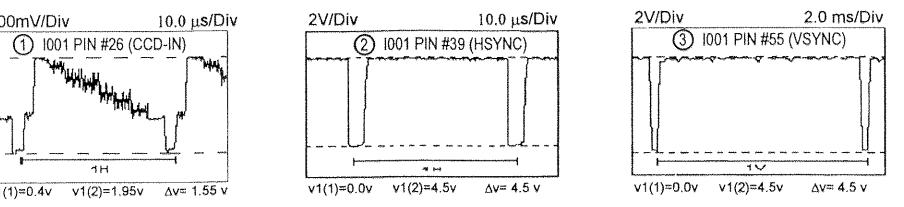


PROTECTION CIRCUIT BLOCK DIAGRAM



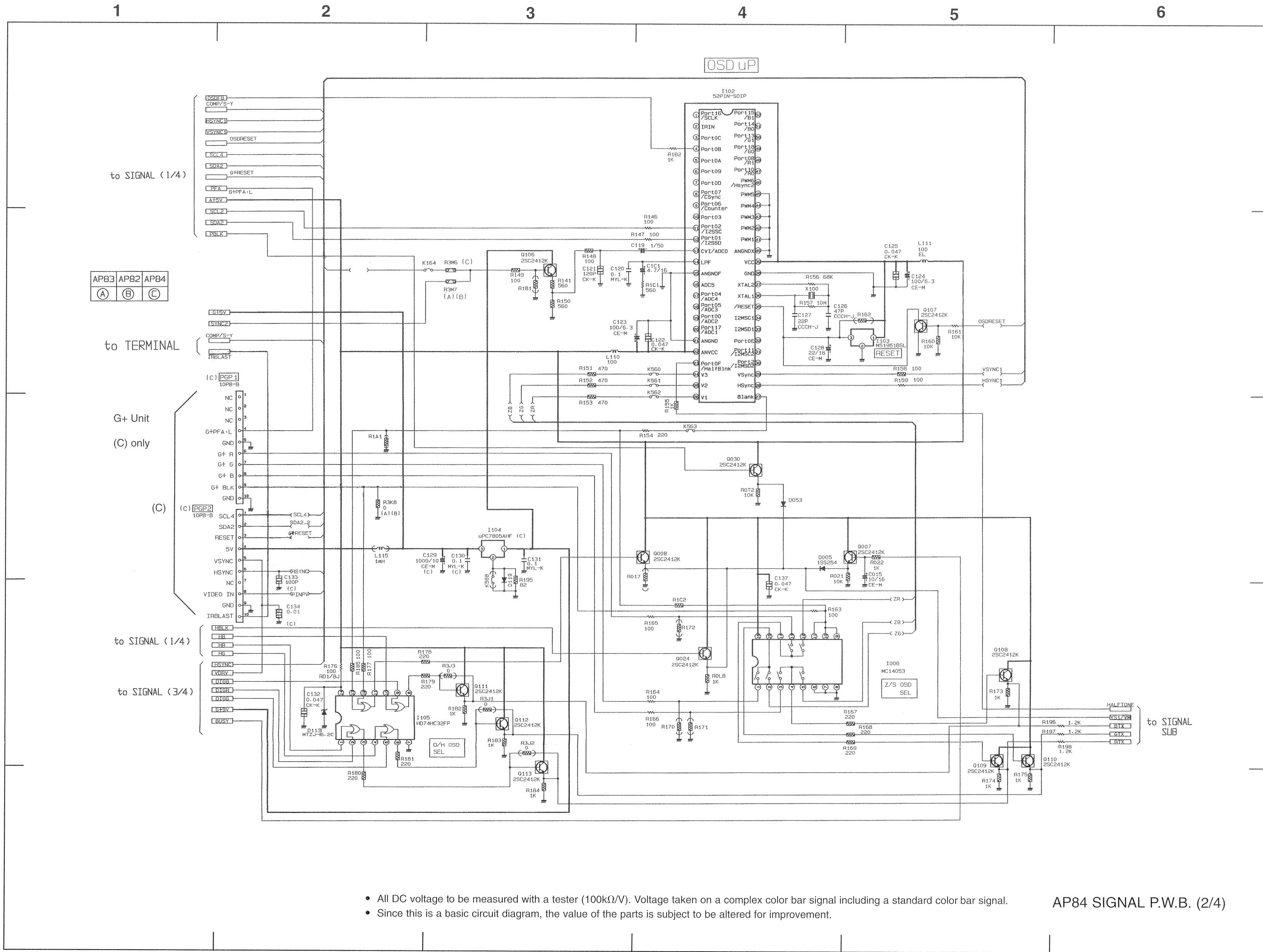
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

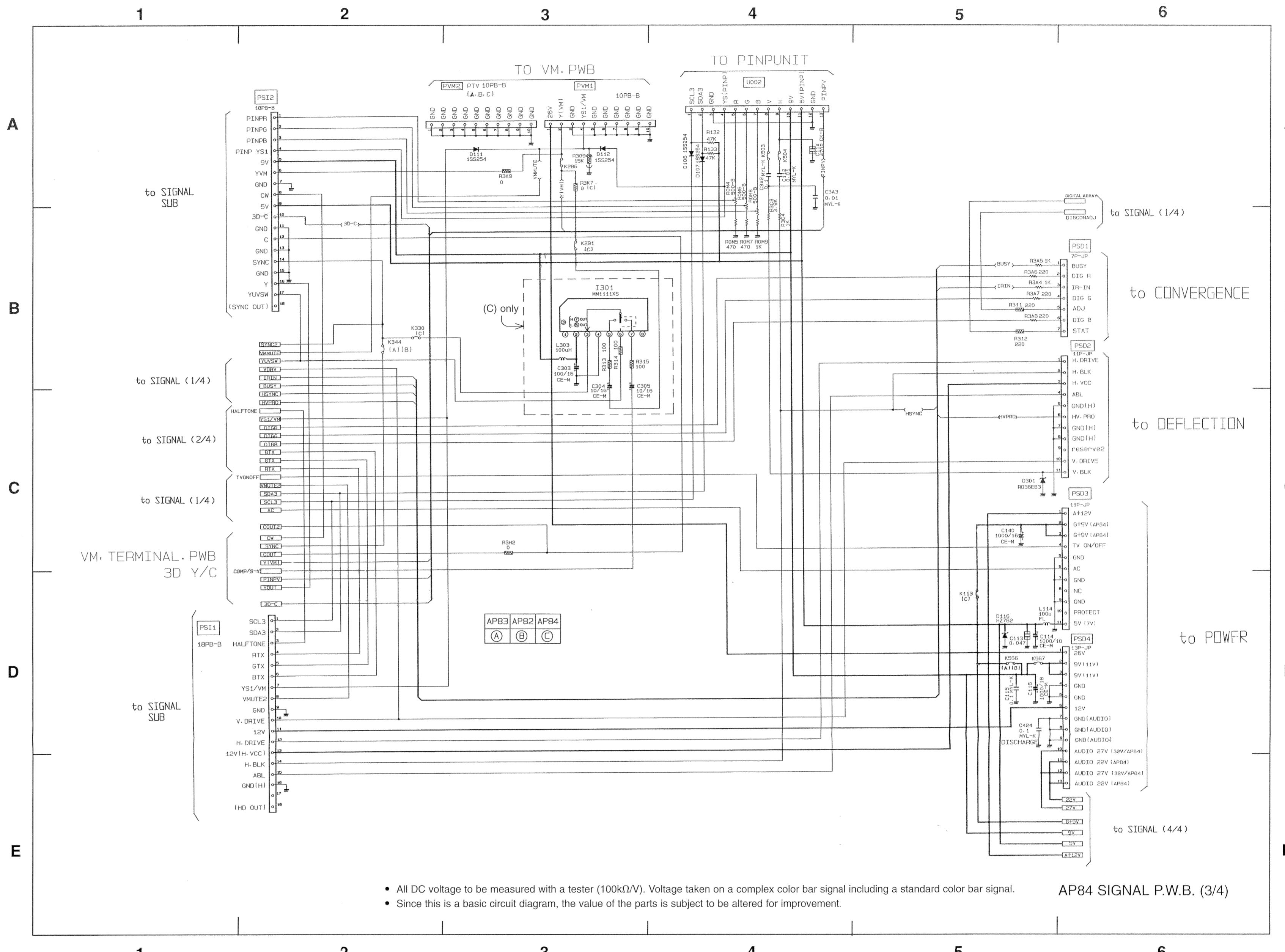
AP84 SIGNAL P.W.B. (1/4)



BASIC CIRCUIT DIAGRAM

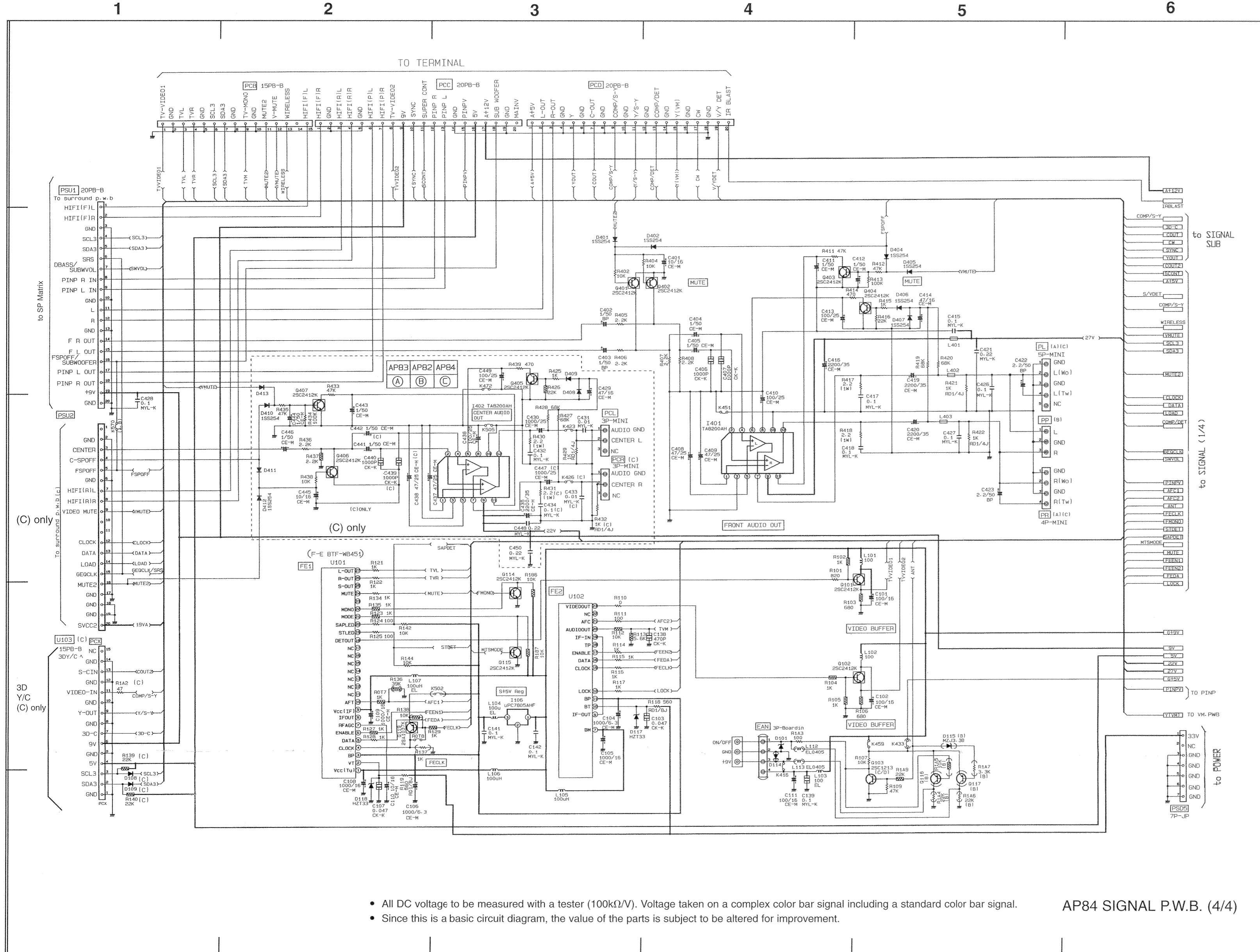
PRODUCT SAFETY NOTE: Components marked with a and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.





BASIC CIRCUIT DIAGRAM

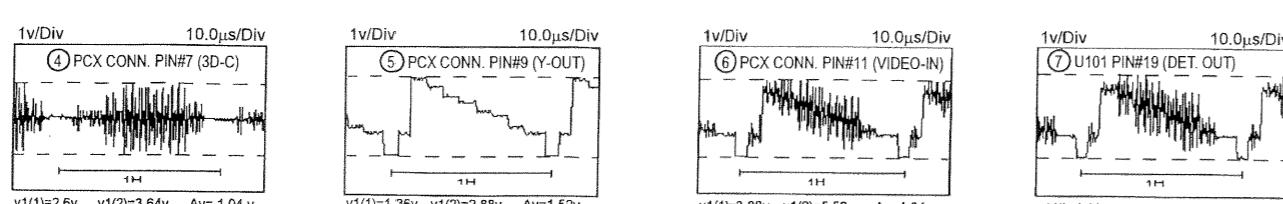
PRODUCT SAFETY NOTE: Components marked with a  and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester ($100k\Omega/V$). Voltage taken on a complex color bar signal including a standard color bar signal.
 - Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AP84 SIGNAL P.W.B. (4/4)

Circuit No.	Pin No.	Voltage DC
I106	1	9.3
	2	0
	3	5.1
I401	1	1.5
	2	0
	3	0
	4	0
	5	1.5
	6	9.3
	7	12.9
	8	5.2
	9	27.5
	10	0
	11	4.4
	12	12.5
Circuit No.	Pin Name	Voltage DC
Q101	E	6.4
	B	7.1
	C	9.2
Q102	E	1.7
	B	2.3
	C	9.2
Q103	E	0
	B	0.6
	C	0
Q114	E	0
	B	0.7
	C	0
Q115	E	0
	B	0.7
	C	0
Circuit No.	Pin Name	Voltage DC
Q401	E	0
	B	0
	C	0
Q402	E	0
	B	0
	C	0
Q403	E	0
	B	0
	C	4.3
Q404	E	0
	B	0
	C	9.3



Circuit No.	Pin No.	Voltage DC
I901	1	155.4
	2	0
	3	0
	4	1.6
	5	24.2
	6	0.2
	7	2.0

Circuit No.	Pin No.	Voltage DC
I902	1	12.0
	2	11.3
	3	1.1
	4	24.2

Circuit No.	Pin No.	Voltage DC
I903	1	12.0
	2	11.0
	3	0
	4	23.4

Circuit No.	Pin No.	Voltage DC
I904	1	8.0
	2	8.4
	3	4.6
	4	11.8

Circuit No.	Pin No.	Voltage DC
I905	1	119.0
	2	10.9
	3	0

Circuit No.	Pin No.	Voltage DC
I906	1	0
	2	25.1
	3	0

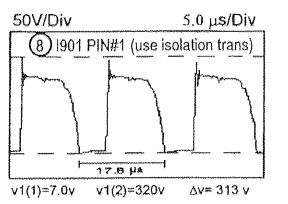
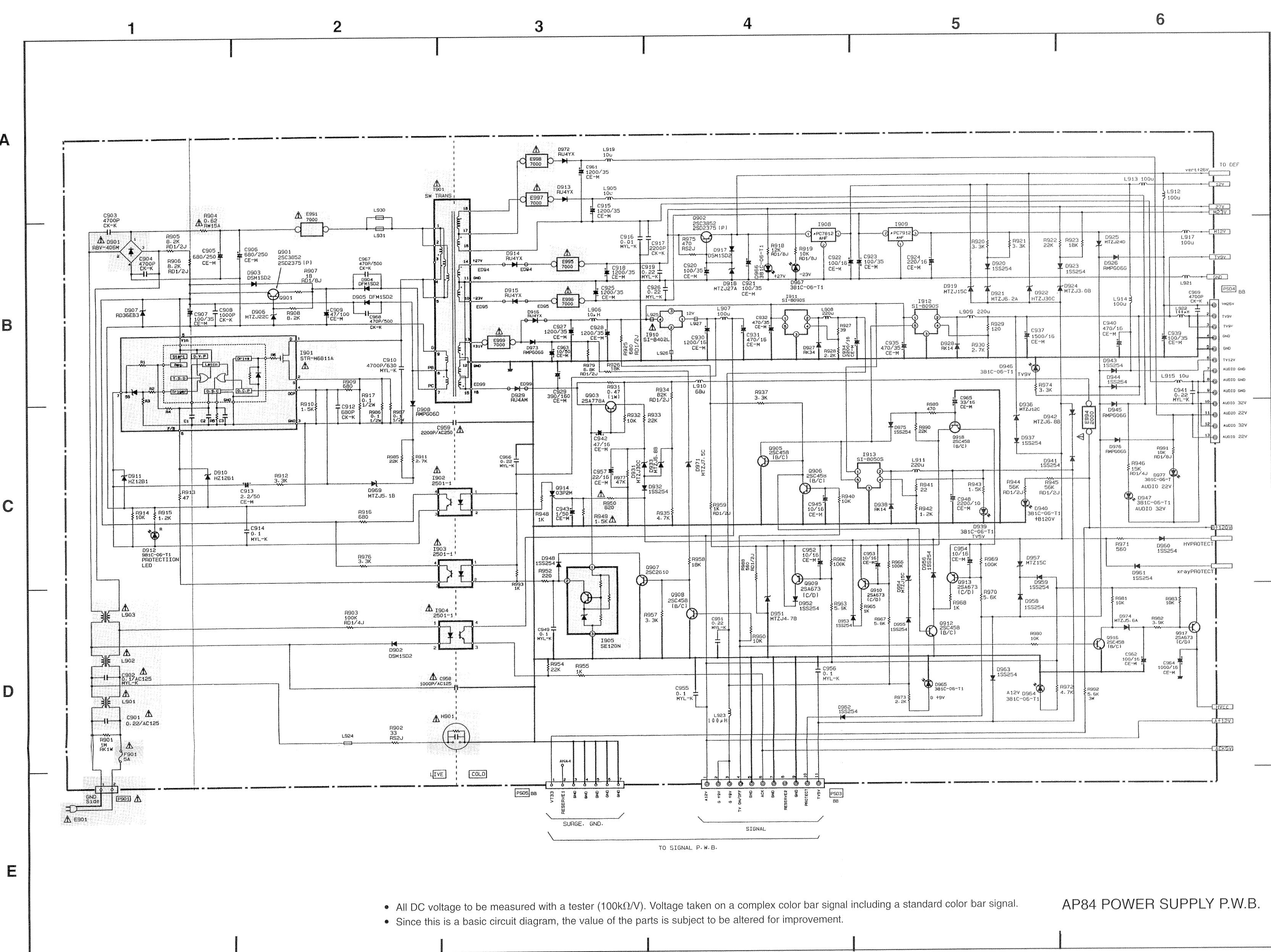
Circuit No.	Pin No.	Voltage DC
I907	1	0
	2	25.1
	3	0
	4	25.2

Circuit No.	Pin No.	Voltage DC
I908	1	12.0
	2	0
	3	25.2

Circuit No.	Pin No.	Voltage DC
I909	1	0
	2	-22.7
	3	-12.2

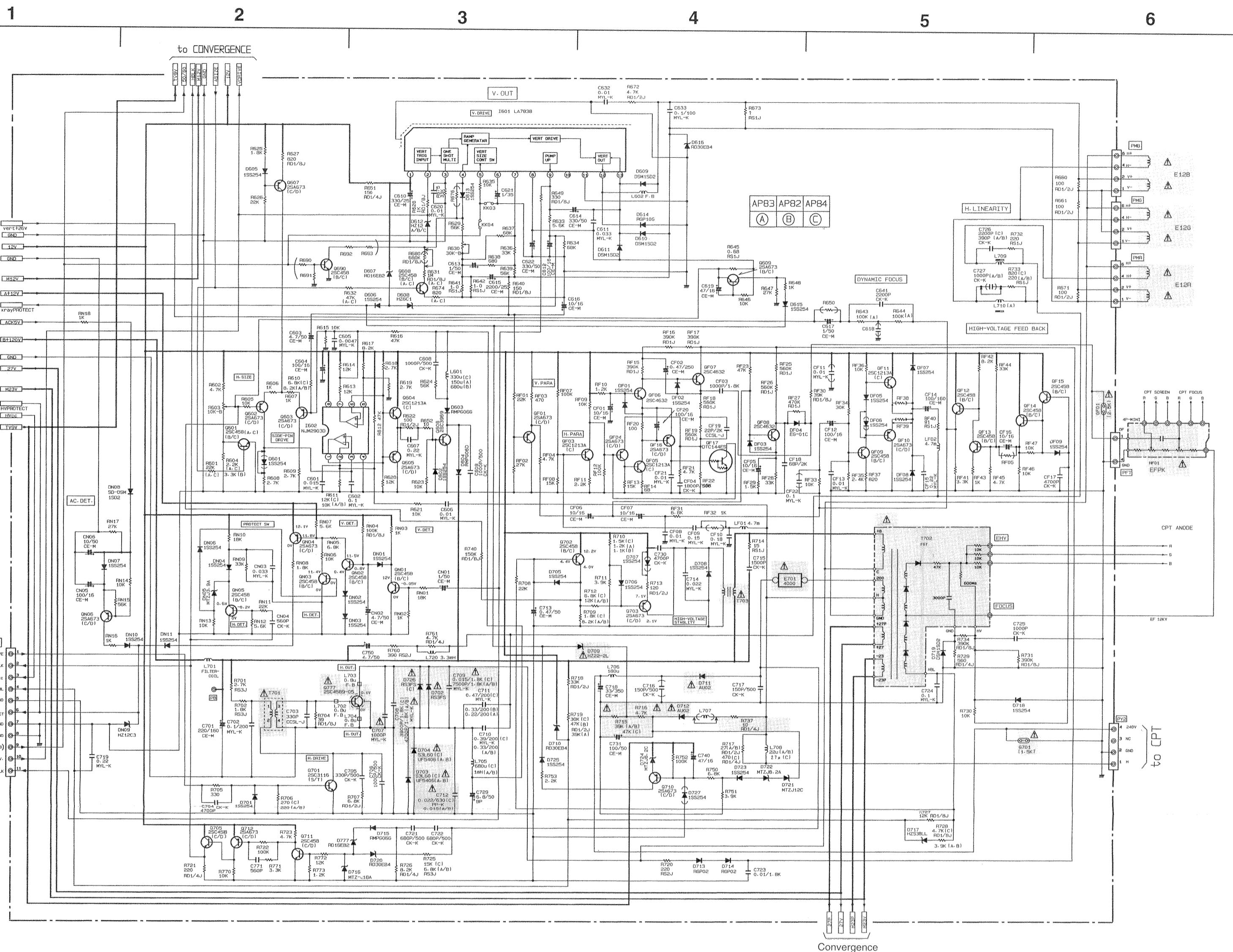
Circuit No.	Pin No.	Voltage DC
I910	1	12.0
	2	0
	3	12.2
	4	31.2

Circuit No.	Pin No.	Voltage DC
I911	1	31.2
	2	9.3
	3	0
	4	9.1
	5	1.5



BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

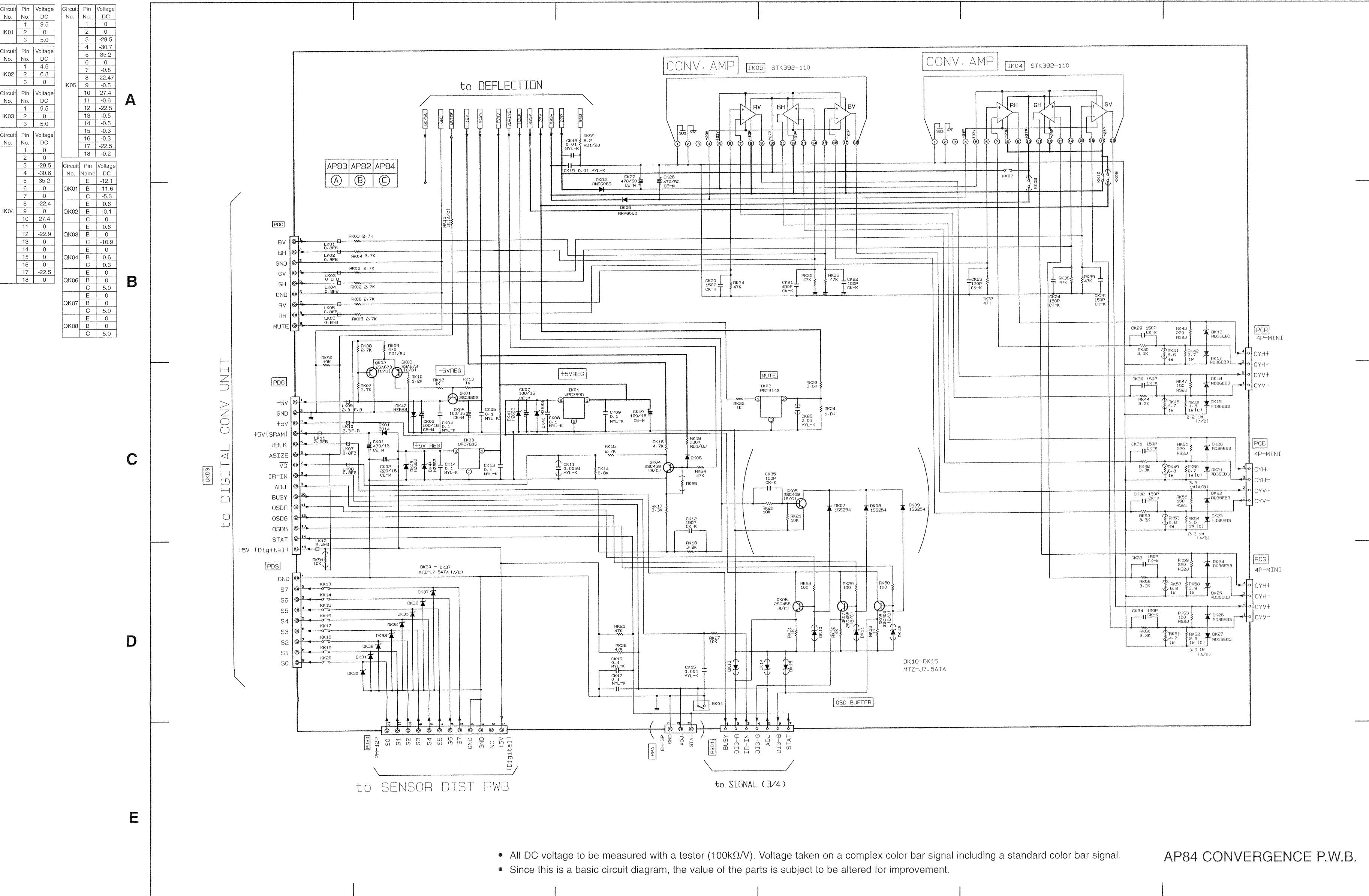
AP84 DEFLECTION P.W.B.

Circuit No.	Pin No.	Voltage DC
1	11.3	E 12.0
2	4.8	C 2.0
3	5.4	E 0
4	5.6	C 119.0
5	0	E 8.1
6	5.1	C 0
7	5.5	E 1.6
8	25.0	C 0
9	1.6	E 0.9
10	1.3	C 1.5
11	0	E 1.5
12	12.8	C 6.9
13	24.7	E 7.3

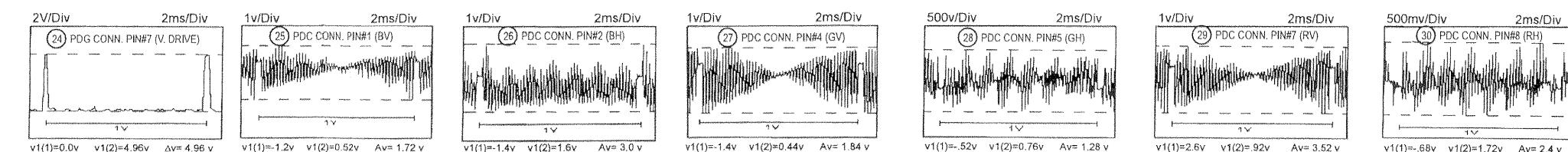
Circuit No.	Pin No.	Voltage DC
1	4.8	E 0.1
2	2.1	C 11.4
3	2.2	E 11.1
4	0	C 432.1
5	2.9	E 552.2
6	4.8	C 448.5
7	2.4	E 11.7

Circuit No.	Pin No.	Voltage DC
1	4.8	E 0.2
2	0.9	C 7.9
3	5.4	E 8.2
4	2.1	C 0
5	5.9	E 8.2
6	5.3	C 0.5

Circuit No.	Pin No.	Voltage DC
1	4.6	E 4.2
2	4.8	C 11.7
3	0	E 0.8
4	1.4	C 4.8
5	0	E 8.8
6	4.8	C 9.4
7	11.2	E 11.7
8	0.9	C 11.7
9	6.1	E 0
10	2.1	C 11.7
11	0	E 11.6
12	4.6	C 0
13	0	E 25.1
14	4.8	C 0
15	0	E 0
16	4.6	C 0
17	0	E 24.8
18	0	C 0
19	0	E 6.9
20	0.4	C 0
21	2.7	E 0
22	0	C 11.8
23	0.1	E 0.5
24	0.2	C 11.8
25	0.6	E 0
26	1.7	C 0.4
27	0.4	E 11.8
28	0.2	C 11.8
29	0.6	E 11.8
30	0.4	C 2.0
31	0.2	E 11.8
32	0.6	C 11.8
33	0	E 11.8
34	0	C 0
35	0	E 0
36	0	C 0
37	0	E 0
38	0	C 0
39	0	E 0
40	0	C 0
41	0	E 0
42	0	C 0
43	0	E 0
44	0	C 0
45	0	E 0
46	0	C 0
47	0	E 0
48	0	C 0
49	0	E 0
50	0	C 0
51	0	E 0
52	0	C 0
53	0	E 0
54	0	C 0
55	0	E 0
56	0	C 0
57	0	E 0
58	0	C 0
59	0	E 0
60	0	C 0
61	0	E 0
62	0	C 0
63	0	E 0
64	0	C 0
65	0	E 0
66	0	C 0
67	0	E 0
68	0	C 0
69	0	E 0
70	0	C 0
71	0	E 0
72	0	C 0
73	0	E 0
74	0	C 0
75	0	E 0
76	0	C 0
77	0	E 0
78	0	C 0
79	0	E 0
80	0	C 0
81	0	E 0
82	0	C 0
83	0	E 0
84	0	C 0
85	0	E 0
86	0	C 0
87	0	E 0
88	0	C 0
89	0	E 0
90	0	C 0
91	0	E 0
92	0	C 0
93	0	E 0
94	0	C 0
95	0	E 0
96	0	C 0
97	0	E 0
98	0	C 0
99	0	E 0
100	0	C 0
101	0	E 0
102	0	C 0
103	0	E 0
104	0	C 0
105	0	E 0
106	0	C 0
107	0	E 0
108	0	C 0
109	0	E 0
110	0	C 0
111	0	E 0
112	0	C 0
113	0	E 0
114	0	C 0
115	0	E 0
116	0	C 0
117	0	E 0
118	0	C 0
119	0	E 0
120	0	C 0
121	0	E 0
122	0	C 0
123	0	E 0
124	0	C 0
125	0	E 0
126	0	C 0
127	0	E 0
128	0	C 0
129	0	E 0
130	0	C 0
131	0	E 0
132	0	C 0
133	0	E 0
134	0	C 0
135	0	E 0
136	0	C 0
137	0	E 0
138	0	C 0
139	0	E 0
140	0	C 0
141	0	E 0
142	0	C 0
143	0	E 0
144	0	C 0
145	0	E 0
146	0	C 0
147	0	E 0
148	0	C 0
149	0	E 0
150	0	C 0
151	0	E 0
152	0	C 0
153	0	E 0
154	0	C 0
155	0	E 0
156	0	C 0
157	0	E 0
158	0	C 0
159	0	E 0
160	0	C 0
161	0	E 0
162	0	C 0
163	0	E 0
164	0	C 0
165	0	E 0
166	0	C 0
167	0	E 0
168	0	C 0
169	0	E 0
170	0	C 0
171	0	E 0
172	0	C 0
173	0	E 0
174	0	C 0
175	0	E 0
176	0	C 0
177	0	E 0
178	0	C 0
179	0	E 0
180	0	C 0
181	0	E 0
182	0	C 0
183	0	E 0
184	0	C 0
185	0	E 0
186	0	C 0
187	0	E 0
188	0	C 0
189	0	E 0
190	0	C 0
191	0	E 0
192	0	C 0
193	0	E 0
194	0	C 0
195	0	E 0
196	0	C 0
197	0	E 0
198	0	C 0
199	0	E 0
200	0	C 0
201	0	E 0
202	0	C 0
203	0	E 0
204	0	C 0
205	0	E 0
206	0	C 0

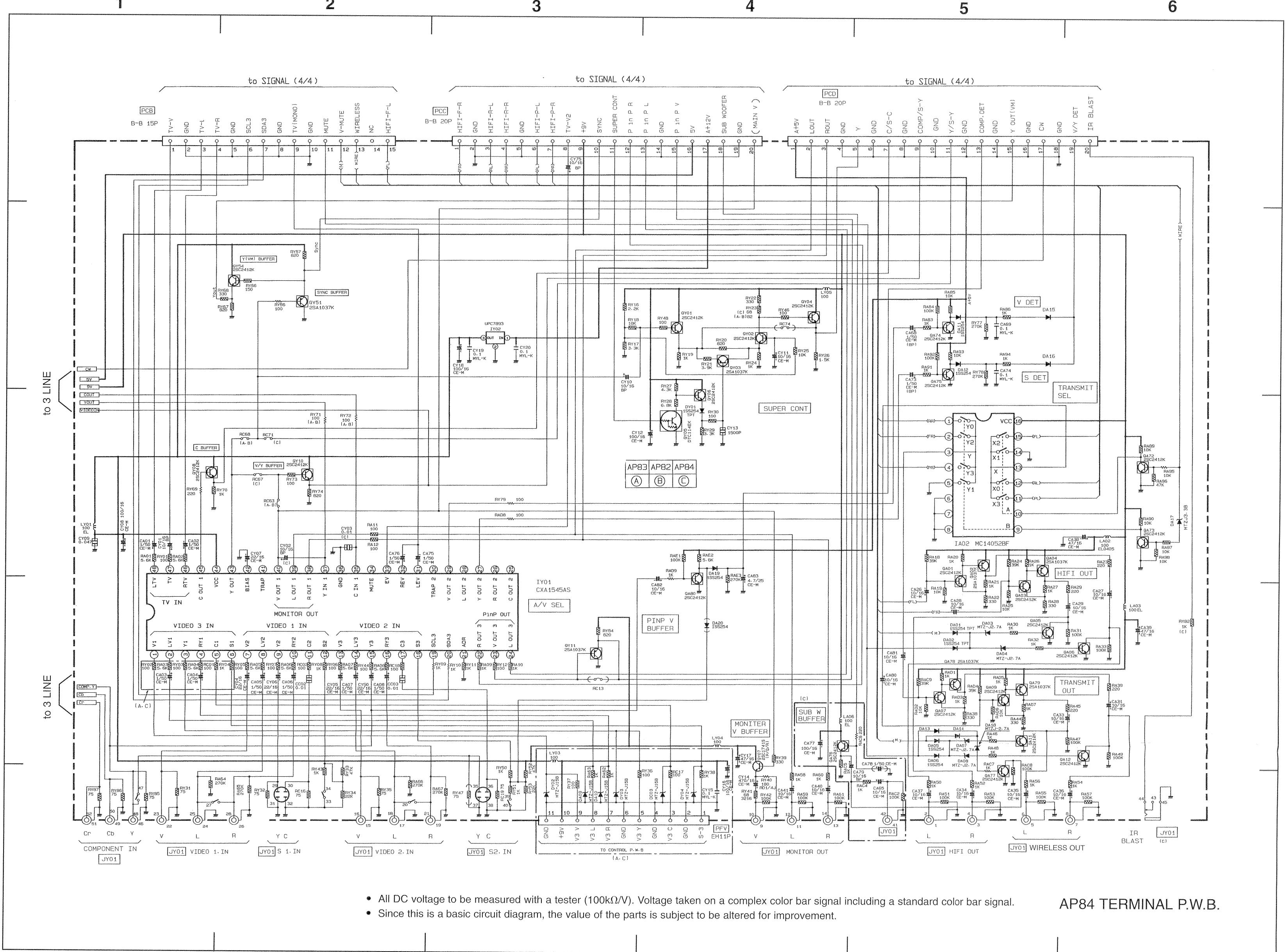


1 **2** **3** **4** **5** **6**



BASIC CIRCUIT DIAGRAM

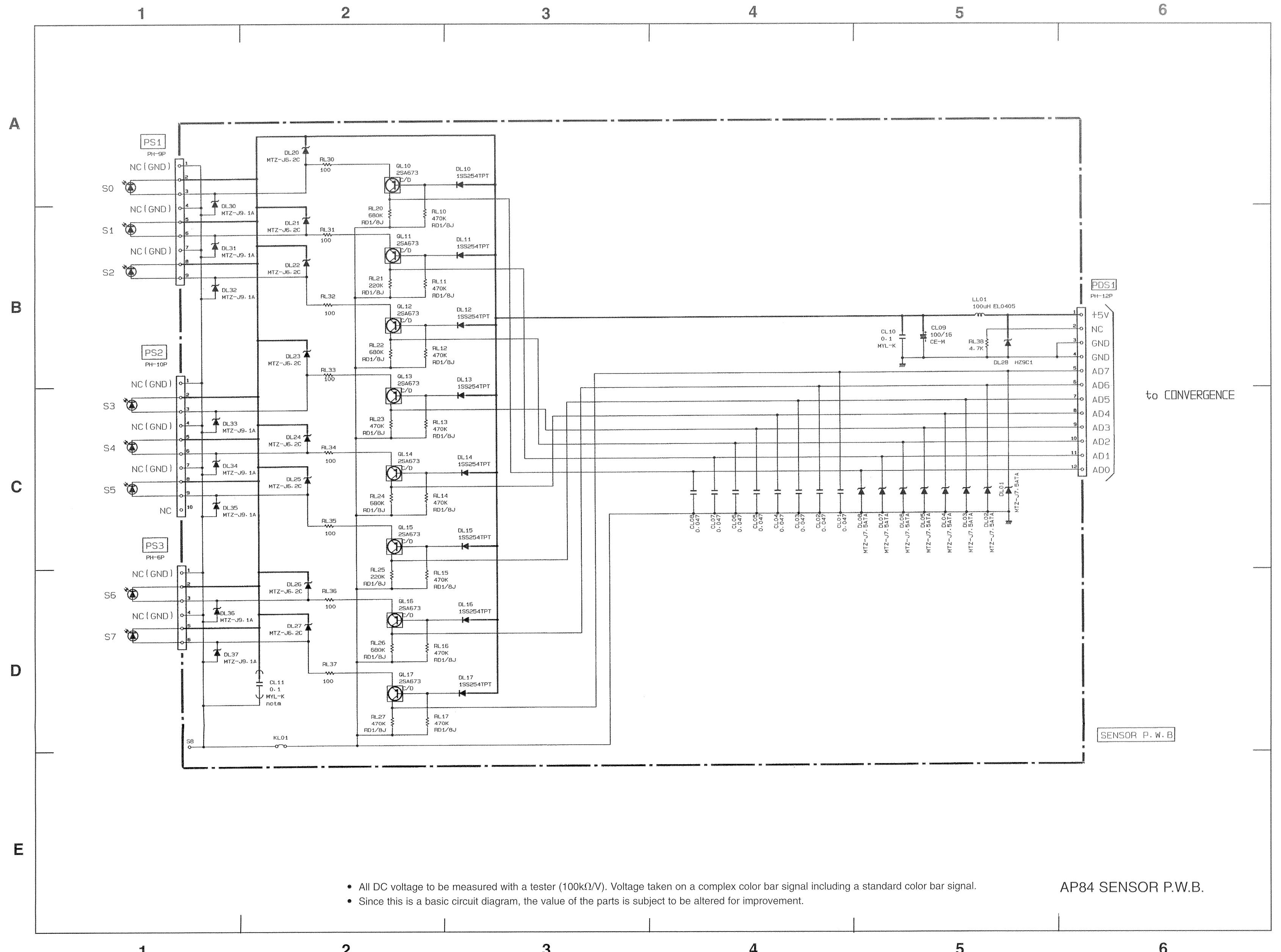
PRODUCT SAFETY NOTE: Components marked with a  and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



Circuit No.	Pin No.	Voltage DC
IA02	1	0
	2	4.2
	3	4.2
	4	4.2
	5	0
	6	0
	7	0
	8	0
	9	9.3
	10	0
	11	4.2
	12	0
	13	4.2
	14	0
	15	4.2
	16	9.3
IY01	1	4.7
	2	4.7
	3	4.7
	4	4.7
	5	4.7
	6	0.5
	7	4.7
	8	4.7
	9	4.7
	10	4.7
	11	4.7
	12	2.3
	13	4.7
	14	4.7
	15	4.7
	16	4.7
	17	4.7
	18	2.3
	19	4.9
	20	4.9
	21	0
	22	4.7
IY01	23	4.6
	24	4.7
	25	4.7
	26	4.7
	27	4.7
	28	4.7
	29	4.7
	30	4.7
	31	4.7
	32	4.7
	33	4.7
	34	0
	35	4.7
	36	0
	37	4.7
	38	4.7
	39	4.7
	40	4.7
	41	4.7
	42	0
	43	4.6
	44	9.1
	45	4.6
	46	4.7
	47	4.7
	48	4.7
IY02	1	11.8
	2	0
	3	9.2
	E	1.2
	QA01	B 1.8
	C	8.6
	E	9.3
	QA02	B 8.6
	C	4.3
	E	1.2
	QA03	B 1.8
	C	0
	E	9.3
	QA04	B 8.6
	C	4.2
QA05	E	0
	B	0
	C	0
	E	0
	QA06	B 0
	C	0
	E	1.2
	QA07	B 1.8
	C	8.6
	E	1.1
	QA09	B 1.8
	C	8.6
	E	0
	QA11	B 0
	C	0
QA12	E	0
	B	0
	C	0
	E	0
	QA72	B 0.5
	C	0
	E	0
	QA73	B 0
	C	9.3
	E	0
	QA74	B 0
	C	3.3
	E	0
	QA75	B 0.6
	C	0
QA77	E	0
	B	0
	C	0
	E	9.3
	QA78	B 8.6
	C	4.3
	E	0
	QA79	B 8.6
	C	4.3
	E	0
	QA80	B 0.5
	C	0
	E	4.5
	QY01	B 5.1
	C	9.2
QY02	E	4.5
	B	5.1
	C	7.5
	E	4.5
	QY03	B 4.5
	C	4.5
	E	6.8
	QY04	B 7.5
	C	9.3
	E	0
	QY05	B 2.1
	C	0
	E	5.1
	QY06	B 5.7
	C	9.3
QY07	E	3.9
	B	4.6
	C	9.1
	E	3.9
	QY08	B 4.6
	C	9.2
	E	3.9
	QY10	B 4.6
	C	9.2
	E	5.3
	QY11	B 4.7
	C	0
	E	5.2
	QY51	B 4.6
	C	0
QY54	E	4.6
	B	5.2

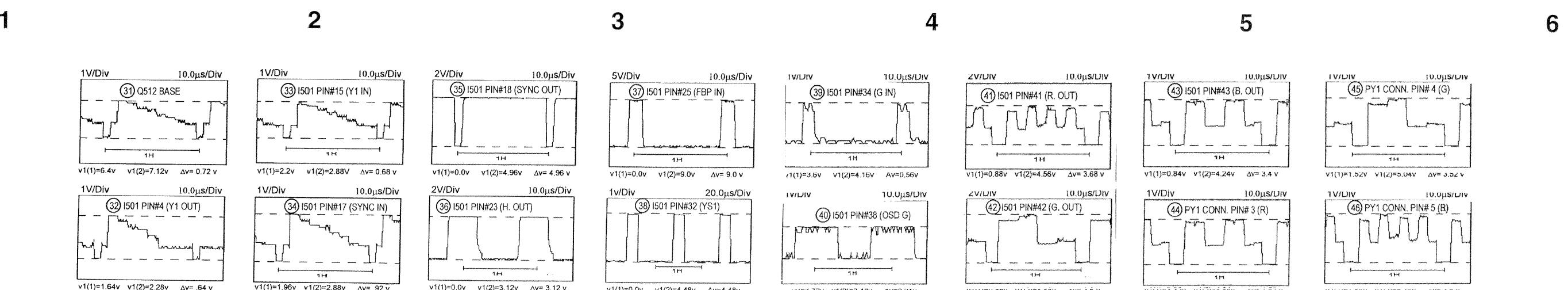
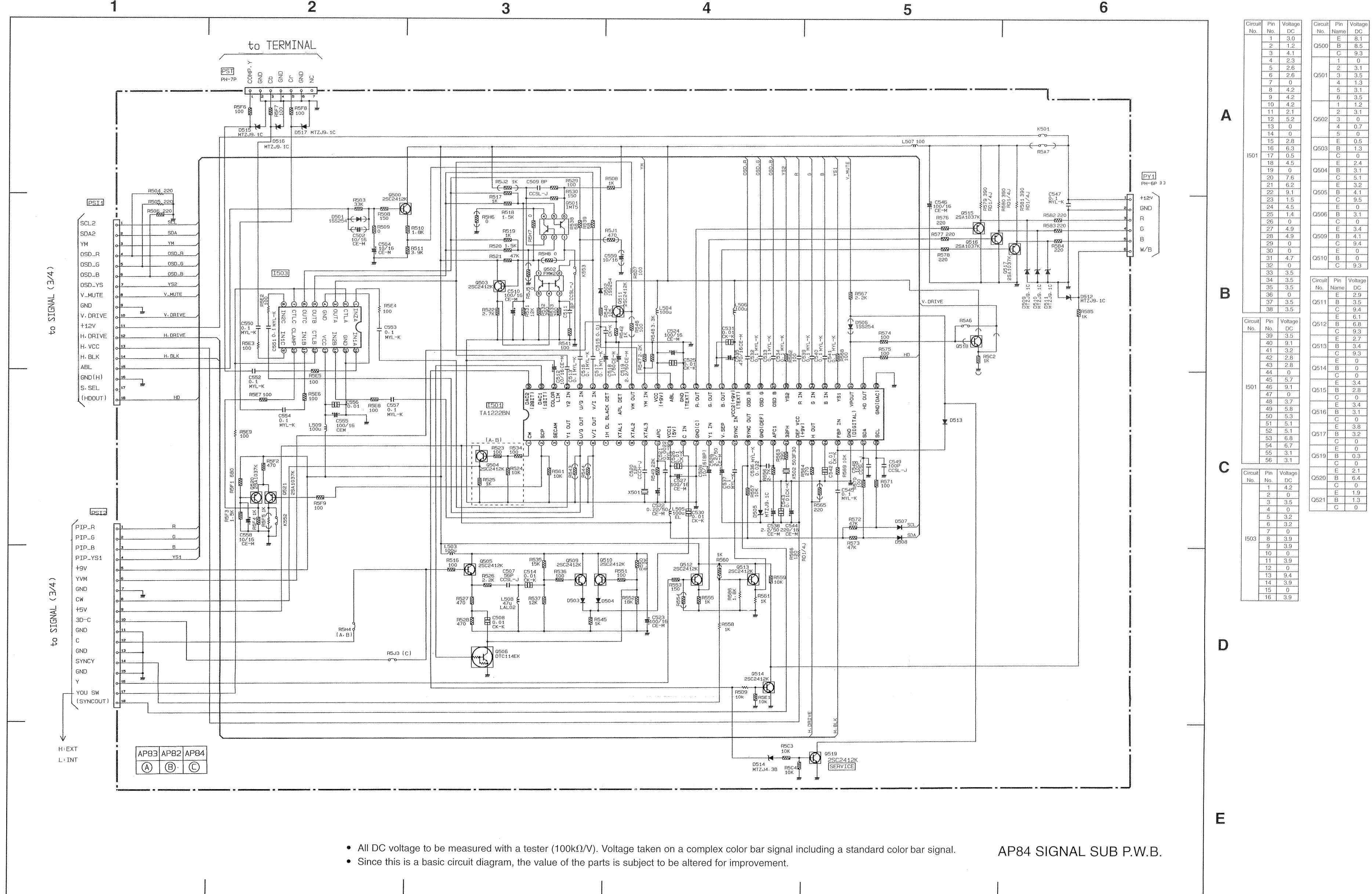
- All DC voltage to be measured with a tester ($100k\Omega/V$). Voltage taken on a complex color bar signal including a standard color bar signal.
 - Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

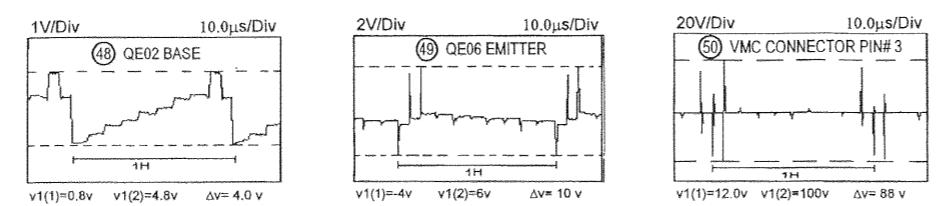
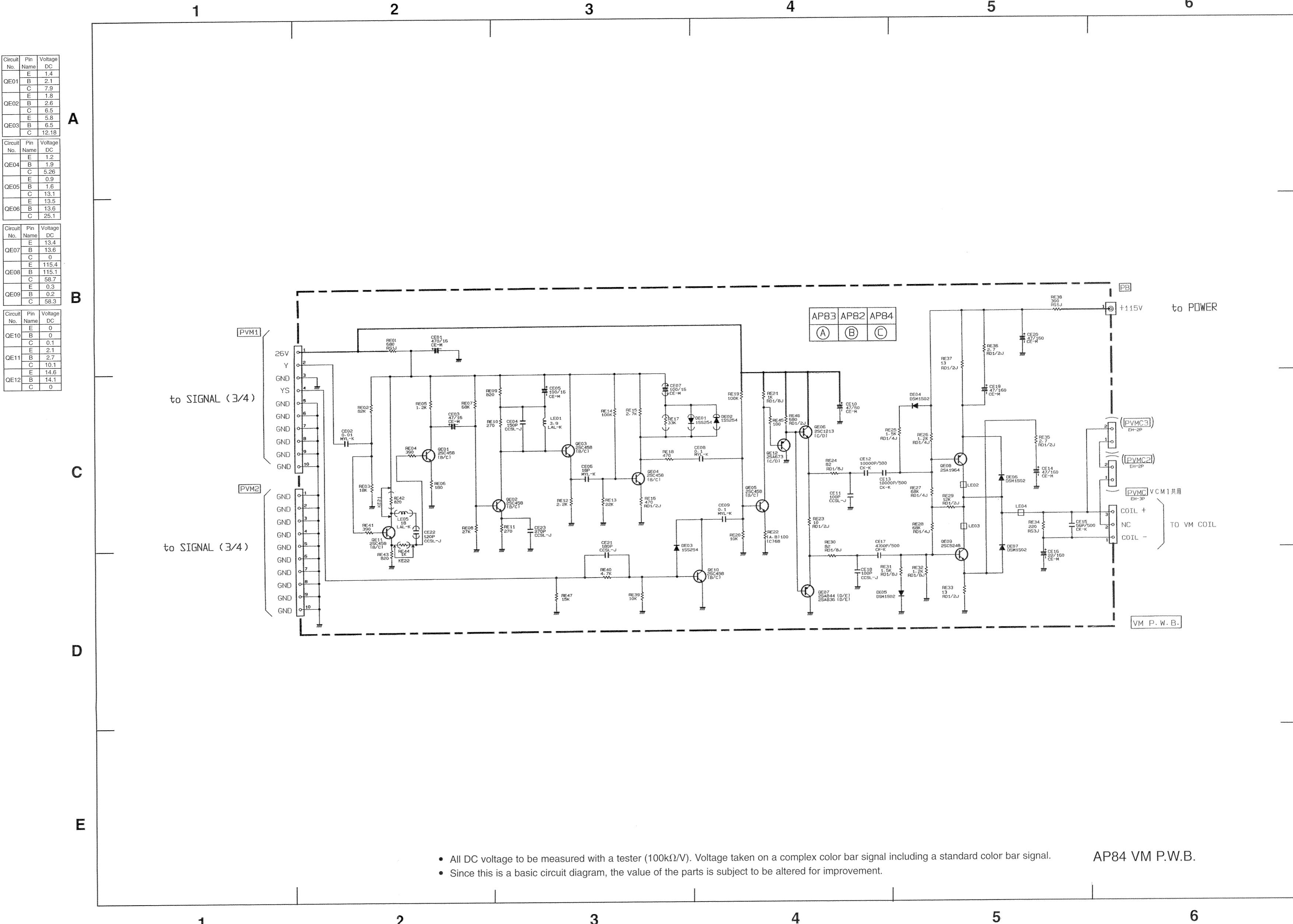
AP84 TERMINAL P.W.B.



BASIC CIRCUIT DIAGRAM

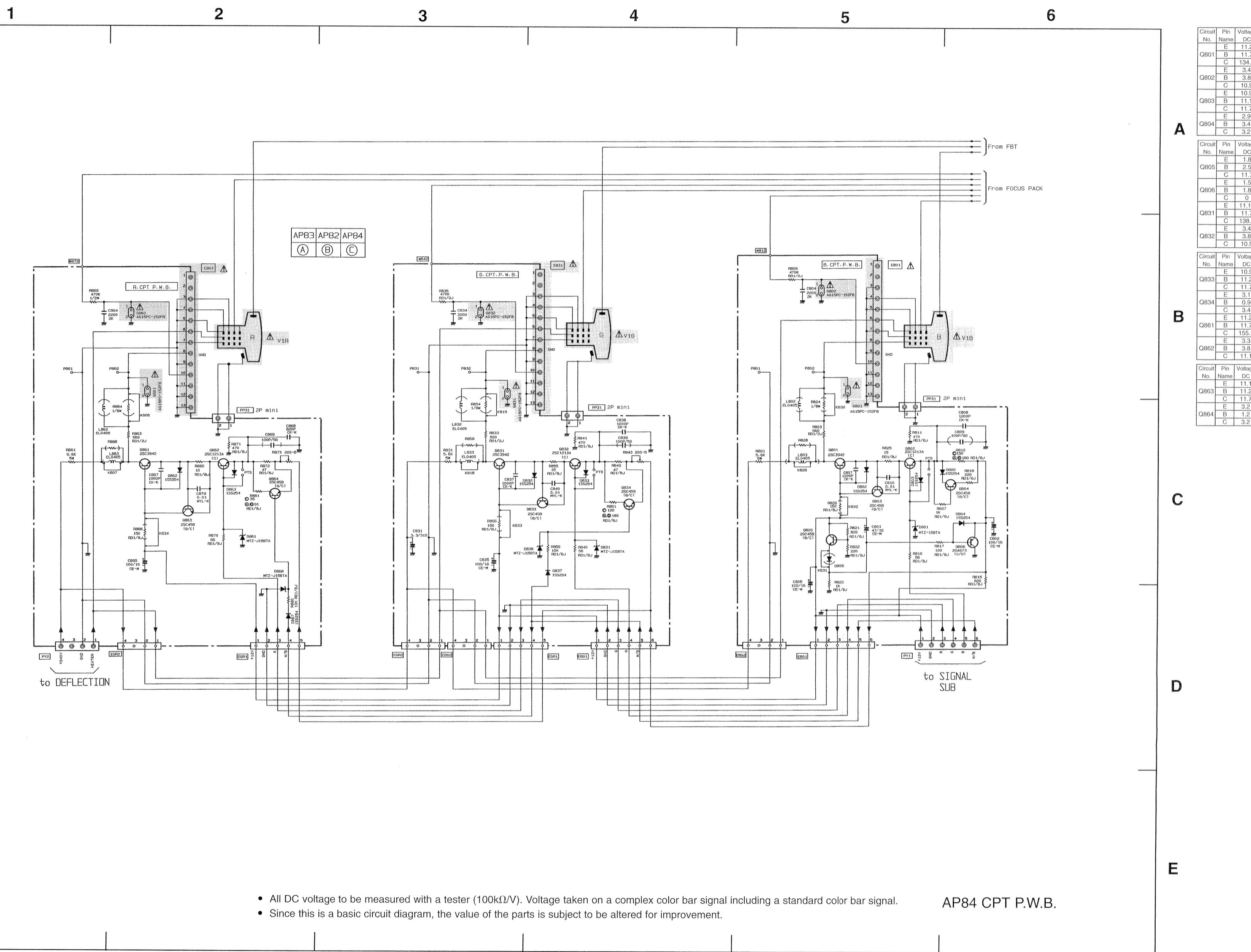
PRODUCT SAFETY NOTE: Components marked with a and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.





BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a Δ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



Circuit No.	Pin	Voltage DC
Q801	E	11.2
	B	11.7
	C	134.5
Q802	E	3.4
	B	3.8
	C	10.9
Q803	E	10.9
	B	11.1
	C	11.7
Q804	E	2.9
	B	3.4
	C	3.2

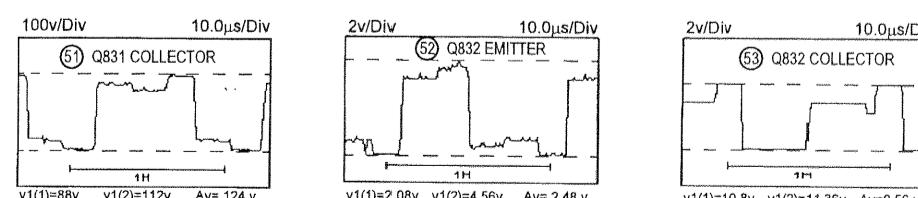
Circuit No.	Pin	Voltage DC
Q805	E	1.8
	B	2.5
	C	11.7
Q806	E	1.5
	B	1.8
	C	0
Q831	E	11.15
	B	11.7
	C	136.2
Q832	E	3.4
	B	3.8
	C	10.9

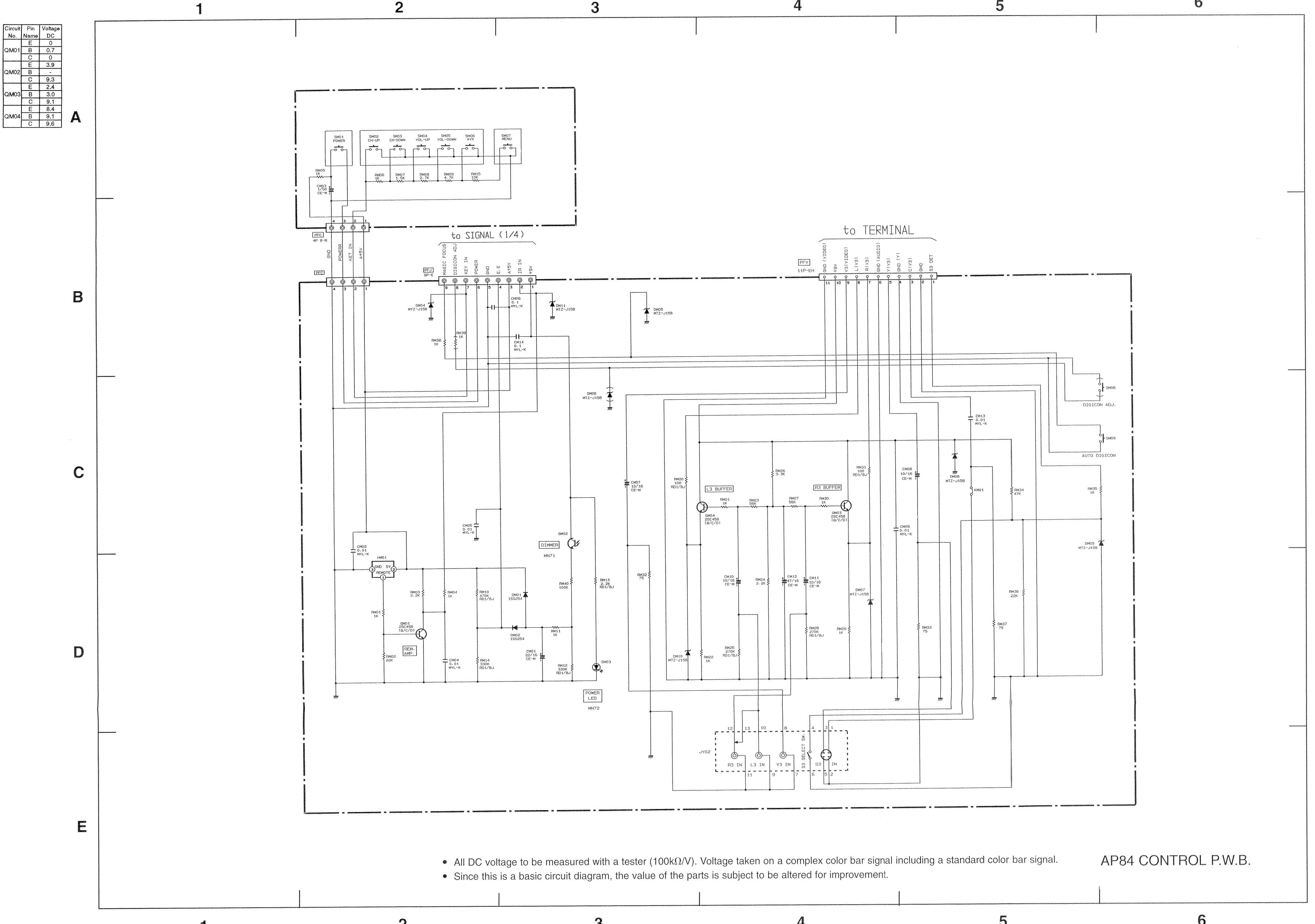
Circuit No.	Pin	Voltage DC
Q833	E	10.9
	B	11.2
	C	11.7
Q834	E	3.1
	B	0.9
	C	3.4
Q861	E	11.2
	B	11.7
	C	155.9
Q862	E	3.3
	B	3.8
	C	11.1

Circuit No.	Pin	Voltage DC
Q863	E	11.1
	B	11.2
	C	11.7
Q864	E	3.2
	B	1.2
	C	3.2

AP84 CPT P.W.B.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
 • Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.



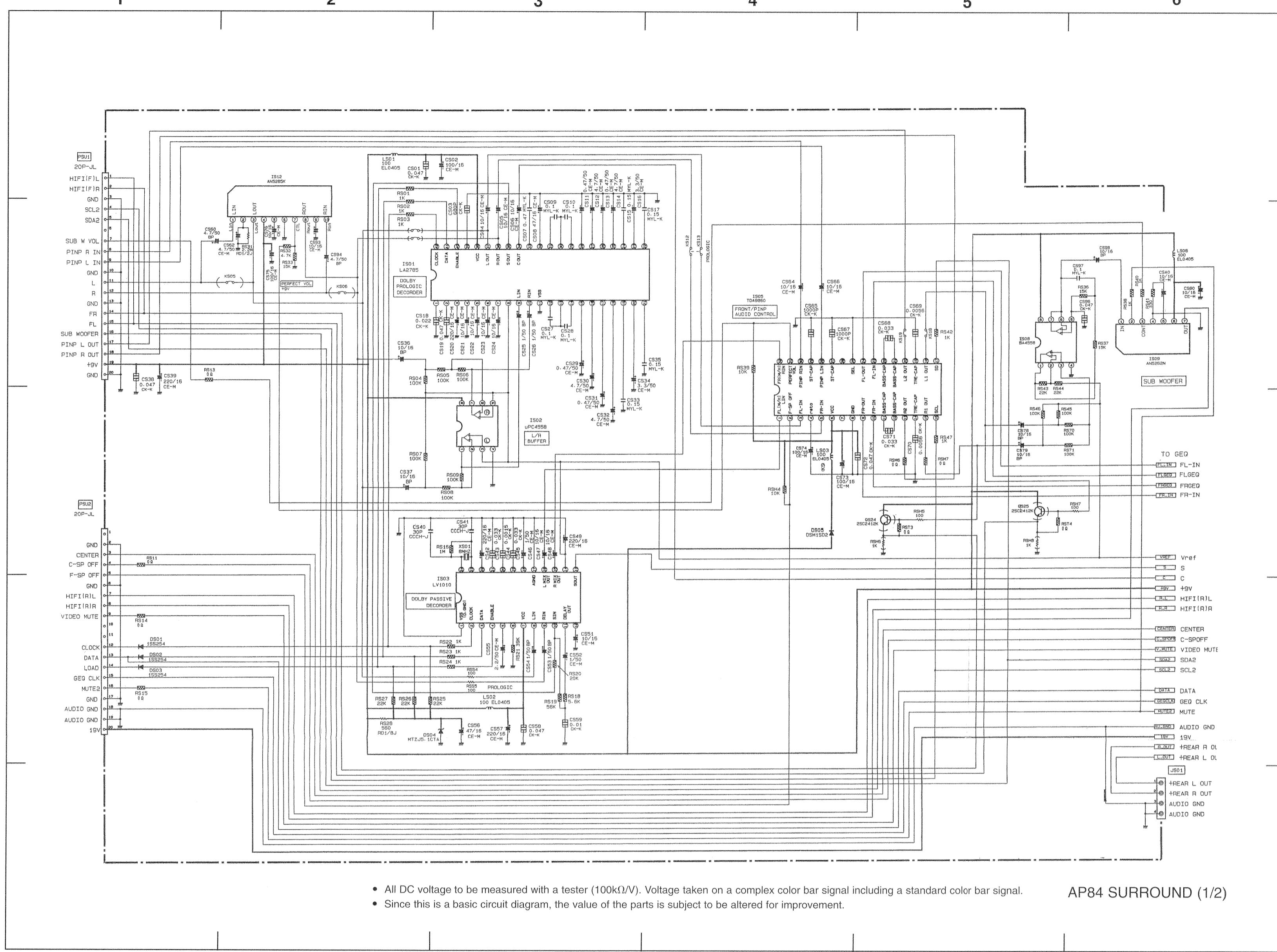


- All DC voltage to be measured with a tester ($100k\Omega/V$). Voltage taken on a complex color bar signal including a standard color bar signal.
 - Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AP84 CONTROL P.W.B.

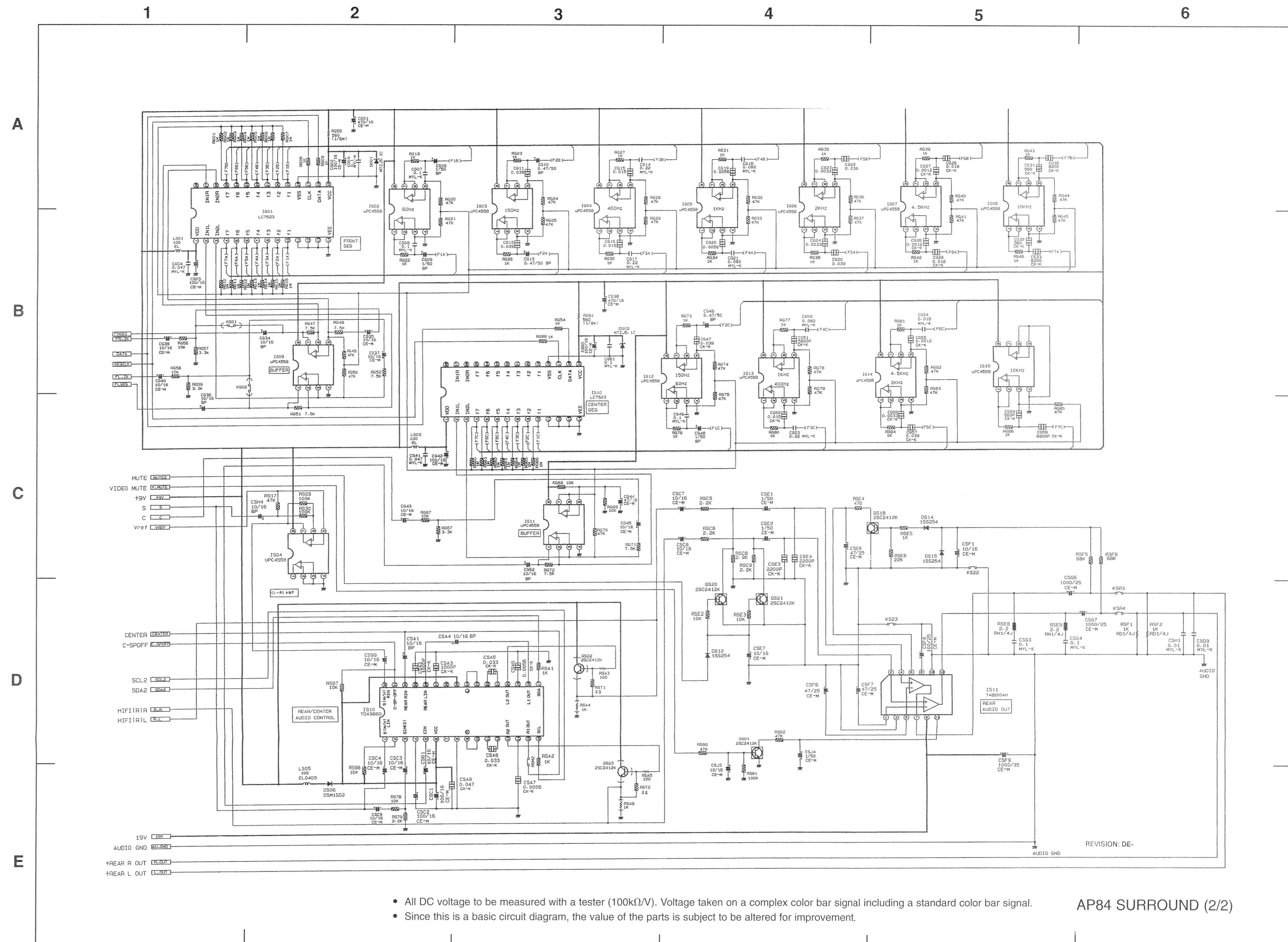
BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a  and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester ($100k\Omega/V$). Voltage taken on a complex color bar signal including a standard color bar signal.
 - Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AP84 SURROUND (1/2)

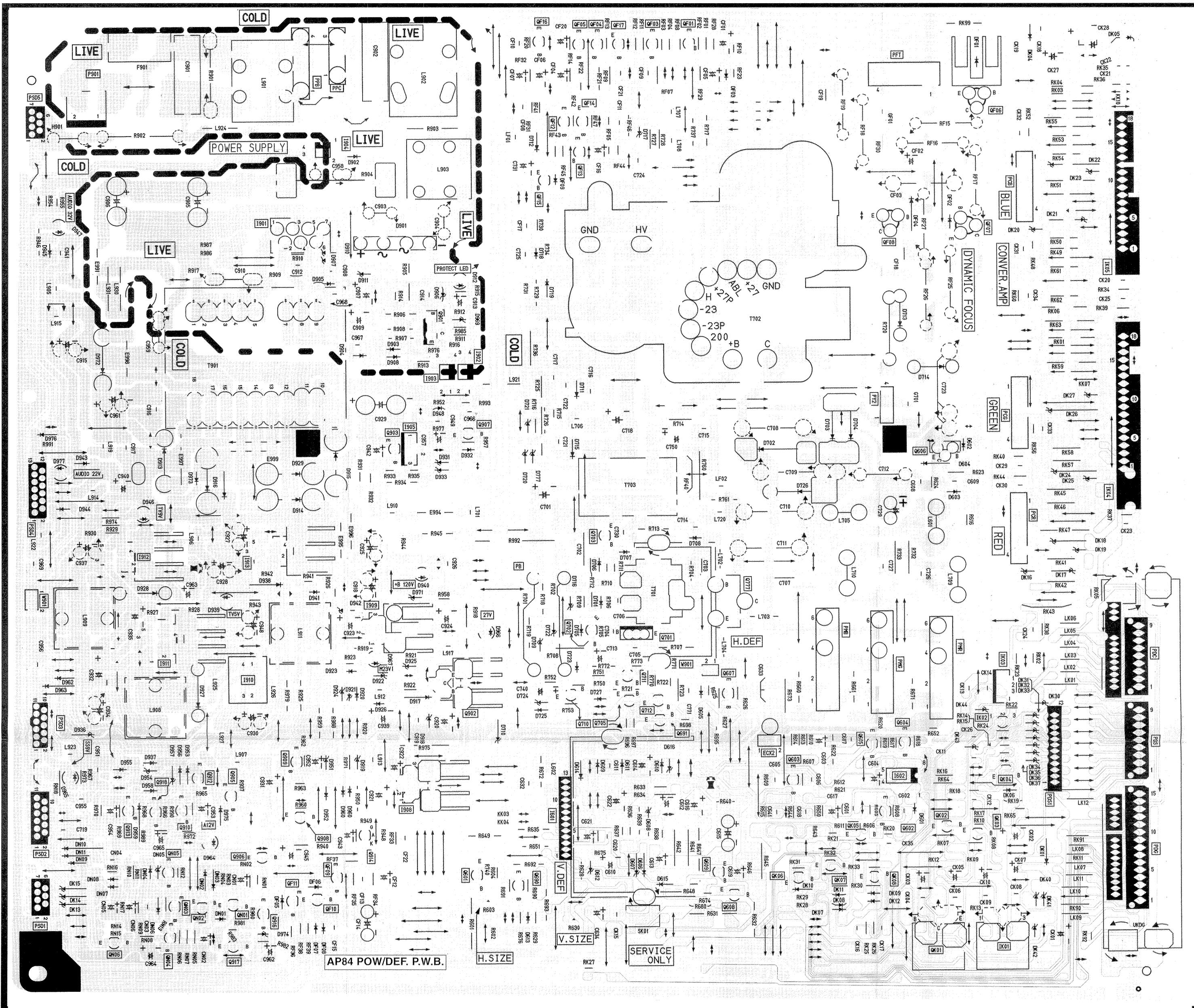


- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AP84 SURROUND (2/2)

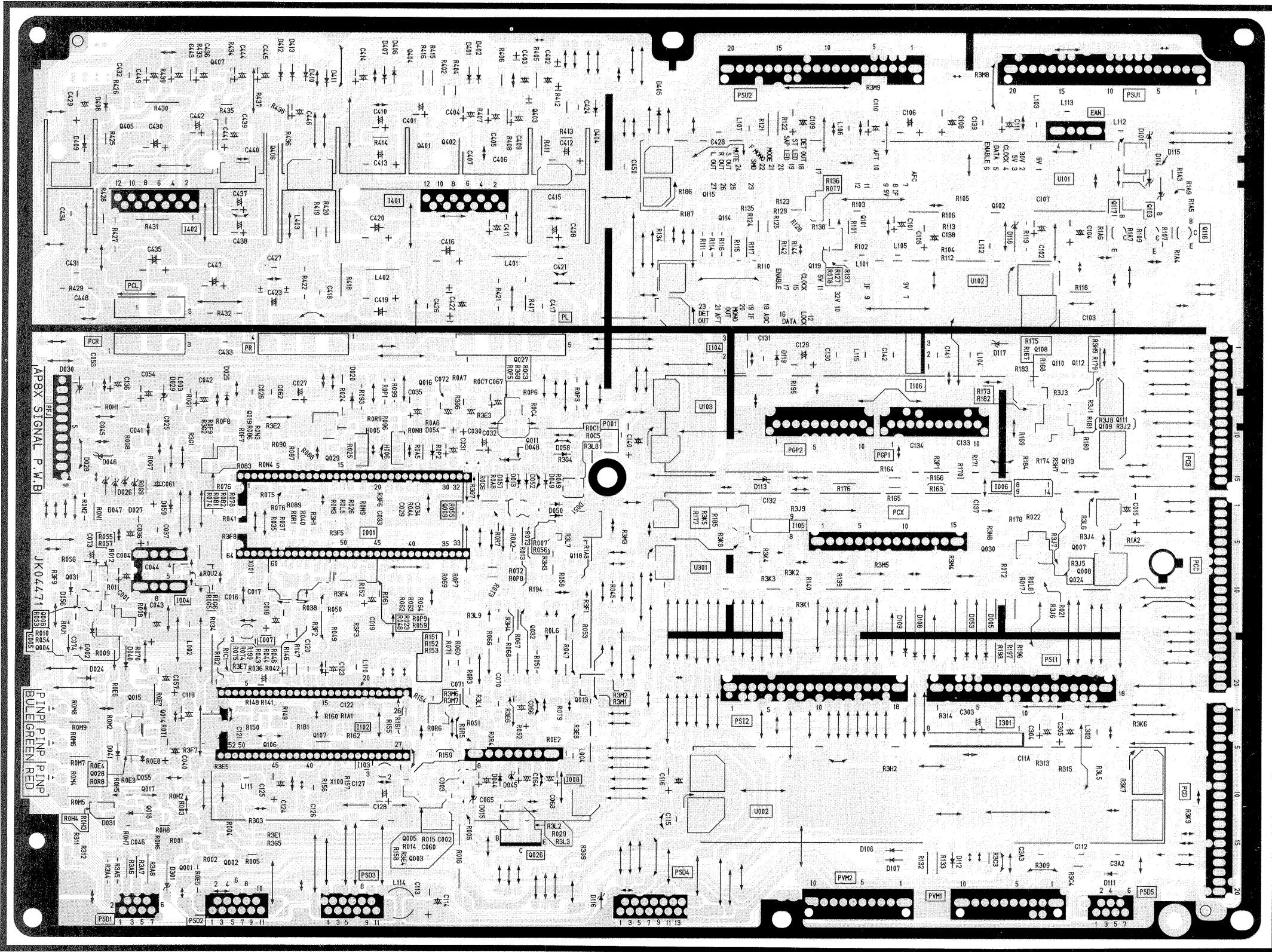
PRINTED CIRCUIT BOARD

POWER/DEFLECTION P.W.B.

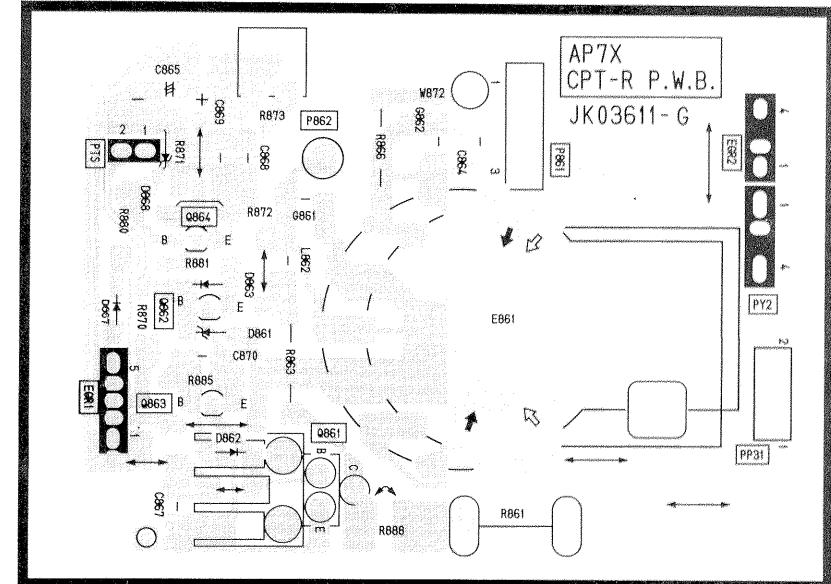


PRINTED CIRCUIT BOARD

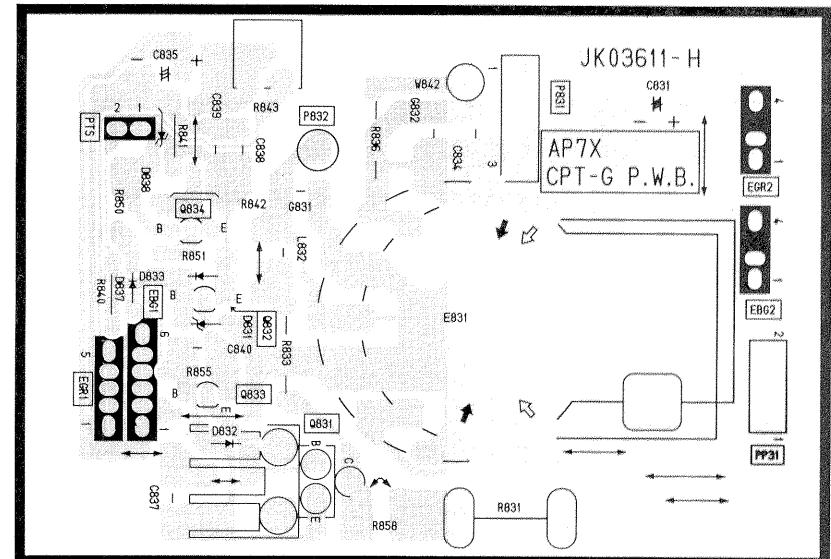
SIGNAL P.W.B.



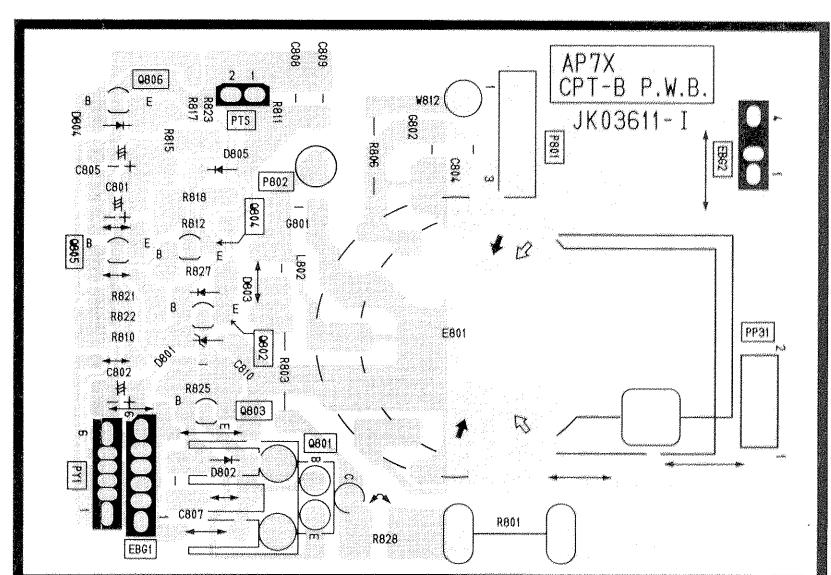
RED CPT P.W.B.



GREEN CPT P.W.B.

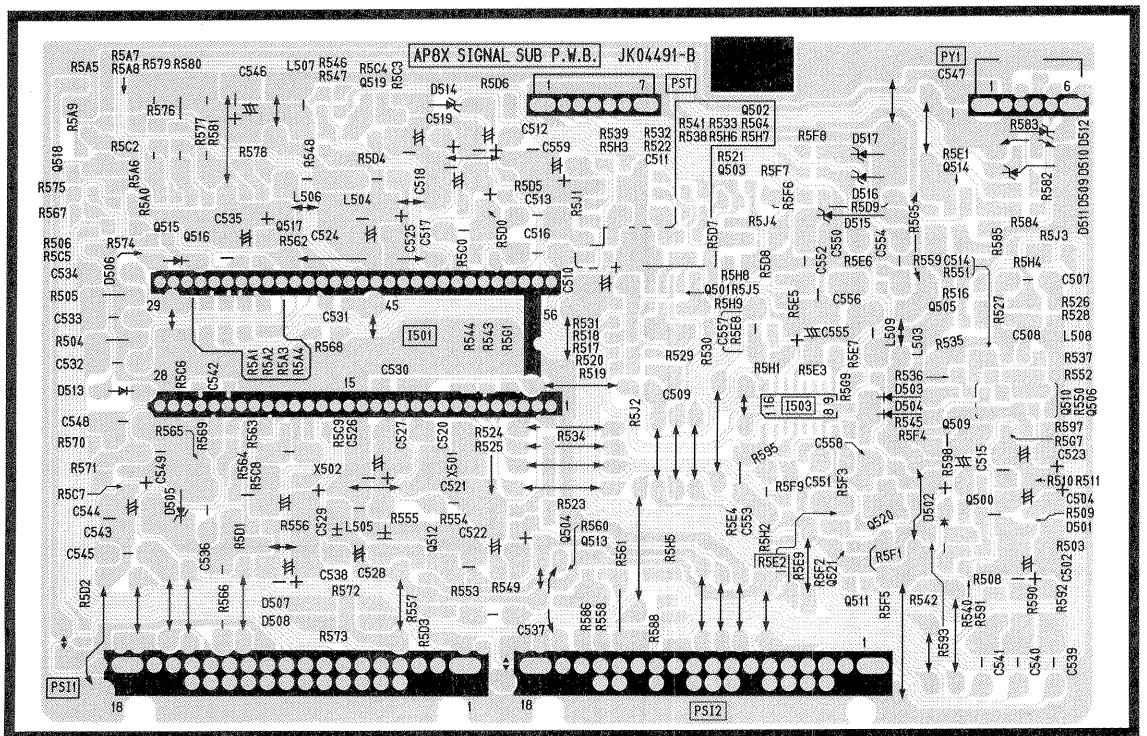


BLUE CPT. P.W.B.

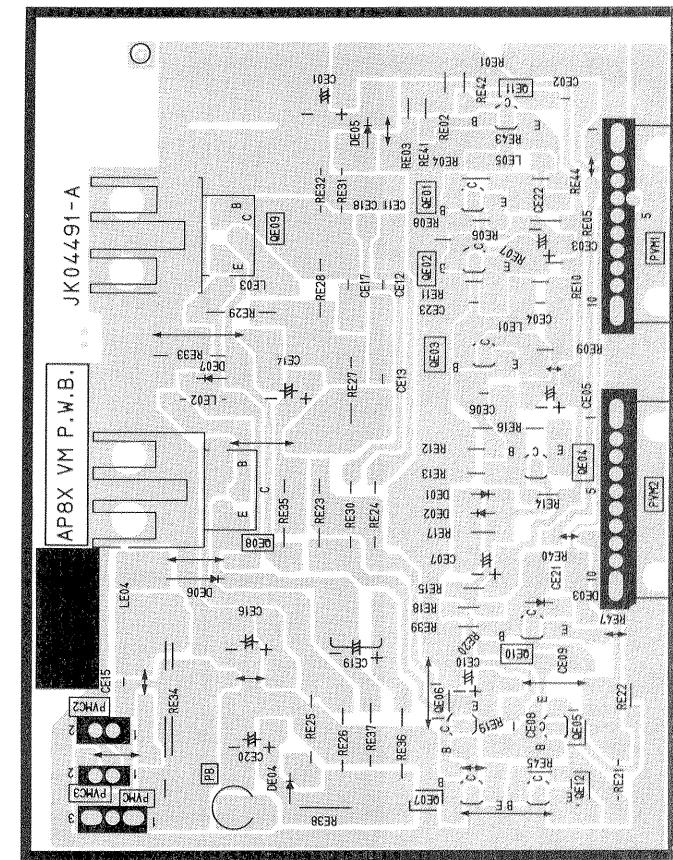


PRINTED CIRCUIT BOARD

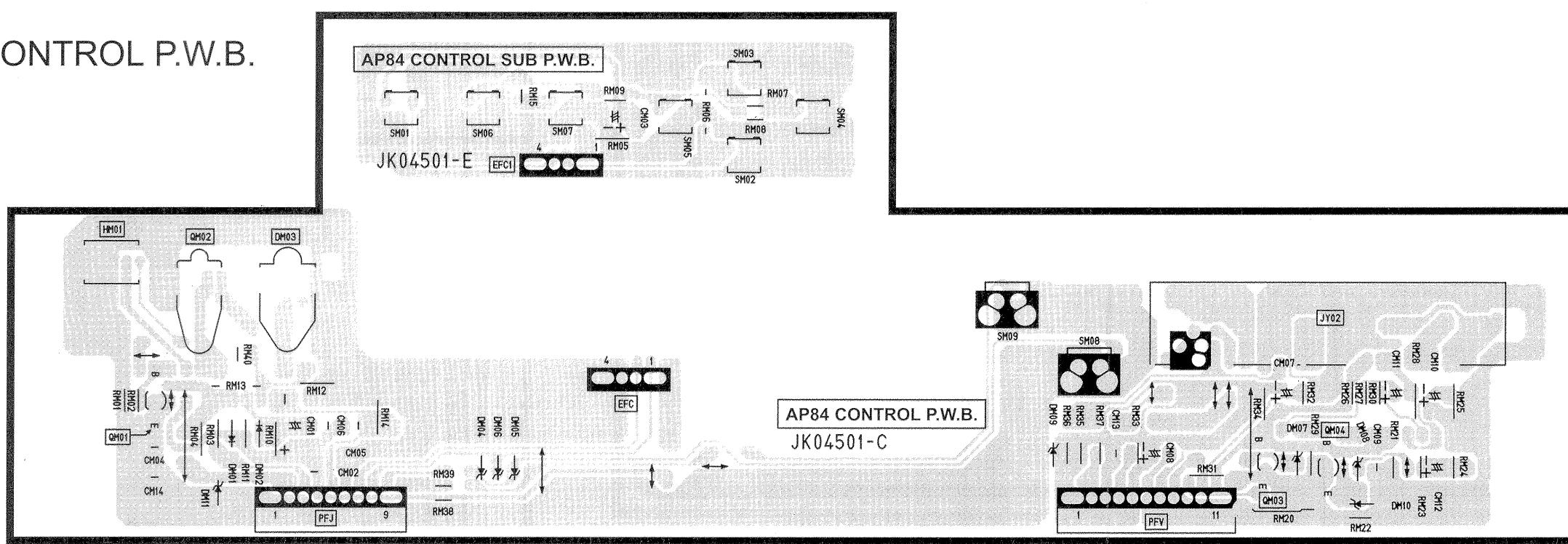
SIGNAL SUB P.W.B.



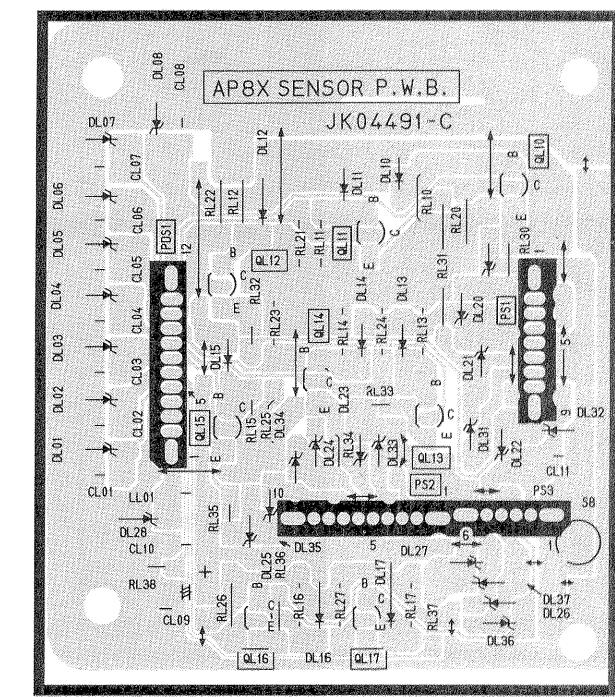
VM P.W.B.



CONTROL P.W.B.



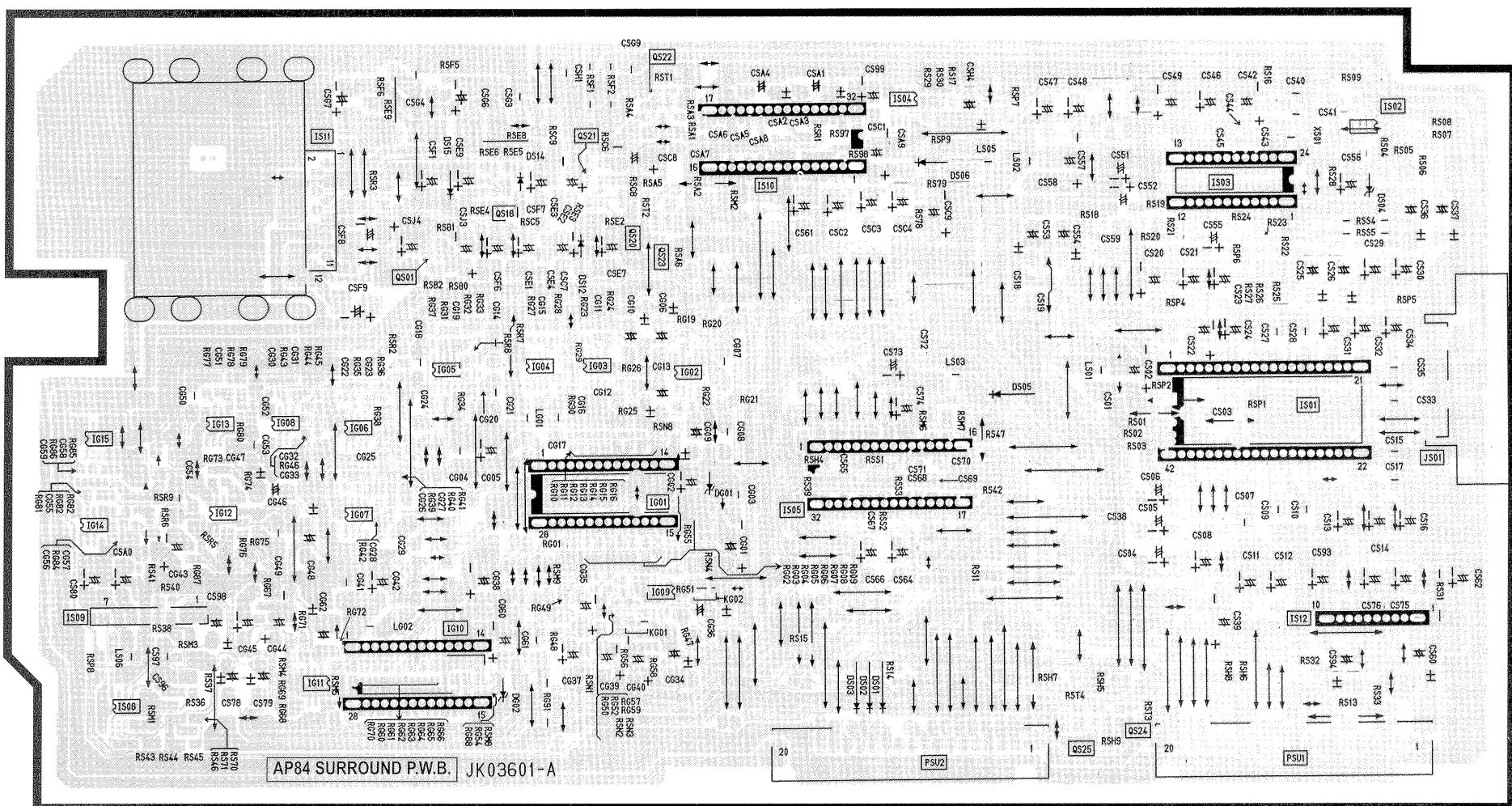
SENSOR P.W.B.



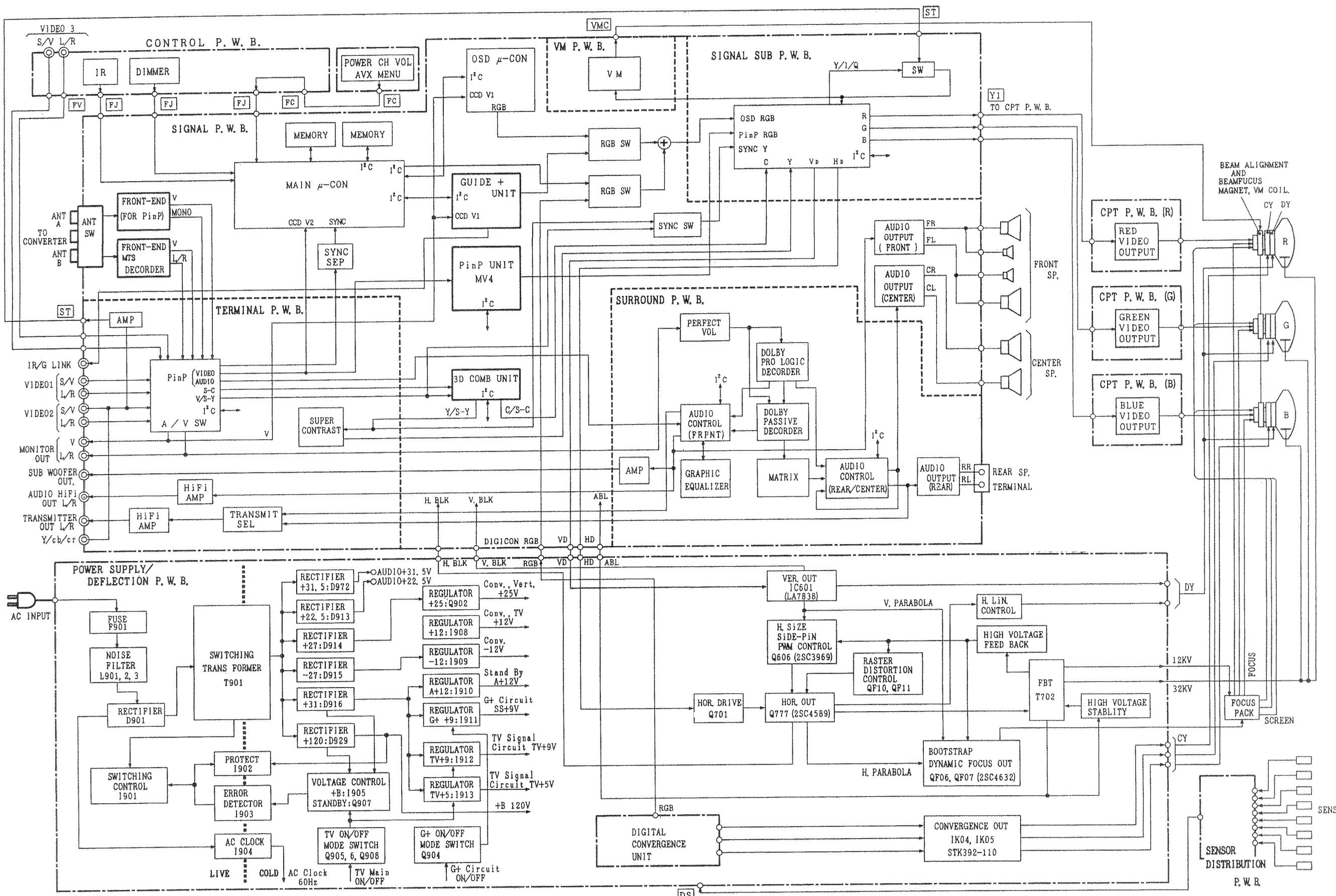
PRINTED CIRCUIT BOARD

TERMINAL P.W.B.

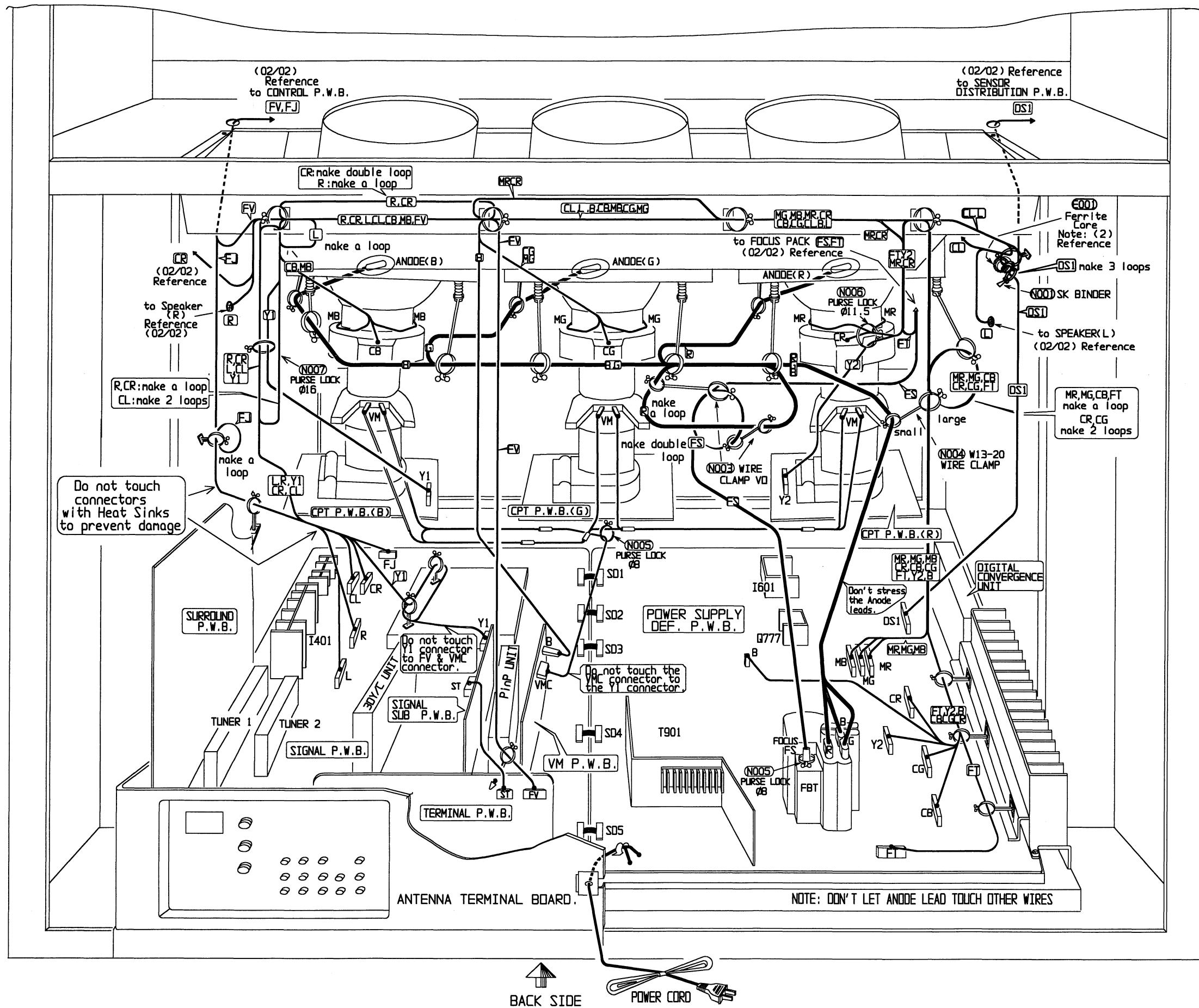
SURROUND P.W.B.



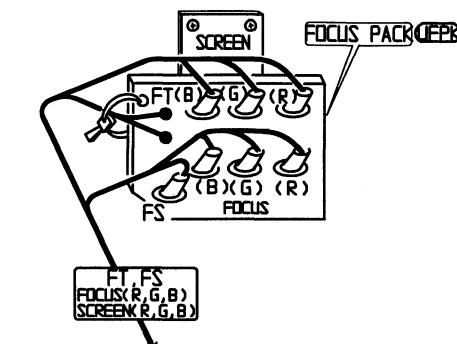
AP84 BLOCK DIAGRAM



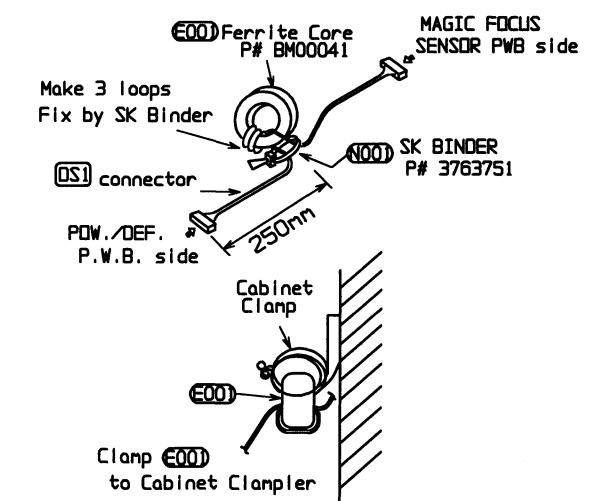
AP84 CHASSIS WIRING DIAGRAM (01/02)

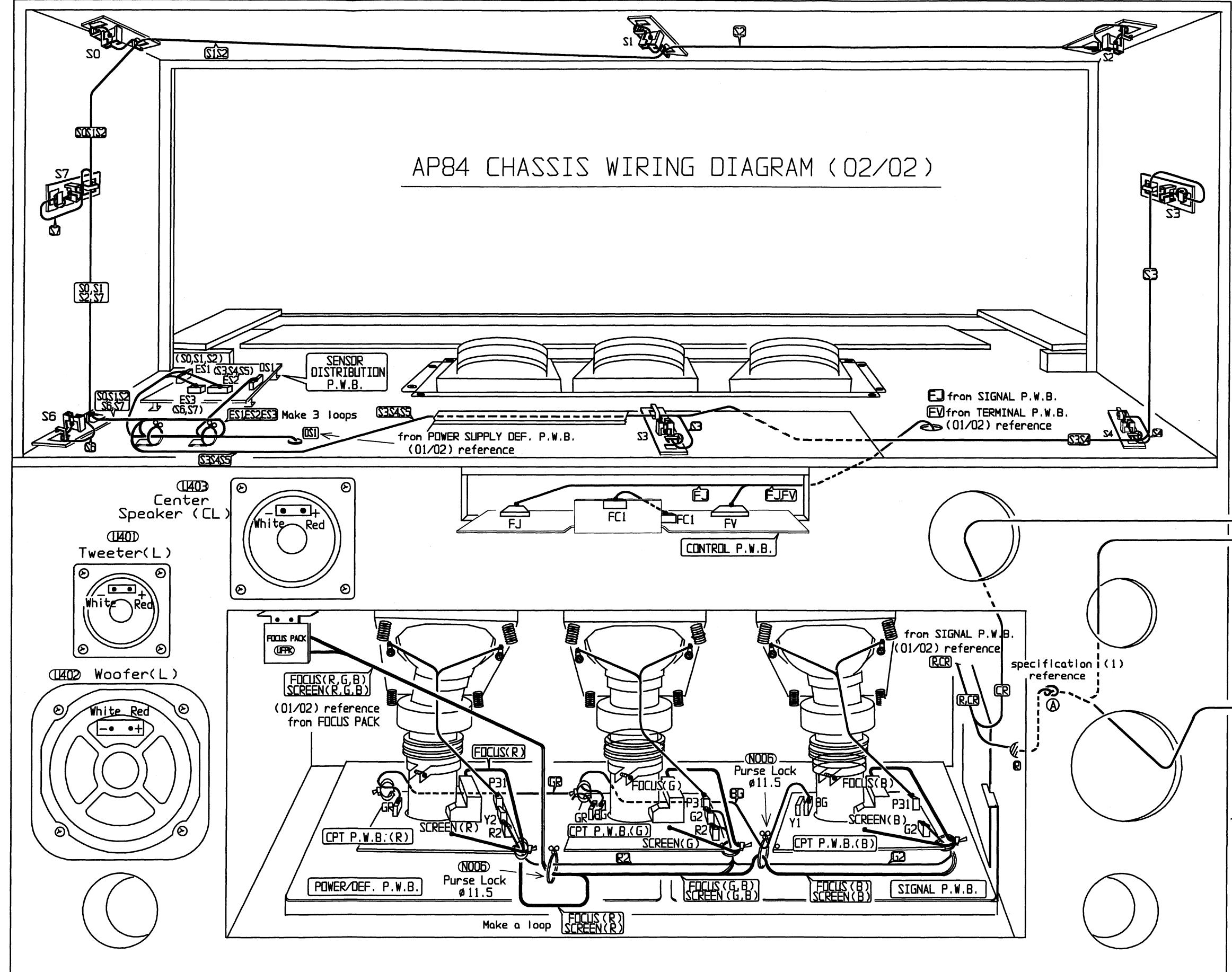


NOTE: (1)
Refer to figure below about the assembly of FOCUS PACK leads.

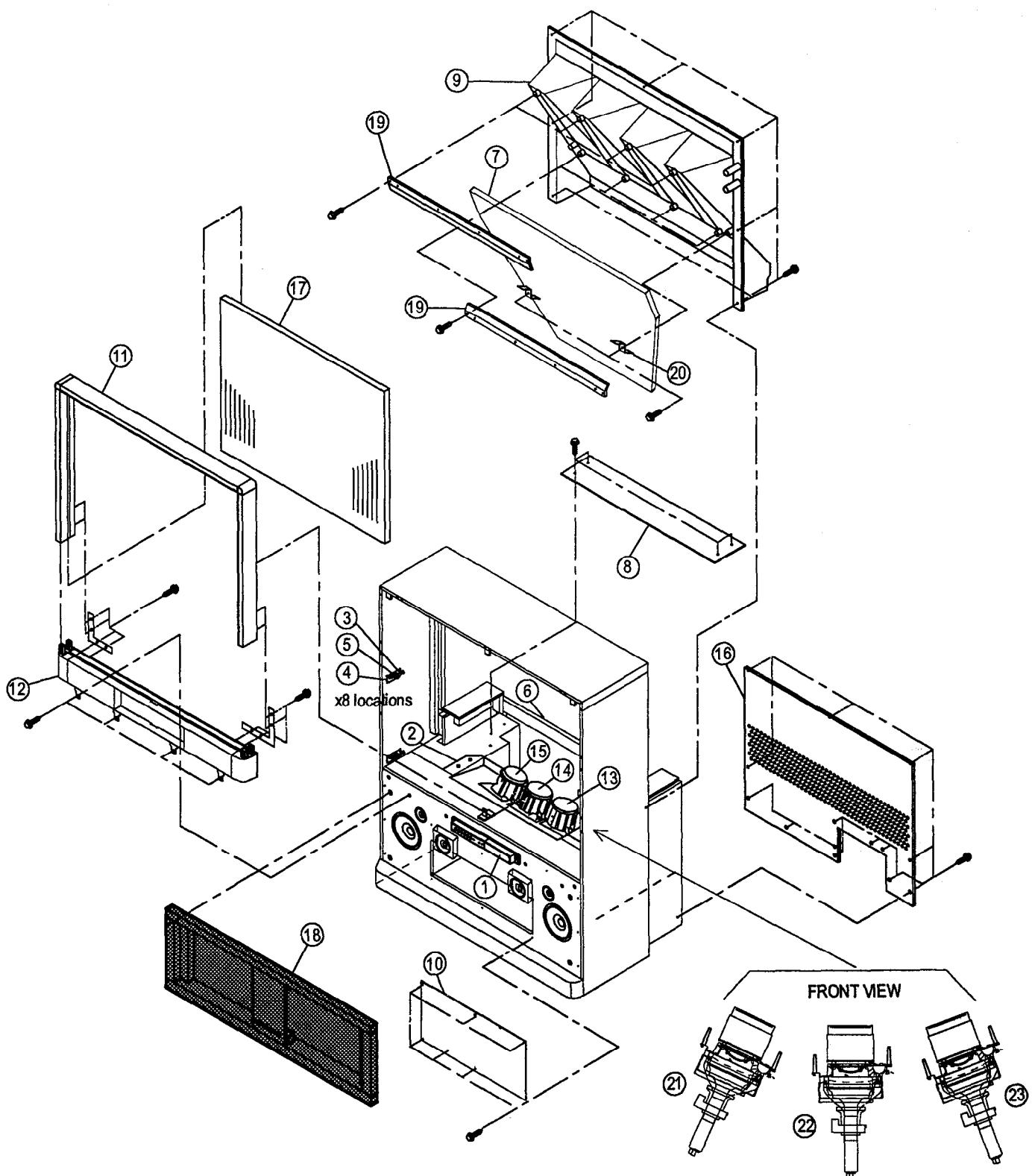


NOTE: (2)





EXPLODED VIEW



NOTES: Some parts may appear different than those shown in the Exploded View. When ordering, refer to the Replacement Parts List for correct part number. Since this Service Manual covers several models, use care to select the correct part for the model being serviced.

REPLACEMENT PARTS LIST

PRODUCT SERVICE NOTE: Components marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS

Capacitors:	Resistors:	Semiconductors:
AL: Aluminum Electrolytic	CF: Carbon Film	TR: Transistor
CD: Ceramic Disc	CC: Carbon Composition	DL: Diode
EL: Electrolytic	MF: Metal Oxide	ZD: Zener Diode
PF: Polyester Film	VR: Variable Resistor	VA: Varistor
PP: Polypropylene	WW: Wire Wound	TH: Thermistor
PL: Plastic	FR: Fuse Resistor	IC: Integrated Circuit
TA: Tantalum	MG: Metal Glaze	

CIRCUIT BLOCK	SECOND CHAR. OF SYMBOL No.	CIRCUIT BLOCK	SECOND CHAR. OF SYMBOL No.	CIRCUIT BLOCK	SECOND CHAR. OF SYMBOL No.
System Control	0	C.P.T.	8	Graphic Equalizer	G
Tuner	1	Power Supply	9	Convergence	K
Signal (Y) & Sync.	2	Signal Control (MTS)	A	Magic Focus	L
Audio	4	Signal Control	C	Control	M
Signal (Chroma)	5	(include B.P.F.)		Hor. & Vert. Det.	N
Vertical Deflection	6	V.M.	E	Surround	S
Horizontal Deflection	7	Dynamic Focus	F	Signal Control (Comp.)	Y

SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CAPACITORS					
C002	0228758R	CAP 2125 CHIP 150PFJSL50V TAPE	C064	0800326R	EL 100UF-M 16V
C003	0246464R	CD 100PF-J CH 50V TAPE	C065	0800291R	EL 10UF-M(SMG) 16V
C004	0800299R	EL 22UF-M(SMG) 16V	C067	0800291R	EL 10UF-M(SMG) 16V
C005	0893031R	CAP 2125 CHIP 1000PFBK 50V TAPE	C068	0800317R	EL 47UF-M(SMG) 16V
C015	0800291R	EL 10UF-M(SMG) 16V	C070	AN00637R	PF 0.1UF 50V TAPE
C016	0890121R	CD 33PF-J CH 50V	C071	AN00637R	PF 0.1UF 50V TAPE
C017	0890121R	CD 33PF-J CH 50V	C072	0800288R	EL 4.7UF-M(SMG) 50V
C018	0800291R	EL 10UF-M(SMG) 16V	C075	0890087R	CD 1000PF-K 50V
C019	0800282R	EL 2.2UF-M(SMG) 50V	C101	0800326R	EL 100UF-M 16V
C025	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE	C102	0800326R	EL 100UF-M 16V
C026	AN00637R	PF 0.1UF 50V TAPE	C103	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
C027	0800288R	EL 4.7UF-M(SMG) 50V	C104	0800358R	EL 1000UF-M 6.3V
C029	0228758R	CAP 2125 CHIP 150PFJSL50V TAPE	C105	0800361N	EL 1000UF 16V
C030	0800279R	EL 1.0UF-M(SMG) 50V	C106	0800358R	EL 1000UF-M 6.3V
C031	0800279R	EL 1.0UF-M(SMG) 50V	C107	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
C032	0800324R	EL 100UF-M(SMG) 6.3V	C108	0800361N	EL 1000UF 16V
C033	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE	C109	0800361N	EL 1000UF 16V
C036	0800324R	EL 100UF-M(SMG) 6.3V	C110	0800291R	EL 10UF-M(SMG) 16V
C037	AN00633R	PF 0.047UF 50V TAPE	C111	0800326R	EL 100UF-M 16V
C040	0800353R	EL 470UF-M 16V	C112	AN00624R	PF 0.01UF 50V TAPE
C041	AN00637R	PF 0.1UF 50V TAPE	C113	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
C042	0800291R	EL 10UF-M(SMG) 16V	C114	0800359R	EL 1000UF-M 10V
C043	0800351R	EL 470UF-M 6.3V	C115	AN00637R	PF 0.1UF 50V TAPE
C044	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE	C116	0800361N	EL 1000UF 16V
C045	AN00637R	PF 0.1UF 50V TAPE	C119	0800279R	EL 1.0UF-M(SMG) 50V
C046	0893048R	CAP 2125 CHIP 22000PFBK 50V TAPE	C11A	0228770R	CAP MINI-CHIP 470PF-J SL 50V TAPE
C053	AN00637R	PF 0.1UF 50V TAPE	C120	AN00637R	PF 0.1UF 50V TAPE
C054	0800326R	EL 100UF-M 16V	C121	0228756R	CAP 2125 CHIP 120PFJSL 50V TAPE
C057	0800279R	EL 1.0UF-M(SMG) 50V	C122	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
C061	0800279R	EL 1.0UF-M(SMG) 50V	C123	0800324R	EL 100UF-M(SMG) 6.3V
			C124	0800324R	EL 100UF-M(SMG) 6.3V
			C125	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
			C126	0890069R	CD 47PF-J 50V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C127	0890118R	CD 22PF-J CH 50V	C437	0800318R	EL 47UF-M 25V
C128	0800299R	EL 22UF-M(SMG) 16V	C438	0800318R	EL 47UF-M 25V
C129	0800359R	EL 1000UF-M 10V	C439	0890301R	CAP 2125 CHIP 1000PFBK 50V TAPE
C130	AN00637R	PF 0.1UF 50V TAPE	C440	0890301R	CAP 2125 CHIP 1000PFBK 50V TAPE
C131	AN00637R	PF 0.1UF 50V TAPE	C441	0800279R	EL 1.0UF-M(SMG) 50V
C132	0890353R	CAP 2125 CHIP 47000PFBK 50V TAPE	C442	0800279R	EL 1.0UF-M(SMG) 50V
C133	0228754R	CAP 2125 CHIP 100PFSL 50V TAPE	C443	0800279R	EL 1.0UF-M(SMG) 50V
C134	0228754R	CAP 2125 CHIP 100PFSL 50V TAPE	C444	0800279R	EL 1.0UF-M(SMG) 50V
C136	0800326R	EL 100UF-M 16V	C445	0800291R	EL 10UF-M(SMG) 16V
C137	0890353R	CAP 2125 CHIP 47000PFBK 50V TAPE	C446	0800279R	EL 1.0UF-M(SMG) 50V
C138	0228770R	CAP MINI-CHIP 470PF-J SL 50V TAPE	C447	0800362N	EL 1000UF-M 25V
C139	AN00637R	PF 0.1UF 50V TAPE	C448	0880198R	PP 0.22UF-J 50V
C140	0800361N	EL 1000UF 16V	C449	0800327R	EL 100UF-M 25V
C141	AN00637R	PF 0.1UF 50V TAPE	C450	0880198R	PP 0.22UF-J 50V
C142	AN00637R	PF 0.1UF 50V TAPE	C451	0880198R	PP 0.22UF-J 50V
C1C1	0800288R	EL 4.7UF-M(SMG) 50V	C504	0800291R	EL 10UF-M(SMG) 16V
C303	0800326R	EL 100UF-M 16V	C507	0890071R	CD 56PF-J 50V
C304	0800291R	EL 10UF-M(SMG) 16V	C508	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE
C305	0800291R	EL 10UF-M(SMG) 16V	C509	0890058R	CD 8PF-50V
C3A2	AN00637R	PF 0.1UF 50V TAPE	C510	0800326R	EL 100UF-M 16V
C3A3	AN00624R	PF 0.01UF 50V TAPE	C511	0890058R	CD 8PF-50V
C401	0800291R	EL 10UF-M(SMG) 16V	C512	0800291R	EL 10UF-M(SMG) 16V
C402	0284623R	EL 1UF-SME(BP) 50V	C513	AN00637R	PF 0.1UF 50V TAPE
C403	0284623R	EL 1UF-SME(BP) 50V	C514	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE
C404	0800279R	EL 1.0UF-M(SMG) 50V	C515	0244171R	CD 0.01UF-Z F 50V TAPE
C405	0800279R	EL 1.0UF-M(SMG) 50V	C516	AN00637R	PF 0.1UF 50V TAPE
C406	0893031R	CAP 2125 CHIP 1000PFBK 50V TAPE	C517	AN00637R	PF 0.1UF 50V TAPE
C407	0893031R	CAP 2125 CHIP 1000PFBK 50V TAPE	C518	0800279R	EL 1.0UF-M(SMG) 50V
C408	0800318R	EL 47UF-M 25V	C519	0800282R	EL 2.2UF-M(SMG) 50V
C409	0800318R	EL 47UF-M 25V	C520	0890115R	CD 12PF-J CH 50V
C410	0800327R	EL 100UF-M 25V	C521	AN00615R	PF 0.0022UF 50V TAPE
C411	0800279R	EL 1.0UF-M(SMG) 50V	C522	0800273R	EL 0.22UF-M 50V
C412	0800279R	EL 1.0UF-M(SMG) 50V	C523	0800326R	EL 100UF-M 16V
C413	0800327R	EL 100UF-M 25V	C524	0800326R	EL 100UF-M 16V
C414	0800317R	EL 47UF-M(SMG) 16V	C525	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE
C415	AN00637R	PF 0.1UF 50V TAPE	C526	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE
C416	0284824F	EL 2200UF 35V SMG	C527	0800326R	EL 100UF-M 16V
C417	AN00637R	PF 0.1UF 50V TAPE	C528	0284638R	EL 10UF-SME(BP) 16V
C418	AN00637R	PF 0.1UF 50V TAPE	C529	0800282R	EL 2.2UF-M(SMG) 50V
C419	0284824F	EL 2200UF 35V SMG	C530	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE
C420	0284824F	EL 2200UF 35V SMG	C531	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE
C421	0880198R	PP 0.22UF-J 50V	C532	AN00637R	PF 0.1UF 50V TAPE
C422	0258616	EL 2.2UF-M 50V	C533	AN00637R	PF 0.1UF 50V TAPE
C423	0258616	EL 2.2UF-M 50V	C534	AN00637R	PF 0.1UF 50V TAPE
C424	AN00637R	PF 0.1UF 50V TAPE	C535	0800353R	EL470UF-M 16V
C426	AN00637R	PF 0.1UF 50V TAPE	C536	AN00628R	PF 0.022UF 50V TAPE
C427	AN00637R	PF 0.1UF 50V TAPE	C537	AN00637R	PF 0.1UF 50V TAPE
C428	AN00637R	PF 0.1UF 50V TAPE	C538	0800282R	EL 2.2UF-M(SMG) 50V
C429	0800317R	EL 47UF-M(SMG) 16V	C539	AN00637R	PF 0.1UF 50V TAPE
C430	0800362N	EL 1000UF-M 25V	C540	AN00637R	PF 0.1UF 50V TAPE
C431	AN00624R	PF 0.01UF 50V TAPE	C541	AN00637R	PF 0.1UF 50V TAPE
C432	AN00637R	PF 0.1UF 50V TAPE	C542	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE
C433	AN00624R	PF 0.01UF 50V TAPE	C543	0893044R	CAP 2125 CHIP 10000PFBK 50V TAPE
C434	AN00637R	PF 0.1UF 50V TAPE	C544	0800335R	EL 220UF-M(SMG) 16V
C435	0284824F	EL 2200UF 35V SMG	C545	AN00637R	PF 0.1UF 50V TAPE
C436	0800327R	EL 100UF-M 25V	C546	0800326R	EL 100UF-M 16V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C547	AN00637R	PF 0.1UF 50V TAPE	C723	0262427F	PF 0.01UF 1.8KV
C548	0890074R	CD 100PF-J 50V	C724	AN00637R	PF 0.1UF 50V TAPE
C549	0890074R	CD 100PF-J 50V	C725	0890087R	CD 1000PF-K 50V
C550	AN00637R	PF 0.1UF 50V TAPE	C726	0244505R	CD 0.0022UF-K 500V
C551	AN00637R	PF 0.1UF 50V TAPE	C729	0259471	EL 6.8UF-M (BP) 50V
C552	AN00637R	PF 0.1UF 50V TAPE	C730	0244109R	CD 4700PF-KB 50V
C553	AN00637R	PF 0.1UF 50V TAPE	C731	0800329R	EL 100UF-M(SMG) 50V
C554	AN00637R	PF 0.1UF 50V TAPE	C740	0284667R	EL 47UF-MBPR(SME)16V
C555	0800326R	EL 100UF-M 16V	C750	0284634R	EL 4.7UF-M 50V
C556	0893044R	CAP 2125 CHIP 10000PFKB 50V TAPE	C771	0890084R	CD 560PF-K 50V
C557	AN00637R	PF 0.1UF 50V TAPE	C801	0800317R	EL 47UF-M(SMG) 16V
C558	0800291R	EL 10UF-M(SMG) 16V	C802	0800326R	EL 100UF-M 16V
C601	AN00626R	PF 0.015UF 50V TAPE	C804	0244889R	CD 2200PF-K 2KV
C602	AN00637R	PF 0.1UF 50V TAPE	C805	0800326R	EL 100UF-M 16V
C603	0284449R	EL 4.7UF-KMF 50V	C807	0890087R	CD 1000PF-K 50V
C604	0800326R	EL 100UF-M 16V	C808	0890088R	CD 0.0012UF 50V
C605	AN00619R	PF 0.0047UF 50V TAPE	C810	AN00624R	PF 0.01UF 50V TAPE
C606	AN00624R	PF 0.01UF 50V TAPE	C831	0257543F	EL 3.3UF 315V
C607	0880198R	PP 0.22UF-J 50V	C834	0244889R	CD 2200PF-K 2KV
C608	0244501R	CD 1000PF-K 500V	C835	0800326R	EL 100UF-M 16V
C609	0244501R	CD 1000PF-K 500V	C837	0890087R	CD 1000PF-K 50V
C610	0800345R	EL 330UF-M(SMG) 25V	C838	0890087R	CD 1000PF-K 50V
C611	AN00631R	PF 0.033UF 50V TAPE	C840	AN00624R	PF 0.01UF 50V TAPE
C612	0800326R	EL 100UF-M 16V	C864	0244889R	CD 2200PF-K 2KV
C613	0284446R	EL 1UF-M 50V	C865	0800326R	EL 100UF-M 16V
C614	0800347N	EL 330UF-M(SMG) 50V	C867	0890087R	CD 1000PF-K 50V
C615	0284426F	PF 2200PF-M 25V	C868	0890086R	CD 820PF-K 50V
C616	0284399R	EL 10UF-M 16V(KMF)TAPE	C870	AN00624R	PF 0.01UF 50V TAPE
C617	0284446R	EL 1UF-M 50V	 C901	AN00148S	PL (0.22UF250V)
C619	0800317R	EL 47UF-M(SMG) 16V	 C902	AN00144S	PL (0.1UF250V)
C620	AN00624R	PF 0.01UF 50V TAPE	C903	0248593F	CD 4700PF-Z 250V
C621	0298261R	TA 1MF-J 35V	C904	0248593F	CD 4700PF-Z 250V
C622	0800347N	EL 330UF-M(SMG) 50V	C905	0284296	EL 680UF-M 250V(KMH)
C632	AN00062R	PL (103UF 50V)	C906	0284296	EL 680UF-M 250V(KMH)
C633	0279859F	PF 0.1UF-K 100V	C907	0800328R	EL 100UF-M 35V
C641	0244105R	CD 2200PF-K 50V TAPE	C908	0890087R	CD 1000PF-K 50V
C701	0259153F	EL 220UF (HR) 160V	C909	0800323R	EL 47UF-M 100V
C702	0299926F	PF 0.1UF-K 200V	C910	0299977F	PP 0.0047UF-F 630V
C703	0890028M	CD 330PF-K B 50V CYLINDRICAL	C912	0890085R	CD 680PF-K 50V
C704	0244109R	CD 4700PF-KB 50V	C913	0800282R	EL 2.2UF-M(SMG) 50V
C705	0243507R	CD 330PF-K 500V TAPE	C914	AN00637R	PF 0.1UF 50V TAPE
C706	0244501R	CD 1000PF-K 500V	C915	AL00796S	EL S-LEAD 1200UF-M(LXV) 35V
 C707	0244211	CD 1000PF-K 2KV	C916	AN00624R	PF 0.01UF 50V TAPE
 C708	0262416F	PF 3900PF-J 1.8KV	C917	0244105R	CD 2200PF-K 50V TAPE
 C709	0262432F	PP 15000PF-J 1800V	C918	AL00796S	EL S-LEAD 1200UF-M(LXV) 35V
C710	0299933F	PF 0.39UF-K 200V	C919	0880198R	PP 0.22UF-J 50V
C711	0299934F	PP 0.47UF 200V	C920	0800328R	EL 100UF-M 35V
 C712	0299984F	PF 0.022UF-J 630V	C921	0800328R	EL 100UF-M 35V
C713	0800001R	EL 0.47UF-M 50V (SME)	C922	0800326R	EL 100UF-M 16V
C714	AN00628R	PF 0.022UF 50V TAPE	C923	0800328R	EL 100UF-M 35V
C715	0890089R	CD 1500PF-K 50V	C924	0800335R	EL 220UF-M(SMG) 16V
C717	0243503R	CD 150PF-K B 500V	C925	AL00796S	EL S-LEAD 1200UF-M(LXV) 35V
C718	0253983F	EL 33UF-M 350V	C926	0880198R	PP 0.22UF-J 50V
C719	0880198R	PP 0.22UF-J 50V	C927	AL00796S	EL S-LEAD 1200UF-M(LXV) 35V
C721	0243511R	CD 680PF-K 500V TAPE	C928	AL00796S	EL S-LEAD 1200UF-M(LXV) 35V
C722	0243511R	CD 680PF-K 500V TAPE	C929	0251703	EL 390UF-M 160V(KMH)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C930	AL00793S	EL S-LEAD 1200UF-M(LXV) 16V	CA69	AN00637R	PF 0.1UF 50V TAPE
C931	0800353R	EL 470UF-M 16V	CA73	0284623R	EL 1UF-SME(BP) 50V
C932	0800355N	EL 470UF-M 35V	CA74	AN00637R	PF 0.1UF 50V TAPE
C934	AL00795S	EL S-LEAD 2200UF-M(LXV) 16V	CA75	0800279R	EL 1.0UF-M(SMG) 50V
C935	0800355N	EL 470UF-M 35V	CA76	0800279R	EL 1.0UF-M(SMG) 50V
C937	AL00794S	EL S-LEAD 1500UF-M(LXV) 16V	CA77	0800326R	EL 100UF-M 16V
C939	0800328R	EL 100UF-M 35V	CA79	0284638R	EL 10UF-SME(BP) 16V
C940	0800353R	EL470UF-M 16V	CA80	0800291R	EL 10UF-M(SMG) 16V
C941	0880198R	PP 0.22UF-J 50V	CA81	0800291R	EL 10UF-M(SMG) 16V
C942	0800317R	EL 47UF-M(SMG) 16V	CA82	0800291R	EL 10UF-M(SMG) 16V
C943	0800279R	EL 1.0UF-M(SMG) 50V	CA83	0800286R	EL 4.7UF-M(SMG) 25V
C945	0800291R	EL 10UF-M(SMG) 16V	CC02	0893044R	CAP 2125 CHIP 10000PFKB 50V TAPE
C948	AL00792S	EL S-LEAD 2200UF-M(LXV) 10V	CC03	0893044R	CAP 2125 CHIP 10000PFKB 50V TAPE
C949	AN00637R	PF 0.1UF 50V TAPE	CE01	0800354R	EL 470UF-M 25V
C951	0880062R	PF 0.22UF-KEB 50V	CE02	AN00624R	PF 0.01UF 50V TAPE
C952	0800291R	EL 10UF-M(SMG) 16V	CE03	0800317R	EL 47UF-M(SMG) 16V
C953	0800291R	EL 10UF-M(SMG) 16V	CE04	0890076R	CD 150PF-K 50V
C954	0800291R	EL 10UF-M(SMG) 16V	CE05	0800326R	EL 100UF-M 16V
C955	AN00637R	PF 0.1UF 50V TAPE	CE06	0890064R	CD 18PF-J SL 50V
C956	AN00637R	PF 0.1UF 50V TAPE	CE08	AN00637R	PF 0.1UF 50V TAPE
C957	0800299R	EL 22UF-M(SMG) 16V	CE09	AN00637R	PF 0.1UF 50V TAPE
△ C958	AJ00157R	CD 1000P 400V B	CE10	0800321R	EL 47UF-M 50V
△ C959	AJ00163R	CD 2200P 400V E	CE11	0890074R	CD 100PF-J 50V
C961	AL00796S	EL S-LEAD 1200UF-M(LXV) 35V	CE12	0244541F	CD 0.01MF-K B 500V
C962	0800326R	EL 100UF-M 16V	CE13	0244541F	CD 0.01MF-K B 500V
C963	0800026R	EL 22UF-M 50V	CE14	AL00009R	AL 47UF 160V
C964	0800361N	EL 1000UF 16V	CE15	0247848R	CD 56PF-J SL 500V
C965	0800308R	EL 33UF-M(SMG) 16V	CE16	AL00007R	AL (220UF160V)
C966	0880198R	PP 0.22UF-J 50V	CE17	0244509R	CD 4700PF-KB B 500V
C967	0243509R	CD 470PF-K 500V TAPE	CE18	0890074R	CD 100PF-J 50V
C968	0243509R	CD 470PF-K 500V TAPE	CE19	AL00009R	AL 47UF 160V
C969	0244109R	CD 4700PF-KB 50V	CE20	AL00009R	AL 47UF 160V
CA01	0800279R	EL 1.0UF-M(SMG) 50V	CE21	0890077R	CD 180PF-K 50V
CA02	0800279R	EL 1.0UF-M(SMG) 50V	CE23	0890079R	CD 270PF-K 50V
CA03	0800279R	EL 1.0UF-M(SMG) 50V	CF01	0800291R	EL 10UF-M(SMG) 16V
CA04	0800279R	EL 1.0UF-M(SMG) 50V	CF02	0255520R	EL 0.47UF 250V(KME)
CA05	0800279R	EL 1.0UF-M(SMG) 50V	CF03	0262401F	PP 1000PF 1800V
CA06	0800279R	EL 1.0UF-M(SMG) 50V	CF04	AN00614R	PF 0.0018UF 50V TAPE
CA07	0800279R	EL 1.0UF-M(SMG) 50V	CF05	0800291R	EL 10UF-M(SMG) 16V
CA08	0800279R	EL 1.0UF-M(SMG) 50V	CF06	0800291R	EL 10UF-M(SMG) 16V
CA26	0800291R	EL 10UF-M(SMG) 16V	CF07	0800291R	EL 10UF-M(SMG) 16V
CA27	0800291R	EL 10UF-M(SMG) 16V	CF08	AN00624R	PF 0.01UF 50V TAPE
CA28	0800291R	EL 10UF-M(SMG) 16V	CF09	0880196R	PF 0.15UF 50V HFT
CA29	0800291R	EL 10UF-M(SMG) 16V	CF10	0880197R	PF 0.18UF 50V
CA31	0800291R	EL 10UF-M(SMG) 16V	CF12	0800326R	EL 100UF-M 16V
CA33	0800291R	EL 10UF-M(SMG) 16V	CF13	AN00624R	PF 0.01UF 50V TAPE
CA34	0800291R	EL 10UF-M(SMG) 16V	CF14	0259151F	EL 100UF 160V
CA35	0800291R	EL 10UF-M(SMG) 16V	CF15	0880198R	PP 0.22UF-J 50V
CA36	0800291R	EL 10UF-M(SMG) 16V	CF16	0800291R	EL 10UF-M(SMG) 16V
CA37	0800291R	EL 10UF-M(SMG) 16V	CF17	0244109R	CD 4700PF-KB 50V
CA38	0800317R	EL 47UF-M(SMG) 16V	CF18	0245158	CD 68PF/2KV
CA39	0800317R	EL 47UF-M(SMG) 16V	CF19	0245156	CD 22PF/2KV
CA40	0800291R	EL 10UF-M(SMG) 16V	CF20	0800326R	EL 100UF-M 16V
CA41	0800291R	EL 10UF-M(SMG) 16V	CF21	AN00624R	PF 0.01UF 50V TAPE
CA65	0800291R	EL 10UF-M(SMG) 16V	CG01	0800353R	EL 470UF-M 16V
CA68	0284623R	EL 1UF-SME(BP) 50V	CG02	0800049R	EL 100UF-M 16V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CG03	AN00637R	PF 0.1UF 50V TAPE	CG59	0893043R	CAP 2125 CHIP 8200PFKB 50V TAPE
CG04	AN00633R	PF 0.047UF 50V TAPE	CG60	0800049R	EL 100UF-M 16V
CG05	0800049R	EL 100UF-M 16V	CG61	AN00637R	PF 0.1UF 50V TAPE
CG06	0284623R	EL 1UF-SME(BP) 50V	CG62	0284638R	EL 10UF-SME(BP) 16V
CG07	AN00637R	PF 0.1UF 50V TAPE	CK01	0800353R	EL 470UF-M 16V
CG08	AN00637R	PF 0.1UF 50V TAPE	CK02	0800335R	EL 220UF-M(SMG) 16V
CG09	0284623R	EL 1UF-SME(BP) 50V	CK03	0800326R	EL 100UF-M 16V
CG10	0284621R	EL 0.47UF 50V (BP)	CK04	AN00637R	PF 0.1UF 50V TAPE
CG11	0893052R	CAP 2125 CHIP 39000PFKB 50V TAPE	CK05	0800326R	EL 100UF-M 16V
CG12	0893052R	CAP 2125 CHIP 39000PFKB 50V TAPE	CK06	AN00637R	PF 0.1UF 50V TAPE
CG13	0284621R	EL 0.47UF 50V (BP)	CK07	0800326R	EL 100UF-M 16V
CG14	0880062R	PF 0.22UF-KEB 50V	CK08	AN00637R	PF 0.1UF 50V TAPE
CG15	0893046R	CAP 2125 CHIP 15000PFKB50V TAPE	CK09	AN00637R	PF 0.1UF 50V TAPE
CG16	0893046R	CAP 2125 CHIP 15000PFKB50V TAPE	CK10	0800326R	EL 100UF-M 16V
CG17	0880062R	PF 0.22UF-KEB 50V	CK12	0890076R	CD 150PF-K 50V
CG18	0880056R	PF 0.082UF-KEB 50V	CK13	AN00637R	PF 0.1UF 50V TAPE
CG19	0893041R	CAP 2125 CHIP 5600PFKB 50V TAPE	CK14	AN00637R	PF 0.1UF 50V TAPE
CG20	0893041R	CAP 2125 CHIP 5600PFKB 50V TAPE	CK15	AN00611R	PF 0.001UF 50V TAPE
CG21	0880056R	PF 0.082UF-KEB 50V	CK16	AN00637R	PF 0.1UF 50V TAPE
CG22	0893052R	CAP 2125 CHIP 39000PFKB 50V TAPE	CK17	AN00637R	PF 0.1UF 50V TAPE
CG23	0893037R	CAP 2125 CHIP 3300PFKB 50V TAPE	CK18	AN00624R	PF 0.01UF 50V TAPE
CG24	0893037R	CAP 2125 CHIP 3300PFKB 50V TAPE	CK19	AN00624R	PF 0.01UF 50V TAPE
CG25	0893052R	CAP 2125 CHIP 39000PFKB 50V TAPE	CK20	0890076R	CD 150PF-K 50V
CG26	0893017R	CAP 2125 CHIP 18000PFKB 25V TAPE	CK21	0890076R	CD 150PF-K 50V
CG27	0893032R	CAP 2125 CHIP 1200PFKB 50V TAPE	CK22	0890076R	CD 150PF-K 50V
CG28	0893032R	CAP 2125 CHIP 1200PFKB 50V TAPE	CK23	0890076R	CD 150PF-K 50V
CG29	0893017R	CAP 2125 CHIP 18000PFKB 25V TAPE	CK24	0890076R	CD 150PF-K 50V
CG30	0893043R	CAP 2125 CHIP 8200PFKB 50V TAPE	CK25	0890076R	CD 150PF-K 50V
CG31	0228772R	CAP 2125 CHIP 560PFJSL 50V TAPE	CK27	0800356N	EL 470UF-M 50V
CG32	0228772R	CAP 2125 CHIP 560PFJSL 50V TAPE	CK28	0800356N	EL 470UF-M 50V
CG33	0893043R	CAP 2125 CHIP 8200PFKB 50V TAPE	CK29	0890076R	CD 150PF-K 50V
CG34	0284638R	EL 10UF-SME(BP) 16V	CK30	0890076R	CD 150PF-K 50V
CG35	0800015R	EL 10UF-M 16V	CK31	0890076R	CD 150PF-K 50V
CG36	0284638R	EL 10UF-SME(BP) 16V	CK32	0890076R	CD 150PF-K 50V
CG37	0800015R	EL 10UF-M 16V	CK33	0890076R	CD 150PF-K 50V
CG38	0800353R	EL 470UF-M 16V	CK34	0890076R	CD 150PF-K 50V
CG39	0800015R	EL 10UF-M 16V	CL01	AN00633R	PF 0.047UF 50V TAPE
CG40	0800015R	EL 10UF-M 16V	CL02	AN00633R	PF 0.047UF 50V TAPE
CG41	AN00633R	PF 0.047UF 50V TAPE	CL03	AN00633R	PF 0.047UF 50V TAPE
CG42	0800049R	EL 100UF-M 16V	CL04	AN00633R	PF 0.047UF 50V TAPE
CG43	0800015R	EL 10UF-M 16V	CL05	AN00633R	PF 0.047UF 50V TAPE
CG44	0800041R	EL 47UF-M 16V	CL06	AN00633R	PF 0.047UF 50V TAPE
CG45	0800015R	EL 10UF-M 16V	CL07	AN00633R	PF 0.047UF 50V TAPE
CG46	0284621R	EL 0.47UF 50V (BP)	CL08	AN00633R	PF 0.047UF 50V TAPE
CG47	0893052R	CAP 2125 CHIP 39000PFKB 50V TAPE	CL09	0800326R	EL 100UF-M 16V
CG48	0284623R	EL 1UF-SME(BP) 50V	CL10	AN00637R	PF 0.1UF 50V TAPE
CG49	AN00637R	PF 0.1UF 50V TAPE	CM01	0800023R	EL 22UF-M 16V
CG50	0880056R	PF 0.082UF-KEB 50V	CM02	0244171R	CD 0.01UF-Z F 50V TAPE
CG51	0893041R	CAP 2125 CHIP 5600PFKB 50V TAPE	CM03	0800003R	EL 1.0UF-M 50V
CG52	0893046R	CAP 2125 CHIP 15000PFKB50V TAPE	CM04	0244171R	CD 0.01UF-Z F 50V TAPE
CG53	0880062R	PF 0.22UF-KEB 50V	CM05	0244171R	CD 0.01UF-Z F 50V TAPE
CG54	0880047R	PF 0.018UF-KEB 50V	CM06	0880016R	PF 0.1UF 50V
CG55	0893032R	CAP 2125 CHIP 1200PFKB 50V TAPE	CM07	0800015R	EL 10UF-M 16V
CG56	0893037R	CAP 2125 CHIP 3300PFKB 50V TAPE	CM08	0800015R	EL 10UF-M 16V
CG57	0893052R	CAP 2125 CHIP 39000PFKB 50V TAPE	CM09	0244171R	CD 0.01UF-Z F 50V TAPE
CG58	0228772R	CAP 2125 CHIP 560PFJSL 50V TAPE	CM10	0800015R	EL 10UF-M 16V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CM11	0800015R	EL 10UF-M 16V	CS47	0800015R	EL 10UF-M 16V
CM12	0800041R	EL 47UF-M 16V	CS48	0800015R	EL 10UF-M 16V
CM13	0244171R	CD 0.01UF-Z F 50V TAPE	CS49	0800058R	EL 220UF-M 16V
CM14	0880016R	PF 0.1UF 50V	CS51	0800015R	EL 10UF-M 16V
CN01	0800279R	EL 1.0UF-M(SMG) 50V	CS52	0800003R	EL 1.0UF-M 50V
CN02	0800288R	EL 4.7UF-M(SMG) 50V	CS53	0284623R	EL 1UF-SME(BP) 50V
CN03	AN00631R	PF 0.033UF 50V TAPE	CS54	0284623R	EL 1UF-SME(BP) 50V
CN04	0890084R	CD 560PF-K 50V	CS55	0800005R	EL 2.2UF-M 50V
CN05	0800326R	EL 100UF-M 16V	CS56	0800041R	EL 47UF-M 16V
CN06	0800294R	EL 10UF-M(SMG) 50V	CS57	0800058R	EL 220UF-M 16V
CS01	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE	CS58	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
CS02	0800049R	EL 100UF-M 16V	CS59	0893044R	CAP 2125 CHIP 1000PFBK 50V TAPE
CS03	0228774R	CAP MINI-CHIP 680PF-J SL 50V TAPE	CS60	0284634R	EL 4.7UF-M 50V
CS04	0800015R	EL 10UF-M 16V	CS61	0800015R	EL 10UF-M 16V
CS05	0800015R	EL 10UF-M 16V	CS62	0800012R	EL 4.7UF-M 50V
CS06	0800015R	EL 10UF-M 16V	CS64	0800015R	EL 10UF-M 16V
CS07	0880203R	PF 0.47UF-J 50V	CS65	0893031R	CAP 2125 CHIP 1000PFBK 50V TAPE
CS08	0800041R	EL 47UF-M 16V	CS66	0800015R	EL 10UF-M 16V
CS09	0880016R	PF 0.1UF 50V	CS67	0893031R	CAP 2125 CHIP 1000PFBK 50V TAPE
CS10	0880016R	PF 0.1UF 50V	CS68	0893051R	CAP 2125 CHIP 33000PFBK 50V TAPE
CS11	0800001R	EL 0.47UF-M 50V (SME)	CS69	0893041R	CAP 2125 CHIP 5600PFBK 50V TAPE
CS12	0800012R	EL 4.7UF-M 50V	CS70	0893041R	CAP 2125 CHIP 5600PFBK 50V TAPE
CS13	0800001R	EL 0.47UF-M 50V (SME)	CS71	0893051R	CAP 2125 CHIP 33000PFBK 50V TAPE
CS14	0800012R	EL 4.7UF-M 50V	CS72	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
CS15	0880059R	PF 0.15UF-KEB 50V	CS73	0800049R	EL 100UF-M 16V
CS16	0800007R	EL 3.3UF-M 50V	CS74	0800049R	EL 100UF-M 16V
CS17	0880059R	PF 0.15UF-KEB 50V	CS75	0800049R	EL 100UF-M 16V
CS18	0893048R	CAP 2125 CHIP 22000PFBK 50V TAPE	CS76	0800015R	EL 10UF-M 16V
CS19	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE	CS78	0284638R	EL 10UF-SME(BP) 16V
CS20	0800058R	EL 220UF-M 16V	CS79	0284638R	EL 10UF-SME(BP) 16V
CS21	0800015R	EL 10UF-M 16V	CS80	0800015R	EL 10UF-M 16V
CS22	0800015R	EL 10UF-M 16V	CS93	0800015R	EL 10UF-M 16V
CS23	0800015R	EL 10UF-M 16V	CS94	0284634R	EL 4.7UF-M 50V
CS24	0800015R	EL 10UF-M 16V	CS96	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
CS25	0284623R	EL 1UF-SME(BP) 50V	CS97	0880016R	PF 0.1UF 50V
CS26	0284623R	EL 1UF-SME(BP) 50V	CS98	0284638R	EL 10UF-SME(BP) 16V
CS27	0880016R	PF 0.1UF 50V	CS99	0800015R	EL 10UF-M 16V
CS28	0880016R	PF 0.1UF 50V	CSA0	0800015R	EL 10UF-M 16V
CS29	0800001R	EL 0.47UF-M 50V (SME)	CSA1	0284638R	EL 10UF-SME(BP) 16V
CS30	0800012R	EL 4.7UF-M 50V	CSA2	0893031R	CAP 2125 CHIP 1000PFBK 50V TAPE
CS31	0800001R	EL 0.47UF-M 50V (SME)	CSA3	0893031R	CAP 2125 CHIP 1000PFBK 50V TAPE
CS32	0800012R	EL 4.7UF-M 50V	CSA4	0284638R	EL 10UF-SME(BP) 16V
CS33	0880059R	PF 0.15UF-KEB 50V	CSA5	0893051R	CAP 2125 CHIP 33000PFBK 50V TAPE
CS34	0800007R	EL 3.3UF-M 50V	CSA6	0893041R	CAP 2125 CHIP 5600PFBK 50V TAPE
CS35	0880059R	PF 0.15UF-KEB 50V	CSA7	0893041R	CAP 2125 CHIP 5600PFBK 50V TAPE
CS36	0284638R	EL 10UF-SME(BP) 16V	CSA8	0893051R	CAP 2125 CHIP 33000PFBK 50V TAPE
CS37	0284638R	EL 10UF-SME(BP) 16V	CSA9	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE
CS38	0893053R	CAP 2125 CHIP 47000PFBK 50V TAPE	CSC1	0800049R	EL 100UF-M 16V
CS39	0800058R	EL 220UF-M 16V	CSC2	0800049R	EL 100UF-M 16V
CS40	0246451R	CD 30PF-JB CH 50V	CSC3	0800015R	EL 10UF-M 16V
CS41	0246451R	CD 30PF-JB CH 50V	CSC4	0800015R	EL 10UF-M 16V
CS42	0800058R	EL 220UF-M 16V	CSC7	0800015R	EL 10UF-M 16V
CS43	0893051R	CAP 2125 CHIP 33000PFBK 50V TAPE	CSC8	0800015R	EL 10UF-M 16V
CS44	0893033R	CAP 2125 CHIP 1500PFBK 50V TAPE	CSC9	0800291R	EL 10UF-M(SMG) 16V
CS45	0893051R	CAP 2125 CHIP 33000PFBK 50V TAPE	CSE1	0800003R	EL 1.0UF-M 50V
CS46	0800003R	EL 1.0UF-M 50V	CSE2	0800003R	EL 1.0UF-M 50V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CSE3	0893035R	CAP 2125 CHIP 2200PFKB 50V TAPE	D028	2348212M	DI-MTZ-J15BTA
CSE4	0893035R	CAP 2125 CHIP 2200PFKB 50V TAPE	D029	2348212M	DI-MTZ-J15BTA
CSE7	0800015R	EL 10UF-M 16V	D030	2348212M	DI-MTZ-J15BTA
CSE9	0800042R	EL 47UF-M 25V	D031	2344041M	DI 1SS254TA/1SS270TA
CSF1	0800015R	EL 10UF-M 16V	D040	2344041M	DI 1SS254TA/1SS270TA
CSF6	0800042R	EL 47UF-M 25V	D041	2344041M	DI 1SS254TA/1SS270TA
CSF7	0800042R	EL 47UF-M 25V	D044	2344041M	DI 1SS254TA/1SS270TA
CSF8	0800051R	EL 100UF-M 25V	D045	2348102M	ZD MTZJ-5.1B TA
CSF9	0800084F	EL 1000UF-M 35V	D046	2348212M	DI-MTZ-J15BTA
CSG3	0880016R	PF 0.1UF 50V	D047	2348212M	DI-MTZ-J15BTA
CSG4	0880016R	PF 0.1UF 50V	D048	2344041M	DI 1SS254TA/1SS270TA
CSG6	0800083F	EL 1000UF-M 25V	D050	2344041M	DI 1SS254TA/1SS270TA
CSG7	0800083F	EL 1000UF-M 25V	D051	2344041M	DI 1SS254TA/1SS270TA
CSG9	0880009R	PF 0.01UF-K 50V	D053	2344041M	DI 1SS254TA/1SS270TA
CSH1	0880009R	PF 0.01UF-K 50V	D054	2344041M	DI 1SS254TA/1SS270TA
CSH4	0284638R	EL 10UF-SME(BP) 16V	D055	CH00151M	DI DSM1SD2(200V) TAPE
CSJ3	0800015R	EL 10UF-M 16V	D057	2344041M	DI 1SS254TA/1SS270TA
CSJ4	0800003R	EL 1.0UF-M 50V	D058	2344041M	DI 1SS254TA/1SS270TA
CY01	0284638R	EL 10UF-SME(BP) 16V	D059	2344041M	DI 1SS254TA/1SS270TA
CY02	0284638R	EL 10UF-SME(BP) 16V	D101	2348212M	DI-MTZ-J15BTA
CY03	0893044R	CAP 2125 CHIP 10000PFKB 50V TAPE	D106	2344041M	DI 1SS254TA/1SS270TA
CY04	0800299R	EL 22UF-M(SMG) 16V	D107	2344041M	DI 1SS254TA/1SS270TA
CY05	0800299R	EL 22UF-M(SMG) 16V	D108	2344041M	DI 1SS254TA/1SS270TA
CY06	0800299R	EL 22UF-M(SMG) 16V	D109	2344041M	DI 1SS254TA/1SS270TA
CY07	0800335R	EL 220UF-M(SMG) 16V	D111	2344041M	DI 1SS254TA/1SS270TA
CY08	0800326R	EL 100UF-M 16V	D112	2344041M	DI 1SS254TA/1SS270TA
CY09	0893053R	CAP 2125 CHIP 47000PFKB 50V TAPE	D113	2348123M	ZD MTZJ-6.2C TA
CY10	0284638R	EL 10UF-SME(BP) 16V	D116	2331815M	ZD HZ7-B2
CY11	0800291R	EL 10UF-M(SMG) 16V	D117	2335991M	ZD HZ-T33 (02 TP)
CY12	0800326R	EL 100UF-M 16V	D118	2335991M	ZD HZ-T33 (02 TP)
CY13	0893033R	CAP 2125 CHIP 1500PFKB 50V TAPE	D119	2344041M	DI 1SS254TA/1SS270TA
CY14	0800353R	EL 470UF-M 16V	D301	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
CY15	AN00637R	PF 0.1UF 50V TAPE	D401	2344041M	DI 1SS254TA/1SS270TA
CY16	0800326R	EL 100UF-M 16V	D402	2344041M	DI 1SS254TA/1SS270TA
CY17	0800317R	EL 47UF-M(SMG) 16V	D404	2344041M	DI 1SS254TA/1SS270TA
CY18	0800326R	EL 100UF-M 16V	D405	2344041M	DI 1SS254TA/1SS270TA
CY19	AN00637R	PF 0.1UF 50V TAPE	D406	2344041M	DI 1SS254TA/1SS270TA
CY20	AN00637R	PF 0.1UF 50V TAPE	D407	2344041M	DI 1SS254TA/1SS270TA
CY30	0800291R	EL 10UF-M(SMG) 16V	D408	2344041M	DI 1SS254TA/1SS270TA
CY31	0800291R	EL 10UF-M(SMG) 16V	D409	2344041M	DI 1SS254TA/1SS270TA
CY32	0800291R	EL 10UF-M(SMG) 16V	D410	2344041M	DI 1SS254TA/1SS270TA
CY33	0893044R	CAP 2125 CHIP 10000PFKB 50V TAPE	D411	2344041M	DI 1SS254TA/1SS270TA
CY34	0800326R	EL 100UF-M 16V	D412	2344041M	DI 1SS254TA/1SS270TA
CY50	0800299R	EL 22UF-M(SMG) 16V	D413	2344041M	DI 1SS254TA/1SS270TA
CY75	0284638R	EL 10UF-SME(BP) 16V	D414	2344041M	DI 1SS254TA/1SS270TA
		DIODES	D415	2344041M	DI 1SS254TA/1SS270TA
D005	2344041M	DI 1SS254TA/1SS270TA	D416	2344041M	DI 1SS254TA/1SS270TA
D013	2344041M	DI 1SS254TA/1SS270TA	D417	2344041M	DI 1SS254TA/1SS270TA
D015	2331827M	ZD HZ-9 TAPE (C1) SI 500MW 9.3V	D502	2344041M	DI 1SS254TA/1SS270TA
D020	2344041M	DI 1SS254TA/1SS270TA	D503	2344041M	DI 1SS254TA/1SS270TA
D024	2344041M	DI 1SS254TA/1SS270TA	D504	2344041M	DI 1SS254TA/1SS270TA
D025	2344041M	DI 1SS254TA/1SS270TA	D505	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM
D026	2348212M	DIO-MTZ-J15BTA	D507	2344041M	DI 1SS254TA/1SS270TA
D027	2348212M	DI-MTZ-J15BTA	D508	2344041M	DI 1SS254TA/1SS270TA
			D509	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM
			D510	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D511	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM	D837	2344041M	DI 1SS254TA/1SS270TA
D512	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM	D838	2348212M	DI-MTZ-J15BTA
D513	2344041M	DI 1SS254TA/1SS270TA	D861	2348212M	DI-MTZ-J15BTA
D514	2348082Q	ZD MTZ J T-77 4.3V 5MA	D862	2344041M	DI 1SS254TA/1SS270TA
D515	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM	D863	2344041M	DI 1SS254TA/1SS270TA
D516	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM	D867	2344041M	DI 1SS254TA/1SS270TA
D517	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM	D868	2348212M	DI-MTZ-J15BTA
D602	2344041M	DI 1SS254TA/1SS270TA	△ D901	2338313	DI RBV-406M (60V) SI 0.1USEC
D603	2348432M	DI RMPG06G	D902	CH00151M	DI DSM1SD2(200V)TAPE
D604	2348431M	DI RMPG06D	D903	CH00151M	DI DSM1SD2(200V)TAPE
D605	2344041M	DI 1SS254TA/1SS270TA	D904	CH00172M	DI DFM1SD2(200V)TAPE
D606	2344041M	DI 1SS254TA/1SS270TA	D905	CH00172M	DI DFM1SD2(200V)TAPE
D607	2334243M	ZD RD16E (B2 T2/TP/TA) SI 10MA 16.51V	D906	2348253M	ZD MTZ-J22CTA
D608	2331807M	ZD HZ-6 TAPE (C1) SI 500MW 6.1V	D907	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D609	CH00151M	DI DSM1SD2(200V)TAPE	D908	2348431M	DI RMPG06D
D610	CH00151M	DI DSM1SD2(200V)TAPE	D910	2331844M	ZD HZ12-B1
D611	CH00151M	DI DSM1SD2(200V)TAPE	D911	2331844M	ZD HZ12-B1
D612	2331154M	ZD HZ-12 (A1-3 B1-3.TA) SI 200MA 14.3V	D912	CH00183R	LIGHT EMITTING DI (SLZ-981C-06-T1)
D613	2344041M	DI 1SS254TA/1SS270TA	D913	2337952S	DI RU4YX(LF015-302)
D614	2343941M	DI RGP10G (GI)	D914	2337952S	DI RU4YX(LF015-302)
D615	2344041M	DI 1SS254TA/1SS270TA	D915	2337952S	DI RU4YX(LF015-302)
D616	2334305M	ZD RD30E (B4 T2/TP/TA) SI 5MA 30.51V	D916	2337952S	DI RU4YX(LF015-302)
D701	2344041M	DI 1SS254TA/1SS270TA	D917	CH00151M	DI DSM1SD2(200V)TAPE
△ D702	2348511G	DI RS3FS LF-U1(014-201)	D918	2348271M	ZD MTZ-J27ATA
△ D703	CH00891S	DI UF5406 (600V)	D919	2348213M	ZD MTZJ-15C TA
△ D704	CH00891S	DI UF5406 (600V)	D920	2344041M	DI 1SS254TA/1SS270TA
D705	2344041M	DI 1SS254TA/1SS270TA	D921	2348121M	ZD MTZJ-6.2A TA
D706	2344041M	DI 1SS254TA/1SS270TA	D922	2348283M	ZD MTZJ-30C TA
D708	2344041M	DI 1SS254TA/1SS270TA	D923	2344041M	DI 1SS254TA/1SS270TA
△ D709	2335042M	ZD HZ-22 (2L TP) SI 200MA 400MW	D924	2348042M	ZD MTZ-J3.0BTA
D710	2334305M	ZD RD30E (B4 T2/TP/TA) SI 5MA 30.51V	D925	2348264M	ZD MTZJ-24D TA
△ D711	CH00031M	DI AU02V1(280V)	D926	2348432M	DI RMPG06G
△ D712	CH00031M	DI AU02V1(280V)	D927	CH01042M	DI RK34 (40V)
D713	CH00901M	DI RGP02-15E 1500V 20A	D928	CH01052M	DI RK14
D714	CH00901M	DI RGP02-15E 1500V 20A	D929	CH01061F	DI RU4AM(600V)
D715	2348432M	DI RMPG06G	D931	2348283M	ZD MTZJ-30C TA
D716	2348231M	ZD MTZ-18A TA	D932	2344041M	DI 1SS254TA/1SS270TA
D717	2339612M	ZD HZS-3 TA (BLL) SI 200MA 3V	D933	2348132M	ZD MTZ-J6.8BTA
D718	2344041M	DI 1SS254TA/1SS270TA	D936	2348193M	ZD MTZJ-12C TA
D719	CH00151M	DI DSM1SD2(200V)TAPE	D937	2344041M	DI 1SS254TA/1SS270TA
D720	2334305M	ZD RD30E (B4 T2/TP/TA) SI 5MA 30.51V	D938	CH01052M	DI RK14
D721	2348193M	ZD MTZJ-12C TA	D939	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)
D722	2348151M	ZD MTZ-J8.2ATA	D940	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)
D723	2344041M	DI 1SS254TA/1SS270TA	D941	2344041M	DI 1SS254TA/1SS270TA
D724	2348123M	ZD MTZJ-6.2C TA	D942	2348132M	ZD MTZ-J6.8BTA
D725	2344041M	DI 1SS254TA/1SS270TA	D943	2344041M	DI 1SS254TA/1SS270TA
△ D726	2348511	DI RS3FS	D944	2344041M	DI 1SS254TA/1SS270TA
D777	2334243M	ZD RD16E (B2 T2/TP/TA) SI 10MA 16.51V	D945	2348432M	DI RMPG06G
D801	2348212M	DI-MTZ-J15BTA	D946	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)
D802	2344041M	DI 1SS254TA/1SS270TA	D947	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)
D803	2344041M	DI 1SS254TA/1SS270TA	D948	2344041M	DI 1SS254TA/1SS270TA
D804	2344041M	DI 1SS254TA/1SS270TA	D951	2348092M	ZD MTZ-J4.7BTA
D805	2344041M	DI 1SS254TA/1SS270TA	D952	2344041M	DI 1SS254TA/1SS270TA
D831	2348212M	DI-MTZ-J15BTA	D953	2344041M	DI 1SS254TA/1SS270TA
D832	2344041M	DI 1SS254TA/1SS270TA	D954	2348193M	ZD MTZJ-12C TA
D833	2344041M	DI 1SS254TA/1SS270TA	D955	2344041M	DI 1SS254TA/1SS270TA

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D956	2344041M	DI 1SS254TA/1SS270TA	DK04	2348431M	DI RMPG06D
D957	2348213M	ZD MTZJ-15C TA	DK05	2348431M	DI RMPG06D
D958	2344041M	DI 1SS254TA/1SS270TA	DK06	2344041M	DI 1SS254TA/1SS270TA
D959	2344041M	DI 1SS254TA/1SS270TA	DK16	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D960	2344041M	DI 1SS254TA/1SS270TA	DK17	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D961	2344041M	DI 1SS254TA/1SS270TA	DK18	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D962	2344041M	DI 1SS254TA/1SS270TA	DK19	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D963	2344041M	DI 1SS254TA/1SS270TA	DK20	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D964	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)	DK21	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D965	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)	DK22	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D966	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)	DK23	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D967	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)	DK24	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D969	2348102M	ZD MTZJ-5.1B TA	DK25	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D971	2348143M	DI MTZ-J7.5CTA	DK26	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D972	2337952S	DI RU4YX(LF015-302)	DK27	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D973	2348432M	DI RMPG06G	DK30	2348141M	ZD MTZJ-7.5A TA
D974	2348111M	ZD MTZ-J5.6ATA	DK31	2348141M	ZD MTZJ-7.5A TA
D975	2344041M	DI 1SS254TA/1SS270TA	DK32	2348141M	ZD MTZJ-7.5A TA
D976	2348432M	DI RMPG06G	DK33	2348141M	ZD MTZJ-7.5A TA
D977	CH00182R	LIGHT EMITTING DI (SLZ-381C-06-T1)	DK34	2348141M	ZD MTZJ-7.5A TA
DA01	2344041M	DI 1SS254TA/1SS270TA	DK35	2348141M	ZD MTZJ-7.5A TA
DA02	2344041M	DI 1SS254TA/1SS270TA	DK36	2348141M	ZD MTZJ-7.5A TA
DA03	2348031Q	ZD MTZ J T-77 2.7V 5MA	DK37	2348141M	ZD MTZJ-7.5A TA
DA04	2348031Q	ZD MTZ J T-77 2.7V 5MA	DK40	2331806M	ZD HZ-6 TAPE (B3) SI 500MW
DA05	2344041M	DI 1SS254TA/1SS270TA	DK41	2331806M	ZD HZ-6 TAPE (B3) SI 500MW
DA06	2344041M	DI 1SS254TA/1SS270TA	DK42	2331806M	ZD HZ-6 TAPE (B3) SI 500MW
DA07	2348031Q	ZD MTZ J T-77 2.7V 5MA	DK43	2331806M	ZD HZ-6 TAPE (B3) SI 500MW
DA08	2348031Q	ZD MTZ J T-77 2.7V 5MA	DK44	2331806M	ZD HZ-6 TAPE (B3) SI 500MW
DA09	2348212Q	ZD MTZ J T-77 15V 5MA	DL01	2348141Q	ZD MTZ J T-77 7.5V 5MA
DA10	2348212Q	ZD MTZ J T-77 15V 5MA	DL02	2348141Q	ZD MTZ J T-77 7.5V 5MA
DA11	2344041M	DI 1SS254TA/1SS270TA	DL03	2348141Q	ZD MTZ J T-77 7.5V 5MA
DA12	2344041M	DI 1SS254TA/1SS270TA	DL04	2348141Q	ZD MTZ J T-77 7.5V 5MA
DA13	2344041M	DI 1SS254TA/1SS270TA	DL05	2348141Q	ZD MTZ J T-77 7.5V 5MA
DA14	2344041M	DI 1SS254TA/1SS270TA	DL06	2348141Q	ZD MTZ J T-77 7.5V 5MA
DA15	2344041M	DI 1SS254TA/1SS270TA	DL07	2348141Q	ZD MTZ J T-77 7.5V 5MA
DA16	2344041M	DI 1SS254TA/1SS270TA	DL08	2348141Q	ZD MTZ J T-77 7.5V 5MA
DA17	2348052Q	ZD MTZ J T-77 3.3V 5MA	DL10	2344041M	DI 1SS254TA/1SS270TA
DA18	2348031Q	ZD MTZ J T-77 2.7V 5MA	DL11	2344041M	DI 1SS254TA/1SS270TA
DA19	2344041M	DI 1SS254TA/1SS270TA	DL12	2344041M	DI 1SS254TA/1SS270TA
DC03	2348212Q	ZD MTZ J T-77 15V 5MA	DL13	2344041M	DI 1SS254TA/1SS270TA
DE03	2344041M	DI 1SS254TA/1SS270TA	DL14	2344041M	DI 1SS254TA/1SS270TA
DE04	CH00151M	DI DSM1SD2(200V)TAPE	DL15	2344041M	DI 1SS254TA/1SS270TA
DE05	CH00151M	DI DSM1SD2(200V)TAPE	DL16	2344041M	DI 1SS254TA/1SS270TA
DE06	CH00151M	DI DSM1SD2(200V)TAPE	DL17	2344041M	DI 1SS254TA/1SS270TA
DE07	CH00151M	DI DSM1SD2(200V)TAPE	DL20	2348123Q	ZD MTZ J T-77 6.2V 5MA
DF01	2344041M	DI 1SS254TA/1SS270TA	DL21	2348123Q	ZD MTZ J T-77 6.2V 5MA
DF02	2344041M	DI 1SS254TA/1SS270TA	DL22	2348123Q	ZD MTZ J T-77 6.2V 5MA
DF03	2344041M	DI 1SS254TA/1SS270TA	DL23	2348123Q	ZD MTZ J T-77 6.2V 5MA
DF04	2338531M	DI EG-01C (V) SI 0.5A	DL24	2348123Q	ZD MTZ J T-77 6.2V 5MA
DF05	2344041M	DI 1SS254TA/1SS270TA	DL25	2348123Q	ZD MTZ J T-77 6.2V 5MA
DF07	2344041M	DI 1SS254TA/1SS270TA	DL26	2348123Q	ZD MTZ J T-77 6.2V 5MA
DF08	2344041M	DI 1SS254TA/1SS270TA	DL27	2348123Q	ZD MTZ J T-77 6.2V 5MA
DF09	2344041M	DI 1SS254TA/1SS270TA	DL28	2331827Q	ZD HZ-9 TAPE (C1)TD
DG01	2348103M	ZD MTZJ-5.1C TA	DL30	2348161Q	ZD MTZ J T-77 9.1V 5MA
DG02	2348103M	ZD MTZJ-5.1C TA	DL31	2348161Q	ZD MTZ J T-77 9.1V 5MA
DK01	2339551M	DI ED14(V1) SI 5MA 45V	DL32	2348161Q	ZD MTZ J T-77 9.1V 5MA

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
DL33	2348161Q	ZD MTZ J T-77 9.1V 5MA	U101	HC00311	TUNER UNIT V6-A30FT
DL34	2348161Q	ZD MTZ J T-77 9.1V 5MA	U102	2429691	FE TUNER V8-A68FT
DL35	2348161Q	ZD MTZ J T-77 9.1V 5MA	U301	HP00701	3D Y/C SEP UNIT KC-301
DL36	2348161Q	ZD MTZ J T-77 9.1V 5MA	△ UFPK	AZ00005	FOCUS PACK TYPE MHF116
DL37	2348161Q	ZD MTZ J T-77 9.1V 5MA	UKDG	CS00152	DIGITAL CONVERGENCE UNIT (HC2092)
DM01	2344041M	DI 1SS254TA/1SS270TA			
DM02	2344041M	DI 1SS254TA/1SS270TA			
DM03	CH00231	LED SLH-56VC3F			
DM04	2348212M	DI-MTZ-J15BTA	I001	CP04295U	MN1876478HB2
DM05	2348212M	DI-MTZ-J15BTA	I004	CP05272U	E2PROM M24C16-BN6
DM06	2348212M	DI-MTZ-J15BTA	I006	2015711R	IC HD74HC4053FPT
DM07	2348212M	DI-MTZ-J15BTA	I007	2000541	IC M51951BSL
DM08	2348212M	DI-MTZ-J15BTA	I008	2020342	IC MM1115XS
DM09	2348212M	DI-MTZ-J15BTA	I102	CP05241U	IC Z9035612PSCR3611
DM10	2348212M	DI-MTZ-J15BTA	I103	2000541	IC M51951BSL
DM11	2348212M	DI-MTZ-J15BTA	I104	2003421	IC UPC7805AHF
DN01	2344041M	DI 1SS254TA/1SS270TA	I105	2015494R	HD74HC32FPTR/ER
DN02	2344041M	DI 1SS254TA/1SS270TA	I106	2003421	IC UPC7805AHF
DN03	2344041M	DI 1SS254TA/1SS270TA	I301	2020341	IC MM1111XS
DN04	2344041M	DI 1SS254TA/1SS270TA	I401	2004751	IC TA8200AH
DN05	2348071M	ZD MTZJ-3.9A TA	I402	2004751	IC TA8200AH
DN06	2344041M	DI 1SS254TA/1SS270TA	I501	CP03552U	IC TA1222BN
DN07	2344041M	DI 1SS254TA/1SS270TA	I503	CK08951R	MM1389XFBE
DN08	CH00151M	DI DSM1SD2(200V)TAPE	I601	2003541	IC LA7838
DN09	2331849M	ZD HZ12C3 (TA) SI 500MW	I602	2365452	IC NJM2903D
DN10	2344041M	DI 1SS254TA/1SS270TA	△ I901	CZ00451	HYBRID IC (STR-M6811A)
DN11	2344041M	DI 1SS254TA/1SS270TA	△ I902	2000465	IC PS2501-1 (KC/LC)
DS01	2344041M	DI 1SS254TA/1SS270TA	△ I903	2000465	IC PS2501-1 (KC/LC)
DS02	2344041M	DI 1SS254TA/1SS270TA	△ I904	2000465	IC PS2501-1 (KC/LC)
DS03	2344041M	DI 1SS254TA/1SS270TA	△ I905	2381349	HYBRID IC (SE120N:+B CONT.)
DS04	2348103M	ZD MTZJ-5.1C TA	I908	2003424	IC UPC7812AHF
DS05	CH00151M	DI DSM1SD2(200V)TAPE	I909	CP03163	ANALOG MONOLITHIC UPC7912AHF
DS06	CH00151M	DI DSM1SD2(200V)TAPE	△ I910	CP03912F	ANALOG MONOLITHIC IC (SI-8402L)
DS12	2344041M	DI 1SS254TA/1SS270TA	I911	CP03923F	ANALOG MONOLITHIC IC (SI-8090S)
DS14	2344041M	DI 1SS254TA/1SS270TA	I912	CP03923F	ANALOG MONOLITHIC IC (SI-8090S)
DS15	2344041M	DI 1SS254TA/1SS270TA	I913	CP03922F	ANALOG MONOLITHIC IC (SI-8050S)
DY01	2344041M	DI 1SS254TA/1SS270TA	IA02	CK06362R	DIGITAL MONO. IC (MC14052BFEL)
DY02	2348212Q	ZD MTZ J T-77 15V 5MA	IG01	CP02771U	GRAPHIC EQUALIZER IC
DY03	2348212Q	ZD MTZ J T-77 15V 5MA	IG02	CK07141R	ANALOG MONO. IC (BA4558F-E2)
DY04	2348212Q	ZD MTZ J T-77 15V 5MA	IG03	CK07141R	ANALOG MONO. IC (BA4558F-E2)
DY05	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM	IG04	CK07141R	ANALOG MONO. IC (BA4558F-E2)
DY06	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM	IG05	CK07141R	ANALOG MONO. IC (BA4558F-E2)
DY07	2348163Q	ZD MTZJ T72 9.1V 5MA 26MM	IG06	CK07141R	ANALOG MONO. IC (BA4558F-E2)
		FUSES	IG07	CK07141R	ANALOG MONO. IC (BA4558F-E2)
△ F901	2722358	FUSE AC05A	IG08	CK07141R	ANALOG MONO. IC (BA4558F-E2)
		COMPOUND COMPONENTS	IG09	CK07141R	ANALOG MONO. IC (BA4558F-E2)
H005	2791754R	CONDENSER WITH 3 TERMINAL 100PF	IG10	CP02771U	GRAPHIC EQUALIZER IC
H006	2791754R	CONDENSER WITH 3 TERMINAL 100PF	IG11	CK07141R	ANALOG MONO. IC (BA4558F-E2)
△ H901	2793312	CP-EXN-471P365L	IG12	CK07141R	ANALOG MONO. IC (BA4558F-E2)
HM01	CZ00522	R/C RECEIVER UNIT (TYPE SBX1981-52)	IG13	CK07141R	ANALOG MONO. IC (BA4558F-E2)
U002	HP00094	PINP UNIT KC-010S	IG14	CK07141R	ANALOG MONO. IC (BA4558F-E2)
U003	CS00241	HCA031 ASY (GUIDE PLUS UNIT)	IG15	CK07141R	ANALOG MONO. IC (BA4558F-E2)
			IK01	2003421	IC UPC7805AHF
			IK02	CP01631R	ICL-PST9142
			IK03	2003421	IC UPC7805AHF
			IK04	CZ00431	HYBRID IC (STK392-110)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
IK05	CZ00431	HYBRID IC (STK392-110)	L906	BH00201R	FILTER COIL 10UH
IS01	CP00801U	IC LA2785	L907	BH00214R	FILTER COIL 100UH
IS02	CK07141R	ANALOG MONO. IC (BA4558F-E2)	L908	BV00741	PL-CHOPPER COIL(220)
IS03	CP00791U	IC LV1010N	L909	BV00741	PL-CHOPPER COIL(220)
IS04	CK07141R	ANALOG MONO. IC (BA4558F-E2)	L910	BH00212R	FILTER COIL 68UH
IS05	2020001	IC TDA9860	L911	BV00741	PL-CHOPPER COIL(220)
IS08	CK07141R	ANALOG MONO. IC (BA4558F-E2)	L912	BH00214R	FILTER COIL 100UH
IS09	CP03931U	AN5262N	L913	BH00214R	FILTER COIL 100UH
IS10	2020001	IC TDA9860	L914	BH00214R	FILTER COIL 100UH
IS11	2004751	IC TA8200AH	L915	BH00201R	FILTER COIL 10UH
IS12	CP02601	AN5285K	L917	BH00214R	FILTER COIL 100UH
IY01	2020452	ANALOG MONOLITHIC IC (CXA1545AS)	L919	BH00201R	FILTER COIL 10UH
IY02	2003423	IC UPC7893AHF	L921	2161152	FILTER COIL
COILS			L922	BH00214R	FILTER COIL 100UH
COILS			L923	BH00214R	FILTER COIL 100UH
COILS			L924	2122653M	FERRITE CORE 1.65UH TAPE
L002	2123781R	FILTER COIL 101K	L925	2122652M	FERRITE CORE
L003	2123781R	FILTER COIL 101K	L926	2122652M	FERRITE CORE
L004	BH00697R	COIL 100UH	L927	2122652M	FERRITE CORE
L101	BH00697R	COIL 100UH	L930	2122653M	FERRITE CORE 1.65UH TAPE
L102	BH00697R	COIL 100UH	L931	2122653M	FERRITE CORE 1.65UH TAPE
L103	2123781R	FILTER COIL 101K	LA02	BH00697R	COIL 100UH
L104	2123781R	FILTER COIL 101K	LA03	BH00697R	COIL 100UH
L105	2123781R	FILTER COIL 101K	LA06	BH00697R	COIL 100UH
L106	2123781R	FILTER COIL 101K	LE01	2123097Q	LAL02 TYPE AXIAL COIL 3.9UH-K(26)
L107	2123781R	FILTER COIL 101K	LE02	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L110	2123781R	FILTER COIL 101K	LE03	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L111	2123781R	FILTER COIL 101K	LE04	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L114	BH00214R	FILTER COIL 100UH	LF01	BH00229R	COIL 472K-1T7608A
L303	BH00697R	COIL 100UH	LF02	BH00229R	COIL 472K-1T7608A
L401	2122652M	FERRITE CORE	LG01	2123781R	FILTER COIL 101K
L402	2122652M	FERRITE CORE	LG02	2123781R	FILTER COIL 101K
L403	2122652M	FERRITE CORE	LK01	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L503	BH00697R	COIL 100UH	LK02	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L504	BH00697R	COIL 100UH	LK03	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L505	BH00697R	COIL 100UH	LK04	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L506	BH00697R	COIL 100UH	LK05	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L507	BH00697R	COIL 100UH	LK06	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L508	2123112Q	COIL-AXIAL 47UH-K(26)	LK07	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L509	BH00697R	COIL 100UH	LK08	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L601	BZ00843	CHOKE COIL 330UH SL1720	LK09	2123462M	FERRITE BEADS CORE B 2.3UH
L602	2123461M	FERRITE BEADS B 0.8 MH	LK10	2123462M	FERRITE BEADS CORE B 2.3UH
L701	BH00212R	FILTER COIL 68UH	LK11	2123462M	FERRITE BEADS CORE B 2.3UH
L702	2123461M	FERRITE BEADS B 0.8 MH	LK12	2123462M	FERRITE BEADS CORE B 2.3UH
L703	2123461M	FERRITE BEADS B 0.8 MH	LL01	BH00697R	COIL 100UH
L704	2123461M	FERRITE BEADS B 0.8 MH	LS01	2123763R	RADIAL COIL 101K(TYPE EL0405)
L705	BZ00845	CHOKE COIL 680UH SL1720	LS02	2123763R	RADIAL COIL 101K(TYPE EL0405)
L706	BH00217R	FILTER COIL 180UH	LS03	2123763R	RADIAL COIL 101K(TYPE EL0405)
L708	BH00206R	FILTER COIL 27UH	LS05	2123763R	RADIAL COIL 101K(TYPE EL0405)
L709	BZ02041	H.LINEARITY COIL 82UH	LS06	2123763R	RADIAL COIL 101K(TYPE EL0405)
L710	BZ02042	H.LINEARITY COIL 32UH	LY01	BH00697R	COIL 100UH
L720	BH00228R	COIL 332K-1T7608A	LY03	BH00697R	COIL 100UH
 L901	BZ01841	LX-LINE FILTER(102)	LY04	BH00697R	COIL 100UH
 L902	BZ01831	LX-LINE FILTER(382)	LY05	BH00697R	COIL 100UH
 L903	BZ01841	LX-LINE FILTER(102)	LY06	2123781R	FILTER COIL 101K
L905	BH00201R	FILTER COIL 10UH			

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		TRANSISTORS		Q513	TR CHIP (2SC2412KQ/R)
				Q514	TR CHIP (2SC2412KQ/R)
				Q515	2SA1037KT146Q/R
				Q516	2SA1037KT146Q/R
				Q517	2SA1037KT146Q/R
				Q519	TR CHIP (2SC2412KQ/R)
				Q520	2SA1037KT146Q/R
				Q521	2SA1037KT146Q/R
				Q601	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q602	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q603	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q604	TR 2SC1213A (C)
				Q605	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q606	CF00611 TR 2SC3969(AB) 400V
				Q607	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q608	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q609	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q701	TR 2SC3116 (S/T)
				Q702	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q703	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q705	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q710	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q711	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q712	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
			⚠ Q777	2315274F	TR 2SC4589-05 (1500V)
				Q801	2312372F TR 2SC3942
				Q802	2320663M TR 2SC1213A (C)
				Q803	2320591M TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q804	2320591M TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q805	2320591M TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q806	2320637M TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q831	2312372F TR 2SC3942
				Q832	2320663M TR 2SC1213A (C)
				Q833	2320591M TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q834	2320591M TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q861	2312372F TR 2SC3942
				Q862	2320663M TR 2SC1213A (C)
				Q863	2320591M TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q864	2320591M TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q901	2312171 TR 2SC3852
				Q902	2312171 TR 2SC3852
				Q903	2321112M TR2SA778AK(02 TAPE)
				Q905	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q906	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q907	TR 2SC2610-05 TZ TAPE
				Q908	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q909	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q910	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q912	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q913	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
			⚠ Q914	2323782R	THYRISTOR 03P2M(TA)
				Q916	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				Q917	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
				Q918	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
				QA01	TR CHIP (2SC2412KQ/R)
				QA02	2SA1037KT146Q/R

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
QA03	2325691R	TR CHIP (2SC2412KQ/R)	QL14	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
QA04	2325781R	2SA1037KT146Q/R	QL15	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
QA05	2325691R	TR CHIP (2SC2412KQ/R)	QL16	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
QA06	2325691R	TR CHIP (2SC2412KQ/R)	QL17	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
QA07	2325691R	TR CHIP (2SC2412KQ/R)	QM01	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QA09	2325691R	TR CHIP (2SC2412KQ/R)	QM02	2312992	PHOTO TR RPT-38PT3F (M)
QA11	2325691R	TR CHIP (2SC2412KQ/R)	QM03	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QA12	2325691R	TR CHIP (2SC2412KQ/R)	QM04	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QA72	2325691R	TR CHIP (2SC2412KQ/R)	QN01	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QA73	2325691R	TR CHIP (2SC2412KQ/R)	QN02	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QA74	2325691R	TR CHIP (2SC2412KQ/R)	QN03	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QA75	2325691R	TR CHIP (2SC2412KQ/R)	QN04	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
QA76	2325691R	TR CHIP (2SC2412KQ/R)	QN05	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QA77	2325691R	TR CHIP (2SC2412KQ/R)	QN06	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
QA78	2325781R	2SA1037KT146Q/R	QS01	2325691R	TR CHIP (2SC2412KQ/R)
QA79	2325781R	2SA1037KT146Q/R	QS18	2325691R	TR CHIP (2SC2412KQ/R)
QA80	2325691R	TR CHIP (2SC2412KQ/R)	QS20	2325691R	TR CHIP (2SC2412KQ/R)
QE01	2320598M	TR 2SC458 (B TZ/C TZ/D TZ)	QS21	2325691R	TR CHIP (2SC2412KQ/R)
QE02	2320598M	TR 2SC458 (B TZ/C TZ/D TZ)	QY01	2325691R	TR CHIP (2SC2412KQ/R)
QE03	2320598M	TR 2SC458 (B TZ/C TZ/D TZ)	QY02	2325691R	TR CHIP (2SC2412KQ/R)
QE04	2320598M	TR 2SC458 (B TZ/C TZ/D TZ)	QY03	2325781R	2SA1037KT146Q/R
QE05	2320598M	TR 2SC458 (B TZ/C TZ/D TZ)	QY04	2325691R	TR CHIP (2SC2412KQ/R)
QE06	2320647M	TR 2SC1213 (C 21TZ/D21TZ) SI 80MHZ400MW	QY05	CA11264R	PHOTO TR(DTC114EKA)
QE07	2321351M	TR 2SA836/844D/E 100MA 200MW 200MHZSI	QY06	2325691R	TR CHIP (2SC2412KQ/R)
QE08	CF00531	TR 2SA1964 160V	QY07	2326021M	TR 2SC1741S P/R/Q (TP) 250MHZ 300MW
QE09	CF00541	TR 2SC5248 160V	QY08	2325691R	TR CHIP (2SC2412KQ/R)
QE10	2320598M	TR 2SC458 (B TZ/C TZ/D TZ)	QY10	2325691R	TR CHIP (2SC2412KQ/R)
QE11	2320598M	TR 2SC458 (B TZ/C TZ/D TZ)	QY11	2325781R	2SA1037KT146Q/R
QE12	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QY51	2325781R	2SA1037KT146Q/R
QF01	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QY54	2325691R	TR CHIP (2SC2412KQ/R)
QF03	2320663M	TR 2SC1213A (C)	QY57	2325691R	TR CHIP (2SC2412KQ/R)
QF04	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QY58	2325691R	TR CHIP (2SC2412KQ/R)
QF05	2320663M	TR 2SC1213A (C)	QY59	2325781R	2SA1037KT146Q/R
QF06	2315341F	ST-2SC4632LS-CB7	QY60	2325691R	TR CHIP (2SC2412KQ/R)
QF07	2315341F	ST-2SC4632LS-CB7	QY61	2325691R	TR CHIP (2SC2412KQ/R)
QF08	2315341F	ST-2SC4632LS-CB7	QY62	2325781R	2SA1037KT146Q/R
QF09	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QY63	2325691R	TR CHIP (2SC2412KQ/R)
QF10	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW			RESISTORS
QF11	2320663M	TR 2SC1213A (C)			
QF12	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R001	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QF13	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R002	0195947R	RES 2125 CHIP 1/10W 82KJ TAPE
QF14	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R003	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
QF15	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R004	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
QF16	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R005	0700063M	CF 1/16W 47K-JB
QF17	2326873R	TR DTC144ES TP	R007	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
QK01	2312171	TR 2SC3852	R008	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
QK02	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R009	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QK03	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R010	0195916R	RES 2125 CHIP 1/16W 4.7KJ TAPE
QK04	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R011	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
QK06	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R012	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
QK07	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R013	0700054M	CF 1/16W 10K-JB
QK08	2320591M	TR 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R014	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QL10	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R015	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
QL11	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R016	0700051M	CF 1/16W 5.6K-JB
QL12	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R021	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QL13	2320637M	TR 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW			

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R022	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0A2	0700041M	CF 1/16W 1.0K-JB
R023	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R0A4	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R024	0700054M	CF 1/16W 10K-JB	R0A8	0700041M	CF 1/16W 1.0K-JB
R025	0700041M	CF 1/16W 1.0K-JB	R0A9	0700041M	CF 1/16W 1.0K-JB
R026	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R0C1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R029	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0C3	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
R034	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R0C4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R035	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R0C5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R036	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0C6	0700027M	CF 1/16W 100-JB
R037	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R0C7	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE
R038	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0E2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R040	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0E3	0114149M	CF SRD 1/4 PF 560-J
R041	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0E4	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
R042	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R0E5	0700041M	CF 1/16W 1.0K-JB
R043	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0E6	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
R044	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R0E7	0700055M	CF 1/16W 12K-JB
R045	0700041M	CF 1/16W 1.0K-JB	R0E8	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R046	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R0F7	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R047	0700041M	CF 1/16W 1.0K-JB	R0F8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R048	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R0F9	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R049	0700041M	CF 1/16W 1.0K-JB	R0G1	0100123M	CF 1/8W 270K-JB
R050	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R0G5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R051	0700041M	CF 1/16W 1.0K-JB	R0G6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R053	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0G7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R055	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0G8	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R056	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0G9	0700041M	CF 1/16W 1.0K-JB
R058	0700041M	CF 1/16W 1.0K-JB	R0H1	0700041M	CF 1/16W 1.0K-JB
R059	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R0H2	0195916R	RES 2125 CHIP 1/16W 4.7KJ TAPE
R060	0700054M	CF 1/16W 10K-JB	R0H3	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
R061	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R0H4	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R062	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R0H5	0195916R	RES 2125 CHIP 1/16W 4.7KJ TAPE
R063	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R0H6	0195881R	RES 2125 CHIP 1/16W 180J TAPE
R064	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R0H7	0195947R	RES 2125 CHIP 1/10W 82KJ TAPE
R066	0700027M	CF 1/16W 100-JB	R0H8	0700064M	CF 1/16W 56K-JB
R067	0700051M	CF 1/16W 5.6K-JB	R0L5	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R068	0700027M	CF 1/16W 100-JB	R0L6	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R069	0700041M	CF 1/16W 1.0K-JB	R0L8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R070	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R0M2	0195916R	RES 2125 CHIP 1/16W 4.7KJ TAPE
R071	0700041M	CF 1/16W 1.0K-JB	R0M3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R072	0700058M	CF 1/16W 22K-JB	R0M4	AW00074	TRIMMER RES
R073	0700041M	CF 1/16W 1.0K-JB	R0M5	0700032M	CF 1/16W 220-JB
R074	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	R0M6	AW00074	TRIMMER RES
R075	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	R0M7	0700032M	CF 1/16W 220-JB
R076	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0M8	AW00074	TRIMMER RES
R078	0700027M	CF 1/16W 100-JB	R0M9	0700032M	CF 1/16W 220-JB
R081	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R0N1	0700041M	CF 1/16W 1.0K-JB
R082	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R0N2	0700041M	CF 1/16W 1.0K-JB
R083	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0N3	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R086	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0N4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R087	0700041M	CF 1/16W 1.0K-JB	R0N8	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R088	0700041M	CF 1/16W 1.0K-JB	R0N9	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
R089	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0P1	0700041M	CF 1/16W 1.0K-JB
R090	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0P2	0700054M	CF 1/16W 10K-JB
R093	0700067M	CF 1/16W 100K-JB	R0P3	0700041M	CF 1/16W 1.0K-JB
R096	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R0P5	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
R099	0700041M	CF 1/16W 1.0K-JB	R0P6	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R0P7	0700041M	CF 1/16W 1.0K-JB	R144	0700054M	CF 1/16W 10K-JB
R0P8	0700058M	CF 1/16W 22K-JB	R146	0700027M	CF 1/16W 100-JB
R0P9	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R147	0700027M	CF 1/16W 100-JB
R0R1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R148	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0R3	0700027M	CF 1/16W 100-JB	R149	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0R4	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R150	0195893R	RES 2125 CHIP 1/16W 560J TAPE
R0R5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R151	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R0R6	0700041M	CF 1/16W 1.0K-JB	R152	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R0R7	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R153	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R0R8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R154	0700036M	CF 1/16W 470-JB
R0R9	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R155	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0S1	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R156	0700065M	CF 1/16W 68K-JB
R0S2	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R157	0179600M	MG 10M-J TAPE
R0T1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R158	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0T2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R159	0700027M	CF 1/16W 100-JB
R0T3	0700058M	CF 1/16W 22K-JB	R160	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R0T4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R163	0700027M	CF 1/16W 100-JB
R0T5	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R164	0700027M	CF 1/16W 100-JB
R0T6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R165	0700027M	CF 1/16W 100-JB
R0T7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R166	0700027M	CF 1/16W 100-JB
R0T8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R167	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R0T9	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R168	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R0U1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R169	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R101	0700039M	CF 1/16W 820-JB	R170	0195916R	RES 2125 CHIP 1/16W 4.7KJ TAPE
R102	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R171	0195916R	RES 2125 CHIP 1/16W 4.7KJ TAPE
R103	0195895R	RES 2125 CHIP 1/10W 680J TAPE	R172	0195916R	RES 2125 CHIP 1/16W 4.7KJ TAPE
R104	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R173	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R105	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R174	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R106	0195895R	RES 2125 CHIP 1/10W 680J TAPE	R175	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R107	0700054M	CF 1/16W 10K-JB	R176	0100041M	CF 1/8W 100-JB
R109	0700063M	CF 1/16W 47K-JB	R177	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R110	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R178	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R111	0700027M	CF 1/16W 100-JB	R179	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R112	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R180	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R113	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R181	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R114	0700041M	CF 1/16W 1.0K-JB	R182	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R115	0700041M	CF 1/16W 1.0K-JB	R183	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R116	0700041M	CF 1/16W 1.0K-JB	R184	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R118	0100059M	CF 1/8W 560-JB	R185	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R119	0100059M	CF 1/8W 560-JB	R186	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R121	0700041M	CF 1/16W 1.0K-JB	R187	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R122	0700041M	CF 1/16W 1.0K-JB	R194	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
R123	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R195	0195897R	RES 2125 CHIP 1/16W 820J TAPE
R124	0700027M	CF 1/16W 100-JB	R196	0700042M	CF 1/16W 1.2K-JB
R125	0700027M	CF 1/16W 100-JB	R197	0700042M	CF 1/16W 1.2K-JB
R127	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R198	0700042M	CF 1/16W 1.2K-JB
R128	0700041M	CF 1/16W 1.0K-JB	R199	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
R129	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R1A2	0700023M	CF 1/16W 47-J
R132	0700063M	CF 1/16W 47K-JB	R1A3	0700027M	CF 1/16W 100-JB
R133	0700063M	CF 1/16W 47K-JB	R1A8	0700054M	CF 1/16W 10K-JB
R134	0700041M	CF 1/16W 1.0K-JB	R1A9	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
R135	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R1B2	0700041M	CF 1/16W 1.0K-JB
R139	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R1C1	0195893R	RES 2125 CHIP 1/16W 560J TAPE
R140	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R200	0700055M	CF 1/16W 12K-JB
R141	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R311	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R142	0700054M	CF 1/16W 10K-JB	R312	0195883R	RES 2125 CHIP 1/16W 220J TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R313	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R3L2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R314	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R3L5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R315	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R3L6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3A4	0700041M	CF 1/16W 1.0K-JB	R3L7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R3A5	0700041M	CF 1/16W 1.0K-JB	R3L8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3A6	0700032M	CF 1/16W 220-JB	R3L9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R3A7	0700032M	CF 1/16W 220-JB	R3M1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R3A8	0700032M	CF 1/16W 220-JB	R3M2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R3C3	0700048M	CF 1/16W 3.9K-JB	R3M3	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3C4	0700041M	CF 1/16W 1.0K-JB	R3M4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R3E1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R3M5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R3E2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R3M6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3E3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R3M8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3E4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R3M9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3E5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R3P1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3E6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R402	0700054M	CF 1/16W 10K-JB
R3E7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R404	0700054M	CF 1/16W 10K-JB
R3E8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R405	0700045M	CF 1/16W 2.2K-JB
R3F1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R406	0700045M	CF 1/16W 2.2K-JB
R3F3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R407	0700045M	CF 1/16W 2.2K-JB
R3F4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R408	0700045M	CF 1/16W 2.2K-JB
R3F5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R411	0700063M	CF 1/16W 47K-JB
R3F6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R412	0700063M	CF 1/16W 47K-JB
R3F7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R413	0700067M	CF 1/16W 100K-JB
R3F8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R414	0700036M	CF 1/16W 470-JB
R3F9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R415	0700041M	CF 1/16W 1.0K-JB
R3G1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R416	0700058M	CF 1/16W 22K-JB
R3G2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R417	AT01549S	MF(2.2OHM 1W)
R3G3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R418	AT01549S	MF(2.2OHM 1W)
R3G4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R419	0700065M	CF 1/16W 68K-JB
R3G5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R420	0700065M	CF 1/16W 68K-JB
R3G6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R421	0114161M	CF 1/4W 1K-JB
R3G7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R422	0114161M	CF 1/4W 1K-JB
R3G8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R425	0700041M	CF 1/16W 1.0K-JB
R3G9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R426	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
R3H1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R427	0700065M	CF 1/16W 68K-JB
R3H2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R428	0700065M	CF 1/16W 68K-JB
R3H4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R429	0114161M	CF 1/4W 1K-JB
R3H7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R430	AT01549S	MF (2.2OHM 1W)
R3H8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R431	AT01549S	MF (2.2OHM 1W)
R3H9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R432	0114161M	CF 1/4W 1K-JB
R3J4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R433	0700063M	CF 1/16W 47K-JB
R3J5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R434	0700067M	CF 1/16W 100K-JB
R3J6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R435	0700063M	CF 1/16W 47K-JB
R3J7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R436	0700045M	CF 1/16W 2.2K-JB
R3J8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R437	0195908R	RES 2125 CHIP 1/10W 2.2KJ TAPE
R3J9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R438	0700054M	CF 1/16W 10K-JB
R3K1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R439	0700036M	CF 1/16W 470-JB
R3K2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R503	0195937R	RES 2125 CHIP 1/16W 33KJ TAPE
R3K3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R504	0700032Q	CF 1/16W 220-JQ
R3K4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R505	0700032Q	CF 1/16W 220-JQ
R3K5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R506	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R3K6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R508	0195879R	RES 2125 CHIP 1/16W 150J TAPE
R3K7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R509	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3K9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R510	0195906R	RES MINI-CHIP RMC1/16 1.8K-J TAPE
R3L1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R511	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R516	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R582	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R517	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R583	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R518	0195904R	RES 2125 CHIP 1/16W 1.5KJ TAPE	R584	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R519	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R585	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R520	0195904R	RES 2125 CHIP 1/16W 1.5KJ TAPE	R586	0700044Q	CF 1/16W 1.8K-JQ
R521	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	R588	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R522	0195910R	RES 2125 CHIP 1/16W 2.7KJ TAPE	R590	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R526	0195908R	RES 2125 CHIP 1/10W 2.2KJ TAPE	R591	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R527	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R592	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R528	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R593	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R529	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R595	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R530	0195879R	RES 2125 CHIP 1/16W 150J TAPE	R597	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R531	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	R598	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R532	0195889R	RES 2125 CHIP 1/10W 390J TAPE	R5A0	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R533	0195889R	RES 2125 CHIP 1/10W 390J TAPE	R5A1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R535	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	R5A2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R536	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5A3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R537	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	R5A4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R538	0195870R	RES MINI-CHIP RMC1/10 68-J TAPE	R5A5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R539	0195870R	RES MINI-CHIP RMC1/10 68-J TAPE	R5A6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R540	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5A8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R541	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5A9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R542	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5C0	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R545	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5C3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R547	0195908R	RES 2125 CHIP 1/10W 2.2KJ TAPE	R5C4	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R548	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	R5C5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R549	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	R5C6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R550	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE	R5C7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R551	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5C8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R552	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE	R5C9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R553	0195879R	RES 2125 CHIP 1/16W 150J TAPE	R5D0	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R555	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5D1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R556	0195910R	RES 2125 CHIP 1/16W 2.7KJ TAPE	R5D2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R557	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5D3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R558	0700041Q	CF 1/16W 1.0K-JQ	R5D4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R559	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5D5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R561	0700041Q	CF 1/16W 1.0K-JQ	R5D6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R562	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5D7	0700027Q	CF 1/16W 100-JQ
R563	0195889R	RES 2125 CHIP 1/10W 390J TAPE	R5D8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R564	0195885R	RES 2125 CHIP 1/16W 270J TAPE	R5D9	0700054Q	CF 1/16W 10K-JQ
R566	0114133M	CF SRD 1/4 P 120-J	R5E1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R567	0195908R	RES 2125 CHIP 1/10W 2.2KJ TAPE	R5E2	0700027Q	CF 1/16W 100-JQ
R568	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E3	0700027Q	CF 1/16W 100-JQ
R569	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5E4	0700027Q	CF 1/16W 100-JQ
R570	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R571	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R572	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	R5E7	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R573	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	R5E8	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R574	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E9	0700027Q	CF 1/16W 100-JQ
R575	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5F1	0195895R	RES 2125 CHIP 1/10W 680J TAPE
R576	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F2	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R577	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F3	0195904R	RES 2125 CHIP 1/16W 1.5KJ TAPE
R578	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R579	0114145M	CF SRD 1/4 P 390-J	R5F6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R580	0114145M	CF SRD 1/4 P 390-J	R5F7	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R581	0114145M	CF SRD 1/4 P 390-J	R5F8	0195875R	RES 2125 CHIP 1/16W 100J TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R5F9	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R643	0700067M	CF 1/16W 100K-JB
R5G1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R644	0700067M	CF 1/16W 100K-JB
R5G4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R645	0119731M	MF 1W R68-K TAPE
R5G5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R646	0700054M	CF 1/16W 10K-JB
R5G7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R647	0700059M	CF 1/16W 27K-JB
R5G9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R648	0700041M	CF 1/16W 1.0K-JB
R5H1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R649	0100053M	CF 1/8W 330-JB
R5H2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R651	0114135M	CF 1/4W 150-JB
R5H3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R652	0700014M	CF 1/16W 10-J
R5H5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R660	0113725M	CF SRD1/2P-B 100-J
R5H7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R661	0113725M	CF SRD1/2P-B 100-J
R5J3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R671	0113725M	CF SRD1/2P-B 100-J
R5J4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R672	0113766M	CF SRD1/2P-B 4.7K-J
R5K1	0179536M	MG 1M J TAPE	R673	0110121S	MF 100-JS
R601	0700058M	CF 1/16W 22K-JB	R674	0700039M	CF 1/16W 820-JB
R602	0700049M	CF 1/16W 4.7K-JB	R675	0700061M	CF 1/16W 33K-JB
R603	AW00126	TRIMMER RES	R701	0110355S	MF 3W 2.7K-J
R604	0700045M	CF 1/16W 2.2K-JB	R702	0110351S	MF 1.8K-J
R605	0700054M	CF 1/16W 10K-JB	R704	0100031M	CF 1/8W 39-JB
R606	0700041M	CF 1/16W 1.0K-JB	R705	0700034M	CF 1/16W 330-JB
R607	0700041M	CF 1/16W 1.0K-JB	R706	0700033M	CF 1/16W 270-JB
R608	0700046M	CF 1/16W 2.7K-JB	R707	0113770M	CF SRD1/2P-B 6.8K-J
R609	0700046M	CF 1/16W 2.7K-JB	R708	0700058M	CF 1/16W 22K-JB
R610	0700052M	CF 1/16W 6.8K-JB	R709	0700044M	CF 1/16W 1.8K-JB
R611	0700055M	CF 1/16W 12K-JB	R710	0700043M	CF 1/16W 1.5K-JB
R612	0700063M	CF 1/16W 47K-JB	R711	0700048M	CF 1/16W 3.9K-JB
R613	0700055M	CF 1/16W 12K-JB	R712	0700052M	CF 1/16W 6.8K-JB
R614	0700055M	CF 1/16W 12K-JB	R713	0113727M	CF SRD1/2P-B 120-J
R615	0700054M	CF 1/16W 10K-JB	R714	0110101S	MF 1W 15-JS
R616	0700063M	CF 1/16W 47K-JB	△ R715	0700063M	CF 1/16W 47K-JB
R617	0700053M	CF 1/16W 8.2K-JB	△ R716	0700049M	CF 1/16W 4.7K-JB
R618	0700046M	CF 1/16W 2.7K-JB	R717	0114133M	CF SRD 1/4 P 120-J
R619	0700046M	CF 1/16W 2.7K-JB	R718	0113787M	CF 1/2P-B 33K-J
R620	0700055M	CF 1/16W 12K-JB	R719	0113786M	CF SRD1/2P-B 30K-J
R621	0700054M	CF 1/16W 10K-JB	R720	0110229S	MF 220-JS
R622	0113725M	CF SRD1/2P-B 100-J	R721	0114139M	CF SRD 1/4 P 220-J
R623	0700054M	CF 1/16W 10K-JB	R722	0700067M	CF 1/16W 100K-JB
R624	0700064M	CF 1/16W 56K-JB	R723	0700049M	CF 1/16W 4.7K-JB
R625	0700044M	CF 1/16W 1.8K-JB	R725	0110373S	MF 3W 15K-JS
R626	0700058M	CF 1/16W 22K-JB	R726	0114183M	CF SRD 1/4 P 8.2K-J
R627	0100063M	CF 1/8W 820-JB	R727	0100091M	CF 1/8W 12K-JB
R628	0100065M	CF 1/8W 1K-JB	R728	0700049M	CF 1/16W 4.7K-JB
R629	0700064M	CF 1/16W 56K-JB	R729	0114149M	CF SRD 1/4 PF 560-J
R630	AW00128	TRIMMER RES	R730	0700054M	CF 1/16W 10K-JB
R631	0179536M	MG 1M J TAPE	R731	0100127M	CF 1/8W 390K-JB
R632	0700063M	CF 1/16W 47K-JB	R732	0110129S	MF 220-JS
R633	0700051M	CF 1/16W 5.6K-JB	R733	0110143S	MF 820-JS
R634	0700065M	CF 1/16W 68K-JB	R734	0100127M	CF 1/8W 390K-JB
R635	0700054M	CF 1/16W 10K-JB	△ R737	0114041M	CF SRD 1/4P 10J
R636	0700061M	CF 1/16W 33K-JB	R740	0100117M	CF 1/8W 150K-JB
R637	0700065M	CF 1/16W 68K-JB	R750	0700052M	CF 1/16W 6.8K-JB
R638	0700038M	CF 1/16W 680-JB	R751	0700048M	CF 1/16W 3.9K-JB
R639	0700064M	CF 1/16W 56K-JB	R752	0700067M	CF 1/16W 100K-JB
R640	0100045M	CF 1/8W 150-JB	R753	0700045M	CF 1/16W 2.2K-JB
R641	0119722M	MF 1.0-JB/W	R760	0110215S	MF 2W56-J
R642	0119722M	MF 1.0-JB/W	R761	0114177M	CF SRD 1/4 P 4.7K-J

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R770	0700054M	CF 1/16W 10K-JB	R919	0100089M	CF 1/8W 10K-JB
R771	0700047M	CF 1/16W 3.3K-JB	R920	0700047M	CF 1/16W 3.3K-JB
R772	0700055M	CF 1/16W 12K-JB	R921	0700047M	CF 1/16W 3.3K-JB
R773	0700042M	CF 1/16W 1.2K-JB	R922	0700058M	CF 1/16W 22K-JB
R801	0140326S	WW 5.6K-J 5W	R923	0700057M	CF 1/16W 18K-JB
R803	0113744M	CF SRD1/2P-B 560-J	R925	0113746M	CF 1/2W 680-JB
R806	0113815M	CF SRD1/2P-B 470K-J	R926	0700057M	CF 1/16W 18K-JB
R810	0100035M	CF 1/8W 56-JB	R927	0700022M	CF 1/16W 39-J
R811	0100057M	CF 1/8W 470-JB	R928	0700045M	CF 1/16W 2.2K-JB
R812	0100045M	CF 1/8W 150-JB	R929	0700025M	CF 1/16W 68-J
R815	0100063M	CF 1/8W 820-JB	R930	0700045M	CF 1/16W 2.2K-JB
R817	0100041M	CF 1/8W 100-JB	R931	0119695M	MF 1W 0.47-F
R818	0100049M	CF 1/8W 220-JB	R932	0700054M	CF 1/16W 10K-JB
R821	0100063M	CF 1/8W 820-JB	R933	0700058M	CF 1/16W 22K-JB
R822	0100049M	CF 1/8W 220-JB	R934	0113797M	CF 1/2W 82K-JB
R823	0100065M	CF 1/8W 1K-JB	R935	0700049M	CF 1/16W 4.7K-JB
R825	0100021M	CF 1/8W 15-JB	R937	0700047M	CF 1/16W 3.3K-JB
R827	0100065M	CF 1/8W 1K-JB	R940	0700054M	CF 1/16W 10K-JB
R831	0140326S	WW 5.6K-J 5W	R941	0700018M	CF 1/16W 22-J
R833	0113744M	CF SRD1/2P-B 560-J	R942	0700042M	CF 1/16W 1.2K-JB
R836	0113815M	CF SRD1/2P-B 470K-J	R943	0700043M	CF 1/16W 1.5K-JB
R840	0100035M	CF 1/8W 56-JB	R944	0113793M	CF SRD1/2P-B 56K-J
R841	0100057M	CF 1/8W 470-JB	R945	0113793M	CF SRD1/2P-B 56K-J
R842	0100033M	CF 1/8W 47-JB	R946	0114205M	CF SRD 1/4 P 15K-J
R843	0150001	VR 08 200-B	R948	0700041M	CF 1/16W 1.0K-JB
R850	0100089M	CF 1/8W 10K-JB	⚠ R949	0700043M	CF 1/16W 1.5K-JB
R851	0100043M	CF 1/8W 120-JB	⚠ R950	0700039M	CF 1/16W 820-JB
R855	0100021M	CF 1/8W 15-JB	R952	0700032M	CF 1/16W 220-JB
R861	0140326S	WW 5.6K-J 5W	R954	0700058M	CF 1/16W 22K-JB
R863	0113744M	CF SRD1/2P-B 560-J	R955	0700041M	CF 1/16W 1.0K-JB
R866	0113815M	CF SRD1/2P-B 470K-J	R957	0700047M	CF 1/16W 3.3K-JB
R870	0100035M	CF 1/8W 56-JB	R958	0700057M	CF 1/16W 18K-JB
R871	0100057M	CF 1/8W 470-JB	R959	0113750M	CF 1/2W 1K-JB
R872	0100033M	CF 1/8W 47-JB	R960	0700054M	CF 1/16W 10K-JB
R873	0150001	VR 08 200-B	R962	0700067M	CF 1/16W 100K-JB
R880	0100089M	CF 1/8W 10K-JB	R963	0700051M	CF 1/16W 5.6K-JB
R881	0100031M	CF 1/8W 39-JB	R965	0700041M	CF 1/16W 1.0K-JB
R885	0100021M	CF 1/8W 15-JB	R966	0700067M	CF 1/16W 100K-JB
R901	0179639	MG 1.0M-J 1W	R967	0700051M	CF 1/16W 5.6K-JB
R902	0147060	WW 2W 33-K	R968	0700041M	CF 1/16W 1.0K-JB
R903	0114281M	CF SRD 1/4P 100K-J	R969	0700067M	CF 1/16W 100K-JB
⚠ R904	0147802	WW 15W 0.62-KM	R970	0700051M	CF 1/16W 5.6K-JB
R905	0113772M	CF SRD1/2P-B	R971	0700037M	CF 1/16W 560-JB
R906	0113772M	CF SRD1/2P-B	R972	0700049M	CF 1/16W 4.7K-JB
R907	0100023M	CF 1/8W 18-JB	R973	0700047M	CF 1/16W 3.3K-JB
R908	0700053M	CF 1/16W 8.2K-JB	R974	0700047M	CF 1/16W 3.3K-JB
R909	0700038M	CF 1/16W 680-JB	R975	0110237S	MF 2W 470-J
R910	0700043M	CF 1/16W 1.5K-JB	R976	0700047M	CF 1/16W 3.3K-JB
R911	0700046M	CF 1/16W 2.7K-JB	R977	0700063M	CF 1/16W 47K-JB
R912	0700047M	CF 1/16W 3.3K-JB	R979	0113770M	CF SRD1/2P-B 6.8K-J
R913	0700023M	CF 1/16W 47-J	R980	0700054M	CF 1/16W 10K-JB
R914	0700054M	CF 1/16W 10K-JB	R981	0700054M	CF 1/16W 10K-JB
R915	0700042M	CF 1/16W 1.2K-JB	R982	0700048M	CF 1/16W 3.9K-JB
R916	0700038M	CF 1/16W 680-JB	R983	0700054M	CF 1/16W 10K-JB
R917	AT01531S	MF (0.1OHM1/2W)	R985	0700058M	CF 1/16W 22K-JB
R918	0100091M	CF 1/8W 12K-JB	R986	AT01531S	MF (0.1OHM1/2W)

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R987	AT01531S	MF (0.1OHM1/2W)	RA63	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R988	0113744M	CF SRD1/2P-B 560-J	RA64	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
R989	0700036M	CF 1/16W 470-JB	RA65	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
R990	0700058M	CF 1/16W 22K-JB	RA66	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
R991	0100089M	CF 1/8W 10K-JB	RA67	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
R992	0110363S	MF 5.6K-JS	RA83	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R993	0700041M	CF 1/16W 1.0K-JB	RA84	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RA01	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA85	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA02	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA86	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA03	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA89	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA04	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA90	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA05	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA91	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA06	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA92	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RA07	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA93	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA08	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA94	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA09	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RA95	0700054Q	CF 1/16W 10K-JQ
RA10	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RA96	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RA11	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RA97	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA12	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RA98	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA18	0195939R	RMC73S-2A393JR	RAC2	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RA19	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RAC4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA20	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RAC5	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA21	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RAC6	0700032Q	CF 1/16W 220-JQ
RA22	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RACT	0700041Q	CF 1/16W 1.0K-JQ
RA23	0195883R	RES 2125 CHIP 1/16W 220J TAPE	RAC8	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RA24	0195939R	RMC73S-2A393JR	RAC9	0195939R	RMC73S-2A393JR
RA25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RAD1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA26	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RAD2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA27	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RAD3	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA28	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RAD4	0195939R	RMC73S-2A393JR
RA29	0195883R	RES 2125 CHIP 1/16W 220J TAPE	RAD5	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA30	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RAD6	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA31	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RAD7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA32	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RAD8	0700027Q	CF 1/16W 100-JQ
RA33	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RAD9	0700041Q	CF 1/16W 1.0K-JQ
RA38	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RAE1	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RA39	0195883R	RES 2125 CHIP 1/16W 220J TAPE	RAE2	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
RA44	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RAE3	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
RA45	0195883R	RES 2125 CHIP 1/16W 220J TAPE	RC01	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RA46	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC02	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RA47	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RC03	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RA48	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC04	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA49	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RC05	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC06	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA51	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RC07	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA52	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC08	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA53	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RC09	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA54	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC10	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA55	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RC11	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RA56	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC12	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RA57	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RC15	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA58	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC16	0195871R	RMC73S-2A750JR
RA59	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RC17	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RA60	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC18	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RA61	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RC19	0195871R	RMC73S-2A750JR
RA62	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RC20	0195250R	RES 2125 CHIP 1/16W 000 TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RC21	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE26	0114163M	CF 1/4W 1.2K-JB
RC22	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE27	0114221M	CF 1/4 PB 68K-J
RC52	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE28	0114221M	CF 1/4 PB 68K-J
RC54	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE29	0113776M	CF SRD1/2P-B 12K-J
RC55	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE30	0100039Q	CF 1/8W 82-JQ
RC61	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE31	0100069Q	CF 1/8W 1.5K-JQ
RC64	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE32	0100067Q	CF 1/8W 1.2K-JQ
RC66	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE33	0113704M	CF SRD1/2P-B 13-J
RC67	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE34	0110329S	MF 3W 220-JS
RC69	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE35	0113686M	CF 1/2W 2.7-J
RC71	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE36	0113686M	CF 1/2W 2.7-J
RC73	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE37	0113704M	CF SRD1/2P-B 13-J
RC76	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE38	0110132S	MF 300-JS
RC77	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE39	0700054Q	CF 1/16W 10K-JQ
RC78	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE40	0700049Q	CF 1/16W 4.7K-JQ
RC79	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE41	0700035Q	CF 1/16W 390-JQ
RC81	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE43	0700039Q	CF 1/16W 820-JQ
RC82	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE45	0700027Q	CF 1/16W 100-JQ
RC83	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE46	0113746M	CF 1/2W 680-JB
RC84	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE47	0700056Q	CF 1/16W 15K-JQ
RC85	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF01	0700058M	CF 1/16W 22K-JB
RC86	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF02	0700059M	CF 1/16W 27K-JB
RC87	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF03	0700036M	CF 1/16W 470-JB
RC88	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RF04	0700049M	CF 1/16W 4.7K-JB
RC89	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF07	0700067M	CF 1/16W 100K-JB
RC90	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF08	0700056M	CF 1/16W 15K-JB
RC91	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF09	0700054M	CF 1/16W 10K-JB
RC93	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RF10	0700042M	CF 1/16W 1.2K-JB
RC94	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RF11	0700045M	CF 1/16W 2.2K-JB
RC95	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF12	0700067M	CF 1/16W 100K-JB
RC96	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RF13	0700056M	CF 1/16W 15K-JB
RC97	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF14	0700025M	CF 1/16W 68-J
RE01	0110141S	MF 680-JS	RF15	AT01458	MG 1W 390K OHM
RE02	0700066Q	CF 1/16W 82K-JQ	RF16	AT01458	MG 1W 390K OHM
RE03	0700057Q	CF 1/16W 18K-JQ	RF17	AT01458	MG 1W 390K OHM
RE04	0700035Q	CF 1/16W 390-JQ	RF18	0179636	MG 560K 1W
RE05	0700042Q	CF 1/16W- 1.2K-JQ	RF19	0179636	MG 560K 1W
RE06	0700031Q	CF 1/16W 180-JQ	RF20	0700027M	CF 1/16W 100-JB
RE07	0700065Q	CF 1/16W 68K-JQ	RF21	0700049M	CF 1/16W 4.7K-JB
RE08	0700059Q	CF 1/16W 27K-JQ	RF22	0700057M	CF 1/16W 18K-JB
RE09	0700039Q	CF 1/16W 820-JQ	RF23	0700063M	CF 1/16W 47K-JB
RE10	0700033Q	CF 1/16W 270-JQ	RF25	0179636	MG 560K 1W
RE11	0700033Q	CF 1/16W 270-JQ	RF26	0179636	MG 560K 1W
RE12	0700045Q	CF 1/16W 2.2K-JQ	RF27	0179635	MG 470K 1W
RE13	0700058Q	CF 1/16W 22K-JQ	RF28	0700061M	CF 1/16W 33K-JB
RE14	0700067Q	CF 1/16W 100K-JQ	RF29	0700043M	CF 1/16W 1.5K-JB
RE15	0700046Q	CF 1/16W 2.7K-JQ	RF30	0100103M	CF 1/8W 39K-JB
RE16	0113742M	CF 1/2W 470-JB	RF31	0700052M	CF 1/16W 6.8K-JB
RE18	0700036Q	CF 1/16W 470-JQ	RF33	0700054M	CF 1/16W 10K-JB
RE19	0700067Q	CF 1/16W 100K-JQ	RF34	0187100M	CF 1/16W 30K-JB
RE20	0700054Q	CF 1/16W 10K-JQ	RF35	0187074M	CF 1/16W 2.4K-JB
RE21	0100065Q	CF 1/8W 1K-JQ	RF36	0700054M	CF 1/16W 10K-JB
RE22	0700025Q	CF 1/16W- 68-JQ	RF37	0700039M	CF 1/16W 820-JB
RE23	0113701M	CF SRD1/2P-B 10-J	RF40	0110120S	MF 91-JS
RE24	0100039Q	CF 1/8W 82-JQ	RF41	0700047M	CF 1/16W 3.3K-JB
RE25	0114165M	CF SRD 1/4 PF 1.5K-J	RF42	0700053M	CF 1/16W 8.2K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RF43	0700041M	CF 1/16W 1.0K-JB	RG56	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RF44	0700061M	CF 1/16W 33K-JB	RG57	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
RF45	0700049M	CF 1/16W 4.7K-JB	RG58	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RF46	0700054M	CF 1/16W 10K-JB	RG59	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
RF47	0700054M	CF 1/16W 10K-JB	RG60	0195975R	RMC73S-2A105JR
RG01	0195975R	RMC73S-2A105JR	RG61	0195975R	RMC73S-2A105JR
RG02	0195975R	RMC73S-2A105JR	RG62	0195975R	RMC73S-2A105JR
RG03	0195975R	RMC73S-2A105JR	RG63	0195975R	RMC73S-2A105JR
RG04	0195975R	RMC73S-2A105JR	RG64	0195975R	RMC73S-2A105JR
RG05	0195975R	RMC73S-2A105JR	RG65	0195975R	RMC73S-2A105JR
RG06	0195975R	RMC73S-2A105JR	RG66	0195975R	RMC73S-2A105JR
RG07	0195975R	RMC73S-2A105JR	RG67	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
RG09	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RG68	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RG10	0195975R	RMC73S-2A105JR	RG69	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RG11	0195975R	RMC73S-2A105JR	RG70	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RG12	0195975R	RMC73S-2A105JR	RG71	0195921R	RES MINI-CHIP RMC1/16 7.5K-J TAPE
RG13	0195975R	RMC73S-2A105JR	RG72	0195921R	RES MINI-CHIP RMC1/16 7.5K-J TAPE
RG14	0195975R	RMC73S-2A105JR	RG73	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RG15	0195975R	RMC73S-2A105JR	RG74	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RG16	0195975R	RMC73S-2A105JR	RG75	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RG19	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RG76	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RG20	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RG77	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RG21	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RG78	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RG22	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RG79	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RG23	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RG80	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RG24	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RG81	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RG25	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RG82	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RG26	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RG83	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RG27	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RG84	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RG28	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RG85	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE
RG29	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RG86	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RG30	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RG87	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RG31	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RG91	0114149M	CF SRD 1/4 PF 560-J
RG32	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK01	0700046M	CF 1/16W 2.7K-JB
RG33	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK02	0700046M	CF 1/16W 2.7K-JB
RG34	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RK03	0700046M	CF 1/16W 2.7K-JB
RG35	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RK04	0700046M	CF 1/16W 2.7K-JB
RG36	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK05	0700046M	CF 1/16W 2.7K-JB
RG37	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK06	0700046M	CF 1/16W 2.7K-JB
RG38	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RK07	0700046M	CF 1/16W 2.7K-JB
RG39	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RK08	0700046M	CF 1/16W 2.7K-JB
RG40	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK09	0100057M	CF 1/8W 470-JB
RG41	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK10	0700042M	CF 1/16W 1.2K-JB
RG42	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RK11	0700041M	CF 1/16W 1.0K-JB
RG43	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RK12	0700041M	CF 1/16W 1.0K-JB
RG44	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK13	0700041M	CF 1/16W 1.0K-JB
RG45	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK14	0700052M	CF 1/16W 6.8K-JB
RG46	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RK15	0700046M	CF 1/16W 2.7K-JB
RG47	0195921R	RES MINI-CHIP RMC1/16 7.5K-J TAPE	RK16	0700049M	CF 1/16W 4.7K-JB
RG48	0195921R	RES MINI-CHIP RMC1/16 7.5K-J TAPE	RK17	0700047M	CF 1/16W 3.3K-JB
RG49	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK18	0700048M	CF 1/16W 3.9K-JB
RG50	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RK19	0100125M	CF 1/8W 330K-JB
RG51	0195921R	RES MINI-CHIP RMC1/16 7.5K-J TAPE	RK22	0700041M	CF 1/16W 1.0K-JB
RG52	0195921R	RES MINI-CHIP RMC1/16 7.5K-J TAPE	RK23	0700051M	CF 1/16W 5.6K-JB
RG54	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RK24	0700044M	CF 1/16W 1.8K-JB
RG55	0114149M	CF SRD 1/4 PF 560-J	RK25	0700063M	CF 1/16W 47K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RK26	0700063M	CF 1/16W 47K-JB	RL35	0700027Q	CF 1/16W 100-JQ
RK27	0700054M	CF 1/16W 10K-JB	RL36	0700027Q	CF 1/16W 100-JQ
RK28	0700027M	CF 1/16W 100-JB	RL37	0700027Q	CF 1/16W 100-JQ
RK29	0700027M	CF 1/16W 100-JB	RL38	0700049Q	CF 1/16W 4.7K-JQ
RK30	0700027M	CF 1/16W 100-JB	RM01	0700041M	CF 1/16W 1.0K-JB
RK31	0700041M	CF 1/16W 1.0K-JB	RM02	0700058M	CF 1/16W 22K-JB
RK32	0700041M	CF 1/16W 1.0K-JB	RM03	0700045M	CF 1/16W 2.2K-JB
RK33	0700041M	CF 1/16W 1.0K-JB	RM04	0100065M	CF 1/8W 1K-JB
RK34	0700063M	CF 1/16W 47K-JB	RM05	0100065M	CF 1/8W 1K-JB
RK35	0700063M	CF 1/16W 47K-JB	RM06	0700041M	CF 1/16W 1.0K-JB
RK36	0700063M	CF 1/16W 47K-JB	RM07	0700043M	CF 1/16W 1.5K-JB
RK37	0700063M	CF 1/16W 47K-JB	RM08	0700046M	CF 1/16W 2.7K-JB
RK38	0700063M	CF 1/16W 47K-JB	RM09	0700049M	CF 1/16W 4.7K-JB
RK39	0700063M	CF 1/16W 47K-JB	RM10	0100129M	CF 1/8W 470K-JB
RK40	0700047M	CF 1/16W 3.3K-JB	RM11	0700041M	CF 1/16W 1.0K-JB
RK42	AT01552S	MF (2.7 OHM 1W)	RM12	0100125M	CF 1/8W 330K-JB
RK43	0110229S	MF 220-JS	RM13	0100073M	CF 1/8W 2.2K-JB
RK44	0700047M	CF 1/16W 3.3K-JB	RM14	0100125M	CF 1/8W 330K-JB
RK46	AT01547S	MF (1.8 OHM 1W)	RM15	0700054M	CF 1/16W 10K-JB
RK47	0110225S	MF 150-JS 2W	RM20	0100041M	CF 1/8W 100-JB
RK48	0700047M	CF 1/16W 3.3K-JB	RM21	0700041M	CF 1/16W 1.0K-JB
RK50	AT01552S	MF (2.7 OHM 1W)	RM22	0700041M	CF 1/16W 1.0K-JB
RK51	0110229S	MF 220-JS	RM23	0700064M	CF 1/16W 56K-JB
RK52	0700047M	CF 1/16W 3.3K-JB	RM24	0700045M	CF 1/16W 2.2K-JB
RK54	AT01545S	MF (1.5 OHM 1W)	RM25	0100123M	CF 1/8W 270K-JB
RK55	0110225S	MF 150-JS 2W	RM26	0700047M	CF 1/16W 3.3K-JB
RK56	0700047M	CF 1/16W 3.3K-JB	RM27	0700064M	CF 1/16W 56K-JB
RK58	AT01556S	MF (3.9 OHM 1W)	RM28	0100123M	CF 1/8W 270K-JB
RK59	0110229S	MF 220-JS	RM29	0700041M	CF 1/16W 1.0K-JB
RK60	0700047M	CF 1/16W 3.3K-JB	RM30	0700041M	CF 1/16W 1.0K-JB
RK62	AT01549S	MF (2.2OHM 1W)	RM31	0100041M	CF 1/8W 100-JB
RK63	0110225S	MF 150-JS 2W	RM32	0187038M	CF 1/16W 75-J
RK64	0700063M	CF 1/16W 47K-JB	RM33	0187038M	CF 1/16W 75-J
RK90	0700054M	CF 1/16W 10K-JB	RM34	0700063M	CF 1/16W 47K-JB
RK99	0113698M	CF 1/2W 8.2-J	RM35	0700041M	CF 1/16W 1.0K-JB
RL10	0100129Q	CF 1/8 470K-JQ	RM36	0700058M	CF 1/16W 22K-JB
RL11	0100129Q	CF 1/8 470K-JQ	RM37	0187038M	CF 1/16W 75-J
RL12	0100129Q	CF 1/8 470K-JQ	RM38	0700041M	CF 1/16W 1.0K-JB
RL13	0100129Q	CF 1/8 470K-JQ	RM39	0700041M	CF 1/16W 1.0K-JB
RL14	0100129Q	CF 1/8 470K-JQ	RN01	0700057M	CF 1/16W 18K-JB
RL15	0100129Q	CF 1/8 470K-JQ	RN02	0700041M	CF 1/16W 1.0K-JB
RL16	0100129Q	CF 1/8 470K-JQ	RN03	0700041M	CF 1/16W 1.0K-JB
RL17	0100129Q	CF 1/8 470K-JQ	RN04	0100113M	CF 1/8W 100K-JB
RL20	0100133Q	CF 1/8W 680K-JQ	RN05	0700052M	CF 1/16W 6.8K-JB
RL21	0100121Q	CF 1/8W 220K-JQ	RN06	0700054M	CF 1/16W 10K-JB
RL22	0100133Q	CF 1/8W 680K-JQ	RN07	0700051M	CF 1/16W 5.6K-JB
RL23	0100129Q	CF 1/8 470K-JQ	RN08	0700044M	CF 1/16W 1.8K-JB
RL24	0100133Q	CF 1/8W 680K-JQ	RN09	0700061M	CF 1/16W 33K-JB
RL25	0100121Q	CF 1/8W 220K-JQ	RN10	0700057M	CF 1/16W 18K-JB
RL26	0100133Q	CF 1/8W 680K-JQ	RN11	0700058M	CF 1/16W 22K-JB
RL27	0100129Q	CF 1/8 470K-JQ	RN12	0700051M	CF 1/16W 5.6K-JB
RL30	0700027Q	CF 1/16W 100-JQ	RN13	0700054M	CF 1/16W 10K-JB
RL31	0700027Q	CF 1/16W 100-JQ	RN14	0700054M	CF 1/16W 10K-JB
RL32	0700027Q	CF 1/16W 100-JQ	RN15	0700064M	CF 1/16W 56K-JB
RL33	0700027Q	CF 1/16W 100-JQ	RN16	0700041M	CF 1/16W 1.0K-JB
RL34	0700027Q	CF 1/16W 100-JQ	RN17	0700059M	CF 1/16W 27K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RN18	0700041M	CF 1/16W 1.0K-JB	RSC5	0195908R	RES2125 CHIP 1/10W 2.2KJ TAPE
RS01	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSC6	0195908R	RES2125 CHIP 1/10W 2.2KJ TAPE
RS02	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSC8	0195908R	RES2125 CHIP 1/10W 2.2KJ TAPE
RS03	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSC9	0195908R	RES2125 CHIP 1/10W 2.2KJ TAPE
RS04	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSE2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RS05	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSE3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RS06	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSE4	0195891R	RES 2125 CHIP 1/16W 470J TAPE
RS07	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSE5	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS08	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSE6	0195933R	RES2125 CHIP 1/16W 22KJ TAPE
RS09	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSE8	0119505G	MF 2.2-J
RS11	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RSE9	0119505G	MF 2.2-J
RS13	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RSF1	0114161M	CF 1/4W 1K-JB
RS14	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RSF2	0114161M	CF 1/4W 1K-JB
RS15	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RSF5	0195945R	RES 2125 CHIP 1/16W 68KJ TAPE
RS16	0195975R	RMC73S-2A105JR	RSF6	0195945R	RES 2125 CHIP 1/16W 68KJ TAPE
RS17	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RSH4	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RS18	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RSH5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS19	0195943R	RES2125 CHIP 1/16W 56KJ TAPE	RSH7	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS20	0195932R	RES 2125CHIP 1/10W 20KJ TAPE	RSH9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS21	0195939R	RMC73S-2A393JR	RSM1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS22	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSM2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS23	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSM3	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS24	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSM4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS25	0195933R	RES2125 CHIP 1/16W 22KJ TAPE	RSM5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS26	0195933R	RES2125 CHIP 1/16W 22KJ TAPE	RSM6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS27	0195933R	RES2125 CHIP 1/16W 22KJ TAPE	RSM7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS28	0100059M	CF 1/8W 560-JB	RSM8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS29	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSM9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS30	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSN1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS31	0179561M	MG 2.2M-J TAPE	RSN2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS32	0195916R	RES 2125 CHIP 1/16W 4.7KJ TAPE	RSN3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS33	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	RSN8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS36	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	RSP1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS37	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	RSP2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS38	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSP3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS39	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RSP4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS40	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSP5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS41	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RSP6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS42	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSP7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS43	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RSP8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS45	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSP9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS46	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSR1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS47	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSR2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS70	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSR3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS71	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSR5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RS78	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RSR6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS79	0195908R	RES2125 CHIP 1/10W 2.2KJ TAPE	RSR7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS80	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RSR8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS81	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RSR9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS82	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RSS1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS97	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RSS2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS98	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RSS3	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RSA1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSS4	0700027M	CF 1/16W 100-JB
RSA2	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RSS5	0700027M	CF 1/16W 100-JB
RSA3	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RST1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RSA5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RST2	0195250R	RES 2125 CHIP 1/16W 000 TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RST3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RY70	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RST4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RY73	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RST5	0700041M	CF 1/16W 1.0K-JB	RY74	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY01	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY77	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
RY02	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY78	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
RY03	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY79	0700027Q	CF 1/16W 100-JQ
RY04	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY82	0195881R	RES 2125 CHIP 1/16W 180J TAPE
RY05	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY84	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY06	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY85	0195871R	RMC73S-2A750JR
RY07	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY86	0195871R	RMC73S-2A750JR
RY08	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY87	0195871R	RMC73S-2A750JR
RY09	0700041Q	CF 1/16W 1.0K-JQ	RY88	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY10	0700041Q	CF 1/16W 1.0K-JQ	RY89	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY11	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY90	0195943R	RES 2125 CHIP 1/16W 56KJ TAPE
RY12	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY91	0195937R	RES 2125 CHIP 1/16W 33KJ TAPE
RY16	0195908R	RES 2125 CHIP 1/10W 2.2KJ TAPE	RY96	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY17	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RY98	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY18	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY99	0195943R	RES 2125 CHIP 1/16W 56KJ TAPE
RY19	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RYA1	0195937R	RES 2125 CHIP 1/16W 33KJ TAPE
RY20	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RYA2	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY21	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE	RYA3	0195891R	RES 2125 CHIP 1/16W 470J TAPE
RY22	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RYA4	0195891R	RES 2125 CHIP 1/16W 470J TAPE
RY23	0195870R	RES MINI-CHIP RMC1/10 68-J TAPE	RYA5	0195879R	RES 2125 CHIP 1/16W 150J TAPE
RY24	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RYA6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RYA7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RY26	0195904R	RES 2125 CHIP 1/16W 1.5KJ TAPE	RYA8	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY27	0195915R	RES MINI-CHIP RMC1/16 4.3K-J TAPE	RYA9	0195943R	RES 2125 CHIP 1/16W 56KJ TAPE
RY28	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE	RYC1	0195937R	RES 2125 CHIP 1/16W 33KJ TAPE
RY29	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RYC2	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY30	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYC3	0195891R	RES 2125 CHIP 1/16W 470J TAPE
RY31	0195871R	RMC73S-2A750JR	RYC4	0195891R	RES 2125 CHIP 1/16W 470J TAPE
RY32	0195871R	RMC73S-2A750JR	RYC5	0195885R	RES 2125 CHIP 1/16W 270J TAPE
RY33	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	RYC6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY34	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	RYC7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RY35	0195871R	RMC73S-2A750JR	RYC8	0195879R	RES 2125 CHIP 1/16W 820J TAPE
RY36	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYC9	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY37	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYE1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY38	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE			TRANSFORMERS
RY39	0195887R	RES 2125 CHIP 1/16W 330J TAPE			
RY40	0114137M	CF 1/4W 180-JB			
RY41	0195870R	RES MINI-CHIP RMC1/10 68-J TAPE	▲ T701	2260291U	HORIZONTAL DRIVE TRANS.
RY42	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	▲ T702	BW00631	HFL1735YP-RC (FLYBACK TRANS.)
RY43	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	▲ T703	2272762	TRANS.-SATURBLE
RY44	0195875R	RES 2125 CHIP 1/16W 100J TAPE	▲ T901	BT00751	COIL PT-EE54F19US
RY46	0195875R	RES 2125 CHIP 1/16W 100J TAPE			SWITCHES
RY48	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
RY50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	SK01	FE00061	1P TACT SWITCH
RY51	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	SM01	FE00001R	PUSH SWITCH
RY52	0195941R	RES 2125 CHIP 1/16W 47KJ TAPE	SM02	FE00001R	PUSH SWITCH
RY53	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE	SM03	FE00001R	PUSH SWITCH
RY56	0700027Q	CF 1/16W 100-JQ	SM04	FE00001R	PUSH SWITCH
RY57	0195897R	RES 2125 CHIP 1/16W 820J TAPE	SM05	FE00001R	PUSH SWITCH
RY66	0195879R	RES 2125 CHIP 1/16W 150J TAPE	SM06	FE00001R	PUSH SWITCH
RY67	0195897R	RES 2125 CHIP 1/16W 820J TAPE	SM07	FE00001R	PUSH SWITCH
RY68	0195887R	RES 2125 CHIP 1/16W 330J TAPE	SM09	FE00091	SWP01N01-EVQQKH08Q
RY69	0700032Q	CF 1/16W 220-JQ			

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
MISCELLANEOUS					
1	PH04452	CONTROL PANEL ASSY (50" & 60")		4491082	CHASSIS PWB BKT FB2
2	NA11701	LENS/CRT METAL		NA03131	CHASSIS PWB BRACKET
3	NJ01361	SENSOR HOLDER BASE (50" & 60")		H420691	FOCUS METAL
4	NJ01301	SENSOR HOLDER (60")	N1	3727972	POWER CORD HANGER
4	NJ01302	SENSOR HOLDER (50")	N2	NJ02252	SPEAKER HOLDER (CENTER SPEAKER)
5	FT00001	SOLAR CELL (60")	N745	MD03052	SHIELD CASE B TC-30
5	FT00002	SOLAR CELL (50")	N901	MD03061	SHIELD PLATE A TC-30
6	33200048	BACK CENTER BAR (50")	E001	2781697	YC20A INSULATION WASHER
6	33200043	BACK CENTER BAR (60")		3782714	PCB SUPPORT 10S NYLON
7	KS00163	MIRROR (60")		BM00041	FERRITE CORE BP53RB
7	KS00164	MIRROR (50")	 E10B	GX00192	MAG-VM(C-C)36.5 2.0U
8	33010162	BARRIER BOARD (50")	 E10G	GX00192	MAG-VM(C-C)36.5 2.0U
8	33010133	BARRIER BOARD (60")	 E10R	GX00192	MAG-VM(C-C)36.5 2.0U
9	QG00831	BACK COVER ASS'Y(60")	 E12B	BY00831	DEFLECTION YOKE
9	QG00811	BACK COVER ASS'Y (50")	 E12G	BY00831	DEFLECTION YOKE
10	55010061	FRONT DOOR (60")	 E12R	BY00831	DEFLECTION YOKE
10	55010079	FRONT DOOR (50")	E301	HL00713	RCT CLU-613MP/GUIDE PLUS
11	NT00952	SCREEN FRAME ASS'Y (60")	E401	EY00691	PJX-IR BLASTER
11	NT00951	SCREEN FRAME ASS'Y (50")	 E701	AZ00107M	PROTECTOR CRXT491004
12	H311231	DECO FRAME (50")	 E801	EY00601	CRT SOCKET (TYPE HPS0630-010300)
12	H311232	DECO FRAME (60")	 E831	EY00601	CRT SOCKET (TYPE HPS0630-010300)
13	UX03061	LENS ASS'Y (50" SBA.B)	 E861	EY00601	CRT SOCKET (TYPE HPS0630-010300)
13	UX03071	LENS ASS'Y (60" SBB.B)	 E901	EV00551	COD UL/CSA 302 5199
14	UX03062	LENS ASS'Y (50" SBA.RG)	E902	3772201	AC CORD HOLDER NYLON
14	UX03072	LENS ASS'Y (60" SBB.RG)	E903	3739671	BS CORD HOLDER NYLON6
15	UX03063	LENS ASS'Y (50" SBA.RG)	 E991	AZ00109M	PROTECTOR CRXT491007
15	UX03073	LENS ASS'Y (60" SBB.RG)	 E994	AZ00104M	PROTECTOR(CRXT491002)
16	H512229	LOWER REAR BOARD (60")	 E995	AZ00109M	PROTECTOR CRXT491007
16	H512225	LOWER REAR BOARD (50")	 E996	AZ00109M	PROTECTOR CRXT491007
17	KR00632	SCREEN ASS'Y 50 KR	 E997	AZ00109M	PROTECTOR CRXT491007
17	KR00631	SCREEN ASS'Y 60 KR	 E998	AZ00109M	PROTECTOR CRXT491007
18	PH04413	SPEAKER GRILL (50")	 E999	AZ00109M	PROTECTOR CRXT491007
18	32110044	SPEAKER GRILL (60")	EAN	2974056S	3J CONNECTOR SEH UL1007 L=160
19	NA11681	MIRROR METAL A (50" & 60")	 EANT	HP00341	ANTENNA SW
20	NA11691	MIRROR METAL B (50" & 60")	EB	2997977	1J MINI CONNECTOR L=910
21	UE04511	AP84 (50") LENS CRT B. ASS'Y (R)	EBG1	2964984	6J CONNECTOR L=300
21	UE04514	AP84 (60") LENS CRT B. ASS'Y (R)	EBG2	2966821	4J CONNECTOR L=300
22	UE04512	AP84 (50") LENS CRT .B ASS'Y (G)	ECL	EF05961	3P CONNECTOR (L=1500 N.C#3)
22	UE04515	AP84 (60") LENS CRT B, ASS'Y (G)	ECR	EF05962	3P CONNECTOR (L=1000 N.C#3)
23	UE04513	AP84 (50") LENS CRT B. ASS'Y (B)	ED94	EY00791	PJX-LEAD-PLUG PIN
23	UE04516	AP84 (60") LENS CRT B. ASS'Y (B)	ED95	EY00791	PJX-LEAD-PLUG PIN
UE03224	AP84 LENS CRT CHAS. B. ASS'Y(50")	ED96	EY00791	PJX-LEAD-PLUG PIN	
UE03225	AP84 LENS CRT CHAS. B. ASS'Y(60")	ED99	EY00791	PJX-LEAD-PLUG PIN	
PH05451	TERMINAL HOLDER AP84 SASS'Y	EDS1	2908947	12J CONNECTOR L=1000	
PH02244	TERMINAL HOLDER AP84 PS	EF91	2721351	FUSE HOLDER	
PH04383	DEC0. PLATE AV AP84 PVC	EFC	2998591	CONNECTOR W/WIRE 4J	
NA21011	SP PWB SUPPORT BRACKET	EFJ	2973897S	CONNECTOR 9P L=1000	
4159423	SCR NO 3X12 FL/FLT	EFS	2958151	CONNECTOR RE01X-X3239A901	
NA20931	SUB PWB SUPPORT BRACKET	EFT	EF05941	4P CONNECTOR (L=1000 N.C#2,3)	
4520881	M3*8 SCREW WITH WASHER	EFV	2973957S	11J CONNECTOR L=1000	
NT00981	FBT HOLDER	EGR1	2964954	CONNECTOR W/WIRE 5J BOARD IN L=300	
NA03111	CHASSIS PWB BRACKET	EGR2	2966821	4J CONNECTOR L=300	
NA20921	CHASSIS PWB BKT	ES1	EF02233	CO-09C-N2R0-322 (PH)	
		ES2	EF02242	CO-10C-N2R0-262 (PH)	
		ES3	EF02253	CO-06C-N2R0-152 (PH)	
		ESL	EF05931	5P CONNECTOR (L=1500 N.C#5)	

REPLACEMENT PARTS LIST

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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
ESR	EF05951	4P CONNECTOR (L=1500)	PR	2903544	4P PLUG PIN (WITH BASE)
EST	2908776	7J PH CONNE L=160	PS1	2959058	PIN POST 9P PH
ETU1	2979173	PLUG WITH COAXIAL CABLE	PS2	2959059	PLUG PH PIN POST 10P
ETU2	2979172	MINI PLUG WITH COAXIAL CABLE	PS3	2959055	CONNECTOR 6P(PH)
EVMC	EF01202	3P EH CONNECTOR (L=820)	PSD1	ED01471U	PLUG (07BP1R2HUTWGP-A1)
EY1	2908764	CONNECTOR 6P L=750	PSD1	ED01491U	CONNECTOR (07BS1R2VUTWGXA1)
EY2	H210621	4J EH(IDC) CONNECTOR	PSD2	ED01472U	PLUG (11BP1R2HUTWGP-A1)
 G701	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M	PSD3	ED01472U	CONNECTOR (11BS1R2VUTWGXA1)
 G801	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M	PSD4	ED01492U	PLUG (11BP1R2HUTWGP-A1)
 G802	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M	PSD4	ED01473U	CONNECTOR (11BS1R2VUTWGXA1)
 G831	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M	PSD4	ED01493U	PLUG (13BP1R2HUTWGP-A1)
 G832	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M	PSD5	ED01471U	CONNECTOR (13BS1R2VUTWGXA1)
 G861	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M	PSD5	ED01491U	PLUG (07BP1R2HUTWGP-A1)
 G862	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M	PSI1	ED00575	CONNECTOR (07BS1R2VUTWGXA1)
 GF01	CJ00072R	SEMICONDUCTOR 252FB-K2M	PSI1	ED00515	CP-TAC-L18X-A1
JS01	ER00121	2L4P LEVER TERMINAL	PSI2	ED00515	CP-TAC-L18P-A1
JY01	ES00115	PJF-17P W/3.5	PSI2	ED00575	CP-TAC-L18X-A1
JY02	ES00022	3P(SW) PIN JACK WITH S	PST	2675286	CP-TAC-L20X-A1
N201	QR25451	INSTRUCTION MANUAL (USA)	PSU1	ED00576	CP-TAC-L20P-A1
N201	QR25461	INSTRUCTION MANUAL (CAN)	PSU1	ED00516	CP-TAC-L20P-A1
P001	2663821	2P SUB MINI PLUG PIN	PSU2	ED00576	CP-TAC-L20X-A1
P801	2961141	2P PLUG PIN WITH BASE	PSU2	ED00516	CP-TAC-L20P-A1
P802	2661756	1P PLUG PIN WITH BASE	PTS	2663821	2P SUB MINI PLUG PIN
P831	2961141	2P PLUG PIN WITH BASE	PVM1	ED00566	CP-TAC-L10X-A1
P832	2661756	1P PLUG PIN WITH BASE	PVM1	ED00506	CP-TAC-L10P-A1
P861	2961141	2P PLUG PIN WITH BASE	PVM2	ED00566	CP-TAC-L10X-A1
P862	2661756	1P PLUG PIN WITH BASE	PVM2	ED00506	CP-TAC-L10P-A1
 P901	ED01851	PLUG 5289-2A	PVMC	2902262	CP-TAC-L10P-A1
PB	2661756	1P PLUG PIN WITH BASE	PY1	2675285	PLUG PIN (SUB MINI 3P)
PCB	ED00572	CP-TAC-L15X-A1	PY1	2959055	PIN POST (PH 6P)
PCB	ED00512	CP-TAC-L15P-A1	PY2	2902263	CONNECTOR 6P(PH)
PCB	2903544	4P PLUG PIN WITH BASE	PY2	2902263	PLUG PIN (SUB MINI 4P)
PCC	ED00576	CP-TAC-L20X-A1	 U401	GK00281	PLUG PIN (SUB MINI 4P)
PCC	ED00516	CP-TAC-L20P-A1	 U402	GK00271	SP-05M SPEAKER (TWEETER)
PCD	ED00576	CP-TAC-L20X-A1	 U403	GK00291	SP-12M SPEAKER (LEFT)
PCD	ED00516	CP-TAC-L20P-A1	 U404	GK00291	SP-10M SPEAKER (CENTER LEFT)
PCG	2903544	4P PLUG PIN (WITH BASE)	 U405	GK00281	SP-10M SPEAKER (CENTER RIGHT)
PCL	2903543	3P PLUG PIN (WITH BASE)	 U406	GK00271	SP-05M SPEAKER (RIGHT)
PCR	2903543	3P PLUG PIN (WITH BASE)	 V1R	DE01314	SP-12M SPEAKER (RIGHT)
PCR	2903544	4P PLUG PIN (WITH BASE)	 V1G	DE01315	CRT P16LFT00 RFA (R) EU
PCX	ED00572	CP-TAC-L15X-A1	 V1B	DE01316	CRT P16LFT00 HLA (G) EU
PDC	ED00565	CP-TAC-L09X-A1	W811	2692464	CRT P16LFT00 BMB (B) EU
PDG	ED00572	CP-TAC-L15X-A1	W812	EK00062	CONNECTOR FOR FOCUS
PDS	ED00565	CP-TAC-L09X-A1	W841	2692463	WIRE (PROCESSED) FOR SCREEN
PDS1	2959062	PIN POST (PH 12P)	W842	EK00061	CONNECTOR FOR FOCUS
PFJ	2902268	PLUG PIN (SUB MINI 9P)	W871	2692463	WIRE (PROCESSED)
PFJ	2902248	PLUG PIN (SUB MINI 9P)	W872	EK00061	CONNECTOR FOR FOCUS
PFT	ED01596U	PLUG CP-04BP5R0VU-TBL#2,3N	W901	2964863	WIRE (PROCESSED)
PFV	2902251	11P PLUG PIN	X001	2168831	2J-CONNECTOR
PGP1	2675588	10P PLUG PIN	X100	BP00771	CRYSTAL CSA12.0MTZ
PGP2	2675588	10P PLUG PIN	X501	2791501	OSXR032X121TA252E00
PL	2903545	5P PLUG PIN (WITH BASE)	X502	2168771	CRYSTAL HC-49/U
PMB	ED01597U	PLUG (CP-06BP5R0VU-TBL#3,5N)	XS01	2786585	XTAL CSB503F30
PMG	ED01597U	PLUG (CP-06BP5R0VU-TBL#3,5N)	H310354	2786585	CRYSTAL RESONATOR 8.000MHZ
PMR	ED01597U	PLUG (CP-06BP5R0VU-TBL#3,5N)	H310355	2786585	DIGITAL CONVERGENCE JIG SCREEN (50")
PP31	2661751	2P PLUG PIN (WITH BASE)			DIGITAL CONVERGENCE JIG SCREEN (60")

NOTES: