

HITACHI

SERVICE MANUAL

NTSC

AP92R Chassis

PA

No. 0125

46FX01B 46GX01B
50GX10B 50GX20B

R/C: CLU-436UI

This addendum gives differences between AP92R and AP92 chassis models. For any other information, see the 50GX49B Service Manual PA No. 0114 issued in April 1999.

CONTENTS

SAFETY PRECAUTIONS	3
SERVICING PRECAUTIONS	6
TECHNICAL CAUTIONS	10
SPECIFICATIONS	11
CIRCUIT PROTECTION	11
GENERAL INFORMATION	12
CUSTOMIZED PICTURE AND SOUND ADJUSTMENTS	13
CAUTIONS WHEN CONNECTING/DISCONNECTING THE HV CONNECTOR	16
SERVICE ADJUSTMENTS	17
IC USE LIST	31
TROUBLESHOOTING	32
PROTECTION CIRCUIT BLOCK DIAGRAM	39
BLOCK DIAGRAM	41
WIRING DIAGRAM	43
EXPLODED VIEW	45
REPLACEMENT PARTS LIST	46

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 $\triangle$ 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 or Hitachi approved equivalent type.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PROJECTION COLOR TELEVISION

JANUARY 2000

HHEA-MANUFACTURING DIVISION

SAFETY NOTICE

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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

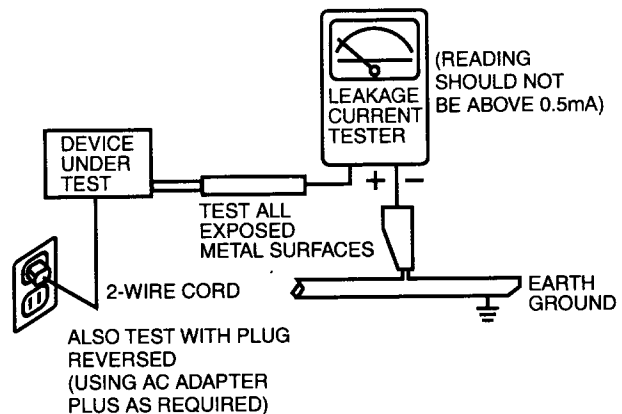
1. Before returning an instrument to the customer, always make a safety check of the entire instrument, including but not limited to the following items.

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 milliamps. Reverse the instrument power cord plug in the outlet and repeat test.



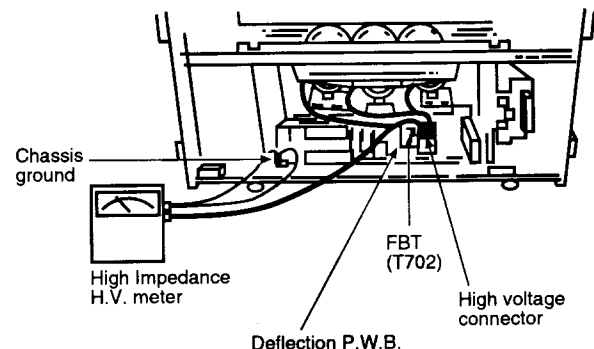
AC Leakage Test

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 with 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 **31.5 kV**. In case any component having influence on high voltage is replaced, confirm that the high voltage with maximum contrast is lower than **31.5 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.

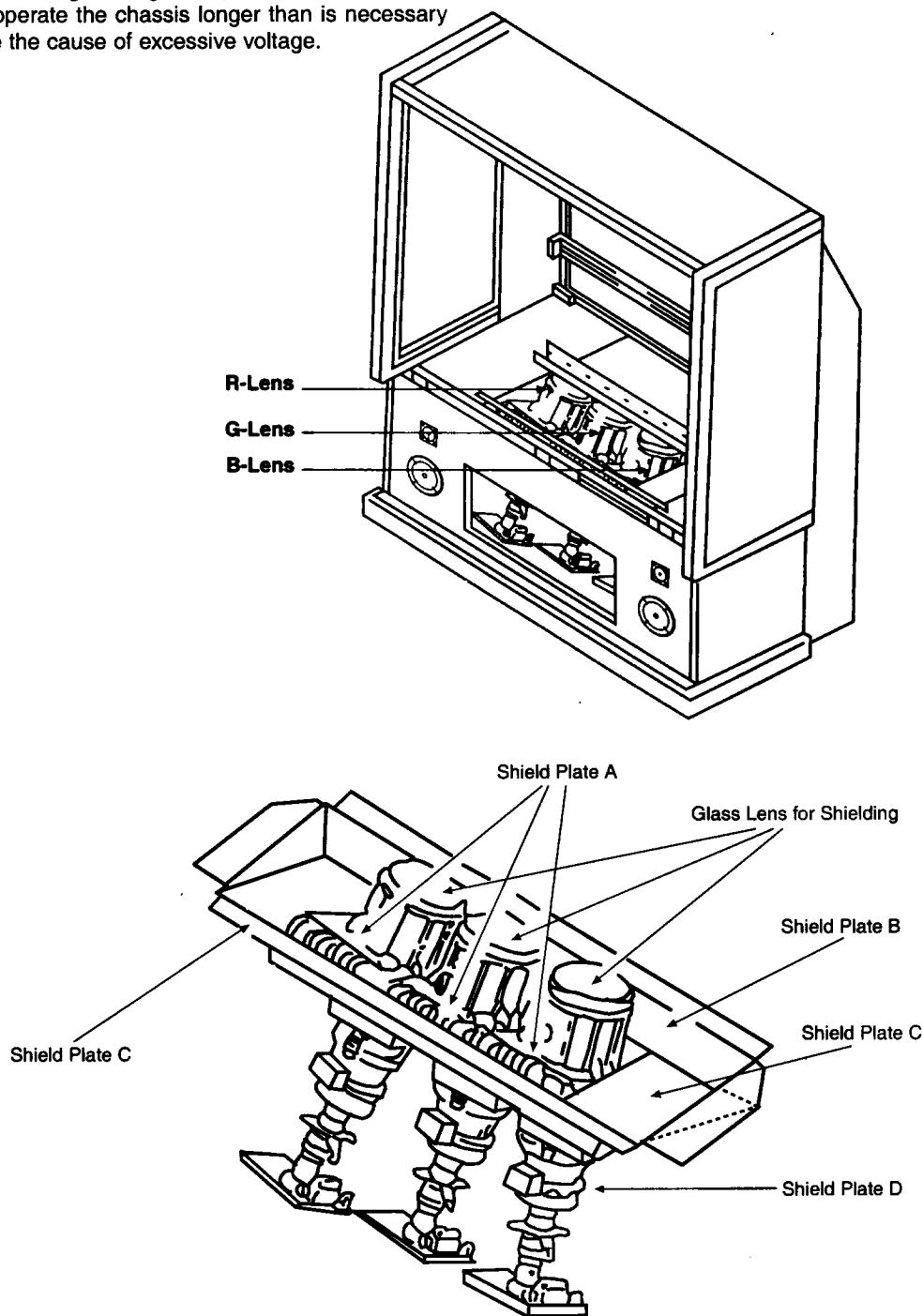
For continued X-radiation protection, the replacement tube must be the same type as the original, Hitachi approved type.

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.



Detailing X-radiation shield

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-plate, 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 Ω 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 heat-sinks 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 an 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.)

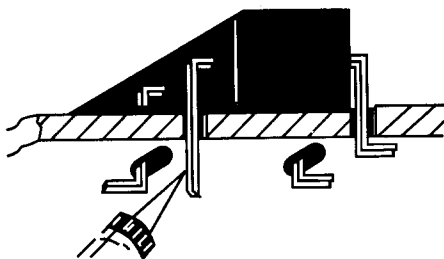
General Soldering Guidelines

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 Soldering 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.

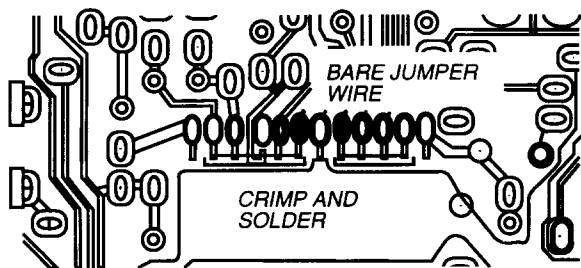
In Critical Copper Pattern Areas

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.

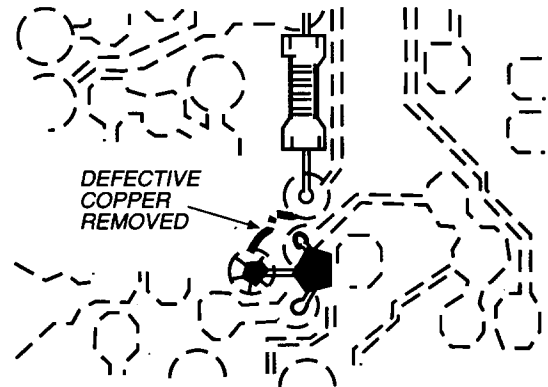


Install Jumper Wire and Solder

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.

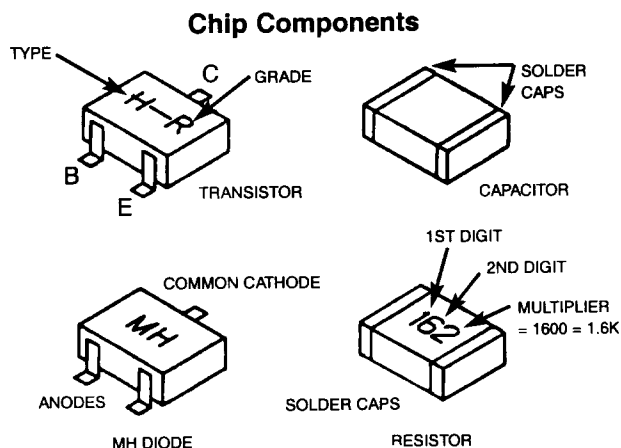
Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

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.

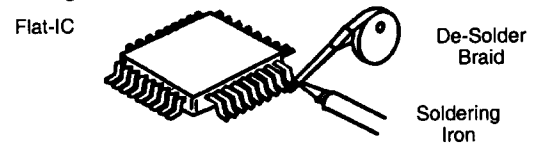
Chip Component Installation

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

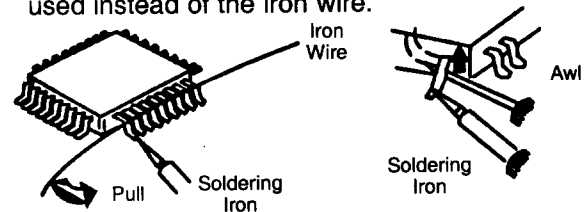


How to Replace Flat-IC —Required Tools—

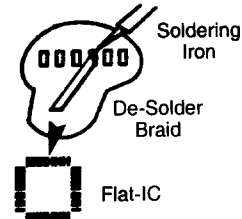
- Soldering iron
 - iron wire or small awl
 - De-solder braids
 - Magnifier
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



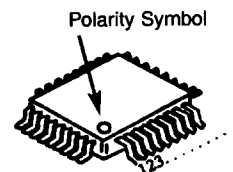
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



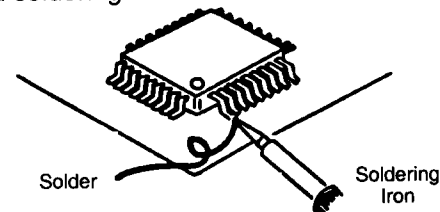
3. Remove the solder from all of the pads of the Flat-IC by using a de-solder braid.



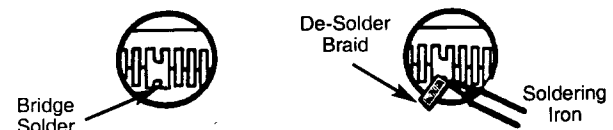
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



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.

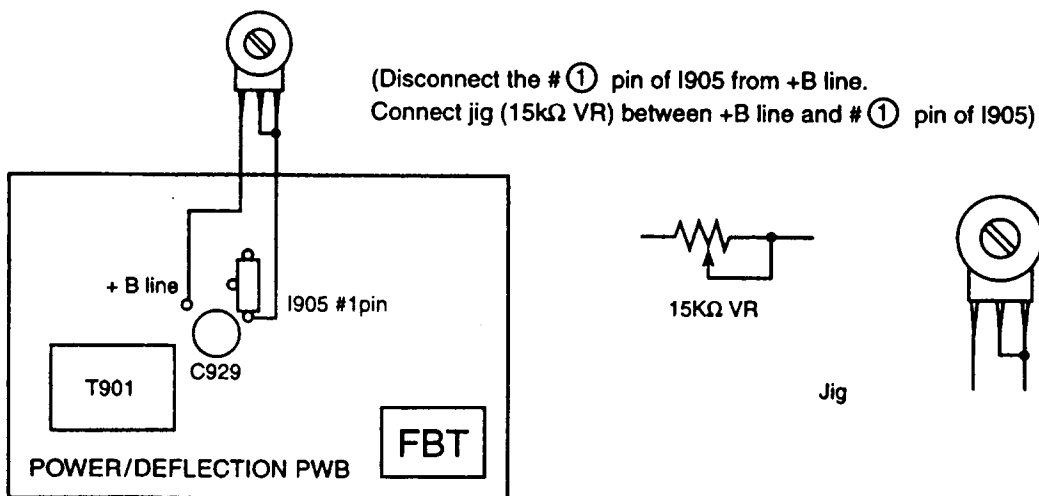
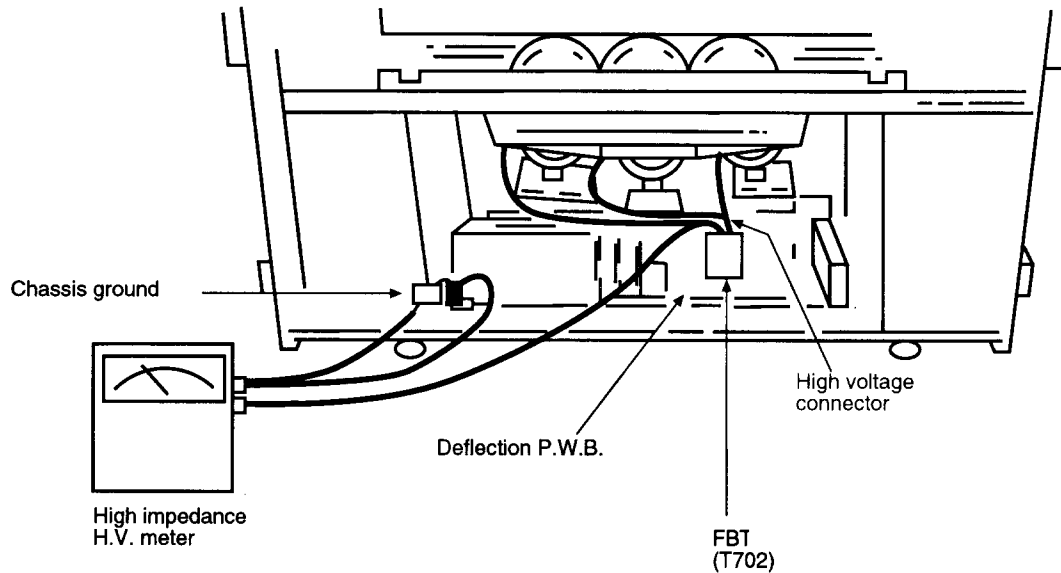


Fig. 2. Deflection/Power P.C.B.

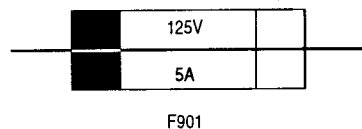
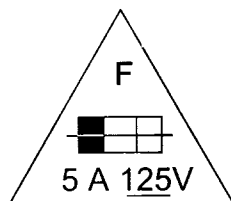
SPECIFICATIONS

Model:	46FX01B 46GX01B 50GX10B 50GX20B	Audio Input:	470 mVrms, 47 k Ohm
Cathode-Ray Tube:	R=180DLB22R G=180DLB22G B=180DLB22B	Stereo Audio Output:	470 mVrms, 1 k Ohm
Power Input:	120 volts AC, 60 Hz	Audio Output Power:	Front – 12 watts at 10% distortion, 8 ohm Impedance Max output – 24 watts
Power Consumption:	184 Watts - Maximum 152 Watts - Operating	Anode Voltage:	35.0 ± 1.5kv (contrast, brightness=max)
Antenna Impedance:	75 ohm Unbalanced VHF / UHF / CATV	Brightness:	46FX01B/46GX01B 50GX10B/50GX20B 235 cd/m ² 205 cd/m ² (white screen) (white screen)
Receiving Channel:	<u>BAND</u> <u>CH</u> 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)	Speakers:	2 Woofers - 5 inch (12 cm) round
Intermediate Frequency:	Picture I-F Carrier 45.75 MHz Sound I-F Carrier 41.25 MHz Color Sub Carrier 42.17 MHz	Dimension:	46FX01B/46GX01B 50GX10B/50GX20B Height (in.) 49 3/4 51 7/8 Width (in.) 40 1/4 45 1/2 Depth (in.) 22 7/8 23 3/4 Weight (lbs.) 130 185
Video Input:	1 Volt p-p, 75 Ohm 1 Volt p-p, 75 Ohm (Y) 0.7 Volt p-p, 75 Ohm, (Cb, Cr)	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. SP Matrix P.W.B. Signal P.W.B. Power/Deflection P.W.B. Signal Sub P.W.B. Control P.W.B.
Video Output:	1 Volt p-p, 75 ohm		

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”

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

GENERAL INFORMATION

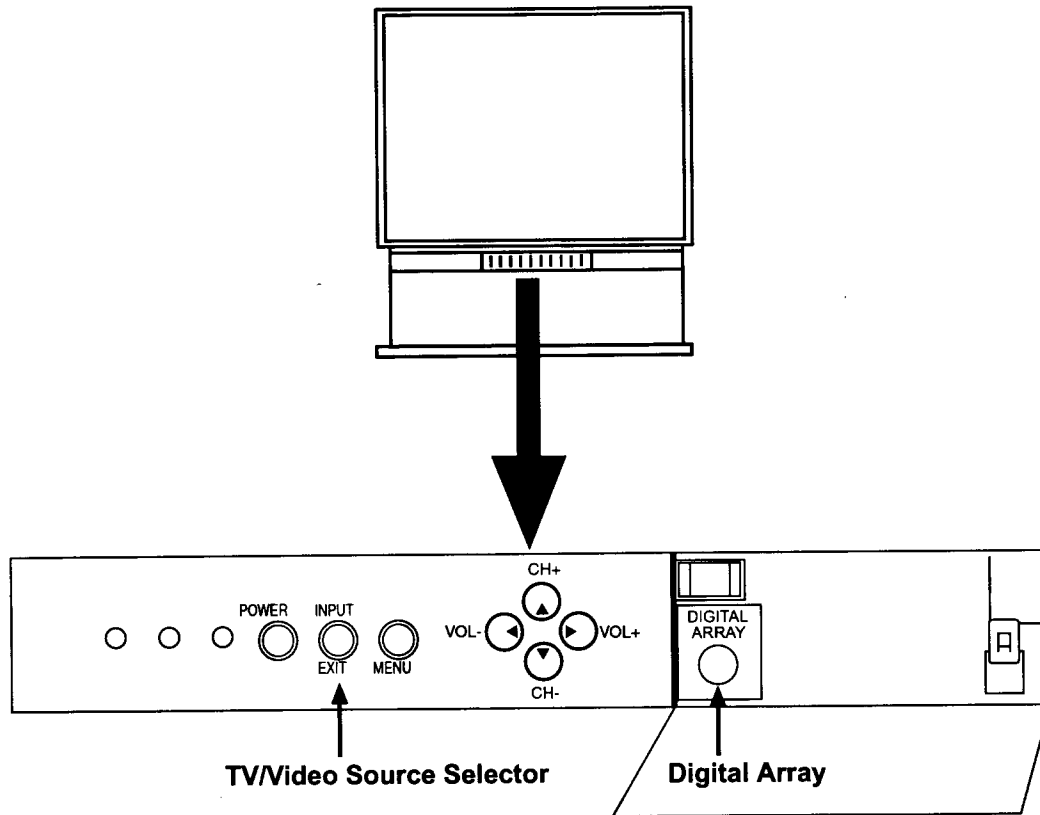


Fig. 3. Control Panel

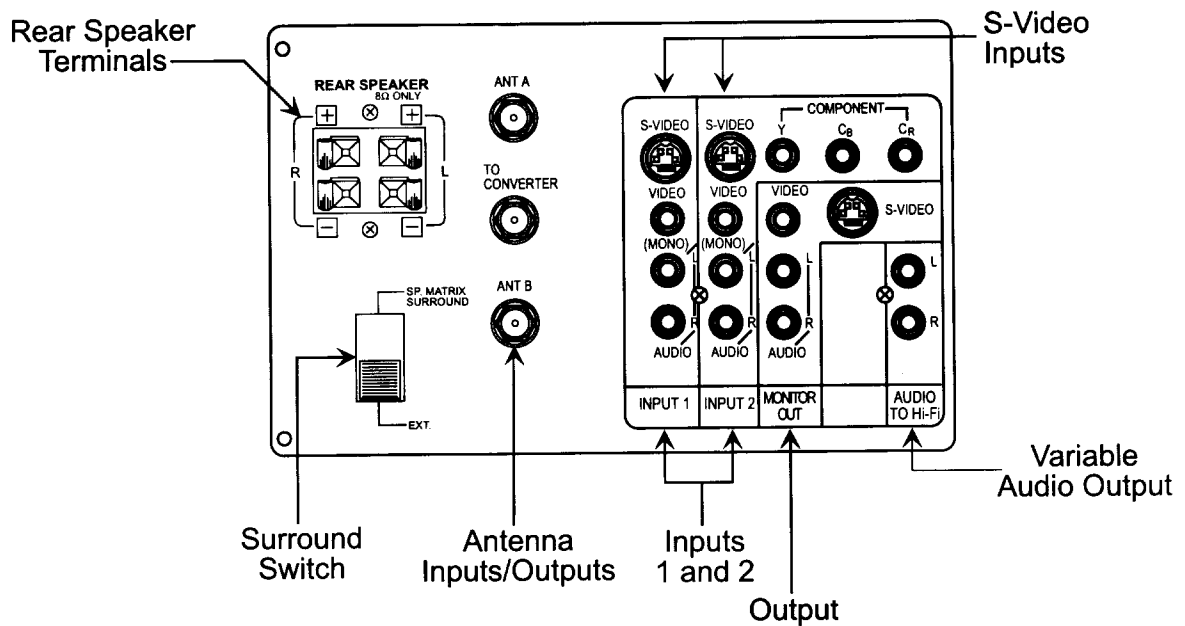
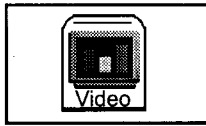
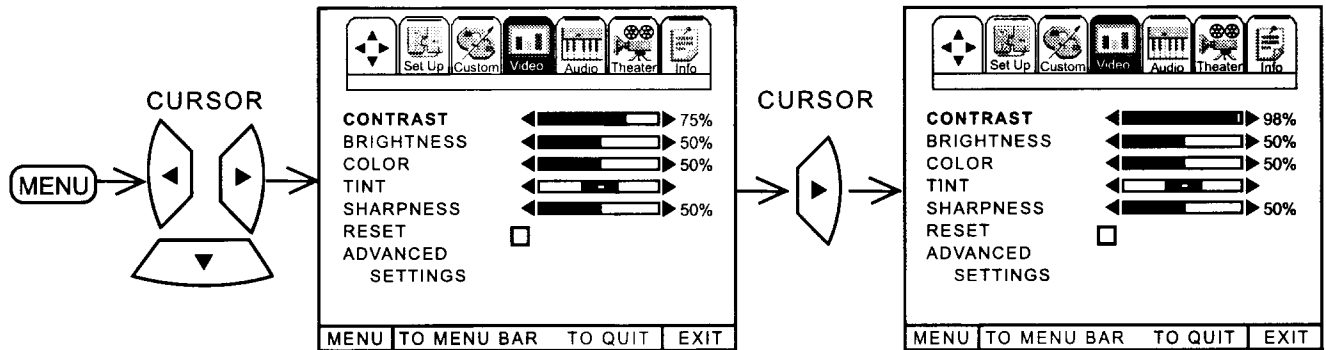


Fig. 4. Rear Connections Panel

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 (PIP).

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

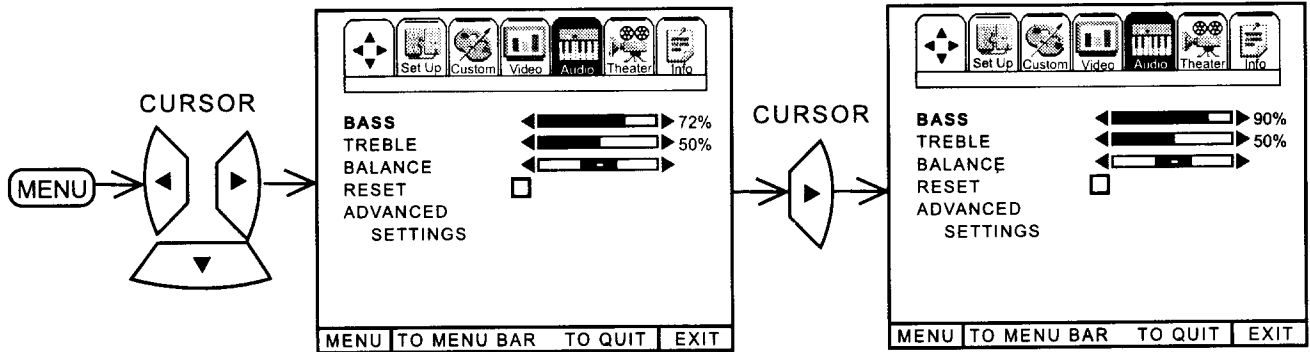
Use this function to adjust the amount of fine detail in the picture.

RESET

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



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.

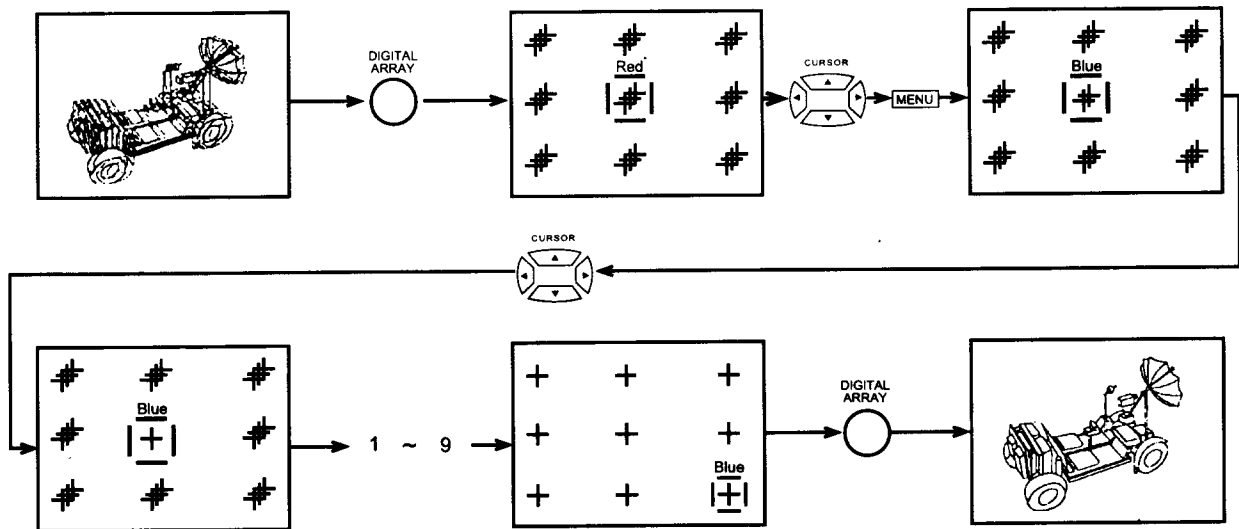
BALANCE

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

RESET

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

DIGITAL ARRAY



Use the number buttons to select which point to adjust: (1) - Upper Left, (2) - Upper Middle, (3) - Upper Right, (4) - Center Left, (5) - Center, (6) - Center Right, (7) - Bottom Left, (8) - Bottom Middle, (9) - Bottom Right.

Four lines surrounding a crosshatch indicate the point being adjusted. the color of these surrounding lines indicates the color being adjusted.

Press the CURSOR buttons to move the displayed color up, down, left or right.

Press MENU to change the color you want to adjust (Red or Blue).

Press the front panel DIGITAL ARRAY button or the remote control MOVE button when adjustment is done. This will save your adjustment into memory.

CAUTIONS WHEN CONNECTING / DISCONNECTING THE HV CONNECTOR

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

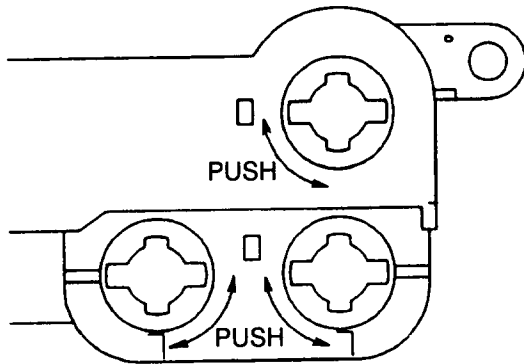
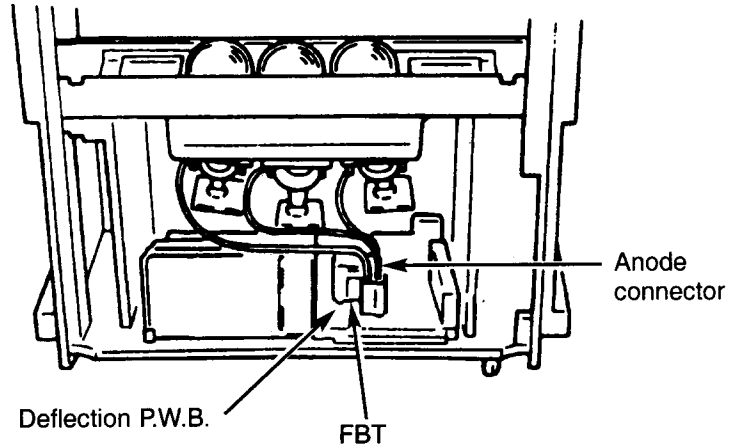


Fig. A

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)

3. Remove the connector slowly by pulling it away from the case.

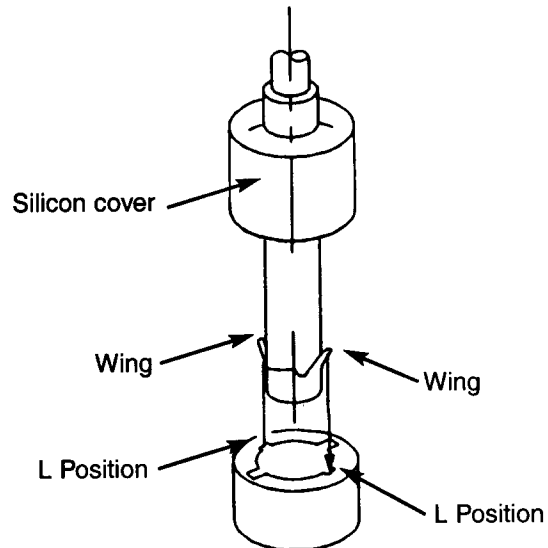


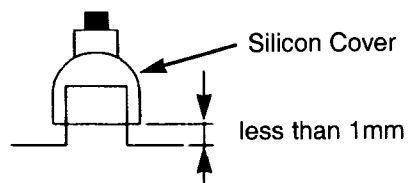
Fig. B

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.



SERVICE ADJUSTMENTS

1. ASSEMBLED P.W.B. ADJUSTMENT	18
1-1. Memory Initialization	18
1-2. Comb Filter Operation Check	18
1-3. Sub Picture (PIP) Position Adjustment	18
 2. FINAL ASSEMBLY ADJUSTMENT	 19
2-1. Focus Adjustment	19
2-2. White Balance Adjustment	20
2-3. Sub Brightness Adjustment	20
2-4. Sub Picture White Balance Adjustment	21
2-5. SP Matrix Check	21
2-6. Raster Inclination Adjustment (Deflection Yoke)	21
2-7. Raster Position Adjustment	22
2-8. Vertical Size Adjustment (R630)	22
2-9. Horizontal Size Adjustment (R603)	23
2-10. Beam Alignment	23
2-11. Beam Shape Adjustment	23
2-12. Static Focus Adjustment	24
2-13. Blue Defocus Adjustment	24
2-14. Digital Convergence Adjustment	24
2-14-1. Phase Adjustment (service mode)	25
2-14-2. Raster Position Adjustment	25
2-14-3. Convergence Point Adjustment	26
2-14-4. Digital Convergence Remote Control	26
 3. ADJUSTMENT POINT	 27
3-1. CRT (R)(G)(B), Cabinet Locations	27
3-2. Main Chassis (Signal P.W.B.)	28
3-3. Main Chassis (Power/Deflection P.W.B.)	29
3-4. CPT (R)(G)(B), Focus Pack, Control P.W.B.	30

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	AP92R
SERVICE	0
SUB CONT	1F
SUB COLOR	1A
SUB TINT	40
SUB SHARP	38
EXT RGB BRIGHT	40
EXT RGB CONT	60
BRIGHTNESS	80
YHCOR	0
* SUB BRIGHT ADJ. □	
INITIAL SET □	

P.02	AP92R
G DRIVE GAIN	47
B DRIVE GAIN	3A
H POSITION	12
AFC G	0
H BLK END PHASE	0
V BLK PHASE	0
V FREQUENCY	1
V POSITION	0
R-Y PHASE	3
R-Y LEVEL	0
G-Y LEVEL	0
GPPHS	1

P.03	AP92R
S-TRAC	1
YA	0
Y DL	0
TXACL	1
COLOR A	0
CTL	0
CDE	1
C TRAP	0
TOF FO	0
TOF Q	0
COLOR SYSTEM	0
DY GAIN	9

P.04	AP92R
DC T.C. POINT	0
DC T.C. RATIO	0
DC T.C. LIMIT	0
B.E. P. LIMIT	0
B.E. P. POINT1	5
B.E. P. POINT2	0
B.L.S.	0
B.L.C.	1
B.S.G.	0
B.D.L.	0
BEARE	0
DC GAIN	6

P.05	AP92R
WPD L	1
HI BRT	1
OSACL	0
APACON PEAK FO	0
WHITE PEAK	0
D. ABL POINT	0
D. ABL GAIN	7
ABL POINT	5
ABL GAIN	6
	(00)
YC VAPINV	0B
YC VAPGAIN	5

P.06	AP92R
POLLING	F
TIME OUT	55
CONT STATUS	02
FUNCTION	1
USER RATING TV	User set
USER RATING MPAA	User set
PIP RATING MPAA	00
PIP RATING TV	00
MAIN RATING MPAA	00
MAIN RATING TV	00

P.07	AP92R
H POSI (CENT)	04 *
V POSI (CENT)	07 *
H DLY OSD	A
V POSI OSD	29
1 ST L AFTER V	5
H DLY VBI	2
VIDEO FIELD	1
CLAMP DELAY	34
INITIAL SET □	-

*: Adjustable data
Others: Fixed data (be careful not to change)

- (4) Press 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 P7.
- (3) Should be changed to OFF for FIRST TIME TOUR at first Power ON by pressing MENU key during FIRST TIME TOUR running.

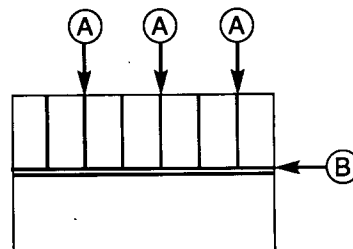
1.2 Comb filter operation check

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.

Adjustment procedure

- (1) Check that between the color bars there are line dots every second color bar as shown in the drawing.



Check (A) and (B) line dots.

LINE	DOTS
(A)	X
(B)	None

1.3 Sub-picture (PIP) 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

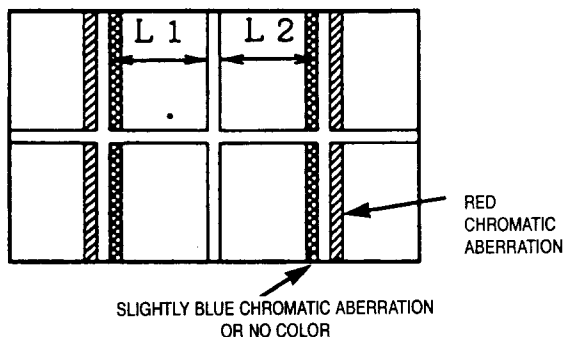
- (1) The set can face in any direction: west, east, north or south.
- (2) Receive the cross-hatch pattern signal.
CONTRAST : HALF
BRIGHTNESS : MINIMUM
- (3) The electrical focus adjustment should have been completed.
- (4) The centering DY inclination should have been adjusted.

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.

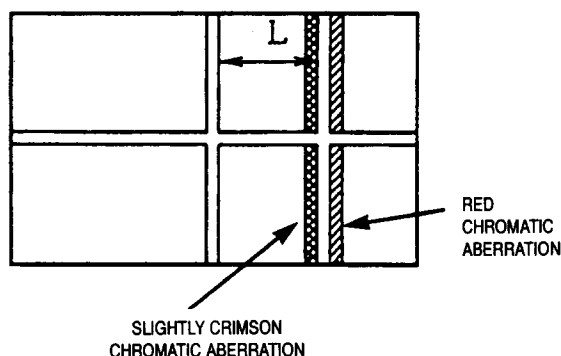
Lens	Change of color aberration
R lens	Red → Crimson
G lens	Blue → Red
B lens	Purple → Green

- (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.



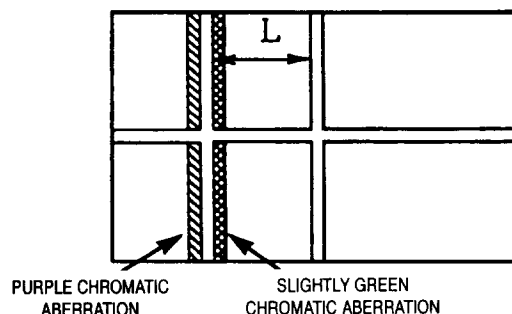
Set Size	Pitch between L
46"	3.0 cross-hatch pitches
50"	3.0 cross-hatch pitches

- (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.



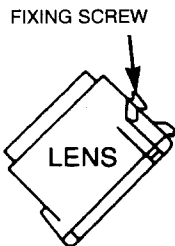
Set Size	Pitch between L
46"	3.0 cross-hatch pitches
50"	3.0 cross-hatch pitches

- (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.

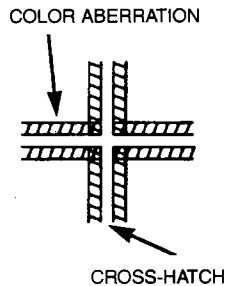


Set Size	Pitch between L
46"	3.0 cross-hatch pitches
50"	3.0 cross-hatch pitches

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).

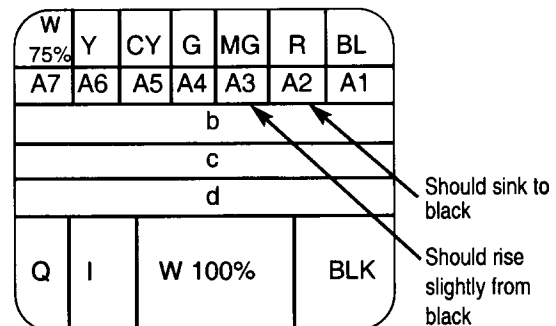
NOTE: Before adjusting the White Balance, check that the screen adjustment VRs are turned fully counterclockwise. Since the phosphorescent surface of the CRT is likely to be burned, be careful.

White balance = 9300° K ± 0MPCD
Color coordinate = x 0.285
y 0.295

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.



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 microprocessor 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.

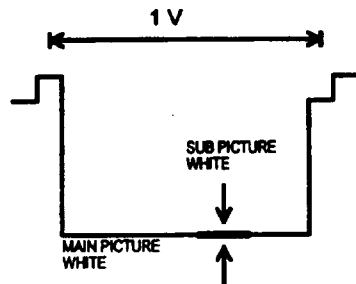
2.4 Sub picture white balance adjustment (R0M4, R0M6, R0M8)

Adjustment preparation

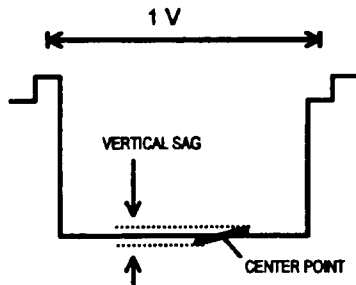
- (1) Start adjustment after power is ON for 20 minutes.
- (2) Use a white raster signal for adjustment.
- (3) Press "FREEZE" on the remote control and select "SINGLE" freeze mode to display the sub picture.
- (4) Set CONTRAST to Maximum, Other conditions to center.

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.



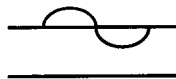
2.5 SP Matrix Check

Adjustment preparation

- (1) Input the following audio signals to the audio input of the VIDEO INPUT terminals, when checking SP Matrix:

① R ch: 435mVrms

② L ch: no signal



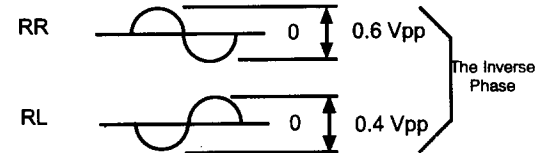
- Set the AUDIO ADVANCED SETTING for INT. SPEAKERS: ON, LOUDNESS: OFF and PERFECT VOLUME: OFF.
- Set the volume control of FRONT to 20 step.
- Set the BALANCE, TREBLE and BASS to Normal.

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

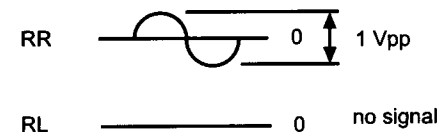
Adjustment procedure

- (1) Check that the waveforms shown below are obtained (Input signal ① and ②), at rear SP Terminal Out.

(a) SP MATRIX mode



(b) EXT mode



2.6 Raster Inclination adjustment (Deflection Yoke)

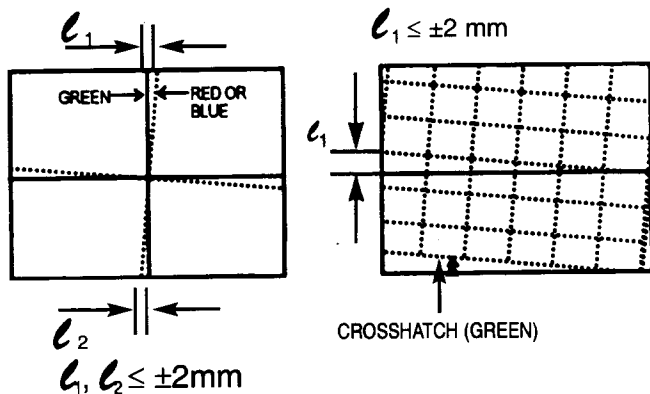
Adjustment preparation

- (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

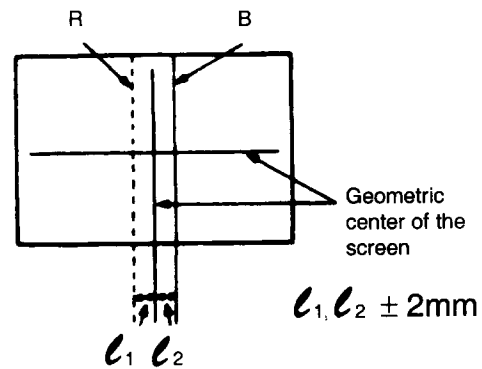
Adjustment preparation

- (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.

Size	l_1 (RED)	l_2 (BLUE)
46"	10mm	30mm
50"	10mm	30mm



- 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

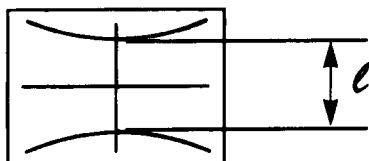
- (1) The set can face east or west.
- (2) Input the single cross test signal.
- (3) Set video conditions to factory reset.
- (4) The lens focus adjustment should have been completed.
- (5) The electric focus should have been coarse adjusted.
- (6) The digital convergence RAM should be cleared (uncorrected 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.

Size	l
46"	$600 \pm 5 \text{ mm}$
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)

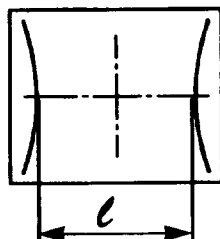
Adjustment preparation

- (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.

Size	c
46"	$875 \pm 5\text{mm}$
50"	$950 \pm 5\text{mm}$



- 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

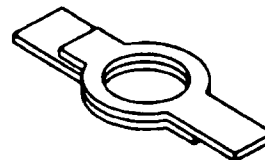
Adjustment preparation

- (1) Adjust at least 30 minutes after turning on power switch.
- (2) Raster inclination, centering, horizontal and vertical amplitudes and optical focus adjustment 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.

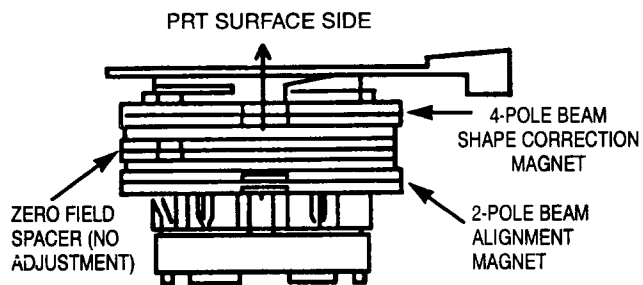
2.11 Beam shape adjustment

Adjustment preparation

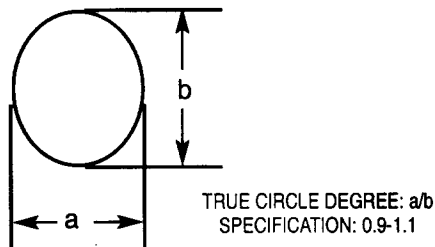
- (1) The beam alignment should have been completed.
- (2) The raster inclination, centering, horizontal/vertical amplitude and optical focus adjustments should have been completed.
- (3) Set video conditions to factory reset.
- (4) Input the dot signal.

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

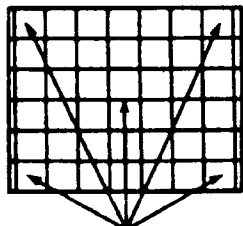
Adjustment preparation

- (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

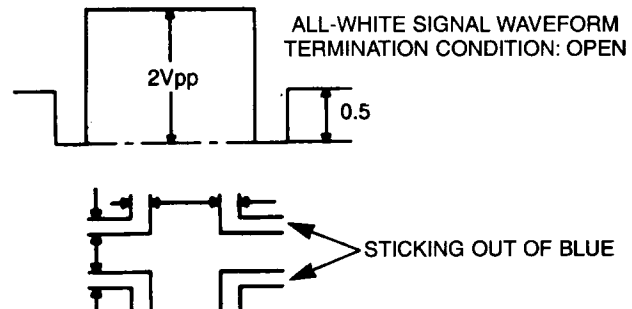
Adjustment Preparation

- (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.



Defocus sticking out specification

Screen Size	Blue sticking out
46"	1.0mm
50"	1.0mm

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

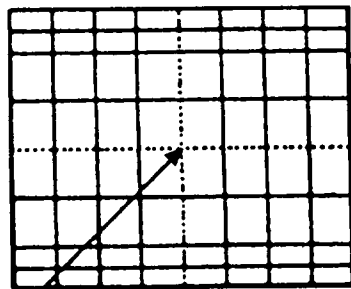
Cautions: Correct the brightness gauge and amplitude of the all-white signal periodically. The aperture angle of the brightness gauge is 1°. Use a cross-hatch pattern to check.

2.14 Digital convergence adjustment

Adjustment preparation

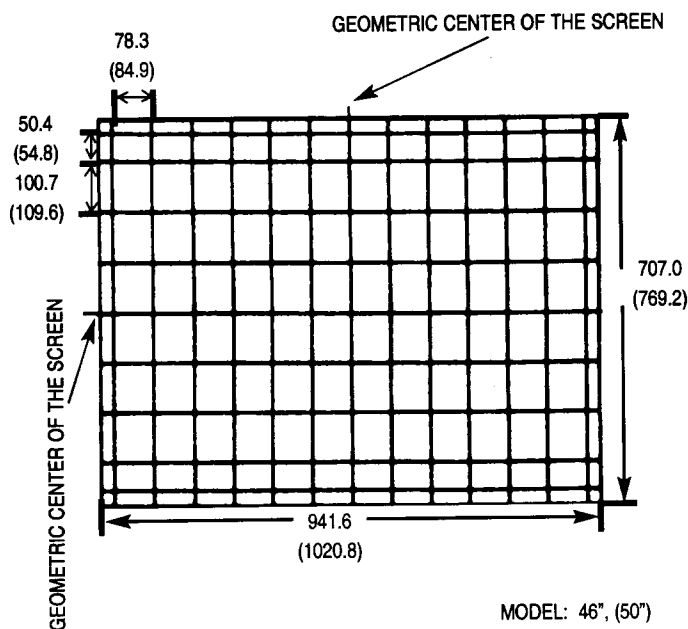
- (1) Receive an RF or video signal.
- (2) Set controls to factory preset.
- (3) Install jig screen on the set.
- (4) Note the center of the video pattern displayed. This is necessary to match dotted lines (adjustment point viewed) and actual point that is adjusted and displayed by the video signal.

- (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).



Adjustment Point

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)

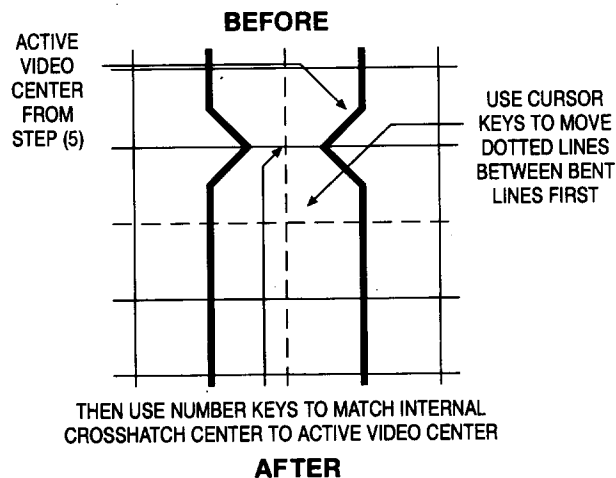
Adjustment preparation

- (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) Display external signal.
- (5) Identify center of active video, then 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

NOTE: 3 x 3 mode can only be accessed at start of adjustment from clear data in ram adj. mode.

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.

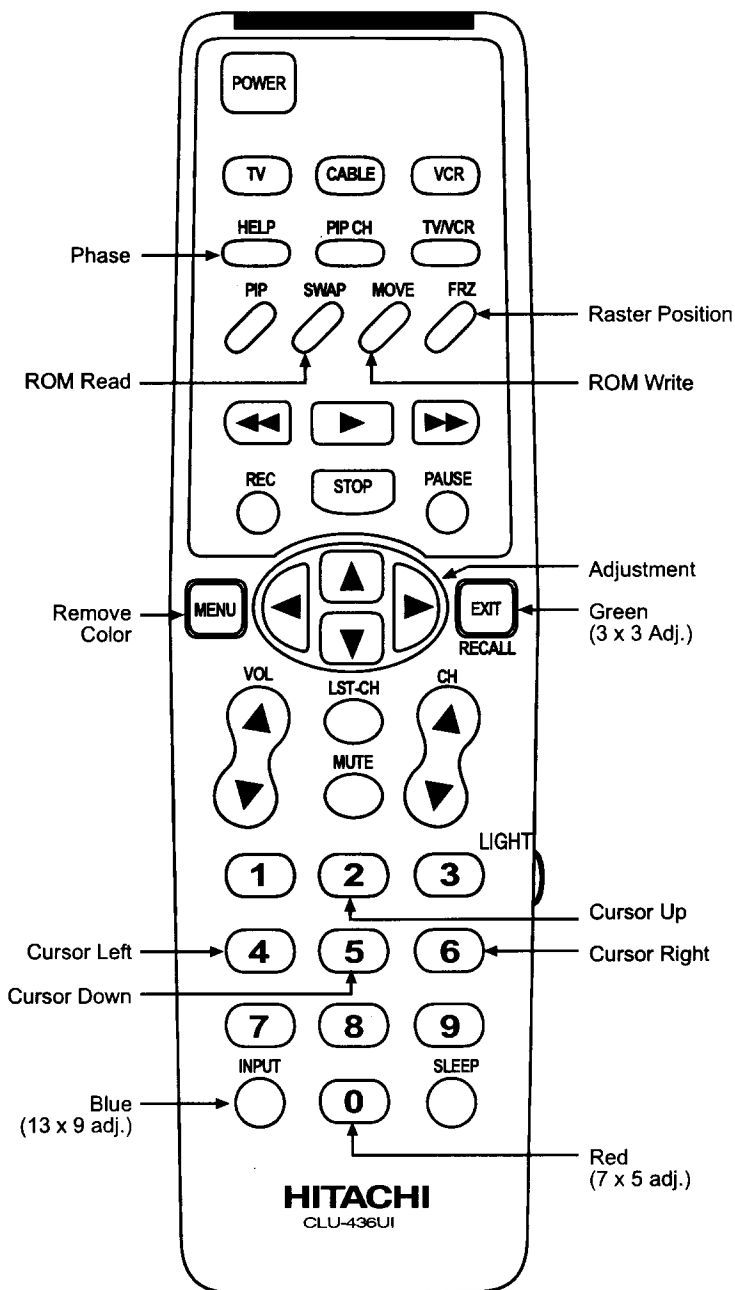
Adjustment procedure

- (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) 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.
- (5) DATA WRITE TO ROM will take approximately 20 seconds and no picture will be displayed.
- (6) Green dots will be displayed when operation is complete.
- (7) Press MUTE to return to convergence pattern, then confirm again convergence is acceptable.

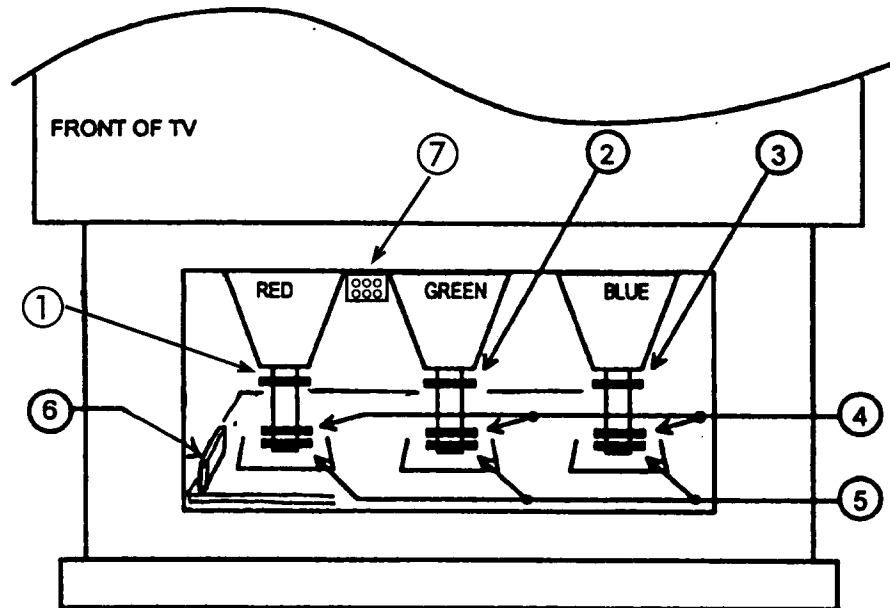
- Notes:**
- (1) Display only green for easier adjustment and match to jig screen. Press "MENU", THEN PRESS "RECALL".
 - (2) Write data to ROM after green adjustment. Once green has been confirmed to match jig screen, the jig screen can be removed. Do not readjust the green color after jig screen has 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.

2.14.4 Digital Convergence Remote Control

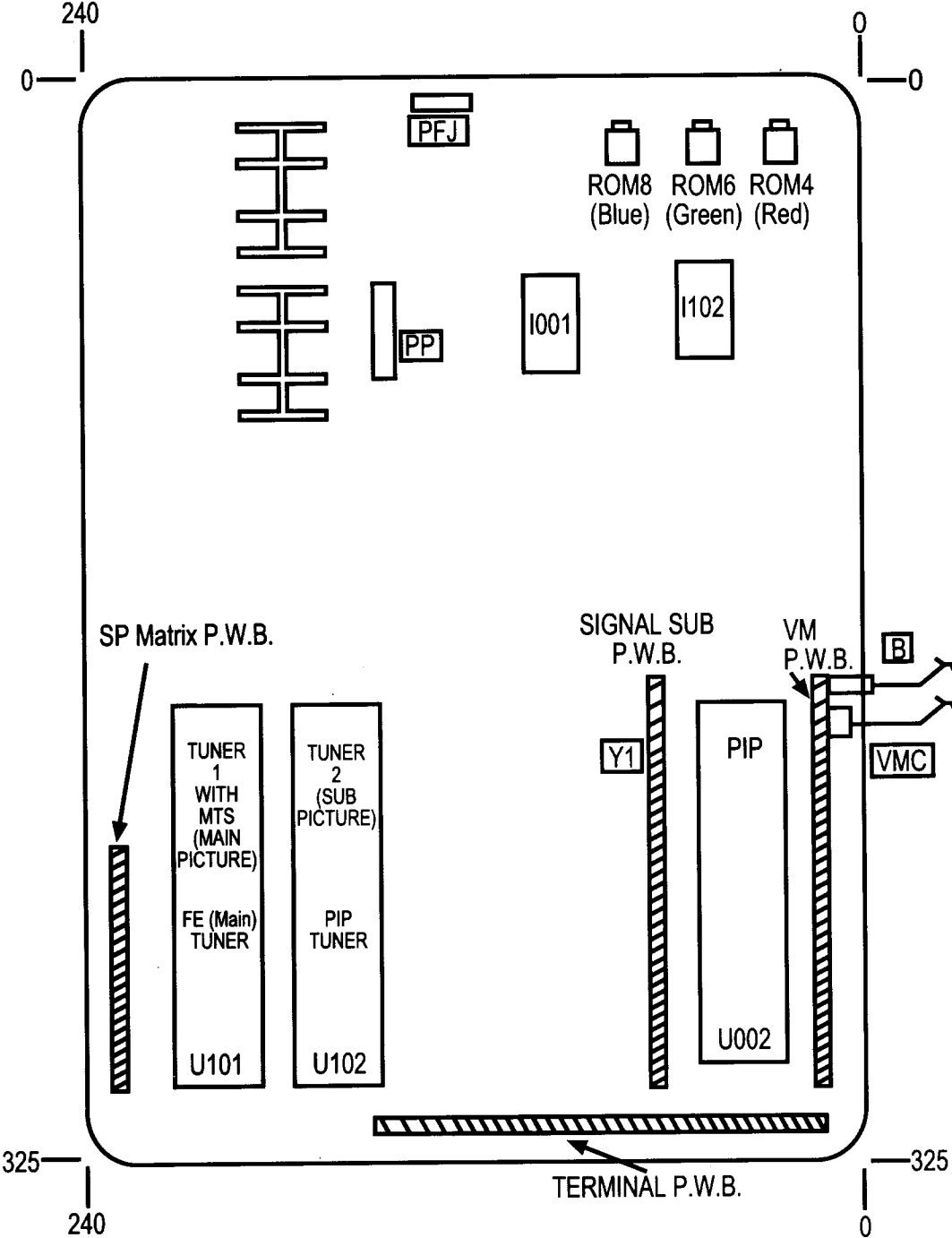


3. ADJUSTMENT POINT
3.1 CRT, cabinet locations



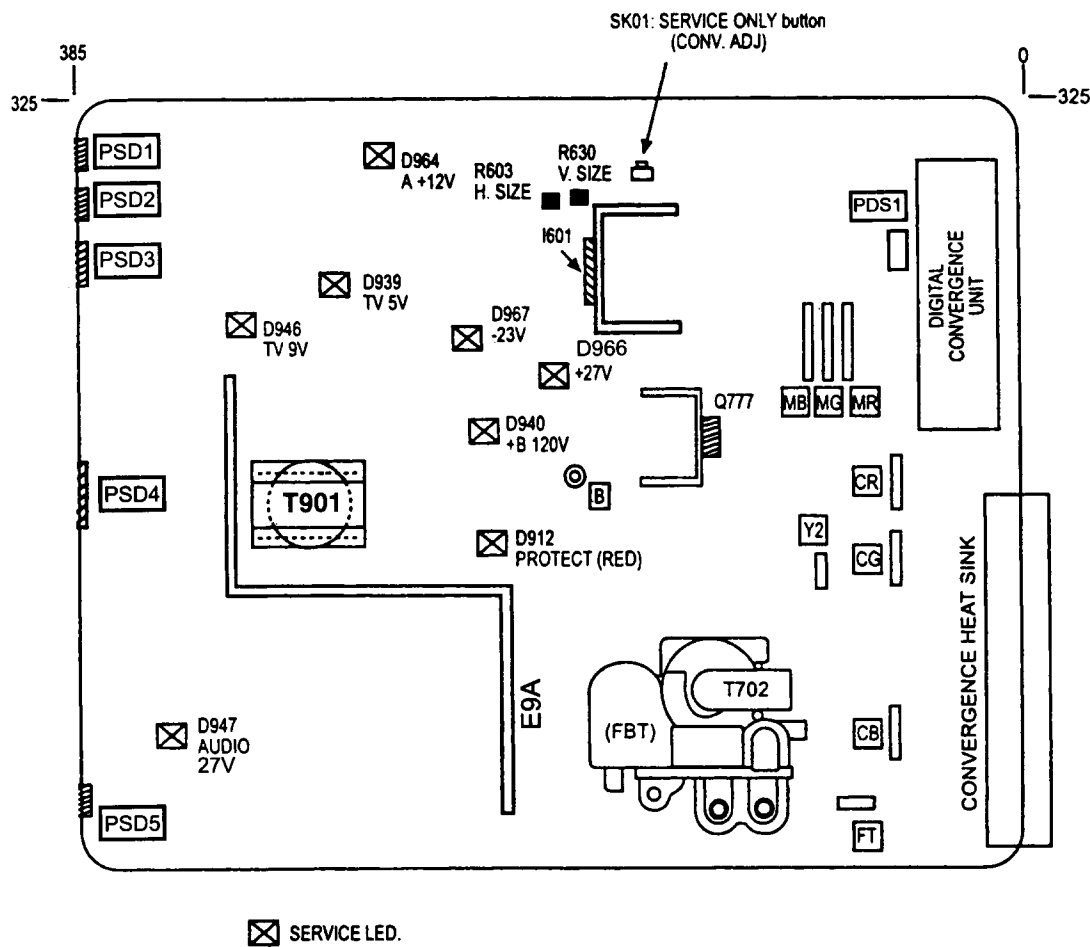
1. CENTERING MAGNET FOR RED PRT
2. CENTERING MAGNET FOR GREEN PRT
3. CENTERING MAGNET FOR BLUE PRT
4. 4-POLE MAGNET FOR BEAM FORM ADJUSTMENT
5. BEAM ALIGNMENT MAGNET
6. DIGITAL CONVERGENCE MODULE (On Power/Deflection Board)
7. FOCUS PACK (Top Adjustments for SCREEN, Bottom for FOCUS)

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



Rear View

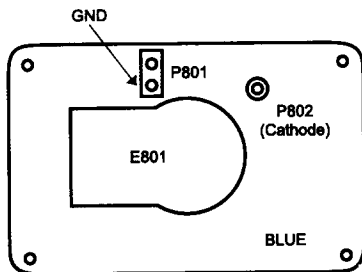
3.3 MAIN CHASSIS
(Power/Deflection P.W.B.)



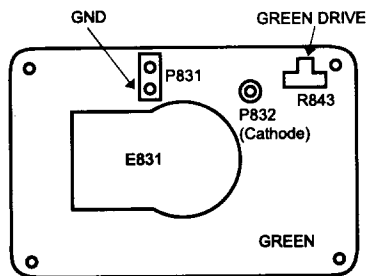
↑
Rear View

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

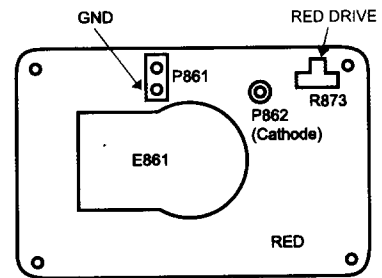
CPT (B)



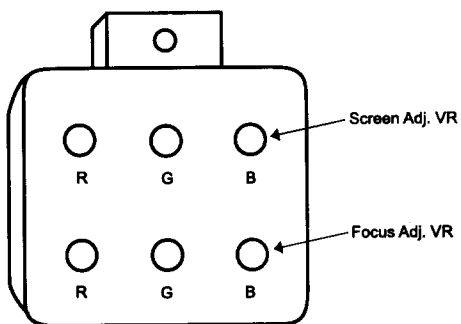
CPT (G)



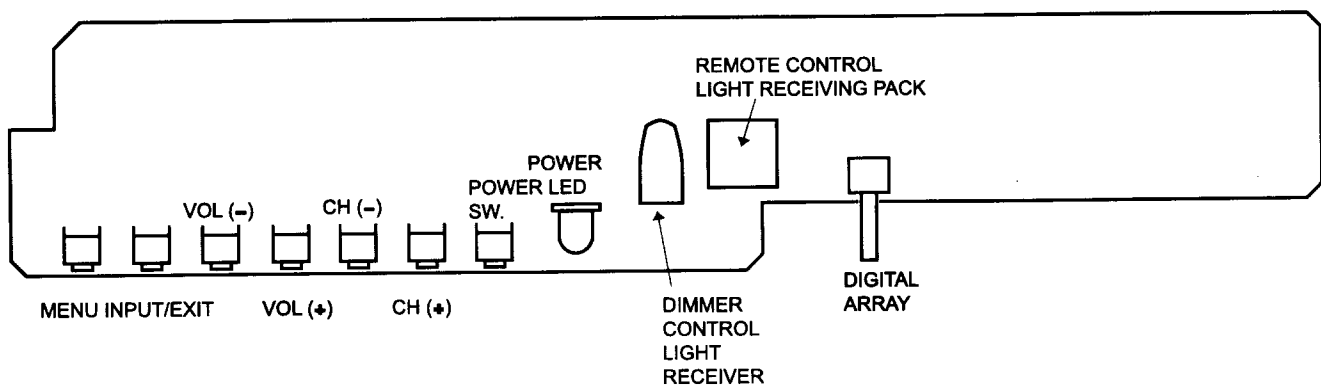
CPT (R)



Focus Pack (UFPK)



Control P.W.B.

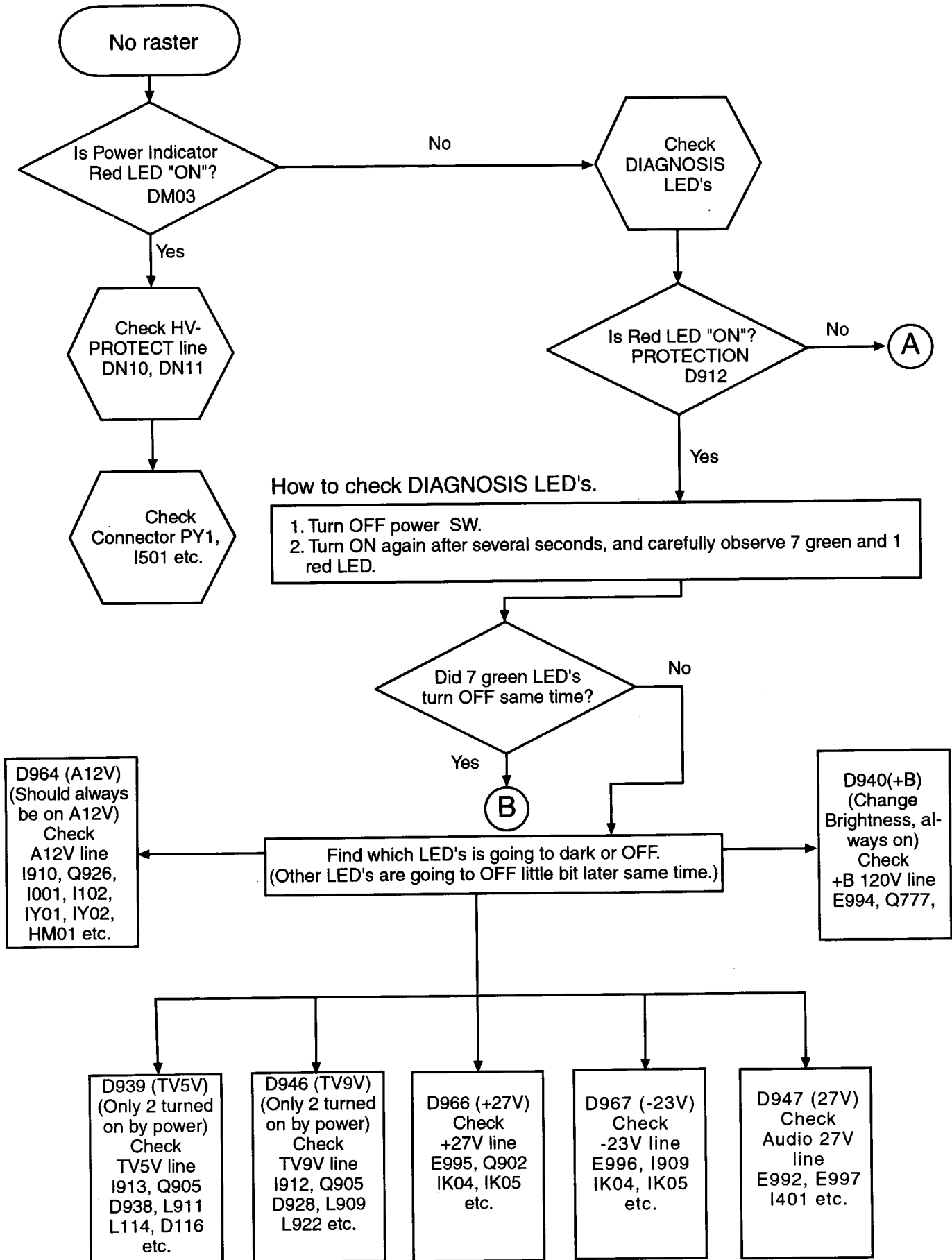


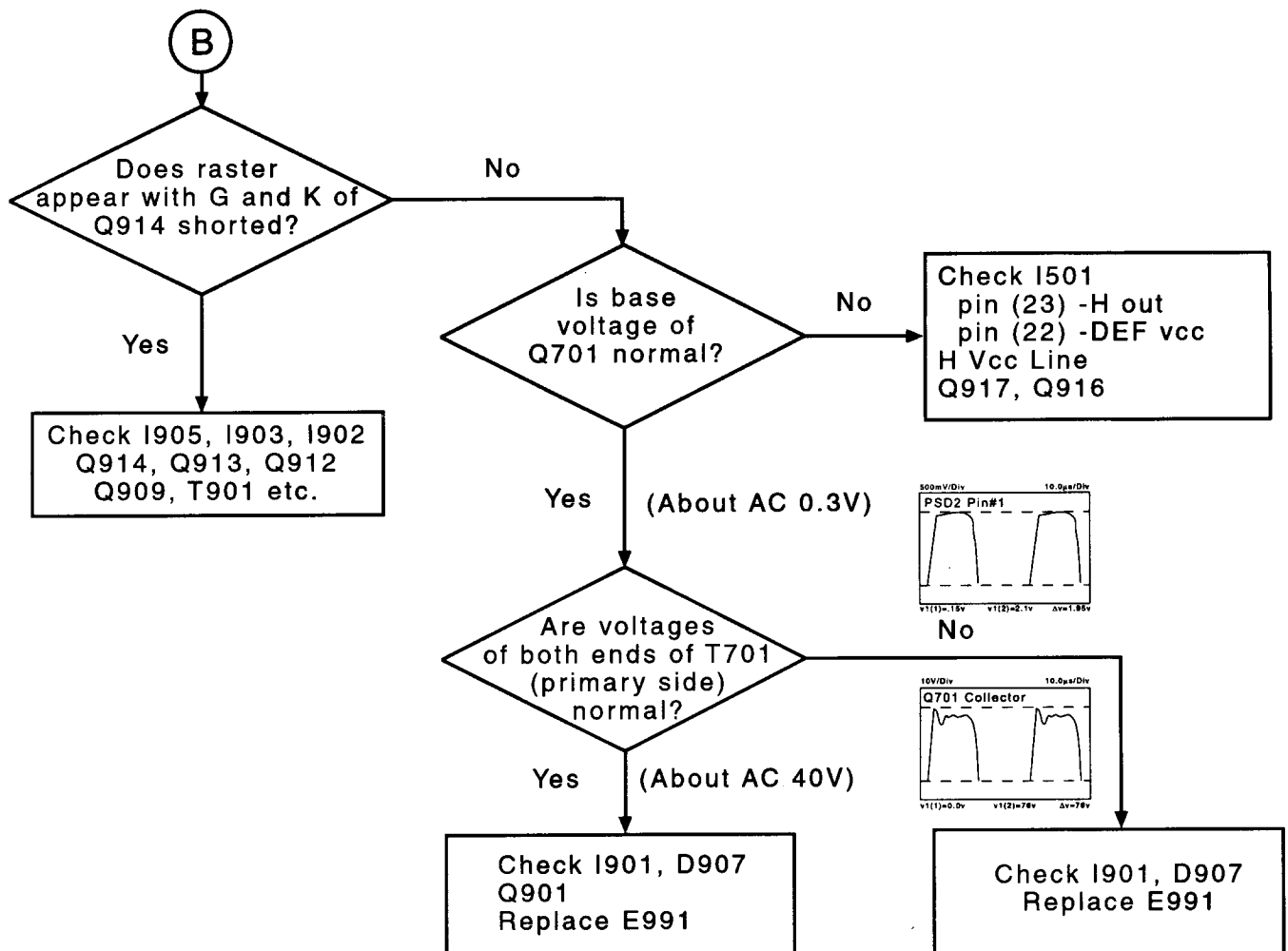
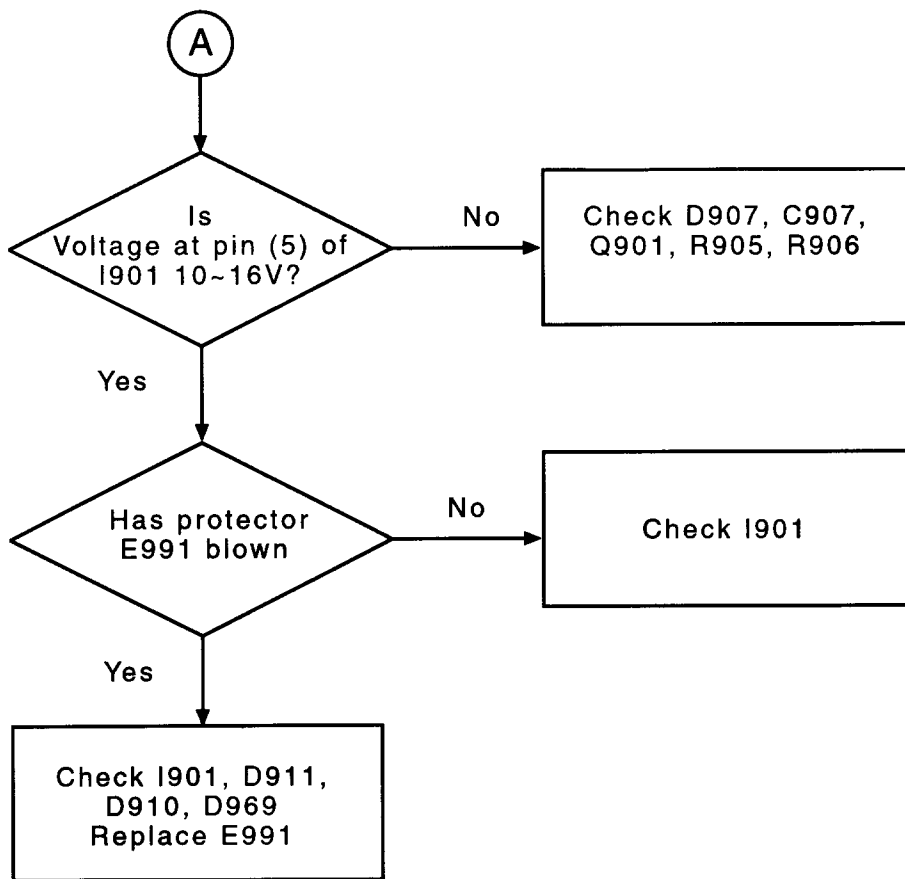
IC Use List

No.	CIR No.	Part #	DESCRIPTION	FUNCTION	PWB
1	I001	CP06616U	MN1876478HE1	TV uP	SIGNAL
2	I004	CP05272U	M24C16-BN6	E2PROM	SIGNAL
3	I006	CK07131R	MC14053BFEL	OSD SELECT	SIGNAL
4	I007	2000541	M51951BSL	RESET	SIGNAL
5	I008	2020342	MM1115XS	VIDEO SELECT	SIGNAL
6	I102	CP05243U	Z9035612PSCR_B	OSD uP	SIGNAL
7	I103	2000541	M51951BSL	RESET	SIGNAL
8	I105	2015495R	HD74HC32FPEL	OSD SELECT	SIGNAL
9	I106	CP05571	BA17805	+5V REG.	SIGNAL
10	I401	2004751	TA8200AH	L/R AUDIO OUT	SIGNAL
11	IK01	CP05571	BA17805	+5V REG.	POW/DEF
12	IK02	CP01631R	PST9142	RESET	POW/DEF
13	IK03	CP05571	BA17805	+5V REG.	POW/DEF
14	IK04	CZ00431	STK392-110	CONV. AMP.	POW/DEF
15	IK05	CZ00431	STK392-110	CONV. AMP.	POW/DEF
16	I601	2003541	LA7838	VER. DEF. OUT	POW/DEF
17	I602	CP06351U	BA10393	HOR. DEF. SIZE	POW/DEF
18	I901	CZ00451	STR-M6811A	POW SWITCH CONT.	POW/DEF
19	I902	2000465	PS2501-01 (KC/LC)	PROTECT	POW/DEF
20	I903	2000465	PS2501-01 (KC/LC)	ERROR DETECT	POW/DEF
21	I904	2000465	PS2501-01 (KC/LC)	AC CLOCK	POW/DEF
22	I905	2381349	SE120N	+B CONTROL	POW/DEF
23	I908	CP05573	IC BA17812	+12V REG.	POW/DEF
24	I909	1360891	NJM7912FA	-12V REG.	POW/DEF
25	I910	CP03912F	SI-8402L	STAND BY +12V REG.	POW/DEF
26	I912	CP03923F	SI-8090S	+9V REG.	POW/DEF
27	I913	CP03922F	SI-8050S	+5V REG.	POW/DEF
28	IX01	CP06911U	TC90A13N	D 3LINE COMB	3 LINE COMB
29	IY01	2020452	CXA1545AS	A/V SELECT	TERMINAL
30	IY02	2003423	UPC7893AHF	+9V REG.	TERMINAL
31	I501	CP03552U	TA1222BN	VIDEO/CHROMA	VID/CHROMA
32	I503	CK08951R	MM1389XFBE	Y-u-v SW	VID/CHROMA
33	IS05	2020001	TDA9860	AUDIO CONTROL	SP. MATRIX
34	IS12	CP02601	AN5285K	PERFECT VOL. CONT.	SP. MATRIX
35	HM01	CZ00523	SBX1981-52P	IR RECEIVER	CONTROL
36	U002	HP00094	KC-010S	PINP UNIT	SIGNAL
37	U101	HC00311	V6-A30FT	1st TUNER	SIGNAL
38	U102	HC00401	V8-A68FT	2nd TUNER	SIGNAL
39	UKDG	CS00441	HC2131	DCU	POW/DEF
40	EANT	HP00771	ANT SW	ANT SW BOX	MAIN CHASS

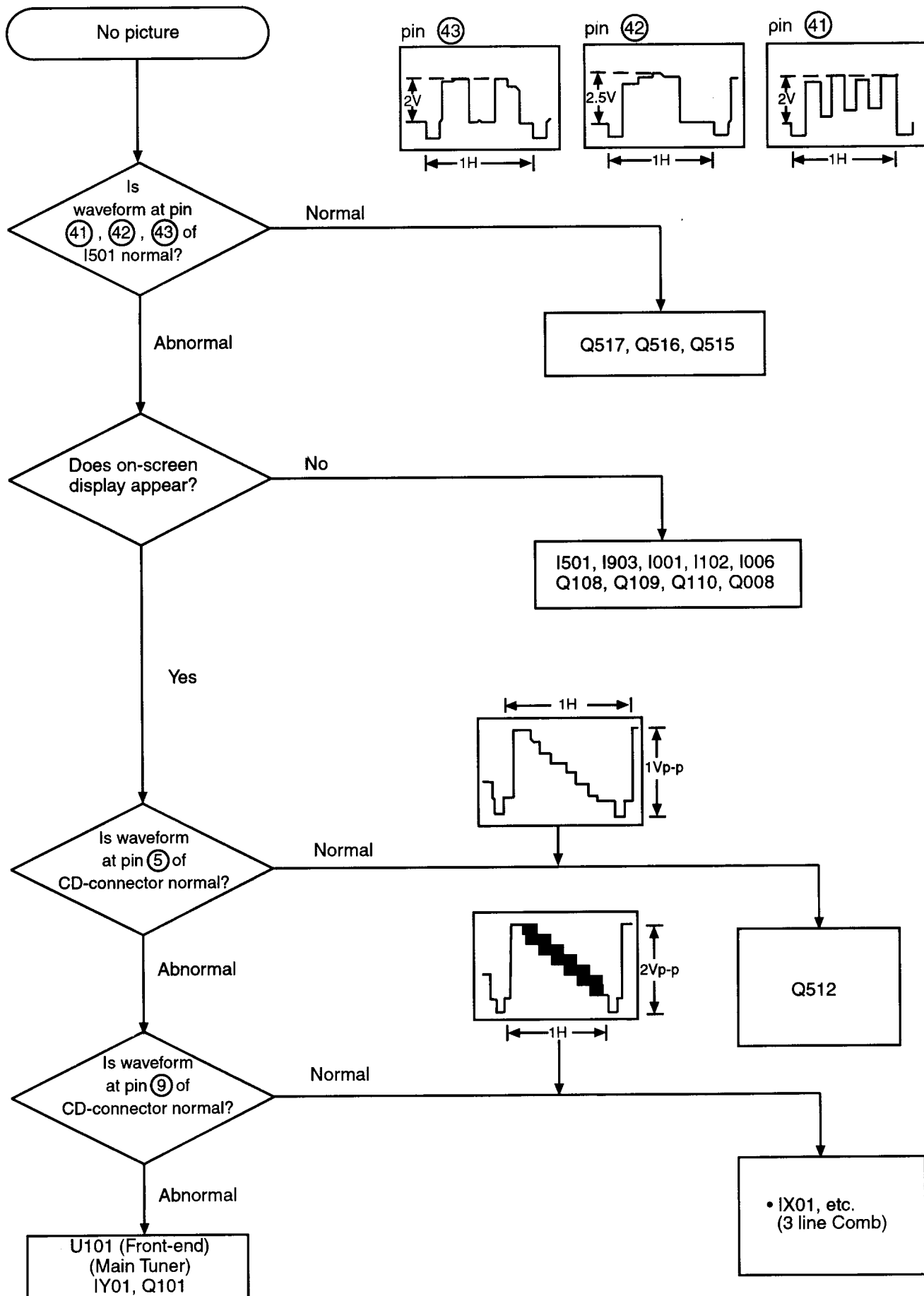
TROUBLESHOOTING

1. No Raster and No Power (REPAIR METHOD)



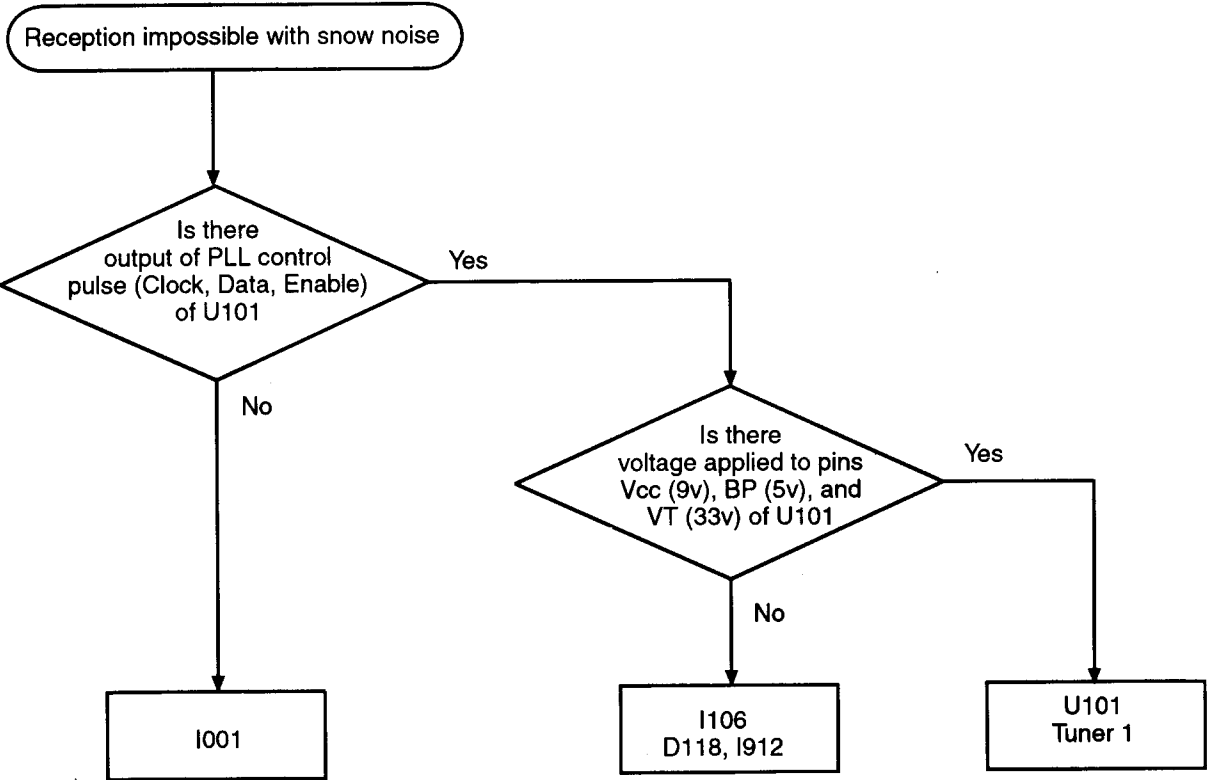


2. No Picture

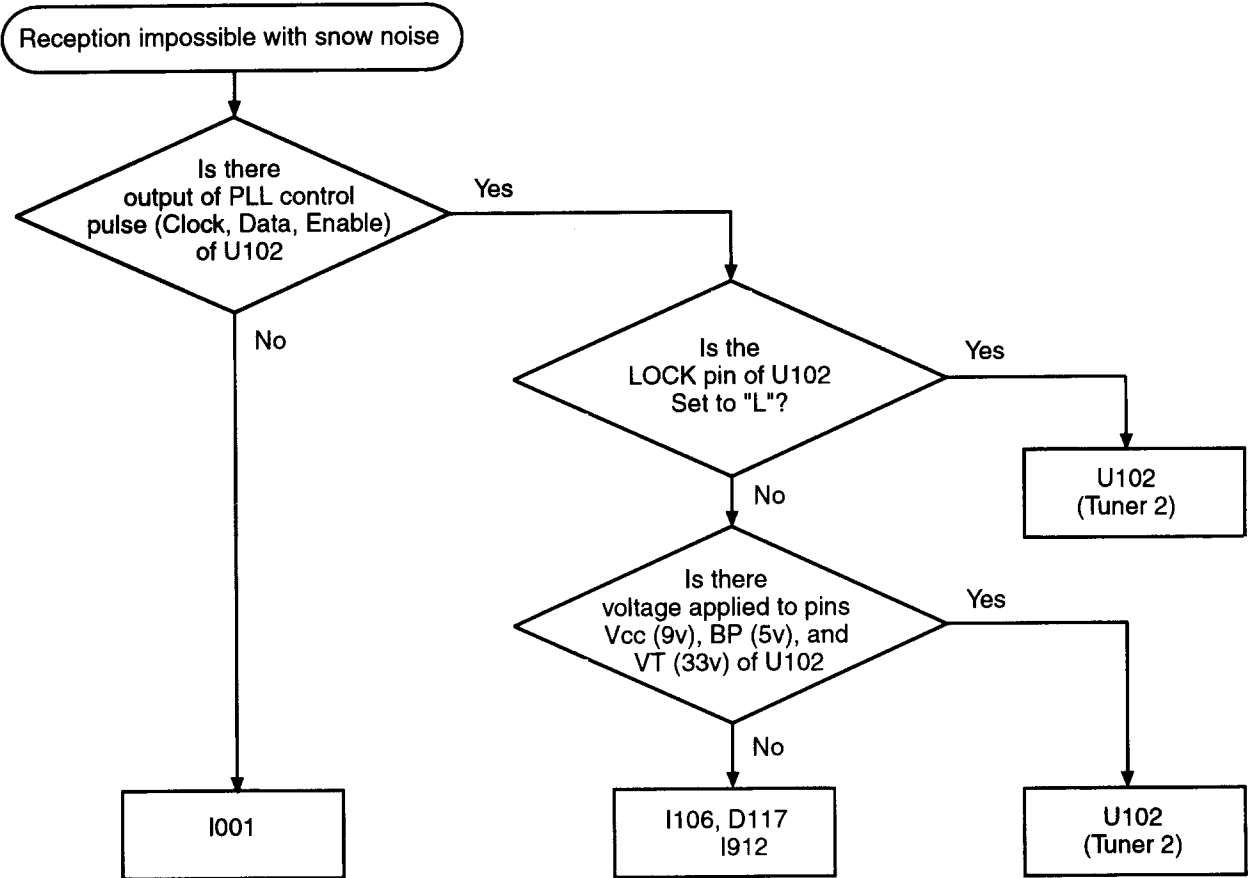


3. Reception Impossible with Snow Noise

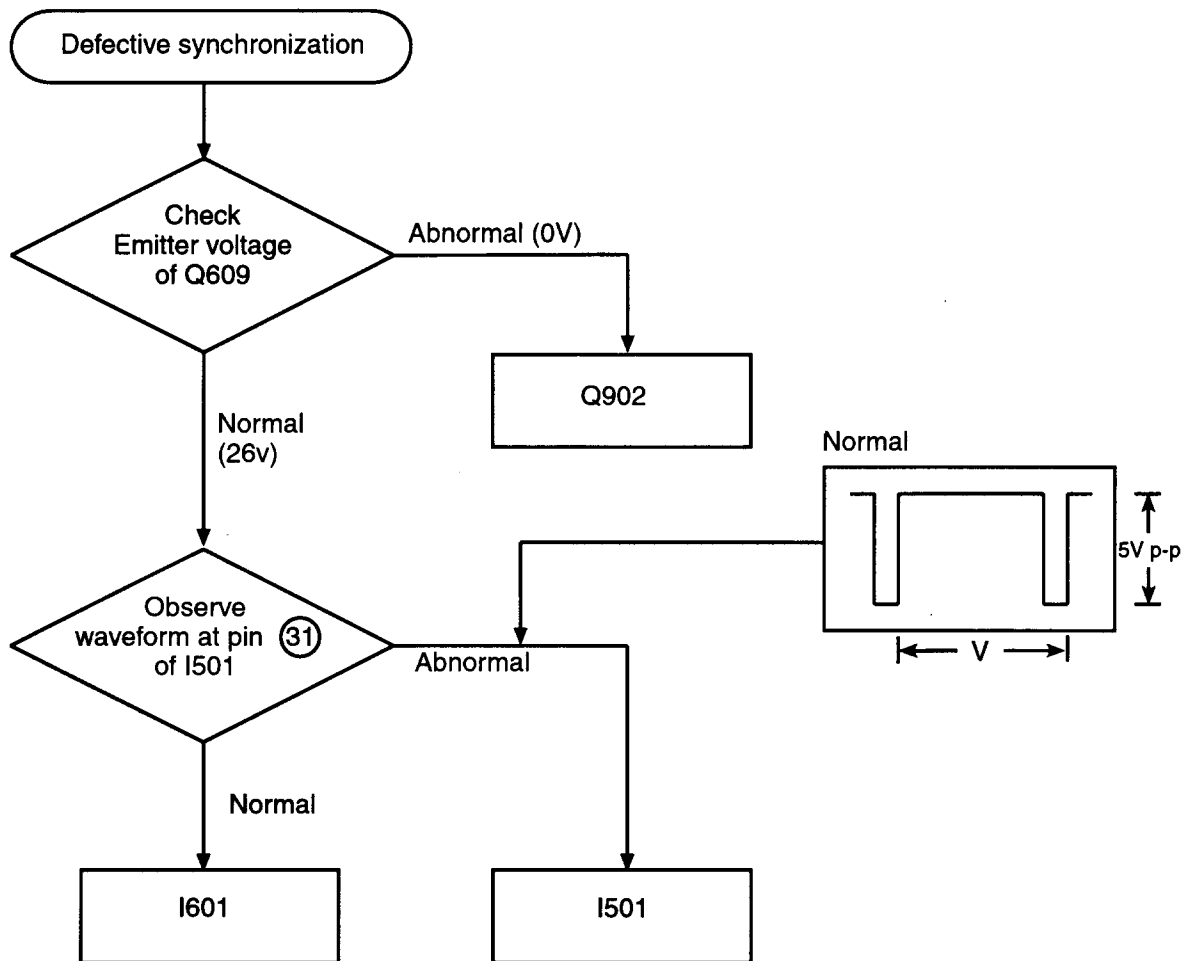
Main Picture



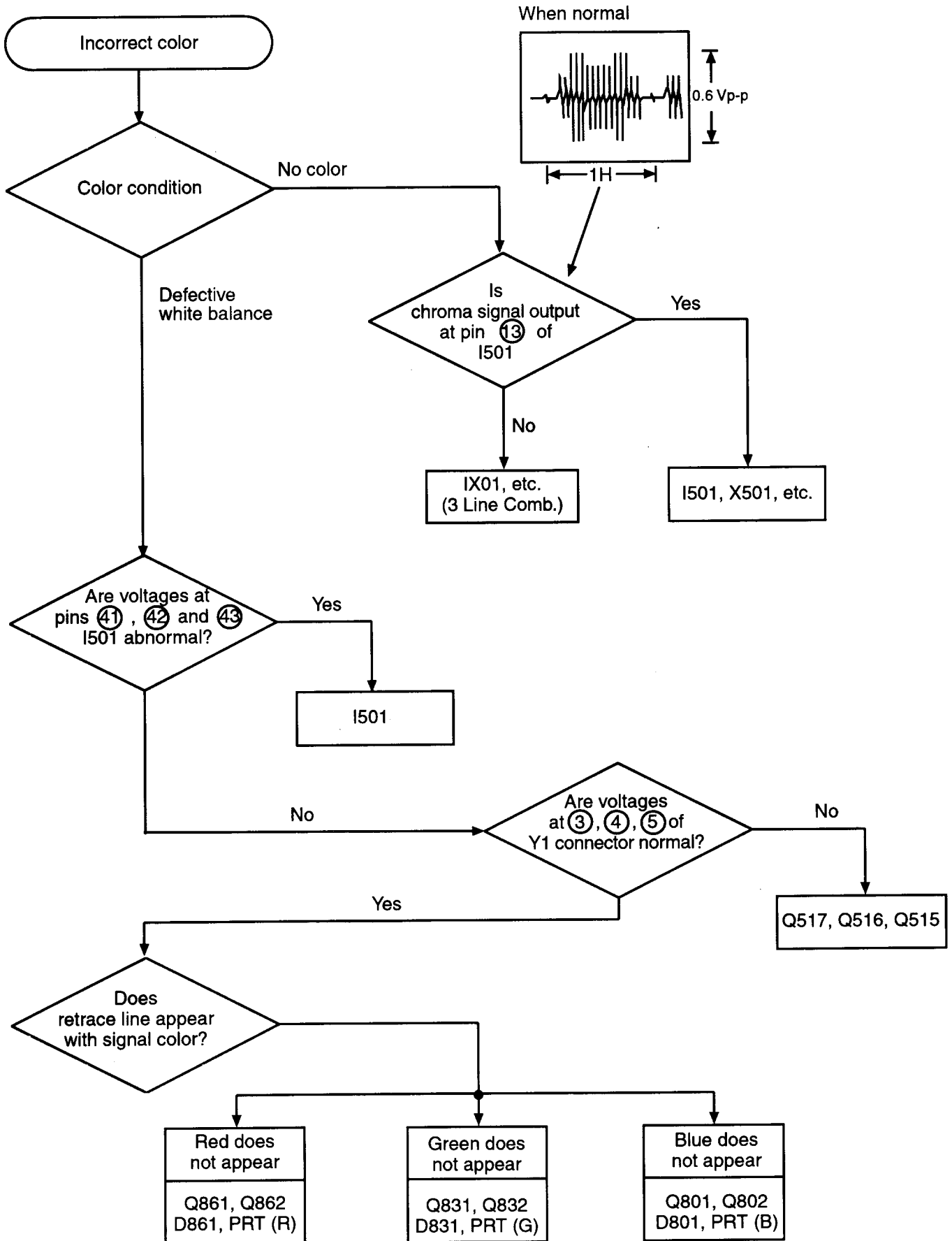
Sub Picture (PIP)



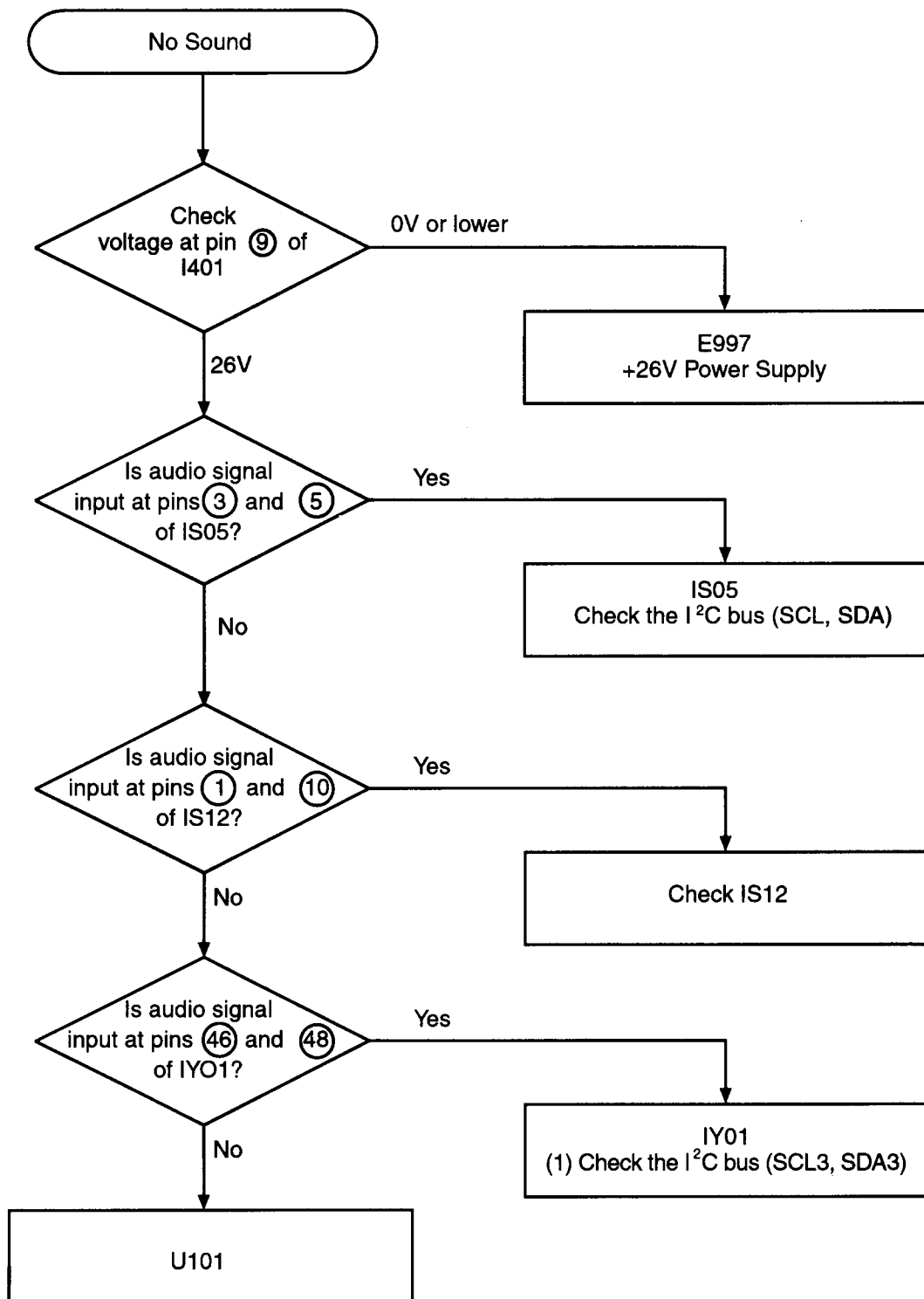
4. Defective Synchronization

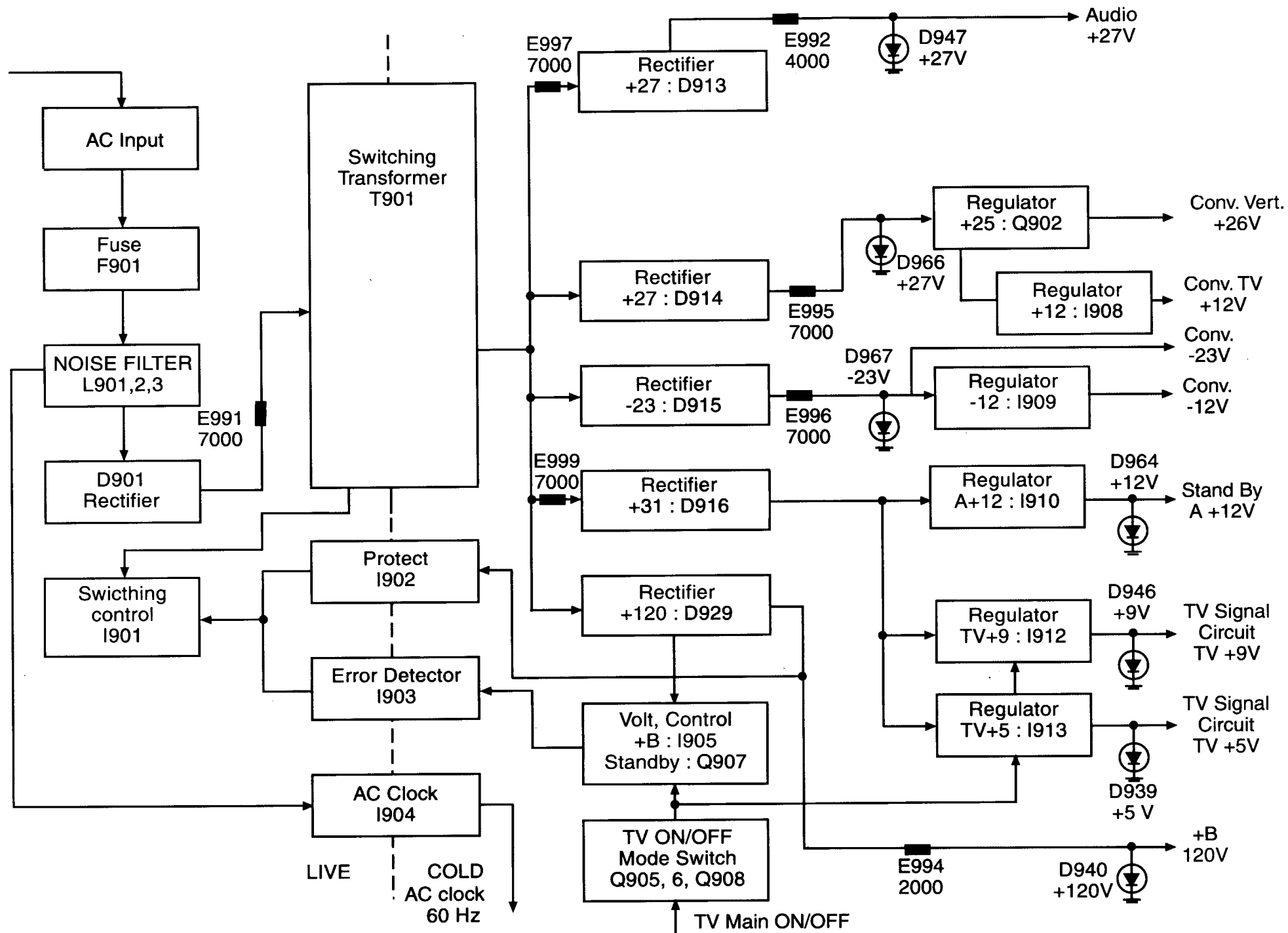


5. Incorrect Color



6. No Sound

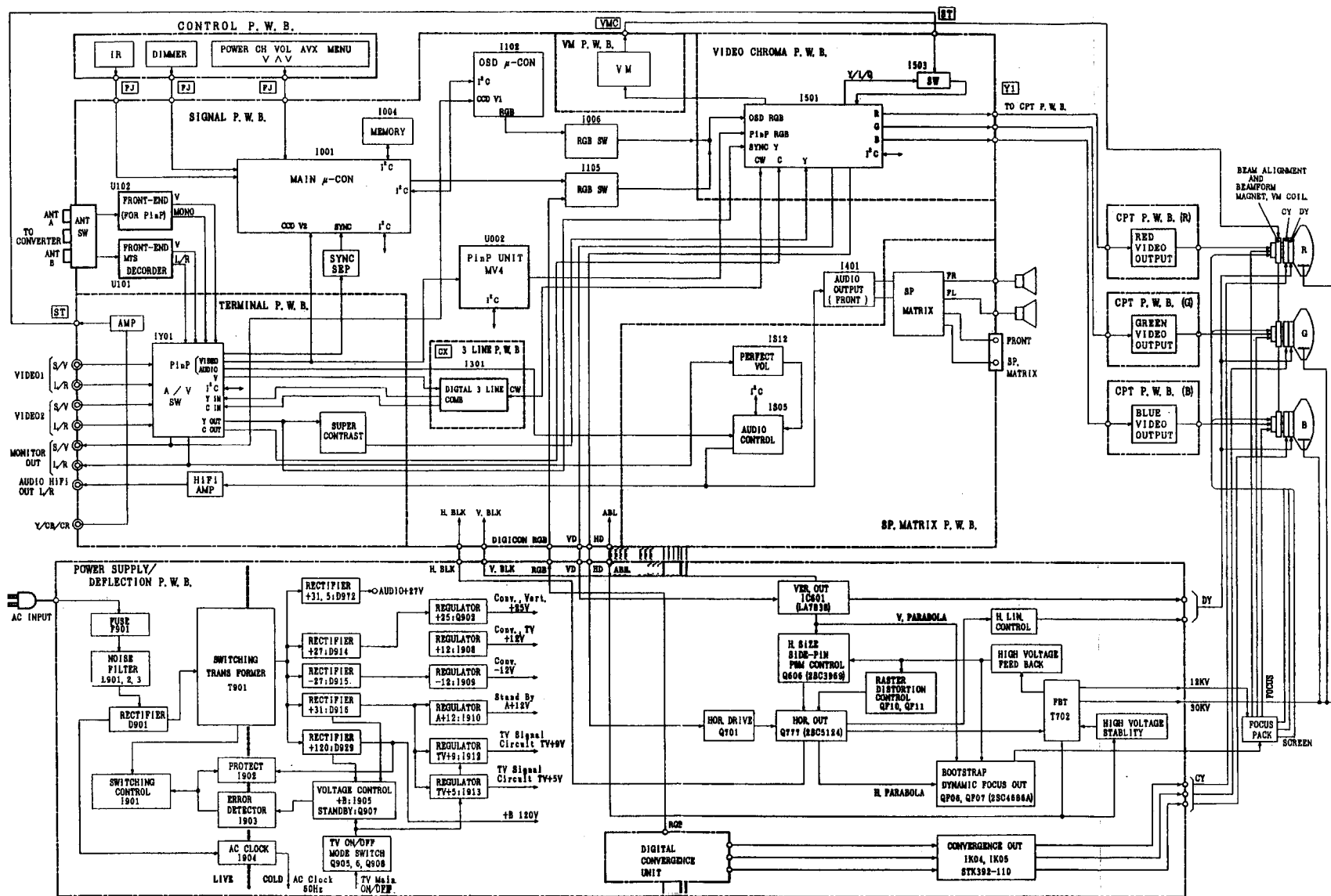




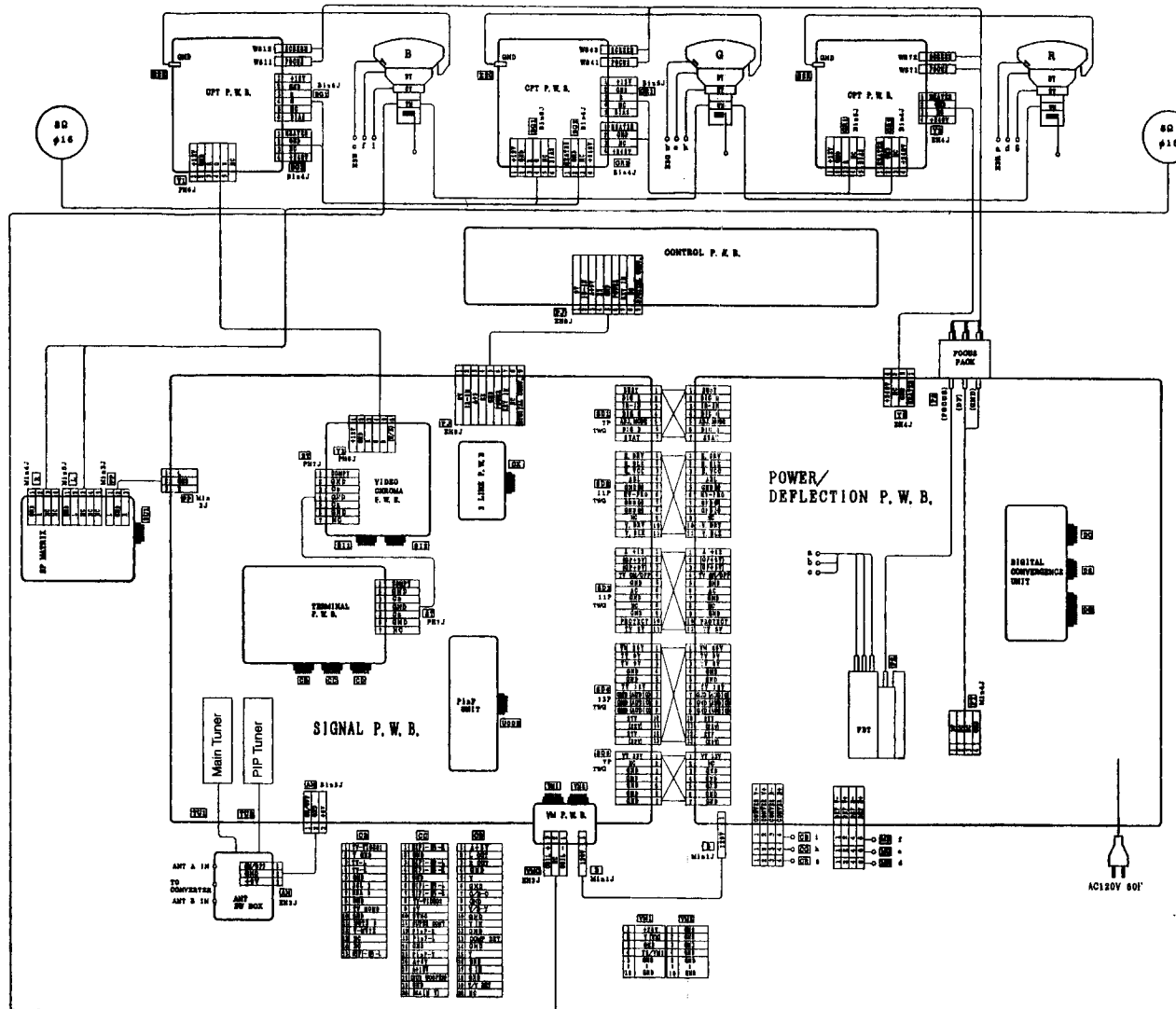
PROTECTION CIRCUIT BLOCK DIAGRAM

NOTES:

BLOCK DIAGRAM



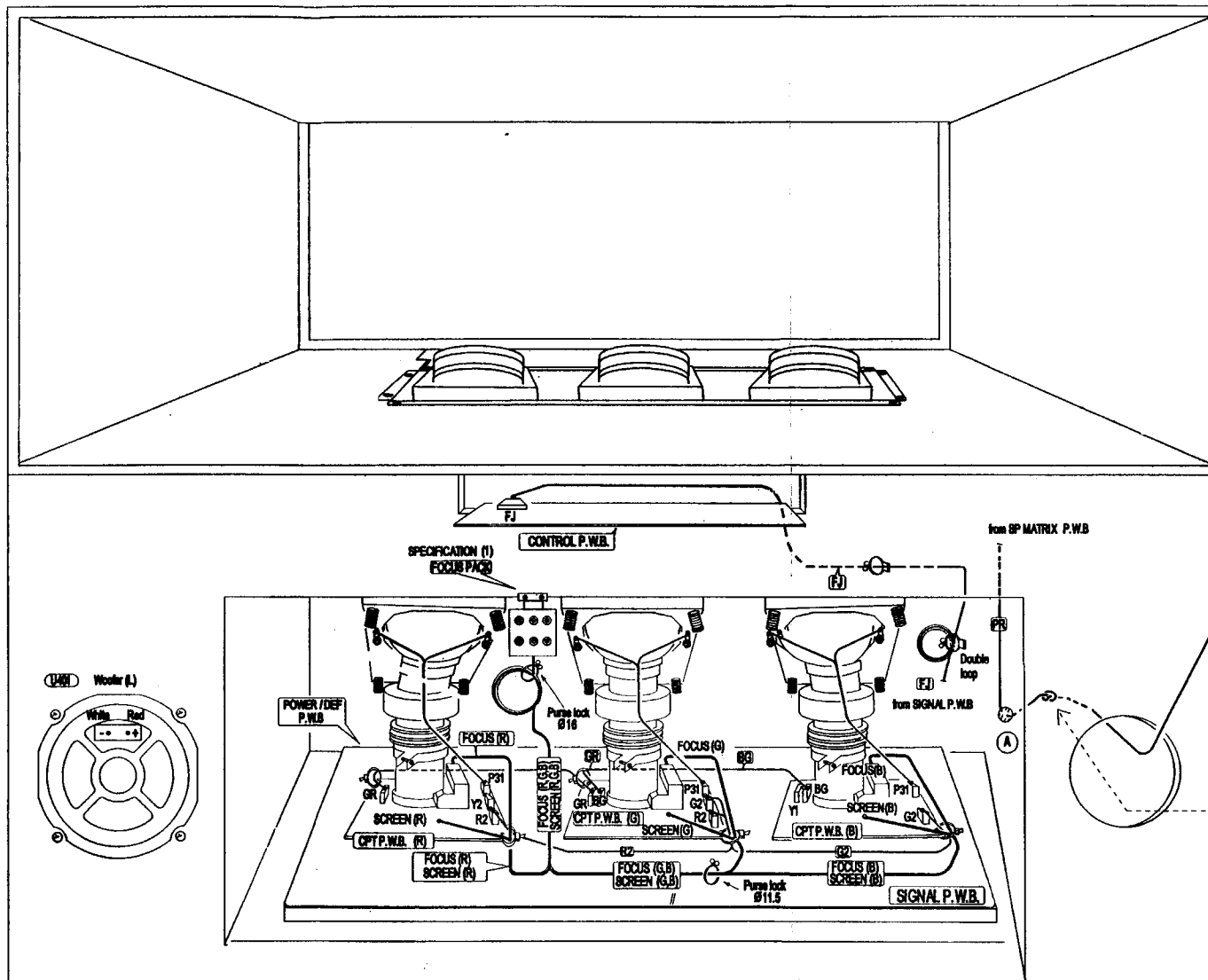
WIRING CONNECTION DIAGRAM



The diagram illustrates the internal wiring of a television set, showing the connection of various components and their associated wiring. Key components and labels include:

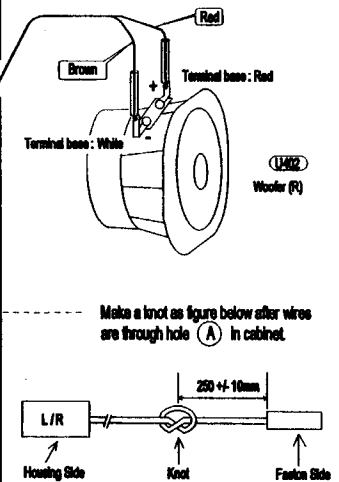
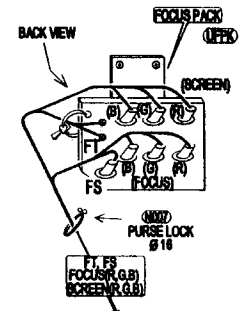
- Top Section:** Three large cylindrical components, likely vacuum tubes or capacitors, are shown at the top.
- Central Section:**
 - ANODE (R), ANODE (G), ANODE (B):** Labels for the anodes of the main tubes.
 - Y1, Y2:** Labels for vertical deflection coils.
 - W13-30 WIRE CLAMP:** A specific type of wire clamp used for securing wires.
 - WIRE CLAMP VO:** Another type of wire clamp.
 - PURSE LOCK (R):** A component used for securing wires.
 - Make a loop, Make a double loop:** Instructions for proper wire routing and securing.
 - Do not touch Y1 connector to FV & VMC connectors:** A safety warning.
 - Do not touch VMC connector to Y1 connector:** Another safety warning.
 - Don't stress the Anode Leads:** A warning to avoid damaging the anode leads.
- Bottom Section:**
 - SP MATRIX P.W.B.:** Signal processing wiring board.
 - Main Tuner, PIP Tuner:** Tuning components.
 - SIGNAL P.W.B.:** Signal processing wiring board.
 - 3D COMB UNIT:** A component for color and contrast control.
 - SIGNAL SUB P.W.B.:** Sub-signal processing wiring board.
 - VM P.W.B.:** Video matrix processing wiring board.
 - TERMINAL P.W.B.:** Terminal processing wiring board.
 - ANTENNA TERMINAL BOARD:** The board for connecting the antenna.
 - POWER DEF. P.W.B.:** Power deflection processing wiring board.
 - DIGITAL CONVERGENCE UNIT:** A unit for digital signal processing.
 - POWER CORD:** The main power input cable.
- Notes:**
 - NOTE:** Reference to CAUTIONS WHEN CONNECTING/DISCONNECTING THE HV CONNECTOR when HV Conn. (anode lead) is removed or inserted.
 - NOTE:** Anode lead should be separated from others wires. (min. 10 mm)
 - NOTE:** Anode lead must not be twisted during the operation of wiring dress.

WIRING DRAWING

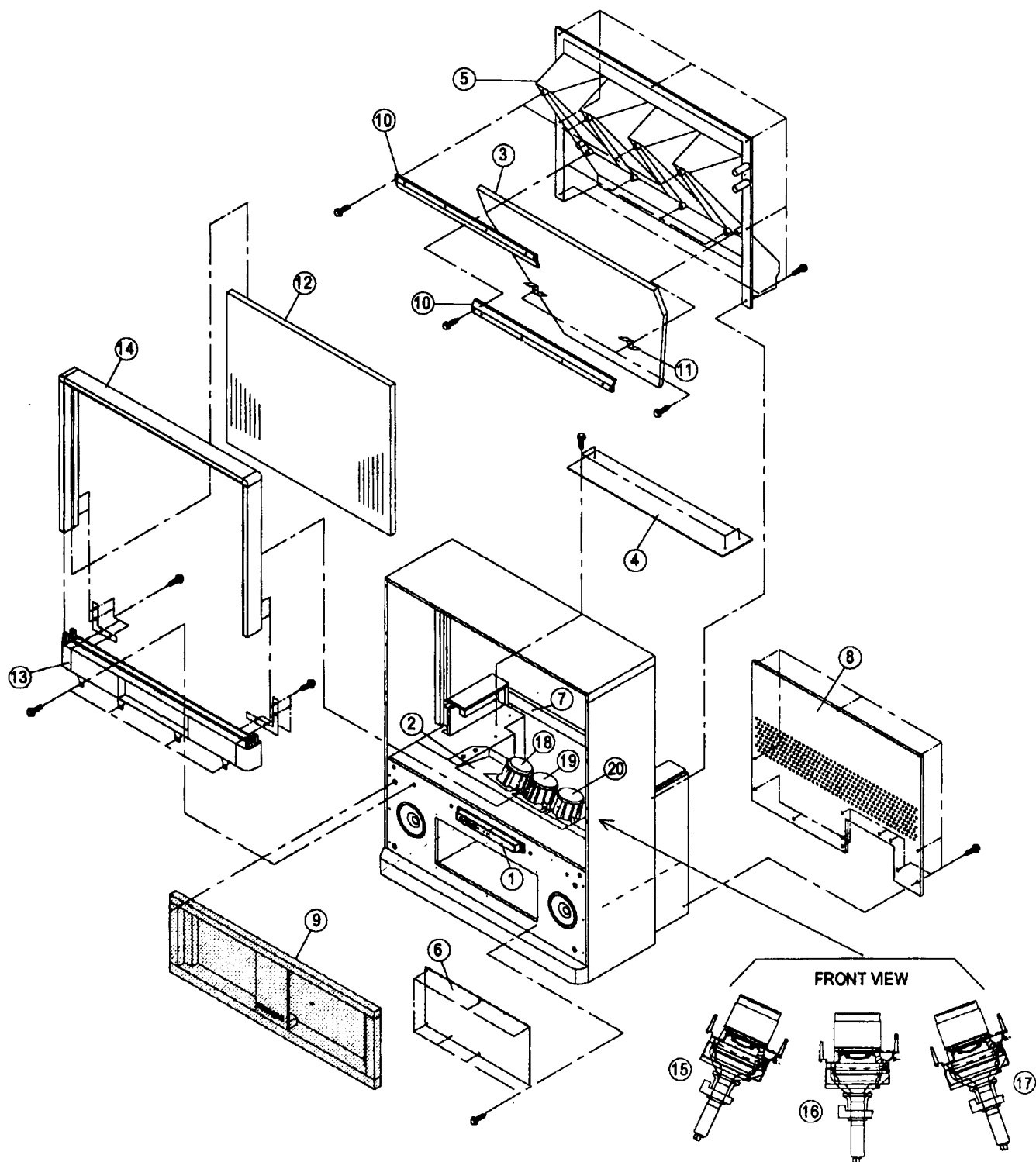


SPECIFICATION

- Refer to figure below about assembly of FOCUS PACK leads.



EXPLODED VIEW



NOTE: Refer to page 66 for description and parts list. 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:

CD: Ceramic Disc
PF: Polyester Film
EL: Electrolytic
PP: Polypropylene
PR: Paper
TA: Tantalum
TM: Trimmer
MC: Mylar

Resistors:

CF: Carbon Film
CC: Carbon Composition
MF: Metal Oxide Film
VR: Variable Resistor
WW: Wire Wound
FR: Fuse Resistor
MG: Metal Glaze

Semiconductors:

TR: Transistor
DI: Diode
ZD: Zener Diode
VA: Varistor
TH: Thermistor
IC: Integrated Circuit

SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		CAPACITORS	C064	0800326R	CAP.-ELECTRO. 100UF-M 16V
C002	0228758R	CAP 2125 CHIP 150PFJSL50V TAPE	C065	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C003	0246464R	CAP.-CERAMIC 100PF-J CH 50V TAPE	C067	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C004	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	C068	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C005	0893031R	CAP 2125CHIP 1000PFB 50V TAPE	C070	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C015	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C071	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C016	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE	C075	0893031R	CAP 2125CHIP 1000PFB 50V TAPE
C017	0890121R	CAP.-CERAMIC 33PF-J CH 50V	C076	0228756R	CAP2125CHIP 120PFJSL 50V TAPE
C018	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C101	0800326R	CAP.-ELECTRO. 100UF-M 16V
C019	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V	C102	0800326R	CAP.-ELECTRO. 100UF-M 16V
C025	0893044R	CAP2125CHIP 10000PFB 50V TAPE	C103	0893053R	CAP2125CHIP 47000PFB 50V TAPE
C026	0893027R	CAP 2125 CHIP 10000PF-K B 25V TAPE	C104	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V
C029	0228758R	CAP 2125 CHIP 150PFJSL50V TAPE	C105	0800361N	CAP.-ELECTRO 1000UF 16V
C030	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C106	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V
C031	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C107	0893053R	CAP2125CHIP 47000PFB 50V TAPE
C032	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C108	0800361N	CAP.-ELECTRO 1000UF 16V
C033	0893053R	CAP2125CHIP 47000PFB 50V TAPE	C109	0800361N	CAP.-ELECTRO 1000UF 16V
C034	0228756R	CAP2125CHIP 120PFJSL 50V TAPE	C110	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C035	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C111	0800326R	CAP.-ELECTRO. 100UF-M 16V
C036	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V	C112	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C037	0893027R	CAP 2125 CHIP 10000PF-K B 25V TAPE	C113	0893027R	CAP 2125 CHIP 10000PF-K B 25V TAPE
C040	0800353R	CAP.-ELECTRO.470UF-M 16V	C114	0800359R	CAP.-ELECTRO. 1000UF-M 10V
C041	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C115	0893027R	CAP 2125 CHIP 10000PF-K B 25V TAPE
C042	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C116	0800361N	CAP.-ELECTRO 1000UF 16V
C043	0800351R	CAP.-ELECTRO. 470UF-M 6.3V	C119	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C044	0893053R	CAP2125CHIP 47000PFB 50V TAPE	C11A	0228770R	CAPACITOR MINI-CHIP 470PF-J SL 50V TAPE
C045	0893027R	CAP 2125 CHIP 10000PF-K B 25V TAPE	C120	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C046	0893048R	CAP2125CHIP 22000PFB 50V TAPE	C121	0228756R	CAP2125CHIP 120PFJSL 50V TAPE
C053	0893027R	CAP 2125 CHIP 10000PF-K B 25V TAPE	C122	0893053R	CAP2125CHIP 47000PFB 50V TAPE
C054	0800326R	CAP.-ELECTRO. 100UF-M 16V	C123	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V
C057	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C124	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V
C061	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C125	0893053R	CAP2125CHIP 47000PFB 50V TAPE
			C126	0228746R	CAP 2125 CHIP 47PFJSL 50V TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C127	0228038R	CAP 2125CHIP 22PFJCH 50V TAPE	C517	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C128	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C518	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C132	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C519	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C136	0800326R	CAP.-ELECTRO. 100UF-M 16V	C520	0228032R	CAP 2125CHIP 12PFJCH 50V TAPE
C137	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C521	AN00615R	CAP.POLYESTER 0.0022UF 50V TAPE
C138	0228770R	CAPACITOR MINI-CHIP 470PF-J SL 50V TAPE	C522	0800273R	CAP.-ELECTRO 0.22UF-M 50V
C139	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C523	0800326R	CAP.-ELECTRO. 100UF-M 16V
C140	0800361N	CAP.-ELECTRO 1000UF 16V	C524	0800326R	CAP.-ELECTRO. 100UF-M 16V
C141	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C525	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C142	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C526	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C143	0890084R	CAP.-CERAMIC 560PF-K 50V	C527	0800326R	CAP.-ELECTRO. 100UF-M 16V
C1C1	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	C528	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C3A2	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C529	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C3A3	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C530	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C401	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C531	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C402	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C532	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C403	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C533	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C404	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C534	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C405	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C535	0800353R	CAP.-ELECTRO.470UF-M 16V
C406	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	C536	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE
C407	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	C537	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C408	0800318R	CAP.-ELECTRO. 47UF-M 25V	C538	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C409	0800318R	CAP.-ELECTRO. 47UF-M 25V	C539	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C410	0800327R	CAP.-ELECTRO. 100UF-M 25V	C540	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C411	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C541	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C412	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C542	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C413	0800327R	CAP.-ELECTRO. 100UF-M 25V	C543	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C414	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C544	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
C415	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C545	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C416	0284824F	CAP.-ELECTRO. 2200UF 35V SMG	C546	0800326R	CAP.-ELECTRO. 100UF-M 16V
C417	0880198R	CAP.-PLOY. 0.22UF-J 50V	C547	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C418	0880198R	CAP.-PLOY. 0.22UF-J 50V	C548	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
C419	0284824F	CAP.-ELECTRO. 2200UF 35V SMG	C549	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
C420	0284824F	CAP.-ELECTRO. 2200UF 35V SMG	C550	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C424	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C551	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C426	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C552	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C427	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C553	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C428	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C554	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C451	0880198R	CAP.-PLOY. 0.22UF-J 50V	C555	0800326R	CAP.-ELECTRO. 100UF-M 16V
C456	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C556	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C457	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C557	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C458	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C558	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C459	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C601	AN00626R	CAP.POLYESTER 0.015UF 50V TAPE
C504	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	C602	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C507	0228048R	CAPACITOR MINI-CHIP 56PF-J CH 50V TAPE	C603	AL01326R	ALUMINIUM ELECT. CAPACITOR PW(4.7UF 50V)
C508	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C604	0800326R	CAP.-ELECTRO. 100UF-M 16V
C509	0890058R	CAP.-CERAMIC 8PF-50V	C605	AN00619R	CAP.POLYESTER 0.0047UF 50V TAPE
C510	0800326R	CAP.-ELECTRO. 100UF-M 16V	C606	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C511	0228708R	CAPACITOR MINI-CHIP 8PF-C SL 50V TAPE	C607	0880198R	CAP.-PLOY. 0.22UF-J 50V
C512	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C608	0244501R	CAP.-CERAMIC 1000PF-K 500V
C513	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C609	0244501R	CAP.-CERAMIC 1000PF-K 500V
C514	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C610	0800345R	CAP.-ELECTRO. 330UF-M(SMG) 25V
C515	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C611	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE
C516	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C613	AL01157R	ALUM. ELECTROLYTIC CAP.(1UF 50V)

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C614	0800347N	CAP.-ELECTRO. 330UF-M(SMG) 50V	C864	AJ00559	CAPACITOT CERAMIC 2200PF2KV
C615	AL01143S	ALUMINIUM ELECTRO. CAP.(2200UF 25V)	C865	0800326R	CAP.-ELECTRO. 100UF-M 16V
C616	AL01336R	ALUMINIUM ELECT. CAPACITOR PW(10UF 16V)	C867	0890087R	CAP.-CERAMIC 1000PF-K 50V
C617	AL01297R	ALUMINIUM ELECT. CAPACITOR PW(1UF 50V)	C868	0890083R	CAP.-CERAMIC 470PF-K 50V
C619	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C870	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C620	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	 C901	AN01445S	ACROSS CAPA 0.22UF 250V RE224
C621	0298261R	CAP.-TANTALUM 1MF-J 35V	 C902	AN01443S	ACROSS CAPA 0.1UF 250V RE104
C622	0800347N	CAP.-ELECTRO. 330UF-M(SMG) 50V	C903	AJ00195F	CAPACITOR CERAMIC 4700P 250V F
C632	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C904	AJ00195F	CAPACITOR CERAMIC 4700P 250V F
C633	0279693R	CAP.-POLYESTER FLM 0.1UF	C905	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
C641	0244105R	CAP.-CERAMIC 2200PF-K 50V TAPE	C906	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
C701	0251771	CAP.-ELECTRO 220UF-M 160V	C907	0800328R	CAP. ELECTRO. 100UF-M 35V
C702	0299926F	CAPACITOR-POLYESTER FILM 0.1UF-K 200V	C908	0890087R	CAP.-CERAMIC 1000PF-K 50V
C703	0890028M	CAP.-CERAMIC 330PF-K B 50V CYLINDRICAL	C909	0800332N	CAP.-ELECTRO. 100UF-M 100V
C704	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	C910	0299977F	CAPACITOR-POLYPRO. FILM 0.0047UF-F 630V
C705	0243507R	CAP.-CERAMIC 330PF-K 500V TAPE	C912	0890085R	CAP.-CERAMIC 680PF-K 50V
C706	0244501R	CAP.-CERAMIC 1000PF-K 500V	C913	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V
C707	AJ00134	CAPACITOR CERAMIC 1000P DC2K-R	C914	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
 C708	AN01128F	METALLIZ POLYPRO. FILM CAPACITOR0.0047UF	C915	AL01153S	ALUM. ELECTROLYTIC CAP.(1000UF 35V)
 C709	AN01134F	METALLIZ POLYPRO. FILM CAPACITOR0.0075UF	C916	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C710	0299932F	CAP.-POLYPRO. 0.33UF-K 200V	C917	0244105R	CAP.-CERAMIC 2200PF-K 50V TAPE
C711	0299932F	CAP.-POLYPRO. 0.33UF-K 200V	C918	AL01153S	ALUM. ELECTROLYTIC CAP.(1000UF 35V)
 C712	0299707F	CAP.-POLYESTOR 0.015UF-K 630V	C919	0880198R	CAP.-PLOY. 0.22UF-J 50V
C713	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C920	0800328R	CAP. ELECTRO. 100UF-M 35V
C714	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE	C921	0800328R	CAP. ELECTRO. 100UF-M 35V
C715	AJ00134	CAPACITOR CERAMIC 1000P DC2K-R	C922	0800326R	CAP.-ELECTRO. 100UF-M 16V
C717	0243503R	CAP.-CERAMIC 150PF-K B 500V	C923	0800328R	CAP. ELECTRO. 100UF-M 35V
C718	AL00042	CAP.ELECTRO 33UF 350V	C924	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
C721	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	C925	AL01153S	ALUM. ELECTROLYTIC CAP.(1000UF 35V)
C722	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	C926	0880198R	CAP.-PLOY. 0.22UF-J 50V
C723	AN01137F	METALLIZ POLYPRO. FILM CAPACITOR0.01UF	C927	AL01153S	ALUM. ELECTROLYTIC CAP.(1000UF 35V)
C724	0279693R	CAP.-POLYESTER FLM 0.1UF	C928	AL01153S	ALUM. ELECTROLYTIC CAP.(1000UF 35V)
C725	0890087R	CAP.-CERAMIC 1000PF-K 50V	C929	0251703	CAP.ELECTRO 390UF-M 160V(KMH)
C726	0243508R	CAPACITOR-CERAMIC 390PF-K 500V	C930	AL01129S	ALUM. ELECTROLYTIC CAP.(1000UF 16V)
C727	0244501R	CAP.-CERAMIC 1000PF-K 500V	C931	0800353R	CAP.-ELECTRO.470UF-M 16V
C729	0259471	CAP.-ELECTRO 6.8UF-M (BP) 50V	C935	0800355N	CAP.ELECTRO. 470UF-M 35V
C730	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	C937	AL01118S	ALUM. ELECTROLYTIC CAP.(2200UF 10V)
C731	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	C939	0800328R	CAP. ELECTRO. 100UF-M 35V
C740	0284667R	CAP.-ELECTRO. 47UF-MBPR(SME)16V	C940	0800353R	CAP.-ELECTRO.470UF-M 16V
C750	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	C941	0880198R	CAP.-PLOY. 0.22UF-J 50V
C771	0890084R	CAP.-CERAMIC 560PF-K 50V	C942	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C801	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C943	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C802	0800326R	CAP.-ELECTRO. 100UF-M 16V	C945	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C804	AJ00559	CAPACITOT CERAMIC 2200PF2KV	C948	AL01107S	ALUM. ELECTROLYTIC CAP.(3300UF6.3V)
C805	0800326R	CAP.-ELECTRO. 100UF-M 16V	C949	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C807	0890087R	CAP.-CERAMIC 1000PF-K 50V	C952	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C808	0890084R	CAP.-CERAMIC 560PF-K 50V	C954	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C810	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C955	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C831	AL00037R	ALUM. ELECTROLYTIC CAP.(33UF350V)	C956	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C834	AJ00559	CAPACITOT CERAMIC 2200PF2KV	C957	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C835	0800326R	CAP.-ELECTRO. 100UF-M 16V	 C958	AJ00157R	CAPACITOR CERAMIC 1000P 400V B
C837	0890087R	CAP.-CERAMIC 1000PF-K 50V	 C959	AJ00163R	CAPACITOR CERAMIC 2200P 400V E
C838	0890084R	CAP.-CERAMIC 560PF-K 50V	C962	0800326R	CAP.-ELECTRO. 100UF-M 16V
C839	0890071R	CAP.-CERAMIC 56PF-J 50V	C963	0800303R	CAP.-ELECTRO. 22UF-M 50V
C840	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C964	0800361N	CAP.-ELECTRO 1000UF 16V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C965	0800308R	CAP.-ELECTRO. 33UF-M(SMG) 16V	CF03	AN01111F	METALLIZ POLYPRO. FILM CAP 0.001UF
C966	0880198R	CAP.-PLOY. 0.22UF-J 50V	CF04	AN00614R	CAP.POLYESTER 0.0018UF 50V TAPE
C967	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	CF05	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C968	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	CF06	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C969	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	CF07	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C971	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF08	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C974	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF09	0880196R	CAP.-POLYESTER 0.15UF 50V HFT
C975	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF10	0880197R	CAP.POLYESTER 0.18UF 50V
CA01	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CF12	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA02	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CF13	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CA05	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CF14	0259151F	CAP.-ELECTRO. 100UF 160V
CA06	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CF15	0880198R	CAP.-PLOY. 0.22UF-J 50V
CA07	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CF16	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CA08	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CF17	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V
CA26	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF18	0245158	CAPACITOT CERAMIC 68PF/2KV
CA27	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF19	0245156	CAPACITOT CERAMIC 22PF/2KV
CA28	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF20	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA29	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF21	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CA34	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK01	0800353R	CAP.-ELECTRO.470UF-M 16V
CA37	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK02	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
CA38	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CK03	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
CA40	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK04	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA41	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK05	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
CA68	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CK06	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA69	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CK07	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA73	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CK08	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA74	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CK09	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA75	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CK10	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA76	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CK12	0890076R	CAP.CERAMIC 150PF-K 50V
CA82	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK13	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA83	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V	CK14	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CC02	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CK15	AN00611R	CAP.POLYSTYLENE 0.001UF 50V TAPE
CC03	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CK16	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CE01	0800354R	CAP.-ELECTRO. 470UF-M 25V	CK17	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CE02	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CK18	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CE03	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CK19	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CE04	0890076R	CAP.CERAMIC 150PF-K 50V	CK20	0890076R	CAP.CERAMIC 150PF-K 50V
CE05	0800326R	CAP.-ELECTRO. 100UF-M 16V	CK21	0890076R	CAP.CERAMIC 150PF-K 50V
CE06	0890064R	CAP.-CERAMIC 18PF-J SL 50V	CK22	0890076R	CAP.CERAMIC 150PF-K 50V
CE08	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CK23	0890076R	CAP.CERAMIC 150PF-K 50V
CE09	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CK24	0890076R	CAP.CERAMIC 150PF-K 50V
CE10	0800321R	CAP.-ELECTRO. 47UF-M 50V	CK25	0890076R	CAP.CERAMIC 150PF-K 50V
CE11	0890074R	CAP.-CERAMIC 100PF-J 50V	CK27	0800356N	CAP.-ELECTRO. 470UF-M 50V
CE12	0244541F	CAPACITOR-CERAMIC 0.01MF-K B 500V	CK28	0800356N	CAP.-ELECTRO. 470UF-M 50V
CE13	0244541F	CAPACITOR-CERAMIC 0.01MF-K B 500V	CK29	0890076R	CAP.CERAMIC 150PF-K 50V
CE14	AL00009R	ALU.ELEC.CAP. 47UF 160V	CK30	0890076R	CAP.CERAMIC 150PF-K 50V
CE15	0247848R	CAP.-CERAMIC 56PF-J SL 500V	CK31	0890076R	CAP.CERAMIC 150PF-K 50V
CE16	AL00007R	ALUM. ELECTROLYTIC CAP.(220UF160V)	CK32	0890076R	CAP.CERAMIC 150PF-K 50V
CE17	0244509R	CAP.-CERAMIC 4700PF-KB B 500V	CK33	0890076R	CAP.CERAMIC 150PF-K 50V
CE18	0890074R	CAP.-CERAMIC 100PF-J 50V	CK34	0890076R	CAP.CERAMIC 150PF-K 50V
CE19	AL00009R	ALU.ELEC.CAP. 47UF 160V	CK60	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CE20	AL00009R	ALU.ELEC.CAP. 47UF 160V	CM01	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CE21	0890079R	CAP.-CERAMIC 270PF-K 50V	CM02	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CE23	0890079R	CAP.-CERAMIC 270PF-K 50V	CM03	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
CF01	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CM04	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CF02	AL01296R	ALUM. ELECTRO. CAP. PW(0.47UF 350V)	CM05	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CM06	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CX47	0800326R	CAP.-ELECTRO. 100UF-M 16V
CM14	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CX48	0893044R	CAP2125CHIP 10000PFBK 50V TAPE
CN01	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CX49	0800326R	CAP.-ELECTRO. 100UF-M 16V
CN02	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CX50	0800325R	CAP.-ELECTRO. 100UF-M 10V
CN03	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CX52	0800325R	CAP.-ELECTRO. 100UF-M 10V
CN04	0890084R	CAP.-CERAMIC 560PF-K 50V	CX53	0893044R	CAP2125CHIP 10000PFBK 50V TAPE
CN05	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX54	0284647R	CAP.-ELECTRO.22UF-SME(BP) 16V
CN06	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CX55	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE
CS38	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CX56	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE
CS39	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V	CX57	0228048R	CAPACITOR MINI-CHIP 56PF-J CH 50V TAPE
CS60	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	CX58	0228048R	CAPACITOR MINI-CHIP 56PF-J CH 50V TAPE
CS62	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CY01	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CS63	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CY04	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CS64	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY05	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CS65	0890087R	CAP.-CERAMIC 1000PF-K 50V	CY06	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CS66	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY07	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
CS67	0890087R	CAP.-CERAMIC 1000PF-K 50V	CY08	0800326R	CAP.-ELECTRO. 100UF-M 16V
CS68	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CY09	0893053R	CAP2125CHIP 47000PFBK 50V TAPE
CS69	AN00621R	CAP.POLYESTER 0.0056UF 50V TAPE	CY10	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CS70	AN00621R	CAP.POLYESTER 0.0056UF 50V TAPE	CY11	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS71	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CY12	0800326R	CAP.-ELECTRO. 100UF-M 16V
CS72	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CY13	0893033R	CAP 2125CHIP 1500PFBK 50V TAPE
CS73	0800326R	CAP.-ELECTRO. 100UF-M 16V	CY14	0800353R	CAP.-ELECTRO.470UF-M 16V
CS74	0800326R	CAP.-ELECTRO. 100UF-M 16V	CY17	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CS75	0800326R	CAP.-ELECTRO. 100UF-M 16V	CY18	0800326R	CAP.-ELECTRO. 100UF-M 16V
CS76	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY19	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CS77	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CY20	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CS78	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY30	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS79	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY31	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS93	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY32	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS94	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	CY33	0893044R	CAP2125CHIP 10000PFBK 50V TAPE
CX01	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CY34	0800326R	CAP.-ELECTRO. 100UF-M 16V
CX02	0228040R	CAP 2125CHIP 27PFJCH 50V TAPE	CY37	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CX03	0228008R	CAP 2125 CHIP 8PF-C CH 50V TAPE	CY38	0800353R	CAP.-ELECTRO.470UF-M 16V
CX04	0228034R	CAP 2125 CHIP 15PF-J CH 50V TAPE	CY39	0893044R	CAP2125CHIP 10000PFBK 50V TAPE
CX24	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	CY50	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CX25	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	CY75	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CX26	0893044R	CAP2125CHIP 10000PFBK 50V TAPE			
CX27	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V			
CX28	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D005	CH02021M	DIODES
CX29	0893053R	CAP2125CHIP 47000PFBK 50V TAPE	D013	CH02021M	DIODE 1SS133 T-72
CX30	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D015	2331827M	DIODE 1SS133 T-72
CX31	0228060R	CAP 2125 CHIP 180PF-J CH 50V TAPE	D024	CH02021M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V
CX32	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D025	CH02021M	DIODE 1SS133 T-72
CX33	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D026	2348212M	DIODE 1SS133 T-72
CX34	0800325R	CAP.-ELECTRO. 100UF-M 10V	D027	2348212M	DIO-MTZ-J15BTA
CX35	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D028	2348212M	DIO-MTZ-J15BTA
CX36	0800325R	CAP.-ELECTRO. 100UF-M 10V	D029	2348212M	DIO-MTZ-J15BTA
CX37	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D030	2348212M	DIO-MTZ-J15BTA
CX38	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D031	CH02021M	DIO-MTZ-J15BTA
CX39	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D040	CH02021M	DIODE 1SS133 T-72
CX40	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D041	CH02021M	DIODE 1SS133 T-72
CX41	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D044	CH02021M	DIODE 1SS133 T-72
CX42	0800334R	CAP.-ELECTRO. 220UF 10V	D045	2348102M	DIODE 1SS133 T-72
CX45	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	D046	2348212M	ZENER MTZJ-5.1B TA
CX46	0800326R	CAP.-ELECTRO. 100UF-M 16V	D048	CH02021M	DIO-MTZ-J15BTA
					DIODE 1SS133 T-72

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D053	CH02021M	DIODE 1SS133 T-72	D710	CH02001M	DIODE 1SR139-400
D055	CH02001M	DIODE 1SR139-400	 D711	CH00031M	DIODE AU02V1(280V)
D057	CH02021M	DIODE 1SS133 T-72	 D712	CH00031M	DIODE AU02V1(280V)
D058	CH02021M	DIODE 1SS133 T-72	D713	CH00041M	DIODE ES1FV1 (1500V)
D059	CH02021M	DIODE 1SS133 T-72	D714	CH00041M	DIODE ES1FV1 (1500V)
D101	2348212M	DIO-MTZ-J15BTA	D715	CH02011M	DIODE 1SR153-400
D106	CH02021M	DIODE 1SS133 T-72	D716	2348231M	ZENER DIODE MTZ-18A TA
D107	CH02021M	DIODE 1SS133 T-72	D717	2348041M	DIODE MTZ-J3.0 ATA
D111	CH02021M	DIODE 1SS133 T-72	D718	CH02021M	DIODE 1SS133 T-72
D112	CH02021M	DIODE 1SS133 T-72	D719	CH02001M	DIODE 1SR139-400
D113	2348123M	ZENER MTZJ-6.2C TA	D720	2334305M	ZENER RD30E (B4 T2/TP/TA) SI 5MA 30.51V
D116	2331815M	ZENER HZ7-B2	D721	2348193M	ZENER DIODE MTZJ-12C TA
D117	2335991M	ZENER HZ-T33 (02 TP)	D722	2348151M	ZENER MTZ-J8.2ATA
D118	2335991M	ZENER HZ-T33 (02 TP)	D723	CH02021M	DIODE 1SS133 T-72
D301	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	D724	2348123M	ZENER MTZJ-6.2C TA
D401	CH02021M	DIODE 1SS133 T-72	D725	CH02021M	DIODE 1SS133 T-72
D402	CH02021M	DIODE 1SS133 T-72	D777	2334243M	ZENER RD16E (B2 T2/TP/TA) SI 10MA 16.51V
D404	CH02021M	DIODE 1SS133 T-72	D778	2334305M	ZENER RD30E (B4 T2/TP/TA) SI 5MA 30.51V
D405	CH02021M	DIODE 1SS133 T-72	D802	CH02021M	DIODE 1SS133 T-72
D406	CH02021M	DIODE 1SS133 T-72	D803	CH02021M	DIODE 1SS133 T-72
D407	CH02021M	DIODE 1SS133 T-72	D804	CH02021M	DIODE 1SS133 T-72
D502	CH02021M	DIODE 1SS133 T-72	D805	CH02021M	DIODE 1SS133 T-72
D503	CH02021M	DIODE 1SS133 T-72	D832	CH02021M	DIODE 1SS133 T-72
D504	CH02021M	DIODE 1SS133 T-72	D833	CH02021M	DIODE 1SS133 T-72
D505	2348163M	ZENER MTZJ-9.1C TA	D862	CH02021M	DIODE 1SS133 T-72
D507	CH02021M	DIODE 1SS133 T-72	D863	CH02021M	DIODE 1SS133 T-72
D508	CH02021M	DIODE 1SS133 T-72	 D901	2338313	DIODE RBV-406M (60V) SI 0.1USEC
D509	2348163M	ZENER MTZJ-9.1C TA	D902	CH02001M	DIODE 1SR139-400
D510	2348163M	ZENER MTZJ-9.1C TA	D903	CH02001M	DIODE 1SR139-400
D511	2348163M	ZENER MTZJ-9.1C TA	D904	CH02011M	DIODE 1SR153-400
D513	CH02021M	DIODE 1SS133 T-72	D905	CH02011M	DIODE 1SR153-400
D515	2348163M	ZENER MTZJ-9.1C TA	D906	2348253M	ZENER MTZ-J22CTA
D516	2348163M	ZENER MTZJ-9.1C TA	D907	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D517	2348163M	ZENER MTZJ-9.1C TA	D908	CH02011M	DIODE 1SR153-400
D602	CH02021M	DIODE 1SS133 T-72	D910	2331844M	ZENER HZ12-B1
D603	CH02011M	DIODE 1SR153-400	D911	2331844M	ZENER HZ12-B1
D604	CH02011M	DIODE 1SR153-400	D912	CH00183R	LIGHT EMITTING DIODE (SLZ-981C-06-T1)
D605	CH02021M	DIODE 1SS133 T-72	D913	2336615	DIODE RU3YX (LF-A1)
D606	CH02021M	DIODE 1SS133 T-72	D914	2337952S	DIODE RU4YX(LF015-302)
D607	2334243M	ZENER RD16E (B2 T2/TP/TA) SI 10MA 16.51V	D915	2337952S	DIODE RU4YX(LF015-302)
D609	CH02001M	DIODE 1SR139-400	D916	2337952S	DIODE RU4YX(LF015-302)
D610	CH02001M	DIODE 1SR139-400	D917	CH02001M	DIODE 1SR139-400
D611	CH02001M	DIODE 1SR139-400	D918	2348271M	ZENER MTZ-J27ATA
D612	2331154M	ZENER HZ-12 (A1-3 B1-3.TA) SI 200MA 14.3V	D919	2348213M	ZENER DIODE MTZJ-15C TA
D613	CH02021M	DIODE 1SS133 T-72	D920	CH02021M	DIODE 1SS133 T-72
D614	CH02011M	DIODE 1SR153-400	D921	2348121M	ZENER MTZJ-6.2A TA
D615	CH02021M	DIODE 1SS133 T-72	D922	2348283M	ZENER DIODE MTZJ-30C TA
D616	2334305M	ZENER RD30E (B4 T2/TP/TA) SI 5MA 30.51V	D923	CH02021M	DIODE 1SS133 T-72
D701	CH02021M	DIODE 1SS133 T-72	D924	2348042M	ZENER MTZ-J3.0BTA
 D702	2348511G	DIODE RS3FS LF-U1(014-201)	D925	2348264M	ZENER DIODE MTZJ-24D TA
 D703	CH00891S	DIODE UF5406 (600V)	D926	CH02011M	DIODE 1SR153-400
 D704	CH00891S	DIODE UF5406 (600V)	D928	CH01042M	DIODE RK34 (40V)
D705	CH02021M	DIODE 1SS133 T-72	D929	CH01061F	DIODE RU4AM(600V)
D706	CH02021M	DIODE 1SS133 T-72	D931	2348283M	ZENER DIODE MTZJ-30C TA
D708	CH02021M	DIODE 1SS133 T-72	D932	CH02021M	DIODE 1SS133 T-72
 D709	2335042M	ZENER HZ-22 (2L TP) SI 200MA 400MW	D933	2348132M	ZENER MTZ-J6.8BTA

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D936	2348193M	ZENER DIODE MTZJ-12C TA	DK16	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D937	CH02021M	DIODE 1SS133 T-72	DK17	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D938	CH00921M	DIODE SB140 40V 1A	DK18	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D939	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DK19	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D940	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DK20	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D941	CH02021M	DIODE 1SS133 T-72	DK21	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D942	2348132M	ZENER MTZJ-6.8BTA	DK22	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D943	CH02021M	DIODE 1SS133 T-72	DK23	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D944	CH02021M	DIODE 1SS133 T-72	DK24	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D945	CH02011M	DIODE 1SR153-400	DK25	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D946	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DK26	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D947	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DK27	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D948	CH02021M	DIODE 1SS133 T-72	DK40	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D951	2348092M	ZENER MTZJ-4.7BTA	DK41	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D952	CH02021M	DIODE 1SS133 T-72	DK42	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D956	CH02021M	DIODE 1SS133 T-72	DK43	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D957	2348213M	ZENER DIODE MTZJ-15C TA	DK44	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D958	CH02021M	DIODE 1SS133 T-72	DM01	CH02021M	DIODE 1SS133 T-72
D959	CH02021M	DIODE 1SS133 T-72	DM02	CH02021M	DIODE 1SS133 T-72
D960	CH02021M	DIODE 1SS133 T-72	DM03	CH00231	LED SLH-56VC3F
D961	CH02021M	DIODE 1SS133 T-72	DM04	2348212M	DIO-MTZ-J15BTA
D962	CH02021M	DIODE 1SS133 T-72	DM05	2348212M	DIO-MTZ-J15BTA
D963	CH02021M	DIODE 1SS133 T-72	DM11	2348212M	DIO-MTZ-J15BTA
D964	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DN01	CH02021M	DIODE 1SS133 T-72
D966	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DN02	CH02021M	DIODE 1SS133 T-72
D967	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DN03	CH02021M	DIODE 1SS133 T-72
D969	2348102M	ZENER MTZJ-5.1B TA	DN04	CH02021M	DIODE 1SS133 T-72
D971	2348143M	DIODE MTZJ-7.5CTA	DN05	2348071M	ZENER DIODE MTZJ-3.9A TA
D973	CH02011M	DIODE 1SR153-400	DN06	CH02021M	DIODE 1SS133 T-72
D974	2348111M	ZENER MTZJ-5.6ATA	DN07	CH02021M	DIODE 1SS133 T-72
D975	CH02021M	DIODE 1SS133 T-72	DN08	CH02001M	DIODE 1SR139-400
DA01	CH02021M	DIODE 1SS133 T-72	DN09	2348212M	DIO-MTZ-J15BTA
DA02	CH02021M	DIODE 1SS133 T-72	DN10	CH02021M	DIODE 1SS133 T-72
DA03	2348031M	DIO-MTZ-J2.7ATA	DN11	CH02021M	DIODE 1SS133 T-72
DA04	2348031M	DIO-MTZ-J2.7ATA	DS05	CH02001M	DIODE 1SR139-400
DA11	CH02021M	DIODE 1SS133 T-72	DY01	CH02021M	DIODE 1SS133 T-72
DA12	CH02021M	DIODE 1SS133 T-72	DY05	2348163M	ZENER MTZJ-9.1C TA
DA19	CH02021M	DIODE 1SS133 T-72	DY06	2348163M	ZENER MTZJ-9.1C TA
DE03	CH02021M	DIODE 1SS133 T-72	DY07	2348163M	ZENER MTZJ-9.1C TA
DE04	CH02001M	DIODE 1SR139-400			
DE05	CH02001M	DIODE 1SR139-400			
DE06	CH02001M	DIODE 1SR139-400			
DE07	CH02001M	DIODE 1SR139-400			
DF01	CH02021M	DIODE 1SS133 T-72	 E701	AZ00107M	PROTECTOR CRXT491004
DF02	CH02021M	DIODE 1SS133 T-72	 E991	AZ00109M	PROTECTOR CRXT491007
DF03	CH02021M	DIODE 1SS133 T-72	 E994	AZ00104M	PROTECTOR(CRXT491002)
DF04	2338531M	DIODE EG-01C (V) SI 0.5A	 E995	AZ00109M	PROTECTOR CRXT491007
DF05	CH02021M	DIODE 1SS133 T-72	 E996	AZ00109M	PROTECTOR CRXT491007
DF07	CH02021M	DIODE 1SS133 T-72	 E997	AZ00109M	PROTECTOR CRXT491007
DF08	CH02021M	DIODE 1SS133 T-72	 E999	AZ00109M	PROTECTOR CRXT491007
DF09	CH02021M	DIODE 1SS133 T-72	 F901	2722358	FUSE AC05A
DK01	2339551M	DIODE ED14(V1) SI 5MA 45V			
DK04	CH02011M	DIODE 1SR153-400	EANT	HP00771	ANT SWITCH
DK05	CH02011M	DIODE 1SR153-400	 H901	2793312	CP-EXN-471P365L (CAPRISTOR)
DK06	CH02021M	DIODE 1SS133 T-72	HM01	CZ00523	SBX1981-52P (R/C RECEIVER)
			U002	HP00094	PINP UNIT KC-010S

FUSES

PROTECTOR CRXT491004
PROTECTOR CRXT491007
PROTECTOR(CRXT491002)
PROTECTOR CRXT491007
PROTECTOR CRXT491007
PROTECTOR CRXT491007
PROTECTOR CRXT491007
PROTECTOR CRXT491007
FUSE AC05A

COMPOUND COMPONENTS

ANT SWITCH
CP-EXN-471P365L (CAPRISTOR)
SBX1981-52P (R/C RECEIVER)
PINP UNIT KC-010S

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
U101	HC00311	TUNER UNIT V6-A30FT (MAIN)	L403	BH01341M	COIL FERRITE BEADS 0.8UH
U102	HC00401	FRONT-END V8-A68CT (PIP)	L503	BH00697R	COIL 100UH
UKDG	CS00441	DIGITAL CONV. UNIT (HC2141)	L504	BH00697R	COIL 100UH
 UFPK	AZ00006	CRX FOCUS PACK	L505	BH00697R	COIL 100UH
			L506	BH00697R	COIL 100UH
		INTEGRATED CIRCUITS	L507	BH00697R	COIL 100UH
I001	CP06616U	IC MN1876478HE1	L508	2123112M	COIL-AXIAL 47UH-K
I004	CP05272U	E2PROM M24C16-BN6	L509	BH00697R	COIL 100UH
I006	CK07131R	ANALOG MONO. IC (MC14053BFEL)	L601	BZ00845	CHOKE COIL 680UH SL1720
I007	2000541	IC M51951BSL	L602	2123468M	FERRITE BEADS CORE LEAD 0.8MH
I008	2020342	IC MM1115XS	L701	BH00212R	FILTER COIL 68UH
I102	CP05243U	Z9035612PSCFR_4297	L702	2123468M	FERRITE BEADS CORE LEAD 0.8MH
I103	2000541	IC M51951BSL	L703	2123468M	FERRITE BEADS CORE LEAD 0.8MH
I105	2015495R	IC HD74HC32FPEL	L704	2123468M	FERRITE BEADS CORE LEAD 0.8MH
I106	CP05571	IC BA17805	L705	BZ00846	CHOKE COIL 1000UH SL1720
I401	2004751	IC TA8200AH	L706	BH00217R	FILTER COIL 180UH
I501	CP03552U	IC TA1222BN	L708	BH00205R	FILTER COIL 22UH
I503	CK08951R	MM1389XFBE	L709	BZ00317	LINEARITY COIL 140UH-W
I601	2003541	IC LA7838	L710	BZ00318	LINEARITY COIL 50UH-W
I602	CP06351U	ANALOG MONOLITHIC IC BA10393	L720	BH00228R	COIL 332K-1T7608A
 I901	CZ00451	HYBRID IC (STR-M6811A)	L803	BH00699R	COIL 150UH
 I902	2000465	IC PS2501-1 (KC/LC)	L833	BH00699R	COIL 150UH
 I903	2000465	IC PS2501-1 (KC/LC)	L863	BH00699R	COIL 150UH
 I904	2000465	IC PS2501-1 (KC/LC)	 L901	BZ01841	LX-LINE FILTER(102)
 I905	2381349	HYBRID IC (SE120N:+B CONT.)	 L902	BZ01831	LX-LINE FILTER(382)
I908	CP05573	IC BA17812	 L903	BZ01841	LX-LINE FILTER(102)
I909	1360891	IC-NJM7912FA	L905	BH00201R	FILTER COIL 10UH
 I910	CP03912F	ANALOG MONOLITHIC IC (SI-8402L)	L906	BH00201R	FILTER COIL 10UH
I912	CP03923F	ANALOG MONOLITHIC IC (SI-8090S)	L907	BH00214R	FILTER COIL 100UH
I913	CP03922F	ANALOG MONOLITHIC IC (SI-8050S)	L909	BV00901	PL-CHOPPER COIL 200UH/2A
IK01	CP05571	IC BA17805	L910	BH00212R	FILTER COIL 68UH
IK02	CP01631R	ICL-PST9142	L911	BV00901	PL-CHOPPER COIL 200UH/2A
IK03	CP05571	IC BA17805	L912	BH00214R	FILTER COIL 100UH
IK04	CZ00431	HYBRID IC (STK392-110)	L913	BH00214R	FILTER COIL 100UH
IK05	CZ00431	HYBRID IC (STK392-110)	L914	BH00214R	FILTER COIL 100UH
IS05	2020001	IC TDA9860	L917	BH00214R	FILTER COIL 100UH
IS12	CP02601	AN5285K	L921	2161152	FILTER COIL
IX01	CP06911U	ANALOG MONOLITHIC IC (TC90A53N)	L922	BH00214R	FILTER COIL 100UH
IY01	2020452	ANALOG MONOLITHIC IC (CXA1545AS)	L924	2123469M	FERRITE BEADS CORE 2.3UH
IY02	2003423	IC UPC7893AHF ICL	L925	2123468M	FERRITE BEADS CORE LEAD 0.8MH
			L926	2123468M	FERRITE BEADS CORE LEAD 0.8MH
		COILS	L927	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L002	2123781R	FILTER COIL 101K	L930	2123469M	FERRITE BEADS CORE 2.3UH
L003	2123781R	FILTER COIL 101K	L931	2123469M	FERRITE BEADS CORE 2.3UH
L004	BH00697R	COIL 100UH	L932	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L101	BH00697R	COIL 100UH	LA02	BH00697R	COIL 100UH
L102	BH00697R	COIL 100UH	LE01	2123097M	LAL02 TYPE AXIAL COIL 3.9UH-K
L103	2123781R	FILTER COIL 101K	LE02	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L104	2123781R	FILTER COIL 101K	LE03	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L105	2123781R	FILTER COIL 101K	LE04	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L106	2123781R	FILTER COIL 101K	LF01	BH00229R	COIL 472K-1T7608A
L107	2123781R	FILTER COIL 101K	LF02	BH00229R	COIL 472K-1T7608A
L110	2123781R	FILTER COIL 101K	LK01	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L111	2123781R	FILTER COIL 101K	LK02	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L114	BH00214R	FILTER COIL 100UH	LK03	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L401	BH01341M	COIL FERRITE BEADS 0.8UH	LK04	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L402	BH01341M	COIL FERRITE BEADS 0.8UH	LK05	2123468M	FERRITE BEADS CORE LEAD 0.8MH

REPLACEMENT PARTS LIST



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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
LK06	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q112	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK07	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q113	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK08	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q114	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK09	2123469M	FERRITE BEADS CORE 2.3UH	Q115	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK10	2123469M	FERRITE BEADS CORE 2.3UH	Q401	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK11	2123469M	FERRITE BEADS CORE 2.3UH	Q402	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK12	2123469M	FERRITE BEADS CORE 2.3UH	Q403	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LS03	BH00697R	COIL 100UH	Q404	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX01	2123105M	LAL02 AXIAL COIL 15UH-K	Q500	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX05	BH00697R	COIL 100UH	Q501	CA00171R	TRS.CHIP IMT5 25V TAPE
LX06	BH00697R	COIL 100UH	Q502	2328072R	TRS.CHIP FMW2 40V TAPE
LX07	BH00697R	COIL 100UH	Q503	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX08	BH00697R	COIL 100UH	Q504	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX09	BH00697R	COIL 100UH	Q505	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX10	BH00697R	COIL 100UH	Q506	CA11264R	PHOTO TRANSISTOR(DTC114EKA)
LX11	2123109M	COIL-AXIAL 33UH-K	Q509	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX12	2123107M	LAL02 AXIAL COIL 22UH-K	Q510	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX13	2123107M	LAL02 AXIAL COIL 22UH-K	Q511	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LY01	BH00697R	COIL 100UH	Q512	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LY04	BH00697R	COIL 100UH	Q513	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LY05	BH00697R	COIL 100UH	Q515	CA11271R	TRS 2SA1037AK T146 RS
LY06	2123781R	FILTER COIL 101K	Q516	CA11271R	TRS 2SA1037AK T146 RS
LY07	BH00697R	COIL 100UH	Q517	CA11271R	TRS 2SA1037AK T146 RS
		TRANSISTORS	Q519	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q001	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q520	CA11271R	TRS 2SA1037AK T146 RS
Q002	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q521	CA11271R	TRS 2SA1037AK T146 RS
Q004	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q602	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q005	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q603	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q006	CA11271R	TRS 2SA1037AK T146 RS	Q604	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW
Q007	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q605	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q008	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q606	CF00611	TRS. 2SC3969(AB) 400V
Q009	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q607	2325702M	TRS 2SA854S TAPE (Q/R) SI 200MHZ300MW
Q011	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q609	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q013	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q701	2326216	TRS. 2SC3116 (S/T)
Q014	CA11271R	TRS 2SA1037AK T146 RS	Q702	2325725M	TRS.2SC1740 Q/R TZ
Q015	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q703	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q016	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q705	2325725M	TRS.2SC1740 Q/R TZ
Q017	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q710	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q018	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q711	2325725M	TRS.2SC1740 Q/R TZ
Q019	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q712	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q024	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q777	CF01542F	TRS.2SC5124(LF702)
Q026	2312171	TRS. 2SC3852	Q801	2312372F	TRS-2SC3942
Q027	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q802	2320663M	TRS. 2SC1213A (C)
Q028	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q803	2325725M	TRS.2SC1740 Q/R TZ
Q030	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q804	2325725M	TRS.2SC1740 Q/R TZ
Q032	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q805	2325725M	TRS.2SC1740 Q/R TZ
Q101	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q806	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q102	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q831	2312372F	TRS-2SC3942
Q103	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW	Q832	2320663M	TRS. 2SC1213A (C)
Q106	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q833	2325725M	TRS.2SC1740 Q/R TZ
Q107	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q861	2312372F	TRS-2SC3942
Q108	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q862	2320663M	TRS. 2SC1213A (C)
Q109	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q863	2325725M	TRS.2SC1740 Q/R TZ
Q110	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q901	2312171	TRS. 2SC3852
Q111	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q902	2312171	TRS. 2SC3852
			Q903	CF02281R	TRS. 2SA821S

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
Q905	2325725M	TRS.2SC1740 Q/R TZ	QM01	2325725M	TRS.2SC1740 Q/R TZ
Q906	2325725M	TRS.2SC1740 Q/R TZ	QM02	2312992	PHOTO TRS. RPT-38PT3F (M)
Q907	CF02251R	2SC3415S TP	QN01	2325725M	TRS.2SC1740 Q/R TZ
Q908	2325725M	TRS.2SC1740 Q/R TZ	QN02	2325725M	TRS.2SC1740 Q/R TZ
Q909	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	QN03	2325725M	TRS.2SC1740 Q/R TZ
Q912	2325725M	TRS.2SC1740 Q/R TZ	QN04	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q913	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	QN05	2325725M	TRS.2SC1740 Q/R TZ
 Q914	2323782R	THYRISTOR 03P2M(TA)	QN06	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW
Q916	2325725M	TRS.2SC1740 Q/R TZ	QX01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q917	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	QX02	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q918	2325725M	TRS.2SC1740 Q/R TZ	QX05	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA02	CA11271R	TRS 2SA1037AK T146 RS	QX07	CA11271R	TRS 2SA1037AK T146 RS
QA03	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA04	CA11271R	TRS 2SA1037AK T146 RS	QX09	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA05	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX11	CA11271R	TRS 2SA1037AK T146 RS
QA74	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX12	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA75	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA80	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY02	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE01	2325725M	TRS.2SC1740 Q/R TZ	QY03	CA11271R	TRS 2SA1037AK T146 RS
QE02	2325725M	TRS.2SC1740 Q/R TZ	QY04	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE03	2325725M	TRS.2SC1740 Q/R TZ	QY05	CA11264R	PHOTO TRANSISTOR(DTC114EKA)
QE04	2325725M	TRS.2SC1740 Q/R TZ	QY06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE05	2325725M	TRS.2SC1740 Q/R TZ	QY07	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW
QE06	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW	QY08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE07	CF10833R	TRS. 2SA933AS S TP	QY10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE08	CF00531	TRS. 2SA1964 160V	QY11	CA11271R	TRS 2SA1037AK T146 RS
QE09	CF00541	TRS. 2SC5248 160V	QY12	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW
QE10	2325725M	TRS.2SC1740 Q/R TZ	QY13	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW
QE11	2325725M	TRS.2SC1740 Q/R TZ	QY51	CA11271R	TRS 2SA1037AK T146 RS
QE12	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	QY57	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF01	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	QY58	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF03	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW	QY59	CA11271R	TRS 2SA1037AK T146 RS
QF04	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	QY60	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF05	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW	QY61	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF06	CF00821F	TRS. 2SC4686A 1200V	QY62	CA11271R	TRS 2SA1037AK T146 RS
QF07	CF00821F	TRS. 2SC4686A 1200V	QY63	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF08	CF00821F	TRS. 2SC4686A 1200V			
QF09	2325725M	TRS.2SC1740 Q/R TZ			RESISTORS
QF10	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	R001	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QF11	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW	R002	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE
QF12	2325725M	TRS.2SC1740 Q/R TZ	R003	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
QF13	2325725M	TRS.2SC1740 Q/R TZ	R005	0700063M	RES.-CARBON FLM 1/16W 47K-JB
QF14	2325725M	TRS.2SC1740 Q/R TZ	R007	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
QF15	2325725M	TRS.2SC1740 Q/R TZ	R008	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
QF16	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	R009	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QF17	CF10852R	TRS. DTC144ESA-T	R010	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
QK01	2312171	TRS. 2SC3852	R011	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
QK02	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	R012	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
QK03	2325702M	TRS.2SA854S TAPE (Q/R) SI 200MHZ300MW	R013	0700054M	RES.-CARBON FLM 1/16W 10K-JB
QK04	2325725M	TRS.2SC1740 Q/R TZ	R014	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QK06	2325725M	TRS.2SC1740 Q/R TZ	R015	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
QK07	2325725M	TRS.2SC1740 Q/R TZ	R016	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
QK08	2325725M	TRS.2SC1740 Q/R TZ	R021	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE

REPLACEMENT PARTS LIST



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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	R0A8	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R023	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0A9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R025	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0C1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R026	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R0C3	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R029	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0C4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R034	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R0C5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R035	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0C6	0700027M	RES.-CARBON FLM 1/16W 100-JB
R036	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0C7	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE
R037	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0E2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R038	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0E3	0188127M	RES.-CARBON FLM 560-JB 1/2W
R040	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	RES.-CARBON FLM 1/16W 1.0K-JB
R043	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0E6	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R044	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0E7	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R045	0700041M	RES.-CARBON FLM 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	RES.-CARBON FLM 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	RES.-CARBON FLM 1/16W 1.0K-JB	R0G1	0100123M	RES.-CARBON FLM 1/8W 270K-JB
R050	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0G5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R051	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0G6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R055	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0G7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R056	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0G8	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R059	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0G9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R060	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R0H1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R061	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R0H2	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
R062	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R0H3	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R063	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R0H4	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R064	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R0H5	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
R066	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0H6	0195881R	RES 2125 CHIP 1/16W 180J TAPE
R067	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	R0H7	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE
R068	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0H8	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R069	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0L5	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R070	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R0L6	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R071	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0L8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R072	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R0M2	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
R073	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0M3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R074	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R0M4	AW00074	TRIMMER RESISTOR
R075	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R0M5	0700032M	RES.-CARBON FLM 1/16W 220-JB
R076	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0M6	AW00074	TRIMMER RESISTOR
R078	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0M7	0700032M	RES.-CARBON FLM 1/16W 220-JB
R081	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R0M8	AW00074	TRIMMER RESISTOR
R082	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R0M9	0700032M	RES.-CARBON FLM 1/16W 220-JB
R083	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0N2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R086	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0N4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R087	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0P3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R088	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0P5	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R089	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0P6	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R090	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0P8	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R099	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0P9	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R0A2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0R1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0A5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0R3	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0A6	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R0R4	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0A7	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0R5	0195875R	RES 2125 CHIP 1/16W 100J TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R0R6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R148	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0R7	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R149	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0R8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R150	0195893R	RES 2125 CHIP 1/16W 560J TAPE
R0S1	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R151	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R0S2	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R152	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R0T1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R153	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R0T2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R154	0700036M	RES.-CARBON FLM 1/16W 470-JB
R0T4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R155	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0T5	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R156	0700065M	RES.-CARBON FLM 1/16W 68K-JB
R0T6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R157	AT03694M	RES.MTL GRAZD FLM 1W 10M
R0T7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R158	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0T8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R159	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0T9	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R160	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R0U1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R163	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0U3	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R167	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R0U4	0700027M	RES.-CARBON FLM 1/16W 100-JB	R168	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R0U5	0700027M	RES.-CARBON FLM 1/16W 100-JB	R169	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R101	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R173	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R102	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R174	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R103	0195895R	RES.2125 CHIP 1/10W 680J TAPE	R175	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R104	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R176	0100041M	RES.-CARBON FLM 1/8W 100-JB
R105	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R177	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R106	0195895R	RES.2125 CHIP 1/10W 680J TAPE	R178	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R107	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R179	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R109	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R180	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R110	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R181	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R111	0700027M	RES.-CARBON FLM 1/16W 100-JB	R182	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R112	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R183	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R113	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R184	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R114	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R185	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R115	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R186	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R116	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R187	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R118	0100059M	RES.-CARBON FLM 1/8W 560-JB	R196	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R119	0100059M	RES.-CARBON FLM 1/8W 560-JB	R197	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R121	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R198	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R122	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R1A2	0700023M	RES.-CARBON FLM 1/16W 47-J
R123	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R1A3	0700027M	RES.-CARBON FLM 1/16W 100-JB
R124	0700027M	RES.-CARBON FLM 1/16W 100-JB	R1A9	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R125	0700027M	RES.-CARBON FLM 1/16W 100-JB	R1B2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R127	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R1C1	0195893R	RES 2125 CHIP 1/16W 560J TAPE
R128	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R312	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R129	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3A4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R132	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R3A5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R133	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R3A6	0700032M	RES.-CARBON FLM 1/16W 220-JB
R134	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3A7	0700032M	RES.-CARBON FLM 1/16W 220-JB
R135	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3A8	0700032M	RES.-CARBON FLM 1/16W 220-JB
R141	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R3C3	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
R142	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R3C4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R144	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R3E1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R146	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3E2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R147	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3E3	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
R3E4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R402	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R3E5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R404	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R3E6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R405	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
R3E7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R406	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
R3E8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R407	0700037M	RES.-CARBON FLM 1/16W 560-JB
R3F1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R408	0700037M	RES.-CARBON FLM 1/16W 560-JB
R3F3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R411	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R3F4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R412	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R3F5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R413	0700067M	RES.-CARBON FLM 1/16W 100K-JB
R3F6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R414	0700036M	RES.-CARBON FLM 1/16W 470-JB
R3F7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R415	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R3F8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R416	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R3F9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R417	AT01549S	METAL FILM RESISTOR(2.2OHM 1W)
R3G1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R418	AT01549S	METAL FILM RESISTOR(2.2OHM 1W)
R3G2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R419	0700065M	RES.-CARBON FLM 1/16W 68K-JB
R3G3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R420	0700065M	RES.-CARBON FLM 1/16W 68K-JB
R3G4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R421	0188131M	RES.-CARBON FLM 1/4W 1K-JB
R3G6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R422	0188131M	RES.-CARBON FLM 1/4W 1K-JB
R3G7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R503	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE
R3G8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R504	0700032M	RES.-CARBON FLM 1/16W 220-JB
R3G9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R505	0700032M	RES.-CARBON FLM 1/16W 220-JB
R3H1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R506	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R3H2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R508	0195879R	RES 2125 CHIP 1/16W 150J TAPE
R3H4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R509	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3H7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R510	0195906R	RESISTOR MINI-CHIP RMC1/16 1.8K-J TAPE
R3H8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R511	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE
R3H9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R516	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3J4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R517	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3J5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R518	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R3J6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R519	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3J7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R520	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R3J8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R521	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R3J9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R522	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE
R3K1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R523	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3K2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R524	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R3K3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R525	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3K4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R526	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
R3K5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R527	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R3K6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R528	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R3K8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R529	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3K9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R530	0195879R	RES 2125 CHIP 1/16W 150J TAPE
R3L1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R531	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
R3L2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R532	0195889R	RES.2125 CHIP 1/10W 390J TAPE
R3L6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R533	0195889R	RES.2125 CHIP 1/10W 390J TAPE
R3L7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R534	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3L8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R535	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE
R3L9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R536	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3M1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R537	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
R3M2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R538	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
R3M3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R539	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
R3M7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R540	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R3M8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R541	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3M9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R542	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3P1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R545	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3P4	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R547	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R548	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	R5C6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R549	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R5C7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R550	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE	R5C8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R551	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5C9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R552	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE	R5D0	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R553	0195879R	RES 2125 CHIP 1/16W 150J TAPE	R5D1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R555	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5D2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R556	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE	R5D3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R557	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5D4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R558	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5D5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R559	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5D6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R561	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5D7	0700027M	RES.-CARBON FLM 1/16W 100-JB
R562	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5D8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R563	0195889R	RES.2125 CHIP 1/10W 390J TAPE	R5E2	0700027M	RES.-CARBON FLM 1/16W 100-JB
R564	0195885R	RESISTOR 2125 CHIP 1/16W 270J TAPE	R5E3	0700027M	RES.-CARBON FLM 1/16W 100-JB
R566	0188118M	RES.-CARBON FLM 1/2W 120-JB	R5E4	0700027M	RES.-CARBON FLM 1/16W 100-JB
R567	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	R5E5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R568	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R569	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5E7	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R570	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E8	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R571	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E9	0700027M	RES.-CARBON FLM 1/16W 100-JB
R572	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R5F1	0195895R	RES.2125 CHIP 1/10W 680J TAPE
R573	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R5F2	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R574	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5F3	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R575	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5F4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R576	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R577	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F7	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R578	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F8	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R579	0188125M	RES.-CARBON FLM 390-J 1/2W	R5F9	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R580	0188125M	RES.-CARBON FLM 390-J 1/2W	R5G1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R581	0188125M	RES.-CARBON FLM 390-J 1/2W	R5G4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R582	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R583	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R584	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R586	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	R5H1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R588	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R590	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R591	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R592	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R593	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5H7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R595	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5J4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R597	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5K2	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
R598	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R602	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R5A0	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R603	AW00126	TRIMMER RESISTOR
R5A1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R604	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R5A2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R605	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5A3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R606	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5A4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R607	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5A5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R608	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5A6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R609	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5A8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R610	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R5A9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R611	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5C0	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R612	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R5C3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R613	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R5C4	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R614	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R5C5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R615	0700054M	RES.-CARBON FLM 1/16W 10K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R616	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R720	AT03411S	METAL OX. 220OHM 2W
R617	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R721	0188122M	RES.-CARBON FLM 220-J 1/2W
R618	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	R722	0700067M	RES.-CARBON FLM 1/16W 100K-JB
R619	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	R723	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R620	0700055M	RES.-CARBON FLM 1/16W 12K-JB	R725	AT03611S	METAL OX. 6.8KOHM 3W
R621	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R726	0188143M	RES.-CARBON FLM 1/4W 8.2K-JB
R622	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J	R727	0100091M	RES.-CARBON FLM 1/8W 12K-JB
R623	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R728	0100081M	RES.-CARBON FLM 1/8W 4.7K-JB
R624	0700059M	RES.-CARBON FLM 1/16W 27K-JB	R729	0188127M	RES.-CARBON FLM 560-JB 1/2W
R625	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	R730	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R626	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R731	0100127M	RES.-CARBON FLM 1/8W 390K-JB
R627	0100063M	RES.-CARBON FLM 1/8W 820-JB	R732	AT03251S	METAL OX. 220OHM 1W
R628	0100065M	RES.-CARBON FLM 1/8W 1K-JB	R733	AT03251S	METAL OX. 220OHM 1W
R629	0700064M	RES.-CARBON FLM 1/16W 56K-JB	R734	0100127M	RES.-CARBON FLM 1/8W 390K-JB
R630	AW00128	TRIMMER RESISTOR	 R737	0188104M	RES.-CARBON FLM 1/2W 10-JB
R635	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R740	0100117M	RES.-CARBON FLM 1/8W 150K-JB
R636	0700061M	RES.-CARBON FLM 1/16W 33K-JB	R750	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
R637	0700065M	RES.-CARBON FLM 1/16W 68K-JB	R751	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
R638	0700038M	RES.-CARBON FLM 1/16W 680-JB	R752	0700067M	RES.-CARBON FLM 1/16W 100K-JB
R639	0700064M	RES.-CARBON FLM 1/16W 56K-JB	R753	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
R640	0100045M	RES.-CARBON FLM 1/8W 150-JB	R760	AT03417S	METAL OX. 390OHM 2W
R641	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W	R761	0188139M	RES.-CARBON FLM 4.7K-J 1/2W
R642	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W	R770	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R643	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R771	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R644	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R772	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R645	0119731M	RES.-MTL OX1DE 1W R68-K TAPE	R773	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R646	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R801	0140326S	RES. WIRE WOUND 5.6K-J 5W
R647	0700059M	RES.-CARBON FLM 1/16W 27K-JB	R803	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R648	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R806	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J
R649	0100053M	RES.-CARBON FLM 1/8W 330-JB	R810	0100051M	RES.-CARBON FLM 1/8W 270-JB
R651	0188119M	RES.-CARBON FLM 150-J 1/2W	R811	0100057M	RES.-CARBON FLM 1/8W 470-JB
R652	0700014M	RES.-CARBON FLM 1/16W 10-J	R812	0100045M	RES.-CARBON FLM 1/8W 150-JB
R660	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J	R815	0100063M	RES.-CARBON FLM 1/8W 820-JB
R661	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J	R817	0100041M	RES.-CARBON FLM 1/8W 100-JB
R671	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J	R818	0100049M	RES.-CARBON FLM 1/8W 220-JB
R672	0113766M	RESISTOR CARBON FILM SRD1/2P-B 4.7K-J	R821	0100063M	RES.-CARBON FLM 1/8W 820-JB
R673	AT03242S	METAL OX. 100OHM 1W	R822	0100049M	RES.-CARBON FLM 1/8W 220-JB
R675	0700061M	RES.-CARBON FLM 1/16W 33K-JB	R823	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R701	AT03599S	METAL OX. 2.7KOHM 3W	R825	0100021M	RES.-CARBON FLM 1/8W 15-JB
R702	AT03595S	METAL OX. 1.8KOHM 3W	R827	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R704	0100031M	RES.-CARBON FLM 1/8W 39-JB	R831	0140326S	RES. WIRE WOUND 5.6K-J 5W
R705	0700034M	RES.-CARBON FLM 1/16W 330-JB	R833	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R706	0700032M	RES.-CARBON FLM 1/16W 220-JB	R836	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J
R707	0113770M	RESISTOR CARBON FILM SRD1/2P-B 6.8K-J	R840	0100051M	RES.-CARBON FLM 1/8W 270-JB
R708	0700066M	RES.-CARBON FLM 1/16W 82K-JB	R841	0100057M	RES.-CARBON FLM 1/8W 470-JB
R709	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R842	0100033M	RES.-CARBON FLM 1/8W 47-JB
R710	0187068M	RES.-CARBON FLM 1/16W 1.3K-JB	R843	0150001	RESISTOR-VARIABLE CARBON RV08 200-B
R711	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	R855	0100021M	RES.-CARBON FLM 1/8W 15-JB
R712	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R861	0140326S	RES. WIRE WOUND 5.6K-J 5W
R713	0113727M	RESISTOR CARBON FILM SRD1/2P-B 120-J	R863	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R714	AT03219S	METAL OX. 15.0OHM 1W	R866	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J
 R715	0700062M	RES.-CARBON FLM 1/16W 39K-JB	R870	0100051M	RES.-CARBON FLM 1/8W 270-JB
 R716	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R871	0100057M	RES.-CARBON FLM 1/8W 470-JB
R717	0113709M	RESISTOR CARBON FILM SRD1/2P-B 22-J	R872	0100033M	RES.-CARBON FLM 1/8W 47-JB
R718	0113785M	RESISTOR CARBON FILM SRD1/2P-B 27K-J	R873	0150001	RESISTOR-VARIABLE CARBON RV08 200-B
R719	0113791M	RES.-CARBON FLM 1/2W 47K-JB	R885	0100021M	RES.-CARBON FLM 1/8W 15-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R901	AT03665M	RES.MTL GRAZD FLM 1/2W 1M	R972	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R902	0147060	RES.-WIRE WOUND 2W 33-K	R974	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R903	0188157M	RES.-CARBON FLM 100K-JB 1/2W	R975	AT03419S	METAL OX. 470 OHM 2W
 R904	0147802	RES.-WIRE WOUND 15W 0.62-KM	R976	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R905	0113772M	RES.-CARBON FLM SRD1/2P-B	R977	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R906	0113772M	RES.-CARBON FLM SRD1/2P-B	R979	0113762M	RESISTOR CARBON FILM SRD1/2P-B 3.3K-J
R907	0100023M	RES.-CARBON FLM 1/8W 18-JB	R980	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R908	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R981	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R909	0700038M	RES.-CARBON FLM 1/16W 680-JB	R982	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
R910	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	R983	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R911	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	R985	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R912	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	R986	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)
R913	0700023M	RES.-CARBON FLM 1/16W 47-J	R987	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)
R914	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R988	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R915	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	R989	0700036M	RES.-CARBON FLM 1/16W 470-JB
R916	0700038M	RES.-CARBON FLM 1/16W 680-JB	R990	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R917	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)	R992	AT03608S	METAL OX. 5.6KOHM 3W
R918	0100091M	RES.-CARBON FLM 1/8W 12K-JB	R993	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R919	0100089M	RES.-CARBON FLM 1/8W 10K-JB	RA01	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R920	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA02	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R921	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA05	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R922	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA06	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R923	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RA07	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R925	0113746M	RES.-CARBON FLM 1/2W 680-JB	RA08	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R926	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RA09	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R929	0700028M	RES.-CARBON FLM 1/16W 120-JB	RA10	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R930	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RA11	0700027M	RES.-CARBON FLM 1/16W 100-JB
R931	0119695M	RES.-MTL OXIDE FLM 1W 0.47-F	RA12	0700027M	RES.-CARBON FLM 1/16W 100-JB
R932	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA13	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R933	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA14	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R934	0113797M	RES.-CARBON FLM 1/2W 82K-JB	RA15	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R935	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RA16	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R937	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA17	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R940	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA18	0195939R	RMC73S-2A393JR
R941	0700018M	RES.-CARBON FLM 1/16W 22-J	RA19	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R942	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RA20	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R943	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RA21	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R944	0113793M	RESISTOR CARBON FILM SRD1/2P-B 56K-J	RA22	0195887R	RES 2125 CHIP 1/16W 330J TAPE
R945	0113793M	RESISTOR CARBON FILM SRD1/2P-B 56K-J	RA23	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R946	0188146M	RES.-CARBON FLM 1/4W 15K-JB	RA24	0195939R	RMC73S-2A393JR
R948	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
 R949	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RA26	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
 R950	0700039M	RES.-CARBON FLM 1/16W 820-JB	RA27	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R952	0700032M	RES.-CARBON FLM 1/16W 220-JB	RA28	0195887R	RES 2125 CHIP 1/16W 330J TAPE
R954	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA29	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R955	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA30	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R957	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA31	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R958	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RA32	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R959	0113750M	RES.-CARBON FLM 1/2W 1K-JB	RA33	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R960	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA34	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R962	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RA35	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R963	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RA36	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R968	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA37	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R969	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RA40	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R970	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RA41	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R971	0700037M	RES.-CARBON FLM 1/16W 560-JB	RA42	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
RA43	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE04	0700035M	RES.-CARBON FLM 1/16W 390-JB
RA50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE05	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RA51	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RE06	0700031M	RES.-CARBON FLM 1/16W 180-JB
RA52	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE07	0700065M	RES.-CARBON FLM 1/16W 68K-JB
RA53	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RE08	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RA58	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE09	0700039M	RES.-CARBON FLM 1/16W 820-JB
RA59	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RE10	0700033M	RES.-CARBON FLM 1/16W 270-JB
RA60	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE11	0700033M	RES.-CARBON FLM 1/16W 270-JB
RA61	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RE12	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RA64	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RE13	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RA65	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RE14	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RA66	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RE15	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RA67	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RE16	0113742M	RES.-CARBON FLM 1/2W 470-JB
RA68	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE18	0700036M	RES.-CARBON FLM 1/16W 470-JB
RA69	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE19	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RA70	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE20	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RA75	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE21	0100065M	RES.-CARBON FLM 1/8W 1K-JB
RA76	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE22	0700027M	RES.-CARBON FLM 1/16W 100-JB
RA77	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE23	0113701M	RESISTOR CARBON FILM SRD1/2P-B 10-J
RA78	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE24	0100039M	RES.-CARBON FLM 1/8W 82-JB
RA79	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE25	0188133M	RES.-CARBON FLM 1/2W 1.5K-JB
RA80	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE26	0188132M	RES.-CARBON FLM 1.2K-J 1/2W
RA81	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE27	0188155M	RES.-CARBON FLM 68K-JB
RA82	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE28	0188155M	RES.-CARBON FLM 68K-JB
RA83	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE29	0113776M	RESISTOR CARBON FILM SRD1/2P-B 12K-J
RA84	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RE30	0100039M	RES.-CARBON FLM 1/8W 82-JB
RA85	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RE31	0100069M	RES.-CARBON FLM 1/8W 1.5K-JB
RA86	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE32	0100067M	RES.-CARBON FLM 1/8W 1.2K-JB
RA91	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE33	0113704M	RESISTOR CARBON FILM SRD1/2P-B 13-J
RA92	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RE34	AT03571S	METAL OX. 220OHM 3W
RA93	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RE35	0113686M	RES.-CARBON FLM 1/2W 2.7-J
RA94	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE36	0113686M	RES.-CARBON FLM 1/2W 2.7-J
RA99	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE37	0113704M	RESISTOR CARBON FILM SRD1/2P-B 13-J
RAA1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE38	AT03254S	METAL OX. 300OHM 1W
RAA2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE39	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RAA3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE40	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RAA4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE41	0700035M	RES.-CARBON FLM 1/16W 390-JB
RAA5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE43	0700039M	RES.-CARBON FLM 1/16W 820-JB
RAA6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE45	0700027M	RES.-CARBON FLM 1/16W 100-JB
RAA7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE46	0113746M	RES.-CARBON FLM 1/2W 680-JB
RAD8	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RE47	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RAD9	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RF01	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RAE1	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RF02	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RAE2	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RF03	0700036M	RES.-CARBON FLM 1/16W 470-JB
RAE3	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RF04	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RC02	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RF07	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RC14	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF08	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RC16	0195871R	RMC73S-2A750JR	RF09	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RC18	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RF10	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RC19	0195871R	RMC73S-2A750JR	RF11	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RC63	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RF12	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RC89	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF13	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RC98	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF14	0700025M	RES.-CARBON FLM 1/16W 68-J
RE01	AT03584S	METAL OX. 680OHM 3W	RF15	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE02	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RF16	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE03	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RF17	AT03659M	RES.MTL GRAZD FLM 1/2W 390K

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RF18	AT03662M	RES.MTL GRAZD FLM 1/2W 560K	RK34	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF19	AT03662M	RES.MTL GRAZD FLM 1/2W 560K	RK35	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF20	0700027M	RES.-CARBON FLM 1/16W 100-JB	RK36	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF21	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RK37	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF22	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RK38	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF23	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RK39	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF25	AT03662M	RES.MTL GRAZD FLM 1/2W 560K	RK40	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RF26	AT03662M	RES.MTL GRAZD FLM 1/2W 560K	RK42	AT03199S	METAL OX. 2.70HM 1W
RF27	AT03661M	RES.MTL GRAZD FLM 1/2W 470K	RK43	AT03571S	METAL OX. 220OHM 3W
RF28	0700062M	RES.-CARBON FLM 1/16W 39K-JB	RK44	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RF29	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RK46	AT03197S	METAL OX. 2.20HM 1W
RF30	0100103M	RES.-CARBON FLM 1/8W 39K-JB	RK47	AT03566S	METAL OX. 150OHM 3W
RF31	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	RK48	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RF33	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK50	AT03202S	METAL OX. 3.30HM 1W
RF34	0187100M	RES.-CARBON FLM 1/16W 30K-JB	RK51	AT03571S	METAL OX. 220OHM 3W
RF35	0187074M	RES.-CARBON FLM 1/16W 2.4K-JB	RK52	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RF36	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK54	AT03197S	METAL OX. 2.20HM 1W
RF37	0700039M	RES.-CARBON FLM 1/16W 820-JB	RK55	AT03566S	METAL OX. 150OHM 3W
RF40	AT03241S	METAL OX. 91.0OHM 1W	RK56	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RF41	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RK58	AT03204S	METAL OX. 3.90HM 1W
RF42	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	RK59	AT03571S	METAL OX. 220OHM 3W
RF43	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RK60	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RF44	0700061M	RES.-CARBON FLM 1/16W 33K-JB	RK62	AT03202S	METAL OX. 3.30HM 1W
RF45	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RK63	AT03566S	METAL OX. 150OHM 3W
RF46	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK64	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF47	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK90	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK01	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RK99	0113698M	RES.-CARBON FLM 1/2W 8.2-J
RK02	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM01	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK03	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM02	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RK04	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM03	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RK05	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM04	0100065M	RES.-CARBON FLM 1/8W 1K-JB
RK06	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM05	0100065M	RES.-CARBON FLM 1/8W 1K-JB
RK07	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM06	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM07	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
RK09	0100057M	RES.-CARBON FLM 1/8W 470-JB	RM08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RK10	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RM09	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RK12	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RM10	0100129M	RES.-CARBON FLM 1/8W 470K-JB
RK13	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RM11	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK14	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RM12	0100125M	RES.-CARBON FLM 1/8W 330K-JB
RK15	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM13	0100073M	RES.-CARBON FLM 1/8W 2.2K-JB
RK16	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RM14	0100125M	RES.-CARBON FLM 1/8W 330K-JB
RK17	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RM15	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK18	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RM38	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK19	0100125M	RES.-CARBON FLM 1/8W 330K-JB	RM40	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RK22	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RN01	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RK23	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RN02	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK24	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	RN03	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK25	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN04	0100113M	RES.-CARBON FLM 1/8W 100K-JB
RK26	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN05	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RK27	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RN06	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK28	0700027M	RES.-CARBON FLM 1/16W 100-JB	RN07	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RK29	0700027M	RES.-CARBON FLM 1/16W 100-JB	RN08	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RK30	0700027M	RES.-CARBON FLM 1/16W 100-JB	RN09	0700061M	RES.-CARBON FLM 1/16W 33K-JB
RK31	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RN10	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RK32	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RN11	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RK33	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RN12	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RN13	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RX58	0195952R	RMC73S-2A124JR
RN14	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RX59	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE
RN15	0700064M	RES.-CARBON FLM 1/16W 56K-JB	RX60	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE
RN16	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RX62	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RN17	0700059M	RES.-CARBON FLM 1/16W 27K-JB	RX63	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RN18	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RY01	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS12	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RY05	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS13	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RY06	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS14	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RY07	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS15	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RY08	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS32	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RY09	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RS33	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RY10	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RS34	AT03665M	RES.MTL GRAZD FLM 1/2W 1M	RY11	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS35	AT03666M	RES.MTL GRAZD FLM 1/2W 1.2M	RY12	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS42	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RY13	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS47	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RY14	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS48	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RY15	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RSH4	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RY16	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
RX01	0195935R	RES 2125 CHIP 1/16W 27K-J TAPE	RY17	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
RX02	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RY18	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RX03	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY19	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX04	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY20	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RX05	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RY21	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE
RX06	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE	RY22	0195887R	RES 2125 CHIP 1/16W 330J TAPE
RX07	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY23	0195872R	RES 2125 CHIP 1/10W 82-J TAPE
RX08	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY24	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX22	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RX26	0195967R	RESISTOR MINI-CHIP RMC1/16 510K-J TAPE	RY26	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
RX27	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RY27	0195915R	RESISTOR MINI-CHIP RMC1/16 4.3K-J TAPE
RX28	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY28	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE
RX29	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY29	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
RX30	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY30	0700027M	RES.-CARBON FLM 1/16W 100-JB
RX31	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY31	0195871R	RMC73S-2A750JR
RX32	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY32	0195871R	RMC73S-2A750JR
RX33	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY33	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RX34	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE	RY34	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
RX35	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	RY35	0195871R	RMC73S-2A750JR
RX36	0195891R	RES 2125 CHIP 1/16W 470J TAPE	RY39	0195887R	RES 2125 CHIP 1/16W 330J TAPE
RX37	0195889R	RES.2125 CHIP 1/10W 390J TAPE	RY40	0195893R	RES 2125 CHIP 1/16W 560J TAPE
RX38	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RY41	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
RX39	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY42	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RX40	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY43	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX41	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY44	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX42	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY46	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX43	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RY48	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX45	0195939R	RMC73S-2A393JR	RY50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX46	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY51	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX47	0195891R	RES 2125 CHIP 1/16W 470J TAPE	RY52	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RX48	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RY53	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
RX49	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY55	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX50	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY56	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX51	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RY57	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RX52	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	RY61	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RX53	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE	RY62	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX55	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY64	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX57	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY65	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
RY69	0700032M	RES.-CARBON FLM 1/16W 220-JB	RYG6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY70	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RYG7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY71	0700027M	RES.-CARBON FLM 1/16W 100-JB	RYG8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY72	0700027M	RES.-CARBON FLM 1/16W 100-JB	RYG9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY73	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYH1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY74	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RYH2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY75	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RYH3	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY77	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RYH4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY78	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RYH5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY79	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYH6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY81	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RYH7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY83	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RYH8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY84	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RYH9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY85	0195871R	RMC73S-2A750JR	RYJ1	0195893R	RES 2125 CHIP 1/16W 560J TAPE
RY86	0195871R	RMC73S-2A750JR	RYJ2	0195893R	RES 2125 CHIP 1/16W 560J TAPE
RY87	0195871R	RMC73S-2A750JR	RYJ3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY88	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYJ4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY89	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYJ5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY90	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	RYJ6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY91	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	RYJ7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY96	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYJ8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY98	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RYJ9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY99	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	RYK1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RYA1	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	RYK2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RYA2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RZ09	0147152	RES.-WIRE WOUND 3W 27-JA CEMENTED
RYA3	0195891R	RES 2125 CHIP 1/16W 470J TAPE			
RYA4	0195891R	RES 2125 CHIP 1/16W 470J TAPE			
RYA5	0195885R	RESISTOR 2125 CHIP 1/16W 270J TAPE	SK01	FE00061	SWITCHES
RYA6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	SM01	FE00001R	1P TACT SWITCH
RYA7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	SM02	FE00001R	PUSH SWITCH
RYA8	0195897R	RES 2125 CHIP 1/16W 820J TAPE	SM03	FE00001R	PUSH SWITCH
RYA9	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	SM04	FE00001R	PUSH SWITCH
RYC1	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	SM05	FE00001R	PUSH SWITCH
RYC2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	SM06	FE00001R	PUSH SWITCH
RYC3	0195891R	RES 2125 CHIP 1/16W 470J TAPE	SM07	FE00001R	PUSH SWITCH
RYC4	0195891R	RES 2125 CHIP 1/16W 470J TAPE	SM09	FE00091	SWP01N01-EVQQKH08Q
RYC5	0195889R	RES.2125 CHIP 1/10W 390J TAPE	SZ01	FD00041	SLIDE SWITCH
RYC6	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
RYC7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			
RYC8	0195897R	RES 2125 CHIP 1/16W 820J TAPE	 T701	2260291U	TRANSFORMERS
RYC9	0195875R	RES 2125 CHIP 1/16W 100J TAPE	 T702	BW00632	HORIZONTAL DRIVE TRANS.
RYE2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	 T703	2272762	HFL1735YP-RC
RYE3	0195893R	RES 2125 CHIP 1/16W 560J TAPE	 T901	BT00801	TRANS.-SATURBLE
RYE4	0195893R	RES 2125 CHIP 1/16W 560J TAPE			POWER TRANS. EE49F17U-AP73F
RYE5	0195893R	RES 2125 CHIP 1/16W 560J TAPE			
RYE6	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
RYE7	0195893R	RES 2125 CHIP 1/16W 560J TAPE			
RYE8	0195893R	RES 2125 CHIP 1/16W 560J TAPE			
RYE9	0195893R	RES 2125 CHIP 1/16W 560J TAPE			
RYF1	0700025M	RES.-CARBON FLM 1/16W 68-J			
RYF2	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE			
RYF3	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE			
RYF4	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE			
RYG1	0195250R	RES 2125 CHIP 1/16W 000 TAPE			
RYG4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE			
RYG5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE			

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		EXPLODED VIEW PARTS			
1	PH08411	CONTROL PANEL ASS'Y			
2	NA11703	SB LENS CRT METAL (BLACK)			
3	KS00044A	46" MIRROR			
3	KS00169	50" MIRROR			
4	33010339	BARRIER BOARD			
5	QG00223	REAR COVER ASSY (46")			
5	QD01532	46" REAR COVER			
5	QG00812	REAR COVER ASSY (50")			
5	QD03841	50" REAR COVER			
6	55010199	FRONT DOOR			
7	33200070	BACK CENTER BAR			
8	H512261	LOWER REAR BOARD			
9	32110071	SPEAKER GRILL ASSY (46")			
9	32110072	SPEAKER GRILL ASSY (50")			
10	H420673	46" MIRROR METAL A			
10	NA11681	50" MIRROR METAL A			
11	H420682	46" MIRROR METAL B			
11	NA11691	50" MIRROR METAL B			
12	KR00271	46FX01B SCREEN ASSY			
12	KR00272	50GX10B SCREEN ASSY			
12	KR01471	50GX20B SCREEN ASSY			
12	KR01472	46GX01B SCREEN ASSY			
13	QD08771	46" DECO FRAME (GX)			
13	QD08771	46" DECO FRAME (FX)			
13	H311404	50" DECO FRAME (50GX10B)			
13	H311405	50" DECO FRAME (50GX20B)			
14	NT01401	50GX10B FRAME ASSY			
14	NT01402	50GX20B FRAME ASY			
14	NT01403	46GX01B FRAME ASSY			
14	NT01404	46FX01B FRAME ASY			
 15	DE01081	CRT 180DLB22(RED)			
 16	DE01084	CRT 180DLB22 (GREEN)			
 17	DE01083	CRT 180DLB22 (BLUE)			
18	KQ00823	DELTA 38 C-ELEMENT (RED)			
19	KQ00822	DELTA 38 C-ELEMENT (GREEN)			
20	KQ00821	DELTA 38 C-ELEMENT (BLUE)			

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		MISCELLANEOUS	E93F	3446473	HEATSINK H30 P10
#	UE06994	AP92R CONTROL B.ASY	E98F	MC00104	HEAT SINK P10 H45 19 A6063S-75
#015	H312101	DRIPPING TRAY	E99F	MC00104	HEAT SINK P10 H45 19 A6063S-75
#016	4520771	HEX HEAD TAPPING SCREW 4*18	E9A	MA00842	POWER HEAT SINK AP73B A1100P-H14
#110	H311511	CONTROL PANEL BOX	E9DW	4269926	WASHER PL-1252
#111	PH06854	TERMINAL HOLDER ASSY	E9QF	MC00104	HEAT SINK P10 H45 19 A6063S-75
#121	PH06314	TERMINAL HOLDER AP9X/ZP9* PS	EAN	2974056S	3J CONNE SEH UL1007 L=160
#130	H311531	CONTROL DOOR	EB	2997977	1J MINI CONNE. L=910
#131	PH06754	DECO. PLATE AV AP92 PVC	EBG1	EF08271	CO-06B-B2R5-301
#135	3875771	LATCH 4T02 NYLON	EBG2	2966821	4J CONNE. L=300
#140	H311541	SELECT BUTTONS	ED94	EY00791	PJX-LEAD-PLUGPIN
#141	4519511	4X12 B TAPPING SCREW	ED95	EY00791	PJX-LEAD-PLUGPIN
#146	4519503	3X12 B TAPPING SCREW SWCH15A	ED99	EY00791	PJX-LEAD-PLUGPIN
#147	4159423	SCR NO 3X12 FL/FLT	EF91	FP00031R	FUSE HOLDER TP00351-51
#150	H311522	RC POWER LENS	EFC	2974086S	CONNE 4P L=160
#151	NA21011	SP PWB SUPPORT BRACKET	EFJ	2973897S	CONNE. 9P L=1000
#160C	3827878	INDOOR PLATE	EFS	2958151	CONNECTOR RE01X-X3239A901
#161	3813121	LEAD CLAMPER 2135 PA	EFT	EF05941	4P CONNECTOR (L=1000 N.C#2,3)
#163	3813121	LEAD CLAMPER 2135 PA	EGR1	EF08381	CO-05B-B2R5-301
#165	NA20931	SUB PWB SUPPORT BRACKET	EGR2	2966821	4J CONNE. L=300
#167	4520881	M3*8 SCREW WITH WASHER	EPP	2901351	3J MINI CONNE.L=300
#170	4517512	3*16 T-NE WITH WASHER SWCH16A	ESL	2993567	CONN. W/WIRE MINI 5J (L1500) W/FASTON
#171	4329271	WASHER (F) C2720R	ESL	EF05933	CO-05C-F5R0-152#345NC (46")
#172	4522901	6 NUT (F) BSBM	ESR	2993557	CONN. W/WIRE MINI 4J (L1500) W/FASTON
#175	H810211	SCREW-M4X14 P.H CROSS RECESS	ESR	EF05953	CO-04C-F5R0-152#34NC (46")
#178	4517511	SCREW 3X14 TAPPING W/WASHER	EST	2908776	7J PH CONNE L=160
#180	61010047	WASHER	ETU1	2979173	PLUG WITH COAXIAL CABLE
#222	4524911	HEX FLANGE HEAD B T-S 4*12 SWCH16A	ETU2	2979172	MINI PLUG WITH COAXIAL CABLE
#240	3876031	WIRE CLAMP W 13-20 PA	EVMC	EF01202	3P EH CONNECTOR (L=820)
#240	4159411	SCREW 3*8 KNURLED TAPPING	EY1	2908764	CONNE. 6P L=750
#250	3744172	CLAMP 20	EY2	2973744S	4J CONNE. L=750
#310	4527821	BOLT M6X20 WITH WASHER SWRM12A	 G701	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
#330	4520772	HEX HEAD TAPPING SCREW 4*14	 G801	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
#350	81481100	DRYWALL SCREW NO.8X1"	 G802	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
#392A	H810181	SCREW 4.1X16 CROSS HEAD WOOD	 G831	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
#394	81180138	NO. 8X13/8 H.H.S.	 G832	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
#428	3727972	POWER CORD HANGER	 G861	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
E002	2169513	COIL LX-ZCAT2032	 G862	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
E10B	2776543	MAG-VM(C-C)2/4P1.8UH	 GF01	CJ00072R	SEMICONDUCTOR 252FB-K2M
E10G	2776543	MAG-VM(C-C)2/4P1.8UH	JY01	ES00182	JACK 3S-14US AP92
E10R	2776543	MAG-VM(C-C)2/4P1.8UH	JZ01	ER00121	2L4P LEVER TERMINAL
 E12B	BY01101	DY-V80-7.0SS3.0L AKME	N003	3700342	WIRE CLAMP V0
 E12G	BY01101	DY-V80-7.0SS3.0L AKME	N004	3876031	WIRE CLAMP W 13-20 PA
 E12R	BY01101	DY-V80-7.0SS3.0L AKME	N005	3728273	PURSE LOCK (8)
E201	FQ00021	BATTERY(2-AA)	N006	3785502	V LOCK 11.5
E301	HL00728	RCT CLU-436UI	N007	3785522	V LOCK 20
E3B	2958351	CONN. W/WIRE MINI 2J	N1	MD03052	SHIELD CASE
E3G	2958351	CONN. W/WIRE MINI 2J	N160	3733243	NP3 LEAD CLAMP (V0)
E3R	2958351	CONN. W/WIRE MINI 2J	N2	MD03062	SHIELD PLATE
 E801	EY00941	CRT-SOCKET	N200B	KQ00811	CPD38 LENS AB ASS'Y
 E831	EY00941	CRT-SOCKET	N200G	KQ00811	CPD38 LENS AB ASS'Y
 E861	EY00941	CRT-SOCKET	N200R	KQ00811	CPD38 LENS AB ASS'Y
 E901	EV00901	COD-AP9X-B-160	N201	QR43642	AP92R INST.BOOK
E92F	3446473	HEATSINK H30 P10	N202	H462163	PTV WARRANTY CARD
E92N	4520883	3*12 SCREW WITH WASHER	N203	H462673	V-CHIP GUIDE PTV
			N401	3442022	SOUND HEAT SINK 2CH

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
N426B	3875441	LEAD CLAMPER	PR	2903544	4P PLUG PIN WITH BASE
N426G	3875441	LEAD CLAMPER	PSD1	ED01471U	PLUG 07BP1R2HUTWGP-A1
N426R	3875441	LEAD CLAMPER	PSD1	ED01491U	CONNECTOR 07BS1R2VUTWGX-A1
N601	3442081	HEAT SINK (V) A2	PSD2	ED01472U	PLUG 11BP1R2HUTWGP-A1
N701	MA00851	HEAT SINK AP73 (H)A1100P-H14	PSD2	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1
N703	NT00981	FBT HOLDER	PSD3	ED01472U	PLUG 11BP1R2HUTWGP-A1
N704	4159425	3X16 TAPPING WITH WASHER	PSD3	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1
N711	NA03111	CHASSIS PWB BRACKET	PSD4	ED01473U	PLUG 13BP1R2HUTWGP-A1
N715	NA20921	CHASSIS PWB BKT	PSD4	ED01493U	CONNECTOR 13BS1R2VUTWGX-A1
N721	4491082	CHASSIS PWB BKT FB2 SECC20/20E	PSD5	ED01471U	PLUG 07BP1R2HUTWGP-A1
N725	NA03131	CHASSIS PWB BRACKET	PSD5	ED01491U	CONNECTOR 07BS1R2VUTWGX-A1
N730	4159427	3X10 SCREW WITH WASHER	PSI1	ED00515	CP-TAC-L18P-A1
N740	4531761	SCREEN 3X16 TAPPING W/S-WASHER	PSI1	ED00575	CP-TAC-L18X-A1
N745	2781697	YC20A INSULATION WASHER	PSI2	ED00515	CP-TAC-L18P-A1
N801	3763751	SK BINDER	PSI2	ED00575	CP-TAC-L18X-A1
N802	3446473	HEATSINK H30 P10	PST	2675286	PH CONNE. 7P
N901	3782714	PCB SUPPORT 10S NYLON	PSU1	ED00516	CP-TAC-L20P-A1
NE01	3446473	HEATSINK H30 P10	PSU1	ED00576	CP-TAC-L20X-A1
NK01	3446473	HEATSINK H30 P10	PTS	2663821	2P SUB MINI PLUG PIN
NK02	3446473	HEATSINK H30 P10	PVM1	ED00506	CP-TAC-L10P-A1
NK05	MC00192	CONV.HEAT SINK A6063S-T5	PVM1	ED00566	CP-TAC-L10X-A1
NK06	4520885	3*16 SCREW WITH WASHER	PVM2	ED00506	CP-TAC-L10P-A1
NK08	NA20781	CONV. IC SUPPORT BRACKET	PVM2	ED00566	CP-TAC-L10X-A1
NPF2	3763751	SK BINDER	PVMC	2902262	PLUG PIN SUB MINI 3P
P001	2663821	2P SUB MINI PLUG PIN	PY1	2675285	PIN POST (PH 6P)
P801	2961141	2P PLUG PIN WITH BASE	PY1	2959055	CONNECTOR-6P(PH)
P802	2661756	1P PLUG PIN WITH BASE	PY2	2902263	PLUG PIN SUB MINI 4P
P831	2961141	2P PLUG PIN WITH BASE	△ U401	2412921	SPEAKER 160DG (50")
P832	2661756	1P PLUG PIN WITH BASE	△ U401	GK00481	SP-12CMM EAST12PL17A (46")
P861	2961141	2P PLUG PIN WITH BASE	△ U402	2412921	SPEAKER 160DG (50")
P862	2661756	1P PLUG PIN WITH BASE	△ U402	GK00481	SP-12CMM EAST12PL17A (46")
△ P901	ED01851	PLUG 5289-2A	W811	2692464	CO-01C-N0R0-821FOCUS
PB	2661756	1P PLUG PIN WITH BASE	W812	EK00062	WIRE (PROCESSED) FOR SCREEN
PCB	2903544	4P PLUG PIN WITH BASE	W841	2692463	CONNECTOR FOR FOCUS
PCB	ED00512	CP-TAC-L15P-A1	W842	EK00061	WIRE (PROCESSED)
PCB	ED00572	CP-TAC-L15X-A1	W871	2692463	CONNECTOR FOR FOCUS
PCC	ED00516	CP-TAC-L20P-A1	W872	EK00061	WIRE (PROCESSED)
PCC	ED00576	CP-TAC-L20X-A1	W901	2964863	2J-CONNECTOR
PCD	ED00516	CP-TAC-L20P-A1	X001	2168831	CRYSTAL CSA12.0MTZ
PCD	ED00576	CP-TAC-L20X-A1	X100	BP00771	OSXR032X121TA252E00
PCG	2903544	4P PLUG PIN WITH BASE	X501	2791501	CRYSTAL HC-49/U
PCR	2903544	4P PLUG PIN WITH BASE	X502	2168771	X'TAL CSB503F30
PCX	ED00512	CP-TAC-L15P-A1			
PCX	ED00572	CP-TAC-L15X-A1			
PDC	ED00565	CP-TAC-L09X-A1			
PDG	ED00572	CP-TAC-L15X-A1			
PFC	2902263	PLUG PIN SUB MINI 4P			
PFJ	2902248	PLUG PIN SUB MINI9P			
PFJ	2902268	PLUG PIN SUB MINI 9P			
PFT	ED01596U	PLUG CP-04BP5R0VU-TBL#2,3N			
PL	2903545	5P PLUG PIN WITH BASE			
PMB	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N			
PMG	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N			
PMR	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N			
PP	2903543	3P PLUG PIN WITH BASE			
PP31	2661751	2P PLUG PIN WITH BASE			

HITACHI

HITACHI

SERVICE MANUAL

NTSC

AP92 Chassis

PA

No. 0114

50GX49B

R/C: CLU-435UI

CONTENTS

SAFETY PRECAUTIONS	3
SERVICING PRECAUTIONS	6
TECHNICAL CAUTIONS	10
SPECIFICATIONS	11
CIRCUIT PROTECTION	11
GENERAL INFORMATION	12
CUSTOMIZED PICTURE AND SOUND ADJUSTMENTS	13
CAUTIONS WHEN CONNECTING/DISCONNECTING THE HV CONNECTOR	16
SERVICE ADJUSTMENTS	17
TROUBLESHOOTING	31
PROTECTION CIRCUIT BLOCK DIAGRAM	38
BASIC CIRCUIT DIAGRAM	39
PRINTED CIRCUIT BOARDS	53
BLOCK DIAGRAM	56
WIRING DIAGRAM	57
EXPLODED VIEW	61
REPLACEMENT PARTS LIST	62

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 $\triangle$ 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

APRIL 1999

HHEA-MANUFACTURING DIVISION

SAFETY NOTICE

USE ISOLATION TRANSFORMER WHEN SERVICING

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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.

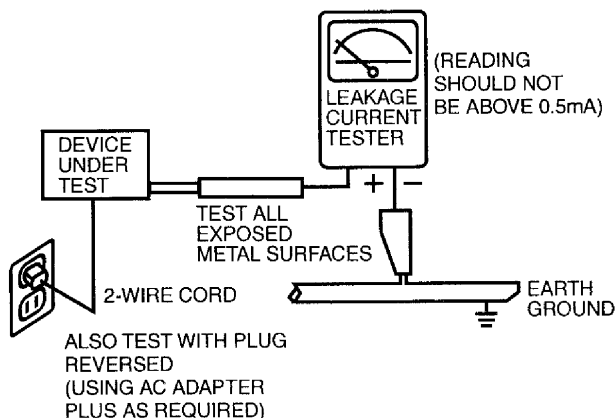
- a. Be sure that no built-in protective devices are defective and/or have been deleted during servicing.

(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 milliamps. Reverse the instrument power cord plug in the outlet and repeat test.

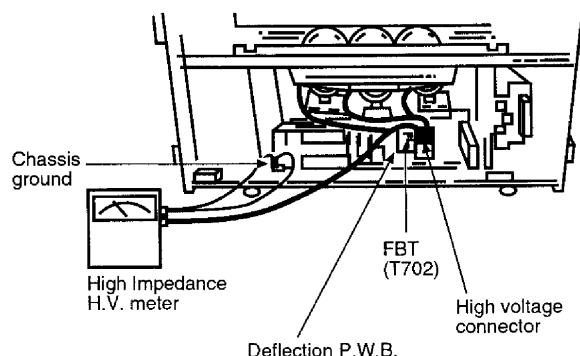


AC Leakage Test

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 with 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 **31.5 kV**. In case any component having influence on high voltage is replaced, confirm that the high voltage with maximum contrast is lower than **31.5 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.

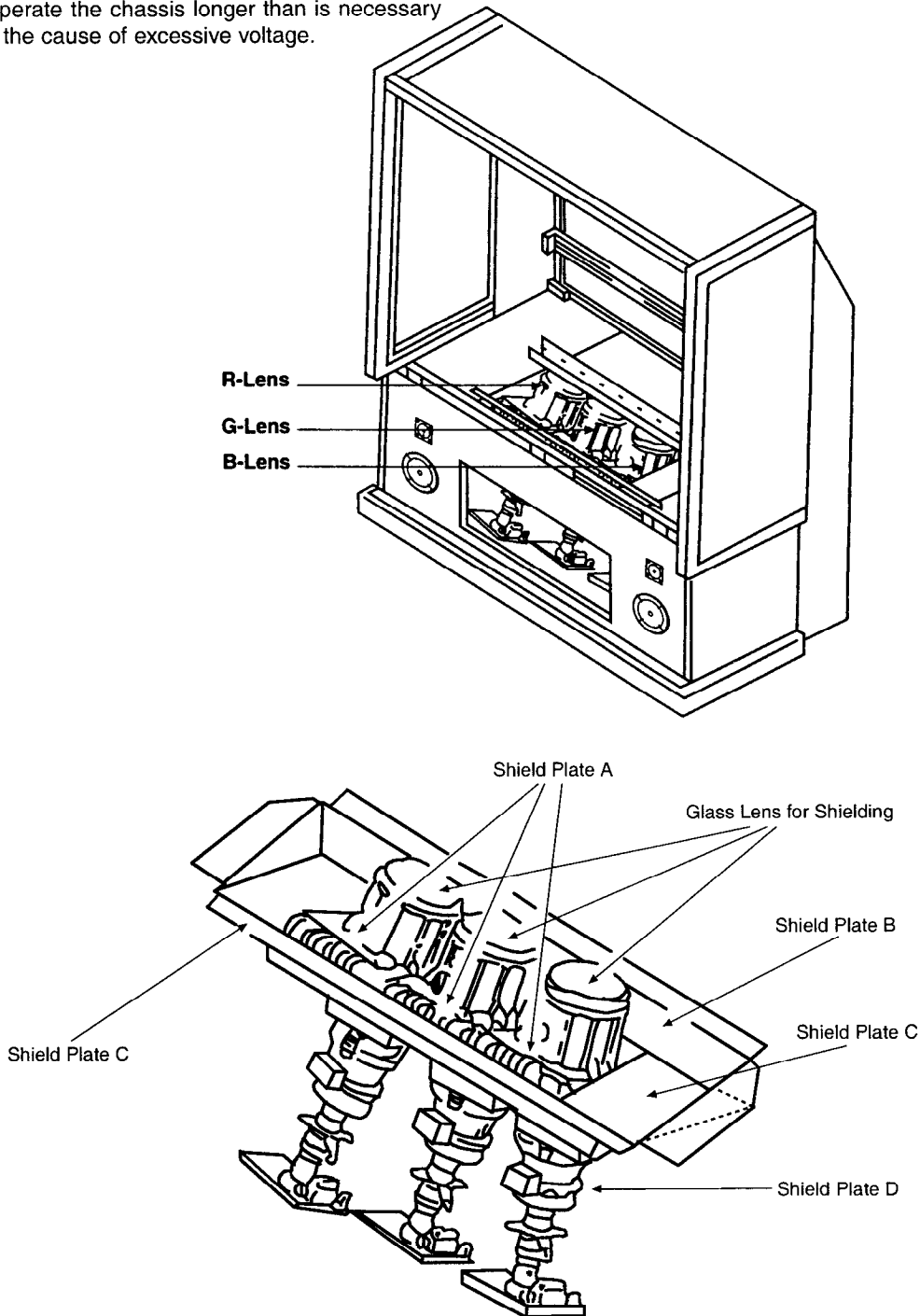
For continued X-radiation protection, the replacement tube must be the same type as the original, Hitachi approved type.

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.



Detailing X-radiation shield

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-plate, 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 Ω 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 heat-sinks 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.)

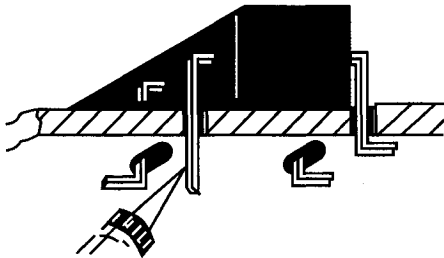
General Soldering Guidelines

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 Soldering 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.

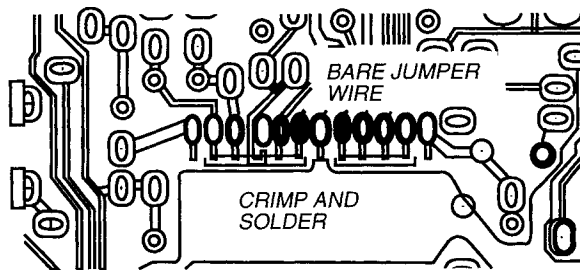
In Critical Copper Pattern Areas

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.

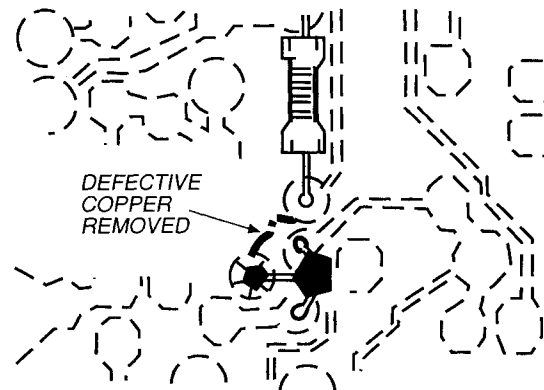


Install Jumper Wire and Solder

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.

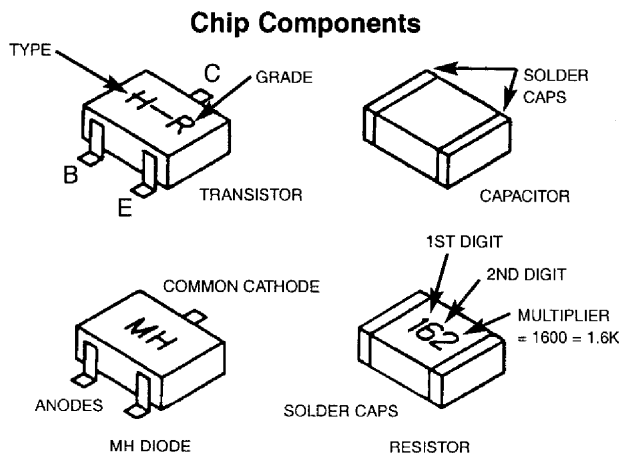
Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

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.

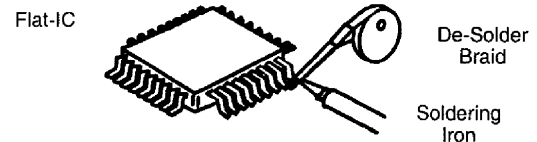
Chip Component Installation

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

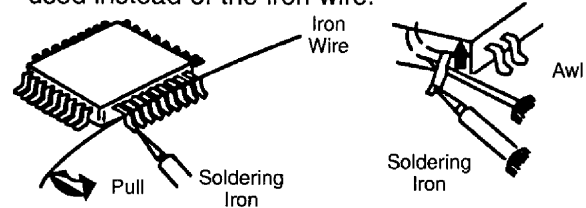


How to Replace Flat-IC —Required Tools—

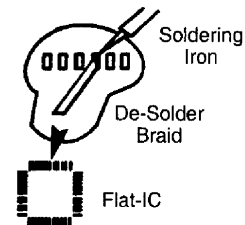
- Soldering iron
 - iron wire or small awl
 - De-solder braids
 - Magnifier
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



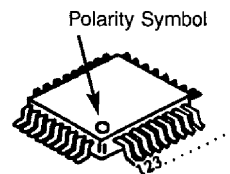
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



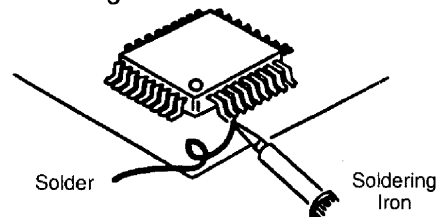
3. Remove the solder from all of the pads of the Flat-IC by using a de-solder braid.



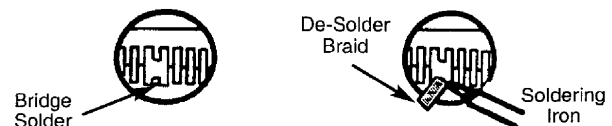
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



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.

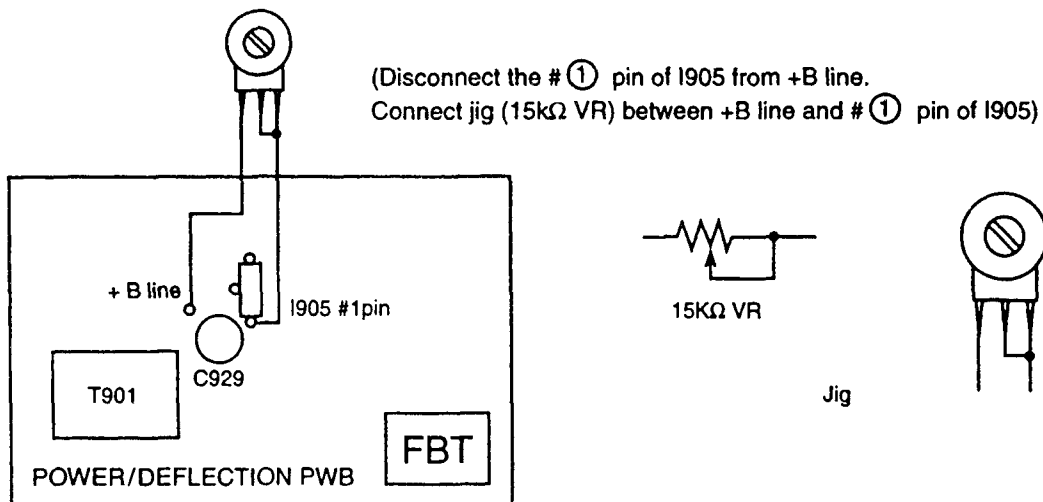
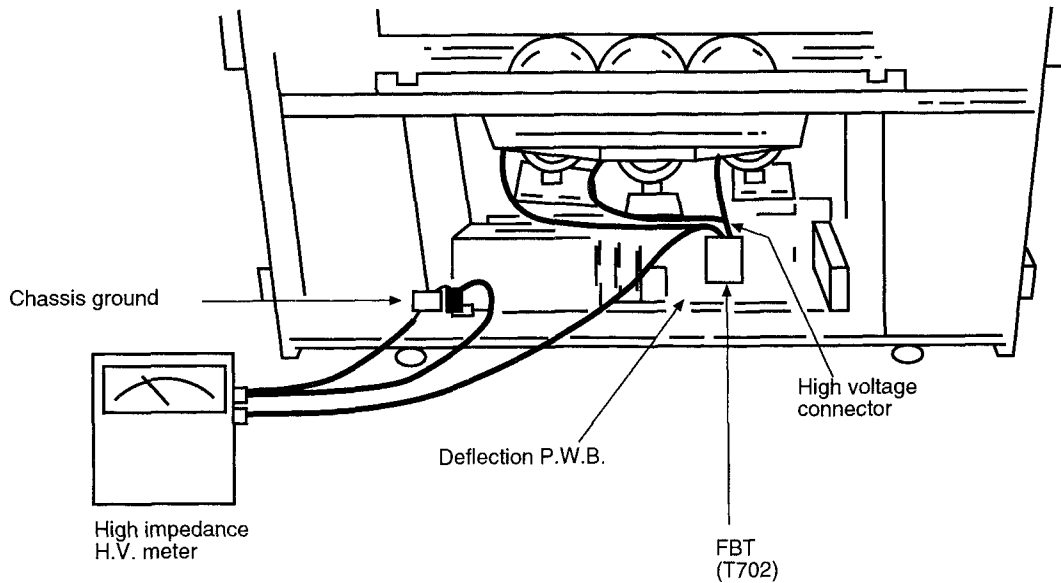


Fig. 2. Deflection/Power P.C.B.

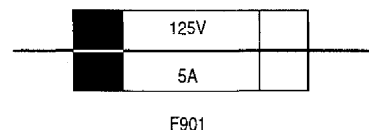
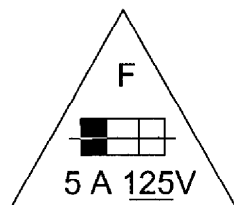
SPECIFICATIONS

Model:	50GX49B		Audio Input:	470 mVrms, 47 k Ohm	
Cathode-Ray Tube:	R=180DLB22R G=180DLB22G B=180DLB22B		Stereo Audio Output:	470 mVrms, 1 k Ohm	
Power Input:	120 volts AC, 60 Hz		Audio Output Power:	Front – 12 watts at 10% distortion, 8 ohm Impedance Max output – 24 watts	
Power Consumption:	184 Watts - Maximum 152 Watts - Operating		Anode Voltage:	35.0 ± 1.5kv (contrast, brightness=max)	
Antenna Impedance:	75 ohm Unbalanced VHF / UHF / CATV		Brightness:	205 cd/m ² (white screen)	
Receiving Channel:	<u>BAND</u>	<u>CH</u>	Speakers:	2 Woofers - 5 inch (12 cm) round	
	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		Dimension:	50GX49B	
Video Input:	1 Volt p-p, 75 Ohm 1 Volt p-p, 75 Ohm (Y) 0.7 Volt p-p, 75 Ohm, (Cb, Cr)		Height (in.)	51 7/8	
			Width (in.)	43 1/2	
			Depth (in.)	23 3/4	
			Weight (lbs.)	185	
Video Output:	1 Volt p-p, 75 ohm		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.	SP Matrix P.W.B.	
			Signal P.W.B.	Power/Deflection P.W.B.	
			Signal Sub P.W.B.	Control 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”

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

GENERAL INFORMATION

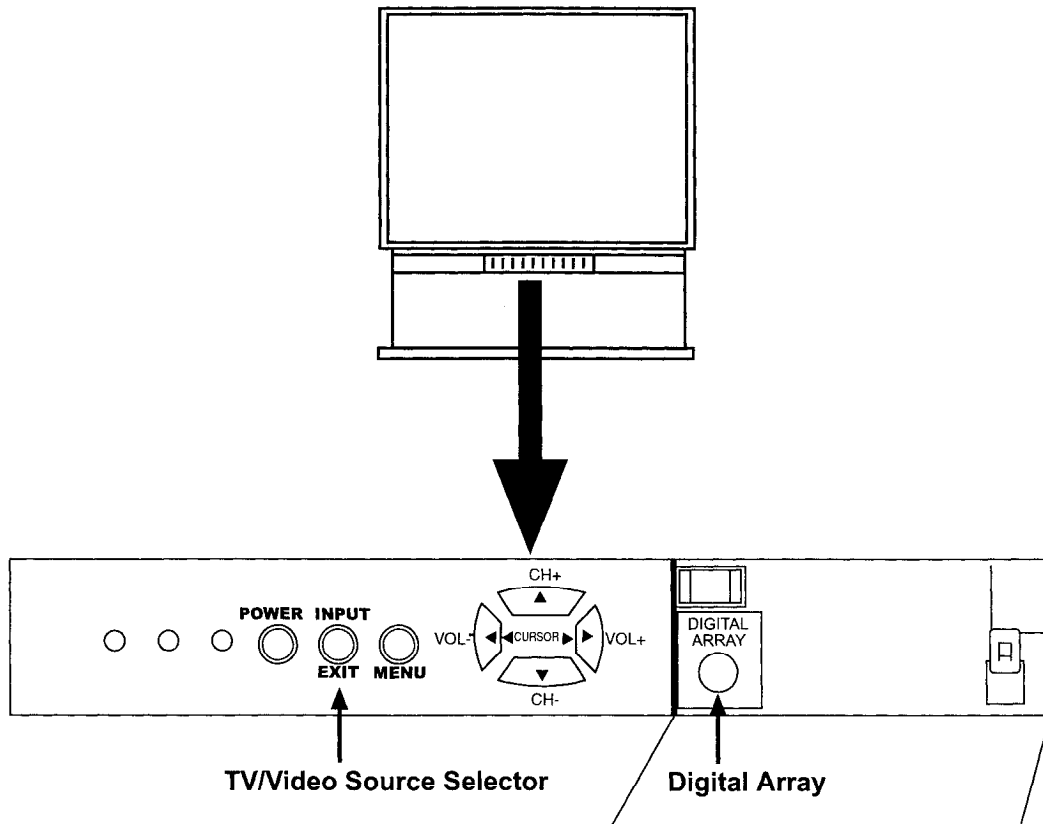


Fig. 3. Control Panel

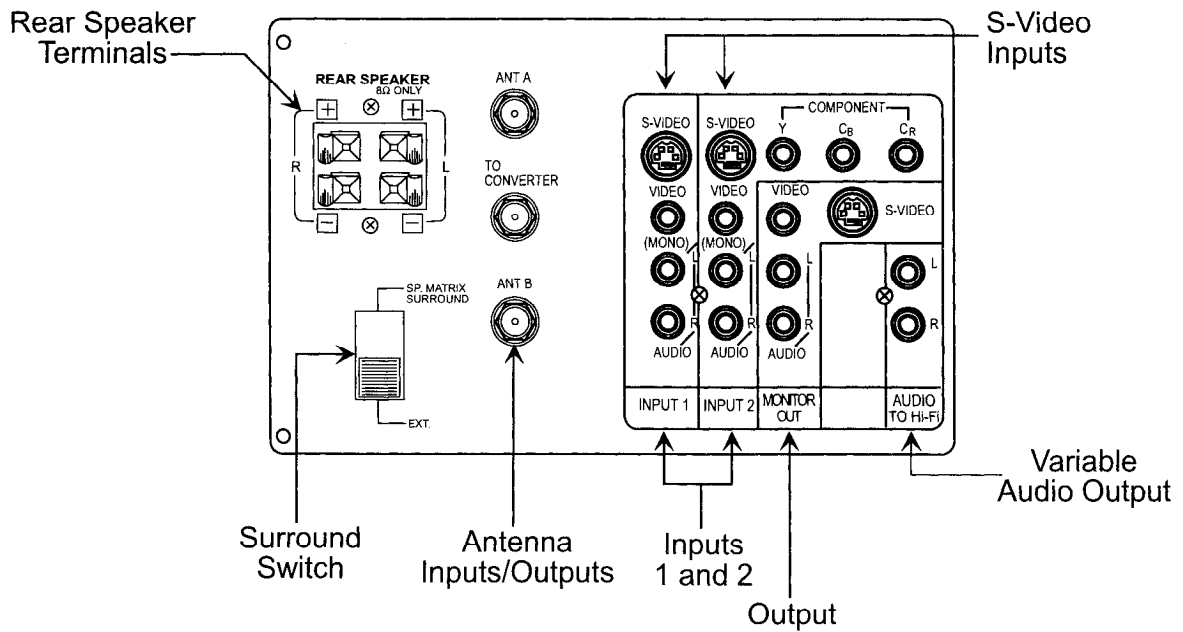
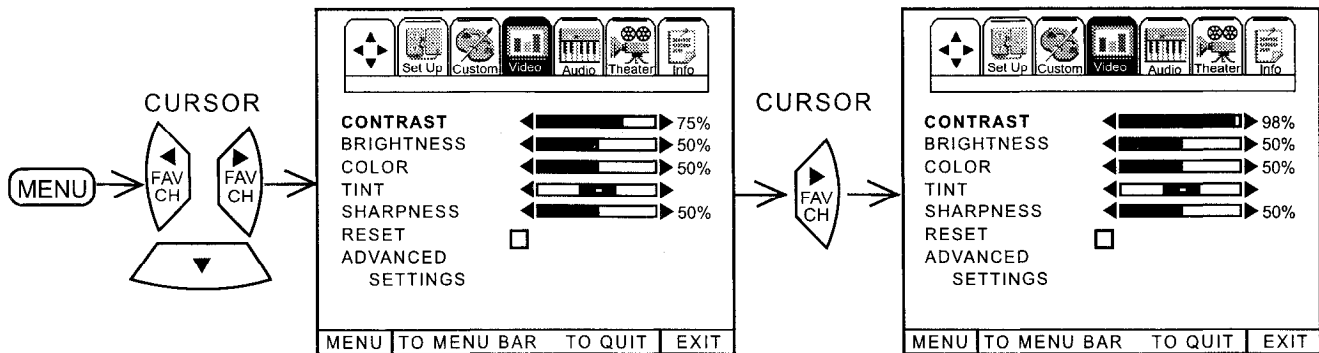


Fig. 4. Rear Connections Panel

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 (PIP).

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

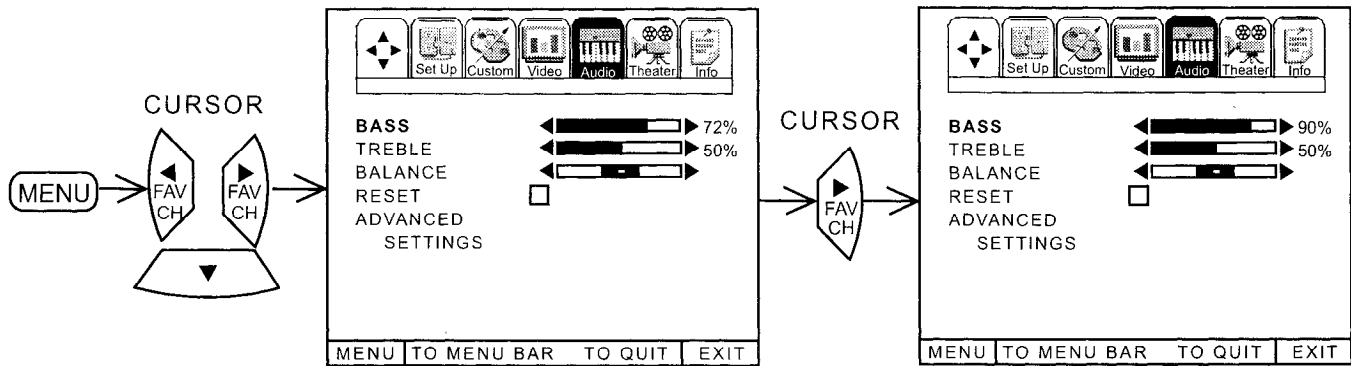
Use this function to adjust the amount of fine detail in the picture.

RESET

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



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.

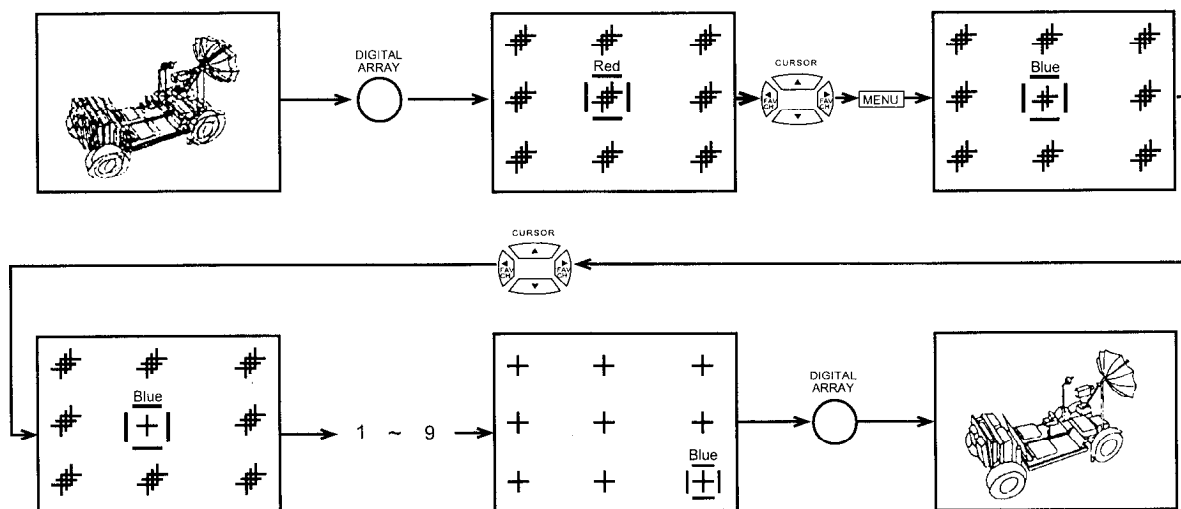
BALANCE

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

RESET

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

DIGITAL ARRAY



Use the number buttons to select which point to adjust: (1) - Upper Left, (2) - Upper Middle, (3) - Upper Right, (4) - Center Left, (5) - Center, (6) - Center Right, (7) - Bottom Left, (8) - Bottom Middle, (9) - Bottom Right.

Four lines surrounding a crosshatch indicate the point being adjusted. the color of these surrounding lines indicates the color being adjusted.

Press the CURSOR buttons to move the displayed color up, down, left or right.

Press MENU to change the color you want to adjust (Red or Blue).

Press the front panel DIGITAL ARRAY button or the remote control MOVE button when adjustment is done. This will save your adjustment into memory.

CAUTIONS WHEN CONNECTING / DISCONNECTING THE HV CONNECTOR

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

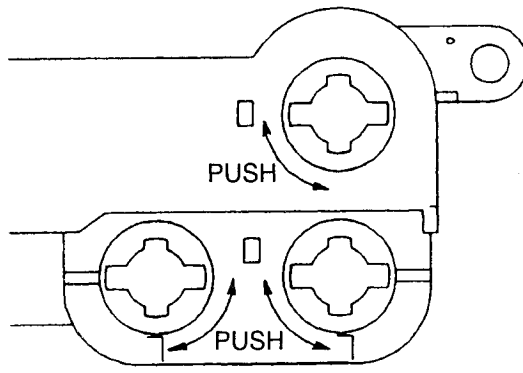
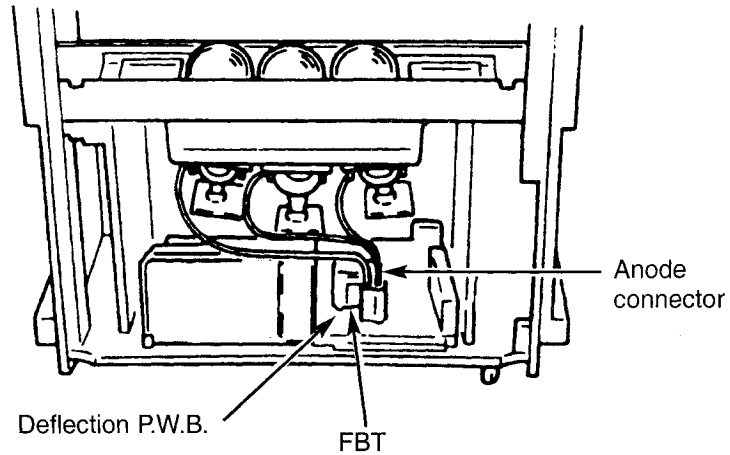


Fig. A

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)

3. Remove the connector slowly by pulling it away from the case.

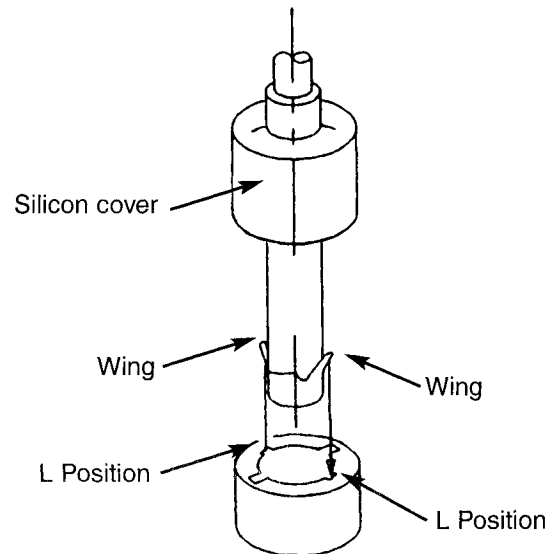


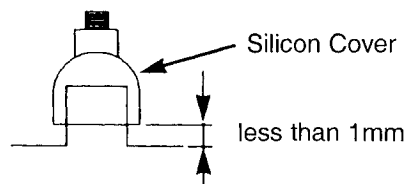
Fig. B

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.



SERVICE ADJUSTMENTS

1. ASSEMBLED P.W.B. ADJUSTMENT	.18
1-1. Memory Initialization	.18
1-2. Comb Filter Operation Check	.18
1-3. Sub Picture (PIP) Position Adjustment	.18
 2. FINAL ASSEMBLY ADJUSTMENT	.19
2-1. Focus Adjustment	.19
2-2. White Balance Adjustment	.20
2-3. Sub Brightness Adjustment	.20
2-4. Sub Picture White Balance Adjustment	.21
2-5. SP Matrix Check	.21
2-6. Raster Inclination Adjustment (Deflection Yoke)	.21
2-7. Raster Position Adjustment	.22
2-8. Vertical Size Adjustment (R630)	.22
2-9. Horizontal Size Adjustment (R603)	.23
2-10. Beam Alignment	.23
2-11. Beam Shape Adjustment	.23
2-12. Static Focus Adjustment	.24
2-13. Blue Defocus Adjustment	.24
2-14. Digital Convergence Adjustment	.24
2-14-1. Phase Adjustment (service mode)	.25
2-14-2. Raster Position Adjustment	.25
2-14-3. Convergence Point Adjustment	.26
2-14-4. Digital Convergence Remote Control	.26
 3. ADJUSTMENT POINT	.27
3-1. CRT (R)(G)(B), Cabinet Locations	.27
3-2. Main Chassis (Signal P.W.B.)	.28
3-3. Main Chassis (Power/Deflection P.W.B.)	.29
3-4. CPT (R)(G)(B), Focus Pack, Control P.W.B.	.30

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.

P01	AP92
SERVICE	0
SUB CONT	1F
SUB COLOR	1A
SUB TINT	40
SUB SHARP	38
EXT RGB BRIGHT	40
EXT RGB CONT	60
BRIGHTNESS	80
* SUB BRIGHT ADJ. □	
INITIAL SET □	

P02	AP92
G DRIVE GAIN	47
B DRIVE GAIN	3A
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

P03	AP92
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) Press 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.

P04	AP92
DC T.C. POINT	0
DC T.C. RATIO	0
DC T.C. LIMIT	0
B.E. P. LIMIT	0
B.E. P. POINT1	5
B.E. P. POINT2	0
B.L.S.	0
B.L.C.	1
B.S.G.	0
B.D.L.	0
BEARE	0
DC GAIN	6

P05	AP92
WPD L	1
HI BRT	1
OSACL	0
APACON PEAK FO	0
WHITE PEAK	0
D. ABL POINT	0
D. ABL GAIN	7
ABL POINT	5
ABL GAIN	6
(BLANK)	(00)
VAPINV	0B
VAPGAIN	5

P06	AP92
H POSI (CENT)	04 *
V POSI (CENT)	07 *
H DLY OSD	A
V POSI (CENT)	5
1 ST L AFTER V	29
H DLY VBI	2
VIDEO FIELD	1
CLAMP DELAY	34
INITIAL SET □	-

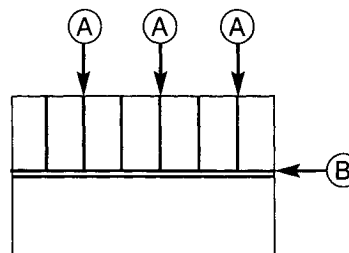
1.2 Comb filter operation check

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.

Adjustment procedure

- (1) Check that between the color bars there are line dots every second color bar as shown in the drawing.



Check (A) and (B) line dots.

LINE	DOTS
(A)	X
(B)	None

1.3 Sub-picture (PIP) 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

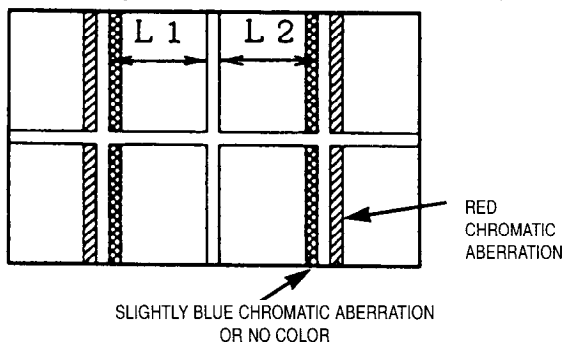
- (1) The set can face in any direction: west, east, north or south.
- (2) Receive the cross-hatch pattern signal.
CONTRAST : HALF
BRIGHTNESS : MINIMUM
- (3) The electrical focus adjustment should have been completed.
- (4) The centering DY inclination should have been adjusted.

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.

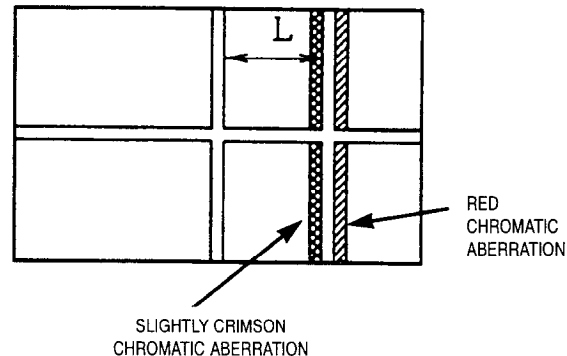
Lens	Change of color aberration
R lens	Red → Crimson
G lens	Blue → Red
B lens	Purple → Green

- (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.



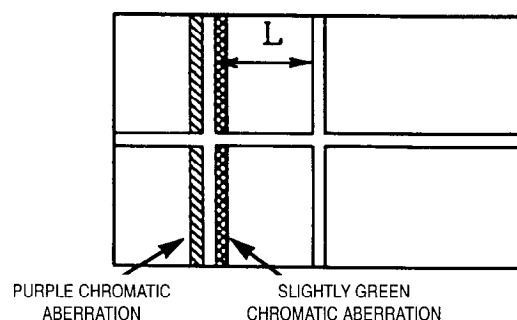
Set Size	Pitch between L1 & L2
50"	3.0 cross-hatch pitches

- (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.



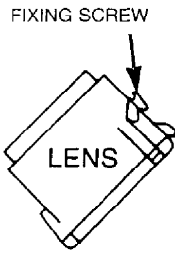
Set Size	Pitch between L
50"	3.0 cross-hatch pitches

- (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.

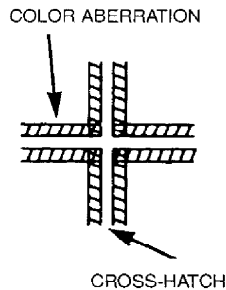


Set Size	Pitch between L
50"	3.0 cross-hatch pitches

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).

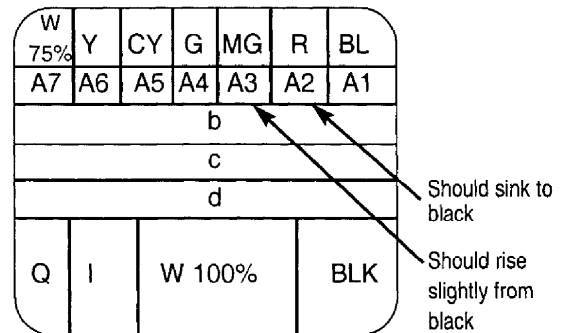
NOTE: Before adjusting the White Balance, check that the screen adjustment VRs are turned fully counterclockwise. Since the phosphorescent surface of the CRT is likely to be burned, be careful.

White balance = 9300° K ± 0MPCD
 Color coordinate = x 0.285
 y 0.295

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.



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 microprocessor 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.

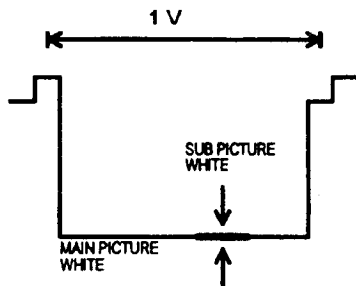
2.4 Sub picture white balance adjustment (R0M4, R0M6, R0M8)

Adjustment preparation

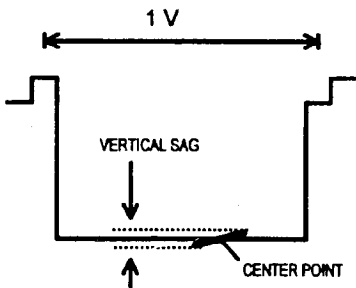
- (1) Start adjustment after power is ON for 20 minutes.
- (2) Use a white raster signal for adjustment.
- (3) Press "FREEZE" on the remote control and select "SINGLE" freeze mode to display the sub picture.
- (4) Set CONTRAST to Maximum, Other conditions to center.

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.

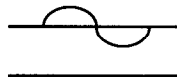


2.5 SP Matrix Check

Adjustment preparation

- (1) Input the following audio signals to the audio input of the VIDEO INPUT terminals, when checking SP Matrix:

① R ch: 435mVrms



② L ch: no signal

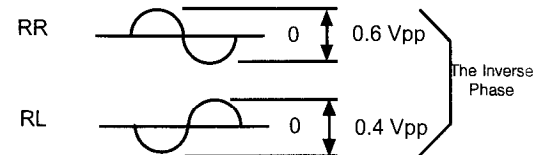
- Set the AUDIO ADVANCED SETTING for INT. SPEAKERS: ON, LOUDNESS: OFF and PERFECT VOLUME: OFF.
- Set the volume control of FRONT to 20 step.
- Set the BALANCE, TREBLE and BASS to Normal.

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

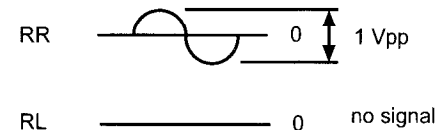
Adjustment procedure

- (1) Check that the waveforms shown below are obtained (Input signal ① and ②), at rear SP Terminal Out.

(a) SP MATRIX mode



(b) EXT mode



2.6 Raster Inclination adjustment (Deflection Yoke)

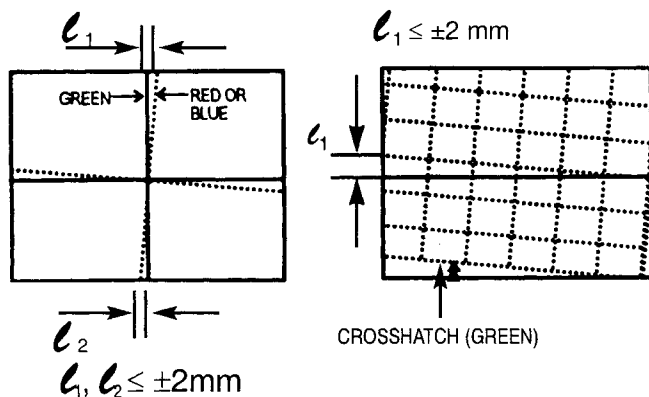
Adjustment preparation

- (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

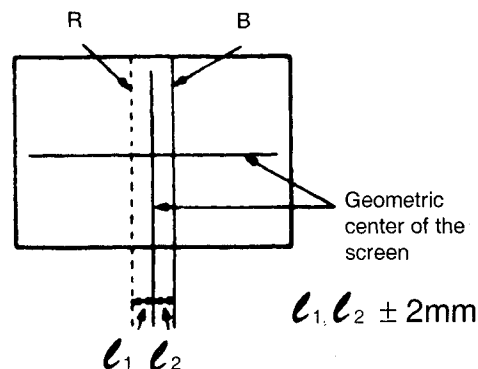
Adjustment preparation

- (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.

Size	l_1 (RED)	l_2 (BLUE)
50"	10mm	30mm



- 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

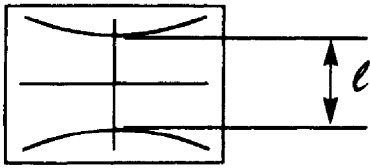
- (1) The set can face east or west.
- (2) Input the single cross test signal.
- (3) Set video conditions to factory reset.
- (4) The lens focus adjustment should have been completed.
- (5) The electric focus should have been coarse adjusted.
- (6) The digital convergence RAM should be cleared (uncorrected 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.

Size	l
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)

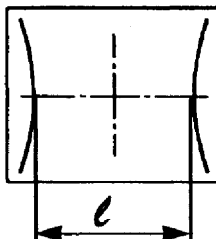
Adjustment preparation

- (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.

Size	e
50"	$950 \pm 5\text{mm}$



- 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

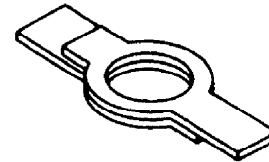
Adjustment preparation

- (1) Adjust at least 30 minutes after turning on power switch.
- (2) Raster inclination, centering, horizontal and vertical amplitudes and optical focus adjustment 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.

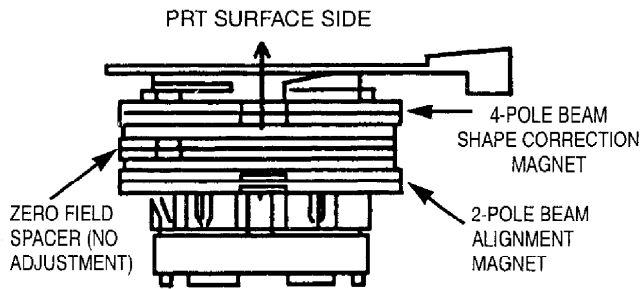
2.11 Beam shape adjustment

Adjustment preparation

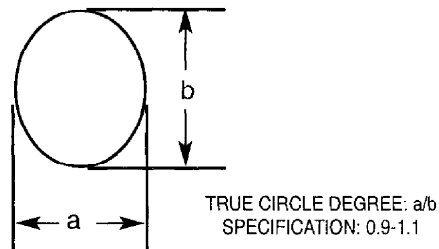
- (1) The beam alignment should have been completed.
- (2) The raster inclination, centering, horizontal/vertical amplitude and optical focus adjustments should have been completed.
- (3) Set video conditions to factory reset.
- (4) Input the dot signal.

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

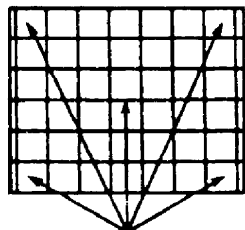
Adjustment preparation

- (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

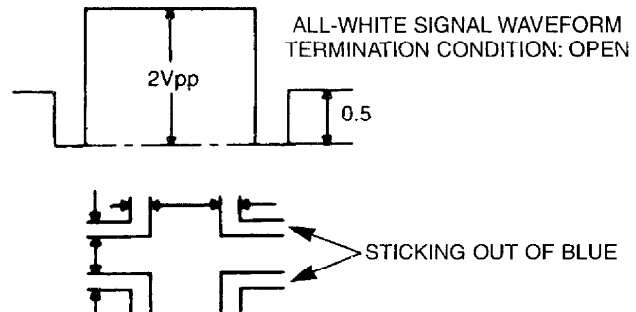
Adjustment Preparation

- (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 as shown in Table.
- (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.



Defocus sticking out specification

Screen Size	Blue sticking out
50"	1.0mm

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

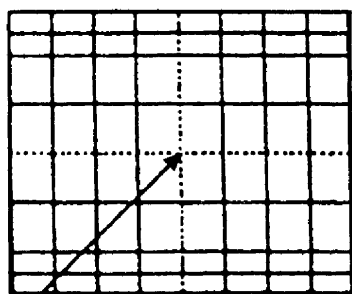
Cautions: Correct the brightness gauge and amplitude of the all-white signal periodically. The aperture angle of the brightness gauge is 1°. Use a cross-hatch pattern to check.

2.14 Digital convergence adjustment

Adjustment preparation

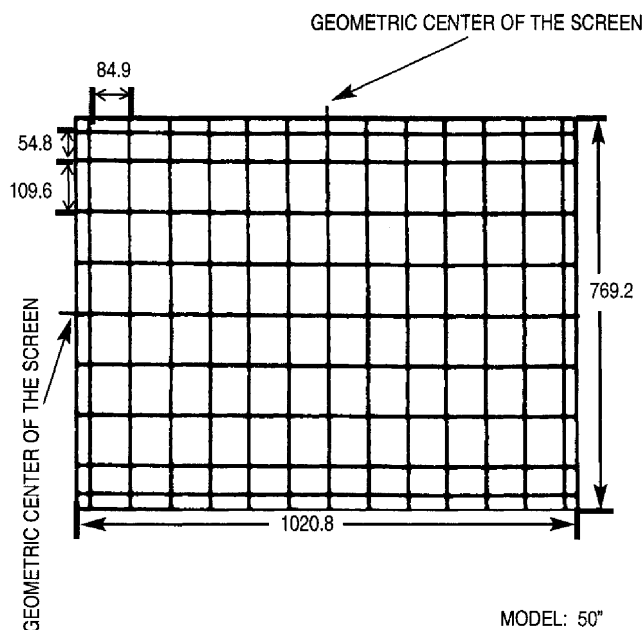
- (1) Receive an RF or video signal.
- (2) Set controls to factory preset.
- (3) Install jig screen on the set.
- (4) Note the center of the video pattern displayed. This is necessary to match dotted lines (adjustment point viewed) and actual point that is adjusted and displayed by the video signal.

- (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).



Adjustment Point

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)

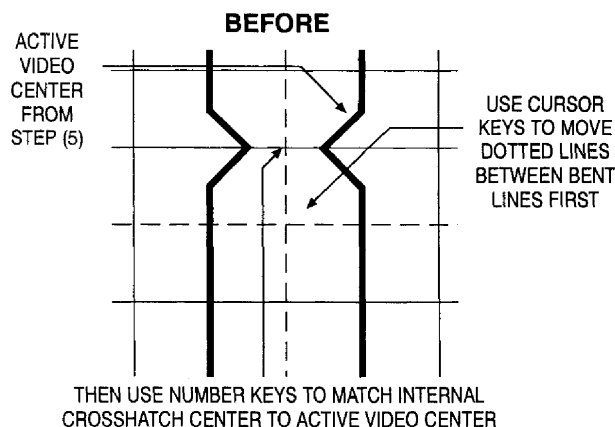
Adjustment preparation

- (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).

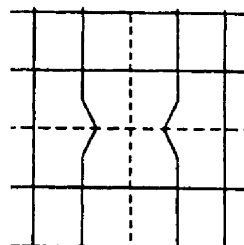
Adjustment procedure

- (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 EXIT 5 times to display external signal.
- (5) Identify center of active video, then press EXIT 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.



AFTER



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

NOTE: 3 x 3 mode can only be accessed at start of adjustment from clear data in ram adj. mode.

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.

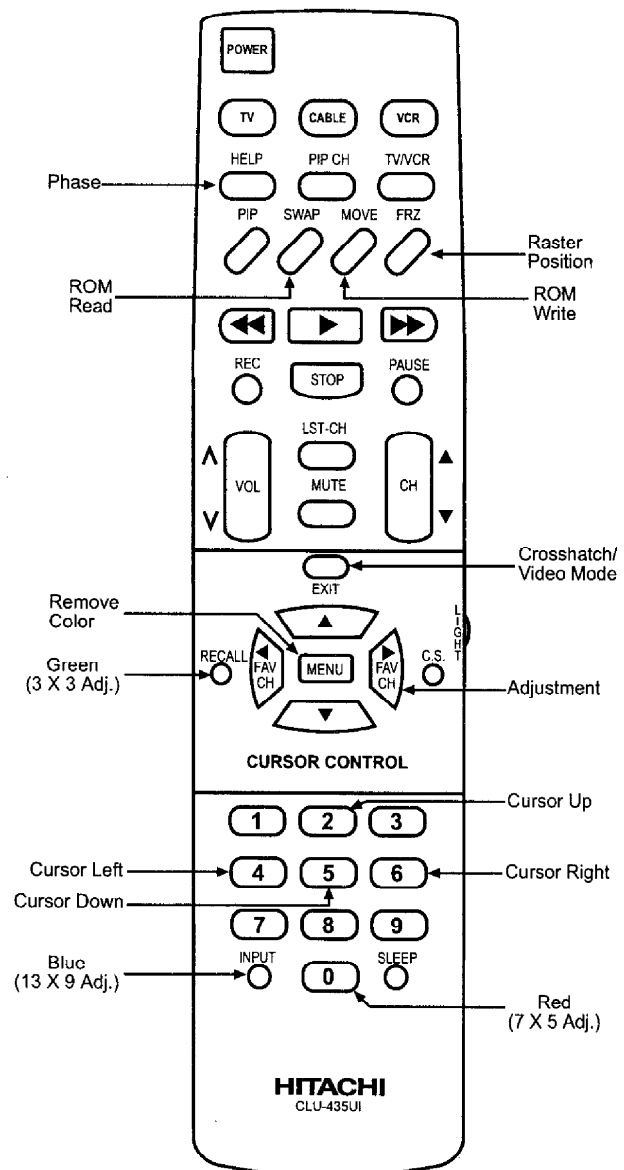
Adjustment procedure

- (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) 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.
- (5) DATA WRITE TO ROM will take approximately 20 seconds and no picture will be displayed.
- (6) Green dots will be displayed when operation is complete.
- (7) Press MUTE to return to convergence pattern, then confirm again convergence is acceptable.

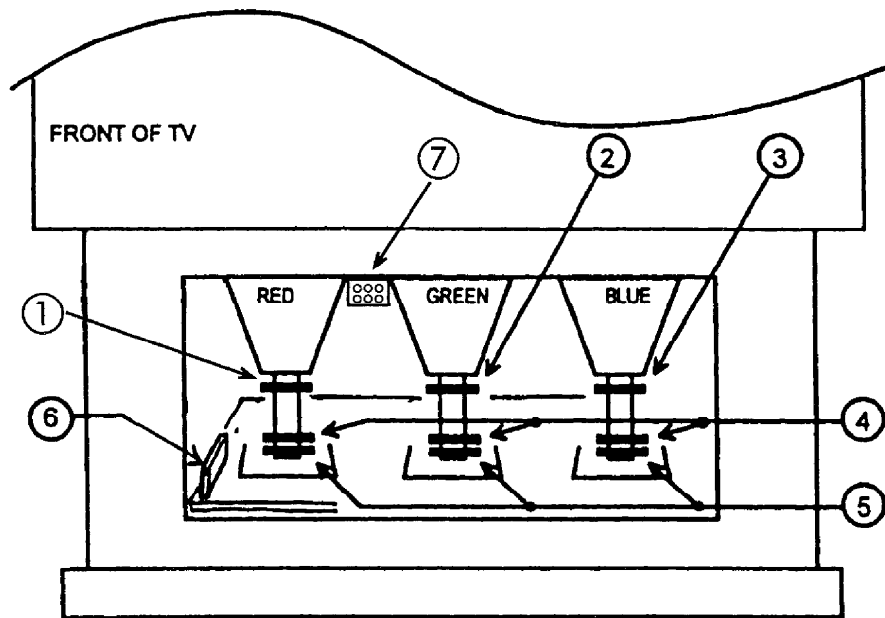
- Notes:**
- (1) Display only green for easier adjustment and match to jig screen. Press "MENU", THEN PRESS "RECALL".
 - (2) Write data to ROM after green adjustment. Once green has been confirmed to match jig screen, the jig screen can be removed. Do not readjust the green color after jig screen has 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.

2.14.4 Digital Convergence Remote Control

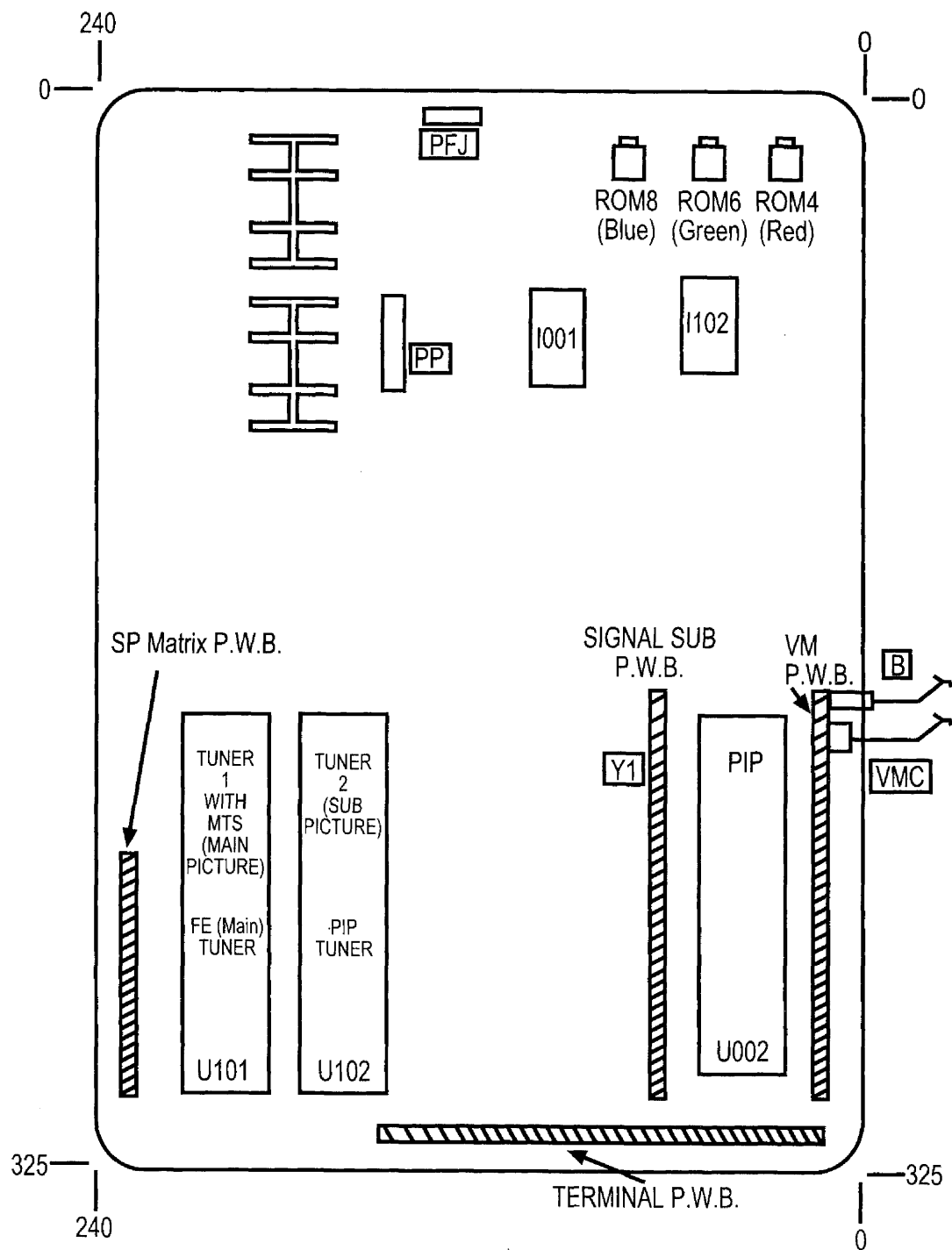


3. ADJUSTMENT POINT
3.1 CRT, cabinet locations



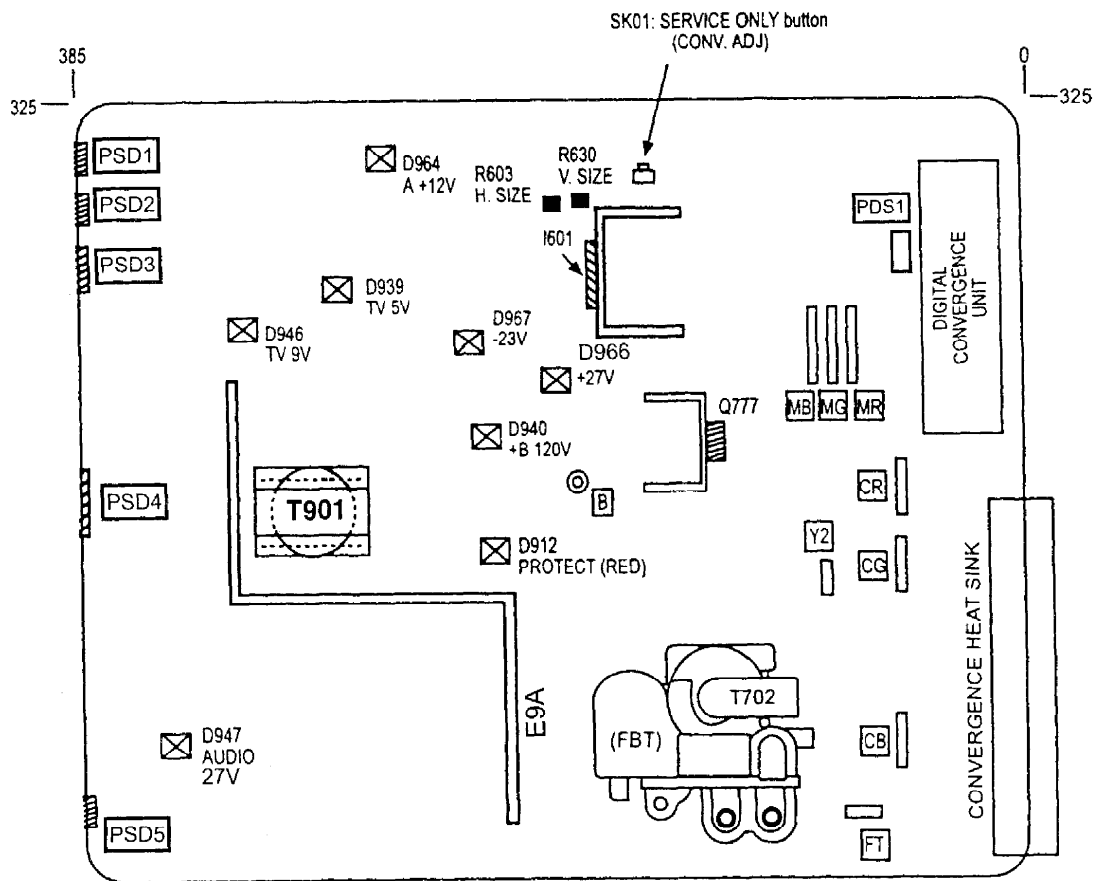
- 1. CENTERING MAGNET FOR RED PRT
- 2. CENTERING MAGNET FOR GREEN PRT
- 3. CENTERING MAGNET FOR BLUE PRT
- 4. 4-POLE MAGNET FOR BEAM FORM ADJUSTMENT
- 5. BEAM ALIGNMENT MAGNET
- 6. DIGITAL CONVERGENCE MODULE (On Power/Deflection Board)
- 7. FOCUS PACK (Top Adjustments for SCREEN, Bottom for FOCUS)

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



Rear View

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



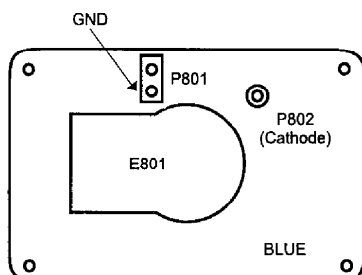
☒ SERVICE LED.



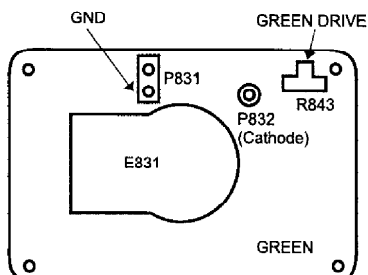
Rear View

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

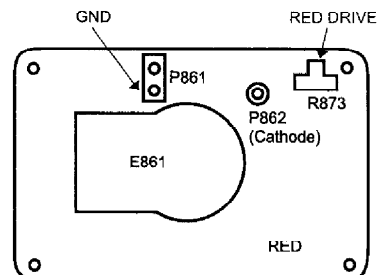
CPT (B)



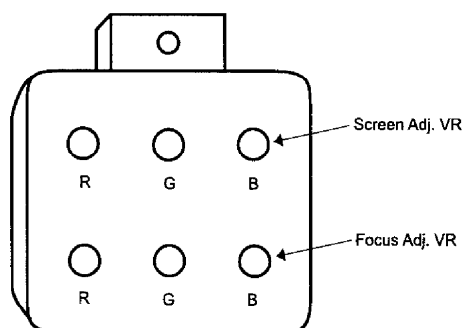
CPT (G)



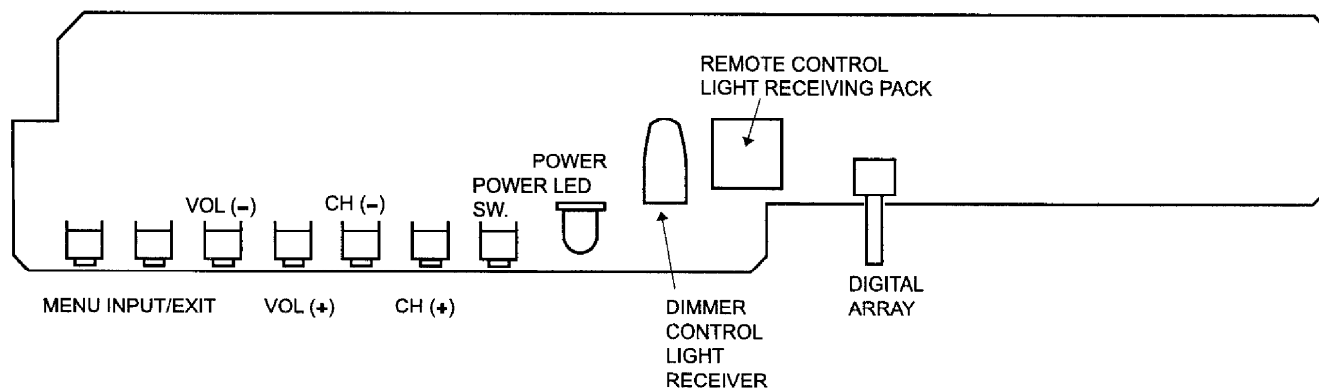
CPT (R)



Focus Pack (UFPK)

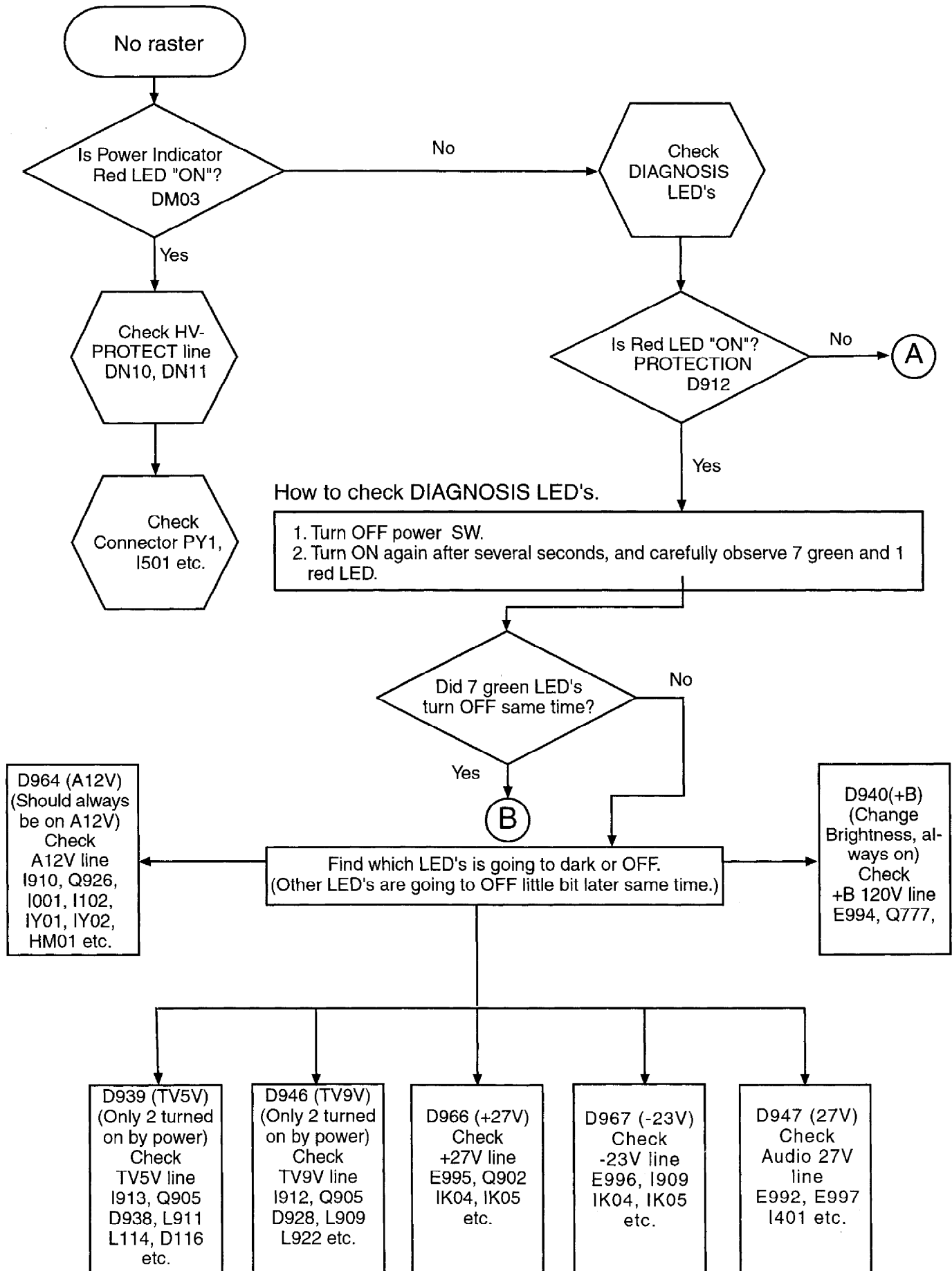


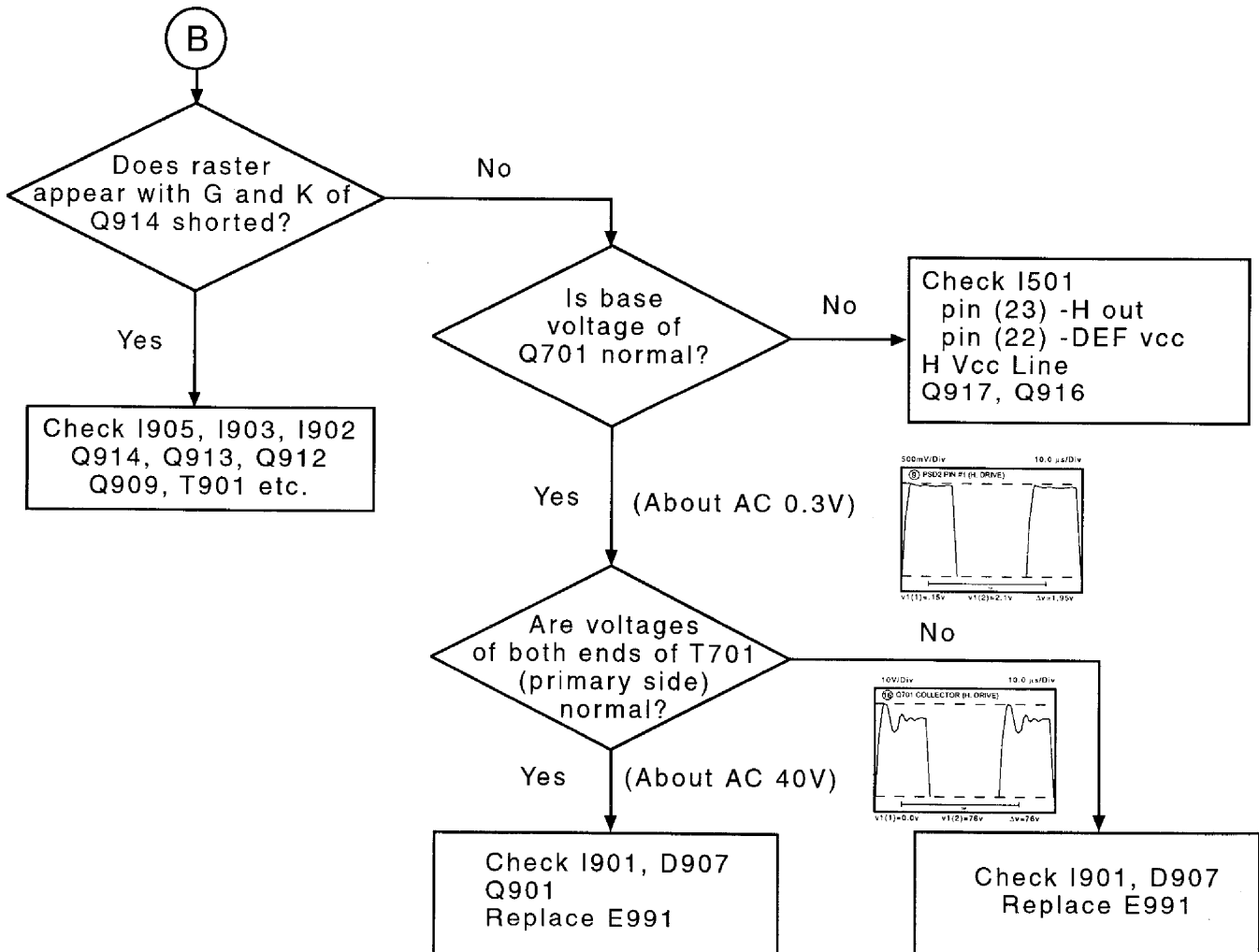
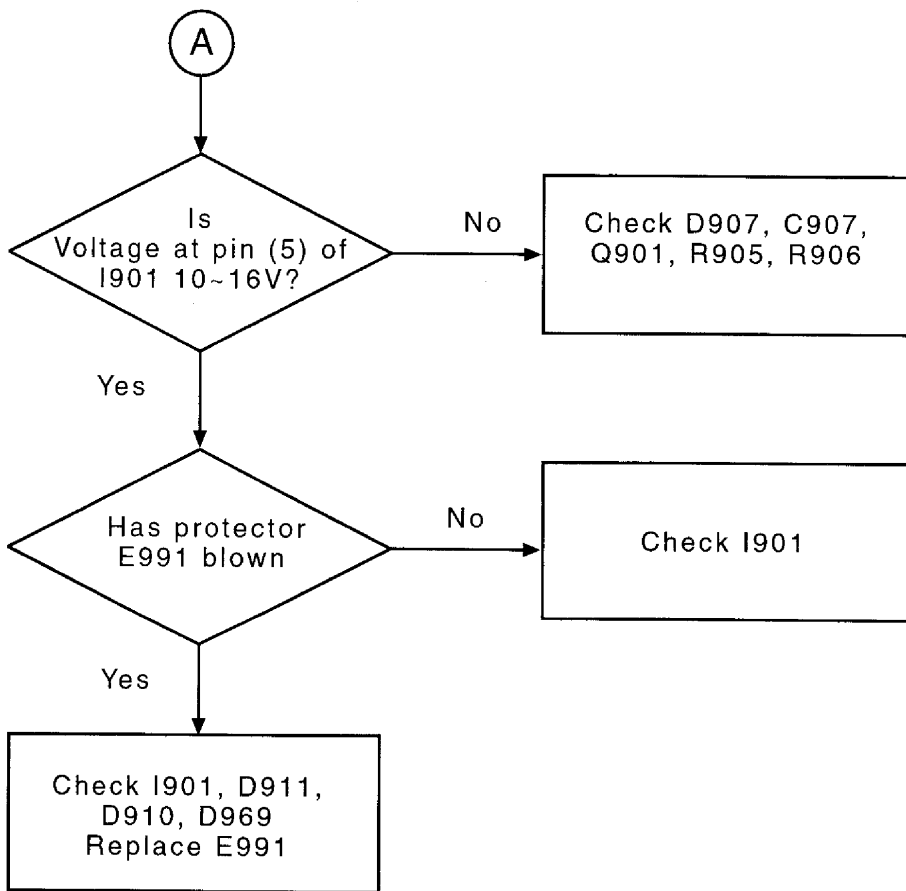
Control P.W.B.



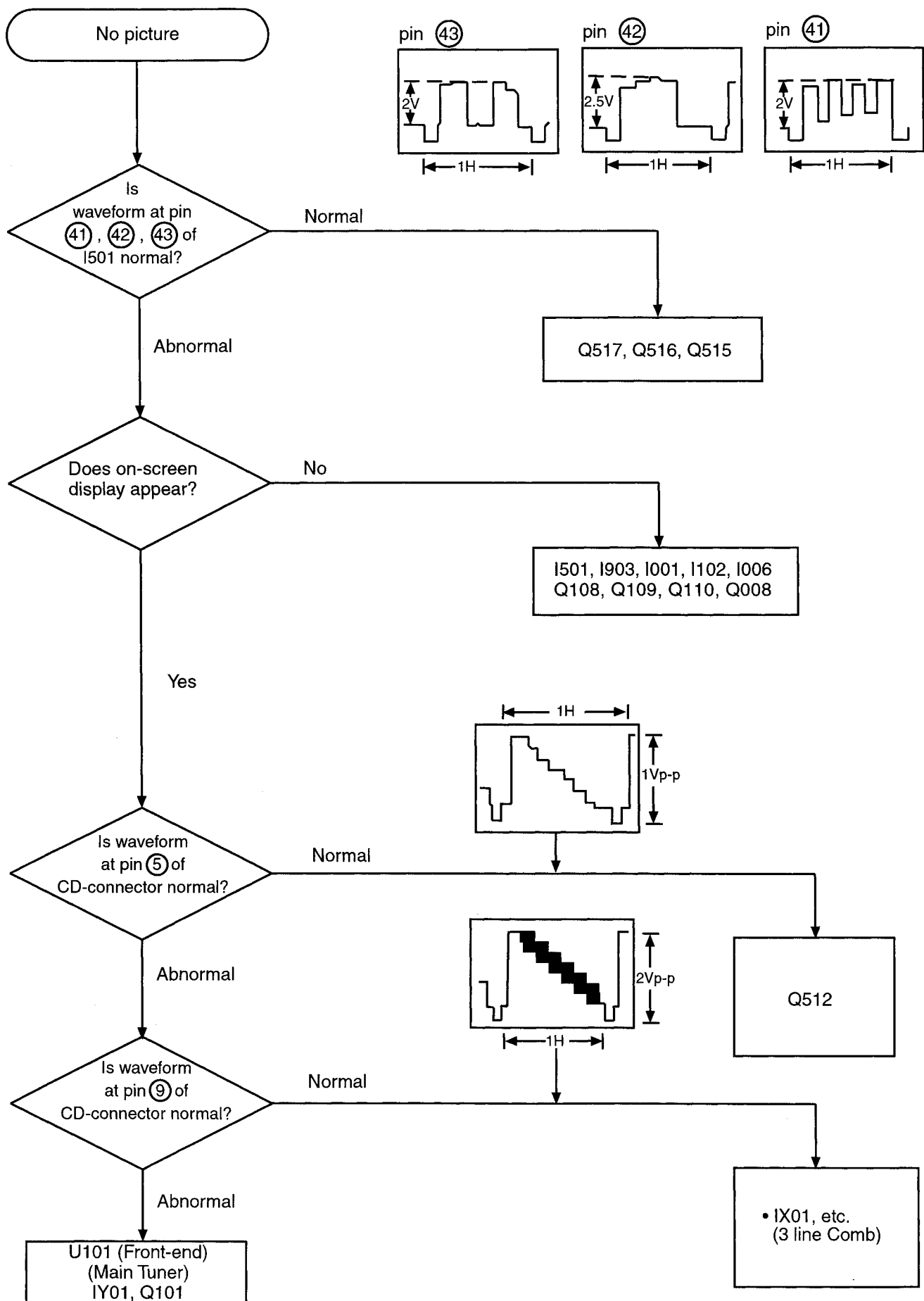
TROUBLESHOOTING

1. No Raster and No Power (REPAIR METHOD)



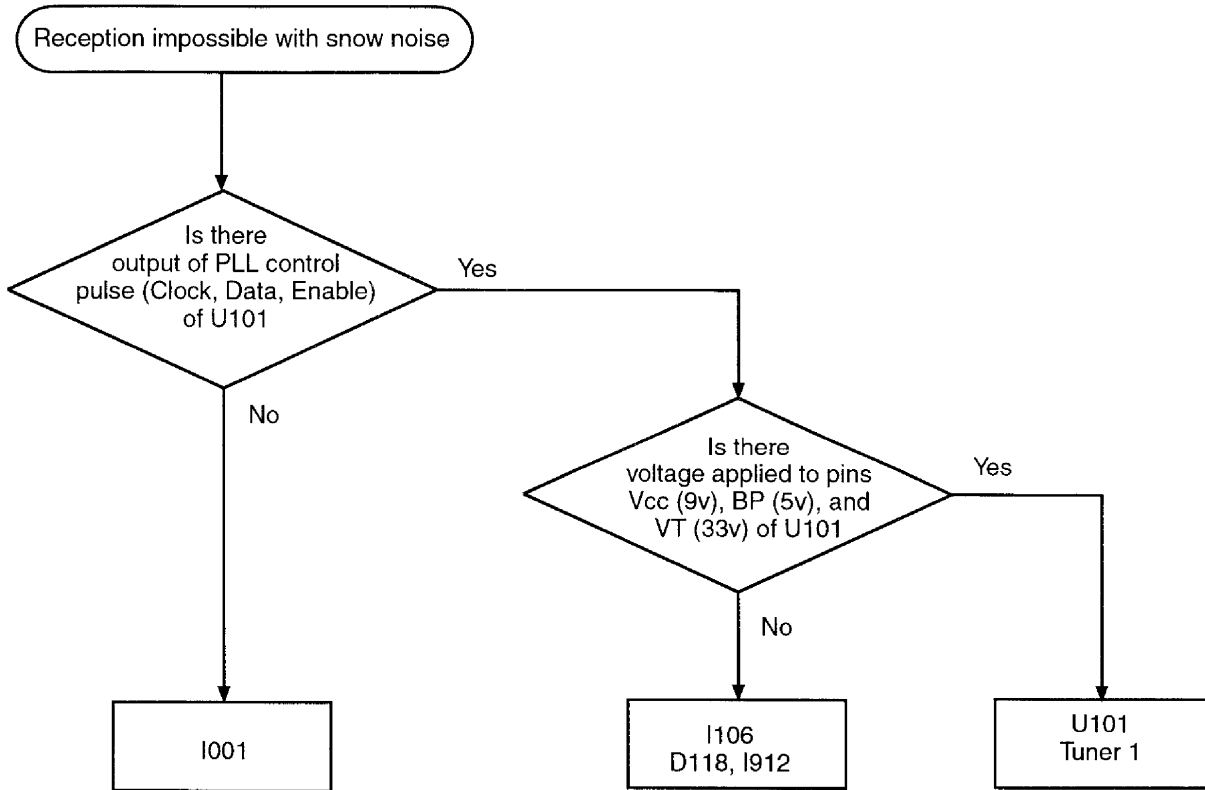


2. No Picture

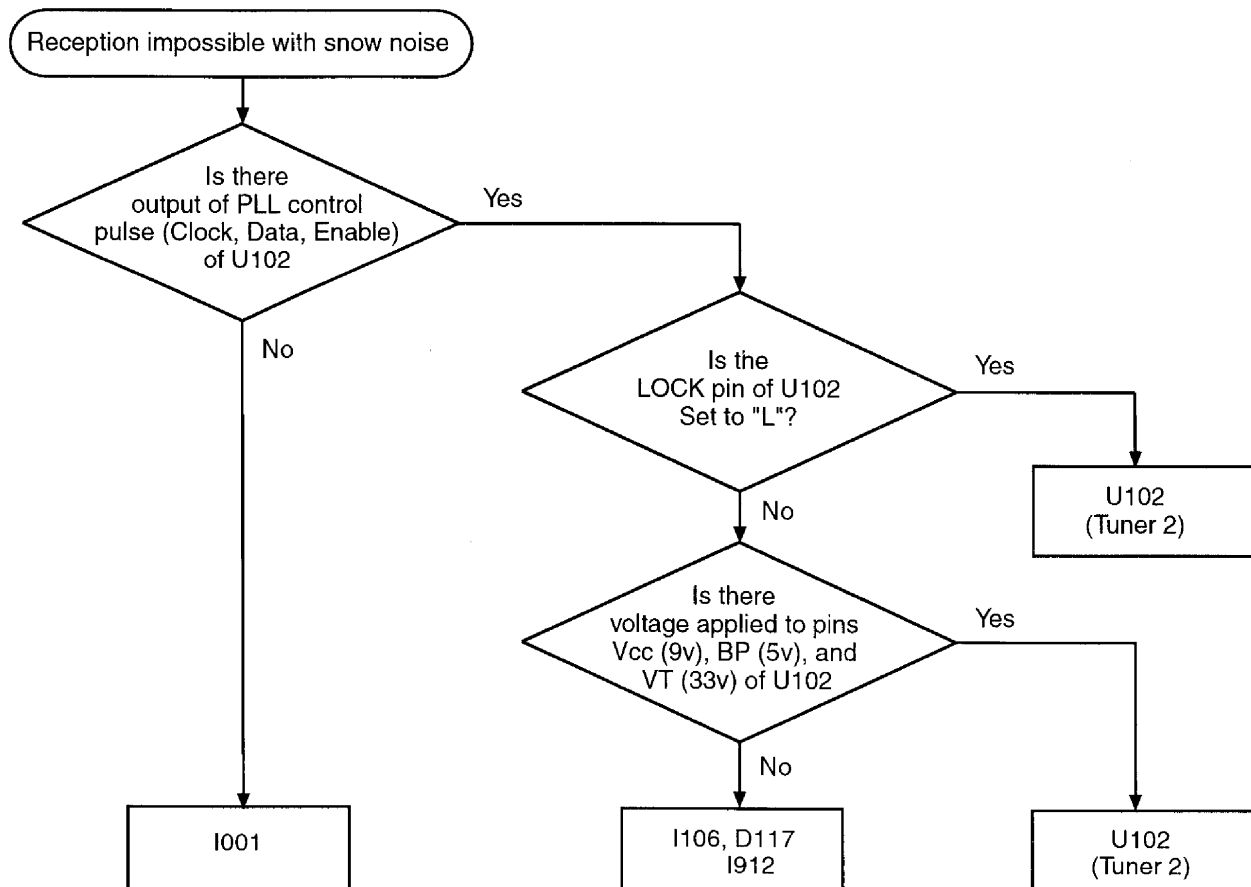


3. Reception Impossible with Snow Noise

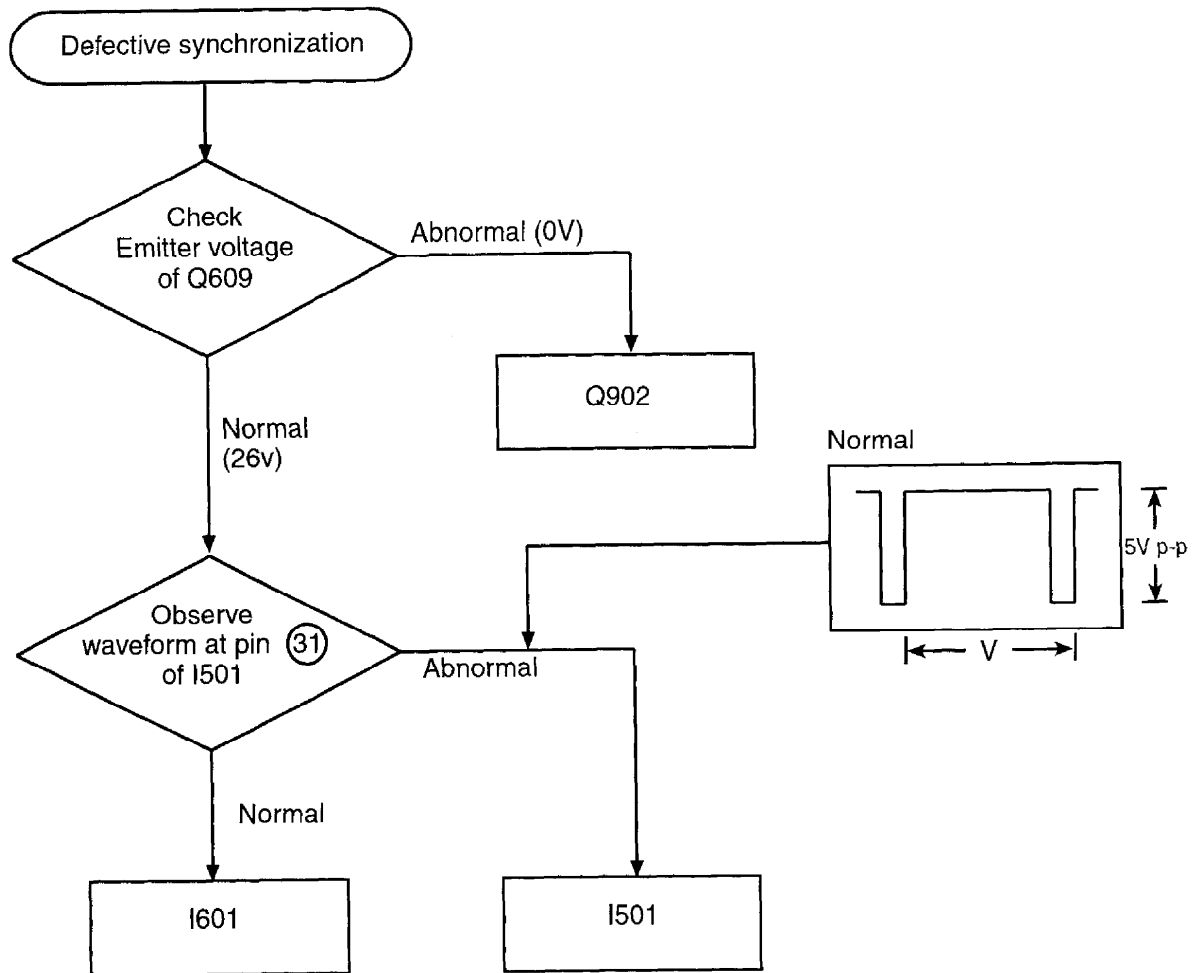
Main Picture



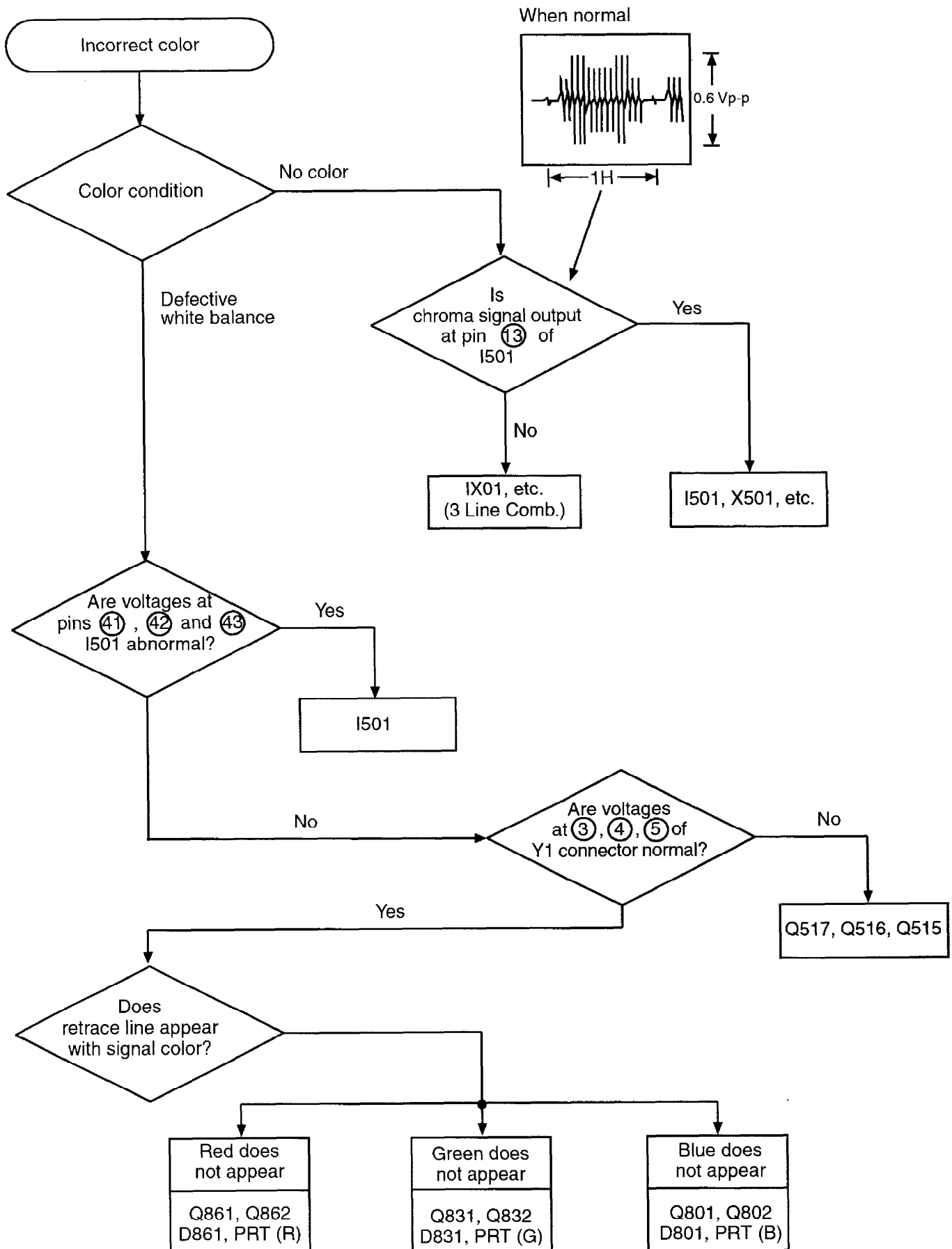
Sub Picture (PIP)



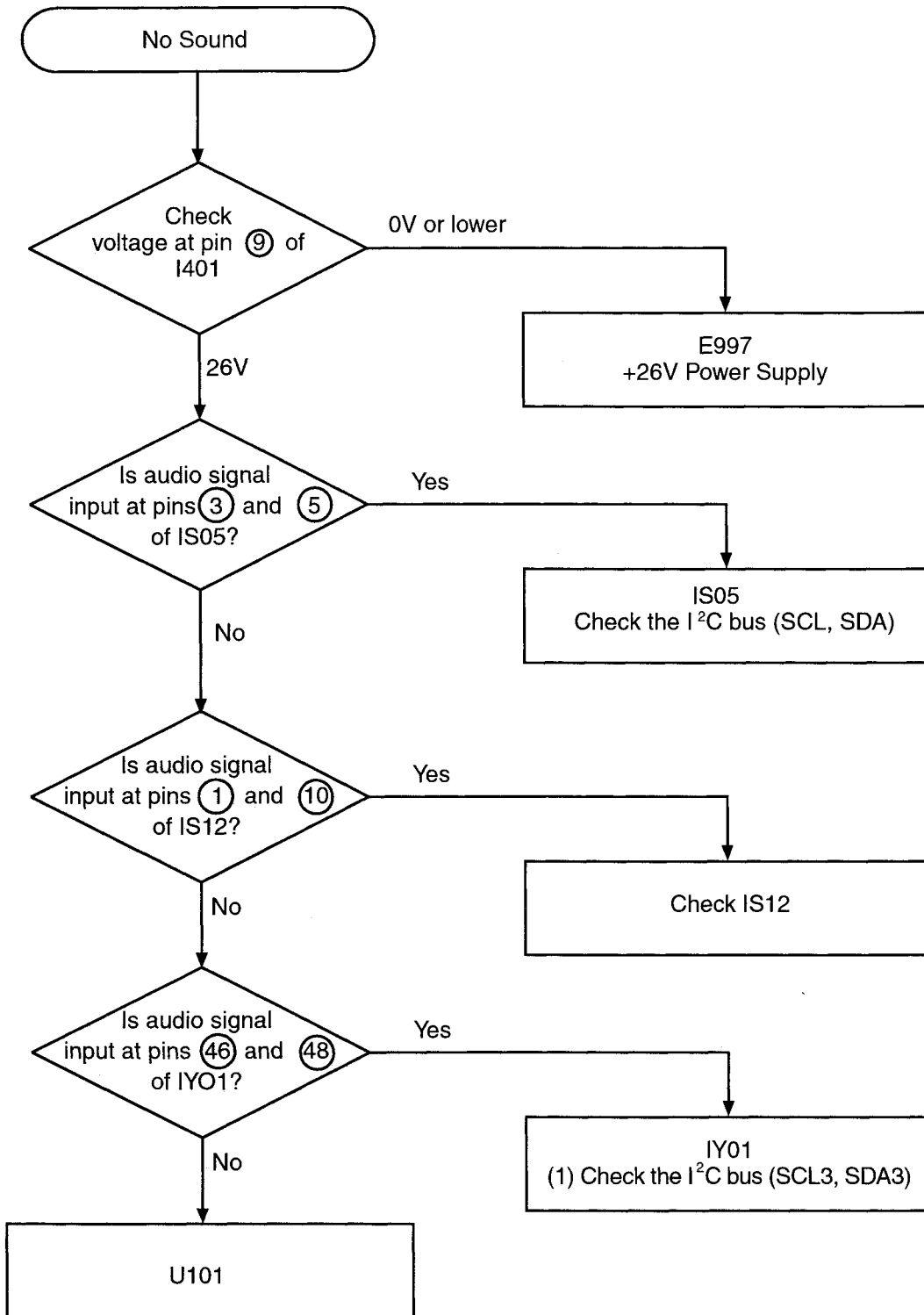
4. Defective Synchronization



5. Incorrect Color



6. No Sound



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
	1	0
	2	0
	3	3
	4	5.2
	5	0
	6	3.5
	7	1.9
	8	0
	9	0
	10	0
	11	2.4
	12	0
	13	2.4
	14	4.8

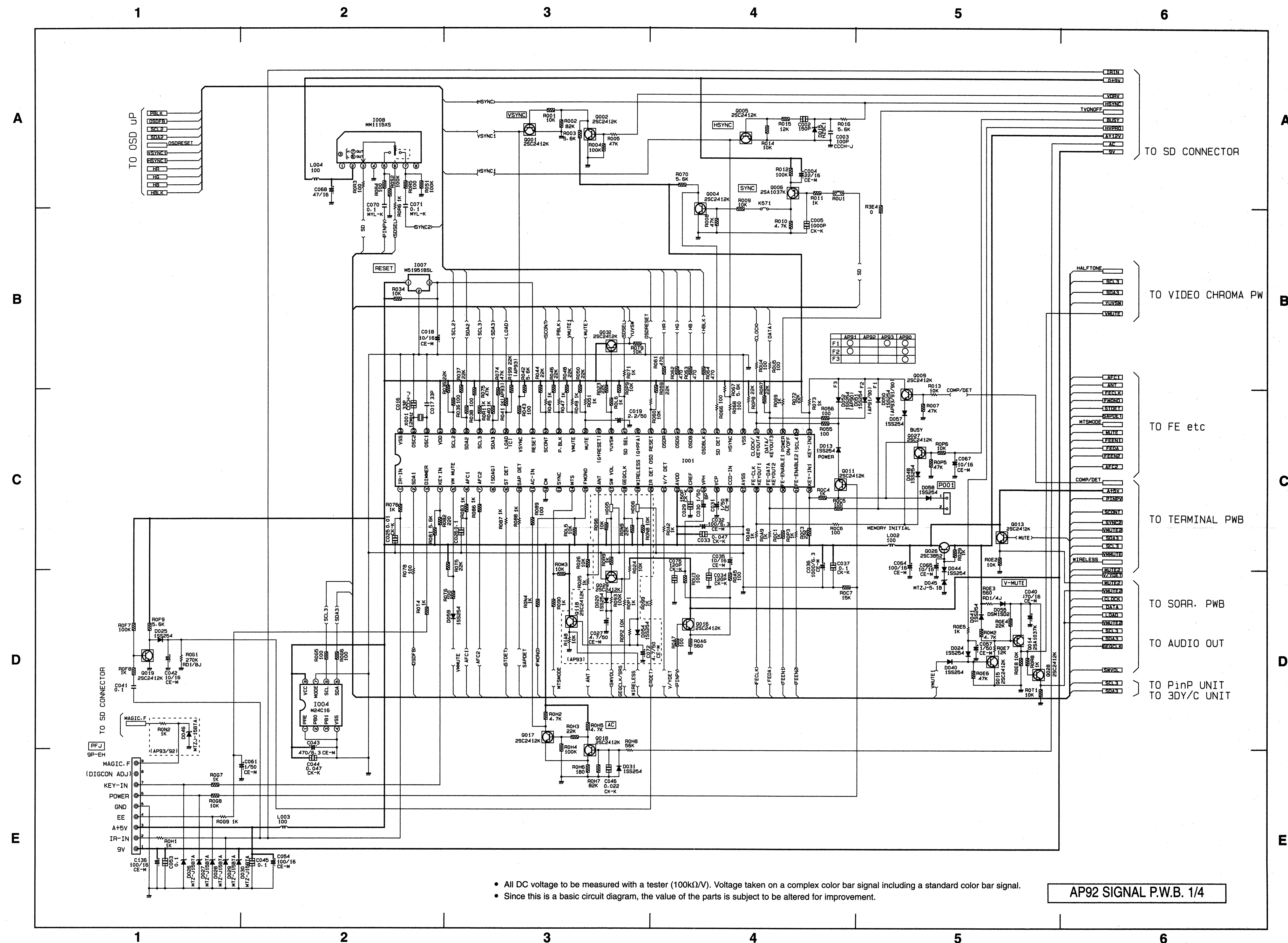
Circuit No.	Pin No.	Voltage DC
1007	1	5.2
	2	0
	3	5.2
1008	1	0
	2	9.3
	3	2.7
	4	0
	5	3.5
	6	2.9
	7	3.4
	8	0

1001	17	0
	18	0
	19	0
	20	0
	21	0
	22	5.2
	23	0
	24	2.8
	25	1.2
	26	2.2
	27	0
	28	4.9
	29	4.9
	30	0.2
	31	0
	32	5.2
33	5.1	
34	0	
35	5.1	
36	5.1	

Circuit No.	Pin Name	Voltage DC
Q001	E	0
	B	0
	C	4.9
Q002	E	0.5
	B	0
	C	0.2
Q004	E	0
	B	0.1
	C	4.7
Q005	E	0
	B	0
	C	4.5
Q006	E	2.5
	B	2.6
	C	0.4
Q009	E	0
	B	0

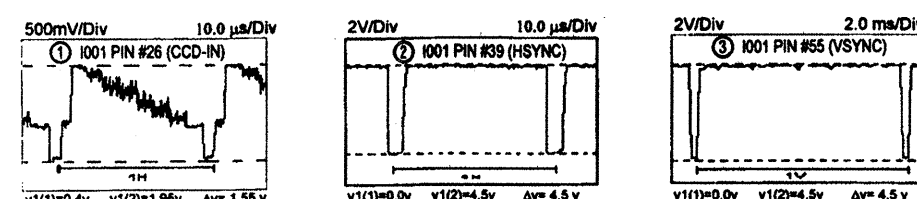
Circuit No.	Pin No.	Voltage DC
1001	37	5.1
	38	0
	39	4.6
	40	4.4
	41	0
	42	0
	43	0
	44	0
	45	0
	46	5.2
	47	3.5
	48	0
	49	0
	50	0
	51	0
	52	0
	53	2.2
	54	2.8
	55	5.0
	56	0
57	4.9	
58	4.9	
59	5.2	
60	5.2	
61	5.2	
62	2.4	
63	2.3	
64	0	
1004	1	0
	2	0
	3	0
	4	0
	5	4.9
	6	4.9
	7	0
	8	5.2

Q011	E	5.3
	C	0
	B	0
Circuit No.	C	5.1
	Pin Name	
Q013	E	0
	B	0
	C	5.2
Q014	E	11.9
	B	11.7
	C	0
Q015	E	0
	B	0
	C	1.6
Q016	E	4.6
	B	5.2
	C	9.3
Q017	E	0.2
	B	0.6
	C	2.4
Q018	E	0.2
	B	0.4
	C	2.6
Q019	E	0
	B	0.7
	C	0
Q026	E	5.2
	B	5.7
	C	11.8
Q027	E	0
	B	0
	C	5.1
Q028	E	0
	B	0
	C	11.7
Q032	E	0
	B	0



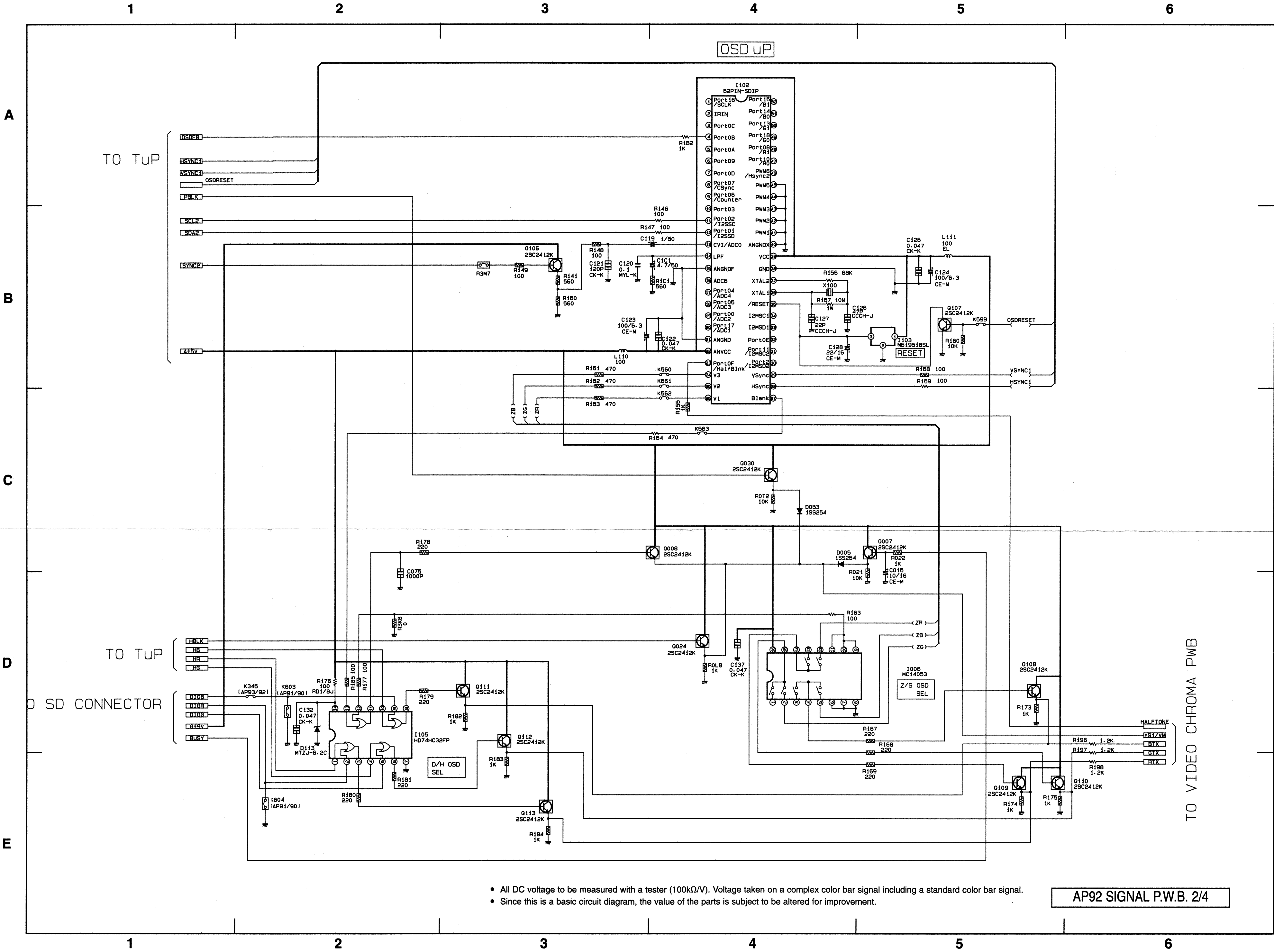
- All DC voltage to be measured with a tester (100k Ω /V). Voltage taken on a complex color bar signal including a standard color bar signal
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AP92 SIGNAL P.W.B. 1/4



BASIC CIRCUIT DIAGRAM

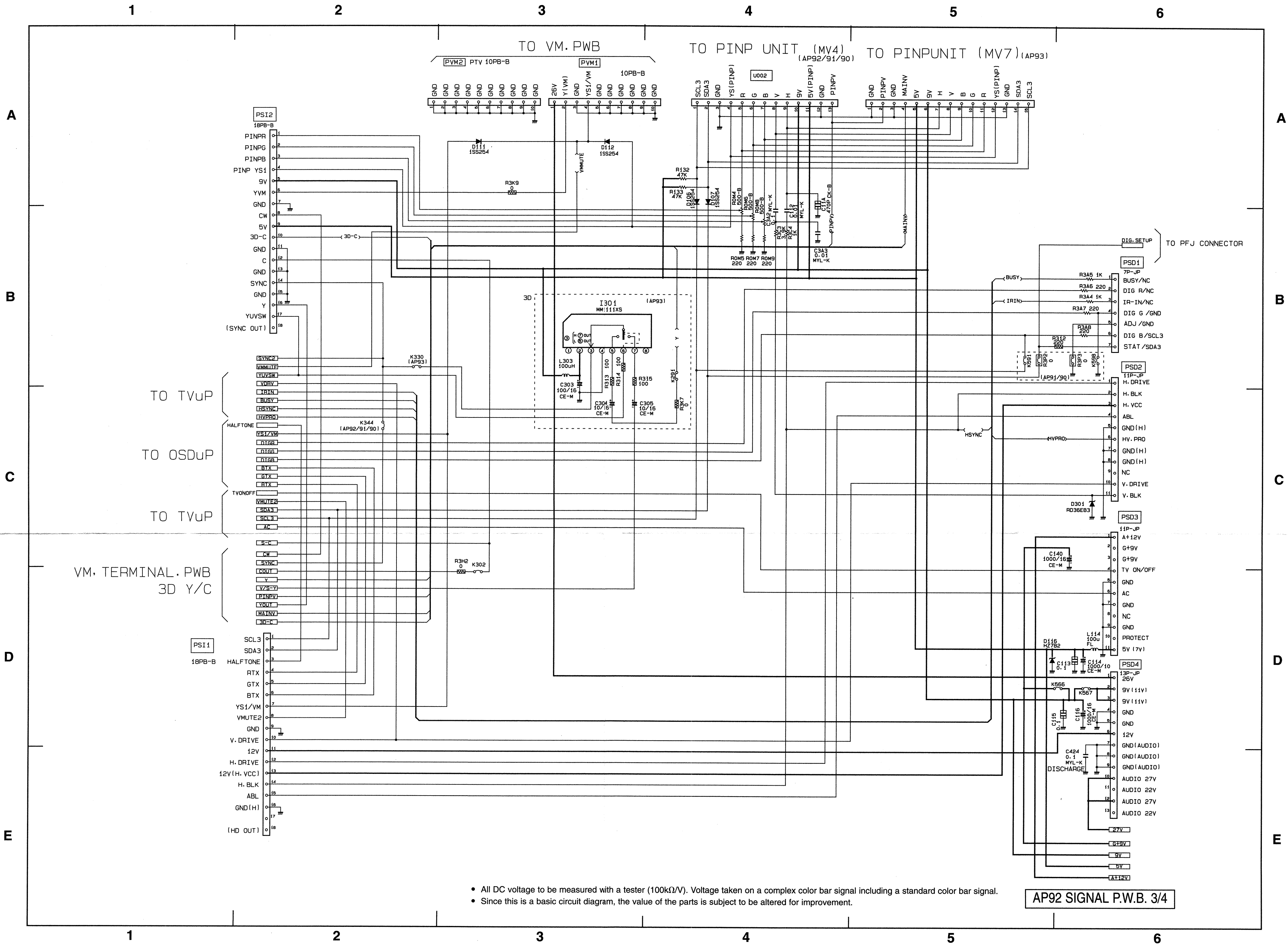
PRODUCT SAFETY NOTE: Components marked with a  and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

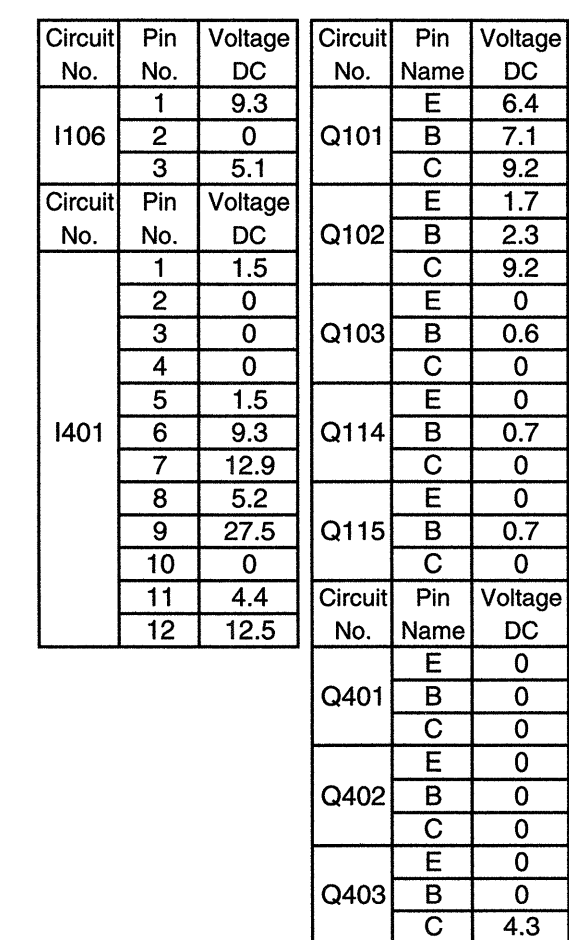


Circuit No.	Pin No.	Voltage DC	Circuit No.	Pin No.	Voltage DC
1006	1	0	I103	1	5.2
	2	0		2	0
	3	0		3	5.1
	4	0		4	0
	5	0		5	0
	6	0		6	0
	7	0		7	0
	8	0		8	0
	9	0		9	0
	10	0		10	0
	11	0		11	0
	12	0		12	0
	13	0		13	0
	14	0		14	0
	15	0		15	0
	16	5.2		16	5.2
I102	1	0	Q007	1	0
	2	0		2	0
	3	0		3	0
	4	0		4	0
	5	0		5	0
	6	0		6	0
	7	0		7	0
	8	0		8	0
	9	0		9	0
	10	0		10	0
	11	5.2		11	5.2
	12	5.2		12	5.2
	13	2.2		13	2.2
	14	1.2		14	1.2
	15	0		15	0
	16	1.8		16	1.8
	17	0		17	0
I102	18	0	Q030	1	0
	19	0		2	0
	20	0		3	0
	21	0		4	0
	22	5.2		5	0
	23	0		6	0
	24	0		7	0
	25	0		8	0
	26	0		9	0
	27	3.2		10	0
	28	4.6		11	0
	29	5.1		12	0
	30	0		13	0
	31	0		14	0
	32	0		15	0
	33	0		16	0
	34	0		17	0
I102	35	5.1	Q106	1	0
	36	1.6		2	0
	37	2.2		3	0
	38	0		4	0
	39	5.1		5	0
	40	0		6	0
	41	0		7	0
	42	0		8	0
	43	0		9	0
	44	0		10	0
	45	0		11	0
	46	0		12	0
	47	0		13	0
	48	0		14	0
	49	0		15	0
	50	0		16	0
	51	0		17	0
	52	0		18	0

BASIC CIRCUIT DIAGRAM

SIGNAL 3/4
SIGNAL 4/4





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BASIC CIRCUIT DIAGRAM

POWER SUPPLY
DEFLECTION

Circuit No.	Pin No.	Voltage DC	Circuit No.	Pin Name	Voltage DC
I901	1	155.4	Q901	E	24.2
	2	0		B	22.0
	3	0		C	51.5
	4	1.6	Q902	E	25.1
	5	24.2		B	25.7
	6	0.2		C	27.5
	7	2.0	Q903	E	119.1
I902	1	12.0		B	118.5
	2	11.3		C	0.9
	3	1.9	Q905	E	0
	4	24.2		B	0
I903	1	12.0		C	2.5
	2	11.0	Q906	E	0
	3	0		B	0.7
I904	4	23.4		C	0
	1	8.0	Q907	E	0
	2	8.4		B	0
	3	4.6		C	10.8
I905	4	11.8	Q908	E	0
	1	119.0		B	0.7
	2	10.9		C	0
	3	0	Q909	E	4.6
I908	1	25.1		B	10.5
	2	0		C	0
I909	3	25.2	Q912	E	0
	1	0		B	0
	2	-22.7		C	0
I910	3	-12.2	Q913	E	2.6
	1	12.0		B	2.6
	2	0		C	0
	3	12.2	Q914	G	0
I912	4	31.2		A	11.3
	1	31.2		K	0
	2	9.7	Q916	E	0
	3	0		C	0.7
I913	4	9.1		C	0
	5	2.5	Q917	E	11.9
	1	31.2		B	11.1
	2	5.2		C	11.8
	3	0	Q918	E	2.6
	4	5.1		B	3.0
	5	2.5		C	4.6

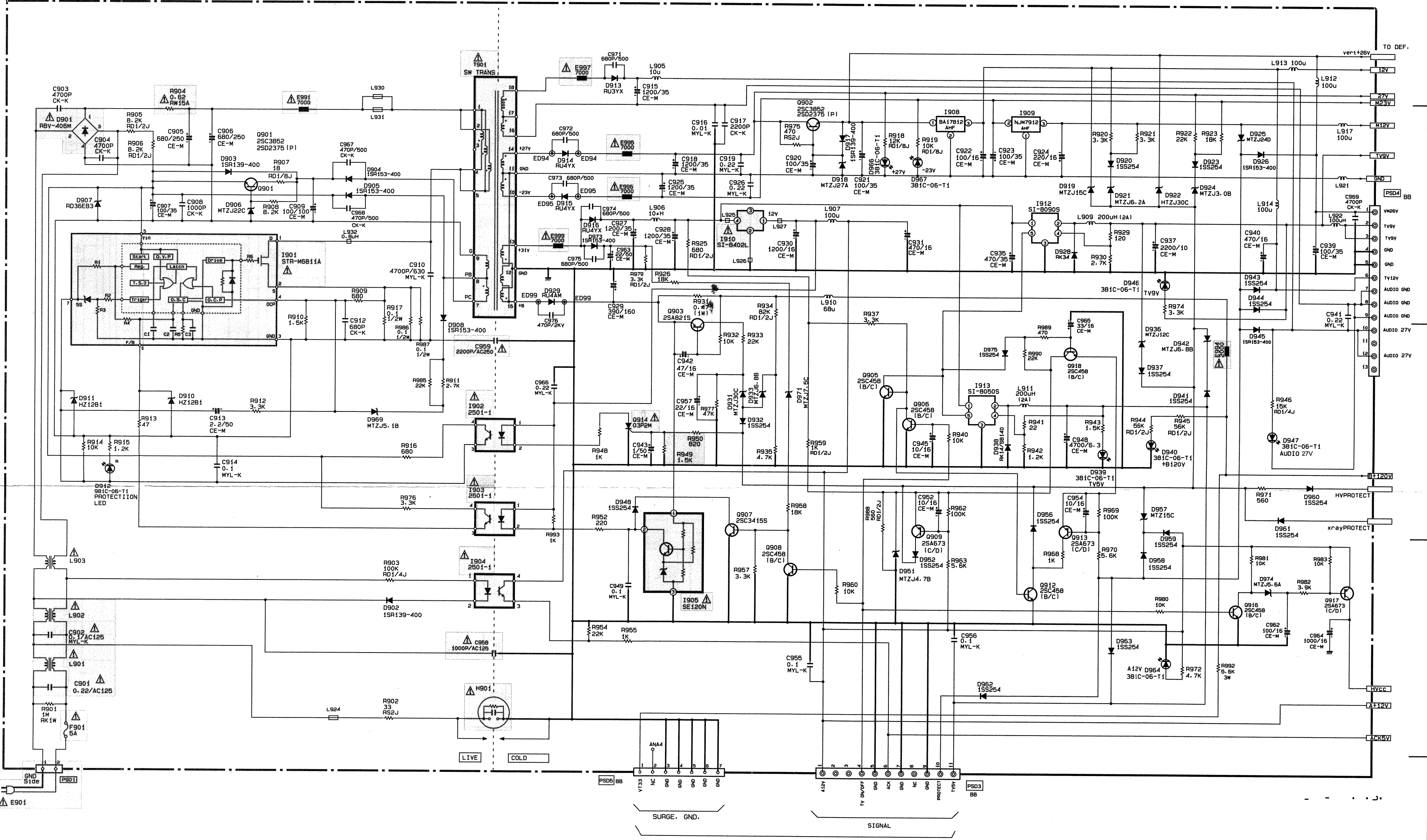
A

B

C

D

E



A

B

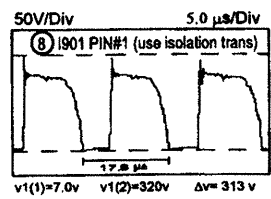
C

D

E

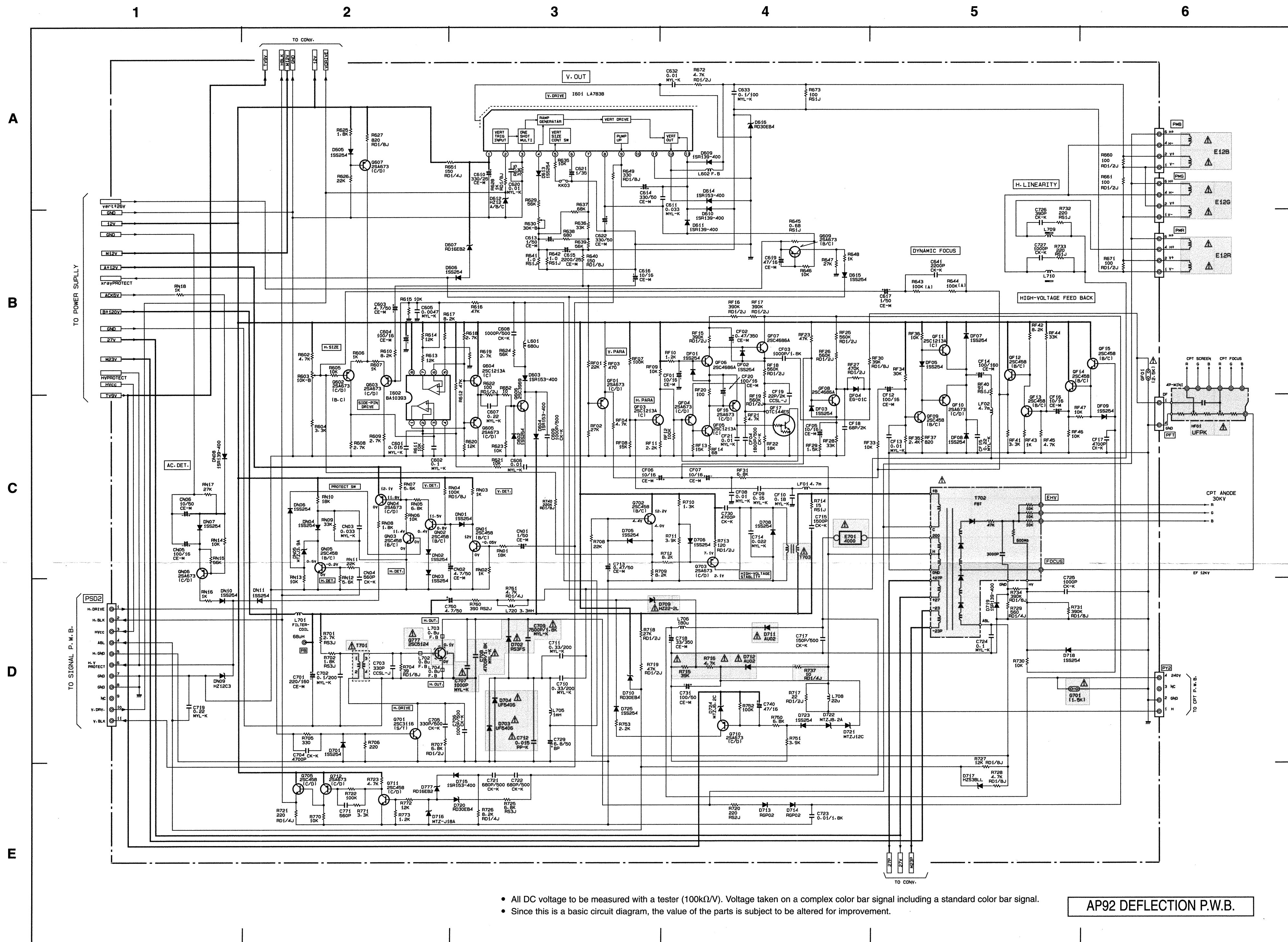
- All DC voltage to be measured with a tester (100k Ω /V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AP92 POWER SUPPLY P.W.B.



BASIC CIRCUIT DIAGRAM

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- All DC voltage to be measured with a tester (100k Ω /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.

AP92 DEFLECTION P.W.B.

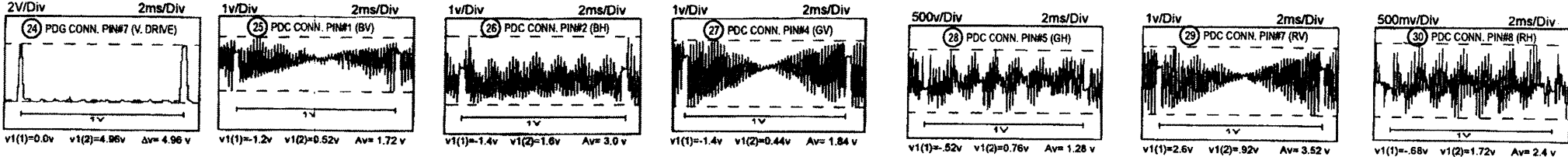
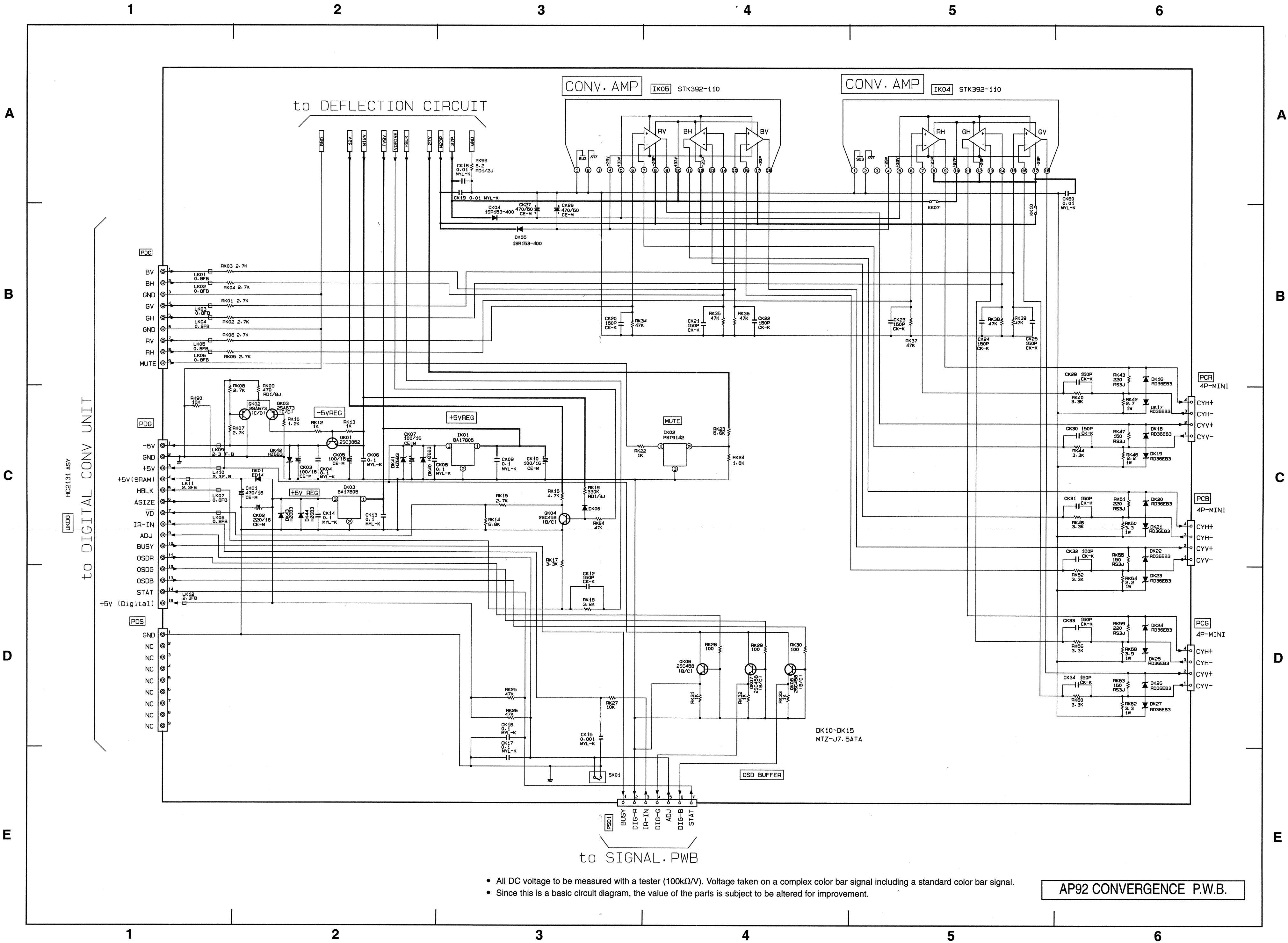
Circuit No.	Pin No.	Voltage DC	Circuit No.	Pin Name	Voltage DC	
1601	1	11.3	Q712	B	12.0	
	2	4.8		B	17.0	
	3	5.4		C	2.0	
	4	5.6	E	0		
	5	0	Q777	B	0	
	6	5.1		C	119.0	
	7	5.5		E	8.1	
	8	25.0	QF01	B	7.5	
	9	1.6	E	0.9		
	10	1.3	QF03	B	1.5	
	11	0		C	6.9	
	12	12.8		E	7.3	
	1602	13	24.7	QF04	C	6.9
1		4.8	C		0.7	
2		2.1	E		0.1	
3		2.2	QF05	B	0.7	
4		0		C	11.4	
5		2.9		E	11.1	
6		4.8	QF06	B	12.1	
7		2.4		C	432.1	
8		11.7		E	2.2	
Q602		Pin Name	Voltage DC	QF07	B	448.5
		E	5.4		C	1096
		B	4.8		E	11.1
Q603		B	C	QF08	B	11.4
	C	2.1	C		638.5	
	E	5.9	E		0.2	
Q604	B	C	QF09	B	0.9	
	C	5.3		C	7.9	
	E	0.5		E	8.2	
Q605	B	C	QF10	B	7.9	
	C	4.6		E	0	
	E	11.7		E	8.2	
Q606	B	C	QF11	B	8.4	
	C	4.6		C	11.7	
	E	4.8				
Q607	B	C	QF12	B	4.8	
	C	0		E	4.2	
	E	0		B	11.7	
Q609	C	48.7	QF13	E	0.8	
	E	11.2		B	1.4	
	B	10.3		C	4.8	
Q701	C	6.1	QF14	E	8.8	
	E	25.1		C	11.7	
	B	24.8		E	9.4	
Q702	C	0	QF15	B	9.4	
	E	0		C	11.7	
	B	0.4		E	11.6	
Q703	C	27.8	QF16	B	11.4	
	E	3.4		C	0	
	B	3.1		E	0	
Q705	C	11.7	QF17	B	0	
	E	9.2		C	6.9	
	B	8.6		E	0	
Q710	C	1.7	QN01	B	0	
	E	1.8		C	11.8	
	B	2.0		E	0.5	
Q711	C	12.0	QN02	B	0	
	E	4.7		C	11.8	
	B	5.0		E	9.1	
Q711	C	0	QN03	B	0.4	
	E	0		C	11.8	
	B	0.0		E	11.8	
Q711	C	10.0	QN04	B	11.8	
				C	0	
				E	0	
Q711			QN05	B	0	
				C	0.6	
				E	9.1	
Q711			QN06	B	9.1	
				C	0	
				E	0	

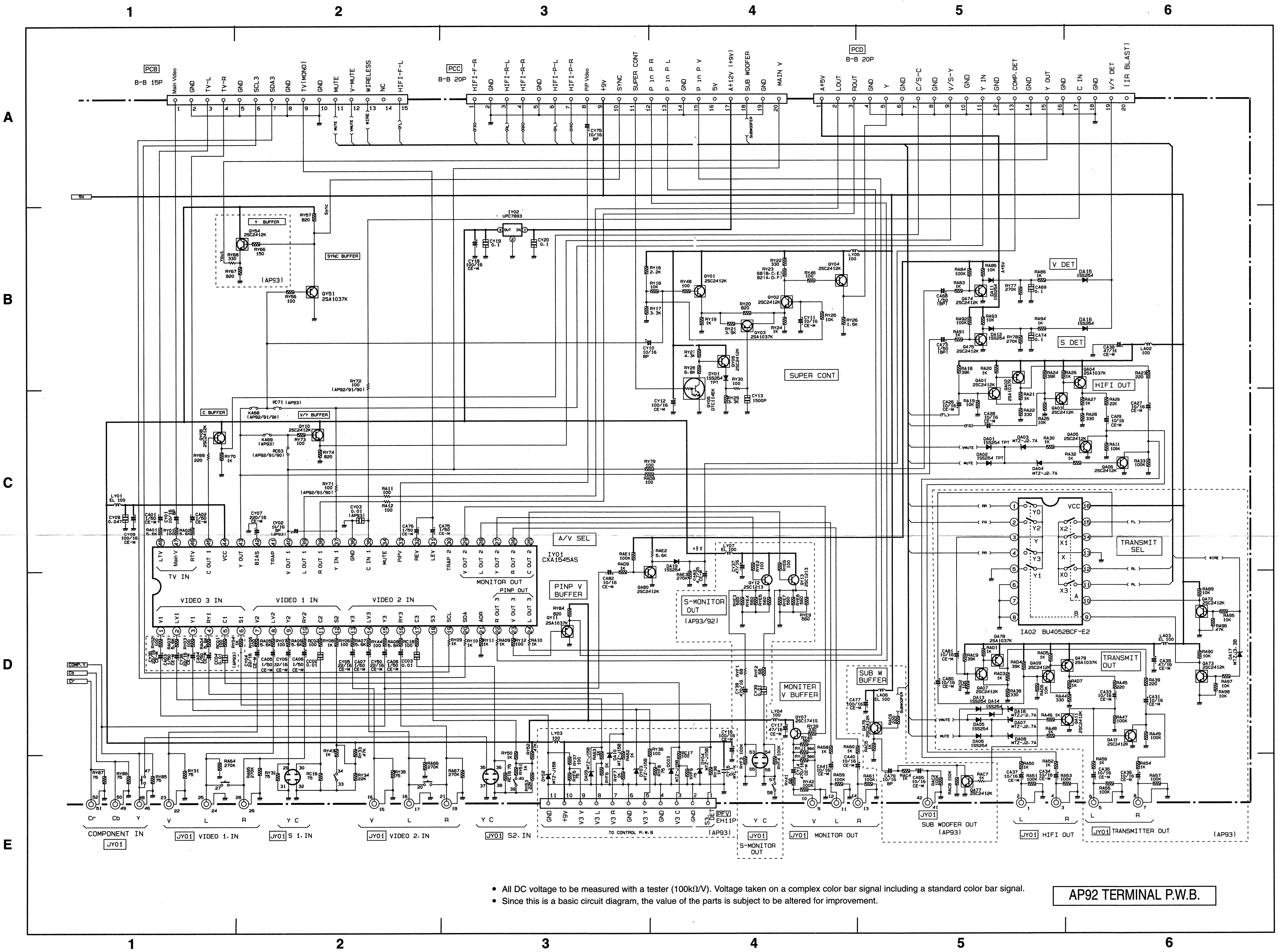
PRODUCT SAFETY NOTE: Components marked with a  and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

CONVERGENCE
TERMINAL

Circuit No.	Pin No.	Voltage DC	Circuit No.	Pin No.	Voltage DC
IK01	1	9.5	IK05	1	0
	2	0		2	0
	3	5.0		3	-29.5
IK02	1	4.6		4	-30.7
	2	6.8		5	35.2
IK03	3	0		6	0
	1	9.5		7	-0.8
	2	0		8	-22.47
IK04	3	5.0		9	-0.5
	1	0		10	27.4
	2	0		11	-0.6
	3	-29.5		12	-22.5
	4	-30.6		13	-0.5
	5	35.2		14	-0.5
	6	0		15	-0.3
	7	0		16	-0.3
	8	-22.4		17	-22.5
	9	0		18	-0.2
Circuit No.	Pin No.	Voltage DC	Circuit No.	Pin No.	Voltage DC
QK01	1	0	QK02	1	0
	2	0		2	0
	3	-29.5		3	-29.5
	4	-30.6		4	-30.6
	5	35.2		5	35.2
	6	0		6	0
	7	0		7	0
	8	-22.4		8	-22.4
QK03	9	0	QK04	9	0
	10	27.4		10	27.4
	11	0		11	0
	12	-22.9		12	-22.9
	13	0		13	0
	14	0		14	0
	15	0		15	0
	16	0		16	0
QK06	17	-22.5	QK07	17	-22.5
	18	0		18	0
	1	0		1	0
	2	0		2	0
	3	5.0		3	5.0
	4	0		4	0
	5	0		5	0
	6	0		6	0
QK08	7	0	QK09	7	0
	8	5.0		8	5.0
	9	0		9	0
	10	0		10	0
	11	0		11	0
	12	0		12	0
	13	0		13	0
	14	0		14	0





• 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.

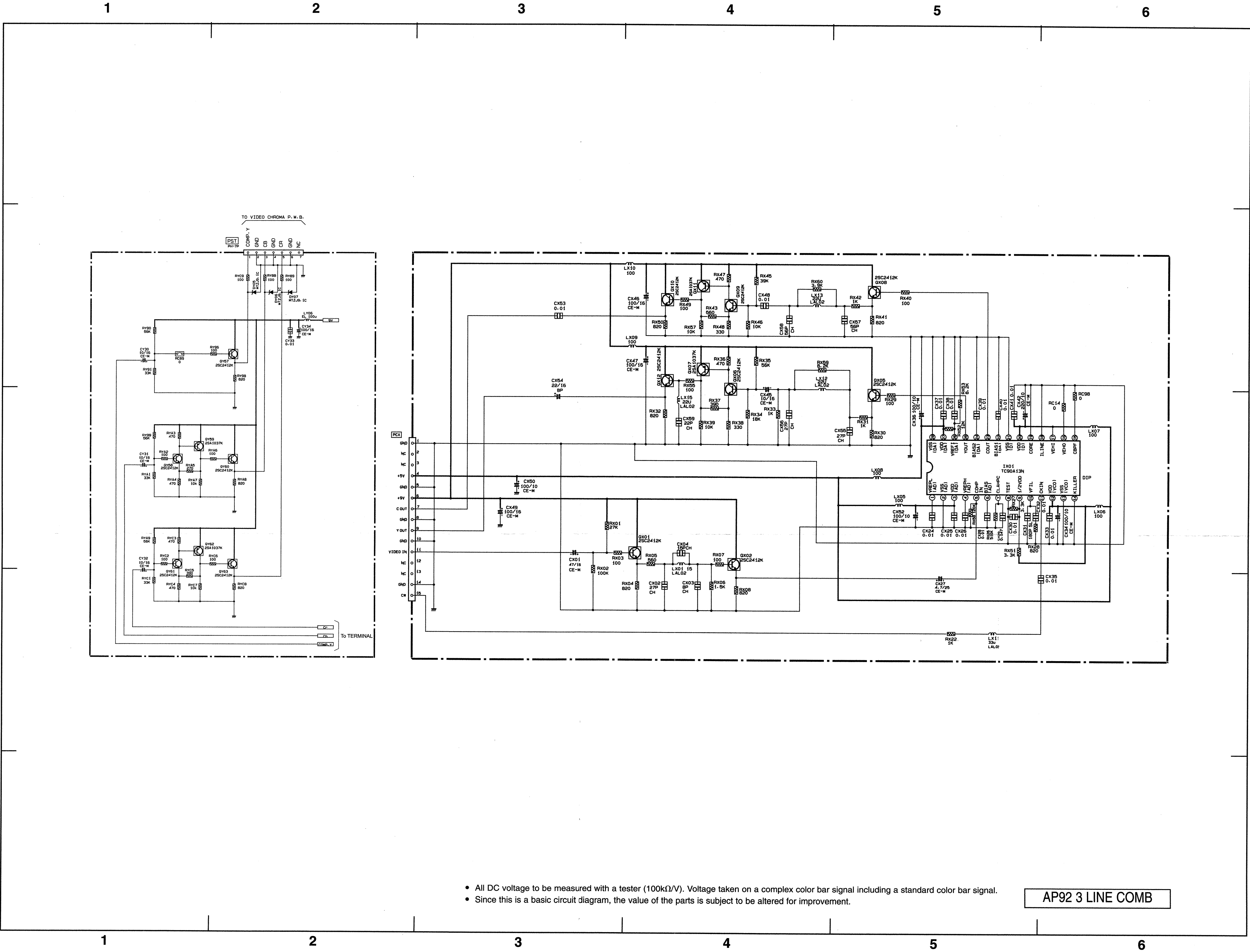
Circuit No.	Pin No.	Voltage DC	Circuit No.	Pin Name	Voltage DC	Circuit No.	Pin Name	Voltage DC							
IY01	1	4.7	QA01	E	1.2	QY57	E	2.5							
	2	4.7		B	1.8		B	3.1							
	3	4.7		C	8.6		C	9.4							
	4	4.7		E	9.3		E	2.8							
	5	4.7	QA02	B	8.6	QY58	B	3.4							
	6	0.5		C	4.3		C	8.7							
	7	4.7		E	1.2		E	9.4							
	8	4.7		B	1.8		B	8.7							
	9	4.7	QA03	C	0	QY59	C	3.4							
	10	4.7		E	9.3		E	9.4							
	11	4.7		B	8.6		B	3.4							
	12	2.3		C	4.2		C	9.4							
	13	4.7	QA04	E	0	QY60	E	2.8							
	14	4.7		B	0		B	3.4							
	15	4.7		C	0		C	8.7							
	16	4.7		E	0		E	9.4							
	17	4.7	QA05	B	0	QY61	B	8.7							
	18	2.3		C	0		C	3.9							
	19	4.9		E	0		E	9.4							
	20	4.9		B	0		B	3.4							
	21	4.7	QA06	C	3.3	QY62	C	8.7							
	22	4.7		E	0		E	9.4							
IY01	Circuit No.	Pin No.		Voltage DC	Circuit No.		Pin Name	Voltage DC	Circuit No.	Pin Name	Voltage DC				
												Circuit No.	Pin Name	Voltage DC	
	23	4.6	QA75	B	0.6	QY63	B	3.9							
	24	4.7		C	0		C	9.4							
	25	4.7		E	0		E	9.4							
	26	4.7		B	0.5		B	3.4							
	27	4.7	QA80	C	0	QY01	C	8.7							
	28	4.7		E	4.5		E	9.4							
	29	4.7		B	5.1		B	8.7							
	30	4.7		C	9.2		C	3.9							
	31	4.7	QY02	E	4.5	QY03	E	9.4							
	32	4.7		B	5.1		B	3.4							
	33	4.7		C	7.5		C	9.4							
	34	0		E	4.5		E	9.4							
	35	4.7	QY04	B	4.5	QY05	B	4.5							
	36	0		C	4.5		C	4.5							
	37	4.7		E	6.8		E	6.8							
	38	4.7		B	7.5		B	7.5							
	39	4.7	QY06	C	9.3	QY07	C	9.3							
	40	4.7		E	0		E	0							
	41	4.7		B	2.1		B	2.1							
	42	4.7		C	0		C	0							
43	4.6	QY08	E	5.1	QY10	E	5.1								
44	9.1		B	5.7		B	5.7								
45	4.6		C	9.3		C	9.3								
46	4.7		E	3.9		E	3.9								
47	4.7	QY09	B	4.6	QY11	B	4.6								
48	4.7		C	9.1		C	9.1								
QM01	Circuit No.		Pin Name	Voltage DC		Circuit No.	Pin Name	Voltage DC	Circuit No.	Pin Name	Voltage DC				
												Circuit No.	Pin Name	Voltage DC	
	E	0	QY08	E	3.9	QY10	E	3.9							
	B	0.7		B	4.6		B	4.6							
	C	0.1	C	9.2	C	9.2									
	E	1.4	E	5.3	E	5.3									
	B	-	B	4.7	B	4.7									
	C	9.3	C	0	C	0									
	QM02	Circuit No.	Pin Name	Voltage DC	Circuit No.	Pin Name	Voltage DC	Circuit No.	Pin Name	Voltage DC					
											Circuit No.	Pin Name	Voltage DC		
Circuit No.														Pin Name	Voltage DC
	E	0	QY51	E	3.2										
	B	2.6		B	2.6										
C	9.3	C	0	C	0										

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BASIC CIRCUIT DIAGRAM

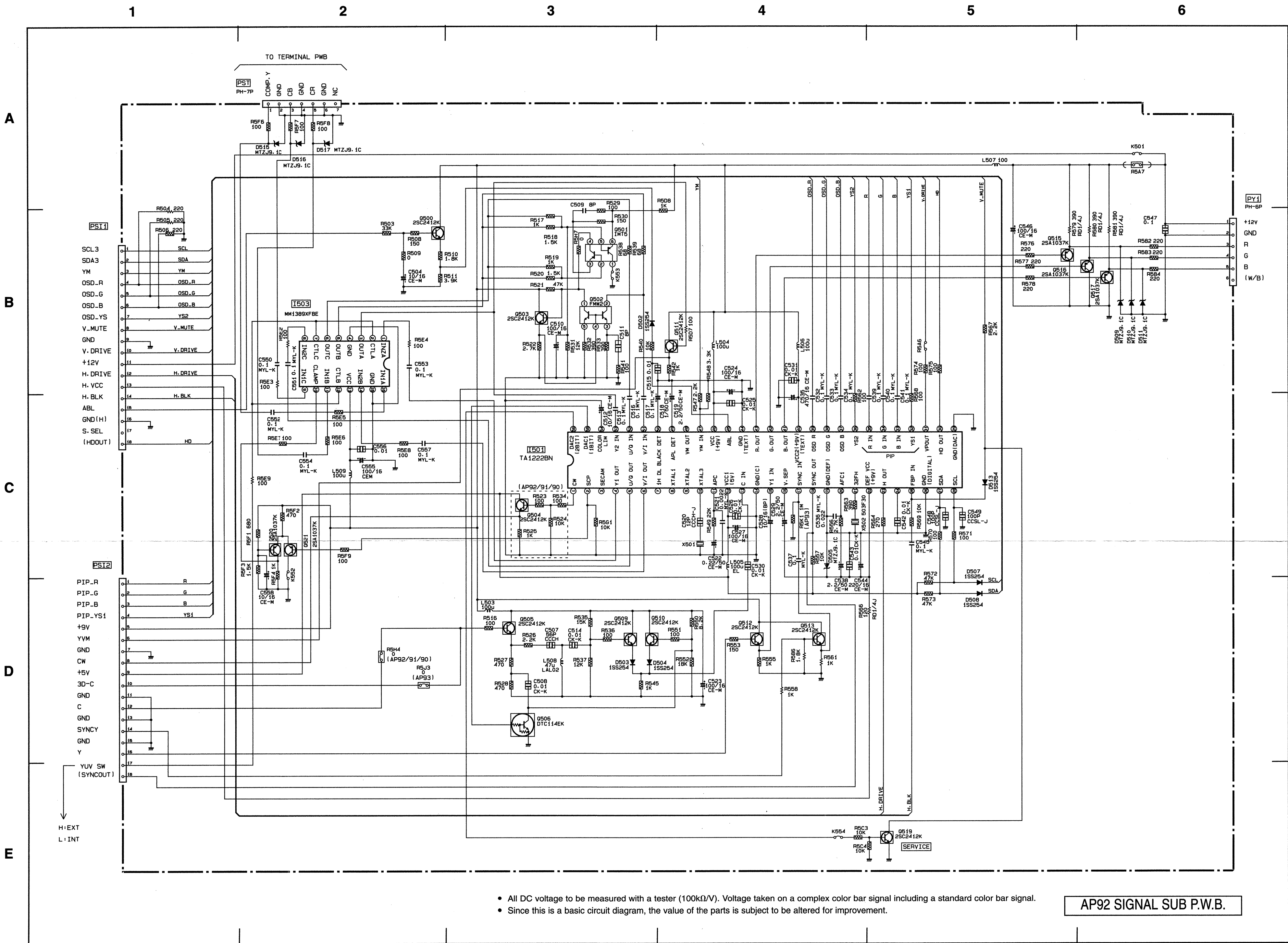
3 LINE COMB
SIGNAL SUB

Circuit No.	Pin Name	Voltage DC	Circuit No.	Pin No.	Voltage DC
QX01	E	5.5	IX01	21	0
	B	6.2		22	3.5
	C	9.4		23	4.3
QX02	E	3.3		24	0
	B	4.1		25	4.4
	C	9.4		26	3.6
QX05	E	3.7		27	4.9
	B	4.4		28	0
	C	9.3	IX01	1	1.5
QX06	E	1.5		2	0
	B	2.2		3	4.9
	C	8.6		4	3.4
QX07	E	9.3		5	2.6
	B	8.6		6	1.3
	C	5.9		7	3.3
QX08	E	3.6		8	0
	B	4.3		9	2.5
	C	9.3		10	0
QX09	E	1.2		11	0
	B	1.8		12	5.1
	C	8.7		13	0
QX10	E	4.8		14	0
	B	5.5		15	0
	C	9.3		16	0
QX11	E	9.3		17	4.9
	B	8.7		18	0
	C	5.5		19	0
QX12	E	5.2		20	4.9
	B	5.9			
	C	9.3			



BASIC CIRCUIT DIAGRAM

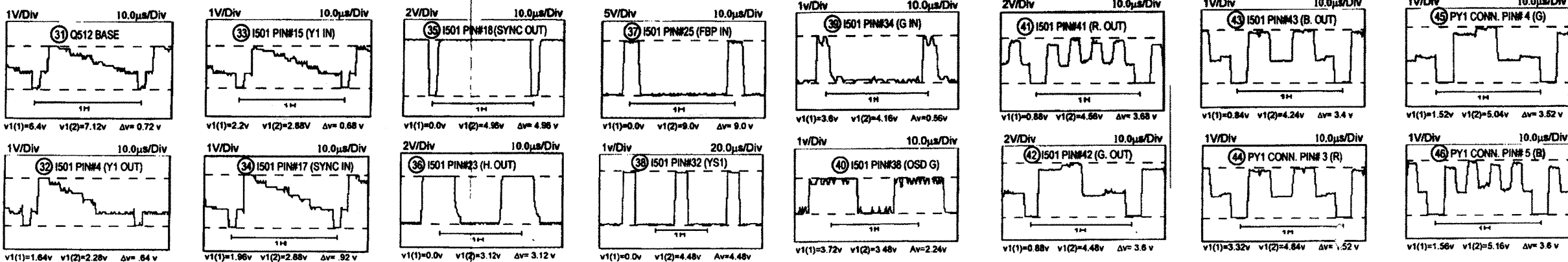
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Circuit No.	Pin No.	Voltage DC	Circuit No.	Pin Name	Voltage DC
I501	1	3.0	Q500	E	8.1
	2	1.2		B	8.5
	3	4.1		C	9.3
	4	2.3	Q501	1	0
	5	2.6		2	3.1
	6	2.6		3	3.5
	7	0	Q502	4	1.3
	8	4.2		5	3.1
	9	4.2		6	3.5
	10	4.2	Q503	1	1.2
	11	2.1		2	3.1
	12	5.2		3	0
	13	0	Q505	4	0.7
	14	0		5	0
	15	2.8		E	0.5
	16	6.3	Q506	B	1.3
	17	0.5		C	9.5
	18	4.5		E	3.2
	19	0	Q509	B	4.1
	20	7.6		C	9.4
	21	6.2		E	0
	22	9.1	Q510	B	3.1
	23	1.5		C	0
	24	4.5		E	3.4
	25	1.4	Q511	B	4.1
	26	0		C	9.4
	27	4.9		E	0
	28	4.9	Q512	B	0
	29	0		C	9.3
	30	0		E	2.7
	31	4.7	Q513	B	3.4
	32	0		C	9.3
	33	3.5		E	3.4
	34	3.5	Q515	B	2.8
	35	3.5		C	0
	36	0		E	3.4
	37	3.5	Q516	B	3.1
	38	3.5		C	0
	39	0		E	3.8
I503	40	3.9	Q517	B	3.2
	41	0		C	0
	42	0		E	0
	43	3.9	Q519	B	0.3
	44	0		C	0
	45	9.4		E	2.1
	46	3.9	Q520	B	6.4
	47	0		C	0
	48	3.7		E	1.9
	49	5.8	Q521	B	1.3
	50	5.3		C	0
	51	5.1		E	0
I501	52	5.1	I501	53	6.8
	53	6.8		54	6.7
	54	3.1		55	3.1
	55	3.1		56	3.1
	56	3.1			
	57	3.1			

- 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.
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AP92 SIGNAL SUB P.W.B.



TO SIGNAL P.W.B.

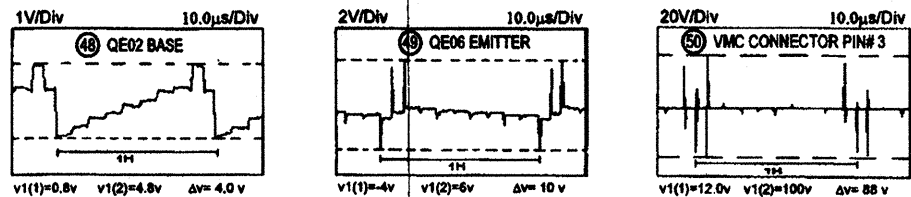
TO SIGNAL P.W.B.

TO POWER SUPPLY P.W.B.

TO VM COIL

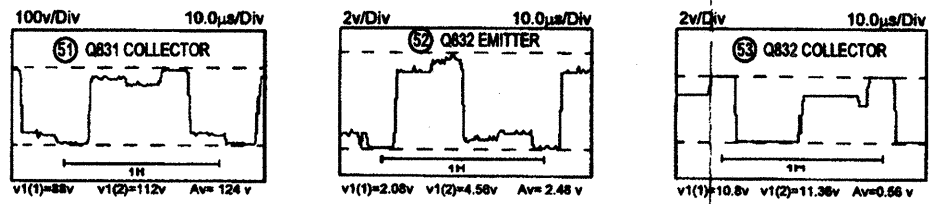
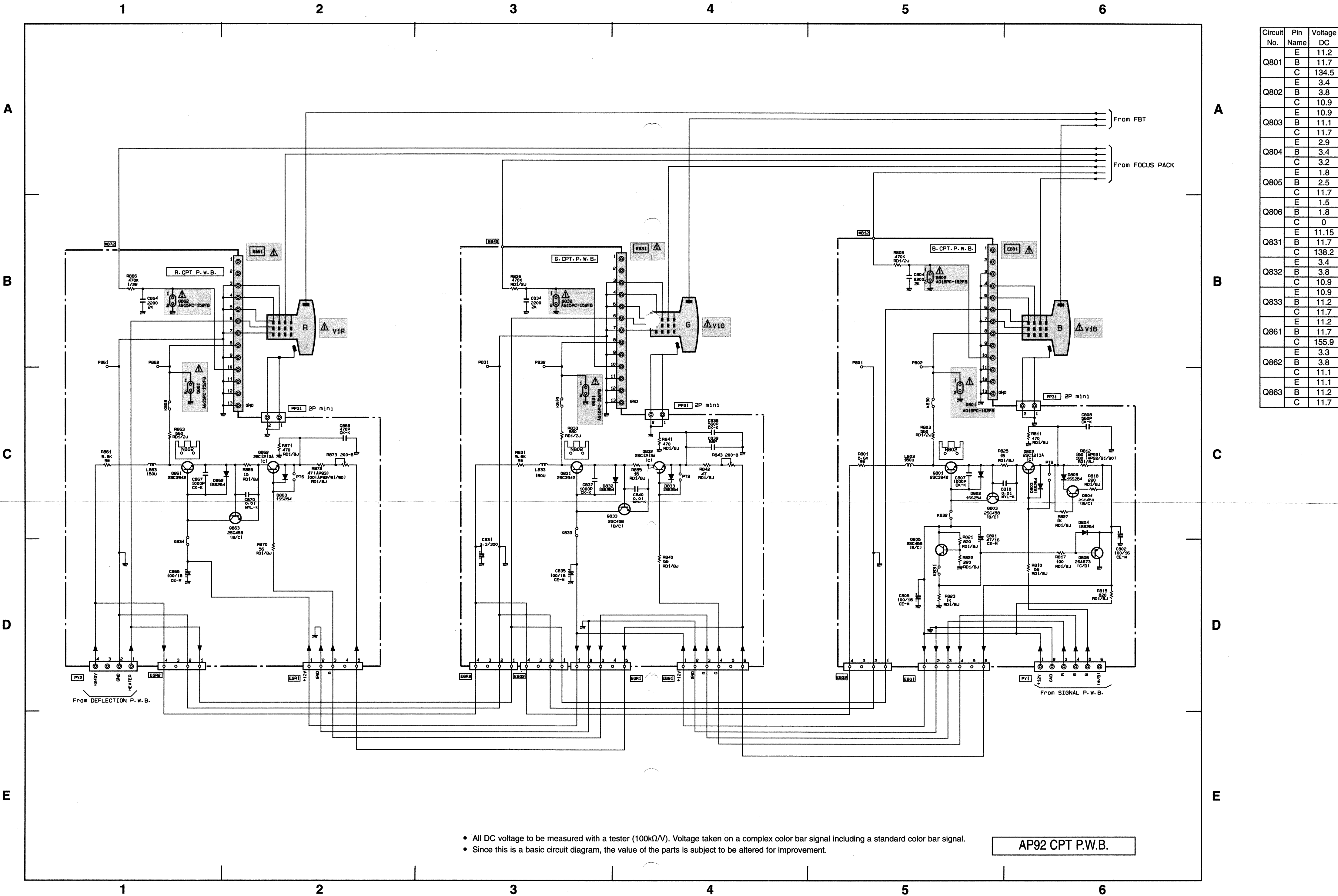
AP92 VM P.W.B.

- 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.



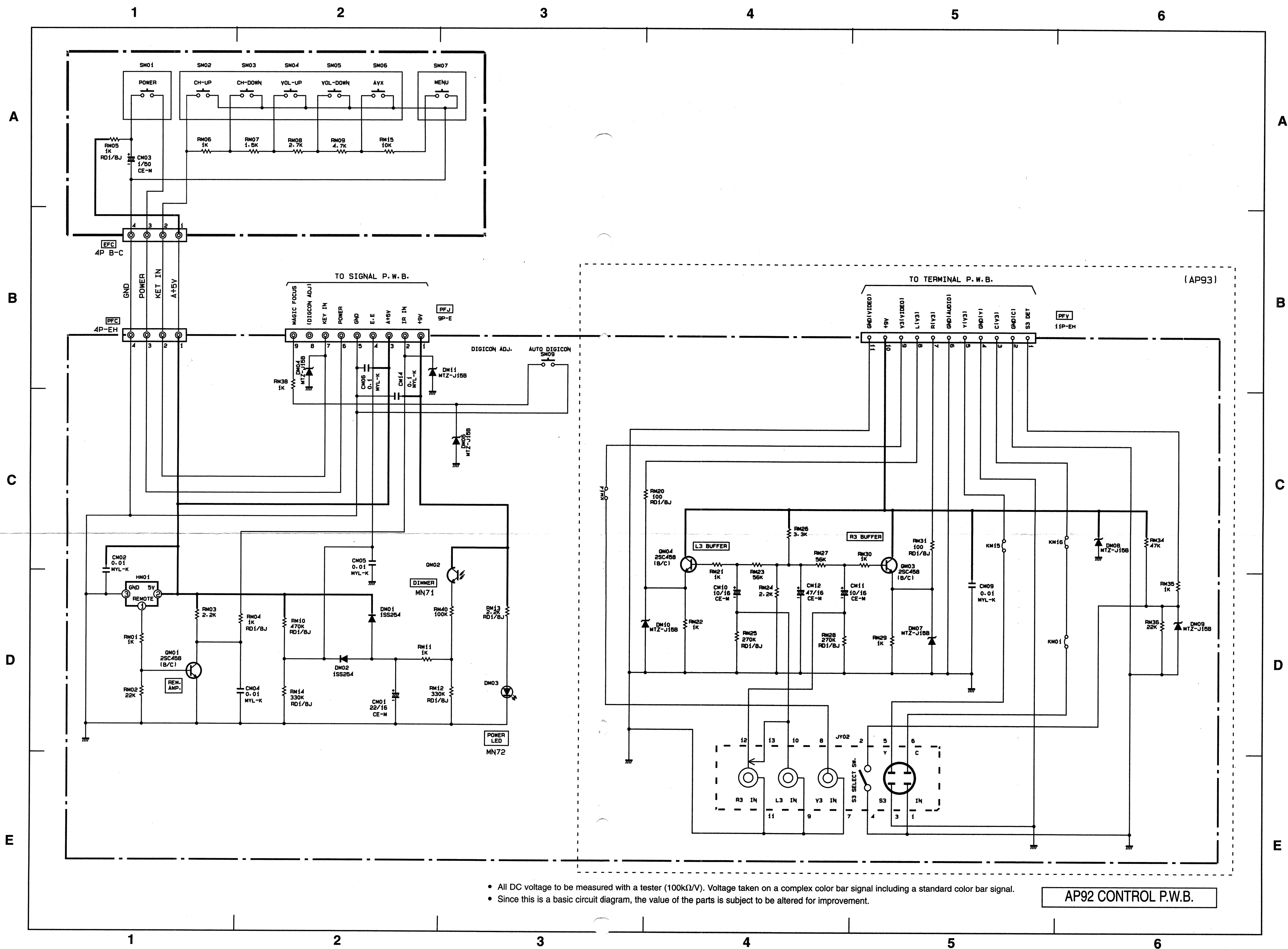
BASIC CIRCUIT DIAGRAM

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.



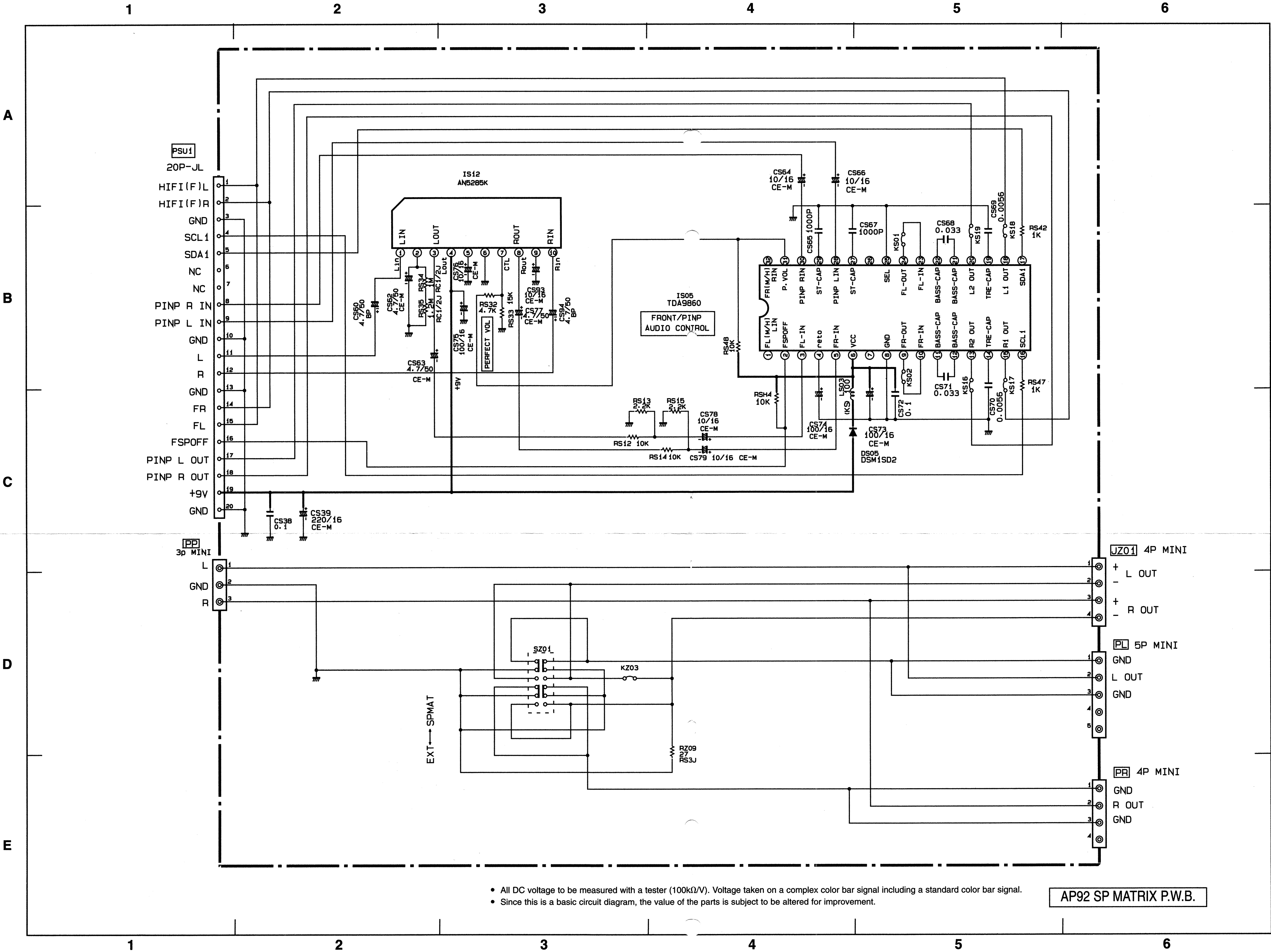
BASIC CIRCUIT DIAGRAM

CONTROL
SP. MATRIX



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	Circuit No.	Pin No.	Voltage DC
IS12	1	4.3	IS05	1	4.7
	2	0		2	1.2
	3	4.3		3	4.7
	4	8.5		4	1.4
	5	4.3		5	4.7
	6	8.6		6	0
	7	4.3		7	0
	8	0		8	4.7
	9	4.3		9	2
	10	4.3		10	4.7
IS05	11	4.3	IS12	11	4.3
	12	4.3		12	4.3
	13	4.3		13	4.3
	14	4.3		14	4.3
	15	4.3		15	4.3
	16	4.9		16	4.9
	17	4.9		17	4.9
	18	4.3		18	4.3
	19	4.3		19	4.3
	20	4.3		20	4.3
IS05	21	4.3	IS12	21	4.3
	22	4.3		22	4.3
	23	4.3		23	4.3
	24	4.3		24	4.3
	25	0		25	0
	26	4.3		26	4.3
	27	4.3		27	4.3
	28	4.3		28	4.3
	29	4.3		29	4.3
	30	4.3		30	4.3
IS05	31	0	IS12	31	0
	32	4.3		32	4.3

• 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.

AP92 SP MATRIX P.W.B.

VM P.W.B.
3 LINE P.W.B.

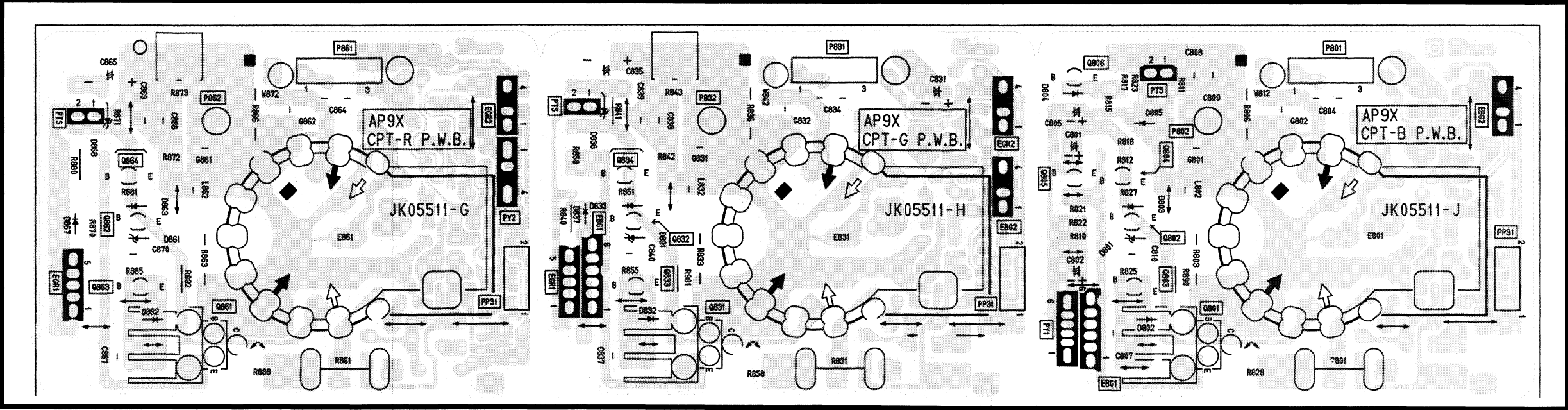
The image displays four detailed electronic circuit diagrams for the AP9X 3LINE P.W.B. (JK05501-E), AP9X VIDEO CHROMA P.W.B. (JK05501-C), AP9X VM P.W.B. (JK05501-D), and AP9X TERMINAL P.W.B. (JK05501-A). Each diagram shows a complex network of components including resistors (R), capacitors (C), diodes (D), and integrated circuits (ICs) connected by a dense web of lines. The diagrams are labeled with component values and part numbers, and include terminal blocks for connection.

AP9X 3LINE P.W.B. (JK05501-E)

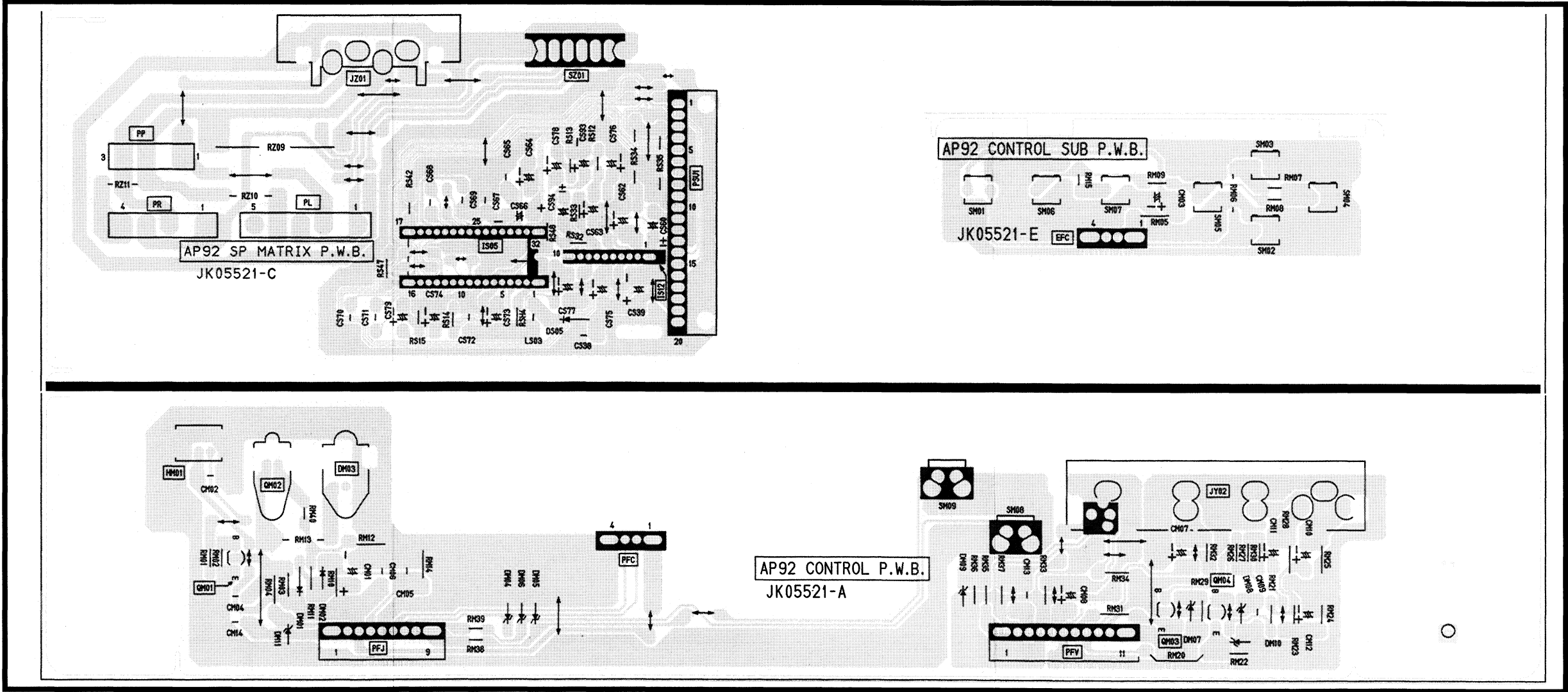
This diagram shows the internal circuitry of the 3-line P.W.B. It features a central IC labeled X01, surrounded by various resistors (R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151, R152, R153, R154, R155, R156, R157, R158, R159, R160, R161, R162, R163, R164, R165, R166, R167, R168, R169, R170, R171, R172, R173, R174, R175, R176, R177, R178, R179, R180, R181, R182, R183, R184, R185, R186, R187, R188, R189, R190, R191, R192, R193, R194, R195, R196, R197, R198, R199, R200, R201, R202, R203, R204, R205, R206, R207, R208, R209, R210, R211, R212, R213, R214, R215, R216, R217, R218, R219, R220, R221, R222, R223, R224, R225, R226, R227, R228, R229, R230, R231, R232, R233, R234, R235, R236, R237, R238, R239, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R264, R265, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282, R283, R284, R285, R286, R287, R288, R289, R290, R291, R292, R293, R294, R295, R296, R297, R298, R299, R300, R301, R302, R303, R304, R305, R306, R307, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R318, R319, R320, R321, R322, R323, R324, R325, R326, R327, R328, R329, R330, R331, R332, R333, R334, R335, R336, R337, R338, R339, R340, R341, R342, R343, R344, R345, R346, R347, R348, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R359, R360, R361, R362, R363, R364, R365, R366, R367, R368, R369, R370, R371, R372, R373, R374, R375, R376, R377, R378, R379, R380, R381, R382, R383, R384, R385, R386, R387, R388, R389, R390, R391, R392, R393, R394, R395, R396, R397, R398, R399, R400, R401, R402, R403, R404, R405, R406, R407, R408, R409, R410, R411, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, R438, R439, R440, R441, R442, R443, R444, R445, R446, R447, R448, R449, R450, R451, R452, R453, R454, R455, R456, R457, R458, R459, R460, R461, R462, R463, R464, R465, R466, R467, R468, R469, R470, R471, R472, R473, R474, R475, R476, R477, R478, R479, R480, R481, R482, R483, R484, R485, R486, R487, R488, R489, R490, R491, R492, R493, R494, R495, R496, R497, R498, R499, R500, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770,

CPT-R P.W.B. CPT-G P.W.B.
CPT-B P.W.B.

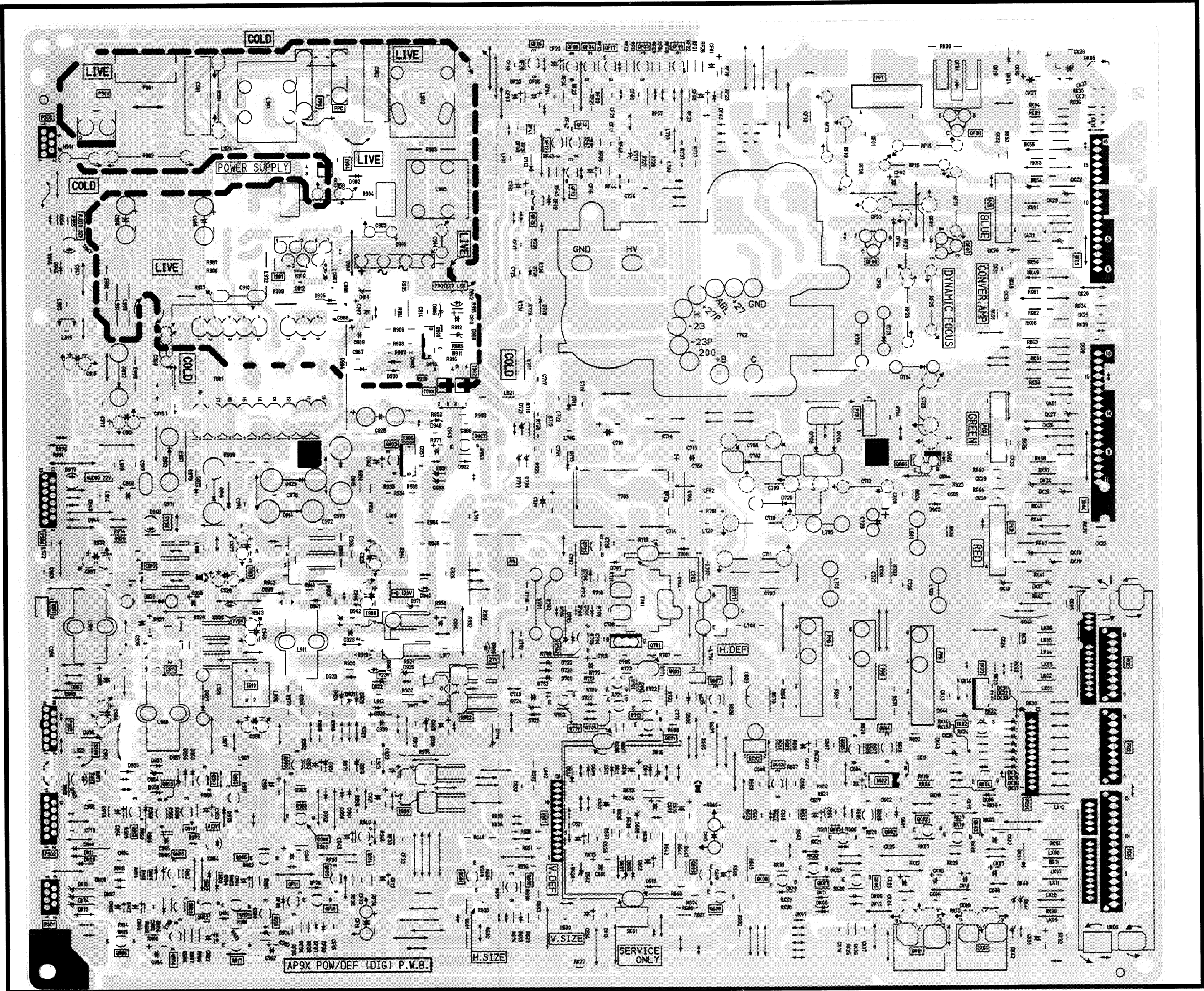
PRINTED CIRCUIT BOARD



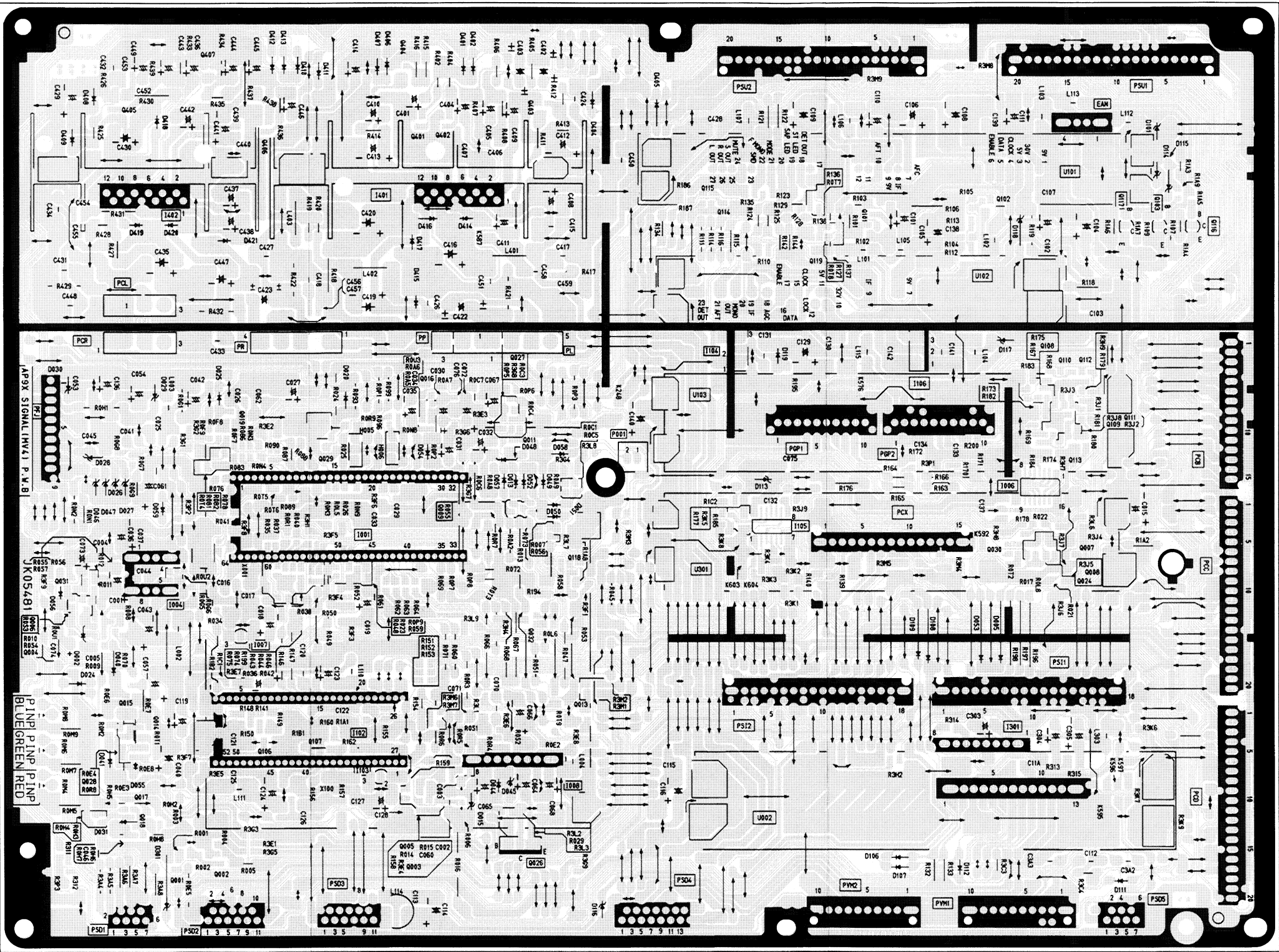
CONTROL SUB P.W.B. SP MATRIX P.W.B.
CONTROL P.W.B.



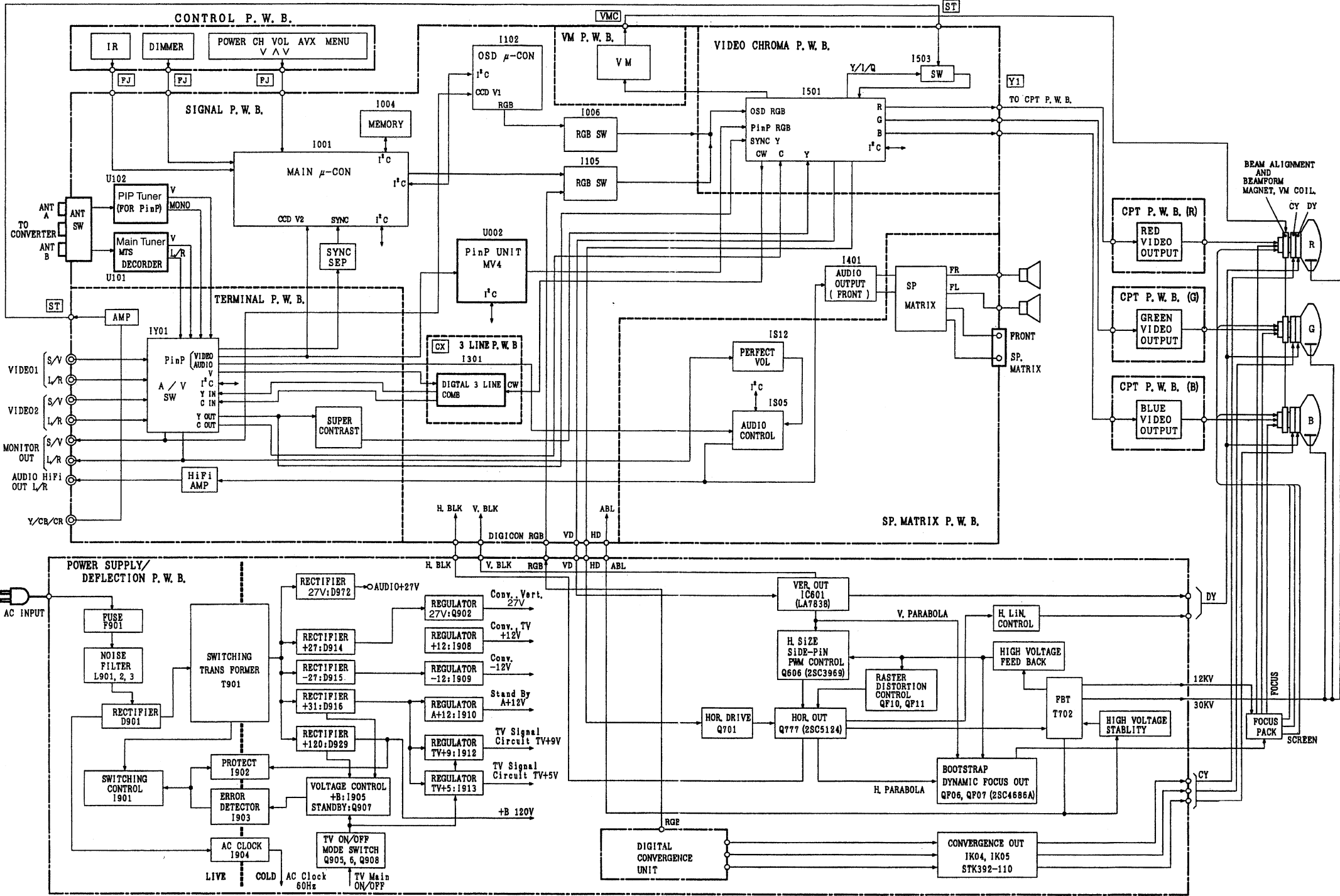
PRINTED CIRCUIT BOARD



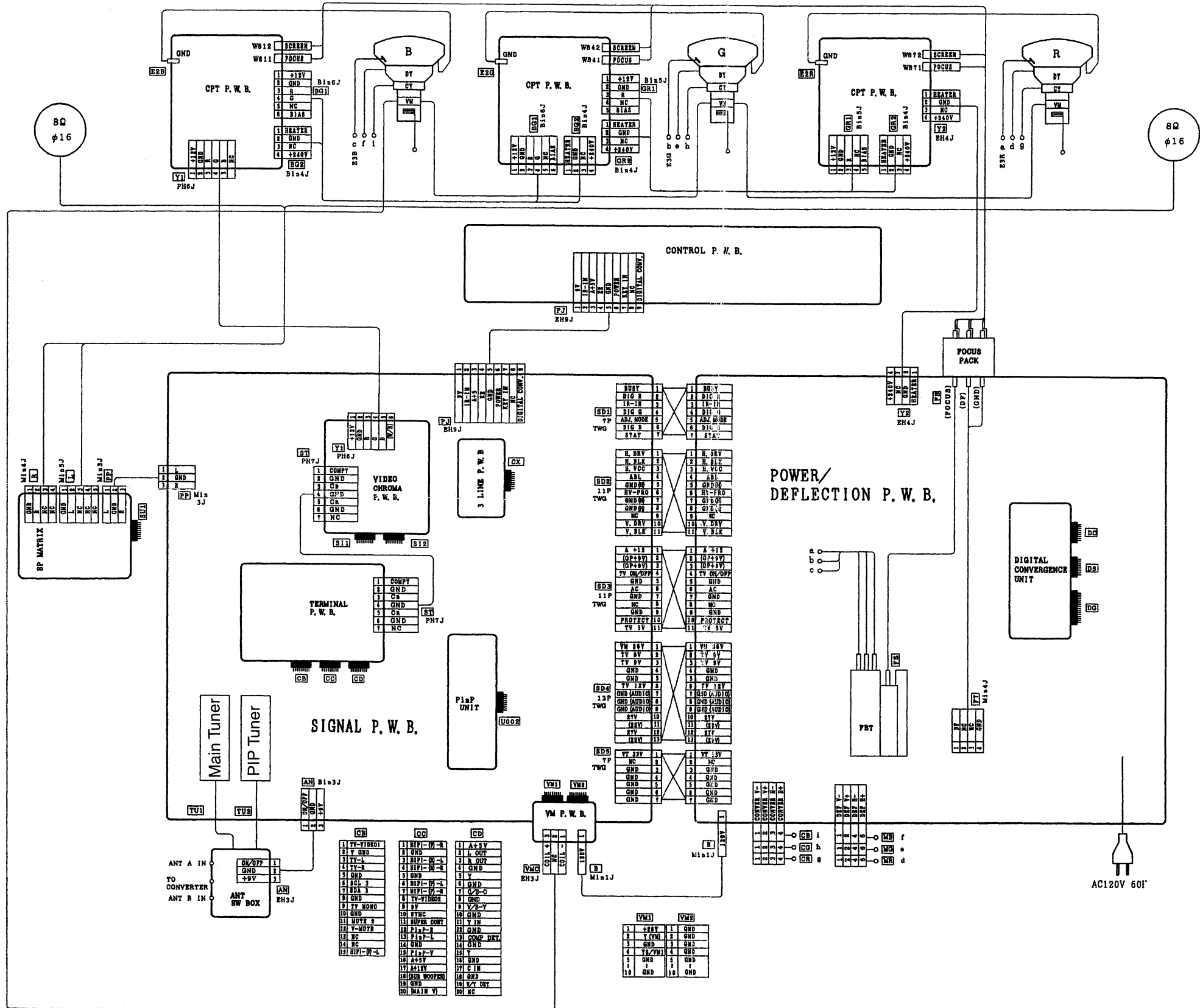
PRINTED CIRCUIT BOARD



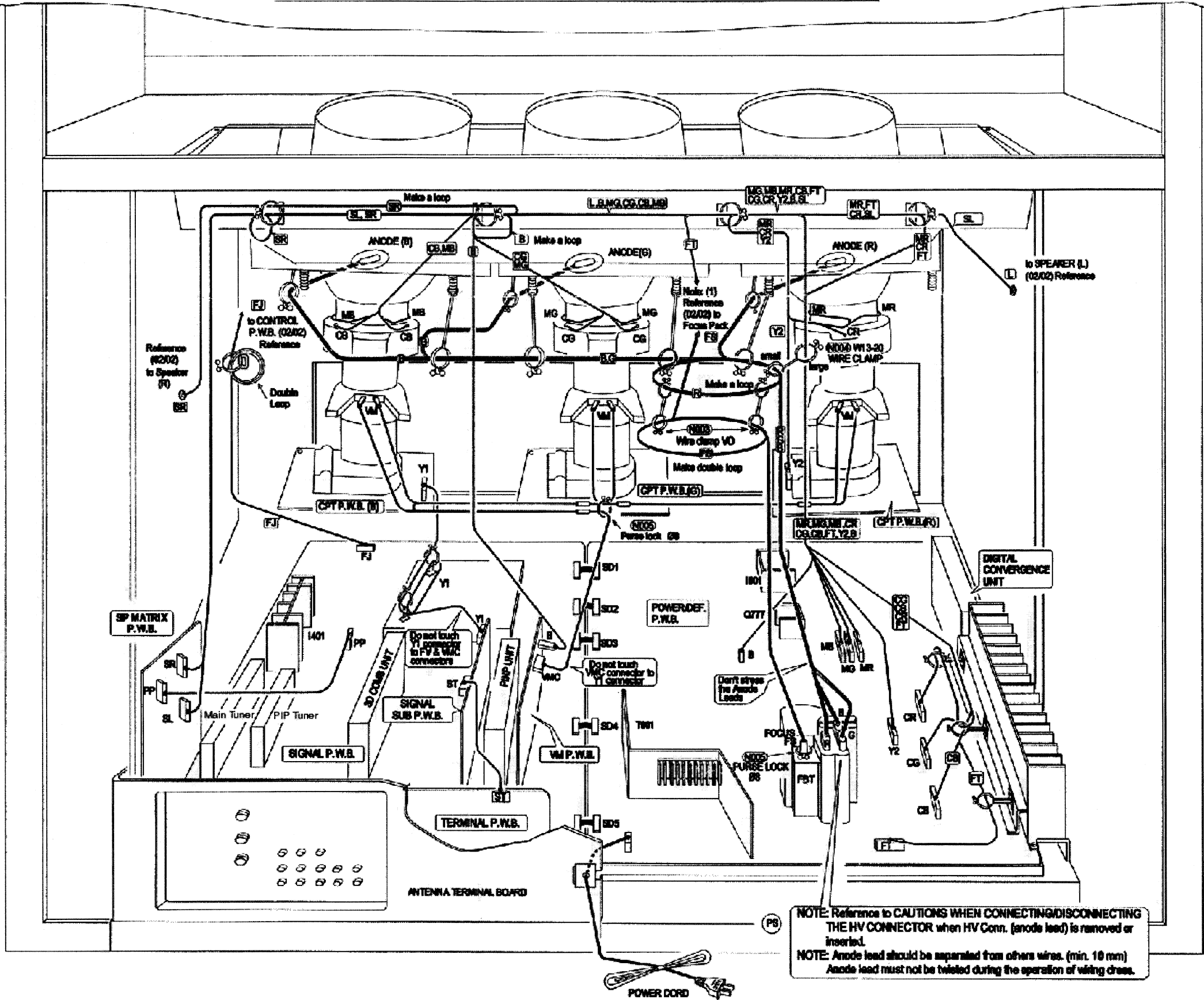
AP92 BLOCK DIAGRAM



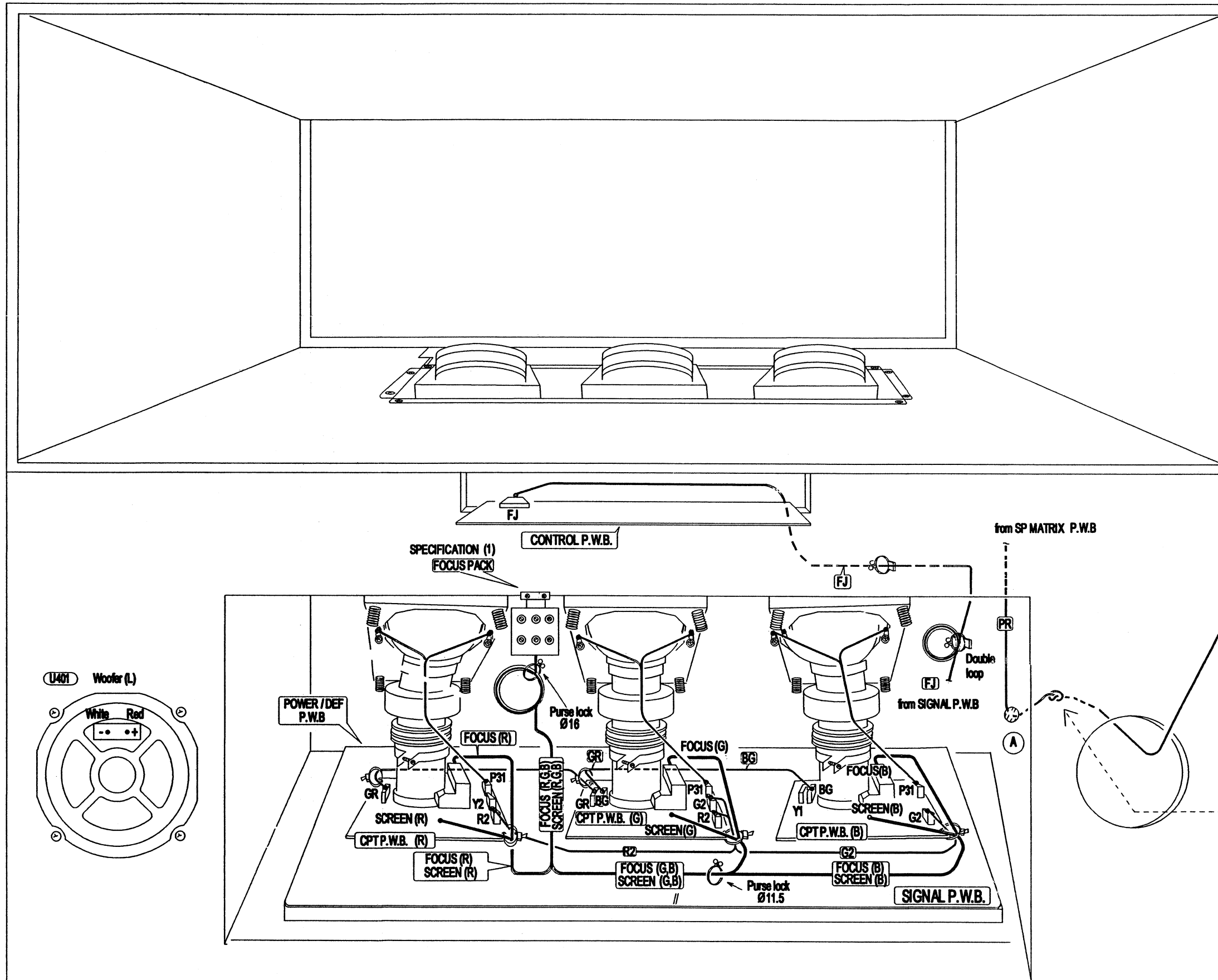
AP92 WIRING CONNECTION DIAGRAM



50FX49B WIRING DRAWING

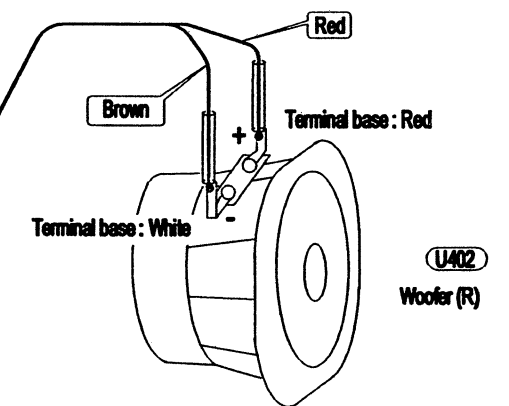
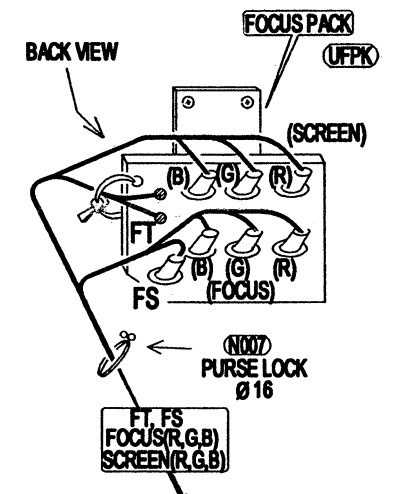


50FX49B WIRING DRAWING

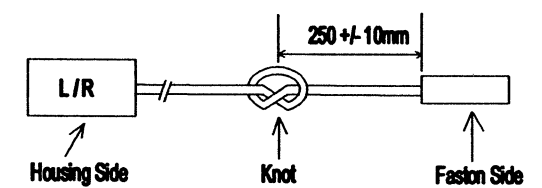


SPECIFICATION

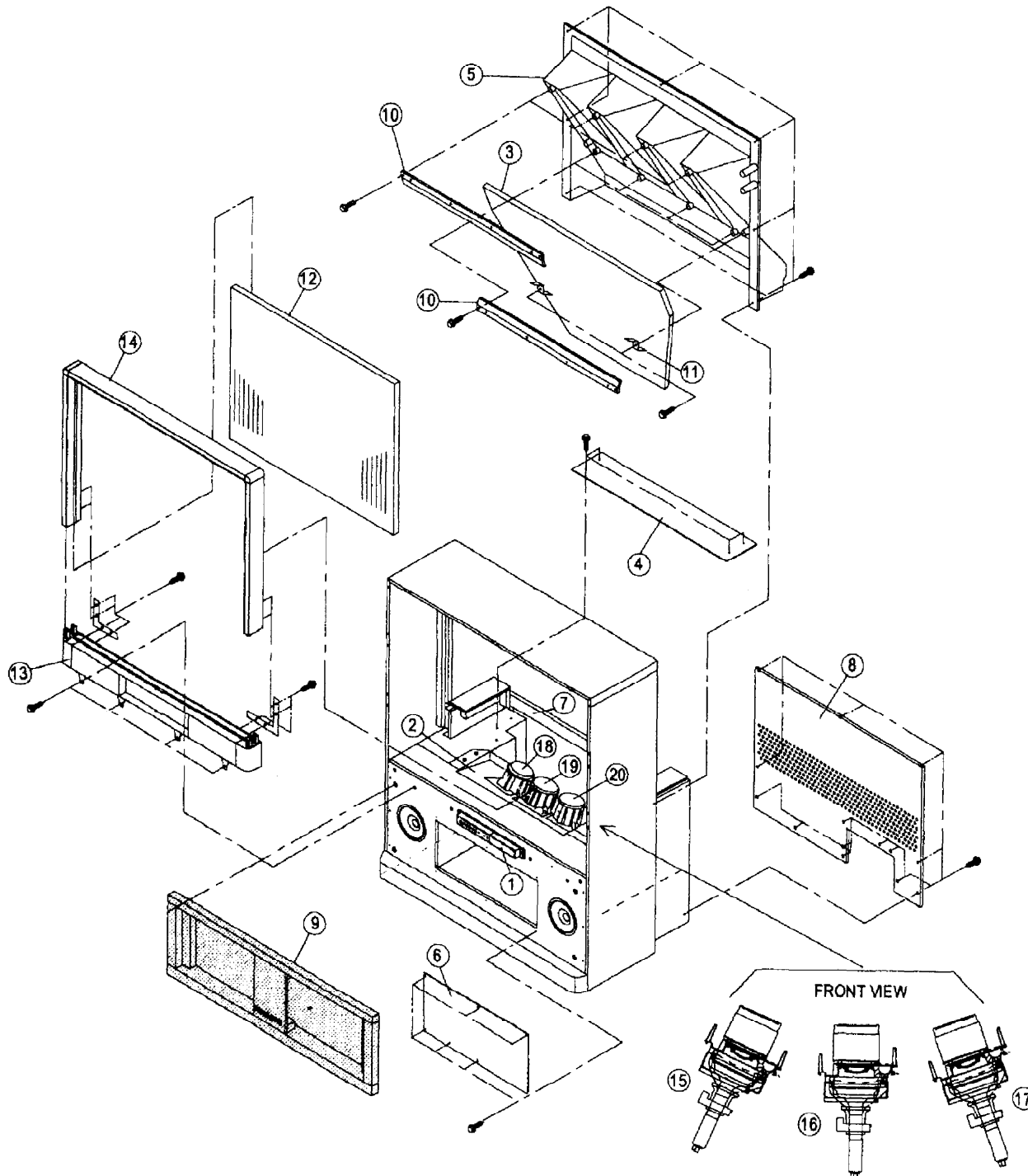
- (1) Refer to figure below about assembly of FOCUS PACK leads.



Make a knot as figure below after wires are through hole (A) in cabinet.



EXPLODED VIEW



NOTE: Refer to page 83 for description and parts list. 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:

AL: Aluminum Electrolytic
CD: Ceramic Disc
EL: Electrolytic
PF: Polyester Film
PP: Polypropylene
PL: Plastic
TA: Tantalum

Resistors:

CF: Carbon Film
CC: Carbon Composition
MF: Metal Oxide
VR: Variable Resistor
WW: Wire Wound
FR: Fuse Resistor
MG: Metal Gazed

Semiconductors:

TR: Transistor
DI: Diode
ZD: Zener Diode
VA: Varistor
TH: Thermistor
IC: Integrated Circuit

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	Convergence	K
Tuner	1	Power Supply	9	Control	M
Signal (Y) & Sync.	2	Signal Control (MTS)	A	Hor. & Vert. Det.	N
Audio	4	Signal Control (include B.P.F.)	C	3 Line Comb Filter	X
Signal (Chroma)	5	V.M.	E	Signal Control (Comp.)	Y
Vertical Deflection	6			SP Matrix	S
Horizontal Deflection	7				

SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CAPACITORS					
C002	0228758R	CAP 2125 CHIP 150PFJSL50V TAPE	C054	0800326R	CAP.-ELECTRO. 100UF-M 16V
C003	0246464R	CAP.-CERAMIC 100PF-J CH 50V TAPE	C057	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C004	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	C061	0800279R	CAP.-ELE. 1.0UF-M(SMG) 50V
C005	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	C064	0800326R	CAP.-ELE. 100UF-M 16V
C015	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C065	0800291R	CAP.-ELE. 10UF-M(SMG) 16V
C016	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE	C067	0800291R	CAP.-ELE. 10UF-M(SMG) 16V
C017	0890121R	CAP.-CERAMIC 33PF-J CH 50V	C068	0800317R	CAP.-ELE. 47UF-M(SMG) 16V
C018	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C070	AN00637R	CAP.POLY 0.1UF 50V TAPE
C019	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V	C071	AN00637R	CAP.POLY 0.1UF 50V TAPE
C025	0893044R	CAP2125CHIP 1000PFKB 50V TAPE	C075	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE
C026	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C076	0228756R	CAP2125CHIP 120PFJSL 50V TAPE
C029	0228758R	CAP 2125 CHIP 150PFJSL50V TAPE	C101	0800326R	CAP.-ELE. 100UF-M 16V
C030	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C102	0800326R	CAP.-ELE. 100UF-M 16V
C031	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C103	0893053R	CAP2125CHIP 47000PFKB 50V TAPE
C032	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C104	0800358R	CAP.-ELE. 1000UF-M 6.3V
C033	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C105	0800361N	CAP.-ELE 1000UF 16V
C034	0228756R	CAP2125CHIP 120PFJSL 50V TAPE	C106	0800358R	CAP.-ELE. 1000UF-M 6.3V
C035	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C107	0893053R	CAP2125CHIP 47000PFKB 50V TAPE
C036	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V	C108	0800361N	CAP.-ELE. 1000UF 16V
C037	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C109	0800361N	CAP.-ELECTRO 1000UF 16V
C040	0800353R	CAP.-ELECTRO.470UF-M 16V	C110	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C041	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C111	0800326R	CAP.-ELECTRO. 100UF-M 16V
C042	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C112	AN00624R	CAP.POLY 0.01UF 50V TAPE
C043	0800351R	CAP.-ELECTRO. 470UF-M 6.3V	C113	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C044	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C114	0800359R	CAP.-ELECTRO. 1000UF-M 10V
C045	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C115	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C046	0893048R	CAP2125CHIP 22000PFKB 50V TAPE	C116	0800361N	CAP.-ELECTRO 1000UF 16V
C053	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C119	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
			C11A	0228770R	CAP. MINI-CHIP 470PF-J SL 50V TAPE
			C120	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE

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.

SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C121	0228756R	CAP2125CHIP 120PFJSL 50V TAPE	C514	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C122	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C515	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C123	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C516	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C124	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C517	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C125	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C518	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C126	0228746R	CAP 2125 CHIP 47PFJSL 50V TAPE	C519	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V
C127	0228038R	CAP 2125CHIP 22PFJCH 50V TAPE	C520	0228032R	CAP 2125CHIP 12PFJCH 50V TAPE
C128	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C521	AN00615R	CAP.POLYESTER 0.0022UF 50V TAPE
C132	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C522	0800273R	CAP.-ELECTRO. 0.22UF-M 50V
C136	0800326R	CAP.-ELECTRO. 100UF-M 16V	C523	0800326R	CAP.-ELECTRO. 100UF-M 16V
C137	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C524	0800326R	CAP.-ELECTRO. 100UF-M 16V
C138	0228770R	CAP. MINI-CHIP 470PF-J SL 50V TAPE	C525	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C139	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C526	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C140	0800361N	CAP.-ELECTRO 1000UF 16V	C527	0800326R	CAP.-ELECTRO. 100UF-M 16V
C141	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C528	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C142	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C529	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V
C1C1	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	C530	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C3A2	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C531	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C3A3	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C532	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C401	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C533	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C402	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C534	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C403	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C535	0800353R	CAP.-ELECTRO.470UF-M 16V
C404	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C536	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE
C405	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C537	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C406	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	C538	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V
C407	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	C539	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C408	0800318R	CAP.-ELECTRO. 47UF-M 25V	C540	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C409	0800318R	CAP.-ELECTRO. 47UF-M 25V	C541	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C410	0800327R	CAP.-ELECTRO. 100UF-M 25V	C542	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C411	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C543	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C412	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C544	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
C413	0800327R	CAP.-ELECTRO. 100UF-M 25V	C545	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C414	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C546	0800326R	CAP.-ELECTRO. 100UF-M 16V
C415	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C547	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C416	0284824F	CAP.-ELECTRO. 2200UF 35V SMG	C548	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
C417	0880198R	CAP.-PLOY. 0.22UF-J 50V	C549	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
C418	0880198R	CAP.-PLOY. 0.22UF-J 50V	C550	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C419	0284824F	CAP.-ELECTRO. 2200UF 35V SMG	C551	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C420	0284824F	CAP.-ELECTRO. 2200UF 35V SMG	C552	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C424	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C553	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C426	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C554	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C427	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C555	0800326R	CAP.-ELECTRO. 100UF-M 16V
C428	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C556	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C451	0880198R	CAP.-PLOY. 0.22UF-J 50V	C557	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C456	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C558	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C457	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C601	AN00626R	CAP.POLYESTER 0.015UF 50V TAPE
C458	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C602	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C459	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C603	AL01326R	ALUMINIUM ELECT. CAP. PW(4.7UF 50V)
C504	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	C604	0800326R	CAP.-ELECTRO. 100UF-M 16V
C507	0228048R	CAP. MINI-CHIP 56PF-J CH 50V TAPE	C605	AN00619R	CAP.POLYESTER 0.0047UF 50V TAPE
C508	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C606	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C509	0890058R	CAP.-CERAMIC 8PF-50V	C607	0880198R	CAP.-PLOY. 0.22UF-J 50V
C510	0800326R	CAP.-ELECTRO. 100UF-M 16V	C608	0244501R	CAP.-CERAMIC 1000PF-K 500V
C511	0228708R	CAPACITOR MINI-CHIP 8PF-C SL 50V TAPE	C609	0244501R	CAP.-CERAMIC 1000PF-K 500V
C512	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C610	0800345R	CAP.-ELECTRO. 330UF-M(SMG) 25V
C513	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C611	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C613	AL01157R	AL ELECTROLYTIC CAPACITOR(1UF 50V)	C840	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C614	0800347N	CAP.-ELECTRO. 330UF-M(SMG) 50V	C864	AJ00559	CAPACITOT CERAMIC 2200PF2KV
C615	AL01143S	AL ELECTROLYTIC CAPACITOR(2200UF 25V)	C865	0800326R	CAP.-ELECTRO. 100UF-M 16V
C616	AL01336R	AL ELECT. CAPACITOR PW(10UF 16V)	C867	0890087R	CAP.-CERAMIC 1000PF-K 50V
C617	AL01297R	AL ELECT. CAPACITOR PW(1UF 50V)	C868	0890083R	CAP.-CERAMIC 470PF-K 50V
C619	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C870	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C620	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	 C901	AN01445S	ACROSS CAPA 0.22UF 250V RE224
C621	0298261R	CAP.-TANTALUM 1MF-J 35V	 C902	AN01443S	ACROSS CAPA 0.1UF 250V RE104
C622	0800347N	CAP.-ELECTRO. 330UF-M(SMG) 50V	C903	AJ00195F	CAPACITOR CERAMIC 4700P 250V F
C632	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C904	AJ00195F	CAPACITOR CERAMIC 4700P 250V F
C633	0279693R	CAP.-POLYESTER FLM 0.1UF	C905	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
C641	0244105R	CAP.-CERAMIC 2200PF-K 50V TAPE	C906	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
C701	0251771	CAP.-ELECTRO 220UF-M 160V	C907	0800328R	CAP. ELECTRO. 100UF-M 35V
C702	0299926F	CAP.-POLYESTER FILM 0.1UF-K 200V	C908	0890087R	CAP.-CERAMIC 1000PF-K 50V
C703	0890028M	CAP.-CERAMIC 330PF-K B 50V CYLINDRICAL	C909	0800332N	CAP.-ELECTRO. 100UF-M 100V
C704	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	C910	0299977F	CAP.-POLY FILM 0.0047UF-F 630V
C705	0243507R	CAP.-CERAMIC 330PF-K 500V TAPE	C912	0890085R	CAP.-CERAMIC 680PF-K 50V
C706	0244501R	CAP.-CERAMIC 1000PF-K 500V	C913	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C707	AJ00134	CAPACITOR CERAMIC 1000P DC2K-R	C914	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
 C708	AN01128F	METALLIZ POLY FILM CAP.0.0047UF	C915	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V
 C709	AN01134F	METALLIZ POLY FILM CAP.0.0075UF	C916	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C710	0299932F	CAP.-POLYPRO. 0.33UF-K 200V	C917	0244105R	CAP.-CERAMIC 2200PF-K 50V TAPE
C711	0299932F	CAP.-POLYPRO. 0.33UF-K 200V	C918	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V
 C712	0299707F	CAP.-POLYESTOR 0.015UF-K 630V	C919	0880198R	CAP.-PLOY. 0.22UF-J 50V
C713	0800277R	CAP.-ELECTORO. 0.47UF-M 50V	C920	0800328R	CAP. ELECTRO. 100UF-M 35V
C714	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE	C921	0800328R	CAP. ELECTRO. 100UF-M 35V
C715	0890089R	CAP.-CERAMIC 1500PF-K 50V	C922	0800326R	CAP.-ELECTRO. 100UF-M 16V
C717	0243503R	CAP.-CERAMIC 150PF-K B 500V	C923	0800328R	CAP. ELECTRO. 100UF-M 35V
C718	AL00042	CAP.ELECTRO 33UF 350V	C924	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
C719	0880198R	CAP.-PLOY. 0.22UF-J 50V	C925	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V
C721	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	C926	0880198R	CAP.-PLOY. 0.22UF-J 50V
C722	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	C927	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V
C723	AN01137F	METALLIZ POLY FILM CAP.0.01UF	C928	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V
C724	0279693R	CAP.-POLYESTER FLM 0.1UF	C929	0251703	CAP.ELECTRO 390UF-M 160V(KMH)
C725	0890087R	CAP.-CERAMIC 1000PF-K 50V	C930	AL00793S	CAP.EL.S-LEAD 1200UF-M(LXV) 16V
C726	0243508R	CAPACITOR-CERAMIC 390PF-K 500V	C931	0800353R	CAP.-ELECTRO.470UF-M 16V
C727	0244501R	CAP.-CERAMIC 1000PF-K 500V	C935	0800355N	CAP.ELECTRO. 470UF-M 35V
C729	0259471	CAP.-ELECTRO 6.8UF-M (BP) 50V	C937	AL00792S	CAP.-EL.S-LEAD 2200UF-M(LXV) 10V
C730	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	C939	0800328R	CAP. ELECTRO. 100UF-M 35V
C731	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	C940	0800353R	CAP.-ELECTRO.470UF-M 16V
C740	0284667R	CAP.-ELECTRO. 47UF-MBPR(SME)16V	C941	0880198R	CAP.-PLOY. 0.22UF-J 50V
C750	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	C942	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C771	0890084R	CAP.-CERAMIC 560PF-K 50V	C943	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C801	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C945	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C802	0800326R	CAP.-ELECTRO. 100UF-M 16V	C948	AL00952S	AL ELECTROLYTIC CAP.(4700UF6.3V)
C804	AJ00559	CAPACITOT CERAMIC 2200PF2KV	C949	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C805	0800326R	CAP.-ELECTRO. 100UF-M 16V	C952	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C807	0890087R	CAP.-CERAMIC 1000PF-K 50V	C954	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C808	0890084R	CAP.-CERAMIC 560PF-K 50V	C955	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C810	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C956	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C831	AL00037R	AL ELECTROLYTIC CAPACITOR(33UF350V)	C957	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C834	AJ00559	CAPACITOT CERAMIC 2200PF2KV	 C958	AJ00157R	CAPACITOR CERAMIC 1000P 400V B
C835	0800326R	CAP.-ELECTRO. 100UF-M 16V	 C959	AJ00163R	CAPACITOR CERAMIC 2200P 400V E
C837	0890087R	CAP.-CERAMIC 1000PF-K 50V	C962	0800326R	CAP.-ELECTRO. 100UF-M 16V
C838	0890084R	CAP.-CERAMIC 560PF-K 50V	C963	0800303R	CAP.-ELECTRO. 22UF-M 50V
C839	0890071R	CAP.-CERAMIC 56PF-J 50V	C964	0800361N	CAP.-ELECTRO 1000UF 16V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C965	0800308R	CAP.-ELECTRO. 33UF-M(SMG) 16V	CF03	AN01111F	METALLIZ POLY FILM CAPACITOR0.001UF
C966	0880198R	CAP.-PLOY. 0.22UF-J 50V	CF04	AN00614R	CAP.POLYESTER 0.0018UF 50V TAPE
C967	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	CF05	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C968	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	CF06	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C969	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	CF07	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C971	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF08	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C974	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF09	0880196R	CAP.-POLYESTER 0.15UF 50V HFT
C975	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF10	0880197R	CAP.POLYESTER 0.18UF 50V
CA01	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF12	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA02	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF13	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CA05	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF14	0259151F	CAP.-ELECTRO. 100UF 160V
CA06	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF15	0880198R	CAP.-PLOY. 0.22UF-J 50V
CA07	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF16	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CA08	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF17	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V
CA26	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF18	0245158	CAPACITOT CERAMIC 68PF/2KV
CA27	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF19	0245156	CAPACITOT CERAMIC 22PF/2KV
CA28	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF20	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA29	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF21	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CA34	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK01	0800353R	CAP.-ELECTRO.470UF-M 16V
CA37	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK02	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
CA38	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CK03	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA40	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK04	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA41	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK05	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA68	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CK06	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA69	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CK07	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA73	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CK08	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA74	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CK09	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA75	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CK10	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA76	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CK12	0890076R	CAP.CERAMIC 150PF-K 50V
CA82	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK13	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CA83	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V	CK14	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CC02	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CK15	AN00611R	CAP.POLYSTYLENE 0.001UF 50V TAPE
CC03	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CK16	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CE01	0800354R	CAP.-ELECTRO. 470UF-M 25V	CK17	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CE02	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CK18	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CE03	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CK19	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CE04	0890076R	CAP.CERAMIC 150PF-K 50V	CK20	0890076R	CAP.CERAMIC 150PF-K 50V
CE05	0800326R	CAP.-ELECTRO. 100UF-M 16V	CK21	0890076R	CAP.CERAMIC 150PF-K 50V
CE06	0890064R	CAP.-CERAMIC 18PF-J SL 50V	CK22	0890076R	CAP.CERAMIC 150PF-K 50V
CE08	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CK23	0890076R	CAP.CERAMIC 150PF-K 50V
CE09	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CK24	0890076R	CAP.CERAMIC 150PF-K 50V
CE10	0800321R	CAP.-ELECTRO. 47UF-M 50V	CK25	0890076R	CAP.CERAMIC 150PF-K 50V
CE11	0890074R	CAP.-CERAMIC 100PF-J 50V	CK27	0800356N	CAP.-ELECTRO. 470UF-M 50V
CE12	0244541F	CAPACITOR-CERAMIC 0.01MF-K B 500V	CK28	0800356N	CAP.-ELECTRO. 470UF-M 50V
CE13	0244541F	CAPACITOR-CERAMIC 0.01MF-K B 500V	CK29	0890076R	CAP.CERAMIC 150PF-K 50V
CE14	AL00009R	ALU.ELEC.CAP. 47UF 160V	CK30	0890076R	CAP.CERAMIC 150PF-K 50V
CE15	0247848R	CAP.-CERAMIC 56PF-J SL 500V	CK31	0890076R	CAP.CERAMIC 150PF-K 50V
CE16	AL00007R	AL ELECTROLYTIC CAP.(220UF160V)	CK32	0890076R	CAP.CERAMIC 150PF-K 50V
CE17	0244509R	CAP.-CERAMIC 4700PF-KB B 500V	CK33	0890076R	CAP.CERAMIC 150PF-K 50V
CE18	0890074R	CAP.-CERAMIC 100PF-J 50V	CK34	0890076R	CAP.CERAMIC 150PF-K 50V
CE19	AL00009R	ALU.ELEC.CAP. 47UF 160V	CK60	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CE20	AL00009R	ALU.ELEC.CAP. 47UF 160V	CM01	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CE21	0890079R	CAP.-CERAMIC 270PF-K 50V	CM02	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CE23	0890079R	CAP.-CERAMIC 270PF-K 50V	CM03	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CF01	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CM04	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CF02	AL01296R	AL ELECT. CAPACITOR PW(0.47UF 350V)	CM05	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CM06	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CX47	0800326R	CAP.-ELECTRO. 100UF-M 16V
CM14	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CX48	0893044R	CAP2125CHIP 10000PFBK 50V TAPE
CN01	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CX49	0800326R	CAP.-ELECTRO. 100UF-M 16V
CN02	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CX50	0800325R	CAP.-ELECTRO. 100UF-M 10V
CN03	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CX52	0800325R	CAP.-ELECTRO. 100UF-M 10V
CN04	0890084R	CAP.-CERAMIC 560PF-K 50V	CX53	0893044R	CAP2125CHIP 10000PFBK 50V TAPE
CN05	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX54	0284647R	CAP.-ELECTRO.22UF-SME(BP) 16V
CN06	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CX55	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE
CS38	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CX56	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE
CS39	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V	CX57	0228048R	CAPACITOR MINI-CHIP 56PF-J CH 50V TAPE
CS60	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	CX58	0228048R	CAPACITOR MINI-CHIP 56PF-J CH 50V TAPE
CS62	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CY01	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CS63	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CY04	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CS64	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY05	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CS65	0890087R	CAP.-CERAMIC 1000PF-K 50V	CY06	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CS66	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY07	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
CS67	0890087R	CAP.-CERAMIC 1000PF-K 50V	CY08	0800326R	CAP.-ELECTRO. 100UF-M 16V
CS68	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CY09	0893053R	CAP2125CHIP 47000PFBK 50V TAPE
CS69	AN00621R	CAP.POLYESTER 0.0056UF 50V TAPE	CY10	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CS70	AN00621R	CAP.POLYESTER 0.0056UF 50V TAPE	CY11	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS71	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CY12	0800326R	CAP.-ELECTRO. 100UF-M 16V
CS72	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CY13	0893033R	CAP 2125CHIP 1500PFBK 50V TAPE
CS73	0800326R	CAP.-ELECTRO. 100UF-M 16V	CY14	0800353R	CAP.-ELECTRO.470UF-M 16V
CS74	0800326R	CAP.-ELECTRO. 100UF-M 16V	CY17	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CS75	0800326R	CAP.-ELECTRO. 100UF-M 16V	CY18	0800326R	CAP.-ELECTRO. 100UF-M 16V
CS76	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY19	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CS77	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CY20	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CS78	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY30	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS79	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY31	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS93	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY32	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS94	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	CY33	0893044R	CAP2125CHIP 10000PFBK 50V TAPE
CX01	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CY34	0800326R	CAP.-ELECTRO. 100UF-M 16V
CX02	0228040R	CAP 2125CHIP 27PFJCH 50V TAPE	CY37	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CX03	0228008R	CAP 2125 CHIP 8PF-C CH 50V TAPE	CY38	0800353R	CAP.-ELECTRO.470UF-M 16V
CX04	0228034R	CAP 2125 CHIP 15PF-J CH 50V TAPE	CY39	0893044R	CAP2125CHIP 10000PFBK 50V TAPE
CX24	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	CY50	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CX25	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	CY75	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CX26	0893044R	CAP2125CHIP 10000PFBK 50V TAPE			
CX27	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V			
CX28	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D005	2344041M	DIODES DIODE 1SS254TA/1SS270TA
CX29	0893053R	CAP2125CHIP 47000PFBK 50V TAPE	D013	2344041M	DIODE 1SS254TA/1SS270TA
CX30	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D015	2331827M	ZENER DIODE HZ-9 TAPE (C1)SI 500MW 9.3V
CX31	0228060R	CAP 2125 CHIP 180PF-J CH 50V TAPE	D024	2344041M	DIODE 1SS254TA/1SS270TA
CX32	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D025	2344041M	DIODE 1SS254TA/1SS270TA
CX33	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D026	2348212M	DIO-MTZ-J15BTA
CX34	0800325R	CAP.-ELECTRO. 100UF-M 10V	D027	2348212M	DIO-MTZ-J15BTA
CX35	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D028	2348212M	DIO-MTZ-J15BTA
CX36	0800325R	CAP.-ELECTRO. 100UF-M 10V	D029	2348212M	DIO-MTZ-J15BTA
CX37	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D030	2348212M	DIO-MTZ-J15BTA
CX38	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D031	2344041M	DIODE 1SS254TA/1SS270TA
CX39	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D040	2344041M	DIODE 1SS254TA/1SS270TA
CX40	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D041	2344041M	DIODE 1SS254TA/1SS270TA
CX41	0893044R	CAP2125CHIP 10000PFBK 50V TAPE	D044	2344041M	DIODE 1SS254TA/1SS270TA
CX42	0800334R	CAP.-ELECTRO. 220UF 10V	D045	2348102M	ZENER MTZJ-5.1B TA
CX45	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	D046	2348212M	DIO-MTZ-J15BTA
CX46	0800326R	CAP.-ELECTRO. 100UF-M 16V	D048	2344041M	DIODE 1SS254TA/1SS270TA

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D053	2344041M	DIODE 1SS254TA/1SS270TA	D710	CH02001M	DIODE 1SR139-400
D055	CH00151M	DIODE DSM1SD2(200V)TAPE	 D711	CH00031M	DIODE AU02V1(280V)
D057	2344041M	DIODE 1SS254TA/1SS270TA	 D712	CH00031M	DIODE AU02V1(280V)
D058	2344041M	DIODE 1SS254TA/1SS270TA	D713	CH00901M	DIODE RGP02-15E 1500V 20A
D059	2344041M	DIODE 1SS254TA/1SS270TA	D714	CH00901M	DIODE RGP02-15E 1500V 20A
D101	2348212M	DIO-MTZ-J15BTA	D715	CH02011M	DIODE 1SR153-400
D106	2344041M	DIODE 1SS254TA/1SS270TA	D716	2348231M	ZENER DIODE MTZ-18A TA
D107	2344041M	DIODE 1SS254TA/1SS270TA	D717	2339612M	ZD HZS-3 TA (BLL) SI 200MA 3V
D111	2344041M	DIODE 1SS254TA/1SS270TA	D718	2344041M	DIODE 1SS254TA/1SS270TA
D112	2344041M	DIODE 1SS254TA/1SS270TA	D719	CH02001M	DIODE 1SR139-400
D113	2348123M	ZENER MTZJ-6.2C TA	D720	2334305M	ZD RD30E (B4 T2/TP/TA) SI 5MA 30.51V
D116	2331815M	ZENER HZ7-B2	D721	2348193M	ZENER DIODE MTZJ-12C TA
D117	2335991M	ZENER HZ-T33 (02 TP)	D722	2348151M	ZENER MTZ-J8.2ATA
D118	2335991M	ZENER HZ-T33 (02 TP)	D723	2344041M	DIODE 1SS254TA/1SS270TA
D301	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	D724	2348123M	ZENER MTZJ-6.2C TA
D401	2344041M	DIODE 1SS254TA/1SS270TA	D725	2344041M	DIODE 1SS254TA/1SS270TA
D402	2344041M	DIODE 1SS254TA/1SS270TA	D777	2334243M	ZD RD16E (B2 T2/TP/TA) SI 10MA 16.51V
D404	2344041M	DIODE 1SS254TA/1SS270TA	D778	2334305M	ZD RD30E (B4 T2/TP/TA) SI 5MA 30.51V
D405	2344041M	DIODE 1SS254TA/1SS270TA	D802	2344041M	DIODE 1SS254TA/1SS270TA
D406	2344041M	DIODE 1SS254TA/1SS270TA	D803	2344041M	DIODE 1SS254TA/1SS270TA
D407	2344041M	DIODE 1SS254TA/1SS270TA	D804	2344041M	DIODE 1SS254TA/1SS270TA
D502	2344041M	DIODE 1SS254TA/1SS270TA	D805	2344041M	DIODE 1SS254TA/1SS270TA
D503	2344041M	DIODE 1SS254TA/1SS270TA	D832	2344041M	DIODE 1SS254TA/1SS270TA
D504	2344041M	DIODE 1SS254TA/1SS270TA	D833	2344041M	DIODE 1SS254TA/1SS270TA
D505	2348163M	ZENER MTZJ-9.1C TA	D862	2344041M	DIODE 1SS254TA/1SS270TA
D507	2344041M	DIODE 1SS254TA/1SS270TA	D863	2344041M	DIODE 1SS254TA/1SS270TA
D508	2344041M	DIODE 1SS254TA/1SS270TA	 D901	2338313	DIODE RBV-406M (60V) SI 0.1USEC
D509	2348163M	ZENER MTZJ-9.1C TA	D902	CH02001M	DIODE 1SR139-400
D510	2348163M	ZENER MTZJ-9.1C TA	D903	CH02001M	DIODE 1SR139-400
D511	2348163M	ZENER MTZJ-9.1C TA	D904	CH02011M	DIODE 1SR153-400
D513	2344041M	DIODE 1SS254TA/1SS270TA	D905	CH02011M	DIODE 1SR153-400
D515	2348163M	ZENER MTZJ-9.1C TA	D906	2348253M	ZENER MTZ-J22CTA
D516	2348163M	ZENER MTZJ-9.1C TA	D907	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D517	2348163M	ZENER MTZJ-9.1C TA	D908	CH02011M	DIODE 1SR153-400
D602	2344041M	DIODE 1SS254TA/1SS270TA	D910	2331844M	ZENER HZ12-B1
D603	CH02011M	DIODE 1SR153-400	D911	2331844M	ZENER HZ12-B1
D604	CH02011M	DIODE 1SR153-400	D912	CH00183R	LIGHT EMITTING DIODE (SLZ-981C-06-T1)
D605	2344041M	DIODE 1SS254TA/1SS270TA	D913	2336615	DIODE RU3YX (LF-A1)
D606	2344041M	DIODE 1SS254TA/1SS270TA	D914	2337952S	DIODE RU4YX(LF015-302)
D607	2334243M	ZD RD16E (B2 T2/TP/TA) SI 10MA 16.51V	D915	2337952S	DIODE RU4YX(LF015-302)
D609	CH02001M	DIODE 1SR139-400	D916	2337952S	DIODE RU4YX(LF015-302)
D610	CH02001M	DIODE 1SR139-400	D917	CH02001M	DIODE 1SR139-400
D611	CH02001M	DIODE 1SR139-400	D918	2348271M	ZENER MTZ-J27ATA
D612	2331154M	ZD HZ-12 (A1-3 B1-3.TA)SI 200MA 14.3V	D919	2348213M	ZENER DIODE MTZJ-15C TA
D613	2344041M	DIODE 1SS254TA/1SS270TA	D920	2344041M	DIODE 1SS254TA/1SS270TA
D614	CH02011M	DIODE 1SR153-400	D921	2348121M	ZENER MTZJ-6.2A TA
D615	2344041M	DIODE 1SS254TA/1SS270TA	D922	2348283M	ZENER DIODE MTZJ-30C TA
D616	2334305M	ZENER RD30E (B4 T2/TP/TA) SI 5MA 30.51V	D923	2344041M	DIODE 1SS254TA/1SS270TA
D701	2344041M	DIODE 1SS254TA/1SS270TA	D924	2348042M	ZENER MTZ-J3.0BTA
 D702	2348511G	DIODE RS3FS LF-U1(014-201)	D925	2348264M	ZENER DIODE MTZJ-24D TA
 D703	CH00891S	DIODE UF5406 (600V)	D926	CH02011M	DIODE 1SR153-400
 D704	CH00891S	DIODE UF5406 (600V)	D928	CH01042M	DIODE RK34 (40V)
D705	2344041M	DIODE 1SS254TA/1SS270TA	D929	CH01061F	DIODE RU4AM(600V)
D706	2344041M	DIODE 1SS254TA/1SS270TA	D931	2348283M	ZENER DIODE MTZJ-30C TA
D708	2344041M	DIODE 1SS254TA/1SS270TA	D932	2344041M	DIODE 1SS254TA/1SS270TA
 D709	2335042M	ZENER HZ-22 (2L TP) SI 200MA 400MW	D933	2348132M	ZENER MTZ-J6.8BTA

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D936	2348193M	ZENER DIODE MTZJ-12C TA	DK06	2344041M	DIODE 1SS254TA/1SS270TA
D937	2344041M	DIODE 1SS254TA/1SS270TA	DK16	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D938	CH00921M	DIODE SB140 40V 1A	DK17	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D939	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DK18	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D940	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DK19	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D941	2344041M	DIODE 1SS254TA/1SS270TA	DK20	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D942	2348132M	ZENER MTZ-J6.8BTA	DK21	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D943	2344041M	DIODE 1SS254TA/1SS270TA	DK22	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D944	2344041M	DIODE 1SS254TA/1SS270TA	DK23	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D945	CH02011M	DIODE 1SR153-400	DK24	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D946	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DK25	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D947	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DK26	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D948	2344041M	DIODE 1SS254TA/1SS270TA	DK27	2334324M	Z DIODE RD36E TAPE (B3) SI 500MW 36V
D951	2348092M	ZENER MTZ-J4.7BTA	DK40	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D952	2344041M	DIODE 1SS254TA/1SS270TA	DK41	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D956	2344041M	DIODE 1SS254TA/1SS270TA	DK42	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D957	2348213M	ZENER DIODE MTZJ-15C TA	DK43	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D958	2344041M	DIODE 1SS254TA/1SS270TA	DK44	2331806M	ZENER DIODE HZ-6 TAPE (B3) SI 500MW
D959	2344041M	DIODE 1SS254TA/1SS270TA	DM01	2344041M	DIODE 1SS254TA/1SS270TA
D960	2344041M	DIODE 1SS254TA/1SS270TA	DM02	2344041M	DIODE 1SS254TA/1SS270TA
D961	2344041M	DIODE 1SS254TA/1SS270TA	DM03	CH00231	LED SLH-56VC3F
D962	2344041M	DIODE 1SS254TA/1SS270TA	DM04	2348212M	DIO-MTZ-J15BTA
D963	2344041M	DIODE 1SS254TA/1SS270TA	DM05	2348212M	DIO-MTZ-J15BTA
D964	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DM11	2348212M	DIO-MTZ-J15BTA
D966	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DN01	2344041M	DIODE 1SS254TA/1SS270TA
D967	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DN02	2344041M	DIODE 1SS254TA/1SS270TA
D969	2348102M	ZENER MTZJ-5.1B TA	DN03	2344041M	DIODE 1SS254TA/1SS270TA
D971	2348143M	DIODE MTZ-J7.5CTA	DN04	2344041M	DIODE 1SS254TA/1SS270TA
D973	CH02011M	DIODE 1SR153-400	DN05	2348071M	ZENER DIODE MTZJ-3.9A TA
D974	2348111M	ZENER MTZ-J5.6ATA	DN06	2344041M	DIODE 1SS254TA/1SS270TA
D975	2344041M	DIODE 1SS254TA/1SS270TA	DN07	2344041M	DIODE 1SS254TA/1SS270TA
DA01	2344041M	DIODE 1SS254TA/1SS270TA	DN08	CH02001M	DIODE 1SR139-400
DA02	2344041M	DIODE 1SS254TA/1SS270TA	DN09	2331849M	ZENER HZ12C3 (TA) SI 500MW
DA03	2348031M	DIO-MTZ-J2.7ATA	DN10	2344041M	DIODE 1SS254TA/1SS270TA
DA04	2348031M	DIO-MTZ-J2.7ATA	DN11	2344041M	DIODE 1SS254TA/1SS270TA
DA11	2344041M	DIODE 1SS254TA/1SS270TA	DS05	CH00151M	DIODE DSM1SD2(200V)TAPE
DA12	2344041M	DIODE 1SS254TA/1SS270TA	DY01	2344041M	DIODE 1SS254TA/1SS270TA
DA15	2344041M	DIODE 1SS254TA/1SS270TA	DY05	2348163M	ZENER MTZJ-9.1C TA
DA16	2344041M	DIODE 1SS254TA/1SS270TA	DY06	2348163M	ZENER MTZJ-9.1C TA
DA19	2344041M	DIODE 1SS254TA/1SS270TA	DY07	2348163M	ZENER MTZJ-9.1C TA
DE03	2344041M	DIODE 1SS254TA/1SS270TA			
DE04	CH00151M	DIODE DSM1SD2(200V)TAPE			
DE05	CH00151M	DIODE DSM1SD2(200V)TAPE	 F901	2722358	FUSE AC05A
DE06	CH00151M	DIODE DSM1SD2(200V)TAPE			
DE07	CH00151M	DIODE DSM1SD2(200V)TAPE			
DF01	2344041M	DIODE 1SS254TA/1SS270TA	 H901	2793312	CP-EXN-471P365L CAPRISTOR
DF02	2344041M	DIODE 1SS254TA/1SS270TA	HM01	CZ00523	SBX1981-52P R/C RCVR.
DF03	2344041M	DIODE 1SS254TA/1SS270TA	UKDG	CS00351	(HC2131) DCU
DF04	2338531M	DIODE EG-01C (V) SI 0.5A	U002	HP00094	PINP UNIT KC-010S
DF05	2344041M	DIODE 1SS254TA/1SS270TA	U101	HC00311	FE (MAIN) TUNER UNIT V6-A30FT
DF07	2344041M	DIODE 1SS254TA/1SS270TA	U102	2429691	PIP TUNER V8-A68FT
DF08	2344041M	DIODE 1SS254TA/1SS270TA	U401	2412921	SPEAKER 160DG
DF09	2344041M	DIODE 1SS254TA/1SS270TA	U402	2412921	SPEAKER 160DG
DK01	2339551M	DIODE ED14(V1) SI 5MA 45V	 UFPK	AZ00161	CRX FOCUS PACK HDK
DK04	CH02011M	DIODE 1SR153-400			
DK05	CH02011M	DIODE 1SR153-400			

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
INTEGRATED CIRCUITS					
I001	0000000	UNDECIDED	L505	BH00697R	COIL 100UH
I004	CP05272U	E2PROM M24C16-BN6	L506	BH00697R	COIL 100UH
I006	CK07131R	ANALOG MONO. IC (MC14053BFEL)	L507	BH00697R	COIL 100UH
I007	2000541	IC M51951BSL	L508	2123112M	COIL-AXIAL 47UH-K
I008	2020342	IC MM1115XS	L509	BH00697R	COIL 100UH
I102	CP05243U	Z9035612PSCR_B	L601	BZ00845	CHOKO COIL 680UH SL1720
I103	2000541	IC M51951BSL	L602	2123468M	FERRITE BEADS CORE LEAD 0.8MH
I105	2015495R	IC HD74HC32FPEL	L701	BH00212R	FILTER COIL 68UH
I106	CP05571	IC BA17805	L702	2123468M	FERRITE BEADS CORE LEAD 0.8MH
I401	2004751	IC TA8200AH AUDIO OUTPUT	L703	2123468M	FERRITE BEADS CORE LEAD 0.8MH
I501	CP03552U	IC TA1222BN	L704	2123468M	FERRITE BEADS CORE LEAD 0.8MH
I503	CK08951R	MM1389XFBF	L705	BZ00846	CHOKO COIL 1000UH SL1720
I601	2003541	IC LA7838	L706	BH00217R	FILTER COIL 180UH
I602	CP06351U	ANALOG MONOLITHIC IC BA10393	L708	BH00205R	FILTER COIL 22UH
 I901	CZ00451	HYBRID IC (STR-M6811A)	L709	BZ00317	LINEARITY COIL 140UH-W
 I902	2000465	IC PS2501-1 (KC/LC)	L710	BZ00318	LINEARITY COIL 50UH-W
 I903	2000465	IC PS2501-1 (KC/LC)	L720	BH00228R	COIL 332K-1T7608A
 I904	2000465	IC PS2501-1 (KC/LC)	L803	BH00699R	COIL 150UH
 I905	2381349	HYBRID IC (SE120N:+B CONT.)	L833	BH00699R	COIL 150UH
I908	CP05573	IC BA17812	L863	BH00699R	COIL 150UH
I909	1360891	IC-NJM7912FA	 L901	BZ01841	LX-LINE FILTER(102)
 I910	CP03912F	ANALOG MONOLITHIC IC (SI-8402L)	 L902	BZ01831	LX-LINE FILTER(382)
I912	CP03923F	ANALOG MONOLITHIC IC (SI-8090S)	 L903	BZ01841	LX-LINE FILTER(102)
I913	CP03922F	ANALOG MONOLITHIC IC (SI-8050S)	L905	BH00201R	FILTER COIL 10UH
IK01	CP05571	IC BA17805	L906	BH00201R	FILTER COIL 10UH
IK02	CP01631R	ICL-PST9142	L907	BH00214R	FILTER COIL 100UH
IK03	CP05571	IC BA17805	L909	BV00901	PL-CHOPPER COIL 200UH/2A
IK04	CZ00431	HYBRID IC (STK392-110)	L910	BH00212R	FILTER COIL 68UH
IK05	CZ00431	HYBRID IC (STK392-110)	L911	BV00901	PL-CHOPPER COIL 200UH/2A
IS05	2020001	IC TDA9860	L912	BH00214R	FILTER COIL 100UH
IS12	CP02601	AN5285K	L913	BH00214R	FILTER COIL 100UH
IX01	CP04011U	ANALOG MONOLITHIC IC (TC90A13N)	L914	BH00214R	FILTER COIL 100UH
IY01	2020452	ANALOG MONOLITHIC IC (CXA1545AS)	L917	BH00214R	FILTER COIL 100UH
IY02	2003423	IC UPC7893AHF ICL	L921	2161152	FILTER COIL
COILS					
L002	2123781R	FILTER COIL 101K	L922	BH00214R	FILTER COIL 100UH
L003	2123781R	FILTER COIL 101K	L924	2123469M	FERRITE BEADS CORE 2.3UH
L004	BH00697R	COIL 100UH	L925	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L101	BH00697R	COIL 100UH	L926	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L102	BH00697R	COIL 100UH	L927	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L103	2123781R	FILTER COIL 101K	L930	2123469M	FERRITE BEADS CORE 2.3UH
L104	2123781R	FILTER COIL 101K	L931	2123469M	FERRITE BEADS CORE 2.3UH
L105	2123781R	FILTER COIL 101K	L932	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L106	2123781R	FILTER COIL 101K	LA02	BH00697R	COIL 100UH
L107	2123781R	FILTER COIL 101K	LE01	2123097M	LAL02 TYPE AXIAL COIL 3.9UH-K
L110	2123781R	FILTER COIL 101K	LE02	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L111	2123781R	FILTER COIL 101K	LE03	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L114	BH00214R	FILTER COIL 100UH	LE04	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L401	BH01341M	COIL FERRITE BEADS	LF01	BH00229R	COIL 472K-1T7608A
L402	BH01341M	COIL FERRITE BEADS	LF02	BH00229R	COIL 472K-1T7608A
L403	BH01341M	COIL FERRITE BEADS	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
			LK04	2123468M	FERRITE BEADS CORE LEAD 0.8MH
			LK05	2123468M	FERRITE BEADS CORE LEAD 0.8MH
			LK06	2123468M	FERRITE BEADS CORE LEAD 0.8MH
			LK07	2123468M	FERRITE BEADS CORE LEAD 0.8MH
			LK08	2123468M	FERRITE BEADS CORE LEAD 0.8MH

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
LK09	2123469M	FERRITE BEADS CORE 2.3UH	Q114	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK10	2123469M	FERRITE BEADS CORE 2.3UH	Q115	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK11	2123469M	FERRITE BEADS CORE 2.3UH	Q401	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK12	2123469M	FERRITE BEADS CORE 2.3UH	Q402	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LS03	BH00697R	COIL 100UH	Q403	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX01	2123105M	LAL02 AXIAL COIL 15UH-K	Q404	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX05	BH00697R	COIL 100UH	Q500	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX06	BH00697R	COIL 100UH	Q501	CA00171R	TRS.CHIP IMT5 25V TAPE
LX07	BH00697R	COIL 100UH	Q502	2328072R	TRS.CHIP FMW2 40V TAPE
LX08	BH00697R	COIL 100UH	Q503	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX09	BH00697R	COIL 100UH	Q504	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX10	BH00697R	COIL 100UH	Q505	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX11	2123109M	COIL-AXIAL 33UH-K	Q506	CA11264R	PHOTO TRANSISTOR(DTC114EKA)
LX12	2123107M	LAL02 AXIAL COIL 22UH-K	Q509	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LX13	2123107M	LAL02 AXIAL COIL 22UH-K	Q510	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LY01	BH00697R	COIL 100UH	Q511	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LY04	BH00697R	COIL 100UH	Q512	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LY05	BH00697R	COIL 100UH	Q513	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LY06	2123781R	FILTER COIL 101K	Q515	CA11271R	TRS 2SA1037AK T146 RS
LY07	BH00697R	COIL 100UH	Q516	CA11271R	TRS 2SA1037AK T146 RS
TRANSISTORS			Q517	CA11271R	TRS 2SA1037AK T146 RS
Q001	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q519	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q002	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q520	CA11271R	TRS 2SA1037AK T146 RS
Q004	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q521	CA11271R	TRS 2SA1037AK T146 RS
Q005	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q602	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q006	CA11271R	TRS 2SA1037AK T146 RS	Q603	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q007	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q604	2320663M	TRS. 2SC1213A (C)
Q008	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q605	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q009	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q606	CF00611	TRS. 2SC3969(AB) 400V
Q011	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q607	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q013	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q609	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q014	CA11271R	TRS 2SA1037AK T146 RS	Q701	2326216	TRS. 2SC3116 (S/T)
Q015	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q702	2320591M	TRS. 2SC458 (B TZ/C TZ)
Q016	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q703	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q017	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q705	2320591M	TRS. 2SC458 (B TZ/C TZ)
Q018	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q710	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q019	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q711	2320591M	TRS. 2SC458 (B TZ/C TZ)
Q024	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q712	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q026	2312171	TRS. 2SC3852	Q777	CF01541F	2SC2514 F
Q027	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q801	2312372F	TRS-2SC3942
Q028	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q802	2320663M	TRS. 2SC1213A (C)
Q030	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q803	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q032	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q804	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q101	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q805	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q102	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q806	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q103	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ)	Q831	2312372F	TRS-2SC3942
Q106	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q832	2320663M	TRS. 2SC1213A (C)
Q107	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q833	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q108	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q861	2312372F	TRS-2SC3942
Q109	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q862	2320663M	TRS. 2SC1213A (C)
Q110	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q863	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q111	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q901	2312171	TRS. 2SC3852
Q112	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q902	2312171	TRS. 2SC3852
Q113	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q903	CF02281R	TRS. 2SA821S
			Q905	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
			Q906	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
Q907	CF02251R	2SC3415S TP	QN02	2320591M	TRS. 2SC458 (B TZ/C TZ)
Q908	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QN03	2320591M	TRS. 2SC458 (B TZ/C TZ)
Q909	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	QN04	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
Q912	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QN05	2320591M	TRS. 2SC458 (B TZ/C TZ)
Q913	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	QN06	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)
 Q914	2323782R	THYRISTOR 03P2M(TA)	QX01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q916	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QX02	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q917	2320637M	TRS. 2SA673 SI 80MHZ 400MW	QX05	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q918	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QX06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX07	CA11271R	TRS 2SA1037AK T146 RS
QA02	CA11271R	TRS 2SA1037AK T146 RS	QX08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA03	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX09	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA04	CA11271R	TRS 2SA1037AK T146 RS	QX10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA05	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX11	CA11271R	TRS 2SA1037AK T146 RS
QA06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QX12	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA74	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA75	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY02	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QA80	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY03	CA11271R	TRS 2SA1037AK T146 RS
QE01	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)	QY04	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE02	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)	QY05	CA11264R	PHOTO TRANSISTOR(DTC114EKA)
QE03	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)	QY06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE04	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)	QY07	2326021M	TRS. 2SC1741S
QE05	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)	QY08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE06	2320647M	TRS. 2SC1213 SI 80MHZ400MW	QY10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE07	2321351M	TRS. 2SA836/844D/E 100MA	QY11	CA11271R	TRS 2SA1037AK T146 RS
QE08	CF00531	TRS. 2SA1964 160V	QY12	2320647M	TRS. 2SC1213(C21 TZ/D21 TZ)SI 80MHZ400MW
QE09	CF00541	TRS. 2SC5248 160V	QY13	2320647M	TRS. 2SC1213(C21 TZ/D21 TZ)SI 80MHZ400MW
QE10	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)	QY51	CA11271R	TRS 2SA1037AK T146 RS
QE11	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)	QY57	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QE12	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	QY58	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF01	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	QY59	CA11271R	TRS 2SA1037AK T146 RS
QF03	2320663M	TRS. 2SC1213A (C)	QY60	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF04	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	QY61	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF05	2320663M	TRS. 2SC1213A (C)	QY62	CA11271R	TRS 2SA1037AK T146 RS
QF06	CF00821F	TRS. 2SC4686A 1200V	QY63	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF07	CF00821F	TRS. 2SC4686A 1200V			
QF08	CF00821F	TRS. 2SC4686A 1200V			
QF09	2320591M	TRS. 2SC458 (B TZ/C TZ)			
QF10	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	R001	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QF11	2320663M	TRS. 2SC1213A (C)	R002	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE
QF12	2320591M	TRS. 2SC458 (B TZ/C TZ)	R003	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
QF13	2320591M	TRS. 2SC458 (B TZ/C TZ)	R005	0700063M	RES.-CARBON FLM 1/16W 47K-JB
QF14	2320591M	TRS. 2SC458 (B TZ/C TZ)	R007	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
QF15	2320591M	TRS. 2SC458 (B TZ/C TZ)	R008	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
QF16	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	R009	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QF17	CF10852R	TRS. DTC144ESA-T	R010	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
QK01	2312171	TRS. 2SC3852	R011	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
QK02	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	R012	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
QK03	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ)	R013	0700054M	RES.-CARBON FLM 1/16W 10K-JB
QK04	2320591M	TRS. 2SC458 (B TZ/C TZ)	R014	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QK06	2320591M	TRS. 2SC458 (B TZ/C TZ)	R015	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
QK07	2320591M	TRS. 2SC458 (B TZ/C TZ)	R016	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
QK08	2320591M	TRS. 2SC458 (B TZ/C TZ)	R021	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QM01	2320591M	TRS. 2SC458 (B TZ/C TZ)	R022	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
QM02	2312992	PHOTO TRS. RPT-38PT3F (M)	R023	0195933R	RES 2125 CHIP 1/16W 22KJ TAPE
QN01	2320591M	TRS. 2SC458 (B TZ/C TZ)	R025	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB

RESISTORS

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R026	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R0C5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R029	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0C6	0700027M	RES.-CARBON FLM 1/16W 100-JB
R034	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R0C7	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE
R035	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0E2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R036	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0E3	0188127M	RES.-CARBON FLM 560-JB 1/2W
R037	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0E4	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R038	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0E5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R040	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0E6	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R042	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R0E7	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R043	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0E8	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R044	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0F7	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R045	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0F8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R046	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0F9	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R047	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0G1	0100123M	RES.-CARBON FLM 1/8W 270K-JB
R048	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0G5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R049	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0G6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R050	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0G7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R051	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0G8	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R055	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0G9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R056	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0H1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R059	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0H2	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
R060	0700054M	RES.-CARBON FLM 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	RESISTOR 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	RES.-CARBON FLM 1/16W 100-JB	R0H8	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R067	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	R0L5	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R068	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0L6	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R069	0700041M	RES.-CARBON FLM 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	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
R071	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0M3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R072	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R0M4	AW00074	TRIMMER RESISTOR
R073	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0M5	0700032M	RES.-CARBON FLM 1/16W 220-JB
R074	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R0M6	AW00074	TRIMMER RESISTOR
R075	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R0M7	0700032M	RES.-CARBON FLM 1/16W 220-JB
R076	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0M8	AW00074	TRIMMER RESISTOR
R078	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0M9	0700032M	RES.-CARBON FLM 1/16W 220-JB
R081	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R0N2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R082	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R0N4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R083	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0P3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R086	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0P5	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R087	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0P6	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R088	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0P8	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R089	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0P9	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R090	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0R1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R099	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0R3	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0A2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0R4	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0A5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0R5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0A6	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R0R6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R0A7	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0R7	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R0A8	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0R8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0A9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0S1	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R0C1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0S2	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R0C3	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0T1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R0C4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0T2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R0T4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R160	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R0T5	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R163	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0T6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R167	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R0T7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R168	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R0T8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R169	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R0T9	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R173	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0U1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R174	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0U3	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R175	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0U4	0700027M	RES.-CARBON FLM 1/16W 100-JB	R176	0100041M	RES.-CARBON FLM 1/8W 100-JB
R0U5	0700027M	RES.-CARBON FLM 1/16W 100-JB	R177	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R101	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R178	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R102	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R179	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R103	0195895R	RES.2125 CHIP 1/10W 680J TAPE	R180	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R104	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R181	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R105	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R182	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R106	0195895R	RES.2125 CHIP 1/10W 680J TAPE	R183	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R107	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R184	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R109	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R185	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R110	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R186	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R111	0700027M	RES.-CARBON FLM 1/16W 100-JB	R187	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R112	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R196	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R113	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R197	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R114	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R198	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R115	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R1A2	0700023M	RES.-CARBON FLM 1/16W 47-J
R116	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R1A3	0700027M	RES.-CARBON FLM 1/16W 100-JB
R118	0100059M	RES.-CARBON FLM 1/8W 560-JB	R1A9	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R119	0100059M	RES.-CARBON FLM 1/8W 560-JB	R1B2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R121	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R1C1	0195893R	RES 2125 CHIP 1/16W 560J TAPE
R122	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R312	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R123	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3A4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R124	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3A5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R125	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3A6	0700032M	RES.-CARBON FLM 1/16W 220-JB
R127	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3A7	0700032M	RES.-CARBON FLM 1/16W 220-JB
R128	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3A8	0700032M	RES.-CARBON FLM 1/16W 220-JB
R129	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3C3	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
R132	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R3C4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R133	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R3E1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R134	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3E2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R135	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3E3	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R141	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R3E4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R142	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R3E5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R144	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R3E6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R146	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3E7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R147	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3E8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R148	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R3F1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R149	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R3F3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R150	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R3F4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R151	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R3F5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R152	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R3F6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R153	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R3F7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R154	0700036M	RES.-CARBON FLM 1/16W 470-JB	R3F8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R155	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3F9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R156	0700065M	RES.-CARBON FLM 1/16W 68K-JB	R3G1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R157	AT03694M	RES.MTL GRAZD FLM 1W 10M	R3G2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R158	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R3G3	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R159	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3G4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R3G6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R503	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE
R3G7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R504	0700032M	RES.-CARBON FLM 1/16W 220-JB
R3G8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R505	0700032M	RES.-CARBON FLM 1/16W 220-JB
R3G9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R506	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R3H1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R508	0195879R	RES 2125 CHIP 1/16W 150J TAPE
R3H2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R509	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R3H4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R510	0195906R	RES MINI-CHIP RMC1/16 1.8K-J TAPE
R3H7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R511	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE
R3H8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R516	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3H9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R517	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3J4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R518	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R3J5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R519	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3J6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R520	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R3J7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R521	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R3J8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R522	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE
R3J9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R523	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3K1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R524	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R3K2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R525	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3K3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R526	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
R3K4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R527	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R3K5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R528	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R3K6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R529	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3K8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R530	0195879R	RES 2125 CHIP 1/16W 150J TAPE
R3K9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R531	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
R3L1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R532	0195889R	RES.2125 CHIP 1/10W 390J TAPE
R3L2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R533	0195889R	RES.2125 CHIP 1/10W 390J TAPE
R3L6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R534	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3L7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R535	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE
R3L8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R536	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3L9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R537	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
R3M1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R538	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
R3M2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R539	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
R3M3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R540	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R3M7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R541	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3M8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R542	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3M9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R545	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3P1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R547	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
R3P4	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R548	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
R402	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R549	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R404	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R550	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE
R405	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R551	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R406	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R552	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE
R407	0700037M	RES.-CARBON FLM 1/16W 560-JB	R553	0195879R	RES 2125 CHIP 1/16W 150J TAPE
R408	0700037M	RES.-CARBON FLM 1/16W 560-JB	R555	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R411	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R556	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE
R412	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R557	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R413	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R558	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R414	0700036M	RES.-CARBON FLM 1/16W 470-JB	R559	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R415	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R561	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R416	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R562	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R417	AT01549S	METAL FILM RESISTOR(2.2OHM 1W)	R563	0195889R	RES.2125 CHIP 1/10W 390J TAPE
R418	AT01549S	METAL FILM RESISTOR(2.2OHM 1W)	R564	0195885R	RESISTOR 2125 CHIP 1/16W 270J TAPE
R419	0700065M	RES.-CARBON FLM 1/16W 68K-JB	R566	0188118M	RES.-CARBON FLM 1/2W 120-JB
R420	0700065M	RES.-CARBON FLM 1/16W 68K-JB	R567	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
R421	0188131M	RES.-CARBON FLM 1/4W 1K-JB	R568	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R422	0188131M	RES.-CARBON FLM 1/4W 1K-JB	R569	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R570	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E8	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R571	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E9	0700027M	RES.-CARBON FLM 1/16W 100-JB
R572	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R5F1	0195895R	RES.2125 CHIP 1/10W 680J TAPE
R573	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R5F2	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R574	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5F3	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R575	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5F4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R576	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R577	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F7	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R578	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5F8	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R579	0188125M	RES.-CARBON FLM 390-J 1/2W	R5F9	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R580	0188125M	RES.-CARBON FLM 390-J 1/2W	R5G1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R581	0188125M	RES.-CARBON FLM 390-J 1/2W	R5G4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R582	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R583	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R584	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R586	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	R5H1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R588	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R590	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R591	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R592	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R593	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5H7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R595	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5J4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R597	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5K2	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
R598	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R602	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R5A0	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R603	AW00126	TRIMMER RESISTOR
R5A1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R604	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R5A2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R605	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5A3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R606	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5A4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R607	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5A5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R608	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5A6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R609	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5A8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R610	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R5A9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R611	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5C0	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R612	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R5C3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R613	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R5C4	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R614	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R5C5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R615	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5C6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R616	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R5C7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R617	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R5C8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R618	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5C9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R619	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5D0	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R620	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R5D1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R621	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5D2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R622	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J
R5D3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R623	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5D4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R624	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R5D5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R625	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
R5D6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R626	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R5D7	0700027M	RES.-CARBON FLM 1/16W 100-JB	R627	0100063M	RES.-CARBON FLM 1/8W 820-JB
R5D8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R628	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R5E2	0700027M	RES.-CARBON FLM 1/16W 100-JB	R629	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R5E3	0700027M	RES.-CARBON FLM 1/16W 100-JB	R630	AW00128	TRIMMER RESISTOR
R5E4	0700027M	RES.-CARBON FLM 1/16W 100-JB	R635	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5E5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R636	0700061M	RES.-CARBON FLM 1/16W 33K-JB
R5E6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R637	0700065M	RES.-CARBON FLM 1/16W 68K-JB
R5E7	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R638	0700038M	RES.-CARBON FLM 1/16W 680-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R639	0700064M	RES.-CARBON FLM 1/16W 56K-JB	R753	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
R640	0100045M	RES.-CARBON FLM 1/8W 150-JB	R760	AT03417S	METAL OX. 390OHM 2W
R641	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W	R761	0114177M	RESISTOR-CARBON FILM SRD 1/4 P 4.7K-J
R642	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W	R770	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R643	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R771	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R644	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R772	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R645	0119731M	RES.-MTL 0X1DE 1W R68-K TAPE	R773	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R646	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R801	0140326S	RES. WIRE WOUND 5.6K-J 5W
R647	0700059M	RES.-CARBON FLM 1/16W 27K-JB	R803	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R648	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R806	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J
R649	0100053M	RES.-CARBON FLM 1/8W 330-JB	R810	0100051M	RES.-CARBON FLM 1/8W 270-JB
R651	0114135M	RES.-CARBON FLM 1/4W 150-JB	R811	0100057M	RES.-CARBON FLM 1/8W 470-JB
R652	0700014M	RES.-CARBON FLM 1/16W 10-J	R812	0100045M	RES.-CARBON FLM 1/8W 150-JB
R660	0113725M	RES CARBON FILM SRD1/2P-B 100-J	R815	0100063M	RES.-CARBON FLM 1/8W 820-JB
R661	0113725M	RES CARBON FILM SRD1/2P-B 100-J	R817	0100041M	RES.-CARBON FLM 1/8W 100-JB
R671	0113725M	RES CARBON FILM SRD1/2P-B 100-J	R818	0100049M	RES.-CARBON FLM 1/8W 220-JB
R672	0113766M	RES CARBON FILM SRD1/2P-B 4.7K-J	R821	0100063M	RES.-CARBON FLM 1/8W 820-JB
R673	AT03242S	METAL OX. 100OHM 1W	R822	0100049M	RES.-CARBON FLM 1/8W 220-JB
R675	0700061M	RES.-CARBON FLM 1/16W 33K-JB	R823	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R701	AT03599S	METAL OX. 2.7KOHM 3W	R825	0100021M	RES.-CARBON FLM 1/8W 15-JB
R702	AT03595S	METAL OX. 1.8KOHM 3W	R827	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R704	0100031M	RES.-CARBON FLM 1/8W 39-JB	R831	0140326S	RES. WIRE WOUND 5.6K-J 5W
R705	0700034M	RES.-CARBON FLM 1/16W 330-JB	R833	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R706	0700032M	RES.-CARBON FLM 1/16W 220-JB	R836	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J
R707	0113770M	RES CARBON FILM SRD1/2P-B 6.8K-J	R840	0100051M	RES.-CARBON FLM 1/8W 270-JB
R708	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R841	0100057M	RES.-CARBON FLM 1/8W 470-JB
R709	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R842	0100033M	RES.-CARBON FLM 1/8W 47-JB
R710	0187068M	RES.-CARBON FLM 1/16W 1.3K-JB	R843	0150001	RESISTOR-VARIABLE CARBON RV08 200-B
R711	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	R855	0100021M	RES.-CARBON FLM 1/8W 15-JB
R712	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R861	0140326S	RES. WIRE WOUND 5.6K-J 5W
R713	0113727M	RES CARBON FILM SRD1/2P-B 120-J	R863	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R714	AT03219S	METAL OX. 15.0OHM 1W	R866	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J
 R715	0700062M	RES.-CARBON FLM 1/16W 39K-JB	R870	0100051M	RES.-CARBON FLM 1/8W 270-JB
 R716	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R871	0100057M	RES.-CARBON FLM 1/8W 470-JB
R717	0113709M	RES CARBON FILM SRD1/2P-B 22-J	R872	0100033M	RES.-CARBON FLM 1/8W 47-JB
R718	0113785M	RES CARBON FILM SRD1/2P-B 27K-J	R873	0150001	RESISTOR-VARIABLE CARBON RV08 200-B
R719	0113791M	RES.-CARBON FLM 1/2W 47K-JB	R885	0100021M	RES.-CARBON FLM 1/8W 15-JB
R720	AT03411S	METAL OX. 220OHM 2W	R901	AT03665M	RES.MTL GRAZD FLM 1/2W 1M
R721	0188122M	RES.-CARBON FLM 220-J 1/2W	R902	0147060	RES.-WIRE WOUND 2W 33-K
R722	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R903	0114281M	RESISTOR-CARBON FILM SRD 1/4P 100K-J
R723	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	 R904	0147802	RES.-WIRE WOUND 15W 0.62-KM
R725	AT03611S	METAL OX. 6.8KOHM 3W	R905	0113772M	RES.-CARBON FLM SRD1/2P-B
R726	0114183M	RES.-CARBON FILM SRD 1/4 P 8.2K-J	R906	0113772M	RES.-CARBON FLM SRD1/2P-B
R727	0100091M	RES.-CARBON FLM 1/8W 12K-JB	R907	0100023M	RES.-CARBON FLM 1/8W 18-JB
R728	0100081M	RES.-CARBON FLM 1/8W 4.7K-JB	R908	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R729	0114149M	RES.-CARBON FILM SRD 1/4 PF 560-J	R909	0700038M	RES.-CARBON FLM 1/16W 680-JB
R730	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R910	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
R731	0100127M	RES.-CARBON FLM 1/8W 390K-JB	R911	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R732	AT03251S	METAL OX. 220OHM 1W	R912	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R733	AT03251S	METAL OX. 220OHM 1W	R913	0700023M	RES.-CARBON FLM 1/16W 47-J
R734	0100127M	RES.-CARBON FLM 1/8W 390K-JB	R914	0700054M	RES.-CARBON FLM 1/16W 10K-JB
 R737	0114041M	RESISTOR-CARBON FILM SRD 1/4P 10J	R915	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R740	0100121M	RES.-CARBON FLM 1/8W 220K-JB	R916	0700038M	RES.-CARBON FLM 1/16W 680-JB
R750	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	R917	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)
R751	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	R918	0100091M	RES.-CARBON FLM 1/8W 12K-JB
R752	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R919	0100089M	RES.-CARBON FLM 1/8W 10K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R920	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA02	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R921	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA05	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R922	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA06	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R923	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RA07	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R925	0113746M	RES.-CARBON FLM 1/2W 680-JB	RA08	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R926	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RA09	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R929	0700028M	RES.-CARBON FLM 1/16W 120-JB	RA10	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R930	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RA11	0700027M	RES.-CARBON FLM 1/16W 100-JB
R931	0119695M	RES.-MTL OXIDE FLM 1W 0.47-F	RA12	0700027M	RES.-CARBON FLM 1/16W 100-JB
R932	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA13	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R933	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA14	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R934	0113797M	RES.-CARBON FLM 1/2W 82K-JB	RA15	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R935	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RA16	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R937	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA17	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R940	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA18	0195939R	RMC73S-2A393JR
R941	0700018M	RES.-CARBON FLM 1/16W 22-J	RA19	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R942	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RA20	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R943	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RA21	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R944	0113793M	RES CARBON FILM SRD1/2P-B 56K-J	RA22	0195887R	RES 2125 CHIP 1/16W 330J TAPE
R945	0113793M	RES CARBON FILM SRD1/2P-B 56K-J	RA23	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R946	0114205M	RES-CARBON FILM SRD 1/4 P 15K-J	RA24	0195939R	RMC73S-2A393JR
R948	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
 R949	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RA26	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
 R950	0700039M	RES.-CARBON FLM 1/16W 820-JB	RA27	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R952	0700032M	RES.-CARBON FLM 1/16W 220-JB	RA28	0195887R	RES 2125 CHIP 1/16W 330J TAPE
R954	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA29	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R955	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA30	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R957	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA31	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R958	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RA32	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R959	0113750M	RES.-CARBON FLM 1/2W 1K-JB	RA33	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R960	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA34	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R962	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RA35	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R963	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RA36	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R968	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA37	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R969	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RA40	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R970	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RA41	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R971	0700037M	RES.-CARBON FLM 1/16W 560-JB	RA42	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R972	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RA43	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R974	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R975	AT03419S	METAL OX. 470 OHM 2W	RA51	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R976	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA52	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R977	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RA53	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R979	0113762M	RES CARBON FILM SRD1/2P-B 3.3K-J	RA58	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R980	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA59	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R981	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA60	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R982	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RA61	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R983	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA64	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE
R985	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA65	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE
R986	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)	RA66	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE
R987	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)	RA67	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE
R988	0113744M	RES CARBON FILM SRD1/2P-B 560-J	RA68	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R989	0700036M	RES.-CARBON FLM 1/16W 470-JB	RA69	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R990	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA70	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R992	AT03608S	METAL OX. 5.6KOHM 3W	RA75	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R993	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA76	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA01	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA77	0195250R	RES 2125 CHIP 1/16W 000 TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RA78	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE24	0100039M	RES.-CARBON FLM 1/8W 82-JB
RA79	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE25	0188133M	RES.-CARBON FLM 1/2W 1.5K-JB
RA80	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE26	0188132M	RES.-CARBON FLM 1.2K-J 1/2W
RA81	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RE27	0188155M	RES.-CARBON FLM 68K-JB
RA82	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE28	0188155M	RES.-CARBON FLM 68K-JB
RA83	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE29	0113776M	RESISTOR CARBON FILM SRD1/2P-B 12K-J
RA84	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RE30	0100039M	RES.-CARBON FLM 1/8W 82-JB
RA85	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RE31	0100069M	RES.-CARBON FLM 1/8W 1.5K-JB
RA86	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE32	0100067M	RES.-CARBON FLM 1/8W 1.2K-JB
RA91	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE33	0113704M	RESISTOR CARBON FILM SRD1/2P-B 13-J
RA92	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RE34	AT03571S	METAL OX. 220OHM 3W
RA93	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RE35	0113686M	RES.-CARBON FLM 1/2W 2.7-J
RA94	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE36	0113686M	RES.-CARBON FLM 1/2W 2.7-J
RA99	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE37	0113704M	RESISTOR CARBON FILM SRD1/2P-B 13-J
RAA1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE38	AT03254S	METAL OX. 300OHM 1W
RAA2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE39	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RAA3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE40	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RAA4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE41	0700035M	RES.-CARBON FLM 1/16W 390-JB
RAA5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE43	0700039M	RES.-CARBON FLM 1/16W 820-JB
RAA6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE45	0700027M	RES.-CARBON FLM 1/16W 100-JB
RAA7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE46	0113746M	RES.-CARBON FLM 1/2W 680-JB
RAD8	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RE47	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RAD9	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RF01	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RAE1	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RF02	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RAE2	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RF03	0700036M	RES.-CARBON FLM 1/16W 470-JB
RAE3	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE	RF04	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RC02	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RF07	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RC14	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF08	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RC16	0195871R	RMC73S-2A750JR	RF09	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RC18	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RF10	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RC19	0195871R	RMC73S-2A750JR	RF11	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RC63	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RF12	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RC89	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF13	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RC98	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF14	0700025M	RES.-CARBON FLM 1/16W 68-J
RE01	AT03584S	METAL OX. 680OHM 3W	RF15	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE02	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RF16	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE03	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RF17	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE04	0700035M	RES.-CARBON FLM 1/16W 390-JB	RF18	AT03662M	RES.MTL GRAZD FLM 1/2W 560K
RE05	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RF19	AT03662M	RES.MTL GRAZD FLM 1/2W 560K
RE06	0700031M	RES.-CARBON FLM 1/16W 180-JB	RF20	0700027M	RES.-CARBON FLM 1/16W 100-JB
RE07	0700065M	RES.-CARBON FLM 1/16W 68K-JB	RF21	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RE08	0700059M	RES.-CARBON FLM 1/16W 27K-JB	RF22	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RE09	0700039M	RES.-CARBON FLM 1/16W 820-JB	RF23	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RE10	0700033M	RES.-CARBON FLM 1/16W 270-JB	RF25	AT03662M	RES.MTL GRAZD FLM 1/2W 560K
RE11	0700033M	RES.-CARBON FLM 1/16W 270-JB	RF26	AT03662M	RES.MTL GRAZD FLM 1/2W 560K
RE12	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RF27	AT03661M	RES.MTL GRAZD FLM 1/2W 470K
RE13	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RF28	0700062M	RES.-CARBON FLM 1/16W 39K-JB
RE14	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RF29	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
RE15	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RF30	0100103M	RES.-CARBON FLM 1/8W 39K-JB
RE16	0113742M	RES.-CARBON FLM 1/2W 470-JB	RF31	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RE18	0700036M	RES.-CARBON FLM 1/16W 470-JB	RF33	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RE19	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RF34	0187100M	RES.-CARBON FLM 1/16W 30K-JB
RE20	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RF35	0187074M	RES.-CARBON FLM 1/16W 2.4K-JB
RE21	0100065M	RES.-CARBON FLM 1/8W 1K-JB	RF36	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RE22	0700027M	RES.-CARBON FLM 1/16W 100-JB	RF37	0700039M	RES.-CARBON FLM 1/16W 820-JB
RE23	0113701M	RESISTOR CARBON FILM SRD1/2P-B 10-J	RF40	AT03241S	METAL OX. 91.0OHM 1W

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RF41	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RK58	AT03204S	METAL OX. 3.9OHM 1W
RF42	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	RK59	AT03571S	METAL OX. 220OHM 3W
RF43	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RK60	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RF44	0700061M	RES.-CARBON FLM 1/16W 33K-JB	RK62	AT03202S	METAL OX. 3.3OHM 1W
RF45	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RK63	AT03566S	METAL OX. 150OHM 3W
RF46	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK64	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF47	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK90	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK01	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RK99	0113698M	RES.-CARBON FLM 1/2W 8.2-J
RK02	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM01	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK03	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM02	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RK04	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM03	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RK05	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM04	0100065M	RES.-CARBON FLM 1/8W 1K-JB
RK06	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM05	0100065M	RES.-CARBON FLM 1/8W 1K-JB
RK07	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM06	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM07	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
RK09	0100057M	RES.-CARBON FLM 1/8W 470-JB	RM08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RK10	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RM09	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RK12	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RM10	0100129M	RES.-CARBON FLM 1/8W 470K-JB
RK13	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RM11	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK14	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RM12	0100125M	RES.-CARBON FLM 1/8W 330K-JB
RK15	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RM13	0100073M	RES.-CARBON FLM 1/8W 2.2K-JB
RK16	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RM14	0100125M	RES.-CARBON FLM 1/8W 330K-JB
RK17	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RM15	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK18	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RM38	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK19	0100125M	RES.-CARBON FLM 1/8W 330K-JB	RM40	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RK22	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RN01	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RK23	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RN02	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK24	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	RN03	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK25	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN04	0100113M	RES.-CARBON FLM 1/8W 100K-JB
RK26	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN05	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RK27	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RN06	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK28	0700027M	RES.-CARBON FLM 1/16W 100-JB	RN07	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RK29	0700027M	RES.-CARBON FLM 1/16W 100-JB	RN08	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RK30	0700027M	RES.-CARBON FLM 1/16W 100-JB	RN09	0700061M	RES.-CARBON FLM 1/16W 33K-JB
RK31	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RN10	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RK32	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RN11	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RK33	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RN12	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RK34	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN13	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK35	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN14	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK36	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN15	0700064M	RES.-CARBON FLM 1/16W 56K-JB
RK37	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN16	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK38	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN17	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RK39	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RN18	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK40	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RS12	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RK42	AT03199S	METAL OX. 2.7OHM 1W	RS13	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RK43	AT03571S	METAL OX. 220OHM 3W	RS14	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RK44	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RS15	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RK46	AT03197S	METAL OX. 2.2OHM 1W	RS32	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RK47	AT03566S	METAL OX. 150OHM 3W	RS33	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RK48	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RS34	AT03665M	RES.MTL GRAZD FLM 1/2W 1M
RK50	AT03202S	METAL OX. 3.3OHM 1W	RS35	AT03666M	RES.MTL GRAZD FLM 1/2W 1.2M
RK51	AT03571S	METAL OX. 220OHM 3W	RS42	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK52	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RS47	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK54	AT03197S	METAL OX. 2.2OHM 1W	RS48	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK55	AT03566S	METAL OX. 150OHM 3W	RSH4	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RK56	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RX01	0195935R	RES 2125 CHIP 1/16W 27K-J TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RX02	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RY18	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RX03	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY19	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX04	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY20	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RX05	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RY21	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE
RX06	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE	RY22	0195887R	RES 2125 CHIP 1/16W 330J TAPE
RX07	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY23	0195872R	RES 2125 CHIP 1/10W 82-J TAPE
RX08	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY24	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX22	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RX26	0195967R	RESISTOR MINI-CHIP RMC1/16 510K-J TAPE	RY26	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
RX27	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RY27	0195915R	RESISTOR MINI-CHIP RMC1/16 4.3K-J TAPE
RX28	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY28	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE
RX29	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY29	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
RX30	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY30	0700027M	RES.-CARBON FLM 1/16W 100-JB
RX31	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY31	0195871R	RMC73S-2A750JR
RX32	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY32	0195871R	RMC73S-2A750JR
RX33	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY33	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RX34	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE	RY34	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
RX35	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	RY35	0195871R	RMC73S-2A750JR
RX36	0195891R	RES 2125 CHIP 1/16W 470J TAPE	RY39	0195887R	RES 2125 CHIP 1/16W 330J TAPE
RX37	0195889R	RES.2125 CHIP 1/10W 390J TAPE	RY40	0195893R	RES 2125 CHIP 1/16W 560J TAPE
RX38	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RY41	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
RX39	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY42	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RX40	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY43	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX41	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY44	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX42	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY46	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX43	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RY48	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX45	0195939R	RMC73S-2A393JR	RY50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX46	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY51	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX47	0195891R	RES 2125 CHIP 1/16W 470J TAPE	RY52	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RX48	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RY53	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
RX49	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY55	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX50	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RY56	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX51	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RY57	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RX52	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	RY61	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RX53	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE	RY62	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX55	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY64	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX57	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY65	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX58	0195952R	RMC73S-2A124JR	RY69	0700032M	RES.-CARBON FLM 1/16W 220-JB
RX59	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE	RY70	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX60	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE	RY71	0700027M	RES.-CARBON FLM 1/16W 100-JB
RX62	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RY72	0700027M	RES.-CARBON FLM 1/16W 100-JB
RX63	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RY73	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY01	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY74	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY05	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY75	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY06	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY77	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
RY07	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY78	0195960R	RES MINI-CHIP RMC1/16 270K-J TAPE
RY08	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY79	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY09	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RY81	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY10	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RY83	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY11	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RY84	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY12	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY85	0195871R	RMC73S-2A750JR
RY13	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RY86	0195871R	RMC73S-2A750JR
RY14	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RY87	0195871R	RMC73S-2A750JR
RY15	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RY88	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY16	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	RY89	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY17	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RY90	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RY91	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	RYJ7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY96	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYJ8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY98	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RYJ9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY99	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	RYK1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RYA1	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	RYK2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RYA2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RZ09	0147152	RES.-WIRE WOUND 3W 27-JA CEMENTED
RYA3	0195891R	RES 2125 CHIP 1/16W 470J TAPE			
RYA4	0195891R	RES 2125 CHIP 1/16W 470J TAPE			
RYA5	0195885R	RESISTOR 2125 CHIP 1/16W 270J TAPE			
RYA6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	 T701	2260291U	HORIZONTAL DRIVE TRANS.
RYA7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	 T702	BW00632	HFL1735YP-RC FLYBACK TRANSFER
RYA8	0195897R	RES 2125 CHIP 1/16W 820J TAPE	 T703	2272762	TRANS.-SATURBLE
RYA9	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	 T901	BT00801	POWER TRANSFORMER EE49F17U-AP73F
RYC1	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE			
RYC2	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
RYC3	0195891R	RES 2125 CHIP 1/16W 470J TAPE			
RYC4	0195891R	RES 2125 CHIP 1/16W 470J TAPE			
RYC5	0195889R	RES.2125 CHIP 1/10W 390J TAPE			
RYC6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	SM01	FE00001R	PUSH SWITCH
RYC7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	SM02	FE00001R	PUSH SWITCH
RYC8	0195897R	RES 2125 CHIP 1/16W 820J TAPE	SM03	FE00001R	PUSH SWITCH
RYC9	0195875R	RES 2125 CHIP 1/16W 100J TAPE	SM04	FE00001R	PUSH SWITCH
RYE2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	SM05	FE00001R	PUSH SWITCH
RYE3	0195893R	RES 2125 CHIP 1/16W 560J TAPE	SM06	FE00001R	PUSH SWITCH
RYE4	0195893R	RES 2125 CHIP 1/16W 560J TAPE	SM07	FE00001R	PUSH SWITCH
RYE5	0195893R	RES 2125 CHIP 1/16W 560J TAPE	SM09	FE00091	SWP01N01-EVQQKH08Q
RYE6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	SZ01	FD00041	SLIDE SWITCH
RYE7	0195893R	RES 2125 CHIP 1/16W 560J TAPE	SK01	FE00061	1P TACT SWITCH
RYE8	0195893R	RES 2125 CHIP 1/16W 560J TAPE			
RYE9	0195893R	RES 2125 CHIP 1/16W 560J TAPE			
RYF1	0700025M	RES.-CARBON FLM 1/16W 68-J	E10B	2776543	MAG-VM(C-C)2/4P1.8UH
RYF2	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE	E10G	2776543	MAG-VM(C-C)2/4P1.8UH
RYF3	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	E10R	2776543	MAG-VM(C-C)2/4P1.8UH
RYF4	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	 E12B	BY01101	DY-V80-7.0SS3.0L AKME YOKE ASS'Y
RYG1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	 E12G	BY01101	DY-V80-7.0SS3.0L AKME YOKE ASS'Y
RYG4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	 E12R	BY01101	DY-V80-7.0SS3.0L AKME YOKE ASS'Y
RYG5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	E201	FQ00021	BATTERY(R6P-AA)
RYG6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E2R	EZ00911	COZ-ANODE COVER SP45-S3
RYG7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E3R	2958351	CONN. W/WIRE MINI 2J
RYG8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E301	HL00726	RML CLU-435UI REMOTE CONTROL
RYG9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	 E701	AZ00107M	PROTECTOR CRXT491004
RYH1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	 E801	EY00941	CRT-SOCKET
RYH2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	 E831	EY00941	CRT-SOCKET
RYH3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	 E861	EY00941	CRT-SOCKET
RYH4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	 E901	EV00901	COD-AP9X-B-160
RYH5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E92F	3446473	HEATSINK H30 P10
RYH6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	E92N	4520883	3*12 SCREW WITH WASHER
RYH7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	E93F	3446473	HEATSINK H30 P10
RYH8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E93N	4520883	3*12 SCREW WITH WASHER
RYH9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E98F	MC00104	HEAT SINK P10 H45 19 A6063S-75
RYJ1	0195893R	RES 2125 CHIP 1/16W 560J TAPE	E98N	4520883	3*12 SCREW WITH WASHER
RYJ2	0195893R	RES 2125 CHIP 1/16W 560J TAPE	 E991	AZ00109M	PROTECTOR CRXT491007
RYJ3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	 E994	AZ00104M	PROTECTOR(CRXT491002)
RYJ4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	 E995	AZ00109M	PROTECTOR CRXT491007
RYJ5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	 E996	AZ00109M	PROTECTOR CRXT491007
RYJ6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	 E997	AZ00109M	PROTECTOR CRXT491007
			 E999	AZ00109M	PROTECTOR CRXT491007

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
E99F	MC00104	HEAT SINK P10 H45 19 A6063S-75	P832	2661756	1P PLUG PIN WITH BASE
E99N	4520883	3*12 SCREW WITH WASHER	P861	2961141	2P PLUG PIN WITH BASE
E9A	MA00842	POWER HEAT SINK A1100P-H14	P862	2661756	1P PLUG PIN WITH BASE
E9DN	4520883	3*12 SCREW WITH WASHER	 P901	ED01851	PLUG 5289-2A
E9DW	4269926	WASHER PL-1252	PB	2661756	1P PLUG PIN WITH BASE
E9IN	4520883	3*12 SCREW WITH WASHER	PB	2661756	1P PLUG PIN WITH BASE
E9QF	MC00104	HEAT SINK P10 H45 19	PCB	ED00572	CP-TAC-L15X-A1
E9QN	4520883	3*12 SCREW WITH WASHER	PCB	ED00512	CP-TAC-L15P-A1
EBG1	EF08271	CO-06B-B2R5-301	PCB	2903544	4P PLUG PIN WITH BASE
EBG2	2966821	4J CONNE. L=300	PCC	ED00516	CP-TAC-L20P-A1
ED94	EY00791	PJX-LEAD-PLUGPIN	PCC	ED00576	CP-TAC-L20X-A1
ED95	EY00791	PJX-LEAD-PLUGPIN	PCD	ED00516	CP-TAC-L20P-A1
ED99	EY00791	PJX-LEAD-PLUGPIN	PCG	2903544	4P PLUG PIN WITH BASE
EF91	FP00031R	FUSE HOLDER TP00351-51	PCR	2903544	4P PLUG PIN WITH BASE
EAN	2974056S	3J CONNE SEH UL1007 L=160	PCX	ED00512	CP-TAC-L15P-A1
EFC	2974086S	CONNE 4P L=160	PDC	ED00565	CP-TAC-L09X-A1
EGR1	EF08381	CO-05B-B2R5-301	PCD	ED00576	CP-TAC-L20X-A1
EGR2	2966821	4J CONNE. L=300	PCX	ED00572	CP-TAC-L15X-A1
 G701	CJ00071R	SPARK GAP AG15PC-152FS-K2M	PDG	ED00572	CP-TAC-L15X-A1
 G801	CJ00071R	SPARK GAP AG15PC-152FS-K2M	PDS	ED00565	CP-TAC-L09X-A1
 G802	CJ00071R	SPARK GAP AG15PC-152FS-K2M	PFC	2902263	PLUG PIN SUB MINI 4P
 G831	CJ00071R	SPARK GAP AG15PC-152FS-K2M	PFJ	2902248	PLUG PIN SUB MINI9P
 G832	CJ00071R	SPARK GAP AG15PC-152FS-K2M	PSD3	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1
 G861	CJ00071R	SPARK GAP AG15PC-152FS-K2M	PSD3	ED01472U	PLUG 11BP1R2HUTWGP-A1
 G862	CJ00071R	SPARK GAP AG15PC-152FS-K2M	PSD4	ED01493U	CONNECTOR 13BS1R2VUTWGX-A1
JY01	ES00182	JACK 3S-14US AP92	PSD4	ED01473U	PLUG 13BP1R2HUTWGP-A1
JZ01	ER00121	2L4P LEVER TERMINAL	PFJ	2902268	PLUG PIN SUB MINI 9P
GF01	CJ00072R	SEMICONDUCTOR 252FB-K2M	PFT	ED01596U	PLUG CP-04BP5R0VU-TBL#2,3N
N101R	ND00069	CPD BRACKET RB50-3	PL	2903545	5P PLUG PIN WITH BASE
N111R	3810112	HP BELLOWES STAY	PMB	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N
N121R	4738241	ORING PRTX	PMG	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N
N123R	KX00062	CP LENS SEAL	PMR	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N
N125R	4621121	BELLOWES R EPDM	PP	2903543	3P PLUG PIN WITH BASE
N131R	NA02922	CPC LENS FIX METAL	PP	2903543	3P PLUG PIN WITH BASE
N135R	4491972	PRT METAL (AP74)	PP31	2661751	2P PLUG PIN WITH BASE
N200B	KQ00811	CPD38 LENS AB ASS'Y	PR	2903544	4P PLUG PIN WITH BASE
N200G	KQ00811	CPD38 LENS AB ASS'Y	PSD1	ED01491U	CONNECTOR 07BS1R2VUTWGX-A1
N200R	KQ00811	CPD38 LENS AB ASS'Y	PSD1	ED01471U	PLUG 07BP1R2HUTWGP-A1
N201	QR29311	50GX49B-511 INST.BOOK	PSD2	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1
N300R	KQ00823	DELTA 38 C-ELEMENT R	PSD2	ED01472U	PLUG 11BP1R2HUTWGP-A1
N301R	9483051	COOLANT (GE-55)	PSD3	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1
N703	NT00981	FBT HOLDER AP74 PS(HI=100%)	PSD3	ED01472U	PLUG 11BP1R2HUTWGP-A1
N711	NA03111	CHASSIS PWB BRACKET	PSD4	ED01493U	CONNECTOR 13BS1R2VUTWGX-A1
N715	NA20921	CHASSIS PWB BKT	PSD4	ED01473U	PLUG 13BP1R2HUTWGP-A1
N721	4491082	CHASSIS PWB BKT	PSD3	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1
N725	NA03131	CHASSIS PWB BRACKET	PSD3	ED01472U	PLUG 11BP1R2HUTWGP-A1
NK05	MC00192	CONV.HEAT SINK AP73B A6063S-T5	PSD4	ED01493U	CONNECTOR 13BS1R2VUTWGX-A1
NK06	4520885	3*16 SCREW WITH WASHER	PSD4	ED01473U	PLUG 13BP1R2HUTWGP-A1
NK07	4531761	SCREEN 3X16 TAPPING W/S-WASHER STEEL	PSD5	ED01471U	PLUG 07BP1R2HUTWGP-A1
NK08	NA20781	CONV. IC SUPPORT BRACKET	PSD5	ED01491U	CONNECTOR 07BS1R2VUTWGX-A1
NM71	3816161	G9 EE HOLDER (S)	PSI1	ED00515	CP-TAC-L18P-A1
NM72	NJ01171	LED HOLDER A5WS	PSI1	ED00575	CP-TAC-L18X-A1
P001	2663821	2P SUB MINI PLUG PIN	PSI2	ED00515	CP-TAC-L18P-A1
P801	2961141	2P PLUG PIN WITH BASE	PSI2	ED00575	CP-TAC-L18X-A1
P802	2661756	1P PLUG PIN WITH BASE	PST	2675286	PH CONNE. 7P
P831	2961141	2P PLUG PIN WITH BASE	PSU1	ED00576	CP-TAC-L20X-A1

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
PSU1	ED00516	CP-TAC-L20P-A1			EXPLODED VIEW PARTS LIST
PTS	2663821	2P SUB MINI PLUG PIN			
PVM1	ED00566	CP-TAC-L10X-A1			
PVM2	ED00566	CP-TAC-L10X-A1	①	PH05723	CONTROL PANEL ASS'Y
PVM1	ED00506	CP-TAC-L10P-A1	②	NAI1701	LENS/CRT METAL
PVM2	ED00506	CP-TAC-L10P-A1	③	KS00169	MIRROR
PVMC	2902262	PLUG PIN SUB MINI 3P	④	33010299	BARRIER BOARD
PY1	2959055	CONNECTOR-6P(PH)	⑤	QD03841	REAR COVER
PY1	2675285	PIN POST (PH 6P)	⑥	55020069	FRONT DOOR ASS'Y
PY2	2902263	PLUG PIN SUB MINI 4P	⑦	3320048	BACK CENTER BAR
PY2	2902263	PLUG PIN SUB MINI 4P	⑧	H512244	LOWER REAR BOARD
⚠ U401	2412921	SPEAKER 160 DG	⑨	32110067	SPEAKER GRILL ASS'Y
⚠ U402	2412921	SPEAKER 160 DG	⑩	NA11681	MIRROR METAL A
⚠ V1B	DE01083	CRT 180DLB22B	⑪	NA11691	MIRROR METAL B
⚠ V1G	DE01082	CRT 180DLB22 G	⑫	KR00272	SCREEN ASS'Y
⚠ V1R	DE01081	CRT 180DLB22 R	⑬	H311404	DECO FRAME PAINTED
X100	BP00771	OSXR032X121TA252E00	⑭	H311399	TOP FRAME PAINTED
X501	2791501	CRYSTAL HC-49/U	⑮	DE01081	CRT 180DLB22(R)
X502	2168771	X'TAL CSB503F30	⑯	DE01082	CRT 180DLB22(G)
XX02	BJ00141	COIL (LC FILTER) 3.58 MHz	⑰	DE01083	CRT 180DLB22(B)
XX03	BJ00112	COIL (LC FILTER) 6 MHz	⑱	KQ00823	DELTA38 C-ELEMENT (R)
			⑲	KQ00822	DELTA38 C-ELEMENT (G)
			⑳	KQ00821	DELTA38 C-ELEMENT (B)

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