

HITACHI

PA**No. 0110****36SDX88B****NTSC*****MM1 Chassis*****R/C: CLU-433FC**

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

SAFETY NOTICE

USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a  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.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety-related notes located on or inside the cabinet and on the chassis or picture tube.

WARNING: Since the chassis of this receiver is connected to one side of the AC power supply during operation, whenever the receiver is plugged in, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

The following precautions should be observed:

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away from the picture tube while handling.
2. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a "HOT" chassis receiver.
3. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment cover-shields, isolation resistors, capacitors, etc.
4. When service is required, observe the original lead dress in the high voltage circuitry area.
5. Always use the manufacturer's replacement components. Critical components as indicated on the circuit diagram should not be replaced by another manufacturer's. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of overheating.
6. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

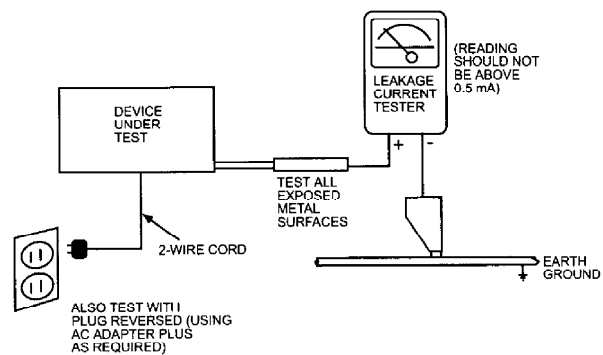
Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

With the AC plug removed from the 120V AC 60Hz source, place a jumper across the two plug prongs. Using an insulation tester (DC500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis should have a minimum resistor reading of $0.24M\Omega$ and a maximum resistor reading of $12M\Omega$. Any resistance value below or above this range indicates an abnormality which requires corrective action. An exposed metal part having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC 60Hz outlet (do not use an isolated transformer for this check). Turn the AC power ON. Using a Leakage Current Tester (Simpson's Model 229 or equivalent), measure for current from all exposed metal parts of the cabinet (antennas, screwheads, overlays, control shafts, etc.) particularly any exposed metal part having a return path to the chassis or to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5 milliamps.



AC LEAKAGE TEST

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

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 is operated correctly.

Serviceman Warning

With minimum BRIGHTNESS and CONTRAST, the operating high voltage in this receiver is lower than 36.5kV. In case any component having influence on the high voltage is replaced, confirm that high voltage with minimum BRIGHTNESS and CONTRAST is lower than 36.5kV. To measure high voltage use a High Impedance High Voltage 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.

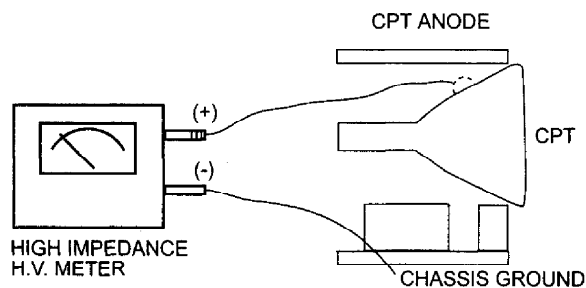
PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receivers have special safety-related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified with an $\triangle$ mark in the schematics and parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI-recommended replacement component, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Production safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of HITACHI Service Manuals may be obtained at a nominal charge from HITACHI Sales Corporation.



X-Radiation

TUBE: The primary source of X-Radiation in this receiver is the picture tube. The tube utilized 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 an excessive high voltage problem, 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.

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 per-

formed repairs can adversely affect the safety and reliability of the product and may void warranty. Consumers should not risk trying to do the necessary repairs and should refer 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.

SAFETY NOTICE USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics identified by $\triangle$ on the parts list in this service manual and its supplements and bulletins. Before servicing this product, it is important that the service technician read and follow the "Safety Precautions" and the "Product Safety Notices" in this Service Manual.

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

POWER SOURCE

This television receiver is designed to operate on 120 Volts/60Hz, AC house current. Insert the power cord into a 120 Volts/60Hz outlet.

NEVER CONNECT THE TV TO OTHER THAN THE SPECIFIED VOLTAGE OR TO DIRECT CURRENT.

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."
3. Discharge the picture tube's anode 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 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.

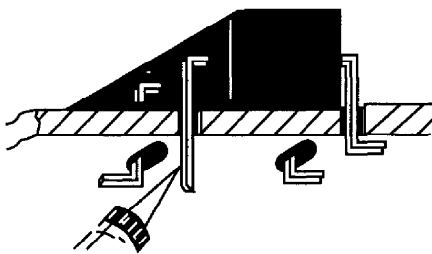
Electrostatically Sensitive (ES) Devices

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 build-up 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/Replacement

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.

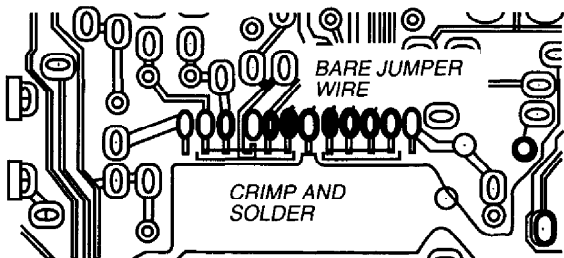
In Critical Copper Pattern Areas

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 area 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.

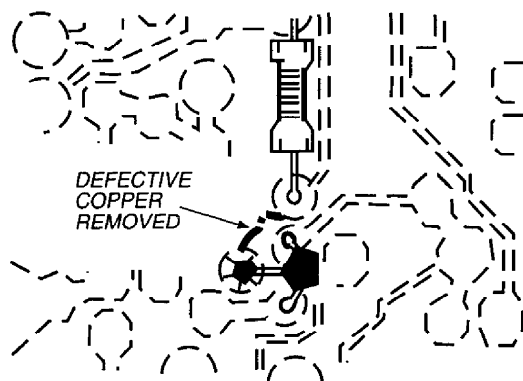


Install Jumper Wire and Solder

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 the power is applied to the instrument.
3. When troubleshooting intermittent problems that might be caused by defective cable connection(s) to the FS tuning system, remove the instrument AC power as soon as the defective connector is found and finish confirming the bad connection with a continuity test. This procedure will reduce the probability of electrical overstress of the FS system semi-conductor components.

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

Leadless Chip Components (surface mount)

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

Chip resistors have a three digit numerical resistance code - 1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6K resistor, 0 = 0 (jumper).

Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

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

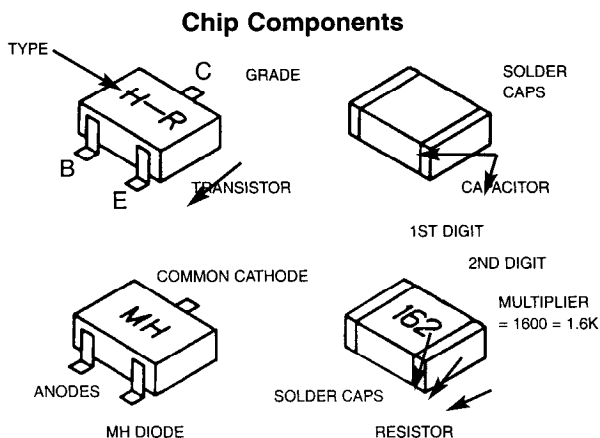
Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

Component Removal

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

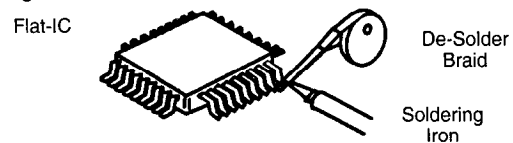
Chip Component Installation

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

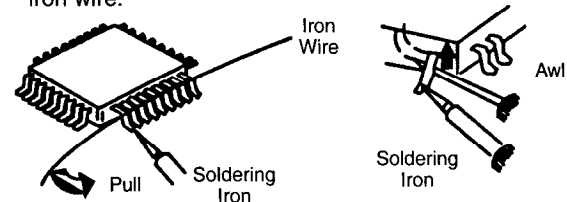


How to Replace Flat-IC —Required Tools—

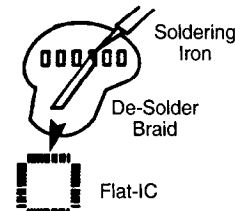
- Soldering iron
 - De-solder braid
 - iron wire or small awl
 - Magnifier
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



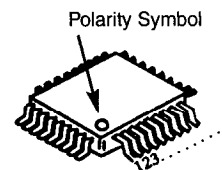
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



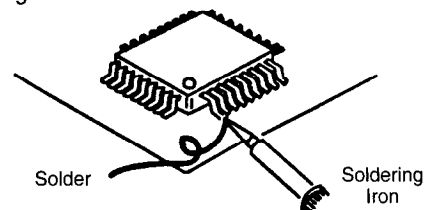
3. Remove the solder from all of the pads of the Flat-IC by using a de-solder braid.



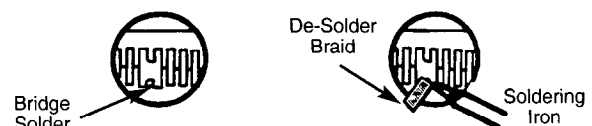
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



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



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



AGENCY REGULATORY INFORMATION

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi Home Electronics (America), Inc. may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Any cables that are supplied with the system must be replaced with identical cables in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

Declaration of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any cables that are supplied with the system must be replaced with identical cable in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

For questions regarding this declaration, contact:

Hitachi Home Electronics (America), Inc.
1855 Dornoch Court
San Ysidro, CA 92173
1-800-448-2244 (1-800-HITACHI)
ATTN: Customer Relations

TECHNICAL SPECIFICATIONS

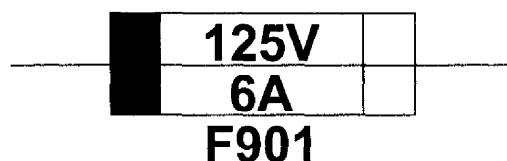
PICTURE TUBE

36SDX88B/MM1.....A90AGW14X04

CAUTION!

The following symbol near the fuse indicates fast operating fuse (to be replaced). Fuse ratings appear within the symbol.

Example:



The rating of fuse F901 is 6.0A-125V.
Replace with the same type fuse for continued protection against fire.

Inputs:

- Power InputAC 120V, 60Hz
- Power Consumption 180W
- Power Consumption (maximum)240W
- Antenna input impedance75 Ohm
- Channel coverage181 ch.
- VHF-Band2 ~ 13
- UHF-Band14 ~ 69
- CATV Mid BandA-5 ~ A-1
- Mid BandA-I
- Super BandJ-W
- Hyper BandW+1 - W+28
- Ultra BandW+29 - W+84
- Video input1.0Vp-p, 75 Ohm
- S-Video input
- Luminance (Y)1.0Vp-p, 75 Ohm
- Chrominance (C_B, C_R)0.286Vp-p, 75 Ohm
- Audio input level (average) ..400mVrms, 47K Ohm

Outputs:

- Audio Output (variable)400mVrms, 1K Ohm
- Video Output1.0Vp-p, 75 Ohm

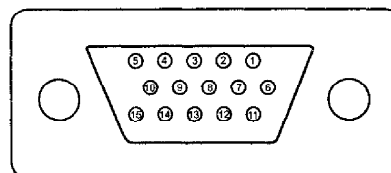
Dimensions:

- Height (in.) 29¹⁷/₃₂ in.
- Width (in.) 35 in.
- Depth (in.) 24¹³/₃₂ in.
- Weight (lbs.) 164 lbs.

VGA AND SVGA SPECIFICATIONS

TYPE	VGA 1/PS2-1	VGA 2/PS2-2	SVGA/PS2-3
MODE	640X480	640X480	800X600
HORIZONTAL FREQUENCY	31.469Khz	37.861Khz	37.879Khz
VERTICAL FREQUENCY	60.00Hz	72.809Hz	60.31Hz
SYNC TYPE	H/V separate	H/V separate	H/V separate
SYNC POLARITY	H	TTL: negative	TTL: negative
	V	TTL: negative	TTL: positive

D-Sub Mini 15-Pin Connector Pin Assignments



PIN NO.	SIGNAL	PIN NO.	SIGNAL
1	Red Video	9	No Connection
2	Green Video	10	Ground
3	Blue Video	11	No Connection
4	Ground	12	No Connection
5	Ground	13	H-Sync (or H/V sync)
6	Red Ground	14	V-Sync
7	Green Ground	15	Ground
8	Blue Ground		

NOTE: Due to improvements, specifications in this operating guide are subject to change without notice.

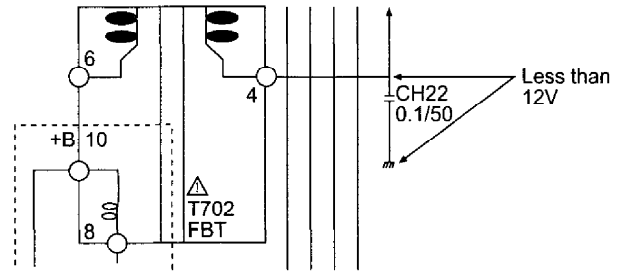
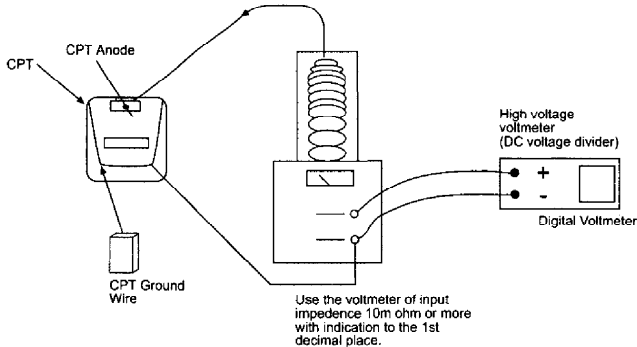
TECHNICAL CAUTIONS

HV Protection Circuit Operation Checking

High voltage limiter circuit operation check and over voltage protection circuit operation check.

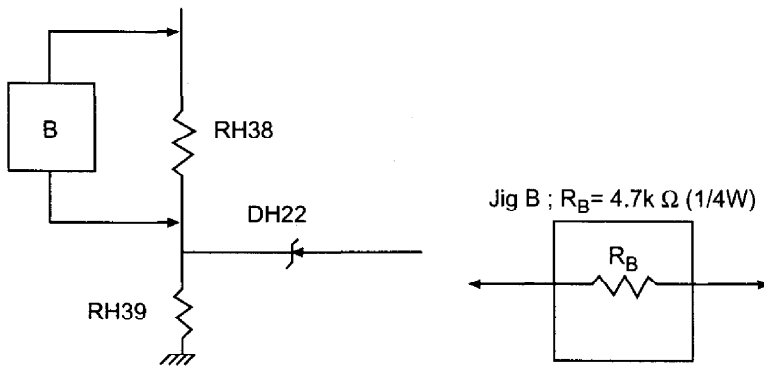
Adjustment Preparation

- (1) Connect a high voltage voltmeter between CPT anode terminal (Anode cap side) and the ground as below.
- (2) Set AC input voltage to $120 \pm 2V$.
- (3) Receive Hitachi circle pattern and set "Brightness" and "Contrast" to maximum. Adjust Screen VR so that Beam Current is $I_B = 1.15 \pm 0.1 mA$. (The voltage of ABL terminal-CH22 both ends should be 12V or less).



Adjustment Procedure

- (1) Check that the normal High Voltage is $30.0 \pm 0.2KV$ and +B Voltage is $220 \pm 1V$.
- (2) Connect jig B to the both end of RH38 and check that power turn off and standby mode is set.



- (3) Disconnect the AC plug and remove jig B.
- (4) Turn the main power on. Check if power is supplied and high voltage rises.

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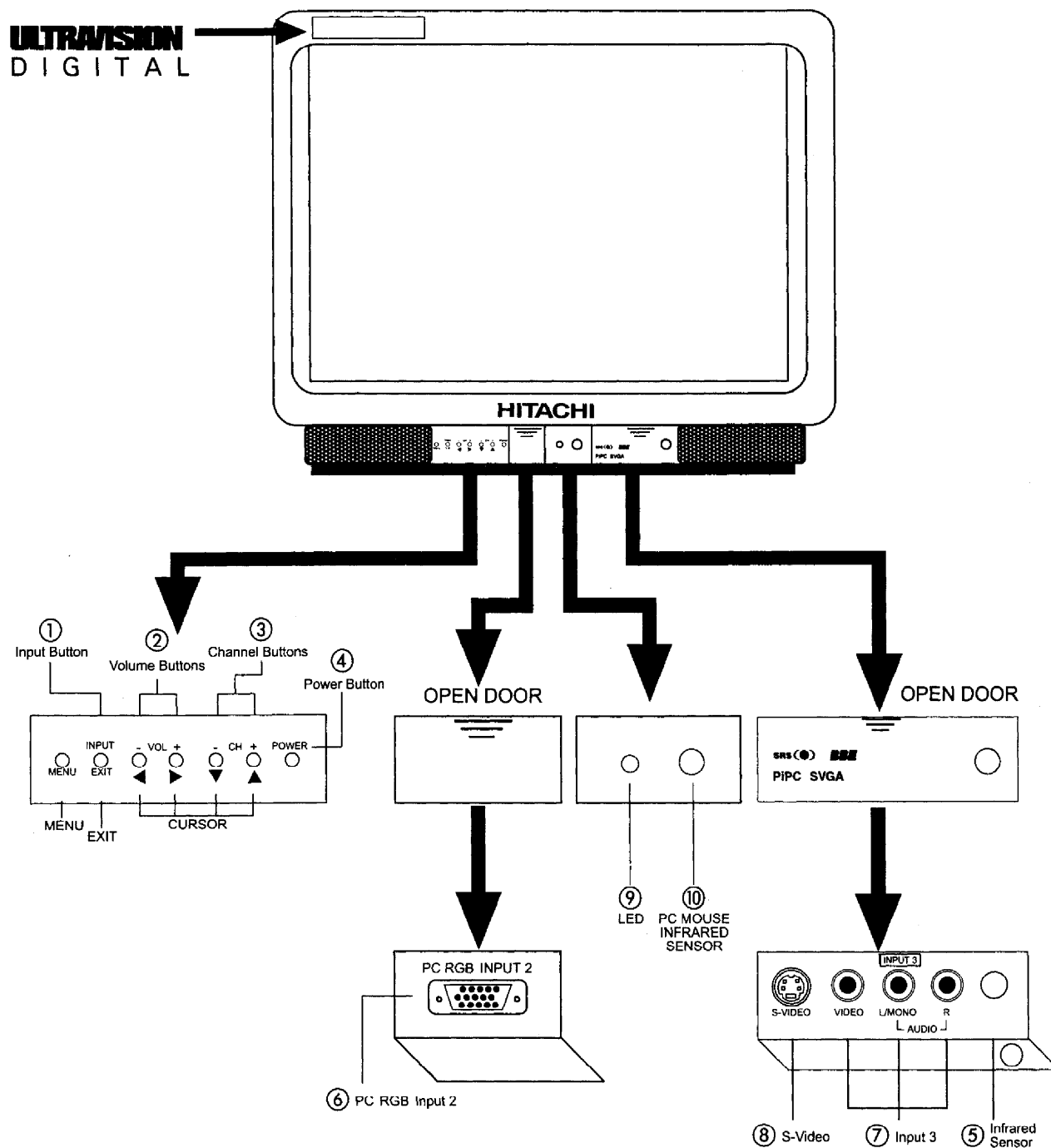
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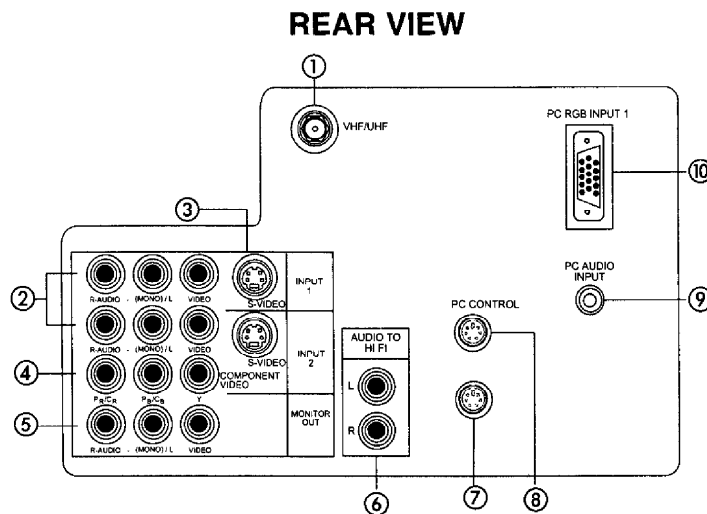


FRONT PANEL CONTROLS

FRONT VIEW



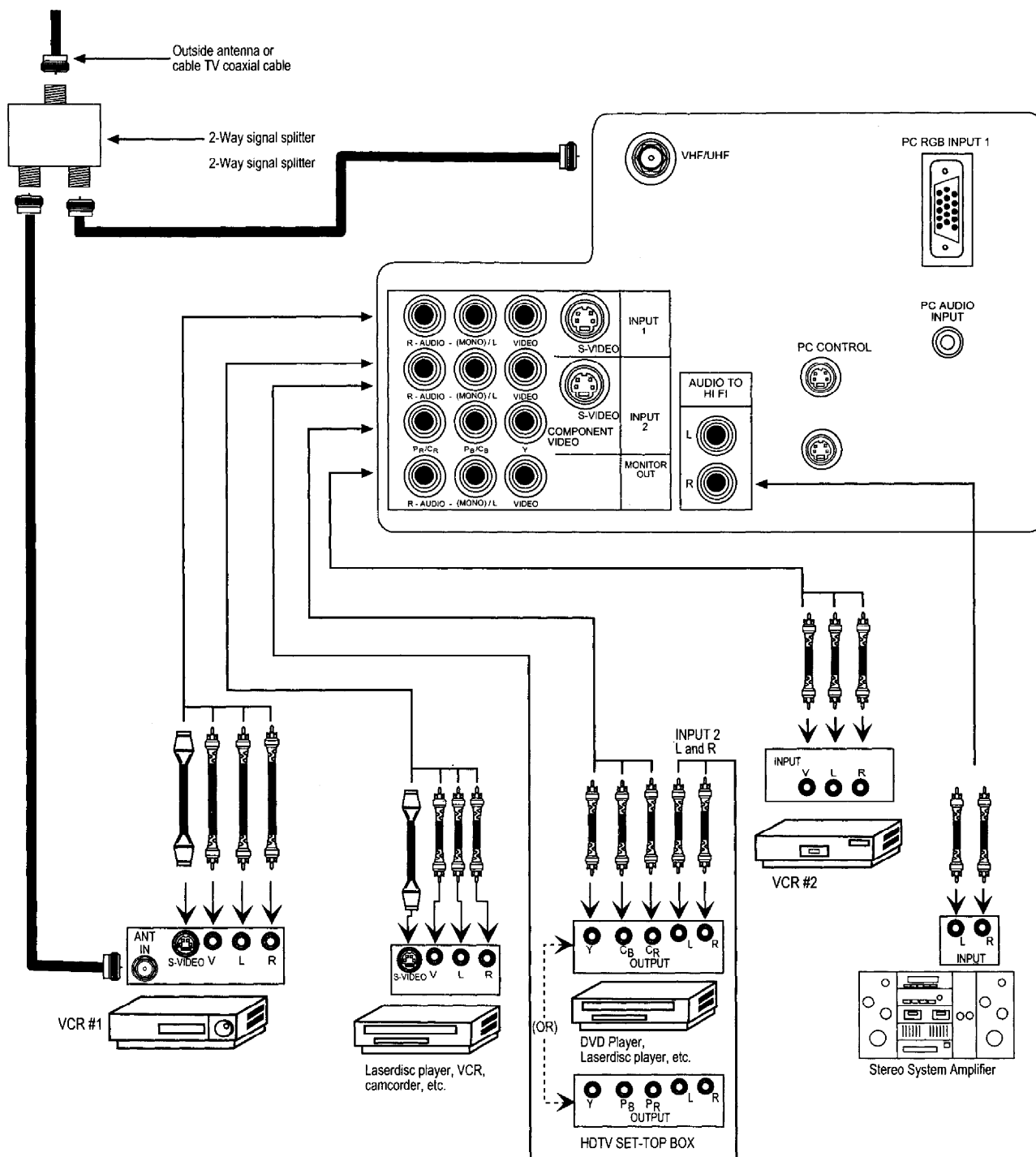
REAR PANEL JACKS



- ① **Antenna Inputs**
The VHF/UHF terminal can be used for normal TV, cable TV (CATV), a video game, etc.
- ② **Audio/Video Inputs 1,2**
The INPUT button will step through each signal source input each time it is pressed. Use the audio and video inputs to connect external devices, such as VCRs, camcorders, laserdisc players, DVD players etc. (If you have mono sound, insert the audio cable into the left channel jack.)
- ③ **S-Video 1,2**
Input provides S-Video (Super Video) jacks for connecting equipment with S-Video output capability.
- ④ **Component: Y-CbCr/Y-PbPr Input 2**
Input 2 provides Y-CbCr/Y-PbPr jacks for connecting equipment with this capability, such as a DVD player.
- ⑤ **Monitor Out**
These jacks provide fixed audio and video signals which are used for recording.
There is NO MONITOR OUT when using COMPONENT VIDEO.
- ⑥ **Audio to Hi-Fi**
These jacks provide variable audio output to a separate stereo amplifier. With this connection, the audio to the stereo can be controlled by the PC ready color television's main volume. Use these jacks for the SURROUND Left and Right channels.
- ⑦ **NOTE:** The mini DIN 6 Pin Keyboard terminal underneath the PC Control at rear panel does not work on this model.
- ⑧ **PC Control**
Use this input for remote control mouse operation.
- ⑨ **PC Audio Input**
Connect external devices for audio in PC mode.
- ⑩ **PC RGB Input 1 (RGB1)**
Use this 15-pin D-Sub Input for your PC connection.

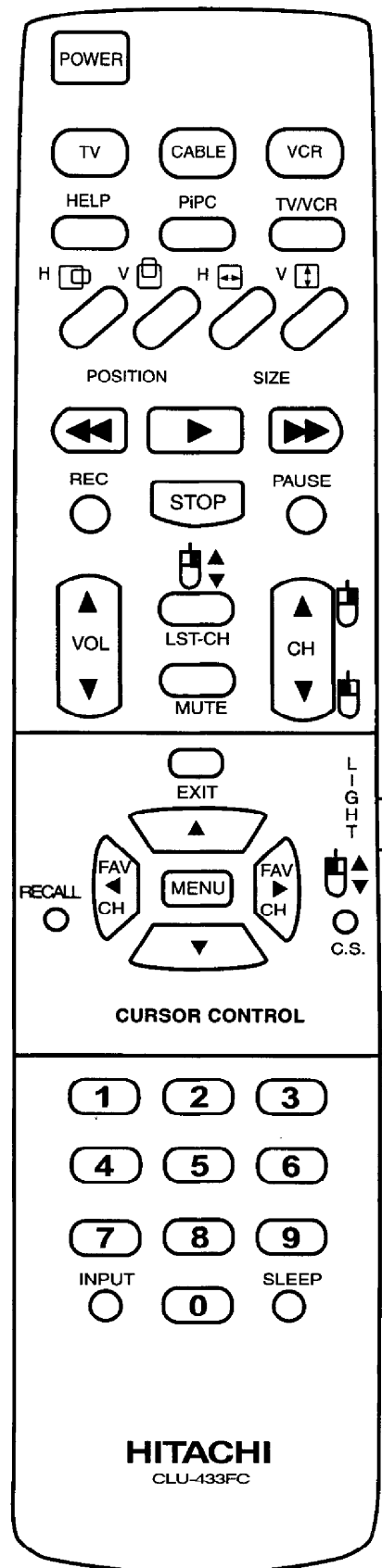


REAR PANEL CONNECTIONS



NOTE: Connect only 1 component to each input jack.

THE REMOTE TO CONTROL YOUR TV





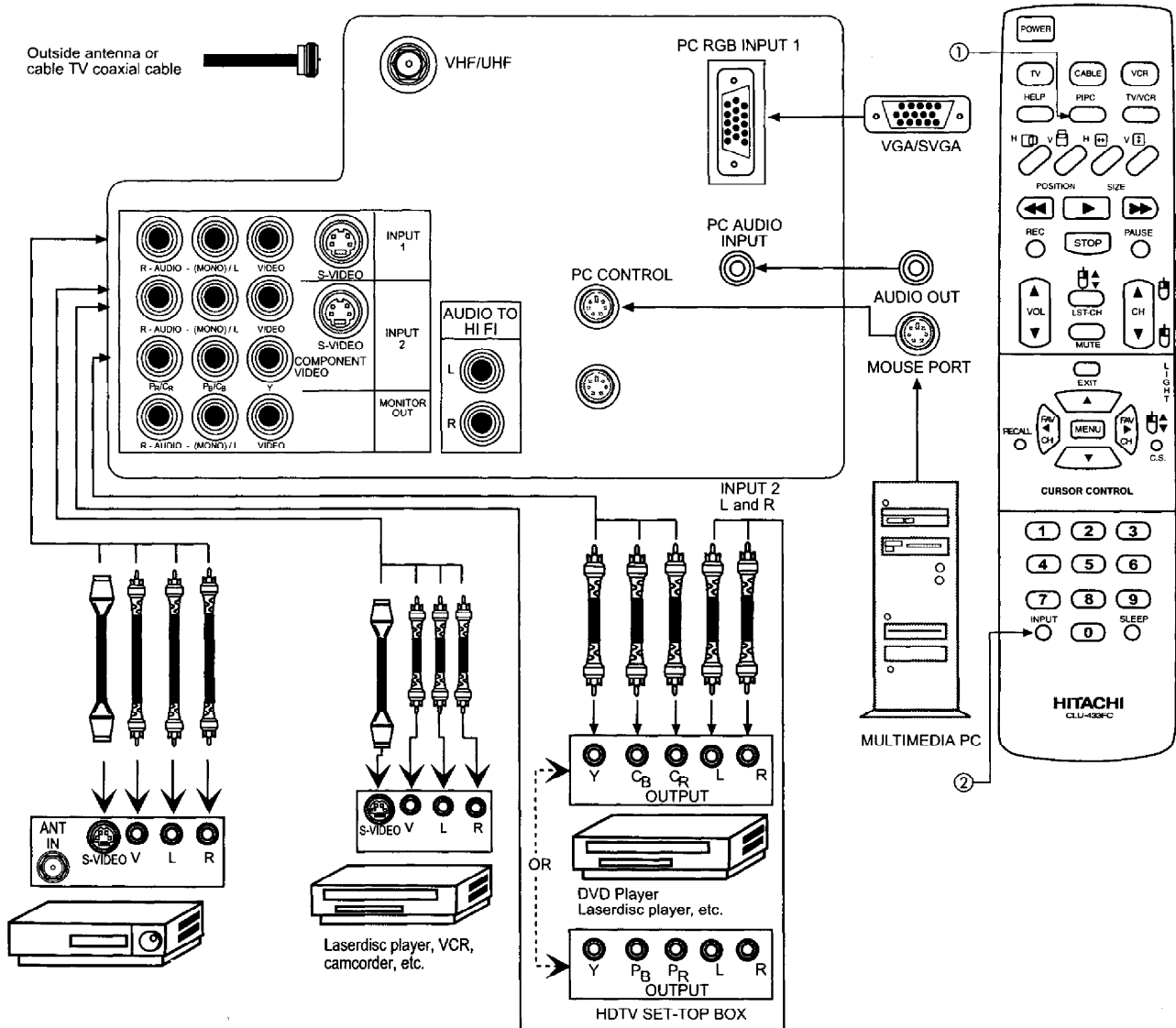
PICTURE-IN-PC

Your PC ready color TV incorporates PinPC technology designed for improved viewing enjoyment.

The Picture-in-PC feature is convenient when you want to watch a program. You can watch your PC operation while viewing other programs from Antenna, Video and component input sources.

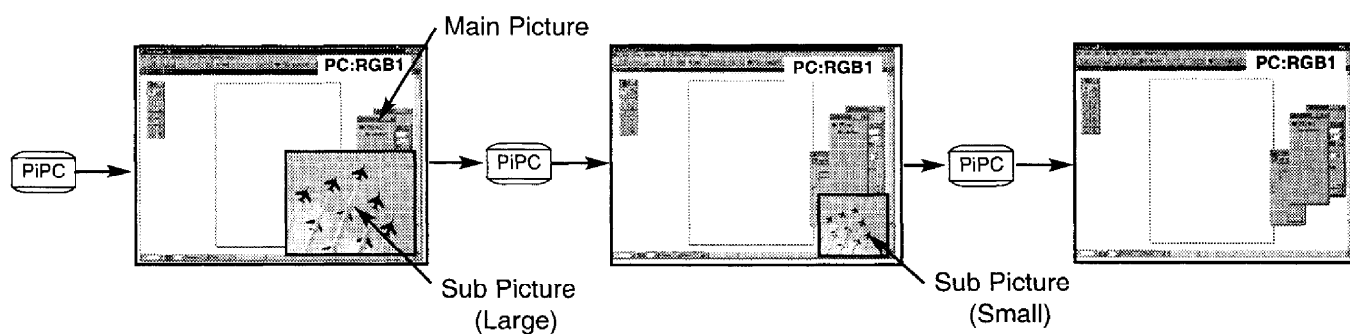
PC input sources can only be viewed as a main pictures.

Antenna, Video and component inputs can be viewed as the sub-picture.

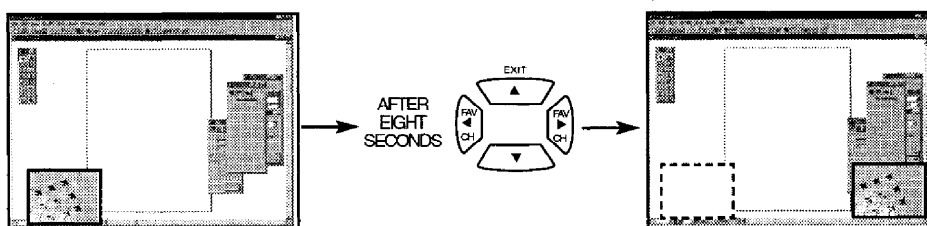


- ① **PiPC Button**
Press the PiPC Button and a Sub-Picture will appear. This PiPC works only on PC mode.
- ② **Input Button**
Press Input to change Sub-Picture Input Source.

NOTE: When PiPC is on Antenna Source, press channel ▲, ▼ to change channel or use number button.



It is also possible to customize the PiPC position. To do this, wait until the On-Screen Display disappears (about eight seconds) and then use the CURSOR ►, ◄ buttons. Press CURSOR ▲, ▼ to select Audio Input source to TV or PC mode.



NOTE: PinPC works correctly when receiving the following signal timings, horizontal and vertical position of PinPC may not work correctly with other timings.

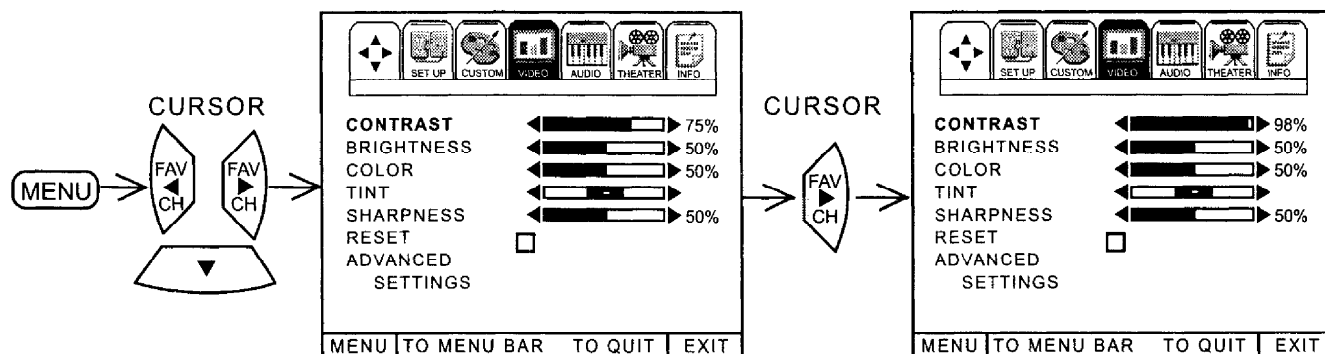
Signal	Resolution	Horizontal		Vertical	
		Freq. (kHz)	Polarity	Freq. (Hz)	Polarity
VGA	640x480	31.5	Negative	60	Negative
VGA	640x480	37.8	Negative	72	Negative
SVGA	800x600	37.8	Positive	60	Positive

NOTE: Component input with High Definition (1080 I) and Standard Definition (480P) Digital signals do not show up on the PinPC sub-picture because digital decoding is only for the main picture.

NOTE: If PinPC is activated, the remote control mouse operation does not work. Use the PC mouse for control instead of the remote control mouse.



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, or CURSOR ◀ to return to previous menu.

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

CONTRAST

Use this function to change the contrast between black and white levels in the picture.

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-P_BP_R/Y-C_BC_R Input 2 jacks).

SHARPNESS

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

RESET

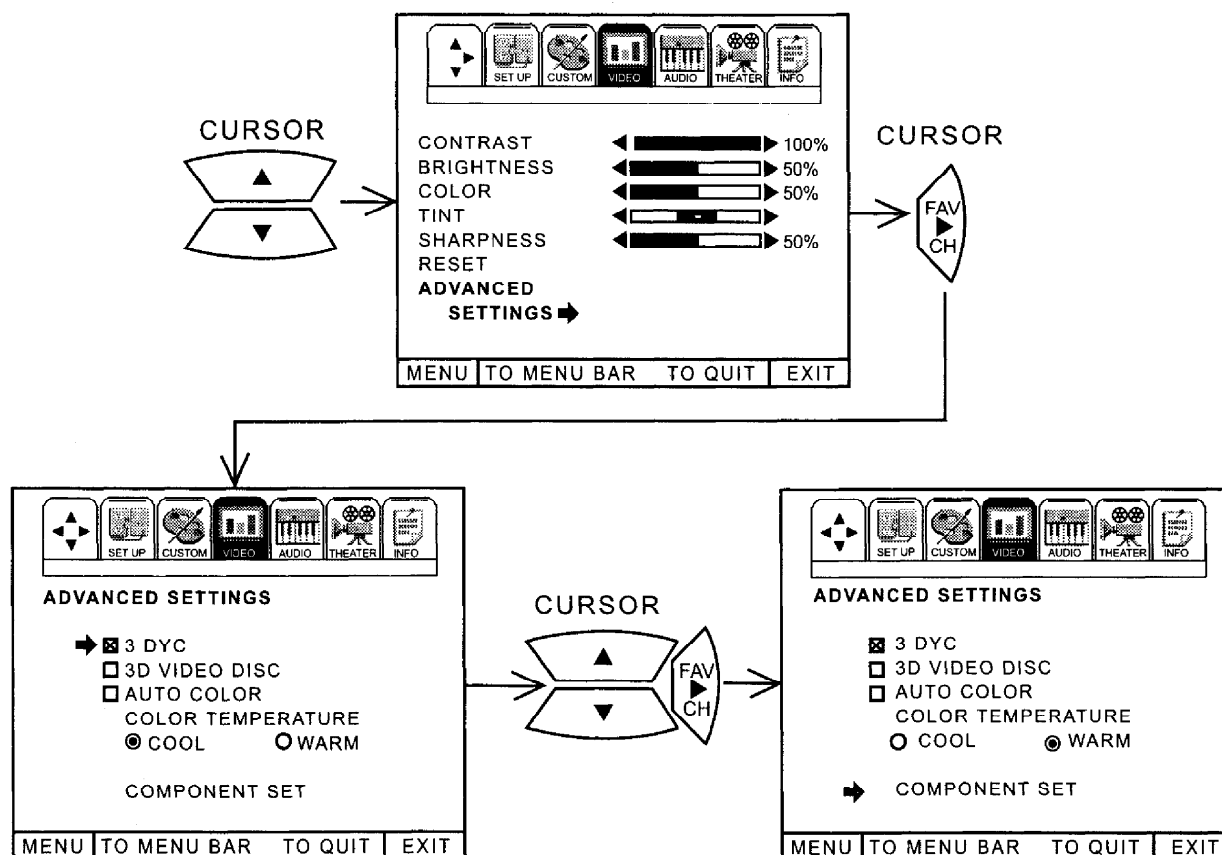
When RESET is selected, the "ARE YOU SURE?" display will appear on the screen to confirm your choice. Press CURSOR ▶ to return VIDEO adjustments to factory preset conditions.

VIDEO



ADVANCED SETTINGS

Your PC ready color TV has the following functions which will adjust picture settings to produce the highest quality picture possible.



Use CURSOR ▲ or ▼ to select function.

Use CURSOR ► to change the function setting. When the function has an "X" in the box, it is ON.

Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

3DYC (DIGITAL 3DYC COMB FILTER)

The 3DYC function automatically turns on the 3 Dimension Luma and Chroma filter. This lessens the dot crawl and cross color. Turn on 3DYC to eliminate flickering, or picture artifacts, that a detailed pattern or scene would normally cause.

3D VIDEO DISC

Turn on for 3D Video programs. Use this mode only when input signal is 3 Dimension. If activated and PC ready color TV turns off, 3D video disc is deactivated.

AUTO COLOR

The AUTO COLOR function automatically monitors and adjusts the color to maintain constant color levels even after a program or channel changes. It also maintains natural flesh tones while preserving fidelity of background colors.

NOTE: It may be necessary to set AUTO COLOR-ON to obtain optimum picture quality when using the COMPONENT: Y-C_BC_R/Y-P_BP_R Input 2 jacks.

COLOR TEMPERATURE

Use this function adjust the white balance (hue) of the picture to your own color preference.

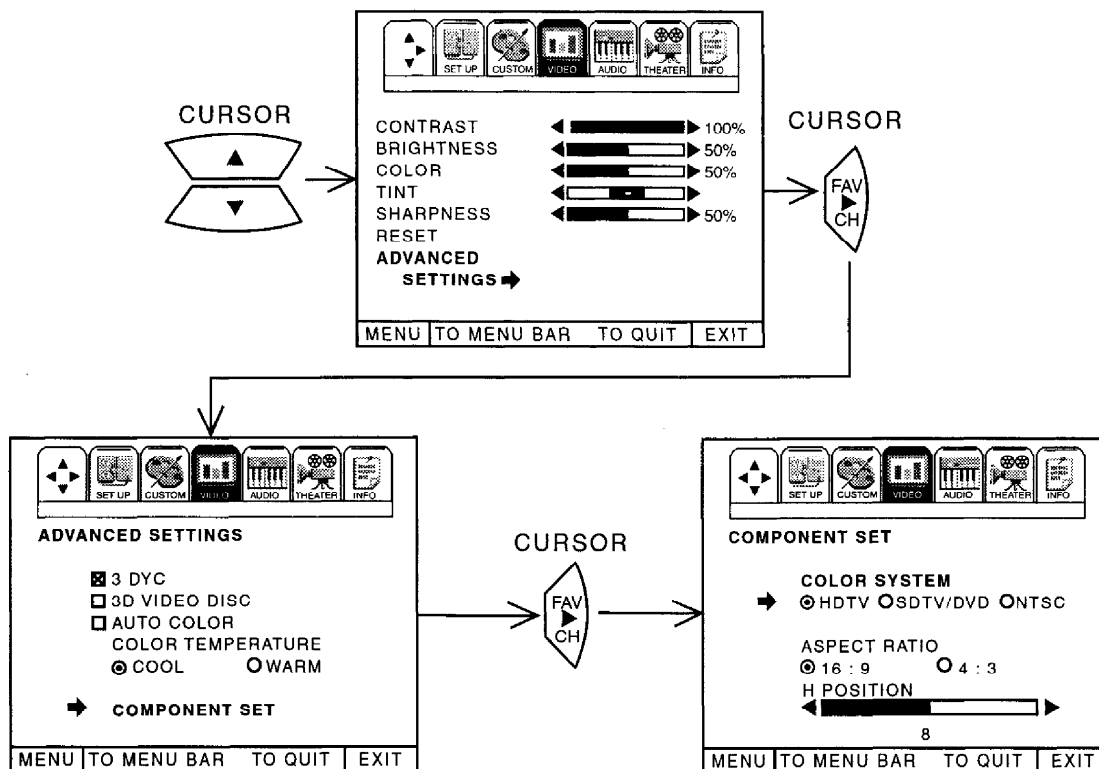
Set this to WARM for hotter colors with more red, or set to COOL for less intense colors with more blue.



ADVANCED SETTINGS

COMPONENT SET

The COMPONENT SET function is very useful when setting up High Definition, Standard Definition and NTSC signal while changing the aspect ratio and moving the Horizontal Position.



Press CURSOR ► to select Color System (HDTV, SDTV/DVD, NTSC).

Press CURSOR ▼ to change position.

Press CURSOR ▲ or ▼ to highlight then CURSOR ► to select ASPECT RATIO (16 : 9, 4 : 3).

Press CURSOR ▼, ► to highlight then CURSOR ► to select H Position.

NOTE: Set up a Component Signal and switch to Video 2 by pressing the Input Button on the Remote Control when planning to use the component set function.

COLOR SYSTEM

The COLOR SYSTEM function allows you to change tint and color coordinate for DTV Programs.

HDTV - High Definition Television - Use for High Vision Signal Y-P_BP_R from HDTV Set-Top Box.

SDTV/DVD - Standard Definition Television or Digital Video Disc Y-C_BC_R such as DVD (Digital Video Disc Player).

NTSC - Basic U.S. Standard Normal Signal Standardized by the National Television Standard Committee.

ASPECT RATIO

16 : 9 - Screen changes to 16 : 9 aspect ratio.

HDTV signal is normally 16 : 9 aspect ratio.

4 : 3 - Screen changes to 4 : 3 aspect ratio.

SDTV and NTSC signals are normally 4 : 3 aspect ratio.

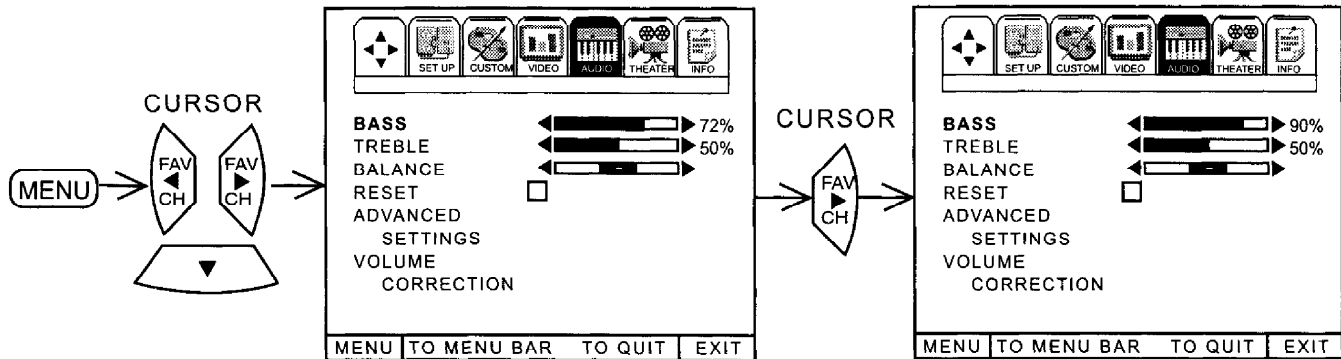
H POSITION

This function allows you to adjust the Horizontal Position on DTV mode. This is convenient when using SET TOP BOX.

AUDIO



Select AUDIO SETTINGS to adjust the PC ready color 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 or cursor ◀ to return to previous 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.

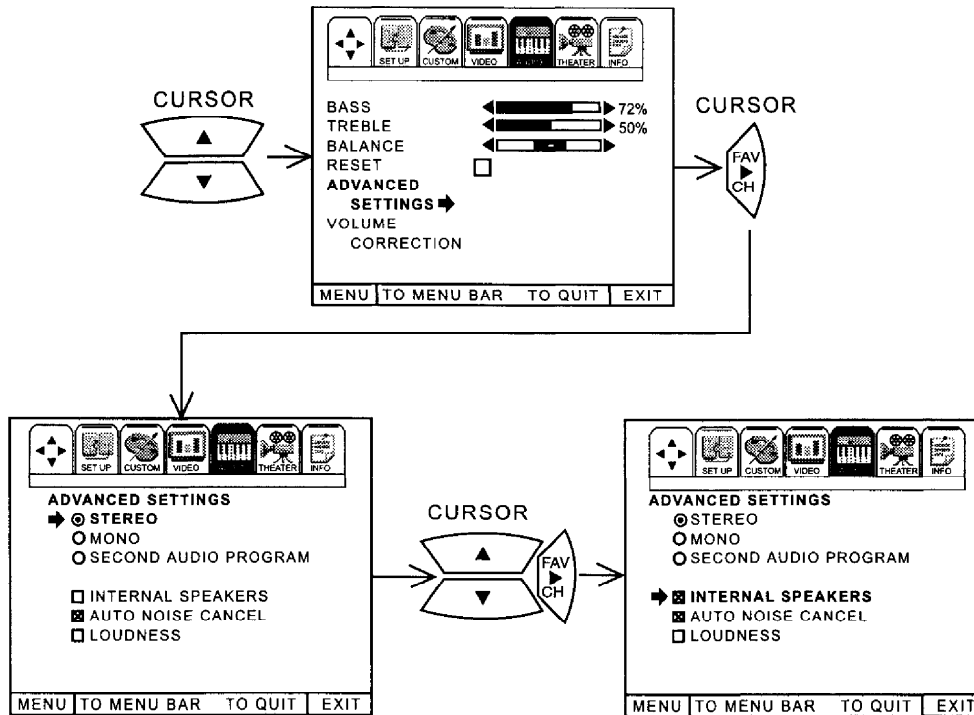
RESET

When RESET is selected, the "ARE YOU SURE?" display will appear on the screen to confirm your choice. Press CURSOR ▶ to return AUDIO adjustments to factory preset conditions.



ADVANCED SETTINGS

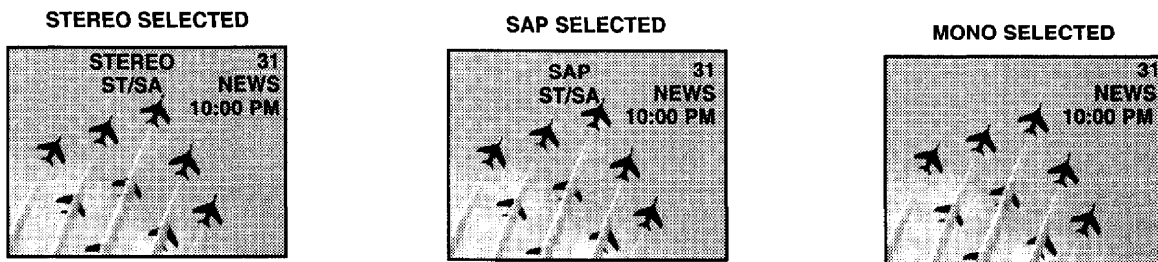
Use ADVANCED SETTINGS to improve the sound performance of your PC ready color TV, depending on listening conditions.



Press CURSOR ▲ or ▼ to highlight a function. Press CURSOR ► to change the function setting. When the function has an "X" in the box, it is ON. Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

MTS MODE

Multi-Channel Television Sound (MTS) will allow you to select STEREO (a Stereo Broadcast), MONO (Monaural Sound) used when receiving a weak stereo broadcast or SAP (Second Audio Program) which may be a secondary language, weather report, etc. The sources received will be displayed at the top center edge of the PC ready color TV. The source you select will be displayed above the sources received. See example below for each selection when both stereo and second audio are received (monaural is always received).



INTERNAL SPEAKERS

This function is useful when first setting up the external speakers, or if you prefer to use only speakers from a separate stereo system.

AUTO NOISE CANCEL

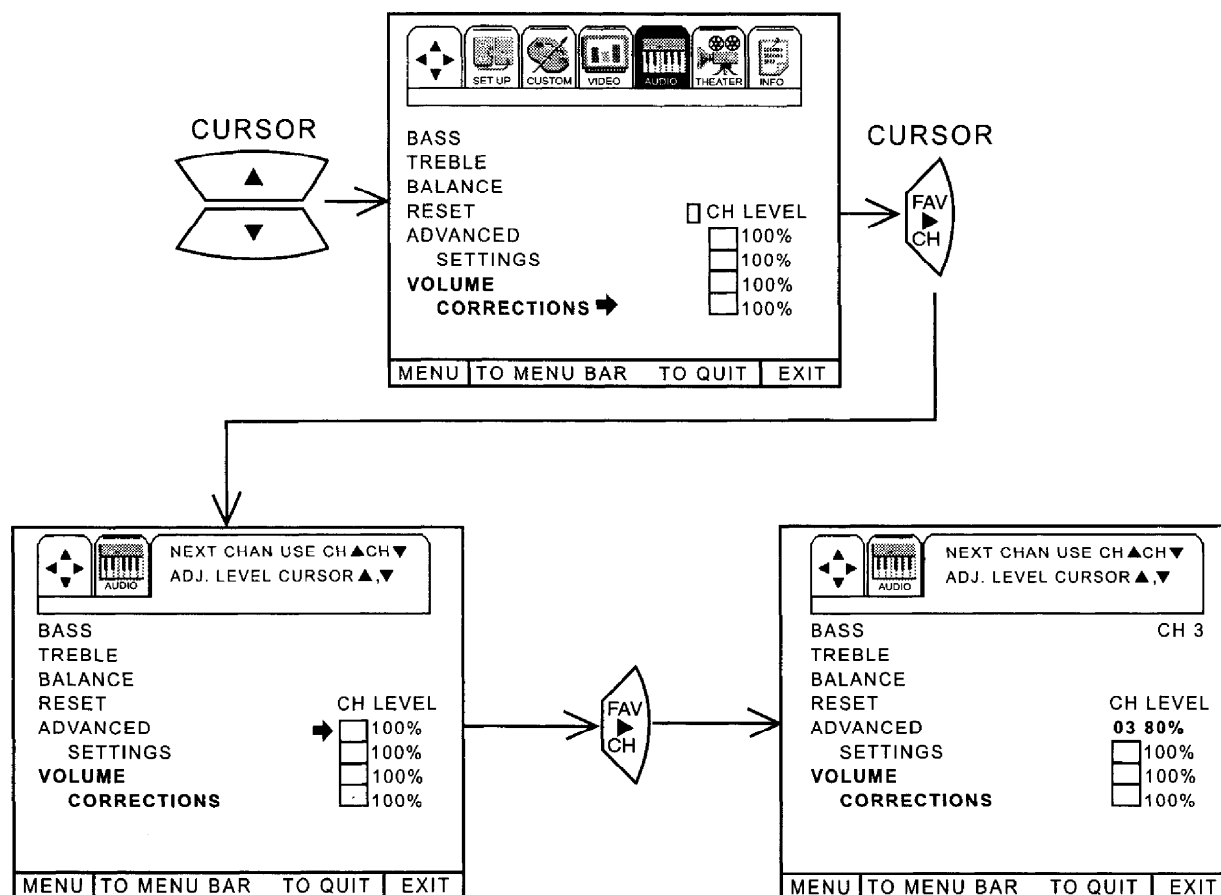
This function eliminates the noise in between stations. If a channel is tuned and is noisy, this function will automatically eliminate the audio for that channel and set to blue screen.

LOUDNESS

This function will improve the quality of both low and high frequency sounds when listening at low volume levels.

VOLUME CORRECTION

Use this function to reduce the volume level of up to four channels that sound loud compared to other channels.



Press CURSOR ▲ or ▼ to highlight one of the four volume corrections, then CURSOR ► to select.

Press CHANNEL ▲ or ▼ and number buttons to select a channel.

Press CURSOR ▲ or ▼ to adjust volume level in 5% increments.

Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

- NOTE:**
1. Volume Correction adjustment is for the channel display in the top right corner of the screen.
 2. If the channel is already set, use CURSOR ► to select that channel, then use CURSOR ▲ or ▼ to change the level.
 3. To erase a channel from volume correction, select channel 00 and press MENU.
 4. The volume level will change from 50% to 100% in increments of 5%.

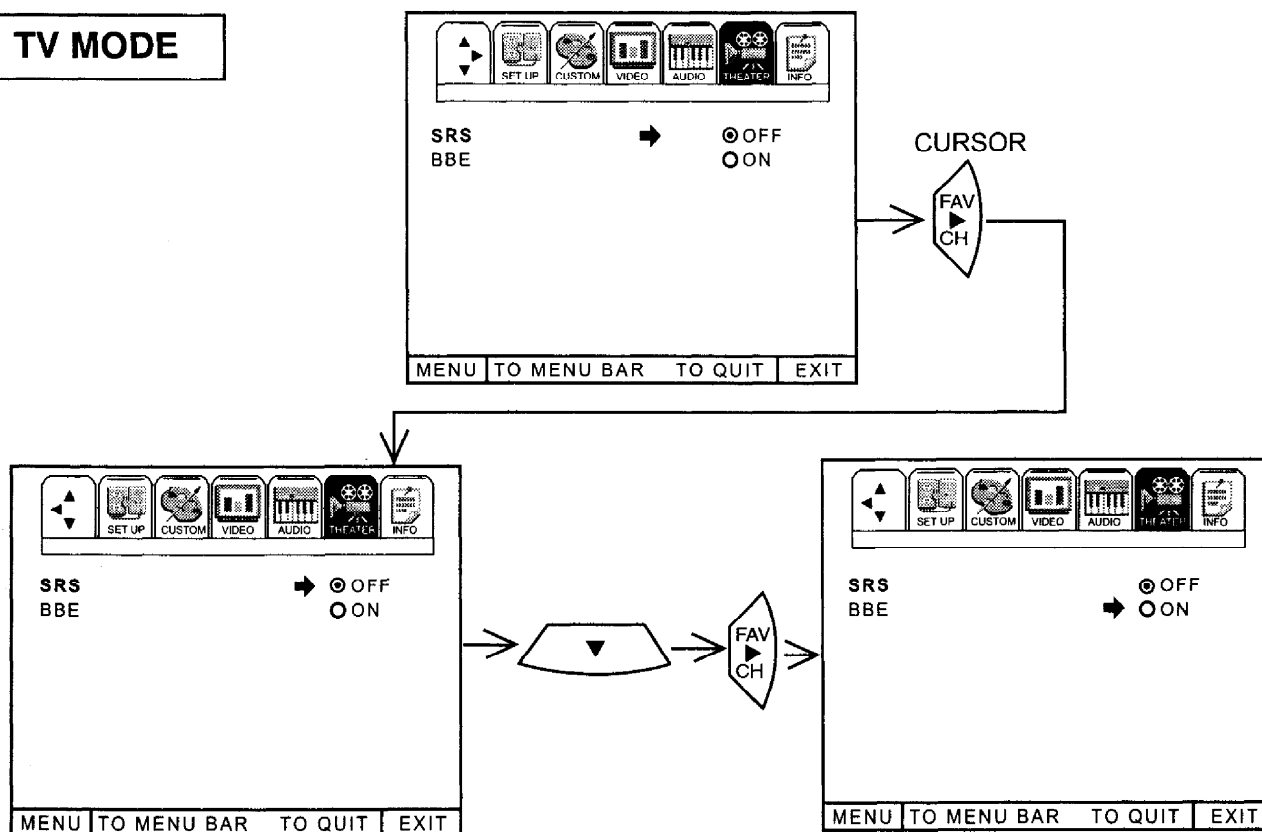


Use this function to choose audio settings for a true home THEATER experience.



Based on the principles of the human hearing system, SRS technology delivers an exciting and realistic 3D Sound experience from just two speakers (or) the two internal speakers of your HITACHI PC ready color television. If your HITACHI PC ready color television is connected to an external audio system, SRS will also create an incredible 3D sound experience from two speakers and even enhance a complete multi-speaker surround sound system.

TV MODE



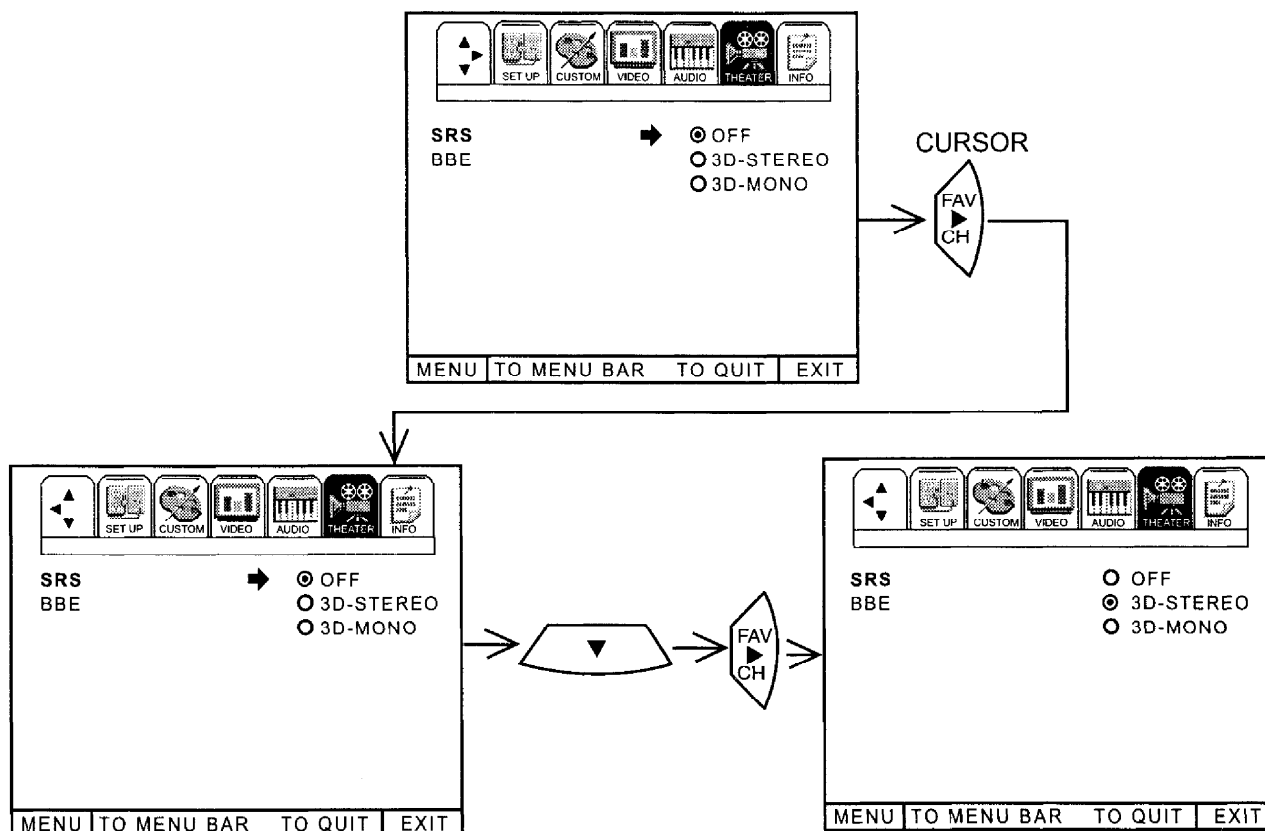
NOTE: TV Mode - This mode is when Input selection is on Antenna or Cable.

NOTE: SRS, the SRS symbol and Sound Retrieval System are registered trademarks of SRS Labs, Inc. in the U.S. and select countries. SRS Technology is manufactured under license from SRS Labs, Inc. and is protected by USA patents 4,748,669 and 4,841,572 and additional patents worldwide.

THEATER

SRS (●)®

VIDEO MODE



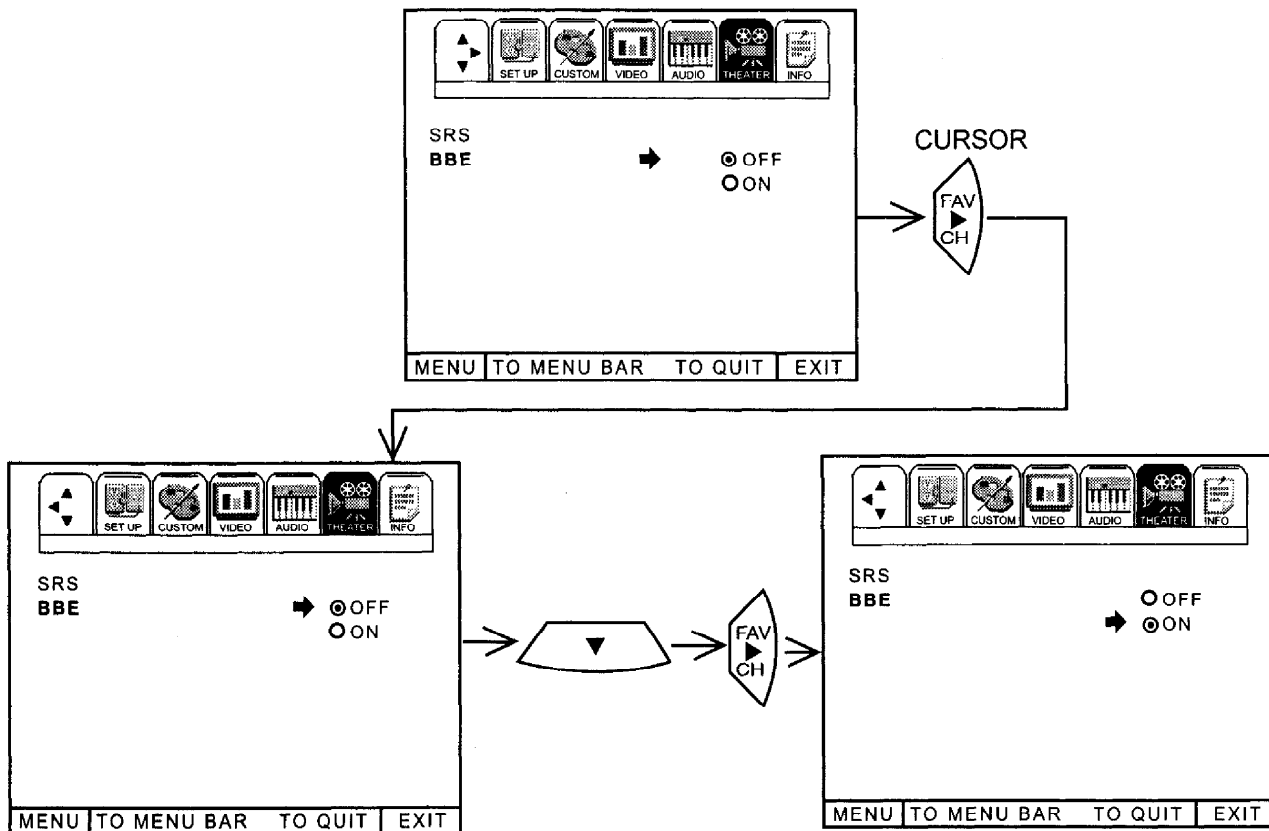
USE CURSOR ▲ or ▼, then CURSOR ► to set SRS OFF, 3D-STEREO or 3D-MONO.
Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

NOTE: VIDEO MODE - This mode is when Input selection is from VIDEO Inputs.



BBE®

Sound reproduction quality enhancement system. The BBE technology produces sound that is natural and crisp from just two speakers (or) the two internal speakers of your HITACHI PC ready color television. If your HITACHI PC ready color television is connected to an external audio system, BBE will also create an incredible crisp sound experience from two speakers and even enhance a complete multi-speaker surround sound system. BBE brings to the listener's ear a more complete and accurate reproduction of the original performance. Each voice, speaking or singing, each instrument or sound effect is presented with its attendant harmonics or partials more clearly audible. The ear can then more easily recognize the unique tonal colors of each sound as though the sound was being produced live.

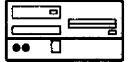


Use CURSOR ▲ or ▼, then CURSOR ► to set BBE ON or OFF.
Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

NOTE: BBE functions the same manner on TV mode and on VIDEO mode.

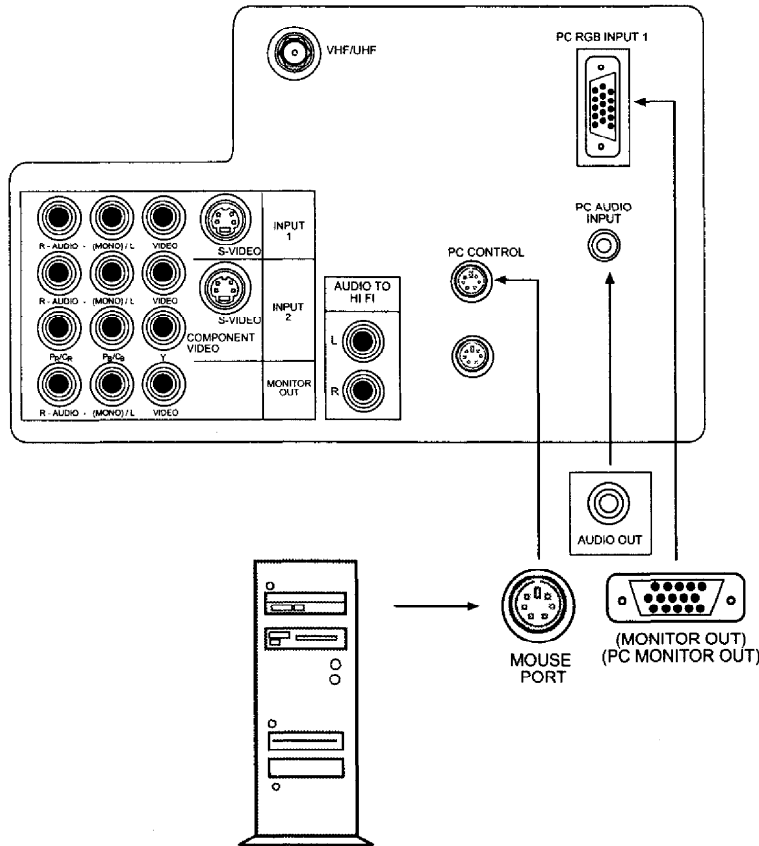
NOTE: The mark BBE and the BBE symbol are trademarks of BBE Sound, Inc. Manufactured under license from BBE Sound, Inc. US pat. 4,638,258, 4,482,866 and 5,510,752.

PC MODE CONNECTION AND OPERATION



IMPORTANT: TURN OFF THE TV/PC MONITOR AND THE PC BEFORE CONNECTING OR DISCONNECTING ANY CABLES.

REAR PANEL CONNECTION TO PC



- NOTE:**
1. This monitor can display VGA and SVGA formats:
VGA 1 640 X 480 (horizontal frequency: 31.469Khz, vertical frequency: 60.00Hz)
VGA 2 640 X 480 (horizontal frequency: 37.861Khz, vertical frequency: 72.809Hz)
SVGA 800 X 600 (horizontal frequency: 37.879Khz, vertical frequency: 60.317Hz)
LED flashes and PC picture does not appear at all when receiving a signal which is not supported on spec.
If PC display setting is wrong the monitor will display: "Please set PC for 640 x 480 60Hz, 640 x 480 72Hz, 800 x 600 60Hz display."
 2. This monitor uses PS/2 format for the mouse interface. On some PC's, the mouse control may not work in the following situations:
 - Disconnecting and reconnecting mouse cable while PC ready color TV and PC power is turned on.
 - Turning on the PC power before turning on the PC ready color TV power.
 - Operating systems other than Windows 3.1x and Windows 95.

Consult your PC operation manual for the keyboard keys to re-start or shutdown your computer.

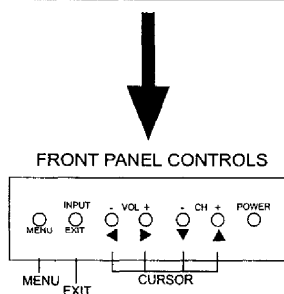
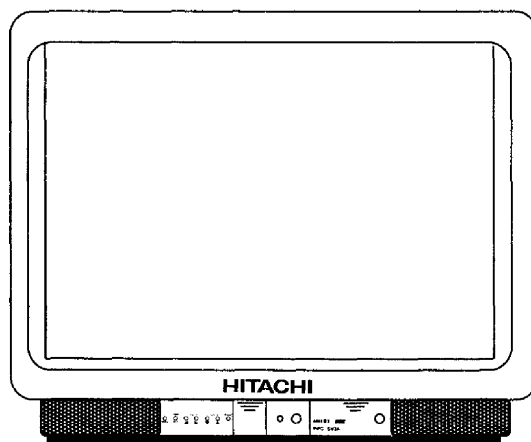
NOTE: If PC is set to correct horizontal and vertical frequencies and the picture is out of sync or scrambled, check the video card documentation and set up software to properly set the monitor.

NOTE: The Mini DIN 6 pin keyboard terminal underneath the PC CONTROL at rear panel does not work on this model.

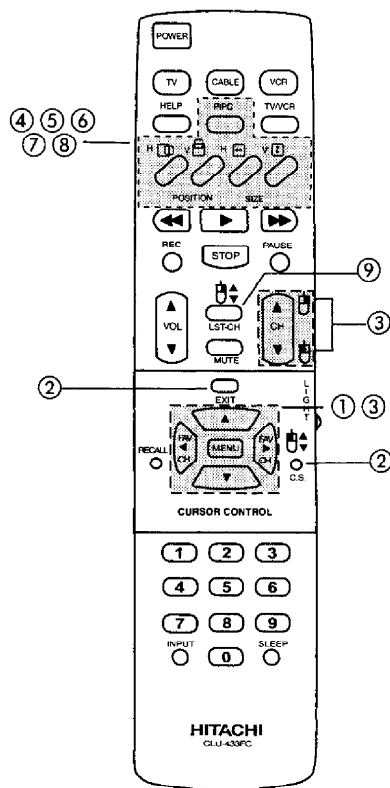


PC MODE CONTROLS

1. FRONT PANEL



2. REMOTE CONTROL



PC MODE CONTROLS

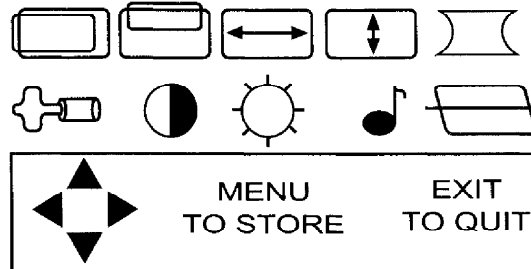


① MENU Button

Press MENU to display PC mode On-Screen Display.

PC MAIN MENU

There are ten features that allow you to set up your multimedia vision (while in PC Mode) to your preference. Features are H Position, V Position, H Size, V Size, Pincushion, Set Up, Contrast, Brightness, Audio and Tilt.



After completing adjustment, press MENU to store.

② EXIT Button

Press EXIT button to exit the on-screen display.

③ CURSORS Button

Use Left/Right cursors to highlight a feature and Up/Down cursors to select the highlighted item, then use left/right cursors to adjust. These buttons are also used for mouse cursor remote control operation.

④ PinPC Button

Press this button to go to PinPC mode. This function works on PC mode only.

⑤ H POSITION Button

Press to display PC horizontal position adjustment bar. Press cursor left/right to adjust PC horizontal position.

⑥ V POSITION Button

Press to display PC vertical position adjustment bar. Press cursor left/right to adjust PC vertical position.

⑦ H SIZE Button

Press to display PC horizontal size adjustment bar. Press cursor left/right to adjust PC horizontal size.

⑧ V SIZE Button

Press to display PC vertical size adjustment bar. Press cursor left/right to adjust PC vertical size.

⑨ LAST CHANNEL (LST-CH) Button /

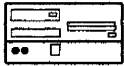
Press to perform mouse right button drag, toggle.

⑩ COMMERCIAL SKIP (CS) Button /

Press to perform left button drag, toggle.

⑪ CHANNEL UP/DOWN Button /

Use the channel up () button to perform a right click. Use the channel down () button to perform a left click.



PC MOUSE CONTROL AND AUDIO INPUT OPERATION

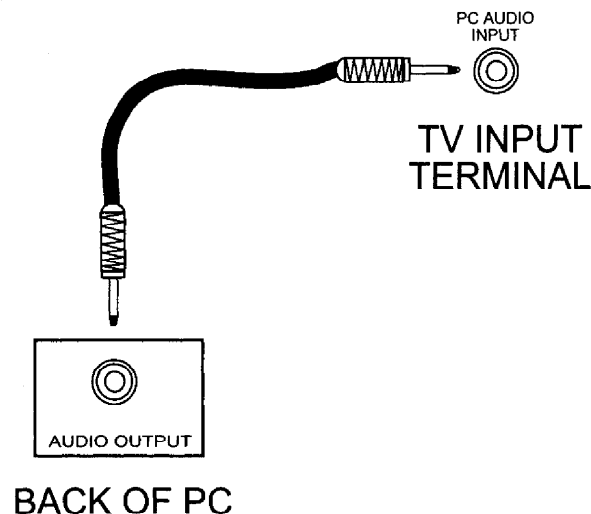
IMPORTANT: TURN POWER OFF ON THE TV/PC MONITOR AND THE PC BEFORE CONNECTING OR DISCONNECTING ANY CABLES.

PC MOUSE CONTROL OPERATION

1. Connect the 6 pin-din cable (provided) to the PC and monitor.
2. Turn the TV/PC monitor power on.
3. Press the input button on the front panel or on the remote control until you select PC mode.
4. Turn the PC power on.
5. After the PC has completed booting, use the cursor buttons on the PC ready color TV front panel or on the remote control to move the mouse cursor up/down/left/ or right to make selections. Use the channel down, channel up, C.S., and LST-CH buttons to perform other mouse functions. (0,0,0,0,0,0)

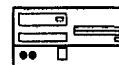
PC AUDIO INPUT OPERATION

1. Connect the audio output of the PC to the PC Audio Input on the TV/PC monitor as shown below.



2. Turn the TV/PC monitor power on.
3. Press the input button on the front panel or on the remote control until you select PC mode.
4. Turn the PC power on.
5. Press volume up (▲) or down (▼) to increase or decrease the sound level.
6. Press the menu button on the TV/PC monitor front panel or on the remote control to display the PC on-screen display.
7. Press the right (▶) or left (◀) cursor buttons to select the audio menu .
8. Press the up(▲) or down (▼) cursor buttons to access the audio adjustment functions.

NOTE: Make sure that the Remote Control is on TV Mode (not VCR or CABLE) when using the Cursor and Mouse control buttons.



PICTURE ADJUSTMENTS

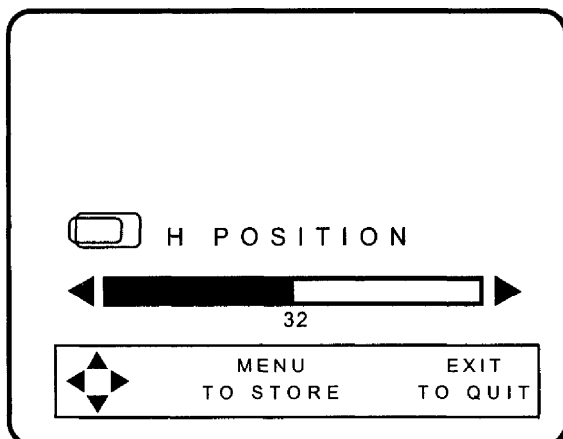
The following adjustments are independent of the TV mode:

- Press MENU in PC mode for on-screen display.
- Press CURSORS right (▶) or (◀) left to highlight the item to be adjusted.
- Press CURSORS up (▲) or down (▼) to select the highlighted item.
- Use CURSORS right (▶) or (◀) left to adjust.



H POSITION

This feature allows you to adjust the horizontal position of the display.

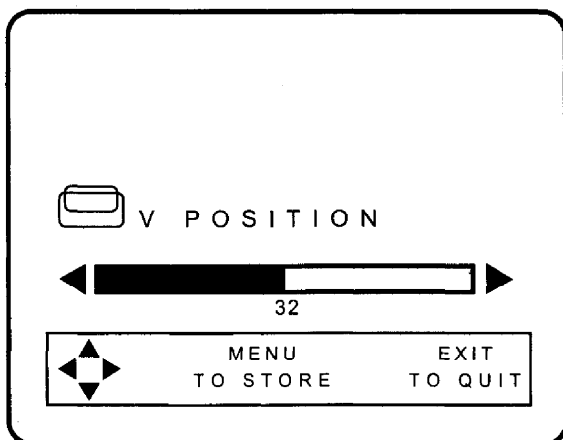


Use Left/Right cursors to adjust the horizontal position.
Press the MENU button to store and EXIT to quit.

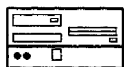


V POSITION

This feature allows you to adjust the vertical position in PC mode.



Use Left/Right cursors to adjust the vertical position.
Press MENU button to store and EXIT to quit.

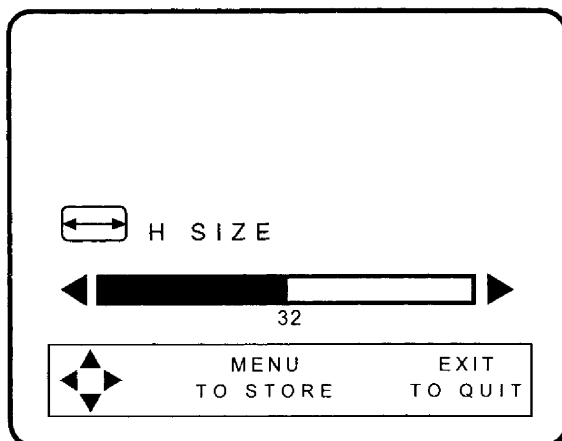


PC ON-SCREEN DISPLAY



H SIZE

This feature allows you to adjust the horizontal size in PC Mode.

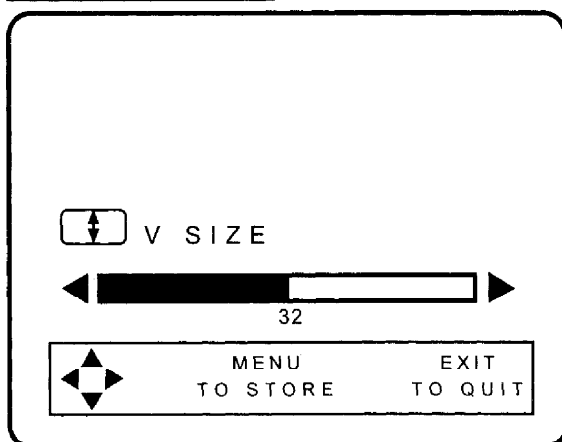


Use Left/Right cursors to adjust the horizontal size.
Press MENU button to store and EXIT to quit.



V SIZE

This feature allows you to adjust the vertical size in PC mode.

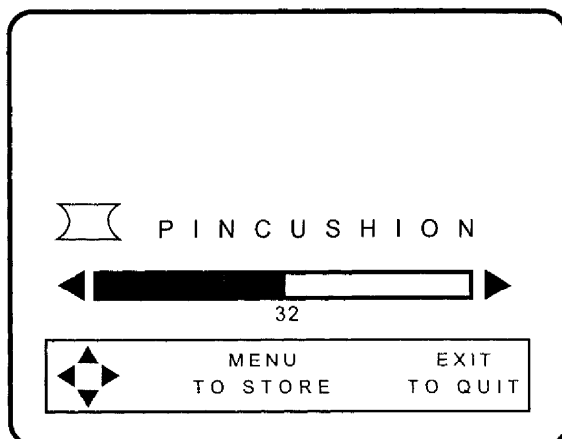


Use Left/Right cursors to adjust the vertical size.
Press MENU button to store and EXIT to quit.



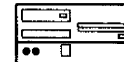
PINCUSHION

This feature allows you to adjust the left and right sides (pincushion) in PC Mode.



Use Left/Right cursors to adjust pincushion.
Press the MENU button to store and EXIT to quit.

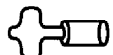
PC ON-SCREEN DISPLAY



SET UP ADJUSTMENTS

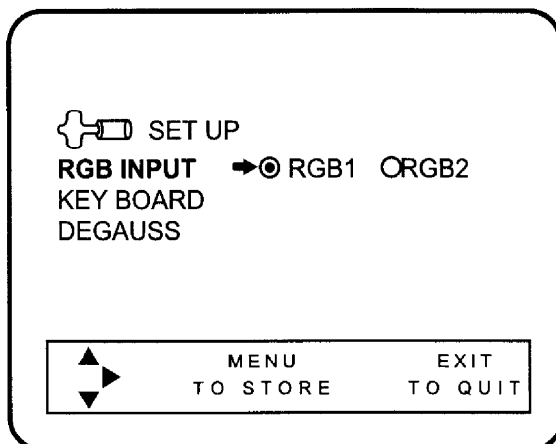
The following adjustments are independent of the TV mode:

- Press MENU in PC mode for on-screen display.
- Press CURSORS right ► or ◀ left to highlight the item to be adjusted.
- Press CURSORS up ▲ or down ▼ to select the highlighted item.
- Use CURSORS right ► or ◀ left to adjust.

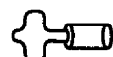


RGB INPUT

This feature allows you to select PC INPUT between RGB1 or RGB2.

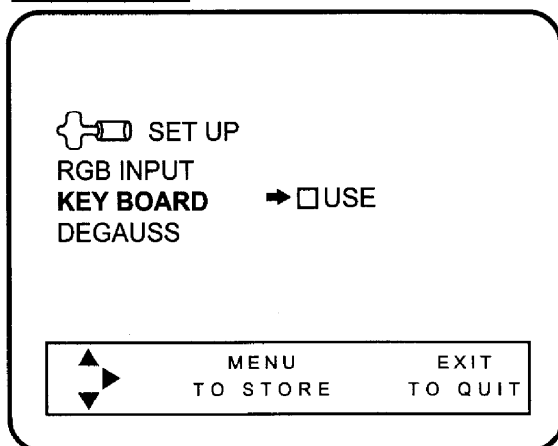


- Use right CURSOR ► to select between RGB1 or RGB2.
- Press MENU button to store and EXIT to quit.
- RGB1 when selected, the PC Input will be on the Rear Panel.
- RGB2 when selected, the PC Input will be on the Front Panel.



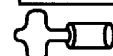
KEYBOARD

This feature allows you to use the Remote Control Keyboard.



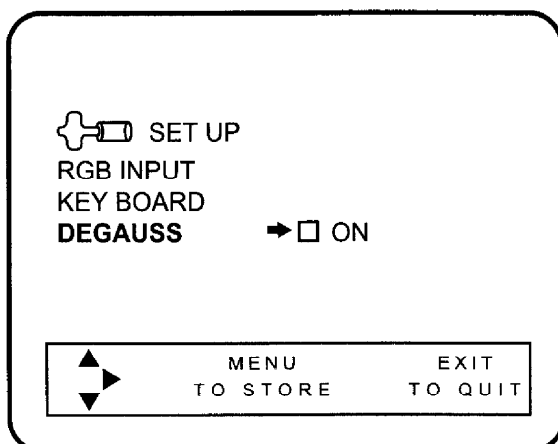
- Use right CURSOR ► to check when Keyboard will be in use.
- Press MENU button to store and EXIT to quit.

NOTE: Please don't check "Keyboard USE" on PC Set Up Menu, otherwise PC CONTROL will not work. Once you change setting of "Keyboard USE" of PC Set Up Menu, you better restart PC to refresh PS/2 communication between your set and PC. The Mini DIN 6 pin keyboard terminal on the Rear Panel does not work on this model.

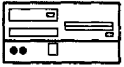


DEGAUSS

This feature allows you to manually Degauss your set.

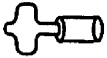


- Use right cursor ► to check and turn on the Degaussing Coil.
- Press MENU button to store and EXIT to quit.
- Degauss function is convenient when cleaning any misleading or discolorization in the Picture.
- This will momentarily turn on the Degaussing coil then stop when completed.



PC ON-SCREEN DISPLAY

SET UP ADJUSTMENTS Press CURSOR ▼ for more set up adjustments.



COLOR TEMPERATURE

This feature allows you to select your color temperature.

SET UP
COLOR
TEMPERATURE
ASPECT RATIO
RESET

● 9300K
○ 8000K
○ 6500K

MENU TO STORE EXIT TO QUIT

- Use CURSOR ▲ or ▼ then CURSOR ► to set Color Temperature to 9300°k, 8000°k or 6500°k depending on your preference.
- Press MENU button to store and EXIT to quit.



ASPECT RATIO

This feature allows you to select your aspect ratio.

SET UP
COLOR
TEMPERATURE
ASPECT RATIO
RESET

→ ○ 16:9 ● 4:3

MENU TO STORE EXIT TO QUIT

- Use CURSOR ▲ or ▼ then CURSOR ► to select Aspect Ratio from 16:9 or 4:3.
- Press MENU button to store and EXIT to quit.



RESET

This feature allows you to reset the PC ready color television to the Factory Preset Conditions.

SET UP
COLOR
TEMPERATURE
ASPECT RATIO
RESET

→ □
ARE YOU SURE?

MENU TO STORE EXIT TO QUIT

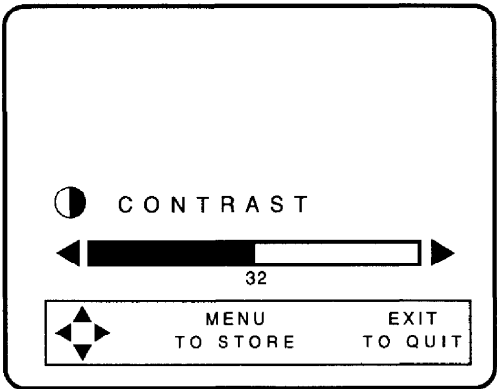
- Use CURSOR ▲ or ▼ then CURSOR ► to select Reset.
- When Reset is selected, the "ARE YOU SURE?" display will appear to confirm your choice.
- Press CURSOR ► to return SET-UP Adjustment to factory preset conditions.
- Press MENU button to store and EXIT to quit.

PC ON-SCREEN DISPLAY



CONTRAST

This feature allows you to adjust the contrast in PC mode.



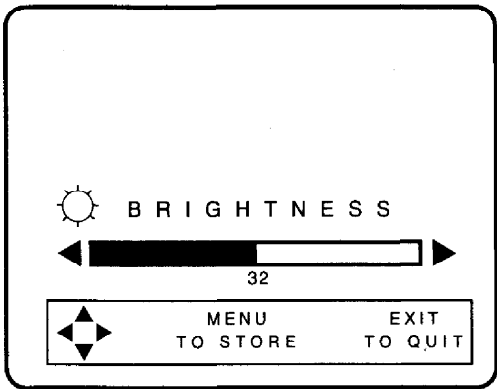
Use Left/Right cursors to adjust contrast.
Press MENU button to store and EXIT to quit.

NOTE: See TV contrast feature for additional information regarding contrast.



BRIGHTNESS

This feature allows you to adjust brightness in PC Mode.



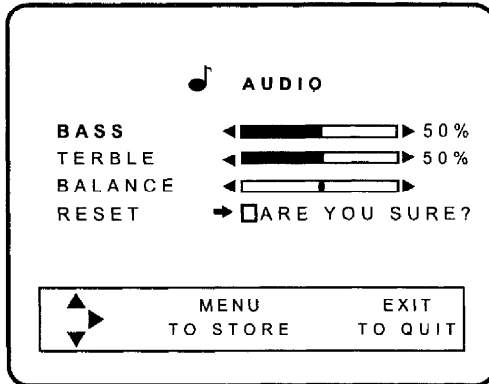
Use Left/Right cursors to adjust brightness.
Press MENU button to store and EXIT to quit.



PC ON-SCREEN DISPLAY



PC AUDIO OPERATION



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

Press CURSOR ◀ or ▶ to adjust the function.

Press MENU button to store and EXIT to quit.

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.

NOTE: TV mode and PC mode AUDIO have the same effect.

RESET

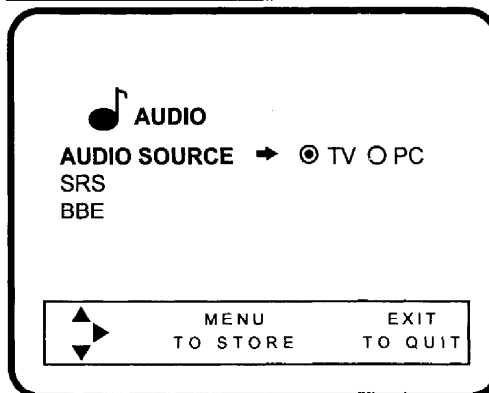
When RESET is selected, the "ARE YOU SURE?" display will appear on the screen to confirm your choice. Press CURSOR ▶ to return AUDIO adjustments to factory preset conditions.

Press CURSOR ▼ for more AUDIO ADJUSTMENT.



AUDIO SOURCE

This feature allows you to select Audio Source between TV or PC.



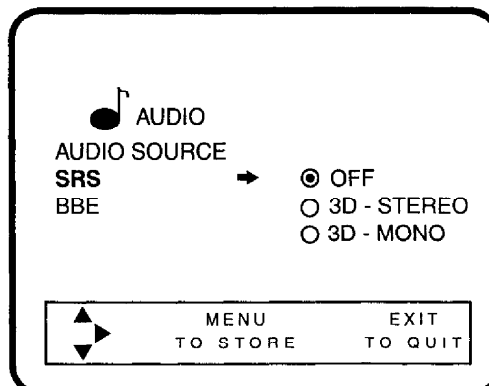
Use CURSOR ▲ or ▼, the CURSOR ▶ to select AUDIO SOURCE between TV or PC.

Press MENU button to store and EXIT to quit.



SRS (●)

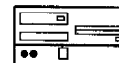
This feature allows you to select SRS in different modes.



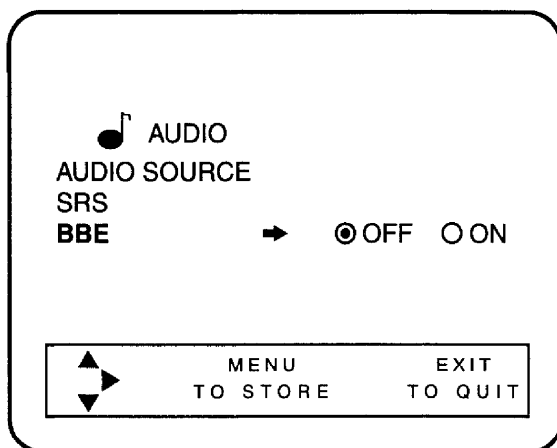
Use CURSOR ▲ or ▼, the CURSOR ▶ to select SRS - OFF, 3D - STEREO or 3D - MONO.

Press MENU button to store and EXIT to quit.

PC ON-SCREEN DISPLAY

**BBE®**

This feature allows you to turn on or off the BBE function.

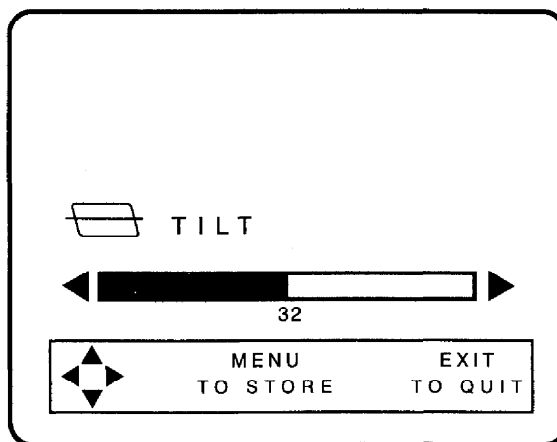


Use CURSOR ▲ or ▼, the CURSOR ► to select BBE and turn in on or off.

Press MENU button to store and EXIT to quit.

**TILT**

This feature allows you to adjust the tilt position of the display.



Use ► or ◀ CURSORS to adjust the horizontal position.

Press MENU button to store and EXIT to quit.

NOTE: Tilt control works only on PC mode, it does not work on TV mode.
If you change tilt setting on PC mode, the tilt data on TV mode will change as well.
Please change mode back to PC mode, then adjust tilt control, if you want to adjust it on TV mode.



FEATURE INFORMATION

As the digital era dawns, Hitachi has models that provide the best possible images today....and tomorrow. Our HDTV-Ready SDX model incorporates new Flex Converter technology to display a high quality 480 P (progressive scanning) image; this same circuitry enables it to accept a full 1080 I HDTV signal from a digital set-top box now or in the future. The SDX model also has a S-VGA input for 800x600 resolution from a computer.

FLEX CONVERTER TECHNOLOGY

With current analog broadcasts, there is just one level of picture quality. In the new age of digital TV, there will be several levels. The highest, called HDTV, can be as high as 1080 I. The standard level, SDTV, can be 480 P or 480 I. Hitachi has developed the Flex Converter, advance circuitry that allows your UltraVision SDX series television to produce true 1080 I HDTV resolution with an HDTV set-top box, it also converts analog 480 I signals to the higher-quality 480 P signals with no scan lines or flicker. SDX needs a set-top box to receive any Digital Signal.

COMPONENT VIDEO

A component Video input accepts separate blue, red & B/W signals from a high resolution digital source as DVD or digital set-top box to provide a higher resolution picture.

3DYC (DIGITAL 3DYC COMB FILTER)

The Digital 3DYC Comb Filter analyzes three lines of information from a single video frame as well as lines from adjacent frames. This technology eliminates the flickering that a detailed pattern or scene would normally cause, for the cleanest, neatest picture possible.

PIPC (PICTURE-IN-PC)

On our 36" SDX model, Picture-in-PC allows you to display images from our computer in the main TV picture, while displaying video (from your antenna or video inputs) in the sub-picture. You can even choose to listen to the sound from the sub-picture.

SRS 3D SURROUND

SRS is a truly dynamic Sound Retrieval System that works whether the signal you receive is stereo or surround encoded. Its genius is that it creates a three-dimensional sound image from only the front speakers by retrieving the spatial information from recordings. The effect is similar to that of a live performance.

BBE HIGH DEFINITION SOUND

BBE professional systems are used in broadcasting, television and recording studios all over the world and by many of the world's most famous musicians in their concerts to achieve the best possible sound. BBE provides a rich and exciting presence, clarity and detail to music. Speech is clearer and more intelligible at lower volume. BBE is a boon to those with hearing problems or for those who enjoy old movies or TV shows. Sound from TV, and even stereo, speakers can sound muddled because certain dynamics of the original recording can be lost. BBE circuitry recreates the clear midrange sounds and crisp highs of the original recording for your enjoyment.

PROGRESSIVE SCANNING

A standard TV uses Interlaced Scanning where each frame of video is broken into two fields, each providing alternating scan lines. This can leave noticeable scan lines and cause flickering. With Progressive Scanning, complete frames are displayed for a smoother picture with no scan lines and no flicker. This allows you to get the optimal picture quality from today's high resolution digital sources such as DVD, a digital set-top box, or with a VGA input, a computer.

ULTRABLACK DIGITAL PITCH PICTURE TUBE

A standard 36" tube has a 1.0 mm dot pitch. The smaller the dots, the sharper the picture. Our 36" SDX model utilizes the UltraBlack Digital Pitch Invar Picture Tube with an ultrafine .78 mm dot pitch, a contributing factor to make HDTV-Ready.

DDC2B PROTOCOL SUPPORT

In order for a computer to recognize a monitor it must have DDC2B support, which you'll find in our 36" SDX model. This allows the computer to recognize the resolution capability of that monitor and then automatically set itself to that level without manual adjustments.

Input Signal Timings

Model:36SDX88B

1	Adjustment and Check		Check Only	Check Only	Adjust	Adjust	Check Only	Adjust	Check Only	Check Only	Check Only	Check Only
2	Guarantee		No	No	Yes	Yes	No	Yes	No	No	No	No
3	Group No.		Group 1	Group 1	Group 1	Group 1	Group 1	Group 1	Group 1	Group 1	Group 1	Group 1
4	Video Mode		VGA1 (PC1)	VGA2 (PC2)	VGA3 (PC5)	VGA4 (PC6)	SVGA (PC9)	SVGA (PC7)	Mac (PC8)	1080i (PC11)	480P (PC11)	1080i (PC11)
5	Mode		Under Scan	Under Scan	Under Scan	Under Scan	Under Scan	Under Scan	Under Scan	Over Scan	Over Scan	Over Scan
6	Input Connector		D-Sub 15pin	D-Sub 15pin	D-Sub 15pin	D-SUB 15pin	D-SUB 15pin	D-SUB 15pin	D-SUB 15pin	D-SUB 15pin	D-SUB 15pin	D-SUB 15pin
7	Video	Type	R/G/B Analog	R/G/B Analog	R/G/B Analog	R/G/B Analog	R/G/B Analog	R/G/B Analog	R/G/B Analog	R/G/B Analog	R/G/B Analog	R/G/B Analog
		Amplitude	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p
8	Sync	Type	H/V SEPARATE	H/V SEPARATE	H/V SEPARATE	H/V Separate	H/V Separate	H/V Separate	H/V Separate	H/V Separate	H/V Separate	H/V Separate
		Amplitude	TTL H:+,V:-	TTL H:-,V:+	TTL H:-,V:-	TTL H:-,V:-	TTL H:+,V:+	TTL H:+,V:+	TTL H:-,V:-	TTL H:-,V:-	TTL H:-,V:-	TTL H:-,V:-
9	Clock Frequency		25.175MHz	25.175MHz	25.175MHz	31.500MHz	36.000MHz	25.175MHz	30.240MHz	74.250MHz	27 MHz	74.176MHz
10	Screen Resolution		640pixels 350Lines	640pixels 400Lines	640pixels 480Lines	640pixels 480Lines	800pixels 600Lines	800pixels 600Lines	640pixels 480Lines	1920pixels 1080Lines	704pixels 480Lines	1920pixels 1080Lines
11	Horizontal Sync Timing	Frequency	31.469kHz	31.469kHz	31.469kHz	37.861kHz	35.156kHz	37.8796kHz	35.000kHz	33.75kHz	31.500kHz	33.716kHz
		Front Porch	0.636 μ s 16pixels	0.636 μ s 16pixels	0.636 μ s 16pixels	0.761 μ s 24pixels	0.667 μ s 24pixels	1.000 μ s 40pixels	2.116 μ s 64pixels	0.593 μ s 44pixels	0.75 μ s 24pixels	0.593 μ s 44pixels
		Sync Width	3.813 μ s 96pixels	3.813 μ s 96pixels	3.813 μ s 96pixels	1.270 μ s 40pixels	2.000 μ s 72pixels	3.200 μ s 128pixels	2.116 μ s 64pixels	1.185 μ s 88pixels	2.33 μ s 63pixels	1.186 μ s 88pixels
		Back Porch	1.907 μ s 48pixels	1.907 μ s 48pixels	1.907 μ s 48pixels	4.058 μ s 128pixels	3.556 μ s 128pixels	2.200 μ s 88pixels	3.175 μ s 96pixels	1.993 μ s 148pixels	2.48 μ s 67pixels	1.995 μ s 148pixels
		Active	25.422 μ s 640pixels	25.422 μ s 640pixels	25.422 μ s 640pixels	20.317 μ s 640pixels	22.222 μ s 800pixels	20.000 μ s 800pixels	21.164 μ s 640pixels	25.859 μ s 1920pixels	26.074 μ s 704pixels	25.884 μ s 1920pixels
		Blank + 2 Border	6.356 μ s 160pixels	6.356 μ s 160pixels	6.356 μ s 160pixels	6.0952 μ s 192pixels	6.223 μ s 224pixels	6.400 μ s 256pixels	7.407 μ s 224pixels	3.771 μ s 280pixels	5.700 μ s 154pixels	3.775 μ s 280pixels
		Interval	31.778 μ s 800pixels	31.778 μ s 800pixels	31.778 μ s 800pixels	26.413 μ s 832pixels	28.444 μ s 1024pixels	26.400 μ s 1056pixels	28.571 μ s 864pixels	29.630 μ s 2200pixels	31.778 μ s 858pixels	29.659 μ s 2200pixels
12	Vertical Sync Timing	Frequency	70.0863Hz (Non Interlaced)	70.0068Hz Non Interlaced	59.94Hz Non Interlaced	72.809Hz Non Interlaced	56.250Hz Non Interlaced	60.317Hz Non Interlaced	66.667ms Non Interlaced	30Hz Interlaced	60Hz Non Interlaced	29.970Hz Interlaced
		Front Porch	1.175ms 37H	0.381ms 12H	0.318ms 10H	0.238ms 9H	0.028ms 1H	0.026ms 1H	0.086ms 3H	0.059ms 2H	0.29ms 9H	0.060ms 2H
		Sync Width	0.064ms 2H	0.064ms 2H	0.064ms 2H	0.079ms 3H	0.057ms 2H	0.106ms 4H	0.086ms 3H	0.148ms 5H	0.19ms 6H	0.148ms 5H
		Back Porch	1.906ms 60H	1.111ms 35H	1.049ms 33H	0.740ms 28H	0.626ms 22H	0.607ms 23H	1.114ms 39H	0.444ms 15H	0.95ms 30H	0.445ms 15H
		Active	11.124ms 350H	12.712ms 400H	15.253ms 480H	12.678ms 480H	17.067ms 600H	15.840ms 600H	13.714ms 480H	32.000ms 1080H	15.253ms 480H	32.032ms 1080H
		Blank + 2 Border	3.145ms 99H	1.556ms 49H	1.430ms 49H	1.057ms 40H	0.711ms 25H	0.739ms 28H	1.286ms 45H	0.652ms 22H	1.430ms 45H	0.653ms 22H
		Interval	14.268ms 449H	14.2843ms 449H	16.683ms 525H	13.735ms 520H	17.778ms 625H	16.579ms 628H	15.000ms 525H	33.333ms 1125H	16.683ms 525H	33.367ms 1125H
13	Comment				PiPC			PiPC	Apple 13"	SMPTE 274M-1995	SMPTE 293M-1996	SMPTE 274M-1995

Input signal timings Model:36SDX88B						
1	Adjustment and Check		Adjust	Check Only	Check Only	Adjust
2	Guarantee		Yes	Yes	Yes	Yes
3	Group No.		Group 3	Group 3	Group 3	Group 3
4	Video Mode		1080i	480P	480i	1080i
5	Mode		Over Scan	Over Scan	Over Scan	Over Scan
6	Input Connector		Y / PB / PR	Y / CB / CR	Y /CB / CR	Y /PB / PR
7	Video	Type	Y PB/CB PR/CR	Y PB/CB PR/CR	Y PB/CB PR/CR	Y PB/CB PR/CR
		Amplitude	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p
8	Sync	Type				
		Amplitude	TTL H:-,V:-	TTL H:-,V:-	TTL H:-,V:-	TTL H:-,V:-
9	Clock Frequency		74.250MHz	27.000 MHz	13.5 MHz	74.176MHz
10	Screen Resolution		1920pixels 1080Lines	720pixels 483Lines	704pixels 480Lines	1920pixels 1080Lines
11	Horizontal Sync Timing	Frequency	33.75kHz	31.469kHz	15.750kHz	33.716kHz
		Front Porch	0.593 μ s 44pixels	0.593 μ s 16pixels	1.78 μ s 24pixels	0.593 μ s 44pixels
		Sync Width	1.185 μ s 88pixels	2.333 μ s 63pixels	4.67 μ s 63pixels	1.186 μ s 88pixels
		Back Porch	1.993 μ s 148pixels	2.185 μ s 59pixels	4.96 μ s 67pixels	1.995 μ s 148pixels
		Active	25.859 μ s 1920pixels	26.667 μ s 720pixels	52.148 μ s 704pixels	25.884 μ s 1920pixels
		Blank + 2 Border	3.771 μ s 280pixels	5.111 μ s 138pixels	11.40 μ s 154pixels	3.775 μ s 280pixels
		Interval	29.630 μ s 2200pixels	31.778 μ s 858pixels	63.51 μ s 858pixels	29.659 μ s 2200pixels
12	Vertical Sync Timing	Frequency	30Hz	59.940Hz	60Hz	29.970Hz
			Interlaced	Non Interlaced	Interlaced	Interlaced
		Front Porch	0.059ms 2H	0.191ms 6H	0.32ms 5H	0.060ms 2H
		Sync Width	0.148ms 5H	0.191ms 6H	0.19ms 3H	0.148ms 5H
		Back Porch	0.444ms 15H	0.953ms 30H	0.89ms 14H	0.445ms 15H
		Active	32.000ms 1080H	15.349ms 483H	35.556ms 480H	32.032ms 1080H
		Blank + 2 Border	0.652ms 22H	1.335ms 42H	1.429ms 22.5H	0.653ms 22H
		Interval	33.333ms 1125H	16.683ms 525H	38.889ms 525H	33.367ms 1125H
13	Comment		SMPTE 274M-1995	SMPTE 293M-1996		SMPTE 274M-1995

		Signal pattern from VG-814 or VG-823			
	Rom No.	Signal	fh(KHz)	fv(Hz)	Remarks
	1	VGA 1	31.5	70	640*350
	2	VGA 2	31.5	70	640*400
	3	VGA 3	31.5	60	640*480
	4	VGA 4	37.8	72	640*480
	5	SVGA	37.8	60	800*600
	6	480P	31.5	60	Sync On Green
	7	Mac	35	66.6	13"Mode
	8	1080i	33.75	60	Input To D-Sub
	9	SVGA	35	56	800*600
	10	1080i	33.75	60	Input To D-Sub
					and
					Sync On Green

TEST EQUIPMENT RECOMMENDED FOR VIDEO/SIGNAL GENERATOR.

- PC MODE
- 1) ASTRO VG-814 or VG-823 Digital Video Generator
from Team Systems.
- 2) LEADER LP1611
DTV Signal Generator.

Adjustment Procedures

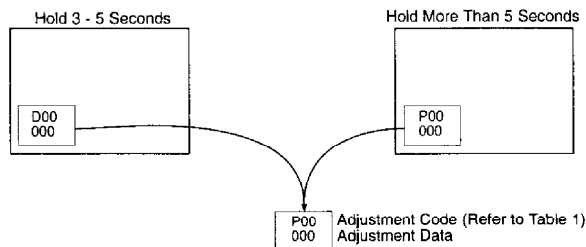
MAIN CHASSIS ADJUSTMENT

1. ADJUSTMENT PROCEDURE-START UP

How to Get to Adjustment Mode

Chassis adjustment can be done by using the front control panel buttons with CTV set turned off.

Press the FRONT PANEL CONTROL "POWER" and "MENU" keys at the same time, and hold more than 3 seconds. The CTV set turns on in adjustment mode with OSD as follows.



"To Escape from Adjustment Mode"

Press "POWER" button of remote control or front panel once at anytime, then set returns to normal.

2. ADJUSTMENT CODES

Table - 1

Adjustment Codes

TV MODE	Adj Code	Function	Range	Service Code ~Data	Remarks
TV	P01	R Drive	0-127	068	
TV	P02	B Drive	0-127	064	
TV	P03	R Drive Offset	0-127	070	
TV	P04	B Drive Offset	0-127	055	
TV	P05	R Cutoff	0-255	127	
TV	P06	G Cutoff	0-255	167	
TV	P07	B Cutoff	0-255	141	
TV	P08	Sub Contrast	0-31	020	
TV	P09	Sub Color	0-64	037	
TV	P10	Sub Brightness	0-128	072	
TV	P11	Sub Tint	0-64	032	
TV	P12	Sub Sharpness	0-64	042	
TV/PC	P13	OSD H Position	101-255	125	
TV/PC	P14	OSD V Position	74-155	098	
PC	P15	Sub RGB Brightness	0-64	035	
PC	P16	Sub RGB Contrast	0-64	020	
PC	P17	R Drive (9300K)	0-127	064	
PC	P18	B Drive (9300K)	0-127	055	
PC	P19	R Drive (8000K)	99	099	
PC	P20	B Drive (8000K)	60	060	
PC	P21	R Drive (6500K)	55	055	
PC	P22	B Drive (6500K)	60	060	
PC	P23	R Drive Offset 1	0-127	067	
PC	P24	B Drive Offset 1	0-127	059	
PC	P25	R Drive Offset 2	0-127	073	
PC	P26	B Drive Offset 2	0-127	051	

NOTE: This data is an approximate service code data. Fine adjustment must be done using the specified test procedure and adjustment tools.

Table - 2

Adjustment Codes

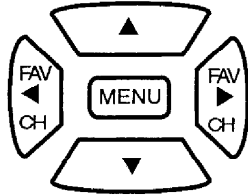
TV/PC MODE	Adj Code	Function	Range	Service Code ~Data	Remarks
TV/PC	D01	H Min OSC Freq.	0-62	006	
TV/PC	D02	H OSC. Sensitiv	0-63	008	
TV/PC	D03	H F/V Control	99-265	245	
TV/PC	D04	H Duty Control	0-31	015	
TV/PC	D05	20ms Counter	0-255	163	
TV/PC	D06	Side Pin Balance	0-31	013	
TV/PC	D07	Parallelogram	0-31	016	
TV/PC	D08	Side Pin Corn	0-63	029	
TV/PC	D09	Trapezoid	0-63	035	
TV/PC	D10	V S Linearity	0-63	016	
TV/PC	D11	V C Linearity	0-31	018	
TV/PC	D12	V Out Max Size	0-31	025	
TV/PC	D13	Sub H Position	0-31	069	
TV/PC	D14	Sub Side Pin	0-127	032	
TV/PC	D15	Sub H Size	0-63	065	
TV/PC	D16	Sub V Size	0-127	099	
TV/PC	D17	Sub V Center	0-127	064	
TV/PC	D18	Sub Tilt	0-127	088	
TV/PC		V Cutoff	0-128	0	

NOTE: When adjustment code is accessed copy data of Adjustment Code and save for reference.

2-1 Changing Data and Adjustment code

When the CTV set is in adjustment mode, the cursor ▲,▼,◀,▶ and MENU keys of the customers remote control will be the adjustment keys.

- A. Use any Hitachi remote control with MENU button as shown when making an adjustment.



▲,▼ keys are used for changing adjustment code.
◀,▶ keys are used for changing data.
MENU key is used for changing "Cut Off Mode"/"Normal mode." (Refer to cut off adjustment)

3. ADJUSTMENT MODE

If below display appears

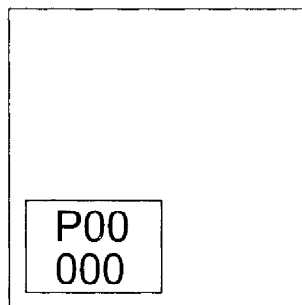


Adjustment code cannot be changed by cursor ▲,▼ keys.
Set data "D020" at "P00" or "D030" at "D00" by ◀,▶ keys.
Then adjustment code can be changed by ▲,▼ keys.



B. By Front Control Panel-Another Method

- Before turning ON the set, press and hold the POWER and MENU buttons for about 3 seconds.
- After 3 seconds, a small square will appear in the lower left corner. There are two different displays, depending upon how long the MENU button is pressed and held. One shows D for TV/PC adjustment, and the other shows P for the TV/PC picture adjustment.



P= Picture

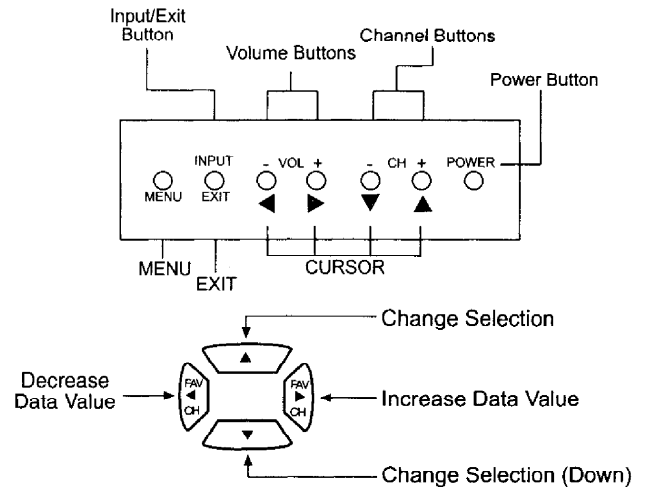
- To activate the P adjustment mode, input a data value of 20 (020), using the front panel cursor ◀,▶ before any of the picture adjustments can be adjusted.



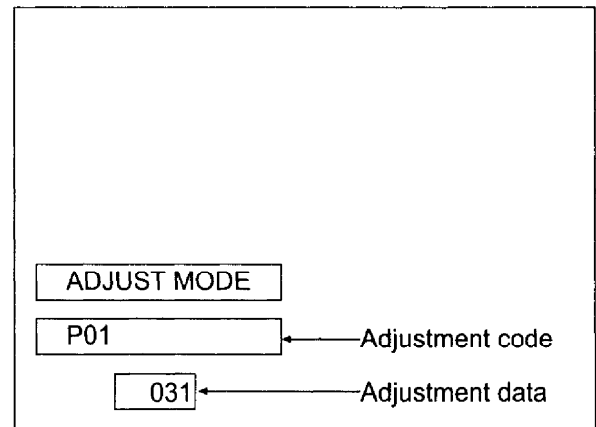
The same for the D adjustment. To activate the adjustment, you need an input data value of 30 before any of the D adjustments can be adjusted.



- To make a selection, you have to use the arrow keys on front panel control.



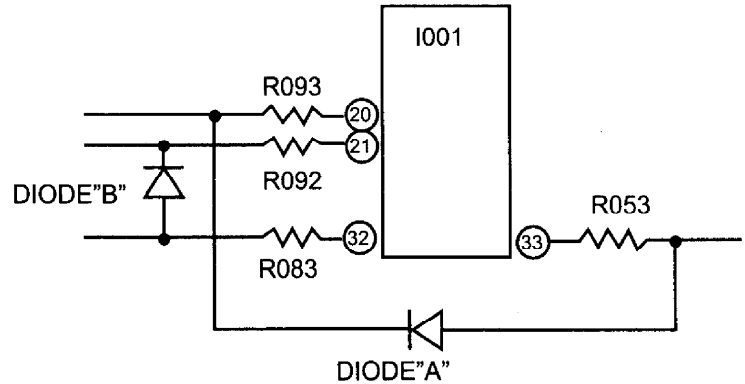
Match front panel control cursor to remote control cursor.



NOTE: Press MENU button to stop vertical oscillation when selecting P01 to P07 and P17 to P28, then press MENU button again to restart vertical oscillation.
Press POWER button to quit Service Mode.

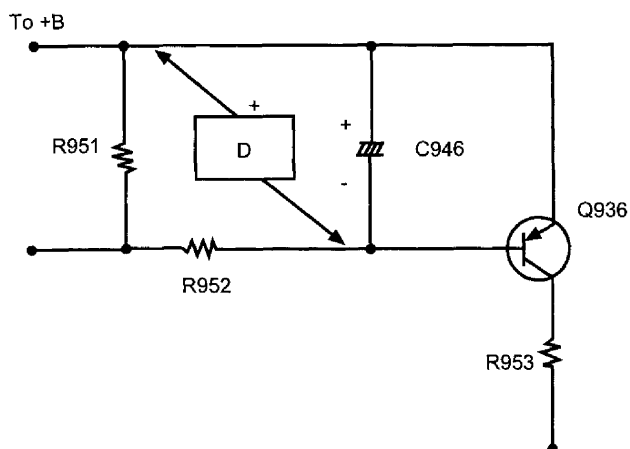
2. PWB (Chassis) Assembly Adjustment

2.1 Memory Initial Adjustment					
Preparation for adjustment				Notes	
(1)	Set the following				
(2)	Set diode "A"				
(3)	Set diode "B"				
(4)	Remove diodes.				

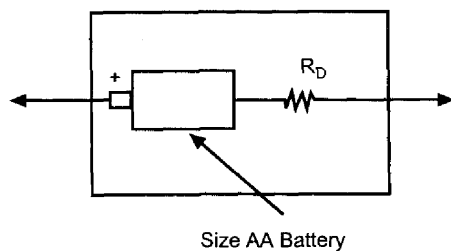


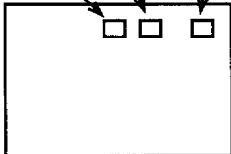
2.2 Power Circuit Adjustment					
2.2.1 +B Adjustment					
Preparation for adjustment		Adjustment procedure		Notes	
(1)	Connect power supply PWB assembly to the standard set.	1)	Set the voltmeter to both sides of C932.		
(2)	Set AC voltage to $120 \pm 2V$, 60Hz	(2)	Heat-Run more than 1 minute.		
(3)	Receive Circle Pattern.	(3)	Turn Adjustment Variable Resistor R936 so that +B Voltage value become $220 \pm 1V$		
(4)	Set Brightness to the center and Contrast to the maximum.				

2.2.2. Operation Check of +B Over-Current Protection Circuit			Adj. point	Q936
Preparation for adjustment		Adjustment procedure		Notes
(1)	Set AC voltage to $120 \pm 2V$	(1)	Connect jig D between Emitter and Base of Q936 and check that power turns off and standby mode is set.	
(2)	Receive Circle Pattern.	(2)	Disconnect AC plug.	
(3)	Set Brightness to the center and Contrast to the maximum.	(3)	Remove jig D and turn main power on.	

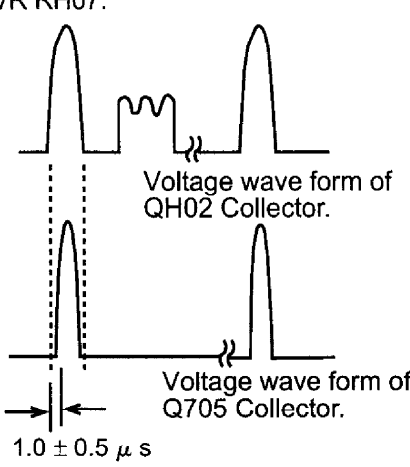
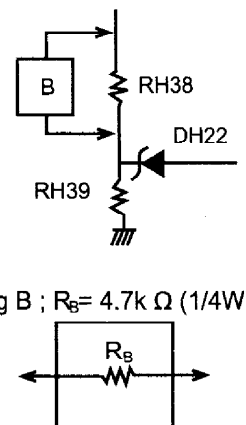


jig D ; $R_D = 560 \Omega$ (1/4W)

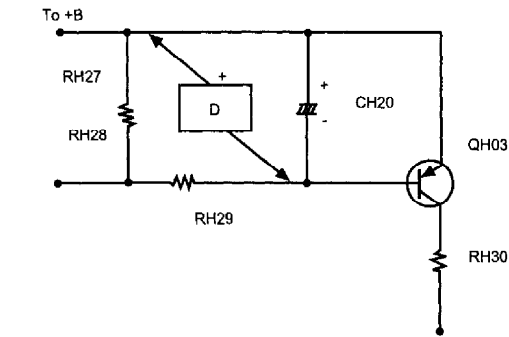


2.3 Deflection Circuit Adjustment			
2.3.1 Chopper Voltage Adjustment			
Preparation for adjustment		Adjustment procedure	Notes
(1) Connect deflection PWB assembly to the standard set.	(1) Set the Voltage meter to both side of CP20.	SVGA (RPE3)DTV (RPA2)VGA (RPO9)  Chopper P.W.B (Parts side View)	Set the value of adjustment code D15, H size, to the center, before starting adjustment shown at left. Re-marking after re-adjustment should be as follows. The 2nd time:Red The 3rd time:Blue or Green The 4th time:Change VR
(2) Set AC voltage to 120 ± 2V, 60Hz	(2) Leave the set heat-run for more than 30 sec. over.		
(3) Receive Cross-Hatch and Circle Pattern with White background of VGA3 in group 1. (Horizontal Frequency: 31.5kHz)	(3) Adjust Chopper Voltage as shown below. (1) VGA of group 1. ↓ (2) DTV ready of group 3. ↓ (3) SVGA of group 1. (1) <u>VGA of group 1</u> Turn the RP09 VR so that Chopper Voltage value is 112±0.5V (2) <u>DTV ready of group 3</u> Turn the RPA2 VR so that Chopper Voltage value is 124±0.5V (3) <u>SVGA of group 1</u> Turn the RPE3 VR so that Chopper Voltage value is 140±0.5V		
(4) Receive White Signal in DTV Ready of group 3 (Horizontal Frequency: 33.75kHz) or Receive White Signal in PC mode (Horizontal Frequency: 33.75kHz)	Mark base and ditch of VR with black ink after adjusting 1 to 3.		

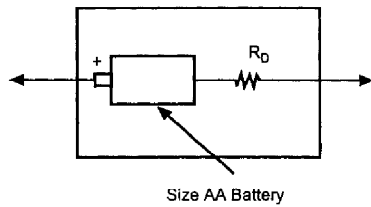
Preparation for adjustment		Adjustment procedure	Notes
(5)	Receive White Raster Signal of SVGA in group 1. (Horizontal Frequency: 37.8kHz)		
(6)	Set Brightness to the center, and Contrast to the maximum.		
2.3.2. High Voltage Adjustment			
(1)	Connect Deflection PWB assembly to the standard set.	1) Connect High-Voltage meter between FBT anode and CRT GND.	Adjustment criterion: $\pm 0.2\text{kV}$
(2)	Set AC $120\pm 2\text{V}$, 60Hz.	(2) Leave the set heat-run for more than 1 minute.	
(3)	Receive White Raster Signal with Circle Pattern of VGA3 in group 1. (Horizontal Frequency: 31.5kHz) (Black line, 100% white back raster)	(3) Turn High Voltage Adjustment VR, RH69 and then adjust High Voltage to $30.0\pm 0.2\text{kV}$	
(4)	Set Brightness to the center, and Contrast to the maximum.		

2.3.3 High Voltage Phase Adjustment		Adj. point	RH07
Preparation for adjustment		Adjustment procedure	
(1) Receive Cross-Hatch and Circle Pattern with white background of VGA3 in group 1 (2) Set Brightness control to the center, and Contrast control to the maximum. (3) Connect probe to Collector of Q705 and QH02.		1) Adjust wave form as shown below with turning High-Voltage Phase Adjustment VR RH07.  Both of the probes should be 100 : 1 or 50:1. Confirm that the wave form meet adjustment spec. when receiving SVGA of group 1.	
2.3.4 High Voltage Limiter Operation Check		Adj. point	R763
(1) Set AC Voltage to $120 \pm 2V$. (2) Receive Cross-Hatch Signal with Black Lines and 100% White background of VGA3. (3) Set Brightness and Contrast to the maximum.		1) Connect Jig B between both ends of RH38 and check that power turns off and standby mode is set. (2) Disconnect AC plug. (3) Remove Jig B and turn the main power on. Check if power is supplied and High Voltage rises.  Jig B ; $R_B = 4.7k \Omega$ (1/4W)	

2.3.5 Operation Check of +B Over-Current Protection Circuit		Adj. point	QH03
Preparation for adjustment		Adjustment procedure	Notes
(1)	Set AC voltage to $120 \pm 2V$.	(1) Connect jig D between Emitter and Base of QH03, then check if power turns off and Standby mode is set.	Check the voltage of the battery if it is 1.5V
(2)	Receive Cross-Hatch Signal of VGA3 with Black Line and 100% White background.	(2) Disconnect AC plug.	
(3)	Set Brightness and Contrast to the maximum.	(3) Remove jig D and turn main power on.	

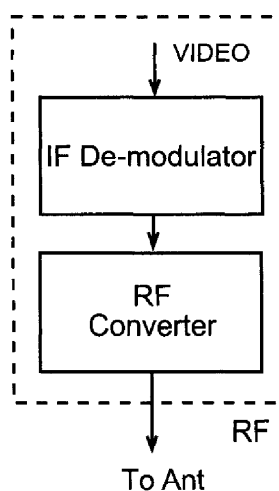


jig D ; $R_D = 560 \Omega$ (1/4W)



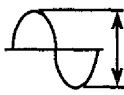
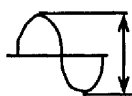
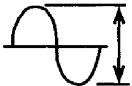
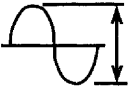
2.4 AFC Operation Check			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Connect Jig to the Antenna Terminal as shown below.	(1) Select Main Picture. (2) Receive standard signal, which isn't offset, by channel up/down or direct selection buttons. Check if it is pulled in the standard tuning point. (3) Receive +1.5MHz offset signal. Check if it is pulled in the standard tuning point. (4) Receive -1.5MHz and offset signal. Check that it is pulled in the standard tuning point.	1) Use Circle Pattern or Color Bar signal when modulating.

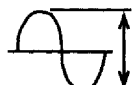
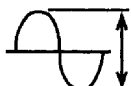
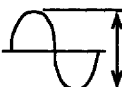
Checking Jig : all channel converter is appropriate.



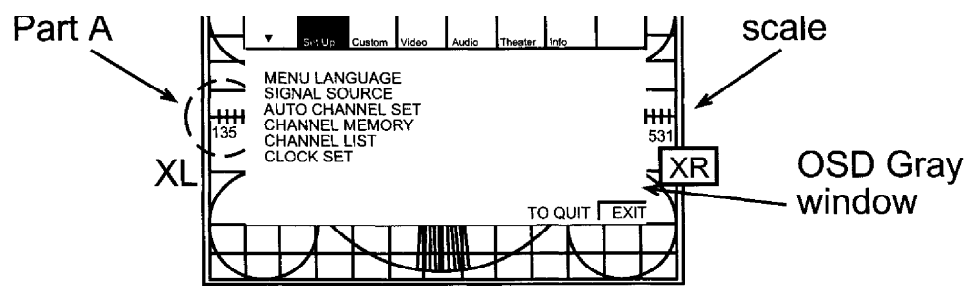
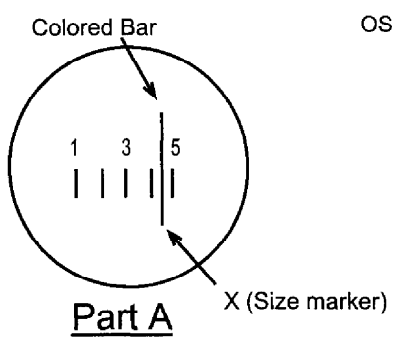
2.5 Audio Operation Check

2.5.1 MTS Operation Check			
2.5.1.1 Stereo/SA Broadcast Receiving Check			
Preparation for adjustment		Adjustment procedure	Notes
(1) Receive Stereo Broadcast.	1) Stereo Broadcast receiving check. 1) Select STEREO mode. 2) Check L channel sound from left speaker when only L channel is broadcasting. 3) Check R channel sound from right speaker when only R channel is broadcasting. 4) Check both left and right channel sound from both speakers when monaural is broadcasting.		• Select "Stereo/SAP" alternately • Check if "ST" OSD appears below the Channel OSD, for approx. 8 sec when you select Channel or Recall Button is pressed.
(2) Receive Second Audio Program, then select it.	(2) Second Audio Program broadcast receiving check. 1) Select Second Audio Program mode. 2) Check if you can hear the Second Audio Program from both left and right speakers. 3) Check if you can hear the main sound when receiving no Second Audio Program.		
(3) Set Balance to the center.			
2.5.1.2 STEREO Separation Check.			
Preparation for adjustment		Adjustment procedure	Notes
(1) Receive Stereo or Second Audio Program Broadcast.	1) Check if there is more than 15dB out difference between L channel and R channel when receiving stereo signal.		When receiving broadcast with only L channel audio. (30% modulation f=400Hz)
(2) Set Surround off. 1) SRS 2) BBE			
(3) Select Stereo mode.			
(4) Connect probe with Audio out terminal L and R.			

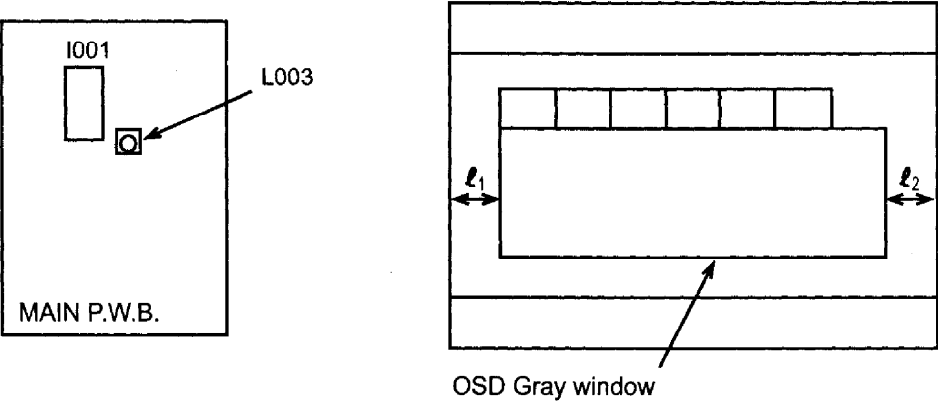
2.5.2 SRS Operation Check			
Preparation for adjustment		Adjustment procedure	Notes
(1) Set Audio settings as follows. Balance : TYP Bass : TYP Treble : TYP Loudness : OFF BBE : OFF (2) Input signal to the VIDEO INPUT R terminal with SRS mode 3D STEREO, or L/Mono terminal with SRS mode 3D Mono, as follows. ① SRS mode 3D Stereo Rch : 400Hz 1Vp-p Lch : No signal ② SRS mode 3D Mono Rch : 200Hz 1Vp-p Lch : 200Hz 1Vp-p (3) Set Volume 40 steps.	 1Vp-p	(1) Check if HiFi output L channel meets the following wave form on signal ①. (a) SRS : OFF  0 HiFi (L) out (b) SRS : 3D STEREO  0.7 Vp-p±0.2	
		(2) Check if HiFi output L channel meets the following wave form on signal ②. (a) SRS : OFF  0.6Vp-p±0.2 (b) SRS : 3D STEREO  0.8Vp-p±0.2	

2.5.3 BBE Operation Check				
Preparation for adjustment		Adjustment procedure		Notes
(1)	Set Audio settings as follows. Balance : TYP Bass : TYP Treble : TYP Loudness : OFF SRS : OFF	(1)	Check if the following wave form output at HiFi output (L). (a) BBE : OFF (b) BBE : ON	 0.6Vp-p±0.2  0.9Vp-p±0.2
(2)	Input signal to L/Mono terminals at video input as follows. L/Mono channel 100Hz 1Vp-p	 1Vp-p		
(3)	Set Volume 40 steps.			

RF signal AUDIO MODE	MTS mode		
	MONO	Stereo	Second Audio Program
Normal	12	12	12
Stereo	12	STEREO 12 ST	STEREO 12 ST
Second audio program	12	STEREO 12 SA	SAP 12 SA
STEREO +SAP	12	STEREO 12 ST/SA	SAP 12 ST/SA

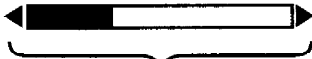
2.6 OSD Check			
2.6.1 OSD Position Check			
Preparation for adjustment		Adjustment procedure	Notes
(1) Receive Circle Pattern.	(1) Press MENU button.		
(2) Set Video settings normal condition; center.	(2) Check if the lower blue rectangle meet 3.5 ± 1 of scale on Circle Pattern as follows.		
	(3) Check if Colored Bar meet 4.5 ± 1 of scale on the Circle Pattern as follows.		
Left edge of the Menu (The 1st layer) 			
 Part A scale XL XR OSD Gray window TO QUIT EXIT MENU LANGUAGE SIGNAL SOURCE AUTO CHANNEL SET CHANNEL MEMORY CHANNEL LIST CLOCK SET 135 531			
$XL = 5.0 \pm 1.0$ $XR = 5.0 \pm 1.0$ OSD position spec.			
 Colored Bar Part A X (Size marker) 1 3 5			

2.6.2 OSD Size Adjustment			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Receive DTV (1080i) signal	(1) Press MENU button. (2) Adjust L003 so that OSD size becomes as follows. $ l_1 - l_2 \leq 5\text{mm}$	

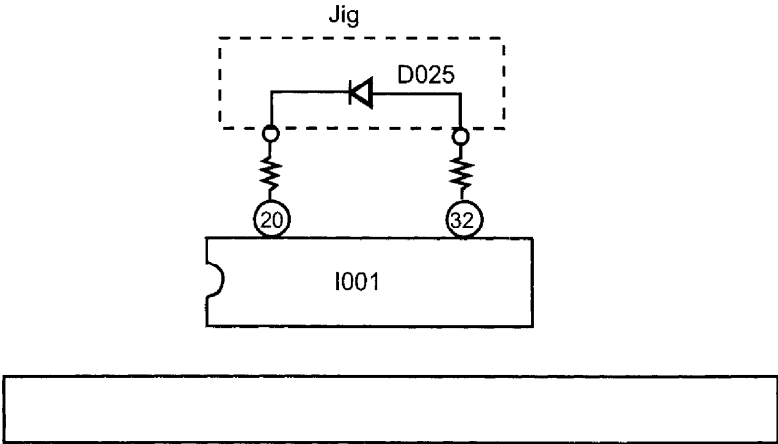


2.7 Remote Operation Check			
2.7.1 Direct Channel Selection			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Input channel number by using "0" to "9" buttons.	(1) Check if input number coincides displayed channel number, and also the picture coincides the channel number.	
2.7.2 LST-CH			
		(1) Check if channel immediately changes alternately every time LST-CH button is pressed.	
2.7.3 MUTE			
		(1) Check if sound alternates between mute and normal every time MUTE button is pressed. VOLUME 24 : Green  ↕ MUTE 24 : Magenta 	
2.7.4 RECALL			
		(1) Check if On-Screen Display appears and disappears alternately every time RECALL button is pressed.	

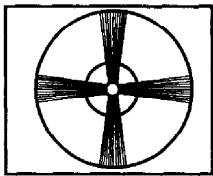
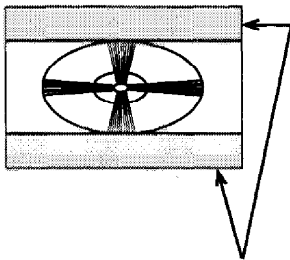
2.8 PC Control Operation Check			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Select PC mode	(1) Press cursor button of the remote handset.	
(2)	Confirm that there is no check mark of "keyboard use" on Set Up Menu OSD.	(2) Check if the pointer of the windows is moving.	General check If there is a check mark at Keyboard Use Menu, press right cursor button to release.
(3)	Connect PC and TV with Mini DIN 6P cable for PC control. Note: Windows 3.1 or 95 should be working on PC. Use PC which has Hot Plugging on mouse operation. Recommended PC : Think Pad 365XD	(3) Check if speed of the pointer changes when pressing the cursor button continuously.	Speed control check.

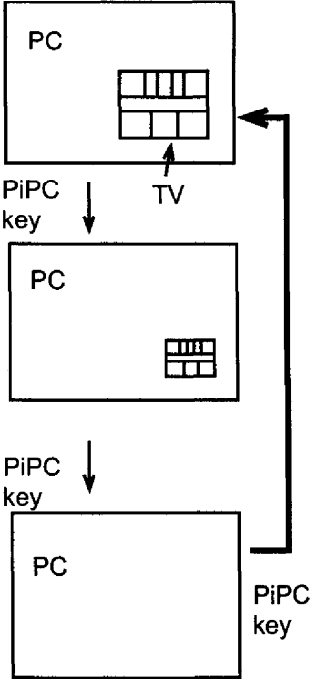
		2.9 Selection Operation Check			
		2.9.1 Power			
Preparation for adjustment		Adjustment procedure		Notes	
(1)	Set VHF/UHF/CATV signal.	(1)	Power should alternate between On and Off every time power button is pressed.	Also check if power LED, Green, on the control panel lights ad turn off at this time.	
		2.9.2 Channel UP/DOWN			
		(1)	Check if receiving VHF, UHF, and CATV every time CHANNEL Up (▲) or CHANNEL Down (▼) buttons is pressed.	• Check if On-Screen Display appears which corresponded to the receiving broadcast. • Antenna indication color.	
				Antenna	CHANNEL display color
				Antenna	Green
		2.9.3 Volume UP/DOWN			
		(1)	Volume should increase or decrease continuously every time VOLUME UP (▲) or VOLUME Down (▼) buttons is pressed.	Check that the On-Screen Display changes. VOLUME : Green  Yellow	

2.9.4 Input Selection				
Preparation for adjustment		Adjustment procedure	Notes	
		1) Check if signal and OSD change in the following sequence every time INPUT button is pressed. <pre> graph TD TV --> VIDEO1[VIDEO 1] VIDEO1 --> VIDEO2[VIDEO 2] VIDEO2 --> VIDEO3[VIDEO 3] VIDEO3 --> PC PC --> TV </pre>	• Check if the contents of the picture meets OSD. • OSD, "S-IN", appears when using S-input on video 1, 2 and Video 3. • OSD, "Y-CBCR", appears when using Y-C_B C_R INPUT on component input at Video 2. • OSD "Y-PBPR" appears when using Y-PBPR input on component input at Video 2.	
2.9.5 Clock Set				
(1) Initial set-up mode.		(1) Select Initial set up mode with ▼▲ buttons. (2) Select clock setting with ▼▲ buttons. (3) Then press ► button to set clock. (4) Set clock with using the ▼▲► button, then the clock starts when pressing ◀ key to return to clock set mode. (5) Connect D025 between pin 20 and pin 32 of I001. (6) Check if clock OSD appears by pressing RECALL button. Then, clock OSD runs 60 times faster.	• Diode D025 helps to check the operation with 60 times faster.	



2.10 External in / out Operation			
2.10.1 AV in / out Signal Check			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Input signal to the V and L/R terminals of input 1.	(1) External input check. 1) Check Picture and Audio of Video 1.	S-Input has a priority on VIDEO 1, 2, and 3.
(2)	Input signal to the S-input terminal of input 1.	2) Check Picture at S-input of Video 1.	- Y P_B/C_B P_R/C_R has a priority on VIDEO 2. - You hear both L and R channels together with only L terminal input.
(3)	Input signal to the V and L/R terminals of input 2.	3) Check Picture and Audio of Video 2.	Check VIDEO mode.
(4)	Input signal to the S-input terminal of Input 2.	4) Check Picture and Audio at S-input of video 2.	Check if bass, treble, balance, volume, mute, and surround work.
(5)	Input signal to the Y P _B /C _B P _R /C _R Input terminal of INPUT 2.	5) Check Picture and Audio at Y P _B /C _B P _R /C _R of Video 2.	
(6)	Input signal to the S-input terminal of Input 3.	6) Check Picture of S-input of Video 3.	Refer to the Surround Operation Check in detail.
(7)	Input signal to the V and L/R terminals of Input 3.	7) Check Picture and Audio of Video 3.	
(8)	Receive Circle Pattern.	(2) External output check. 1) Check Picture and Audio can be monitored.	
(9)	AUDIO to HiFi terminal.	2) Check Audio from speakers.	

2.10.2 Terminal Priority Check			
Preparation for adjustment	Adjustment procedure	Notes	
VIDEO 1 / VIDEO 3 (1) Input signal "A" to the Video terminal of input 1, then input the signal "B" to S terminal of INPUT 1 (2) Remove signal "B" of INPUT 1 and INPUT 3 S-terminal.	(1) Check picture at S-input of VIDEO 1 and VIDEO 3 with signal "B". (2) Check picture at S-input of VIDEO 1 and VIDEO 3 with signal "A".	Use the different signal between A and B.	
VIDEO 1 / VIDEO 2 (3) Input signal "A" to the VIDEO terminal of INPUT 2. Input signal "B" to the S-terminal of INPUT 2. Then, input signal "C" to the Y/CB/CR terminals. (4) Remove signal "C" of Y/CB/CR terminal. (5) Remove signal "B" of S-terminal at INPUT 2.	(3) Check picture at Y/CB/CR with signal "C". (4) Check that the picture of VIDEO 2. Signal "B" for S input, can be monitored. (5) Check picture of VIDEO 2. with signal "A".	Use the different signal between A, B, and C.	
2.10.3 Component Input Operation Check			
Preparation for adjustment	Adjustment procedure	Notes	
(1) Prepare signal Y P _B /C _B P _P /C _R at COMPONENT terminal. (f _H :15.73kHz, 31.5kHz, 33.75kHz). (2) Input signal with 15.73kHz to COMPONENT terminal.	(1) Check picture. (2) Check if Vertical Size changes by remote handset. (3) Check if vertical size changes with the same procedure as well at 31.5kHz, 33.75kHz.	  Black Area	

2.10.4 PC Input Operation Check					
Preparation for adjustment		Adjustment procedure		Notes	
(1)	Input sound to the Stereo Jack terminal.				
(2)	Input signal to the rear D-Sub terminal.	(1)	Check picture and audio.		
(3)	Change the D-Sub terminal input by menu.				
(4)	Then, input signal to the front of the D-Sub terminal.	(2)	Check picture and audio.		
(5)	Change signal to the rear of the D-Sub terminal by MENU.				
2.10.5 P in PC Operation Check					
Preparation for adjustment		Adjustment procedure		Notes	
(1)	Input Color Bar Signal to RF terminal.			 The diagram illustrates the sequence of operations for the P in PC check. It shows three states of a TV screen with a PC window. In the first state, the PC window is large and contains a color bar. An arrow labeled 'PiPC key' points down to the second state, where the PC window is smaller. Another arrow labeled 'PiPC key' points down to the third state, where the PC window is even smaller. A final arrow labeled 'PiPC key' points from the third state back to the first state, indicating a cycle.	
(2)	Input Cross-Hatch Signal of VGA3, VGA4 and SVGA to the rear of the D-sub terminal.	(1)	Check if the size of window on TV picture changes, when pressing the PinPC button of the remote handset.		
(3)	Select PC mode.	(2)	Check if the window on TV picture moves to the Left and Right, when pressing cursor left and buttons of the remote handset.		
(4)	Press P in PC key of the Remote handset.	(3)	Check if the sound is changing of TV and PC by pressing up and down cursor buttons of the remote handset.		
		(4)	Check the same operation check for the front D-Sub terminal.		

2.10.6 CATV Check			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Select Signal source of Set-up menu.	(1) Select set-up menu by pressing up and down cursor buttons. (2) Select signal source option by pressing up and down cursor buttons. (3) Check if signal source change between antenna, CATV 1, and CATV 2 by pressing right cursor button. Check if broadcast coincides to OSD.	

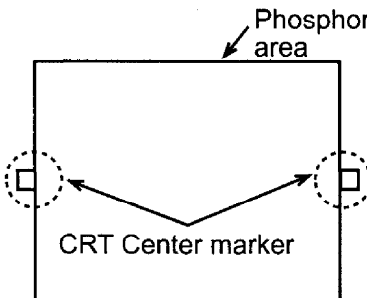
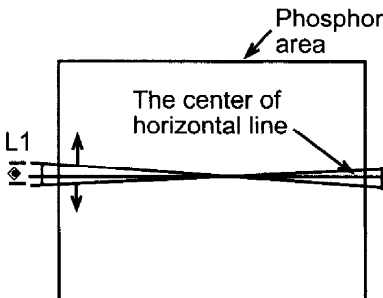
2.10.7 Closed Caption Check			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Press MENU, then select CUSTOMIZE option with ▼▲ buttons.	(1) Check that CAPTION appears on the screen according to the settings.	Receive signal which is encoded Closed Caption.
(2)	Press ► button, then select CLOSED CAPTION with ▼ ▲ buttons.	(2) The CAPTION of CHANNEL 2 appears on the screen.	
(3)	Press ► button, then select CLOSED CAPTION mode.	(3) Check that the CAPTION of CHANNEL 1 (Field 2) appears on the screen.	* Read error should not occur on each mode.
(4)	The DISPLAY mode should set ON with ► button. The MODE should be set C.C. with ► button. The CHANNEL mode should set 1 with ► key.	(4) Check that a Black Window appears and TEXT letters appears at the center of the screen.	Errors of Closed Caption 1. Wrong letters appear. 2. Missing letters. 3. Other abnormal display.
(5)	Set CHANNEL to 2.	(5) Check if TEST letters appear.	
(6)	Set CHANNEL to 1.	(6) The Black Window should disappear.	
(7)	Set MODE to TEXT.	(7) Check if the CAPTION letters disappear.	
		X Y Black Background Window TEXT letters ABCD... $X-Y \leq 30\text{mm}$	
(8)	Repeat steps (5) to (7).		
(9)	Set MODE to C.C.		
(10)	Set DISPLAY to OFF.		

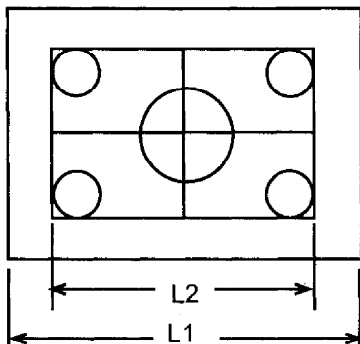
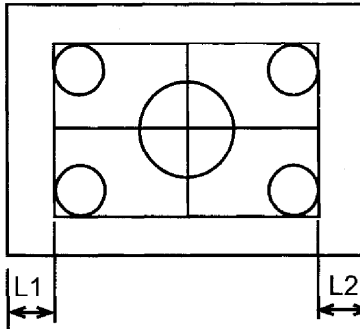
2.10.8 DPMS			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Set AC to 120±2V, 60Hz.		
(2)	Receive Cross-Hatch signal of VGA3 on group 1 at PC mode.	(1) Check picture, then check that the color of LED is green.	
(3)	Remove Horizontal Sync.	(2) Check that the high voltage of deflection shuts down. Heater voltage should be 6.3V±0.2V, then the color of LED is orange.	
(4)	Remove Vertical Sync.	(3) Check that high voltage of deflection shuts down. Check that heater voltage becomes 0V, then the color of LED becomes orange.	
(5)	Remove Horizontal and Vertical Sync.	(4) Check if High voltage of deflection shuts down. Check that heater voltage becomes 0V, then the color of LED becomes orange.	
(6)	Re-input Horizontal or Vertical sync in (3), (4), (5).	(5) Check that the set turns on after re-input of Horizontal or Vertical synchronous signal.	

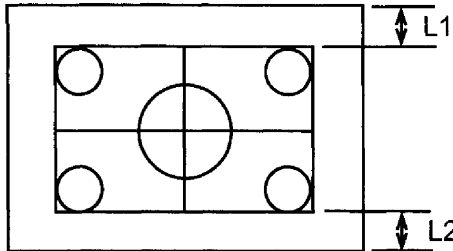
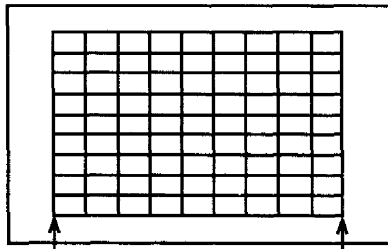
3. Final Assembly adjustment

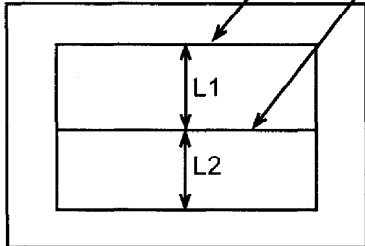
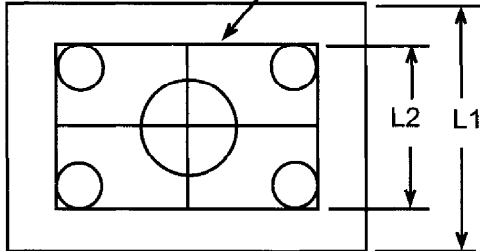
3.1 Deflection system adjustment (Picture display position and size adjustment)			
Preparation for adjustment		Adjustment procedure	Notes
(1)	Turn power on, then heat-run for 20 minutes or more.	(1) Perform each deflection adjustment item. Adjust by I ² C command.	This TV is compatible with 8 resolution patterns. Perform deflection adjustment for each resolution pattern. The group corresponding to the resolution pattern Group 1 :PC Mode <u>VGA3</u> (640x480 Under scan) <u>VGA4</u> (640x480 Under scan) <u>SVGA</u> (800x600 Under scan) Group 2 :TV Mode Group 3 :Component Mode • Monitor will discriminate resolution pattern from the input polarity of sync signal, and write adjustment data in memory area corresponding to the resolution pattern when receiving save command. However, for Group 3. Set should face to East-West direction during adjustment. If not, use artificial magnetic field.
(2)	Input signal which resolution is adjusted.		
(3)	Coarse adjust screen and Focus.		

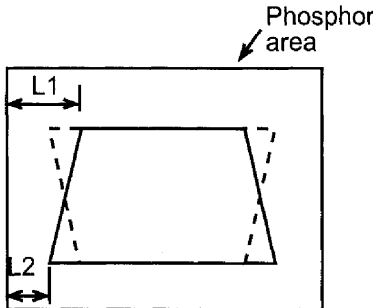
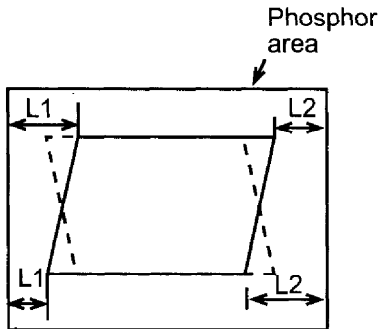
3.1.1 Deflection System Adjustment in PC Mode.		Adj. point	R741						
3.1.1.1 Horizontal Raster Center Adjustment									
Preparation for adjustment		Adjustment procedure							
(1) Receive Cross-Hatch and Circle Pattern with Black background of VGA3 in group 1. Set Contrast and Bright to the maximum so that raster is visible. Do this item at the beginning of final adjustment.		(1) Turn screen VR so that the raster appears slightly. (2) Factory adjustment data Set D15, Horizontal Size, to 20 with user data center (3) Turn the R741 VR so that size of L1 and L2 at left and right in diagram below are equal. (4) Set process 1 and 2 to the previous condition. Phosphor area Raster Phosphor area Signal L1 L2							
		The position of screen VR Focus F 2 TH01 Screen VR							
		<table><tr><td></td><td>Unit :mm</td></tr><tr><td>Model</td><td>IL1-L2I</td></tr><tr><td>36SDX88B</td><td>3.0</td></tr></table>			Unit :mm	Model	IL1-L2I	36SDX88B	3.0
	Unit :mm								
Model	IL1-L2I								
36SDX88B	3.0								

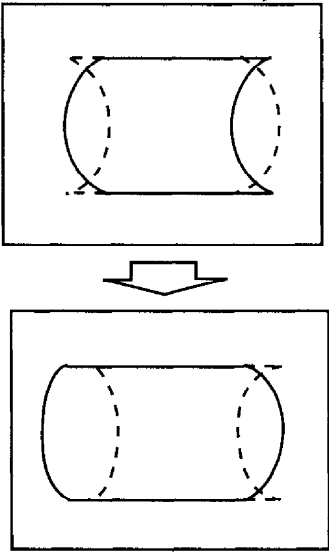
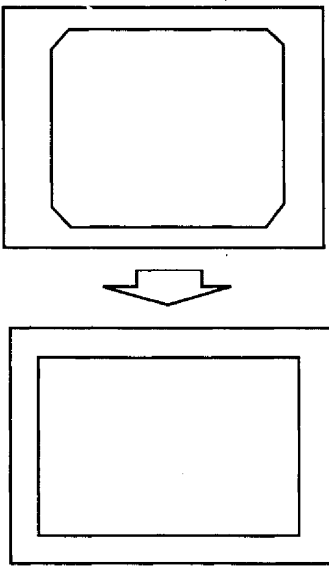
3.1.1.2 Tilt and V Position Adjustment		Adj. point	D15, D18			
Preparation for adjustment		Adjustment procedure		Notes		
(1)	Receive Cross-Hatch signal with Black Back ground of VGA3 in group 1.	(1)	Select D15, H Size, of adjustment code.	Adjust Tilt and V Position on VGA4 and SVGA as well with the same way.		
		(2)	Set data of D15 to more than 35 until CRT center marker can be visible.			
				Adjustment criterion		
		(3)	Adjust D17 so that the center of horizontal line meet CRT center marker			
		<table><tr><td>Model</td><td>L1</td></tr><tr><td>36SDX88B</td><td>≤2.0mm</td></tr></table>	Model	L1	36SDX88B	≤2.0mm
Model	L1					
36SDX88B	≤2.0mm					
		(4)	Adjust Tilt of both CRT center markers and the center of horizontal line with D18 of adjustment code.			

3.1.1.3 Horizontal Size and Position Adjustment		Adj. point	D13,D15					
Preparation for adjustment		Adjustment procedure		Notes				
(1) Receive Cross-Hatch and Circle Pattern of VGA1 in group 1 with White Background.	(2) Focus adjustment should be finished in advance.	(1) Select Horizontal Size of factory adjustment and adjust so that Horizontal Size is L2 value shown in Table below.	Factory adjustment No. :D15 (H-Size)  Do this adjustment and Horizontal center adjustment together in case of adjustment.	Adjust VGA4, SVGA by the same way.				
					(2) Select Horizontal Position of factory adjustment adjust so that size of L1 and L2 at the top and bottom in diagram below are equal.	Factory adjustment No. :D13. 		
				(unit :mm)				
		Model	L1	L2				
		36SDX88B	721.4	671±3				
		(93% of active area)						
		Do this adjustment and Horizontal size adjustment together in case of adjustment.						
		Model	(unit :mm)					
			L1-L2					
		36SDX88B	≤3.0					

3.1.1.4 Vertical Linearity, Size and Position Adjustment			Adj. point	D17				
Preparation for adjustment		Adjustment procedure	Notes					
		(3) Adjust D17 of adjustment code, V position, so that L1 and L2 are equal as shown below. 	(unit :mm) <table><tr><td>Set name</td><td>IL1-L2I</td></tr><tr><td>36SDX88B</td><td>≤3.0</td></tr></table>		Set name	IL1-L2I	36SDX88B	≤3.0
Set name	IL1-L2I							
36SDX88B	≤3.0							
3.1.1.5 Vertical Pincushion Adjustment			Adj. point	D14				
Preparation for adjustment		Adjustment procedure	Notes					
(1) Adjust Vertical Pincushion adjustment after adjust vertical size.	(1) Select Vertical pincushion of factory adjustment adjust so that vertical lines, shown by arrow, at left and right sides become straight. Factory adjustment No. :D14 	Adjust VGA4, SVGA by the same way.						
(2) Receive the Cross-Hatch signal of VGA3 in group 1 with Black Background.	(2) If adjustment is difficult with D14, adjust the following items as well. Trapezoid adjustment : see 3.1.1.6 Pincushion balance : see 3.1.1.8 Corner adjustment : see 3.1.1.9 Parallelogram adjustment : 3.1.1.7							
(3) Contrast: maximum Brightness: center								

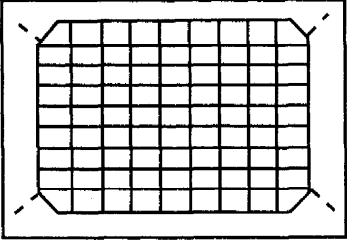
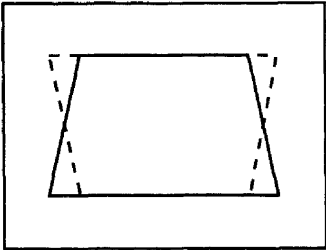
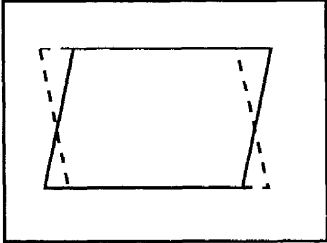
3.1.1.4 Vertical Linearity, Size and Position Adjustment		Adj. point	D11, D16							
Preparation for adjustment		Adjustment procedure		Notes						
(1) Receive Cross-Hatch and Circle Pattern of VGA3 in group 1 with White Background.	(2) Focus adjustment should be finished in advance.	(1) Adjust Vertical Linearity with adjustment code, D11 so that the length of upper area L1 and lower area L2 to be equal.	Phosphor edge Signal area The center of horizontal lines 	Adjust VGA4, SVGA by the same way.						
(unit :mm) <table><tr><th>Model</th><th>L1-L2</th><th> L1-L2 </th></tr><tr><td>36SDX88B</td><td>251.5 ±3</td><td>≤2</td></tr></table>					Model	L1-L2	L1-L2	36SDX88B	251.5 ±3	≤2
Model	L1-L2	L1-L2								
36SDX88B	251.5 ±3	≤2								
		(2) Adjust Vertical Size with adjustment code D16 so as to meet the specification shown at right.	Phosphor edge Signal area 							
(unit :mm) <table><tr><th>Model</th><th>L1</th><th>L2</th></tr><tr><td>36SDX88B</td><td>541.0</td><td>503±3</td></tr></table>					Model	L1	L2	36SDX88B	541.0	503±3
Model	L1	L2								
36SDX88B	541.0	503±3								

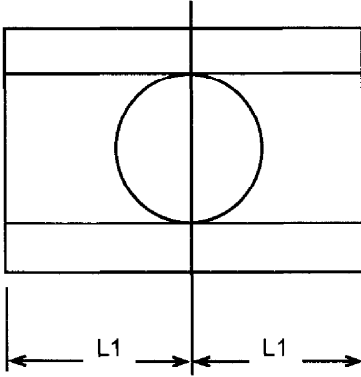
3.1.1.6 Trapezoid Adjustment (if necessary)		Adj. point	D09
Preparation for adjustment		Adjustment procedure	
(1) Receive Cross-Hatch Pattern in group 1.	(1) Adjust Trapezoid with adjustment No. D09 so that L1 and L2 become equal if there is a difference between L1 and L2.	Notes	
			
		unit :mm	
		Model	IL1-L2I
		36SDX88B	≤3.0mm
<u>Adjust Trapezoid and Parallelogram together.</u>			
3.1.1.7 Parallelogram Adjustment (if necessary)		Adj. point	D07
(1) Receive Cross-Hatch pattern in group 1.	(1) Adjust Parallelogram with adjustment No. D07 so that L1 and L2 become equal if there is a difference between L1 and L2.	Notes	
			
		unit :mm	
		Model	IL1-L2I
		36SDX88B	≤3.0mm
<u>Adjust Trapezoid and Parallelogram together.</u>			

3.1.1.8 Pincushion Balance (if necessary)		Adj. point	D06
Preparation for adjustment		Adjustment procedure	
(1) Receive Cross-Hatch Pattern of VGA3 in group 1.		(1) Adjust Pincushion Balance with adjustment No. D06 so that left and right side of pincushion become equal if it's not good enough. Phosphor area 	
Adjust VGA4 and SVGA as well by the same way.			
3.1.1.9 Corner Adjustment (if necessary)		Adj. point	D08
Preparation for adjustment		Adjustment procedure	
(1) Receive Cross-Hatch Signal of VGA3 in group 1 with Black Background.		(1) Adjust Corner with adjustment no. D08, so that left and right end of the corner at the vertical line on Cross-Hatch become straight if it bends. Phosphor area 	
Adjust VGA4, SVGA by the same way.			

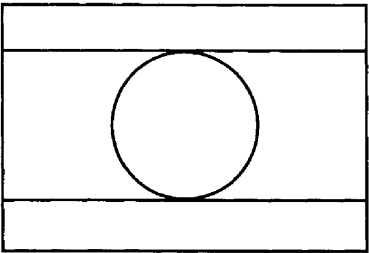
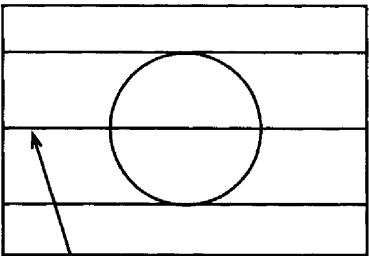
3.1.2 Deflection System Adjustment in TV Mode		Adj. point	D13, D15				
3.1.2.1 Size, Position, and Tilt Adjustment			D17, D18				
Preparation for adjustment		Adjustment procedure					
Notes							
(1) Receive Circle Pattern. Contrast : Maximum Brightness : Center	(1) Adjust Horizontal Size and Postition with adjustment code D15 so that CRT center marker is completely visible.	Adjust Tilt and Vertical position as well on DTV mode in group 3.					
	(2) Adjust Tilt with adjustment code D18 so that the center horizontal line of Circle Pattern meet the specification as shown the right.	Unit : mm <table><tr><th>Model</th><th>L1</th></tr><tr><td>36SDX88B</td><td>2.0</td></tr></table>		Model	L1	36SDX88B	2.0
	Model	L1					
	36SDX88B	2.0					
	(3) Adjust Vertical Position with adjustment code D17 so that the center horizontal line of Circle Pattern enters CRT center marker.						
(4) Adjust Horizontal Size with adjustment code D15 so that Horizontal Size marker of Circle Pattern become 0.5, -0.3 / +0.5. Adjust Horizontal Position with adjustment code D13 so that both left and right Horizontal Size markers become equal.	Phosphor edge						
(5) Repeat item (4) until specifications is met.							

3.1.2.2 Vertical Size Adjustment		Adj. point	D11, D16
Preparation for adjustment		Adjustment procedure	
(1) Receive Circle Pattern.	(1) Adjust Vertical Linearity with adjustment code so that the both upper and lower area of circle are balanced. Then, adjust Vertical Size with adjustment code D16, so that inner circle touches CRT phosphor edge. (2) Repeat adjustment item (1) until the specifications is met.	Unit : mm	
		Model	IL1-L2I
		36SDX88B	3.0
3.1.2.3 Other Geometry Adjustment		Adj. point	D14, D06~D09
Preparation for adjustment		Adjustment procedure	
(1) Vertical Size and Position adjustment should be finished in advance. Receive Cross-Hatch Pattern in group 2. (2) Contrast : Maximum Brightness : Center	(1) Adjust Vertical Pincushion with adjustment code D14 so that outer vertical line of Cross-Hatch, shown by arrow mark, become straight.	Unit : mm	
		Model	IL1-L2I
		36SDX88B	≤ 3.0mm
		Adjustment code : D06	

Preparation for adjustment	Adjustment procedure	Notes
	b) Corner Distortion Adjustment  c) Trapezoid Adjustment  d) Parallelogram Adjustment 	Adjustment code : D08 Adjustment code : D09 Adjustment code : D07

3.1.3 Deflection System Adjustment in DTV Mode		Adj. point	D13, D15
3.1.3.1 Tilt and Vertical Position Adjustment			D17, D18
Preparation for adjustment		Adjustment procedure	
		(1)	Refer to 3.1.2.1 Horizontal Size, Vertical Size and Position adjustment.
3.1.3.2 Horizontal Size Position Adjustment		Adj. point	D13, D15
Preparation for adjustment		Adjustment procedure	
(1)	Receive 1080i Circle Pattern No. 59 of DTV signal generator made by Leader.	(1)	Adjust Horizontal Size with adjustment code D15 so that CRT center marker is completely visible.
(2)	Contrast : Maximum Brightness : Center	(2)	Adjust Horizontal Size and position with adjustment code D15 and D13 as shown below.
		 L1 : Adjust Horizontal Size so that there are $9.0_{+0.3}^{-0.1}$ squares between horizontal center and phosphor edge.	
		Model	L1(squares)
		36SDX88B	$9_{+0.3}^{-0.1}$

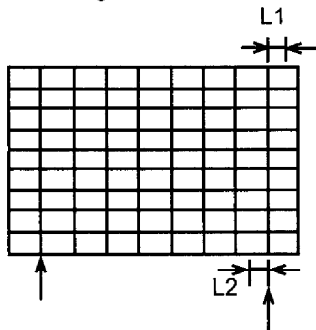
3.1.3.3 Vertical Size Adjustment			Adj. point	D11, D16
Preparation for adjustment		Adjustment procedure	Notes	
(1) Receive 1080i Circle Pattern No. 59 of DTV signal generator made by Leader.	(2) Contrast : Maximum Brightness : Center	(1) Adjust Vertical Linearity with adjustment code D11 so that L1 and L2 become equal.		
			Unit : mm	
			Model	IL1-L2I
			36SDX88B	3.0
		(1) Adjust Vertical Size with adjustment code D16 so as to meet specification.		
			Unit : mm	
			Model	L
			36SDX88B	495±3



3.1.3.4 Other Geometry Adjustment		Adj. point	D14, D06 ~D09
Preparation for adjustment		Adjustment procedure	
(1) Vertical Size and Position adjustment should be finished in advance. (2) Receive 1080i Circle Pattern No. 59 of DTV signal generator made by leader. (3) Contrast : Maximum Brightness : Center		Notes	
		Unit : mm	
		Model	IL1-L2I
		36SDX88B	3.0
		Adjustment code : D06	
		Adjustment code : D08	

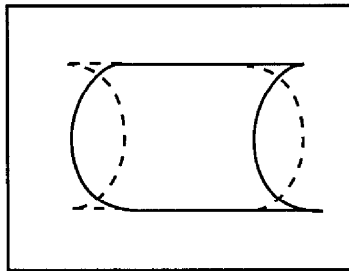
- (1) Vertical Size and Position adjustment should be finished in advance.
- (2) Receive 1080i Circle Pattern No. 59 of DTV signal generator made by leader.
- (3) Contrast : Maximum
Brightness : Center

- (1) Adjust Vertical Pincushion with adjustment code D14 so that the second vertical line from left and right end, shown by arrow in the figure, become straight.

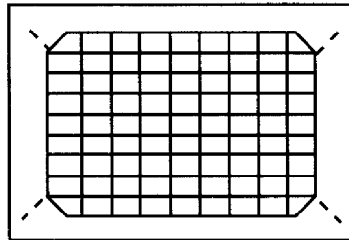


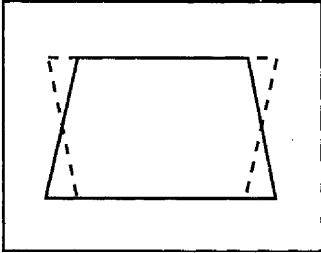
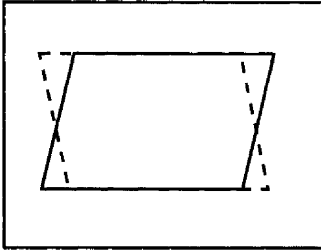
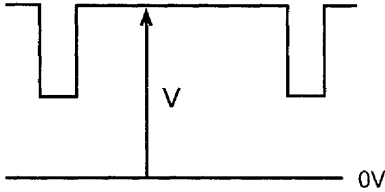
- (2) Adjust the following adjustment if it does not meet specification.

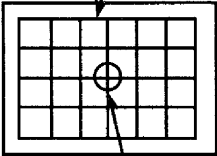
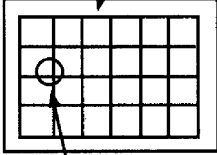
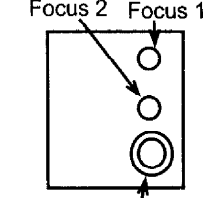
- a) Vertical Pincushion Balance



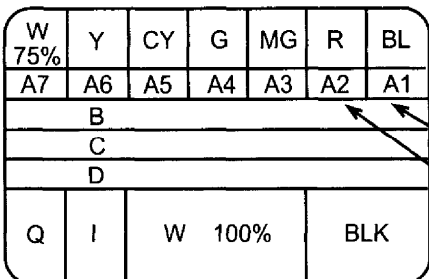
- b) Corner Distortion Adjustment



Preparation for adjustment		Adjustment procedure	Notes
		c) Trapezoid adjustment 	Adjustment code : D09
		d) Parallelogram adjustment 	Adjustment code : D07
3.2 Cut-off Coarse Adjustment			Adj. point
Preparation for adjustment		Adjustment procedure	Notes
(1) Connect probe of the oscilloscope to pin 1 of ECT connector on CPT PWB. (2) Set vertical deflection stop in a beeline.		(1) Change IIC data of adjustment No. P05 so that the voltage of ECT connector pin 1 become the same voltage as shown below. (2) Write same data of adjustment No. P05 to No. P06 and No. P07 after finish adjustment item 1.  $V = 3.1 \pm 0.05V_{DC}$	Release vertical deflection stop in a beeline after adjustment. Begin cut-off adjustment on this data as a start which is written here when final adjustment.

3.3 Focus Adjustment		Adj. point	FOCUS 1 FOCUS 2
Preparation for adjustment		Adjustment procedure	
(1) Do this adjustment after adjusting horizontal and vertical center and size is finished. Picture :Standard factory settings (2) AC120V±2V (3) Receive Cross-Hatch Signal with Circle Pattern. VGA3 group 1 Black background White line (4) Adjust cut-off after finishing coarse Focus adjustment; Just Focus is ±200V. Confirm Cut-Off Adjustment if voltage range is out of ±200V after re-adjusting Focus.		(1) Turn picture adjust VR. Change Sub-Brightness Data at adjustment No. 10 so that background become just black if it's too bright or too dark. (2) Horizontal Line Adjustment Adjust Focus on Cross-Hatch Circle Pattern concentrating the center point of the picture. (3) Adjust focus while focusing only at horizontal line so that it become the thinnest without any halo and blooming on the horizontal line. (4) The focus point is center. Adjust focus so that there is no halo and blooming on the horizontal and vertical lines with repeating from item 2 to 5. Final process should be item 5 of this page. (5) Vertical Line Adjustment Adjust Focus on Cross-Hatch Circle Pattern focusing the point as shown in the right figure. (6) Adjust focus 2, focusing only at vertical line so that it become the most thick; the adjustment point which can be seen the clearest without any saturation. Concentration point: Inner point of the circle as shown in the right figure. Note: Adjust Horizontal Center Focus again after adjusting Vertical Focus.	
		There are 2 Focus adjustment VRs at FBT, TH01, on Deflection PWB, because this chassis uses Double Focus System. A criteria of Focus adjustment should be Halo tendency. Focusing point is shown below. The top end of Cross-Hatch  The center of horizontal line The end of Cross-Hatch  The second vertical line from the left end. Focus 2 Focus 1  FBT SCREEN	

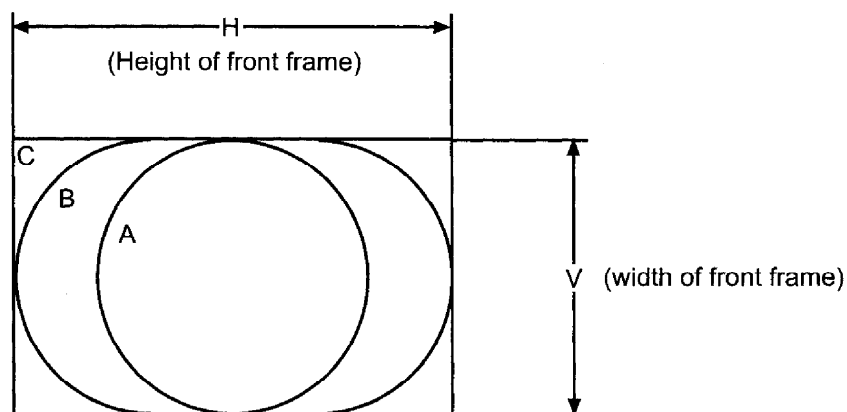
3.4 White balance adjustment (1)			Adj. point	
Preparation for adjustment		Adjustment procedure		Notes
(1)	20 minutes heat-run is necessary before adjustment.	(1)	Turn screen adjustment VR clockwise gradually until horizontal line appears slightly on the surface of CPT. No longer change the data of color, data A, which appears the first.	Adjustment criteria : more than 0.5V with cathode voltage conversion
(2)	The surface of CPT should be less than 20 lux.	(2)	Adjust white balance so that equally RGB lines appear slightly in low light	Adjustment criteria : less than 0.5V with cathode voltage conversion
(3)	Check if the value of sub-black level center is 64 at adjustment No.P10.	(3)	Release stopping vertical deflection.	Adjustment No. P05 R cut OFF P06 G cut OFF P07 B cut OFF
(4)	Receive white raster. TV Mode	(4)	Set contrast minimum, then set sub-brightness so that white raster appears slightly.	QC should guide suitably the people who is in charge of this adjustment so that white balance tolerance is minimum after heat-run.
(5)	Turn screen VR, which is near FBT, full counterclockwise.	(5)	Set white balance meter at the center of the picture.	Low light(10~15cd/m ²)
(6)	Send IIC data so as to stop vertical deflection.	(6)	Adjust white balance after calibrating brightness so that the level of white balance meter is 80% of full scale.	Adjustment No. P01 R Drive P02 B Drive
		(7)	Check if white balance is correct in low light with changing brightness by eyes. Adjust white balance at low light except for data A if white balance is incorrect, then return to adjustment process 7. White balance :9300° K	Do not use mirrors during Adjustment No. P05 R cut OFF P06 G cut OFF P07 B cut OFF
3.4 White balance adjustment (2)			Adj. point	
Preparation for adjustment		Adjustment procedure		Notes
(1)	Receive 100% white signal of VGA3.	(1)	Copy data at P01 to P17, then add 4 to P17. Copy data at P02 to P18.	
(2)	Set brightness to the center, and contrast to the Maximum.	(2)	Confirm color temperature. Adjust color temperature by adjustment code P17 and P18, if it does not satisfy specification of 9300K; X=0.285, Y=0.294.	
(3)	Set color temperature to 9300K mode.			

3.5 Sub Brightness Adjustment																																												
3.5.1 PC Mode																																												
Preparation for adjustment		Adjustment procedure	Notes																																									
(1) Do this adjustment after deflection system adjustments are finished.	(1) Set white balance meter at the center of the screen.	Adjustment code of Factory: P15.																																										
(2) Receive all black signal.	(2) Set sub brightness adjustment to 0.3ft-L (1.0cd/m²).																																											
(3) Select VGA3 of Group 1. color temperature : 9300K																																												
(4) Set contrast to the minimum.																																												
(5) Set brightness to the maximum.																																												
3.5.1 PC Mode																																												
(1) Start adjustment 20 minutes or more after the power is turned on. Receive the color bar signal. Select SUB BRIGHT adjust STAGE BY R / C JIG. Adjustment code of Factory : P10.	(1) Adjust so that the points A1 and A2 sink to black and A3 slightly above it rises by pressing ◀▶ key of R/C JIG. to store data. (2) <table><tr><td>W 75%</td><td>Y</td><td>CY</td><td>G</td><td>MG</td><td>R</td><td>BL</td></tr><tr><td>A7</td><td>A6</td><td>A5</td><td>A4</td><td>A3</td><td>A2</td><td>A1</td></tr><tr><td colspan="7">B</td></tr><tr><td colspan="7">C</td></tr><tr><td colspan="7">D</td></tr><tr><td>Q</td><td>I</td><td colspan="3">W 100%</td><td colspan="2">BLK</td></tr></table> Adjustment specification : Within ±0.3 step Quality control specification: Within ±0.5 step	W 75%	Y	CY	G	MG	R	BL	A7	A6	A5	A4	A3	A2	A1	B							C							D							Q	I	W 100%			BLK		Remarks * check it without using a mirror.  Should sink to black Should rise slightly from black Note: When selecting SUB-BRIGHTNESS mode, micro sets CONTRAST and COLOR to the minimum automatically, then other control to the Center.
W 75%	Y	CY	G	MG	R	BL																																						
A7	A6	A5	A4	A3	A2	A1																																						
B																																												
C																																												
D																																												
Q	I	W 100%			BLK																																							

3.6 Convergence Check			
Preparation for adjustment		Adjustment procedure	
(1)	Input LINEARITY TEST PATTERN (9 x 11 lines) signal.	(1)	Measure mis-convergence value between red and green, blue and green and red and blue.
		(2)	Touch up with ferrite sheet in case red vertical and horizontal lines, especially in Zone C, are remarkably visible, even if set meet the following specifications.

Criteria

Area	A	B	C
Mis-convergence specification	Within 1.0mm (0.0394 inches)	Within 1.5mm (0.0591 inches)	Within 2.5mm (0.0787 inches)

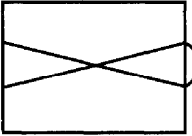


Area A, B and C on the screen

Area A: Inside circle with radius of $\frac{1}{2} V$ (height of front frame)

Area B: Inside circle with radius of $\frac{1}{2} H$ (width of front frame), outside Area A

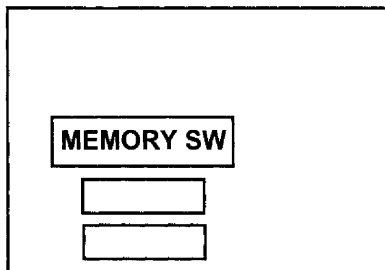
Area C: Outside Area B

		3.7 VM Check		
Preparation for adjustment		Adjustment procedure		
(1)	Receive Circle Pattern signal, then select TV or PC mode.	(1)	Short-circuit between pins 3 and 4 of PCT connector on VM PWB, then check that width of vertical line of the circle pattern changes.	
		3.8 Rotation Check		
(1)	Receive Cross-Hatch or Circle Pattern signal	(1)	Perform rotation in + and - directions, then check if pattern moves 3 mm or more.	 3 mm or more

4. Settings for shipping

(1) Memory Initialize.

(2) Check that OSD appears.



(3) Press Recall of remote handset.

(4) The settings when shipping are as follows

No.	Name	Specification	36SDX88B
1	Reception Channel	03 Channel	x
2	Input	TV	x
3	Volume	10 steps	x
4	P in PC	Off	x
5	P in PC Position	Lower right (P in PC ON)	x
6	CCD	Off / CC / Channel. 1	x
7	Language	ENGLISH	x
8	Air / Cable	Air	x
9	Channel Memory	02~13 channel	x
10	Channel Caption	Not registered for all channel.	x
11	Child Lock	Off for all channel	x
12	Volume Correction	Off for all channel	x
13	Clock Set	Off	x
14	Contrast	Maximum	x
15	Tint	Center	x
16	Color	Center	x
17	Brightness	Center	x
18	Sharpness	Center	x
19	Balance	Center	x
20	Bass	Center	x
21	Treble	Center	x
22	MTS Mode	Stereo	x
23	Internal Speakers	On	x
24	Auto Noise Cancel	Off	x
25	Loudness	Off	x
26	BBE	On	x

No.	Name	Specification	36SDX88B
27	SRS	Off	x
28	Color TEMP	Cool	x
29	3DYC	On	x
30	Auto Color	On	x
31	(Progressive Scan)	On	x
32	Aspect Ratio	16 : 9	x
33	Color System	Mode 1	x
34	H Position	Center	x
35	Special Event Reminder	Not registered for all mode	x
36	Calendar	Jan. 01 1998	x
37	Auto Help	Off	x
38	4 Event Program	Not registered for all mode	x
39	Auto Link	Off for ALL Mode	x
40	Video Id	Not Registered For All Mode	x
41	Menu Background	Gray	x
42	H Position	Center	x
43	V Position	Center	x
44	H Size	Center	x
45	V Size	Center	x
46	Tilt	Center	x
47	Pincushion	Center	x
48	Contrast	Maximum	x
49	Brightness	Center	x
50	RGB Input	1	x
51	Key board	Not Use	x
52	Aspect ratio	16:9	x
53	Color temperature	9300k	x
54	Balance	Center	x
55	Bass	Center	x
56	Treble	Center	x
57	Audio source	PC	x
58	SRS	Off	x
59	BBE	On	x

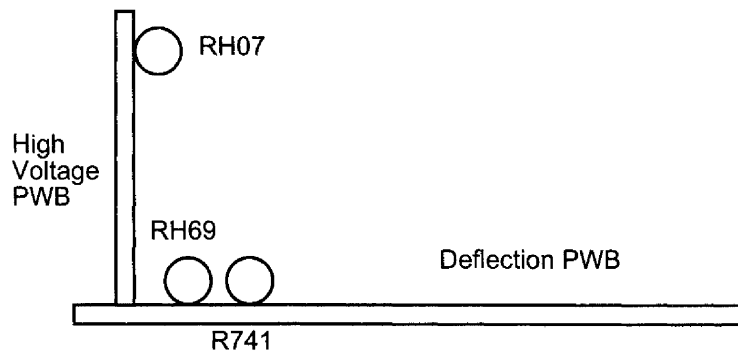
5. EDID data

MODEL : 36SDX88B (MM1)

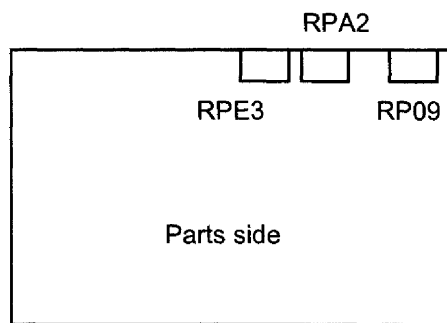
	+0	+1	+2	+3	+4	+5	+6	+7			
00h	Header										
	00	FF	FF	FF	FF	FF	FF	00			
08h	Vendor/Product Identification										
	ID Manufacture Name		ID Product Code		ID Serial Number				Week of Manufacture	Year of Manufacture	
	22	83	C3	CE	01	01	01	01	00	08	
12h	EDID Version		Video input Definition	Max H. Image Size	Max. V. Image Size	Display Transfer Char. (gamma)	Feature Support (DPMS)	(Basic Display Parameters / Features)			
	Version	Reversion									
	01	01									08
19h	Red Green Low Bits	Blue White Low Bits	Red x	Red y	Green x	Green y	Blue x	Blue y	White x	White y	(Color Characteristics)
	EE	98	A3	54	4C	99	26	0F	48	4C	
23h	Timing I	Timing II	Reserved Timing	(Established Timing)							
	29	00	00								
26h	Standard Timing Identification										
	#1		#2		#3		#4				
	45	40	31	4C	31	40	01	01			
2Eh	Standard Timing Identification										
	#5		#6		#7		#8				
	01	01	01	01	01	01	01	01			
36h	Pixel Clock/ 10000		H. Active	H. Blanking	H. Active/ Blanking	V. Active	V. Blanking	V. Active/ Blanking	(Detailed Timing Descriptions #1)		
	A0	0F	20	00	31	58	1C	20			
3Eh	H. Sync Offset	H. Sync Pulse Width	V. Sync Offset Pulse Width	H.V. Sync Offset Pulse Width	H. Image Size	H. Image Size	H.V. Image Size	H. Border	V. Border	Flags	
	28	80	14	00	D0	1C	22	00	00	1E	
48h	Block use descriptor		Reserved =00	Monitor Limit ID	Flag =00	V. Min rate (Hz)	V. Max rate (Hz)	H. Min rate (kHz)	(Detailed Timing Descriptions #2)		
	00	00	00	FD	00	3C	48	1F			
50h	H. Max rate (kHz)	Pixel Clock	GTF use flag	GTF use flag	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	
	26	FF	00	0A	20	20	20	20	20	20	
5Ah	Block use descriptor		Reserved =00	Monitor Name ID	Flag =00	ASCII	ASCII	ASCII	(Detailed Timing Descriptions #3)		
	00	00	00	FC	00	33	36	53			
62h	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	
	44	58	38	38	42	20	20	20	20	20	
6Ch	Block use descriptor		Reserved =00	Monitor Name ID	Flag =00	ASCII	ASCII	ASCII	(Detailed Timing Descriptions #4)		
	00	00	00	FF	00	20	20	20			
74h	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	
	20	20	20	20	20	20	20	20	20	20	
7Eh	Extension Flag	Checksum									
	00	89									

6. Adjustment point

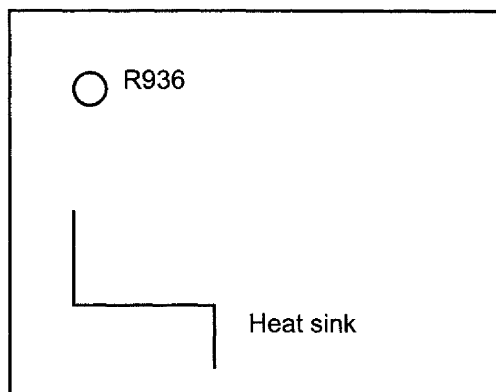
6.1 Deflection / High Voltage PWB



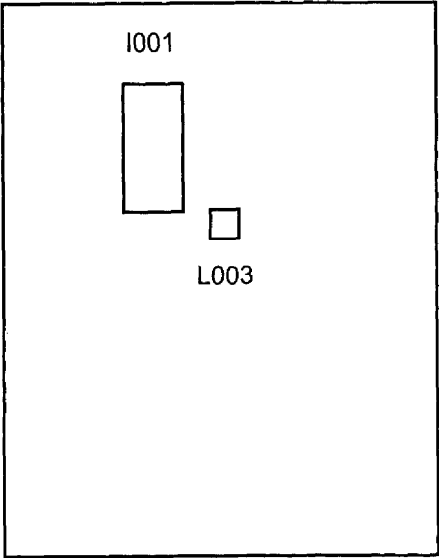
6.2 Chopper PWB



6.3 Power PWB



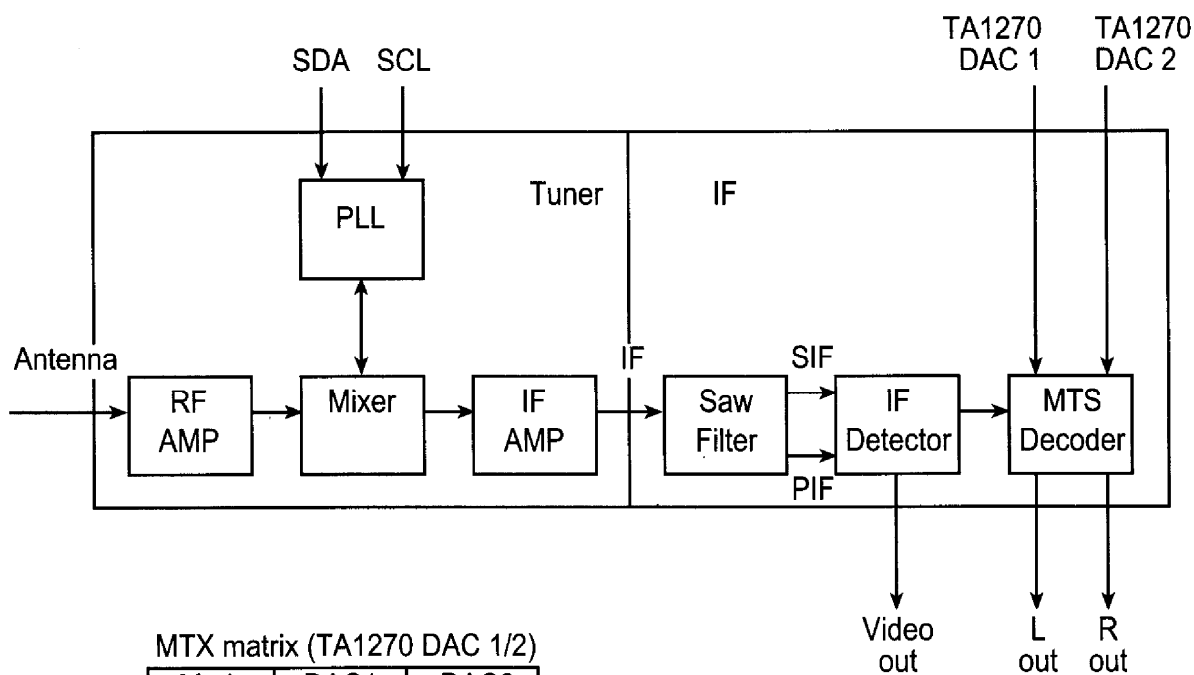
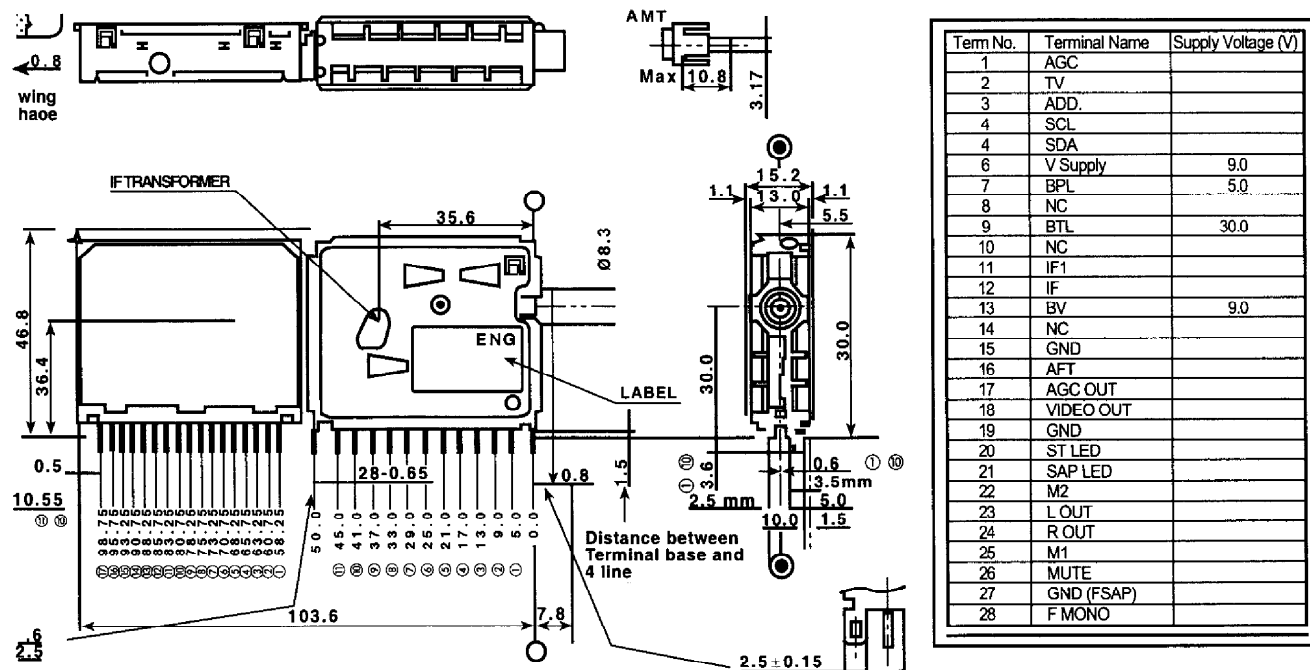
6.4 Main PWB



Circuit Descriptions

1. Tuner (F-EVP-50SR)

This chassis uses a 181 channel tuner in which the / PLL section (prescaler built-in) and IF section are made into one unit.



MTX matrix (TA1270 DAC 1/2)

Mode	DAC1	DAC2
Stereo	Low	High
Mono	Low	Low
SAP	High	High

2. Power Supply

The MM1 chassis consists of the standby power supply (which is activated when the power cord is plugged in, to control the micro-processor) and the main switching supply (which operates the deflection and signal functions). I901 is a hybrid IC, with a built-in MOSFET.

2.1 Features

Small SIP full mold package.
Small number of external components.
Soft switching and quasi resonant operation.
Designed for a light load mode.
Guaranteed avalanche energy.
Many protection functions.
Soft start function.

2.2 Standby Operation

When the power cord is plugged in, T951 (pin 16 and 17) will provide regulated +7V standby, and from this a regulated +5V is supplied to I001 from I956. I001 is now in standby mode until the front panel power button is pressed, or the remote control power code is received. At power on, pins 14 to 16 of I001 will go high, switching Q912 which causes current to flow through Q931, which starts the switching circuit.

2.3 Switching Operation

When the D901 rectified voltage appears at pin 5 of I901 starts oscillating at 22.5V and continues until the voltage drops below 15.1V. After start up, the voltage at the return winding of T901 is rectified by D980 and pin 5 is supplied with a stable voltage proportional +B. The oscillator C981 is connected to the Drain of the MOSFET (pin 1, I901) and smoothes the rising edge of the pulse. This creates a pseudo resonance function in order to delay activation of the MOSFET, to reduce loss and noise interference.

2.4 Voltage Regulation

During normal operation, the +B voltage is checked for stability at Pin 1 of Q931, and changes in voltages are sent to I902, and back to feedback pin 6 of I901 in order to change the pulse duration and stabilize the +B voltage.

2.5 I901 Protection

1) Current Limiter : pin 4 of I901 senses an over current condition at 0.5V. The switching operation continues but the MOSFET will turn off each pulse when pin 4 is detecting an over-current condition. This pin is also used for pseudo resonance mode action.

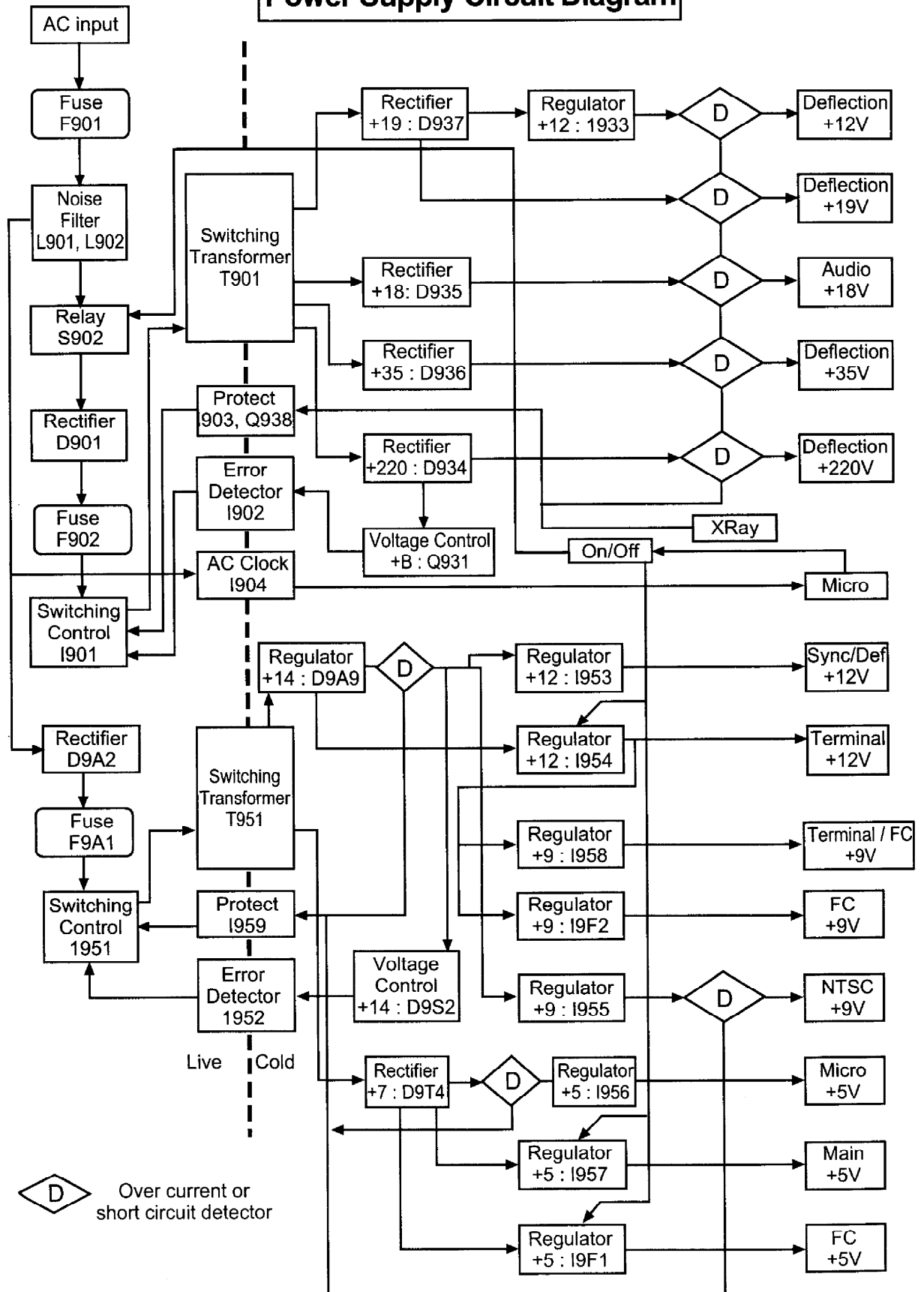
2) Over-Voltage Protection : If the input voltage is too high (pin 5 voltage higher than about 30.8v), and oscillation will stop.

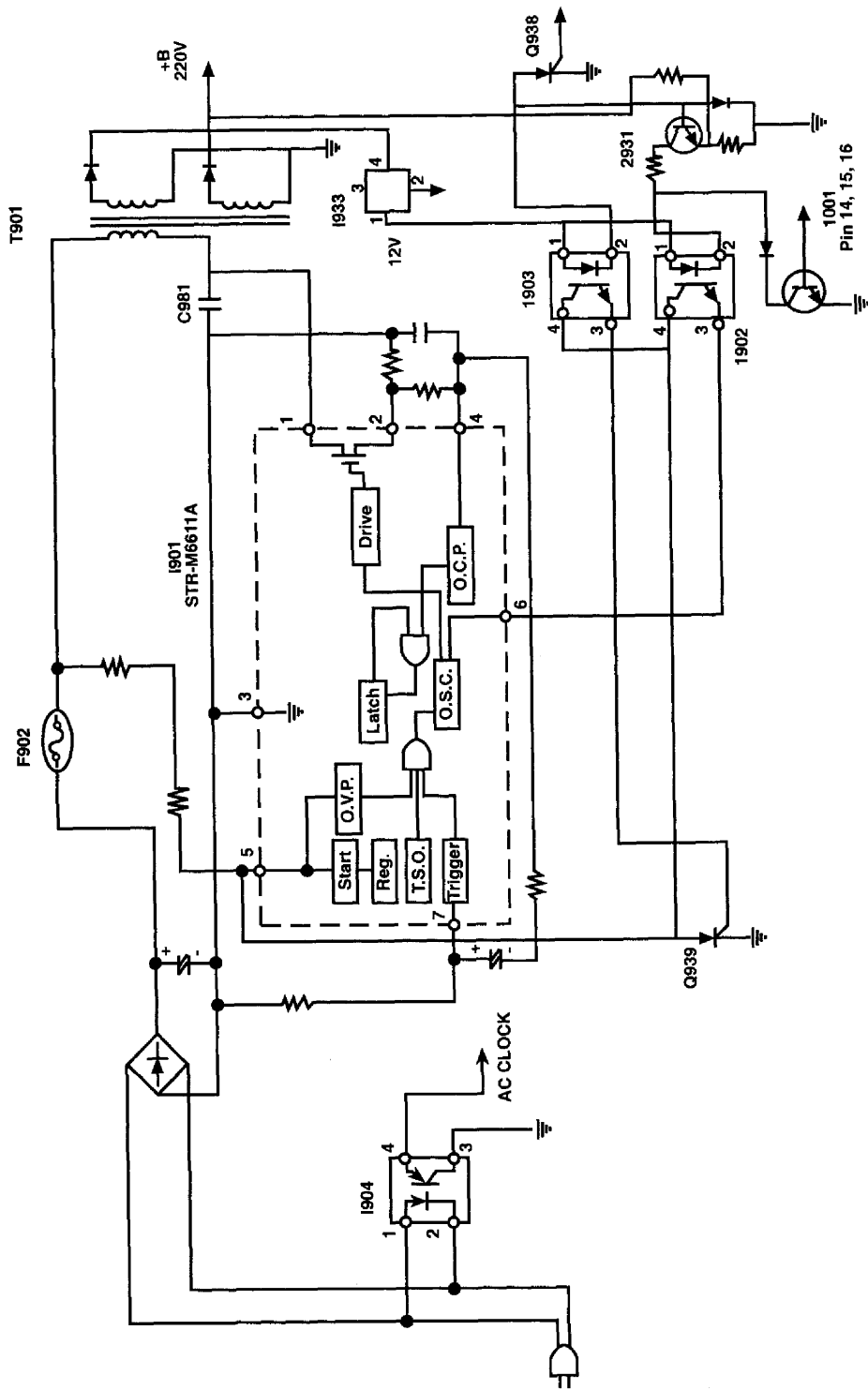
3) Thermal Protection : Oscillation will stop if I901 case temperature is above 150 degrees Celsius.

4) Soft Start : At initial start-up, the 4 volts present at pin 7 is input as a differential voltage to pin 4 by means of C987. This modifies the pulse during start-up and allows a current limited soft start condition.

5) Secondary Circuit Protection : Protection action of secondary-circuit is made up of Q938 entirely. If Q938 turns on, it makes Q939 turn on, then make pin 5 of I901 low to stop oscillation.

Power Supply Circuit Diagram





Power Supply Circuit

3. Microprocessor I001 Pin Description

3.1 I001 Pin Functions

Pin No.	Name	Function
1	RMIN	This is the input for remote control signals from the receiver "UG01".
2	SDA3	This is the data for IIC communication. I ² C for I002, I003 and Audio
3	SCL3	This is the clock for IIC communication.
4	A/D IN	Input for front control keys.
5	AFC	AFC AD input from U101 pin 16.
6	K04	Matrix-out for Auto Link.
7	+B Select	This is the output for +B selection.
8	SDA (Mouse)	This is the data for Mouse control IC IM01
9	USB IRQ	Unused
10	Request (Mouse)	Interrupt request rail from Mouse control IC IM01
11	Picture Blanking	This pin mutes the video when changing channels or selecting A/V inputs or PC Mode.
12	SCL (Mouse)	This is the clock for Mouse control IC IM01
13	IIC Enable	This is the pin for stopping micro jobs. Low : Stop, High: Work
14	Power 1	When power is turned on, this pin goes "H" to switch Q912 and S902 to turn main power on.
15	Power 2	When power is turned on, this pin goes "H" to switch Q913 and S903 to short rush resistor.
16	Power 3	When power is turned on, this pin goes "H" to switch Q912 and S902 to turn main power on.
17	H Select 1	Unused
18	H Select 2	This pin switches mode in PC mode. VGA : Low, DTV / SVGA : High
19	H Select 3	This pin switches mode in PC mode. VGA / DTV : Low, SVGA : High
20	K01/SCL (FC)	Matrix output for power switch. This is the clock for IIC communication of Flex Controller.
21	K02/SDA (FC)	Matrix output for Auto Link detect and Stereo broadcast detection. This is the data for IIC communication of Flex Controller.
22	Vdd	Vdd +5V Input
23	CREFO	CREFO is connected to GND. Data slice output level for CCD.
24	VPH0	VPH0 is the input for the composite video for CCD.
25	P27, VCP	Unused
26	CVBS0	CVBS0 is the input for the composite video for CCD.
27	K03	Matrix output for Second Audio Program and YUV detection.
28	TV / PC1	This pin switches between TV and PC. In TV mode it is High. In PC mode it is Low.
29	AC	This is the input for Clock / Timer counter. 50/60Hz det.
30	LED 2	This is the switch for red LED. On (DPMS in PC mode) : Low, Off (Others) : High
31	KI1	Matrix input for Power, Auto Link, and YUV Detection.
32	KI2	Matrix input for Stereo broadcast.
33	KI3	Matrix input for Second Audio Program.
34	SD	Sync input for TV mode.
35	LED 1	This is the switch for green LED. On : Low, Off : High
36	OSDX0	These pins are connected to an external LC circuit to provide a clock for OSD.
37	OSDX1	
38	Vss	GND
39	H Sync	This is the input for the H. Sync. signal for OSD.
40	Mute	This is the output signal used to mute the audio when changing channels. When the Mute button is pressed, this pin is set to "H".
41	OSD Blanking	This pin switches OSD and picture. Picture : Low, OSD : High
42	OSD R	This the OSD output for both TV-OSD and PC-OSD. OSD is sent to I501.
43	OSD G	
44	OSD B	
45	COMP	This is the pin for DAC phase compensation.
46	IREF	This is the pin to connect resistor for DAC bias setting. R040 connection for DAC bias current setting.
47	VREF	This is the input for DAC reference voltage.
48	OSD Shade	In case of selecting Shaded on Menu, this pin is "H" when OSD appears. It switches to reduce the level of the background video. Halftone to I501 pin 47 to reduce video level when OSD is ON.
49	AVdd	Vdd +5V Input (Analog)
50	PDO	This pin is the output for Internal phase comparison. Internal PLL input.
51	VCO1	This pin is the input for internal VCO.
52	TEST	TEST is connected to Vdd
53	SDA 1	This is the data for IIC communication.
54	Reset	When the power is turned on, a reset is initiated to perform RAM check and read last data input to the EEPROM. The reset pin is held "L" (1.5 or less) for approx.
55	V Sync	This is the input for the V. Sync. signal for OSD.
56	IRQ0	IRQ0 is connected to Vdd. External interrupt request line held high.
57	FC Enable	Interrupt request rail from Flex. controller unit UFC.

58	SCL1	This is the clock for IIC communication.
59	SDA2	This is the data for IIC communication.
60	SCL2	This is the clock for IIC communication.
61	Vdd	Vdd +5V Input
62	OSC1	These pins are connected to an external oscillator circuit for internal clock circuit when power-on this OSC1 clock start oscillation. 4 MHz oscillator for MPC.
63	OSC2	
64	Vss	GND

MICROPROCESSOR (I001)

The microprocessor used is 16-bit CPU, 144KB ROM and 5 KB RAM. Oscillator frequency is 4 MHz with two I²C interfaces. There are 2 internal sync. separators for CCD decoding.

I²C BUS

The I²C bus controller interfaces via six internal control registers.

I²C transmission from master/slave receiver, slave transmitter/receiver allows direct I²C protocol. An interrupt is generated when transfer ends then clears to high at the next write to I²C. If the UPC is the slave transmitting and transfer ends, the clock line clears at a read of I²C REC after ACK=1.

The Hardware monitors the I²C bus line so the Software can start a transfer at any time.

Through Software control the I²C bus controller can force the clock line to reset the circuit leaving the contents of the address and clock registers the same.

CLOSED CAPTION SYSTEM

The closed caption decoding is made by an algorithm of the Micon IC. The CCD data captioning algorithm utilizes sampling of the composite video signal during line 21. In order for the CCD algorithm to recognize CCD burst (seven clock cycles of 503khz) certain timing relationship between incoming composite video signal and horizontal flyback pulse (FBP) should be maintained. This algorithm determines the display position, screen display (Roll-Up, Pop-On, Paint-On), format and character attributes (color italics, underline, and flash).

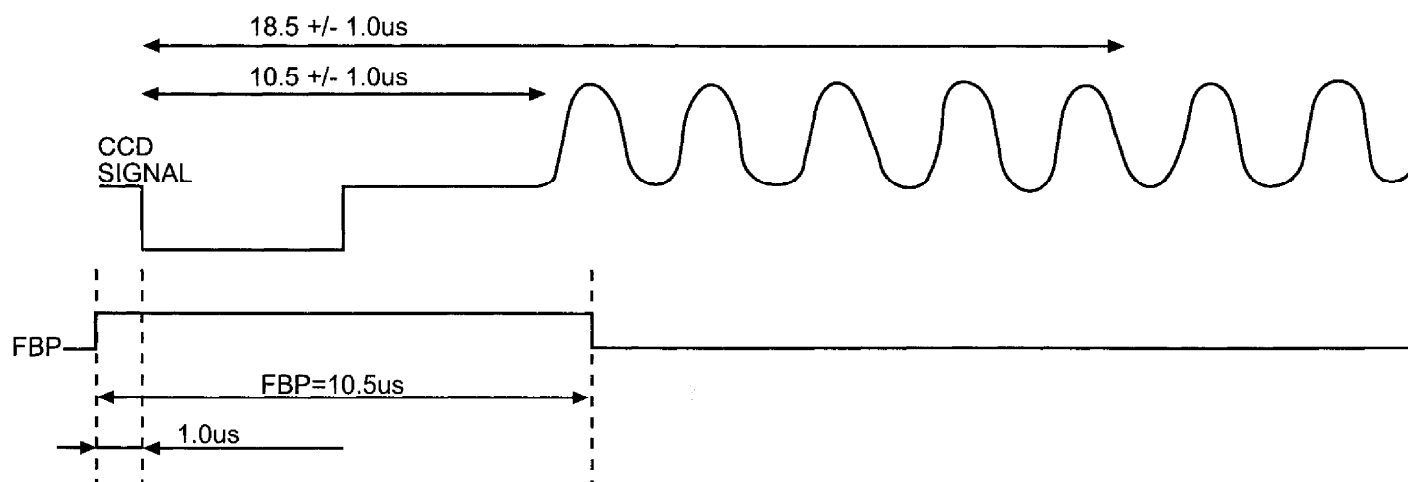


Fig. 3.2.1 Optimal Timing for CCD Data Capture Algorithm.

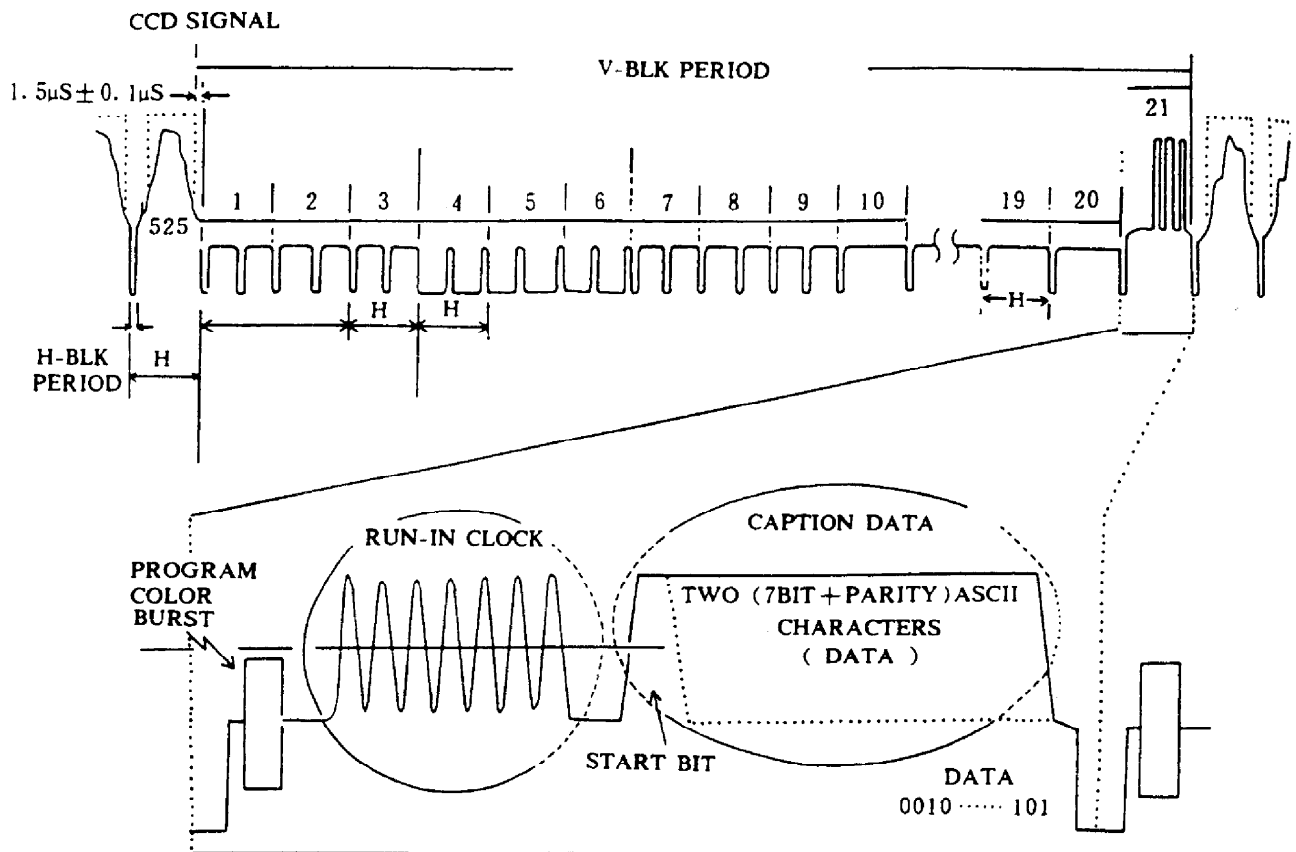


Fig. 3.2.2 CCD Signal

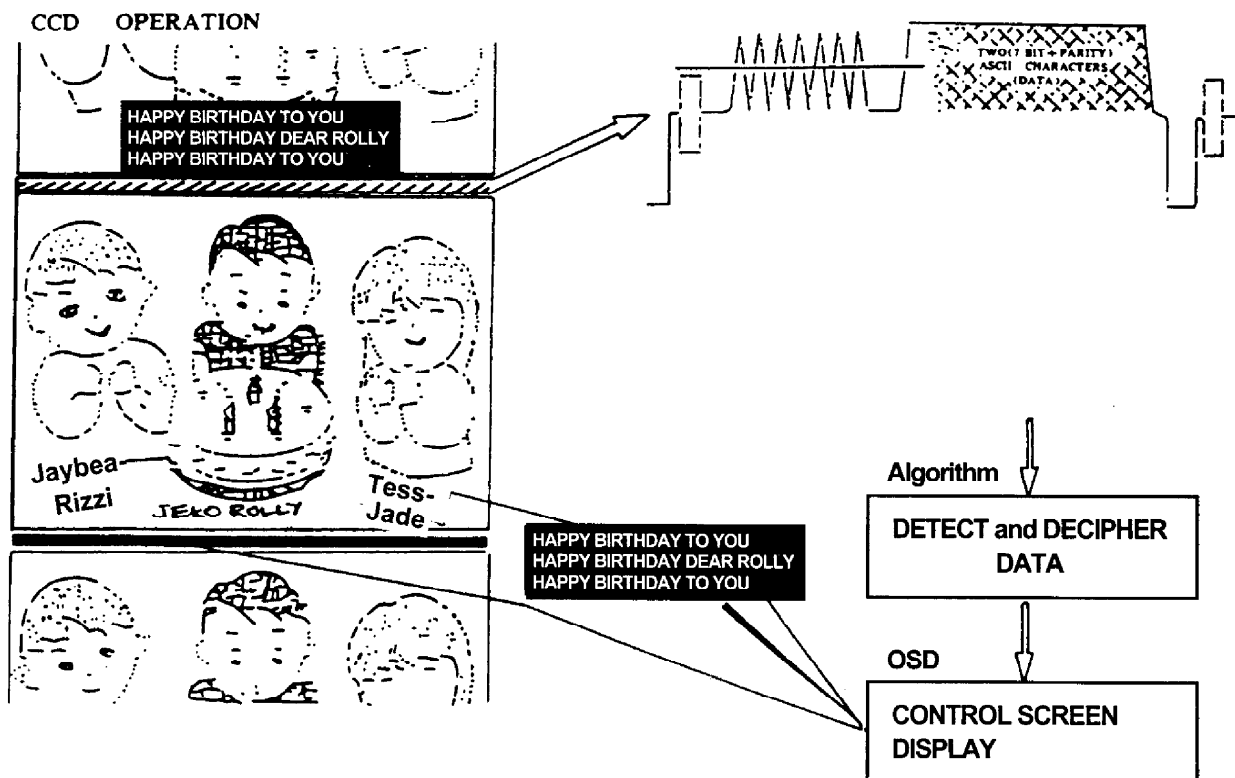


Fig. 3.2.3 CCD Operation

4. Memory

4.1 Memory

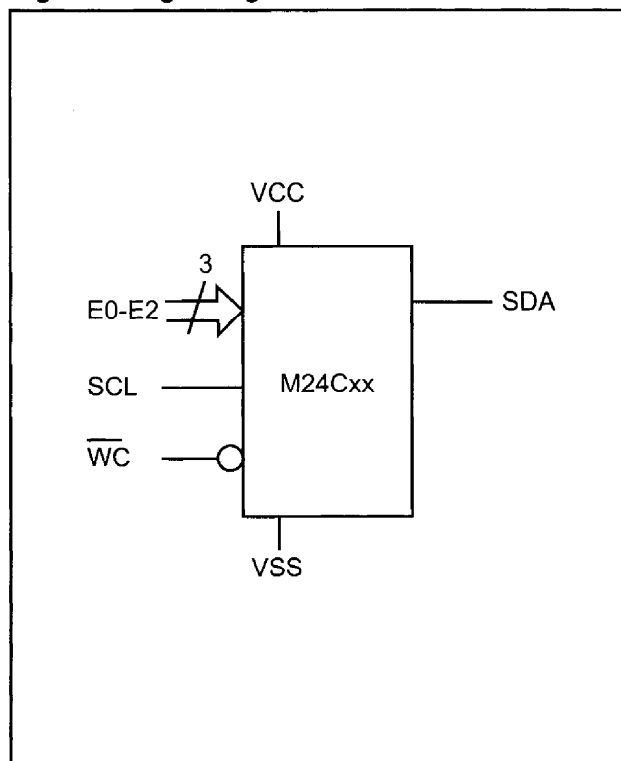
M24C16-BNG

The memory is an electrically erasable programmable memory (EEPROM) fabricated with High Endurance Single Polysilicon CMOS technology which guarantees an endurance typically well above one million erase/write cycles with a data retention of 40 years.

Table 1. Signal Names

E0-E2	Chip Enable Inputs
SDA	Serial Data Address Input/Output
SCL	Serial Clock
$\overline{WC}$	Write Control
Vcc	Supply Voltage
Vss	Ground

Figure 1. Logic Diagram



The memory is compatible with the I²C standard, two wire serial interface which uses a bi-directional data bus and serial clock. The memory carry a built-in 4 bit unique Device Type Identifier code (1010) which corresponds to the I²C bus definition. The Device Type Identifier code is used together with 3 Chip Enable bits. Depending on the size of the device memory, these Chip Enables bits can be directly linked to the E0-E1-E2 input pins or can be used as Most Significant Address bits for the memory area. The I²C protocol allows to address up to 16K bits of memory on the same bus. Using the E0-E1-E2 inputs pins.

The memory behaves as a slave device in the I²C protocol with all memory operations synchronized by the serial clock. Read and write operations are initiated by a START condition generated by the bus master. The START condition is followed by the Device Select Code which is composed by a stream of 7 bits (Device Type Identifier code '1010' followed by the 3 Chip Enable bits), plus one read/write bit (R/W) and terminated by acknowledged bit.

When writing data to the memory, it responds to the 8 bits received by asserting an acknowledge bit during the 9th bit time. When data is read by the bus master, it acknowledges the receipt of the data bytes in the same way. Data transfers are terminated with a STOP condition after an Ack for WRITE and after a No Ack for READ.

Power On Reset: V_{CC} lock out write protect. In order to prevent any possible data corruption and inadvertent write operations during power up, a Power On Reset (POR) circuit is implemented. Until the V_{CC} voltage has reached the POR threshold value, the internal reset is active, all operations are disabled and the device will not respond to any command. In the same way, when V_{CC} drops down from the operating voltage to below the POR threshold value, all operations are disabled and the device will not respond to any command. A stable V_{CC} must be applied before applying any logic signal.

SIGNAL DESCRIPTIONS

Serial Clock (SCL). The SCL input pin is used to synchronize all data in and out of memory. A resistor can be connected from the SCL line to V_{CC} to act as a pull up.

Serial Data (SDA). The SDA pin is bi-directional and is used to transfer data in or out of the memory. It is an open drain output that may be wire-OR'ed with other open drain or open collector signals on the bus. A resistor must be connected from the SDA bus line to V_{CC} to act as pull up (Figure 1).

Chip Enable (E0-E2). For the M24C16, there is no chip enable input. Only one M24C16 can be addressing on the same I^2C bus. The E0, E1 and E2 pins are Not Connected.

These E0, E1 and E2 inputs may be driven dynamically or tied to V_{CC} or V_{SS} to establish the Device Select code.

Write Control ($\overline{WC}$). A hardware Write Control pin ($\overline{WC}$) is provided on pin 7 of the memory. This feature is useful to protect the entire contents of the memory from any erroneous erase/write cycle. The Write Control signal is used to enable ($\overline{WC}=V_{IL}$) or disable ($\overline{WC}=V_{IH}$) write instruction to the entire memory area. When unconnected, the $\overline{WC}$ input is internally read as V_{IL} and write operations are allowed. When $\overline{WC}=1$, Device Select and Address bytes are acknowledged, Data bytes are not acknowledged.

4.2 Memory 24LC21A/P

1. DESCRIPTION

The Microchip Technology Inc. 24LC21A is a 128 x 8-bit dual-mode Electrically Erasable PROM. This device is designed for use in applications requiring storage and serial transmission of configuration and control information. Two modes of operation have been implemented: Transmit-Only Mode and Bi-directional Mode. Upon power-up, the device will be in the Transmit-Only Mode, sending a serial bit stream of the memory array from 00h to 7Fh, clocked by the VCLK pin. A valid high to low transition on the SCL pin will cause the device to enter the transition mode, and look for a valid control byte on the I^2C bus. If it detects a valid control byte from the master, it will switch into Bi-directional Mode, with byte selectable read/write capability of the memory array using SCL. If no control byte is received, the device will revert to the Transmit-Only Mode after it receives 128 consecutive VCLK pulses while the SCL pin is idle. The 24LC21A is available in a standard 8-pin PDIP and SOIC package in both commercial and industrial temperature ranges.

BLOCK DIAGRAM

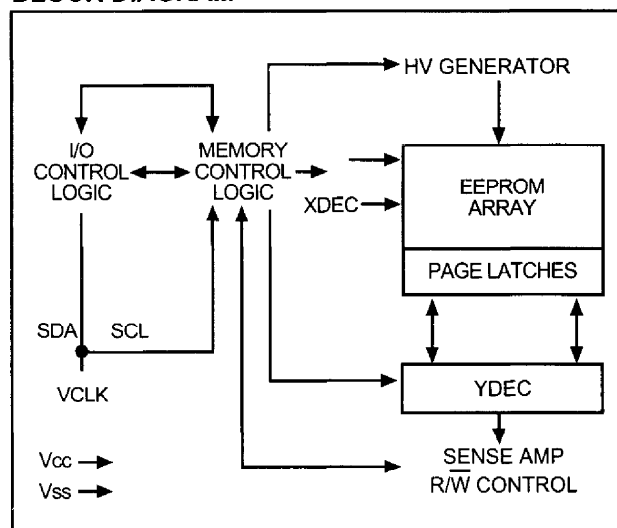


TABLE 1-1: PIN FUNCTION TABLE

Name	Function
Vss	Ground
SDA	Serial Address/Data I/O
SCL	Serial Clock (Bi-directional Mode)
VCLK	Serial Clock (Transmit-Only Mode)
Vcc	+2.5V to 5.5V Power Supply
NC	No Connection

PIN DESCRIPTIONS

1. SDA

This pin is used to transfer addresses and data into and out of the device, when the device is in the Bi-directional Mode. In the Transmit-Only Mode, which only allows data to be read from the device, data is also transferred on the SDA pin. This pin is an open drain terminal, therefore the SDA bus requires a pullup resistor to V_{CC} (typical 10 K Ω for 100 kHz, 1 K Ω for 400 kHz).

For normal data transfer in the Bi-directional Mode, SDA is allowed to change only during SCL low. Changes during SCL high are reserved for indicating the START and STOP conditions.

2. SCL

This pin is the clock input for the Bi-directional Mode, and is used to synchronize data transfer to and from the device. It is also used as the signaling input to switch the device from the Transmit-Only Mode to the Bi-directional Mode. It must remain high for the chip to continue operation in the Transmit-Only Mode.

3. VCLK

This pin is the clock input for the Transmit-Only Mode (DDC1). In the Transmit-Only Mode, each bit is clocked out on the rising edge of this signal. In the Bi-directional Mode, a high logic level is required on this pin to enable write capability.

2.0 FUNCTIONAL DESCRIPTION

The 24LC21A is designed to comply to the DDC Standard proposed by VESA (Figure 4-2) with the exception that it is not access bus capable. It operates in two modes, the Transmit-Only Mode and the Bi-directional Mode. There is a separate 2-wire protocol to support each mode, each having a separate clock input but sharing a common data line (SDA). The device enters the Transmit-Only Mode upon power-up. In this mode, the device transmits data bits on the SDA pin in response to a clock signal on the VCLK pin. The device will remain in this mode until a valid high to low transition is placed on the SCL input. When a valid transition on SCL is recognized, the device will switch into the Bi-directional Mode and look for its control byte to be sent by the master. If it detects its control byte, it will stay in the Bi-directional Mode. Otherwise, it will revert to the Transmit-Only Mode after it sees 128 VCLK pulses.

2.1 Transmit-Only Mode

The device will power up in the Transmit-Only Mode at address 00H. This mode supports a unidirectional 2-wire protocol for continuous transmission of the contents of the memory array. This device requires that it be initialized prior to valid data being sent in the Transmit-Only Mode (Section 2.2). In this mode, data is transmitted on the SDA pin in 8-bit bytes, with each byte followed by a ninth, null bit. The clock source for the Transmit-Only Mode is provided on the VCLK pin, and a data bit is output on the rising edge on this pin. The eight bits in each byte are transmitted most significant bit first. Each byte within the memory array will be output in sequence. After address 7Fh in the memory array is transmitted, the internal address pointers will wrap around to the first memory location (00h) and continue. The Bi-Directional Mode Clock (SCL) pin must be held high for the device to remain in the Transmit-Only Mode.

2.2 Initialization Procedure

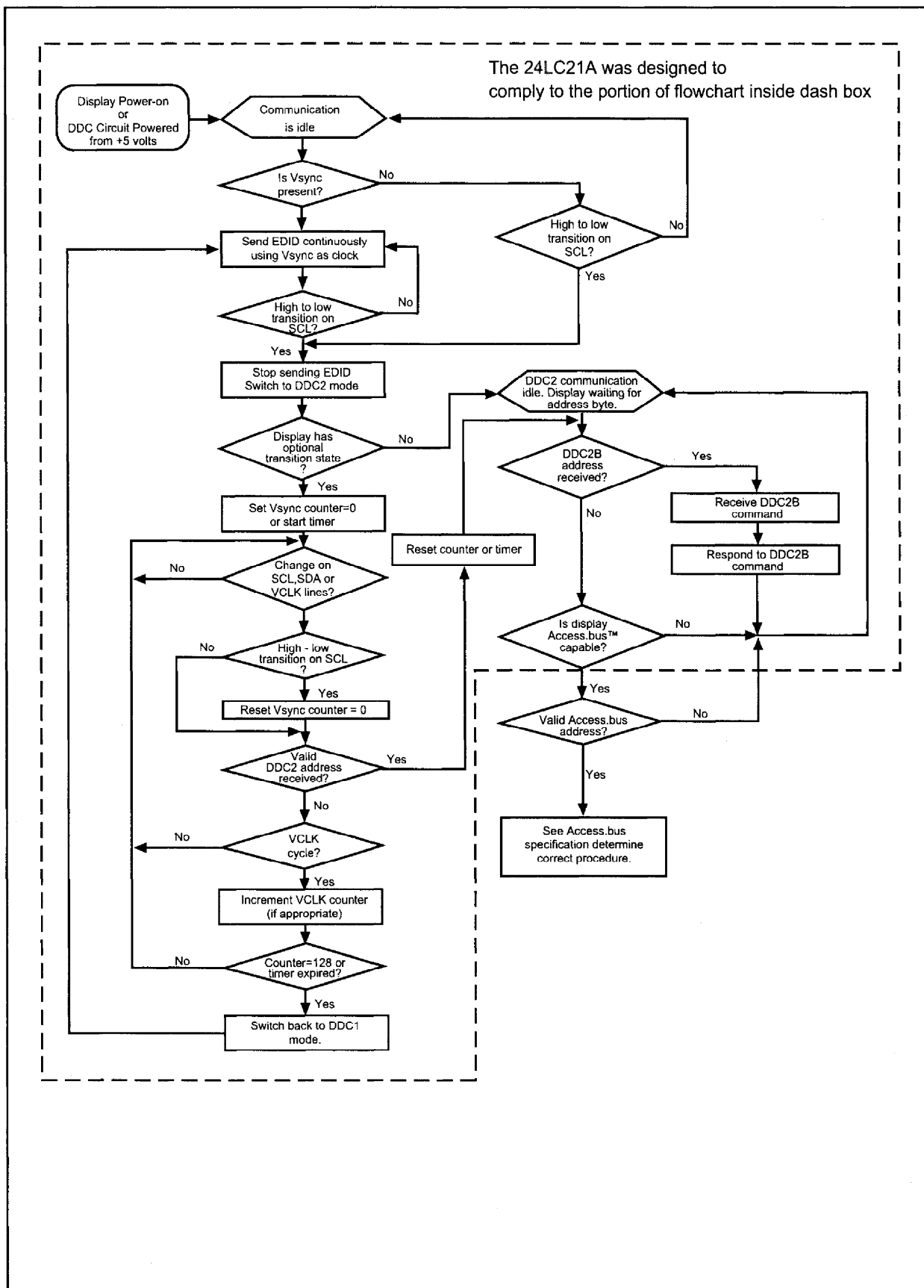
After Vcc has stabilized, the device will be in the Transmit-Only Mode. Nine clock cycles on the VCLK pin must be given to the device for it to perform internal synchronization. During this period, the SDA pin will be in a high impedance state. On the rising edge of the tenth clock cycle, the device will output the first valid data bit which will be the most significant bit in address 00h.

3.0 BI-DIRECTIONAL MODE

Before the 24LC21A can be switched into the Bi-directional Mode it must enter the transition mode, which is done by applying a valid high to low transition on the Bi-directional Mode Clock (SCL). As soon it enters the transition mode, it looks for a control byte 1010 000X on the I²C™ bus, and starts to count pulses on VCLK. Any high to low transition on the SCL line will reset the count. If it sees a pulse count of 128 on VCLK while the SCL line is idle, it will revert back to the transmit-Only Mode, and transmit its contents starting with the most significant bit in address 00h. However, if it detects the control byte on the I²C™ bus, it will switch in the Bi-directional Mode. Once the device has made the transition to the Bi-directional mode, the only way to switch the device back to the Transmit-Only Mode is to remove power from the device.

Once the device has switched into the Bi-directional Mode, the VCLK input is disregarded, with the exception that a logic high level is required to enable write capability. This mode supports a two-wire Bi-directional data transmission protocol (I²C™). In this protocol, a device that sends data on the bus is defined to be the transmitter, and a device that receives data from the bus is defined to be the receiver. The bus must be controlled by a master device that generates the Bi-directional Mode Clock (SCL), controls access to the bus and generates the START and STOP conditions, while the 24LC21A acts as the slave. Both master and slave can operate as transmitter or receiver, but the master device determines which mode is activated. In the Bi-directional mode, the 24LC21A only responds to commands for device 1010 000X.

FIGURE 4.2 DISPLAY OPERATION PER DDC STANDARD PROPOSED BY VESA



5. PC-MOUSE Microcomputer IM01 (M37470M4) (see Fig. 5.1 and 5.2)

In PC mode, PC-PS2 mouse can be controlled by the R/C handset through a connection to the PC via the 6pin mini din jack provided at the rear of the unit. The microcomputer for mouse control is IM01 (M37470M4, an 8-bit controller). I001 the main u-con is the master and IM01 is the slave. Communication between the PC, I001, and IM01 is through Bi-directional Serial Bus of TTL level.

Communication request from the PC is through the PS-2 CLK. and DATA lines. IM01 REQ. output (pin #1) is sent to I001 (pin #4). I001 sends CLK and DATA signals from pins 8 and 12 to IM01 pins 2 and 4.

QM01 and QM02 are switches send clk and data signals to PC via the I/O pins of the jack (JM03). IM01 pin#18 is the reset IM02 is the reset IC which holds pin #18 "L" for 2uS or more until the VCC rises to approx. 5V.

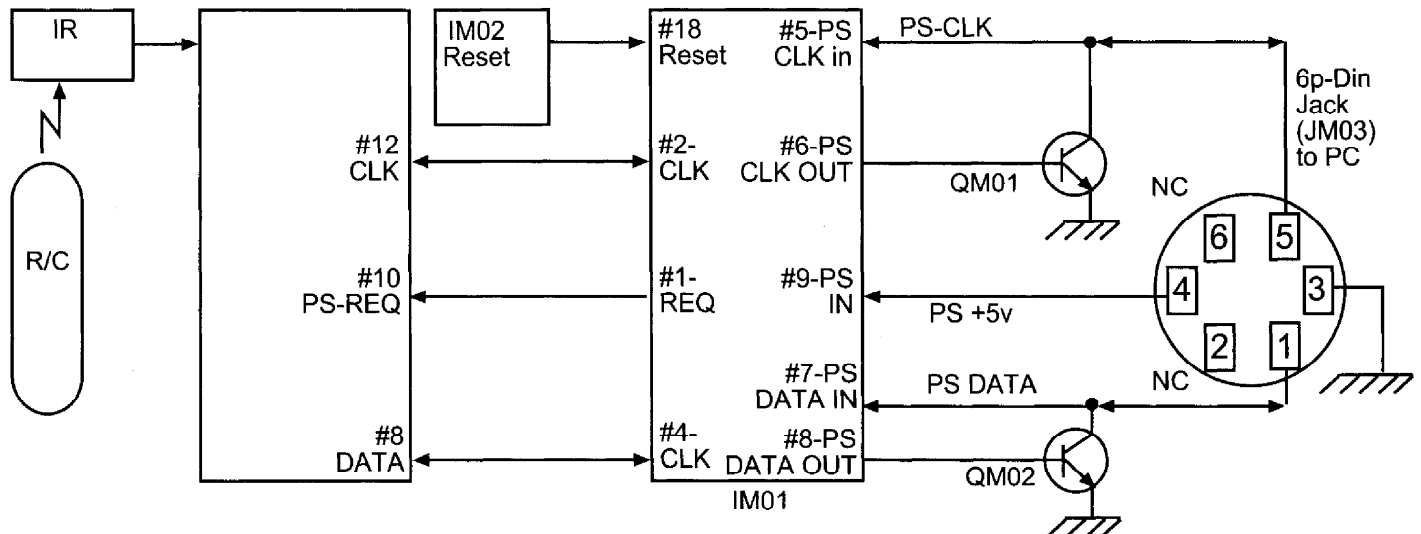


Fig. 5.1 SYSTEM BLOCK DIAGRAM

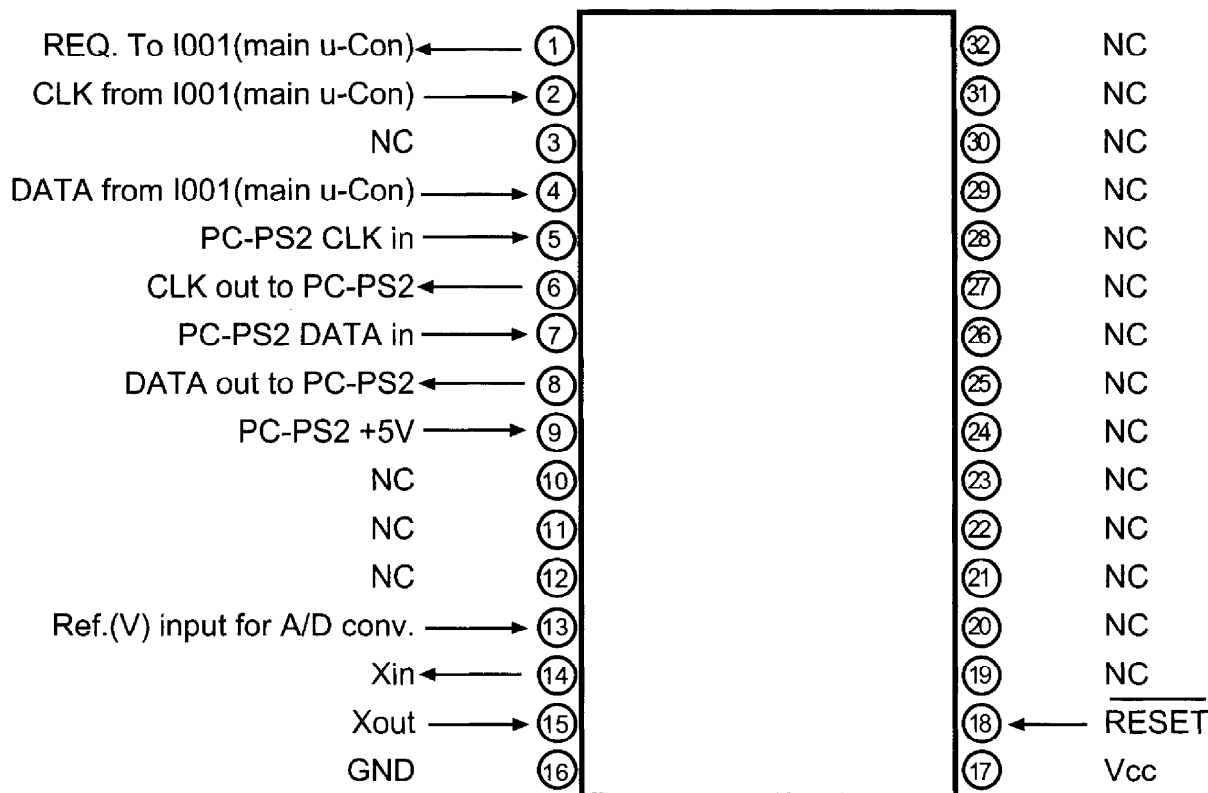


Fig. 5.2 IM01 PIN ARRANGEMENT.

6. Video / Chroma / RGB Processing

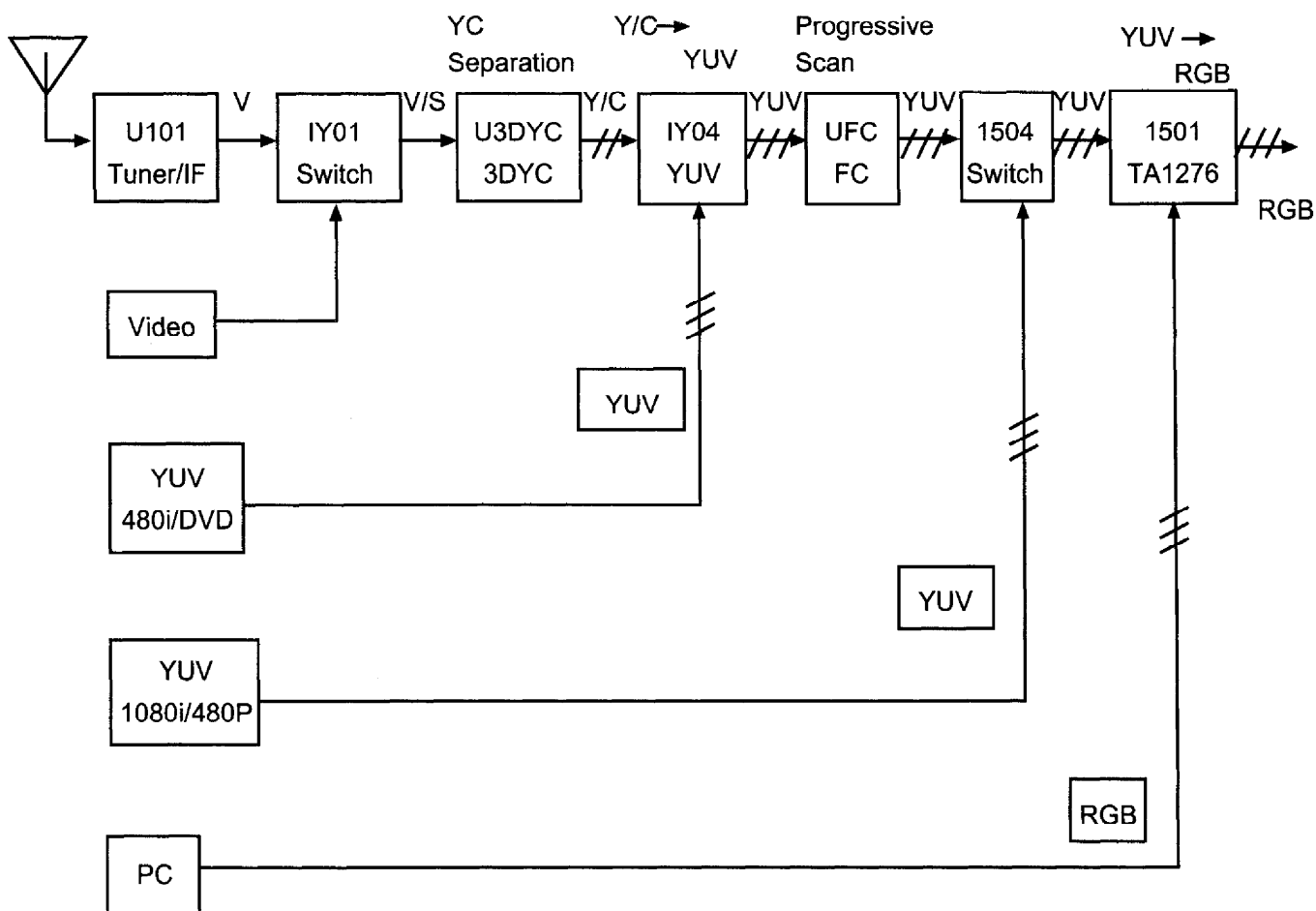
Pin Description : See drawings as shown below.

Function : See drawings as shown below.

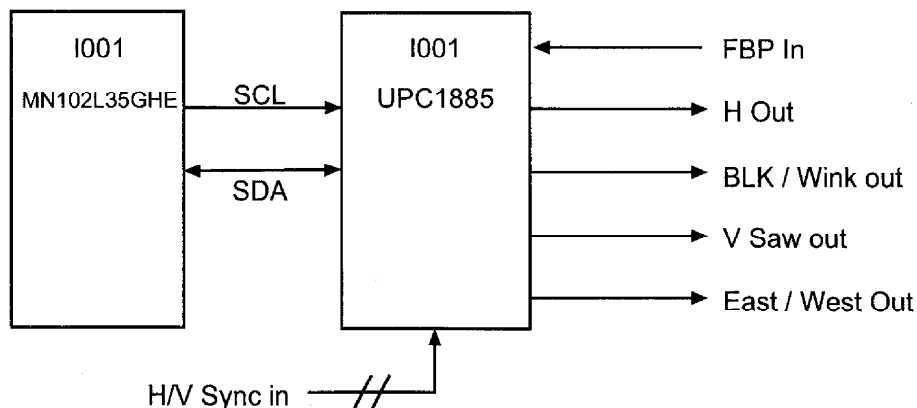
Signal Flow : See below.

Video / Chroma / RGB key components

No.	Circuit No	P#	Name	Functions	PWB
1	UFC	CSOO301	HC5601	Flex. Controller	Main
2	U3DYC	HP00701	UNXKC-301S	Comb Filter	Main
3	IY01	2020452	CXA1545AS	Signal Switch	NTSC
4	U101	HC00381	F-EVP-50SR	Front-End	NTSC
5	I501	CP04712U	TA1276AN	Video / Chroma	Terminal
6	I504	CK08951R	MM1389XFB	Signal Switch	Terminal
7	IY04	CK07922U	TA1270AF(J)	Video / Chroma	YUV



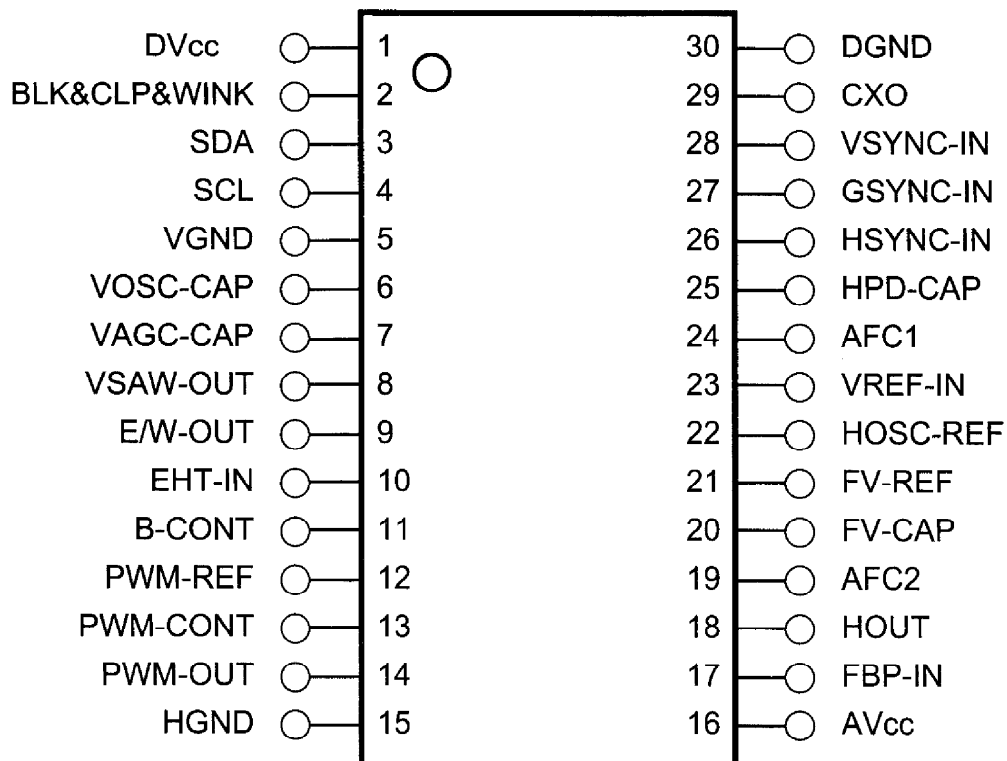
7. Sync. Signal Processing I



Operation Procedure

- 1) IS01 detect input signal, then calculate H/V signal frequency and polarity. IS01 controls H out, Blank out, Vertical Saw out, and East / West out, according to the H/V sync. input signal.
- 2) I001 read H/V signal frequency and polarity via IS01 by IIC bus.
- 3) I001 change mode, then send UPC1885 appropriate data for H/V size and pincushion, according to the input signal timing.

Pin Description



8. Vertical and Horizontal Drive

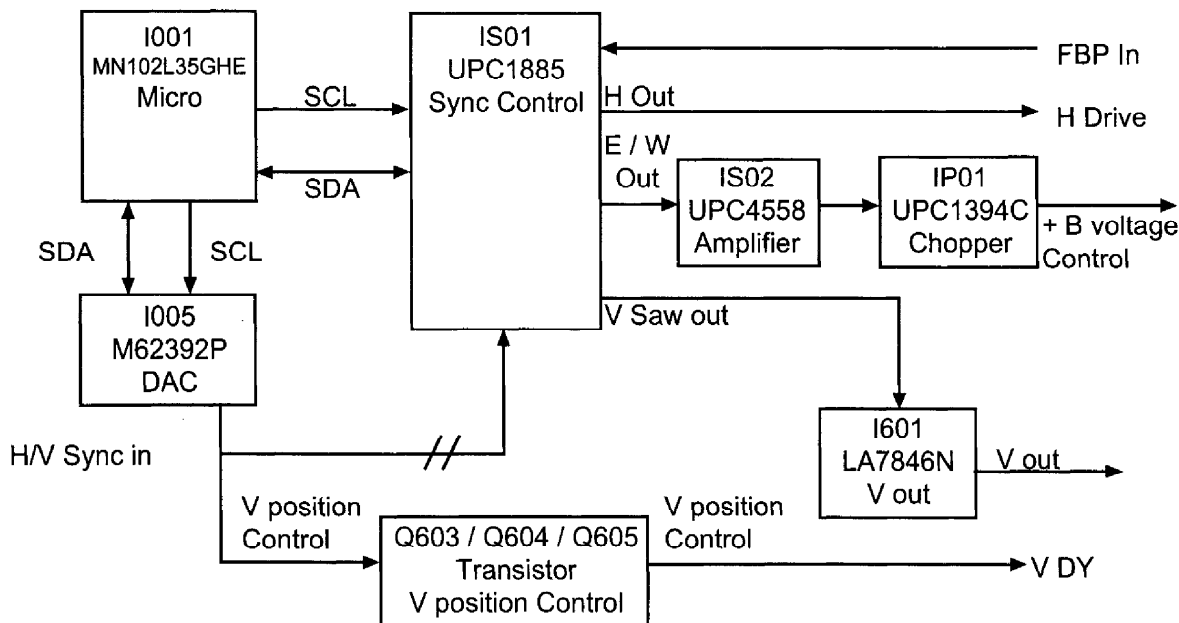
Pin Description : See drawings as shown below in detail.

Function : See drawings as shown below in detail.

Signal Flow : See below.

No.	Circuit No	P#	Name	Functions	PWB
1	I001	CP05361	MN102L35GHE	Main Micro	Main
2	I005	CP05261U	M62392P	D/A Converter	Main
3	IP01	2366721	UPC1394C	Chopper Controller	NTSC
4	IS01	CZ00751U	UPC1885	Deflection Control	Terminal
5	IS02	236202	UPC4558	Operation Amplifier	Terminal
6	I601	CZ00761U	LA7846N	Vertical Amplifier	Terminal

Vertical and Horizontal Drive Signal Flow



Description

- V Drive** The vertical sync signal from TV /PC sync circuit is input to IS01 pin #28 on Sync PWB. IS01 make vertical saw tooth and it is output at IS01 pin #8 to I601 pin #6.
- H Drive** The FBP (Fly Back Pulse) is applied to IS01 pin #17. East/West out is output at IS01 pin #9 to operation amplifier IS02. It is amplified by IS02, then output it at IS01 pin #1 to IP01 pin #14. Side pin drive pulse, which is modulated with vertical East / West, is output at IP01 pin #7 and controls +B voltage. H out is output at IS01 pin #18 to Q701 base.
- V Position** The vertical position circuit composed of I005, Q603, Q604, and Q605. The vertical position output from I005 pin #17 varies the base of Q503, which changes the DC bias being added to the V DY by Q604 and Q605 through R611, R612, R613, and R614 to change the vertical position of the picture.

VERTICAL DEFLECTION CIRCUIT(LA7846)

A vertical sawtooth voltage is input at pin (6). At the start of the retrace period a pulse voltage occurs at pin (3). This voltage is added to the voltage across C606. The sum is approx. 50V which is necessary for during then retrace period. C606 then discharges and the cycle starts again.

9. Horizontal Output Operation

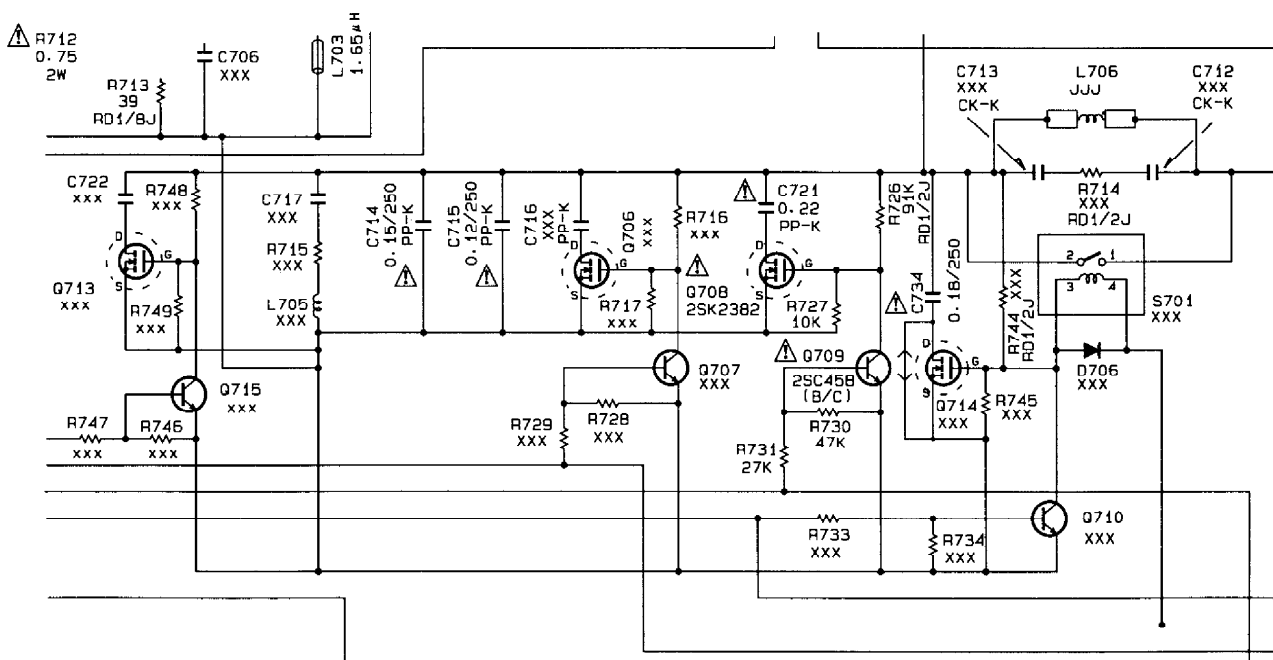
The Horizontal deflection circuit consists of Q701 (H.Driver), and Q702(H.output) to drive the H.DY. Q705 and damper diode D705 switches according to the pulse voltage from the H.drive circuit to supply the H.DY coil with a sawtooth current. C707, C708, C709, and C710 resonates with the H.DY coil. C718, C719, R718, and L707 corrects H.Linearity. The Horizontal output, Q705 and the damper D705 perform switching operation to supply the H.DY deflection current. When Q705 conducts, the current in the H DY coil increases linear until Q705 is cut-off. The energy stored in the DY decreases, changing the resonance capacitors C707, C708, C709, and C710. These capacitors then discharges across the DY coil in a reverse direction. D705 conducts to suppress this reverse voltage. When the damper current becomes zero, C705 conducts again.

T702 secondary output voltages are rectified by D710 and D711 and provides DC bias for the H.DY through Q711 and Q712.

Figure below shows the components which are switched in TV/VGA mode and SVGA mode by switching Q708 and Q709.

In TV and VGA mode, Q709 is cut off, and Q708 is on. Q708 is made to conduct, adding C721 for "S" correction.

In SVGA mode, Q709 is on, and Q708 is off. Q708 is made to conduct, removing C721 for "S" correction.



10. HV Regulation / Raster Centering/HV Circuit/Dynamic Focus Circuit Operation

10.1 HV Regulation

HV regulation is done by applying the divided voltage of TH01 high voltage to QH12, QH13 transfer the voltage change to IH02 pin #1 to regulate the HV depending on the brightness of the picture.

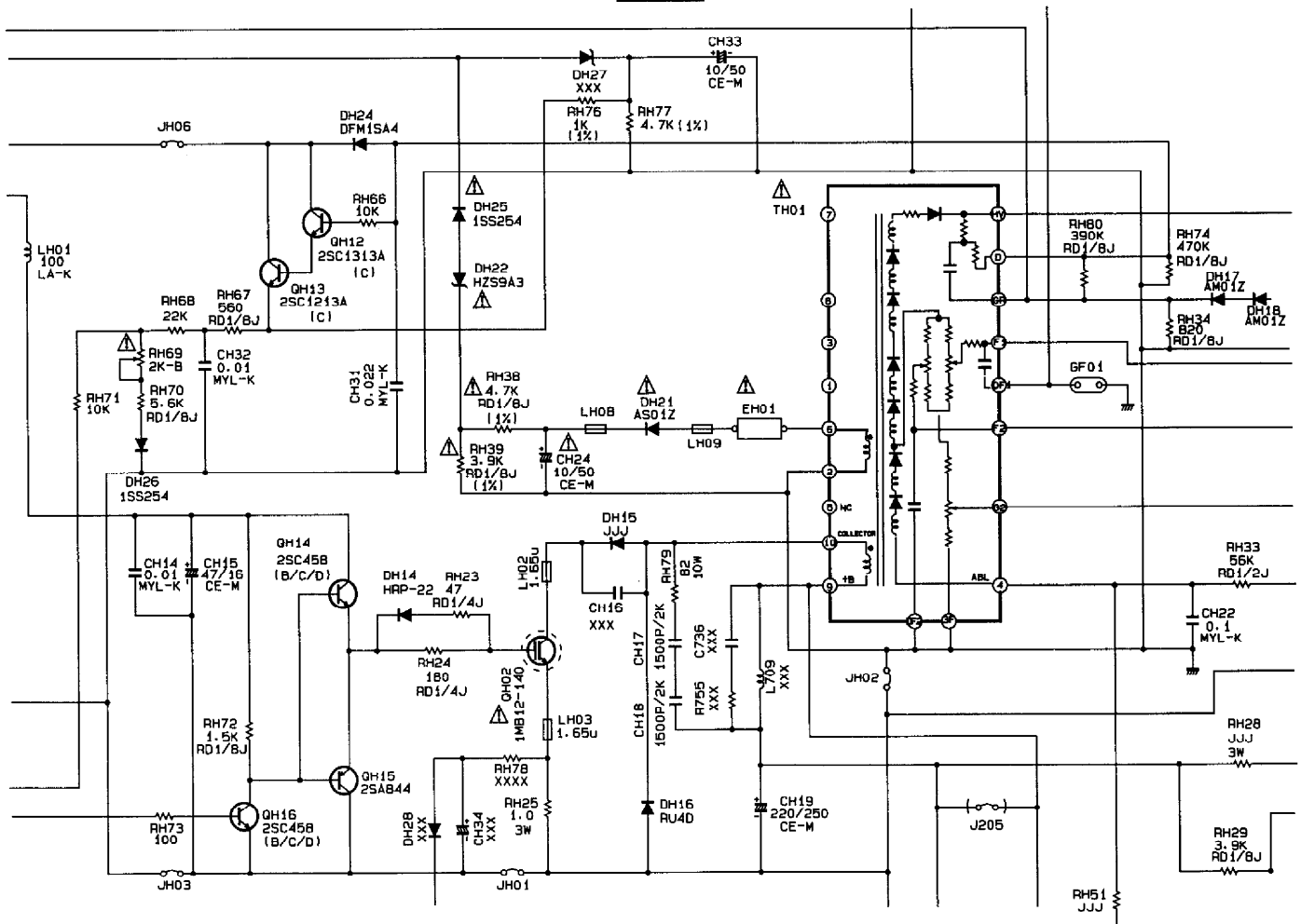
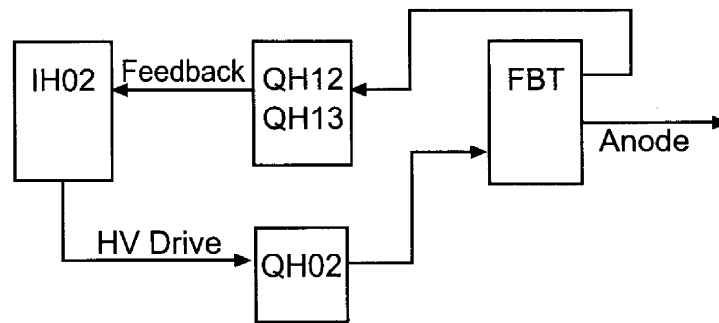
The HV stabilized by modulating the HV drive pulse width to control the ON/Off switching of QH02.

If the picture goes bright, the HV falls then QH12 turns on and the voltage at QH13 is applied to IH02 pin (1) connected to the internal error amplifier which compares it to a reference voltage at pin (14). The voltage at pin (12) drops and the internal comparator changes to change the width of the output pulse voltage. The ON time of QH02 becomes longer to stabilize the HV.

10.2 Raster Centering Circuit

R741 adjust raster position by changing Q711 (B) and Q712 (B) voltage. The output voltage flows through L708 to L707 (linearity circuit) in series with H. DY coil to shift the center by changing its bias.

HV Regulation



10.3 HV Circuit

High Voltage circuit for CRT anode voltage and regulation consist of IH02 (Control IC), drivers QH14, QH15, QH16, and HV output QH02.

When the TV is switched on, IH02 internal oscillator starts up to generate a pulse voltage as a source for the HV drivers. IH02 also regulates the HV to keep the picture size fixed by controlling the HV pulse width when the picture brightness changes.

IH02 oscillator time constant is dependent on RH19 and CH10. H. blk pulses are applied to pin (10) as a trigger and to synchronize the oscillator.

A sawtooth voltage is generated and compared with to the voltage at pin (12) to produce a pulse voltage, which is output at pin (7) to the HV drivers. QH16, QH14, AND QH15 amplifiers this pulse voltage to drive QH02 which produces a HV pulse at QH02 © to the FBT TH01 to provide Anode, focus and screen voltages.

10.4 Dynamic Focus Circuit Operation

The dynamic focus circuit improves the focus at the corners of the screen. This requires higher focusing voltage due to the distance from the center. The focus voltage is varied in a parabolic form as the electron beam scans horizontally and vertically.

The FBT pulse is integrated by LF02 and CF05 then amplified by QF05 and clamped by QF04(DF PWB). The amplitude is increased by QF53, QF52 and QF55 provides temperature stability.

The vertical output pulse is integrated by RF19 and CF09 (DF PWB) to produce a parabolic wave form. It is amplified by QF58 and added to the Horiz. Parabola and applied to the Focus pin (DF) on FBT TH01.

11. VM Circuit Operation

The VM circuit improves the definition between black and white edges by accelerating or decelerating the horizontal scanning speed of the electron beams. As a result, the gradient of the ramp of the leading edge of the luminance signal is increased with the brightness changes and the video bandwidth of the video signal narrowed simultaneously to sharpen the edged.

The Y signal is differentiated by Q552. The second differential of the Y signal is applied to Q556, VM amplifier, then to the VM drivers, QL08 and QL09 are the VM output amplifiers which drive the VM coil the current applied to the VM coil creates a magnetic field which varies the velocity of the horizontal scanning of the electron beam. The Ys signal is applied to Q555 to cut-of the VM when OSD is displayed. Q552, Q555, and Q556 are sub VM circuit. QL08 and QL09 are VM circuit.

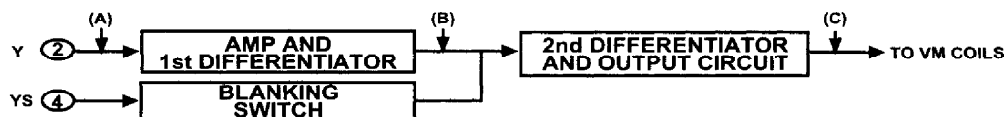


Fig. 11.1 VM Block Diagram

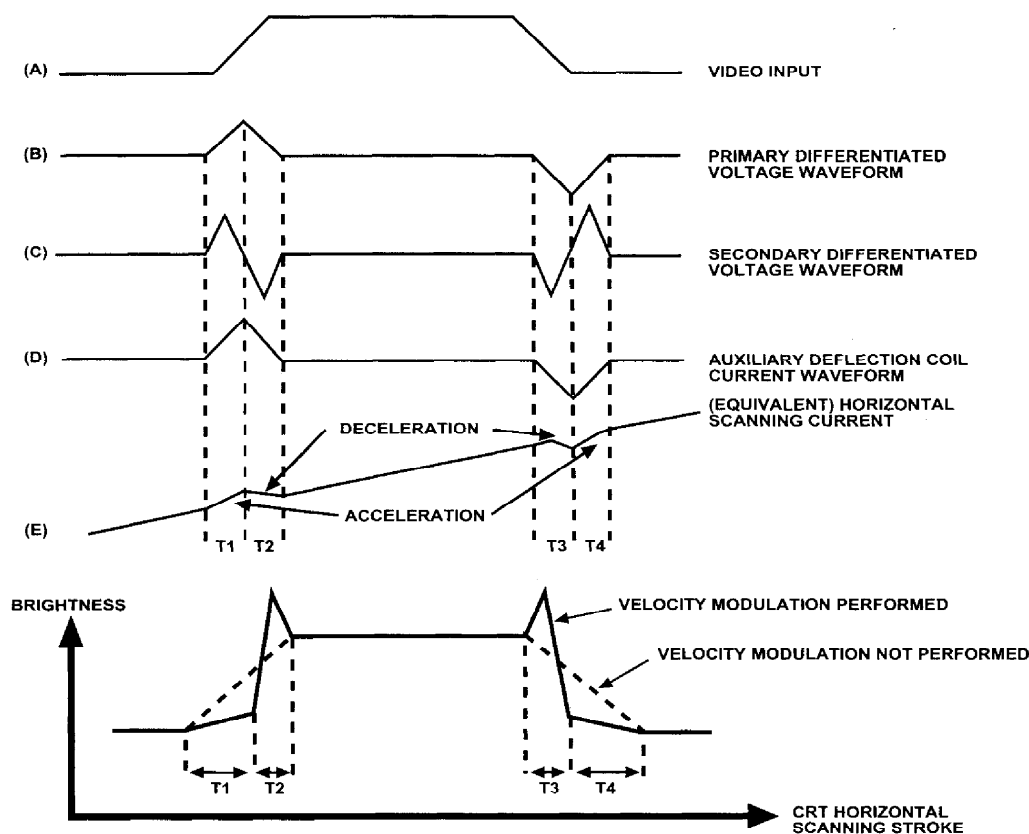


Fig. 11.2 VM Signal Process

12. MTS Decoding (FE-VR50SR)

- 1) Block Diagram See item 1 "Tuner" - MTS Decoding
- 2) Stereo Demodulation The stereo LPF is used to remove the SAP (5fH) and telemetry (6.5fH). The resulting signal is sent to the phase detector. The phase detector converts to a DC voltage and filtered. The 8fH VCO is divided and produces two fH signal, one in phase with the pilot signal and the other 90 degree out of phase.

The signal from the Stereo LPF is also sent to the pilot decoder which converts it to a DC voltage and is stabilized by internal circuit which is used to determine the ON / OFF condition of the Stereo indicator. The Pilot Cancel cancels the pilot signal by adding the stereo signal with matrix signal at the response level of the input pilot signal. The pilot signal is also sent to the L-R signal and the L-R signal goes to the ST/SAP switch.

The L + R LPF consists of 2 traps tuned to fH and 24kHz to remove the L+R signal and passed through a 75us de-emphasis filter to the mode selector.
- 3) SAP Demodulation Block The composite audio signal is also applied to the SAP BPF (peaked to 5fH) to remove the SAP signal. The output of the SAP BPF goes to the SAP Detector. It is full wave rectified to DC voltage and smoothened by the internal circuit. When this DC voltage reaches a certain level, SAP signal is detected.

13. Audio Signal Processing

1 Audio Signal Select

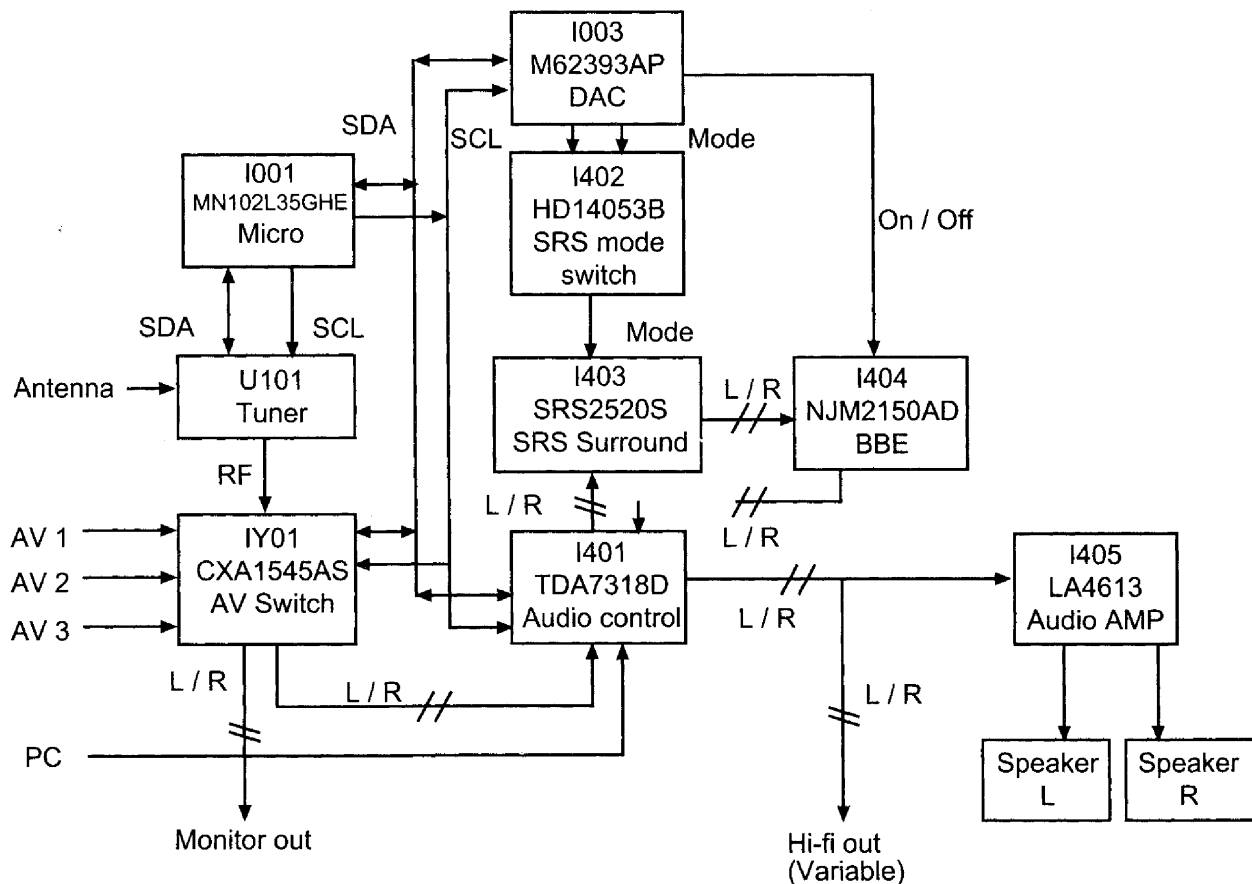
The audio L and R signals from tuner U101, the AV 1 L and R signals, the AV 2 L and R signals, and the AV 3 L and R signals are switched by IY01 (CXA1545AS) on the NTSC PWB. The L-s and R-s are the output signals which are sent to the Audio Control IC 1401 (TDA7318D) and the monitor output jacks. I401 consists of IIC bus controlled amplifiers per channel. These serve to control Volume, and Tone (Bass / Treble). The L and R signals from IY01 and the PC L and R signals are switched by I401 (TDA7318D) on Audio PWB. The L-s and R-s are the output signals which are sent to the SRS Surround IC I403.

2 SRS Surround

I403 (SRS5250AS) is the SRS surround processor. SRS ON / OFF is controlled by I402 (HD14053B).

3 BBE

I404 (NJM2150AD) is BBE sound enhancement processor. BBE ON / OFF is controlled by IIC bus from I001.



14. 3 Dimension Comb Filter Unit

The 3 Dimension Comb Filter Unit Block Diagram is shown in Fig. 14.1.

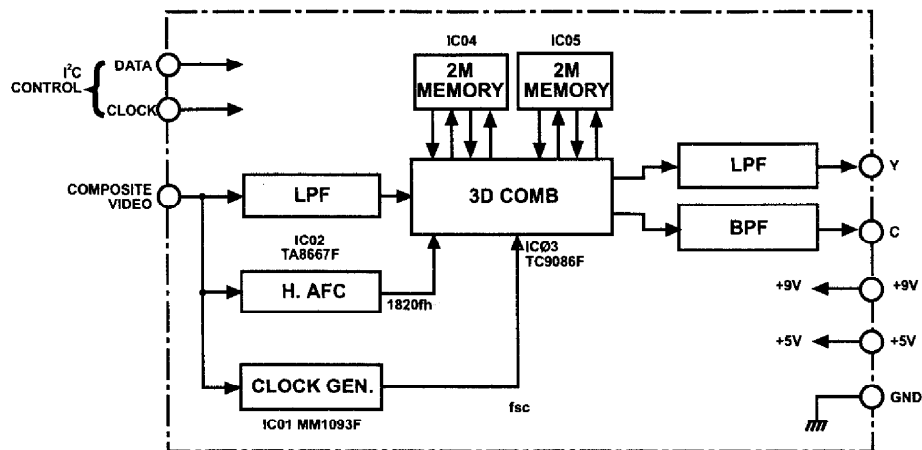


Fig. 14.1 3 Dimension Comb Filter Unit Block Diagram

The 3 Dimension Comb IC (IC03) Block Diagram is shown in Fig. 14.1.

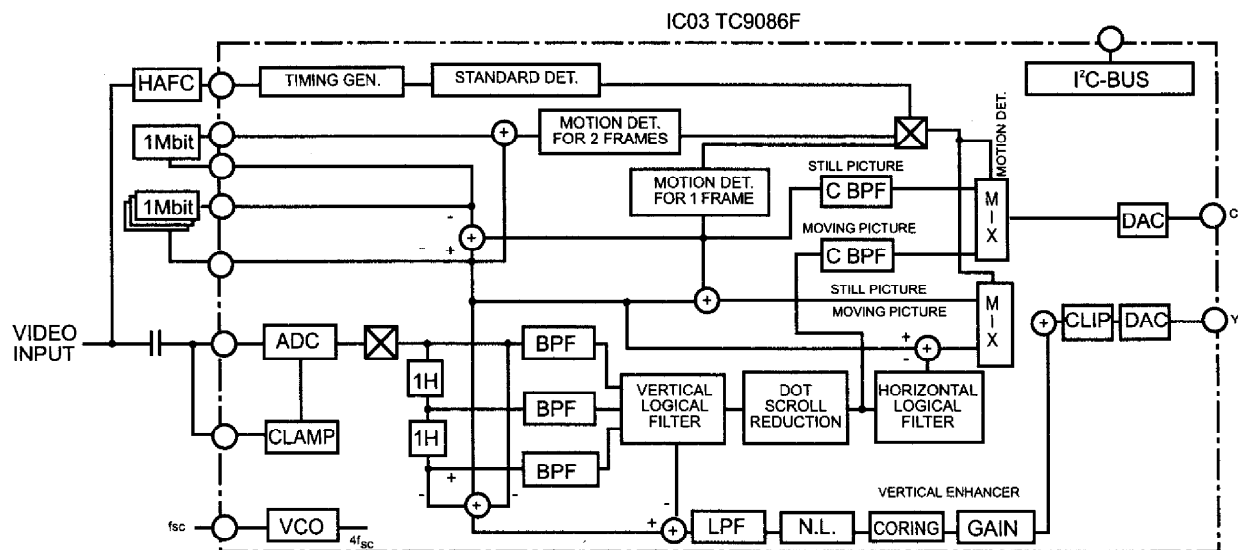


Fig. 14.2 3 Dimension Comb IC Block Diagram

The TC9086F is a motion adaptive 3 Dimension Y/C Separation System. This system detects the amount of moving picture information and processes this information for the still portion and moving portion of the picture. For still portions, 3 Dimension Y/C Separation with field memory is executed. For moving portions, Dynamic Comb Filtering Y/C Separation between 3 lines is executed.

15. MM1 I²C Bus Controlled IC

No.	Circuit No.	P#	Name	Functions	PWB
1	I002	CP05272U	M24C16-BN6	EEPROM	Main
2	I003	CP00871U	M62393P	D/A Converter	Main
3	I005	CP05261U	M62392P	D/A Converter	Main
4	U3DYC	HP00701	UNXKC-301S	Comb Filter	Main
5	IY01	2020452	CXA1545AS	Signal Switch	NTSC
6	I401	CP05341R	TDA7318D013TR	Audio Control	NTSC
7	U101	HC00381	F-EVP-50SR	Front-End	NTSC
8	IS01	CZ00751U	UPC1885	Deflection Control	Terminal
9	IT04	CP01042U	24LC21A/P	EEPROM for DDC	Terminal
10	I501	CP04712U	TA1276AN	Video / Chroma	Terminal
11	IY04	CK07922U	TA1270AF(J)	Video / Chroma	YUV

MM1 Video Flow

No.	Circuit No.	P#	Name	Functions	PWB
1	UFC	CS00301	HC5601	Flex. Controller	Main
2	U3DYC	HP00701	UNXKC-301S	Comb Filter	Main
3	IY01	2020452	CXA1545AS	Signal Switch	NTSC
4	U101	HC00381	F-EVP-50SR	Front-End	NTSC
5	I501	CP04712U	TA1276AN	Video / Chroma	Terminal
6	I504	CK08951R	MM1389XFBE	Signal Switch	Terminal
7	IY04	CK07922U	TA1270AF(J)	Video / Chroma	YUV

16. Major Component Functions

No.	Circuit No	P#	Name	Functions	PWB
1	I001	CPO5361	MN102L35GHE	MAIN MICRO	MAIN
2	I002	CPO5272U	M24C16-BN6	EEPROM	MAIN
3	I003	CP00871U	M62393P	D/A CONVERTER	MAIN
4	I004	CPO5011R	PST994D-T	RESET	MAIN
5	I005	CPO5261U	M62393P	D/A CONVERTER	MAIN
6	I5N1	2005491	HD74HC221P	MULTI-VIBRATOR	MAIN
7	I5N2	2362651	HD14053B	ANALOG SWITCH	MAIN
8	I9F1	2004661F	PQ05RF1B	+5V REGULATOR	MAIN
9	I9F2	2004662F	PQ09RF1B	+9V REGULATOR	MAIN
10	I954	2004663F	PQ012RF1B	+12V REGULATOR	MAIN
11	I955	2004662F	PQ09RF1B	+9V REGULATOR	MAIN
12	I956	2004661F	PQ05RF1B	+5V REGULATOR	MAIN
13	I957	2004661F	PQ05RF1B	+5V REGULATOR	MAIN
14	I958	2004662F	PQ09RF1B	+9V REGULATOR	MAIN
15	UFC	CS00301	HC5601	FLEX CONTROLLER	MAIN
16	U3DYC	HP00701	UNXKC-301S	COMB FILTER	MAIN
17	I901	CZ00451	M6811A	SWITCHING REGULATOR	POWER
18	I902	2000465	PS2501-1(K/L)	ERROR AMPLIFIER	POWER
19	I903	2000465	PS2501-1(K/L)	PROTECTOR	POWER
20	I904	2000465	PS2501-1(K/L)	ISOLATOR FOR TIMER CLOCK	POWER
21	I933	2004663F	PQ012RF1B	REGULATOR	POWER
22	I951	CP04343F	M1P0224SYOLF	SWITCHING REGULATOR	POWER
23	I952	2000465	PS2501-1(K/L)	ERROR AMPLIFIER	POWER
24	I953	2004663F	PQ012RF1B	REGULATOR	POWER
25	I959	2000465	PS2501-1(K/L)	PROTECTOR	POWER
26	I960	CP05141	PQ6RD083	REGULATOR	POWER
27	IH01	2005491	HD74HC221P	MULTI-VIBRATOR	NTSC
28	IH02	236721	UPC1394C	HIGH VOLTAGE CONTROLLER	NTSC
29	IP01	236721	UPC1394C	CHOPPER CONTROLLER	NTSC
30	IY01	2020452	CXA1545AS	SIGNAL SWITCH	NTSC
31	IY02	2020341	MM1111XS	SIGNAL SWITCH	NTSC
32	IY03	CK07131R	MC14053BFEL	ANALOG SWITCH	NTSC
33	I401	CP05341R	TDA7318D013TR	AUDIO CONTROL	NTSC
34	I402	2362651	HD14053B	ANALOG SWITCH	NTSC
35	I403	CK06623R	SRS5250AS-E2	SRS CONTROL	NTSC
36	I404	CPO5351	NJM2150AD	BBE CONTROL	NTSC
37	I405	CPO4061	LA4613	AUDIO AMPLIFIER	NTSC
38	I502	CK07131R	MC14053BFEL	ANALOG SWITCH	NTSC
39	U101	HC00381	F-EVP-50SR	FRONT-END	NTSC
40	IS00	2366361	AN7805	REGULATOR	TERMINAL
41	IS01	CZ00751U	UPC1885	DEFLECTION CONTROL	TERMINAL
42	IS02	2362602	HA17485/UPC4558	OPERATION AMPLIFIER	TERMINAL
43	IS03	2004781	LA7213	SYNCHRONOUS CONTROL	TERMINAL
44	IS05	2362651	HD14053	ANALOG SWITCH	TERMINAL
45	IT01	CK07131R	MC14053BFEL	ANALOG SWITCH	TERMINAL

17. Major Component Functions

No.	Circuit No	P#	Name	Functions	PWB
46	IT02	CK07131R	MC14053BFEL	ANALOG SWITCH	TERMINAL
47	IT03	CK07131R	MC14053BFEL	ANALOG SWITCH	TERMINAL
48	IT04	CP01042U	24LC2A/P	EEPROM FRO DDC	TERMINAL
49	I501	CP04712U	TA1276AN	VIDEO/CHROMA	TERMINAL
50	I504	CK08951R	MM1389XFBE	SIGNAL SWITCH	TERMINAL
51	UG01	CZ00641	GP1U281Q	I/R UNIT	TERMINAL
52	UG02	CZ00781	TPS831(A)	I/R UNIT	TERMINAL
53	I601	CZ00761U	LA7846N	VERTICAL AMPLIFIER	DEFLECTION
54	Q705	CF01891F	2SC5413	HORIZ. OUT TRANS.	DEFLECTION
55	QH02	2390851	ST-1MB12-140	H/V OUT TRANSISTOR	DEFLECTION
56	TH01	BW00754	HVT1735YD-RC	FBT	DEFLECTION
57	IM01	CP04461	M37470M4-751SP	MOUSE CONTROLLER	IR
58	IM02	CZ00461R	BMR-4201FT	RESET	IR
59	IR01	CKO9451	SMK0160-02816	I/R DECODER	IR
60	IR02	CKO9461	SMKSQ160-02819	PS/2 INTERFACE	IR
61	IR03	2362651	HD14053B	ANALOG SWITCH	IR
62	IY04	CK07922U	TA1270AF(J)	VIDEO/CHROMA	YUV

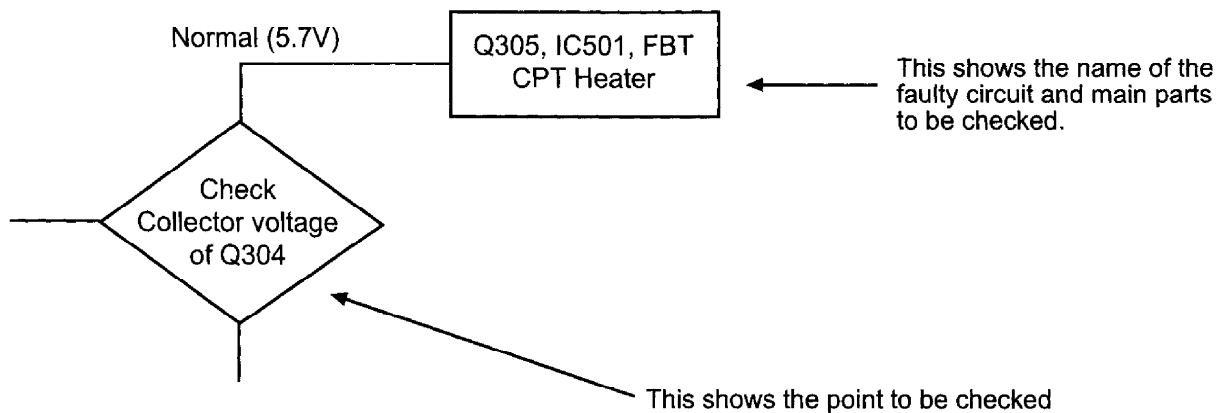
TROUBLESHOOTING

PRODUCT SAFETY NOTE

The shaded and  marked components have special characteristics important to safety. Read carefully the product safety notice of each service manual. Don't degrade the safety of the receiver through improper servicing when replacing any of this components.

HOW TO USE FLOW CHART

(1) The flow chart shows the following:

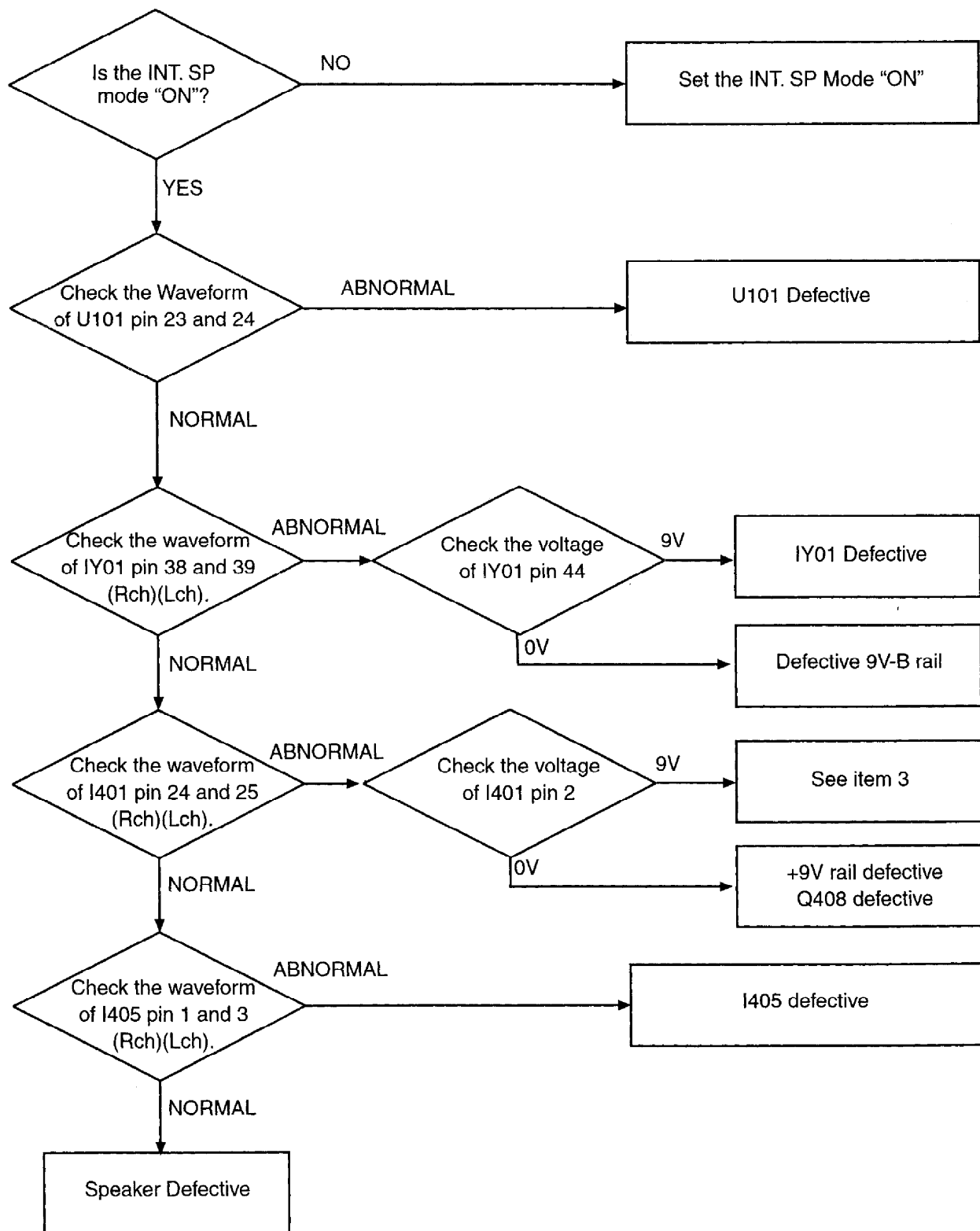


(2) The voltage shown in the chart may differ to some extent depending on the condition of the set and tester.

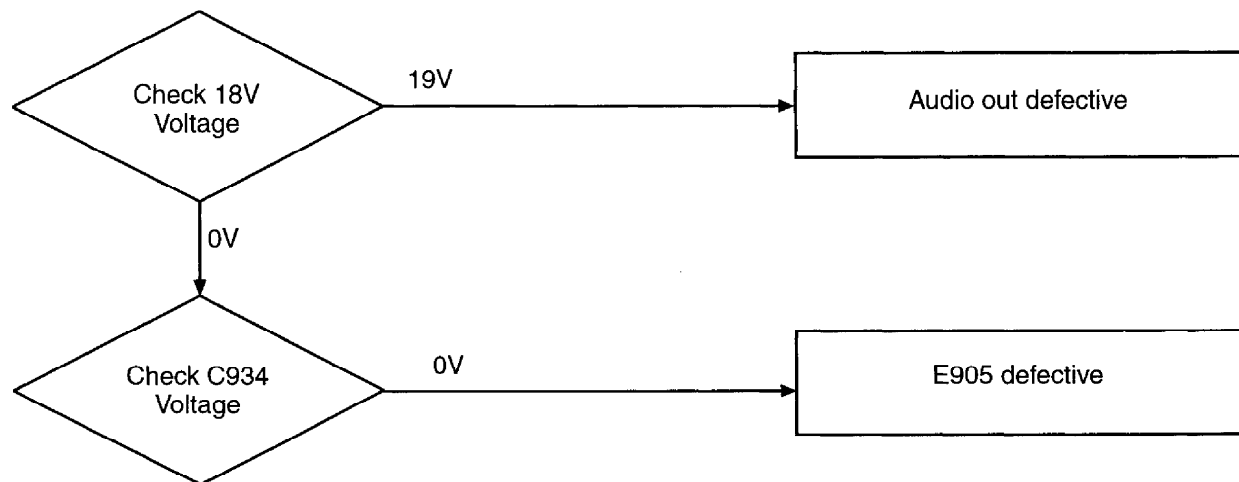
PRECAUTION ON MAKING MEASUREMENTS AND ON HANDLING

1. When any parts become abnormally hot or there is a smell of burning, cut off the power immediately.
2. Do not make shorts between circuits or across terminals except for those specified.
3. When measuring the voltages of ICs and TRs, be careful that the test lead of the tester does not touch any other terminal.
4. Measure the voltage correctly.
5. Measure the resistance over a small range.
6. Be sure to switch off the power when replacing parts.
7. Do not apply a soldering iron for a long time when replacing parts. (Use a solder-wick.)
8. Use an isolation transformer when troubleshooting.

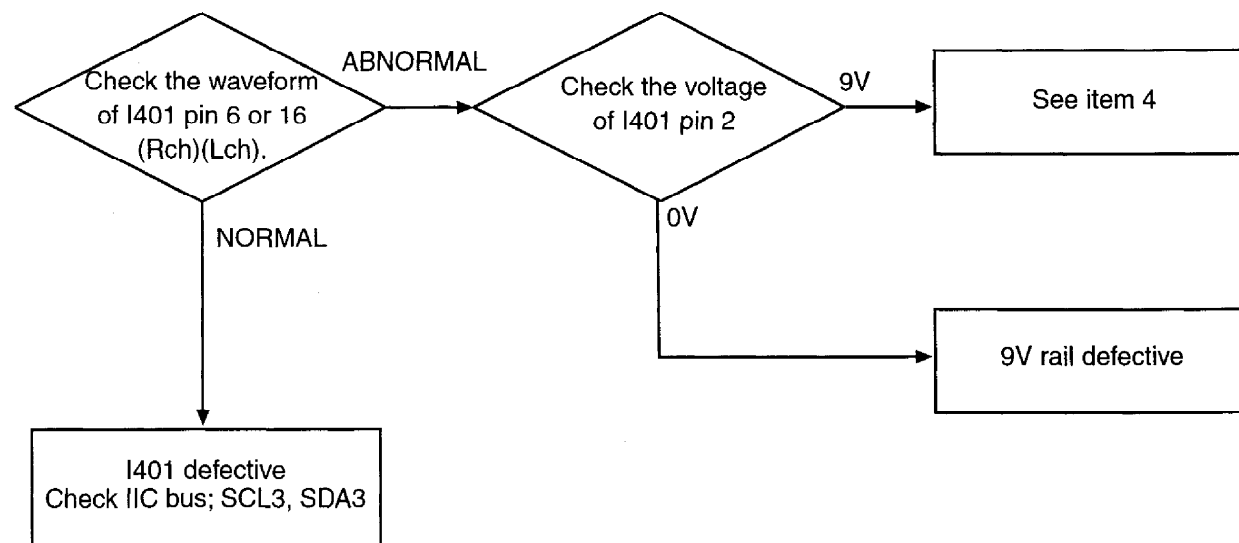
1. No Sound



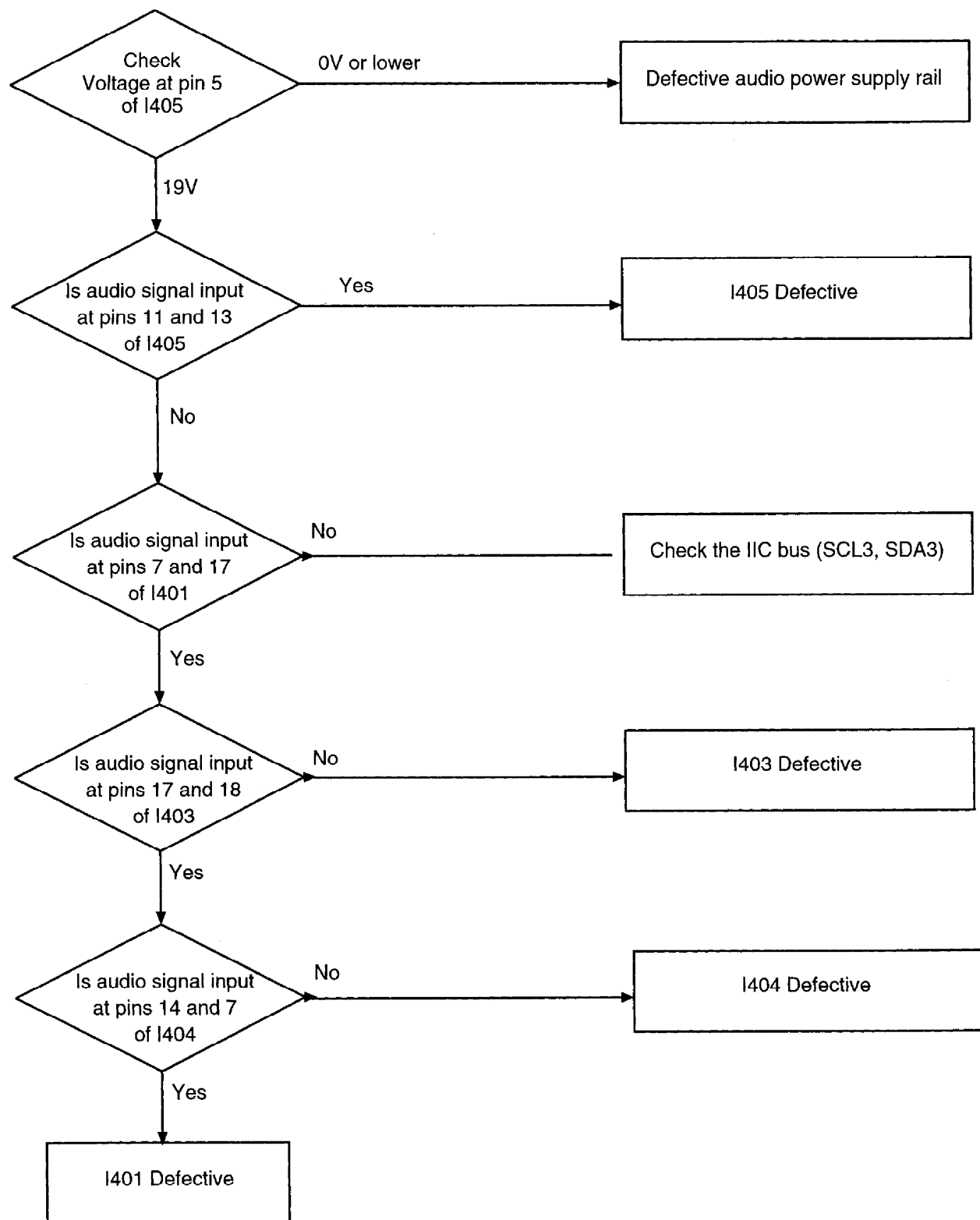
2. No Sound (No Audio Power)



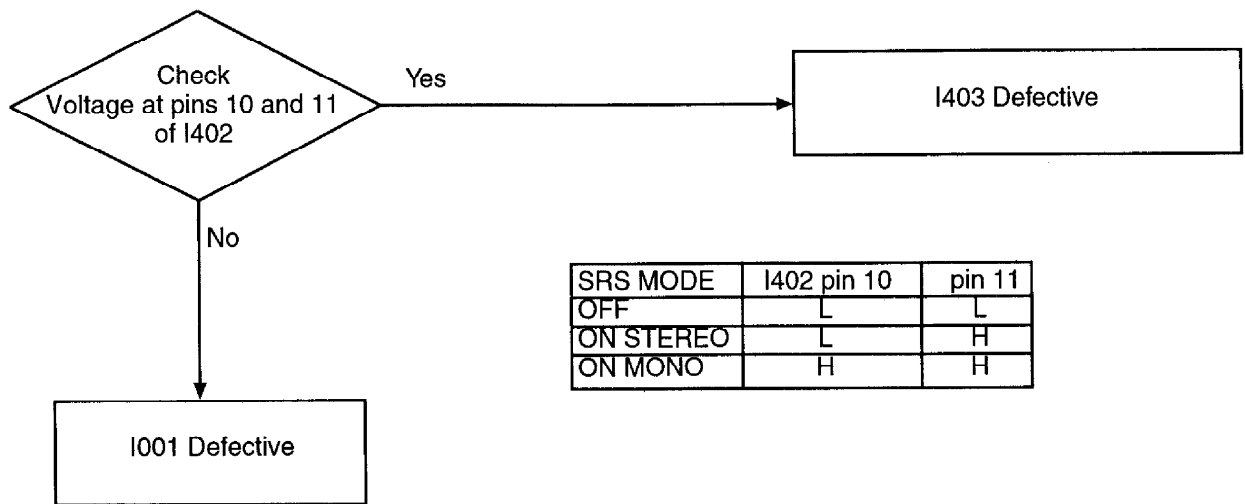
3. No sound or not variable (Bass, Treble)



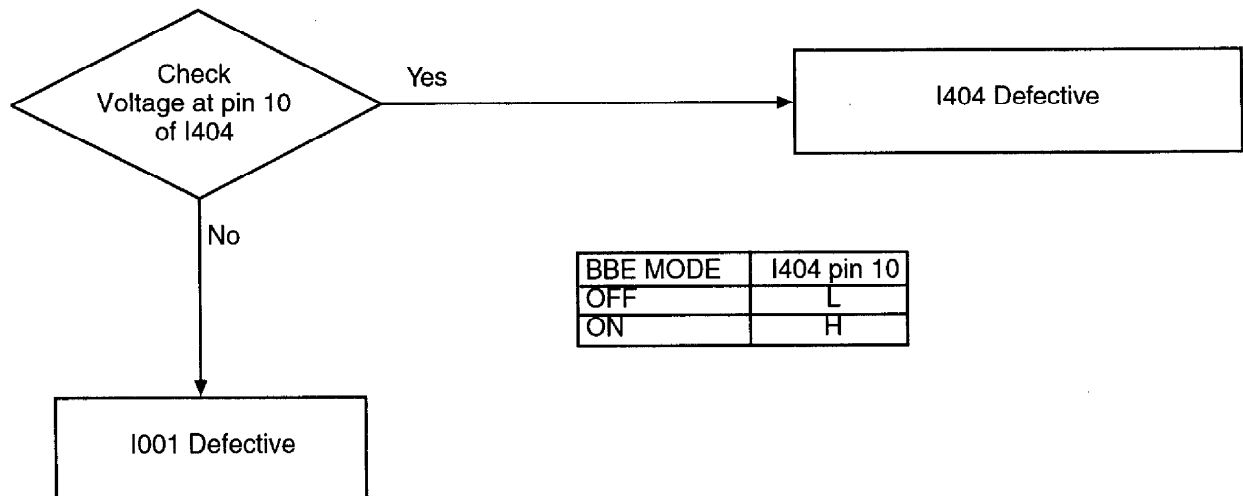
4. No Sound



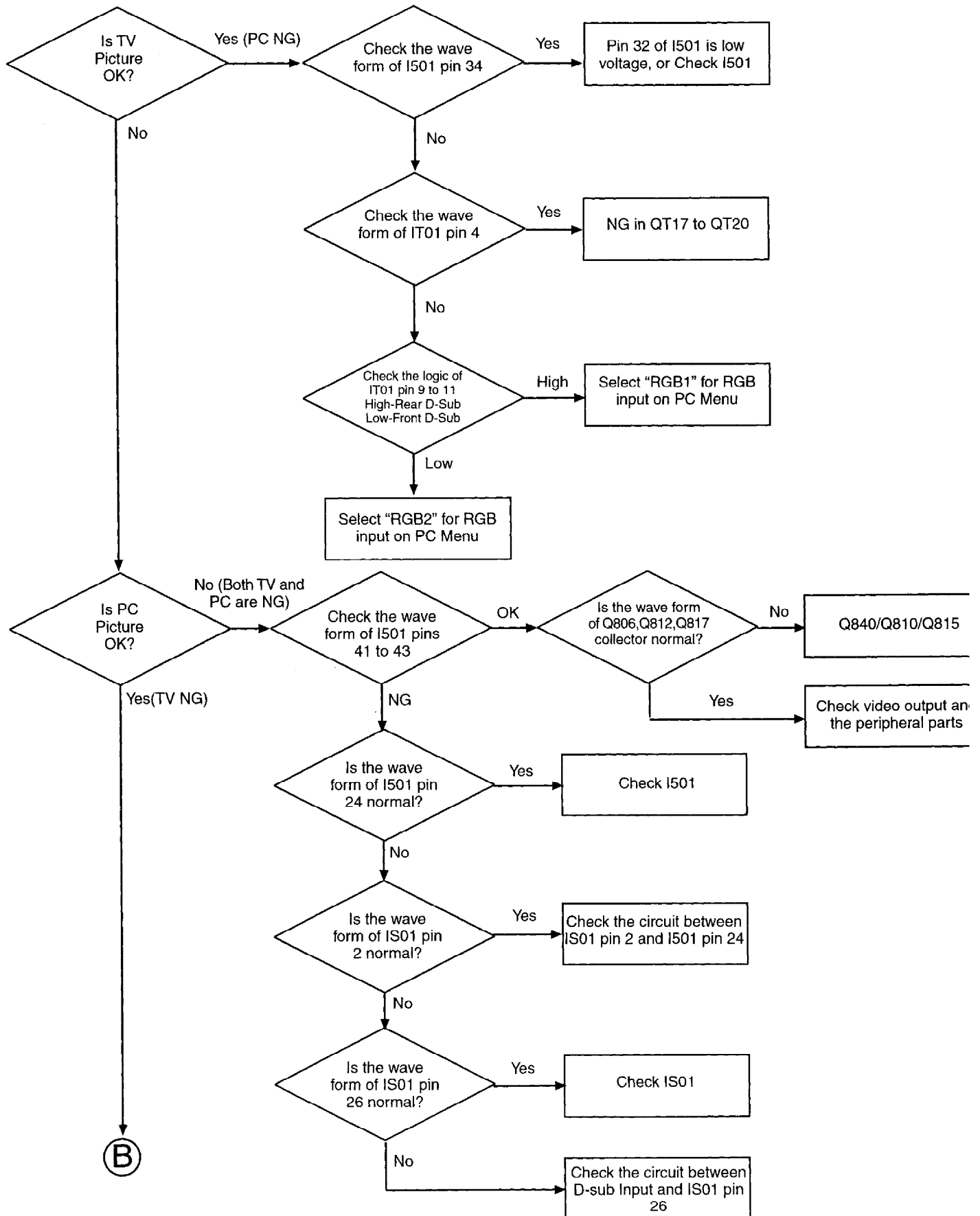
5. No SRS

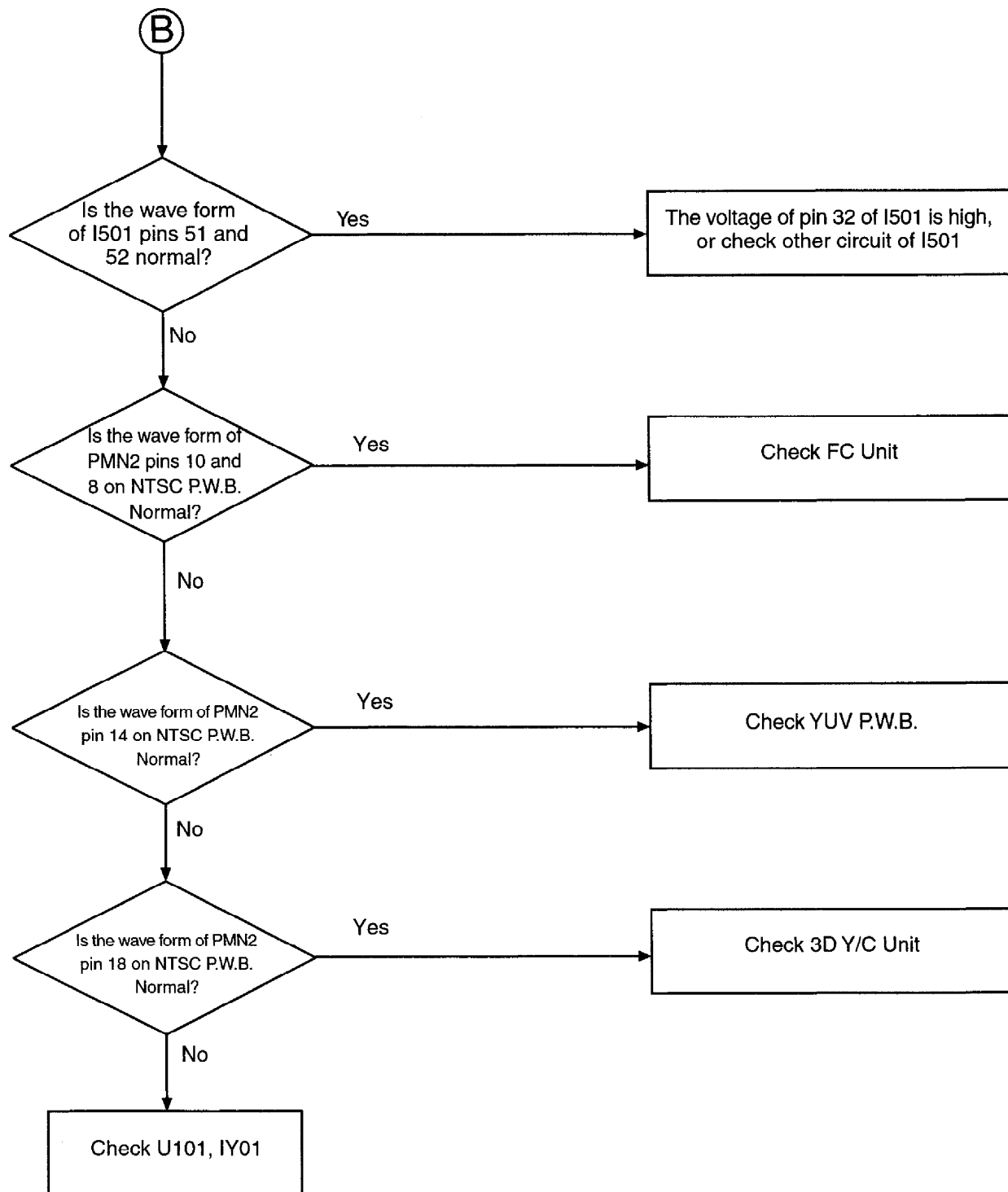


6. No BBE

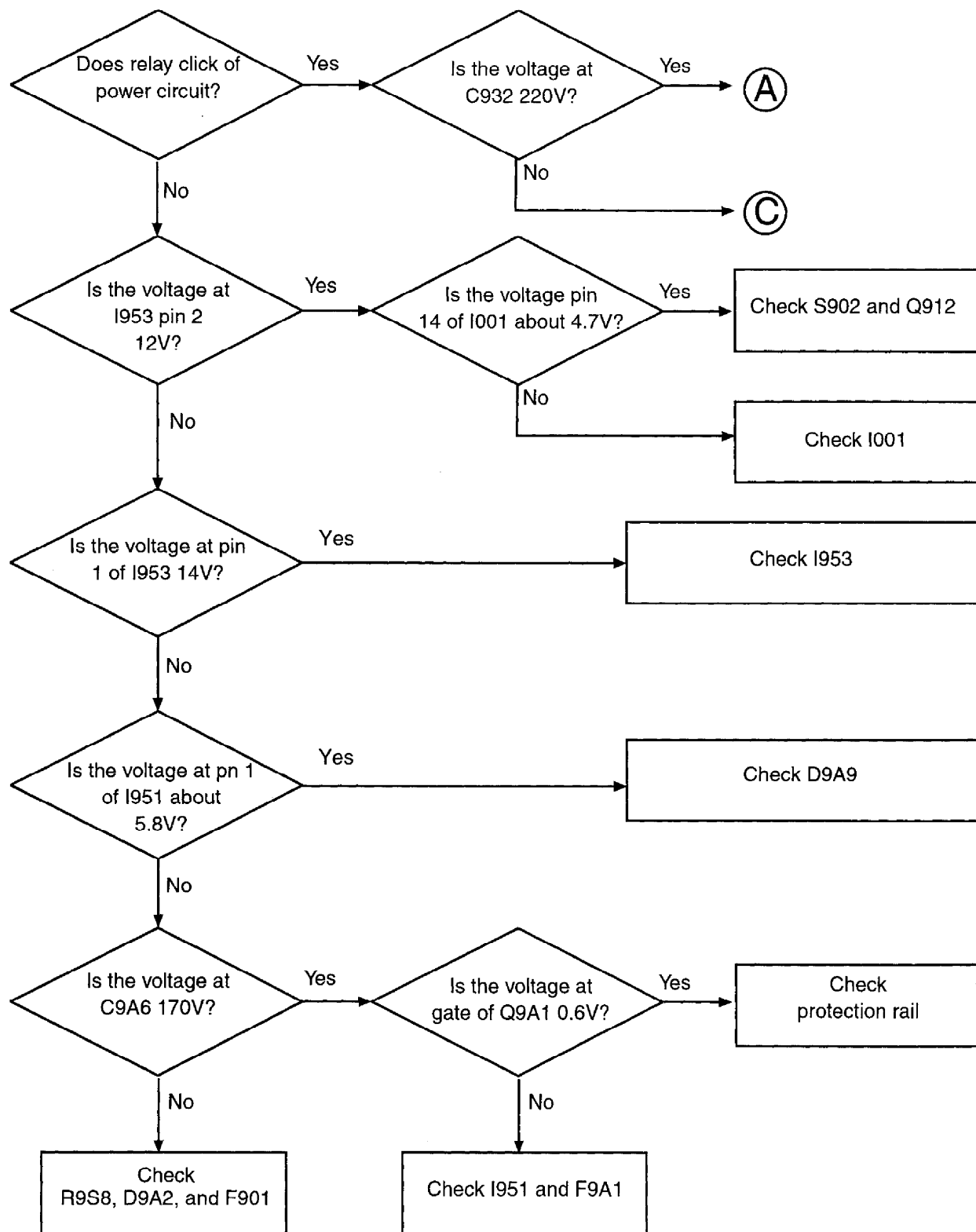


7. No Picture (Raster OK)

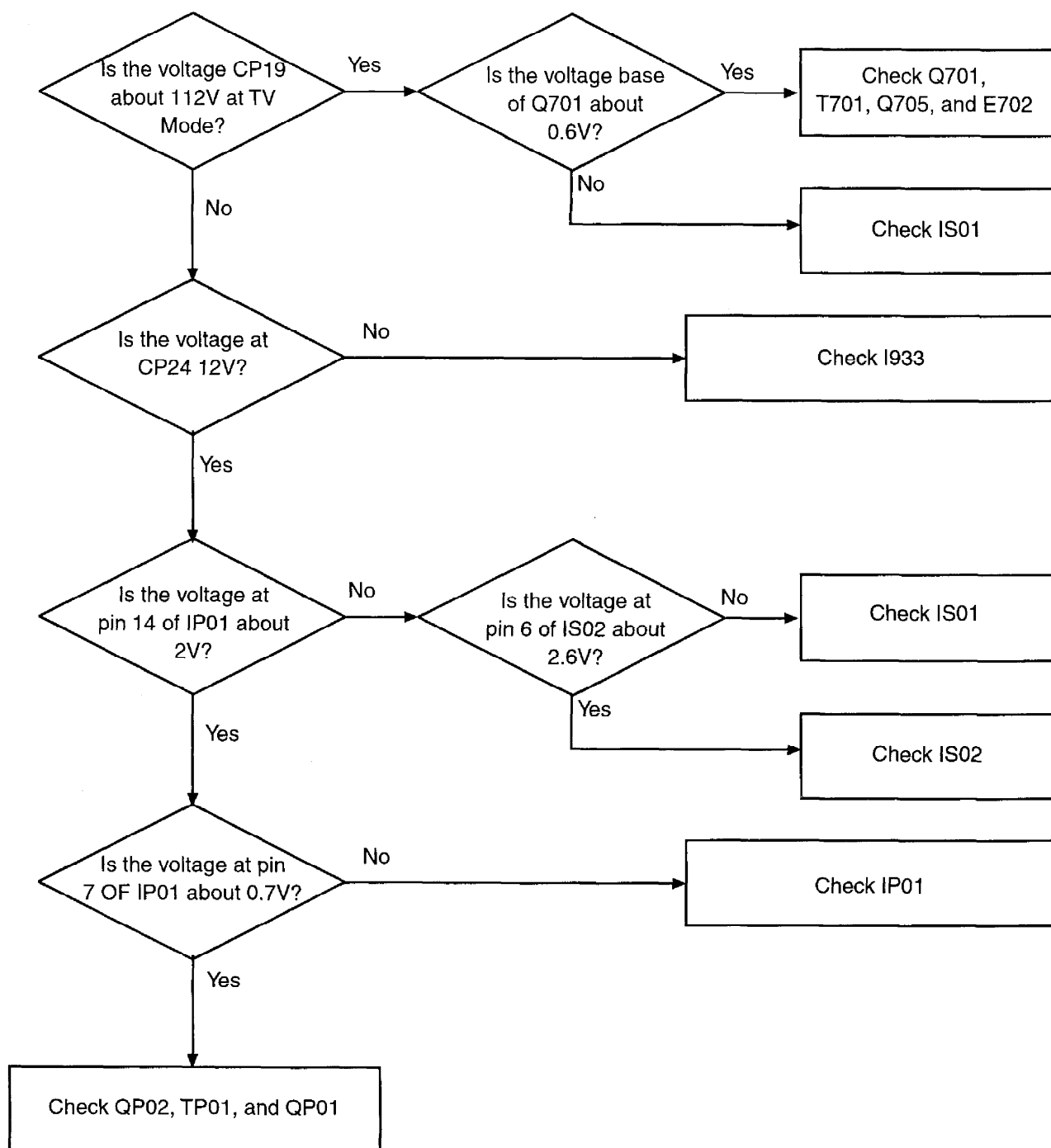


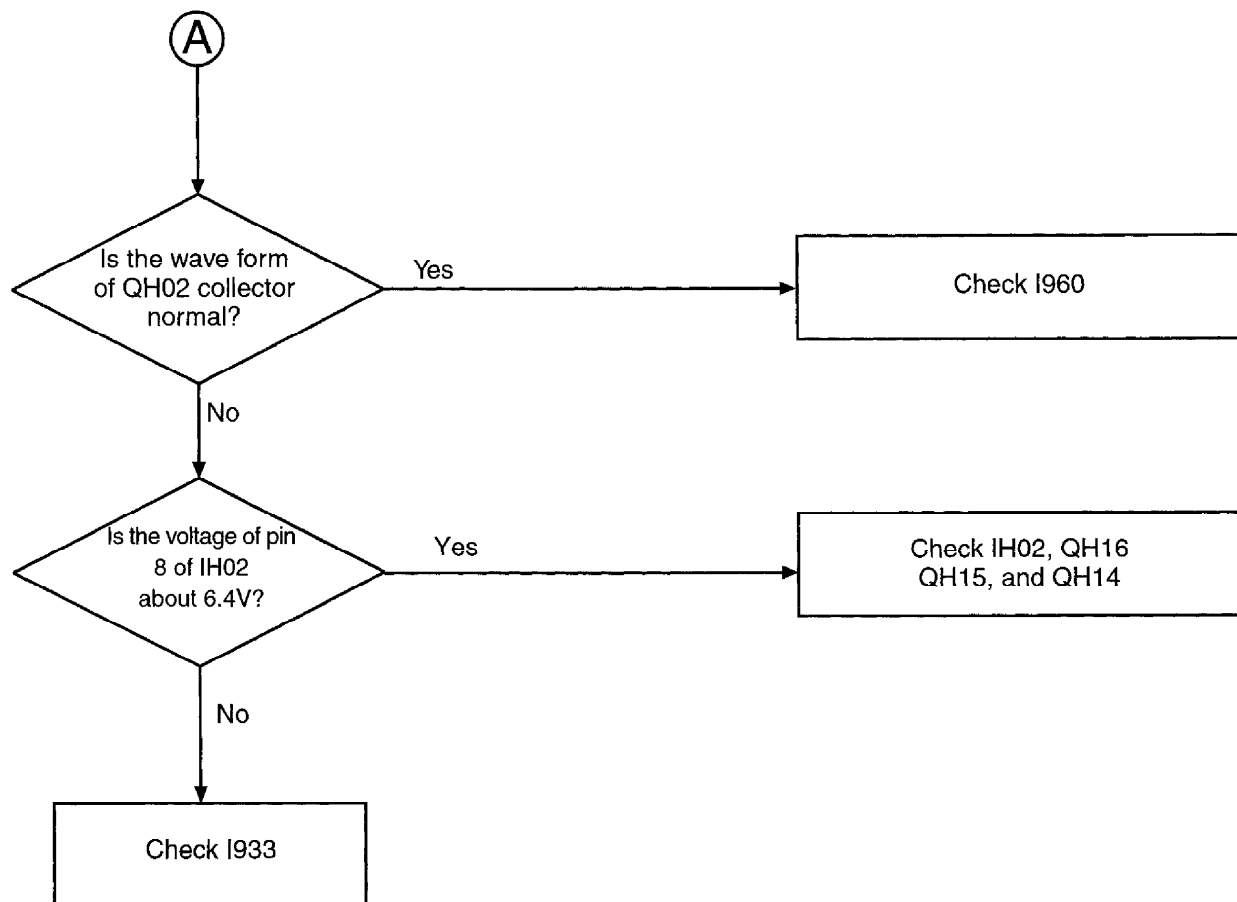


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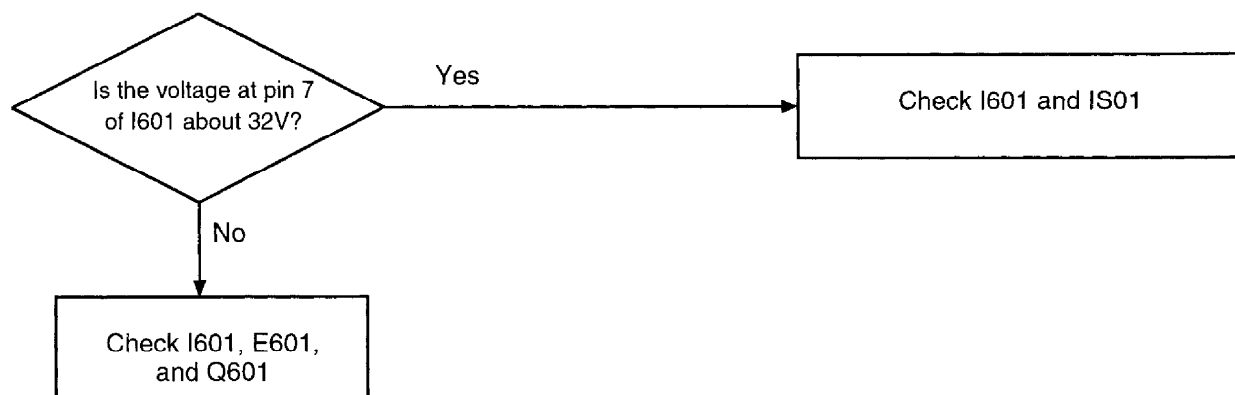


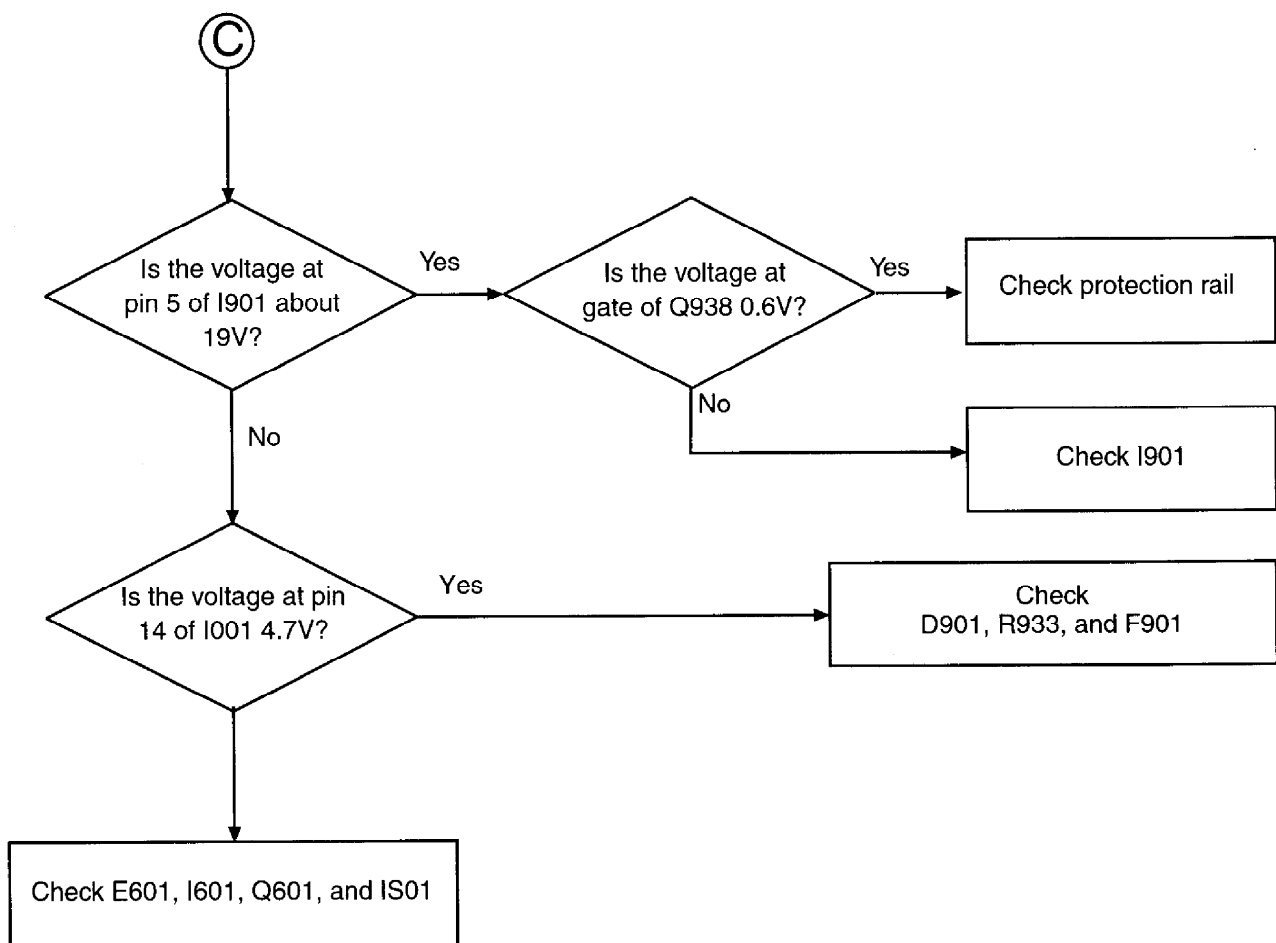
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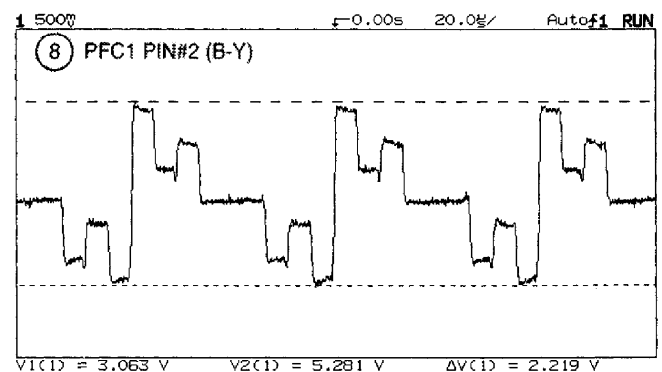
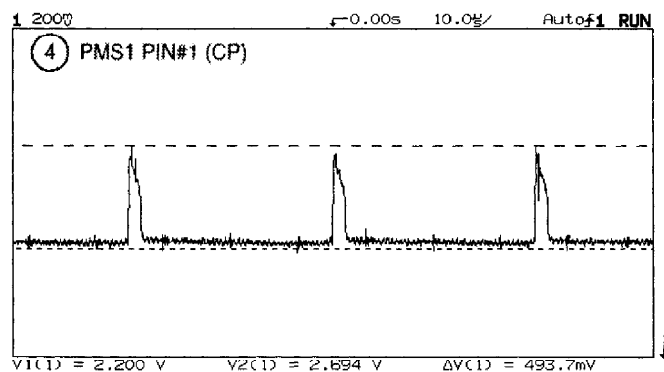
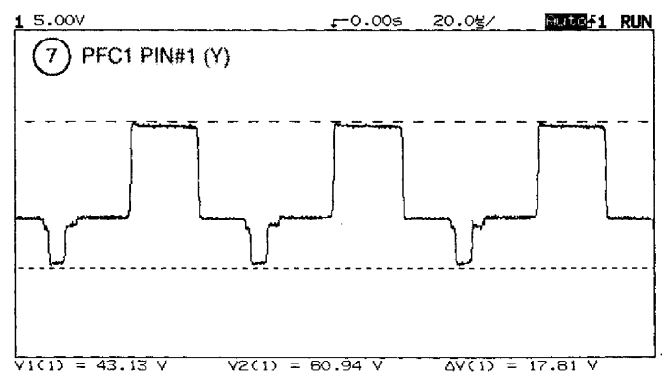
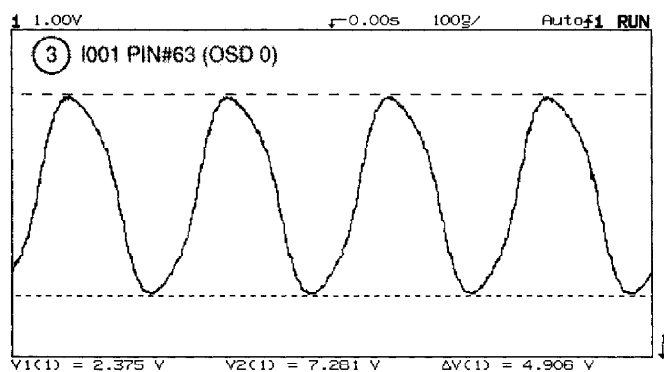
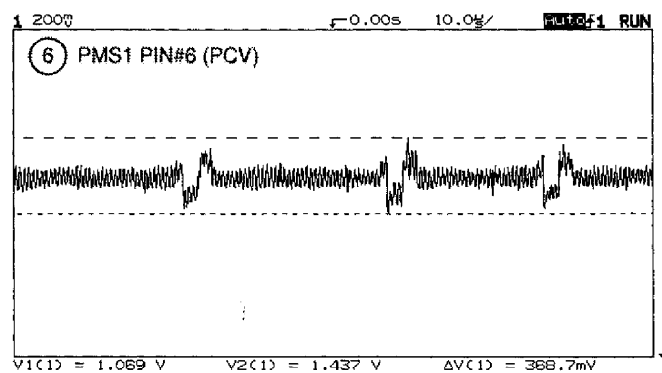
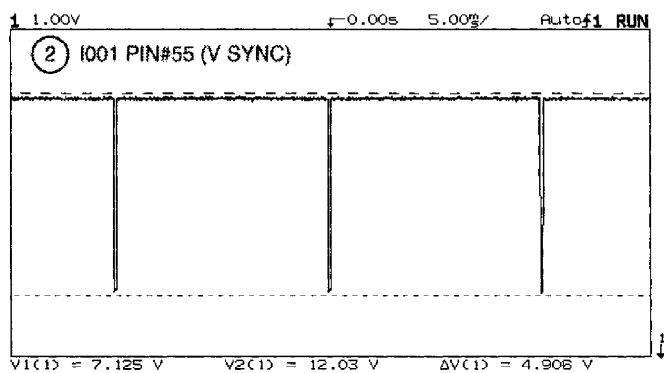
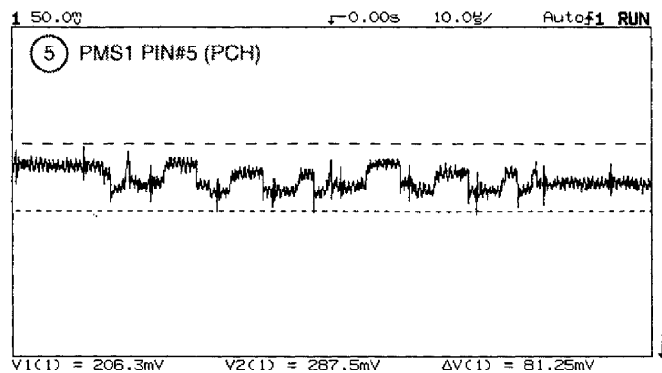
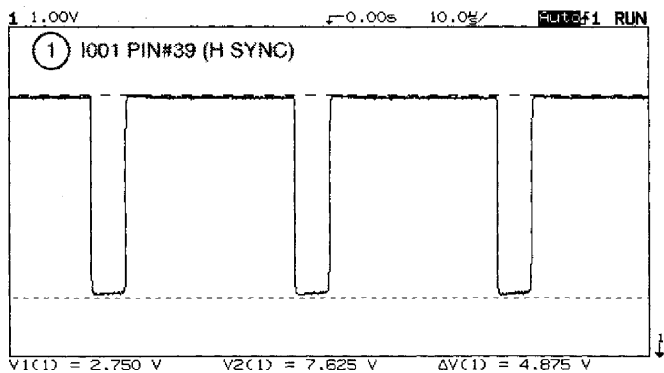


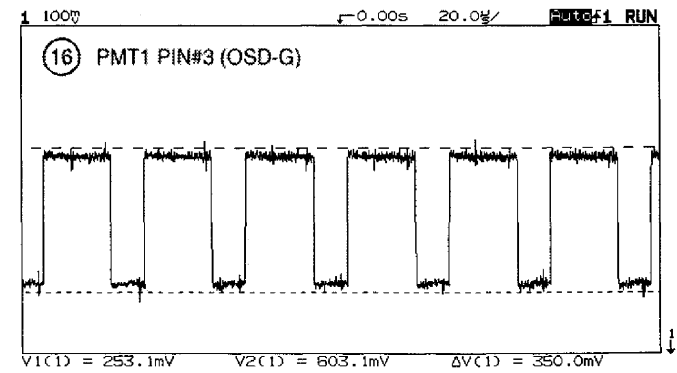
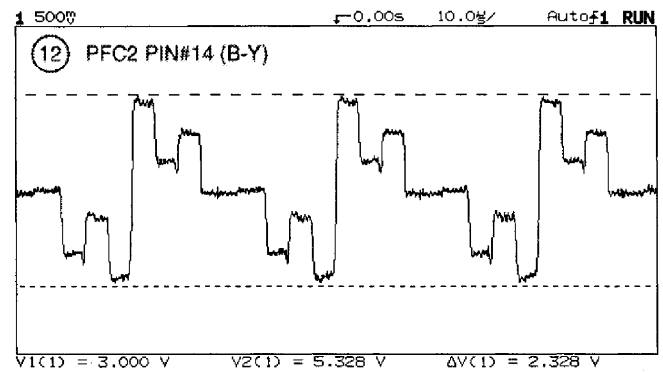
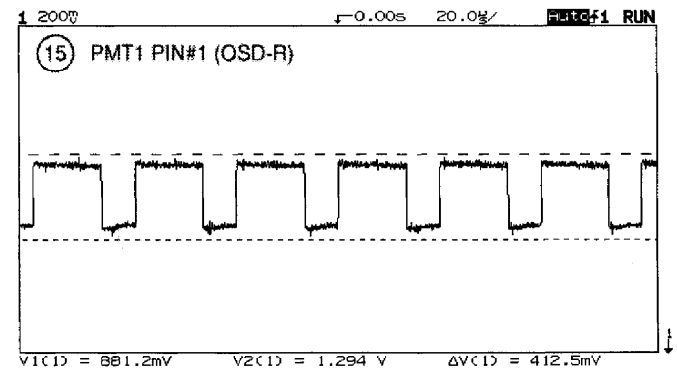
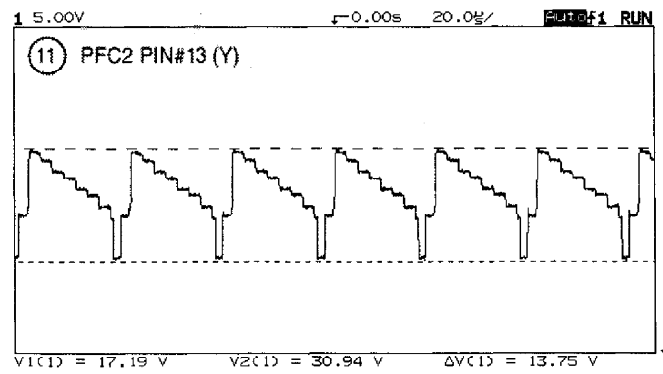
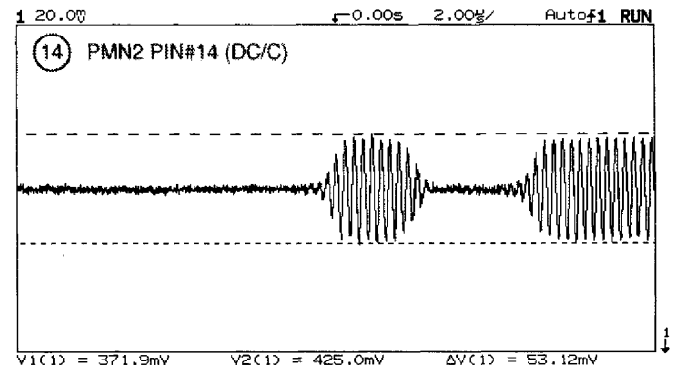
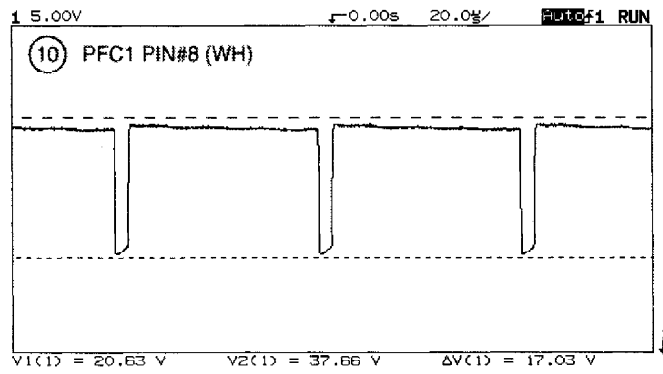
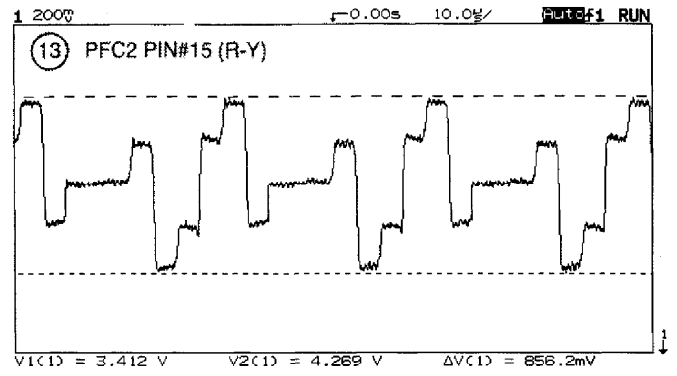
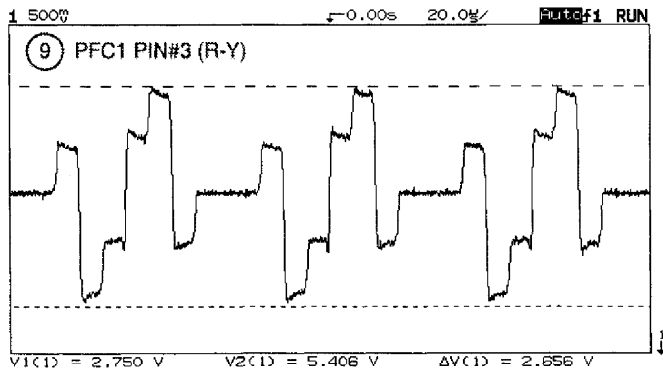
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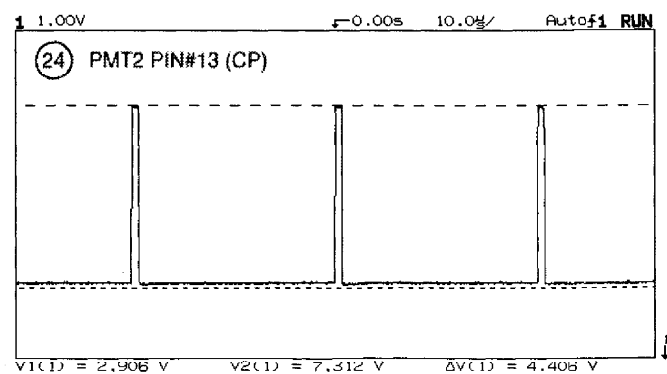
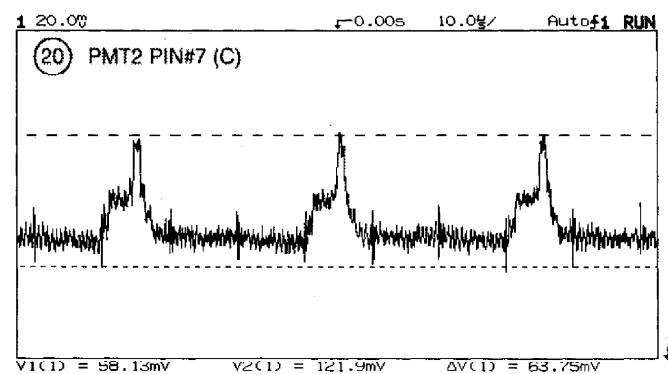
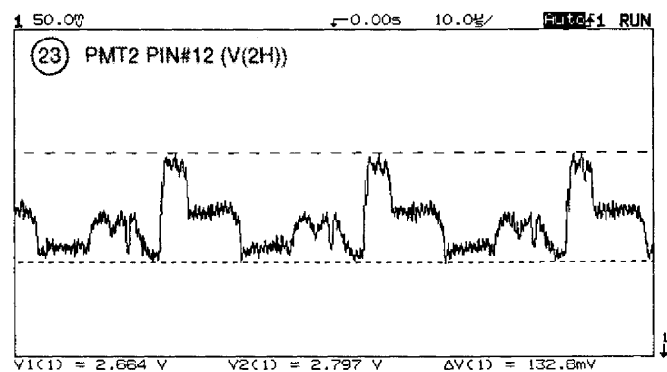
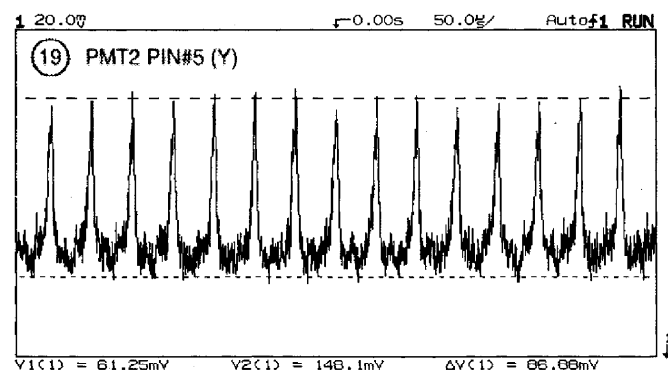
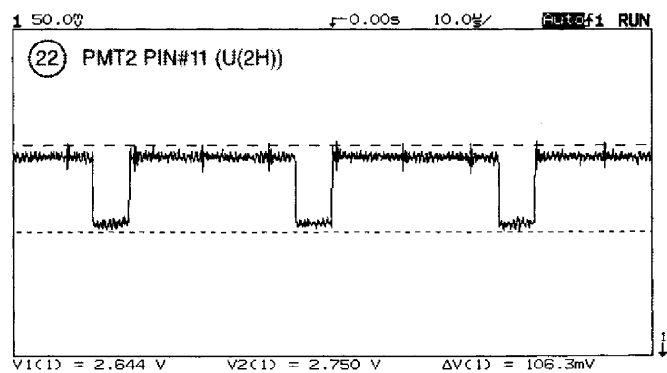
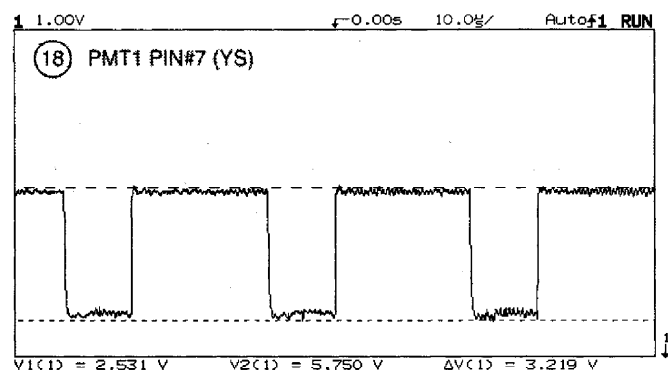
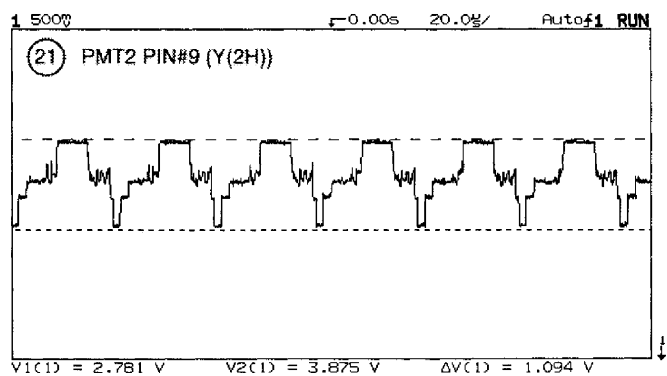
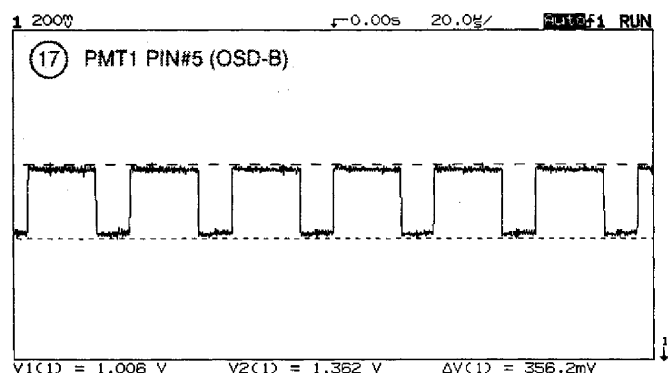


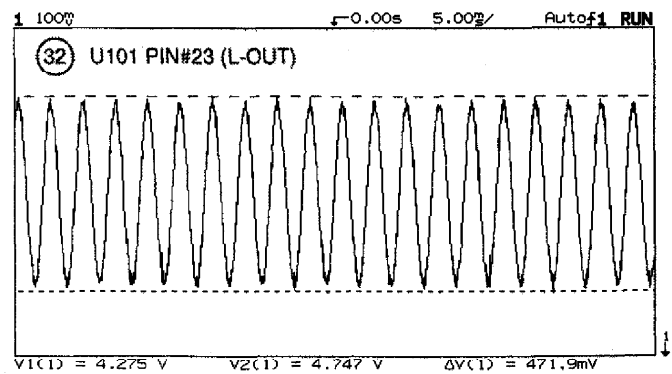
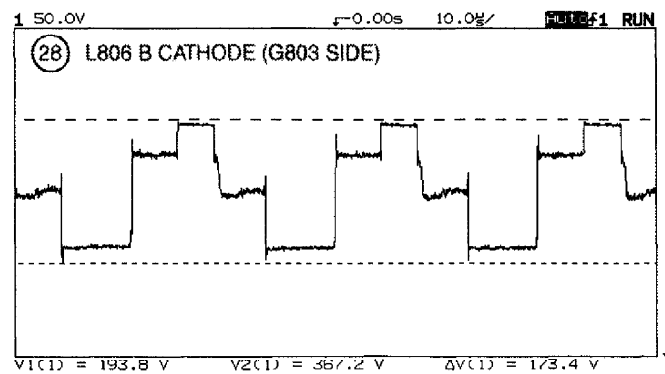
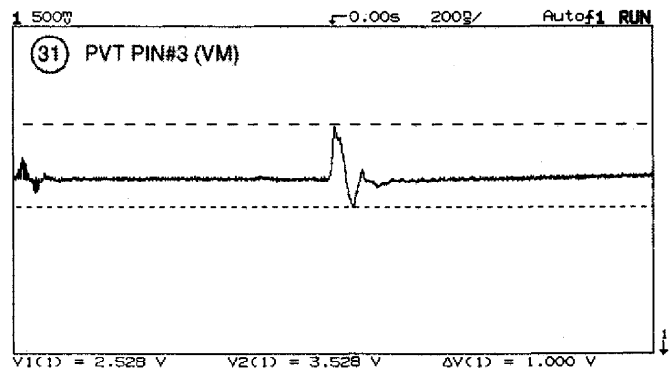
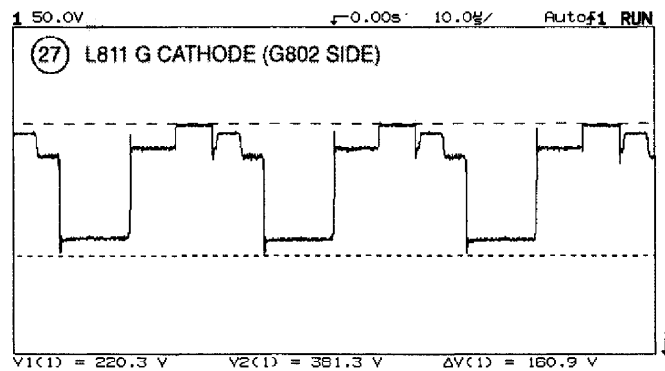
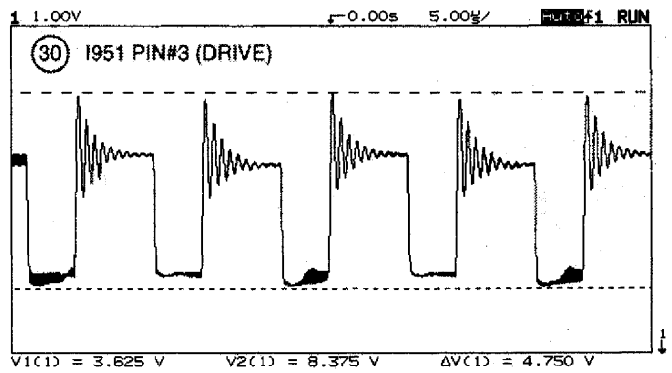
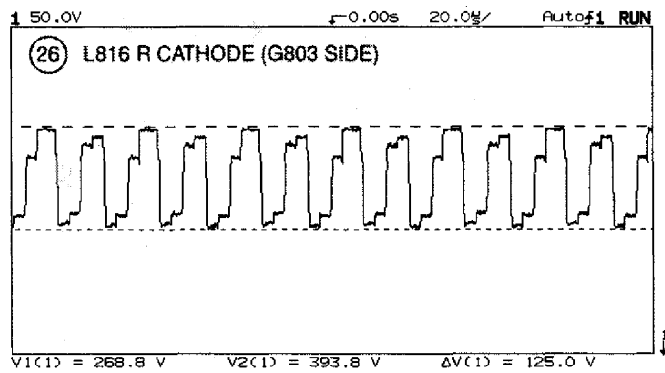
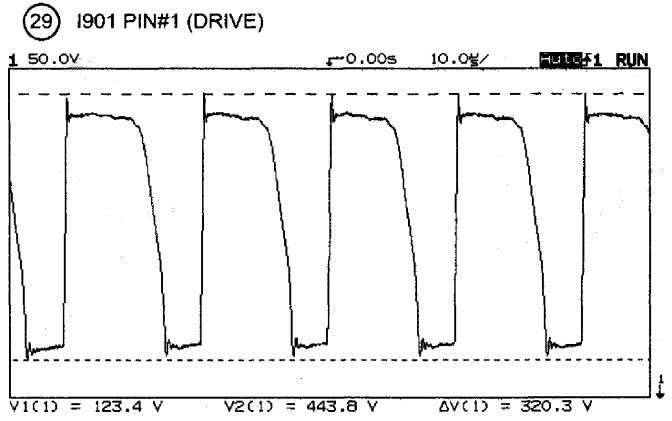
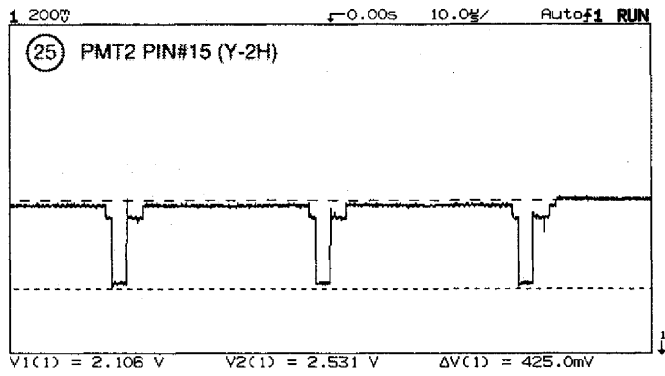


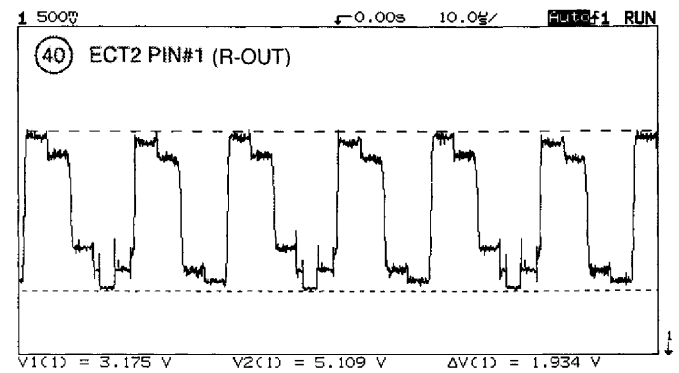
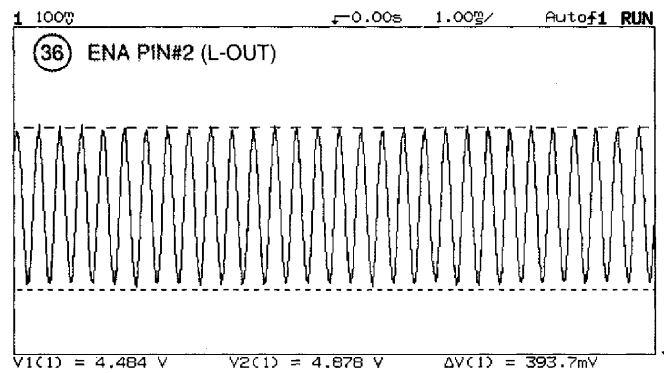
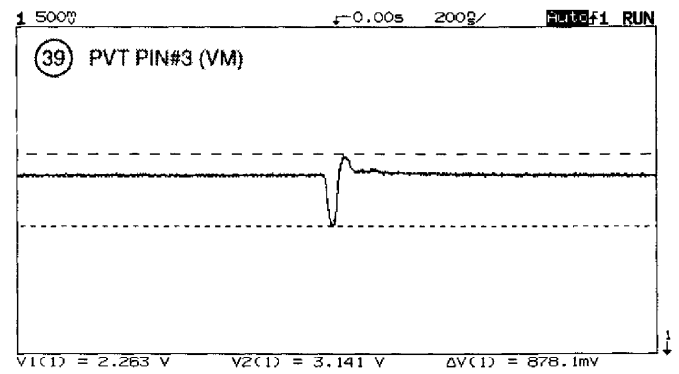
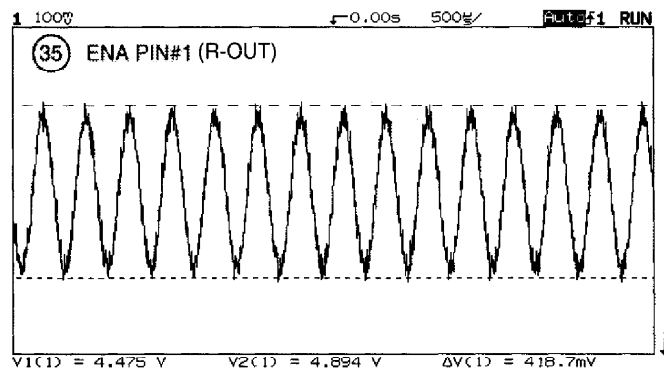
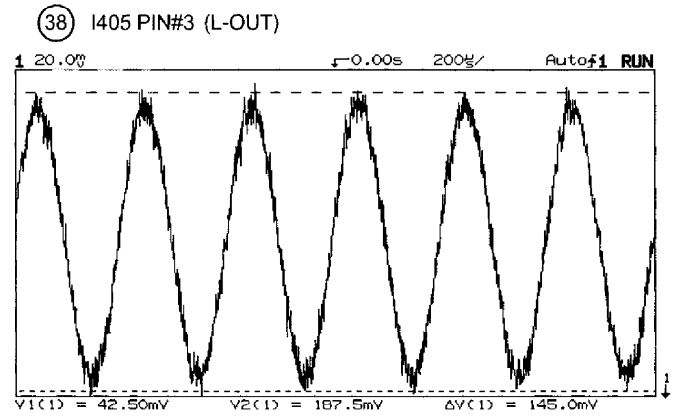
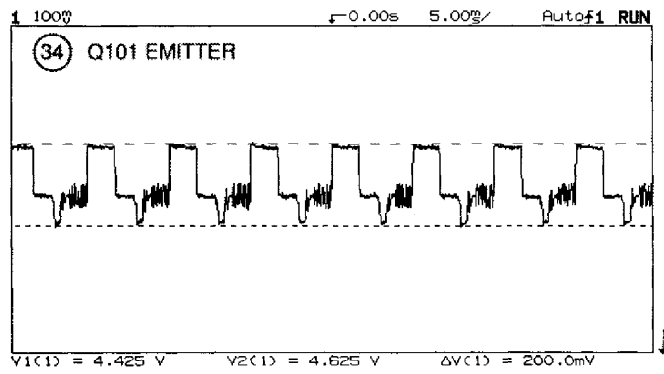
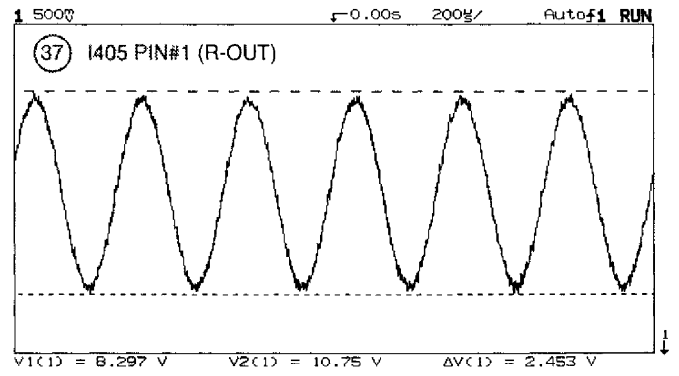
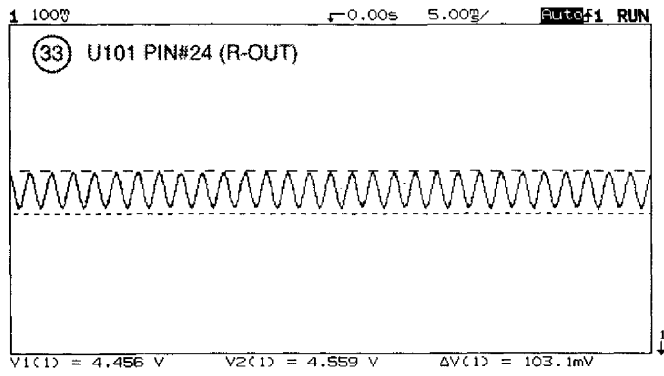
Waveforms

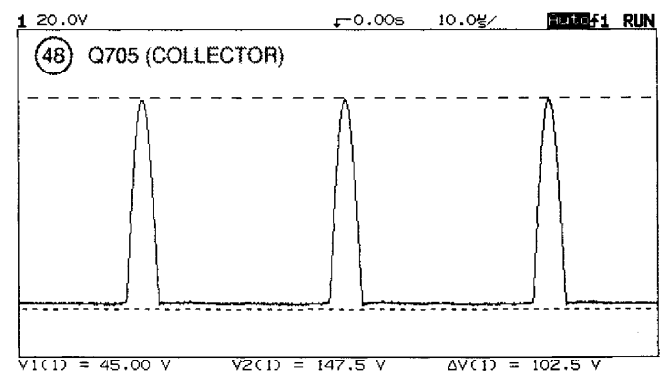
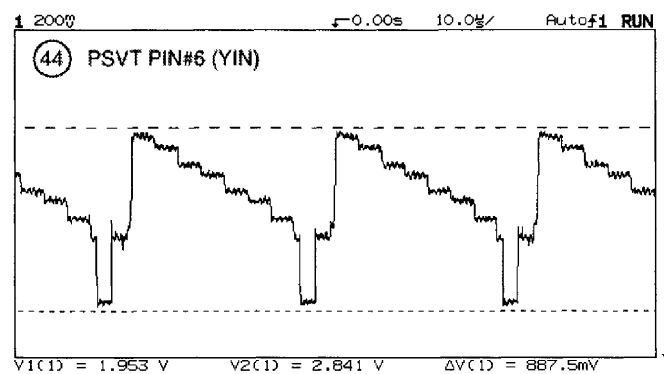
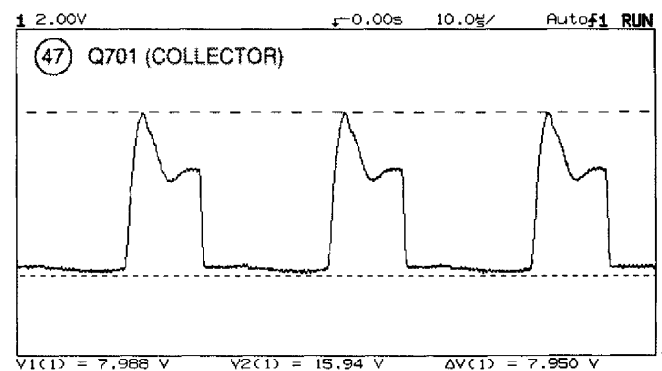
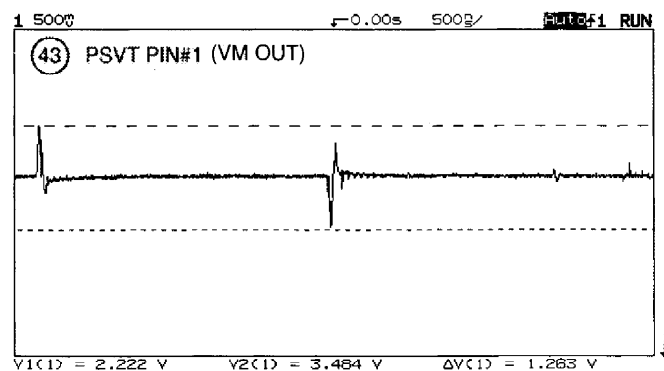
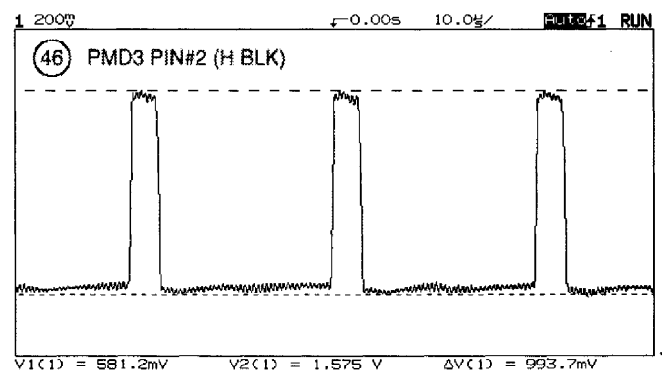
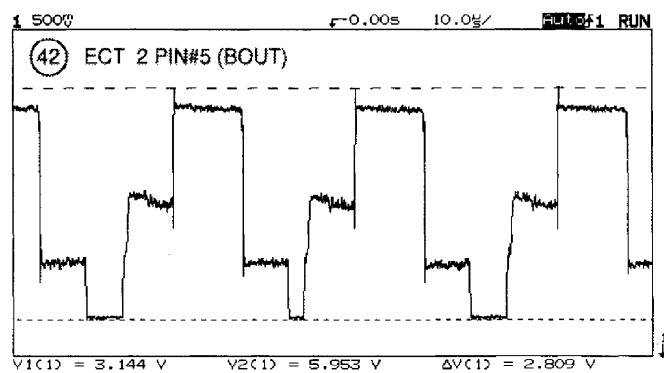
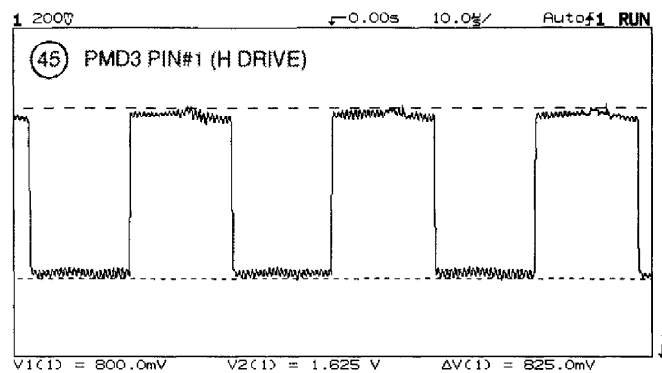
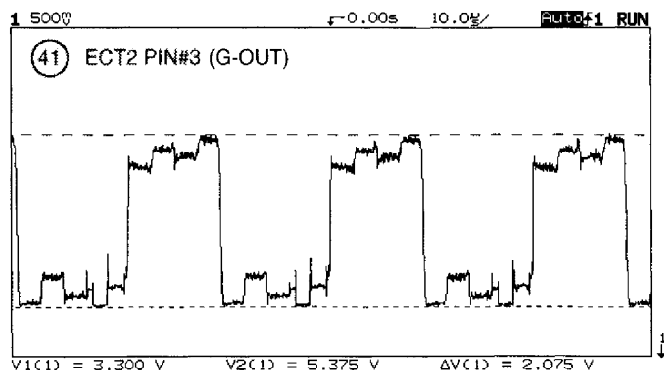


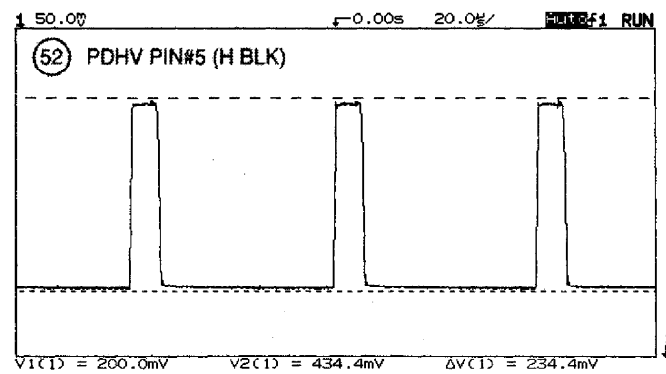
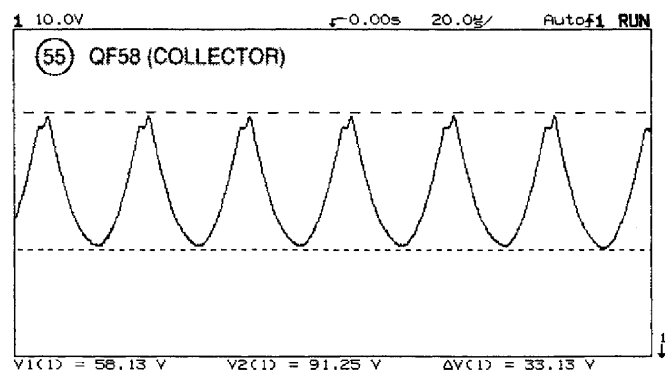
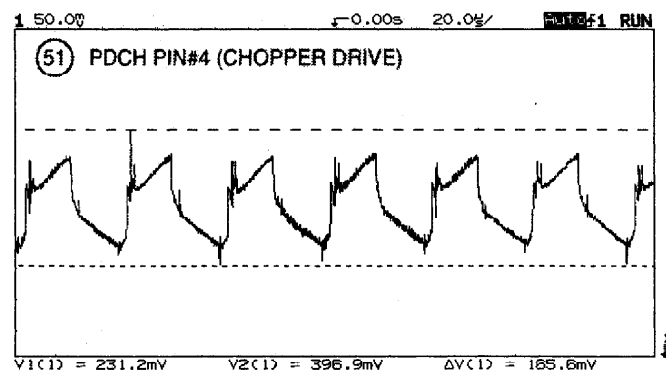
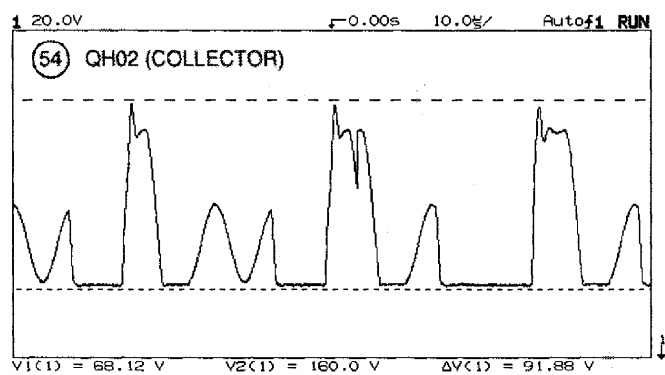
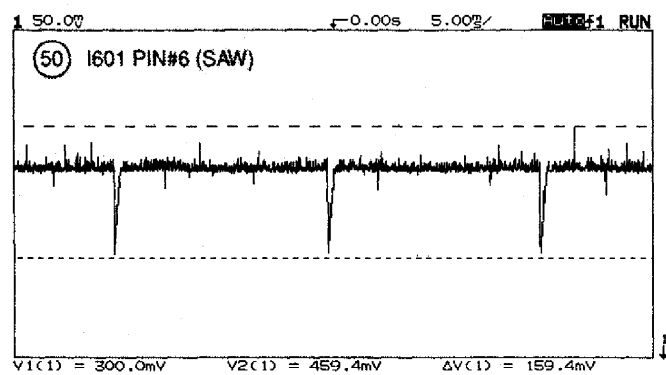
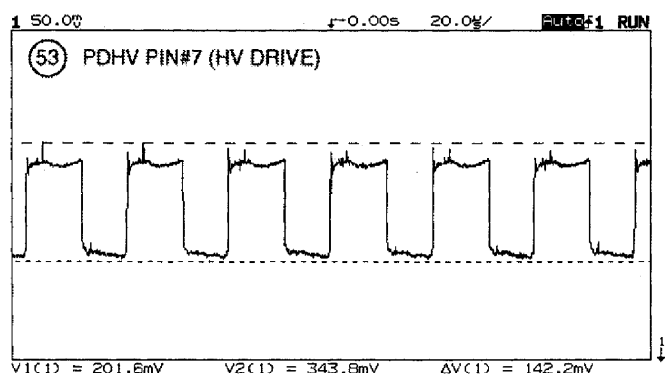
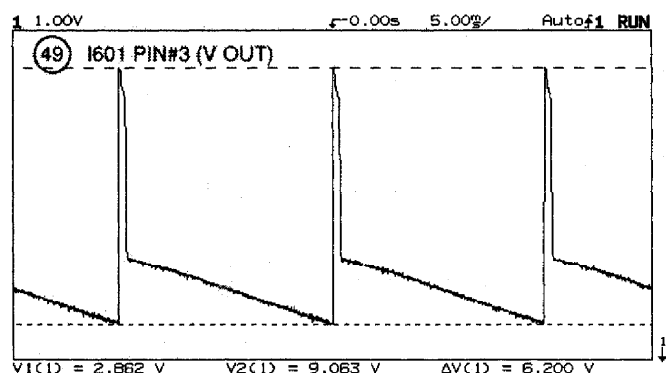












REPLACEMENT PARTS LIST

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
		MAIN CHASSIS ASSEMBLY PARTS LIST			
		MAIN PWB ASSEMBLY			
		MAIN PWB CAPACITORS			
C001	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C039	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C002	0800351R	CAP.-ELECTRO. 470UF-M 6.3V	C041	AN00615R	CAP.POLYESTER 0.0022UF 50V TAPE
C003	0880198R	CAP.-PLOY. 0.22UF-J 50V	C042	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C004	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C043	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V
C005	0800366N	CAP.-ELECTRO. 2200UF-10V SMG	C050	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C006	0890089R	CAP.-CERAMIC 1500PF-K 50V	C053	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C007	0890119R	CAP.-CERAMIC 27PF-J 50V	C054	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C008	0890119R	CAP.-CERAMIC 27PF-J 50V	C055	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C009	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C056	0890083R	CAP.-CERAMIC 470PF-K 50V
C010	0284621R	CAP.-ELECTRO. 0.47UF 50V (BP)	C057	0890087R	CAP.-CERAMIC 1000PF-K 50V
C011	0890077R	CAP.-CERAMIC 180PF-K 50V	C058	0890075R	CAP.-CERAMIC 120PF-K 50V
C012	0244105R	CAP.-CERAMIC 2200PF-K 50V TAPE	C059	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C013	0800326R	CAP.-ELECTRO. 100UF-M 16V	C060	0890087R	CAP.-CERAMIC 1000PF-K 50V
C017	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V	C061	0890087R	CAP.-CERAMIC 1000PF-K 50V
C019	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C062	0890087R	CAP.-CERAMIC 1000PF-K 50V
C020	AN00635R	CAP.POLYESTER 0.068UF 50V TAPE	C063	0890087R	CAP.-CERAMIC 1000PF-K 50V
C021	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C064	0890087R	CAP.-CERAMIC 1000PF-K 50V
C022	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	C065	0890087R	CAP.-CERAMIC 1000PF-K 50V
C025	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE	C066	0890087R	CAP.-CERAMIC 1000PF-K 50V
C026	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C067	0890087R	CAP.-CERAMIC 1000PF-K 50V
C027	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	C068	AN00624	PLASTIC FILM CAPACITOR(0.01UF 50V)
C028	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	C069	0890087R	CAP.-CERAMIC 1000PF-K 50V
C030	0890087R	CAP.-CERAMIC 1000PF-K 50V	C070	0890087R	CAP.-CERAMIC 1000PF-K 50V
C031	0890118R	CAP.-CERAMIC 22PF-J CH 50V	C071	0890087R	CAP.-CERAMIC 1000PF-K 50V
C032	0890118R	CAP.-CERAMIC 22PF-J CH 50V	C074	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C033	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C075	0890083R	CAP.-CERAMIC 470PF-K 50V
C038	0890083R	CAP.-CERAMIC 470PF-K 50V	C076	0890083R	CAP.-CERAMIC 470PF-K 50V
			C077	0890083R	CAP.-CERAMIC 470PF-K 50V
			C078	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
			C0M7	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE
			C0M8	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
			C0S1	0890083R	CAP.-CERAMIC 470PF-K 50V
			C3A2	0890074R	CAP.-CERAMIC 100PF-J 50V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C3A3	AN00611R	CAP.POLYSTYLENE 0.001UF 50V TAPE	C808	AJ00001R	CAP.CERAMIC 0.01UF-Z 500V
C3C5	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C811	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C3C6	AN00633R	CAP.POLYESTER 0.047UF 50V TAPE	C812	0890083R	CAP.-CERAMIC 470PF-K 50V
C5M1	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C813	AJ00001R	CAP.CERAMIC 0.01UF-Z 500V
C5M2	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C815	0890078R	CAP.-CERAMIC 220PF-K 50V
C5M3	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C816	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C5M4	0299001R	CAP.-POLY. 1000PF-G 100V	C817	0244889R	CAP.-CERAMIC 2200PF-K 2KV
C5M5	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C818	0244881R	CAP.-CERAMIC 100PF-K 2KV
C5N0	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C819	0299622F	CAP.-PP FILM 0.01UF-J 630V
C5N1	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C820	AL00031R	CAP.-ELECTRO. 33UF-M 250V
C5N2	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C822	AN00615R	CAP.POLYESTER 0.0022UF 50V TAPE
C5N4	0299001R	CAP.-POLY. 1000PF-G 100V	C823	AN00615R	CAP.POLYESTER 0.0022UF 50V TAPE
C5N5	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C824	AN00615R	CAP.POLYESTER 0.0022UF 50V TAPE
C5N6	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C825	0880062R	CAP.-POLYESTER 0.22UF-KEB 50V
C5N7	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C826	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C5N8	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C827	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C5N9	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C828	AJ00001R	CAP.CERAMIC 0.01UF-Z 500V
C5P1	0890074R	CAP.-CERAMIC 100PF-J 50V	C829	AJ00001R	CAP.CERAMIC 0.01UF-Z 500V
C5P2	0890081R	CAP.-CERAMIC 330PF 50V	C831	0880057R	CAP.-POLYESTER 0.1UF-KEB 50V
C5P3	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C832	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C9C3	0800366N	CAP.-ELECTRO. 2200UF-10V SMG	C833	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C9C4	0800326R	CAP.-ELECTRO. 100UF-M 16V	C834	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C9C5	0800367N	CAP.-ELECTRO. 2200UF-M 16V	 C901	AN00144S	PLASTIC FILM CAPACITOR(0.1UF250V)
C9C6	0800325R	CAP.-ELECTRO. 100UF-M 10V	 C902	AN00144S	PLASTIC FILM CAPACITOR(0.1UF250V)
C9C7	0800325R	CAP.-ELECTRO. 100UF-M 10V	 C903	AN00144S	PLASTIC FILM CAPACITOR(0.1UF250V)
C9C8	0800366N	CAP.-ELECTRO. 2200UF-10V SMG	C920	0880198R	CAP.-PLOY. 0.22UF-J 50V
C9CA	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	 C929	0249391F	CAP.-CERAMIC 1000PF 125V
C9CB	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C931	0244215	CAP.-CERAMIC 2200PF-DC 2KV
C9CC	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C932	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
C9F1	0800366N	CAP.-ELECTRO. 2200UF-10V SMG	C934	0800368N	CAP.-ELECTRO. 2200UF-M 25V
C9F2	0800326R	CAP.-ELECTRO. 100UF-M 16V	C936	0800364N	CAP.-ELECTRO. 1000UF-M 50V
C9F3	0800326R	CAP.-ELECTRO. 100UF-M 16V	C938	0800362N	CAP.-ELECTRO. 1000UF-M 25V
C9M1	0800326R	CAP.-ELECTRO. 100UF-M 16V	C940	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE
C9M2	0800367N	CAP.-ELECTRO. 2200UF-M 16V	C942	0800326R	CAP.-ELECTRO. 100UF-M 16V
C9M3	0800326R	CAP.-ELECTRO. 100UF-M 16V	C943	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C9M4	0800326R	CAP.-ELECTRO. 100UF-M 16V	C945	0800327R	CAP.-ELECTRO. 100UF-M 25V
C9M5	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	 C946	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA10	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C947	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
CA11	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C948	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CF01	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C950	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
CF02	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C951	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CF03	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C971	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CF04	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	 C974	0249390F	CAP. CERAMIC 470PF 125V
CF05	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	 C975	0249390F	CAP. CERAMIC 470PF 125V
CF06	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C976	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
CF08	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	 C977	AJ00195F	CAPACITOR CERAMIC 4700P 250V F
		POWER PWB ASSEMBLY	 C978	AJ00195F	CAPACITOR CERAMIC 4700P 250V F
		(POWER, CPT, VM, FILTER)	 C979	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
		POWER PWB CAPACITORS	 C980	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
			C981	0299978F	CAP.-PP 0.0056UF-J 630V
C802	0800361N	CAP.-ELECTRO 1000UF 16V	C983	0800337R	CAP.-ELECTRO 220UF 35V (SMG TY PE)
C803	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C985	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C804	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C986	0890086R	CAP.-CERAMIC 820PF-K 50V
C805	0890083R	CAP.-CERAMIC 470PF-K 50V	C987	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C807	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C991	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
			C992	0800326R	CAP. ELECTRO. 100UF-M 35V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C9A1	0244215	CAP.-CERAMIC 2200PF-DC 2KV	C112	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C9A2	0890087R	CAP.-CERAMIC 1000PF-K 50V	C3A4	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C9A3	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C3A5	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C9A4	0800316R	CAP.-ELECTRO. 47UF-M(SMG) 10V	C3C7	0228734R	CAP 2125 CHIP 15PFJSL 50V TAPE
C9A5	0244171R	CAP.-CERAMIC 0.01UF-Z F 50V TAPE	C401	0800368F	CAP.-ELECTRO 2200UF-M 25V
 C9A6	0284291	CEL-221M251WMT(KMH)	C402	0800083N	CAP.-ELECTRO. 1000UF-M 25V
 C9A7	0299914F	CAP.-PP FILM 0.01UF 200V	C403	0800353R	CAP.-ELECTRO.470UF-M 16V
 C9A8	AJ00195F	CAPACITOR CERAMIC 4700P 250V F	C404	0800292R	CAP.-ELECTRO. 10UF-M(SMG) 25V
 C9A9	AJ00195F	CAPACITOR CERAMIC 4700P 250V F	C405	0890087R	CAP.-CERAMIC 1000PF-K 50V
C9C9	0800366N	CAP.-ELECTORO. 2200UF-10V SMG	C406	0800277R	CAP.-ELECTORO. 0.47UF-M 50V
C9E6	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C407	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
 C9S1	0249391F	CAP.-CERAMIC 1000PF 125V	C408	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C9S3	0800366N	CAP.-ELECTORO. 2200UF-10V SMG	C409	0800277R	CAP.-ELECTORO. 0.47UF-M 50V
C9S4	0800366N	CAP.-ELECTORO. 2200UF-10V SMG	C40A	0800353R	CAP.-ELECTRO.470UF-M 16V
C9S5	0800367N	CAP.-ELECTRO. 2200UF-M 16V	C410	0890087R	CAP.-CERAMIC 1000PF-K 50V
C9S6	0800367N	CAP.-ELECTRO. 2200UF-M 16V	C413	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C9S7	0800367N	CAP.-ELECTRO. 2200UF-M 16V	C414	0800368F	CAP.-ELECTRO 2200UF-M 25V
C9S8	0800326R	CAP.-ELECTRO. 100UF-M 16V	C417	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C9T1	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C418	0800361N	CAP.-ELECTRO 1000UF 16V
C9T2	0800334R	CAP.-ELECTRO. 220UF 10V	C419	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C9T3	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	C420	0800326R	CAP.-ELECTRO. 100UF-M 16V
C9T4	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	C421	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C9T6	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	C422	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C9T7	0244202R	CAP.-CERAMIC 470PF-K 2KV	C429	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V
CL01	0880016R	CAP.-POLYESTER FILM 0.1UF 50V	C430	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V
CL02	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	C431	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V
CL04	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C432	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V
CL05	0880009R	CAP.-POLYESTER 0.01UF-K 50V	C441	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CL06	0880016R	CAP.-POLYESTER FILM 0.1UF 50V	C442	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CL07	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C443	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CL09	AJ00001R	CAP.CERAMIC 0.01UF-Z 500V	C444	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CL10	AJ00001R	CAP.CERAMIC 0.01UF-Z 500V	C445	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CL11	AN00619R	CAP.POLYESTER 0.0047UF 50V TAPE	C446	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CL12	0800321R	CAP.-ELECTRO. 47UF-M 50V	C447	0800361N	CAP.-ELECTRO 1000UF 16V
CL13	0800321R	CAP.-ELECTRO. 47UF-M 50V	C448	AN00611R	CAP.POLYSTYLENE 0.001UF 50V TAPE
CL14	AL00028R	AL EL CAPACITOR(100UF250V)	C449	AN00611R	CAP.POLYSTYLENE 0.001UF 50V TAPE
CL15	0246836R	CAP.CERAMIC 18PF 500V TAPE	C452	0800326R	CAP.-ELECTRO. 100UF-M 16V
CL16	0246836R	CAP.CERAMIC 18PF 500V TAPE	C453	0880059R	CAP.-POLYESTER 0.15UF-KEB 50V
CL17	AL00032R	AL EL CAPACITOR(2.2UF350V)	C454	0880059R	CAP.-POLYESTER 0.15UF-KEB 50V
CL18	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C455	0893099R	CERAMIC CAPACITOR(474PF 16V)
CL20	0890059R	CCL-9R0D500SLDFT-D3	C456	0893099R	CERAMIC CAPACITOR(474PF 16V)
CL21	0890059R	CCL-9R0D500SLDFT-D3	C457	0800326R	CAP.-ELECTRO. 100UF-M 16V
		NTSC PWB ASSEMBLY	C458	0893013R	CAP 2012CHIP 220000PFKB16V TAPE
		(NTSC, AUDIO, DF, HV, CHOPPER, SUB VM)	C459	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V
		NTSC PWB CAPACITORS	C460	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V
			C461	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
			C462	0893037R	CAP 2125CHIP 3300PFKB 50V TAPE
C101	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C463	0893051R	CAP2125CHIP 33000PFKB 50V TAPE
C102	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C464	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C103	0800361N	CAP.-ELECTRO 1000UF 16V	C465	0800361N	CAP.-ELECTRO 1000UF 16V
C104	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C466	0880062R	CAP.-POLYESTER 0.22UF-KEB 50V
C105	0893035R	CAP2125CHIP 2200PFKB 50V TAPE	C467	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C106	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C468	0893037R	CAP 2125CHIP 3300PFKB 50V TAPE
C107	0800361N	CAP.-ELECTRO 1000UF 16V	C469	0893051R	CAP2125CHIP 33000PFKB 50V TAPE
C108	0800326R	CAP.-ELECTRO. 100UF-M 16V	C470	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C110	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C471	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C472	0893099R	CERAMIC CAPACITOR(474PF 16V)	CC03	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C473	0893099R	CERAMIC CAPACITOR(474PF 16V)	CF03	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C474	0893095R	CAP.CHIP-CERAMIC 330000PF 16V TAPE	CF04	0880062R	CAP.-POLYESTER 0.22UF-KEB 50V
C475	0228768R	CAP2125CHIP 390PFJSL 50V TAPE	CF05	0800277R	CAP.-ELECTRO. 0.47UF-M 50V
C476	0893034R	CAP 2125CHIP 1800PFKB 50V TAPE	CF09	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C477	0893042R	CAP 2125CHIP 6800PFKB 50V TAPE	CF10	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C478	0893048R	CAP2125CHIP 22000PFKB 50V TAPE	CF11	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C479	0893096R	CAP.CHIP-CERAMIC 68000PF 50V TAPE	CF12	0893039R	CAP 2125CHIP 4700PFKB 50V TAPE
C480	0880062R	CAP.-POLYESTER 0.22UF-KEB 50V	CF13	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C481	0800277R	CAP.-ELECTRO. 0.47UF-M 50V	CF14	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C482	0893039R	CAP 2125CHIP 4700PFKB 50V TAPE	CF15	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C483	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CF16	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C484	0800361N	CAP.-ELECTRO 1000UF 16V	CH01	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C485	0893013R	CAP 2012CHIP 220000PFKB16V TAPE	CH02	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
C490	0284625R	CAP.-ELECTRO. 2.2UF-SME(BP)50V	CH03	0800326R	CAP.-ELECTRO. 100UF-M 16V
C491	0284625R	CAP.-ELECTRO. 2.2UF-SME(BP)50V	CH04	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C4A1	0228754R	CAP2125CHIP 100PFJSL 50V TAPE	CH05	0299015R	CAP.-POLY. 3900PF-G 100V
C4A2	0228754R	CAP2125CHIP 100PFJSL 50V TAPE	CH06	0229005R	CAP 2125 CHIP 470PF-K B 50V TAPE
C4A3	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CH07	0244141R	CAP.-CERAMIC 0.01UF-KB B 50V
C4C1	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CH08	AN00619R	CAP.POLYESTER 0.0047UF 50V TAPE
C500	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CH09	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
C501	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	CH10	AN00611R	CAP.POLYSTYLENE 0.001UF 50V TAPE
C507	0890057R	CAP.-CERAMIC 7PF-50V	CH11	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C508	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CH12	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C510	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	CH13	0800308R	CAP.-ELECTRO. 33UF-M(SMG) 16V
C512	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	CH29	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C514	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CH35	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C523	0800326R	CAP.-ELECTRO. 100UF-M 16V	CH36	0890074R	CAP.-CERAMIC 100PF-J 50V
C534	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CH37	0893035R	CAP2125CHIP 2200PFKB 50V TAPE
C535	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CH38	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
C536	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CP06	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C537	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CP07	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C5A2	0890064R	CAP.-CERAMIC 18PF-J SL 50V	CP08	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE
C5A4	0890074R	CAP.-CERAMIC 100PF-J 50V	CP09	AN00627R	CAP.POLYESTER 0.018UF 50V TAPE
C5A8	AN00619R	CAP.POLYESTER 0.0047UF 50V TAPE	CP12	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C5A9	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CP13	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C5C1	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CP14	0243512R	CAP.-CERAMIC 820PF-K 500V TAPE
C5C2	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CP15	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
C5C3	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CP16	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C5C4	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CP17	0893037R	CAP 2125CHIP 3300PFKB 50V TAPE
C5C5	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CP22	0890077R	CAP.-CERAMIC 180PF-K 50V
C5C6	0228766R	CAPACITOR MINI-CHIP 330PF-J SL 50V TAPE	CP23	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C5K1	0890068R	CAP.-CERAMIC 39PF-J 50V	CP24	0800367N	CAP.-ELECTRO. 2200UF-M 16V
C5K2	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CP25	0800364N	CAP.-ELECTRO. 1000UF-M 50V
C5K3	0228754R	CAP2125CHIP 100PFJSL 50V TAPE	CP26	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
CA01	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CY01	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CA02	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CY02	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CA03	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CY03	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CA04	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CY04	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CA05	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CY05	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CA06	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CY06	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CA07	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CY07	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CA08	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CY08	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA40	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY09	0893053R	CAP2125CHIP 47000PFKB 50V TAPE
CA41	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CY11	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CC02	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CY12	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CY13	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	C596	0893053R	CAP2125CHIP 47000PFKB 50V TAPE
CY14	0800353R	CAP.-ELECTRO.470UF-M 16V	C597	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CY15	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C598	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CY16	0800326R	CAP.-ELECTRO. 100UF-M 16V	C599	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CY17	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C5A1	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CY18	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V	C5C5	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CY30	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C5C6	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CY31	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	C5C7	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CY32	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	C736	0244511F	CAPACITOR CERAMIC 0.0068MF-K 500V
CY33	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CA91	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CY34	0800326R	CAP.-ELECTRO. 100UF-M 16V	CA92	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CY50	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	CA93	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
		TERMINAL PWB ASSEMBLY	CA94	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
		(TERMINAL, CONTROL A/B/C, SYNC)	CC91	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
		TERMINAL PWB CAPACITORS	CG01	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
			CG02	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
			CG03	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C3A1	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CG07	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C504	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CG08	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C505	0800308R	CAP.-ELECTRO. 33UF-M(SMG) 16V	CG09	0800326R	CAP.-ELECTRO. 100UF-M 16V
C506	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CG11	0800326R	CAP.-ELECTRO. 100UF-M 16V
C509	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V	CG12	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V
C515	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CS00	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C516	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CS01	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C517	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CS02	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V
C541	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CS03	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V
C542	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CS04	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE
C543	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CS05	0893042R	CAP 2125CHIP 6800PFKB 50V TAPE
C544	0800326R	CAP.-ELECTRO. 100UF-M 16V	CS06	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C545	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CS07	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C546	0800326R	CAP.-ELECTRO. 100UF-M 16V	CS08	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE
C547	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CS09	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C548	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CS11	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C549	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CS13	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C550	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CS14	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE
C554	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CS15	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C555	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CS16	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C557	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	CS17	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C558	0800326R	CAP.-ELECTRO. 100UF-M 16V	CS18	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C560	0800326R	CAP.-ELECTRO. 100UF-M 16V	CS19	0800326R	CAP.-ELECTRO. 100UF-M 16V
C561	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	CS20	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C567	0800326R	CAP.-ELECTRO. 100UF-M 16V	CS21	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C573	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	CS23	0800361N	CAP.-ELECTRO 1000UF 16V
C574	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V	CS25	0800277R	CAP.-ELECTRO. 0.47UF-M 50V
C575	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V	CS26	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C577	0228754R	CAP2125CHIP 100PFJSL 50V TAPE	CS27	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V
C578	0893048R	CAP2125CHIP 22000PFKB 50V TAPE	CS28	0800326R	CAP.-ELECTRO. 100UF-M 16V
C583	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CS30	0800353R	CAP.-ELECTRO.470UF-M 16V
C584	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CS31	0800353R	CAP.-ELECTRO.470UF-M 16V
C585	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CS32	0228754R	CAP2125CHIP 100PFJSL 50V TAPE
C586	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CS40	0228762R	CAP 2125 CHIP 220PFJSL 50V TAPE
C587	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CS41	0228762R	CAP 2125 CHIP 220PFJSL 50V TAPE
C588	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CS42	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C589	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CS50	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C590	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CS51	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C595	0800326R	CAP.-ELECTRO. 100UF-M 16V	CS63	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CS64	0800326R	CAP.-ELECTRO. 100UF-M 16V	C705	0880062R	CAP.-POLYESTER 0.22UF-KEB 50V
CS66	0248672R	CAPACITOR-CERAMIC 33PF-JB SL 50V	 C707	0244202R	CAP.-CERAMIC 470PF-K 2KV
CT01	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	 C708	0262412	CAP.POLYPRO 2700PF 1800V
CT02	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	 C709	0262412	CAP.POLYPRO 2700PF 1800V
CT03	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	 C710	0262412	CAP.POLYPRO 2700PF 1800V
CT04	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	 C714	AN01165F	METALLIZ PP FILM CAP. 0.15UF
CT05	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	 C715	AN01163F	METALLIZ PP FILM CAP. 0.12UF
CT06	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	C718	0244505R	CAP.-CERAMIC 0.0022UF-K 500V
CT07	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C719	0244505R	CAP.-CERAMIC 0.0022UF-K 500V
CT08	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	 C721	AN01169F	METALLIZ PP FILM CAP. 0.22UF
CT09	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C726	0249493	CAP.-CERAMIC 4700PF-K 2KV
CT10	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C727	0299914F	CAP.-PP FILM 0.01UF 200V
CT11	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C728	0299914F	CAP.-PP FILM 0.01UF 200V
CT12	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C729	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V
CT13	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C730	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V
CT14	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C731	0244501R	CAP.-CERAMIC 1000PF-K 500V
CT15	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	C732	0244501R	CAP.-CERAMIC 1000PF-K 500V
CT16	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C733	0800341N	CAP.-ELECTRO. 220UF-M 100V
CT17	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	 C734	AN01167F	METALLIZ PP FILM CAP. 0.18UF
CT18	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C735	0800344R	CAP.-ELECTRO. 330UF-M(SMG) 16V
CT19	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C737	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE
CT20	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	C738	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE
CT23	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	C739	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE
CT24	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	C740	0248690R	CAPACITOR-CERAMIC 180PF-J SL 50V
CT36	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	C741	0244215	CAP.-CERAMIC 2200PF-DC 2KV
CT37	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C742	0244202R	CAP.-CERAMIC 470PF-K 2KV
CT38	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C743	0244202R	CAP.-CERAMIC 470PF-K 2KV
CT39	0228238R	CAP 2125CHIP 22PFJPH 50V TAPE	CF51	0299622F	CAP.-PP FILM 0.01UF-J 630V
CT40	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CF52	0244211	CAP.-CERAMIC 1000PF-K 2KV
CT41	0228748R	CAP2125CHIP 56PFJSL 50V TAPE	CF53	0800326R	CAP.-ELECTRO. 100UF-M 16V
CT90	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	CF54	0800326R	CAP.-ELECTRO. 100UF-M 16V
CT91	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	CF55	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CY91	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF56	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CY92	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF58	0800328R	CAP. ELECTRO. 100UF-M 35V
		DEFLECTION PWB ASSEMBLY	CF60	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
		DEFLECTION PWB CAPACITORS	CF61	0262427F	CAP.-POLY. FLM 0.01UF 1.8KV
			CH14	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C601	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CH15	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C603	0800277R	CAP.-ELECTRO. 0.47UF-M 50V	CH17	0244213	CAP.-CERAMIC 1500PF-K 2KV
C604	0800338R	CAP.ELECTRO.220UF-M 50V(SMG)	CH18	0244213	CAP.-CERAMIC 1500PF-K 2KV
C605	0800338R	CAP.ELECTRO.220UF-M 50V(SMG)	CH19	0284291	CEL-221M251WMT(KMH)
C606	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	CH20	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V
C607	0890056R	CAP.CERAMIC 6PF 50V	CH21	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C608	0800279R	CAP.-ELECTRO. 1.0UF-M(SMG) 50V	CH22	0279693R	CAP.-POLYESTER FLM 0.1UF
C609	0284825F	CAP.-ELECTRO.3300UF-M 35V	 CH24	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C611	0279859F	CAPACITOR-POLYESTER FILM 0.1UF-K 100V	CH31	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE
C612	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CH32	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C613	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CH33	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C614	0800327R	CAP.-ELECTRO. 100UF-M 25V	CP01	AL00031R	CAP.-ELECTRO. 33UF-M 250V
C615	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CP03	0279693R	CAP.-POLYESTER FLM 0.1UF
C619	0800344R	CAP.-ELECTRO. 330UF-M(SMG) 16V	CP04	0244505R	CAP.-CERAMIC 0.0022UF-K 500V
C620	0800364N	CAP.-ELECTRO. 1000UF-M 50V	CP19	AL00028R	AL EL CAPACITOR(100UF250V)
C621	0244501R	CAP.-CERAMIC 1000PF-K 500V	CP20	AL00028R	AL EL CAPACITOR(100UF250V)
C703	0244501R	CAP.-CERAMIC 1000PF-K 500V	CP22	AL00028R	AL EL CAPACITOR(100UF250V)
C704	0244501R	CAP.-CERAMIC 1000PF-K 500V	CP23	0244211	CAP.-CERAMIC 1000PF-K 2KV

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
IR PWB ASSEMBLY			MAIN PWB ASSEMBLY		
IR PWB CAPACITORS			MAIN PWB DIODES		
CM01	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	D001	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
CM02	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D002	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
CM03	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE	D003	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CM04	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE	D004	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CM05	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D005	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CM06	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V	D009	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CM07	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D010	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CM08	0228746R	CAP 2125 CHIP 47PFJSL 50V TAPE	D011	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CM09	0228746R	CAP 2125 CHIP 47PFJSL 50V TAPE	D012	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CR03	0228746R	CAP 2125 CHIP 47PFJSL 50V TAPE	D013	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CR04	0228746R	CAP 2125 CHIP 47PFJSL 50V TAPE	D015	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CR07	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D016	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CR08	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D019	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CR09	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D020	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CR10	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	D030	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
CR12	0228054R	CAP 2125 CHIP 100PFJCH 50V TAPE	D055	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
CR13	0228054R	CAP 2125 CHIP 100PFJCH 50V TAPE	D056	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
CR14	0800047R	CAP.-ELECTRO. 100UF-M 6.3V	D057	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
CR15	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D059	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
CR43	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D060	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
CR44	0800047R	CAP.-ELECTRO. 100UF-M 6.3V	D061	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
YUV PWB ASSEMBLY			D062	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
YUV PWB CAPACITORS			D070	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
C301	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	D072	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
C302	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D073	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
C303	0228032R	CAP 2125CHIP 12PFJCH 50V TAPE	D074	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
C304	0893013R	CAP 2012CHIP 220000PFKB16V TAPE	D075	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
C305	0893035R	CAP2125CHIP 2200PFKB 50V TAPE	D076	2339858M	ZENER HZS-7C2 TAPE
C306	0893044R	CAP2125CHIP 1000PFKB 50V TAPE	D352	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
C307	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V	D353	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
C308	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D354	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
C309	AN00619R	CAP.POLYESTER 0.0047UF 50V TAPE	D9C1	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
C310	0800282R	CAP.-ELECTRO. 2.2UF-M(SMG) 50V	D9C2	2339867M	ZENER HZS-9-C1 TAPE (SI.200MA)
C311	0800326R	CAP.-ELECTRO. 100UF-M 16V	D9C3	2339889M	ZENER HZS12 (C3) 0.005A
C312	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D9C5	2339889M	ZENER HZS12 (C3) 0.005A
C313	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D9C6	2398611	DIODE 1SS254
C314	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D9C8	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
C315	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D9M1	2339889M	ZENER HZS12 (C3) 0.005A
C316	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	POWER PWB ASSEMBLY		
C317	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	(POWER, CPT, VM, FILTER)		
C318	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	POWER PWB DIODES		
C319	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	D801	2339153M	ZENER HZS12C3L (TA)
C320	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	D802	2338321M	DIODE 1SS270 (TA)
C321	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	D803	2338321M	DIODE 1SS270 (TA)
C322	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	D804	2338321M	DIODE 1SS270 (TA)
C323	0228054R	CAP 2125 CHIP 100PFJCH 50V TAPE	D805	2338321M	DIODE 1SS270 (TA)
C324	0228054R	CAP 2125 CHIP 100PFJCH 50V TAPE	D806	2338321M	DIODE 1SS270 (TA)
C325	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	D807	2338321M	DIODE 1SS270 (TA)

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D808	2338321M	DIODE 1SS270 (TA)	D950	2339212M	ZENER HZS24-2L
D809	2338321M	DIODE 1SS270 (TA)	D951	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D810	2348432M	DIODE RMPG06G	D953	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A
D811	2348432M	DIODE RMPG06G	D961	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D812	2348432M	DIODE RMPG06G	D963	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D813	2348432M	DIODE RMPG06G	D976	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A
D814	2338321M	DIODE 1SS270 (TA)	D977	2339491M	DIODE AM01Z (200 TAPE) 1A
D815	2339153M	ZENER HZS12C3L (TA)	D978	2339491M	DIODE AM01Z (200 TAPE) 1A
D816	2338321M	DIODE 1SS270 (TA)	D979	2339491M	DIODE AM01Z (200 TAPE) 1A
D817	2338321M	DIODE 1SS270 (TA)	D980	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A
D818	2338321M	DIODE 1SS270 (TA)	D981	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A
D819	2338321M	DIODE 1SS270 (TA)	D982	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D820	2338321M	DIODE 1SS270 (TA)	D983	2339222M	ZENER HZS27-2L
D821	2338321M	DIODE 1SS270 (TA)	D984	2339825M	ZENER DIODE HZS-4 TAPE (B2) SI 400MW 3.9V
D822	2338321M	DIODE 1SS270 (TA)	D985	2334304M	ZENER RD30E (B3 T2/TP/TA) SI 5MA 30.51V
D823	2338321M	DIODE 1SS270 (TA)	D986	2334304M	ZENER RD30E (B3 T2/TP/TA) SI 5MA 30.51V
D824	2338321M	DIODE 1SS270 (TA)	D987	2334304M	ZENER RD30E (B3 T2/TP/TA) SI 5MA 30.51V
D825	2348432M	DIODE RMPG06G	D989	2339491M	DIODE AM01Z (200 TAPE) 1A
D826	2348432M	DIODE RMPG06G	D9A1	2338531M	DIODE EG-01C (V) SI 0.5A
D827	2348432M	DIODE RMPG06G	 D9A2	2342062	DIODE D3SBA60-4103
D828	2348432M	DIODE RMPG06G	D9A6	2339952M	ZENER DIODE HZS27.2 TA
D830	2339153M	ZENER HZS12C3L TA	D9A7	2339857M	ZENER HZS7C1 SI
D831	2338321M	DIODE 1SS270 (TA)	D9A8	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A
D832	2338321M	DIODE 1SS270 (TA)	D9A9	2338944	DIODE FML-G12S (F) (200V) SI 0.04USEC
D833	2338321M	DIODE 1SS270 (TA)	D9E2	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D834	2338321M	DIODE 1SS270 (TA)	D9E3	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D835	2338321M	DIODE 1SS270 (TA)	D9E5	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D836	2338321M	DIODE 1SS270 (TA)	D9E6	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D837	2338321M	DIODE 1SS270 (TA)	D9E7	2339835M	ZENER HZS5B2 TAPE
D838	2338321M	DIODE 1SS270 (TA)	D9E9	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D839	2348432M	DIODE RMPG06G	D9F1	2339482M	DIODE AS01 (400 TAPE) SI 0.6A
D840	2348432M	DIODE RMPG06G	D9F2	2339482M	DIODE AS01 (400 TAPE) SI 0.6A
D841	2348432M	DIODE RMPG06G	D9S1	2338944	DIODE FML-G12S (F) (200V) SI 0.04USEC
D842	2348432M	DIODE RMPG06G	D9S2	2339845M	ZENER DIODE HZS6 (B2)
D843	2338321M	DIODE 1SS270 (TA)	D9S3	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D844	2338321M	DIODE 1SS270 (TA)	DL02	2337341M	DIODE 1SS270A (TP)
D845	2338321M	DIODE 1SS270 (TA)	DL03	2337341M	DIODE 1SS270A (TP)
D846	2338321M	DIODE 1SS270 (TA)	DL04	2331913M	DIODE 1SS83 (TAPE)
D847	2338321M	DIODE 1SS270 (TA)	DL05	2331913M	DIODE 1SS83 (TAPE)
D848	2338321M	DIODE 1SS270 (TA)	DL06	2331913M	DIODE 1SS83 (TAPE)
D849	2338321M	DIODE 1SS270 (TA)	DL07	2331913M	DIODE 1SS83 (TAPE)
D850	2344041M	DIODE 1SS254TA/1SS270TA	DL08	2339889M	ZENER HZS12 (C3) 0.005A
D851	2344041M	DIODE 1SS254TA/1SS270TA			
D852	2344041M	DIODE 1SS254TA/1SS270TA			
 D901	2342061	DIODE D3SB(A)60.			NTSC PWB ASSEMBLY
D934	2349971	DIODE FMG-G2CS			(NTSC, AUDIO, DF, HV, CHOPPER, SUB VM)
D935	2338944	DIODE FML-G12S (F) (200V) SI 0.04USEC			NTSC PWB DIODES
D936	2336612M	DIODE RU3AM TA	D101	2339837M	ZENER HZS-5C1 TAPE
D937	2338944	DIODE FML-G12S (F) (200V) SI 0.04USEC	D102	2339971M	ZENER HZS33-1 TA
D938	2339847M	ZENER HZS6C1 TA	D403	2344041M	DIODE 1SS254TA/1SS270TA
D939	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC	D404	2344041M	DIODE 1SS254TA/1SS270TA
D943	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC	D405	2344041M	DIODE 1SS254TA/1SS270TA
D944	2339847M	ZENER HZS6C1 TA	D408	2339874M	ZENER HZS11B1 TA
D946	2339491M	DIODE AM01Z (200 TAPE) 1A	D40A	2344041M	DIODE 1SS254TA/1SS270TA
D947	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC	D40B	2344041M	DIODE 1SS254TA/1SS270TA
D948	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC	D40C	2344041M	DIODE 1SS254TA/1SS270TA

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D411	2339869M	ZENER HZS9C3 TA	DP26	2344041M	DIODE 1SS254TA/1SS270TA
D412	2339869M	ZENER HZS9C3 TA	DP27	2344041M	DIODE 1SS254TA/1SS270TA
D413	2339869M	ZENER HZS9C3 TA	DY01	2344041M	DIODE 1SS254TA/1SS270TA
D414	2339869M	ZENER HZS9C3 TA	DY02	2339869M	ZENER HZS9C3 TA
D415	2339869M	ZENER HZS9C3 TA	DY03	2339869M	ZENER HZS9C3 TA
D416	2339869M	ZENER HZS9C3 TA	DY04	2339869M	ZENER HZS9C3 TA
D417	2339869M	ZENER HZS9C3 TA			
D418	2339869M	ZENER HZS9C3 TA			
D420	2339869M	ZENER HZS9C3 TA			
D421	2339869M	ZENER HZS9C3 TA			
D422	2339869M	ZENER HZS9C3 TA			
D423	2339869M	ZENER HZS9C3 TA			
D424	2339869M	ZENER HZS9C3 TA			
D430	2344041M	DIODE 1SS254TA/1SS270TA	D505	2344041M	DIODE 1SS254TA/1SS270TA
D432	2344041M	DIODE 1SS254TA/1SS270TA	D506	2344041M	DIODE 1SS254TA/1SS270TA
D441	2344041M	DIODE 1SS254TA/1SS270TA	D507	2344041M	DIODE 1SS254TA/1SS270TA
D4E2	2344041M	DIODE 1SS254TA/1SS270TA	D508	2344041M	DIODE 1SS254TA/1SS270TA
D501	2344041M	DIODE 1SS254TA/1SS270TA	D509	2344041M	DIODE 1SS254TA/1SS270TA
D502	2344041M	DIODE 1SS254TA/1SS270TA	D510	2344041M	DIODE 1SS254TA/1SS270TA
D540	2344041M	DIODE 1SS254TA/1SS270TA	D511	2339869M	ZENER HZS9C3 TA
D541	2344041M	DIODE 1SS254TA/1SS270TA	D512	2339869M	ZENER HZS9C3 TA
D542	2344041M	DIODE 1SS254TA/1SS270TA	D513	2339869M	ZENER HZS9C3 TA
D543	2344041M	DIODE 1SS254TA/1SS270TA	D514	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D546	2339869M	ZENER HZS9C3 TA	D515	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D547	2344041M	DIODE 1SS254TA/1SS270TA	D516	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
D548	2339889M	ZENER HZS12 (C3) 0.005A	D517	2339869M	ZENER HZS9C3 TA
D549	2344041M	DIODE 1SS254TA/1SS270TA	D518	2344041M	DIODE 1SS254TA/1SS270TA
D5K2	2344041M	DIODE 1SS254TA/1SS270TA	DA91	2339889M	ZENER HZS12 (C3) 0.005A
DA09	2339869M	ZENER HZS9C3 TA	DA92	2339889M	ZENER HZS12 (C3) 0.005A
DA10	2339869M	ZENER HZS9C3 TA	DA93	2339889M	ZENER HZS12 (C3) 0.005A
DA11	2339869M	ZENER HZS9C3 TA	DG01	2339889M	ZENER HZS12 (C3) 0.005A
DA12	2339869M	ZENER HZS9C3 TA	DG02	2339889M	ZENER HZS12 (C3) 0.005A
DA13	2339869M	ZENER HZS9C3 TA	DG03	2339889M	ZENER HZS12 (C3) 0.005A
DA14	2339869M	ZENER HZS9C3 TA	DG04	2339889M	ZENER HZS12 (C3) 0.005A
DC03	2339869M	ZENER HZS9C3 TA	DG05	2339889M	ZENER HZS12 (C3) 0.005A
DF04	2344041M	DIODE 1SS254TA/1SS270TA	DG06	2343561	LED SPR-54MVW
DF08	2344041M	DIODE 1SS254TA/1SS270TA	DG07	2339889M	ZENER HZS12 (C3) 0.005A
DF09	2337341M	DIODE 1SS270A (TP)	DG08	2339889M	ZENER HZS12 (C3) 0.005A
DF10	2337341M	DIODE 1SS270A (TP)	DG09	2339889M	ZENER HZS12 (C3) 0.005A
DH01	2344041M	DIODE 1SS254TA/1SS270TA	DG11	2331847M	ZENER HZ-12C 1 TAPE SI
DH02	2974432M	JUMPER WIRE (0.5 L=52MM)	DG12	2344041M	DIODE 1SS254TA/1SS270TA
DH03	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A	DG13	2344041M	DIODE 1SS254TA/1SS270TA
DH04	2339837M	ZENER HZS-5C1 TAPE	DGM1	2339869M	ZENER HZS9C3 TA
DH05	2339839M	ZENER HZS5C3 TAPE	DGM2	2339869M	ZENER HZS9C3 TA
DH06	2339837M	ZENER HZS-5C1 TAPE	DS02	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC
DH07	2344041M	DIODE 1SS254TA/1SS270TA	DS03	2339889M	ZENER HZS12 (C3) 0.005A
DH08	2339837M	ZENER HZS-5C1 TAPE	DS04	2339889M	ZENER HZS12 (C3) 0.005A
DH09	2344041M	DIODE 1SS254TA/1SS270TA	DS05	2339889M	ZENER HZS12 (C3) 0.005A
DH10	2339889M	ZENER HZS12 (C3) 0.005A	DS06	2339889M	ZENER HZS12 (C3) 0.005A
DH11	2339889M	ZENER HZS12 (C3) 0.005A	DT01	2339889M	ZENER HZS12 (C3) 0.005A
DH12	2344041M	DIODE 1SS254TA/1SS270TA	DT02	2339889M	ZENER HZS12 (C3) 0.005A
DP03	2337341M	DIODE 1SS270A (TP)	DT03	2339889M	ZENER HZS12 (C3) 0.005A
DP07	2339839M	ZENER HZS5C3 TAPE	DT04	2339839M	ZENER HZS5C3 TAPE
DP12	2344041M	DIODE 1SS254TA/1SS270TA	DT05	2339839M	ZENER HZS5C3 TAPE
DP24	2339491M	DIODE AM01Z (200 TAPE) 1A	DT06	2339839M	ZENER HZS5C3 TAPE
DP25	2339491M	DIODE AM01Z (200 TAPE) 1A	DT07	2339839M	ZENER HZS5C3 TAPE
			DT12	2337341M	DIODE 1SS270A (TP)
			DT13	2337341M	DIODE 1SS270A (TP)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
DT14	2337341M	DIODE 1SS270A (TP)	DM05	2338321M	DIODE 1SS270 (TA)
DT15	2337341M	DIODE 1SS270A (TP)	DM06	2338321M	DIODE 1SS270 (TA)
DT16	2344041M	DIODE 1SS254TA/1SS270TA	DM07	2338321M	DIODE 1SS270 (TA)
DT18	2344041M	DIODE 1SS254TA/1SS270TA	DR01	2338321M	DIODE 1SS270 (TA)
DY91	2339889M	ZENER HZS12 (C3) 0.005A	DR03	2338321M	DIODE 1SS270 (TA)
		DEFLECTION PWB ASSEMBLY	DR04	2338321M	DIODE 1SS270 (TA)
		DEFLECTION PWB DIODES	DR05	2338321M	DIODE 1SS270 (TA)
D601	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC	DR06	2338321M	DIODE 1SS270 (TA)
D602	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC	DR07	2331809M	ZENER DIODE HZ-6 TAPE (C3) SI 500MW
 D603	2339222M	ZENER HZS27-2L	DR08	2331809M	ZENER DIODE HZ-6 TAPE (C3) SI 500MW
 D604	2339825M	ZENER DIODE HZS-4 TAPE (B2) SI 400MW 3.9V			DEFLECTION PWB ASSEMBLY
D608	2974432M	JUMPER WIRE (0.5 L=52MM)			DEFLECTION PWB PROTECTORS
D609	2339889M	ZENER HZS12 (C3) 0.005A	 E601	AZ00103M	PROTECTOR(CRXT49101.5)
D610	2339491M	DIODE AM01Z (200 TAPE) 1A	 E701	AZ00102M	PROTECTOR(CRXT491001)
D611	2339825M	ZENER DIODE HZS-4 TAPE (B2) SI 400MW 3.9V	 E702	AZ00105M	PROTECTOR(CRXT49102.5)
D612	2337341M	DIODE 1SS270A (TP)	 EH01	AZ00104M	PROTECTOR(CRXT491002)
D617	2339983M	ZENER HZS36-3 TA	GF01	CJ00072R	SEMICONDUCTOR 252FB-K2M
D623	2337341M	DIODE 1SS270A (TP)			POWER PWB ASSEMBLY
D624	2337341M	DIODE 1SS270A (TP)			(POWER, CPT, VM, FILTER)
D701	2344041M	DIODE 1SS254TA/1SS270TA			POWER PWB FUSES
D702	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A	 F901	2722359	FUSE AC06A
D703	2339491M	DIODE AM01Z (200 TAPE) 1A	 F902	2722357	FUSE AC04A
 D704	2339551M	DIODE ED14(V1) SI 5MA 45V	 F9A1	2722353	FUSE AC1.6A
 D705	CH00551	DIODE FMQ-G5FS 1500V			POWER PWB ASSEMBLY
D709	2339868M	ZENER HZS9C2 TAPE			(POWER, CPT, VM, FILTER)
D710	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A			POWER PWB PROTECTORS
D711	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A			
D712	2339835M	ZENER HZS5B2 TAPE			
D713	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A			
DF51	2337341M	DIODE 1SS270A (TP)	G801	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
DF52	2337341M	DIODE 1SS270A (TP)	G802	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
DF53	CH00041M	DIODE ES1FV1 (1500V)	G803	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
DF54	CH00041M	DIODE ES1FV1 (1500V)	H901	2793312	CP-EXN-471P365L
DH14	2337571	DIODE HRP22	 H902	2340741	SURGE PROTECTOR DSP-301N-S00B
DH16	2337361F	DIODE RU4D LF-20	 H970	2793313	CP-EXN-G131P365L
DH17	2339491M	DIODE AM01Z (200 TAPE) 1A			MAIN PWB ASSEMBLY
DH18	2339491M	DIODE AM01Z (200 TAPE) 1A			MAIN PWB INTEGRATED CIRCUITS (IC)
DH19	2339491M	DIODE AM01Z (200 TAPE) 1A			
 DH21	2339481M	DIODE AS01Z (200 TAPE) SI 0.6A			
 DH22	2339863M	ZENER HZS9A3 TA			
DH24	2338902M	DIODE DFM1SA4	I001	CP05361	MN102L35G
 DH25	2398611M	DIODE 1SS254 TAPE (35V) SI 4NSEC	I002	CP05272U	E2PROM M24C16-BN6
DH26	2344041M	DIODE 1SS254TA/1SS270TA	I003	CP00871U	DIGITAL MONOLITHIC IC (M62393P)
DP01	2349861	DIODE FMU-G16S	I004	CP05011R	ANALOG MONOLITHIC IC (PST994D-T)
DP02	2339889M	ZENER HZS12 (C3) 0.005A	I005	CP05261U	DIGITAL MONOLITHIC IC (M62392P)
		IR PWB ASSEMBLY	I5N1	2005491	IC-HD74HC221P
		IR PWB DIODES	I5N2	2362651	IC HD14053B
DM01	2338321M	DIODE 1SS270 (TA)	I954	2004663F	IC PQ12RF1B
DM02	2338321M	DIODE 1SS270 (TA)	I955	2004662F	ANALOG MONOLITHIC IC(PQ09RF1B)
DM03	2338321M	DIODE 1SS270 (TA)	I956	2004661F	IC PQ05RF1B(5V REG.)
DM04	2338321M	DIODE 1SS270 (TA)	I957	2004661F	IC PQ05RF1B(5V REG.)
			I958	2004662F	ANALOG MONOLITHIC IC(PQ09RF1B)
			I9F1	2004661F	IC PQ05RF1B(5V REG.)
			I9F2	2004662F	ANALOG MONOLITHIC IC(PQ09RF1B)

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		POWER PWB ASSEMBLY (POWER, CPT, VM, FILTER) POWER PWB INTEGRATED CIRCUITS (IC)			IR PWB ASSEMBLY IR PWB INTRGRATED CIRCUITS(IC)
 I901	CZ00451	HYBRID IC (STR-M6811A)	IM01	CP04461	M37470M4-751SP
 I902	2000465	IC PS2501-1 (KC/LC)	IM02	CZ00461R	RESET IC BMR-4201FT TAPE
 I903	2000465	IC PS2501-1 (KC/LC)	IR01	CK09451	SMK0160-02816
 I904	2000465	IC PS2501-1 (KC/LC)	IR02	CK09461	SMK0160-02819
I933	2004663F	IC PQ12RF1B	IR03	2362651	IC HD14053B
 I951	CP04343F	ANALOG MONOLITHIC IC			YUV PWB ASSEMBLY YUV PWB INTEGRATED CIRCUITS(IC)
 I952	2000465	IC PS2501-1 (KC/LC)			
I953	2004663F	IC PQ12RF1B			
 I959	2000465	IC PS2501-1 (KC/LC)	IY04	CK07922U	ANALOG MONOLITHIC IC TA1270AF(J)
I960	CP05141	ANALOG MONOLITHIC IC (PQ6RD083)			MAIN PWB ASSEMBLY MAIN PWB INDUCTOR/COILS
		NTSC PWB ASSEMBLY (NTSC, AUDIO, DF, HV, CHOPPER, SUB VM) NTSC PWB INTEGRATED CIRCUITS (IC)	L001	BH00697R	COIL 100UH
I401	CP05341R	ANALOG MONOLITHIC IC TDA7318D013TR	L002	2122253M	COIL-AXIAL 100UH-K
I402	2362651	IC HD14053B	L003	BJ00402	30MHZ BAND PASS LC FILTER 87F2
I403	CK06623R	SRS5250AS-E2	L004	BH00697R	COIL 100UH
I404	CP05351	ANALOG MONOLITHIC IC NJM2150D	L005	BH00697R	COIL 100UH
I405	CP04061	ANALOG MONOLITHIC IC (LA4603)	L006	BH00697R	COIL 100UH
I502	CK07131R	ANALOG MONO. IC (MC14053BFEL)	L007	BH00697R	COIL 100UH
IH01	2005491	IC-HD74HC221P	L00A	2771892	FERRITE BEADS CORE (004)
 IH02	2366721	IC UPC1394C	L00B	2771892	FERRITE BEADS CORE (004)
IP01	2366721	IC UPC1394C	L353	BH00697R	COIL 100UH
IY01	2020452	ANALOG MONOLITHIC IC (CXA1545AS)	L5H7	2122938M	COIL-AXIAL 4.7UHKM BELTING
IY02	2020341	IC MM1111XS	L5N1	BH00697R	COIL 100UH
IY03	CK07131R	ANALOG MONO. IC (MC14053BFEL)	L5N2	BH00697R	COIL 100UH
		TERMINAL PWB ASSEMBLY (TERMINAL, CONTROL A/B/C, SYNC) TERMINAL PWB INTEGRATED CIRCUITS	L5N3	BH00697R	COIL 100UH
I501	CP04712U	ANALOG MONOLITHIC IC (TA1276AN)	L5N4	BH00697R	COIL 100UH
I504	CK08951R	MM1389XFBE	L5N5	2125811N	IC HC-101KS1T(LHL08)
IS00	2366361	IC.AN7805	LF01	BH00697R	COIL 100UH
IS01	CZ00751U	UPC1885	LF02	2125803N	HC-270KS1T(LHL08)
IS02	2362602	IC UPC4558	LF03	BH00697R	COIL 100UH
IS03	2004781	ICL-LA7213			POWER PWB ASSEMBLY (POWER, CPT, VM, FILTER) POWER PWB INDUCTOR/COILS
IS05	2362651	IC HD14053B	L801	BH00214R	FILTER COIL 100UH
IT01	CK07131R	ANALOG MONO. IC (MC14053BFEL)	L802	BH00676R	COIL 2.7UH
IT02	CK07131R	ANALOG MONO. IC (MC14053BFEL)	L803	BH00676R	COIL 2.7UH
IT03	CK07131R	ANALOG MONO. IC (MC14053BFEL)	L804	BH00678R	COIL 3.9UH
IT04	CP01042U	DIGITAL MONOLITHIC IC (24LC21A- /P)	L805	BH00679R	COIL 4.7UH
		DEFLECTION PWB ASSEMBLY DEFLECTION PWB INTEGRATED CIRCUIT (IC)	L806	BH00673R	COIL 1.5UH
 I601	CZ00761U	LA7846N	L807	BH00676R	COIL 2.7UH
			L808	BH00676R	COIL 2.7UH
			L809	BH00678R	COIL 3.9UH
			L810	BH00679R	COIL 4.7UH
			L811	BH00676R	COIL 2.7UH
			L812	BH00676R	COIL 2.7UH
			L813	BH00676R	COIL 2.7UH
			L814	BH00678R	COIL 3.9UH
			L815	BH00679R	COIL 4.7UH

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
L816	BH00676R	COIL 2.7UH	L543	BH00697R	COIL 100UH
 L901	2274556	LINE FILTER-LL (333Y1R5-02)	L709	2125759R	HLL-150MRLT(LHLC06)
 L902	2274556	LINE FILTER-LL (333Y1R5-02)	LG01	BH00697R	COIL 100UH
 L903	2274556	LINE FILTER-LL (333Y1R5-02)	LG02	BH00697R	COIL 100UH
L932	BZ01932	DC NOISE FILTER	LS00	BH00697R	COIL 100UH
L934	2123461M	FERRITE BEADS B 0.8 MH	LS01	BH00697R	COIL 100UH
L935	2123461M	FERRITE BEADS B 0.8 MH	LS02	BH00697R	COIL 100UH
L938	2123461M	FERRITE BEADS B 0.8 MH	LS03	BH00697R	COIL 100UH
L939	2123461M	FERRITE BEADS B 0.8 MH	LS05	BH00697R	COIL 100UH
L940	2123461M	FERRITE BEADS B 0.8 MH	LT01	BH00697R	COIL 100UH
 L941	2124365	DC NOISE FILTER	LT02	BH00697R	COIL 100UH
L942	2123462M	FERRITE BEADS CORE B 2.3UH	LT03	BH00697R	COIL 100UH
L943	2123461M	FERRITE BEADS B 0.8 MH	LT04	BH00697R	COIL 100UH
L944	2123461M	FERRITE BEADS B 0.8 MH	LT05	2122944M	COIL-AXIAL 12UHKM BELTING
L945	BZ01932	DC NOISE FILTER	LT10	BH00697R	COIL 100UH
L947	BZ01932	DC NOISE FILTER			
 L9A1	2124365	DC NOISE FILTER			DEFLECTION PWB ASSEMBLY
L9A2	BH00206R	FILTER COIL 27UH			DEFLECTION PWB INDUCTOR/COILS
L9A4	BH00206R	FILTER COIL 27UH			
L9A5	2123461M	FERRITE BEADS B 0.8 MH	L602	BH00206R	FILTER COIL 27UH
L9A6	2123461M	FERRITE BEADS B 0.8 MH	L702	2122653M	FERRITE CORE 1.65UH TAPE
L9A8	2123461M	FERRITE BEADS B 0.8 MH	L703	2123461M	FERRITE BEADS B 0.8 MH
LL01	2123781R	FILTER COIL 101K	L704	2771892	FERRITE BEADS CORE (004)
LL02	2123468M	FERRITE BEADS CORE LEAD 0.8MH	L707	BZ01471	COIL LX-H.LINEARITY 5UH
LL03	2123416M	LAL AXIAL COIL 2.7UH-K	L708	BZ00845	CHOKE COIL 680UH SL1720
LL04	2123416M	LAL AXIAL COIL 2.7UH-K	L711	2122653M	FERRITE CORE 1.65UH TAPE
		NTSC PWB ASSEMBLY	L712	2771892	FERRITE BEADS CORE (004)
		(NTSC, AUDIO, DF, HV, CHOPPER, SUB VM)	L713	2771892	FERRITE BEADS CORE (004)
		NTSC PWB INDUCTOR/COILS	L714	2771892	FERRITE BEADS CORE (004)
			L715	2771892	FERRITE BEADS CORE (004)
			L716	2771892	FERRITE BEADS CORE (004)
L101	2122253M	COIL-AXIAL 100UH-K	L717	2771892	FERRITE BEADS CORE (004)
L102	2122253M	COIL-AXIAL 100UH-K	LH01	BH00214R	FILTER COIL 100UH
L352	BH00697R	COIL 100UH	LH02	2122653M	FERRITE CORE 1.65UH TAPE
L500	BH00697R	COIL 100UH	LH03	2122653M	FERRITE CORE 1.65UH TAPE
L501	2122952M	COIL-AXIAL 47UHKM BELTING	LH08	2123461M	FERRITE BEADS B 0.8 MH
L503	BH00697R	COIL 100UH	LH09	2123461M	FERRITE BEADS B 0.8 MH
L509	BH00697R	COIL 100UH	LP01	BV00752	COIL CHOKE TRANS. 4MH
L511	BH00697R	COIL 100UH	LP02	2123462M	FERRITE BEADS CORE B 2.3UH
L541	BH00682R	COIL 6.8UH			
LF01	BH00214R	FILTER COIL 100UH			IR PWB ASSEMBLY
LF02	BH00222R	FILTER COIL 390UH			IR PWB INDUCTOR/COILS
LY01	BH00697R	COIL 100UH			
LY03	BH00697R	COIL 100UH	LM01	BH00697R	COIL 100UH
LY04	BH00697R	COIL 100UH	LR01	BH00697R	COIL 100UH
LY06	BH00697R	COIL 100UH	LR03	2123461M	FERRITE BEADS B 0.8 MH
		TERMINAL PWB ASSEMBLY	LR04	2123461M	FERRITE BEADS B 0.8 MH
		(TERMINAL, CONTROL A/B/C, SYNC)	LR05	2123461M	FERRITE BEADS B 0.8 MH
		TERMINAL PWB INDUCTOR/COILS	LR06	2123461M	FERRITE BEADS B 0.8 MH
			LU01	2123461M	FERRITE BEADS B 0.8 MH
			LU02	2123461M	FERRITE BEADS B 0.8 MH
L506	BH00697R	COIL 100UH	LU03	2123461M	FERRITE BEADS B 0.8 MH
L507	BH00697R	COIL 100UH	LU04	2123461M	FERRITE BEADS B 0.8 MH
L508	BH00697R	COIL 100UH	LU05	2123461M	FERRITE BEADS B 0.8 MH
L510	BH00697R	COIL 100UH	LU06	2123461M	FERRITE BEADS B 0.8 MH
L512	BH00697R	COIL 100UH	LU07	2123461M	FERRITE BEADS B 0.8 MH
L515	BH00697R	COIL 100UH	LU08	2123461M	FERRITE BEADS B 0.8 MH

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
LU09	2123461M	FERRITE BEADS B 0.8 MH	QF06	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ
LU10	2123461M	FERRITE BEADS B 0.8 MH	QF07	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
		YUV PWB ASSEMBLY	QF08	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
		YUV PWB INDUCTOR/COILS	QF09	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
			QF10	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
L301	BH00697R	COIL 100UH			POWER PWB ASSEMBLY
L302	BH00697R	COIL 100UH			(POWER, CPT, VM, FILTER)
		MAIN PWB ASSEMBLY			POWER PWB TRANSISTORS
		MAIN PWB TRANSISTORS	Q804	2327471	TRANSISTOR 2SC3950-HIT
Q004	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q805	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q005	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q806	2312372F	TRS-2SC3942
Q009	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q807	2312772	TRS.2SA1546 (M/L)
Q010	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	Q808	2312371	TRS. 2SC3942
Q011	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ	Q809	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q012	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ	Q810	2327471	TRANSISTOR 2SC3950-HIT
Q013	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q811	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q014	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q812	2312372F	TRS-2SC3942
Q015	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q813	2312772	TRS.2SA1546 (M/L)
Q016	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q814	2312371	TRS. 2SC3942
Q017	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q815	2327471	TRANSISTOR 2SC3950-HIT
Q018	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q816	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q019	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q817	2312372F	TRS-2SC3942
Q021	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q818	2312772	TRS.2SA1546 (M/L)
Q022	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q819	2312371	TRS. 2SC3942
Q023	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q820	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q024	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q903	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW
Q025	2320646R	TRS. 2SC1213 B/C	Q911	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ400MW
Q026	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q912	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ400MW
Q027	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q913	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ400MW
Q028	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q920	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ400MW
Q032	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q931	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW
Q033	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q936	2326821	TRANSISTOR 2SA1371 E/F
Q034	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	 Q938	2323782R	THYRISTOR 03P2M(TA)
Q035	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	 Q939	2323782R	THYRISTOR 03P2M(TA)
Q036	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ	 Q9A1	2323782R	THYRISTOR 03P2M(TA)
Q040	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	Q9A2	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW
Q050	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QL01	2327772M	TRS.2SC3413 TAPE (B/C) SI 200MHZ300MW
Q061	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	QL02	2327772M	TRS.2SC3413 TAPE (B/C) SI 200MHZ300MW
Q062	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	QL03	2327772M	TRS.2SC3413 TAPE (B/C) SI 200MHZ300MW
Q3A3	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	QL04	2327772M	TRS.2SC3413 TAPE (B/C) SI 200MHZ300MW
Q3A4	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	QL05	2327772M	TRS.2SC3413 TAPE (B/C) SI 200MHZ300MW
Q3A5	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	QL06	2327772M	TRS.2SC3413 TAPE (B/C) SI 200MHZ300MW
Q5H3	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QL07	2325715M	TRS.2SA933S (Q/R)
Q5H4	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QL08	2315381	TRS. 2SA1837
Q5N1	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	QL09	2315391	TRS. 2SC4793
Q5N2	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QL10	2326821	TRANSISTOR 2SA1371 E/F
Q5N5	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ	QL11	2327772M	TRS.2SC3413 TAPE (B/C) SI 200MHZ300MW
Q5N6	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW			NTSC PWB ASSEMBLY
Q5N7	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW			(NTSC, AUDIO, DF, HV, CHOPPER, SUB VM)
QF01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW			NTSC PWB TRANSISTORS
QF02	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	Q101	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF03	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	Q103	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF04	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ	Q104	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF05	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ			

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
Q3A6	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QH18	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q3A7	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QH19	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q3A8	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QH20	2325781R	2SA1037KT146Q/R
Q3B1	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QP03	2325781R	2SA1037KT146Q/R
Q401	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ200MW	QP06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q402	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QP08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q403	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QP09	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q404	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QP10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q405	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QP11	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q406	2325781R	2SA1037KT146Q/R	QP14	2325781R	2SA1037KT146Q/R
Q407	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q408	2320647M	TRS. 2SC1213 SI 80MHZ400MW	QY02	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q409	2325781R	2SA1037KT146Q/R	QY07	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW
Q40A	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ	QY08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q410	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q4E1	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY55	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q4E2	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY57	2325781R	2SA1037KT146Q/R
Q505	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY58	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q506	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY60	2325781R	2SA1037KT146Q/R
Q509	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY61	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q510	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY63	2325781R	2SA1037KT146Q/R
Q511	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY71	2325781R	2SA1037KT146Q/R
Q512	2325781R	2SA1037KT146Q/R	QY75	2325781R	2SA1037KT146Q/R
Q513	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QY80	2325781R	2SA1037KT146Q/R
Q514	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			
Q515	2325781R	2SA1037KT146Q/R			
Q516	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			
Q517	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			
Q518	2325781R	2SA1037KT146Q/R			
Q519	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q529	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q524	2325781R	2SA1037KT146Q/R	Q531	2325781R	2SA1037KT146Q/R
Q525	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q532	2325781R	2SA1037KT146Q/R
Q550	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q533	2325781R	2SA1037KT146Q/R
Q551	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q534	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q552	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q535	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q553	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q536	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q554	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q537	2325781R	2SA1037KT146Q/R
Q555	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q538	2325781R	2SA1037KT146Q/R
Q556	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q539	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF05	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q540	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q541	2325781R	2SA1037KT146Q/R
QF12	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q542	2325781R	2SA1037KT146Q/R
QF13	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q543	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF14	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q544	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF15	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q545	2325781R	2SA1037KT146Q/R
QF16	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q546	2325781R	2SA1037KT146Q/R
QF17	2326873R	TRS. DTC144ES TP	Q548	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF18	2326873R	TRS. DTC144ES TP	Q549	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QF19	2326873R	TRS. DTC144ES TP	QA91	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QF20	2326873R	TRS. DTC144ES TP	QA92	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QH01	2325781R	2SA1037KT146Q/R	QG01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QH09	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QG02	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QH10	2325781R	2SA1037KT146Q/R	QG03	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QH12	2325781R	2SA1037KT146Q/R	QG04	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QH13	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QG05	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QH17	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QG06	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW

**TERMINAL PWB ASSEMBLY
(TERMINAL, CONTROL A/B/C, SYNC)
TERMINAL PWB TRANSISTORS**

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
QG07	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ	Q607	2322511	TRS.2SD669A (C TYPE)
QG08	2320631M	TRS. 2SA673 (B 26TZ/C 26TZ) SI 80MHZ	Q608	2322521	TRS.2SB649A (C TYPE)
QG09	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	Q609	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QG10	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	 Q701	2315391	TRS. 2SC4793
QS00	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q702	2322521	TRS.2SB649A (C TYPE)
QS01	2325781R	2SA1037KT146Q/R	Q703	2322511	TRS.2SD669A (C TYPE)
QS06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q704	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QS12	2325781R	2SA1037KT146Q/R	 Q705	CF01891F	TRS. 2SC5413
QS13	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	 Q708	CF00931U	TRS. 2SK2382 200V
QS14	2325781R	2SA1037KT146Q/R	 Q709	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QS15	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q711	2312177	TRS. 2SD2375 (LD) (P)
QS16	2325781R	2SA1037KT146Q/R	Q712	2315933	TRS. 2SB1548A P/Q
QS62	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	 QF51	2315341F	ST-2SC4632LS-CB7
QT01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	 QF52	CF00821F	TRS. 2SC4686A 1200V
QT08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QF53	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QT09	2325781R	2SA1037KT146Q/R	QF54	2320637M	TRS. 2SA673 SI 80MHZ 400MW
QT10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QF55	2320637M	TRS. 2SA673 SI 80MHZ 400MW
QT11	2325781R	2SA1037KT146Q/R	QF56	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
QT12	2325781R	2SA1037KT146Q/R	QF57	2326873R	TRS. DTC144ES TP
QT14	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	 QF58	2315341F	ST-2SC4632LS-CB7
QT16	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	 QH02	2390851	TRS. ST-1MB12-140 (ABC)
QT17	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QH03	2326821	TRANSISTOR 2SA1371 E/F
QT18	2325781R	2SA1037KT146Q/R	QH12	2320663M	TRS. 2SC1213A (C)
QT19	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QH13	2320663M	TRS. 2SC1213A (C)
QT20	2325781R	2SA1037KT146Q/R	QH14	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
QT21	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QH15	2321321M	TRS. 2SA844 (D TZ/E TZ) SI 200MHZ300MW
QT22	2325781R	2SA1037KT146Q/R	QH16	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
QT23	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	 QP01	CF00011	ST-2SC4546
QT24	2325781R	2SA1037KT146Q/R	QP02	2322511	TRS.2SD669A (C TYPE)
QT25	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			
QT26	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			IR PWB ASSEMBLY
QT27	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			IR PWB TRANSISTORS
QT28	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			
QT29	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q301	2325781R	2SA1037KT146Q/R
QT43	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q302	2325781R	2SA1037KT146Q/R
QT44	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q303	2325781R	2SA1037KT146Q/R
QT45	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q304	2325781R	2SA1037KT146Q/R
QT46	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q305	2325781R	2SA1037KT146Q/R
QT47	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q307	2325781R	2SA1037KT146Q/R
QT48	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q308	2325781R	2SA1037KT146Q/R
QT49	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QM01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QT50	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QM02	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
QT51	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			
QT52	2325781R	2SA1037KT146Q/R			MAIN PWB ASSEMBLY
QT53	2325781R	2SA1037KT146Q/R			MAIN PWB RESISTORS
QT54	2325781R	2SA1037KT146Q/R			
QT55	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)			
		DEFLECTION PWB ASSEMBLY			
		DEFLECTION PWB TRANSISTORS			
 Q601	2312171	TRS. 2SC3852	R001	0700058M	RES.-CARBON FLM 1/16W 22K-JB
Q603	2320591M	TRS. 2SC458 (B TZ/C TZ) 230MHZ200MW	R004	0700038M	RES.-CARBON FLM 1/16W 680-JB
Q604	2315391	TRS. 2SC4793	R006	0700032M	RES.-CARBON FLM 1/16W 220-JB
Q605	2315381	TRS. 2SA1837	R010	0700055M	RES.-CARBON FLM 1/16W 12K-JB
Q606	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)	R011	0700059M	RES.-CARBON FLM 1/16W 27K-JB
			R012	0700059M	RES.-CARBON FLM 1/16W 27K-JB
			R016	0100067M	RES.-CARBON FLM 1/8W 1.2K-JB
			R017	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
			R018	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
			R019	0700054M	RES.-CARBON FLM 1/16W 10K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R020	0700033M	RES.-CARBON FLM 1/16W 270-JB	R091	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R021	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R092	0700027M	RES.-CARBON FLM 1/16W 100-JB
R022	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R093	0700027M	RES.-CARBON FLM 1/16W 100-JB
R023	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R094	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R024	0700064M	RES.-CARBON FLM 1/16W 56K-JB	R095	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R027	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R096	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R028	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R097	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R029	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R098	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R031	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0A1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R032	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R0A2	0700027M	RES.-CARBON FLM 1/16W 100-JB
R033	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0A3	0700027M	RES.-CARBON FLM 1/16W 100-JB
R034	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	R0A4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R035	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0A6	0700027M	RES.-CARBON FLM 1/16W 100-JB
R036	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R0A7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R037	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0A8	0700027M	RES.-CARBON FLM 1/16W 100-JB
R038	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0A9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R039	0700037M	RES.-CARBON FLM 1/16W 560-JB	R0AA	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R040	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	R0C5	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R041	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R0C6	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R043	0700028M	RES.-CARBON FLM 1/16W 120-JB	R0C7	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R044	0700028M	RES.-CARBON FLM 1/16W 120-JB	R0C8	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R045	0700028M	RES.-CARBON FLM 1/16W 120-JB	R0C9	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R046	0700061M	RES.-CARBON FLM 1/16W 33K-JB	R0E0	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R047	0100065M	RES.-CARBON FLM 1/8W 1K-JB	R0E1	0100123M	RES.-CARBON FLM 1/8W 270K-JB
R048	0100065M	RES.-CARBON FLM 1/8W 1K-JB	R0E2	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
R049	0100065M	RES.-CARBON FLM 1/8W 1K-JB	R0E3	0700067M	RES.-CARBON FLM 1/16W 100K-JB
R050	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R0E4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R051	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0E6	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R052	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0F2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R053	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0F3	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
R054	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0F4	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
R055	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R0F5	0100123M	RES.-CARBON FLM 1/8W 270K-JB
R056	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R0F6	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
R057	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	R0F7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R058	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R0F8	0700061M	RES.-CARBON FLM 1/16W 33K-JB
R059	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	R0F9	0700027M	RES.-CARBON FLM 1/16W 100-JB
R060	0700066M	RES.-CARBON FLM 1/16W 82K-JB	R0G0	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
R061	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0G1	0700027M	RES.-CARBON FLM 1/16W 100-JB
R062	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R0G2	0700027M	RES.-CARBON FLM 1/16W 100-JB
R063	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0G3	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R064	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R0G4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R076	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	R0G5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R077	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R0H4	0700027M	RES.-CARBON FLM 1/16W 100-JB
R078	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R0H5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R079	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R0H6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R080	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R0H7	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R081	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R0J1	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R082	0700031M	RES.-CARBON FLM 1/16W 180-JB	R0J2	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R083	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0K4	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R084	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0K5	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R085	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0K6	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R086	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0K8	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R087	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0K9	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R088	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0L0	0100055M	RES.-CARBON FLM 1/8W 390-JB
R089	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0L1	0100041M	RES.-CARBON FLM 1/8W 100-JB
R090	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R0L2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R0L3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0S7	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0L4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3A5	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
R0L6	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3A6	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0L7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3A7	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R0L8	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3A8	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
R0L9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3A9	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0LAA	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3C1	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0LE	0700027M	RES.-CARBON FLM 1/16W 100-JB	R3C2	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R0M1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3C3	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
R0M2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3C4	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R0M3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3C5	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0M4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3C6	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R0M7	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5F1	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0M8	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5F2	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0M9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5F3	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0MA	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5F4	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0MC	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5F5	0119597M	RES.-MTL FLM 1/8W 390-FB
R0MD	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R5F6	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0MF	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5F7	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0MG	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5F8	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0MM	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5F9	0700061M	RES.-CARBON FLM 1/16W 33K-JB
R0N1	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R5M1	0113731M	RES.-CARBON FLM 1/2W 180-JB
R0N2	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R5M2	0113731M	RES.-CARBON FLM 1/2W 180-JB
R0N3	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R5M4	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
R0N4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5M5	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
R0N5	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R5M6	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0N6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5M7	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0N7	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	R5M8	0119607M	RES.-MTL FLM 1/8W 1.0K-FB
R0N8	0700029M	RES.-CARBON FLM 1/16W 150-JB	R5M9	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0N9	0100065M	RES.-CARBON FLM 1/8W 1K-JB	R5MA	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R0P1	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R5N0	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0P2	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5N1	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R0P3	0700034M	RES.-CARBON FLM 1/16W 330-JB	R5N2	0119607M	RES.-MTL FLM 1/8W 1.0K-FB
R0P4	0700038M	RES.-CARBON FLM 1/16W 680-JB	R5N3	0700037M	RES.-CARBON FLM 1/16W 560-JB
R0P5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5N4	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R0P6	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R5N5	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0P7	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R5N6	0700039M	RES.-CARBON FLM 1/16W 820-JB
R0P8	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R5N8	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0P9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5N9	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0Q1	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	R5P1	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R0Q2	0700026M	RES.-CARBON 1/16P 82-JB	R5P2	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R0Q3	0700026M	RES.-CARBON 1/16P 82-JB	R5P3	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R0Q4	0700026M	RES.-CARBON 1/16P 82-JB	R5P4	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0Q5	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	R5P5	0700035M	RES.-CARBON FLM 1/16W 390-JB
R0Q6	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R5P6	0700035M	RES.-CARBON FLM 1/16W 390-JB
R0Q7	0700031M	RES.-CARBON FLM 1/16W 180-JB	R5P7	0700031M	RES.-CARBON FLM 1/16W 180-JB
R0Q8	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	R5P8	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R0Q9	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	R5P9	0700061M	RES.-CARBON FLM 1/16W 33K-JB
R0R1	0700061M	RES.-CARBON FLM 1/16W 33K-JB	R981	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0R2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R984	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0R3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R985	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0S1	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R9A9	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0S2	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R9AA	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R0S3	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R9AC	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R0S4	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R9AD	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R0S5	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R9AE	0100065M	RES.-CARBON FLM 1/8W 1K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R9AF	0100065M	RES.-CARBON FLM 1/8W 1K-JB	R814	0100063M	RES.-CARBON FLM 1/8W 820-JB
R9AH	0100069M	RES.-CARBON FLM 1/8W 1.5K-JB	R815	0144068	RES. WIRE WOUND 1.5K 7W
R9M1	0100065M	RES.-CARBON FLM 1/8W 1K-JB	R817	0100035M	RES.-CARBON FLM 1/8W 56-JB
R9M2	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R818	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J
R9M3	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W	R819	0100035M	RES.-CARBON FLM 1/8W 56-JB
R9M4	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W	R821	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R9M5	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W	R822	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R9M6	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W	R824	0700032M	RES.-CARBON FLM 1/16W 220-JB
R9M7	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R826	0700018M	RES.-CARBON FLM 1/16W 22-J
R9M8	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R827	0188123M	RES.-CARBON FLM 1/2W 270-JB
RA13	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R828	0188127M	RES.-CARBON FLM 560-JB 1/2W
RA14	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R829	0119561M	RES.-MTL FLM 1/8W 12-FB
RA15	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R830	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RA16	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R831	0100063M	RES.-CARBON FLM 1/8W 820-JB
RF01	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R832	0144068	RES. WIRE WOUND 1.5K 7W
RF02	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R834	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J
RF03	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R835	0100035M	RES.-CARBON FLM 1/8W 56-JB
RF04	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R836	0100035M	RES.-CARBON FLM 1/8W 56-JB
RF05	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R839	0700032M	RES.-CARBON FLM 1/16W 220-JB
RF06	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R841	0700022M	RES.-CARBON FLM 1/16W 39-J
RF07	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R843	0119561M	RES.-MTL FLM 1/8W 12-FB
RF08	0700027M	RES.-CARBON FLM 1/16W 100-JB	R844	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RF09	0700034M	RES.-CARBON FLM 1/16W 330-JB	R845	0100049M	RES.-CARBON FLM 1/8W 220-JB
RF09A	0700021M	RES.-CARBON FLM 1/16W 33-J	R846	0144068	RES. WIRE WOUND 1.5K 7W
RF10	0700056M	RES.-CARBON FLM 1/16W 15K-JB	R848	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J
RF11	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R849	0100035M	RES.-CARBON FLM 1/8W 56-JB
RF12	0700037M	RES.-CARBON FLM 1/16W 560-JB	R850	0100035M	RES.-CARBON FLM 1/8W 56-JB
RF15	0700034M	RES.-CARBON FLM 1/16W 330-JB	R851	0188166M	RES.-CARBON FLM 470K-JB 1/2W
RF16	0700039M	RES.-CARBON FLM 1/16W 820-JB	R852	0188159M	RES.-CARBON FLM 150K-JB 1/2W
RF17	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R853	0188127M	RES.-CARBON FLM 560-JB 1/2W
RF18	0700034M	RES.-CARBON FLM 1/16W 330-JB	R871	0100087M	RES.-CARBON FLM 1/8W 8.2K-JB
RF19	0700056M	RES.-CARBON FLM 1/16W 15K-JB	R872	0100063M	RES.-CARBON FLM 1/8W 820-JB
RF20	0700027M	RES.-CARBON FLM 1/16W 100-JB	R873	0100087M	RES.-CARBON FLM 1/8W 8.2K-JB
RF21	0700039M	RES.-CARBON FLM 1/16W 820-JB	R874	0100035M	RES.-CARBON FLM 1/8W 56-JB
RF22	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R875	0188123M	RES.-CARBON FLM 1/2W 270-JB
RF23	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R876	0100035M	RES.-CARBON FLM 1/8W 56-JB
RF24	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R877	0100035M	RES.-CARBON FLM 1/8W 56-JB
RF25	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R878	0188123M	RES.-CARBON FLM 1/2W 270-JB
RF26	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R879	0144068	RES. WIRE WOUND 1.5K 7W
RF27	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R880	0144068	RES. WIRE WOUND 1.5K 7W
RF28	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R881	0144068	RES. WIRE WOUND 1.5K 7W
RF29	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R885	0188159M	RES.-CARBON FLM 150K-JB 1/2W
RF30	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R895	0700031M	RES.-CARBON FLM 1/16W 180-JB
RF31	0700056M	RES.-CARBON FLM 1/16W 15K-JB	R908	0113805M	RESISTOR CARBON FILM SRD1/2P-B 180K-J
RF32	0700027M	RES.-CARBON FLM 1/16W 100-JB	R909	0113805M	RESISTOR CARBON FILM SRD1/2P-B 180K-J
RF33	0700027M	RES.-CARBON FLM 1/16W 100-JB	R910	0100081M	RES.-CARBON FLM 1/8W 4.7K-JB
		POWER PWB ASSEMBLY (POWER, CPT, VM, FILTER) POWER PWB RESISTORS	R911	0100081M	RES.-CARBON FLM 1/8W 4.7K-JB
			R912	0100081M	RES.-CARBON FLM 1/8W 4.7K-JB
			R913	0700058M	RES.-CARBON FLM 1/16W 22K-JB
			R914	0100059M	RES.-CARBON FLM 1/8W 560-JB
			R915	0700058M	RES.-CARBON FLM 1/16W 22K-JB
			R916	0700058M	RES.-CARBON FLM 1/16W 22K-JB
			R917	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R807	0188127M	RES.-CARBON FLM 560-JB 1/2W	 R919	2341281	THERMISTOR 3R0Q
R809	0700032M	RES.-CARBON FLM 1/16W 220-JB	R920	0113766M	RESISTOR CARBON FILM SRD1/2P-B 4.7K-J
R811	0700018M	RES.-CARBON FLM 1/16W 22-J	R921	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R812	0119561M	RES.-MTL FLM 1/8W 12-FB			
R813	0700067M	RES.-CARBON FLM 1/16W 100K-JB			

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R922	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R9A5	0113807M	RESISTOR CARBON FILM SRD1/2P-B 220K-J
R923	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R9A6	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R924	0100081M	RES.-CARBON FLM 1/8W 4.7K-JB	R9A7	0140955M	RES.MTL FLM 1/2W 220K-JB
R932	0113793M	RESISTOR CARBON FILM SRD1/2P-B 56K-J	R9A8	0140955M	RES.MTL FLM 1/2W 220K-JB
R933	0147532	RES.-WIRE WOUND 4.7J 5W	R9C2	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R934	0119618M	RES.-MTL FLM 1/8W 3.0K-FB	R9C3	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R935	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R9C5	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R936	AW00101	TRIMMER RESISTOR	R9C6	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R939	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R9C7	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R942	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R9C8	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R944	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	R9C9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R946	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R9E5	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R947	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	R9F1	0100081M	RES.-CARBON FLM 1/8W 4.7K-JB
R948	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	R9S6	0700054M	RES.-CARBON FLM 1/16W 10K-JB
 R949	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R9S7	0100037M	RES.-CARBON FLM 1/8W 68-JB
 R951	0148050	RW99J3FR47KS	R9S8	0147532	RES.-WIRE WOUND 4.7J 5W
 R952	0100079M	RES.-CARBON FLM 1/8W 3.9K-JB	R9S9	0100031M	RES.-CARBON FLM 1/8W 39-JB
 R953	0113785M	RESISTOR CARBON FILM SRD1/2P-B 27K-J	R9T2	0700054M	RES.-CARBON FLM 1/16W 10K-JB
 R954	0113793M	RESISTOR CARBON FILM SRD1/2P-B 56K-J	R9T3	0100017M	RES.-CARBON FLM 1/8W 10-JB
 R956	0100091M	RES.-CARBON FLM 1/8W 12K-JB	RL02	0700065M	RES.-CARBON FLM 1/16W 68K-JB
R958	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RL03	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R959	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RL04	0700027M	RES.-CARBON FLM 1/16W 100-JB
R960	0100063M	RES.-CARBON FLM 1/8W 820-JB	RL05	0700031M	RES.-CARBON FLM 1/16W 180-JB
R961	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RL06	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
 R962	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RL07	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R963	0113760M	RES.-CARBON FLM 1/2W 2.7K-JB	RL08	0700055M	RES.-CARBON FLM 1/16W 12K-JB
 R965	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RL09	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R971	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RL10	0700027M	RES.-CARBON FLM 1/16W 100-JB
R972	0100065M	RES.-CARBON FLM 1/8W 1K-JB	RL11	0700027M	RES.-CARBON FLM 1/16W 100-JB
 R975	0113785M	RESISTOR CARBON FILM SRD1/2P-B 27K-J	RL12	0700033M	RES.-CARBON FLM 1/16W 270-JB
R977	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J	RL13	0700027M	RES.-CARBON FLM 1/16W 100-JB
R978	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J	RL14	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R979	0113803M	RESISTOR CARBON FILM SRD1/2P-B 150K-J	RL15	0700061M	RES.-CARBON FLM 1/16W 33K-JB
R980	0700064M	RES.-CARBON FLM 1/16W 56K-JB	RL16	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R981	0144151	RES.-WIRE WOUND 33-J	RL17	0700027M	RES.-CARBON FLM 1/16W 100-JB
R982	0110279S	RES.-MTL OXIDE FLM 27K-JS	RL18	0700036M	RES.-CARBON FLM 1/16W 470-JB
R982B	0110279S	RES.-MTL OXIDE FLM 27K-JS	RL19	0700029M	RES.-CARBON FLM 1/16W 150-JB
R983	0110265S	RES.-MTL OXIDE FLM 6.8K-JS	RL20	0700031M	RES.-CARBON FLM 1/16W 180-JB
R984	0100113M	RES.-CARBON FLM 1/8W 100K-JB	RL21	0700027M	RES.-CARBON FLM 1/16W 100-JB
R986	0100037M	RES.-CARBON FLM 1/8W 68-JB	RL22	0100059M	RES.-CARBON FLM 1/8W 560-JB
R987	0100017M	RES.-CARBON FLM 1/8W 10-JB	RL23	0700027M	RES.-CARBON FLM 1/16W 100-JB
R988	0100083M	RES.-CARBON FLM 1/8W 5.6K-JB	RL24	0700027M	RES.-CARBON FLM 1/16W 100-JB
R989	0100083M	RES.-CARBON FLM 1/8W 5.6K-JB	RL25	0188104M	RES.-CARBON FLM 1/2W 10-JB
R990	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	RL26	0100071M	RES.-CARBON FLM 1/8W 1.8K-JB
R991	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RL27	0100119M	RES.-CARBON FLM 1/8W 180K-JB
R992	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RL28	0100119M	RES.-CARBON FLM 1/8W 180K-JB
R993	0148009	RES.-WIRE WOUND 2W 0.056-J	RL29	0100071M	RES.-CARBON FLM 1/8W 1.8K-JB
R994	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RL30	0100017M	RES.-CARBON FLM 1/8W 10-JB
R995	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RL31	0100067M	RES.-CARBON FLM 1/8W 1.2K-JB
R996	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RL32	0100017M	RES.-CARBON FLM 1/8W 10-JB
R997	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RL33	0188111M	RES.-CARBON FLM 1/2W 33-JB
R998	0100107M	RES.-CARBON FLM 1/8W 56K-JB	RL34	0188097M	RES.-CARBON FLM 3.3-J 1/2W
R9A1	0140955M	RES.MTL FLM 1/2W 220K-JB	RL35	0188111M	RES.-CARBON FLM 1/2W 33-JB
R9A2	0700023M	RES.-CARBON FLM 1/16W 47-J	RL36	0188097M	RES.-CARBON FLM 3.3-J 1/2W
R9A3	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RL37	0147568	RES.-WIRE WOUND 5W 150-JM CEMENTED
R9A4	0113807M	RESISTOR CARBON FILM SRD1/2P-B 220K-J	RL38	0100021M	RES.-CARBON FLM 1/8W 15-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RL39	0700027M	RES.-CARBON FLM 1/16W 100-JB	R418	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE
RL40	0110237S	RES.-MTL OXIDE FLM 2W 470-J	R419	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RL41	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R420	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RL42	0700027M	RES.-CARBON FLM 1/16W 100-JB	R421	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE
RL43	0100113M	RES.-CARBON FLM 1/8W 100K-JB	R423	0195883R	RES 2125 CHIP 1/16W 220J TAPE
		NTSC PWB ASSEMBLY	R424	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
		(NTSC, AUDIO, DF, HV, CHOPPER, SUB VM)	R425	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
		NTSC PWB RESISTORS	R426	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R101	0700032M	RES.-CARBON FLM 1/16W 220-JB	R427	0700062M	RES.-CARBON FLM 1/16W 39K-JB
R102	0700032M	RES.-CARBON FLM 1/16W 220-JB	R428	0700027M	RES.-CARBON FLM 1/16W 100-JB
R104	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R429	0100053M	RES.-CARBON FLM 1/8W 330-JB
R105	0114133M	RESISTOR-CARBON FILM SRD 1/4 P 120-J	R430	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R107	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R431	0700026M	RES.-CARBON 1/16P 82-JB
R109	0100061M	RES.-CARBON FLM 1/8W 680-JB	R432	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R110	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R433	0700062M	RES.-CARBON FLM 1/16W 39K-JB
R111	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R434	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
R112	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R435	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R113	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R436	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R114	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R437	0700026M	RES.-CARBON 1/16P 82-JB
R121	0195935R	RMC73S-2A273JR	R438	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R122	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R444	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R136	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R445	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R137	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R455	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R138	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R456	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R139	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R457	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R140	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R458	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R141	0195935R	RMC73S-2A273JR	R459	0100041M	RES.-CARBON FLM 1/8W 100-JB
R142	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R460	0100041M	RES.-CARBON FLM 1/8W 100-JB
R3C9	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R461	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R3E3	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R462	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R3E6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R464	0100049M	RES.-CARBON FLM 1/8W 220-JB
R3E7	0195897R	RES 2125 CHIP 1/16W 820J TAPE	R465	0100089M	RES.-CARBON FLM 1/8W 10K-JB
R3E8	0700027M	RES.-CARBON FLM 1/16W 100-JB	R466	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R3F1	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	R467	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE
R3F2	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R468	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE
R3F8	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R469	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R3F9	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R471	0700032M	RES.-CARBON FLM 1/16W 220-JB
R401	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R472	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R402	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R473	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R403	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R474	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE
R404	0100053M	RES.-CARBON FLM 1/8W 330-JB	R475	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE
R405	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R476	0195932R	RES. 2125CHIP 1/10W 20KJ TAPE
R407	0100077M	RES.-CARBON FLM 1/8W 3.3K-JB	R477	0195932R	RES. 2125CHIP 1/10W 20KJ TAPE
R408	0100077M	RES.-CARBON FLM 1/8W 3.3K-JB	R478	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE
R409	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R480	0195932R	RES. 2125CHIP 1/10W 20KJ TAPE
R40A	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R481	0195932R	RES. 2125CHIP 1/10W 20KJ TAPE
R40B	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R482	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE
R410	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R483	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R411	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R484	0187102M	RES.-CARBON FLM 1/16W 36K-JB
R412	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R485	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R413	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R486	0195932R	RES. 2125CHIP 1/10W 20KJ TAPE
R414	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R487	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R415	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	R488	0195940R	RESISTOR MINI-CHIP RMC1/16 43K-J TAPE
R416	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R489	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
			R490	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
			R491	0195890R	RESISTOR MINI-CHIP RMC1/10 430-J TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R492	0195850R	RES 2125 CHIP 1/16W 10J TAPE	R539	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R4A1	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE	R541	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R4A2	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE	R542	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE
R4A4	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	R544	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R4A5	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R545	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R4C1	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R546	0195885R	RESISTOR 2125 CHIP 1/16W 270J TAPE
R4C2	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	R547	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R4C3	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R548	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R4C4	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	R549	0195897R	RES 2125 CHIP 1/16W 820J TAPE
R4C5	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	R550	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE
R4C6	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	R551	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R4C7	0700038M	RES.-CARBON FLM 1/16W 680-JB	R552	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE
R4E1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R553	0700027M	RES.-CARBON FLM 1/16W 100-JB
R4E2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5A3	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R4E3	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5A5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R4E4	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5A7	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R4E5	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R5A8	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE
R4E7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5A9	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R4F1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5C1	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE
R4F2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5C2	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE
R4F3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5C3	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R4G1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5C4	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE
R4G2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5C5	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R4G3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5C6	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE
R4G4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R5E1	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE
R500	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R5E2	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE
R501	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5E3	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE
R502	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5E4	0195935R	RMC73S-2A273JR
R503	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	R5E5	0195897R	RES 2125 CHIP 1/16W 820J TAPE
R505	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R5E6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R506	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R5E7	0100053M	RES.-CARBON FLM 1/8W 330-JB
R507	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5E8	0195897R	RES 2125 CHIP 1/16W 820J TAPE
R508	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5E9	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R509	0195897R	RES 2125 CHIP 1/16W 820J TAPE	R5F7	0195935R	RMC73S-2A273JR
R510	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5F8	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R516	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5K1	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE
R517	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R5K2	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE
R518	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5K3	0195887R	RES 2125 CHIP 1/16W 330J TAPE
R520	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	R5K4	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R522	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5K5	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE
R523	0195885R	RESISTOR 2125 CHIP 1/16W 270J TAPE	R5K6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R524	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R5K7	0195935R	RMC73S-2A273JR
R525	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5K8	0100063M	RES.-CARBON FLM 1/8W 820-JB
R526	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE	R5K9	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R527	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R5L5	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R528	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R5L6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R529	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5L7	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R530	0195897R	RES 2125 CHIP 1/16W 820J TAPE	R5L9	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R531	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5P7	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R532	0700059M	RES.-CARBON FLM 1/16W 27K-JB	RA01	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R533	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RA02	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R534	0195906R	RESISTOR MINI-CHIP RMC1/16 1.8K-J TAPE	RA03	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R535	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	RA04	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R536	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RA05	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R537	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	RA06	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R538	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	RA07	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RA08	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RH08	0187084M	RES.-CARBON FLM 1/16W 6.2K-JB
RA09	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RH09	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA10	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RH10	0700027M	RES.-CARBON FLM 1/16W 100-JB
RA11	0700027M	RES.-CARBON FLM 1/16W 100-JB	RH11	0113760M	RES.-CARBON FLM 1/2W 2.7K-JB
RA12	0700027M	RES.-CARBON FLM 1/16W 100-JB	RH12	0700039M	RES.-CARBON FLM 1/16W 820-JB
RA58	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RH13	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE
RA59	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RH14	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
RA60	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RH15	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
RA61	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RH16	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
RA62	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RH17	0100113M	RES.-CARBON FLM 1/8W 100K-JB
RA63	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RH18	0100129M	RES.-CARBON FLM 1/8W 470K-JB
RA64	0100123M	RES.-CARBON FLM 1/8W 270K-JB	RH19	0187104M	RES.-CARBON FLM 1/16W 43K-JB
RA65	0100123M	RES.-CARBON FLM 1/8W 270K-JB	RH20	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RA66	0100123M	RES.-CARBON FLM 1/8W 270K-JB	RH21	0195926R	RES. 2125CHIP 1/10W 11KJ TAPE
RA67	0100123M	RES.-CARBON FLM 1/8W 270K-JB	RH22	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
RA68	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RH53	0700027M	RES.-CARBON FLM 1/16W 100-JB
RA69	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RH59	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RA70	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RH60	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RA71	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RH61	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RC01	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RH62	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RC02	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RH63	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RC16	0195871R	RMC73S-2A750JR	RH66	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RC17	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RH67	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RC18	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RH68	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RC19	0195871R	RMC73S-2A750JR	RH69	0195935R	RMC73S-2A273JR
RC51	0700027M	RES.-CARBON FLM 1/16W 100-JB	RH78	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RF03	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RH79	0195935R	RMC73S-2A273JR
RF04	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE	RH80	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RF05	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE	RH81	0195935R	RMC73S-2A273JR
RF06	0195906R	RESISTOR MINI-CHIP RMC1/16 1.8K-J TAPE	RH82	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RF07	0700064M	RES.-CARBON FLM 1/16W 56K-JB	RH83	0195935R	RMC73S-2A273JR
RF08	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RH84	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RF19	0700033M	RES.-CARBON FLM 1/16W 270-JB	RH85	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RF20	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RH86	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RF21	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RH87	2974432M	JUMPER WIRE (0.5 L=52MM)
RF24	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	RH90	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RF25	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RP05	0195854R	RES 2125 CHIP 1/16W 15J TAPE
RF26	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RP07	0100099M	RES.-CARBON FLM 1/8W 27K-JB
RF27	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RP08	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
RF28	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RP09	AW00074	TRIMMER RESISTOR
RF29	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RP10	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
RF30	0700061M	RES.-CARBON FLM 1/16W 33K-JB	RP11	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RF31	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RP12	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE
RF32	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE	RP13	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RF33	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RP14	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RF34	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RP16	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE
RF35	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RP17	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE
RF36	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RP21	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RF37	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RP22	0113760M	RES.-CARBON FLM 1/2W 2.7K-JB
RH01	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RP23	0195940R	RESISTOR MINI-CHIP RMC1/16 43K-J TAPE
RH02	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RP24	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RH03	0700027M	RES.-CARBON FLM 1/16W 100-JB	RP25	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
RH04	0700027M	RES.-CARBON FLM 1/16W 100-JB	RP26	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
RH05	0113729M	RES.-CARBON FLM 1/2W 150-JB	RP27	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
RH06	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RP28	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
RH07	AW00075	TRIMMER RESISTOR RV06 2K-B	RP30	0700057M	RES.-CARBON FLM 1/16W 18K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RP31	0700038M	RES.-CARBON FLM 1/16W 680-JB	RY52	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RP87	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY53	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
RP90	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RY69	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RPA2	AW00079	TRIMMER RESISTOR	RY70	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RPA7	0195935R	RMC73S-2A273JR	RY73	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RPC3	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RY74	0700039M	RES.-CARBON FLM 1/16W 820-JB
RPE1	0195935R	RMC73S-2A273JR	RY79	0700027M	RES.-CARBON FLM 1/16W 100-JB
RPE2	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RY85	0195871R	RMC73S-2A750JR
RPE3	AW00079	TRIMMER RESISTOR	RY86	0187038M	RES.-CARBON FLM 1/16W 75-J
RPE4	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RY87	0187038M	RES.-CARBON FLM 1/16W 75-J
RPE5	0700059M	RES.-CARBON FLM 1/16W 27K-JB	RY90	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
RPE6	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RY91	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE
RPE7	0195935R	RMC73S-2A273JR	RY92	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RPE8	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RY94	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE
RPF3	0195935R	RMC73S-2A273JR	RY95	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RPF4	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RY96	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RPF6	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RY98	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RPF7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RY99	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
RPF8	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE	RYA1	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE
RY01	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYA2	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY02	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYA4	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE
RY03	0700027M	RES.-CARBON FLM 1/16W 100-JB	RYA5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY04	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RYA6	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RY05	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYA8	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY06	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYA9	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
RY07	0700027M	RES.-CARBON FLM 1/16W 100-JB	RYC1	0700064M	RES.-CARBON FLM 1/16W 56K-JB
RY08	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RYC2	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY09	0195883R	RES 2125 CHIP 1/16W 220J TAPE	RYC4	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RY10	0195883R	RES 2125 CHIP 1/16W 220J TAPE	RYC5	0700027M	RES.-CARBON FLM 1/16W 100-JB
RY11	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RYC6	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RY12	0700027M	RES.-CARBON FLM 1/16W 100-JB	RYC8	0700039M	RES.-CARBON FLM 1/16W 820-JB
RY13	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYG3	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RY14	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYG4	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY15	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYH1	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
RY16	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RYH2	0195935R	RMC73S-2A273JR
RY17	0195889R	RES.2125 CHIP 1/16W 290J TAPE	RYH3	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RY18	0100123M	RES.-CARBON FLM 1/8W 270K-JB	RYH7	0700032M	RES.-CARBON FLM 1/16W 220-JB
RY19	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	RYH8	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY20	0100117M	RES.-CARBON FLM 1/8W 150K-JB	RYJ7	0700032M	RES.-CARBON FLM 1/16W 220-JB
RY31	0195871R	RMC73S-2A750JR	RYJ8	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RY32	0195871R	RMC73S-2A750JR			TERMINAL PWB ASSEMBLY
RY33	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE			(TERMINAL, CONTROL A/B/C, SYNC)
RY34	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE			TERMINAL PWB RESISTORS
RY35	0195871R	RMC73S-2A750JR			
RY36	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R554	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RY37	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R555	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RY38	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R556	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RY39	0195887R	RES 2125 CHIP 1/16W 330J TAPE	R557	0700032M	RES.-CARBON FLM 1/16W 220-JB
RY40	0100047M	RES.-CARBON FLM 1/8W 180-JB	R558	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY41	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE	R561	0700027M	RES.-CARBON FLM 1/16W 100-JB
RY42	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R562	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY43	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R563	0700032M	RES.-CARBON FLM 1/16W 220-JB
RY44	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R564	0700032M	RES.-CARBON FLM 1/16W 220-JB
RY47	0195871R	RMC73S-2A750JR	R565	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RY50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R566	0100057M	RES.-CARBON FLM 1/8W 470-JB
RY51	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE			

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R567	0100057M	RES.-CARBON FLM 1/8W 470-JB	R5R9	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE
R568	0100057M	RES.-CARBON FLM 1/8W 470-JB	R5T0	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R572	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R5T1	0195897R	RES 2125 CHIP 1/16W 820J TAPE
R573	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R5T2	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R574	0700032M	RES.-CARBON FLM 1/16W 220-JB	R5T3	0100055M	RES.-CARBON FLM 1/8W 390-JB
R575	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5T5	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE
R576	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5T7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R577	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5T8	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R578	0700027M	RES.-CARBON FLM 1/16W 100-JB	R5T9	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R579	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R5U1	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R582	0195895R	RES.2125 CHIP 1/10W 680J TAPE	R5U2	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R583	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R5U3	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R584	0195935R	RMC73S-2A273JR	R5U4	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R589	0700032M	RES.-CARBON FLM 1/16W 220-JB	R5U5	0700027M	RES.-CARBON FLM 1/16W 100-JB
R5A1	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R5U6	0700032M	RES.-CARBON FLM 1/16W 220-JB
R5A2	0195935R	RMC73S-2A273JR	R755	0147552	RES.-WIRE WOUND 5W 33-JM CEMENTED
R5A3	0700027M	RES.-CARBON FLM 1/16W 100-JB	RA100	0100123M	RES.-CARBON FLM 1/8W 270K-JB
R5C9	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RA101	0100123M	RES.-CARBON FLM 1/8W 270K-JB
R5G4	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RA102	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5G5	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RA91	0100041M	RES.-CARBON FLM 1/8W 100-JB
R5G6	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE	RA92	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R5G7	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RA93	0100041M	RES.-CARBON FLM 1/8W 100-JB
R5G8	0700027M	RES.-CARBON FLM 1/16W 100-JB	RA94	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5G9	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RA95	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R5H0	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RA96	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R5H1	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE	RA97	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5H2	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE	RA98	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
R5H3	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE	RA99	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5H4	0700027M	RES.-CARBON FLM 1/16W 100-JB	RC91	0187038M	RES.-CARBON FLM 1/16W 75-J
R5H8	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE	RG01	0187038M	RES.-CARBON FLM 1/16W 75-J
R5J1	0700027M	RES.-CARBON FLM 1/16W 100-JB	RG02	0187038M	RES.-CARBON FLM 1/16W 75-J
R5J2	0700027M	RES.-CARBON FLM 1/16W 100-JB	RG03	0187038M	RES.-CARBON FLM 1/16W 75-J
R5J3	0195889R	RES.2125 CHIP 1/10W 390J TAPE	RG04	0700036M	RES.-CARBON FLM 1/16W 470-JB
R5L0	0195889R	RES.2125 CHIP 1/10W 390J TAPE	RG05	0700036M	RES.-CARBON FLM 1/16W 470-JB
R5L1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RG10	0700027M	RES.-CARBON FLM 1/16W 100-JB
R5P8	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	RG11	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R5P9	0195883R	RES 2125 CHIP 1/16W 220J TAPE	RG12	0700035M	RES.-CARBON FLM 1/16W 390-JB
R5Q0	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RG13	0700032M	RES.-CARBON FLM 1/16W 220-JB
R5Q1	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RG14	0100051M	RES.-CARBON FLM 1/8W 270-JB
R5Q2	0195935R	RMC73S-2A273JR	RG17	0700027M	RES.-CARBON FLM 1/16W 100-JB
R5Q3	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE	RG18	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE
R5Q4	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RG19	0700035M	RES.-CARBON FLM 1/16W 390-JB
R5Q5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RG20	0700032M	RES.-CARBON FLM 1/16W 220-JB
R5Q6	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RG21	0100051M	RES.-CARBON FLM 1/8W 270-JB
R5Q7	0100055M	RES.-CARBON FLM 1/8W 390-JB	RG24	0700027M	RES.-CARBON FLM 1/16W 100-JB
R5Q8	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RG25	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R5Q9	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RG26	0700035M	RES.-CARBON FLM 1/16W 390-JB
R5R0	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE	RG27	0700032M	RES.-CARBON FLM 1/16W 220-JB
R5R1	0195935R	RMC73S-2A273JR	RG28	0100051M	RES.-CARBON FLM 1/8W 270-JB
R5R2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RG30	0700027M	RES.-CARBON FLM 1/16W 100-JB
R5R3	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RG31	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5R4	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RG33	0700034M	RES.-CARBON FLM 1/16W 330-JB
R5R5	0100055M	RES.-CARBON FLM 1/8W 390-JB	RG34	0700033M	RES.-CARBON FLM 1/16W 270-JB
R5R6	0700027M	RES.-CARBON FLM 1/16W 100-JB	RG35	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R5R7	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RG36	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R5R8	0195935R	RMC73S-2A273JR	RG37	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RG38	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RK46	0195248R	RFS 3216 CHIP 1/8 W 000 TAPE
RG39	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK47	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RG40	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RK48	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RG41	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK49	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RG42	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK50	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RG43	0100041M	RES.-CARBON FLM 1/8W 100-JB	RK51	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RG44	0100041M	RES.-CARBON FLM 1/8W 100-JB	RK53	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RG45	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK54	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RGM1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RK55	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RGM2	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RK56	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RGM3	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RK57	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RGM4	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RK58	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RGM5	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RK59	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK01	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK60	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK02	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK61	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK03	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK62	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK04	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK63	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK05	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK64	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK06	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RK65	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK09	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK67	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK10	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RK68	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK11	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK69	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK12	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RK70	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK13	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK71	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK14	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK72	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK15	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK73	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK16	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK75	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK17	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK76	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK18	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK83	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK19	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK84	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK20	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK85	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK21	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK88	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK22	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK89	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK23	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RK92	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK24	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RK93	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK25	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RK97	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK26	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RK99	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK27	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKA1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK28	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKA2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK29	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RKA3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK30	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKA5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK31	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKA6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK32	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RKF1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK33	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKF2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK34	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKF3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK35	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RKF4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK36	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKF5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK37	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RKF6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK38	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RKF7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK39	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKF8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK40	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RKF9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK41	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RKG1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK42	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKG2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK43	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKG3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RK44	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RKG4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RK45	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RKG5	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
RKG6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RS75	0700027M	RES.-CARBON FLM 1/16W 100-JB
RKG7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RS76	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RKJ1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RS77	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RKJ2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RS80	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RKJ3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RS81	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RKJ4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RT01	0187038M	RES.-CARBON FLM 1/16W 75-J
RKJ5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RT02	0187038M	RES.-CARBON FLM 1/16W 75-J
RS03	0195942R	RESISTOR MINI-CHIP RMC1/16 51K-J TAPE	RT03	0187038M	RES.-CARBON FLM 1/16W 75-J
RS04	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE	RT04	0700027M	RES.-CARBON FLM 1/16W 100-JB
RS05	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT05	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS07	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT06	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS08	0195892R	RES 2125 CHIP 1/10W 510-J TAPE	RT07	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS09	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT11	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS10	0100061M	RES.-CARBON FLM 1/8W 680-JB	RT13	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS11	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	RT14	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS13	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT15	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RS14	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE	RT17	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS15	0113737M	RES.-CARBON FLM 1/2W 330JB	RT18	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS16	0187082M	RES.-CARBON FLM 1/16W 5.1K-JB	RT19	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS17	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT20	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS18	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT21	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS19	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT22	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS20	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RT23	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS21	0195948R	RESISTOR MINI-CHIP RMC1/16 91K-J TAPE	RT24	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS33	0700061M	RES.-CARBON FLM 1/16W 33K-JB	RT25	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS34	0700059M	RES.-CARBON FLM 1/16W 27K-JB	RT26	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS35	0119651M	RES.-MTL FLM 1/8W 68K-FB	RT27	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS36	0119641M	RES.-MTL FLM 1/8W 27K-FB	RT28	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS37	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RT30	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS38	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RT31	0700027M	RES.-CARBON FLM 1/16W 100-JB
RS39	0119653M	RES.-MTL FLM 1/8W 82K-FB	RT32	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS40	0119643M	RES.-MTL FLM 1/8W 33K-FB	RT33	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS41	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT34	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS42	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RT35	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS48	0700027M	RES.-CARBON FLM 1/16W 100-JB	RT36	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS49	0700027M	RES.-CARBON FLM 1/16W 100-JB	RT37	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS50	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RT38	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RS51	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	RT43	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS52	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT44	0700027M	RES.-CARBON FLM 1/16W 100-JB
RS54	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	RT45	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE
RS55	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RT46	0195935R	RMC73S-2A273JR
RS56	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RT51	0700027M	RES.-CARBON FLM 1/16W 100-JB
RS57	0700027M	RES.-CARBON FLM 1/16W 100-JB	RT52	0700027M	RES.-CARBON FLM 1/16W 100-JB
RS58	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RT66	0700032M	RES.-CARBON FLM 1/16W 220-JB
RS59	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT67	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RS60	0100121M	RES.-CARBON FLM 1/8W 220K-JB	RT68	0195893R	RES 2125 CHIP 1/16W 560J TAPE
RS61	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE	RT69	0195889R	RES.2125 CHIP 1/10W 390J TAPE
RS62	0119634M	RES.-MTL FLM 1/8W 13K-FB	RT70	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE
RS63	0119626M	RES.-MTL FLM 1/8W 6.2K-FB	RT71	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS64	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT72	0195895R	RES.2125 CHIP 1/10W 680J TAPE
RS66	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT73	0195879R	RES 2125 CHIP 1/16W 150J TAPE
RS70	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	RT74	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
RS71	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RT75	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RS72	0195935R	RMC73S-2A273JR	RT76	0195879R	RES 2125 CHIP 1/16W 150J TAPE
RS73	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT77	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
RS74	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RT78	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE

REPLACEMENT PARTS LIST

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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RT80	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	RTR2	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RT81	0195935R	RMC73S-2A273JR	RTR3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RT82	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RTR4	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
RT83	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RTR5	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RT84	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RTR6	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RT85	0195891R	RES 2125 CHIP 1/16W 470J TAPE	RTR7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RT86	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	RTR8	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RT87	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RTR9	0195889R	RES.2125 CHIP 1/10W 390J TAPE
RT88	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE	RTS1	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RT89	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RTS2	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RT90	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RTS3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RT92	0700032M	RES.-CARBON FLM 1/16W 220-JB	RTS4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RT93	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RTS5	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RT94	0195889R	RES.2125 CHIP 1/10W 390J TAPE	RTS6	0195889R	RES.2125 CHIP 1/10W 390J TAPE
RT95	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RTS7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RT96	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	RTS8	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RT97	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RTS9	0195889R	RES.2125 CHIP 1/10W 390J TAPE
RT98	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	RTT1	0700027M	RES.-CARBON FLM 1/16W 100-JB
RT99	0195887R	RES 2125 CHIP 1/16W 330J TAPE	RTT2	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RTA1	0195879R	RES 2125 CHIP 1/16W 150J TAPE	RTT3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RTA2	0195879R	RES 2125 CHIP 1/16W 150J TAPE	RTT4	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RTA3	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RTT5	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RTA4	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RTT6	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RTA6	0700032M	RES.-CARBON FLM 1/16W 220-JB	RTT8	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RTA7	0195897R	RES.2125 CHIP 1/16W 820J TAPE	RTT9	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RTA8	0195889R	RES.2125 CHIP 1/10W 390J TAPE	RTU2	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RTA9	0195893R	RES 2125 CHIP 1/16W 560J TAPE	RTV1	0195868R	RESISTOR MINI-CHIP RMC1/10 56-J TAPE
RTC1	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	RTV2	0195868R	RESISTOR MINI-CHIP RMC1/10 56-J TAPE
RTC2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RTV3	0195868R	RESISTOR MINI-CHIP RMC1/10 56-J TAPE
RTC3	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE	RTV4	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RTC4	0195906R	RESISTOR MINI-CHIP RMC1/16 1.8K-J TAPE	RTV5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RTC5	0195879R	RES 2125 CHIP 1/16W 150J TAPE	RY91	0187038M	RES.-CARBON FLM 1/16W 75-J
RTC6	0195879R	RES 2125 CHIP 1/16W 150J TAPE	RY92	0187038M	RES.-CARBON FLM 1/16W 75-J
RTC7	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RY93	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RTC8	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RY94	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RTC9	0100067M	RES.-CARBON FLM 1/8W 1.2K-JB	RY95	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RTE1	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE			
RTE2	0195935R	RMC73S-2A273JR			DEFLECTION PWB ASSEMBLY
RTE3	0195875R	RES 2125 CHIP 1/16W 100J TAPE			DEFLECTION PWB RESISTORS
RTE4	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	R601	0110245S	RES.-MTL OXIDE FLM 1.0K-JS
RTE6	0195897R	RES 2125 CHIP 1/16W 820J TAPE	R605	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RTE7	0100051M	RES.-CARBON FLM 1/8W 270-JB	R606	0700065M	RES.-CARBON FLM 1/16W 68K-JB
RTE8	0100051M	RES.-CARBON FLM 1/8W 270-JB	R607	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
RTE9	0100051M	RES.-CARBON FLM 1/8W 270-JB	R608	0113739M	RES.-CARBON FLM 1/2W 390-JB
RTF1	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	R609	0113774M	RESISTOR CARBON FILM SRD1/2P-B 10K-J
RTF2	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R611	0110215S	RES.-MTL OXIDE 2W56-J
RTF3	0195902R	RES 2125 CHIP 1/16W 1.2KJ TAPE	R612	0110215S	RES.-MTL OXIDE 2W56-J
RTF4	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R613	0110217S	RES.-MTL OXIDE FLM 68-JS
RTF5	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE	R614	0110217S	RES.-MTL OXIDE FLM 68-JS
RTF6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R615	0114179M	RESISTOR-CARBON FILM SRD 1/4 PF 5.6K-J
RTF7	0195895R	RES.2125 CHIP 1/10W 680J TAPE	R616	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RTF8	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R617	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RTF9	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE	R618	0110133S	RES.-MTL OXIDE FLM 330-JS
RTQ1	0100123M	RES.-CARBON FLM 1/8W 270K-JB	R619	0113701M	RESISTOR CARBON FILM SRD1/2P-B 10-J
RTQ2	0100123M	RES.-CARBON FLM 1/8W 270K-JB	R620	0113684M	RES.-CARBON FLM 1/2W 2.2-J
RTR1	0700054M	RES.-CARBON FLM 1/16W 10K-JB			

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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R621	0113686M	RES.-CARBON FLM 1/2W 2.7-J	RF69	AT01457	RES.MTL GRAZD FLM 1W 330K OHM
R622	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RF70	0700061M	RES.-CARBON FLM 1/16W 33K-JB
R623	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RF71	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
R624	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RF73	AT01457	RES.MTL GRAZD FLM 1W 330K OHM
R625	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RF74	AT01457	RES.MTL GRAZD FLM 1W 330K OHM
R626	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RF75	AT01457	RES.MTL GRAZD FLM 1W 330K OHM
R627	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RF76	0179593	RES.-MTL.GRAZED FLM 330K-J 1/2W
R628	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RF77	0179593	RES.-MTL.GRAZED FLM 330K-J 1/2W
R629	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RF78	0179593	RES.-MTL.GRAZED FLM 330K-J 1/2W
R632	0113769M	RESISTOR CARBON FILM SRD1/2P-B 6.2K-J	RF79	0700061M	RES.-CARBON FLM 1/16W 33K-JB
R633	0188098M	RES.-CARBON FLM 1/2W 3.9-JB	RF80	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
R634	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RF81	0110245S	RES.-MTL OXIDE FLM 1.0K-JS
R635	0700038M	RES.-CARBON FLM 1/16W 680-JB	RF82	0110163S	RES.-MTL OXIDE FLM 5.6K-JS
R642	0110139S	RES.-MTL OXIDE FLM 1W 560-JS	RH23	0114057M	RESISTOR-CARBON FILM SRD 1/4 PF 47-J
R643	0100067M	RES.-CARBON FLM 1/8W 1.2K-JB	RH24	0114137M	REG.-CARBON FILM 1/4W 180-JB
R644	0100067F	RES.-CARBON FLM 1/8W 1.2K-JF	RH25	0148054	RES.-WIRE WOUND 1.0-K 3W
R701	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RH27	0148054	RES.-WIRE WOUND 1.0-K 3W
R702	0700032M	RES.-CARBON FLM 1/16W 220-JB	RH29	0100079M	RES.-CARBON FLM 1/8W 3.9K-JB
R703	0110153S	RES.-MTL OXIDE FLM 2.2K-JS	RH30	0113783M	RES.-CARBON FLM 1/2W 22K-JB
R704	0140368S	RSL-392J10L	RH31	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R705	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RH32	0113791M	RES.-CARBON FLM 1/2W 47K-JB
R706	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RH33	0113793M	RESISTOR CARBON FILM SRD1/2P-B 56K-J
R707	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RH34	0100063M	RES.-CARBON FLM 1/8W 820-JB
R708	0700058M	RES.-CARBON FLM 1/16W 22K-JB	 RH38	0119623M	RES.-MTL FLM 1/8W 4.7K-FB
R709	0700063M	RES.-CARBON FLM 1/16W 47K-JB	 RH39	0119621M	RES.-MTL FLM 1/8W 3.9K-FB
R710	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RH66	0700054M	RES.-CARBON FLM 1/16W 10K-JB
 R711	AT00435S	RES.MTL OXIDE FLM 2W 0.75 OHM	RH67	0100059M	RES.-CARBON FLM 1/8W 560-JB
 R712	AT00435S	RES.MTL OXIDE FLM 2W 0.75 OHM	RH68	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R713	0100031M	RES.-CARBON FLM 1/8W 39-JB	 RH69	AW00075	TRIMMER RESISTOR RV06 2K-B
R718	0113729M	RES.-CARBON FLM 1/2W 150-JB	RH70	0100083M	RES.-CARBON FLM 1/8W 5.6K-JB
R724	0113754M	RES.-CARBON FLM 1/2W 1.5K-JB	RH71	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R726	0140951M	RES.MTL FLM 1/2W 100K-JB	RH72	0100069M	RES.-CARBON FLM 1/8W 1.5K-JB
R727	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RH73	0700027M	RES.-CARBON FLM 1/16W 100-JB
R730	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RH74	0100129M	RES.-CARBON FLM 1/8W 470K-JB
R731	0700059M	RES.-CARBON FLM 1/16W 27K-JB	RH76	0119607M	RES.-MTL FLM 1/8W 1.0K-FB
R732	0144051	RES.-WIRE WOUND 5W 1.5K-J	RH77	0119623M	RES.-MTL FLM 1/8W 4.7K-FB
R738	0140321S	RES. WIRE WOUND 2.2K-J 5W	RH79	0147756	RES.-WIRE WOUND 10W 82-JM CEMENTED
R740	0100083M	RES.-CARBON FLM 1/8W 5.6K-JB	RH80	0100127M	RES.-CARBON FLM 1/8W 390K-JB
R741	AW00077	TRIMMER RESISTOR	RP01	AT00401S	RES.MTL OXIDE FLM 3W 39K OHM
R742	0100083M	RES.-CARBON FLM 1/8W 5.6K-JB	RP02	AT01047S	RES.MTL FLM 1W 4.7 OHM
R743	0100113M	RES.-CARBON FLM 1/8W 100K-JB	RP03	AT01047S	RES.MTL FLM 1W 4.7 OHM
RF51	AT01457	RES.MTL GRAZD FLM 1W 330K OHM	RP04	0110163S	RES.-MTL OXIDE FLM 5.6K-JS
RF52	AT01457	RES.MTL GRAZD FLM 1W 330K OHM	RP06	0113805M	RESISTOR CARBON FILM SRD1/2P-B 180K-J
RF53	0179593	RES.-MTL.GRAZED FLM 330K-J 1/2W	RP84	AT00405S	RES.MTL OXIDE FLM 3W 56K OHM
RF54	0100055M	RES.-CARBON FLM 1/8W 390-JB	RP85	0100031M	RES.-CARBON FLM 1/8W 39-JB
RF55	0700027M	RES.-CARBON FLM 1/16W 100-JB			IR PWB ASSEMBLY
RF56	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB			IR PWB RESISTORS
RF57	0700054M	RES.-CARBON FLM 1/16W 10K-JB			
RF58	0100133M	RES.-CARBON FLM 1/8W 680K-JB			
RF59	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RM01	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
RF60	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RM02	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
RF61	0700025M	RES.-CARBON FLM 1/16W 68-J	RM03	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RF63	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RM04	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RF65	0700027M	RES.-CARBON FLM 1/16W 100-JB	RM05	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RF67	AT01457	RES.MTL GRAZD FLM 1W 330K OHM	RM06	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
RF68	AT01457	RES.MTL GRAZD FLM 1W 330K OHM	RM07	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE

REPLACEMENT PARTS LIST

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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RM08	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R322	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RM09	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R323	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RM12	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R324	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RM13	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R325	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RM14	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R326	0195883R	RES 2125 CHIP 1/16W 220J TAPE
RM15	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R327	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RM16	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE	R328	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RM17	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R330	0700027M	RES.-CARBON FLM 1/16W 100-JB
RR01	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R331	0700027M	RES.-CARBON FLM 1/16W 100-JB
RR02	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R332	0700027M	RES.-CARBON FLM 1/16W 100-JB
RR03	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R333	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RR04	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R334	0700027M	RES.-CARBON FLM 1/16W 100-JB
RR05	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R335	0700027M	RES.-CARBON FLM 1/16W 100-JB
RR10	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R336	0700027M	RES.-CARBON FLM 1/16W 100-JB
RR11	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R337	0700027M	RES.-CARBON FLM 1/16W 100-JB
RR12	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R338	0700027M	RES.-CARBON FLM 1/16W 100-JB
RR13	0195891R	RES 2125 CHIP 1/16W 470J TAPE			
RR14	0195975R	RMC73S-2A105JR			
RR20	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			POWER PWB ASSEMBLY (POWER, CPT, VM, FILTER)
RR21	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			POWER PWB RELAYS
RR22	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			
RR23	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	 S901	FJ00071	AC POWER RELAY ALK3213
RR24	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	 S902	FJ00071	AC POWER RELAY ALK3213
RR25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	 S903	FJ00071	AC POWER RELAY ALK3213
RR26	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			
RR27	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			TERMINAL PWB ASSEMBLY (TERMINAL, CONTROL A/B/C, SYNC)
RR28	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			TERMINAL PWB SWITCHES
RR29	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			
RR30	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			
RR32	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	SG01	2632851	5KEY TACT SWITCH
RR33	0195875R	RES 2125 CHIP 1/16W 100J TAPE	SG02	2634621	SWITCH BLOCK VR
			SG03	2634621	SWITCH BLOCK VR
		YUV PWB ASSEMBLY YUV PWB RESISTORS			
R301	0195936R	RESISTOR MINI-CHIP RMC1/16 30K-J TAPE			
R302	0195911R	RESISTOR MINI-CHIP RMC1/16 3.0K-J TAPE	 SP451	GK00262	SPEAKER 6X12D
R303	0195888R	RESISTOR MINI-CHIP RMC1/10 360-J TAPE	 SP452	GK00262	SPEAKER 6X12D
R304	0700027M	RES.-CARBON FLM 1/16W 100-JB			
R305	0700027M	RES.-CARBON FLM 1/16W 100-JB			POWER PWB ASSEMBLY (POWER, CPT, VM, FILTER)
R306	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE			POWER PWB TRANSFORMERS
R307	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
R308	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE			
R309	0195875R	RES 2125 CHIP 1/16W 100J TAPE	 T901	BT01041	POWER TRANSFORMER (MM1)
R310	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	 T951	BT01051	POWER TRANSFORMER (MM1 SUB)
R311	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
R312	0195891R	RES 2125 CHIP 1/16W 470J TAPE			DEFLECTION PWB ASSEMBLY DEFLECTION PWB TRANSFORMERS
R313	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
R314	0195895R	RES.2125 CHIP 1/10W 680J TAPE			
R315	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	 T701	2260261	DRIVE TRANSFORMER
R316	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	 T702	BZ01972	COIL CHOKE TRANS. 4.23MH
R317	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE	 TH01	BW00757	FBT HVT1735YD-RC WITH LEAD (MM1)
R318	0195875R	RES 2125 CHIP 1/16W 100J TAPE	 TP01	BS00011	H.DRIVE TRANS
R319	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
R320	0195875R	RES 2125 CHIP 1/16W 100J TAPE			
R321	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE			

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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		MAIN PWB ASSEMBLY MAIN PWB ASSEMBLY UNIT	XR01 XR02	BP00141 2163971R	RESONATOR(CST8.00MTW) VFL-CSA4.00MG-TF01
U3DYC UFC	HP00701 CS00301	3DYCSEP UNIT KC-301 HC5601 ASS'Y			YUV PWB ASSEMBLY YUV PWB CRYSTALS
		NTSC PWB ASSEMBLY (NTSC, AUDIO, DF, HV, CHOPPER, SUB VM) NTSC PWB TUNER	X301 X302	2791501 2168771	CRYSTAL HC-49/U X'TAL CSB503F30
U101	HC00381	FRONT-END UNIT VP-50SR			MAIN CHASSIS ASSEMBLY MAIN CHASSIS MISCELLANEOUS PARTS
		TERMINAL PWB ASSEMBLY (TERMINAL, CONTROL A/B/C, SYNC) TERMINAL PWB ASSEMBLY UNIT	#010 #015 #020 #030 #040 #060 #070 #080 #082 #084 #086 #090 #100 #110 #160 #220 #225 #230 #232 #236 #240 #242 #300 #320 #330 #340 #342 EANT EMF N001 NAC NANT NEAT NVT PANT	NT01291 3744174 NT01301 NT01221 NT01222 PH06401 PH06412 NA40041 4520881 3875351 3814662 NA40071 4319361 4520232 4519503 MN01851 3814662 NA42131 MN01971 3782714 MQ00681 MN01981 NA40051 NA40591 NA40021 NA40031 4342651 2979173 2908705 3787482 2169512 2169513 3763751 2169513 2687791	CHASSIS FRAME R MM1 CLAMP 20 L16 V0 CHASSIS FRAME L MM1 MM1 CHASSIS SUPPORT MM1CHASSIS SUPPORT R TERMINAL HOLDER MM1 TERMINAL LABEL MM1-2 IR HOLD METAL MM1 M3*8 SCREW WITH WASHER WIRE CLAMP 18 PLASTIC RIVET(BK) CHAS.CONNECT MTL MM1 3*12 B-T SCREW WITH WASHER 4X16 D TAPPING SCREW SWCH16A 3X12 B TAPPING SCREW SWCH15A CHOPPER PROTECTOR PLASTIC RIVET(BK) YUV SUPPORT PVC SPACER 36SDX PCB SUPPORT 10S NYLON CUSHION 36SDX YUV PVC 36SDX AUDIO HOLD METAL MM1 AUDIO SUPPORT MTL 36 D-SUB MTL FRONT MM1 D-SUB METAL REAR MM1 SCREW WASHER 4*12 PLUG WITH COAXIAL CABLE CONNE.4P L=820 PCB HOLDER (16L) CLAMP NOISE FILTER ZCAT3035 COIL LX-ZCAT2032 SK BINDER COIL LX-ZCAT2032 F-US ADAPTOR
 V1	DE01351	PICTURE TUBE A90AGW14X04			
		MAIN PWB ASSEMBLY MAIN PWB FILTER			
X001	2787526	VFL-KSS HC-49/U 4000			
		POWER PWB ASSEMBLY (POWER, CPT, VM, FILTER) POWER PWB FILTERS			
 X901	AJ00322	ENC271D-14A			
		TERMINAL PWB ASSEMBLY (TERMINAL, CONTROL A/B/C, SYNC) TERMINAL PWB FILTERS			
X502	2168771	X'TAL CSB503F30			
XG01	BJ00391R	LC FILTER 390L7R0SST-ELKAW150GB			
XG02	BJ00391R	LC FILTER 390L7R0SST-ELKAW150GB			
XG03	BJ00391R	LC FILTER 390L7R0SST-ELKAW150GB			
XS00	2786681	CERAMIC OSCILLATOR 500KHZ			
XT04	2169548	LX-100NS DELAY-EQU			
XT05	2169548	LX-100NS DELAY-EQU			
XT06	2169548	LX-100NS DELAY-EQU			
XT10	BJ00391R	LC FILTER 390L7R0SST-ELKAW150GB			
XT11	BJ00391R	LC FILTER 390L7R0SST-ELKAW150GB			
XT12	BJ00391R	LC FILTER 390L7R0SST-ELKAW150GB			
		IR PWB ASSEMBLY IR PWB RESONATORS	B EMD1 EMD2 EMD3 JJIG1	JK04562 2674635 2674636 2674633 2959057	MM1 MAIN PWB #2 10P PLUG PIN 12P FJ CONNECTOR (TYPE 12PL-FJ) PLUG 7P PIN POST (PH 8P)
XM01	2163974	VFL-CSA 8.00M			

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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
JY05	EU00741	TERMINAL PIN(2P)	NI933	3446476	HEAT SINK H30P10
N954	3446477	HEAT SINK H60P10	NI951	3445328	METAL PARTS FOR VTR (HEAT SINK)
N955	3446476	HEAT SINK H30P10	NL01	NJ02211	VM PWB HOLDER
N9F2	3446478	HEATSINK H40P10	NL02N	8781646	SCREW 4 X 16 TAPPING
NA954	4520883	3*12 SCREW WITH WASHER	NQ08	MC00104	HEAT SINK P10 H45 19 A6063S-75
NS	9414017	SILICONE COMPOUND(G-746)	NSF	2169513	COIL LX-ZCAT2032
P3DYC	ED00572	CP-TAC-L15X-A1	NSSF	3763751	SK BINDER
PFC1	2675593	15P PLUG PIN	P31	2665272	4P PLUG PIN WITH BASE
PFC2	2675593	15P PLUG PIN	PCT	2902252	12P PLUG PIN
PGM1	2959054	PINPOST 5P PH	PCV	2959052	PIN POST (PH 3P)
PGM2	2959056	PIN POST(7P)	PMF	2959053	5P POST PIN 4P TYPE PH
PMA	2959061	PINPOST 11P PH	PPA	2902263	PLUG PIN SUB MINI 4P
PMF	2959053	5P POST PIN 4P TYPE PH	PPC	2902267	PLUG PIN SUB MINI 8P
PMN1	ED00575	CP-TAC-L18X-A1	PPD1	2723094	PLUG CP-05BP5R0V-SD-53415
PMN2	ED00576	CP-TAC-L20X-A1	PPD2	2902265	PLUG PIN SUB MINI 6P
PMR	ED00573	CP-TAC-L16X-A1	PPF	2723092	PLUG CP-03BP5R0V-SD-53415
PMS1	ED00565	CP-TAC-L09X-A1	PPM1	2723093	PLUG CP-04BP5R0V-SD-53415
PMS2	ED00567	CP-TAC-L11X-A1	PPM2	2902266	PLUG PIN SUB MINI 7P
PMT1	ED00576	CP-TAC-L20X-A1	PVT	2902264	PLUG PIN SUB MINI 5P
PMT2	ED00576	CP-TAC-L20X-A1	PVV	2902262	PLUG PIN SUB MINI 3P
PMT3	ED00567	CP-TAC-L11X-A1	PW	2663133	4P PLUG PIN WITH BASE
PPM1	2723093	PLUG CP-04BP5R0V-SD-53415	Z1	9449552	NITTOO TAPE NO747 WIDTH-9
PPM2	2902266	PLUG PIN SUB MINI 7P	Z802	9374575	UL CSA1007-24HP CODE GREEN
Z007	9413926	SILICON RUBBER	Z803	9485158	HOT MELT (AX-1503C)
ZC003	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW	Z806	2787213	INSULATOR FOR TRANSISTOR
		POWER PWB ASSEMBLY	Z818	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW
		(POWER, CPT, VM, FILTER)	Z901	9451115	UL CSA TUBE NO.0
		POWER PWB MISCELLANEOUS PARTS	ZH970	9553958	ADHESIVE TAPE (PERMACEL P212 19W)
					NTSC PWB ASSEMBLY
#400	MD04491	SHIELD PLATE CPT MM1			(NTSC, AUDIO, DF, HV, CHOPPER, SUB VM)
B	JK04572	MM1 POWER PWB #2			NTSC PWB MISCELLANEOUS PARTS
E801	EY00411	W-FOCUS CPT SOCKET			
 E901	EV00421	POWER CORD(Noise Filter 125V/6A)	#001	NA40051	AUDIO HOLD METAL MM1
E902	AZ00109M	PROTECTOR CRXT491007	#002	4159427	3X10 SCREW WITH WASHER STEEL
E903	AZ00109M	PROTECTOR CRXT491007	#100	MD04831	NTSC FRONT SHIELD
E904	3776571	CORD HOLDER 3	#200	MD04841	NTSC REAR SHIELD
E905	AZ00109M	PROTECTOR CRXT491007	B	JK04582	MM1 NTSC PWB #2
E910	2782611	CENTER PIN	EGN	EF08671	EH CONNECTER(C-B) WITH SHIELDWIRE
E911	2782611	CENTER PIN	EMX1	2957997	1J PUG CONNE. L=430
E912	2782611	CENTER PIN	ENA	2909177	6P CONNE.-BASE L=430
EDC	2997977	1J MINI CONNE. L=910	JY01	EU00241	TERMINAL(TERMINAL BOARD)
EFT	2957991	1J CONNE.L=150	JY02	EU00241	TERMINAL(TERMINAL BOARD)
EMX2	2956488	1J MINI-AMPIN CONNECTOR	JY03	EU00244	TERMINAL PIN(YBPBR)
ESF	EZ01001	FOCUS SCREEN LEAD	JY04	EU00242	TERMINAL(TERMINAL BOARD)
N806	4340676	HEATSINK A6MM	N405	3446862	VERTICAL HEAT SINK M1LXU
N807	4520883	3*12 SCREW WITH WASHER	N405A	4520883	3*12 SCREW WITH WASHER
N808	9414017	SILICONE COMPOUND(G-746)	N405B	8821234	NUT-3
N901	3763751	SK BINDER	PAT	2959052	PIN POST (PH 3P)
ND901B	4269926	WASHER PL-1252	PDCH	ED00508	CP-TAC-L12P-A1
ND934	3446472	HEATSINK	PDDF	ED00509	CP-TAC-L13P-A1
NF901	2721351	FUSE HOLDER	PDHV	ED00511	CP-TAC-L14P-A1
NF902	2721351	FUSE HOLDER	PJIG	2959054	PINPOST 5P PH
NF9A1	2721351	FUSE HOLDER	PMA	2959061	PINPOST 11P PH
NH970	2784342	CONDENSER COVER	PMN1	ED00515	CP-TAC-L18P-A1
NI901	MD02731	POWER HEAT SINK 36V.MONITOR	PMN2	ED00516	CP-TAC-L20P-A1

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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
PNA	2959055	CONNECTOR-6P(PH)	NQ705C	2786281	MICA SHEET
PPA	2902263	PLUG PIN SUB MINI 4P	NQ705X	NA42031	HEAT SINK SUPPORT
PSL	2902261	PLUGPIN SUB MINI 2P	NQ705Y	4243445	G51 INSULATION WASHER PL-11T
PSR	2902262	PLUG PIN SUB MINI 3P	NQ705Z	4319361	3*12 B-T SCREW WITH WASHER
PSVT	2959062	PIN POST (PH 12P)	NQ708	3446475	HEAT SINK H50 P10
PY01	ED00567	CP-TAC-L11X-A1	NQ711	MA00512	HEAT SINK H.C 2198M3
PY02	ED00567	CP-TAC-L11X-A1	NQH02	MD04362	FBT SHIELD MM1
		TERMINAL PWB ASSEMBLY	NQH02B	4159427	3X10 SCREW WITH WASHER STEEL
		(TERMINAL, CONTROL A/B/C, SYNC)	NQH02D	8815124	WASHER-3 LOCKING
		TERMINAL PWB MISCELLANEOUS PARTS	NTH01A	4194804	3X12 POLY WAVE SCREW
			NTH01B	4269926	WASHER PL-1252
			NTH01C	8821114	NUT,3
#001	NA40021	D-SUB MTL FRONT MM1	PD	2661752	3P PLUG PIN WITH BASE
#001	NJ00921	IR HOLDER A4Y	PDC	2661756	1P PLUG PIN WITH BASE
#002	NA40031	D-SUB METAL REAR MM1	PDCH	ED00568	CP-TAC-L12X-A1
B	JK04592	MM1 TERMINAL PWB #2	PDDF	ED00569	CP-TAC-L13X-A1
EAT	2909092	3P CONNE.-BASE L=620	PDH	2665272	4P PLUG PIN WITH BASE
ECT	2974336S	12P CONNE.-BASE L=390	PDHV	ED00571	CP-TAC-L14X-A1
EHV1	2723091	PLUG CP-02BP5R0V-SD-53415	PDV	2663132	3P PLUG PIN WITH BASE
EVT	2974126S	5P CONNE.-BASE L=390	PMD1	2674645	10P PLUG PIN
JT01	2673721	JACK- 3.5 PHONE	PMD2	2674646	12P FJ CONNECTOR (TYPE 12R-FJ)
JT02	EQ00221	15P D-SUB JACK	PMD3	2674643	7P PLUG PIN
JT91	EQ00221	15P D-SUB JACK	PPD1	2723094	PLUG CP-05BP5R0V-SD-53415
JY91	ES00022	3P(SW) PIN JACK WITH S	PPD2	2902265	PLUG PIN SUB MINI 6P
NDG06	NJ01171	LED HOLDER A5WS	Z008	9413926	SILICON RUBBER
NJT02	4527661	M2.6 INCH SCREW	Z702	9449553	TAPE-ADHESIVE W19 NITTO#223S(B PVC
NJT91	4527661	M2.6 INCH SCREW	ZC606	9485258	ADHESIVE-AX-1503C
NS01	3443231	SHIELD PLATE M1C TC-30	ZDF53	9451136	UL CSA TUBE NO.8
PGM1	2959054	PINPOST 5P PH	ZEDD3	9563446	EXCEED GLASS TUBE HG-2E 6
PGM2	2959056	PIN POST(7P)			
PGN	2902251	11P PLUG PIN			IR PWB ASSEMBLY
PGT	2902273	PLUGPIN SUB MINI 13P			IR PWB MISCELLANEOUS PARTS
PMS1	ED00505	CP-TAC-L09P-A1	B	JK04971	MM1 IR PWB #1
PMS2	ED00507	CP-TAC-L11P-A1	JM03	EY00581	SOCKET
PMT1	ED00516	CP-TAC-L20P-A1	JM04	EY00581	SOCKET
PMT2	ED00516	CP-TAC-L20P-A1	PMR	ED00513	CP-TAC-L16P-A1
PMT3	ED00507	CP-TAC-L11P-A1	PWK	2902242	PLUG PIN SUB MINI3P
PRC	2959052	PIN POST (PH 3P)			
PSVT	2959062	PIN POST (PH 12P)			YUV PWB ASSEMBLY
PWK	2902262	PLUG PIN SUB MINI 3P			YUV PWB MISCELLANEOUS PARTS
ZC08	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW			
		DEFLECTION PWB ASSEMBLY	B	JK05221	MM1 YUV PWB #1
		DEFLECTION PWB MISCELLANEOUS PARTS	PY01	ED00507	CP-TAC-L11P-A1
			PY02	ED00507	CP-TAC-L11P-A1
B	JK04962	MM1 DEFLEC.PWB #2			SPEAKER ASSEMBLY
EDD	EF00896	CO-01A-A0R0-121			SPEAKERS MISCELLANEOUS PARTS
EDD2	EF00897	CO-01A-A0R0-800			
EDD3	EF06452	CO-02C-A7R5-271LOCK			
ND705	MC00381	MM1 DIODE HEAT SINC	ESL	2976648	2P CONNE. L=1000
ND705A	4520883	3*12 SCREW WITH WASHER	ESR	2976656	3J EH CONNECTOR
NI601	4302896	MM1 VERTICAL HEAT SINK	Z101A	9449603	NITTOH TAPE #747
NQ601	3446473	HEATSINK H30 P10			
NQ604	3446472	HEATSINK			
NQ705	3442026	METAL PARTS FOR HOUT(HEAT SINK)			
NQ705B	2786301	TRANSISTOR SPACER (TO-3P)			

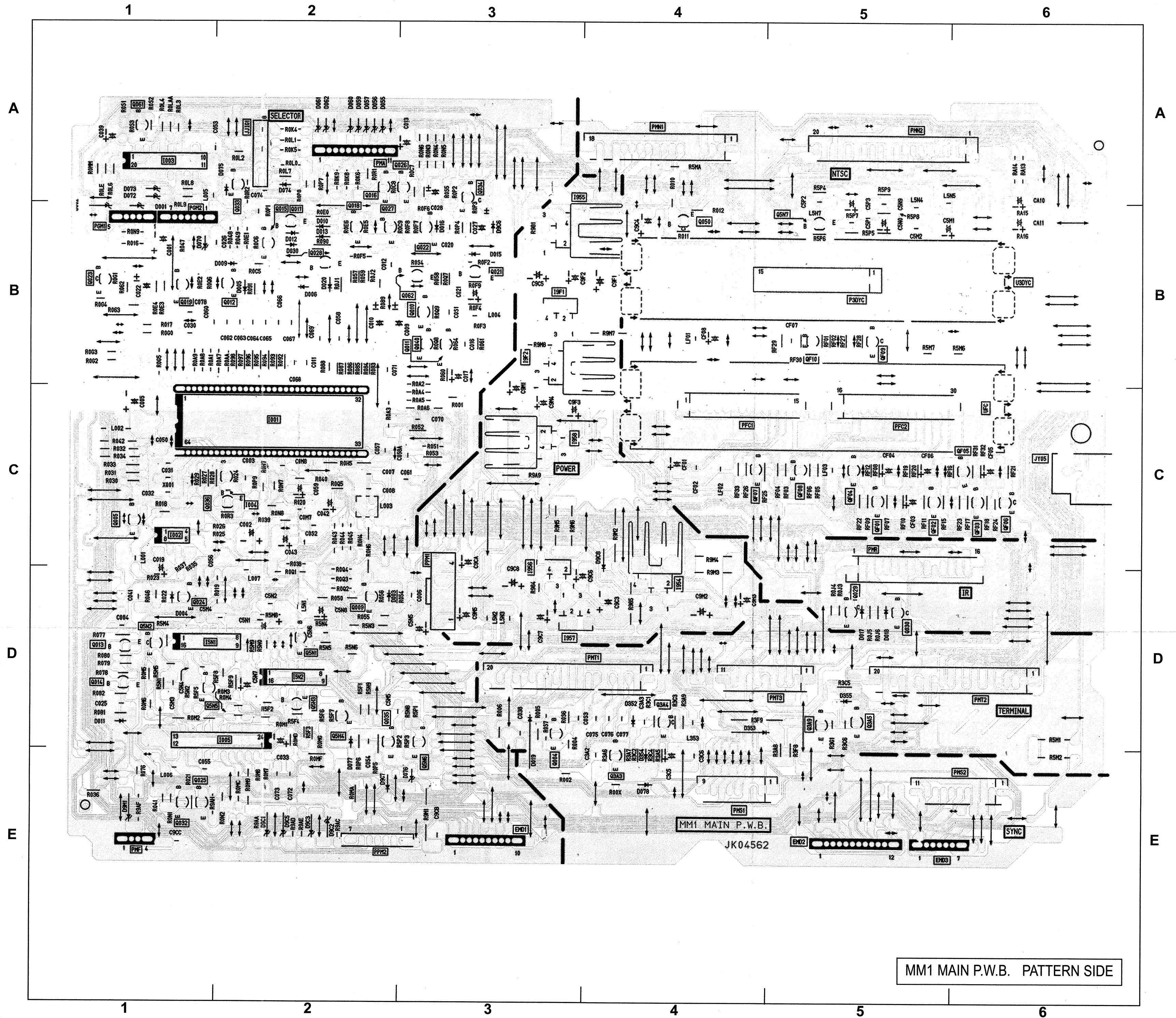
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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		CPT FIXING ASSEMBLY	EPD1	EF05352	5P CONNE. L=910
		CPT MISCELLANEOUS PARTS	EPD2	2973805S	6P CONNE. L=820
E602	2908402	CRT EARTH WIRE (35V)	EPF	EF04213	3P CONNE. L=470
E603	GX00131	CHEVRON FUNNEL MAGNET	EPM1	EF04223	4P LOCK CONNE. L=910
EDH	2999871	MINI CONNE. 6J L550	EPM2	2973833S	7P CONNE. L=680
EDV	EF01521	MINI CONNE. 3J L560	ERC	2908656	3P CONNE. L=160
 L970	2229023	DEGAUSSING COIL (35V)	ESVT	2908923	12P CONNE. L=100
LMFC	BZ00411	COIL M.F.COIL	EVV	2973695S	CONNE. 3P L=140
N606	3333922	EARTH SPRING SUS.	EWK	2973715S	3P CONNE. L=820
N607	3763751	SK BINDER	N103	3737102	PURSE LOCK 15
N608	3763752	SK BINDER 200 NYLON 66	N105	3744161	PURSE LOCK 25 NYLON 6
N610	2772981	FERRITE SHEET ASS'Y	N106	3744151	PURSE LOCK
N612	2956801	EARTH RING	N108	3728273	PURSE LOCK (8)
N613	4621186	CUSHION 2908 CR	N115	3731082	PURSE LOCK 11.5
Z1	9449506	SCOTCH TAPE NO.29 19MM	N171	3705232	ANODE CLAMPER 94V0 (1010N)
Z606	9436111	TAPE-ADHESIVE W50 NITTO#223S	N201	9563444	EXCEL TUBE 6
Z609	9449503	ADHESIVE TAPE (SCOTCH NO.3 W=9)	N202	9449603	NITTOH TAPE #747
Z610	9449553	TAPE-ADHESIVE W19 NITTO#223S(B PVC)	NCV	2169515	LX-ZCAT1325-0530A
		FINAL ASSEMBLY	NDV	2169513	COIL LX-ZCAT2032
		FINAL ASSEMBLY MISCELLANEOUS PARTS	NGN	2169513	COIL LX-ZCAT2032
#010	QD06421	FRAME ASSEMBLY 36SDX88B	NMF	2169513	COIL LX-ZCAT2032
#020	QD06651	FRAME SUB-ASSEMBLY 36SDX88B	NPCC	2169513	COIL LX-ZCAT2032
#030	QD03492	FRAME 36SDX88B	NPCP	2169513	COIL LX-ZCAT2032
#040	3760031	SMALL PIECE (S-2) FOR CABINET PS	NPM1	2169512	CLAMP NOISE FILTER ZCAT3035
#050	3875771	LATCH 4T02 NYLON	NSPC	3763751	SK BINDER
#060	PH06371	DOOR CENTER 36SDX88B	Z101	9413945	SILICONE KE-1300 (WHITE)
#070	PH02512	DOOR 36SDX88B			OWNERS ACCESSORY ASSEMBLY
#080	PH02542	R/C LENS 36SDX88B			OWNERS ACCESSORY REMOTE CONTROL
#090	PH06391	LENS 36SDX88B			
#100	PH06381	INDOOR PLATE D-SUB			OWNERS ACCESSORY ASSEMBLY
#110	PH02531	INDOOR PLATE 36SDX88B			OWNERS ACCESSORY INSTRUCTION BOOK
#120	3487427	HITACHI BADGE 55	N201	QR27361	36SDX88B INSTRUCTION BOOK
#130	4519511	4X12 B TAPPING SCREW STEEL	N201	QR27362	36SDX88B INSTRUCTION BOOK
#140	PC01191	BUTTON 36SDX88B			OWNERS ACCESSORY ASSEMBLY
#160	QD01574	BACK COVER 36SDX88B			OWNERS ACCESSORY WARRANTY CARD
#170	3727972	POWER CORD HANGER			
#190	4137974	4X12 TAPPING WITH WASHER STEEL			
#196	NA42141	RECTANGULAR WASHER	N202	H462382	PC/TV WARRANTY CARD
#200	4520232	4X16 D TAPPING SCREW SWCH16A			OWNERS ACCESSORY ASSEMBLY
#230	4518378	6X35 TAPPING SCREW WITH WASHER STEEL			OWNERS ACCESSORY
#270	H420871	CLAMP-CPT NECK			MISCELLANEOUS PARTS
#300	4342651	SCREW WASHER 4*12			
#325	8441615	HIMERON SHEET	E203	2784243	DRY BATTERY SUM-3 (G)
#551	MQ00431	CUSHION CM36702ET	Z202	EW03101	CORD 6P MINI DIN CABLE
#N150	8441428	HIMERON SHEET(H)			
ECV	2908653	CONNE. 3P EH L=100			
EGM1	2908733	5P CONNE. L=680			
EGM2	2908793	7P CONNE. L=680			
EGT	EF08432	13P CONNECTOR			
EMA	2908903	11P CONNE. L=300			
EPA	2973741S	4P CONNE. L=560			
EPC	EF08801	CO-08C-C2R5-910MM-BR			

PRINTED CIRCUIT BOARD- PATTERN SIDE
MM1 MAIN P.W.B.

MM1 MAIN P.W.B.
PATTERN SIDE



MM1 MAIN P.W.B. PATTERN SIDE

MM1 POWER P.W.B.
MM1 CPT P.W.B.
MM1 V.M. P.W.B.
MM1 FILTER P.W.B.

PATTERN SIDE

PRINTED CIRCUIT BOARD- PATTERN SIDE
MM1 POWER P.W.B.
MM1 CPT P.W.B.
MM1 V.M. P.W.B.
MM1 FILTER P.W.B.

A

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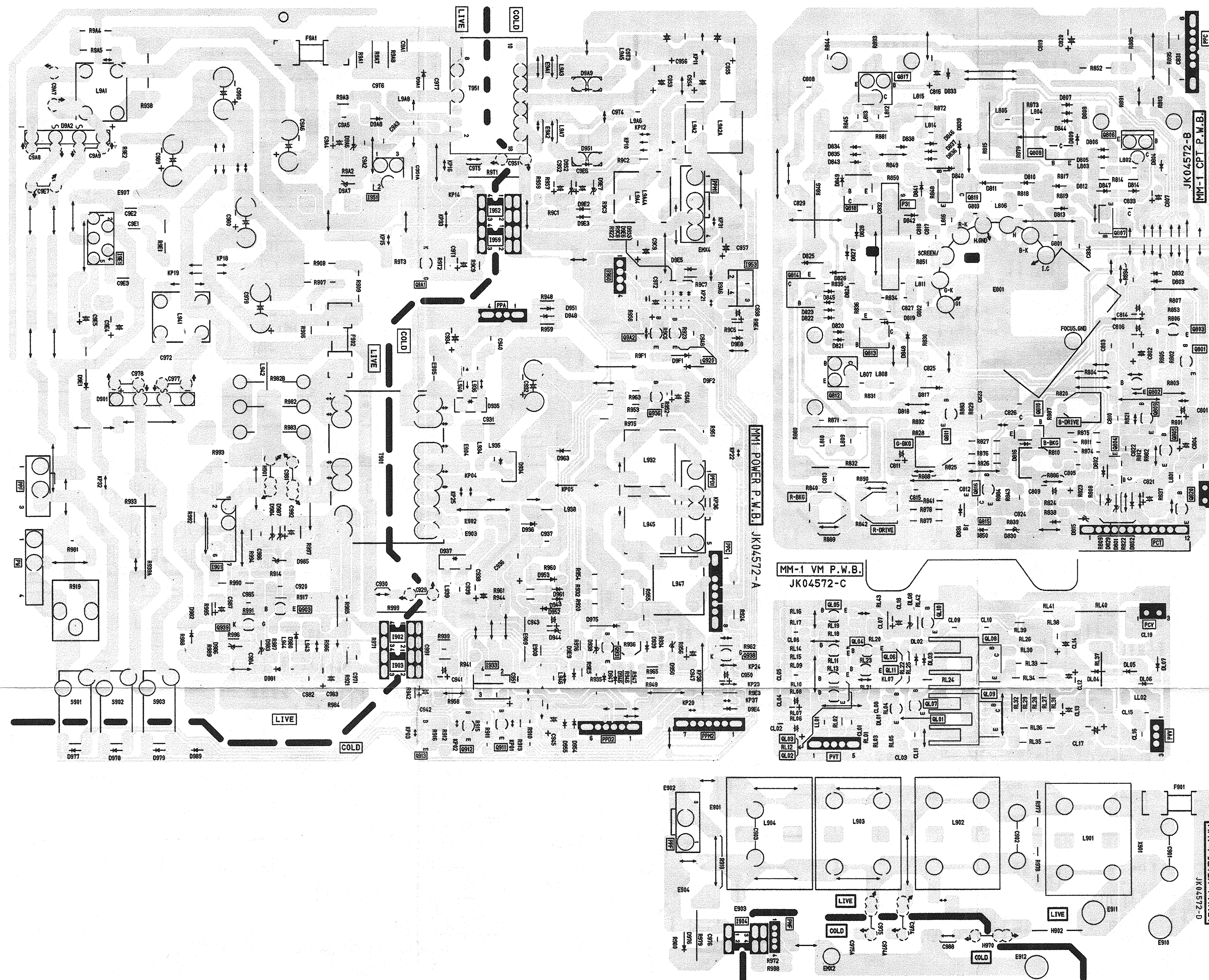
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MM1 POWER P.W.B.
MM1 CPT P.W.B.
MM1 V.M. P.W.B.
MM1 FILTER P.W.B.

PATTERN SIDE

MM1 NTSC P.W.B.
MM1 AUDIO P.W.B.

MM1 HV P.W.B.
MM1 CHOPPER P.W.B.

MM1 DF P.W.B.
MM1 SUB VM P.W.B.

MM1 NTSC P.W.B.
MM1 AUDIO P.W.B.
MM1 HV P.W.B.
MM1 CHOPPER P.W.B.
MM1 DF P.W.B.
MM1 SUB VM P.W.B.
PATTERN SIDE

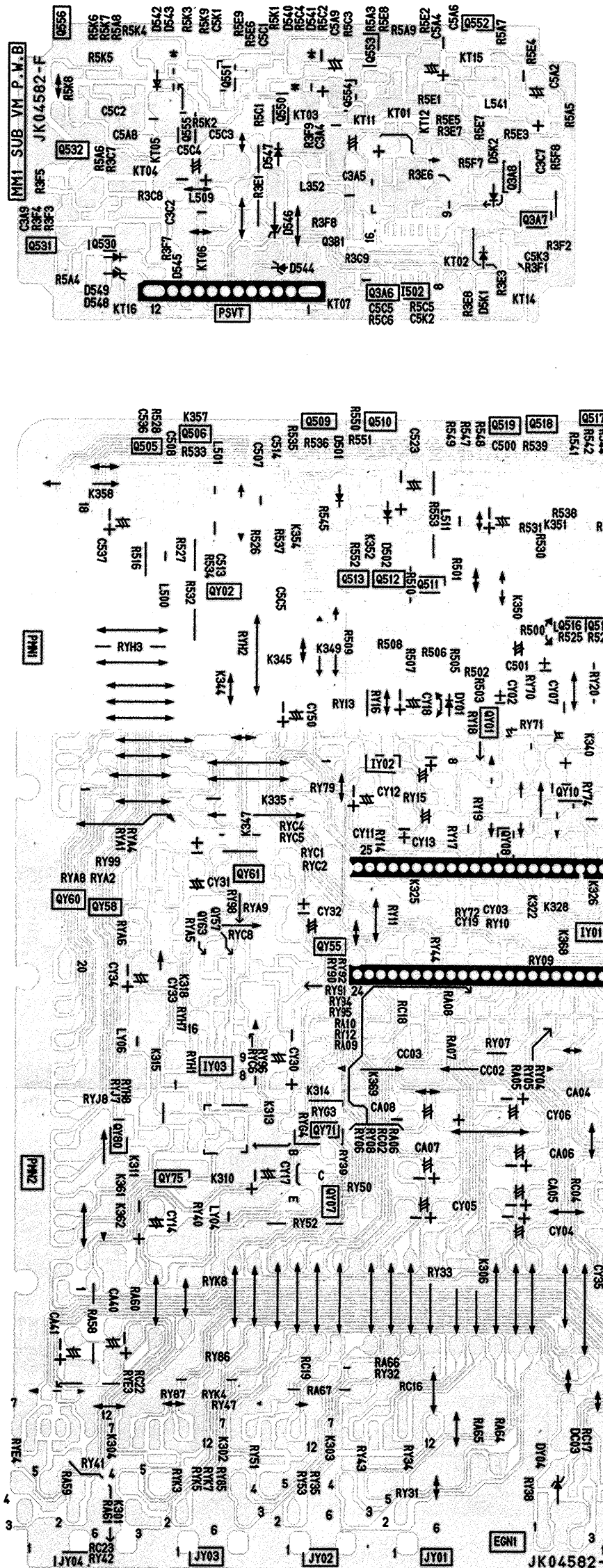
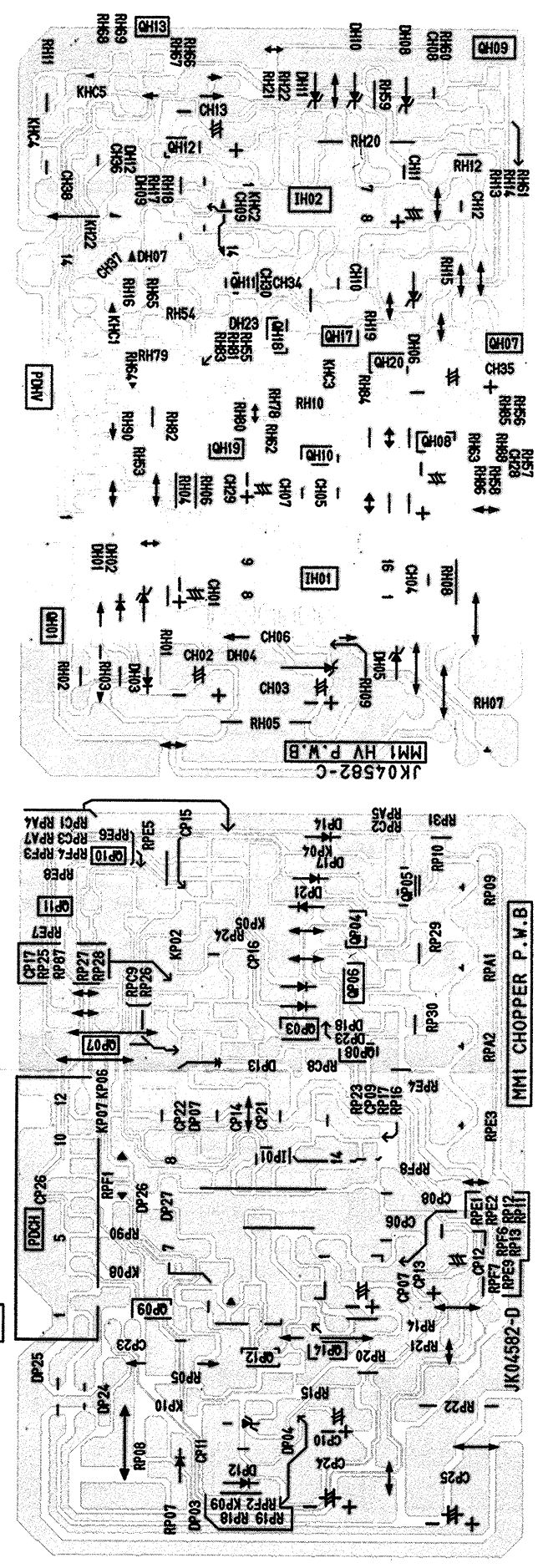
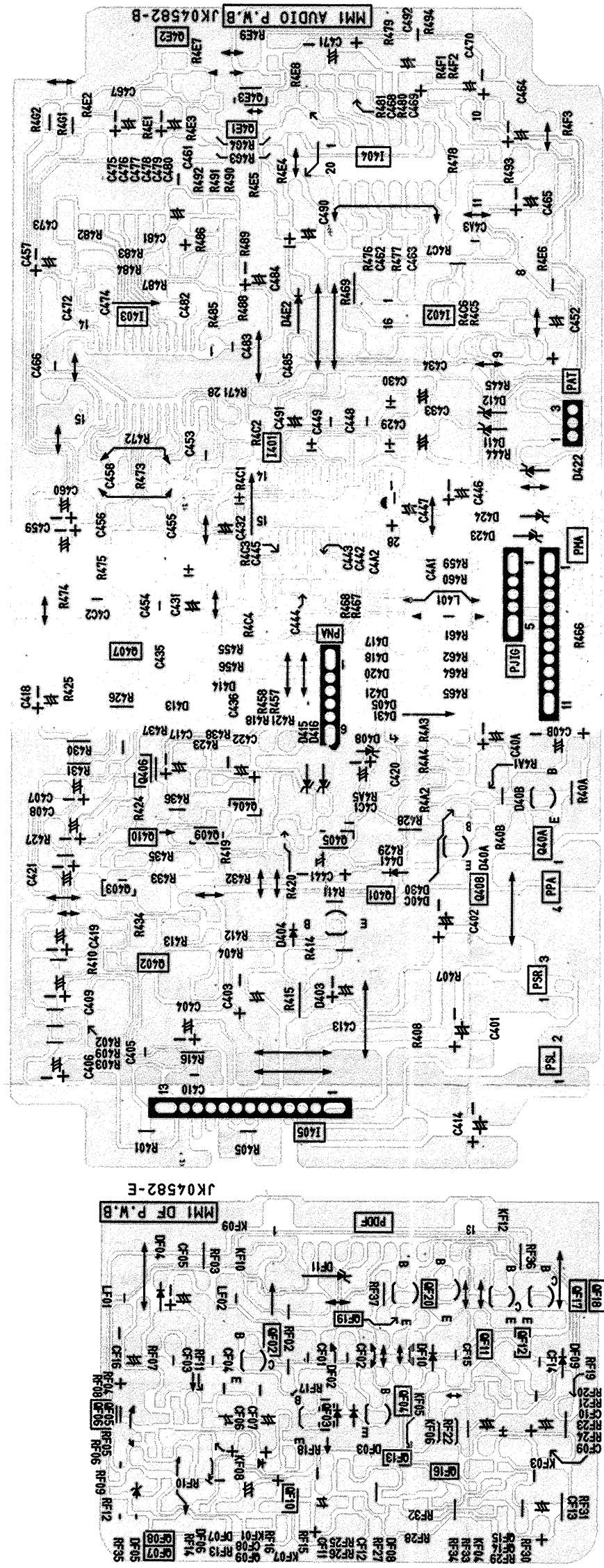
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MM1 NTSC P.W.B.
MM1 AUDIO P.W.B.
MM1 HV P.W.B.
MM1 CHOPPER P.W.B.
MM1 DF P.W.B.
MM1 SUB VM P.W.B.
PATTERN SIDE

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MM1 TERMINAL P.W.B.
MM1 SYNC P.W.B.
MM1 CONTROL A P.W.B.
MM1 CONTROL B P.W.B.
MM1 CONTROL C P.W.B.
MM1 SUB HV P.W.B.
PATTERN SIDE

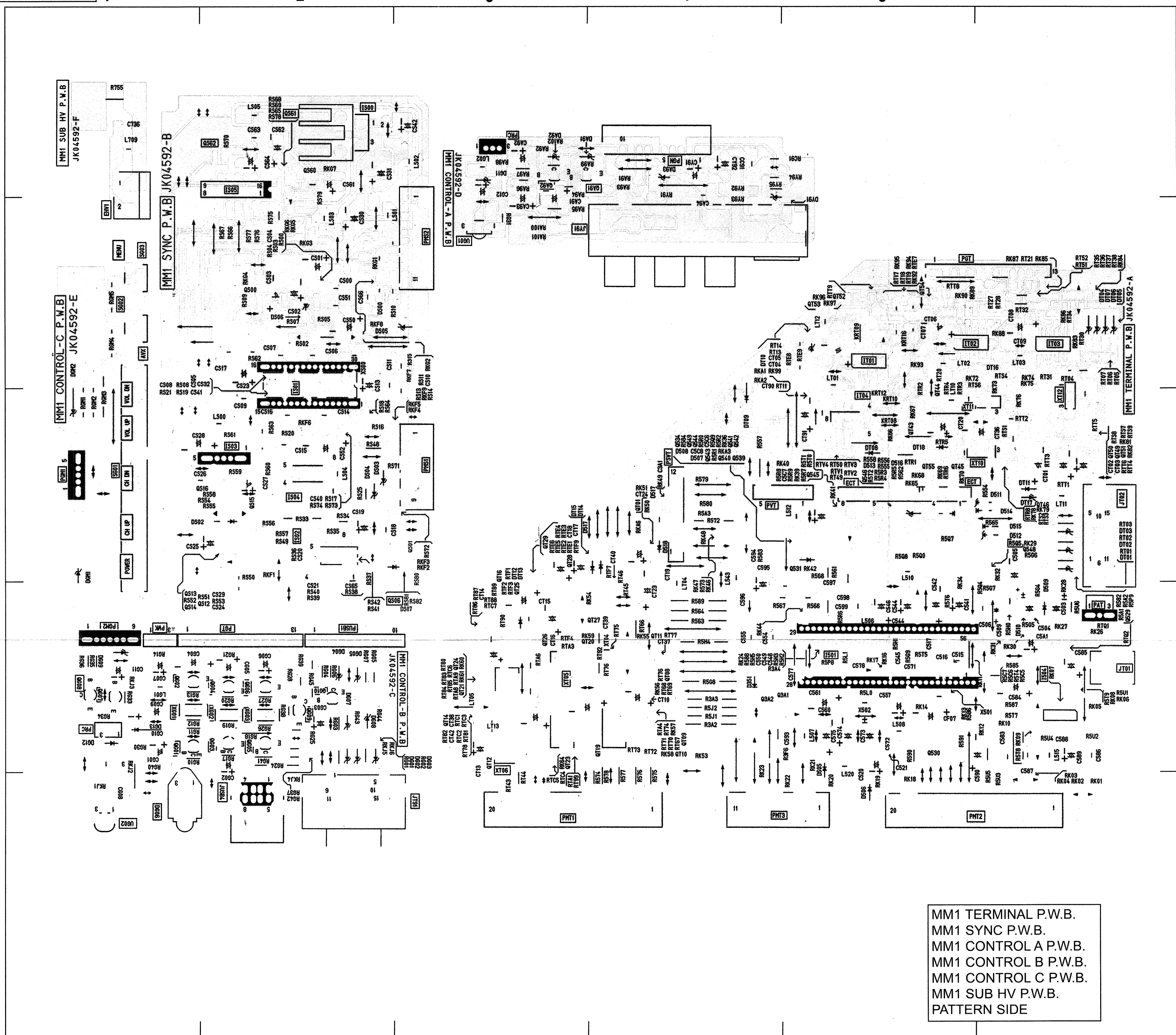
MM1 TERMINAL P.W.B.
MM1 SYNC P.W.B.

PRINTED CIRCUIT BOARD- PATTERN SIDE
MM1 CONTROL A P.W.B.
MM1 CONTROL B P.W.B.

MM1 CONTROL C P.W.B.
MM1 SUB HV P.W.B.

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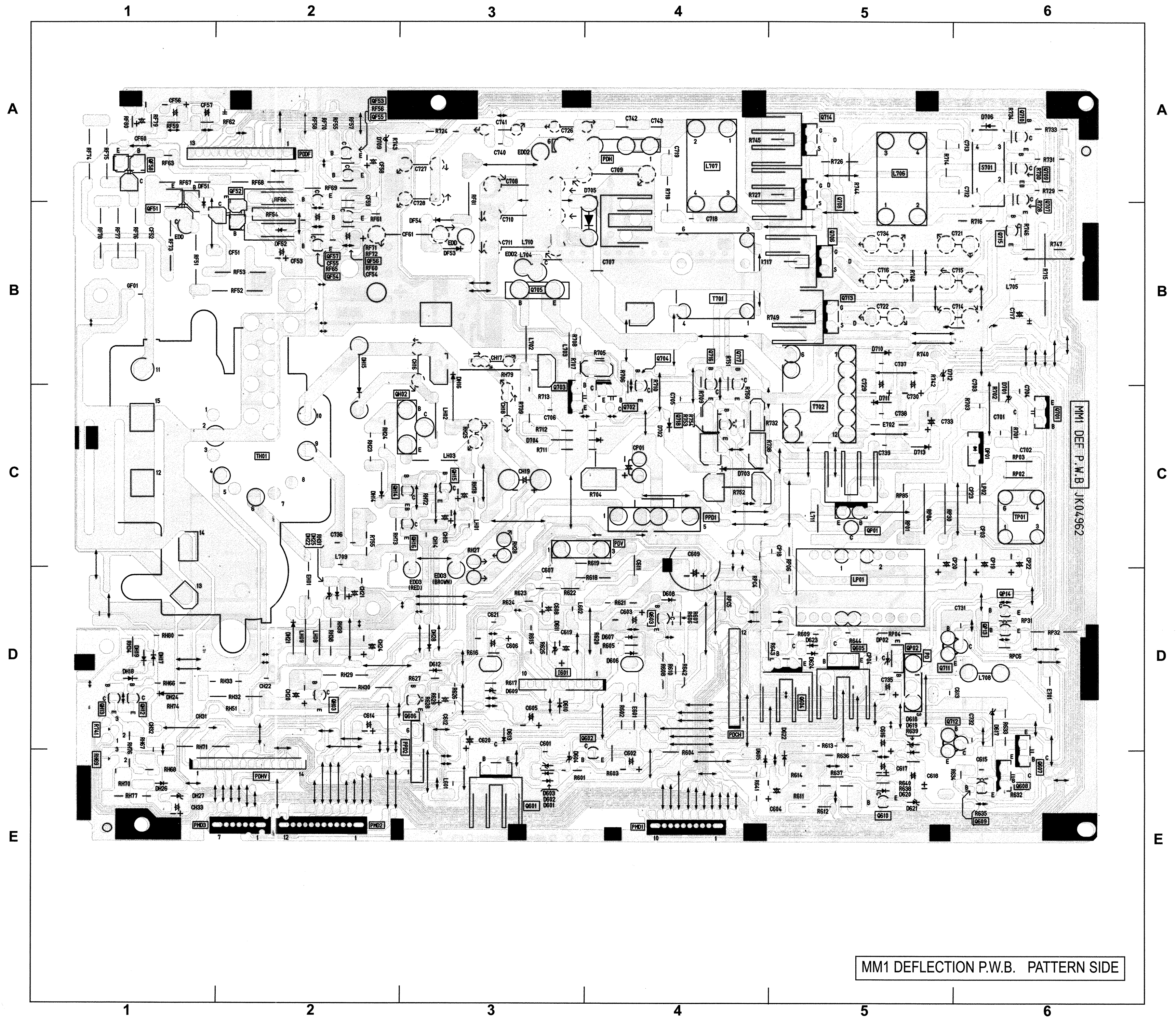
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MM1 TERMINAL P.W.B.
MM1 SYNC P.W.B.
MM1 CONTROL A P.W.B.
MM1 CONTROL B P.W.B.
MM1 CONTROL C P.W.B.
MM1 SUB HV P.W.B.
PATTERN SIDE

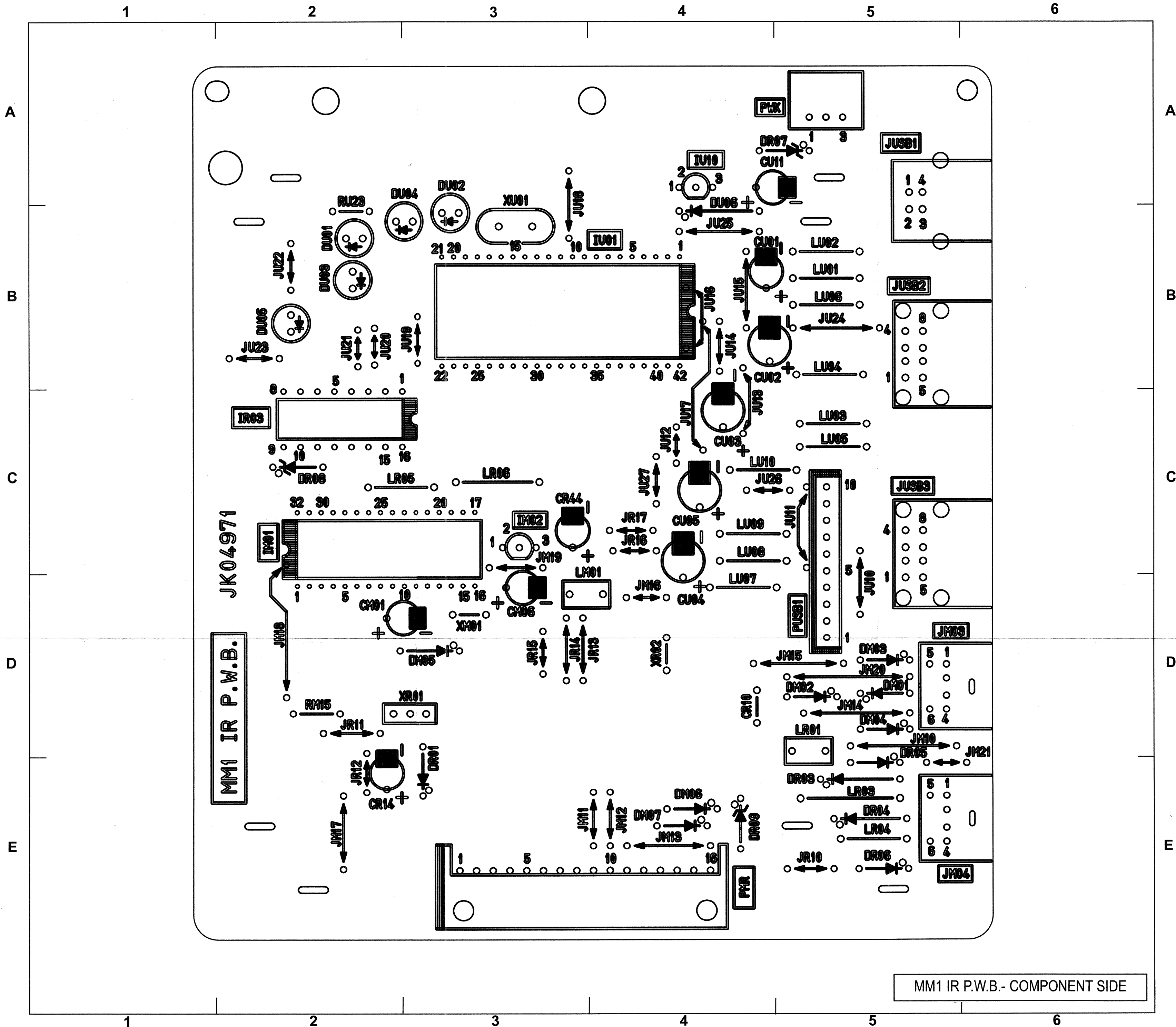
PRINTED CIRCUIT BOARD- PATTERN SIDE
MM1 DEFLECTION P.W.B.

MM1 DEFLECTION P.W.B.
PATTERN SIDE



MM1 DEFLECTION P.W.B. PATTERN SIDE

PRINTED CIRCUIT BOARD- COMPONENT SIDE
MM1 IR P.W.B.



MM1 IR P.W.B. - COMPONENT SIDE



PRINTED CIRCUIT BOARD- COMPONENT SIDE AND PATTERN SIDE
MM1 YUV P.W.B.

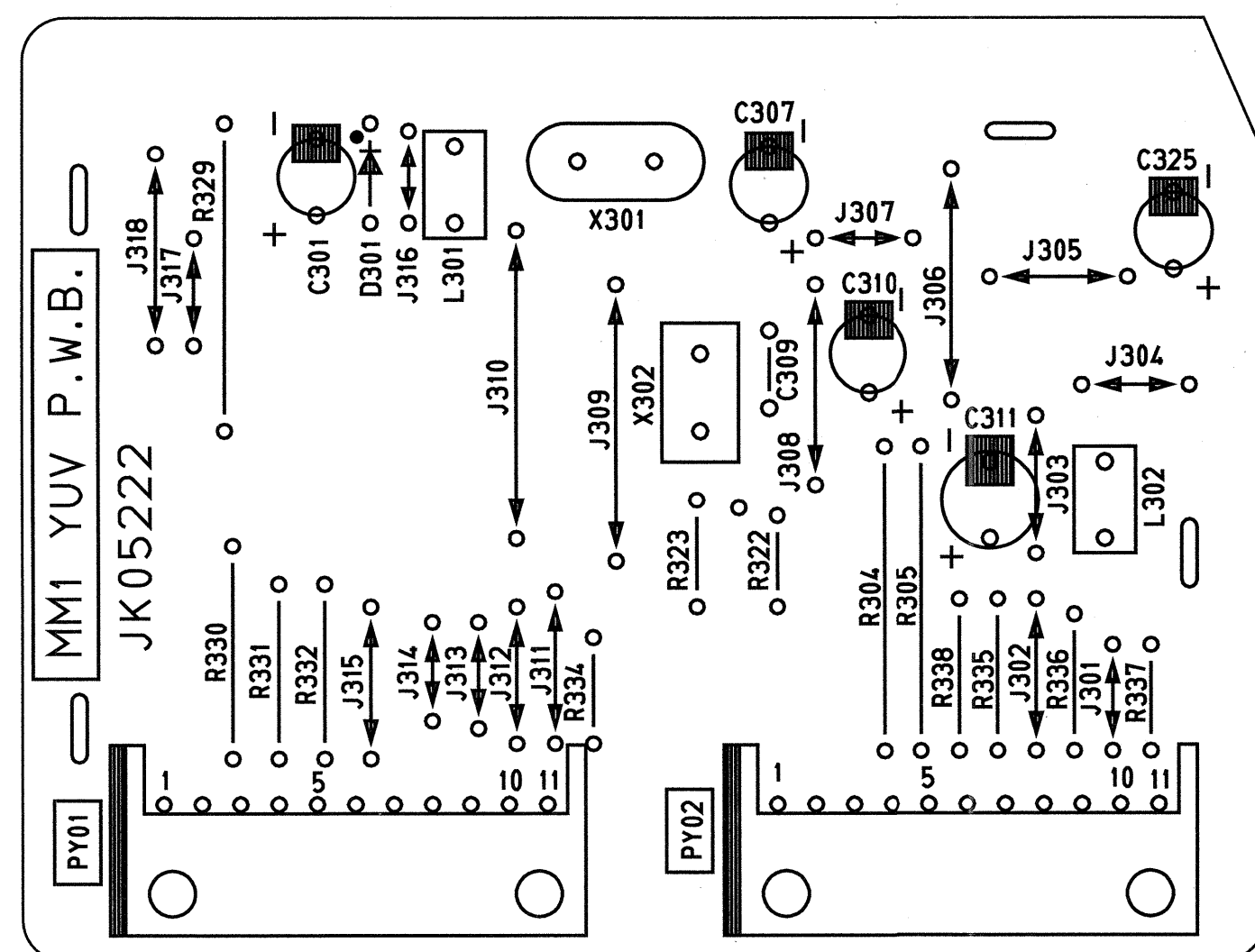
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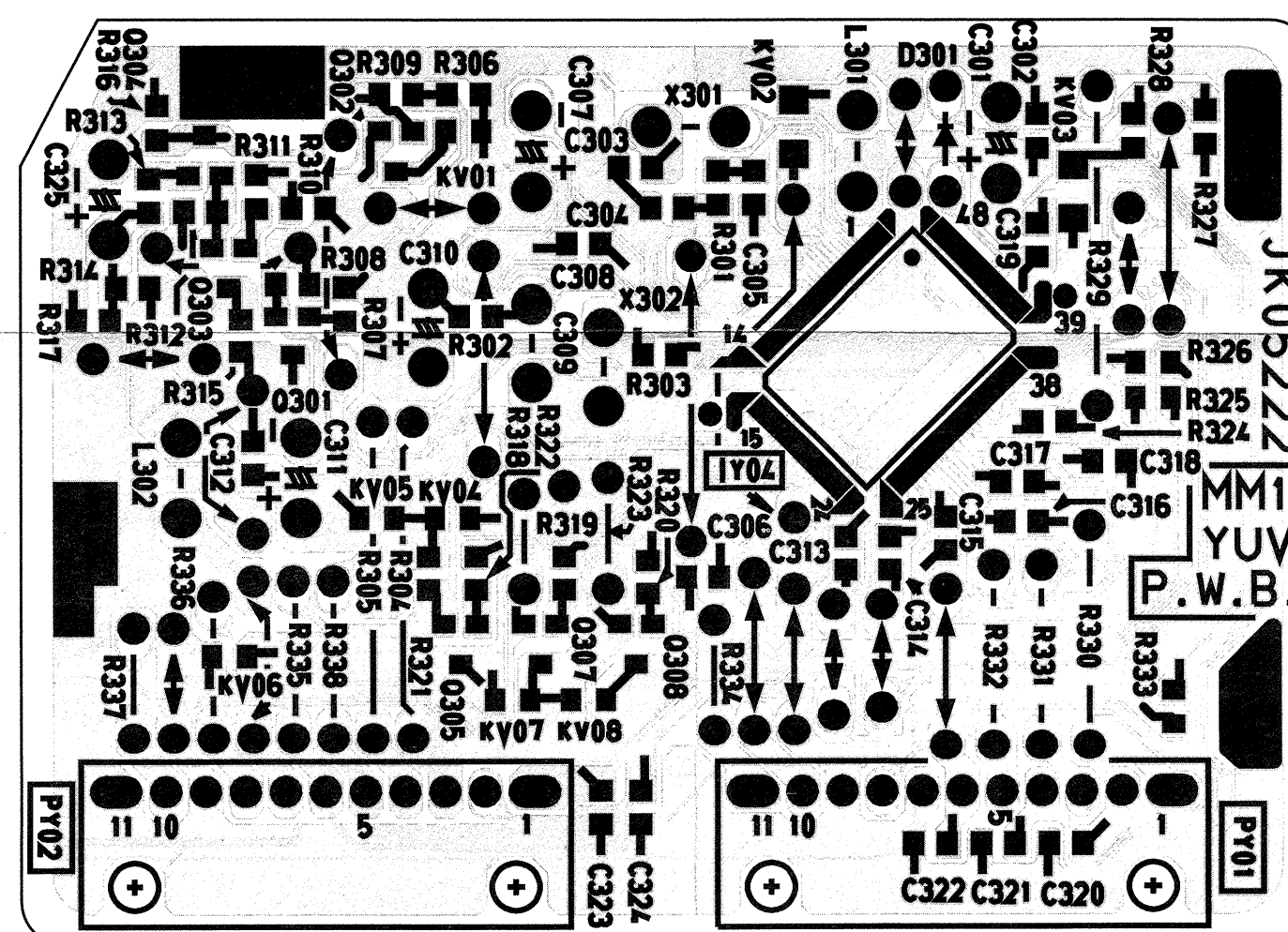
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MM1 YUV P.W.B.- COMPONENT SIDE



MM1 YUV P.W.B.- PATTERN SIDE

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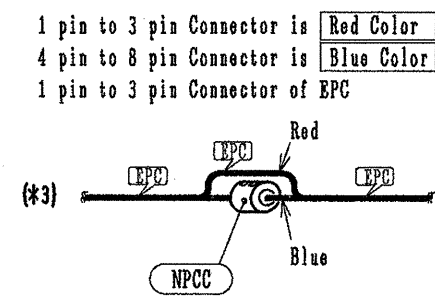
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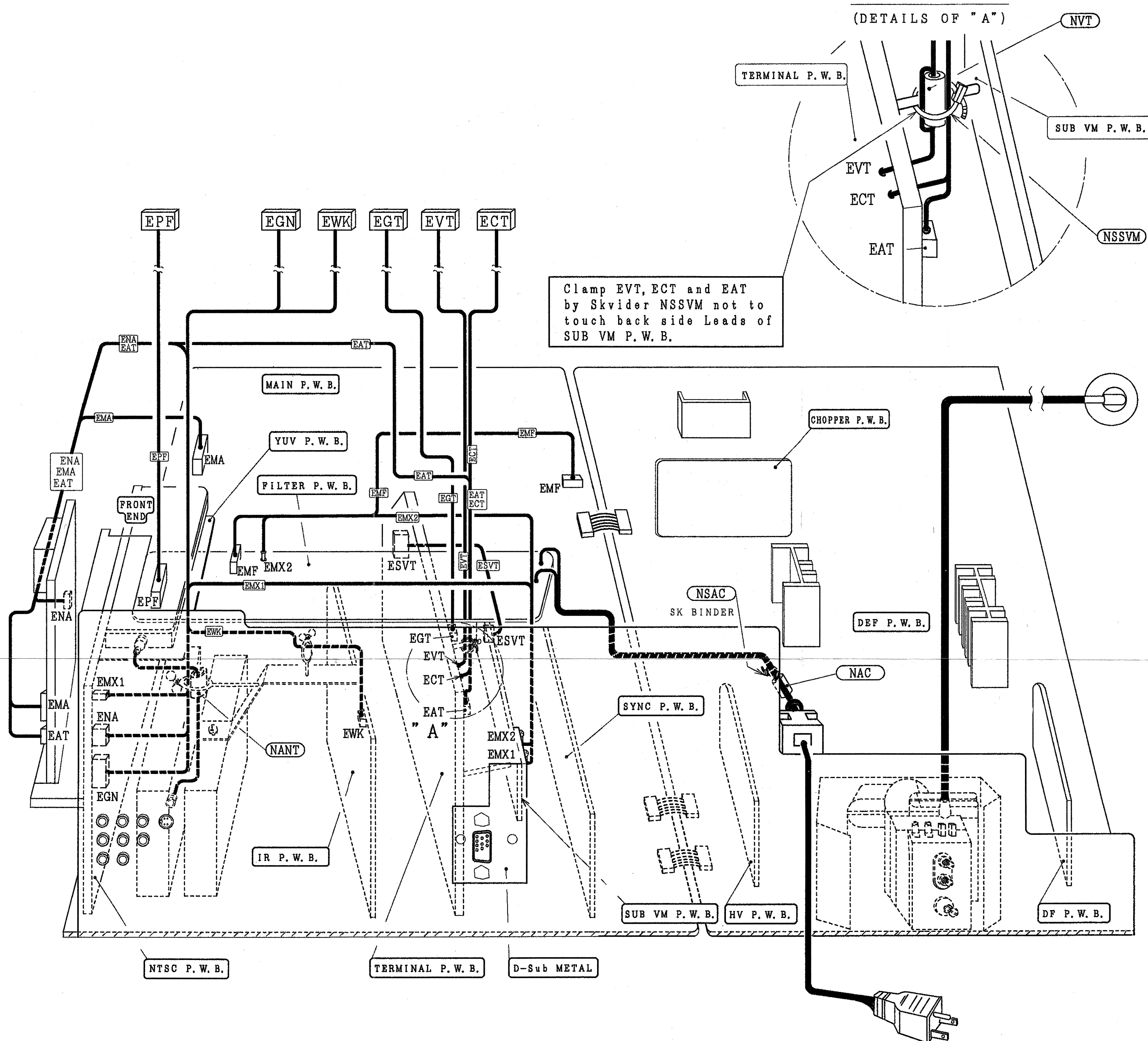
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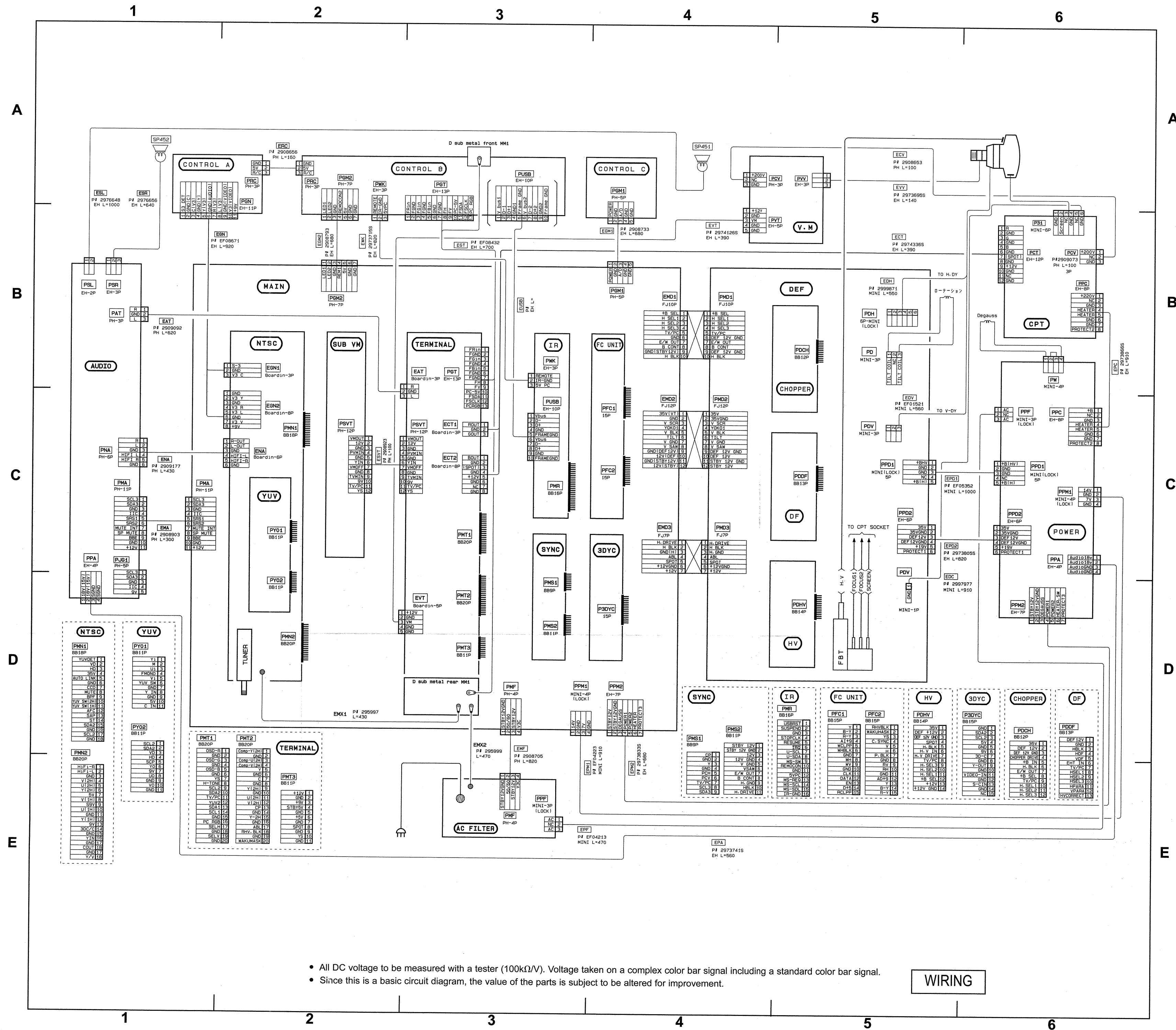
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[illegible]

Clamp EDD3 with N116 so that EDV and EPD1
do not touch the heat sink of I601.

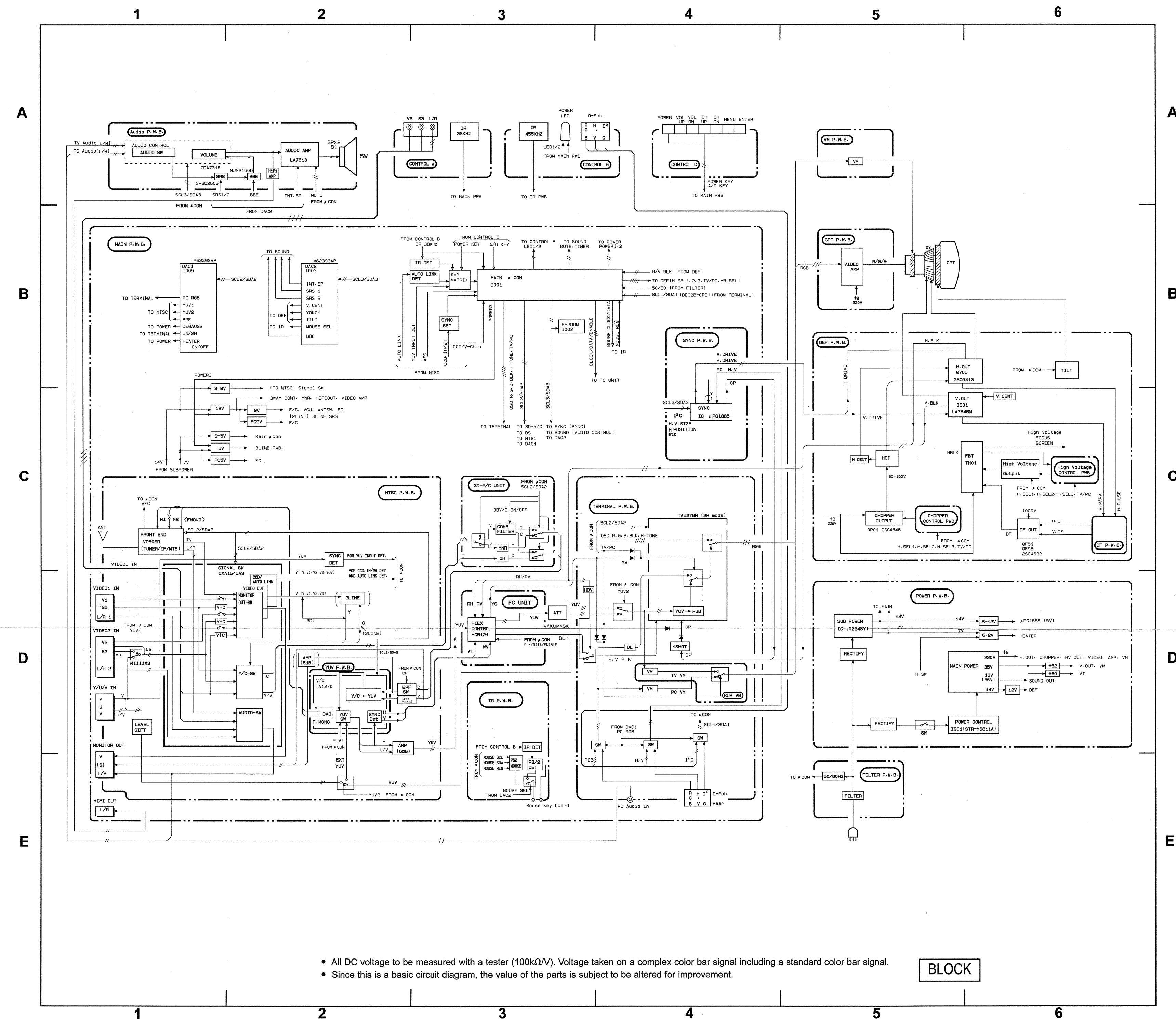
WIRING DRAWING OF 36SDX88B/MM1 MAIN CHASSIS ASSEMBLY





- 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.

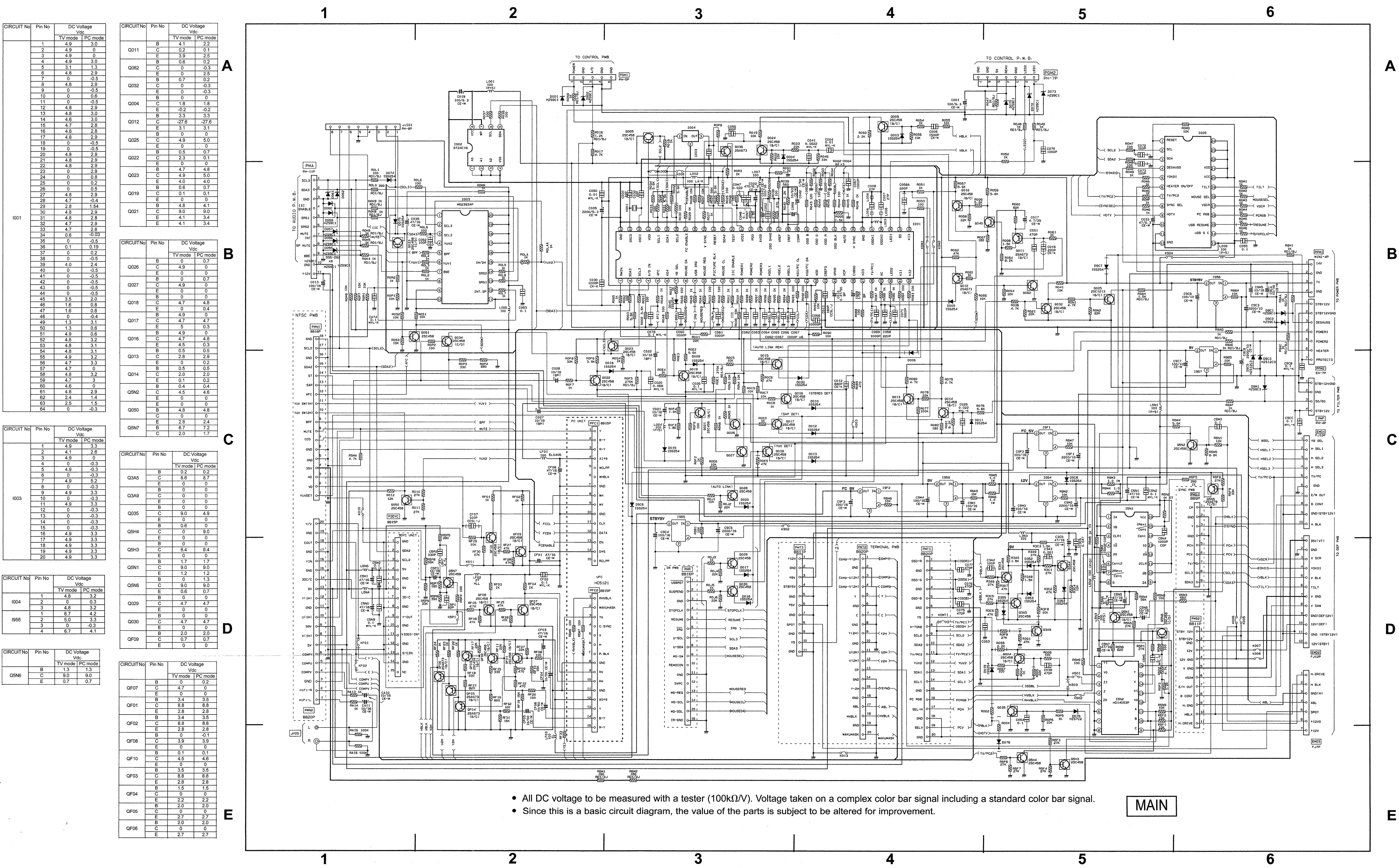
WIRING



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 - MAIN

MAIN



- 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.

MAIN

E

CIRCUIT No	Pin No	DC Voltage	
		Vdc	PC mode
Q033	B	0	0
	C	4.8	3.2
	E	4.8	0
	B	0	-0.3
Q061	C	2.8	1.7
	E	4.8	-0.3
	B	4.5	2.9
	C	8.9	5.7
Q034	E	3.8	2.5
	B	4.5	0
	C	4.9	3.3
	E	3.9	0
Q005	B	4.8	3.2
	C	1.3	0.6
	E	4.9	3.3
	B	0	-0.3
Q024	C	4.9	3.2
	E	0	-0.3
	B	0	-0.5
	C	4.0	2.8
Q009	E	0	-0.3
	B	0.8	0.3
	C	0.8	-0.2
	E	0.2	-0.2
Q010	B	0.1	0
	C	3	1.8
	E	0	-0.1
	B	NC	NC
Q063	C	NC	NC
	E	NC	NC
	B	NC	NC

CIRCUIT No	Pin No	DC Voltage	
		Vdc	PC mode
I005	1	4.9	3.3
	2	3.8	0
	3	4.9	0
	4	4.7	-0.3
	5	0	-0.3
	6	4.8	3.2
	7	4.9	-0.3
	8	0	-0.3
	9	0	0.3
	10	4.9	-0.3
	11	4.9	3.3
	12	3.9	0
I006	13	4.9	3.3
	14	4.9	-0.3
	15	4.9	3.3
	16	4.8	-0.3
	17	0	3.2
	18	0	-0.3
	19	2.4	-0.3
	20	4.9	1.4
	21	4.9	3.3
	22	4.9	3.3
	23	4.9	3.3
	24	4.8	3.3

CIRCUIT No	Pin No	DC Voltage	
		Vdc	PC mode
ISN2	1	0	-0.2
	2	0	-0.2
	3	2.0	0.8
	4	1.1	0.7
	5	1	0.7
	6	0	-0.3
	7	0	-0.3
	8	0	-0.3
	9	0	5.7
	10	8.4	5.3
	11	9.0	5.7
	12	0	-0.2
ISN1	13	0	-0.2
	14	0	-0.2
	15	0	0.3
	16	9.0	5.8
	1	4.5	3.0
	2	4.9	3.2
	3	4.9	3.3
	4	4.8	3.1
	5	0	-0.2
	6	0	-0.4
	7	4.8	3.1
	8	0	-0.3
ISN3	9	0	-0.2
	10	4.9	3.3
	11	4.9	3.3
	12	4.8	3.1
	13	0	-0.2
	14	0	-0.3
	15	4.8	3.1
	16	4.8	3.2
	1	6.5	6.5
	2	4.9	3.2
	3	4.9	4.9
	4	4.8	3.1
5	0	-0.2	
6	0	0.4	
7	2.8	0.5	
8	0	-0.3	
Q3A3	B	0.5	-0.5
	C	7.6	7.7
	E	11.5	7.6
	B	0.8	0.8
Q3A4	C	2.0	1.5
	E	0.8	0.8

CIRCUIT No	Pin No	DC Voltage	
		Vdc	PC mode
Q5N5	B	0	0
	C	4.8	4.8
	E	4.9	4.9
	B	3.0	0
Q028	C	4.7	4.8
	E	3.0	0
	B	0	-0.3
	C	3.0	0
Q3A3	B	0.5	-0.5
	C	7.6	7.7
	E	11.5	7.6
	B	0.8	0.8
Q3A4	C	2.0	1.5
	E	0.8	0.8

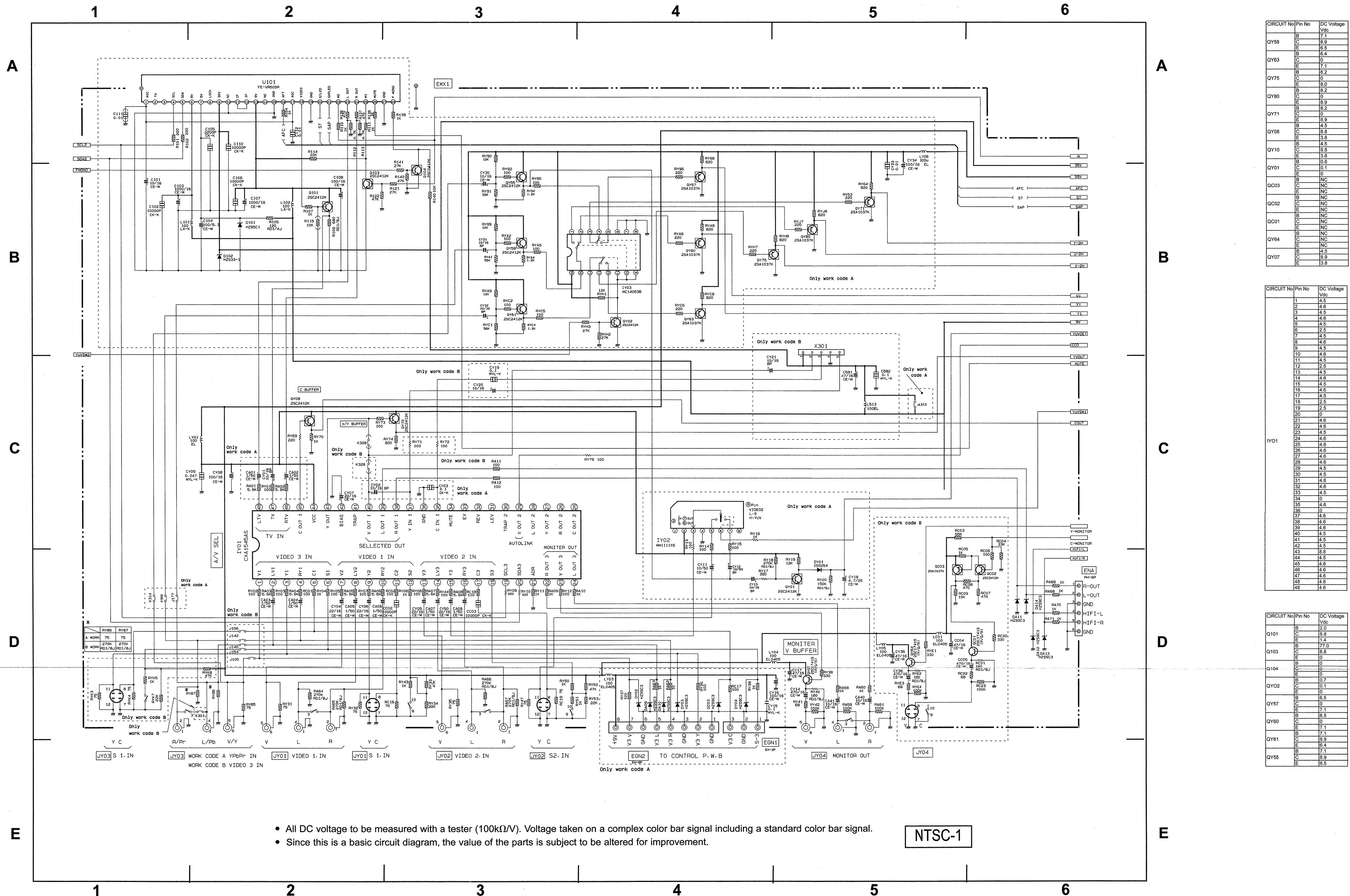
CIRCUIT No	Pin No	DC Voltage	
		Vdc	PC mode
I954	1	13.3	8.8
	2	12.0	8.0
	3	0	-0.3
	4	4.9	3.3
I958	1	11.5	7.6
	2	9.0	5.8
	3	0	-0.3
	4	11.5	7.6
I9F1	1	11.5	7.6
	2	9.0	5.8
	3	0	-0.3
	4	11.5	7.6
I9F2	1	11.5	7.6
	2	9.0	5.8
	3	0	7.6
	4	11.5	7.6

CIRCUIT No	Pin No	DC Voltage	
		Vdc	PC mode
I957	1	6.7	6.1
	2	4.9	3.3
	3	0	-0.3
	4	4.9	3.3
I9F1	1	6.7	4.2
	2	4.9	3.3
	3	0	-0.3
	4	4.9	3.3
I955	1	12.8	9.3
	2	8.9	5.7
	3	0	-0.3
	4	14	9.3

CIRCUIT No	Pin No	DC Voltage	
		Vdc	PC mode
I002	1	0	0.3
	2	0	-0.3
	3	0	-0.3
	4	5.0	0
I003	5	5.0	0
	6	4.0	2.7
	7	0	-0.3
	8	5.0	3.3

CIRCUIT No	Pin No	DC Voltage	
		Vdc	PC mode
I955	1	13.8	8.9
	2	4.9	3.3
	3	0	-0.3
	4	13.8	8.9

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CIRCUIT No	Pin No	DC Voltage
QY58	B	2.1
	E	6.5
QY63	B	6.4
	E	7.1
QY75	B	6.2
	E	8.0
QY80	B	6.2
	E	6.9
QY71	B	6.2
	E	8.9
QY08	B	4.5
	E	3.8
QY10	B	4.5
	E	3.8
QY01	B	6.8
	E	1.1
QC03	B	0
	C	NC
QC02	B	NC
	C	NC
QC01	B	NC
	C	NC
QY64	B	NC
	C	NC
QY07	B	4.5
	E	3.8

CIRCUIT No	Pin No	DC Voltage V _{DS}
1Y01	1	4.5
	2	4.6
	3	4.5
	4	4.6
	5	4.5
	6	2.5
	7	4.5
	8	4.6
	9	4.5
	10	4.6
	11	4.5
	12	2.5
	13	4.6
	14	4.5
	15	4.5
	16	4.6
	17	4.5
	18	2.5
	19	2.5
	20	0
	21	4.6
	22	4.6
	23	4.5
	24	4.6
	25	4.6
	26	4.6
	27	4.6
	28	4.6
	29	4.5
	30	4.5
	31	4.6
	32	4.6
	33	4.5
	34	0
	35	4.6
	36	0
	37	4.6
	38	4.6
	39	4.6
	40	4.5
	41	4.5
	42	4.5
	43	8.8
	44	4.5
	45	4.6
	46	4.6
	47	4.6
	48	4.6
49	4.6	

CIRCUIT No	Pin No	DC Voltage Vdc
Q101	B	2.0
	C	8.8
	E	1.4
Q103	B	77.0
	C	8.8
	E	0
Q104	B	0
	C	0
	E	0
QY02	B	0.7
	C	0.1
	E	0
QY57	B	6.5
	C	0
	E	7.1
QY60	B	6.5
	C	0
	E	7.1
QY61	B	7.1
	C	8.9
	E	6.4
QY55	B	7.1
	C	8.9
	E	6.5

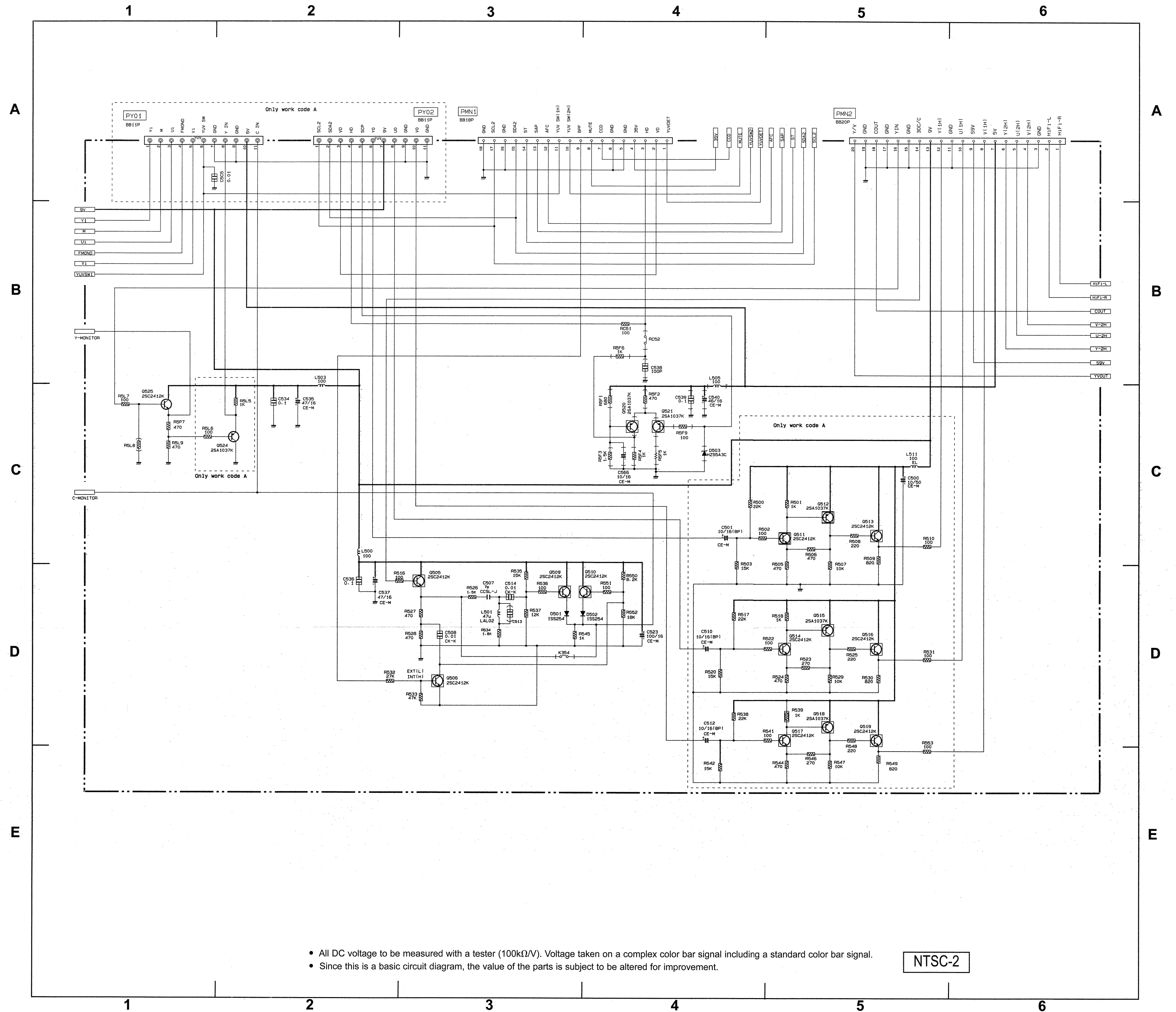
CIRCUIT No	Pin No	DC Voltage V _{dc}
IY03	1	8.2
	2	6.4
	3	8.2
	4	6.4
	5	6.4
	6	0
	7	0
	8	0
	9	0
	10	0
	11	0
	12	6.4
	13	8.2
	14	6.4
	15	6.5
	16	8.9

CIRCUIT No	Pin No	DC Voltage Vdc
U101	1	6.6
	2	5.8
	3	1.3
	4	3.9
	5	4.7
	6	8.8
	7	5.1
	8	0
	9	33.6
	10	33.6
	11	0

CIRCUIT No	Pin No	DC Voltage Vdc
IYO2	1	0
	2	8.8
	3	4.2
	4	0
	5	4.9
	6	0
	7	4.9
	8	0

CIRCUIT No	Pin No	DC Voltage Vdc
Q505	B	4.0
	C	8.9
	E	3.3
Q506	B	0.6
	C	0.1
	E	0
Q509	B	0.1
	C	8.9
	E	3.2
Q511	B	3.6
	C	8.2
	E	2.9
Q512	B	8.2
	C	5.6
	E	5.9
Q513	B	3.6
	C	8.9
	E	4.9
Q514	B	3.0
	C	8.0
	E	3.0
Q515	B	4.5
	C	8.9
	E	4.5
Q516	B	6.9
	C	3.8
	E	3.6
Q517	B	8.2
	C	3.0
	E	3.0

CIRCUIT No	Pin No	DC Voltage Vdc
Q518	B	8.2
	C	4.4
	E	8.9
Q519	B	4.4
	C	8.9
	E	3.8
Q520	B	NC
	C	NC
	E	NC
Q521	B	NC
	C	NC
	E	NC
Q524	B	1.2
	C	0
	E	1.9
Q525	B	3.0
	C	8.9
	E	2.4
Q510	B	0.1
	C	8.9
	E	0



BASIC CIRCUIT DIAGRAM - YUV

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.

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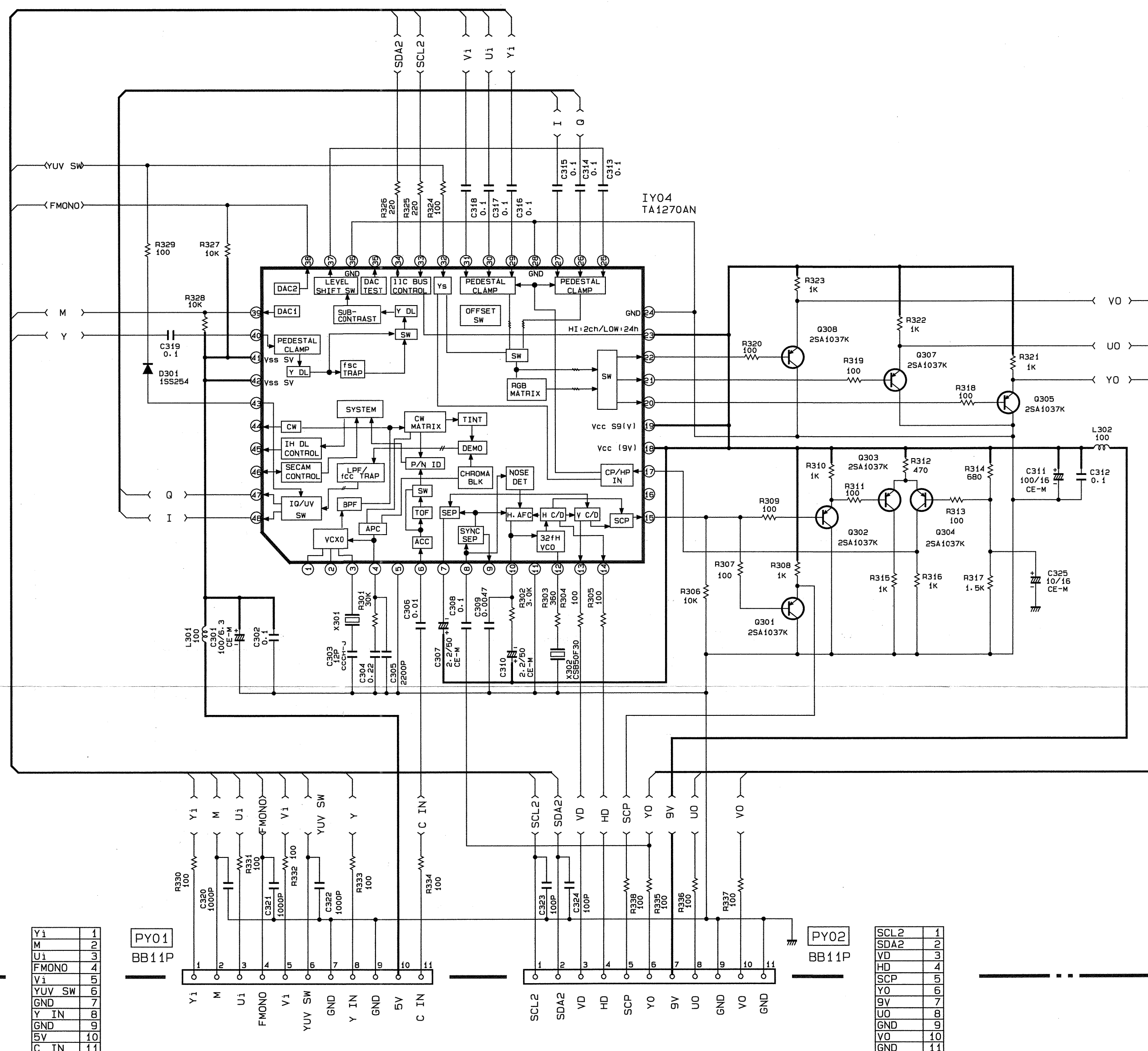
A

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E



Y1	1
M	2
U1	3
FMONO	4
V1	5
YUV SW	6
GND	7
Y IN	8
GND	9
5V	10
C IN	11

PY01
BB11P

PY02
BB11P

SCL2	1
SDA2	2
VD	3
HD	4
SCP	5
Y0	6
9V	7
U0	8
GND	9
VO	10
GND	11

- 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.

YUV

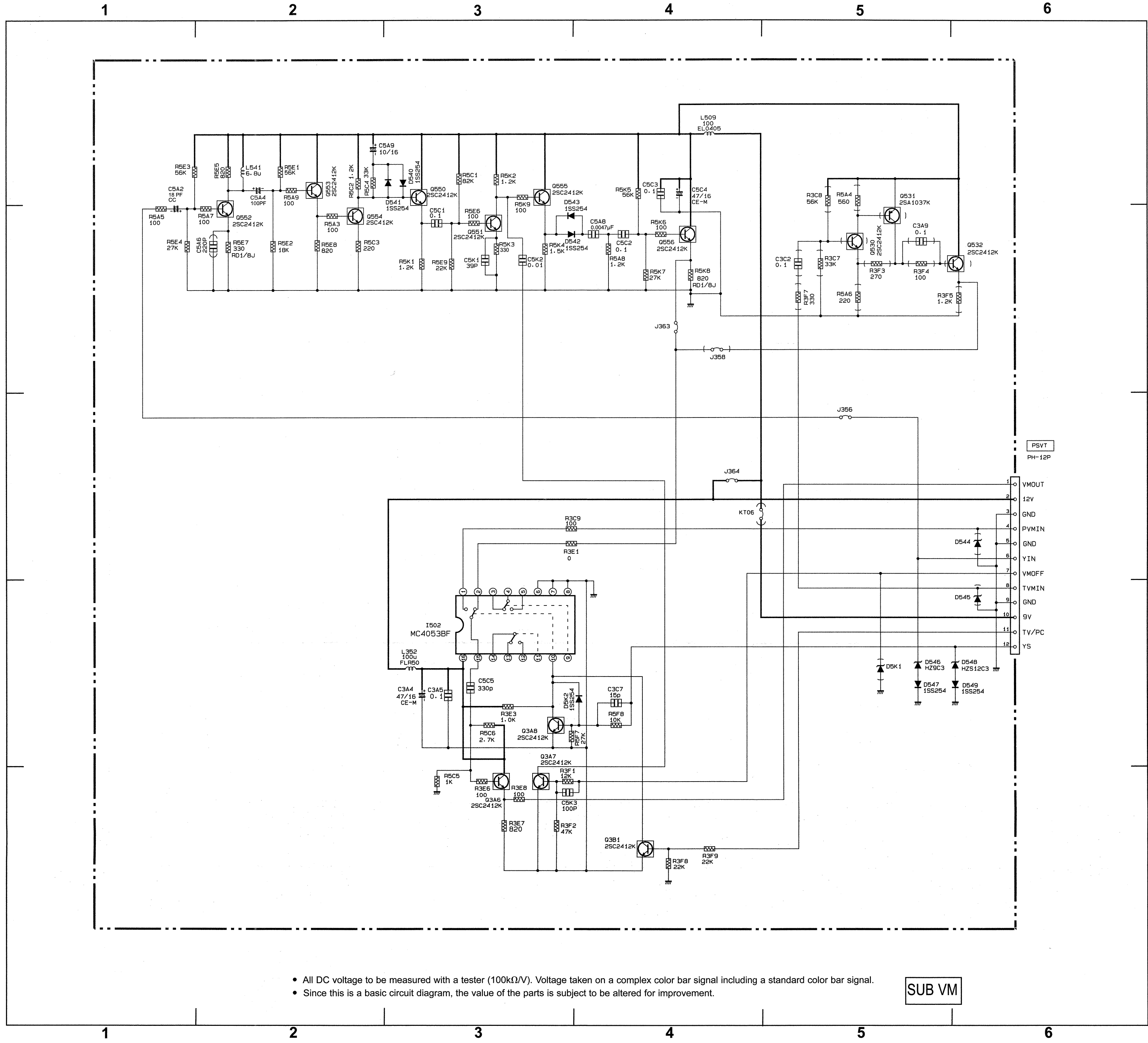
CIRCUIT No.	Pin No.	DC Voltage Vdc
IY04	1	3.9
	2	3.9
	3	3.9
	4	2.1
	5	0
	6	1.7
	7	5.8
	8	2.6
	9	0
	10	0
	11	7.3
	12	5.6
	13	5.6
	14	0.2
	15	0
	16	0
	17	0.1
	18	8.8
	19	8.8
	20	4.4
	21	4.3
	22	4.3
	23	8.8
	24	0
	25	5.8
	26	5.6
	27	5.6
	28	0
	29	5.6
	30	5.6
	31	5.8
	32	0
	33	0
	34	0
	35	0
	36	0
	37	2.1
	38	4.8
	39	0.1
	40	2.6
	41	4.8
	42	4.8
	43	4.8
	44	3.0
	45	0
	46	0
	47	0
	48	0

CIRCUIT No.	Pin No.	DC Voltage Vdc
Q301	B	1.5
	C	0
	E	2.2
Q302	B	1.5
	C	0
	E	2.2
Q303	B	2.9
	C	3.4
	E	3.6
Q304	B	6.1
	C	0.1
	E	3.6
Q305	B	4.4
	C	0
	E	5.1
Q307	B	4.3
	C	0
	E	4.9
Q308	B	4.2
	C	0
	E	4.9

CIRCUIT No	Pin No	DC Voltage	
		TV mode	PC mode
Q550	B	4.1	4.1
	C	11.9	11.9
	E	3.4	3.5
Q551	B	2.2	2.2
	C	7.1	7.1
	E	1.5	1.5
Q552	B	3.3	3.2
	C	11.9	11.9
	E	2.6	2.6
Q553	B	2.8	2.7
	C	4.1	4.2
	E	2.1	1.4
Q554	B	2.1	2.1
	C	4.0	4.2
	E	1.5	1.4
Q555	B	7.7	3.2
	C	11.9	11.9
	E	6.4	2.6
Q556	B	3.6	3.5
	C	11.9	11.9
	E	2.9	2.9
Q530	B	NC	NC
	C	NC	NC
	E	NC	NC
Q531	B	NC	NC
	C	NC	NC
	E	NC	NC
Q532	B	NC	NC
	C	NC	NC
	E	NC	NC

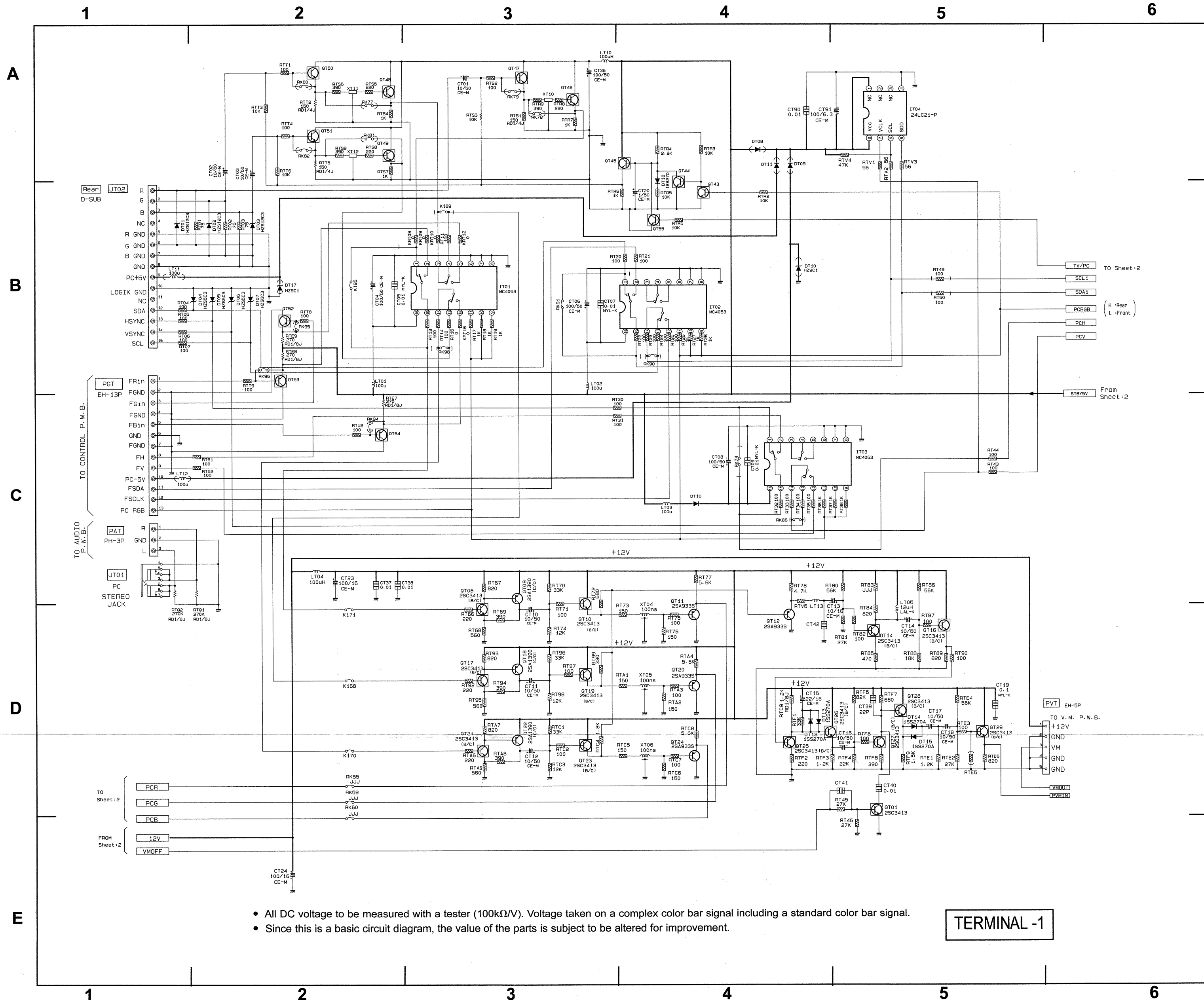
CIRCUIT No	Pin No	DC Voltage	
		TV mode	PC mode
IS02	1	2.9	2.9
	2	2.9	2.9
	3	0	0.1
	4	0	0.1
	5	0	0.4
	6	0	0
	7	0	0
	8	0	0
	9	0	0.6
	10	0	11.9
	11	0	0
	12	0	0.2
	13	0.6	0.1
	14	0	0
	15	2.9	0
	16	11.9	11.9

CIRCUIT No	Pin No	DC Voltage	
		TV mode	PC mode
Q3A6	B	3.2	0
	C	11.9	11.9
	E	2.6	2.6
Q3A7	B	0	0
	C	0	0
	E	0	0
Q3A8	B	0	0
	C	0.1	12.0
	E	0	0
Q3B1	B	0	0
	C	0.1	12.0
	E	0	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.

SUB VM



CIRCUIT No	Pin No	DC Voltage V _{dc}	
		TV mode	PC mode
ITO1	1	0	2.1
	2	0	0
	3	0	0.8
	4	0	0.8
	5	0	0
	6	0	0
	7	0	0
	8	0	0
	9	4.2	4.2
	10	4.2	4.2
	11	4.2	4.2
	12	0	0.8
	13	3.9	2.1
	14	3.9	2.1
	15	0	2.1
	16	5.0	5.0

CIRCUIT No	Pin No	DC Voltage Vdc	
		tv mode	pc mode
QT09	B	11.9	11.2
	C	0	2.1
	E	11.9	11.9
QT10	B	2.9	2.9
	C	11.9	11.9
	E	2.3	2.3
QT11	B	1.1	1.7
	C	0	0
	E	1.1	1.1
QT12	B	2.2	2.3
	C	0	0
	E	2.9	2.3
QT14	B	3.4	0
	C	11.9	11.9
	E	2.8	0
	B	0.7	2.1

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ITO2	1	0	0
	2	0	0
	3	0	0
	4	0	0
	5	0	0
	6	0	0
	7	0	0
	8	0	0
	9	4.2	0
	10	4.2	0
	11	4.2	0
	12	0	0
	13	3.9	0
	14	3.9	3.8
	15	0	0
	16	5.0	5

CIRCUIT No	Pin No	DC Voltage V _{dc}	
		TV mode	PC mode
QT44	B	0	0
	C	0	4.1
	E	0	0
QT45	B	0.1	4.1
	C	0	4.9
	F	0	3.5

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ITO3	1	0	4.3
	2	0	0.2
	3	0	0.3
	4	0	0.3
	5	0	0.3
	6	0	0
	7	0	0
	8	4.2	0
	9	4.2	4.2
	10	4.2	4.2
	11	4.2	4.2
	12	0	4.8
	13	0	4.8
	14	0	4.8
	15	0	4.3

QT48	E	NC	NC
	B	NC	NC
	C	NC	NC
QT49	E	NC	NC
	B	0	2.7
	C	5.0	4.9
QT52	E	0	2.1
	B	0.1	0.8
	C	0	0
QT53	E	0.7	0.8
	B	0.1	0.8
	C	0	0
QT54	E	0.7	0.8
	B	0.1	0.8
	C	0	0
QT08	E	0.7	0.8
	B	0	1.4
	C	11.9	11.2
	E	0	2.1

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
QT50	B	0	3.4
	C	5.0	4.5
	E	0	2.7
QT51	B	0	3.4
	C	5.0	4.5
	E	0	2.7
QT43	B	0.7	0
	C	0	0
	E	0	0

		TV mode	PC mode
QT25	B	2.1	2.0
	C	4.2	0
	E	1.4	1.1
QT26	B	4.2	4.3
	C	11.9	11.1
	E	3.5	3.7
QT27	B	2.3	2.5
	C	9.5	9.5
	E	1.6	1.6
QT28	B	10	9.5
	C	11.9	0
	E	4.9	9.5
QT29	B	3.5	3.6
	C	11.9	11.1
	E	2.9	2.5
QT01	B	0	0
	C	0	0
	E	0	0
	B	0.6	0

ITO4	3	0	0
	4	0	0
	5	0	0
	6	3.9	3.8
	7	0	4.8
	8	5.0	5

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
QT21	B	2.0	1.7
	C	4.2	1.0
	E	1.4	1.7
QT22	B	NC	NC
	C	NC	NC
	E	NC	NC
QT23	B	2.9	2.9
	C	11.9	11.9
	E	2.3	2.3
QT24	B	1.1	2.1
	C	0	4.3
	E	1.1	1.4

- 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.

TERMINAL -1

CIRCUIT No	Pin No	DC Voltage Vdc
QT50	B	0
	C	5.0
	E	0
QT51	B	0
	C	5.0
	E	0
QT43	B	0.7
	C	0
	E	0
QT44	B	0
	C	0
	E	0

CIRCUIT No	Pin No	DC Voltage Vdc
QT28	B	9.5
	C	11.9
	E	8.8
QT29	B	3.5
	C	11.9
	E	2.9
QT01	B	0
	C	0
	E	0
QT55	B	0.6
	C	0.1
	E	0

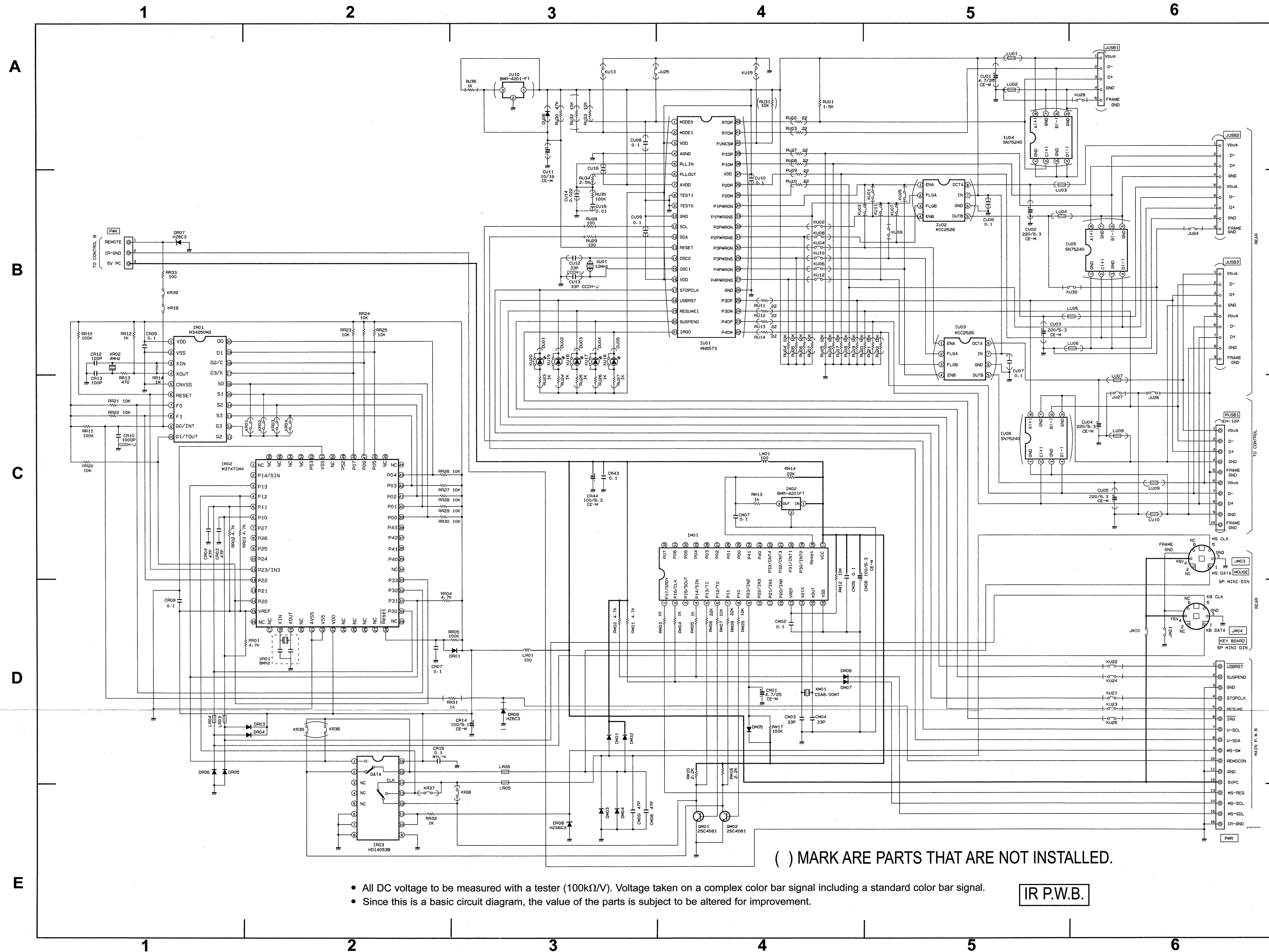
CIRCUIT No	Pin No	DC Voltage Vdc
ITO-4	1	0
	2	0
	3	0
	4	0
	5	0
	6	3.9
	7	0
	8	5.0

CIRCUIT No	Pin No	DC Voltage	
		TV mode	PC mode
Q531	B	1.8	0
	E	2.4	2.4
	C	NC	NC
Q532	C	NC	NC
	E	NC	NC
	B	NC	NC
Q533	C	NC	NC
	E	NC	NC
	B	NC	NC
Q530	C	NC	NC
	E	NC	NC
	B	NC	NC
Q529	C	8.9	9.0
	E	2.4	2.4
	B	3.0	3.0
Q534	C	6.1	4.8
	E	0	0
	B	7.8	9.3
Q548	C	6.7	8.7
	E	7.2	8.5
	B	NC	NC
Q535	C	NC	NC
	E	NC	NC
	B	NC	NC
Q536	C	NC	NC
	E	NC	NC
	B	NC	NC
Q537	C	NC	NC
	E	NC	NC
	B	NC	NC



BASIC CIRCUIT DIAGRAM - IR P.W.B.

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



CIRCUIT No	Pin No	DC Voltage
IRO1	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
	9	0.8
	10	0
	11	0.8
	12	0
	13	0.8
	14	0
	15	0.8
	16	0
	17	0.8
	18	0
	19	0.8
	20	0
IRO2	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
	9	0.8
	10	0
	11	0.8
	12	0
	13	0.8
	14	0
	15	0.8
	16	0
IRO3	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
IRO4	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
IVO1	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
	9	0.8
	10	0
	11	0.8
	12	0
	13	0.8
	14	0
	15	0.8
	16	0
IVO2	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
	9	0.8
	10	0
	11	0.8
	12	0
	13	0.8
	14	0
	15	0.8
	16	0
IVO3	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
	9	0.8
	10	0
	11	0.8
	12	0
	13	0.8
	14	0
	15	0.8
	16	0
IVO4	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
	9	0.8
	10	0
	11	0.8
	12	0
	13	0.8
	14	0
	15	0.8
	16	0
IVO5	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
	9	0.8
	10	0
	11	0.8
	12	0
	13	0.8
	14	0
	15	0.8
	16	0
IVO6	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0
	9	0.8
	10	0
	11	0.8
	12	0
	13	0.8
	14	0
	15	0.8
	16	0

CIRCUIT No	Pin No	DC Voltage
IVO6	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0

CIRCUIT No	Pin No	DC Voltage
IVO5	1	V _{dc}
	2	0
	3	0.8
	4	0
	5	0.8
	6	0
	7	0.8
	8	0

CIRCUIT No	Pin No	DC Voltage
QMO1	1	V _{dc}
	2	0
	3	0.8
	4	0
QMO2	1	V _{dc}
	2	0
	3	0.8
	4	0

CIRCUIT No	Pin No	DC Voltage
JMO4	1	V _{dc}
	2	0
	3	0.8
	4	0
JMO3	1	V _{dc}
	2	0
	3	0.8
	4	0

CIRCUIT No	Pin No	DC Voltage
JMO3	1	V _{dc}
	2	0
	3	0.8
	4	0
JMO2	1	V _{dc}
	2	0
	3	0.8
	4	0

CIRCUIT No	Pin No	DC Voltage
JMO2	1	V _{dc}
	2	0
	3	0.8
	4	0
JMO1	1	V _{dc}
	2	0
	3	0.8
	4	0

CIRCUIT No	Pin No	DC Voltage
JMO1	1	V _{dc}
	2	0
	3	0.8
	4	0
JMO4	1	V _{dc}
	2	0
	3	0.8
	4	0

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ISO1	1	2.3	2.3
	2	2.1	2.1
	3	4.8	4.8
	4	4.8	4.1
	5	0	0
	6	3.9	3.9
	7	6.4	5.5
	8	5.1	5.1
	9	4.8	2.9
	10	4.8	4.8
	11	4.9	3.5
	12	4.9	4.9
	13	0	0
	14	0	0
	15	0	0
	16	11.8	11.8
	17	28.4	28.4
	18	0.4	0.4
	19	6.5	6.5
	20	2.2	2.2
	21	0.7	0.7
	22	1.3	1.3
	23	4.8	4.8
	24	3.5	3.5
	25	3.0	3.0
	26	4.4	4.4
	27	1.5	1.5
	28	4.8	4.8
	29	0.4	0.4
	30	0	0

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ISO5	1	0	4.3
	2	4.4	4.9
	3	0	4.8
	4	4.8	4.8
	5	4.8	4.8
	6	0	0
	7	0	0
	8	0	0
	9	0.1	11.9
	10	0.1	11.9
	11	0	0
	12	0	0
	13	0	0
	14	0	0
	15	4.4	0
	16	11.9	11.9

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ISO2	1	3.0	2.4
	2	3.0	3.4
	3	3.0	3.4
	4	0	0
	5	3.0	3.4
	6	3.0	3.4
	7	3.0	3.6
	8	12.0	11.8

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ISO3	1	2.9	2.7
	2	4.4	4.9
	3	0	0
	4	4.8	4.9

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ISO0	1	11.9	11.9
	2	0	0
	3	4.8	4.9

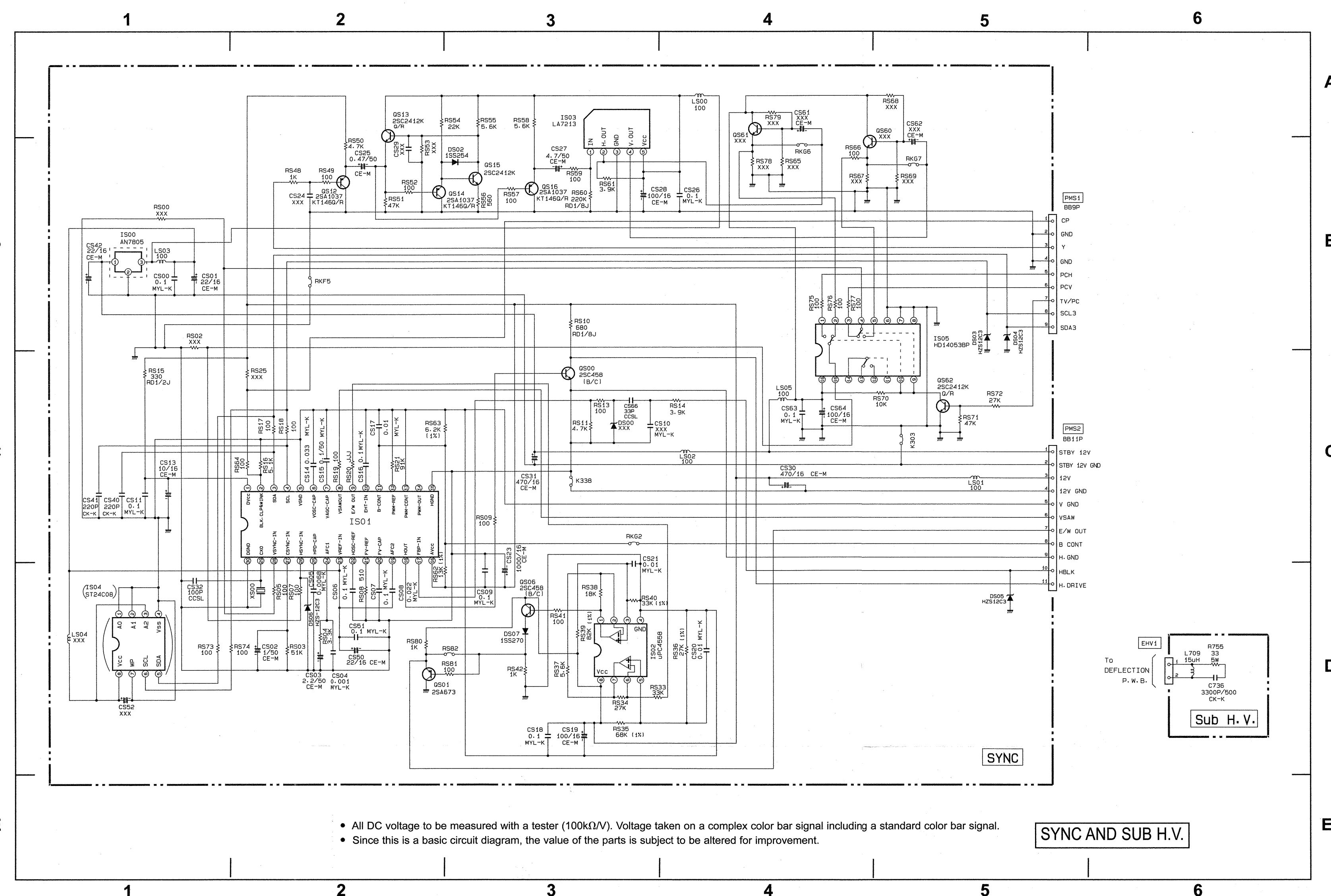
CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ISO4	1	NC	NC
	2	NC	NC
	3	NC	NC
	4	NC	NC
	5	NC	NC
	6	NC	NC
	7	NC	NC
	8	NC	NC

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
ISO4	1	NC	NC
	2	NC	NC
	3	NC	NC
	4	NC	NC
	5	NC	NC
	6	NC	NC
	7	NC	NC
	8	NC	NC

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
QS61	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS62	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS00	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS01	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS06	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
QS12	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS13	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS14	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS15	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS16	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS60	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC

CIRCUIT No	Pin No	DC Voltage Vdc	
		TV mode	PC mode
QS12	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS13	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS14	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS15	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS16	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC
QS60	B	NC	NC
	C	NC	NC
	E	NC	NC
	F	NC	NC

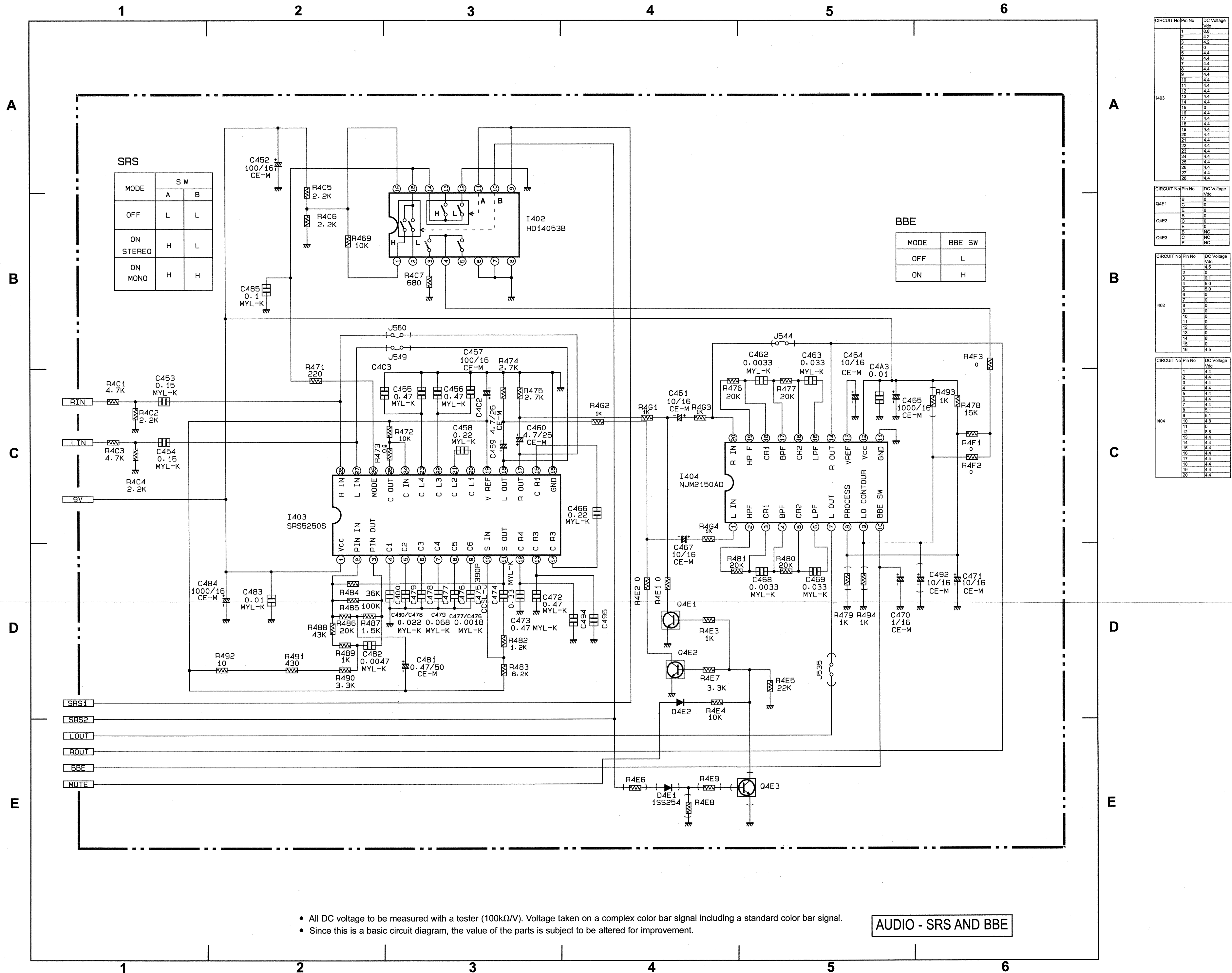


- All DC voltage to be measured with a tester (100k Ω /V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

SYNC AND SUB H.V.

BASIC CIRCUIT DIAGRAM - AUDIO - SRS AND BBE

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



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 - AUDIO

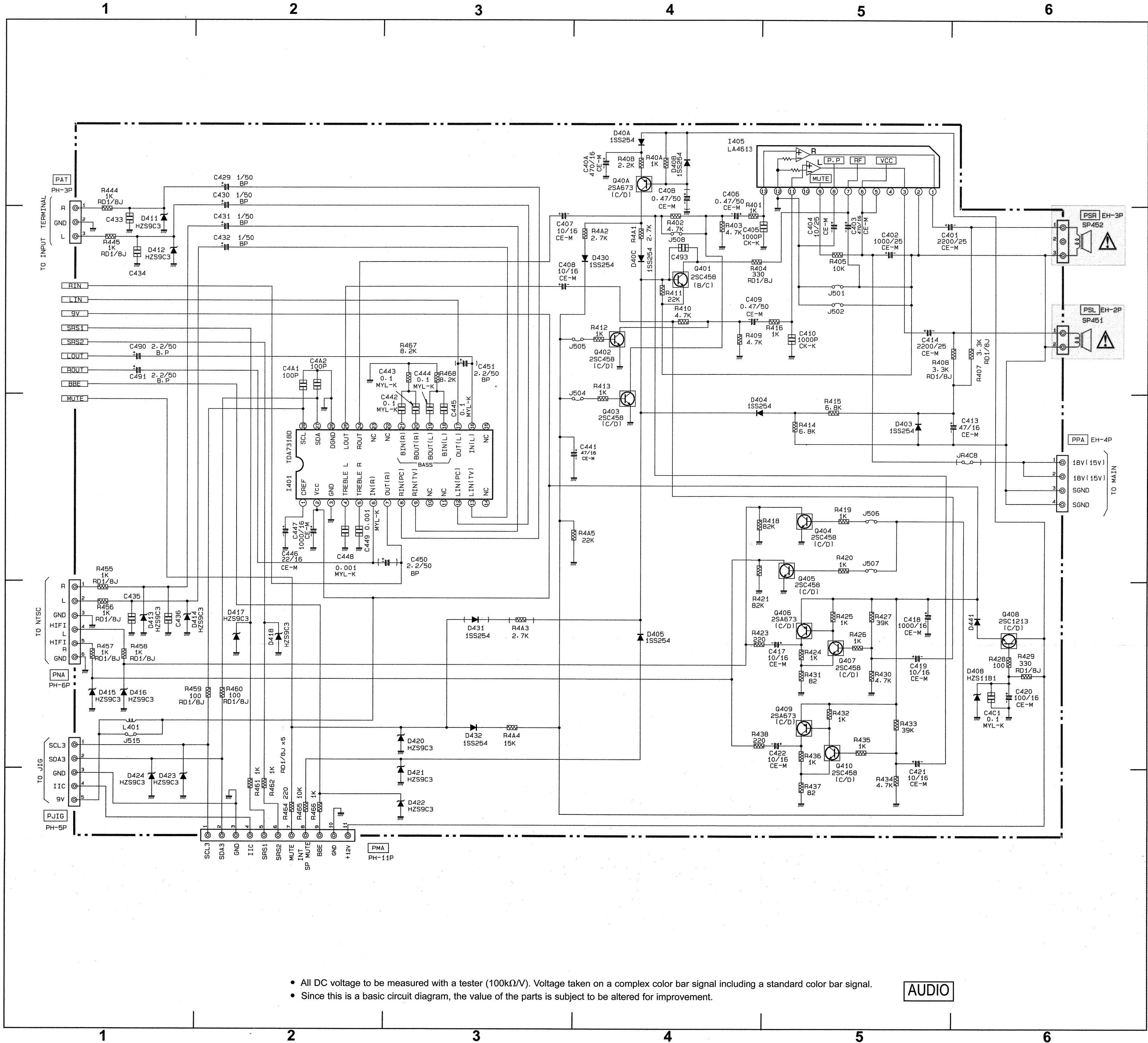
AUDIO

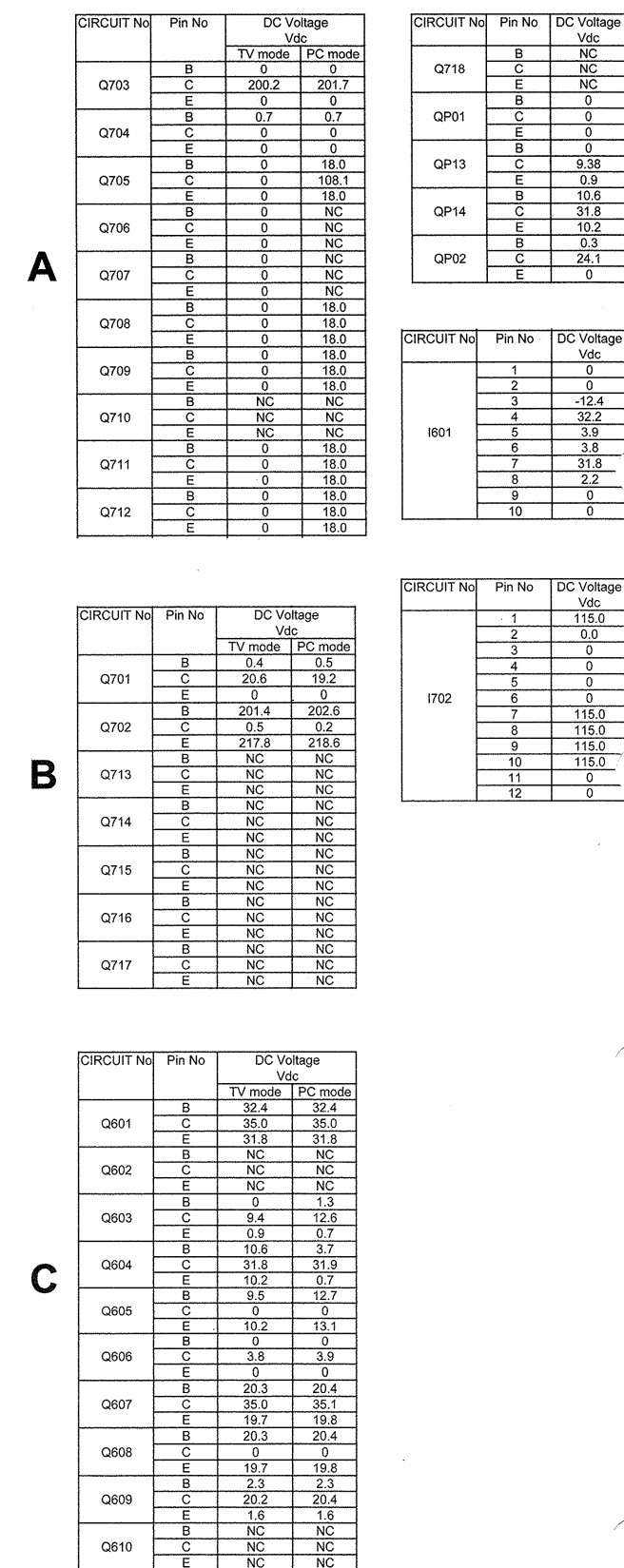
CIRCUIT No.	Pin No.	DC Voltage
I405	1	8.3
	2	0
	3	0
	4	0
	5	19.2
	6	19.2
	7	8.5
	8	12.4
	9	2.3
	10	0
	11	1.4
	12	0
	13	1.4

CIRCUIT No.	Pin No.	DC Voltage
Q401	B	0.0
	C	9.5
Q402	B	0
	C	0
Q403	B	0
	C	0
Q404	B	0
	C	0
Q405	B	0
	C	0
Q406	B	8.2
	C	8.8
Q407	B	8.2
	C	0.3
Q408	B	10.3
	C	11.5
Q409	B	9.6
	C	8.2
	B	4.0
	C	8.2

CIRCUIT No.	Pin No.	DC Voltage
I401	1	4.4
	2	8.8
	3	0
	4	4.4
	5	4.4
	6	4.4
	7	4.4
	8	4.4
	9	4.4
	10	4.4
	11	4.4
	12	4.4
	13	4.4
Q410	B	0
	C	0
	B	NC
	C	NC
	B	NC
	C	NC
	B	NC
	C	NC
	B	NC
	C	NC
	B	NC
	C	NC
	B	NC

CIRCUIT No.	Pin No.	DC Voltage
Q410	B	0
	C	0
Q40A	B	NC
	C	NC



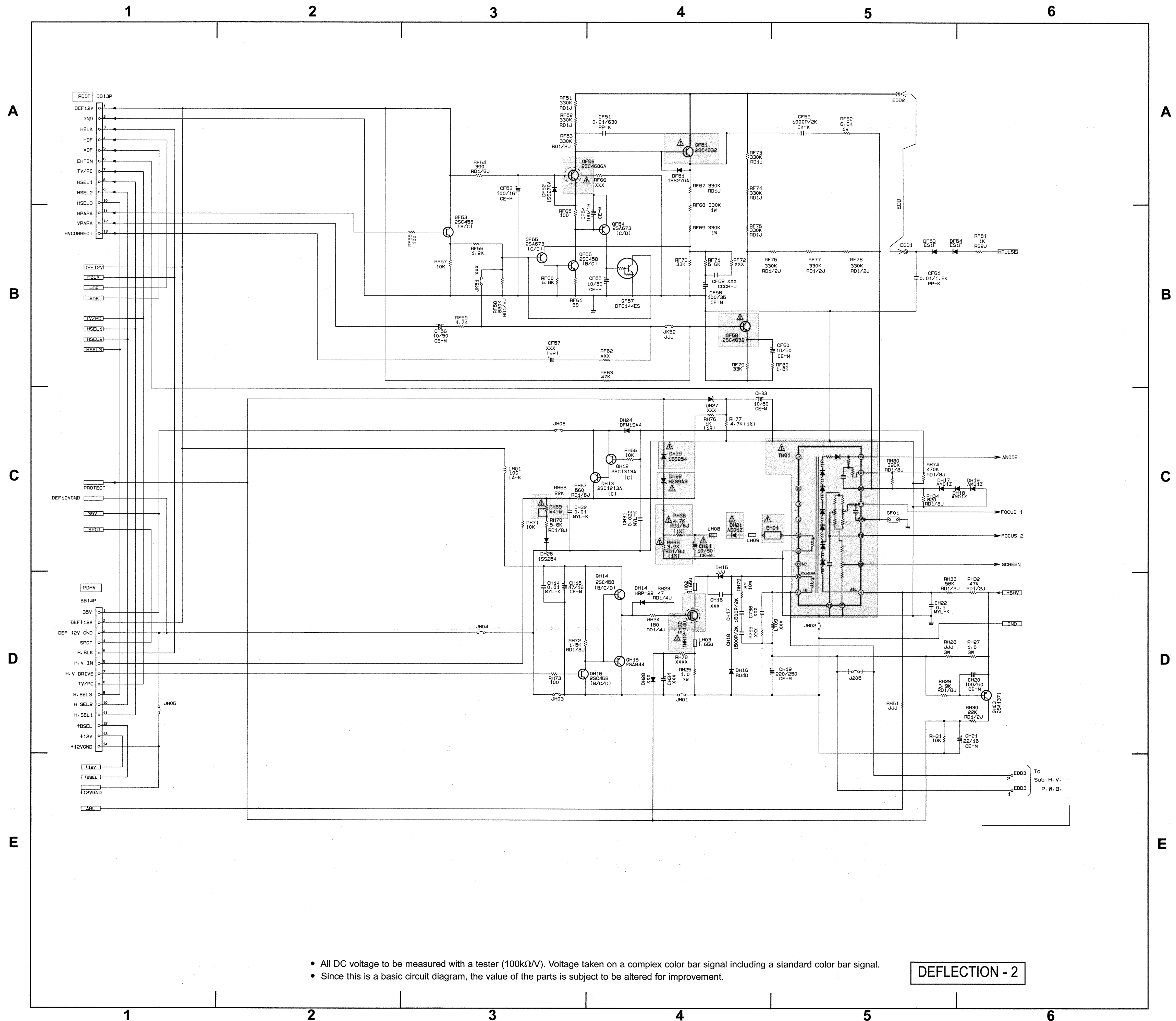


- All DC voltage to be measured with a tester (100k Ω /V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

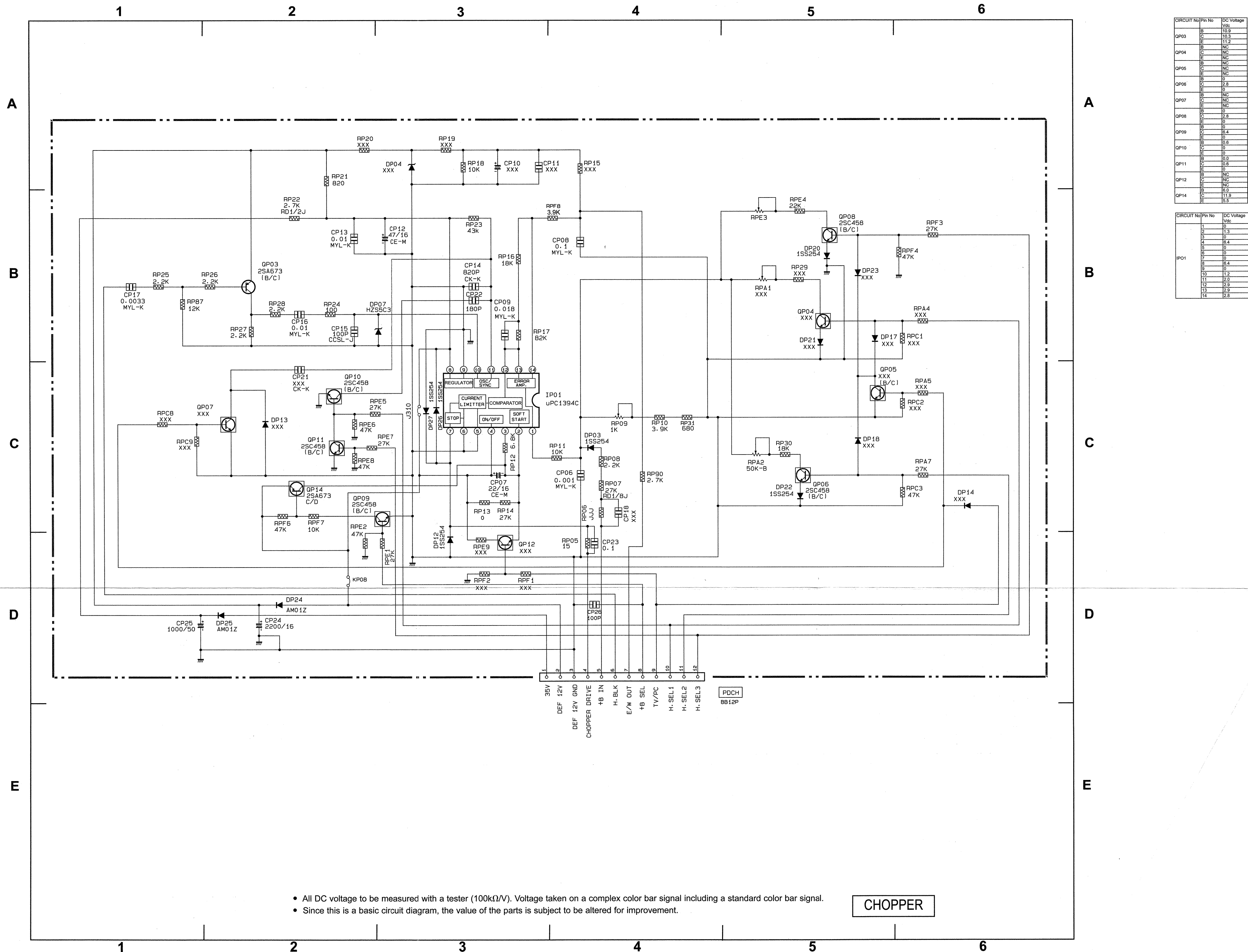
DEFLECTION - 1

DEFLECTION - 2

CIRCUIT No	Pin No	DC Voltage V _{dc}	
		TV mode	PC mode
QH15	B	2.5	3.5
	C	1.9	0
	E	3.8	3.3
QH16	B	2.5	0.5
	C	2.5	3.5
	E	1.9	0
QH02	B	8.8	2.7
	C	0	214.3
	E	1.9	0.4



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BASIC CIRCUIT DIAGRAM - DF

DF

CIRCUIT No	Pin No	DC Voltage	
		TV mode	PC mode
QF16	B	9.8	9.3
	C	11.9	11.9
	E	9.5	9.7
QF17	B	0	0
	C	9.8	9.8
	E	0	0
QF18	B	9.8	9.8
	C	0	-0.2
	E	0	0
QF19	B	0	9.8
	C	9.8	-0.2
	E	0	0
QF20	B	9.8	9.8
	C	0	-0.2
	E	0	0

CIRCUIT No	Pin No	DC Voltage	
		TV mode	PC mode
QF02	B	NC	NC
	C	NC	NC
	E	NC	NC
QF03	B	NC	NC
	C	NC	NC
	E	NC	NC
QF04	B	NC	NC
	C	NC	NC
	E	NC	NC
QF05	B	3.6	3.6
	C	9.8	9.8
	E	3.0	3.0
QF06	B	9.0	9.0
	C	11.9	11.9
	E	9.8	9.8
QF07	B	NC	NC
	C	NC	NC
	E	NC	NC
QF08	B	NC	NC
	C	NC	NC
	E	NC	NC
QF09	B	NC	NC
	C	NC	NC
	E	NC	NC
QF10	B	NC	NC
	C	NC	NC
	E	NC	NC
QF11	B	NC	NC
	C	NC	NC
	E	NC	NC

CIRCUIT No	Pin No	DC Voltage	
		TV mode	PC mode
QF14	B	5.4	5.4
	C	11.9	11.9
	E	5.0	5.0
QF15	B	0.8	0.8
	C	9.8	9.8
	E	0.4	0.4
QF12	B	5.9	5.9
	C	11.9	11.9
	E	5.3	5.3
QF13	B	6.0	6.0
	C	11.9	11.9
	E	5.5	5.5

A

B

C

D

E

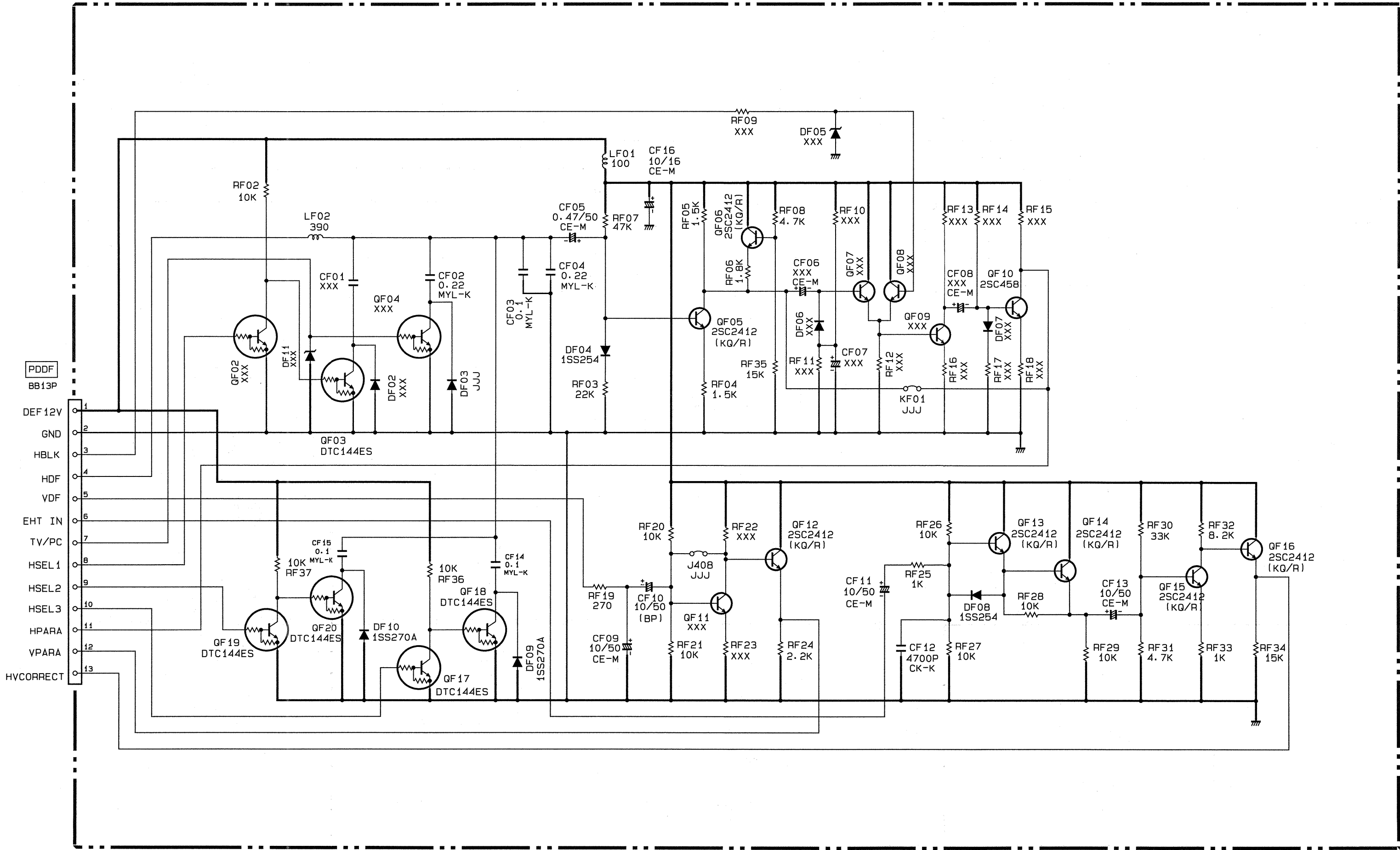
A

B

C

D

E



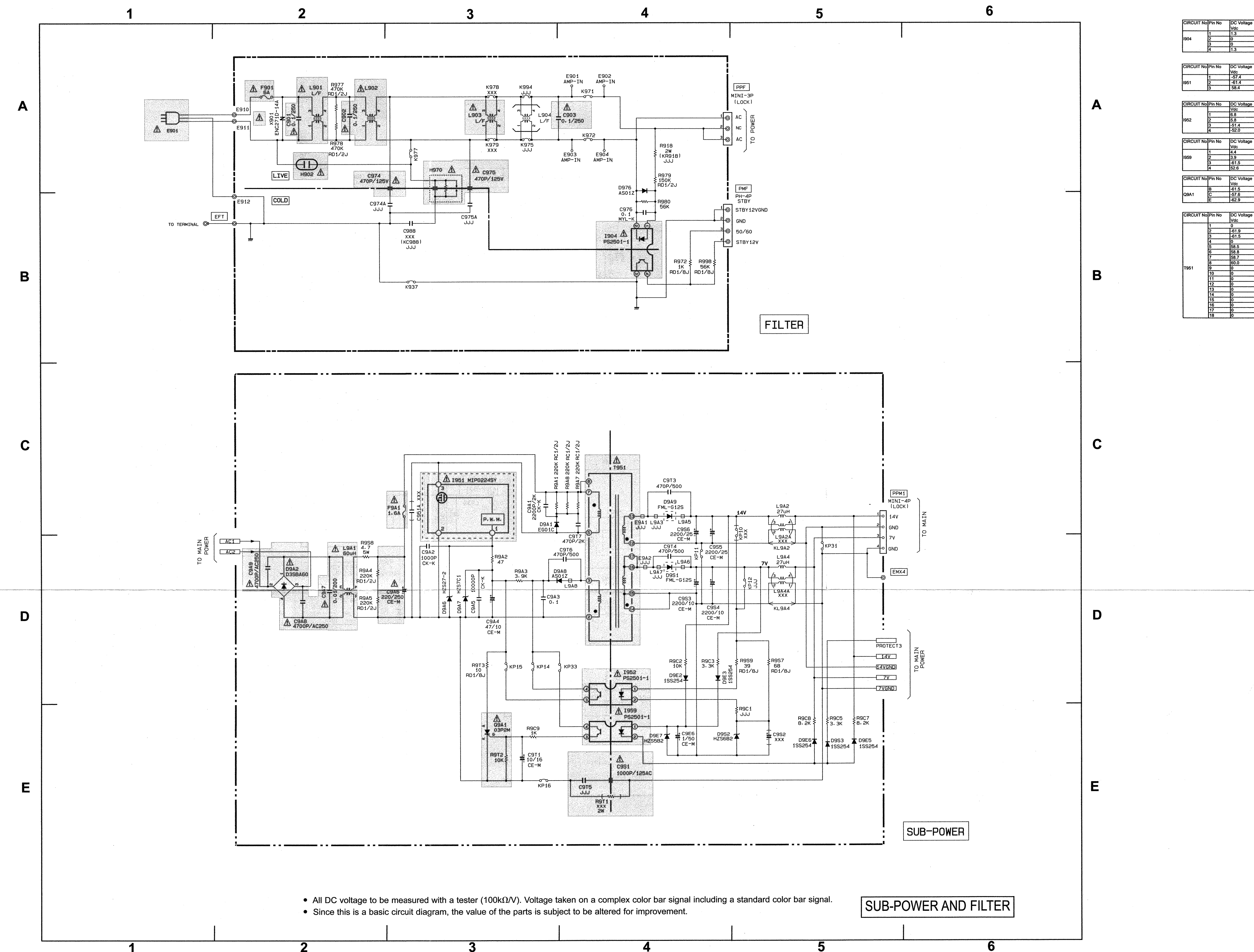
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

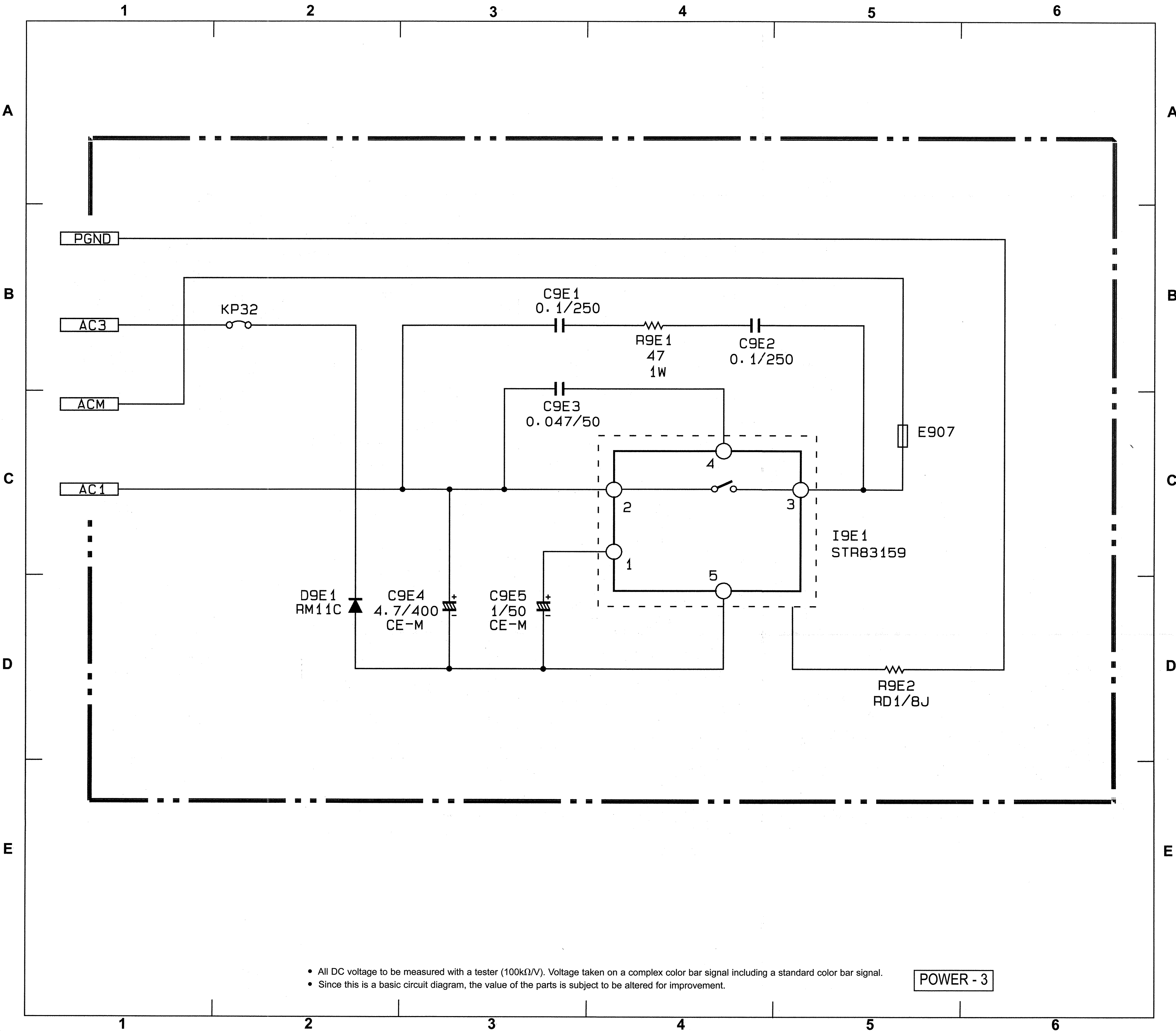
DF



CIRCUIT No	Pin No	DC Voltage V _{dc}
Q911	B	0
	C	11.9
	E	0







BASIC CIRCUIT DIAGRAM - CPT

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A

A

B

B

C

C

D

D

E

E

VIDEO-OUT (B)

VIDEO-OUT (G)

VIDEO-OUT (R)

circuit #	pin #	DC voltage Vdc	
		TV mode	PC mode
Q 801	B	NC	NC
	C	NC	NC
	E	NC	NC
Q 802	B	NC	NC
	C	NC	NC
	E	NC	NC
Q 803	B	NC	NC
	C	NC	NC
	E	NC	NC
Q 804	B	3.8	4.4
	C	11.0	10.7
	E	3.1	3.7
Q 805	B	11.2	11.2
	C	11.9	6.1
	E	11.0	10.8
Q 806	B	11.8	11.8
	C	149.4	1.5
	E	11.3	11.2
Q 807	B	149.6	1.5
	C	0	0
	E	150.5	1.8
Q 808	B	0	0
	C	218.4	218.7
	E	150.8	1.9
Q 809	B	0	0
	C	11.9	11.8
	E	0	0
Q 810	B	3.8	4.3
	C	11.0	10.8
	E	2.9	3.6

circuit #	pin #	DC voltage Vdc	
		TV mode	PC mode
Q 816	B	11.3	11.3
	C	11.9	10.9
	E	11.0	10.8
Q 817	B	11.9	11.8
	C	152.9	2.0
	E	11.3	11.2
Q 818	B	152.5	10.8
	C	0	0
	E	153.3	2.3
Q 819	B	154.6	2.1
	C	218.3	218.8
	E	154.5	2.1
Q 820	B	0	0
	C	6.0	6.1
	E	0	0
Q 821	B	11.3	11.2
	C	11.9	11.9
	E	11.0	10.8
Q 822	B	11.8	11.8
	C	162.1	2.2
	E	11.3	11.2
Q 823	B	162.1	2.2
	C	0	0
	E	162.7	2.4
Q 824	B	163.4	2.4
	C	218.3	218.8
	E	163.2	2.5
Q 825	B	3.5	4.2
	C	11.0	10.9
	E	2.8	3.4

- 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.

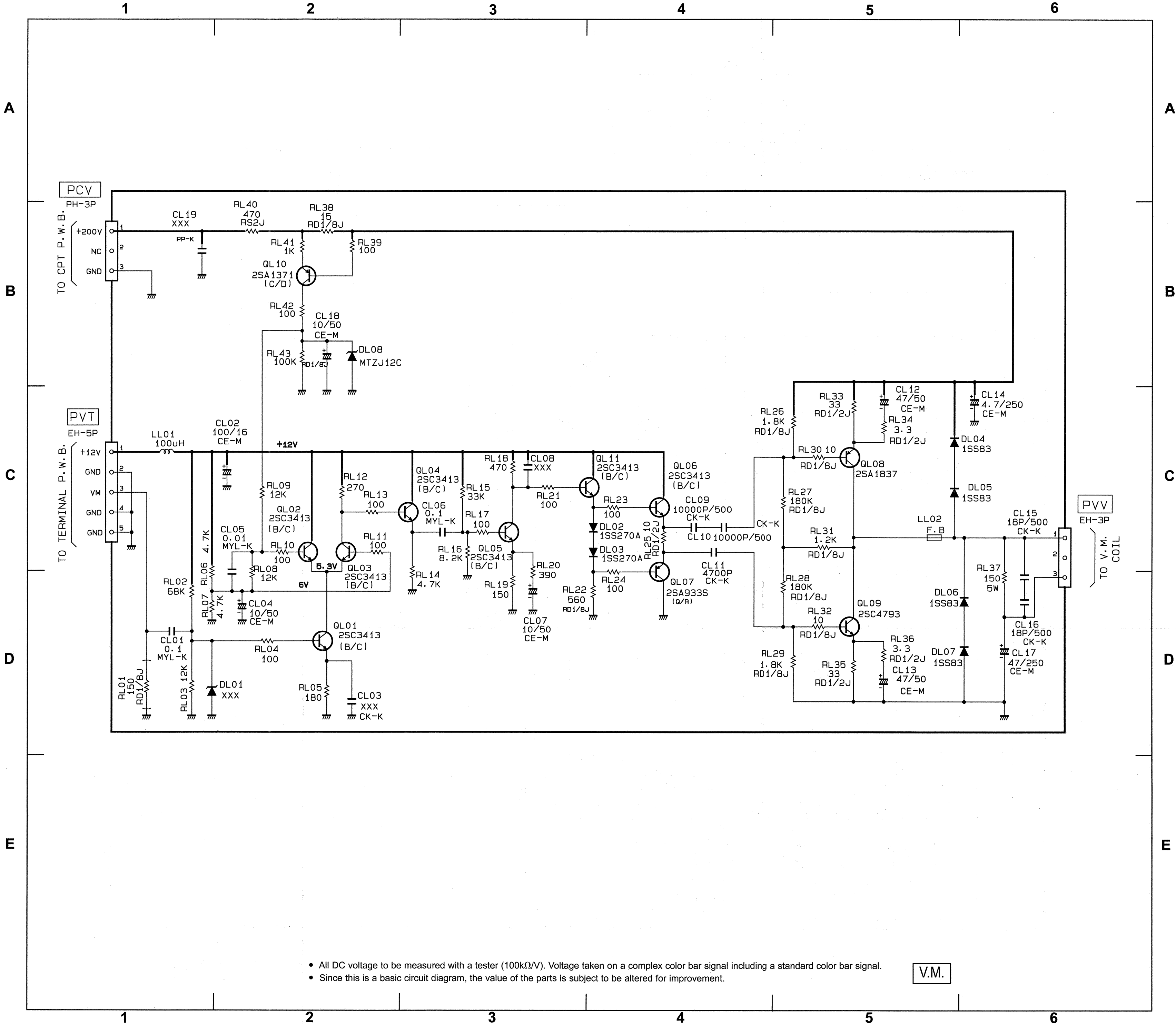
CPT

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BASIC CIRCUIT DIAGRAM V.M.

V.M.

CIRCUIT No	Pin No	DC Voltage Vdc
QL01	B	1.6
	C	5.1
	E	0.9
QL02	B	5.2
	C	11.9
	E	5.1
QL03	B	5.8
	C	10.6
	E	6.1
QL04	B	10.6
	C	11.9
	E	9.9
QL05	B	2.2
	C	7.2
	E	1.5
QL06	B	6.5
	C	11.9
	E	5.8
QL07	B	5.1
	C	0
	E	5.8
QL08	B	211.2
	C	107.9
	E	211.9
QL09	B	1.0
	C	107.5
	E	0.4
QL10	B	212.3
	C	4.7
	E	212.5
QL11	B	7.2
	C	11.9
	E	6.5



• 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.

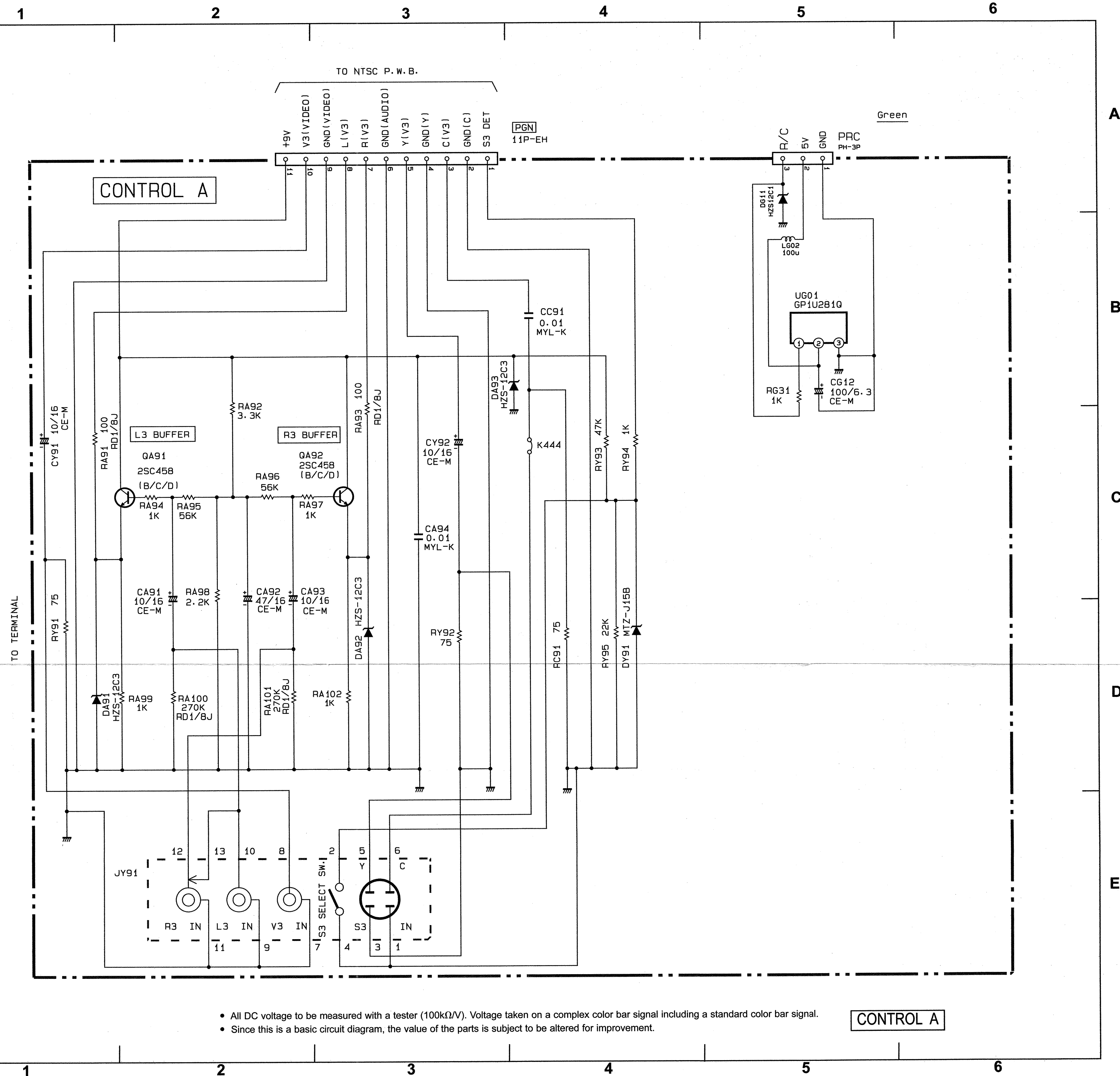
V.M.

BASIC CIRCUIT DIAGRAM - CONTROL A

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CIRCUIT No	Pin No	DC Voltage Vdc
QA91	B	2.9
	C	8.9
	E	2.2
QA92	B	2.9
	C	8.9
	E	2.2
UG01	1	4.9
	2	4.9
	3	0
RRC	1	0
	2	4.9
	3	4.9

CIRCUIT No	Pin No	DC Voltage Vdc
JY91	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	0
	12	0



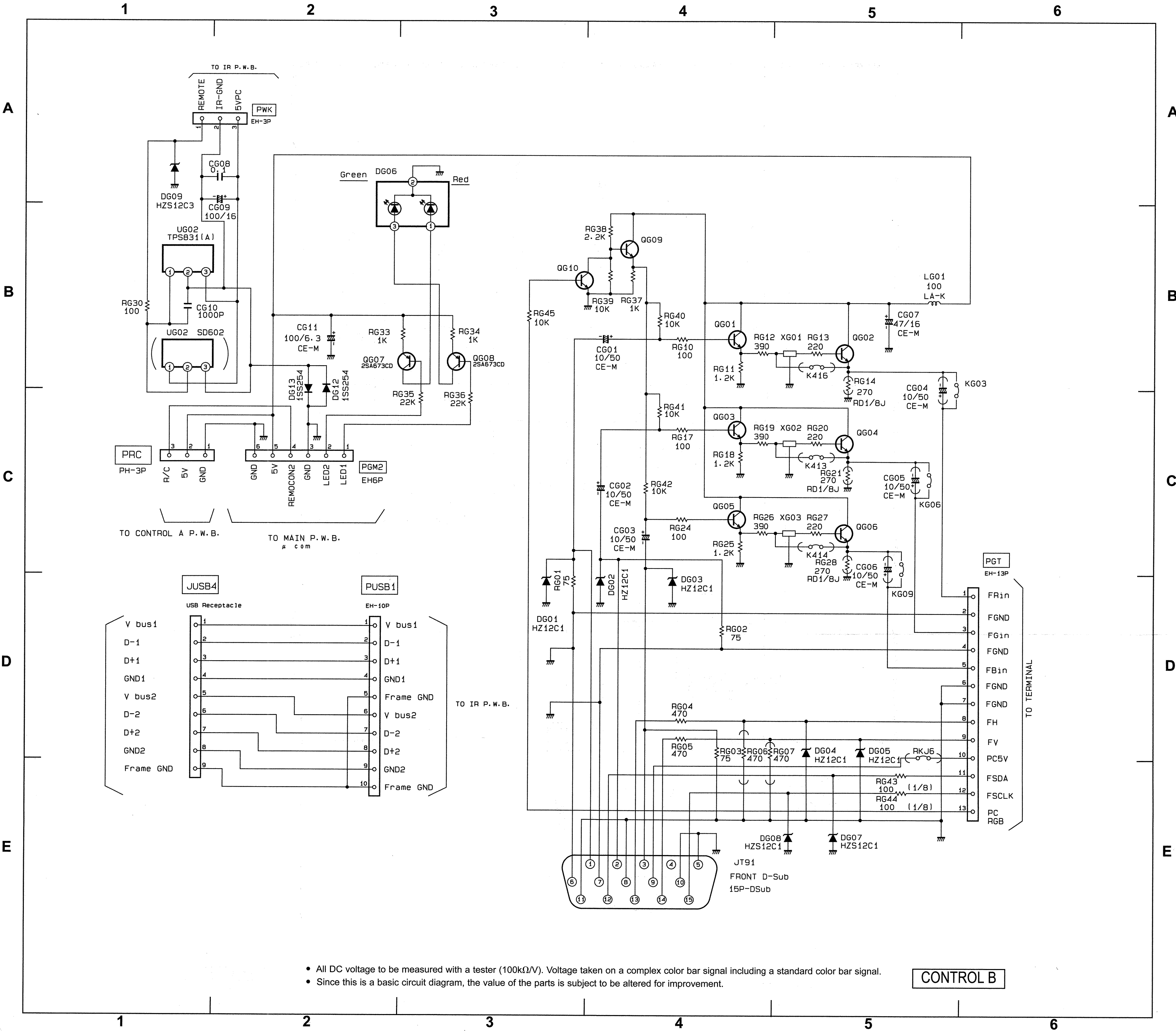
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BASIC CIRCUIT DIAGRAM - CONTROL B

CONTROL B

CIRCUIT No	Pin No	DC Voltage Vdc
UG02,1	1	0.8
UG02,1	2	0
UG02,1	3	0.8
UG02,2	B	NC
UG02,2	C	NC
UG02,2	E	NC
QG06	B	0
QG06	C	4.9
QG06	E	0.1
QG07	B	4.8
QG07	C	0
QG07	E	5.0
QG08	B	1.7
QG08	C	2.1
QG08	E	2.4
QG09	B	0.1
QG09	C	4.9
QG09	E	0
QG01	B	0
QG01	C	4.9
QG01	E	0
QG02	B	0
QG02	C	4.9
QG02	E	0
QG03	B	0
QG03	C	4.9
QG03	E	0
QG04	B	0
QG04	C	4.9
QG04	E	0.1
QG05	B	0
QG05	C	4.9
QG05	E	0

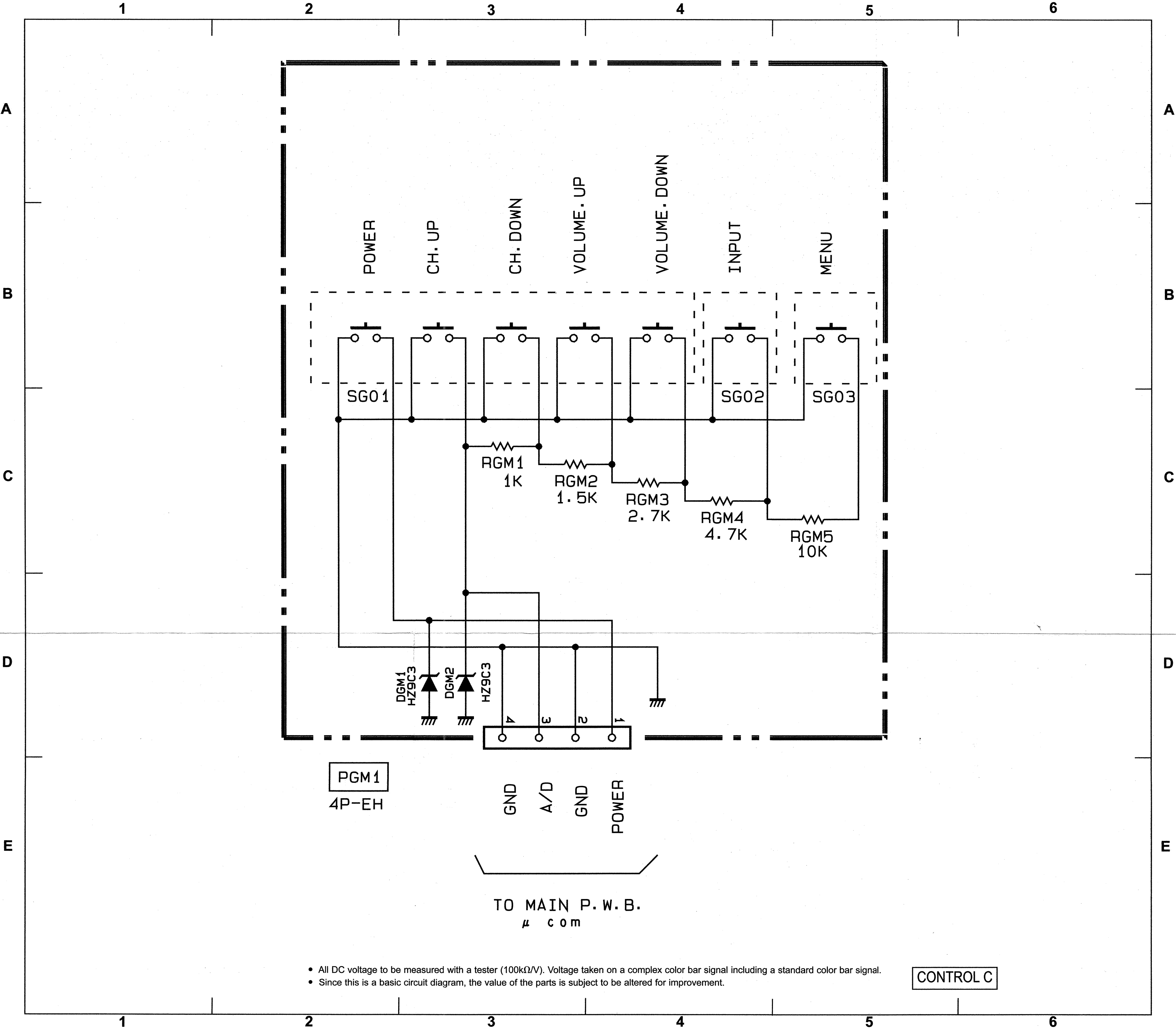
CIRCUIT No	Pin No	DC Voltage Vdc
RRC	1	0
RRC	2	4.9
RRC	3	4.9
XG01	1	0
XG01	2	0
XG01	3	0
XG02	1	0
XG02	2	0
XG02	3	0
XG03	1	0
XG03	2	0
XG03	3	0



BASIC CIRCUIT DIAGRAM - CONTROL C

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CIRCUIT No	Pin No	DC Voltage Vdc
UG02.1	1	0
	2	0
	3	0
	4	0



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CONTROL C

HITACHI