

CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Remove five screws holding cabinet back and remove back. Disconnect speaker and antenna connectors. Channel readout may be removed at this point of disassembly. Remove one screw holding readout to cabinet front and remove assembly from cabinet. Disconnect HV anode, CRT socket, deflection yoke connectors, degaussing coil connector and ground leads. Remove six screws holding main board assembly

to cabinet bottom and remove assembly from cabinet.

CRT REMOVAL

Follow "Chassis Removal" procedure and lay set facedown on a soft protective surface. Loosen and remove CRT neck assemblies. Remove four screws holding CRT to cabinet front and lift CRT out of cabinet. Do not lift CRT by the neck.

SERVICING IN THE FIELD

CRT IMPLOSION PROTECTION AND CLEANING

Implosion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

FUSE DEVICES

A 4-amp fuse is used for AC line protection. (See photo, Cabinet - Rear View.)

CHANNEL TUNING

Channel Up and Down buttons are provided for channel scanning. Add and Delete buttons are provided for channel pretuning. Ten numbered buttons on remote are provided for two-digit entry channel selection.

HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the Horizontal Frequency Control.

FOCUS

The focus may be varied by a focus control. (See photo, Cabinet - Rear View.)

AGC

The AGC may be varied by an AGC control. (See Main Board photo.)

CENTERING

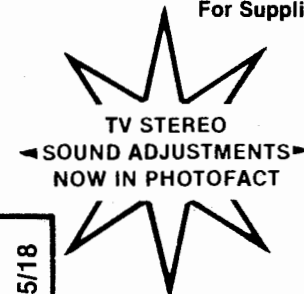
Vertical centering is accomplished by proper adjustment of the vertical centering switch. (See Main Board photo.)

SET 2521 FOLDER 2

SAMS

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For Supplier Address See PHOTOFACT Index



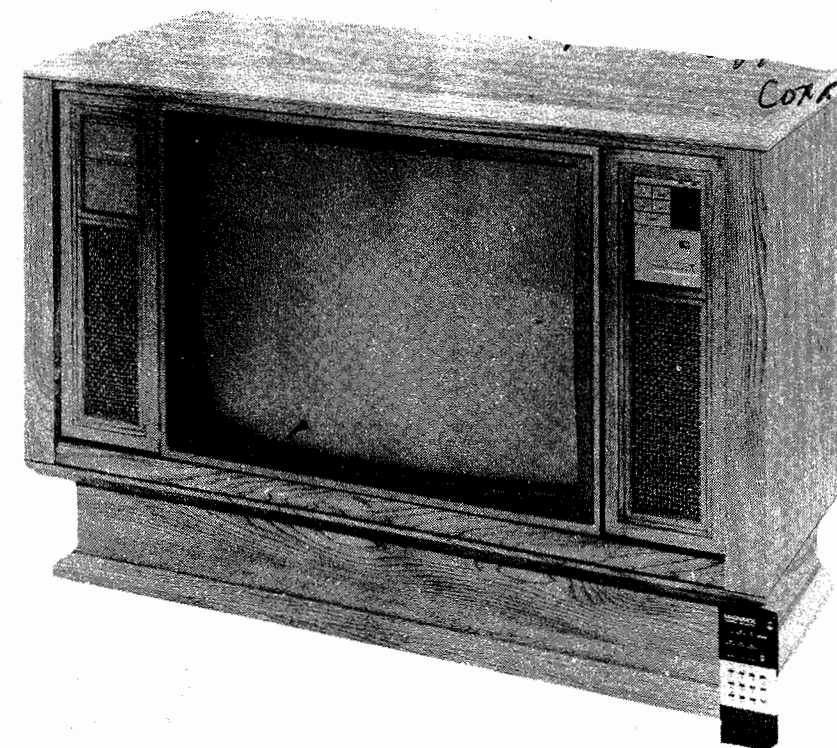
MAGNAVOX CHASSIS
25C802/03/05/19,26C801/02/03/10/11/12/13/15/18

MAGNAVOX CHASSIS

25C802/03/05/19,26C801/02/03/10/11/12/13/15/18

MODELS

- RG4550AK01
- RG4550AK02
- RG4950AK01
- RG4950AK02
- RG5950AK01
- RG5950AK02
- RG5960AK01
- RG5960AK02
- RG5966PE01
- RG5966PE02
- RG5970AK01
- RG5970AK02
- RG5976PE01
- RG5976PE02



Model RG5950AK02

SAFETY PRECAUTIONS

See Page 1.

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SAMS

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The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co. as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co. by the manufacturers of the particular type of replacement part listed.

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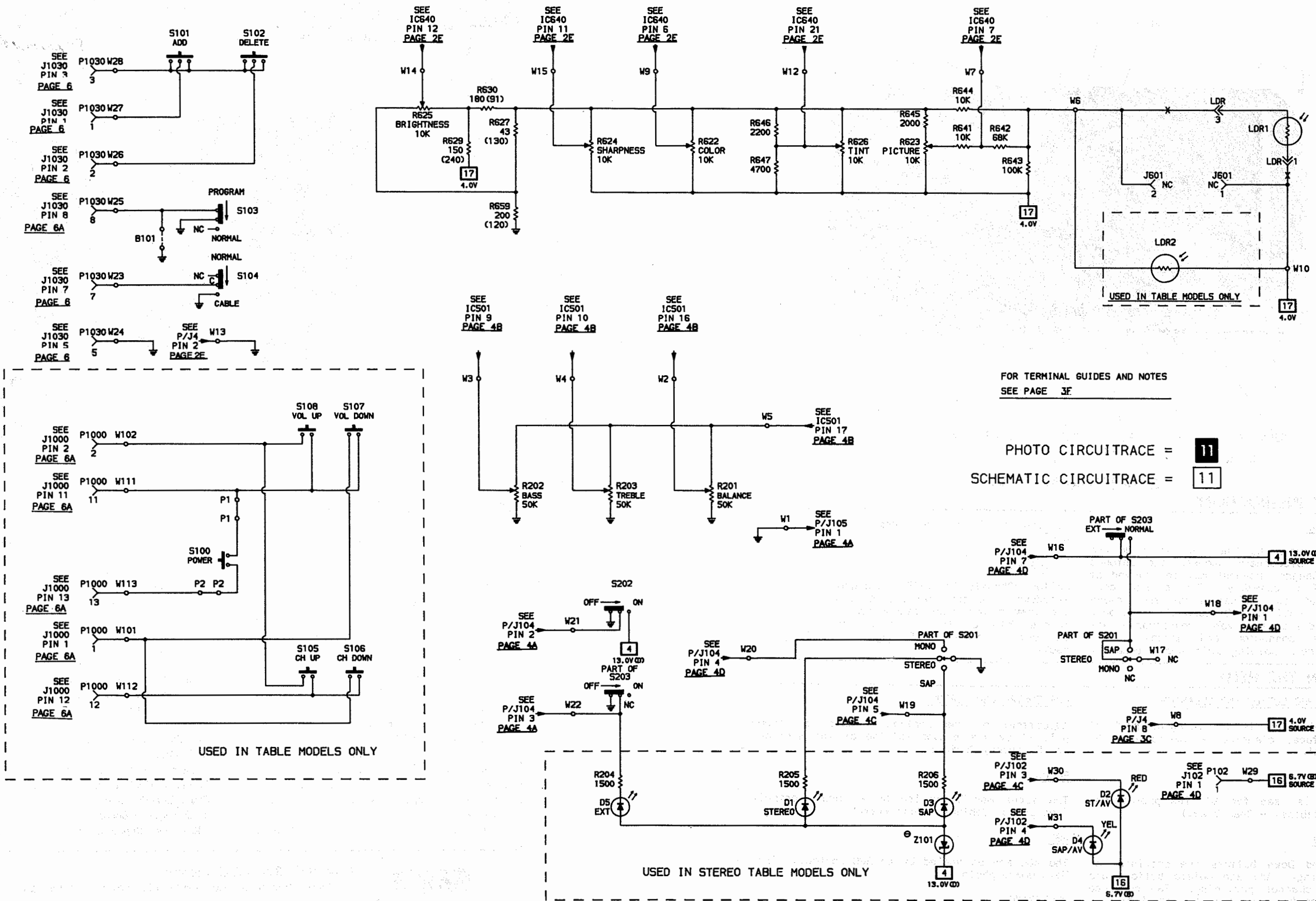
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DATE 9-87

SET 2521 FOLDER 2

MAGNAVOX CHASSIS
25C802/03/05/19,26C801/02/03/10/11/12/13/15/18

SET 2521 FOLDER 2



SWITCHES AND SECONDARY CONTROLS

A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH CIRCUITRACE
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SWITCHES AND SECONDARY CONTROLS

SET 2521 FOLDER 2

G

H

TROUBLESHOOTING (Continued)

Blue, check the voltages and components associated with pin 13 of IC640 and Blue Output Transistor (Q47. If the raster has a keystone shape, check the Deflection Yoke (DY1). If the raster has height or width problems, refer to the "Vertical", "Horizontal" and "Power Supply" sections of this Troubleshooting guide.

CHROMA

Check for a chroma waveform at pin 3 of Chroma/Luminance IC (IC640). If the waveform is missing, check the components associated with pin 3. If the chroma waveform is present at pin 3, check for the proper chroma wave-

forms at pins 13, 14 and 15 of IC640. If these waveforms are missing, check the voltages, waveforms and components associated with pins 1 thru 6, 8 and 16 thru 24 of IC640. Check the 7.16MHz oscillator at pins 20 and 22 of IC 640. Check the voltages and components associated with the Color Control and pin 6 of IC640. If there is no color sync, check the voltages, waveforms and components associated with pin 8 of IC640. If there is inadequate Tint Range, check the voltages and components associated with the Tint Control and pin 21 of IC640. If the proper chroma waveforms are present at pin 13, 14 and 15 of IC640, refer to the "Raster" section of this Troubleshooting guide.

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TEST EQUIPMENT

Test Equipment listed by Manufacturer illustrates typical or equivalent equipment used by SAMS' Engineers to obtain measurements and is compatible with most types used by field service technicians.

Equipment	B & K Precision Equipment No.	Sencore Equipment No.	Notes
OSCILLOSCOPE	1560, 1564, 1541	SC61	
GENERATORS			
RGB	1249,1260		
MULTIBURST SIGNAL	1251,1260	VA62	
COLOR BAR	1211A,1249,1251,1260	VA62,CG25	
ANALOG VOM	277,111,116		
DIGITAL VOM	2830,2806	DVM37,DVM56,SC61	
FREQUENCY METER	1803,1805	FC71,SC61	
HI-VOLTAGE PROBE VOM/DMM	HV-44	HP200	
Accessory probes	PR-28(HV)		
ISOLATION TRANSFORMER	TR110,1604,1653,1655	PR57	
CAPACITANCE ANALYZER	820,810,830	LC53,LC75,LC76, LC77	
CRT ANALYZER	467,470	CR70	
TEMPERATURE PROBE	TP-28,TP-30		
AC LEAKAGE TESTER	1655	PR57	
LOGIC PROBE	DP51,DP21		
LOGIC PULSER	DP101,DP31		
INDUCTANCE ANALYZER	875	LC53,LC75,LC76, LC77	
FLYBACK YOKE TESTER	875	LC53,VA62	
TV STEREO GENERATOR	2009	ST65,ST66	
FIELD STRENGTH METER		FS73,FS74	

TV ALIGNMENT INSTRUCTIONS

Use an Isolation transformer and observe power supply polarity. Maintain line voltage at 120V AC. Allow a 20-minute warm-up period for receiver and test equipment.

PRELIMINARY INSTRUCTIONS

Set the channel selector to the highest unused channel. Set scope sweep to external. Connect scope vertical input to scope vertical input on sweep/marker generator. Connect scope external horizontal input to scope horizontal input on sweep/marker generator. Ground test equipment to TV chassis unless specified otherwise. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from that shown. Connect a 6.7V Bias to TP210 (Pin 10 IC201).

VIDEO IF ALIGNMENT (SWEEP MARKER GENERATOR)

DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
TP244 (Emitter of Q244)	TP240 (Base of Q240)	44MHz (10MHz Sweep)	45.75MHz	Adjust L205 for Maximum 45.75MHz marker. See Figure 1.

VIDEO IF ALIGNMENT (BAR SWEEP GENERATOR)

BAR SWEEP GENERATOR	SCOPE INPUT	REMARKS
Antenna Terminals	TP244	Perform Video IF Adjustments per SWEEP/MARKER GENERATOR Instructions above See Figure 2.

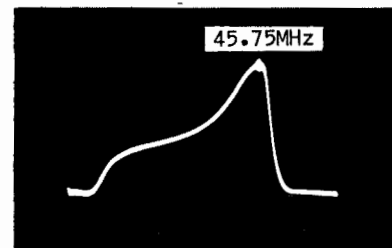
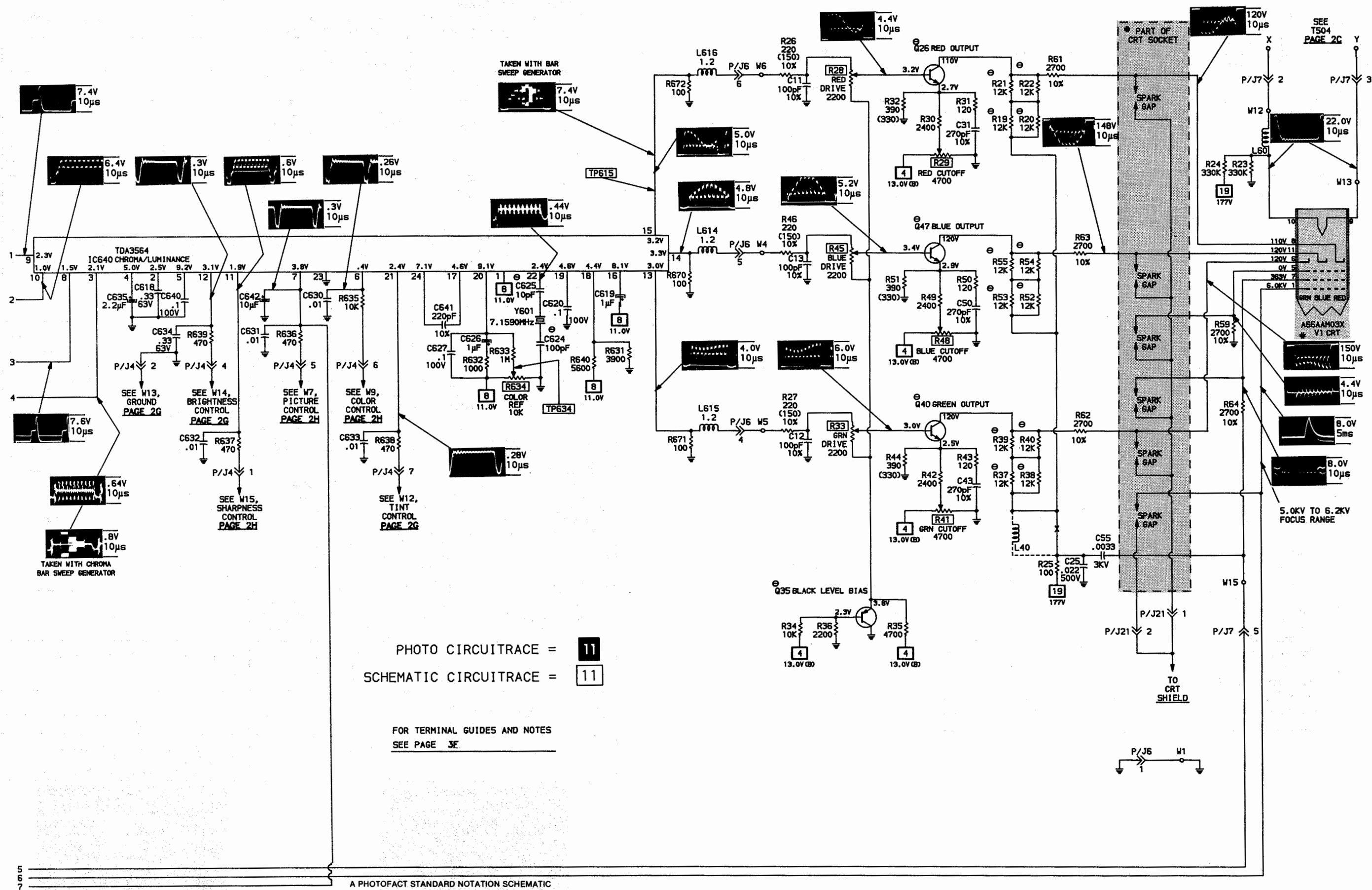


Figure 1



Figure 2



SAFETY PRECAUTIONS

SERVICE WARNING

Service work should be performed only by qualified service technicians who are familiar with safety checks and guide lines.

- 1. For continued safety, no modification of any circuit should be attempted unless recommended by manufacturer.
- 2. Disconnect power source before replacing parts as some parts may be electrostatic sensitive.
- 3. Use an isolation transformer between the line cord and power receptacle, when servicing chassis.

SERVICING HIGH VOLTAGE AND PICTURE TUBE

When servicing the High Voltage circuits, extreme caution should be used.

- 1. Discharge static High Voltage by connecting a 10 kohms resistor in series with a test lead between chassis and anode lead of picture tube.
- 2. Wear shatter-proof eye protection (goggles) when handling the picture tube in case of implosion.
- 3. DO NOT lift picture tube by the neck.

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Service personnel should be aware of the procedures and instructions covering x-ray radiation. The only potential source of x-ray in present day solid state receivers and monitors is the picture tube.

- 1. It is only when High Voltage is excessive that x-ray radiation is capable of being emitted from shell of picture tube. Be sure the High Voltage is set at specified level.
- 2. An accurate High Voltage meter should be available at all times. Meter calibration should be checked periodically.
- 3. High Voltage should be kept at rated value - NO HIGHER. Higher voltages may cause x-ray radiation or failure of other associated components. DO NOT depend on protection circuit to keep voltages at rated value.
- 4. Every time a chassis is serviced, High Voltage should be checked at various brightness levels to be sure it is regulating properly.
- 5. While troubleshooting a set with excessive High Voltage, avoid being close to picture tube. DO NOT operate longer than it is necessary to locate the cause of excessive High Voltage. Use a variable AC transformer to regulate voltage.
- 6. Many components, electrical and mechanical, in present chassis have safety related characteristics which are not evident with visual inspection. When these components are known, they are identified with a # on the schematic and in the parts list. When replacing these components, for SAFETY, use only an equivalent replacement part.

SAFETY CHECKS-FIRE AND SHOCK HAZARD

Cold Leakage Checks (Sets with isolated ground.)

- 1. Unplug the AC cord and connect a jumper across the two prongs on the plug.
- 2. Turn on power switch.
- 3. Measure the resistance, with an Ohm meter, between the jumpered AC plug and any exposed metal cabinet parts on the set such as: antenna screw heads, control shafts, handle brackets. Exposed metal parts that have a return path should measure between 200 kohms and 5 megohm. Parts without a return path must measure infinity.

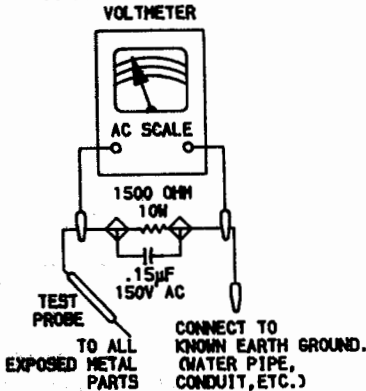
Leakage Current Hot Check

- 1. Plug the AC cord directly into AC outlet. DO NOT use an isolation transformer.
- 2. Connect a 1500 Ohm 10 watt resistor, in parallel with a .15µF 150V AC capacitor, between any exposed metal parts on the set and a good earth ground such as a water pipe. (See Figure below.)
- 3. Using an AC volt meter, with 1000 Ohms per volt or more sensitivity, measure the voltage across the resistor. Check each exposed part and measure voltage at each point.
- 4. Reverse the AC plug and repeat voltage measurement at each point.
- 5. The voltage at any point should not exceed .75 volts RMS. This corresponds to .5 milliamps AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected.

GENERAL GUIDE LINES

A final SAFETY check before returning the set to customer.

- 1. Check area repaired for poorly soldered or de-soldered connections. Check entire circuit board surface for solder splashes.
- 2. Check interboard wiring for pinched wires or wires contacting any high-wattage resistors.
- 3. Check that all control knobs, shields, covers, grounds and mounting hardware have been replaced. Be sure to replace all insulators.



TROUBLESHOOTING AID

Note: Waveforms taken with triggered scope, Keyed-Rainbow generator. Schematic voltages measured with digital meter, no signal. Controls adjusted for normal operation.

PICTURE or SOUND

NO PIC, NO SOUND, NO RASTER: Check AC power supply and sources generated from Horizontal Output Transformer (T504). Refer to "Troubleshooting" Power Supply and Horizontal circuits.

NO PIC, NO SOUND, HAS RASTER: Check IF-AGC and source voltages from Horizontal Output Transformer (T504). Refer to "Troubleshooting" IF-AGC and Horizontal circuits.

NO PIC, HAS SOUND, NO RASTER: Check Horizontal Output Transformer (T504) sources and Video circuit. Refer to "Troubleshooting" Horizontal and Video circuits.

NO PIC, HAS SOUND, HAS RASTER: Refer to "Troubleshooting" Video circuit.

HAS PIC, NO SOUND: Refer to "Troubleshooting" Audio circuit.

OVERLOADED PICTURE: Refer to "Troubleshooting" IF-AGC circuit.

LOW OR EXCESSIVE BRIGHTNESS: Check Video and Luminance circuits. Refer to "Troubleshooting" Video circuit.

SWEEP

NO RASTER, HAS SOUND: Check HV rectifier, Part of Horizontal Output Transformer (T504). Refer to "Troubleshooting" Horizontal circuit.

NO RASTER, NO SOUND: Refer to "Troubleshooting" Horizontal circuit.

NO VERT DEFLECTION: Refer to "Troubleshooting" Vertical circuit.

POOR VERT LIN OR FOLDOVER: Refer to "Troubleshooting" Vertical circuit.

POOR HORIZ LIN OR FOLDOVER: Refer to "Troubleshooting" Horizontal circuit.

NARROW PICTURE: Refer to "Troubleshooting" Horizontal circuit.

VERT OFF FREQUENCY: Refer to "Troubleshooting" Vertical circuit.

HORIZ OFF FREQUENCY: Refer to "Troubleshooting" Horizontal circuit.

SYNC

NO VERT/HORIZ SYNC: Refer to "Troubleshooting" Sync circuit.

RASTER

YELLOW (NO BLUE): Check Chroma and Blue Output circuits. Refer to "Troubleshooting" Raster circuit.

CYAN (NO RED): Check Chroma and Red Output circuits. Refer to "Troubleshooting" Raster circuit.

MAGENTA (NO GREEN): Check Chroma and Green Output circuits. Refer to "Troubleshooting" Raster circuit.

COLOR (B/W operating normally)

NO COLOR: Refer to "Troubleshooting" Chroma circuit.

WEAK COLOR: Refer to "Troubleshooting" Chroma circuit.

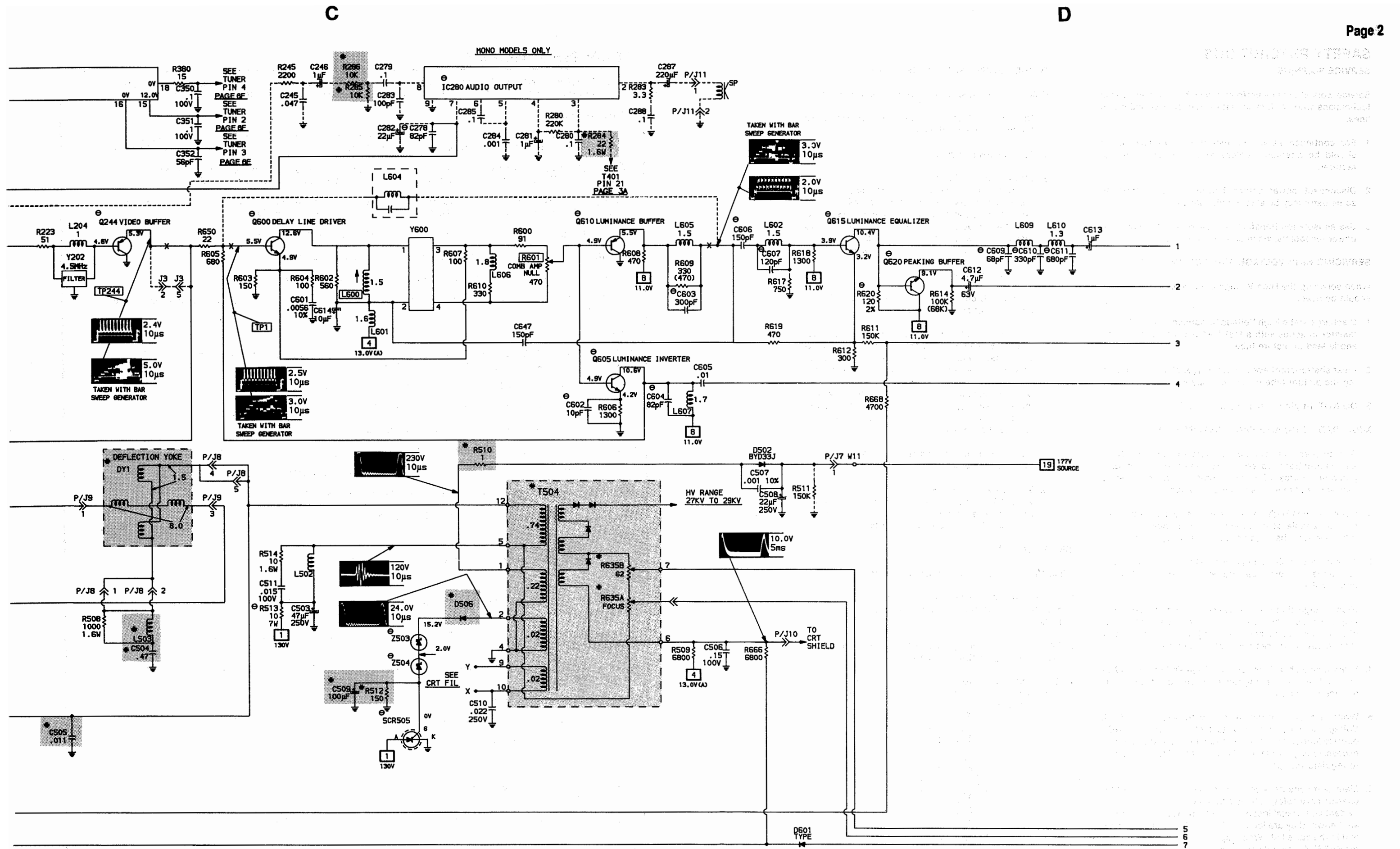
NO COLOR SYNC: Refer to "Troubleshooting" Chroma circuit.

NO GREEN: Check Chroma and Green Output circuits. Refer to "Troubleshooting" Raster circuit.

NO BLUE: Check Chroma and Blue Output circuits. Refer to "Troubleshooting" Raster circuit.

NO RED: Check Chroma and Red Output circuits. Refer to "Troubleshooting" Raster circuit.

INCORRECT HUE (TINT): Refer to "Troubleshooting" Chroma circuit.



TEST JIG HOOKUP

FUNCTION	Chek-A-Color ADAPTER NO.	RCA / TeleMatic ADAPTER NO.	ZENITH ADAPTER NO.
CRT YOKE YOKE SETTING	B239 YP1 Focus Tap	10J683 10J771 (1) Horiz 1.2, Vert 14 FVS-3950 Focus Voltage Supply	852-441 Horiz 1.8, Vert 14 Focus Tap

(1) If vertical or horizontal sweep is reversed, rotate respective chassis connection 180°.

TROUBLESHOOTING

POWER SUPPLY DESCRIPTION

When 120V AC is supplied to the set, 158V* is developed at TP22. The voltage developed at TP22 is simultaneously applied to Switch Mode Regulator Transistor (Q400), Duty Cycle Control Transistors (Q402, Q403) through Resistors and Switched Mode Transformer (T401) to initialize the power supply into operation. After the circuit has been pulsed into operation, its operation is sustained by feedback pulses from Horizontal Output Transformer (T401) and bias voltages from Opto Isolator IC (IC404) and Main Control Amp Transistor (Q406) and Differential Amp Transistor (Q407). The pulses developed by Transformer T401 are rectified by diodes to provide operating voltages for the rest of the set. Diodes D431 and D433 provide a rectified operating voltage for Mode Switch Transistor (Q410), Standby Power Switch Transistors (Q431, Q432) and Voltage Regulator IC (IC309) in Standby mode. In Standby mode the Power Supply is operating at a reduced potential because of the loading provided by Transistors Q410, Q431, Q432, IC309 and the 13.0V applied across Zener Diode Z435. In Standby mode 18.9V is present at TP4; 2.87V at TP5; 4.4V at TP8; 3.8V at TP10; Transistor Q402 E.49, B.51V, C-1.9V; Transistor Q403 E-1.9V, B-1.7V, C-.51V; Transistor Q406 E3.8V, B3.8V, C.99V and Transistor Q407 E1.8V, B.96V, C3.8V. When the Power button is depressed, Transistor Q410 is turned on which turns off Transistor Q432. This action removes the 13.0V across Zener Diode Z435 and the load provided by Transistors Q410, Q431 and Q432, enabling the Power Supply to go to full Power mode, thus providing the proper operating voltages for the rest of the set.

* With respect to isolated ground.

POWER SUPPLY

Check the AC Fuse F400. If fuse is open, check Bridge Rectifier Diodes D404 thru D407, Capacitors C400, C404 thru C407, Thermistor R401, Electrolytic C403 and Switch Mode Regulator Transistor (Q400). Apply 120V AC and check for 155V* at the collector of Transistor Q400. If this voltage is absent, check Line Filter (L400), Thermistor R403 and the winding of Switched Mode Transformer (T401) from pins

5 to pins 7. If 155V* is present at the collector of Transistor Q400, depress the Power Switch and check for 130V at TP4. If this voltage is absent, check the voltages, waveforms and components associated with Transformer T401, Transistor Q400, Duty Cycle Control Transistors (Q402, Q403), Differential Amp Transistor (Q407), Main Amp Control Transistor (Q407), Standby Power Switch Transistors (Q431, Q432) and Mode Switch Transistor (Q410). If 130V is present at TP4, refer to the "Horizontal" section of this Troubleshooting guide. If Transformer T401 is being overloaded by a short or other condition, a very loud high frequency sound will be heard coming from the set.

* With respect to isolated ground.

HORIZONTAL

Determine if the TV is in shutdown, refer to the "High Voltage Shutdown" section of this Troubleshooting guide. If the TV is not in shutdown, inject a horizontal signal at the base of the Horizontal Output Transistor (Q501). If horizontal deflection is now present, check the voltages, waveforms and components associated with pins 7, 23 thru 28 of IF/Sync/Sound IC (IC201) and the Horizontal Driver Transistor (Q500). If there is still no horizontal sweep, check the voltages, waveforms and components associated with Transistor Q501 and the Horizontal Output Transformer (T504). Check Diodes D502, D506 and associated components for defects. The high voltage rectifier is part of Transformer T504 and if defective will affect the performance of the horizontal circuits. If the horizontal oscillator is off frequency, check the voltages, waveforms and components associated with pins 23, 24 and 28 of IC201. Horizontal linearity or width problems may be caused by Capacitors C501, C502, C504 and C505 being defective.

HIGH VOLTAGE SHUTDOWN

The high voltage is monitored by Diode D506 rectifying pulses from the Horizontal Output Transformer (T504) and applying the voltage to the cathode of Zener Diode Z503. Should the high voltage increase, the rectified voltage at the cathode of Zener Diode Z503 will also

TROUBLESHOOTING (Continued)

Increase and trigger Zener Diodes Z503 and Z504 into conduction. This triggers Over-voltage Shutdown SCR (SCR505) which shuts down the set. To troubleshoot, disconnect Diode D506 from the circuit and check the voltage at TP4. If the voltage is more than 135V, troubleshoot the power supply. If the voltage at TP4 is less than 130V, check the components associated with the collector circuit of the Horizontal Output Transistor (Q501) and SCR505. Return Diode D506 to the circuit.

Voltages Taken In Shutdown

SCR505	TP4
K 0V	.9V
G .74V	
A .9V	

IF-AGC

Inject a video IF signal at the IF Input and check for video on the CRT. If video is present, check the Tuner, Tuner Control and Tuner AFT circuit. If there is no video on the CRT, check for a video waveform at TP1. If video is present, refer to the "Video" section of this Troubleshooting guide. If there is no video at TP1, apply AGC bias to pin 19 of IF/Sync/Sound IC (IC201). If video is present at TP1, check the voltages and components associated with the AGC circuit at pins 1, 5 and 19 of IC201. If there is no video at TP1, check the voltages, waveforms and components associated with pins 7 thru 10, 17, 18 and 22 of IC201, Transistors Q1 thru Q4 on Audio Jack Panel Board and IF Preamp Transistor (Q240). A defective AGC circuit can cause an overloaded picture, excessive snow or loss of audio and video. See the AGC Voltage Chart for AGC voltages with signal.

IC201

Pin 1	3.9V
Pin 5	5.2V
Pin 19	4.5V

AUDIO

Select an active TV channel and check for an audio waveform at pin 12 of FM/Demod IC (IC101) on Stereo Decoder Board. If there is no audio, check the voltages, waveforms and components associated with Sound IF IC (IC202) and IC101. If an audio waveform is present at pin 12 of IC101, select a station that is transmitting a stereo signal and check for an audio waveform at pins 8 and 16 and .85V at pin 29 of Stereo/SAP/Decoder IC (IC201) on Stereo Decoder Board. If the waveforms and voltage are missing, check the voltages, waveforms and components associated with pins 7, 8, 9, 15 thru 26 and 29 of IC201. If the proper waveforms and voltage are present at pins 8, 16 and 29 of IC201, select Stereo mode and check for an audio waveform at pins 13 and 14 of IC201. If there is no audio, check the voltages, waveforms and components associated with L+R Amp/Expander IC (IC202) on Stereo Decoder Board and pins 9 thru 14 of IC201. Select a station that is transmitting a SAP

signal, select SAP mode and check for an audio signal at pins 13 and 14 of IC201. If there is no audio, check the voltages, waveforms and components associated with pins 2 thru 14, 27 and 28 of IC201. There will be an audio waveform at pin 11 of IC201 in SAP and Stereo modes only. If there is audio at pins 13 and 14 of IC201 in Mono/Stereo/SAP, check for an audio waveform at pins 4 and 15 of Audio Control IC (IC501). If there is no audio, check the voltages, waveforms and components associated with TV/AUX Switch IC (IC1), Stereo/Mono IC (IC2), Audio Buffer Transistors (Q2, Q4) on Audio Input/Output Jack Panel and Sound Processor IC (IC400) on Stereo Decoder Board. If there is audio at pins 4 and 15 of IC501, check the voltages, waveforms and components associated with IC501 and Audio Output IC's (IC502, IC503). Check the voltage at pin 1 of IC501, it should measure .20V at mute and 4.1V at Maximum volume.

VIDEO

Inject a video signal at TP1 and check for video on the CRT. If video is present, troubleshoot the "IF/AGC" section. If there is no video on the CRT, check for a video waveform at pins 13, 14 and 15 of Chroma/Luminance IC (IC640). If there is no video at pins 13, 14 and 15 of IC640, check the voltages, waveforms and components associated with pins 1, 7 and 9 thru 15 of IC640. If video is present at pins 13, 14 and 15 of IC640, check the voltages, waveforms and components associated with the CRT and Output Transistors (Q26, Q40 and Q47). If the brightness is inadequate or cannot be controlled, check the voltages and components associated with pins 7 and 12 of IC640 and pin 7 of the CRT.

VERTICAL

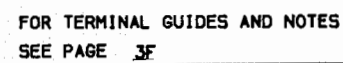
Inject a vertical drive signal at pin 3 of IF/Sync/Sound IC (IC201). If vertical deflection is now present, check the voltages, waveforms and components associated with pins 2, 3, 4 and 27 of IC201. If there is still no vertical sweep, check the voltages, waveforms and components associated with the Vertical Output IC IC580. Vertical linearity or height problems may be caused by the vertical feedback and bias circuits, check Electrolytics C582, C584 and C585 for defects.

SYNC

Check for a video waveform at TP6. If the video waveform is missing, check the components associated with TP6. If a video waveform is present at TP6 and there is no vertical or horizontal sync, Capacitor C227 or IC201 may be defective.

RASTER

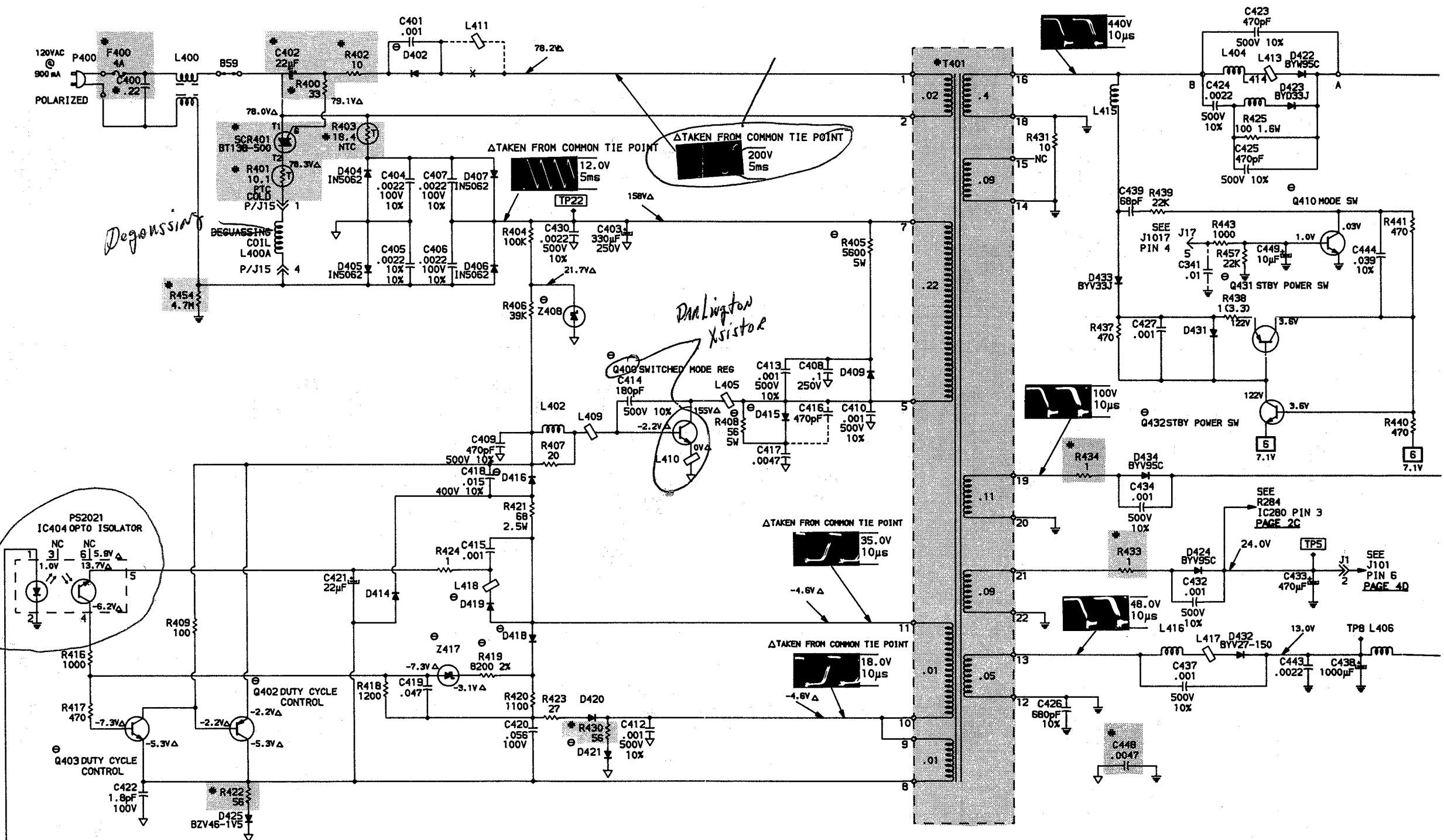
Check the CRT and CRT voltages. If there is no Red, check the voltages and components associated with pin 15 of Chroma/Luminance IC (IC640) and Red Output Transistor (Q26). If there is no Green, check the voltages and components associated with pin 14 of IC640 and Green Output Transistor (Q40). If there is no



A

B

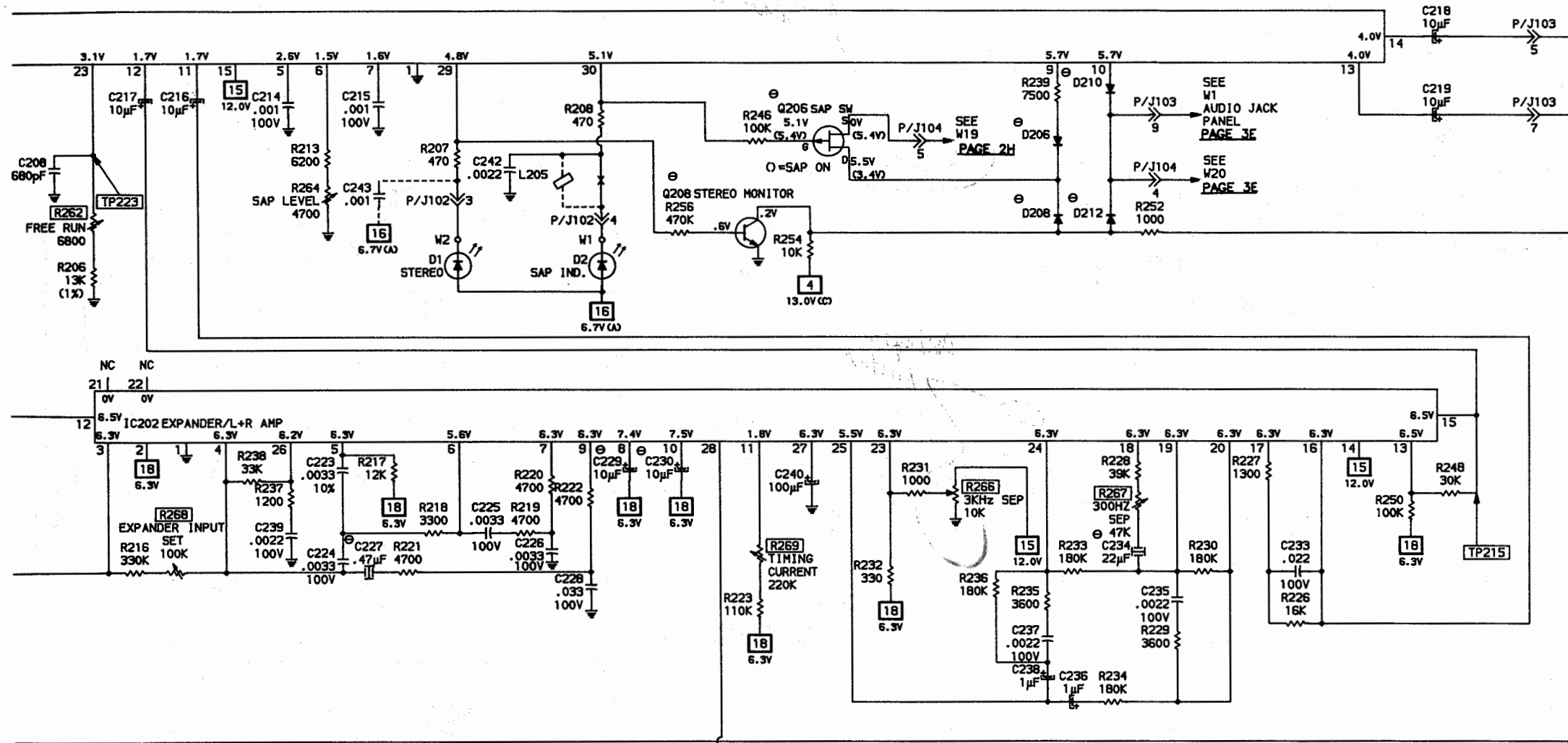
Pin 4 goes to An Internal emitter. Pin 5 goes to int. collector



FOR TERMINAL GUIDES AND NOTES
SEE PAGE 3F

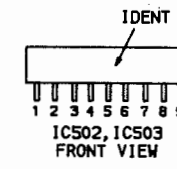
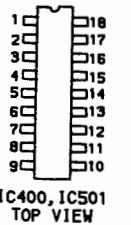
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SCHEMATIC CIRCUITRACE = 11

C



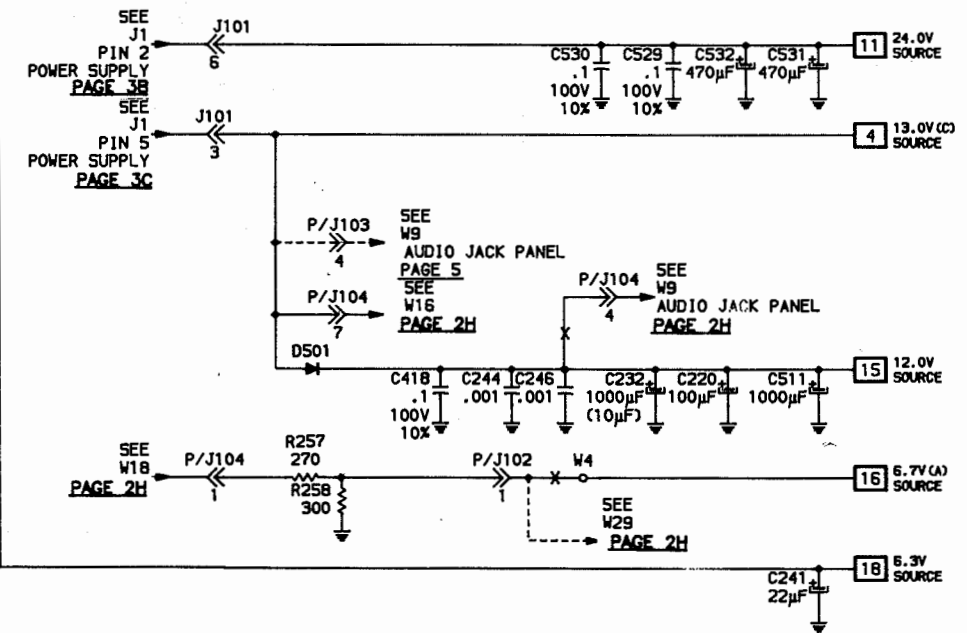
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STEREO DECODER/ AMP PANEL

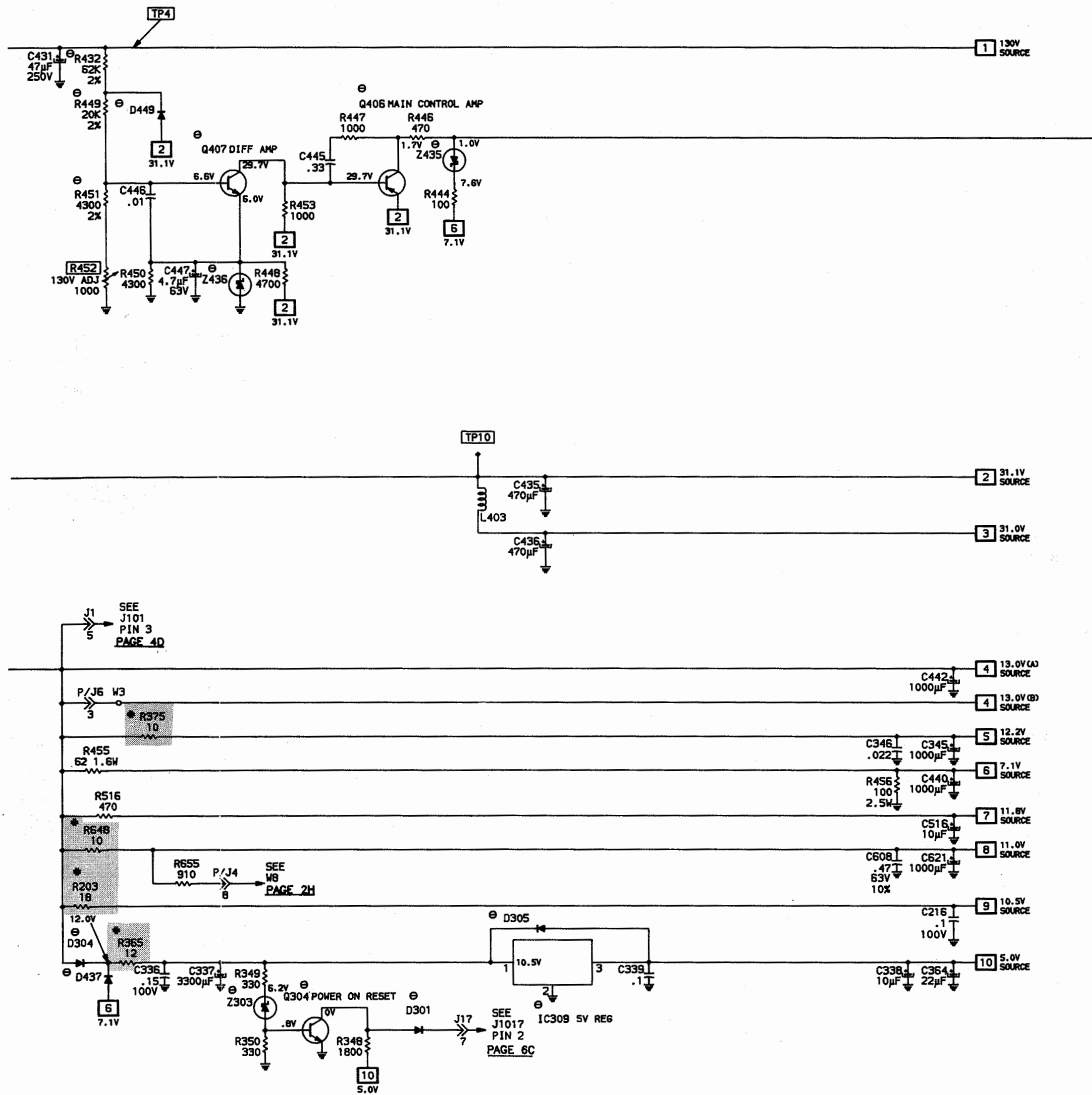


- Circuitry not used in some versions
 - - - Circuitry used in some versions
 - ⊕ See parts list
 - ⊗ Nominal value
 - ⊕ Ground
 - ⊕ Chassis
 - ⊕ Common tie point
- Waveforms and voltages are taken from ground, unless noted otherwise.
- Waveforms: triggered scope, keyed rainbow generator.
- Item numbers in rectangles appear in the alignment/adjustment instructions.
- Supply voltages maintained as shown at input.
- Voltages measured with digital meter, no signal.
- Controls adjusted for normal operation.
- Terminal identification may not be found on unit.
- Capacitors are 50 volts or less, 5% unless noted.
- Electrolytic capacitors are 50 volts or less, 20% unless noted.
- Resistors are 1/2W or less, 5% unless noted.
- Value in () used in some versions.

TERMINAL GUIDES AND NOTES

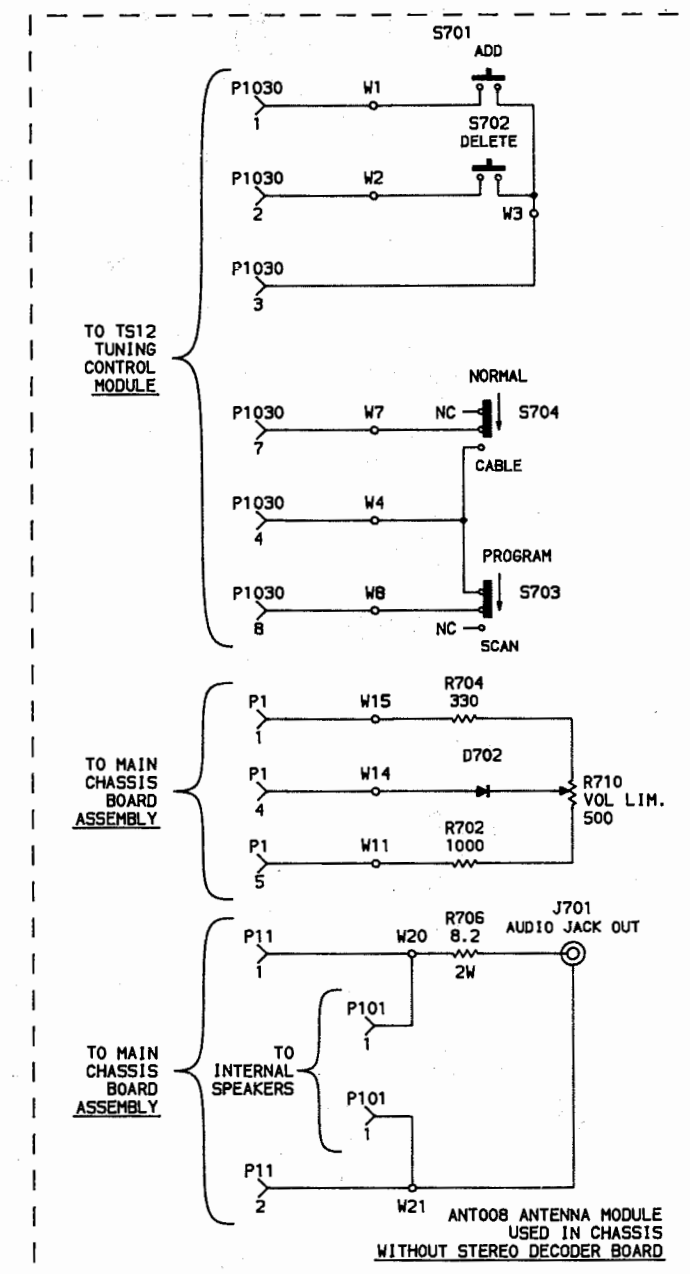


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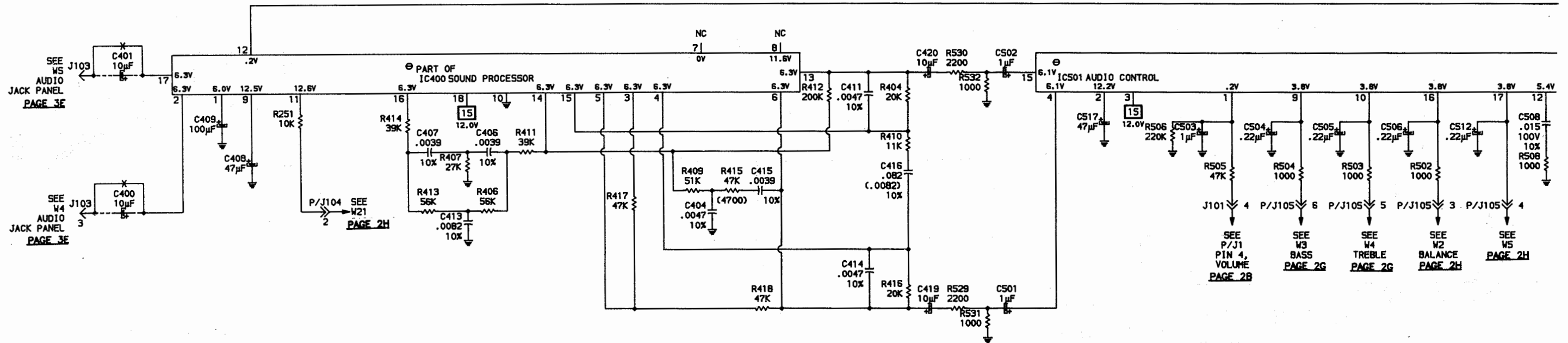
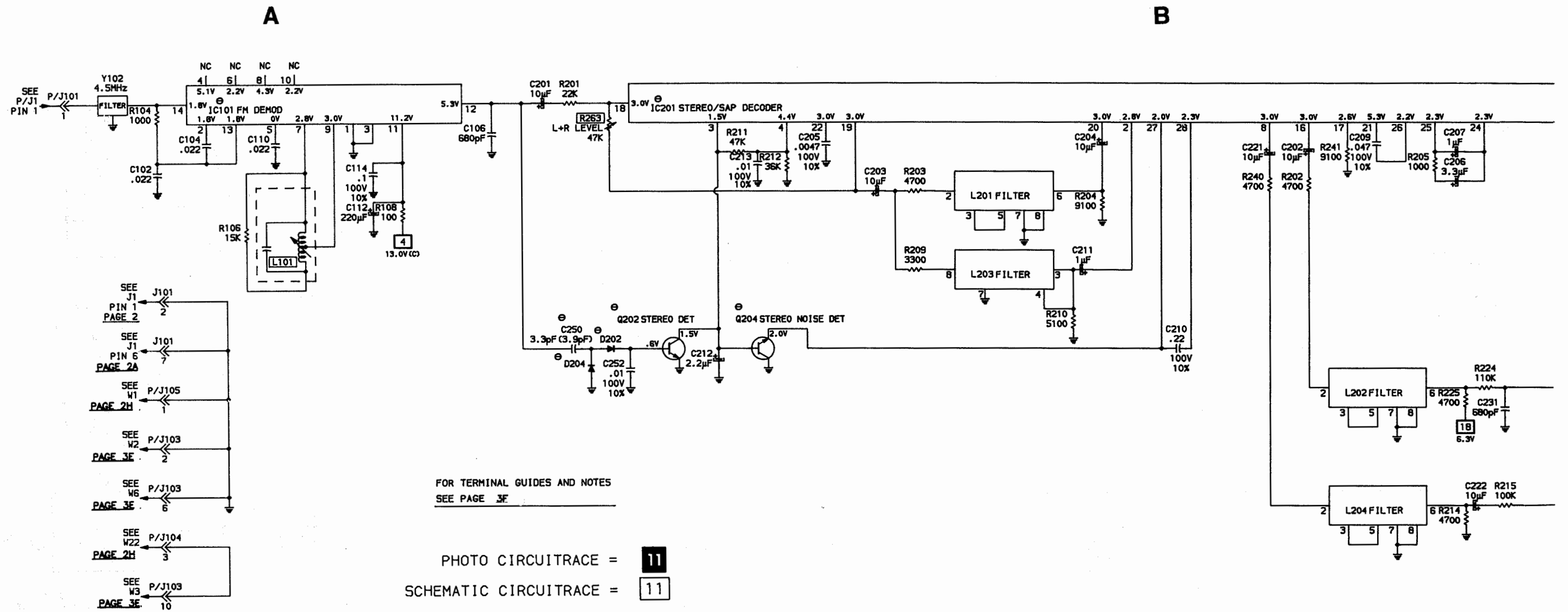
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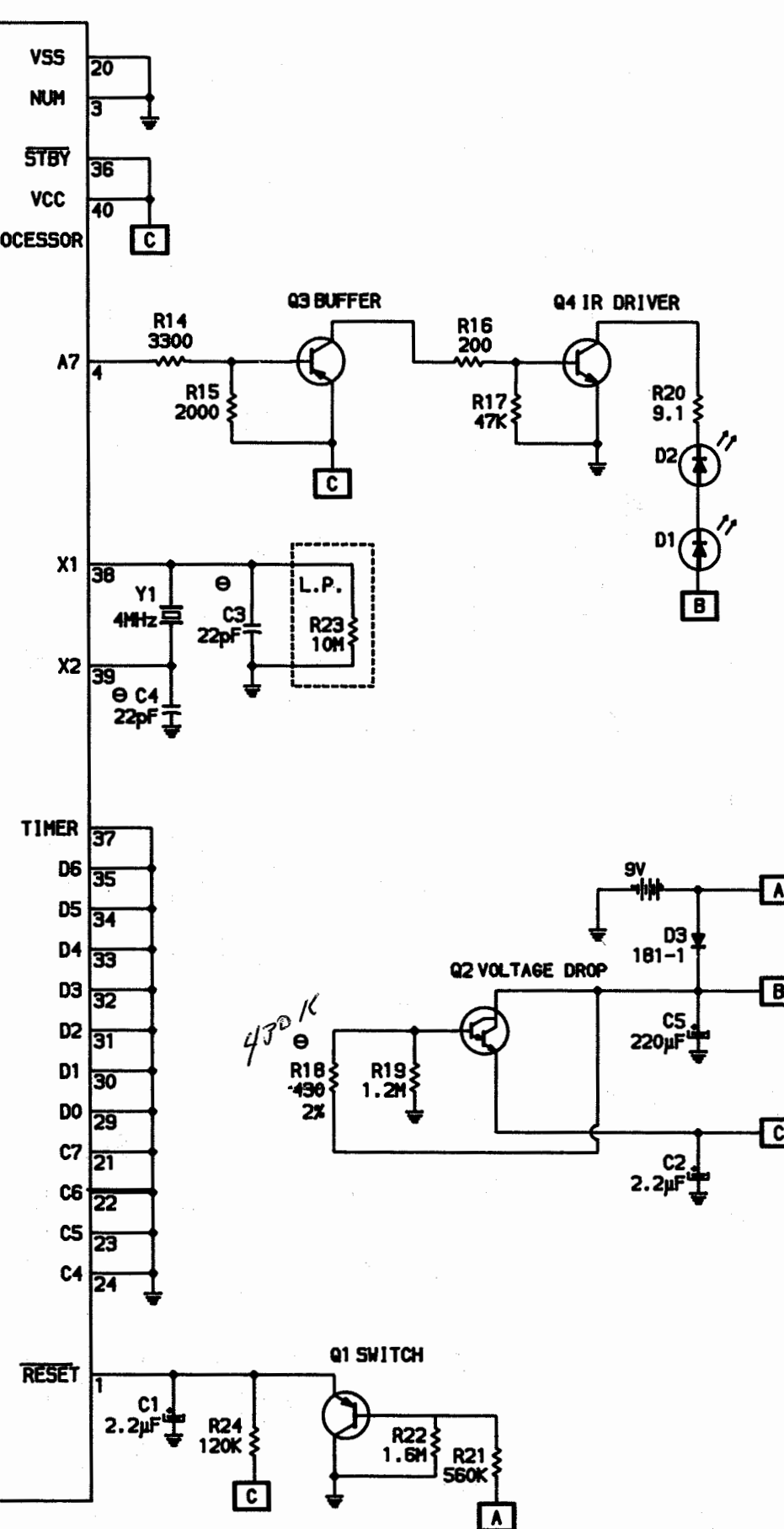
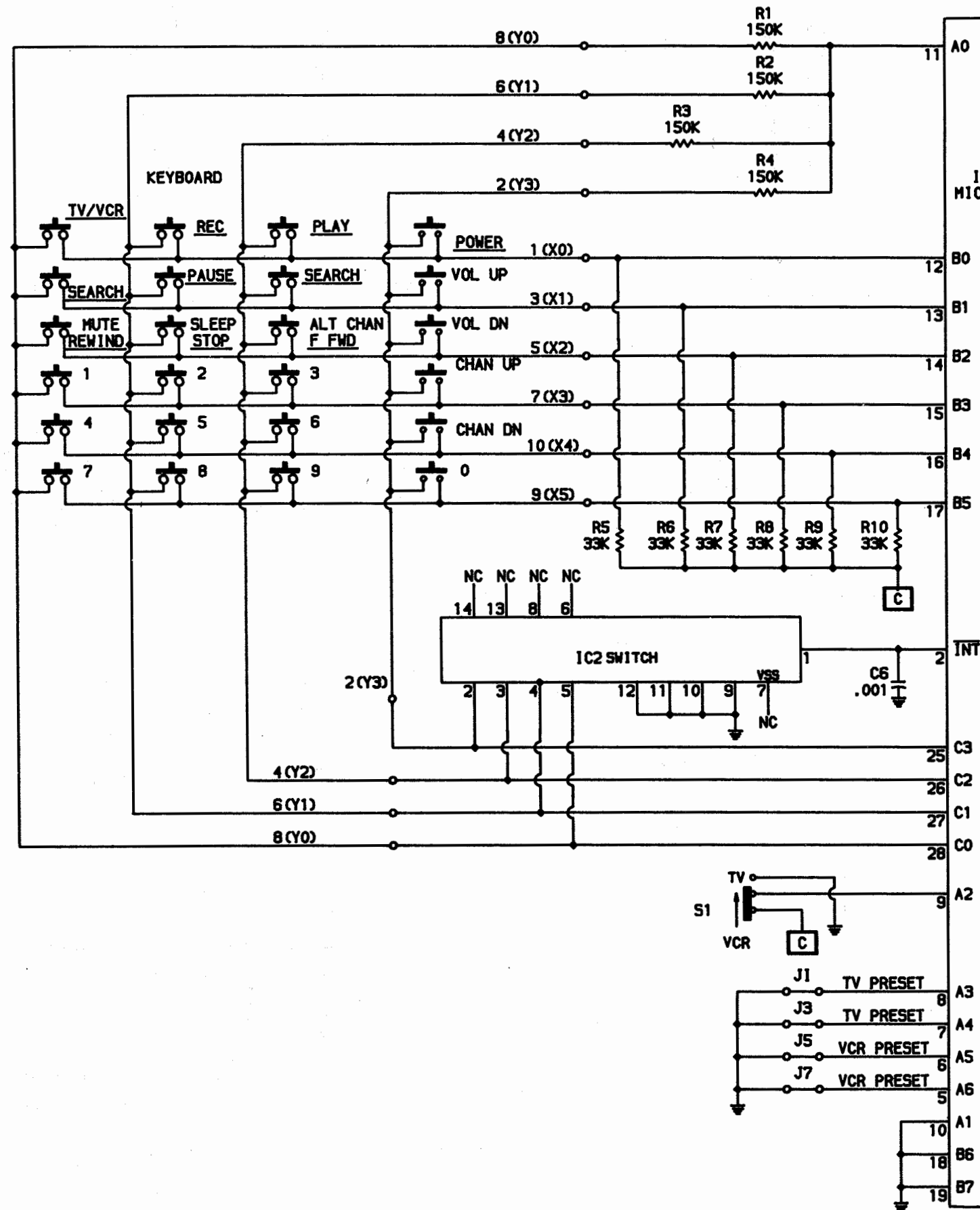
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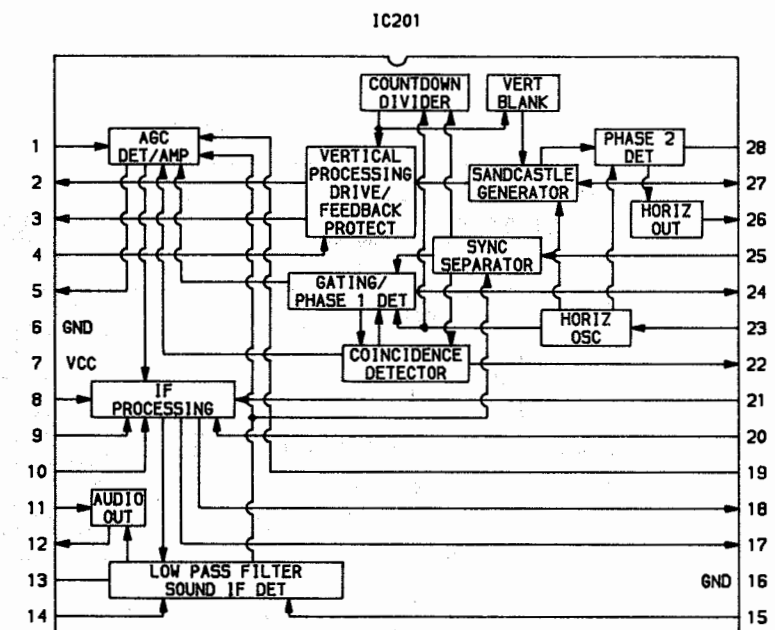
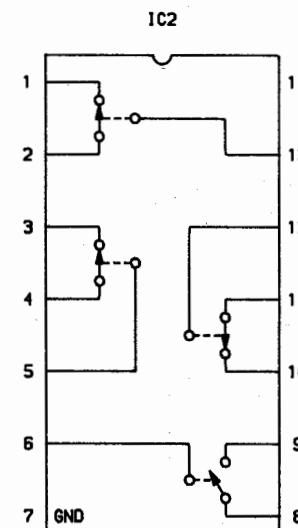
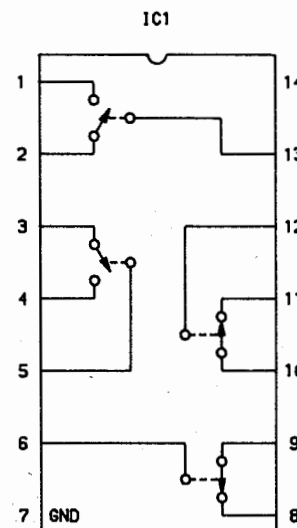
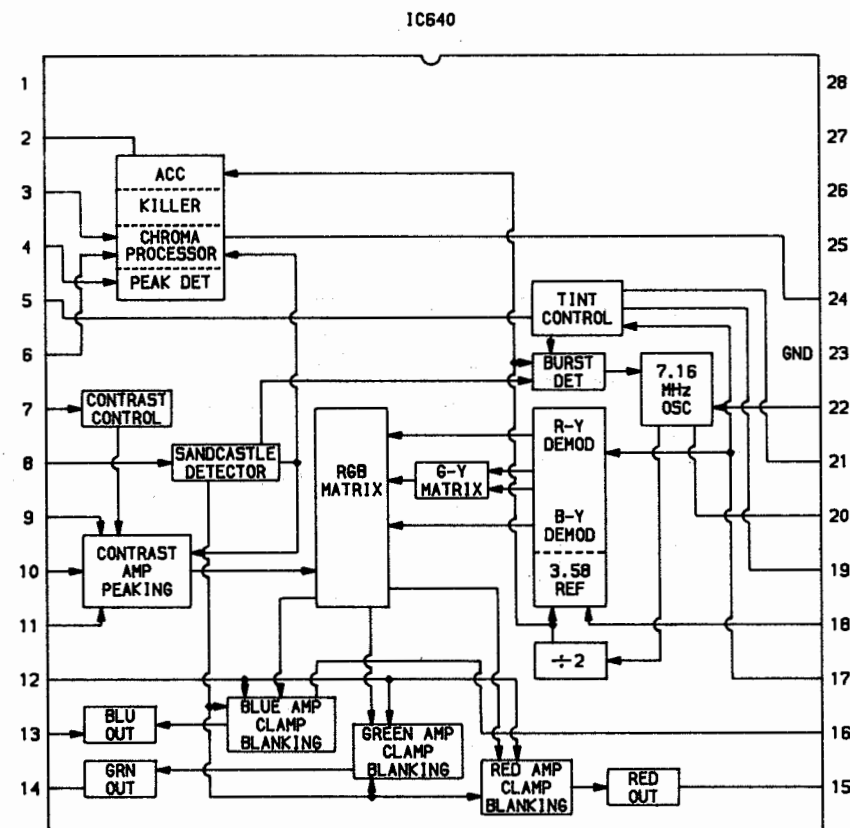
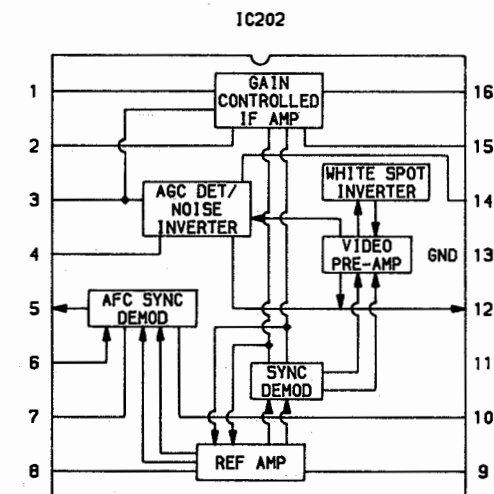
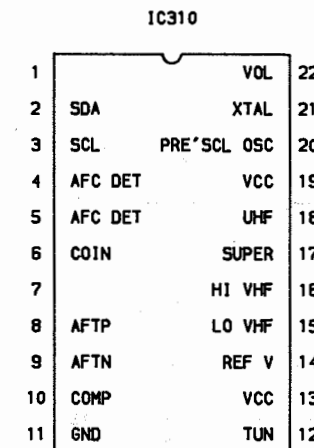
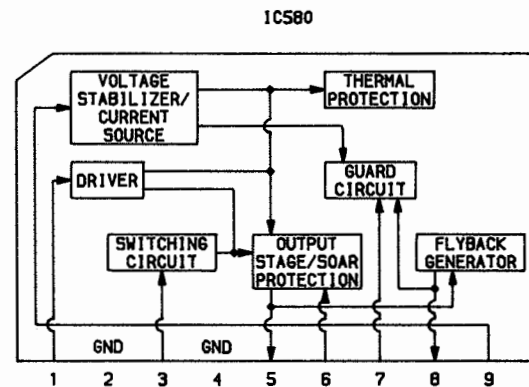
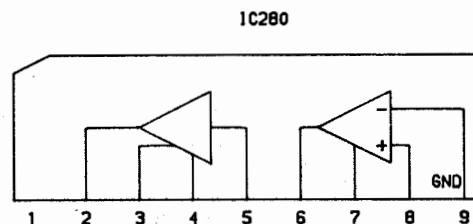


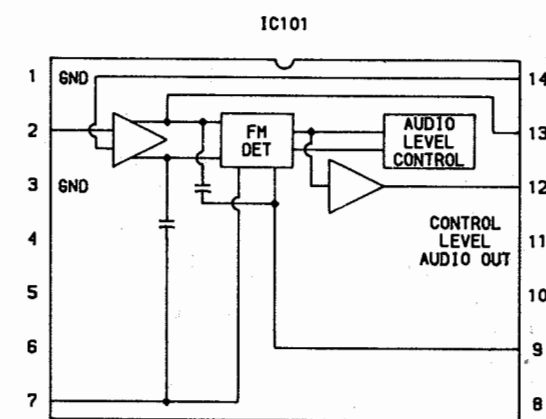
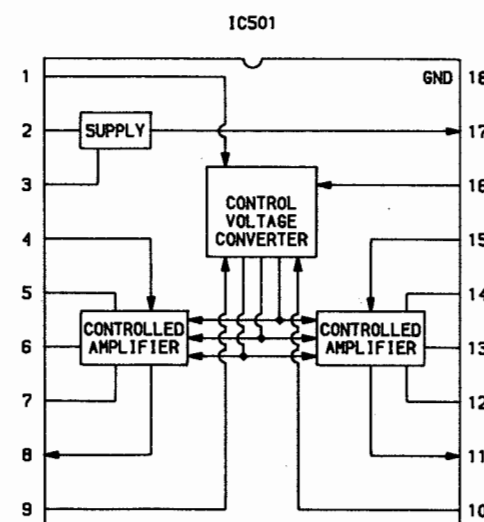
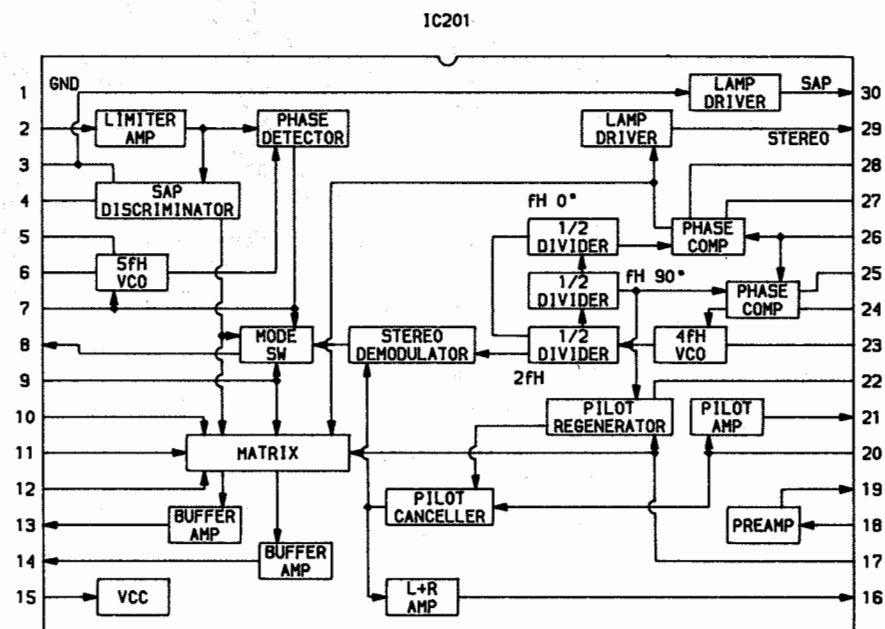
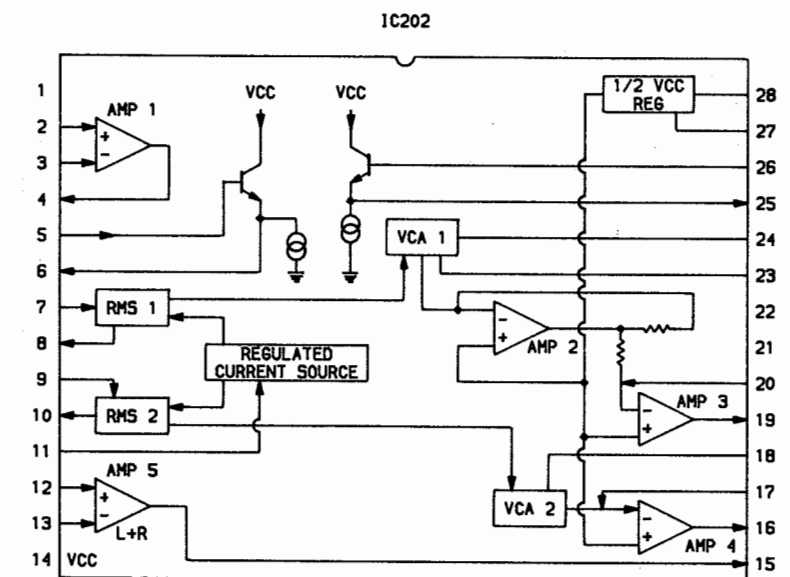
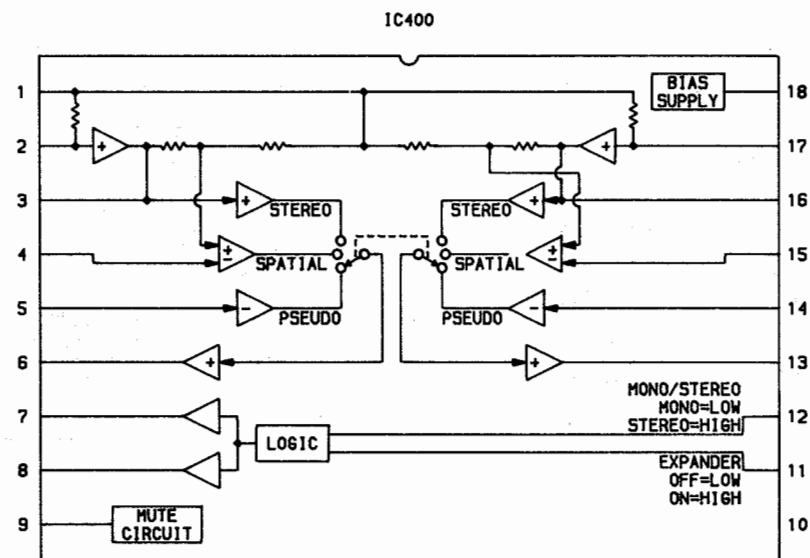
A PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE™**

ANTENNA MODULE (ANT008) © Howard W. Sams & Co. 1987







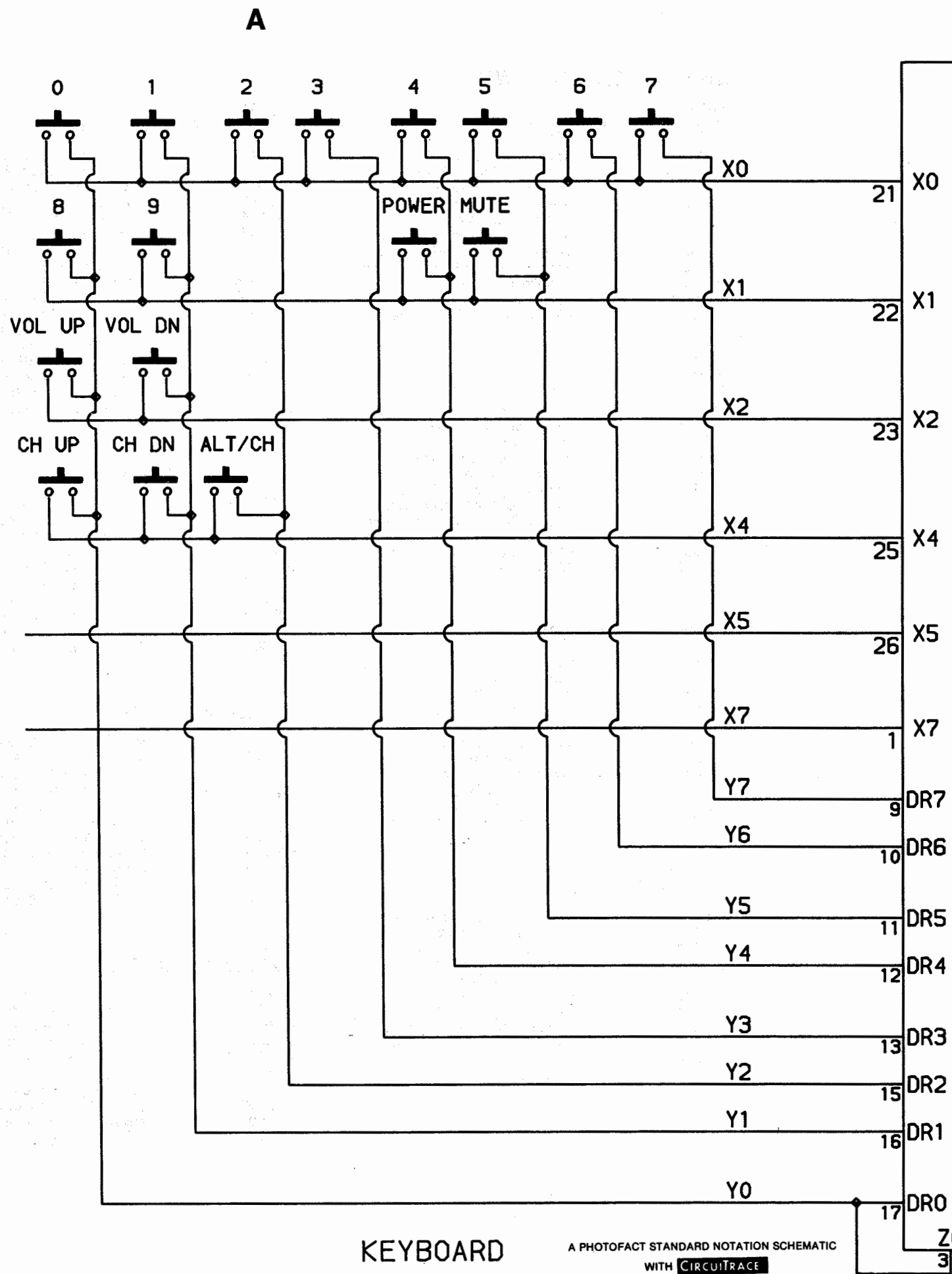


IC FUNCTIONS

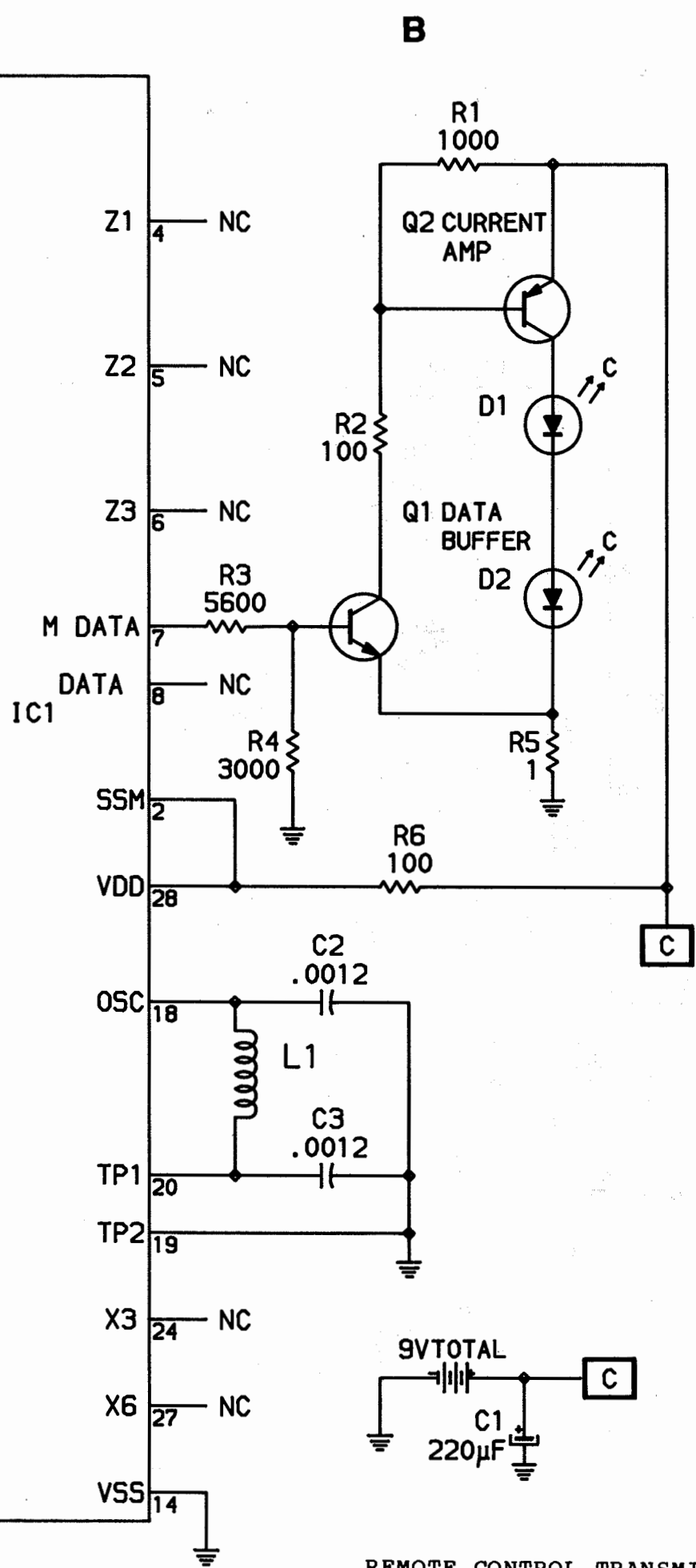
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IC FUNCTIONS

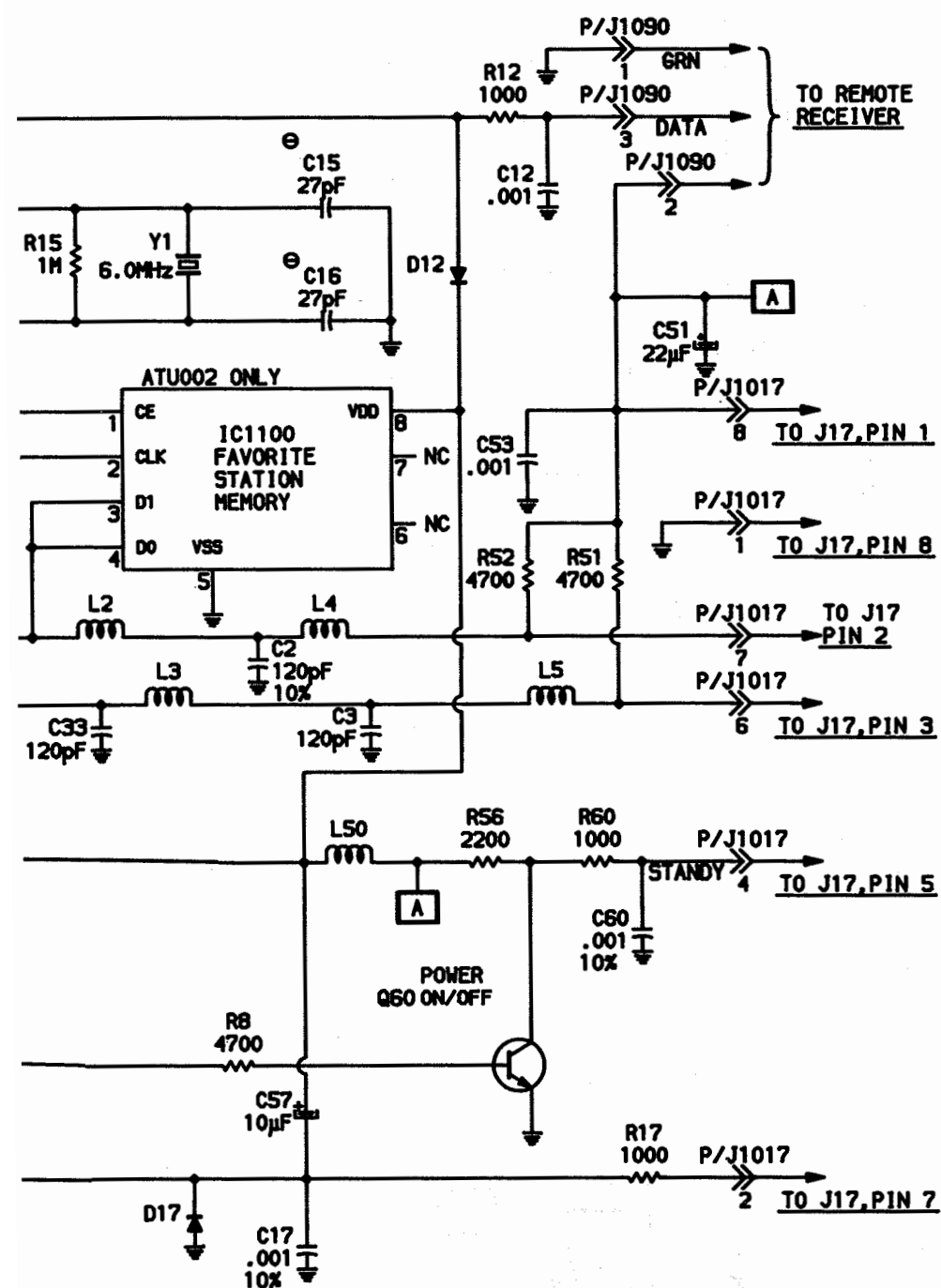
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A PHOTOFAC STANDARD NOTATION SCHEMATIC
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TS-12A



CHASSIS BREAK-DOWN

CHASSIS
25C802 (-AA/-CC/-GG & -HH)

EMC801	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ022	Audio Jack Panel
ASC186	Secondary Control Module
ATC381	Tuner Control Unit Assembly
-ALD038	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
-ASW048	Five Function Scan Module
ATU002	TS12A Tuning System Module

CHASSIS
25C803 (-AA/-BB & -CC)

EMC801	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ014	Audio Jack Panel
ASC186	Secondary Control Module
ATC390	Tuner Control Unit Assembly
-ALD040	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
-ASW049	Five Function Scan Module
ATU002	TS12A Tuning System Module

CHASSIS
25C805 (-AA/-BB & -CC)

EMC801	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ014	Audio Jack Panel
ASC186	Secondary Control Module
ATC384	Tuner Control Unit Assembly
-ALD038	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
-ASW048	Five Function Scan Module
ATU002	TS12A Tuning System Module

CHASSIS
25C819 (-AA/-BB & -CC)

EMC801	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ022	Audio Jack Panel
ASC186	Secondary Control Module
ATC385	Tuner Control Unit Assembly
-ALD038	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
-ASW048	Five Function Scan Module
ATU002	TS12A Tuning System Module

CHASSIS
26C801 (-AA/-CC/-EE/-FF & -KK)

EMC811	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ014	Audio Jack Panel
ASC186	Secondary Control Module
ATC385	Tuner Control Unit Assembly
-ALD038	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
-ASW048	Five Function Scan Module
ATC384	Tuner Control Unit Assembly

CHASSIS
26C802 (-AA/-BB & -CC)

EMC811	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ014	Audio Jack Panel
ASC187	Secondary Control Module
ATC388	Tuner Control Unit Assembly
-ALD039	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
ATU002	TS12A Tuning System Module

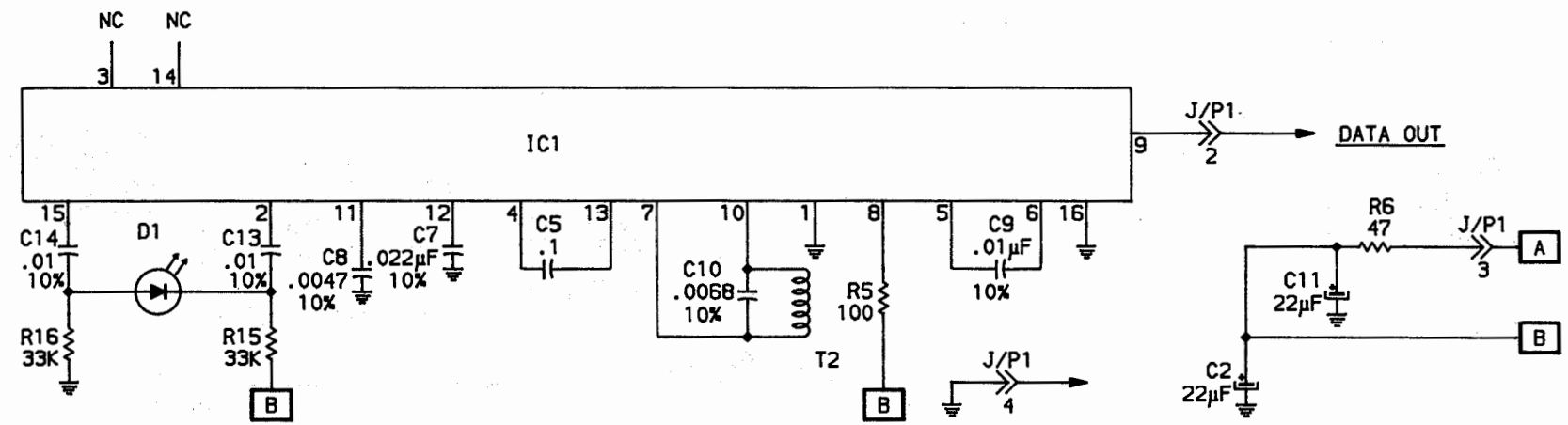
CHASSIS
26C803 (-AA/-BB & -CC)

EMC811	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ022	Audio Jack Panel
ASC186	Secondary Control Module
ATC389	Tuner Control Unit Assembly
-ALD038	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
-ASW048	Five Function Scan Module
ATU002	TS12A Tuning System Module

CHASSIS
26C810 (-AA/-BB & -CC)

EMC811	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ014	Audio Jack Panel
ASC187	Secondary Control Module
ATC386	Tuner Control Unit Assembly
-ALD039	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
ATU002	TS12A Tuning System Module

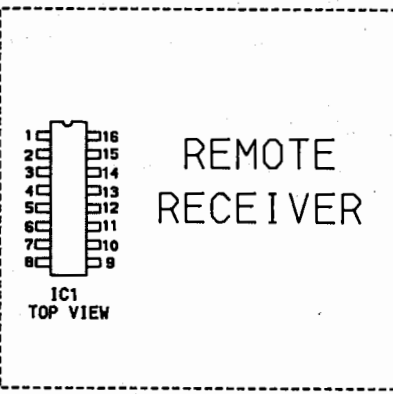
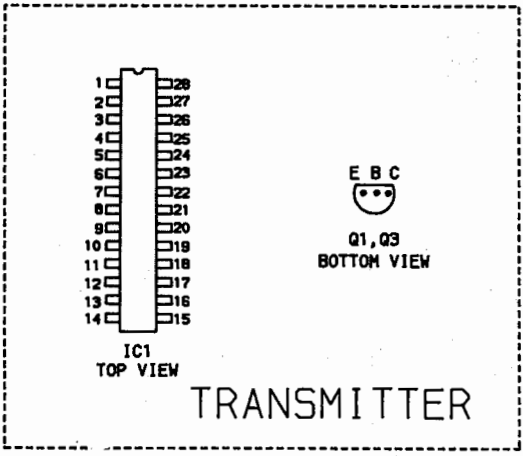
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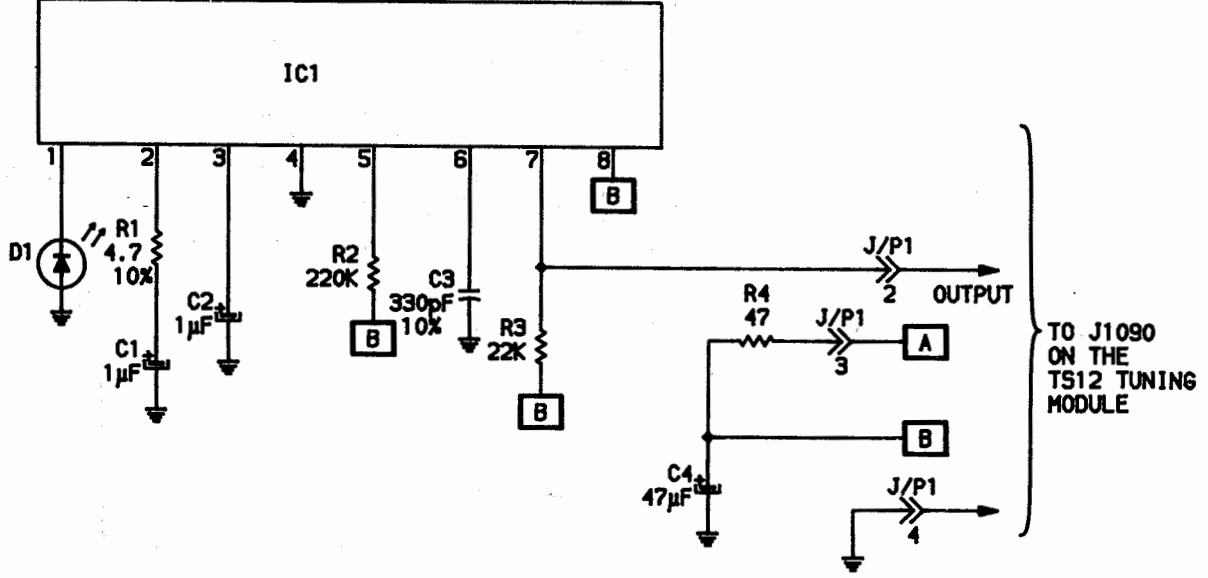
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REMOTE CONTROL RECEIVER-ARR002



TERMINAL GUIDES

ARR007 REMOTE RECEIVER MODULE

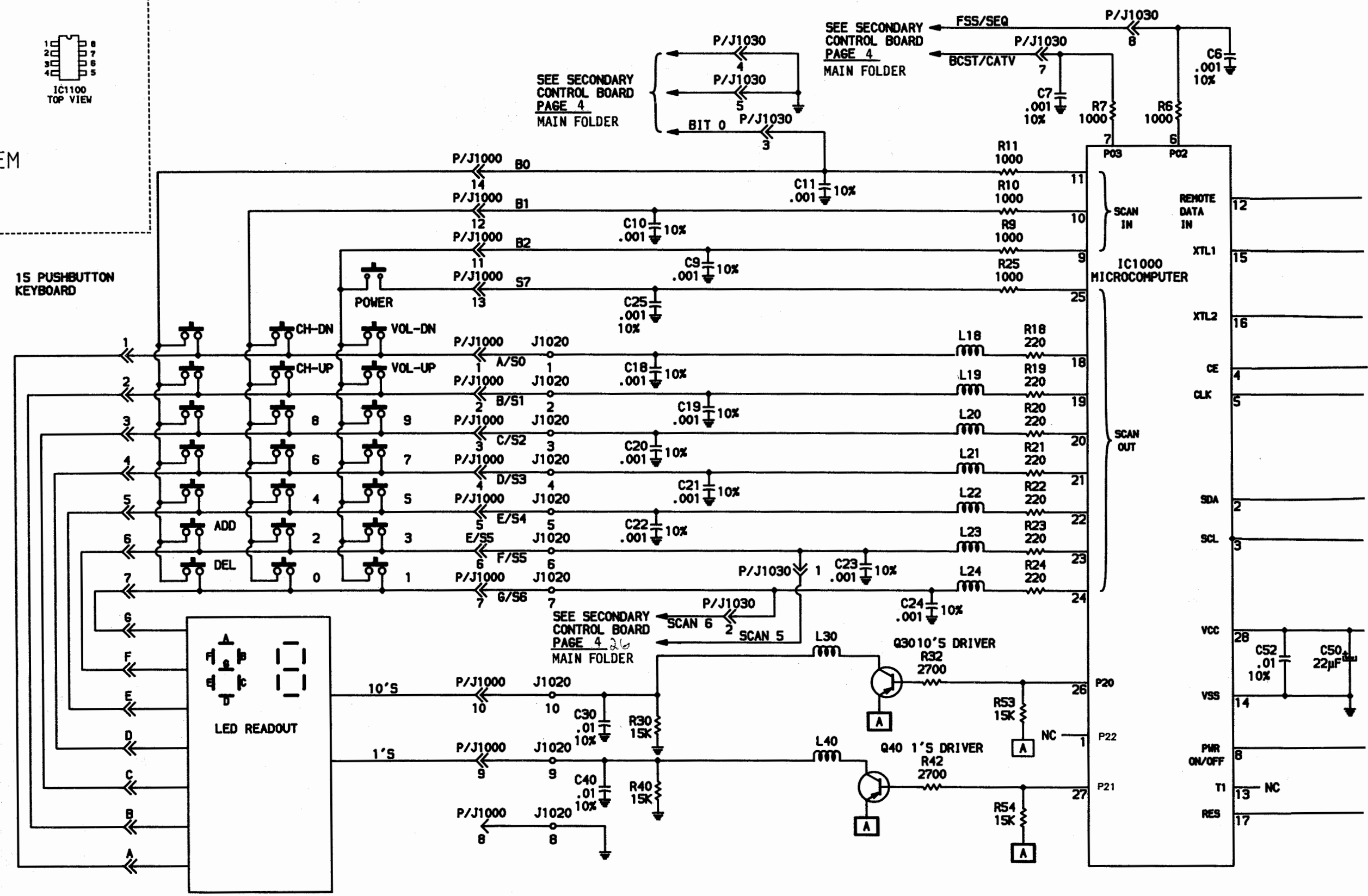
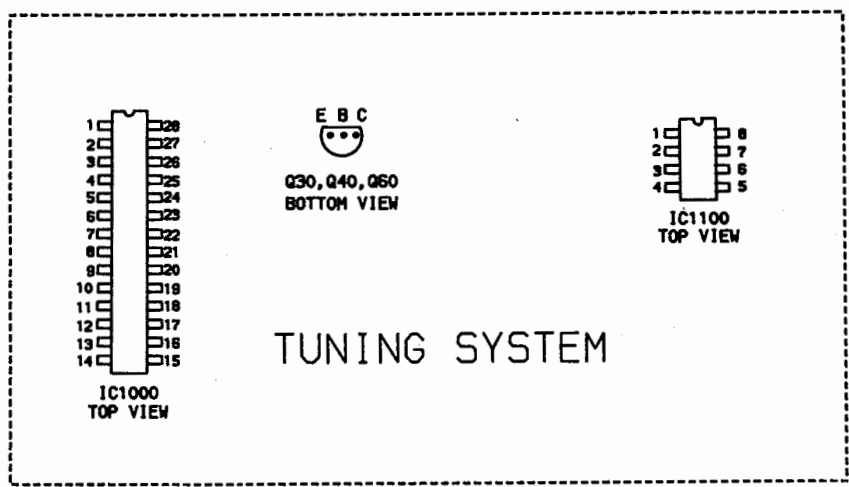


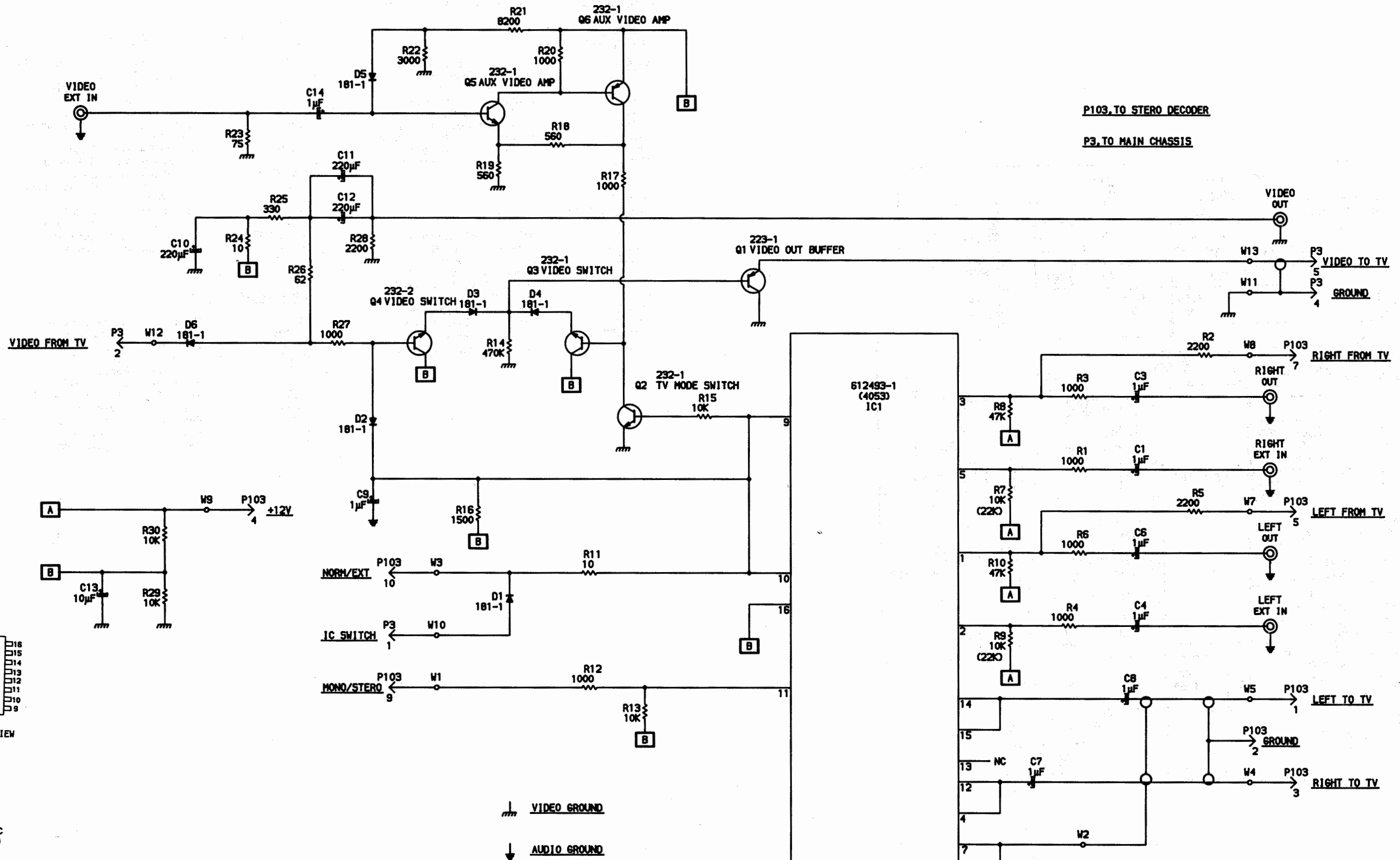
A PHOTOFACT STANDARD NOTATION SCHEMATIC
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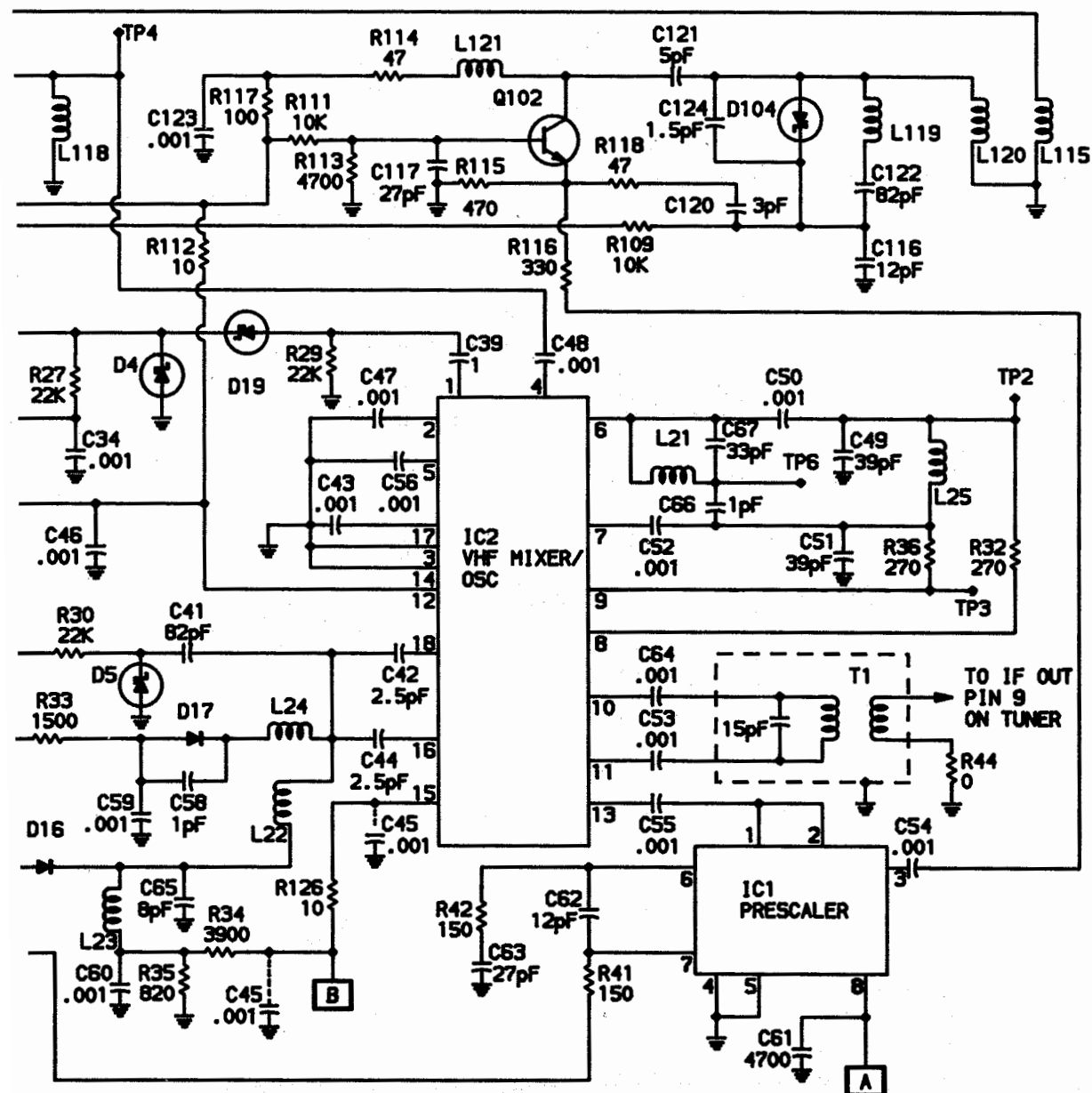
REMOTE CONTROL RECEIVER-ARR007

A

B







CHASSIS BREAK-DOWN (continued)

CHASSIS
26C812 (-AA/-BB & -CC)

EMC815	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ023	Audio/Video Jack Panel
ATC467	Tuner Control Unit Assembly
ASC202	Secondary Control Module
-ARR007	Remote Receiver Module
ATU002	TS12A Tuning System Module

CHASSIS
26C813 (-AA/-BB/-CC & -DD)

EMC815	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ023	Audio/Video Jack Panel
ATC469	Tuner Control Unit Assembly
-ARR007	Remote Receiver Module
ASC202	Secondary Control Module
-7051030007	Headphone Jack Assembly
ATU002	TS12A Tuning System Module

CHASSIS
26C815 (-AA/-BB/-CC/-DD/-EE & -FF)

EMC815	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ023	Audio/Video Jack Panel
ATC468	Tuner Control Unit Assembly (-AA/-CC & -EE)
-ARR007	Remote Receiver Module
ASC202	Secondary Control Module
-705103007	Headphone Jack Assembly
ATC489	Tuner Control Unit Assembly (-VV/-DD & -FF)
-ARR007	Remote Receiver Module
-ASC202	Secondary Control Module
-705103007	Headphone Jack Assembly
ATU002	TS12A Tuning System Module

CHASSIS
26C818 (-AA/-BB & -CC)

EMC811	Main Chassis Board Assembly
-340293	Varactor Tuner Module
APT030	CRT Socket Board Module
ASD002	Stereo Decoder Panel
AVJ022	Audio Jack Panel
ASC186	Secondary Control Module
ATC382	Tuner Control Unit Assembly
-ALD038	Stereo/SAP Indicator Module
-ARR007	Remote Receiver Module
-ASW048	Five Function Scan Module
ATU002	TS12A Tuning System Module

MISCELLANEOUS ADJUSTMENTS

PRETUNING

1. Connect antenna.
2. Open secondary control access door.
3. Slide PRO-NORM Switch to program position.
4. Incrementing from channel two thru sixty-nine, momentarily depress ADD (for wanted channels) or DEL (for unwanted channels) buttons for desired preturning results.
5. Close secondary control access door.

RF AGC ADJUSTMENT

Tune in a station and allow a 15-minute warm-up time. Adjust RF AGC Control (R237) clockwise until snow (noise appears in picture and then counterclockwise until snow just disappears.

130V B+ ADJUSTMENT

Allow a 15-minute warm-up time and maintain line voltage at 120V AC. Connect a digital voltmeter to TP4, low side to chassis ground. Set Volume, Brightness and Picture Controls to MINIMUM. Adjust 130V Adjust Control (R452) for 130V \pm 1.0V DC reading on meter.

HORIZONTAL FREQUENCY ADJUSTMENT

Tune in a station and allow a 15-minute warm-up time. Place a short from TP6 to chassis ground. Adjust Horizontal Frequency Control (R233) until picture stops or slowly floats across screen. Remove short from TP6 and check all active channels for proper horizontal lock-in.

HORIZONTAL CENTERING ADJUSTMENT

Tune in a station and allow a 15-minute warm-up time. Adjust Horizontal Centering Control (R247) to position the picture horizontally for best viewing.

BLACK AND WHITE TRACKING

Tune in a station and allow a 15-minute warm-up time. Set Screen Control fully counterclockwise. Set Brightness, Picture and Color Controls to MINIMUM. Adjust Red (R28), Green (R33) and Blue (R45) Drive Controls fully clockwise. Set Red (R29), Green (R41) and Blue (R48) Cut Off Controls to their mechanical center. Place a jumper from TP13 to ground. Advance Screen Control to produce a dim line of one color. Adjust Cut Off Controls of two remaining colors to produce a dim white line. Disconnect the jumper from TP13 and ground. Tune in a station and set Brightness and Picture Controls for sufficient brightness to

produce a normal picture. Adjust Red (R28), Green (R33) and Blue (R45) Drive Controls to produce a normal black and white picture. Turn Brightness and Picture Controls to Maximum and check for blooming and/or retrace and adjust Screen Control slightly counterclockwise to eliminate problem.

COMB FILTER ADJUSTMENT

Connect a color bar generator to the antenna terminals and tune in a color bar pattern. Connect oscilloscope to TP615 (Pin 15 of IC640), low side to ground. Adjust Chroma Amp Null Control (R601) and Chroma Phase Null Coil (L600) for MINIMUM Chroma Component in waveform.

COLOR OSCILLATOR ADJUSTMENT

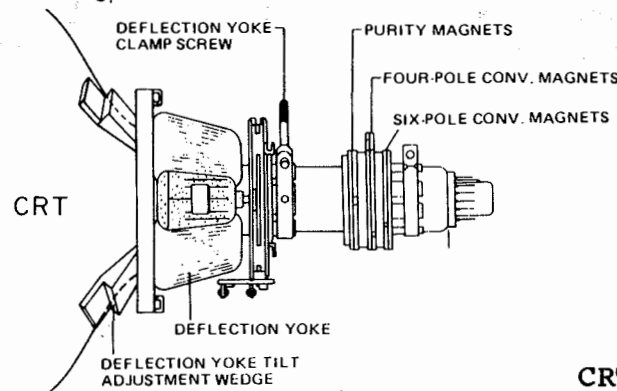
Tune in a color bar signal and allow a 15-minute warm-up time. Connect digital voltmeter to TP634 (Junction R633 and Wiper of R634), low side to ground. Adjust Color Oscillator Control (R634) for 4.0V \pm 0.1V DC reading on meter. Disconnect color bar generator and tune in an active channel. Check that the color locks in properly. Check all active channels and adjust Oscillator Control (R634) slightly if lock-in is slow.

PURITY ADJUSTMENT

Allow a 15-minute warm-up time. Set Red Cut Off Control (R29) fully clockwise. Set Blue (R48) and Green (R41) Cut Off Controls fully counterclockwise. Loosen deflection yoke and remove rubber wedges. Move yoke assembly forward against the CRT bell. Adjust purity magnets to center the vertical red band on the CRT. Pull deflection yoke back to produce a uniform red screen. Use Cut Off Controls to produce blue and green fields to check purity of blue and green. Tighten deflection yoke, replace rubber wedges and perform Black and White Tracking.

CONVERGENCE ADJUSTMENT

Tune in a crosshatch pattern and allow a 15-minute warm-up time. Spread and rotate the tabs of the 4-pole magnets to converge the red and blue lines at the center of the screen. Spread and rotate the 6-pole magnets to converge the red/blue with the green lines at the center of the screen. Remove wedges between CRT and deflection yoke. Tilt the deflection yoke vertically and horizontally to converge the edges of the screen. Replace rubber wedges.



CRT NECK ASSEMBLY

STEREO ADJUST

NOTE: Adjustments were made using B & K Model 2009 MTS TV/Stereo Generator. Equivalent generator may be used. Generator settings are as follows unless otherwise noted. Allow a 15-minute warm-up time before performing adjustments.

Pilot Switch ON
SAP Switch OFF
Audio Frequency 1KHz
Modulating Signal L-R

L+R LEVEL ADJUSTMENT

Select "Stereo" mode on receiver. Select L+R Modulating Signal. Connect oscilloscope to TP215 (Pin 15 of IC202), low side to ground. Adjust L+R Level Control (R263) for 250MV p-p amplitude of waveform.

VCO ADJUSTMENT

Connect Frequency Counter to TP223 (Pin 23 of IC201), low side to ground. Select "Stereo" mode on receiver. Adjust VCO Adjust Control (R262) for 62.936KHz \pm .010KHz. Check to see that Stereo Indicator is on.

SEPARATION ADJUSTMENT

Select "Stereo" mode on receiver. Change Audio Frequency on generator to 300Hz and Modulating Signal to "L". Connect oscilloscope to Right Audio Output Terminal on back of receiver. Adjust Separation Adjust Control (R267) for MINIMUM amplitude of waveform. Select 8KHz Audio Frequency on generator. Adjust Separation Adjust Control (R266) for MINIMUM amplitude of waveform.

SAP LEVEL ADJUSTMENT

Select "SAP" mode on receiver. Turn Pilot Switch Off and SAP Switch On on generator. Select 1KHz Audio Frequency and L-R Modulating Signal. Connect oscilloscope to Left or Right Audio Output Terminals on back of receiver. Adjust SAP Level Control (R264) for 4.8V p-p amplitude of waveform.

SOUND ADJUSTMENT

Connect oscilloscope to TP24, low side to ground. Adjust 45.75MHz Coil (L213) for MINIMUM amplitude and symmetry of waveform. See Figure 3.

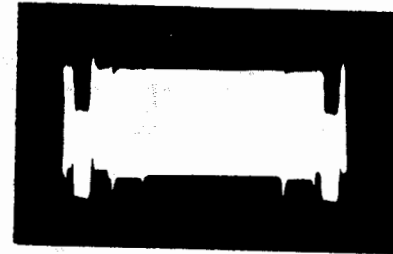
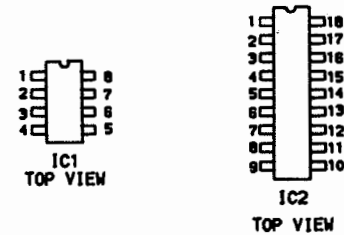
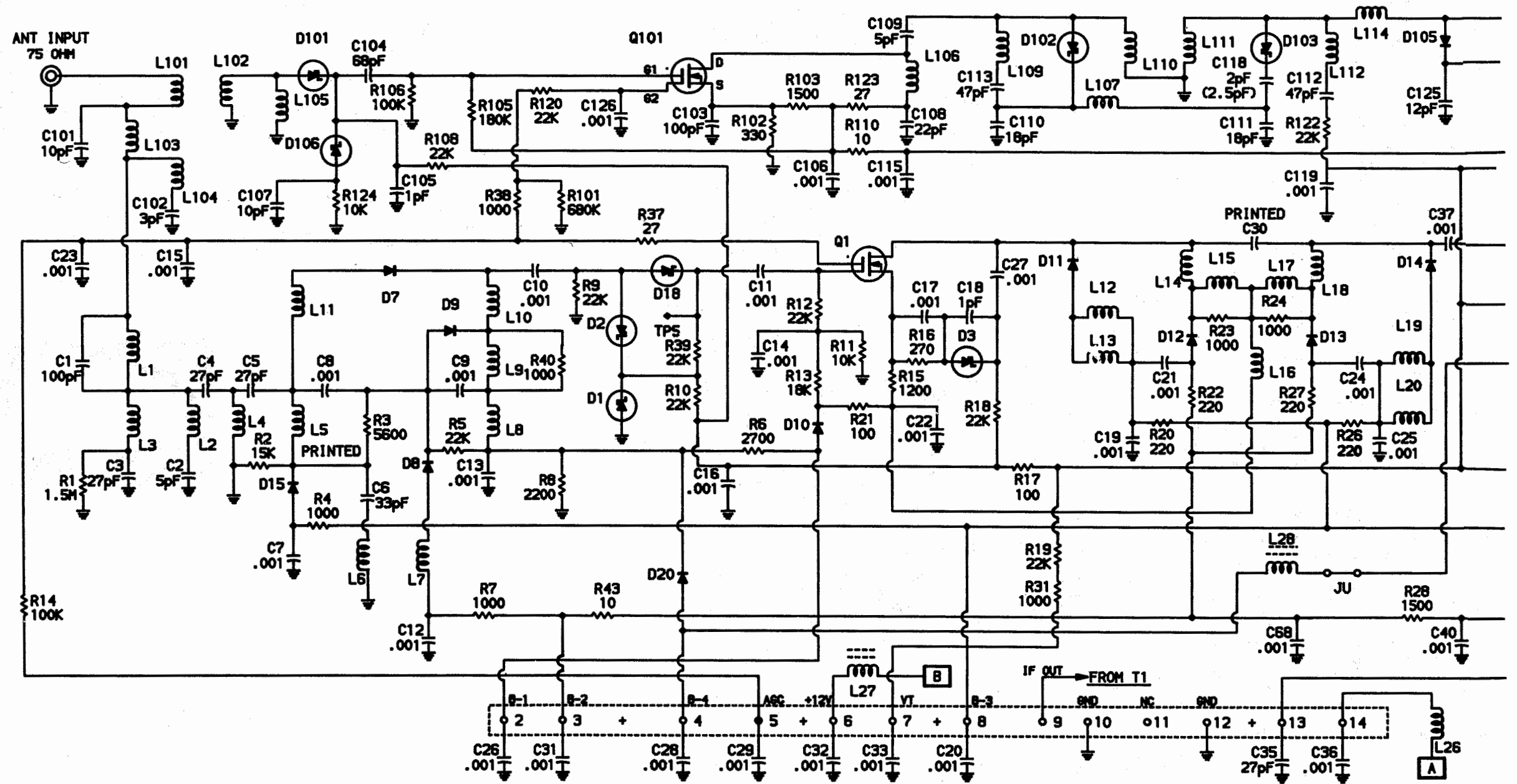


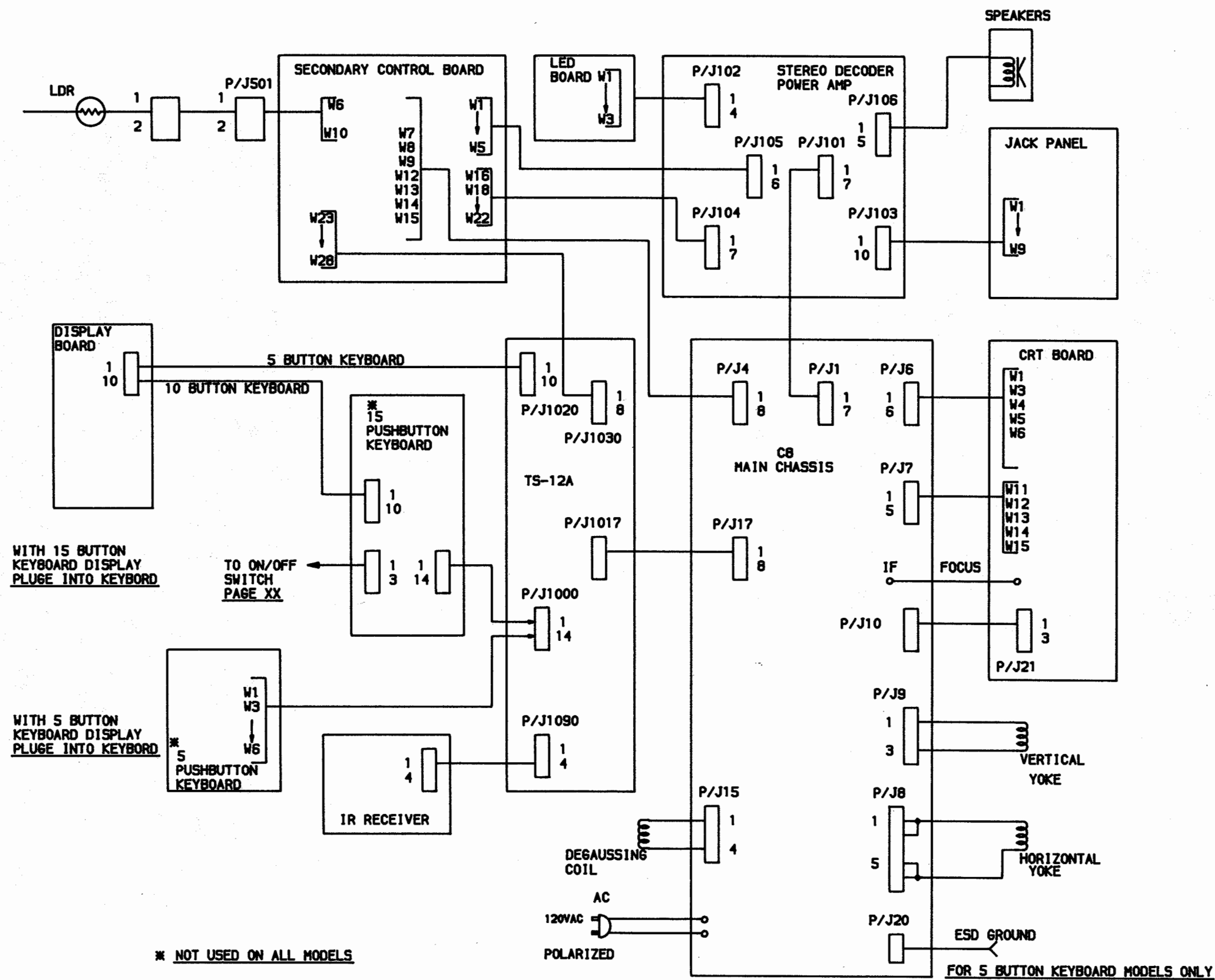
Figure 3

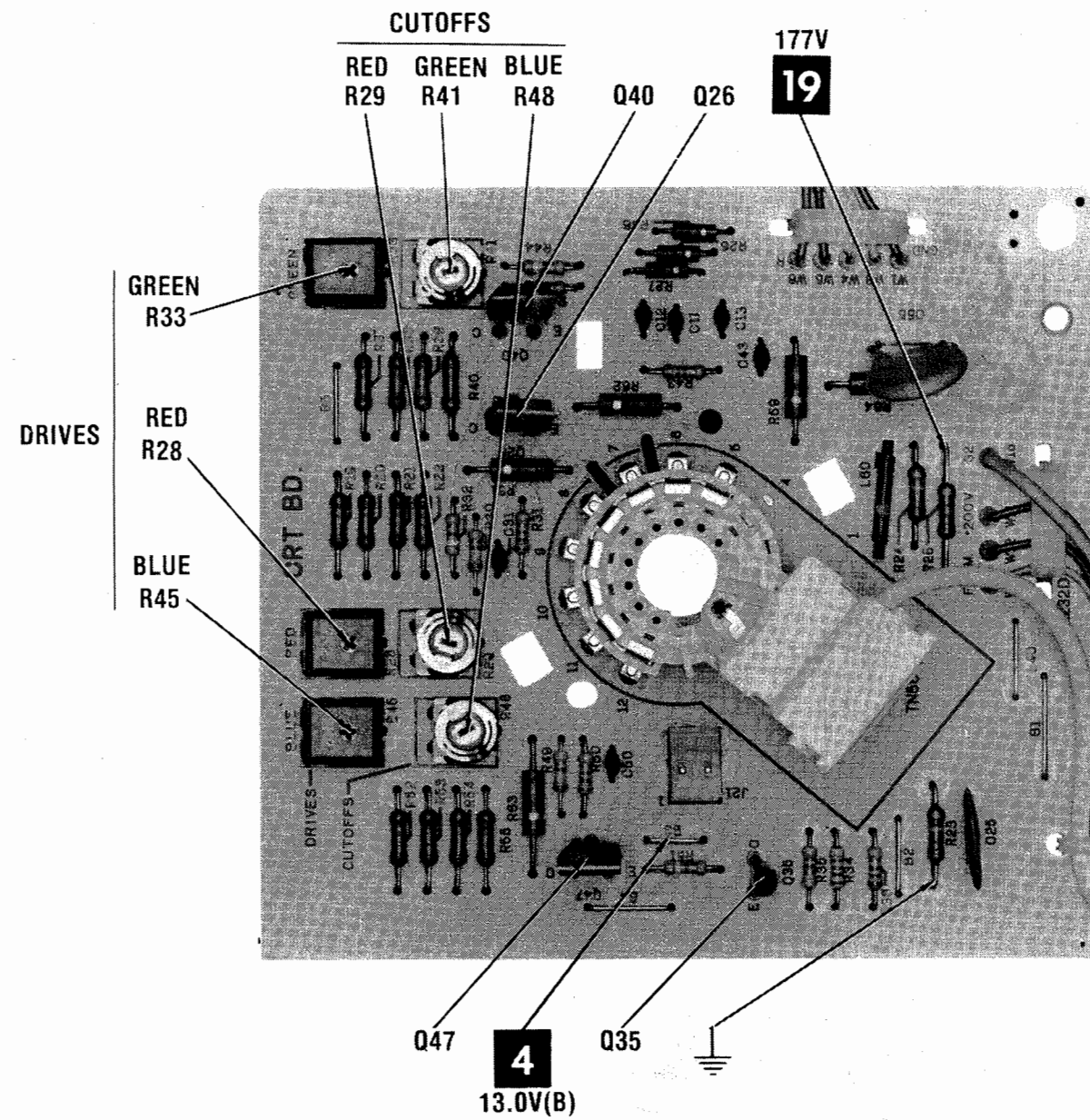


VARACTOR
TUNER

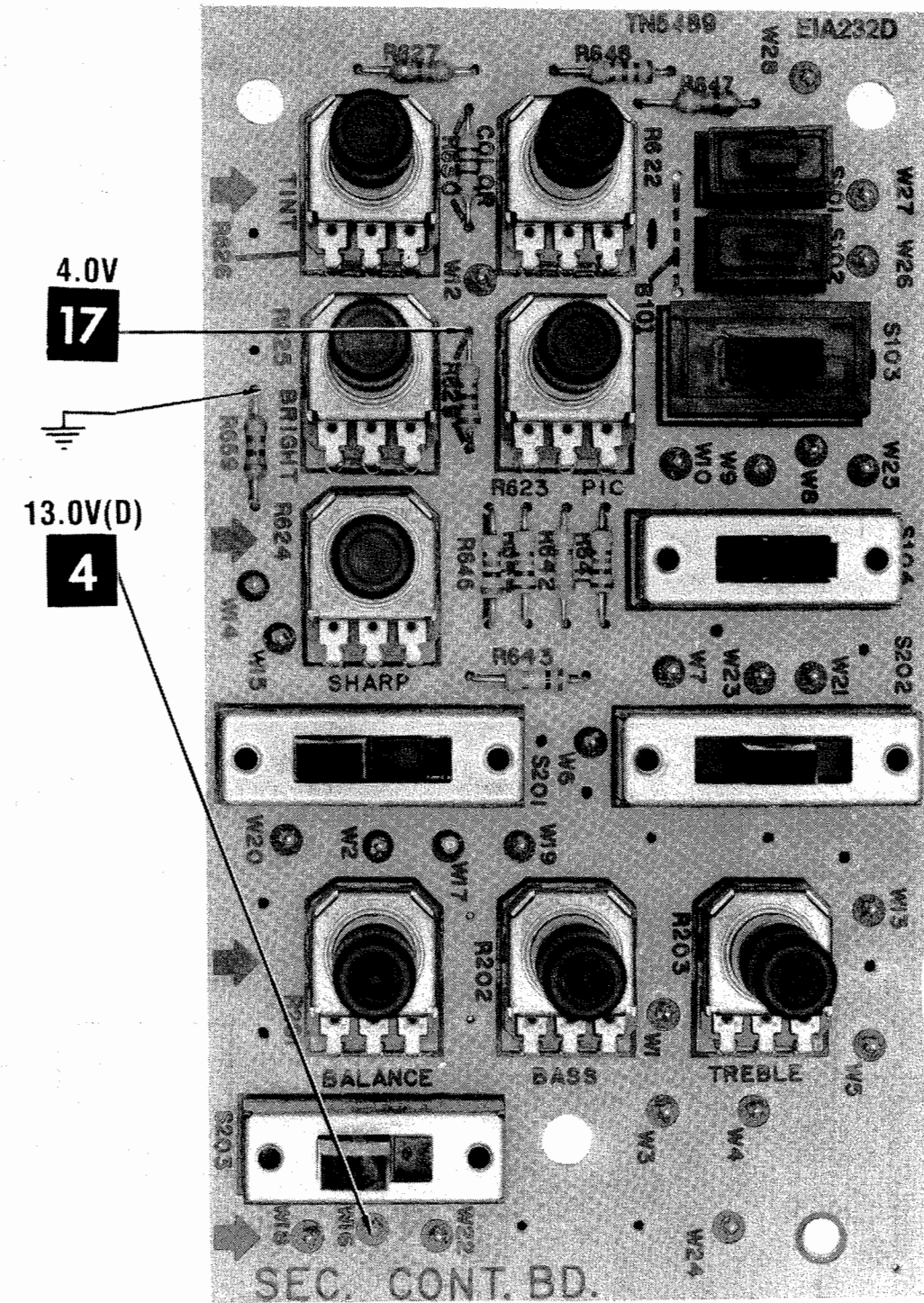
A PHOTOFACIT STANDARD NOTATION SCHEMATIC
WITH CIRCUITTRACE
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UHF/VHF TUNER 340293

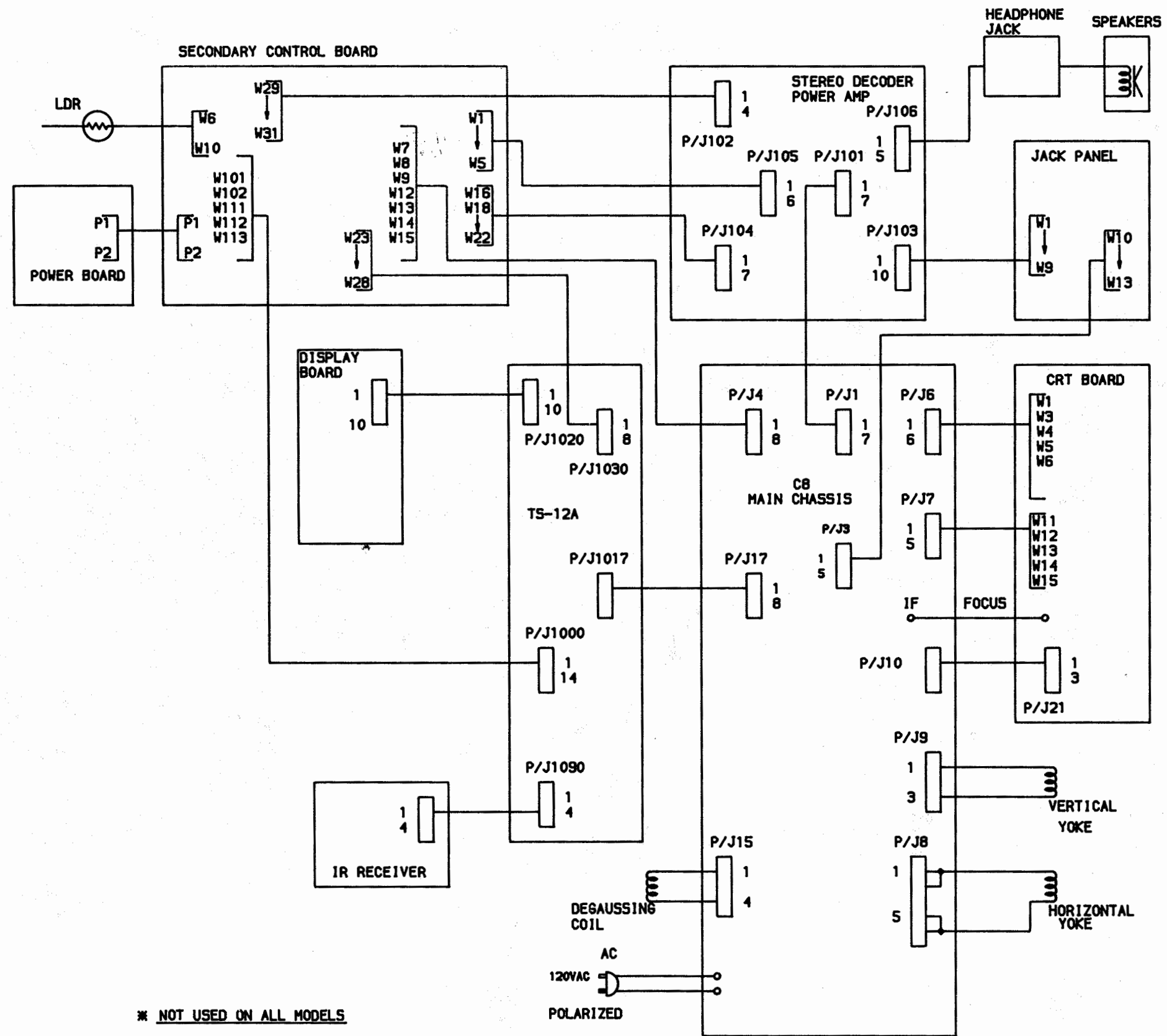


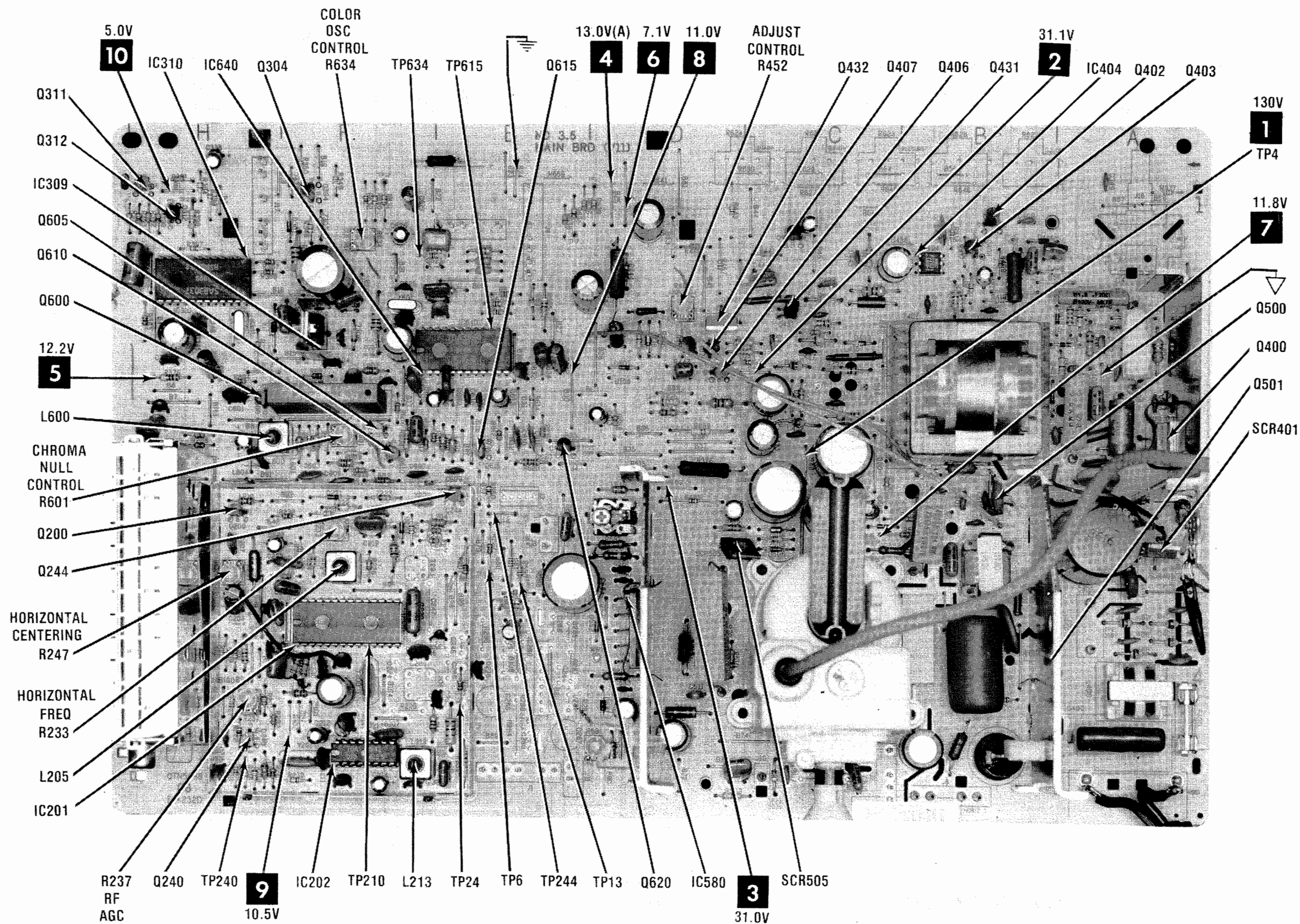


CRT BOARD



SECONDARY CONTROL BOARD





NOTE: ARROWS ON IC'S INDICATE PIN 1 UNLESS NOTED



IC640 PIN 10
IC VIDEO IN



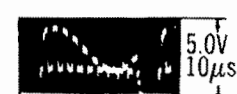
IC640 PIN 3
CHROMA



IC640 PIN 13
BLUE CHROMA



IC640 PIN 14
GREEN CHROMA



IC640 PIN 15
RED CHROMA

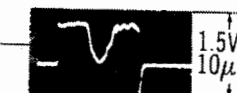
IC640 PIN 1
11.0V

D432 CATHODE
13.0V SOURCE

D434 CATHODE
31.1V SOURCE



Q500 COLLECTOR
HORIZ DRIVE



Q500 BASE
HORIZ DRIVE

Q500 COLLECTOR
54.8V



Q501 BASE
HORIZ OUTPUT

Q501 COLLECTOR
125V

JCT D406-D407
158VΔ SOURCE

COMMON
TIE POINTΔ

D502 CATHODE
177V SOURCE

IC309 PIN 3
5.0V SOURCE



Q244 EMITTER
VIDEO



Q610 EMITTER
VIDEO

IC201 PIN 5
RF AGC
3.6V-9.4V

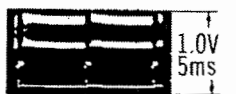
IC201 PIN 7
10.3V



IC201 PIN 26
HORIZ OSC



IC201 PIN 3
VERTICAL OSC



IC201 PIN 25
VERTICAL SYNC



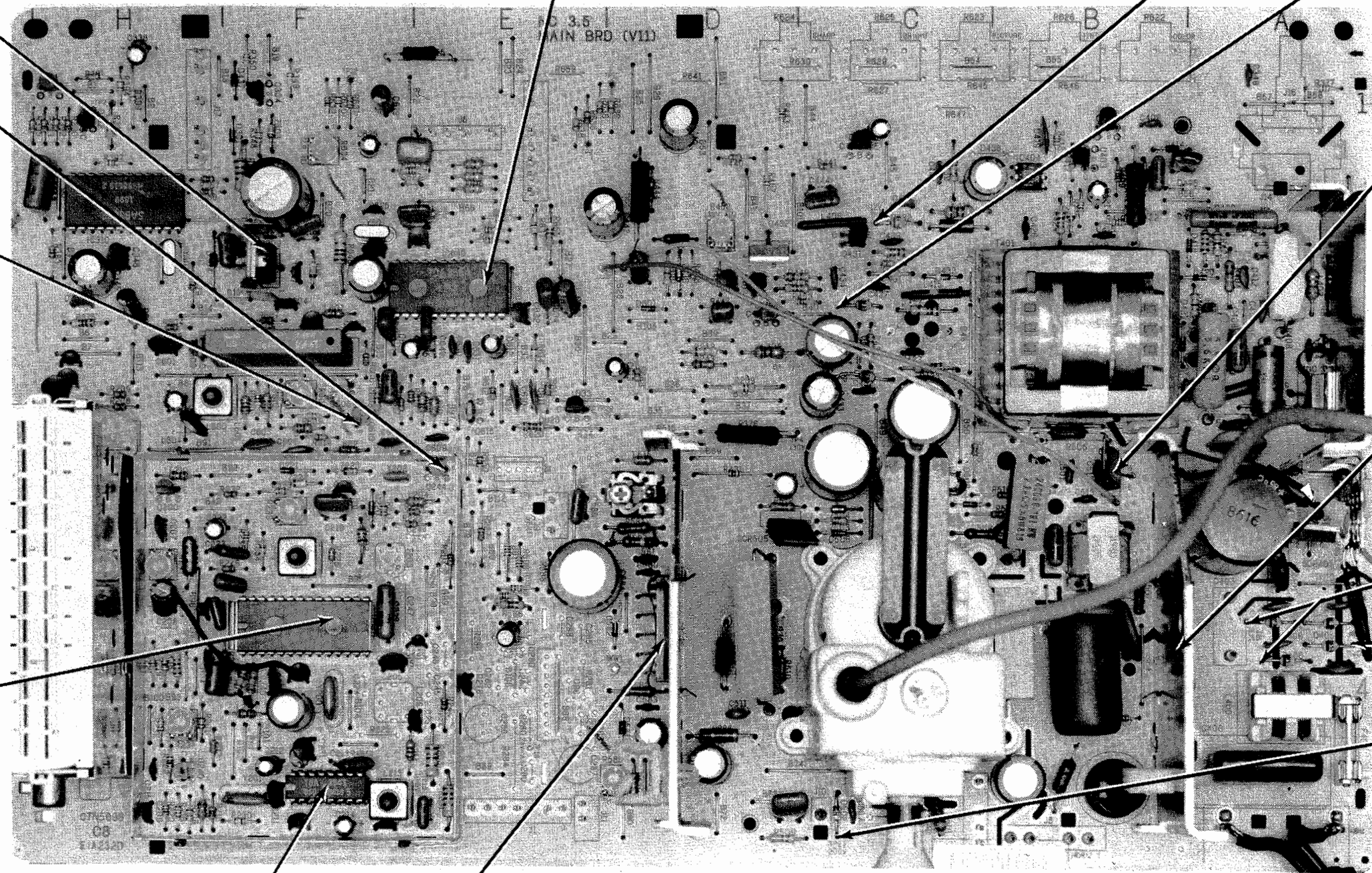
IC201 PIN 25
HORIZ SYNC

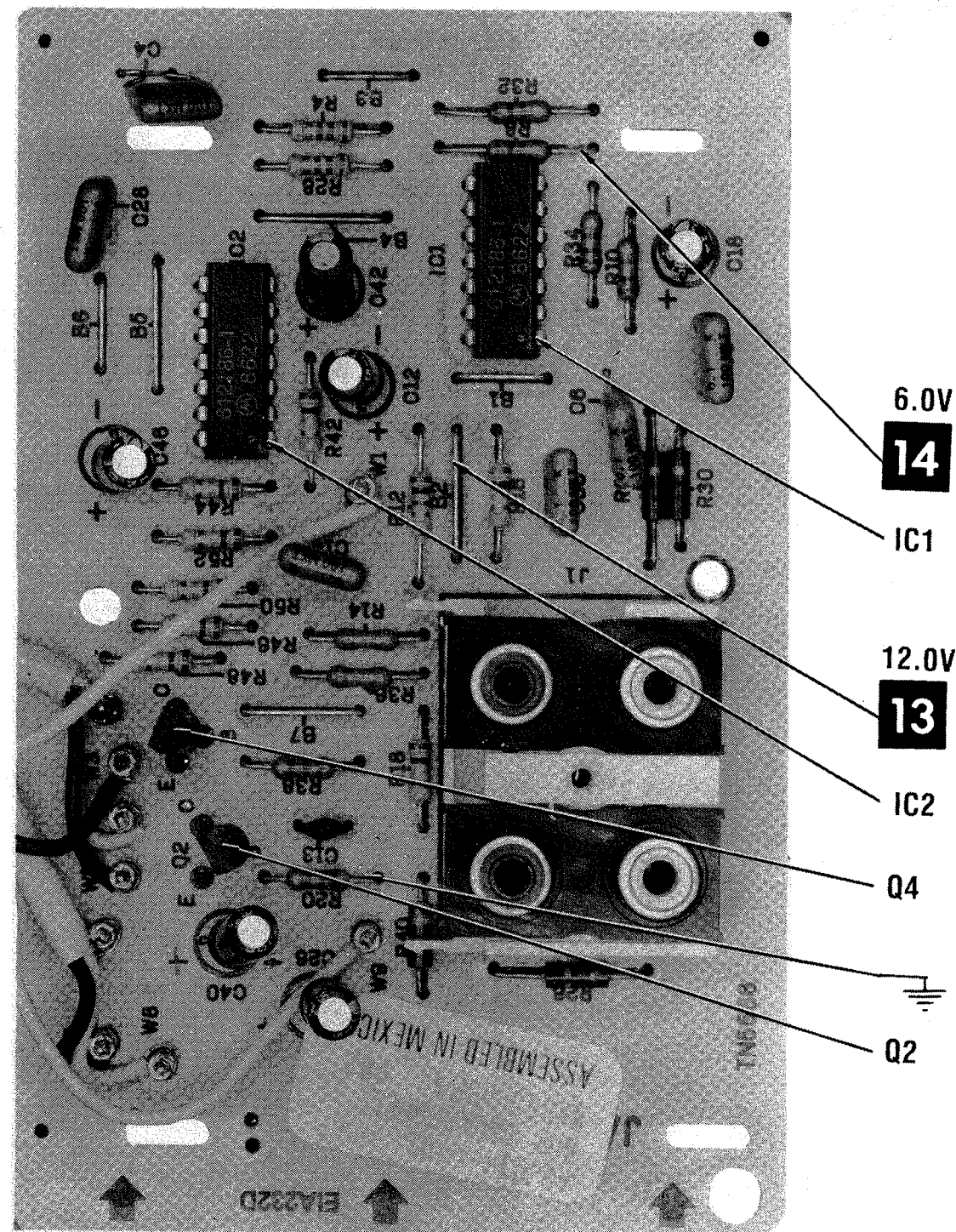
IC202 PIN 11
AUDIO
9.0V

IC580 PIN 9
31.0V



IC580 PIN 5
VERTICAL OUT

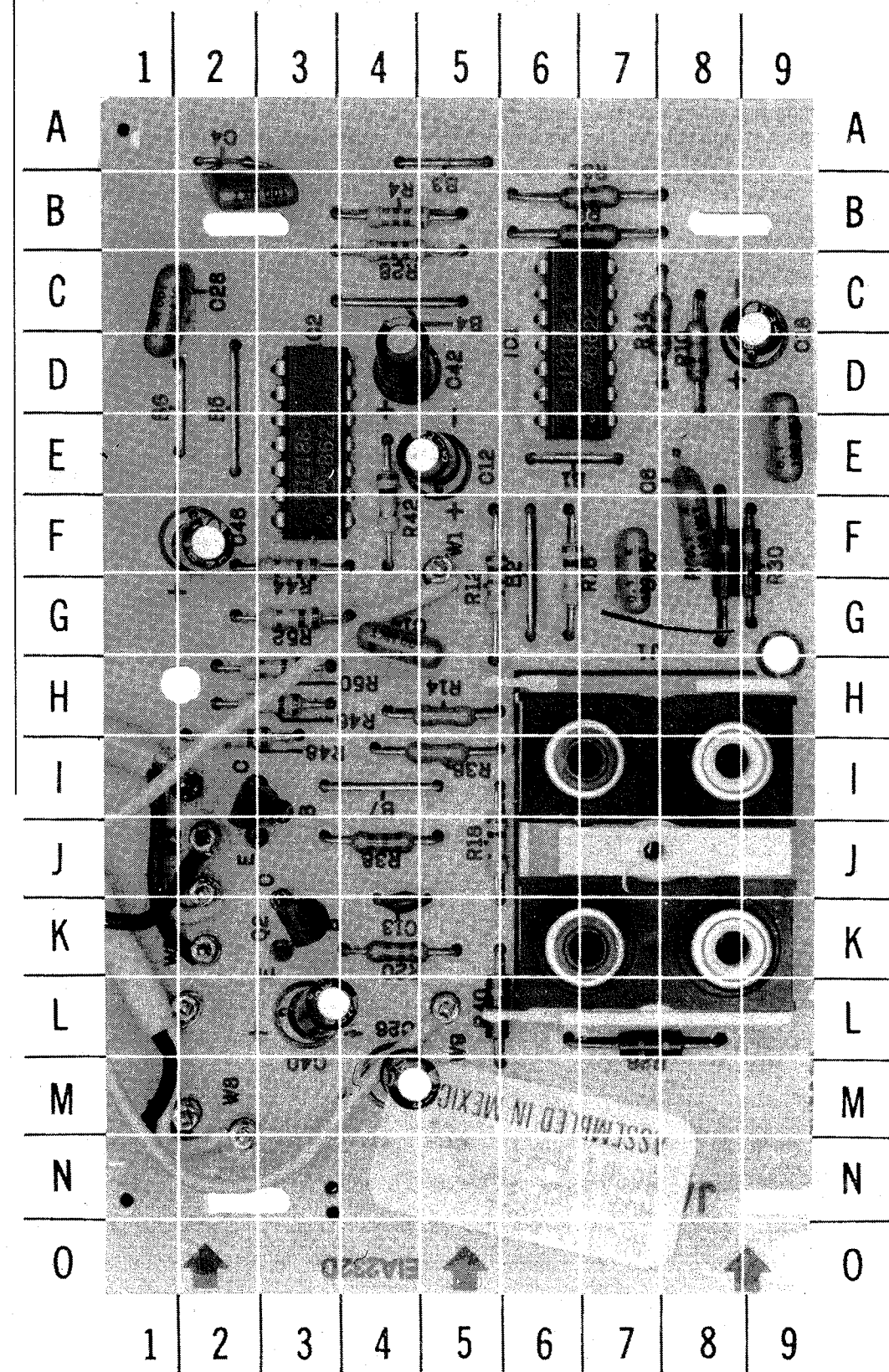


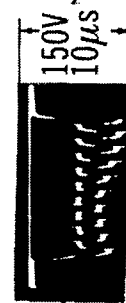
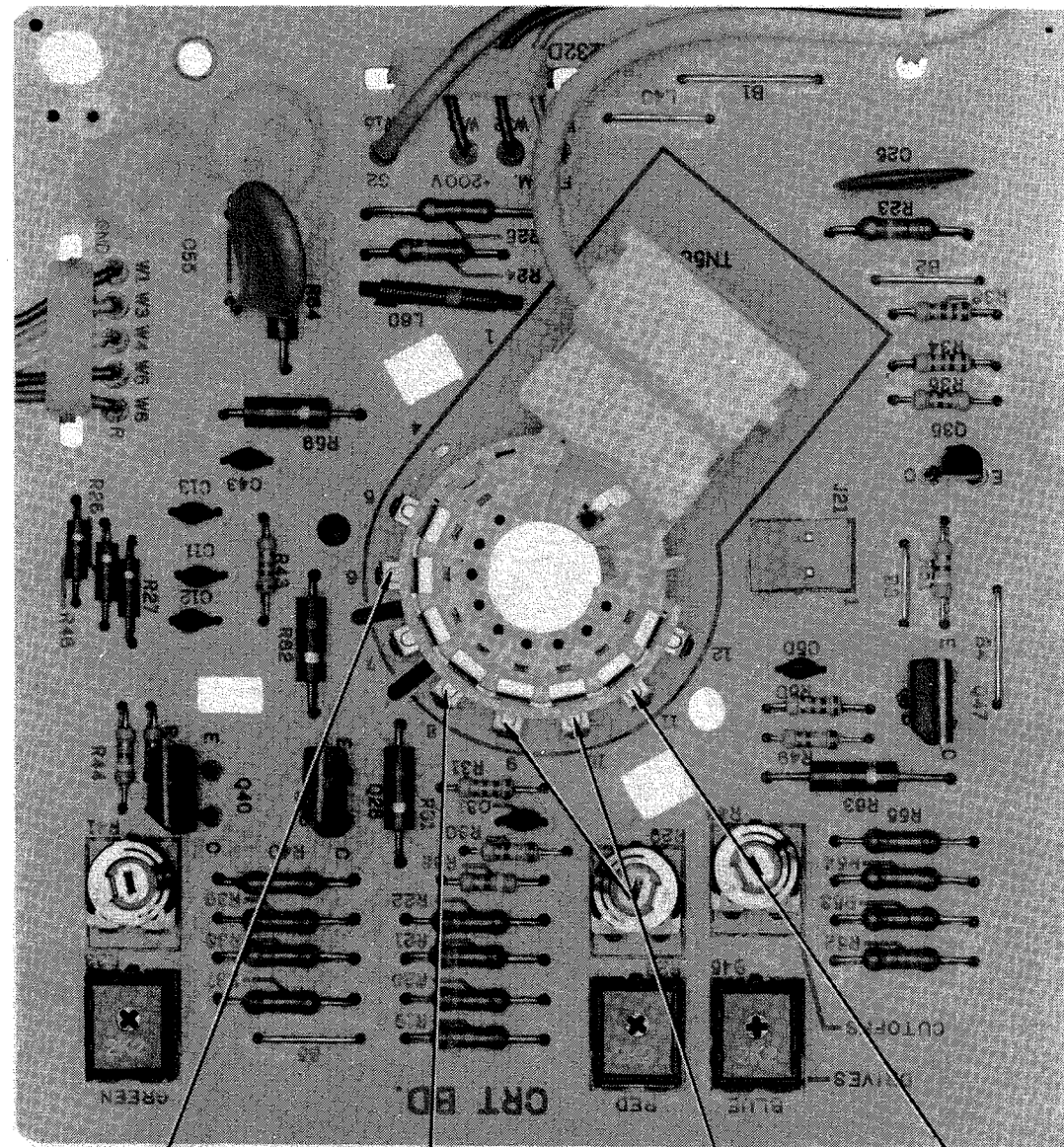


NOTE: ARROWS ON IC'S INDICATE PIN 1 UNLESS NOTED

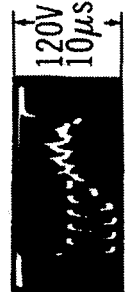
AUDIO JACK PANEL (AVJ022)-GridTrace LOCATION GUIDE

C4	B-2
C6	F-8
C12	E-5
C13	K-4
C14	G-4
C18	C-9
C26	M-4
C28	C-1
C30	F-9
C36	F-7
C40	L-3
C42	D-4
C46	F-2
IC1	D-6
IC2	E-3
Q2	K-3
Q4	I-2
R4	B-4
R6	F-8
R8	B-7
R10	D-8
R12	G-5
R14	H-5
R16	G-6
R18	J-5
R20	K-4
R26	L-7
R28	B-4
R30	F-9
R32	B-7
R34	C-8
R36	I-5
R38	J-4
R40	L-5
R42	F-4
R44	F-3
R46	H-3
R48	I-2
R50	H-3
R52	G-3





V1 PIN 6
GREEN OUTPUT



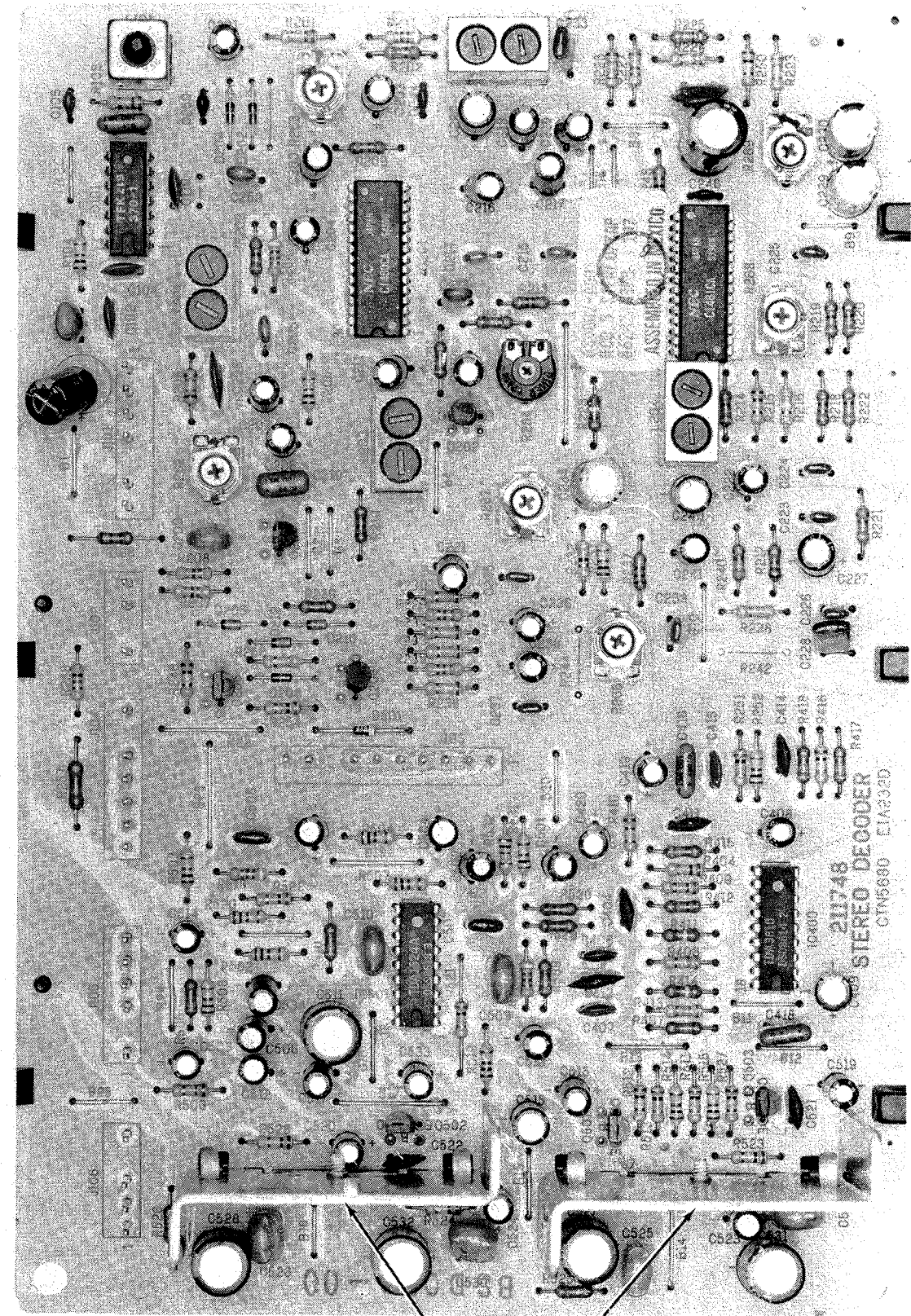
V1 PIN 8
RED OUTPUT



V1 PINS 9-10
FILAMENT

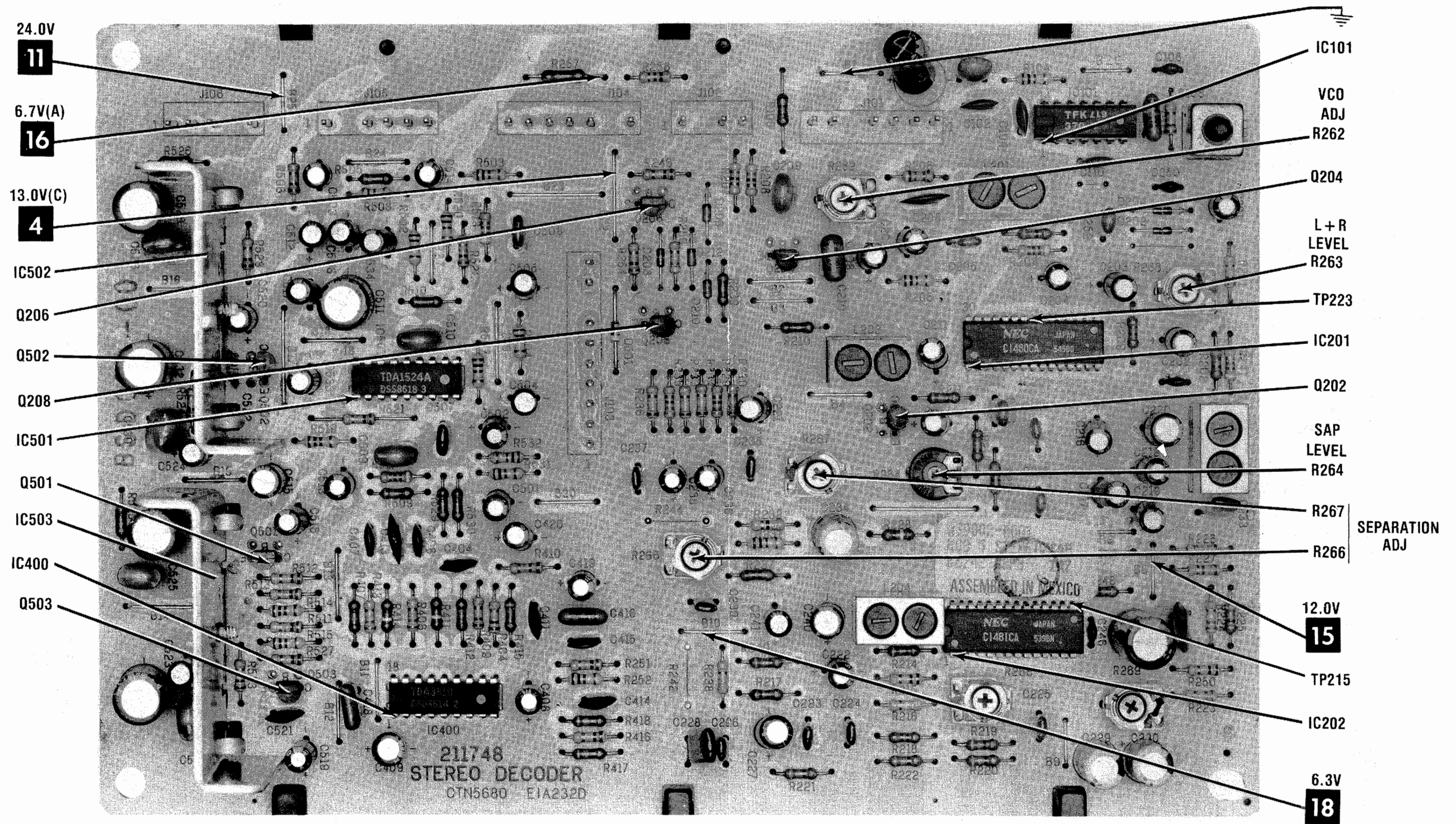


V1 PIN 11
BLUE OUTPUT

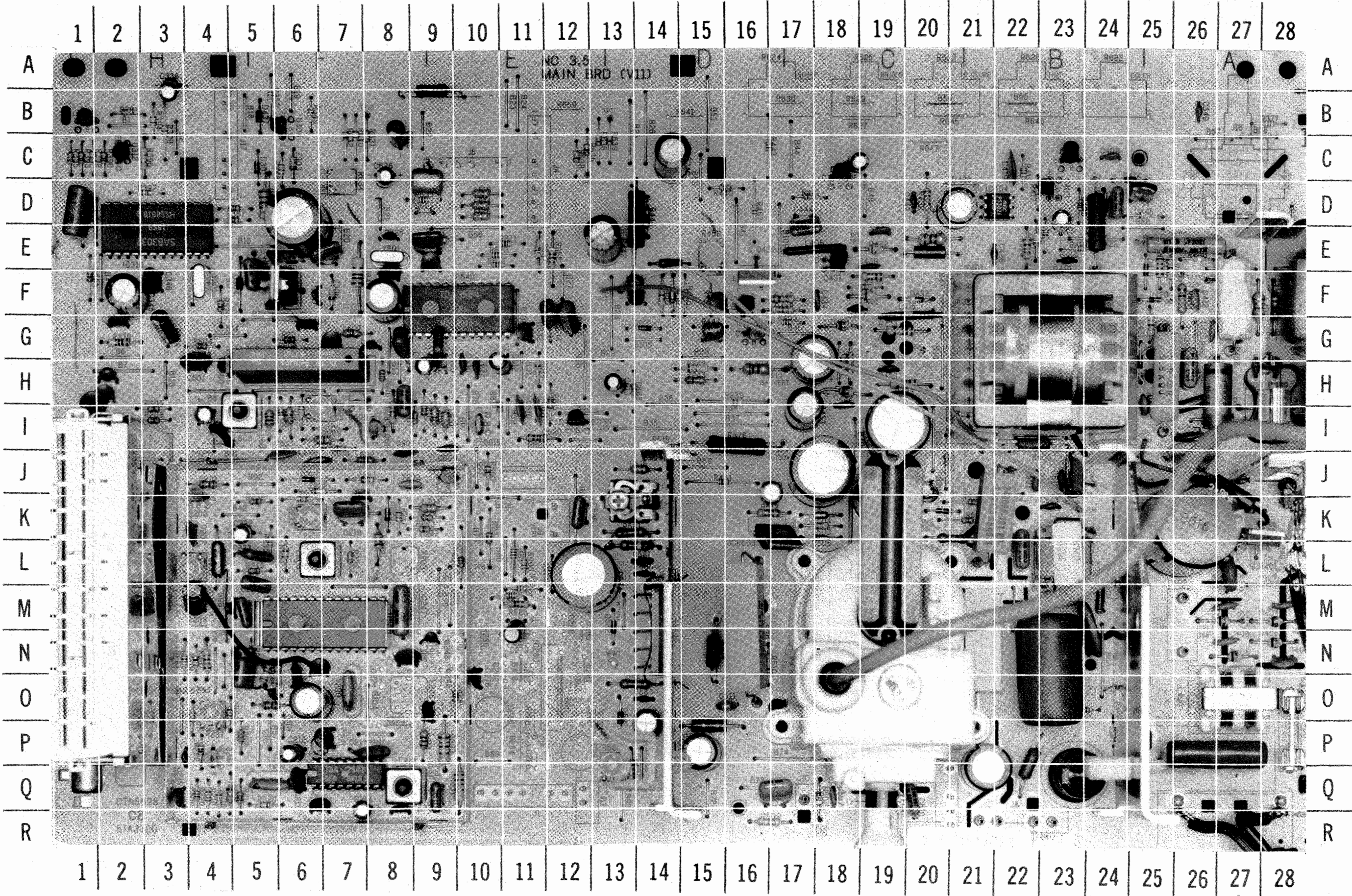


IC502 PIN 1
LEFT AUDIO OUT
24.0V

IC503 PIN 1
RIGHT AUDIO OUT
24.0V



NOTE: ARROWS ON IC'S INDICATE PIN 1 UNLESS NOTED

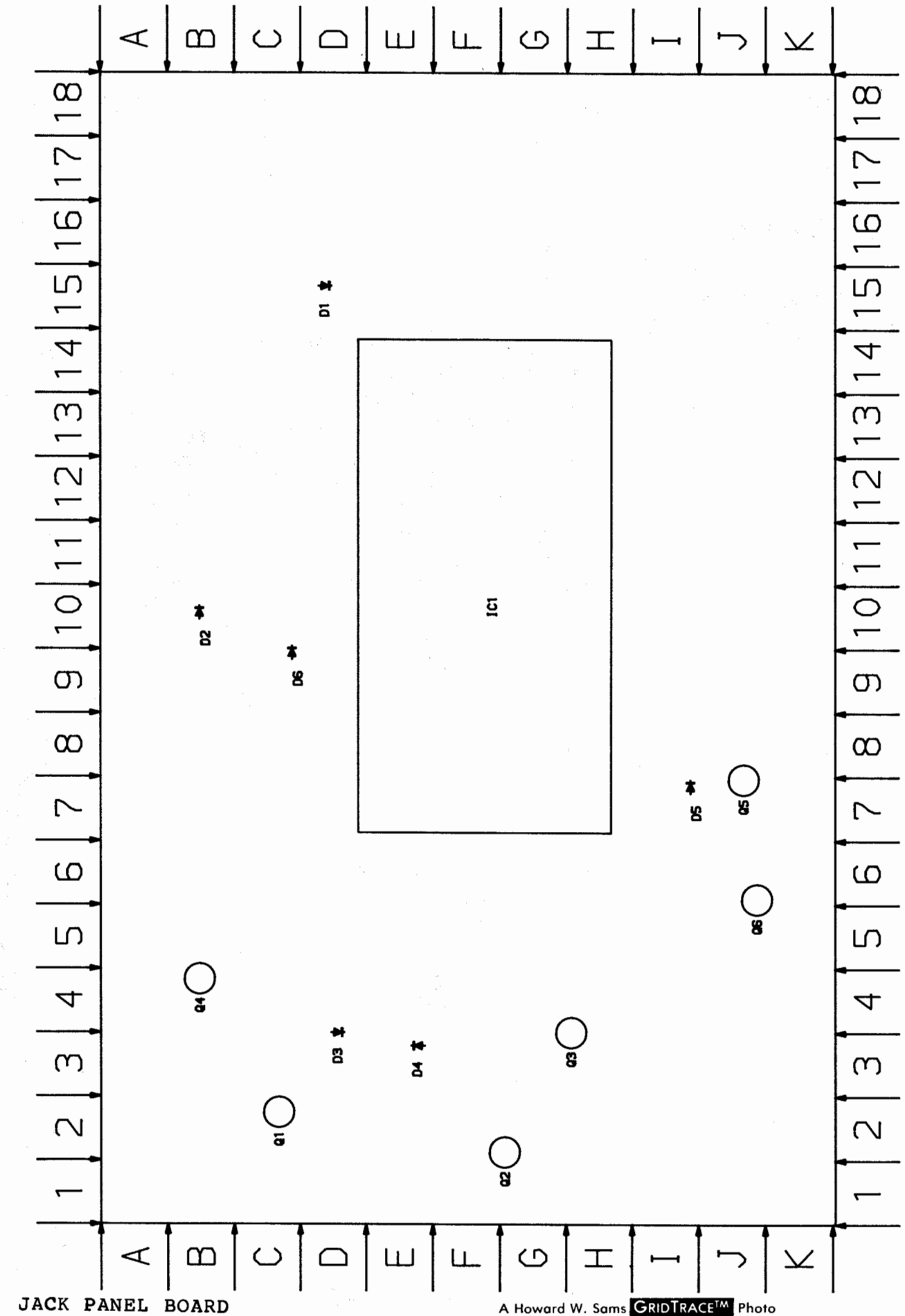


TUNING SYSTEM BOARD
GridTrace LOCATION GUIDE

C2	G-5	R60	D-5
C3	H-4	Y1	G-13
C6	L-7		
C7	K-7		
C9	K-15		
C10	J-15		
C11	J-15		
C12	J-2		
C15	I-12		
C16	J-12		
C17	H-3		
C18	A-16		
C19	B-15		
C20	C-15		
C21	C-16		
C22	D-16		
C23	E-15		
C24	E-16		
C25	I-15		
C30	H-16		
C33	H-4		
C40	F-16		
C50	F-7		
C51	B-8		
C52	G-6		
C53	G-2		
C57	F-8		
C60	C-4		
D12	K-11		
D17	H-6		
IC1000	I-8		
IC1100	J-5		
L2	H-5		
L3	H-4		
L4	D-7		
L5	D-5		
L18	B-12		
L19	B-12		
L20	C-12		
L21	C-12		
L22	D-12		
L23	D-12		
L24	D-12		
L30	F-13		
L40	F-12		
L50	D-7		
Q30	G-12		
Q40	E-12		
Q60	E-4		
R6	K-8		
R7	K-9		
R8	H-3		
R9	L-12		
R10	K-12		
R11	K-12		
R12	K-10		
R15	H-12		
R17	D-4		
R18	B-10		
R19	B-10		
R20	C-10		
R21	D-10		
R22	D-10		
R24	D-10		
R25	G-9		
R30	L-15		
R32	F-10		
R40	K-15		
R42	E-10		
R51	D-6		
R52	D-6		
R53	E-9		
R54	C-8		
R56	E-3		

JACK PANEL BOARD-GridTrace
LOCATION GUIDE

C1	D-11
C3	D-14
C4	I-11
C6	I-14
C7	C-17
C8	I-16
C9	B-11
C10	D-5
C11	B-5
C12	B-8
C13	H-6
C14	I-9
D1	D-15
D2	B-10
D3	D-3
D4	F-3
D5	J-7
D6	C-9
IC1	F-10
Q1	C-2
Q2	F-2
Q3	H-4
Q4	B-4
Q5	J-8
Q6	J-5
R1	C-11
R2	C-14
R3	C-14
R4	H-10
R5	I-13
R6	H-13
R7	C-12
R8	A-11
R9	I-12
R10	H-15
R11	C-16
R12	E-18
R13	E-17
R14	D-3
R15	F-2
R16	A-9
R17	I-4
R18	I-4
R19	J-11
R20	I-7
R21	I-7
R22	I-8
R23	I-10
R24	F-4
R25	C-6
R26	D-7
R27	B-9
R28	D-7
R29	F-6
R30	F-6

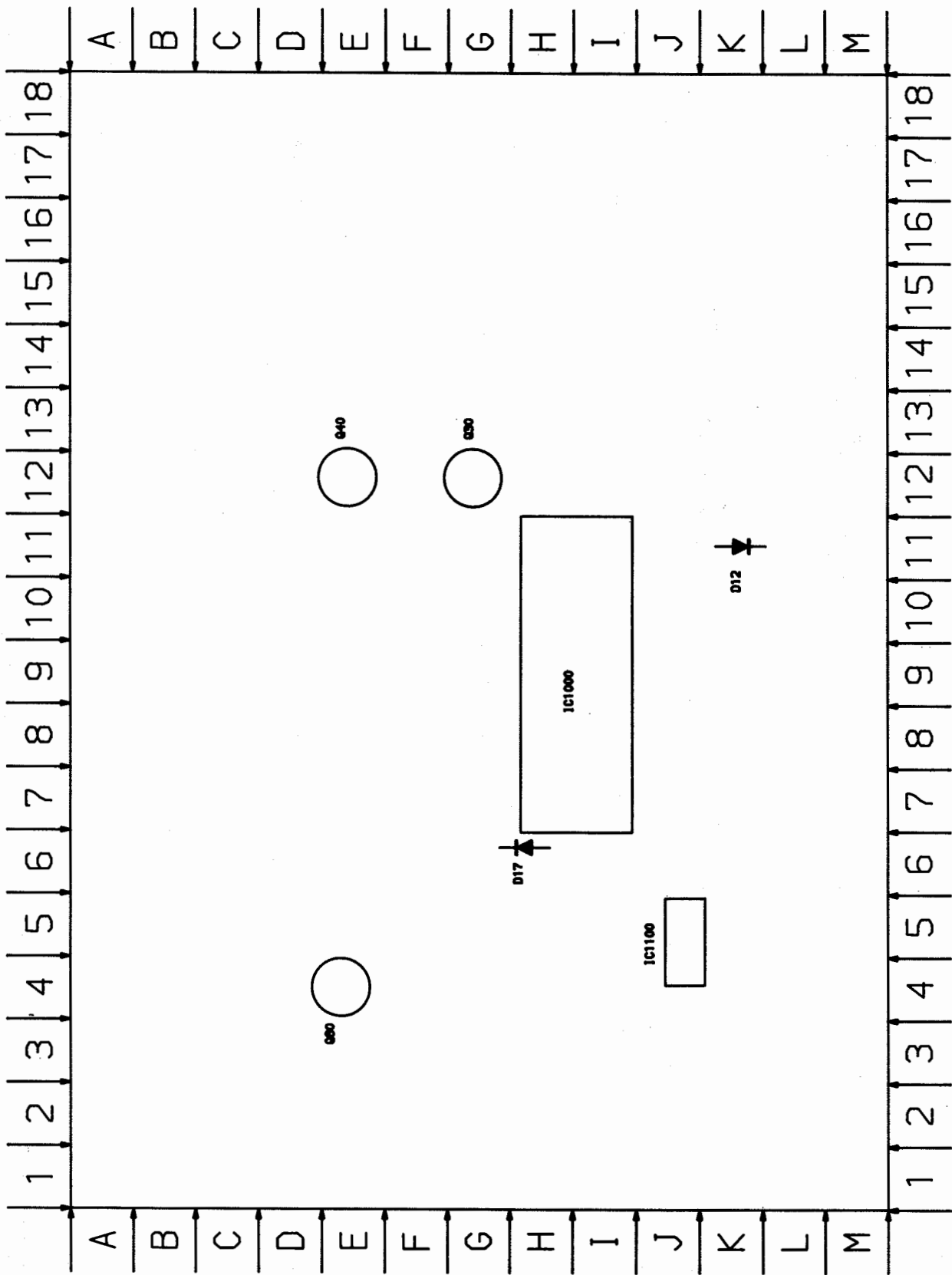
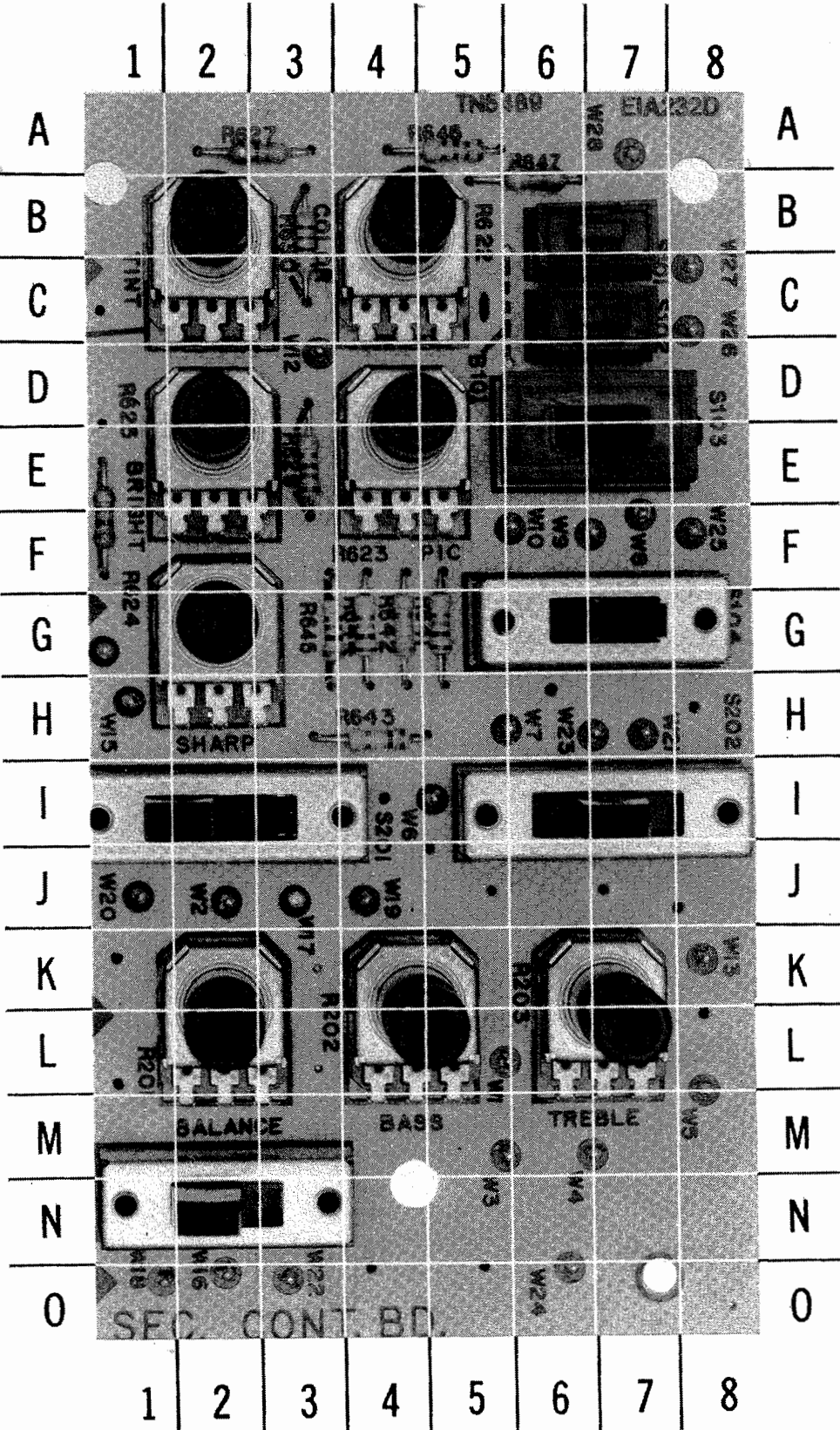


MAIN BOARD-GridTrace LOCATION GUIDE

C200	N-5	C432	I-18	D301	C-5	L602	J-7	R367	D-5	R515	I-14	Y600	G-6
C201	N-5	C433	H-17	D304	F-5	L605	I-7	R375	G-2	R516	K-21	Y601	E-8
C202	N-6	C434	F-18	D305	F-5	L606	I-6	R376	I-16	R579	Q-13	Z222	J-6
C205	N-8	C435	G-17	D402	J-27	L607	G-7	R377	B-28	R581	K-i3	Z223	J-7
C206	J-7	C436	P-15	D404	D-28	L609	I-9	R379	F-4	R582	O-14	Z303	C-6
C207	K-4	C437	E-19	D405	N-28	L610	I-9	R380	J-1	R583	Q-14	Z306	F-7
C209	Q-3	C438	D-21	D406	N-27	L614	D-10	R383	F-1	R584	M-11	Z408	F-27
C210	O-6	C439	E-19	D407	M-27	L615	D-10	R387	N-4	R585	Q-13	Z417	E-22
C211	Q-6	C440	C-14	D409	H-25	L616	D-10	R390	C-2	R586	M-11	Z435	E-14
C212	P-6	C442	E-13	D414	C-25	Q200	J-4	R392	C-1	R587	L-13	Z436	F-14
C213	P-8	C443	D-20	D415	F-27	Q240	P-4	R393	C-1	R587A	K-13	Z503	K-18
C214	R-7	C444	C-17	D416	E-26	Q244	J-9	R394	B-3	R588	L-12	Z504	K-18
C215	P-3	C445	G-15	D418	E-25	Q304	B-6	R395	C-1	R589	M-11		
C216	Q-9	C446	F-15	D419	E-23	Q311	B-1	R396	C-3	R590	L-11		
C218	N-6	C447	F-14	D420	F-25	Q312	C-2	R397	D-3	R600	I-6		
C219	K-7	C448	J-26	D421	H-25	Q400	I-28	R398	D-1	R601	I-6		
C220	M-5	C449	C-19	D424	H-18	Q402	C-23	R399	B-3	R602	I-4		
C221	L-4	C500	L-22	D425	D-25	Q403	D-23	R400	K-28	R603	Q-4		
C222	K-5	C501	J-22	D431	F-19	Q406	G-16	R401	L-27	R604	G-4		
C223	L-5	C502	N-24	D432	E-19	Q407	F-16	R402	K-27	R605	G-6		
C226	N-9	C503	J-18	D433	F-20	Q410	C-18	R403	M-28	R606	H-8		
C227	M-5	C504	N-23	D434	G-18	Q431	E-18	R404	F-26	R607	G-6		
C228	M-4	C505	N-21	D437	B-5	Q432	F-16	R405	H-25	R608	I-8		
C229	M-8	C506	Q-17	D449	H-18	Q500	J-23	R406	E-26	R609	I-7		
C230	Q-6	C507	Q-18	D500	K-20	Q501	O-25	R407	F-28	R610	I-6		
C231	P-7	C508	Q-21	D502	Q-18	Q600	H-4	R408	F-27	R611	H-12		
C232	Q-8	C509	J-17	D506	K-18	Q605	H-7	R409	D-23	R612	I-10		
C233	O-9	C510	Q-20	D581	O-13	Q610	I-8	R416	E-23	R614	H-11		
C278	O-10	C511	Q-16	D582	M-13	Q615	I-10	R417	D-22	R617	I-9		
C336	F-5	C512	J-23	D601	G-14	Q620	I-12	R418	C-22	R618	I-9		
C337	D-6	C513	K-23	F400	P-28	R201	O-4	R419	E-23	R619	I-7		
C338	B-3	C516	J-20	IC201	M-7	R202	P-5	R420	E-25	R620	I-11		
C339	E-7	C580	L-14	IC202	Q-7	R203	P-9	R421	D-24	R631	C-8		
C345	F-2	C581	L-14	IC309	F-6	R207	L-10	R422	E-24	R632	C-7		
C346	F-3	C582	P-14	IC310	E-3	R208	I-3	R423	E-25	R633	D-9		
C347	F-6	C583	O-14	IC404	D-22	R209	I-3	R424	E-22	R634	C-7		
C349	B-26	C584	L-12	IC580	N-14	R210	N-5	R430	G-25	R635	C-12		
C350	N-1	C585	N-11	IC640	F-10	R215	Q-5	R431	J-15	R636	C-13		
C351	P-1	C586	K-15	J1	Q-12	R216	Q-4	R432	H-18	R637	E-11		
C352	I-1	C587	M-14	J4	B-11	R217	K-8	R433	H-20	R638	C-12		
C353	D-1	C601	H-4	J6	C-10	R218	Q-4	R434	G-19	R639	C-13		
C354	H-2	C602	G-8	J7	R-21	R219	N-4	R437	F-19	R640	C-7		
C360	H-1	C603	J-6	J8	R-23	R220	Q-4	R438	F-19	R648	F-7		
C361	G-2	C604	G-6	J9	K-12	R221	N-3	R439	D-20	R650	J-10		
C362	H-2	C605	G-7	J10	Q-17	R222	P-4	R440	D-16	R655	E-12		
C364	G-3	C606	J-6	J11	Q-12	R223	K-9	R441	D-17	R666	P-15		
C365	O-1	C607	J-8	J15	M-6	R224	K-9	R443	C-16	R668	H-13		
C366	M-4	C608	H-8	J17	D-4	R226	L-7	R444	D-14	R670	E-10		
C400	P-27	C609	I-9	L201	Q-4	R227	K-10	R446	F-15	R671	E-11		
C401	J-27	C610	I-11	L202	L-8	R228	K-7	R447	G-15	R672	E-10		
C402	J-28	C611	I-11	L204	K-9	R229	K-6	R448	F-17	S580	K-13		
C403	K-26	C612	H-10	L205	L-6	R230	Q-5	R449	F-17	SCR401	K-28		
C404	M-28	C613	H-13	L210	J-4	R231	Q-10	R450	F-14	SCR505	K-17		
C405	N-28	C614	I-4	L211	O-5	R232	K-5	R451	F-15	T401	G-23		
C406	N-27	C618	G-8	L213	Q-8	R233	K-6	R452	E-15	T500	L-23		
C407	M-27	C619	B-8	L214	P-9	R234	L-6	R453	G-17	T504	N-19		
C408	H-26	C620	E-9	L400	O-27	R235	L-5	R454	O-25	TP1	K-11		
C409	C-24	C621	F-8	L402	F-27	R236	O-4	R455	A-9	TP2	C-3		
C410	H-25	C624	F-8	L403	H-16	R237	Q-4	R456	D-14	TP4	I-18		
C412	F-26	C625	E-8	L405	H-26	R238	P-6	R457	D-16	TP5	H-18		
C413	C-26	C626	C-8	L406	E-18	R239	H-16	R500	J-20	TP6	L-10		
C414	H-27	C627	D-9	L409	I-28	R240	N-5	R501	K-20	TP8	E-18		
C415	C-23	C630	H-10	L410	I-27	R240A	N-5	R502	K-21	TP10	H-17		
C417	H-27	C631	H-10	L415	F-20	R242	H-15	R503	J-22	TP13	L-11		
C418	D-24	C632	G-11	L416	D-24	R243	H-15	R504	K-21	TP24	P-9		
C419	C-22	C633	E-9	L417	E-20	R244	Q-9	R505	K-22	TP210	N-7		
C420	D-25	C634	F-12	L418	F-23	R246	L-5	R506	I-22	TP240	Q-4		
C421	D-23	C635	H-9	L501	M-24	R247	L-4	R507	O-24	TP244	K-10		
C422	E-26	C640	G-9	L502	N-16	R251	L-11	R508	P-22	TP615	F-10		
C423	H-19	C641	E-9	L503	Q-23	R348	C-6	R509	R-16	TP634	D-8		
C426	E-21	C642	F-12	L515	J-14	R349	B-6	R510	N-16	Y200	Q-7		
C427	F-18	C647	I-4	L516	M-25	R350	B-5	R512	K-16	Y201	Q-5		
C430	I-26	D220	K-8	L600	I-5	R365	D-5	R513	M-16	Y202	J-8		
C431	I-19	D221	J-6	L601	I-5	R366	D-5	R514	N-15	Y301	F-4		

SECONDARY CONTROL BOARD-GridTrace LOCATION GUIDE

R201	L-2	R626	B-2	R644	G-4	S102	C-7
R202	L-5	R627	A-3	R645	G-3	S103	E-7
R203	L-7	R629	E-3	R646	A-5	S104	G-7
R622	B-5	R630	B-3	R647	B-6	S201	I-2
R623	D-5	R641	G-5	R659	F-1	S202	I-7
R624	G-2	R642	G-4	S101	B-7	S203	N-2
R625	D-2	R643	H-4				



PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFG. PART No./TYPE No.					NOTES
		NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
D220, 221, 301 D304 D305 D402 D402	5301810001 5302990002 5301810001 5301810001 5302990002	NTE177 NTE177 NTE177	ECG177 ECG177 ECG177	SK9091/177 SK9091/177 SK9091/177	103-131 103-131 103-131	-A001 VERSIONS, REMOTE ONLY -B002 & LATER VERSIONS, REMOTE ONLY
D404 THRU D407	1N5062 5302620001 5303100003 5302990001 5302600002	NTE506 NTE506 NTE580 NTE552	ECG506 ECG506 ECG580 ECG552	SK3175A SK3175A SK5036/580 SK9000/552	212-Z9007 212-Z9007 212-Z9000 103-287	
D409 D414 D415	5302990001 5301810001 5302990002	NTE177 NTE177 NTE580	ECG177 ECG177 ECG580	SK9091/177 SK9091/177 SK5036/580	103-131 103-131 212-Z9000	
D420, 21 D422	BYW95C 5303051003	NTE580 NTE580	ECG580 ECG580	SK5036/580 SK5036/580	212-Z9000 212-Z9000	
D423	BYD33J 5303101003	NTE580	ECG580	SK5036/580	212-Z9000	
D424	BYW95C 5302600002	NTE580	ECG580	SK5036/580	212-Z9000	-A001 REMOTE VERSIONS -B002 & LATER VERSIONS, REMOTE ONLY
D425	BZV46-1V5 5303010002	NTE552	ECG552	SK9000/552	103-287	
D431 D431	5302680001 5302600001	NTE519	ECG519	SK3100/519	103-131	
D432	BYV27-150 5303260003	NTE580	ECG580	SK5036/580	212-Z9000	
D433 D434	BYW33J 5303100003 BYW95C 5302600002	NTE580 NTE580 NTE580 NTE552	ECG580 ECG580 ECG580 ECG552	SK5036/580 SK5036/580 SK5036/580 SK9000/552	212-Z9000 212-Z9000 212-Z9000 103-287	

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

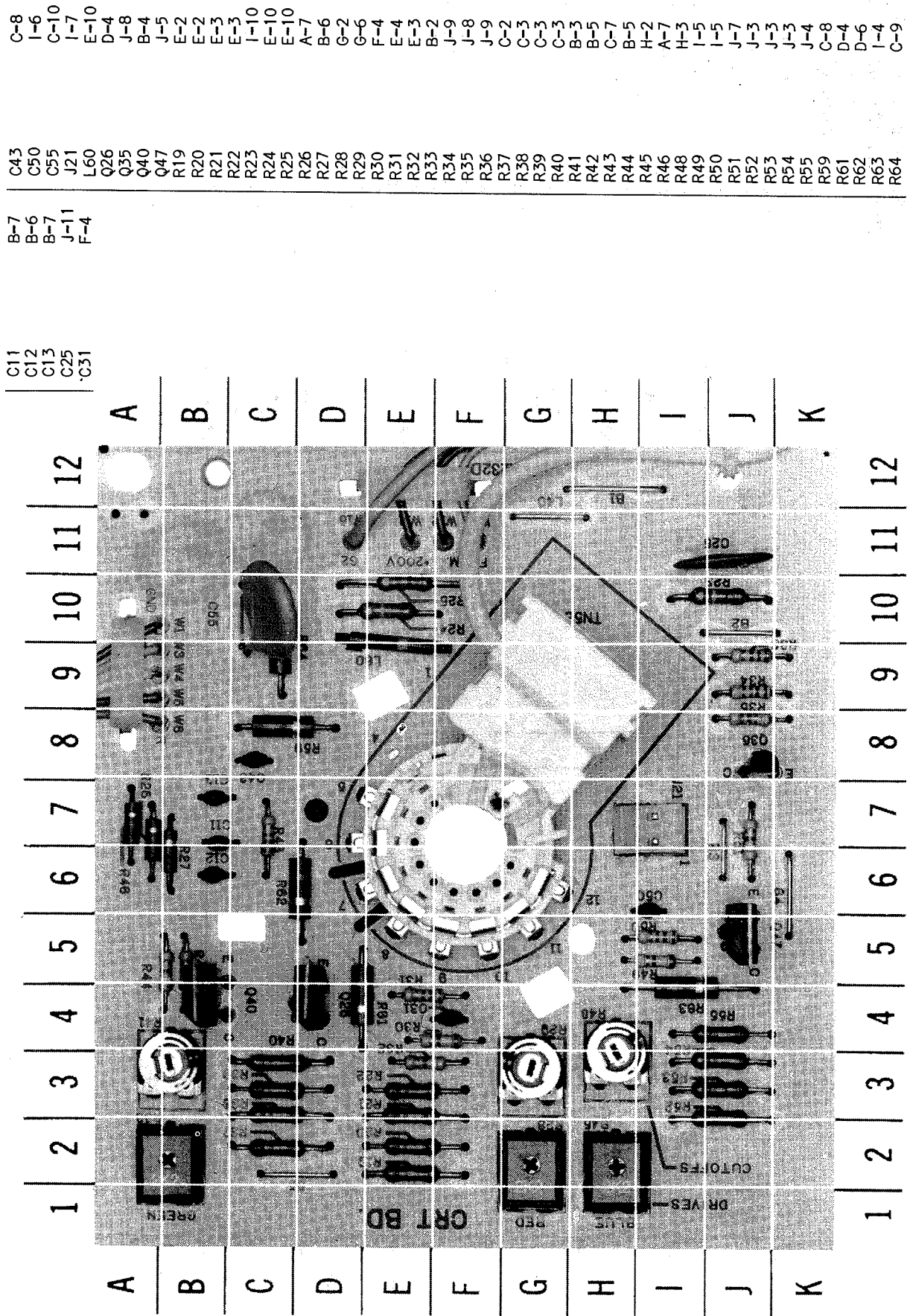
SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFG. PART No./TYPE No.					NOTES
		NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
D437 D438 D449 D450 D500	5302990001 5301810001 5301810001 5301810001 5301810001	NTE177 NTE177 NTE177 NTE177	ECG177 ECG177 ECG177 ECG177	SK9091/177 SK9091/177 SK9091/177 SK9091/177	103-131 103-131 103-131 103-131	USED IN LATE VERSIONS -E005 VERSIONS ONLY
D502	BYD33J 5303100003	NTE580 NTE580	ECG580 ECG580	SK5036/580 SK5036/580	212-Z9000 212-Z9000	
D506 D581 D582, 601	5302660001 5302990001 5301810001	NTE177 NTE177	ECG177 ECG177	SK9091/177 SK9091/177	103-131 103-131	
D702	5301810001	NTE177	ECG177	SK9091/177	103-131	
IC201 IC202 IC202	TDA4505A 6125070001 TDA2541 6121260001 6125880001	NTE177 NTE177	ECG177 ECG177	SK9091/177 SK9091/177	103-131 103-131	
IC280 IC309 IC310	6124670001 612479-1 6124790001 SAB3037 6125450001	NTE960 NTE960	ECG960 ECG960	SK7635 SK7635	LATE PRODUCTION MONAURAL CHASSIS ONLY	-E005 VERSIONS
IC404 IC580 IC640	PS2021 5302980001 TDA3654Q 6124440001 TDA3564 6125080001	NTE3041 NTE3041 NTE1567 NTE1567	ECG3041 ECG3041 ECG1567 ECG1567	SK2041/3041 SK2041/3041 SK7805/1567 SK7805/1567	221-Z9043 221-Z9043	
IC640 Q26 Q35 Q40, 47 Q200	6126150001 6102500003 6104340001 6102500003 6104350001	NTE171 NTE159+ NTE171 NTE123AP+ NTE123AP+	ECG171 ECG159+ ECG171 ECG123AP+ ECG123AP+	SK3201/171 SK3466/159+ SK3201/171 SK3854/123AP+ SK3854/123AP+	121-822 121-Z9003+ 121-822 121-Z9000A+	

STEREO DECODER BOARD-GridTrace LOCATION GUIDE

C102	C-22	C511	G-6	R217	Q-17	R523	P-4
C104	C-23	C512	F-6	R218	R-20	R524	J-3
C106	B-26	C513	L-6	R219	R-22	R525	L-1
C110	D-24	C514	D-9	R220	R-22	R526	D-2
C112	A-20	C515	L-4	R221	S-17	R527	P-5
C114	C-26	C516	M-5	R222	R-20	R528	F-4
C201	E-28	C517	G-5	R223	Q-27	R529	L-9
C202	H-27	C519	R-5	R224	Q-27	R530	L-9
C203	G-25	C520	H-4	R225	Q-28	R531	K-10
C204	G-24	C521	Q-5	R226	M-27	R532	J-10
C205	F-21	C522	I-4	R227	N-27	TP215	O-24
C206	F-19	C523	P-2	R228	M-20	TP223	H-23
C207	F-20	C524	K-3	R229	J-15	Y102	B-22
C208	E-20	C525	N-2	R230	J-16		
C209	E-17	C526	F-2	R231	M-17		
C210	F-18	C527	M-2	R232	M-17		
C211	H-21	C528	E-2	R233	J-15		
C212	J-21	C529	Q-3	R234	J-15		
C213	J-22	C530	J-2	R235	J-14		
C214	J-23	C531	Q-2	R236	J-14		
C215	L-23	C532	I-2	R237	N-16		
C216	K-25	C533	I-5	R238	Q-15		
C217	L-25	C534	F-7	R239	G-16		
C218	K-26	D202	F-26	R240	P-17		
C219	L-26	D204	E-26	R241	I-28		
C220	J-26	D206	E-15	R246	D-14		
C221	J-16	D208	F-14	R248	N-25		
C222	P-18	D210	G-15	R250	P-27		
C223	R-18	D212	F-15	R251	P-12		
C224	R-19	D501	H-13	R252	P-12		
C225	Q-23	IC101	C-24	R254	F-13		
C226	R-15	IC201	H-23	R256	F-14		
C227	R-17	IC202	O-23	R257	B-12		
C228	R-15	IC400	Q-9	R258	B-14		
C229	R-25	IC501	I-8	R262	E-18		
C230	R-26	IC502	G-3	R263	G-27		
C231	O-27	IC503	O-3	R264	K-22		
C232	O-26	J101	C-21	R266	M-15		
C233	L-27	J102	C-15	R267	K-18		
C234	M-18	J103	K-12	R268	Q-22		
C235	K-17	J104	C-10	R269	Q-25		
C236	L-15	J105	C-6	R404	Q-10		
C237	K-13	J106	C-2	R406	Q-8		
C238	L-14	L101	C-27	R407	Q-7		
C239	O-15	L201	E-22	R409	Q-10		
C240	O-18	L202	K-28	R410	N-11		
C241	O-17	L203	I-19	R411	Q-9		
C244	I-26	L204	O-20	R412	Q-9		
C246	O-24	Q202	J-20	R413	Q-7		
C250	E-26	Q204	F-17	R414	Q-7		
C252	E-25	Q206	E-14	R415	Q-10		
C404	N-9	Q208	H-14	R416	R-12		
C406	M-8	Q501	M-4	R417	R-12		
C407	M-7	Q502	I-5	R418	Q-12		
C408	Q-11	Q503	Q-5	R502	F-2		
C409	R-7	R104	B-23	R503	D-10		
C411	O-11	R106	C-26	R504	H-11		
C413	M-8	R108	C-17	R505	D-7		
C414	O-12	R201	G-28	R506	D-5		
C415	O-12	R202	I-27	R507	I-10		
C416	Q-7	R203	F-23	R508	E-7		
C418	N-12	R204	F-23	R509	L-8		
C419	M-11	R205	G-20	R510	G-8		
C420	L-10	R206	D-20	R511	Q-5		
C501	J-10	R207	D-16	R512	N-5		
C502	D-6	R208	D-16	R513	N-5		
C503	J-11	R209	H-25	R514	Q-5		
C504	G-11	R210	H-17	R515	Q-5		
C505	F-6	R211	J-21	R517	K-8		
C506	F-9	R212	K-22	R518	F-10		
C507	F-11	R213	L-23	R519	K-6		
C508	K-8	R214	P-20	R520	E-9		
C509	H-8	R215	P-20	R521	J-7		
C510		R216	Q-20	R522	F-9		

CRT BOARD
GridTrace LOCATION GUIDE

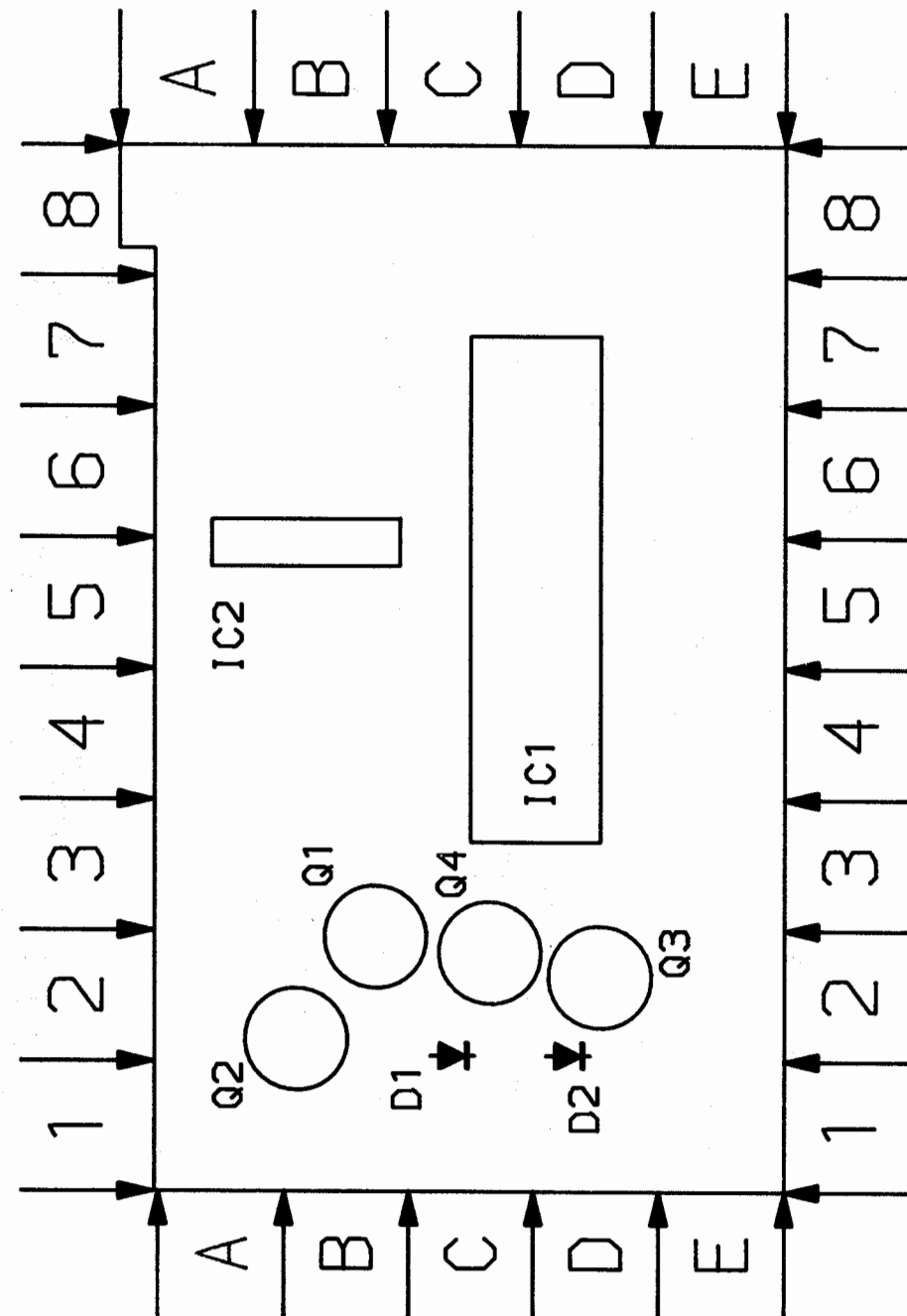


REMOTE CONTROL
TRANSMITTER-TUMA5G

GridTrace

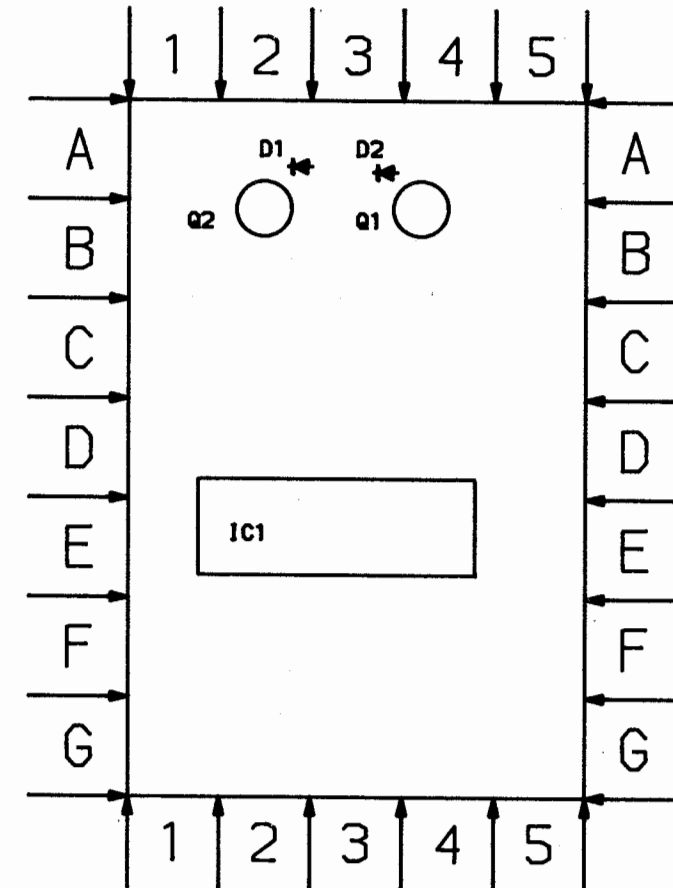
LOCATION GUIDE

C1	B-4
C2	D-7
C3	B-3
C4	B-3
C5	A-4
C6	E-3
D1	C-2
D2	D-2
D3	A-6
IC1	D-5
IC2	B-5
Q1	C-2
Q2	B-2
Q3	D-2
Q4	C-2
R1	A-7
R2	B-7
R3	B-7
R4	B-7
R5	E-7
R6	E-6
R7	C-7
R8	B-7
R9	E-6
R10	E-6
R14	D-3
R15	C-3
R16	D-2
R17	C-3
R18	A-1
R19	A-1
R20	D-2
R21	C-4
R22	B-2
R23	B-4
R24	E-3
S-1	E-1
Y-1	B-3



REMOTE CONTROL TRANSMITTER
Tl76AG-GridTrace LOCATION GUIDE

C1	C-5	IC1	E-3	R2	B-2
C2	C-1	L1	D-2	R3	C-4
C3	C-2	Q1	A-4	R4	C-4
D1	A-2	Q2	B-2	R5	B-4
D2	A-3	R1	C-2	R6	C-2



PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFGR. PART No./ TYPE No.					NOTES
		NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
Q240	6104420001	NTE319P	ECG319P	SK9432/319P	121-Z9021	LATE PRODUCTION -A001 VERSIONS -B002 & LATER VERSIONS
Q244	6104340001	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
Q304	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
Q311	6104340001	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
Q312	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
#						
Q400	6105320003	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
Q402	C327 (EUROPE)	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
Q403	6103690001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
Q406	6105000001	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
	C557 (EUROPE)	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
	6104980001	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
Q407	6105000004	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
Q410	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
Q431	6103600001	NTE288	ECG288	SK3434/288	121-Z9046	
Q432	C3038					
	6105510001					
Q500	BF819	NTE198+	ECG198+	SK3220/198+	121-Z9028+	
	6105310001	NTE198+	ECG198+	SK3220/198+	121-Z9028+	
Q501	6104330002	NTE2302	ECG2302	SK9422		
Q600, 605	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
Q610	6104340001	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
Q615, 620						
#						
SCR401	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
	BT138-500	NTE56008	ECG56008	SK3660/56008		
SCR505	6110190001	NTE56008	ECG56008	SK3660/56008		
	611018-1	NTE5456	ECG5457	SK3598/5457	185-Z9010	
	6110180001	NTE5456	ECG5457	SK3598/5457	185-Z9010	
Z101	5301571399	NTE5011A	ECG5011A	SK5A6/5011A	103-Z9007	LATE PRODUCTION -A001 VERSIONS -B002 & LATER VERSIONS
Z101	5301571569					
Z222	5301571439	NTE5008A	ECG5008A	SK4A3/5008A	103-279-08	
Z223	5302491759	NTE5015A	ECG5015A	SK7A5/5015A	103-Z9002	
Z223	5302491829					
Z303	5301571569	NTE5011A	ECG5011A	SK5A6/5011A	103-Z9007	
Z306	5301571330	NTE5036A	ECG5036A	SK33A/5036A	103-Z9004	

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFGR. PART No./ TYPE No.					NOTES
		NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
Z408	5301571220	NTE5030A	ECG5030A	SK22A/5030A	103-144	
Z417	5301571130	NTE5021T1	ECG5021T1			
Z435	5303020003	NTE5013A	ECG5013A	SK6A2/5013A	103-Z9008	
Z436	5302541039					
#	5303291629					
#	5302491160					
Z503	5302491519	NTE5010A	ECG5010A	SK5A1/5010A	103-279-10	
Z504						

For SAFETY use only equivalent replacement part.
+ Rotate 180° to conform with original lead configuration.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFGR. PART No.
C402	220 10V 22 35V	2702152210 2702152135

For SAFETY use only equivalent replacement part.
Items Not Listed Are Normally Available At Local Distributors.

WIRING DATA

High Voltage Lead	Use BELDEN No. 9867 (30 KV)
Shielded Hook-up Wire	Use BELDEN No. 8401 or 8421 (Single-Conductor)
General-use Unshielded Hook-up Wire	8208 (Two-Conductor)
300-Ohm Tuner Input Lead	Use BELDEN No. 8529 (Solid) Available in 13 Colors
75-Ohm Tuner Input Lead	8522 (Stranded) Available in 13 Colors
300-Ohm Antenna Lead-In	Use BELDEN No. 8225
Antenna Rotor Cable	Use BELDEN No. 8241
	Use BELDEN No. 8275 (Foam Core) or 8285 (Foam Jacketed)
	8464 (Flat) or 8484 (Round) 4-Conductor
	8485 (Round) 5-Conductor
	8488 (Round) 8-Conductor

PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFR. PART No./ TYPE No.	NOTES			
		NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.
TRANSMITTER TUMA5G D3 IC1 IC1 IC2 Q1 Q2 Q3 Q4	5301810001 6125670004 6125990001 6125660001 6102230001 6104430001 6102230001 6102240001	NTE177	ECG177	SK9091/177	103-131
TRANSMITTER T176AG IC1 Q1 Q2	6125590001 6102240001 6101580003	NTE123AP NTE159	ECG123AP ECG159	SK3854/123AP SK3466/159	121-Z9000A 121-Z9003

CAPACITORS

ITEM No.	RATING	MFR. PART No.
C3 C4	TUMA5G REMOTE TRANSMITTER 22 NPO 50V 5% 22 NPO 50V 5%	2508412205 2508412205

Items Not Listed Are Normally Available At Local Distributors.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		MFR. PART No.	NTE PART No.	WORKMAN PART No.
R18	REMOTE TRANSMITTER TUMA5G 430K 2 1/4W Carbon Film	2302814342	QW443	

COILS (RF-IF)

ITEM No.	FUNCTION	MFR. PART No.	ITEM No.	FUNCTION	MFR. PART No.
L1	REMOTE TRANSMITTER Peaking (8mH)	3620460002			

MISCELLANEOUS

ITEM No.	PART NAME	MFR. PART No.	NOTES
D1 D2	REMOTE TRANSMITTER T176AG LED LED Keyboard	5302740001 5302740001 7027850002	TV/VCR 4MHz
D1 D2 S1 X1	REMOTE TRANSMITTER TUMA5G LED LED Switch Crystal	5302740001 5302740001 1607320001 5604480004	

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
T176AG TRANSMITTER		TUMA5G REMOTE TRANSMITTER	
Case-Top	1458810001	Case-Top	1458810004
Case-Bottom	1458820001	Case-Bottom	1458820001
Battery Cover	1459050002	Battery Cover	1459050002
Push Button Array (17 Buttons)	1459060012	Inlay-Top	1520890011
Overlay-KeyBoard	1520890005	Lens-Infrared Light	1460720013
Lens-Infrared Light	1459040004		

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	ITEM No.	RATING	MFGR. PART No.
C204	82 NPO 50V 5%	2508418205	C607	120 NPO 50V 5%	2508411215
C208	15 NPO 50V 5%	2508411505	C609	18 NPO 50V 5%	2508411805
C230	82 NPO 50V 5%	2508418205		68 NPO 50V 5%	2508416805
C231	82 NPO 50V 5%	2508418205		22 NPO 50V 5%	2508412205
C232	82 NPO 50V 5%	2508418205		100 NPO 50V 5%	2508411015
C233	82 NPO 50V 5%	2508418205	C610	82 NPO 50V 5%	2508418205
C278	82 NPO 50V 5%	2508418205		330 N750 50V 5%	2508433315
C340	150 N220 50V 5%	2508421515		100 NPO 50V 5%	2508411015
C362	39 NPO 50V 5%	2508413905		470 N750 50V 5%	2508444715
C400	.22 120VAC	2509842240	C611	180 N220 50V 5%	2508421815
C439	68 N750 50V 5%	2508686805		680 N220 50V 10%	2508446819
C448	.0047 125VAC	2506260014		220 N220 50V 5%	2508422215
C502	470 2KV 10%	2508850004	C615	.001 100V 5%	2508451025
C504	.47 400V 5%	2508050002 (1)		15 N220 50V 5%	2508421515
	.43 400V 5%	2508050004 (2)	C624	100 NPO 50V 5%	2508411015
C505	.011 2KV	2508181135	C625	10pF NPO 50V 5%	2508411008
C602	10pF NPO 50V 10%	2508411008		4.7pF NPO 50V 10%	2508414798
	4.7pF NPO 50V 10%	2508414798		13 NPO 50V 5%	2508411305
C603	300 N750 50V 5%	2508433015		2-40pF Trimmer	2602290001
C604	82 NPO 50V 5%	2508418205			
C606	180 N220 50V 5%	2508421815			
	150 N220 50V 5%	2508421515			
	220 N220 50V 5%	2508422215			

For SAFETY use only equivalent replacement part.

Items Not Listed Are Normally Available At Local Distributors.

(1) 26" CRT Models.

(2) 25" CRT Models.

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM NO.	FUNCTION	RESISTANCE	MFGR. PART NO.	NOTES
	MAIN BOARD P.L.			
R28	Red Drive	2200	2204202222	
R29	Red Cut-Off	4700	2204204722	
R33	Green Drive	2200	2204202222	
R41	Green Cut-Off	4700	2204204722	
R45	Blue Drive	2200	2204202222	
R48	Blue Cut-Off	4700	2204204722	
R201	Balance	50K	2204590011 (4)	
		Detent @ 50%	2204320010 (5)	
R202	Bass	50K	2204590011 (4)	
		Detent @ 50%	2204320010 (5)	
R203	Treble	50K	2204590011 (4)	
		Detent @ 50%	2204320010 (5)	
R233	Horiz Freq Adjust	4700	2204804722 (1)	
		6800	2204806822 (2)	
R237	RF AGC	47K	2204804732	
R247	Horiz Centering Adjust	10K	2204801032	
R452	130V Adjust	1000	2204801022	
R585	Vert Height Adjust	100	2204801012	
R601	Comb Amp Null	470	2204804712	
R622	Color	10K	2304590001 (4)	
			2304320011 (6)	
R623	Picture	10K	2304590001 (4)	
			2304320011 (6)	
R624	Sharpness	10K	2304590016 (4)	
		Detent @ 50%	2304320011 (6)	
R625	Brightness	10K	2304590001 (4)	
			2304320011 (6)	
R626	Tint	10K	2304590001 (4)	
			2304320011 (6)	

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM NO.	FUNCTION	RESISTANCE	MFGR. PART NO.	NOTES
R634	Color Osc Adjust	10K	2204801032	
R635A	Focus		(3)	
R635B	Screen		(3)	
R710	Volume Limiter	500	2204130027	

For SAFETY use only equivalent replacement part.

(1) Early Production.

(2) Late Production.

(3) Part of Horizontal Output Transformer #T504, Part No. 3620541002.

(4) ASC186 & ASC187 Modules.

(5) ASC202 Module only.

(6) ASC200, ASC202, ASC203 Modules.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		MFGR. PART No.	NTE PART No.	WORKMAN PART No.
R19	12K 2% 1/2W Carbon Film	2302821232	HW312	
R20	12K 2% 1/2W Carbon Film	2302821232	HW312	
R21	12K 2% 1/2W Carbon Film	2302821232	HW312	
R22	12K 2% 1/2W Carbon Film	2302821232	HW312	
R37	12K 2% 1/2W Carbon Film	2302821232	HW312	
R38	12K 2% 1/2W Carbon Film	2302821232	HW312	
R39	12K 2% 1/2W Carbon Film	2302821232	HW312	
R40	12K 2% 1/2W Carbon Film	2302821232	HW312	
R52	12K 2% 1/2W Carbon Film	2302821232	HW312	
R53	12K 2% 1/2W Carbon Film	2302821232	HW312	
R54	12K 2% 1/2W Carbon Film	2302821232	HW312	
R55	12K 2% 1/2W Carbon Film	2302821232	HW312	
R203	18 5% 1/2W Carbon Film	2302231805	HW018	22-1054
R232	30K 5% 1/8W Carbon Film	2303153035 (1)	EW330	
	30.1K 1% 1/8W Carbon Film	2303323012 (2)		
	28.7K 1% 1/8W Carbon Film	2303322872 (3)		
R284	22 5% 1.6W Metal Film	2303092295		
R285	10K 5% 1/8W Carbon Film	2303151035 (3)	EW310	
R365	12 5% 1/2W Carbon Film	2302231205	HW012	22-2050
R375	10 5% 1/4W Carbon Film	2302181005	QW010	22-1048
R387	13 5% 1/4W Carbon Film	2302181305	QW013	
R400	33 5% 1/4W Carbon Film	2302813305 (5)	QW033	22-1060
	20 5% 1/4W Carbon Film	2302812005 (4)		
R401	PTC 10.1 Cold	2302070008		FR605
R402	10 5% 1/4W Carbon Film	2302811005 (5)	QW010	22-1048
	20 5% 1/4W Carbon Film	2302812005 (4)		
R403	NTC 18.4 Cold	2303240001		FR1010
R405	5600 5% 5W WW	2303315625	5W256	
R408	56 5% 5W WW	2400800143	5W056	
R416	1000 5% 1/8W Carbon Film	2303151025	EW210	
R419	8200 2% 1/4W Carbon Film	2303158222	EW282	
R420	1100 2% 1/4W Carbon Film	2302811122	QW211	
R422	56 5% 1/4W Metal Film	2302685695	QW056	22-1066
R430	56 5% 1/4W Metal Film	2302685695	QW056	22-1066
R432	62K 2% 1/4W Carbon Film	2302816232	QW362	
	56K 2% 1/8W Carbon Film	2302815632	EW356	
R433	1 5% 1/2W Carbon Film	2302231095	HW1D0	
R434	1 5% 1/2W Carbon Film	2302231095	HW1D0	
R449	20K 2% 1/4W Carbon Film	2302812032	QW320	
R451	4300 2% 1/2W Carbon Film	2303154322	HW243	
R454	4.7M 5% 1/2W Metal Film	2302674755	HW547	22-2184
R505	2200 5% 5W WW		5W222	
	2200 10% 5W WW	2400800181	5W222	

PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFGR. PART No./ TYPE No.	NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	NOTES
STEREO DECODER/AMP PANEL						
D202, 4, 6	5301810001	NTE177	ECG177	SK9091/177	103-131	
D208	5302470001	NTE112	ECG112	SK3089/112	103-61	
D210, 12	5301810001	NTE177	ECG177	SK9091/177	103-131	
D501	5303100001	NTE580	ECG580	SK5036/580	212-Z9000	
IC101	6123700001	NTE1580	ECG1580	SK7743/1580		
IC201	C1480CA					
IC202	6125630001					
IC400	C1481CA					
	6125640001					
	TDA3810					
	6124720001					
IC501	TDA1424A					
IC502, 3	6124120002					
Q202	6123270001	NTE1566	ECG1566	SK7726/1566		
	C548A (EUROPE)	NTE199*	ECG199*	SK3245/199*	121-972+	
	6104350004	NTE199*	ECG199*	SK3245/199*	121-972+	
	6104350002	NTE123AP*	ECG123AP*	SK3854/123AP*	121-Z9000A+	
Q204	6104340001	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
Q206	6103620001	NTE199*	ECG199*	SK3245/199*	121-972+	
Q208	C548A (EUROPE)	NTE199*	ECG199*	SK3245/199*	121-972+	
	6104350004	NTE199*	ECG199*	SK3245/199*	121-972+	
Q501, 2, 3	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	

+ Rotate 180° to conform with original lead configuration.
* Lead configuration may vary from original.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFGR. PART No.
C227 C229	STEREO DECODER .47 50V NP 10 50V 10%	2701625050 2701341069

Items Not Listed Are Normally Available At Local Distributors.

CAPACITORS

ITEM No.	RATING	MFGR. PART No.
C231	STEREO DECODER 680 N1000 50V 5%	2508446815

Items Not Listed Are Normally Available At Local Distributors.

ITEM No.	RATING	MFGR. PART No.
C230 C234	10 50V 10% 22 16V NP	2701341069 2701400002

ITEM No.	RATING	MFGR. PART No.
C250	3.3pF NPO 50V 5% 3.9pF NPO 50V ±.25pF	2508413997

COILS (RF-IF)

ITEM No.	FUNCTION	MFGR. PART No.
L101 L201	Sound IF 50KHz Low Pass Filter	3619680005 3620620001
L202	15KHz Low Pass Filter	3620150002
L203	78.67KHz Band Pass Filter	3620530001
L204	15KHz Low Pass Filter	3620150002

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM NO.	FUNCTION	RESISTANCE	MFGR. PART NO.	NOTES
	STEREO DECODER			
R262	Free Run	6800	2203026822	
R263	L+R Level	47K	2203024732	
R264	SAP Level	4700	2203024722	
R266	3KHz SEP	10K	2203021032	
R267	300Hz SEP	47K	2203024732	
R268	Expander Input Set	10K	2203021042	
R269	Timing Current	220K	2203022242	

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		MFGR. PART No.	NTE PART No.	WORKMAN PART No.
R206	STEREO DECODER 13K 5% 1/8W Carbon Film	2302811335	EW313	
R226	13K 1% 1/8W Carbon Film	2302811635		
R410	16K 5% 1/8W Carbon Film 11K 5% 1/8W Carbon Film	2302811135		

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
L205	STEREO DECODER Ferrite Bead	3640460003	
Y102	Heatsink Filter	7348770001 3617960002	For IC502 and IC503 (2 used) 4.5MHz

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		MFGR. PART No.	NTE PART No.	WORKMAN PART No.
# R510	1 5% 1/4W Carbon Film	2302181095	QW1D0	22-1076
# R512	150 5% 1/4W Carbon Film	2302811515	QW115	
R513	10 5% 7W WW	2400810125		
R620	120 2% 1/4W Carbon Film	2302811212 (5)	QW112	
# R648	110 2% 1/4W Carbon Film	2302811112 (4)	QW111	22-2048
	10 5% 1/2W Carbon Film	2302231005	HW010	

- # For SAFETY use only equivalent replacement part.
(1) Early Production Chassis.
(2) Late Production Chassis.
(3) Monaural Chassis only.
(4) Chassis numbers ending in -A001.
(5) Chassis numbers ending in -B002 and later.

COILS (RF-IF)

ITEM No.	FUNCTION	MFGR. PART No.	ITEM No.	FUNCTION	MFGR. PART No.
L40	RF Choke (56uH)	3618135609	L502	RF Choke (27.4uH)	3620440001
L60	RF Choke (10uH)	3620410003	L503	Horiz Linearity	3620280003 (3)
L201	Peaking (0.68uH)	3618130680		Horiz Linearity	3620280001 (4)
L202	Peaking (3.3uH)	3618133399	L515	RF Choke (180uH)	3618131819
	Peaking (1.2uH)	3618131299 (9)	L600	Comb Phase	3619660003
L204	Peaking (4.7uH)	3618134799	L601	RF Choke (10uH)	3618131009
L205	Video IF	3617990008	L602	Peaking (10uH)	3618131009
L206	Sound Discriminator	3619680005 (8)	L604	3.58MHz Trap	3616910002 (5)
L210	Peaking (2.2uH)	3618132290	L605	Peaking (10uH)	3618131009
L211	RF Choke (2.2uH)	3618132290	L606	Peaking (18uH, 5%)	3618131805
L213	Audio Detector (45.7MHz)	3617990008	L607	RF Choke (15uH, 5%)	3618131505
L214	Peaking (12uH)	3618131209	L609	Peaking (12uH)	3618131205 (6)
L400	Line Filter	3619150002 (1)		Peaking (15uH)	3618131505 (7)
	Line Filter	3619150003 (2)		Peaking (3.3uH)	3618133395 (2)
L402	RF Choke (3.3uH)	3618353395	L610	Peaking (27uH)	3618132705 (6)
L403	RF Choke (12uH)	3618351209		Peaking (33uH)	3618133309 (7)
L404	RF Choke (3.6uH)	3620430001		Peaking (6.8uH)	3618136895 (2)
L406	RF Choke (12uH)	3620410001	L614	Peaking (6.8uH)	3618136899
L414	RF Choke (5.3uH)	3620410002	L615	Peaking (6.8uH)	3618136899
L415	RF Choke (10uH)	3620410003	L616	Peaking (6.8uH)	3618136899
L416	RF Choke (1.0uH)	3618351099	Y600	Delay Line	3615790006
L501	RF Choke (3.75uH)	3620430001	T203	Sound IF	3620111002 (8)

- # For SAFETY use only equivalent replacement part.
(1) Chassis numbers ending in -A001.
(2) Chassis numbers ending in -B002 and later.
(3) 25" Models.
(4) 26" Models.
(5) Non-Comb Filter Chassis.
(6) Chassis numbers ending in -A001, Comb Filter Chassis.
(7) Chassis numbers ending in -A001, Non-Comb Filter Chassis.
(8) Chassis with Monaural Sound only.
(9) Late production Chassis.

COILS & TRANSFORMERS

ITEM No.	FUNCTION	MFGR. PART No.	OTHER IDENTIFICATION	NOTES
# DY1	Yoke Horiz 1.39mH 100° Vert 15.6mH	3620470002 (2) or 3619670003 (3)	362047-2 (1)	
# DY1	Yoke	3620570001	3112 338 31041(1)	
# T401	Switch Mode	3204030003	30541 (1)	
# T500	Horiz Drive	3620541002	362054-2B (1)	
# T504	Horiz Output			

- # For SAFETY use only equivalent replacement part.
(1) Number on unit.
(2) For 26" CRT Models.
(3) For 25" CRT Models.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	4" x 6" PM 16 Ohms	5846120001 (1)	46A1Z16	
	2" x 6" PM 16 Ohms	5826011001 (2)		
	3" x 5" PM 16 Ohms	5835091001 (3)		
SP2	4" x 6" PM 16 Ohms	5846120001 (1)	46A1Z16	
	2" x 6" PM 16 Ohms	5826011001 (2)		
	3" x 5" PM 16 Ohms	5835091001 (3)		

- (1) Models RG5950AK02, RG5960AK01, RG5960AK02, RG5966PE01, RG5966PE02, RG5970AK01, RG5970AK02, RG5976PE01, RG5976PE02.
(2) Models RG4550AK01, RG4550AK02, RG4551WA01, RG4551WA02.
(3) Models RG4950AK01, RG4950AK02, RG4956PE01, RG4956PE02.

FUSE DEVICES

ITEM NO.	DESCRIPTION	MFGR. PART NO.		NOTES
		DEVICE	HOLDER	
# F400	4 Amp @ 125VAC Slow Blow	1815205400	7340420002 (1)	

- # For SAFETY use only equivalent replacement part.
(1) Two used for each fuse.

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
D1	LED	5303150001	Red Stereo (ASC202 only Secondary Control) Red ST/AV (ASC202 only Secondary Control) Amber SA? (ASC202 only Secondary Control) Amber SAP/AV (ASC202 only Secondary Control) Green EXT (ASC202 only Secondary Control) 26" CRT Models 25" CRT Models
D2	LED	5303150001	
D3	LED	5303150002	
D4	LED	5303150002	
D5	LED	5303150003	
L400A	Degaussing Coll	3620210004	
	Deguassing Coll	3620210003	
L405	Ferrite Bead	3640460003	
L409	Ferrite Bead	3640460001	
L410	Ferrite Bead	3640460003	
L411	Ferrite Bead	3640050001	Add (ASC186 and ASC187 Secondary Control) Add (ASC200 and ASC202 Secondary Control) Delete (ASC186 and ASC187 Secondary Control) Delete (ASC200 and ASC202 Secondary Control) Program/Normal (ASC186 and ASC187 Secondary Control) Program/Normal (ASC200 and ASC202 Secondary Control) Cable/Normal (ASC186 and ASC187 Secondary Control) Cable/Normal (ASC200 and ASC202 Secondary Control) Channel Up (ASC200, ASC202, ASC203 Secondary Control) Channel Down (ASC200, ASC202, ASC203 Secondary Control) Volume Up (ASC200, ASC202, ASC203 Secondary Control) Volume Down (ASC200, ASC202, ASC203 Secondary Control) Mono/Stereo/SAP (ASC 186 and ASC187 Secondary Control)
L413	Ferrite Bead	3640050001	
L417	Ferrite Bead	3640460003	
L418	Ferrite Bead	3640460001	
L516	Ferrite Bead	3640460001	
L518	Ferrite Bead	3640460001	
S101	Switch	1606680002	
	Switch	1606880004	
S102	Switch	1606680002	
	Switch	1606880004	
S103	Switch	1606690003	
	Switch	1607100008	
S104	Switch	1607100001	
	Switch	1607100008	
S105	Switch	1606880004	
S106	Switch	1606880004	
S107	Switch	1606880004	
S108	Switch	1606880004	
S201	Switch	1607110001	

PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFGR. PART No./ TYPE No.	NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	NOTES
AUDIO JACK PANEL AVJ022						
IC1,2	612186-1	NTE4016B	ECG4016B	SK4016B	HE-442-99	
Q2,4	6121860001	NTE4016B	ECG4016B	SK4016B	HE-442-99	
	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP	121-Z9000A+	
AUDIO JACK PANEL AVJ023						
D1 THRU D6	5301810001	NTE177	ECG177	SK9091/177	103-131	
IC1	4053	NTE4053B	ECG4053B	SK4053B	905-354	
	612493-1	NTE4053B	ECG4053B	SK4053B	905-354	
	6124930001	NTE4053B	ECG4053B	SK4053B	905-354	
Q1	6102230001	NTE159	ECG159	SK3466/159	121-Z9003	
Q2 THRU Q5	6102320002	NTE123AP	ECG123AP	SK3854/123AP	121-Z9000A	
Q6	6102230001	NTE159	ECG159	SK3466/159	121-Z9003	

+ Rotate 180° to conform with original lead configuration.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

COILS (RF-IF)

ITEM No.	FUNCTION	MFGR. PART No.
L2	Peaking (4.7uH)	3618134799
L3	Peaking (4.7uH)	3618134799
L4	Peaking (3.3uH)	3618133399
L5	Peaking (3.3uH)	3618133399
L18	Peaking (4.7uH)	3618134799
L19	Peaking (4.7uH)	3618134799
L20	Peaking (4.7uH)	3618134799

ITEM No.	FUNCTION	MFGR. PART No.
L21	Peaking (4.7uH)	3618134799
L22	Peaking (4.7uH)	3618134799
L23	Peaking (4.7uH)	3618134799
L30	Peaking (4.7uH)	3618134799
L40	Peaking (4.7uH)	3618134799
L50	Peaking (12uH)	3618133399

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
Y1	Resonator Shield Shield	3620560002 7348430001 7348410001	Ceramic, 6MHz Top Cover Bottom Cover

PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFGR. PART No./ TYPE No.	NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	NOTES
VARACTOR TUNER						
D1 THRU D5	5302300003					USED IN SOME VERSIONS
D1 THRU D5	1716580001					USED IN SOME VERSIONS
D7 THRU D17	5303040001					USED IN SOME VERSIONS
D18,19	5302300003					
D20	5303040001					
D21	5303040001					
D101 THRU D104	5302300003					
D101 THRU D104	1716580001					
D105,6	5302300003					
IC1	6124400001					
IC2	6124990002					
Q1	6105210001					
Q101	6105360001					
Q102	6105150002					

25C802/03/05/19,26C801/02/03/10/11/12/13/15/18
MAGNAVOX CHASSIS

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
S202	Switch	1607110006	Mono/Stereo/SAP (ASC202 only Secondary Control)
	Switch	1607110001	Expanded Sound (ASC186 and ASC187 Secondary Control)
S203	Switch	1607100008	Expanded Sound (ASC202 only Secondary Control)
	Switch	1607100001	TV/Aux (ASC186 and ASC187 Secondary Control)
	Switch	1607100008	Audio/Video (ASC202 only Secondary Control)
S401	Switch	1606880004	Power (ASC202 only Secondary Control)
S580	Switch	1606720001	Vertical Centering
Y200	Filter	3620600001	SAW
Y201	Filter	3620700001	SAW
Y202	Filter	3617560001	4.5MHz Trap
Y301	Crystal	5604440010	4MHz
Y601	Crystal	5604450002	7.1590MHz
	Antenna		UHF, RUSSELL Replacement Antenna BOW-4H
	Antenna		VHF, RUSSELL Replacement Assembly BEA-1H
	Antenna Balun	3618050001	
	Cord	4614070006	AC Power
	CRT	A66AAM03X	26" Models RG4550AK01,AK02, RG4551WA01,WA02, RG5950AK02, RG5960AK02, RG5966PE02, RG5970AK02, RG5976PE02
#	CRT	A66AAM00X	26" (Includes CRT Neck Components) Models RG5960AK01, RG5966PE01, RG5970AK01, RG5976PE01
#	CRT	A63AAM13X	25" Models RG4950AK01,AK02, RG4956PE01,PE02
#	CRT	A63AKM01X	25"
#	Magnet Module	3615730008	Convergence and Purity Assembly
	Module	EMC801	Main Board Assembly
	Module	EMC811	Main Board Assembly
	Module	EMC818	Main Board Assembly
	Module	3402930001	152 Channel Varactor Tuner
	Module	3402970001	68/82 Channel Varactor Tuner
	Module	APT030	CRT Socket Board
	Module	ASC186	Secondary Control
	Module	ASC187	Secondary Control
	Module	ASC200	Secondary Control
	Module	ASC202	Secondary Control
	Module	ASC203	Secondary Control
	Module	ATC385	Tuner Control
	Module	ATC389	Tuner Control
	Module	ATC382	Tuner Control
	Module	ASD002	Stereo Decoder
	Module	ALD038	Stereo/SAP Indicator
	Module	ALD040	Stereo/SAP Indicator
	Module	AVJ022	Audio Jack
	Module	AVJ023	Audio Jack
	Module	ASW049	Switch Assembly
	Module	ASW048	Switch Assembly
	Module	ATU002	TS12 Tuning System
	Module	ARR002	Remote Receiver
	Module	ARR007	Remote Receiver
	Wedge	6458520001	Yoke Positioning (2 used)
	Wedge	6458520002	Yoke Positioning (1 used)

For SAFETY use only equivalent replacement part.

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

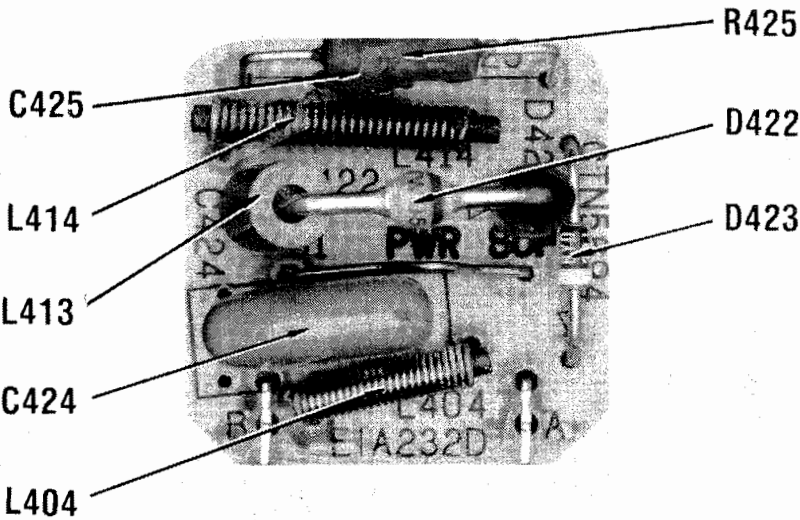
ITEM	PART No.	PART No.	PART No.	PART No.
MODELS	RG4550AK01	RG4550AK02	RG4551WA01	RG4551WA02
Cabinet Back	1457390008	1457390008	1457390008	1457390008
Mask	1457360004	1457360004	1457360004	1457360004
Door-Secondary Controls	1458350008	1458350008	1458350008	1458350008
Grille-Left Hand	1460530001	1460530001	1460530001	1460530001
Grille-Right Hand	1460530002	1460530002	1460530002	1460530002

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	PART No.	PART No.	PART No.
MODELS	RG4950AK01	RG4950AK02	RG4956PE01	RG4956PE02
Cabinet Back	6457550001	6457550001	6457870001	6457870001
Mask	1444980054	1444980054	1444980032	1444980032
Door-Secondary Controls	1455390007	1455390007	1455390008	1455390008
Cabinet, Front Base and Drawer			1456570008	1456570008
Push Button-Power	1455370010	1455370010	1455370010	1455370010
Push Button-Volume Up	1455370006	1455370006	1455370006	1455370006
Push Button-Volume Down	1455370007	1455370007	1455370007	1455370007
Push Button-Channel Up	1455370008	1455370008	1455370008	1455370008
Push Button-Channel Down	1455370009	1455370009	1455370009	1455370009
MODELS	RG5960AK01	RG5960AK02	RG5966PE01	RG5966PE02
Cabinet Back	6457910001	6457910001	6457770001	6457770001
Mask	1456670011	1456670011	1456670010	1456670010
Door-Secondary Controls	7050680005	7050680005	7050680006	7050680006
Cabinet, Front Base and Drawer			1459900008	1459900008
Push Button-Channel Up/Down, Volume Up/Down, Power	1455500008	1455500008	1455500008	1455500008
Push Button-Numbers 1 thru 9	1455510001	1455510001	1455510001	1455510001
Push Button-Number 0	1455520001	1455520001	1455520001	1455520001
MODELS	RG5970AK01	RG5970AK02	RG5976PE01	RG5976PE02
Cabinet Back	6457780001	6457780001	6457770001	6457770001
Mask	1456670011	1456670011	1456670010	1456670010
Door-Secondary Controls	7050680005	7050680005	7050680006	7050680006
Cabinet, Front Base and Drawer			1459900006	1459900006
Push Button-Channel Up/Down, Volume Up/Down, Power	1455500008	1455500008	1455500008	1455500008
Push Button-Numbers 1 thru 9	1455510001	1455510001	1455510001	1455510001
Push Button- Number 0	1455520001	1455520001	1455520001	1455520001



130V POWER SUPPLY BOARD

PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFGR. PART No./ TYPE No.					NOTES
		NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
REMOTE RECEIVER ARR002	5303176001 6124500001 6125790001					
D2 IC1						
REMOTE RECEIVER ARR007						
IC1						

COILS (RF-IF)

ITEM No.	FUNCTION	MFGR. PART No.	ITEM No.	FUNCTION	MFGR. PART No.
T2	REMOTE RECEIVER Peaking	3619870001			

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
D1	REMOTE RECEIVER ARR002 AND ARR007 LED Front Cap Rear Cap Grille Lens	5302350001 7347270001 7344150002 7326110003 1457400003	

PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFGR. PART No./ TYPE No.					NOTES
		NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
TUNING SYSTEM	5301811001 5302471001 MAB8441P 612556-2 6125560002 612485-2 6124850002 6102230001 6102320002	NTE177 NTE112	ECG177 ECG112	SK9091/177 SK3089/112	103-131 103-61	
D12						
D17						
IC1000						
IC1100						
Q30,40 Q60		NTE159 NTE123AP	ECG159 ECG123AP	SK3466/159 SK3854/123AP	121-29003 121-29000A	

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	ITEM No.	RATING	MFGR. PART No.
	TUNING SYSTEM	2507392705 2507392705			
C15 C16	27 NPO 50V 5% 27 NPO 50V 5%				

Items Not Listed Are Normally Available At Local Distributors.