

MODEL NO. 580.41003750

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Sears
 DIVISION 57
 TECHNICAL DATA SHEET
 TELEVISION

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

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FRONT AND INNER CONTROL VIEWS

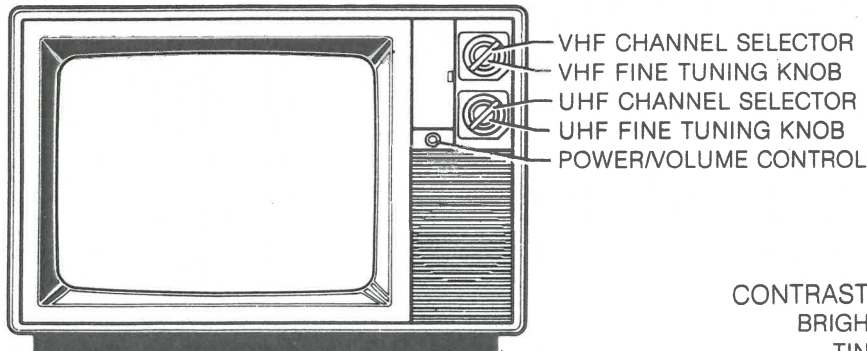


Figure 1. Front Controls View

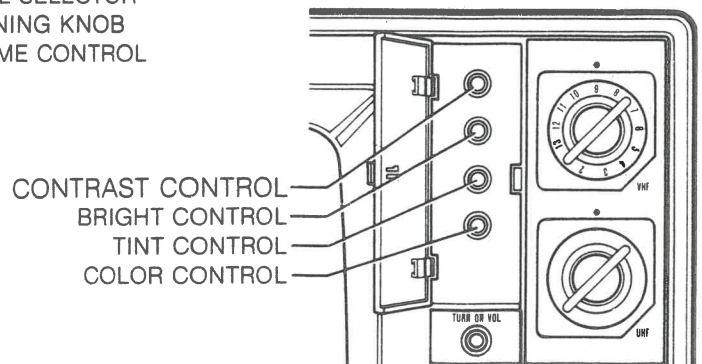


Figure 2. Inner Controls View

Refer to the Div. 57 Authorized Price List 528 for current selling prices, availability and ordering information.

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X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 25KV at zero beam current (minimum brightness) with a 120v AC power source. The high voltage must not, under any circumstances, exceed 27KV.

Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure on page 22 of this manual. It is recommended the reading of the high voltage be recorded as a part of the service record.

It is important to use an accurate and reliable high voltage meter.

2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

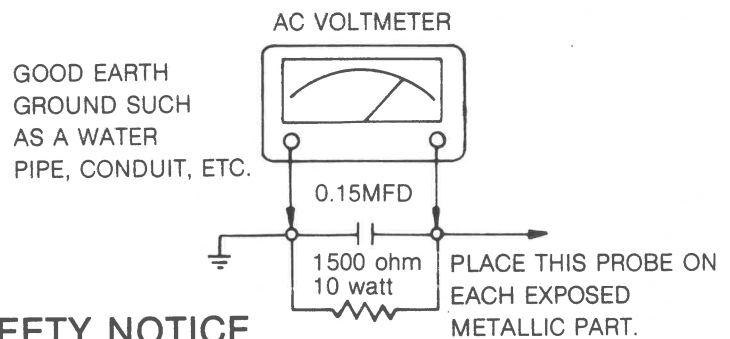
SAFETY PRECAUTION

WARNING: Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. Since the chassis of this receiver is directly connected to the AC power line. (Hot chassis), an isolation transformer should be used during any dynamic service to avoid possible shock hazard.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as: non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network, etc.
4. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts, etc, to be sure the set is safe to operate without danger of electrical shock. Plug the AC line

cord directly into a 120v AC outlet (do not use a line isolation transformer during this check.) Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner.

Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 mfd, AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 mfd capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts RMS. This corresponds to 0.5 milliamp. AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

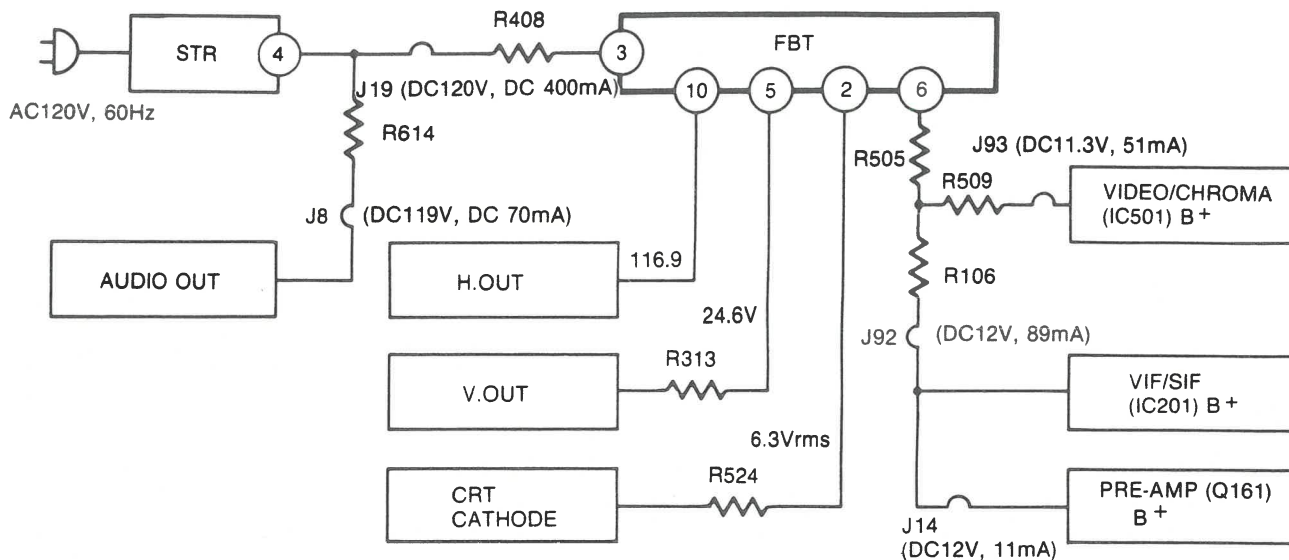


PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot 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 manual and its supplements; electrical components having such features are identified by a STAR (★) in the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

B + DISTRIBUTION DIAGRAM



SERVICE NOTES

- When replacing parts or circuit boards, clamp the lead wires to terminals before soldering.
- When replacing a high wattage resistor (oxide metal film resistor) on circuit board, keep the resistor 10 mm (1/2 in.) away from circuit board.
- Keep wires away from high voltage or high temperature components.

SCHEMATIC DIAGRAM

NOTES:

The unit of resistance "OHM" is omitted (K: 1000 ohms M: 1Meg ohm)
 All resistors are 1/8 watt, unless otherwise noted.
 All capacitors are uF, unless otherwise noted pF.
 P.P indicated POLY PROPYLENE capacitor.
 All inductors are uH, unless otherwise noted.
 All DC voltages are measured with DVM connected between points indicated and chassis ground. All controls set for normal picture unless otherwise indicated.

- All waveforms are measured with synchroscope connected between points indicated and chassis ground, waveforms taken on a standard color bar signal, the tint setting adjusted for proper color.

- * Refer to following information of semiconductors had same characteristics for replacement.

CAUTION

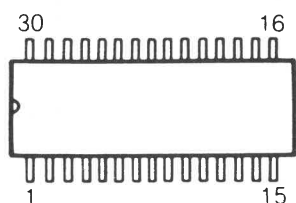
★ CRITICAL SAFETY RELATED COMPONENT-SEE PARTS LIST FOR EXACT REPLACEMENT.

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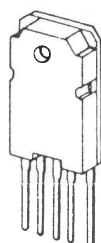
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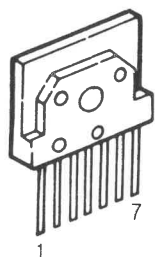
TERMINAL VIEWS OF SEMICONDUCTORS



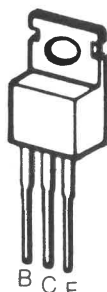
IC201 IC501



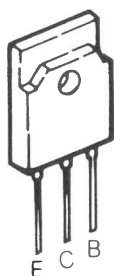
IC801



IC301



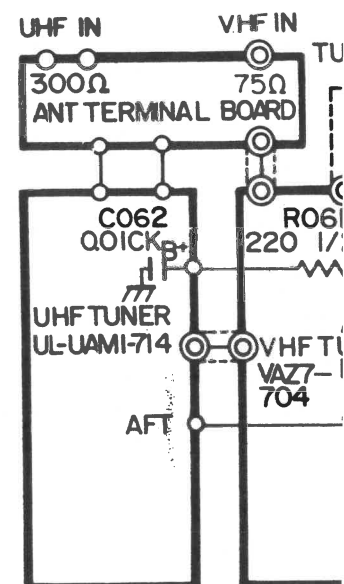
Q561, Q562
Q563



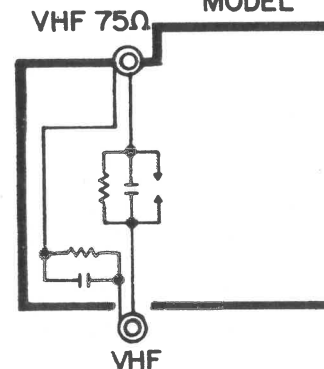
Q402



Q161, Q201, Q204
Q301, Q401, Q601
Q602, Q561, Q562
Q563



INPUT/WITH ADAPTOR
MODEL

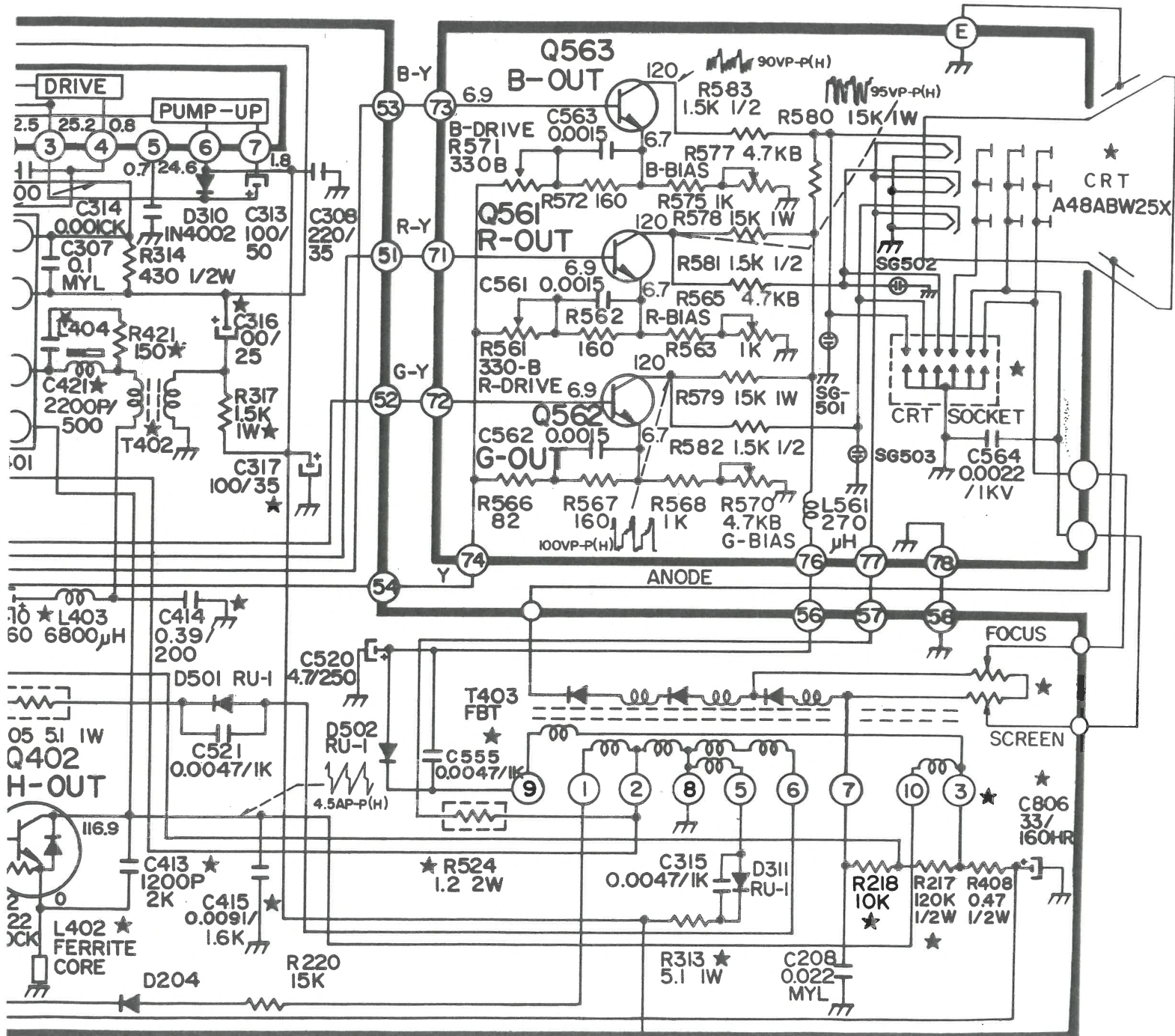


POWER S



AC120V

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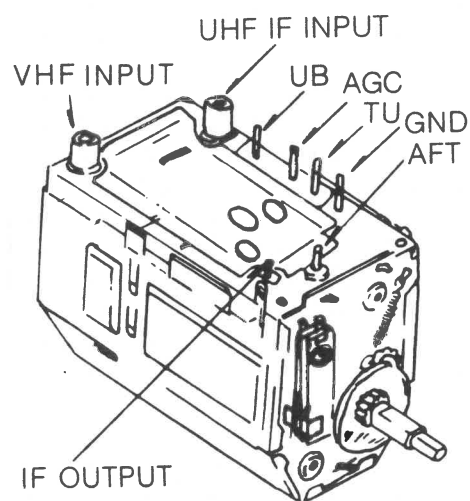


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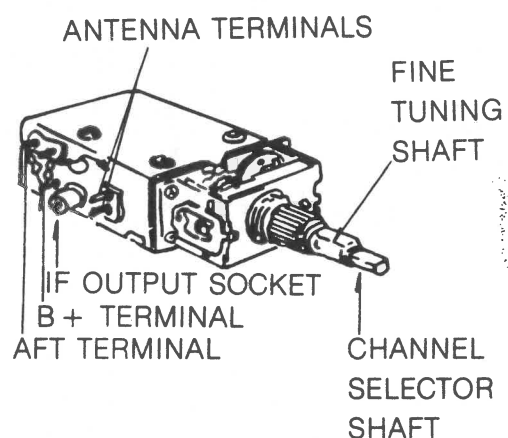
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TUNER TERMINAL VIEW



VHF TUNER
(VAZ7-704)



UHF TUNER
(UAM1-714A)

Figure 3

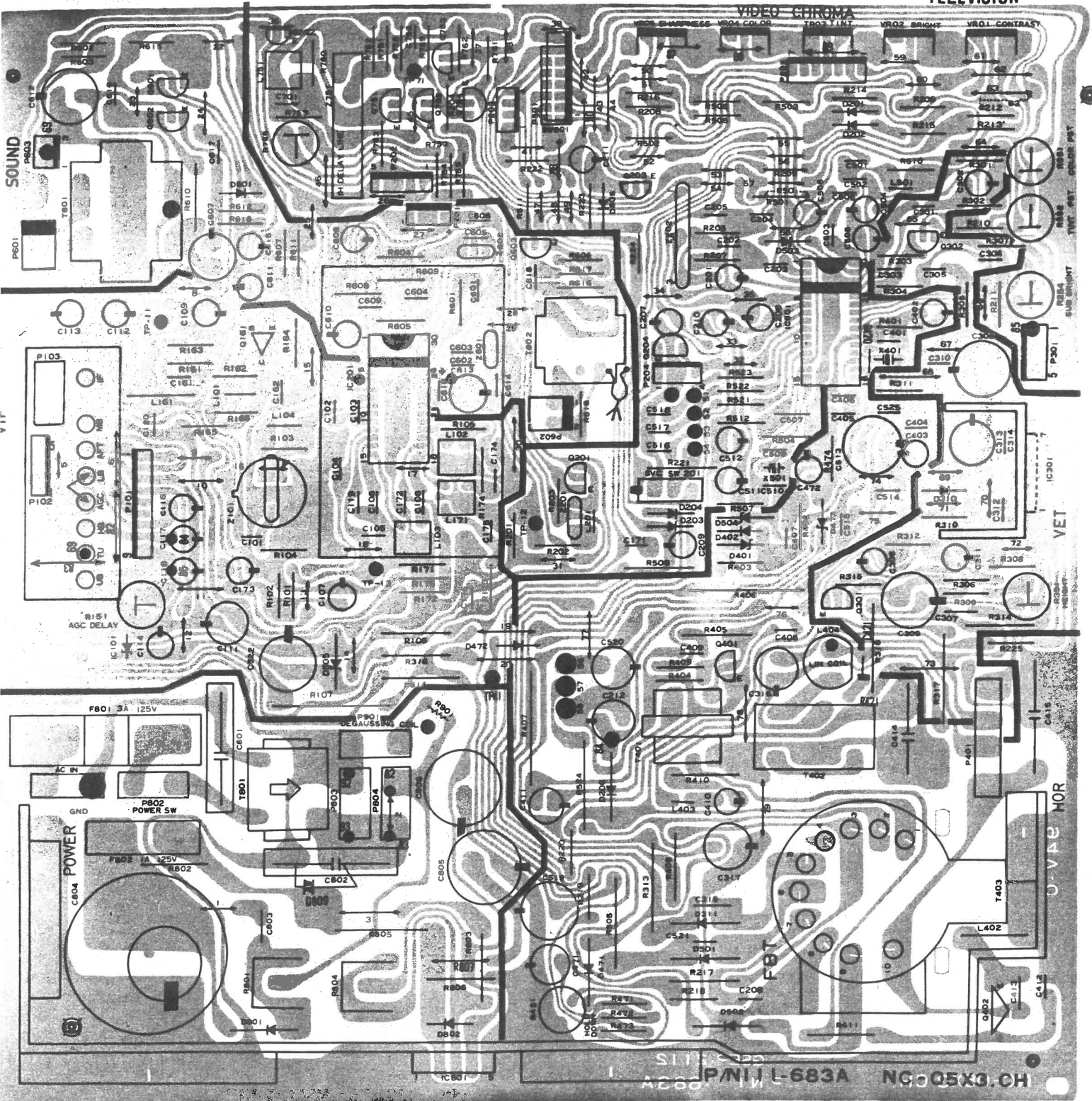
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P.C.BAORD VIEW

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MAIN P.C.BOARD



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Figure 5

TV CHASSIS VIEW

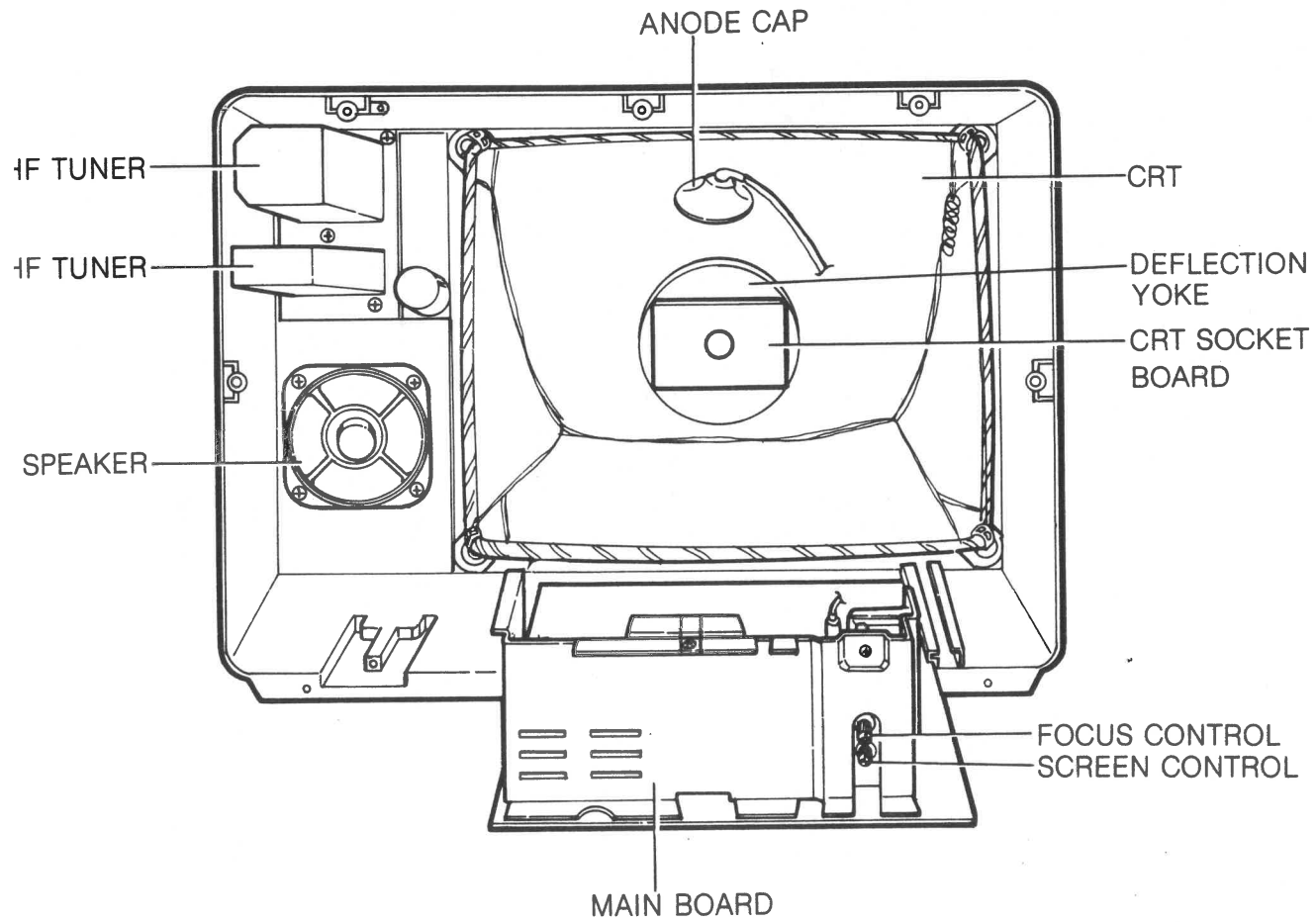


Figure 4

Figure 6

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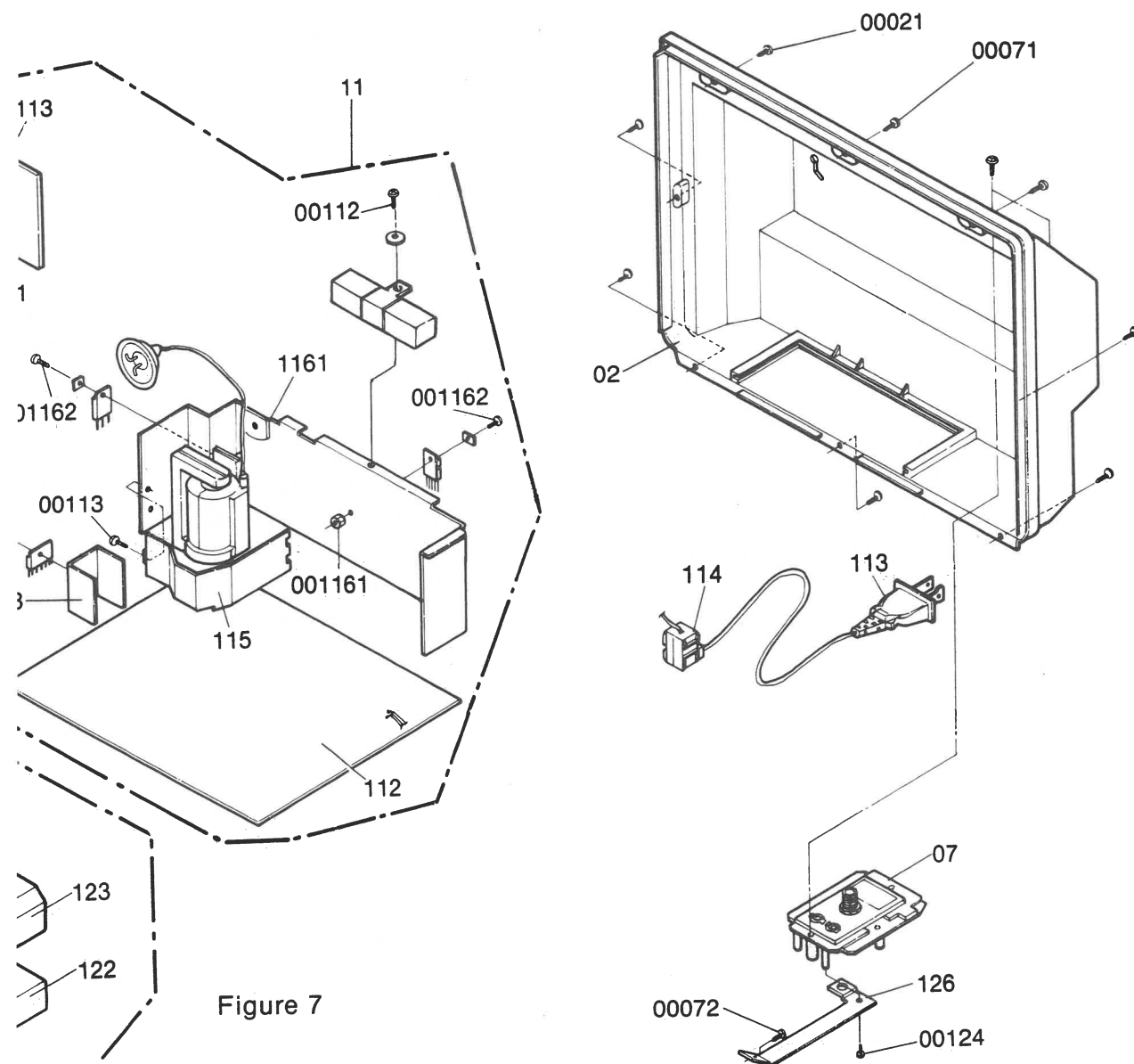
TECHNICAL DATA SHEET

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CAUTION: The STAR (★) in the schematic diagram and the parts list designates components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2 in this manual. Do not degrade the safety of the receiver through improper servicing.

CABINET EXPLODED VIEW AND PARTS LIST



N.S.P. (Not Service Part): These parts are not available as a repair parts because they are too costly or are not practical to replace or never expected to fail during the life expectancy of the unit.

Refer to the Div. 57 Authorized Price List 528 for current selling prices, availability and ordering information.

LOCATION	PART NO.	DESCRIPTION	LOCATION	PART NO.	DESCRIPTION
01	46-42733-3	CABINET ASSY CMR-9163	00051	46-56156-3	NUT,HEXAGON HEAD HNW508 MSWR FZMY-1
02	46-42724-3	COVER,BACK	00052	46-57485-3	SCREW, TTS1+4X16 MSWR FZMY R FZMY-1
★ 05	A48ABW25X	CRT,A48ABW25X RCA 19=	00053	46-58708-3	WASHER,CPT FIXING
06	46-33761-3	SPEAKER,C100A21K1458	00061	46-57570-3	SCREW, TTS1+4X14 MSWR FZMY
07	46-76459-3	BOARD ASSY, ANT TERMINAL	00071	46-57570-3	SCREW, TTS1+4X14 MSWR FZMY
11	NSP	CHASSIS ASSY,MAIN	00072	46-57570-3	SCREW, TTS1+4X14 MSWR FZMY
12	NSP	CHASSIS ASSY, TUNER & CONTROL	00111	46-57354-3	SCREW, RTS2+3X8A
011	46-211931-3	DOOR	00112	46-57351-3	SCREW RTS2+3X10A MSWR FZM
012	46-401059-3	PLATE,BRAND	00113	46-57410-3	SCREW TTS1+4X10 MSWR FZMY
013	46-401060-3	PLATE,DECORATION	00114	46-57767-3	SCREW,WASHER
014	46-522188-3	KNOB,PRE-SET	00115	46-57767-3	SCREW,WASHER
015	46-521969-3	KNOB ASSY,DETENT	00116	46-58707-3	WASHER,INSULATION
016	46-521970-3	KNOB ASSY,PULL-ON	00117	46-58707-3	WASHER,INSULATION
017	46-521971-3	KNOB ASSY, VHF CHANNEL	00121	46-57354-3	SCREW, RTS2+3X8A
018	46-521972-3	KNOB ASSY, UHF CHANNEL	00122	46-57570-3	SCREW, TTS1+4X14 MSWR FZMY
019	46-112194-3	FIXER,DOOR	00123	46-57437-3	SCREW PS+3*8 MSWR FZMY-1
051	46-2762-3	MAGNET,CONVERGENCE DCA 1012	00124	46-57618-3	SCREW RTS1+3*10 MSWR FZMY
★ 052	46-102640-3	COIL,DEGAUSSING	00125	46-58391-3	WASHER SW3 SWP-A FZMY-1
053	NSP	METAL CRT FIXING	001161	46-5673-3	NUT,HEXAGON HEAD HN1305 MSWR FZMY-1
054	NSP	WEDGE,RUBBER	001162	46-57256-3	SCREW PS+3*14 MSWR FZMY-1 WR FZMY-1
★ 055	46-801351-3	DY,KYS-60176 FOR PHILIPS	001163	46-58391-3	WASHER SW3 SWP-A FZMY-1
056	NSP	SPRING,GROUND	001164	46-58647-3	WASHER FOR TR SQUARE
057	NSP	CONNECTOR ASSY, CRT GROUND			
071	NSP	LUG ASSY,ANT			
072	46-31244-3	PLATE,ANTENNA			
073	46-131612-3	SHIELD BOX, ANTAPSB06AMU450VWD			
111	46-352876-3	PWB ASSY,CPT			
112	46-352992-3	PWB ASSY,MAIN			
★ 113	46-23703-3	CORD,POLARIZED POWER			
114	46-112190-3	HOLDER,POWER CORD			
115	NSP	PLATE,FBT SHIELD			
116	NSP	PLATE ASSY,HEAT SINK			
121	46-352993-3	PWB ASSY,CONTROL			
★ 122	46-95336-3	TUNER,UHF UAM1-714A			
★ 123	46-95337-3	TUNER,VAZ7-704			
124	46-522189-3	SWITCH ASSY			
125	46-112251-3	BRACKET, TUNER & CONTROL			
126	46-112189-3	SUPPORTER,ANTENNA			
1111	NSP	PWB,CPT(NC-05X3) NSP=			
1112	NSP	PIN ASSY,PLUG(1P)			
★ 1113	46-451358-3	SOCKET,CPT (CS-623)			
1114	NSP	LUG,SQUARE			
1121	NSP	PWB ASSY,AUTOINSERT NSP=			
1122	NSP	PWB MAIN(NC-05X3) NSP=			
1123	NSP	PLATE ASSY,HEAT SINK			
1124	46-45424-3	METAL,FUSE FIXING			
1125	46-45595-3	METAL, FIXING			
1161	NSP	PLATE,HEAT SINK			
1211	NSP	PWB,CONTROL NSP=			
00021	46-57485-3	SCREW, TTS1+4X16 MSWR FZMY			

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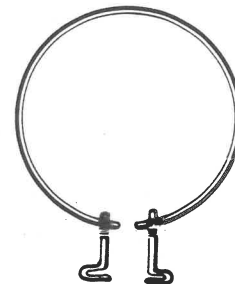
ACCESSORIES PARTS LIST



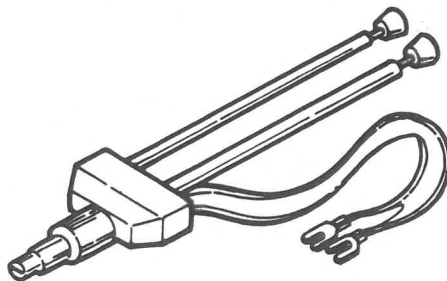
501



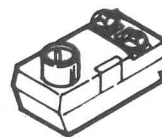
502



503



504



505

Figure 8

N.S.P. (Not Service Part): These parts are not available as a repair parts because they are too costly or are not practical to replace or never expected to fail during the life expectancy of the unit.

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DRAWING NO. 02

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LOCATION	PART NO.	DESCRIPTION
501	L46-381074-3	CMR-9163 HDSM
502	L38-13297-0	SAFETY TIPS
503	82-304-0	ANTENNA LOOP
504	46-82117-3	ANT.ASSY,ROD
505	46-45733-3	ADAPTOR,ANT

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INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL.

In the majority of cases, a color television receiver will need only slight touch-up adjustment upon installation.

Check the basic characteristics such as height, vertical sync., horizontal sync. and focus.

Observe the picture for good black and white details without objectionable color shading. If color shading is evident, demagnetize the receiver.

If color shading still persists, perform purity and convergence adjustments. This should be all that is necessary to achieve optimum receiver performance.

VERTICAL SIZE ADJUSTMENT

The V-SIZE Control R351 changes the size of the picture or pattern. Make final adjustment to overscan the mask about 7% vertically.

HIGH VOLTAGE CHECK

CAUTION: The power supply voltage must not exceed + 30 volts to insure the correct high voltage.

1. Connect an accurate high voltage meter to second anode of the picture tube. Connect (-) to chassis ground and (+) to the CRT second anode. (See the following diagram).
2. Turn the receiver ON, Set the BRIGHTNESS and CONTRAST to minimum (zero beam current).
3. High voltage must measure below 25KV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit under any condition.

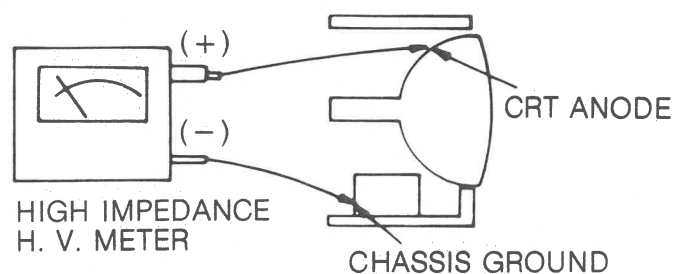


Figure 9

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INSTALLATION AND SERVICE ADJUSTMENT (CONTINUED)

COLOR PURITY ADJUSTMENT

Before proceeding with PURITY ALIGNMENT, demagnetize (degauss) chassis and picture tube. Check that purity convergence magnet assembly is secured at 35mm (1-3/8") from the tip of the CRT neck.

1. Apply rated power to the receiver for more than 20 minutes before this alignment.
2. Apply red raster signal to the set.
3. If the position of the magnet assembly is not correct, correct the position as shown in figure 10.
4. Loosen the DY and pull it toward you gradually until Red belt appears on the screen.
5. Rotate two purity magnet rings to position the red belt at the center of the screen and lock the lock ring of the magnet assembly.
6. Push the deflection yoke toward the funnel of the CRT until red covers the whole screen. Set it at that position.
7. Tighten the screw of D.Y.
8. Check the purity by adjusting the bias controls.
9. Perform convergence adjustment after this alignment.

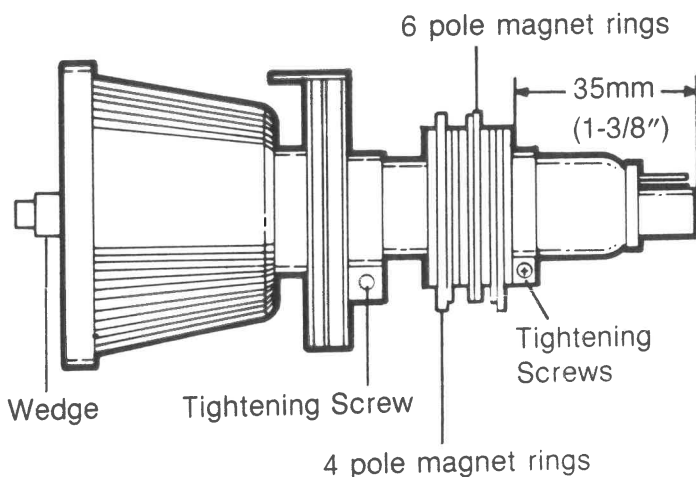
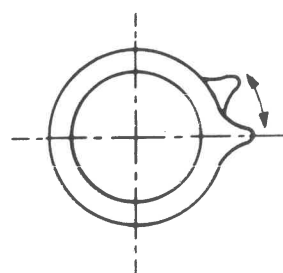


Figure 10

CONVERGENCE ADJUSTMENT

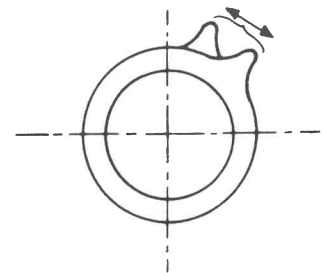
NOTE: Before any convergence adjustments are made, vertical size, linearity and focusing adjustments must be completed.

1. Use a dot or crosshatch pattern.
2. Set the brightness level no higher than necessary to obtain a clear pattern.
3. Adjust vertical Blue and Red by "rotating" 4 pole magnet rings in relation to each other per Fig. 11.
4. Adjust horizontal Blue and Red by "rotating" 4 pole magnet rings together as a unit per Fig. 12.
5. Adjust vertical Blue/Red and Green by "rotating" 6 pole magnet rings in relation to each other per Fig. 11.
6. Adjust horizontal Blue/Red and Green by "rotating" 6 pole magnet rings together as a unit per Fig. 12.
7. See that all the lines are converged, at the center part, if not repeat step 3 and 4.
8. Remove the DY wedges and slightly tilt the deflection yoke horizontally and vertically to obtain good overall edge convergence.
9. Secure the deflection yoke by wedges and tape.
10. If purity error is found, follow "Purity Adjustment" instructions on this page.



Rotating two magnet ring tabs toward or away from each other

Figure 11



Rotating both magnet rings together

Figure 12

INSTALLATION AND SERVICE ADJUSTMENT (CONTINUED)

WHITE BALANCE ADJUSTMENT

1. Tune in an active channel.
2. Set the color control to minimum position and AUTO button to off position.
3. Turn the SCREEN control fully counterclockwise. Rotate the RED, GREEN and BLUE BIAS controls (R565, R570, R577) counterclockwise from maximum, to the 1/3 position.
4. Set the RED and BLUE DRIVE controls (R561, R571) to their mid-positions.
5. Set SW201 to the left while viewing it from the back.
6. Remove the raster tip (P201) from the main chassis.
7. Gradually rotate the SCREEN control clockwise until a horizontal line appears on the screen.
8. Obtain a white line by adjusting the two bias controls not associated with the color with appears in step No. 7.
9. Set SW201 to mid-position.
10. Adjust the RED and BLUE DRIVE controls to get a proper white balanced picture in high light areas.
11. Rotate the BRIGHTNESS and CONTRAST controls to get dark gray raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the BIAS controls and DRIVE controls to get a good white balance in both low and high light areas.

SUB-BRIGHTNESS ALIGNMENT

1. Tune in a normal picture.
2. Set the BRIGHTNESS to maximum position. Set the CONTRAST control to minimum position.
3. Adjust SUB-BRIGHTNESS control (R254) for proper contrast.

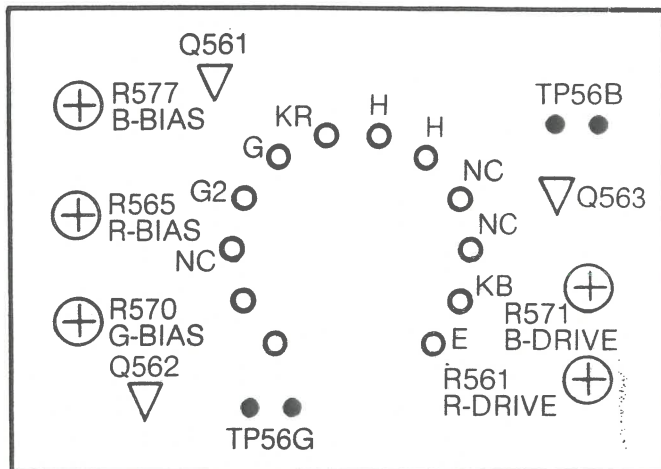


Figure 13 . CRT P.C.BOARD

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GENERAL ALIGNMENT INSTRUCTIONS

THIS RECEIVER IS TRANSISTORIZED AND SPECIAL CARE MUST BE TAKEN WHEN SERVICING READ THE FOLLOWING NOTES BEFORE ATTEMPTING ALIGNMENT.

- Alignment requires an exacting procedure and should be undertaken only when necessary.
- Isolation transformer must be used to prevent shock hazard.
- The test equipment specified or its equivalent is required to perform the alignment properly. Use of equipment which does not meet these requirements may result in improper alignment.
- Correct matching of the equipment is essential. Failure to use proper matching will result in responses which cannot represent the true operation of receiver.
- Use of excessive signal from a sweep generator can cause overloading of receiver circuit. Overloading should be avoided to obtain a true response curve. Insertion of markers from the marker generator should not cause distortion of the response.
- The AC power line voltage should be kept between 115 to 125 volts or the DC power line voltage between 12 to 24V during alignment.
- Do not attempt to connect or disconnect any wire while the receiver is in operation. Make sure the power cord is disconnected before replacing any parts in the receiver.

TEST EQUIPMENT

Refer to D/806 Supply and equipment list for authorized test equipment.

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1. Ac
ve
CA
2. Cr
ad
2'
3. Se
en
4. Se
en



1. Connect the output terminal of the swemar (sweep/ marker) generator to both ends of C102 through the coupled circuit as shown in Figure 14.
In the case of the coupled circuits connected to Pin 9 of IC201 a resistor must apply the same resistance as the output impedance of the swemar generator and connect Pin 10 of IC201 to SAW FILTER through the capacitor.
The output of the swemar generator applies -25dBm.

- 4

V-IF ALIGNMENT & AFT COIL ALIGNMENT (CONTINUED)

Alignment

1. Adjust to measure the DC voltage, by setting the vertical scope of the alignment scope to 1V/DIV and CAL position.
2. Change the output of the DC POWER SUPPLY and adjust the waveform on the alignment scope to be 2 Vp-p.
3. Set the marker 45.75 MHz to position at the low end by adjusting L102.
4. Set the marker 41.25 MHz to position at the upper end by adjusting L103.
5. Being careful that the DC voltage of TP11 is not altered, connect the input terminal of the alignment scope to pin 17 of IC201 from TP12.
At this time, C173 electrolytic capacitor must be opened.
6. Adjust the waveform of the alignment scope to the same as Figure 15 and adjust L171 to position the 45.75 MHz marker to $10.5 \pm 0.5V$ DC.
7. Reinstall C173.

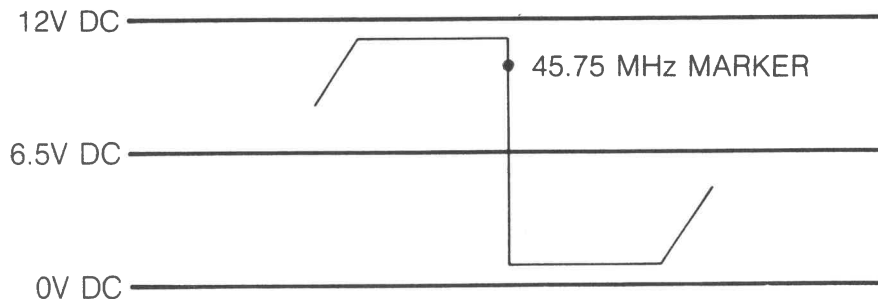


Figure 15

RF AGC ADJUSTMENT

Set the channel selector to a high channel (7-13 ch).

SIGNAL	V.T.V.M	ALIGNMENT CIRCUIT	ALIGNMENT	ALIGNMENT PROCEDURE
VHF antenna terminal. 65dB	TP13	AGC	R151	Adjust R151 so that the voltage is $4.0 \pm 0.1V$.

MODEL NO. 580.41003750

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WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

MECHANICAL DISASSEMBLIES

1. BACK COVER REMOVAL

Remove 10 screws holding Back Cover as shown in figure 16 and take off Back Cover.

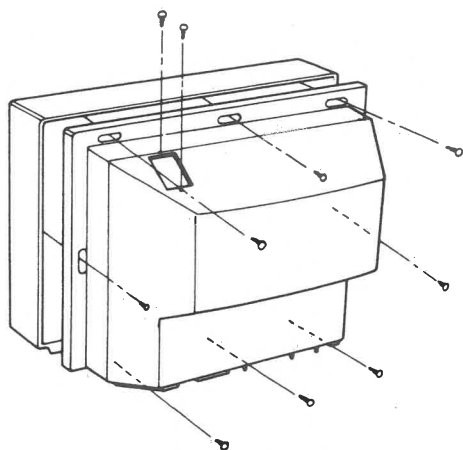


Figure 16

2. MAIN BOARD REMOVAL

2-1 Remove Anode Cap from CRT as shown in figure 17 and discharge the charged voltage in FBT.

2-2 Remove Connectors P802, P901, P603, P205, P102, P103, P401 from Main Board.

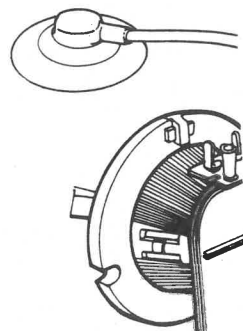


Figure 17

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MECHANICAL DISASSEMBLIES

2-3 Remove CRT Board from CRT Neck and take off CRT Ground Connector from CRT Board. (Refer to figure 18).

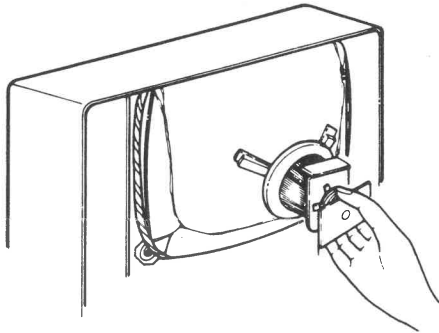


Figure 18

2-4 Grasp both sides of Main Board and slide it backward. (Refer to figure 19)

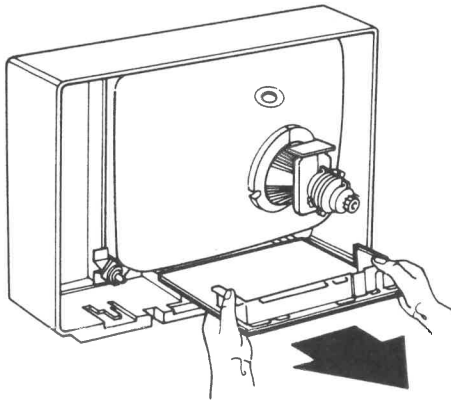


Figure 19

3. TUNER POWER/SW REMOVAL

3-1 Remove the screw holding to Front Cabinet and take off ANT terminal as shown figure 20.

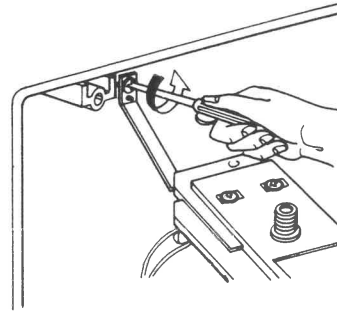


Figure 20

3-2 Remove VHF, UHF Channel VOL/POWER Knob residing on Front by using electric wire or string (Refer to figure 21)

4.

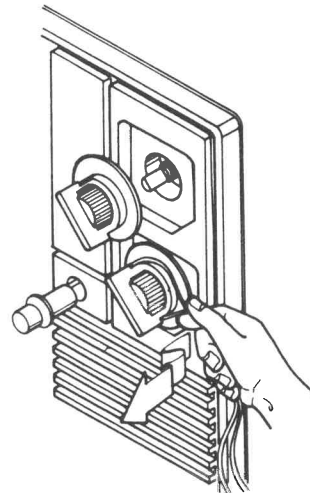


Figure 21

MECHANICAL DISASSEMBLIES

- 3-3 Remove 3 screws holding Tuner Chassis and Front Cabinet, and pull Tuner chassis backward. (Refer to figure 22)

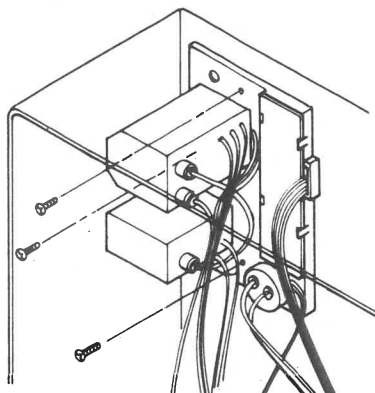


Figure 22

SPEAKER REMOVAL

Remove the 4 screws holding Front Cabinet and pull speaker backward. (Refer to figure 23)

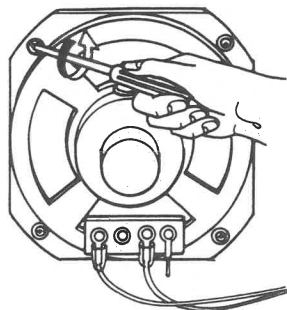


Figure 23

5. CRT REMOVAL

- 5-1 Spread a soft mat on the floor and put the TV set face down on it.
- 5-2 Remove the 4 Nuts holding CRT to Front Cabinet and hold up CRT. (Refer to figure 24)

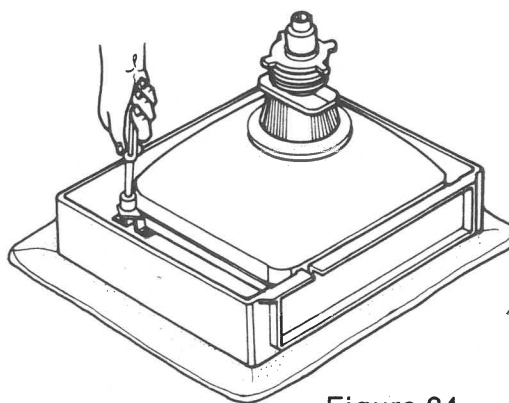


Figure 24

** PICTURE TUBE HANDLING CAUTION

Due to high vacuum and large surface area of picture tube, great care must be exercised when handling the picture tube. Always lift picture tube by grasping it firmly around faceplate. NEVER LIFT THE TUBE BY ITS NECK. The picture tube must not be scratched or subject to excessive pressure as fracture of glass may result in an implosion of considerable violence which can cause personal injury or property damage.

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CIRCUIT DESCRIPTIONS

1. VIDEO SIGNAL SYSTEM CIRCUIT

Video Signal System contains Tuner, Video IF AMP., Video DET., Video AMP., AGC Circuit and AFT Circuit, and, in this chassis, all functions except Tuner are performed within IC201 (LA7520).

1-1 Video DET. of Video IF AMP. Circuit and Video AMP. Circuit

The schematic diagram is as below.

LA7520 (IC201) used in this Chassis is the LSI which contains the VIF stage, SIF stage and Sound stage, and reduces 4.5 MHz Beat, 920 KHz Beat and Buzz by performing VIF, SIF DET. in the separate circuit.

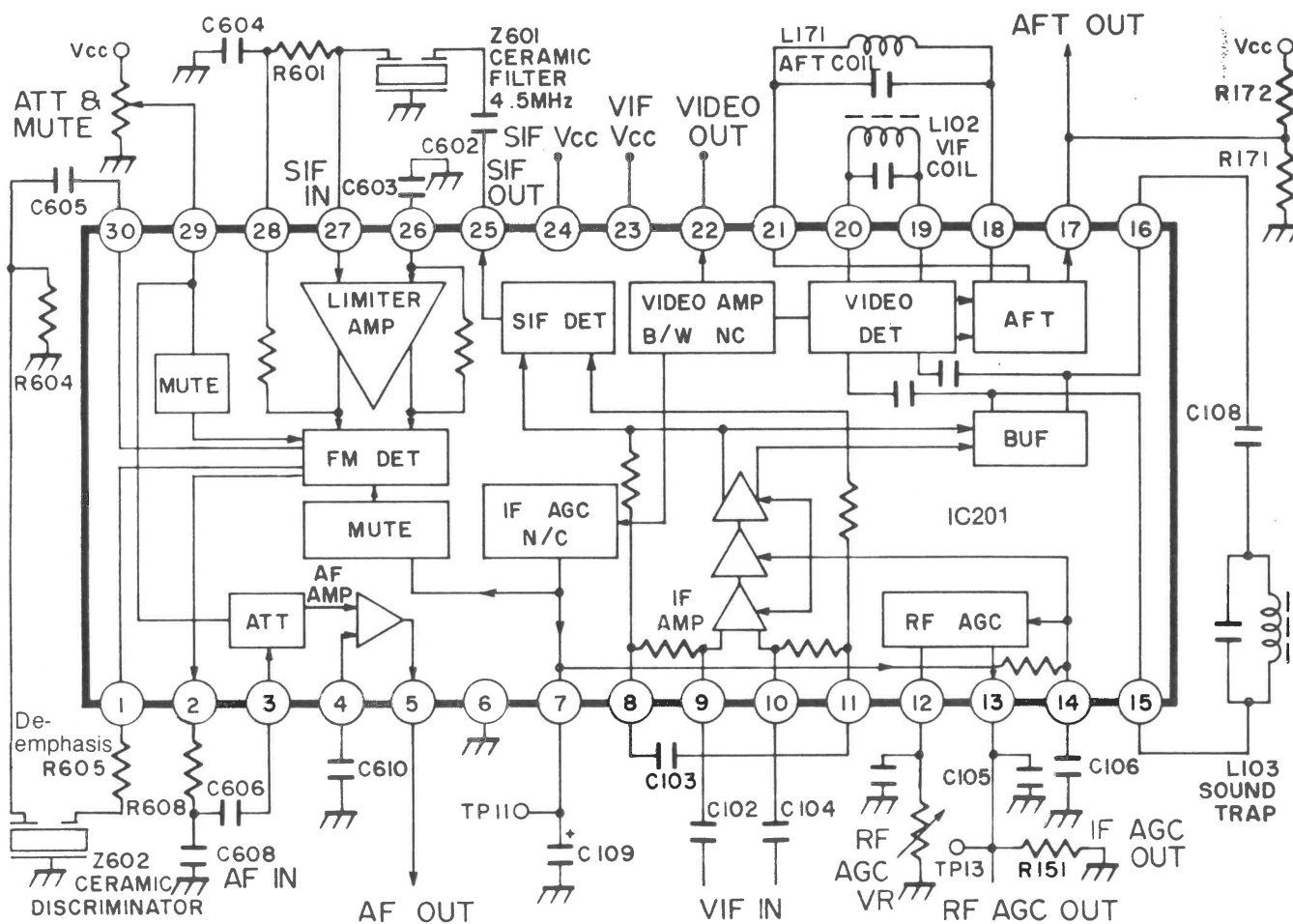


Figure 25

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CIRCUIT DESCRIPTION (CONTINUED)

Simultaneously, IC201 improves the sound quality and the picture quality (compared with the conventional chassis) as a result of detecting the sound in Quadrature DET. Circuit.

1-2 Video/Sound (4.5MHz) DET. Circuit

The IF signal which is fed to IC201 is amplified, and the DET. circuit creates the 4.5MHz SIF signal. Also, after the amplified signal passes the Buffer Circuit, the 41.25MHz (SIF) signal is attenuated and the Video signal is detected in the Video DET. circuit.

2. VIDEO SIGNAL SYSTEM AND SYNC. CIRCUIT

This chassis uses LA7620 (IC 501), which includes the Video Sync. Circuit in one IC and simplifies the circuit by employing an IC which includes Pump-up circuit as V-output, and improved reliability.

2-1 Burst Gate Circuit

The conventional chassis made the Burst Gate pulse by delaying sync. sep. output as L.R.C, but the circuitry of this chassis is as follows:

The Video signal inputs to pin 27 of IC501, is sync. separated and is output from pin 26.

This output is integrated like (B) (Fig. 29) by R303 and C303. (Designed charge time constant of C303 short, discharge time constant long).

If the waveform (B) is obtained, the waveform (C) is obtained from the Burst Gate Pulse generation circuit, and then the Gate Pulse (D) is obtained by eliminating (A) part from (C).

* To stabilize operation in a weak electrical field, gate pulse is applied to the burst gate circuit only when a blanking signal is input at pin 27 of IC501. No color, however, appears in the absence of the blanking signal.

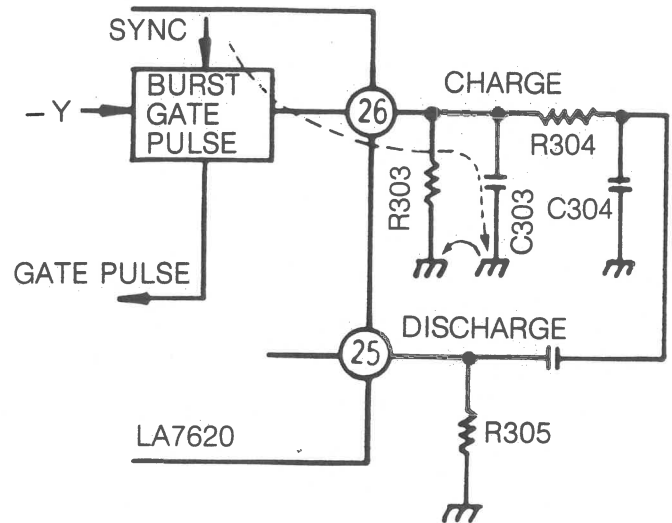


Figure 26

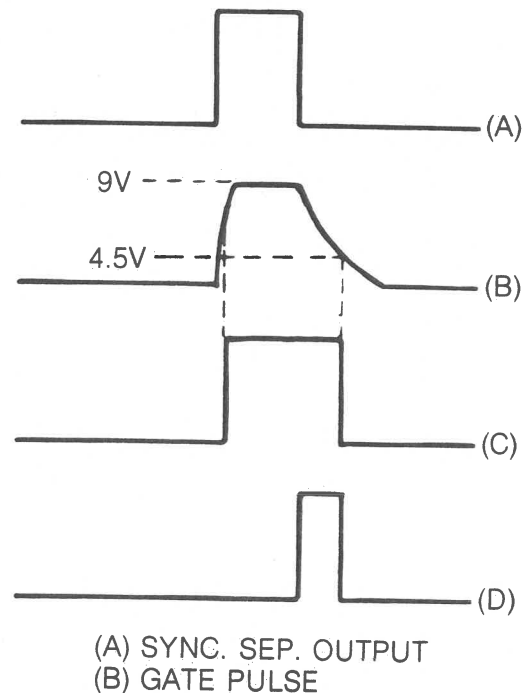


Figure 27

CIRCUIT DESCRIPTION (CONTINUED)

3. HORIZONTAL/VERTICAL OSCILLATION CIRCUIT

The horizontal pulse is created as follows: A $32f_H$ (created by VCO, a ceramic oscillating element, which is controlled by AFC) is applied to the 1/16 divider and the 1/2 divider. After amplification by H-Drive, the H pulse is output at pin 17 of IC501.

The vertical pulse is created in two ways as follows:

- a) In the absence of the vertical sync. pulse input at pin 25 of IC501 while the $2f_H$ ($1/16$ divided) pulse is $1/593$ divided, the vertical divider outputs a vertical sync. pulse (about 650 μ S) to the vertical oscillating stage. Then the frequency division circuit is reset. (about 53.1 Hz).
- b) When the vertical sync. pulse is input at pin 25 of IC501, the vertical divider outputs a vertical sync. pulse to the vertical oscillating stage and the divider is reset.

The vertical frequency divider has window width of $f_H/296.5$ — $f_H/232.5$ to prevent the vertical sync. from being collapsed by the noise.

Only the signal, which is input at pin 25 of IC during this period, is judged as the vertical sync. signal.

- * $f_H/296.5$: the period for 593 frequency division of 1/16 frequency divided pulse.
- * $f_H/232.5$: the period for 465 frequency dividing of 1/16 frequency divided pulse.

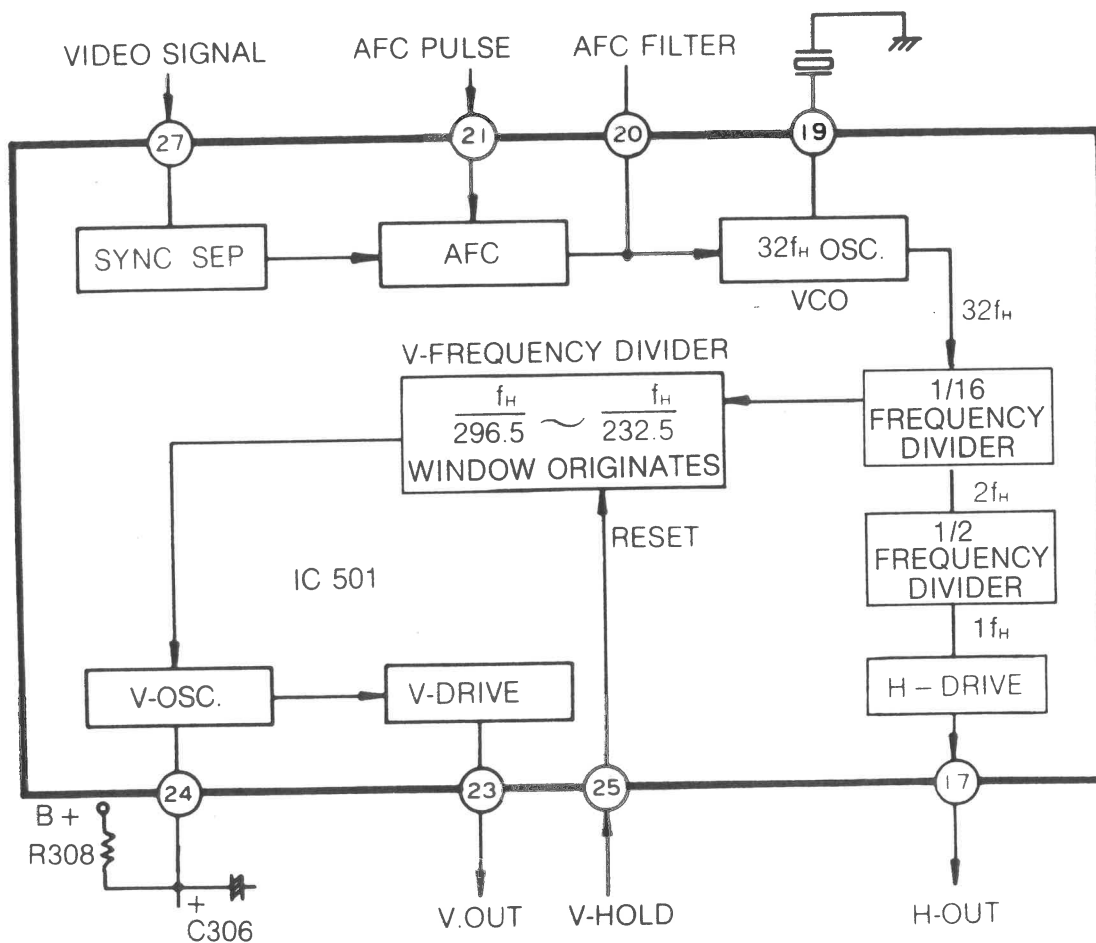


Figure 28

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CIRCUIT DESCRIPTION (CONTINUED)

4. GENERAL INSTRUCTIONS

4-1 Power Supply

The primary power source is a half wave rectifier on the main chassis circuit board that develops 135V DC supplied to the voltage regulator system (IC801 and associated components) which provides a regulated + 120V DC to operate the horizontal output (Q402 and T403) system and audio output system (Q601 and Q602).

All other operating voltages and pulses are derived from the secondary windings of the high voltage transformer (also called FBT, T403).

4-2 Start Up Circuit

An initial start-up circuit provides drive to the horizontal output stage when the set is initially turned on.

This circuit consists of IC801 and associated components. It provides the initial voltage necessary to activate IC501 and provides a drive pulse to the horizontal drive transistor Q401.

Once the FBT-driven voltages are + 24V DC to IC301 and + 12V DC to IC501 and IC201.

4-3 Horizontal and Vertical Deflection Synchronization

Integrated circuit IC501 performs the horizontal sync. (also called horizontal oscillator).

A horizontal rate output pulse is coupled from pin 17 of IC 501 to horizontal driver Q401. The driver stage drives the horizontal output Q402.

Horizontal sync. signal is derived from the composite video signal which is coupled to pin 27 of IC 501.

Vertical sync. signal is derived from the composite signal at pin 27 of IC 501 and coupled to pin 25 through C305.

4-4 Horizontal AFC and Oscillation Limiter

The AFC circuit consists of R402, C405 and the phase detection circuit of IC501.

An Oscillation limiter circuit is necessary to prevent excessive high voltage. This circuit is located in IC501 and controls the oscillator to maintain the control signal in correct frequency and phase with the horizontal sync signal.

4-5 X-Ray Protection Circuit

The X-ray protection circuit consists of R471, D471, C472, D473 and associated components that are connected to pin 18 of IC501.

A pulse from FBT pin 2 is rectified by D471. Under normal operating conditions, the resultant voltage is maintained at specified limits.

CIRCUIT DESCRIPTION (CONTINUED)

If a malfunction causes excessive high voltage, the amplitude of the pulse from FBT increases, causing a corresponding increase in D473 which results in voltage increase at pin 18 of IC501. Voltage increase at pin 18 of IC501 makes the X-ray protection circuit operate and horizontal oscillation.

The circuit will remain shut down, and it will be necessary for the unit to be off for at least 30 seconds to function again.

5. SIGNAL PROCESSING

5-1 Saw Filter IF Operation

The chassis uses a semiconductor device called a Surface Acoustic Wave (SAW) Filter and an IF integrated circuit (IC) in place of IF interstage tuned circuits. The SAW Filter establishes the proper IF response. The IF IC contains three stages of IF amplification, a synchronous video detector, and AFT and AGC circuits.

Since the IF response is determined during the manufacture of the SAW filter device, alignment of the IF circuit in the field is no longer needed. Once the SAW filter device has been made, its response characteristics will not change unless it is damaged.

5-2 IF Processing

The IF signal from the tuner is amplified by Q161 and applied across SAW filter Z101 input terminals.

The output of Z101 is an IF signal with the correct frequency response. It is applied differentially to pins 9 and 10 of IC201. After processing by three stages of IF amplification in the IC, the IF signal is applied to a synchronous video detector. After detection, the composite video signal is amplified, passed through a noise inverter, and then exits IC201 at pin 22.

At this point, the composite video signal supplies two separate sections: IF is coupled through video buffer stage Q202 to the comb filter circuit. The separated signal is supplied to R204, R301 and R501. The 4.5MHz trap Z201 in the base circuit of Q201 eliminates the sound carrier information from the composite video signal. IF AGC, which is developed inside IC201 by a non-keyed circuit, is used to control the gain of the three IF amplification stages.

IF AGC also is used as a comparison against the AGC delay control setting to develop the RF AGC voltage. The AFT voltage for the tuner is taken from pin 17 of IC201. Nominal AFT voltage is 10.5 volts (no signal applied).

6-4

6. VIDEO PROCESSING

6-1 Delay Line and 3.58MHz Trap

The composite video signal, taken at emitter of Q201 contains video signal and color signal. The 3.58MHz trap, and delay line circuit is composite component Z202, eliminating further adjustment.

6-2 Sharpness Circuit

The video signal is also differentiated twice by C202, C203 and R207 and added to the previous integrated signal.

Proper "overshoot" and "preshoot" is added to the video signal, which results in a sharp picture.

6-3 Automatic Color Contrast Control

This circuit consists of D201, D202, and associated components. The contrast level which is coupled to pin 5 of IC501 is changed with the voltage of pin 5. This means that the function of both contrast and brightness control stabilizes the black level of the video signal.

CIRCUIT DESCRIPTION (CONTINUED)

6-4 Chroma Processing

Bandpass filter C501, L501 and C502 passes only the chrominance component. The chroma input signal of pin 30 of IC501 is applied to the bandpass amplifier, the gain of which is controlled by ACC (Automatic Chroma Control).

The color control function is performed by changing the bias voltage of IC501 pin 1. The output of the bandpass amplifier is fed through the burst gate, and then the chrominance signal and the gate signal are separated.

The chroma signal is then applied to the color control IC Synchronous "I" and "Q" demodulators. They compare the instantaneous phase and amplitude of the chroma signal against a pair of phase quadrature 3.58MHz signals developed in IC501 by a 3.58MHz voltage-controlled oscillator (VCO), which is stabilized by external 3.58MHz crystal X501.

The 3.58MHz VCO forms part of a phase-locked-loop system that includes the automatic phase control (APC) circuit.

The APC system compares the 3.58MHz oscillator reference signal against a sample of the broadcast signal color burst. The product of this comparison is a feedback DC control voltage that locks the VCO in exact frequency and phase agreement with the transmitted burst.

The 3.58MHz VCO output is a two phase

quadrature signal at 90 degrees and 180 degrees from the 0 degree burst reference phase.

The signals are combined in correct relative amplitudes by circuits in the "Tint" block, which is controlled by tint control R253.

Adjustment of R253 changes the phase of the 3.58MHz signal supplied to the I and Q demodulators. The color killer system senses the presence or absence of the color burst and either enables or disables the chroma amplifier circuits.

6-5 Color Matrix

Three color difference signals (R-Y, G-Y, B-Y) are obtained at Pin 9, 10 and 11 of IC501.

These color difference signals are combined with the luminance signal in the matrix circuit; Q561, Q562 and Q563, producing the three color video signals: R, B and G.

At the matrix circuit, these three color video signals are amplified and applied to the respective cathodes of the picture tube.

The drive controls: R571 (Blue drive) and R561 (Red drive) are adjusted to achieve optimum highlight white color temperature.

Red, Green and Blue Bias controls R565, R570 and R577 are adjusted during color temperature setting to achieve optimum low-level (white) color temperature.

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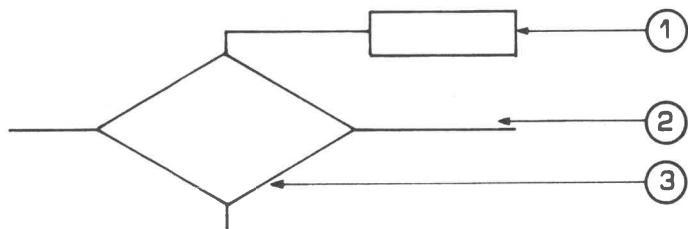
WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION"
"SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

TROUBLESHOOTING

How to Use the flow chart

1. The flow chart shows the following

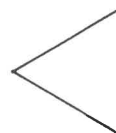
- ① It shows the name of the faulty circuit and main parts to be checked.
- ② It shows the name of the printed circuit board to be checked.
- ③ It shows the point to be checked.



2. The voltages shown in the chart may differ to some extent depending on the condition of the set and test equipment being used.

Precautions on making measurements and on handling

1. When any part becomes abnormally hot or there is a smell of burning, cut off the power immediately.
2. Do not short between circuits or across terminals.
3. When applying a signal for checking purpose, make connections in AC.
4. Look carefully at the picture on the screen.
5. When measuring the voltages of ICs and TPs, be careful to see that the lead of the tester does not touch any other terminal.
6. Measure the voltage correctly.
7. Measure the resistance using the smallest range possible.
8. Be sure to switch off the power when replacing parts.
9. Do not apply the soldering iron for long periods of time when replacing parts.



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TROUBLESHOOTING (CONTINUED)

MAIN P.C. BOARD

Is the 120V
detected in PIN 4
of IC801?

No

Is the (DC (120V—240V)
voltage detected in the
back terminal of F802?

No

Replace F801,
F802 and D801

Yes

Replace R803
R806 and IC801

Yes — Proceed to items 2 and 4

MAIN P.C. BOARD

Is the voltage at
the Q601 and Q602
terminals normal?

No

Check/Replace
R614

Yes

MAIN P.C. BOARD

Does the
voltage of PIN 29 of
IC201 vary according to
the variation of
VOL?

No

Check/Replace
VOL and IC201

Yes

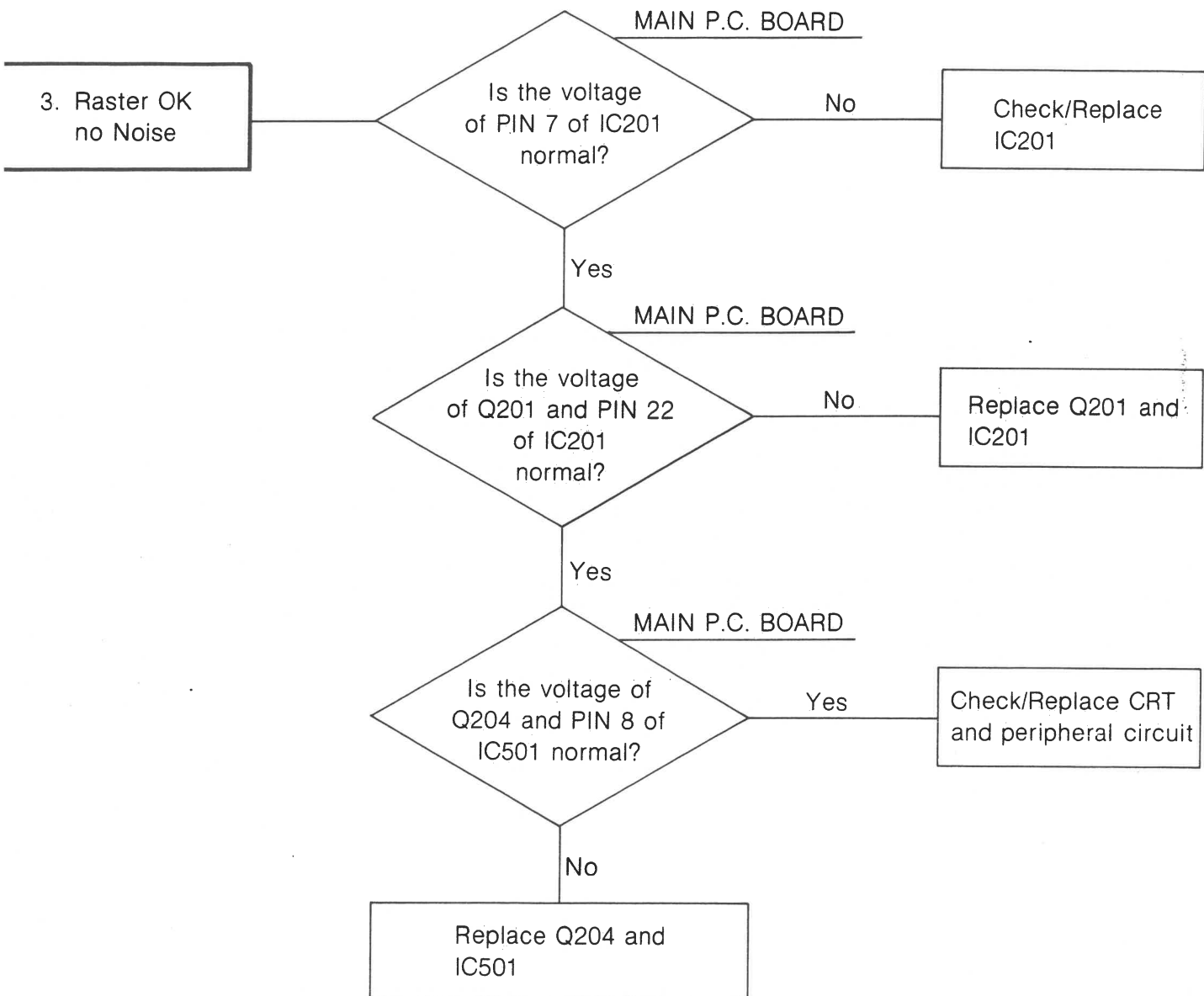
MAIN P.C. BOARD

Does the voltage
of PIN 7 of IC201
appear?

No

Check/Replace
IC201

TROUBLESHOOTING (CONTINUED)

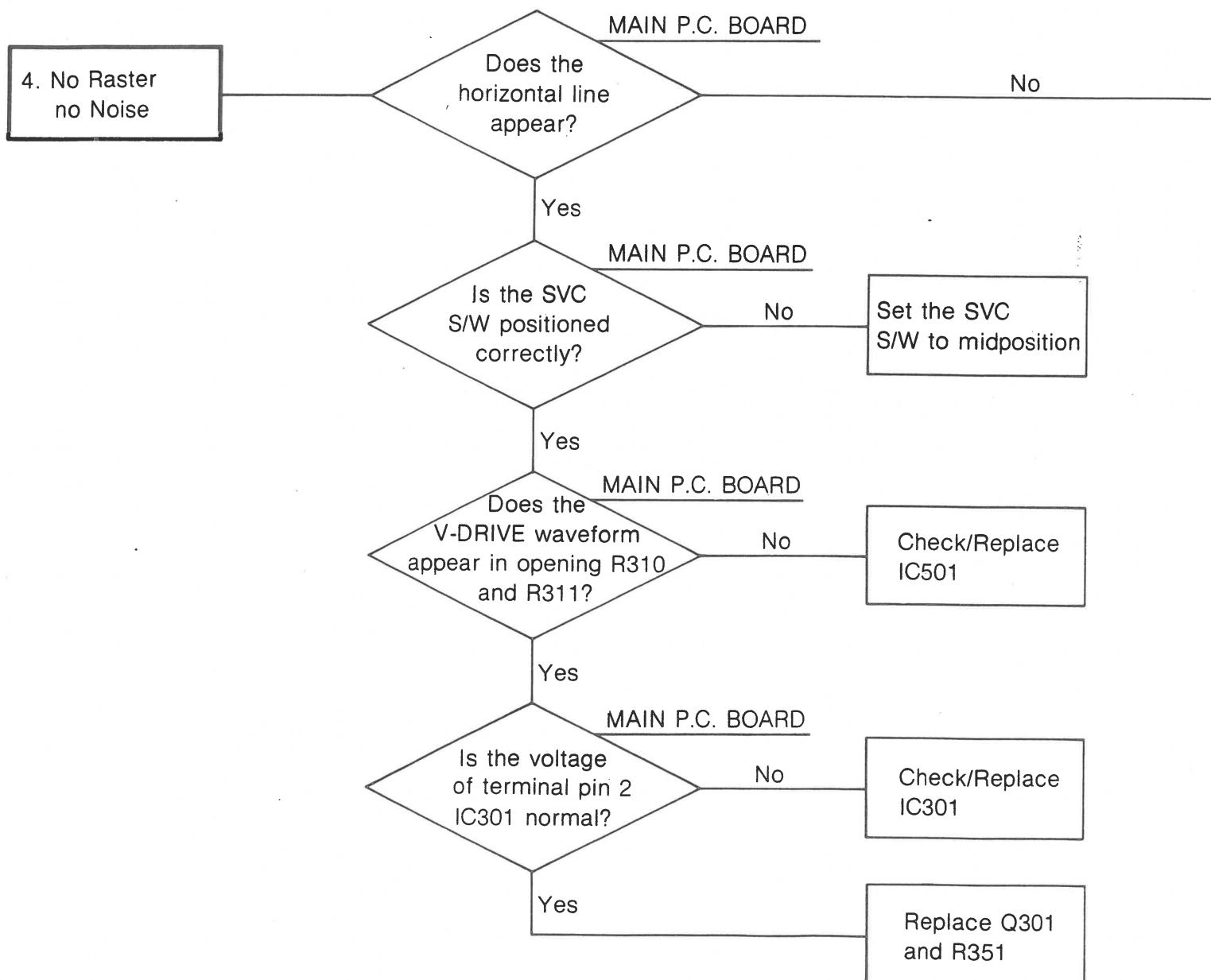


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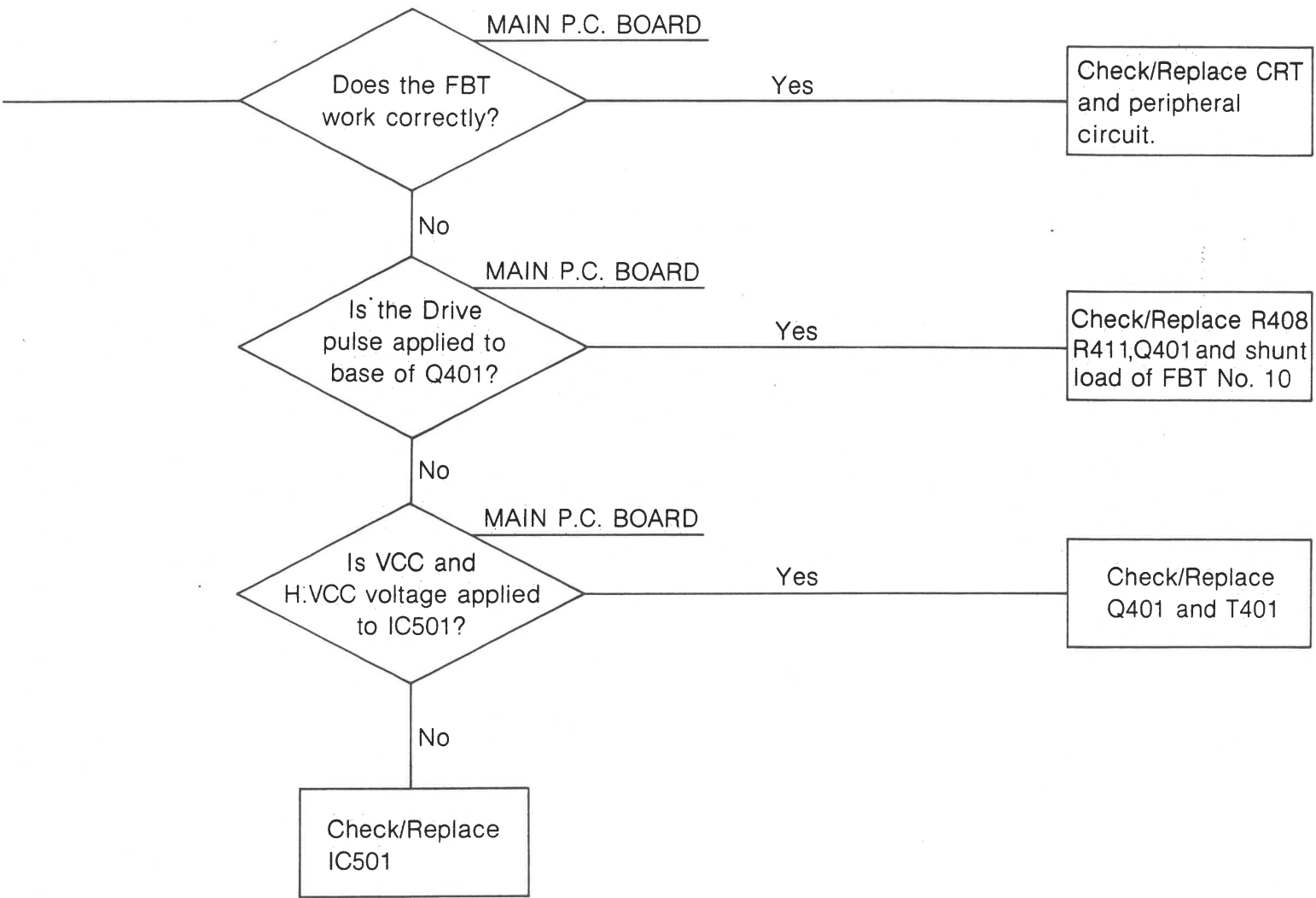
TROUBLESHOOTING (CONTINUED)



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TROUBLESHOOTING (CONTINUED)



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WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The STAR (★) in the schematic diagram and the parts list designates components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2 in this manual. Do not degrade the safety of the receiver through improper servicing.

CHASSIS PARTS LIST MODEL NO. 580.41003750

LOCATION	PART NO.	DESCRIPTION	LOCATION	PART NO.	DESCRIPTION
BK	46-13843-3	SPARK GAP,AG20PT 152F-L3N	C301	46-201076-3	C,CERAMIC(HI-K) 680PF/50V K
C062	46-201670-3	C,CERAMIC(HI-K) 0.01MF/50V Z	C303	46-201283-3	C,CERAMIC(HI-K) 1200PF/50V K
C101	46-201113-3	C,CERAMIC(TC) 68PF/50V J	C304	46-201448-3	C,POLYESTER 4700PF/100V K
C102	46-201229-3	C,CERAMIC(HI-K) 0.001MF/50V K	★ C305	46-201363-3	C,POLYESTER 0.056MF/100V M
C103	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	★ C306	46-18503-3	CAPACITOR,TANTAL 1.0MF/25V K
C104	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	C307	46-201614-3	C,POLYESTER 0.1MF/100V K
C105	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	★ C308	46-18597-3	C,ELECTROLYTIC 220MF/35V
C108	46-201004-3	C,CERAMIC(TC) 5PF/50V D	C309	46-18574-3	C,ELECTROLYTIC 1000MF/16V Y
C109	46-201463-3	C,POLYESTER 0.22MF/50V K	C310	46-201229-3	C,CERAMIC(HI-K) 0.001MF/50V K
C111	46-18570-3	C,ELECTROLYTIC 100MF/16V Y	C312	12-101212-3	C,CERAMIC(HI-K) 100PF/500V K
C120	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	C313	46-18588-3	C,ELECTROLYTIC 100MF/50V Y
C161	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	C314	46-201229-3	C,CERAMIC(HI-K) 0.001MF/50V K
C162	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	C315	46-201462-3	C,CERAMIC(HI-K) 4700PF/1KV K
C172	46-201229-3	C,CERAMIC(HI-K) 0.001MF/50V K	★ C316	46-18570-3	C,ELECTROLYTIC 100MF/25V Y
C174	46-20907-3	C,CERAMIC(TC) 15PF/50V J	★ C317	46-18685-3	C,ELECTROLYTIC 100MF/35V
C176	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	C401	46-201464-3	C,POLYESTER 0.033MF/100V K
C187	46-18503-3	C,ELECTROLYTIC 1MF/25V Y	C403	46-18674-3	C,ELECTROLYTIC 22MF/16V Y
C202	46-201120-3	C,CERAMIC(TC) 22PF/50V J	C404	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K
C203	46-201120-3	C,CERAMIC(TC) 22PF/50V J	C405	46-201480-3	C,POLYESTER 0.022MF/100V K
C204	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	C406	46-201448-3	C,POLYESTER 4700PF/100V K
C205	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	C407	46-20992-3	C,CERAMIC(TC) 270PF/50V J
C206	46-18520-3	C,ELECTROLYTIC 1MF/50V M	C408	12-271288-3	C,CERAMIC(HI-K) 270PF/500V K
C207	46-18525-3	C,ELECTROLYTIC 0.47MF/50V Y	C409	12-101212-3	C,CERAMIC(HI-K) 100PF/500V K
C208	46-201480-3	C,POLYESTER 0.022MF/100V K	C412	12-222711-6	C,CERAMIC(HI-K) 2200PF/500V K
C209	46-18565-3	C,ELECTROLYTIC 2.2MF/50V Y	★ C413	46-20726-3	C,CERAMIC(HI-K) 1200PF/2KV K

N.S.P. (Not Service Part): These parts are not available as a repair parts because they are too costly or are not practical to replace or never expected to fail during the life expectancy of the unit.

Refer to the Div. 57 Authorized Price List 528 for current selling prices, availability and ordering information.

DRAWING NO. 00

SEARS, ROEBUCK AND CO.

LOCATION	PART NO.	DESCRIPTION	LOCATION	PART NO.	DESCRIPTION
★ C414	46-201059-3	C,POLYPROPYLENE 0.39MF/200V J	C402(N)	46-18520-3	C,ELECTROLYTIC 1MF/50V M
★ C415	46-201723-3	C,METALPOLYPROPYLENE9100PF/1.6KV J	★ C410(N)	46-18797-3	C,ELECTROLYTIC 1MF/160V Y
★ C421	12-222711-6	C,CERAMIC(HI-K) 2200PF/500V K	C411(N)	46-18797-3	C,ELECTROLYTIC 1MF/160V Y
C440	12-271288-3	C,CERAMIC(HI-K) 270PF/500V K	★ C472(N)	46-18598-3	C,ELECTROLYTIC 3.3MF/50V Y
★ C471	46-18559-3	C,ELECTROLYTIC 33MF/25V Y	C505(N)	46-18429-3	C,ELECTROLYTIC 4.7MF/50V Y
C501	46-201338-3	C,CERAMIC(TC) 33PF/50V J	C506(N)	46-18520-3	C,ELECTROLYTIC 1MF/50V M
C502	46-201213-3	C,CERAMIC(TC) 150PF/50V J	C511(N)	46-18565-3	C,ELECTROLYTIC 2.2MF/50V Y
C503	46-201229-3	C,CERAMIC(HI-K) 0.001MF/50V K	C512(N)	46-18565-3	C,ELECTROLYTIC 2.2MF/50V Y
C504	46-18565-3	C,ELECTROLYTIC 2.2MF/50V Y	C606(N)	46-18492-3	C,ELECTROLYTIC 10MF/16V Y
C507	46-201614-3	C,POLYESTER 0.1MF/100V K	C607(N)	46-18757-3	C,ELECTROLYTIC 2.2MF/160V Y
C508	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	C615(N)	46-18520-3	C,ELECTROLYTIC 1MF/50V M
C509	46-20573-3	C,CERAMIC(TC) 24PF/50V J	D101		DIODE,RM-2C
C510	46-201526-3	C,POLYESTER 0.015MF/100V K	D201	46-86309-3	DIODE,1S2471 TA
C513	46-18574-3	C,ELECTROLYTIC 1000MF/16V Y	D202	46-86309-3	DIODE,1S2471 TA
C514	46-201191-3	C,CERAMIC(TC) 390PF/50V J	D203	46-86309-3	DIODE,1S2471 TA
C515	46-201213-3	C,CERAMIC(TC) 150PF/50V J	D204	46-86309-3	DIODE,1S2471 TA
C516	46-201191-3	C,CERAMIC(TC) 390PF/50V J	D310	86-67-3	DIODE,IN4002TA
C517	46-201191-3	C,CERAMIC(TC) 390PF/50V J	D311	86-116-3	DIODE,RU-1V
C518	46-201191-3	C,CERAMIC(TC) 390PF/50V J	D401	46-86953-3	DIODE,ZENER EQA02-09A V
C519	46-18574-3	C,ELECTROLYTIC 1000MF/16V Y	★ D471	86-67-3	DIODE,SIB01-01V
C520	46-18780-3	C,ELECTROLYTIC 4.7MF/250V Y	★ D472	46-61951-3	VARISTOR,RVDFV-212
C521	46-201462-3	C,CERAMIC(HI-K) 4700PF/1KV K	★ D473	46-86922-3	DIODE,RD11EB2 TR21R
C522	46-18677-3	C,ELECTROLYTIC 220MF/16V Y	D501	86-116-3	DIODE,RU-1V
C525	46-201229-3	C,CERAMIC(HI-K) 0.01MF/50V K	D502		DIODE,RM-2C
C555	46-201462-3	C,CERAMIC(HI-K) 4700PF/1KV K	D503	46-86309-3	DIODE,1S2471 TA
C561	46-201321-3	C,CERAMIC(HI-K) 1500PF/50V K	D504	46-861396-3	DIODE,RD11GB02 TA21 R
C562	46-201321-3	C,CERAMIC(HI-K) 1500PF/50V K	D601	46-86309-3	DIODE,1S2471 TA
C563	46-201321-3	C,CERAMIC(HI-K) 1500PF/50V K	★ D801	86-128-3	DIODE,RM2A
C564	46-201719-3	C,CERAMIC(HI-K) 0.022MF/1KV K	★ D802	46-86309-3	DIODE,1S2471 TA
C601	46-201229-3	C,CERAMIC(HI-K) 0.001MF/50V K	★ D809	46-611117-3	VARISTOR, ERZ-C10DK241
C602	46-201602-3	C,CERAMIC(TC) 27PF/50V J	★ F801	STD380030	FUSE,(UL) 125V 3A
C603	46-201076-3	C,CERAMIC(HI-K) 680PF/50V K	★ F802	STD385100	FUSE,MINI 1A/125V (UL)
C604	46-201229-3	C,CERAMIC(HI-K) 0.001MF/50V K	GK	46-13843-3	SPARK GAP,AG20PT 152F-L3N
C605	46-201602-3	C,CERAMIC(TC) 27PF/50V J	IC201	46-131206-3	IC,LA7520
C608	46-201480-3	C,POLYESTER 0.022MF/100V K	IC301	46-131208-3	IC,LA7830
C609	46-201292-3	C,CERAMIC(TC) 100PF/50V J	IC501	46-131207-3	IC,LA7620
C610	46-18492-3	C,ELECTROLYTIC 10MF/16V Y	★ IC801	46-132287-3	IC,STR30120
C611	46-18520-3	C,ELECTROLYTIC 1MF/50V M	L101	46-102621-3	COIL,CHOKE 0.85UH
C612	46-18782-3	C,ELECTROLYTIC 22MF/160V Y	L102	46-102611-3	COIL,DET(VIF)
C613	46-18570-3	C,ELECTROLYTIC 100MF/16V Y	L103	46-102611-3	COIL,DET(VIF)
C614	46-201229-3	C,CERAMIC(HI-K) 0.001MF/50V K	L171	46-102612-3	COIL,AFT
C616	12-102811-3	C,CERAMIC(HI-K) 1000PF/500V K	L201	46-101369-3	PEAKING COIL 10MH-K
C617	12-102811-3	C,CERAMIC(HI-K) 1000PF/500V K	★ L402	46-83403-3	CORE,FERRITE SM-2CRHW3.5X12X1B
C619	46-201417-3	C,CERAMIC(TC) 82PF/50V J	★ L403	46-102622-3	COIL,PEAKING SPL 6800MH-J
★ C801	46-201012-3	C,METAL POLYESTER 0.22MF/125V M	L404	46-102623-3	COIL LINEARITY
★ C803	46-201285-3	C,CERAMIC(HI-K) 4700PF/500V K	L501	46-101369-3	PEAKING COIL 10MH-K
★ C804	46-18690-3	C,ELECTROLYTIC 470MF/200WV(SMALL)	L561	46-101886-3	PEAKING COIL 270MH-J
★ C805	46-18780-3	C,ELECTROLYTIC 4.7MF/250V Y	P102	NSP	PIN,MOLEX 5045-05A (2.5)
★ C806	46-18755-3	C,ELECTROLYTIC 33MF/160V	P103	46-451151-3	JACK,PHONO
C107(N)	46-18598-3	C,ELECTROLYTIC 3.3MF/50V Y	P205	NSP	PIN,MOLEX 5045-06A (2.5)
C201(N)	46-18492-3	C,ELECTROLYTIC 10MF/16V Y	P401	NSP	PIN ASSY,PLUG(4P)
C210(N)	46-18520-3	C,ELECTROLYTIC 1MF/50V M	P603	NSP	PIN,MOLEX 5045-03A (2.5)
C302(N)	46-18580-3	C,ELECTROLYTIC 0.22MF/50V Y	P802	NSP	PIN ASSY,PLUG(2P)
★ C311(N)	46-18701-3	C,ELECTROLYTIC 1MF/50V M	P901	NSP	PIN ASSY,PLUG(2P)

LOCATION	PART NO.	DESCRIPTION	LOCATION	PART NO.	DESCRIPTION
Q161	46-86535-3	TRANSISTOR, KTC388A	R305	46-605645-3	R,CARBON FILM 560K-J 1/8W
Q201	46-86682-3	TRANSISTOR, KTC1815-Q(TA)	R306	46-602735-3	R,CARBON FILM 27K-J 1/8W
Q204	46-86805-3	TRANSISTOR, KTA562TM-Q(TA)	R308	46-601812-3	R,CARBON FILM 180-J 1/8W
Q301	46-86679-3	TRANSISTOR, KTA1015-Y	R309	46-608225-3	R,CARBON FILM 8.2K-J 1/8W
Q401	46-86630-3	TRANSISTOR, KTC2482(TA)	R310	46-601015-3	R,CARBON FILM 100-J 1/8W
★ Q402	46-862100-3	TRANSISTOR, 2SD1455 W/MICASHEET	R311	46-601245-3	R,CARBON FILM 120K-J 1/8W
Q561	46-86630-3	TRANSISTOR, KTC2482	R312	46-608235-3	R,CARBON FILM 82K-J 1/8W
Q562	46-86630-3	TRANSISTOR, KTC2482	★ R313	46-61566-3	RESISTOR,FUSING 5.1-J 1W
Q563	46-86630-3	TRANSISTOR, KTC2482	R314	64-43105	R,CARBON FILM 430-J 1/2W
Q601	46-86628-3	TRANSISTOR, KTC2230A(Y)	R315	46-605625-3	R,CARBON FILM 5.6K-J 1/8W
Q602	46-86628-3	TRANSISTOR, KTC2230A(Y)	R316	46-61898-3	R,METAL FILM 3.3-J 1W
R061	46-68102-3	R,CARBON FILM 220-J 1/2W	★ R317	46-63260-3	R,METAL OXIDE FILM 1.5K-J 1W
R102	46-601535-3	R,CARBON FILM 15K-J 1/8W	R318	46-63261-3	R,CARBON FILM 270-J 1/2W
R103	46-601215-3	R,CARBON FILM 120-J 1/8W	R351	46-241047-3	RESISTOR,SEMIFIXED SR-19R 220B
R104	46-602715-3	R,CARBON FILM 270-J 1/8W	R401	46-602225-3	R,CARBON FILM 2.2K-J 1/8W
R105	46-608215-3	R,CARBON FILM 820-J 1/8W	R402	46-602725-3	R,CARBON FILM 2.7K-J 1/8W
R106	64-56905	R,CARBON FILM 5.6-J 1/2W	R403	46-602025-3	R,CARBON FILM 2K-J 1/8W
R151	46-241036-3	RESISTOR,SEMIFIX SR-19R 10KB	R404	46-606815-3	R,CARBON FILM 680-J 1/8W
R161	46-601015-3	R,CARBON FILM 100-J 1/8W	R405	46-603325-3	R,CARBON FILM 3.3K-J 1/2W
R162	46-605625-3	R,CARBON FILM 5.6K-J 1/8W	R406	68-12325	R,METAL OXIDE FILM 12K-J 2W
R163	46-601025-3	R,CARBON FILM 1K-J 1/8W	R407	68-56225	R,METAL OXIDE FILM 5.6K-J 2W
R164	46-602205-3	R,CARBON FILM 22-J 1/8W	★ R408	46-681-3	R,METAL FILM 0.47-J 1/2W
R165	46-603315-3	R,CARBON FILM 330-J 1/8W	★ R410	46-68102-3	R,CARBON FILM 220-J 1/2W
R171	46-608235-3	R,CARBON FILM 82K-J 1/8W	R411	46-681-3	R,METAL FILM 0.47-J 1/2W
R172	46-606835-3	R,CARBON FILM 68K-J 1/8W	R420	46-603315-3	R,CARBON FILM 330-J 1/8W
R173	46-601025-3	R,CARBON FILM 1K-J 1/8W	★ R421	46-601515-3	R,CARBON FILM 150-J 1/8W
R174	46-601025-3	R,CARBON FILM 1K-J 1/8W	★ R451	46-241336-3	RESISTOR,SEMIFIX SR-29D 2.2KB
R175	46-601025-3	R,CARBON FILM 1K-J 1/8W	★ R471	46-605695-3	R,CARBON FILM 5.6-J 1/8W
R201	46-602725-3	R,CARBON FILM 2.7K-J 1/8W	★ R472	46-602225-3	R,CARBON FILM 2.2K-J 1/8W
R202	46-602215-3	R,CARBON FILM 220-J 1/8W	★ R473	46-601025-3	R,CARBON FILM 1K-J 1/8W
R203	46-601025-3	R,CARBON FILM 1K-J 1/8W	R474	46-604725-3	R,CARBON FILM 4.7K-J 1/8W
R204	46-601625-3	R,CARBON FILM 1.6K-J 1/8W	R501	46-601625-3	R,CARBON FILM 1.6K-J 1/8W
R205	46-601625-3	R,CARBON FILM 1.6K-J 1/8W	R503	46-602735-3	R,CARBON FILM 27K-J 1/8W
R206	46-602045-3	R,CARBON FILM 200K-J 1/8W	R504	46-603345-3	R,CARBON FILM 330K-J 1/8W
R207	46-601825-3	R,CARBON FILM 1.8K-J 1/8W	R505	46-61566-3	RESISTOR,FUSING 5.1-J 1W
R208	46-601235-3	R,CARBON FILM 12K-J 1/8W	R506	46-602735-3	R,CARBON FILM 27K-J 1/8W
R209	46-601235-3	R,CARBON FILM 12K-J 1/8W	R507	46-601225-3	R,CARBON FILM 1.2K-J 1/8W
R210	46-602735-3	R,CARBON FILM 27K-J 1/8W	R509	64-15005	R,CARBON FILM 15-J 1/2W
R211	46-601635-3	R,CARBON FILM 16K-J 1/8W	R510	46-602225-3	R,CARBON FILM 2.2K-J 1/8W
R212	46-601545-3	R,CARBON FILM 150K-J 1/8W	R521	46-603315-3	R,CARBON FILM 330-J 1/8W
R213	46-603345-3	R,CARBON FILM 330K-J 1/8W	R522	46-603315-3	R,CARBON FILM 330-J 1/8W
R214	46-604735-3	R,CARBON FILM 47K-J 1/8W	R523	46-603315-3	R,CARBON FILM 330-J 1/8W
R215	46-601545-3	R,CARBON FILM 150K-J 1/8W	★ R524	46-611005-3	RESISTOR,FUSING 1.2-J 2W
R216	46-602735-3	R,CARBON FILM 27K-J 1/8W	R561	46-24284-3	RESISTOR,SEMIFIX SR19R 330B
R217	46-601245-3	R,CARBON FILM 120K-J 1/8W	R562	46-601615-3	R,CARBON FILM 160-J 1/8W
★ R218	46-601035-3	R,CARBON FILM 10K-J 1/8W	R563	46-601025-3	R,CARBON FILM 1K-J 1/8W
R219	46-601225-3	R,CARBON FILM 1.2K-J 1/8W	R565	46-241253-3	RESISTOR,SEMIFIX SR-19R 4.7KB
R220	46-601535-3	R,CARBON FILM 15K-J 1/8W	R566	46-608205-3	R,CARBON FILM 82-J 1/8W
R221	64-47105	R,CARBON FILM 470-J 1/2W	R567	46-601615-3	R,CARBON FILM 160-J 1/8W
R254	46-241036-3	RESISTOR,SEMIFIX SR-19R 10KB	R568	46-601025-3	R,CARBON FILM 1K-J 1/8W
R301	46-603315-3	R,CARBON FILM 330-J 1/8W	R570	46-241253-3	RESISTOR,SEMIFIX SR-19R 4.7KB
R302	46-601545-3	R,CARBON FILM 150K-J 1/8W	R571	46-24284-3	RESISTOR,SEMIFIX SR19R 330B
R303	46-604725-3	R,CARBON FILM 4.7K-J 1/8W	R572	46-601615-3	R,CARBON FILM 160-J 1/8W
R304	46-603935-3	R,CARBON FILM 39K-J 1/8W	R575	46-601025-3	R,CARBON FILM 1K-J 1/8W

MODEL NO. 580.41003750

Sears
DIVISION 57
TECHNICAL DATA SHEET
TELEVISION

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION"
"SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

LOCATION	PART NO.	DESCRIPTION	LOCATION	PART NO.	DESCRIPTION
R577	46-241253-3	RESISTOR, SEMIFIX SR-19R 4.7KB	VR04	46-241761-3	R, VARIABLE K16B0 10KB
R578	46-63330-3	R, METAL OXIDE FILM 15K-J 1W	★ X401	46-33399-3	RESONATOR, CSB503F5
R579	46-63330-3	R, METAL OXIDE FILM 15K-J 1W	X501	46-33582-3	OSCILLATOR, CRYSTAL 3.58MHZ
R580	46-63330-3	R, METAL OXIDE FILM 15K-J 1W	Z101	46-131790-3	FILTER, SAW HW-9062
R581	64-15205	R, CARBON FILM 1.5K-J 1/2W	Z201	46-102427-3	TRAP, CERAMIC TPS 4.5MB
R582	64-15205	R, CARBON FILM 1.5K-J 1/2W	Z202	46-23666-3	COIL, DELAY LINE 3.58T(SHIELD)
R583	64-15205	R, CARBON FILM 1.5K-J 1/2W	Z601	46-131820-3	FILTER, CERAMIC SFE 4.5MHZ
★ R601	46-601025-3	R, CARBON FILM 1K-J 1/8W	Z602	46-131821-3	FILTER, CERAMIC CDA4.5MC24
R602	46-603325-3	R, CARBON FILM 3.3K-J 1/8W			
R603	46-605625-3	R, CARBON FILM 5.6K-J 1/8W			
R604	46-606815-3	R, CARBON FILM 680-J 1/8W			
R605	46-603915-3	R, CARBON FILM 390-J 1/8W			
R607	46-602225-3	R, CARBON FILM 2.2K-J 1/8W			
R608	46-604725-3	R, CARBON FILM 4.7K-J 1/8W			
R609	46-602225-3	R, CARBON FILM 2.2K-J 1/8W			
R610	64-27305	R, CARBON FILM 27K-J 1/2W			
R611	46-603915-3	R, CARBON FILM 390-J 1/8W			
R612	46-604735-3	R, CARBON FILM 47K-J 1/8W			
R613	46-601045-3	R, CARBON FILM 100K-J 1/8W			
★ R614	46-611113-3	RESISTOR, FUSING 100 1W			
R615	46-605615-3	R, CARBON FILM 560-J 1/8W			
R630	46-241726-3	RESISTOR, VAR. 10KB POWER			
★ R801	46-611114-3	RESISTOR, RWR STD 1-J 7W			
★ R802	46-602245-3	R, CARBON FILM 220K-J 1/8W			
★ R803	46-61922-3	RESISTOR, CEMENT RWR 5W 2.2J			
★ R804	46-611115-3	RESISTOR, RWR. 220 25W			
★ R805	46-68131-3	R, METAL OXIDE FILM 12K-J 1W			
★ R806	64-47405	R, CARBON FILM 470K-J 1/2W			
★ R807	46-601615-3	R, CARBON FILM 160-J 1/8W			
★ R901	46-611116-3	THERMISTOR, PTH631-04BF7ROM140			
RK	46-13843-3	SPARK GAP, AG20PT 152F-L3N			
SW201	46-691438-3	SWITCH, SVC P12T21			
★ T401	46-801326-3	TRANS, H.DRIVE 19Y4BY			
★ T402	46-801327-3	TRANSFORMER SIDE PINCUSHION			
★ T403	46-801329-3	FBT, NC05X 3L 19S			
★ T601	46-102624-3	TRANS, AUDIO OUTPUT			
★ T801	46-102625-3	COIL, LINE FILTER			
VR01	46-241761-3	R, VARIABLE K16B0 10KB			
VR02	46-241761-3	R, VARIABLE K16B0 10KB			
VR03	46-241761-3	R, VARIABLE K16B0 10KB			

DRAWING NO. 00

SEARS, ROEBUCK AND CO.

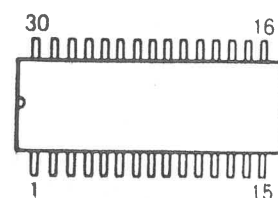
MODEL NO. 580.41003750

Sears
DIVISION 57
TECHNICAL DATA SHEET
TELEVISION

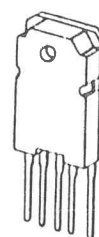
SCHEMATIC DIAGRAM ---- POWER, VIF AND AUDIO OL

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION"
"SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

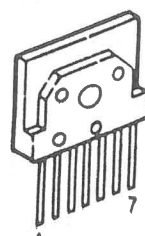
TERMINAL VIEWS OF SEMICONDUCTORS



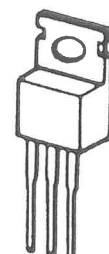
IC201 IC501



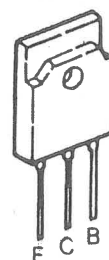
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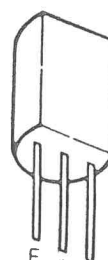
IC301



Q561, Q562
Q563

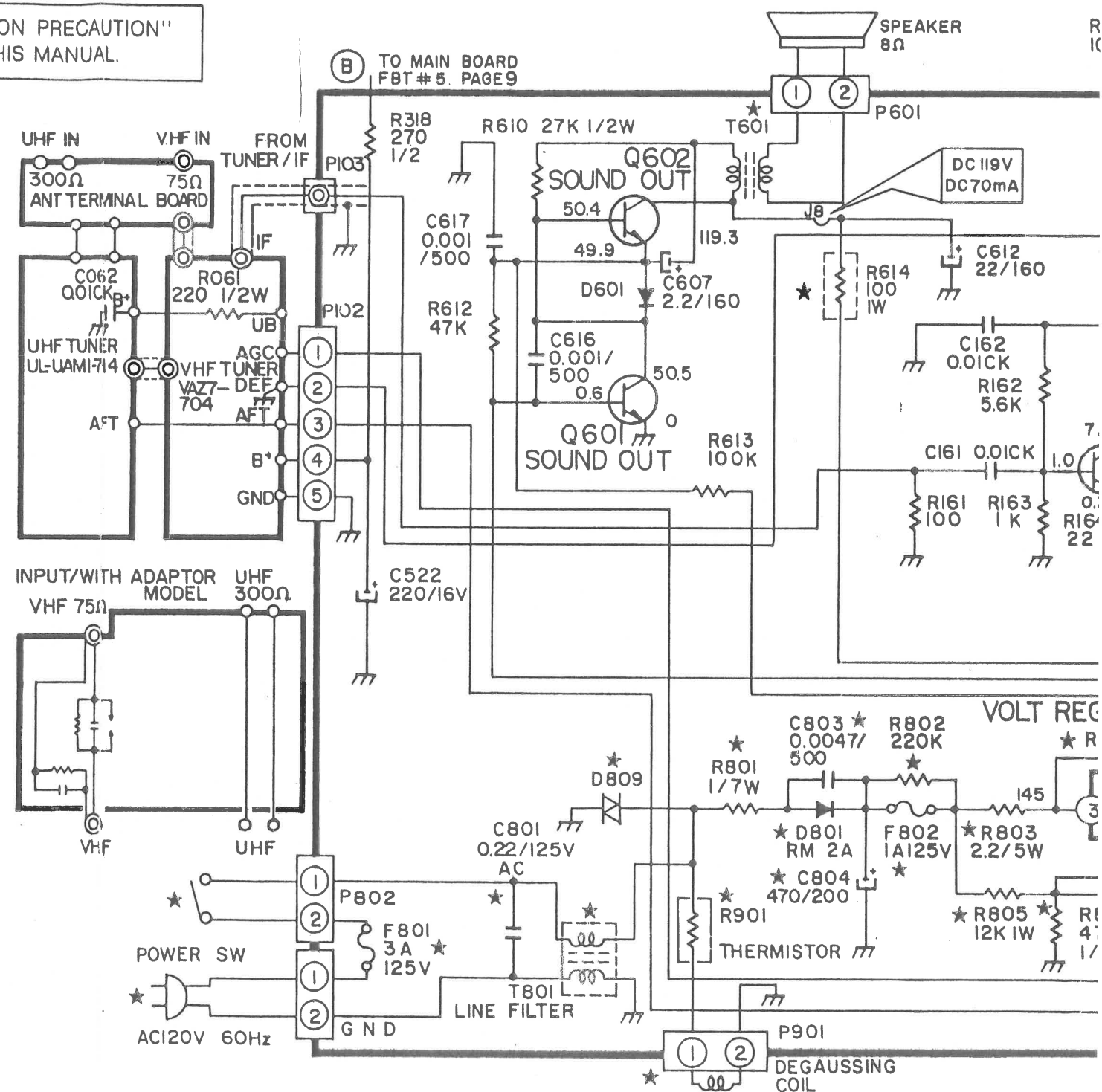


Q402

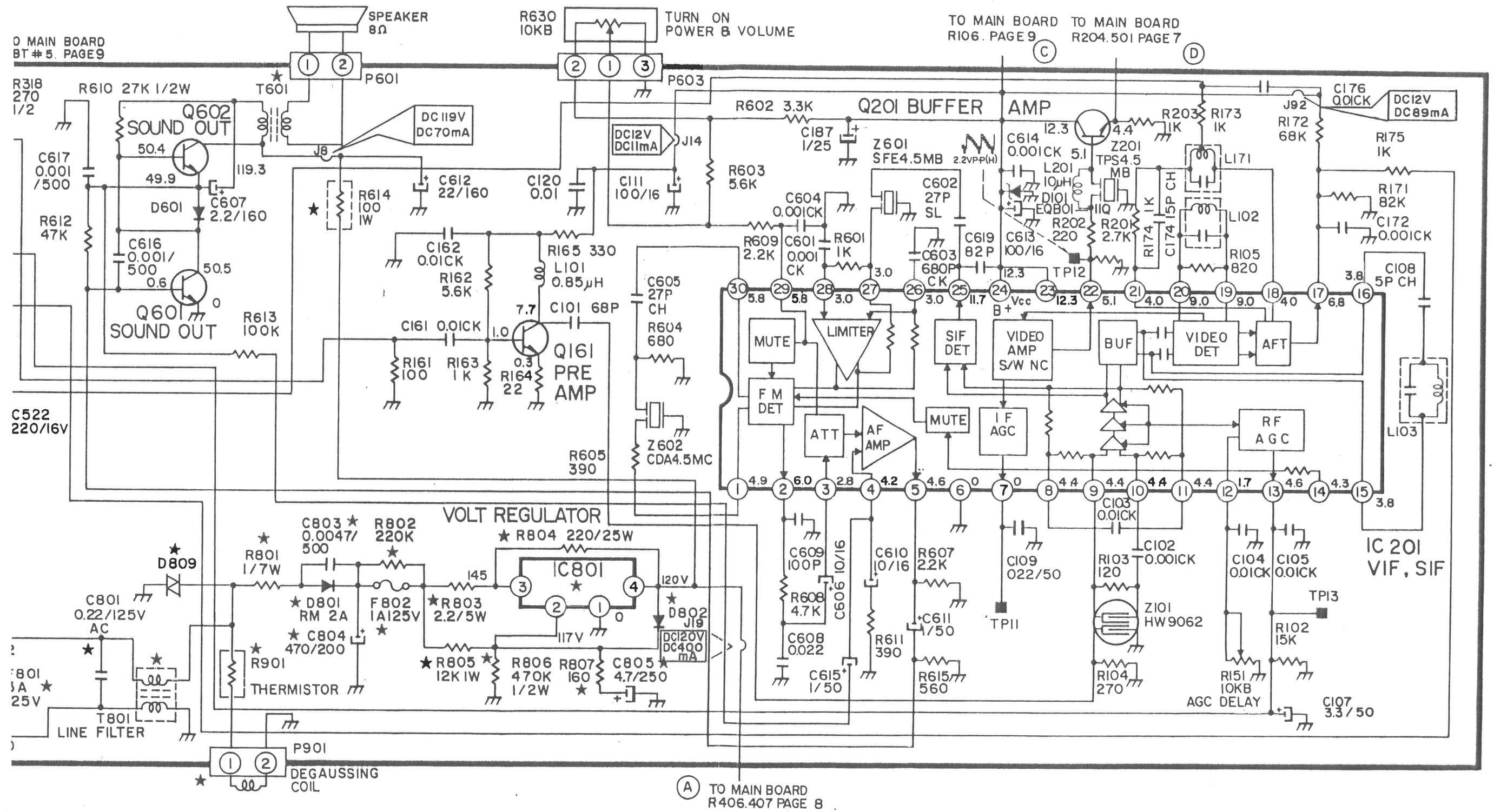


Q161, Q201, Q204
Q301, Q401, Q601
Q602, Q561, Q562
Q563

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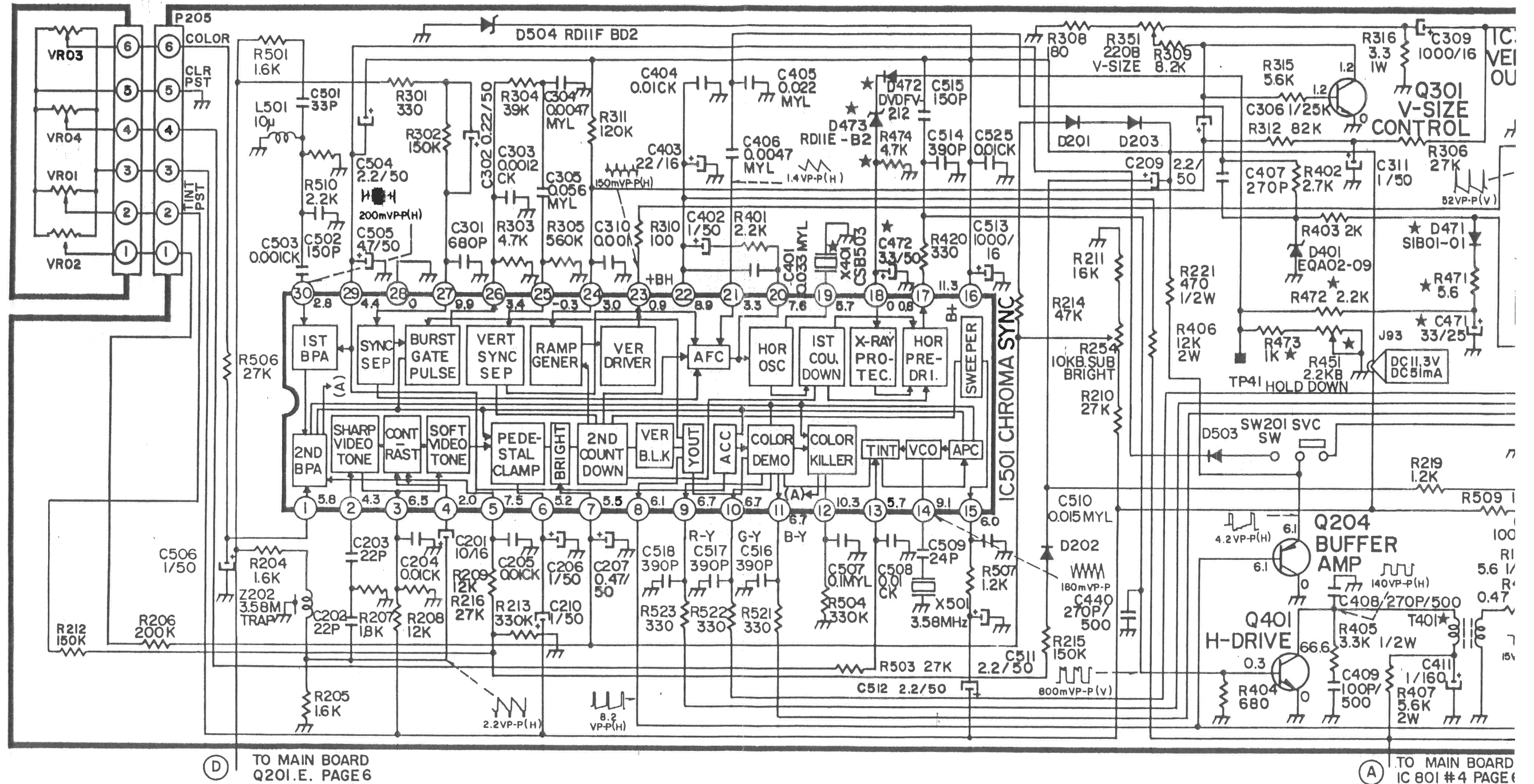
SCHEMATIC DIAGRAM ---- POWER, VIF AND AUDIO OUTPUT



MODEL NO. 580.41003750

SCHEMATIC DIAGRAM ---- CHROMA AND SYNC CIRCUIT

CONTROL BOARD



SEARS, ROEBUCK AND CO.

EMATIC DIAGRAM ---- CHROMA AND SYNC CIRCUIT

