INDEX

General

BUILT-IN "ROTO-SCOPE" ANTENNA

The built-in "Roto-Scope" antenna is operated by the antenna control lever which extends from the back of the cabinet (near the top). Set the antenna control lever in that one of its three positions (left, center, or right) which gives the clearest picture.

When an external indoor or an outdoor antenna is required, be sure to disconnect the built-in Roto-Scope antenna leads from the antenna terminal board. When disconnected, tape the Roto-Scope antenna lead lugs and place them away from the chassis.

INPUT IMPEDANCE and TRANSMISSION LINES

The input impedance to the receiver is 300 ohm balanced (between antenna terminals). When using a 300 ohm transmission line connect it across the antenna terminals.

Input impedance between one antenna terminal and chassis is approximately 75 ohms. When using 75 ohm coaxial transmission line, connect the outer conductor to the chassis and the inner conductor to either antenna terminal; use the terminal which gives the most satisfactory picture on the weakest station.

FUSE LOCATION

The horizontal output circuit is fused with a ¼ amp, 250 volt fuse, part #84A4-2. The fuse is located in the back end of the high voltage compartment.

CHASSIS NOTES

Chassis used in the straight TV and combination models differ in that the combination models have connectors for supplying power to the radio and the cabinet pilot light.

To service the television chassis in combination models with the radio disconnected, it will be necessary to complete the heater circuit by connecting a wire jumper from pin "L" to pin "K". See plug and socket drawing on schematic. Since the radio receives its power from the television chassis, it cannot be operated without the television chassis.

Important: If both the radio and television are turned on at the same time, neither unit will operate.

PICTURE TUBE HANDLING PRECAUTION

Due to the high vacuum and large surface area of picture tubes, great care must be exercised when handling these tubes. Shatterproof goggles and heavy gloves should be worn while handling or installing a picture tube. The picture tube must not be scratched or subjected to excessive pressure as fracture of the glass will result in an explosion of considerable violence which may cause personal injury or property damage.

HIGH VOLTAGE WARNING

High voltages are present throughout this receiver. Operation with cabinet removed involves shock hazard. Exercise normal high voltage precautions while working with this set.

Installing the Television Receiver

After the antenna is set properly, make all checks or adjustments given here to insure best performance and ease in tuning. ***It is especially important that the Channel Slugs and Ion Trap be adjusted upon installation or servicing of every set.***

For best results, all checks or adjustments should be made using a transmitted television test pattern. A mirror placed in front of the picture tube screen will be of help in observing the picture while adjusting rear panel controls.

NOTE: If both radio and television are turned on in combination models, neither unit will operate. Be sure set owner has been properly instructed on the operation.

TUNE IN A PICTURE

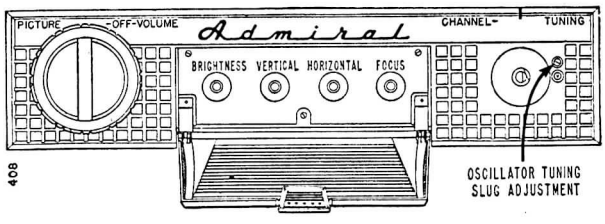
Tune in a picture as instructed in the customer instruction leaflet; note illustrations on interference effects.

ADJUST CHANNEL SLUGS

Individual channel oscillator adjustment of every receiver should be checked upon installation or servicing. If this adjustment is properly made, it is possible to tune from one station to another by merely turning the CHANNEL control and if necessary, slightly readjusting the TUNING control. With correct oscillator channel adjustment, best picture and satisfactory sound will be located at the approximate center (half rotation) of the range of the Tuning control.

This adjustment can be made without removing the chassis from the cabinet. Adjust as follows:

a. Turn the set on and allow 15 minutes to warm up.
b. Set the CHANNEL knob for a station; set other controls for normal picture and sound.
c. Set TUNING control at center of its range by rotating it approximately half-way.
d. Remove the CHANNEL and TUNING knobs.
e. Insert a 1/8" blade, NON-METALLIC screwdriver in the 1/4" hole (to the right of the channel tuning shaft). For each channel in operation, carefully adjust the oscillator slug for clearest picture detail. Then check sound, and if necessary readjust for minimum buzz. Only slight rotation of the slug will be required; turning the slug in too far will cause the slug to fall into the coil. (If an oscillator slug should fall into the channel coil, remove the coil, move the slug retaining spring aside, lightly tap the open end of the coil against a solid object until the slug slips out. Replace slug and set the slug retaining spring into its cut-out slot.)



Control Panel; CHANNEL and TUNING Knobs Removed.

ADJUST THE ION TRAP

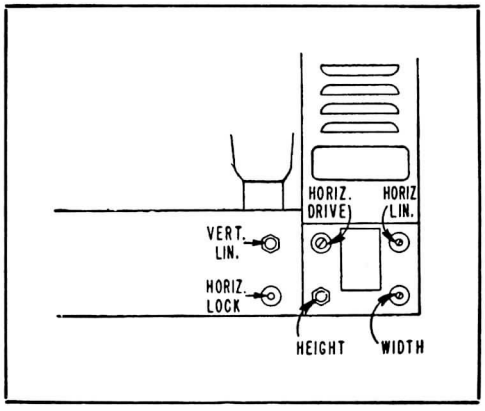
In order to prolong the life of the picture tube, it is important that this adjustment be made on every receiver upon installation or servicing.

These sets use a 16TP4 or 16RP4 picture tube. If the set has the 16TP4 tube, locate the ion trap on the neck of the tube with the blue sleeve on top and the magnet to the left (facing rear of chassis). With the 16RP4 tube, locate the blue sleeve to the left and the magnet at the bottom. Starting from a point close to the tube base, very carefully move the ion trap forward or backward, and at the same time rotate it slightly in either direction; adjust for the brightest picture possible with the BRIGHTNESS control set for average brightness.

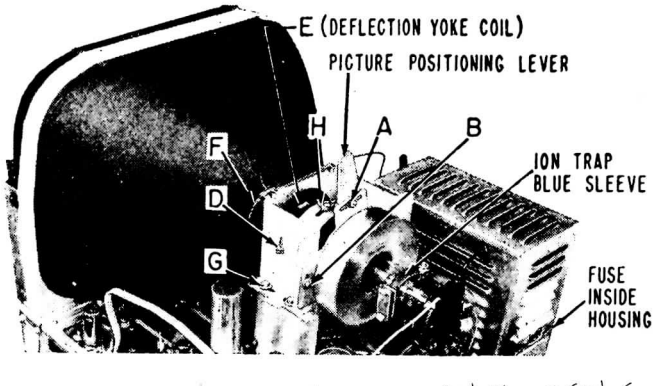
Note that there may be two locations where the brightest picture can be produced. The second ion trap location, which is further forward on the tube neck, should not be used.

Important: Should the corners of the picture become rounded off or shaded after adjusting the ion trap, correct this by moving the deflection yoke coil "E" as far forward as possible and then adjusting the picture positioning lever (or the focus coil if necessary) as described below. Do not try to remove shaded corners with adjustment of the ion trap. Be sure to readjust the ion trap after adjusting the picture positioning lever or repositioning the focus coil.

The 16TP4 picture tube uses ion trap, part number 94A15-2; the 16RP4 tube uses ion trap, 94A15-1. The part number is stamped on the ion trap magnet. The wrong ion trap may cause shaded corners or insufficient picture brightness.



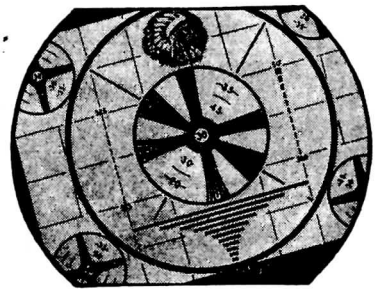
Chassis Views Showing Adjustment Locations.



MODELS 36R37, 36R45, 36R46,
Ch. 21B1, 21C1, Radio Ch. 5D2

CHECK PICTURE TILT

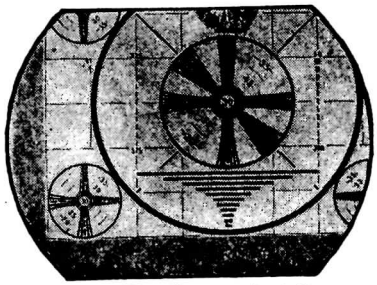
If the picture is tilted, loosen the wing nut "H" on the deflection yoke coil and slightly rotate the yoke "E" until the picture is straight. Before tightening the wing nut, be sure that the yoke is moved as far forward as possible, otherwise corners of the picture may become shaded.



Picture Tilted; Adjust Deflection Yoke Coil.

CHECK PICTURE CENTERING

If the picture is off center, it can be centered by using the picture positioning lever, and when necessary, re-positioning the focus coil around the picture tube neck. Follow the instructions given below. ***Note that the picture positioning lever can be moved sideways, or up and down.***



Picture Not Centered; Adjust Picture Positioning Lever.

Picture Slightly Off Center

a. Adjust ion trap as instructed on preceding page.
b. Slightly loosen the screw "A" which locks the picture positioning lever to the focus coil, adjust the lever for correct picture centering.
c. Readjust the ion trap.

Picture Greatly Off Center

a. Adjust ion trap as instructed on preceding page.
b. Slightly loosen the two screws "B" which hold the focus coil to the yoke bracket. Center focus coil around the tube neck; tighten screws.
c. Loosen the screw "A" and center the picture with the picture positioning lever. If the picture cannot be centered with the lever, it may be necessary to locate the focus coil slightly off center and then center the picture with the picture positioning lever.
d. Readjust the ion trap.

Difficulty in Centering Picture or Eliminating Shaded Corners

a. Loosen screws "G", then move the yoke support bracket forward until rubber grommet "F" is firmly against the flare of the picture tube.
b. Push the deflection yoke coil "E" as far forward as possible. In some cases, it may be necessary to loosen the two yoke bracket support screws "D" at the sides of the upper mounting bracket, move the bracket up or down, and then move the deflection yoke coil as far forward as possible.

Shaded corners may also result from use of the wrong ion trap. The 16TP4 picture tube uses ion trap 94A15-2; the 16RP4 picture tubes uses ion trap 94A15-1. The part number is stamped on the ion trap magnet.

SCHEMATIC NOTES

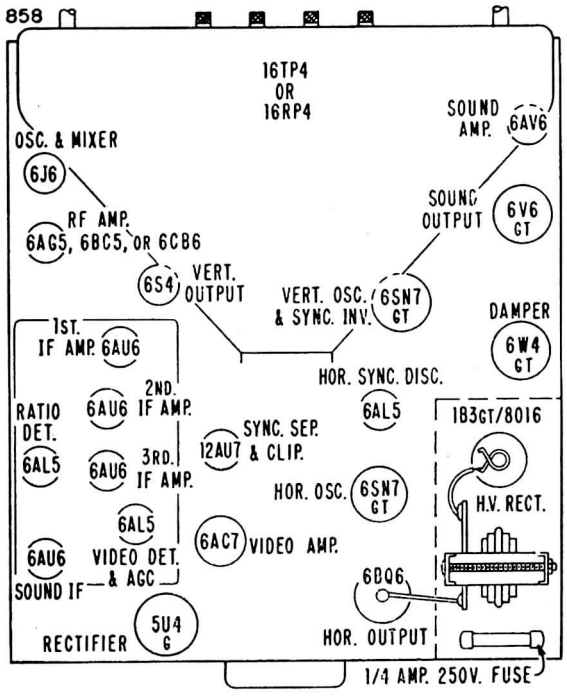
[1],[2],[3] etc. are run numbers and indicate a production change. Run numbers are rubber stamped at rear of chassis.

(A1), (A2),.....(Y), (Z), etc. indicate alignment points and alignment connections.

TV VOLTAGE DATA

(Voltages given on schematic diagram)

- PICTURE control turned fully clockwise. CHANNEL control set on an unused channel. Other front controls set at approximately half rotation. Vert. Lin. and Height set at approximately half rotation.
- Voltages marked with an asterisk * will vary widely with control setting.
  In combination models, B+ voltages in TV chassis will be slightly higher when set is switched to radio position. Alternate voltage readings for radio and TV are shown for sound output tube V204 (6V6GT).
- Line voltage 117 volts AC.
- Voltages measured with a vacuum tube voltmeter between tube socket terminals and chassis, unless otherwise indicated.
  Voltages at V101, V102, V306 measured from top of socket with tube removed.



Top View of Chassis.

- Antenna disconnected from set with terminals shorted.
- Under operating conditions, AGC (Automatic Gain Control) voltage developed at pin 1 of V301 (6AU6) should measure approximately —3 volts. This voltage depends on picture signal strength and Picture control setting.

CAUTION

Pulsed high voltages are present on the cap of the 6BQ6GT tube, and on the filament terminals and cap of the 1B3GT tube. NO ATTEMPT SHOULD BE MADE TO TAKE MEASUREMENTS FROM THESE POINTS UNLESS SUITABLE TEST EQUIPMENT IS AVAILABLE.

Picture tube 2nd anode voltage can be measured from the 2nd anode connector and should be taken only with a high voltage instrument such as a kilovoltmeter. 2nd anode voltage is approximately 12.5 KV. Proper filament voltage check of the 1B3GT tube may be made by observing filament brilliancy as compared with that obtained with a 1.5 volt dry cell battery.

RADIO VOLTAGE DATA
(Voltages given on schematic diagram)

- Line voltage 117 volts AC.
- Voltages measured with a vacuum tube voltmeter, between tube terminals and chassis.
- Voltages measured with band switch on FM position, unless otherwise indicated; an AM reading is given where difference is significant.
- Volume control set at minimum.
- Dial turned to low frequency end.
- Antennas disconnected.

▲ When R602 is 240 ohms, voltage on pin 1 of V601 is 152 volts, pin 2 is —.5 volts, pin 6 is 152 volts and pin 8 is 1.9 volts.
When R602 is 1500 ohms, voltage on pin 1 of V601 is 160 volts, pin 2 is —3 volts, pin 6 is 160 volts and pin 8 is 3 volts.

IMPROVED NOISE IMMUNITY IN THE HORIZONTAL SYNC CIRCUIT OF 21B1 AND 21C1 CHASSIS

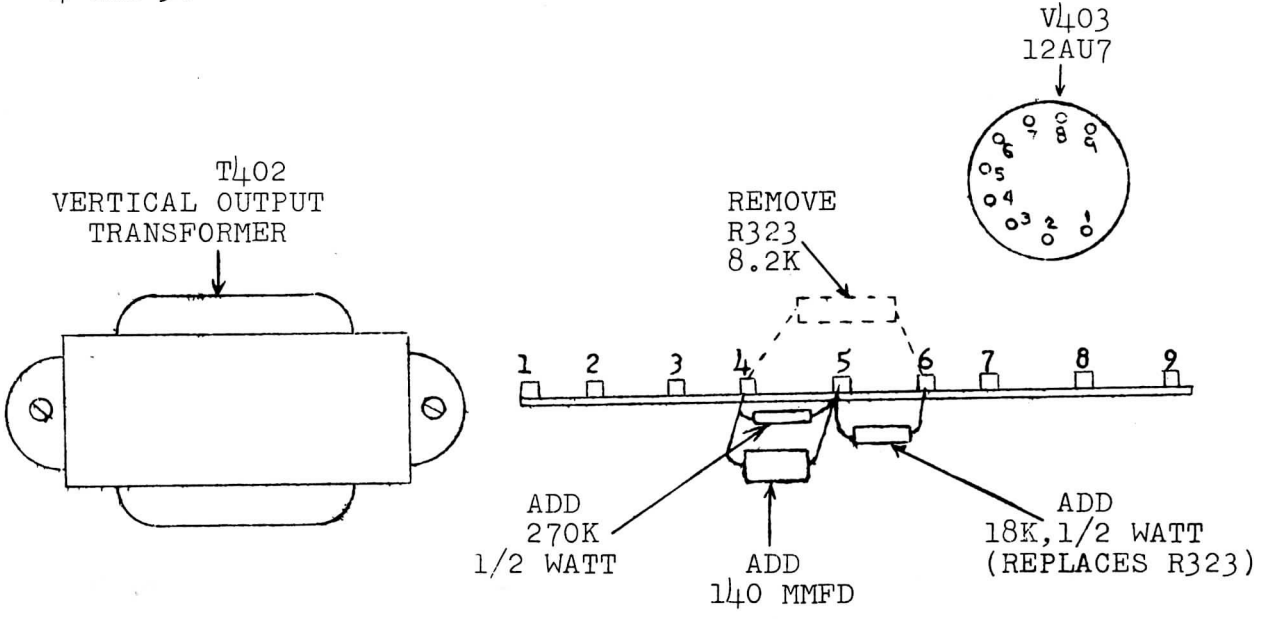
In some areas where the noise level is high, the noise peaks may affect the sync circuit and cause the picture to shake horizontally or lose horizontal sync.

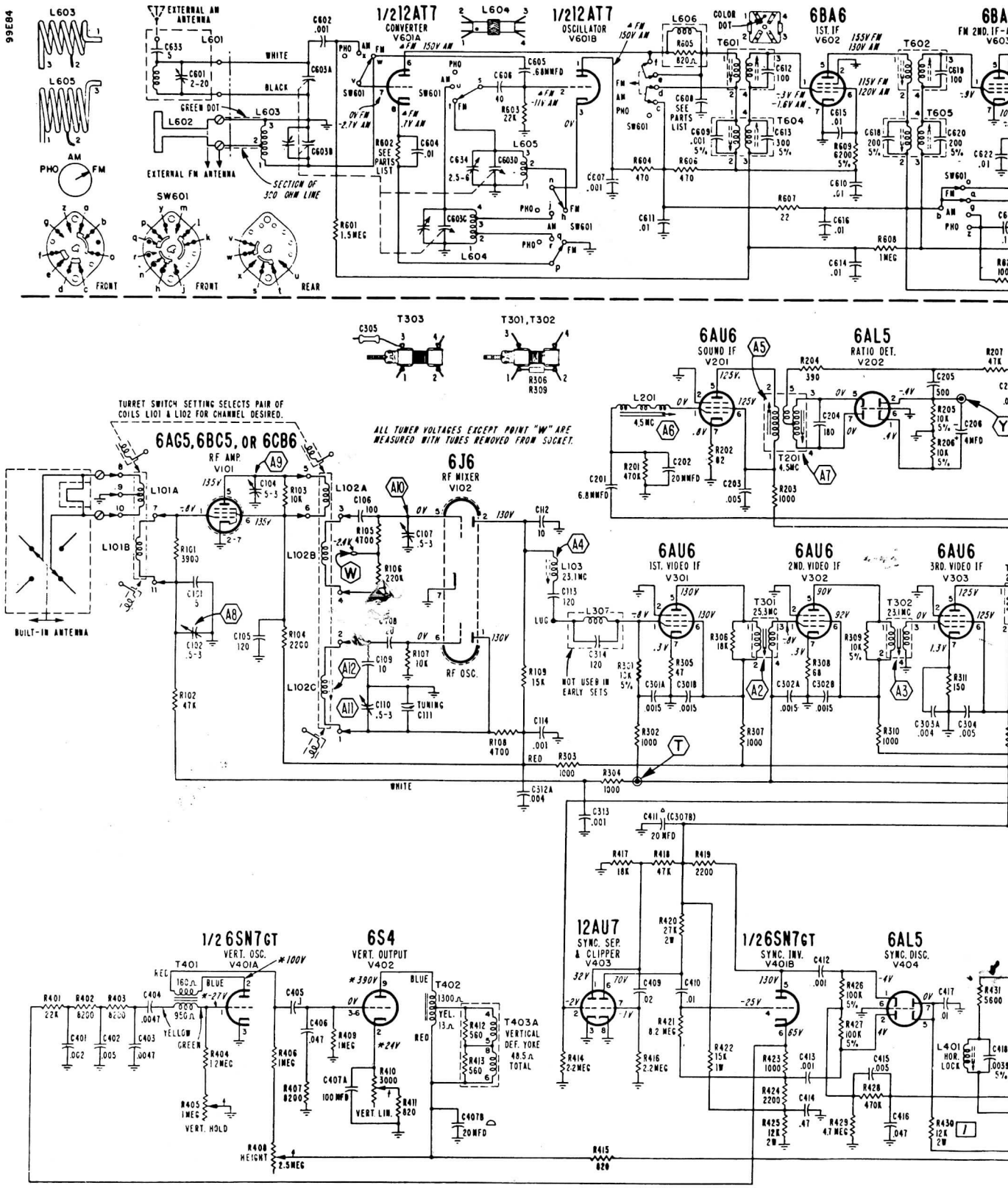
A change in resistor value and an additional filter in the sync circuit has been incorporated in late production to reduce this trouble.

The circuit change began with run 2 of 21B1 chassis and run 5 of 21C1 chassis.

Early production receivers may be modified by following the procedure given below:

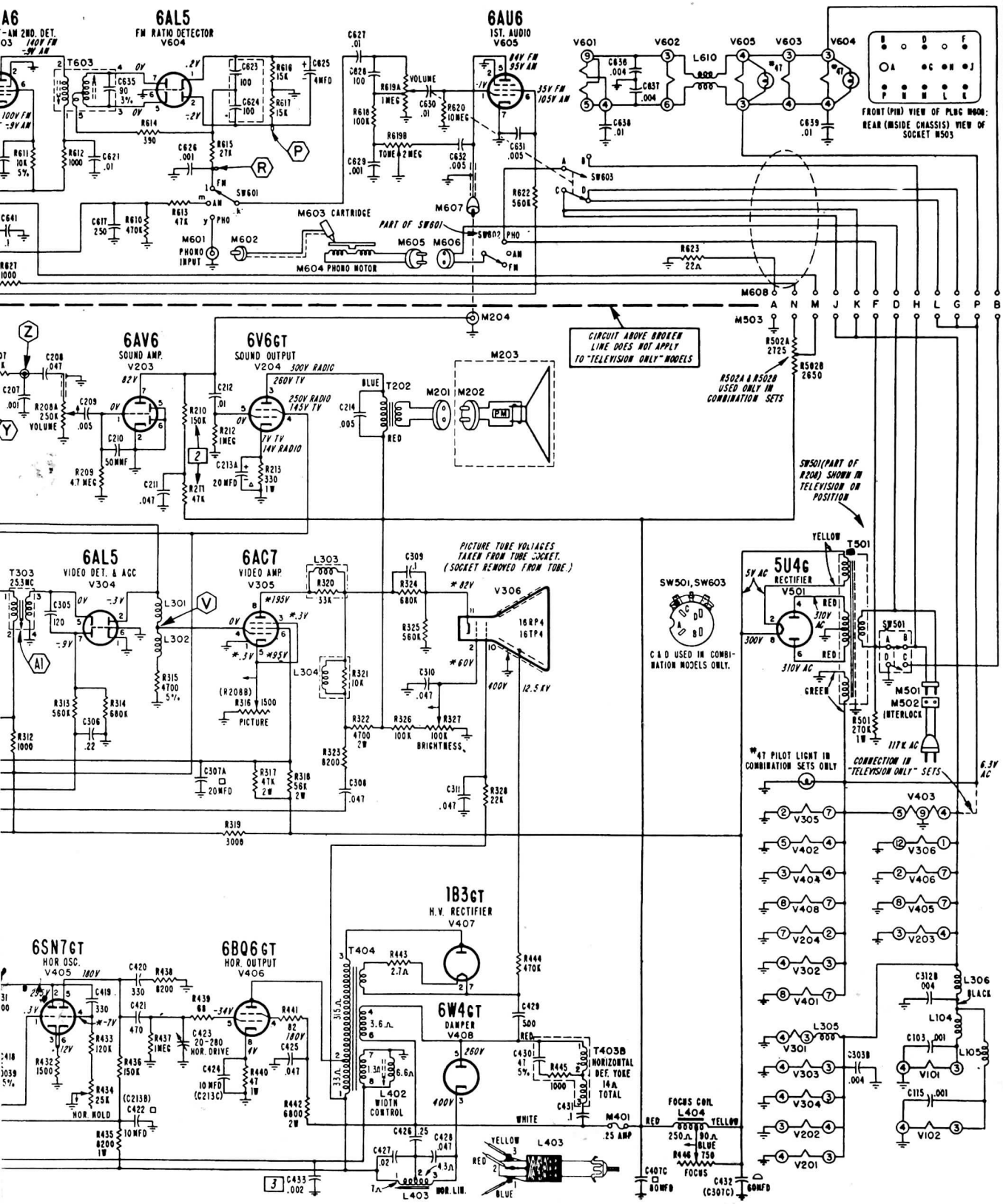
1. Locate a 9 lug terminal strip adjacent to the vertical output transformer.
2. Remove R323 (8200 ohms) from lugs 4 and 6.
3. Connect an 18,000 ohm 1/2 watt resistor (part number 60B8-183) between lugs 5 and 6.
4. Connect a 140 μμfd condenser (part number 65B1-26 with a 270K 1/2 watt resistor, (part number 60B8-274) in parallel between lugs 4 and 5.





Schematic for 21B1, 21C1 Television Chassis; 5

RECORD CHANGERS: Model RC500, See page
RCD.CH.21-1; Model RC550, See page
RCD.CH.21-9.



5D2 radio circuit and connections also shown.

MODELS 36R37, 36R45, 36R46,
Ch. 21B1, 21C1, Radio Ch. 5D2

PRODUCTION CHANGES

RUN 1 in 21C1 CHASSIS

Resistor R430 was changed from 12,000 ohms, ½ watt to 12,000 ohms, 2 watt (part #60B20-123). This change was made to prevent possible increase in resistance of R430 due to increased power dissipation.

RUN 2 in 21C1 CHASSIS

In early sets R210 was 270,000 ohms; R211 was 100,000 ohms. In later sets R210 was changed to 150,000 ohms, ½ watt (part #60B8-154); R211 was changed to 47,000 ohms, ½ watt (part #60B8-473). This change resulted in improved audio response on radio operation.

RUN 3 in 21C1 CHASSIS

Condenser C433, .002 mfd, 600 volts (part #64B5-14) was added across width control L402 to increase sweep width.

INTERFERENCE TRAP ADDED

Later production sets have an Adjacent Channel Interference Trap added between the connector lug (terminal of C113) on the TV tuner and pin 1 of 1st video IF amplifier V301 (6AU6). This trap consists of L307 and C314; it has part number 72A102.

IMPORTANT

This preliminary service data contains the complete electrical parts list for models using the 21B1, 21C1 television chassis and for the 5D2 (AM-FM) radio chassis. It also includes cabinet parts for models 36R37, 36R45, 36R46. It contains alignment data for the television chassis.

This TV chassis uses a 16" rectangular picture tube. It uses an improved intercarrier sound system (adjacent channel trap and improved sound take-off) and Automatic Gain Control circuits which are similar to the 20X1, 20Y1, 20Z1 chassis. Sweep circuits are similar to 24D1, 24E1, 24F1, 24G1, 24H1 chassis.

Model RC500 or Model RC550 record changer is used.

21B1, 21C1, 5D2 CHASSIS PARTS

RESISTORS

Sym.	Description	Part No.
†R101	3,900 ohms, 1/2 watt	98A 45-16
R102	47,000 ohms, 1/2 watt	98A 45-17
R103	10,000 ohms, 1/2 watt	98A 45-18
R104	2,200 ohms, 1/2 watt	98A 45-19
†R105	4,700 ohms, 1/2 watt	98A 45-20
R106	220,000 ohms, 1/2 watt	98A 45-21
R107	10,000 ohms, 1/2 watt	98A 45-18
†R108	4,700 ohms, 1/2 watt	98A 45-20
R109	15,000 ohms, 1/2 watt	98A 45-67
R201	470,000 ohms, 1/2 watt	60B 8-474
R202	82 ohms, 1/2 watt, carbon resistor only	60B 28-31
R203	1,000 ohms, 1/2 watt	60B 8-102
R204	390 ohms, 1/2 watt	60B 8-391
R205	10,000 ohms, 1/2 watt, 5%	60B 7-103
R206	10,000 ohms, 1/2 watt, 5%	60B 7-103
R207	47,000 ohms, 1/2 watt	60B 8-473
R208A	250,000 ohms, Volume	75B 11-16
R208B	1,500 ohms, Picture (R208 includes switch SW501)	75B 11-16
R209	4.7 megohms, 1/2 watt	60B 8-475
R210	150,000 ohms, 1/2 watt	60B 8-154
R211	47,000 ohms, 1/2 watt	60B 8-473
R212	1 megohm, 1/2 watt	60B 8-105
R213	330 ohms, 1 watt	60B 14-331
R301	10,000 ohms, 1/2 watt, 5%	60B 7-103
R302	1,000 ohms, 1/2 watt	60B 8-102
R303	1,000 ohms, 1/2 watt	60B 8-102
R304	1,000 ohms, 1/2 watt	60B 8-102
R305	47 ohms, 1 watt	60B 14-470
R306	18,000 ohms, 1/2 watt	60B 8-183
R307	1,000 ohms, 1/2 watt	60B 8-102
R308	68 ohms, 1/2 watt, carbon resistor only	60B 28-44
R309	10,000 ohms, 1/2 watt, 5%	60B 7-103
R310	1,000 ohms, 1/2 watt	60B 8-102
R311	150 ohms, 1/2 watt	60B 8-151
R312	1,000 ohms, 1/2 watt	60B 8-102
R313	560,000 ohms, 1/2 watt	60B 8-564
R314	680,000 ohms, 1/2 watt	60B 8-684
R315	4,700 ohms, 1/2 watt, 5%	60B 7-472
R316	Picture control	See R208B
R317	47,000 ohms, 2 watt	60B 20-473
R318	56,000 ohms, 2 watt	60B 20-563
R319	3,000 ohms, 15 watt, candohm	61A 3-14
R320	33,000 ohms, 1/2 watt	Part of L303
R321	10,000 ohms, 1/2 watt	Part of L304
R322	4,700 ohms, 2 watt	60B 20-472
R323	8,200 ohms, 1/2 watt	60B 8-822
R324	680,000 ohms, 1/2 watt	60B 8-684
R325	560,000 ohms, 1/2 watt	60B 8-564
R326	100,000 ohms, 1/2 watt	60B 8-104
R327	100,000 ohms, Brightness	75B 13-12
R328	22,000 ohms, 1/2 watt	60B 8-223
R401	22,000 ohms, 1/2 watt	60B 8-223
R402	8,200 ohms, 1/2 watt	60B 8-822
R403	8,200 ohms, 1/2 watt	60B 8-822
R404	1.5 megohms, 1/2 watt	60B 8-155
R405	1 megohm, Vertical Hold	75B 13-14
R406	1 megohm, 1/2 watt	60B 8-105
R407	8,200 ohms, 1/2 watt	60B 8-822
R408	2.5 megohms, Height	75B 13-3
R409	1 megohm, 1/2 watt	60B 8-105
R410	3,000 ohms, Vert. Lin	75B 13-7
R411	820 ohms, 1/2 watt	60B 8-821
R412	560 ohms, 1/2 watt	60B 8-561
R413	560 ohms, 1/2 watt	60B 8-561
R414	2.2 megohms, 1/2 watt	60B 8-225
R415	820 ohms, 2 watt	60B 20-821
R416	2.2 megohms, 1/2 watt	60B 8-225
R417	18,000 ohms, 1/2 watt	60B 8-183
R418	47,000 ohms, 1 watt	60B 14-473
R419	2,200 ohms, 1/2 watt	60B 8-222
R420	27,000 ohms, 2 watt	60B 20-273
R421	8.2 megohms, 1/2 watt	60B 8-825
R422	15,000 ohms, 1 watt	60B 14-153
R423	1,000 ohms, 1/2 watt	60B 8-102
R424	2,200 ohms, 1/2 watt	60B 8-222
R425	12,000 ohms, 2 watt	60B 20-123

†To secure proper high frequency characteristics, order exact part from Admiral distributor or use IRC metalized resistor only.

R426	100,000 ohms, 1/2 watt, 5%	60B 7-104
R427	100,000 ohms, 1/2 watt, 5%	60B 7-104
R428	470,000 ohms, 1/2 watt	60B 8-474
R429	4.7 megohms, 1/2 watt	60B 8-475
R430	12,000 ohms, 2 watt	60B 20-123
R431	5,600 ohms, 1/2 watt	60B 8-562
R432	1,500 ohms, 1/2 watt	60B 8-152
R433	120,000 ohms, 1/2 watt	60B 8-124
R434	25,000 ohms, Hor. Hold	75B 13-13
R435	8,200 ohms, 1 watt	60B 14-822
R436	150,000 ohms, 1/2 watt	60B 8-154
R437	1 megohm, 1/2 watt	60B 8-105
R438	8,200 ohms, 1/2 watt	60B 8-822
R439	68 ohms, 1/2 watt, carbon resistor only	60B 28-44
R440	47 ohms, 1/2 watt, carbon resistor only	60B 28-45
R441	82 ohms, 1/2 watt, carbon resistor only	60B 28-31
R442	6,800 ohms, 2 watt	60B 20-682
R443	2.7 ohms, 1/2 watt	60B 28-47
R444	470,000 ohms, 1 watt	60B 14-474
R445	1,000 ohms, 1/2 watt	60B 8-102
R446	750 ohms, Focus	75B 13-16
R501	270,000 ohms, 1 watt	60B 14-274
R502A, R502B	2,725 ohms, 2.5 watt; 2,650 ohms, 10 watt (candohm)	61A 5-8
R602	240 ohms, 1/2 watt, 5% (used in early 5D2 sets)	60B 7-241
R602	1,500 ohms, 1/2 watt (used in late 5D2 sets)	60B 8-152
	Before replacing, see 5D2 production change on reverse side.	
R603	22,000 ohms, 1/2 watt	60B 8-223
R604	470 ohms, 1/2 watt	60B 8-471
R605	820 ohms, 1/2 watt	Part of L606
R606	470 ohms, 1/2 watt	60B 8-471
R607	22 ohms, 1/2 watt	60B 8-220
R608	1 megohm, 1/2 watt	60B 8-105
R609	6,200 ohms, 1/2 watt, 5%	60B 7-622
R610	470,000 ohms, 1/2 watt	60B 8-474
R611	10,000 ohms, 1/2 watt	60B 8-103
R612	1,000 ohms, 1/2 watt	60B 8-102
R613	47,000 ohms, 1/2 watt	60B 8-473
R614	390 ohms, 1/2 watt	60B 8-391
R615	27,000 ohms, 1/2 watt	60B 8-273
R616	15,000 ohms, 1/2 watt	60B 8-153
R617	15,000 ohms, 1/2 watt	60B 8-153
R618	100,000 ohms, 1/2 watt	60B 8-104
R619A, R619B	1 megohm, Volume; 2 megohms, Tone (R619 includes on-off switch SW603) (Dual control)	75B 11-12
R620	10 megohms, 1/2 watt	60B 8-106
R622	560,000 ohms, 1/2 watt	60B 8-564
R623	22 ohms, 1/2 watt	60B 8-220
R627	1,000 ohms, 1 watt	60B 14-102

CONDENSERS

Sym.	Description	Part No.
C101	5 mmfd, ±.5 mmfd, Zero temp. coeff	98A 45-22
C102	.5 to 3 mmfd, ceramic trimmer	98A 45-87
C103	.001 mfd. min, ceramic	98A 45-24
C104	.5 to 3 mmfd, ceramic trimmer	98A 45-23
C105	120 mmfd, 5%, ceramic, −750 temp. coeff	98A 45-25
C106	100 mmfd, ceramic, −750 temp. coeff	98A 45-26
C107	.5 to 3 mmfd, ceramic trimmer	98A 45-23
C108	20 mmfd, Cer. Zero temp. coeff.	98A 45-27
C109	10 mmfd, 5%, ceramic, −750 temp. coeff	98A 45-79
C110	.5 to 3 mmfd, ceramic trimmer	98A 45-23
C111	.3 to 5 mmfd, fine tuning rotor	98A 45-92
C112	10 mmfd, 5%, ceramic, Zero temp. coeff	98A 45-64
C113	120 mmfd, 10%, silver mica	98A 45-78
C114	.001 mfd. min, ceramic	98A 45-24
C115	.001 mfd. min, ceramic	98A 45-24
C201	6.8 mmfd, −.00033 temp. coeff	65B 6-71
C202	20 mmfd, 5%, ceramic	65B 6-51
C203	.005 mfd, ceramic	65A 10-1
C204	180 mmfd, 5%, −.00003 temp. coeff	65B 6-59
C205	500 mmfd, ceramic	65B 6-6
C206	4 mfd, 50 V., electrolytic	67A 4-9
C207	.001 mfd, ceramic	65B 6-41
C208	.047 mfd, 200 volts, paper	64B 9-41
C209	.005 mfd, ceramic	65A 10-1
C210	50 mmfd, ceramic	65B 6-4
C211	.047 mfd, 400 volts, paper	64B 9-28
C212	.01 mfd, 400 volts, paper	64B 5-25
C213A, C213B, C213C	20 mfd, 25 V.; 10 mfd, 25 V.; 10 mfd, 450 V. (electrolytic)	67C 15-19
C214	.005 mfd, 600 volts, paper	64B 5-12
C301A, C301B	.0015 mfd. (dual ceramic)	65A 17-2
C302A, C302B	.0015 mfd. (dual ceramic)	65A 17-2
C303A, C303B	.004 mfd. (dual ceramic)	65A 17-1
C304	.005 mfd, ceramic	65A 10-1
C305	120 mmfd, ceramic	65B 6-66
C306	.22 mfd, 200 volts, paper	64B 8-37
C307A, C307B, C307C	20 mfd, 350 V.; 20 mfd, 350 V.; 60 mfd, 400 V. (electrolytic)	67C 15-17
C308	.047 mfd, 400 volts, paper	64B 9-28
C309	.1 mfd, 400 volts, paper	64B 5-20
C310	.047 mfd, 400 volts, paper	64B 9-28
C311	.047 mfd, 600 volts, paper	64B 8-9
C312A, C312B	.004 mfd. (dual ceramic)	65A 17-1
C313	.001 mfd, ceramic	65B 6-41
C314	120 mmfd, 3%, mica	65B 1-10
C401	.002 mfd, 600 volts, paper	64B 5-14
C402	.005 mfd, 600 volts, paper	64B 5-12
C403	.0047 mfd, mica	65B 21-472
C404	.0047 mfd, mica	65B 21-472
C405	.1 mfd, 600 volts, paper	64B 5-5
C406	.047 mfd, 600 volts, paper	64B 8-9
C407A, C407B, C407C	100 mfd, 50 V.; 20 mfd, 450 V.; 80 mfd, 350 V. (electrolytic)	67C 15-18
C409	.02 mfd, 400 volts, paper	64B 5-24
C410	.01 mfd, 400 volts, paper	64B 5-25
C411	Electrolytic	See C307B
C412	.001 mfd, mica	65B 21-102
C413	.001 mfd, mica	65B 21-102
C414	.47 mfd, 400 volts, paper	64B 9-72
C415	.005 mfd, 600 volts, paper	64B 5-12
C416	.047 mfd, 400 volts, paper	64B 9-28
C417	.01 mfd, 400 volts, paper	64B 5-25
C418	.0039 mfd, 5%, silver mica	65B 1-63
C419	330 mmfd, mica	65B 21-331
C420	330 mmfd, mica	65B 21-331
C421	470 mmfd, mica	65B 21-471
C422	Electrolytic	See C213B
C423	20 to 280 mmfd, trimmer, Hor. Drive	66A 30-1
C424	Electrolytic	See C213C
C425	.047 mfd, 600 volts, paper	64B 5-7
C426	.25 mfd, 600 volts, paper	64B 5-3
C427	.02 mfd, 400 volts, paper	64A 2-9
C428	.047 mfd, 200 volts, paper	64A 2-8
C429	500 mmfd, 20,000 V., ceramic	65B 18-5
C430	47 mmfd, 5%, 1,500 volts, silver mica	65B 1-64
C431	.1 mfd, 400 volts, paper	64A 2-10
C432	Electrolytic	See C307C
C433	.0022 mfd, 600 volts, paper	64B 9-11
C601	2 to 20 mmfd, trimmer	Part of L601
C602	.001 mfd. min, ceramic	65B 6-41
C603A, C603B, C603C, C603D	486 mmfd. (max.) AM RF; 15 mmfd. (max.) FM RF; 114 mmfd. (max.) AM Osc.; 15 mmfd. (max.) FM Osc. (gang) Dial drum spotwelded to gang.	68B 24
C604	.01 mfd. min, ceramic	65A 10-3
C605	.68 mmfd, ceramic	65A 16-1
C606	40 mmfd, ceramic, −.000750 temp. coeff	65B 6-67
C607	.001 mfd, ceramic	65B 6-41

C608	40 mmfd, silver mica (used in early 5D2 sets)	65B 1-65
	30 mmfd, silver mica (used in late 5D2 sets)	65B 1-69
	Before replacing, see 5D2 production change on reverse side.	
C609	.001 mfd, silver mica, 5%	Part of T604
C610	.01 mfd. min, ceramic	65A 10-3
C611	.01 mfd. min, ceramic	65A 10-3
C612	100 mmfd, silver mica, 5%	Part of T601
C613	300 mmfd, silver mica, 5%	Part of T604
C614	.01 mfd. min, ceramic	65A 10-3
C615	.01 mfd. min, ceramic	65A 10-3
C616	.01 mfd. min, ceramic	65A 10-3
C617	250 mmfd, ceramic	65B 6-5
C618	200 mmfd, silver mica, 5%	Part of T605
C619	100 mmfd, silver mica, 5%	Part of T602
C620	200 mmfd, silver mica, 5%	Part of T605
C621	.01 mfd. min, ceramic	65A 10-3
C622	.01 mfd. min, ceramic	65A 10-3
C623	100 mmfd. } dual ceramic	63A 7-1
C624	100 mmfd. }	
	If a section of this dual condenser becomes defective, replace with exact duplicate or two condensers of the same value with a tolerance within 10% of each other.	
C625	4 mfd, 150 volts, electrolytic	67A 4-2
C626	.001 mfd. min, ceramic	65B 6-41
C627	.01 mfd. min, ceramic	65A 10-3
C628	100 mmfd, ceramic, -.000750 temp. coeff	65B 6-68
C629	.001 mfd, ceramic	65B 6-41
C630	.01 mfd. min, ceramic	65A 10-3
C631	.1 mfd, 400 volts, paper	64B 1-20
C632	.005 mfd. min, ceramic	65A 10-1
C633	5 mmfd, ceramic	65B 6-61
C634	2.5 to 6 mmfd, ceramic trimmer	66A 28-1
C635	90 mmfd, silver mica, 3%	Part of T603
C636	.004 mfd. min. } dual ceramic	65A 17-1
C637	.004 mfd. min. }	
C638	.01 mfd. min, ceramic	65A 10-3
C639	.01 mfd. min, ceramic	65A 10-3
C641	.1 mfd, 400 volts, paper	64B 1-20

COILS and TRANSFORMERS

Sym.	Description	Part No.
L101	Antenna Coil	
	for Channel #2	98A 62-2
	for Channel #3	98A 62-3
	for Channel #4	98A 62-4
	for Channel #5	98A 62-5
	for Channel #6	98A 62-6
	for Channel #7	98A 62-7
	for Channel #8	98A 62-8
	for Channel #9	98A 62-9
	for Channel #10	98A 62-10
	for Channel #11	98A 62-11
	for Channel #12	98A 62-12
	for Channel #13	98A 62-13
L102	Mixer-Oscillator Coil	
	for Channel #2	98A 63-2
	for Channel #3	98A 63-3
	for Channel #4	98A 63-4
	for Channel #5	98A 63-5
	for Channel #6	98A 63-6
	for Channel #7	98A 63-7
	for Channel #8	98A 63-8
	for Channel #9	98A 63-9
	for Channel #10	98A 63-10
	for Channel #11	98A 63-11
	for Channel #12	98A 63-12
	for Channel #13	98A 63-13
	Before inserting replacement coil L 101 or L 102, see that teeth at inner end of coils fit together when fitted in detent plate at center of turret. If necessary file teeth slightly.	
L103	Mixer Plate Coil	98A 45-77
L104	Heater RF Choke	98A 45-13
L105	Heater Oscillator Choke	98A 45-14
L201	Sound Take-off Coil (includes R201, C201, C202)	72B 99-1
L301	Video Peaking Coil	73A 5-12
L302	Video Peaking Coil	73A 5-7
L303	Video Peaking Coil (wound on R320)	73A 5-13
L304	Video Peaking Coil (wound on R321)	73A 5-9
L305	Heater RF Choke	73A 2-5
L306	Heater RF Choke	73A 2-5
L307	Trap Coil (includes C314)	72A 102
L401	Horizontal Lock Coil (includes C418 and R431)	94A 17
L402	Width Control	94A 29-1
L403	Horizontal Linearity Control	94A 28
L404	Focus Coil	69C 117-3
L601	AM Loop Antenna, includes C601	69C 116-1
L602	FM Antenna	AB195
L603	FM Antenna Coil	69A 85
L604	AM Oscillator Coil	69A 86-1
L605	FM Oscillator Coil	69A 87
L606	FM Peaking Coil (wound on R605)	73A 5-11
L610	RF Dual Choke	69A 102
T201	Ratio Detector Transformer	72B 68
T202	Audio Output Transformer	
	for 21B1 chassis	79C 33-1
	for 21C1 chassis	79C 33-2
T301	1st IF Transformer (includes R306, R307, C302A, C302B)	72C 96-6
T302	2nd IF Transformer (includes R309)	72C 96-7
T303	3rd IF Transformer (includes C305)	72C 96-8
T401	Blocking Oscillator Transformer	79A 18-2
T402	Vertical Output Transformer	79B 29-1
T403	Deflection Yoke (includes R412, R413, R445, C430)	A3222
T404	Horizontal Output Transformer (includes tube cap clips)	79C 30-2
T501	Power Transformer	80C 26-1
T601	1st IF (FM) Transformer	
	for early 5D2 sets	72B 98
	for late 5D2 sets	72B 98-1
	Before replacing, see 5D2 production change on reverse side.	
T602	2nd IF (FM) Transformer	72B 76
T603	Ratio Det. Transformer	72B 39
T604	1st IF (AM) Transformer	
	for early 5D2 sets	72B 97
	for late 5D2 sets	72B 97-1
	Before replacing, see 5D2 production change on reverse side.	
T605	2nd IF (AM) Transformer	72B 94

MISCELLANEOUS PARTS for TV CHASSIS

Sym.	Description	Part No.
M201	Speaker Socket	88A 5-6
M202	Speaker Plug	88A 5-5
M203	Speaker	
	5" PM	78B 59-1
	8" PM	78B 49-1
	12" PM	78B 56-2
M204	Socket, Audio Input	88A 1
M401	Horizontal Output Fuse, 1/4 amp., 250 volts	84A 4-2
	Fuse Holder	84A 5-1
M501	Interlock Socket (Male)	89A 22-2
M502	Line Cord, with interlock socket	89A 22-1
M503	Cable Socket (Combination models only)	88A 20-2
SW501	Switch, On-Off Power (S.P.D.T.).	Part of R208
V306	Picture Tube	16RP4 or 16TP4
Bracket, Deflection Yoke Holding		15A 572
Bracket, Picture Tube Mounting (Supports front of picture tube)		
	Right side (facing tube)	15B 615-1
	Left side (facing tube)	15B 615-2
Bracket (for mtg. picture tube focus coil)		
	Top	
	Bottom	
Bracket, Tuner Shaft (Bakelit		
Clamp, Picture Tube Front M		
Bracket (clamps bracket to		
Clamp, Webbing (for mtg. pic		
Clip, Tube Cap		
for 6BQ6GT tube		
for 1B3GT tube		
Connector Lead, 2nd Anode (i plug)		
Cover, IF Strip		
Fuse Holder		
Insulating Plate (for 2nd anod condenser mtg.)		
Ion Trap		
for 16TP4 picture tube		
for 16RP4 picture tube		
Lever, Focus Coil Adjusting		
Lock, 1B3 Mounting Shell Dis		
Pilot Light (#47)		
Pilot Light Socket (used in co models)		
Rubber Channel, 1" long (for tube bracket)		
Rubber Collar (mounted over tube neck)		
Rubber Grommet, 2nd Anode		
Rubber Insert, 1" diamter (bo side support of picture tube		
Rubber Strip, Adhesive (3/16" used under webbing band)		
Shield, Tube		
plain type		
slotted type		
Socket, Jewel Light		
Socket, Shell (cover for 1B3 t		
Socket, Tube		
miniature bakelite (7 pin)		
octal, plain		
octal, ringmount (mica fill		
miniature (9 pin)		
picture tube		
Socket, Test (4 terminal)		
Spring, Picture Tube Groundi		
Tuner, Television (compiete)		
Webbing, Picture Tube Mtg. S (42" length)		

MISCELLANEOUS P for TV TUNER 940

Sym.	Description
M104	Shaft Shell & Rotor Ass Tuning) (with 4 1/16 brass shaft shell)
M107	Bracket, Sharp Tuning Retaining
M108	Spring, Detent Plate G
M109	Shield, Tube (Slotted; f
M110	Shield, Tube (Plain; fo
M112	Spring, Slug Retaining
M113	Washer, Fibre Spacer (1/4" IDx1/2" OD)
M114	Nut, Locking Spring (fo
M115	Screw, Trimmer (4-36
M116	Screw, Bracket Mtg. (6
M117	Slug, Brass Tuning
M118	Stator Plate (ungrounde Ceramic Insulator, ing C111 (includes m
M120	Tuner, Television (con
M121	Roller, Detent (3/8" di 3/32" dia. bearing)
M122	Spring, Detent (2 5/16
M123	Contact Plate and Brac (Uses Wiping Conta
M124	Spring, Sharp Tuning (Flat bronze 1 7/16
M125	Spring, Front and Rea (Wire 2 3/4" long, 3
M126	Turret and Shaft Asser coils) (5 3/8" shaft rounded detent depre

be and

.....15C 613
.....15C 614
lite).....32A 111-1
Mounting
to chassis)... 15A 616
picture tube)...15A 526

.....88A 16-8
.....19A 54
(includes
.....88A 16-7
.....15B 641
.....84A 5-1
ode filter
.....32A 135-1

.....94A 15-2
.....94A 15-1
g.....15B 574
Disk.....15A 589
.....81A 1-8
combination
.....82A 11-58
or picture
.....12A 9-11
er picture
.....12B 40
e Housing.....12A 2-7
bottom and
be).....12A 16-1
.6"x3/8"x2"
).....12A 5-6

.....87A 7-7
.....98A 45-73
.....87A 6-3
3 tube socket)..88A 27-1

).....87A 3-7
.....87A 5-1
illed).....87A 20-2
.....87A 25-1
.....87B 31-5
.....10A 28
ding.....19A 23-2
e).....94A 18-4
. Strap
.....50A 3-4

S PARTS
4C18-4

on Part No.

Assy. (Sharp
/16" long
..... 98A 45-92
ng Rotor
.....98A 45-95
Grounding....98A 45-94
; for 6J6).....98A 45-73
for 6AG5).....87A 7-7
ng (Osc. coil)..98A 45-52
er
).....98A 45-63
(for trimmers).98A 45-31
36x5/8").....98A 45-33
. (6-32x1/4")..98A 45-62
..... 98A 45-88
nded); Silver with
r, for Sharp Tun-
s mtg. bracket).98A 45-86
complete).....94C 18-4
' dia.,
g).....98A 45-82
16" long).....98A 45-81
racket Assembly
ntacts)..... 98A 45-84
g Rotor Contact
16"x1/2").....98A 45-83
ear Turret Shaft
, 3/64" dia.).. 98A 45-85
sembly (less
ft and 3/16"
pression).....98A 45-91

MISCELLANEOUS PARTS for 5D2 RADIO

Sym.	Description	Part No.
M601	Socket, Phono Input	88A 1
M606	Socket, Phono Motor	88A 8-7
M607	Plug and Shielded Cable	89A 29-11
M608	Plug, 14 Pin	88A 20-1
	Cover, Plug (for M608)	88A 20-12
	Cable (9 wire), includes plug M608	AB216
	Socket and Leads, Pilot Light	82A 2-3
SW601	Switch, "PH-AM-FM" (includes SW602)	76B 22
SW602	Switch, Phono Motor	76B 23
SW603	Switch, ON-OFF Power (S.P.D.T.)	Part of R619
	Antenna Lead (300 ohm transmission line, 32" length)	95A 16-11
	Bracket, Tuning Sleeve	15A 394
	Clamp, Cable	11A 2-9
	Cover Assembly, Chassis	A1880
	Dial Back and Bracket Assembly	A3153
	Dial Cord (44" length)	50A 1-3
	Dial Scale	22B 22-1
	Escutcheon, Radio	23D 63-1
	Grommet, Rubber (Gang mounting)	12A 1-4
	Pilot Light (#47)	81A 1-8
	Plate, Switch	15A 409
	Pointer, Metal Dial	25A 37
	Pointer Cover, Plastic	25A 38
	Sleeve, Spacer (Gang mounting)	29A 2-10-71
	Sleeve, Spacer (AM loop mounting)	29A 3-15
	Snap Button (for mounting dial scale)	13A 1-1-71
	Socket, Tube	
	for Miniature Tube (7 pin)	87A 3-7
	for Miniature Tube (9 pin)	87A 25-2
	Speed Nut (for mtg. radio escutcheon)	2B 12-4-68
	Spring, Dial Cord Tension	19B 1-3
	Spring, Tube Retainer (for 12AT7)	19A 56-1

RECORD CHANGER PARTS

Model RC500 or Model RC550 record changers are used. The changer model number is on the top rear of the changer pan and also on the changer model label on the underside of the changer. For the RC500 changer refer to Service Manual No. S298; for the RC550 changer, refer to Service Manual No. S327.

Sym.	Description	Part No.
M602	Cable, Shielded (includes plug)	412A 11-2
M603	Cartridge, Push-in Needle Type (includes needle)	409A 13-1
	Cartridge, Knurled Nut Retaining Type (includes needle)	409A 13
M604	Motor (3 speed)	407B 19
M605	Plug, Motor (Male)	88A 8-1
	Adapter, 45 RPM (envelope of 12)	48A 8-1
	Belt, Rubber Drive	406A 20
	Idler Wheel Assembly (includes tire)	G400A 279
	Manual, Service	
	for RC500 changer	S298
	for RC550 changer	S327
	Needle, Phonograph	
	for 409A13 cartridge	98A 15-19
	for 409A13-1 cartridge	98A 15-18
	Needle Retaining Nut (for 409A13 cartridge)	98A 54-2
	Spring, Changer Float	405A 139
	Touch-Up Paint	
	Coppertone	98A 54-3
	Gold Hammertone	98A 54-12

PARTS for TILT-OUT MECHANISM

Description	Part No.
Eye Bolt (for tilt-out spring)	1A 87-1
Grommet, Rubber (for tilt-out spring)	12A 1-1
Hinge Assembly, Tilt-Out	
Left side (facing front)	AC183-1
Right side (facing front)	AC183-2
Screw, Tilt-Out Brkt. Shipping (10-24x3/8")	1A 51-25-71
Screw, Tilt-Out Adjusting Bracket Mtg. (#8-32x1/4" Bd. H.M.S.)	85-250-C2-71
Screw, Tilt-Out Tie Rod Mtg. (#6-32x1/4" Bd. H.M.S.)	365-250-C2-71
Spring, Tilt-Out Coil (2 3/8" unstretched)	19A 15-1
Spring, Tilt-Out Arm Retaining (7 1/4" unstretched)	19A 59
Tie Rod, Tilt-Out	28A 22-1

CABINET PARTS for 36R37 (Blond), 36R45 (Walnut), 36R46 (Mahogany)

The above model numbers may contain the suffix "N"

Part No.	Description
A3060	Antenna, Built-in TV
AB195	Antenna, Built-in FM
43C 129-1	Back, Radio-Phono and Record Compt.
A3224	Back, TV Compt. (Complete)
*35E 123-55	*Base, Cabinet (Legs), Blond
*35E 124-57	*Base, Cabinet (Legs), Walnut
*35E 124-58	*Base, Cabinet (Legs), Mahogany
*35E 123-3	*Cabinet, Blond
*35E 124-1	*Cabinet, Walnut
*35E 124-2	*Cabinet, Mahogany
44B 173	Carton and Fillers, for 36R37
44B 172	Carton and Fillers, for 36R45, 36R46
98A 60-7	Caster (for cabinet leg)
11A 2-6	Clamp, Cable
*35E 123-53	*Door, Record Compt. (Complete) Blond
*35E 124-53	*Door, Record Compt. (Complete) Walnut
*35E 124-54	*Door, Record Compt. (Complete) Mahog.
*35E 123-51	*Doors, TV and Radio-Phono Compt., Blond (matched pair)
*35E 124-50	*Doors, TV and Radio-Phono Compt., Walnut (matched pair)
*35E 124-51	*Doors, TV and Radio-Phono Compt., Mahogany (matched pair)
35E 124-56	Door Catch and Strike Plate, for Walnut and Mahogany
35E 123-59	Door Catch and Strike Plate, for Blond
23D 60-4	Escutcheon, Control (Plastic; less door)
23D 60-1	Escutcheon Door (Plastic)
23D 63-1	Escutcheon, Radio
98A 61-8	Gasket, Sponge Rubber (includes chipboard back for picture window)
36B 16-1	Grille, Metal, for Blond
36B 13	Grille, Metal, for Walnut and Mahogany
36B 13-1	Grille Rosette (for 36B13 grille)
36B 3-20	Grille Cloth (2 pieces) for Blond
36B 3-27	Grille Cloth (2 pieces) for Walnut & Mahog.
37A 23-1	Handle, Door (for upper doors) for Blond
37A 25-1	Handle, Door (for upper doors) for Walnut and Mahogany
33A 41-2	Handle, Door (for blond record compt. door)
35E 123-57	Hinge, Knife (Pair), for Blond
35E 124-55	Hinge, Knife (Pair), for Walnut & Mahog.
82A 10-8	Jewel, Pilot Light (Green)
33D 55-1	Knob, Radio, 'PH-AM-FM', 'Tuning'
33D 55-4	Knob, Radio, 'Off-Volume'
33D 55-5	Knob, Radio, 'Tone'
33C 53-9	Knob, TV, 'Channel'
33C 53-10	Knob, TV, 'Tuning'
33C 53-11	Knob, TV, 'Off-Volume'
33C 53-12	Knob, TV, 'Picture'
81A 1-8	Light, Pilot #47
89A 22-1	Line Cord and Interlock Socket
6A 4-6-0	Line Cord Mounting Rivet
1A 7-23-71	Screw, for mtg. picture window (#6x3/8 R.H.W.S.)
1A 7-9-57	Screw, for mtg. control escutcheon (#4x3/8 R.H.W.S.)
1A 7-24-71	Screw, for mtg. cabinet back (#6x1/2 R.H.W.S.)
1A 67-43-71	Screw, for mtg. TV chassis (1/4-20x1")
98A 44-47	Spacer, Fibre Cabinet Leveler (Kit of 6)
78B 56-2	Speaker, 12 inch PM
2B 10-24-59	Speed Nut (for mtg. radio escutcheon)
18A 45	Spring Clip (for mtg. picture window)
18A 41	Spring, Hinge (for mtg. escutcheon door)
18A 43-2	Spring, TV Knob Tension, "Off-Volume"
18A 43-1	Spring, TV Knob Tension, "Tuning"
18A 43-3	Spring, TV Knob Tension, "Channel"
	Tilt-Out Parts See "Parts For Tilt-Out Mechanism"
5A 4-14	Washer, Felt, behind "Channel" knob
5A 4-15	Washer, Felt, behind "Picture" knob
5A 4-11	Washer, Felt, behind radio knobs
23D 67	Window, Picture

If only mounting tab is broken on picture window, a new metal tab (part number 15A668) can be installed with a soldering iron. Instructions (Form S340) included with tabs.

* To insure proper matching and fit, also specify cabinet manufacturer's code letters (usually burned or stamped on back rail of cabinet). Wood parts are supplied only if old part cannot be repaired. When ordering describe condition of old part in detail.

TELEVISION ALIGNMENT PROCEDURE

ALIGNMENT ADJUSTMENT IDENTIFICATION

Adj.	Symbol	Frequency	Function
A1	T303	25.3 MC	3rd IF Transformer
A2	T301	25.3 MC	1st IF Transformer
A3	T302	23.1 MC	2nd IF Transformer
A4	L103	23.1 MC	Mixer Plate Coil
A5	T201	4.5 MC	Primary of Ratio Detector Transformer
A6	L201	4.5 MC	Sound Take-off Coil
A7	T201	4.5 MC	Secondary of Ratio Detector Transformer
A8	C102		Trimmer (RF Amplifier)
A9	C104		Trimmer (RF Amplifier)
A10	C107		Trimmer (Mixer)
A11	C110		Trimmer (HF Oscillator)
A12	L102		Slug, HF Oscillator Coils

IF AMPLIFIER ALIGNMENT

a. **Before starting alignment, be sure IF cover shield is mounted to chassis.**

b. Disconnect antenna and connect a jumper across antenna terminals.

c. Set receiver to channel 13 or other unassigned high channel to prevent signal interference during IF alignment.

d. Set Picture control fully to the right (clockwise). Retain this setting for all IF adjustments.

e. Allow about 15 minutes for receiver and test equipment to warm up.

f. To service TV chassis with radio disconnected, complete the heater circuit by connecting a jumper from pin "L" to pin "K" of socket M503. See schematic.

Step	Signal Gen. Freq. (MC)	VTVM and Signal Generator Connections	Instructions	Adjust
1	25.3	VTVM high side to test jack "T", common to chassis. Connect generator high side to 6J6 (V102) tube shield; insulate shield from chassis. Connect common to chassis near 6J6 tube base.	Use VTVM 3 volt DC scale. When peaking, keep reducing generator output for VTVM reading of approx. 1 volt or less.	A1 and A2 for maximum.
2	23.1			A3 and A4 for maximum.
3	To insure correct IF alignment, make the "IF Response Curve Check" given below, or make the "Overall RF and IF Response Curve Check (Step 1)" given later. The overall check should be made after making all other alignments.			

IF RESPONSE CURVE CHECK

(Using sweep generator and oscilloscope with sweep input to RF Mixer V102.)

Differences in tube gain and component values affect IF response. These differences are not apparent in alignment of IFs when using a signal generator and VTVM (single frequency alignment); hence it is preferable that an IF response curve check be made after completion of the IF amplifier alignment.

The IF response curve check can be made as indicated directly below. However, also note that a better check can be made by feeding the sweep signal through the entire RF and IF system as given under "Overall RF and IF Response Curve Check (Step 1)". The overall check should be made after making all other alignments.

a. Make all control settings and connections as given in the IF amplifier alignment chart; see "a" through "f" above.

b. Connect oscilloscope* between point "V" and chassis ground through a decoupling filter; see fig. 29. Keep leads away from receiver.

c. Connect sweep generator high side to tube shield of 6J6 (V102) osc-mixer tube. Be sure to insulate tube shield from chassis. Connect sweep generator common to chassis close to 6J6 tube base. Set sweep generator to sweep the IF band pass (19 to 29 MC).

d. Loosely couple marker generator high side to the sweep generator lead connected to tube shield on tuner; common to chassis ground.

To avoid distortion of the response curve, keep the sweep generator and marker generator outputs at a very minimum. Marker pips should be just kept barely visible. To minimize distortion, set sweep generator output for VTVM reading of approximately .5 volt DC, measured between test jack "T" and chassis. Connecting a 1½ volt battery (negative to test jack "T", positive to chassis) will allow greater signal input without distorting the response curve.

e. Check curve obtained against the ideal IF response curve shown in figure 28. Since it is not always possible to get ideal curves, it should be noted that the height of opposite peaks should be within 3db or 30% of each other. The dip or valley in the center of the curve should not be greater than 3db or 30% down from the highest peak of the curve. Check video and sound IF carrier points by means of marker generator. It is important that marker pips be in the proper location on the response curve. The 25.75 MC marker, should be 6db below the highest peak (50% point on the high frequency side of the curve). The 22 MC marker should be at the opposite side of the response curve, located approximately 18db (85%) below the highest peak. The 21.25 MC marker should be located at least 26db (95%) below the highest peak, and may or may not be visible.

Consistent with proper band width and correct location of markers, the response curve should preferably have maximum amplitude, symmetry, and flat top appearance.

If the procedure given has been carefully followed and the response curve obtained differs greatly from the curve shown in figure 28, repeat the IF Amplifier Alignment, making sure generator frequencies are precise and adjustments are accurately made.

*** In dealing with RF and IF response curves, it is well to remember that an inverted or mirror image may result, depending on the sweep generator and oscilloscope used. The general waveform should still be identical.**

When using a wide band oscilloscope for alignment, marker pips will be more distinct if condenser from 100 to 1,000 mmfd. is connected across the oscilloscope input. Caution: Use the smallest condenser possible, since too high a capacity will affect the shape of the response curve.

ALIGNMENT HINT

After becoming familiar with alignment procedure, some servicemen simplify subsequent alignment of sets by merely using the essential alignment data given in figures 29 and 30.

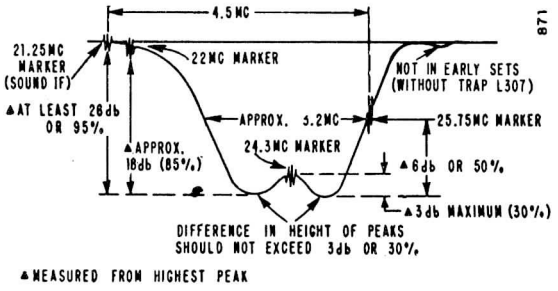


Figure 28. IF Response Curve.

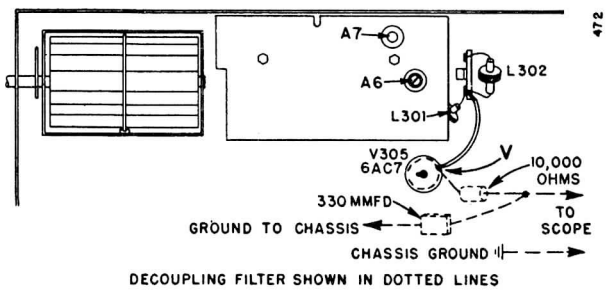


Figure 29. Bottom View Showing Test Point "V".

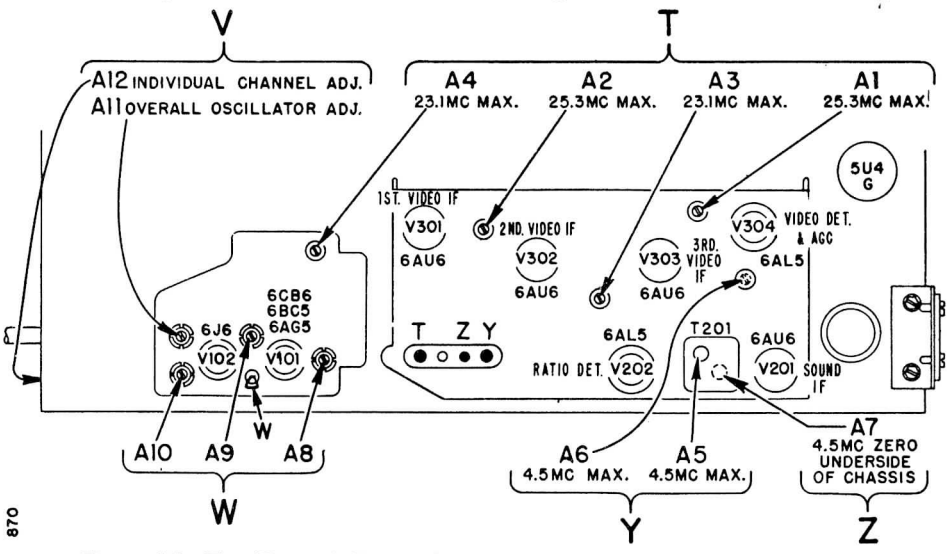


Figure 30. Top View of Chassis Showing Alignment Adjustment Locations.

4.5 MC SOUND IF ALIGNMENT

a. Disconnect antenna and connect a wire jumper across antenna terminals.

b. Set Picture control fully to the right (clockwise).

c. Connect signal generator high side to point "V" through a .01 mfd. condenser.

d. Allow about 15 minutes for receiver and test equipment to warm up.

e. Use a NON-METALLIC alignment tool. If Ratio Det. Transformer (T201) has hollow core slugs, bottom slug adjustment A7 can be made from top of chassis, if you use alignment tool #98A30-7 obtainable from Admiral Distributor. Bottom slug (A7) can be reached through the hole in the core of the upper slug (A5).

f. To service TV chassis with radio disconnected, complete the heater circuit by connecting a jumper from pin "L" to pin "K" of socket M503. See schematic.

Step	Signal Gen. Freq. (MC)	VTVM Connections	Instructions	Adjust
	Since the transmitted video and sound carriers have an accurate 4.5 MC frequency difference, a TV station signal may be used instead of a signal generator for alignment of steps below. When using a television signal, it may be necessary to use a higher scale on the VTVM. IMPORTANT: When using a signal generator, be sure to check it against a crystal calibrator or other frequency standard for accurate frequency calibration at 4.5 MC. Accuracy is required within one kilocycle.			
1	**†4.5**	**To test jack "Y"**	**Use 3 volt DC scale on VTVM. Keep VTVM leads well separated from signal generator and chassis wiring.**	**A5 and A6 for maximum (keep reducing generator output to keep VTVM at approx. 1 volt).**
2	**†4.5**	**To test jack "Z"**	**Use 3 volt zero center scale on VTVM, if available. Keep VTVM leads well separated from signal generator and chassis wiring.**	****A7 for zero on VTVM (the correct zero point is located between a positive and a negative maximum).**

† Signal may be unmodulated or 400 cycle AM modulated.

**** If A7 was far off, repeat steps 1 and 2.**

RF AND MIXER ALIGNMENT

a. Disconnect 1½ volt battery from test jack "T" if used earlier. Connect a wire jumper from test jack "T" (Fig. 30) to chassis. Leave connected for all steps in this alignment.

b. Disconnect antenna from receiver.

c. Connect sweep generator to antenna terminals. If sweep generator does not have a built-in marker generator, loosely couple a marker generator to the antenna terminals. To avoid distortion of the response curve, keep sweep generator output at a minimum, marker pips just barely visible.

d. Connect oscilloscope through a 10,000 ohm resistor to test point "W" on tuner (Fig. 30). Keep scope leads away from chassis.

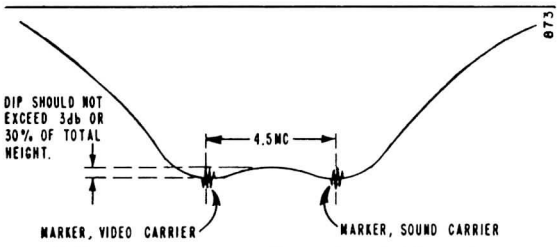
e. Allow about 15 minutes for receiver and test equipment to warm up.

f. To service TV chassis with radio disconnected, complete the heater circuit by connecting a jumper from pin "L" to pin "K" of socket M503. See schematic.

Step	Marker Gen. Freq. (MC)	Sweep Gen. Frequency	Instructions
1	*205.25 **209.75	Sweeping Channel 12	**Check for curve resembling RF Response Curve shown below. If necessary, adjust A8, A9 and A10 (Figure 30) as required. Consistent with proper band width and correct marker location, response curve should have maximum amplitude and flat top appearance.**
2	See table below.		**Check each channel operating in the service area for curve resembling RF Response Curve shown below. When checking any channel, set the sweep and marker generators for the proper frequencies as indicated in the table below. In general, the adjustment performed in step 1 is sufficient to give satisfactory response curves on all channels. However, if reasonable alignment is not obtained on a particular channel, (a) check to see that coils have not been intermixed, or (b) try replacing the pair of coils for that particular channel, or (c) repeat step 1 for the weak channel as a compromise adjustment to favor this particular channel. If a compromise adjustment is made, other channels operating in the service area should be checked to make certain that they have not been appreciably affected.**

* Video Carrier Frequency (MC). ** Sound Carrier Frequency (MC).

Channel Number	Channel Freq., MC	Video Carrier, MC	Sound Carrier, MC
2	54- 60	55.25	59.75
3	60- 66	61.25	65.75
4	66- 72	67.25	71.75
5	76- 82	77.25	81.75
6	82- 88	83.25	87.75
7	174-180	175.25	179.75
8	180-186	181.25	185.75
9	186-192	187.25	191.75
10	192-198	193.25	197.75
11	198-204	199.25	203.75
12	204-210	205.25	209.75
13	210-216	211.25	215.75



Full skirt of curve will not be visible unless generator sweep width extends beyond 10 MC.

Figure 31. RF Response Curve (see "Oscilloscope Note" below).

OSCILLOSCOPE NOTE

In dealing with RF and IF response curves, it is well to remember that an inverted or mirror image may result, depending on the sweep generator and oscilloscope used. The general waveform should still be identical.

When using a wide band oscilloscope for alignment, marker pips will be more distinct if condenser from 100 to 1,000 mmfd. is connected across the oscilloscope input. Caution: Use the lowest capacity condenser possible, since too high a capacity will affect the shape of the response curve.

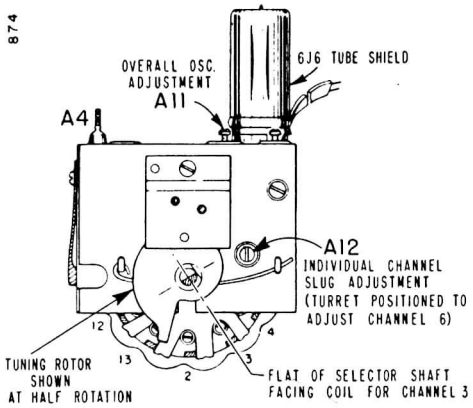


Fig. 32. Front View of Tuner.

OVERALL RF and IF RESPONSE CURVE CHECK (Step 1) and HF OSCILLATOR ALIGNMENT (Step 2)

(Using sweep generator and oscilloscope.)

a. Disconnect antenna.

b. Disconnect signal generator and VTVM (if used earlier).

c. Set the Tuning control at half rotation by rotating it approximately 150° as shown in figure 32. Set Picture control fully to the right (clockwise).

d. Connect sweep generator to antenna terminals. If sweep generator does not have a built-in marker generator, loosely couple a marker generator to the antenna terminals. To avoid distortion of the response curve, keep sweep generator output at a minimum, marker pips just barely visible. Connecting a 1½ volt battery (negative to test jack "T"; positive to chassis) will allow greater signal input without distorting response curve.

e. Connect oscilloscope between point "V" and chassis ground through a decoupling filter (see figure 29). Keep oscilloscope leads away from chassis.

f. Allow about 15 minutes for receiver and test equipment to warm up.

g. When adjusting A12, use a NON-METALLIC alignment screwdriver with a ⅛ inch blade.

h. To service TV chassis with radio disconnected, complete the heater circuit by connecting a jumper from pin "L" to pin "K" of Socket M503. See Schematic.

Step	Marker Gen. Freq. (MC)	Sweep Gen. Frequency	Instructions
1			**While sweeping the RF band pass (channel 13 or other unassigned high channel), check the overall response curve obtained against the ideal curve shown below. If shape of curve is not within limits shown, it will be necessary to repeat the IF Amplifier Alignment. The IFs must be accurately aligned before correct oscillator adjustment can be made.**
2	**See channel frequency table on previous page.**		**Check need for oscillator alignment by comparing the response curve obtained (for each channel operating in the service area) with the "Overall RF and IF Response Curve" shown below. With correct oscillator alignment, the video and sound markers should locate at the points shown on the response curve. The Tuning control must be at half rotation (see figure 32) when making this check.** **If a major number of channels are far off in the same direction, make the overall oscillator adjustment A11. (Touch-up of individual channel slugs A12 may also be required.)** **If only individual channel adjustment is required, adjust the proper channel slug A12.** **Make all oscillator adjustments so that the video and sound marker pips appear at the proper points on the response curve. Important: Before making oscillator adjustments, be sure that the Tuning control is set at half rotation; see figure 32. Only slight rotation of the slug (A12) will be required; turning the slug in too far will cause the slug to fall into the coil. (If an oscillator slug should fall into a coil, remove the coil, move the slug retaining spring aside, lightly tap the open end of the coil against a solid object until the slug slips out. Replace slug and set the slug retaining spring into its cut-out slot.)**

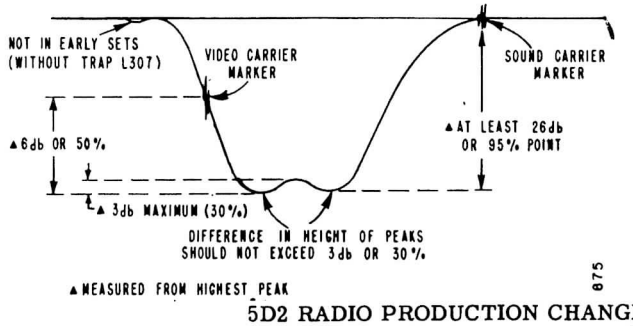
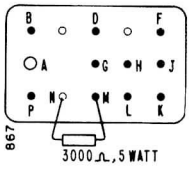


Fig. 33. Overall RF and IF Response Curve.

SERVICING RADIO SEPARATELY



The radio receives its operating voltages from the power supply on the TV chassis. It is necessary to use a separate power supply if the radio is to be operated without the TV chassis. The 2PA1 power supply, which is used in radio-phono-television combination sets with the 20Z1 (12" picture) television chassis and 5B2 radio, can be used to operate the 5D2 radio if a 3,000 ohm, 5 watt resistor (part number 61A1-15) is connected between pins M and N of the 2PA1 socket as illustrated.

5D2 RADIO PRODUCTION CHANGE

To improve sensitivity of the 5D2 radio, the 1st IF transformers in the AM and FM stages were changed.

The 1st AM-IF transformer (T604) used in early sets, part 72B97 has been replaced with part 72B97-1.

The 1st FM-IF transformer (T601) used in early sets, part 72B98 has been replaced with part 72B98-1.

To accommodate this change of the IF transformers, C608 has been changed from 40 mmfd (part 65B1-65) to 30 mmfd (part 65B1-69); R602 has been changed from 240 ohms, 5%, 1/2 watt (part 60B7-241) to 1,500 ohms, 1/2 watt (part 60B8-152).

IMPORTANT: All changes mentioned above must be made when replacing early IF transformers with late IF transformers.

MODELS 36R37, 36R45, 36R46, Ch. 21B1, 21C1

Form No. S336

(1) Additions to the preliminary service data already published on 21B1, 21C1, 5D2 chassis.

(2) Circuit information on 21D1, 21H1, 21J1 television chassis and 3C1 radio chassis.

(3) Revised instructions on Horizontal Drive and Horizontal Linearity adjustments.

(4) Cabinet parts for models 16R12, 26R12, 26X55A to 26X75A, 26R25A to 26R37A, and 39X35, 39X36.

21D1, 21H1 and 21J1 CHASSIS

The 21B1 and 21C1 chassis use a 16" rectangular picture tube. The 21D1 chassis use a 16" round picture tube. The 21H1 and 21J1 chassis use a 19" round picture tube, which is mounted separately from the chassis.

The 21B1, 21C1 chassis (16" rectangular tube) and the 21H1, 21J1 chassis (19" round tube) are the same electrically except for some differences in the deflection yoke. See the schematic and the schematic inset (for the deflection circuit used in 19" sets).

The 21D1 (16" round) chassis differs in that the vertical and horizontal output circuits have differences in some component values, in the tube complement, and in B+ distribution. The vertical output tube is a 6W6GT in the 21D1 chassis; the horizontal output tube is a 6CD6GT. Since there are differences in the horizontal output circuit of the 16" round sets, adjustment of the horizontal drive will be different. See the discussion on the following pages.

3C1 RADIO (AM ONLY)

Combination models 39X35, 39X36 use the 3C1 radio (AM only). See schematic. The radio receives its operating voltage from the TV chassis. The radio can be operated separately from the television chassis by using the 2PA1 power supply as instructed in "Preliminary Service Data", Form No. S336-1.

PRODUCTION CHANGES AND SERVICE NOTES

RUN 4 in 21C1 CHASSIS and RUN 1 in 21B1 CHASSIS

Adjacent Lower Channel Sound Trap (L307 and C314) Added. Later production sets have an Adjacent Lower Channel Sound Trap added between the connector lug (terminal of C113) on the TV tuner and pin 1 of this 1st IF amplifier tube V301 (6AU6). The trap (part number 72A102), consisting of L307 and C314, is pre-tuned at 27.25 MC.

This trap will eliminate the herringbone interference pattern produced by the sound carrier of the adjacent lower channel. Close examination of this type of interference will reveal that the fine lines of the herringbone pattern will vary in accordance with the speech or music on the adjacent lower channel.

Since FM interference from other sources will also produce a herringbone pattern, the presence of interference from a station on the adjacent lower channel should be definitely determined before deciding that the trap is required. This can be checked by quickly turning the channel selector to the adjacent lower channel. After installing the trap, realign slug A4 (mixer plate coil L105) as instructed under "IF Amplifier Alignment" in Preliminary Service Data, Form No. S336-1.

All 21D1, 21H1, 21J1 chassis have this trap.

RUN 5 in 21C1 CHASSIS and RUN 2 in 21B1 CHASSIS

Noise Filter Added to Improve Sync Immunity to Noise. In areas where the noise level is high, noise peaks may affect the horizontal or vertical sync and cause the picture to shake horizontally or lose horizontal or vertical sync. A change in value of resistor R323 and an additional filter (R329 and C315) have been incorporated in the sync circuit of later production chassis to reduce this trouble. See schematic.

This circuit change began with run 2 of 21B1 chassis and run 5 of 21C1 chassis; all 21D1, 21H1, 21J1 chassis will have this sync circuit. Early production receivers may be modified by following the procedure given below:

1. Locate the 9 lug terminal strip adjacent to vertical output transformer T402.

2. Remove resistor R323 (8200 ohms) from between lugs 4 and 6, counting 1 from end of strip near T402.
3. Connect a 18,000 ohms, $\frac{1}{2}$ watt resistor (part number 60B8-183) between lugs 5 and 6.
4. Between lugs 4 and 5, connect a 150 mmfd. mica condenser (part number 65B21-151) with a 270,000 ohm, $\frac{1}{2}$ watt resistor (part number 60B8-274) in parallel.

RUN 2 in 21D1 CHASSIS – CHANGE in 21J1 CHASSIS

In some 21D1 and 21J1 chassis, condenser C433 was changed from .002 mfd, to .0047 mfd, 600 volts (part number 64B9-15). Some sets having this change use a single .0047 mfd. condenser; other sets use two .002 mfd. condenser in parallel. This change was made to increase sweep width. Condenser C433 is .002 mfd, in later sets using an improved horizontal output transformer.

R411 in 21D1 CHASSIS CHANGED to INCREASE RANGE of VERTICAL LINEARITY CONTROL (R410)

Resistor R411 was changed from 820 ohms, 1 watt to 680 ohms, 1 watt (part number 60B14-681). This change was made to increase the range of the VERT. LIN. control R410.

ALTERNATE VERTICAL OUTPUT TUBE (V402) in 21B1, 21C1, 21H1, and 21J1 CHASSIS

Some sets with 16" rectangular or 19" round picture tube may use a 6SN7GT tube as an alternate for the 6S4 vertical output tube (V402). The schematic shows the circuit used with the 6S4 tube; the schematic inset shows the circuit used with the 6SN7GT tube.

ALTERNATE IF TUBE (V301, V302, V303)

Some sets may use a 6AG5 tube as an alternate for the 6AU6 tube in the 3rd IF stage (V303); other sets may use a 6AG5 tube for the 1st, 2nd and 3rd IF stages (V301, V302 and V303). When the 6AG5 tube is used, tube socket terminal 2 is unused (not grounded) as pins 2 and 7 of this tube are connected internally. A tube shield is used in the 1st and 3rd IF stages with the 6AG5 tube.

ALTERNATE TUBE USED IN 3C1 RADIO

Early sets used a 6AV6 tube for V703 (Det-AVC-AF). A few of these early sets used the 6AT6 tube. Later production sets use the 6SQ7 tube, which is the metal tube equivalent.

ALTERNATE CONTROL ESCUTCHEONS

Two alternate control escutcheons are used with these sets. Although the escutcheons are interchangeable as a complete unit, individual parts for the two alternate escutcheons are not interchangeable. The different escutcheons can be identified by the type of door spring used and the differences in the cutout slot which supports the ends of the door springs.

The parts for the control escutcheon having an "I" shaped slot using a flat (bronze) door spring are:

Escutcheon, Control (less door).....23D 60-3
Escutcheon Door.....23D 60-2
Escutcheon Door Spring, Flat (bronze)..18A 41

The parts for the control escutcheon having a "U" shaped slot using a coil (wire) door spring are:

Escutcheon, Control (less door)..... 23D 60-6
Escutcheon Door..... 23D 60-7
Escutcheon Door Spring, Coil (wire)
right side (facing front).....19A 65-1
left side (facing front)..... 19A 65-2

REPAIRING MOUNTING LUGS on PICTURE WINDOW

If only the mounting lugs are broken on picture windows 23D67, 23E62-1, and 23D61-1, a metal replacement lug can be pressed into the plastic by heating it with a soldering iron. Instructions for installing (Form No. S340) are included with the 3 lugs supplied under part number 15A668.

SERVICE ADJUSTMENTS

The following information on making the Horizontal Drive and Horizontal Linearity adjustment corrects and supercedes the information given in "Installation and Service Notes for 21B1, 21C1 Chassis", Form No. 41A9-13.

HORIZONTAL DRIVE and HORIZONTAL LINEARITY ADJUSTMENT for 21B1, 21C1, 21H1, 21J1 CHASSIS

If the large circle in the center of the test pattern has a cramped or flattened appearance at one side (non-linear horizontally), turn the HOR. DRIVE adjustment screw in fully (to the right), then slowly turn it out while adjusting for best linearity (circular shape). Note that the Horizontal Drive control also affects width and brightness.

If horizontal non-linearity can not be completely corrected with the HOR. DRIVE adjustment, further correction can be made by adjusting the HOR. LIN. control. Alternate adjustment of the Horizontal Drive and Horizontal Linearity controls may be necessary to obtain best linearity.

HORIZONTAL DRIVE ADJUSTMENT for 21D1 CHASSIS

This adjustment should be made so that the adjustment screw is as far out (to the left) as possible without producing vertical lines in the picture. Adjust as follows:

a. Turn the CHANNEL control to an unused channel.

b. Set BRIGHTNESS control at a lower than average setting.

c. Turn the HORIZONTAL control (front panel) completely to the left. (If the Horizontal control is not set at the extreme left position, the vertical lines may be removed in step "d", but may re-appear when the Horizontal control is rotated to the right.)

d. Turn the HORIZ. DRIVE adjustment screw to the left until a vertical line appear near the center of the raster. Then, turn the screw to the right just far enough to make the lines disappear. If the screw is turned further than required to eliminate the vertical lines, picture width and brightness may be affected.

Do not use the Horizontal Drive to correct width or linearity. If necessary, make the Width and Horizontal Linearity adjustments.

HORIZONTAL LINEARITY ADJUSTMENT for 21D1 CHASSIS

If the large circle in the center of the test pattern has a cramped or flattened appearance at either side (non-linear horizontally), adjust the HORIZ. LIN. adjustment screw by turning it to the left or right as required. Note that the Horizontal Drive and the Width adjustments also affect linearity. Be sure that these adjustments are set correctly if difficulty is encountered when making the horizontal linearity adjustment.

If vertical lines appear in the center of the picture when making the horizontal linearity adjustment, see "Horizontal Drive Adjustment for 21D1 Chassis" above.

Form No. S336-3

C433 INCREASED to OBTAIN SUFFICIENT WIDTH

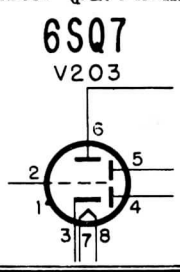
To obtain sufficient width, C433 may be .0047 mfd, 600 V. (part number 64B8-15) in some 21D1, 21H1, 21J1 chassis. Also, some of the 21D1 chassis may use a .01 mfd, 600 V. condenser, part number 64B8-13.

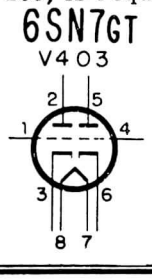
GRID RESISTOR REQUIRED WHEN V303 is 6AG5

When a 6AG5 is used at V303, an 18,000 ohms, $\frac{1}{2}$ watt resistor (part number 60B8-183) is required from grid (pin 1) to ground.

DIFFERENT TUBE USED for SOUND AMPLIFIER (V203)

Some sets may use a 6SQ7 tube instead of a 6AV6 tube at V203. There are no part changes necessary with this substitution. The pin numbering for the 6SQ7 is shown in the adjacent illustration.





DIFFERENT TUBE USED for SYNC SEP. and CLIPPER (V403)

Some sets may use a 6SN7GT tube instead of a 12AU7 tube at V403. There are no part changes necessary with this substitution. The pin numbering for the 6SN7GT is shown in the adjacent illustration.

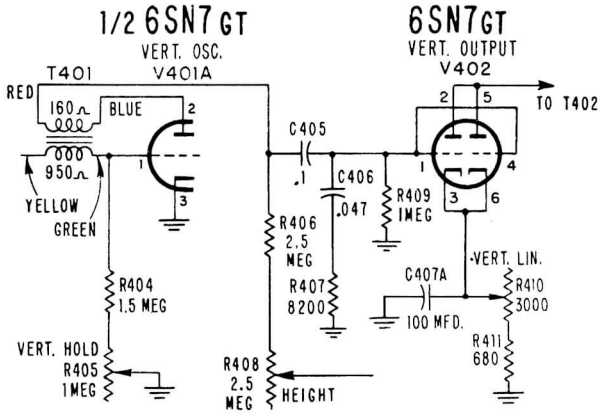
ALTERNATE CIRCUIT WHEN V402 is 6SN7GT

The schematic (in Form No. S336-2) for the 21B1, 21C1, 21H1, 21J1 television chassis shows an alternate circuit for V402 when a 6SN7GT tube is used in place of the 6S4. (See inset in lower left portion of schematic.)

Cross out this schematic inset and in its place use the circuit given in the adjacent illustration.

R404 1.5 megohms, $\frac{1}{2}$ W..... 60B 8-155
R406 2.5 megohms, $\frac{1}{2}$ W..... 60B 8-255

ALTERNATE CIRCUIT WHEN V402 IS 6SN7GT



RESISTOR ADDED in VERTICAL OSCILLATOR STAGE

In sets using a 6S4 or a 6W6GT tube in the vertical output stage (V402), a 150,000 ohms, 1/2 watt resistor (part number 60B8-154) is connected between R404 and the grid (pin 1) of the vertical oscillator (V401A, 6SN7GT). This resistor centers the operating point of the Vertical Hold control.

Add this resistor to both schematics. This resistor has been used since the beginning of production.

SUPPLEMENTARY PARTS LIST

This parts list contains corrections and additions to the parts list given in "Preliminary Service Data for models using 21B1, 21C1, 5D2 Chassis" (Form No. S336-1). Use this parts list FIRST, then use the list in the Preliminary Service Data.

RESISTORS

Sym.	Description	Part No.
§R401	22,000 ohms, $\frac{1}{2}$ watt	60B 8-223
§R402	8,200 ohms, $\frac{1}{2}$ watt	60B 8-822
§R403	8,200 ohms, $\frac{1}{2}$ watt	60B 8-822
R406	1 megohm, $\frac{1}{2}$ watt, in sets using 6S4 vert. output tube (V402)	60B 8-105
	1.5 megohm, $\frac{1}{2}$ watt, in sets using 6SN7GT vert. output tube (V402)	60B 8-155
	680,000 ohms, $\frac{1}{2}$ watt, in sets using 6W6GT vert. output tube (V402)	60B 8-684
R407	8,200 ohms, $\frac{1}{2}$ watt in 21B1, 21C1, 21H1, 21J1	60B 8-822
	10,000 ohms, $\frac{1}{2}$ watt, in 21D1	60B 8-103
R409	1 megohm, $\frac{1}{2}$ watt, in 21B1, 21C1, 21H1, 21J1	60B 8-105
	3.3 megohms, $\frac{1}{2}$ watt, in 21D1, 21E1	60B 8-335
R410	3,000 ohms, Vert. Lin. for 21B1, 21C1, 21H1, 21J1	75B 13-7
	for 21D1, 21E1	75B 13-18
R411	820 ohms, $\frac{1}{2}$ watt, in sets using 6S4 vert. output tube (V402)	60B 8-821
	680 ohms, $\frac{1}{2}$ watt, in sets using 6SN7GT vert. output tube (V402)	60B 8-681
	680 ohms, 1 watt, in sets using 6W6GT vert. output tube (V402)	60B 14-821
	(R411 was 820 ohms in early (21D1) sets using 6W6GT tube, see production changes.)	
R415	820 ohms, 2 watt, in 21B1, 21C1, 21H1, 21J1	60B 20-821
	2,200 ohms, $\frac{1}{2}$ watt, in 21D1, 21E1	60B 8-222
R435	8,200 ohms, 1 watt, in 21B1, 21C1, 21H1, 21J1	60B 14-822
	12,000 ohms, 1 watt, in 21D1, 21E1	60B 14-123
R619A R619B	2 megohms, Volume 2 megohms, Tone pot.	75B 11-12
	(R619 includes on-off switch SW603)	

†Part of Diode Filter Unit-63A3-1 consisting of R707, C709, C710.
§ Component may be part of couplate, part number 63B6-2. Order exact duplicate or individual components.

MODELS 16R12, 26R12, -25A, -26A, -35A, -36A, -37A, 26X55A, -56A, -65A, -66A, -67A, -75A, -76A, 39X35, -36, Ch. 21B1, -C1, -D1, -H1, -J1

R701	22,000 ohms, 1/2 watt	60B 8-223
R702	10,000 ohms, 1 watt	60B 14-103
R703	150 ohms, 1/2 watt	60B 8-151
R704	27,000 ohms, 1 watt	60B 14-273
R705	2,200 ohms, 2 watt	60B 20-222
R706	1 megohm, 1/2 watt	60B 8-105
†R707	47,000 ohms, 1/2 watt	
R708	4.7 megohms, 1/2 watt	60B 8-475
R709	27,000 ohms, 1/2 watt	60B 8-273
R710A	2 megohms, Tone } pot.	75B 11-12
R710B	2 megohms, Volume } pot. (includes SW702)	
R711	22 ohms, ½ watt	60B 8-220

CONDENSERS

Sym.	Description	Part No.
§C401	.002 mfd, 600 volts, paper	64B 5-14
§C402	.005 mfd, 600 volts, paper	64B 5-12
§C403	.0047 mfd, mica	65B 21-472
C421	470 mmfd, mica in 21B1, 21C1, 21H1, 21J1	65B 21-471
	330 mmfd, mica, in 21D1	65B 21-331
C430	47 mmfd, 5%, 1,500 volts, mica, in 16" sets	65B 1-64
	75 mmfd, 5%, 1,500 volts, mica, in 19" sets	65B 1-66
C433	.002 mfd, 600 volts, paper (.0047 mfd. used in some 21D1 and 21J1 chassis, see production changes)	64B 9-11
C701	5 mmfd, mica	65B 1-62
C702	2 to 20 mmfd, trimmer	66B 8-5
C703A	0 to 420 mmfd. } gang	68B 32
C703B	0 to 108 mmfd. } gang	
	(Note: Dial drum spot-welded to gang.)	
C704	50 mmfd, ceramic	65B 6-4
C705	.005 mfd. min, ceramic	65A 10-1
C706	.1 mfd, 200 volts, paper	64B 5-30
C707	.005 mfd. min, ceramic	65A 10-1
C708	.1 mfd, 400 volts, paper	64B 5-20
†C709	100 mmfd, ceramic	
†C710	100 mmfd, ceramic	
C711	.01 mfd, 400 volts, paper	64B 5-25
C712	250 mmfd, ceramic	65B 6-5
C713	.01 mfd, 400 volts, paper	64B 5-25
C714	.002 mfd, 600 volts, paper	64B 5-14

COILS and TRANSFORMERS

Sym.	Description	Part No.
L404	Focus Coil	
	for 21B1, 21C1, 21H1, 21J1	69C 117-3
	for 21D1, 21E1 (supplied less plug)	69C 117-4
L701	AM Antenna	
	Loop Antenna (includes C701, C702)	69C 116-2
	Iron Core Ant. (includes C701, C702)	69C 121-2
L702	Oscillator Coil	69A 52-1
T202	Audio Output Transformer	
	for TV only sets	79C 33-1
	for combination sets	79C 33-2
T402	Vertical Output Transformer	
	for 21B1, 21C1, 21H1, 21J1	79B 29-1
	for 21D1, 21E1	79B 34-1
T403	Deflection Yoke	
	(includes R412, R413, R445, C430)	
	for 16" rectangular tube	A3222
	for 16" round tube	A3178
	for 19" round tube	A3197
	(A3197 includes connector plug)	
T404	Horizontal Output Transformer	
	(includes tube cap clips)	
	for 21B1, 21C1, 21H1, 21J1	79C 30-2
	for 21D1, 21E1	79C 30-3
T701	1st IF Transformer	72B 28-7
T702	2nd IF Transformer	72B 28-17

MISCELLANEOUS PARTS for TV CHASSIS

Picture tube mounting parts listed below are for 16" tubes. See separate heading for 19" tube mounting parts.

Sym.	Description	Part No.
M203	Speaker	
	5" PM	78B 59-1
	8" PM	78B 49-1
	10" PM	78B 47-2
	12" PM	78B 56-2
M403	Socket, Focus Coil (5 contact wafer)	87A 4-4
M404	Plug, Focus Coil (5 pin)	88A 3-5
	Cover & Insulator (for 88A3-5 plug)	88A 3-4
M405	Socket, Deflection Yoke (6 contact, molded)	87A 30-2
M406	Plug, Deflection Yoke (6 pin)	88A 9-1
	Cover & Insulator (for 88A9-1 plug)	88A 17
M504	Socket, Light (4 contact, wafer; used only in 19" combination sets)	87A 6-3
	Band, Metal Tube (for mtg. 16" round tube)	28A 40-1
	Band, Plastic Insulating (for mounting 16" round tube)	33A 59-1
	Bracket, Picture Tube Mounting (supports front of rectangular picture tube)	
	Right side (facing tube)	15B 615-1
	Left side (facing tube)	15B 615-2
	Bracket, Picture Tube Mounting (supports front of 16" round tube)	15C 576
	Bracket, Top and Bottom (for mounting picture tube and focus coil)	
	for rectangular picture tubes	
	Top	15C 613
	Bottom	15C 614
	for 16" round tubes	
	Top	15C 628-1
	Bottom	15C 627
	Clamp, Picture Tube Front Mtg. Bracket (for mtg. rectangular picture tube)	15A 616
	Clamp, Webbing (for mtg. rectangular tube)	15A 526
	Clip, Tube Cap	
	for 6CD6G tube	88A 16-6
	for 6BQ6GT tube	88A 16-8
	for 1B3GT tube	19A 54
	Connector Lead, 2nd Anode	
	with plug for 16" rectangular tube	88A 16-7
	with contact spring for 16" round tube	A3171
	with female plug for 19" round tube	88A 25-1
	with male plug and contact spring for 19" round tube	A3200
	Ion Trap	
	for round picture tubes	94A 15-2
	for rectangular picture tubes	94A 15-1
	Nut, Tube Band Mounting (8-32)	2A 1-15-71
	Pilot Light (#47)	81A 1-8
	Rubber Channel, 1" long (for rectangular picture tube bracket)	12A 9-11
	Rubber Insert, 1" diameter (bottom and side support of rectangular picture tube)	12A 16-1
	Rubber Grommet (for 2nd anode load)	12A 1-15
	Screw, Wing (for deflection yoke)	1A 101-1-71
	Shield, Tube	87A 7-7
	Shield Base, Tube	87A 7-6
	Socket, Tube	
	miniature bakelite (7 pin)	87A 3-7
	octal, plain	87A 5-1
	octal, ringmount (mica filled)	87A 20-2
	miniature (9 pin)	87A 14-2
	picture tube	87B 31-8
	Spring, HV Contact (for front of round picture tube)	18A 37
	Spring, Picture Tube Grounding (used on rectangular tubes only)	19A 23-2
	Spring, Support (for 2nd anode lead)	19A 66
	Washer, Spring (for mounting picture positioning lever)	4A 5-10-71
	Webbing, Rectangular Picture Tube Mtg. Strap (42" length)	50A 3-4

MODELS 16R12, 26R12, 26R25A, 26R26A, 26R35A, 26R36A, 26R37A, 26X55A, 26X56A, 26X65A, 26X66A, 26X67A, 26X75A, 26X76A, 39X35,-36, Ch. 21B1,-C1,-D1,-H1,-J1

PARTS for MOUNTING 19" PICTURE TUBE

m.	Description	Part No.
103	Socket, Focus Coil (5 contact wafer)	87A 4-3
104	Plug, Focus Coil (5 pin)	88A 3-5
	Cover & Insulator (for 88A3-5 plug)	88A 3-4
105	Socket, Deflection Yoke (6 contact; molded)	87A 30-2
106	Plug, Deflection Yoke (6 pin-includes interlock)	88A 9-1
	Cover & Insulator (for 88A9-1 plug)	88A 17
ınd,	Tube Front Insulating (Plastic)	33B 59-2
ınd,	Tube Retaining (Meta!)	28A 40-2
'acket,	Strap (supports yoke coil)	15A 572
'acket,	Tube Mtg. (supports front of tube)	
for	right side facing tube	15C 564-1
for	left side facing tube	15C 564-2
'acket,	Yoke (upper mtg. bracket)	15C 628-2
'acket,	Yoke Base (lower support)	15C 627
ınnector	Lead, 2nd Anode	
with	female plug	88A 25-1
with	male plug and contact spring	A3200
ɔund	Wire Assembly	A3209
	Trap	94A 15-2
ver,	Picture Positioning	15B 574
t (8-32	Hex, for tube band)	2A 1-15-71
:ture	Tube 19" TV	19AP4
ɔber	Collar (supports flare of picture tube)	12B 40
·ew,	Wing (for deflection yoke)	1A 101-1-71
m,	Focus Coil Mounting	32A 134
ıcer	Sleeve (1/8" in length)	29A 2-3-71
·ing,	HV Contact at front of tube	18A 37
pe,	Aluminum Foil (order length needed)	52A 1-17
sher,	Spring (for mtg. picture positioning lever)	4A 5-10-71

MISCELLANEOUS PARTS for 3C1 RADIO

7701	Switch, Radio-Phono	77A 28-2
7702	Switch, On-Off	Part of R710
701	Socket, Phono Input	88A 1
706	Socket, Phono Motor	89A 6-1
707	Shielded Cable Assembly	89A 29-11
708	Plug, Cable Connector (14 pin rect.)	88A 20-1
	Cover and Insulator (for plug 88A20-1)	88A 20-6
	Cable (12 wire), including 88A20-1 plug and 88A20-6 cover	AB216
acket,	Mounting	
or	Off-Volume and Tone control	15A 409
or	Radio-Phono Switch	15A 385
or	Tuning Sleeve	15A 394
p,	IF Transformer Mtg	72B 28-10
ver	Assembly, Chassis	A1880
al	Back and Bracket Assembly	A1881
al	Cord (50" length needed)	50A 1-3
al	Scale	22B 23-1
cutcheon,	Radio	23D 63-3
ommet,	Gang Mounting	12A 1-2
x Nut,	Switch Retaining	2A 2-11-71
ob,	'Radio-Phono', 'Tuning'	33D 55-1
ob,	'Tone'	33D 55-4
ob,	'Volume'	33D 55-5
ckwasher,	Osc. Coil & Gang (#6 I.T.)	3B 1-25-71
ot	Light, #47 Mazda	81A 1-8
inter,	Dial	25A 38
aft,	Tuning	28A 48-1
ap	Button (for mtg. dial scale)	13A 1-1-71
cket,	Tube	
7 pin	(for 6BA6, 6AV6)	87A 3-7
7 pin	(for 6BE6)	87A 24-3
cket,	Pilot Light (includes 14" lead)	82A 2-3
cket,	Pilot Light (includes 9" lead)	82A 2-9
ıcer	Sleeve (for gang mounting)	29A 2-1-71
ıcer	Sleeve (3 1/4" long, for mounting phono-radio switch)	29A 3-15
ring,	Dial Cord Tension	19B 1-3
sher,	Vellutex (Oscillator coil mtg.)	5A 1-21

PARTS for PHONO COMPARTMENT LIGHT and JEWEL LIGHT

M505	Socket and Leads (miniature)	82A 11-58
M506	Plug (4 pin round)	88B 22-1
	Cover and Insulator for 88B22-1	88B 22-3
M507	Socket and Leads (candelabra)	82A 12-1
SW502	Switch, Light	77A 29
Bracket,	Switch	15B 502
Bulb,	Light (7 watt candelabra Mazda #7C7)	81A 2-4
Bulb,	Light (miniature #47 Mazda)	81A 1-8
Light	Assembly, Complete (less bulbs)	AB209
Shield,	Light	82A 13
Washer,	Insulating	5A 1-31

CABINET PARTS for 36R37 (Blond), 26R45 (Walnut), 36R46 (Mahogany)

When ordering parts for these models, use this list FIRST, then see Form No. S338-1 for any parts not listed here.

Part No.	Description
	Escutcheon, Control (less door)
23D 60-1	with "I" shaped slot, for flat door spring
23D 60-5	with "U" shaped slot, for coil door spring
	Escutcheon, Door
23D 60-4	used with 23D60-1 escutcheon (mounts with flat door spring)
23D 60-8	used with 23D60-5 escutcheon (mounts with coil door spring)
	Spring, Escutcheon Door
18A 41	flat (bronze) spring, used with 23D60-1 escutcheon, for left or right hinge
	coil (wire) spring, used with 23D60-5 escutcheon
19A 65-2	for left hinge (facing front)
19A 65-1	for right hinge (facing front)

CABINET PARTS for 16R12 (Mahogany), 26R12 (Mahogany)

Above model numbers may have the suffix "N".

Part No.	Description
A3131	Antenna, Built-in TV
	Back, Cabinet (includes line cord)
A3287	for table model
A3289	for console model
A3015	Baffle Board, Speaker, for table model
46B 26	" " " for console model
34E 36-2	Cabinet, Plastic, 16R12 (Mahogany)
34E 37-2	" " 26R12 (Mahogany)
44B 183	Carton and Fillers, for table model
44B 187	" " " for console model
98A 60-7	Caster (for cabinet leg)
	Escutcheon, Control (less door)
23D 60-1	with "I" shaped slot, for flat door spring
23D 60-5	with "U" shaped slot, for coil door spring
	Escutcheon, Door
23D 60-4	used with 23D 60-1 escutcheon (mounts with flat door spring)
23D 60-8	used with 23D 60-5 escutcheon (mounts with coil door spring)
12A 32-6	Gasket, Sponge Rubber (for back of pic. window)
36B 3-20	Grille Cloth, for table model
36B 3-44	" " for console model
33C 53-9	Knob, TV, maroon, 'Channel'
33C 53-10	" " maroon, 'Tuning'
33C 53-11	" " maroon, 'Off-Volume'
33C 53-12	" " maroon, 'Picture'
89A 22-1	Line Cord and Interlock Socket
6A 4-10	Mounting Rivet, for line cord

85-437-C2-71	Screw, for pic. window (#8-32x7/16" BH MS)
65-375-C2-71	" for cabinet back (#6-32x3/8" BH MS)
1A 71-3-57	" for control escutcheon (#4x3/8" RH ST)
1A 67-44-71	" for TV chassis (1/4-20x1 1/4")
78B 59-1	Speaker, 5" PM, for table model
78B 49-1	" 8" PM, for console model
2B 10-26-59	Speed Nut (for mtg. speaker baffle) in floor models
	Spring, Escutcheon Door
18A 41	flat (bronze) spring, used with 23D 60-1 escutcheon, for left or right hinge
	coil (wire) spring, used with 23D60-5 escutcheon
19A 65-2	for left hinge (facing front)
19A 65-1	for right hinge (facing front)
18A 43-1	Spring, TV Knob Tension, for 'Tuning' knob
18A 43-2	" " " " for 'Off-Volume' knob
18A 43-3	" " " " for 'Channel' knob
5A 4-14	Washer, Felt, used behind 'Channel' knob
5A 4-15	" " used behind 'Picture' knob
23D 68	Window, Picture

CABINET PARTS for 26X55A, 26X56A, 26X57A, 26X65A, 26X66A, 26X67A, 26X75A, 26X76A

This parts list applies only to models having the suffix letters "A" or "AN" and does not apply to models with the suffix "N" only or without any suffix letter.

Part No.	Description
A3132	Antenna, Built-in TV
43D 102	Backing, Cardboard, for 23D61 picture window
43D 116	" " for 23D61-1 picture window
43C 101-3	Back, Lower TV Compartment
A3337	Back, Television Compartment (complete)
35E 130-1	*Cabinet, Wood, 26X55A (Walnut)
35E 130-2	" " 26X56A (Mahogany)
35E 130-3	" " 26X57A (Blond)
35E 131-1	" " 26X65A (Walnut)
35E 131-2	" " 26X66A (Mahogany)
35E 131-3	" " 26X67A (Blond)
35E 132-1	" " 26X75A (Walnut)
35E 132-2	" " 26X76A (Mahogany)
35E 131-53	*Cabinet Legs, 26X65A (Walnut)
35E 131-54	" " 26X66A (Mahogany)
35E 131-55	" " 26X67A (Blond)
35E 132-56	" " 26X75A (Walnut)
35E 132-57	" " 26X76A (Mahogany)
44B 182	Carton and Fillers, for 26X55A, 26X56A, 26X57A
44B 184	" " " for 26X65A, 26X66A, 26X67A
44B 185	" " " for 26X75A, 26X76A
98A 60-7	Caster, for Cabinet Leg
35E 131-50	*Doors, Matched Pair, 26X65A (Walnut)
35E 131-51	" " " 26X66A (Mahogany)
35E 131-52	" " " 26X67A (Blond)
35E 132-50	" " " 26X75A (Walnut)
35E 132-51	" " " 26X76A (Mahogany)
	*Door Catch and Strike Plate
35E 131-58	*for 26X65A (Walnut), 26X66A (Mahogany)
35E 131-59	*for 26X67A (Blond)
35E 132-55	*for 26X75A (Walnut), 26X76A (Mahogany)
	Escutcheon, Control (less door)
23D 60-3	with "I" shaped slot, for flat door spring
23D 60-6	with "U" shaped slot, for coil door spring
	Escutcheon, Door
23D 60-2	used with 23D60-3 escutcheon (mounts with flat door spring)
23D 60-7	used with 23D60-6 escutcheon (mounts with coil door spring)
12A 32-6	Gasket, Sponge Rubber (40" long, used with picture window)
36A 7-11	Grille, Metal, for 26X65A (Walnut), 26X66A (Mahog.), 26X67A (Blond)
	Grille Cloth
36B 3-49	for 26X55A (Walnut), 26X56A (Mahogany)
36B 3-50	for 26X57A (Blond)
36B 3-47	for 26X65A (Walnut), 26X66A (Mahogany)
36B 3-48	for 26X67A (Blond)
36B 3-41	for 26X75A (Walnut), 26X76A (Mahogany)
	Grounding Clip (includes 30" braided wire)
A3229	for grounding 23D61 picture window
A3232	for grounding 23D61-1 picture window
	Handle, Door
37A 30-1	pair for 26X65A (Walnut), 26X66A (Mahog.), 26X67A (Blond)
37A 34	pair for 26X75A (Walnut), 26X76A (Mahog.)
	*Hinge, Knife
35E 131-56	*pair for 26X65A (Walnut), 26X66A (Mahog.)
35E 131-57	*pair for 26X67A (Blond)
35E 132-53	*pair for 26X75A (Walnut), 26X76A (Mahog.)
33C 53-9	Knob, Television, 'Channel'
33C 53-10	" " 'Tuning'
33C 53-11	" " 'Off-Volume'
33C 53-12	" " 'Picture'
89A 22-1	Line Cord and Interlock Socket
1A 7-9-57	Screw, for control escutcheon (#4x3/8 RH WS)
1A 6-24-59	" for mtg. back & bumper strip (#6x1/2 RH WS)
1A 22-8-71	" for picture window (#6x1/2 RH WS)
1A 67-43-71	" for mtg. TV chassis (1/4-20x1-1)
32D 127	Sheet, Insulating (mounts on cabinet in front of picture tube)
78B 47-2	Speaker, 10" PM
	Spring, Escutcheon Door
18A 41	flat (bronze) spring, used with 23D60-3 escutcheon for left or right hinge
	coil (wire) spring, used with 23D60-6 escutcheon
19A 65-2	for left hinge (facing front)
19A 65-1	for right hinge (facing front)
18A 43-1	Spring, TV Knob Tension, for 'Tuning' knob
18A 43-2	" " " " for 'Off-Volume' knob
18A 43-3	" " " " for 'Channel' knob
	Trim, Picture Window (Plastic; 55" long, used with 23D61 picture window)
33A 57-1	Maroon, for Walnut, Mahogany
33A 57-4	Beige, for Blond
5A 4-14	Washer, Felt, used behind 'Channel' knob
5A 4-15	" " used behind 'Picture' knob
	Window, Picture
23D 61	with round holes, for mtg. with screws
23D 61-1	with oblong holes, for mtg. with spring clips

If only the mounting lugs are broken on picture window 23D61-1, a metal replacement lug (part number 15A668) can be pressed into the plastic by heating it with a soldering iron. Instructions for installing (Form No. S340) are included with the 3 lugs furnished under part number 15A668.

CABINET PARTS for 39X35 (Walnut), 39X36 (Mahogany)
The above model numbers may contain the suffix "N".

A3023	Antenna, Built-in "Roto-Scope" TV
43C 108-2	Back, for Album Compartment
43C 114-2	" for Cabinet (below TV compartment)
43C 107-2	" for Record Changer Compartment
A3193	" for Television Compartment (Complete)
43D 105	Backing, Cardboard, for 23E 62 pic. window
43D 119	" " for 23E 62-1 pic. window
	Bracket, Slide to Pan Mtg.
15C 620-3	Left side (facing front of cabinet)
15C 620-4	Right side (facing front of cabinet)
15A 624	Bracket, Changer Stop
35E 136-1	*Cabinet, Walnut
35E 136-2	" Mahogany
	Carton and Fillers
98A 60-7	Caster, for cabinet leg
11B 12-6	Clamp, plastic, for cable
	Decal, Cabinet Door Refinishing
35E 136-60	for pair of doors, Walnut
35E 136-61	for pair of doors, Mahogany
98A 11-3	Decal Cement (1 pint)
35E 136-53	*Door, Record Compt. (Complete) Walnut
35E 136-54	" " " (Complete) Mahog.
	*Doors, TV and Radio-Phono Compt.,
35E 136-50	matched pair for Walnut
35E 136-51	matched pair for Mahogany
35E 136-63	Door Catch and Strike Plate
37A 25-2	Door Handle (for upper doors)
	Escutcheon, Control (less door)
23D 60-3	with "I" shaped slot, for flat door spring
23D 60-6	with "U" shaped slot, for coil door spring

*To insure proper matching and fit, also specify cabinet manufacturer's code letters (usually burned or stamped on the back rail of cabinet). Wood parts are supplied only if old part cannot be repaired. When ordering describe condition of old part in detail.

	Escutcheon, Door
23D 60-2	used with 23D 60-3 escutcheon (mounts with flat door spring)
23D 60-7	used with 23D 60-6 escutcheon (mounts with coil door spring)
23D 63-3	Escutcheon, Radio
12A 32-7	Gasket, Sponge Rubber (for picture window)
36B 3-53	Grille Cloth (2 pieces)
	Grounding Clip (includes 30" braided wire)
A3229	for grounding 23D 61 picture window
A3232	for grounding 23D 61-1 picture window
35E 136-56	*Hinge, Knife (pair), for Radio and TV Compt.
35E 136-58	" " for Album Compt.
82A 10-8	Jewel, Pilot Light (green)
33D 55-1	Knob, Radio 'Radio-Phono', 'Tuning'
33D 55-4	" " 'Off-Volume'
33D 55-5	" " 'Tone'
33C 53-9	Knob, Television, for 'Channel'
33C 53-10	" " for 'Tuning'
33C 53-11	" " for 'Off-Volume'
33C 53-12	" " for 'Picture'
89A 22-1	Line Cord & Interlock Socket
6A 4-6-0	Line Cord Mounting Rivet
81A 1-8	Pilot Light, #47
37A 31-1	Pull, Record Changer Slide
46A 4-5	Rod, Wooden Dowel (Antenna Mtg.)
1A 7-9-57	Screw, for control escutcheon (#4x3/8 RH WS)
1A 6-24-59	" for back and bumper strip (#6x1/2 RH WS)
1A 7-23-71	" for pic. window (#6x3/8 RH WS)
1A 67-43-71	" for TV chassis (1/4-20x1)
361-375-C2-71	" for mounting slide-out bracket to slide (#6 32x3/8 FH MS)
32D 128	Sheet, Insulating (mounts on cabinet in front of picture tube)
37B 32-5	Slide and Track, Drawer
98A 44-47	Spacer, Fibre Cabinet Leveler (Kit of 6)
78B 56-2	Speaker, 12 inch PM
	Speed Nut
2B 12-4-68	for mounting radio escutcheon
2B 10-8-59	for mounting speaker
18A 45	Spring Clip (for mtg. 23E62-1 pic. window)
	Spring, Escutcheon Door
18A 41	flat (bronze) spring, used with 23D60-3 escutcheon, for left or right hinge
	coil (wire) spring, used with 23D60-6 escutcheon
19A 65-2	for left hinge (facing front)
19A 65-1	for right hinge (facing front)
18A 46	Spring, Slide Tension
18A 43-1	Spring, TV Knob Tension, for 'Tuning' knob
18A 43-2	" " " " for 'Off-Volume' knob
18A 43-3	" " " " for 'Channel' knob
33A 57-2	Trim, Picture Window (used with 23E62 picture window only)
5A 4-14	Washer, Felt, used behind 'Channel' knob
5A 4-15	" " used behind 'Picture' knob
5A 4-11	" " used behind radio tuning knobs
	Window, Picture
23E 62	with round holes, for mtg. with screws
23E 62-1	with oblong holes, for mtg. with spring clips

CABINET PARTS for 26R25A, 26R26A, 26R35A, 26R36A, 26R37A

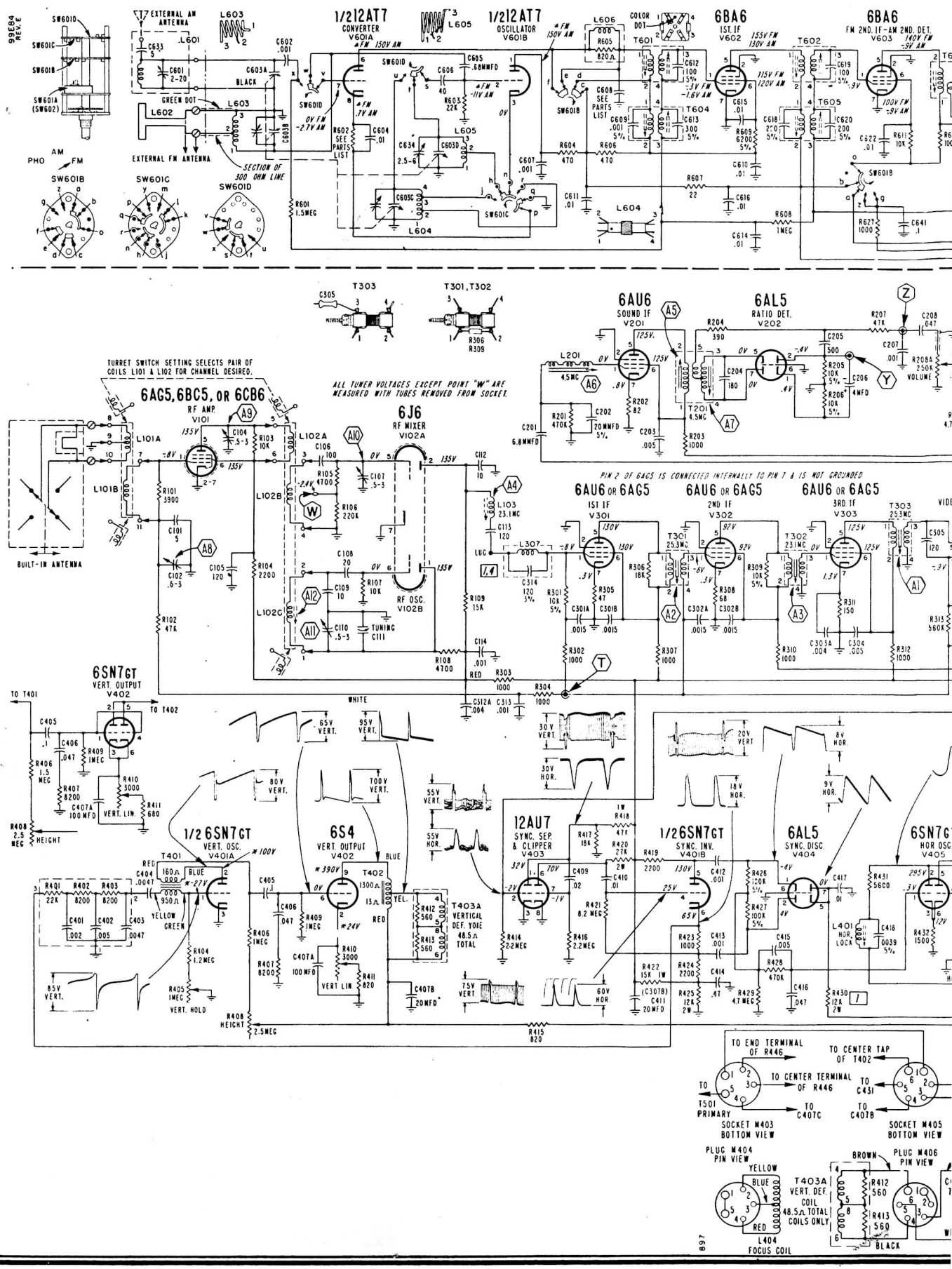
This parts list applies only to models having the suffix letters "A" or "AN" and does not apply to models with the suffix "N" only or without any suffix letter.

Part No.	Description
A3091	Antenna, Built-in TV
A3337	Back, Cabinet (Complete)
35E 126-1	*Cabinet, Wood, 26R25A (Walnut)
35E 126-2	" " 26R26A (Mahogany)
35E 125-1	" " 26R35A (Walnut)
35E 125-2	" " 26R36A (Mahogany)
35E 125-3	" " 26R37A (Blond)
44B 175	Carton and Fillers, for 26R25A, 26R26A
44B 174	" " " for 26R35A, 26R36A, 26R37A
98A 60-7	Caster, for Cabinet Leg
36E 126-50	*Doors, Matched Pair, 26R25A (Walnut)
36E 126-51	" " " 26R26A (Mahogany)
35E 125-50	" " " 26R35A (Walnut)
35E 125-51	" " " 26R36A (Mahogany)
35E 125-52	" " " 26R37A (Blond)
	*Door Catch and Strike Plate
35E 126-56	for 26R25A (Walnut), 26R26A (Mahogany)
35E 125-56	for 26R35A (Walnut), 26R36A (Mahogany) 26R37A (Blond)
	Escutcheon, Control (less door)
23D 60-1	with "I" shaped slot, for flat door spring
23D 60-5	with "U" shaped slot, for coil door spring
	Escutcheon, Door
23D 60-4	used with 23D60-1 escutcheon (mounts with flat door spring)
23D 60-8	used with 23D60-5 escutcheon (mounts with coil door spring)
98A 61-8	Gasket, Sponge Rubber (includes chipboard back for picture window)
	Grille Cloth
36B 3-41	for 26R25A (Walnut), 26R26A (Mahogany)
36B 3-33	for 26R35A (Walnut), 26R36A (Mahogany)
36B 3-34	for 26R37A (Blond)
	Handle, Door
37A 34	pair for 26R25A (Walnut), 26R26A (Mahogany)
37A 30	pair for 26R35A (Walnut), 26R36A (Mahogany), 26R37A (Blond)
	*Hinge, Knife
35E 126-53	pair for 26R25A (Walnut), 26R26A (Mahogany)
35E 125-53	pair for 26R35A (Walnut), 26R36A (Mahogany)
35E 125-54	pair for 26R37A (Blond)
33C 53-9	Knob, Television, 'Channel'
33C 53-10	" " 'Tuning'
33C 53-11	" " 'Off-Volume'
33C 53-12	" " 'Picture'
89A 22-1	Line Cord and Interlock Socket
	Screw
1A 7-9-57	for mtg. escutcheon (#4x3/8 RH WS)
1A 6-23-71	for mtg. picture window (#6x3/8 RH WS)
1A 67-43-71	for mtg. TV chassis (1/4-20x1)
78B 47-1	Speaker, 10" PM
	Spring, Escutcheon Door
18A 41	flat (bronze) spring, used with 23D60-1 escutcheon, for left or right hinge
	coil (wire) spring, used with 23D60-5 escutcheon
19A 65-2	for left hinge (facing front)
19A 65-1	for right hinge (facing front)
18A 43-1	Spring, TV Knob Tension, for 'Tuning' knob
18A 43-2	" " " " for 'Off-Volume' knob
18A 43-3	" " " " for 'Channel' knob
18A 45	Spring Clip (for mtg. 23D67 picture window)
5A 4-14	Washer, Felt, used behind 'Channel' knob
5A 4-15	" " used behind 'Picture' knob
23D 67	Window, Picture

If only the mounting lugs are broken on picture window 23D67, a metal replacement lug (part number 15A668) can be pressed into the plastic by heating it with a soldering iron. Instructions for installing (Form No. S340) are included with the 3 lugs supplied under part number 15A668.

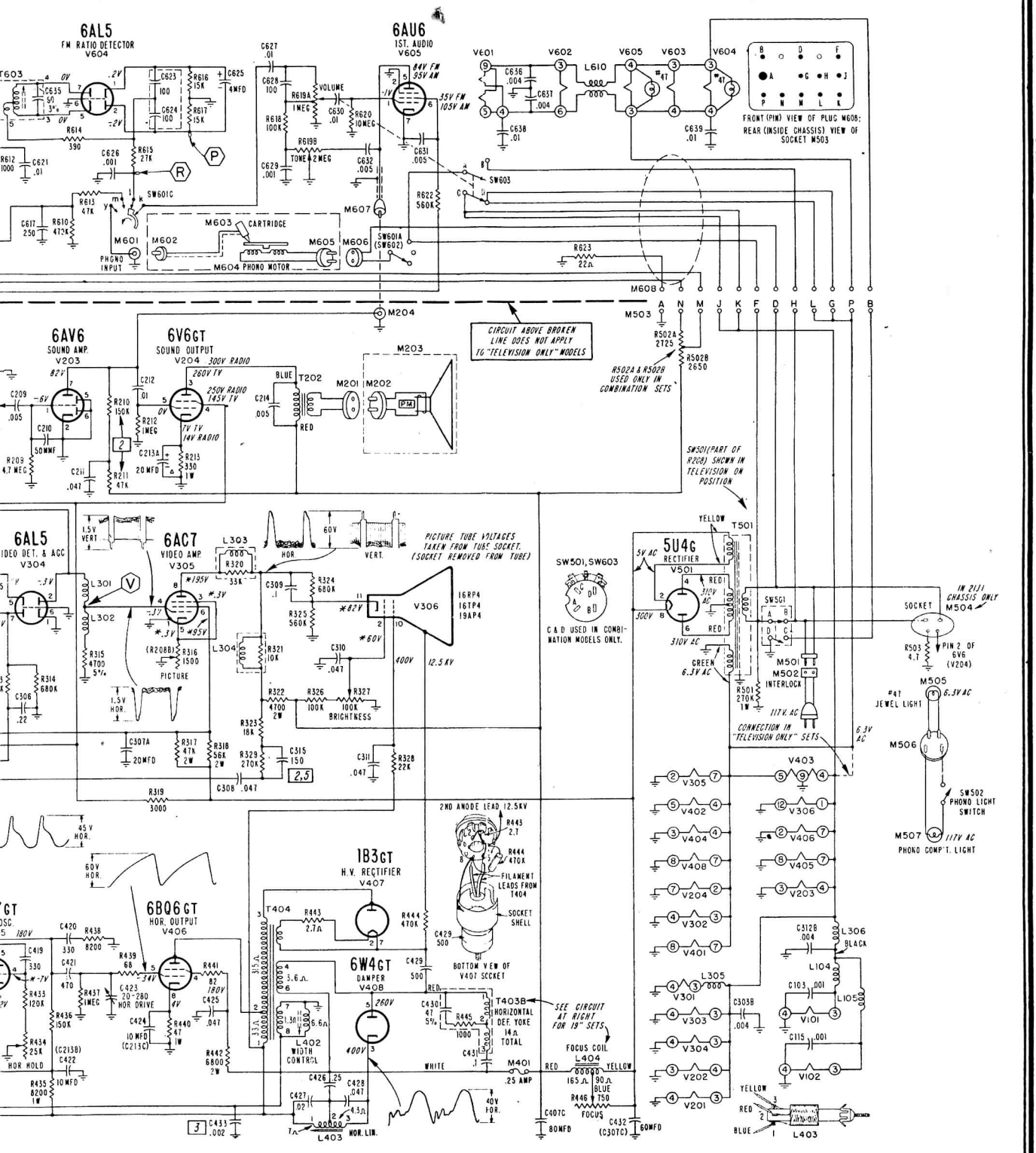
MODELS 16R12, 26R12, 26R25A, 26R26A, 26R35A, 26R36A, 26R37A, 26X55A, 26X56A, 26X65A, 26X66A, 26X67A, 26X75A, 26X76A, 39X35, 39X36, Ch. 21B1, 21C1, 21D1, 21H1, 21J1

Schematic for 21B1, 21C1, 21H1, 21J1 Televisio

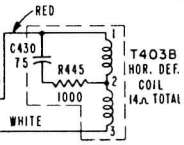


CHASSIS 21B1, 21C1, 21H1, 21J1; Radio Ch. 5D2

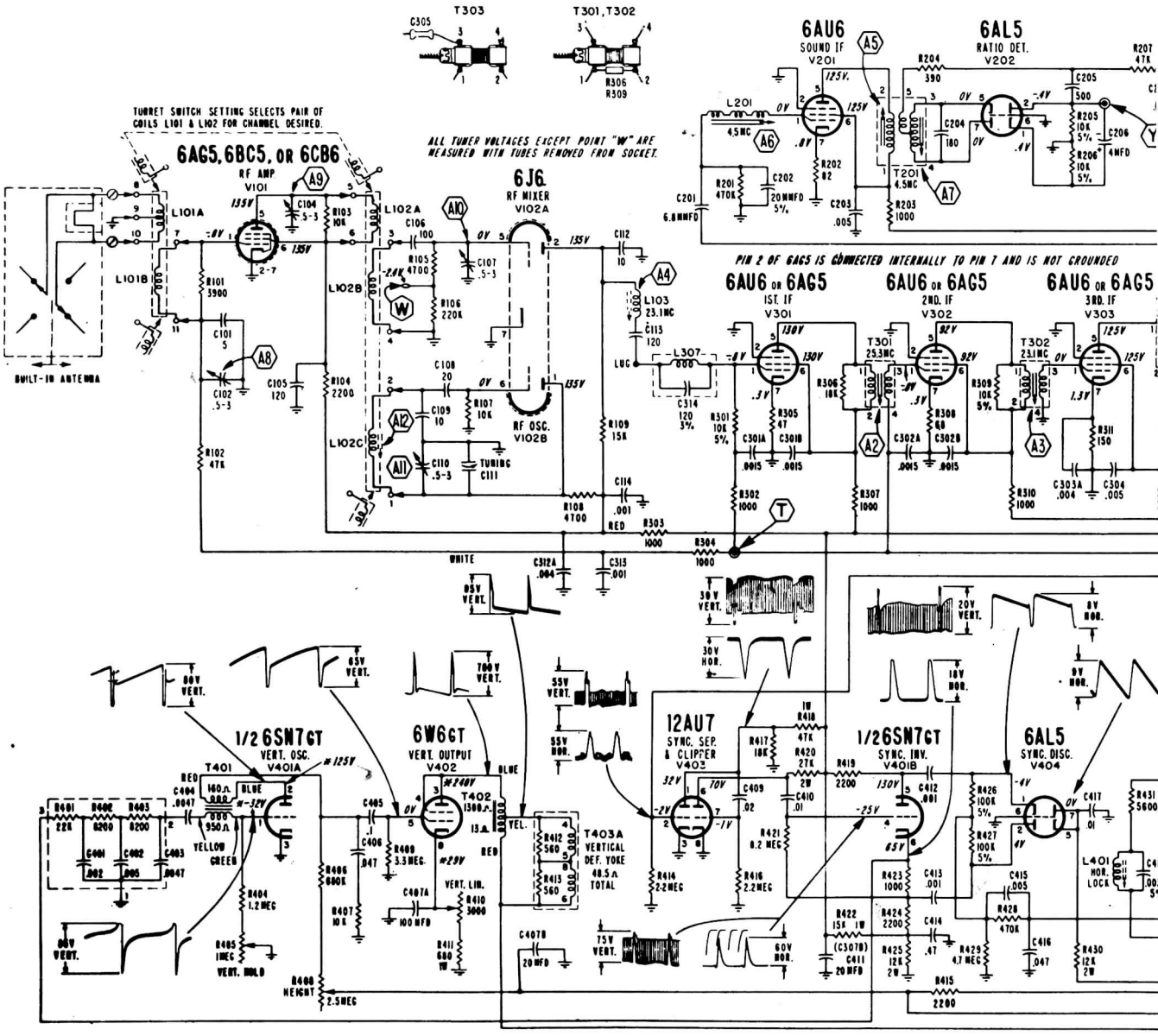
on Chassis; 5D2 radio circuit also shown.



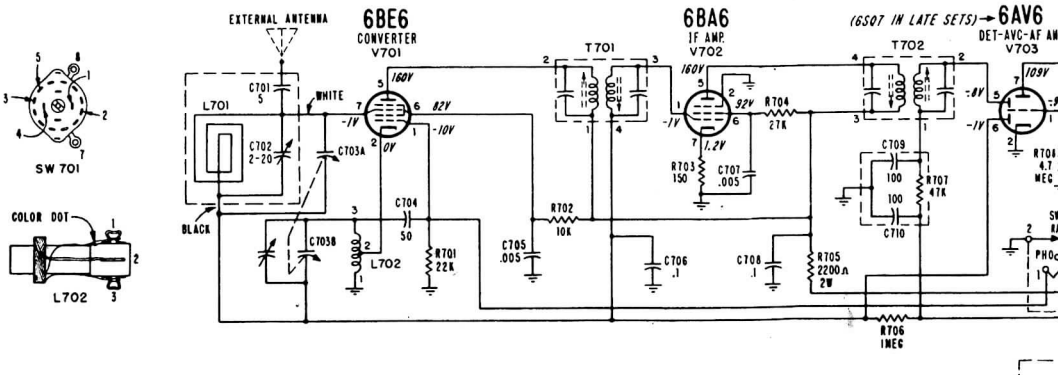
FOCUS COIL AND DEFLECTION YOKE CONNECTORS USED IN 19" SETS



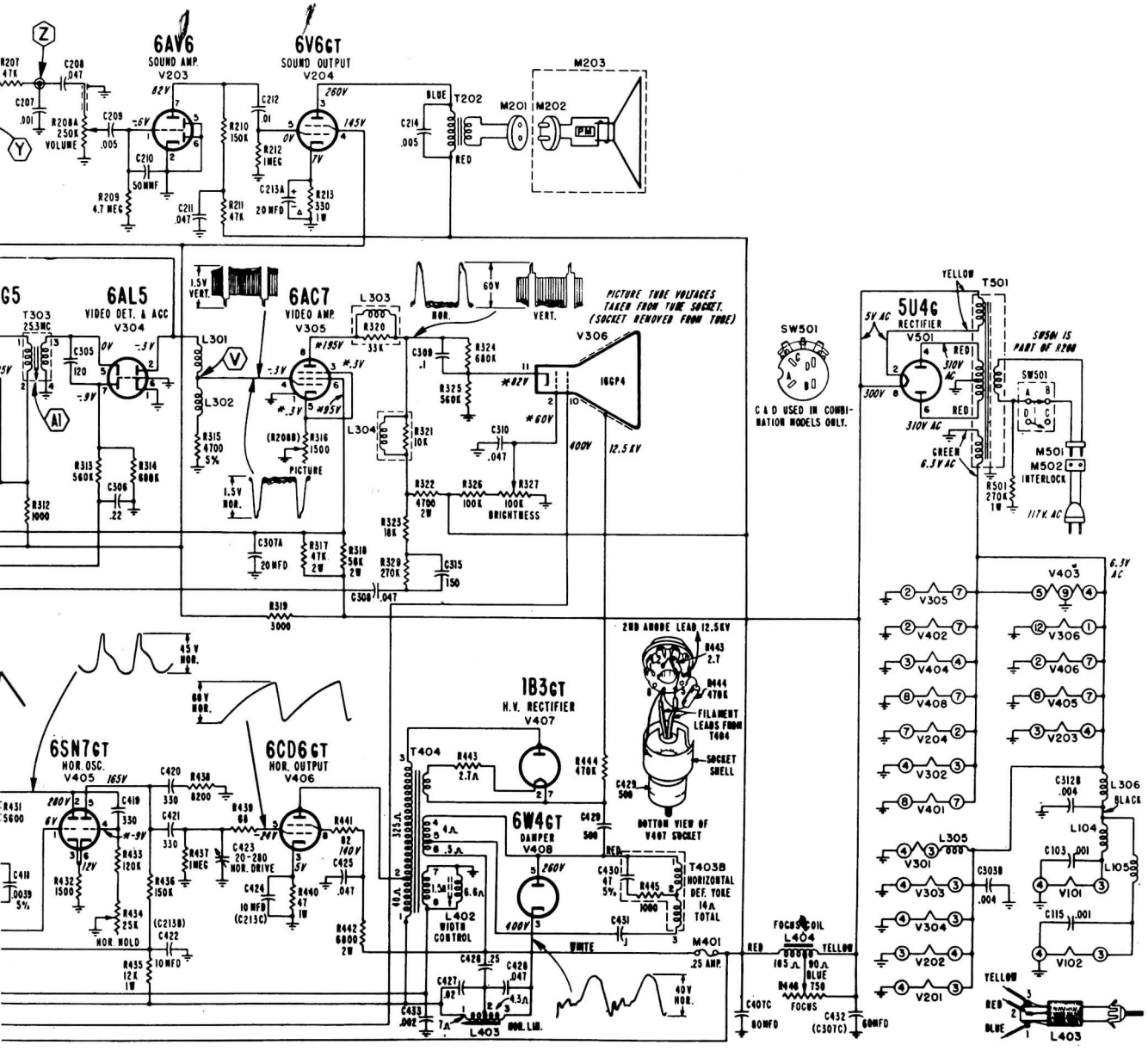
Schematic for 21D1 Televisi



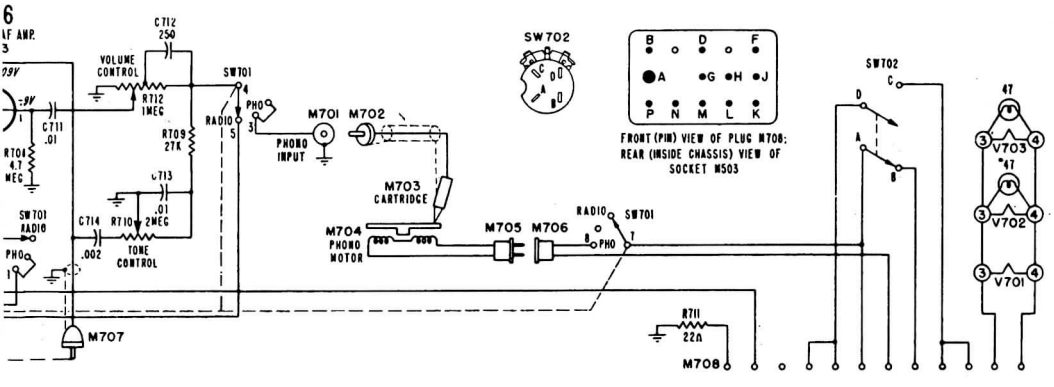
Schematic for 3C



ision Chassis (16" round tube).



C1 Radio Circuit



CHASSIS 21D1;
Radio Ch. 3C1