

Admiral

SUPPLEMENT TO PRELIMINARY SERVICE DATA

for models using

20X1, 20Y1, 4L1 CHASSIS

IMPORTANT

When servicing any model using the 20X1, 20Y1, or 4L1 chassis, use this supplement with the "Preliminary Service Data for 20X1 Chassis" (Form No. S286-1).

This supplement contains necessary service data for late production 20X1 chassis.

It also includes service data for the 20Y1 television chassis (12" picture tube). Note that the 20X1 and 20Y1 chassis are practically identical except for size of picture tube. Mechanically, a different bracket (part #15C403-1) is used for mounting the picture tube and focus coil, and a longer (36") picture tube webbing strap (part #50A1-3) is used.

Schematic and parts list for 4L1 AM Radio Tuner, which is used in radio-phono-television models, are also given.

This supplement contains data for servicing the 94C21-2 television tuner, which is used in place of the 94C21-1 television tuner used in early production. When servicing or ordering parts for a 94C21-2 tuner (late production), BE SURE to use this Supplement. When servicing or ordering parts for a 94C21-1 tuner (early production), BE SURE to use "Preliminary Service Data for 20X1 Chassis" (Form No. S286-1). Page 3 explains how to identify the tuner used.

WRITING TO FACTORY OR DISTRIBUTOR

If it is necessary to write to the factory or distributor regarding any trouble with a set, IT IS VERY IMPORTANT to include the television chassis number and run number (rubber stamped at rear of TV chassis). When writing about a record changer, be sure to include the run number of the record changer (rubber stamped on the label on the bottom of the record changer pan).

CORRECTIONS TO "PRELIMINARY SERVICE DATA FOR 20X1 CHASSIS", FORM NO. S286-1

The last paragraph on page 7 (under "Video Amplifier V305, 6AU6") should be changed to read as follows:

The video signal from the video detector V304 is capacitively coupled to the grid of video amplifier V305 by coupling condenser C321. Grid leak bias is developed for the video amplifier by C321 and R328.

Contrast control R317A varies the contrast by varying the gain of the video amplifier V305. Since R317A is connected in series with the video amplifier plate resistance, plate voltage will be proportional to the contrast control setting. This is effectively the same as varying the plate load resistance. Note: The cathode and grid of V305 operate approximately 140 volts above ground.

Note that the response curve illustrations (Figures 28, 31 and 34 on pages 11, 12 and 13 respectively) in the "Preliminary Service Data for 20X1 Chassis" Form No. S286-1, show the ideal response curves. However, 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.

Also, in Figure 28 and 34, the video carrier marker (25.75 MC) should be located at the 50% point measured down from the highest peak on the curve.

COMBINATION MODELS 24X15, 24X16

These models use a 4L1 AM Radio Tuner and a 20X1 television chassis. Note that the television chassis used in combination models differs slightly from that used in "television only" models. In "television only" models, the speaker field coil (L501) is used as a choke in the low voltage power supply filter. Since a PM speaker is used in combination models, a filter choke (L502) is used in place of L501.

It should also be noted that the replacement output transformer (T202) can be used with either the electromagnetic speaker used in "television only" sets or the PM speaker used in combination models.

Admiral Corporation

PRODUCTION CHANGES

MODIFICATION OF VIDEO AMPLIFIER TO DECREASE AUDIO "BUZZ".

Chassis with this change stamped run "3" or higher.

In early sets, the control grid of video amplifier V305 was connected to the junction of series peaking coil L301 and shunt peaking coil L302.

The cathode of V305 was returned to ground through a 15,000 ohm resistor. This resistor was removed, and coupling condenser C321 was added to the circuit. Resistor R328 was added to provide grid leak bias to the tube.

The schematic in "Preliminary Service Data for 20X1 Chassis" (Form No. S286-1) shows R328 connected from control grid to B-plus, however, it has always been connected from control grid to cathode.

R425 INCREASED TO IMPROVE HORIZ. STABILIZATION.

Chassis with this change stamped run "4" or higher.

Resistor R425 which is common to both the horizontal oscillator V403B and horizontal oscillator control tube V403A, was 150,000 ohms. It was changed to a 220,000 ohm resistor, $\frac{1}{2}$ watt (part number 6088-224). When replacing this resistor, use the late production part.

V204 FILTER NETWORK CHANGED TO DECREASE "HUM".

Chassis with this change stamped run "5" or higher.

The filter network between the plate voltage lead and cathode of the sound output tube V204 has been modified as shown in the schematic in this supplement. C209 (four section electrolytic) and C211 (single electrolytic) condensers have been replaced in late production sets by a three section electrolytic condenser and a dual electrolytic condenser (C213). Other combinations of filter condensers than those mentioned above were used in a few sets, but were connected as shown in the schematic in this supplement.

Early Filter Circuit

C209A	60 mfd, 150 V	} 4 section	
C209B	20 mfd, 450 V		
C209C	20 mfd, 450 V		} Electrolytic.....67C 15-9
C209D	100 mfd, 25 V		
C211	40 mfd, 250 V, Electrolytic.....67A 19-1		

Late Filter Circuit

C209A	60 mfd, 150 V	} 3 section
C209C	20 mfd, 450 V	
C209D	100 mfd, 25 V	
C213A	40 mfd, 250 V	
C213B	40 mfd, 250 V	} Dual Elect.....67C 15-52

MODIFICATION OF VERTICAL OSCILLATOR CIRCUIT V402A.

Chassis with this change stamped run "6" or higher.

In early sets, a 6.8 megohm resistor (R415) was connected from the plate (pin 1) of the vertical oscillator (V402A) to the control arm of the vertical hold control R342B. Also, a 100,000 ohm resistor (R414) was connected in series with R412 and R432B. Both the 6.8 megohm resistor and the 100,000 ohm resistor were removed from the circuit.

Removing R414 and R415 made it necessary to change coupling condenser C407 from 4,700 mfd. to .006 mfd. (part number 65821-602).

VERTICAL OSCILLATOR PLATE VOLTAGE CHANGED IN LATE PRODUCTION 20X1 CHASSIS TO IMPROVE CONTROL OF HEIGHT AND LINEARITY

Chassis with this change stamped run "7" or higher.

"Boot Strap" voltage supplies the vertical oscillator with plate voltage in early production 20X1 chassis and all 20Y1 chassis. In these sets, R416 is 2.2 megohms. In late production 20X1 chassis, the vertical oscillator plate voltage is supplied directly through the focus coil I404 (approximately 340 volts) and R416 is changed to a 2.7 megohm resistor (part number 6088-275).

VOLTAGE RATING OF C423 INCREASED

Chassis with this change marked run "7" or higher.

Decoupling condenser C423 was changed from a .05 mfd, 400 volts condenser to a .05 mfd, 600 volts condenser (part number 6485-7). When replacing C423, be sure to use late production part.

COUPLING CONDENSER ADDED TO IMPROVE AUDIO

Chassis with this change stamped run "8" or higher.

A coupling condenser (C214, .05 mfd, 400 volts, part number 6485-22) was added between the de-emphasis network (R206 and C206) and volume control R207A. This results in removing direct current from the volume control R207A.

FOCUS CIRCUIT MODIFIED

A 150 ohm, 1 watt resistor (R448) was added in series with the focus resistor R207B in late sets, to increase the wattage rating of the system. A 750 ohm, 7.5 watt resistor (R449) was also added in series with load resistor R446, to limit current through focus resistor R207B. The new focus circuit is given at the lower left corner of schematic.

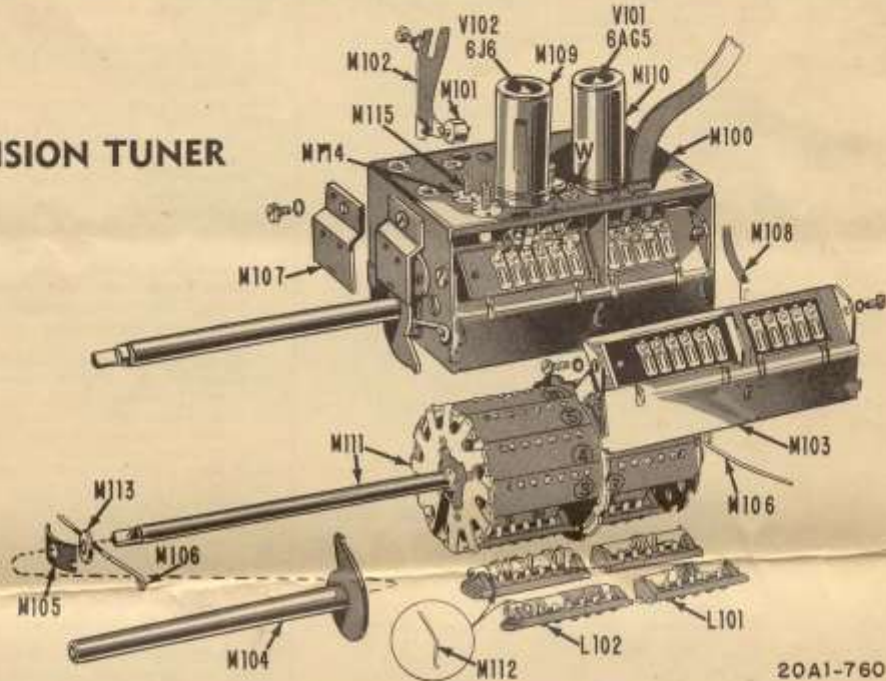
TELEVISION TUNER IDENTIFICATION

Early production sets used the 94C21-1 TV Tuner. Late production sets use the 94C21-2 TV Tuner. These tuners are similar in physical appearance and electrical operation but are only interchangeable as a complete unit. Many of the parts are neither electrically or mechanically interchangeable. Some of the parts appear to be identical physically but are not interchangeable. For example: The detent rollers in these tuners both have a 3/8" diameter but the diameter of the bearings are different. The bearing diameter for the 94C21-1 Tuner is 1/16"; the bearing diameter

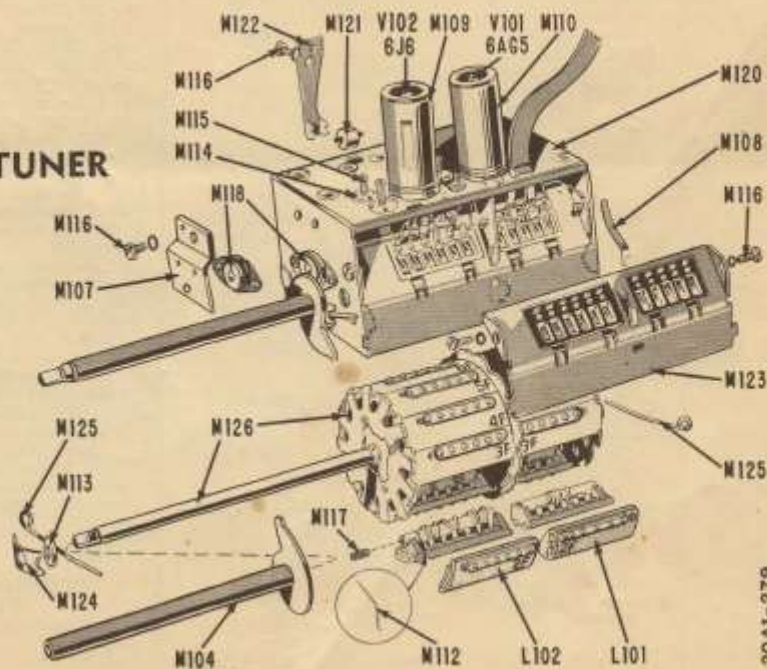
for the 94C21-2 Tuner is 3/32". Consequently it is important that the tuner being serviced is identified properly and the correct parts list used.

The most noticeable identifying feature of the 94C21-2 tuner is the individual channel coils. The coils on the 94C21-2 Tuner are stamped 2F, 3F, 4F, etc. and the coil contacts are mounted on a "raised" portion on the surface of the coil. The coils on the 94C21-1 Tuner are stamped 2, 3, 4, etc. (without letter "F") and the coil contacts are mounted on the flat surface of the coil.

94C21-1 TELEVISION TUNER



94C21-2 TELEVISION TUNER



PARTS LIST

This parts list contains additions and corrections to the parts list in "Preliminary Service Data for 20X1 Chassis" (Form No. 286-1). Use this list FIRST, then refer to the Preliminary Service Data (Form No. S286-1) for any part NOT listed here.

R213	1,000 ohms, $\frac{1}{2}$ watt.....	60B	8-102
R414	100,000 ohms, $\frac{1}{2}$ watt.....	60B	8-104
R415	6.8 megohms, $\frac{1}{2}$ watt.....	60B	8-685
R416	2.2 megohms, $\frac{1}{2}$ W. in 20Y1 and early 20X1.....	60B	8-225
		60B	8-275
R425	220,000 ohms, $\frac{1}{2}$ watt.....	60B	8-224
R438	82 ohms, 2 watt.....	60B	20-820
R448	150 ohms, 1 watt.....	60B	14-151
R449	750 ohms, 7.5 watt.....	61A	1-17
C209A	60 mfd, 150 V. } 3 section67C	15-11
C209C	20 mfd, 450 V. } Electrolytic		
C209D	100 mfd, 25 V. }		
C213A	40 mfd, 250 V. } Dual67C	15-52
C213B	40 mfd, 250 V. } Electrolytic		
C214	.05 mfd, 400 V., Paper.....	64B	5-22
C407	.006 mfd, 300 V., Mica.....	65B	21-602
C409	.1 mfd, 400 V., Paper.....	64B	5-20
C417	.05 mfd, 400 V., Paper.....	64B	5-22
C423	.05 mfd, 600 V., Paper.....	64B	5-7
L502	Choke, Filter (used in combination models only).....	74A	12
V306	10" Picture Tube (20X1).....	10BP4	
	12" Picture Tube (20Y1).....	12LP4	

MISCELLANEOUS PARTS FOR TELEVISION CHASSIS

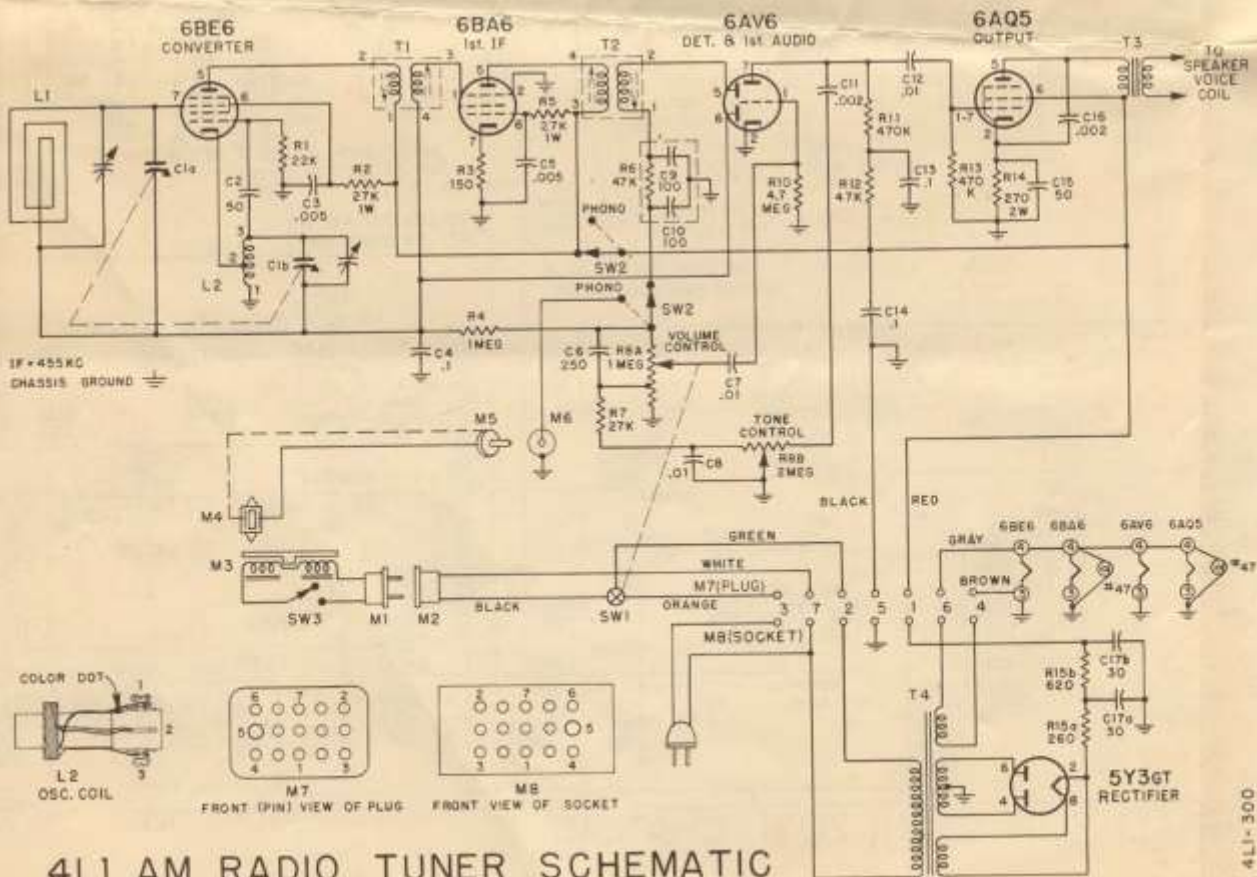
NOTE: A different arrangement for mounting the picture tube, focus coil, and deflection yoke may be used in future sets.

Bracket, Tube and Focus Coil Mounting for 10" sets (20X1 chassis).....	15A	240-1
for 12" sets (20Y1 chassis).....	15C	403-1
Clamp, Webbing Strap Tension.....	19A	61
Plate, Channel Selector Shaft		
Bearing (Fibre).....	32A	111-1
Rubber Bumper (under front of picture tube)		
Round (1" dia, used in late sets)....	12A	16-1
Strip (Sponge rubber, 3/8"x1"x1 1/2", used in early sets).....	12A	5-11
Spacer, Brass (for mounting C426)....	29A	1-34
Webbing, Picture Tube Mtg. Strap		
30" length for 10" sets.....	50A	3-1
36" length for 12" sets.....	50A	3-3
Corona Ring.....	19A	62

CABINET PARTS FOR 20X11, 20X12, 20X121, 20X122

Bumper, Rubber (20X11, 20X12)		
Black Rubber (used in early sets)....	12A	3-8
Red Rubber, with Spacer (used in late sets).....	12B	3-9
Frame, Picture Tube (used only with 23D50-5 window) for 20X11, 20X12.....	23D	50-6
Window, Picture Tube (for 20X11, 20X12).....	23D	50-5

For one-piece window and frame, see parts list in "Preliminary Service Data for 20X1 Chassis".



IMPORTANT

Use this parts list for 94C21-2 Tuner only. Some parts for early tuner (94C21-1) and late tuner (94C21-2) are not interchangeable. Be sure to use the parts list in the "Preliminary Service Data for 20X1 Chassis" (Form No. S286-1) for all 94C21-1 parts. Page 3 explains how to identify the tuner used.

INDIVIDUAL CHANNEL COILS FOR TV TUNER 94C21-2

Note: Channel coils used in the 94C21-2 Tuner are stamped 2F, 3F, 4F, etc.

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 L101 or L102 in turret, check to see that teeth at inner end of coils fit together when fitted in detent plate at center of turret. If necessary, file teeth slightly.

MISCELLANEOUS PARTS FOR TV TUNER 94C21-2

To identify a 94C21-1 or 94C21-2 Tuner, see discussion under "Television Tuner Identification".

Sym.	Description	Part No.
M104	Shaft Shell & Rotor Assy. (Sharp Tuning) (with 1 1/8" long brass shaft Shell).....	98A 45-76
M107	Bracket, Sharp Tuning Rotor Retaining.....	98A 45-61
M108	Spring, Detent Plate Grounding.....	98A 45-74
M109	Shield, Tube (Slotted; for 6J6).....	98A 45-73
M110	Shield, Tube (Plain; for 6AG5).....	98A 45-36
M112	Spring, Slug Retaining (Osc. coil).....	98A 45-52
M113	Washer, Fibre Spacer (1/4" ID x 1/2" OD).....	98A 45-63
M114	Nut, Locking Spring (for trimmers).....	98A 45-31
M115	Screw, Trimmer (4-36 x 3/8").....	98A 45-33
M116	Screw, Bracket Mounting (6-32 x 1/4").....	98A 45-62
M117	Slug, Brass Tuning.....	98A 45-80
M118	Stator Plate (ungrounded); Silver with Ceramic Insulator (includes mounting bracket) for Sharp Tuning C111.....	98A 45-86
M120	Tuner, Television (complete).....	94C 21-2
M121	Roller, Detent (3/8" dia., 3/16" dia. bearing).....	98A 45-82
M122	Spring, Detent (2 3/8" long).....	98A 45-81
M123	Contact Plate and Bracket Assembly (with wiping contacts).....	98A 45-84
M124	Spring, Sharp Tuning Rotor Contact (Flat bronze 1 1/4" x 1/2").....	98A 45-83
M125	Spring, Front and Rear Turret Shaft (Wire 2 3/8" long, 1/8" dia.).....	98A 45-85
M126	Turret and Shaft Assembly (less coils) (3/4" shaft and 1/8" rounded detent depression).....	98A 45-89

† Part of encased Diode Filter Unit 65A3-1. This unit consists of R6, C9, C10 (see schematic). If a section of the unit becomes defective, it may be replaced with an individual component.

PARTS LIST FOR 4L1 RADIO CHASSIS RESISTORS

Sym.	Description	Part No.
R1	22,000 ohms, 1/2 watt.....	60B 8-233
R2	27,000 ohms, 1 watt.....	60B 14-273
R3	150 ohms, 1/2 watt.....	60B 8-151
R4	1 Megohm, 1/2 watt.....	60B 8-105
R5	27,000 ohms, 1 watt.....	60B 14-273
†R6	47,000 ohms, 1/2 watt.....	
R7	27,000 ohms, 1/2 watt.....	60B 8-273
R8A	1 Megohm, Volume Control.....	75B 11-11
R8B	2 Megohm, Tone Control.....	
R10	4.7 Megohm, 1/2 watt.....	60B 8-475
R11	470,000 ohms, 1/2 watt.....	60B 8-474
R12	47,000 ohms, 1/2 watt.....	60B 8-473
R13	470,000 ohms, 1/2 watt.....	60B 8-474
R14	270 ohms, 2 watt.....	60B 20-271
R15A	260 ohms.....	61A 5-5
R15B	620 ohms.....	

CONDENSERS

Sym.	Description	Part No.
C1A	0-420 mmfd, 1 Gang.....	68B 32
C1B	0-108 mmfd, 1.....	
C2	50 mmfd, Ceramic.....	65B 6-4
C3	.005 mfd, min, Ceramic.....	65A 10-1
C4	.1 mfd, 200 volt, Paper.....	64B 5-30
C5	.005 mfd, min, Ceramic.....	65A 10-1
C6	250 mmfd, Ceramic.....	65B 6-5
C7	.01 mfd, 400 volt Paper.....	64B 5-25
C8	.01 mfd, 400 volt Paper.....	64B 5-25
†C9	100 mmfd, Ceramic.....	
†C10	100 mmfd, Ceramic.....	
C11	.002 mfd, 600 volt, Paper.....	64B 5-9
C12	.01 mfd, 400 volt, Paper.....	64B 5-25
C13	.1 mfd, 400 volt, Paper.....	64B 5-20
C14	.1 mfd, 400 volt, Paper.....	64B 5-20
C15	50 mfd, 25 volt, Electrolytic.....	67A 4-7
C16	.002 mfd, 600 volt, Paper.....	64B 5-9
C17A	30 mfd, 350 volt.....	67C 6-22
C17B	30 mfd, 350 volt.....	

COILS, TRANSFORMERS, ETC.

Sym.	Description	Part No.
L1	Antenna, AM Loop.....	69C 100-1
L2	Coil, Oscillator.....	69A 52-1
T1	Transformer, 1st IF.....	72B 28-7
T2	Transformer, 2nd IF.....	72B 28-17
T3	Transformer, Output.....	79A 22
T4	Transformer, Power.....	80B 1
SW1	Switch, On-Off.....	Part of R8A
SW2	Switch, Radio-Phone.....	77A 31

MISCELLANEOUS PARTS FOR 4L1 RADIO CHASSIS

M2	Socket, Phono Motor.....	89A 6-1
M6	Socket, Phono Input.....	88A 1
M7	Plug, Cable Connector (9 pin rect.).....	88A 20-11
	Cover and Insulator (for 88A 20-11 plug).....	88A 20-6
	Cable, (7 wire) including 88A 20-11 plug and 88A 20-6 cover.....	AB294
M8	Socket, Power Supply Cable (14 contact).....	88A 20-2
	Bracket, Off-Volume and Tone.....	15A 385
	Bracket, Radio-Phono Switch.....	15A 409
	Bracket, Tuning Sleeve.....	15A 394
	Cover Assembly, Chassis.....	A1880
	Dial Back and Bracket Assembly.....	A1881
	Dial Cord (40" approximately).....	50A 1-3
	Dial Scale.....	22B 21
	Escutcheon, Radio.....	23D 39-4
	Grommet, Gang Mounting.....	12A 1-2
	Hex Nut, Switch Retaining.....	2A 2-9-71
	Line Cord.....	89A 1-1
	Lockwasher, Oscillator Coil & Gang (#6 I.T.).....	3B 1-25-71
	Pilot Light, #47 Mazda.....	81A 1-8
	Painter, Dial.....	25A 33
	Shaft, Tuning.....	28A 48
	Socket Tube	
	7 pin (for 6BA6, 6AU6, 6AQ5).....	87A 3-7
	7 pin (for 6BE6).....	87A 2-4
	8 pin (for 5X3).....	87A 5-1
	Socket, Pilot Light (includes 12" lead).....	82A 0-6
	Socket, Power Cable (14 contact).....	88A 20-6
	Spacer Sleeve (for gang mounting).....	29A 2-1-71
	Spacer Sleeve (3/4" long, for mounting phono-radio switch).....	29A 3-15
	Spring, Dial Cord Tension.....	19B 1-3
	Spring, Tube Retainer (for 6AQ5).....	19A 56-2
	Washer, Vellutex (Oscillator coil mtg.).....	5A 1-21

APH PARTS

label and see Record Changer
Record Changer parts list
..... 98A 8-1
..... 98A 6-1
..... 407B 17
needles) 409A 11
..... 98A 15-6
..... 98A 15-7
plug) 413A 11-1
..... 88A 1
..... 406A 20
..... C400B 311
..... C400B 310
..... C400B 329
(for holding
..... A2002
file) G400A 279
..... 98A 54-2
g phono
..... 1A 87-1
..... AC183-1
..... AC183-2
..... 19A 15-1
long) 19A 59
..... 28A 22-1
summer) 98A 54-3

PARTS FOR K136, 20X137

shers may contain the suffix
..... A3029
ield) A3027
es mtg. spring) A3015
..... 35E 109-1
..... 35E 109-2
..... 35E 109-3
..... 44B 157
..... 98A 15-1
low and frame) 23D 49
d (less mounting
..... 23B 43-2
ides chipboard
ion) 98A 61-2

own, 5 1/2" x 6 1/2") 36B 3-32
5") 36B 3-23
g. (#8-32) 2A 2-14-71
" knob) 33C 28-19
lume
..... 33C 28-20
O-shaped" knob) 33C 28-35
(Brass
..... 33C 28-36
). 3B 1-29-71
sion. 18A 5-3
g. 1A 67-44-71
on to Cabinet
(S.) 1A 7-24-71
d Mtg. (#8-32) 1A 48-2-71
x 8") 16A 2-1-71
includes output
..... 78B 50-1
etaining 19A 48
ining 18A 12
ntrast,
nob) 98A 44-1
ed" knob) 98A 44-2
ntrast-Brightness,
..... 5A 4-6
nob 5A 4-5
inner and outer
..... 5A 1-30

PARTS FOR 20X146, 20X147

umbers may contain the suffix
..... A3072
..... 16D 16
..... 43B 86
..... 16A 21-1-70
..... 35E 107-1
..... 35E 107-2
..... 35E 107-3
..... 44B 136

Decal, Cabinet Lettering 98A 15-1
Escutcheon, Bezel (fits between cabinet cutout
and picture tube escutcheon) 23C 56
Escutcheon, Channel (less mtg. spring) 23B 43-2
Escutcheon, Picture Tube (includes window) 23D 49
Gasket, Sponge Rubber (includes chipboard
backing for back of picture tube escutcheon) 98A 61-2
Grille, Plastic Woven
for 20X146, 20X145 35E 107-57
for 20X147 35E 107-58
Grommets, Speaker Mounting (use with spacer
Grommet 29A2-5-71) 12A 2-6
Knobs, Tuning
Channel (Maroon "I-shaped" knob) 33C 28-19
Horizontal, Contrast, Off-Volume
(Maroon "I-shaped" knob) 33C 28-20
Sharp Tuning (Brass rim "O-shaped" knob) 33C 28-35
Vertical, Brightness, Focus
(Brass rim "O-shaped" knob) 33C 28-36
Leg, Cabinet (front)
for Walnut 35E 107-50
for Mahogany 35E 107-51
for Blond 35E 107-52
Leg, Cabinet (rear)
for Walnut 35E 107-53
for Mahogany 35E 107-54
for Blond 35E 107-55
Ring, Channel Knob Compression 18A 5-3
Spacer, Metal (for speaker mtg. grommet) 29A 2-5-71
Speaker, 6" Electromagnetic (includes output
transformer) 78B 51
Spring Clip, Channel Escutcheon 19A 48
Spring, Tuning Knob Tension
for Channel, Horizontal, Contrast,
Off-Volume ("I-shaped" knob) 98A 44-1
for Sharp Tuning ("O-shaped" knob) 98A 44-2
Washer, Felt (Television)
for Horizontal-Vertical, Contrast-Brightness,
Off-Volume-Focus knobs 5A 4-6
for Channel-Sharp Tuning knobs 5A 4-5
Washer, Fibre (used between inner and outer
television knobs) 5A 1-30

CABINET PARTS FOR 24X15, 24X16, 24X16S

Note: The above model numbers may contain the suffix
letter "N".

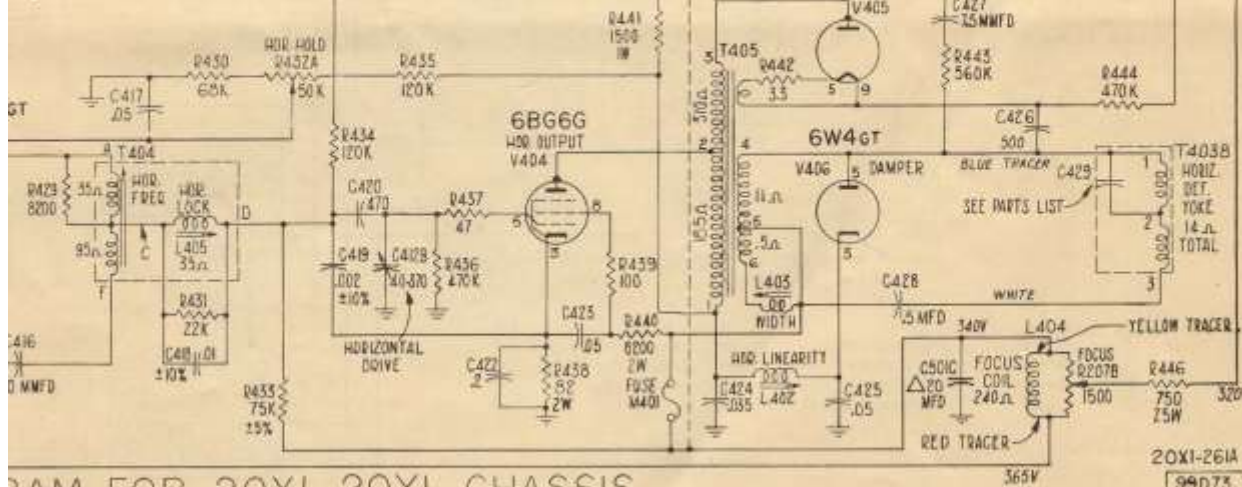
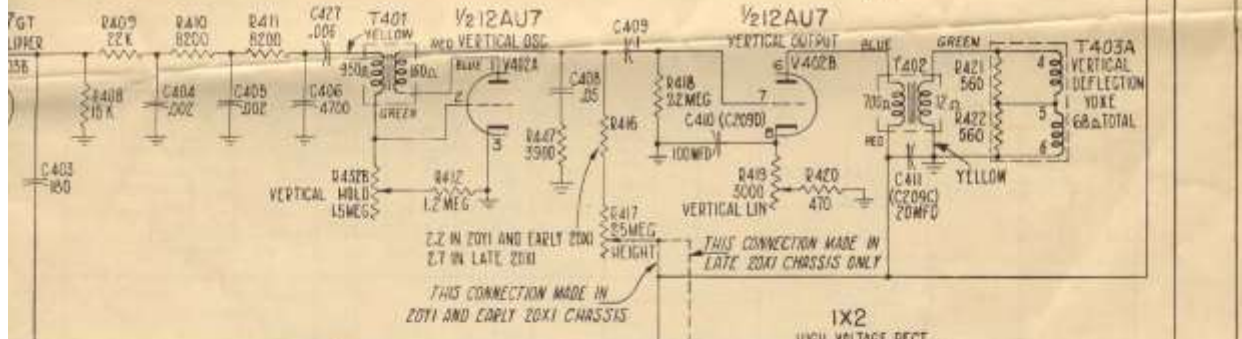
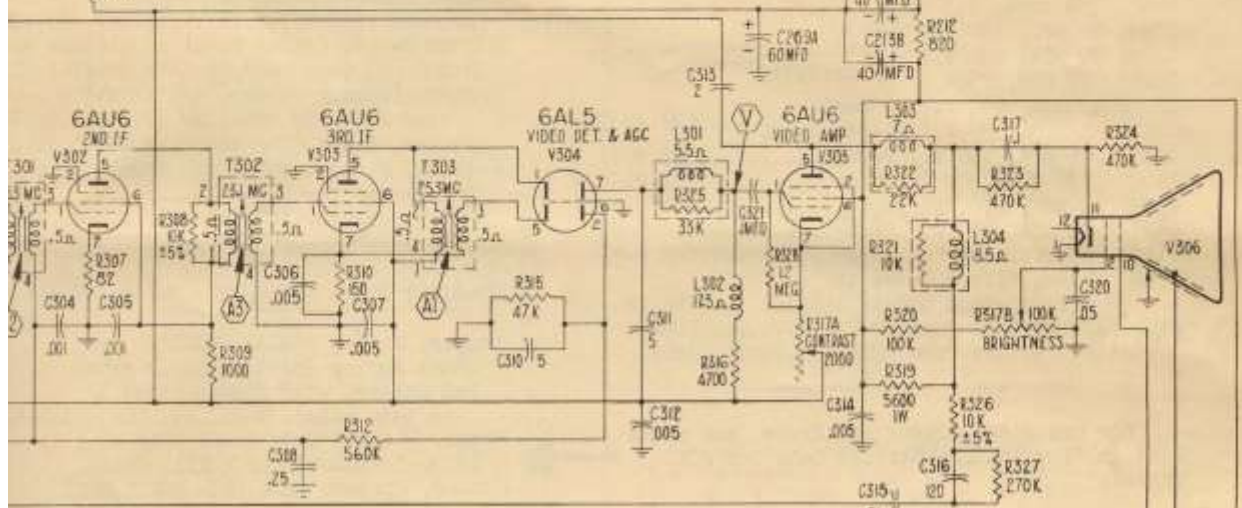
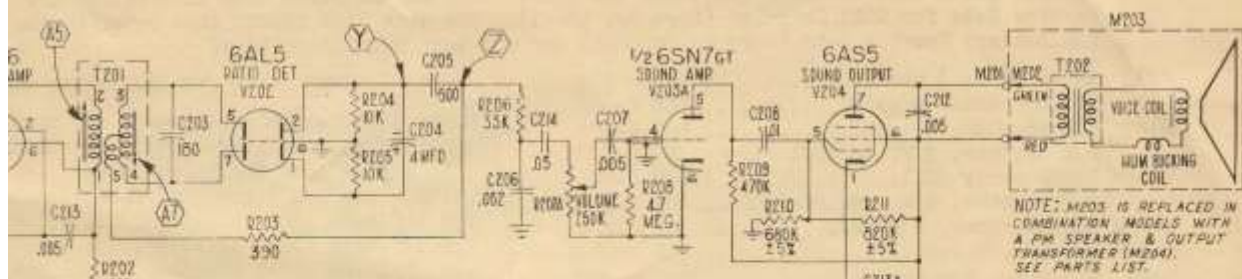
Antenna, Built-In (oto-scope) A3000
Back, Cabinet *
for Allium Compartment 43C 85-1
for Radio-Phono Compartment 43B 64-3
for Television Compartment 16D 18
Cabinet, Wood
Wood (24X15) 35E 108-1
Mahogany (24X16) 35E 108-2
Mahogany (24X16S) 35E 89-5
Carton and Fillers 44B 158
Centerpost Mounting Assembly (for holding
extra centerposts) A2002
Clamp, Cable 11A 2-6
Cushion Plate, Fibre (for mtg. 23B44-1
channel escutcheon) 32A 78
Decal, Cabinet Lettering 98A 15-1
Door Bumper, Sponge Rubber
(1/2" x 1/4" x 1") 12A 5-5
Door Catch and Strike Plate, Bullets 98A 48-26
Door, Record Compartment Complete
for Walnut (24X15) 35E 108-56
for Mahogany (24X16) 35E 108-57
for Mahogany (24X16S) 98A 48-29
Doors, Television and Radio-Phono Compartment
matched pair for Walnut (24X15) 35E 108-53
matched pair for Mahogany (24X16) 35E 108-54
matched pair for Mahogany (24X16S) 98A 48-17
Escutcheon, Channel (less mounting spring)
for 24X15, 24X16 23B 43
Escutcheon, Channel (less mounting spring,
speed nuts and fibre cushion plate)
for 24X16S 23B 44-1
Escutcheon, Radio (plastic) 23D 39-4
Escutcheon, Lower Monogram Panel
(for use with 23D48-1 picture tube window) 23D 48-2
Frame, Picture Tube (used only with 23D50-5
picture tube window) 23D 50-6
Gasket, Sponge Rubber
for use with 23D50 picture tube window
(includes cardboard backing) 98A 61-1
for use with 23D48-1 picture tube window
(includes cardboard backing) 98A 61-3
for use with 23D50-5 picture tube window
and 23D50-6 picture tube frame 12A 32-3
Grille Cloth
for Walnut 24X15 and Mahogany 24X16
(order 2 pieces to insure matching) 36B 3-21

Hinge Assembly, Tilt-Out
Left Side (facing front) AC183-1
Right Side (facing front) AC183-2
Leg, Cabinet
Left Rear
for Walnut (24X15) 35E 108-59
for Mahogany (24X16) 35E 108-60
Right Rear
for Walnut (24X15) 35E 108-62
for Mahogany (24X16) 35E 108-63
Left Front
for Walnut (24X15) 35E 108-65
for Mahogany (24X16) 35E 108-66
Right Front
for Walnut (24X15) 35E 108-68
for Mahogany (24X16) 35E 108-69
Hinge, Knife Door-
Pair for Walnut (24X15 and Mahogany
24X16) 98A 48-24
Knob, Door (record compartment) 33A 52-2
Knob, Door (telev. and radio-phon
compartment) 33A 52-1
Knob, Radio Tuning
"Radio-Phono" (double knob) 33C 40-34
"Tuning" (double knob) 33C 40-33
"Tone" (O-shaped knob) 33C 40-35
"Volume On-Off" (I-shaped knob) 33C 40-36
Knobs, Television
for 24X15, 24X16
Channel (mahogany "I-shaped" knob) 33C 28-38
Horizontal, Contrast, Off-Volume
(mahogany "I-shaped" knob) 33C 28-41
Sharp Tuning (mahogany "O-shaped" knob) 33C 28-40
Vertical, Brightness, Focus (mahogany
"O-shaped" knob) 33C 28-39
for 24X16S
Channel (gold "I-shaped" knob) 33C 28-17
Horizontal, Contrast, Off-Volume
(gold "I-shaped" knob) 33C 28-18
Sharp Tuning (maroon "O-shaped" knob) 33C 28-21
Vertical, Brightness, Focus (maroon
"O-shaped" knob) 33C 28-22
Metal Sheet, 1 1/2" x 5 3/4" (24X16S only) 16A 2-6-70
Nut, Hex (#4-40 for tilt-out tie bar) 2A 1-6-71
Ring, Knob Compression (for "Channel" knob) 18A 5-3
Screen, Perforated (8" x 11") 16A 2-1-70
Screw, Telev. Chassis Mtg. (# 3/32 x 1 1/4") 1A 67-44-71
Screw, Escutcheon Mtg. (#6 x 3/8" RH MS)
for 24X15, 24X16 1A 7-23-49
for 24X16S 1A 12-5-58
Screw, Tilt-Out Tie Rod Mtg. (#6-32 x 3/8"
Bd H M S) 365-250-C2-58
Speaker, 10" PM (includes output transformer) 78B 52
Speed Nut (for Channel escutcheon 23B44-1) 2B 10-5-68
Speed Nut (radio escutcheon mounting) 2B 10-24-59
Speed Nut (#8-22 Speaker mounting) 2B 10-8-59
Spring, Channel Escutcheon Retaining
for 24X15, 24X16 19A 48
for 24X16S 18A 27
Spring, Tilt-Out Coil (2 1/2" unstretched) 19A 15-1
Spring, Tilt-Out Arm Retaining (7 3/4"
unstretched) 19A 59
Spring, Tuning Knob Tension
for Channel, Horizontal, Contrast,
Off-Volume ("I-shaped" knob) 98A 44-1
for Sharp Tuning ("O-shaped" knob) 98A 44-2
Tie Rod, Tilt-Out (13 3/8" long) 28A 22-1
Tilt-Out Eye Bolt 1A 87-1
Washer, Escutcheon Mtg. (24X16S only) 5A 1-21
Washer, Felt (radio knobs) 5A 4-11
Washer, Felt (television)
for Horizontal-Vertical, Contrast-Brightness,
Off-Volume-Focus knobs 5A 4-6
for Channel-Sharp Tuning knobs 5A 4-5
Washer, Fibre (used between inner and outer
knobs) 5A 1-30
Washer, Fibre (for loop mtg.) 5A 1-27
Window, Picture Tube (with picture tube
frame molded to window)
for 24X15, 24X16 23D 50
for 24X16S, less lower monogram
panel 23D48-2) 23D 48-1
Window, Picture Tube (used with separate
picture tube frame)
for 24X15, 24X16 23D 50-5

UNIVERSAL REPLACEMENT PARTS FOR ROTO-SCOPE ANTENNA

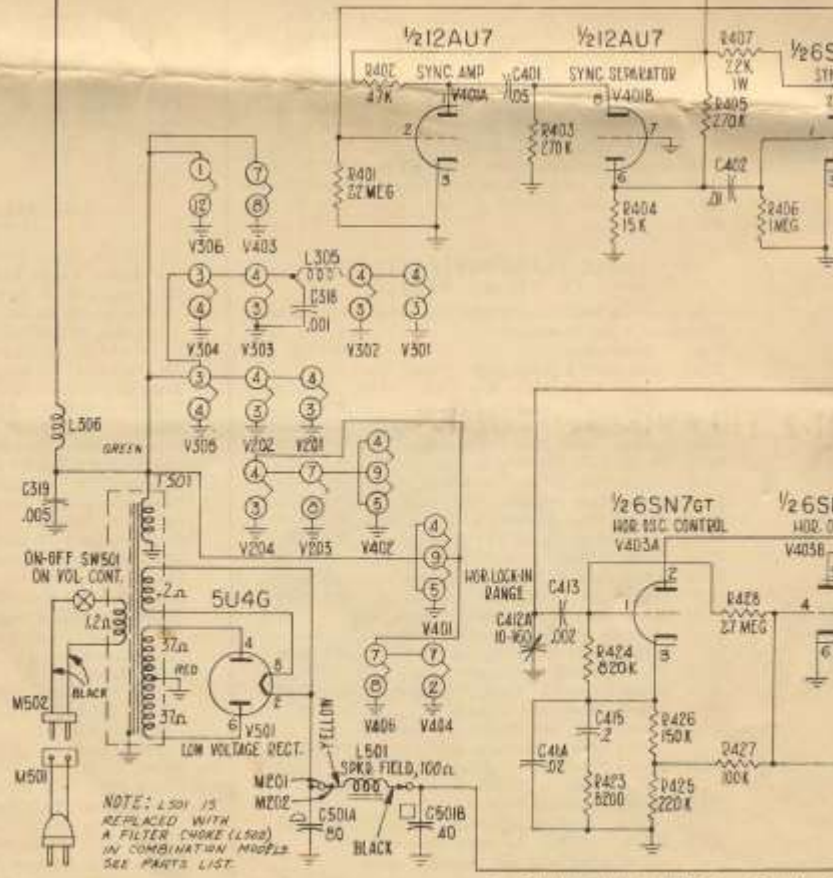
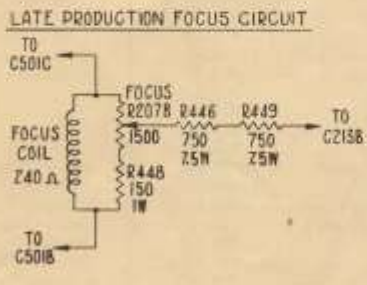
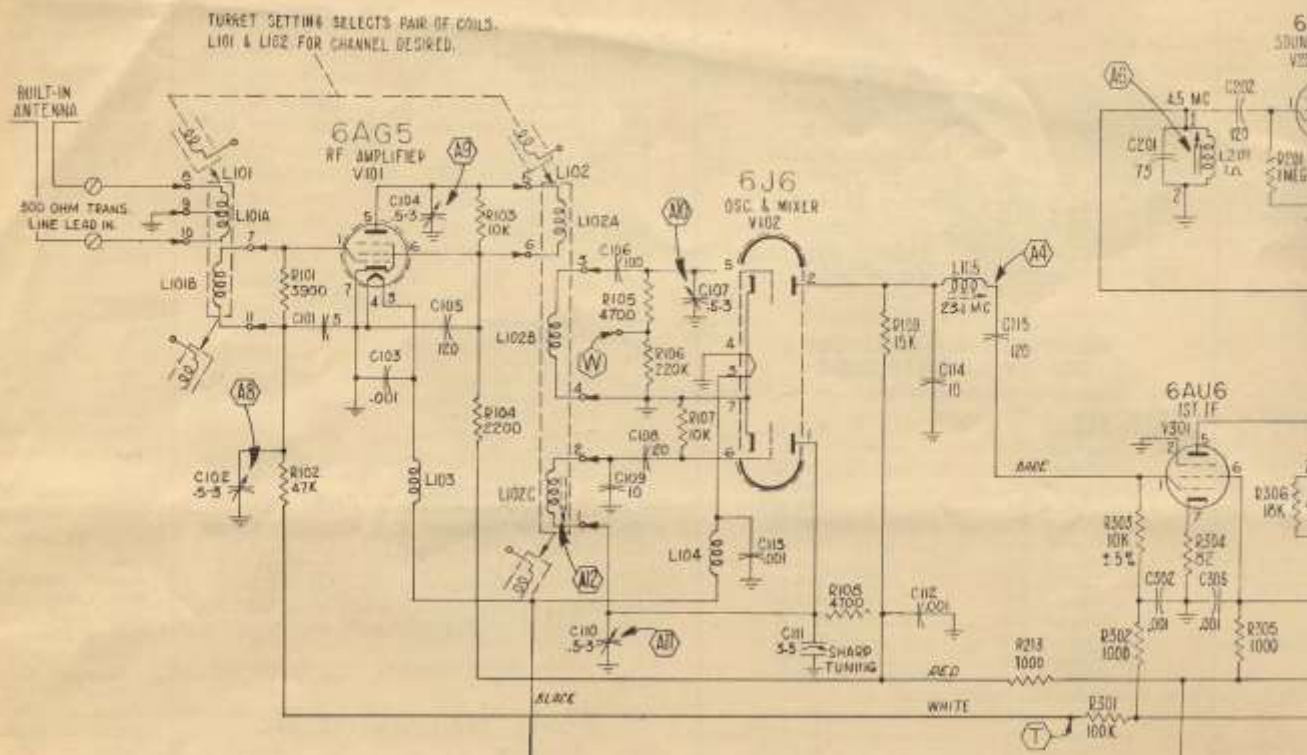
Antenna Lead (includes matching stub and
spade lugs) A3030
Control Lever Arm (includes switch blades) A3024
Contact, Bronze Spring 18A 40

* Supplied only if old part cannot be repaired. When ordering, describe condition of old part in detail.



RAM FOR 20X1, 20Y1 CHASSIS

20X1-261A
99D73



SCHEMATIC DIAG