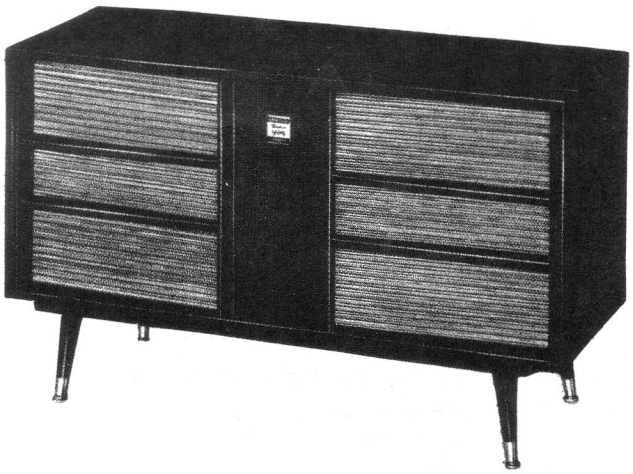
ADMIRAL
SERVICE MANUAL

T1138

5YICX
AM PHONO



8YICX
FM-AM PHONO

AMX100 FM-STEREO-MULTIPLEXER

MODEL IDENTIFICATION CHART			
MODEL NUMBER	CHASSIS NO.	RECORD CHANGER	CARTRIDGE
Y2401X	5YICX	9400L3-2 COLLARO STUDIO	9400K2-3
Y2406X	5YICX	9400L3-2 COLLARO STUDIO	9400K2-3
Y2501X	8YICX	9400L4-1 GARRARD "210"	9400K2-3
Y2506X	8YICX	9400L4-1 GARRARD "210"	9400K2-3
Y3401X	8YICX	9400L3-2 COLLARO STUDIO	9400K2-3
Y3401AX	8YICX	9400L6-1 ADMIRAL	409B34-2-1
Y3406X	8YICX	9400L3-2 COLLARO STUDIO	9400K2-3
Y3406AX	8YICX	9400L6-1 ADMIRAL	409B34-2-1
Y4306X	8YICX	9400L4-1 GARRARD "210"	9400K2-3
Y4346X	8YICX	9400L4-2 GARRARD "A"	9400K2-3

SPECIFICATIONS

ANTENNA:
- AM: Air Loop
- FM: Built-In, Transmission Line Type.

CIRCUIT

Superheterodyne, using eight miniature tubes and two diodes, and one silicon rectifier.

TUBE AND DIODE COMPLEMENT:
- V1 ECC85/6AQ8 (FM RF Amplifier and FM mixer-oscillator)
- V2 6AU6 (1st IF Amplifier)
- V3 6AU6 (2nd IF Amplifier)
- V4 6AL5 (FM Detector)
- V5 6BE6 (AM Converter)
- V6 12AX7 (Left and Right Channel AF Amplifier)
- V7 EL86/6CW5 (Output, Left Channel)
- V8 EL86/6CW5 (Output, Right Channel)
- CR1 Silicon Diode (AFC Diode) Valvo BA102
- CR2 1N87 (AM Detector)
- CR3 1N1764 (Rectifier, 500 MA)

CONTROLS:
- Tuning
- On-Off/Treble: (Dual Channel)
- Bass: (Dual Channel)
- Balance: (Dual Channel)
- Loudness: (Dual Channel)
- Function: (AM, FM, FM Stereo (multi), Phono)
- AFC Switch: (On-Off)

FREQUENCIES:
- RF AM: 535 -1620 KC
  FM: 88-108 MC
- IF AM: 455 KC
  FM: 10.7 MC

OPERATING VOLTAGE:

105-120 volts, 60 cycle AC only.

POWER OUTPUT:

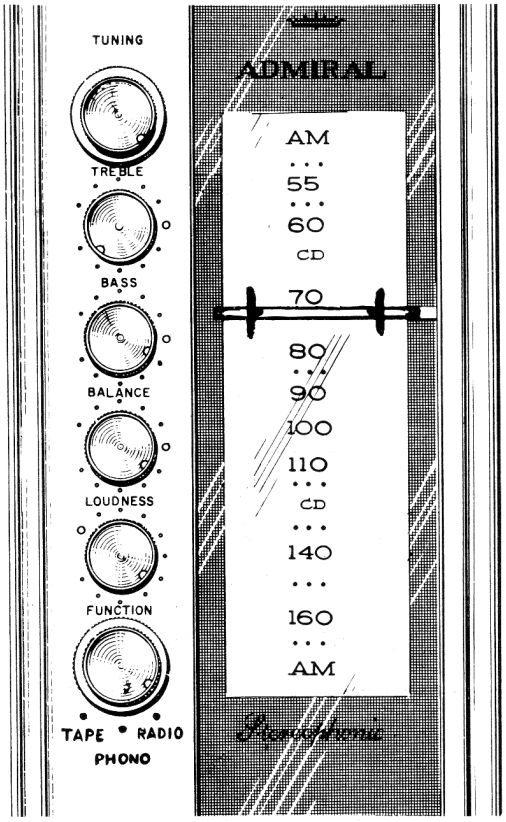
6.0 Watts total at 10% distortion.

FREQUENCY RESPONSE:

40 cycles to 15,000 cycles.

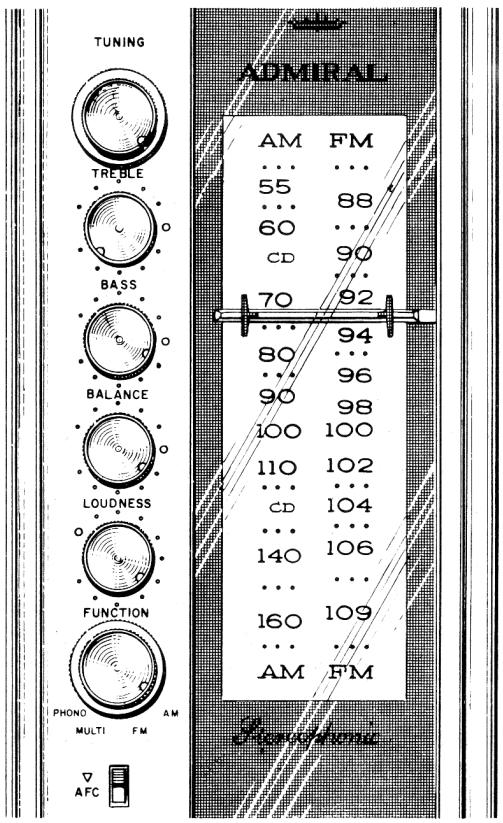
WATTAGE CONSUMPTION:

85 watts



CONTROL PANEL - 5YICX

FIG. 1



CONTROL PANEL - 8YICX

FIG. 2

GENERAL

The models included in this manual are combination console models with an FM-AM radio and dual channel stereophonic phonograph with provisions for FM Stereo adapter.

For FM or FM Stereo reception, first tune to the desired station with the AFC switch in the "off" position. Then slide the AFC switch to "on" for drift-free operation.

The Stereo phonograph consists of a four speed automatic record changer with a dual-output cartridge, a dual amplifying system and two separate speaker systems.

THE FM TUNER

The FM tuner has been designed for better than average sensitivity consistent with good selectivity. Most components are incorporated into an etched circuit board. The entire tuner, including the input IF transformer, is completely encased (shielded).

The tuner employs a dual triode ECC85/6AQ8 tube acting as a RF Amplifier and combined oscillator-mixer.

The 2nd triode of this tuner is Automatic Frequency Controlled by a diode in its grid circuit. AFC is achieved by the voltage developed by the ratio detector being applied across the special diode CR1. The capacity across this diode varies in proportion to the applied voltage and in turn corrects any frequency drift of the FM oscillator.

It is important to note that in a regenerative type circuit, in this case the RF stage, some form of control is required to prevent the circuit from breaking into oscillations. This is accomplished by feedback from plate to cathode of the RF tube, through trimmer C6. C6 is shown as adjustment "L". See Fig. 8

This tuner is very stable and will seldom need alignment, since it has been carefully aligned at the factory. Complete alignment of the tuner should not be attempted without proper test equipment, using information given in this manual.

IMPORTANT: Any misadjustment of the neutralization trimmer C6 may cause extreme oscillations, very distorted reception, weak or no reception at all.

Due to the unique design of this tuner in compactness of size, complete shielding, components mounted on an etched circuit board, etc., any major tuner repairing is not recommended. No parts for the tuner have been shown in the parts list for this reason.

First decide by actual test, if the tuner is defective, then replace with a new one.

FM TUNER REPLACEMENT

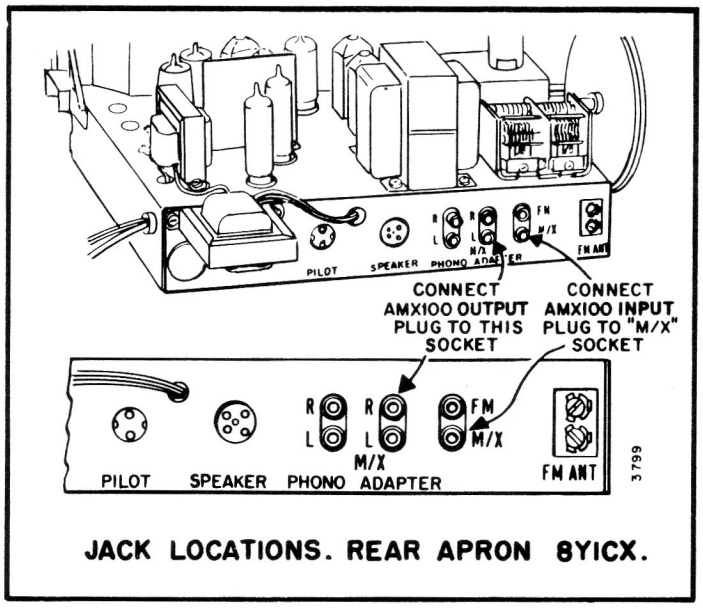
To replace tuner, it is necessary to remove only four Robertson head screws mounting the tuner to the chassis, after first removing all associated components and leads. It is not necessary to remove the dial cord attached to the tuner, as the replacement tuner is supplied with the proper length of cord.

If tuner is replaced, adjust cord tension and check the tuning range. The tuners supplied for replacement have been carefully aligned at the factory before shipment, so that only a touch-up alignment should be needed.

If the set does not tune properly through the FM range (88 MC to 108 MC), first check dial cord tension and correct placement of collar retainers, before deciding on tuner realignment.

To adjust string tension or shift the FM tuning range, loosen collars on the tuning shaft and rotate them until the set tunes through the proper FM range.

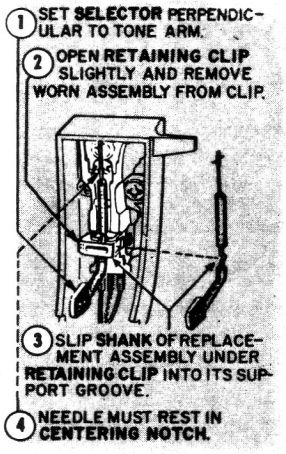
If only the ECC85/6AQ8 tube needs replacement, select a tube that will provide the proper tuning range, so that realignment is unnecessary.



JACK LOCATIONS. REAR APRON 8YICX.

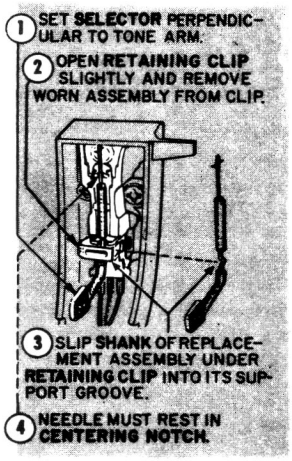
FIG. 5

REPLACEMENT CARTRIDGES



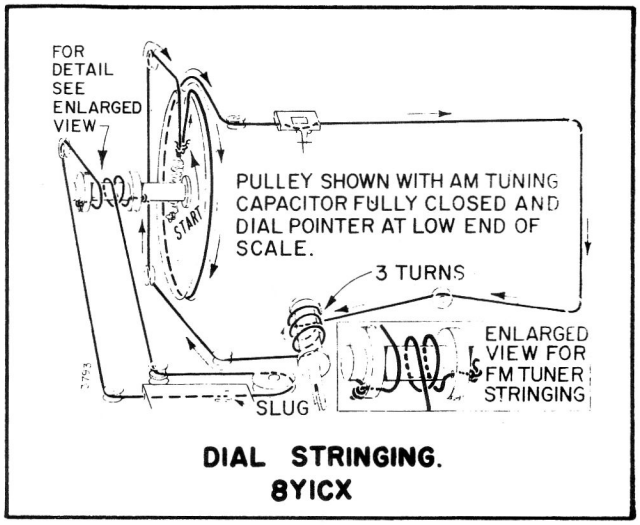
PART NO.
9400K2-3

FIG. 3



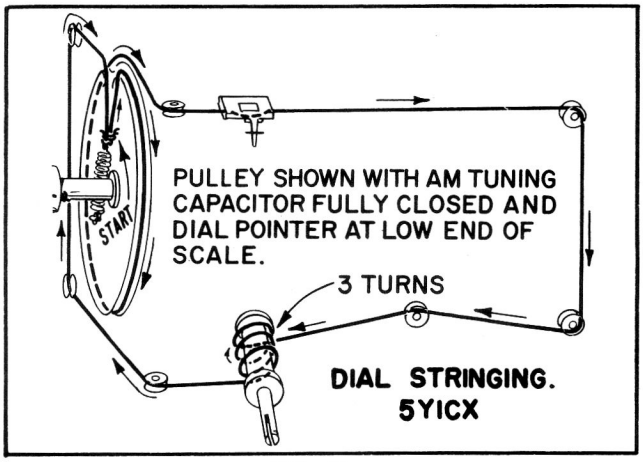
PART NO.
409B34-2-1

FIG. 4



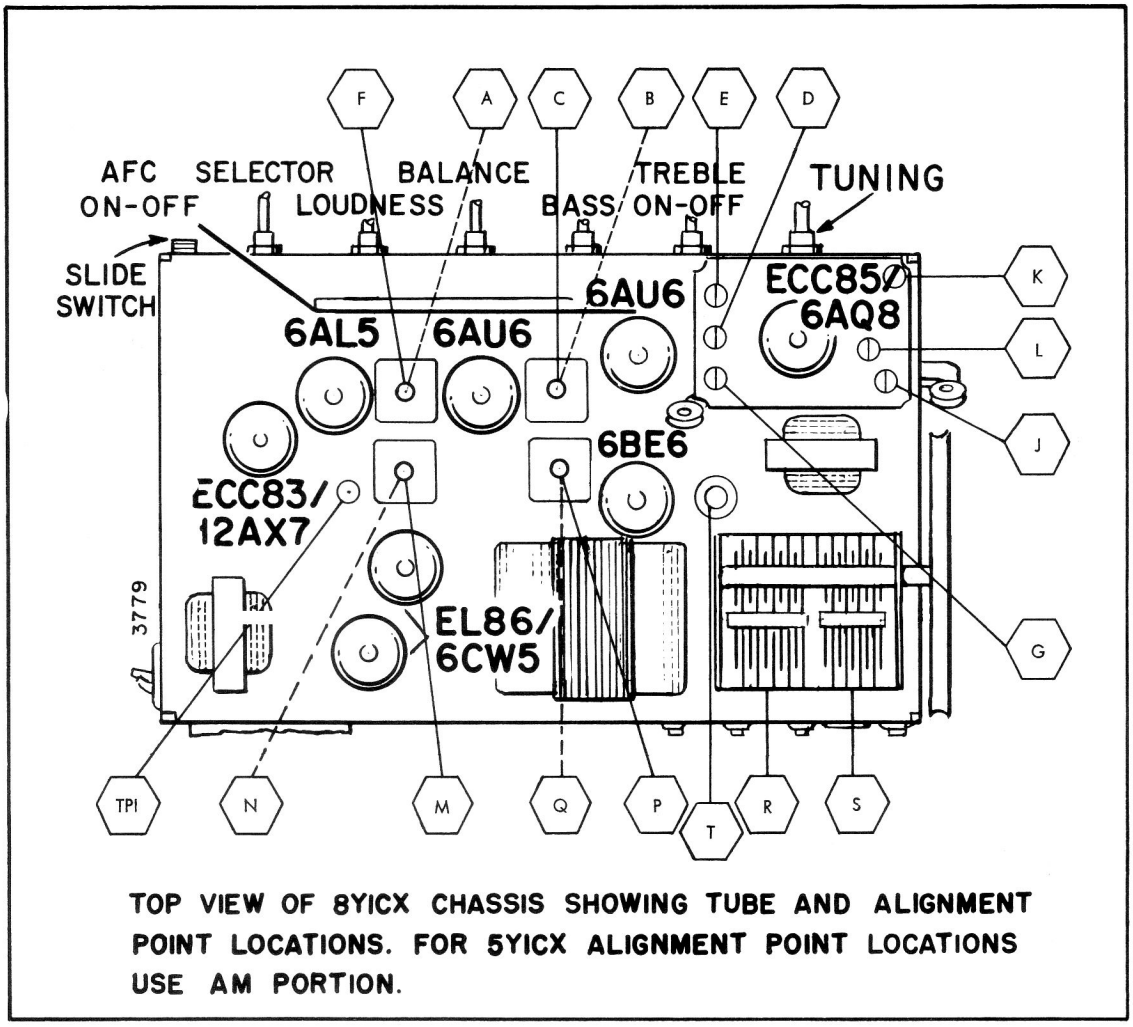
DIAL STRINGING.
8YICX

FIG. 6



DIAL STRINGING.
5YICX

FIG. 7



TOP VIEW OF 8YICX CHASSIS SHOWING TUBE AND ALIGNMENT POINT LOCATIONS. FOR 5YICX ALIGNMENT POINT LOCATIONS USE AM PORTION.

FIG. 8

ALIGNMENT PROCEDURE

AM ALIGNMENT FOR 5YICX AND 8YICX CHASSIS TURN FUNCTION SWITCH TO AM POSITION (CCW)				
STEP	**CONNECTION OF SIGNAL GENERATOR**	**SIGNAL GENERATOR FREQUENCY**	**RECEIVER GANG SETTING**	**ADJUST**
1	Through a .1 mf capacitor to antenna section of tuning gang.	455 KC 30% Mod.	Fully open	M, N, P, & Q for max. on output meter.
2	Use a radiated signal. Loop of several turns of wire, or place generator lead close to antenna loop for adequate signal pickup.	1620 KC 30% Mod.	Fully open	R for max.
3		535 KC 30% Mod.	Fully closed	T for max.
4	Same as Steps 2 & 3	Repeat above two steps until 535-1620 KC range is established.		
5	Same as Steps 2 & 3	1400 KC 30% Mod.	Tune in generator signal	S for max.

RF AND IF ALIGNMENT FOR 8YICX USING AM SIGNAL GENERATOR AND VTM

- Allow set and test equipment to warm up for at least 5 minutes before an alignment.
- Turn function switch to FM position (2nd from CCW) AFC switch to *OFF*. Connect output meter from chassis ground to high side of either "L" or "R" voice coil connection at speaker socket. If speakers are not connected, then connect 3.2 ohm 5 watt load across each speaker channel.
- Before proceeding with alignment, see Step 7.
- Set loudness control to minimum position.
- For IF alignment, inject the 10.7 MC unmodulated signal by means of an ungrounded tube shield atop the RF tube (ECC85).
- For RF alignment, inject signal into antenna terminals as follows: High side of signal generator to bottom screw through a 120 ohm resistor; low side to top screw through a 150 ohm resistor.
- Use the lowest signal input possible to provide a usable reading on the 1.5 volt minus DC scale, except in Step 2. In Step 2, use maximum signal and the zero center scale.
- Use non-metallic alignment tools. Use hex tool (Part No. 98A30-12) for IF transformers and an insulated screw driver type, with a blade no wider than 3/32", for the tuner adjustments.

STEP	SIGNAL GENERATOR CONNECTION	SIGNAL GENERATOR FREQUENCY	RECEIVER DIAL SETTING	VTVM CONNECTION	ADJUST	REMARKS
1	Ungrounded tube shield atop RF tube (ECC85)	10.7 MC Unmod.	High end (Dial fully clockwise)	High side to TP1. See Fig. 8. Ground lead to chassis.	A, B, C, D and E for max.	"E" should be turned inward until the 2nd peak is found.
2	Same as Step 1	10.7 MC Unmod.	Same as Step 1	Move VTVM lead to M/X jack	F for zero center	Use zero center scale on VTVM. Increase signal input to max.
3	Check oscillator range before proceeding. High end, 108.4 MC. Low end, 87.6 MC. Check dial cord for correct tension and placement. To take up slack or shift the tuning range, loosen collars on tuning shaft and rotate to provide tension and proper range.					
4	Antenna terminals through resistors described in paragraph 6 above	108.4 MC (Unmod.)	Same as Step 1	Same as Step 1	G for max.	Only slight adj. will be required.
5	Same as Step 4	94 MC (Unmod.)	Tune in 94 MC on dial	Same as Step 1	J for max.	Repeat steps 5 & 6 until no further increase. Make Step 5 last adjustment.
6	Same as Step 4	90 MC (Unmod.)	Tune in 90 MC on dial	Same as Step 1	K for max.	
7	Before or after alignment, if set has low sensitivity, squeals or howls at any point on the dial, first make certain there are no defective components, then check adjustment of the neutralization trimmer C6 (Adjustment "L"). See Fig.8 Disconnect antenna, turn volume control to maximum and tune in a station (or point of maximum noise). Turn C6 clockwise until set cuts out, then reverse rotation slightly until station (or noise) is received loud and clear. For improved bandwidth, continue to rotate CCW another fractional turn.					

AMX100 FM-STEREO-MULTIPLEXER

GENERAL DESCRIPTION

The AMX100 FM-STEREO-MULTIPLEXER is a transistorized electronic device which, when used in conjunction with certain Admiral FM-AM Stereo instruments permits reception of the newly announced technique of FM-Stereo broadcasting. At the present time there are few regularly scheduled FM-Stereo programs. However, many FM broadcasting stations are in the process of converting their equipment and will soon be scheduling regular FM-Stereo programs. When this occurs the owners of those sets which are equipped to receive stereo broadcasts will enjoy never before achieved fidelity in the reception of radio broadcasts.

The Admiral AMX100 consists of two transistors and three diodes and their associated circuitry. It has been especially designed to be connected by means of plugs and sockets, to all current Admiral FM-AM-STEREO receivers and all FM-AM Stereo Theater Television instruments, as well as many previous years FM-AM Stereo sets. The Table on page 1 identifies all past and present Admiral models which had been designed and manufactured with provisions for the AMX100 MULTIPLEXER.

To accommodate the large variety of cabinet configurations, the AMX100 has slotted adjustable mounting plates which, in effect, allow the distance between chassis mounting holes to be increased or decreased in accordance with the requirements of the individual cabinet into which it is to be installed.

CONNECTING THE AMX100

To connect the AMX100, proceed as follows:

1. Connect the AMX100 output cable (dual plug) into the proper jack on the rear apron of the FM-AM tuner. Be sure the "L" and "R" on the plug match those adjacent to the jacks. Refer to Figures 9, 10 and 11.
2. Plug the AMX100 input cable (single plug) into the jack on the rear apron of the FM-AM tuner marked "M/X".
3. Locate the connectors in the power line to the record changer motor. Route the AMX100 power input cable to this location. Unplug the record changer power connectors and insert the AMX100 power input connectors between them.
4. Install cabinet backs and speaker enclosure backs removed in the installation process.
5. Connect set line cord to wall outlet and test to see that instrument operates in all positions of Function switch.

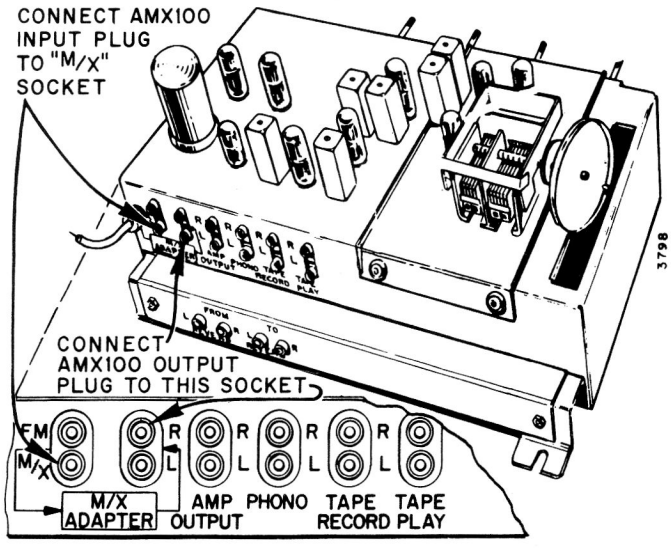
RECEIVING FM-STEREO BROADCASTS

Turn set on. Turn Function switch to FM position. In sets having separate AFC switch, move switch to "OFF" position. Tune in station carefully; then turn Function switch to "FM-MULTI" position. If set has separate AFC control, move switch to "ON" position. If set has "Stereo-Monaural" switch, it should be in "STEREO" position. Adjust Balance and Loudness controls as described in the Operating Instruction booklet.

IMPORTANT

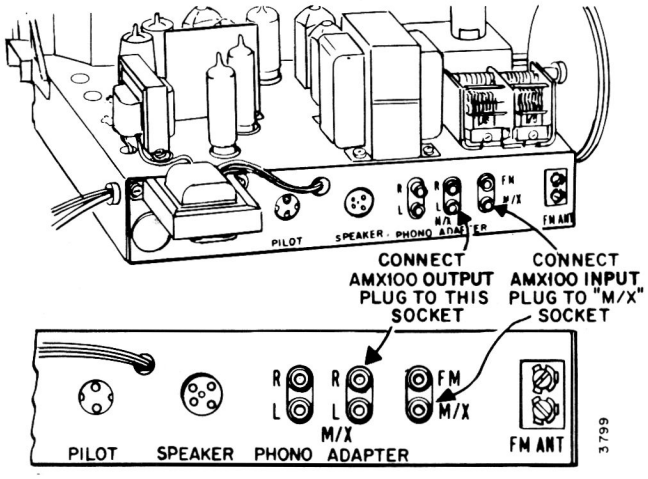
The AMX100 requires no on-off switch since power is controlled automatically by the main On-Off switch of the FM-AM receiver.

If the function switch is in the "FM-MULTI" position when the station is not broadcasting a stereo program, there may be undesirable hiss or background distortion in the sound.



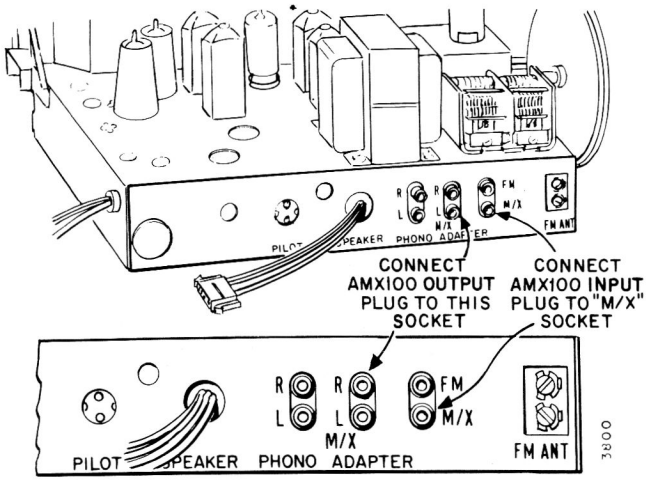
Jack Locations, Rear Apron 9J1-Series FM-AM Tuners.

FIG. 9



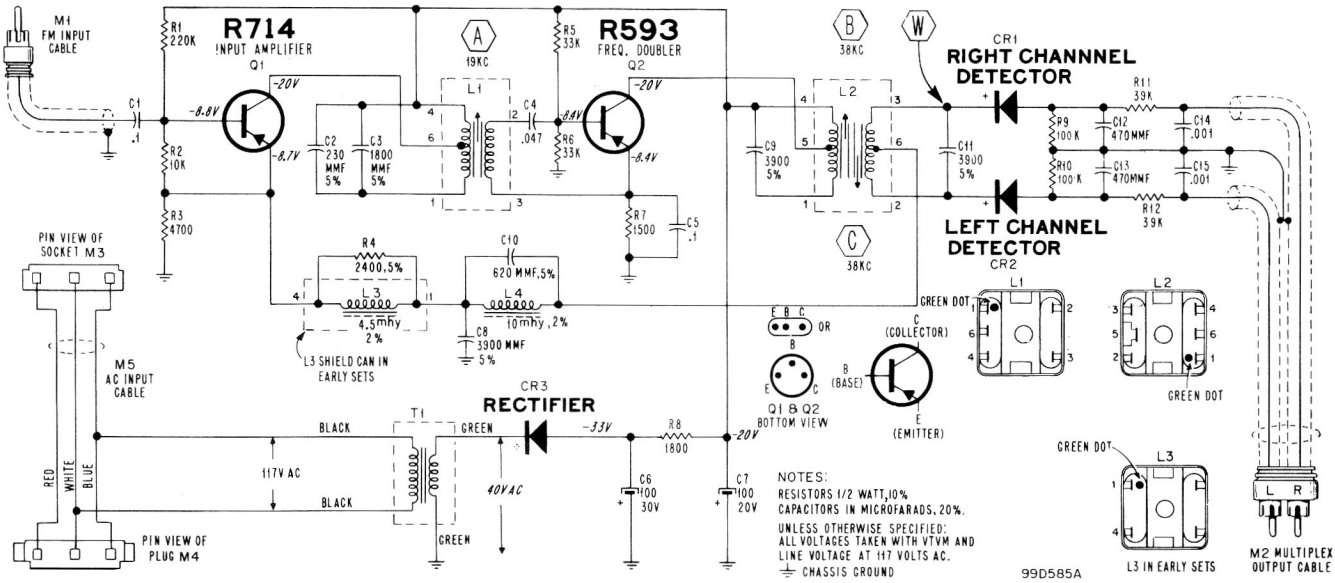
Jack Locations, Rear Apron 8Y1-Series FM-AM Tuners.

FIG. 10



Jack Locations, Rear Apron 6S3-Series FM-AM Tuners.

FIG. 11



Schematic Diagram of 2H1 Chassis Used in AMX100 FM-STEREO-MULTIPLEXER.

PARTS LIST

RESISTORS

Sym.	Description	Part No.
R1	220,000 ohms, ½ watt	60B8-224
R2	10,000 ohms, ½ watt	60B8-103
R3	4,700 ohms, ½ watt	60B8-472
R4	2,400 ohms, ½ watt, 5%	60B7-242
R5	33,000 ohms, ½ watt	60B8-333
R6	33,000 ohms, ½ watt	60B8-333
R7	1,500 ohms, ½ watt	60B8-152
R8	1,800 ohms, ½ watt	60B8-182
R9	100,000 ohms, ½ watt	60B8-474
R10	100,000 ohms, ½ watt	60B8-474
R11	39,000 ohms, ½ watt	60B8-393
R12	39,000 ohms, ½ watt	60B8-393

CAPACITORS

Sym.	Description	Part No.
C1	.1 mf, 200 volts, paper	64B8-39
C2	230 mmf, 500 volts, 5%, cer. disc, N750 temp. coeff	65D10-251
C3	1,800 mmf, 100 volts, 5%, mica	65C50-13
C4	.047 mf, 20 volts, paper	64B27-59
C5	.1 mf, 10 volts, paper	65C45-22
C6	100 mf, 30 volts, electrolytic	67D35-14
C7	100 mf, 20 volts, electrolytic	67D35-13
C8	3,900 mmf, 100 volts, 5% mica	65C50-7
C9	3,900 mmf, 100 volts, 5%, mica	65C50-7
C10	620 mmf, 100 volts, 5%, mica	65C50-14
C11	3,900 mmf, 100 volts, 5%, mica	65C50-7
C12	470 mmf, 500 volts, ceramic	65D10-70
C13	470 mmf, 500 volts, ceramic	65D10-70
C14	.001 mf, 500 volts, ceramic	65B10-53
C15	.001 mf, 500 volts, ceramic	65B10-53

COIL AND TRANSFORMERS

Sym.	Description	Part No.
L1	19KC Coupling Coil	69D274-1
L2	38KC Filter Coil	72D237-1
L3	Filter Coil	72D237-2
L4	SCA Filter Coil	73B8-12
T1	Power Transformer	80D74-7

MISCELLANEOUS CHASSIS PARTS

Sym.	Description	Part No.
CR1	Detector Diode	93B27-3
CR2	Detector Diode	93B27-3
CR3	Silicon Rectifier	93B27-2
M1	FM Input Cable (includes plug)	89C70-6
M2	Multiplex Output cable (includes plug)	89C95-1
M3	AC Input Socket	Part of M5
M4	AC Input Plug	Part of M5
M5	AC Input Cable and Plug Assembly (includes M3 and M4)	700C369-1
Q1	Transistor (type R714)	57D1-91
Q2	Transistor (type R593)	57D1-76

5Y1CX PARTS LIST

RESISTORS

Sym.	Description	Part No.
R5	390 ohm, 1/2, 10%	60B8-391
R19	270 ohm, 1/2, 10%	60B8-274
R20	270K ohm, 1/2W, 10%	60B8-274
R21	82K ohm, 1/2W, 10%	60B8-823
R22	82K ohm, 1/2W, 10%	60B8-823
R23A	3.3 meg. Dual Control	
R23B	Loudness	75D46-26
R24	6.8 meg ohm, 1/2, 10%	60B8-685
R25	6.8 ohm, 1/2W, 10%	60B8-685
R26	1K ohm, 1/2W, 10%	60B8-102
R27	1K ohm, 1/2, 10%	60B8-102
R28	470K ohm, 1/2W, 10%	60B8-474
R29	470K ohm, 1/2W, 10%	60B8-474
R30A	3.3 meg, Dual Control	
R30B	Treble On-Off	75D46-27
R31A	3.3 meg, Dual Control	
R31B	Balance	75L10-6
R32A	3.3 meg, Dual Control	
R32B	Bass	75D46-24
R33	470K ohm, 1/2W, 10%	60B8-474
R34	470K ohm, 1/2W, 10%	60B8-471
R35	470K ohm, 1/2W, 10%	60B8-474
R36	470 ohm, 1.2W, 10%	60B8-471
R37	150 ohm, 2W, 5%	60B19-151
R38	2.2 meg ohm, 1/2W, 10%	60B8-225
R39	2.2 meg ohm, 1/2W, 10%	60B8-225
R40	22K ohm, 1/2W. 10%	60B8-223
R41	3.9K ohm, 1/2W, 10%	60B8-392
R42	100K ohm, 1/2W, 10%	60B8-104
R43	390K ohm, 1/2W, 10%	60B8-394
R44	.47 ohm, 1/2W, 10%	60D28-73
R45	3K ohm, 5W, 10%	61B24-536
R47	470K ohm, 1W, 10%	60B14-474
R48	180 ohm, 2W, 5%	60B19-181
R49	100 ohm, 1/2W, 10%	60B8-101
R50	10K ohm, 1/2W, 10%	60B8-103

CAPACITORS

C27	.01 mfd, GMV, 500V	65D10-3
C35	.01 mfd, 20%, 500V	65D10-41
C36	100 mmfd, 10%, 500V	65D10-228
C37	.001 mfd, 10%, 500V	65D10-58
C38	68 mmfd, ± 10%, 500V, N750	65D6-161
C39	.005 mfd, 20%, 500V	65D10-188
C40	.005 mfd, 20%, 500V	65D10-188
C41	.001 mfd, 100%, 500V	65D10-58
C42	68 mmfd, ± 10%, 500V, N750	65D6-161
C43	100 mmfd, 10%, 500V	65D10-228
C44	.01 mfd, 20%, 500V	65D10-41
C45	.01 mfd, 20%, 500V	65D10-41
C46	.01 mfd, 20%, 500V	65D10-41
C47	3300 mmfd, 20%, 500V	65D10-204
C48	3300 mmfd, 20%, 500V	65D10-204
C50	.02 mfd, +80% -20%, 500V	65D10-28
C51	.02 mfd, +80% -20%, 500V	65D10-28
C52	330 mmfd, 20%, 500V	65D10-205
C53	330 mmfd, 20%, 500V	65D10-205
C54	2200 mmfd, 20%, 1400V	65D10-214
C55	2200 mmfd, 20%, 1400V	65D10-214
C56	100 mmfd, 20%, 500V	65D10-84
C59A	Variable Gang	
C59B	Capacitor	68C90-1
C60	47 mmfd, 10%, 500V, N750	65D10-177
C61	.05 mfd, +80% -20%, 50V	65C45-32
C62	47 mmfd, 10%, 500V, N750	65D10-177
C63	.01 mfd, GMV, 500V	65D10-3
C64	47 mmfd, 10%, 500V, N750	65D10-177

CAPACITORS (Cont'd)

Sym.	Description	Part No.
C65	.047 mfd, ± 20%, 400V	64L6-28
C69	.02 mfd, ± 80% -20%, 500V	65D10-28
C70	.047 mfd, ± 20%, 600V	64L6-9
C71	100 mmfd, 20%, 500V	65D10-84
C72A	Electrolytic 200 mfd, 250V	67D7-113
C72B	Electrolytic 100 mfd, 250 V	67D7-113
C72C	Electrolytic 40 mfd, 250V	67D7-113
C72D	Electrolytic 80 mfd, 25V	67D7-113
C75	.02 mfd, + 80%, 20%, 500V	65D10-28
C76	.02 mfd, + 80% -20%, 500V	65D10-28
C78	10 mfd, 475V	67D4-33

COILS

L3	Antenna, Air Loop	69C273-1
L4	Coil, Oscillator, AM	69C243-3
L5	Choke, Iron Core (With End Bells)	74M7-17

TRANSFORMERS

T4	455KC I.F. Transformer	72D227-1
T5	455KC I.F. Transformer	72D227-1
T7	Output Transformer	79D33-46
T8	Output Transformer	79D33-46
T9	Power Transformer	80D69-3

MISCELLANEOUS CHASSIS PARTS

Solderless Terminal	9L3-1
Solderless Terminal (Ring Tongue)	9C22-3
Clamp (Line Cord to 14E309)	11B27-3
Grommet, Rubber (15C2407-1 to 14E309)	12C2-18
Grommet , Rubber (15C2406-1 to 15C2404) (15C2406-1 to 15C2405)	12C2-22
Grommet , Rubber	12B117-1
Strip, Laten Foam	12A119-1
Plug Button (3/4 dia. hole) (Plastic)	13B3-18
Chassis Base	14E309-1
Rail, Pointer Guide	15B2403-1
Bracket, Dial R.H.	15B2404-1
Bracket, Dial L.H.	15B2405-1
Bracket, Dial Mounting	15C2406-1
Bracket, Chassis Support	15C2407-1
Bracket, Pulley	15A2413-1
Shield, Heat	15B2437-1
Bracket, Pulley Idler	15C2451-1
Bracket, Pointer Carriage (Part of 700C346 Ass'y)	15C2492-1
Shield, Dial Light	15C2493-1
Pulley, Nylon	17C1-92
Pulley, Nylon	17C1-93
Drum (Part of 700B340-1 Ass'y)	17B56-5
Clip, Capacitor Mtg. (Snap-in Type)	18A92-4
Spring - Dial Retaining	18A308-1
Spring - Dial Cord	19D1-63
	OR
Spring - Dial Cord	19D1-5
Dial Scale (A.M.)	21M10-1
Escutcheon Control Panel (A.M.)	23L47-1
Escutcheon - Upper (Long)	23D470-2
Bushing - Tuning (Staked to 14E309)	27A322-1
Bushing - Drum (Stacked to 17B56-5 (Part of 700B340-1 Ass'y)	27A371-1

MISCELLANEOUS CHASSIS PARTS (Cont'd)

Sym.	Description	Part No.
	Shaft, Tuning (Mounted in 27A322-1	28B148-1
	Spacer Sleeve, Tee Type (15C2406-1 to 15C2404-1) (15C2406-1 to 15C2405-1	29C2-16
	Spacer Sleeve - Tee, Type (15C2407-1 to 14E309	29C2-20
	Screen - Background	32B541-1
	Amploc Plug	33B287-1
	Knob - Preference Controls	33D432-6
	Knob - Rear Function Control	33D432-8
	Knob - Rear Tuning	33D432-10
	Dial Pointer (Part of 700C346 Ass'y)	33B484-1
	Cord - Dial	50A1-3
	Plastic Ties	50B8-2
	Clip, .F. Mounting	72D28-10
	Function Switch	77L3-1
	Pilot Light Bulb (1847)	81B1-19
	Shield Pilot Light	82D24-9
	Socket, Pilot Light	82A42-2
	Shield, Tube Tapered, 7 Pin	87C7-19
	Shield, Tube Tapered, 9 Pin	87C7-20
	Socket, Tube, Shield Base, 9 Pin	87C23-2
	Socket, Tube, Min. 9 Pin	87B25-18
	Socket, Tube, Min. 7 Pin	87A39-10
	Phono Jack	88L5-1
	Socket, Speaker, 4 Prong	88B5-3
	Line Cord (8' Hanked)	89W1-3
	Diode 500MA (R.C.A. IN1764)	93B30-1

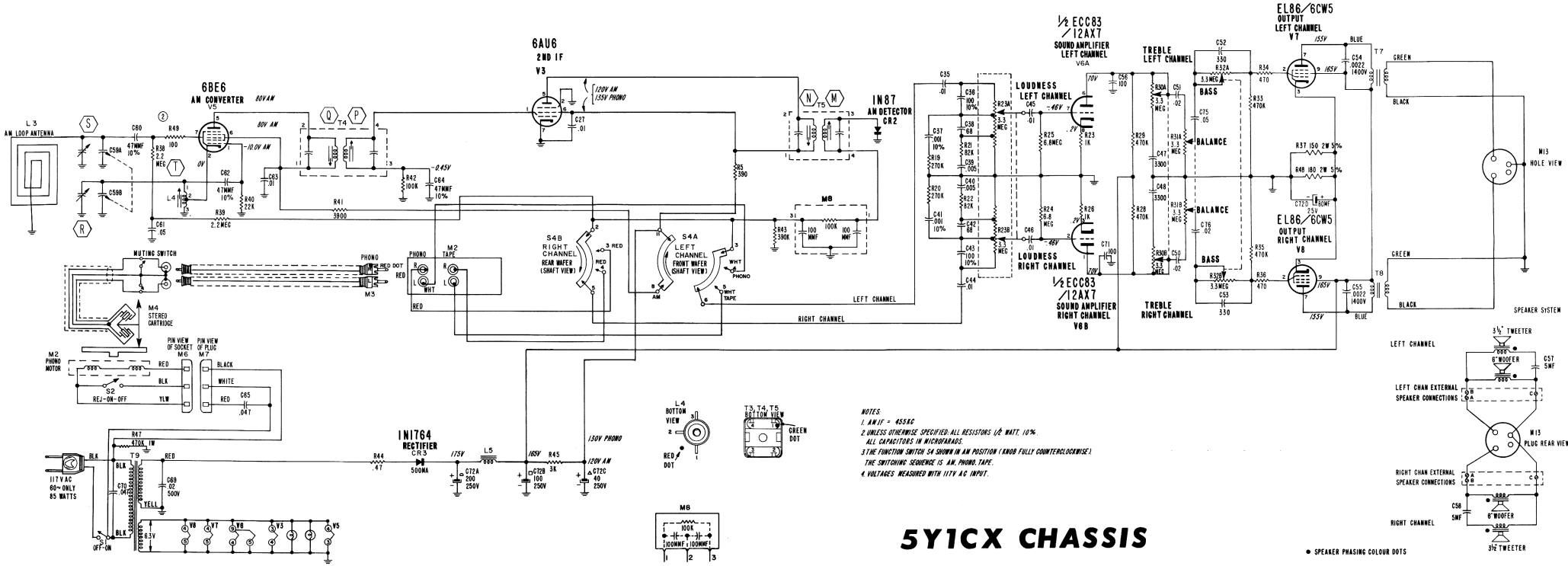
CABINET PARTS LIST FOR MODELS Y2401X-Y2406X

Sym.	Description	Part No.
	Solderless Terminal (Part of 700Z141)	9M5-1
	(Part of 89L4-1)	OR 9M5-8
	Tee Spacer (Mtg. A.M. Ant.) (Surplus)	29A2-12
	Speaker - Terminals (Part of 700Z141)	32K51-1
	Cabinet - Stereo Console (Walnut) Contemporary (Y2406X)	35P209-1
	Cabinet - Stereo Console (Scandinavian Walnut) (Contemporary Y2406X)	35P209-6
	Operating Instructions	41K12-5
	Back Cover (Dark Brown) (Y2401X)	43N94-3
	Back Cover (Autumn Leaf) (Y2406X)	43N94-4
	Plastic Tie (A.C. Leads to Changer)	50B8-2
	Crossover Cond. (5 mfd)	67K3-1
	Speaker 6" (3.16 oz) Orange	78M19-6
	Speaker 6" (3/16 oz) Orange	78M19-7
	Speaker 3-1/2" (1 oz) Orange	78L26-1
	Phono Plug (Part of 89N5-11 and -12)	88A2-3
	Speaker Plug (4 Prong)	88B5-2
	Phono Lead Assembly	89N5-11
	Coaxial - Shielded (Part of 89N5-11 and -12)	89B45-10
	Schematic	99P198
	Speaker Harness	700Z141-30

PRODUCTION RUN CHANGES

① START OF PRODUCTION

② R49 ADDED (PARASITIC SUPPRESSION)



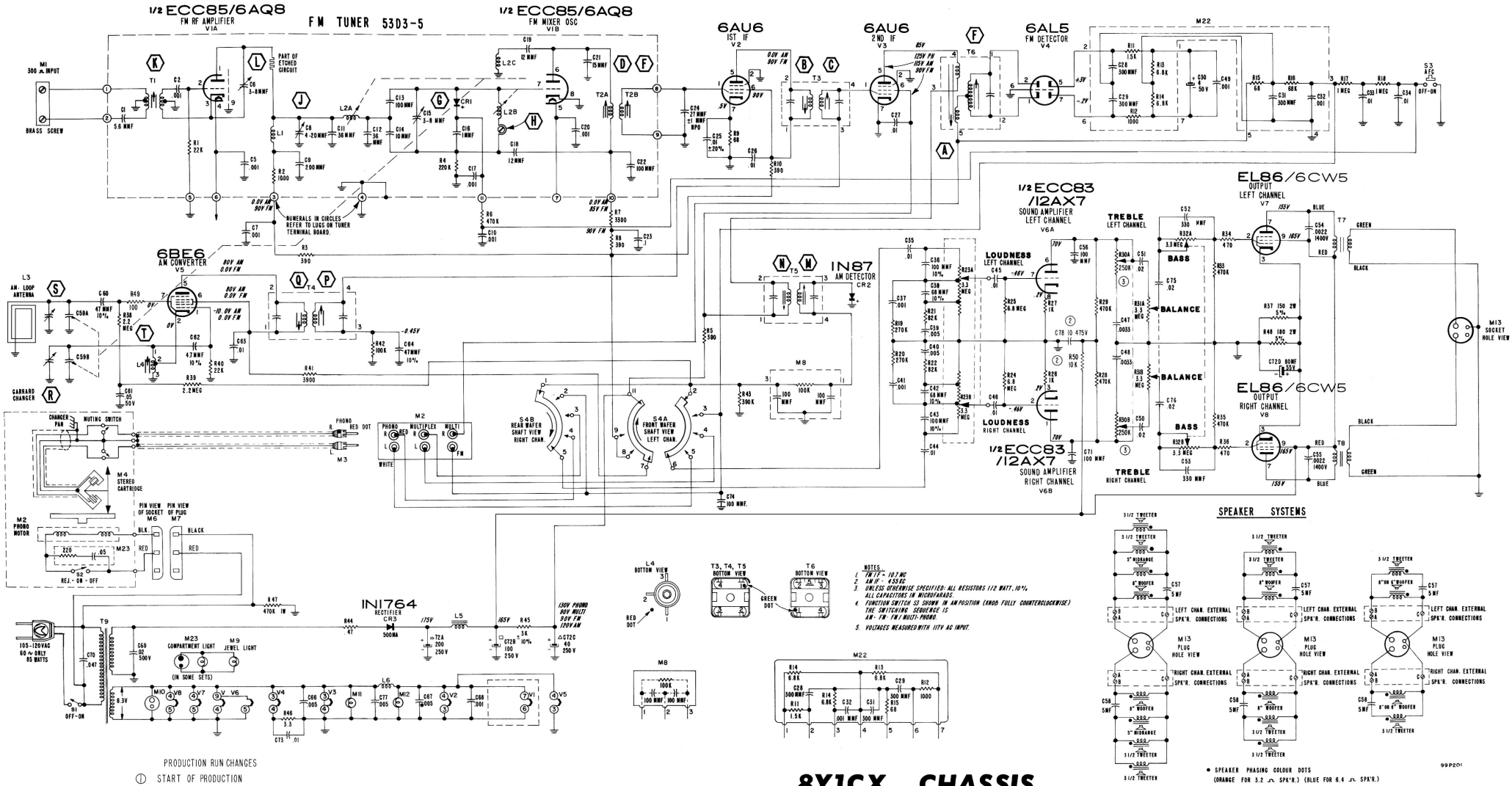
NOTES:

1. AM IF = 455KC
2. UNLESS OTHERWISE SPECIFIED: ALL RESISTORS 1/2 WATT, 10%. ALL CAPACITORS IN MICROFARADS.
3. THE FUNCTION SWITCH S4 SHOWN IN AM POSITION (KNOB FULLY COUNTERCLOCKWISE). THE SWITCHING SEQUENCE IS AM, PHONO, TAPE.
4. VOLTAGES MEASURED WITH 117V AC INPUT.

5Y1CX CHASSIS

● SPEAKER PHASING COLOUR DOTS

99P198


FM TUNER 53D3-5
1/2 ECC85/6AQ8
FM RF AMPLIFIER
V1A
1/2 ECC85/6AQ8
FM MIXER OSC
V1B
6AU6
1ST IF
V2
6AU6
2ND IF
V3
6AL5
FM DETECTOR
V4
6BE6
AM CONVERTER
V5
IN87
AM DETECTOR
CR2
IN1764
RECTIFIER
CR3
1/2 ECC83
/12AX7
SOUND AMPLIFIER
LEFT CHANNEL
V6A
1/2 ECC83
/12AX7
SOUND AMPLIFIER
RIGHT CHANNEL
V6B
EL86/6CW5
OUTPUT
LEFT CHANNEL
V7
EL86/6CW5
OUTPUT
RIGHT CHANNEL
V8
M1
300 Ω INPUT
BRASS SCREW
PART OF ETCHED CIRCUIT
NUMERALS IN CIRCLES REFER TO LUGS ON TUNER TERMINAL BOARD.
L3
AM. LOOP ANTENNA
GARRARD CHANGER
CHANGER PAN
MUTING SWITCH
M4
STEREO CARTRIDGE
M2
PHONO MOTOR
PIN VIEW OF SOCKET M6
PIN VIEW OF PLUG M7
M23
COMPARTMENT LIGHT
M9
JEWEL LIGHT
(IN SOME SETS)
105-120VAC
60 ~ ONLY
85 WATTS
S1
OFF-ON
S2
REC. - ON - OFF
S3
AFC
OFF-ON
S4B
REAR WAFER SHAFT VIEW
RIGHT CHAN.
S4A
FRONT WAFER SHAFT VIEW
LEFT CHAN.
M3
PHONO
MULTIPLEX
FM
L4
BOTTOM VIEW
T3, T4, T5
BOTTOM VIEW
T6
BOTTOM VIEW
M8
M22
TREBLE
LEFT CHANNEL
BASS
BALANCE
LOUDNESS
LEFT CHANNEL
TREBLE
RIGHT CHANNEL
BASS
BALANCE
LOUDNESS
RIGHT CHANNEL
M13
SOCKET HOLE VIEW
SPEAKER SYSTEMS
3 1/2 TWEETER
5" MIDRANGE
8" WOOFER
LEFT CHAN. EXTERNAL SPK'R. CONNECTIONS
RIGHT CHAN. EXTERNAL SPK'R. CONNECTIONS
M13
PLUG HOLE VIEW
• SPEAKER PHASING COLOUR DOTS
(ORANGE FOR 3.2 Ω SPK'R.) (BLUE FOR 6.4 Ω SPK'R.)
99P201
PRODUCTION RUN CHANGES
① START OF PRODUCTION
② R50 & C78 ADDED
③ R30A & B WAS 3.3 MEG.
NOTES
1. FM I.F. = 10.7 MC
2. AM I.F. = 455 KC
3. UNLESS OTHERWISE SPECIFIED: ALL RESISTORS 1/2 WATT, 10%. ALL CAPACITORS IN MICROFARADS.
4. FUNCTION SWITCH S3 SHOWN IN AM POSITION (KNOB FULLY COUNTERCLOCKWISE) THE SWITCHING SEQUENCE IS AM - FM - FM MULTI - PHONO.
5. VOLTAGES MEASURED WITH 117V AC INPUT.
8Y1CX CHASSIS

8Y1CX PARTS LIST

RESISTORS

Sym.	Description	Part No.
R3	390 ohm, 1/2W, 10%	60B8-391
R5	390 ohm, 1/2W, 10%	60B8-391
R6	470K, ohm1/2W, 10%	60B8-474
R7	3.3K ohm, 1/2W, 10%	60B8-332
R8	390 ohm, 1/2W, 10%	60B8-391
R9	68 ohm, 1/2W, 10%	60B8-680
R10	390 ohm, 1/2W, 10%	60B8-391
R17	1 meg ohm, 1/2W, 10%	60B8-105
R18	1 meg ohm, 1/2W, 10%	60B8-105
R19	270K ohm, 1/2W, 10%	60B8-274
R20	270K ohm, 1/2W, 10%	60B8-274
R21	82K ohm, 1/2W, 10%	60B8-823
R22	82K ohm, 1/2W, 10%	60B8-823
R23A	3.3 meg, Dual Control,	
R23B	Loudness	75D46-26
R24	6.8 meg ohm, 1/2W, 10%	60B8-685
R25	6.8 meg ohm, 1/2W, 10%	60B8-685
R26	1K ohm, 1/2W, 10%	60B8-102
R27	1K ohm, 1/2W, 10%	60B8-102
R28	470K ohm, 1/2W, 10%	60B8-474
R29	470K ohm, 1/2W, 10%	60B8-474
R30A	3.3 meg, Dual Control,	
R30B	Treble On-Off	75D46-27
R31A	3.3 meg, Dual Control	
R31B	Balance	75L10-6
R32A	3.3 meg, Dual Control	
R32B	Bass	75D46-24
R33	470K ohm, 1/2W, 10%	60B8-474
R34	470 ohm, 1/2W, 10%	60B8-471
R35	470K ohm, 1/2W, 10%	60B8-474
R36	470 ohm, 1/2W, 10%	60B8-471
R37	150 ohm, 2W, 5%	60B19-151
R38	2.2 meg ohm, 1/2W, 10%	60B8-225
R39	2.2 meg ohm, 1/2W, 10%	60B8-225
R40	22K ohm, 1/2W, 10%	60B8-223
R41	3.9K ohm, 1/2W, 10%	60B8-392
R42	100K, 1/2W, 10%	60B8-104
R43	390K ohm, 1/2W, 10%	60B8-394
R44	.47 ohm, 1/2W, 10%	60D28-73
R45	3K ohm, 5W, 10%	61B24-536
R46	3.3 ohm, 1/2W, 10%	60D28-10
R47	470K ohm, 1W, 10%	60B14-474
R48	180 ohm, 2W, 5%	60B19-181
R49	100 ohm, 1/2W, 10%	60B8-101
R50	10K ohm, 1/2W, 10%	60B8-103

CAPACITORS

Sym.	Description	Part No.
C7	.001 mfd, 20%, 500V	65D10-53
C10	.001 mfd, 20%, 500V	65D10-53
C23	.1 mfd, 200V, Tubular	64L6-39
C24	27 mmfd, ± 1 mmfd, NPO	65D6-17
C25	.01 mfd, 20%, 500V	65D10-41
C26	.01 mfd, GMV, 500V	65D10-3
C27	.01 mfd, GMV, 500V	65D10-3
C30	Electrolytic, 5 mfd, 50V	67D4-43
	OR	
C30	Electrolytic, 4 mfd, 50V (Preferred)	67D4-54
C33	.01 mfd, GMV, 500V	65D10-3
C34	.01 mfd, GMV, 500V	65D10-3
C35	.01 mfd, 20%, 500V	65D10-41
C36	100 mmfd, 10%, 500V	65D10-228
C37	.001 mfd, 10%, 500V	65D10-58
C38	68 mmfd, ± 10%, 500V, N750	65D6-161
C39	.005 mfd, 20%, 500V	65D10-188
C40	.005 mfd, 20%, 500V	65D10-188

CAPACITORS (Cont'd)

Sym.	Description	Part No.
C41	.001 mfd, 10%, 500V	65D10-58
C42	68 mmfd, 10%, 500V, N750	65D6-161
C43	100 mmfd, 10%, 500V	65D10-228
C44	.01 mfd, 20%, 500V	65D10-41
C45	.01 mfd, 20%, 500V	65D10-41
C46	.01 mfd, 20%, 500V	65D10-41
C47	3300 mmfd, 20%, 500V	65D10-204
C48	3300 mmfd, 20%, 500V	65D10-204
C49	.001 mfd, GMV, 500V	65D10-6
C50	.02 mfd, +80% -20%, 500V	65D10-28
C51	.02 mfd, +80% -20%, 500V	65D10-28
C52	330 mmfd, 20%, 500V	65D10-205
C53	330 mmfd, 20%, 500V	65D10-205
C54	2200 mmfd, 20%, 1400V	65D10-214
C55	2200 mmfd, 20%, 1400V	65D10-214
C56	100 mmfd, 20%, 500V	65D10-84
C59A	Variable Gang	
C59B	Capacitor	68C90-1
C60	47 mmfd, 10%, N750, 500V	65D10-177
C61	.05 mfd, +80% -20%, 50V	65C45-32
C62	47 mmfd, 10%, N750, 500V	65D10-177
C63	.01 mfd, GMV, 500V	65D10-3
C64	47 mmfd, 10%, N750, 500V	65D10-177
C66	.005 mfd, GMV, 500V	65D10-5
C67	.005 mfd, GMV, 500V	65D10-5
C68	.001 mfd, 20%, 500V	65D10-53
C69	.02 mfd, +80% -20%, 500V	65D10-28
C70	.047 mfd, ± 20%, 600V	64L6-9
C71	100 mmfd, 20%, 500V	65D10-84
C72A	Electrolytic, 200 mfd, 250V	67D7-113
C72B	Electrolytic, 100 mfd, 250V	67D7-113
C72C	Electrolytic, 40 mfd, 250V	67D7-113
C72D	Electrolytic, 80 mfd, 25 V	67D7-113
C73	.01 mfd, GMV, 500V	65D10-3
C74	100 mmfd, 20%, 500V	65D10-84
C75	.02 mfd, +80% -20%, 500V	65D10-28
C76	.02 mfd, +80% -20%, 500V	65D10-28
C77	.005 mfd, GMV, 500V	65D10-5
C78	10 mfd, 475, 25V	65D4-33

COILS

L3	Antenna, Air Loop	69C273-1
L4	Coil, Oscillator, A.M.	69B243-3
L5	Choke, Iron Core (with End Bells)	74M7-17
L6	Filter Choke, Air Wound	73C2-15

TRANSFORMERS

T3	10.7 MC I. F. Trans	72D225-2
T4	455KC, I. F. Trans	72D227-1
T5	455KC, I. F. Trans	72D227-1
T6	Ratio Detector Trans	72D196-2
T7	Output Transformer	79D33-46
T8	Output Transformer	79D33-46
T9	Power Transformer	80D69-3

MISCELLANEOUS CHASSIS PARTS

Solderless Terminal (Spade)	9C22-1
Solderless Terminal	9L3-1
Solderless Terminal (Ring Tongue)	9C22-3
Test Point	9B24-9

MISCELLANEOUS CHASSIS PARTS (Cont'd)

Sym.	Description	Part No.
	Solderless Connector	9L3-3
	Clamp (Line Cord to 14E309)	11B27-3
	Grommet, Rubber (15C2407-1 to 14E309)	12C2-18
	Grommet, Rubber (15C2406-1 15C2404) (15C2406-1 to 15C2405)	12C2-22
	Grommet, Rubber	12B117-1
	Strip, Laten Foam	12A119-1
	Plug Button (3/4 dia. hole) (Plastic)	13B3-18
	Chassis Base	14E309-1
	Rail, Pointer Guide	15B2403-1
	Bracket - Dial R.H.	15B2404-1
	Bracket - Dial L.H.	15B2405-1
	Bracket - Dial Mounting	15C2406-1
	Bracket - Chassis Support	15C2407-1
	Bracket - Pulley	15A2413-1
	Shield, Tube Socket	15A2414-1
	Bracket - Switch	15C2421-1
	Shield - Control	15B2432-1
	Bracket, Tuner Support	15A2443-1
	Shield, Heat	15B2437-1
	Bracket, Pulley Idler	15C2451 1
	Bracket, Pointer Carriage (Part of 700C346 Ass'y)	15C2492-1
	Shield, Dial Light	15C2493-1
	Pulley - Nylon	17C1-92
	Pulley - Nylon	17C1-93
	Drum (Part of 700B340-1 Ass'y)	17B56-5
	Clip, Capactior Mtg. (Snap-in Type)	18A92-4
	Spring - Dial Retaining	18A308-1
	Spring - Dial Cord	19D1-63 OR
	Spring - Dial Cord (Preferred)	19D1-5
	Dial Scale (Long) Left Vert Position	21C149-1
	Escutcheon Upper Long	23D470-2
	Escutcheon - Control Panel (Long) Left Vertical Position	23D471-4
	Bushing - Tuning (Staked to 14E309)	27A322-1
	Collar Set (Mounting to Gang Condenser)	27B341-1
	Bushing - Drum (Staked to 17B56-5) Part of 700B340-1 Ass'y)	27A371-1
	Shaft, Tuning (Mounted in 27A322-1	28A148-1
	Slide Switch D.P.D.T.	77C1-49
	Function Switch	77C126-1
	Pilot Light Bulb (1847)	81B1-19
	Shield - Pilot Light	82D24-9
	Socket - Pilot Light	82A42-2
	Shield - Tube Tapered, 7 Pin	87C7-19
	Shield - Tube Tapered, 9 Pin	87C7-20
	Socket, Tube, Shield Base, 9 Pin	87C23-2
	Socket, Tube, Shield Base, Min 7 Pin	87C23-4
	Socket, Tube, Min 9 Pin	87B25-18
	Socket, Tube, Min 7 Pin	87A39-10
	Phono Jack	88B1-8
	Socket, Speaker, 4 Prong	88B5-3
	Socket and Plug	88B5-6
	Line Cord (8' Hanked)	89W1-3
	Diode 500 MA (RC.A. IN1764)	93B30-1
	300 ohm, Transmission Line	95Y16-27

CABINET PARTS LIST FOR MODELS Y2501X-06X, Y3401X-06X, Y3401AX-06AX, Y4306X-46X

Sym.	Description	Part No.
	Solderless Terminal (Part of 700N18-4 (Y2501X-06X, Y4306X-46X	9L3-1
	Solderless Terminal (Part of 700Z141 Part of 89L4-1)	9M5-1 OR 9M5-8
	Solderless Terminal (750C282-2 to 10D1-68 (Y4306X-46X)	9M5-8
	Solderless Terminal (Part of 700M8-3 (700M8-1)	9A22-1 OR 9M5-2
	Clamp, (89N5-1 to Changer (Y3401AX-06AX)	11B12-4
	Monogram (Stereophonic) (Y2501X-06X) (Y4306X-46X)	23B376-3
	Comp. Light Lens (Y4306X-46X)	24C41-1
	Tee Spaces (Mtg. A.M. Ant.)	29A2-12
	Ant-Terminal (FM) (Part of 700M8-3)	32L44-4
	Speaker-Terminals (Part of 700Z141)	32K51-1
	Amploc Cap (Part of 700N18-4) (Y2501X-06X) (Y4306X-46X)	33B287-2
	Cabinet-Stereo Console (Walnut) Contemporary (Y2501X)	35P208-1
	Cabinet-Stereo Console (Scandinavian Walnut) Contemporary (Y2506X)	35P208-6
	Cabinet-Stereo Console (Walnut) Contemporary (Y3401X)	35P209-1
	Cabinet, Stereo Console (Walnut Contemporary (Y3401AX)	35P209-2
	Cabinet-Stereo Console (Scandinavian Walnut Contemporary (Y3406X)	35P209-6
	Cabinet-Stereo Console (Scandinavian Walnut) Contemporary (Y3406AX)	35P209-7
	Cabinet-Stereo Console (Scandinavian Walnut) Contemporary (Y4306X)	35P210-6
	Cabinet-Stereo Console (Scandinavian Walnut) Danish (Y4346X)	35P211-6
	Operating Instructions (Y3401X-06X) (Y4306X)	41K12-5
	Operating Instructions (Y4346X)	41K12-8
	Operating Instructions (Y3401AX-06AX)	21K12-9
	Back Cover (Autumn Leaf) (Y4346X)	43N90-2
	Back Cover (Dark Brown) (Y2501X)	43N93-1
	Back Cover (Autumn Leaf) (Y2506X)	43N93-2
	Back Cover (Autumn Leaf) (Y4306X)	43N94-2
	Back Cover (Dark Brown) (Y3401X-01AX)	43N94-5
	Back Cover (Autumn Leaf) (3406X-06AX)	43N94-6
	Plastic Tie (AC Leads to Changer)	50B8-2
	Crossover Cond (5 mfd)	67K3-1
	Speaker 6" (3.16oz) Orange (Y3401X-06X) (Y3401AX-06AX)	78M19-6
	Speaker 6" (3.16oz) Orange (Y3401X-06X) (Y3401AX-06AX)	78M19-7
	Speaker 8" (4.64) Orange (Y4346X)	78M24-2
	Speaker 8" (3.16oz.) Orange (Y2501X-06X) (Y4306X)	78M24-3
	Speaker 3-1/2" (1 oz) Orange (Y2501X-06X) (Y3401X-06X) 3401AX-06AX) (Y4346X)	78L26-1
	Speaker 3-1/2" (1oz) Blue (Y4306X)	78L26-2
	Speaker 5" (1oz) Blue (Y4346X)	78M27-1
	Speaker 5" (1oz) Blue (Y4346X)	78M27-2
	Bulb-Pilot Light (6.8 Volt) (Y4306X-46X.	81A1-19
	Pilot Light Socket & Leads (Jewel Light Part of 700M19-4) (Y4306X-46X)	82A11 57
	Phono Plug (Part of 89N5-11&-12)	88A2-3
	Speaker Plug (4 Prong)	88B5-2
	Pilot Light Plug (2 Prong) (Part of 700M19-4) (Y4306X-Y4346X)	88B5-4
	Twin Speaker Leads (Y4306X-46X)	89L4-1
	Phono Lead Assembly (Y3401X-06X)	89N5-11
	Phono Lead Assembly (Y2501X-06X) (Y3401AX-06AX) (Y4306X-46X)	89N5-12
	Coaxial-Shielded (Part of 89N5-11&-12)	89B45-10
	300 ohm, Twin Lead (19" Long) (Part of 700M8-3)	95Y16-5
	300 ohm, Twin Lead (33" Long) (Part of 700M8-1)	95Y16-5
	Schematic	99P201
	Ant.-Lead Assembly	700M8-3
	Plug Assembly (AC Input) (Y2501X-06X) (Y4306X-46X)	700N18-4
	Pilot Light & Plug Assembly (Y4306X-46X	700M19-4
	Speaker Harness (Y2501X-06X) (Y3401X-06X) (Y3401AX-06AX) (Y4306X)	700Z141-30
	Speaker Harness (Y4346X)	700Z141-31
	Pilot Light Socket Assembly (Part of 700M19-4) (Y4306X-46X)	750Y282-2