

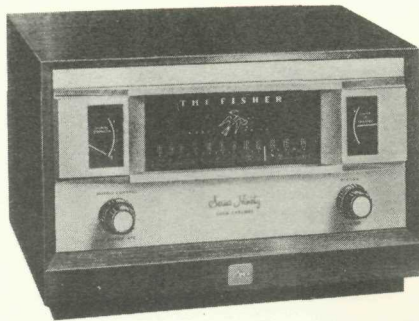


THE FISHER

Professional

FM TUNER

INSTALLATION AND
OPERATING INSTRUCTIONS



MODEL FM-90 X

PRICE: \$1.00

FISHER RADIO CORPORATION • NEW YORK

THE FISHER

PROFESSIONAL

FM TUNER

MODEL FM-90X

GENERAL INFORMATION

NEVER BEFORE in the history of Frequency Modulation has there been a tuner to match the *truly remarkable*, new FISHER Model FM-90X, with its revolutionary GOLD-CASCADE RF amplifier. Precision manufactured, this tube is the costliest of its type in the world! It carries a *two-year warranty*. The use of the GOLD-CASCADE plus exclusive FISHER circuitry has brought the FM-90X to the theoretical limits of sensitivity—0.5 microvolts—an achievement *never before possible*. Only FISHER has it!

The circuit comprises a dual triode, cascode-type tuned RF stage (for maximum signal-to-noise ratio), plus four IF stages, followed by two dynamic diode limiters. The continuously variable AUTOMATIC FREQUENCY CONTROL (AFC) located on the front panel, assures accurate tuning. The range of AFC lock-in can be adjusted according to the needs of the particular and exact location of the receiver, being continuously adjustable. The AFC feature can also be rendered inoperative, if desired.

Also located on the front panel is an exclusive FISHER Interchannel Muting Control, allowing station-to-station tuning without interchannel noise and hiss. The Interchannel Muting Control is completely variable, and may be adjusted to exclude weak stations, as well as noise, when tuning in channels.

THE FISHER Model FM-90X features two meters. The first is a signal strength meter, which shows the relative intensity of the incoming signal. The second is a center-of-channel meter that indicates when the receiver is accurately tuned to the desired frequency.

A low impedance audio output stage with voltage feedback provides two bridged outputs, without introducing distortion or hum; this special design permits cable lengths up to 200 feet to be used with the FM-90X. A Multiplex output is also provided, for binaural or stereophonic reception.

A carefully designed flywheel tuning mechanism makes selection of stations extremely simple and smooth. Tuning is facilitated by the attractive two-Color scale, calibrated from 0 to 100 for logging purposes and 88 to 108 for FM tuning. The dial glass is edge-lighted. The front panel of the Model FM-90X is of handsomely styled brushed brass that adds distinction to the instrument, and any components used with it.



TECHNICAL SPECIFICATIONS

GENERAL FEATURES: Circuit comprises dual triode, cascode-type tuned RF stage; triode mixer; four IF stages; two diode dynamic limiters; full wide-band ratio detector.

SENSITIVITY: Dual Limiters in full operation on signals as low as 0.5 microvolt. 0.75 microvolts for 20 db of quieting.

FREQUENCY RESPONSE: 20 to 20,000 cycles within 1 db.

ANTENNA INPUTS: 72 or 300 ohm balanced.

OUTPUTS: Total of three—two bridged types (Main and Tape Recorder output) and Multiplex, for binaural or stereophonic reception.

POWER SOCKET: Provides necessary AC and DC voltages for the operation of unpowered auxiliary components.

METERS: Two meters, indicating signal strength and center-of-channel tuning.

CONTROLS: Interchannel Muting, AFC/Power Switch, Station Selector, Input Level.

TUBE COMPLEMENT: Total of ten tubes, four germanium diodes. 1-V50064 Cascode RF, 1-6AB4 Mixer, 1-6BQ7A Local Oscillator and AFC, 3-6BH6 First, Second and Fourth IF, 1-6AM8 Third IF and Muting Diode, 2-IN295 Dual Dynamic Limiters, 2-IN542 Ratio Detector, 1-12AX7 Muting Control and First Audio, 1-12AU7 Second Audio and Meter Tube, 1-6X4 Full Wave Rectifier.

POWER REQUIREMENTS: 105-125 volts, 50-60 cycles AC. Consumes 55 watts.

SIZE: 13 $\frac{1}{32}$ " wide x 8 $\frac{3}{8}$ " deep x 6 $\frac{1}{8}$ " high.

SHIPPING WEIGHT: 16 pounds.

LIST OF CONTENTS: THE FISHER Model FM-90X is supplied with the following:

- 1-FM Folded Dipole, with plug attached
- 1-Antenna Plug
- 4-Mounting Screws and Flat Washers
- 1-Shielded Cable
- 2-Mounting Templates

MECHANICAL INSTALLATION

THE FISHER Model FM-90X is constructed with a completely self-contained front panel, housing the dial and meter assemblies. It can thus be fitted into custom installations having front panels up to $\frac{5}{8}$ " thick without the necessity of extending the control shafts. The FM-90X may be installed into THE FISHER Custom Cabinets for use on a table top or a bookcase shelf. THE FISHER Custom Cabinets are hand crafted in fine furniture woods and are available in Blonde (Model FM-9B) and in Mahogany (Model FM-9M). Instructions for mounting are supplied with the cabinets.

To mount the FM-90X into a custom installation or console, the brass front panel assembly is left intact and the tuner is positioned into place from the front of the enclosure as follows:

1. Cut a rectangular opening in the front panel of the enclosure using TEMPLATE NO. 1.
2. Drill four chassis mounting holes in the shelf of the enclosure using TEMPLATE NO. 2. *Important!* Take special note of instructions on TEMPLATE NO. 2 for locating the mounting holes in a shelf where the front panel is thicker than $\frac{1}{4}$ ".
3. Install the FM-90X by inserting it through the rectangular opening with the rear of the chassis tilted upward so the tuner shock mounts clear the lower edge of the cutout.
4. With the chassis in place, secure with four screws and washers.

PROPER VENTILATION: In any installation, it is important that adequate ventilation be provided. The tuner should *never* be mounted in a totally enclosed cabinet of small dimension. In cases where a completely enclosed cabinet must be used, cut air slots at the rear edge of the shelf and in the rear panel of the tuner compartment (or on the shelf above the tuner if it has an escape for air). This is especially necessary where an amplifier or other heat-producing component will be placed in the same compartment with the tuner.

ELECTRICAL INSTALLATION

POWER REQUIREMENTS: THE FISHER Model FM-90X is designed to operate on 105-125 volts, 50-60 cycles AC. It consumes approximately 55 watts.

ANTENNA REQUIREMENTS: A folded dipole antenna is supplied with the FM-90X. This antenna is adequate, except in *extreme* fringe areas, or where there is a high noise level. The folded dipole may be affixed to the rear surface of the tuner compartment or placed under an adjacent carpet. Before placing the dipole under the carpet, check for the position which provides maximum signal. If necessary, the lead-in portion of the dipole may be lengthened with standard 300 ohm twin-lead. Should an external antenna be necessary, the antenna input is designed for a 300 ohm balanced system or a 72 ohm unbalanced, coaxial system. For 300 ohms, use standard ribbon twin-lead cable. For 72 ohms, type RG59/U shielded coaxial cable is recommended. Connections for both types of antenna system are shown on the antenna transformer shield and on the schematic diagram.

CONNECTIONS TO ASSOCIATED EQUIPMENT: THE FISHER Model FM-90X supplies sufficient audio voltage to operate into any control chassis or conventional amplifier. Connection is made by cable from the Main Output Jack of the tuner. For the purposes of recording, use the jack marked Recorder Output. Cables up to 200 feet in length may be used with these outputs. For FM Multiplex reception, use the jack marked Multiplex Output. The Multiplex lead should be kept as short as possible. For Binaural or Stereophonic listening, the Main Output and the Multiplex Output are used simultaneously. It is necessary to use a Multiplex adaptor and a second amplifier and speaker for this type of reception.

POWERING AUXILIARY COMPONENTS: The octal power socket J5 provides necessary AC and DC voltages for operating auxiliary components which do not have their own power supply. 6.3 volts AC at 1 ampere may be obtained from pins 2 and 7 for filament supply. 200 volts DC at a maximum current of 5 milliamperes may be obtained from pin number 8; pin 1 is connected to ground.

OPERATING INSTRUCTIONS

After the FM-90X has been mechanically installed and connected as outlined in the preceding paragraphs, connect the power plug to an AC power outlet. Turn the set on at the Power Switch, located on the AFC Control. Advance the Interchannel Muting Control to approximately maximum position. Tune to the desired station with the Station Selector. Indication of accurate tuning may be observed on the Tuning Meter when the pointer is on center-of-channel, midway between — and + on the meter scale.

OUTPUT LEVEL CONTROL: Set the Output Level Control as follows:

1. Turn the Output Level Control to maximum (full clock-wise) if the amplifier to which the FM-90X is connected has an input level control.
2. If the associated amplifier does not have an input level control, adjust the Output Level Control on the FM-90X so that the output level is approximately equal to that of other equipment, such as the record player, TV tuner, tape recorder, etc. This assures that the output level of the FM-90X will be relatively the same as the other equipment when switching from one program source to another. The Output Level Control is also used to adjust the output level of the FM-90X so that it does not overload the amplifier.

INTERCHANNEL MUTING CONTROL: Set the Interchannel Muting Control as follows:

Set the Station Selector so that the dial pointer is between channels (stations) and there is an audible rushing noise, with the Interchannel Muting Control in full counterclockwise position. Advance the control clockwise until the rushing noise is no longer audible. After this adjustment is made, it may be desirable to make use of this control to reject adjacent channel interference when necessary.

SETTING OF AFC CONTROL: Turn the AFC Control to maximum clockwise. In this position, it will be found that the station will automatically lock in and remain correctly tuned when the dial pointer is moved in the vicinity of the desired channel. Under ordinary conditions, the Model FM-90X can be used with the AFC in the maximum position at all times, when the pointer of the FM TUNING METER rests on any part of the vertical bar, the instrument is correctly tuned. The amount of dial pointer travel over which the lock-in feature operates for a given channel can be adjusted by means of the AFC Control. In some locations, however, when a weak station is separated from a strong station by only one or two channels, the latter will tend to operate the control circuit, and make it difficult to bring in the weaker of the two stations. When this condition prevails, turn the AFC Control counterclockwise to the degree necessary for normal reception of the weaker station.

LOGGING SCALE: THE FISHER Model FM-90X dial glass carries a logging scale consisting of linear divisions from 0 to 100. By referring to this scale, location of your favorite and frequently used stations is reduced to its simplest form.

ADJUSTMENT OF METERS: After the instrument has been in operation for ten or fifteen minutes, note the positions of the pointer on each meter. With the antenna disconnected, the Signal Meter pointer should be at 0. At the same time, the Tuning Meter pointer should be at the center of its scale. If one or both of these conditions do not occur, adjustments must be made as follows:

1. Meter adjustment screws will be found on the top surface of the chassis, behind each meter. Insert a screw driver in the corresponding slot

and rotate the screw until the pointer of the Signal Meter is at 0 and the pointer of the Tuning Meter is adjusted to the center of its scale.

COMPLETE HOME MUSIC SYSTEM

Careful selection of associated equipment for use with the FISHER FM-AM Tuner, Model FM-90X will result in a perfectly matched system for providing high fidelity music at home. Those seeking the ultimate in associated equipment will find it in THE FISHER Laboratory Standard Amplifiers, THE FISHER Master Audio Control, and other FISHER quality instruments. Complete specifications are available on request.

AT YOUR SERVICE

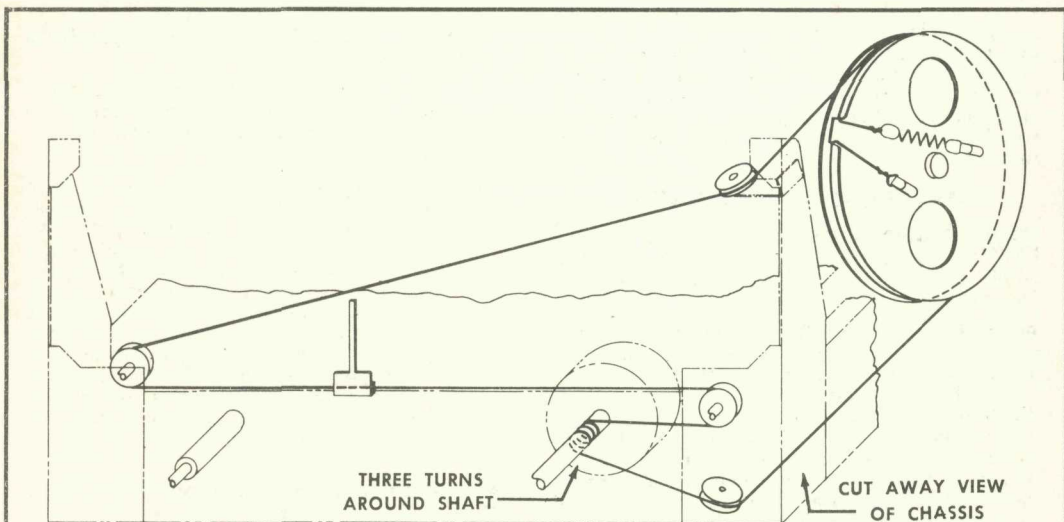
It is the constant desire of Fisher Radio Corporation to have your FISHER equipment give you the best possible performance. Toward that objective we solicit your correspondence on any special problems that may arise. After you have had an opportunity to familiarize yourself with THE FISHER equipment you have purchased, we would appreciate your letting us know how it is meeting your requirements. Write to the *Customer Relations Department*.

SPECIAL NOTE: To maintain your equipment at peak performance, may we suggest you avail yourself of our facilities and factory trained personnel. Write or call the *Service Department*.

FISHER RADIO CORPORATION

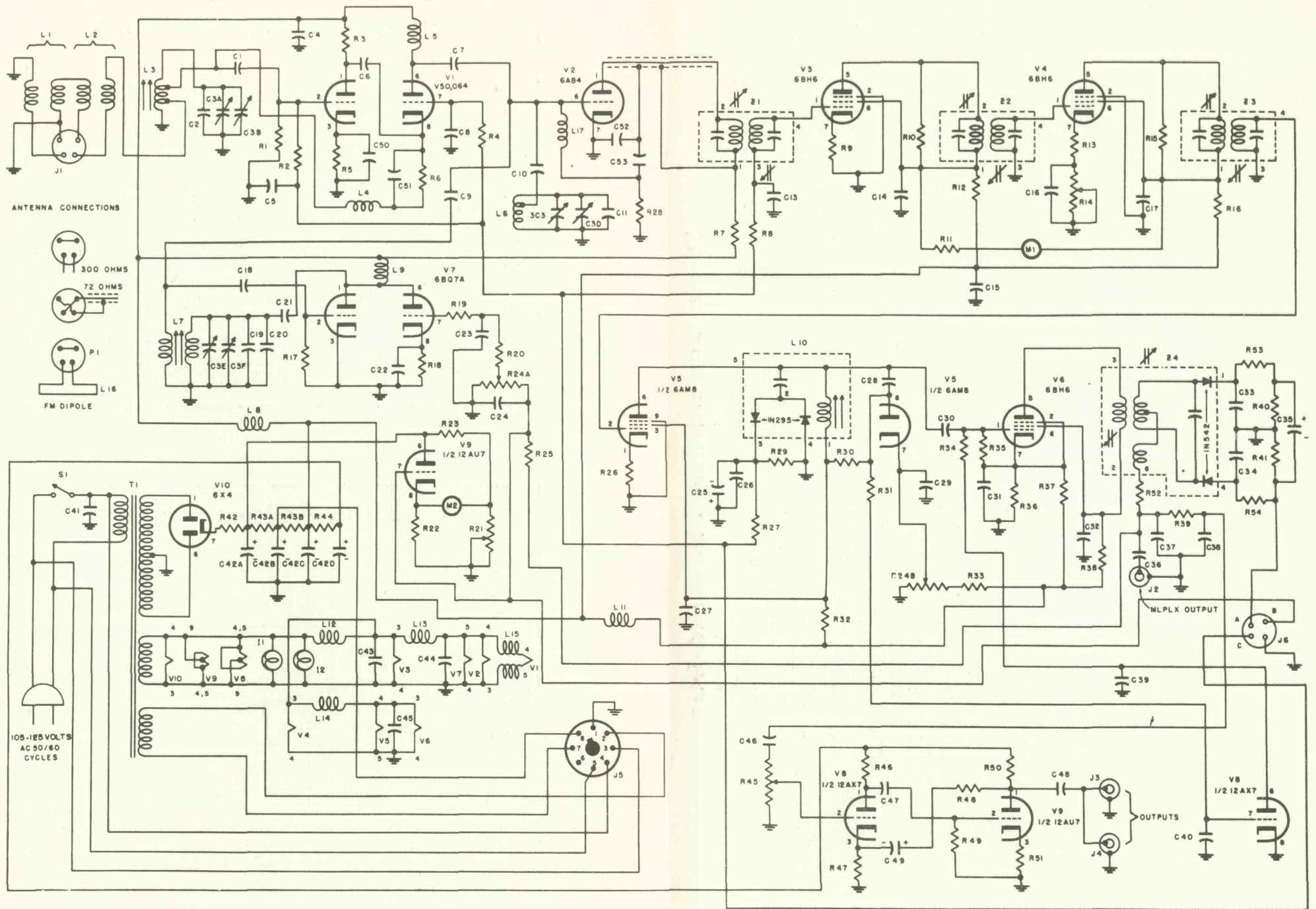
21-21 44th Drive

Long Island City 1, New York



DIAL CORD REPLACEMENT INSTRUCTIONS

1. Remove defective cord and dial pointer.
2. Restring new cord as shown in illustration.
3. Mount dial pointer, and with variable capacitor fully in counterclockwise position, center pointer over index mark at low-frequency end of dial.
4. Wrap dial string with adhesive type tape where string is inserted under pointer tabs.
5. Secure dial pointer in place by applying household cement.



THE FISHER

MODEL FM 90-X

Parts Description List • FM-90X

Symbol	Description	Part No.	Symbol	Description	Part No.
C-1, C-28	Capacitor, Ceramic: 100 mmfd; 600 V	C-577-121	P-1	Plug, 4 male contacts	P-520-138
C-2	Capacitor, Ceramic: 100 mmfd, NPO; 500 V	CC20CH100G5	R-1, R-2, R-20	Resistor, Composition: 1 megohm, 10%; 1/2 W	RC20BF106K
C-3A-E	Capacitor, Variable	C-551-119	R-3	Resistor, Composition: 470 ohms, 10%; 1/2 W	RC20BF471K
C-3F	Capacitor, Ceramic trimmer: 1-6 mmfd; NPO	C-520-159	R-4	Resistor, Composition: 1 megohm, 10%; 1/2 W	RC20BF103K
C-4, C-5	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502Y6	R-5	Resistor, Composition: 100 ohms, 10%; 1/2 W	RC20BF101K
C-5, C-21	Capacitor, Ceramic: 600 mmfd; 500 V	C-515 P380M5	R-6	Resistor, Composition: 1000 ohms, 10%; 1/2 W	RC20BF102K
C-6	Capacitor, Ceramic: 95 mmfd; 500 V	C-520-148	R-7	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF174K
C-9	Capacitor, Ceramic: 2.2 mmfd; Disc	C-3089	R-8	Resistor, Composition: 100 ohms, 10%; 1/2 W	RC20BF101K
C-10	Capacitor, Ceramic: 470 mmfd; 600 V	CK62GP502Y6	R-10	Resistor, Composition: 330,000 ohms, 10%; 1/2 W	RC20BF334K
C-11, C-13	Capacitor, Ceramic: 5 mmfd, NPO; 500 V	CC20CH040F5	R-12, R-16	Resistor, Composition: 1500 ohms, 10%; 1/2 W	RC20BF102K
C-14, C-15	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502Y6	R-13, R-19	Potentiometer, 250 ohms; wirewound	RC-550-135-2
C-16, C-17	Capacitor, Ceramic: .08 mmfd; disc type	C-551-170	R-17	Resistor, Composition: 330,000 ohms, 10%; 1/2 W	RC20BF334K
C-18	Capacitor, Ceramic: 5 mmfd ± 1 mmfd N750;	CC20J050F5	R-22	Resistor, Composition: 4700 ohms, 10%; 1/2 W	RC20BF472K
C-19	500 V		R-21	Resistor, Composition: 1000 ohms, 10%; 1/2 W	RC20BF102K
C-20	Capacitor, Ceramic: 5 mmfd ± 1 mmfd, N380;	CC20J050F5	R-23	Potentiometer, 1500 ohms; wirewound	RC-550-149
C-22, C-24	500 V		R-24	Potentiometer, Dual w/ switch	RC-550-150
C-23	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502Y6	R-25	Resistor, Composition: 220,000 ohms, 10%; 1/2 W	RC20BF224K
C-25	Capacitor, Ceramic: .05 mfd	C-551-120	R-26	Resistor, Composition: 220 ohms, 10%; 1/2 W	RC20BF101K
C-26, C-27	Capacitor, Electrolytic: 10 mfd; 50 V	C-551-146	R-27	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF105K
C-29, C-31, C-36	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502Y6	R-28	Resistor, Composition: 1 megohm, 10%; 1/2 W	RC20BF101K
C-30	Capacitor, Ceramic: .02 mfd; 600 V	C-550-122	R-29	Resistor, Composition: 22,000 ohms, 10%; 1/2 W	RC20BF223K
C-32, C-40	Capacitor, Ceramic: 83 mmfd; 500 V	CC21GP380M5	R-30	Resistor, Composition: 15 megohms, 10%; 1/2 W	RC20BF156K
C-33, C-34	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502Y6	R-31, R-33	Resistor, Composition: 220,000 ohms, 10%; 1/2 W	RC20BF224K
C-35	Capacitor, Ceramic: 800 mmfd; 500 V	CC21GP201M5	R-32	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF102K
C-37	Capacitor, Electrolytic: 10 mfd; 50 V	C-551-128	R-34	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF104K
C-38	Capacitor, Ceramic: 300 mmfd; 500 V	CC21GP301M5	R-35	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF474K
C-39	Capacitor, Ceramic: 1000 mmfd; 10%; 500 V	CC21GP102K5	R-36	Resistor, Composition: 4700 ohms, 10%; 1/2 W	RC20BF472K
C-40	Capacitor, Ceramic: .02 mfd; 600 V	CK62GP502Y6	R-37	Resistor, Composition: 220,000 ohms, 10%; 1/2 W	RC20BF224K
C-41	Capacitor, Mica: 0.01 mfd; 600 V	C-274	R-38, R-44	Resistor, Composition: 68,000 ohms, 10%; 1/2 W	RC20BF682K
C-42A, B, C, D	Capacitor, Electrolytic: 40 mfd, 250 V, 40 x 40 x 30 mmfd; 200 V	C-550-130	R-40, R-41	Resistor, Composition: 6800 ohms, 10%; 1/2 W	RC20BF682K
C-43, C-44, C-45	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502Y6	R-42	Resistor, 220 ohms, 10% 5 W	RC-551-137
C-46	Capacitor, Ceramic: .047 mfd; 200 V	C68P473M2	R-43A, B	Resistor, Wirewound: 910 ohms, tapped at 330 ohms	R-551-138
C-47	Capacitor, Ceramic: .0047 mfd; 200 V	C68P472M2	R-45	Potentiometer, Composition: 500,000 ohms	R-520-139
C-48	Capacitor, Ceramic: .22 mfd; 200 V	C68P224V2	R-46	Resistor, Composition: 220,000 ohms, 10%; 1/2 W	RC20BF224K
C-49	Capacitor, Electrolytic: 1 mfd; 250 V	C-546-126	R-47	Resistor, Composition: 2700 ohms, 10%; 1/2 W	RC20BF272K
C-50	Capacitor, Ceramic: 470 mmfd; 500 V	C-520-143	R-48	Resistor, Composition: 33,000 ohms, 10%; 1/2 W	RC20BF333K
C-52	Capacitor, Ceramic: 220 mmfd; 10%; 500 V	CC21GP221K5	R-49, R-52	Resistor, Composition: 1 megohm, 10%; 1/2 W	RC20BF105K
C-53	Capacitor, Ceramic: 1000 mmfd, 10%; 500 V	CC21GP102K5	R-51	Resistor, Composition: 2700 ohms, 10%; 1/2 W	RC20BF271K
I-1, I-2	Lamp, 2 W	I-563-145	R-53	Resistor, Composition: 270 ohms, 10%; 1/2 W	RC20BF271K
J-1, J-6	Jack	J-520-137	R-54	Resistor, Composition: 1500 ohms, 10%; 1/2 W	RC20BF152K
J-2, J-3, J-4	Jack, Phone	J-3143	S-1	Switch, Power	R-551-136
J-5	Socket, Tube Octal	X-1530	T-1	Transformer, Power	T-551-118
L-1, L-2	Coil, Elevator	L-500-139	Z-1	Transformer, FM I.F.	ZZ-2987
L-3	Coil, Antenna	L-551-131	Z-2, Z-3	Transformer, FM I.F.	ZZ-500-180
L-4, L-7	Coil, Neutralization	L-520-178	Z-4	Transformer, FM Discriminator	ZZ-502-170
L-5, L-8, L-9, L-11	Coil, RF choke, 2.2 micro-henry	L-835-2			
L-6	Coil, RF	L-551-132			
L-7	Coil, Oscillator	L-551-133			
L-10	Coil, FM Limiter Assembly	L-551-121			
L-12, L-13, L-14	Choke, Filament	L-520-156			
L-15	Coil, Binlar	L-500-140			
L-16	Dipole, Assembly	AS-520-168			
M-1	Motor, Signal	M-551-134			
M-2	Motor, Tuning	M-551-169			

MISCELLANEOUS PARTS

AS-551-168	Dress Panel
AS-551-172	Dress Panel Escutcheon
E-50049-3	Knob, Tuning
E-50049-2	Knob, AFC
E-50049-4	Knob, Muting
N-551-117	DBI Glass

ALIGNMENT INSTRUCTIONS: READ WITH EXTREME CARE BEFORE ATTEMPTING ALIGNMENT. Set Muting Control and AFC Control to minimum, counterclockwise. Use an insulated screwdriver for alignment adjustment.

STEPS	DUMMY ANTENNA	COUPLING	FREQUENCY	MODULATION	DIAL POINTER SETTING	INDICATING METER	ADJUST	REMARKS
1	—	To shield of V-2 (6AB4) Unground shield	10.7 MC	None	Point of no interference	DC VTVM to Pin C of J-6	Z-1, Z-2, Z-3, Top and bottom and top of L-10	Adjust for maximum negative voltage.
2	—	"	"	"	"	DC VTVM to Pin A of J-6	Bottom of Z-4	Adjust for maximum negative voltage.
3	—	"	"	"	"	Connect VTVM to Pin B of J-6	Top of Z-4	Adjust for zero between positive and negative reading.
4	Two 120 ohm carbon resistors	Connect for 300 ohms	106 MC	400 CPS FM (22.5 KC deviation)	106 MC	DC VTVM to Pin C of J-6	C-3F	Adjust for maximum negative voltage.
5	"	"	90 MC	"	90 MC	"	L-7	Adjust for maximum negative voltage.
6	"	"	106 MC	"	106 MC	"	C-3B and C-3D	Adjust for maximum negative voltage.
7	"	"	90 MC	"	90 MC	"	L-3 and L-6	Adjust for maximum negative voltage.
8	Repeat Steps 4 to 7 for proper dial calibration and maximum output.							
9	Adjustment of meters: refer to text.							

Voltage Reference Chart

SOCKET PINS

TUBE	1	2	3	4	5	6	7	8	9
V1, 50064	102	— .65	0	0	6.3AC	103	— .7	0	0
V2, 6AB4	100	0	0	6.3AC	0	— 2.5	0	—	—
V3, 6BH6	— .43	.46	6.3AC	.0	101	101	0	—	—
V4, 6BH6	0	.58	6.3AC	0	100	100	0	—	—
V5, 6AM8	1.8	0	100	6.3AC	0	100	0	— .8	0
V6, 6BH6	23	24.5	6.3AC	0	100	100	24.5	—	—
V7, 6BQ7A	108	— 3.9	0	0	6.3AC	108	0	3.6	0
V8, 12AX7	65	0	.54	6.3AC	6.3AC	26	— .8	0	0
V9, 12AU7	55	0	2.4	0	0	160	0	5.5	6.3AC
V10, 6X4	196AC	—	0	6.3AC	—	196AC	180	—	—

NOTES: Line voltage set at 117 volts, 60 cycles. Voltage readings may vary 10% under normal operating conditions. All voltages read with a vacuum-tube voltmeter under no-signal conditions. Muting Control and AFC Control at maximum, counterclockwise. All voltages read with respect to chassis. Readings are in positive voltages DC unless otherwise specified.

Resistance Reference Chart

SOCKET PINS

TUBES	1	2	3	4	5	6	7	8	9
V1, 50064	20K	2M	100	0	.1	19K	2M	100	0
V2, 6AB4	20K	0	0	.1	0	1M	0	—	—
V3, 6BH6	560K	100	.1	0	20K	20K	0	—	—
V4, 6BH6	.1	100	.1	0	20K	20K	0	—	—
V5, 6AM8	220	.1	20K	.1	0	20K	6	16M	0
V6, 6BH6	500K	5K	.1	0	20K	20K	5K	0	0
V7, 6BQ7A	20K	4.7K	0	0	.1	20K	1M	1K	0
V8, 12AX7	220K	500K	2.7K	.1	.1	600K	16M	0	0
V9, 12AU7	70K	1M	2.2K	0	0	20K	200K	630	.1
V10, 6X4	90	—	0	.1	—	90	20K	—	—

CAUTION: Be certain to disconnect AC line cord when making these measurements. Muting and AFC Control at maximum, counterclockwise. Level Control maximum, clockwise. All resistance in ohms unless otherwise specified.

M equals Megohms
K equals Kilohms
Measurements taken with respect to chassis.
*Varies with the setting of R-14

NOTES