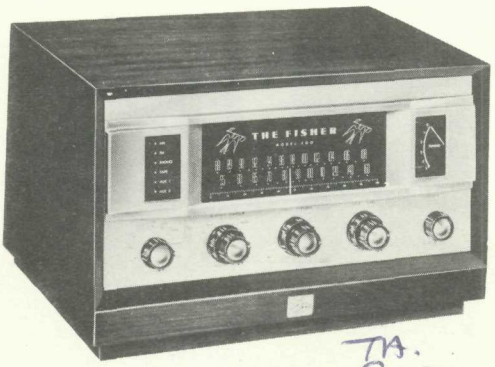
THE FISHER

Laboratory Standard

FM-AM Receiver

INSTALLATION, OPERATING
AND SERVICE INSTRUCTIONS



MODEL ~~500~~ TA. 902

PRICE: $1.00

FISHER RADIO CORPORATION · NEW YORK

THE FISHER

FM-AM RECEIVER • MODEL 500

GENERAL INFORMATION

THE FISHER FM-AM Receiver, MODEL 500 is designed to meet the requirements of the most exacting user, having been planned to professional standards from the very beginning. With a full complement of tubes and components for three complete circuits (FM-AM TUNER, AUDIO CONTROL AND 30-WATT Amplifier) the MODEL 500 features an unusually compact chassis of exceptional design and performance.

The FM section comprises a dual triode, cascode type, tuned RF stage (for extreme sensitivity and maximum signal-to-noise ratio) and three IF stages. These are combined with a full wide-band FM detector for maximum capture ratio. The AM section employs a tuned RF stage using a high efficiency FERRITE BAR built-in antenna, plus provision for an external antenna. The diode detector is of exclusive FISHER design and will operate with a minimum of distortion under all conditions. Separate inputs for a standard 300 ohm FM and a conventional AM antenna is provided on the rear skirt of the chassis. A professional meter for micro-accurate tuning of both FM and AM, is located on the front panel.

A precision flywheel tuning mechanism with an anti-backlash feature facilitates smooth and easy selection of stations. The edge-lighted slide-rule dial has large easy-to-read numerals and a 0 to 100 logging scale for convenient location of the stations most frequently used. Channel selection is indicated by a six point light panel located on the front of the unit. The front panel is of beautiful, brushed brass, die-cast construction that will add distinction to any type of installation.

The integrated chassis of the MODEL 500 also includes the audio control, pre-amplifier and power amplifier circuits. Audio controls include a VOLUME CONTROL and a calibrated LOUDNESS CONTOUR CONTROL with three separate compensating networks and an off position. The BASS and TREBLE controls are of the continuously variable cross-over type, concentrically mounted on a unit assembly for simplified operation.

A complete phonograph and tape pre-amplifier for low level magnetic cartridges and direct tape-head playback is of exclusive FISHER design, comprising a dual triode with feed-back for distortion-free performance. There are four separate and complete equalization settings to compensate for all of the popular recording characteristics, *plus* a correctly equalized setting for NARTB tape playback characteristics. Low impedance tape recorder output permits recording from remote locations in the home. There are two auxiliary inputs for connection to the audio section of the MODEL 500 from television, crystal phonograph or the amplifier output of a complete tape recorder.

The 30-watt power amplifier uses two type 5881 high fidelity audio output tubes in push-pull operation for extremely low distortion. All low-level audio tubes use DC voltage on the filaments for maximum signal-to-hum ratio.

INSTALLATION INSTRUCTIONS

THE FISHER MODEL 500 includes the following:

1 — FM folded dipole indoor antenna
1 — AM Ferrite Bar antenna installed in the chassis
4 — Mounting screws and flat washers
2 — Mounting templates

MECHANICAL INSTALLATION

THE FISHER MODEL 500 is constructed with a completely self-contained front panel, housing the dial, indicator light and meter assembly. It may be fitted into custom installations with front panels up to 5/8" thick, without the necessity of extending the control shafts. The 500 may be installed into THE FISHER Custom Cabinets for use on a table top or a bookcase shelf. THE FISHER Custom Cabinets are custom-made in fine furniture woods and are available in Blonde (Model TA-5B) and in Mahogany (Model TA-5M). Installation instructions are supplied with the cabinets.

To mount the MODEL 500 into a custom installation or console, the brass front panel assembly is left intact and the receiver 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 on TEMPLATE NO. 2 for locating the mounting holes on a shelf where the front panel is *thicker* than 1/4".
3. Install the MODEL 500 by inserting it through the rectangular opening with the rear of the chassis tilted *upward* so the chassis shock mounts clear the lower edge of the cutout.
4. With the chassis in place over the mounting holes, secure it to the shelf with four mounting screws and flat washers.

PROPER VENTILATION: In any installation, it is important that adequate ventilation be provided. The receiver should *never* be installed into a totally enclosed cabinet of small dimension. In cases where a completely enclosed cabinet or enclosure must be used, cut air slots in the rear panel and at the rear edge of the shelf of the compartment (or on the shelf above the receiver, if it has an escape for air).

ELECTRICAL INSTALLATION

POWER REQUIREMENTS: THE FISHER MODEL 500 is designed to operate on 105-125 volts, 50-60 cycles AC. It draws approximately 140 watts.

ANTENNA REQUIREMENTS: A folded dipole indoor FM antenna is supplied with the MODEL 500. Connection is made to the terminal strip mounted above the power transformer in the rear of the chassis. Use terminals marked FM. This antenna is adequate except in *extreme* fringe or remote areas, or where there is a high noise level. The folded dipole may be affixed to the rear of the cabinet or enclosure. If after orienting the antenna (rotating the horizontal section for maximum signal) it is found that the rear of the enclosure is not convenient for mounting, the dipole may be placed under an adjacent carpet. If necessary, the lead-in portion of the dipole may be lengthened with standard 300 ohm twin-line cable. Should an external antenna be necessary, connection of the lead-in is made to the antenna terminals as outlined above.

In normal areas, the built-in Ferrite Bar antenna is adequate for AM reception. If an external AM antenna is required, connection is made to the antenna terminal strip located on the top of the power transformer in the rear of the chassis. Use the terminal on the right for the AM antenna, and the center terminal for a ground connection.

CONNECTION OF ASSOCIATED EQUIPMENT: The MODEL 500 is a self-contained receiver providing reception from FM and AM broadcasts. There is provision for reproducing from a phonograph (with magnetic or crystal cartridge), tape-head play-back or from the output of a complete tape recorder and from the audio section of a television receiver or tuner chassis. Connections are made as follows:

PHONOGRAPH: When using a magnetic type cartridge, connection should be made to the input on the rear chassis skirt marked PHONO. When using a high level crystal or ceramic cartridge, use the auxiliary input marked AUX 1 or AUX 2.

TAPE: When using a basic tape playback unit, use the input marked TAPE. When feeding from the AMPLIFIER output of a complete tape recorder, use the input marked AUX 1 or AUX 2.

TELEVISION: When feeding from a TV tuner chassis or the audio section of a TV receiver, use the input marked AUX 1 or AUX 2.

TAPE RECORDER OUTPUT: Connection to a tape recorder for recording from FM, AM or phonograph is easily made from the tape recorder output jack located on the rear chassis skirt marked RCDR. A shielded cable should be used for this connection. The RCDR output is a low impedance line which permits cable lengths of considerable distance between the MODEL 500 and the tape recorder. For best results, it is recommended that the length of this cable should not exceed 100 feet.

LOUDSPEAKER CONNECTION: The MODEL 500 provides output connections to speakers having a voice coil or system impedance of 4, 8 or 16 ohms. Connection is made to the output terminal strip in the center of the rear chassis deck. One lead should be connected to the screw terminal marked GND and the other to the correct impedance value: 4, 8 or 16 ohms.

OPERATING INSTRUCTIONS

Connect a loudspeaker or loudspeaker system to the output terminals as outlined above and then plug the receiver into a convenient AC electrical outlet. Set the controls on the front as follows:

LOUDNESS CONTOUR: Completely counter-clockwise to OFF.

TONE CONTROLS: Mid-way (which is the 'flat', or 'normal' position). The gold markers on the knob should be at top center. The BASS control is the larger knob marked with a gold dot, the TREBLE control is the smaller, marked with a gold triangle.

Turn the CHANNEL SELECTOR switch to the program desired and turn the power switch in a clockwise direction to ON. Refer to paragraphs below for specific operation of FM, AM, Phono, Tape or Auxiliary.

FREQUENCY MODULATION - FM

With the CHANNEL SELECTOR in the FM position, tune in the desired station with the STATION SELECTOR knob on extreme right of panel. At the same time, observe the movement of the meter pointer for maximum deflection. In operation, this pointer will reach maximum, anywhere from between 3 and 4 to 5 when the station is tuned in. As the station is passed, the pointer will go toward 0 and then swing toward maximum when another station is approached on the dial. Tune to the number of the station you wish and adjust the STATION SELECTOR knob in the area of that station that registers maximum deflection of the tuning meter pointer.

AMPLITUDE MODULATION - AM

With the CHANNEL SELECTOR in the AM position, tune in the desired station with the STATION SELECTOR knob. Observe the tuning meter during this operation and follow the instructions as outlined for FM in the preceding paragraph.

LOGGING SCALE: THE FISHER MODEL 500 dial glass has a logging scale consisting of linear divisions from 0 to 100. By referring to this scale, location of stations most frequently used is reduced to its simplest form.

PHONOGRAPH OPERATION: In view of the variety of recording characteristics employed by record manufacturers, both the bass and treble frequencies must be properly equalized to match the original recording techniques. Because of the physical limitations of the record groove, frequencies below approximately 500 cycles are recorded with gradually decreasing amplitude as the music approaches the extremely low frequencies. Conversely, in order to obtain an improved signal-to-noise ratio, treble boost is incorporated. The point at which low frequency attenuation begins, and the amount of high frequency pre-emphasis employed, vary considerably from manufacturer to manufacturer. THE FISHER MODEL 500 provides four complete equalization settings for both low and high frequencies. By setting the CHANNEL SELECTOR for the proper equalization, reproduction from a given record is realized with optimum balance. A list of recommeded settings for the various record manufacturers is provided. — To play the phonograph, set the CHANNEL SELECTOR knob to the correct equalization setting. Adjust VOLUME and TONE controls for the most pleasing musical balance.

TAPE OPERATION: THE FISHER MODEL 500 is equipped to reproduce directly from the tape-head of a tape transport mechanism. Connection for this is made into the TAPE input jack located on the rear chassis skirt. The CHANNEL SELECTOR should be turned to TAPE. For reproducing tape from a complete recorder containing its own amplifiers, connection from the AMPLIFIER output of the tape recorder should be made to AUX 1 or AUX 2 and the CHANNEL SELECTOR set accordingly. The TAPE input is equalized for the NARTB curve and is designed for direct tape-head playback only. *Important! Do not connect the* AMPLIFIER *output of a complete tape recorder to this jack. Use* AUX 1 *or* AUX 2.

To make a tape recording from FM, AM or Phonograph. Connect a shielded cable from the RCDR output of the MODEL 500 to the RADIO or AMPLIFIER input of the tape recorder. This connection is not affected by the VOLUME or TONE controls. The RCDR output jack is located on the rear chassis skirt.

LOUDNESS CONTOUR CONTROL: At low volume levels, the human ear does not readily respond to the upper and lower frequency limits, while it does efficiently receive the middle register. Thus it is necessary to compensate for these deficiencies in order to achieve a natural balance of the program. The LOUDNESS CONTOUR control automatically restores this balance when the VOLUME control is set for low level. In the extreme counter-clockwise position, the LOUDNESS CONTOUR control is OFF and not in operation. The three positions of the control provide a choice of three degrees of bass and treble boost, depending upon the low volume setting. *Important!* Use the LOUDNESS CONTOUR control only for *low volume* settings. If used at average or loud levels, the program will be too boomy because of excessive bass.

TONE CONTROLS: When the BASS and TREBLE controls are set mid-way with the gold markers at the top, the response is uniform throughout the range. Turning either control to the right, clockwise, will effect a boost in the response. Turning to the left counter-clockwise, will effect a cut in the response. Effectively, the range of these controls is 15 db of boost or cut at 50 and 10,000 cycles respectively. The controls should be set to balance to room acoustics in accord with personal taste. *Important!* When using the LOUDNESS CONTOUR control, the TONE controls should be in the normal or flat position with the gold markers on the top.

AT YOUR SERVICE

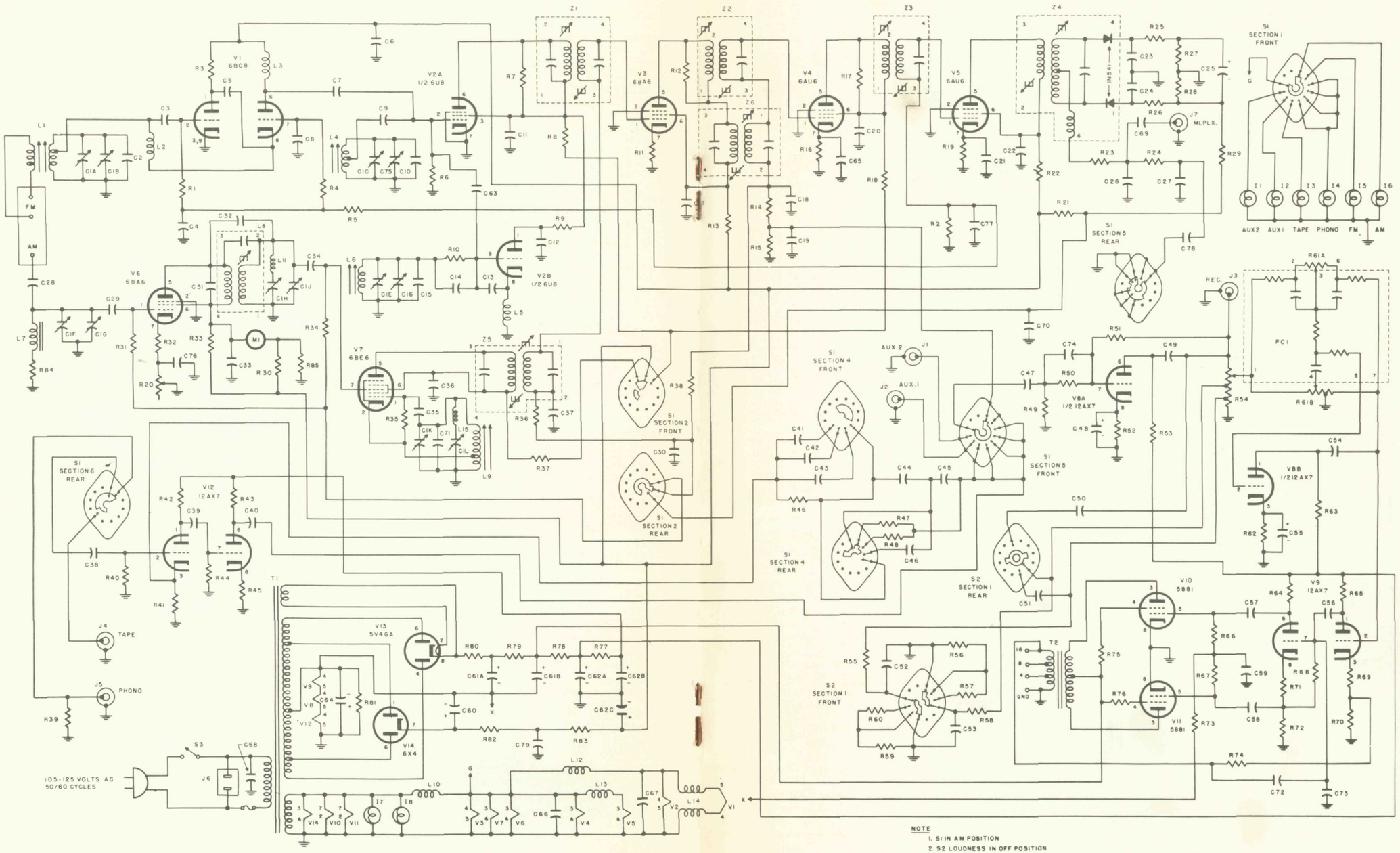
It is the constant desire of Fisher Radio Corporation to have your FISHER equipment give you its best possible performance. Toward that objective, we solicit your correspondence on any special problems that may arise. After you have had an opportunity to familiarize yourself with THE FISHER equipment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

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

FISHER RADIO CORPORATION
21-21 - 44th Drive
Long Island City 1, New York

Parts Description List · Model 500

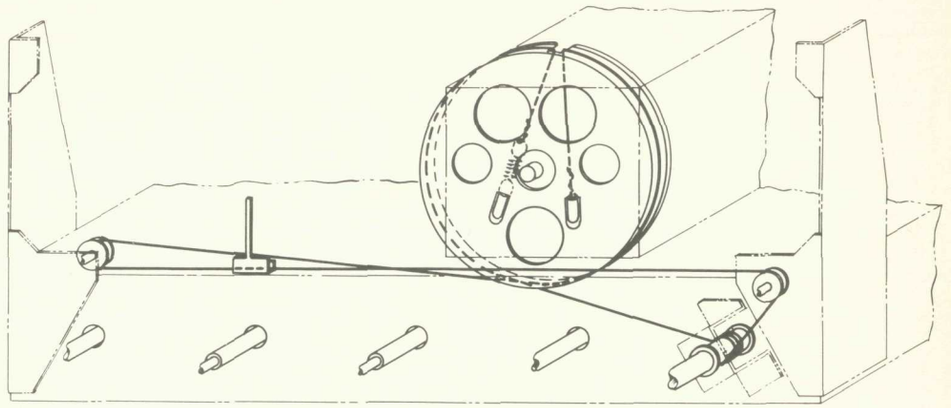
Symbol	Description	Part No.
C-1 to C1L	Capacitor, Variable	C-592-116
C-2, C-10	Capacitor, Ceramic: 5 mmfd, NPO; 500 V	CC20CH050F5
C-3	Capacitor, Ceramic: 100 mmfd; 600 V	C-577-121
C-4, C-6	Capacitor, Ceramic: 1000 mmfd;	C-592-187
C-5, C-8	Capacitor, Ceramic: 470 mmfd; 600 V	C-520-143
C-7	Capacitor, Ceramic: 33 mmfd; 500 V	CC21GP330M5
C-9, C-11, C-12	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502V6
C-13	Capacitor, Ceramic: 5 mmfd, N 150; 500 V	CC20PH050F5
C-14	Capacitor, Ceramic: 82 mmfd, 10%; 500 V	CC21GP820K5
C-15	Capacitor, Ceramic: 13 mmfd, N030; 500 V	CC20HG130K5
C-16, C-75	Capacitor, Ceramic: Trimmer: 1-6 mmfd, npo	C-520-159
C-17, C-33, C-36 C-37, C-76	Capacitor, Ceramic: .02 mfd; 600 V	C-556-122
C-18, C-19, C-77	Capacitor, Ceramic: 100 mmfd; 500 V	CC21GP101M5
C-20, C-21, C-22	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502V6
C-23, C-24, C-26	Capacitor, Ceramic: 300 mmfd; 10%; 500 V	CC21GP301K5
C-25	Capacitor, Electrolytic: 10 mfd, 50 V	C-551-146
C-27	Capacitor, Ceramic: 1000 mmfd, 10%; 500 V	CC26GP102K5
C-28, C-32, C-63	Capacitor; 2.2 mmfd, 500 V	C-3039
C-29, C-34	Capacitor, Ceramic: 100 mmfd; 600 V	C-577-121
C-30, C-38, C-40, C-47, C-78	Capacitor; .047, 200 V	C68P473M2
C-31	Capacitor, Ceramic: 10 mmfd, NPO; 500 V	CC20CH100G5
C-35	Capacitor, Ceramic: 220 mmfd, 500 V	CC21GP22M5
C-39	Capacitor, Ceramic: .01 mfd; 600 V	CK62GP103V6
C-41, C-50	Capacitor, Ceramic: 220 mmfd, 10%; 500 V	CC21GP221K5
C-42, C-51	Capacitor, Ceramic: 120 mmfd, 10%; 500 V	CC21GP121K5
C-43	Capacitor, Ceramic: 420 mmfd, 10%; 500 V	CC21GP421K5
C-44	Capacitor, Ceramic: 720 mmfd, 10%; 500 V	CC21GP721K5
C-45	Capacitor: .0022 mfd, 10%; 200 V	C68P222K2
C-46	Capacitor: .0033 mfd, 10%; 200 V	C68P332K2
C-48, C-55	Capacitor, Electrolytic: 25 mfd, 6 V	C-556-137
C-49, C-54	Capacitor: .1 mfd; 400 V	C68P104M4
C-52, C-53	Capacitor: .0047 mfd, 10%; 200 V	C68P472K2
C-56	Capacitor, Ceramic: .02 mfd; 600 V	C-556-122
C-57, C-58	Capacitor: .047 mfd; 400 V	C68P473M4
C-59	Capacitor: .22 mfd; 200 V	C68P224V2
C-60	Capacitor, Electrolytic: 40 mfd, 250 V	C-592-151
C-61A, B	Capacitor, Electrolytic: 40/40 mfd; 500 V	C-592-146
C-62A, B, C	Capacitor, Electrolytic: 40 mfd, 450 V; 30 mfd, 350 V; 40 mfd, 250V	C-592-147
C-64	Capacitor, Electrolytic: 100 mfd, 50 V	C-592-150
C-65, C-66, C-67 C-69, C-70	Capacitor, Ceramic: 005. mfd; 600 V	CK62GP502V6
C-68	Capacitor, Molded Tubular: 01 mfd; 600 V	C-2747
C-71	Capacitor, Ceramic: 10 mmfd, N 1400; 500 V	CC20VK100G5
C-72	Capacitor, Ceramic: 47 mmfd, 500 V	CC21GP470M5
C-73	Capacitor, Ceramic: 120 mmfd, 10%; 500 V	CC21GP121K5
C-74	Capacitor, Ceramic: 82 mmfd, 10%; 500 V	CC21GP820K5
F-1	Fuse, 3 Amp. Slo-Blo	F592-171
I-1 to I-6	Lamp, Channel Indicator	I-588-120
I-7, I-8	Lamp, Dial Panel	I-563-145
J-1, J-2 J-4, J-5	Jack	J-50048
J-3, J-7	Jack	J-3143
J-6	Receptacle, AC	J-546-129
L-1	Coil, FM Antenna	L-592-186
L-2	Coil, Neutralization	L-50066-1
L-3	Choke	L-50066-7
L-4	Coil, FM RF	L-592-137
L-5	Choke	L-3352
L-6	Coil FM OSC	L-592-136
L-7	Loop AM	L-592-134
L-8	Coil AM RF	L-556-125
L-9	Coil AM OSC	L-550-122
L-10, L-12, L-13	Choke Filament	L-520-156
L-11, L-15	Choke .68 Microhenry	L-50066-1
L-14	Choke, Bi-Filar	L-509-140
M-1	Meter Tuning	M-551-134
PC-1	Printed Circuit	PC-552-105
R-1, R-4, R-6	Resistor Composition: 1 megohm, 10%; ½ W	RC20BF105K
R-2	Resistor Composition: 6800 ohms, 10%; ½ W	RC20BF682K
R-3, R-8	Resistor Composition: 470 ohms, 10%; ½ W	RC20BF471K
R-5	Resistor Composition: 100,000 ohms, 10%; ½ W	RC20BF104K
R-7	Resistor Composition: 33,000 ohms, 10%; ½ W	RC20BF333K
R-9	Resistor Composition: 2700 ohms, 10%; ½ W	RC20BF272K
R-10	Resistor Composition: 4700 ohms, 10%; ½ W	RC20BF472K
R-11	Resistor Composition: 100 ohms, 10%; ½ W	RC20BF101K
R-12, R-17	Resistor Composition: 330,000 ohms, 10%; ½ W	RC20BF334K
R-13, R-18	Resistor Composition: 1000 ohms, 10%; ½ W	RC20BF102K
R-14, R-15	Resistor Composition: 100,000 ohms, 10%; ½ W	RC20BF104K
R-16, R-19	Resistor Composition: 68 ohms, 10%; ½ W	RC20BF680K
R-20	Rheostat, Wirewound: 150 ohms	R550-135-2
R-21	Resistor Composition: 18 megohms	RC20BF186K
R-22	Resistor Composition: 2200 ohms, 10%; ½ W	RC20BF222K
R-23	Resistor Composition: 270 ohms, 10%; ½ W	RC20BF271K
R-24	Resistor Composition: 68,000 ohms, 10%; ½ W	RC20BF683K
R-25	Resistor Composition: 1000 ohms, 10%; ½ W	RC20BF102K
R-26	Resistor Composition: 1500 ohms, 10%; ½ W	RC20BF152K
R-27, R-28	Resistor Composition: 6800 ohms, 10%; ½ W	RC20BF682K
R-29	Resistor Composition: 270,000 ohms, 10%; ½ W	RC20BF274K
R-30	Resistor Composition: 3900 ohms, 10%; ½ W	RC20B392K
R-31	Resistor Composition: 1 megohm, 10%; ½ W	RC20BF105K
R-32	Resistor Composition: 47 ohms, 10%; ½ W	RC20BF470K
R-33, R-37	Resistor Composition: 1000 ohms, 10%; ½ W	RC20BF102K
R-34	Resistor Composition: 1 megohm, 10%; ½ W	RC20BF105K
R-35	Resistor Composition: 22,000 ohms, 10%; ½ W	RC20BF223K
R-36	Resistor Composition: 470,000 ohms, 10%; ½ W	RC20BF474K
R-38	Resistor Composition: 1.8 megohm, 10%; ½ W	RC20BF185K
R-39	Resistor Composition: 47,000 ohms, 10%; ½ W	RC20BF473K
R-40	Resistor Composition: 330,000 ohms, 10%; ½ W	RC20BF334K
R-41	Resistor Composition: 2700 ohms, 10%; ½ W	RC20BF272K
R-42, R-43, R-50	Resistor Composition: 220,000 ohms, 10%; ½ W	RC20BF224K
R-44, R-48	Resistor Composition: 2.2 megohms, 10%; ½ W	RC20BF225K
R-45	Resistor Composition: 2200 ohms, 10%; ½ W	RC20BF222K
R-46	Resistor Composition: 120,000 ohms, 10%; ½ W	RC20BF124K
R-47, R-51	Resistor Composition: 3.3 megohms, 10%; ½ W	RC20BF335K
R-49	Resistor Composition: 1 megohm, 10%; ½ W	RC20BF105K
R-52	Resistor Composition: 1500 ohms, 10%; ½ W	RC20BF152K
R-53	Resistor Composition: 100,000 ohms, 10%; ½ W	RC20BF104K
R-54	Potentiometer, Volume Loudness	R-592-178
R-55, R-56, R-58, R-59	Resistor Composition: 47,000 ohms, 10%; ½ W	RC20BF473K
R-57, R-60	Resistor Composition: 47,000 ohms, 10%; ½ W	RC20BF683K
R-61A, B	Potentiometer, Dual Tone Control	R-592-179
R-62	Resistor Composition: 2700 ohms, 10%; ½ W	RC20BF272K
R-63	Resistor Composition: 100,000 ohms, 10%; ¼ W	RC20BF104K
R-64	Resistor Composition: 47,000 ohms, 10%; ½ W	RC20BF473K
R-65	Resistor Composition: 220,000 ohms, 10%; ½ W	RC20BF224K
R-66, R-67	Resistor Composition: 470,000 ohms, 10%; ½ W	RC20BF474K
R-68	Resistor Composition: 1.2 megohms, 10%; ½ W	RC20BF125K
R-69	Resistor Composition: 1000 ohms, 10%; ½ W	RC20BF102K
R-70	Resistor Composition: 680 ohms, 10%; ½ W	RC20BF681K
R-71	Resistor Composition: 2700 ohms, 10%; ½ W	RC20BF272K
R-72	Resistor Composition: 47,000 ohms, 10%; ½ W	RC20BF473K
R-73	Resistor Composition: 33,000 ohms, 10%; ½ W	RC20BF333K
R-74	Resistor Composition: 6800 ohms, 10%; ½ W	RC20BF682K
R-75, R-76	Resistor Composition: 68 ohms, 10%; ½ W	RC20BF680K
R-77	Resistor Composition: 330,000 ohms, 10%; ½ W	RC20BF334K
R-78	Resistor Composition: 10,000 ohms, 10%; ½ W	RC20BF103K
R-79	Resistor Wirewound: 100 ohms, 10%; 5 W	R-592-185
R-80	Resistor Wirewound: 50 ohms, 10%; 7 W	R-592-168
R-81	Resistor Wirewound: 920 ohms, 5%; 5 W	R-592-167
R-82, R-83	Resistor Composition: 270 ohm, 10%; 2 W	RC40BF271K
R-84	Resistor Composition: 10 ohms, 10%; 2 W	RC20BF100K
R-85	Resistor Composition: 39,000 ohms, 10%; ½ W	RC20BF393K
S-1	Switch, Channel Selector	S-592-184
S-2	Switch, Loudness	Part of S592-178
S-3	Switch, Power	S592-149
T-1	Transformer, Power	T-592-125-1
T-2	Transformer, Output	T-563-117
Z-1	FM IF Transformer	ZZ-2987
Z-2, Z-3	FM IF Transformer	ZZ-509-130
Z-4	FM Ratio Detector	ZZ-592-170
Z-5	AM IF Transformer	ZZ-2985
Z-6	AM IF Transformer	ZZ-2984
	Escutcheon Assembly	AS-592-176
	Socket, Indicator Light	X-588-123
	Dial Glass	N-592-123
	FF Dipole Assembly	AS-520-163-2
	Dress Panel	AS-592-169
	Knobs: Rear Dual	E-50049-4
	Forward Dual	E-50049-7
	Power, On-Off	E-50049-3
	Tuning	E-50049-1
	Channel Switch	E-50049-9



THE FISHER

SCHEMATIC DIAGRAM **MODEL 500**

FISHER RADIO CORPORATION · NEW YORK



DIAL CORD REPLACEMENT INSTRUCTIONS

1. Remove chassis from cabinet.
2. Remove defective cord and dial pointer.
3. Remove dial panel by unscrewing four hexagonal self-tapping screws.
4. Restring new cord as shown in illustration.
5. Remount dial panel.
6. Mount dial pointer, and with variable capacitor fully in counterclockwise position, center pointer over index mark at low-frequency end of dial.
7. Secure dial pointer in place by applying household cement.

RECORD EQUALIZATION GUIDE

MANUFACTURER	EQUALIZATION SETTING	MANUFACTURER	EQUALIZATION SETTING
ALLEGRO	LP	HMV-ENGLISH	LP
ALLIED	RIAA	L'OISEAU-LYRE*	RIAA
AMERICAN REC. SOCIETY*	RIAA	LONDON*	RIAA
ANGEL	RIAA	LYRICHORD*	NAB
ATLANTIC*	NAB	MERCURY*	AES
BACH GUILD	LP	MGM	RIAA
BANNER	LP	MONTILLA	RIAA
BARTOK	NAB	NEW RECORDS	LP
BLUE NOTE*	AES	OCEANIC*	LP
BOSTON*	LP	OXFORD	LP
CAEDMON	AES	PACIFIC JAZZ	RIAA
CANYON*	AES	PERIOD	NAB
CAPITAL*	AES	PHILHARMONIA*	AES
CAPITOL-CETRA	AES	POLYMUSIC*	NAB
CETRA-SORIA	LP	RACHMANINOFF SOCIETY	RIAA
COLOSSEUM*	LP	RCA VICTOR	ORTHO**
COLUMBIA*	LP	REMINGTON*	NAB
CONCERT HALL*	AES	RENAISSANCE	RIAA
COOK	AES	RIVESIDE	RIAA
CONTEMPORARY*	AES	ROMANY	RIAA
CORAL*	AES	SAVOY	RIAA
DECCA*	AES	STRADIVARI	LP
DIAL	LP	TEMPO	RIAA
ELEKTRA	NAB	URANIA*	LP
EMS*	AES	VANGUARD*	LP
EPIC*	LP	VOX*	LP
ESOTERIC	RIAA	WALDEN	RIAA
FESTIVAL	LP	WESTMINSTER	RIAA
FOLKWAYS	NAB		
GOOD TIME*	AES		
HANDEL SOCIETY	LP		
HAYDN SOCIETY*	LP		
HMV-AMER	AES		

* Beginning sometime in 1954 records made from new masters require RIAA equalization.

** The Ortho characteristic is identical to the RIAA.

ALIGNMENT INSTRUCTIONS: READ WITH EXTREME CARE BEFORE ATTEMPTING ALIGNMENT. To set pointer, turn the tuning capacitor fully closed and set pointer to last reference mark at low frequency end of dial. Use an insulated screwdriver for alignment adjustment.

STEPS	DUMMY ANTENNA	COUPLING	FREQUENCY	MODULATION	BAND SWITCH SETTING	DIAL POINTER SETTING	INDICATING METER	ADJUST	REMARKS
1	.01 mfd	Pin 7 (Grid) V7 (6BE6)	455 Kc	400 cps AM	AM	1000 Kc (Approx.)	AC Voltmeter to speaker output terminals and 16 ohm load	Z-5, Z-6 Top and Bottom	Adjust for maximum deflection
2	200 mmfd	AM Terminals on antenna strip	1400 Kc	"	AM	1400 Kc	"	C-1L, C-1J, C-1G	" "
3	"	"	600 Kc	"	AM	600 Kc	"	L-9, L-8	" "
4	Repeat steps 2 and 3								
5	—	To shield of V2 (6U8) Unground shield	10.7 Mc	None	FM	Point of no interference	DC VTVM to junction of R-29 and R-21	Z-1, Z-2, Z-3, Top and Bottom and Bottom of Z-4	Adjust for maximum negative voltage
6	—	"	"	None	FM	"	DC VTVM to junction of C-27 and R-24	Z-4 Top	Adjust for zero between positive and negative readings
7	270 ohm carbon resistor	FM Terminals on antenna strip	106 Mc	400 cps FM (22.5 KC deviation)	FM	106 Mc	DC VTVM to junction of R-29 and R-21	C-16	Adjust for maximum negative voltage
8	"	"	90 Mc	"	FM	90 Mc	"	L-6	" "
9	"	"	106 Mc	"	FM	106 Mc	"	C-7S & C-1B	" "
10	"	"	90 Mc	"	FM	90 Mc	"	L-4 & L-1	" "
11	Repeat steps 7 to 10 for proper dial calibration and maximum output.								

Resistance Reference Chart

SOCKET PINS

TUBE	1	2	3	4	5	6	7	8	9
V-1, 6BC8	2 Meg +	1.35 Meg	0	.1	.1	2 Meg +	1.35 Meg	0	0
V-2, 6U8	2 Meg +	1 Meg	2 Meg +	.05	0	2 Meg +	0	1.9	4.7K
V-3, 6BA6	560K	0	0	.05	2 Meg +	2 Meg +	68	—	—
V-4, 6AU6	147K	0	.05	0	2 Meg +	2 Meg +	68	—	—
V-5, 6AU6	0	0	.05	0	2 Meg +	2 Meg +	68* 320	—	—
V-6, 6BA6	2.95 Meg	0	.05	0	2 Meg +	2 Meg +	68	—	—
V-7, 6BE6	22K	0.5	.05	0	2 Meg +	2 Meg +	2.95 Meg	—	—
V-8, 12AX7	2 Meg +	390K	2.7K	30	18	2 Meg +	1 Meg	1.5K	20
V-9, 12AX7	2 Meg +	220K	1.5K	39	28	2 Meg +	1.25 Meg	47K	35
V-10. 5881	—	0	2 Meg +	2 Meg +	400K	2 Meg +	.05	0	—
V-11, 5881	66K	0	2 Meg +	2 Meg +	400K	2 Meg +	.05	0	—
V-12, 12AX7	2 Meg +	330K	2.7K	15	0	2 Meg +	2.2 Meg	2.7K	15
V-13, 5V4GA	—	—	2 Meg +	70	—	70	—	0	—
V-14, 6X4	47	2 Meg +	.05	0	—	50	2 Meg +	—	—

CAUTION: Be certain to disconnect AC line cord when making fhese measurements.

NOTES: Bandswitch in FM position except in AM when measuring V-6 and V-7. All resistances in ohms unless otherwise specified.

K equals 1,000 ohms.

Meg equals 1 megohm.

*Depends on setting of R-20.

Voltage Reference Chart

SOCKET PINS

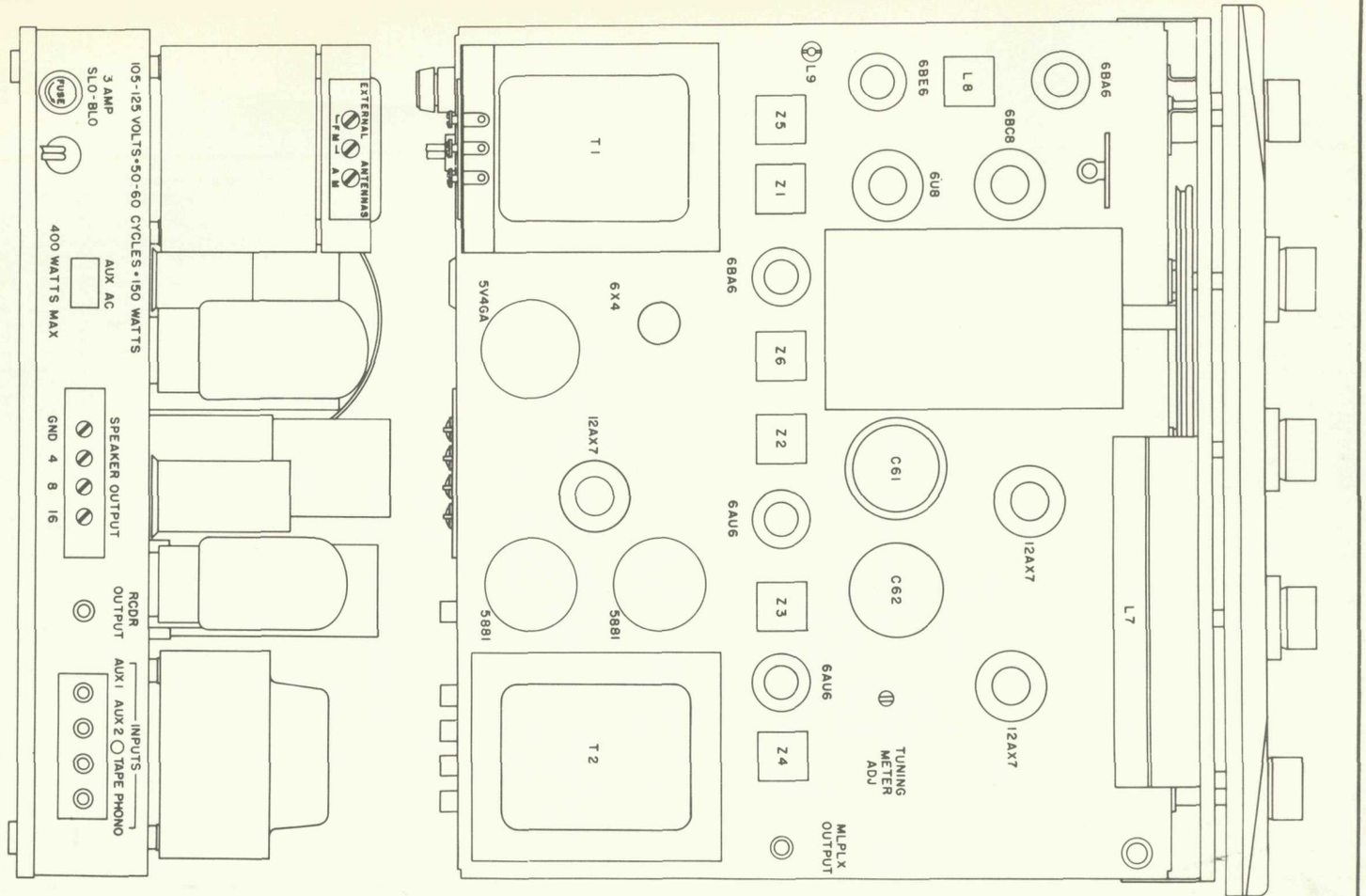
TUBE	1	2	3	4	5	6	7	8	9
V-1, 6BC8	86	—.95	0	6.3AC	0	112	—.9	0	0
V-2, 6U8	82	—2.8	96	6.3AC	0	96	0	0	—4.0
V-3, 6BA6	—.95	0	0	6.3AC	100	100	.7	—	—
V-4, 6AU6	—.2	0	6.3AC	0	94	94	.55	—	—
V-5, 6AU6	0	0	6.3AC	0	94	94	.6	—	—
V-6, 6BA6	—.5	0	6.3AC	0	98	98	.8	—	—
V-7, 6BE6	—12	0	6.3AC	0	100	100	—.5	—	—
V-8, 12AX7	250	0	2.4	—25	—12.5	215	0	1.75	18.8
V-9, 12AX7	150	0	1.25	—37.5	—25	250	75	83	31.3
V-10, 5881	0	0	395	400	—37.5	400	6.3AC	0	—
V-11, 5881	—37.5	0	395	400	—37.5	400	6.3AC	0	—
V-12, 12AX7	48	0	.4	—12.5	0	48	0	.4	6.25
V-13, 5V4GA	—	403	400	395AC	0	395AC	—	403	—
V-14, 6X4	205AC	0	6.3AC	0	—	205AC	145	—	—

NOTES: Line voltage set at 117 Volts, 60 Cycles. Voltage readings may vary 10% under normal operating conditions. Band switch at FM except in AM for V-6 and V-7.

Measurements taken with respect to chassis.

Readings are DC positive unless otherwise specified.

TUBE LAYOUT CHART — VIEW OF CHASSIS



NOTES

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