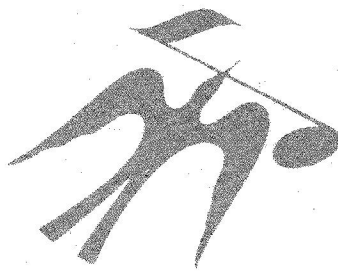
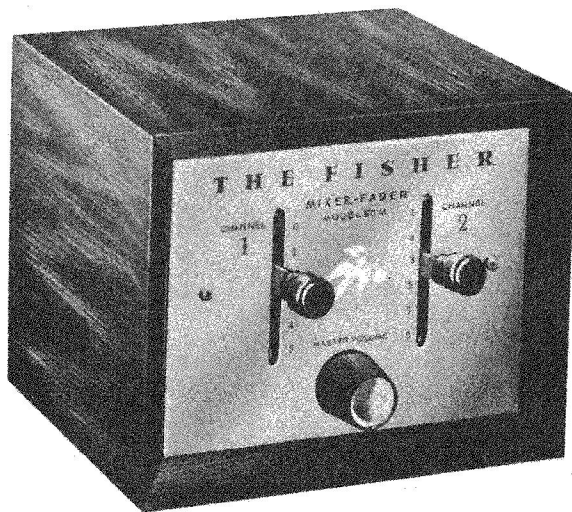


THE FISHER



MIXER-FADER

INSTALLATION AND
OPERATING INSTRUCTIONS



MODEL 50-M

PRICE: \$1.00

FISHER RADIO CORPORATION • NEW YORK

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GENERAL INFORMATION

THE FISHER Mixer-Fader offers facilities of professional quality for the blending of two signal sources. These signals can be of equal or different strength. Furthermore, the unique action of the two continuously variable channel controls makes it possible to use the Model 50-M for fading smoothly from one channel to the other without any switching noise or interruption of either signal. The Model 50-M is an all-electronic device and, therefore, avoids the inherent limitations of the non-electronic, passive-resistive mixers. Unlike the latter type, the Model 50-M has no insertion loss and, therefore, does not impair the signal-to-noise-and-hum ratio of the audio output. Those who use recorders (tape, wire or disc) will find that the Model 50-M is the equal of the costliest professional equipment in its capacity for smooth mixing and fading effects.

OUTSTANDING FEATURES

(1) Has no insertion loss. (2) Two high impedance inputs. (3) Low impedance, cathode-follower output. Output leads can be any length up to 200 feet. (4) Additional 10 db amplification available in the Model 50-M, if needed, by shorting out one resistor. (5) Extremely low distortion and low hum level. (6) Completely self-powered. (7) Housed in a strong, attractive, molded plastic cabinet.

THE FISHER Model 50-M can be used with any combination of radio-phonograph, phonograph, pre-amplifier, equalizer, recorder, public address system, and TV sound. Its quality is such that it can be used in broadcast stations and recording studios.

ELECTRICAL INSTALLATION

POWER REQUIREMENTS: 105-125 volts, 50-60 cycles AC. Power consumption approximately 5 watts. The ON-OFF switch is on the rear apron of the chassis.

The extreme flexibility and versatility of the Model 50-M Mixer-Fader makes the number of possible hook-ups virtually infinite. See FIGURE 1. When incorporating this unit in any system, a few general rules should be observed:

1. If both signal sources exceed 1/2 volt, both may be fed directly into the CH-1 and CH-2 inputs of the Model 50-M without modification. Signals even as high as 8 volts produce negligible distortion.
2. If both signals exceed 1/10 volt, but are less than 1/2 volt, make the simple modification as explained below in the paragraph: "HOW TO OBTAIN PRE-AMPLIFICATION."
3. If both signals are less than 1/10 volt, pre-amplify both signals sufficiently to meet the conditions of Rule 1 and feed the amplified signals into the Model 50-M as signal sources.
4. If one high-amplitude and one low-amplitude signal are to be mixed, pre-amplify the weaker of the two so as to raise its amplitude to that of the other and then proceed as in either Step 1 or 2 above.

All connections and interconnections should be made with single-wire shielded cable, of the type used with crystal microphones. Use RETMA-type phono plugs for connection to and from the Model 50-M (two of these plugs are supplied with the unit.) The two INPUTS, located on the rear apron of the chassis, are labeled CH-1 and CH-2. The single OUTPUT is so labeled and is located on the upper, rear surface of the chassis. If mixing of more than two signals is desired, additional 50-M units can be used.

Professional MIXER-FADER • Model 50-M

If desired, the unit may be attractively mounted in a wood panel, rather than left in its own plastic cabinet. To remove the chassis, first remove the two screws from the rear apron of the chassis. Next, remove the two brass screws which hold the front panel in place. The chassis may now be removed by pulling it forward. The cut-out in the wood panel should be made carefully, in accordance with the enclosed template.

HOW TO OBTAIN PRE-AMPLIFICATION

If both sources of audio signal require *pre-amplification*, as well as mixing or fading, THE FISHER Model 50-M can be easily modified to provide an additional 10 db of gain. After removing the chassis from its plastic cabinet, remove the two screws holding the bottom cover. Examination of the underside of the chassis will disclose a terminal strip on which is mounted an 8200 ohm resistor, color-coded grey, red, red, silver. Simply short out this resistor by soldering a piece of bare wire from one of its terminals to the other. Before replacing the bottom cover, make certain that the added wire shorts ONLY the two terminals of the resistor and makes NO contact with any other terminals or components.

OPERATING INSTRUCTIONS

After making all the electrical connections and the mechanical installation required, connect the line cord to an outlet supplying 105-125 volts, 50-60 cycles AC. Turn the ON-OFF switch to the ON position. A faint glow in the 12AX7 vacuum tube should be evident after a few seconds, by viewing the rear of the unit. Set the CHANNEL-1 lever all the way up, the CHANNEL-2 lever all the way down, and the MASTER VOLUME CONTROL fully counter-clockwise. Make certain that both signal sources are on, and operating properly. After allowing sufficient time for warm-up, depress the CHANNEL-1 lever to "5" and gradually rotate the MASTER VOLUME CONTROL until the signal of CHANNEL-1 is heard. Then by raising the lever of CHANNEL-2, the second signal source will "mix" with the first. It is suggested that if either signal source has a Level Set or a Volume Control, it should be set so as to provide optimum balance with the Model 50-M levers in their full-ON positions (corresponding to "5" on the front panel.) This will afford maximum range of mixing of both signals.

HOW TO USE THE MODEL 50-M AS A FADER

You will note that the action of the CHANNEL-1 lever and CHANNEL-2 lever are deliberately opposite. That is, *lowering* the CHANNEL-1 lever causes an increase in the volume of the CHANNEL-1 source, whereas *raising* the CHANNEL-2 lever causes an increase in the volume of its signal. Thus, if both levers are all the way up, the signal of CHANNEL-2 will be heard. By placing one finger of the hand on each lever and depressing BOTH simultaneously, the signal of CHANNEL-2 will gradually and uniformly fade out, while that of CHANNEL-1 will be heard to increase to maximum. Thus complete transition from one signal to another takes place by a single motion of the hand.

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.

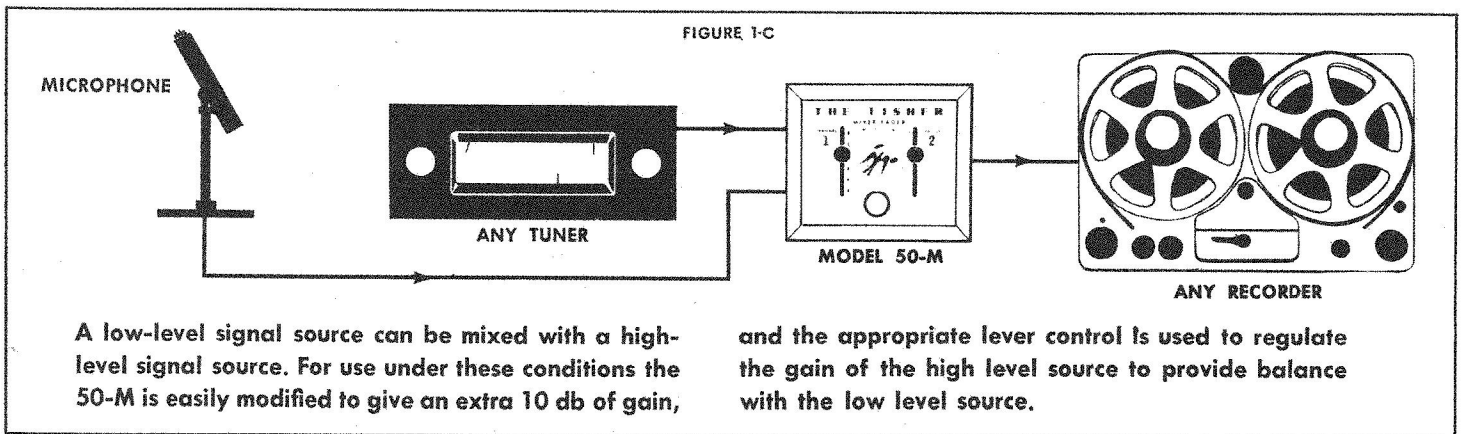
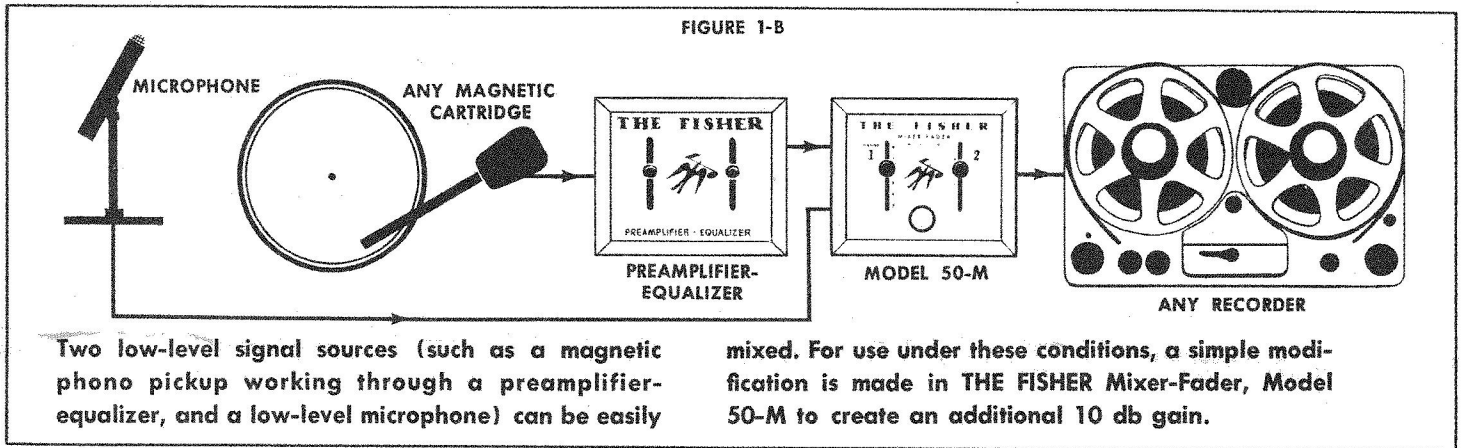
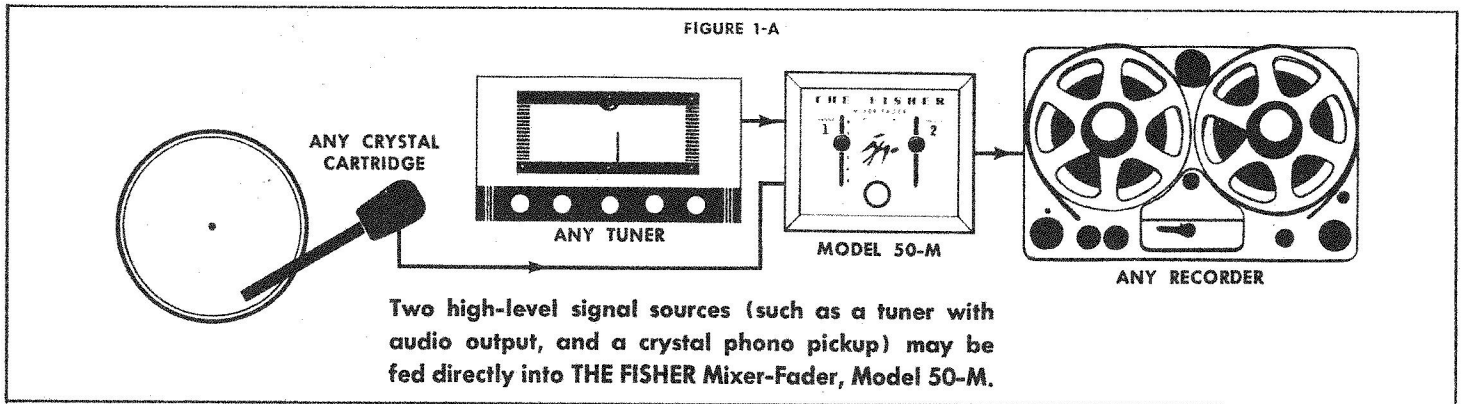
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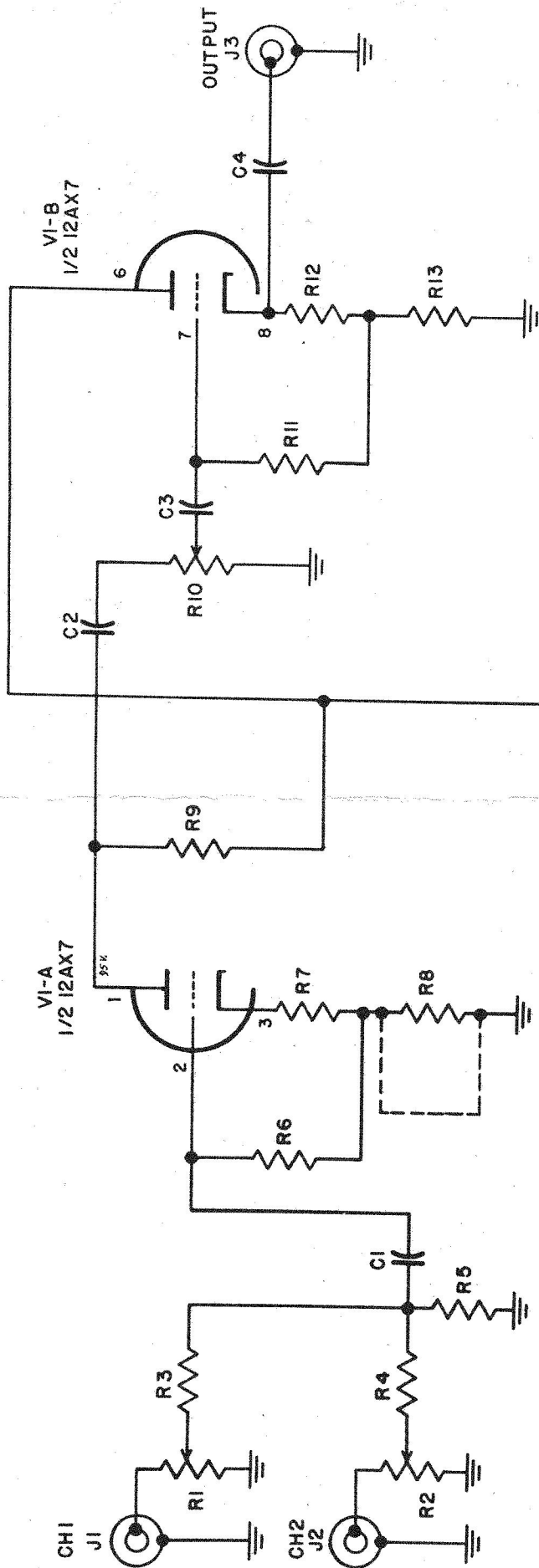
MIXER-FADER • Model 50-M

FIGURE 1. Several possible hook-ups using the Model 50-M



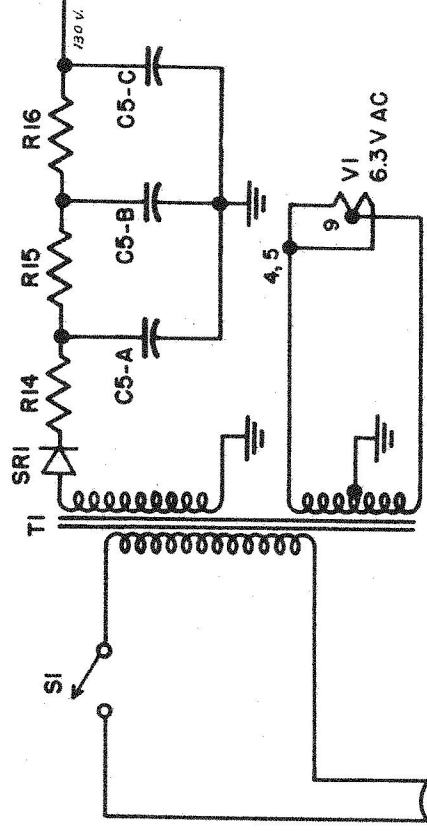
PARTS DESCRIPTION LIST

| SYMBOL | DESCRIPTION | PART NO. | SYMBOL | DESCRIPTION | PART NO. |
|---------------|---|-------------|------------|---------------------------------|-------------|
| C-1 | Capacitor: .01 mfd, 20%; 200 V | C-68P103M2 | R-8 | Resistor: 8200 ohms, 10%; ½ W | RC-20BF822K |
| C-2 | Capacitor: .022 mfd, 20%; 200 V | C-68P223M2 | R-9 | Resistor: 68,000 ohms, 10%; ½ W | RC-20BF683K |
| C-3 | Capacitor: .01 mfd, 20%; 200 V | C-68P103M2 | R-10 | Potentiometer: 1 megohm | R-50000-6 |
| C-4 | Capacitor: .1 mfd, 20%; 200 V | C-68P104M2 | R-11 | Resistor: 2.2 megohms, 10%; ½ W | RC-20BF225K |
| C-5A,-B,-C | Capacitor, Electrolytic: Section A and B 15 mfd, Section C 30 mfd, 150 V | C-515-122 | R-12 | Resistor: 2200 ohms, 10%, ½ W | RC-20BF222K |
| J-1, J-2, J-3 | Jack, Phono | J-3143 | R-13 | Resistor: 47,000 ohms, 10%; ½ W | RC-20BF473K |
| R-1, R-2 | Potentiometer: 500,000 ohms | R-521-115 | R-14 | Resistor: 4700 ohms, 10%; ½ W | RC-20BF472K |
| R-3, R-4 | Resistor: 330,000 ohms, 10%; ½ W | RC-20BF334K | R-15, R-16 | Resistor: 10,000 ohms, 10%; ½ W | RC-20BF103K |
| R-5 | Resistor: 120,000 ohms, 10%; ½ W | RC-20BF124K | S-1 | Switch, Slide: SPST | S-515-119 |
| R-6 | Resistor: 2.2 megohms, 10%; ½ W | RC-20BF225K | SR-1 | Selenium Rectifier | SR-50011-1 |
| R-7 | Resistor: 1500 ohms, 10%; ½ W | RC-20BF152K | T-1 | Transformer, Power | T-515-118 |



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- 105-125 VOLTS
 AC 50/60
 CYCLES
- NOTES:
1. R14 PRESENT IN SOME MODELS.
 2. SHORT OUT R8 FOR PREAMPLIFICATION