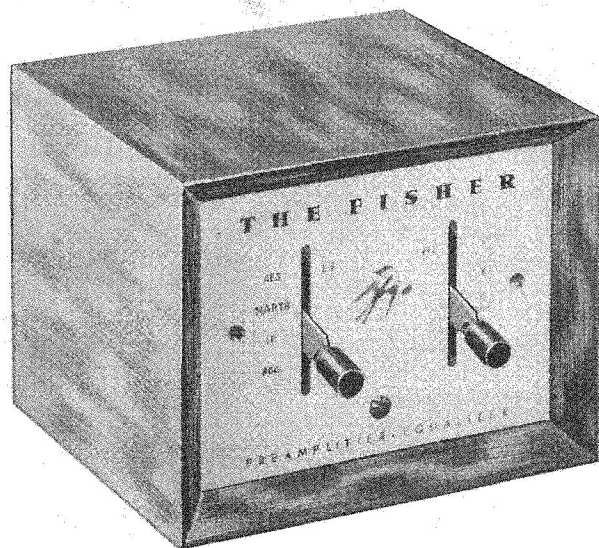




THE FISHER

PREAMPLIFIER-EQUALIZER

Model 50-PR



**INSTALLATION AND
OPERATING INSTRUCTIONS**

PRICE \$1.00

FISHER RADIO CORPORATION • NEW YORK

THE FISHER

PREAMPLIFIER-EQUALIZER • Model 50-PR

GENERAL INFORMATION

THE FISHER Preamplifier-Equalizer, Model 50-PR, has the voltage gain and equalization necessary to operate any low level magnetic cartridge in conjunction with a standard radio receiver or any audio amplifier. There are separate equalization settings for low frequency turnover and high frequency roll-off. Two independent, four-position lever switches offer sixteen combinations of equalization settings. A twin-triode tube, type 6SC7, is used as a two-stage amplifier. An unusually effective form of feedback produces the necessary low frequency equalization for various record turnover frequencies. The high frequency equalization has been designed to occur after preamplification, in order to obtain the best signal-to-noise ratio. A special circuit permits use of an exceptionally long output cable (up to 50 feet if desired.) The self-contained power supply furnishes the plate and filament voltages. Anti-vibration mounts isolate the 6SC7 tube, and minimize the possibility of microphonics. The ON-OFF switch is located on the rear apron of the chassis.

INSTALLATION

POWER REQUIREMENTS: 105-125 volts, 50-60 cycles AC. Power consumption is approximately 5 watts.

INPUT CONNECTIONS: Where THE FISHER Model 50-PR is to be used with low level magnetic phonograph cartridges having a uniform response over their entire frequency range, connection may be made directly from the cartridge to the INPUT of the Model 50-PR, using shielded cable. It should be noted, however, that some of the popular magnetic cartridges currently manufactured require compensation at high frequencies to smooth out their response. For this type of compensation, a resistor should be connected across the cartridge terminals at the INPUT jack. If one plans to use different types of cartridges interchangeably, the correct resistor should be connected across the cartridge terminals themselves so that the resistor remains with the particular cartridge when switching from one type to another. Suggested values of resistance for various cartridges are shown below. If the desired cartridge is not listed, check the manufacturer's specifications to determine the loading required for a "flat" response.

RECOMMENDED RESISTOR VALUES

Audak	— 47,000 ohms
Fairchild	— No Resistor
General Electric	— No Resistor
Pickering	— 27,000 ohms

Ordinarily, constant amplitude pickups cannot be used with a preamplifier designed for low-level, magnetic cartridges. However, the former (such as conventional crystal cartridges, frequency modulated cartridges, ceramic cartridges, etc.) can readily be adapted for use with THE FISHER Model 50-PR. The circuit to be added in series with these devices is shown in FIGURE 1. The resistor and capacitor used should be connected as closely to the Model 50-PR as possible and preferably shielded by mounting it in a suitable metal can. If this is inconvenient, insulate the components by means of electrical tape or plastic sleeving and wrap a strip of aluminum foil around the components, making certain that the foil is in good contact with the shielded braid of the extension cable. This network serves the dual purpose of converting the output of these constant amplitude devices to constant velocity, and reducing the amplitude to that required at the Model 50-PR INPUT.

OUTPUT CONNECTIONS: The Model 50-PR Preamplifier-Equalizer can be used with any amplifier having a level control

or with phonographs, radio-phonographs, tone control chassis, etc. When connecting the Model 50-PR to a receiver or amplifier previously equipped for use with a crystal cartridge, remove all components employed to compensate phonograph cartridge response. Connection from the OUTPUT jack should be made by means of a shielded cable using an RETMA type phono plug (one plug is supplied with each 50-PR.) When connecting the other end of the shielded cable to an amplifier or other equipment, make certain that the shielded braid of the cable is connected to the chassis of the equipment. See FIGURE 2 for INPUT and OUTPUT connections. The amplification of THE FISHER Model 50-PR is adequate for magnetic cartridges of extremely low level. As a result, some of the more popular "high level" magnetic pickups may require a lower setting of the level control of the associated amplifier than is convenient. Furthermore, if the level control of the associated equipment is located beyond the first stage of amplification, overload of the power amplifier may result. In these cases a resistive pad should be inserted at the INPUT of the Model 50-PR. Component values and circuit configuration are shown in FIGURE 3.

HUM BALANCE ADJUSTMENT: After installation, adjust R-15 (located at top, rear of chassis) for minimum hum.

SET UP AND OPERATING INSTRUCTIONS

In view of the many recording characteristics used by record manufacturers, both the bass and treble must be properly equalized to match the various recording techniques. Because of the physical limitations of record grooves, frequencies below approximately 500 cycles are recorded with gradually decreasing voltage amplitude as one approaches the lower frequencies. Conversely, in order to obtain the most favorable 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 varies considerably from one manufacturer to the next. THE FISHER Preamplifier-Equalizer offers a sufficient number of combinations of equalization to accommodate virtually every brand of record. Thus, knowing a given manufacturer's recording characteristics, the user can properly equalize for the particular recording, to achieve optimum balance. A table of recommended equalization settings for various record manufacturers is enclosed. Response curves corresponding to the settings of low frequency turnover and high frequency roll-off switches are shown in FIGURE 4.

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.

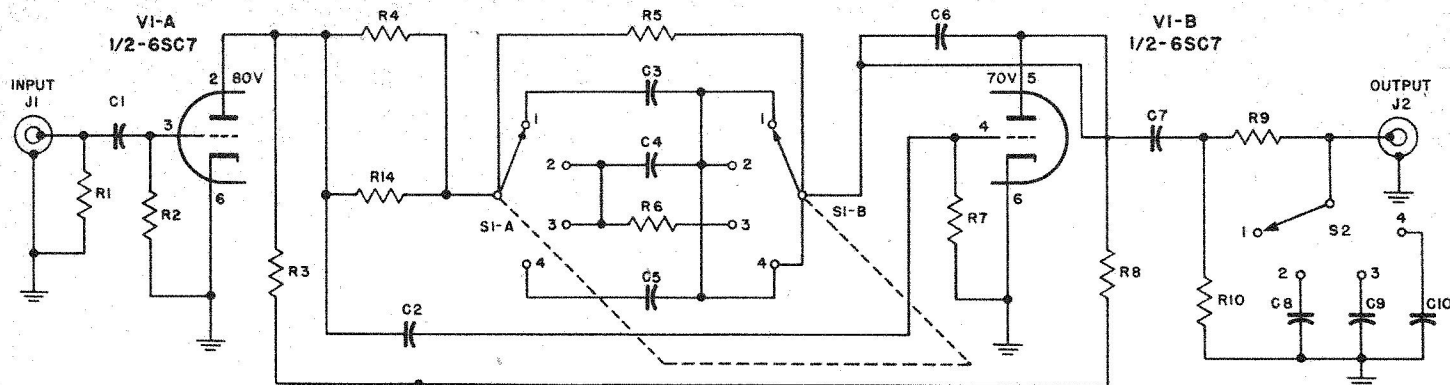
SPECIAL NOTE: To maintain your equipment at peak performance, may we suggest that you avail yourself of the facilities and factory trained personnel at our Service Department.

Address all *correspondence* to:

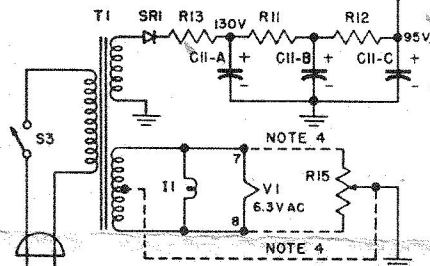
Fisher Radio Corporation
41 East 47th Street
New York 17, N. Y.

Address all *equipment* to:

Fisher Radio Service, Inc.
32-19 Borden Avenue
Long Island City 1, N. Y.



NOTE:
R13 AND R14 PRESENT
IN SOME MODELS



105-125 VOLTS AC 50/60 CYCLES

NOTES:

1. S1 SHOWN IN "AES" POSITION.
2. S2 SHOWN IN "0" POSITION.
3. VOLTAGES MEASURED WITH RESPECT TO CHASSIS. ELECTRONIC VOLTMETER. 117V LINE.
4. ALTERNATE CONNECTION PRESENT IN SOME MODELS

THE FISHER

PREAMPLIFIER-EQUALIZER • Model 50-PR SCHEMATIC DIAGRAM AND REPLACEMENT PARTS LIST

Symbol	Description	Part No.	Symbol	Description	Part No.
C-1	Capacitor: .047 mfd, 20% 200 V	C-68P473M2	R-4	Resistor: 120,000 ohms, 10%; 1/2 W	RC-20BF124K
C-2	Capacitor: .0047 mfd, +40, -20%; 200 V	C-68P472F2	R-5	Resistor: 22 megohms, 10%; 1/2 W	RC-20BF226K
C-3	Capacitor: .0036 mfd, 10%; 200 V	C-68P362K2	R-6	Resistor: 680,000 ohms, 10%; 1/2 W	RC-20BF684K
C-4	Capacitor: .0027 mfd, 10%; 200 V	C-68P272K2	R-7	Resistor: 22 megohms, 10%; 1/2 W	RC-20BF226K
C-5	Capacitor: .0015 mfd, 10%; 200 V	C-68P152K2	R-8	Resistor: 100,000 ohms, 10%; 1/2 W	RC-20BF104K
C-6, C-7	Capacitor: .1 mfd, 20% 200 V	C-68P104M2	R-9	Resistor: 10,000 ohms, 10%; 1/2 W	RC-20BF103K
C-8	Capacitor: .002 mfd, 10%; 200 V	C-68P202K2	R-10	Resistor: 2.2 megohms, 10%; 1/2 W	RC-20BF225K
C-9	Capacitor: .0026 mfd, 10%; 200 V	C-68P262K2	R-11, R-12	Resistor: 22,000 ohms, 10%; 1/2 W	RC-20BF228K
C-10	Capacitor: .0068 mfd, 10%; 200 V	C-68P682K2	R-13	Resistor: 4700 ohms, 10%; 1/2 W	RC-20BF472K
C-11A, -B, -C	Capacitor, Electrolytic: Section A and B 15 mfd; Section C 30 mfd, 150 V	C-815-122	R-14	Resistor: 1 megohm, 10%; 1/2 W	RC-20BF105K
I-1	Pilot Light: 6.3 V	I-50009-2	R-15	Potentiometer, Wirewound: 500 ohms, 20%; 1.5 W	R-516-128
J-1, J-2	Jack, Phone	J-3143	S-1, S-2	Switch, Lever	S-50605
R-1	Resistor: 470,000 ohms, 10%; 1/2 W	RC-20BF474K	S-3	Switch, Slide: SPST	S-515-119
R-2	Resistor: 22 megohms, 10%; 1/2 W	RC-20BF226K	SR-1	Selenium Rectifier	SR-50611-1
R-3	Resistor: 68,000 ohms, 10%; 1/2 W	RC-20BF683K	T-1	Transformer, Power	T-515-118

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EQUALIZATION CHARACTERISTICS

