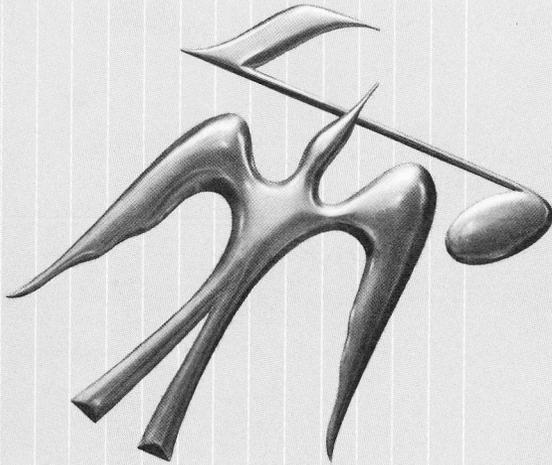


OPERATING INSTRUCTIONS AND WARRANTY



# THE FISHER

**Ambassador IV**

MODEL A-60

**Stereophonic Radio-Phonograph**

PRICE \$1.00

WORLD LEADER IN HIGH FIDELITY  
(c) [www.fisherconsoles.com](http://www.fisherconsoles.com)

# Congratulations!

WITH your purchase of a FISHER instrument you have completed a chain of events that began many months ago, in our research laboratories. For it is there that the basic concept of the equipment you have just acquired came into being—its appearance, its functions, its quality of performance, its convenience of use.

But the end step—your purchase—is merely a beginning. A door has now opened, for you and your family, on virtually unlimited years of musical enjoyment. Recognizing that one of the keys to pleasurable ownership is reliability, we have designed this instrument to give long and trouble-free service. In fact, instruments we made over twenty-five years ago are still in use today.

Remember always that we want this equipment to give you the best performance of which it is capable. Should you at any time need our assistance toward that objective, please write me personally.

## AN IMPORTANT SUGGESTION

Many hours have been spent by our engineers and technical writers to create this instruction book for your guidance and enjoyment. If you want the *most* out of your FISHER, there is only one way to obtain it. With the equipment before you, please read this booklet carefully. It will be time well spent!

*Avery Fisher* Founder and President

## Fisher Firsts - Milestones In the History of High Fidelity Reproduction

- |      |  |      |  |      |   |
|------|--|------|--|------|---|
| 1937 | First high-fidelity sound systems featuring a beam-power amplifier, inverse feedback, acoustic speaker compartments (infinite baffle and bass reflex) and magnetic cartridges. | 1954 | First moderately-priced, professional FM Tuner with TWO meters.                                  | 1960 | First to use MicroRay for FM tuning and as a Recording Audio Level Indicator.   |
| 1937 | First exclusively high fidelity TRF tuner, featuring broad-tuning 20,000 cycle fidelity.   | 1955 | First Peak Power Indicator in high fidelity.   | 1960 | First complete stereo FM-AM receiver with 60-watt power amplifier and new 7591 output tubes.  |
| 1937 | First two-unit high fidelity system with separate speaker enclosure.   | 1955 | First Master Audio Control Chassis with five-position mixing facilities.                         | 1960 | Smithsonian Institution, Washington, D.C., accepts for its collection America's first commercially manufactured high fidelity radio-phonograph, made by Avery Fisher in 1937. |
| 1938 | First coaxial speaker system.  | 1955 | First correctly equalized, direct tape-head master audio controls and self-powered preamplifier. | 1960 | First reverberation device, for use in high fidelity equipment — The Fisher Dynamic Spaceexpander.  |
| 1938 | First high fidelity tuner with amplified AVC.  | 1956 | First to use Power Monitor in a home amplifier.  | 1960 | First stereo tuner with MicroTune.  |
| 1939 | First 3-Way Speaker in a high fidelity system.   | 1956 | First All-Transistorized Preamplifier-Equalizer.   | 1960 | First FM tuner with six IF stages.  |
| 1939 | First Center-of-Channel Tuning indicator.  | 1956 | First dual dynamic limiters in an FM tuner for home use.   | 1960 | First FM tuner with five limiters.  |
| 1945 | First Preamplifier-Equalizer with selective phonograph equalization.   | 1956 | First Performance Monitor in a high quality amplifier for home use.                              | 1960 | First front panel antenna selector switch, 72-300 ohm, Local-Distant positions.   |
| 1948 | First Dynamic Range Expander with feedback.  | 1956 | First FM-AM tuner with TWO meters.   | 1961 | First Multiplex units with Stereo Beacon and automatic switching, mono to stereo.   |
| 1949 | First FM-AM Tuner with variable AFC.   | 1956 | First complete graphic response curve indicator for bass and treble.                             | 1961 | First complete receivers with Multiplex.  |
| 1952 | First 50-Watt, all-triode amplifier.   | 1957 | First Golden Cascode FM Tuner.   | 1961 | First FM-Stereo-Multiplex tuners with Stereo Beam.  |
| 1952 | First self-powered Master Audio Control.   | 1957 | First MicroRay Tuning Indicator.   | 1961 | First loudspeaker system with frameless woofer cone, eliminating all parasitic resonance.   |
| 1953 | First self-powered, electronic sharp-cut-off filter system for high fidelity use.  | 1958 | First Stereophonic Radio-Phonograph with Magnetic Stereo Cartridge.                              | 1961 | First internal switching system to permit immediate tape playback with use of all controls and switches.  |
| 1953 | First Universal Horn-Type Speaker Enclosure for any room location and any speaker.   | 1959 | First high-quality Stereo Remote Control System.   |      |   |
| 1953 | First FM-AM Receiver with a Cascode Front End.   | 1959 | First complete Stereophonic FM-AM Receiver (FM-AM tuner, audio control, 40-watt amplifier).      |      |   |
| 1954 | First low-cost electronic Mixer-Fader.   | 1959 | First high-compliance plus high-efficiency free-piston speaker system.                           |      |   |



## THE FISHER AMBASSADOR IV

MODEL A-60

**Stereophonic Radio-Phonograph**

ADVANCED ELECTRONIC ENGINEERING has been combined with old-world cabinet craftsmanship to create the new FISHER *Ambassador* — a musical instrument that meets the most exacting criteria. Each unit in the *Ambassador* has been designed to meet the laboratory standards that distinguish all FISHER components. The unusually sensitive tuning sections can be used separately for the reception of monophonic FM or AM broadcasts, or simultaneously to receive FM-AM stereophonic broadcasts. The renowned Garrard Automatic Turntable, containing a professional magnetic cartridge with a diamond stylus, will faithfully convey every musical nuance of your most treasured stereophonic or monophonic record selections. Located on the operating panel of the *Ambassador* are eight controls which will enable you to select any program source instantly, and adjust the volume and tonal characteristics of sound to your most critical listening tastes. Special connections are provided for the FISHER *Spacexpander* and the MPX-70 multiplex adaptor, and a new Automatic Shutoff switch has been included which will turn off the entire *Ambassador* automatically, after the last record has been played. Fifty watts of music power, free of all audible distortion, is supplied by a dual-channel Power Amplifier which can reproduce the most complex symphonic passage as easily as the softest notes of an oboe. Lastly, two acoustically-balanced speaker enclosures, each containing a three-way speaker system, provide the full orchestral sweep that only stereophonic sound makes possible.

Flawless circuitry, the use of costly, durable materials, and un-hurried manufacture — essential ingredients that are often lost in mass production — all of these will contribute to years of trouble-free operation and your greater listening pleasure. These are the qualities that have for over two decades won for the FISHER a world-wide reputation.

### A NOTE ON STEREOPHONIC SOUND

THE DEVELOPMENT of stereophonic sound has brought us close to achieving “Concert Hall” realism in the home. This dual-channel system offers a distinct advantage over monophonic (single-channel) systems by virtue of two important audio characteristics: the dimensions of *direction* and *depth*. These live sound qualities are for the most part missing in monophonic systems because recordings are made and reproduced over a single channel. This is somewhat analogous to listening to music with one ear. Stereophonic recording techniques, however, utilize two separate banks of microphones which are positioned in the left and right sections of the orchestra. In this arrangement, the microphones receive the musical sounds in much the same manner as the two ears of a listener. The sound picked up by each bank of microphones is then fed to independent channels and recorded on disks or tape, or transmitted over separate channels of a stereophonic broadcast.

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To reproduce a stereophonic recording or broadcast in the home, two separate sound channels are required. The stereophonic sound output of a record player, tape recorder or tuner is fed to two separate amplifier channels, which in turn drive two separate speaker systems. Thus, instruments located on the left and right sides of the orchestra are heard predominantly in the left and right speakers, respectively; while instruments located in the center appear to be heard mid-way between the two speaker systems. The result is a startling sense of *presence* heretofore realized only at a live orchestral performance.

### INSTALLING THE AMBASSADOR

**T**HE AMBASSADOR operates on *AC only*. Connect the power cable extending from the back of the cabinet to a wall outlet supplying 105 to 120 volts AC, at 50 to 60 cycles. Maximum power consumption is 165 watts. (Where line voltage is too high or too low, a step-down or step-up transformer will be necessary. For 50-cycle current, a special adaptor pulley is required for the Automatic Turntable. In each case, see your FISHER dealer.)

Note: We suggest you read the information in this booklet carefully. Proper installation together with a good knowledge of the controls are essential for deriving the fullest enjoyment from your FISHER.

#### The Automatic Turntable

During transit the Automatic Turntable is held in place by a large wooden retaining bracket. This bracket and its two mounting screws should be removed after the Ambassador has been placed in its final location. The small wooden blocks under the metal motor board can be removed by loosening the screws holding the Automatic Turntable to the wooden shelf. When this is done, the Automatic Turntable will ride freely on springs which act as shock absorbers. Depress each side of the Turntable to determine whether it rides freely on its spring mounts. If it does not move downward and back under hand pressure, consult your FISHER dealer.

To remove the V-Guard, simply grasp the "V" of the stylus assembly between the tips of the thumb and forefinger, pull gently to remove the stylus assembly. To replace the V-Guard, grasp the "V" of the stylus assembly with the stylus point down, and slip into the cavity as far as it will go.

### The Antennas

The *Ambassador* is equipped with two antennas, one to receive FM broadcasts and one for AM broadcasts. These should provide good reception in all cases except extreme fringe areas, or where special local conditions result in high signal loss. (Buildings constructed of steel girders, for example, can cause a loss of signal strength.) If reception is weak or poor, see the instructions on page 6 to rectify the condition.

## HOW TO USE THE CONTROLS

THE OPERATION OF ALL CONTROLS is explained in this section. Referring to Figure 1 while reading will be helpful. If you wish to connect additional components to the sound system of the *Ambassador*, such as a Tape Recorder, for example, full information is provided on page 5. Before attempting to operate the Automatic Turntable, read the instruction booklet accompanying this unit.

### AC and Volume

The AC Switch, which supplies power to the *Ambassador*, is combined with the Volume Control. Turning this switch slightly clockwise until it clicks, turns on the power and lights the dial scale. Note: Make certain automatic shutoff switch is in the off position.

The Volume Control is used to adjust the level of sound for both channels. Turning this control in a clockwise direction will increase the volume simultaneously at both speaker systems.

Note: Although only stereophonic programs require the use of two speaker systems to achieve the necessary sound separation, the two speaker systems of the *Ambassador* are in operation for monophonic programs as well. This use of both systems provides a superior monophonic effect.

### Selector Switch

This seven-position switch selects the program you wish to hear, whether a radio broadcast, a record selection, or some other program source you may have connected to the sound system of the *Ambassador*. The positions have the following functions:

**PHONO MONO:** Use this position to play regular LP or 45 RPM records on the Record Changer. The stereophonic cartridge in the Tone Arm will accommodate monophonic as well as stereophonic records. In addition, all verticle rumble and noise characteristics of LP monophonic records will be completely eliminated, resulting in superior monophonic sound.

NOTE: To play 78 RPM records, a special cartridge is required. You can obtain one from your FISHER dealer.

**PHONO STEREO:** Play all stereophonic records in this position.

**FM:** This position selects the FM tuner for reception of FM broadcasts.

**AM:** This position selects the AM Tuner for reception of AM broadcasts.

**FM-AM:** In this position both Tuners are selected for the reception of a stereophonic FM-AM broadcast. The FM sound will be heard on the left speaker system; the AM on the right. (Consult your newspaper for the station to which each Tuner must be set.)

**AUX MONO:** Use this position to select any additional *monophonic* component you may have connected to the *Ambassador*—a monophonic tape recorder, record turntable, etc.

**MPX STEREO:** This position is used for the reception of FM multiplex stereo programs with the addition of the FISHER MPX-70 adaptor. A stereo tape recorder or other stereo sound source may be played through the *Ambassador* if multiplex reception is not desired.

### FM and AM Tuning

The FM Tuning knob selects stations in the 87.5 to 108 megacycle band, while the AM Tuning knob selects stations in the 535 to 1620

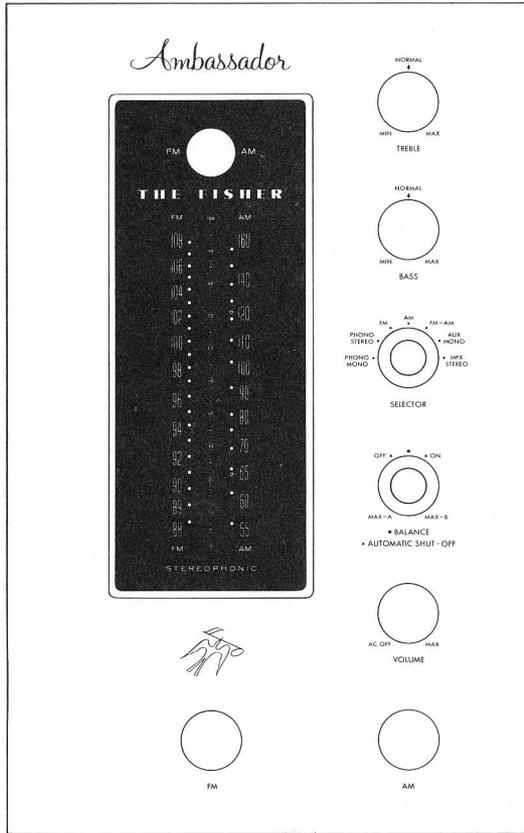


FIGURE 1. Front Panel Of The Ambassador.

kilocycle band. Turning either knob will move the corresponding pointer along the dial scale to the station you wish to bear. A *logging scale*, numbered 0 to 100, is included on the dial glass between the FM and AM scales. By using this scale as a reference, you can tune in your favorite stations more easily — the numerical order is linear, and the gradations are equal. As you tune in a station, the left (FM) or right (AM) portion of the dual-display Micro-Ray tuning indicator will close. Best reception is achieved by tuning until the dark band is narrowest. (On AM, the two bright sections may overlap somewhat on strong stations.)

### Bass and Treble Controls

These controls permit you to adjust the tonal qualities of sound to your personal listening requirements. The Bass Control varies the intensity of the low frequency bass tones, while the Treble Control varies the intensity of the high frequency treble tones. Each Control varies the tones for both channels simultaneously. To increase or decrease bass or treble intensity, turn these knobs toward MAX or MIN, as desired.

To listen to program material exactly as it originates from a broadcasting studio, set these controls to NORMAL. This is “flat” position, and is equivalent to RIAA equalization. If you leave these controls at NORMAL while playing an LP or stereophonic record, RIAA equalization will be provided automatically. (A Tape Recorder is provided with NARTB equalization within its own circuitry. Leaving the Bass and Treble Controls in NORMAL position will maintain this equalization.) It should be remembered, however, that these controls may be set to any position dictated by personal listening preferences.

### Balance Control

This control enables you to obtain equal sound levels from each speaker system. Balanced separation is important when you are listening to stereophonic program material, since each section of an orchestra must be heard in its true perspective; that is, neither section should come through any louder than it normally would in relation to the other.

With the Balance Control pointing to NORMAL, the volume at the left and right speaker systems should be the same. However, any slight imbalance that may exist — due to record characteristics, differences in room acoustics etc.—can be corrected with this control. Simply turn the knob slightly toward MAX-A or MAX-B to increase the volume at the left or right speaker systems, as required. You can also use this control when you are listening to monophonic program material, since both speaker systems are also in use. In this case, of course, balanced sound output is not very critical.

It should be pointed out that the Balance Control is *not* a volume control; for, as the level of sound is increased on one speaker system, it is decreased on the other, maintaining approximately the same overall sound output. (NOTE: You can cut off the sound at either loud-speaker system by moving the control to its extreme MAX-A or MAX-B position.)

### **Automatic Shutoff**

In order to use the automatic shutoff feature, the AC Power switch on the control panel must first be turned ON. Then by turning the Automatic Shutoff switch to ON, the entire *Ambassador* will be turned off after the last record has been played, and will be turned on again as soon as the Automatic Turntable is once more put in operation. This feature may be defeated by turning the switch to OFF. *Be sure to leave this switch OFF when not using the Automatic Turntable, or the Ambassador will be inoperative.*

## **CONNECTING ADDITIONAL COMPONENTS TO THE SOUND SYSTEM OF THE AMBASSADOR**

**I**N ADDITION TO LISTENING to radio broadcasts and playing the Automatic Turntable, you can connect other program sources to the sound system of the *Ambassador*. These can include the sound from your TV set, the FISHER *Spacexpander* and MPX-70 multiplex adaptor, or a

stereo tape recorder (if multiplex reception is not desired). The information that follows describes how to connect additional equipment, and also gives the necessary control settings for proper operation. The input and output jacks to which connections are made are located on the Tuner and Amplifier chassis, as illustrated in Figures 5 and 6.

### **Tape Recorder**

A monophonic tape recorder may be played through the *Ambassador* by connecting the recorder output to the AUX MONO jack on the Tuner-Control chassis. You can record a program from the *Ambassador* by connecting the tape recorder input jack to the Channel A or B RCRDR OUTPUT jack on the same chassis.

A stereo tape recorder may be used if the MPX-70 multiplex adaptor is not installed in your *Ambassador*. In this case, connect the MPX INPUT jacks on the *Ambassador* to the recorder outputs, and the RCRDR OUTPUT jacks on the *Ambassador* to the recorder inputs. Be sure you do not reverse the channels when making these connections. To play back your tapes through the sound system of the *Ambassador*, turn the Selector switch to MPX STEREO.

### **Multiplex Stereo**

FM multiplex is a new method of transmitting stereo broadcasts over a single FM station. In order to receive multiplex programs in stereo sound, the FISHER MPX-70 must be added to the *Ambassador*. Without the addition of the MPX-70, you will hear multiplex programs monophonically, just as ordinary FM broadcasts. To install the MPX-70, simply follow these four steps:

- 1 — Mount the MPX-70 with the four screws provided.
- 2 — Connect the MPX OUTPUT on the Tuner-Control chassis of the *Ambassador* (see Figure 5) to the INPUT jack of the MPX-70 with the three-foot cable supplied.
- 3 — Connect the Channel A and Channel B OUTPUT jacks of the MPX-70 to the corresponding MPX INPUT jacks on the Tuner-Control chassis of the *Ambassador*. Two cables are supplied for this purpose.

4—The power cable of the MPX-70 should be connected to the special MPX CONNECTOR jack on the Tuner chassis.

## TV Sound

Because television receivers differ widely in circuit design, it is advisable to consult your serviceman before attempting to connect the sound output of your TV set to the sound system of the *Ambassador*. However, once the method of connection has been determined, the cable from the TV set should be connected to the AUX MONO input jack on the side of the Tuner chassis. Set the Selector Switch to AUX MONO and adjust the audio controls as desired.

## WS-1 Speakers

Jacks are provided on the Amplifier chassis of the *Ambassador* for the connection of two FISHER WS-1 Speakers as adjuncts to the two speaker systems. With the addition of the WS-1 system, the stereophonic as well as monophonic sound pattern can be augmented to a startling degree. Simply connect the WS-1 cables to the WS-1 jacks. Place the speaker connected to the A jack on the left side of the room, and the speaker connected to the B jack on the right side of the room, (as viewed from the listening area.)

## Spacexpander

Special *Spacexpander* jacks are located on the Tuner-Control chassis for the connection of this revolutionary new reverberation device. Remove the jumper plugs before installing the *Spacexpander* and store in a safe place for possible future use. Then make the following connections:

- 1—TO REV OUT A jack on the *Ambassador* to the Channel A Output jack on the *Spacexpander*.
- 2—TO REV OUT B jack on the *Ambassador* to the Channel B Output jack on the *Spacexpander*.
- 3—TO REV IN A jack on the *Ambassador* to the Channel A Input jack on the *Spacexpander*.

4—TO REV IN B jack on the *Ambassador* to the Channel B Input jack on the *Spacexpander*.

NOTE: If the *Spacexpander* is not connected to these jacks, the jumper plugs must be inserted, or the *Ambassador* will be inoperative.

## THE FM AND AM ANTENNAS

SEPARATE FM AND AM ANTENNAS are supplied with the *Ambassador* for the two types of radio reception. These antennas should be adequate in all cases except extreme fringe area conditions. If reception is weak, the connection of a roof antenna may be necessary to increase the strength of the radio signals. The following information refers to the Antenna Terminal strip at the rear of the Tuner chassis (see Figure 5).

### FM Antenna

A folded dipole antenna for FM reception is stapled to the rear of the cabinet along the edges. The leads from this antenna are connected to FM Terminals 2 and 3. To increase signal strength, remove these two leads and connect the leads from a roof antenna in their place (see Fig. 2). Consult your serviceman about a proper FM antenna for your area.

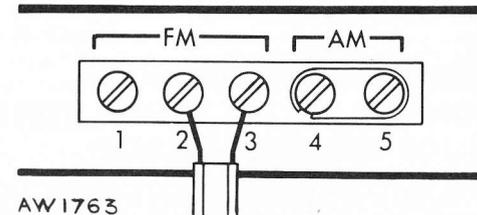
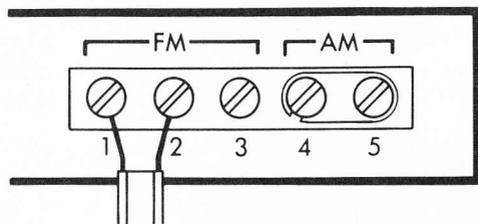
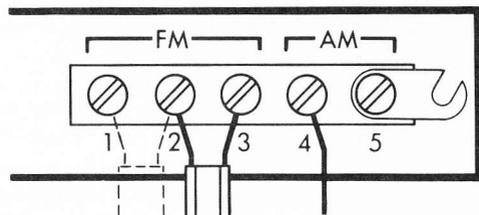


FIGURE 2. Antenna connections (dipole or roof type) for normal or fringe signal areas.



**FIGURE 3. FM Antenna connections for strong signal areas.**

NOTE: In areas where reception is too strong, the signal may overload the Tuner input circuit. To cut down on excessive signal strength, transfer the leads of the FM antenna to FM Terminals 1 and 2. (See Fig. 3.)



**FIGURE 4. AM Roof Antenna connections (link disconnected).**

### AM Antenna

The built-in Ferrite Loop Antenna that provides AM reception is connected to the AM Tuner when the metal link connects AM Terminals 4 and 5. If reception is weak on some stations because of fringe area conditions, a roof antenna will provide greater signal strength. Disconnect the link from Terminal 4 and connect the AM roof antenna to this terminal, as shown in Fig. 4.



## SERVICE NOTES

### Cleaning the Dial Glass

The dial glass can be removed for cleaning purposes by following these simple steps:

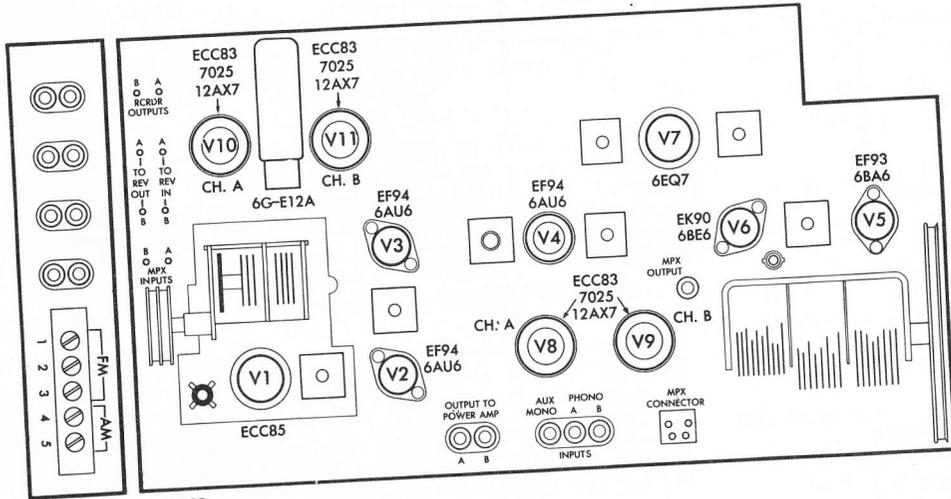
- 1 — Remove all of the control knobs from the front panel by pulling them up.
- 2 — Remove the screws from the wooden panel, then lift off the panel.
- 3 — Loosen the screws that retain the clips to the dial glass, swing the clips aside, then lift off the glass. (When you replace the dial glass, make certain it is set in the same position it occupied before removal.)
- 4 — Remove dust with a dry cloth. For more thorough cleaning, use a soap and water solution *only*. If you use any stronger cleaning agent, you may damage the markings on the glass.

### At Your Service

It is our continuing desire to have your FISHER instrument give you the best performance of which it is capable. 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, we would appreciate hearing from you on how it is meeting your requirements.

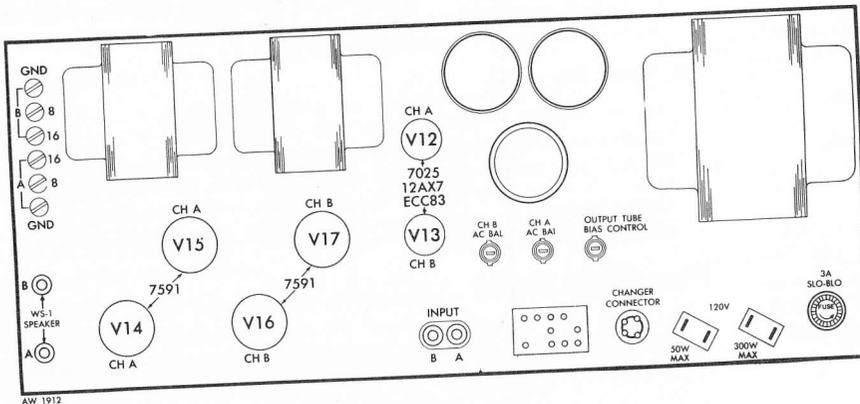
### Your Fisher Dealer

“We take care of our own.” Be sure to consult your FISHER dealer promptly if any defect is indicated. He stands ready to assist you at any time.



AW # 1905

FIGURE 5. Rear View Of The Tuner-Control Chassis.



AW 1912

N912-101

FIGURE 6. Top View Of The Power Amplifier Chassis.