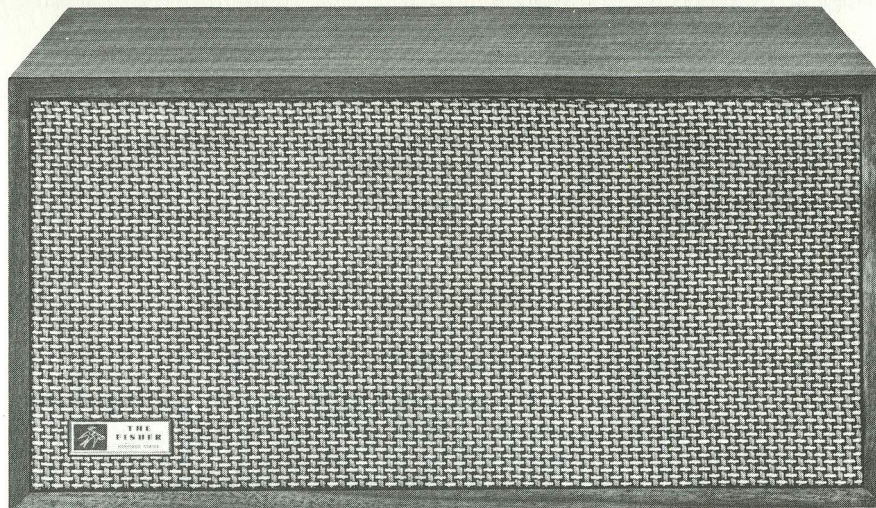


OPERATING INSTRUCTIONS AND WARRANTY



**THE FISHER<sup>®</sup>**

**XP-5**

**FREE-PISTON  
Speaker System**

**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-seven 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.

- |  |  |  |
|--|--|--|
| <b>1937</b> First high-fidelity sound systems featuring a beam-power amplifier, inverse feedback, acoustic speaker compartments (infinite baffle and bass reflex) and magnetic cartridges. | <b>1956</b> First dual dynamic limiters in an FM tuner for home use.   | <b>1961</b> First complete receivers with Multiplex.   |
| <b>1937</b> First exclusively high fidelity TRF tuner, featuring broad-tuning 20,000 cycle fidelity.   | <b>1956</b> First Performance Monitor in a high quality amplifier for home use.  | <b>1961</b> First FM-Stereo-Multiplex tuners with STEREO BEAM.   |
| <b>1937</b> First two-unit high fidelity system with separate speaker enclosure.   | <b>1956</b> First FM-AM tuner with TWO meters.   | <b>1961</b> First loudspeaker system with frameless woofer cone, eliminating all parasitic resonance.  |
| <b>1938</b> First coaxial speaker system.  | <b>1956</b> First complete graphic response curve indicator for bass and treble.   | <b>1961</b> First internal switching system to permit immediate tape playback with use of all controls and switches.   |
| <b>1938</b> First high fidelity tuner with amplified AVC.  | <b>1957</b> First Golden Cascade FM Tuner.   | <b>1962</b> First simplified-operation Control-Amplifier, with infrequently used controls behind a front-panel cover, yet immediately accessible.            |
| <b>1939</b> First 3-Way Speaker in a high fidelity system.   | <b>1957</b> First MicroRay Tuning Indicator.   | <b>1962</b> First loudspeaker with eddy-current-damped voice coil.   |
| <b>1939</b> First Center-of-Channel Tuning Indicator.  | <b>1958</b> First Stereophonic Radio-Phonograph with Magnetic Stereo Cartridge.  | <b>1962</b> First bass speaker with combined serrated-aluminum and fiber cone.   |
| <b>1945</b> First Preamplifier-Equalizer with selective phonograph equalization.   | <b>1959</b> First high-quality Stereo Remote Control System.   | <b>1962</b> First FM Tuner Kit with separate d'Arsonval meter for tuning and separate cathode ray stereo broadcast indicator (STEREO BEAM).                  |
| <b>1948</b> First Dynamic Range Expander with feedback.  | <b>1959</b> First complete Stereophonic FM-AM Receiver (FM-AM tuner, audio control, 40-watt amplifier).  | <b>1962</b> First Stereophonic FM Tuner with TUNE-O-MATIC Motor Tuning.  |
| <b>1949</b> First FM-AM Tuner with variable AFC.   | <b>1959</b> First high-compliance plus high-efficiency free-piston speaker system.   | <b>1962</b> First Supersonic Wireless Remote Control in a high fidelity component.   |
| <b>1952</b> First 50-Watt, all triode amplifier.   | <b>1960</b> First to use MicroRay for FM tuning and as a Recording Audio Level Indicator.  | <b>1963</b> First to use 8417 tubes with unique cavity-anode design.   |
| <b>1952</b> First self-powered Master Audio Control.   | <b>1960</b> First complete stereo FM-AM receiver with 60-watt power amplifier and new 7591 output tubes.   | <b>1963</b> First power amplifier to use oscilloscope-type, frequency compensated input circuit.   |
| <b>1953</b> First self-powered electronic, sharp-cut-off filter system for high fidelity use.  | <b>1960</b> Smithsonian Institution, Washington, D.C. accepts for its collection America's first commercially manufactured high fidelity radio-phonograph, made by Avery Fisher in 1937. | <b>1963</b> First amplifier kit with STRATABALANCE, visual dynamic balancing system.   |
| <b>1953</b> First Universal Horn-Type Speaker Enclosure for any room location and any speaker.   | <b>1960</b> First reverberation device, for use in high fidelity equipment—The Fisher Dynamic Spaceexpander.   | <b>1964</b> First multiplex adaptor with 'flywheel synchronization.' Closely approaches theoretical limit of noise rejection, and of all spurious responses. |
| <b>1953</b> First FM-AM Receiver with a Cascade Front End.   | <b>1960</b> First stereo tuner with MicroTune.   | <b>1964</b> First AFC with strong locking on weak signals, with no pull-in from adjacent strong signals.   |
| <b>1954</b> First low-cost electronic Mixer-Fader.   | <b>1960</b> First FM tuner with six IF stages.   |  |
| <b>1954</b> First moderately-priced, professional FM Tuner with TWO meters.  | <b>1960</b> First FM tuner with five limiters.   |  |
| <b>1955</b> First Peak Power Indicator in high fidelity.   | <b>1960</b> First front panel antenna selector switch, 72-300 ohm, Local-Distant positions.  |  |
| <b>1955</b> First Master Audio Control Chassis with five-position mixing facilities.   | <b>1960</b> First Multiplex units with STEREO BEACON and automatic switching, mono to stereo.  |  |
| <b>1955</b> First correctly equalized, direct tape-head master audio controls and self-powered preamplifier.   |  |  |
| <b>1956</b> First to use Power Monitor in a home amplifier.  |  |  |
| <b>1956</b> First All-Transistorized Preamplifier-Equalizer.   |  |  |



## THE FISHER XP-5

FREE-PISTON

### Speaker System

**T**HE XP-5 FREE-PISTON Speaker System is the result of a major advance in the electro-acoustic field by Fisher Engineering Laboratories. Using specially-developed transducers, which incorporate the latest advances in the state of the art, the XP-5 combines high performance with extremely compact size.

Here is a speaker system whose quality can only be compared to that of more costly speaker systems, far larger in size. The characteristic FISHER sound — extreme clarity, precise reproduction of transients, and complete lack of coloration — is immediately apparent to the listener. *Though the enclosure volume is just over one cubic foot, this unparalleled performance is faultlessly maintained from the low bass notes to the highest audible overtones of the concert violin.* Both transducers are accurately matched for overall smoothness of response.

Bass and mid-frequencies are reproduced by an eight-inch free-piston woofer, with a long-throw voice coil and an extremely compliant inverted half-roll surround. New cone material, and the use of a special chemical treatment for both cone and surround result in a woofer with a 25 cps free-air resonance, by far the lowest yet attained in a transducer of this size. These factors, combined with an exceptionally rigid cone, and an enclosure of veneered, high-density flakeboard, give the XP-5 its exceptional low-frequency response, free from distortion and

cabinet resonance. There is no 'artificial' sound, since the excellent low-frequency response of the woofer, which extends (*without doubling*) to 38 cps, is achieved without resorting to response-shaping networks. Mid-frequency performance is also superb, enhanced by an Acoustiglas-filled enclosure, which prevents internal reflections, and provides a high degree of damping.

High-frequency performance of the XP-5 is no less spectacular. Here, the system employs a 2½-inch, wide-dispersion, cone-type tweeter. Because of its low-mass cone, the system achieves excellent transient response, up to the limits of audibility. The cone is a combination of a fibrous material and a special polyurethane foam, thus preventing distortion due to cone resonance and breakup, while providing outstandingly smooth reproduction of highs. A crossover network utilizing components of the highest quality, completes the system.

The XP-5 is suitable for mounting in every location — even where space is limited. It may be placed on a shelf or table, or hung on the wall, with no degradation in performance. While placing it near or against a wall will enhance bass response, corner placement is not necessary.

The excellence of design which FISHER products incorporate is matched only by the painstaking attention given to every detail in



assembly. This care throughout every stage of production — a hallmark of FISHER quality for over a quarter-century — assures that your XP-5 will perform as well as its laboratory prototype. Your XP-5 was carefully assembled, inspected and reinspected, before receiving the FISHER name.

We are confident that your appreciation of the XP-5 will actually grow with time, as your speaker system handles each musical assignment with the utmost ease and realism.

## Speaker Placement

Your XP-5 can be used in either the vertical or horizontal position. Placing it in one position or the other will not affect the quality of sound reproduction. When using two XP-5's in the horizontal position (with the longest dimension parallel to the floor), place the speakers so that the ends of the enclosures nearest the FISHER nameplate are a maximum distance apart. This will assure maximum apparent stereo separation. Normally, it is best to position the speaker system so that the end of the cabinet nearest the nameplate is at ear level.

*Note:* The FISHER nameplate is oriented at the factory for horizontal placement of the speaker. Should you wish to place the speaker vertically, you may reorient the nameplate, if desired. The procedure requires a certain amount of manual dexterity. Be careful when changing the nameplate position — avoid using excessive pressure or sharply-pointed tools to loosen the nameplate. Gently pull the nameplate away from the cabinet until it is about 1/16-inch away from the grille cloth. Turn the nameplate to reorient it as desired, and push it into contact with the grille cloth again.

## Speaker Connection

Your XP-5 has a nominal impedance of eight ohms. To connect it to your amplifier, use ordinary lamp cord or heavy-duty antenna twin-lead, for distances of up to 50 feet. Heavier wire should be used for greater distances, to prevent losses in the cable. Connect the XP-5 to the 8-ohm speaker terminals on your amplifier. There is no harm in connecting the speaker to the 4- or 16-ohm terminals, if 8-ohm

terminals are not available. No more than a half-inch of insulation should be removed from either end of the speaker cable, since any greater amount of exposed wire would be likely to cause shorts, at either the amplifier or speaker terminals. Twist the exposed strands of wire tightly, so that the wire ends become easy to handle, and good contact can be maintained. If the wiring is tacked to the wall or baseboard, care should be taken that the wires are not cut or shorted when fastened.

If you install a pair of XP-5 speaker systems for stereo, care must be taken to phase the speakers properly. To do this, connect the lead from the COM terminal of each speaker to the COM (or GND) terminal of the amplifier. In order to simplify connection, we suggest that you use wire which enables easy lead identification, such as a type with a ridge on one side of the insulation, or a colored thread under the insulation of one lead.

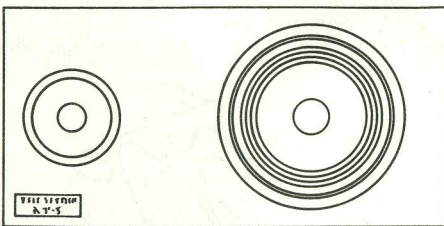
*Note:* If you are using two different types of amplifier in your stereo system, you should experiment by reversing the leads to one of the XP-5's. You will notice a substantial improvement in bass response when the two speakers are correctly phased.

## For Stereo . . .

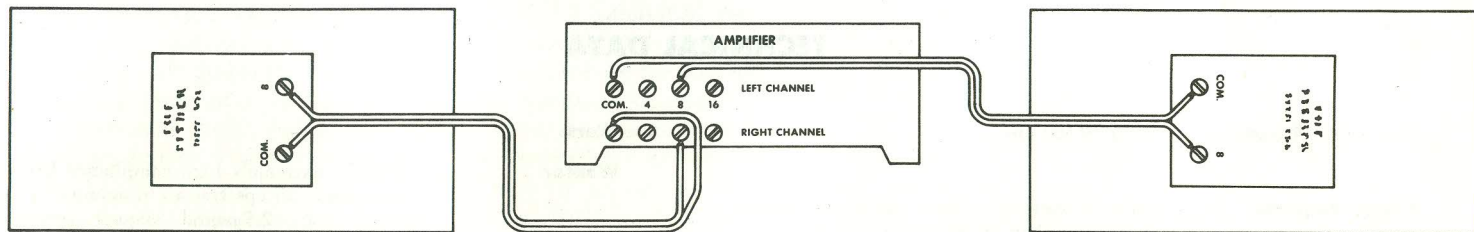
We recommend that you try several locations before deciding on a permanent arrangement. The bass response of the XP-5 will be greatly enhanced by placing it against a wall, but it does not require corner placement. No large objects should be allowed to intrude between the speakers and the listening area. The speakers should not be placed on the floor, to prevent absorption of high frequencies by carpeting and to place them near ear-level for best listening results.

Experimentation is especially important in the placement of stereo speaker systems. Although no definite rule can be given, it has been found that the distance between the stereo speakers should be about two-thirds of the distance separating the speakers from the main listening area. For example, if the speakers are six feet apart, listening will be best from six to nine feet in front of them. However, because of varying acoustic conditions or available space limitations, you may find that unorthodox placement of the speakers yields improved results.





THE FISHER XP-5



CONNECTION OF A PAIR OF XP-5 SPEAKERS TO A STEREOHONIC AMPLIFIER

## At your service

It is our desire that your FISHER operates to your complete satisfaction. We solicit your correspondence on any special problems that may arise. Because of our long experience in the art and science of speaker manufacture, we are confident that your XP-5 will give you many years of pleasurable, trouble-free operation. Should some defect

become apparent in your system, keep in mind that the speaker is *almost never* a source of audible distortion and noise, since it serves only to convert the electrical signal from the amplifier into sound energy.

## Your FISHER dealer

Be sure to consult your FISHER dealer promptly if any defect seems indicated. He stands ready to assist you at any time.



## TECHNICAL DATA

<b>Frequency Response</b>	38 to 18,500 cps.
<b>Power Required</b>	Only 10 watts to achieve full room volume (can safely handle 30 watts).
<b>Impedance</b>	8 ohms.
<b>Crossover Frequency</b>	2,000 cps; 12db/octave rolloff.

### Speakers:

#### Woofers

8-inch; extremely high compliance half-roll surround; 25 cps free-air resonance; 1-inch voice coil; 2.5-pound magnet structure; 12,500 gauss flux density.

#### Tweeter

2½-inch; wide dispersion cone type.

#### Dimensions

10" x 20" x 9" deep.

#### Weight

15 pounds.





## THE MAN BEHIND THE PRODUCT

**AVERY FISHER**  
Founder and President,  
Fisher Radio Corporation

Twenty-seven years ago, Avery Fisher introduced America's first high fidelity radio-phonograph. That instrument attained instant recognition, for it opened a new era in the faithful reproduction of records and broadcasts. Some of its features were so basic that they are used in all high fidelity equipment to this day. One of these models is now in the permanent collection of the Smithsonian Institution as an example of the earliest high fidelity instruments commercially available in this country.

The engineering achievements of Avery Fisher and the world-wide reputation of his products have been the subject of descriptive and biographical articles in Fortune, Time, Pageant, The New York Times, Life, Coronet, High Fidelity, Esquire, The Atlantic, and other publications. Benefit concerts for the National Symphony Orchestra in Washington and the Philadelphia Orchestra, demonstrating recording techniques, and the great advances in the art of music reproduction, used FISHER high fidelity instruments both for recording and playback, to the enthralled audiences. FISHER equipment formed the key part of the high fidelity demonstration at the American National Exposition in Moscow, July 1959. FISHER FM and FM-AM tuners are the most widely used by broadcast stations for monitoring and relay work, and by research organizations—under conditions where absolute reliability and maximum sensitivity are a 'must.'

The FISHER instrument you have just purchased was designed to give you many years of pride and enjoyment. If you should desire information or assistance on the installation or performance of your FISHER, please write directly to Avery Fisher, President, Fisher Radio Corporation, Long Island City 1, New York.

## **WARRANTY TO OWNER**

The warranty on a product fully reflects the confidence of its maker on the validity of the design, and the quality of materials and workmanship that go into that product. The truest index to the reliability of the FISHER instrument you have just purchased will be found in the unique FISHER warranty:

This equipment is unconditionally guaranteed against all defects in materials and workmanship. Speakers and speaker systems are guaranteed for one year. There will be no charge for warranty labor on all factory-wired speakers during the first ninety days. Parts replacement and labor, under the above warranty, will be supplied by the dealer from whom the purchase was made. To protect your warranty, and to register your ownership, please be sure to mail this card within 10 days from date of purchase.

**FOR WARRANTY SERVICE, CONSULT YOUR DEALER**