

XP-5
FREE-PISTON
Speaker System

WORLD LEADER IN HIGH FIDELITY



## CONGRATULATIONS

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

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

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

### AN IMPORTANT SUGGESTION

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

# tury true Founder and President

# FISHER FIRSTS - Milestones in the History of High Fidelity Reproduction

1901	First All-Transistorized Preamplifier-Equalizer.	1956
1001	_	1056
1960	mixing facilities.  First correctly equalized, direct tape-head master	1955
1960		1955
1960	First Peak Power Indicator in high fidelity.	1955
1960	First moderately-priced, professional FM Tuner with	1954
		1954
	First FM-AM Receiver with a Cascode Front End.	1953
1960	First Universal Horn-Type Speaker Enclosure for any	1953
1960		1953
	10	1952
1960		1952
	First FM-AM Tuner with variable AFC.	1949
1959	First Dynamic Range Expander with feedback.	1948
1909		1945
1959	-	1939
0	First 3-Way Speaker in a high fidelity system.	1939
1958	First high fidelity tuner with amplified AVC.	1938
1957	First coaxial speaker system.	1938
1957	speaker enclosure.	
	First two-unit high fidelity system with separate	1937
1956	broad-tuning 20,000 cycle fidelity.	
1956	First exclusively high fidelity TRF tuner, featuring	1937
	magnetic cartridges.	
1956	compartments (infinite baffle and bass reflex) and	
	power amplifier, inverse feedback, acoustic speaker	
1956	First high-fidelity sound systems featuring a beam-	1937

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DD First FM tuner with six IF stages. DD First FM tuner with five limiters. DD First front panel antenna selector softm. Local-Distant positions. DD First Multiplex units with STEREO automatic switching, mono to stereo.	ufactured high fidelity radio-phonograph, made by Avery Fisher in 1937.  Avery Fisher in 1937.  50 First reverberation device, for use in high fidelity equipment—The Fisher Dynamic Spacexpander.  50 First stereo tuner with MicroTune.	the first complete steroe FM-AM receiver with 60-watt power amplifier and new 7591 output tubes. Smithsonian Institution, Washington, D.C. accepts Smithsonian Institution, Washington, D.C. accepts to the collection Americally man-	First high-compliance plus high-efficiency free- piston speaker system. OF First to use MicroRay for FM tuning and as a Record- ing Audio Level Indicator	Stereo Cartinge.  9 First high-quality Stereo Remote Control System.  9 First complete Stereophonic FM-AM Receiver (FM-AM tuner, audio control, 40-watt amplifier).	pass and trebue. 7 First Golden Cascode FM Tuner. 17 First MicroRay Tuning Indicator. 18 First Stereophonic Radio-Phonograph with Magnetic	<ul> <li>First Performance Monitor in a high quality ampli- fier for home use.</li> <li>First FM.AM tuner with TWO meters.</li> <li>First complete graphic response curve indicator for</li> </ul>	6 First dual dynamic limiters in an FM tuner for home
FM tuner with six IF stages. FM tuner with five limiters. FM tuner with five limiters. FM tuner with five limiters. FM tuner with six IF stages front panel antenna selector switch, 72-300 local-Distant positions. Local-Distant positions. Multiplex units with STEREO BEACON and latic switching, mono to stereo.	io-phonograph, made by 1963 for use in high fidelity 1963 namic Spacexpander. 1963 oTune.			mote Control System. ic FM-AM Receiver (FM- 1962 -watt amplifier).			in an FM tuner for home 1961
namic balancing system.  First multiplex adaptor with 'flywheel synchroniz tion.' Closely approaches theoretical limit of nois rejection, and of all spurious responses.  First AFC with strong locking on weak signals, with no pull-in from adjacent strong signals.		Motor Tuning.  First Supersonic Wireless Remote Control in a hig fidelity component.	First FM Tuner Kit with separate d'Arsonval meto for tuning and separate cathode ray stereo broad cast indicator (STEREO BEAM).	First loudspeaker with eddy-current-damped voic coil. First bass speaker with combined serrated-alum num and fiber cone.	switches.  First simplified-operation Control-Amplifier, with inference of the frequently used controls behind a front-panel cove yet immediately accessible.	First loudspeaker system with frameless work first loudspeaker system with frameless work cone, eliminating all parasitic resonance.  First internal switching system to permit immed ate tape playback with use of all controls an	First complete receivers with Multiplex.

formance with extremely compact size. latest advances in the state of the art, the XP-5 tories. Using specially developed transducers, whi THE XP-5 FREE-PISTON Speaker System is the advance in the electro-acoustic field by Fisher E

sients, and complete lack of coloration - is immed transducers are accurately matched for overall smoo the listener. Though the enclosure volume is just o that of more costly speaker systems, far larger in s bass notes to the highest audible overtones of the c this unparallelled performance is faultlessly mainto istic FISHER sound - extreme clarity, precise rep Here is a speaker system whose quality can on

cone, and an enclosure of veneered, high-density fl a 25 cps free air resonance, by far the lowest yet woofer, with a long-throw voice coil and an extre ducer of this size. These factors, combined with an chemical treatment for both cone and surround resu XP-5 its exceptional low-frequency response, free t verted half-roll surround. New cone material, and t Bass and mid-frequencies are reproduced by an eigen

lat we want this equipment to give you e of which it is capable. Should you at assistance toward that objective, please

### MPORTANT SUGGESTION

ant the most out of your FISHER, there is in it. With the equipment before you, please s instruction book for your guidance and en spent by our engineers and technical refully. It will be time well spent!



## h Fidelity Reproduction

1961 1961 JII- 1961

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First complete receivers with Multiplex.

I First FM-Stereo-Multiplex tuners with STEREO BEAM.

I First loudspeaker system with frameless woofer cone, eliminating all parastic resonance.

I First internal switching system to permit immediate tape playback with use of all controls and switches.

First simplified-operation Control-Amplifier, with infrequently used controls behind a front-panel cover, yet immediately accessible. 1962

bass speaker with combined serrated-alumiand fiber cone. 1962 1962

First FM Tuner Kit with separate d'Arsonval meter for tuning and separate cathode ray stereo broadcast indicator (STEREO BEAM). Stereophonic FM Tuner with TUNE-0-MATIC 1962 1962

fidelity component. First to use 8417 tubes with unique cavity-anode First Supersonic Wireless Remote Control in a high 1962 1963

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quency compensated input circuit. First amplifier kit with STRATABALANCE, visual dynamic balancing system. First power amplifier to use oscilloscope-type, fre-963 963

First multiplex adaptor with 'flywheel synchroniza-tion.' Closely approaches theoretical limit of noise rejection, and of all spurious responses. First AFC with strong looking on weak signals, with no pull-in from adjacent strong signals. 1964 1964

2-300

and

formance with extremely compact size.

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

#### THE FISHER XP-5

FREE-PISTON

Speaker System

THE 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 per-

Here is a speaker system whose quality can only be compared to sients, and complete lack of coloration - is immediately apparent to the listener. Though the enclosure volume is just over one cubic foot, that of more costly speaker systems, far larger in size. The characteristic FISHER sound - extreme clarity, precise reproduction of tranthis unparallelled 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.

cabinet resonance. There is no 'artificial' sound, since the excellent low-frequency response of the woofer, which extends (without doubling) Mid-frequency performance is also superb, enhanced by an Acoustiglasto 38 cps, is achieved without resorting to response-shaping networks. 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, response, up to the limits of audibility. The cone is a combination of a ingly smooth reproduction of highs. A crossover network utilizing the system employs a 21/2-inch, wide-dispersion, cone-type tweeter. Because of its low-mass cone, the system achieves excellent transient fibrous material and a special polyurethane foam, thus preventing distortion due to cone resonance and breakup, while providing outstand-

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 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 twinlead, 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.

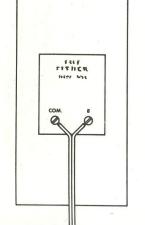
If you install a pair of XP-5 speaker systems for stereo, care must be taken to phase the speakers properly. To do this, connect the lead from the COM terminal of each speaker to the COM (or GND) terminal of the amplifier. In order to simplify connection, we suggest that you use wire which enables easy 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.



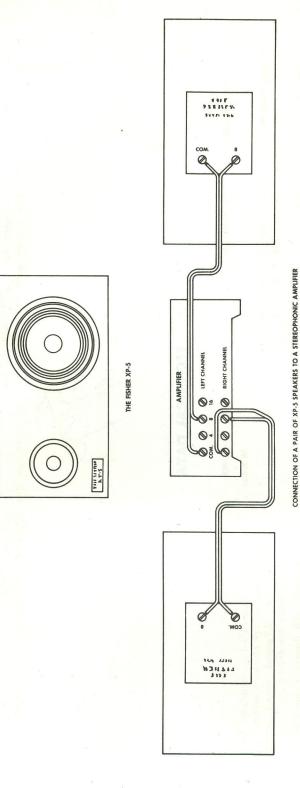
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#### At your service

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

Crossover Frequency		Impedance		Frequency Response	
2,000 cps; 12db/octave rolloff.	8 ohms.		(can safely handle 30 watts).	38 to 18,500 cps.	
Weight	Dimensions	Tweeter		Woofer	Speakers:
15 pounds.	10" x 20" x 9" deep.	2½-inch; wide dispersion cone type.	voice coil; 2.5-pound magnet structure; 12,500 gauss flux density.	8-inch; extremely high compliance half-roll	

WARRANTY TO

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The warranty on a product fully reflect maker on the validity of the design, and and workmanship that go into that proto the reliability of the FISHER instruction that of the reliability of the unique FISHER instructions.

This equipment is unconditionally guarents in materials and workmanship. systems are guaranteed for one year. for warranty labor on all factory-wire first ninety days. Parts replacement above warranty, will be supplied by the purchase was made. To protect your vyour ownership, please be sure to mail from date of purchase.

FOR WARRANTY SERVICE, CONS

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18,500 cp	watts
18	10
to	ıly

Woofer

Speakers:

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can safely handle 30 watts).

,000 cps; 12db/octave rolloff.

ohms.

surround; 25 cps free-air resonance; 1-inch voice coil; 2.5-pound magnet structure; 12,500 gauss flux density.

8-inch; extremely high compliance half-roll

21/2-inch; wide dispersion cone type.

Tweeter

10" x 20" x 9" deep.

Dimensions

Weight

15 pounds.

P 12123

# WARRANTY TO OWNER

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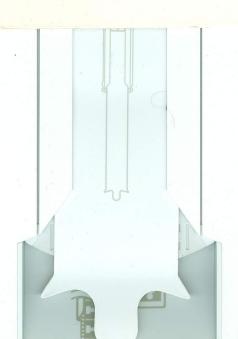
The warranty on a product fully reflects the confidence of its maker on the validity of the design, and the quality of materials and workmanship that go into that product. The truest index to the reliability of the FISHER instrument you have just purchased will be found in the unique FISHER warranty:

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

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#### At your service

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# THE MAN BEHIND THE PRODUCT

**AVERY FISHER** 

Founder and President, Fisher Radio Corporation

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 Twenty-seven years ago, Avery Fisher introduced America's first high fidelity 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.'

Only 10 watts to achie

Power Required

38 to 18,500 cps.

Frequency Response

(can safely handle 30

8 ohms.

Impedance

2,000 cps; 12db/octave

**Crossover Frequency** 

N1196-102

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.