

THE FISHER[®]

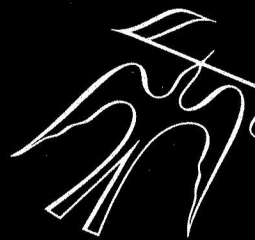
ALLEGRO II

MODEL A-190

Stereophonic Radio-Phonograph

WORLD LEADER IN HIGH FIDELITY

PRICE \$100



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.

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| <p>1937 First high-fidelity sound systems featuring a beam-power amplifier, inverse feedback, acoustic speaker compartments (infinite baffle and bass reflex) and magnetic cartridges.</p> <p>1937 First exclusively high fidelity TRF tuner, featuring broad-tuning 20,000 cycle fidelity.</p> <p>1937 First two-unit high fidelity system with separate speaker enclosure.</p> <p>1938 First coaxial speaker system.</p> <p>1938 First high fidelity tuner with amplified AVC.</p> <p>1939 First 3-Way Speaker in a high fidelity system.</p> <p>1939 First Center-of-Channel Tuning Indicator.</p> <p>1945 First Preamplifier-Equalizer with selective phonograph equalization.</p> <p>1948 First Dynamic Range Expander with feedback.</p> <p>1949 First FM-AM Tuner with variable AFC.</p> <p>1952 First 50-Watt, all triode amplifier.</p> <p>1952 First self-powered Master Audio Control.</p> <p>1953 First self-powered electronic, sharp-cut-off filter system for high fidelity use.</p> <p>1953 First Universal Horn-Type Speaker Enclosure for any room location and any speaker.</p> <p>1953 First FM-AM Receiver with a Cascade Front End.</p> <p>1954 First low-cost electronic Mixer-Fader.</p> <p>1954 First moderately-priced, professional FM Tuner with TWO meters.</p> <p>1955 First Peak Power Indicator in high fidelity.</p> <p>1955 First Master Audio Control Chassis with five-position mixing facilities.</p> <p>1955 First correctly equalized, direct tape-head master</p> | <p>1956 First dual dynamic limiters in an FM tuner for home use.</p> <p>1956 First Performance Monitor in a high quality amplifier for home use.</p> <p>1956 First FM-AM tuner with TWO meters.</p> <p>1956 First complete graphic response curve indicator for bass and treble.</p> <p>1957 First Golden Cascade FM Tuner.</p> <p>1957 First MicroRay Tuning Indicator.</p> <p>1958 First Stereophonic Radio-Phonograph with Magnetic Stereo Cartridge.</p> <p>1959 First high-quality Stereo Remote Control System.</p> <p>1959 First complete Stereophonic FM-AM Receiver (FM-AM tuner, audio control, 40-watt amplifier).</p> <p>1959 First high-compliance plus high-efficiency free-piston speaker system.</p> <p>1960 First to use MicroRay for FM tuning and as a Recording Audio Level Indicator.</p> <p>1960 First complete stereo FM-AM receiver with 60-watt power amplifier and new 7591 output tubes.</p> <p>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.</p> <p>1960 First reverberation device, for use in high fidelity equipment—The Fisher Dynamic Spacechanger.</p> <p>1960 First stereo tuner with MicroTune.</p> <p>1960 First FM tuner with six IF stages.</p> <p>1960 First FM tuner with five limiters.</p> <p>1960 First front panel antenna selector switch, 72-300</p> | <p>1961 First complete receivers with Multiplex.</p> <p>1961 First FM-Stereo-Multiplex tuners with STEREO BEAM.</p> <p>1961 First loudspeaker system with frameless woofer cone, eliminating all parasitic resonance.</p> <p>1961 First internal switching system to permit immediate tape playback with use of all controls and switches.</p> <p>1962 First simplified-operation Control-Amplifier, with infrequently used controls behind a front-panel cover, yet immediately accessible.</p> <p>1962 First loudspeaker with eddy-current-damped voice coil.</p> <p>1962 First bass speaker with combined serrated-aluminum and fiber cone.</p> <p>1962 First FM Tuner Kit with separate d'Arsonval meter for tuning and separate cathode ray stereo broadcast indicator (STEREO BEAM).</p> <p>1962 First Stereophonic FM Tuner with TUNE-O-MATIC Motor Tuning.</p> <p>1962 First Supersonic Wireless Remote Control in a high fidelity component.</p> <p>1963 First to use 8417 tubes with unique cavity-anode design.</p> <p>1963 First power amplifier to use oscilloscope-type, frequency compensated input circuit.</p> <p>1963 First amplifier kit with STRATABALANCE, visual dynamic balancing system.</p> <p>1964 First multiplex adaptor with 'flywheel' synchronization. Closely approaches theoretical limit of noise</p> |
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THE FISHER ALLEGRO

MODEL A-190

Stereophonic Radio-Phonograph

BY PURCHASING THE FISHER *Allegro*, you have joined a select group of discerning music lovers who demand the highest standards of reliability and performance in their home music reproducing equipment. The FISHER *Allegro* has been designed by the same world-renowned engineering facilities which have created professional equipment now used in laboratories, government agencies and broadcast stations throughout the nation and abroad. Fisher equipment can also be found in the homes of many leaders in all walks of life, including many celebrities from the world of music.

The *Allegro* possesses many of the features found in the larger, more elaborate Fisher units. It incorporates a versatile, yet convenient set of audio controls, including Volume, Balance and separate Bass and Treble controls. A convenient front-panel jack for listening with earphones is also included and a special speaker silencing switch allows you to enjoy music without disturbing others or being distracted by them. Full facilities for connecting a tape recorder or the sound system of your TV set are provided. Behind the elegantly styled front panel are many unseen, but important, features of high quality design, such as the use of separate push-pull output stages for each channel, using a newly developed, beam-power, dual pentode. Moderate and carefully controlled use of feedback reduces distortion to the vanishing point.

The record player is the world-renowned Garrard four-speed changer which intermixes all standard size records. It includes a wide-range cartridge with a diamond stylus for your stereophonic and monophonic long-playing records.

The *Allegro* includes a superb Fisher FM tuner with a built-in multiplex converter for reception of stereophonic FM programs. Fisher tuners are famous throughout the world as the finest instruments ever developed for the reception of radio programs, and the tuner included in this *Allegro* console is fully representative of the design principles and careful construction that have created that reputation.

A total of four speakers (two for each channel) are used to reproduce the entire audible spectrum with an amazing degree of realism. Each speaker system consists of two speakers, an eight-inch, specially-designed low-resonance woofer for the bass and mid-range frequencies, and a cone-type tweeter for the upper mid-range and treble tones housed in a fully sealed enclosure. Together these speakers recreate the entire audible spectrum from below 50 cycles to the highest frequencies that the human ear can detect.

The characteristics of the individual components of your *Allegro* were carefully matched to produce a totally integrated sound system. (The amplifier, for example, was specifically designed to complement

dominate over the other any more than it did during the original performance. Normally, this control will be in the center, or **NORMAL** position, although small variations to either side are to be expected because of differences in room acoustics or imbalance in the program material. Turning the control past the **NORMAL** position toward **R** will increase the volume of the right speaker relative to the left; turning it toward **L** will increase the left speaker volume over the right.

Bass and Treble Controls

The Bass control increases or decreases the amount of bass tones heard in the sound output. With the Bass control in the **NORMAL** position, the bass tones will sound exactly as they were recorded at the program source. If you wish to increase the bass emphasis because of a bass deficiency in the record, tape or radio broadcast you have selected, simply turn the Bass control clockwise. To decrease the prominence of the bass tones, turn the Bass control counterclockwise.

The Treble controls adjust the intensity of the Treble tone heard in the sound output. As with the Bass control, the **NORMAL** position will result in the same degree of treble tone as exists in the program source. The relative amount of treble tone can be increased, resulting in a more brilliant and crisp sound, by turning the Treble control clockwise; and it can be decreased, resulting in a more mellow and intimate tone, by turning the control counterclockwise.

Selector

PHONO: Selects the Record Changer for playing of all monophonic and stereophonic records. (See the paragraph following on the Automatic Shut-Off feature.)

FM: This position selects the tuner for listening to all monophonic or stereophonic FM programs.

AUX: Selects an additional component, such as a tape recorder, connected to the **AUX** jacks on the rear of the *Allegro*. (See page 7.)

Automatic Shut-Off

When the Selector switch is turned to the **PHONO** position, the entire *Allegro*, including the tuner, will be turned off when the

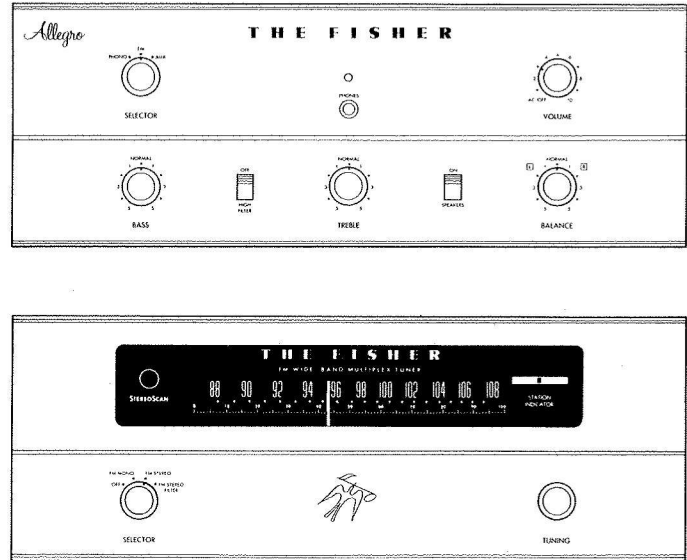


FIGURE 1. Control Panel of the Allegro

Record Changer automatically shuts off after the last record has been played. This special feature permits you to leave the *Allegro* unattended when playing records.

High Filter

The High Filter is a sharp cut-off circuit designed to remove annoying record scratch, hiss and other high frequency noise without dulling the treble portion of the musical program. It may also be used to eliminate noise on multiplex programs from very weak stations.

Speakers Switch and Earphones Jack

The Speakers switch is designed to silence the two speaker systems of your *Allegro*, so that you can listen to a program with earphones, without disturbing others in the same room, and without being distracted by external noises. The Earphones jack will accommodate any standard stereo earphones plug. In order to prevent overloading, and possible damage to the earphones, we recommend that you do not leave them plugged in when not using them and that you turn the Volume control to a relatively low level before connecting the earphones. Be sure to leave the Speakers switch in the ON position for normal listening through the two speaker systems.

TUNER

Selector

OFF: Turns off the tuner only. The dial lights will remain ON as an indication that power is still applied to the amplifier.

FM MONO: This position should be used for reception of all monophonic FM programs. It can also be used to eliminate excessive noise on multiplex stereo programs from very weak stations. The monophonic signal will be heard through both speakers.

FM STEREO: Use this position to listen to multiplex programs in

full stereo sound. Return the Selector to the FM MONO position for monophonic programs.

FM STEREO FILTER: Use this position for listening to a *stereophonic* program when background hiss from a weak station interferes with the program being broadcast. If the noise is not reduced sufficiently, try the High Filter on the Amplifier Control Panel. If this does not result in a significant reduction in the noise level, turn the Selector to the FM MONO position for monophonic reception of the stereo program. The FM STEREO FILTER position should be used only during multiplex stereo broadcasts. Leaving the Selector in this position during monophonic programs will cause an unnecessary increase in the level of background noise.

Tuning

The TUNING knob is used to select the desired FM-Broadcast station. A logging scale (0 to 100) is included to make it easy to find your favorite station.

TUNING INDICATOR: When a station is being tuned in, watch the tuning indicator. Slowly rotate the knob to the position where the two bars of light are closest together. This is the center-of-channel tuning point that gives the clearest, noise-free, reception.

STEREO SCAN: When you tune to a station that is broadcasting a multiplex stereo program, this indicator will go on. If the station changes to a monophonic program the light will go off. When the indicator is lighted the SELECTOR switch on the tuner should be turned to the FM STEREO position.

RECORD CHANGER OPERATION

Disengage the arm from the holding clip before attempting to play a record. Before swinging the record changer compartment up, to its closed position, be sure to press the tone arm down firmly on the mounting post. Records should not be left on the turntable when the record-changer compartment is closed. For detailed information concerning the operation of your record changer, read the instructions on the turntable.

SPEAKERS

The two speaker systems of your *Allegro* can be detached and placed up to 10 feet from the main cabinet. To do this, simply lift the speaker door directly upward. The hinges separate with only a moderate amount of upward pressure; do not try to force them apart. Two 10-foot cables are provided with phono jacks on each end. One end of this cable should be inserted in the receptacle on the bottom hinge of the speaker cabinet; the other end of the cable should be connected to the SPEAKER jack on the rear of the *Allegro*. Two such jacks are provided, one for the left speaker and one for the right speaker. The speakers should be placed against or close to a wall for best results. For the best stereo perspective, the two speakers should be equidistant from the listening area. Placing them too far apart will result in an unnatural, exaggerated channel separation and will cause a "hole-in-the-middle" of the stereophonic sound pattern.

ADDING AUXILIARY COMPONENTS

Tape Recorder

Tape recorders can be connected to record from and to play back through the *Allegro*. To make a recording from the *Allegro*, connect the two tape recorder inputs to the two RCRDR output jacks on the rear of the *Allegro*. While making a recording, you can adjust all of the controls on the control panel of the *Allegro* without affecting the recording. The Selector switch should be set at PHONO to make a tape recording of a record, or FM to record an FM radio broadcast. To play back a previously recorded tape through the *Allegro*, connect the outputs of your tape recorder to the AUX input jacks on the rear of the *Allegro*. These tape recorder outputs should be preamplifier outputs and not the direct output from a playback head or the type intended for direct connection of a loudspeaker. To play back your tape, turn the Selector to AUX.

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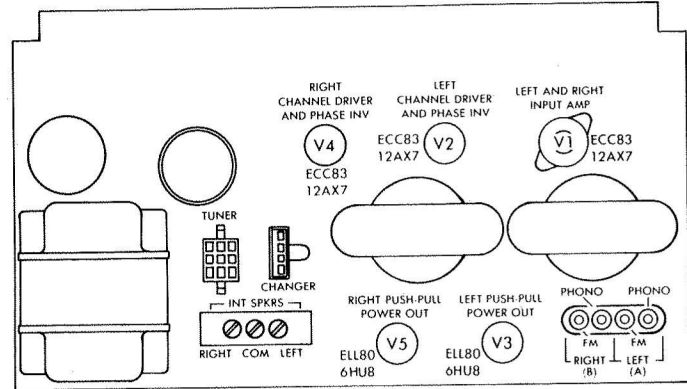


FIGURE 2. Tube layout of the amplifier

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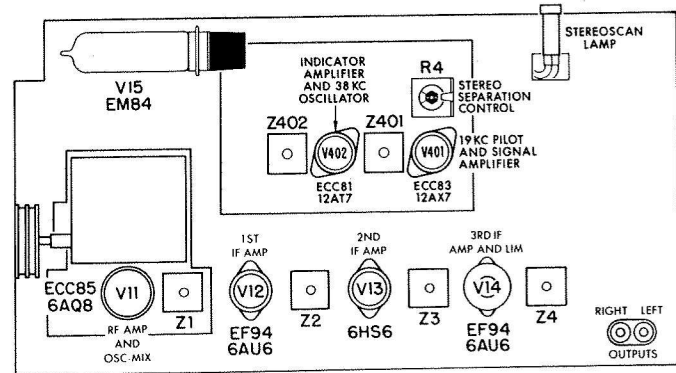


FIGURE 3. Tube layout of the tuner

IN518B

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An external tuner can be connected to the AUX jacks on the rear of the *Allegro*. A monophonic tuner with a single output, should be connected to both AUX jacks through a "Y" connector, available from your dealer or any electronics supply store.

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 *Allegro*. However, once the method of connection has been determined, the cable from the TV set should be connected to the AUX jacks through a "Y" connector, available from your dealer.

WS-1 Speakers

WS-1 Speakers may be added to the *Allegro* if the main speakers are not detached. The WS-1 speakers should be connected to the LEFT and RIGHT SPEAKER jacks on the rear of the cabinet. The speaker to the left as viewed from the listening area should be connected to the LEFT SPEAKER jack. Clip the wire loops on the rear of the WS-1 speakers for best results.

External Antenna

The built-in antenna of your *Allegro* is of the folded dipole type and should provide good reception in most areas. The extra requirements of the multiplex stereo system, however, sometimes make it necessary to use an outdoor directional yagi antenna for proper reception of stereo programs even though monophonic programs from the same station are received perfectly. If you happen to live in such a stereo fringe area, consult your Fisher Dealer concerning the addition of an external antenna.

To connect an external antenna to the *Allegro* once the antenna is installed, remove the back panel. In the upper left corner of the

tuner chassis you will find two screw terminals marked FM ANT 300 OHMS. Disconnect the two leads from the built-in antenna and connect the external antenna leads. When replacing the back cover make sure that the antenna wire is threaded through the slot at the edge of the back cover. Then carefully fit together the two mating parts of the power interlock and press the back cover into place.

SERVICE NOTES

Replacing the Dial Lamps and Power Light

AMPLIFIER: The red power lamp can be replaced by removing the rear cover of the *Allegro*. This cover is provided with an interlock which disconnects the power when the cover is detached. With the rear panel removed, the power lamp can be removed by reaching through the amplifier compartment, pressing the bulb into its socket slightly and turning counterclockwise. Replace with a No. 1847 bulb. When replacing the rear cover, position the two sections of the power interlock before pressing the cover into place. Do not use excessive pressure.

TUNER: The lamps which illuminate the tuner dial can also be replaced from the rear by removing the rear cover. The bulbs are mounted in two bracket assemblies, one on each end of the dial. These bracket assemblies must be detached from the front panel before the bulb can be removed. To do this, press together the two metal strips and pull gently toward the rear of the cabinet. Be careful not to pull too hard on the wires connected to the bracket assembly. Once the assembly has been detached, the bulb can be removed by pressing inward slightly and turning counterclockwise. Replace with a No. 1847 bulb. When replacing the rear cover, position the two sections of the power interlock before pressing the cover into place. Do not use excessive pressure.

Replacing the Phono Stylus Assembly

The stylus assembly included with your Record Changer uses a diamond stylus for all long-playing records, both stereo and mono-

phonic, as well as all 45 rpm records. It also includes a sapphire stylus for playing any 78 rpm shellac records you may own. The diamond stylus is extremely resistant to wear, and should give 1000 hours or more of service before replacement is necessary. The life of the stylus will be greatly prolonged by keeping the stylus assembly and record surfaces free of dust.

When replacement is necessary, remove the cartridge shell from the tone arm by turning the knurled ring directly behind the cartridge shell. (If the set is on, turn the Selector to AUX or TUNER beforehand.) To remove the stylus assembly, grasp the lever with the "78" and "LP" markings on it, rotate it to the midway position and pull firmly outward from the cartridge. The entire assembly will pull free when sufficient pressure is applied. The new stylus assembly (Fisher Part No. G3501) can easily be pressed into

place in the same position occupied by the old one. Be sure that the metal rod at the end of the assembly rests within the two prongs of the clear plastic holder.

At Your Service

It is our desire that your *Allegro* operates to your complete satisfaction. We solicit your correspondence on any special problems that may arise. After you have had an opportunity to familiarize yourself with your FISHER, we would appreciate hearing from you concerning how it is meeting your requirements.

Your Fisher Dealer

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

TECHNICAL SPECIFICATIONS

AMPLIFIER

Music Power (IHF Standard, both channels)	20 watts
Frequency Response	
Amplifier only	35-72,000 cps \pm 3 db
Entire system (including speakers)	Uniform throughout audible range as an integrated system
Harmonic Distortion (at rated output)	Less than 1.0%
Intermodulation Distortion (at rated output)	Less than 1.0%
Stereo Channel Separation (at 1 kc)	More than 50 db
Sensitivity (at AUX inputs)	230 millivolts
TUNER	
Usable Sensitivity (IHFM Standard)	2.5 microvolts
Selectivity (alternate channel)	52 db

Calibration Accuracy	0.2%
Audio Frequency Response (after de-emphasis)	35-15,000 cps \pm 1 db
Stereo Channel Separation (at 1 kc)	More than 30 db

SPEAKER SYSTEMS

Speaker Complement (each channel)	
Woofer	8-inch diameter
Tweeter	2½-inch diameter
Woofer flux density	10,000 gauss
Crossover frequency (L-C network)	2500 cps
OVER-ALL	
Power Consumption (at 105-120 volts, 50-60 cycles, including tuner and record changer)	100 watts
Dimensions (speaker doors closed)	33½" w, 17½" h, 13" d

BECAUSE ITS PRODUCTS ARE SUBJECT TO CONTINUOUS IMPROVEMENT, FISHER RADIO CORPORATION RESERVES THE RIGHT TO MODIFY ANY DESIGN OR SPECIFICATION WITHOUT NOTICE AND WITHOUT INCURRING ANY OBLIGATION.