

THE FISHER

100-T

STEREO FM-AM TUNER
AND MASTER AUDIO CONTROL





Unlimited three-in-one versatility

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Stereo

FM TUNER • AM TUNER
MASTER AUDIO CONTROL

THE FISHER 100-T provides not one, but *three* of the world's finest stereo high fidelity components—an advanced-design FM tuner, an AM tuner, and a Master Audio Control, all ingeniously integrated on a single chassis for compactness and maximum operating convenience. Here is traditional FISHER quality, reliability and, as you will discover when you read the specifications that follow, unusual versatility. The 100-T actually offers features not to be found even in costly, single-purpose components! Ask your dealer to connect the 100-T to any of the new FISHER stereo amplifiers and to the FISHER XP-1 Speaker System. Instantly, you will realize why FISHER has for twenty-two years been the first choice of critical audio enthusiasts and professional users the world over.

OUTSTANDING FEATURES

DESCRIPTION Independent FM and AM tuners and Master Audio Control for stereo or monophonic operation. Provides facilities for plug-in FISHER MPX-20 Multiplex Adaptor; for Center-Channel operation (to increase the stereo effect with a third amplifier and speaker,) and for all types of ceramic and magnetic-cartridges, record players, tape recorders, external tuners and amplifiers. In addition, there are *fourteen* front-panel controls and switches for the selection of any program source and tonal adjustment desired.

FM TUNER CIRCUIT The RF stage is a cascode-type, providing high sensitivity and maximum signal-to-noise ratio. Limiting is accomplished with only one microvolt of signal at the antenna terminals. A bridge-type, low-noise triode mixer and oscillator operates with unusual stability and minimum drift. Three IF stages provide maximum gain and a high degree of selectivity. The last IF stage also functions as a short-time-constant limiter to eliminate random noise and impulses. An AGC circuit maintains constant signal level to assure comfortable listening. The wide-band ratio detector, using a matched pair of germanium diodes, operates with minimum distortion and also suppresses random noise and impulses. The MICRORAY tuning indicator, logarithmic in action, permits precise tuning even with weak signals. The tuning range is 87.5 to 108.5 megacycles.

AM TUNER CIRCUIT A *rotatable* Ferrite Loop antenna supplies a strong, low-noise signal, while a tuned RF amplifier stage provides high gain and low noise. Sensitivity is 30 microvolts per meter on the Ferrite Loop antenna, and 10 microvolts with an external antenna, for one volt at the main output terminals. The low-noise

heptode mixer-triode oscillator is combined in a single tube. A 10-Kc sharp cut-off filter is included to suppress adjacent-channel interference (heterodyne "whistle.")

A high-gain IF amplifier stage can be switched to either wide or narrow-band operation, a necessity for reception of stereo FM-AM broadcasts and reduction of adjacent-channel interference. The detector circuit is distortion-free over the entire signal range, while the AVC maintains a constant signal level at the main output terminals for comfortable listening. A MICRORAY Tuning Indicator, operating logarithmically, permits precise tuning even with minimum signal at the antenna. The tuning range is 535 to 1650 Kc.

AUDIO CIRCUIT Two fully independent preamplifier channels are governed by the front and rear panel controls and switches. Each channel contains a phono-preamplifier stage, a tone-control amplifier, a Hi-Lo filter amplifier stage, and a low impedance output stage. Tubes have a DC filament supply to reduce hum to virtual inaudibility. *Frequency response* is uniform from 20 to 20,000 cps \pm 1 db. Phono stages are equalized for the standard RIAA curve, with settings on Bass and Treble controls for LP and 78, as well as an approximate NARTB setting for tape. Equalization is uniform within \pm 1 db. Harmonic distortion is less than 0.2% at the rated output, and inaudible.

HUM AND NOISE At least 80 db below rated output with volume control set at minimum, for all high level inputs. For low level inputs, hum and noise level is at least 60 db down with volume control at maximum.

INPUT CONNECTIONS Seven inputs on the rear panel permit connection of magnetic cartridges, ceramic cartridges, tuners, and tape recorders for either monophonic or stereophonic operation.

OUTPUT CONNECTIONS Two Tape Recorder outputs, and two outputs for connection to the A and B channels of a dual-channel power amplifier. One Center Channel Output jack is provided for connection to a third amplifier and speaker system.

MPX CONNECTIONS The 100-T is designed to accommodate the FISHER MPX-20 Multiplex Adaptor for reception of Crosby Compatible Multiplex broadcasts. (All that is necessary is the removal of a plate from the chassis.) The MPX-20 will fit directly into the chassis; two cables plug into nine-pin and single-pin jacks on the 100-T.

CONTROLS Fourteen controls and switches on the front panel, and five on the rear panel, permit the selection of any program material desired and the adjustment of the tonal qualities and volume of sound to suit the requirements of the listener. *Front-Panel Controls:* Separate FM and AM tuning controls, separate dual-friction-loaded Bass and Treble controls with positions

marked for proper equalization, Master Volume control, Loudness control to maintain full acoustic balance at all frequencies from low bass, to high treble, even at the lowest volume settings, and a Channel Balance control to equalize the outputs at the speakers.

THE SWITCHES (Front Panel) A Selector Switch with nine positions for the selection of program sources—Mono Phono, Stereo Phono, AM, FM, FM-AM, FM-MPX, FM-FM, Aux Stereo, and Aux Mono. Separate high and low Filters to reduce high and low frequency interference (such as record scratch and turntable rumble). AM Broad-Sharp switch for either broad-tuning high fidelity reception, or high selectivity of AM stations where there is adjacent station interference. A Channel Reverse switch for the transposal of the A and B program sources, at the speakers. *Rear Panel Controls and Switches:* Two Phono Level Sets, one AM Level Set, one MPX-Stereo Separation Control, and one MPX-Main Channel Separation switch.

ANTENNA TERMINALS One three-terminal antenna strip for FM, and one for AM, are located at the rear panel. Connections to the FM strip can be made in three different ways to provide reception from a built-in dipole, or from a roof antenna whether in weak or strong signal areas. Connections to the AM strip can be made in three different ways—utilizing the Ferrite Loop, an external roof antenna, or the FM dipole.

POWER SUPPLY Rectifier and filter circuit to supply B+ to all stages; separate bridge rectifier to supply DC for filaments of preamplifier stages.

AUXILIARY AC JACKS Two auxiliary AC jacks are available on the rear panel: a 25-watt jack for connection of a record player, and a 300-watt jack for connection of associated components.

POWER REQUIREMENTS 105-120 volts, 50-60 cycles, AC only. Power consumption is 80 watts. AC input line is fused for 2 amps.

FRONT PANEL Brushed brass. FM and AM dial includes a 0 to 100 logging scale.

TUBE COMPLEMENT A total of 16 tubes plus a matched pair of germanium diodes (1N541) for the FM ratio detector and a bridge rectifier for the preamp heaters. FM Tuner: 2-ECC85/6AQ8, 3-6AU6, 1-EM84/6FG6. AM Tuner: 1-6BA6, 1-ECH81/6AJ8, 1-EBF89, 1-EM84/6FG6. Power Supply: 1-EZ80/6V4. Preamplifier: 5-ECC83/7025/12AX7.

DIMENSIONS AND WEIGHT 15 $\frac{1}{8}$ " wide, 4 $\frac{1}{16}$ " high, 11 $\frac{15}{16}$ " deep. 18 pounds.

CUSTOM CABINET. The Model MC-1, a simulated leather-covered metal cabinet is available.

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