

NOV 20 1964

IMPORTANT NOTICE

A temporary instruction manual has been supplied with your new Marantz tuner. A finalized version of the Model 10B instruction manual will be available within three weeks and will be automatically mailed to your home. Please be sure to mail your warranty card to the Marantz Company at your earliest opportunity.

TEMPORARY OPERATING INSTRUCTIONS

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MARANTZ MODEL 10 STEREO FM TUNER

The circuitry of the model 10 successfully applies a number of advanced electronic techniques which result in a significantly higher order of performance over previous methods. Its improved distortion characteristics, sharp selectivity, excellent quieting, etc., all make this instrument eminently suitable for relay re-broadcast or station monitoring, or for any other application requiring the highest quality of FM and FM multiplex reception.

PRELIMINARY NOTES

Warranty - Fill in and return the enclosed warranty card immediately. The permanent and more detailed instruction manual now in preparation can be mailed only to the owners registered in our warranty file.

Packing - Save all packing material, fillers, plastic wrap etc. Should it become necessary to ship the model 10, it should be packed in exactly the same manner to protect it against physical or finish damage.

INSTALLATION

Line Voltage Requirements

Design center - 117 volts, 60 cycles, 100 watts
Range - 105-125 volts, 50-60 cycles
(The transformer can be restrapped for 234 volts, 50/60 cycles)

Ventilation

The heat generated by the 22 tubes in the model 10 should be free to dissipate itself without restriction. Do not mount in a small enclosed space unless provision is made for adequate ventilation. If necessary to mount in a small chamber, openings should be provided in both the upper and lower regions to permit a flow of air past the tuner.

Internal chassis ventilation is provided through the perforated bottom plate and four feet which raise the chassis above its mounting surface.

Signal Connections

Audio Outputs - The cathode-follower outputs provide nearly one volt for high impedance preamplifier inputs. Left and Right channel outputs are adjacent to tube V18. (Facing the front panel, V18 is the second tube in the extreme left row). Use shielded audio cables from these two outputs to high level pre-amplifier inputs.

Two screwdriver level controls also are located alongside tube V18. For full output, these should be left in the fully-clockwise position.

Antenna Input

Antenna input terminals are located near the front of the power transformer. The model 10 was designed for a balanced 300 ohm antenna input. This provides the greatest amount of immunity from noise and multipath pickup in the transmission line. We strongly recommend that the lead-in cable used be of the balanced, shielded type such as ITT-Federal #K-111 or Columbia Wire #5520. These consist of two conductors with an outer shield and insulating jacket.

Antenna Connection

300 ohm, balanced. Two inner conductors to the "300 ohms" terminals. Outer shield braid to "ground" terminal. Shield braid does not connect at the antenna. (Ordinary 300 ohm ribbon also connects to the 300 ohm terminals).

If it should be necessary to use single-ended 72 ohm coax lead-in, connect as follows:

Inner lead to either hot terminal (marked "300 ohms"), and the outer shield to terminal marked "GND" (ground).

OPERATION1. First set controls as follows:

STEREO TEST SWITCH - to outer, or released, position

MODE - To "Normal"

POWER - "On"

MUTING SWITCH - To outer, or released, position (muting on)

2. Tuning & Tuning Indicator (Stereo Test Switch must be in released position for tuning indicator to operate).

After a few minutes of warm-up tune to a local station. Note that as you tune through each station, a trace appears on the tuning indicator. This trace follows an approximately rectangular path. For a station to be properly received the trace should be tuned to the center of the uppermost boundary of its rectangle.

When the tuner has warmed up for 5 or 10 minutes, center calibration of the indicator can be checked and, if necessary, adjusted as follows:

Tune to a point between stations. The trace should drop to the horizontal line on the inverted "T" of the tuning indicator and will appear as a horizontally elongated "fuzzy" or out-of-focus area. This area should be centered at the juncture of the lines forming the inverted "T". It can be centered vertically by means of the "vertical" adjustment located on the panel at the left of the dial. If off center to right or left readjust with the "horizontal" control at the right of the dial. After this adjustment, stations will be accurately tuned at the vertical center-line.

In actuality, tuning is not very critical in the model 10 and there is no apparent deterioration of reception if the center of the trace is detuned 1/8th inch or so in either direction.

Relative signal strength is indicated by the vertical position of the tuned trace.

Modulation or deviation is shown by the instantaneous horizontal expansion and contraction of the trace from a central point. The maximum deviation, (or expansion) permitted by the FCC is 75kc, indicated by the maximum limits of the horizontal tuning line.

Multipath or improper antenna direction for any station is indicated when the trace is not reasonably smooth and horizontal. A poor antenna setting will result in a jagged trace with peaks and dips along its length. As the antenna is rotated, the shape of the trace will undergo considerable change. A little experimentation will soon familiarize you with this indicator and its characteristics.

Weak distant stations can be seen even when they are below the muting threshold. Often, orientation of the antenna will increase the signal strength sufficiently for reception. In extreme cases, it can be made audible by pushing the "MUTING OUT" button. If there is insufficient quieting of a weak stereo program, improvement can be made by turning the MODE switch to "hi-blend" position, but with some sacrifice of separation at higher frequencies. Under the worst conditions of stereo reception, a considerable noise reduction occurs with the MODE in the "MONO" position. The program will then be heard monophonically.

CONTROLS

Mode Switch

There are two AUTOMATIC positions, marked "Normal" and "hi-blend", and one "MONO" setting. In either automatic setting, stereo and monophonic programs will be automatically switched to proper playing modes by means of a unique photo-electronic circuit. A stereo indicator light on the dial will turn on in the presence of a stereo program.

The normal position will ordinarily be used. Hi-blend position will blend the higher frequencies, reducing both noise and separation in stereo reception, and having no effect on monophonic noise.

The MONO position plays all programs in monophonic mode and is most useful in improving extreme cases of noisy stereo reception.

Stereo Test - When pushed to the "in" position, the tuning indication is transformed to an "X-Y plot" for technical analysis of separation, phase, etc., of stereo and monophonic broadcasts. This button must be released to restore tuning indicator functions. (Vertical and horizontal centering controls have no effect in the "in" position).

Muting Out - In normal released position, interchannel muting occurs automatically when tuning between stations. (It also mutes distant signals which are below a predetermined strength as preadjusted with the Muting Level screwdriver control on the chassis). In order to make weak transmissions audible it may be necessary to disable the muting function by pushing this switch to its IN position. To restore, push in again and release.

Power Switch - Its three positions are OFF, ON, AND DIM. The DIM position reduces the intensity of the panel illumination.

BE SURE TO SEND IN YOUR WARRANTY REGISTRATION

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