

# INSTRUCTION MANUAL

# MODEL MXT-286 FM STEREO MULTIPLEX TUNER

## INSTALLATION AND OPERATION INSTRUCTIONS

Model MXT-286 is a High Fidelity ultra-sensitive FM stereo multiplex tuner, which should be used in connection with a high-grade high fidelity stereo amplifier. It is furnished complete with AFC, a stereo function indicator light, and a special stereo station "beacon" light which indicates when the stereo station is broadcasting a stereo program. It is also supplied with a Power "Off-On" switch, a "Stereo-Monaural" switch, an AFC "Off-On" switch, and a "Balance" control to balance the left and right audio channels for the best stereo performance.

#### UNPACKING:

The unit is to be removed carefully from the carton and inspected for any possible damage in transit. If there is any evidence of any damage which might have occurred in shipment, notify your dealer at once, or the transportation company which delivered it. Claims for damage sustained in transit must be made upon the Carrier. Save all packing material for inspection by the claim agent who will furnish you with the proper forms and will also give you the necessary instructions for filing a claim. In addition to the Unit, there should be included in the carton the following:

1. INSTRUCTION BOOKLET

2. WARRANTY CARD

To insure proper servicing and to protect your rights under the warranty, be sure to fill in the warranty registration card without delay and mail to the factory.

#### WARRANTY

Your Teeco unit has been very carefully inspected and tested at the factory and normally should require no service other than a semi-annual check of the tubes. Each unit is warranted to be free from defects in material and workmanship under normal use and service for a period of 90 days from date of delivery to the original purchaser. If any unit appears to be defective, the factory will repair any unit returned within said 90 days, providing all transportation charges are pre-paid, and which our examination shall disclose to our satisfaction to be defective.

This Warranty does not include free labor, nor is it applicable to any unit which shall have been subject to accident, tampered with, mis-used, abused, or altered in any manner whatsoever. Further, this Warranty shall not apply to any unit which has been connected improperly.

It is recommended that any Tuner on which service is required, be processed through your dealer wherever possible.

This Warranty is expressly in lieu of all other Warranties, expressed or implied, and of all other obligations or liabilities on our part. We neither assume nor authorize any other person to assume for us any other liability in connection with the products manufactured by Trutone Electronics, Inc.

TRUTONE ELECTRONICS, INC.

## INSTALLATION

It is imperative that Model MXT-286 Multiplex Tuner be placed alongside or under the amplifier and not on top of it as undue heat will affect the stable operation of the circuitry. It is highly desirable that it be placed in an area of adequate ventilation. Although the unit has ample vents for normal ventilation, sufficient space should be allowed around it to permit free air flow.

Do not put books or other objects on top of the unit as this will reduce the ventilation and result in reducing the life of the components and tubes.

If it is installed in a cabinet, the cover should be removed to permit greater ventilation.

Plug the AC line cord into any outlet furnishing 105 to 120 volts, 60 cycles AC.

# CONNECTIONS

Three shielded cables supplied with the unit are used to connect the tuner to the stereo amplifier. For monaural listening one end of one shielded cable is plugged into the "Monaural" jack on the rear of the tuner, and the other end of the same cable into the "Tuner" jack of the amplifier. For stereophonic listening one end of the second shielded cable is plugged into the "Stereo Left" channel of the tuner and the other end into the "Channel I AUX" jack of the stereo amplifier; also one end of the third shielded cable is plugged into the "Stereo Right" jack of the tuner and the other end into the "Channel 2 AUX" jack of the stereo amplifier.

#### **OPERATION**

On the front panel of the tuner are located a tuning control, a stereo balance control, a Power "Off-On" switch, a Stereo-Monaural switch (FM Stereo "Off-On"), and an AFC "Off-On" switch.

AFC refers to "Automatic Frequency Control", and is an electronic means of keeping the tuner properly tuned to the F.M. broadcasting station. Even if the Tuner Pointer is not in the exact center of the channel, the AFC will automatically pull in the signal to the proper point. However, in tuning in a weak station adjacent to a stronger one, if the AFC is in operation position, it may "lock on the stronger signal". It is for this reason that a means has been provided for disabling the AFC. This is accomplished by using the AFC slide switch at the right on the front panel.

For normal operation, the AFC slide switch should be placed at the "on" position. For very precise tuning or for tuning a weak station next to a powerful station on FM, it is suggested that the switch be placed in the "off" position until the station is received the loudest. The switch is then to be moved to the "on" position and the station will be properly tuned and locked in position. The same procedure is very important especially when tuning in stereo multiplex programs so as to obtain maximum stereo separation.

FOR MONAURAL RECEPTION: On your stereo amplifier turn the Function switch to the "Tuner" position and the Stereo-Monaural switch to the "monaural" position. On the MXT-286 tuner turn the FM-Stereo "Off-On" switch to the "off" position. Turn the Power "Off-On" switch to the "on" position. The "Balance" control is inoperative during Monaural operation.

FOR STEREO MULTIPLEX RECEPTION: On your stereo amplifier turn the Function switch to the "AUX" position and the Stereo-Monaural switch to the "stereo" position.

On the MXT-286 tuner turn the Power "Off-On" switch to the "on" position. Turn the FM-Stereo "Off-On" switch to the "on" position whereupon the stereo function indicator light at the left of the dial scale will glow. When a station broadcasting a stereo multiplex program is tuned in, the stereo station indicator light at the right of the dial scale will glow. Turn the "Balance" control to the point at which the best stereophonic effect is obtained.

PLEASE NOTE: The stereo station indicator light will sometimes glow on stereo stations even when they are broadcasting monaural programs. This light will also flicker on some stations when the tuner is operating in a noisy location, or when the broadcasting station has strong audio "peaks", or when tuning from station to station. The light will remain constant only when a stereo station is correctly tuned in.

# **ADJUSTMENTS**

When Model MXT-286 is installed, it is seldom necessary to make any service adjustments as all controls have been pre-set at the factory. However, if it should be necessary to adjust for correct channel separation, proceed as follows. Turn the Balance control on the front panel to the center position. Turn the control with the slotted shaft located on the rear of the chassis to the extreme left (counter-clockwise) position. Tune in a stereo program; rotate the control with the slotted shaft toward the right until the best stereophonic blend is obtained.

In isolated cases a "motorboating" or "putt-putt" sound may be heard when listening to a stereo multiplex program. This indicates that the oscillator coil is slightly out of synchronization. To correct this condition it is necessary to adjust the unit as follows. Turn the Balance control on the front panel to the center position. Turn the control with the slotted shaft on the rear panel, to the extreme left (counter-clockwise) position. Adjust the oscillator coil on the extreme left at the rear of the tuner (adjacent to the ANT-GND terminal) with a non-metallic screwdriver. Turn slightly to right or left for maximum and clearest sound. Reset the control with the slotted shaft on the rear of the panel, to the point of best stereo blend.

If when using an inside antenna a "motorboating" or "putt-putt" sound is heard on one or more stereo programs whereas on others the programs are clear, it will be necessary to use an outside antenna so that all stations broadcasting stereo multiplex are heard clearly.

The use of an outside antenna is recommended for best results at all times.



