TUNER-AMPLIFIER-BACKGROUND MUSIC SYSTEM

MODEL 1105

INSTRUCTION MANUAL

BE SURE TO KEEP THIS INSTRUCTION BOOKLET AVAILABLE FOR READY REFERENCE

GENERAL DESCRIPTION

Model 1105 Background Music Tuner-Amplifier consists of a High Fidelity ultra sensitive FM Tuner, complete with AFC and a 7 Watt audio amplifier. It incorporates an electronic squelch circuit for silencing commercials from those FM stations providing supersonic frequencies for this purpose. Model 1105 also includes a shielded microphone input transformer and a 25 volt AC relay system, properly fused for remote microphone operation during paging, which silences the FM Tuner when the microphone is put in operation. The unit has a "tape out" jack, a crystal phono jack, a Multiplex converter jack, and a squelch test jack.

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

This 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 unit 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.

INSTALLATION

Because of its attractive appearance, Model 1105 Background Music System may be placed on a table or a book shelf. Altho 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 would reduce the ventilation and result in reducing the life of the components and tubes.

If installed in an enclosure, the cover is to be removed, and ample ventilation must be allowed around the unit.

Plug the AC line cord in any outlet furnishing 105 to 120 volt, 60 cycle AC.

TRUTONE ELECTRONICS, INC.

14660 Raymer St. • Van Nuys, Calif.

CONNECTIONS

The screw terminals for speaker connection are located at the upper right of the chassis rear panel. Any ordinary insulated wire, such as parallel lamp cord, is suitable for hooking up the unit to the voice coil terminal of a 4 to 8 ohm speaker. A number of speakers can be used by connecting them in parallel, or series parallel, to form an impedance of from 4 to 8 ohms.

For normal FM reception, a built-in line cord antenna is sufficient for most locations. In the event that the unit is located in a remote area, an external Dipole antenna will increase the efficiency and a number of distant stations can then be received. This external antenna is to be connected across the terminals marked "ANT" and "GND".

DO NOT TURN ON THE UNIT UNTIL THE SPEAKERS HAVE BEEN CONNECTED TO THE TERMINAL STRIPS AS POSSIBLE DAMAGE TO THE EQUIPMENT MAY OCCUR.

The Tape Out jack is clearly marked and is to be used when it is desired to by-pass the internal amplifier and connect to an external amplifier for greater power. It can also be used to feed the signal from the Tuner to a tape recorder which has a built-in pre-amplifier.

The Multiplex jack can be used for connecting to a Multiplex Converter to receive simultaneous signals on both FM and Multiplex broadcast, and for Multiplex Stereo Reception.

The crystal phono input jack enables the amplifier in the unit to be used for playing of records, using a crystal or ceramic cartridge.

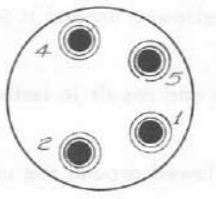
The squelch test jack is used for connection to service test equipment whenever it is necessary to adjust the squelch frequency.

The fuse post located on the lower rear panel of the chassis contains a 2 ampere fuse. Above the 4-pin socket, there is located a separate removable fuse, to protect the 25 volt relay system. In the event it is necessary to replace the fuse, it shall be done with a ½ amp fuse, Buss #C-½ or equivalent.

CAUTION --- WHEN AN EXTERNAL AMPLIFIER IS USED TO REPLACE THE AMPLIFIER PORTION, THE EL84 TUBE MUST BE REMOVED UNLESS A SPEAKER IS CONNECTED TO THE SPEAKER TERMINALS OF THE RECEIVER.

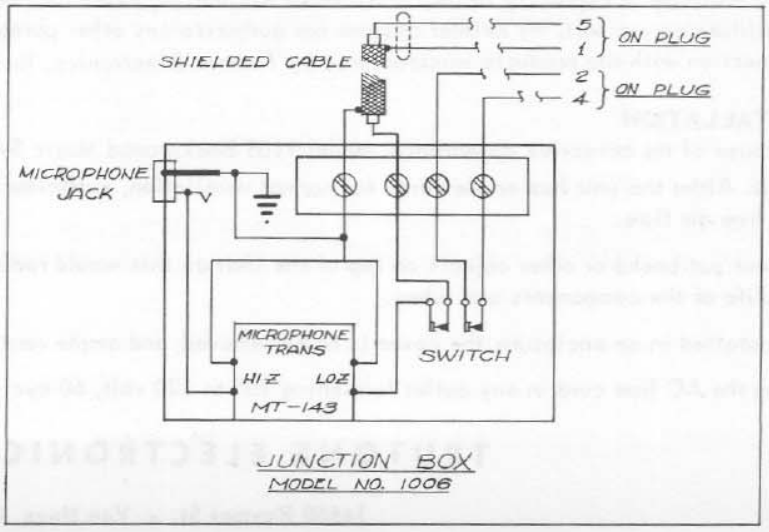
For use as a paging system, a 4-prong socket has been provided on the rear panel. The plug which is furnished with the unit is to be connected to a shielded cable and two unshielded leads or cable. One end of the center wire of the shielded cable is to be connected to pin #5 on the plug, and the shield itself is to be connected to pin #1. The other two ends of this cable are to be connected to a low impedance microphone. The two unshielded leads are to have two ends connected to pins #2 and #4 on the plug and the other ends of this wire are to terminate at a switch. The above connections are for a low impedance microphone.

Model 1006 Junction Box is available for use with a high impedance microphone. The "Push to Talk" return switch will operate the relay in a paging position only as long as the switch is held in that position and when released, will return the set to the FM reception. When the Junction Box is used, connect as indicated above, but terminate the leads as shown on the diagram.



4 PRONG PLUG

NUMBER POSITION OF PINS LOOKING DOWN ON PINS



JUNCTION BOX
MODEL NO. 1006

OPERATION

The front panel has five knobs and two slide switches. The Microphone Volume knob is used to adjust the level of the microphone paging. The Tuner Volume knob is employed to adjust the level of the sound of the FM Tuner or external phonograph only. The Tone Control knob can be turned to the position that is most pleasing to the listener as it affects both the high and low frequency response. The FM Tuning knob is used to select the desired FM station. The Tuner-Phono Selector knob is used to select either the tuner or phonograph. The slide switch located at the lower left is used to turn the receiver off or on. The slide switch at the lower right is for AFC defeat.

AFC refers to "Automatic Frequency Control" and is an electronic means of keeping the receiver properly tuned to the F.M. Broadcasting station. Even if the F.M. Tuner Pointer is not in the exact center of the channel, the AFC will automatically pull in the station to the proper point. However, in tuning a weak station adjacent to a strong one, even if the AFC is in an operating position, it may lock on the stronger signal. It is for this reason that a selector switch has been provided for the disabling of the AFC.

For normal operation, the "AFC" selector switch should be left in 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 "AFC" selector switch be set to the "OFF" position until the station is received the loudest. The switch is then to be moved to "ON" position and the station will be properly tuned and locked in position.

The center marking on the dial glass is a "LOG" scale for easy recording of the position of the pointer for any specific station.

On the rear panel of the chassis there is located a slide switch for the purpose of eliminating the electronic squelch function when the Tuner is used on stations that do not have a supersonic frequency. When the switch is thrown to the "on" position, the electronic squelch is in operation and will eliminate commercials on stations that provide a supersonic frequency for this purpose. When pushed to the "off" position, this portion of the electronic circuit is non-operating and will avoid possible program interference.

The electronic squelch circuit is adjusted at the factory for 22 kc, and will function satisfactorily on all stations using a squelch frequency between 21 and 23 kc. If the local station employs a frequency different from the above, the squelch can be adjusted as follows:

1. On the bottom of the cabinet a small hole has been provided to allow access to a slotted screw. To adjust the squelch circuit for a specific FM station the slide switch on the rear panel must be placed in the "on" position. The supersonic frequency of the station must be known or determined so that the procedure as indicated below can be followed.
2. After this frequency has been determined, connect the output of an audio generator through a 50 mmf capacitor to the Multiplex jack on the rear panel, and adjust the audio generator to this frequency. Connect a Vacuum Tube Voltmeter to the squelch test jack on the rear panel, and set the VTVM to a 20 to 30 DC scale. Rotate the screw either to the left or right until maximum reading is obtained on the meter.
3. If the above instruments are not available, proceed as follows:
   With the slide switch still in the "on" position and the desired station tuned in, rotate the screw, while the commercials on the station are being broadcast, either to the right or left until the commercial fades out.

THE INCLUSION OF THE ELECTRONIC SQUELCH CIRCUIT DOES NOT IMPLY PERMISSION TO USE EXCEPT WITH AUTHORIZATION FROM THE BROADCASTING STATION UTILIZING THE SUPERSONIC FREQUENCY.