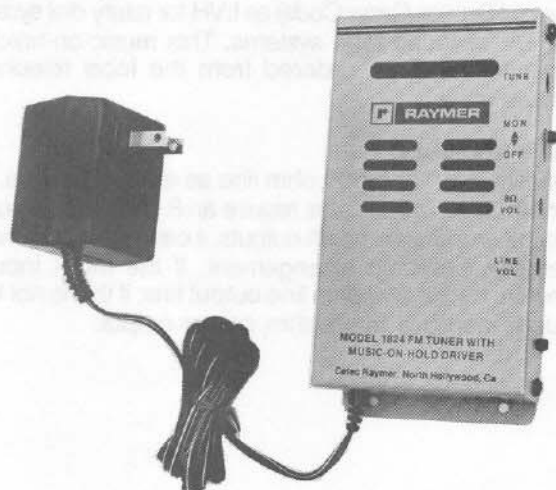


University Sound, Inc.
a Mark IV company

MODEL 1824

OPERATING INSTRUCTIONS



DESCRIPTION

The University Sound Model 1824 is an all solid state FM tuner ideally suited to provide music to paging systems, background music systems and telephone music-on-hold arrangements. Three audio outputs are provided: 8 ohms at 1 watt, 500 ohms at +4 and a high impedance aux level. Separate volume controls for the 8 ohm and line outputs allow the Model 1824 to simultaneously provide music for a paging system as well as a telephone music-on-hold system.

A built-in monitor speaker is included to aid in tuning the desired station. The switch provided to turn on the monitor speaker also activates the AFC circuit. This assures accurate tuning in the monitor position and drift free reception in normal operation.

A tuning light on the dial scale indicates the signal strength of the station being received and an automatic squelch circuit mutes out the noise when tuning between stations. The Model 1824 includes a unique feature which allows the power cord to act as a built-in antenna thus eliminating the necessity of an external antenna in most cases. Provisions are made for connecting an outside antenna when necessary.

The unit is housed in a painted sturdy steel box measuring only 1-1/4" x 3" X 6-1/8" which may be mounted to surfaces by means of #6 screws through holes provided in the mounting flanges. A wall outlet mounted power pack is supplied with each unit to permit operation from 120 volts A.C. 60 Hertz.

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, immediately notify your supplier, 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.

INSTALLATION

The unit may be mounted to a wall or other flat surface by means of #6 screws through the holes in the mounting flanges. For optimum ventilation, the unit should be mounted in a vertical position. Because of the cord on the power pack, the unit should be mounted within 6 feet of an electrical outlet. NOTE: This equipment is for indoor use only.

- DO NOT expose to rain or moisture
- DO NOT install over heat generating equipment
- DO NOT install in direct sunlight

WARRANTY

This unit has been very carefully inspected and is warranted to be free from defects in material and workmanship under normal use and service for a period of one year from date of sale to the original purchaser. This Warranty does not extend to any unit which has been subject to abuse, misuse, neglect, accident, improper installation, or alterations. The obligation of University Sound under this Warranty is limited to the repair of any defect in material or workmanship and/or the replacement of any defective part, provided the unit is returned to University Sound, transportation paid within the year.

It is recommended that any unit on which service is required be processed through your distributor or installation company 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 University Sound.

CONNECTIONS

All connections are made on the printed circuit board inside of the unit. To make connections the top cover must be removed. This cover is secured by four screws (two on each side of the unit). Replace the cover and screws when installation is complete.

ANTENNA INPUT

For normal reception the Model 1824 is provided with a built-in antenna. This is the power cord between the unit and the power supply. For best reception this cord should be fully extended and kept away from any metal objects. It may be necessary to carefully position this cord for optimum reception of weaker stations.

Remote or poor reception areas will require the use of an outside antenna. Provisions are made to connect a 75 ohm antenna line to the input of the Model 1824. The center conductor of this antenna coax should be connected to the terminal marked 75 ohms and the shield to the terminal marked with a ground symbol as shown in Figure 2.

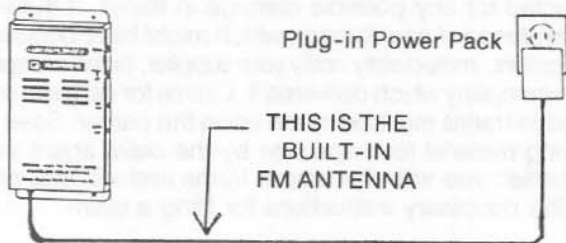


FIGURE 1: For best reception EXTEND power cord.

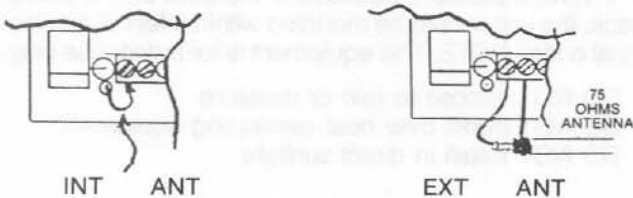


FIGURE 2: Antenna input connections.

OUTPUT CONNECTIONS

Three different outputs are provided: 8 ohms, 500 ohms and high impedance (50K). Any combination of outputs may be used at the same time.

Connection to the high impedance output is made by means of a phono type plug. To prevent induced hum and noise, shielded audio cable must be used when wiring this circuit. The total length of this cable should be limited to 100 feet to prevent high frequency attenuation. The audio signal of this output is fixed at one volt maximum and is not affected by either level control. This signal is sufficient to drive the auxiliary input of an external amplifier with an input impedance of 50,000 ohms or greater. Low frequency response will be attenuated if the load is less than this value.

Connection to the 8 ohm and 500 ohm outputs are made by means of screw terminals. The output signals at these terminals is adjusted by a separate LEVEL control.

The 500 ohm output is isolated from ground and may be used to drive a balanced line at a +4dbm level (1.23V). This output may be used to drive the music input of a music-on-hold line card in a privately owned key system such as those manufactured by T.I.E. and N.E.C. Refer to the technical specifications supplied by the manufacturer for proper connections and input voltage requirements.

The 8 ohm output has a maximum power output of 1 watt (2.83V) which may be used to drive a monitor speaker or the Bell Telephone System music-on-hold arrangement. The Bell System arrangement is identified by their USOC (Universal Service Order Code) as LVH for rotary dial systems and FTP for touch tone systems. This music-on-hold arrangement must be ordered from the local telephone business office.

MUSIC-ON-HOLD

Usually requires a 500 ohm line as a driver source, but older 1A2 type key systems require an 8 ohm 1 watt source. Since the amplifier has both outputs, it can be used to match either music-on-hold arrangement. If the MOH input is unknown, try the 500 ohm line output first; if this is not loud enough, then use the 8 ohm power output.

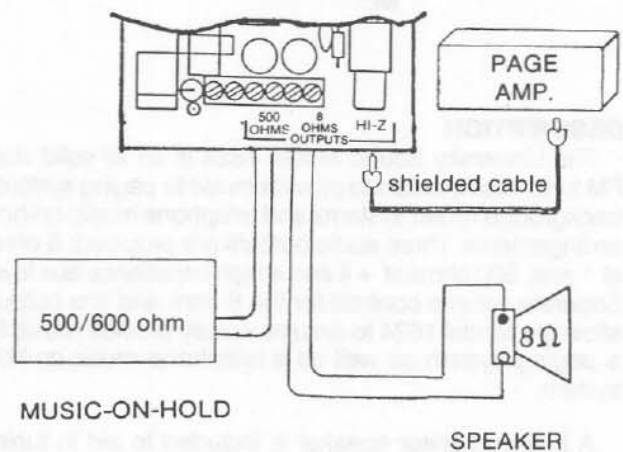
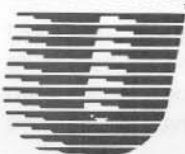


FIGURE 3: All outputs may be used simultaneously.

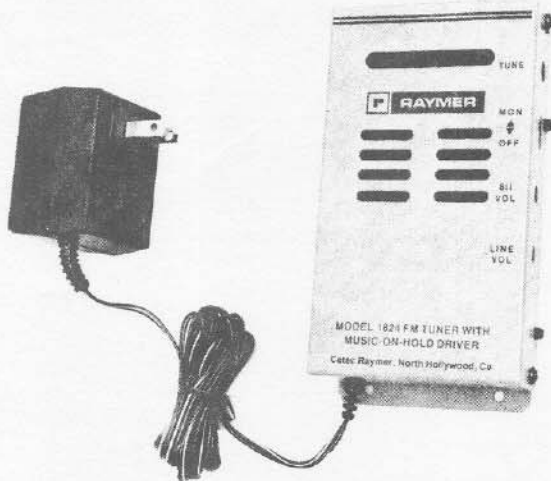
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MODEL 1824

DESCRIPTION

The Raymer Model 1824 is an all solid state FM tuner ideally suited to provide music to paging systems, background music systems and telephone music-on-hold arrangements. Three audio outputs are provided: 8 ohms at 1 watt, 500 ohms at +4dbm and a high impedance aux level. Separate volume controls for the 8 ohm and line outputs allow the Model 1824 to simultaneously provide music for a paging system as well as a telephone music-on-hold system.

A built-in monitor speaker is included to aid in tuning the desired station. The switch provided to turn on the monitor speaker also activates the AFC circuit. This assures accurate tuning in the monitor position and drift free reception in normal operation.

A tuning light on the dial scale indicates the signal strength of the station being received and an automatic squelch circuit mutes out the noise when tuning between stations. The Model 1824 includes a unique feature which allows the power cord to act as a built-in antenna thus eliminating the necessity of an external antenna in most cases. Provisions are made for connecting an outside antenna when necessary.

The unit is housed in a painted sturdy steel box measuring only 1-1/4" x 3" x 6-1/8" which may be mounted to surfaces by means of #6 screws through holes provided in the mounting flanges. A wall outlet mounted power pack is supplied with each unit to permit operation from 120 volts A.C. 60 Hertz.

FEATURES:

- All solid state FM tuner with 3 outputs; 8 ohms, 500 ohms and high impedance.
- Separate volume controls for 8 ohm and 500 ohm outputs.
- Built-in monitor speaker with on/off switch.
- AFC automatically switched off in monitor position for ease of tuning.
- Built-in FM antenna. External antenna optional connection.
- Automatic squelch mutes noise between stations.
- Tuning light indicates signal strength.
- Tamper resistant operating controls.
- 120 volt operation. Receptical mounted power supply included.
- Compact sturdy steel case, wall mounts.