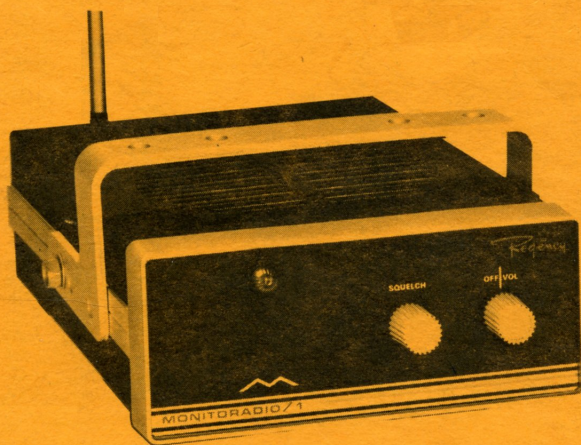




MONITORADIO RECEIVER



MODEL TMR-1

INSTRUCTION MANUAL

UNPACKING

- 1 – Receiver Unit
- 1 – AC Power Cord
- 1 – DC Power Cord
- 1 – Telescopic Antenna
- 1 – Mobile Mounting Bracket
- 1 – Instruction Manual
- 1 – Warranty Card

To be filled out and returned to:

Regency Electronics, Inc.

7900 Pendleton Pike

Indianapolis, Indiana 46226

MAINTENANCE

It is recommended that the services of a qualified electronic technician be used for troubleshooting.

DO NOT TAMPER WITH INTERNAL ADJUSTMENTS! DAMAGE TO THE EQUIPMENT AND/OR IMPROPER OPERATION MAY RESULT.

DESCRIPTION

The Regency TMR-1 is a crystal-controlled, single channel, all transistor, double-conversion, super-hetrodyne receiver designed for use in the narrow-band FM Channels of the public service communications VHF band. Police, fire, civil defense, forestry and weather are just a few of the numerous services included in this band. The VHF FM band covers the frequency range of 148-174 megahertz.

The TMR-1 utilizes silicon transistors throughout for dependability. The use of two Integrated Circuits provides for compactness and circuit reliability. In addition, a ceramic filter employed in the second I.F. ensures optimum performance in areas of the country where many of the services are very closely grouped together. The two-way power supply permits operation from either 117 VAC or 12 VDC, depending upon the power cable used.

Some extra features include: connections for an external or remote speaker, a telescopic antenna, and a mounting bracket for easy installation in a car or truck.

SPECIFICATIONS

Frequency Range	148-174MHz
Sensitivity	0.5 microvolt for 20 DB quieting
Selectivity	6 DB @ $\pm$ 7 KHz 50 DB @ $\pm$ 15 KHz
Spurious Rejection	50 DB
Adjacent Channel Rejection	60 DB
Modulation Acceptance	$\pm$ 7 KHz
I. F. Frequencies	1st I. F: 10.7 MHz 2nd I. F: 455 KHz (ceramic filter)
Squelch Sensitivity (Threshold)	0.3 Microvolt
Audio Output	3 Watts @ 10%, or less, distortion; 5 watts maximum
Power	105-130 VAC, 60Hz @ 17 watts maximum 11-15 VDC @ 12 watts maximum

INSTALLATION

117 VAC Installation:

Plug the AC power cable into any 117 VAC, 60 Hz receptacle. The TMR-1 needs very little ventilation; however, it is good practice to avoid excessively warm locations such as near radiators or heating vents.

For areas with moderate signal strength, the telescopic antenna will be an adequate receiving antenna. Insert it through the hole in the cover and screw it onto the 6-32 bolt projecting upward.

In areas of low signal strength, it may be necessary to use a better antenna system for proper reception. An antenna, such as a ground-plane or coaxial type, mounted as high above the ground as practical will greatly increase the signal strength. For proper input matching, a 50 Ω lead-in coaxial cable such as RG 58/U should be used. A Motorola type antenna plug (Cinch-Jones No. 13B or H. H. Smith No. 1200) will have to be installed on the receiver end of the cable in order to utilize the antenna connector located on the rear (back) panel of the unit.

An external (or remotely mounted) speaker can be used by first opening the link between terminals No. 1 and No. 2. Then, connect one lead of the external speaker to terminal No. 1 and its other lead to terminal No. 4. A 3 to 4 Ω speaker is recommended for optimum performance.

Mobile (12 VDC) Installation: (Optional)

NOTE: Mobile reception of a POLICE frequency by UNAUTHORIZED personnel is ILLEGAL in some areas. It is the responsibility of the person making the installation to be sure that the user of this receiver is authorized or cleared through the local police department. Under no conditions can Regency Electronics, Inc., the manufacturer of this set, be held responsible for its unauthorized installation or use.

The TMR-1 receiver may be used in any car, truck, boat, etc. that has a 12 VDC negative ground system. The red lead with the fuseholder must be connected to the positive terminal side of the battery. The negative or

ground connection is normally made through the mounting bracket. If the mounting bracket is not fastened to the metal frame or dash of the vehicle, a separate ground wire will have to be utilized. An 18 gauge conductor, preferably stranded, should be connected to terminal No. 4 on the rear panel and ran to the nearest negative or ground point of the system.

A "mobile" antenna, with a Motorola type plug on the coax cable, will provide suitable reception and still permit easy removal or installation of the receiver.

For a quick and even easier mobile installation, that also performs well, an accessory 12 VDC power cord with cigarette lighter plug (Regency part no. MA-3) can be used. First, plug the 4-pin connector into the unit. Second, connect the spade lug to terminal No. 4. Install the telescoping antenna and place the unit on the front seat of the vehicle. Plug the cord into the cigarette lighter and with the antenna fully extended, use the receiver as in normal operation.

OPERATION

Volume Control/Off-On Switch:

This control varies the audio output level for the internal speaker. It also varies the level of audio present at the external speaker connection. Clockwise rotation of this control turns the receiver on and increases the volume.

Squelch Control:

This control eliminates background noise in the absence of a signal. Full clockwise rotation removes all squelch action. Turning this control counter-clockwise until the noise disappears permits the receiver to be "quiet" until an actual signal is received. Even if the squelch control is set fully counter-clockwise, the receiver will still operate properly and not be locked-out or prevented from receiving a signal.

Crystal Installation:

Due to the numerous frequencies or channels involved the crystal is not normally installed by the factory, but by the seller or owner of the unit. Miniature, plug-in crystals are simply installed by inserting them into the receptacles on the circuit board. Because of the accuracy required, Shepherd Industries' crystals are recommended. They are usually available at the source from which the radio was purchased. Specify exact frequency.

For maximum sensitivity, the channel frequency specified should be within ± 4 megahertz of 155.55 MHz. However, for a channel frequency outside of this range, the unit will still operate, but with some loss in sensitivity. This 8 MHz range can be moved up, or down, in the band, in which case the RF section of the receiver would have to be realigned. Realignment should only be performed by a qualified technician in order to maintain the unit's high standard of performance.

If desired, the crystal may be purchased from other manufacturers. The following information must be included in the order:

1. Crystal frequency, determined as follows:

$$\text{Crystal frequency} = \frac{\text{channel frequency} - 10.7 \text{ MHz}}{3}$$

Example:

Crystal frequency =

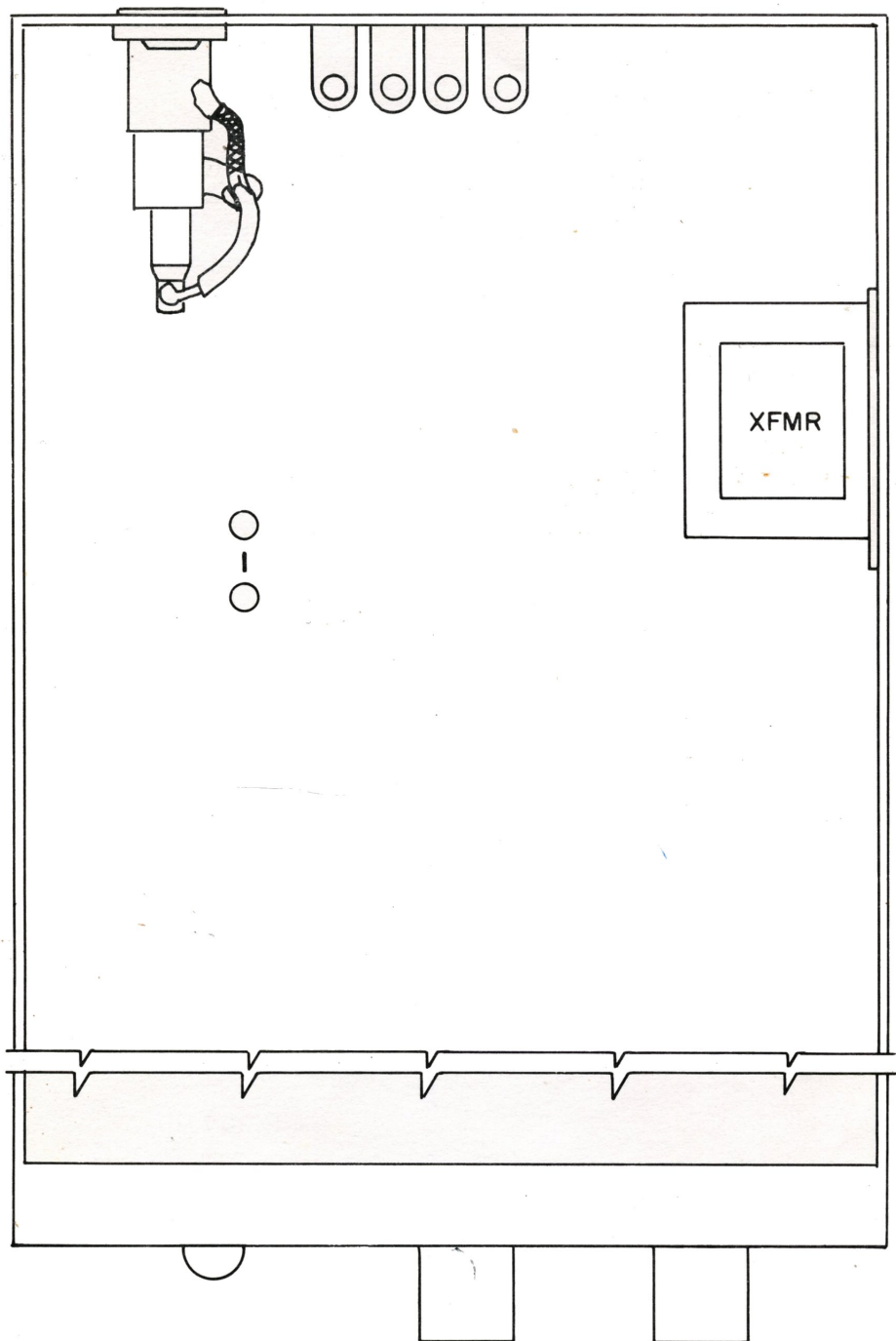
$$\frac{155.55\text{MHz} - 10.7\text{MHz}}{3} = \frac{144.85 \text{ MHz}}{3} = 48.2833\text{MC}$$

2. Frequency tolerance of .001%
3. 3rd overtone; series resonance mode —450Hz.
4. Maximum impedance of 40 ohms.
5. Holder is an HC-25/u with pin leads (plug-in type)

Prior to installing a crystal the receiver's cover will have to be removed. To remove the cover, first remove the telescopic antenna if it is installed. Second, unscrew the two large bolts located at the sides of the unit. The cover may then be slipped off by sliding it toward the rear of the unit.

Also, to lessen the possibility of causing damage to the unit, the speaker should be removed. Unscrew the two small metal screws (one located on each side) holding the speaker brackets in place. Then carefully place the speaker assembly along side of the unit.

Insert the crystal in the socket pins as shown on the crystal location drawing. See Page 7.



FRONT

CRYSTAL LOCATIONS (INSIDE VIEW)

