

INSTRUCTIONS FOR OPERATING  
CITIZEN-SHIP MODEL LC TRANSMITTER

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DESCRIPTION

Your CITIZEN-SHIP "27" Model LC Transmitter is intended for use with impulse-type radio remote-controlled devices such as are normally encountered in model aircraft, model boats, etc. It is crystal controlled and operates at a frequency of 27.255 megacycles and will meet the requirements of the Federal Communications Commission for a Class C transmitter operating in the Citizens Radio Service.

The Model LC uses 2 - 3V4 tubes, an oscillator tripler buffer stage and a power output stage powered by a self-contained battery power supply. The antenna is a vertical whip type base loaded for resonance. In operation, the transmitter emits an unmodulated carrier at a frequency of 27.255 mc. plus or minus less than .04% as long as the "OPERATE" switch is held down.

The Model LC is intended for use with the CITIZEN-SHIP "27" Model LR Receiver.

ASSEMBLY

The Model LC is shipped less batteries and with the antenna dismounted.

To install batteries, remove the front of the transmitter case and insert two 67-1/2 Volt Eveready Type 467 "B" batteries (or equivalent) side by side in the bottom of the transmitter case. Insert a 1-1/2 Volt Eveready Type "A" battery #742 (or equivalent) on top of the "B" batteries. All batteries should be installed so that their connections are toward the open front of the transmitter. Connect the two snap-type connectors to the "B" batteries and the plug-type connector to the "A" battery. Replace the front of the transmitter case.

The antenna is made up of three lengths of aluminum tubing which plug into each other and also plug into the fitting on top of the transmitter case. This demountable feature gives ease of shipping and transporting.

OPERATION

CAUTION: Before this transmitter can be operated, it must be licensed as a Class C station in the Citizens Radio Service. In general, the only requirements for a Citizens Radio Station license with the CITIZEN-SHIP transmitter are that the applicant be 18 years of age or older and a citizen of the United States. After the



Citizens Radio Station license has been obtained, anyone may operate the transmitter, as long as the licensee assumes responsibility for the proper operation of the station. It is quite simple to obtain a Citizens Radio License, and complete information is contained in Part 19, FCC Rules and Regulations. This publication may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C., at a cost of 5¢ per copy (do not send stamps). An application blank, FCC Form 505, is enclosed for your station license. This form should be filled out and sent to your nearest FCC Field Office. Additional forms may be obtained from your FCC Field Office or from the Federal Communications Commission, Washington 25, D.C. Do not operate your transmitter until you have received your Citizens Radio Station License.

To operate the transmitter, the "FILAMENT" switch should be switched to the on position. As the tubes are instant heating, it is immediately ready for use.

The transmitter will transmit as long as the "OPERATE" switch is depressed.

In operation, the CITIZEN-SHIP transmitter should be held with both hands so that the antenna rod is in a vertical position and the thumb of the right hand is near the "OPERATE" switch. This allows the operator to control the "OPERATE" switch with the right thumb and the "FILAMENT" switch with the right index finger.

At the conclusion of operation, make certain that the "FILAMENT" switch is in the off position in order to conserve the battery power.

As soon as the batteries become exhausted, they should be removed immediately. The chemical action that takes place in exhausted dry batteries can cause permanent damage to the transmitter.

#### SERVICE

Since the transmitter is crystal controlled, it will hold its frequency even with changes in battery voltage. The end use of the batteries as measured WITH THE FILAMENT SWITCH ON AND THE OPERATE BUTTON DEPRESSED is 1.1 volts on the "A" batteries and 90 volts total on the "B" batteries. At this low voltage, however, power output will materially be reduced. (A reliable voltmeter should be used in these measurements. (See brochure on CITIZEN-SHIP Meter packed with LR receiver.)



Whereas the transmitter should not need retuning, two compression type mica compression trimmers are accessible with the cover off just to the right of the "OPERATE" switch. The lower trimmer adjusts the resonance of the antenna loading coil and the upper, the actual antenna loading which determines the output tube plate current.

The buffer stage is tuned by the slotted screw to the right of the crystal.

The above adjustments require the use of a field strength meter and should not be attempted by anyone not skilled in the art. The transmitter may be returned to the factory for tuning at a nominal charge.

#### WARRANTY

Your CITIZEN-SHIP transmitter is warranted by the manufacturer to be free from defects in material and workmanship. Any transmitter failing to operate within thirty days after date of purchase will be repaired or replaced free of charge upon being returned to the factory. This warranty does not apply to failure of operation due to exhausted or improper batteries.

If your transmitter is damaged in shipment, you should file a claim with the carrier immediately upon noting the damage.

This warranty does not apply, if, in our judgment, the transmitter has been tampered with or received abusive treatment beyond that encountered in normal usage.

VERNON C. MACNABB COMPANY

INDIANAPOLIS, INDIANA