

## M-601C AM BC Active Antenna

## M-601C AM Broadcast Active Antenna

The M-601C is a compact broadband coverage active antenna that effectively covers the AM broadcast band (530 kHz through 1700 kHz).

The high impedance E field antenna contains a proprietary signal amplifier and high pass filter for reduction of lower frequency interference caused by light dimmers and power lines. The M-601C is an effective antenna for receiving within fringe areas where AM signals are weak and where a long wire antenna of equal gain would pick up noise or would not be practical in confined areas.

The antenna is omni directional allowing for various installation configurations and for use as a portable antenna. The antenna probe is waterproof and UV resistant.



### Features

- 530 kHz to 1700 kHz broadband coverage (no tuner required)
- 50 ft of RG174/U with RCA connector included.
- The antenna probe is fully sealed and does not use a whip antenna.
- Extended ESD and RF protection.
- Mounting clamp included.
- Low power consumption, 10 ma typical.
- Dual source power design: Two internal 9 volt batteries or external 120 vac /12 vdc supply (included).

### Product Warranty

LF Engineering Co. warrants that, at the time of shipment the products manufactured by LF Engineering Co. are free from defects in material and workmanship. LF Engineering Co. obligation under this warranty is limited to replacement or repair of such products within 1 year from the date of shipment.

For sales or return authorization, contact LF Engineering Co. at (860) 526-4759. For technical support call (203) 467-3590.

### M-601C Specifications

Antenna Probe Size	26 inches long, 1 inch dia.
Coupler Size	4.19"L x 2.74"W x 1.57"H
Operating Frequency	530 kHz to 1700 kHz $\pm$ 3 dB
E Field Sensitivity	-12 dB
IP3	28 dB
Input/Output Jacks	RCA Type
Output Impedance	50 - 100 ohms
Weatherproofing	Antenna probe tested to 2 atmospheres (-66 ft)
DC Power:	12 - 18 Volt, 20 ma, NEDA (2) or equivalent battery
AC Power: (included)	120 vac / 12 vdc power pack with 2.5 mm plug

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## Introduction:

The M-601C Active Antenna covers the broadcast spectrum from 530 kHz through 1700 kHz. A proprietary low noise amplifier (2 wire feed) insures ample gain throughout the operating spectrum. The output impedance of the M-601 is 50 to 100 ohms, and is designed to match most receivers in use today. The Receiver Coupler requires two 9 volt batteries (18v) for operation. An external 120 vac / 12 vdc power supply is included for continuous operation.



### Battery Installation:

Remove the 4 Philip head screws from the four corners of the front panel. Lift the panel/circuit board from the cabinet and install two 9 volt batteries onto the two battery clips. Reassemble panel into cabinet. The battery life with normal intermittent operation is more than 1 year.



### AC Power Supply:

The 120 vac / 12 vdc power supply plugs into the 2.5 mm jack located on the front panel. The ac power supply may be used even with a battery internally connected. The 2.5 mm plug disconnects the internal battery when inserted into the panel jack.

## Antenna Installation:

1. Mount the antenna E probe in the clear 8 ft to 20 ft high in the clear, preferably roof height. Use the stainless clamp supplied for attachment to a vertical support pole.
  - a. A support pole may be any vertical structure made from wood, metal or PVC that is between 1 and 2 inches in diameter. You may use an external roof structure such as the top of a TV mast or roof vent pipe. Note: The use of a vent pipe or any other large diameter mounting surfaces will require a larger mounting clamp.
  - b. The support pipe should not be attached any higher than the neoprene grip as shown in the illustration.
2. Connect the coupler output (RCVR) to the antenna input terminals or coaxial connection of your broadcast receiver.
  - a. Use accessory AC-600 Inductive Coupler for receivers without antenna input connections.

3. Connect the antenna cable to the coupler (ANT) input. Longer lengths of cable may be added.
  - a. Coax length may be extended 150 ft for a total of 200 ft max. Longer transmission line lengths will decrease signal strength, with increased attenuation in the upper band area. Use of RG-59/U or other suitable 75 ohm coaxial cable is recommended when extending beyond 200 feet.
4. Turn the coupler on and your receiver on. The coupler LED will light and your system is now ready for use.

## How to Get the Most Out Of Your M-601C AM Active Antenna:

1. Keep your antenna in the clear and above metal objects (8 ft minimum height) and use a good ground on your receiver.
2. When mounting onto a metal pole, mounting area should not exceed the neoprene grip.
3. Use a cable strain relief (clamp, strap, tape) around the mounting pipe and cable to reduce cable fatigue at the antenna.
4. Mount your antenna away from man made EMI such TV sets, light dimmers and other noise generators.

## Notes on Loop Input Receivers:

When using the M-601C with a loop antenna input, intermod and overload problems may occur. If the receiver does not have a coaxial or long wire input, then a attenuation pad should be added to the loop input as shown in the illustration.

