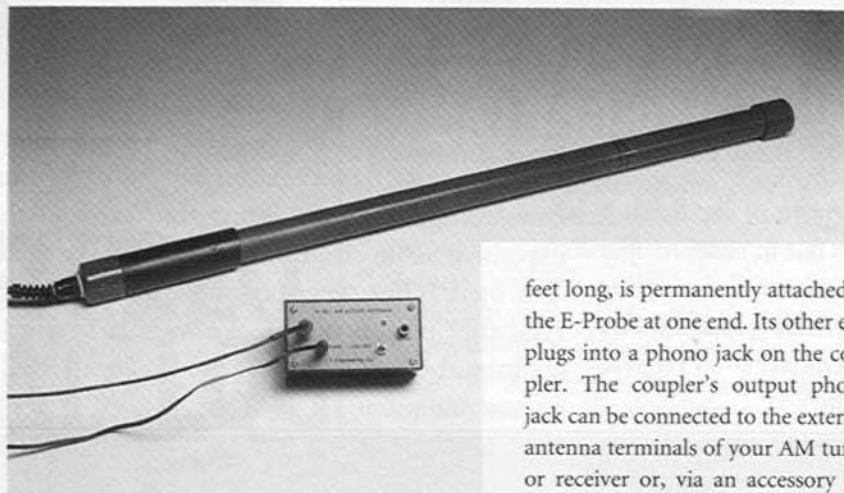


LF ENGINEERING M-601 AM ANTENNA



The M-601 is a fully sealed 26-inch-long active antenna designed for the AM broadcast band. Operating between 530 and 1,705 kHz, this high-impedance antenna contains a proprietary signal amplifier with 6 dB of voltage gain, plus a high-pass filter for reduction of lower frequency interference caused by light dimmers and power lines. According to LF Engineering, the M-601 is effective in fringe areas where a long-wire antenna of equal gain would pick up noise or would not be practical to erect.

The M-601 consists of the 26-inch E-Probe antenna and a small antenna coupler into which may be mounted a pair of 9-V batteries. Alternatively, the included a.c. adaptor can be plugged into the coupler for operation from the power line. The M-601 system consumes only 10 mA of current. A coaxial cable, 50

feet long, is permanently attached to the E-Probe at one end. Its other end plugs into a phono jack on the coupler. The coupler's output phono jack can be connected to the external antenna terminals of your AM tuner or receiver or, via an accessory inductive coupler, to the loopstick antenna of AM sets without such terminals. A stainless steel mounting clamp is included, so you can attach the E-Probe section to a mounting post to elevate it. The suggested retail price for the M-601 with E-Probe, coupler, and a.c. supply is \$89; the accessory AC-600 inductive coupler is \$15. Both prices are post-paid within North America.

LF Engineering claims that this is the first active outdoor antenna designed for AMAX radios. For those of you who haven't heard about AMAX, it is a new voluntary standard intended to improve the quality of AM radio. One of the first tuners to take full advantage of the AMAX standard is the Denon TU-680NAB (*Audio*, April). Having had an opportunity to test this remarkable tuner, it seemed appropriate to use it in combination with the M-601.

Rather than mount the M-601 on my roof, as recommended by its maker, I decided that a fairer comparison would result if I first logged the number of acceptable AM signals received with just the loop antenna supplied with the Denon tun-

er. Following that count, I would connect the M-601 to the tuner and see if there was a noticeable improvement in signal quality or an increase in the number of acceptably received signals. Fortunately, the TU-680NAB allows connecting an external AM antenna without having to disconnect its own loop antenna, making comparison tests extremely simple and reliable.

With only the loop antenna connected, I logged 29 signals across the AM broadcast band in my ground-level laboratory at midday. Of these, approximately a half dozen were plagued by relatively high levels of noise and interference. When I connected the M-601 and repeated the test, I received 31 signals, only two more than before. However, of the six or so that had been noise-ridden, only two still suffered from interference and noise. Furthermore, many of the signals that had failed to light up all of the tiny LEDs in the tuner's signal-strength display were now strong enough to illuminate the entire string of them. The manufacturer's claimed 23 dB of overall power gain for the M-601 system seems to be substantiated. Even the two new signals were clear enough and sufficiently noise-free to be enjoyed.

Repeating the tests at night (when AM reception generally extends for hundreds of miles), I logged only 28 usable signals without the M-601 (one of the signals that had come in clearly by day was now plagued by interference, presumably from a distant station not received during daylight hours). With the M-601, the number of usable signals increased to 33. I have no doubt that if I had taken the trouble to mount the M-601 outdoors at a somewhat higher elevation, I would have been able to pick up many more usable signals.

The LF Engineering M-601 AM broadcast antenna is a fitting addition to the Denon TU-680NAB or to any tuner or receiver whose owner wishes to explore the revitalized world of AM radio.

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