

Terlin Outbacker Perth HF Mobile Antenna

Reviewed by Jeff Bauer, WA1MBK

Be it musical groups, movies or wildlife, Australia seems to offer the truly unique. Outbacker antennas are no exception. One look is all it takes to realize that these are different...radical radiators, if you will. I can almost hear Crocodile Dundee saying, "Now these are antennas!"

I've heard two extraordinary stories about Outbackers. One has to do with how the ruggedness of these antennas is demonstrated at hamfests. Like misplaced Louisville slug-gers, the sales reps allegedly swing back and repeatedly strike an antenna against the edge of a table. If any chips fly, they're from the table, not the antenna.

The other story involves a Land Rover that rolled over in (where else?) the outback of Australia. The antenna and mount survived the accident—the vehicle wasn't so lucky.

So during the product review period, I was deliberately rough on this antenna, but not out of disrespect, disregard nor dementia. After hearing about the Outbacker and its reputation for being a tough antenna, the Product Review Editor may as well have said to me, "Go ahead...I dare you!"

Here we review the 150-W, 4-foot-long model PERTH for 75 through 10 meters, along with the OBSB spring-base mount. I used the antenna at 100 W and below, as most users would. Models capable of up to 500 W PEP are available.

Antenna Construction

The Outbacker is a light-weight but rugged two-piece antenna that weighs a scant 1½ pounds. The bottom section is comprised of a fiberglass rod with a helically wound copper radiator, encased in an epoxy resin. Taps for the eight HF ham bands (80 through 10 meters) are provided for fast band-hopping. These taps point downward so as not to collect water. Band switching is accomplished by changing the band taps on the Outbacker with the "Wander Lead," a cute name for a jumper wire with a plug on each end. Tuning the antenna for resonance in a particular part of a band is done via the adjustable whip at the top. The antenna terminates at the bottom with standard 3/8-24 threads.

Mount

The OBSB (Outbacker spring base) mount is the mother of all mounts. This *serious* unit,

weighing in at 4½ pounds, is no lightweight, literally or figuratively. The spring portion is zinc-plated spring steel and the base is nickel-plated steel. Both are rustproof. The mount contains an easily weatherproofed integral female UHF connector (SO-239). Mount installation requires a ½-inch-diameter hole for the 3/4-inch hex-head bolt.

Installation and Use

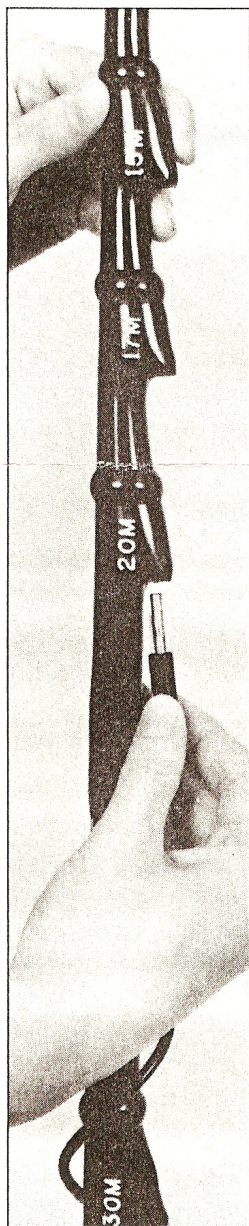
So up on the roof of my car it went. I backed up the mounting hole with a 4- × 4-inch piece of ¼-inch-thick aluminum, just to be on the safe side. Although perhaps not much of a problem in the outback of Australia, hitting overhead objects is more than an annoyance in many parts of the world. At first, the sound of the antenna's stainless-steel whip, referred to as the "Stinger" by Terlin, frequently hitting tree branches was a bit of a humorous novelty. The novelty wore off in a hurry, though!

Many New England tree boughs now sport whiplash scars from the 'MBK Outbacker. However, one tree, somewhere in Northwestern Connecticut, got the last laugh. Upon arriving home from running an errand, I noticed the Stinger portion of the antenna was missing.

Necessary aside: I have a compulsion for making certain that hardware is tight. This compulsion has earned me the nickname "Torque Meister" in some circles. (I believe I've been called other things as a result of this compulsion.) My father can tell you tales of snapped-off automotive bolt shanks. My wife is constantly wrestling with "welded" jar lids. And retired WIAW Chief Operator Chuck Bender, WIWPR, frequently had to use pliers to loosen PL-259s from SO-239s. Chuck could *always* tell which connectors I had tightened! So it is with confidence I can say that it's doubtful that the loss of the Stinger was due to operator negligence.

A phone call to Terlin's US distributor was all I needed to have a replacement shipped. The rep I spoke with went on to advise that the whip portion of a popular 2-meter, 5/8-wavelength mobile antenna "would do in a pinch" to replace the Stinger. The replacement Stinger appeared to be slightly thicker than the original, though we didn't have the luxury of the original for comparison.

When mounted on the rear bumper of my car, the Outbacker



Close-up of the Outbacker Perth antenna showing a few of its band taps and the "Wander Lead" band-changing wire.

Table 2

Outbacker 2:1 SWR Bandwidth

Band	Bandwidth	
	Claimed	Measured
80 meters*	25-50 kHz	35 kHz
40 meters	60-85 kHz	88 kHz
30 meters	<1.5:1 across entire band	As specified
20 meters	325-425 kHz	Entire band
17 meters	<1.5:1 across entire band	As specified
15 meters	250-350 kHz	<1.5:1 across band
12 meters	<1.5:1 across entire band	As specified
10 meters	700-800 kHz	1 MHz

*3.6 MHz is the lowest frequency at which a 1:1 match is attainable.

performed fine, except that I had trouble getting it to load on 40 or 75 meters because of the antenna's very low feed-point impedance on these bands. Integral antenna tuners in modern radios can usually compensate for this sort of problem, but the loss in radiation efficiency resulting from the mismatch still exists.

Terlin has done their homework with this problem, though, by designing into the base of the Outbacker a matching coil to provide a 50-Ω feed point on these bands. To put the matching network in line, you simply install a jumper wire. With other manufacturers, such a matching coil, if available, is usually an added-cost accessory. With the Outbacker, it's built in.

A-B testing with two other popular HF mobile antennas revealed essentially identical received and transmitted signal strengths. So, from a performance standpoint, the Outbacker is on par with other manufacturers' offerings.

The Outbacker's tapered profile, light weight, low wind resistance and ease of band switching and adjustment make this antenna stand above the crowd. With it, there's no need for guy ropes or other anti-sway kludges.

The bottom line? Although the Outbacker antennas aren't inexpensive, neither are other popular mobile antennas. The big plus for the Outbacker is that one radiator and one mount does it all. It requires no extra resonating units or matching coils for multiband operation. The Outbacker is the sturdy, well-built antenna that its reputation promises.

I really enjoy using this antenna. It makes mobile hamming a lot of fun. I like it so much that I've given away my other name-brand HF mobile antenna!

Manufacturer's suggested retail prices: Perth (7.5 feet long, 75-10 meters), \$269; OB-JR8, \$229; OBSB mount, \$69; OB-8 (300 W, 6 feet long, 75-10 meters), \$259; OB-8HP (as OB-8, but 500 W PEP), \$289; OB-M (75, 40, 20, 17 and 10 meters, plus HF marine band), \$389. Distributor: Outbacker Antenna Sales, 330 Cedar Glen Cir, Chattanooga, TN 37412, tel/fax 615-899-3390.

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