

OUTREACH

INTRODUCTION

Thank you for purchasing the OUTBACKER. Please take a few moments to carefully read these instructions before installing your antenna. This will ensure that your mobile setup works and works well!

Like all the OUTBACKER range, your antenna is constructed of a very tough, yet flexible, fibreglass core. This core is then helically wound with copper wire, which is hand-tuned to the various "tap" points. A coating of clear epoxy resin is then applied. Finally a layer of coloured polyurethane is applied as a protection against the elements. All fittings on the antenna are solid brass and nickel-plated. The 3/8" x 24tpi stud is made of tough, high-strength, stainless steel.

DESCRIPTION OF COMPONENTS

1. **FIBREGLASS MAIN SHAFT** - Location of helical coils. Base mounting stud is stainless steel with standard 3/8" x 24 threads.
BAND SOCKETS - Non-corrosive and silver-plated sockets are clearly engraved with band markings. These sockets are used for selecting a band of operation.
2. **WANDER LEAD** - Insulated length of stranded wire with banana plug on each end. Used for 80m through to 10m operation. One end should be plugged into the WL socket and the other into the desired band socket. Must be wound (counter-clockwise) from the bottom up, with coils evenly spaced and neither taut, nor hanging loosely. Remove completely from antenna for 160m operation.
NB :- See Specifications for WANDER LEAD replacement lengths.
4. **STINGER / TIP / TUNING ROD or SPIKE** - Steel rod which extends up to 47" out of antenna shaft. Used for fine tuning SWR.
5. **KNURLED LOCKING NUT** - Located at the top of the antenna shaft. Used for holding STINGER in place - finger tighten only!

TUNE-UP AND OPERATION

After following the proper mounting and grounding procedures which are crucial, as mentioned earlier, you are now ready for antenna tune-up.

NB:- The OUTREACH is a multi - piece model. Be sure to screw each section together tightly, before attempting any of the following tuning operations.

1. Route the feed-line to your transceiver, making sure the antenna is properly grounded to the vehicle body at the antenna base.
2. Extend the STINGER from the mainshaft, to the scribe point (3" from the bottom of the STINGER.)
 - a. For operation on 40m, tune your transmitter to 7.250MHz.
 - b. Key the transmitter and read the SWR measured at the transmitter. If SWR reads greater than 2:1, go to Step C.
 - c. If SWR is greater than 2:1, tune your transmitter to 7.295MHz and check the SWR there. If the SWR increases at this frequency, this indicates the antenna is too long and is resonating "low." You will want to shorten the STINGER about 1/4 inch, by loosening the KNURLED LOCKING NUT and making the adjustment. Then re-tighten with fingers only. If the SWR decreases at this frequency, your antenna is too short and you will need to lengthen the STINGER by following the same procedures as for shortening. Continue this process until the SWR, as measured at the transmitter, is as low as possible at your desired operating frequency, on 40m.
 - d. Provided your SWR is sufficiently low, (less than 2:1 at the middle of the 40m phone band), in most cases all that is necessary to do when changing bands, is to move the top banana plug on the WANDER LEAD, into the desired socket for 20m, 17m, 15m, etc. Be sure to wrap the WANDER LEAD evenly and counter clockwise, but not too tightly against the shaft. You can make fine-tuning adjustments by moving the STINGER up or down.
3. 160m. operation is obtained by complete removal of the WANDER LEAD. It will also be necessary to use the STINGER to adjust for lowest SWR on the desired operating frequency. You must adjust the STINGER for the lowest SWR on 160m. With the STINGER set at the scribe point, the resonant frequency is approximately 1.830 MHz. To raise the resonant frequency, push the STINGER in.
The length of the wander lead should not be altered for any reason.

TROUBLESHOOTING

EXTREMELY HIGH SWR - Check all connections for opens, or shorts. Make sure the WANDER LEAD extends from the WL socket for your desired band of operation. Make sure the WANDER LEAD is evenly spaced as it wraps around the antenna, counter clockwise, from the bottom up. Again, remember, do not wrap too tightly. Also, remember that a quarter wave vertical needs a large span of metal/ground beneath it to act as a counterpoise.

MODERATELY HIGH SWR - Make sure the antenna is not unusually close (parallel) to any metal such as the trunk, or side of an RV (see INSTALLATION). Recheck the integrity of your grounding. Try retuning the STINGER at the desired operating frequency.

Remember there are more important aspects of mobile installations than having a 1:1 SWR. It is okay and fully acceptable if your SWR should vary from 1:1 to 1:8. Pay special attention to grounding and antenna placement.

CARE AND MAINTENANCE

All OUTBACKER antenna are fitted with a rubber "O" ring inside the tip to prevent water entering the mainshaft, however, condensation will accumulate on the inside of the shaft, do not be alarmed. This condensation will not harm the antenna, nor will it cause inferior performance. Just remove the KNURLED LOCKING NUT and shake out any water. Check your antenna after heavy rain.

To clean your antenna, wash it with warm, soapy water and wipe dry with a soft cloth. Apply a thin coating of non-abrasive, car wax. Buff the antenna to a shine. Do not use cleaners with an acetone base as this will strip the shiny coating.

MOUNTING YOUR OUTBACKER

Correct mounting of your OUTBACKER is of utmost importance to obtain successful antenna performance. Your OUTREACH / OUTFITTER is not recommended for use with the OUTBACKER OB360 but can be used with any standard 3/8" x 24tpi mount.

We highly recommend the Alpha Delta OUTPOST Tripod/ground coupler ground mount system for use with the OUTREACH.

Trunk Lip and Hatch Mounting are not recommended for antenna over 4' in length.

Check your mount and antenna occasionally to ensure everything remains snug OUTBACKER assumes no liability for antennas lost as a result of loose mounts, or hardware.

INSTALLATION

Your OUTBACKER antenna can be installed on cars, trucks, RVs and for fixed operation (condos, apartments, etc.). As with any antenna system, there are no specific rules to follow. However, here are some helpful suggestions.

1. Mount as high as possible, and as far away from other vertical metal areas as possible. If mounting in a condo, use a metal balcony rail where possible, or three-inch wide copper foil (minimum 20 ft.length) for counterpoise.
2. The optimum mounting location for any mobile, is dead centre of the vehicle roof. However, since this is not usually practical for most HF antennas, mount your antenna on the drivers side trunk of the vehicle to avoid tree limbs, etc. (see Trunk Mounting section).
3. Use high grade 52-ohm RG-58cu coax, or similar, with at least 95% shield. Marine grade coax is the best. Do not use foam coax as it will deform in heat and absorb moisture. Avoid solid center conductor-type coax as it breaks easily. **DO NOT SPLICE THIS "RUN" OF COAX.** It should be a single, unbroken length from transceiver to antenna mount. Use Coax Seal to protect cable where its wires separate at mount.
4. A solid electrical ground is an absolute necessity for proper and successful antenna performance. This is the most important yet often overlooked step in all mobile antenna installations. **DO NOT IGNORE THIS STEP AND DO NOT ASSUME THE NEGATIVE LEAD OF A POWER CABLE GIVES AN ADEQUATE GROUND CONNECTION. IT DOES NOT!**

Install a wide ground strap between a bolt connected to your auto's frame and the ground lug on your HF radio. A ground/frame bolt is usually located behind your auto's dash. Another ground/frame bolt is also used to secure the front seats in place (look under seat for shiny bolt). A large alligator clip on this ground strap will permit quick connection to rig (and easy rig removal).

NB: trunk lip mounting is not recommended for the OUTREACH.

5. It is recommended that you run your coax as far away from the ECM (Engine Control Module) and existing vehicle electrical systems as possible and that you ground your tailpipe at the tip to help reduce spark plug noise, etc. Now use an Ohmmeter to check your work. No Ohmmeter? Clip leads connected to a Code Practice Oscillator, or a Keyer with sidetone can be used to check connections. Remove the ground strap from your rig. Connect one Ohmmeter prod, or one clip lead only to the ground strap. Connect other Ohmmeter prod, or other clip lead to the center pin of the PL-259 plug removed from your rig. You are now checking for good electrical connections through coax, mount, back to mounts, ground strap, and back to meter. If resistance is above .7 ohms, or oscillator does not produce tone, recheck/re-scrape all ground connection points until "poor connection point(s)" are found. THIS STEP ENSURES YOU RADIATE "A KILLER" SIGNAL!

If your OUTBACKER antenna is to be used in conjunction with The Alpha Delta OUTPOST, please read instruction sheet enclosed with the Tripod on purchase.

Specifications

Model: OUTREACH (Centered to Nth.American bands)

Band Coverage: 160m-80m-75m-40m-30m-20m-17m-15m-12m-10m

Feed Impedance: 48-52 Ohms

Power : 150 watts (pep)

Construction: Brass - Stainless Steel - Urethane, 1/4 wave helical.

Mounting: 3/8" x 24tpi (UNF) Male thread (Stainless Steel)

Wander Eead Eength: WL for the OUTREACH is 59"plug tip to plug tip

Supplied with your OUTBACKER antenna

Part# Qty Description

1 x Main shaft (Black) - the OUTREACH has a multi-piece main shaft OBWL 1 x Wander lead (WE stands for
wander lead) OBSP120 1x 47" long tuning spike (installed at manufacture)

Please quote Part# when ordering replacements.

Optional

OBSB Heavy Duty fixed mount.

OBADP 3/8" unf to 1/2" bsw Stainless steel adaptor.

OBQD 3/8" TO 3/8" Quick disconnect adaptor(Not suitable for the OUTREACH)

OBMT M-Type to 3/8" adaptor, (brass) (Not suitable for the OUTREACH)

OBKNK Knocknown Knuckle 3/8" to 3/8" unf (Not suitable for the OUTREACH)

Should you discover your OUTBACKER antenna has been damaged in transit, please notify your supplier, or write to the manufacturer within seven days. Claims made more than 7 days after delivery will not be recognised.

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