

# OUTBACKER JOEY MANUAL

## INTRODUCTION

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

Like all OUTBACKER antenna, the Joey is constructed of a very tough yet flexible, fiberglass 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 colored polyurethane is applied as a protection against the elements. All fittings on the antenna are solid brass and nickel-plated, including the PL259 mounting socket.

## DESCRIPTION OF COMPONENTS

1. FIBERGLASS MAIN SHAFT - Location of helical coils. Base mounting PL259 brass nickel-plated.
2. BAND SOCKETS - Non-corrosive and silver-plated sockets are clearly engraved with band markings. These sockets are used for selecting a band of operation.
3. WANDER LEAD - Insulated 32" length of stranded wire with banana plug on each end. Used for 80m through to 2m operations. One end should be plugged into the WL-32 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 75m operation.
4. STINGER/ TIP/ TUNING ROD or SPIKE - Steel rod which extends up to 15" 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

The Outbacker Joey antenna is designed to be used in conjunction with low power portable transceivers (20 Watts PEP Max). On most transceivers a right angle PL259 adapter to mount the antenna on the rear of the transceiver is recommended. It is not recommended that the antenna be used portable when connected to front mounted BNC type sockets. Physical damage to the front panel may occur

Best results will be obtained when the transceiver is placed on the ground with the antenna placed vertical to the ground and a 12 foot counterpoise wire is connected the earth tag on the transceiver.

1. When attempting to tune the antenna, stand as far away from the unit as possible as the proximity of the human body to the antenna will alter antenna resonance. NB. When using an antenna such as the Outbacker Joey on a portable above ground type transceiver it is always difficult to obtain constant resonance. All measurements at manufacture were achieved with the unit placed on dry-hard ground with a 12' counterpoise attached.
2. Set the STINGER to the scribe point which is marked on the STINGER (length from scribe point to tip of STINGER is 13"). This position (length) stays the same for all bands other than 6m. **When using the Outbacker Joey on 6m it is necessary to lower the tuning stinger down into the mainshaft until only 4" of stinger remains out A scribe mark indicates this position as well.**
  - 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. If less than 2:1, go to Step D.
  - 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. 80m 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 80m. With the STINGER set at the scribe point, the resonant frequency is approximately 3.850 MHz. To raise the resonant frequency, push the STINGER in. When operating the antenna on 6m, or 2m, the length of the black WANDER LEAD (32") is a critical factor as it forms an integral part of the antenna tuning. **Its length 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. Try altering the position of the counterpoise or use an earthing stake.

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 2:0. Pay special attention to grounding and antenna placement.

#### **CARE AND MAINTENANCE**

**NB: The Outbacker Joey antenna is not to be used as a mobile vehicle antenna. Stationary use only.**

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.

#### **SPECIFICATIONS**

Model: Joey (Cut to American frequencies not for resale outside North America)

Band Coverage: 80m-75m-40m-30m-20m-17m-15m-12m-10m-6m-2m

Feed Impedance: 48-52 Ohms

Power: 20 watts (pep)

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

Mounting: PL259 (UHF) plug (brass)

Wander Lead Length: 32" Plug tip, to Plug tip.

#### **Supplied with Joey antenna**

<u>Qty</u>	<u>PaH#</u>	<u>Description</u>
1 x		Main shaft. (Black)
1 x	OBWL	Wander lead. (WL stands for Wander Lead, 32" in length)
1 x	OBSP15	15" tuning spike

*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 recognized.*

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