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## OUTBACKER™

### INSTALLATION & OPERATION GUIDE

#### ANTENNA TUNING

- i. After unpacking your OUTBACKER™ antenna, adjust the tuning spike at the top, by extending the "tuning tip", to 80mm out. At this point, a scribe mark on the tip should be visible (measured from the top of the tip to the top of the locking ferrule). For the PERTH model only, extend the 1 Meter tuning tip, until the scribe mark is seen (usually 10cm from the bottom). Once you have made these adjustments the antenna is resonant to where it was, when it left our factory. If for some reason it does not resonate correctly, please follow the procedures outlined below.  
 ...All OUTBACKER™ models are manufactured to give an S.W.R of better than 2:0.1.
2. (A) To tune the antenna, select the 40 M band and tune your TX to 7.090 Mhz, key the TX. If the SWR is greater than > 2:0.1 go to step (B), if it is less than < 2:0.1 go to step (C).  
 (B) If the SWR is > than 2:0.1, then tune your transmitter to 7.100 Mhz and check the SWR - if the SWR decreases at this frequency, your antenna is resonating too high - or your antenna is too short. You will therefore need to lengthen the "tuning tip" about 6mm. However, if the SWR increases at this frequency it would indicate that the antenna was too long and the "tuning tip" will need to be shortened - continue this procedure, until the SWR, as measured at the transceiver is as low as possible at the desired operating frequency on the 40m band.  
 (C) If your SWR was already lower than < 2:0.1 at 7.090 Mhz (40m) this indicates the antenna is tuned correctly, and all that is necessary to change bands, is to move the top banana plug into the desired socket for 20m - 17m - 15m etc. Be sure to wrap the "wander lead" evenly around the antenna. There should be no need to adjust the "tuning tip" as you change bands, except when operating on 80m.  
 ..To use 80m it will be necessary to alter the "tuning tip" for the lowest SWR on the desired frequency and remove the wander lead COMPLETELY from the antenna (store in a safe place).

NB:- If you have purchased a PERTH model you will notice with it, an extra FLY LEAD, black in colour with a green plug. This lead is used when 40m is selected. The FLY LEAD brings into circuit, a built-in impedance matching device, to allow correct matching on 40m. When required, the FLY LEAD is connected between - ground (normally the base mounting bolt) and the socket marked "G". When not required, the green plug can be stored in the unmarked socket directly above socket "G".

#### MOUNTING & INSTALLATION

1. Always mount your antenna as high as possible on your vehicle, and as far away as possible from other metal objects.(eg:- AM, VHF - aerials, carry racks etc)
2. The mounting base when supplied as part of the OUTBACKER™ antenna, must be bolted to a strong fabricated bracket (as per drawing) made to suit your vehicle.
3. The optimum mounting location for any antenna is in the "dead centre" of the roof, however this is not always practical for most H.F. antennas, the next best location is usually in the centre of the drivers side of the boot (to avoid low hanging curb side branches) or on the front or rear bumper. If you must use a bumper mount, it is recommended you use a base extension to bring the bottom of the antenna to at least the height of the top of the boot or bonnet. If the OUTBACKER™ OSB spring base is not used, the 3/8 unf stud at the base of the antenna may be removed and the antenna attached to other 3/8 unf (male or female) type roof, or trunk lip mounts.
4. To ensure correct tuning and performance, no matter where your antenna is mounted - a good ground or earth is an absolute necessity! - It is highly recommended you run a heavy copper braid (15 to 25mm) from the base mounting bolt, to the frame of your vehicle.
5. It is also recommended, that you run the feed line as far away as possible, from the engines ignition management system, to eliminate induced R.F. and electrical interference to your receiver..

TO CLEAN YOUR OUTBACKER™ ANTENNA SIMPLY WASH WITH WARM SOAPY WATER AND POLISH WITH CARPOLISH.

Specialising in H.F. Multi Frequency Mobile Whips and Heavy Duty Base Springs

