



Model

**M45T**

Highly flexible

UHF Whip

400-520 MHz

Field Trim

2.1 dBi Gain

170mm

- Highly flexible multi-strand wire core with PVC jacket outer and chrome plated mount ferrule.
- Mounts to any antenna base with 5/16"-26 brass male thread

## INSTALLATION GUIDE

[www.zcg.com.au](http://www.zcg.com.au)

### ANTENNA DESCRIPTION

For the UHF range 400-520MHz, this highly flexible 2.1 dBi gain whip can be mounted to any antenna base with 5/16"-26 brass male thread and trimmed in the field to the desired frequency using an SWR meter or network analyser.

The M45T is virtually unbreakable, constructed of a multi-stranded stainless steel core, PVC outer jacket and a chrome plated brass ferrule. To field trim, remove the blue cap and trim gradually from the top.

A detailed specification sheet is available to download from our website [www.zcg.com.au](http://www.zcg.com.au)

### SELECTING THE MOUNTING POSITION

The whip can be mounted in various positions on a vehicle, or some other fixed location.

To achieve best performance from your antenna, these are the important principles you should consider when selecting the mounting point:

1. **The antenna mounting base will require a metal ground plane for effective performance.**
2. **Mount the antenna in as high a place as possible.**
3. **Mount the antenna as far away from other antennas and metallic objects as possible to avoid interference and distortion of the 360° omnidirectional pattern. At least 350 mm side clearance is desirable, preferably more.**
4. **Mount the antenna vertical, not at an angle.**

### IMPORTANT FIELD TUNING NOTES

Because whips will tune differently on differing ground planes and antenna bases, M45T cannot be supplied factory tuned and there is no cutting chart.

The whip must be installed into its final position and gradually trimmed to the desired frequency in the field while mounted onto a minimum 1/4 wave ground plane or appropriate ground independent elevated feed mount base to achieve stated performance levels.

### TUNING GUIDE

1. Install the whip and antenna mounting base in the intended final position. As mentioned, this is most important.
2. Connect the antenna to your SWR meter and the meter to your radio.
3. Set the correct frequency range and power band on the SWR meter.
4. Tune your radio to the desired centre frequency within the 400-520 MHz range.
5. Press and hold the transmit button on the microphone of your radio and check the SWR reading on the meter.
6. If SWR is greater than 1.5:1, remove the blue cap and trim a short (max.) 2mm length from the top of the whip. It is important to trim only short lengths gradually.
7. Replace the blue cap. Don't forget; this is important.
8. Repeat step (5) to check the SWR reading of the meter again.
9. **Repeat this trimming process very gradually until SWR reduces to less than 1.5:1 at the desired frequency. If SWR dips and then starts to rise, trim no further !**
10. Finally, glue the blue cap permanently in place utilising a contact adhesive..

### Ground dependent mounting options available separately



**OB-2**  
Australian Standard OB base, Black, 5/16"-26 brass male thread, no cable, no connector



**OB-4.7**  
OB-2 mount and cable base, black (available in all white), 4.7 metres RG58A/U stranded core cable, UHF male solder PL259 connector supplied, not fitted.



**MGB-OB**  
Magnetic OB-2 mount and cable base, 105mm diameter, 4.7 metres RG58A/U stranded core cable side exits, no connector - specify requirements

**The options above require a metal ground plane for effective performance.**