

Model

BFB1

**Ground Independent
 Mobile Antenna**

Frequency Range

VHF 70 – 85 MHz

Field tune to 3% Bandwidth

2.1 dBi Gain

- ↳ Mounts into any bracket with minimum 12.7 mm (½") diameter hole.
- ↳ UHF female connector located in the side of the mounting base.

INSTALLATION and TUNING GUIDE

www.zcg.com.au

ANTENNA DESCRIPTION

For the VHF range 70 to 85 MHz, the **BFB1** ground independent mobile antenna features a stainless steel tuning tip which can be trimmed to any 3% bandwidth you desire using an SWR meter.

Standing 1.83 metres tall, the antenna is primarily designed for installation on vehicles operating in off-road and heavy duty situations.

This model offers 2.1 dBi gain and is ideally suited for the emergency services, construction and mining industries.

The radiating element is enclosed inside a 10 mm fibreglass rod and the UHF Female connector located in the side of the antenna mounting base allows easy removal of the feeder cable.

A detailed specification sheet is available to download from our website www.zcg.com.au

SELECTING THE MOUNTING POSITION

Typical mounting positions for this antenna are to your vehicle bull bar or guard using the appropriate bracket. No metal ground plane is necessary for the antenna to operate effectively.

When mounting to a vehicle, to dampen vibrations while travelling we recommend installing the antenna onto either the **1269** stainless steel beehive spring or **1270** heavy duty steel barrel spring.

BFB1 can also be mounted in other fixed locations and used as a Base Station antenna.

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

1. **Mount the antenna in as high a place as possible.**
2. **Mount the antenna as far away from other antennas and metallic objects as possible to avoid distortion of the 360° omnidirectional pattern and interference. At least 350 mm side clearance is desirable, preferably more.**
3. **Mount the antenna vertical, not at an angle.**

INSTALLATION GUIDE

Secure the antenna into any bracket with 12.7 mm (½") minimum diameter hole using the nut and washer on the threaded base.

Tighten the nut from underneath to secure the antenna firmly into the bracket.

Suitable 50 ohm feeder cable such as RG58 low loss stranded will be required. Keep the cable length to the minimum necessary. Fit a UHF Male connector to one end of the cable and fit this into the UHF Female connector located in the side of the **BFB1** antenna base.

Route the cable carefully to your radio. Avoid high heat areas in the engine bay. Ensure that the cable is not stretched excessively and there are no sharp kinks. Use cable ties, but do not pull so tight as to crush the cable. A damaged feeder cable is a cause of high VSWR and reduced performance.

Carefully fit a connector to suit your radio.

TUNING GUIDE

1. Secure the antenna in the intended final position. This is important since tune will vary in different locations.
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 70 to 85 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, loosen the grub screw in the antenna holding the stainless steel tuning tip to the point where you can remove the tip.
7. Trim a short 2 mm length from the bottom of the tip. It is important to trim only short lengths gradually. Then replace the tip.
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 centre frequency.
10. Finally, tighten the grub screw to secure the tip.

