



Model

AB-BFB-118

Ground Independent

Mobile Antenna

Frequency Range

118 – 137 MHz

Field tune to 3% Bandwidth

2.1 dBi Gain

- Mounts into any bracket with minimum 12.7 mm ($\frac{1}{2}$ ") diameter hole.
- N-female connector located in the side of the mounting base.

INSTALLATION and TUNING GUIDE

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ANTENNA DESCRIPTION

For the VHF range 118-137 MHz, the **AB-BFB-118** 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 1.1 metres tall, the antenna is primarily designed for installation on vehicles or structures suitable for heavy-duty applications.

This model offers 2.1 dBi gain and is ideally suited for the emergency services, construction and mining industries, requiring VHF Air Band communications.

The radiating element is enclosed inside a 10 mm fibreglass rod and the N-type 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 a **A-1269** medium-duty beehive spring or **A-1270** heavy-duty parallel spring.

AB-BFB-118 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 ($\frac{1}{2}$ ") 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.

A suitable 50 Ohm feeder cable such as RG58 low loss solid core cable will be required. Keep the cable length to the minimum necessary. Fit a N-type male connector to one end of the cable and fit this into the N-type female connector located in the side of the **AB-BFB-118** antenna base.

Route the cable carefully to your radio. Avoid high heat areas or electrical interference locations. 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 118-137 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.