Thank you for purchasing our Horizon centre fed dipole. The antenna is designed and manufactured in Australia and is intended to offer simple and very efficient operation on the 40 and 80 metre bands. At only 24 metres in length it will easily fit into most installation scenarios. Commercial antennas are rated with a usable VSWR of 2:1 or under. Rating the centre fed using this method the band width is appropriately 150 kHz at 40m and 75 kHz at 80m. In most cases this will be fine but if you prefer wider band width or tighter VSWR the addition of a good quality tuner will help.

SPECIFICATION:
40 and 80m bands
200w SSB
24 metres physical length
Wire used: 1.6mm G304 grade stainless steel
Trap and balun winding: All copper

SET UP:
The antenna can be set up either supported at each end or centre supported as an inverted “V”. Your choice of method will depend entirely on your installation scenario. Stretch the main radiating elements outwards and fix tight at each end. Although the wire is G304 stainless steel and it can be pulled quite tight without stretching there is no need to over tension the antenna. Pulled up “just” level or a slight droop is all that is needed. This antenna is ground independent so earthing is not required.

When manufactured the antennas are hand tuned at approximately 3m (10 feet) above ground. For this reason when you install the antenna its height above ground or proximity to trees, buildings, sheds and so on will affect VSWR. You may have to retune for your requirements.
TUNING Introduction
As stated in the product introduction band width narrows as VSWR requirements tighten. As a commercial manufacturer we rated this antenna with usable VSWR figures of under 2:1. The lower the desired VSWR the narrower the perceived band width will be. For example if 2:1 is acceptable to you will have a usable band width of approximately 300 kHz on 40m. If nothing over 1.2:1 is acceptable then band width will be very narrow. In this case the addition of a tuner may be desirable to avoid constant retuning.

If you approach tuning with a practical understanding of the antenna and take your time you will find it quite easy.

TUNING:
The first thing to do is work out your target centre frequency, for example you may like to operate the 40m band between 7050 and 7160 which makes your centre point 7105. Do the same for the 80m band. After installation check the VSWR on BOTH bands. If both bands are high in centre frequency you can use the wire rope grips nears the end insulators to lengthen the antenna.

If one band is perfect and the other is a little off your target, adjusting height and angle in most cases will remedy. Another possible solution is to run the antenna with a good quality tuner.

Also be aware any metal, buildings or trees and so forth near the antenna will affect tuning. Clamp off and make sure loose wire is cable tied, taped or otherwise attached to the main radiating element.

Some general considerations.

* Use good quality UV stabilised rope or cord to secure the antenna. It will last longer and therefore is cheaper in the long term

* Generally speaking the best VSWR is easier to achieve when the antenna is installed at a ¼ wave in metres above the ground in reference to the target frequency. For example the 40m band antenna should be 10 metres above the ground, a 20m band antenna 5 metres above the ground. For this reason a multi or broadband antenna will always be a compromise. With this rule in mind, if your favourite band is 40m then try to install the antenna to favour this band.

* Why do we use stainless steel? We get asked this question a lot. In truth, copper is very slightly more efficient but the trade-off is a shorter life span. Additionally, copper corrodes and stretches. Stainless does not. So while this antenna is a moderate investment in price, the materials used mean it will serve you well into the future.