

I-PRO Traveller

A vertical dipole from Pro Antennas



DX on the water's edge - the whole antenna is very light and can be moved around easily.

PORTABLE OPERATION. I was really looking forward to reviewing the I-PRO Traveller, a vertical dipole antenna from Pro Antennas. I reviewed that manufacturer's DMV Pro antenna in the May 2009 edition of *RadCom* and was very impressed. The Traveller is a new design from Carl Kidd, G4GTW and promises great things for the portable DXer or home-based amateur with little garden space.

The antenna is a centre-fed half-wave vertical dipole with capacity hat end loading. Capacity hat loading was chosen to keep the inductive loading to a minimum and so minimise losses. The added benefit is that you have an antenna that can cover 40m-10m without an ATU, but which stands only 3m tall. The other bonus is the antenna doesn't need any form of ground plane or radials to work.

The Traveller power specification is 1200W PEP 20m-10m and 1000W PEP on 40m.

NEAT FIT. The antenna comes packed in a sturdy cardboard box. Once everything is pulled out you are left with a selection of components, including the star-shaped quad-leg base, the two capacity 'hats' and

the multi-band centre matching section. You can opt for the 10-20m or 40m versions, or buy the separate optional loaded dipole centre piece and have two antennas in one.

All of this fits neatly into a 1m long custom-built black nylon holdall, which can easily be carried around or put into a car boot. The Traveller also lends itself to explore portable operation overseas as it is easily transported in its compact carrying holdall.

The dipole pieces are made of high-quality anodised thick-walled aluminium stock, with right angle bracing and thumbwheels to enable a) the four legs to be adjusted on uneven ground and b) the lower capacity hat legs to be moved upwards to tune the antenna – this is

especially important on 12-10m.

All nuts bolts and screws are stainless steel with plating and anodising protecting bracketing and tubing. This means that it can be left outside as a permanent installation.

The quad-legged base allows the Traveller to be used with the ground sloping by as much as 30°.

CONSTRUCTION. The first stage of construction is to set up the quad-legged based. To help with this Carl supplies a small spirit level that plugs into the base and helps you get the whole thing truly upright. Once you have done that you can slot in the lower capacity hat, multi-band centre matching section and top capacity hat all in one go. This sounds quite complex, but only takes a few minutes.

The capacity hat sections are a slot fit into the centre pieces, with small stainless steel press button clips to lock them into position. If you are likely to leave the antenna up in your back garden you can use the supplied screws as well. We found that the pieces were a very tight fit indeed and disassembling the antenna in cold conditions

was quite difficult. A smear of Vaseline or something similar would help no end.

You then fit a small 30cm long 8mm thick fibreglass support piece which supports the coax feed at right angles to the antenna. Now, you are almost done – you just need to decide what band you wish to use.

Carl supplies the antenna with a coax patch lead. This is fitted with an S0239 socket on one end and plugs on the other and a convenient weatherproofing boot. You then have to decide what band you wish to use and plug the fly lead in to the gold-plated sockets accordingly – this selects different loading coils on the lower bands. He supplies a small laminated instruction sheet with the tapping points shown which makes life simpler.

These tapping points give the rough points for each band. You then tune the antenna to resonance by moving the bottom capacity hat sections up or down, so making them into a V-shape.

The whole assembly weighs around 6kg and can easily be moved around by one person.

Using a Timewave analyser Chris, GODWV and I were very quickly able to resonate the antenna on each of the bands from 20m - 10m.

The bandwidth of the antenna was very impressive – we were able to get SWR lows of around 1:1.10 - 1:1 in the middle of each and concur with the I-PRO Traveller specifications that you should be able to get the following 1:1.5 bandwidths:

20m – 300kHz
17m – 500kHz
15m – 900kHz
12m – 1800kHz
10m – 2200kHz

An antenna analyser is not required to set up the Traveller - the built-in SWR metering in



The antenna packs away neatly into its own carrying case.



Set up on a very windy Norfolk beach took just a few minutes - This is Chris GODWV checking the SWR.



The antenna comes with a spirit level to ensure that you get it perfectly upright.

most radios will be fine. The choice of transceiver is made easy because no ATU is required.

We were able to use the antenna without an ATU, only having to move the arms up or down to centre the lowest SWR point on the portion of the band we wished to operate.

If you wish to operate 40m you remove the centre multi-band centre matching section and replace it with a dedicated 40m section, complete with loading coils. We were able to achieve a 1:1 match on 40m with about a 70kHz bandwidth between 1:1.5 SWR points.

The whole structure is quite sturdy and survived gale force winds during the test period without guying, but make sure you fully tighten the thumbwheels that hold the base legs in place.

But what you really want to know is how does it perform?

PERFORMANCE. To give the antenna fair test we pitted it against a wide range of antennas – and even took it to a very cold and windswept Norfolk beach in January (not recommended!).

We first tested it against Chris, GODWV's Cushcraft A4S tri-band beam, which had been lowered to around 25ft due to high winds. We also compared it against Chris's 132ft doublet at the same height. We then tested it against my dipoles and 132ft OCF dipole (Windom) at 25ft and a 65ft inverted L with 9:1 UnUn and ground system.

At Chris's we found that the antenna performed pretty much the same as the 132ft doublet on 20m and 17m. Sometimes it was slightly better and sometimes slightly worse. What was gratifying was that the noise level was lower on the Traveller by

about 2-3 S-points. The similar reports on the two antennas were confirmed by a contact with a station in Italy who couldn't tell the difference between the two antennas.

We also listened to CW from a station in 8P9 (Barbados) and there was no difference. Chris's beam was consistently 2-3 S points better, which was to be expected.

With the 40m centre section fitted Chris was able to take part in our Norfolk Amateur Radio Club's 40m net with a station in Koblenz, one of Norwich's twin cities, receiving 59 reports each way with 100W. In these tests the Traveller was down slightly on the 132ft doublet on 40m, but that is hardly surprising given that the antenna is only 3m tall – a fraction of the full 40m wavelength.

At my QTH the Traveller was quite competitive on a closing 20m band. Signals were roughly equal to my dipoles and 132ft off-set centre fed dipole, sometimes slightly weaker as propagation varied. The antenna was more than capable of working across the Atlantic to the USA, Canada and the Caribbean.

It was around 2 S-points down on my 65ft inverted L with 9:1 UnUn with the top at 9m, which is a good DX performer on HF.

On 17m the I-PRO was either equal to or outperformed all my other antennas by about 1 S-point.

We then took it to Walcott on the North Norfolk coast and set it up right next to the sea's edge. Carl is a keen advocate of waters-edge DXing and we soon saw why. The sea acts as a giant ground plane which, coupled with the zero degree takeoff stretching out to the horizon, guarantees Yagi-like performance.

We were soon listening to VK (Australia) stations aplenty on 20m, and had a genuine

Designer's comments

The I-Pro traveller was designed to meet my own portable demands. I think the end result is a robust, go-anywhere, self-contained antenna that provides low visual impact, ease of use and high performance.

I am pleased that Steve got the opportunity to go portable. He experienced the effects of 'adding a little salt water' to an antenna that has low angle performance. The addition of a salt water ground plane is dramatic and should come with a health warning, 'highly addictive'. Thanks for braving the winter elements!

Carl Kidd, G4GTW
Pro Antennas

57-59 short-path QSO with Mike, VK3XL near Melbourne, straight out across the North Sea.

Mike was using a two-element tribander and 200W, but switched to a quarter-wave vertical and we were still able to continue the conversation. That's amazing performance and I had to video the QSO as I couldn't believe it.

Mike also said that we were the only station he could hear out of the UK. We also logged VK3BCY and VK3VBC and could easily hear many of the IBP beacons on 14.100MHz, including LU4AA in Brazil. Unfortunately, 17m (18MHz) was dead.

We then swapped over to 40m and had solid 59+ QSOs with a lot of European stations. All this with an antenna just 3m high.

Both Chris and I are now sold on the enhancement to be had from sea's-edge locations and will be returning to the beach – but perhaps when it is warmer!

What did strike me during the tests was how easy the Traveller is to erect and, as it is freestanding, how effective it is without needing high supports or ground radials. This really can be put up in a small back garden or park, or on the beach, for an afternoon's HF DXing without too much trouble.

I do urge you to try HF operation from the sea's edge – I would not have believed what you can work if I hadn't seen it with my own eyes.

The Multi-band I-PRO Traveller costs £279.95 for either the 20-10m or 40m version. You can add the other bands to either version by buying the alternative centre matching section for £119.95. The only other option is the custom-designed I-PRO branded nylon carrying holdall at £19.95.

For more information about the antenna see www.proantennas.co.uk or call 01489 789960. My thanks to ProAntennas for the loan of the aerial.