

# The I-PRO Traveller

part no. 11440



Thank you for your purchase, please take your time to digest some of the important building tips and the essential matching/adjustment techniques.

You will need 8m of good quality 50 ohm coaxial cable (this is the minimum length). Your coax cable will require a PL259 plug to connect to the I-PRO. No balun is required. For matching the I-PRO to your radio, you will require a method of measuring your standing wave ratio.

The I-PRO is very straight forward to put together. The following tips will help increase the life span of the product. The fitting of the centre matching section should be carried out with the utmost care; excessive force will damage the wall surface of the soft alloy tubing. To preserve the condition of the alloy tube sections, use the techniques shown in the following series of pictures. A good rule of thumb – if the components are aligned correctly **minimum** effort is required.

## Step 1

The quad legged base is very simple to set up, the levelling device should be pushed firmly and squarely onto the base support tube. If the wind is fresh to strong, each of the leg adjustment knobs should be very well tightened. If the antenna is being used in very exposed locations, the addition of three light weight nylon guy lines is recommended. The best guy attachment point on the I-PRO is 10mm above the 8mm support rod. Avoid attaching any material near the top or bottom ends of the I-PRO.

## Step 2

Start the I-PRO build by fitting the support rod into the top of the centre matching section. Both folding capacity hat sections are identical, unfold the arms and secure. You are now ready to build the top section of the antenna. Align and push fit the centre matching section to the vertical section of the top capacity hat, as illustrated below.



## Step 2 continued

The lower capacity hat is dropped into the fibre glass tube of the quad legged base.



Fit the centre matching section (with the previously fitted capacity hat), onto the lower vertical section. If the I-PRO is being set up for more than a day or two, it is good practice to use the supplied self tapping screws to secure the centre matching section. This will help maintain good electrical conductivity and will also stop slight movement which, over time, will cause unwanted wear.

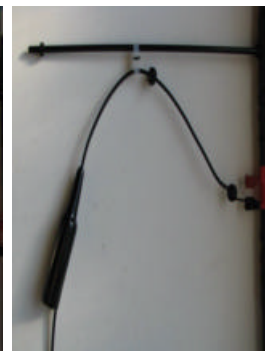
## Step 3

### Preparing the coax patch lead

-1-



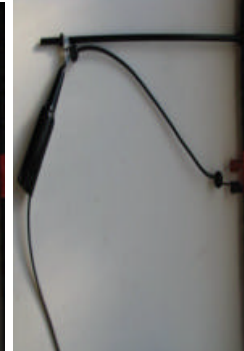
-2-



-3-



-4-



The protection boot is slid back to reveal the SO239 socket. Install your coaxial cable and slide the boot over the connections as far as possible. Slide the cable support clips along the rod, up to the end stop. Press the button of the plastic toggle and slide it up to the cable support clips. When the cable support system is adjusted correctly, there should be no pulling forces from your coax feeder transferred to the connectors. A simple adjustment can be made by pushing the rubber end stop along the rod towards the centre section by a couple of inches. It is good practice to do a final check on the coax connection plugs, just to make sure they are pushed in fully.

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**WiMo Antennen und Elektronik GmbH**

Am Gäxwald 14, D-76863 Herxheim Tel. (07276) 96680 FAX 9668-11

<http://www.wimo.com>

e-mail: [info@wimo.com](mailto:info@wimo.com)

## Step 4

### I-PRO matching and ground conductivity

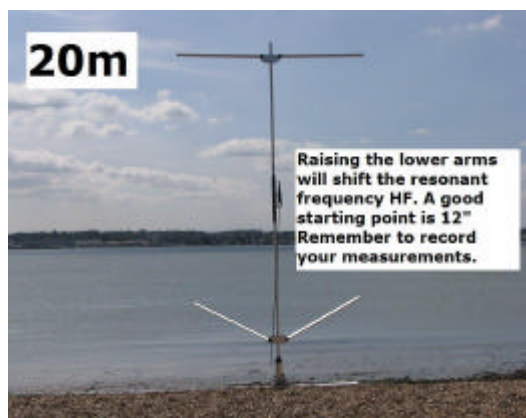
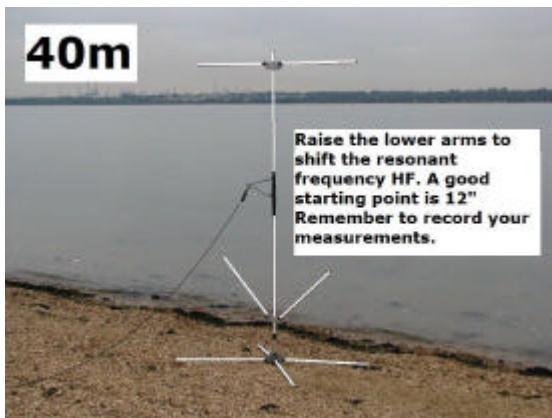
The resonance of the I-PRO is affected by extremes of ground conductivity. Using the I-PRO right next to salt water will move resonance down in frequency - this shift can be as much as 100 kHz. This is quite a predictable change and can be easily compensated for. Raising each of the lower capacity hat arms will shift resonance higher in frequency. The elevation required to obtain a satisfactory match should be recorded for future reference.

Always remember to run your coax feeder at 45 degrees away from the I-PRO cable support rod.

### Changing bands with the I-PRO

A separate laminated card is provided to illustrate the band changing connections.

Practical handling tips are illustrated below



## Considerations for good efficiency

Do not run high power levels with the antenna presenting an SWR above 1.5:1. For power levels up to 200 Watts PEP, miss-matches of up to 2.5:1 can be compensated for with an ATU. Never be tempted to use a high power ATU in order to run hundreds of Watts into a miss-matched I-PRO.

Another good rule of thumb - maximum efficiency will be obtained by using the antenna close to resonance with **no ATU in line**; this will minimise feeder losses.

### Safety

A little thought and consideration should be given before setting up the I-PRO in public places. When transmitting, the proximity of the antenna to on-lookers should be considered in-relation to the RF field. Additionally a no contact zone should be kept in mind around the antenna, for obvious reasons.

### Maintenance

Carrying out the following service procedures will help keep your I-PRO in good condition for years to come.

Each of the folding arms and the push together centre matching sections should all present good electrical conductivity. If the I-PRO is installed as a base antenna, it is good practice to use the folding action of the arms periodically. Moving the arms back and forth half a dozen times with a little WD40 will help keep the contact surfaces in good condition. For longer term maintenance, each arm should be removed to clean the contact surfaces more thoroughly.

Do not be concerned with the paint wearing away around the bearing surfaces of the adjustment screws. Long term corrosion will be minimal due to the use of zinc plated 2mm gauge steel brackets.

### Basic specifications

Multi-band I-PRO power handling capability (antenna at resonance): 1200 Watts PEP

40m I-PRO power handling capability (antenna at resonance): 1000 Watts PEP

Muti-band I-PRO, user selected band operation: 20, 17, 15, 12, 11 & 10m

Span across capacity hat arms: 1700mm

Packed dimensions: 200 x 200 x 1000 mm

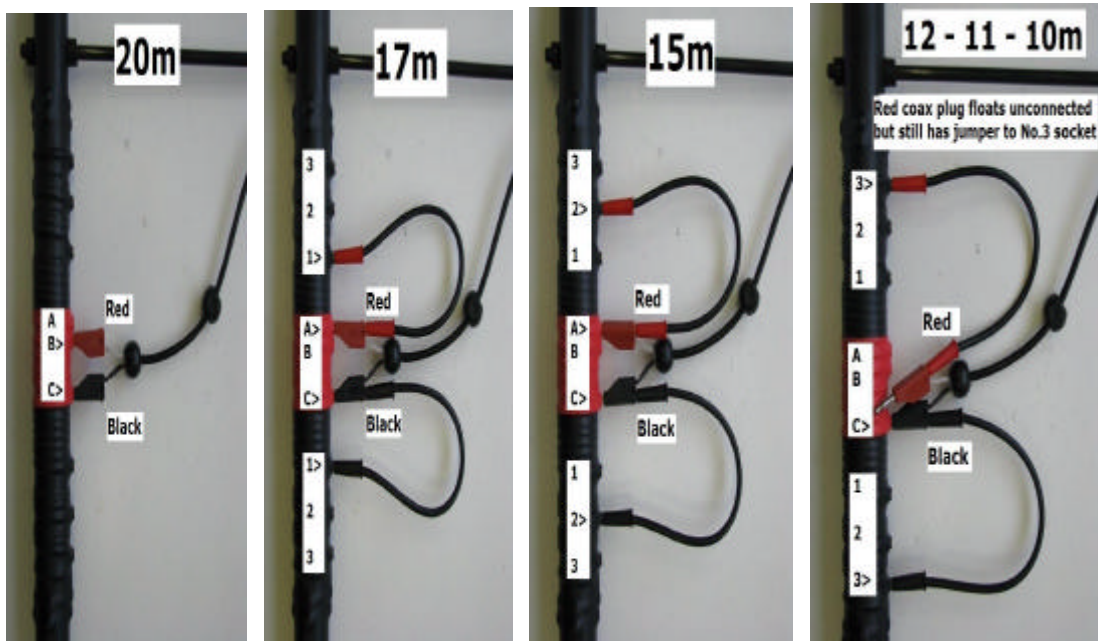
Erected height of Muti-band I-PRO: 3m

Erected height of the 40m I-PRO: 3m

Total weight: 6.6 kg

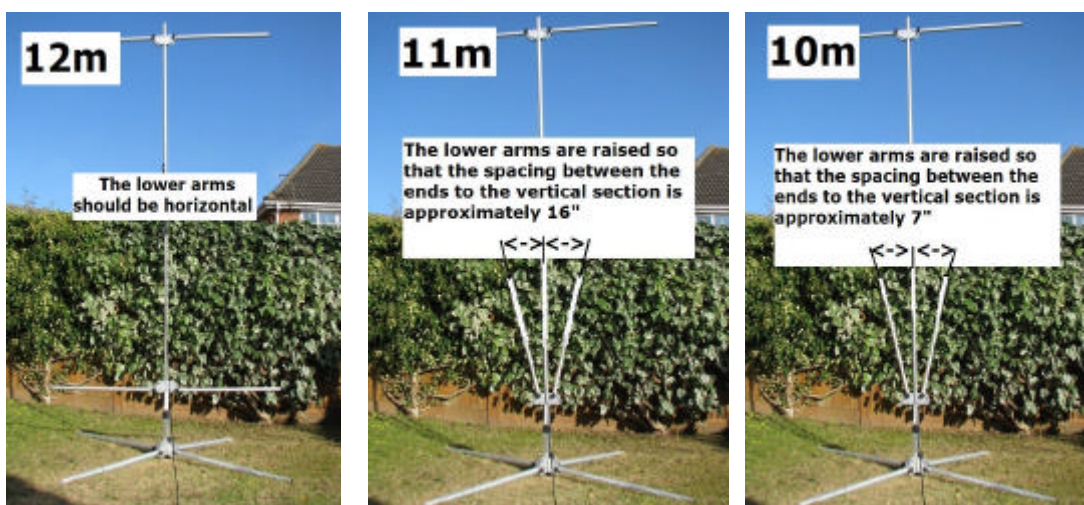
## Connections for the multi-band I-PRO

The matching section is installed so that the support rod is positioned above the connectors



\* Remember to change the red input coax plug when moving up from 20m\*

The multi-band I-PRO: elevate the lower arms for 11m & 10m  
(Remember the position of the jumper leads PTO)



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## PACKING CHECK LIST

2 x Vertical sections with folding arms

1 x Multi-band matching vertical centre section

1 x Coax patch lead assembly, 2 jumper wires red/black

1 x Quad legged base with spirit level installation aid and 4 x foam bag protectors

1 x Instruction book

1 x laminated instruction sheet for set up of 20m-10m matching section and arm adjustments.

1 x Spares kit: (1 x spare adjustment Knob, 2x and stainless self tapping screws for semi permanent installation of centre matching section, 1 x spare screw)

1 x Custom made heavy duty I-PRO carrying holdall.

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