

I-Pro Home Multi-Band HF Antenna



Assembly Instructions

I-Pro Home Assembly Instructions

Thank you for purchasing this unique antenna product. We hope that it will provide you with many hours of operation and pleasure for years to come.

Please take a little time to carefully follow the instructions and study the pictures to help understand the correct positioning and alignment of various components.

Contents

The packing tube should contain:

- 2 x 1 inch diameter alloy 2.5m main element sections
- 1 complete with end cap and capacity hat securing bolt
- 2 x 3/8 inch diameter alloy 2.5m capacity hat elements
- 1 x GRP rod centre joining insulator
- 1 x GRP rod base support insulator
- complete with jubilee clip retainer
- 1 x 1 inch diameter 300mm centre support arm
- complete with end caps

The small box should contain:

- 1 x matching transformer
- complete with connection strips and mounting jubilee clip
- 1 x galvanised base support clamp
- 2 x cross clamps for the centre support and lower element
- 4 x 35mm M6 bolts with serrated nuts
- 4 x capacity hat element end caps
- 1 x self amalgamating tape for sealing the cable connector

Tools required

A flat head screwdriver, 10mm and 13mm spanners

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Safety

The GRP rod can cause skin irritation and protective gloves are recommended

Ensure you have a safe working area of at least 5m x 3m

The I-Pro home should be guyed for extended operation - see installation for details

Specification

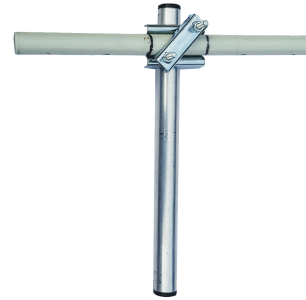
The I-Pro home is a non-resonant dipole with capacity loading end elements. Aerospace alloy is used for the elements and the fasteners and clamps are galvanised for excellent corrosion resistance.

Overall span of main rotatable element	5.0m
Overall span of end elements	2.5m
Total weight including clamp and transformer	4.5kg
Support post diameter range	32 - 50mm
Maximum peak envelope power 20m - 6m	1000W
Maximum peak envelope power 40m & 30m	600W

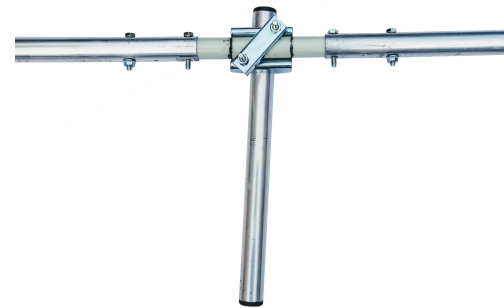
This antenna requires an ATU to minimise the reflected power. For 40m and 30m operation, the ATU built into most modern HF transceivers is unlikely to have a sufficient matching range and an external ATU will be required.

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Assembly



1. Attach the central GRP rod (with 4 drilled holes) to the centre support arm bracket as shown and tighten the clamp nuts.



2. Fit the main elements onto the ends of the GRP rod and align the bolt holes. Insert the 2 outermost 35mm bolts and tighten the serrated nuts. The open main element section (with the end hat securing bolt) is on the right in the picture.

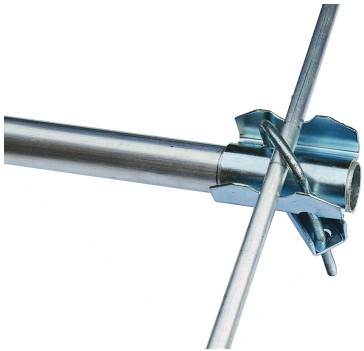
3. Fit the 2 connection strips to the matching transformer and offer the up the assembly to the 2 innermost bolts ensuring that the jubilee clip slides onto the centre support arm. Fit the serrated nuts finger tight.



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Assembly

4. Slide a capacity hat element through the hole in the outer end of the top main element section. Centralise the capacity hat element using the scored alignment marks and tighten the securing bolt by no more than 1/2 turn. Fit the plastic end caps.



5. Attach the lower capacity hat element to the bottom of the lower main element using the second cross clamp as shown. Centralise the capacity hat element using the scored alignment marks and ensure it is parallel to the top element before tightening the clamp bolts. Fit the plastic end caps.

5. Attach the base support insulator to your ground post using the 8 nut clamp aligned with the markings on the insulator. Ensure that the ground post is of sufficient gauge and deep enough to support the antenna safely.

The lower element should be no less than 1m above ground. The ground post can be much higher but then antenna mounting and guying will become more challenging.



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Connection

Your co-axial cable can now be fitted to the matching transformer with a PL259 connector. Seal the connector against moisture using the self amalgamating tape. Wrap the tape tightly from the socket to the plug. Form a small loop prior to taping the coax cable to the centre support arm using PVC insulating tape.



Finally, recheck the alignment of the end elements and check that all the main element bolts, matching transformer connection strip nuts and the jubilee clip are tight.

Guying

The I-Pro home is designed to be lifted onto the support insulator rod for operation and lifted off again after use. This means the antenna can be laid flat when not in use to minimise any visual impact on neighbours.

For extended use, particularly in exposed areas, it is recommended that the I-Pro home is guyed with 3 x 6m lengths of 3mm nylon cord (do not use wire). Attach the guy lines just above the centre support arm clamp with one line pulling opposite to the support arm (and feeder) and the other 2 at 120 degree spacing (either side of the matching transformer). The feeder can now be adjusted to trail away at between 30 and 45 degrees to the vertical.