

# G4TPH ML40 HP Mk 2 Magloop Instructions

Congratulations on your purchase of a G4TPH ML40 High Power Mk2Mag-Loop, the answer to portable operation, at a reasonable price.

The ML40 HIGH POWER consists of a tuning unit, a Loading unit and 10 lengths of Aluminium rails. antennas should handle 100 watts SSB, 50 Watts CW and 35 Watts Data modes. Any more and you may get arching across the capacitor. Not good for your rig.

The following instructions outline the assembly of the ML40 HIGH POWER and outline how to cover all amateur bands from 40m through 15m.

The efficiency figures are based on computer modelling only. No actual comparison with a dipole has been carried out so these efficiency figures are only provided as a guide. (See the Data Sheet)

## Assembly Instructions

- Using the wing nuts supplied, attach 1 rail with a blue dot to each of the bolts located on the back of the Tuning unit. The blue dot indicates the 4mm drilled holes. All other rails have M6 holes drilled in both ends. Star washers supplied and should be placed between the rails.
- Attach half of rails to each of these rails to form a circle. You should now have 5 rails coming from each side of the tuning unit.
- Slide the load unit onto 1 of the last rails at the bottom and attach these rails to each other.
- Lay the completed Loop on the ground and adjust all rails as uniformly as possible to form a symmetrical circle.
- Tighten all wing nuts firmly to insure the circle is symmetrically maintained when lifted into a vertical position. (The Q of the antenna will be affected if these wing nuts are not firmly tightened).
- Using a non-conducting string or other means of holding the antenna up, place the antenna in a position so the bottom is approximately 1 foot off the ground.
- Attach a coax cable to the BNC socket located on the load unit and to your rig.

## Tuning the G4TPH Mag-Loop

To tune the antenna adjust the tuning unit for maximum noise on receive for the middle of the band you wish to work. Key the transmitter and check the SWR. You may find that you will need to make small adjustments at first since your body capacitance will affect the tuning. Unlike most Magnetic loop antennas once the minimum SWR point is found you should be able to work the whole of the band without having to retune with an SWR of 1.5:1 or better. This is one of the major benefits of the G4TPH design.

Page 3 has SWR Charts for the 40, 20, and 15metre bands. All SWR figures have been obtained using the MINIVNA antenna analyser. The antenna will be directional off the sides of the rails. I find that mounting in a horizontal position works very well and provides a omni-directional radiation pattern.

A picture, they say, is worth a thousand words so here are some pictures to help explain the above assembly instructions.

Happy portable operating and Gud DX

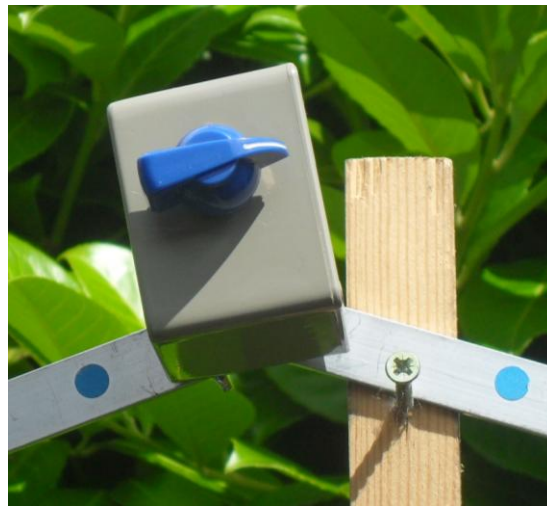
Tom  
G4TPH  
Email: [tom@g4tph.com](mailto:tom@g4tph.com) [www.g4tph.com](http://www.g4tph.com)



**Mk 2 items Supplied, Tune unit, Loan unit, Rails, & Hardware pack**



**Mk 2 Load unit with cable attached**



**Mk 2 Tune Unit & Rails with blue spot**



**Mk 2 Assembled (Testing done with this set-up)**

Minimum Frequency is

6.750 MHz

Maximum Frequency is

22.560 MHz