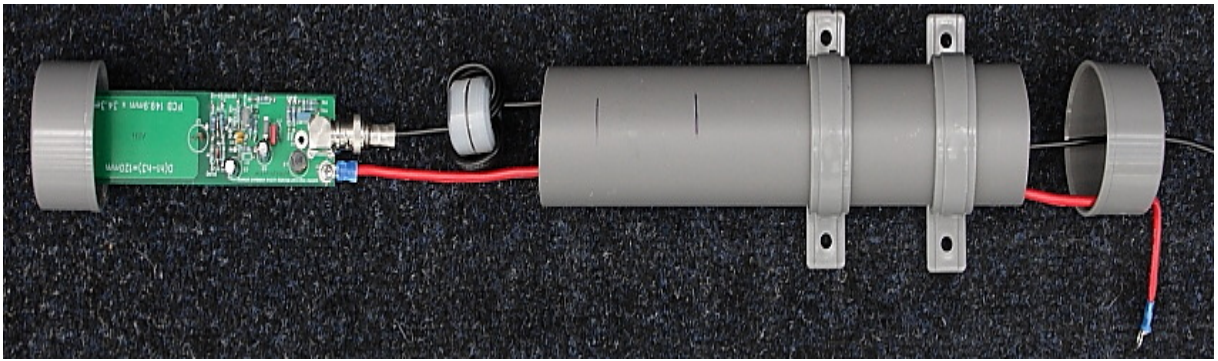


## Installation.



L => R : top cap, antenna PCB, ferrite ring with 4 turns coax, 42mm PVC pipe, PVC clamps, end cap, RED = grounding wire to the mast.

The antenna PCB must be installed **vertically**, in a non-screening, fully closed, rain resist housing.  
For instance a 5cm long, 40mm dia; gray PVC pipe. Which is closed with plastic top and bottom end caps.

**The antenna surface "ANT" must be FULLY ABOVE the metal mast.**

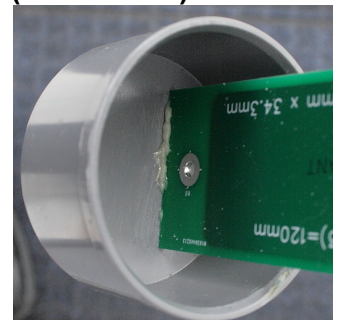
The top of electronics surface (C5) should be at the same level as the mast top, or above it.

**Screw hole "GND h2" must be connected via a thick (reed) wire to a noise free ground connection or grounded metal mast .**

**The THIN (2.8mm) coax should be wound through a ferrite ring core ( $U_i \geq 3000$ ) at least 3 times to block noises on the coax screening outside.**

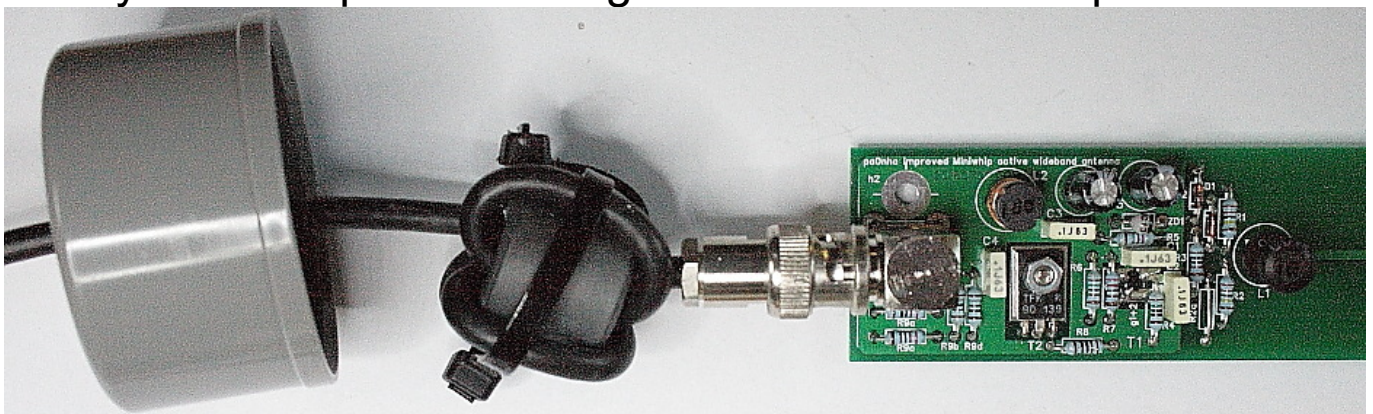
The PCB can :

1. be glued into a PVC end top-cap (see photo) ==>>  
or
2. hanging with hole h1 on one (plastic) screw  
or
3. fixed with distance bushes at h1 and h3.



**Highly recommended** : Leave 13V power supply always switched ON.  
Then the little internally generated warmth prevents condensation.

Every antenna performs as good as its installation permits it to.



(Earlier version antenna PCB).

Here a sample of a mantle current choke. With as much as possible windings thin coax through it.

A HI- $U_i$  ferrite core ( $U_i=5000$ ) will block noises coming from the coax cable.

## For max. sensitivity and best noise free reception:

- Install the antenna unit :
- far away from noise sources
    - as high as possible
    - as free as possible
    - noise free grounded
  - with the antenna surface FULLY above the top of the antenna mast

### Grounding :

The complete Miniwhip\_antenna + splitter + power\_supply must **only be grounded to ONE POINT : the grounded antenna pole.**

### Be sure you are protected by :

an automatic ground-current-leak-switch in the mains supply line.

Screw hole "h2" on the antenna PCB must be connected to the *noise free grounded* antenna mast.

*This mast may not be "grounded" to the polluted mains safety "ground".*

>> **Also** disconnect all safety ground wires at :

- the receiver and
- the 13.6V power supply
- all other connected equipment

### Further :

- Use THIN coax (2.8 mm RG174) as this can be wound easier through ferrite cores.
- Install hi-Ui ferrite material on the beginning and the end of every cable.  
See photo below.
- Wind cables several times through the ferrite hole for far more effectiveness.  
**3 times through the hole = 9 times more effective than 1 time straight through the hole!**

**TIP** : useable and cheap ferrite rings:

**Conrad NR 534480** (Ui=5.000, remove the insulating shells).

**Conrad NR 500683** (Ui=5000, Epcos B64290-L618-X35)

Epcos has more suited ferrite rings (ui=5000-10.000) in various dimensions.