

Pa0nhc improved version of Pa0rdt "Miniwhip" active wideband receiving antenna.

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Properties :

- Fully **class A** circuitry, **clean reception without IMD**.

- **Output IP3 (7 en 8 MHz) +35 dBm, IP2 (1MHz) +45 dBm ( !! ) measured by pa3fwm (TU Twente).**

- New version 13, improved circuitry for T1

- Only 0.6dB insertion loss, for abt. 6 dB higher sensitivity.

- PCBs with enlarged SMD solder pads for easier heating and solder flow.

- **Now using commonly available new type very hi-Ft UHF transistor for T2.**

- Biggest strong signal handling, max output 2Vrms (!).

- Frequency range 30 kHz - 30MHz (extendable down).

- All commonly available parts, only two SMD components.

- The cleanest reception possible if well installed.

- Really wideband with R/C coupling to the receiver, no transformer.

For which signals is the Miniwhip useable ?

The Miniwhip is a vertically positioned antenna. The following properties are valid for **all vertical antennas** :

- Good results for the reception of VLF / LF / LW / MW / SW short distance ground wave communication.

- Good results for the reception of SW signals at distances over 300km (DX).

The Miniwhip is (like all vertical antennas) **NOT suitable for NVIS**, that is for the reception of signals between 3.5MHz and 7.2 MHz and distances UNDER 300km ..

Listen DX at :

The broad band webSDR at the university Twente (50kHz to 30MHz)

[<http://websdr.ewi.utwente.nl:8901/>] They use a "Miniwhip".

Highly recommended to read :

Theory [<http://www.pa3fwm.nl/technotes/tn07.html>] about the practice

[<http://www.pa3fwm.nl/technotes/tn09d.html>] of the Miniwhip antenna (written by pa3FWM).

REM:

You need a clean external (linear, NON-switchable) power supply : 12V to 14V, min. 120mA .

You can find a design for such a **noise- and rattle free** power supply at :

[<http://www.pa0nhc.nl/PS/12V-130mA/indexE.htm>]

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