

LOOP ANTENNA

by I3VHF



no noise – no Limits



WHY NO NOISE?

Radio waves travel by a wave of electric and magnetic fields at 90 degrees to each other.

Regular antennas work by receiving the electric field portion of the radio wave. A small current is transduced on the antenna and the receiver amplifies it and converts it to audio.

Magnetic loop works differently. It transduces the magnetic portion of the radio wave and is basically a LC tuned circuit and it is quite because it is not affected by electrical interference.

The magnetic loop has a small bandwidth, this eliminates interference from nearby stations.

WHY NO LIMITS?

The **LOOP ANTENNA** was designed for radio operators who have limited space for their antenna, yet still want a quality antenna that meets their needs.

The antenna has small dimensions, but high efficiency in order to compete with the classic dipole. The antenna bandwidth covers more than one band within the amateur radio frequency allocations, as well as enough bandwidth to support commercial, military and civil use.

The **LOOP ANTENNA** was designed and produced by an entrepreneur, who dedicated his professional life to experimentation and testing in order to produce such a superior product.

The brain of **LOOP ANTENNA** is the ATU 2.0 (Automatic Tuner Unit). It takes care of every single movement any time that you need to tune your **LOOP ANTENNA**.

Thanks to its technology, ATU 2.0 is able to set the antenna to the best S.W.R. by opening or closing the capacitor for a correct inductance and capacity ratio.

In this way, the antenna is well tuned and the power of your signal is ready to go all around the world.

The ATU 2.0 has an RS232 interface on-board and can be connected and managed by the radio in AUTO or SEMIAUTO mode.

The ATU 2.0 supports * :

- > CI-V ICOM protocol (with CT-17 interface and DB9 f to DB25 m cable opt.)
- > YAESU CAT DB9 port (mode1 with DB9 f/f cable opt.) or 8 pin port (mode2 with CT-62 cable opt.)
- > Kenwood (with DB9 f/f cable opt.)
- > Elecraft (with KXSER cable opt.)
- > ELAD FDM-DUO (with interface cable opt.)
- > Flex Radio (with interface cable opt.)



* We have a large selection of rigs available for testing with our firmware updates and upgrades.
If a particular rig is not at our disposal, all the information that we use to update and upgrade our firmware is taken directly from the rigs' manufacturers' manuals available at the moment of release.
Manufacturers may modify the technical specifications provided in their rig manuals, at any time, at their discretion.
LOOP ANTENNA by I3VHF assumes no responsibility for malfunction of untested models.
For further information please refer to our website and our blog.

BABY LOOP datasheet:



ELECTRICAL SPECIFICATIONS

- > continuous coverage from 6.6 to 29.8 MHz
- > S.W.R. 1.3:1 (typical)
- > front to back ratio: 6dB
- > front to side ratio: 25dB
- > 50 Ohm input impedance with gamma match short circuited (electrostatic discharge protection)
- > $L = 3 \text{ H}$ $Q = 1.100 @ 7 \text{ MHz}$ $C = 400 \text{ pF @ 17 KV r.m.s.}$
- > power 450W up to 21MHz
1KW from 22 to 29.8 MHz
- > bandwidth 4KHz @ 7MHz
6KHz @ 14MHz
12KHz @ 21MHz
20KHz @ 28MHz
- > Gain compared to $\lambda/2$ dipole (1 point "S" = 6 dB) :
 - 4 dB @ 7 MHz
 - 0.3 dB @ 28 MHz

MECHANICAL SPECIFICATIONS

- > diameter: 1.0m 39.8in
- > alluminum alloy 60/60 TIG solder
- > weight 16Kg 26.5lbs
- > windload 0.25m 2.69ft
- > max wind speed 161Km/h 100mph

MIDI LOOP datasheet:

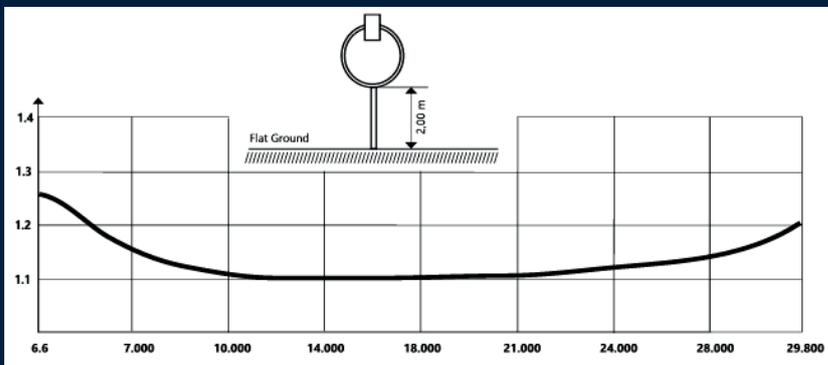
ELECTRICAL SPECIFICATIONS

- > continuous coverage from 3.5 to 14.5 MHz
- > S.W.R. 1.2:1 (typical)
- > front to back ratio: 6dB
- > front to side ratio: 25dB
- > 50 Ohm input impedance with gamma match short circuited (electrostatic discharge protection)
- > $L = 4.5 \text{ H}$ $Q = 1.500 @ 3.5 \text{ MHz}$
 $C = 560 \text{ pF @ 14 KV r.m.s.}$
- > power 300W up to 7MHz
800W from 8 to 14MHz
- > bandwidth 4KHz @ 3.5MHz
6KHz @ 7MHz
10KHz @ 14MHz
- > Gain compared to $\lambda/2$ dipole (1 point "S" = 6 dB) :
 - 4 db @ 3.5 MHz
 - 0.3 db @ 14.0 MHz

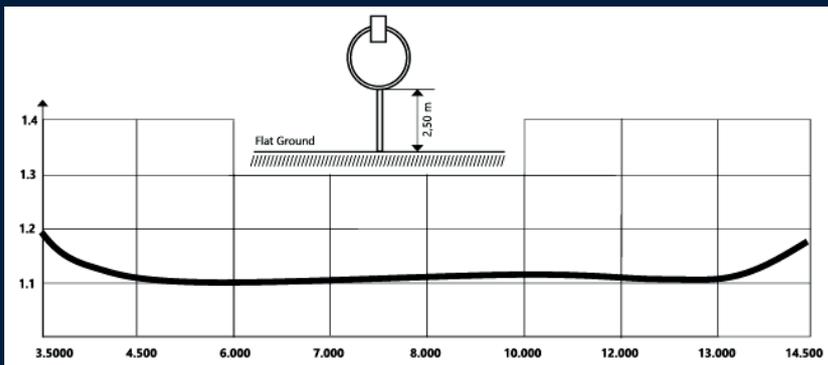
MECHANICAL SPECIFICATIONS

- > diameter: 2.0m 78.7in
- > alluminum alloy 60/60 TIG solder
- > weight 20Kg 44.1lbs
- > windload 0.50m 5.38ft
- > max wind speed 161Km/h 100mph

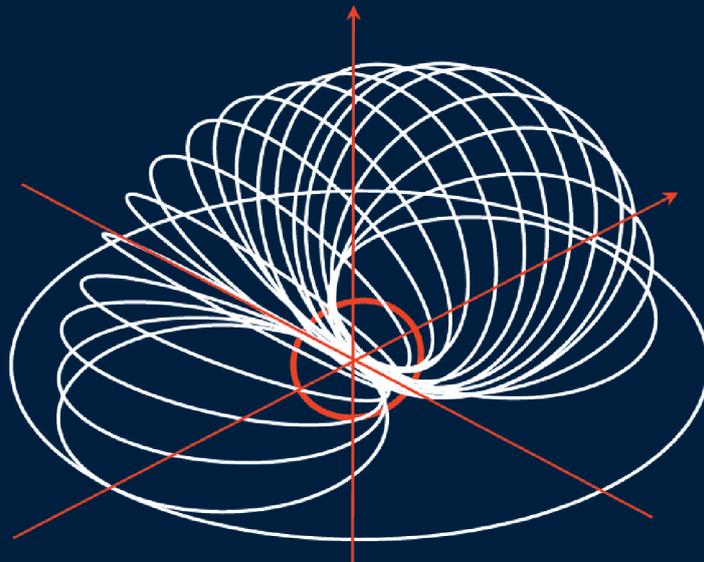
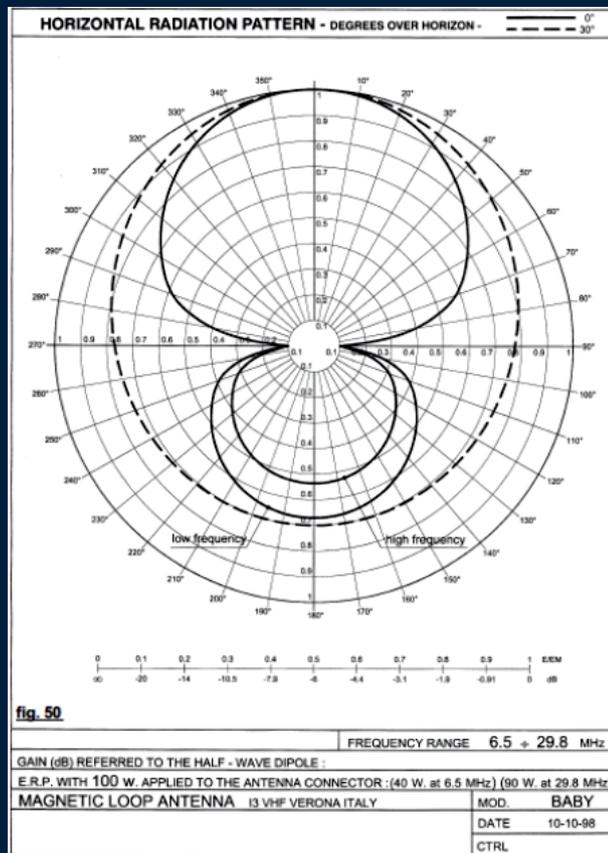




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