



Rev 1.2  
03.02.2017

# World's first 3D Antenna from 9kHz to 6GHz

## IsoLOG 3D Mobile

One Antenna for all your needs, no need to change an antenna again anymore

- ◆ Usable with any spectrum analyzer
- ◆ Frequency range 9kHz to 6GHz
- ◆ High gain and low Noise
- ◆ Built-in bypass pre-amplifier
- ◆ Manual or automatic axis switching
- ◆ Battery or DC powered
- ◆ 6h battery run-time
- ◆ Only 350g weight
- ◆ 10 years warranty
- ◆ Made in Germany

**AARONIA AG**  
WWW.AARONIA.DE

Made in Germany



## 3D RF TESTING AT IT'S BEST

The new IsoLOG 3D Mobile, Aaronia's latest development, is a very light and small isotropic antenna which is compatible to any spectrum analyzer. It just works „on the fly“ and is a suitable plug and play solution for 3D measurements in limited time frames.

The antenna requires no software installation, no power connection and no hardware changes. It is connectable via the N (male) connector to any analyzer or oscilloscope.

The IsoLOG 3D Mobile is available in 2 versions with an ultra-wide frequency coverage from 9kHz up to 3GHz (IsoLOG 3D Mobile 9030) or 6GHz (IsoLOG 3D Mobile 9060).

### Hardware

Each IsoLOG 3D Mobile includes an internal, re-chargeable battery, offering a run-time of approx. 6 hours, and a switchable low noise bypass pre-amplifier.

The integrated amp allows measurements of very low-powered signals. Thus, used in bypass mode, the antenna is still usable for high field-strengths. The control of the antenna is done via USB or via manual antenna selection mode, requiring no USB connection.



Aaronia also integrated an ultra fast adjustable „chopper“ function. Using special, glitch free RF switches this feature offers an automatic endless antenna rotation/selection with a switching duration of up to 50kHz. This feature transforms the IsoLOG 3D Mobile into a fully functional 3D antenna without the need of any USB software control.

### Scope of Delivery

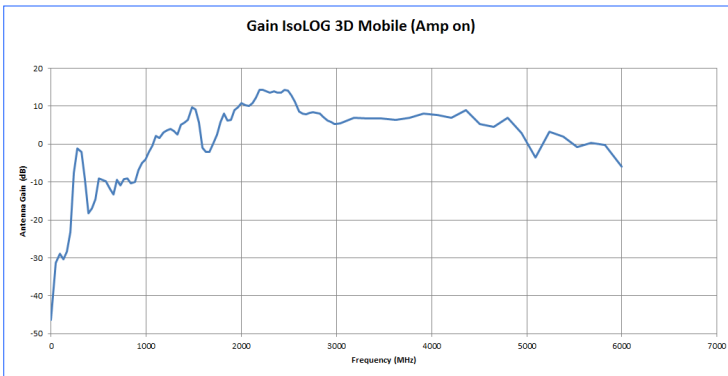
Shipped in a waterproof transport-case the scope of delivery leaves nothing to be desired:

- ◆ IsoLOG 3D Mobile antenna with built-in re-chargeable battery
- ◆ Watertight & shock-proof transport case
- ◆ SMA to N Adapter for connection of SMA cables
- ◆ Pistol grip with miniature-tripod function
- ◆ Battery charger / power supply

# TECHNICAL DATA

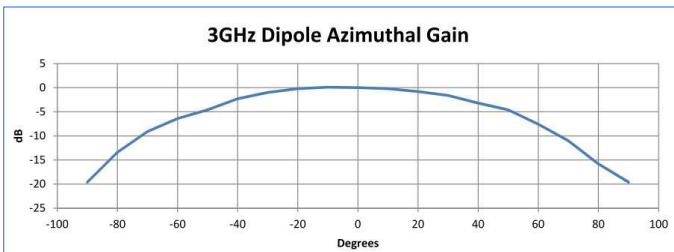
- ◆ **Design** Isotropic / 3D, portable
- ◆ **Frequency range** 9kHz to **3GHz** (*IsoLog 3D Mobile 9030*) or **6GHz** (*IsoLOG 3D Mobile 9060*)
- ◆ **Gain (bypass mode, typ.)** @70MHz: -42dB  
@3GHz: -10dB
- ◆ **Gain (pre-amp on, typ.)** @70MHz: -22dB  
@3GHz: 10dB
- ◆ **Chop/Switch Speed Rate** 1Hz to 50kHz
- ◆ **Nominal impedance** 50 Ohm
- ◆ **RF-connection** N female (optional N male, SMA or BNC via adapter)
- ◆ **Dimensions (L/W/D)** 315 x 70 x 70 mm
- ◆ **Weight** 350g
- ◆ **Tripod connection** 1/4"
- ◆ **Battery** 650mAh LiPo (in-built), typ. 6h run-time
- ◆ **Interface** USB 2.0
- ◆ **Temperature Range** Operation: -10° to +50°C, Storage: -20° to +60°C
- ◆ **Country of Origin** Germany
- ◆ **Warranty** 10 years

## Antenna Gain

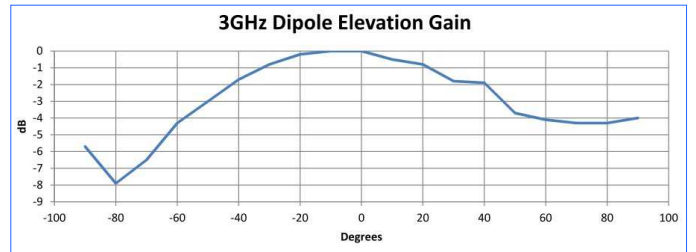


## Antenna Pattern

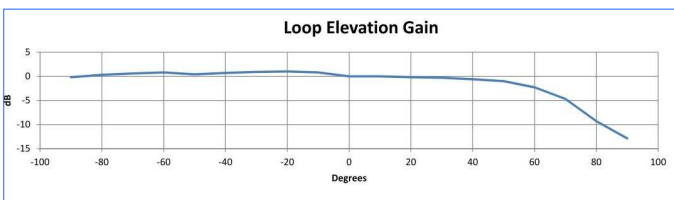
Azimuth Gain at 3GHz



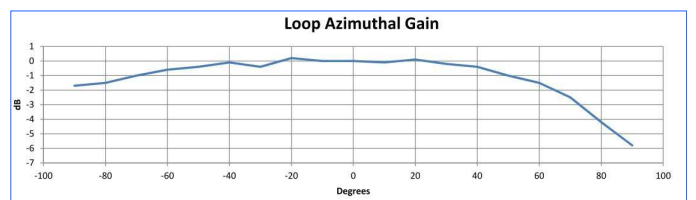
Elevation Gain at 3GHz



Elevation Gain at 70MHz

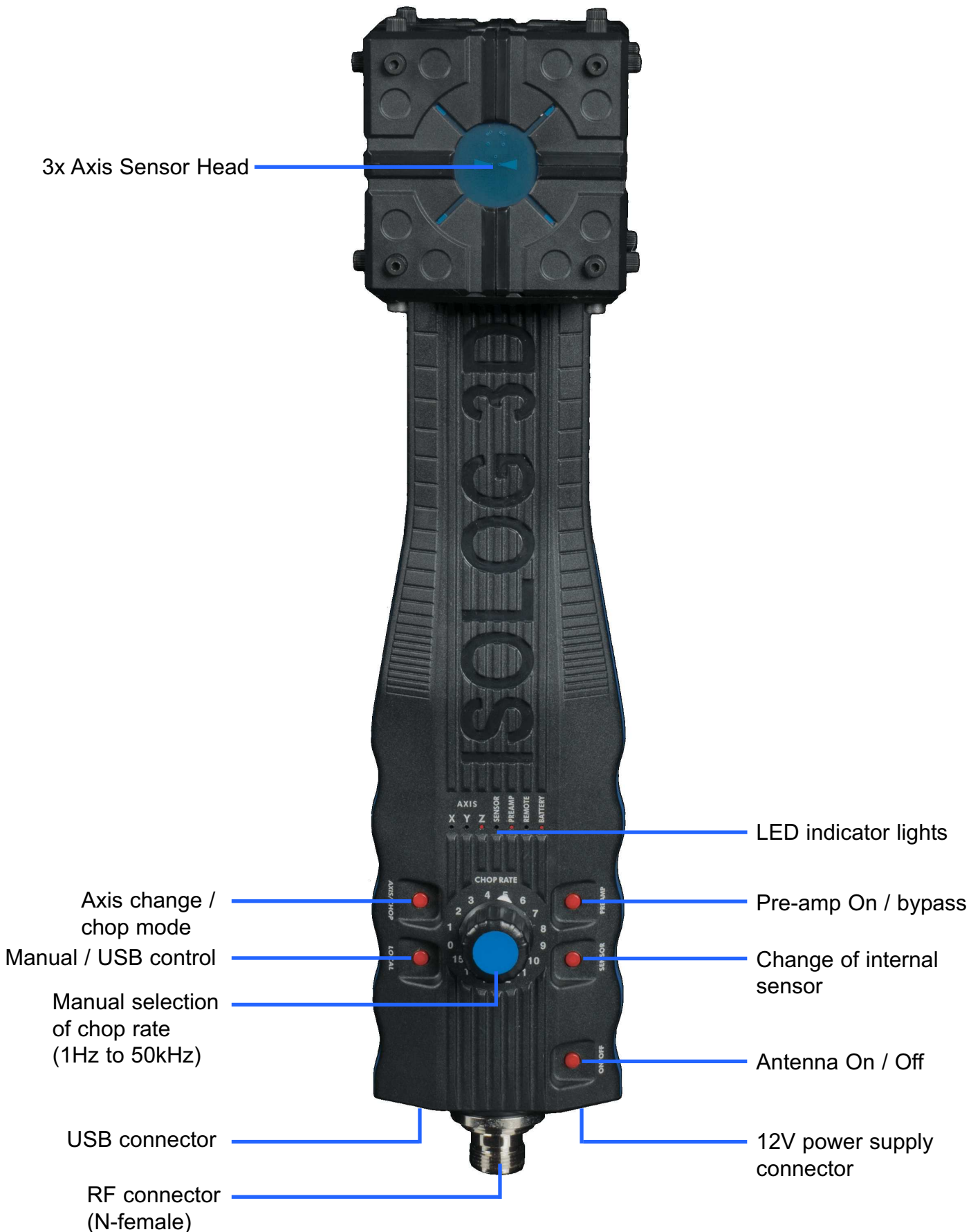


Azimuth Gain at 70MHz



# LAYOUT

The handy form factor and small weight of only 350g predestine the IsoLOG 3D Mobile for portable measurements. Following picture shows the layout and functions of the antenna:



# Accessories

## 1m / 5m / 10m SMA-Cable

High quality special SMA cable to connect the IsoLOG Antenna with various test equipment like SPECTRAN Spectrum-Analyzers. Choose between 3 different cables:

- 1m standard SMA cable (RG316U)
- 5m LowLoss SMA cable (especially low damping)
- 10m LowLoss SMA cable (especially low damping)

All versions: SMA plug (male) / SMA plug (male)

*Order/Art.-No.: 771 (1m Cable), 772 (5m Cable), 773 (10m Cable)*



## Heavy multifunctional Pistol Grip

Recommend for the usage of the IsoLOG 3D Mobile, e.g. connected to larger tripods. Quick and easy change of antenna polarization.

*Order/Art.-No.: 282*



## SMA to N Adapter (incl. in delivery)

This special high quality adapter allows operation of all IsoLOG Mobile antennas with any spectrum-analyzer with SMA connector.

Nominal impedance 50 Ohms.

Layout: SMA socket (female) / N plug (male).

*Order/Art.-No.: 770*



## Aluminum tripod

Height adjustable, high stability. Recommended for use with IsoLOG Mobile antennas for long time measurements! Max. height: 105cm.

*Order/Art.-No.: 281*



# References

## Cross-Section of Aaronia Clients

### Government, Military, Aeronautic, Astronautic

- ◆ NATO, Belgium
- ◆ Department of Defense, USA
- ◆ Department of Defense, Australia
- ◆ Airbus, Germany
- ◆ Boeing, USA
- ◆ Bundeswehr, Germany
- ◆ NASA, USA
- ◆ Lockheed Martin, USA
- ◆ Lufthansa, Germany
- ◆ DLR, Germany
- ◆ Eurocontrol, Belgium
- ◆ EADS, Germany
- ◆ DEA, USA
- ◆ FBI, USA
- ◆ BKA, Germany
- ◆ Federal Police, Germany
- ◆ Ministry of Defense, Netherlands

### Research/Development, Science and Universities

- ◆ MIT - Physics Department, USA
- ◆ California State University, USA
- ◆ Indonesien Institute of Science, Indonesia
- ◆ Los Alamos National Laboratory, USA
- ◆ University of Bahrain, Bahrain
- ◆ University of Florida, USA
- ◆ University of Victoria, Canada
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- ◆ Max-Planck Institute for Radio Astronomy, Germany
- ◆ Max-Planck-Institute for Nuclear Physics, Germany
- ◆ Research Centre Karlsruhe, Germany

### Industry

- ◆ APPLE, USA
- ◆ IBM, Switzerland
- ◆ Intel, Germany
- ◆ Shell Oil Company, USA
- ◆ ATI, USA
- ◆ Microsoft, USA
- ◆ Motorola, Brazil
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- ◆ Philips, Germany
- ◆ ThyssenKrupp, Germany
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- ◆ Keysight, China
- ◆ Infineon Technologies, Germany
- ◆ Philips Semiconductors, Germany
- ◆ Hyundai Europe, Germany
- ◆ JDSU, Korea
- ◆ Wilkinson Sword, Germany
- ◆ IBM Deutschland, Germany
- ◆ Nokia-Siemens Networks, Germany



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