

Rev 1.1  
19.09.2014

# Active biconical Antennas - BicoLOG X Series

Active Antennas with high gain up to 41dBi

## Highlights

- ◆ Only a single broadband test antenna for the complete frequency range from 20MHz up to 3GHz
- ◆ Optimal for usage with spectrum analysers for EMC measurement
- ◆ Suitable for mobile use
- ◆ Small weight and dimensions
- ◆ Made in Germany
- ◆ 10 years warranty



Made in Germany

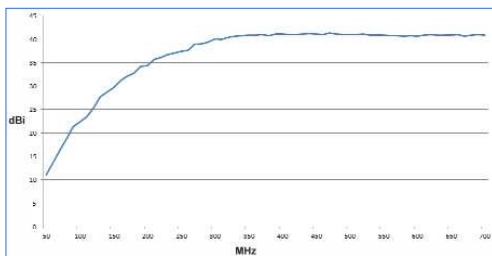


# Specifications

## BicoLOG® 5070 X

- ◆ Design: Biconical (active)
- ◆ Frequency range: **50MHz to 700MHz**
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: 11dBi to 41dBi
- ◆ Calibration points: **70** (5MHz and 10MHz steps)
- ◆ RF connection: SMA (female) or N with adapter
- ◆ Tripod socket: 1/4"
- ◆ Dimensions (L/W/D) : (350x160x140)mm
- ◆ Weight: 500gr
- ◆ **Warranty: 10 years**

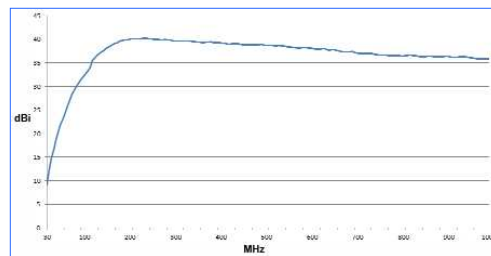
Gain Diagram BicoLOG 5070 X



## BicoLOG® 30100 X

- ◆ Design: Biconical (active)
- ◆ Frequency range: **30MHz to 1GHz**
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: 1dBi to 41dBi
- ◆ Calibration points: **104** (5MHz and 10MHz steps)
- ◆ RF connection: SMA (female) or N with adapter
- ◆ Tripod socket: 1/4"
- ◆ Dimensions (L/W/D) : (350x160x140)mm
- ◆ Weight: 500gr
- ◆ **Warranty: 10 years**

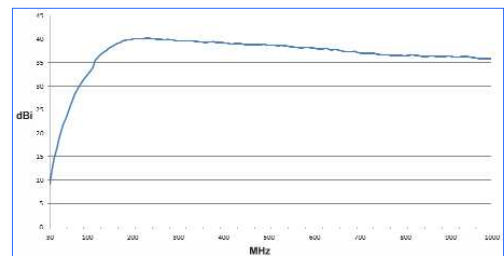
Gain Diagram BicoLOG 30100 X



## BicoLOG® 30100E X

- ◆ Design: Biconical (active)
- ◆ Frequency range: **30MHz to 1GHz**
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: 9dBi to 41dBi
- ◆ Calibration points: **194 (5MHz steps)**
- ◆ RF connection: SMA (female) or N with adapter
- ◆ Tripod socket: 1/4"
- ◆ Dimensions (L/W/D) : (540x225x225)mm
- ◆ Weight: 1300gr
- ◆ **Warranty: 10 years**

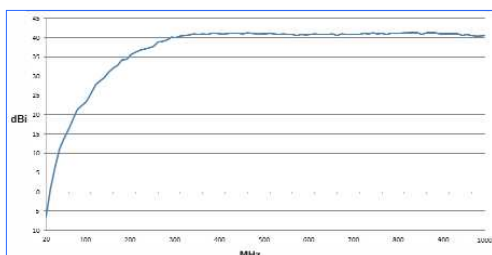
Gain Diagram BicoLOG 30100E X



## BicoLOG® 20100 X

- ◆ Design: Biconical (active)
- ◆ Frequency range: **20MHz to 1GHz**
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: -5dBi to 41dBi
- ◆ Calibration points: **106** (5MHz and 10MHz steps)
- ◆ RF connection: SMA (female) or N with adapter
- ◆ Tripod socket: 1/4"
- ◆ Dimensions (L/W/D) : (350x160x140)mm
- ◆ Weight: 500gr
- ◆ **Warranty: 10 years**

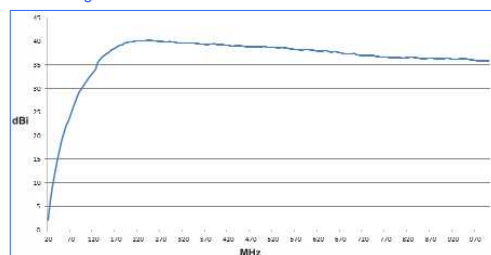
Gain Diagram BicoLOG 20100 X



## BicoLOG® 20100E X

- ◆ Design: Biconical (active)
- ◆ Frequency range: **20MHz to 1GHz**
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: 2dBi to 41dBi
- ◆ Calibration points: **196 (5MHz steps)**
- ◆ RF connection: SMA (female) or N with adapter
- ◆ Tripod socket: 1/4"
- ◆ Dimensions (L/W/D) : (540x225x225)mm
- ◆ Weight: 1300gr
- ◆ **Warranty: 10 years**

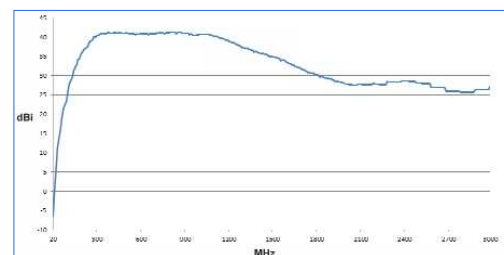
Gain Diagram BicoLOG 20100E X



## BicoLOG® 20300 X

- ◆ Design: Biconical (active)
- ◆ Frequency range: **20MHz to 3GHz**
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: -5dBi to 41dBi
- ◆ Calibration points: **296** (5MHz and 10MHz steps)
- ◆ RF connection: SMA (female) or N with adapter
- ◆ Tripod socket: 1/4"
- ◆ Dimensions (L/W/D) : (350x160x140)mm
- ◆ Weight: 500gr
- ◆ **Warranty: 10 years**

Gain Diagram BicoLOG 20300 X



# Recommended accessories for Aaronia Antennas

## Heavy multifunctional Pistol Grip (strongly recommended!)

Highly recommend for the usage of our BicoLOG active antennas. Quick and easy change of antenna polarization, perfect antenna handling (even with the more heavy BicoLOG 30100E X and 20100E X).

Order/Art.-No.: 282



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

High quality special SMA cable for connecting any BicoLOG®-Antenna with various test equipment like SPECTRAN RF Spectrum-Analyzer. You can 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)



## SMA to N Adapter

This special high quality adapter allows operation of all BicoLOG®-Antenna with any standard spectrum-analyzer with N connector.

Especially massive, chrome-plated design. This adapter is usable for very high frequencies up to at least 18GHz. Physical dimensions are just 30x20mm. Nominal impedance 50 Ohms. Layout: SMA socket (female) / N plug (male).

Order/Art.-No.: 770



## Pistol grip / miniature tripod

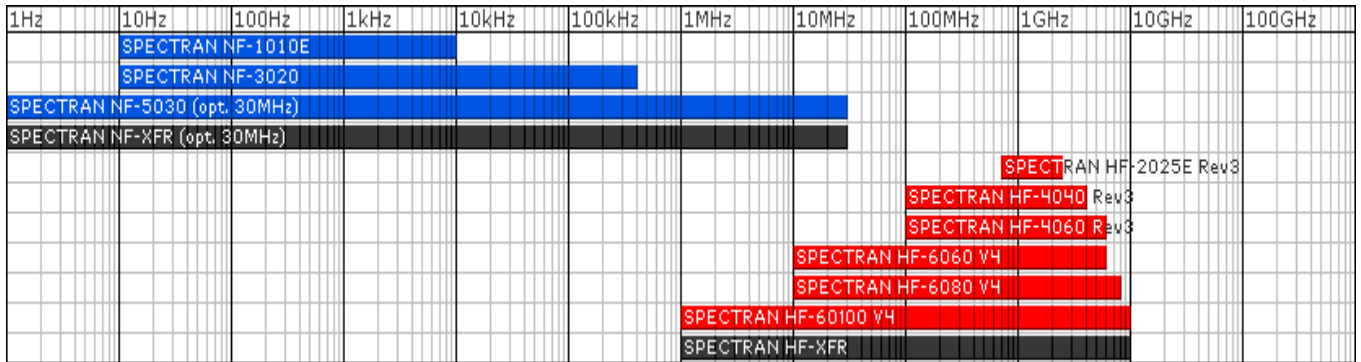
Detachable handle with super-practical miniature tripod mode: this handle is attachable to the backside of the unit and allows optimal handling and even fixed installation of the unit. Strongly recommended for PC use!

Order/Art.-No.: 280

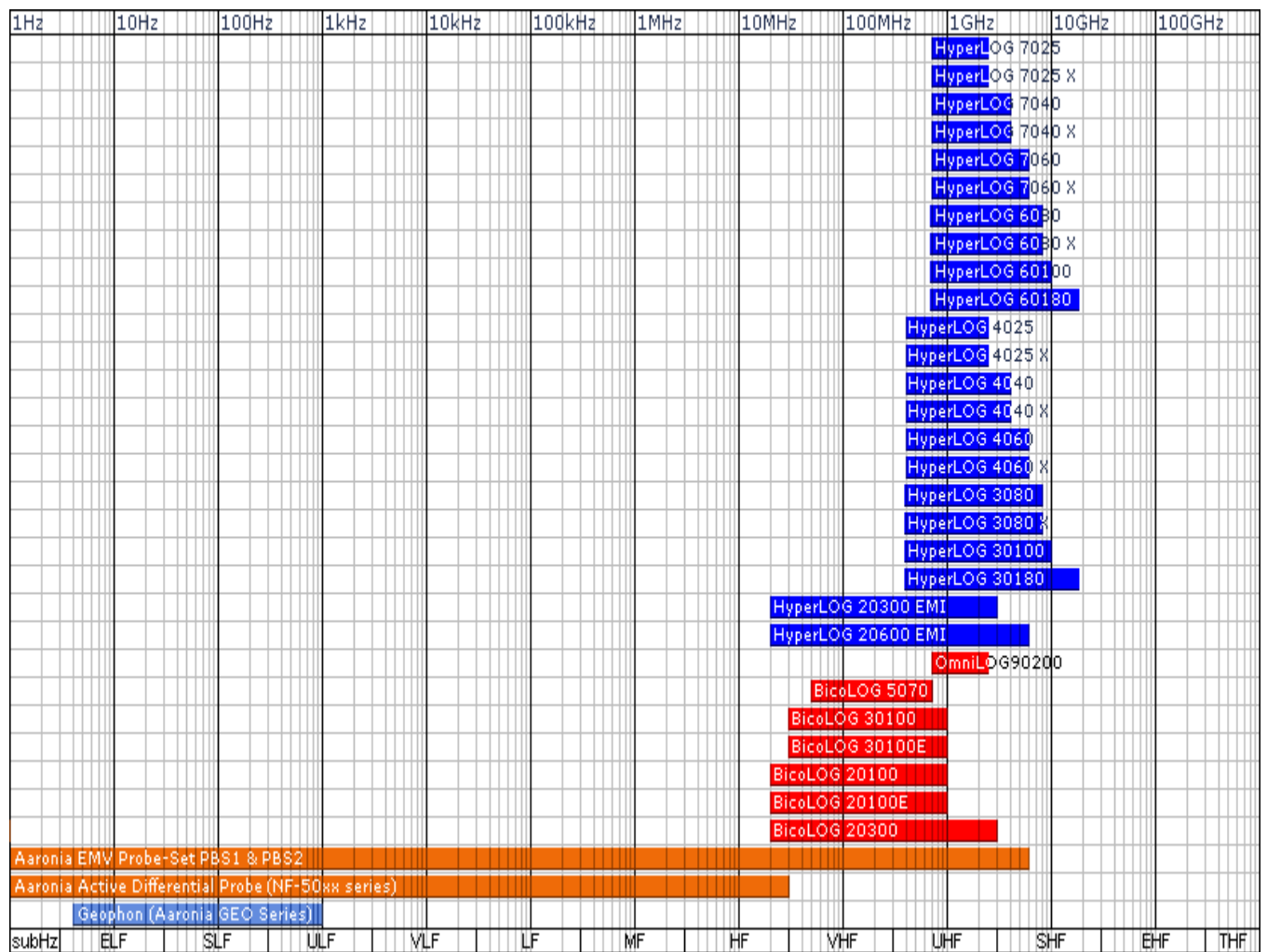


# Frequency overview Analyzer & Antennas

## Frequency Overview SPECTRAN Spectrum Analyzer



## Frequency Overview HyperLOG and BicoLOG Antennas and Probes



# References

## User of Aeronia Antennas and Spectrum Analyzers (Examples)

### Government, Military, Aeronautic, Astronautic

- ◆ NATO, Belgium
- ◆ Boeing, USA
- ◆ Airbus, Germany
- ◆ Bund (Bundeswehr), Germany
- ◆ Bundeswehr (Technische Aufklärung), Germany
- ◆ Lufthansa, Germany
- ◆ DLR (Deutsches Zentrum für Luft- und Raumfahrt, Germany)
- ◆ Eurocontrol (Flugüberwachung), Belgium
- ◆ Australian Government Department of Defence, Australia
- ◆ EADS (European Aeronautic Defence & Space Company) GmbH, Germany
- ◆ Institut für Luft- und Raumfahrtmedizin, Germany
- ◆ Deutscher Wetterdienst, Germany
- ◆ Polizeipräsidium, Germany
- ◆ Landesamt für Umweltschutz Sachsen-Anhalt, Germany
- ◆ Zentrale Polizeitechnische Dienste, Germany
- ◆ Bundesamt für Verfassungsschutz, Germany
- ◆ BEV (Bundesamt für Eich- und Vermessungswesen)

### Research/Development, Science and Universitys

- ◆ Deutsches Forschungszentrum für Künstliche Intelligenz, Germany
- ◆ University Freiburg, Germany
- ◆ Indonesien Institute of Sience, Indonesia
- ◆ Max-Planck-Institut für Polymerforschung, Germany
- ◆ Los Alamos National Labratory, USA
- ◆ University of Bahrain, Bahrain
- ◆ University of Florida, USA
- ◆ University Erlangen, Germany
- ◆ University Hannover, Germany
- ◆ University of Newcastle, United Kingdom
- ◆ University Strasbourg, France
- ◆ Universität Frankfurt, Germany
- ◆ University Munich, Germany
- ◆ Technical University Hamburg, Germany
- ◆ Max-Planck Institut für Radioastronomie, Germany
- ◆ Max-Planck-Institut für Quantenoptik, Germany
- ◆ Max-Planck-Institut für Kernphysik, Germany
- ◆ Max-Planck-Institut für Eisenforschung, Germany
- ◆ Forschungszentrum Karlsruhe, Germany

### Industry

- ◆ Shell Oil Company, USA
- ◆ ATI, USA
- ◆ Fedex, USA
- ◆ Walt Disney, Kalifornien, USA
- ◆ Agilent Technologies Co. Ltd., China
- ◆ Motorola, Brazil
- ◆ IBM, Switzerland
- ◆ Audi AG, Germany
- ◆ BMW, Germany
- ◆ Daimler Chrysler AG, Germany
- ◆ BASF, Germany
- ◆ Deutsche Bahn, Germany
- ◆ Deutsche Telekom, Germany
- ◆ Siemens AG, Germany
- ◆ Rohde & Schwarz, Germany
- ◆ Infineon, Austria
- ◆ Philips Technologie GmbH, Germany
- ◆ ThyssenKrupp, Germany
- ◆ EnBW, Germany
- ◆ RTL Television, Germany
- ◆ Pro Sieben – SAT 1, Germany
- ◆ Channel 6, United Kingdom
- ◆ WDR, Germany
- ◆ NDR, Germany
- ◆ SWR, Germany
- ◆ Bayerischer Rundfunk, Germany
- ◆ Carl-Zeiss-Jena GmbH, Germany
- ◆ Anritsu GmbH, Germany
- ◆ Hewlett Packard, Germany
- ◆ Robert Bosch GmbH, Germany
- ◆ Mercedes Benz, Austria
- ◆ EnBW Kernkraftwerk GmbH, Germany
- ◆ AMD, Germany
- ◆ Infineon Technologies, Germany
- ◆ Intel GmbH, Germany
- ◆ Philips Semiconductors, Germany
- ◆ Hyundai Europe, Germany
- ◆ Saarschmiede GmbH, Germany
- ◆ Wilkinson Sword, Germany
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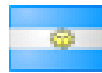
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