



Rev 2.0
19.09.2014

Biconical EMC broadband antennas - BicoLOG Series

Broadband transmission and reception from 20MHz to 3GHz - mobile and stationary use

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**

Calibration & standards:

- ◆ The biconical antennas of the BicoLOG® series are suitable for EMI interference field strength measurement. The specialized broadband characteristics allow measurements to be taken in the complete specified frequency range **without switching**.
- ◆ **These antennas are suitable for measurements according to the following standards and procedures:**
CISPR, VDE, MIL, VG, EN 55011, EN 55013, EN 55015, EN 55022, MIL-Std-461.

Included with delivery:

- ◆ BicoLOG® EMI testantenna
- ◆ **Typical calibration data with up to 106 calibration points (5MHz and 10MHz steps!)**

References / examples of proof:

- ◆ NATO, Belgium
- ◆ Rohde & Schwarz Rome, Italy
- ◆ EADS, Germany
- ◆ Robert Bosch GmbH, Germany
- ◆ Australian Government Department of Defence, Australia
- ◆ Eurocontrol, Netherlands



Made in Germany

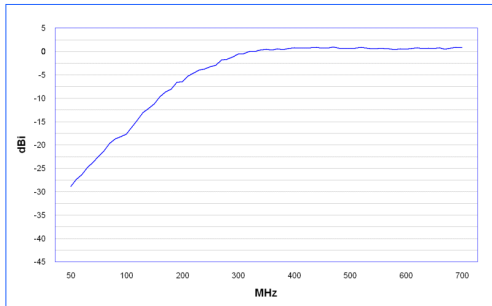


Specifications

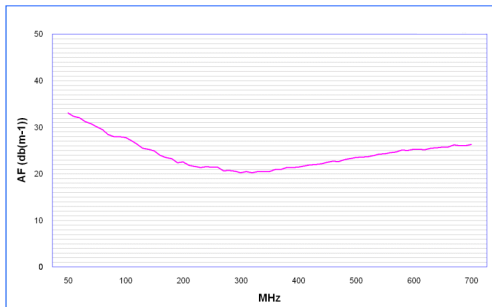
BicoLOG® 5070

- ◆ Design: Biconical Antenna
- ◆ Frequency range: **50MHz to 700MHz**
- ◆ Max. transmission power: 5W AM (100MHz)
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: **-29dBi to 1dBi**
- ◆ Antenna factor: **20-33dB/m**
- ◆ 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: 350gr
- ◆ **Warranty: 10 years**

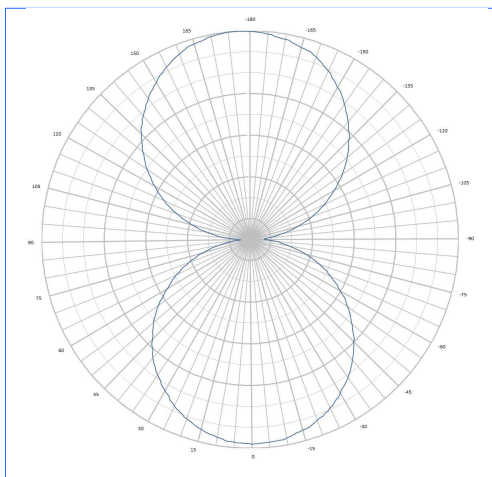
Gain Diagram BicoLOG 5070



Antenna factor BicoLOG 5070



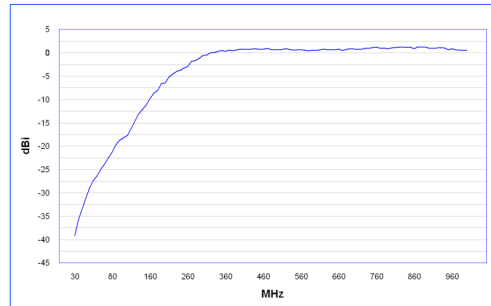
Horizontal Pattern (typical) BicoLOG Antennas



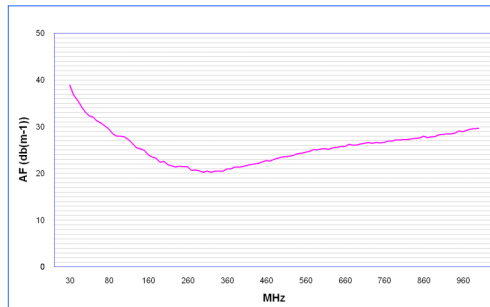
BicoLOG® 30100

- ◆ Design: Biconical Antenna
- ◆ Frequency range: **30MHz to 1GHz**
- ◆ Max. transmission power: 5W AM (100MHz)
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: **-39dBi to 1dBi**
- ◆ Antenna factor: **20-41dB/m**
- ◆ 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: 350gr
- ◆ **Warranty: 10 years**

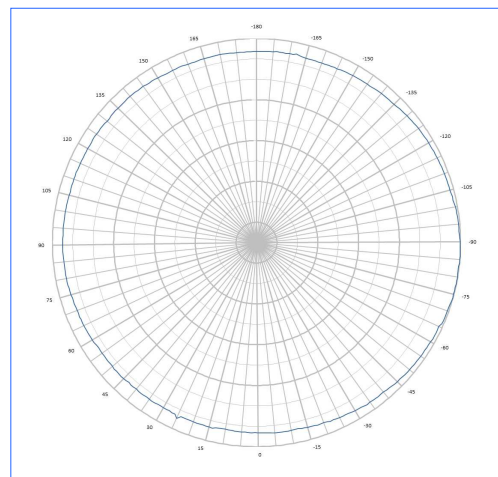
Gain Diagram BicoLOG 30100



Antenna factor BicoLOG 30100



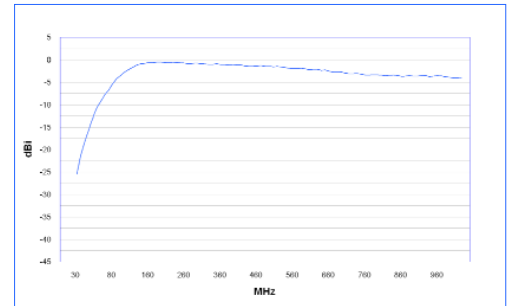
Vertical Pattern (typical) BicoLOG Antennas



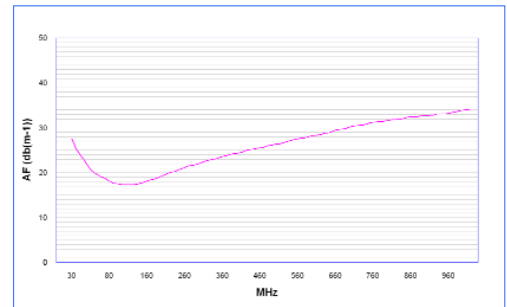
NEW: BicoLOG® 30100E

- ◆ Design: Biconical Antenna
- ◆ Frequency range: **30MHz to 1GHz**
- ◆ Max. transmission power: 5W AM (100MHz)
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: **-31dBi to 1dBi**
- ◆ Antenna factor: **17-31dB/m**
- ◆ Calibration points: **194 (5MHz steps)**
- ◆ RF connection: SMA (female) or N with adapter
- ◆ Tripod socket: 1/4"
- ◆ Dimensions (L/W/D) : (540x225x225)mm
- ◆ Weight: 1150gr
- ◆ **Warranty: 10 years**
- ◆ **Optimized for EMC measurements**

Gain Diagram BicoLOG 30100E



Antenna factor BicoLOG 30100E



BicoLOG® 20100

- ◆ Design: Biconical Antenna
- ◆ Frequency range: **20MHz to 1GHz**
- ◆ Max. transmission power: 5W AM (100MHz)
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: **-45dBi** to 1dBi
- ◆ Antenna factor: **20-42dB/m**
- ◆ 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: 350gr
- ◆ **Warranty: 10 years**

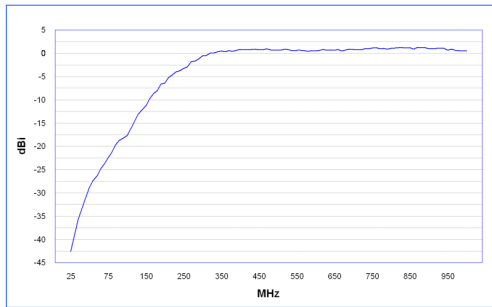
NEW: BicoLOG® 20100E

- ◆ Design: Biconical Antenna
- ◆ Frequency range: **20MHz to 1GHz**
- ◆ Max. transmission power: 5W AM (100MHz)
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: **-38dBi** to 1dBi
- ◆ Antenna factor: **17-34dB/m**
- ◆ Calibration points: **196** (**5MHz steps**)
- ◆ RF connection: SMA (female) or N with adapter
- ◆ Tripod socket: 1/4"
- ◆ Dimensions (L/W/D) : (540x225x225)mm
- ◆ Weight: 1150gr
- ◆ **Warranty: 10 years**
- ◆ **Optimized for EMC measurements**

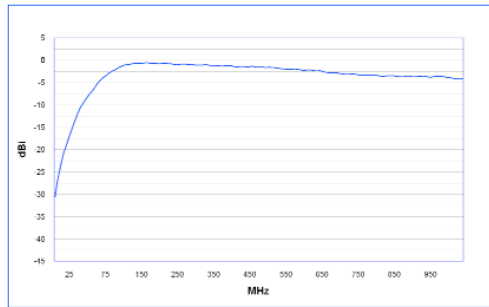
BicoLOG® 20300

- ◆ Design: Biconical Antenna
- ◆ Frequency range: **20MHz to 3GHz**
- ◆ Max. transmission power: 5W AM (100MHz)
- ◆ Nominal impedance: 50 Ohms
- ◆ Gain: **-45dBi** to 1dBi
- ◆ Antenna factor: **20-51dB/m**
- ◆ 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: 350gr
- ◆ **Warranty: 10 years**

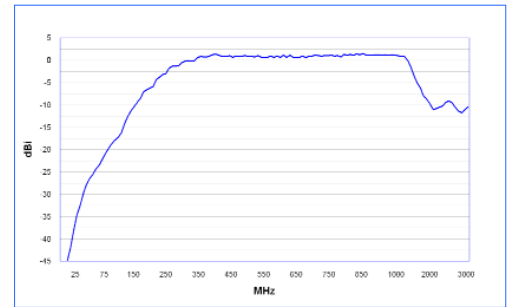
Gain Diagram BicoLOG 20100



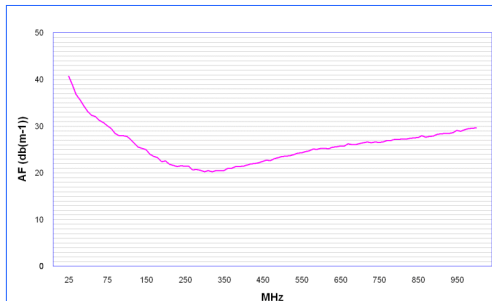
Gain Diagram BicoLOG 20100E



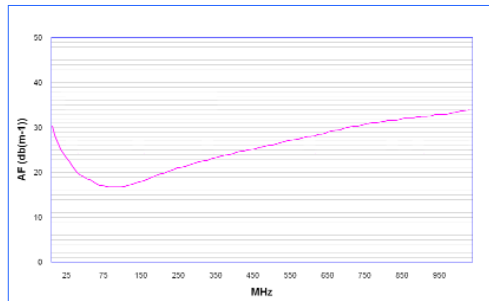
Gain Diagram BicoLOG 20300



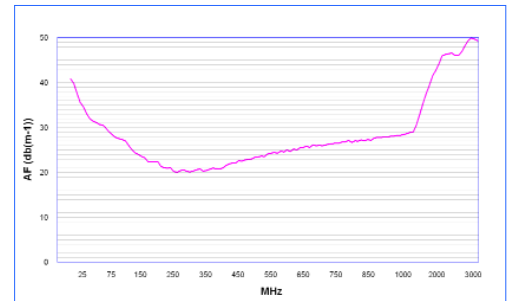
Antenna factor BicoLOG 20100



Antenna factor BicoLOG 20100E



Antenna factor BicoLOG 20300



Recommended accessories for Aaronia Antennas

Heavy Plastic Carrycase PRO

Shock resistant, heavy version with padding. Offers space foam for all BicoLOG® antennas with all accessories. A MUST for the professional user or outdoor usage! Already included with each BicoLOG 30100E or 20100E antenna.

Order/Art.-No.: 244



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



Heavy multifunctional Pistol Grip (strongly recommended!)

Highly recommend for the usage of BicoLOG antennas. Quick and easy change of antenna polarization, perfect antenna handling (even with the more heavy BicoLOG X-Series).

Order/Art.-No.: 282



Frequency overview Analyzer & Antennas

Frequency Overview SPECTRAN Spectrum Analyzer

1Hz	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	10MHz	100MHz	1GHz	10GHz	100GHz
	SPECTRAN NF-1010E										
	SPECTRAN NF-3020										
	SPECTRAN NF-5030 (opt. 30MHz)										
	SPECTRAN NF-XFR (opt. 30MHz)										
									SPECTRAN HF-2025E Rev3		
									SPECTRAN HF-4040 Rev3		
									SPECTRAN HF-4060 Rev3		
								SPECTRAN HF-6060 V4			
								SPECTRAN HF-6080 V4			
							SPECTRAN HF-60100 V4				
							SPECTRAN HF-XFR				

Frequency Overview HyperLOG and BicoLOG Antennas and Probes

1Hz	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	10MHz	100MHz	1GHz	10GHz	100GHz	
									HyperLOG 7025			
									HyperLOG 7025 X			
									HyperLOG 7040			
									HyperLOG 7040 X			
									HyperLOG 7060			
									HyperLOG 7060 X			
									HyperLOG 6030			
									HyperLOG 6030 X			
									HyperLOG 60100			
									HyperLOG 60180			
									HyperLOG 4025			
									HyperLOG 4025 X			
									HyperLOG 4040			
									HyperLOG 4040 X			
									HyperLOG 4060			
									HyperLOG 4060 X			
									HyperLOG 3080			
									HyperLOG 3080 X			
									HyperLOG 30100			
									HyperLOG 30180			
								HyperLOG 20300 EMI				
								HyperLOG 20600 EMI				
									OmniLOG 90200			
									BicoLOG 5070			
									BicoLOG 30100			
									BicoLOG 30100E			
									BicoLOG 20100			
									BicoLOG 20100E			
									BicoLOG 20300			
									Aaronia EMV Probe-Set PBS1 & PBS2			
									Aaronia Active Differential Probe (NF-50k series)			
									Geophon (Aaronia GEO Series)			
subHz	ELF	SLF	ULF	VLF	LF	MF	HF	VHF	UHF	SHF	EHF	THF

References

User of Aeronia Antennas and Spectrum Analyzers (Examples)

Government, Military, aeronautic, astronautic

- ◆ NATO, Belgien
- ◆ Boeing, USA
- ◆ Airbus, Hamburg
- ◆ Bund (Bundeswehr), Leer
- ◆ Bundeswehr (Technische Aufklärung), Hof
- ◆ Lufthansa, Hamburg
- ◆ DLR (Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart)
- ◆ Eurocontrol (Flugüberwachung), Belgien
- ◆ Australian Government Department of Defence, Australien
- ◆ EADS (European Aeronautic Defence & Space Company) GmbH, Ulm
- ◆ Institut für Luft- und Raumfahrtmedizin, Köln
- ◆ Deutscher Wetterdienst, Tauche
- ◆ Polizeipräsidium, Bonn
- ◆ Landesamt für Umweltschutz Sachsen-Anhalt, Halle
- ◆ Zentrale Polizeitechnische Dienste, NRW
- ◆ Bundesamt für Verfassungsschutz, Köln
- ◆ BEV (Bundesamt für Eich- und Vermessungswesen)

Research/Development, Science and Universitys

- ◆ Deutsches Forschungszentrum für Künstliche Intelligenz, Kaiserslautern
- ◆ Universität Freiburg
- ◆ Indonesien Institute of Science, Indonesien
- ◆ Max-Planck-Institut für Polymerforschung, Mainz
- ◆ Los Alamos National Laboratory, USA
- ◆ University of Bahrain, Bahrain
- ◆ University of Florida, USA
- ◆ Universität Erlangen, Erlangen
- ◆ Universität Hannover, Hannover
- ◆ University of Newcastle, Großbritannien
- ◆ Universität Strasbourg, Frankreich
- ◆ Universität Frankfurt, Frankfurt
- ◆ Uni München – Fakultät für Physik, Garching
- ◆ Technische Universität Hamburg, Hamburg
- ◆ Max-Planck Institut für Radioastronomie, Bad Münstereifel
- ◆ Max-Planck-Institut für Quantenoptik, Garching
- ◆ Max-Planck-Institut für Kernphysik, Heidelberg
- ◆ Max-Planck-Institut für Eisenforschung, Düsseldorf
- ◆ Forschungszentrum Karlsruhe, Karlsruhe

Industry

- ◆ Shell Oil Company, USA
- ◆ ATI, USA
- ◆ Fedex, USA
- ◆ Walt Disney, Kalifornien, USA
- ◆ Agilent Technologies Co. Ltd., China
- ◆ Motorola, Brasilien
- ◆ IBM, Schweiz
- ◆ Audi AG, Neckarsulm
- ◆ BMW, München
- ◆ Daimler Chrysler AG, Bremen
- ◆ BASF, Ludwigshafen
- ◆ Deutsche Bahn, Berlin
- ◆ Deutsche Telekom, Weiden
- ◆ Siemens AG, Erlangen
- ◆ Rohde & Schwarz, München
- ◆ Infineon, Österreich
- ◆ Philips Technologie GmbH, Aachen
- ◆ ThyssenKrupp, Stuttgart
- ◆ EnBW, Stuttgart
- ◆ RTL Television, Köln
- ◆ Pro Sieben – SAT 1, Unterföhring
- ◆ Channel 6, Großbritannien
- ◆ WDR, Köln
- ◆ NDR, Hamburg
- ◆ SWR, Baden-Baden
- ◆ Bayerischer Rundfunk, München
- ◆ Carl-Zeiss-Jena GmbH, Jena
- ◆ Anritsu GmbH, Düsseldorf
- ◆ Hewlett Packard, Dornach
- ◆ Robert Bosch GmbH, Plochingen
- ◆ Mercedes Benz, Österreich
- ◆ EnBW Kernkraftwerk GmbH, Neckarwestheim
- ◆ AMD, Dresden
- ◆ Infineon Technologies, Regensburg
- ◆ Intel GmbH, Feldkirchen
- ◆ Philips Semiconductors, Nürnberg
- ◆ Hyundai Europe, Rüsselsheim
- ◆ Saarschmiede GmbH, Völklingen
- ◆ Wilkinson Sword, Solingen
- ◆ IBM Deutschland, Stuttgart
- ◆ Vattenfall, Berlin
- ◆ Fraport, Frankfurt

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