Rev 1.5  
31.01.2014

# EMC Reference Antennas up to 6GHz Series HyperLOG® EMI

EMC Broadbandantennas for the complete frequency range from 20MHz to 6GHz

- ◆ Reference Antenne with 0,3dB accuracy
- ◆ Max. input power: 310W AM
- ◆ Compatible with any Spectrum Analyzer brand
- ◆ Perfect for EMC/EMI pre-compliance tests and immunity measurements
- ◆ Incl. specific calibration details (up to 5970 calibration points)
- ◆ Made in Germany

  
**AARONIA AG**  
WWW.AARONIA.DE

Made in Germany

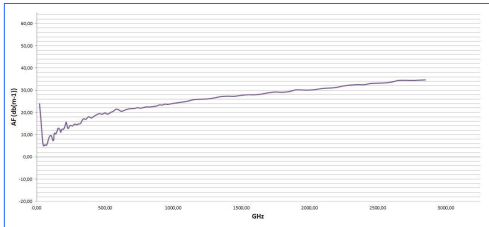


# Technical data

## HyperLOG® 20300 EMI

- ◆ Design: Biconical & LogPer
- ◆ Frequency range: **20MHz-3GHz**
- ◆ Max. input power: **310W AM**
- ◆ Immunity test field strength: **10V/m**
- ◆ Nominal impedance: 50 Ohm
- ◆ Accuracy: **0,3dB**
- ◆ VSWR (typ.): <2:1
- ◆ Gain (typ.): **8dBi**
- ◆ Calibration points: **2970** (1MHz-steps)
- ◆ RF-connection: N female
- ◆ Dimensions (L/W/D): (1200x1600x80) mm
- ◆ Weight: 6,5kg
- ◆ Warranty: 10 years

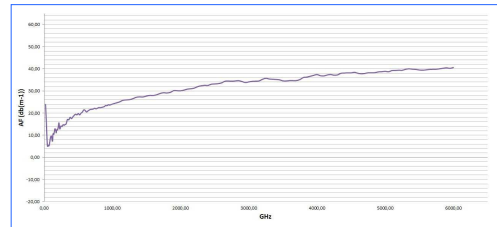
Antenna factor HyperLOG 20300 EMI



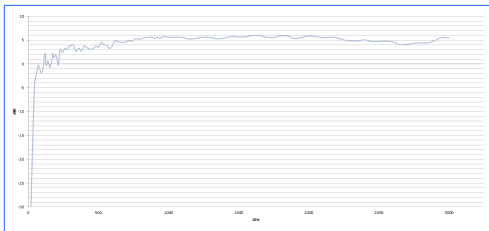
## HyperLOG® 20600 EMI

- ◆ Design: Biconical & LogPer
- ◆ Frequency range: **20MHz-6GHz**
- ◆ Max. input power: **310W AM**
- ◆ Immunity test field strength: **10V/m**
- ◆ Nominal impedance: 50 Ohm
- ◆ Accuracy: **0,3dB**
- ◆ VSWR (typ.): <2:1
- ◆ Gain (typ.): **8dBi**
- ◆ Calibration points: **5970** (1MHz-steps)
- ◆ RF-connection: N female
- ◆ Dimensions (L/W/D): (1200x1600x80) mm
- ◆ Weight: 6,5kg
- ◆ Warranty: 10 years

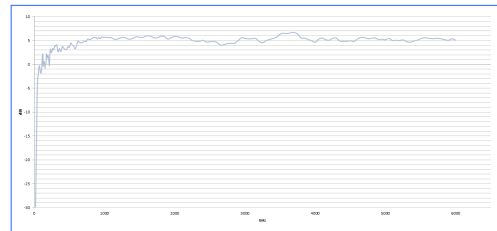
Antenna factor HyperLOG 20600 EMI



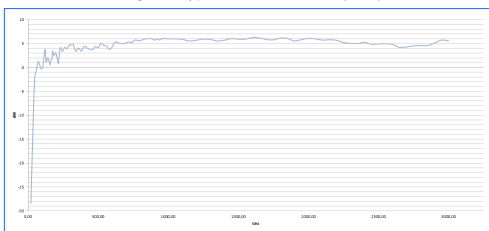
Gain Diagram HyperLOG 20300 EMI (3m)



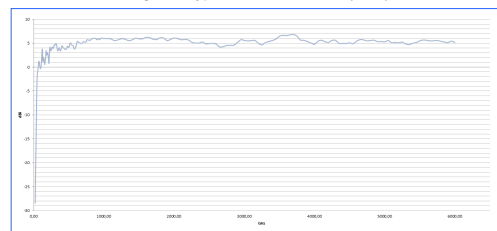
Gain Diagram HyperLOG 20600 EMI (3m)



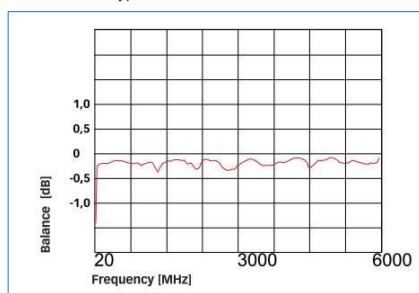
Gain Diagram HyperLOG 20300 EMI (10m)



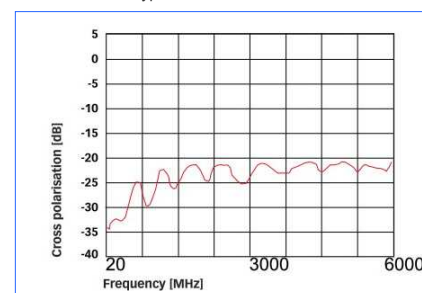
Gain Diagram HyperLOG 20600 EMI (10m)



Typical Balance / Unbalance



Typical Cross Polarization





HyperLOG EMI Antenna with optional tripod

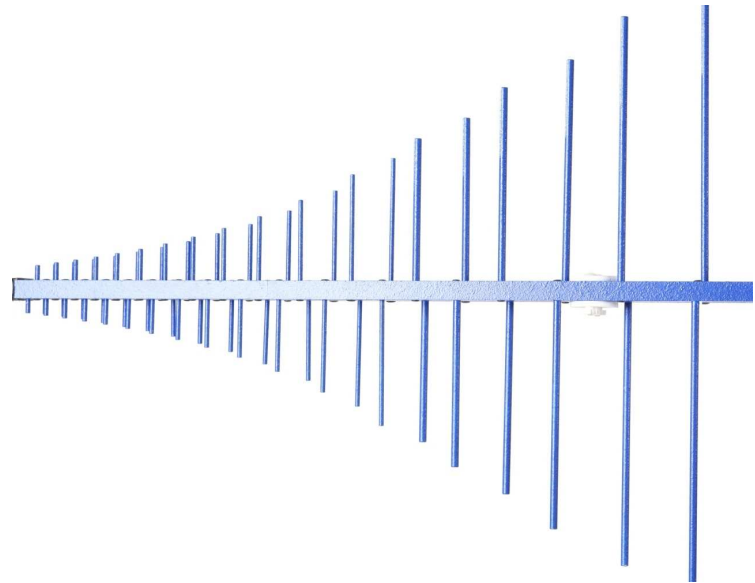
By using the HyperLOG EMI antennas, the common EMI and EMC measurement error-rates, which show up by switching between different test antennas, are avoided. This is because you have only to use one antenna for the complete frequency range instead of two or more antennas. This saves significant costs since the measuring time is reduced drastically.

The HyperLOG EMI series can also be used as a powerful broadcasting antenna with up to 310 watts. This antenna is suitable even for immunity measurements, where very high field strengths are needed by more than 10 V/m.

Aaronia's HyperLOG EMI antennas are the ultimate EMC / EMI pre-compliance test antennas with unmatched high accuracy. These antennas offer a very high gain over the full frequency range.

The HyperLOG EMI is Aaronia's latest antenna development and combines the advantages of a biconical antenna and those of a log periodic antenna in a single high end EMC/EMI antenna.

Furthermore the HyperLOG EMI series offer an extremely high accuracy of 0.3dB over the full specified frequency range and therefore can even be used as reference antenna.



HyperLOG EMI Antenna



Transportcase of the HyperLOG EMI Antenna (included in delivery)

Included in delivery with each HyperLOG EMI antenna is the large transport case with protection foam and the specific calibration details.

# Recommended accessories for HyperLOG EMI antennas

## Heavy tripod

Height adjustable, high stability. STRONGLY recommended for use with HyperLOG EMI antennas!

Order/Art.-No.: 283



Tripod for HyperLOG EMI

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

High quality special SMA cable for connecting any HyperLOG EMI Antenna with various test equipment like our 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 Cable (1-10m)

## SMA to N Adapter

This special adapter allows operation of all HyperLOG EMI Antennas with any spectrum-analyzer with SMA connector (like the Aaronia SPECTRAN series).

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



SMA to N Adapter

## Laser

Perfect for pinpointing any RF source even at bright daylight. Including connector and all needed screws. Easy to connect on top of any HyperLOG EMI antenna.

Order/Art.-No.: 791 (150mW Laser), 792 (1mW Laser)



150mW Laser

# References

## User of Aaronia 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 Sience, Indonesien
- ◆ Max-Planck-Institut für Polymerforschung, Mainz
- ◆ Los Alamos National Labratory, 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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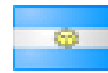
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