



Rev 1.1  
31.03.2009

## EMC EMI probe set sniffer 100kHz to 3GHz

High performance sniffer-set for the SPECTRAN NF-50xx and HF-60xx Analyzer-Series

### References / examples of proof:

- ◆ EADS Deutschland GmbH, Unterschleissheim
- ◆ EnBW Kernkraftwerk GmbH, Neckarwestheim
- ◆ Universität Erlangen, Erlangen
- ◆ Saarschmiede GmbH, Völklingen

### Included with delivery:

- ◆ 1 x 60mm magnetic field probe
- ◆ 1 x 30mm magnetic field probe
- ◆ 1 x 10mm magnetic field probe
- ◆ 1 x isotropic E-field probe
- ◆ 1 x directional E-field probe
- ◆ **Pre-amplifier with power supply (only PBS2)**
- ◆ Transport case with paddings
- ◆ Exhaustive manual (English)

  
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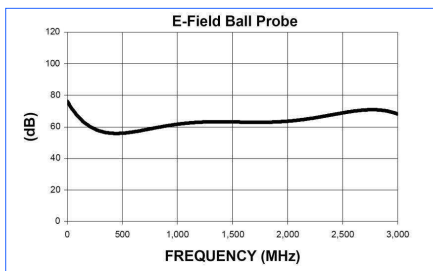
# Specifications:

## PBS1 & PBS2 Sniffer Set:

- ◆ Frequency range: **100kHz-3GHz**
- ◆ Pre-Amplifier noise (PBS2): 3.5dB typical
- ◆ PreAmplifier type/gain (PBS2): "linear" falloff. 1MHz: 40dB; 500MHz: 37.5dB; 1GHz: 35dB
- ◆ Dimensions of case (L/W/D): (320x250x100) mm
- ◆ Weight PBS1 (case incl. probes): 1200gr
- ◆ Weight PBS2 (case incl. probes and pre-amplifier): 1500gr
- ◆ **Warranty: 10 years**

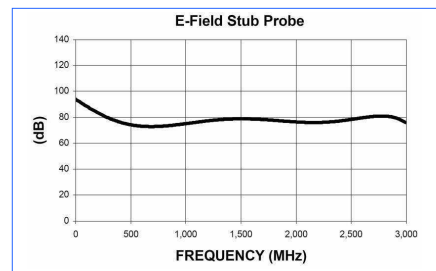
## Isotropic E-field sniffer:

- ◆ H field shielding: 30dB
- ◆ Maximum resonance frequency: >3GHz
- ◆ Connector: 50 Ohms BNC socket (f)
- ◆ **Warranty: 10 years**



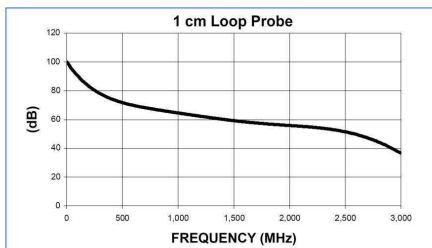
## Directional E-field probe:

- ◆ E-field shielding: 30dB
- ◆ Maximum resonance frequency: >3GHz
- ◆ Connector: 50 Ohms BNC socket (f)
- ◆ **Warranty: 10 years**



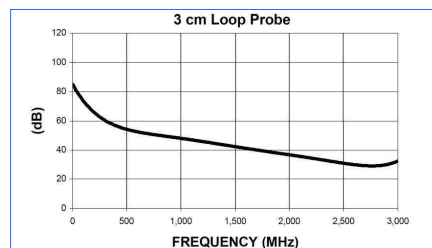
## 10mm magnetic field probe:

- ◆ E Field shielding: 41dB
- ◆ Maximum resonance frequency: 790MHz
- ◆ Connector: 50 Ohms BNC socket (f)
- ◆ **Warranty: 10 years**



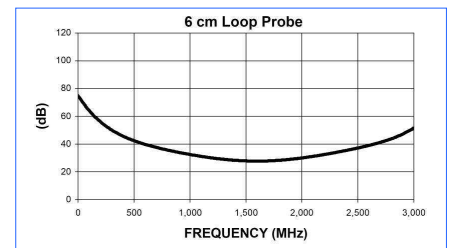
## 30mm magnetic field sniffer:

- ◆ E-field shielding: 29dB
- ◆ Maximum resonance frequency: 1.5GHz
- ◆ Connector: 50 Ohms BNC socket (f)
- ◆ **Warranty: 10 years**



## 60mm magnetic field probe:

- ◆ E-field shielding: 11dB
- ◆ Maximum resonance frequency: 2.3GHz
- ◆ Connector: 50 Ohms BNC socket (f)
- ◆ **Warranty: 10 years**



# Details

Our EMC probe set allows for straightforward pinpointing and measurement of interference sources in electronic component groups as well as execution and monitoring of generic EMC measurement. Our probe set is especially suitable for:

- Pinpointing interference sources
- Estimation of interference field strength
- Verification of shielding and filtering measures
- Identifying faulty components
- Detecting circuitry overly sensitive to interference

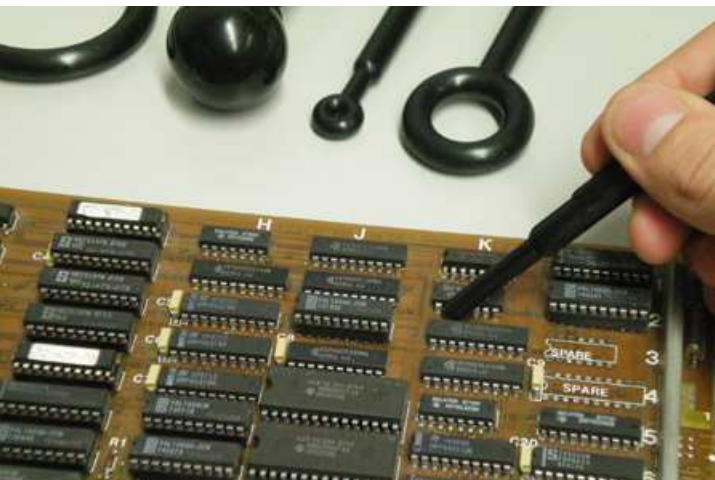
Our set includes a total of 5 probes: 3 probes for magnetic field measurement and two for measurement of electric fields. All probes are covered with an insulating layer, thus allowing safe measurement of oscillators or mains lines.

The PBS2 probe set additionally contains a high-performance pre-amplifier, allowing measurement of significantly weaker interference sources, boosting the sensitivity of our instruments by up to 40dB.

All probes have deliberately been implemented as passive devices to make them usable as transmitting devices as well. Consequently, components and circuits sensitive to interference can easily be pinpointed.



Magnetic field measurement on a group of components using the 60mm H-field probe



Pinpointing interference sources on a circuit board

**Perfect for locating interference sources** which might have been found e.g. in an EN55011, EN55022 or EN50371 (Class A or Class B) survey. After implementing appropriate changes in the circuit, their efficiency can easily and reliably be verified. That way, expensive and time-consuming re-assessments in an EMC laboratory can be skipped.

**Verification of official EMC limits:** For example, should an interference source exceed an official EMC limit by 10dB, our probe set can easily verify if a certain countermeasure succeeds in making the circuitry conforming again.

This is another situation where the probe sets can eliminate the need for expensive and time-consuming measurements in EMC laboratories.

Included in delivery is a transport case with paddings for the 5 probes and for the pre-amplifier with power supply (only included at the PBS2). Each probe-set contains also an exhaustive english manual.



Included in delivery (PBS1)

# References

## User of Aaronia Antennas, Probe Sets and Spectrum Analyzers (Examples)

### Government, Military, aeronautic, astronautic

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

### Industry

- ◆ Audi AG, Neckarsulm, Germany
- ◆ Rohde & Schwarz, München, Germany
- ◆ Shell Oil Company, USA
- ◆ Motorola, Brazil
- ◆ Anritsu GmbH, Düsseldorf, Germany
- ◆ Philips Technologie GmbH, Aachen, Germany
- ◆ Siemens AG, Erlangen, Germany
- ◆ ThyssenKrupp, Stuttgart, Germany
- ◆ Carl-Zeiss-Jena GmbH, Jena, Germany
- ◆ BMW, München, Germany
- ◆ Daimler Chrysler AG, Bremen, Germany
- ◆ ATI, USA
- ◆ BASF, Ludwigshafen, Germany
- ◆ Hewlett Packard, Dornach, Germany
- ◆ Robert Bosch GmbH, Plochingen, Germany
- ◆ IBM Deutschland, Stuttgart, Germany
- ◆ EnBW Kernkraftwerk GmbH, Neckarwestheim
- ◆ AMD, Dresden, Germany
- ◆ Infineon Technologies, Regensburg, Germany

### Research/Development, Science and Universitys

- ◆ Deutsches Forschungszentrum für Künstliche Intelligenz, Germany
- ◆ Universität Freiburg, Germany
- ◆ Indonesien Institute of Science, Indonesia
- ◆ Max-Planck-Institut für Polymerforschung, Mainz, Germany
- ◆ Los Alamos National Laboratory, USA
- ◆ University of Bahrain, Bahrain
- ◆ University of Florida, USA
- ◆ Universität Erlangen, Erlangen, Germany
- ◆ Universität Hannover, Hannover, Germany
- ◆ University of Newcastle, United Kingdom
- ◆ Universität Strasbourg, France
- ◆ Universität Frankfurt, Frankfurt, Germany
- ◆ Uni München – Fakultät für Physik, Garching, Germany
- ◆ Technische Universität Hamburg, Hamburg, Germany
- ◆ Max-Planck Institut für Radioastronomie, Bad Münstereifel, Germany
- ◆ Max-Planck-Institut für Quantenoptik, Garching, Germany
- ◆ Max-Planck-Institut für neurologische Forschung, Köln, Germany
- ◆ Max-Planck-Institut für Kernphysik, Heidelberg, Germany
- ◆ Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany
- ◆ Forschungszentrum Karlsruhe, Karlsruhe, Germany
- ◆ Forschungszentrum Molekularphysiologie des Gehirns, Germany

# Visit us at the



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