Rev 2.1
12.09.2014

RF Near Field Probe Set DC to 9GHz

EMF & RF close field sniffer-set for use with any Spectrum Analyzer or Measurement Receiver

Included with delivery:

- 1 x 50mm magnetic field probe
- 1 x 25mm magnetic field probe
- 1 x 12mm magnetic field probe
- 1 x 6mm magnetic field probe
- 1 x E-field probe
- **Pre-amplifier with power supply (only PBS2)**
- 1m SMB-to-SMA Cable
- Pistol grip with tripod function
- Transport case with paddings
- Exhaustive manual
- Power Converter Excel files on CD
- **Power Converter App for iPhone & iPad**
  (Download via Apple Store)

AARONIA AG
WWW.AARONIA.DE

Made in Germany

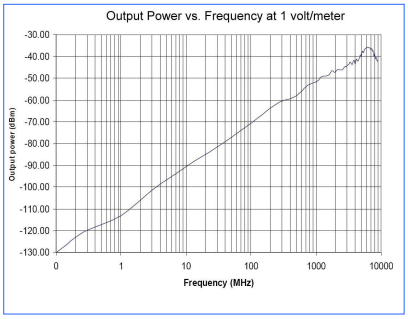
Specifications:

PBS1 & PBS2 Sniffer Set:

- Frequency range: **DC-9GHz**
- Pre-Amplifier noise (PBS2): 3.5dB typical
- PreAmplifier type/gain (PBS2): "linear" falloff. 1MHz: 40dB; 3GHz: 37.5dB; 6GHz: 35dB
- Dimensions of case (L/W/D): (300x190x70) mm
- Weight PBS1 (case incl. probes): 1200gr
- Weight PBS2 (case incl. probes and pre-amplifier): 1500gr

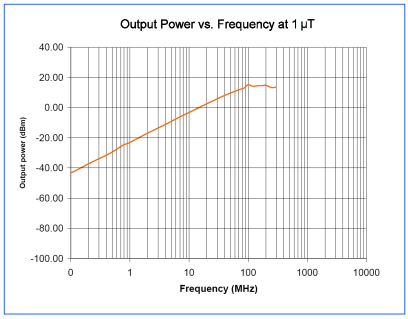
Isotropic E-field probe:

- Sensor diameter: 3mm
- Maximum resonance frequency: 9GHz
- Connector: 50 Ohms SMB socket (m)



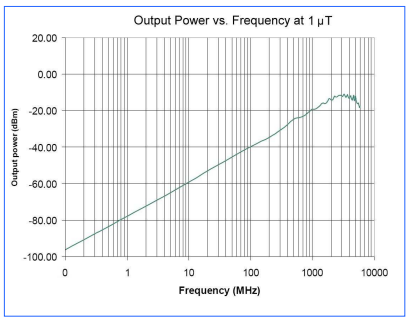
50mm magnetic field probe:

- Sensor diameter: 50mm
- Maximum resonance frequency: 700MHz
- Connector: 50 Ohms SMB socket (m)



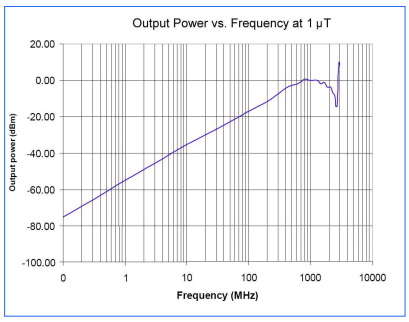
6mm magnetic field probe:

- Sensor diameter: 6mm
- Maximum resonance frequency: >6GHz
- Connector: 50 Ohms SMB socket (m)



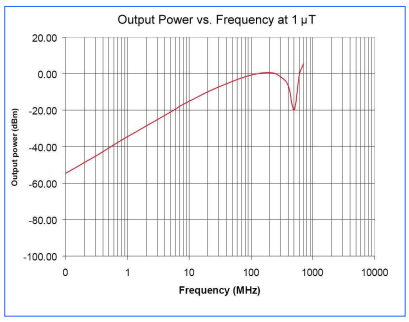
12mm magnetic field sniffer:

- Sensor diameter: 12mm
- Maximum resonance frequency: 2,6GHz
- Connector: 50 Ohms SMB socket (m)



25mm magnetic field probe:

- Sensor diameter: 25mm
- Maximum resonance frequency: 500MHz
- Connector: 50 Ohms SMB socket (m)



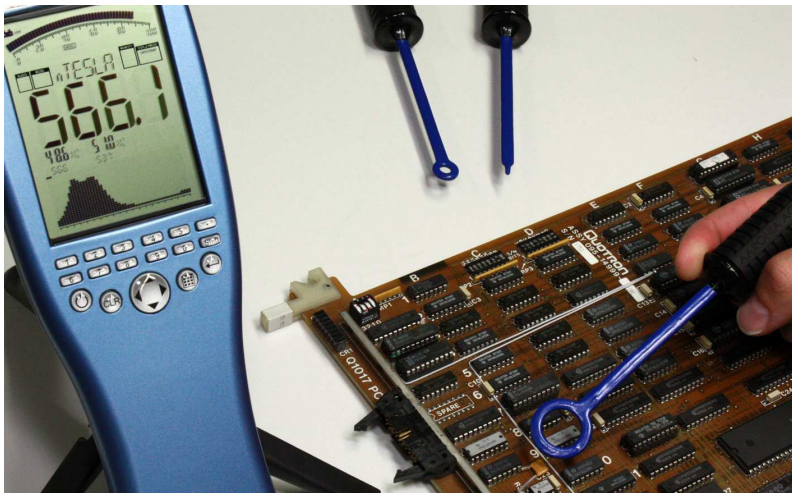
Included in delivery is a transport case with paddings for the 5 probes and for the pre-amplifier with power supply (only included at the PBS2). Each probe-set also contains an exhaustive english manual, a 1m SMB-to-SMA cable and a pistol grip with miniature tripod function.

Details

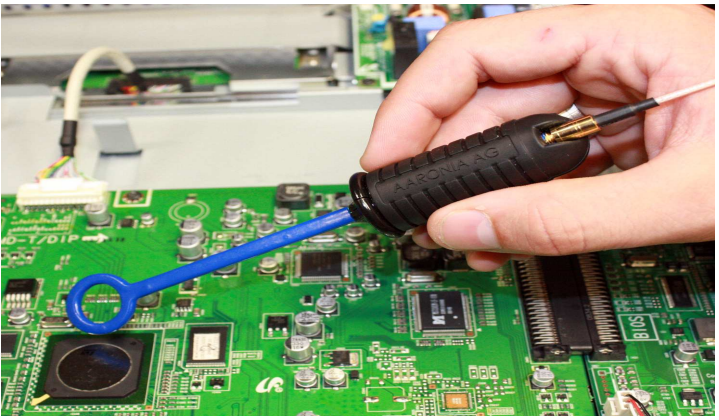
The EMC Near Field probe set allows for straightforward pinpointing and measurement of interference sources in electronic component groups as well as execution and monitoring of generic EMC measurement. Our RF near field probe set is especially suitable for:

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

The set includes a total of 5 probes: 4 probes for magnetic field measurement and one for measurement of electric fields. All probes are covered with an insulating layer, thus allowing safe measurement of oscillators or mains lines.



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



Pinpointing interference sources on a circuit board

Use of the included tripod for the fixation of the H-field probe

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.

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.

Very useful is the integrated (1/4”) tripod connector which allows to mount the probes on each tripod.

The RF Probe Set can be connected to any Spectrum Analyzer or Oscilloscope. For units with N-connector we offer a SMA-to-N Adapter (optional).

Each Probe offers a SMB-quick-connector...

... which allows a fast connection/change of the included measurement cable.

The tripod connector at the bottomside of each probe allows the comfortable fixation using the included miniature tripod

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 Sience, Indonesia
- Max-Planck-Institut für Polymerforschung, Mainz, Germany
- Los Alamos National Labratory, 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