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NEW

RF Basic set

Near-Field Probes 30 MHz to 3 GHz

Precise and practical EMC diagnostics made easy – with the RF Basic set from Langer EMV-Technik GmbH.

The six near-field probes cover frequencies from 30 MHz to 3 GHz, allowing targeted localization of interference sources on the circuit board and complement each other perfectly in their application. Ideal for developers and test engineers who want to detect and eliminate electromagnetic emissions early and effectively.

Application Areas for the RF Basic Set

» Evaluation of the electric and magnetic excitation of electronics
» Detection of RF sources on the PCB
» Indirect RF current measurement in cables or at IC pins possible
» Coverage of a wide frequency range
» Use with spectrum analyzers, test receivers, or oscilloscopes
» Suitable as a near-field probe in automated scanner systems

Scope of delivery

1x	RF-R 400-1, H-Field Probe 30 MHz up to 3 GHz
1x	RF-R 3-2, H-Field Probe 30 MHz up to 3 GHz
1x	RF-B 3-2, H-Field Probe 30 MHz up to 3 GHz
1x	RF-U 2.5-2, H-Field Probe 30 MHz up to 3 GHz
1x	RF-E 02, E-Field Probe 30 MHz up to 1.5 GHz
1x	RF-E 05, E-Field Probe 30 MHz up to 3 GHz
1x	SMB-BNC 1 m, SMB-BNC Measurement Cable
1x	Case 5, System Case for 5 Near-Field Probes

Click here for more information:

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Efficient Entry into EMC Diagnostics

Our new RF Basic Set with Near-Field Probes from 30 MHz to 3 GHz

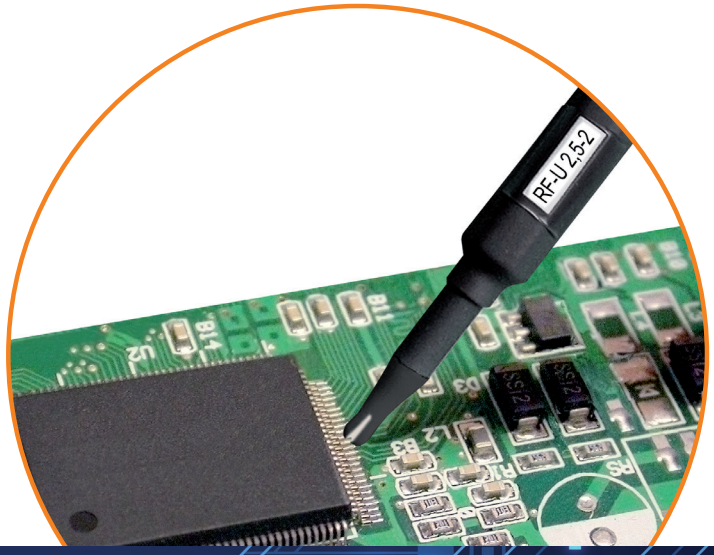
With the new RF Basic set, Langer EMV-Technik GmbH offers a powerful tool for development-accompanying diagnostics of electromagnetic emissions on electronic assemblies. This set is particularly aimed at developers and test engineers looking for a solid entry into EMC measurement technology.

The set includes six passive near-field probes for measuring electric and magnetic fields in the frequency range from 30 MHz to 3 GHz. Thanks to the variety of probe heads, RF interference sources can be gradually localized and their coupling mechanisms analyzed. Starting with a general analysis using the RF-R 400-1 and RF-E 02 probes, the relevant interference components for both conducted and radiated EMC tests (antenna measurements) can be detected. Higher-resolution probes such as the RF-R 3-2, RF-B 3-2, RF-U 2.5-2, and RF-E 05 enable precise investigation of field distribution and field orientation directly on the PCB.

A standout feature of this set is its versatility. It allows detection of around 80 percent of EMC-relevant interference factors, thus covering the majority of typical application scenarios – for both electric and magnetic near fields. The probes are designed for connection to spectrum analyzers, measuring receivers, or oscilloscopes with a 50-ohm input.

It is recommended to use an additional preamplifier (20–30 dB), especially with the high-resolution probes. This increases measurement sensitivity and also protects the input of the measuring device from overvoltage (only with external preamplifier).

With its well-balanced combination of functionality, resolution, and ease of use, the RF Basic set is the ideal solution for EMC newcomers and a reliable tool for optimizing electromagnetic compatibility in electronic development.



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PHISIC 2025

Langer EMV Focuses on IC Security

On May 20–21, 2025, we participated in PHISIC 2025 in Gardanne, France – a highly specialized workshop dedicated to the practical security of integrated circuits (ICs).

Together with our partner ES France, we presented targeted solutions addressing attack scenarios, risk assessment, and diagnostic methods at the chip level.

Key technical highlights at our booth:

- IC Immunity Testing – reproducible evaluation of susceptibility to electromagnetic interference
- Fault Injection – targeted disruption to analyze system behavior and identify vulnerabilities
- Side-Channel Analysis – detection and mitigation of information leakage
- Surface Scanning of ICs & PCBs – using the ICS 105 set and FLS 106 set for high-resolution localization

We appreciate the strong interest, insightful technical conversations, and direct exchange with visitors at our booth.

Olaf Arendt (General Manager) and Carsten Stange (Development) were on-site, providing in-depth insights and hands-on expertise related to IC security topics and applications.

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ESA Workshop on Aerospace EMC

Recap of our Trade Show Appearance in Seville

Together with our partner Wavecontrol S.L., Barcelona, we at Langer EMV-Technik GmbH look back on a successful participation at the "ESA Workshop on Aerospace EMC", held this year in Seville, Spain. Our focus was on solutions for the efficient identification and mitigation of electromagnetic disturbances at the PCB level – right during the development process.

Our Highlights in Seville:

- Presentation of the ESA1 set in combination with the CS-ESA software, supported by a video sequence showcasing practical examples of emission analysis
- Live demonstrations using the P1 set, DB 20 set, and D10 set to illustrate typical EMC phenomena related to immunity testing
- Hands-on insights into targeted EMC optimizations and early-stage fault identification methods during development

Our goal is to support electronics developers worldwide with the best development-phase EMC tools, training, and services.

Our three Core Pillars:

- EMC Consulting
- EMC Experimental Seminars
- Development-phase EMC Measurement and Test Equipment

We enable our customers to optimize costs and meet EMC requirements already during the development phase.

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We were particularly pleased to establish numerous new contacts in Spain and to receive strong interest from visitors from Belgium and Poland – including individuals from European space organizations and leading research institutes in space technology. These international encounters clearly showed: our approach resonates broadly – from industrial electronics to aerospace applications.

We thank all visitors for their interest, valuable feedback, and inspiring conversations. We look forward to continuing these valuable connections and to future collaborations.

The BPS 202 Software Development Kit (SDK)

The BPS 202 Software Development Kit (SDK) is a collection of resources designed to facilitate the development of applications that can control the Langer Burst Power Station (BPS 202) or integrate it into existing programs.

The SDK supports both Windows and Linux environments, providing a cross-platform library (DLL for Windows and shared object file for Linux) for direct USB communication with the hardware.

It includes:

- the shared library (`.dll` for Windows, `.so` for Linux),
- a Python example script and C++ program code demonstrating how to use the SDK, and
- a manual with a detailed description of all library routines, a flowchart illustrating the typical workflow when using the SDK library.

For Windows the BPS 202 can also be controlled through the provided GUI application "BPS 202-Client". Both methods utilize the same underlying library file to communicate with the hardware, ensuring consistent behaviour across different control approaches.

Not available individually; included in the following product sets: P202 / P302 L-EFT set, ICI E450 L-EFT set, ICI I900 L-EFT set, and ICI HH500-15 L-EFT set.

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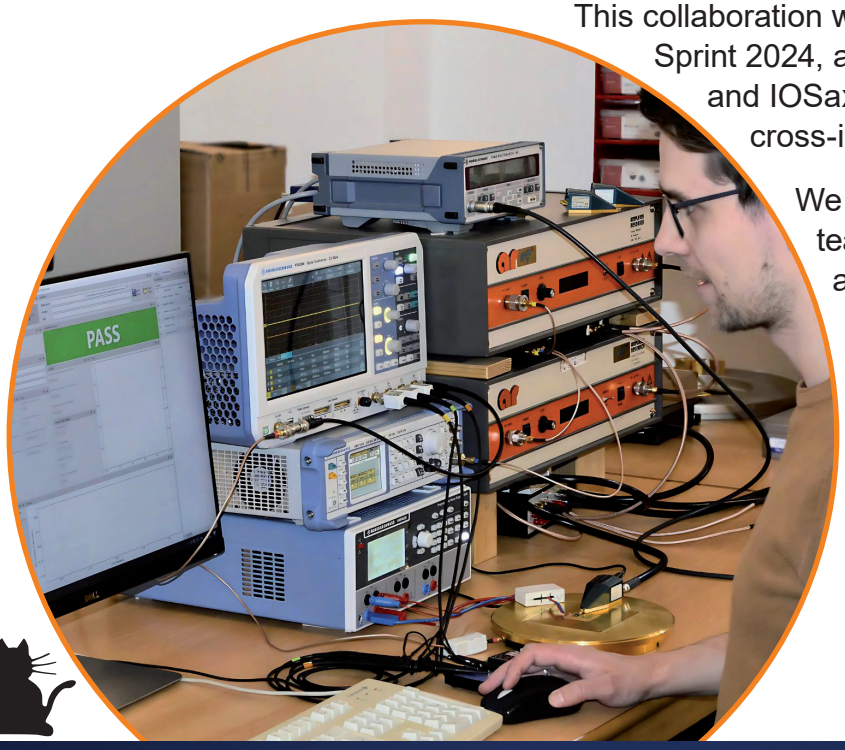
Automated EMC Testing

New DPI Test Station for IC Immunity Testing with SweepMe!

Together with SweepMe! we have implemented a Direct Power Injection (DPI) measurement setup to automate and streamline immunity testing procedures for ICs. DPI is a standardized method used in electromagnetic compatibility (EMC) testing, where RF interference is directly injected into the signal or power pins of a device under test (DUT) to evaluate its susceptibility to conducted RF disturbances. This method is essential for qualifying ICs and to ensure their immunity towards disturbances. The setup includes a signal generator, multiple RF amplifiers, an oscilloscope, an injection probe, and power reflection meters to monitor and control the injected power levels precisely.

Using SweepMe!, the entire test sequence, including RF level and frequency sweeps, real-time power monitoring, and DUT response logging, has been automated into a single, synchronized procedure. Furthermore, an automatic pass/fail detection was realized. This enhances test repeatability and flexibility while providing detailed documentation of the immunity thresholds. The modularity of SweepMe! allows us to easily adapt the setup for different test objects, test equipment (generators, oscilloscopes, …) and standards, significantly reducing setup time and increasing reliability in EMC testing workflows.



This collaboration was initiated as part of the Product Sprint 2024, a program by Smart Systems Hub and IOSax supporting innovation through cross-industry partnerships.

We would like to thank the SweepMe! team for their excellent cooperation and look forward to continuing our joint efforts in advancing automated EMC test solutions.

You can find SweepMe! at the following link:
https://sweep-me.net/

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