

PLA FSMP

Field Strength Meter

USER MANUAL



We would like to congratulate you on your purchase of a PROLOOP FSMplus Field Strength Meter. You have chosen a modern and reliable system. Please make sure to read the operating instructions carefully before using this equipment. They will provide you with important information on the safety, use and operation of the device. The PROLOOP FSMplus is an ideal solution for measuring, comparing and starting up an induction loop system according to the requirements of the IEC60118-4 Norm. The ergonomically designed, hand-held meter has two calibrated measuring functions and two calibrated measuring functions and two settings for the evaluation of background noise and the magnetic strength. You can use the PROLOOP FSMplus headphone jack to listen to and test the loop signal. The PROLOOP FSMplus comes complete with the batteries required and an audio CD with special test signals. The CD contains different sine test signals in the 100 Hz to 6 kHz range.

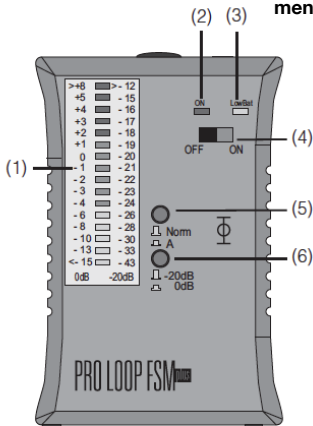
Safety Instructions

Use "AA/LR6" batteries only. Do not expose the meter to water in any way. Should any water penetrate into the enclosure, it may destroy the electronics. Do not store the de-vice outside. To clean the meter, wipe it carefully with a dry cloth – never use any type of chemicals or water.

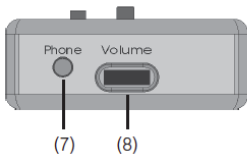
1. Overview of the connection jacks and operating elements

- | | |
|---|--|
| (1) Color-coded display of the field strength | (5) Filter selection switch |
| (2) On/off indicator | (6) Measurement range selection switch |
| (3) Battery-low indicator | (7) Headphone jack |
| (4) On/off switch | (8) Volume control for the headphones |

Switch setting for the measurement range selection switch (6)



0 dB	-20 dB
>+8	>-12
+5	-15
+4	-16
+3	-17
+2	-18
+1	-19
0	-20
-1	-21
-2	-22
-3	-23
-4	-24
-6	-26
-8	-28
-10	-30
-13	-33
<-15	<-43



2. Measurement functions

(-20dB) measurement range for background noise

Increases the sensitivity of the device and is used to detect magnetic interference fields. This function can be used to determine the crosstalk of

the loops. Measurement range from -43 to -12 dB.

(0dB) measurement range for magnetic field strength

A broadband measurement range used to check the field strength that the induction loop emits.

Filter A

Evaluates the values measured on the basis of the listening curve of the human ear.

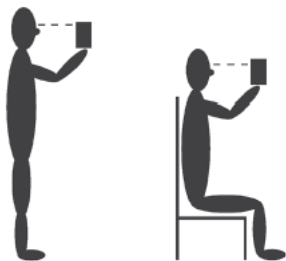
Filter Norm

Evaluates all the values measured in the same way on the basis of their physical values.

3. Using the meter

Before you begin with the calibration, look for a reference point within your loop (usually in the middle of the installed loop). Hold the PROLOOP FSMplus perfectly perpendicular to the floor. Be sure to also make a note of the height at which you hold the device. This depends on the application.

Typical values are e.g. 1.20 m (sitting) or 1.70 m (standing).



4. Step-by-step instructions

Use the CD with the reference signal that is enclosed with the device and perform the following steps to perfectly adjust the loop to your needs.

To ensure exact measurements, always hold the PROLOOP FSMplus perpendicular to the floor.

	Measurement	Signal Required	Measurement range and filter selection switch	Comparison point	Reference measurements
Step 1	Basic setting	Amplifier off	FSMplus off	None	All controls turned as far to the left as possible
Step 2	Background noise	Amplifier off	FSMplus off -20 dB	Several points inside the loop	Maximum < -30 dB Ideal < -43 dB
Step 3	Magnetic Field Strength	CD track 3	Norm 0 dB	Loop power	0 dB +-3 dB at 1000 Hz
Step 4	Frequency response	CD track 3	Norm 0 dB	Treble	Max deviation -3 to +3 dB
Step 5	Magnetic field strength again	CD track 3	Norm 0 dB	Adjust loop power	0 dB +-3 dB at 1000 Hz
Step 6		Current signal e.g. microphone	Norm 0 dB	Line IN control	-3 to +3 dB in the peaks

5. Maintenance and care

The PROLOOP FSMplus does not require any maintenance. If the unit does become dirty, simply wipe it clean with a soft, damp cloth. Never use spirits, thinners or other organic solvents. Do not set up the PROLOOP FSMplus where it will be exposed to full sunlight for long periods. In addition, it must be protected against excessive heat, moisture and severe mechanical shocks.

Note: This product is **not** protected against splash water. Do not place any containers filled with water, such as flower vases, or anything with an open flame, such as a lit candle, on or near the product.

6. Warranty

The PROLOOP FSMplus is a very reliable product. Should a malfunction occur despite the unit having been set up and operated correctly, please contact your dealer or the manufacturer directly.

This warranty covers the repair of the product and returning it to you free of charge. It is essential that you send in the product in its original packaging, so do not throw the packaging away. The warranty does not apply to damage caused by incorrect handling or attempts to repair the unit by people not authorised to do so (destruction of the seal on the unit). Repairs will only be carried out under warranty if the completed warranty card is returned accompanied by a copy of the dealer's invoice/till receipt. **Always specify the product number in any event.**

7.



Disposal

Disposal of used electric and electronic units (applicable in the countries of the European Union and other European countries with a separate collection system). The symbol on the product or the packaging indicates that this product is not to be handled as ordinary household waste but has to be returned to a collecting point for the recycling of electric and electronic units. You protect the environment and health of your fellow men by the correct disposal of these products. Environment and health are endangered by a faulty disposal. Material recycling helps to reduce the consumption of raw material. You will receive further information on the recycling of this product from your local community, your communal disposal company or your local dealer.

8. Specifications

Scale calibration:

Operating mode	-20 dB -20 dB = 0.043 A/m
Operating mode	0 dB 0 dB = 0.4 A/m
Type of measurement	True RMS 125 ms

Frequency response:

Filter	A / Flat
30 Hz...500 Hz	-3 dB...-4 dB
500 Hz...2500 Hz	+/-0.25 dB
2500 Hz...10kHz	+/-3 dB

Outputs:

Display	Color-coded LED dot display
Headphones	3.5 mm cinch
Power supply:	Batteries 2x AA
Indicator lights	LED
Service life	100 h
Dimensions	(WxHxD) 83 x 126 x 35 mm
Weight approx.	300 g



This device satisfies the following EU directives:

- 2002/95/EG RoHS directive - 2004/108/EG EMC directive
- 2002/96/EG WEEE directive - 2006/95/EG Low voltage directive

Compliance with the directives listed above is confirmed by the CE seal on the device. CE compliance declarations are available on the Internet at www.humanteknik.com.

Technical specifications subject to change without notice.

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