

# eHV10\_27G3 Manual

**High Frequency preamplifier with a signal amplification of 10dB (15dB) in the frequency range of 27 MHz - 3000 MHz. For amplification of field strength below the lower limit of the HF-Analyzer.**

Preamplifier +10dB (15dB) with DC-Passthrough.

This preamplifier increases the lower field strength measurement range of the HF-Analyzer by a factor of 10 i.e. (Increases the signal strength 10 times). If the measurement range is set to minimum and the display indicates ( $< 1\mu\text{W}/\text{m}^2$ ), this attenuator will allow the HF-Analyzer to accurately display the lower signal strength. It is compatible with the following HF Analyzers HFE35C, HF58B, HF58B-r, HF59B and HFE59B (here incl.) This preamplifier is recommended to be used on the most sensitive measurement range.

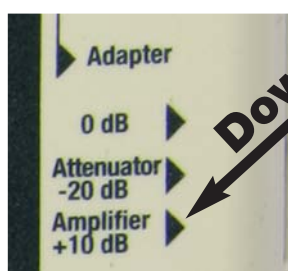
## Assembly:

The preamplifier is screwed between the antenna cable and the antenna jack of your HF-Analyser. If necessary use our snap-on tightening aid MZU0076. **CAUTION:** Tools SHOULD NOT be used for tightening the connections because over tightening can damage the threads. The filter is usually attached directly to the antenna jack. If required it can also be assembled on a 90 degree angle with the enclosed SMA elbow connector. (CAUTION: Do not fold the antenna cables!)

The HF-Analyser supplies the amplifier with power. A green light-emitting diode illuminates through the amplifier symbol on the filter. Please pay attention to the Low-Batt. warning on the HF-Analyser's display, as the light-emitting diode still glows even if power supply is not sufficient for proper function!

## Interpreting the Displayed Measurements

HF58B, HF58B-r, HF59B, HFE59B:



When the preamplifier is connected, set the "Adapter" switch of the HF-Analyser to "Amplifier +10dB" (See picture on left). This activates the integrated automatic conversion feature of the HF-Analyser. The true signal strength value can be read from the display without any manipulation. The vertical line on the left side of the display indicates the correct measuring unit.

Example (HF58B, HF58B-r, HF59B, HFE59B: Attenuator connected and the "Adapter" switch set for "Amplifier +10dB):

Displayed value:  
 100  $\mu\text{W}/\text{m}^2$

True (precise) value:  
 100  $\mu\text{W}/\text{m}^2$

Caution: Caution: Please connect a frequency filter before the amplifier if using an antenna which does not cover the complete frequency range. This will avoid overloads.

Example: When using the antenna "HF800V2500LPE174" please also connect the high pass filter "eHP800\_G3".

**HFE35C:**

The value from the display must be divided with a factor of 30 to get the real field strength:

Example : Displayed value:  
 100  $\mu\text{W}/\text{m}^2$

True (precise) value:  
 $100 \mu\text{W}/\text{m}^2 / 30 = 3,33 \mu\text{W}/\text{m}^2$

**Technical data:**

Amplification range: 0 Hz (DC) < 5 Ohm  
 27 MHz - 2600 MHz = 15 dB  $\pm$  1 dB  
 2600 MHz - 3000 MHz = 15 dB - 1 dB to 15 dB - 4 dB

Return loss: 27 MHz - 3000 MHz < -6 dB

**Diagram:**

