

## Wideband power meter

Power meter PM-1W is intended for power measurements in 10-6000MHz frequency range.

### Features:

- Compact case
- Wide frequency range
- Good dynamics
- Large built-in LCD
- Rechargeable and replaceable accumulators
- Internal 3-cell charger

### Application areas:

- GSM/UMTS networks
- CATV networks
- GPS
- FM-radio
- 2.4GHz & 5.5GHz Wi-Fi
- WiMax

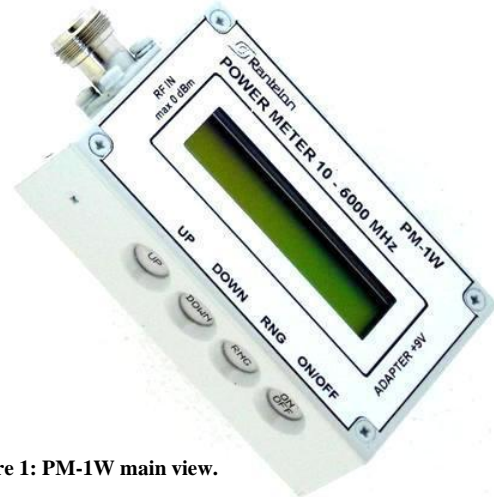


Figure 1: PM-1W main view.

### Product description:

Power meter PM-1W operates in 10-6000MHz range. Operating range is divided into 9 sub-ranges. For precise and stable work in each sub-range special calibration coefficients are defined. No any filtering is applied at input of power meter. Therefore the device can operate in band 10-6000MHz without changing of the sub-ranges. In this case working precision is out of specified limits, but relative result can be valid.

PM-1W allows measurements of radio-signals with dynamics up to 60dB. "Offset" option gives possibility to read results directly from power meter display, without additional calculations after measurement.

Built-in battery level indicator shows (right lower corner of LCD) remaining power of 3xAA-type elements. If level is equal with 4.5V (or above) the indicator will show 9. In case of low level (3.1V or less) value is 0. Built-in charger allows external charging/powering with just with any kind of network adapter +9V.



Figure 2: PM-1W top and side view.



## Technical specifications:

Parameter	Specification
Input frequency range	10-6000MHz
Frequency sub-ranges *	10-500MHz 500-1000MHz 1000 – 1500MHz 1500 – 1900MHz 1900 – 2500MHz 2500 – 3000MHz 3000 – 4000MHz 4000 – 5000MHz 5000 – 6000MHz
Dynamic range (@ 1 GHz)	60dB
Input impedance	50Ω
Input maximum level	0dBm
Accuracy (tested at -10dBm)	± 3dB (typ. 2dB)
Operating time (3xAA-type new accumulators 2600mAh)	> 8 hours
Accumulators	3 pcs., AA-type, NiMH, 1.2V
Battery charging duration (2600mAh NiMH 3xAA)	≈ 3 hours
Battery level indicator	digital, built-in
Digital offset option	built-in
Internal 3-cell charger ** 1000mA, 2.1mm DC-connector for external network adapter	built-in
RF-connector	N-type, female
Dimensions	122 x 61 x 34 mm

\* on order other frequencies are available up to 8GHz. For more details ask Rantelon.

\*\* **NB!** Using external adapter please see that positive side of 2.1mm DC-connector is in center (inner conductor). In charging progress output voltage of external adapter must be between +8.5...+9.5V. In case of normal operation (in charging progress) green LED is active. In case of some fault charging situation, like broken battery, red LED is active. Begin charging only, if battery level indicator will show “1” or less.

### Buttons:

ON/OFF - switching device ON and OFF

RNG - activating of offset or frequency sub-range tuning

DOWN - tuning current frequency sub-range or offset value to next lower one

UP - tuning current frequency sub-range or offset value to next higher one

### Settings and properties:

- Measuring, it cannot be forgotten, that maximum input power is 0dBm. Giving higher level the device can be damaged. Recommended range of input levels is between -55 to -10dBm.
- Offset tuning step is 1dB in range -100dB to 100dB
- Switching the device on, frequency sub-range is set to 500-1000MHz and offset is putted to 0dB.
- In case of need, batteries/accumulators can be replaced: unscrew case (in corners of top cover 4 screws) and replace batteries/accumulators.