

The handy handheld oscilloscope and multimeter

RedHand Scope



The RedHand Scope is the ideal solution, if you need an universal measurement instrument with an oscilloscope, multimeter and logger. For example for mobile applications in service and maintenance, on-site field service or starting of machines. The robust case is included and can be locked with a key. Also included in the case is a complete set of accessories like probes and cables. The device's USB interface can be used to transfer measurement data to a PC if needed.

- **Handheld scope** and 3 3/4 digit digital multimeter with data logger in one device.
- Depending on model: Bandwidth 20 MHz, sample rate 100 MS/s or bandwidth 60 MHz, sample rate 250 MS/s.
- 2 channels.
- **Edge and video trigger.**
- 5 automatic measurement modes.
- Manual cursor measurements.
- 2 K/channel or 6 K/channel memory depth.
- **USB communication** for data transfer to a PC. Windows software for the transfer.
- Operation with **battery or power adaptor.**
- Independent, full isolation between scope and DMM channels.
- **Extra bright display and key illumination.**
- **Robust case with full accessory included.**

**Software:**

Windows software to control data transmission to a PC.

» **Ordering code and functions**

**RedHand Scope**

| Model                | Description  |
|----------------------|--|
| RedHand Scope 20 MHz | Handheld universal device: Scope, multimeter, logger: 2 channels, 8 bit resolution, 100 S/s rate, 20 MHz bandwidth |
| RedHand Scope 60 MHz | see above, but 250 MS/s rate, 60 MHz bandwidth   |

**Included:**

Handheld universal instrument, robust lockable case, instructions for use, CD with software, power adaptor (for loading the internal battery and for operation), 2 oscilloscope probes, 2 multimeter lines (black/red), adaptors etc.



Lockable, robust, handy case



USB cable

Bright, brilliant display, menu language selectable - also English or German!

Illuminated keys



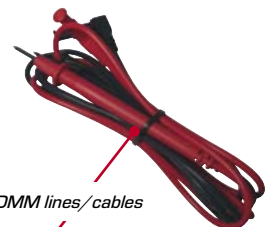
Power adaptor



Housing with rubber cover offers a good grip



Universal device: Scope, multimeter, logger



DMM lines/cables



Probes

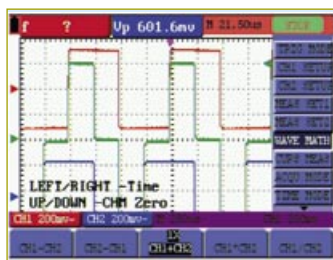


Adaptors, various small accessories



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Screenshot of the RedHand Scope, oscilloscope mode



Screenshot of the RedHand Scope, multimeter mode



## Specifications

| Models  | RedHand Scope 20 MHz   |                |            | RedHand Scope 60 MHz  |          |                 |            |
|---|--|----------------|------------|---|----------|-----------------|------------|
| Bandwidth   | 20 MHz   |                |            | 60 MHz  |          |                 |            |
| Rate  | 100 MS/s   |                |            | 250 MS/s  |          |                 |            |
| Risetime  | 17.5 ns  |                |            | 5.83 ns   |          |                 |            |
| Memory  | 6 K/channel  |                |            |   |          |                 |            |
| <b>...as oscilloscope</b>   |  |                |            |   |          |                 |            |
| Sampling  | Normal, peak detect, averaging   |                |            |   |          |                 |            |
| Inputs  | 2 channels, DC/AC coupling. Impedance 1 MΩ ±2% in parallel with 20 pF ±3 pF. Probe attenuation factors x1, x10, x100, x1000. Max. input voltage 400 V (peak-peak). Channel delay time typ. 150 ps.   |                |            |   |          |                 |            |
| Horizontal system   | Sampling rate range 10 S/s...100 MS/s or 250 MS/s, waveform interpolation (sin x)/x. Record length 6 K points. Time base range (s/Div) 5 ns/Div...5 s/Div, in steps of 1 - 2 (20 MHz)/2.5 (60 MHz) - 5. Sampling rate and relay time accuracy: ±100 ppm (any time interval equal or greater 1 ms). Accuracy of the time interval measurement (Δt, full bandwidth), single: ±(1 sampling interval + 100 ppm * readings + 0.6 ns); >average 16: ±(1 sampling interval + 100 ppm * readings + 0.4 ns)                               |                |            |   |          |                 |            |
| Vertical system   | A/D convertor resolution 8 bit, channel 1 and 2 synchronous. Sensitivity range (V/Div): 5 mV/Div...5 V/Div (input to BNC). Position range 20MHz model: ±50 V (500 mV...5 V)/60 MHz model: ±2 V (5 mV...200 mV), ±1 V (5 mV...200 mV). Single bandwidth: Full bandwidth. LF respond (AD-Kopplung, -3 dB) ≥5 Hz (to BNCs). DC gain accuracy ±5%. Accuracy of DC measurement (averaging sampling mode): voltage difference (ΔV) between any 2 points of the waveform after averaging (more than 16): ±(5% reading + 0.05 divisions) |                |            |   |          |                 |            |
| Trigger   | Auto, normal, single, edge, video<br>Trigger sensitivity (edge) DC coupling: Channel 1 and channel 2, 1 div (DC...25 MHz). AC coupling: Channel 1 and channel 2, 1 div (50 Hz...full bandwidth). Trigger level range ±6 Divisions from center screen. Trigger level accuracy: ±0.3 Divisions. Trigger sensitivity (video trigger and typ. operation): 2 Divisions of peak-peak. Signal system and line/field frequency (video trigger mode): Supports NTSC, PAL and SECAM  |                |            |   |          |                 |            |
| Measurement   | Cursor measurement: Voltage difference (ΔV) and time difference (Δt) between the cursors. Automatic measurement: Peak-peak, averaging, RMS, frequency, circle  |                |            |   |          |                 |            |
| Probe   | x1 position: Bandwidth DC...6 MHz. Factor 1:1. Compensation rate 10 pF...35 pF. Input resistance 1 MΩ ±2%. Input impedance 85 pF...115 pF. Input voltage 150 VDC<br>x10 position: Bandwidth DC...full bandwidth. Factor 10:1. Compensation rate 10 pF...35 pF. Input resistance 10 MΩ ±2%. Input impedance 14.5 pF...17.5 pF. Input voltage 300 VDC  |                |            |   |          |                 |            |
| <b>...as multimeter</b>   |  |                |            |   |          |                 |            |
| <b>Voltage DC</b>   |  |                |            | <b>Voltage AC</b>   |          |                 |            |
| Input impedance 10 MΩ. Input voltage max. 1000 V (DC or AC peak-peak) |  |                |            | Input impedance 10 MΩ. Frequency range 40 Hz...400 Hz. Display: Virtual value or sinus wave. Input voltage max. 750 V (AC, virtual value) |          |                 |            |
| Inputs  | Range  | Accuracy       | Resolution | Inputs  | Range    | Accuracy        | Resolution |
|   | 400.0 mV   | ±1% ±1 Digit   | 100 μV     |   | 4.000 V  | ±1% ±3 Digits   | 1 mV       |
|   | 4.000 V  |                | 1 mV       |   | 40.00 V  |                 | 10 mV      |
|   | 40.00 V  |                | 10 mV      |   | 400.0 V  |                 | 100 mV     |
|   | 400.0 V  |                | 100 mV     |   |          |                 |            |
| <b>Current DC</b>   |  |                |            | <b>Current AC</b>   |          |                 |            |
| Inputs  | Range  | Accuracy       | Resolution | Inputs  | Range    | Accuracy        | Resolution |
|   | 40.00 mA   | ±1% ±1 Digit   | 10 μA      |   | 40.00 mA | ±1.5% ±3 Digits | 10 μA      |
|   | 400.0 mA   | ±1.5% ±1 Digit | 100 μA     |   | 400.0 mA | ±2% ±1 Digit    | 100 μA     |
|   | 20 A   | ±3% ±3 Digits  | 10 mA      |   | 20 A     | ±5% ±3 Digits   | 10 mA      |
| <b>Resistance Ω</b>   |  |                |            | <b>Capacity</b>   |          |                 |            |
| Inputs  | Range  | Accuracy       | Resolution | Inputs  | Range    | Accuracy        | Resolution |
|   | 400.0 Ω  | ±1% ±3 Digits  | 0,1 Ω      |   | 51.20 nF | ±3% ±3 Digits   | 10 pF      |
|   | 4.000 kΩ   | ±1% ±1 Digit   | 1 Ω        |   | 512.0 nF |                 | 100 pF     |
|   | 40.00 kΩ   |                | 10 Ω       |   | 5.120 μF |                 | 1 nF       |
|   | 400.0 kΩ   |                | 100 Ω      |   | 51.20 μF |                 | 10 nF      |
|   | 4.000 MΩ   |                | 1 kΩ       |   | 100 μF   |                 | 100 nF     |
|   | 40.00 MΩ   | ±1.5% ±1 Digit | 10 kΩ      |   |          |                 |            |
| <b>Multimeter - additional functions</b>                              |  |                |            |   |          |                 |            |
| Diode   | Voltage 0...1.5 V  |                |            |   |          |                 |            |
| On-off-test   | <50 (±30) beeping  |                |            |   |          |                 |            |
| <b>General data</b>   |  |                |            |   |          |                 |            |
| Size (cm)   | 18 x 11.5 x 4, 645 g   |                |            |   |          |                 |            |
| Power   | From rechargeable battery or power adaptor for 100...240 VAC, 50/60 Hz, supplies 8.5 VDC/1500 mA. Consumption <6 W   |                |            |   |          |                 |            |
| Display   | 3.8" color TFT, resolution 320 (horizontal) x 240 (vertical) pixels, 4096 colors   |                |            |   |          |                 |            |
| Environmental   | Operating temperature with battery 0...50°C, with power adaptor 0...40°C, storage temperature -20...+60°C. Humidity - operation: (0...10°C) non-condensing, (10...30°C) 95%, (30...40°C) 75%, (40...50°C) 45%, storage (-20...+60°C) non-condensing  |                |            |   |          |                 |            |