Plug-In! Chronomaster
Plug-in! Connect the smart ChronoMaster easily with your PC or tablet. Your measurement results are displayed on the screen. The ChronoMaster offers you user-specific, individual functionalities:

- Modular software in two versions
- Simultaneous testing in combination with the Micromat C automatic microphone
- Convenient operation using 4 buttons
- Plug & Play
ChronoMaster

- Compact microphone with integrated measurement electronics
- Automatic detection of 6 main positions, 4 vertical positions and 2 special positions
- Guided sequence mode, adjustable 1 to 10 testing positions
- Secure mount, even for large watches
- Accurate positioning every 45°
- Convenient operation of «Chronoscope Service» display software, thanks to built-in control buttons
- Interface: USB port, Type A connector
- Housing: Die-cast zinc, painted black
- Dimensions: 130 x 110 x 110 mm (W x H x D)
- Weight: 0.8 kg

### Adjustment Possibilities

<table>
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<th>Continuous Possibilities</th>
<th>ChronoMaster</th>
<th>ChronoMaster Pro</th>
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<tr>
<td><strong>Continuous Diagram Recording,</strong></td>
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<td>Selectable integration time: 4A, 2, 4, 6, 8, 10, 20, 30, 40, 50, 60, 120, 180 und 240 s, adjustable zoom: 1, 2, 4, 8, 16-fach</td>
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<tr>
<td><strong>Vario Display Mode,</strong> measuring time: adjustable from 4 s to 99:59:58h</td>
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<td><strong>Trace Display Mode,</strong> selectable measuring time: from 4 s to 99:59:58h, Adjustable zoom: 1, 2, 4, 8 x</td>
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<td><strong>Sequence Display Mode,</strong> Stabilisation time: adjustable from 2 s to 2 min, Measuring time: adjustable from 4 s to 10 min, Measuring cycle: adjustable from 1 to 10 test positions</td>
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<tr>
<td><strong>Polar Display Mode,</strong> Rotation time: 24, 30, 60, 120, 180 and 240 s, Rotation sense: clockwise / counterclockwise, Measuring time: adjustable from 4 s to 01:00:00 h</td>
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<tr>
<td><strong>Scope Display Mode,</strong> Selectable time deviations: 20, 200, 400 ms Average beat noises</td>
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### Measurement capabilities

Measuring rate variation, amplitude and beat errors in mechanical watches with a variety of display modes.

#### Beat number

Automatic selection of all common beat numbers. Manual selection of less common beat numbers. Manual selection of any beat number between 3’600 to 72’000 b/h.

#### Measuring mode

- **Stnd:** Standard mode / Swiss anchor escapement
- **Spe1:** Mode for watches with Co-Axial escapement
- **Spe2:** Mode for watches with AP escapement
- **Rate:** For rate measurement only

#### Gain control

- Fully automatic
- Manually possible for watches with background noise or unusual beat noises

#### Time base

- TCXO quartz, high-frequency quartz time base
- Stability: ± 0.08s/d
- Ageing in 1st year: ± 0.03s/d

### Measuring Ability Rate accuracy

- Resolution: selectable 1.0, s/d, 0.1 s/d or 0.01 s/d
- Measuring range: ± 999 s/d
- Accuracy: ± 0.1 s/d

#### Amplitude

- Resolution: 1° or 0.1°
- Measuring range: 70° to 360°
- Accuracy: ± 1.0°
- Lift angle: adjustable from 10° to 90°
- Resolution: 0.1°

#### Beat error

- Resolution: 0.1 ms
- Measuring range: 9.9 ms
- Accuracy: ± 0.1 ms

#### Requirements of PC

- Suitable processor (CPU) for operating system Windows 7, Windows 8.1 or Windows 10
- Minimum 4 GB RAM
- USB interface: 2.0
- Screen with a minimum resolution of 1024 x 768 pixels