

# ChronoMaster® Auto



## ChronoMaster Auto, the automatic microphone with infinite possibilities

The ChronoMaster Auto measures the beat noise of mechanical watches. It moves to all main test positions and any intermediate positions automatically and precisely. The movement in two axes is smooth and silent. It can measure while in motion and thus reveals new dimensions in the measurement of mechanical watches.

## Compact and innovative drive solution

The high-quality drive unit was developed to fit the needs of the ChronoMaster Auto. The motors are stowed in the foot section of the device to prevent magnetic fields from affecting the function of the movement. The compact design with a low centre of gravity occupies little space and provides a high degree of stability.

## USB and Bluetooth interfaces

The ChronoMaster Auto requires a single USB cable for data connection and power supply for operation with a PC or the Witschi Terminal. Alternatively, the measurement data can also be transmitted wirelessly via Bluetooth.

**witschi**

LEADING SWISS PRODUCTS

# ChronoMaster® Auto

## ChronoMaster Auto

- Acoustic microphone with integrated measuring electronics for the measurement of mechanical watches
- Smooth and silent movement
- 360° rotation axis and the 180° tilting axis
- Precise position control based on gravity thanks to the integrated acceleration sensor
- One single USB cable for power supply and data transmission
- Wireless data transmission via Bluetooth
- Integrated fixation for large and heavy watches
- Convenient operation with the two built-in control buttons
- Ergonomic regulation of movements thanks to stable hand rest for left- and right-handers
- The smart drive unit also allows manual position changes
- An upgrade to the PRO version is possible at any time

	ChronoMaster Auto	ChronoMaster Auto PRO
Automatic change to the 6 main, 4 intermediate and 2 special positions	•	•
Arbitrary test positions in 1° steps**		•
Tourbillon measurement**		•

(Further functions follow)

Registered design WIPO D230112 (CH, CN)

## General

Operation	4 Control keys
Display devices	Windows PC* Windows tablet* Witschi Terminal
Software	WiCoTRACE Chronoscope Service
Interfaces	USB type C Bluetooth
Dimensions	150 x 220 x 150 mm (W x H x D)
Weight	980 g
WiCoTRACE	yes

## Measuring conditions

Test positions**	Up to 12 standard test positions and arbitrary intermediate positions <sup>PRO</sup>
Drive unit	Low-noise drive unit with 2 axes. Rotation angle main axis 360°, rotation angle tilt axis 180°.
Rotational speed	0 ... 20 min <sup>-1</sup>
Positioning precision	± 1°
Stabilisation time	Manual
Amplification modes	1 ... 4
Measurement time	Manual, 2 s ... 300 h
Frequency	Automatic or manual, 3,600 ... 72,000 A/h
Lift angle	Manual, 10 ... 90°
Time base	TCXO (± 0.004 s/d)
Ambient conditions	Temperature: 5 ... 40 °C Relative humidity: max. 80 % (non-condensing)

## Measurement

Measurement principle	Acoustic measurement of beat noises
Rate	-1'000 ... +1'000 ± 0.1 s/d
Amplitude	70 ... 360° ± 1.0°
Beat error	0 ... 9.9 ms ± 0.1 ms

\* Not compatible with ARM processors (e.g. Microsoft Surface X)

\*\* Depending on the software or display device used (WiCoTRACE 3 & Wicotrace 360°)