

Watch Expert

High Tech for Professionals



The most advanced WATCH EXPERT ever was developed to meet the requirements and demands of watchmaking experts. Generations of watchmakers have used it in the practice of their skills – here is the very latest WATCH EXPERT in its fourth generation.

- The most important results at one glance
- Work comfortably on a reflection-free display
- Automatic recognition of 11 test positions
- Quick and easy to switch between test positions
- Comfortable control of the WATCH EXPERT via microphone



General agent Germany

Beco Technic GmbH · 21500 Geesthacht
Tel. +49 4152 809680 · www.beco-technic.com



NEW WATCH EXPERT Highlights

WATCH EXPERT is the ideal measuring instrument for testing the rate accuracy, amplitude and beat error of mechanical watches. Apart from its precision measurements and multiple measurement modes, the latest WATCH EXPERT offers unique convenience at work.

New: now you can work with a high-quality glass capacitive touchscreen. The display of your measurement results is brilliant, high-contrast and reflection-free. You can navigate the menu on the large colour display with four control buttons on the new microphone. WATCH EXPERT offers watchmaking experts ergonomics, comfort and precision.

Can be operated even while wearing finger cots or gloves

The new capacitive touchscreen enables intuitive operation, even when wearing finger cots or gloves.

The most important results at one glance

The diagrams of all 6 main test positions can be seen at just one glance. The median value and diagram for each test position can be called up individually.

Precise analysis of acoustic signals

The loudspeaker is directed forwards, making every irregularity in the beat noise audible.

Fatigue-free working

Your eyes stay healthy, thanks to the AR-coated glass surface of the display.

Work comfortably on a reflection-free display

With six adjustable angles of inclination, you can adjust the device to the optimal position for your needs.



Space-saving and ergonomic working

More space for manual tasks thanks to the modern and ergonomic design.

Efficient and time-saving working

Save time with simple and individually selectable access to the required parameters.

NEW PILOT MICROPHONE

interactive microphone

Safe and secure mount, even for heavy, large watches

Neoprene clamping jaws and optimised clamping range mean you can safely test heavy, large watches.



Test large watches with wide wrist straps

New geometry: large watches with wide wrist straps also fit the microphone without problem.



Fatigue-free, ergonomic control

Both right- and left-handers can individually set their chosen position and benefit from the stable hand rest.

Precise positioning every 45°

8 locking positions enable precise positioning every 45°.



Automatic recognition of 11 test positions

Automatic recognition of the 6 main test positions, the 4 vertical intermediate positions and the new grid position for the universal test position 7:30h + 45°.

Quick and easy to switch between test positions

180° swivelling, tilting function: quickly and directly switch between the test positions "DU" and "DD". Unrestricted rotatability of the microphone: switch into the vertical positions extremely quickly.

Comfortable control of the WATCH EXPERT via PILOT MICROPHONE

You can control the WATCH EXPERT featuring the new, interactive microphone with the buttons on the microphone base. The buttons are individually programmable.

Technical data

Measurement capabilities

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

Beat number

- Both automatic determination and manual entry possible
- Beat numbers available in case of automatic determination: 12'000, 14'400, 18'000, 19'800, 21'600, 25'200, 28'800, 32'400, 36'000, 43'200, 50'400, 57'600, 64'800, 72'000A/h
- Manual entry: Beat numbers from 3,600 to 86,400 A/h (current or individual values)

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
- manual for watches with background noise or unusual beat noises

Display modes

Diagram

- Continuous diagram recording of watch beat
- Numerical display of measured values (rate variation, amplitude and beat errors)
- Recording diagram and results in 6 positions, subsequent recall possible
- Adjustable zoom (magnifier): 1, 2, 4, 8, 16 x

Vario

- Long-term checking of stability and diversity of rate deviation and amplitude (max.100 hours)
- Graphic and numerical display of minimum, median and maximum values
- Numerical display of actual rate variation, amplitude and beat errors
- Display of min., max. and median values for rate variation and amplitude since measurement start

Time base

- TCXO quartz, high-frequency quartz time base
- Stability: $\pm 0.08\text{s/d}$
- Ageing in 1st year: $\pm 0.03\text{s/d}$

Rate variation measurement

- Measurement range: $\pm 999.9\text{s/d}$
- Resolution: 0.1 s/d

Amplitude measurement

- Measurement range: 70° to 360°; display possible to 999°
- Resolution: 1°
- Lift angle: adjustable from 10° to 90°
- Resolution: 0.1°

Beat errors measurement

- Measurement range: 9.9 ms
- Resolution: 0.1 ms

Integration time measurement

- Adjustable: 4A, 2, 4, 6, 8, 10, 20, 30, 40 and 60 s

Screen

- Capacitive touchscreen
- Size: 7"
- Resolution: 800 x 480 pixels
- Brightness: adjustable to 500 cd/m²

Measurement display

- Speed: dependent upon beat number of watch
- Display width: 720 pixels
- Recording duration per display width (e.g.):
 - 18'000A/h: 144 seconds
 - 21'600A/h: 120 seconds
 - 28'800A/h: 90 seconds
 - 36'000A/h: 72 seconds

Position recognition

Automatic recognition of the 6 main positions as well as 5 further positions

Loudspeaker

Integrated loudspeaker for acoustic testing of the beat noise

RS232 interface

- Printer and calibration interface; GPS receiver

USB interface

- Connection for memory stick
- Print screens can be saved as pictures on the stick
- Device configuration can be saved or read on the stick

Bluetooth interface

Witschi printer with optional Bluetooth mode

Device (housing)

- Front: Glass with integrated touchscreen
- Back: Plastic
- Dimensions: 197x164x130 mm (WxHxD)
- Angle: can be set to 6 different levels
- Weight: 1.7 kg including pilot microphone and mains adapter

Mains connection

- Mains adapter: 100 ... 240 VAC, 50/60 Hz
- Power consumption: 8 W, (4W with screensaver)
- Output: 12VDC, 1.5A

Accessories

Optoelectronic sensor for pendulum watches	Art. 13.1620
Tripod for optoelectronic sensor	Art. 13.16.201
Thermal printer	JB01-SLK-TE2
Dongle and Bluetooth slot	95.1510
Dongle for additional device	JB15-BT900-US
Thermal paper for printer	JB01-MM60-740RS
Witschi GPS receiver	Art. 19.91PK1 (230 V~) 19.91PK2 (120 V~)

Technical details subject to changes

11.2710D41e – 07/2016

General agent Germany

Beco Technic GmbH · 21500 Geesthacht
Tel. +49 4152 809680 · www.beco-technic.com