WATCH SCOPE

• USER GUIDE •

lepsi
GENEVA

CONTENTS

GENERAL INFORMATION

WATCH SCOPE,
EXPERIENCE YOUR WATCH

Watch Scope is a instrument that enables you to make a full check up of your mechanical watches, made up of an Android or iOS application and a watch stand with an integrated electronic measuring system.

PACKAGE CONTENTS

- One watch stand
- One connecting cable
- One user guide with the activation code

Watch Scope allows you to measure several of your watch's key elements:

Frequency : The number of vibrations produced by the watch's balance per hour. The higher the frequency, the more precise the balance. The vibrations made by the balance produce a watch's ticking. Frequency is measured in a/h (alternance per hour).

Rate variation : The rate performance indicates the deviation of your movement, running either too fast or slow, in seconds per day. For the record, a chronometer certified by the COSC should have an average rate of between -4 and +6 seconds per day. The rate is measured in s/d (seconds per day).

Beat error : Indication of an asymmetrical oscillation of the balance wheel. A "perfect" movement should have a beat error of 0ms, and if it doesn't, the balance wheel is oscillating further in one direction than in the other. The beat error is measured in ms (milliseconds).

Amplitude (of the balance spring) : The amplitude values of today's watches are around 270° - 310°. With age, the lubricants break down and this value progressively decreases over time. The amplitude is measured in ° (degrees).

Lift angle: When listening to the sound produced by a watch, we only hear its ticking. However, the sound of a watch's beat is more complex and each "tick" is made up of three different pulses.The angle that the balance wheel travelled between the first and third noise is called the "lift angle". The lift angle is a geometric feature of a movement and is used to calculate the balance wheel's amplitude.

If you don't know the lift angle of your movement, you can find it thanks to the link below:

http://www.lepsi.ch/lift-angle/

INSTRUCTIONS

FIRST TIME USE :

Preparing for measurement (Only to be done once) **:**
- Install the application on your tablet/smartphone.
- Calibrate your tablet/smartphone (see page 9).

Start measuring
- Place the watch on the Watch Scope.
- Connect the Watch Scope to your mobile device using the 3.5 mm cable provided.
- Using your mobile device, click on *start*
- After 30 seconds, it's finished. All that's left for you to do is read the results of the measurement.

INSTALLING THE APPLICATION

iOS installation (iPhone, iPad, iPod)
Log in to the Apple Store, search "LEPSI Watch Scope", and install the application.

Android intallation
Log in to the Google Play Store, search "LEPSI Watch Scope", and install the application.

ACTIVATION

Before running the application, you need to activate the application on your mobile device.

TO RUN THE ACTIVATION, YOUR MOBILE DEVICE MUST BE CONNECTED TO THE INTERNET.

To activate the application you need to enter the code given with your Watch Scope.

1 - First device to be activated

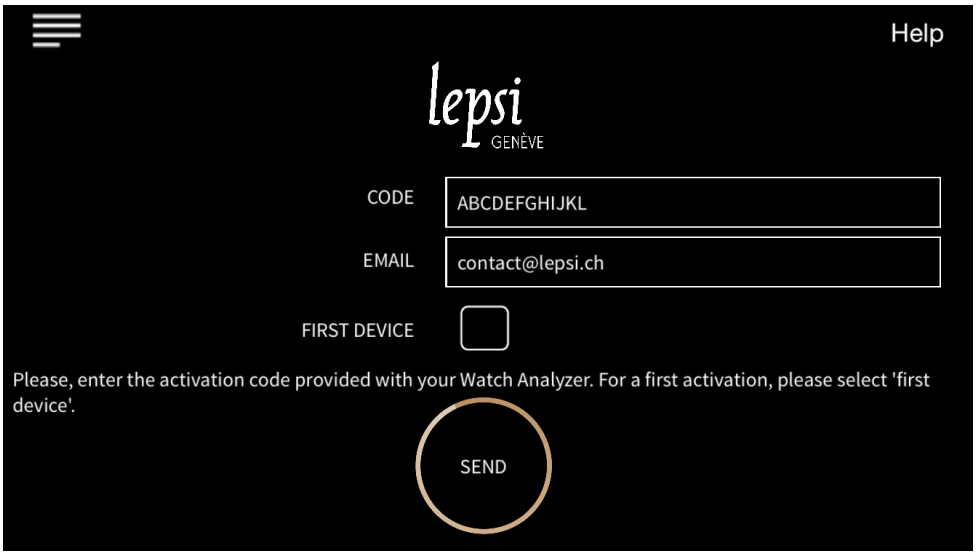
- Make sure the check button “First device“ is ON.
- Enter the activation code given with your Watch Scope.
- Click on *Send.*
- A message box will appear : Enter and confirm your Email address.

Please, make sure you enter a valid email. This address will be asked for further installation on other devices.

2 - Activation on other devices

- Make sure the check button “First device“ is OFF.
- Enter the activation code given with your Watch Scope.
- Enter the email address used for the first activation.
- Click on *Send.*

In case of troubles, you can contact us at : contact@lepsi.ch



CONNECT THE WATCH SCOPE

- 1 -

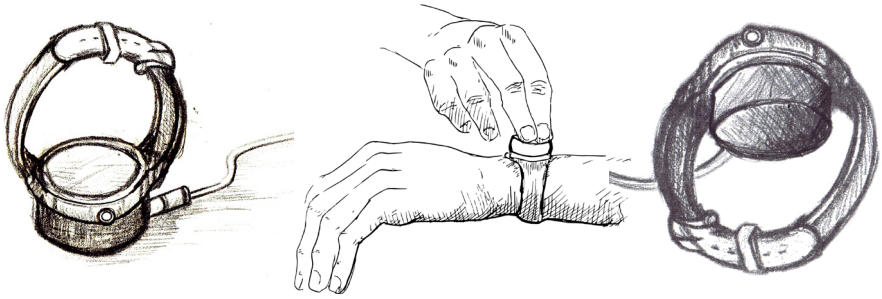
Plug the Watch Scope to your mobile device using the 3.5mm cable provided.

- 2 -

Place the your watch on the Watch Scope.

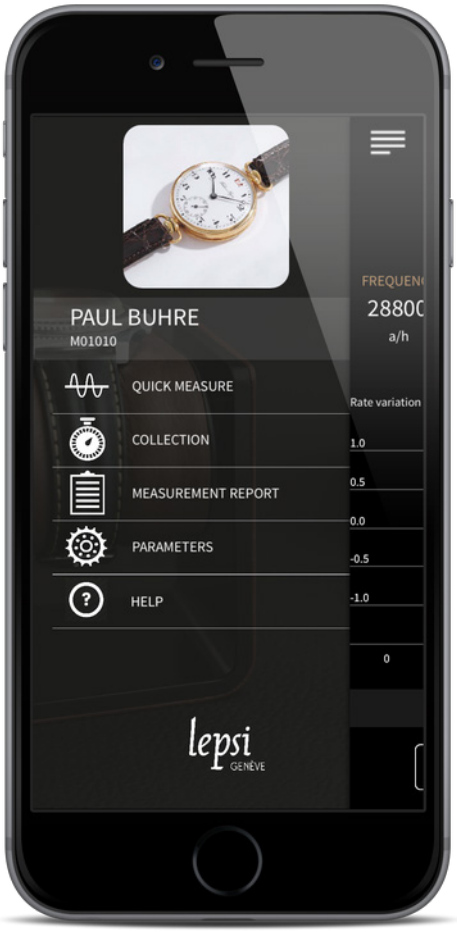
- 3 -

Or place the Watch Scope on your watch.



MENU

You can access the menu with clicking on the top left icon, or with sliding your finger from left to right on the screen.



0 - Your watch

Click on your watch for a direct access to all its information.

1 - Quick measurement

Allows quick measurement without configuration.

2 - Collection

This feature allows you to save your watches' measurement results, allowing you to keep track of your collection over time.

3 - Measurement report

Create a complete report of your watch that you can print or share via email.

4 - Paramètres

Connectez votre tablette à internet et laissez le Watch Analyzer se calibrer grâce aux horloges atomiques du monde entier.

QUICK MEASUREMENT

STARTING A MEASUREMENT : Click *Start* and let the application do the rest.

STOPPING A MEASUREMENT : In the normal mode, the measurement will stop automatically. In the continual analysis mode, you need to click *Stop*.

Lift angle : The lift angle is a characteristic of a watch's calibre. This angle is used to calculate the amplitude. For most calibre this angle is around 50° and is provided by the watch manufacturer. To precisely measure the amplitude, enter the lift angle of the calibre being measured.

1 - Watchmaker dashboard

Bring together all the important information necessary to check the accuracy of your watch:

Frequency (a/h)
Rate variation (s/d)
Beat error (ms)
Amplitude (degrees)

2 - Lift angle

Choose the right lift angle according to your watch or let 52°.

3 - Duration

Select the desired measurement time:

10s, 30s, 45s, 60s, 120s.

The higher the duration, the more precise the measurement.

4 - Start a measurement

Click *Start*

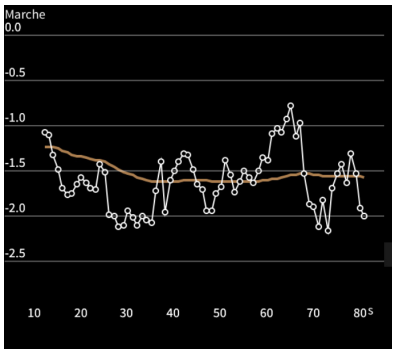


CHART
In the *continual analysis* mode, a chart will appear that allows you to determine the rate performance of your watch in real time.
Normal curve : Average rate performance of the watch.
Dotted curve : Current rate of the last 10s, 30s, 45s, 60s and so on, according to the selected duration.

COLLECTION

Using this mode, you have the possibility of measuring your whole collection and obtaining a complete history of measurements for each watch. The purpose of this function is to detect if a malfunction occurs over time. To add a new watch, select + at the top right of the screen.

1 -Measure your watch
To measure the watch, just click on:

2 -Picture of the watch
Two possibilities, take a photo using your mobile device or choose an existing photo..

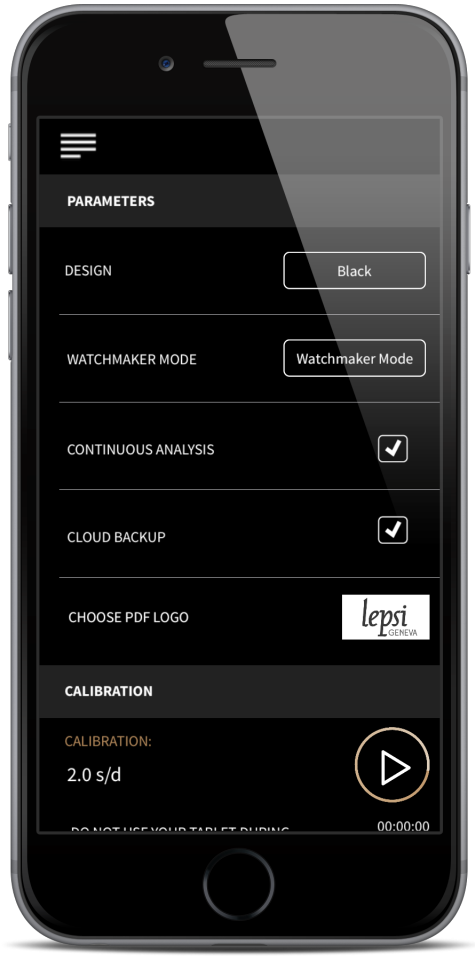
3 - Average rate performance of the watch
Calculation of the average rate performance of the watch.

4 - Consult measurement history
To see the overview of all your measurements by values or graphically.

CALIBRATION

Watch Analyzer is connected to atomic clocks in order to test and calibrate its time base. This way, the Watch Analyzer guarantees exceptional measurement quality up to the highest standards of professional horologists.

To do this, simply connect your mobile device to the internet and begin the calibration by clicking *Start*.



1 - Design (iOs)
Choose your favorite background color.

2 - Watchmaker mode
Standard: The rate variation only is shown.
Watchmaker: All the function of the watch (rate variation, beat error, amplitude, frequency) are shown

3 - Continuous Analysis
Analysis does not stop, useful for checking rate performance over a long period.

4 - Cloud backup
Save your data on our cloud when changing device.

5 - Choose logo pdf
Choose the logo of the watch report to personnalize it.

6 - Calibrating your mobile device
To obtain a precise measurement, calibrating your Watch Scope is IMPERATIVE. Connect to the internet, start the calibration and wait 30 minutes or 3 hours (select your calibration mode). You only need to do this for first time use or if you ever reinstall the system.

FEATURES

Compatibility

iOS 8.2 and higher (iPhone, iPad, iPod touch)
Android 4.4 and higher

Measurement

Automatic vibration detection: 14,400 - 36,000 a/h
Rate performance: 0.1 s/d resolution
Amplitude: 1° resolution
Beat error: 0,1 ms resolution
Calibation via atomic clocks

Weight and dimensions

30 g
38 x 38 x 15 mm

Connectors

4 poles - Jack 3,5 mm

WARRANTY

MANUFACTURER'S WARRANTY

Watch Scope is guaranteed for 3 years after the purchase date against all manufacturing defects. The warranty is only valid upon presentation of proof of purchase or a valid receipt.

WARRANTY RESTRICTIONS

Damages due to normal wear and tear such as scuffs, scratches, marks, cuts, colour fading, etc. are not covered by the warranty.

Damages caused by misuse or improper use of the product such as mishandling, shock, breakage, etc. are not covered by the warranty.

Damages caused by using the product in poor environment conditions such as humid places, exposure to water, to vibrations or to sources of high heat, etc. will not be covered by the warranty.

LIABILITY

LEPSI may in no case be held responsible for harm caused by misuse of the Watch Scope measurement system or for damage caused to watches, goods or people.

Published on August 16th 2015
For more information
www.lepsi.ch