

Sparklike®



SPARKLIKE HANDHELD™ 3.0

Fast instruction manual

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Warning: Read this before the device is taken into use.

- The instrument uses high voltage, therefore the device should NEVER be used near computers nor other sensitive electronic devices.
- Persons with heart conditions or who use pacemakers should not use this device.
- The high voltage discharge should never be directed at humans or at animals either directly or through a conductive material such as wires or metal structures.
- The Sparklike Handheld™ should NEVER be used to measure any flammable substances nor be used in any flammable environment. Also make sure that the insulating glass unit does not contain any flammable substances. (Such as Isopropanol, Alcohol, Acentone, Xylen, Thinner)
- The device should never be used in wet or in humid conditions.
- Never use the instrument while standing on unsteady surfaces.
- The device is a precision measuring instrument and should be handled accordingly. Please, handle the device with care.
- Always turn off the power when instrument is not in use.
- Keep fingers and other body parts clear of the high voltage area when using the device. Do not keep the device connected to your computer nor other electronic devices while performing measurements.
- Do not open the Sparklike Handheld casing. In such case calibration is void and no safety guarantee can be granted.
- Do not use any other battery charger than charger provided by the manufacturer.
- Do not use any other power source for the Sparklike Handheld than the battery provided with the device.

1. Delivered with the device

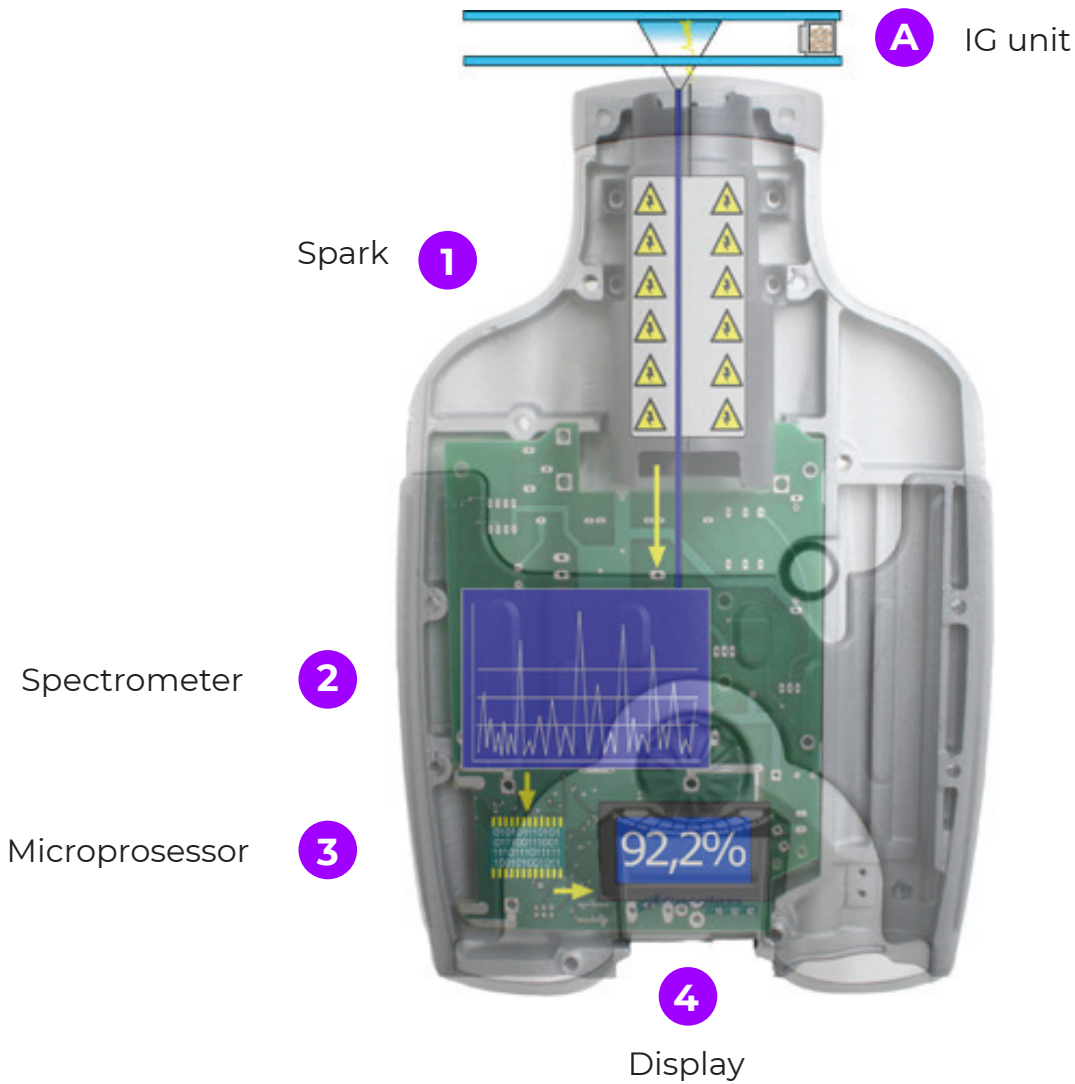


1. Sparklike Handheld™ device
2. Calibration certificate
3. Battery charger and power cord
4. Protective cap
5. USB Cable
6. Neck strap
7. Battery
8. Setup Guide
9. Protective hard case

+ Software, Drivers and Instruction manuals can be downloaded at sparklike.com/en/product/sparklike-handheld/



2. How Does It Work



A high voltage spark **1** is ignited inside the IG unit **A**. This high voltage spark causes the argon atom to emit light to a spectrometer **2**.

A microprocessor **3** interprets the information of the spectrometer and calculates the argon concentration on the display **4**.

3. How to use and starting up for the first time



1. Open the battery hatch



2. Insert the battery



3. Connect it to the battery socket
4. Turn on the device from the ON/OFF switch

YOUR DEVICE IS ALMOST READY TO GO!

Register your device

Please fill in carefully your contact information and the device serial number to get your activation code. **Type your serial number with capital letters.**

** Indicates required fields

First Name *	Last Name *
Email *	Phone *
Job Role *	
Management/administration/factory owner	
Billing address *	
Street Address	
City	ZIP / Postal Code

Sparklike Laser Portable case and on the measu

5. Register your device to receive an activation code to your e-mail: sparklike.com/register



6. Input the activation code
7. Device settings will show on the screen



8. The device is ready for use

4. How to use encoder button



Press down to

- Enter **MENU**
- Confirm a selection



Turn to

- Scroll in the **MENU**
- Name a log file

5. Factors to consider when measuring

Factors affecting the optics

- Coloured glass
- Tinted glass (minimal effect)
- Strong background light measurement (against the sun or other source)
- Dirt on the glass (minimal effect)
- Dirt on the front optical fibre
- Mistreated front optical fibre or electrode

Factors making it easier for the spark to “jump”

- High argon fills
- Thin glass (6mm or less)
- Thin air space (20mm or less)
- Metallic or other conductor on surface 3, such as low-e coating
- Metallic spacer bar

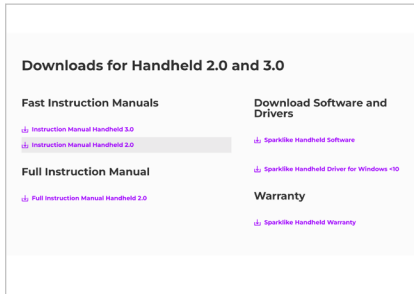
Factors affecting the spark

- Thick glass (over 6 mm)
- Plastic films on glass 1 (laminated glass, coatings, etc.)
- Metallic films on glass 1
- Metallic components in glass 1
- Low Argon fill (less than 90%)
- Wide spacer (over 15mm)
- Electrode is not in contact with the glass surface
- Sparklike Handheld is not evenly pressed against the glass
- Non-metallic spacers

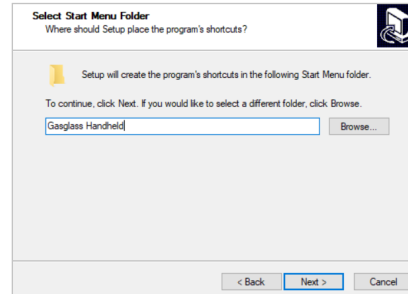
Correct conditions

- Preferably upright standing glass unit
- Stable dark background light
- The device NOT moved during measurement

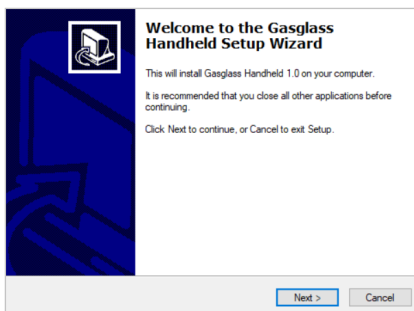
6. Installing the software



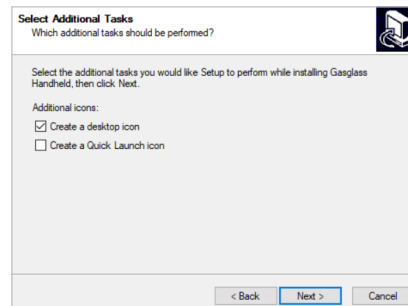
1. Download the software from sparklike.com/en/hh



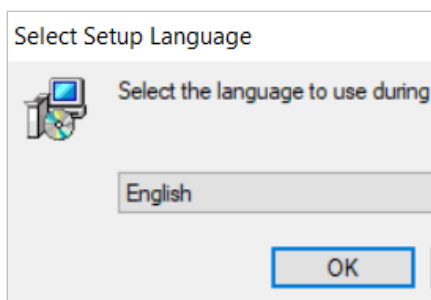
5. Select name for the start up folder



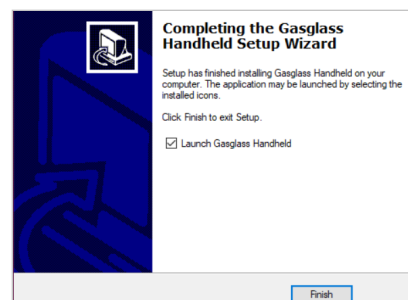
2. Start Install wizard start-up



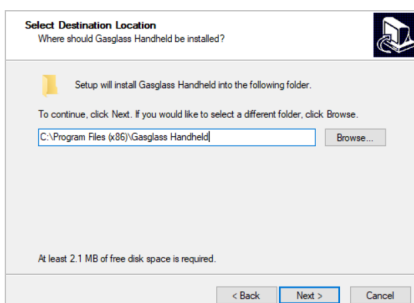
6. Select additional tasks



3. Select language for installation



7. Installation complete



4. Select directory where software files are to be installed

NOTE

The appearance of the Windows will vary according to your computer.

7. Installing the USB drivers

Handheld™ drivers should install automatically in couple of minutes, when you connect Handheld to a PC with Windows 10+ and internet connection.

If you have older Windows version, you can download the driver from Sparklike's website sparklike.com/en/hh



1. Download the driver package
2. Unpack the driver package
3. Connect Handheld to a PC with USB cable
 - If your PC asks the location of the driver, give the unpacked driver folder location
 - If your PC doesn't ask about the driver, open the Device Manager, and select **Scan for hardware changes**
4. Once you get the new connection to the Device Manager's list, right click the connection, and select **Update Driver Software**
5. Follow the installer instructions

8. How to connect to your computer

The software for Sparklike Handheld™ can be downloaded at sparklike.com/en/product/sparklike-handheld

Please make sure that all needed software and drivers are installed before attempting to connect Sparklike Handheld™ with your computer.



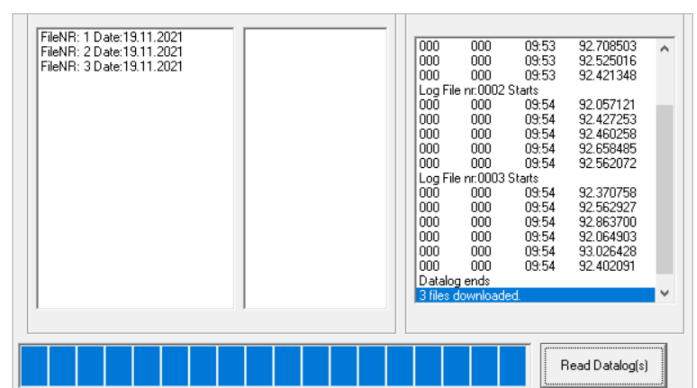
1. Connect the provided USB cable to the USB socket in Sparklike Handheld™. Connect the provided USB cable to your computer.



3. Enable the connection between your computer and Sparklike Handheld from the device by selecting "PC connection".



2. Start Sparklike Handheld™.



4. Start the software.
5. Press the "Read Datalogs"

Copies selected or all log files to clipboard

Sparklike Handheld serial number

Syncs and updates time and date on Sparklike Handheld

The software window has a menu bar with 'File' and 'Data'. Below the menu bar, there is a large display showing the Sparklike Handheld serial number 'HH12/0345'. To the right of this, there is a section for 'PC Time and Date' showing '19.11.2021' and '09:56:17', and a button labeled 'Sync GGHandheld'. Below these, there are two main panels. The left panel, titled 'Data File Information', lists three files: 'FileNR: 1 Date:19.11.2021', 'FileNR: 2 Date:19.11.2021', and 'FileNR: 3 Date:19.11.2021'. The right panel, titled 'Transfer Status', shows a list of transferred data with columns for file number, date, time, and a numerical value. The list includes entries for 'Log File nr:0002 Starts' and 'Log File nr:0003 Starts'. At the bottom of the window, there is a progress bar with blue segments, a button labeled 'Read Datalog(s)', and a status bar showing '3 files downloaded.'.

File Data

HH12/0345

PC Time and Date

19.11.2021 09:56:17 Sync GGHandheld

Data File Information

FileNR: 1 Date:19.11.2021
FileNR: 2 Date:19.11.2021
FileNR: 3 Date:19.11.2021

Transfer Status

000	000	09:53	92.708503
000	000	09:53	92.525016
000	000	09:53	92.421348
Log File nr:0002 Starts			
000	000	09:54	92.057121
000	000	09:54	92.427253
000	000	09:54	92.460258
000	000	09:54	92.658485
000	000	09:54	92.562072
Log File nr:0003 Starts			
000	000	09:54	92.370758
000	000	09:54	92.562927
000	000	09:54	92.863700
000	000	09:54	92.064903
000	000	09:54	93.026428
000	000	09:54	92.402091
Datalog ends			
3 files downloaded.			

Read Datalog(s)

Downloaded log files

Information from selected log file

Status of transfer

Retrieves all logs from Sparklike Handheld

Shows all transferred data

Software window after a successful download

9. Using the screen

1. When the **ON/OFF button** is switched ON, Sparklike Handheld™ will perform a self test where it checks itself for errors.
2. The screen will automatically change when all is tested OK
3. The first fixed screen after start up is a device information screen.
4. This screen will be important when communicating with the manufacturer.
5. Device is now ready to use
6. When the button is pressed for the first time after start up, the measurement result will show.
7. The current time and battery charge status can be seen on the screen.
8. It will also indicate that the measurement has not been logged. (see: How to create a log file)



The information screen shows:

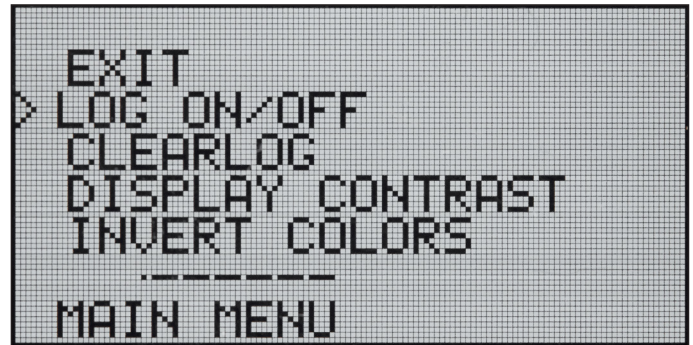
- Revision of the device
- Last calibration date
- Calibration status. Valid, soon or expired
- Current time
- Battery charge status



Measurement result

10. How to create log file

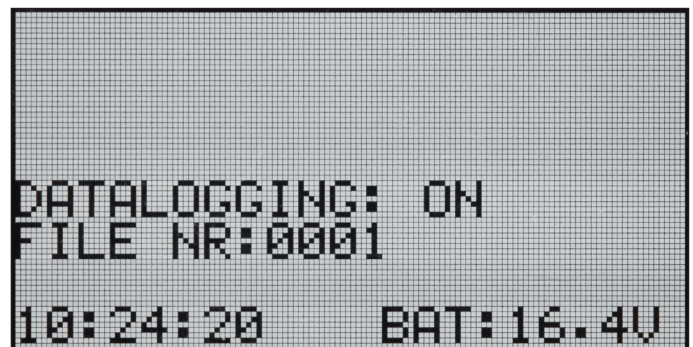
1. From the main menu, scroll by turning the encoder button, to the **Log ON/OFF** menu.
2. Select this by pressing the encoder button once.
3. The next screen shows that the logging is to be started.
4. The device will suggest the following free log name (number) available. If the suggested number is OK, simply press the encoder button to confirm.
5. By turning the encoder button the number of the log file can be changed. One click will increase or decrease the number with one.
6. When measuring a text is displayed showing that the logging mode is on and it will also display the log file number.



```
EXIT
> LOG ON/OFF
CLEARLOG
DISPLAY CONTRAST
INVERT COLORS
-----
MAIN MENU
```



```
STARTING NEW LOG
FILE: 0001
```



```
DATALOGGING: ON
FILE NR:0001
10:24:20      BAT:16.4V
```



```
A:94.6%
LOGGING:0001
10:26:12      BAT:16.4V
```

11. How to erase last logged file

When the log mode is on and a measurement has been taken but the operator feels that the measurement was an error measurement, it is possible to erase this measurement. This is done to prevent faulty log files on your computer.

If the measurement is not satisfying

1. From the main menu, scroll by turning the encoder button, to the **CLEAR LOG** menu.
2. The log value will be deleted permanently.

Sparklike Handheld™ log data can be downloaded to your computer. In order to do this, Sparklike Handheld™ has to open its communication port to your computer. This is performed before enabling the connection from the computer.

12. How to turn off the log mode

1. From the main menu scroll, by turning the encoder button, to the **Log ON/OFF** menu.
2. Select this by pressing the encoder button once.
3. A screen will display that the log mode has been turned off.
4. When measuring, a text is displayed that the measurements have not been logged.
5. To create a new log file with a new name, repeat procedure explained in chapter 10.



NOTE

When Sparklike Handheld™ is connected to a computer and the log files have been retrieved, the log memory will be deleted from Sparklike Handheld™ device. This is the only way of emptying the memory and should be done every now and then to prevent the memory from overflowing.

13. Enabling the connection with your computer

Sparklike Handheld™ log data can be downloaded to your computer. In order to do this, Sparklike Handheld™ has to open its communication port to your computer. This is performed before enabling the connection from the computer.

1. From the main menu scroll, by turning the encoder button to the **PC-connect** menu
2. Select by pressing the encoder button once.
3. A screen will display that the PC communication is enabled.
4. Sparklike Handheld™ is open for communication with the PC.

14. Information display

You can retrieve the device serial number and calibration information through **Setup → Info**.

15. Inverting colors of the display

The colors of the display can be inverted, so that there is either black text on the white background, or vice versa.

- To change the color settings, click the encoder button to access the encoder menu.
- Rotate the encoder button to select the **invert colors**, and click the encoder button to confirm the selection.
- Handheld needs to be restarted for the change to take effect.

16. Technical spesification

Overall Dimensions	Main unit 285×190×100 mm
Main Power Supply	16.8 V Li-ion Battery 2.0 Ah
Weight	The device 1.6 kg
	Protective hard case 2.8 kg
Operating conditions	5–35 °C
Humidity	10–90% R.H. (Non-Condensing)
Measurement time	2 s
Min/max glass thickness*	2-6 mm
Min/max cavity dimension*	6-20 mm
Connections	USB and Battery Charger
Display	OLED 128×64 Pixel Display
Software	Custom GGHandheld by Sparklike
Data logging capability	1900 measurements, Windows10+ PC for data transfer

*** Subject to IGU construction**



Scan the QR-code for further instructions and support

→ sparklike.com/guidance/hh

Contact us

service@sparklike.com

Sparklike Oy, Helsinki, Finland

Contact your local distributor

→ [Sparklike.com/en/contact-us](https://sparklike.com/en/contact-us)