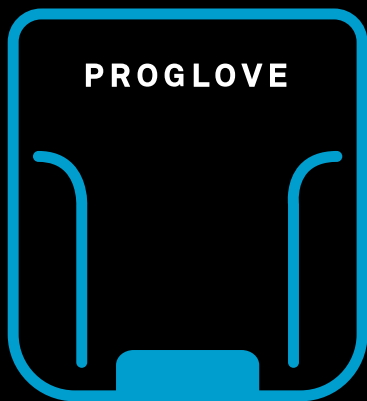




PROGLOVE

LEO USER MANUAL



Technical document



PROGLOVE USER MANUAL

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ABOUT THESE OPERATING INSTRUCTIONS

FUNCTION OF THIS DOCUMENT

This user manual contains a system overview, technical data about the Hardware and Wearables, detailed step-by-step instructions for using ProGlove system and information about configuration settings and troubleshooting.

It is intended for process planners, integrators and maintenance technicians who are using ProGlove system for the first time. It is designed so that ProGlove system can be used safely without prior knowledge.

→ Read carefully before use and keep for future reference.

Workaround GmbH and/or all its affiliated companies (hereinafter "Workaround" or "ProGlove")

ProGlove User Manual is part of the ProGlove General Terms and Conditions. This User Manual is of mandatory nature and in case of any breach of the instructions contained herein ("misuse"), ProGlove waives any liability for any damages/injuries that could arise based on such misuse.

ADDRESS:

Workaround GmbH
Building 64.08a
Rupert-Mayer-Str. 44
81379 Munich, **DE**

ProGlove Inc.
1229 N North Branch St
Suite 211
Chicago, IL. 60642, **USA**

ProGlove Ltd.
Coventry University
Technology Park Puma Way,
Coventry CV1 2TT, **UK**

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EXPLANATION OF SYMBOLS

Warning notices are used throughout the instructions in the user manual. Always read and pay attention to a warning notice. A warning notice is introduced with the word **CAUTION**, as shown below.



CAUTION

Slight bodily injury or danger of physical damage to ProGlove system is possible.

In addition, other symbols are used that mean the following:



NOTE

Additional notices provide more information about the respective chapter.



TIP

Additional tips facilitate the implementation of a certain procedure.



RESULT

The result will show the outcome of the prior action.



SAFETY INSTRUCTIONS

HARDWARE

- ! CAUTION**
Keep all cables and wires away from high voltage sources or power supplies to the following warning! This may otherwise lead to damage or faults due to overvoltage, line noise, electrostatic discharge or other irregularities.
- ! CAUTION**
Do not use damaged cables or power supplies! Otherwise the safe functioning of ProGlove system cannot be ensured.
- ! CAUTION**
Do not unscrew the Hardware housing! This may otherwise lead to ProGlove system not functioning properly.
- ! CAUTION**
Do not replace the battery of the scanner! This may otherwise lead to ProGlove not functioning properly.
- ! CAUTION**
Do not modify ProGlove system! This may otherwise lead to ProGlove system not functioning properly.
- ! CAUTION**
Do not stare directly into beam! Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure. Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

- ! CAUTION**
Do not use, charge, or leave the device near/or in fire, heaters, high-temperature sources, or in a car under the blazing sun. Such a high temperature may cause damage to the protection structure in the battery, which may result in an abnormal reaction, and then heat generation, explosion, or fire.
- ! CAUTION**
Do not use the scanners in a place where static electricity (more than the limit of the manufacturer's guarantee) occurs. Otherwise, the protecting device in the battery might be damaged and cause heat generation, explosion, or fire.
- ! CAUTION**
Do not ship any severely damaged device especially if the battery is also severely damaged. Otherwise, the protecting device in the battery might be damaged and cause heat generation, explosion, or fire.

WEARABLES

- ! CAUTION**
Keep Wearables away from moving machine parts and do not use without a scanner. Otherwise the Wearables may get stuck on objects.
- ! CAUTION**
Use Wearables in the right size!
Otherwise this may cause pain or pressure points on your hand.



BATTERY SAFETY

The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken where the device is charged in a noncommercial environment.

- Follow battery usage, storage, and charging guidelines found in the user guide.
- Improper battery use may result in a fire, explosion, or another hazard.
- To charge the device battery, the battery and charger temperatures must be between +41 °F and +104 °F (5 °C and +40 °C). Do not use incompatible batteries and chargers. Use of an incompatible battery or charger may present a risk of fire, explosion, leakage, or another hazard. If you have any questions about the compatibility of a battery or a charger, contact ProGlove support.
- Do not disassemble or open, crush, bend or deform, puncture, or shred.
- Severe impact from dropping any battery-operated device on a hard surface could cause the battery to overheat.
- Do not short circuit a battery or allow metallic or conductive objects to contact the battery terminals.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, or expose to fire explosion or other hazards.
- In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.



BATTERY INFORMATION

ProGlove approved rechargeable devices are designed and constructed to the highest standards within the industry. However, there are limitations as to how long a device can operate or be stored before needing replacement.

Many factors affect the actual life cycle of a battery pack such as heat, cold, harsh environmental conditions, and severe drops. When batteries are stored over six months, some irreversible deterioration in overall battery quality may occur.

Store batteries at half of full charge in a dry, cool place, removed from the equipment to prevent loss of capacity, rusting of metallic parts, and electrolyte leakage.

When storing batteries for one year or longer, the charge level should be verified at least once a year and charged to half of full charge. Replace the device when a significant loss of run time is detected.

The standard warranty period for all ProGlove devices is one year.





SCOPE OF DELIVERY



CAUTION

Do not use any damaged Hardware or Wearables!

→ Check whether Hardware and Wearables are properly packaged and undamaged.

SCANNER



LEO

WEARABLES



Index Trigger



Hand Strap



Reel

CHARGING STATIONS



Charging Station S / 10-Slot Charging Station with power cable (USB-C) and power supply



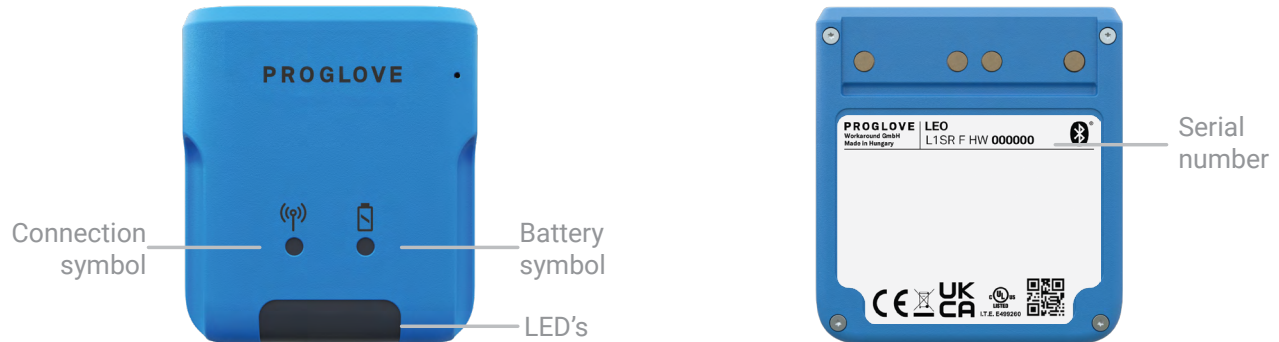
SCANNER

OVERVIEW

After scanning a barcode, the scanner returns feedback signals: haptically by vibrations, acoustically by audio signals and optically by LEDs.

Standard range:
4 - 28 in (10 - 70 cm)

LEO





TECHNICAL DATA - LEO

MECHANICAL PROPERTIES:

Dimensions: 1.96 x 1.77 x 0.63 in (50 x 45 x 17 mm)
Weight: 1.23 oz (35g)

ELECTRICAL PROPERTIES:

Battery type: Lithium polymer (rechargeable)
Charge duration: 1 hours
Number of scans: up to 4000 scans (depending on application and environmental conditions)

WIRELESS COMMUNICATION:

BLE : 2400 - 2483.5 MHz
Max radio-frequency power transmitted: <20dBm



BARCODE TYPES - 1D:

Auto decodes all standard 1D codes including GS1 DataBar linear codes et al.

BARCODE TYPES - 2D:

PDF417, MicroPDF417, Data matrix, QR Code, Micro QR Code, Aztec, RSS, Composite, TLC-39, MaxiCode et al.

BARCODE TYPES - POSTAL:

US PostNet, US Planet, UK Postal, Australia Postal, Japan Postal, Dutch Postal (KIX) et al.

LED CLASSIFICATION:

Standard Range: Excluded risk group LED product according to IEC/EN 62471

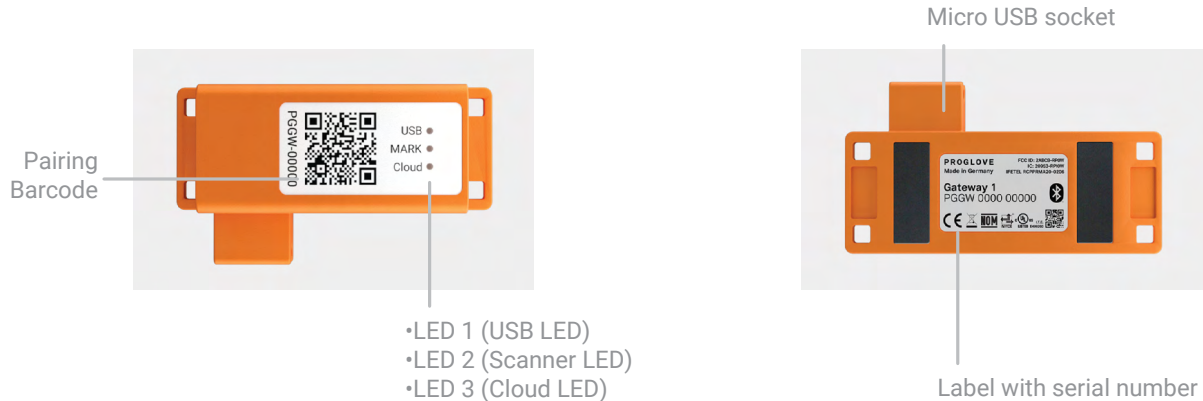
i NOTE
Further technical specifications are available on docs.proglove.de



CONNECTIVITY DEVICE

OVERVIEW GATEWAY

The Gateway receives the scanned barcode data from the scanner via BLE. This barcode data is transmitted to the end device via USB cable. In the USB HID mode, the Gateway simulates a computer keyboard. A serial connection is emulated in the USB CDC mode. In order to use the USB CDC mode, the device must be set to "USB CDC" in the ProGlove INSIGHT Configuration Tool (<https://insight.proglove.com/>) under "Connectivity Configuration - Integration path". Also multipairing is possible. The Gateway can be connected with up to 5 scanners simultaneously.





TECHNICAL DATA GATEWAY

MECHANICAL PROPERTIES:

Dimensions: 3.74 x 2.06 x 0.94 in (95 x 52,3 x 23,8 mm)

Weight: 1.50 oz (42,5 g)

ELECTRICAL PROPERTIES:

Power supply of Access Point via USB cable: 5 V DC (0.5A) (via host computer)

UTILITIES & ACCESSORIES:

ProGlove Configuration Tool: <https://insight.proglove.com/>
Use for barcode, interface, device configuration et al.

UTILITIES & ACCESSORIES:

USB: USB HID (keyboard input on host)
USB CDC (virtual com port)
ProGlove Deep Integration Protocol via USB

i **NOTE**
Further technical specifications are available on docs.proglove.de.



CONNECTIVITY DEVICE

OVERVIEW GATEWAY PLUS

The Gateway Plus receives the scanned barcode data from the scanner via BLE. This barcode data is transmitted to the end device via a USB or Ethernet cable. In the USB HID mode, the Gateway Plus simulates a computer keyboard. A serial connection is emulated in the USB CDC mode. To use the USB CDC mode, the device must be set to “USB CDC” in the ProGlove INSIGHT Configuration Tool (<https://insight.proglove.com/>) under “Connectivity Configuration - Integration path”. Also, multipairing is possible. The Gateway can be connected with up to 10 scanners simultaneously.





TECHNICAL DATA || GATEWAY PLUS

MECHANICAL PROPERTIES:

Dimensions: 125 x 76 x 26 mm (4.29 x 3.0 x 1.02 in)
 Weight: 107 g (3.77 oz)

ELECTRICAL PROPERTIES:

Power supplies: via USB host device supports USB (5 V DC /min 1 A)
 via USB power supply supports USB (5 V DC /min 1 A)
 via RS232 power supply supports USB (5 V DC /min 1 A)
 via RS232 Pin 9 custom cable (5 V DC /min 1 A)
 via Ethernet supports IEEE802.3af 37V - 57V 3.84W

UTILITIES:

ProGlove Configuration Tool: <https://insight.proglove.com/>
 Use for barcode, interface, device configuration et al.

ACCESSORIES:

Depending on integration
 system requirements: USB cable
 Ethernet cable
 RS232 cable / custom cable



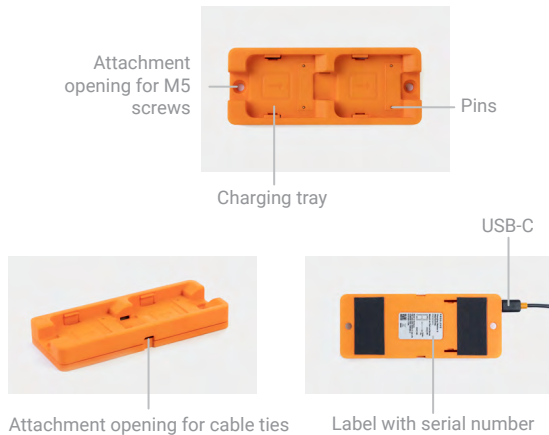
i NOTE
 Further technical specifications are available on docs.proglove.com



CHARGING STATION S

OVERVIEW

The Charging Station S consists of two charging trays that charge two scanners at the same time. The charging status is indicated by the LEDs of the scanner. The LEDs pulse red while in charging mode. When the battery is fully charged, the LEDs pulse green constantly. The Charging Station S can be attached to work stations, for example, through the attachment openings (with M5 screws or cable ties).



TECHNICAL DATA

MECHANICAL PROPERTIES:

Dimensions: 5.5 x 2.2 x 0.7 in (140 x 56 x 19mm)

Weight: 4.4 oz (125g)

ELECTRICAL PROPERTIES:

Power supply: 5 V DC (1.2 A)



i NOTE

Further technical specifications are available on docs.proglove.de.



10-SLOT CHARGING STATION

OVERVIEW

The 10-Slot Charging Station provides multiple options to mount to flat surfaces, workstations and racks. The charging status is indicated by the LEDs of the scanner. The LEDs pulse red while in charging mode. When the battery is fully charged, the LEDs pulse green constantly.

MOUNTING

CAUTION

Do not mount the 10-Slot Charging Station higher than 2m!

On the front and back side are different holes and recesses to enable secure mounting of the 10-Slot Charging Station (with screws and/or zip-ties).

Two wall mount slots on the back side can be used to fix the device with screw heads 135mm apart from each other. The rail slot on the back enables mounting to a standard DIN rail, facilitating the installation in an IT rack or similar constructions. Additionally, the 10-Slot Charging Station can be installed on a monitor arm or stand with holes 75mm apart horizontally and vertically.

TECHNICAL DATA

MECHANICAL PROPERTIES:

Dimensions: 3.74 x 2.06 x 0.94 in
(298 x 203 x 25 mm)

Weight: 26.4 oz (840g)

ELECTRICAL PROPERTIES:

Power supply: 24 V DC (1.67A)





WEARABLES

HAND STRAP

The ProGlove Hand Strap offers an elastic, adjustable Velcro closure that ensures an optimal fit for any user's hand size and shape. It can be worn with or without other gloves underneath. The trigger is located on the side of the index finger and is activated with the thumb. The Hand Strap is a consumable that must be replaced regularly after use.

Variable velcro connection



PROPERTIES

GENERAL:

Packaging unit: 3 or 10 pieces per package

Available sizes: one size

Available variants: right / left

SAFETY & CERTIFICATION:

Standards: EN388 (2131) EN420

Certification: RoHS / REACH CE mark



i NOTE

Further technical specifications are available on docs.proglove.de.



WEARABLES

INDEX TRIGGER

The ProGlove Index Trigger offers hand size optimized variants and can be wrapped around the hand in one movement. The thumb hole fixes the wrap in the correct position and the flexible Velcro mechanism allows it to be securely fastened to the user's hand. It can be worn with or without other gloves underneath. The trigger is located on the side of the index finger and is activated with the thumb. The Index Trigger is a consumable that must be replaced regularly after use.



PROPERTIES

GENERAL:

Packaging unit: 3 or 10 pieces per package

Available sizes: S, M, L

Available variants: right / left

SAFETY & CERTIFICATION:

Standards: EN388 (2131) EN420

Certification: RoHS / REACH CE mark

i NOTE

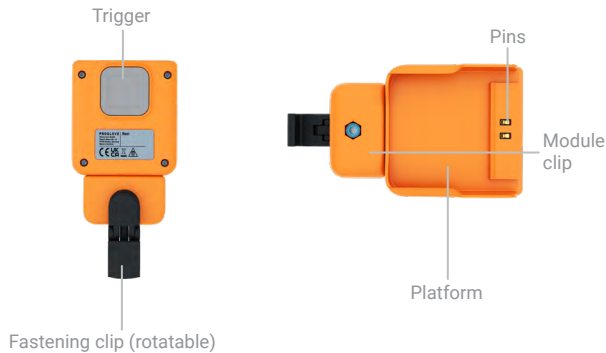
Further technical specifications are available on docs.proglove.de.



WEARABLES

REEL

The ProGlove Reel can be attached with the black, rotating fastening clip to the desired spot. This can be, for example, on the user's clothing or on a belt. Alternatively, the Reel can also be worn on a lanyard around the neck. The trigger is located on the bottom of the Reel and is activated by pressing it. The cord between the mounting clip and the scanner holder is 120 cm / 47.2 in long and retractable. When retracted, the scanner holder is additionally fixed by magnets to prevent it from dangling.



PROPERTIES

GENERAL:

Packaging unit: 2 reels per package

SAFETY & CERTIFICATION:

Certification: RoHS / REACH CE / UKCA



i NOTE

Further technical specifications are available on docs.proglove.de.



APPLICATION OF PROGLOVE SYSTEM

1ST STEP: CHARGE SCANNER

! CAUTION

Only use scanner in a dry Charging Station and only touch with dry hands! This may otherwise lead to the Charging Station not functioning properly.



→ The pins face down. Insert scanner in the Charging Station.

✓ RESULT

Scanner pulses red and charges in the Charging Station.

i NOTE

The LEDs pulse red while in charging mode. When the battery is fully charged, the LEDs pulse green.

2ND STEP: CONNECT THE CONNECTIVITY DEVICE

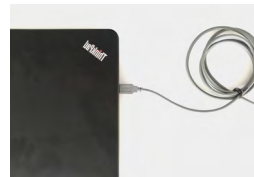
! CAUTION

Only touch the connectivity device with dry hands! This may otherwise lead to the connectivity device not functioning properly.

i NOTE

The following steps are only needed when connecting via Gateway/Gateway Plus.

CONNECTION WITH USB CABLE IN USB HID MODE:



1. Connect the USB cable with the end device. Follow the previous step 1 and step 2 for "Connection with USB Cable in USB HID Mode". Continue with the following steps:



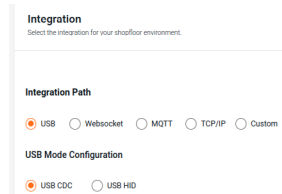
2. Plug the other end of the USB cable into the Micro USB socket of the Gateway / Gateway Plus. A clear clicking sound confirms the correct fastening.

✓ **RESULT**

The LED of the Access Point lights up green. The boot up of the Gateway / Gateway Plus takes around 2min until the LED 1 lights up green. The connectivity device is connected to the end device.

CONNECTION WITH USB CABLE IN USB CDC MODE:

Follow the previous step 1 and step 2 for “Connetion with USB Cable in USB HID Mode”. Continue with the following steps:



3. Under Settings -> Integration -> Integration Path select USB and under USB Mode Configuration select USB CDC

[More detailed information about this can be found in chapter “Configure devices and firmware update.”](#)

4. Connect with the COM port on the end device.

✓ **RESULT**

The LED of the Access Point lights up green. The boot up of the Gateway / Gateway Plus takes around 2 min until the LED 1 lights up green. The connectivity device is connected to the end device.

3RD STEP: SWITCH ON THE SCANNER



1. Position scanner on the fastening rail of the wearable. The pins face down.
2. Push scanner down. A clear clicking sound confirms the correct fastening.



3. Press the textile trigger on the glove for about 2 seconds

✓ **RESULT**

Scanner lights up with all LEDs. You can hear a beeping sound and feel a short vibration. Scanner is switched on.

i NOTE

Scanner switches off automatically after 15 minutes without being used.



4TH STEP: CONNECT THE SCANNER

CONNECT VIA CONNECTIVITY DEVICE



1. Press the trigger on the wearable in order to activate the scanner.



2. Aim scanner on the connectivity device and scan the pairing barcode on the Gateway.

✓ RESULT

Scanner lights up twice. You can hear a beeping sound and feel a short vibration. Scanner is connected to the connectivity device.

4TH STEP: CONNECT SCANNER (BLE)

CONNECT VIA PROGLOVE INSIGHT MOBILE:

➔ For using a ProGlove scanner with ProGlove INSIGHT Mobile via software keyboard, Intent or SDK find more information under docs.proglove.de> PG INSIGHT Mobile.

CONNECT VIA BLE HID TO AN END DEVICE

The scanner can be used to establish a connection via Bluetooth Low Energy Human Interface Device (BLE HID) to an end device. Possible operating systems are: Apple iOS, Google Android, Microsoft Windows.

The individual steps for connecting to the respective operating systems for the first time can be found in the following.

PREREQUISITES:

- ✓ The end device supports at least Bluetooth 4.0 standard
- ✓ No interference or physical obstacles (e.g. metal shelves) interfere with the connection between the scanner and the end device
- ✓ The range between the scanner and the end device is < 33 ft (10m)



TIP 1

Visually label the connected devices (scanner with the end device), e.g.using numbering or a color code. This will allow the user to find the right devices faster.



TIP 2

Adhere the pairing barcode to the end device. In this way, the user can find it quickly and easily.



On a battery-operated end device, the power-saving mode can lock the end device and scanner simultaneously.

→ Permanently disable the power-saving mode of the end device.

The last 5 digits of the serial number attached to the back side identify the scanner among the available Bluetooth devices.

→ Read the serial number of the scanner.

✓ **RESULT**

Example serial number: LEO - 00000.

To make the scanner visible for the end device, the scanner must be put into pairing mode:



1. Press the trigger on the wearable in order to activate the scanner.



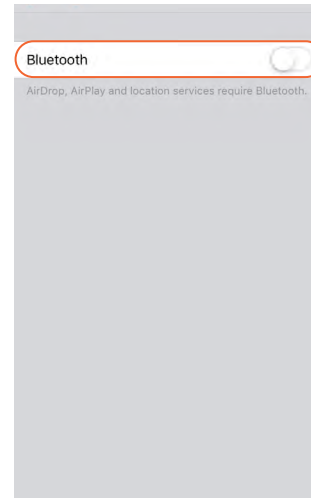
2. Aim the scanner at the pairing barcode and scan.

✓ **RESULT**

Scanner pulses blue and beeping sounds can be heard. Scanner is searching for an end device in pairing mode.

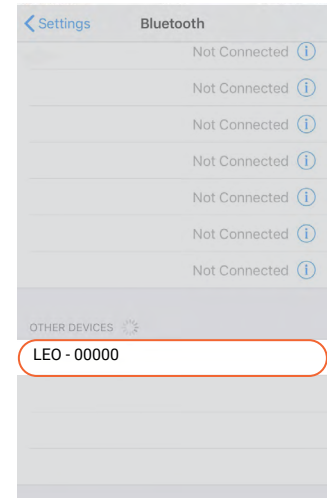
CONNECT WITH APPLE iOS 11 OR HIGHER:

01



Under “Settings - Bluetooth,” activate the Bluetooth option.

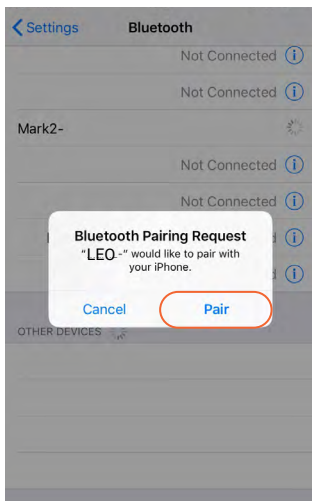
02



Select “LEO - 00000”.

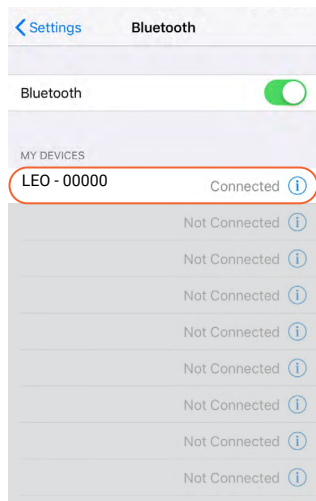


03



Confirm the “Bluetooth Pairing Request”.

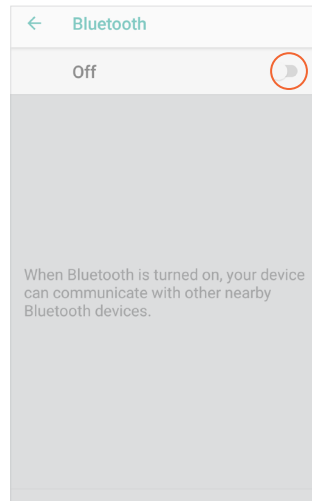
✓ RESULT



The scanner will flash blue twice and you will hear two beeps. The scanner will be shown as connected under “My devices” and is ready for use.

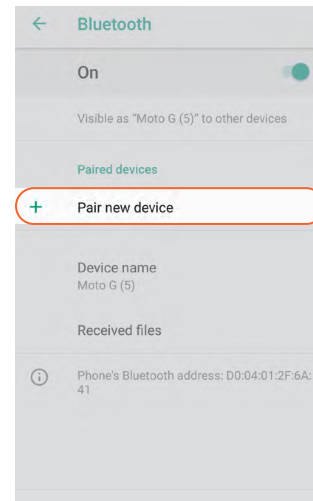
CONNECT WITH GOOGLE ANDROID 4.4 OR HIGHER:

01



Under “Settings - Connected devices,” switch on the Bluetooth option.

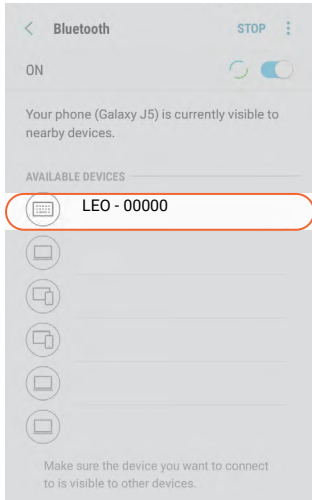
02



Tap “Bluetooth” and select “Pair new device.”

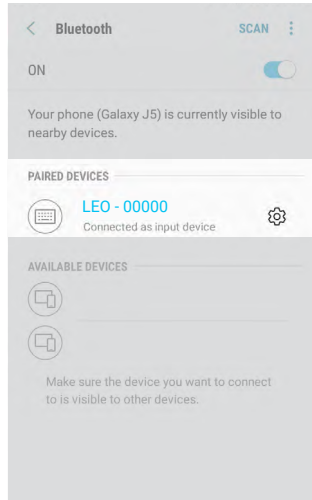


03



Select 'LEO - 00000'.

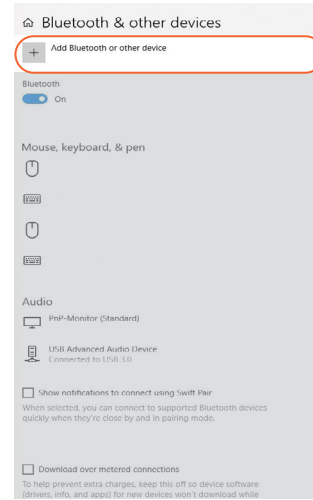
✓ RESULT



The scanner will flash blue twice and you will hear two beeps. The scanner will be shown as connected under "Paired devices" and is ready for use.

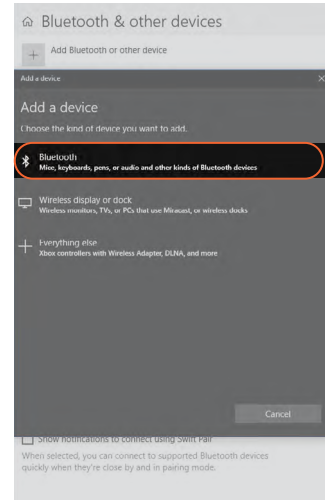
CONNECT WITH MICROSOFT WINDOWS 10:

01



Under "Bluetooth & other devices," click on "Add Bluetooth and other devices".

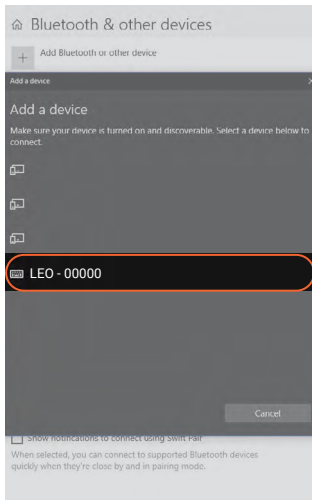
02



Select the option "Bluetooth: Mouses, keyboards and other types".

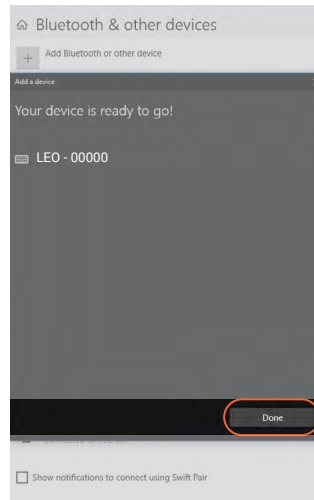


03



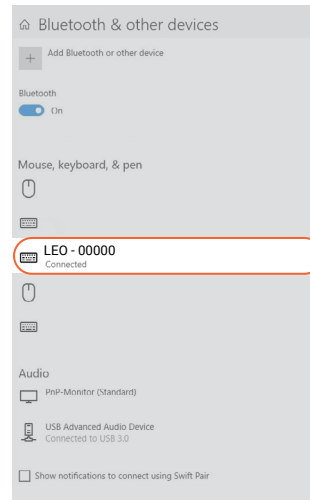
Select "LEO - 00000".

04



Click "Done".

✓ RESULT



The scanner will flash blue twice and you will hear two beeps. The scanner will be shown as connected under "Bluetooth & other devices," and is ready for use.



5TH STEP: SCAN

! CAUTION

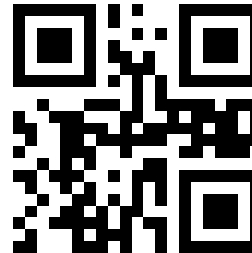
The scanner is an omnidirectional scanner. Scanner can scan barcodes from different angles. The scanning range is between 4 - 28 in (10-70 cm) depending on application case and barcode size.



1. Press the trigger on the glove in order to activate the scanner.



2. Aim scanner at the barcode and scan.



EXAMPLE BARCODE

✓ RESULT

Scanner lights up green. You can hear a beeping sound and feel a short vibration. Scanner has scanned the example barcode and transmitted it to the end device.



6TH STEP: DISCONNECT SCANNER

DISCONNECT SCANNER FROM THE CONNECTIVITY DEVICE



→ Use the scanner to scan the pairing code of a different Gateway/Gateway Plus.

✓ RESULT

Scanner is disconnected from the Gateway/Gateway Plus and is connected to a new Gateway/Gateway Plus.



→ Place the scanner in the Charging Station.

✓ RESULT

The scanner is disconnected from Gateway/Gateway Plus and can be connected to a new one.

DISCONNECT THE CONNECTION CABLE FROM THE GATEWAY OR GATEWAY PLUS:



→ Unplug connection cable from the Micro USB port.



→ Unplug connection cable from the Micro USB port.

✓ RESULT

The LED of the Gateway or Gateway Plus no longer lights up green. The connection cable is disconnected from the Gateway or Gateway Plus.

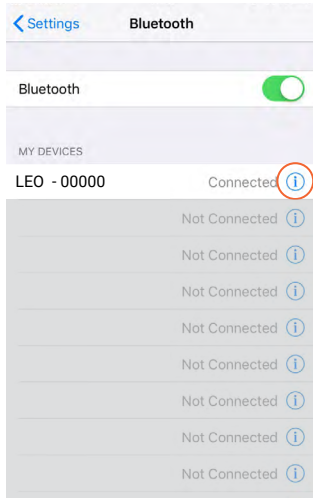


6TH STEP: DISCONNECT SCANNER (BLE HID)

DISCONNECT FROM APPLE iOS:

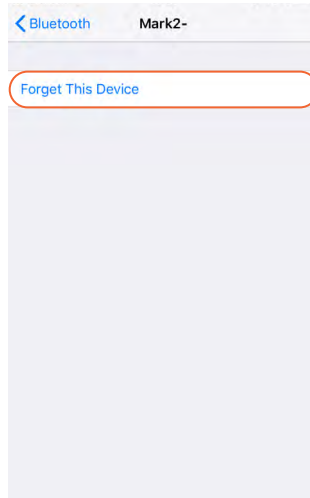
i NOTE: Only disconnect scanner if this is to be newly connected to another end device.

01



Under: "Settings - Bluetooth," tap on ⓘ the symbol.

02



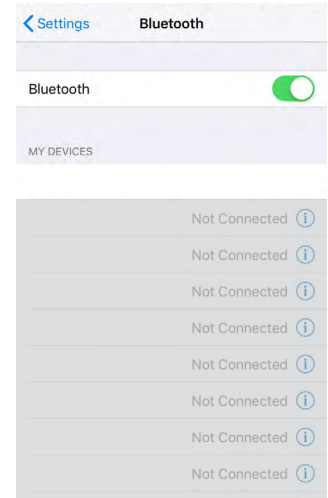
Tap on "Forget this device."

03



Confirm "Forget Device."

✓ RESULT

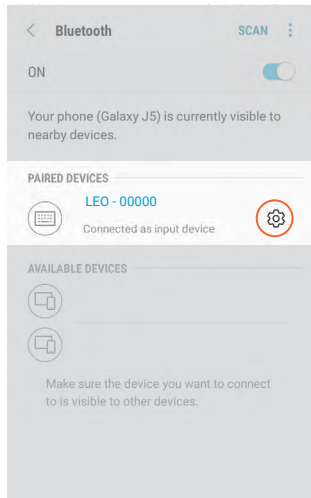


The scanner will flash red three times and you will hear three beeps. Scanner will no longer be shown as connected under "My devices."



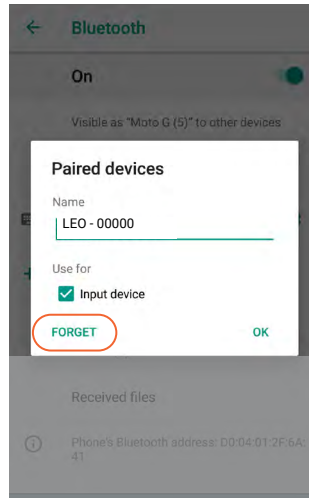
DISCONNECTING FROM GOOGLE ANDROID:

01



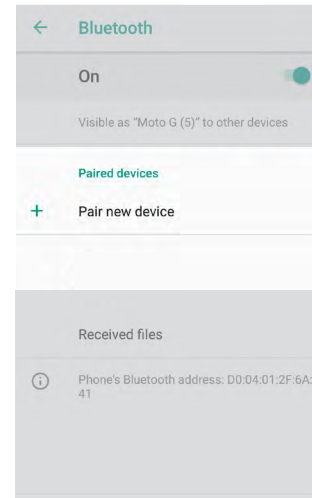
In the Bluetooth option under "Paired devices," tap on the gear wheel symbol of "LEO - 00000."

02



Select "Forget."

✓ RESULT

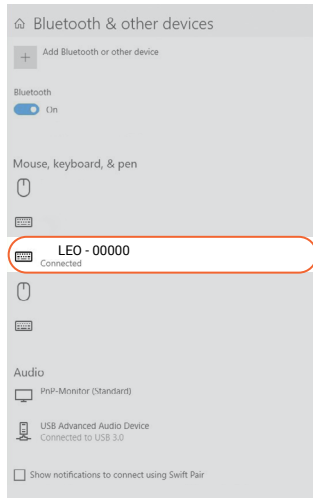


The scanner will flash red three times and you will hear three beeps. Scanner will no longer be shown as connected under "Paired devices."



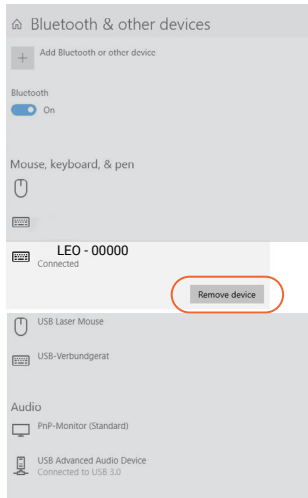
DISCONNECTING FROM MICROSOFT WINDOWS:

01



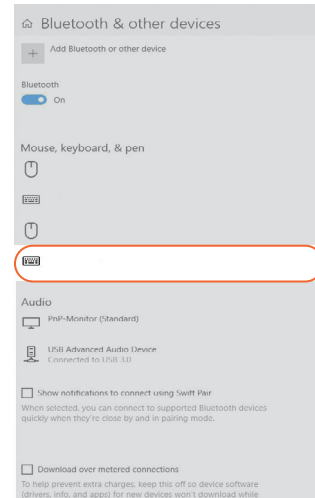
Under "Bluetooth & other devices," select "LEO - 00000."

02



Click "Remove device."

✓ RESULT



The scanner will flash red three times and you will hear three beeps. Scanner will no longer be shown as connected under "Bluetooth & other devices."



7TH STEP: RELEASE SCANNER FROM WEARABLES

! CAUTION

Do not rub over the pins of the wearable with the scanner!

→ This may otherwise lead to bent pins.

More information about removing scanner from wearable can be found under proglove.com/support.



1. Use your fingers to press between the scanner and the fastening rail of the wearable.



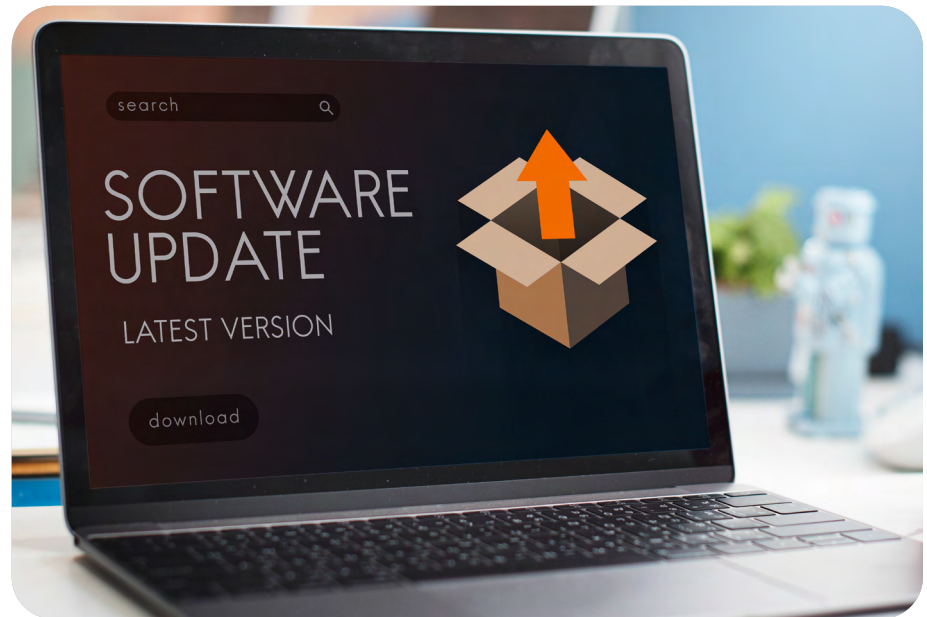
2. Pull the scanner up on a slight angle and push it forward.



CONFIGURING DEVICES AND FIRMWARE UPDATES

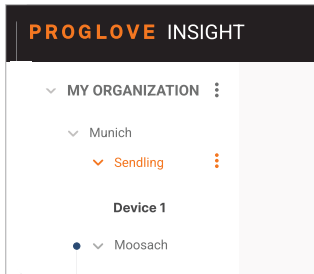
The configuration tool under <https://insight.proglove.com/> can be used to individually set the ProGlove System to improve scanning processes and to update the firmware.

- To **update the firmware** proceed with **step 7**.
- To **create a new configuration** proceed with **step 1**.

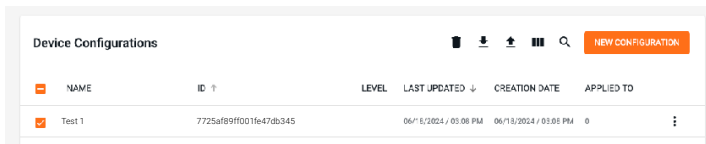


1ST STEP: OPEN CONFIGURATIONS

1. Go to Configurations in the INSIGHT navigation.



2. Select a saved configuration or create a new one.



→ To **install a saved configuration** proceed with **step 7**.

2ND STEP: CREATE A NEW CONFIGURATION

→ Choose which connectivity option is used and need to be configured.



3RD STEP: CONNECTIVITY CONFIGURATION

It is possible to configure the connectivity settings according to the end device.

Gateway Multipairing: It is also possible to adjust the maximum number of scanners that can connect to the Gateway or Gateway Plus.

→ Choose the preferred settings.



4TH STEP: DEVICE SETTINGS

The Device Settings can be used to optimize the scanner for certain use cases.

The **Engine Settings** allow to improve the readability of barcodes:

- activate Fuzzy 1D processing for hard to read 1D barcodes
- activate Display mode for barcodes on screens or foils
- activate Picklist mode to enable a more accurate aiming with the scanning field

The **Feedback profiles** allow to customize the scanners feedback.

The **Sleep Mode** determines the duration of inactivity after which the scanner turns off.

Device Settings

Engine Settings

- Fuzzy 1D processing
- Display Mode
- Picklist Mode

Feedback Profiles

Normal

Enable Haptic Feedback

Sleep Mode

5

Minutes

5TH STEP: SYMBOLOGY SETTINGS

The Symbology Settings can be used to switch the barcode types (including inverse barcodes) on or off and to set barcode lengths, edge tolerances as well as check digits.

- Switch off unused barcode types.
- Switch on inverse barcode types if needed.

6TH STEP: WORKFLOW RULES

The Workflow Rules can be used to manipulate the barcode data. These can be used to change barcode data through rules with conditions and actions. These are then in an IF-THEN relationship with each other, which means that:

IF a condition is true, **THEN** an action is executed.

An action is also carried out without a condition.

APPLICATION EXAMPLE:

Insert the prefix "Pro" for the following barcode:



Condition: Barcode matches "Glove"

Action: Add Prefix "Pro"

Outcome: "ProGlove"

➔ Create the condition “Barcode Matches: *Gloves*” and the action “Add Prefix *Pro.*”

1. set condition (if)

Edit Condition

Barcode Contains Barcode Matches Length

Negate this condition

Barcode matches this Regular expression

Glove\$

SAVE CONDITION

2. set action (then)

Edit Action

Search Action

Output Add Prefix Add S

Insert this String as a prefix of the barcode

Pro.

ADD ENTER ADD TAB

SAVE ACTION

7TH STEP: CONFIGURE DEVICES AND FIRMWARE UPDATE

For the **configuration** of the device:

➔ Click on Save. Assign a name and download the configuration file.

For a **firmware update**:

➔ Download the latest firmware version at <https://insight.proglove.com/resources/downloads> or get it from your ProGlove contact person. Follow the next steps.

To configure PG INSIGHT Mobile:

➔ Copy the downloaded configuration file in the following folder on your mobile device: (*/sdcard*)/*Android/data/de.proglove.connect/files*)

✓ **RESULT**

The configuration file will be deployed automatically on the mobile phone.



To configure the Gateway / Firmware update:



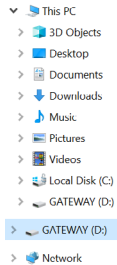
1. Connect the Gateway with the computer. The Gateway boots up. This takes about 2 min and is finished when the USB LED shows constant green light.



2. Scan the Pairing Barcode on the Gateway.



3. Scan this barocde to enable the Gateway as a mass storage device on the computer.



4. Copy the downloaded configuration file or the firmware file into the mass storage device Gateway.



5. Scan this barcode to disable the Gateway as a mass storage device on the computer.

! CAUTION

Do not disconnect the Gateway from the computer during the upload!

✓ RESULT



The upload of the configuration takes about 5 seconds/the upload of the firmware takes about 2 minutes and is finished when the USB LED shows constant green light. The Gateway is now configured/updated and can be connected to the scanner.

i NOTE

The configuration will be applied to the scanner and the Gateway directly. Scanners, that get connected to the Gateway later will receive the same configuration!

To configure the Gateway PLUS / Firmware update:



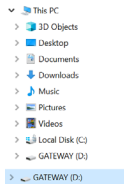
1. Connect the GatewayPlus with the computer. The Gateway Plus boots up. This takes less than 1 min and is finished when the DATA LED shows constant green light.



2. Scan the Pairing Barcode on the Gateway Plus.



3. Scan this barcode to enable the Gateway Plus as a mass storage device on the computer.



4. Copy the downloaded configuration or firmware file to the Gateway Plus mass storage device.



5. Scan this barcode to disable the Gateway Plus as a mass storage device on the computer.

! CAUTION

Do not disconnect the Gateway Plus from the computer during the upload!



✓ RESULT

The upload of the configuration takes about 5 seconds/the upload of the firmware takes less than 1 minute and is finished when the DATA LED shows constant green light. The Gateway Plus is now configured/updated and can be connected to the scanner.













i NOTE

The configuration will be applied to the scanner and the Gateway Plus directly. Scanners, that get connected to the Gateway later will receive the same configuration














SIGNAL TABLE

GENERAL SCANNER:

Description	 LED	 Connection symbol	 Battery symbol	 Audio signal	 Vibration
Barcode data could be transferred	Short green flashing 			Short positive beep	Short vibration
Barcode data could not be transferred	Red flashing 3 times briefly 			Long negative beep	Long vibration
Battery charge under 10%			Slow red flashing 		
Battery charge under 7%			Red flashing 3 times briefly 		
Switch on scanner with battery charge under 5%			Red flashing 3 times briefly 		
Battery charge under 95%			Pulsing Red 		
Battery charge over 95%			Constantly green 		

SCANNER CONNECTION VIA BLE:

Description	LED 	Connection symbol 	Battery symbol 	Audio signal 	Vibration 
Scanner searches for an end device	Pulsing Blue 	Pulsing Blue 		Continuously rising beep	
Scanner is connected to an end device	Blue flashing 2 times briefly 	Blue flashing 2 times briefly 		Short rising positive beep	Short vibration
Scanner cannot connect with the end device	Red flashing 3 times briefly 			Negative beep briefly 3 times	Long vibration
Scanner is disconnected from an end device	Red flashing 3 times briefly 			Negative beep briefly 3 times	Long vibration



SIGNAL TABLE

GATEWAY || GATEWAY PLUS

























Description	LED 1 Power	LED 2 SCANNER	LED 3 Cloud	LED 4 Data <small>is called USB on GW1</small>
Gateway Powered	Static			
Gateway boots up* <small>*the boot up takes around 7 min.</small>		Shuffle from to left to right		
Gateway connected to target device/Server for Data Transmission via USB/RS232/LAN/WLAN				Static
Gateway sends data to host system				Blink
Gateway not connected to scanners		Off		
Gateway connected to one or more scanners		Static		
Gateway connected to the maximum number of allowed scanners		Static		
Gateway cannot connect to another scanner but a scanner tries to connect		Blinks three times		
Gateway receives data from scanner		Blink		



GATEWAY || GATEWAY PLUS



Description	LED 1 Power	LED 2 SCANNER	LED 3 Cloud	LED 4 Data <small>is called USB on GW1</small>
Gateway uploading key layout asset to scanner		Blink 		
Scanner firmware update started		Blink  three times		
Gateway searching for network (WLAN/LAN)			Blink 	
Gateway connected to network (WLAN/LAN) and searching for INSIGHT Webportal / or INSIGHT Webportal is disabled			Static 	
Gateway connected to INSIGHT Webportal			Static 	
Gateway is connected to the scanner via BLE			Blink 	
Gateway downloading Remote Update asset			Blink 	
Gateway USB Mass Storage activated/deactivated		Blink  three times	Blink  three times	Blink  three times
All files on Gateway Mass Storage processed successfully		Blink  three times	Blink  three times	Blink  three times
Failure in processing files on Gateway Mass Storage		Blink  three times	Blink  three times	Blink  three times
Gateway firmware update in progress		Shuffle   from left to right	Shuffle   from left to right	Shuffle   from left to right



STORAGE AND CLEANING

STORAGE

STORAGE LOCATION:

Store hardware wearables in a dry and dirt-free environment. In case of transport, ProGlove System must be transported shockproof in its original packaging.

TEMPERATURE:

Store hardware wearables in an environment between - 4°F (-20°C) and 140°F (+60°C).

CLEANING

! **CAUTION:**
Do not attempt to charge damp/wet hardware. All components must be dry before charging

WEARABLES:

! **CAUTION:**
Protect wearables from moisture!
This may otherwise lead to the wearables not functioning properly.

→ Do not wash wearables.

HARDWARE:

! **CAUTION:**
Protect hardware from moisture!
This may otherwise lead to ProGlove System not functioning properly.

! **CAUTION:**
Do not clean hardware with chemical agents!
Otherwise, the material can be damaged.

→ Use isopropyl alcohol or cleaning agents approved for electronics and use it to wipe all surfaces of the hardware with a soft cloth.
→ Regularly clean the scanner glass with cotton swabs.



SOLUTION TO THE PROBLEM

SCANNER

PROBLEM

Scanner is not responding.

CAUSE

Battery is not charged.

SOLUTION

→ Charge scanner in the Charging Station for at least 20 min.

Wearable is defective.

→ Change wearable.

Scanner is not vibrating or does not beep after successful data transfer.

Feedback signals are disabled.

→ Check whether the feedback signals in the configuration tool are enabled under "Feedback Profiles."

The battery symbol of scanner flashes red.

The battery charge is low.

→ Charge scanner in the Charging Station for at least 20 min.



SCANNER

PROBLEM

CAUSE

SOLUTION

What lights up? But no barcodes are scanned.

The barcode label cannot be read.

→ Create new barcode label.

The barcode type cannot be read.

→ Check whether the barcode type in the configuration tool is enabled under “Symbology settings”.

The barcode length cannot be read.

→ Check whether the barcode length in the configuration tool is enabled under “Symbology settings”.

Scanner glass is dirty.

→ Clean the scanner glass with a cotton swab.

What lights up?

The barcode label is difficult to read.

→ To enhance the scanning performance, make the following settings in the configuration tool under “Symbology settings”.
Fuzzy 1D processing: ON

Scanner glass is dirty.

→ Clean the scanner glass with a cotton swab.

Scanning distance is not optimally used.

→ Position scanner closer or further away from the barcode label and scan.
4-28 in (10 - 70 cm)

BLE - DATA TRANSFER

PROBLEM

CAUSE

SOLUTION

Barcode data is not transferred.

Scanner is not connected to the end device.

1. Scan the pairing barcode.
2. Lights up blue twice briefly while scanner is connecting and after a successful connection.

Scanner lights up green after the data transfer, but no barcode data is shown on the end device.

Scanner is out of range of the end device.
(Maximum range is < 33 ft. (10m))

- Bring scanner closer to the end device and scan the pairing barcode.

Scanner flashes red 3 times, 3 negative beeps are heard and a long vibration is felt.

Scanner cannot connect with the end device.

1. Check whether the range between scanner and end device is < 33 ft. (10m) If not, get closer.
2. Disconnect the connection between the end device and scanner and reconnect "Step 6: Disconnect scanner" and "Step 4: Connect scanner"
3. Scan the pairing barcode again.
4. Scan barcode again.



GATEWAY OR GATEWAY PLUS - DATA TRANSFER

PROBLEM	CAUSE	SOLUTION
Barcode data is not transferred.	Scanner is not connected to the Gateway or Gateway Plus.	<ol style="list-style-type: none"> 1. Scan the pairing barcode on the Gateway or Gateway Plus. 2. Lights up blue twice briefly while scanner is connecting and after a successful connection.
	Scanner is out of range of the Gateway or Gateway Plus. (Maximum range is 100 - 130 ft. (30 - 40m))	→ Bring scanner closer to the Gateway or Gateway Plus.
	Gateway or Gateway Plus is defective.	<p>Gateway or Gateway Plus must be replaced.</p> <p>→ More detailed information can be found at docs.proglove.com/en/gateway.</p>
	Scanner is defective.	<p>Scanner must be replaced.</p> <p>→ More detailed information can be found at docs.proglove.com.</p>



CHARGING STATION

PROBLEM

Scanner does not charge in Charging Station.

CAUSE

Scanner is not correctly inserted in Charging Station.

Charging Station is not connected to power source.

Scanner is defective.

Charging Station is defective.

SOLUTION

➔ Insert scanner in the Charging Station again.

➔ Connect Charging Station to power source.

Scanner must be replaced.
➔ More detailed information can be found at proglove.com/support.

The Charging Station must be replaced.
➔ More detailed information can be found at proglove.com/support.



TIP 1

Problem could not be solved?

➔ Insert scanner into the wearable. Press the trigger on the wearable for about 15 seconds and restart scanner.



TIP 2

Problem could not be solved?

➔ Scan with scanner the Factory Default Barcodes:



SCANNER



GATEWAY

Factory Default Barcode will reset all configurations!



DISPOSAL



LEO system corresponds to the directive 2012/19/EU of the EUROPEAN PARLIAMENT AND COUNCIL of 4 July 2012 regarding waste electrical and electronic equipment (WEEE). That is why LEO system cannot be disposed of through household waste. If you have questions about a return or environmentally-friendly disposal, please contact ProGlove support.

Carry out the following steps to decommission ProGlove system:

1. Release Scanner from Wearables
2. Disconnect the connection cable from the Access Point / Gateway / Gateway Plus
3. Disconnect the mains plug from the Charging Station S
4. Properly dispose of Hardware and Wearables as old electronic and electric devices

DIRECTIVES & CERTIFICATION

Declaration of Conformity (CE)

Wearable Barcode Scanners

Workaround GmbH, hereby declares that the ProGlove Wearable Barcode Scanners (LEO) are in compliance with the following directives:

- 2014/53/EU Radio Equipment
- 2015/863/EU RoHS

Connectivity Devices

Workaround GmbH, hereby declares that the ProGlove Connectivity Devices (Gateway / Gateway Plus) are in compliance with the following directives:

- 2014/53/EU Radio Equipment
- 2015/863/EU RoHS

⚠ CAUTION:

Do not mount the Gateway Plus higher than 2m!

Charging Stations

Workaround GmbH, hereby declares that the ProGlove Charging Stations (Charging Station S, 10-Slot Charging Station) are in compliance with the following directives:

- 2014/30/EU EMC
- 2014/35/EU LVD
- 2015/863/EU RoHS

European contact:

Workaround GmbH
Rupert-Mayer-Str. 44
81379 Munich, Germany

The full text of the EU declaration of conformity is available at the following internet address: docs.proglove.com



REGULATORY INFORMATION

This device is approved under Workaround GmbH (Pro-Glove). This guide applies to MARK, Hardware Connectivity, Accessories, Wearables. All ProGlove devices are designed to be compliant with the rules and regulations in the locations they are sold and will be labeled as required.

BRAZIL RADIO EQUIPMENT WARNING

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

MEXICO RADIO EQUIPMENT WARNING

La operación de este equipo está sujeta a las siguientes dos condiciones:

- Es posible que este equipo o dispositivo no cause interferencia perjudicial y
- Este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.



CAUTION:

Any changes or modifications made to this equipment not expressly approved by Workaround GmbH may void the authorization to operate this equipment.

SINGAPORE REGULATION INFORMATION

**Complies with
IMDA Standards
DA100846**

DISCLAIMER

ProGlove has taken reasonable measures to provide information in this manual that is complete and accurate, however, ProGlove reserves the right to change any specification or the user manual at any time without prior notice. ProGlove and the ProGlove logo are registered trademarks of Workaround GmbH in many countries, including the U.S. and the E.U. MARK and LEO is a trademark of ProGlove GmbH and/or its affiliates, registered in many countries including the U.S. and the E.U. All other brand and product names may be trademarks of their respective owners.

The Customer hereby agrees that it has carefully read and understood any and all terms and conditions, safety precautions, and measures set forth in this Document, furthermore, the Customer agrees to bear full responsibility for these risks and responsibility for any accidents, injury to persons, or property damage that may occur, Customer further agrees to waive claiming any liability against Workaround GmbH.



FCC/IC CERTIFICATION COMPLIANCE:

ProGlove System

The ProGlove System, comprised of: MARK 3, MARK 2 MR, MARK 2 SR, MARK Basic, MARK Display, LEO, Charging Station S, 10 Slot Charging Station Gateway, Wearables, peripherals and accessories, complies with the following FCC/IC product categories:

- FCC Part 15 Subpart C 247 (intentional radiators = RF transceiver)
- FCC Part 15 Subpart C 249 (intentional radiators = RF transceiver)
- FCC Part 15 Subpart B 107/109 (unintentional radiator)
- ISED Canada RSS-Gen Category I (radio apparatus)
- ISED Canada RSS-247
- ISED Canada RSS-102
- ISED Canada RSS-210

The ProGlove LEO is a portable device (distance between person's body and the antenna is 20 cm or less) and excluded from SAR (Specific Absorption Rate) requirements.

FCC/IC Certification Compliance

Under the regulations of the FCC and the IC the user has to be aware of the following when using the ProGlove LEO:

1. This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules.

This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption rate (SAR).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) des lignes directrices de la FCC et les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée comme conforme sans évaluation du débit d'absorption spécifique (DAS).

2. This ProGlove System has been tested and meets the FCC/IC RF exposure rules when used with ProGlove's accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC/IC RF exposure rules.

Le système ProGlove a été testé et est conforme aux règles d'exposition aux fréquences radioélectriques (RF) de l'IC ainsi que de la FCC lorsqu'il est utilisé avec les accessoires ProGlove fournis ou conçus pour ce produit. L'usage d'autres accessoires ne garantit pas nécessairement la conformité aux règles d'exposition aux RF de l'IC ou de la FCC.

FCC Specific Certification Compliance

Under the regulations of the FCC the user has to be aware of the following when using the ProGlove LEO:

1. FCC CAUTION Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



2. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

3. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

4. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IC Specific Certification Compliance

Under the regulations of the IC the user has to be aware of the following when using the ProGlove LEO:

1. This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

1) l'appareil ne doit pas produire de brouillage;

2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



SUPPORT

TECHNICAL SUPPORT CONTACT DATA

If you have questions about integrating or using the ProGlove devices, our customer support department will be happy to help you. They will process your request as soon as possible. You can reach them at:

SUPPORT WEBSITE:


 proglove.com/support


E-MAIL ADDRESS:


 support@proglove.de

 support@proglove.com

TELEPHONE NUMBER:

 +49 (89) 12085158

 +1 (217) 721-0740 (USA)

 Monday – Friday, 9:00 am to 5:00 pm

PROGLOVE

Workaround GmbH

Building 64.08a
Rupert-Mayer-Str. 44
81379 München
Germany

ProGlove Inc.

1229 N North Branch St
Suite 211
Chicago, IL 60642
USA

ProGlove Ltd.

Coventry University Technology Park
Puma Way, Coventry CV1 2TT, UK
United Kingdom



Support at:

proglove.com/support
support@proglove.com