PROGLOVE

USER MANUAL 🇬🇧 🇺🇸

PROGLOVE

PROGLOVE USER MANUAL

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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, configurators 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 (here in after "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.

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DOCUMENT TITLE: ProGlove User Manual
DATE OF PUBLICATION: 06/2023
VERSION: 4.0

EXPLANATION OF SYMBOLS

A warning notice is used in these instructions. Always read and observe this warning notice. The warning notice is introduced with the word **CAUTION** and means the following:

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

MARK 3	MARK 2	MARK Basic	MARK Display

WEARABLES

Hand Stripe	Index trigger	Reel

CHARGING STATION

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

USB CONNECTION

Access Point One S with USB cable	Gateway 1 with USB cable

RS232 CONNECTION

Access Point with RS232 cable	Power supply with power cable

SCANNER

OVERVIEW

After scanning a barcode, the scanner returns feedback signals: haptically by vibrations, acoustically by audio signals and optically by LEDs. The serial number on the rear label indicates whether it is a standard or mid range device.
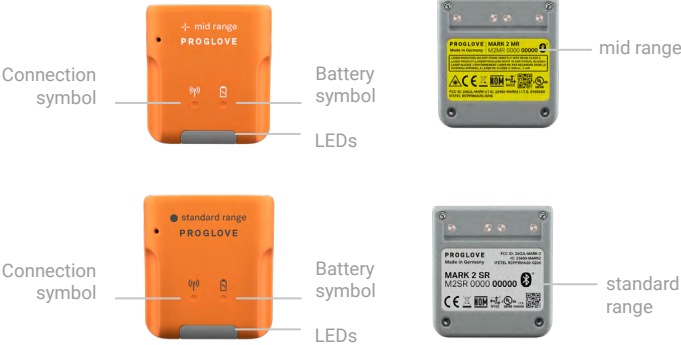
Standard range serial number: MXSR ...
Mid range serial number: MXMR ...

Standard range (available for MARK 2, MARK Basic, MARK Display):
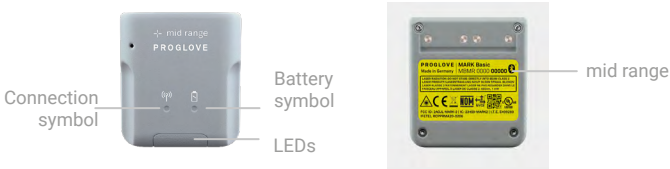4 - 31 in (10 - 80 cm)
Mid range (available for MARK 2, MARK Basic, MARK Display):
12 - 59 in (30 - 150 cm)
Multi Range (available for MARK 3): 4in - 20ft (10-600cm)

MARK 2

Connection symbol
Battery symbol
LEDs
mid range

Connection symbol
Battery symbol
LEDs
standard range

MARK BASIC

Connection symbol
Battery symbol
LEDs
mid range

MARK DISPLAY

E-Paper Display
LEDs
mid range

E-Paper Display
LEDs
standrad range

MARK 3

Connection symbol
Battery symbol
LEDs
multi range

TECHNICAL DATA - MARK 2 AND MARK BASIC

MECHANICAL PROPERTIES:

Dimensions:............................ 1.96 x 1.77 x 0.63 in
(50 x 45 x 16 mm)
Weight:.................................... 1.41 oz (40g)

ELECTRICAL PROPERTIES:

Battery type: .... Lithium polymer (rechargeable)
Charge duration:..................... 2 hours
Number of scans:................... MARK 2: up to 12000 scans
MARK Basic: up to 7000 scans
(depending on application
and environmental conditions)

WIRELESS COMMUNICATION

BLE : .... 2400 - 2483.5 MHz
MARK 2 Sub-1-GHz: .... EU: 863-870 MHz on 70
channels (100kHz channel spacing)
NA: 902-928 MHz on 30
channels (752kHz channel spacing)

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.

LASER CLASSIFICATION:

Complies with 21 CFR 1040.10 and 1040.11 except for
conformance with IEC 60825-1 Ed. 3., as described in Laser
Notice No. 56, dated May 8, 2019.
Laser safety according to EN60825-1:2014 and IEC 60825-1
(Ed. 3.0). (mid range)
Excluded risk group LED product according to IEC/EN 62471
(standard range)

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

TECHNICAL DATA - MARK 3

MECHANICAL PROPERTIES:

Dimensions: ⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱ 1.96 x 1.77 x 0.67 in
(50 x 45 x 17 mm)

Weight: ⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱ 1.48 oz (42g)

ELECTRICAL PROPERTIES:

Battery type: ⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱ Lithium polymer (rechargeable)
Charge duration: ⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱ 2 hours
Number of scans: ⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱⸱ up to 12000 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.

LASER CLASSIFICATION:

Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.
Laser safety according to EN60825-1:2014 and IEC 60825-1 (Ed. 3.0).

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

TECHNICAL DATA MARK DISPLAY

MECHANICAL PROPERTIES:

Dimensions: .... 1.96x 1.77 x 0.7 in
(50 x 45 x 18 mm)
Weight: .... 1.7 oz (48g)

ELECTRICAL PROPERTIES:

Battery type: .... Lithium polymer (rechargeable)
Charge duration: .... 2 hours
Number of scans: .... up to 7500 scans (depending on application and environmental conditions)

DISPLAY:

Display: .... E-Paper Display
Size: .... 1.54 inch
Resolution: .... 200 x 200 pixel resolution, 188 Dpi

WIRELESS COMMUNICATION:

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

INTEGRATION REQUIREMENT:

ProGlove Connect: .... Provides a full featured integration for Android enterprise applications. All information on proglove.com/integration

BARCODE TYPES - 1D

Auto decodes all standard 1D codes including GS1DataBar linear codes et al.

BARCODE TYPES - 2D:

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

BARCODE TYPES - POSTAL:

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

LASER CLASSIFICATION:

Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.
Laser safety according to EN60825-1:2014 and IEC 60825-1 (Ed. 3.0).(mid range)

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

CONNECTIVITY DEVICE

OVERVIEW ACCESS POINT

The Access Point receives the scanned barcode data from the scanner via 868/915 MHz. This barcode data is transmitted to the end device via USB cable or RS232 cable. In the USB HID mode, the Access Point 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 configuration tool (config.proglove.de) under "Device settings - Output mode".
A RS232 cable establishes a serial connection between Access Point and the end 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.

Pairing Barcode

LED

Label with serial number

Cable release opening

RJ50 socket

Micro USB socket

Pairing Barcode

•LED 1 (USB LED)
•LED 2 (Scanner LED)
•LED 3 (Cloud LED)

Label with serial number
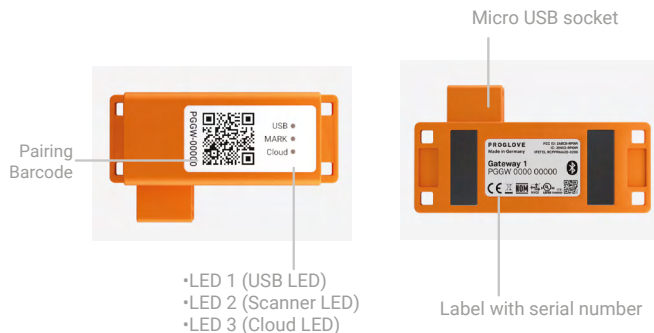
TECHNICAL DATA ACCESS POINT

MECHANICAL PROPERTIES:

Dimensions:............................ 5.4 x 2.5 x 1.3 in
(138 x 64 x 33mm)

Weight:.................................... 3.5 oz (100g)

ELECTRONIC PROPERTIES:

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

Power supply of Access Point 12 V DC (1A)
via RS232 cable:..................... via power supply PG12-10P55

WIRELESS COMMUNICATION:

SubGHz: .... EU: 863-870 MHz on 70 channels (100kHz channel spacing)
NA: 902-928 MHz on 30 channels (752kHz channel spacing)

Max radio-frequency power transmitted: .... <20dBm

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

USB CDC CONNECTION:

Baud rate: .... All standard baud rates are supported.
Standard setting: 115.200

Data bits:................................ 8

Stop bits:................................ 1

Parity:..................................... NONE

Data flow:............................... OFF

Required Control Signal: .... DTR

Handshake control:............... OFF

RS232 CONNECTION:

Baud rate: .... All standard baud rates are supported.
Standard setting: 115.200

Data bits:................................ 8

Stop bits:................................ 1

Parity:..................................... NONE

Data flow:............................... OFF

Handshake control:............... OFF

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

WIRELESS COMMUNICATION:

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

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

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. It takes about 2 hours to charge a scanner. The Charging Station S can be attached to work stations, for example, through the attachment openings (with M5 screws or cable ties).

Attachment opening for M5 screws

Pins

Charging tray

Attachment opening for cable ties

USB-C

Label with serial number
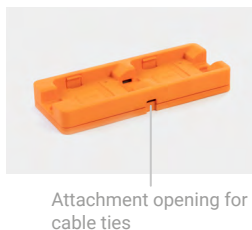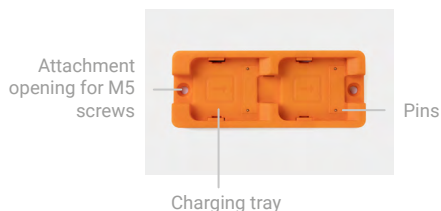
TECHNICAL DATA

MECHANICAL PROPERTIES:

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

Weight: .... 3.9 oz (110g)

ELECTRONIC PROPERTIES:

Power supply: .... 5 V DC (1.2 A)
Use the provided power supply only. Using any other type of AC power supply is prohibited.

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. It takes about 2 hours to charge a scanner.

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 appart horizontally and vertically.

TECHNICAL DATA

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

Weight: 840g

ELECTRONIC PROPERTIES:
Power supply: .... 24 V DC (1.67A)
Use the provided power supply only. Using any other type of AC power supply is prohibited.

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

Trigger

Fastening rail for scanner

PROPERTIES

GENERAL:

Packaging unit: ························· 10 pieces per package

Available sizes: ························· one size

Available variants: ···················· right / left

SAFETY & CERTIFICATION:

Certification: ·························· RoHS / REACH CE / UKCA

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.

Trigger

Fastening rail for scanner

Label with size indication

Variable velcro connection

PROPERTIES

GENERAL:

Packaging unit: ·························· 3 or 10 pieces per package

Available sizes: ·························· S, M, L

Available variants: ····················· right / left

SAFETY & CERTIFICATION:

Certification: ······························ RoHS / REACH CE / UKCA

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.

Trigger

Pins

Module clip

Platform

Fastening clip (rotatable)
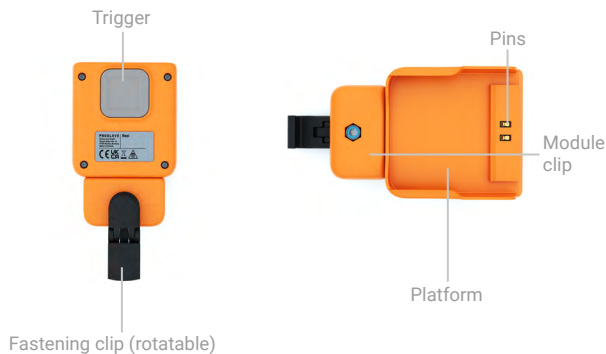
PROPERTIES

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.

COMPATIBILITY MATRIX

This Compatibility Matrix shows the connection possibilities with the different scanners:

	MARK 3	MARK 2	MARK BASIC	MARK DISPLAY
ACCESS POINT	NO	YES (s. page 18)	NO	NO
GATEWAY	YES (s. page 29)	YES (s. page 18)	YES (s. page 18)	YES
BLE HID	YES (s. page 29)	YES (s. page 21)	YES (s. page 18)	NO
PG INSIGHT MOBILE	YES (s. page 29)	YES (s. page 20)	YES (s. page 20)	YES (s. page 20)

ℹ NOTE
For a simplified display, only a MARK 2 scanner and, if necessary, an Access Point will be used in the next steps.

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. It takes about 2 hours to charge a scanner.

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 Access Point or Gateway.

CONNECTION WITH USB CABLE IN USB HID MODE:
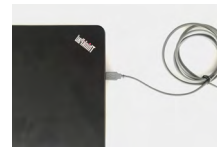
1. Connect the USB cable with the end device.

2. Plug the other end of the USB cable into the RJ50 socket of the Access Point.
A clear clicking sound confirms the correct fastening.

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

✔ **RESULT**

The LED of the Access Point lights up green. The boot up of the Gateway 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:
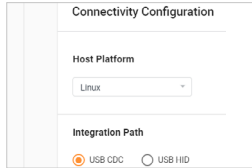
3. In the configuration tool (https://insight.proglove.com/) under "Connectivity Configuration > Integration Path" select USB CDC. More detailed information about this can be found in chapter "Configure devices and firmware update."

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 takes around 2min until the LED 1 lights up green. The connectivity device is connected to the end device.

CONNECTION WITH RS232 CABLE VIA ACCESS POINT

1. Connect the RS232 cable with the end device. Connect the power supply to the RS232 cable and into an external power source.

2. Plug the other end of the RS232 cable into the RJ50 socket of the Access Point. A clear clicking sound confirms the correct fastening.
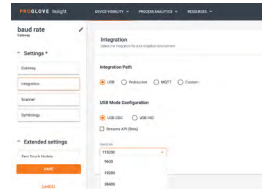
3. Check which baud rate must be set. The baud rate is set to 115,200 as a standard. At a different baud rate, this is to be set in the configuration tool (config.proglove.de).

4. Select the COM port on the end device and set the appropriate baud rate.

✔ **RESULT**

The LED of the Access Point lights up green. The Access Point 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 textile trigger on the wearable in order to activate the red crosshairs.

2. Aim scanner crosshairs on the connectivity device and scan the pairing barcode on the Access Point or 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 PG INSIGHT MOBILE:

➜ For using MARK Display or MARK 2 / MARK Basic with PG Insight Mobile via Software Keyboard, Intent or SDK find more information under
proglove.com/support > *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 MARK 2 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: MARK 2 - 00000.

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

1. Press the tetile trigger on the wearable in order to activate the red crosshairs.

2. Aim the scannercrosshairs 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
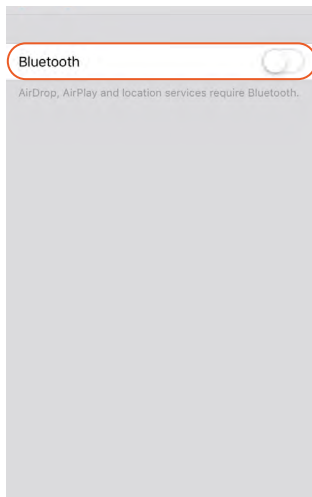
Under "Settings - Bluetooth," activate the Bluetooth option.

02
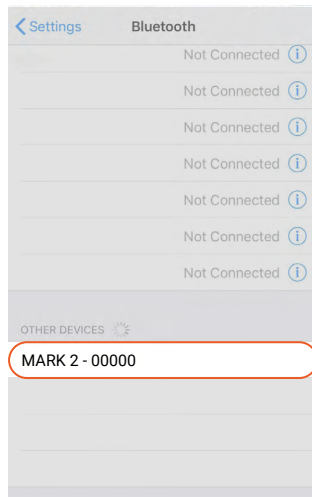
Select "MARK 2 - 00000".

03
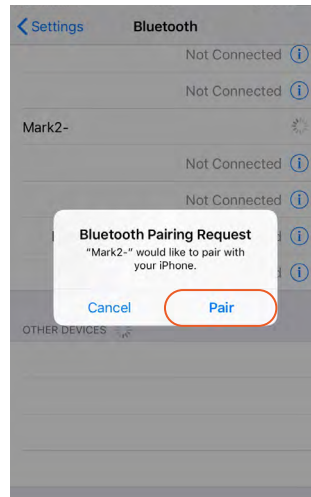
Confirm the "Bluetooth Pairing Request".

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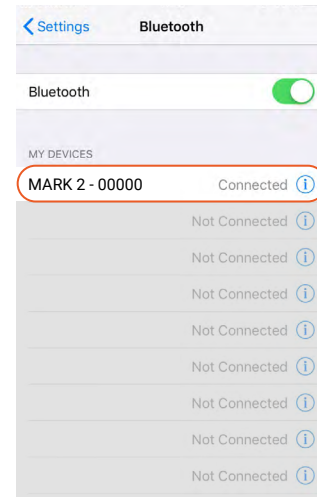
The scanner will flash blue twice and you will hear two beeps. The scanner will be shown as connected under "My devices" and is ready for use.

CONNECT WITH GOOGLE ANDROID 4.4 OR HIGHER:

01
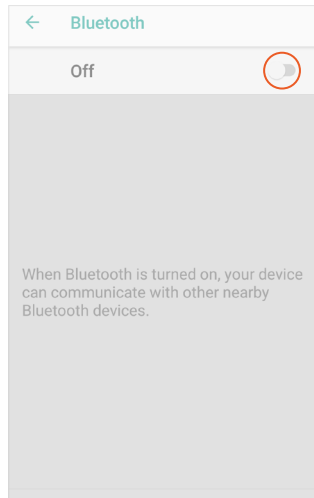
Under "Settings - Connected devices," switch on the Bluetooth option.

02
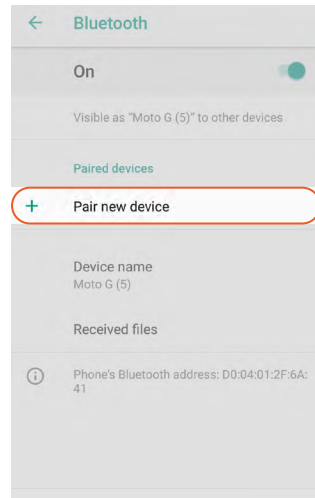
Tap "Bluetooth" and select "Pair new device."

03
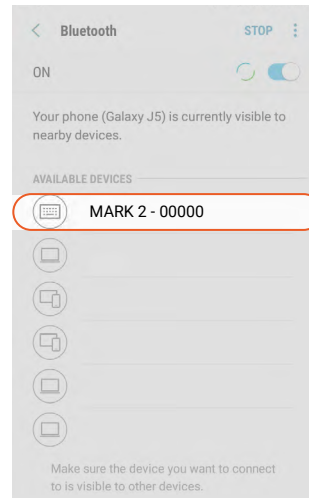
Select 'MARK 2 - 00000'.

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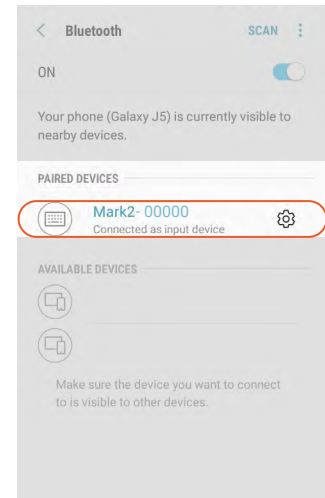
The scanner will flash blue twice and you will hear two beeps. The scanner will be shown as connected under "Paired devices" and is ready for use.

CONNECT WITH MICROSOFT WINDOWS 10:

01
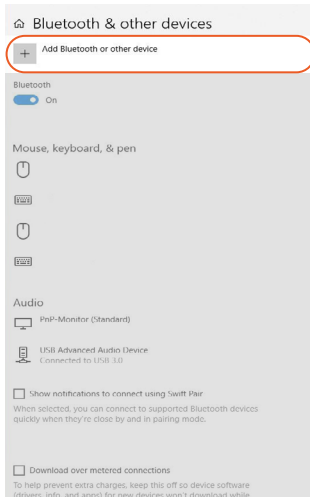
Under "Bluetooth & other devices," click on "Add Bluetooth and other devices".

02
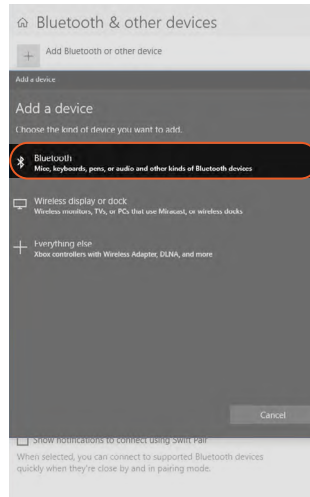
Select the option "Bluetooth: Mouses, keyboards and other types".

03
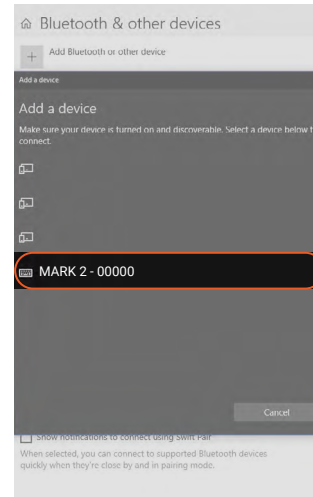
Select "MARK 2 - 00000".

04
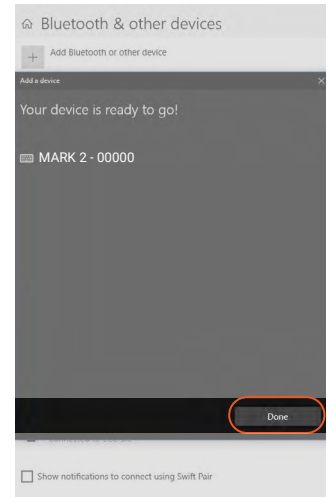
Click "Done".

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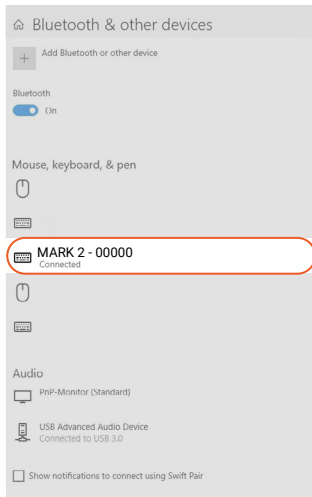
The scanner will flash blue twice and you will hear two beeps. The scanner will be shown as connected under "Bluetooth & other devices," and is ready for use.

5TH STEP: SCAN

⚠ **CAUTION**

For mid range scanning range: do not look directly into the crosshairs!
Otherwise this can lead to temporary blinding effects.
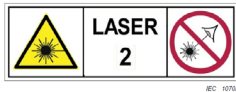
The scanner is an omnidirectional scanner. Scanner can thus scan barcodes from different angles.
For a standard range device (serial number: MXSR…), the scanning range is between 4 - 31 in (10-80 cm) per application case and barcode size. For a mid range device (serial number: MXMR…), the scanning range is 12 - 52 in (30-150 cm) per application case and barcode size.

1. Press the textile trigger on the glove in order to activate the crosshairs.

2. Aim scanner crosshairs at the barcode and scan.
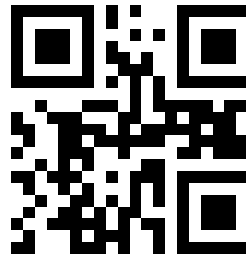
EXAMPLE BARCODE

✓ **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.

✔ **RESULT**
Scanner is disconnected from the Gateway and is connected to a new Gateway.

➜ Place the scanner in the Charging Station.

✔ **RESULT**
The scanner is disconnected from Gateway and can be connected to a new one.

DISCONNECT THE CONNECTION CABLE FROM THE GATEWAY:

✔ **RESULT**
The LED of the Gateway no longer lights up green. The connection cable is disconnected from the Gateway.

6TH STEP: DISCONNECT SCANNER (BLE HID)

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

DISCONNECT FROM APPLE iOS:

01	02	03	✓ RESULT
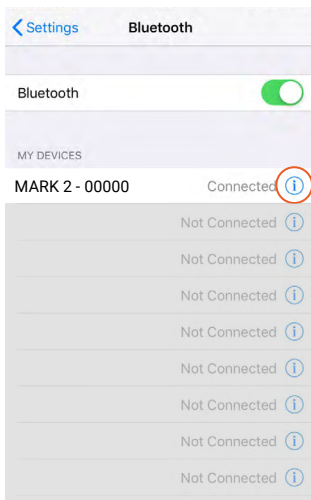
Under: "Settings - Bluetooth," tap on the ⓘ symbol.
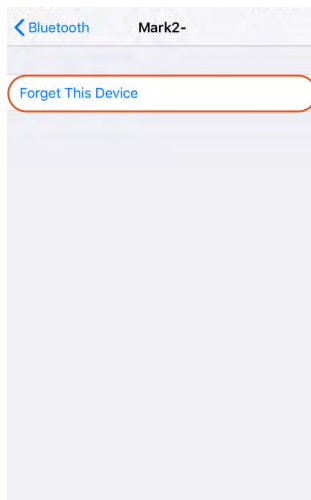
Tap on "Forget this device."
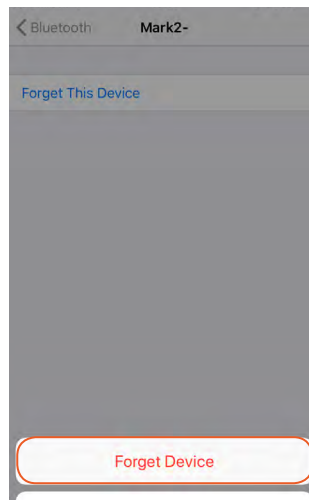
Confirm "Forget Device."
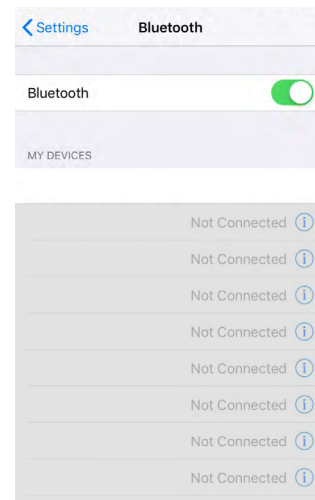
The scanner will flash red three times and you will hear three beeps. Scanner will no longer be shown as connected under "My devices."

DISCONNECTING FROM GOOGLE ANDROID:

01
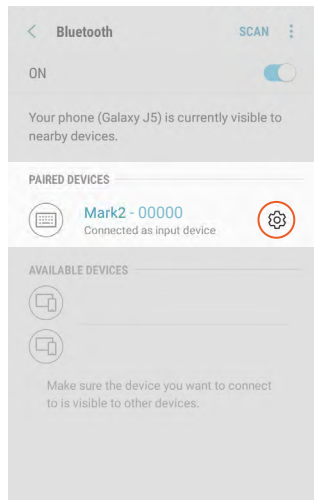
In the Bluetooth option under "Paired devices," tap on the gear wheel symbol of "MARK 2 - 00000."

02
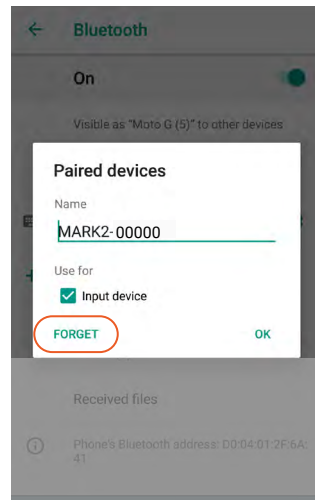
Select "Forget."

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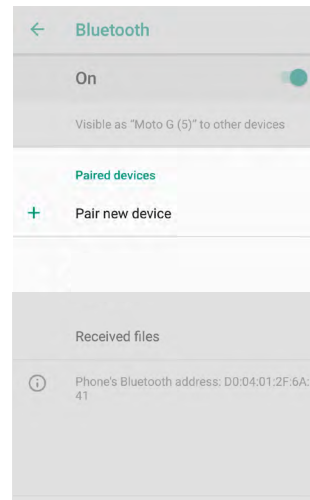
The scanner will flash red three times and you will hear three beeps. Scanner will no longer be shown as connected under "Paired devices."

DISCONNECTING FROM MICROSOFT WINDOWS:

01
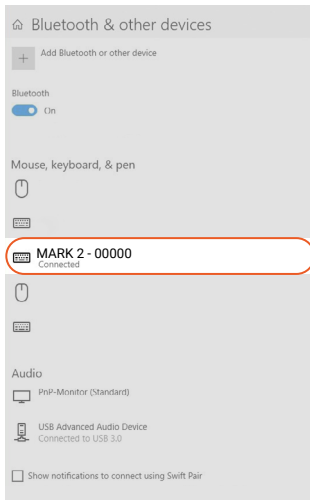
Under "Bluetooth & other devices," select "MARK 2 - 00000."

02
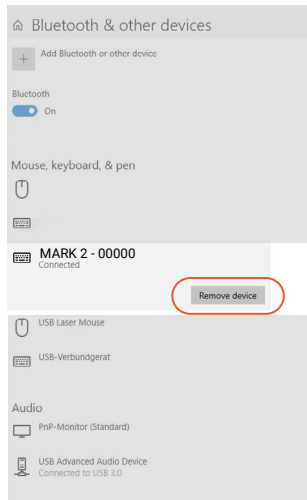
Click "Remove device."

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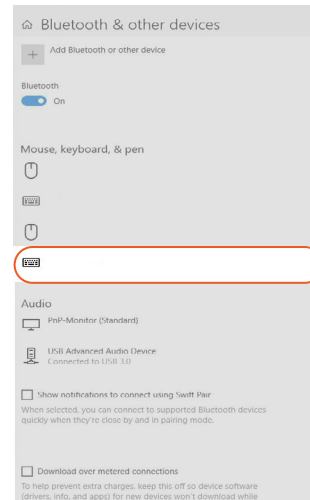
The scanner will flash red three times and you will hear three beeps. Scanner will no longer be shown as connected under "Bluetooth & other devices."

7TH STEP: RELEASE SCANNER FROM WEARABLES

⚠ CAUTION

Do not rub over the pins of the wearable with the scanner!
➜ This may otherwise lead to bended pins.
More information about releasing the scanner correctly
can be found under proglove.com/support.

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

2. Press scanner up slightly
and push it forward.

CONFIGURE DEVICES AND FIRMWARE UPDATE

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

All information are available here:

→ **General information about configuration and firmware update:**
developers.proglove.com/insight/web/Configurations.html

→ **Configuration and firmware update via Insight Mobile (Android):**
developers.proglove.com/insight-mobile/android/latest
Configuration and firmware update via

→ **Configuration and firmware update via Insight Mobile (iOS):**
developers.proglove.com/insight-mobile/ios/latest

→ **Configuration and firmware update via Gateway:**
developers.proglove.com/gateway/latest

SINGAL 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		
High/Low temperature charging stopped	Long flashing purple				

SCANNER CONNECTION VIA ACCESS POINT:

Description	LED	Connection symbol	Battery symbol	Audio signal	Vibration
Scanner is connected to the Access Point	Blue flashing 2 times briefly	Blue flashing 2 times briefly		Short rising positive beep	Short vibration

SCANNER CONNECTION VIA BLE:

Description	LED	Connection symbol	Battery symbol	Audio signal	Vibration
Scanner searches for an end device	Blue pulsing	Blue pulsing		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

Description	LED	Audio signal	Vibration	Screen
MARK Display boots up	LED loop	Short rising positive beep	Short vibration	-
MARK Display is in Standby Mode				mid range PROGLOVE / TRIGGER TO START
MARK Display is ready to connect				SCAN PAIRING BARCODE
MARK Display is connecting	Blue pulsing	Continuously rising beep		CONNECTING
MARK Display is connected to an end device		Short rising positive beep	Short vibration	CONNECTED
MARK Display could not connect to an end device	Red flashing 3 times briefly	Negative beep briefly 3 times	Long vibration	COULD NOT CONNECT

Description	LED	Audio signal	Vibration	Screen
MARK Display lost the connection to end device	Red flashing 3 times briefly	Negative beep briefly 3 times	Short vibrations 3 times briefly	-
MARK Display tries to reconnect to end device	Blue pulsing	Continuously rising beep		
MARK Display is reconnected to the end device	Blue flashing 2 times briefly	Short rising positive beep	Short vibration	-
MARK Display is disconnected from an end device	Red flashing 3 times briefly	Negative beep briefly 3 times	Short vibrations 3 times briefly	
Battery charge under 10 %	Red flashing	Info tone	Short vibrations 2 times briefly	-
Battery charge under 5 %	Red flashing	Info tone	Short vibrations 2 times briefly	-

Description	LED	Audio signal	Vibration	Screen
MARK Display is charging	Red pulsing			+ mid range **PROGLOVE** 50%
MARK Display is fully charged	Green pulsing			+ mid range **PROGLOVE** 100%
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	-

GATEWAY

►The signal table is available at docs.proglove.com/en/led-feedback.html

STORAGE AND CLEANING

STORAGE

STORAGE LOCATION:
Store the Hardware as well as Wearables in a dry and dirt-free environment. In case of transport, ProGlove System must be transported shockproof in its original packaging.

TEMPERATURE:
Store the Hardware as well as 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	CAUSE	SOLUTION
Scanner is not responding.	Battery is not charged.	→ 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.

PROBLEM	CAUSE	SOLUTION
The crosshairs light 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.
The crosshairs light up, but the barcodes are hard to scan.	The barcode label is difficult to read.	➔ To enhance the scanning performance, make the following settings in the configuration tool (config.proglove.de) 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. For standard range: 3.9 - 31.5 in (10-80 cm) For mid range: 11.8 - 59 in (30-150 cm)

ACCESS POINT - DATA TRANSFER

PROBLEM	CAUSE	SOLUTION
Barcode data is not transferred.	Scanner is not connected to the Access Point.	➜ Scan the pairing barcode on the Access Point.
	Scanner is out of range of the Access Point. (maximum range is < 98 ft. (30m))	➜ Bring Scanner closer to Access Point.
	Access Point is defective.	Access Point must be replaced. ➜ More detailed information can be found at proglove.com/support.
	Scanner is defective.	Scanner must be replaced. ➜ More detailed information can be found at proglove.com/support.
Different barcode data is transferred.	The keyboard layout of the end device is set with a different language.	➜ Adjust the keyboard layout of the configuration tool to the keyboard layout of the end device. In the configuration tool (config.proglove.de) under "Device settings - USB keyboard layout," adjust the language.

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.	Scanneris 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 - DATA TRANSFER

PROBLEM	CAUSE	SOLUTION
Barcode data is not transferred.	Scanner is not connected to the Gateway.	1. Scan the pairing barcode on the Gateway. 2. Lights up blue twice briefly while scanner is connecting and after a successful connection.
	Scanner is out of range of the Gateway. (Maximum range is 100 - 130 ft. (30 - 40m))	→ Bring scanner closer to the Gateway.
	Gateway is defective.	Gateway must be replaced. → More detailed information can be found at proglove.com/support.
	Scanner is defective.	Scanner must be replaced. → More detailed information can be found at proglove.com/support.

CHARGING STATION

PROBLEM	CAUSE	SOLUTION
Scanner does not charge in Charging Station.	Scanner is not correctly inserted in Charging Station.	➜ Insert scanner in the Charging Station again.
	Charging Station is not connected to power source.	➜ Connect Charging Station to power source.
	Scanner is defective.	Scanner must be replaced. ➜ More detailed information can be found at proglove.com/support.
	Charging Station is defective.	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   **ACCESS POINT**   **GATEWAY**

Factory Default Barcode will reset all configurations!

DISPOSAL

MARK 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 MARK 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
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 (MARK Basic, MARK 2, MARK Display, LEO, MARK 3) 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 1, Access Point) are in compliance with the following directives:

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

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

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

European contact:
Workaround GmbH
Rupert-Mayer-Str. 44
81379 Munich
Germany

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 prejudici-al 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, Access Point, 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 MARK is a portable device (distance between person's body and theantenna 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 MARK:

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 MARK:

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.

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

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