



AsReader Gun-Type Long Range BCR

ASR-R202G

User's Manual

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Preface

Thank you for purchasing the AsReader GUN-Type Long Range BCR ASR-R202G. ASR-R202G is a barcode reader that supports 1D and 2D barcodes and is suitable for reading over long distances. In addition, autofocus enables reading at short distances (15 cm and up).

This manual describes precautions for handling AsReader GUN-Type Long Range BCR ASR-R202G correctly.

Please read the manual carefully and keep it as long as you have the device.

※ In some sections of this manual, we may refer to "AsReader GUN-Type Long Range BCR ASR-R202G" as "the device", "this device", "this product", "the product", or "the AsReader".

If you have any comments or questions about this manual, please contact us:

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- ★ The copyright of this manual belongs to our company, and it is prohibited to copy, reprint, modify, or translate part or all of this manual into other languages without our consent.
- ★ The images shown in this manual are for illustrative purposes only and may differ from the actual product.
- ★ In order not to damage your life and property safety, please read this manual carefully before using this product. We will not be responsible for any loss caused by non-compliance with this manual.
- ★ We are not responsible for any damage caused by natural disasters, such as earthquake, lightning, winds, floods, fire outside our responsibility, third party behavior, other accidents, intentional or negligent abuse or other improper use.
- ★ If damage is caused by dropping or collision as determined by our company, a fee would be charged for repairs, even within the warranty period.

★We take appropriate measures to ensure that our products do not infringe other patents, but we are not responsible for any patent infringement caused by any of the following items (1) to (4).

- 1) If used in combination with components, products, equipment, data processing systems or software outside our company.
- 2) If our products are used in unexpected ways.
- 3) If our products are modified by any person or company other than our company.
- 4) If used in countries other than where purchased.

Safety Instructions

Please read the following instructions carefully to prevent injury, malfunction, fire, etc.

 Warning
Do not attempt to disassemble, modify or repair the device yourself, otherwise it may cause malfunction, fire or electric shock. We are not responsible for any malfunction of this product or mobile device caused by modification.
If you notice any abnormalities such as smoke, abnormal odor, or strange noises coming from the product during use, stop using it immediately. Continued use may cause fire or electric shock.
Do not drop or throw the product and subject it to strong impact. It may cause damage, fire, electric shock, or malfunction. If the product is damaged by being dropped and the inside of the device is exposed, do not touch the exposed part with your hands, because there is a risk of electric shock or injury from the damaged part.
Do not charge the battery in wet environments, as water may leak through the grip and the installation port of AsLock Header to the battery. Otherwise, it may result in electric shock, short circuit, fire, or burns. Also, do not use this product near water such as in a bathroom, shower room, kitchen, or washroom. It may cause fire or electric shock.
Do not use if the micro USB charging terminal is damaged or broken. It may cause fire or electric shock.
If charging is not completed within the specified charging time, stop charging the device. It may cause liquid leakage, heat generation, fire, or failure.
Do not use, store, or leave the product in hot places (e.g. near fires, near a heater, in direct sunlight, in a car in hot weather, etc.). Doing so may cause rupture, malfunction, fire, injury, or death.
Do not throw the product into fire or heat. It may burst or cause a fire.
This product is a Class 2 laser product. Do not look into the laser beam or point it at other people. Directly looking into the laser beam may damage your eyes. If you suspect a laser beam injury, seek medical advice immediately.
 Caution
For charging, please use the dedicated USB charging cable with the magnetic detachable connector that is provided with this product. Please use this cable with your own wall-adaptor that provides an output of 5V/2A (not included with the ASR-R202G). Using different cables or different output chargers may result in failed charges.
Please refer to local regulations when you recycle this device.
Please contact your local place of purchase immediately if any defects occur.
Continuous use of this product in water or in rain may cause damage to the product or attached mobile devices. If it gets wet, please wipe it off immediately with a clean, dry cloth.
The USB charging cable and its magnetic detachable connector have built-in magnets, which may erase the data on magnetic cards such as credit cards. To protect your data, please keep magnetic cards, such as credit cards, more than 10 cm (4 in) away from these magnets.

How to Care for the Device

Please use this device in a clean environment. Adhesive chemicals or oils may cause the resin shell to break.

- Chemicals include cosmetics, detergents, pesticides, thinners, gasoline, etc.
- Oils include tallow and other animal oils, hand creams, etc.

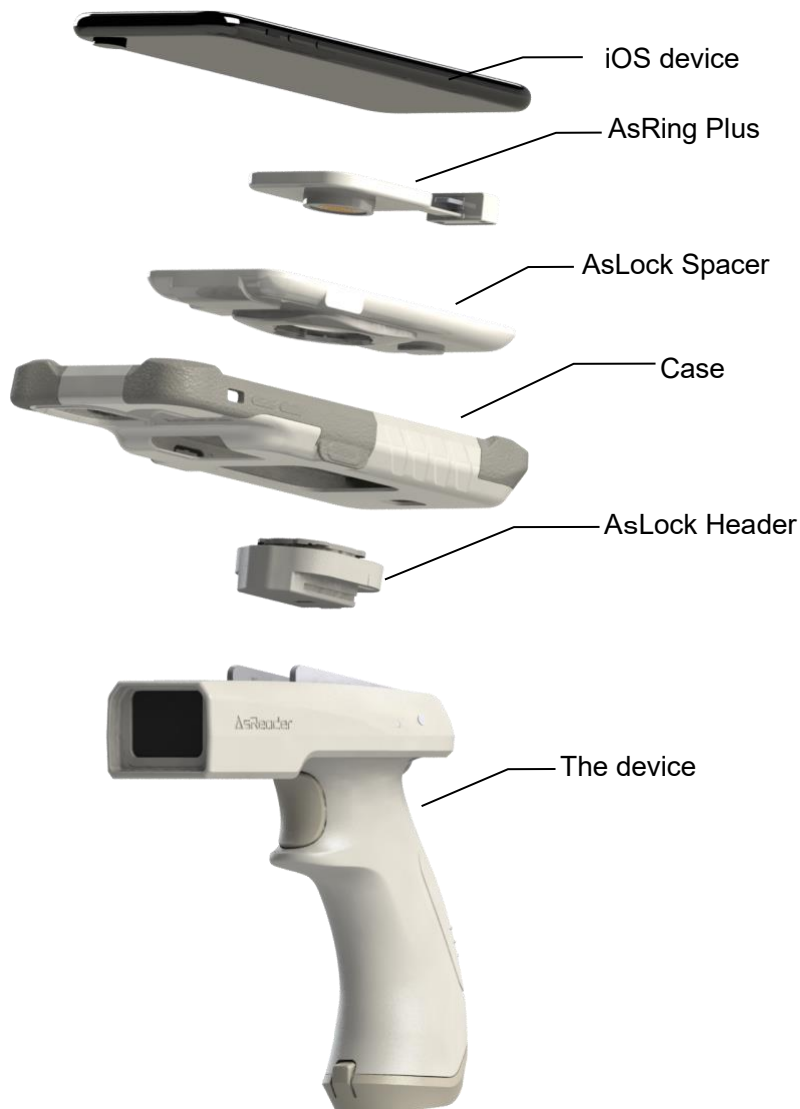
Please keep the device clean. If the device becomes dirty, wipe it with a soft, dry cloth.

Using strong solvents or cleaners may cause color changes and performance problems.

1 Assembly of Products and Accessories

1.1 Assembly Diagram

- In order to use this device with an iOS device connected, you need to purchase the following parts.



Accessories

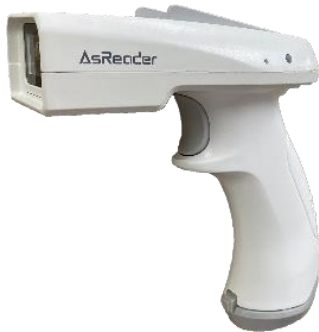
AsReader

By combining these parts, it is possible to connect an iOS device to this device.

1.2 Inside the Box

The following items are contained in the box. Please first make sure you have all of these items. In case that any items are missing, please contact the company from whom you purchased the device.

- AsReader
- Protective cover
- USB charging cable & magnetic detachable connector



Optional accessories (included in the same package as the device if purchased at the same time)

- AsLock Header
- AsRing Plus
- AsLock Spacer
- Case



1.3 Application Development

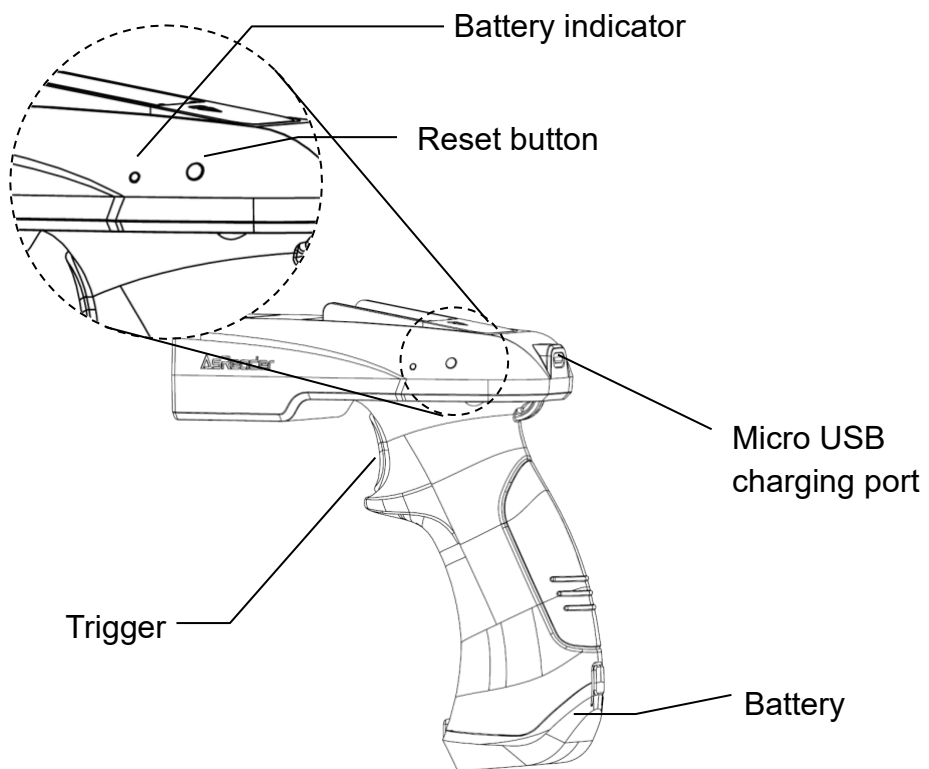
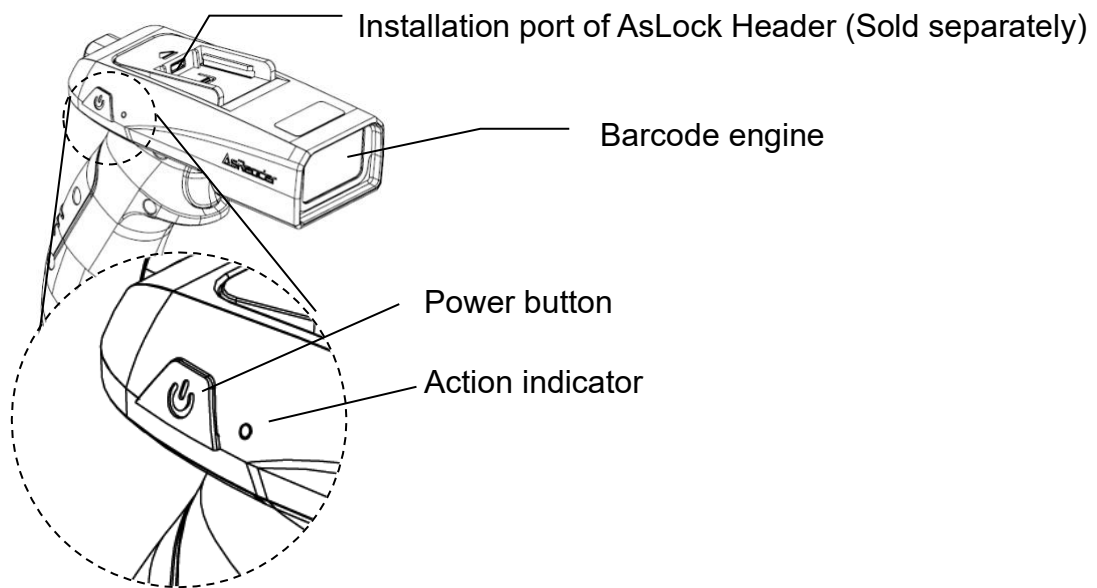
To use this device, you need to install related applications on mobile devices.

You can download SDK from our official website for mobile devices' application development (please refer to the SDK development manual and sample code)

The official website link (SDK for iOS):

<https://asreader.com/downloads/asr-r202g/>

2 Name of Each Part of the AsReader



3 Functions and Operations

① Power Button

- Power on/ off
Press and hold the power button for more than 2 seconds, the device will be turned on, with a beep sound and vibration.
※ The Beep does not sound when set to Off.
※ The vibrator does not vibrate when set to Off.
While the power is ON, the action indicator will be flashing blue. You can turn off the power by pressing and holding the power button for more than 2 seconds.
- Wake up the device
Press the power button to wake up the product from sleep mode.
The device will go into sleep mode after 5 minutes of inactivity while the power is ON. The device will automatically power OFF after 5 minutes of inactivity under sleep mode. The time the device automatically goes to sleep and power OFF can be changed in the settings.
When this device is connected to the application and does not perform any operation, the mobile device may go to sleep before the AsReader. In this case, the mobile device will repeatedly connect and disconnect at certain intervals, and there will be some beeps for connection and disconnection.
In addition, this product will automatically restart if it detects a hardware problem. If multiple automatic restarts occur, the device may be faulty, please contact your distributor.

② LED Indicator

- The LED indicators on the sides of the device indicate the running status of the device.

[Action indicator]

Running status	LED status
Power on (mobile device disconnected)	Blue blinks
mobile device connected	Blue on
Scans to 1D/2D barcodes	Blue blinks

[Battery indicator]

Running status	LED status	
Connected with a USB charging cable (Regardless of power on/off)	Charging	Red on
	Fully charged	Green on
Not connected with a USB charging cable (Only when power is on)	Battery remaining OK	Light off
	Poor battery	Red blinks

③ Trigger

- Press the trigger to scan 1D, 2D codes. Of course, you can also scan by touching the button within the application on the screen of the mobile device.

④ Barcode engine

- When the trigger button is pressed, the scanning window will emit red light with a laser beam in its center, aim it at the 1D and 2D barcodes, and then scan them.
- Beeping occurs during barcode scanning and can be set in the application. The default is “on”.
- Vibration occurs during barcode scanning and can be set in the application. The default is “on”.
- You can set the barcode scanning module, referring to the barcode setting manual.
※ Settings will be saved in the AsReader until you reset it.

Barcode setting manual download link:

<https://asreader.com/downloads/asr-r202g/>

⑤ Reset button

- Press the reset button to force the product to shut down.

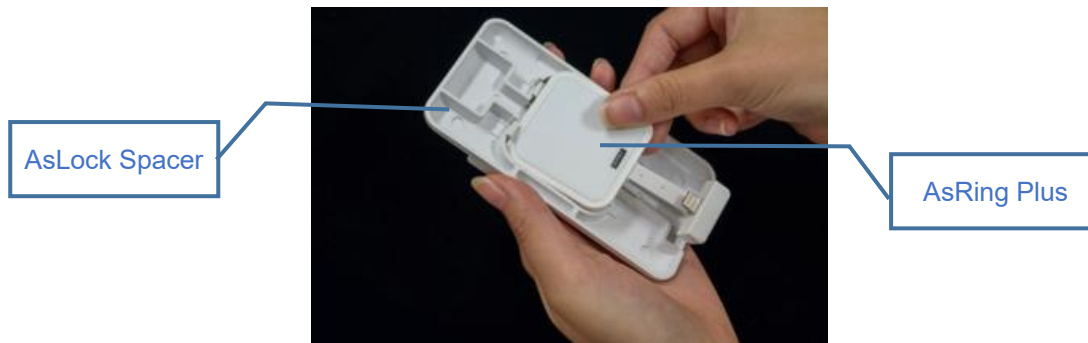
⑥ Micro USB charging port

- The device can be charged using the USB charging cable with the magnetic detachable connector (supplied with the product).
- Put the protective cover after plugging in the magnetic detachable connector to protect the magnet detachable connector.

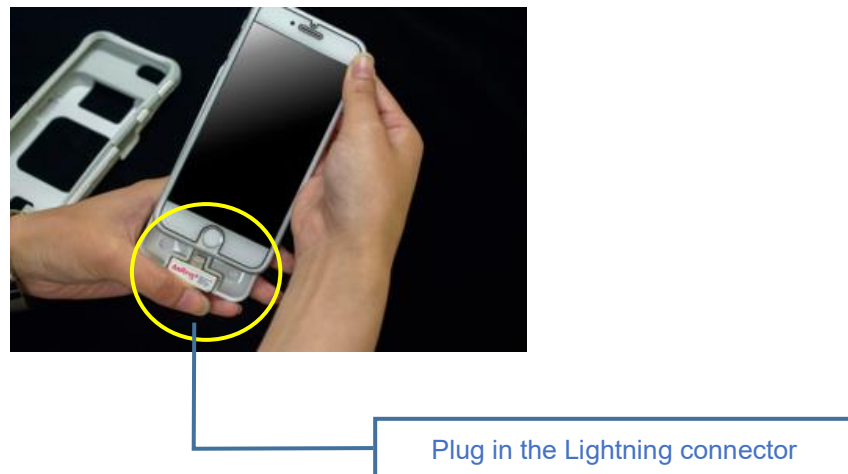
4 Before Use

In order to use the device, the components and mobile devices shown in section 1.1 must be assembled and then connected to the device. The assembly method is as follows:

- ① Attach the AsRing Plus to the AsLock Spacer. Insert it firmly so that it fits into the four claws of the AsLock Spacer.



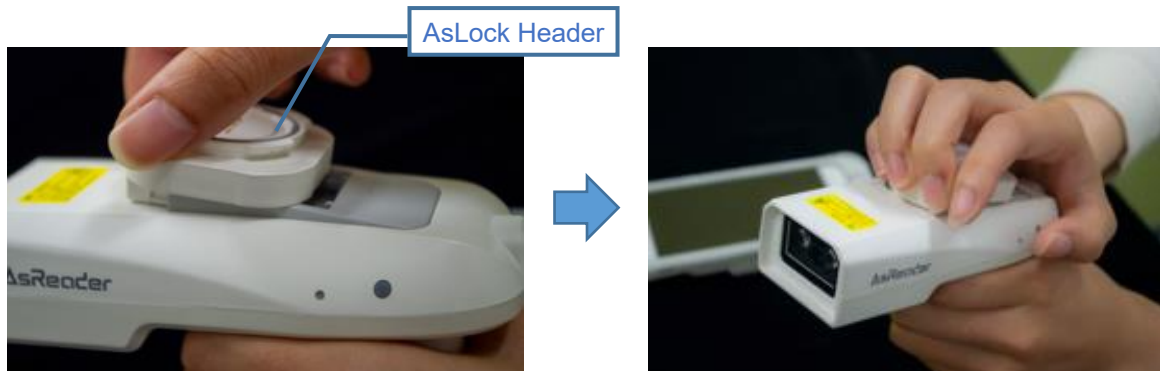
- ② Attach the iOS device into the set of ①.



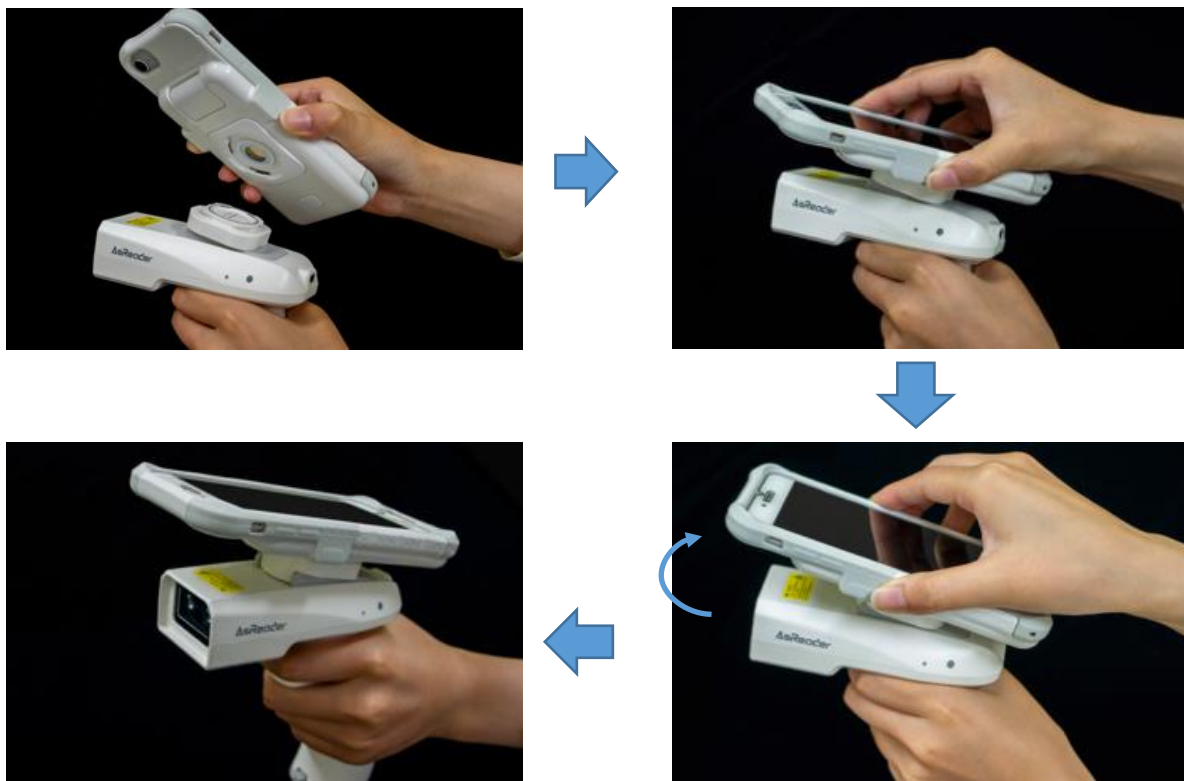
- ③ Attach the case to the set of ② ※



- ④ Attach the AsLock Header to this product. Make sure to insert it all the way in.



- ⑤ Combine ③ and ④. Align the AsLock Header on the AsReader with the groove on the AsLock Spacer on the set of iOS device, and rotate the set of iOS device clockwise until it fits.



※ For detailed assemble method, please refer to the video on the link below:

<https://youtu.be/xrjhrloR-og>

【How to Assemble AsReader GUN-Type(ASR-202G) + AsLock】

To use this product, you need to install a companion application on the mobile device. Please download the applications from AppStore.

<https://apps.apple.com/jp/app/longrange2d/id1480357497>

5 How to Scan

- ① When ready as described in Chapter 4 above, make sure the battery is fully charged.
- ② Next, start the application, boot the product and check the connection status between the application and the product.
- ③ Pull the trigger and point the red light at the 1D/2D barcode to scan (You can also scan by using the application instead of using the trigger).

※ The red laser is for aiming. If you aim at the middle point of the barcode, it will be easier to read.

6 Setting Items of the Demo APP

If you have installed our demo app "LongRange2D", you can use the demo app to perform the following operations for this device.

① Buzzer

Set the buzzer on/off and the volume.

When it is turned on, AsReader will beep at the set volume at the following cases:

- a) When AsReader is turned on or off.
- b) When the phone and AsReader connect successfully.
- c) When AsReader scans 1D and 2D barcodes.

It can be set from **Settings** → **Buzzer** in the demo APP. The default setting is "High" (The buzzer is on and high loud).

② Vibrator

Set the vibrator on/off.

When it is turned on, AsReader will vibrate at the following cases:

- a) When AsReader is turned on or off,
- b) When the phone and AsReader connect successfully,
- c) When AsReader scans 1D and 2D barcodes.

It can be set from **Settings** → **Vibrator** in the demo APP. The default setting is "On".

③ Barcode Options

You can set the readable barcode types. This can be set in the "Barcode Options" in the demo APP. By default, the barcode types which can be read are as follows: UPC-A, UPC-E, EAN/JAN-8, EAN/JAN-13, Code 128, Code39, Code93, Interleaved 2 of 5, Codabar, PDF 417, Data Matrix, MaxiCode, QR Code, Aztec Code, GS1-128, GS1 Databar (RSS-14)

④ Battery Interval Time

You can set the interval at which AsReader sends battery information to Demo APP.

It can be set from **Settings** → **Battery Interval** in the demo APP. Unit: second. Range: 0~30. Default as 10. If set to 0, the AsReader device battery will only be get every time you enter the app's home page.

⑤ Sleep Time

You can set the time you want AsReader to go to sleep.

It can be set from **Settings** → **Sleep Time** in the demo APP. Unit: second. Range: 0~1800. Default as 300. The device will never go to sleep if the sleep time is set to 0.

⑥ Auto Off Time

You can set the automatic shutdown time for AsReader. It is the period between when AsReader goes to sleep and when the power is turned off.

It can be set from **Settings** → **Auto Off Time** in the demo APP. Unit: second. Range: 0~300. Default as 300. The device will never shut down if the sleep time is set to 0.

⑦ Rescan Time

You can set the time interval between two consecutive scans.

It can be set from **Barcode Scan** → **Rescan Time** in the demo APP. Range: 100ms~3500ms. Default as "Not Used".

⑧ Timeout

You can set the scan timeout.

It can be set from **Settings** → **Scanner Time Out** in the demo APP. Unit: second. Range: 4~30. Default as 30.

※ If you click Start Scan button in the application or pull the trigger of the device and the 1D / 2D barcode is not read within a certain period of time, the scan will automatically stop after the set time (timeout).

Note: To save the settings, tap "Save" on each setting screen after setting. The save destination of each setting is as follows.

Save to AsReader	Save to APP
①, ②, ③, ⑤, ⑥, ⑧	④, ⑦

7 How to Charge It

The battery of this device is charged using the included USB charging cable and magnetic detachable connector.

- ① Attach the magnetic detachable connector to the micro USB charging port of this device.
- ② Connect the USB charging cable to charge it.

Magnetic detachable connector



USB charging cable



When using the device for the first time or if it has been left unused for a long period of time, please fully charge the battery of this device before use.

The battery indicator is red and remains on while the product is being charged. When the device is 100% charged, the battery indicator turns off. (The battery indicator on the AsReader does not show the charging status of the mobile device. Please check the display on the mobile device for its charging status.)

When charging this device, please use the 5V/2A charging adapter.

It takes about 5.5 hours to fully charge the product once the battery runs out.

Caution

Do not charge the device with a power adapter other than 5V, since this may cause a malfunction and is not covered by the warranty.

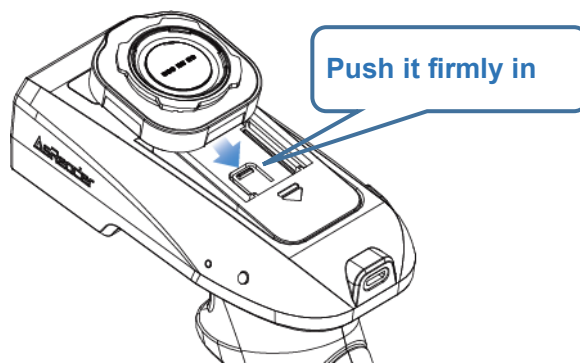
8 Troubleshooting

Please check the following before contacting your distributor:

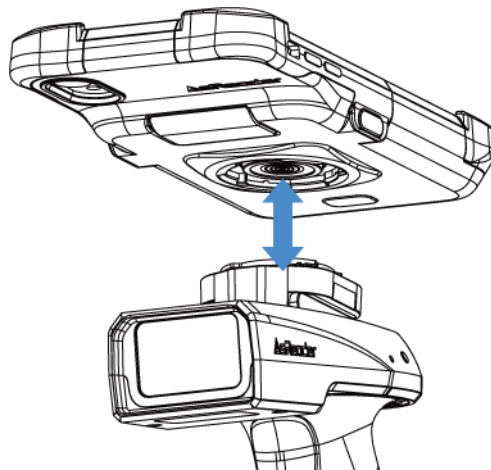
- ◆ Cannot connect to mobile devices

The mobile device may not recognize the device due to problems with the connection or an app. Please check the following:

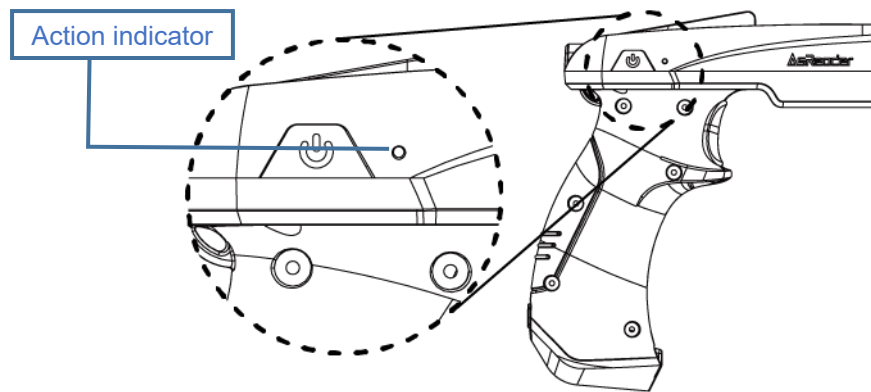
- Please check that the AsLock Header is correctly attached. (Firmly push it in to its slot.)



- Try removing/reattaching the mobile device to confirm that the devices are properly connected.

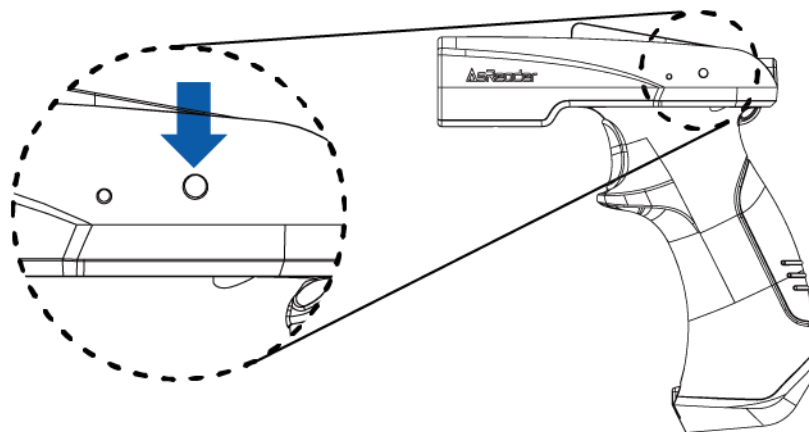


- If the action indicator is lit blue, this indicates a successful connection between the AsReader and mobile device. In this case, there is a high possibility that the problem is on the application side. Please restart the application. If you still cannot solve the problem, contact the application development company.



◆ **Cannot operate**

If this product becomes inoperable, press the reset button to reset it.



◆ **Cannot scan**

If the device does not scan, please try the following:

- Please confirm the device's battery is sufficiently charged.
- If the application is not responding, please try restarting the application.
- Please confirm that the settings for barcode scanning are correct. Please refer to the Barcode Setting Manual at the following link.

<https://asreader.com/downloads/asr-r202g/>

Appendix-Specifications

Items		Specifications	
Product name		AsReader GUN-Type Long Range BCR	
Model		ASR-R202G	
Barcode	Scanning method	Autofocus 2D imager 1280 x 800 pixels	
	Reading distance	Barcode resolution	Distance to the front of the device
		Code39 - 10mil/0.25mm	15 ~ 135cm
		Code39 - 20mil/0.5mm	16 ~ 280cm
		Code39 - 40mil/1mm	25 ~ 550cm
		Code39 - 55mil/1.4mm	40 ~ 720cm
Code39 - 100mil/2.5mm		※1 ~ 1200cm	
※2 Code128 - 100mil/2.5mm		※1 ~ 1300cm	
EAN 100% - 13mil/0.33mm		15 ~ 160cm	
Data Matrix - 10mil/0.25mm		15 ~ 90cm	
Data Matrix - 30mil/0.76mm		25 ~ 310cm	
Data Matrix - 55mil/1.4mm		※1 ~ 450cm	
Data Matrix - 100mil/2.5mm	※1 ~ 1100cm		
Data Matrix - 300mil/7.62mm	20 ~ 1524cm		
Reading width	14° (horizontal), 8.7° (vertical)		
Readable code	1D: UPC-A, UPC-E, EAN/JAN-8, EAN/JAN-13, Code 128, Code39, Code 93, Code 11, Interleaved 2 of 5, Codabar, MSI Code, Matrix 2 of 5, GS1-128, Telepen, Japan Post GS1 Databar (RSS-14), Dutch Post, Canada Post, PostNet, Australian Post, Plessey Code, BPO Code, Standard 2 of 5, Sweden Post, Planet, GS1-DataBar Limited, GS1 DataBar Expanded, TCIF Linked Code 39. 2D: PDF417, Micro PDF417, Data Martrix, MaxiCode, QR Code, Aztec Code, Codablock A, Codablock F, GS1 Composite Codes.		
Light sources	Red LED (Illumination), Class 2 (650nm) laser (aiming)		
Battery	Battery capacity	Built-in rechargeable lithium-ion battery 3350mAh	
	Scan times	20,000 ※3	
Charging	Charging method	USB charging cable & magnetic detachable connector ※4	
	Micro USB input	5V/2A	
	Charging time	About 5.5 hours ※5	
Key input		Trigger button, Power button, Reset button	
LED	Battery indicator	Red (in charging) Green (Fully charged) ※6	

	Action indicator	Blue blinks (Wait for connection) Blue lights on (Be connected) Blue blinks (Scanning) Repeat of 4 times of red blinks and 6 seconds of red off (Battery level ≤ 20%) Red continuously blinks (Battery level ≤ 5%)
Communication	Interface	AsRing Plus (USB) ※7
Appearance	Dimensions(D)x(W)x(H)	130 × 59 × 145 mm ※8
	Weight (with Battery)	340g
	Material	PC/ABS
	Case color	White
Environment	Operation environment	Temperature: -10~45°C Humidity: 20~85%RH
	Charging environment	Temperature: 0~35°C Humidity: 20~85%RH
	Storage environment	Temperature: -20~60°C Humidity: 10~95%RH
	IP rate	IP 52
	Anti-drop	1.5m (Six-sided, 4 edges, 3 times each)
Certificates		FCC、CE、RoHS2.0
Accessories		USB charging cable, Magnetic detachable connector, and Protective cover

※1 It depends on the size of the symbol to be read and the reading width.

※2 When the barcode is printed on a retroreflective label.

※3 Scan twice every 10 seconds (Buzzer on, vibration on).

※4 Use a 5V/2A output charging adapter for charging.

※5 When a mobile device connected, the built-in battery and the mobile device battery are charged at the same time.

※6 While connecting to power

※7 Dedicated SDK is provided

※8 Excluding protrusions

**AsReader Gun-Type Long Range BCR
ASR-R202G**

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2021/7/5 Version 1.10 release

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