



ASR-M24D

AsReader DOCK-Type Barcode Reader for  
iOS/Android

# User's Manual

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## Preface

Thank you for purchasing the AsReader ASR-M24D.

This manual describes precautions for handling the ASR-M24D correctly. Please read the manual carefully before use.

※ In this manual, the ASR-M24D may be referred to as "the device", "this product", or "the AsReader".

## Contact

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

**AsReader, Inc. (USA)** <https://asreader.com>

**Asterisk Inc. (Japan)** <https://asreader.jp>

<https://asreader.com/contact/>

★ 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.

★ **Warning:** Please read this manual before use. Incorrect use of this device could result in property damage, serious personal injury, or even death. 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 earthquakes, 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, crushing, or impacting our device, as determined by our company, a fee will 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, devices, data processing systems, or software outside our company.

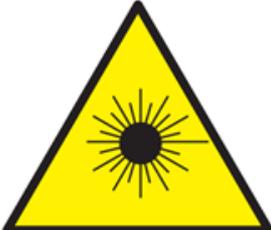
(2) If our products are used in unexpected ways.

(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**

In order to avoid personal injury, device failure, fire or the like circumstances, please make sure to read the following information about warnings and cautions below.

 <b>Warning</b>
Do not attempt to disassemble, modify or repair the device yourself as it may cause malfunction, fire, or electric shock. We are not responsible for any malfunction 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 or 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. Doing so may result in electric shock, short circuits, fire, or burns.
Do not use if the magnetic charging port 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 throw the product into fire or heat. It may burst or cause a fire.
Do not look into the light emitted from the AsReader or point it at other people's eyes. Looking directly into the light may cause eye injury.
This is a Class 2 Laser product. Do not look into the laser light or point it at anyone else. Looking directly into the laser may cause injury to the eyes. If the injury seems to have occurred from the laser light, please see a doctor immediately.
 

 **Caution**

For charging, please use a dedicated magnetic gender adapter and cable. Using other cables or charging adapters may result in failure to charge.

Please refer to local regulations when you recycle this device.

Please contact your supplier immediately if any defects occur.

Continuous use of this product in water or rain may cause damage to the attached mobile device. If it gets wet, please wipe it off immediately with a clean, dry cloth.

The magnetic charging port of the product has 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 keep the device clean. If the device gets dirty, wipe it with a soft, dry cloth.  
Using strong solvents or cleaners may cause deterioration or color changes.

## 1. Assembly of Products and Accessories

### 1.1 Assembly of Products and Accessories

The AsReader ASR-M24D is a 1D and 2D barcode reader used together with an iOS or Android device. It supports both USB HID mode and USB CDC mode.

In order to use an AsReader, you need an AsReader, an iOS/Android device, and a dedicated joint connector. No special operation is required when switching between iOS and Android — the AsReader automatically detects the device type.

To use the device in USB CDC mode, a corresponding application will also need to be installed. USB HID mode does not require any corresponding applications. For more details, please see Chapter 4.

※ iOS devices are limited to iPhone 15 or later models equipped with a USB-C connector.

● AsReader



● iOS/Android device



● Joint connector cable



Note:

1. Since the connector type varies depending on the iOS/Android device model, please confirm with your distributor whether a suitable joint connector is available for your device.
2. For instructions on charging, please see Chapter 6.

## 1.2 Inside the Box

A default box of AsReader ASR-M24D contains only the AsReader. Please purchase optional parts separately, such as a magnetic gender adapter for charging, a USB-C cable, and a joint connector (see Chapter 6 for details). Please make sure that everything is ready before use. In case any items are missing or broken, please contact the distributor from whom you purchased the device immediately.

- Included by default

- AsReader



- Optional parts

- Magnetic gender adapter for charging



- Joint connector cable



- USB-C cable



### 1.3 Application Development

In order to use AsReader in the USB CDC mode, you will need to install a corresponding application.

You can download our free SDK from our official website to develop applications. (Please refer to the SDK Development Manual and sample code.)

Compatible OS: iOS/Android

Official website:

<https://asreader.com/products/asr-m24d/>

## 2. Name of Each Part of the AsReader



## 3. Functions and Operations

### ① Barcode engine

•When the trigger button(s) are pressed, the scanning window emits white light with an aiming laser, reading 1D and 2D barcodes.

•The barcode reading settings can be changed using the Barcode Parameters Manual. The factory default settings can also be confirmed in this manual.

※Please make sure that your AsReader is charged more than 10% when changing settings. The memory inside the AsReader may be broken if settings are changed when its battery is charged less than 10%, making the AsReader unusable.

※In USB HID mode, settings are kept in the AsReader until they are changed again. In USB CDC mode, users can either keep settings in the application temporarily or keep settings in the AsReader until the next setting change.

※For the Barcode Parameters Manual and our Demo App, please visit

<https://asreader.com/products/asr-m24d/>

For the Demo App operation manual, please download the following from the above URL:

iOS: AsReaderScan App Operation Manual

## Android: AsReader ASR-M24D Demo App Operation Manual

- The scan timeout is 5 seconds. If no barcode is detected within 5 seconds, the illumination and aiming laser will turn off.

## ② Trigger button

- When the AsReader is powered on, press the trigger button to scan barcodes. In USB CDC mode, scanning can also be triggered from the application, and scanned data will be displayed in the app.
- Either the right, left, or both trigger buttons can be used for scanning. In USB CDC mode, the trigger button press event can be detected via the SDK, enabling users to assign other functions. Please note that while one trigger button is pressed, the other is not available.
- Pressing both trigger buttons simultaneously for more than 2 seconds causes the Battery LED to light up for 3 seconds, showing the battery status.
- Pressing both trigger buttons at the same time can wake up an AsReader that is in sleep mode.

## ③ Magnetic charging port

- The magnetic charging port can be used in combination with a magnetic gender adapter and a USB-C cable. Please see Chapter 6 for details on charging.

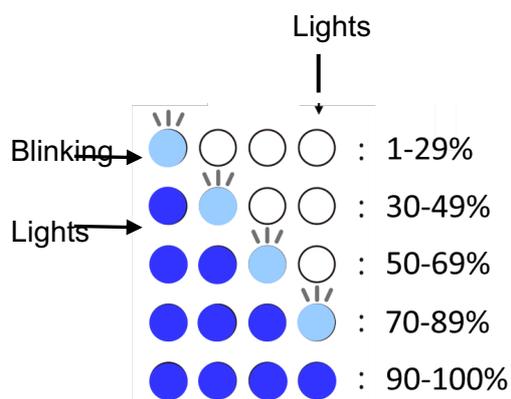
## ④ Battery LED

- The LEDs on the back of the AsReader light up, indicating the battery's status.

Running status	LED status
Both trigger buttons pressed for more than 2 seconds	A corresponding number of LEDs light up for 3 seconds
Charging	The leftmost LED lamp lights up red, and blue LEDs flash/light up according to battery level.
Fully Charged	All LEDs turn off

※When the battery level is 1~29%, the blue LED flashes constantly even if the trigger button is not pressed.

※The battery level is displayed as illustrated below:



- In USB CDC mode, LEDs light up only when LEDs are set “on” in the application.
- In USB HID mode, LEDs light up only when LEDs are set “on” with Barcode Parameters Manual.

※Please visit <https://asreader.jp/products/asr-m24d/> for the Barcode Parameters Manual “ASR-M24D\_Barcode\_Parameters\_for\_HID\_Mode.”

⑤ Reset button

- The AsReader restarts when its reset button is pressed.

⑥ USB-C communication port

- Connects to an iOS/Android device via a dedicated joint connector. Please note that the connection is temporarily disconnected when the charging cable is plugged or unplugged, but can be restored by reconnecting.

⑦ USB-C charging port

- Charge the AsReader using a USB-C cable. This port supports fast charging of iOS/Android devices. For details on charging, please see Chapter 6.

※Charging via this port is prioritized when both the magnetic charging port and this port are used simultaneously.

#### 4. Preparation before Use

Connect your AsReader to the iOS/Android device using a dedicated joint connector. If you have a case for your AsReader, please attach the device to the case.

※Cases are sold separately. The available cases vary depending on the device model. Please contact your distributor for information on compatible cases.

Example: For Digno SX2 device:



- USB CDC mode

This mode uses an application and SDK. After assembling as shown in the diagram, switching on the iOS/Android device will automatically start the AsReader.

Please install a corresponding application for your iOS/Android device before use. Our Demo App is also available.

Please open the application and connect your device to the AsReader.

- USB HID mode

In this mode, the AsReader sends the information it reads to the iOS/Android device as key inputs. This enables the device to receive barcode data as if it had been entered using a keyboard.

Using USB HID mode allows you to use your AsReader without installing any corresponding applications. After assembling as shown in the diagram, switching on the Android device will automatically start the AsReader.

- How to switch between USB CDC mode and USB HID mode

You can switch between USB CDC mode and USB HID mode from our Demo App. It can also be switched via the SDK. For details, please refer to section 4.1 "Reader Settings Screen" in the Demo App Operation Manual at the URL below.

URL: [https://asreader.com/download/asr-m24d/docs/ASR-A24D\\_M24D\\_DemoApp\\_User\\_Manual\\_EN\\_2\\_0.pdf](https://asreader.com/download/asr-m24d/docs/ASR-A24D_M24D_DemoApp_User_Manual_EN_2_0.pdf)

## 5. How to Scan

- USB HID mode

- ① After getting ready as described in Chapter 4, make sure the battery is sufficiently charged.
- ② Start “NotePad” or some other app with text tools and move the cursor to the location where you want the data to appear. Point the AsReader at a 1D/2D barcode and press the right, left, or both trigger buttons to scan. The scanned data will be displayed at the cursor location.

※If you are using our application, scanning can also be performed from within the application.

- USB CDC mode

- ① After getting ready as described in Chapter 4, make sure the battery is sufficiently charged.
- ② Start the application and check the connection status between the AsReader and the application. Depending on your iOS/Android device, a permission message may appear before the application starts. In that case, please select to connect. After the connection, press one or both trigger buttons and point the AsReader at 1D/2D barcodes to scan. You can also scan using the application.
- ③ The scanned data will be displayed in the application.

※Notes on Presentation Mode:

- Battery consumption is higher than during normal scanning. Please use the device while charging.
- Please use at an ambient temperature of 40°C or below and at a scan rate of no more than once every 5 seconds. Exceeding these conditions may cause the device to stop operating or the laser/illumination to turn off.

## 6. How to Charge

### ① Charging using the magnetic charging port:

Connect the USB-C cable and the magnetic gender adapter, then attach it to the AsReader's magnetic charging port to charge. ※ The maximum output is 5V2A when using the magnetic charging port.



### ② Charging using the USB-C charging port:

Plug the USB-C cable into the USB-C charging port.

※When using this port, the maximum output from the AsReader is USB 5V/3A, PD 5~9V/3A (max. 20W). This method supports fast charging of iOS/Android devices.

Note: Fast charging may not be supported for some models of Android devices.



### ③ Recommended adapter:

Please use an adapter of 15W or higher (20W recommended) when charging an AsReader.

We recommend using our recommended adapter to ensure reliable charging.

EC-AC11/MPA-ACCP28



Using other adapters may result in failure to fast charge. Additionally, using an adapter with an output of 1.5A or lower may result in failure to charge from the USB-C charging port.

When connected to an iOS/Android device, the AsReader and the iOS/Android device are charged simultaneously.

While the battery of an AsReader is being charged, the leftmost LED of the battery indicator lights up red. This LED turns off when charging is complete.

If the battery of an AsReader is empty, it takes approximately 3.5 hours to charge it completely.

※When using the AsReader for the first time or if it has been left idle for a long period of time, please charge the AsReader sufficiently before use.

④ Operation during charging:

It is possible to use the AsReader while simultaneously charging it together with the iOS/Android device. However, please note that the connection between the AsReader and the iOS/Android device is temporarily disconnected at the start and end of charging. The connection will then be automatically re-established.

## 7. Troubleshooting

If you think that there is a malfunction in the AsReader, please check the following before contacting your distributor.

- **When the AsReader cannot connect to iOS/Android devices (USB HID mode / USB CDC mode)**

- ① Please confirm that the AsReader and the iOS/Android device are properly connected with a dedicated joint connector.
- ② Please check whether the battery of the AsReader and the iOS/Android device are sufficiently charged.
- ③ Please restart the iOS/Android device.
- ④ Please replace the joint connector.

In USB CDC mode, please also check the following:

- ⑤ Please confirm that a compatible application has been installed.
- ⑥ Please confirm that you have permitted the USB connection.
- ⑦ Please restart the application.

- **When the AsReader and Android device cannot be charged simultaneously (USB HID mode / USB CDC mode)**

- ① Depending on the model of your Android device, simultaneous charging may not be supported.
- ② Please confirm that you are using a charging adapter with appropriate output power (please see Chapter 6 for details).
- ③ Please confirm that the dedicated joint connector is properly connected to both the iOS/Android device and the AsReader.
- ④ Please replace the joint connector with a new one.

- **When the trigger button is pressed but no red light is emitted (USB HID mode / USB CDC mode)**

- ① Please confirm that the physical connection is correct.
- ② Please confirm that the "Aimer" is turned on in the settings.
- ③ Please confirm that the AsReader is charged sufficiently.
- ④ Please restart the application or try using our AsReader M24D Demo App. (USB

CDC mode)

- **When the trigger button is pressed, a red light is emitted but no barcode data is displayed**

- ① Please restart the application or try using our AsReader M24D Demo App. (USB CDC mode)
- ② Please try other software, as it may be a problem with the text tool. (USB HID mode)

- When the read barcode data is not displayed correctly (USB HID mode)

- ① Please change the "Inter-Character Delay" setting and retry.

The settings can be changed using the "ASR-M24D\_Barcode\_Parameters\_for\_HID\_Mode" barcode parameters manual.

※In general, in USB HID mode, depending on the iOS/Android device model, the application used, and the iOS/Android OS, the read data may not be displayed correctly due to data transmission delay.

## Appendix Specifications

Product name		DOCK-Type Barcode Reader for iOS/Android
Model		ASR-M24D
Barcode	Reading method	CMOS Sensor
	Number of scans	16,000 scans (When reading once every 5 seconds)
Power supply	Battery	Rechargeable lithium-ion battery, 1050 mAh
	Charging method	Magnetic gender adapter *1 USB Type-C (supporting USB PD for fast charging of iOS/Android devices) *1
	Charging time	Approx. 3.5 hours (AsReader only)
Key input		2 trigger keys, Reset button
Port		USB-C charging port
Communication	Interface	USB-C communication port *2
Environment	Operating temperature	-10~45 °C, 20~85% RH (Charge at 0°C~40°C)
	Storage temperature	-20°C~60°C, 45~85% RH (For 1 month)
		-20°C~45°C, 45~85% RH (For 3 months)
		0°C~30°C, 45~85% (For 1 year)
Drop-tested	1.5 m (Six-sides and 4-corners, once each, AsReader only)	
IP Rating	IP65 compliant	
Appearance	Dimensions (W)x(D)x(H)	65.1 x 11.6 x 120.3mm ※3
	Weight (incl. battery)	85g
	Material	PC (Polycarbonate)
	Color	Black
	LED display	Battery level display (Blue LEDs light up when trigger buttons are pressed, indicating battery level. Flashing blue LED indicates an extremely low battery.) Charging status (Charging: Red LED on, Fully charged: All LEDs off)

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Certificate	FCC / FDA / CE / UKCA / RoHS
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\*1 We recommend using an adapter of 15W or higher (20W recommended) when charging an AsReader using a magnetic charging port.

\*2 We offer an SDK for USB communications.

\*3 Excluding protrusions.

**ASR-M24D**  
**DOCK-Type Barcode Reader for iOS/Android**

**User's Manual**

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**Asterisk Inc.**

AsTech Osaka Building 6F, 2-2-1 Kikawanishi, Yodogawa-ku, Osaka, 532-0013 JAPAN