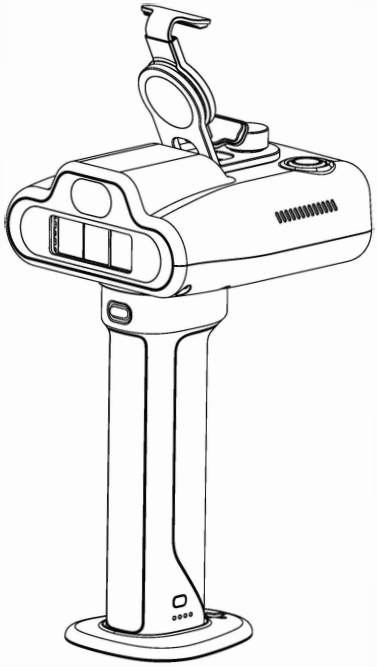
FJDTrion

DelGeo

ПОСТАВКА ГЕОДЕЗИЧЕСКОГО ОБОРУДОВАНИЯ



FJD Trion C1

User Manual

2026-9 | Rev. 1.0

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Revision history

Version	Date	Description
1.0	2026.09	Initial release

Read before use



Follow this manual and all accompanying instructions when operating the product. Improper use may damage the device or reduce its performance. If you experience any problems during use, contact FJD Trion technical support.

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Preface

Thank you for choosing the FJD Trion C1 Scanner (hereinafter referred to as the C1). Read this manual carefully before use and follow all instructions to understand and operate the scanner correctly.

Technical support

FJD Trion provides ongoing technical support and product upgrade services from the date of purchase.
Official website: https://www.fjdtrion.com/

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1. Safety precautions

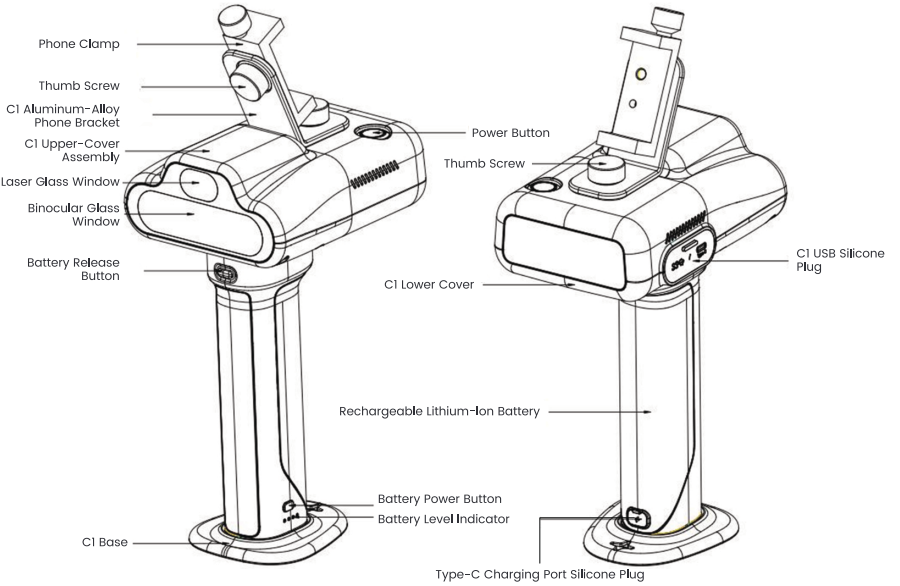
1. The laser safety classification of this product complies with the following standards:

- GB/T 7247.1-2024
- IEC 60825-1:2014
- 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

2. Although the laser rangefinder is designed to meet Class 2 safety requirements, never view the emitted laser beam through magnifying equipment, such as a microscope, head-mounted magnifier, or other optical aid.
3. To minimize the risk of eye exposure, do not look directly into the laser emission window while the device is operating.
4. Do not block or interfere with the laser emission aperture while the laser is operating.
5. Keep all cables securely connected during operation. Avoid frequent connection and disconnection.
6. Operate the product within the recommended ambient temperature range of 0°C to 40°C. Operation outside this range may affect laser ranging accuracy, battery performance, and product safety. minimize operation at extreme temperatures to reduce unforeseen risks.
7. The device contains sensitive electrical and mechanical components. Do not bend or pull the cables forcibly, and do not insert unrelated objects into any port.
8. Do not immerse the battery in water. Store it in a cool, dry place when not in use.
9. Do not use or store the battery near high-temperature heat sources, such as open flames or heaters.
10. Use only the supplied charger. Do not use a third-party charger.
11. Do not reverse the positive and negative battery terminals.
12. Do not connect the positive and negative battery terminals with metal objects, as this may cause a short circuit.
13. Recharge the battery at least once every three months to prevent over-discharge.
14. Do not disassemble the handle housing, solder directly onto the battery, or puncture the battery with sharp objects.
15. Charge the battery only at ambient temperatures from 0°C to 45°C. The permitted discharge temperature range is -20°C to 50°C when the battery is installed in the complete device.
16. Do not remove the battery while the device is operating.
17. Do not supply power directly through the data port.

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2. Product overview



Note: Product illustrations are for reference only. The appearance and details of the actual product may vary.

General specifications			
Product name	Handheld LiDAR Scanner	Model	C1
Weight	2.1 lb (0.95 kg)	Dimensions (excluding battery)	12.2 × 5.5 × 4.5 in (310 × 140 × 115 mm)
Operating temperature	32°F to 104°F (0°C to 40°C)	Storage temperature	-13°F to 140°F (-25°C to 60°C)
Storage	32 GB	Connectivity	BLE (network configuration)
Wi-Fi	2.4 GHz (data transfer)		
Depth camera specifications			
Accuracy	0.4 in (1 cm)	Wavelength	940 nm (infrared)
Field of view	140°×56°	Depth cameras	1

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Point cloud processing	Real-time	Sampling rate	Approx. 230,400 points/s
Scanning range	0.33–19.7 ft (0.1–6 m; 10%–90% reflectivity)		
Laser rangefinder specifications			
Accuracy	±0.12 in (±3 mm; reflectivity: 0.2-1.0; ambient light: 92.9 fc [1 klx])	Range	1.18 in to 196.9 ft (0.03-60 m; reflectivity: 1.0; ambient light: 278.7 fc (3 klx)
Wavelength	510-550 nm (visible green light)	Distance resolution	0.04 in (1 mm)
Power specifications			
Battery	Rechargeable lithium battery, 14.4 V/2.9 Ah	Charging port	USB-C
Operating time	5 h (while scanning)	Power input	14.4 V/3 A
Charging time	2 h		

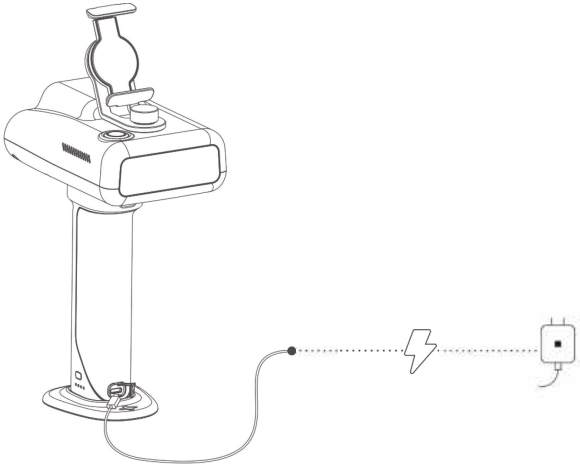
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3. Getting started

3.1 Assembly and connections

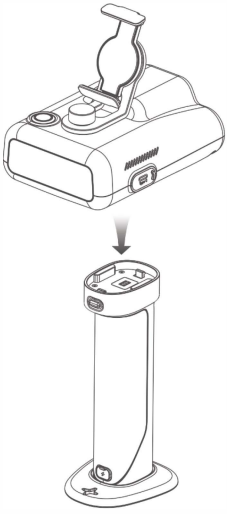
Step 1：Charge the Battery

- Make sure the C1 main unit, battery, charger and required accessories are available.
- Charge the battery before first use.
- Use only approved charging accessories.



Step 2：Install the Battery

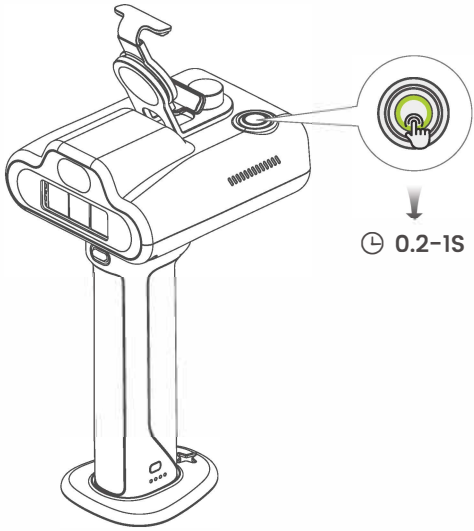
- Align the battery with the main unit.
- Install the battery securely before powering on.
- Do not force the battery into the device.



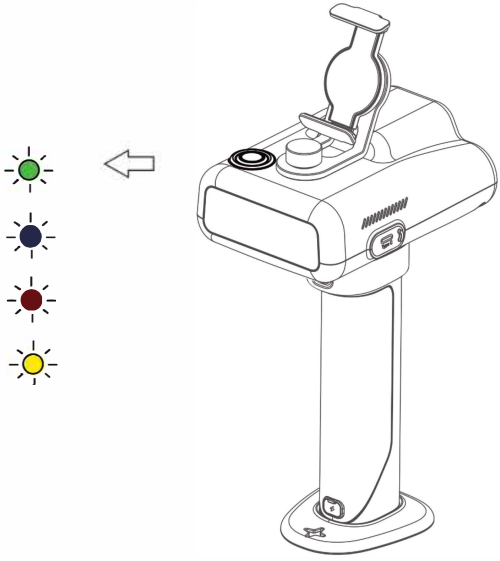
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Step 3：Power On

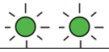
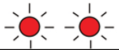
- Press and hold the power button for 0.2–1 second.
- Wait until the status indicator turns on.
- If the device does not start, check the battery level and installation.



3.2 Status indicators



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Indicator	Light pattern	Device status
	Green, slow flashing	Starting up
	Green, double flashing	Shutting down
	Green, solid	Device in STA mode
	Blue, solid	Device in AP mode
	Red, slow flashing	Continuous laser ranging active
	Yellow, fast flashing	Device fault
	Red, double flashing	High-temperature warning
	Blue, flashing	Scan initialization, data saving, or Wi-Fi mode switching (STA/AP)

3.3 Button functions

Function	Button action	Press duration (s)	Indicator sequence
Power on	Press and hold once	0.2 < t < 1	Green, slow flashing → Green, solid
STA → AP	Press once, then press and hold.	Short press: 0.2 < t < 0.5 s press and hold: t > 1 s	Green, solid → Blue, flashing → Blue, solid
AP → STA	Press once, then press and hold.		Blue, solid → Green, solid
Start ranging	Press once	0.5 < t < 1	Green (blue), solid → Red, slow flashing
Stop ranging	Press once	0.5 < t < 1	Red, slow flashing → Blue, flashing → Green (blue), solid
Power off	Press and hold once	3 < t < 5	Green (blue), solid → Green, double flashing → Off
Force shutdown	Press and hold once	t > 8	Any state → Off

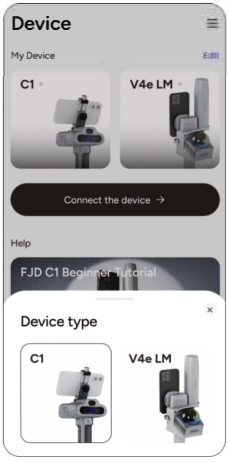
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3.4 Charging the battery

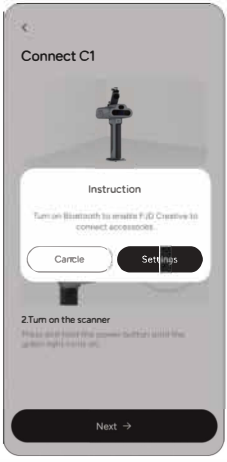
- To charge the device, connect the supplied charger to the USB-C port on the main unit or battery handle.
- The battery level and charging status shown in the app are estimated from battery voltage and are for reference only.

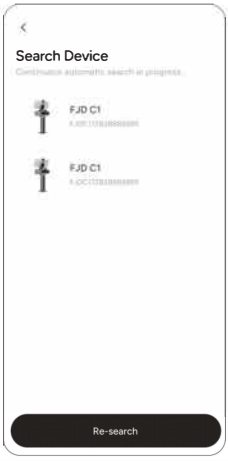
3.5 Powering on and connecting the device

1. STA mode: Follow the connection instructions on the app home screen. Connection guide is available in the upper-right corner of the Bluetooth network configuration screen.
- Power on: Press the power button for 0.2-1 second. The status indicator becomes solid after approximately 10 seconds.
- Connect the device to the Creative app:









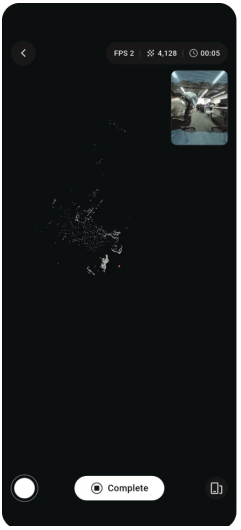


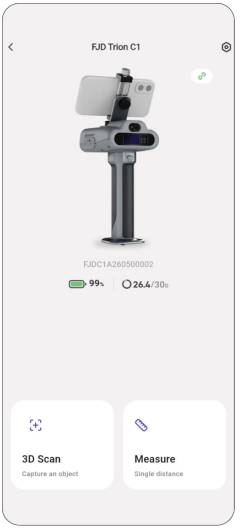
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2. AP mode: Switch the Wi-Fi mode → Disable mobile data on the phone → Add the C1 → Select the device with the matching serial number → Connect to the device Wi-Fi → Open the phone's Wi-Fi settings → Enter the password → Return to the app. The operating screen opens automatically.

3.6 Data capture and download

Use the app to capture and download data: On the home screen, enable device power → Tap 3D Scan → Tap Start → Capture data on the real-time scanning screen → When scanning is complete, tap Finish to open Preview/Edit → Tap More in the upper-right corner to share, download, or upload the data.





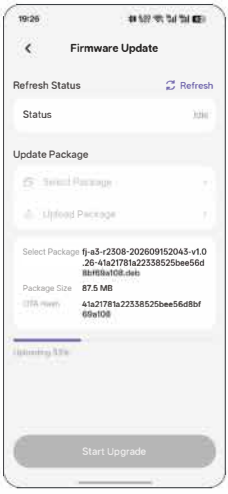


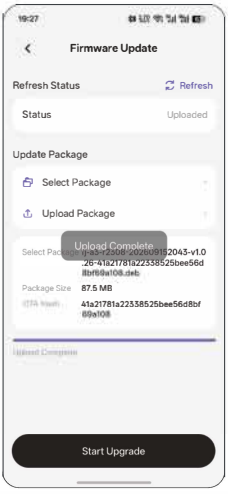
- Time information: The device does not include a real-time clock (RTC). When it operates independently of the app, locally recorded timestamps may be inaccurate. After the data is synchronized with the app, the app system time or cloud time is used.

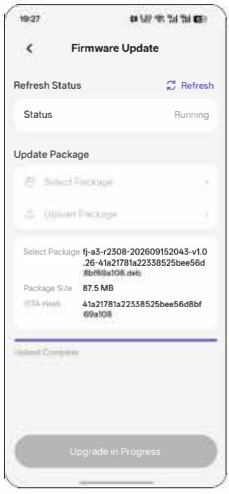
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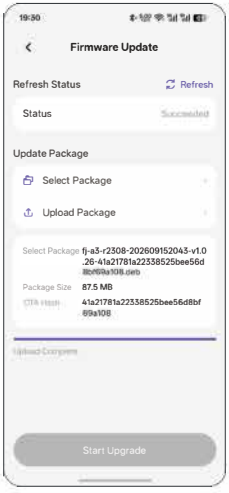
3.7 Firmware update

After connecting the device to the internet, open Settings and select Firmware Update. If a new version is available, the app displays a notification. Select Upload Package to upload the update file. When the upload is complete, confirm the version number, file size, and date, then select Start Update. Ensure that the battery is sufficiently charged before updating. If external power is required, use a PD charger with an output voltage of 18-22 V. Do not power off the device during the update. When the update is complete, the status in the upper-right corner changes from In Progress to Not Started. The device is then ready for use.









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3.8 Shutting down the device

While the device is powered on, press and hold the power button for 3-5 seconds. The solid green or blue indicator changes to double-flashing green and then turns off, indicating that shutdown is complete.

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