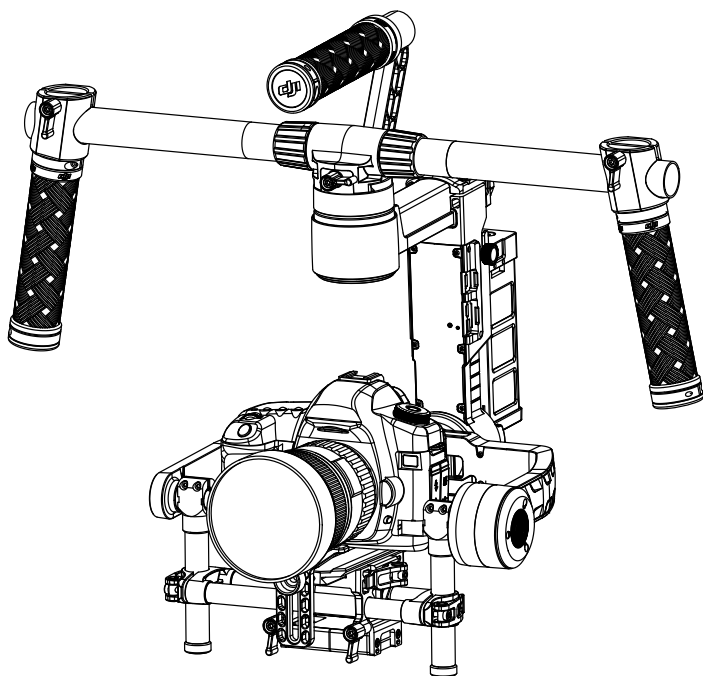# Ronin-M User Manual

dji

Disclaimers and Warnings

Congratulations on purchasing your new DJI product. Please read this manual and disclaimer carefully before using this product. By using this product, you hereby agree to this disclaimer and signify that you have read it fully. You agree that you are responsible for your own conduct and any content created while using this product, and for any consequence thereof. You agree to use this product only for purposes that are proper and in accordance with local regulations, terms and any applicable polices and guidelines.

By reading this disclaimer, you also agree:
1. Any part of this disclaimer is subject to change without prior notice, refer to www.dij.com for the latest version.
2. DJI reserves the right of final interpretation of this disclaimer.

Do not modify or adjust the Ronin-M.
The Ronin-M has been calibrated before it leaves the factory. No adjusting or amending to the Ronin-M is allowed. Make sure to use the original battery, otherwise performance may be hindered, and internal malfunctions and damage to the gimbal may be caused. Please download the corresponding Assistant software.

As DJI has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. DJI assumes no liability for damage(s) or injuries incurred directly or indirectly from the use of this product.

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Using Lithium Polymer (LiPo) Batteries

LiPo intelligent batteries can be extremely hazardous and require special attention when handled. Always follow the following instructions when using LiPo batteries:
1. DJI intelligent batteries must be charged with a DJI charger.
2. DJI Intelligent batteries are designed to stop charging when full. However, it is good practice to monitor the charging progress and disconnect the battery from the charger once fully charged.
3. Do not charge an intelligent battery near flammable materials or on flammable surfaces such as carpet or wood.
4. Never charge a swollen, leaky or damaged battery.
5. Examine charger regularly for damage to the cord, plug, enclosure or other parts. Never use a damaged charger.
6. Disconnect the charger when not in use.
7. Do not clean the charger with denatured alcohol or other flammable solvents.

Usage and Storage

1. Keep batteries out of the reach of children and pets.
2. Never discharge batteries below 3V per cell.
3. Do not heat the battery.
4. Do not insert or remove batteries if the plastic cover has been torn or compromised in any way.
5. Do not drop or strike batteries.
6. Never use a swollen, leaky or damaged battery.
7. Clean battery terminals with a clean, dry cloth.
8. Do not expose batteries to extreme temperatures, including excessive heat. Do not leave the batteries inside vehicles on hot days.
9. Do not allow batteries to come into contact with any kind of liquid. Do not leave batteries out in the rain or near a source of moisture.
10. Do not leave batteries in a microwave oven or in a pressurized container.
11. Do not attempt to dismantle, pierce or cut a battery. Do not attempt to repair batteries yourself.
12. Do not place loose battery cells on any conductive surface, such as metal-toppled tables.
13. Do not put the loose cells in a pocket, bag or drawer where they may short-circuit against other items or where battery terminals could be pressed against each other.
14. Do not place or use batteries on strong electrostatic or electromagnetic surfaces or surrounding areas. This may result in battery damage.
15. Do not place heavy objects on the batteries or charger. Avoid dropping batteries.
16. Avoid direct contact with the electrolyte contained within the batteries. The electrolyte and electrolysis vapors are harmful to your health.
17. Do not mix battery brands inside the controller.
18. Do not attach the battery to wall or car charger sockets directly. Always use a DJI approved adapter.

Battery Disposal

1. Discarding batteries in general household waste is bad for the environment. Please dispose of batteries properly.
2. Do not dispose of batteries in fire.
3. Damaged or unusable batteries must be disposed of in a container specially reserved for this purpose. When disposing of batteries, follow appropriate local guidelines and regulations. For further information, contact your local solid waste authority or a battery store.
4. Only use the DJI intelligent battery.
5. Always use the DJI intelligent battery charger.

FCC Compliance

Ronin-M complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device accepts any interference received, including interference that may cause undesired operation.

Using this manual

⚠ Important   ☀ Hints and Tips   📖 References or Definitions

Download DJI Ronin-M Assistant App

Download and install the DJI Ronin-M Assistant App.

Search "DJI Assistant" on the App Store and then follow the instructions for iOS installation.
Search "DJI Ronin" on the Google Play and then follow the instructions for Android installation.

iOS6.1 or above   Android4.3 or above   http://m.dji.net/dji-ronin
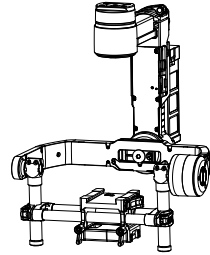
Contents

Introduction

Developed for the filmmaking professional, the DJI Ronin-M marks a generational leap in camera stabilization technology. The technology built into the DJI Ronin-M allows a broad spectrum of cameras varying in size and weight to be mounted for class leading stabilization. Based on the successful design of DJI Ronin Hand-held Gimbal, Ronin-M is lighter, smaller and more convenience to shooting.

A brushless gimbal stabilization system is not simply three brushless motors moving on three axes. The motors work with position feedback and the IMU (Inertial Measurement Unit) to communicate with our custom 32-bit processor, which processes movement calculations in milliseconds. This equates to control and angular vibration range down to 0.02 degrees of translated movement, meaning your images are going to be perfectly still in all three axes of movement. There are three operation modes in the Ronin-M: underslung mode, upright mode and briefcase mode.
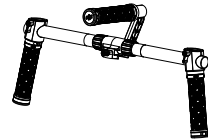
In the Box

Gimbal ×1

The gimbal includes built-in DJI motor drive modules, an independent IMU module, a 32-bit DSP processor, power supply module, Bluetooth, transmitter/receiver module, camera shelf, and power breakout box.

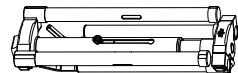## Handle Bar ×1

Customizable handle platform for the gimbal.

Remote Control- 2.4 GHz ×1

Controls the movements of the gimbal, switches the work modes, and selects gimbal speed.
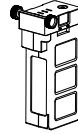
Tuning Stand ×1
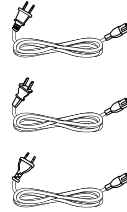
For suspending or storing the gimbal.

Charger ×1

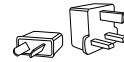110-240V automatic switching charger.

Intelligent Battery ×1

Power source for the gimbal. Also supplies power for other external devices.

Cables ×1

ANSI cable, JIS cable or CE cable (according to your region).

Plug Adaptors ×2

SAA & BS adaptors.

Micro-USB Cable×1

For firmware upgrades.

Camera Mounting Plate ×1

For mounting your camera onto the gimbal.

Accessories Package ×1

Camera Screw A (1/4")×2
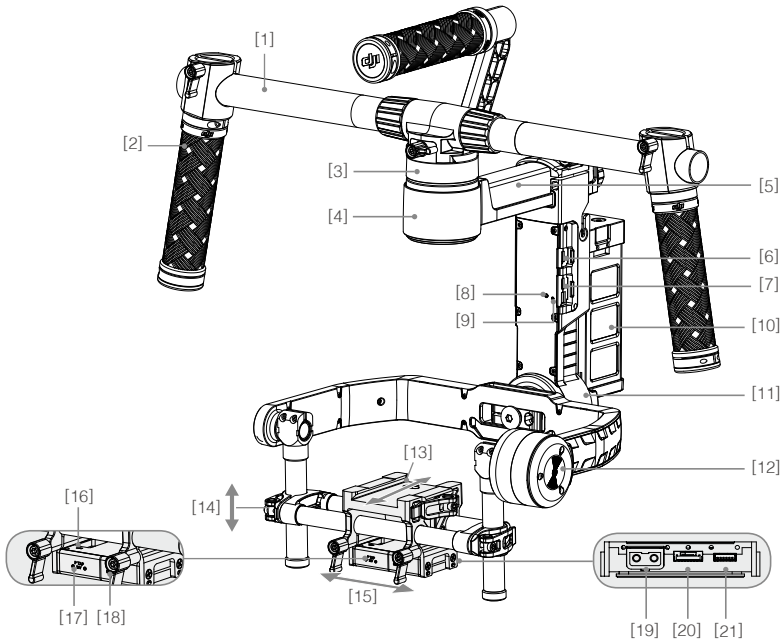
Camera Screw B (3/8") ×2

Lens Support Screw ×1

Lens Support ×1
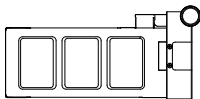
Allen Wrench x3 (3mm, 4mm, & 3/16")

Gimbal Description

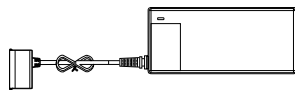|	
[1] Top Handle Bar	[12] Tilt Motor
[2] Side Handle	[13] Fore and Aft Adjustment
[3] Quick Release Mount	[14] Tilt Vertical Adjustment
[4] Pan Motor	[15] Roll Adjustment
[5] Pan Adjustment Slider	[16] IMU Port
[6] D-BUS/PPM Receiver Port	[17] P-TAP Accessory Power Port
[7] USB Port & CAN Bus Port	[18] USB Accessory Power Port
[8] Bind Button	[19] P-TAP Port (rear side)
[9] Gimbal LED Indicator Light	[20] DJI Lightbridge Port (rear side)
[10] Smart Battery	[21] GCU Port (rear side)
[11] Roll Motor	

Getting Started

Intelligent Battery

Before you start using your Ronin-M, be sure to charge the battery first. The Intelligent battery is specially designed for the Ronin-M. It has a battery capacity of 3400mAh, voltage of 14.8V, and power management functionality. Charge the intelligent battery only with DJI approved chargers. When the battery is fully charged, it has a maximum run time of 4 hours.

Intelligent Battery   Charger

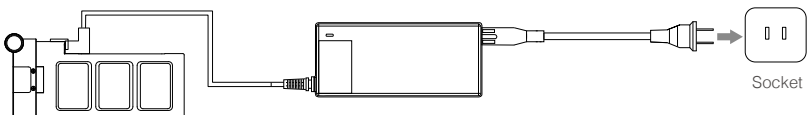| DJI Intelligent Battery Functions	
Balance Charging	Automatically balances the voltage of each battery cell during charging.
Capacity Display	Displays current battery levels.
Overcharge Protection	Charging stops automatically when the battery voltage reaches 16.8V to prevent overcharge damage.
Over Discharge Protection	Discharging stops automatically when battery voltage reaches 12V to prevent over discharge damage.
Short Circuit Protection	Automatically cuts power supply when a short circuit is detected.
Sleep Protection	Sleep mode is activated after 10 minutes of inactivity to save power.
Charging Temperature Detection	The battery will charge only when the temperature is between 0°C and 55°C.

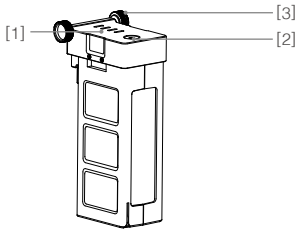| Battery Specifications	
Type	LiPo
Capacity	14.8V, 3400mAh
Charging Environment Temperature	0°C ~ 45°C
Operating Environment Temperature	-15°C ~ 50°C
Charging/Discharging Environment Relative Humidity	<80%

⚠ • Read the user manual, disclaimer, and battery warnings before use. Users take full responsibility for all operations and usage.
• Always use DJI approved chargers. DJI takes no responsibility for any use of non-DJI approved chargers.

Charging the Intelligent Battery

1. Connect the charger to a wall socket (100-240V, 50/60Hz), using the plug set if necessary.
2. Connect the battery to the charger.
3. The battery level indicator lights display the current capacity level as the battery charges.
4. The battery is fully charged when the battery level indicator lights shut off and the indicator light on the charger turns green. Disconnect the battery from the charger when charging is completed.

Socket

Using the Intelligent Battery

[1] Battery Level Indicators
[2] Power Button
    (with one LED battery power indicator.)
[3] Thumb Screws

Checking the battery level: When the battery is powered off, pressing the battery power button once will display the current battery level.
Powering on: When the battery is powered off, press and hold for 1 second to turn on the smart battery.
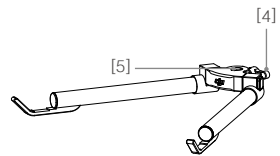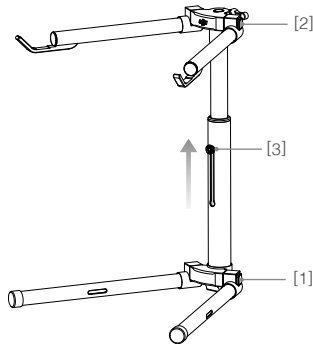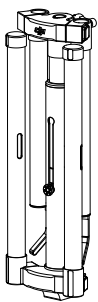**Powering off**: When the battery is powered on, press and hold for 1 second to turn off the smart battery.
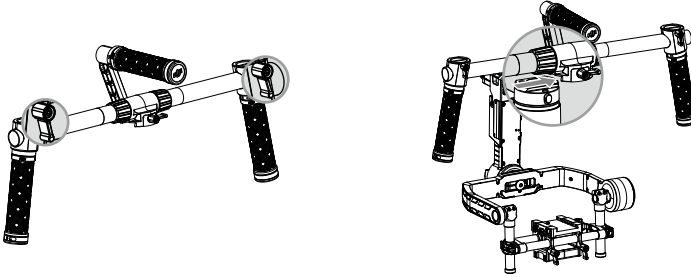
Tuning Stand

You can use the tuning stand during setup or to store the gimbal. The following steps show how to use the tuning stand.

1. Put the stand in the upright position as shown in the picture below:
2. Press button [1] and pull the lower legs outward away from the stand, and then pull downward. Then press button [2] and pull the upper arms outward and upward. Press the button [3] and slide it up to release the stand as shown.
3. The upper half of this tuning stand can be removed by loosening the knob [4]. You can use it with any C-stand style stud that fits the hole [5]. When mounting on to a C-stand, be sure to check the balance of the stand so as to not have the Ronin-M with a camera tilt over. When setting on a table, make sure the table is a flat and even surface.
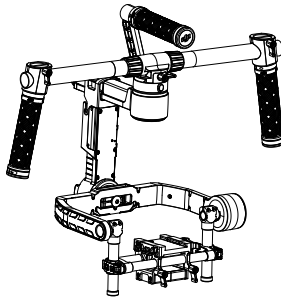
Installing the Handle Bar onto the Gimbal

1. The turn knobs on the handles are loose by default. Adjust the grips to the desired position and tighten the screws to secure their position.
2. Place the handle bar in the position as shown below, then slide the handle bar into the gimbal, tighten the lock-knob.
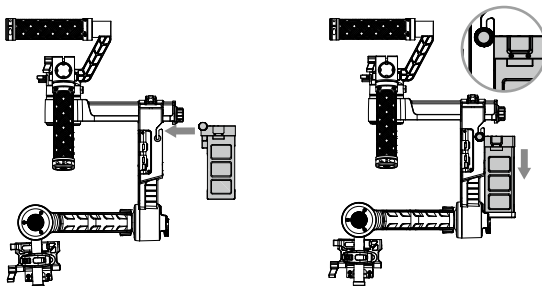

3. With your hands on the handles, be sure the gimbal is not obstructed during a 360 degree pan. Installation is complete.

Intelligent Battery Installation

1. Loosen the thumb screws on either side of the battery. Slide the battery directly into the gimbal and then slide down. Be sure the battery's thumb screws go down into their locating slots making full contact with the gimbal's electrical leads.
2. Tighten the thumb screws on the battery to lock it in place.

⚠️ • Make sure the battery is powered off during the installation.
 • An incorrectly installed battery may lead to (1) Poor battery connection, or (2) Unavailable battery information.
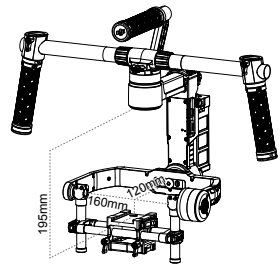
Mounting the Camera

The Ronin-M uses an adjustable camera mounting plate to allow you to easily balance, install and remove your camera. The Ronin-M has been tested with the following types of cameras. Other cameras similar in size and weight may also work:

Black Magic Cinema Camera	Canon 5DMKIII	Nikon D800
Black Magic Pocket Cinema Camera	Canon 6D	Panasonic GH3
Canon 1Dc	Canon 7D	Panasonic GH4
Canon 5DMKII	Canon C100	Sony NEX7

⚠️ • Camera Size Requirements: the maximum depth from the center of gravity on the camera base plate is 120mm; the maximum height measured from the top of the camera base plate is 195mm; and the maximum width is 160mm. As shown in the picture to the right.
 • To avoid obstructing camera movement, the use of soft connection cables is recommended.

1. Attach the camera mounting plate to your camera using the provided screws. Choose the correct 1/4" or 3/8" screws. Some cameras have two tripod mounting holes. It's best to secure the camera as tightly as possible. If two mounting holes are available on your camera, then use both mounting holes. Choose the right screw holes according to your camera's configuration.
2. Install the lens support. Gently push up to apply a little pressure to the lens, then tighten the thumbscrew.