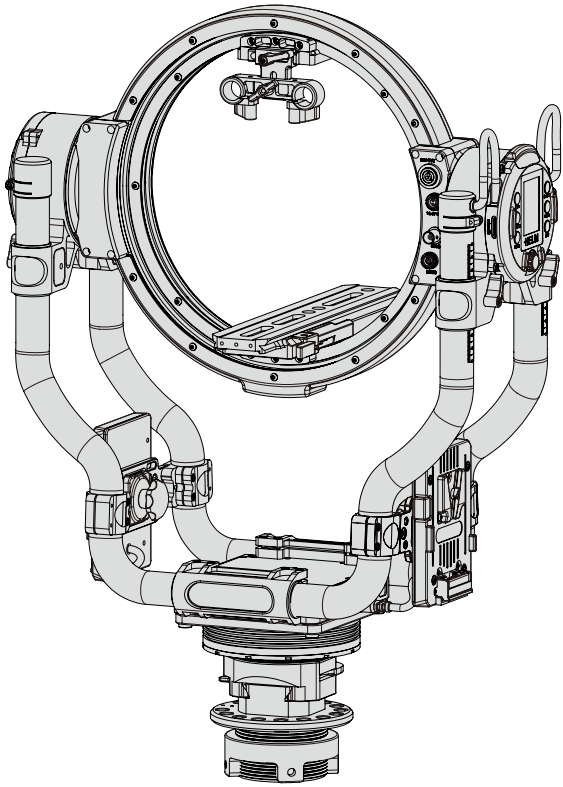
MOVCAM®

HELM

User Manual

V 1.0



RSH-1

Movcam Tech Co.,Ltd

HELM

1、Contents

1、Contents

Features of HELM

3-axis and 2-axis free switching

Maximun load capacity: 23kg

Upright and suspension are available

Supportive of vehicle-mounted, airborne, handheld and other opreating modes

Main specificaatn s of HELM

Dimensions: 472(L) x 433(W) x 191(H) mm

Weight: 3-axis: 5.8kg, 2-axis: 4.7kg

Maximun load capacity: 23kg

Rotati n angle of translaton axis: 360° +

Rotati n angle of elevaton axis: +/-180°

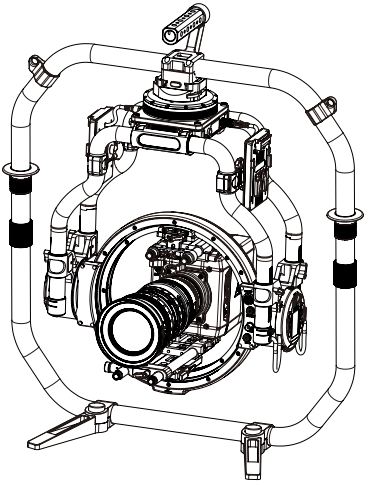
Rotati n angle of roll axis: +/- 180°

Operati g ambient temperature: -20°C -- 50°C

Power: 14.4V DC 15W

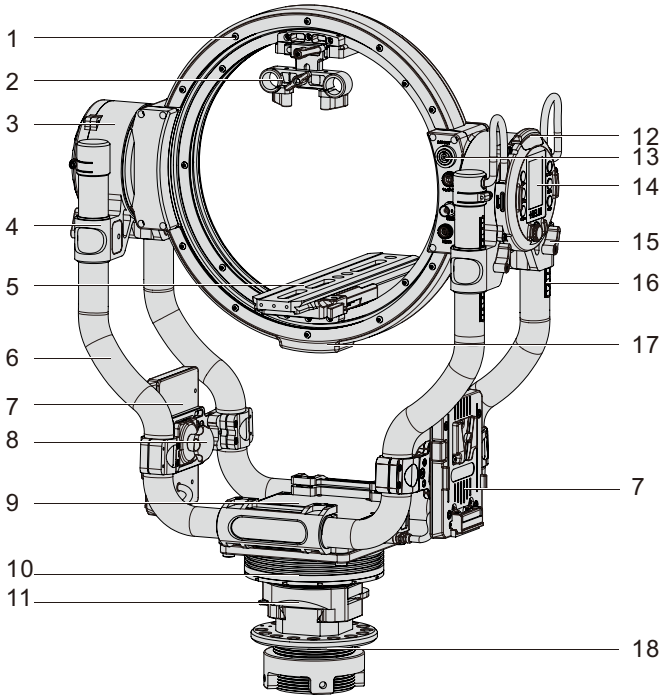
Output: 14.4V DC

Control Frequency: 2.4G

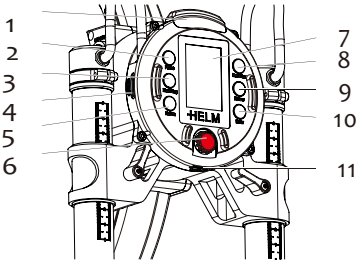


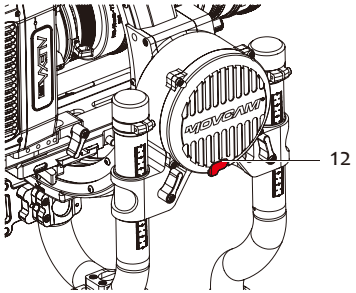
2、Learn about HELM

Structure



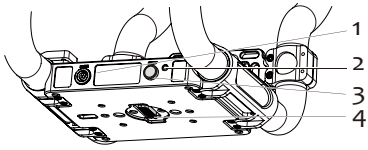
1 The circle design
2 Top rod clamp of camera
3 Motor
4 Rod clamp
5 Camera mounting stage
6 CF tubes
7 Battery mount
8 Release knob for battery mount
9 Base plate
10 Panning axis motor
11 Quick release block
12 Antenna
13 Interface port for camera
14 Control panel
15 Release knob of rod clamp
16 Scale
17 Sensor
18 Mitchel Mount

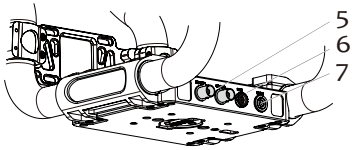




Control Panel

1 Antenna
2 Pause
3 Mounting mode switch button
4 MicroSD card slot
5 Return
6 Multi-function button
7 display screen
8 Recenter
9 Follow mode switch button
10 Enter
11 SBUS port
12 Tilting axis lock pin





Base

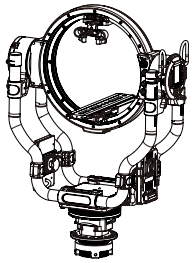
1 DC IN
2 Power light
3 Power switch
4 Expansion port
5 SDI OUT
6 MBUS port
7 DC IN

Assembling and balance adjustment

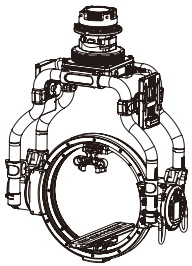
1. Preparation

To assemble the Helm, first select the desired mounting mode, and work mode: 2 axis or 3 axis. There are a variety of scenarios for the 3-axis. Specific mounting equipment will be used for different scenarios. Such as hand-held, vehicle-mounted etc. Before assembling, mount the Helm on the mounting equipment.

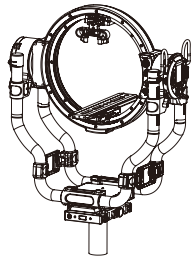
If you are using 2-axis Helm on steadicam, you need to remove the panning axis motor and V mount battery mount on both sides of the Helm to reduce weight.



3-axis Horizontal and vertical positioning.
The mounting carrier includes tripod, slider, dolly and robot, or a crane or vehicle.



3-axis Hanging-mount
The mounting carrier of hanging-mount includes handheld ring, car-mounted vibration isolation arm, etc., It can also be installed on a crane.

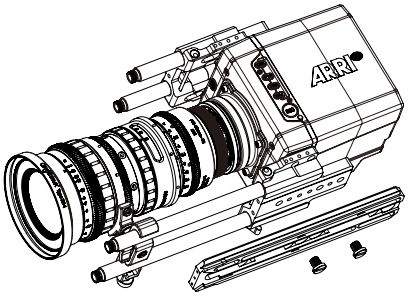


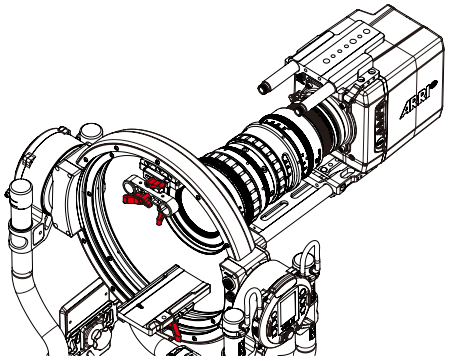
2-axis (incl. single axis)
2-axis installation is mainly used with Steadycam

2. Attach the camera

Install the quick release plate to the bottom of the camera, two rods with a spacing of 60mm, and 15mm diameter are installed on the top of the camera. The distance between the rods and the optical axis of the lens is about 85mm.

Lens support brackets and other parts are needed for longer lens.



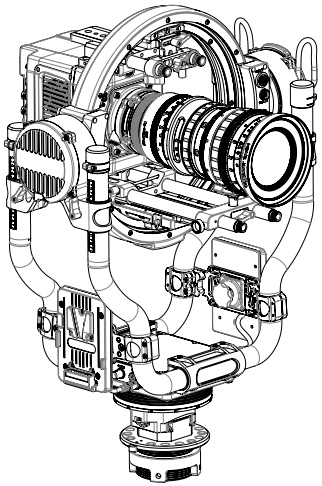


3. Balance adjustment

Assemble your system and Adjust the balance

In order to make the Helm play an excellent stabilization function, the Helm must be kept in a good balance before shooting.
In its structure design, the engineers take into consideration of the symmetry of the system, which greatly facilitates its balance adjustment. When assembling the system with camera and other accessories, users should keep it in mind that it's important to let the system remain its balance.

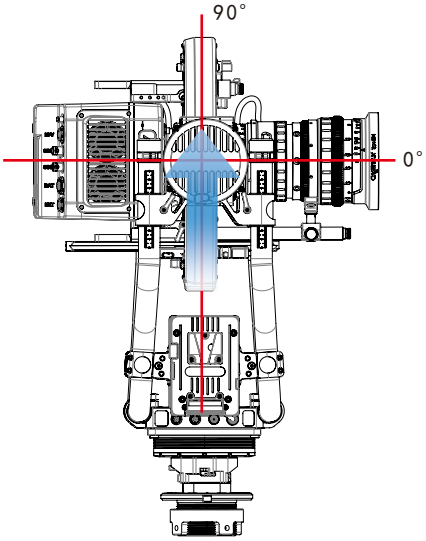
In the assembly and balance adjustment, we should also note that although ring-shaped structure of Helm allows greater freedom for the length of the camera and lens, but the excessively long camera and lens will increase the moving torque, which will also seriously affect the stabilizing performance of Helm.
Always keep Helm in a balanced and more focused state as much as possible during the installation and adjustment.



In general, when installing the camera, the optical axis of the camera lens should also be at the center of the ring. Due to the difference in size of different cameras, it may be necessary to prepare corresponding riser blocks for different cameras. We have prepared corresponding riser blocks for popular cameras on the market. If necessary, you can contact us for purchase.
Before balancing, install all other accessories needed for the camera, such as follow focus and mattebox etc., as well as any cables that need to be connected.

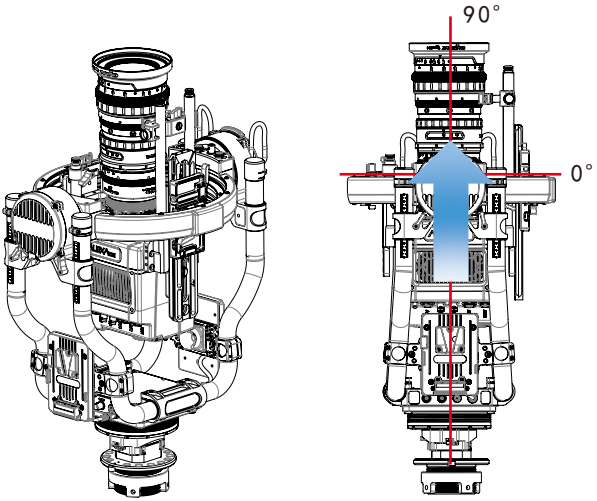
Adjust the balance of tilting axis

With the camera mounted, we need to adjust the balance of tilting axis. If the camera tilts downward, release the safety lock on the quick-release plate and move the quick-release plate backward until the camera is horizontally balanced. If the camera tilts upward, release the safety lock on the quick-release plate and move the quick-release plate forward until the camera is horizontally balanced.



Adjust the balance of rolling axis

After the tilting axis is balanced, we now start to adjust the balance of rolling axis, there are two steps: camera's top/bottom balance and left/right balance adjustment.



1. Camera top/bottom adjustment

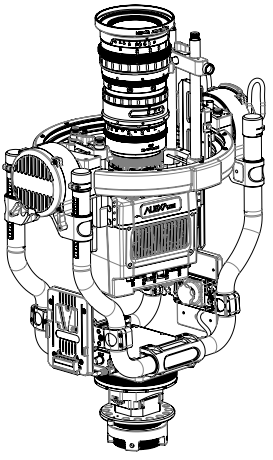
Keep the camera upright with the lens pointing straight up and make the side of the camera body parallel to the control panel and check if the ring is in horizontal position.

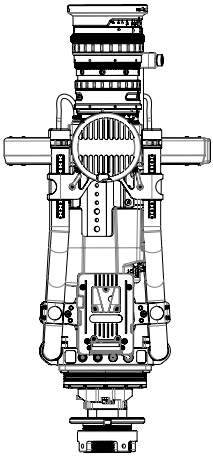
If the camera tilts downward, add weight blocks to the top of the camera until the ring is horizontally balanced. If the camera tilts upward, add weight blocks to the bottom of the camera until the ring is horizontally balanced.

2. Checking left/right adjustment

Keep the camera upright with the lens pointing straight up and make the side of the camera body parallel to the control panel and check if the up-facing side of the ring is in horizontal position.

The camera mounting plate can be adjusted slightly to adjust camera left/right balance. If the left side of camera tilts downward, adjust the camera mounting plate to the right or add appropriate weight to the right side of the camera. If the left side of the camera tilts upward, adjust the camera mount to the left or add appropriate weight to the left side of the camera.

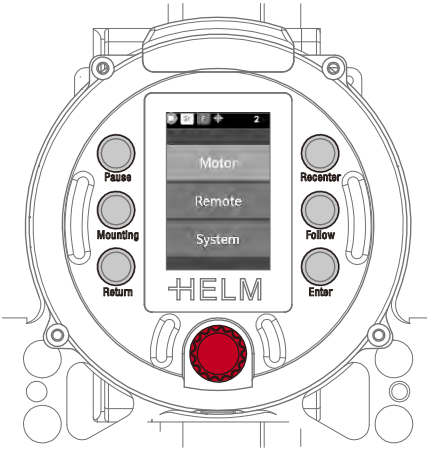




4. Parameter setting

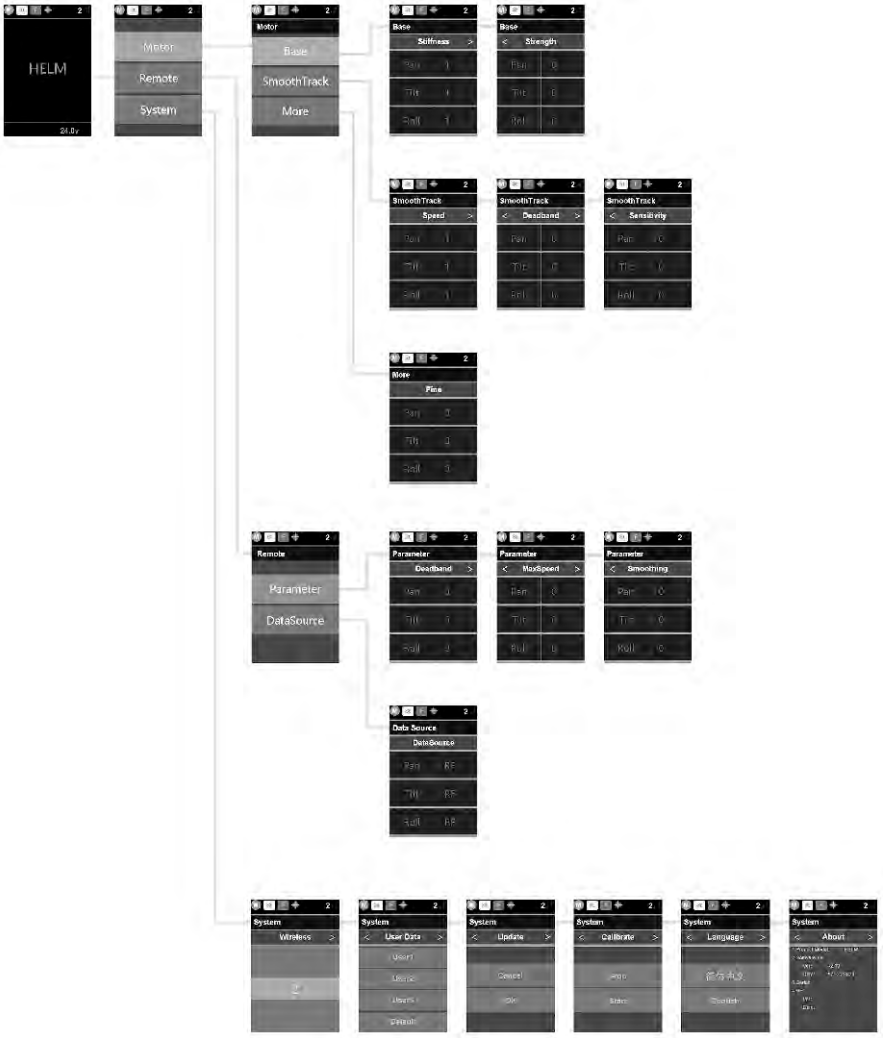
After balance adjustment, use the control panel to do set up Helm. Helm can also be controlled via external controller like the wheel controller.

Power up Helm before starting setup.



1. Press the red knob to enter setup menu. Turn the knob to choose entry for setup.
2. When external controller like the wheel is used to do setup, first step is to enter the **System** to set wireless channel. Set both the channel on control panel and that on the wheel control at the same one. Connection is successful when the sign ıll appears on the upper right corner of the screen.
3. Motor **stiffness** and **strength** can be set via **Motor** entry. Under Smoothtrack mode, motor **speed**, **deadband** and **sensitivity** can be set.
4. Under **Remote** entry, **deadband**, **maxspeed** and **smoothing** can be set. **Data source** can also be set.
5. Under **System** entry, the following can be set: **wireless**, **calibration** and **language**.

HELM


HELM
Motor
Remote
System
Motor
Base
SmoothTrack
More
Base
Stiffness
Base
Strength
SmoothTrack
Speed
SmoothTrack
Deadband
SmoothTrack
Sensitivity
More
Pins
Remote
Parameter
DataSource
Parameter
Deadband
Parameter
MaxSpeed
Parameter
Smoothing
Data Source
DataSource
System
Wireless
System
User Data
System
Update
System
Calibrate
System
Language
System
About

HELM

HELM remote controlled stabilizaion head

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FCC Caution：

This device 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 must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.