

System

ARTEMIS 2

USER MANUAL

01.09.2022



2 Disclaimer

Before using the products, be sure to read and understand all respective instructions.

The products are available for commercial customers only.

For product specification changes since this operating manual was published, refer to the latest publications of ARRI data sheets or data books, etc., for the most up-to-date specifications. Not all products and/or types are available in every country. Please check with an ARRI sales representative for availability and additional information.

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In the case one or all of the foregoing clauses are not allowed by applicable law, the fullest extent permissible clauses by applicable law are validated.

3 Imprint

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5 About this Document

This user manual is aimed at everyone involved in using the system and provides directions on how to operate it safely and as intended. To ensure safe and correct use, all users must read the user manual before using the accessories for the first time.

This user manual is an essential part of this product and must be easily accessible and in proximity to the equipment so that users can use it as a reference anytime.

Keep this user manual and all other operating and assembly instructions belonging to the system in a safe place for future reference and possible subsequent owners.

Document Revision History

Version	Release	Date	Description
1.0		01.07.2022	
1.1		01.09.2022	

6 About the Product

ATTENTION

All versions of the product are intended exclusively for professional use and may only be used by skilled personnel.

Every user should read and understand the operating instructions and the user manual. Use the product only for the purpose described in this document. Always follow the instructions and system requirements for all equipment involved.

What is it?

ARTEMIS 2 is purely mechanical camera stabilizer system which is developed for cinema and broadcast applications. Its modular design allows for quick and easy conversion/upgrading to the TRINITY 2.

The new SAM dovetail plate standard enables quick mounting of different cameras and a quick and tool-free switch from ARTEMIS 2 to remote head, tripod or TRINITY applications.

The new battery system ensures a permanent and regulated 12 / 24V power supply and long runtimes for the entire system.

Quickly exchangeable battery mounts and the various 19mm rods increase the flexibility and improve the balance of the system.

What does it do?

A mechanical camera stabilizer, such as ARTEMIS 2 is an advanced camera stabilizer that offers incredibly smooth video shots. It does this by separating the camera from the operator thereby minimizing camera shakes to negligible degrees.

How does it work?

The so called Rig or Sled is the assembly that includes the Top Stage (at the top) and the Bottom Stage and the battery mount at the bottom. These two components are connected by the centerpost, which is available in different lengths.

What problems does it solve?

The modular design allows for many different types of setups and configurations. This flexibility allows for faster setup, better balancing and more creative work. The modular system allows easy upgrades later and thus secures the investment for many years.

6.1 Environmental Conditions

The CCP Live should only be used and stored under certain environmental conditions. Check the following conditions before commissioning and operation:

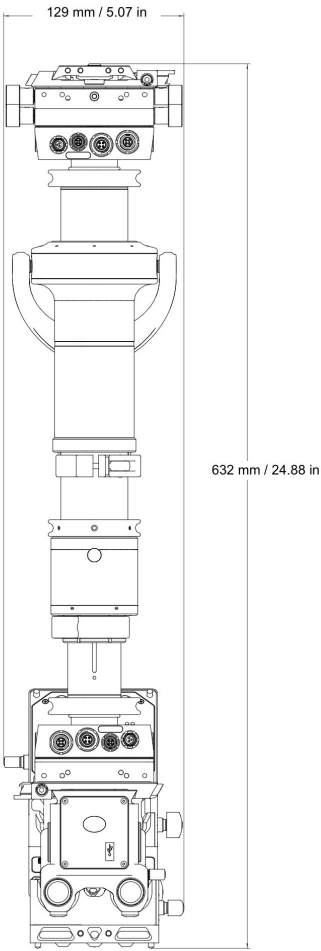
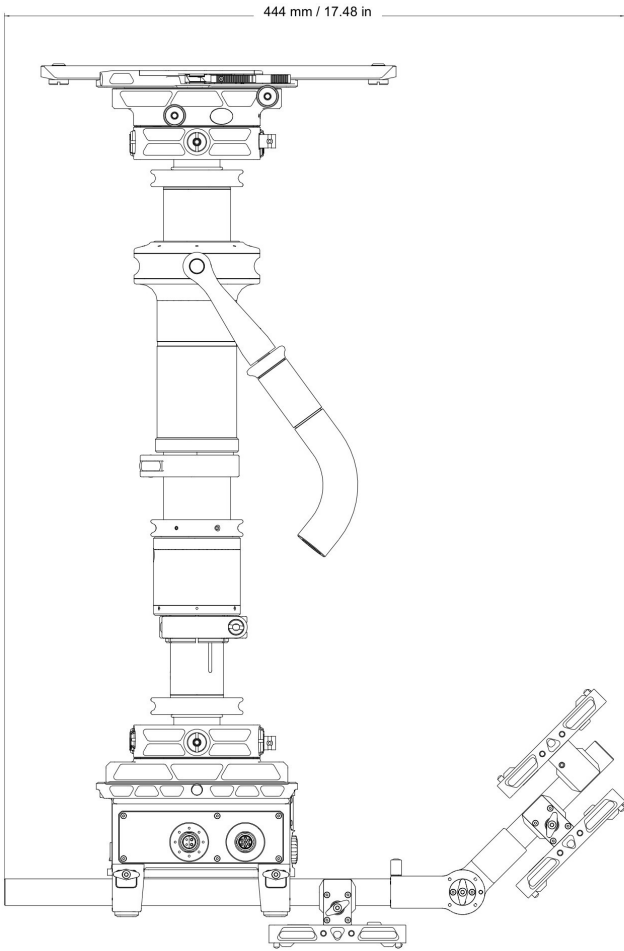
Operating temperature

-20 to +45 °C

-4 to +113°F

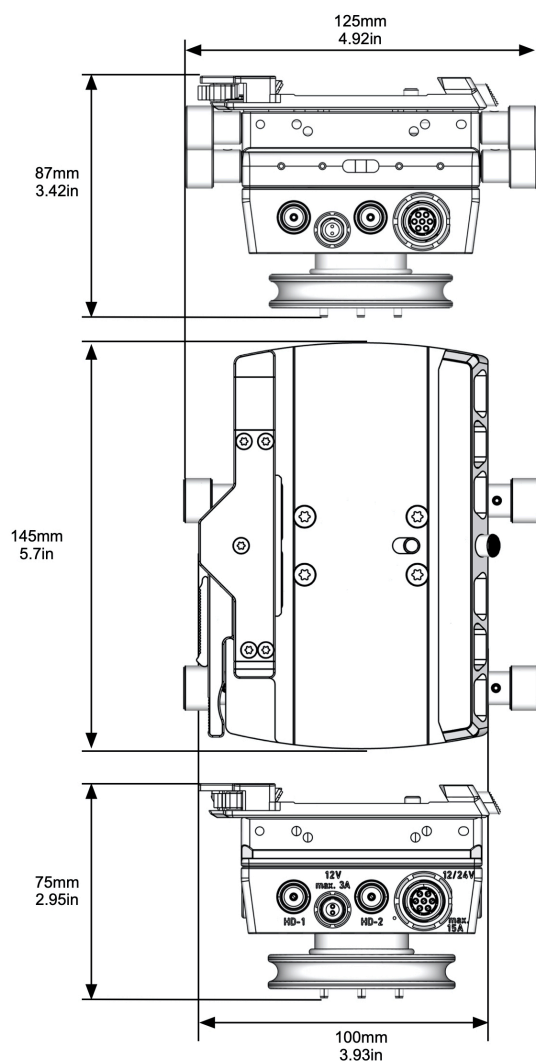
6.2 Technical Data

ARTEMIS 2



Power supply	10,6 V – 33,6 V DC	12/24V max. 15A
Weight	7.4 kg	16.3 lb
Temperature range	-20° C to +45° C	-4° F to +113° F
	95% humidity max.	non condensing
Storage temperature	-30° C to 70° C	-22° F to 158° F

Top and Bottom Stage 2 (TST-2 and BST-2)



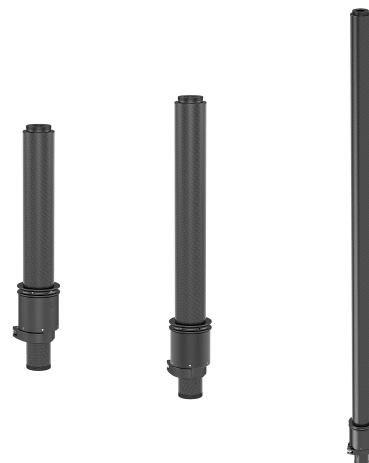
TST-2 and BST-2 Interfaces

12V	Lemo 0B 2pin	12V max. 3A
12V/24V	Lemo 2B 7pin	12/24V max. 15A
HD-1 / HD-2	BNC	
12V	Fischer 3pin	12V max. 3A
12V	Lemo 1B 4pin	12V max. 3A
LBUS	Lemo 0B 4pin	24V max. 3A
CAN Bus	Fischer 4pin	12V max. 3A

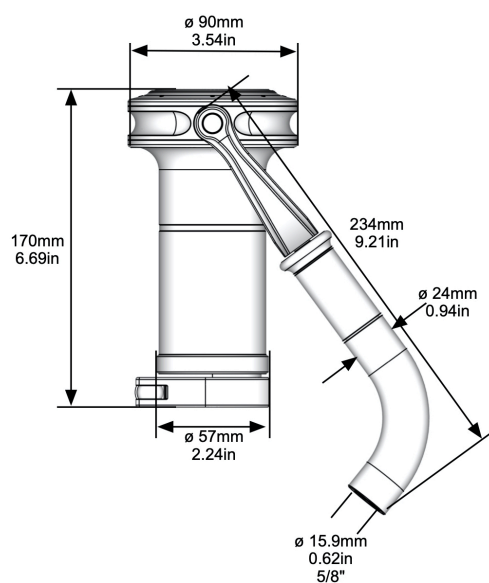
Center Post

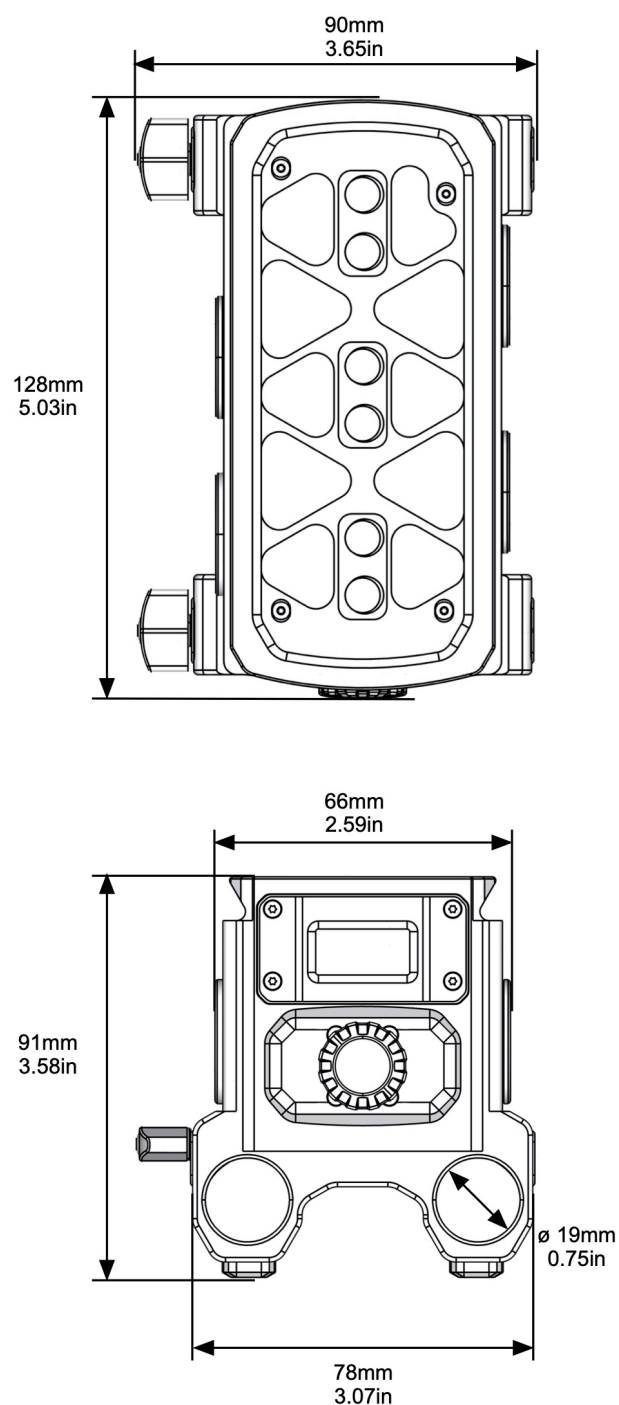
Center Post lengths:

- The Standard and Volt Post can be extended from 45.5cm / 17.92in to 71cm / 27.95in.
ARTEMIS outer post diameter 48mm / 1.88in
Volt outer post diameter 44.45mm / 1.75in
Inner post diameter 38.1mm / 1.5in
- The Shorty Post can be extended from 37cm / 14.56in to 46.5cm / 18.30in.
ARTEMIS outer post diameter 48mm / 1.88in
Inner post diameter 38.1mm / 1.5in
- The Super Post can be extended from 124cm / 48.82in to 200cm / 78.74in.
ARTEMIS outer post diameter 48mm / 1.88in
Inner post diameter 38.1mm / 1.5in



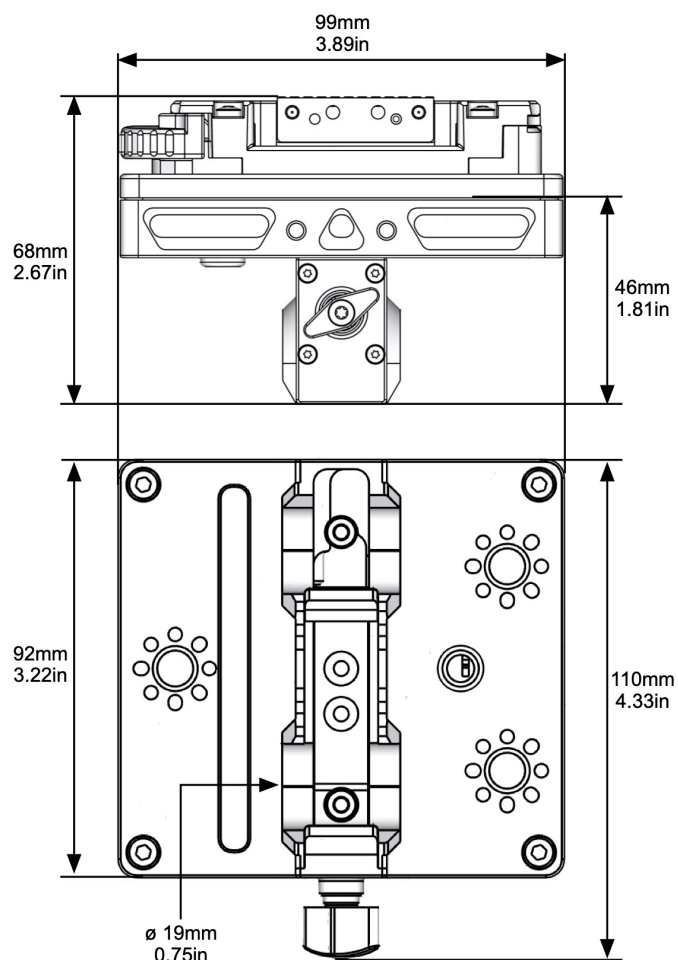
Gimbal



Battery Hanger Module 2 (BHM-2)**BHM-2 Interfaces**

Battery in 1 - 3	Lemo 2B 4pin	12/24V max. 20A
Main Power Out	Lemo 2B 7pin	12/24V max. 15A
USB Port	USB-Typ-A	5,2 V

Battery Mounting System Module 1 and 2 (BMS-1 and BMS-2)



Model	Voltage	Weight	Dimension
K2.0040284 B-Mount for BMS-2	20.5 – 33.6V	99 g / 0.21 lb	92 x 98 x 14mm 3.62 x 3.85 x 0.55in
K2.0040285 Gold Mount for BMS-1 / BMS-2	14.4 – 16.8V	135 g / 0.29 lb	92 x 98 x 23mm 3.62 x 3.85 x 0.90in
K2.0040286 V-Mount for BMS-1 / BMS-2	14.4 – 16.8V	143 g / 0.31 lb	92 x 98 x 33mm 3.62 x 3.85 x 1.29in

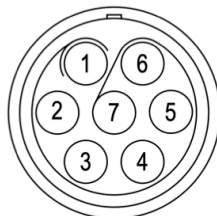
6.3 Pin Out

ARTEMIS 2 / TRINITY 2

12V / 24V Power

Lemo 2B 7pin (12V / 24V max. 15A)

* Shown from mating side



Pin 1 Ground

Pin 2 Ground

Pin 3 12V

Pin 4 12V

Pin 5 24V

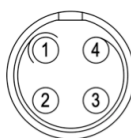
Pin 6 24V

Pin 7 Bat. Data

12V Power

4pin Lemo (12V max. 3A)

* Shown from mating side



Pin 1 12V

Pin 2 Ground

Pin 3 Ground

Pin 4 12V

12V Power

Lemo 0B 2pin (12V max. 3A)

* Shown from mating side



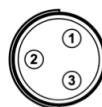
Pin 1 Ground

Pin 2 12V

RS / Tally (TST-2)

Fischer 3pin (TST-2) (12V max. 3A)

* Shown from mating side



Pin 1 Ground

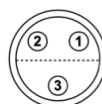
Pin 2 12V

Pin 3 Tally

Aux / Tally (TST-1)

Lemo 0S 3pin (12V max. 3A)

* Shown from mating side



Pin 1 12V

Pin 2 Ground

Pin 3 Tally

LBUS

Lemo 0B 4pin (24V max. 3A)

* Shown from mating side



Pin 1 Ground

Pin 2 CAN Low

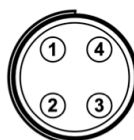
Pin 3 12V / 24V

Pin 4 CAN High

CAN Bus FF

Fischer 4pin (12V max. 3A)

* Shown from mating side



Pin 1 Ground

Pin 2 CAN 1 Low

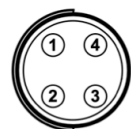
Pin 3 CAN 2 High

Pin 4 12V

CAN Bus FS

Fischer 4pin (12V max. 3A)

* Shown from mating side



Pin 1 Ground

Pin 2 CAN 1 Low

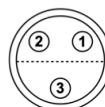
Pin 3 CAN 2 High

Pin 4 12V

External Power In TRINITY

Lemo 2B 3pin (12V / 24V max. 15A)

* Shown from mating side



Pin 1 Ground

Pin 2 12V

Pin 3 24V

6.4 Scope of Delivery

ATTENTION

The packaging consists of recyclable materials. For the sake of the environment, dispose the packaging material at a suitable disposal site only.

Always store, ship and dispose according to local regulations. ARRI is not liable for consequences from inadequate storage, shipment or disposal.

On delivery, please check if package and content are intact. Never accept a damaged delivery.

ARTEMIS 2

Tally Gen.2 Set for artemis Gen.2, 3pin Fischer	K0.0044680
■ Tally System Gen.2 / Host	K2.0044490
■ Tally System Gen.2 / Client	K2.0044491
■ Tally Sensor Cable, Gen. 1 & 2	K2.0010482
■ Tally Gen. 2 Pwr, TST-2, Fischer 3pin to Lemo 0S 3pin, 0,35m / 13.7in	K2.0044143
■ Tally Gen. 2 Pwr, TST-2, Fischer 3pin to Lemo 0S 3pin, 0,35m / 13.7in	K2.0044143

ARTEMIS Gen. 1

Tally Set for artemis Gen.1, 3pin Lemo	K0.0044685
■ Tally System Gen.2 / Host	K2.0044490
■ Tally System Gen.2 / Client	K2.0044491
■ Tally Sensor Cable, Gen. 1 & 2	K2.0010482
■ Tally Gen. 2 Pwr, TST-1, Lemo 0S 3pin to 0S 3pin, 0,35m / 13.7in	K2.0044142
■ Tally Gen. 2 Pwr, TST-1, Lemo 0S 3pin to 0S 3pin, 0,35m / 13.7in	K2.0044142

TRINITY 2

Tally Set for TRINITY Gen.2, 3pin Fischer **K0.0044678**

■ Tally System Gen.2 / Host	K2.0044490
■ Tally System Gen.2 / Client	K2.0044491
■ Tally Sensor Cable, Gen. 1 & 2	K2.0010482
■ Tally Gen. 2 Pwr, TST-2, Fischer 3pin to Lemo 0S 3pin, 0,35m / 13.7in	K2.0044143
■ Tally Gen. 2 Pwr, TRH-2, Fischer 3pin to Lemo 0S 3pin, 0,75m / 29.5in	K2.0044146
■ Tally Gen. 2 Mon Pwr, Lemo 0B 2pin to 0B 5pin, 0,10m / 3.9in	K2.0044374
■ Tally Gen. 2 Mon Pwr, Lemo 0B 2pin to 0B 2pin, 0,10m / 3.9in	K2.0044147

TRINITY Gen. 1

Tally Set for TRINITY Gen.1, 3pin Lemo **K0.0044682**

■ Tally System Gen.2 / Host	K2.0044490
■ Tally System Gen.2 / Client	K2.0044491
■ Tally Sensor Cable, Gen. 1 & 2	K2.0010482
■ Tally Gen. 2 Pwr, TST-1, Lemo 0S 3pin to 0S 3pin, 0,35m / 13.7in	K2.0044142
■ Tally Gen. 2 Mon Pwr, Analog Joystick Lemo 0B 5pin to 0S 3pin, 0,25m / 9.8in	K2.0044260
■ Tally Gen. 2 Mon Pwr, Lemo 0B 2pin to 0B 5pin, 0,10m / 3.9in	K2.0044374
■ Tally Gen. 2 Mon Pwr, Lemo 0B 2pin to 0B 2pin, 0,10m / 3.9in	K2.0044147

6.5 Certifications and Safety Standards

Approval Information

The ARTEMIS 2 is approved for use in countries where the CE or FCC declaration is accepted. That contains the European Union, Canada, Japan and the USA.

The import and use in other countries may be subject to legal, official or regulatory requirements and regulations. It is the importer's or the user's responsibility, prior to importation or use, to inform themselves of the applicable legal, regulatory and administrative requirements and regulations and to ensure compliance with these requirements and regulations. This includes the applying for and obtaining of all necessary approvals or registrations.

As far as reasonable and legally possible, ARRI will support requests in relation to such applications by providing technical documents or declarations. As an importer or user, you confirm that you are familiar and comply with the legal, regulatory, and administrative requirements and regulations that apply in the countries to which you ship or use the products. You further confirm that you will arrange for any necessary registrations, enrollments, or authorizations that are required in such countries.

You release ARRI from all obligations resulting from any legislative, regulatory, or administrative requirements regarding import or use of the products, except in countries where ARRI has obtained a registration or certification. You agree to indemnify, defend, and hold ARRI harmless from any and all claims, damages, losses, liabilities, costs, and expenses (including reasonable fees of attorneys and other professionals) that may arise out of a demand on ARRI in connection with your obligations mentioned above.

EU Declaration of Conformity



Brand Name: ARRI

Product Description: Camera Stabilizer System **ARTEMIS2**

The designated products conform to the specifications of the following European directives:

- Directive 2014/30/EU EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility

The compliance with the requirements of the European Directives was proved by the application of the following standards:

- EN 55032:2015
- EN 55035:2017
- EN IEC 61000-4-2:2009
- EN IEC 61000-4-3:2020
- EN IEC 62368-1:2020 + A11:2020
- EN IEC 63000:2018

The object of the declaration described above complies with the provisions of Directive 2011/65/EU of the European Parliament and the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment and the Commission Delegated Directive (EU) 2015/863 of March 31, 2015.

The manufacturer bears sole responsibility for issuing this declaration of conformity.

UK Declaration of Conformity



Brand Name: ARRI
Product Description: Camera Stabilizer System **ARTEMIS 2**

The designated products conform to the specifications of the following United Kingdom regulations:

- The Electromagnetic Compatibility Regulations 2016 (SI 2016 No. 1091 as amended by SI 2019 No. 696)
- The Electrical Equipment (Safety) Regulations 2016 (SI 2017 No. 1206 as amended by SI 2019 No. 696)
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (SI 2012 No. 3032 as amended by SI 2020 No. 1647 SI 2021 No. 422 and SI 2019 No. 492)

The compliance with the requirements of the United Kingdom regulations was proved by the application of the following standards:

- EN55032:2015
- EN55035:2017
- EN61000-4-2:2009
- EN61000-4-3:02006 A1 2008 A2:2010
- EN61000-4-8:2010
- EN50581:212

The manufacturer bears sole responsibility for issuing this declaration of conformity.

FCC Compliance Statement

Class B Statement: 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:

Industry Canada Compliance Statement

Complies with the Canadian ICES-003 Class B specifications.

This device contains licence exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence exempt RSS(s). Operation is subject to the following two conditions: This device may not cause interference. This device must accept any interference, including interference that may cause undesired operation of the device.

7 Safety Instructions

This safety information is in addition to the product specific operating instructions in general and must be strictly observed for safety reasons. Read and understand all safety and operating instructions before you operate or install the system. Retain all safety and operating instructions for future reference. Always follow the instructions in this and all documents supplied with the device to avoid injury to yourself or others and damage to the system or other objects.

Assembly and operation should only be carried out by trained staff familiar with the system. Only use the tools, materials and procedures recommended in this document. For the correct use of other equipment, see the manufacturer's instructions.

7.1 Safety Conventions and Product Labels

Structure of Safety and Warning Messages

These instructions use safety instructions, warning symbols and signal words to draw your attention to different levels of risk:

⚠ WARNING
WARNING indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury. ► Always follow the recommended measures to avoid this hazardous situation.
⚠ CAUTION
CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. ► Always follow the recommended measures to avoid this hazardous situation.
ADVICE
NOTICE signifies a potentially hazardous situation which can result in damage to property. ► Always follow the recommended measures to avoid this hazardous situation.
ATTENTION
Not relevant to safety, Attention provides additional information to clarify or simplify a procedure.

Warning Symbols and Product Labels



General warning sign



Warning of electrical voltage



Warning of hot surfaces



Warning of hand injuries



Warning of the risk of crushing



Warning of obstacles on the ground



Please read all instructions carefully before using the product for the first time.



Direct Current symbol found on electronics requiring or producing DC power

7.2 General Safety Instructions

WARNING



Operating the ARTEMIS 2 in case of obvious damage

Risk of electric shock and fire hazard caused by short circuit.

- ▶ Do not use the system if electrical lines or housing are visibly damaged.
- ▶ Operate the system using only the type of power source indicated in the manual.
- ▶ Unplug the power cable by gripping the power plug, not the cable.
- ▶ Do not operate the system in areas with humidity above operating levels or expose it to water or moisture.
- ▶ Do not get the system wet.
- ▶ Do not lay cables over sharp edges (e.g. sheet metal, profile or other cut edges). Damaged cables can cause electric shock, short circuit or fire.
- ▶ Do not remove or deactivate any safety measures from the system (incl. warning stickers or paint marked screws).
- ▶ Repairs may only be carried out by authorized ARRI service partners.

WARNING



Falling ARTEMIS 2 components

If the ARTEMIS 2 components is inadequately built up or assembled, it can fall down and cause serious injuries and damage to the camera accessories or property.

- ▶ Installation and operation may only be carried out by trained personnel who are familiar with the system. Observe accident prevention regulations.
- ▶ Do not place the ARTEMIS 2 on an unstable trolley or hand truck, stand, tripod, bracket, table or any other unstable support device.
- ▶ Always place the ARTEMIS 2 on dedicated support devices.
- ▶ Secure the ARTEMIS 2 against falling and tipping over. Observe the general and local safety regulations.

WARNING



Positioning the ARTEMIS 2 on an inclined or unsafe plane

Risk of injury caused by the ARTEMIS 2 tipping over.

- ▶ Observe the accident prevention regulations.
- ▶ Put the ARTEMIS 2 on level and stable ground
- ▶ Do not place the ARTEMIS 2 on an unstable trolley or hand truck, stand, tripod, bracket, table or any other unstable support device.
- ▶ Always place the ARTEMIS 2 on dedicated support devices.
- ▶ Use only ARTEMIS 2 components approved by ARRI. The use of components not approved by ARRI is at your own risk. Please observe all relevant safety guidelines

⚠ WARNING**Overloading the ARTEMIS 2 by persons or objects**

Risk of injury caused by the ARTEMIS 2 tipping over.

- ▶ Do not lean on the ARTEMIS 2.
- ▶ Do not place or hang any unauthorized objects on the ARTEMIS 2.
- ▶ Use only ARTEMIS 2 components approved by ARRI. The use of components not approved by ARRI is at your own risk. Please observe all relevant safety guidelines

⚠ CAUTION**Using the ARTEMIS 2 in a humid environment and with condensation**

When moving ARTEMIS 2 from a cool to a warm location or when the ARTEMIS 2 is used in a damp environment, condensation may form inside the on internal or external electrical connections. Operating the electrical components while condensation is present bears risk of electric shock and/or fire caused by a short circuit.

- ▶ Never operate the ARTEMIS 2 when condensation occurs.
- ▶ After moving the ARTEMIS 2 from a cool to a warm environment, wait for some time for the system to warm up.
- ▶ To reduce the risk of condensation, find a warmer storage location.

⚠ CAUTION**Hot surfaces on electrical ARTEMIS 2 components**

During extended operation, high data rates and/or operation at high ambient temperatures, the electrical ARTEMIS 2 components surfaces can get hot. Direct sunlight can result in temperatures above 60° C (140° F).

- ▶ Never cover, obstruct or block the fan in- or outlets during operation.
- ▶ Do not place the ARTEMIS 2 near any heat sources during operation.
- ▶ At ambient temperatures above 25° C (77° F), protect the ARTEMIS 2 from direct sunlight.
- ▶ Do not touch heated parts of the ARTEMIS 2 after a long film shoot in the sunlight.

⚠ CAUTION**Connected cable on the floor**

Risk of injury caused by tripping, falling or slipping over connected cables.

- ▶ Always properly secure cables connected to the ARTEMIS 2.
- ▶ Install cables in a way that they cannot be tripped over.
- ▶ If necessary, use a cable duct or secure the cables with adhesive tape.
- ▶ Disconnect the cables from the ARTEMIS 2 before moving.

⚠ CAUTION**Unhealthy posture or excessive physical exertion during operation**

Improper handling of the ARTEMIS 2 can lead to permanent physical injuries to the human locomotive system.

- ▶ Ensure an ergonomic posture when operating and carrying the ARTEMIS 2.

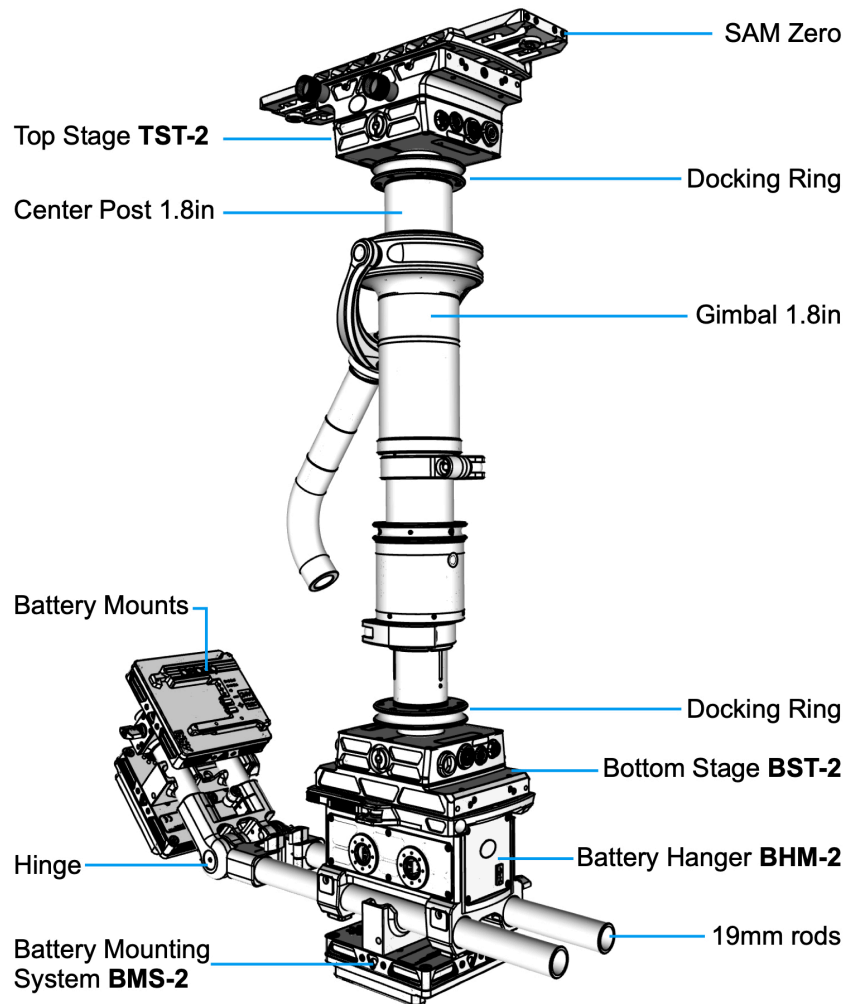
⚠ CAUTION**Radio radiation caused by external radio accessories**

May cause physical impairments such as sleep disturbances and stress.

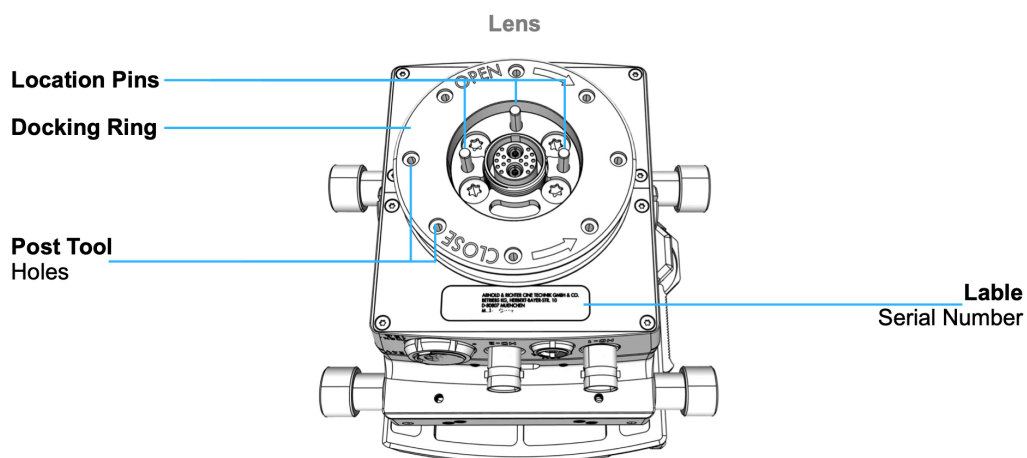
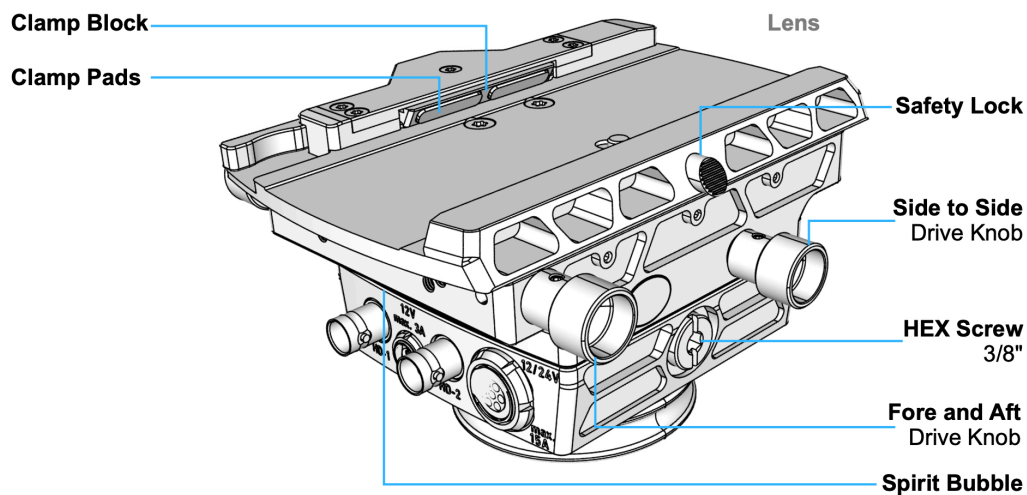
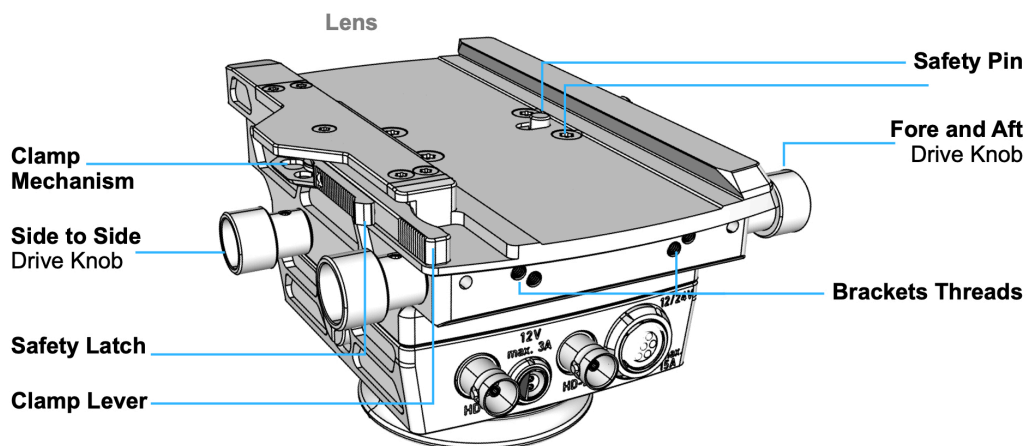
- ▶ Follow the manufacturer's instructions.
- ▶ Use only ARTEMIS 2 components approved by ARRI. The use of components not approved by ARRI is at your own risk. Please observe all relevant safety guidelines

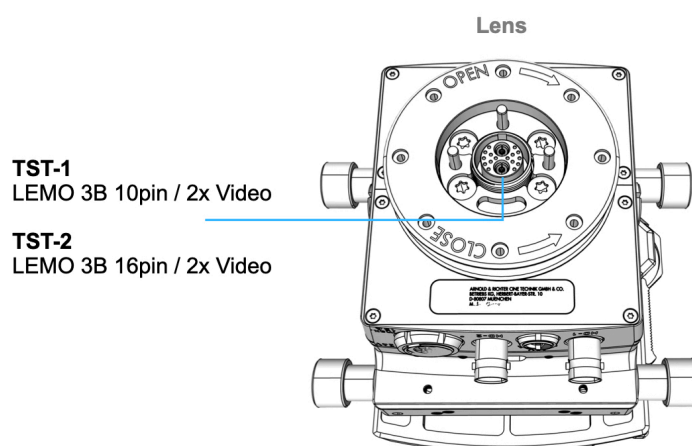
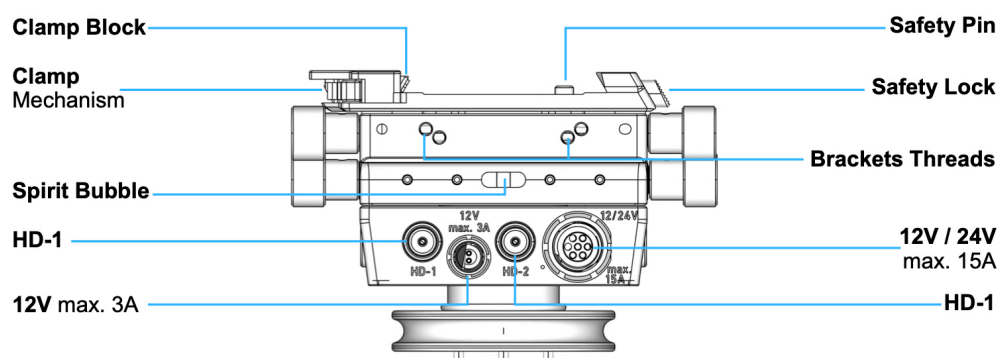
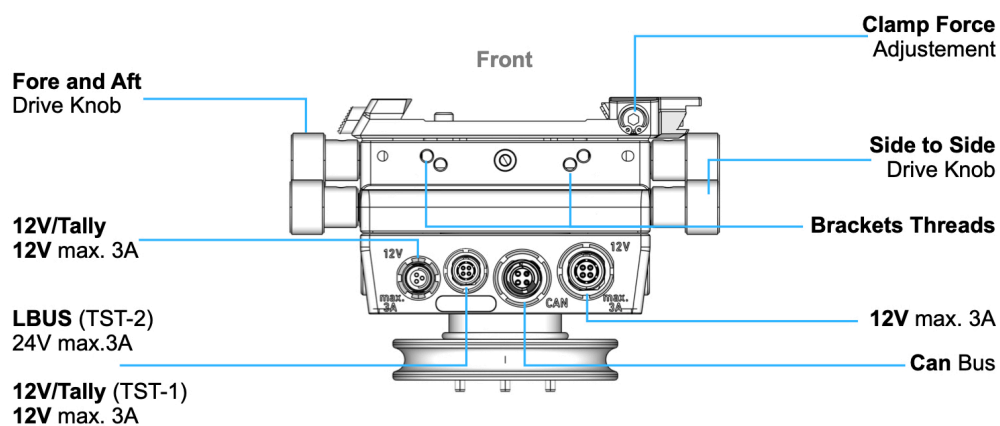
8 Overview

8.1 ARTEMIS 2 Overview



8.2 Top Stage and Bottom Stage Overview





ATTENTION

In the ARTEMIS 2 application, LBUS and CAN Bus are not used.

The TST and BST are available in two versions:

TST-1 & BST-1

- TST-1 & BST-1 is available as an upgrade for existing artemis Gen. 1 and TRINITY Gen. 1 systems using a 3B Lemo 10pin, two video lines socket and main cable.

TST-2 & BST-2

- TST-2 & BST-2 for ARTEMIS 2 and TRINITY 2 systems using a 3B Lemo 16pin, two video lines socket and main cable.

What is it?

The newly developed Top Stages **TST-1** and **TST-2** fulfill important functions of a camera stabilization system, such as:

In combination with an ARTEMIS camera stabilizer, the camera can be attached to the **TST-1** and **TST-2** modules, positioned and supplied with 12V and 24V power.

In combination with the TRINITY systems, the Top Stages **TST-1** and **TST-2** modules carries the new Battery Hanger Module **BHM-2** as also the Battery Hanger of the TRINITY Gen. 1 systems.

The design and functionality of the Bottom Stage **BST-1** and **BST-2** is based on the design of the Top Stage **TST-1** and **TST-2**.

In contrast, the Bottom Stage does not offer side-to-side or fore and aft adjustment.

What does it do?

The new Top Stage combines a very compact design with extremely high overall rigidity and a future-proof modular design.

The conversion to the SAM dovetail plate standard enables a significantly higher rigidity of the dovetail bracket, which has been improved even further by a completely newly developed clamping mechanism.

The new clamping mechanism allows the SAM dovetail plate to be picked up from above, as well as from behind or from the front.

Thus, the BST is perfect for use with the Battery Hanger **BHM-2** at the lower end of the post.

How does it work?

The modular design of the new Top Stages **TST-1** and **TST-2** separates mechanical functions from electronic components, which simplifies service and enables later upgrades.

As a new standard the new Top Stages **TST-1** and **TST-2** uses a new 8pin Lemo 2B main power socket that offers 12V, 24V and battery communication.

Beside two HD SDI video lines, the Top Stage and Bottom Stage is equipped with LBUS Through and additional data lines for future use.

If a lower camera position is desired on top of the ARTEMIS, the modules can also be swapped.

The Top Stage now holds the Battery Hanger at the bottom of the post and the Bottom Stage is used at the top of the post to hold the camera using the SAM plate.

This modularity offers you maximum flexibility in building the perfect rig.

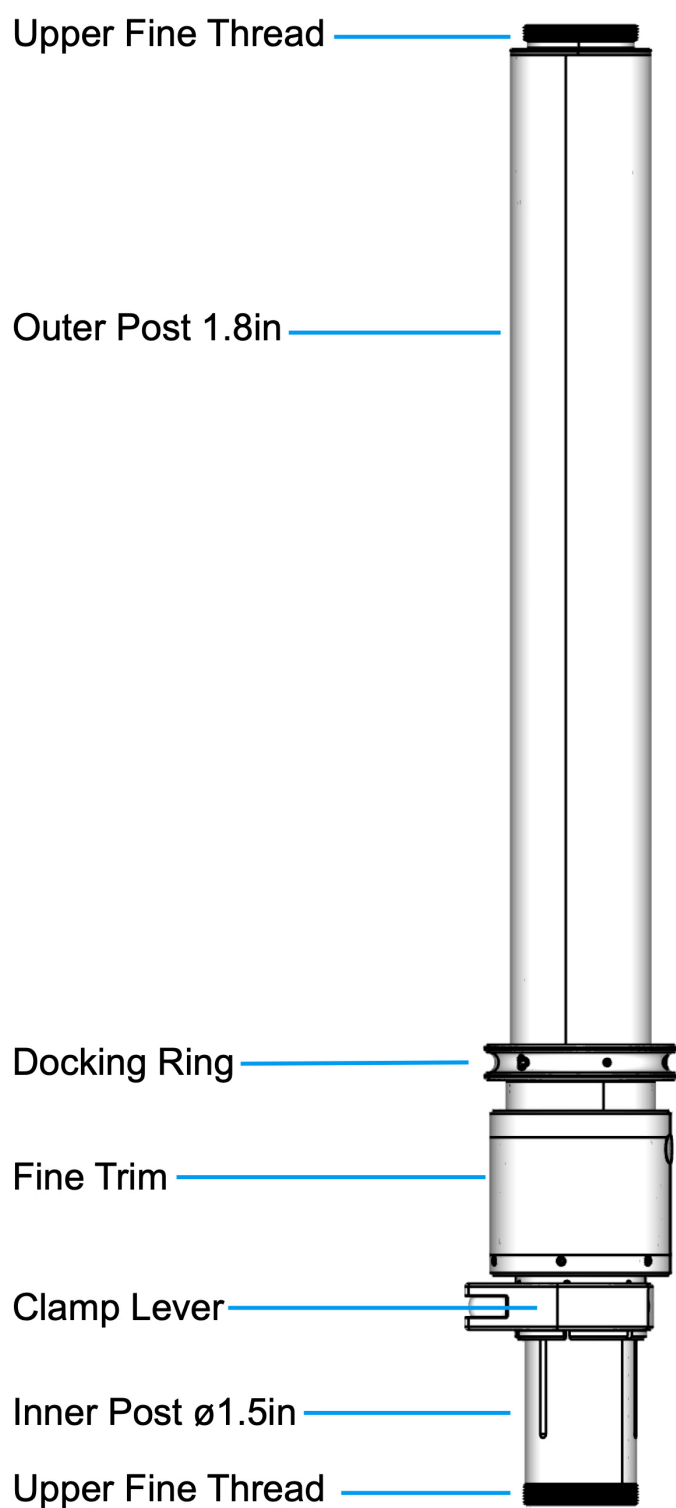
What problems does it solve?

The SAM standard enables extremely quick and tool-free changes from a tripod or handheld setup to an ARTEMIS or TRINITY application within seconds.

The exact front and rear and side-to-side adjustments can be made from either side of the Top Stage. So it doesn't matter if you are left handed or right handed.

The modular design enables the user to carry out essential settings him self, as well as simple and fast service by the local ARRI service.

8.3 Center Post Overview



Introduction

The two-stage artemis 1.8in carbon center post offers a tool-free post clamp and a guided telescopic 1.5" inner post.

Therefore, monitor brackets and existing accessories based on a 1.5in diameter can be used on with the 1.5" inner post.

Only the artemis 1.8in post offers the unique tool-free Fine Trim mechanism for precise length adjustment of the inner post.

Finding the perfect drop down is now more than easy with the Fine Trim mechanism.

After a filter or lens change, there is no longer a need to open the post or gimbal clamp to adjust the drop down.

Available Center Posts

K2.0010489	Carbon Center Post, Ø1.8in
K2.0041474	Carbon Center Post, Ø1.8in, Short
KK.0041404	Super Post, Gen.2, Ø1.8in, 3B, 16pin
KK.0038543	Carbon Center Post, Volt Gimbal, Set
K2.0041976	Post Extension, Ø1.8in, 3B, 16pin, length 8.5in
K2.0040332	Post Main Cable, 3B, 16pin

Lengths

The Standard Post and the Volt Post can be extended from 45,5cm / 17,92in to 71cm / 27,95in.

The Shorty Post can be extended from 37cm / 14,56in to 46,5cm / 18,30in.

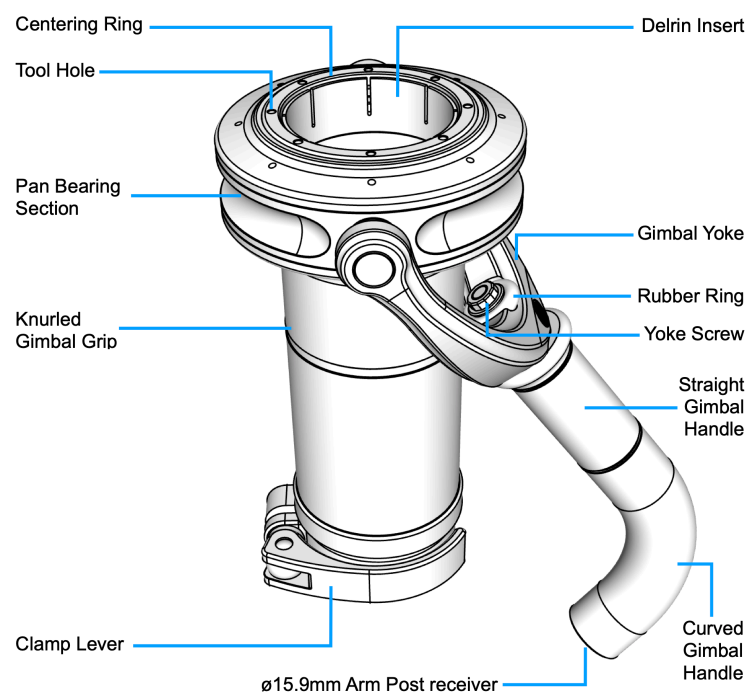
The Super Post can be extended from 124cm / 48,82in to 200cm / 78,74in.

8.4 Overview Gimbal

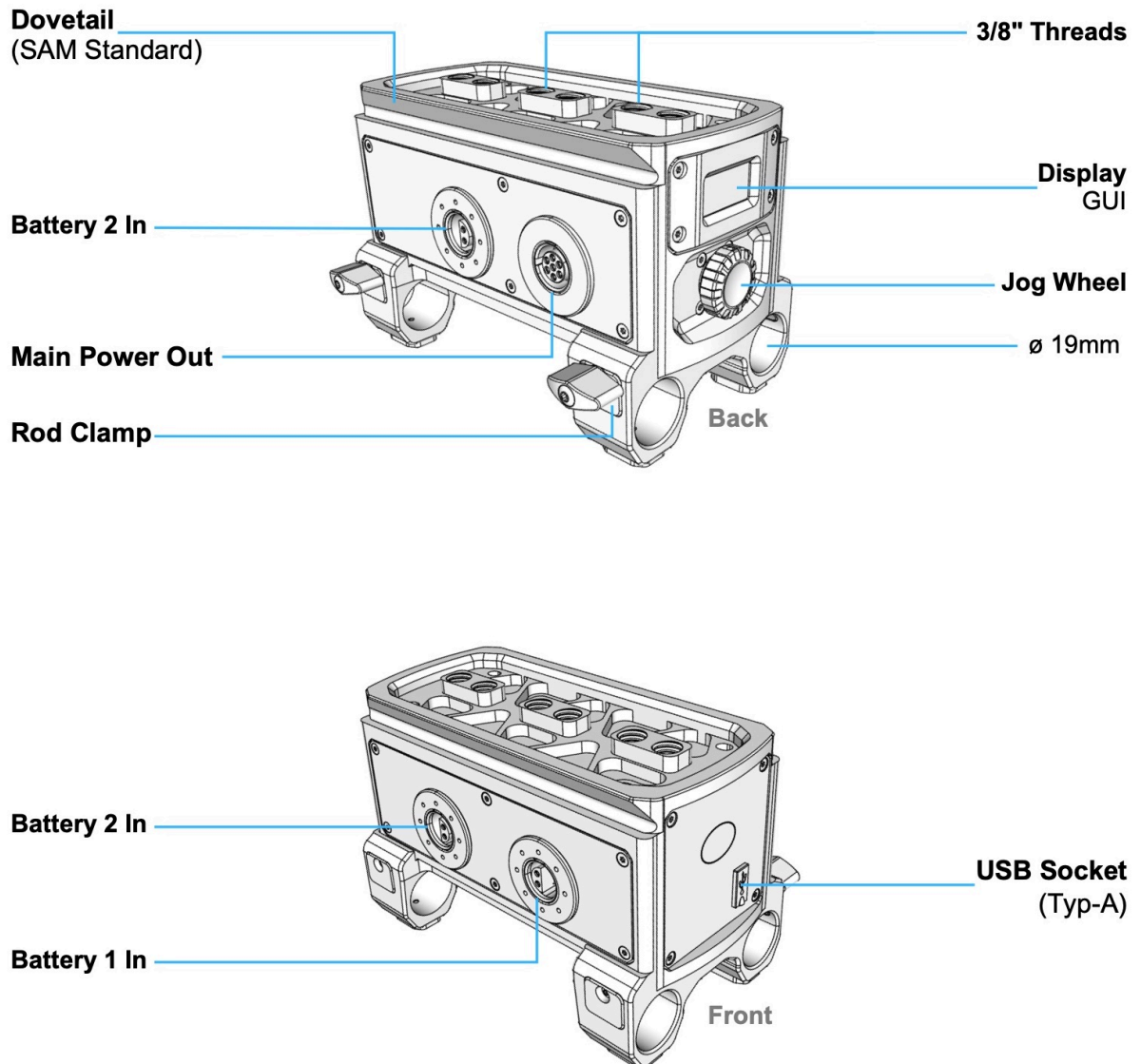
The 1.8in gimbal offers high precision, extremely low-friction bearings, a tool-free clamping mechanism and an ergonomic and functional design.

The diameter of the knurled grip is 57mm / 2.24in, which provides precise torque and more control even when using heavy cameras.

The diameter of the curved gimbal handle 25mm / 0.984in allows mounting a zoom device.



8.5 Battery Hanger Module Overview



What is it?

The new Battery Hanger Module **BHM-2** is a future proof high-performance power supply for ARTEMIS 2 and TRINITY 2 camera stabilizer systems.

Regardless of the batteries used, whether 12V or 24V batteries, the **BHM-2** always supplies 12V and 24V for the camera and the accessories used.

What does it do?

If 12V batteries are used, 24V will be transformed from the 12V if 24V power supply is required. It works the same way if only 24V batteries are connected, then the needed 12V power supply is down transformed from the 24V.

With the **BHM-2**, up to three batteries (V-Mount, B-Mount and Gold Mount) can be connected to the **BHM-2** and their power can be bundled.

How does it work?

Since all batteries always work together, the intelligent battery management enables extremely long runtimes for the entire system, even with high consumption. This means that even very small and light batteries can be used without having to worry about the overall life of the batteries. If the Battery Hanger Module, **BHM-2** is used with a TRINITY 2, the **BHM-2** always supplies the necessary 24V for the motors and at the same time 12V for the control electronics.

What problems does it solve?

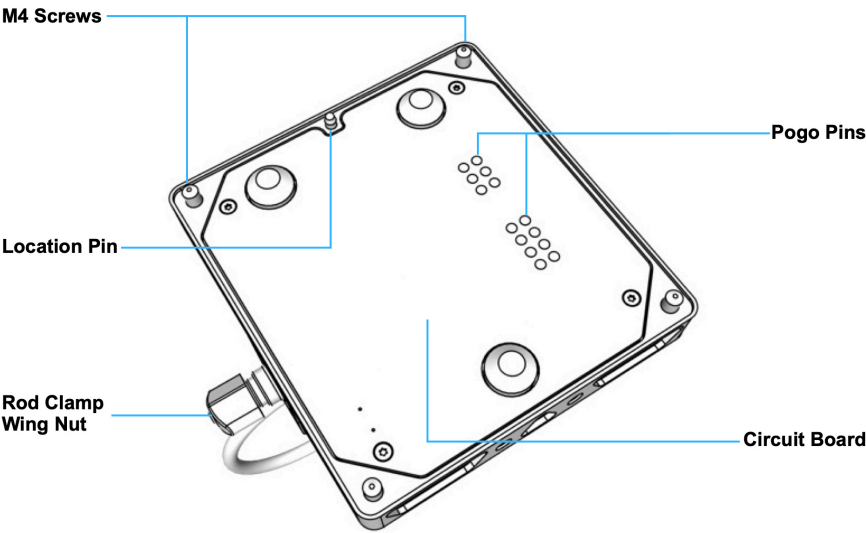
The modular design of the Battery Hanger Module, **BHM-2** takes up to three Battery Mounting System **BMS-2**, which can be placed easily and quickly in any desired position on the 19mm rods.

The **BHM-2** can handle different communication protocols and displays the battery information as long the batteries provides this kind of information.

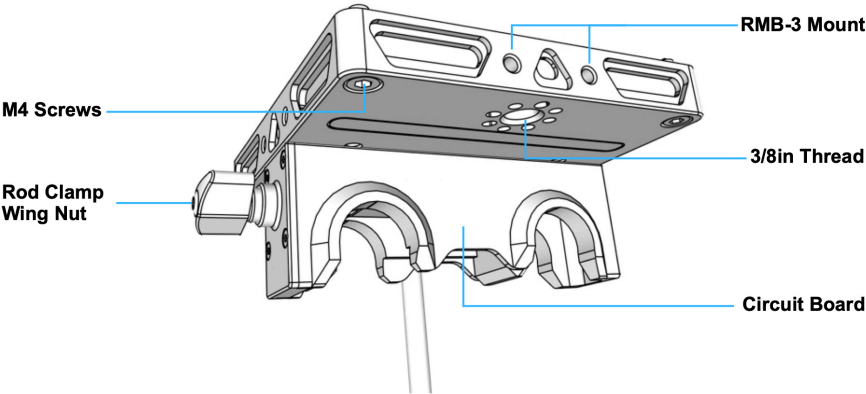
The combination of the **BHM-2**, which is equipped with 19mm rod, and the freely positionable battery system allows the size and weight distribution of the counterweight in the lower slide to be designed in an unprecedented way.

8.6 Battery Mounting System Overview

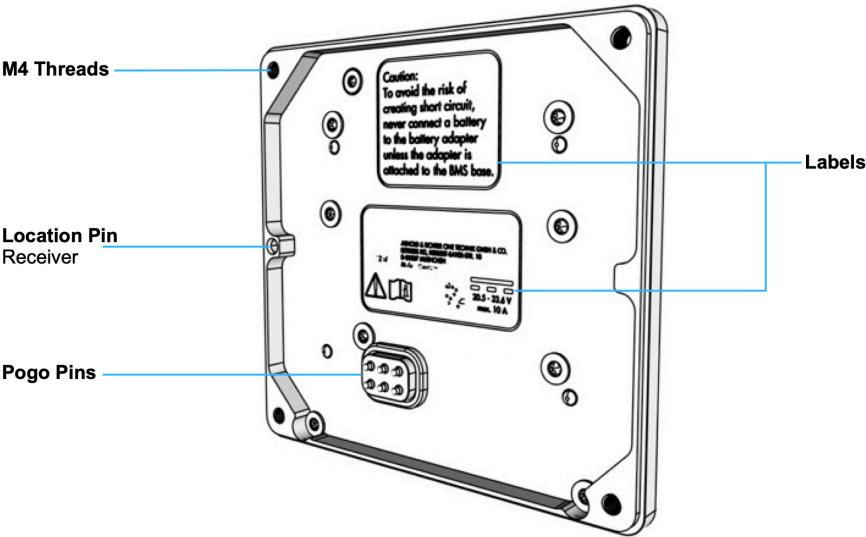
Top View



Bottom View



Bottom View
Battery Mount



What is it ?

The newly developed Battery Mounting System enables extremely flexible use and attachment of three different battery types **B-Mount**, **V-Mount** and **Gold-Mount** on the TRINITY 2 and TRINITY Gen. 1 and ARTEMIS 2.

How does it work?

The battery holder system consists of a base module with a the rod clamp mechanism to which three different battery holders can be attached quickly and easily.

The newly developed clamping mechanism allows the **BMS-2** and **BMS-1** to be mounted on the 19mm rods of the new Battery Hanger **BHM-2** as well as on the 18mm rods of the of the TRINITY Gen. 1 Battery Hanger.

What problems does it solve?

The new clamping mechanism allows the Battery Mounting System to be attached directly to the desired position.

The cumbersome pushing of the mounts onto the rods is no longer necessary.

Which combinations are possible?

There are currently three different battery mounts available to be used with the Battery Hanger Modul **BHM-2: B-Mount (24V)**, **V-Mount (12V)**, **Gold Mount (12V)**

There are two versions of the Battery Mounting System:

BMS-2 with **2B Lemo 4pin**

for Battery Hanger Modul **BHM-2** K2.0039300

and

BMS-1 with **1B Lemo 3pin** for the TRINITY Gen. 1

Battery Hanger **BHM-1** K2.0037707

The **BMS-2** can be combined with the:

B-Mount for BMS-2	K2.0040284
V-Mount for BMS-1 / BMS-2	K2.0040286
Gold Mount for BMS-1 / BMS-2	K2.0040285

The BMS-2 transmits status information of the batteries as soon as the batteries offer data communication.

The **BMS-1** can be combined with the:

V-Mount for BMS-1 / BMS-2	K2.0040286
Gold Mount for BMS-1 / BMS-2	K2.0040285

The **BMS-1** does not transmit any status information of the batteries.

BMS-1 can **NOT** be used with the **B-Mount (24V)** battery mount.

9 Installation and Operation

9.1 TST and BST Installation and Operation

ADVICE

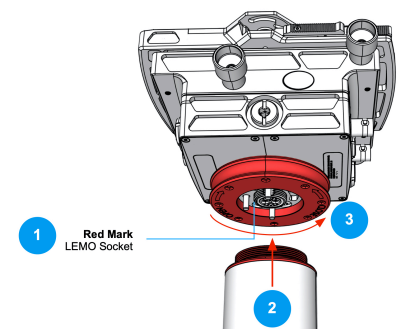
**Powering TRINITY 2 Head, Top and Bottom Stage at the same time**

This would cause more than the allowed amount of volts to flow through the ARTEMIS 2 and TRINITY 2. Risk of damage to the accessories.

- ▶ DO NOT power the TRINITY 2 Head, Top and Bottom Stage at the same time.
- ▶ Use for powering TRINITY 2 Head OR Top Stage OR the Bottom Stage.

9.1.1 Installing TST/BST to Center Post

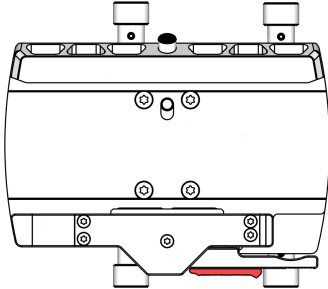
1. Locate the red dot on the main cable plug and socket. When both marks are aligned, insert the Lemo 3B plug into the socket.
2. Carefully place the **Top Stage / Bottom Stage** onto the center post fine thread.
3. Turn the blue **Docking Ring** with your fingers until the thread fully engages.
4. Use the **Post Tool** to finally tighten the Docking Ring.



9.1.2 Installing SAM dovetail plates

⚠ CAUTION



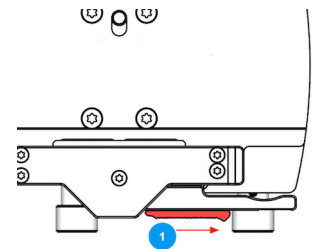


Moving clamp lever without safety lock

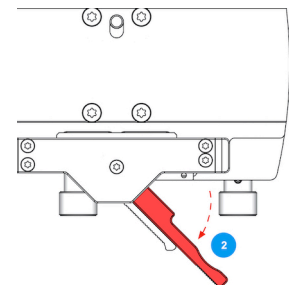
Risk of crushing fingers.

- ▶ Do not pull on the clamp lever before the safety lock has been released!
- ▶ Do not pull on the clamp lever and slide the safety latch at the same time!

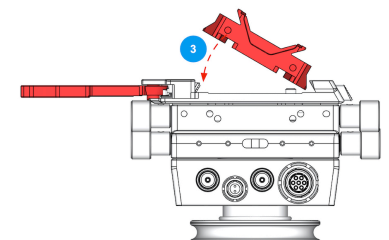
1. Touch the safety latch with your thumb and slide it fully to the right.



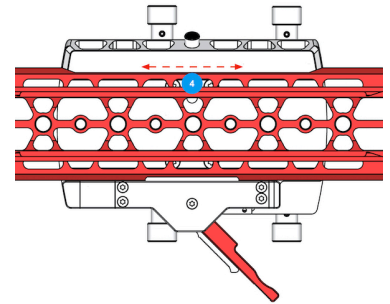
2. Place your index finger behind the clamping lever and pull the clamping lever forward until it reaches the end stop on the left side.



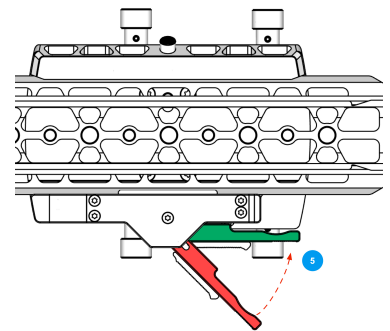
3. Place the slightly inclined SAM dovetail plate and then lay it flat in the top stage as shown here



4. Move the clamping lever to the 45 ° position.
→ The dovetail plate is already completely secured and can no longer be removed upwards. On the other hand, the dovetail plate can still be moved fore and aft in this position and thus the camera's COG can be roughly positioned.



5. Move the clamping lever all the way to the right.
6. Press the clamping lever into the end position, to finally block the dovetail plate.
→ The SAM dovetail plait is mounted.



Camera Dovetail Plates

ADVICE

Using the SAM plates will speed up the camera setup and later the balancing process. The special height of every SAM plate will lift the dedicated camera right into the center of the TRINITY 2 inner ring. This way a perfect COG of the camera is guaranteed.

Available SAM plates and lens support brackets.

K2.0041201	Stabilizer Adapter Mount SAM-Zero
K2.0018851	Stabilizer Adapter Mount SAM-1 for ALEXA
K2.0014215	Stabilizer Adapter Mount SAM-2 for ALEXA
KK.0016116	Stabilizer Adapter Mount SAM-2 Set for ALEXA Mini
K2.0014630	Stabilizer Adapter Mount SAM-3 Set for AMIRA
K2.0024508	Stabilizer Adapter Mount SAM-6
K2.0039405	Stabilizer Adapter Mount SAM-6 450mm/18in
K2.0034512	CSS Broadcast Dovetail Plate (SAM plate standard width)
K2.0039803	Stabilizer Plate for CBP 355mm/14in
K2.0038536	Stabilizer Plate for CBP 450mm/18in
K2.0033662	Stabilizer Adapter Mount SAM-4

KK.0038971	Long Stabilizer Mount 15mm Mini/Mini
KK.0038972	Long Stabilizer Mount 19mm Mini/Mini LF
K2.0039089	Compact Lens Support CLS-1
K2.0040036	Balance Utility Dovetail BUD-2
K2.0039861	Dovetail Utility Base DUB-1
K2.0038537	Stabilizer System Bracket SSB-2 19mm
K2.0038618	Stabilizer System Bracket SSB-2 15mm

9.1.3 Adjusting Clamping Force

If the clamping force of the clamping mechanism decreases:

- Check that the clamping pads are clean. Remove dirt or grease with isopropanol.
- Check whether the clamping pads still cover the entire area. If parts of the clamp pads are gone, please contact ARRI Service.

ADVICE



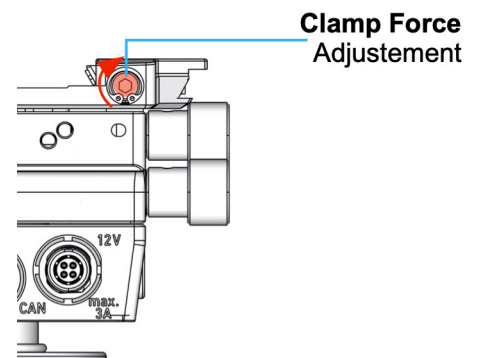
Overtighten the leveling screw

This will cause the clamping force to become excessive and the Clamp Pads may be damaged.

- ▶ Turn the silver nut by a 1/8 or 1/4 turn to the right. NOT more!

Clamp Force Adjustment

1. Open the Clamp Lever.
2. Turn the silver nut by a 1/8 or 1/4 turn to the right, to adjust the clamp force.
→ The clamping force is adjusted.



9.2 Center Post Installation and Operation

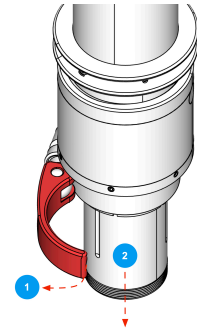
9.2.1 Center Post 1.8in Installation

(Standard Post, Volt Post, Shorty Post, Super Post)

Extending the Center Post

Changing center post position:

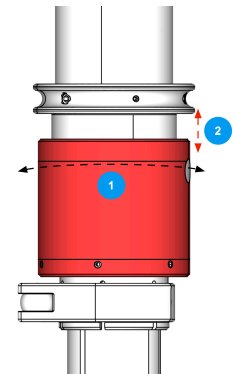
1. Open the post clamp lever.
2. Slide or pull the inner post to the desired position.
→ The center post is positioned.



Fine Trim Mechanism

The Fine Trim allows:

- To adjust the length of the inner post and extremely accurately set the resulting drop down time.
- To add more drop down if needed, or to reduce drop as much to get the rig very easily into a „dirty low mode“.
- An overall movement of 22mm / 0,86in.



ATTENTION

Adjust the Fine Trim halfway before balancing.

9.2.2 Center Post Clamp Force Adjustment

ADVICE



Overtighten the leveling screw

This will cause the clamping force to become excessive and the Carbon Center Post may be damaged.

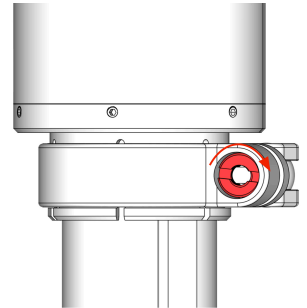
- ▶ Turn the silver nut by a 1/8 or 1/4 turn to the right. NOT more!

ADVICE

If the clamping force of the Center Post clamp weakens, **clean** the Inner Post with isopropanol, before you adjust the clamping force.

Clamp Force Adjustment

1. Open the clamp lever.
2. Turn the silver nut by a 1/8 or 1/4 turn to the right, to adjust the clamp force.
→ The clamping force is adjusted.



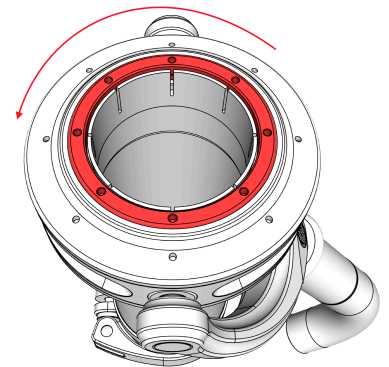
9.3 Gimbal Installation and Operation

9.3.1 Installing the 1.8in Gimbal to the Center Post

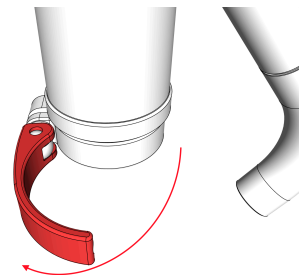
Preparation:

- Remove the top stage from the center post
- Prepare Post Tool (K2.0040046) for Installation

1. Use the **Post Tool** to open the centering ring by turning it to the left.



2. Open the gimbal clamp lever
3. Put the gimbal on the post.
→ The Gimbal is ready for the positioning on the center post.



Positioning the Gimbal

After the gimbal sits on the post, it can be positioned.

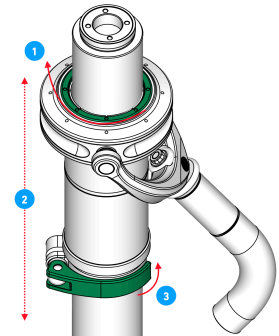
ADVICE

**Overtighten the center ring!**

May cause damage.

- ▶ Tighten the center carefully.
It is not a clamp lever!

1. Tighten carefully the center ring.
2. Move the gimbal to the desired position by rotating and sliding the gimbal.
3. Lock the clamp lever.
→ The Gimbal is positioned.



9.3.2 Adding Components

Gimbal Handle Extension (K2.0010569)

ADVICE

Do not over tighten the centering ring!
It is not a clamp!

ATTENTION

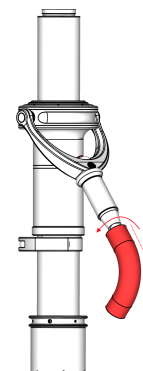
Make sure all handle parts are tight!

Stop using the gimbal once one of the handle parts comes loose.

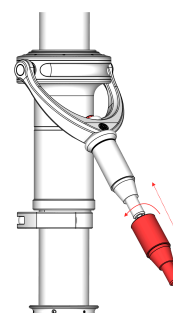
ADVICE

For a more permanent connection, apply two drops of Loctite 222 to the threads.

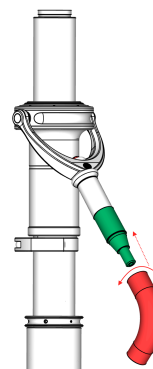
1. Hold the straight gimbal handle and turn the curved gimbal handle to remove the curved handle.

**Gimbal Handle Extender assembly**

2. First screw the extender onto the straight handle.

**Curved Handle assembly**

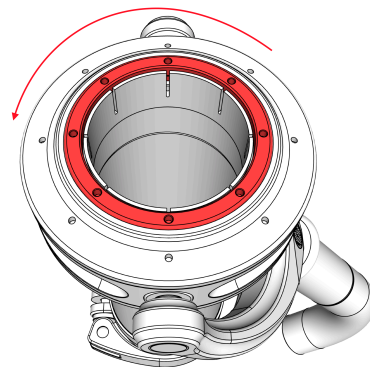
3. Then screw the curved handle onto the extender.



Knurled Grip Gimbal Extension, Ø1.8in (K2.0014280)

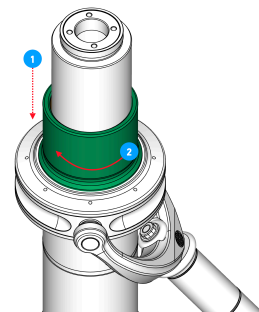
Removing Centering Ring

1. Remove the Top Stage first.
2. Use the Post Tool (K2.0040046) to open the Centering Ring by turning it to the left.
3. Remove the Centering Ring from the Gimbal.



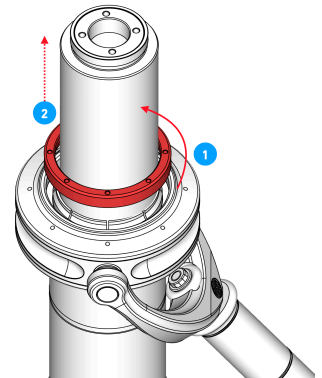
Knurled Grip assembly

4. Slide the knurled grip gimbal extension over the post and place it carefully on top of the gimbal.
5. Carefully tighten the knurled grip gimbal extension.

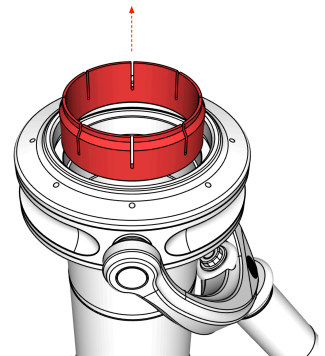


TIFFEN M1 / M2 Post Gimbal Inserts (K0.0040291)**Removing Centering Ring**

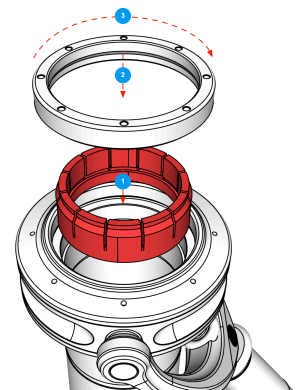
1. Remove the Top Stage first.
2. Use the Post Tool (K2.0040046) to open the Centering Ring by turning it to the left.
3. Remove the Centering Ring from the Gimbal.

**Removing the Delrin Sleeve**

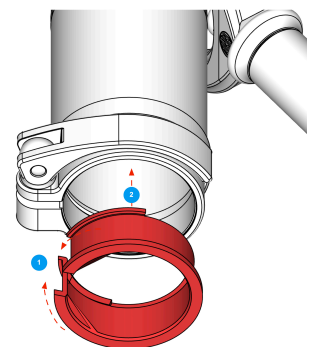
4. Remove the Delrin Sleeve from the Gimbal.

**Insert the Upper Delrin Sleeve**

5. Place the upper Delrin Sleeve.
6. Remove any grease at the inside of the insert.
7. Place the centering ring and carefully tighten it.

**Insert the lower clamp insert**

8. Squeeze the insert with your fingertips and slide it down into the gimbal



9.3.3 Gimbal Clamp Force Adjustment

ADVICE

**Overtighten the leveling screw**

This will cause the clamping force to become excessive and the Carbon Center Post may be damaged.

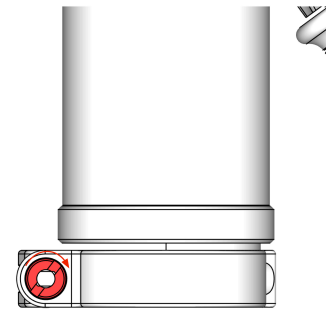
- ▶ Turn the silver nut by a 1/8 or 1/4 turn to the right. NOT more!

ADVICE

If the clamping force of the Gimbal clamp weakens, **clean** the Outer Post with isopropanol, before you adjust the clamping force.

Clamp Force Adjustment

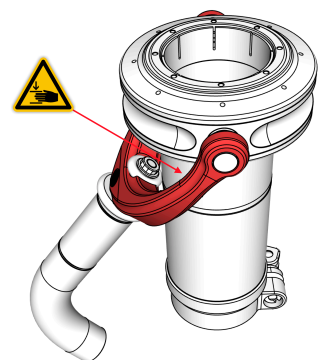
1. Open the clamp lever.
2. Turn the silver nut by a 1/8 or 1/4 turn to the right, to adjust the clamp force.
→ The clamping force is adjusted.



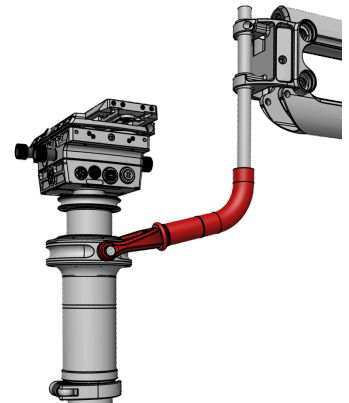
9.4 Safety Instructions

Gimbal 1.8in

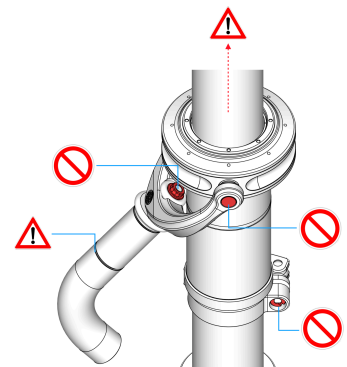
- Do not put your fingers between the yoke and the handle, there is a risk of crushing.



- Never use an ARTEMIS GIMBAL upside down!



- Stop using the gimbal when it starts slipping up on the post due a too weak clamping force!
- Make sure the curved handle is always securely screwed to the straight handle!
- Do not remove any screw covers!
- Do not loosen or remove any screws!
- Do not disassemble the Gimbal!
- Do not adjust the Gimbal yourself!
- Do not lubricate the bearings

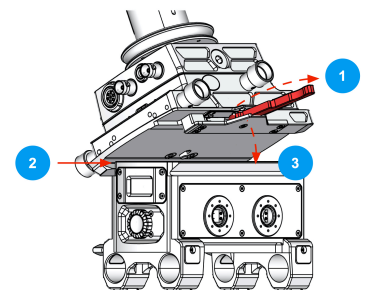


9.5 Battery Hanger Module Operation and Installation

9.5.1 Batter Hanger Module BHM-2

Mounting BHM-2 to TST / BST

1. Unlock and open the Top / Bottom Stage clamp mechanism.
2. Align the Battery Hanger Module dovetail with the Top / Bottom Stage mount.
3. Lift the Battery Hanger Module completely into the Top / Bottom Stage.
4. Lock the dovetail clamp mechanism.

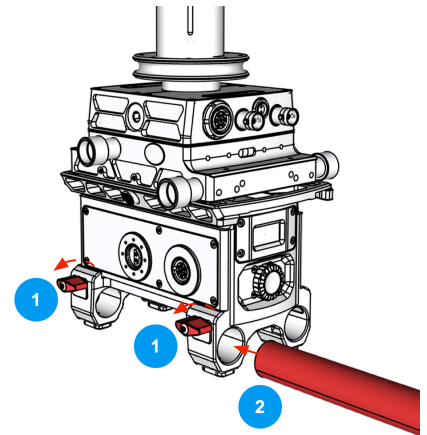


9.5.2 Mounting 19mm Rods

1. Turn both Rod Clamp wing nuts to the left to open the clamp mechanism.
2. Insert the 19mm rods.
3. Tighten both rod clamp wing nuts.

ATTENTION

Do not over tighten, when using carbon fiber rods.

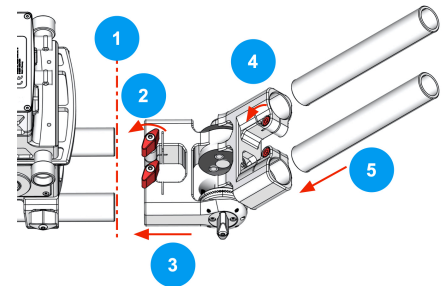


Mounting the hinge and the short 19mm rods

1. Alling the long 19mm rods.
2. Open both wing nuts.
3. Place the hinge on the long 19mm rods.
Tighten the wing nuts.
4. Open the clamp screws.
5. Place the short 19mm rods.
Tighten the clamp screws.

ATTENTION

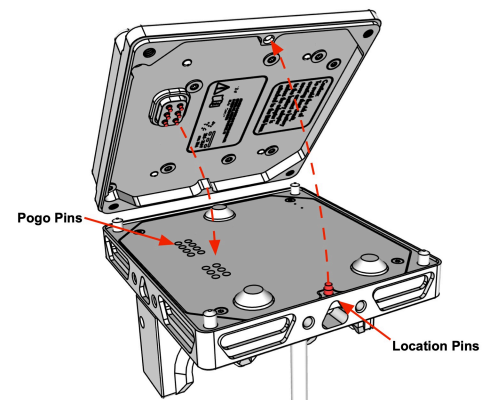
Do not over tighten, when using carbon fiber rods.



9.5.3 Battery Mounting System

Installation BMS-2

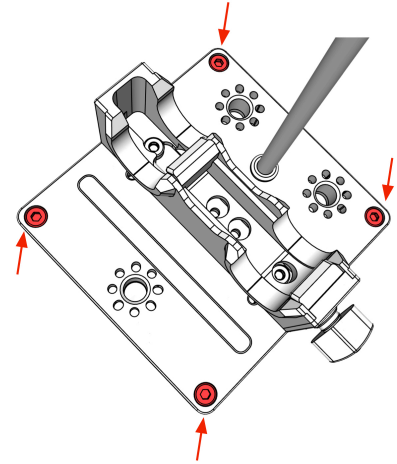
1. Place the Battery Mount on the BMS-2 base.



ATTENTION

Make sure the **location pin is aligned** with the receiver hole and that the **pogo pins line up with the receiver pads** on the circuit board.

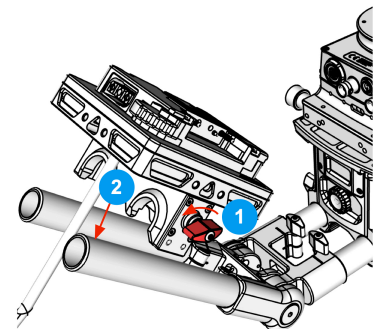
2. Use a 3mm allen wrench to tighten all four screws.



9.5.4 Battery Hanger Module

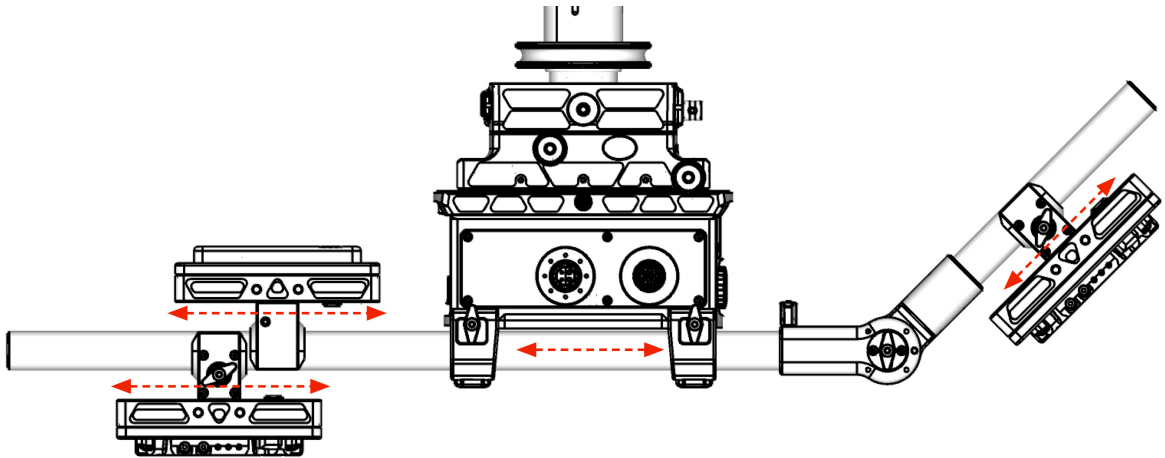
Mounting Battery Mounts BMS-2 to the BHM-2

1. Open the rod clamp wing nut.
2. Positioning the battery mount on the 19mm rods.
3. Tighten the clamp wing nut.



Free Positioning of the Battery Mounts BMS-2

The combination of the **BHM-2**, which is equipped with 19mm rods, and the freely positionable **BMS-2** allows the size and weight distribution of the counterweight in the lower slide to be designed in an unprecedented way.

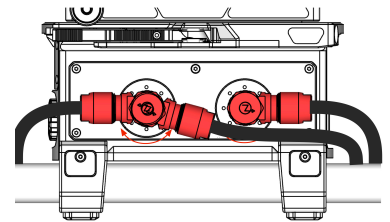


9.5.5 Connecting the Battery Mounts to the Battery Hanger Module

The battery mounts BMS-1 & BMS-2 are equipped with a Lemo 90° elbow connectors. In order to give you more flexibility when placing the battery mounts, the three Battery In sockets can be rotated by 90° and the elbow plug can be placed in the required position.

Right side

BAT IN 1 and **BAT IN 3** can be brought into the desired position by turning the sockets 90° around below.

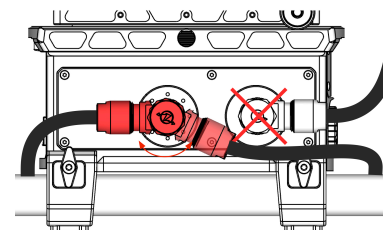


ADVICE

Do **not** turn the **Bat In** sockets **upside down**.
Only turn the sockets around **underneath**!

Left Side

Same procedure with the **BAT IN 2**.



ADVICE

Do **not** turn the **POWER OUT** Socket!
This socket is fixed and cannot be rotated.

9.5.6 Connecting the Battery Hanger Module to the Top / Bottom Stage

The **POWER OUT** socket of the Battery Hanger provides high capacity 12V and 24V power, plus digital battery communication to the ARTEMIS 2 and TRINITY 2 system as soon the **BHM-2** is connected to the Top Stage **TST-2** or Bottom Stage **BST-2**.

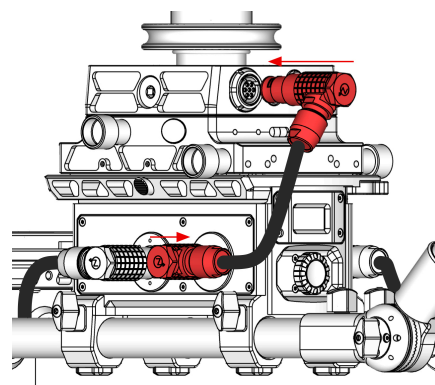
ATTENTION

Hot Plug

Check that the **BHM-2** is switched **OFF** before connecting it to the **TST-2** and **BST-2**.

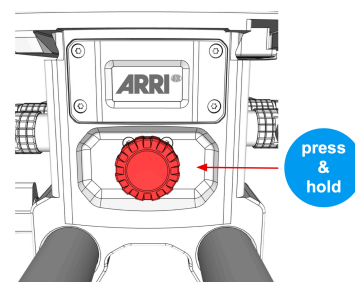
Connecting an operating **BHM-2** to the system, may produce an unwanted **electrical surge**!

Connect the Power Cable, BHM-2 to TST (K2.0037771) to the **POWER OUT** socket of the Battery Hanger Module and the **POWER IN** socket of the Top / Bottom Stage.



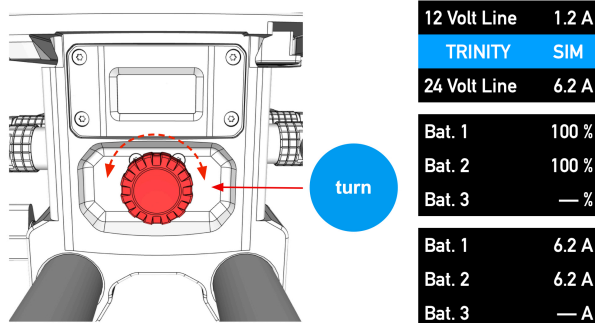
9.5.7 Power ON / OFF

To turn the BHM-2 / the entire system **ON** and **OFF**, **press and hold** down the Jog-Wheel until the ARRI logo appears on the display.



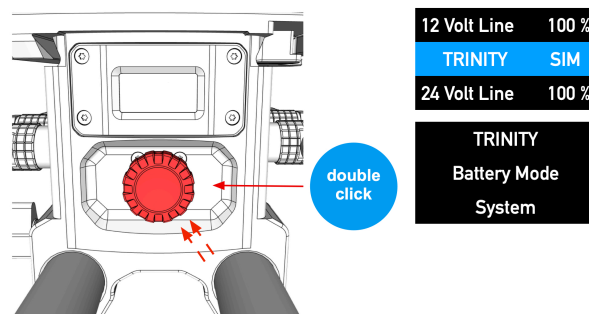
9.5.8 Jog-Wheel Functions

Turning the Jog-Wheel takes you through the various status pages.

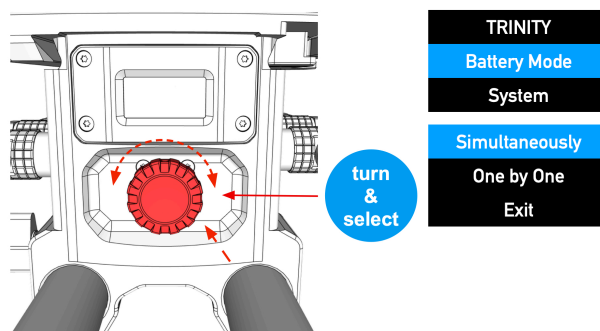


A **double click** on the Jog-Wheel opens the **menu**.

There you set up the Battery Hanger modes or carry out software updates in the System sub menu.



Modes and **functions** can be selected and activated by turning and pressing the Jog-Wheel.



9.5.9 TRINITY / ARTEMIS Mode

ADVICE

The BHM-2 offers two different modes: **ARTEMIS** and **TRINITY**.

Technically and functionally, both modes are exactly the same, they only differ in the way the display acts.

In **ARTEMIS** mode, the display is **rotated** by **180°** as soon as the ARTEMIS was moved into the **low mode** position.

In **TRINITY** mode, the display will **turn off** as soon as the system is raised **above 40°** in the tilt axis.

Switching ARTEMIS / TRINITY Mode

1. **Double-click** the Jog-Wheel.
2. **Turn** the Jog-Wheel **left** to reach the current mode.
3. **Click** the actual mode once
4. Select the mode you want, by clicking once
5. Or select Exit to cancel the action

12 Volt Line	100 %
TRINITY	SIM
24 Volt Line	100 %

TRINITY
Battery Mode
System

TRINITY
ARTEMIS
Exit

9.5.10 Battery Status

Home Screen BHM-2

This **main page** is displayed after switching on the BHM-2.

It shows the selected modes:

TRINITY or **ARTEMIS**

Simultaneously or **One By One**

and the available **total capacity** of the **12V** and **24V** power lines.

12 Volt Line	100 %
TRINITY	SIM
24 Volt Line	100 %

12 Volt Line	12 V
TRINITY	OBO
24 Volt Line	100 %

Battery Status / System Status

This page shows the available capacity in volts or percent of each battery.

Values in percent can only be displayed if the batteries offer one of the supported battery communication protocols.

If there is **no** such battery communication **protocol** available, the values are displayed in **Volt only**.

If **no** battery is **connected** to the input or the battery is **completely discharged**, a **line** is displayed.

Bat. 1	100 %
Bat. 2	— V
Bat. 3	20 %

Bat. 1	24.8 V
Bat. 2	— V
Bat. 3	23.9 V

Turning the Jog-Wheel takes you to this page.
The current consumption in amp of the individual batteries can be read out here.

Bat. 1	6.2 A
Bat. 2	6.2 A
Bat. 3	— A

Bat. 1	100 %
Bat. 2	— V
Bat. 3	20 %

Bat. 1	24.8 V
Bat. 2	— V
Bat. 3	23.9 V

All types of **warnings** are displayed in **orange** color.

12 Volt Line	100 %
Low Voltage	
24 Volt Line	20 %

Low Voltage	
-------------	--

ADVICE

Using 24V batteries

Shutdown when the output voltage is **less** than **23.0** volts.

Single battery warning when the voltage is **less** than **23.9** volts.

Single battery warning when percent reading is **less** than **20%**.

24V Line warning when the output voltage is **less** than **23.9** volts.

Low voltage warning when less than **10% of all batteries**.

Low Voltage warning when all 24V voltages are **less** than **23.9** volts.

Overvoltage warning if **more** than **35 volts** are measured with 24 volt batteries.

ADVICE

Using 12V batteries

Shutdown when the output voltage is **less** than **11.0** volts.

Single battery warning when the voltage is **less** than **11.9** volts.

Single battery warning when percent reading is **less** than **20%**.

24V Line warning when the output voltage is **less** than **11.9** volts.

Low voltage warning when **less** than **10%** of all batteries.

Low Voltage warning when all 12V voltages are **less** than **11.9** volts.

Overvoltage warning if **more** than **25** volts are measured with 12 volt batteries

9.5.11 General Working Method / BHM-2

Overview

The Battery Hanger Module **BHM-2** provides constant 12V and 24V regardless of whether 12V or 24V batteries are connected.

Use of 12V batteries

If up to three **12V batteries** are connected, 12V will be supplied **directly** to the 12V consumers.

As soon as a **24V consumer is detected**, the BHM-2 supplies a **regulated 24V** to this consumer.

The **12V** supply is shown in **percent** as long as battery communication is available, the **24V** supply is shown in **Volts** only.

12 Volt Line	100 %
TRINITY	SIM
24 Volt Line	100 %

Use of 24V batteries

If up to three **24V batteries** are connected, 24V will be supplied **directly** to the 24V consumers.

As soon as a **12V consumer is detected**, the BHM-2 supplies a **regulated 12V** to this consumer.

The **24V** supply is shown in **percent** as long as battery communication is available, the **12V** supply is shown in **Volts** only.

12 Volt Line	12 V
TRINITY	SIM
24 Volt Line	100 %

Combined use of 12V and 24V batteries

If **12V** batteries and **24V** batteries are connected, 12V will be supplied **directly** to the **12V consumers** and 24V **directly** to **24V consumers**.

As soon as a **12V consumer is detected**, the BHM-2 supplies a **regulated 12V** to this consumer.

As soon as a **24V consumer is detected**, the BHM-2 supplies a **regulated 24V** to this consumer.

The 12V and 24V supply percentage is displayed as long as battery communication is available.
If battery communication is not available, only volts will be displayed.

12 Volt Line	100 %
TRINITY	
24 Volt Line	100 %

9.5.12 Discharge Modes

Intro

The Battery Hanger Module BHM-2 offer two different discharge modes:

Simultaneously or **One By One**

Simultaneously / SIM

In **SIM** mode, all connected batteries are discharged at the same time as long as they offer the same voltage.

The strongest battery is discharged first until it has reached the level of the other batteries.

After that, all batteries are discharged evenly.

12 Volt Line	100 %
TRINITY	SIM
24 Volt Line	100 %

ATTENTION

If batteries with **different voltages** are used in the **SIM** mode, the BHM-2 works exclusively in **OBO** mode.

Thus, no hot-swap is available.

If only **one** battery is used, the total running **time** may be **limited**.

One By One / OBO

In the **OBO** mode, the battery connected to **BAT IN 1** is discharged **first**.

As soon as battery 1 is fully discharged, battery 2 will take over.

As soon as battery 2 is fully discharged, battery 3 will take over.

12 Volt Line	12 V
TRINITY	OBO
24 Volt Line	100 %

ATTENTION

If the **active battery** is accidentally **removed** while in **OBO mode**, the BHM-2 will **shut down immediately**.

If only **one** battery is used, the total running **time** may be **limited**.

Changing Battery Mode

- 1. **Double-click** the Jog-Wheel
- 2. **Select** Battery Mode by clicking the Jog-Wheel once
- 3. **Turn** the Jog-Wheel and **select** the desired discharge mode by **clicking** on the Jog-Wheel once
- 4. Or select Exit to cancel the action

12 Volt Line	100 %
TRINITY	SIM
24 Volt Line	100 %

TRINITY

Battery Mode

System

Simultaneously

One By One

Exit

9.5.13 System BHM-2

Brightness

To adjust the display brightness

- 1. **Double-click** the Jog-Wheel.
- 2. Turn the Jog-Wheel **right** to reach **System** and **press** the Jog-Wheel to **select**.
- 3. Turn the Jog-Wheel **left** to reach **Brightness** and **press** the Jog-Wheel to **select**.
- 4. **Click Brightness** once.
- 5. Turn the Jog-Wheel up or down to select the desired brightness.

12 Volt Line100 %

TRINITYSIM

24 Volt Line100 %

TRINITY

Battery Mode

System

Brightness

Firmware Info

Update

8

7

5

Firmware Info

To read out the actual Firmware information

- 1. **Double-click** the Jog-Wheel.
- 2. Turn the Jog-Wheel **right** to reach **System** and **press** the Jog-Wheel to **select**.
- 3. Turn the Jog-Wheel to reach **Firmware Info** and **press** the Jog-Wheel to **select**.
- 4. Turning the Jog-Wheel to the right will cycle through the current firmware levels of all components, including the battery mounts, as long as they are connected.

12 Volt Line	100 %
TRINITY	SIM
24 Volt Line	100 %

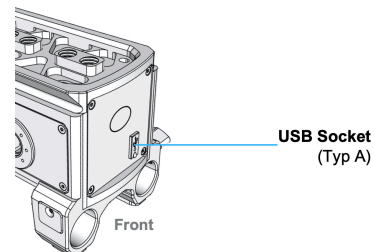
TRINITY
Battery Mode
System

Brightness
Firmware Info
Update

bco v x.xx
poc v x.xx
bms 1: v x.xx

Firmware Update

5. Download the **latest firmware** for the **BHM-2**.
6. Copy it on a USB Stick (FAT32)
7. Insert the USB stick at the front of the BHM-2.
8. **Connect** all **BMS-2** to the Battery Hanger Module **BHM-2**!



ADVICE

Only in this way can new and updated battery communication protocols be uploaded to the individual battery holders.

9. **Double-click** the Jog-Wheel.
10. Turn the Jog-Wheel **right** to reach **System** and **press** the Jog-Wheel to **select**
11. Turn the Jog-Wheel right to reach **Update** and **press** the Jog-Wheel to **select**
12. The update will start automaticly and can take up to 5 min.

12 Volt Line	100 %
TRINITY	SIM
24 Volt Line	100 %

TRINITY
Battery Mode
System

Brightness
Firmware Info
Update

NO USB
Exit

ADVICE

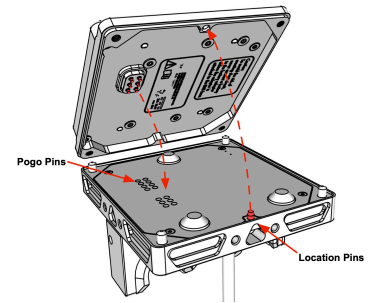
NO USB means

- That something is wrong with the connection to the USB stick
- The USB stick cannot be read
- That there is content on the USB stick

9.6 Battery Mounting System Operation and Installation

9.6.1 Installation and Replacement of Battery Mounts

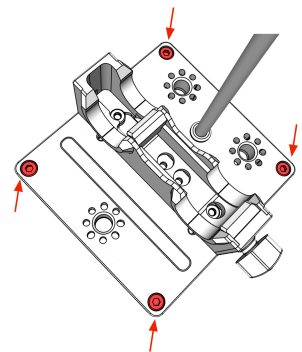
1. Place the Battery Mount on the BMS Base.



ATTENTION

Make sure the location pin is aligned with the receiver hole and that the pogo pins line up with the receiver pads on the circuit board.

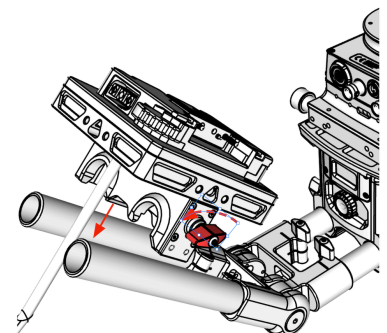
2. Use the 3mm hex key to tighten all four screws.



9.6.2 Mounting the BMS on rods

BMS-1 & BMS-2

1. Open the clamp wing nut fully.
2. Place the Battery Mount at the desired position.
3. Tighten the clamp wing nut.



10 Cleaning and Repair

10.1 Cleaning Instructions

ADVICE	
	Improper Cleaning Procedure Risk of damage of surfaces.
▶ Only use the cleaning agents specified in this chapter. ▶ Do not use any strong or aggressive cleaning detergents like Methanol, Acetone, Benzine or acids. These chemicals may dissolve the paint on the accessories and damage highly polished surfaces. ▶ Do not moisten connectors when cleaning. ▶ Compressed air must not be used on the electronic accessories.	

Recommended Cleaning Agents

- Water
- Glass Cleaner
- Isopropyl Alcohol

Cleaning Information

Before cleaning, remove the camera accessories from the camera and disconnect all cables.

Clean the accessories with a soft, lint free cleaning cloth and some water or glass cleaner.

Only when really necessary, e.g. to remove residues of camera tape, isopropyl alcohol should be used.

10.2 Repair

⚠ WARNING	
	Repairs carried out by Untrained Personnel Risk of injury and damage.
▶ Do not try to repair the device yourself. Repairs may only be carried out by authorized ARRI service partners.	

For repairs and maintenance work on the TALLY System Gen. 2, please contact ["ARRI Service"](#).

11 Transportation and Storage

ADVICE



Improper Packing and Transportation

Risk of damage to the accessories.

- ▶ Unplug all cables during transport.
- ▶ Only transport and storage the accessories in suitable cases.
- ▶ Follow the specified environmental conditions. Do not store the accessories in places where they may be subject to temperature extremes, direct sunlight, high humidity, severe vibration or strong magnetic fields.

If you have any questions regarding the transport or storage of ARRI products, please contact ["ARRI Service"](#).

12 Disposal

ATTENTION

The product can be returned to the manufacturer Arnold & Richter Cine Technik GmbH & Co. Betriebs KG.



This product falls within the scope of Directive 2012/19 / EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of June 4, 2012 on waste electrical and electronic equipment (WEEE II).

Accordingly, this product must not be disposed of with household waste. There are the respective country specific disposal rules that must be observed.

13 ARRI Service Contacts

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