

# **TRINITY 2 System**

USER MANUAL

01.09.2022



Disclaimer 2

# 1 Disclaimer

Before using the products, be sure to read and understood 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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Imprint 3

# 2 Imprint

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About this Document

# 4 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	

# 5 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?

TRINITY 2 is a 5 axis hybrid camera stabilizer system, which enables very special camera movements including 360° rotation on the camera's lens axis.

#### What does it do?

Any influences from the movement of the user, which can negatively affect the image, are completely eliminated by the TRINITY 2 system.

In addition, the user can directly influence the position of the camera in space and in relation to the object.

#### How does it work?

A combination of mechanical and electronic stabilization ensures perfect image quality and the joystick control opens up countless creative possibilities. Automated motion sequences of the TRINITY 2 ensure precise reproduction of tracking shots.

### 5.1 Identification



## 5.2 Environmental Conditions

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

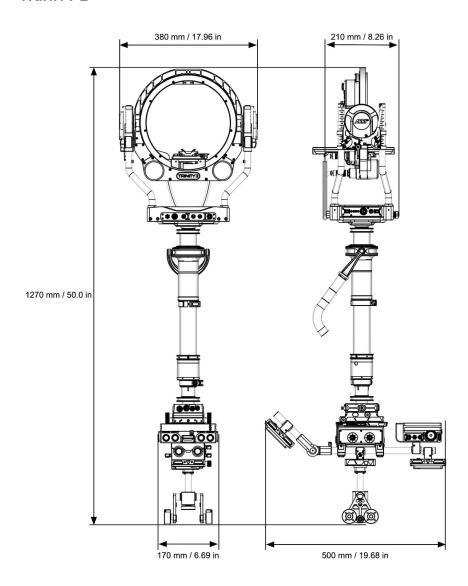
#### **Operating temperature**

-20 to +45 °C

-4 to +113°F

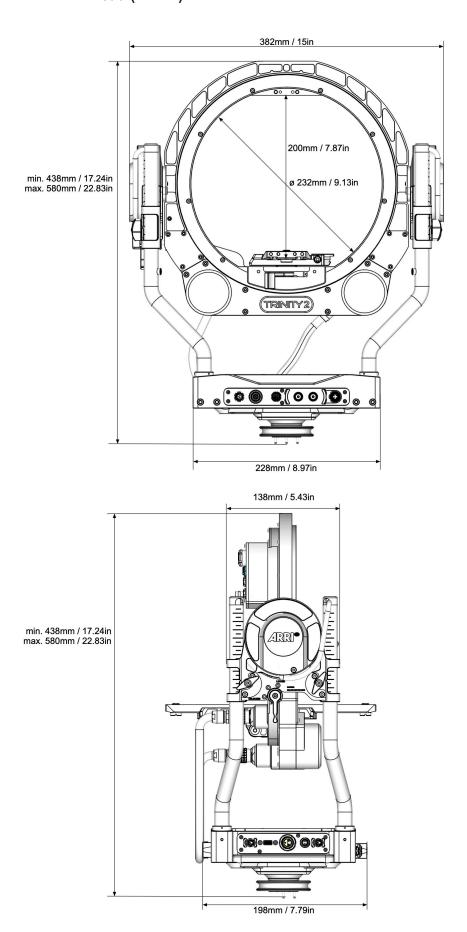
# 5.3 Technical Data

# **TRINITY 2**



Power supply	10,6 V – 33,6 V DC	12/24V max. 15A
Weight	14.5 kg	31.9 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

## TRINITY 2 Head (TRH-2)



#### **TRH-2 Interfaces**

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

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

12V Fischer 3pin 12V max. 3A

CAN Bus Fischer 4pin 12V max. 3A

FS CAN Bus Fischer 4pin 12V max. 3A

HD In / Monitor Out / Loop BNC

Analog Joystick In Lemo 1B 7pin 12V max. 3A

Ext Pwr In Lemo 2B 4pin 12/24V max. 15A

USB Port USB-Typ-C 5,2V

### **TRH-2 Outer Ring**

12/24V (Ring Power Supply) Lemo 22pin 12/24V max. 15A

#### **TRH-Inner Ring**

Video in BNC

12V (2x) Lemo 2pin 12V max. 3A

FF CAN Fischer 4pin 12V max. 3A

12V/Tally Fischer 3pin 12V max. 3A

LBUS Lemo 4pin 24V max. 3A

12/24V Lemo 7pin 12/24V max. 15A

12/24V (Ring Power Supply) Lemo 22pin 12/24V max. 15A

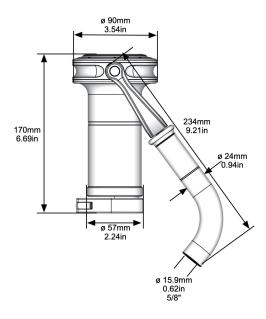
#### **Center Posts**

#### Center Post lengths:

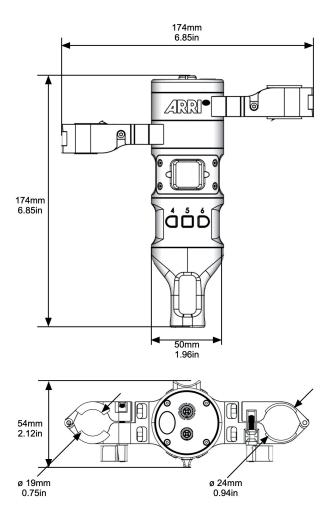
- The Standard and Volt Post can be extended from 45.5cm / 17.92in to 71cm / 27.95in. ARTEMIS outer post diameter 48mm / 1.88in Volt outer post diameter 44.45mm / 1.75in Inner post diameter 38.1mm / 1.5in
- The Shorty Post can be extended from 37cm / 14.56in to 46.5cm / 18.30in.
   ARTEMIS outer post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



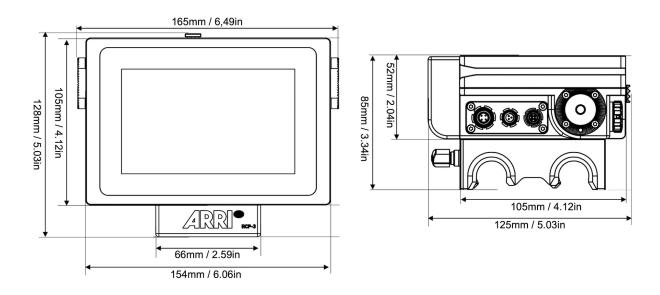
# Master Grip TRINITY 2 (MGT-1 and MGT-2)



### MGT-1 & MGT-2 Interfaces

LBUS	Lemo 0B 4pin	12V max. 3A
Weight MGT-2	0.5 kg	1.10 lb
Weight MGT-1	0.4 kg	8.88 lb

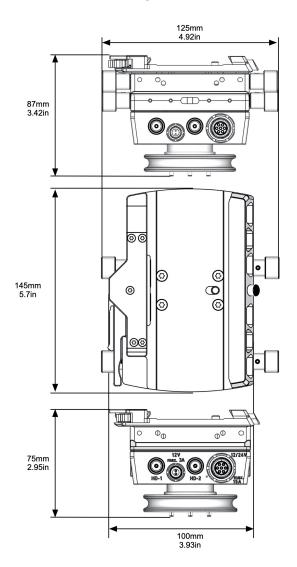
# Remote Control Panel 3 (RCP-3)



### **RCP-3 Interfaces**

Weight	1.0 kg	2.2 lb
12V	Lemo 0B 2pin	12V max. 3A
12V	Fischer 3pin	12V max. 3A
CAN Bus	Fischer 4pin	12V max. 3A
FS CAN Bus	Fischer 4pin	12V max. 3A
LBUS	Lemo 0B 4pin	12V max. 3A
USB	USB-Typ-C	5,2 V

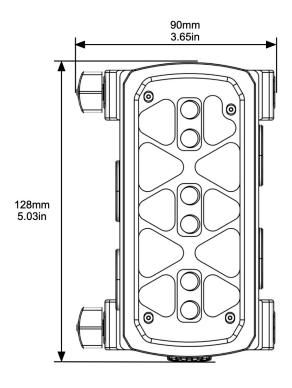
# Top and Bottom Stage 2 (TST-2 and BST-2)

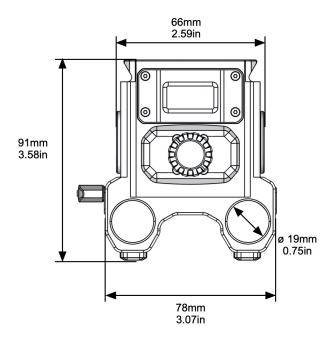


### TST-2 and BST-2 Interfaces

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

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

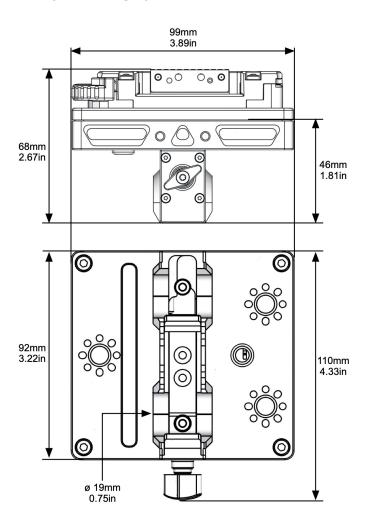




### **BHM-2 Interfaces**

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)



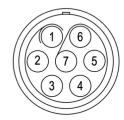
Model	Voltage	Weight	Dimension
K2.0040284 B-Mount for BMS-2	20.5 – 33.6V	99 g / 0.21 lb	92 x 98 x 14mm 3.62 x 3.85 x 0.55in
K2.0040285 Gold Mount for BMS-1 / BMS-2	14.4 – 16.8V	135 g / 0.29 lb	92 x 98 x 23mm 3.62 x 3.85 x 0.90in
K2.0040286 V-Mount for BMS-1 / BMS-2	14.4 – 16.8V	143 g / 0.31 lb	92 x 98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

### 5.4 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

24V

Pin 3

# 5.5 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		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

# 5.6 Certifications and Safety Standards

#### **Approval Information**

The TRINITY 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 TRINITY 2

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 SystemTRINITY 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 A Statement: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

#### **Industry Canada Compliance Statement**

Complies with the Canadian ICES-003 Class A specifications.

# 6 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.

# 6.1 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.

#### **A** 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

# **6.2** General Safety Instructions

#### **WARNING**



#### Operating the TRINITY 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.

#### **A WARNING**



#### **Falling TRINITY 2 components**

If the TRINITY 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 TRINITY 2 on an unstable trolley or hand truck, stand, tripod, bracket, table or any other unstable support device.
- ► Always place the TRINITY 2 on dedicated support devices.
- Secure the TRINITY 2 against falling and tipping over. Observe the general and local safety regulations.

### **WARNING**



### Positioning the TRINITY 2 on an inclined or unsafe plane

Risk of injury caused by the TRINITY 2 tipping over.

- Observe the accident prevention regulations.
- ► Put the TRINITY 2 on level and stable ground
- ▶ Do not place the TRINITY 2 on an unstable trolley or hand truck, stand, tripod, bracket, table or any other unstable support device.
- ▶ Always place the TRINITY 2 on dedicated support devices.
- ▶ Use only TRINITY 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 TRINITY 2 by persons or objects

Risk of injury caused by the TRINITY 2 tipping over.

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

#### **A** CAUTION

#### Using the TRINITY 2 in a humid environment and with condensation



When moving TRINITY 2 from a cool to a warm location or when the TRINITY 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 TRINITY 2 when condensation occurs.
- ► After moving the TRINITY 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.

#### **A** CAUTION



#### Hot surfaces on electrical TRINITY 2 components

During extended operation, high data rates and/or operation at high ambient temperatures, the electrical TRINITY 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 TRINITY 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 TRINITY 2 after a long film shoot in the sunlight.

#### **A** 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 TRINITY 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 TRINITY 2 before moving.

#### **A** CAUTION



#### Unhealthy posture or excessive physical exertion during operation

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

Ensure an ergonomic posture when operating and carrying the TRINITY 2.

#### **A** 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 TRINITY 2 components approved by ARRI. The use of components not approved by ARRI is at your own risk. Please observe all relevant safety guidelines

#### **ADVICE**



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

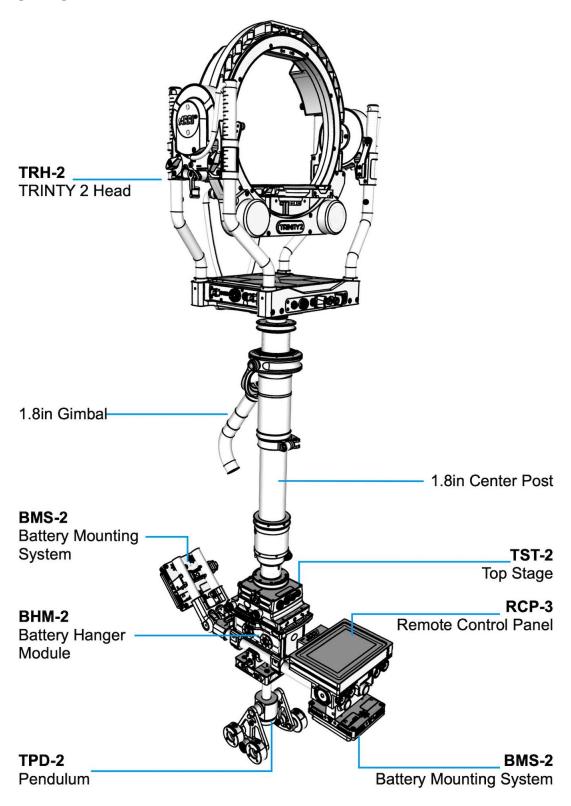
This would cause more than the allowed amount of volts to flow through the ARTEMIS 2 and TRINITY 2. Risk of damage to the accessories.

▶ Only use the Top Stage **TST-2** in combination with the Battery Hanger Module **BHM-2** for the **internal power supply** of the TRINITY 2 Head.

Alternatively, an external power source can be used to power the TRINITY 2 head.

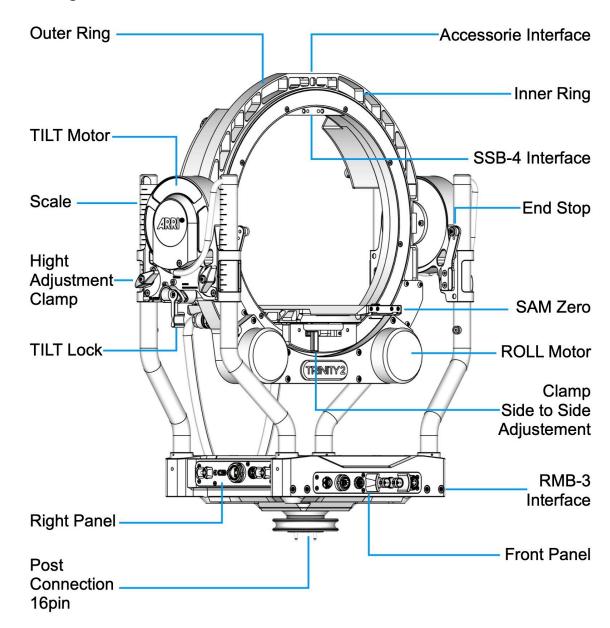
▶ **DO NOT combine** the **internal** with an **external** power supply!

# 7 Overview

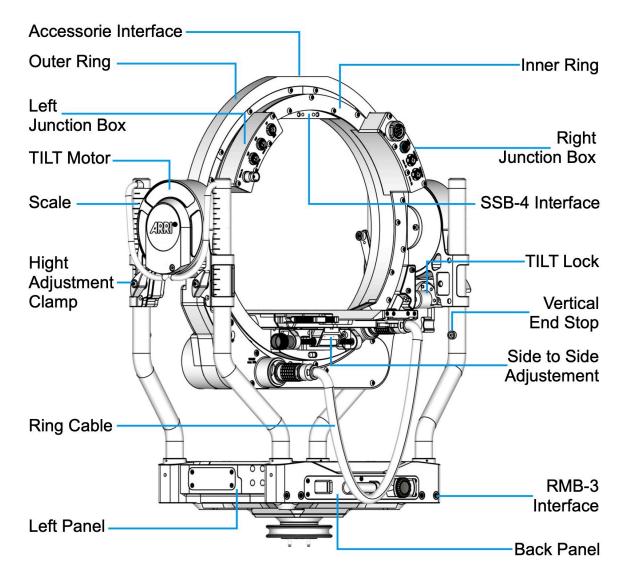


## 7.1 TRINITY 2 Head Overview

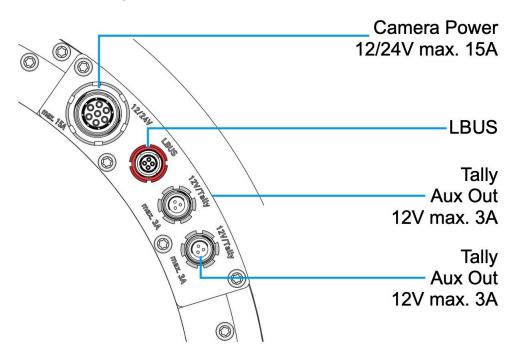
## Front / right view



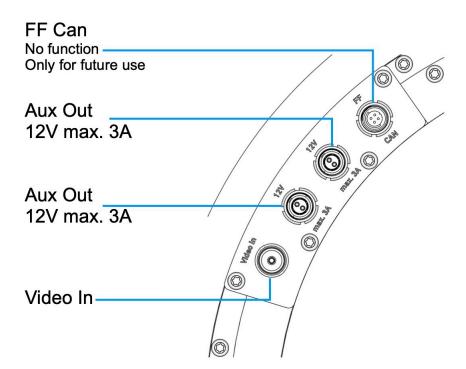
#### Back / left view



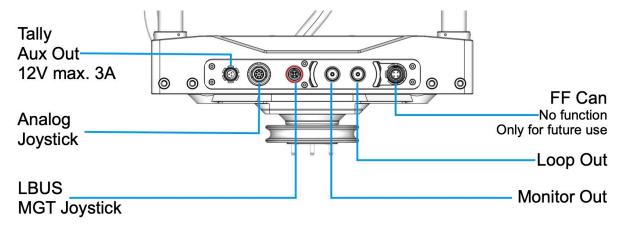
### **Junction Box right side**



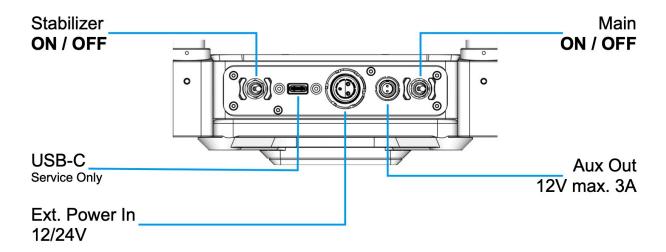
### **Junction Box left side**



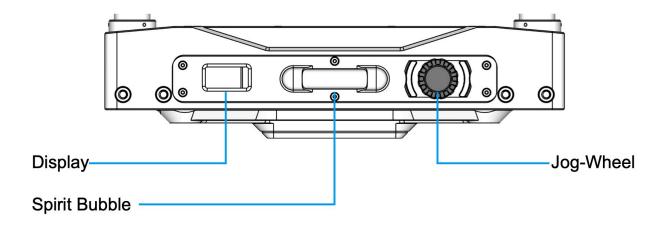
### Front panel



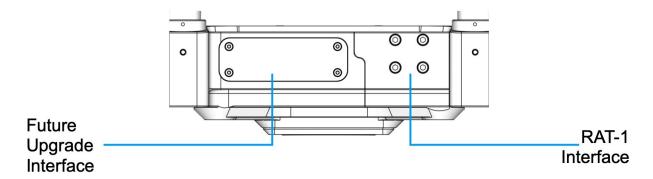
### **Panel Right**



#### **Panel Back**



### **Panel Left**



# **Available Camera Power Cables**

K2.0039443	Cam Pwr Gen.2, Alexa Mini, Amira, 24V, 8pin
K2.0039446	Cam Pwr Gen.2, Alexa, 24V, 2pin Fischer
K2.0039447	Cam Pwr Gen.2, Alexa Mini, Amira, 12V, 8pin
K2.0039448	Cam Pwr Gen.2, 4 pin XLR, 12V
K2.0039449	Cam Pwr Gen.2, RED Monstro, 12V
K2.0039450	Cam Pwr Gen.2, RED Ranger, 24V
K2.0039451	Cam Pwr Gen.2, Sony Venice, 4pin XLR, 24V

# **Available Joystick and Monitor Power Cables**

K2.0043861	TRINITY 2 Joystick Cable, 75cm/29.5in
K2.0043975	TRINITY 2 Joystick Cable, 125cm/49in
K2.0038998	MTG Monitor Pwr, Lemo 0B, 2pin
K2.0038999	MTG Monitor Pwr, Lemo 0B, 5pin

#### **Available Video Cables**

K2.0041984 12G HD SDI BNC Cable, 0,63m/25in

K2.0044234 12G HD SDI BNC Cable, 0,84m/33in

#### What is it?

TRINITY 2 is a 5 axis hybrid camera stabilizer system, which enables very special camera movements including 360° rotation on the camera's lens axis.

#### What does it do?

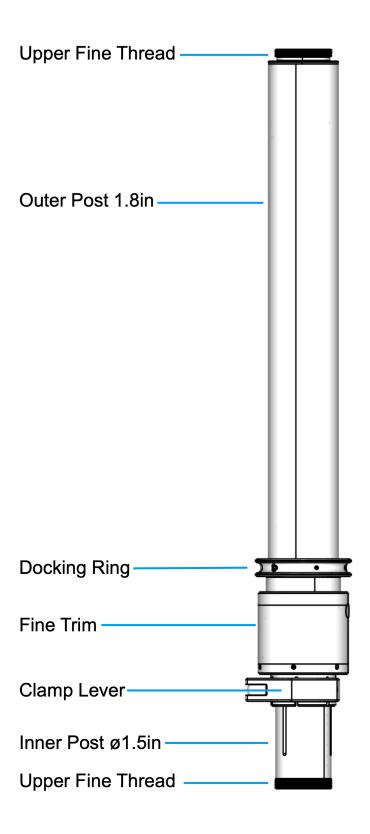
Any influences from the movement of the user, which can negatively affect the image, are completely eliminated by the TRINITY 2 system.

In addition, the user can directly influence the position of the camera in space and in relation to the object.

#### How does it work?

A combination of mechanical and electronic stabilization ensures perfect image quality and the joystick control opens up countless creative possibilities. Automated motion sequences of the TRINITY 2 ensure precise reproduction of tracking shots.

# 7.2 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.

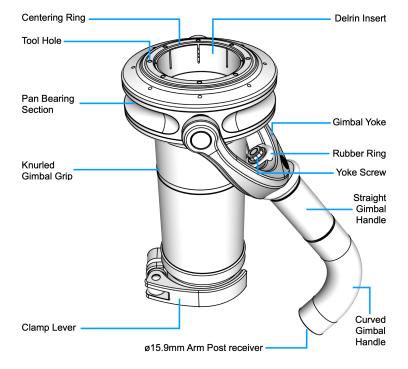
The Super Post can be extended from 124cm / 48,82in to 200cm / 78,74in.

### 7.3 Overview Gimbal

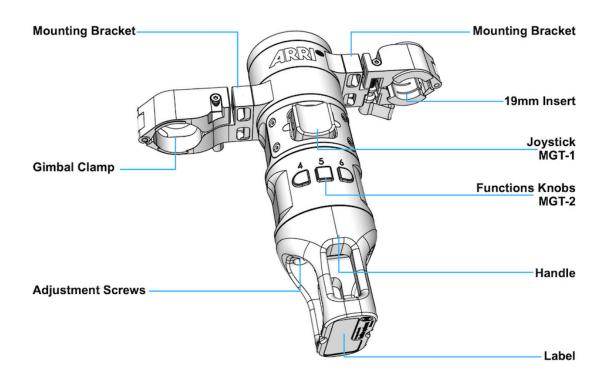
The 1.8in gimbal offers high precision, extremely low-friction bearings, a tool-free clamping mechanism and an ergonomic and functional design.

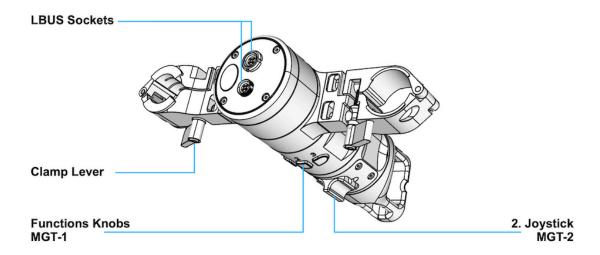
The diameter of the knurled grip is 57mm / 2.24in, which provides precise torque and more control even when using heavy cameras.

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



## 7.4 MGT-1 / MGT-2 Overview





#### What is it?

The Master Grip TRINITY 2 is a new LBUS based joystick controller for the TRINITY 2, which is available in two versions:

- MGT-1 with one joystick and three function keys
- MGT-2 with two joysticks and six function keys

The Master Grip TRINITY 2 is clamped to the handle of the ARTEMIS gimbal.

Another holder allows the installation of a 5in monitor.

#### What does it do?

With the Master Grip TRINITY 2, tilt and roll can be assigned to the two joysticks and thus controlled by the user with maximum precision.

Since the Master Grip TRINITY 2 works with the LBUS protocol, the zoom axis can also be assigned to one of the joysticks.

The freely assignable function buttons can trigger a variety of actions in the RCP-3. Such as:

Home Position, True Tilt, True Roll, Limits ON / Off and of course user presets can also be called up.

#### How does it work?

The Master Grip TRINITY 2 uses high-resolution, extremely sensitive Micro Force joysticks.

In the RCP-3, all necessary settings such as speed, ramp, dead band, direction and sensitivity can be perfectly adjusted to the user's requirements.

The Master Grip TRINITY 2 offers two mounting brackets.

One of the mounting brackets is clamped to the handle of the ARTEMIS gimbal and the other mounting bracket holds a 19mm rod which allows the installation of a 5in monitor.

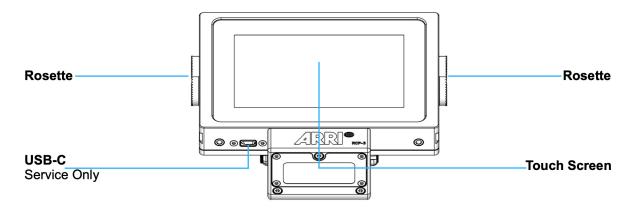
#### What problems does it solve?

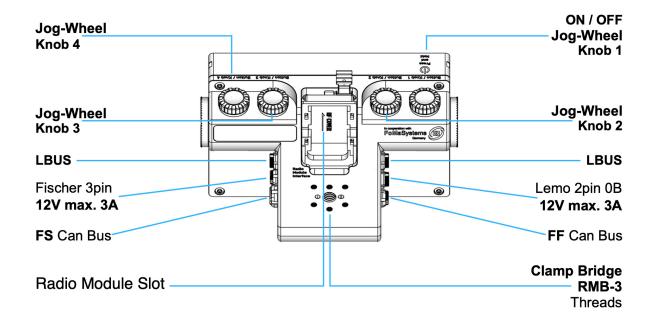
The Master Grip TRINITY 2 enables all segments, such as brackets, joysticks and handle, to be freely positioned in relation to each other.

In this way, every user can position the Master Grip TRINITY 2, the joystick, the function keys and the monitor in the perfect position.

The full LBUS integration also enables perfect integration in broadcast applications, as the MGT-2 can be combined with LCUBE CUB-2 K2.0010681.

## 7.5 Remote Control Panel Overview





#### What is it?

The RCP-3 is a compact and lightweight remote control that is programmed and controlled by the user via a 5in touch panel.

In addition to input through the touch panel, various values can also be programmed into the RCP-3 using four freely assignable encoders, turn-push encoders.

External controllers such as the Digital Remote Wheels DRW-1, Digital Encoder Head DEH-1, Master Grips, Operator Control Unit OCU-1 and future controllers can be connected via the LBUS and FS Can Bus.

#### What does it do?

The RCP-3 is used to set up and control the TRINITY 2 system.

Depending on the camera, lens and accessories used, parameters such as the power and torque of the motors of the TRINITY 2 must be set to the total payload of the camera setup.

The user can also program the general function, the speed and other parameters of the Master Grip TRINITY 2 joystick via the RCP-3 to suit their personal preferences.

#### How does it work?

The RCP-3 uses a newly developed user-friendly GUI (Graphical User Interface), which divides the application of the TRINITY 2 into three areas.

- Setup of the PID values.
  Setting the PID values, or in other words, the power and torque of the motors, as well as the responsiveness of the entire control loop.
- 2 Adjustment of the joystick and other controllers to the needs of the user.
  For example direction, as well as the speed, sensitivity and ramp of the joystick.
- 3 The RCP-3 can also be used to control the lens via the LBUS.
  With the Master Grip TRINITY 2 / MGT-2, the user can now control the tilt axis and zoom of the lens simultaneously with just one hand.

## What problems does it solve?

Since the RCP-3 can be mounted on the bottom of the TRINITY 2, the user can make the necessary settings at any time.

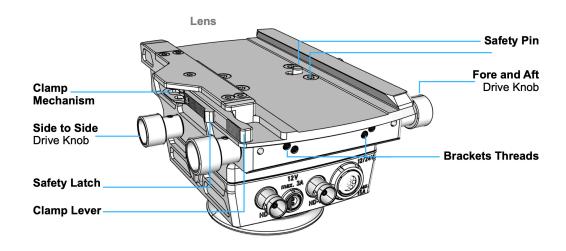
In this way, the user can react spontaneously to changes in the camera setup and avoid unnecessary downtime.

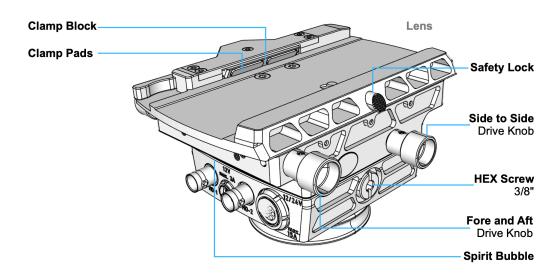
At the back of the RCP-3 there is a new kind of a radio module interface (RIA) in which the optional RF-2400 Radio Module 2400 MHz can be mounted.

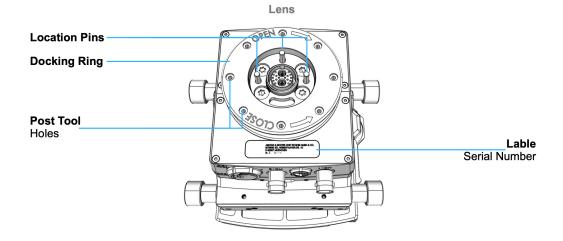
With the RCP-3 wireless mode, a second operator or the DOP can control the tilt and roll axis via the Digital Remote Wheels DRW-1 ARRI wheels.

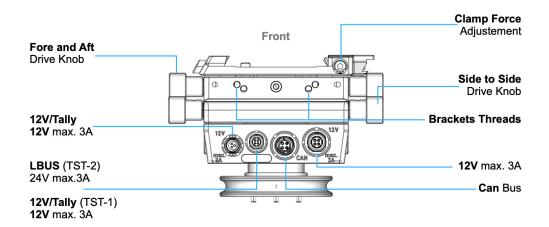
In addition, a technician can also take care of the PID and other settings, while the TRINITY 2 operator concentrates exclusively on the image and the framing.

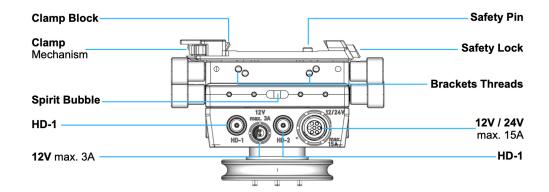
# 7.6 Top Stage and Bottom Stage Overview

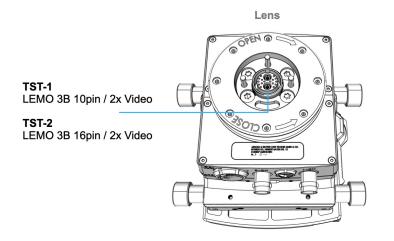












## **ATTENTION**

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.

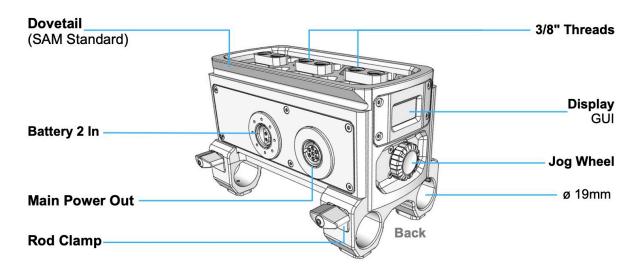
#### What problems does it solve?

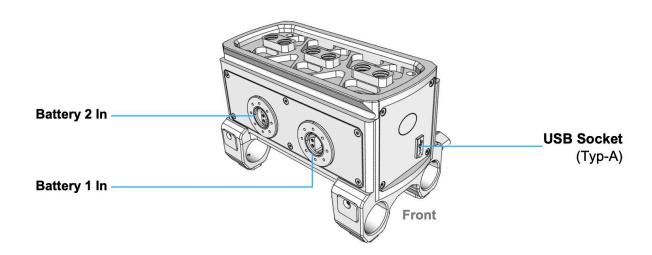
The SAM standard enables extremely quick and tool-free changes from a tripod or handheld setup to an ARTEMIS or TRINITY application within seconds.

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.

## 7.7 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?

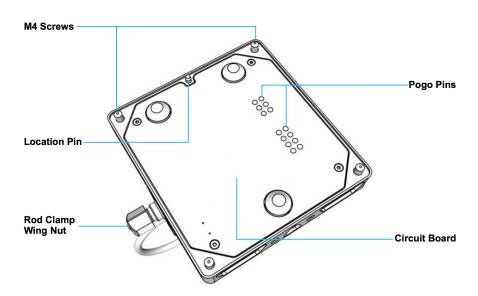
The modular design of the Battery Hanger Module, **BHM-2** takes up to three Battery Mounting System **BMS-2**, which can be placed easily and quickly in any desired position on the 19mm rods.

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

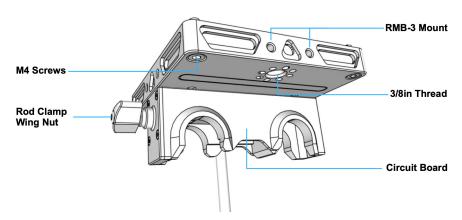
The combination of the **BHM-2**, which is equipped with 19mm rod, and the freely positionable battery system allows the size and weight distribution of the counterweight in the lower slide to be designed in an unprecedented way.

# 7.8 Battery Mounting System Overview

Top View



**Bottom View** 



Battery Mount

M4 Threads

Continue To wood the risk of rowing short circuit, owner connect of bothery to the bothery color in accord to the BMS boss.

Location Pin

Receiver

Pogo Pins

#### 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.

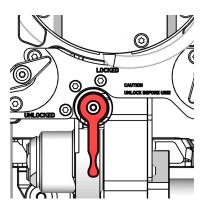
# 8 Installation and Operation

# 8.1 TRINITY Head 2 Installation and Operation

## 8.1.1 Installing TRINITY 2 Head

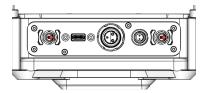
## Tilt-Lock

1. Lock the Tilt-Lock first!



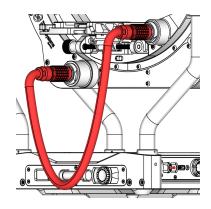
## **Power OFF**

2. Move both power switches to the OFF position.



## **Ring Main Cable**

3. Plug in the Ring Main Cable.



## **ADVICE**



# Removing the Ring Main Cable while the TRINITY 2 head is powered on

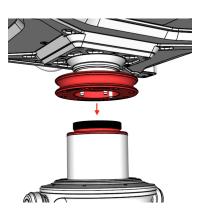
Risk of damage to the accessories.

▶ **DO NOT** remove the **Ring Main Cable** while the TRINITY 2 head is **powered on**.

## **Post Assembly**

4. Carefully place the TRINITY 2 head onto the 1.8in center post. **NOTE** 

The display of the TRINITY 2 head must **point in the same direction** as the display of the battery hanger.



## **Tighten Docking Ring**

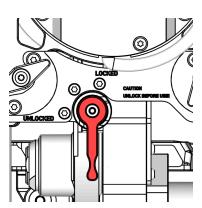
5. Use the **Post Tool** to tighten the Docking Ring.



## 8.1.2 Installing SAM Dovetail Plates to TRINITY 2 Head

#### Tilt-Lock

1. Check if the **Tilt** axis is **locked**.



## **A** CAUTION



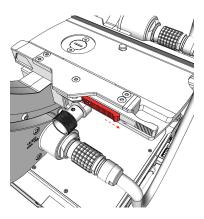
## Moving clamp lever without safety lock

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!

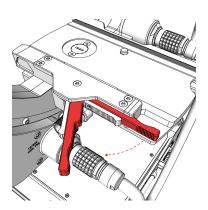
## **Safety Latch**

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



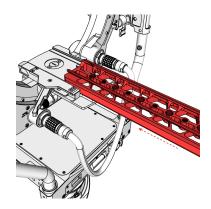
## **Clamp Lever**

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



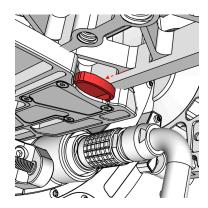
#### **Insert SAM Plate**

4. Slide the SAM dovetail plate in from the back.



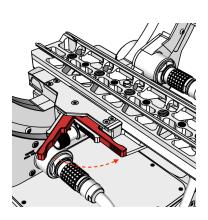
## **Safety Lock**

5. To fully seat the SAM dovetail plate, push the safety lock all the way in.



## **Locking Clamp Lever**

6. After the camera has reached the desired position, push the clamp lever all the way to the right until the clamp mechanism is securely locked.



## **Camera Dovetail Plates**

## ADVICE

Using the SAM plates will speed up the camera setup and later the balancing process. The special hight 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.

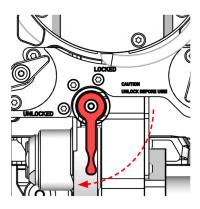
## Available SAM plates and lens support brackets.

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

## 8.1.3 Installing the Camera to TRINITY 2 Head

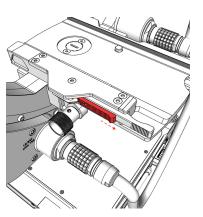
#### Tilt-Lock

1. Move the Lock lever to the **left** in the **Locked** position.



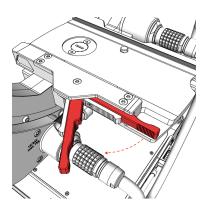
## **Safety Latch**

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



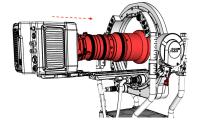
## **Clamp Lever**

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



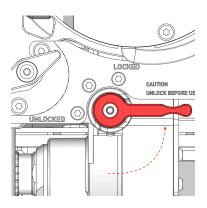
## Placing the camera

- 4. Gently slide the camera into the ring from either the front or back.
- 5. Bring the camera as close as possible to its center of gravity.
- 6. Lock the dovetail clamp mechanism.
- Assemble all required accessories such as focus motors, transmitters, connect all required cables such as camera power and video cables.



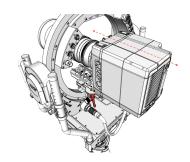
#### **Tilt Lock**

8. Open the Tilt-Lock.



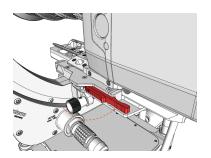
## **Center of Gravity**

9. Move the camera forth and back until it reaches its center of gravity **COG**.



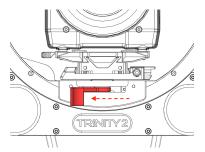
## **Locking Clamp Lever**

10. After the camera has reached the desired position / COG, push the clamp lever all the way to the right until the dovetail clamp mechanism is securely locked.



## Side to Side Lock

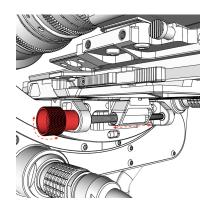
11. Open the side locking mechanism by pushing the clamp lever to the left.



## Side to Side Fine Adjustment

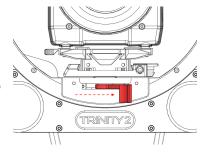
12. Turning the fine adjustment to the right moves the camera further to the right.

Turning left moves the camera further to the left.



## **Locking the Side to Side Movement**

13. After the camera has reached the desired position, push the clamp lever all the way to the right.



## 8.1.4 Height Adjustment

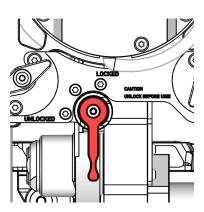
#### Introduction

In order to be able to move the camera and all components on the tilt axis through the TRINITY 2 head, the height of the tilt axis / tilt motors must be adjusted in relation to the rear length of the camera from the COG.

#### Tilt-Lock

- 1. Open the Tilt Lock.
- 2. Double check the center of gravity of the camera.

The camera must be neutrally balanced!



## **A** CAUTION



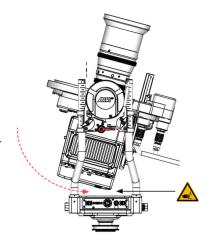
## Fingers between top cover and Camera

Risk of crushing fingers.

▶ Make sure that your fingers do not get between the top cover and the camera while checking the tilt axis.

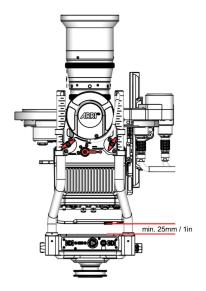
# Checking the current height of the tilt axis

3. Slowly and carefully tilt the rear of the camera until the bottom corner of the camera approaches the top cover of the TRINITY head.



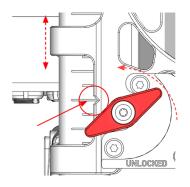
## Minimum height of the tilt axis

4. To ensure enough clearance for the ring main cable, which is located on the back of the camera, a minimum distance of approx. **25mm/1in** be available.



## **Height Adjustment Clamps**

- 5. Open the four wing clamp screws and raise the complete tilt together with your assistant.
- 6. Make sure the small notch on all 4 rod clamps is exactly on the same line!
- 7. Once the desired position has been reached, tighten all four wing clamp screws.



## 8.1.5 Turning on the system

## **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.

Only use the Top Stage TST-2 in combination with the Battery Hanger Module BHM-2 for the internal power supply of the TRINITY 2 Head.

Alternatively, an external power source can be used to power the TRINITY 2 head.

▶ **DO NOT combine** the **internal** with an **external** power supply!

## **A** CAUTION



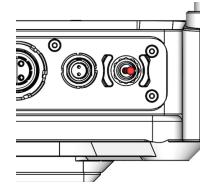
## Automatically move to the home position

Risk of crushing fingers. The camera / tilt and roll axis will automatically move to the home position, after turning on the stabilization.

▶ Make sure that your fingers do not get between the top cover and the camera while checking the tilt axis.

#### **Main Power On**

1. Bring the switcher into the **ON** position.



## **ATTENTION**

After switching on, the TRINITY 2 head is supplied with 24V, camera, monitor, accessories are supplied with 12V and 24V, depending on the case.

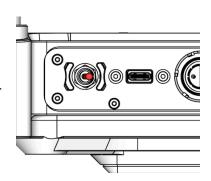
The motors are not yet active as long as the Stabilizer is set to OFF.

As long as the **Stabilizer** is **OFF**, you can work on the camera setting.

#### Stabilizer ON

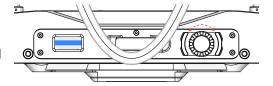
- 2. Turn the Stabilizer ON, when the camera preparation is complete.
  - $\rightarrow$  Observe the camera after turning on the stabilization, the camera

Tilt and Roll axis will automatically move to the Home Position.



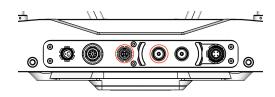
#### **Onboard GUI**

3. Additional functions can be controlled via the Jog-Wheel and read out via the display.



#### **Cable Connections**

4. Connect the joystick cable and video cable with the Master Grip TRINITY 2 and the monitor.



## 8.2 Center Post Installation and Operation

## 8.2.1 Center Post 1.8in Installation

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

## **Extending the Center Post**

## Changing center post position:

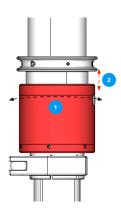
- 1. Open the post clamp lever.
- 2. Slide or pull the inner post to the desired position.
  - $\rightarrow$  The center post is positioned.



#### **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.

## 8.2.2 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.

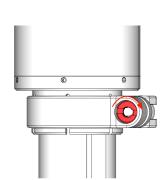
► Turn the silver nut by a 1/8 or 1/4 turn to the right. NOT more!

## **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.



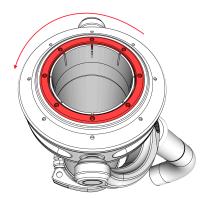
## 8.3 Gimbal Installation and Operation

## 8.3.1 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.
  - ightarrow 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.

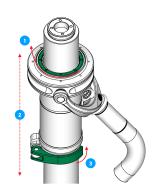
## **ADVICE**



## 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.
  - $\rightarrow$  The Gimbal is positioned.



## 8.3.2 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**

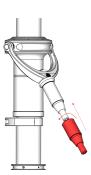
For a more permanent connection, apply two drops of Loctite 222 to the threads.

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)

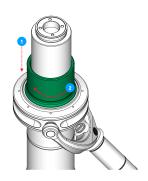
## **Removing Centering Ring**

- 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**

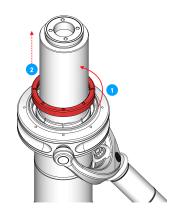
- 4. Slide the knurled grip gimbal extension over the post and place it carefully on top of the gimbal.
- 5. Carefully tighten the knurled grip gimbal extension.



## TIFFEN M1 / M2 Post Gimbal Inserts (K0.0040291)

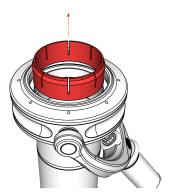
## **Removing Centering Ring**

- 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.



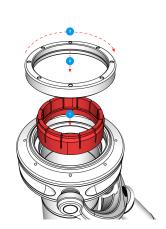
## Removing the Delrin Sleeve

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 ot 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



## 8.3.3 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.

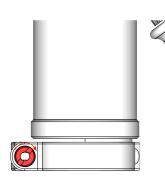
► Turn the silver nut by a 1/8 or 1/4 turn to the right. NOT more!

## **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**

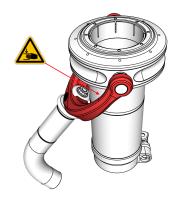
- 1. Open the clamp lever.
- 2. Turn the silver nut by a 1/8 or 1/4 turn to the right, to adjust the clamp force.
  - $\rightarrow$  The clamping force is adjusted.



## 8.4 Safety Instructions

Gimbal 1.8in

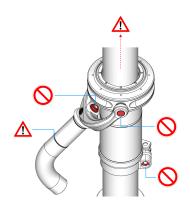
• Do not put your fingers between the yoke and the handle, there is a risk of crushing.



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

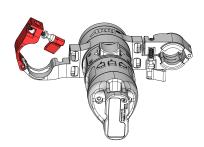


## 8.5 Master Grip TRINITY 2 Installation and Operation

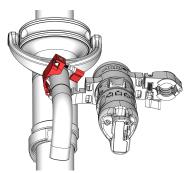
## 8.5.1 Mounting the Master Grip TRINITY 2 on the Gimbal

## **Gimbal Mounting Bracket**

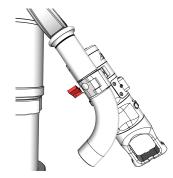
- 1. Before you begin, make sure the gimbal handle extension is also attached.
- 2. Open the clamp lever of the Mounting Bracket



3. Place the Master Grip TRINITY on the gimbal grip as close as possible to the bend.



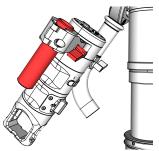
4. When you have reached the desired position, tighten the clamp wing nut.



#### Mounting a Monitor Mount on the Master Grip TRINITY 2 8.5.2

## Mounting the 19mm rod

- 1. Loosen the mounting bracket clamp lever.
- 2. Slide the 19mm rod into the insert.

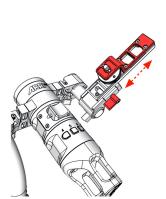


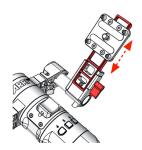
## **Mounting the Monitor Adapter**

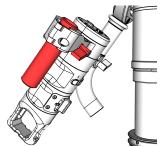
- 3. There are two different monitor adapters to choose from: Monitor Adapter for Transvideo....K2.0014831 Monitor Adapter for Small HD.....K2.0014832
- 4. Slide the monitor adapter on the 19mm rod and bring it in the desired position.
- 5. Tighten the clamp.



- 6. Open the clamp lever.
- 7. Move the mount in the desired position.
- 8. Tighten the clamp lever.



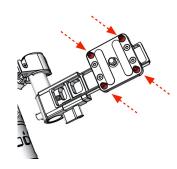




## 8.5.3 Mounting Transvideo Starlite Monitor

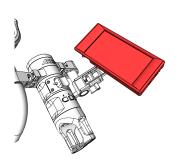
## **Location pins**

1. Remove the location pins.



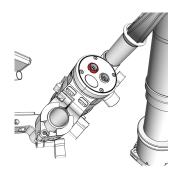
#### **Monitor Position**

- 2. Place the monitor and bring it in the desired angle.
- 3. Tighten the screw at the back.



#### **Monitor Power**

 Connect the MTG Monitor Pwr, Lemo 0B, 5pin (K2.0038999) with the Transvideo / ARRI Starlite monitor and with the upper LBUS Socket at the Master Grip TRINITY 2.



#### **ATTENTION**

If you are using a standard Transvideo Starlite monitor with a 2pin Lemo socket, use the MTG Monitor Pwr, Lemo 0B, 2pin (K2.0038998).

## **Joystick Cable**

 Connect the TRINITY 2 Joystick Cable 75cm/29.5in (K2.0043861) with the lower LBUS Socket at the Master Grip TRINITY and with the LBUS Socket at the TRINITY 2 head.



## 8.5.4 Mounting Small HD 503 Monitor

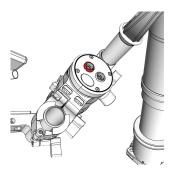
#### **Monitor Position**

- 1. Place the monitor.
- 2. Bring it in the desired angle.
- 3. Tighten the screw at the back.



#### **Monitor Power**

 Connect the MTG Monitor Pwr, Lemo 0B, 2pin (K2.0038998) with the SmallHD monitor and with the upper LBUS Socket at the Master Grip TRINITY 2.



## **Joystick Cable**

Connect the TRINITY 2 Joystick Cable 75cm/29.5in (K2.0043861)
with the lower LBUS Socket at the Master Grip TRINITY 2. and with the
LBUS Socket at the
TRINITY 2 head.

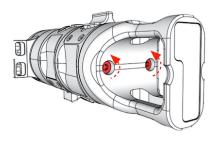


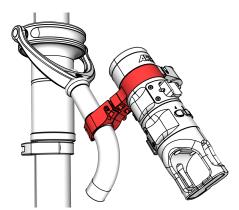
## 8.5.5 Positioning of the Master Grip TRINITY 2

The Master Grip TRINITY 2 / MGT-1 & MGT-2 enables all segments, such as brackets, joysticks and handle, to be freely positioned in relation to each other. In this way, every user can position the Master Grip TRINITY 2, the joystick, the function keys and the monitor in the perfect position.

## **Adjustment Screws**

1. Loosen both adjustments screws, by max. 2 turns.

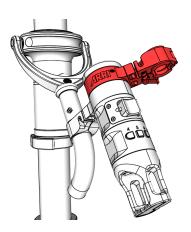


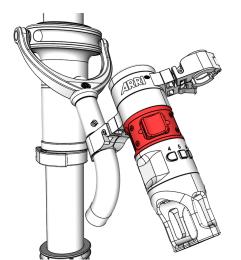


## **Gimbal Mounting Bracket Position**

2. If desired, the Master Grip TRINITY 2 can be placed directly over the gimbal handle.

3. Or raise the monitor mounting bracket in a different position.





#### **Joystick Position**

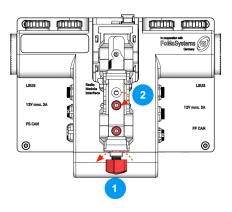
- 4. Or move the joystick to a comfortable position.
- 5. When all segments are in place, tighten the screws.

## 8.6 RCP-3 Installation and Operation

## 8.6.1 RCP-3 Installation

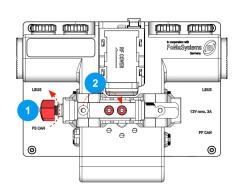
# Mounting the Rod Clamp Bridge vertical

- 1. Open the rod clamp wing nut by turning it counterclockwise.
- If necessary, move the top screw to the middle hole. Pushing away the clamping slide makes it easier to move the screws.
- 3. Tighten both screws.



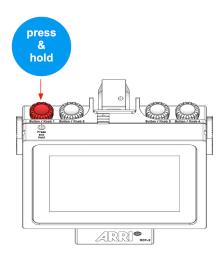
# Mounting the Rod Clamp Bridge horizontal

- Open the rod clamp wing nut by turning it counterclockwise
- If necessary, move the top screw to the lower hole.
   Pushing away the clamping slide makes it easier to move the screws.
- 3. Tighten both screws.



## 8.6.2 Power ON / OFF

To turn the RCP-3 **ON** and **OFF**, press and hold down the Jog-Wheel until the ARRI logo appears on the display.

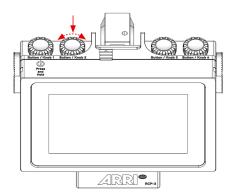


## 8.6.3 Jog-Wheels

Once the Jog-Wheels have been assigned a function, these can be used to quickly and intuitively change values such as speed, ramp by turning the Jog-Wheel.

At the same time, the button function allows you to trigger  ${\bf ON}$  /  ${\bf OFF}$  functions such as:

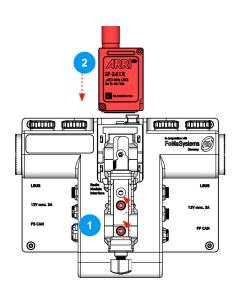
Home Position, True Tilt, True Pan, etc.



#### 8.6.4 Radio Module

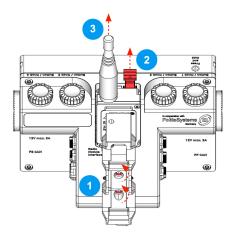
#### **Attaching the Radio Module**

- 1. Open both Rod Clamp Bridge screws to allow some more clearance.
- Insert the Radio Module by fitting it into the radio module slot and sliding it downwards until the Release Button pops back out.
- 3. Tighten both screws again.



#### Removing the Radio Module

- 1. Open both Rod Clamp Bridge screws to allow some more clearance.
- Press the Release Button.Pull the radio module out of the radio module slot.
- 3. Pull the radio module out of the radio module slot.
- 4. Tighten both screws again.



# 8.7 TST and BST Installation and Operation

#### **ADVICE**



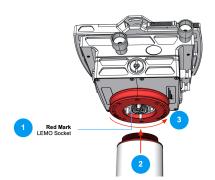
#### Powering TRINITY 2 Head, Top and Bottom Stage at the same time

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.

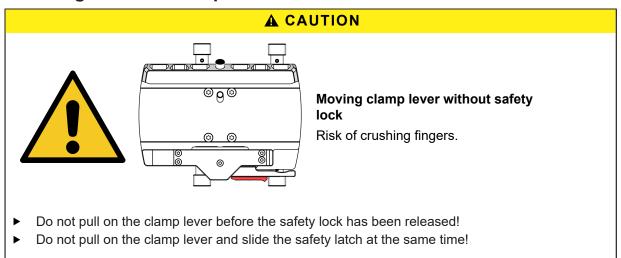
- ▶ DO NOT power the TRINITY 2 Head, Top and Bottom Stage at the same time.
- ▶ Use for powering TRINITY 2 Head OR Top Stage OR the Bottom Stage.

# 8.7.1 Installing TST/BST to Center Post

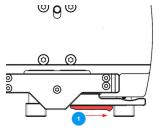
- Locate the red dot on the main cable plug and socket. When both marks are aligned, insert the Lemo 3B plug into the socket.
- 2. Carefully place the **Top Stage** / **Bottom Stage** onto the center post fine thread.
- 3. Turn the blue **Docking Ring** with your fingers until the thread fully engages.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



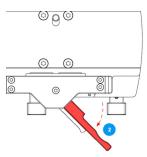
## 8.7.2 Installing SAM dovetail plates



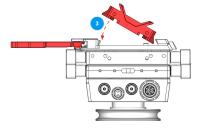
1. Touch the safety latch with your thumb and slide it fully to the right.



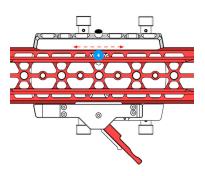
2. Place your index finger behind the clamping lever and pull the clamping lever forward until it reaches the end stop on the left side.



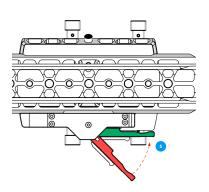
3. Place the slightly inclined SAM dovetail plate and then lay it flat in the top stage as shown here



- 4. Move the clamping lever to the 45  $^{\circ}$  position.
  - ightharpoonup 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.
  - $\rightarrow$  The SAM dovetail plait is mounted.



#### **Camera Dovetail Plates**

1/0 0044004

## ADVICE

Using the SAM plates will speed up the camera setup and later the balancing process. The special hight of every SAM plate will lift the dedicated camera right into the center of the TRINITY 2 inner ring.

Ctabilinan Adamtan Marriat CAM Zana

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

## 8.7.3 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**



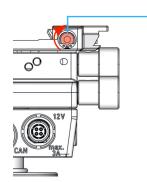
#### Overtighten the leveling screw

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.
  - $\rightarrow$  The clamping force is adjusted.



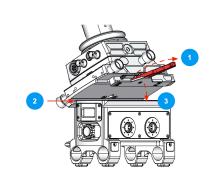
Clamp Force Adjustement

# 8.8 Battery Hanger Module Operation and Installation

# 8.8.1 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.

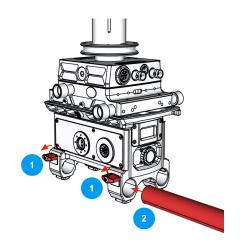


## 8.8.2 Mounting 19mm Rods

- 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.

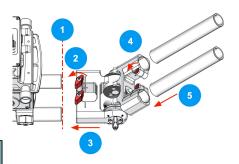


#### Mounting the hinge and the short 19mm rods

- 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.



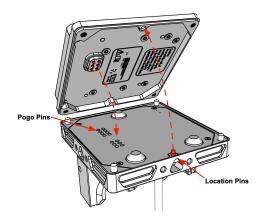
Do not over tighten, when using carbon fiber rods.



# 8.8.3 Battery Mounting System

#### **Installation BMS-2**

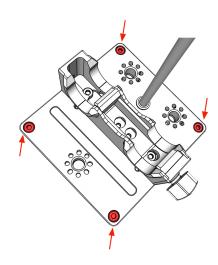
1. Place the Battery Mount on the BMS-2 base.



#### **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.

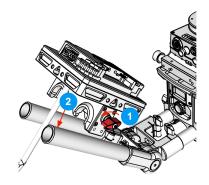
2. Use a 3mm allen wrench to tighten all four screws.



# 8.8.4 Battery Hanger Module

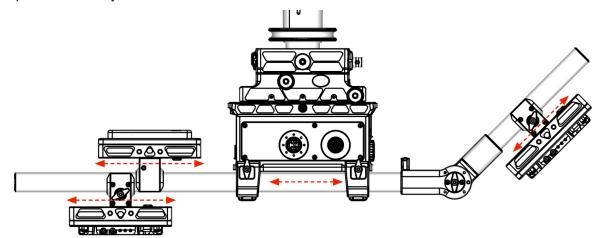
#### Mounting Battery Mounts BMS-2 to the BHM-2

- 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.

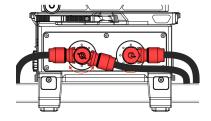


# 8.8.5 Connecting the Battery Mounts to the Battery Hanger Module

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.

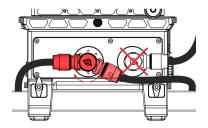


## **ADVICE**

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.

# 8.8.6 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**.

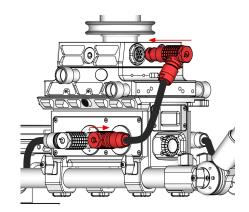
#### **ATTENTION**

#### **Hot Plug**

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

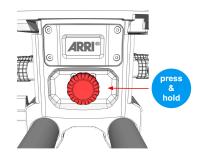
Connecting an operating BHM-2 to the system, may produce an unwanted electrical surge!

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.



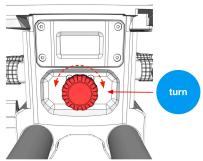
#### 8.8.7 Power ON / OFF

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.



## 8.8.8 Jog-Wheel Functions

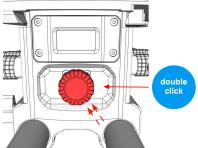
Turning the Jog-Wheel takes you through the various status pages.



12 Volt Line	1.2 A
TRINITY	SIM
24 Volt Line	6.2 A
Bat. 1	100 %
Bat. 2	100 %
Bat. 3	— %
Bat. 1	6.2 A
Bat. 2	6.2 A
Bat. 3	— А

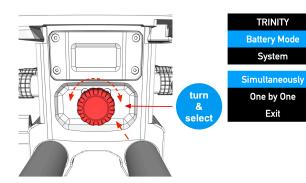
A **double click** on the Jog-Wheel opens the **menu**.

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.



#### 8.8.9 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 %	
TRINIT		
Battery Mode		
System		
TRINITY		
ARTEMIS		
Exit		

## 8.8.10 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
12 Volt Line TRINITY	12 V 0B0

#### **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	— <b>v</b>
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

12 Volt Line 100 %

Low Voltage

24 Volt Line 20 %

Low Voltage

All types of warnings are displayed in orange color.

## **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

## 8.8.11 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 %

## 8.8.12 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	0B0
24 Volt Line	100 %

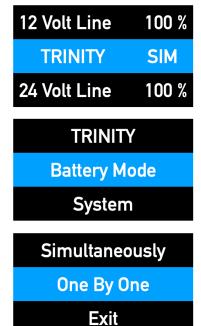
#### **ATTENTION**

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



# 8.8.13 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 Line	100 %	
TRINITY	SIM	
24 Volt Line	100 %	
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		

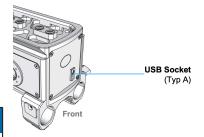
bms 1: v x.xx

#### **Firmware Update**

- 5. Dowload 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.
- Turn the Jog-Wheel right to reach System and press the Jog-Wheel to select
- 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.

#### **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

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

# TRINITY Battery Mode System

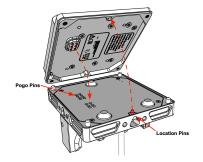
Brightness
Firmware Info
Update



# 8.9 Battery Mounting System Operation and Installation

# 8.9.1 Installation and Replacement of Battery Mounts

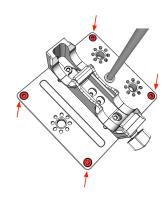
1. Place the Battery Mount on the BMS Base.



#### **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.

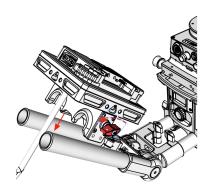
2. Use the 3mm hex key to tighten all four screws.



# 8.9.2 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 clmap wing nut.



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# 9 Cleaning and Repair

# 9.1 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.

# 9.2 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".

# 10 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 <u>"ARRI Service"</u>.

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# 11 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.

ARRI Service Contacts 95

## 12 ARRI Service Contacts

#### Arnold & Richter Cine Technik GmbH & Co. Betriebs KG

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+49 89 3809 2121

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Mo. - Fr. 08:00 am - 05:00 pm (AEST)

service@arri.com.au

#### **ARRI ASIA Limited**

41/F One Kowloon, 1 Wang

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Hong Kong

P. R. China

+852 2537 4266

Business hours:

Mo. - Fr. 09:00 am - 06:00 pm (HKT)

service@arri.asia

#### Bars-Pro Ltd.

Distributor

4-Ya Magistralnaya Ulitsa, 11/2

123007 Moscow

Russia

+7 4995860299

Business hours:

Mo. - Sat. 10:00 - 18:00 (MSK)

arri@bars-pro.ru

ARRI Service Contacts 96

#### **CINEOM Broadcast DMCC.**

Unit No. 2109, Jumeirah Bay Tower X2 Cluster X

Jumeirah Lakes Towers

P.O Box 414659

Dubai, UAE

+971 (0) 45570477

Business hours:

Sa. - Th. 10:00 am- 06:00 pm arriservice.me@cineom.com

#### LINKA Ithalat Ihracat ve Diş Tic.

Distributor

Halide Edip Adıvar Mah. Darülaceze Cad.

No:3 Akın Plaza Kat:5 95-96

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Turkey

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Business hours:

Mo. - Fr. 09:00 - 18:00 (EET) service@linkgroup.com.tr

#### **CINEOM Broadcast India Pvt. Ltd.**

C-4, Goldline Business Centre

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400 064 Mumbai

India

+91 (0)22 42 10 9000

Business hours:

Mo. - Sat. 10:00 am - 06:00 pm (IST) arrisupportindia@cineom.com

Appendix 97

# 13 Appendix

#### **RCP-3 Set**

K2.0041090 RCP-3, Remote Control Panel

K2.0042837 CSS Clamp Bridge 52, 19mm

K2.0043883 RCP-3, FS Can Bus Cable, 25cm/10i

#### **RCP-3 Accessories**

KK.0039984 RF-2400 Radio Module 2400 MHz FHSS Set (2x)

K2.0033762 SRH FS CAN Bus Cable, 1m/3.2ft

K2.0037701 SRH FS CAN Bus Cable, 5m/16.4ft

K2.0019302 SRH FS CAN Bus Cable, 10m/32.8ft