TRINITY 2 Pan Axis Module

Disclaimer

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

The product is available for commercial customers only.

For product specification changes since this document 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.

The information given in this document is subject to change without notice.

While ARRI endeavors to enhance the quality, reliability and safety of their products, customers agree and acknowledge that the possibility of defects thereof cannot be eliminated entirely. To minimize risk of damage to property or injury (including death) to persons arising from defects in the products, customers must incorporate adequate safety measures in their work with the system and have to heed the stated canonic use.

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

Imprint

Initial Language

The initial language of this operating manual is English. Operating manuals in other languages are translations from English.

In the event of conflict between the respective languages (i.e. if any translation(s) of present document has/have been prepared for convenience or any other purpose), with regards to the meaning or interpretation of a word or an instruction etc., the contents and provisions of the English language version shall prevail.

For Further Assistance

Arnold & Richter Cine Technik GmbH & Co. Betriebs KG

Herbert-Bayer-Str. 10

D-80807 Munich

Germany

E-mail: service@arri.de

Website: www.arri.com/en/technical-service

Content

1 About this Document

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

This operating manual is an essential part of the device. It must be easily accessible and in close proximity to the device so that users can use it as a reference anytime.

The separate user manual contains more detailed information about the features and functionalities of the device. Please visit the website www.arri.com to download the user manual.

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

Document Revision History

Document ID: D45 1000 8317

Version	Release	Date	Note
1.0		August 2024	First Release

1.1 Product Information Resources

The ARRI documentation portal provides important documents on the product for free download.

Please enter the following searchkeys in the search bar to retrieve the documents for the product:

TRINITY 2 Pan Axis Module , K2.0050764

ARRI documentation portal

For more details about the product, please refer to the ARRI website at:

TRINITY 2 product page

1.2 How to Use this Manual

All directions are given from an operators point of view. For example, device right side refers to the right side of the device when standing behind the device and operating it in a normal fashion.

Connectors are written in all capital letters, for example "USB connector".

Buttons are written in italic typeface capital letters, for example *"PLAY button"*.

Menu paths are written in italic typeface, with menu and home in capital letters, for example *"MENU > Display Orientation > Normal"*.

2 Safety Instructions

This safety information is in addition to the 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 device. 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 device or other objects.

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

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

DANGER

DANGER indicates an imminent danger. If not avoided, death or serious injury will result.

Always follow the recommended measures to avoid this hazardous situation.

WARNING

WARNING indicates a possibly imminent danger. If not avoided death or serious injury may result.

Always follow the recommended measures to avoid this potentially hazardous situation.

CAUTION

CAUTION indicates a potentially imminent danger. If not avoided, slight or minor injuries may result.

Always follow the recommended measures to avoid this potentially hazardous situation.

NOTICE

NOTICE indicates a potentially harmful situation. If not avoided, the equipment or something in its surrounding may be damaged.

Always follow the recommended measures to avoid this situation.

HINT

Not relevant to safety, **HINT** 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 sharp element
⚠️	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.

WARNING

Risk of Injury through High Torque and Unbalanced Load

Keep in mind that the TRINITY 2 Pan Axis Module stabilized remote head is a fully stabilized Gimbal based device with a payload capacity of up to 25 kg / 55 lbs. The amount of available torque is very high.

▶ Always keep a safe distance between persons, objects and the assembled system. Protruding components (especially lenses) can cause injury or property damage due to shock or impact.

▶ Always balance the system components properly. During rotational movements, the system can become uncontrollable due to too much imbalance.

Safe area

Unsafe area

Unsafe area

Unsafe area

WARNING

Risk of Injury when Mounting or Removing a Component

Mounting or removing components poses a crushing hazard for fingers and/or hands.

▶ Always read the operating instructions provided by the manufacturer before you mount or remove a component.

▶ Always use the tools specified by the manufacturer.

▶ Always activate the tilt lock and the emergency stop before you mount or remove a component.

WARNING

Operation of the TRINITY 2 Pan Axis Module in Case of Obvious Damage

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

▶ Never use the device if electrical lines or housing are visibly damaged.

▶ Only use the type of power source indicated in the manual.

▶ Always grip the power plug to unplug the power cable.

▶ 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 device (incl. warning stickers or paint marked screws).

▶ Do not try to repair the device. Repairs may only be carried out by an authorized ARRI service center.

WARNING

Falling System Parts

Do not built up or assemble the TRINITY 2 Pan Axis Module the wrong way. It can fall down and cause serious injuries and damage to the device or property.

▶ Installation and operation must only be carried out by approved persons who know the device. Obey the accident prevention regulations.

▶ Never put the device on a not stable trolley or hand truck, stand, tripod, bracket, table or any other not stable support device.

▶ Always place the device on dedicated support devices.

▶ Always use a suitable safety rope when you use the device above floor level (i.e. on cranes).

▶ Secure the device and its accessories against falling and tipping over. Obey the general and local safety regulations.

⚠ WARNING

Positioning the TRINITY 2 Pan Axis Module on an Inclined or not safe Surface

Risk of injury caused by the TRINITY 2 Pan Axis Module tipping over.

▶ Obey the accident prevention regulations.

▶ Put the device on level and stable ground that can support the weight of the device and all accessories.

▶ Do not put the device on an unstable trolley or hand truck, stand, tripod, bracket, table or any other unstable support device.

▶ Always put the device on dedicated support devices.

▶ Use only accessories approved by ARRI. The use of accessories not approved by ARRI is at your own risk. Please obey all related safety guidelines.

⚠ WARNING

Overloading the TRINITY 2 Pan Axis Module by Persons or Objects

Risk of injury caused by the TRINITY 2 Pan Axis Module tipping over.

▶ Do not lean on the device.

▶ Do not put any not approved objects on the device.

▶ Do not hang any not approved objects on the device.

▶ Use only accessories approved by ARRI. The use of accessories not approved by ARRI is at your own risk. Please obey all related safety guidelines.

⚠ WARNING

Connected Cable on the Floor

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

▶ Always properly secure cables connected to the device and accessories.

▶ Always install cables that they cannot be tripped over.

▶ If necessary, use a cable duct or secure the cables with adhesive tape.

▶ Always disconnect the cables from the device and accessories before moving.

⚡ CAUTION

Use of the TRINITY 2 Pan Axis Module in a Humid Environment and with Condensation

When you move the device and the accessories from a cool to a warm location or when the device is used in a damp environment, condensation may form inside the device, and on internal or external electrical connections. Do not operate the device while condensation is present. It bears risk of electric shock and/or fire caused by a short circuit.

▶ Do not operate the device and accessories when condensation occurs.

▶ When you move the device and accessories from a cool to a warm environment, wait for some time for the components to warm up.

▶ Find a warmer storage location to decrease the risk of condensation.

CAUTION

Hot Surfaces

During extended operation and / or operation at high ambient temperatures, the surface of the TRINITY 2 Pan Axis Module can get hot. Direct sunlight can result in housing temperatures above 60° C (140° F).

▶ Always use an approved mount to fasten the TRINITY 2 Pan Axis Module to the system.

▶ Never hold the TRINITY 2 Pan Axis Module with bare hands for a long time.

▶ Do not put covers on the TRINITY 2 Pan Axis Module while it is powered.

▶ Do not put the TRINITY 2 Pan Axis Module near any heat sources during operation.

▶ At ambient temperatures above 25° C (77° F), prevent the TRINITY 2 Pan Axis Module from being exposed to direct sunlight.

CAUTION

Unhealthy Posture or too much Physical Exertion During Operation

Improper handling of the TRINITY 2 Pan Axis Module bears risk of permanent long term physical damage to the human locomotive system.

▶ Keep an ergonomic posture when operating and carrying the TRINITY 2 Pan Axis Module.

CAUTION

Radio Radiation caused by External Radio Accessories

May cause physical impairments such as sleep disturbances and stress.

▶ Always follow the manufacturers instructions.

▶ Use only TRINITY 2 Pan Axis Module components approved by ARRI. The use of components not approved by ARRI is at your own risk.

▶ Obey all relevant safety guidelines.

3 About this Product

The additional TRINITY 2 Pan Axis Module allows a TRINITY owner/operator to convert his two axis head into a three axis, fully stabilized remote head with ease.

3.1 Intended Use

The stabilized remote head TRINITY 2 Pan Axis Module is a camera support system. It can be mounted to a hoist, a mast or a structure. It has three axles (Pan, Tilt, Roll) which are remotely controlled by the user to focus the camera dynamically.

NOTICE

All versions of the TRINITY 2 Pan Axis Module and its accessories are intended exclusively for professional use. It must be used only by skilled and trained personnel. The product and its accessories must not be used by inexperienced users and without proper training.

Read and understand the operating manual and the user manual before use.

Use the product and its accessories only for the purpose described in this document. Always follow the safety instructions and system requirements for all equipment involved. ARRI assumes no liability for damages or changes that are caused by improper use. You are not allowed to modify the product and its accessories.

3.2 Application Requirements

Stabilizing remote heads is an extremely complex and sometimes demanding task, and therefore stabilized remote heads have their limitations. For example, the remote head can only correct angular movements, not parallel movements.

This means that if the remote head is directly attached to a hoist, mast, or structure that is subject to vertical motion, it cannot compensate for lift as it moves up and down (since this motion is parallel). To absorb vertical and parallel movements, the remote head must be mounted on a suitable shock absorber.

Stabilization systems are limited by motor power and by their bandwidth or frequency response.

Too fast movements required to correct the camera position may not be compatible with the system's capabilities. This is evident when using longer lenses. The use of suitable iso-dampers improves the application.

By mounting a suitable iso-damper between the remote head and the head's attachment point, the fast, unwanted movements are absorbed so that stabilization occurs with unwanted movements that are slower and within the system's range. There are many iso-dampers that vary in design and quality. Choosing the right iso-damper is as important as the stabilized head itself.

Another purpose of iso-dampers is to decouple the stabilized remote head from the resonance and bending of the mounting point.

All gimbal-stabilized remote heads always face some drift. The drift is an unwanted movement of the system, usually caused by the gyroscopes and the earth rotation, which cannot be measured by the MEMS sensors. Drift is usually measured in degrees per hour. The TRINITY 2 Pan Axis Module stabilized remote head has a very small drift that is only noticeable when the head is stationary for an extended period of time. The average drift can be as low as 10° in 30 minutes. The drift can also be caused by an uncalibrated joystick or a loose camera setting or a too soft iso-damper.

It is crucial that the camera and lens, as well as the remote head, bend or flex as little as possible. The entire setup must be as stiff as possible, as any flexing can cause vibration or oscillation of the head. Every attempt should be made to improve the rigidity of the camera and head mount and to reduce or eliminate any flexing.

Many different camera and lens packages can be used with the TRINITY 2 Pan Axis Module and there are also many different ways to mount the remote head. Therefore, it is not always possible or practical to achieve perfect conditions in terms of rigidity and balance. This can result in the load

becoming unstable and wobbling and swinging when stabilization is active. In such situations, it is necessary to adjust the PID parameters. The correct adjustment of these PID values is crucial for the proper functioning of the system.

An unbalanced camera setting puts more strain on the motors of the TRINITY 2 Pan Axis Module. The system requires more force to move the load, and this sometimes increases the possibility that the load will become unstable and that the remote head will overcompensate or wobble and oscillate.

Please remember that the way the stabilized remote head is mounted has a direct impact on its performance. The total mass of the head and its load are important considerations when choosing how and where to mount it. This torque changes in direction and amplitude to varying degrees. The more stable the mounting, the easier it is for the system to work well. Sometimes even the leveling linkage of a camera crane has play, so the mounting point can move slightly with reversed loads. If there is mechanical play between the components of the shock absorber, the overall system may vibrate. Iso-dampers with the appropriate dimensions and hardness should always be used - the system may become too elastic if the iso-damper used is too soft, resulting in vibrations.

NOTICE

Each of these aspects can lead to the motor power of single axis having to be lowered, which will limit the effectiveness of the overall stabilization.

3.3 Identification

Type label with serial number
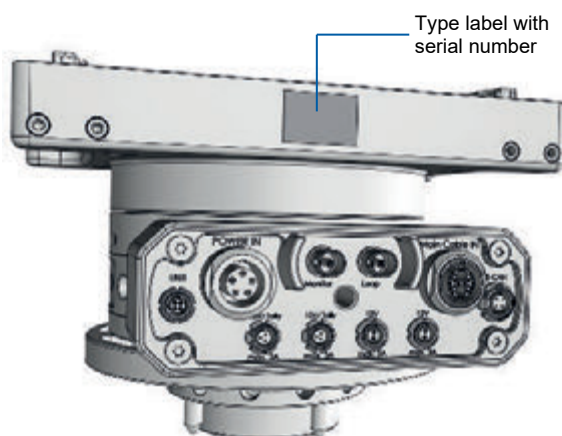
The TRINITY 2 Pan Axis Module serial number is located on the back of the lower ring of the TRINITY 2 Pan Axis Module.

The serial number consists of the last 4 digits of the product number K2.00YYYYYY-1234 (here: 1234).

3.4 Environmental Conditions

The TRINITY 2 Pan Axis Module should only be used and stored under certain environmental conditions.

Check the following conditions before commissioning and operation:

Permissible Operating Temperature	-20° C to +45° C / -4° F to +133° F
Permissible Storage Temperature	-30° C to +70° C / -22° F to +158° F
Permissible Humidity	95% rh, non condensing, from -20° C to +45° C / -4° F to +133° F

3.5 Technical Data

Height	118 mm / 4.64 in
Width	240 mm / 9.44 in
Depth Head Base w/o Safety Hook	175 mm / 6.88 in
Depth Base including Junction Box	212 mm / 8.34 in
Weight w/o Mitchell Mount	4.3 kg / 66 lbs
Stabilized Axles	1 (Pan)
Maximum Payload	up to 25 kg / 55 lbs
Maximum Pan Range	+/- 570°
Maximum Pan Rate	240° / sec

Note: Technical data is subject to change without notice.

3.6 Dimensional Drawing

384 / 15.12

530 / 20.87 min.

200 / 7.87

118
4.65

Ø 170 / 6.67

150 / 5.91

45 / 1.77

240 / 9.45

260 / 10.24
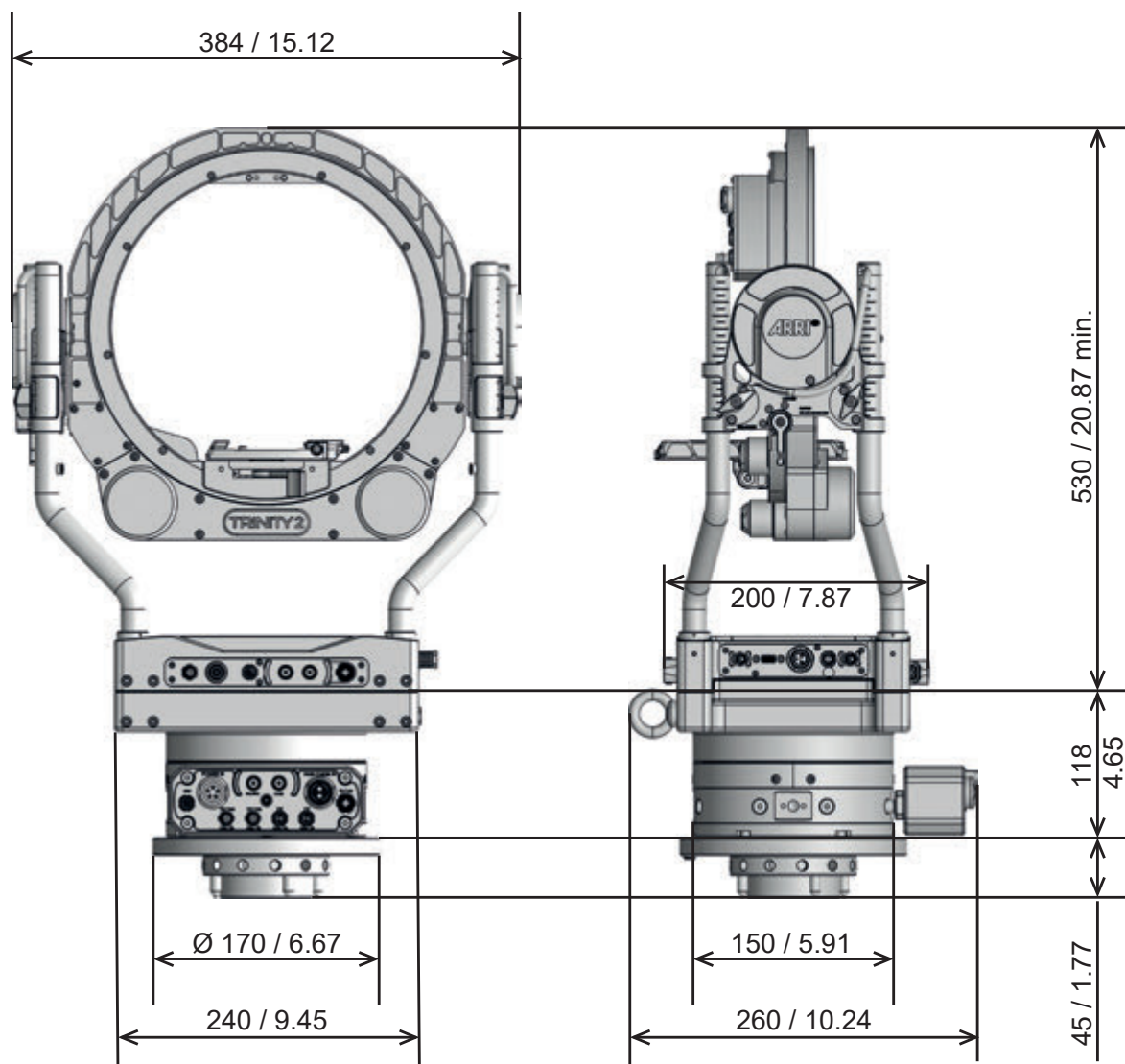
All dimensions given in millimeter / inch. Drawing not to scale.

3.7 Scope of Delivery and Warranty

NOTICE

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

Delivery

A complete set KK.0051466, "Pan Axis for TRINITY 2, Set", delivery includes:

- 1x K2.0050764, TRINITY 2 Pan Axis Module
- 1x K2.0050770, Communication Cable, TRINITY 2 Pan Axis
- 1x K2.0040332, Post Main Cable, 3B, 16pin
- 1x K2.0019298, SRH Mitchell Mount
- 1x K2.0019302, SRH FS CAN Bus Cable, 10 m / 32.8 ft
- 1x K2.0019306, SRH High Capacity Battery Power Cable, 12 V / 24 V, 0.5 m / 1.64 ft
- 1x K2.0021427, SRH High Capacity Battery Power Cable, 24 V, 3pin XLR, 10 m / 33 ft
- 1x K2.0021428, SRH High Capacity Battery Power Cable, 12 V, 4pin XLR, 10 m / 33 ft
- 1x K2.0038756, Wrench for SRH Castle Nut, Mitchell Mount

For scope of warranty, please ask your local ARRI Service Partner. ARRI is not liable for consequences from inadequate shipment, improper use or use of third-party products.

3.8 Certification and Safety Standards

EU Declaration of Conformity

Brand Name:	ARRI
Product Description:	Camera Stabilizer Systems
	TRINITY 2 Pan Axis Module

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.
- 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.

Compliance with the requirements of the European Directives has been verified by applying the following standards:

- EN 61000-6-2:2005 ; IEC 61000-6-2:2016 ; EN IEC 61000-6-2:2019 ; EN IEC 61000-6-4:2019 ; IEC 62368-1:2018
- EN IEC 63000:2018

Year of affixed CE-marking: 2024

Industry Canada Compliance Statement

Complies with CAN ICES-003(A)/NMB-003(A).

FCC 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 not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
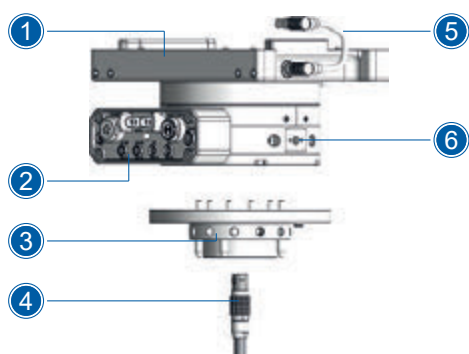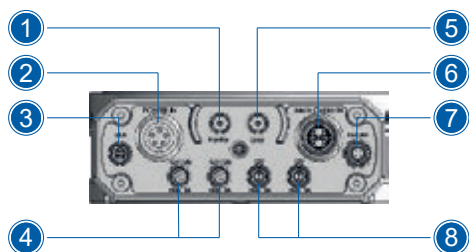
Australia and New Zealand

Brand Name: ARRI
Product Description: TRINITY 2 Pan Axis Module

South Korea

Pending.

3.9 Product Layout

3.9.1 Pan Axis Module Overview

3.9.1.1 Overview Front / Left

1 TRINITY 2 Pan Axis Module
2 Junction Box
3 Mitchell Mount
4 Main Cable
5 Communication Cable
6 Accessory Mount

#### 3.9.1.2 Overview Junction Box

1 Monitor / BNC
2 Power In (12 V / 24 V, max. 15 A)
3 LBUS / 4pin Lemo
4 Aux Out / 3pin Fischer (12 V max. 3 A)
5 Loop In / BNC
6 Main Cable In
7 FS CAN Bus In
8 Aux Out / 2pin Lemo (12 V max. 3 A)

3.9.1.3 Interfaces

| 12 V / 24 V Power In	Lemo 2B 7pin	12 V / 24 V max. 15 A
LBUS	Lemo 0B 4pin	Data / 12 V max. 3 A
Aux / Tally	Fischer 3pin	12 V max. 3 A
Aux	Lemo 0B 2pin	12 V max. 3 A
Monitor / HD SDI	BNC	6G
Loop / HD SDI	BNC	6G
FS CAN	Fischer 4pin	Data / 12 V max. 3 A
Main Cable In	Lemo 16pin	Data / Video 12 V / 24 V max. 15 A

3.9.1.4 Pin Out
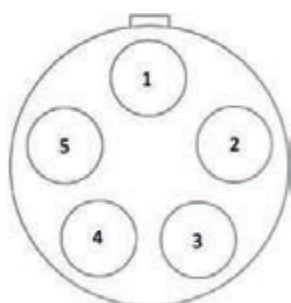
12 V / 24 V Power In

Lemo 3B 7pin (12 V / 24 V max. 15 A)

Pin 1	Ground
Pin 2	FS low
Pin 3	FS high
Pin 4	+ 12 V In
Pin 5	+ 24 V In

Shown from mating side

LBUS

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

Pin 1	Ground
Pin 2	CAN Low
Pin 3	+ 12 V / + 24 V
Pin 4	CAN High

Shown from mating side
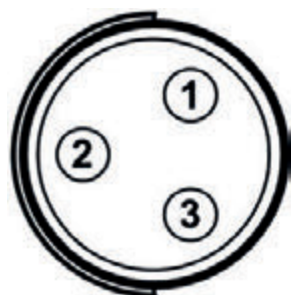
Aux / Tally

Fischer 3pin (12 V max. 3 A)

Pin 1	Ground
Pin 2	+ 12 V
Pin 3	Tally

Shown from mating side

12 V Aux Power

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

Pin 1	Ground
Pin 2	12 V

Shown from mating side

3.9.2 Power Supply

> ⚠️ **CAUTION**
>
> **Loss of Performance through Wrong Cables**
>
> Use only suitable and recommended power cords, batteries and power supplies.
>
> ▶ To perform in the desired way, the stabilized remote head requires at least min. **24 V / 8 A** over the **3pin XLR** plug and min. **12 V / 5 A** via the **4pin XLR** plug.

3.9.3 Batteries (recommended)

BEBOB CUBE 1200	www.bebob.de
Anton Bauer CINE VCLX	www.antonbauer.com
Block Battery	www.blockbattery.com
Cinepower Magnum 60	www.cinepower.com

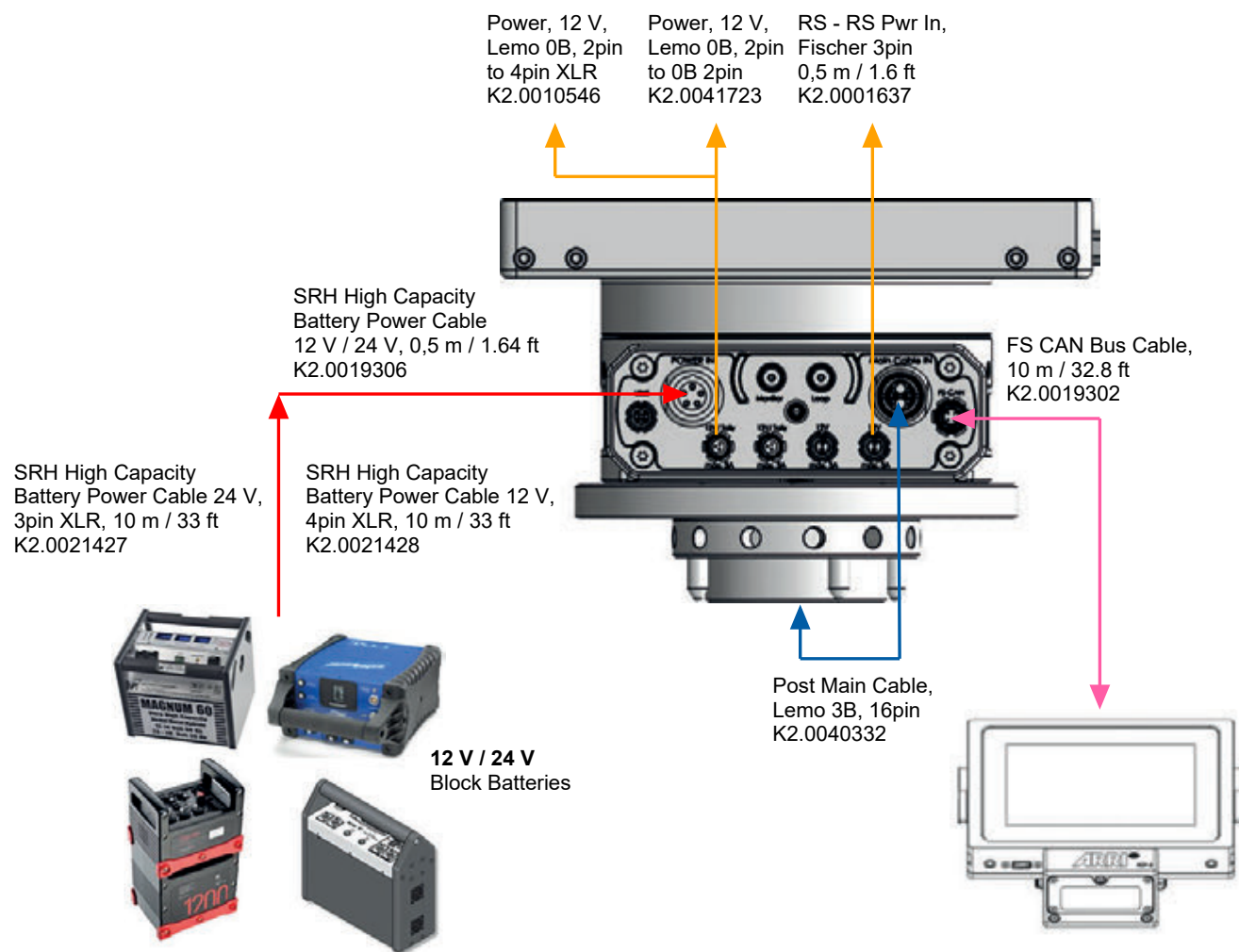### 3.9.4 Power Supply Cables

Use only appropriate cables, like:

K0.0019478	SRH Power Supply Set, 600 W
K2.0019299	SRH Power Supply, 600 W, 220 V / 110 V
K0.0012269	SRH High Capacity Camera Power Cable Set
K0.0021437	SRH High Capacity Battery Power Cable Set, 12 V / 24 V, 20 m / 66 ft
K0.0021438	SRH High Capacity Battery Power Cable Set 12 V / 24 V, 10 m / 33 ft
K2.0019306	SRH High Capacity Battery Power Cable, 12 V / 24 V, 0.5 m / 1.64 ft
K2.0021430	SRH High Capacity Battery Power Cable 12 V, 4pin XLR, 20 m / 66 ft
K2.0021429	SRH High Capacity Battery Power Cable 24 V, 3pin XLR, 20 m / 66 ft
K2.0021428	SRH High Capacity Battery Power Cable 12 V, 4pin XLR, 10 m / 33 ft
K2.0021427	SRH High Capacity Battery Power Cable 24 V, 3pin XLR, 10 m / 33 ft

3.9.5 Power Communication Cables

Use only appropriate cables, like:

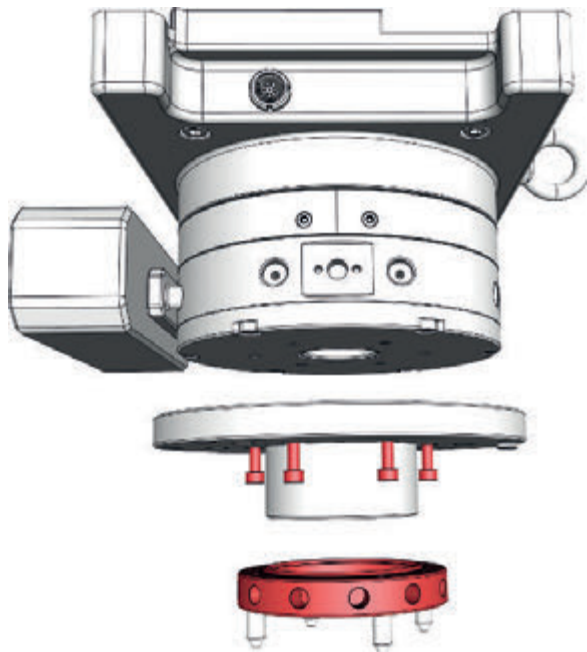|	
K2.0037788	SRH FS CAN Bus Cable, 0.3 m / 0.98 ft
K2.0033762	SRH FS CAN Bus Cable, 1 m / 3.2 ft
K2.0037701	SRH FS CAN Bus Cable, 5 m / 16.4 ft
K2.0019302	SRH FS CAN Bus Cable, 10 m / 32.8 ft
K2.0019301	SRH FS CAN Bus Cable, 25 m / 82 ft
K2.0019300	SRH FS CAN Bus Coupler, 0.2 m / 0.65 ft

3.9.6 Wiring Power Supply

Power, 12 V,
Lemo 0B, 2pin
to 4pin XLR
K2.0010546

Power, 12 V,
Lemo 0B, 2pin
to 0B 2pin
K2.0041723

RS - RS Pwr In,
Fischer 3pin
0,5 m / 1.6 ft
K2.0001637

SRH High Capacity
Battery Power Cable
12 V / 24 V, 0,5 m / 1.64 ft
K2.0019306

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

SRH High Capacity
Battery Power Cable 24 V,
3pin XLR, 10 m / 33 ft
K2.0021427

SRH High Capacity
Battery Power Cable 12 V,
4pin XLR, 10 m / 33 ft
K2.0021428

12 V / 24 V
Block Batteries

Post Main Cable,
Lemo 3B, 16pin
K2.0040332

4 Mounting and Assembly

4.1 TRINITY2 Pan Axis Assembly

4.1.1 To Mount the Mitchell Mount

- Remove the castle nut to be able to reach the six screws.
- Position the Mitchell Mount at the base of the Pan Axis Module.
- Use a 4 mm Hex key to tighten the six screws.

NOTICE

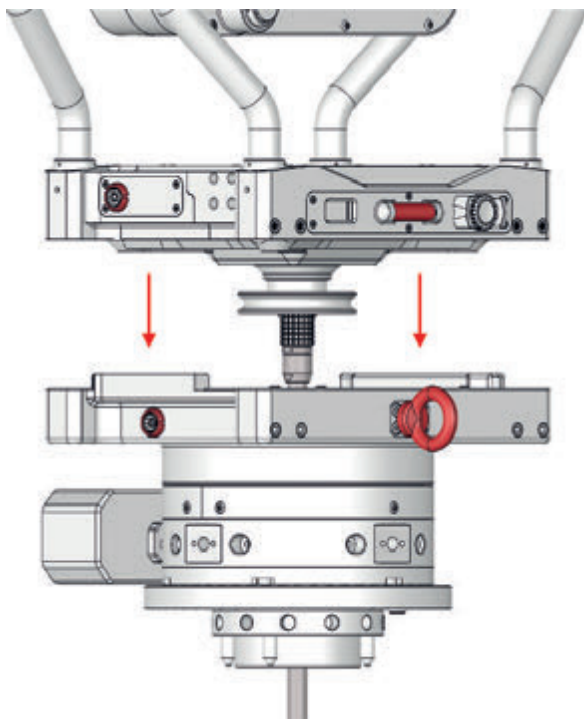A loose Mitchell Mount inevitably leads to unwanted vibrations.
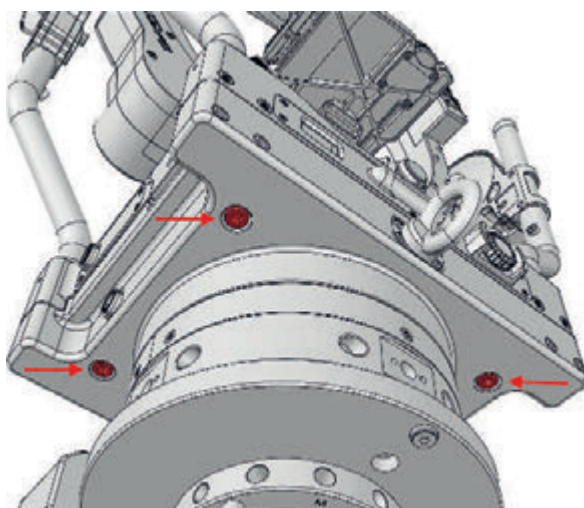
4.1.2 To Mount the TRINITY2 Head
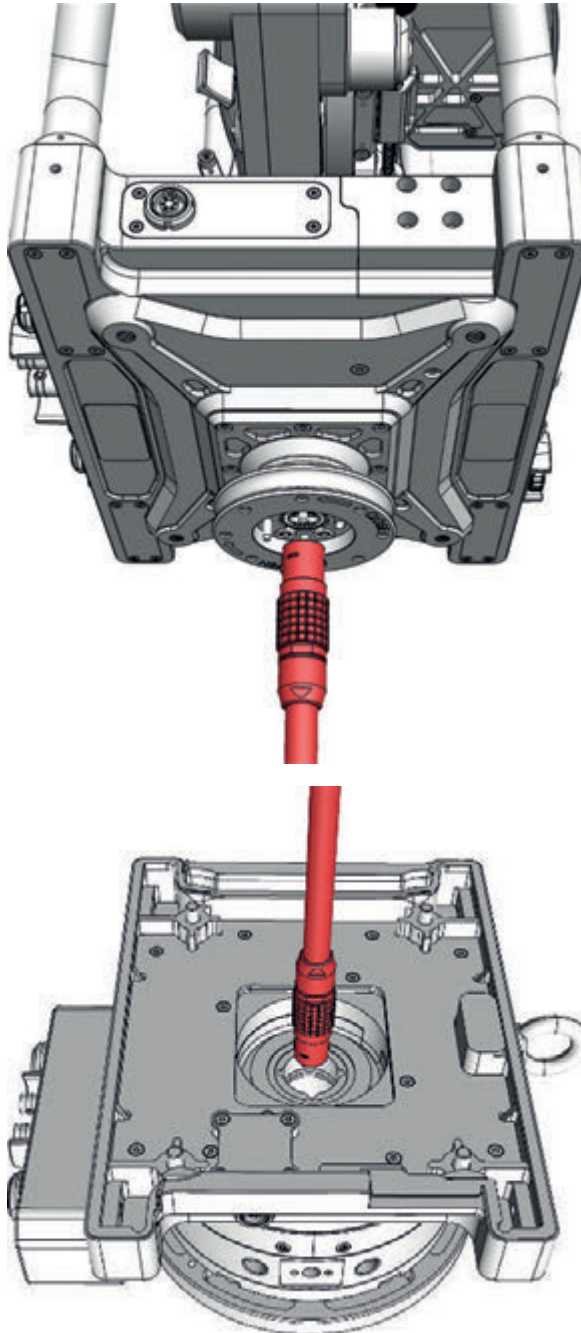
- The **main cable** needs to be connected **first** to the TRINITY 2 head.

- Guide the main cable from the top through the Pan Axis Module.

- Now carefully position the TRINITY 2 head on the Pan Axis Module.

- The two communication sockets on the left-hand side and the spirit level and safety hook on the back are used for orientation.
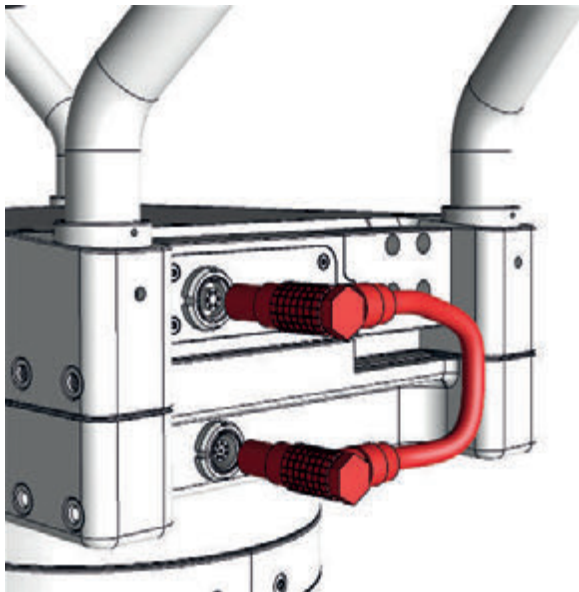
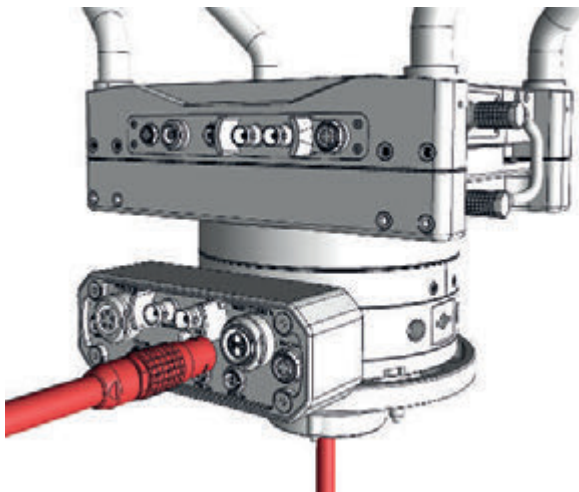

- Use a 5 mm Hex key to tighten the four screws.
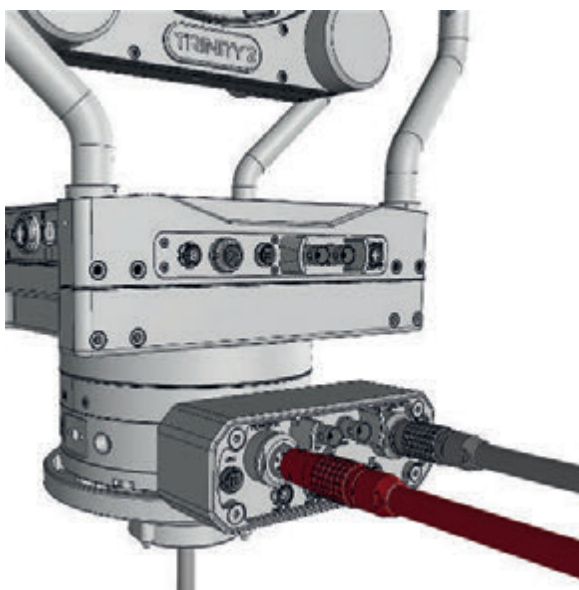

ⓘ NOTICE

A loose Pan Axis Module inevitably leads to unwanted vibrations.

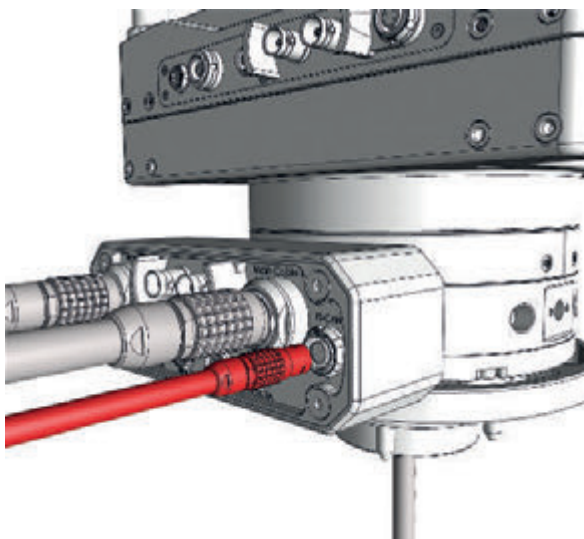- Connect the Communication Cable.

- Plug the Main Cable into the Junction Box after the Mitchell Mount has been mounted on a crane or dolly.
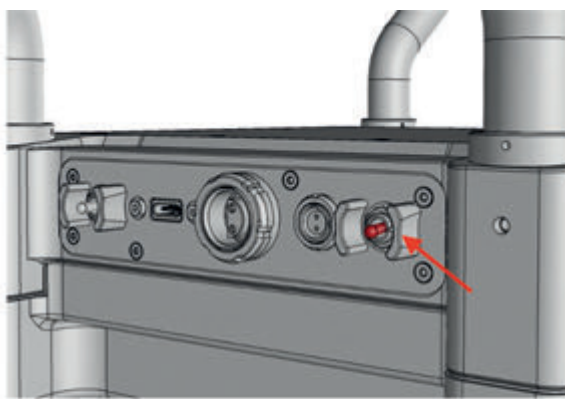

- First connect the Power Cable (K2.0019306).
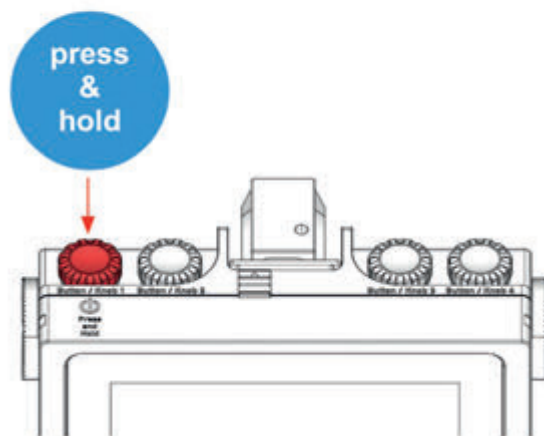- Then, connect the 4-pin 12 V and 3-pin 24 V power cables.

Finally, connect the FS CAN cable to the Junction Box and the RCP-3 with the FS CAN cable.
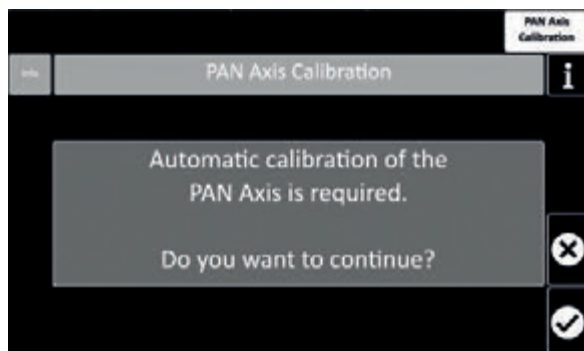

To establish communication between the TRINITY 2 remote head and the RCP-3, please switch on the main power switch at the TRINITY 2 head and press and hold the power switch at the RCP-3.

### 4.1.3 To Calibrate the Pan Axis Assembly

Mount the TRINITY Remote Head securely and firmly on a tripod or a bazooka that has a Mitchell mount.

4.1.3.1 Pan Axis Calibration Step 1

As soon as the Pan Axis module is connected to the TRINITY Head, supplied with suitable power and the TRINITY Head is switched on, the auto-calibration of the system starts automatically.
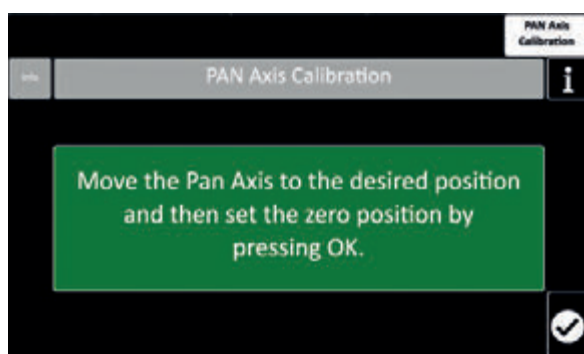
4.1.3.2 Pan Axis Calibration Step 2
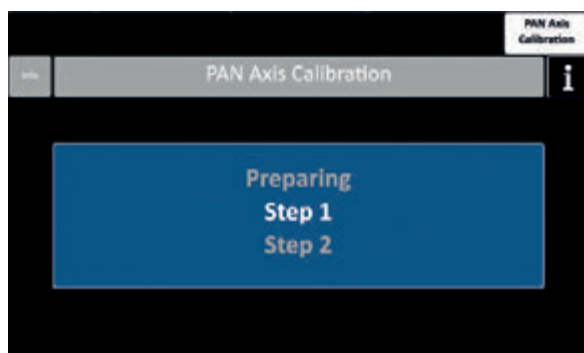
The Pan-Axis now performs the movements required for calibration and shows the individual steps on the display.

> **NOTICE**
>
> Make sure that the TRINITY Remote Head can move freely during calibration.

4.1.3.3 Pan Axis Calibration Step 3

After completing the calibration, the Pan Axis needs to be set to the desired zero point / home position. To achieve this, simply turn the TRINITY remote head to the desired position and touch OK. As a guide, we recommend positioning the TRINITY Remote Head 90 degrees to the junction box.

4.2 TRINITY2 Remote Head Attachment

4.2.1 To Mount the TRINITY2 Remote Head

> **DANGER**
>
> **Danger to Life due to Falling Parts, High Speed Collision and Impact**
>
> Consider all safety regulations!
>
> ▶ Only experienced, authorized operators or grip personal must mount the stabilized remote head to a crane, dolly, support arm or any other device.

> **NOTICE**
>
> To be able to use the maximum stabilization performance of the TRINITY2 Remote Head, the remote head may only be mounted on cranes, dollies, towers, cable cams or other support suitable for use.

4.2.2 ISO Damper

> **NOTICE**
>
> Stabilization systems are limited by engine power, as well as their bandwidth or frequency response. Stabilized remote heads have difficulty isolating certain shocks and violent movements in the vertical axis. Even certain lateral movements cannot always be perfectly corrected.
>
> Very fast movements required to correct the camera position may not be within system capabilities. This can be seen when using longer lenses.
>
> The use of Iso Dampers devices improves the application.
>
> Mounting the Iso Dampers device between the remote head and the mounting point of the head, will soak up the fast, unwanted movements, leaving the stabilization with unwanted movements that are slower and within the bandwidth of the system. When a stabilized remote head, such as the SRH-3 & SRH-360, is attached to a fast-moving vehicle that travels over difficult terrain, extreme shocks and forces are applied to the remote head.

Vibration Isolator for SRH-3, SRH-360, 360 EVO

The vibration isolator for SRH, Gen. 2 offers Mitchell Mounts at both ends.

To allow quick and easy mounting of the stabilized remote head, the shape of the lower blue Mitchell mount is optimized for the SRH-3, SRH-360, 360 EVO and TRINITY2 Remote Head.

Order codes

KK.0039359 Vibration Isolator for SRH, Gen. 2, metric, Basic Set

KK.0041936 Vibration Isolator for SRH, Gen.2, Imperial, Basic Set

5 Remote Control Panel RCP-3

5.1 About the RCP-3

The RCP-3 is a compact and lightweight remote control that can be programmed and controlled via a 5-inch touch panel.

The Graphic User Interface is used to set up and control the TRINITY 2 system, the Pan Axis Module and Lens Control.

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

The touch panel can be used to input values, as well as the jog-wheel encoders that can be freely assigned to program the RCP-3.

External controllers such as the Digital Remote Wheels DRW-1, Digital Encoder Head DEH-1, Master Grips MGT, Operator Control Unit OCU-1 and future controllers can be connected to the RCP-3 via the LBUS and FS CAN Bus.

5.2 Environmental Conditions

The TRINITY 2 Pan Axis Module should only be used and stored under certain environmental conditions.

Check the following conditions before commissioning and operation:

Permissible Operating Temperature	-20° C to +45° C / -4° F to +133° F
Permissible Storage Temperature	-30° C to +70° C / -22° F to +158° F
Permissible Humidity	95% rh, non condensing, from -20° C to +45° C / -4° F to +133° F

5.3 Technical data

Height	128 mm / 5.03 in
Width	165 mm / 6.49 in
Depth	85 mm / 2.04 in
Weight w/o 19 mm Rod clamp	1.0 kg / 2.2 lbs

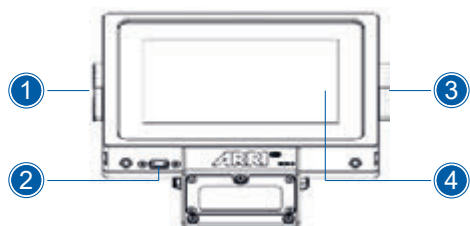*Note: Technical data is subject to change without notice.*

5.4 Dimensional Drawing
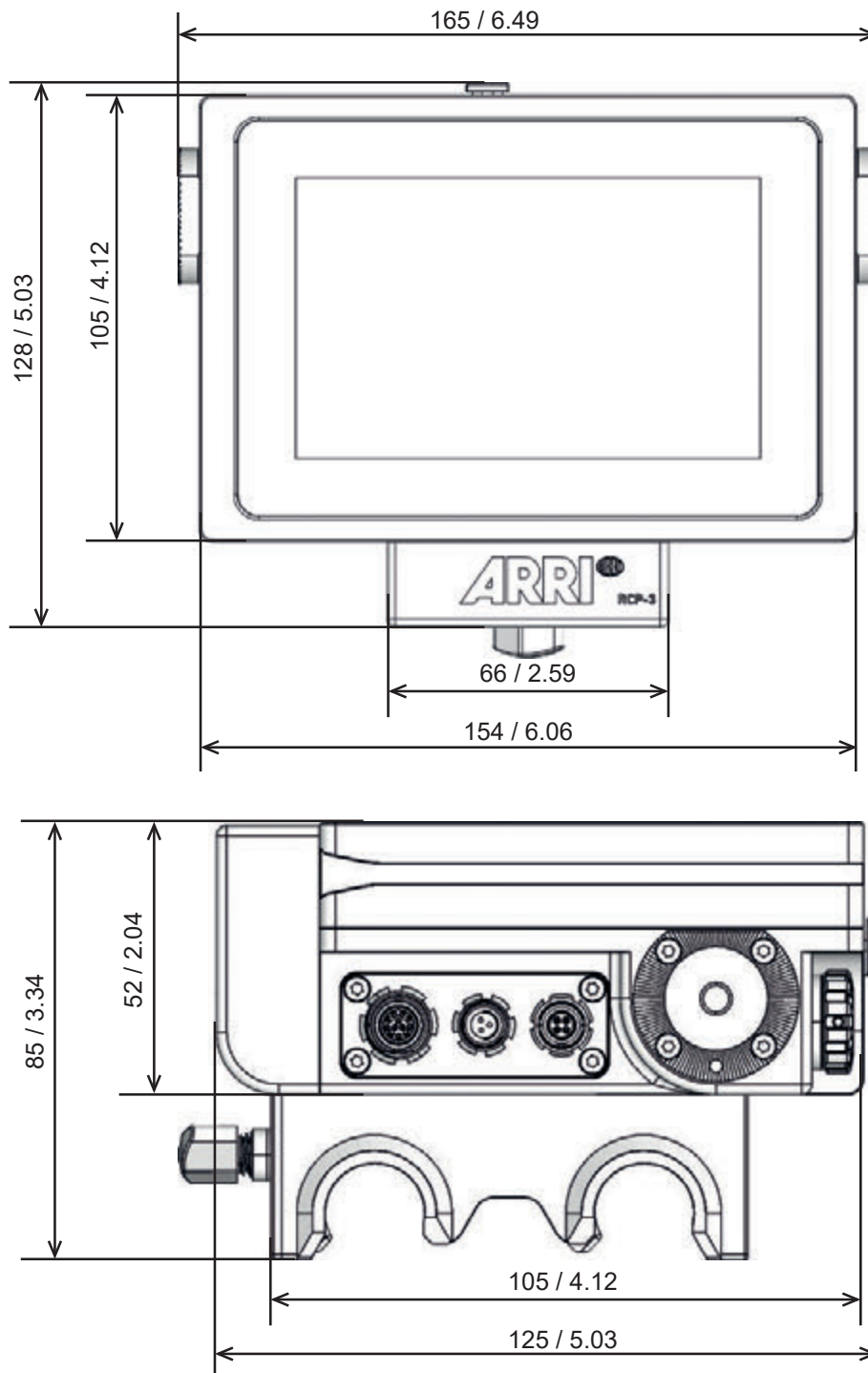
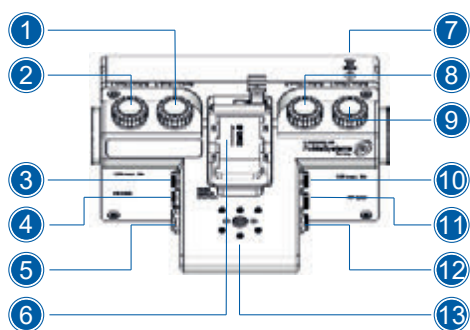All dimensions in mm / inch. Drawing not to scale.

5.5 Overview

Front View

1 Rosette
2 USB-C (service only)
3 Rosette
4 Touch Screen

Back View


1 Jogwheel / Button 3
2 Jogwheel / Button 4
3 LBUS
4 Fischer 3pin (12 V max. 3 A)
5 FS CAN Bus
6 Radio Module Slot
7 ON / OFF
8 Jogwheel / Button 2
9 Jogwheel / Button 1
10 LBUS
11 Lemo 2pin 0B (12 V max. 3 A)
12 FF CAN Bus
13 RMB-3 Thread

5.6 Interfaces

| LBUS	Lemo 0B 4pin	Data / 12 V max. 3 A
12 V	Fischer 3pin	12 V max. 3 A
FS CAN Bus	Fischer 4pin	Data / 12 V max. 3 A
12 V	Lemo 0B 2pin	12 V max. 3 A
FF CAN Bus	Fischer 4pin	Data / 12 V max. 3 A
USB	USB-C	5.2 V

5.7 Mounting and Assembly

5.7.1 To Mount the Rod Clamp Bridge Vertical
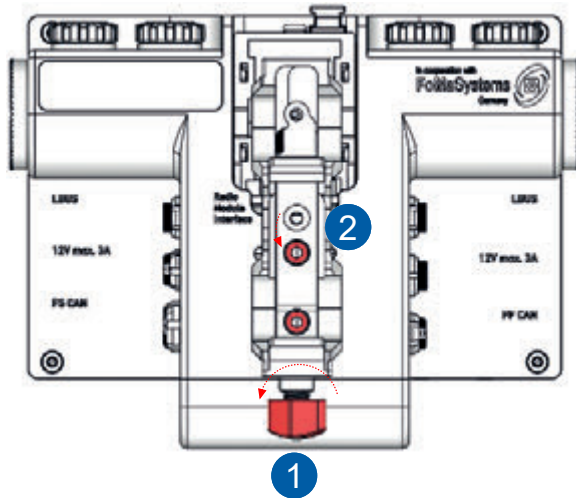
- Turn the rod clamp's wing-nut (1) counterclockwise to open it.
- If necessary, please relocate the top screw (2) to the middle hole.
- It's easier to move the screws by pushing away the clamping slide.
- Make sure both screws are tightened.
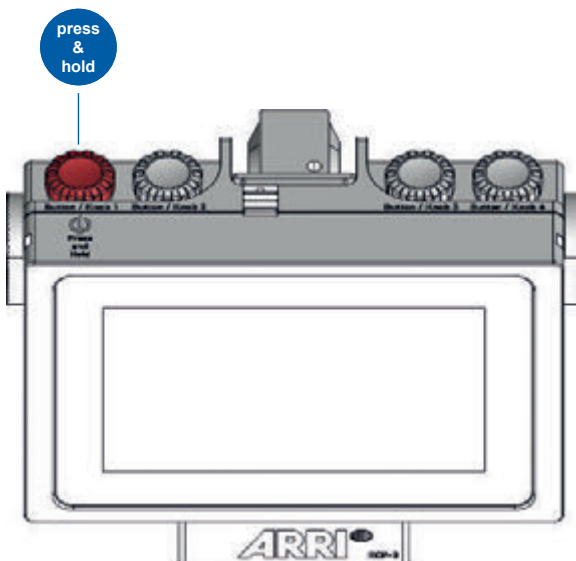
5.7.2 To Mount the Rod Clamp Bridge Horizontal
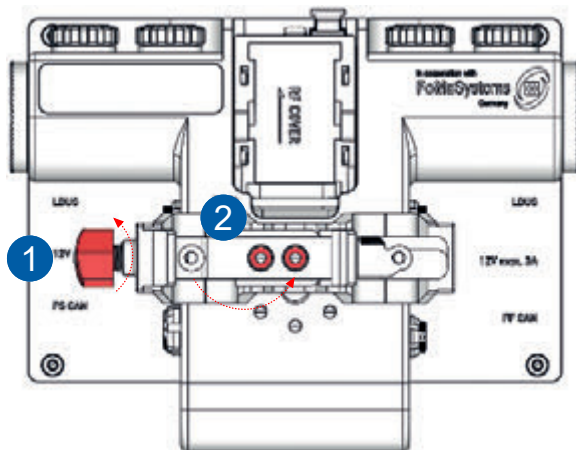
- Turn the rod clamp's wing-nut (1) counterclockwise to open it.
- If necessary, please relocate the top screw (2) to the lower hole.
- It's easier to move the screws by pushing away the clamping slide.
- Make sure both screws are tightened.

5.7.3 Power ON / OFF

- To turn the RCP-3 on and off, press and hold down the jog-wheel until the ARRI logo appears or disappears on the display.

6 Cleaning, Maintenance and Repair

6.1 Cleaning Instructions

> **ⓘ NOTICE**
>
> **Improper Cleaning Procedure**
>
> Risk of damage of surfaces.
>
> ▶ Before cleaning, remove all accessories and disconnect all cables.
>
> ▶ Only use the cleaning agents specified in this section.
>
> ▶ Do not use any strong or aggressive cleaning detergents like Methanol, Acetone, Benzine or acids. These chemicals may dissolve imprinted labels or the paint on the housing and damage highly polished surfaces.
>
> ▶ During cleaning of the device, always make sure that protective covers are in place.
>
> ▶ Do not moisten connectors when cleaning the device.
>
> ▶ Avoid touching any connector pins when cleaning the device.
>
> ▶ Avoid wiping dry connector pins with a dry cloth, especially if the surface is not clean.
>
> ▶ Avoid wiping connector pins without air blow dusting first. If particles or connector pins are electrostatically charged, it may improve dusting efficiency to use deionized air.
>
> ▶ Compressed air should not be used on the housing.

Recommended Cleaning Agents

- Water
- Glass Cleaner
- Isopropyl Alcohol

Area	Cleaning Procedure
Housing	Clean the housing, mechanical and electronic 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.
Narrow spaces and gaps	Use a manual air blower, cotton swabs or a soft brush to remove dust particles from narrow spaces, gaps or connectors.

6.2 Maintenance and Repair

> **⚠ WARNING**
>
> **Repairs carried out by Untrained Personnel**
>
> Risk of injury and damage.
>
> ▶ Do only carry out maintenance work that is describes in this operating manual.
>
> ▶ 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 device, please contact the ARRI Service.

7 Transportation, Storage and Disposal

7.1 Transportation and Storage

NOTICE

Improper Packing and Transportation of the Device

Risk of damage to the device.

▶   Follow the specified environmental conditions.

▶   Only transport the device and accessories in suitable cases.

▶   Follow the instructions for transport and storage in this section.

The device can be damaged if not transported and stored properly. Please take note of the following guidelines.

Transportation Guidelines

- Disconnect all cables and power sources from the device.
- Always transport the device in a suitable case.
- Do not expose the device to severe shocks.

Storage Guidelines

Disconnect all cables and power sources from the device.

Always store the device in a suitable case.

Do not store the device outside of the specified ambient temperature range.

Do not store the device in places where it may be subject to extreme temperatures, direct sunlight, high humidity, severe vibration, dust or strong magnetic fields.

7.2 Disposal

NOTICE

You can return the product to the manufacturer Arnold & Richter Cine Technik GmbH & Co. Betriebs KG for disposal.

When you dispose third party accessories, please observe the instructions of the relevant manufacturer.

	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.

8 ARRI Service Contacts

Please see the current list of service partners at service contacts.

Arnold & Richter Cine Technik GmbH & Co.
Betriebs KG
Herbert-Bayer-Str. 10
80807 Munich
Germany
+49 89 3809 2121
Business hours:
Mo. - Fr. 09:00 - 17:00 (CET)
service@arri.de

ARRI Cine + Video Geräte Ges. m. b. H.
Pottendorferstraße 23-25/3/2/1
1120 Vienna
Austria
+43 1 8920107 30
Business hours:
Mo. - Fr. 09:00 - 17:00 (CET)
service@arri.at

ARRI CT Limited / London
2 Highbridge, Oxford Road
UB8 1LX Uxbridge
United Kingdom
+44 1895 457 000
Business hours:
Mo. - Thu. 09:00 am - 5:30 pm (GMT)
Fr. 09:00 am - 5:00 pm (GMT)
service@arri-ct.com

ARRI Inc. / West Coast
3700 Vanowen Street
CA 91505 Burbank
USA
+1 818 841 7070
Business hours:
Mo. - Fr. 09:00 am- 05:00 pm (PT)
service@arri.com

ARRI Inc. / East Coast
617 Route 303
NY 10913 Blauvelt
USA
+1 845 353 1400
Business hours:
Mo. - Fr. 08:30 am - 05:30 pm (EST)
service@arri.com

ARRI Canada Limited
76 Six Point Road
Etobicoke, ON M8Z 2X2
Canada
+1 416 255 3335
Business hours:
Mo. - Fr. 08:30 am - 05:00 pm (EDT)
service@arri.com

ARRI Australia Pty Ltd
Suite 2, Building B, 12 Julius Ave
NSW 2113 North Ryde
Australia
+61 2 9855 4305
Business hours:
Mo. - Fr. 08:00 am - 05:00 pm (AEST)
service@arri.com.au

ARRI Asia Pte. Ltd.
164 Kallang Way, #03-01
349248 Singapore
Singapore
+65 6230 9488
service@arri.asia

ARRI China (Beijing) Co. Ltd.
Chaowai SOHO Tower C, 6/F, 0628/0656,
Chaowai
Dajie Yi 6
Beijing
China
+86 10 5900 9680
Business hours:
Mo. - Fr. 09:00 am - 06:00 pm (CST)
service@arri.cn

ARRI Hong Kong Limited
26/F Gravity, 29 Hing Yip Street
Kwun Tong, Hong Kong
P. R. China
+852 2571 6288
Business hours:
Mo. - Fr. 09:00 am - 06:00 pm (HKT)
servicehk@arri.asia

ARRI Japan Kabushiki Kaisha
Service
Haneda Innovation City Zone K210, 1-1-4
Hanedakuko, Ota-Ku
144-0011 Tokyo
Japan
+81 3 6635 3750
Business hours:
Mo. - Fr. 10:00 - 18:00 (JST)
info@arri.jp

ARRI Korea Limited
42, World Cup buk-ro 1-gil, Mapo-gu
04031 Seoul
Korea
+82 (0)70 4419 6401
Business hours:
Mo. - Fr. 9:00 - 18:00 (KST)
service@arri.kr

ARRI Brasil Ltda
Rua Clodomiro Amazonas, 1158 - Lojas 45 e 46,
Vila Nova Conceição
São Paulo, SP 04537-901
Brasil
+55 1150419450
Business hours:
Mo. - Fr. 09:00 am - 05:30 pm (BRT)
arribrasil@arri.com

LİNKA GÖRÜNTÜ IŞIK VE SES SİSTEMLERİ
TİCARET ANONİM ŞİRKETİ
Distributor & Service
Maslak Mah. AOS 55. Sokak 42 Maslak A Blok
SİTESİ
NO: 2 İÇ KAPI NO: 1
Sariyer, Istanbul
Turkey
+90 2123584520
service@linkgroup.com.tr

CINEOM Broadcast DMCC.
HDS Business Center, Unit No. 3503, Floor No.
35 Cluster M
Jumeirah Lake Towers
Dubai
Dubai, UAE
+971 (0) 45570477
Business hours:
Sa. - Th. 10:00 am- 06:00 pm
arriservice.me@cineom.com

CINEOM Broadcast India Pvt. Ltd.
C-4, Goldline Business Centre, Link Rd. Malad
West
400 064 Mumbai
India
+91 (0)22 42 10 9000
Business hours:
Mo. - Sa. 10:00 am - 06:00 pm (IST)
arrisupportindia@cineom.in