CLM-5
Controlled Lens Motor

User Manual

05.10.2015
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Original version.

For further assistance

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Scope

This instruction manual applies to the following product:
Controlled Lens Motor CLM-5

Document revision history

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Disclaimer

Before using the products described in this manual be sure to read and understand all respective instruction.

The ARRI Controlled Lens Motor CLM-5 is only available to commercial customers. The customer grants by utilization that the Controlled Lens Motor CLM-5 or other components of the system are deployed for commercial use. Otherwise the customer has the obligation to contact ARRI preceding the utilization.

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 sufficient safety measures in their work with the system and have to heed the stated canonic use.

ARRI or its subsidiaries do not assume any responsibility for incurred losses due to improper handling or configuration of the Controlled Lens Motor CLM-5 or other system components.

ARRI assumes no responsibility for any errors that may appear in this document. The information is subject to change without notice.

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

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

Before use, please ensure that all users comprehensively read, understand, and follow the instructions in this document.

Risk levels and alert symbols

Safety warnings, safety alert symbols, and signal words in these instructions indicate different risk levels:

⚠️ DANGER!

*DANGER* indicates an imminent hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠️ WARNING!

*WARNING* indicates a potentially hazardous situation which, if not avoided, **may result in** death or serious injury.

⚠️ CAUTION!

*CAUTION* indicates a potentially hazardous situation which, if not avoided, **may result in** minor or moderate injury.

NOTICE

*NOTICE* explains practices not related to physical injury. No safety alert symbol appears with this signal word.

Note: Provides additional information to clarify or simplify a procedure.
**Vital precautions**

⚠️ **DANGER!**

**Risk of electric shock and fire!**

Short-circuits may entail lethal damage!

Before use, read and follow all valid instructions.

Use solely and exclusively as described in the instructions.

Never open. Never insert objects.

For operation, always use a power source as indicated in the instructions.

Always unplug the cable by gripping the plug, not the cable.

Never try to repair. All repair work should be done by a qualified ARRI Service Center.

Never remove or deactivate any safety equipment (incl. warning stickers or paintmarked screws).

Always protect from moisture, cold, heat, dirt, vibration, shock, or aggressive substances.
2 Audience and intended use

**NOTICE**

The product is solely and exclusively available for commercial customers and shall be used by skilled personnel only. Every user should be trained according to ARRI guidelines. Use the product only for the purpose described in this document. Always follow the valid instructions and system requirements for all equipment involved.

The Controlled Lens Motor CLM-5 is a digital lens motor solely and exclusively for use on professional camera setups.
3 Scope of delivery and warranty

NOTICE
Product and packaging contain recyclable materials. Always store, ship, and dispose of according to local regulations. ARRI is not liable for consequences from inadequate storage, shipment or disposal.

Delivery
On delivery, please check if package and content are intact. Never accept a damaged/ incomplete delivery. A complete delivery includes:

- CLM-5 motor unit with cable
- CLM-5/cforce mini clamp console 19/15mm
- CLM-5/cforce mini gear 0.8/40t
- User manual
- Original Packaging

Warranty
For scope of warranty, please ask your local ARRI Service Partner. ARRI is not liable for consequences from inadequate shipment, improper use, or third-party products.
ARRI and cmotion have partnered up to develop the Controlled Lens Motor CLM-5.

The Controlled Lens Motor CLM-5 is an exceptionally small and lightweight, yet fast and responsive lens motor, designed for demanding setups involving gimbals and aerial drones. Directly compatible with all ALEXA Plus models, the CLM-5 can also be used with other cameras via ARRI’s Universal Motor Controller UMC-4 or Single Motor Controller SMC-1, or cmotion controllers (with 12 pin connector).

Main features

- Super small and lightweight (205 g incl. clamp console, gear and cable)
- Fast and responsive motor for smaller, smooth-moving lenses on lightweight camera setups
- Easily exchangeable motor cable
- Compatible with ALEXA Plus module, UMC-4, SMC-1 and cmotion motor controllers (with 12 pin connector)
5 Motor layout

1. CLM-5/cforce Clamp Console 19/15mm (K2.0006176)
2. CLM-5/cforce mini Gear 0.8/40t (K2.0003753)
3. CLM-5 Motor Unit (K2.0006360)
4. CLM-5 Motor Cable (K2.0006332)
6 Compatibility

The Controlled Lens Motor CLM-5 is directly compatible with the following ARRI products:

- ALEXA Plus (SUP 11.1 or higher)
- ALEXA XT Plus (SUP 11.1 or higher)
- ALEXA Studio (SUP 11.1 or higher)
- ALEXA XT Studio (SUP 11.1 or higher)
- ALEXA SXT Plus
- ALEXA SXT Studio
- ALEXA 65
- Universal Motor Controller UMC-4 (SUP 1.40 or higher)
- Single Motor Controller SMC-1 (SUP V0127 or higher)
- Zoom Main Unit ZMU-3A (SUP ZMU3_02I or higher)

The Controlled Lens Motor CLM-5 is compatible with the following cmotion products:

- cvolution camin 3M
- broadcast camin
- compact ONE camin

**NOTICE**

Please contact cmotion for further details.
6.1 Sample configurations

CLM-5 lens motors can be used in different applications, within ARRI or cmotion systems. The following configurations are ARRI configuration samples, making no claim to be exhaustive.

ARRI ALEXA Plus

ARRI CLM-5

ARRI UMC-4

ARRI CLM-5
Compatibility

ARRI SMC-1

ARRI CLM-5

Focus/Iris/Zoom

ARRI ZMU-3A

ARRI CLM-5

ZMU-3A to CLM/PSC Cable
K2.65226.0

to ARRI PSC cable
7 Appendix

7.1 Part numbers

Controlled Lens Motor CLM-5 (Basic Set)

- K2.0006355 Controlled Lens Motor CLM-5 (Basic Set)

The Controlled Lens Motor CLM-5 (Basic Set) includes:

- K2.0006360 CLM-5 Motor Unit
- K2.0006332 CLM-5 Motor Cable (included in K2.0006360)
- K2.0006176 CLM-5/cforce mini Clamp Console 19/15mm
- K2.0006175 CLM-5/cforce mini Clamp Insert 19/15mm (included in K2.0006176)
- K2.0003753 CLM-5/cforce mini Gear m0.8/32p, 40t

Gears for the Controlled Lens Motor CLM-5

- K2.0006363 CLM-5/cforce mini Gear m0.6, 56t (Fujinon ENG focus/zoom)
- K2.0006365 CLM-5/cforce mini Gear m0.5, 64t (Canon ENG focus/zoom)
- K2.0006367 CLM-5/cforce mini Gear m0.4/64p, 80t (Pan. iris, Fujinon ENG iris, Canon ENG iris)
K2.0006370  CLM-5/cforce mini Gear 48p, 60t (Panavision zoom)

K2.0006372  CLM-5/cforce mini Gear m0.8, 40t, 25mm (25mm wide)

7.2 Specifications

Temperature range: -20 to +50° C (-4 to +122° F)
Torque: 0.5 Nm peak
Speed: 150 teeth per second
Supply voltage: 12 - 34 V
Power consumption: max. 15 W peak
7.3 Dimensions and weight

Dimensions

The following dimensions are for the Controlled Lens Motor CLM-5 (Basic Set) including cable, the CLM-5/cforce mini Clamp Console 19/15mm and the CLM-5/cforce mini Gear m0.8/32p, 40t.

Weight

Weight of Controlled Lens Motor CLM-5 (Basic Set): 205g/7.2oz
7.4 Pinouts

7.5 Service contacts

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Arnold & Richter Cine Technik
+49 89 3809 2121
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7.6 International declarations

EC Declaration of Conformity

The product Controlled Lens Motor CLM-5 conforms with the specifications of the following European directives:


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

FCC Class A Statement

Note: 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.

Industry Canada Compliance Statement

Complies with the Canadian ICES-003 Class A specifications. Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada. This device complies with RSS 210 of Industry Canada. Cet appareil est conforme à CNR-210 d' Industrie Canada. This Class A device meets all the requirements of the Canadian interference-causing equipment regulations. Cet appareil numérique de la Classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.