

Télécommande HF de Point (Emetteur)

Antenne ou Câble *

*câble vidéo BNC de la prise antenne de l'émetteur à la prise antenne du récepteur.

Prise Lumière

Fonctionne seulement avec le LED lumineux d'éclairage de l'échelle Chrosziel!

Selecteur de canaux RF

Pour les erreurs de RF voir le récepteur

Déclencheur Cam on/off

LED clignote = la caméra est allumée

Batterie

6 Volt/ 600 mAh

Bouton d'inversion

Change la direction de rotation du moteur

Interrupteur On/OFF & LED

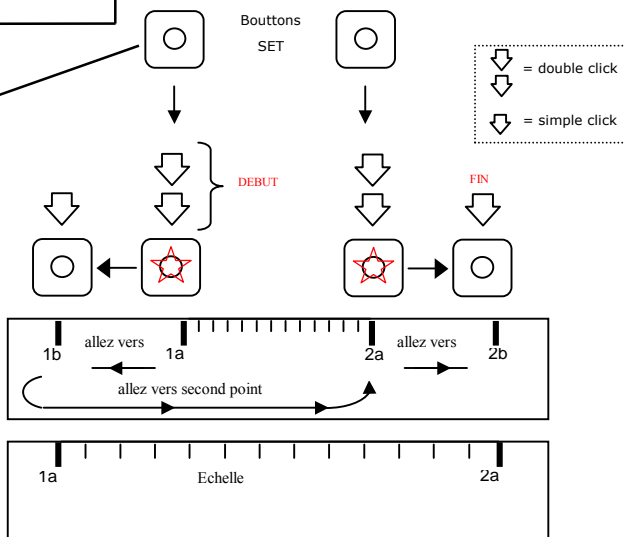
vert = batterie ok
rouge = changez de batterie, le système se coupe automatiquement, quand la capacité de la batterie est faible

Mise au point

L'échelle de course du volant correspond à l'échelle de l'objectif qui est mémorisée durant le set up du récepteur. Sinon faites le reset de l'extension

Exemple: mémorisation des limites de courses

Commencez par un double click pour enregistrer votre 1ère limite de course (1a)



LES LIMITES DE COURSES ENREGISTRÉES NE SONT PAS AFFECTÉES PAR LE CHANGEMENT DE BATTERIE OU LORSQUE L'ON ÉTEIND LE DIGIFOX

Reset des limites de courses



Problèmes fréquents

Problèmes erreurs HF:

- Intérférences avec d'autres systèmes HF sur le tournage. (High power Motorolas etc.)
- 2 systèmes sur le tournage ! Toujours sélectionner un canal différent HF-channel sur chacun des systèmes
- Pas d'antenne ou antenne cassée
- Changez pour un autre canal HF
- Certains problèmes HF-error peuvent être éliminés par l'utilisation d'un câble (BNC) directement sur la prise antenne.

Le Moteur ne reagit pas correctement au mouvement du volant:

- Faites un **Reset** du récepteur en le redémarrant.
- Refaites l'ajustement automatique of lens-scale limit and motor-test on motor control unit
- Changez le moteur et le câble

Le Moteur ne tourne pas jusqu'aux butées de l'optiques:

- Vérifiez que le moteur est bien monté sur le support de tiges
- Refaites l'ajustement automatique of lens-scale limit and motor-test on motor control unit
- Faites un **Reset** de l'expansion du récepteur
- Changez le moteur et le câble (utilisez uniquement des câbles DigiFox Chrosziel pour l'alimentation et le moteur !)
- Faites le set up usine

Informations techniques

Emetteur :

- HF-unit: 433.900 - 434.650 MHz 10 mW (autres fréquences sur demande)
- Alimentation: 5.1 - 10 V
- Consommation: 50mA
- Température d'opération: -10°C - +55°C
- Dimensions: 160 x 85 x 80 mm
- Poids: 600 g (avec antenne & batterie)

Récepteur:

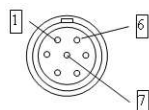
- HF-unit: 433.900 - 434.650 MHz -120dBm (autres fréquences sur demande)
- Alimentation: 10- 35V
- Vitesse Moteur : indépendant de l'alim. secteur ext. 2 niveaux d'alimentations moteurs ajustables
- Consommation: min. 130mA - max. 5A (spikes up to 7 A)
- Température d'utilisation: -10°C - +55°C
- Dimensions: 80 x 96 x 42 mm
- Poids: 280 g

Frequency list

CH	Frequency
CH 1	433.900
CH 2	433.950
CH 3	434.000
CH 4	434.050
CH 5	434.100
CH 6	434.150
CH 7	434.200
CH 8	434.250
CH 9	434.300
CH 10	434.350
CH 11	434.400
CH 12	434.450
CH 13	434.500
CH 14	434.550
CH 15	434.600
CH 16	434.650

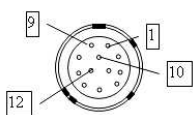
Récepteur (Vue frontale)

Moteur



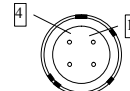
Vue avant du connecteur
Type: Lemo EGG. 1B. 307
Pin 1: Motor -
Pin 2: Motor +
Pin 3: Encoder canal A
Pin 4: +5V
Pin 5: earth/ground
Pin 6: Encoder canal B
Pin 7: earth/ground

LENS FOCUS - CAM ON/OFF



Vue avant du connecteur
Type: Hirose HR10A-10R-12SB
Pin 1: Ucam 12-15V
Pin 2: earth/ground
Pin 3: Uref_H
Pin 4: RS232 in
Pin 5: Uref_L
Pin 6: Ucam 12-15V
Pin 7: UFocus
Pin 8: RS232 out
Pin 9: CAM Relay contact 1
Pin 10: CAM Relay contact 2
Pin 11: CAM Relay contact 1
Pin 12: CAM Relay contact 2

POWER IN - CAM ON/OFF



Vue avant du connecteur
Type: Hirose HR10-7R-4S
Pin 1: Batterie minus / GND
Pin 2: CAM Relay contact 1
Pin 3: CAM Relay contact 2
Pin 4: Batterie plus (9 – 36 V)

Indicateur - Fonction-
(voir manuel pour plus de détails)



Antenne ou Câble BC & HF- error LED

hardwire through any common BNC video cable to transmitter (hand control unit).

Ajustement Automatique des limites de butées et test des moteurs externes digitaux:

Cet ajustement doit être fait à chaque fois que l'on change le moteur ou l'optique.

Ne pas bloquer ou arrêter l'optique pendant le test sous risque que les paramètres soient enregistrés incorrectement !

- engager le moteur sur l'optique (mais pas en butée)
- Appuyer su le bouton "Adjust", le LED rouge clignote
- Rappuyer su le bouton « Adjust »
Le LED rouge clignote plus vite
- Le Moteur commence à tourner doucement. Les limites de butées sont alors automatiquement testées et enregistrées.

Camera on/off

on/off mode pour caméra
(pulse ou permanent on/off)

LED alimentation

vert = batterie ok (>12V)
rouge = changez de batterie

Fusible 5 Amps surge-proof (time-lag fuse)

Ne pas changer la valeur du fusible en cas de remplacement!

Récepteur (Vue arrière)



Alimentation pour Moteur externe digital

Retirez le bouchon et tournez l'interrupteur vers le sens désiré.
Note: Utilisez en mode High-Power seulement si nécessaire!

Manual DIGI FOX

Version V1.11 – eng.
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1. Receiver

1.1. Operation / Optical Signals

- 1.1.1. **Connector „MOTOR“ (Lemo eight pin):** Connects external so-called digital servo motors with incremental encoder, such as motors of the manufacturers Heden (M26VE), Scorpio, Preston
- 1.1.2. **Connector „LENS FOCUS, CAM ON/OFF“ (Hirose 12 pin):** For the connection of internal focus servo motors of ENG-lenses like Fujinon or Canon by means of special adaptor cables. Also connects to the "Focus Control" socket of Panasonic camcorders DVX / HVX – types. This connector also controls the start/stop-function of video and film cameras. If ENG-lenses are connected to the receiver it will be powered through this connector and the lens outlet (10-17V).
- 1.1.3. **Connector „POWER IN, CAM ON/OFF“ (Hirose four pin):** For the connection of an external power supply (voltage 10-35V). It is needed for the operation of external motors or if the receiver controls Panasonic camcorders. It also controls the start/stop-function of film- and video cameras.
- 1.1.4. **Connector „ANTENNA“:** For the connection of the receiver's antenna, 50 Ohm, for 434 MHz band. In case of extremely bad reception due to i.e. broadband interferences, the connection between the transmitter and the receiver may be made of a standard BNC cable.
- 1.1.5. **Button „ADJUST END STOPS“:** When an external motor is connected, this button starts the adjust mode for the end stops of the lens. If calibration of an external motor shall be performed please proceed as follows: press the button once – the LED “FN” starts flashing. Press the button again, the motor starts the calibration slowly and will run faster throughout the process.
Prevent from starting the calibration if the lens is positioned at one of it's end stops!
- This button is without function in all other operation modes (internal ENG-servomotors or when using the Chrosziel light dimmer)
- 1.1.6. **Slide switch „CAM ON/OFF“:** Determines the mode of the start/stop function.
Position left = Duration mode: As long as the camera shall run the control contacts remain closed. They disengage when the camera shall stop.
Position right = pulse mode: On all video cameras and recent film cameras, the start/stop function is normally controlled by a short impulse (approx. 1/2 sec.). Each impulse changes (toggles) to the respective other state. Make sure to synchronize to the proper position of the transmitter's “camera start” switch!
- 1.1.7. **„FUSE“:** An SMD fuse (5 A surge-proof) is located behind this cap. ONLY use an adequate fuse when it is blown. NEVER short! This may cause damages on the unit.

1.1.8. LED „FN“ (FUNCTION):

This LED indicates different operational states of the device:

- **permanent on** = open, no external motor connected (also on, when Panasonic DVX- & HVX – camcorder is connected)
- **permanent off + external motor connected** = end stops are calibrated (also off, when connected to ENG lenses)
- **rhythmic slow flash + external motor connected** = end stops not calibrated
- **faster flash:** calibrating and storing of the end stops with external motor in progress
- **short blinking:** The Chrosziel light dimmer is connected

- 1.1.9. **LED „LOW BATT. - RED“ (status of operations voltage):** This LED indicates the status of the input voltage. LED red means input voltage $\leq 12V$. The DigiFox still continues to work; however, battery should be changed very soon. Under normal operation conditions (voltage $> 12-35V$) the LED is green. For short-time voltage drops below 12V the LED is red for approx. 3 sec., even if voltage has recovered to the normal value.
- 1.1.10. **LED „HF-ERROR“:** Permanent flashing or constantly on indicates a reception error. The transmitter/ receiver channel must be set identical. Interrupted flashing indicates interferences.
- 1.1.11. **Cover on housing bottom:** Under the cover the dip switches for selecting the receiver channels are located. Four switch positions allow for setting of 16 different transmission channels.
- 1.1.12. **Switch „Motor Power – Low High“** (behind the cover on the back of the housing): Allows for adjustment of maximal power for external digital motors. In position “low” the force and thus power for the motor driver is reduced to approx. 60 %. This selection is recommended for smooth-running ENG lenses or in case of an insufficient power source for the receiver. In position “high”, the motor driver provides maximal power to the external motor. This mode is recommended for heavier film lenses and/or good power supplies. The motor then reacts very dynamically due to the power reserves.

1.2. Receiver Connections

1.2.1. External Digital Motors

External digital motors (Heden M26VE, Scorpio SB92, Preston DM2) are connected through the „AMOTD“-cable to the connector “MOTOR”. Power (10-35V) is applied through the 4-Pin Hirose connector. Use power cables as listed in pricelist for DigiFOX (or 12V and 24V power cables for Aladin or 12V cables for Genio/Mag FOX). Do not use 24V power cables made for Genio and MagFox as the wiring is different! For the CAM start/stop function the respective cables are connected to the 12pin Hirose connector „LENS FOCUS - CAM ON/OFF“. The use of a combined Power/Start/Stop cable to the „POWER IN“ connector for appropriate cameras like Panavision „PAN-A-P/CAM“ is possible.

1.2.2. Internal Servomotors of ENG-, EFP-, DV- and HDV- Lenses

To control ENG-lenses (without external motor) the existence of a focus motor in the servo unit is required. DigiFox will be powered and does control the lens through the cables „DFPMCD” (Canon digital), „DFPMCA“ (Canon analog) or „DFPMF“ (Fujinon) to the connector “LENS FOCUS”. For the camera START/STOP function the respective cables are connected to the 4Pin Hirose-connector „POWER IN- CAM ON/OFF“. No additional power supply is required, as the receiver is powered through the lens. The connection of the Panasonic DVX/HVX Camcorder is an exception. Power supply has to be made separately at connector „POWER IN“ (e.g. XLR4-AL). Focus control and Start/Stop function are realized through the connector „LENS FOCUS“ by using the cable „DFPMPVX“.

1.2.3. Chrosziel Light Dimmer for Standard Camera Light

The Chrosziel Light Dimmer for camera lights is connected through the connector „MOTOR“. Power supply has to be feed through „POWER IN“. Only operate the Light Dimmer at 12 – 15V.

2. Transmitter

2.1. Operation / Optical Signals

- 2.1.1. **Switch „power on/off“:** The switch has two fixed positions. In the position “ON”, the LED „ON-Power“ must be green or red. If this is not the case, check the battery and the battery cap.
- 2.1.2. **Slide switch „reverse“:** Changes the rotating direction of the motors (external or internal) in relation to the rotating direction of the hand-wheel.
- 2.1.3. **2 “set” Buttons with LED:**
Are for programming and deleting of the spreading (see topic 2.2. - the “Electronic Gear”).
- 2.1.4. **LED „battery“:** Indicates the operational state of the transmitter. Green indicates normal state, RED indicates an almost empty battery. According to the state of the battery the transmitter switches off in the next minutes.
- 2.1.5. **LED „camera“:** Flashes when the „CAMERA“switch is in position „start“. For cameras with the so-called “impulse mode”, make sure to synchronize switch position with the camera’s operational mode- see next section 2.1.6.
- 2.1.6. **Switch „camera start“:**
Controls the Start/Stop function of the camera (see also item 1.1.6)
- 2.1.7. **Connector „light“:** Connection for the Chrosziel LED- scale illumination (please use original accessories only!)
- 2.1.8. **Cover “channel select”:** Under the cover the dip switches for selecting the transmitter channels are located. Four switch positions result in 16 different transmission channels. Selection must be identical to the receiver.

2.2. Spreading / reducing the lens travel at Aladin and FOX remote systems – The “Electronic Gear”

Before the procedure will be described one needs to understand the meaning of spreading & reducing and how they work.

In **normal mode**, the full scale travel of the hand wheel/slider corresponds 100% to the range between the end stops of the lens.

In **spreading mode** only a part of the lens travel is corresponding to the full range of the hand wheel/slider. This mode is useful if you want to adjust the lens very accurately in a specified range of the lens. This results in a better resolution for this range. I.e. the total lens range is 0,3m to 40m, but you only want to work from 20m to 30m and want to be very precise in this range. Then you would spread this range to the full scale travel of the hand controller. The one end stop corresponds to 20m and the other to 30m.

In **reduced mode** the full range of the lens travel is projected onto *a part* of the scale travel of the hand wheel/ slider. This case is rather rare but possible. It would be useful if you work on the whole range of the lens and need to move fast from one position to another and do not want to turn the full scale of the hand wheel all the time.

To achieve a spreading/ reducing, you tell the hand unit where a selected point on the scale shall be moved to. This needs to be done for both points in the spreading procedure.

Important: If you want to spread/reduce, the new point does not need to be the end stop! It can be any point on the way from the old point up to the end stop. But in most cases you would select the scale/lens end stop as the new point.

Spreading procedure:

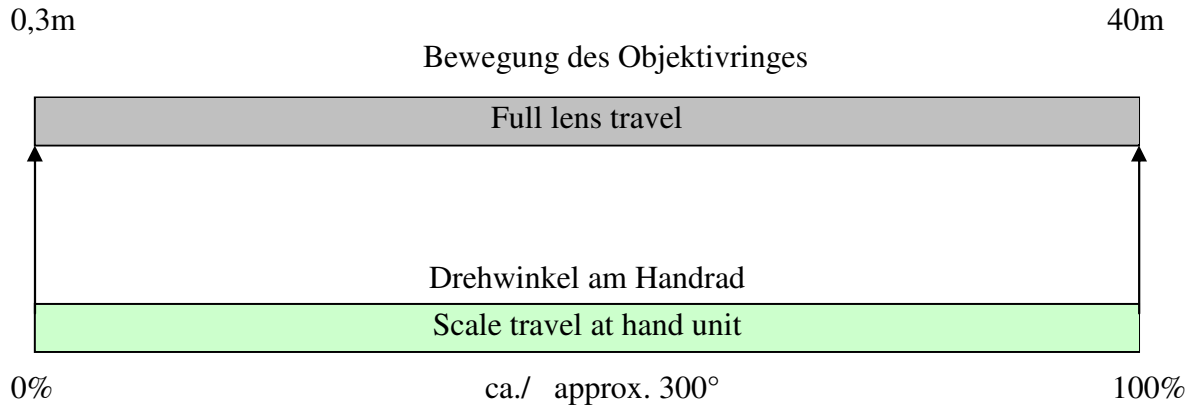
- 1.) Reset the previous spreading as follows:
 - a.) Double press the first “set”- button. This button starts flashing.
 - b.) Double press the second LED- switch. Both switches shortly light up and then go off (this indicates that settings have been reset to default successfully). Now the full lens travel range corresponds to the full range of the hand wheel.
- 2.) Move the hand wheel/slider to the first point on the lens which you want to make the first position (In our example 20m).
- 3.) Double press any of the two “set”- buttons (no matter which). This buttons (let’s say Button A) starts to flash.
- 4.) Move the lens to 0,3m (which is the lower end stop of the lens) by operating the hand wheel/ slider.
- 5.) Press the same button (Button A) again once - the opposite button (Button B) will light up permanently.
- 6.) Move the lens to 30m by operating the hand wheel/ slider.
- 7.) Double press Button B (that lights permanently). This button will flash now.
- 8.) In our example, move the lens to 40 m by operating the hand wheel/ slider.
- 9.) Press the same button again once.
- 10.) Both buttons will light up for about 1 second and then switch off again.

At this stage you are finished. To return to the standard scale travel double press each “set”- button as described in topic 1a. – 1b.

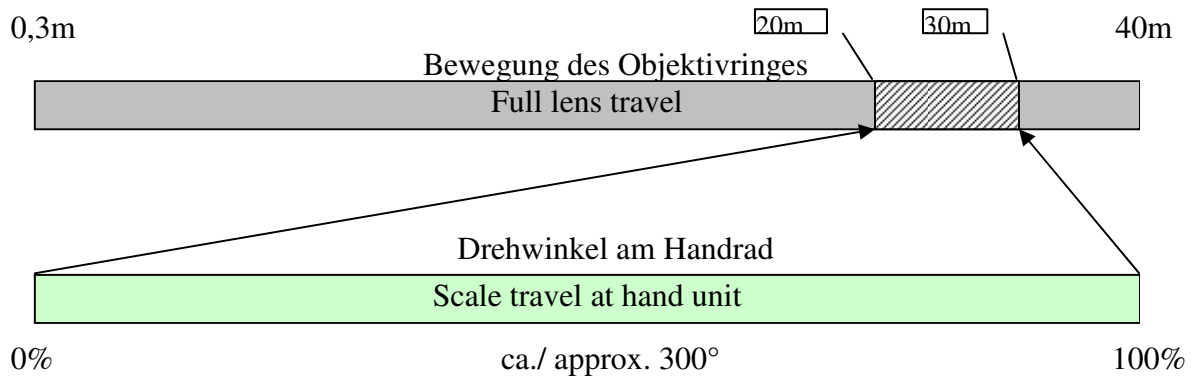
Please see also following graphics on the next page.

Chrosziel DigiFox Electronic Gear/ Elektronisches Getriebe

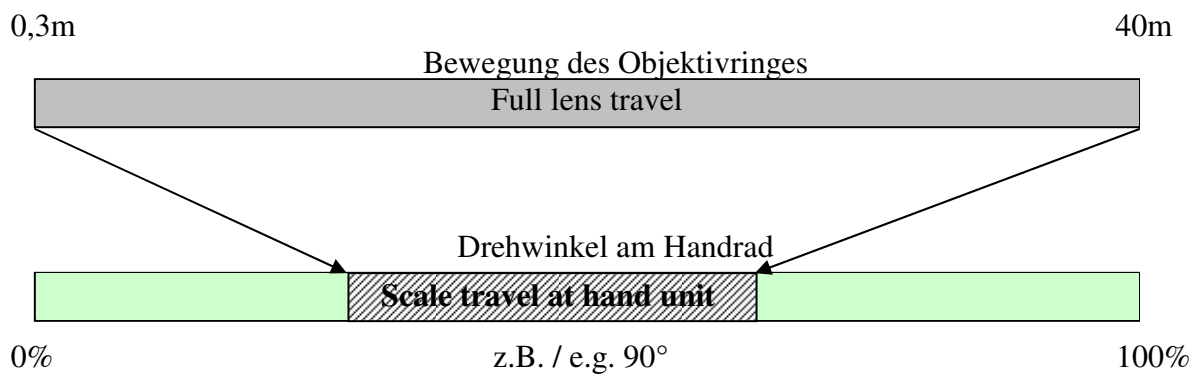
Normal (1:1) Mode:



Spread (gespreizt) Mode:



Reduced (komprimiert) Mode:



3. Technical Data

3.1. Weight and Dimensions

Weight receiver without accessories approx.	280 g / 9.9 oz
Weight transmitter (with antenna and 1 battery) approx.	600 g / 21.2 oz
Max. dimensions receiver H x W x D mm/ inch (incl. connectors) approx. .	80 x 42 x 96/ 3.1 x 1.6 x 3.8
Max. dimensions transmitter H x W x D mm/inch (without antenna) approx.	84 x 95 x 180 /3.3 x 3.7 x 7.1

3.2. Electrical Features

3.2.1. Transmitter

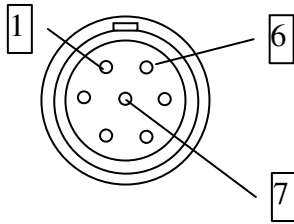
Transmitter power	10 mW an 50 Ohm
Frequency range (16 Channels)	433.900 MHz -434,9 MHz
Operation time with full battery (always on)	6 – 8 hours
Power supply through Chrosziel Battery	6 V, 600 mAh

3.2.2. Receiver

External power supply	10 V – 35 V
Power input <i>without</i> connected ext. Motor max. ca.	130 mA at 10V / 45 mA at 30 V
Power input <i>with</i> connected ext. Motor max. ca.	5 A (short peaks up to 7 A)
HF- Sensitivity	-120 dBm
Fuse for supply voltage (only through „POWER IN“)	5 A surge-proof

4. Pin Assignments

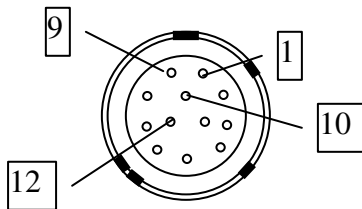
4.1. Connector “MOTOR“



Front View to connector
Type: Lemo EGG. 1B. 307

- Pin 1: Motor –
- Pin 2: Motor +
- Pin 3: Encoder channel A
- Pin 4: +5V
- Pin 5: earth/ground
- Pin 6: Encoder channel B
- Pin 7: earth/ground

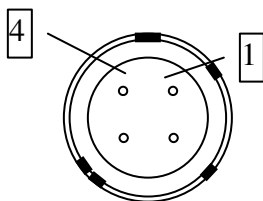
4.2. Connector “LENS FOCUS - CAM ON/OFF”



Front View to connector
Type: Hirose HR10A-10R-12SB

- Pin 1: Ucam 12-15V
- Pin 2: earth/ground
- Pin 3: Uref_H
- Pin 4: RS232 in
- Pin 5: Uref_L
- Pin 6: Ucam 12-15V
- Pin 7: UFocus
- Pin 8: RS232 out
- Pin 9: CAM Relay contact 1
- Pin 10: CAM Relay contact 2
- Pin 11: CAM Relay contact 1
- Pin 12: CAM Relay contact 2

4.3. Connector “POWER IN – CAM ON/OFF”



Front View to connector
Type: Hirose HR10-7R-4S

- Pin 1: Battery minus / GND
- Pin 2: CAM Relay contact 1
- Pin 3: CAM Relay contact 2
- Pin 4: Battery plus (9 – 36 V)

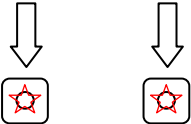
i) Electronic calibration of the transmitter's hand wheel - factory setup

A highly precise control of lenses regarding their end stops requires a factory setup of the transmitters hand wheel. This setup is normally made during the assembly at Chrosziel. If, for whatever reason the calibration has to be made, please proceed as follows:


- 1.) Press both set-buttons simultaneously during the whole procedure and operate the slide switch "reverse" in both directions (toggle it). Both LEDs should flash now slowly.
- 2.) Move the hand wheel gently in both directions up to the end stops while still pressing both set-buttons
- 3.) Toggle the slide switch "reverse" again, the flashing set-buttons should go off.
- 4.) Make a lens end stop calibration (see 1.1.5) and check the success of the calibration as follows: move the hand wheel from one end stop to the other; the motor should reach the corresponding end stops on the lens at the same time. If positioned at an end stop the motor should respond to the slightest movements of the hand wheel.
- 5.) If the result is not sufficient, repeat the procedure from step 1.)

Restore calibration at hand wheel

Push the two buttons simultaneously and hold both.




Operate reverse switch in both directions.



LEDs are flashing; **keep holding** the buttons and turn hand wheel from one limit to the other.

Keep holding the buttons, operate reverse switch in both directions again, LEDs will stop flashing.



Release set-buttons

