

FloatCam MotionControl

INSTRUCTION MANUAL

FloatCam



FLOATCAM MOTION CONTROL

for DollyCrane / DC Slider

ver. MC-003 RF (wireless + cable)

Package Includes:

- Stepper Motor
- Microprocessor Remote Controller
- Motor to Microprocessor Remote Controller Connection Cable
- Power Suplly 12V / 1.5-2A
- Motor Mounting Hardware Set (Plate + set screws)

Optional Accessories:

Camera Control Cable for DSLR's (will control Shutter and Exposure)

- CANON C6 - EOS 30/33/50/300/300D (Digital Rebel)/350 D (XT)/400 D (Xti)/ 450 D (XSi)/1000D (XS)/500D (T1i)/550D (T2i)/60D
- CANON C8 - EOS 10D/20D/30D/40D/50D/5D/7D/1D/1Ds MarkI-IV
- NIKON N8 - N90s/F5/F6/F100/F90X/D1/D1H/D1X/D2/D3/D4/D2Hs/D2X/D2Xs/D200/D300/D700/D800
- NIKON N10 - D90/D3100/D5000/D7000

Motion Control Functions:

Manual Movement, Programmed Movement, Save and Repeat Movement, Time Lapse, Time Lapse after Shots, Stop Motion, Stop Motion Distance

The Motion Control System comes with factory presets to control camera movement. These presets can be easily changed as needed. Motion control allows manual movement and programmed movement. Every movement, manual or programmed may be recorded and stored for later use. There are nine persistent banks and one volatile bank available. Each movement can be repeated up to 999 times and extended up to 99 times. When using Canon and Nikon DSLR's, it is possible to control the shutter speed and exposure from the remote controller with the use of an accessory camera control cord. Have fun and enjoy your Motion Control System.

**DO NOT USE OR INSTALL THE MOTION CONTROL SYSTEM
WITHOUT PROPERLY COUNTERBALANCING THE DOLLYCRANE / DC SLIDER!**

**PLEASE REVIEW AND COMPLETE THE COUNTERBALANCE
STEPS IN THE DOLLYCRANE / DC SLIDER MANUAL BEFORE USING THE MOTION
CONTROL SYSTEM! FAILURE TO PROPERLY COUNTERBALANCE
THE SYSTEM MAY CAUSE THE SYSTEM TO MALFUNCTION
AND/OR MAY PERMANENTLY DAMAGE THE SYSTEM. IMPROPER
COUNTERBALANCE MAY ALSO LEAD TO SHAKING OF THE RAIL,
LOUD NOISE AND SYSTEM ERRORS.**

Lemo and power cables are not covered under warranty



The Controller

1. Socket (Lemo 4 Pin) for cable to connect the stepper motor to the remote controller (for cable mode)
2. Antenna
3. Right direction button
4. Left direction button
5. LCD display
6. Menu Button and ON-OFF Power Button (press 5 sec. to OFF)
7. Control buttons
8. Ramping knob
9. Speed range knob
10. Speed Knob
11. Charging socket / Power 12V 1.5 A (positive pin inside)

Important:

- Pressing buttons 3 & 4 simultaneously will reset the Remote Control.

The Battery

Remote Controller has built-in battery (4x 1.2V AAA battery).

Before first using Motion Control charge the battery using 12V Power Supply for motor.

Important

In the case of discharged battery it is possible to work in cable mode. Connect Lemo cable between remote controller and motor . Then power the motor using 12V power supply.

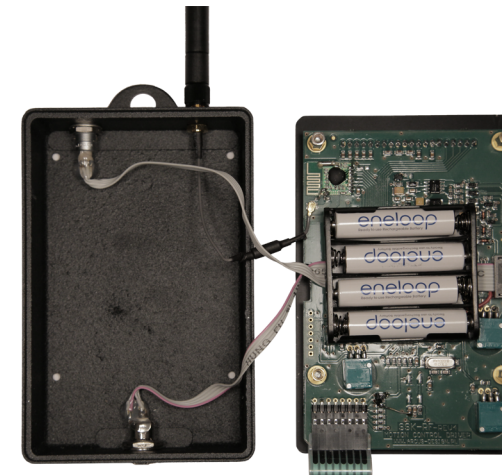


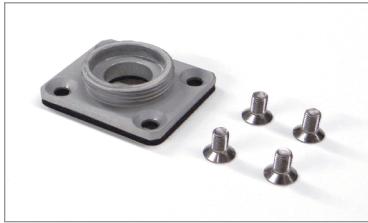
When the batteries become dead, open the remote controller and change the four 1.2V AAA batteries with new ones. Be sure to recycle the old batteries properly.



The Motor

12. Socket (Lemo 4 Pin) for cable to connect the stepper motor to the remote controller (cable mode)
13. Power 12V 1.5A (positive pin inside)
14. Socket (mini Canon 3 pin) for cable to control shutter and exposure of DSLR camera.

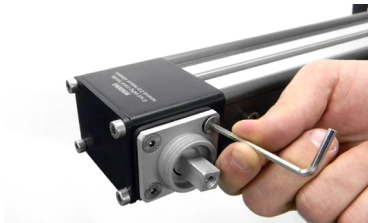




Installation of the System and Setting Distance Limits 'Virtual Ends of the Rail'



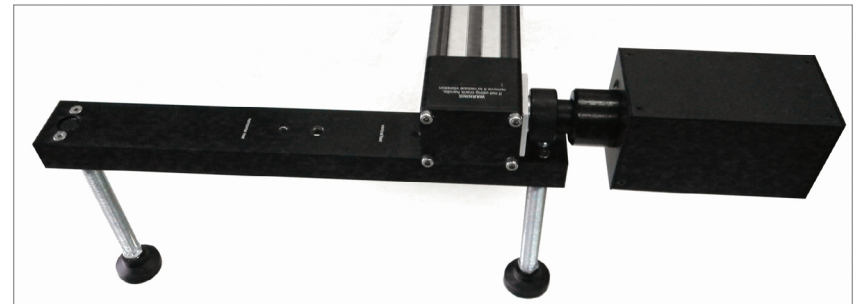
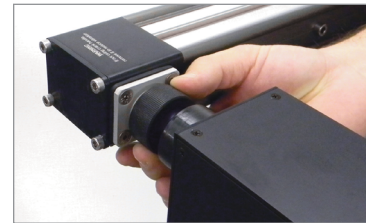
1. Install the motor mounting plate onto the slider with the 4 setscrews and allen wrench.



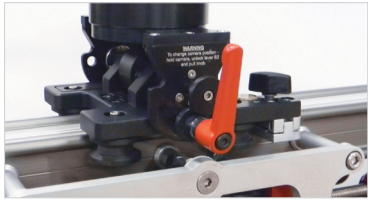
2. Mount the motor onto the plate using the rotating threaded ring.

2a. Makes sure to firmly secure the motor to the mounting plate.

2b. **IMPORTANT:** When using the system in vertical and angled positions place the end of the rail with connected motor to the top.



In low profile mode, you will have to use the motor side foot support off center as the motor prevents the use of the levelers. Use the 3/8" (larger thread) threaded hole on the foot titled 'vertical foot' to mount the foot off center on the slider. It is not necessary for HD version.



3. Move the camera carriage to the middle of the rail. This is very important as this will allow the system to determine its position on the rail once it is turned on.



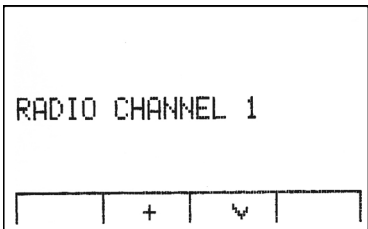
CABLE MODE only

4. Use the cord provided to connect the remote controller to the motor. The ends of the cord have small red dots on the Lemo plugs that will line up with corresponding red dots on the motor and remote controller Lemo sockets.



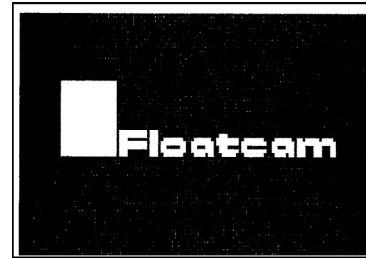
5. Plug in the power cord to the motor and then the power source. The motor does not come with an on/off switch.

6. In cable mode is possible to use 2 m long Lemo Cable. On request, Lemo cables can be customized in lengths up to 500m long.

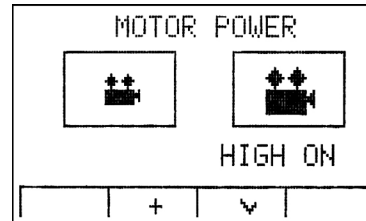


WIRELESS MODE

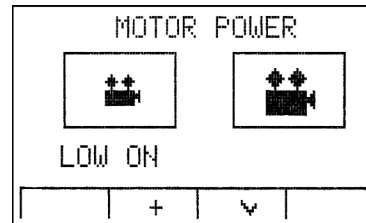
To change Radio Channel (if necessary) connect Lemo cable between motor and remote controller. After changing the channel disconnect the cable.



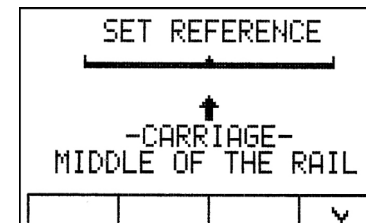
6. Start Window will appear.



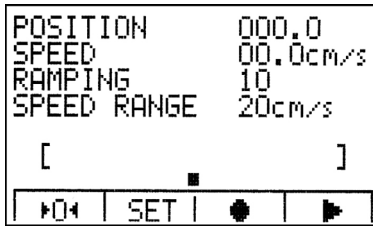
7. Set motor power to low or to high. High mode is for heavy cameras.



Serial number of the remote controller and the motor.



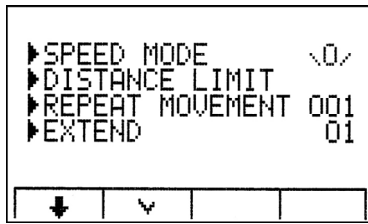
8. The 'SET REFERENCE' screen will then appear and accept it by hitting the blinking ⏏ on the bottom right. This will notify the system that the camera carriage is in the middle of the rail and will allow the system to determine its position when in motion. The stepper motor may lose steps during movement if the brake is set



9. The system will then load to the main screen. This will take a few seconds. You can now use the dial knobs to make moves, adjust speed and ramping.

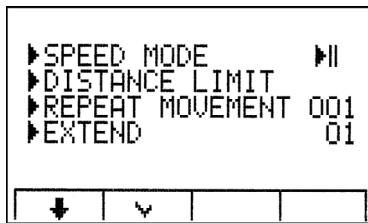
NOTE:

Press to move the camera carriage to the middle of the rail (0 position)



10. You may change Speed Mode in the SET menu. You have two options for Speed Mode.

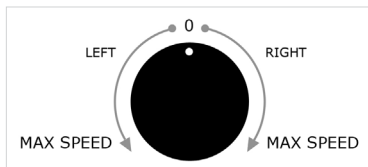
Steering Mode



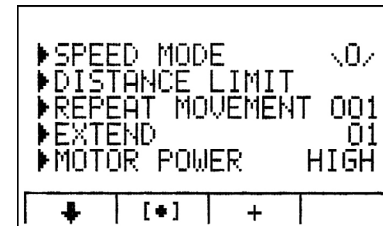
Directional Selection Mode



Setting or Modifying the Distance Limit



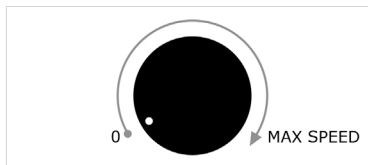
Steering Mode



1. From the main screen, select the button on the bottom of the screen titled 'SET'. Set 'SPEED MODE' to

2. Toggle down to the function titled 'DISTANCE LIMIT' by using the down arrow button until the right arrow on the 'distance limit' option is flashing. Select it by using button on the bottom of the screen.

3. Brake lock or unlock the motor.

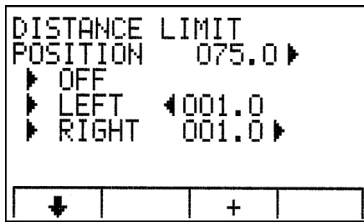


Directional Selection Mode

to the right

to the left

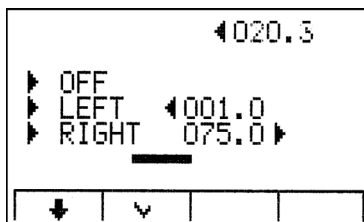
Manual Movement, Record, Save and Repeated Movements



3. The 'DISTANCE LIMIT' screen will appear showing the current position of the camera platform on the rail, whether the distance limit is on or off, and where the current limits are set on both the right and the left.

4. The system gives the option of 'DISTANCE LIMIT' ON or OFF. By using the plus + button on the bottom of the screen, you can toggle between on and off as desired. Keep it in the OFF position when setting the limits.

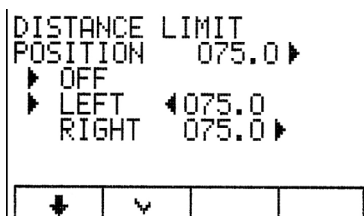
5. In the 'DISTANCE LIMIT' OFF position, use the large knob on the camera carriage to move the camera platform to the left or the right. You will see the position point change on the top of the screen as the camera carriage moves along the rail. It will also indicate whether the value is to the left or the right of the center of the rail with ◀ left or ▶ right symbols.



6. If you moved the camera carriage to 'X' point on the left, toggle down using the down ↓ arrow on the bottom of the screen until the 'LEFT' option is blinking and accept it with the ↵ button on the bottom of the screen.

7. Repeat the last step but move the camera carriage to the opposite side and select the distance limit desired.





8. Set 'DISTANCE LIMIT' ON.



9. NOTE: Distance limits prevent the camera platform from making contact with the ends of the rail. Most users will prefer to have the distance limits as close to the end of the rail as possible, but it is your personal preference.

IMPORTANT: Carriage inertia will occur 0.5-3 cm upon striking the ends of the rail.

1. The remote controller comes with one large knob and two small knobs on the face of the system. They are labeled speed, speed range, and ramping.

2. The large speed knob controls the camera carriage speed and movement both to the left and to the right in mode . Turning this knob to the left/right will cause the system to go left/right at the speed of X. X is determined by knob adjustment and speed range. In directional speed mode  the large knob will control speed only. Direction of the camera carriage is changed by  or  button.

3. The speed range knob controls top speed. You have the option of setting this from 1 to 20cm a second. As you turn this knob, you should notice the speed range change on the screen.

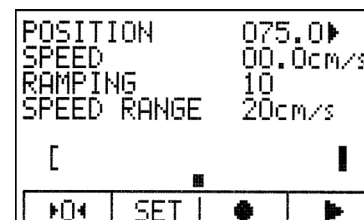
NOTE: you may not adjust this while the system is in motion.

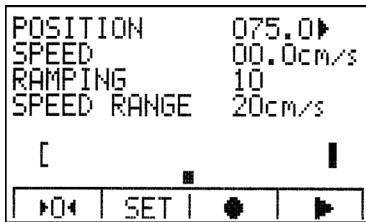
4. The ramping knob controls how fast/slow the system gets up to the top speed or how fast/slow the camera carriage comes to a stop. You have the option of adjusting this from 1-10 (0.5-2.5sec.).

NOTE: you may not adjust this while the system is in motion.

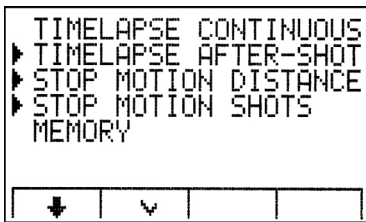
5. To record a move, use the system to move the platform to the desired start position. Make sure to set the speed range and ramping to your preference.

6. Select the record button on the bottom of the screen and make your move. Press the record button again when you are finished.

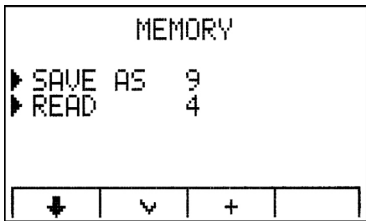




7. To play your shot, press play to the right of the record button. The camera carriage will then move to the starting position and stop. You must hit play once more to activate your recorded move. You may play your shot as many times as you need.

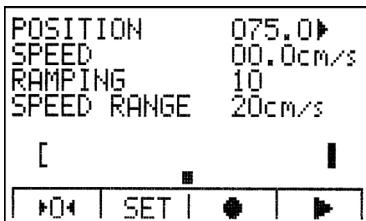


8. You may also save the shot by selecting the menu button on the top right of the remote controller and toggling down to the MEMORY function and selecting it with the checkmark button on the bottom.

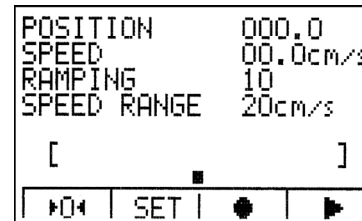


9. A new menu will appear showing SAVE AS and READ. SAVE AS is where you save or re-write recorded moves and READ is where you select them to play. You have the option of saving up to nine different shots by using the plus button on the bottom of the screen to select 1-9. Once you have toggled to the # desired memory cell in which you would like to save your shot, select it by hitting the checkmark button on the bottom. If the shot has been saved properly, DONE will appear next to SAVE AS.

10. If you want to play or READ your saved shot(s), toggle to READ and use the plus button on the bottom to scroll through 1-9. Select your shot by using the checkmark button. DONE will appear next to READ and it will then take you to the main screen.

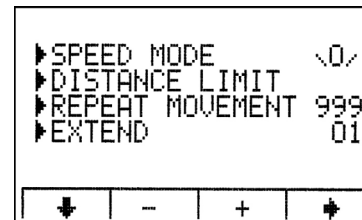


11. Once you are on the main screen, give it a few seconds to load and then you may press play on the bottom right. The camera carriage will then move to the starting position of the program. Press play once more to start the program.

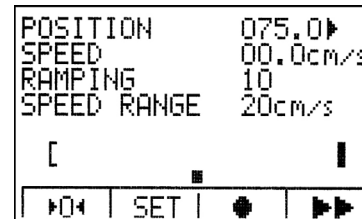


12. If you want stop the program while it is running, hit the 'MENU' button on the top right of the remote controller. You can now control the system manually or if you want to re-start the program, hit the play button again on the bottom right of the screen. The camera carriage will move to the start of the program. Hit play once more to start the program.

Repeat Movement

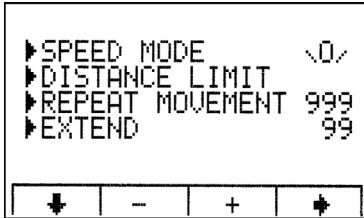


1. You may also set the system to repeat and loop saved and recorded moves from 001-999 times. To do this, select the SET function on the bottom of the screen and toggle down to REPEAT MOVEMENT. You may then toggle to the right ### number field and use the minus plus keys on the menu to change to value desired. Select MENU to exit to the main screen.



2. If you select the play button again or if you play a saved program, the program will repeat itself according to the ### what you set. Once you unplug the system, the repeat setting will go back to 0, but you will not lose your saved programs.

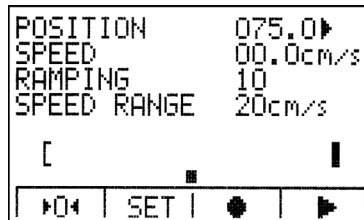
Time Extension



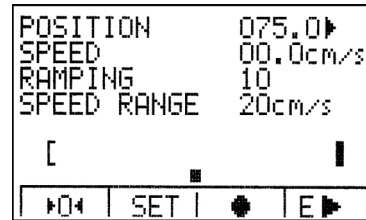
1. Time Extension or 'EXTEND' will allow the user to extend the time of a programmed or saved movement up to 99 times. Example: If your current movement is 10 seconds long, you may extend it to 20 seconds by changing the 'EXTEND' to 2. Or if you change it to 3, your movement will now take 30 seconds long. 4 will take 40 seconds and so on. This is an easy way to slow your movement down and increase the amount of time it takes to complete it.

2. To 'EXTEND' your movement time, go to the SET function on the bottom of the screen. Toggle down \downarrow until you get to the 'EXTEND' function. Use the \uparrow arrow to toggle over to the number field and use the $-$ $+$ signs to increase or decrease your 'EXTEND' time. Hit the MENU button when finished to take you back to the main screen.

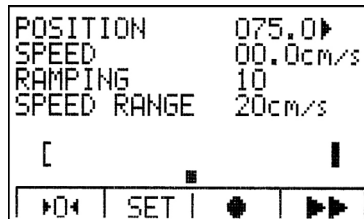
Repeat and Time Extension Icons



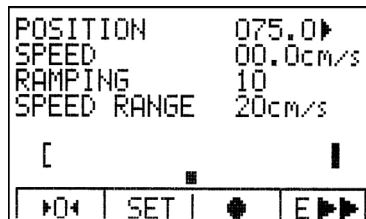
Single movement play



Extend and single movement play



Repeat movement play



Extend and repeat movement play

Time Lapse and Stop Motion

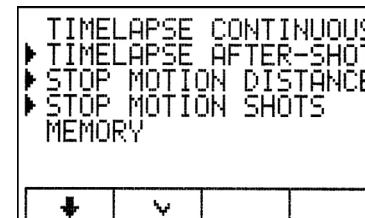
Time Lapse Continuous

Time lapse Continuous mode allows for continuous movement across the slider during the time-lapse process. In this mode it is possible to set the total movement time, number of shots and control the shutter and exposure of a DSLR camera (in Manual mode).

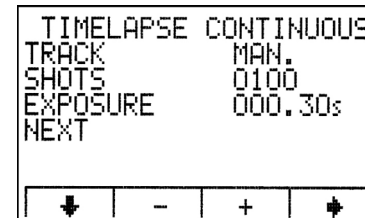
The exposure time works effectively only if DSLR camera is set to bulb exposure mode. To control exposure by the camera, set the exposure time of Motion Control to 0.3 sec. and set camera to non-bulb mode. It is also possible to trigger multiple image sequences from Motion Control. It is especially useful for shooting HDR, exposure-bracketed time-lapse or multiple constant-exposure shots for noise reduction in post production. To do so, set camera to continuous shooting mode and set the exposure bracketing as desired. In Remote Controller set the total exposure time to slightly exceed the total time of exposures of DSLR camera.

Time-lapse Continuous has two possible track settings:

1. Manually set START and STOP position
2. READ recorded movement from the memory

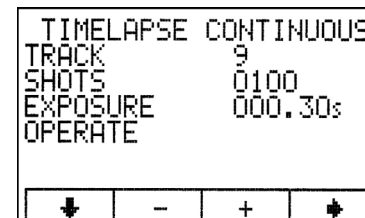


\downarrow Accept



Set track manually - START and STOP position

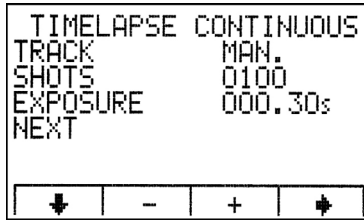
or



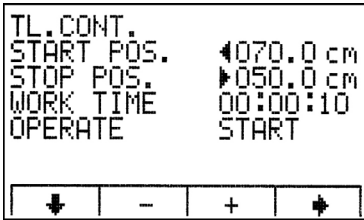
READ track from the memory
e.g. bank 9

SET TRACK MANUALLY

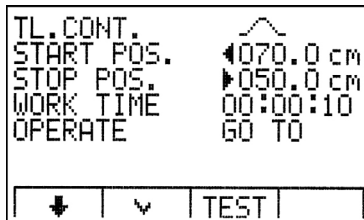
Set Track Manually



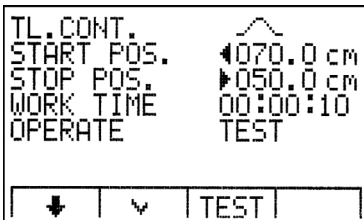
- Set track manually
- Set number of SHOTS for DSLR cameras
- Set EXPOSURE for bulb mode for DSLR cameras



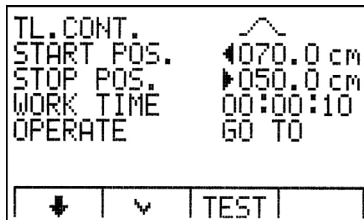
- Set START position (e.g. 70 cm left from the middle of the rail)
- Set STOP position (e.g. 50 cm right from the middle of the rail)
- Set WORK TIME (e.g. 10 sec.)



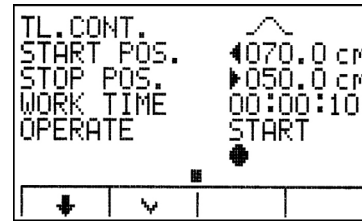
- Movement with set ramping for fast movements.



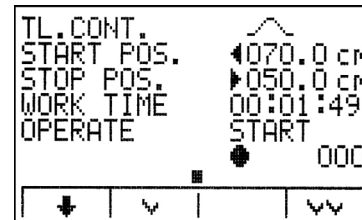
- It is possible to TEST the set camera carriage movement with factory speed.



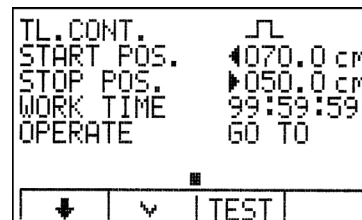
- Or start to play by pressing ↘



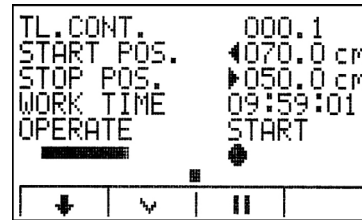
- Single movement



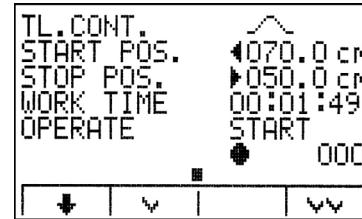
- Repeat movement (if repeat is set)



- Movement without ramping for slow movements



- Single movement



- Repeat movement (if repeat is set)

TRACK READ FROM MEMORY

```
TIMELAPSE CONTINUOUS
TRACK          9
SHOTS         0100
EXPOSURE      000.30s
OPERATE       GO TO
```

↓ | ∨ | TEST

- READ track from the memory e.g. bank 9.
- Set SHOTS number for DSLR cameras
- Set EXPOSURE for bulb mode for DSLR cameras

```
TIMELAPSE CONTINUOUS
TRACK          9
SHOTS         0100
EXPOSURE      000.30s
OPERATE       TEST
```

↓ | ∨ | TEST

- It is possible to TEST the set camera carriage movement with factory speed

```
TIMELAPSE CONTINUOUS
TRACK          9
SHOTS         0100
EXPOSURE      000.30s
OPERATE       GO TO
```

↓ | ∨ | TEST

- Or start to play movement by pressing ∨

```
TL.CON.        0056
TRACK          9
SHOTS         0100
EXPOSURE      000.30s
OPERATE       START
```

↓ | ∨ | | |

- Single movement

```
TL.CON.        0056
TRACK          9
SHOTS         0100
EXPOSURE      000.30s
OPERATE       START
```

↓ | ∨ | | | ∨∨

- Repeat movement (if set to repeat)

TIMELAPSE SHOT-AFTER-SHOT

TIMELAPSE SHOT-AFTER-SHOT

Timelapse Shot-after-Shot works similarly to the continuous timelapse mode, but the camera stops before each shot. In this mode it is possible to set total movement time, number of shots and control shutter and exposure of DSLR camera (in Manual mode). The exposure time works effectively only if DSLR camera is set to bulb exposure mode. To control exposure by the camera, set the exposure time of Motion Control to 0.3 sec. and set camera to non-bulb mode.

It is also possible to trigger multiple image sequences from Motion Control. It is especially useful for shooting HDR, exposure-bracketed timelapse or multiple constant-exposure shots for noise reduction in post production. To do so, set camera to continuous shooting mode and set the exposure bracketing as desired. In Remote Controller set the total exposure time to exceed slightly the total time of multiply exposures of DSLR camera.

```
▶ TIMELAPSE CONTINUOUS
▶ TIMELAPSE AFTER-SHOT
▶ STOP MOTION DISTANCE
▶ STOP MOTION SHOTS
▶ MEMORY
```

↓ | ∨ | | |

∨ Accept

```
TIMELAPSE AFTER-SHOT
SHOTS         0100
EXPOSURE      002.00s
NEXT
```

↓ | - | + | *

- Set the number of SHOTS
- Set EXPOSURE for bulb mode on the DSLR.

```

TL AFT-SHOTS
START POS.  ◀070.0 cm
STOP POS.   ▶050.0 cm
WORK TIME   00:06:30
OPERATE     START

```

- Set START position (e.g. 70 cm)
- Set STOP position (e.g. 50 cm)
- Set WORK TIME (till 99h:59 min:59 sec.)

```

TL AFT-SHOTS
START POS.  ◀070.0 cm
STOP POS.   ▶050.0 cm
WORK TIME   00:06:30
OPERATE     GO TO

```

- It is possible to test the set camera carriage movement with factory speed

```


TL AFT-SHOTS
START POS.  ◀070.0 cm
STOP POS.   ▶050.0 cm
WORK TIME   00:06:30
OPERATE     TEST

```

```

TL AFT-SHOTS
START POS.  ◀070.0 cm
STOP POS.   ▶050.0 cm
WORK TIME   00:06:30
OPERATE     GO TO

```

- Or start to play movement by pressin 

```

TL AFT-SHOTS 0099
START POS.  ◀070.0 cm
STOP POS.   ▶050.0 cm
WORK TIME   00:06:30
OPERATE     START

```

- Single movement

```

TL AFT-SHOTS 0095
START POS.  ◀070.0 cm
STOP POS.   ▶050.0 cm
WORK TIME   00:03:40
OPERATE     START

```

- Repeat movements (if repeat is set)


STOP MOTION DISTANCE

Stop Motion Distance Mode allows programmed distance between each shot with 0.1mm accuracy. Every step and shot is initiated manually.

```

▶SPEED MODE      ▶||
▶DISTANCE LIMIT
▶REPEAT MOVEMENT 001
▶EXTEND          01

```

- Set speed mode to 

```

▶TIMELAPSE CONTINUOUS
▶TIMELAPSE AFTER-SHOT
▶STOP MOTION DISTANCE
▶STOP MOTION SHOTS
▶MEMORY



```

-  Accept

```

STOP MOTION DISTANCE
DISTANCE  004.2 cm
SHOT

```



Set the camera carriage at the start position.
Set desired interval distance
Press  or 
Camera carriage moves programmed distance.

```

STOP MOTION DISTANCE
DISTANCE  004.2 cm
SHOT ●

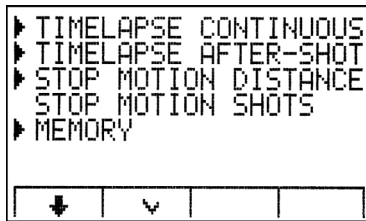
```

- Then press SHOT as many times as desired

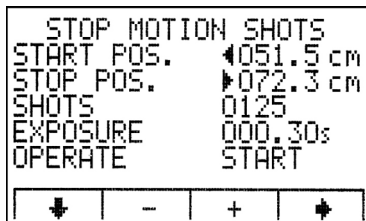
Once you have taken your shot or shots, press  or  to move your camera to the next position. Then press SHOT to do shot or shots

STOP MOTION SHOTS

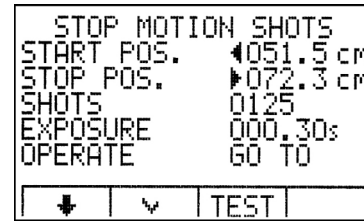
Stop Motion Shots mode allows camera carriage movement with factory settings and uses the programmed number of the shots. In this mode it is possible to set the total movement time, number of shots and control shutter and exposure of the DSLR camera (in Manual mode). The exposure time works effectively only if the DSLR camera is set to bulb exposure mode. To control exposure by the camera, set the exposure time of remote controller to 0.3 sec. and set the camera to non-bulb mode.



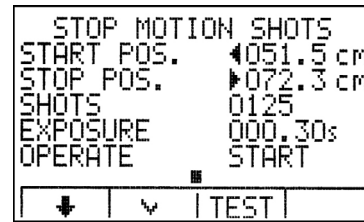
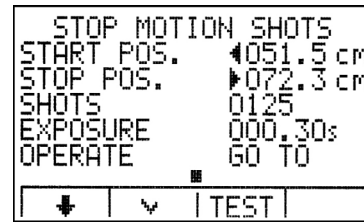
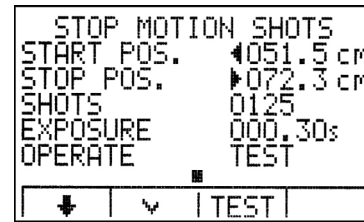
Accept



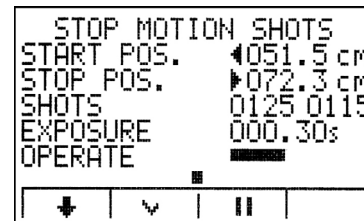
- Set START and STOP position
- Set number of shots
- Set EXPOSURE to bulb mode on the DSLR.



It is possible to test the set camera carriage movement with factory speed.



• Start movement



• Camera carriage moves and makes shots

NOTE: Unplug the power to turn off or reset the system. Unplugging will not erase saved moves, but you will have to set the 'REPEAT MOVEMENT' and 'EXTEND' function. Also, remember to move the camera carriage to the middle of the rail before plugging it back in.

TECHNICAL SPECIFICATIONS

Working speed.	max 1.6m/8 sec. (20cm/sec.) min 1.6m/100 hours (0.004mm/sec.)
Ramping	0.5- 2.5 sec.
Power supply	
- Motor	11.4 - 16.8V
- Remote Controller	built-in battery 4x1.2V AAA or external 12V power supply (positive pin inside)
Current consumption	0.5 - 1.5A
Dimensions:	
- Remote Controller	130x85x30mm
- Stepper motor	130x70x70mm 160x70x70mm (Motion Control HD)
- Control Lemo cable	2 m
- DSLR cable (optional)	3 m
Weight:	
- Remote Controller	400 g
- Stepper motor	1500 g /1700 g (Motion Control HD)

Liability: FloatCam has made diligent effort to illustrate and describe the products and components in this manual accurately however, illustrations and descriptions including descriptions of dimensions and weight, are for identification purposes only, and are not warranties that the products will conform to the illustrations or descriptions. Descriptions of output and other performance levels of our product are based on normal use conditions, as well as installation and operation by qualified persons. However, these descriptions are not warranties. Product performance or output may also be affected by state and local regulations on sales, construction, installation and/or use of products. In no event shall our company, officers, directors, employees or agents be responsible for any direct, indirect, punitive, special, incidental or consequential damages, however, it arises, whether in an action for negligence or some other action, or arising out of or in connection with the comments or advice provided by this application.

Warranty: FloatCam products are warranted against defects for one year from date of purchase. Within this period of time FloatCam will repair it without charge for labor or parts. Warranty does not cover transportation costs nor does it cover a product subjected to misuse or accidental damage. Warranty repairs are subjected to inspection and evaluation by FloatCam.

FloatCam

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