

# User Manual

Slide Kamera HKN-2 stepper drive for Slide Kamera HSO-4 rotational slider is equipment specially designed for smooth shots in motion, as well as Timelapse photos. HKN-2 stepper drive consists of an intuitive controller that allows the user to work in various working programs and a driving motor connected to HSO-4 slider. Simple and functional menu provides excellent ergonomics of use.



## HKN-2 stepper drive for HSO-4 rotational slider

Software Version  
rev 2.0

PDF version of the manual available for download: [www.slidekamera.eu](http://www.slidekamera.eu)



Before you start your work with Slide Kamera HKN-2 stepper drive for Slide Kamera HSO-4 rotational slider we strongly recommend to read the manual carefully. Please note that using the drive in a manner inconsistent with the instructions, unauthorized repair attempts or any kind of modification of the drive can cause damage the manufacturer is not responsible for.

In case of damage during transport you are required to submit:

- proof of purchase
- protective styrofoam inserts/ fillers included in the set in case of new product delivery

**If you fail to comply with the abovementioned conditions, the manufacturer reserves the right to refuse the complaint.**

**Photos of products may slightly differ from the actual product due to constant modifications and improvements introduced by the manufacturer.**

## **Slide Kamera ®**

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## Table of contents

1. Elements of Slide Kamera HKN-2 stepper drive for HSO-4 rotational slider.....	3
2. Accessories for Slide Kamera HKN-2 stepper drive for HSO-4 rotational slider.....	3
3. Product description.....	4
3.1. HKN-ST controller.....	4
3.2. Slide Kamera HKN-2 driving motor.....	5
4. Specification.....	6
5. Mounting Slide Kamera HKN-2 stepper drive.....	7
6. How to operate the controller.....	7
6.1. Specifying startup parameters.....	7
6.1.1. MANUAL Calib.....	8
6.1.2. FREE Mode.....	8
6.2. Main menu.....	9
6.2.1. CONFIG menu.....	9
6.2.2. VIDEO.....	10
6.2.2.1. Free Ride.....	10
6.2.2.2. Recording.....	11
6.2.2.3. Playback.....	11
6.2.2.4. VideoLoop.....	12
6.2.3. TIMELAPSE.....	13
6.2.4. ANIMATION.....	14
7. Maintenance and operation.....	15
8. Transport.....	15
9. Terms of warranty.....	16
10. Shutter release cables for Slide Kamera HKN-2 stepper drive.....	17

# 1. Elements of Slide Kamera HKN-2 stepper drive for HSO-4 slider

Once you receive the shipment please make sure that all the elements of Slide Kamera HKN-2 stepper drive for HSO-4 rotational slider are inside.

## Set includes:

- HKN-2 drive motor [1]
- HKN-ST controller [2]
- RJ-45 cable connecting the motor with the controller [3]
- AC Adapter [4]
- WS Shutter release cable (one to choose from) [5]

**ONLY SLIDE KAMERA MANUFACTURER CAN MOUNT HKN-2 STEPPER DRIVE ON HSO-4 SLIDER.**

A detailed list of WS shutter release cables and photo cameras they support can be found on page 17 of this user manual.



# 2. Accessories for Slide Kamera HKN-2 stepper drive for HSO-4 rotational slider

## Power supply:

AF-7 power pack [1]



AF-7-K1 power lead [2]



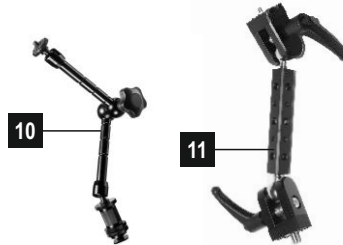
### Shutter release cables:

- WS-1 [3]
- WS-2 [4]
- WS-3 [5]
- WS-4 [6]
- WS-5 [7]
- WS-6 [8]
- WS-7 [9]



### Additional accessories:

- Slide Kamera AF-17 articulated arm [10]
- 11" Magic arm for DSLR [11]



## 3. Product description

Slide Kamera HKN-2 stepper drive dedicated for HSO-4 rotational slider, is equipment specially designed for smooth shots in motion, as well as Timelapse photos. HKN-2 stepper drive consists of an intuitive controller and a driving motor. Simple and functional menu of the controller provides excellent ergonomics of use. The controller allows to work in various working programs: VIDEO, ANIMATION, TIMELAPSE. Front panel of the controller is equipped a joystick and two knobs to adjust: SPEED and DAMPING. To eliminate any movement during shutter release, HKN-2 set includes a shutter release cable that is used in ANIMATION and TIMELAPSE working programs. Depending on your camera model you can choose a proper cable. Power unit allows for a payload of 10 kg. Drive controller is equipped with 1/4" mounting hole that allows to mount it to the slider using Slide Kamera AF-17 articulated arm or MagicArm 11".

### 3.1. HKN-ST controller

Front panel of the controller is equipped a joystick and two knobs to adjust: SPEED and DAMPING. SPEED knob allows to adjust speed range whereas DAMPING knob regulates smooth acceleration and deceleration of movement, ie the user can adjust the time at which the drive reaches the desired speed or stops. RJ-45 cable socket and power switch are located on the upper wall of the controller housing. Joystick on the front panel enables user friendly programming, controlling and configuration. Simple and functional menu provides the ergonomics of operation. HKN-ST controller is equipped with 1/4" mounting hole that allows to mount it to the slider using Slide Kamera AF-17 articulated arm or MagicArm 11".



- Power switch [1]
- RJ-45 cable socket [2] (RJ-45 cable connects driving motor with the controller)
- LCD display [3]
- SPEED knob [4]
- DAMPING knob [5]
- Joystick [6]
- 1/4" mounting hole [7]

### 3.2. Slide Kamera HKN-2 driving motor

HKN-2 driving motor must be attached to HSO-4 rotational slider only in a place with DRIVE UNIT marking. **Remember that only Slide Kamera manufacturer can mount HKN-2 stepper drive to HSO-4 rotational slider.** Transmission of power is achieved thanks a toothed gear. In order to connect/ disconnect the drive use clamping lever [3] that moves the driving motor to to/from the toothed wheel [2].

- HKN-2 driving motor gear wheel [1]
- HSO-4 slider toothed wheel [2]
- Driving motor clamping lever [3]
- Controller socket [4]
- Socket for additional drives [5]
- Power socket [6]
- Shutter release socket [7]
- Limit switch socket [8] (limit switches come only with HKN-2 stepper drive for HSK series sliders)





#### Driving motor markings:

<b>LINK</b>	Indicates that controller cable is properly connected.
<b>Rx</b>	When orange light flashes slowly the user is informed that the driving motor is powered but has not yet received any command from the controller. When orange light starts flashing rapidly this indicates that the driving motor received a command from the controller.
<b>FAULT</b>	Flashing light indicates existing error. Detailed explanations of error codes can be found in paragraph 6.2.1. of this user manual.

## 4. Specification

<b>Supply voltage:</b>	10..18V DC 40
<b>Current consumption:</b>	Average current consumption (continuous track) 0,9A for 100% power 0,6A for 66% power 0,3A for 33% power
<b>Operating time with battery 12V 7Ah (room temperature):</b>	approx. 8h for 100% power approx. 13h for 66% power approx. 24h for 33% power

<b>Slider speed:</b>	maximum 200mm/s - in VIDEO program minimum 100mm/99h - in TIMELAPSE program
<b>Operating temperature range:</b>	-10°C do 70°C
<b>Shutter release cable (one to choose):</b>	WS-1, WS-2, WS-3, WS-4, WS-5, WS-6, WS-7 cables used in ANIMATION, TIMELAPSE programs
<b>Payload:</b>	10kg

## 5. Mounting Slide Kamera HKN-2 stepper drive

### **IMPORTANT !!!**

**Only Slide Kamera manufacturer can mount HKN-2 stepper drive to HSO-4 rotational slider. Any attempts to mount the drive can cause serious damage to the equipment the manufacturer is not responsible for. If you fail to comply with the abovementioned condition, the manufacturer reserves the right to refuse the complaint.**

If you purchased HSO-4 rotational slider in a set with HKN-2 stepper drive you will receive a slider with the drive already mounted. However, if you intend to purchase HKN-2 stepper drive for your HSO-4 slider, it is necessary to send your equipment back to Slide Kamera manufacturer in order to have the drive mounted properly.

## 6. How to operate the controller

After you switch the power on the startup screen will appear on LCD for about 1,5s. with the information about HKN-2 stepper drive software version: rev 2.0.

### 6.1. Specifying startup parameters

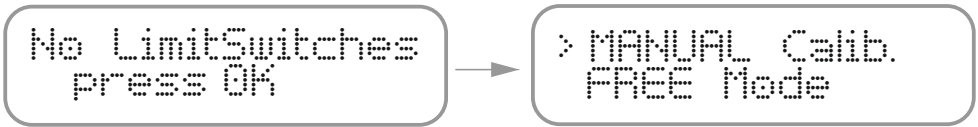
After switching the power on it is necessary to determine startup parameters for our drive, namely points of reference. This kind of calibration is necessary every time we switch the drive on. Please note that HSO-4 rotational slider comes with no limit switches (only HSK series sliders come with limit switches), therefore we differentiate only two types of calibration:

- NO LIMIT SWITCHES: manual calibration (MANUAL Calib.)
- NO LIMIT SWITCHES: no calibration (FREE Mode)



### 6.1.1. MANUAL Calib.

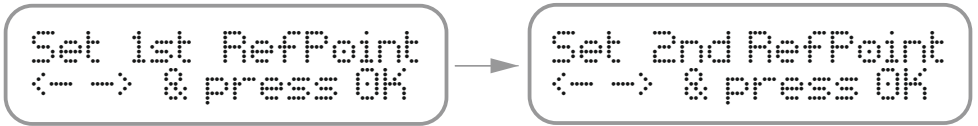
If limit switches are removed, after switching the power on there will be a message on LCD with that information. After pressing the joystick (OK.), a message will appear on the screen. User has two options of calibration without limit switches.



Use the joystick to choose the calibration. The sign ">" indicates your selection. By pressing the joystick enter selected mode. **MANUAL Calib.** allows you to determine reference points for your slider. This mode is recommended if you need to determine range of motion for the slider.

**When setting points of reference in Manual Calib. exercise extreme caution so the slider does not hit any obstacle.**

Message on the screen requires the user to determine points of reference. By moving the joystick right and left set the reference points for the drive. Use **SPEED** knob to determine the speed of the cart, this will allow you to decelerate before the cart reaches second point of reference. Press the joystick to accept.

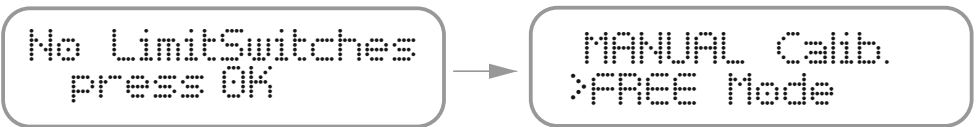


As soon as the user sets the reference points, a message on LCD appears that the drive is ready for work. After pressing OK (understood as pressing the joystick) the main menu appears on the screen.



### 6.1.2. FREE Mode

If limit switches are removed, after switching the power on there will be a message on LCD with that information. After pressing the joystick (OK.), a message will appear on the screen. User has two options of calibration without limit switches.



Use the joystick to choose the calibration. The sign ">" indicates your selection. By pressing the joystick enter the selected mode. **FREE Mode** does not require setting any reference points. The driver is immediately ready to work.

**Exercise extreme caution when working with the drive in FREE Mode. Lack of reference points increases the risk of the slider hitting any possible obstacle. It may cause a serious damage to the equipment.**

## 6.2. Main menu

As soon as you determine/set the reference points for the drive you can enter a main menu with working programs and additional menu CONFIG. Navigate by moving joystick up and down. Sign "❖" "❖" indicates selected choice. Press the joystick to enter selected program. Main menu has four entries: „VIDEO“, „ANIMATION“, „TIMELAPSE“ and „CONFIG“.

### 6.2.1. Menu CONFIG



CONFIG menu has five entries "[Info]", "Power", "Backlight", "[Calibration]" and "<Back>". The list boxes in square brackets [ ] indicate functions generating own screen. In order to activate them, press the joystick. At the end of each submenu there

is "<Back>". Pressing the joystick in this field results in returning to the main menu. The remaining fields of the submenu are the parameters, next is the value of the parameter. To change the value move the joystick right or left.

After entering [Info] there will be information about the voltage:  $V_{in}$ , and range of motion for the cart determined during automatic calibration: L \_\_\_\_\_. The latter can be determined only when working with Slide Kamera HSK series sliders. In case of HSO-4 rotational slider, there is no automatic calibration of the driving motor so the parameter will always be: L \_\_\_\_\_.

**Power** - driving motor power: 33/66/100%. By moving the joystick left or right you can set the power value. Setting a lower power can significantly increase the working time on battery supply.

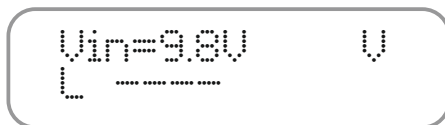
**Back Light** - adjusts the brightness of the LCD. By moving the joystick left or right you can set the brightness within the range of: 10-100%

[Calibration] - driving motor automatic calibration; does not apply to HSO-4 rotational slider.

<Back> - return to main menu

#### WARNING!

If the backlight of the LCD screen starts flashing and there will be an orange flashing light under FAULT marking on the right socket of the driving motor, the user is informed about existing error. In such situation, immediately enter CONFIG menu → [Info]. Information about the error should appear in the upper right corner of the screen.



- „U“: means that the battery voltage is too low. Replace the battery immediately in order to avoid to a sudden stop of the drive, which may result in damage to the equipment.
- „t“: (Thermal Warning) indicates temperature warning. Turn off the drive immediately so as not to overheat the driving motor.
- „T“: (Thermal Shutdown) indicates emergency drive shutdown due to overheating. You should immediately turn off the drive and wait until FAULT light switches off.

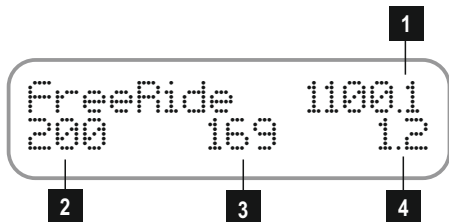
## 6.2.2. VIDEO



As you enter **VIDEO** program a submenu will appear on the screen with different operating modes: [Free Ride],[Recording],[Playback],[VideoLoop],<Back>.

### 6.2.2.1. Free Ride

**Free Ride** mode allows the user to control the speed of the slider using joystick and adjusting knobs. **SPEED** knob sets the maximum speed desired by the user. **DAMPING** knob is used to determine the time at which the drive reaches the desired speed or stops, what allows to achieve very smooth acceleration and deceleration of the slider. By moving the joystick right or left you can control the level of acceleration / deceleration of the slider. Pressing the joystick causes the driving motor to stop immediately and the controller returns to **VIDEO** menu.



- Current position of the slider, measured in mm [1]
- Maximum speed of the slider set by the user [2]
- Currently set speed [3]
- Acceleration / deceleration time [4]

When you work in **Free Ride** mode you can change **SPEED** and **DAMPING** parameters at any time during the movement. **SPEED** knob allows to set the speed value within the range of 2 -200mm/s. **DAMPING** knob allows to set the acceleration/deceleration time within the range from 0.1s to 10s. Sample screen presented above informs that the maximum speed of the slider is set on 200mm /s [2], currently set speed of the slider is 169mm/s [3].The value 1.2 [4], means that the maximum speed will be achieved after 1.2 seconds.

Please note that depending on the chosen method of calibration the current position of the cart is measured and presented on the screen in a different way. Table on the next page illustrates and explains the messages on the controller. Table refers to all modes and programs unless it is indicated otherwise in the manual.

Table showing the positioning of the cart for different calibration methods.

### MANUAL Calib.

```
FreeRide 149
200 -169 12
```

Selecting **MANUAL Calib.** for a calibration method, please note that the position of "0" means the left extreme point of reference. The value grows as the slider moves closer to the right extreme point of reference. The direction of movement is indicated with currently set speed value. If the currently set speed is in the opposite direction it is marked with the sign "-".

### FREE Mode

```
FreeRide -2719
90 -40 12
```

Selecting **FREE Mode** the user does not determine any reference points, therefore the position at which the slider stands at that moment is marked as „0" (starting point). Any position to the left from that starting point is determined as a negative number whereas any position to the right, as a positive number. The direction of movement is indicated with currently set speed value. If the currently set speed is in the opposite direction it is marked with the sign "-".

## 6.2.2.2. Recording

**Recording** mode is designed to record the movements of slider in order to play it back later in **Playback** mode. Movement control (**SPEED** and **DAMPING**) is exactly the same as in **Free Ride** mode, so the user can change **SPEED** and **DAMPING** parameters at any time during the movement. In order to finish the recording and return to the menu press the joystick. The controller can store 59 seconds of the recording. Recorded movement is stored in the controller until the power supply is switched off.

```
Video Rec 1276.1
148 69 25
```

2 3 4

- 1 Current position of the slider, measured in mm [1]
- Maximum speed of the slider set by the user [2]
- Currently set speed [3]
- Acceleration / deceleration time [4]

```
Video Rec 668.7
Memory Full
```

If length of the recorded movement exceeds 59 seconds, a message on the screen will appear informing the user that the controller memory is full. To stop the recording before the end of 59 seconds, press the joystick. In order to play back the recorded movement, return to the main menu and enter **Playback** mode.

## 6.2.2.3. Playback

**Playback** mode plays back movements of HSO-4 rotational slider saved in **Recording** mode. Once you enter **Playback** mode, the screen displays information about the length of the recording or the lack of it.

[Recording]  
> [Playback] 59s

Playback 0.0  
No Records

When you select [Playback] there will be a message displayed on the screen: "Go Home?". The controller requires the user decision whether the slider should return to the position where the recording of movement started (→) or whether to start playing back the movement from the current position of the slider (←). Select the option by moving the joystick in the appropriate direction. You can return to **VIDEO** menu at any time by pressing the joystick.

Playback 590.2  
Go Home? N← →Y

Playback 7267.4  
press OK to Play

Playback 722.1 — [1]  
Time: 7/59s — [2]

The controller displays information about the current position of the slider [1] and the current/ overall time of the recording [2]. Once the recorded movement stops press the joystick to return to **VIDEO** menu.

Playback 58.4  
press OK to exit

#### 6.2.2.4. VideoLoop

During **VideoLoop** mode slider moves from one reference point to the other without stop. It automatically turns back and starts moving in the opposite direction once it reaches the end of the movement range. There is no need for the user to determine the direction of the movement. The user can change **SPEED** and **DAMPING** parameters at any time during the movement. **SPEED** knob allows to set the speed value of the slider [1] within the range of 2 -200mm/s. **DAMPING** knob allows to set the acceleration/deceleration time [2] within the range of 0.1-10 seconds. Pressing the joystick causes the driving motor to stop immediately and the controller returns to **VIDEO** menu. In **VideoLoop** mode there is no "←" sign when the cart moves in the opposite direction.

VidLoop 855.6  
36 3.1

Currently set speed of the slider [1]  
Acceleration/deceleration time [2]

1

2

If you selected **FREE Mode** when setting startup parameters, it is important to remember that the drive has no reference points set. Consequently, it will move only in one direction and will not turn back. Use **SPEED** knob to adjust the speed of the slider paying special attention so it does not hit any obstacle.

## 6.2.3. TIMELAPSE

**TIMELAPSE** program is designed for interval shots synchronized with the movement of HSO-4 slider (Motion Timelapse). Shutter release cable connected to the socket on the driving motor enables to synchronize the drive with the camera. After entering **TIMELAPSE** program the user has to set the parameters below:

Mode – Continuous / SDS working mode

Direction – slider movement direction: left/right

Interval – time at which the drive takes a shot (1-600s)

Expos. – duration time of the trigger signal (from 0.1 to 99.9 s)

Shots – number of photos to take during the track. Time of the track is calculated automatically by the controller. It can be determined from the formula: Interval x Shots

[Start] – TIMELAPSE program starts

<Back> – controller returns to main menu

In **Continuous** mode, HSO-4 rotational slider moves smoothly with a constant speed. In this case, there is no need to use the cable release attached to the driving motor (especially for short exposure times). The release time can be successfully set on the camera, or in the cable release with the interval function.

In **SDS mode (Shot Drive Shot)** HSO-4 rotational slider moves in steps between the points where you want to take photos. The trigger signal, with a preset duration time (**Expos.**) is given to the next point before the slider moves. Shutter release cable connected to the socket on driving motor enables to synchronize the drive with the camera. The distance that the drive covers during the track is calculated from the place where the slider is currently located, to the end of the range of movement in a set point direction (**Direction**).

**Please note that it is important to select a proper direction of the movement in TIMELAPSE program. If you choose movement direction as left and the slider will be located in the left reference point "0", the device will encounter resistance as it is the end of its movement range. Consequently, the drive will not move.**

If specified startup parameters was **Manual Calib.** the controller will calculate automatically length of step for **SDS** mode and speed for **Continuous** mode. However, in **FREE mode**, due to the fact that no reference points were defined, after setting all parameters there would be an additional message on the controller screen asking the user to manually determine the length of step: 1 - 999mm.

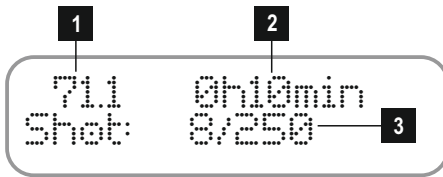


Set Step:  
< 10 >mm

**PLEASE NOTE:** The controller will set the maximum length of step for the drive depending on the time that it has for the movement (it is calculated from the formula: Interval-Exposure).

In case of **Continuous** mode, once you start **TIMELAPSE** mode (by selecting [Start]), use **SPEED** knob to set the speed for the cart: 0.1 to 10 mm / s.

Sample screen presented below informs about the position of the slider [1]. There are 10 min left until the end of the track [2]. The drive has already taken eight photos out of two hundred and fifty photos set by the user [3]. The user can stop the program at any time by pressing the joystick for 2 seconds. When the drive has taken all the photos and stops the program there will be a message on the screen: `Timelaps end OK to exit`. Press the joystick to return to the main menu.



Current position of the slider [1]  
 Time remaining to the end of the track [2]  
 Number of currently taken shots /  
 number of shots to capture [3]

## 6.2.4. ANIMATION

**ANIMATION** allows to program track of the slider during which the drive take series of photos (the drive will trigger the shutter release itself through a cable connected to the camera). After entering **ANIMATION** program set the individual parameters :

`Direction` – direction in which the slider moves: right/left

`HomePos` – home position (measured in mm). Position determined by the user from which the drive should start its work. Home position can be determined in any place (within the range of calibration)

`Step` – length of step (measured in mm)

`Steps` – number of steps. Controller calculates the maximum amount of steps basing on home position (`HomePos`) and selected direction of movement.

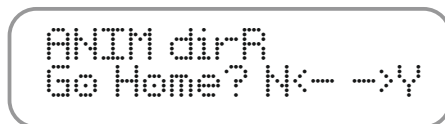
`Shots` – number of shots to take after the slider stops

`Delay` – time of the delay. Time after the slider stops before the drive triggers the shutter (0-9s)

`[Start]` – **ANIMATION** program starts

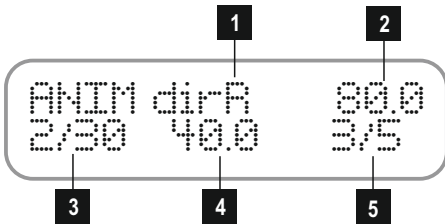
`<Back>` – controller returns to main menu

When you select `[Start]` in **ANIMATION** program there will be a message displayed on the screen: "Go Home?". The controller requires the user decision whether the slider should start the movement from determined `HomePos` (`-> Y`) or whether to start the movement from the current position (`N <-`). Select the option by moving the joystick in the appropriate direction. `dirR` on the screen indicates the selected direction of the movement, in that particular example: right. You can return to the main menu at any time by pressing the joystick.



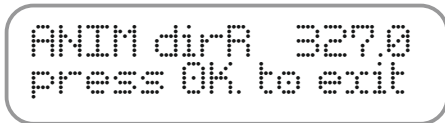
Please note that it is important to select a proper direction of the movement in **ANIMATION** program. If you choose movement direction as left and the slider will be located in the left reference point "0", the device will encounter resistance as it is the end of its movement range. Consequently, the drive will not move.

After the user determines the desired starting position, information about current parameters will appear on the LCD. In order to start, move the joystick in a direction you selected earlier. After the first step, move the joystick again to initiate another step. The user can freely move a step forward or backward (by moving the joystick right or left) or skip a few steps forward or backward (by holding the joystick longer in a selected direction).



- Selected movement direction [1]
- Current position of the slider [2]
- Current step/ number of programed steps [3]
- Length of step [4]
- Number of shots already taken/ number of all shots to take [5]

Sample screen presented above informs that the user selected right as movement direction [1]. If the user chose left, there would be: dirL on the screen. Current position of the slider is 80mm [2] from the left reference point in **MANUAL Calib.**, or starting point in **FREE Mode**. Length of step set by the user is 40mm [4]. The drive currently performs second step out of thirty steps set [3]. The drive has already taken three shots out of five shots set [5]. The user can stop the program at any time by pressing the joystick for 2 seconds. When the drive has taken all the photos and stops the program, there will be a message on the screen with the current position of the slider. Press the joystick to return to the main menu.



## 7. Maintenance and operation

Maintenance of Slide Kamera HKN-2 stepper drive for HSO-4 rotational slider reduces to keeping the drive clean. Use professional maintenance products for this type of equipment, such as Dry Lube with Teflon or antistatic cloth. Elements of the drive do not require any lubrication. To remove any impurities, you can use compressed air.

**Any changes in design and repairs are made only and exclusively by the manufacturer.  
Failure to comply with the recommended guidelines outlined in this manual  
will result in loss of warranty.**

## 8. Transport

Slide Kamera HKN-2 stepper drive for HSO-4 rotational slider must be transported in a transport case that provides a proper protection of the equipment against any damage.



## 9. Terms of warranty

All Slide Kamera products are covered manufacturer's warranty for a period of 12 months from the date of sale. Warranty covers any design faults or of the material of the product which resulted in the product malfunctioning. The warranty covers the repair, or, if the repair proves impossible, replacement of the product with a new one. However, the cost of repair of the product cannot overrun the catalogue value of the product. The warranty does not cover damage and / or product defects resulting from the improper usage, as well as not following product maintenance specifications.

### The warranty excludes:

- unauthorized attempts to repair or modify
- mechanical damage caused during transport and operation of such features as scratches, dents, pits, dirt, etc ...
- flooding, moisture

To obtain warranty service the purchaser should deliver the damaged product together with a proof of purchase and proof of payment (invoice, cash register receipt). The product will be accepted for warranty service on condition that it is delivered with correctly filled in complaint form and properly protected during transport. You can download the complaint from: [www.slidekamera.pl](http://www.slidekamera.pl) / [www.slidekamera.eu](http://www.slidekamera.eu).

After the warranty period is exceeded any spare parts can be purchased directly from the manufacturer or in any selected points of sale.

**PLEASE NOTE:** Any package sent at the expense of HET-CNC s.c., 80-175 Gdańsk, Ul. Kartuska 386 will not be received.

## 10. Shutter release cables for Slide Kamera HKN-2 stepper drive

Type	Supported cameras
<b>WS-1</b>	<p><b>Canon:</b> EOS 10D, EOS 1D, EOS 1D C, EOS 1D mk II, EOS 1D mk II N, EOS 1D mk III, EOS 1D mk IV, EOS 1D X, EOS 1Ds, EOS 1Ds mk2, EOS 1Ds mk3, EOS 20D, EOS 20Da, EOS 30D, EOS 40D, EOS 50D, EOS 5D, EOS 5D mk II, EOS 5D mk III, EOS 6D, EOS 7D, EOS D30, EOS D60</p> <p><b>Kodak:</b> DSC-530 (and others)</p>
<b>WS-2</b>	<p><b>Canon:</b> Digital Rebel, EOS 1000D, EOS 100D, EOS 1100D, EOS 300D, EOS 350D, EOS 400D, EOS 450D, EOS 500D, EOS 550D, EOS 600D, EOS 60D, EOS 60Da, EOS 650D, EOS 700D, EOS 70D, Kiss Digital, Kiss F Digital, Kiss N, Kiss X2, Kiss X3, Kiss X4, Kiss X5, Kiss X50, Kiss X6, PowerShot G1 X, PowerShot G10, PowerShot G11, PowerShot G12, PowerShot G15, PowerShot SX50 HS, Rebel SL1, Rebel T1i, Rebel T2i, Rebel T3, Rebel T3i, Rebel T4i, Rebel T5i, Rebel XS, Rebel XSi, Rebel XT, Rebel Xti,</p> <p><b>Contax:</b> 645, N, N Digital, N1, NX</p> <p><b>FujiFilm:</b> X-E1</p> <p><b>Hasselblad:</b> H, H3D, H4D-200MS, H4D-31, H4D-40, H4D-50, H4D-50MS, H4D-60,</p> <p><b>Pentax:</b> 645D, ist D, ist DL, ist DL2, ist DS, ist DS2, K-30, K-5, K-5 II, K-5 IIs, K-50, K-500, K-7, K-m, K10 Grand Prix, K100D, K100D Super, K10D, K1 10D, K200D, K20D, MZ-6, MZ-L, ZX-L,</p> <p><b>Samsung:</b> GX-1L, GX-1S, GX-20, NX-10, NX-100, NX-11, NX-5</p> <p><b>Sigma:</b> SD1, SD1 Merrill, SD15 (and others)</p>
<b>WS-3</b>	<p><b>FujiFilm:</b> S3 Pro, S5 Pro</p> <p><b>Kodak:</b> DCS Pro 14n</p> <p><b>Nikon:</b> D1, D1H, D1X, D2, D200, D2H, D2HS, D2X, D2XS, D3, D300, D300S, D3s, D3X, D4, D700, D800, D800 E (and others)</p>
<b>WS-4</b>	<p><b>Nikon:</b> D3100, D3200, D5000, D5100, D5200, D60, D7000, D7100, D90 (i inne)</p>
<b>WS-5</b>	<p><b>Nikon:</b> D70S, Nikon D80 (and others)</p>
<b>WS-6</b>	<p><b>Leica:</b> DigiLux 2, DigiLux 3, V Lux 1, V Lux 2, V Lux 3</p> <p><b>Panasonic:</b> FT2, FZ100, FZ15, FZ150, FZ20, FZ200, FZ30, FZ50, G1, G10, G2, G3, G5, GF1, GH1, GH2, GH3, GX1, L1, L10, LC1, TS2 (and others)</p>
<b>WS-7</b>	<p><b>Hasselblad HV</b></p> <p><b>Minolta DiIMAGE:</b> 5, 7, 7Hi, 7i, A1, A2, A200</p> <p><b>Minolta Dynax:</b> 3, 4, 5000, 500si, 505si, 5D, 7, 7000, 7D, 9, 9000, Sweets</p> <p><b>Minolta Maxxum:</b> 3, 4, 5000, 500si, 505si, 5D, 600si, 7, 7000, 700si, 7D, 807si, 9, 9000</p> <p><b>Sony:</b> A100, A200, A300, A33, A35, A350, A37, A400, A450, A500, A55, A550, A550V, A560, A57, A580, A65, A65V, A700, A77, A77V, A850, A900, A99 (and others)</p>

