

Multi Slider XL

User Manual

Version 1.0

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1. Introduction

The Multi Slider XL is a bendable camera slider for professional use. Developed by professional cameramen, the Multi Slider XL enables linear and curved camera tracks with one device. Within seconds the Multi Slider XL can be changed from a linear to a curved slider at any desired radius.





2. System Overview and Components

The Multi Slider XL is a flexible system with multiple components and segments. Due to this flexibility the system can be ordered in length up to 100m.

All Multi Slider XL systems include:

- Segments that are connected to each other and build the track.
- End parts that finish the track ends and holding the belt in place
- Rails that are shifted into the track and allows the carriage to move
- Belt that is tightened between the end parts and allows the drive of the carriage
- Carriage that moves on the rails and includes the drive with motor and control unit.
- XL Control Unit – Controls the System with Sensors, Motor and User Inputs – see separate manual for details for the XL Control Unit
- Power Supply – Supplies the motor and control unit of the MSXL

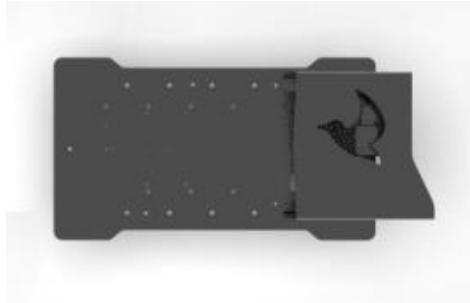
Optional:

- Tripods that allow to mount the track elevated above the ground level
- Battery pack: Rechargeable lithium-ion battery allows the System to be operated without the need for a power supply cable and in locations where no power supply is available
- HMI Unit with joystick or foot pedals allows to control the MSXL via manual control



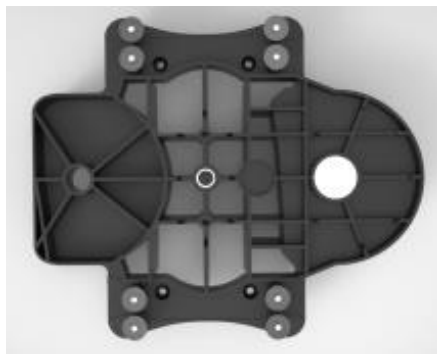
3. Technical Data

3.1 Carriage



Dimensions:	439 x 215 x 170 (L x W x H) [mm]
Weight:	5,6 kg
Material:	Aluminum black anodized surface finish

3.2 Chain Segments



Dimensions:	228 x 187 x 78 (L x W x H) [mm]
Axis to Axis distance:	150 mm
Weight:	0.67 kg
Material:	Glass fiber reinforced Polyamide + stainless steel inlays



3.3 End Parts



Dimensions:	160 x 186 x 78.5 (L x W x H) [mm]
Axis to Axis distance:	150 mm
Weight:	1,1 kg
Material:	Aluminum black anodized surface finish

3.4 Belt



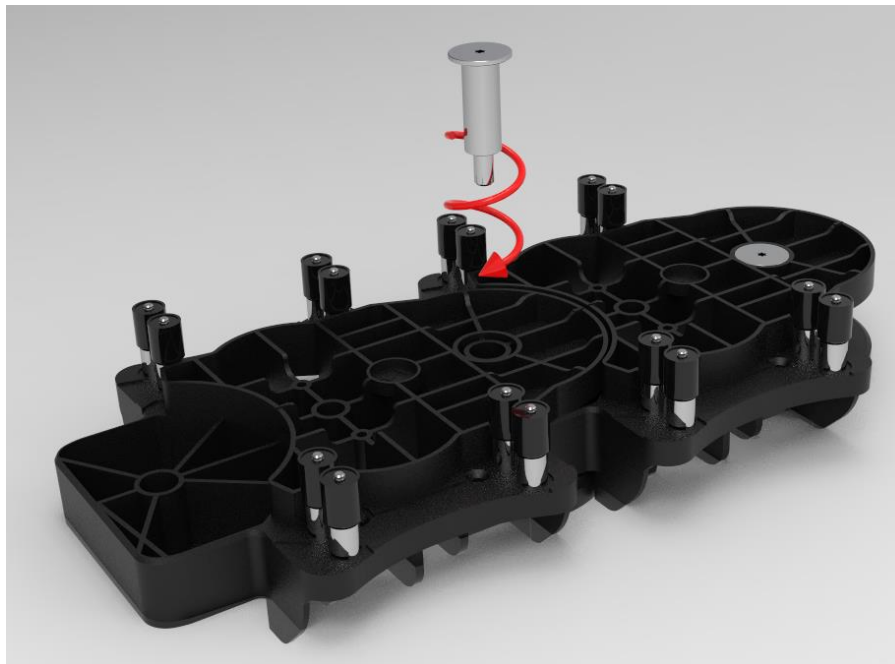
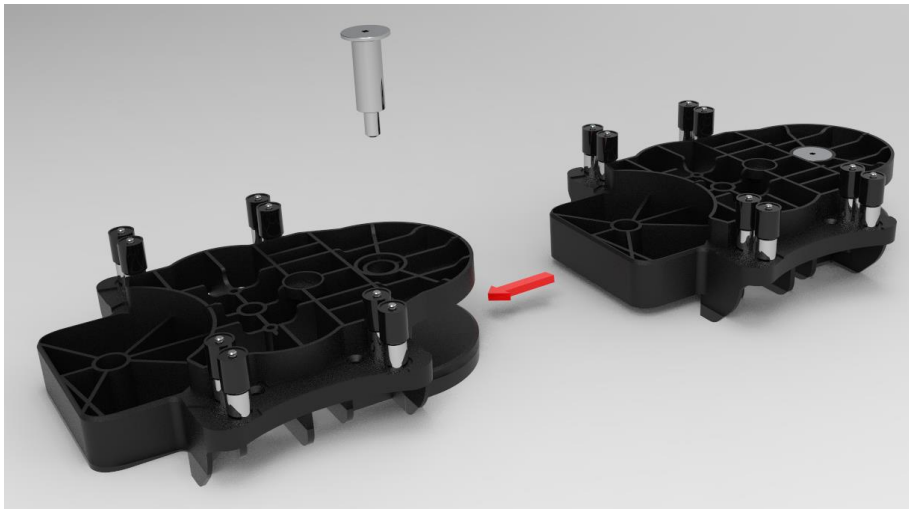
Length:	depending on the ordered slider length
With:	9 mm
Type:	HTD 3M 9 mm

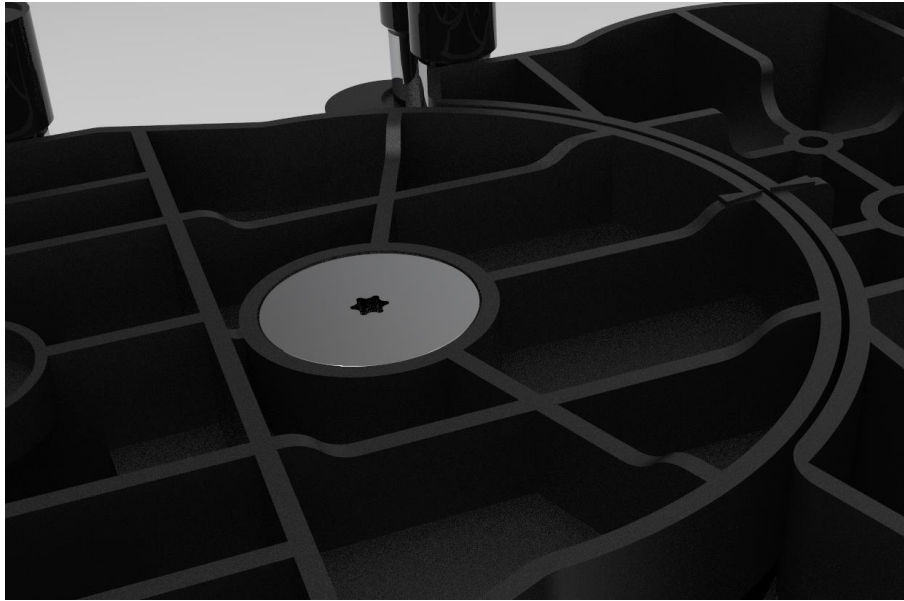


4. Setup

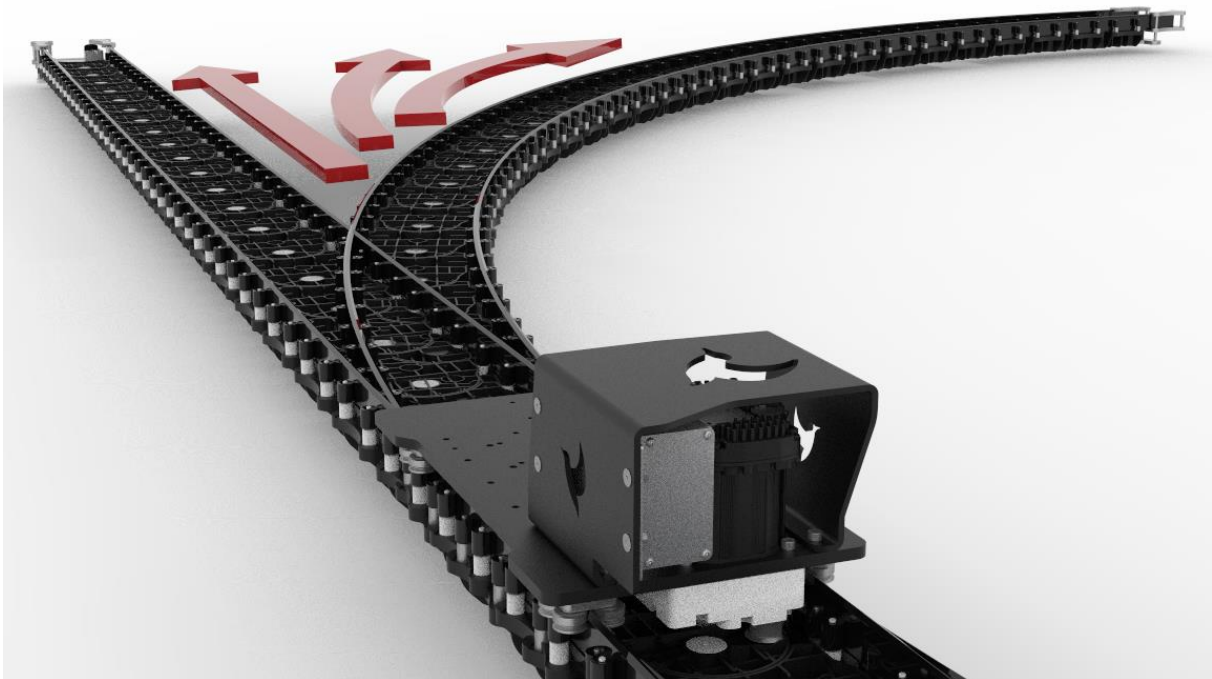
4.1 Assembling the Track

Segments are put together and fixed with the axis-screws.





The screw shall be turned until it is flat with the segments surface.

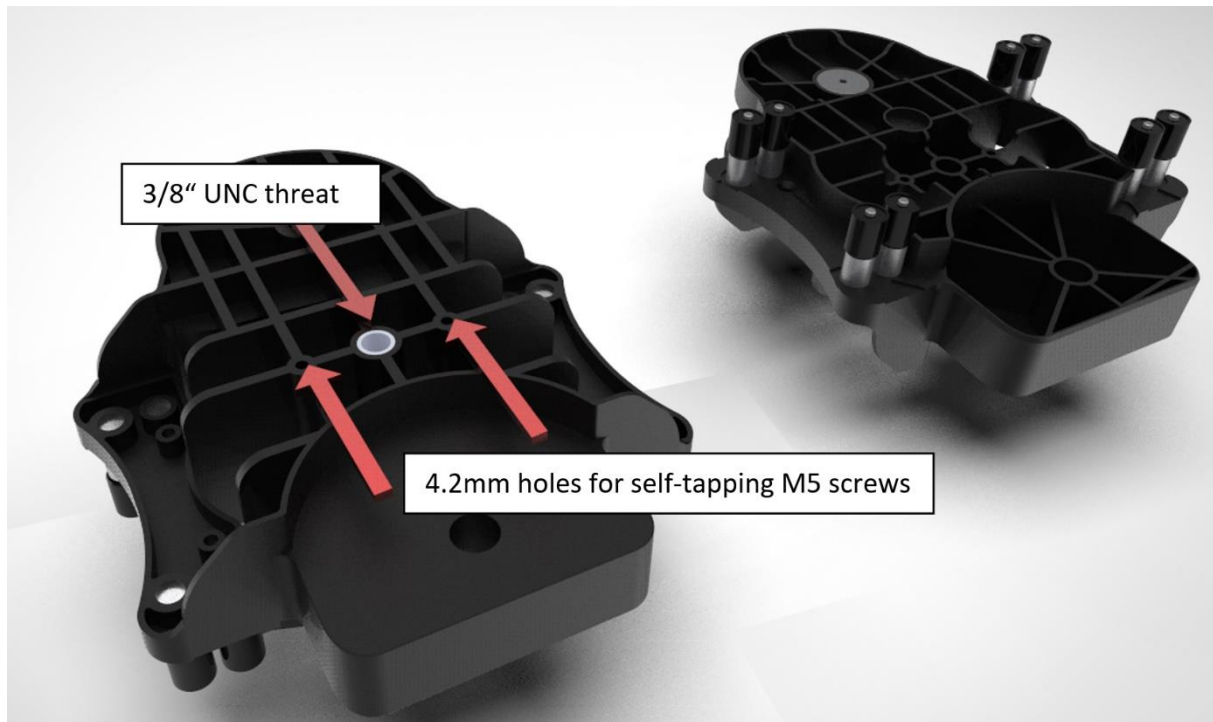


The track can be adjusted to the desired radius and shape before fixing the track by tightening the screws.



4.2 Mounting the Track

The track has different options for mounting. One is to use the 3/8" UNC thread to mount the track on tripods or fixed poles. The two 4,2mm holes can be used to fix the track to undergrounds via 4mm screws from top or via self-tapping M5 screws from behind an underground plate.





4.2.1 Mounting the Track to Tripods



First mount the tripod adapter plate by screw to the middle thread of segments (spigot adapter plate ensures high stability and comes with waterbird tripods or can be ordered separately)

It is recommended to have a support tripod or pole every 5-6 segments for lightweight loads like PTZ cameras or every 3 segments for heavy loads.

Finally connect the track to the tripods by sliding in the adapter plates into the tripods and fix it with tripod locking screw.



4.2.2 Mounting the Track to ground plates



Mounting the segments to ground plate from top.

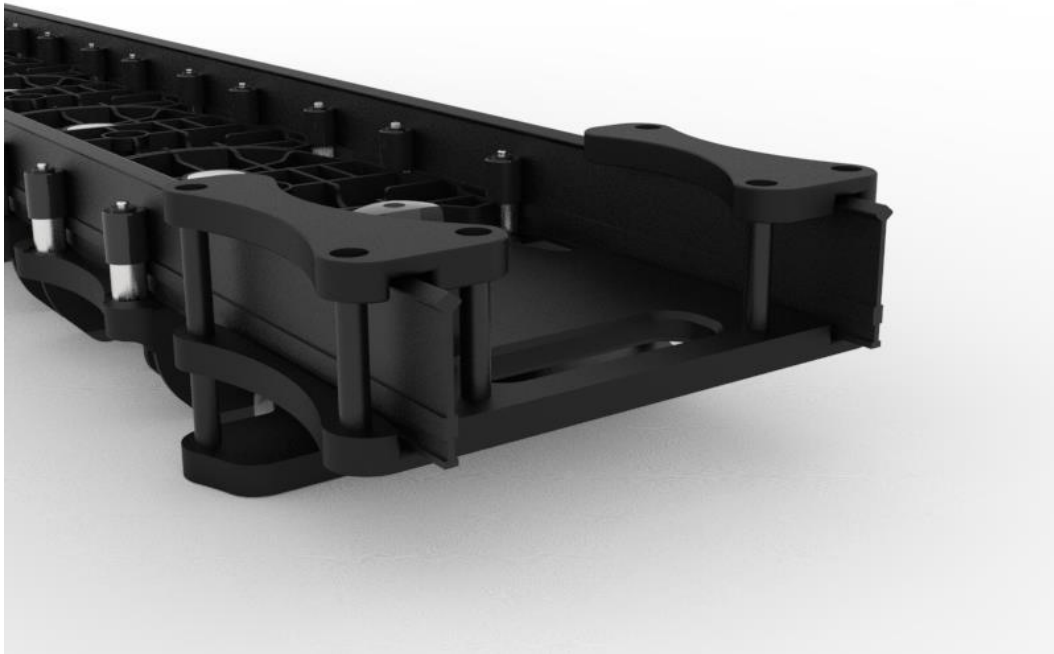


Mounting to ground plate from back.



4.3 Slide in the Rails

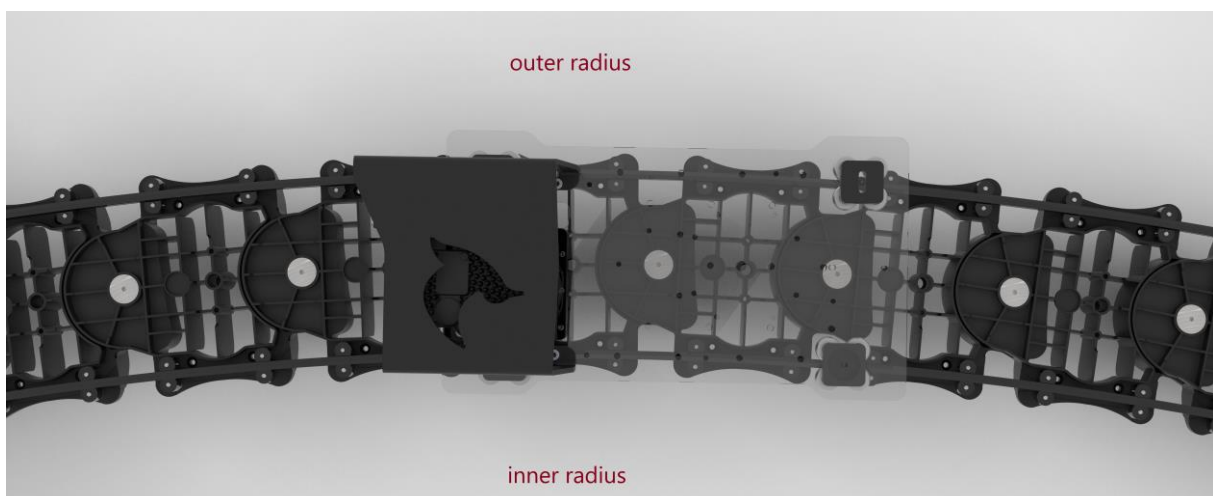
After the segments and the end pieces has been put together the rails can be slid in. For this the rails are pushed in from one end segment through the whole track.



4.4 Installing the carriage

Before the rails are slid in completely, they shall be stopped approximately 50cm before reaching the other end segment to allow the installation of the carriage.

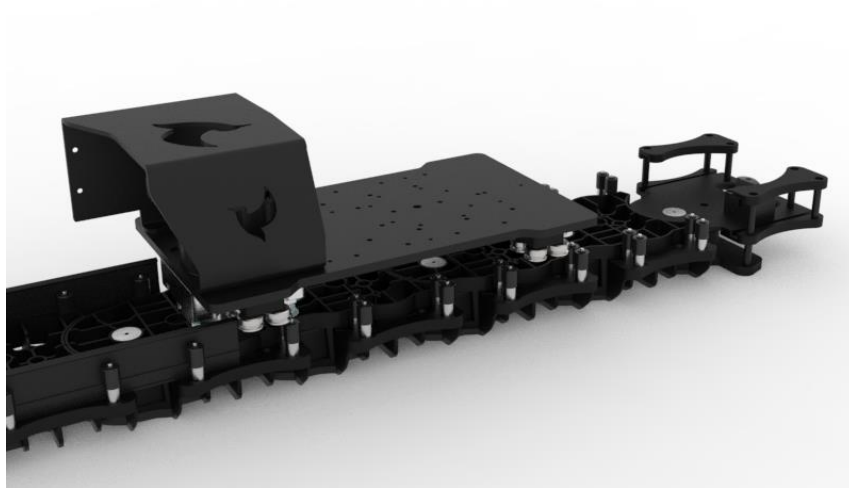
The carriage needs to be mounted in the right direction as shown in the image below.



When looking to the carriage from the inner radius the motor must be on the left side of the carriage.



Be carefully to lead through the belt to the other track end when putting the carriage on the rails.



After the carriage has been put on the rails, the rails can be pushed in completely in the other end piece.



4.5 Mounting the belt

After the carriage is on the track the segments are locked in desired position and the complete slider is in desired shape, the belt needs to be mounted at the end pieces.

Make sure the belt is straight and has no torsion along the way. The belt is locked according the picture below at the end pieces. The belt tense shall be tight for a smooth movement of the slider.





4.6 Connecting the Cables

4.6.1 Supply

Connect white connector of the sliders power supply to the power cable that comes with your slider. The other end of the power cable shall be connected to the D-Tap connector on the carriage.

For strain relief use the included cable bracket and mount the power supply cable via a hook-and-loop tape or cable tie.

After connecting the DC-side of the power supply the AC side can be connected to the mains supply.

For this use a standard IEC 60320 C14 cable and connect it to a properly grounded wall socket.

4.6.2 Control line

The Multi Slider XL comes with the XL Motion Controller. This controller allows to control the slider movements via standard DMX 512 protocol or via Ethernet.

For details of the XL Motion Controller and its capabilities, please see the separate XL Motion Controller User Manual available in the support section of www.waterbird.at

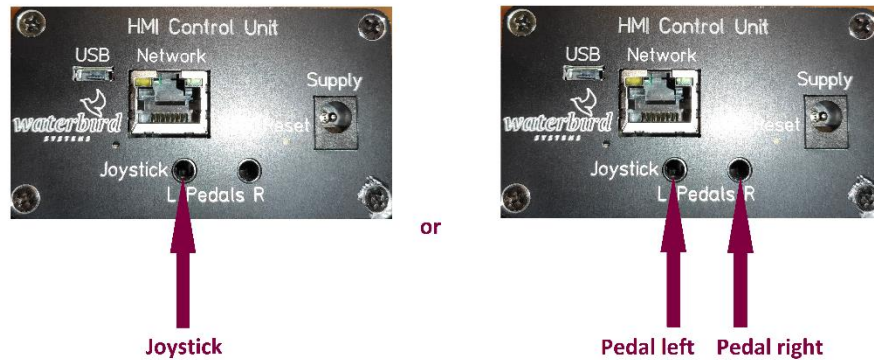
Depending on your chosen way of control connect the DMX or RJ45 cable to the XL Motion Controller mounted on the carriage and strain relief with the included cable bracket alongside with the power cable.



4.6.3 HMI Control Unit with Joystick or food pedals

For manual control of the slider the optional available HMI control unit needs to be connected to the DMX cable.

Next the joystick or food pedals need to be connected to the HMI unit:



After DMX cable and Joystick or food pedals have been connected put the included HMI power supply on the Supply Jack of the HMI Unit and use a standard IEC 60320 C14 cable to connect the power supply to a properly grounded wall socket



5. Operation

5.1 Initialization of the slider via HMI Control Unit

After connecting all cables and powering up the system the slider does not respond to commands from the joystick or foot pedals. This is because it needs to be referenced first.

For this hold down the “Ref run” button for longer than 3 seconds. The “Ref run” button will light up for one second and the slider begins to move and automatically references via the magnets on each end of the slider.



After the reference run is finished the motor stops and the control via Joystick or foot pedals is possible.

You can de-initialize the slider anytime by pressing the “Ref run” button for shorter than 3 seconds. This will suddenly stop the motor and should only be done when the motor is not moving or in the need for an emergency stop.

At deinitialization the controller un-powers the motor and invalidates the current position. Therefore, a new initialization run is necessary after each deinitialization.



5.2 Operating the slider via HMI Control Unit

After the slider is initialized you can move the Joystick / Food Pedals to get the slider in motion.

The Max speed knob on the HMI Unit can be used to set the maximal speed that is used when moving the Joystick to the full left or right position or fully pressing the food pedal.

The Acceleration knob on the HMI Unit sets the ramp of how the carriage is accelerated when moving the Joystick/pressing the Food pedals. A lower value means a softer start, a higher value results in faster accelerations.

Maximum speed and acceleration shall be aligned to the application and payload.

The “Auto PingPong” button can be pressed to activate the automatic movement from one end of the slider to the other continuously. This can be a useful feature for situations you have no operator for the slider but want to have some movement in your pictures like at interviews, live casting, or event recordings.

While the PingPong function is on, the “Auto PingPong” button lights up and the inputs of the Joystick/Food pedals are ignored. Also, during the PingPong function you can control the sliders speed and acceleration behavior via the Max Speed and Acceleration knobs.

For deactivating the PingPong function press again onto the “Auto PingPong” button.



6. Handling and Safety Instructions

Do not use the product in wet or humid environment like rain, snow, spray or waterfalls without extra protection against humidity intrusion into the carriage.

Do not install this Unit near a heater, inflammable material or oily or dusty location or in a location continuously exposed to direct sunlight or in a location where gas may leak.

Remove all foreign substances such as dust or water from the product with a dry cloth on a regular basis. - Clean it with a dry cloth without alcohol or other solvents.

Do not pull or excessively bend the cables. Do not twist or tie the cables. Do not hook the cables over a metal object or place a heavy object on the cables. Do not pull the cables, when unplugging. Pull out the cable only by holding the plug. Do not put force on the cables in any direction when connected to the Control Unit or Motor, this can damage the Control Unit or Motor and connectors.

Before switching on the power to the product ensure that the Motors can spin freely and no harm to humans, animals or objects is possible in case the connected motors start moving.

Do not use the product if it is damaged, the isolation on the cables is damaged or it shows any abnormality like excessive heat dissipation.

It is normal that the Control Unit and Motor gets warm during operation. To avoid overheating do not cover the Control Unit or Motor with thermally insulating material and allow free airflow.



6.1 Regulatory Hints



INSTRUCTION ABOUT THE WEEE MARK

Correct Disposal of This Product (Waste Electrical & Electronic Equipment) (Applicable in countries with separate collection systems) This marking on the product, accessories or literature indicates that the product and its electronic accessories (cables, adapters,...) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

USA:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Canada:

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

China:

注意！

依據 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，

非經許可，

公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計

之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；

經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信規定作業之無線電信。

低功率射頻電機須忍受合法通信或工業、科學及

醫療用電波輻射性

電機設備之干擾。