MS Phoenix

MS Phoenix-RF

User Manual

Version 1.0

Table of Contents

1. System Overview and Components

The MS-Phoenix and MS Phoenix-RF is a controller for Waterbird bendable Slider Systems.

In general, both controllers have equal base functionality, but the MS Phoenix-RF comes with an integrated Wireless-DMX module and an integrated rechargeable battery for wireless use.

Compatibility to Waterbird Multi Slider Systems:

	MS Phoenix		MS Phoenix-RF	
	WIRED	**WIRELESS**	**WIRED**	**WIRELESS**
MS PRO mkII	YES	NO	YES	NO
MS Swift S	YES	NO	YES	YES
MS XL mkII (PanaTrack)	YES	NO	YES	YES

Table 1 -compatibility of MS Phoenix and MS Phoenix-RF

NOT COMPATIBLE WITH MS PRO VERSION!

Additional Compatibility:

The MS Phoenix and MS Phoenix-RF also have the capability to control the Autopod+/Panapod from Polecam. For this the Autopod+ is mounted, powered and controlled via the MS XL Motion controller.

The MS Phoenix controller comes with:

- The Phoenix controller

The MS Phoenix-RF controller comes with:

- The Phoenix-RF controller
- USB-Quick Charge 3.0 wall plug power supply adapter to power and charge the MS Phoenix-RF via the Service Port
- Micro-USB to USB-A cable
- Wireless Antenna
- Hard-Case for safe transport and storage of the MS Phoenix-RF controller

2. Connectors

(from left to right)

12V/24-32V out/DATA, 4-pin XLR female connector:

12V: output Supply for MS PRO mkII (supplied via **12V in, DC connector**)
24-32V: output Supply for MS Swift S/X and MS XL mkII
DATA: DMX signal out
PINOUT 1: Ground | 2: DMX Data- | 3: DMX Data+ | 4: 12V/24-32V DC

24-32V in/DATA, 4-pin XLR male connector:

24-32V: input Supply for MS Swift S/X and MS XL mkII (supply for MS Phoenix, supply and charge for MS Phoenix-RF)
DATA: DMX signal out
PINOUT 1: Ground | 2: DMX Data- | 3: DMX Data+ | 4: 24-32V DC

12V in, DC connector:

12V: input Supply for MS PRO mkII (supply for MS Phoenix, supply and charge for MS Phoenix-RF)
Passed through to **12V/24-32V out/DATA, 4-pin XLR female connector**

Service, micro-USB connector:

Firmware update port, 5V input (supply and battery charge for MS Phoenix-RF)

PEDALS connector:

Pedals are optionally available. Pedals can be used for manual operation instead of the joystick.

3. Connecting to a Waterbird Slider System

The MS Phoenix and MS Phoenix-RF controllers are compatible to following Waterbird Slider Systems:

	MS Phoenix	MS Phoenix-RF
MS PRO mkII	wired	wired
MS Swift S	wired	wired and wireless
MS XL mkII	wired	wired and wireless

Table 2 -signal connection possibilities for MS Phoenix and MS Phoenix-RF

3.1 Wired Connection

Wired signal connection is available for MS Phoenix AND for MS Phoenix-RF.

3.1.1 Wired connection to MS PRO mkII

The MS PRO could be powered via the MS Phoenix controller, if the Phoenix is supplied with at least 12V.

On the other hand, if the MS PRO is driven via a battery on the dolly, the Phoenix can be powered via that as well.

3.1.1 Wired connection to MS SWIFT-S or MS XL mkII (PanaTrack)

MS Swift-S and MS XL needs to be powered by at least 24V. Taking that into consideration, the WB-Core-24V Power Supply comes into the game. It is custom adopted for our Waterbird Systems, using out 4-pin-XLR-power/data-cables you can connect the slider to one port, and to the Phoenix to the second port. DMX signal is passed through.
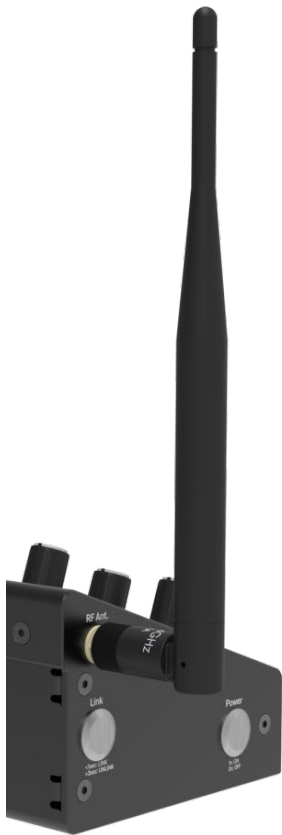
3.2 Wireless DMX Connection

Wireless DMX connection is ONLY AVAILABLE for MS Phoenix-RF.

CRMX is LumenRadio's patented technology for wireless DMX. It is the most reliable technology for wireless DMX on the market and has become the de facto standard in the entertainment industry the world over.

LumenRadio's CRMX technology offers a rock-solid reliability and has been proven to perform on the largest stages and at the biggest events where failure is not an option.

The MS Phoenix-RF controller is equipped with a LumenRadio wireless DMX module, which allows direct point-to-point wireless DMX connections up to 100 meter in free air. MS Phoenix-RF also includes a rechargeable battery.

3.2.1 Pairing the MS Phoenix-RF with MS SWIFT-S or MS XL mkII (PanaTrack) slider systems

If they are not paired, follow the unpairing process in next chapter first, in order to be absolutely sure that both,MS Phoenix-RF and MS SWIFT-S/MS XL mkII (PanaTrack), are ready to start a new pairing process.

As soon as both items are unpaired, short press the link button on the MS Phoenix-RF controller, after some sync blinking of both link button lights on each item, it will take around 5 seconds until they are paired and the MS Phoenix-RF is ready to take control.

After the pairing process is successful, no more initial pairing is necessary after a power reset.

To take over the control of another slider system with the same MS Phoenix-RF, just follow the unpair/pair instructions.

3.2.2 Unpairing Process

Long press and hold the link button for more than 3 seconds, first on the Phoenix-RF controller, then on the MS XL/MS SWIFT S. After that they are ready to start the pairing process.

4. Operating the Slider with the Phoenix / Phoenix-RF

4.1 Power on/off the Phoenix controller

The Phoenix controller is powered on by supplying 12V or 24V..32V (cf. Connectors). To power it off, unplug the power supply.

4.2 Power on/off the Phoenix-RF controller

The Phoenix-RF controller is powered on by supplying via micro-USB, 12V or 24V..32V (cf. Connectors). To power it off, unplug the power supply and double-press the ON/OFF button on the left side of the controller.

When using the Phoenix-RF controller wireless, single-press the ON/OFF button on the left side to power it on, double-press the ON/OFF button on the left side to power it off.

The Phoenix-RF cannot be powered off if it is supplied with a wired power supply.

4.3 Control Overview

4.4   Init/Stop Button

4.4.1 Initialization of *MS PRO mkII* (manual init)

The *MS PRO mkII* needs to be initialized manually, as it has no magnets in the track. After powering the system, the *MS PRO mkII* can already be moved by the Joystick. For manual initialization the 2 endpoints need to be set by following procedure:

1. Move the carriage by holding the Joystick in left or right direction to the position of your desired first endpoint.
2. Long Press and hold the **INIT/STOP** button for more than 3 seconds to save the first endpoint.
3. Move the carriage by holding the Joystick in left or right direction to the position of your desired second endpoint.
4. Long Press and hold the **INIT/STOP** button for more than 3 seconds to save the first endpoint.

After initialization several automatic functions are available, like Ping-Pong mode, setting/recalling memory points.

4.4.2 Initialization of *MS XL mkII* or *MS Swift S* (automatic init)

Long press and hold the **INIT/STOP** button for more than 3 seconds to start the automatic initialization of the slider system. It will search for the magnets in order to learn how long the system is.

Initialization is necessary to allow all the other features getting active. Without initialization the system **cannot** be moved.

4.4.1 Emergency Stop

The INIT/STOP button also acts as an EMERGENCY STOP function, once it is short-pressed (< 1sec.), the power is removed from the motor. After an emergency stop is performed, the system needs to be initialized again.

4.5   Memory Buttons

There are 4 Memory buttons available to save and recall a dedicated slider position: MEM1, MEM2, MEM3 and MEM4.

4.5.1 Saving a Memory Position

1. Move the carriage by holding the Joystick in left or right direction to the position of your desired first memory position.

2. Long press and hold the **MEM/1..4** button for more than 3 seconds to save the current position of the slider.

4.5.2 Goto a Memory Position

Short press the **MEM/1..4** button to start the slider movement to the saved position.

4.6 Speed Knob

Turn the **SPEED** knob to adjust the maximum slider speed between 0..100%. The configured value is viewed in the display.

4.7 Ramp Knob

Turn the **RAMP** knob to adjust the start and stop ramp of the slider between 0..100%.

Higher value means very short and abrupt start/stop ramp, smaller value means long and smooth start/stop ramp.

The configured value is viewed in the display.

4.8 Pause Knob

Turn the **PAUSE** knob to adjust the pause time used in Ping Pong mode of the slider between 0 seconds and 300 seconds. This configures the waiting time between the movements in ping pong mode.

The configured value is viewed in the display.

4.9 Ping-Pong Button

Ping-pong mode enables the feature to run the slider dolly from one end to another infinitely.

4.9.1 Ping-Pong between the initialized endpoints

Short press the **PING-PONG** button to enable or disable the ping pong mode between the initialized endpoints.

Settings configured with SPEED, RAMP and PAUSE knob are active during Ping-Pong Mode and it is also possible to change these settings when ping pong mode is enabled.

4.9.1 Ping-Pong between MEM1 and MEM2 positions.

Long press and hold the **PING-PONG** button for more than 3 seconds to enable or disable the ping pong mode between the saved memory positions MEM1 and MEM2.

Settings configured with SPEED, RAMP and PAUSE knob are active during Ping-Pong Mode and it is also possible to change these settings when ping pong mode is enabled.

4.10   Joystick

Use the **JOYSTICK** to manually operate the slider System by moving the Joystick left or right. Values configured for speed and ramp are used in manual mode, where the configured (max) speed is equivalent to the fully left or right movement of the joystick.

SWITCH CONTROL DIRECTION OF JOYSTICK: Press and hold the **PING-PONG** button during powering on the Phoenix controller until "Reverse Direction" is shown in the display. Use same procedure to switch back.

If an Autopod+/PanaPod is connected to the MS XL, moving the Joystick up and down controls the vertical movement of the Autopod+/PanaPod.

4.11   Pedal Button

Short press the **PEDAL** button to enable or disable the connected Pedals (optionally available). When pedal operation is active, the joystick is disabled.

Pedal Usage: 1 Pedal is used for left and the other Pedal is used for right movement. Both cannot be accelerated together, one of them always needs to be at "zero position".

5. Firmware Update

Make sure your systems are always up to date.

Please download firmware and update instruction from: https://waterbird.at/support/

6. Technical Data

	MS Phoenix	MS Phoenix-RF
Housing Dimensions	220x100x700mm	220x100x700mm
Weight	710g	820g
Working Ambient Temperature	5°C..45°C	5°C..45°C
Storage Temperature	-10°C..70°C	-10°C..45°C
Charge Temperature		0°C..45°C
Humidity Range	0..60% RH (non-condensing)	0..60% RH (non-condensing)
IP Rating	IP20	IP20
Input Voltage		5V@microUSB (charge)
	12V to supply MS PRO	12V to supply MS PRO (charge)
	24..32V to supply MS Swift and MS XL mkII	24..32V to supply MS Swift and MS XL mkII (charge)
Battery Type		Li-Ion, 18650, 3.6V, 3350mAh
Storage Battery Condition		>= 75% charging level
Wireless DMX Frequency		2,4 Ghz
Wired Operating Distance	100m	100m
Wireless Operating Distance		up to 100m

7. Warranty Information

All products by Waterbird Systems are covered by the manufacturer's warranty for a period of 12 months from the date of sale. Warranty covers production faults and material defects, which resulted in the product malfunctioning. 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 or proof of payment (invoice, cash register receipt). The product will be accepted for warranty service on condition, that it is delivered and properly protected during transport.

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

8. 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。