



## **Brief Instructions Micro-series**

### **1 Introduction**

The Development, production and assembly of all weatronic products is based in Germany. All components are tested by the highest German standards.

During the development process reliability and noise immunity are considered the most.

**MADE IN GERMANY**

### **2 Scope of supply**

weatronic ® Receiver **Micro-series**  
Jumper for "Binding"

### **3 Safety instructions**

The weatronic ® 2.4 Dual FHSS - Remote Control System has been developed exclusively for the operation of radio-controlled model cars, model aircraft and ship models and is **only permissible for this use.**

weatronic ® assumes no liability for improper use.

Young people under 14 years of age may operate remote controlled models only under adult supervision.

Please Operate your model only on intended Areas. Be considerate to other Pilots and arrange with each other.

Stay in reach to other Pilots, so you can communicate about your landings and take-offs approaches in order to avoid accidents.

Always stay away from Non-Fly zones and never fly over spectators or any persons who are near the airfield. The weatronic ® 2.4 Dual FHSS system can be used simultaneously with other 2.4 GHz systems, and also with 35/40/72 MHz systems.

The frequency control check is no longer necessary within the 2.4GHz Band. More than 120 weatronic ® 2.4 Dual FHSS systems can simultaneously be operated.

Before operation always perform the following routine checks : fix your model in place.

Keep a safe distance. Mind bystanders, especially spectators who are not aware of the potential dangers!

Indicate sources of danger, such as rotating blades and propellers or the hot exhaust of jet-turbines , etc.

First switch on your transmitter. Check whether the correct model memory is selected. Then turn on the receiver.

All functions of the model, in particular their running direction and all surface deflections should be checked.

Also check your batteries to be sufficiently charged.

### **4 RC-equipment installation**

The correct installation of the receiver, battery, servos, electric cables and antennas is highly required to operate your model.

Avoid excessive vibration exposure and excessive heat load.

### **5 Antenna Laying**

The Dual Receiver **Micro-series** has two antennas of about 200 mm in length but only the last 29mm are the active Parts

Both antenna cables must be laid without kinks and the bared part has to be placed as far away as possible from all metal or conductive parts.

Carbon fiber reinforced hulls, hulls with metal-finish or metal-sheeting are strongly shielding, and therefore the antenna (the

last 60 mm) has to be necessarily moved to the outside.

There the antenna also should not be fixed directly on the shielding material. A certain distance has to be maintained.

For optimal reception the last 29 mm of the antennas must be fixed at a 90 ° angle to each other.

### **6 Flashing code of the LEDs**

When you power the receiver both LEDs light up briefly.

LED green	LED red	Status
ON	OFF	connection is OK
short flashing	OFF	NO connection
flashing 1Hz	OFF	Binding mode
ON	flashing 1 Hz	learn Failsafe
short flashing	rapid flashing	gyro calibration

All Flashing codes are described in the "blink codes" manual.

### **7 Binding Procedure**

weatronic ® receivers must be linked once to the transmitter module, the so-called Binding.

The "Binding" is as follows:

- switch receiver on  
( wait 2-3 sec ) (stable 5V is needed)
- put the small black Binding plug on SCU port  
(at the **Micro-series** on "red" and "black")
- wait until green LED is blinking 1 time every second ( 1Hz )  
(now receiver is in binding mode for 30sec)
- now switch on transmitter  
( wait 2-3 sec )
- now press button 2 and hold until green LED is permanent on receiver and Transmitter module ( min distance 3ft. between receiver and transmitter )
- When green LED's are stable, the Binding Mode is fulfilled and you can remove the small black Binding plug.

Whenever you want to change between already linked Receivers just perform the so called "Quick Binding" process.

- switch receiver on ( wait 2-3 sec)
- switch transmitter on ( wait 2-3 sec)
- press button 2 only one time (transmitter module now search for a receiver which is already "linked" (maintained by "Binding") and connects to this receiver.

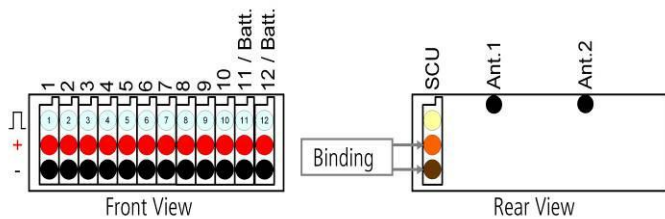
Please **note** that after an update of the receiver firmware a "Binding" process has to be executed!

### **8 Connection of the servos and attaching the power-supply**

The Micro series offers up to 12 servo plugs, depending on the type. For power supply you could use one of the servo connections.

Opposed to the Servo Plugs you will find the SCU port.

The power supply can be 4-5-cell NiMH or 2-cell LiPo / LiFe's.



**Attention:** Check your servos voltage range specifications to match to the connected power supply voltage.

### 9 failsafe settings

It is strongly recommended to adjust a proper servo failsafe position after you set up your model and before you do your maiden flight.

The default value for all servo plugs is the so called "Hold" position. Means the last transmitted servo position will be kept.

There are two ways to adjust you preferred failsafe position.

The easy way is, **before** switching on the Receiver, to place the Jumper Plug on the "red" and "black" SCU port.

Now the receiver will switch to the "learn failsafe" mode after you apply power and the "Red" LED is flashing with 1Hz.

In order to show the new failsafe position for each servo you should move the servo first more than 50% of the servo travel by moving your gimbals.

Then exactly at the moment you remove the jumper from the SCU port the last Servo Position will be stored as the new failsafe position.

Another words, move all your gimbals fully then move them in your preferred position and remove the small black plug.

This position is now stored internal inside the receiver.

Please note: each servo which did not move more than 50% is still on "Hold" mode.

Another option to set the failsafe position can be done by our software GigaControl.

### 10 Programming the Receiver

For special custom applications, the **Micro-series** can be programmed. To do this, use the weatronic ® software GigaControl.

The huge range of adjust options are reached by the free allocation of channels to servo assignments, power settings, the sum channel, slow and sequencer.

To set up the gyro version of the Micro-Series please read the specific manual.

### 11 Declarations of Conformity

All components of the Weatronic ® 2.4 Dual FHSS RC systems are CE marked and comply with both the requirements of the EU (ETSI EN-300328) and the requirements of the Federal Communications Commission (FCC).

Hereby the weatronic ® GmbH declares that the **Micro-series** receiver applies to the requirements and other relevant provisions of the relevant CE directive. On the homepage ([www.weatronic.com](http://www.weatronic.com)) a copy of the declaration of conformity and the ETSI and FCC certification can be downloaded.

### 12 Warranty Disclaimer / damages

weatronic ® complies with the statutory requirements granted a 24-month warranty.

To assert a warranty claim the corresponding article should be sent to the seller

For processing the warranty claims

- proof of purchase
- detailed description of the damage

- log files of the accident. are needed.

weatronic ® will not issue warranty or guarantee for:

- improper operation
- mechanical changes
- polarity and external surges
- Short circuits
- Overheating

weatronic ® assumes no responsibility for any loss, damage or expense arising out of incorrect use and operation, including any kind of resulting consequence.

As far as legally allowed, the commitment of the weatronic ® GmbH to pay damages, for whatever legal reason, is limited to the invoice value of the directly involved and damage-causing goods of the Weatronic ® GmbH.

### 13 Disposal instructions for countries within the EU

Inside the European Union the weatronic ® **Micro-series** receiver must be disposed separated of the household waste by end of its service life.

Proper disposal information can be obtained by the local authorities.



### 14 Specifications Micro-series

operating voltage:	3,8 – 10,0 Volt
servo outputs:	up to 12
Resolution of the servo outputs:	4096
operating distance:	>3.0km/>1.8mi (unobstructed view)
temperature range:	-10 °C to +60 °C / 14 °F to +140°F (non condensing)
dimensions:	54,8x34x18,8 mm / 2,1x1,3x0,7"
weight:	30 g / 1,05 oz
current consumption:	max. 130 mA (with gyro)
current load:	max. 5 A DC for servos
antennas:	2 x 190 mm – effective antenna length: 29 mm
transmission:	Adaptive Frequency Hopping
frequency range:	2.401 to 2.4835 GHz
hopping frequencies:	80
hopping speed:	10ms / 100 Hz
receiving Sensitivity:	-100 dBm
telemetry transmitting power:	20 dBm (100 mW)
telemetry standard:	Battery Voltage, signal quality
SCU port connection:	ext. Sensors and software update
firmware:	upgradeable via USB Adapter
Weatronic disposal number:	905 344 19 WEEE
FCC ID:	W3X2754-30

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