

# MX-6 3-CHANNEL 2.4GHZ RADIO SYSTEM USER'S GUIDE

## TROUBLESHOOTING GUIDE

This troubleshooting guide can help you diagnose and solve some of the more common problems that you may encounter with your MX-6 3-Channel 2.4GHz FHSS-E radio control system. If you cannot solve the problem using this troubleshooting guide, please contact Customer Service using the information in the *Service*

| PROBLEM                                                          | CAUSE                                                     | SOLUTION                                                                                        |
|------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Transmitter does not turn ON                                     | Batteries not installed correctly                         | Reinstall batteries, observing correct polarity                                                 |
|                                                                  | Batteries are dead                                        | Replace batteries                                                                               |
|                                                                  | There's an internal problem                               | Contact Customer Service                                                                        |
| Transmitter will not bind to receiver                            | Modulation Type incorrect                                 | Change Modulation Type to match receiver                                                        |
|                                                                  | Too much time elapsed after pressing receiver Bind Button | Quickly press the transmitter Bind Button after releasing the receiver Bind Button              |
|                                                                  | Attempting to bind incompatible receiver                  | Use only SANWA 2.4GHz FHSS-E surface receivers                                                  |
|                                                                  | Using electronic speed control                            | Disconnect ESC and use dry cell battery for binding procedure, then reconnect ESC after binding |
| Receiver won't power ON                                          | Batteries not installed correctly                         | Reinstall batteries, observing correct polarity                                                 |
|                                                                  | Batteries dead                                            | Replace or recharge batteries                                                                   |
|                                                                  | Loose switch connection                                   | Double-check all connections including switch                                                   |
| Audible alarm beeps continuously                                 | Low transmitter battery voltage                           | Replace transmitter batteries                                                                   |
| Servo movement is slow                                           | Low receiver battery voltage                              | Replace or recharge receiver batteries                                                          |
|                                                                  | Control linkages binding                                  | Adjust control linkages to operate smoothly                                                     |
| Servo does not move when using Trim Switch                       | Trim is outside of operational range                      | Reset trim to zero and center the servo horn and control linkages                               |
| Inadequate transmitting range                                    | Low transmitter battery voltage                           | Replace transmitter batteries                                                                   |
|                                                                  | Low receiver battery voltage                              | Replace or recharge receiver batteries                                                          |
|                                                                  | Receiver antenna not mounted correctly in your model      | Mount receiver antenna as recommended                                                           |
| Servo(s) move the wrong direction                                | Incorrect Servo Reversing setting                         | Change Servo Reversing setting                                                                  |
| Servo Horn(s) not centered                                       | Servo horn not installed correctly                        | Turn servo horn 180° and reinstall                                                              |
|                                                                  | Servo Sub-Trim out of adjustment                          | Adjust Servo Sub-Trim to center servo horn                                                      |
| Control linkage(s) bind                                          | Too much servo travel                                     | Decrease servo travel using EPA function                                                        |
| LCD appears dark or hard to read                                 | Transmitter left in direct sunlight too long              | Place transmitter in shade.                                                                     |
| Throttle servo pulsates                                          | ABS function is ON                                        | This is normal under braking with ABS function ON                                               |
| Model veers right or left without control input                  | Steering out of trim                                      | Use Steering Trim Switch to adjust Steering Trim so model drives straight                       |
| Throttle servo or ESC moves to programmed position without input | Throttle out of trim                                      | Use Throttle Trim Switch to adjust Throttle Neutral point                                       |
| Cannot select characters when naming model                       | Not using steering wheel                                  | Turn steering wheel right or left to highlight desired characters                               |

## GLOSSARY OF TERMS

**Activate:** To turn a particular function ON.

**Antenna:** Transmits the signal from the transmitter to the receiver in the model. The antenna is mounted internally and is located in the front portion of the transmitter. Do NOT cover the front of the transmitter in any way during use! Doing so can block the RF signal, resulting in the loss of control of your model.

**Antenna Wire:** Receives the transmitter signal. The antenna wire should be installed through a nylon tube (antenna tube) in the vertical position for the best reception. Do not alter the length of the antenna or the operation of the receiver will be compromised.

**Auxiliary Lever:** Controls Auxiliary channel 3 High and Low servo travel.

**Anti-Lock Braking:** Makes it possible to achieve stable braking even on slippery surfaces. With stable braking, your model is better able to trace an exact line under braking.

**Battery Compartment:** Houses the four 'AA' Alkaline cells that power the transmitter. Alternatively, the transmitter can be powered using four 'AA' Ni-Cd or Ni-MH rechargeable batteries or a 2S Li-Po or 2S Li-Fe battery pack.

**Battery Eliminator Circuitry (BEC):** A circuit typically found in an electronic speed control that eliminates the need for a separate receiver battery by using the battery pack that powers the model to also power the receiver and the servos.

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## GLOSSARY OF TERMS

**Binding:** The act of pairing the transmitter and receiver to prevent interference from transmitters operated by other users. The transmitter and receiver must be paired so that the two can 'talk' to each other. Once the binding procedure is complete, the setting is remembered even when the transmitter and receiver are turned OFF.

**Bind Button:** Used in the process of binding the transmitter and receiver.

**Bind LED:** Displays the current status of the receiver.

**Brake Side:** Refers to the throttle trigger stroke that engages the brakes on your model (pushing the throttle trigger).

**Decrease Key:** Decreases Programming Values and used to select models. Press the INCREASE and DECREASE keys at the same time to reset Programming Values to default.

**Digital Trim Memory:** Allows the transmitter to store Trim values in its memory. Any amount of Trim that you set during use using the Trim Switches is automatically stored in memory for that specific channel and for that specific model. The Trim values for each model will automatically be loaded when the transmitter is turned ON.

**Dual Rate:** Used to change the control authority of your model's steering by changing the amount of servo travel relative to control input.

**End Point Adjustment:** Used to adjust the desired amount of servo travel in both directions independently. This makes it possible to balance servo travel in both directions.

**Exponential:** Allows you to vary the amount of servo travel in relation to the movement of the steering wheel and throttle trigger near the Neutral positions to change the way those functions react to control movement.

**Fail Safe:** Automatically moves the throttle servo to a predetermined position in the event that the signal between the transmitter and the receiver is interrupted, whether due to signal degradation or low transmitter battery. This helps prevent the chance of a runaway model, should the transmitter lose power or the signal between the transmitter and receiver be lost.

**FH-E Modulation:** Frequency Hopping 2.5th generation FHSS technology. FH-E modulation is not compatible FH2 modulation.

**FHSS:** Frequency Hopping Spread Spectrum. FHSS is a Modulation Type which transmits data across the entire frequency spectrum by transmitting data on different channels at an extremely fast interval.

**Forward Side:** Refers to the throttle trigger stroke that opens the throttle and powers your model (pulling the throttle trigger).

**Grip:** The grip is molded in an ergonomic shape for increased comfort, control and feel. It's moulded with a textured surface to help prevent slipping.

**High Side:** Refers to the position of Auxiliary channel 3 servo movement (pushing the Auxiliary Lever up).

**Increase Key:** Increases Programming Values and used to select models. Press the INCREASE and DECREASE keys at the same time to reset Programming Values to default.

**Low Side:** Refers to the position of Auxiliary channel 3 servo movement (pushing the Auxiliary Lever down).

**Low Voltage Alarm:** Warns you when the transmitter batteries need to be replaced or recharged (if using rechargeable batteries). The Low Voltage Alarm will sound when the transmitter batteries reach 4.6 volts. If the Low Voltage Alarm sounds while you are driving, you should stop as soon as it's safe, then replace or recharge the transmitter batteries.

**LCD Screen:** The heart of the programming and display features of the transmitter. All programming and transmitter display functions are shown on the LCD screen.

**Menu Selections:** Displays the available Programming Menus. The currently Active menu will flash. The information displayed in the Programming Window will vary based on the menu selected.

**Menu Down Key:** Cycles down through the list of menus and sub-menu functions you would like to make programming changes to. Press the MENU UP and MENU DOWN keys at the same time to display the Voltage Monitor.

**Menu Up Key:** Cycles up through the list of menus and sub-menu functions you would like to make programming changes to. Press the MENU UP and MENU DOWN keys at the same time to display the Voltage Monitor.

**Model Naming:** Used to name the different models you have saved in the transmitter. This makes it easy to keep track of multiple models. The Model Name can consist of up to 3 letters, numbers or symbols.

**Model Number:** Displays the model that is currently loaded into memory. Up to 10 different models can be stored.

**Model Select:** Used to store and retrieve Programming Data for any model 1 through 10. If you have Programming Data stored for more than one model, use the Model Select function to load the Programming Data for the particular model that you wish to drive. The currently selected Model Number is displayed next to the Voltage Monitor.

**Operating Voltage:** The safe voltage that the transmitter can operate within. Exceeding the minimum operating voltage can result in loss of power to the device. Exceeding the maximum operating voltage can result in damage to the device.

**Output Power:** The power (in Milliwatts) that your transmitter transmits a signal. Output power is defined by government guidelines and differs by region.

**Power Indicator:** Illuminates red, indicating the transmitter is turned ON.

## GLOSSARY OF TERMS

**Power Switch:** Turns the transmitter ON and OFF.

**Programming Keys:** The programming keys are used to program the functions of your transmitter, select saved models and change the Modulation Type.

**Programming Window:** Displays transmitter programming information. When the transmitter is turned ON, the BATT menu will be selected, the current model number will be shown and the Voltage Monitor will display the transmitter's current voltage.

**Servo Reversing:** Used to electronically switch the direction of servo travel. For example, if you move the steering wheel to the right and your model turns left, you can use the Servo Reversing function to make your model turn right.

**Servo Sub-Trim:** Used to correct the Neutral trim setting for the servos, making it possible to center the Trim Switches while ensuring the servo horns remain centered.

**Steering Trim Switch:** Used to adjust the Steering Trim quickly and easily while you're driving.

**Steering Wheel:** Proportionally operates the model's right and left steering control. The steering wheel features a foam grip for increased comfort, control and feel.

**Suppression Capacitor:** Primarily used on brushed electric motors, a suppression capacitor helps eliminate electrical noise that could interfere with the operation of your radio control system.

**Temperature Range:** The range in temperature of the outside air that the transmitter can safely and reliably operate in.

**Throttle Trigger:** Controls the speed of the model, both forward and backward, or the model's brake.

**Throttle Trim Switch:** Used to adjust Throttle Trim quickly and easily while you're driving.

**Voltage Monitor:** Displays the current voltage of the transmitter batteries. When the transmitter batteries reach 4.6 volts, the Low Voltage Alarm will sound.

**Z-Connector:** The type of servo and battery connector used by SANWA. The Z-Connector is a universal connector which is electronically compatible with the components of other radio control system manufacturers.

## INDEX

### Symbols

2.4GHz Frequency Band, Precautions 4

### A

Activate, Definition of 19  
 Alarms. See Low Voltage Alarm, Overview  
 Antenna - Transmitter, Definition of 7, 19  
 Antenna - Transmitter, Diagram of 6  
 Antenna - Transmitter, Orientation of 6  
 Antenna Wire - Receiver, Definition of 7, 19  
 Antenna Wire - Receiver, Diagram of 6  
 Antenna Wire - Receiver, Orientation of 8  
 Anti-Lock Braking, Definition of 19  
 Anti-Lock Braking, Programming 14  
 Auxiliary Lever, Definition of 7, 19  
 Auxiliary Lever, Diagram of 6

### B

Battery Compartment, Definition of 7, 19  
 Battery Compartment, Diagram of 6  
 Battery Eliminator Circuitry (BEC), Definition of 19  
 Battery - Receiver, Installation 8  
 Battery - Transmitter, Installation 7  
 Battery - Transmitter, Recommendations 5  
 Bind Button, Definition of 7, 20  
 Bind Button - Receiver, Diagram of 6  
 Bind Button - Transmitter, Diagram of 6  
 Binding. See Transmitter and Receiver Binding  
 Binding, Definition of 20  
 Bind LED, Definition of 7, 20  
 Brake Side, Definition of 20

### D

Decrease Key. See Programming Keys, Overview  
 Decrease Key, Definition of 20  
 Digital Trim Memory. See Servo Trim, Overview  
 Digital Trim Memory, Definition of 20  
 DS2 Modulation. See Modulation Type, Changing  
 DS2 Modulation, Definition of 20  
 Dual Rate, Definition of 20  
 Dual Rate, Programming 11  
 Dual Rate Switch, Definition of 7  
 Dual Rate Switch, Diagram of 6

### E

Electronic Speed Control, Connections 8  
 End Point Adjustment, Definition of 20  
 End Point Adjustment, Programming 11  
 Exponential, Definition of 20  
 Exponential, Programming 13

### F

Fail Safe, Definition of 20  
 Fail Safe, Programming 10  
 Features. See System Features 5  
 FH-E Modulation, Definition of 20  
 FHSS, Definition of 20  
 Flow Chart. See Programming Flow Chart 10  
 Forward Side, Definition of 20

### G

Grip, Definition of 20  
 Grip, Diagram of 6

## INDEX

### H

High Side, Definition of 20

### I

Increase Key. See Programming Keys, Overview

Increase Key, Definition of 20

Input Voltage. See System Specifications

### L

LCD Screen, Definition of 7, 20

LCD Screen, Diagram of 6

LCD Screen, Overview 8

Li-Po and Li-Fe Batteries, Using with Receiver 8

Li-Po and Li-Fe Batteries, Using with Transmitter 5

Low Side, Definition of 20

Low Voltage Alarm, Definition of 20

Low Voltage Alarm, Overview 7

### M

Menu Down Key. See Programming Keys, Overview

Menu Down Key, Definition of 20

Menu Selections, Definition of 20

Menu Selections, Overview 8

Menu Up Key. See Programming Keys, Overview

Menu Up Key, Definition of 20

Model Naming, Changing the Model Name 18

Model Naming, Definition of 20

Model Number, Overview 8

Model Select, Definition of 20

Model Select, Selecting a Model 16

Modulation Type, Changing 18

### N

Ni-Cd/Ni-MH, Using with Transmitter 5

Nominal Input Voltage, Receiver 5

Nominal Input Voltage, Transmitter 5

### O

Operating Voltage, Definition of 20

Operating Voltage Range, Transmitter 5

Output Power, Definition of 20

Output Power, Transmitter 5

### P

Packaging 2

Power Indicator, Definition of 7, 20

Power Indicator, Diagram of 6

Power Switch, Definition of 7, 21

Power Switch, Diagram of 6

Precautions. See 2.4GHz Frequency Band Precautions

See Transmitter Precautions

See Receiver Precautions

See Transmitter Battery Precautions

Programming Flow Chart 10

Programming Keys, Definition of 7, 21

Programming Keys, Diagram of 6

Programming Keys, Overview 9

Programming Window, Definition of 21

Programming Window, Overview 8

### R

Receiver Binding. See Transmitter and Receiver Binding

Receiver Connections and Mounting 8

### R

Receiver Fail Safe. See Throttle Fail Safe, Programming

Receiver Precautions 4

Receiver Specifications 5

Receiver, Using 7.4 Volt Servos 8

### S

Safety 3

Servo Connectors 4

Servo Recommendations 5

Servo Reversing, Definition of 21

Servo Reversing, Programming 17

Servo Sub-Trim, Definition of 21

Servo Sub-Trim, Programming 16

Servo Trim, Programming 15

Steering Trim Switch, Definition of 7, 21

Steering Trim Switch, Diagram of 6

Steering Wheel, Definition of 7, 21

Steering Wheel, Diagram of 6

Suppression Capacitor, Definition of 21

System Features 5

System Specifications 5

### T

Temperature Range, Definition of 21

Throttle Fail Safe, Programming 10

Throttle Trigger, Definition of 7, 21

Throttle Trigger, Diagram of 6

Throttle Trim Switch, Definition of 7, 21

Throttle Trim Switch, Diagram of 6

Transmitter and Receiver Binding 9

Transmitter Battery Installation 7

Transmitter Battery Precautions 7

Transmitter Battery Recommendations 5

Transmitter, Changing the Modulation Type 18

Transmitter Features Diagrams 6

Transmitter Precautions 4

Transmitter Specifications 5

Troubleshooting Guide 19

### V

Voltage Monitor, Definition of 21

Voltage Monitor, Overview 8

### Z

Z-Connector. See Servo Connectors

Z-Connector, Definition of 21

## NOTES

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