

AIRTRONICS®

Get The Advantage



Frequency Hopping Spread Spectrum

3 Channel Computer
Radio System

FHSS 2.4 GHz
FHSS-2
MX-3FG

We appreciate your purchase of this new Airtronics MX-3FG Frequency Hopping Spread Spectrum Radio Control System.

These instructions are intended to familiarize you with the many unique features of this modern, state of the art equipment. Please read them carefully so you may obtain maximum success and enjoyment from its operation.

Please note that the MX-3FG is designed for comfort and precise control of all types of model cars and boats.

We wish you the best of success with your radio system.
Enjoy and have fun.

MX-3FG

FHSS 2.4 GHz

FHSS-2

SYSTEM FEATURES

Unique and functional pistol grip transmitter design
Well balanced for precise control
Non-slip foam steering wheel
Well placed digital trim levers
Optimum third channel switch location
Big LCD display
Adjustable (70/30) Throttle trigger
Low Battery warning
Quick Binding and Fail Safe Setup
High performance micro 4 channel receiver
NiCd charger jack in transmitter
Wrist strap holder (optional wrist strap part # 99104)
Sound Beep (On / Off)

Screen Display

Digital Trim indicators (throttle and steering)
Battery Meter
Dual Rate Steering
EPA Steering, Throttle, AUX
ARC Steering, Throttle
Model Memory (18)
Sub-Trim Steering, Throttle
Servo Rev Steering, Throttle, AUX
Battery Voltage Display
Audio On / Off

SYSTEM SPECIFICATIONS

Transmitter

Model: MX-3FG
Output power: 100mW
Power supply: 8 AA alkaline dry cells DC 12V or
 8 cell NiCd Pack.
Weight: 15.31 ounces
Frequency: 2.4 GHz ISM Band

Receiver

Model: 92624
Frequency: 2.4 GHz ISM Band
Power supply: DC 4.8 ~6.0V
Weight: 9.5 grams
Dimensions: 1.03"(L) x 1.18"(W) x 0.62"(H)

Accessories

97003Z switch harness
Receiver dry battery holder
instruction manual

Options

95046Z Transmitter NiCd Battery Pack (700mah)
95033Z NiCd Dual Battery Charger TX and RX
99104 Deluxe wrist strap

AUDIO ON / OFF Beep



Audio off icon

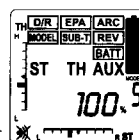
By default the audio sound beep is in the on position. This beep will sound out every time you press any of the input or trim keys. You can turn the audio off by:

1. Turn radio power switch to the off position
2. Press the INC key down and hold.
3. Turn power switch to the on position
4. Release the INC key.

To turn the audio sound on, repeat steps 1 ~ 4.

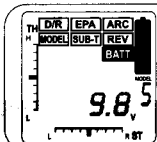
NOTE: Even with the audio off, the transmitter will beep when powered on or off.

Audio off icon



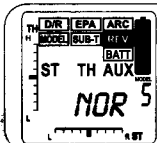
NOTE: When audio sound is "ON", there will be no icon displayed in the lower left of the display screen.

LCD DISPLAY SCREEN



Battery

Pressing both menu buttons simultaneously, will automatically move the cursor to the battery voltage screen. Low battery warning beep will come on when battery reaches 9.1V

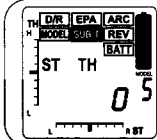


Servo Reverse

Press the left menu key to move the cursor to the REV screen. The screen will now display AUX. Change the servo direction by pressing (*INC* or *DEC*) key for the AUX channel. By pressing the left menu key again, you can change the TH and ST directions.

Default

ST	NOR
TH	NOR
AUX	NOR



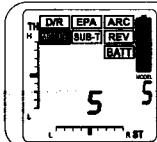
Sub Trim

Press the left menu key to move the cursor to the SUB-T screen. The screen will now display TH. Adjust the sub-trim by using the (*INC* or *DEC*) key. Press the left menu key to display the ST and adjust using the (*INC* or *DEC*) key.

Default

ST	0
TH	0

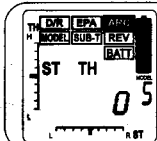
Range +15 ~ -15



Model Select

Press the left menu key to move the cursor to MODEL. The screen will now display the model number you are currently using. To change models, press the (*INC* or *DEC*) key to select model 1 ~ 18.

Range 1 ~ 18



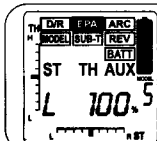
Arc

Press the left menu key to move the cursor to ARC. The screen will now display TH. Adjust the ARC by pressing the (*INC* or *DEC*) key. Press the left menu key to adjust the ST. (NOTE) Steering ARC will work in both left and right directions. Throttle ARC only works in forward direction.

Default

ST	0
TH	0

Range - 100 ~ 100



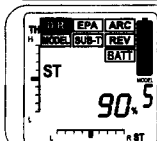
End Point Adjustment

Press the left menu key to move the cursor to EPA. The screen will now display AUX (L) or (R). By moving the AUX channel lever, you will see the (L or R) change. EPA can be set for both directions. To set TH, move trigger forward or back to see (H or L). Move the steering wheel to see (L or R).

Default

ST	100%
TH	100%
AUX	100%

ST: Range 0% ~ 120%
TH-L: Range 0% ~ 160%
TH-H: Range 0% ~ 140%
AUX: Range 0% ~ 150%



Steering Dual Rate

Press the left menu key to move the cursor to EPA. The screen will now display ST. This will display your current Steering Dual Rate setting. You can change this setting by using the (*INC* or *DEC*) keys or, by moving the D/R lever located above the steering wheel.

Default

ST	100%
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Range 0% ~ 120%

BINDING (RECEIVER to TRANSMITTER)

After installing the FHSS Receiver, you are now ready to bind them together. Binding is the process that will match the FHSS Receiver to Transmitter electronically as a match set. You can bind additional Airtronics FHSS Receivers to your Transmitter to operate many other cars, trucks and/or boats.

Throttle Fail Safe is a feature that will move the throttle servo to a preset position that you set. If no user preset is added, the Fail Safe will set it-self to the neutral throttle position.

BINDING:

1. Turn the power switch to the ON position on the Transmitter.
Transmitter LED will turn on after 6 seconds.
2. Depress and hold the FHSS Receiver Binding button.
3. Turn the power switch to the ON position on the FHSS Receiver and continue holding the Binding button.
The FHSS Receiver LED will flash slowly.
4. Release the Binding button on the FHSS Receiver after 2 seconds.
5. Depress and hold the Binding button on the transmitter until the LED on the FHSS Receiver flashes rapidly
6. Binding is now complete. Both Transmitter and Receiver LED will now stay on.
7. Operate the controls to confirm.

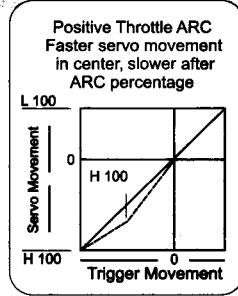
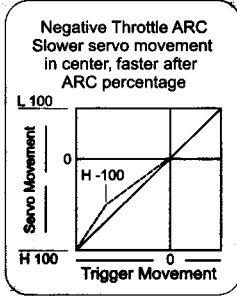
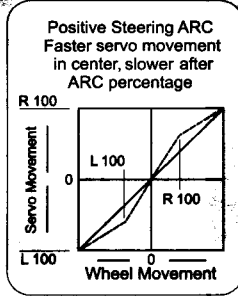
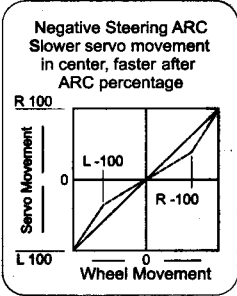
THROTTLE FAIL SAFE

After binding of the Transmitter and Receiver, you can set the Throttle Fail Safe feature.

1. Turn the power switch to the ON position on the transmitter. Confirm Transmitter LED is on.
2. Turn the power switch to the ON position on the FHSS Receiver. Confirm FHSS Receiver LED is on.
3. Move controls to confirm connection between transmitter and receiver.
4. Move throttle lever to your desired Fail Safe position and hold.

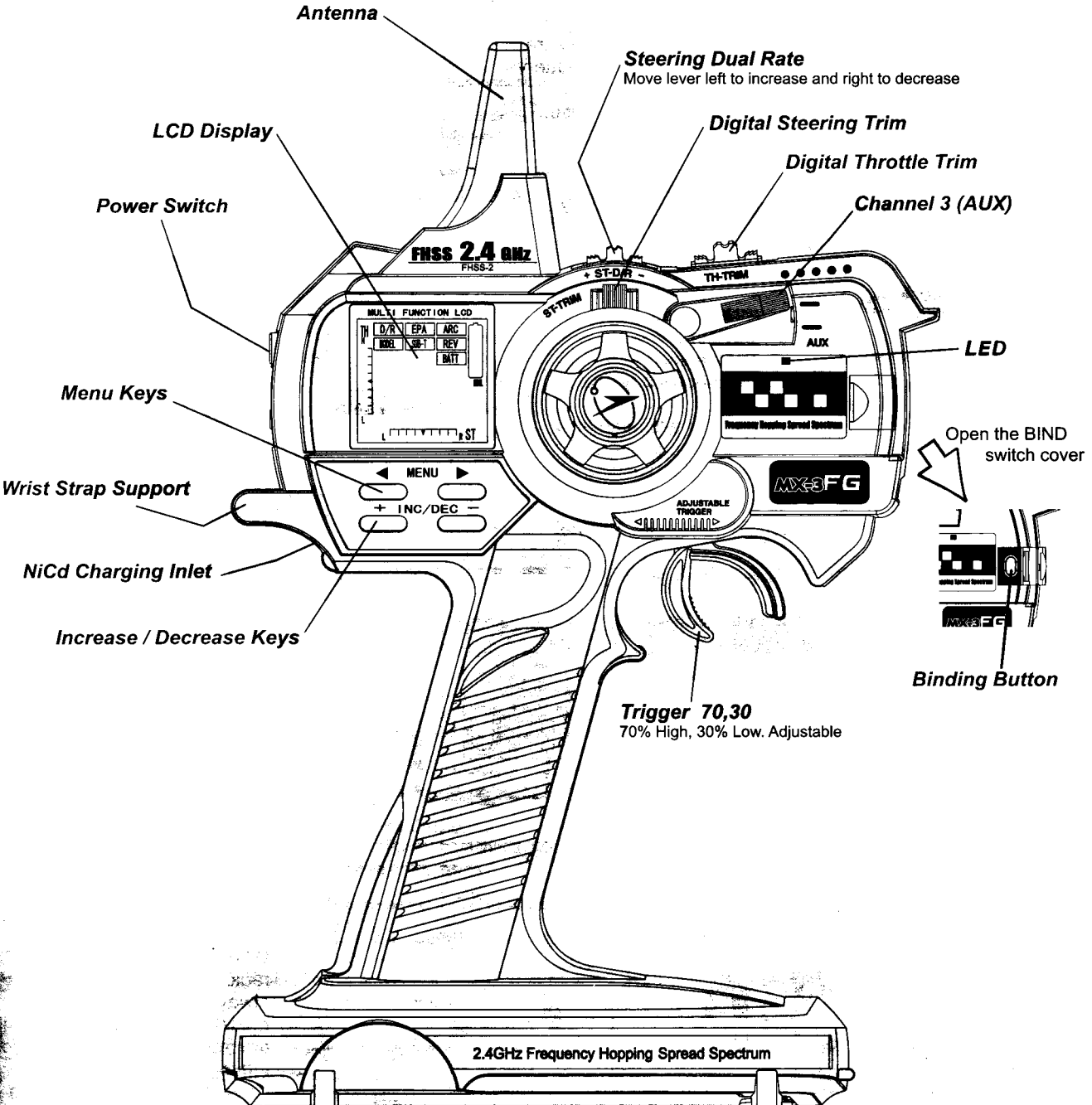
NOTE: If the throttle lever is left in the neutral position, Fail Safe will be set at that position.

5. Depress the binding button on the FHSS Receiver for 4 seconds. LED will flash slow
6. Release the throttle lever after the receiver LED starts to flash rapidly, and discontinue pressing the Binding button on the receiver.
7. Confirm that the Throttle Fail Safe is working properly by turning the transmitter power switch OFF. The servo should move to the preset fail safe position. Turn the transmitter power switch back on to confirm full control.



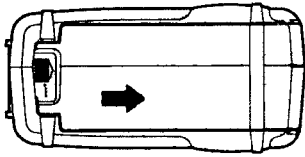
ARC Steering

ARC Throttle

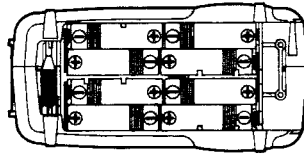


TRANSMITTER BATTERY INSTALLATION

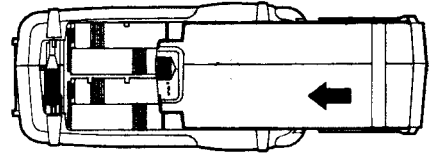
To Open slide cover



Install Batteries



To Close slide cover



1. Press down on the battery cover and slide in the direction of the arrow to remove.
2. Install 8 AA alkaline cells (or Ni-Cd, or Ni-MH) as indicated inside the battery compartment. Make sure to match the polarity (+ and -) as shown in the battery compartment or the transmitter will not function.
3. Install the battery cover in place and slide to close.

WARNING: Improper installation of transmitter batteries can cause serious damage to your system.

RECEIVER AND SERVO CONNECTIONS

Your MX-3FG Computer R/C system receiver is **NOT** equipped with BEC circuitry. DO NOT use more than 6.0 volts to power the receiver. Anything higher than 6.0 volts will burn-up or destroy your receiver. Only use a 4.8~6.0 volt battery pack or a speed controller that is designed to lower the voltage to the receiver. The following diagram shows a typical connection for the servos and receiver.

Note that the receiver antenna should be located at least 2" (50mm) away from any servo leads and switches. In electric cars, we recommend that it be at least 4" (100mm) from the electric motor.

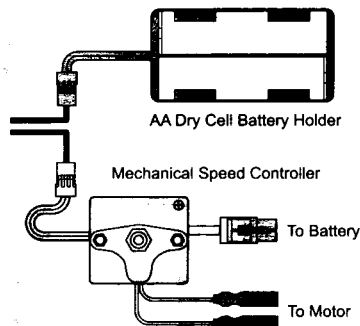
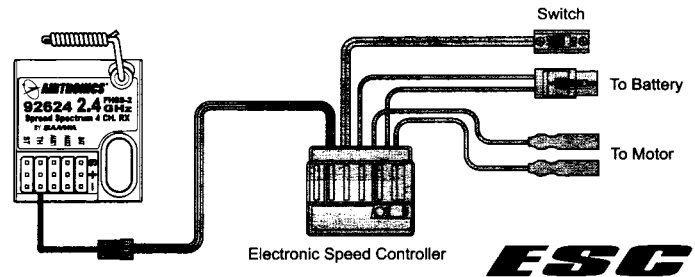
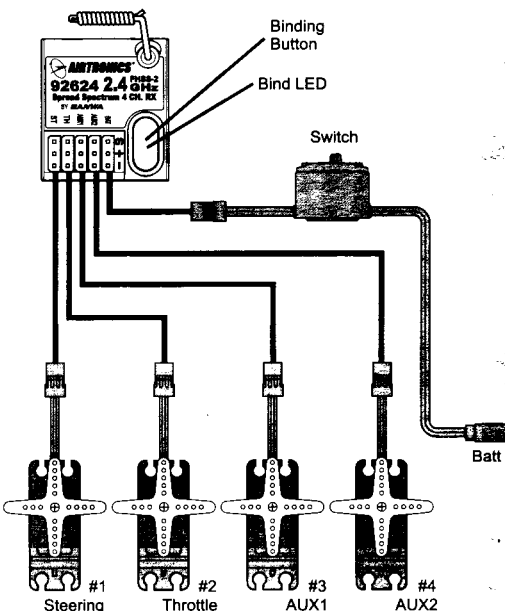
Extend the receiver antenna to the full length. Failure

to do so will cause loss of control. Do not cut or bend the receiver antenna.

Insulate the connectors with tape or use tie wraps to avoid contact with metal car chassis. Please follow the model manufacturers recommendations for the correct installation of your radio system in your car or boat.

NOTE: Position the receiver antenna vertically in your car or boat to ensure the best signal reception under the most diverse conditions.

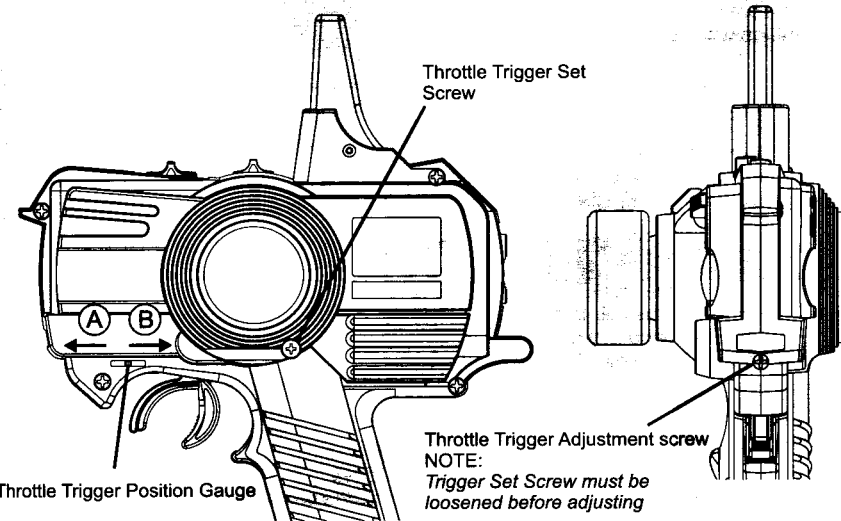
NOTE: When installing the receiver in your car or truck it is always a good idea to wrap your receiver in shock absorbing foam.



CAUTION

When installing your MX-3FG radio system in your model, always make sure to set your model on a stand so the wheels are free from any traction before turning on your radio and or connecting your motor for the first time.

TRIGGER POSITION ADJUSTMENT



The Throttle Trigger can be adjusted to give you a more natural feel of the throttle.

To Adjust:

1. Loosen the Throttle Trigger set screw by turning counter clock-wise.
2. Turning the adjustment screw clock-wise will move the trigger out or in the (A) direction.
3. Turning the adjustment screw counter clock-wise will move the trigger in or towards the (B) direction.
4. After adjustment is made, re-tighten the Trigger Set Screw.
5. Total adjustment for the trigger is 10mm. Do Not over tighten adjustment screw, it may damage the adjuster and/or the threads.

TROUBLESHOOTING GUIDE and WARNINGS

If your radio system does not operate properly, please check the following items:

1. Make sure the batteries are properly installed and fully charged. Make certain all the batteries are installed in the correct direction.
2. Check that both the transmitter and receiver power switches are in the ON position.
3. Check the battery voltage by turning on the transmitter and pushing both menu buttons at the same time and releasing.
4. Make sure all the receiver and servo connections are tight.
5. When binding or setting Fail Safe, make sure to wait 10 seconds between turning the receiver off and back on. If under 10 seconds, the receiver will not bind properly with the transmitter.

WARNINGS:

YOUR MODEL CAN CAUSE SERIOUS DAMAGE OR INJURY SO PLEASE USE CAUTION AND COURTESY AT ALL TIMES.

DO NOT EXPOSE THE RADIO SYSTEM TO WATER, EXCESSIVE MOISTURE, HEAT, OR VIBRATION.

PLEASE WATERPROOF THE RECEIVER AND SERVOS BY PLACING THEM IN A WATER TIGHT RADIO BOX WHEN OPERATING R/C BOAT MODELS.

IF YOU HAVE LITTLE OR NO EXPERIENCE OPERATING R/C MODELS, WE STRONGLY RECOMMEND YOU SEEK THE ASSISTANCE OF EXPERIENCED MODELERS OR YOUR LOCAL HOBBY SHOP FOR GUIDANCE.

FCC COMPLIANCE STATEMENT

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 technician for help.

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications made to this equipment not expressly approved by Airtronics may void the FCC authorization to operate this equipment.

RF Exposure Statement

This transmitter has been tested and meets the FCC RF exposure guidelines when used with the Airtronics accessories supplied or designated for this product, and provided at least 20 cm separation between the antenna and the user's body is maintained. Use of other accessories may not ensure compliance with FCC RF exposure guidelines