## TRANSMITTER AND RECEIVER BATTERY CHARGING

The 90406 transmitter features a Charging Jack, which can be used with the Airtronics 95034 110v AC Transmitter and Receiver Dual Charger to recharge the batteries without removing them from the transmitter. In addition, this charger can also be used to recharge a 4.8v (4 cell) or 6.0v (5 cell) rechargeable Ni-Cd or Ni-MH receiver battery pack at the same time. We recommend one of the following receiver battery packs:

**Hi-Energy 4.8v 2200mAh Ni-MH Rechargeable Flat Battery Pack for Receiver (1 PC.)**

**Hi-Energy 6.0v 2200mAh Ni-MH Rechargeable Flat Battery Pack for Receiver (1 PC.)**

⚠ Depending on the region in which your purchase your 90406 2.4GHz FHSS-1 radio control system, rechargeable transmitter batteries and an overnight charger may or may not be included. If these items are NOT included, we recommend using the following:

**Hi-Energy 1200mAh Ni-MH 'AA' Rechargeable Batteries (4-Pack) for Transmitter (2 PCS.)**

**Airtronics 95034 110v AC Transmitter and Receiver Dual Charger (1 PC.)**

Instead of using Alkaline batteries to power the transmitter, you can use rechargeable Ni-Cd or Ni-MH batteries. This will provide longer usage time and reduced cost in the long run, since you won't need to continuously purchase new Alkaline batteries.

### Warnings About Charging the Transmitter and Receiver Batteries

The 90406 transmitter features a Charging Jack located on the right side of the transmitter, allowing you to recharge the Ni-Cd or Ni-MH rechargeable batteries without removing them from the transmitter. Use **ONLY** the recommended optional Airtronics 95034 110v AC Transmitter and Receiver Dual Charger or damage to the transmitter and/or batteries could result.

> **WARNING** Do NOT attempt to recharge Alkaline batteries. Do NOT attempt to charge any type of batteries other than those recommended and use ONLY the recommended charger. Do not use the Charging Jack with any other after-market fast charger or Peak-Detection charger or the transmitter could be damaged.

- Always follow the charging procedures described below to ensure the safe and correct use of the rechargeable batteries and charger.
- Before charging the batteries, double-check that both the transmitter and the receiver are turned OFF.
- Overcharging reduces the life of the batteries and can result in overheating and bursting. This may cause personal injury and/or property damage.
- Do not plug the recommended charger into anything other than an AC 110v power outlet. Plugging the charger into anything other than AC 110v outlet may result in smoking, sparks, or fire.
- Do not throw the batteries or abuse them in any manner. Do not dispose of the batteries in the fire or allow them to overheat.
- Do not short-circuit the battery terminals with wire or any other object.

> **WARNING** If you're using a Li-Fe or Li-Po receiver battery, do NOT attempt to charge either of these types of batteries with the optional Airtronics 95034 110v AC Transmitter and Receiver Dual Charger. You MUST use a charger that is specifically designed to charge Li-Fe or Li-Po batteries.

> **WARNING** An after-market peak-detection charger, cycler, or fast charger should NOT be used to charge Ni-Cd or Ni-MH rechargeable batteries through the transmitter. The circuitry within the transmitter can interfere with the peak-detection charger's normal operation, resulting in over-charging and damaging the batteries, and possibly the transmitter itself. In addition, a fast charger can damage the transmitter's circuitry. These chargers can be used, but ONLY if the batteries are charged outside of the transmitter.

### Charging the Transmitter and Receiver Batteries

1) Plug the Airtronics 95034 110V AC Transmitter and Receiver Dual Charger into a 110v AC wall socket.

2) Plug the round connector from the charger into the Charging Jack in the transmitter and plug the female connector from the charger into the switch harness charge plug. The charger LEDs will illuminate red, indicating that the charger is charging.

3) Both transmitter and receiver charger outputs are 150mAh, therefore, it will take approximately 15 hours to recharge fully-discharged 2200mAh batteries (2200/150=14.6). Charge time will vary depending on the mAh capacity of the batteries you're charging. For example, 1200mAh batteries would require an 8 hour charge (1200/150=8).

The 90406 transmitter features four Programming Keys, a Navigation Pad and an ENTER key, all used in conjunction to facilitate transmitter programming. This section summarizes the functions of these features in addition to detailing the main areas of the Multi-Function LCD.

## PROGRAMMING KEYS OVERVIEW AND FUNCTIONS

Moving around the LCD and programming the transmitter is accomplished using the Navigation Pad, the ENTER key, and the four Programming Keys positioned on the right half of the transmitter.
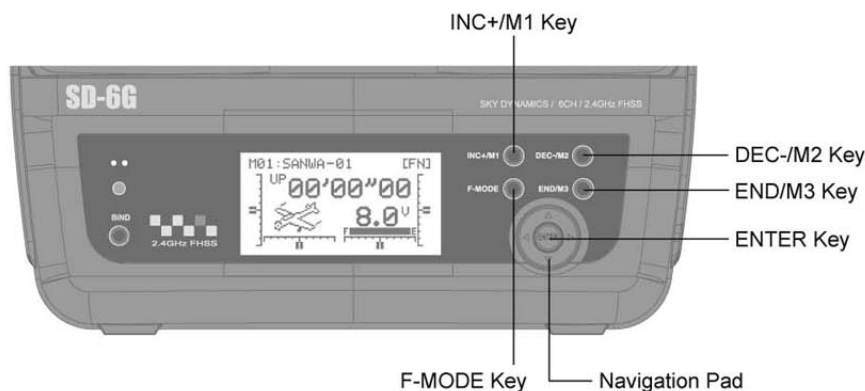


| PROGRAMMING KEY | NAME | FUNCTION |
|---|---|---|
| INC+/M1 | INC+/M1 (Increase/Model 1) | Increases Programming Values and is used to select Model 1, using the Direct Model Select function. |
| DEC-/M2 | DEC-/M2 (Decrease/Model 2) | Decreases Programming Values and is used to select Model 2, using the Direct Model Select function. |
| END/M3 | END/M3 (End/Model 3) | Returns to the previous menu. Press several times to return to the Display screen. Is also used to select Model 3, using the Direct Model Select function. |
| F-MODE | F-MODE (Flight Mode Select) | Cycles through the three Flight Modes during programming. Does NOT switch between Flight Modes during use. |
| Navigation Pad | Navigation Pad | Moves the Programming Cursor Up ▲, Down ▼, Right ▶, and Left ◀. |
| ENTER | ENTER Key | Opens the selected menu or programming option. Advances the cursor in the Model Name menu. |
| INC+/M1 + DEC-/M2 | Rest Default Shortcut | Pressing both keys at the same time within a Programming Menu resets the Programming Value to the Default value. |

## RANGE CHECKING – LOW-POWER MODE

The Low-Power Mode function lowers the transmitter's RF output level to check radio signal reception (Range Check). Use this function to check radio signal reception on the ground, prior to flight.

> **IMPORTANT** The radio control system should be Range Checked prior to the day's first flight and prior to the first flight after a hard landing or after a repair. This will ensure that the transmitter and receiver are communicating properly prior to flight. This ensures the safety of your aircraft, yourself, and the people around you.

### Activating Low-Power Mode

1) Press and HOLD the Bind Button on the transmitter, then turn the transmitter ON. The Bind LED will flash.

2) Continue to HOLD the Bind Button for approximately 5 seconds. After approximately 5 seconds, the Bind LED will flash rapidly, then go out.

| POWER MODE | TRANSMITTER STATUS |
|---|---|
| Low-Power Mode | Bind LED Flashing |
| Normal Mode | Bind LED Solid |

3) Release the Bind Button and the Bind LED should begin to flash again. The transmitter is now in Low-Power Mode and you can begin the Range Check process.

⚠ The transmitter will revert to Normal Mode after approximately 3 minutes. If you haven't completed your Range Check within that time, turn the transmitter OFF, then repeat steps 1 through 3 to re-enter Low-Power Mode.

### Range Checking

1) Turn the receiver in your aircraft ON.

2) With the transmitter in Low-Power Mode (Bind LED flashing), walk approximately 30 paces from your aircraft (approximately 90 feet) and, with the help of another person, check to make sure that the servos move without any problems. If there is a problem with servo movement, try moving to a different position while still maintaining the same distance from your aircraft, then check servo movement again. If there is still a problem, **DO NOT FLY**. Check to make sure that all receiver, servos, switch, and onboard battery connections are correct and secure. Check to ensure that the receiver antenna wires are correctly mounted as described previously.

3) When satisfied that the system is operating correctly, turn the transmitter OFF, then back ON to resume use in Normal Mode.

⚠ If after checking all airborne system components and verifying correct antenna wire mounting, your radio control system still fails the Range Check, **DO NOT FLY**. Please contact Airtronics Customer Service using the information on the back cover of this Operating Manual.

> **WARNING** Do not attempt to fly with the transmitter in Low-Power Mode. You will be unable to control your aircraft once it is a certain distance away from you. **Always verify that the Bind LED is solid prior to flight.**

## CONTROL STICK LENGTH ADJUSTMENT

The length of the control sticks can be adjusted to best suit the way you hold them. In general, pilots who place their thumbs on top of the control sticks prefer the control sticks to be shorter, and pilots who grasp the control sticks prefer the control sticks to be longer. In the default configuration, the control sticks are adjusted as short as possible.

### Adjusting Control Stick Length

1) While holding the base of the control stick, turn the top half of the control stick counter-clockwise to loosen it.

2) To lengthen the control stick, turn the top half of the control stick counter-clockwise. To shorten the control stick, turn the top half of the control stick clockwise.

3) Once your are satisfied with the length of the control stick, thread the bottom half of the control stick up and tighten it gently against the top half of the control stick.
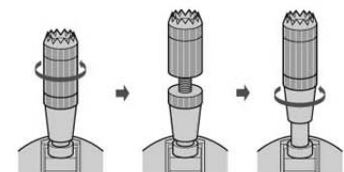
⚠ When lengthening the control sticks, we strongly suggest that you leave at least four threads inside the top half of each control stick. This will ensure that the control sticks maintain optimum mechanical security. If you thread the control sticks out too far, the control sticks might come loose during use.

## MULTI-FUNCTION LCD OVERVIEW

Use the diagram below to familiarize yourself with the layout and different indicators that make up the Multi-Function LCD.
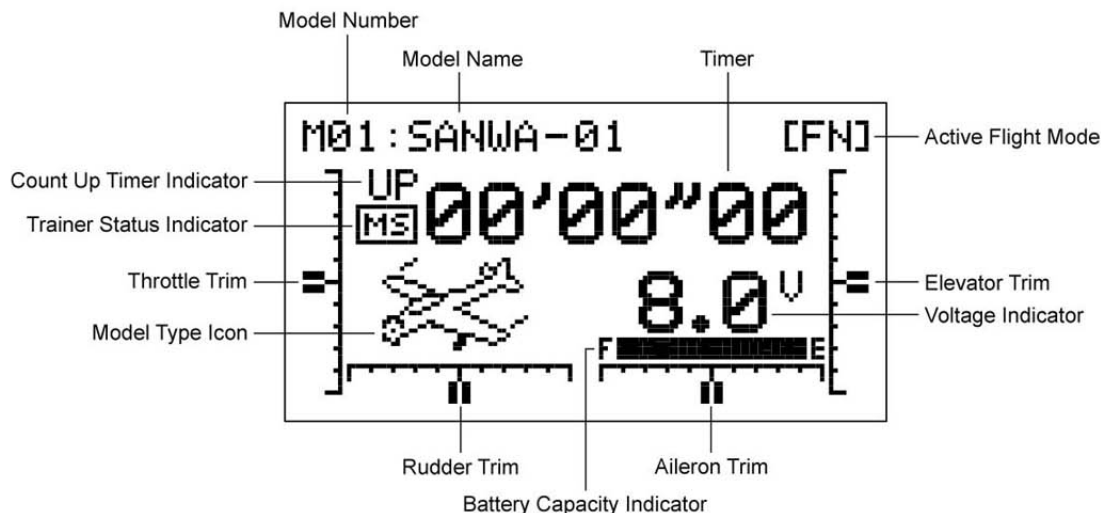


**Active Flight Mode:** Displays the Flight Mode number that is currently Active.

**Aileron Trim:** Displays the current position of the Aileron trim switch*.

**Battery Capacity Indicator:** Indicates the current remaining usable capacity of the transmitter batteries.

**Count Up Timer Indicator:** Displayed when the Count Up Timer is chosen.

**Elevator Trim:** Displays the current position of the Elevator trim switch*.

**Model Name:** Displays the Name of the currently selected Model.

**Model Number:** Displays the Number of the currently selected Model.

**Model Type Icon:** Displays the current Active Model Type loaded into memory, either AERO (Aircraft icon) or HELI (Helicopter icon).

**Rudder Trim:** Displays the current position of the Rudder trim switch*.

**Timer:** Displays the Stop Watch Timer or the Count Up Timer.

**Throttle Trim:** Displays the current position of the Throttle trim switch*.

**Trainer Status Indicator:** Displays when the transmitter Trainer function is Active. If the transmitter is in Master mode, MS will be displayed. If the transmitter is in Slave mode, SL will be displayed.

**Voltage Indicator:** Displays the current voltage of the transmitter batteries. When the voltage reaches 6.7 volts, the Low Voltage Alarm will sound.

THIS SPACE INTENTIONALLY LEFT BLANK

*An audible tone will sound each time a trim switch is pressed. When the trim reaches the center, an audible double-tone will sound. This allows you to know when the trim is centered without needing to look down at the transmitter during flight.

## 02.MODEL NAME (MODEL NAMING), CONTINUED....

**Deleting a Character**

1) Press the INC+/M1 or DEC-/M2 keys to move the underscore under the character you want to erase.

2) Press the Navigation Pad ▲ ▼ ◀ ▶ to highlight the Erase Bracket ⌑, then press the ENTER key to erase the underscored character.

**Deleting a Model Name**

1) Press the INC+/M1 and DEC-/M2 keys at the same time to move the underscore under the first character.

2) Press the Navigation Pad ▲ ▼ ◀ ▶ to highlight the Erase Bracket ⌑, then press the ENTER key repeatedly to erase the entire Model Name.

## 03.TYPE (MODEL TYPE)

The Model Type function allows you to quickly set up the transmitter's low-level mixing based on the type of model you're flying. Common templates for AERO and HELI Model Types are provided. For example, if your aircraft features two aileron servos and dual elevator servos, choosing these options will automatically change the transmitter's programming to accommodate this setup. This takes the guess-work out of setting up more complex models.

> **WARNING** The Model Type function is used when setting up a new model and should be done prior to making any programming changes to your model. When Model Type selection options are changed for the currently selected model, all Programming Data for that model will be reset.

⚠ Individual Model Type selection options can be reset to the default setting by pressing the INC+/M1 and DEC-/M2 keys at the same time.

**Changing the Model Type**

1) From the Display screen, press the ENTER key to display the Programming Menus.

2) Press the Navigation Pad ▲ ▼ to highlight TYPE, then press the ENTER key to display the TYPE menu. The cursor will default to >AERO or >HELI depending on the particular model you've selected.

3) If the current Model Type is >HELI, press the INC+/M1 or DEC-/M2 keys to change the selection option to >AERO.

```
[TYPE]  ■AERO
WING >NORMAL
TAIL >NORMAL
AILE >1
```

**Making AERO Model Type Selection Options**

Choose AERO Model Type selection options that suit the aircraft that you're setting up. For example, if your aircraft is a flying wing and is controlled by elevons, choose WING>DELTA. If your aircraft features separate aileron servos and split elevator halves that use one elevator servo on each elevator half, choose AILERON>2 and TAIL>2xEL, and so on.

⚠ Receiver channel slot assignments will change based on the selection options chosen. To verify which receiver channel slots to plug your servos into, navigate to the SX MONITOR menu after saving your Model Type selection options. For more information, see page 50. Depending on the Model Type selection options chosen, not all channel functions will be available for use.

1) From within the TYPE menu, verify that >AERO is displayed. If >HELI is displayed, change the Model Type to AERO by following the steps in the Changing the Model Type section above.

| AERO | SELECTION | DEFAULT | OPTION |
|------|-----------|---------|--------|
| | WING (Type) | NORMAL | DELTA* (Elevons) |
| | TAIL (Type) | NORMAL | V-TAIL or 2xEL** |
| | AILERON (Servos) | 1 | 2 |

*Delta mixing is sometimes referred to as Elevon mixing.      **If you require both servos to move the same direction, you will need to Reverse one of the channels.

The 90406 transmitter model programming is based around Flight Modes. Each Model Type (AERO and HELI) feature three independently programmable Flight Modes. Flight Mode FN (Normal), Flight Mode F1, and Flight Mode F2. Within these Flight Modes is where the core of the model programming takes place. Features such as Dual Rate, Exponential, Throttle Curve, Pitch Curve, Mixing, Compensation Mixing, and much more can be individually programmed to each of the three Flight Modes. Each Flight Mode is controlled by a switch so that they can be turned ON and OFF during flight.

Flight Modes allow you to change the flying characteristics of your model with the flip of a switch. For example, if you fly helicopters, you can have one Flight Mode for normal flying and a second Flight Mode for aerobatic flying. Flip the Flight Mode switch from FN (Normal) to F1 and your helicopter is now programmed with all of your 'Aerobatic' Flight Mode programming. With three programmable Flight Modes available for each Model Type, the combinations of model programming is highly-configurable.

## GENERAL INFORMATION



There are three Flight Modes that can be individually programmed for each Model Type. The currently Active Flight Mode (FN, F1, or F2) is displayed in the upper right corner of the Display screen.
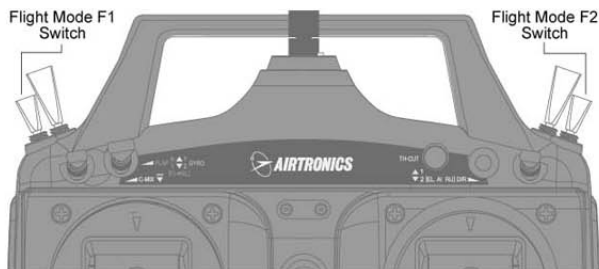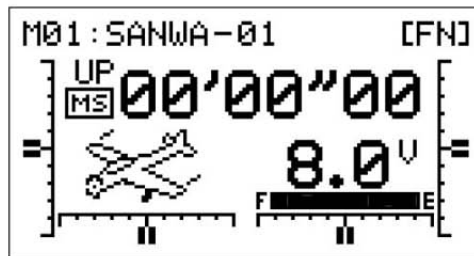


Flight Modes are turned ON and OFF using the two Flight Mode switches, as described below:

**Flight Mode FN (Normal)** - Both Flight Mode switches pushed forward (OFF).

**Flight Mode F1** - Flight Mode F1 Switch pulled toward you (ON) and Flight Mode F2 switch pushed away from you (OFF).

**Flight Mode F2** - Flight Mode F2 switch pulled toward you (ON).

⚠ It's important to note that higher numbered Flight Modes override lower numbered Flight Modes. For example, if you have Flight Mode F1 and Flight Mode F2 Active at the same time (both Flight Mode switches pulled toward you), Flight Mode F2 will override Flight Mode F1.

⚠ There is always one Flight Mode active at all times and will vary based on the positions of the two Flight Mode switches. When both Flight Mode switches are pushed away from you (OFF), Flight Mode FN (Normal) will be Active.

**Common or Separate Flight Modes**

Many Flight Mode programming options can be flagged either COMMON or SEPARATE. Options flagged as Common are common across all Flight Modes. Options flagged as Separate can be programmed separately for each Flight Mode from the same Programming Menu.

The F-MODE key is used to facilitate programming the individual Flight Modes only and does not turn the Flight Modes ON or OFF or switch between Flight Modes during use.

F-MODE Key
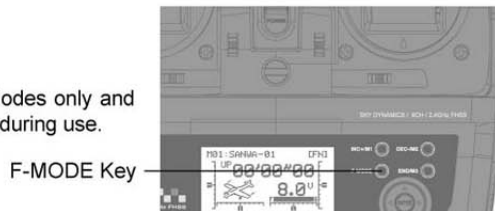


## FLIGHT MODE WARNING ALARM

The 90406 transmitter is equipped with a safety feature that will not allow you to use the transmitter if the Flight Mode is not set to FN (Normal) when you turn the transmitter ON. If the Flight Mode is not set to FN when you turn the transmitter ON, the Flight Mode Warning alarm will sound continuously, the RF Output Indicator will flash, and the LCD will read F-MODE NOT 'N' ! To clear the Flight Mode Warning, set the Flight Mode to FN using the Flight Mode Switches (move both Flight Mode switches forward). The LCD will read normally, the Flight Mode Warning alarm will cease, and RF Output Indicator will stop flashing.

AERO MODEL TYPE

**Making AERO Model Type Selection Options, Continued....**

2) Press the Navigation Pad ▲ ▼ to highlight the AERO Model Type selection option you wish to change, for example, AILE>1.

3) Press the INC+/M1 or DEC-/M2 keys to change the selection option. When a Model Type selection option is changed, ENTER will flash in the Programming Window.

```
[TYPE]  >AERO
WING >NORMAL
TAIL >NORMAL
AILE ■2    (ENTER)
```

4) Repeat steps 2 and 3 to change the options for any of the other AERO Model Type selection options you wish to change.

⚠ Some selection options are dependent on other selection options and may not be able to be changed.

**Saving Model Type Selection Options**

1) After making your choices, press the ENTER key. CREATE NEW DATA? will be displayed and INC+ will flash in the Programming Window.

2) Press the INC+/M1 key to Create New Data. After ~10 seconds, the new Programming Data will be loaded into the transmitter as indicated by the progress bar, and COMPLETE!! will be displayed in the Programming Window. Press any key to return to the TYPE menu.

```
[TYPE]
CREATE
NEW DATA?
(INC+)
```

⚠ If you want to go back and change the settings or if you don't want to create the new settings for any reason, press the DEC-/M2 or END/M3 keys.

## 04.TRAINER (TRAINER SYSTEM)

The 90406 transmitter features a Trainer System that allows you to connect two 90406 transmitters to one another, or connect one 90406 transmitter to one SD-5G transmitter or to one SD-10G transmitter, for the purpose of training a new pilot or for training a more experienced pilot on a new model.

During use, one transmitter acts as the Master (Instructor) and the other transmitter acts as the Slave (Student). The Instructor controls the Student's model as long as the Trainer switch is released. For example, once the Instructor maneuvers the model to a safe altitude, the Instructor pulls and holds the Trainer switch to give control of the model to the Student. The Student will have control of the model as long as the Instructor holds the Trainer switch. Once the Trainer switch is released, the Instructor will have control of the model once again. If at any time the Instructor feels that the Student is in a situation that endangers the model, the Instructor releases the Trainer switch and control of the model returns instantly to the Instructor.

---

**IMPORTANT INFORMATION ABOUT THE TRAINER SYSTEM**

- The Trainer System is currently compatible ONLY with another 90406 transmitter or an SD-5G or SD-10G transmitter and you **MUST** use the Airtronics 97107 Trainer Cable. See your local Airtronics dealer for more information and availability.

- During use, both the Master transmitter and the Slave transmitter should be turned ON. If using an SD-10G transmitter as the Slave transmitter, to save battery power only the transmitter LCD needs to be turned ON, using the DISPLAY key.

- Both transmitters must be programmed identically for the Trainer System to function properly. For example, Servo Reversing, Servo End Point Adjustments, etc. must be identical.

- The Instructor transmitter Trainer System function must be set to MASTER and the Student transmitter Trainer System function must be set to SLAVE.

---

⚠ If using the Trainer System with an Airtronics SD-5G transmitter or an SD-10G transmitter, please refer to those transmitter's Operating Manuals for more information on the correct setup and use of those transmitter's Trainer functions.

**Connecting the Master and Slave Transmitters**

1) Turn both transmitters OFF.

2) Plug one end of the Airtronics 97107 Trainer Cable (available separately) into the back of one 90406 transmitter, then plug the other end of the Trainer Cable into the back of the second 90406 transmitter or an SD-5G or SD-10G transmitter.
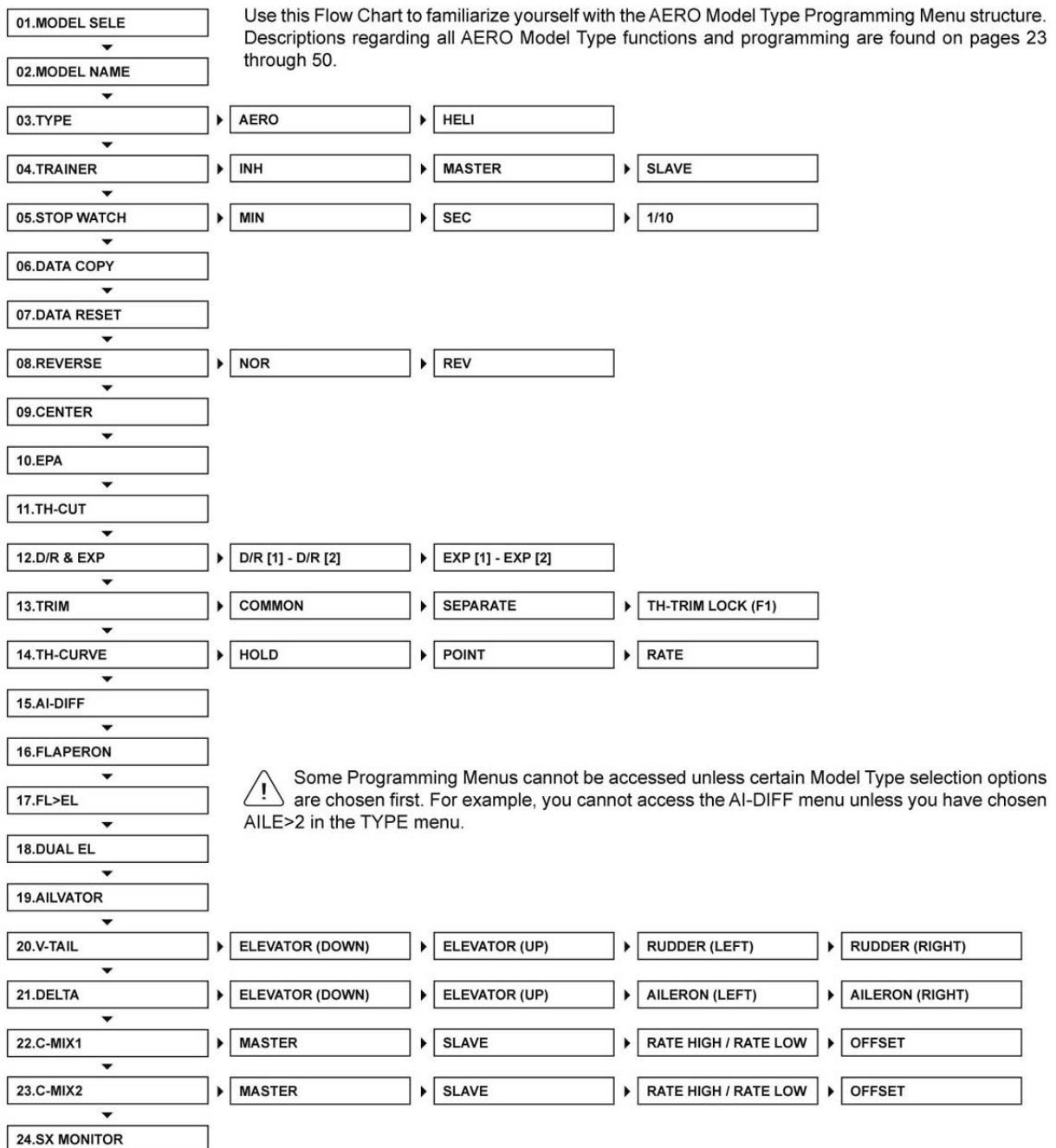
## GENERAL INFORMATION

To access the AERO Model Type Programming Menus, turn the transmitter ON. From the Display screen, press the ENTER key to display the Programming Menus, then press the Navigation Pad ▲ ▼ to scroll to the desired Programming Menu. Press the ENTER key to access the desired Programming Menu.

From within any Programming Menu, press the END/M3 key continuously to return to the Display screen. Unless otherwise noted, all programming changes take effect immediately.

⚠ If the Display screen is not displayed when you turn the transmitter ON, continuously press the END/M3 key until the Display screen is displayed.

## AERO MODEL TYPE PROGRAMMING MENU FLOW CHART

Use this Flow Chart to familiarize yourself with the AERO Model Type Programming Menu structure. Descriptions regarding all AERO Model Type functions and programming are found on pages 23 through 50.

| | | | | |
|---|---|---|---|---|
| 01.MODEL SELE | | | | |
| 02.MODEL NAME | | | | |
| 03.TYPE | AERO | HELI | | |
| 04.TRAINER | INH | MASTER | SLAVE | |
| 05.STOP WATCH | MIN | SEC | 1/10 | |
| 06.DATA COPY | | | | |
| 07.DATA RESET | | | | |
| 08.REVERSE | NOR | REV | | |
| 09.CENTER | | | | |
| 10.EPA | | | | |
| 11.TH-CUT | | | | |
| 12.D/R & EXP | D/R [1] - D/R [2] | EXP [1] - EXP [2] | | |
| 13.TRIM | COMMON | SEPARATE | TH-TRIM LOCK (F1) | |
| 14.TH-CURVE | HOLD | POINT | RATE | |
| 15.AI-DIFF | | | | |
| 16.FLAPERON | | | | |
| 17.FL>EL | | | | |
| 18.DUAL EL | | | | |
| 19.AILVATOR | | | | |
| 20.V-TAIL | ELEVATOR (DOWN) | ELEVATOR (UP) | RUDDER (LEFT) | RUDDER (RIGHT) |
| 21.DELTA | ELEVATOR (DOWN) | ELEVATOR (UP) | AILERON (LEFT) | AILERON (RIGHT) |
| 22.C-MIX1 | MASTER | SLAVE | RATE HIGH / RATE LOW | OFFSET |
| 23.C-MIX2 | MASTER | SLAVE | RATE HIGH / RATE LOW | OFFSET |
| 24.SX MONITOR | | | | |

⚠ Some Programming Menus cannot be accessed unless certain Model Type selection options are chosen first. For example, you cannot access the AI-DIFF menu unless you have chosen AILE>2 in the TYPE menu.
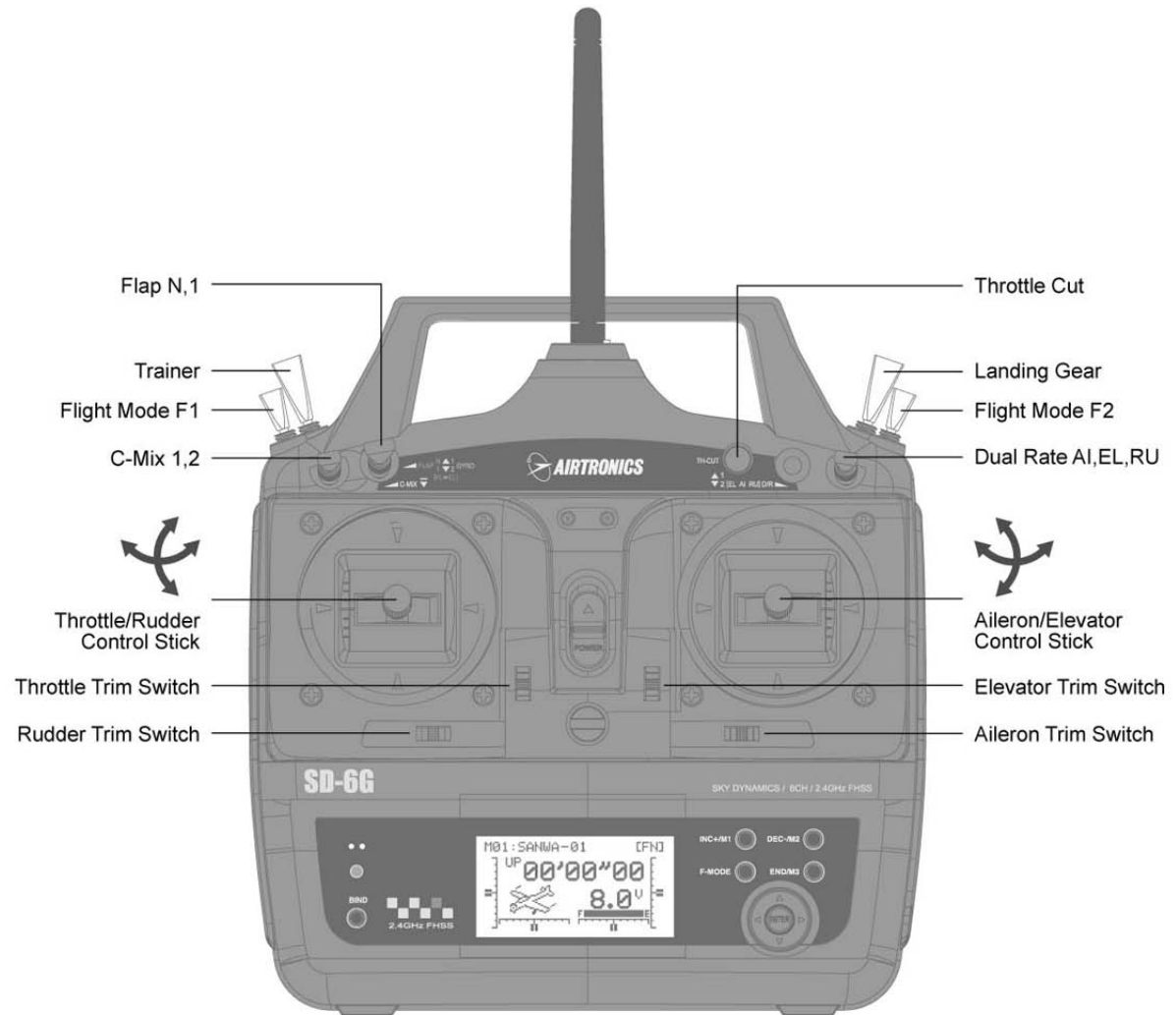
## AERO MODEL TYPE TRANSMITTER LAYOUT

The diagram below shows the transmitter control stick and switch layout in the AERO Model Type configuration.

**IMPORTANT** Since each of the three Flight Modes can be programmed separately, before making programming changes, verify that you are in the Flight Mode you want to make programming changes to. To avoid confusion, we suggest leaving both Flight Mode switches pushed away from you (OFF) and use the F-MODE key from within the programming menus to choose which Flight Mode you would like to make programming changes to.

Flap N,1
Trainer
Flight Mode F1
C-Mix 1,2
Throttle/Rudder Control Stick
Throttle Trim Switch
Rudder Trim Switch

Throttle Cut
Landing Gear
Flight Mode F2
Dual Rate AI,EL,RU
Aileron/Elevator Control Stick
Elevator Trim Switch
Aileron Trim Switch

⚠ When any switch is moved into the Up or Forward position (pushed away from you), this is considered the OFF position. When moved into the Down position or Back position (pulled toward you), this is considered the ON position.

## 01.MODEL SELE (MODEL SELECT)

The Model Select function allows you to load the Programming Data for the particular model you wish to fly. The MODEL SELECT menu displays the currently selected model, along with a list of available models that can be selected. The specific Model Type (AERO or HELI) is displayed for each of the models. The 90406 can store Programming Data for up to 10 different models.

### Selecting a Model

1) From the Display screen, press the ENTER key to display the Programming Menus.

2) Press the Navigation Pad ▲ ▼ to highlight MODEL SELE, then press the ENTER key to display the MODEL SELECT menu. The currently selected model in the Model Select List will be highlighted.

# AERO MODEL TYPE

**Activating the Trainer Function - Master (Instructor) Transmitter**

1) Turn the Master (Instructor) transmitter ON. From the Display screen, press the ENTER key to display the Programming Menus.

```
[TRAINER]

 ∎INH
```

2) Press the Navigation Pad ▲ ▼ to highlight TRAINER, then press the ENTER key to display the TRAINER menu. The cursor will default to >INH.

3) Press the INC+/M1 key to change the current transmitter's Trainer mode to MASTER. >MASTER will be displayed.

```
[TRAINER]

 ∎MASTER
```

⚠ MS will be displayed on the Display screen, indicating that the transmitter is operating in MASTER mode.

**Activating the Trainer Function - Slave (Student) Transmitter**

1) Turn the Slave (Student) transmitter ON. From the Display screen, press the ENTER key to display the Programming Menus.

```
[TRAINER]

 ∎INH
```

2) Press the Navigation Pad ▲ ▼ to highlight TRAINER, then press the ENTER key to display the TRAINER menu. The cursor will default to >INH.

3) Press the INC+/M1 key to change the current transmitter's Trainer mode to SLAVE. >SLAVE will be displayed.

```
[TRAINER]

 ∎SLAVE
```

⚠ SL will be displayed on the Display screen, indicating that the transmitter is operating in SLAVE mode.

**Using the Trainer Function**

1) The Trainer Cable should be connected between the two transmitters and the Trainer function on both transmitters should be Activated as described previously. Both the Master (Instructor's) transmitter and the Slave (Student's) transmitter should be turned ON. If using an SD-10G transmitter as the Slave transmitter, to save battery power only the transmitter LCD needs to be turned ON, using the DISPLAY key.

2) Turn the receiver ON in the model you're using for training and verify that the Instructor's transmitter controls the model's control surfaces correctly.

3) Activate the Trainer function by pulling and HOLDING the Trainer switch on the Instructor's transmitter continuously and verify that the Student's transmitter controls the model's control surfaces correctly.

4) When the Trainer switch is released, the Instructor will have full control over the model. When the Trainer switch is pulled toward you and held continuously, the Student has control over the model. As soon as the Trainer switch is released, the Instructor will have full control over the model once again.

# AERO MODEL TYPE

## Selecting a Model, Continued....

3) Press the Navigation Pad ▲ ▼ to highlight the model you would like to select, then press the ENTER key to select the highlighted model. That model will be displayed above the Model Select List.

⚠ When you press the ENTER key to select a model, the Programming Data for that model will be loaded immediately.

```
[MODEL SELECT]
 01:SANWA-01 (AERO)

 01:SANWA-01 (AERO)
 02:SANWA-02 (AERO)
 03:SANWA-03 (AERO)
 04:SANWA-04 (AERO) ↓
```

⚠ In the default configuration, the Model Select List contains 5 AERO Model Types and 5 HELI Model Types. The Model Type for any of the 10 models in the Model Select List can be changed using the TYPE menu. For more Information, see page 25.

## Using the Direct Model Select Function

The Direct Model Select function allows you to select one of first three models from memory without going through the MODEL SELECT menu. This makes it much quicker and easier to load the Programming Data for your three most-used models.

1) Turn the transmitter OFF.

2) Press and HOLD the programming key of the model you wish to setup or fly, then turn the transmitter ON. The Model Name will be displayed at the top of the Display screen.

```
INC+/M1 selects Model 1, DEC-/M2 selects Model 2, and END/M3
selects Model 3.
```

Model 2 ——
Model 1 ——
Model 3 ——
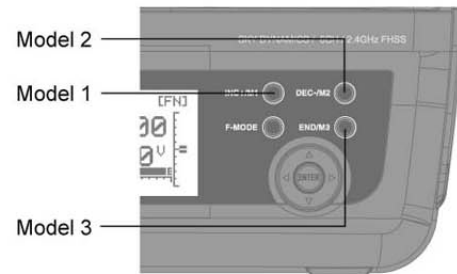
⚠ Before flying, verify that the Model Name displayed at the top of the Display screen is the actual model that you'll be flying.

## 02.MODEL NAME (MODEL NAMING)

The Model Naming function allows you to name each of the 10 individual models. This makes it easy to keep track of multiple models. The Model Name can consist of up to 8 letters, numbers, or symbols. Choose from capital letters, lower case letters, numbers, and various symbols.

## Entering a Model Name

1) From the Display screen, press the ENTER key to display the Programming Menus.

2) Press the Navigation Pad ▲ ▼ to highlight MODEL NAME, then press the ENTER key to display the MODEL NAME menu. The cursor will default to the left side of the top row of letters and an underscore will appear under the first character in the name.

⚠ A model must be selected before a Model Name can be entered or modified. In the default configuration, M01:SANWA-1 is selected. To enter a Model Name for another model, that model must first be selected using the MODEL SELECT menu or the Direct Model Select function. For more information, see the 01.MODEL SELECT section on page 23.

3) Press the Navigation Pad ▲ ▼ ◀ ▶ to highlight a character, then press the ENTER key to select the highlighted character. That character will be displayed and the underscore will move to the next space.

4) Repeat step 3 to enter the rest of the characters. Up to eight characters can be entered. The name of your model will be displayed on the top of the Display screen.

```
[MODEL NAME]
 SANWA-01

 :ABCDEFGHIJKLMNO ↑
 :PQRSTUVWXYZ
 :abcdefghijklmno
 :pqrstuvwxyz     ↓
```

⚠ Press the Navigation Pad ▲ ▼ repeatedly to scroll up and down the list of characters. In addition, press the INC+/M1 and DEC-/M2 keys to move the underscore left and right respectively.

# AERO MODEL TYPE

## 05.STOP WATCH (STOP WATCH AND COUNT UP TIMER)

The Stop Watch function is used to either count down from a programmed Start time (Count Down mode) or to count up from zero if no Start time is programmed (Count Up mode). In Count Down mode, an audible tone will sound in 1 second intervals when the Stop Watch reaches 10 seconds from zero. When zero is reached, a long audible tone will sound and the Stop Watch will begin to count up. In Count Up mode, an audible tone will sound at 1 minute intervals to remind you that the count down time (zero) has been surpassed. The Stop Watch function has a number different uses, but one of the more popular uses is to use it as a fuel usage indicator to remind you to land within an allotted amount of time to ensure that your model doesn't run out of fuel.

### Setting the Stop Watch

1) From the Display screen, press the ENTER key to display the Programming Menus.

2) Press the Navigation Pad ▲ ▼ to highlight STOP WATCH, then press the ENTER key to display the STOP WATCH menu. The cursor will default to MIN>00.

```
[STOP WATCH]
  MIN■00
  SEC>00
 1/10>00
```

3) The Minute, Second, and 1/10 Second times can be set independently. Press the Navigation Pad ▲ ▼ to highlight the time interval you would like to program, then press the INC+/M1 or DEC-/M2 keys to set the desired Start time.

MIN setting range is 0 to 59', SEC setting range is 0 to 59" and 1/10 setting range is 0 to 90. The default setting for each is 0.
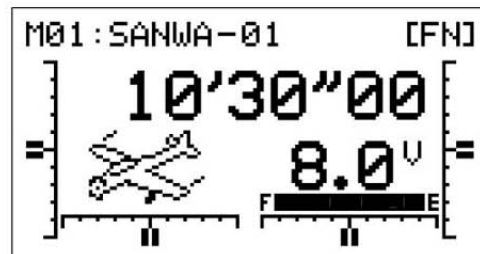
```
[STOP WATCH]
  MIN>10
  SEC■30
 1/10>00
```

### Using the Stop Watch

1) Press the END/M3 key two times to return to the Display screen. The Start time that you programmed will be displayed.

```
M01:SANWA-01        [FN]
     10'30"00
           8.0ᵛ
```

2) To Start the Stop Watch, press the INC+/M1 key. To Stop the Stop Watch, press the DEC-/M2 key a second time. To Reset the Stop Watch to the programmed Start time, press the INC+/M1 and DEC-/M2 keys at the same time.

⚠ The Stop Watch is displayed in Minutes, Seconds, and 1/10 Seconds. 00' (Minutes) 00" (Seconds) 00 (1/10 Seconds).

### Using the Count Up Timer

The Stop Watch function can also be used as a Count Up timer when the Stop Watch is set to 00'00"00. When the Count Up timer runs, UP will be displayed on the Display screen and an audible tone will sound at 1 minute intervals.

1) Set the Stop Watch Start time to 00'00"00 as described in the Setting the Stop Watch section above.

2) To Start the Count Up timer, press the INC+/M1 key. To Stop the Count Up timer, press the INC+/M1 key a second time. To Reset the Count Up timer to 00'00"00, press the INC+/M1 and DEC-/M2 keys at the same time.

```
M01:SANWA-01        [FN]
 UP
    00'00"00
           8.0ᵛ
```
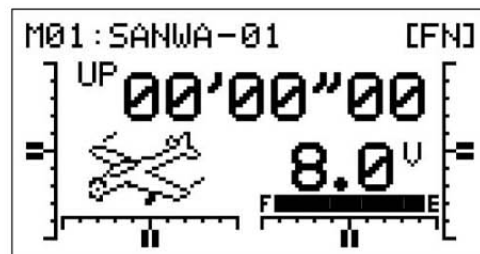
## 06.DATA COPY (MODEL PROGRAMMING DATA COPY)

The Data Copy function allows you to copy the Programming Data from one model to another model. This is convenient if you have similar Model Types. For example, if you have two models that are similar, you can copy the Programming Data from the first model to the second model to use as a base to start fine-tuning the programming for the second model.

**Copying Model Programming Data**

1) From the Display screen, press the ENTER key to display the Programming Menus.

2) Press the Navigation Pad ▲ ▼ to highlight DATA COPY, then press the ENTER key to display the DATA COPY menu. The cursor will default to the currently selected model, for example >01:SANWA-01 <AERO>.

```
[DATA COPY]
  ■01:SANWA-01 <AERO>
        ⬇
  >01:SANWA-01 <AERO>
```

3) With the cursor adjacent to the top model number, press the INC+/M1 or DEC-/M2 keys to select the model you would like to copy Programming Data FROM. ENTER will flash in the Programming Window.

```
[DATA COPY]
  ■02:SANWA-02 <AERO>
        ⬇
  >01:SANWA-01 <AERO>
      (ENTER)
```

4) Press the Navigation Pad ▼ to move the cursor to the bottom model number, then press the INC+/M1 or DEC-/M2 keys to select the model you would like to copy Programming Data TO. ENTER will continue to flash in the Programming Window.

⚠ It's not possible to copy Programming Data from one model to the same model. If you attempt this, ENTER will not be displayed.

```
[DATA COPY]
  >02:SANWA-02 <AERO>
        ⬇
  ■03:SANWA-03 <AERO>
      (ENTER)
```

5) Press the ENTER key. DATA COPY OK? will be displayed and INC+ will flash in the Programming Window.

6) Press the INC+/M1 key to Copy the model Programming Data. After ~10 seconds, the Programming Data will be copied as indicated by the progress bar, and COMPLETE!! will be displayed in the Programming Window. Press any key to return to the DATA COPY menu.

```
[DATA COPY]
  DATA
  COPY OK?
      (INC+)
```

⚠ All model-specific Programming Data, including the Model Name will be copied to the selected model.

⚠ If you want to go back and change models or you don't want to copy the Programming Data for any reason, press the DEC-/M2 or END/M3 keys.

## 07.DATA RESET (MODEL PROGRAMMING DATA RESET)

The Data Reset function allows you to Reset model-specific Programming Data for any model back to the factory default settings. As described previously, individual programming settings can be Reset to the factory default settings by pressing the INC+/M1 and DEC-/M2 keys at the same time, however, this is time consuming if you want to change all of the selected model's programming settings back to default. Using the Data Reset function makes doing this much quicker and more accurate, since nothing will be missed.

## 07.DATA RESET (MODEL PROGRAMMING DATA RESET), CONTINUED....

⚠️ Although Model Type selection options are model-specific, the Data Reset function does **NOT** Reset them. This is useful if you have two similar models, but different programming needs for each. For example, if you have two similar aircraft that use the same Model Type selection options (e.g., TAIL>2xEL and AILE>2) but different Programming Data (e.g., Servo Reversing, End Point Adjustments, etc), you can copy the first model's Programming Data, using the Data Copy function, then use the Data Reset function to Reset all of the Programming Data except Model Type selection options. This saves time by not needing to re-program Model Type selection options.

### Resetting Model Programming Data

1) From the Display screen, press the ENTER key to display the Programming Menus.

2) Press the Navigation Pad ▲ ▼ to highlight DATA RESET, then press the ENTER key to display the DATA RESET menu. The cursor will default to the currently selected model, for example >01:SANWA-01 <AERO> and ENTER will flash in the Programming Window.

```
【DATA RESET】

 ■01:SANWA-01 <AERO>

      (ENTER)
```

3) Press the INC+/M1 or DEC-/M2 keys to select the model you would like to Reset the Programming Data for. ENTER will continue to flash in the Programming Window.

```
【DATA RESET】

 ■03:SANWA-03 <AERO>

      (ENTER)
```

4) Press the ENTER key. DATA RESET OK? will be displayed and INC+ will flash.

5) Press the INC+/M1 key to Reset the Programming Data for the selected model. After ~10 seconds, the Programming Data will be Reset as indicated by the progress bar, and COMPLETE!! will be displayed in the Programming Window. Press any key to return to the DATA RESET menu.

```
【DATA RESET】
DATA
   RESET OK?
      (INC+)
```

⚠️ If you want to go back and change the model or you don't want to Reset the Programming Data for any reason, press the DEC-/M2 or END/M3 keys.

## 08.REVERSE (SERVO REVERSING)

The Servo Reversing function electronically switches the direction of servo travel. For example, if you pull the elevator control stick back for Up elevator, but the elevator moves Down, you can use the Servo Reversing function to switch the direction of servo travel to make the elevator move Up.

⚠️ The channel numbers will differ based on the Model Type selection options you chose previously in the TYPE menu. For example, if you chose AILE>2, channel 2 will be displayed as LA (Left Aileron) and channel 5 will be displayed as RA (Right Aileron).

### Changing Servo Reversing Adjustment Values

1) From the Display screen, press the ENTER key to display the Programming Menus.

2) Press the Navigation Pad ▲ ▼ to highlight REVERSE, then press the ENTER key to display the REVERSE menu. The cursor will default to 1EL>NOR.

```
【REVERSE】
1     4
EL ■NOR  RU> NOR
2     5
AI> NOR  GE> NOR
3     6
TH> NOR  FL> NOR
```