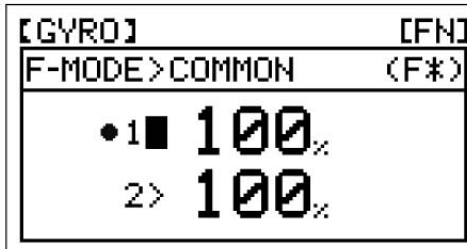


# HELI MODEL TYPE

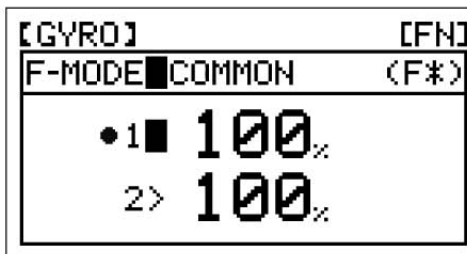
## 19. GYRO (REMOTE GYRO GAIN CONTROL), CONTINUED...

### Choosing the Flight Mode - Common or Separate

- 1) From the Display screen, press the ENTER key to display the Programming Menu.
- 2) Press the Navigation Pad  $\uparrow$ / $\downarrow$  to highlight GYRO, then press the ENTER key to display the GYRO menu. The cursor will default to 1>100%.




- 3) Press the Navigation Pad  $\leftarrow$  to move the cursor to F-MODE>COMMON.
- 4) Press the INC+/M1 or DEC-/M2 keys to choose either SEPARATE or COMMON.
- 5) If you choose SEPARATE, press the F-MODE key to choose the F-MODE number you would like to program the Remote Gyro Gain Control function for. Choose from FN, F1 or F2.



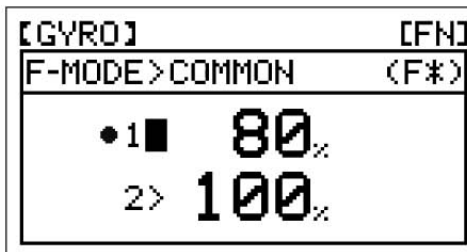
### Changing the Gyro Percentage Values

The Gyro percentage values determine both the amount of gain and the gyro operating mode - either Heading Hold mode or Rate mode. In general, positive values will result in your gyro operating in Heading Hold mode and negative values will result in your gyro operating in Rate mode. The amount of gain is determined by the percentage value.

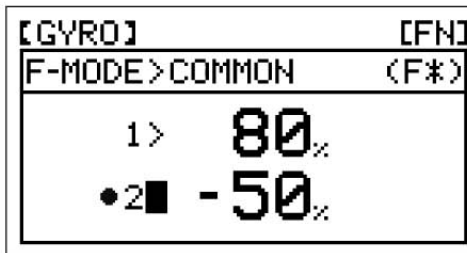
**IMPORTANT** Whether you use positive or negative Gyro percentage values to program your gyro in either Heading Hold mode or Rate mode will be determined by the NOR/REV settings of the gyro channel in the REVERSE menu. For example, if the gyro channel is set to NOR (Normal) in the REVERSE menu, positive Gyro percentage values may result in your gyro operating in Heading Hold mode, but if the gyro channel is set to REV (Reverse) in the REVERSE menu, positive Gyro percentage values may result in your gyro operating in Rate mode. You will need to test your gyro to ensure that it's operating in the desired mode based on the percentage values, then adjust the percentage values accordingly to achieve the desired amount of gain.

 You can program two different Remote Gyro Gain Control functions and control them using the Gyro switch. When programming Gyro percentage values, the 1> percentage value is controlled by the Gyro 1 switch position and the 2> percentage value is controlled by the Gyro 2 switch position.

- 1) Press the Navigation Pad  $\downarrow$  to highlight 1>100%.
- 2) Press the INC+/M1 or DEC-/M2 keys to choose the desired Gyro 1 percentage value.



- 3) Press the Navigation Pad  $\downarrow$  to highlight 2>100%.
- 4) Press the INC+/M1 or DEC-/M2 keys to choose the desired Gyro 2 percentage value.



# HELI MODEL TYPE

## Choosing the Flight Mode - Common or Separate, Continued....

⚠ Two Compensation Mixing functions are available, however, only one Compensation Mixing function can be Active at one time. If F-MODE is set to COMMON, both Compensation Mixing functions will be controlled by the Compensation Mixing switch and Compensation Mixer 2 will always override Compensation Mixer 1. If F-MODE is set to SEPARATE, you can control one Compensation Mixing function using the Compensation Mixing switch and control the second Compensation Mixing function (programmed to a different Flight Mode) using a Flight Mode switch, however, keep in mind that higher numbered Flight Modes will always override lower numbered Flight Modes.

### Choosing the Master Channel

The Master channel is the channel that controls the Slave channel. For example, if you set the Master channel to EL (Elevator), when you move the elevator control stick, the Slave channel that's mixed to the elevator channel will move.

- 1) Press the Navigation Pad ▼ to highlight MASTER>EL, then press the INC+/M1 or DEC-/M2 keys to change the desired Master channel.



MASTER setting range is EL (Elevator), AI (Aileron), TH (Throttle), RU (Rudder), GY (Gyro), and PI (Pitch). The default setting is EL (Elevator).

### Choosing the Slave Channel

The Slave channel is the channel that is controlled by the Master channel. For example, if you set the Master channel to EL (Elevator) and the Slave channel to AI (Aileron), when you move the elevator control stick, the aileron servo will move.

- 1) Press the Navigation Pad ▼ to highlight SLAVE>EL, then press the INC+/M1 or DEC-/M2 keys to change the desired Slave channel.



SLAVE setting range is EL (Elevator), AI (Aileron), TH (Throttle), RU (Rudder), GY (Gyro), and PI (Pitch). The default setting is EL (Elevator).

## Changing the Rate High and Rate Low Percentage Values

By changing the Rate High and Rate Low percentage values, you can program which direction the Slave channel servo travels in relation to the Master channel servo, and program how far the Slave channel servo travels relative to how far the Master channel servo travels.

⚠ The Rate High and Rate Low percentage values are a ratio of Slave channel servo travel to Master channel servo travel. For example, if the Rate High percentage value is set to 10%, the Slave channel servo will travel 1/10th the amount in one direction that the Master channel servo travels. This mix is Linear.

**WARNING** When a Compensation Mixer is Activated, you still have separate control over the Slaved channel, however, depending on the Rate High and Rate Low percentage values, the Slave channel End Point Adjustment could be exceeded. Be cautious to prevent any chance of overdriving your control linkage when the Compensation Mixing function is used.

- 1) Press the Navigation Pad ▼ to highlight RATE Hi>0%.
- 2) Press the INC+/M1 or DEC-/M2 keys to change the Rate High Percentage value.



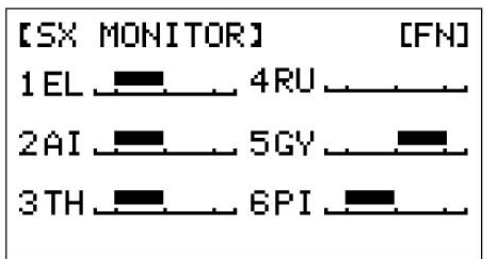
# HELI MODEL TYPE

## 22. SX MONITOR (SERVO MONITOR)

The Servo Monitor displays the output levels of each of the 6 channels in bar graph form, allowing you to monitor servo operation in a virtual manner. This is helpful to see servo movement when the control sticks and switches are moved, and it allows you to visualize what is occurring with servo movements when you apply different mixing values. The Servo Monitor also indicates which channel slots in the receiver to plug your servos into (1 EL, 2AI, 3TH, 4RU, 5GY, and 6FL).

### Using the Servo Monitor

- 1) From the Display screen, press the ENTER key to display the Programming Menu.
- 2) Press the Navigation Pad ▲▼ to highlight SX MONITOR, then press the ENTER key to display the Servo Monitor.



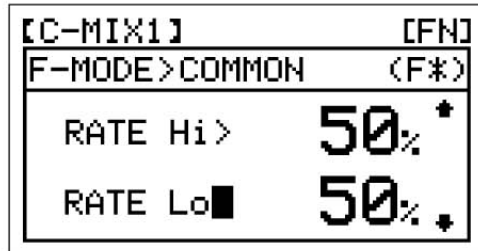
- 3) Moving the control sticks and channel switches will display the position and movement of each of the servos.

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# HELI MODEL TYPE

## Changing the Rate High and Rate Low Percentage Values. Continued....

- 3) Press the Navigation Pad ▾ to highlight RATE Lo>0%.
- 4) Press the INC+/M1 or DEC-/M2 keys to change the Rate Low Percentage value.

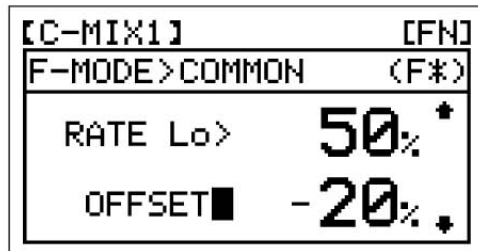


RATE Hi and RATE Lo setting ranges are -150% to 150%. The default settings are 0%. Increasing or decreasing the Rate High and Rate Low percentage values will change the direction that the Slave channel servo travels and the amount that it travels relative to the Master channel servo.

## Changing the Offset Percentage Value

The Offset percentage value changes the neutral position of the Slave channel servo when the Compensation Mixing function is Activated. For example, when an Offset percentage value is programmed, the Slave channel servo neutral position and its two End Point positions will 'shift' the programmed amount.

- 1) Press the Navigation Pad ▾ to highlight OFFSET>0%.
- 2) Press the INC+/M1 or DEC-/M2 keys to change the Offset Percentage value.



OFFSET setting range is -100% to 100%. The default setting is 0%. Increasing the Offset percentage value will shift the neutral position of the Slave servo in one direction and decreasing the Offset percentage value will shift the neutral position of the Slave servo in the opposite direction.

**IMPORTANT** When the Throttle channel is programmed as the Master channel, the Slave channel servo will not begin to move relative to the position of the throttle control stick until the throttle control stick reaches half throttle and above. Once the throttle control stick reaches half travel and above, the Slave channel servo will begin to move. If you require the Slave channel servo to move from Low throttle to High throttle, program the Compensation Mixer as shown in this example: MASTER>TH, SLAVE>RU, Rate Hi>25%, RATE Lo>25%, OFFSET>-25%.

## Compensation Mixing Sample - Mixing Rudder to Throttle

The sample below describes how to mix rudder to throttle using Compensation Mixer 1 controlled by the Compensation Mixing switch. This mix is typically used to reduce the tendency of the helicopter to slightly rise and fall as you pirouette. For example, when you command a pirouette to the left, the helicopter will rise slightly and will require you to reduce throttle, and when you command a pirouette to the right, the helicopter will fall slightly and will require you to increase throttle.

- 1) Set up your swashplate, servo reversing, and control throws as desired. MASTER>RU
  - 2) Program the Compensation Mixer 1 options from the within the C-MIX1 menu, as shown at left. SLAVE>TH
- ! The positive and negative values shown in the example may vary based on the NOR/REV status of your aileron and elevator servos. You may need to change the percentage values to suit.
- RATE Hi>10%  
RATE Lo>10%  
OFFSET>0%

In this example, the Master channel is the Rudder channel and the Slave channel is the Throttle channel. The RATE Hi and RATE Lo percentage values define how far Up and Down the throttle will move when the rudder is moved, and is a percentage of the amount the rudder is moved. To Activate this mix, Activate Compensation Mixer 1 by pulling the Compensation Mixer switch down.

# REFERENCE

## TROUBLESHOOTING GUIDE

This troubleshooting guide has been provided to help you diagnose and solve most problems that you may encounter with your 90406 2.4GHz FHSS-1 radio control system. Most problems encountered can be solved by following the problem-cause-solution sections.

If you cannot solve the problem using this troubleshooting guide, please contact Airtronics Customer Service using the information on the back cover of this Operating Manual.

PROBLEM	CAUSE	SOLUTION
Transmitter does not turn ON	Batteries not installed correctly	Reinstall batteries. Observe correct polarity
	Damage caused by using incorrect charger or reverse polarity	Contact Airtronics Customer Service
	Low transmitter battery voltage	Replace or recharge transmitter batteries
Transmitter will not bind to 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	Transmitter compatible only with Airtronics 2.4GHz FHSS-1 aircraft receivers
	Using ESC with BEC	Disconnect ESC and use standard receiver battery for Binding procedure, then reconnect ESC after binding
Audible alarm beeps continuously	Low transmitter battery voltage	Replace or recharge transmitter batteries
	Transmitter not in Flight Mode FN when turned ON	Place transmitter in Flight Mode FN before turning ON
	Transmitter Trainer function set to MASTER when turned ON	Press any key to Inhibit alarm or use TRAINER menu to Inhibit Trainer function.
	Transmitter Trainer function set to SLAVE when turned ON	Press any key to Inhibit alarm or use TRAINER menu to Inhibit Trainer function.
Servo movement is slow	Control linkages binding	Adjust control linkages to operate smoothly
	Low receiver battery voltage	Recharge receiver battery
Inadequate transmitting range	Low transmitter or receiver battery voltage	Replace or recharge transmitter and receiver batteries
	Receiver antennas not mounted correctly in your model or are damaged	Mount receiver antennas as recommended or replace antennas
	Transmitter antenna not angled to optimum position	Adjust transmitter antenna so that it's angled to the optimum position during use
	Transmitter in Low-Power Range Check mode	Change transmitter to Normal mode
Servo(s) move the wrong direction	Incorrect Servo Reversing setting	Change Servo Reversing setting assigned to the channel affected in REVERSE menu
Servo horn(s) not centered	Servo horn not installed correctly	Turn servo horn 180° and reinstall
	Trim switch not centered	Center trim switch
	Servo not centered	Use CENTER menu to center servo horn
Control linkage(s) bind	Too much servo travel	Adjust EPA to reduce servo travel
RF Output Indicator flashes	Transmitter Trainer function set to SLAVE	This is normal
Transmitter Bind LED flashes	Transmitter in Low-Power mode	Complete Range Check in Low-Power mode, then turn transmitter OFF, then back ON to enter Normal mode
Transmitter Bind LED goes out	Transmitter Trainer function set to SLAVE	This is normal

# REFERENCE

## TROUBLESHOOTING GUIDE, CONTINUED....

PROBLEM	CAUSE	SOLUTION
Cannot copy Programming Data	Attempting to copy Programming Data to the same model number	Copy Programming Data to a different model number
LCD appears dark or hard to read	Transmitter left in direct sunlight for too long	Place transmitter in shade until LCD clears up. Do not place transmitter in direct sunlight for long periods of time
Trim changes when switching between Flight Modes	Trim set to SEPARATE in TRIM menu	This is normal when Trim is set to SEPARATE, otherwise, set Trim to COMMON
Controls too sensitive	Too much control throw	Turn Dual Rate switch ON to lower control throw
	No Exponential programmed	Program positive Exponential percentage value
Range check fails	Low transmitter or receiver battery voltage	Replace or recharge transmitter and receiver batteries
	Receiver antennas not mounted correctly in your model or are damaged	Mount receiver antennas as recommended or replace antennas
	Aircraft sitting in tall grass (usually sailplanes only)	Lift model out of grass for range check

## GLOSSARY OF TERMS

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

**Aileron/Elevator Control Stick:** Controls the Aileron and Elevator axes. The Aileron/Elevator Control Stick length is adjustable to suit your preference.

**Aileron Trim Switch:** Used to control the Aileron axis Right and Left trim.

**Ailvator:** Ailvator mixes ailerons and elevator, allowing you to have both roll control and pitch control on the elevator, separate from the ailerons. When Activated, not only will the two elevator halves move up and down together, but each elevator half can move up and down independently like ailerons. This function is commonly referred to as tailerons or stabilators.

**Antenna:** Transmits the signal from the transmitter to the receiver in the model. The Antenna should be pivoted into the vertical position during use. When not in use, the Antenna should be collapsed into the horizontal position to prevent damage during handling and transport.

**Antenna Reception Wires:** The portion of each of the receiver antenna wires that actually receives the transmitter signal. The Antenna Reception Wires should never be bent or they could be damaged and limit the range of the receiver.

**Battery Compartment:** Houses the 6 cells that power the transmitter. The transmitter uses 6 cells for lighter weight and better feel, while still providing long usage time and high power output.

**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 process is complete, the setting is remembered even when the transmitter and receiver are turned OFF.

**Bind Button:** Used to Bind the transmitter and receiver. Also used to enter Low-Power Range Check mode.

**Bind LED:** Displays the current status of the transmitter and receiver pair.

**CCPM:** Collective, Cyclic, Pitch Mixing. CCPM is software-controlled mixing that allows control of the collective, cyclic and pitch using three (and sometimes four) servos. This allows lower mechanical complexity and greater control precision. In this configuration the cyclic and collective controls are mixed.

**CCPM Servo End Point Adjustment:** The CCPM End Point Adjustment function allows you to adjust servo travel in each direction for the elevator, aileron, and pitch servos independently. Unlike standard End Point Adjustment, which affects all the cyclic servos, CCPM End Point Adjustment allows you to adjust each cyclic servo independently without any affect on the other cyclic servos.

**Charging Jack:** Used for onboard charging of the Ni-Cd or Ni-MH transmitter batteries.

# REFERENCE

## GLOSSARY OF TERMS, CONTINUED....

**Coaxial Cables:** The portion of each receiver antenna wire that extends the Antenna Reception Wires. The Coaxial Cables can be bent into gentle curves, however, do not bend the Coaxial Cables acutely, or repeatedly bend them, or the antenna wire's cores can be damaged.

**Compensation Mixing:** Allows you to mix two channels together, then apply that mixing to the channels themselves. Useful if you need to program a mix that is not already pre-programmed.

**Delta Mixing:** Delta mixing, more commonly referred to as Elevon mixing, combines the use of aileron and elevator from two separate control surfaces to provide both roll and pitch control.

**Differential:** The Differential function allows you change the ratio of the Up to Down movement of each aileron. The Aileron Differential function can be used to eliminate aircraft yaw tendency by adding more movement to the upward moving aileron than the downward moving aileron.

**Digital Trim Memory:** Allows the transmitter to store trim values in its memory. The amount of control surface trim that you set during flight 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.

**Direct Model Select:** Direct Model Select allows you to select one of three of your most-used models from memory without going through the Model Select menu.

**Dual Rate:** The Dual Rate function allows you to change the control authority of the control surfaces by changing the amount of servo travel. You can use Dual Rate to lower the control throw with just the flip of the Dual Rate switch.

**Elevator Trim Switch:** Used to control the Elevator axis Up and Down trim.

**End Point Adjustment:** The End Point Adjustment function allows you to adjust servo travel in each direction. This makes it possible to balance control surface throw in both directions. For example, if you want your elevator to move Up and Down two inches in each direction, but the elevator moves Down more than two inches, decrease the End Point Adjustment in the Down direction, so that the elevator moves Up and Down the same amount.

**Exponential:** The Exponential function allows you to vary the amount of servo travel in relation to the movement of the elevator, aileron, and rudder control sticks near the neutral positions to change the way the control surfaces react to control stick movement. Increasing the Exponential value will soften the control feel around neutral and decreasing the Exponential value will heighten the control feel around neutral.

**Fail Safe:** The Fail Safe function automatically sets the servos to a predetermined position in the event that the signal between the transmitter and the receiver is interrupted, whether due to signal degradation or to a low transmitter battery.

**FH1 Modulation:** Frequency Hopping 1st generation FHSS technology.

**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.

**Flaperons:** Flaperons is a mix of flaps and ailerons, allowing you to use the ailerons as flaps if your model does not feature separate flaps. When Activated, both ailerons are moved down at the same time to provide the function of flaps, while still providing aileron roll control.

**Flight Modes:** Flight Modes allow you to change the flying characteristics of your model with the flip of a switch. For example, you can have one Flight Mode for normal flying and a second Flight Mode for aerobatic flying. Flip the Flight Mode switch from Flight Mode FN (Normal) to Flight Mode F1 and your model 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.

**Flight Mode Key:** Allows you to cycle through the three different Flight Modes during programming.

**Gyro:** A Gyro is an electronic device, that coupled with a high-speed servo linked to the tail rotor control arm, is used to stabilize a helicopter's yaw axis.

**Inhibit:** To deactivate or turn OFF a particular function.

**Landing Gear Switch:** Used to control the operation of the Landing Gear channel. This channel is a non-proportional channel, and is ideal for controlling the retractable landing gear or any other non-proportional control function on your model.

**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.

# REFERENCE

## GLOSSARY OF TERMS, CONTINUED....

**Model Name:** The Model Name function allows you to name each of your 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.

**Model Select:** The Model Select function allows you to load the programming for the particular model you wish to fly. The Programming Data for all of your models is accessed through the Model Select menu.

**Multi-Function LCD:** The heart of the programming and display features of the transmitter. All programming and transmitter display functions are shown on the Multi-Function LCD.

**Navigation Pad:** The Navigation Pad is used in conjunction with the Programming Keys to facilitate transmitter programming. The Navigation Pad allows you to quickly and easily move the Programming Cursor up and down, and right and left. The ENTER key in the center of the Navigation Pad is used to open the selected menu or programming option.

**Neck Strap Anchor:** Used to attach your neck strap (available separately) to the transmitter.

**Ni-MH:** Short for Nickel Metal Hydride, a Ni-MH battery typically has about two to three times the capacity of an equivalently sized Ni-Cd (Nickel Cadmium) battery, therefore, they are ideal for use to power both the transmitter and the receiver.

**Offset:** The Offset function allows you to shift and hold the neutral position of the Slave servo within a Compensation Mix.

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

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

**Pitch Curve:** The Pitch Curve function allows you to vary the amount of pitch travel in relation to the movement of the throttle control stick at different points throughout the entire range of deflection.

**Power Indicator:** Indicates that there is power to the transmitter. When the battery voltage drops to 6.7 volts, the audible Low Voltage Alarm will sound.

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

**Programming Keys:** The Programming Keys are used to facilitate transmitter programming and select models stored in memory. The four Programming Keys consist of the INC+/M1 (Increase/Model 1) key, the DEC-/M2 (Decrease/Model 2) key, the END/M3 (End/Model 3) key, and the F-MODE (Flight Mode) key.

**RF Output Indicator:** Illuminates when the transmitter is turned ON and transmitting a signal. If the RF Output Indicator fails to illuminate, RF output is limited or non-existent. In this case, you should not fly. The RF Output Indicator will flash when the transmitter Trainer mode is set to Slave.

**Rudder Trim Switch:** Used to control the Rudder axis Right and Left trim.

**Servo Centering Sub-Trim:** The Servo Centering Sub-Trim function allows you to fine-tune the Center (Neutral) position of each servo. It's not unusual that when you install the servo horn onto your servo that the servo horn is not perfectly centered. The Servo Centering Sub-Trim function allows you to center the servo horn perfectly.

**Servo Monitor:** The Servo Monitor displays the output levels of each of the 6 channels in bar graph form, allowing you to monitor servo operation in a virtual manner. This is helpful to see servo movement when the control sticks and switches are moved, and it allows you to visualize what is occurring with servo movements when you apply different mixing values. The Servo Monitor also indicates which channel slots in the receiver to plug your servos into.

**Servo Reversing:** Electronically switches the direction of servo travel. For example, if you move the elevator control stick forward, and the elevator moves up, you can use the Servo Reversing function to make the elevator move down.

**Spoilerons:** Spoilerons is a mix of spoilers and ailerons, allowing you to use the ailerons as spoilers if your model does not feature separate spoilers. When Activated, both ailerons are moved up at the same time to provide the function of spoilers, while still providing aileron roll control.

**Stopwatch Timer:** The Stop Watch timer 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. One of its 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.

**Swashplate:** The swashplate changes the pilot's linear cyclic (and often collective) control inputs into rotary blade pitch angle changes in the main rotor. It is the position of the swashplate that determines which direction the rotor disk will move in.



# REFERENCE

## GLOSSARY OF TERMS, CONTINUED....

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

**Throttle/Rudder Control Stick:** Controls the Throttle and Rudder axes. The Throttle/Rudder Control Stick length is adjustable to suit your preference.

**Throttle Cut:** The Throttle Cut function allows you to set a specific position that the throttle servo will move to. The Throttle Cut function is primarily used to shut down your engine after flight.

**Throttle Hold:** The Throttle Hold function allows you to set a specific position that the throttle servo will Hold and not respond to the throttle control stick. This function is typically used when flying helicopters to Hold the throttle at idle or low speed, while still allowing you full pitch control. This is ideal for practicing auto-rotations and is also a good safety feature on electric helicopters, because when Activated, the rotor head will not spin up if you accidentally bump the throttle control stick up.

**Throttle Trim Switch:** Used to control the Throttle axis Up and Down trim.

**Trainer Port:** The Trainer Port is where the trainer cable (available separately) is plugged into. An adapter to use the transmitter with a flight simulator can also be plugged into the Trainer Port.

**Trainer System:** Provides a way of training pilots to fly. 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. Once the Instructor maneuvers the model to a safe altitude, the Instructor holds the Trainer Switch and the Student has control of the model. 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.

**Trim Switch:** Used to control the center trim of the channel that the Trim Switch is adjacent to.

**Type (Model Type):** The 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 (Aircraft) and HELI (Helicopters) are provided. This takes the guess-work out of setting up more complex models.

**V-Tail Mixing:** V-Tail mixing combines the use of elevator and rudder to provide pitch and yaw control. V-Tail mixing is commonly found on gliders and sailplanes that don't feature a separate vertical fin and horizontal stabilizer.

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

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# SETUP SHEETS

## AERO SETUP SHEET

Use this Aero Setup Sheet to help you keep track of each of your model's Programming Data. Before filling out this Setup Sheet for the first time, make several copies of it to use with multiple models.

MODEL NUMBER		
MODEL NAME		
TYPE	WING	
	TAIL	
	AILE	

TRAINER	INH/MASTER/SLAVE
---------	------------------

	CH1	CH2	CH3	CH4	CH5	CH6
REVERSE	NOR/REV	NOR/REV	NOR/REV	NOR/REV	NOR/REV	NOR/REV
CENTER	%	%	%	%	%	%
EPA	%	%	%	%	%	%
	%	%	%	%	%	%

STOP WATCH		MIN	
		SEC	
		1/10	
TH-CUT			%
V-TAIL	EL-DOWN	EL	%
		RU	%
	EL-UP	EL	%
		RU	%
	RU-L	EL	%
		RU	%
RU-R	EL	%	
	RU	%	
DELTA	EL-DOWN	EL	%
		AI	%
	EL-UP	EL	%
		AI	%
	AI-L	EL	%
		AI	%
AI-R	EL	%	
	AI	%	

			F-MODE FN	F-MODE F1	F-MODE F2
EL	D/R	1	%	%	%
		2	%	%	%
	EXP	1	%	%	%
		2	%	%	%
AI	D/R	1	%	%	%
		2	%	%	%
	EXP	1	%	%	%
		2	%	%	%
RU	D/R	1	%	%	%
		2	%	%	%
	EXP	1	%	%	%
		2	%	%	%
TRIM		EL			
		AI			
		TH			
		RU			
TH-CURVE		1	%	%	%
		2	%	%	%
		3	%	%	%
		4	%	%	%
		5	%	%	%
AI-DIFF		LA-L	%	%	%
		LA-R	%	%	%
		RA-L	%	%	%
		RA-R	%	%	%
FLAPERON		FL→LA	%	%	%
		FL→RA	%	%	%
	FL→EL	%	%	%	
DUAL EL		LE-D	%	%	%
		LE-U	%	%	%
		RE-D	%	%	%
		RE-U	%	%	%
AILVATOR		AI→LE	%	%	%
		AI→RE	%	%	%
C-MIX1		MASTER			
		SLAVE			
		RATE Hi	%	%	%
		RATE Lo	%	%	%
	OFFSET	%	%	%	
C-MIX2		MASTER			
		SLAVE			
		RATE Hi	%	%	%
		RATE Lo	%	%	%
		OFFSET	%	%	%

# SETUP SHEETS

## HELI SETUP SHEET

Use this Heli Setup Sheet to help you keep track of each of your model's Programming Data. Before filling out this Setup Sheet for the first time, make several copies of it to use with multiple models.

MODEL NUMBER		
MODEL NAME		
TYPE	SWASH	

TRAINER INH/MASTER/SLAVE

	CH1	CH2	CH3	CH4	CH5	CH6
REVERSE	NOR/REV	NOR/REV	NOR/REV	NOR/REV	NOR/REV	NOR/REV
CENTER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EPA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- <input type="checkbox"/>	<input type="checkbox"/>
CP-EPA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- <input type="checkbox"/>	<input type="checkbox"/>

### SWASH SETUP

	EL	AI	PI
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STOP WATCH	MIN	
	SEC	
	1/10	
TH-CUT		<input type="checkbox"/>

			F-MODE FN	F-MODE F1	F-MODE F2
EL	D/R	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXP		1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AI	D/R	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXP		1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RU	D/R	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXP		1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TRIM		EL			
		AI			
		TH			
		RU			
TH-CURVE		1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PI-CURVE		1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
REVO-MIX		H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		L	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GYRO		1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C-MIX1		MASTER			
		SLAVE			
		RATE Hi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		RATE Lo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C-MIX2		OFFSET	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		MASTER			
		SLAVE			
		RATE Hi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	RATE Lo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	OFFSET	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



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