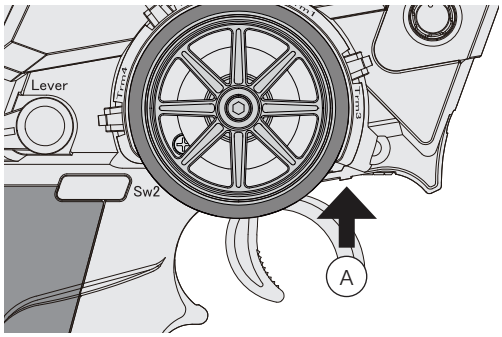
THROTTLE TRIGGER AND STEERING WHEEL SPRING TENSION ADJUSTMENT

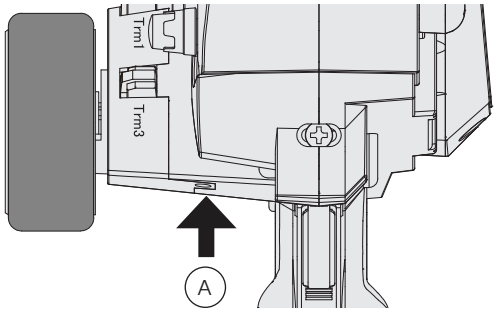
GENERAL

The spring tension of the throttle trigger and steering wheel can be adjusted to best suit the user. Some users may prefer the throttle trigger and/or steering wheel to feel 'firmer' and some users may prefer them to feel 'softer'. It all depends on your personal preference.



To adjust the throttle trigger spring tension, follow the step below:

1) To increase the spring tension of the throttle trigger (firmer), use a 1.5mm hex wrench to turn the Throttle Trigger Tension Adjustment Screw (A) clockwise. To decrease the spring tension of the throttle trigger (looser), turn the Throttle Trigger Tension Adjustment Screw counter-clockwise.



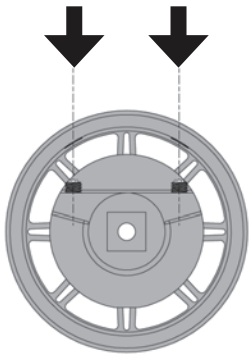
To adjust the steering wheel spring tension, follow the step below:

1) To increase the spring tension of the steering wheel (firmer), use a 1.5mm hex wrench to turn the Steering Wheel Tension Adjustment Screw (A) clockwise. To decrease the spring tension of the steering wheel (looser), turn the Steering Wheel Tension Adjustment Screw counter-clockwise.

STEERING WHEEL TRAVEL ADJUSTMENT

GENERAL

The maximum right and left travel of the steering wheel can be adjusted to best suit the feel of the steering wheel and your driving style. Some drivers prefer to limit the travel of the steering wheel as it makes them feel more 'connected' to their model.



To adjust the maximum travel of the steering wheel, follow the steps below:

1) Remove the foam steering wheel grip from the steering wheel by firmly pulling it straight off.
2) To limit the maximum travel of the steering wheel, use a 1.5mm hex wrench to turn both grub screws (A) clockwise equally the desired amount. To maximize the travel of the steering wheel, turn both grub screws counter-clockwise equally the desired amount.

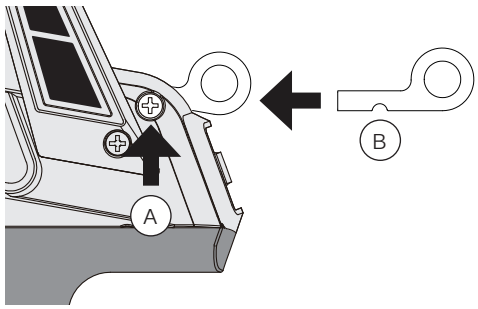
⚠ After making steering wheel travel adjustments, you must use the Variable Rate Adjustment function to ensure your steering servo travel limits are equal. For more information, see the V*ariable Rate Adjustment* section on page XX.

⚠ Limiting the maximum travel of the steering wheel will increase the sensitivity of the steering. We recommend setting negative Exponential to soften the control feel around Neutral. For more information, see the ***Exponential and ARC Adjustment*** section on pages XX through XX.

WRIST STRAP ANCHOR

GENERAL

A wrist strap anchor is included that can be installed onto the transmitter to facilitate the use of a wrist strap (not included).



To install the wrist strap anchor, follow the steps below:

1) Remove the self-tapping screw (A) from the transmitter, using a # 1 philips head screwdriver.
2) Slide the wrist strap anchor into the mounting slot in the back of the transmitter, then reinstall and tighten the self-tapping screw.

⚠ When installing the wrist strap anchor, note its orientation. The U-Shaped groove in the base of the wrist strap anchor should be pointing down.

TOP SCREEN AND TELEMETRY SCREEN OVERVIEW

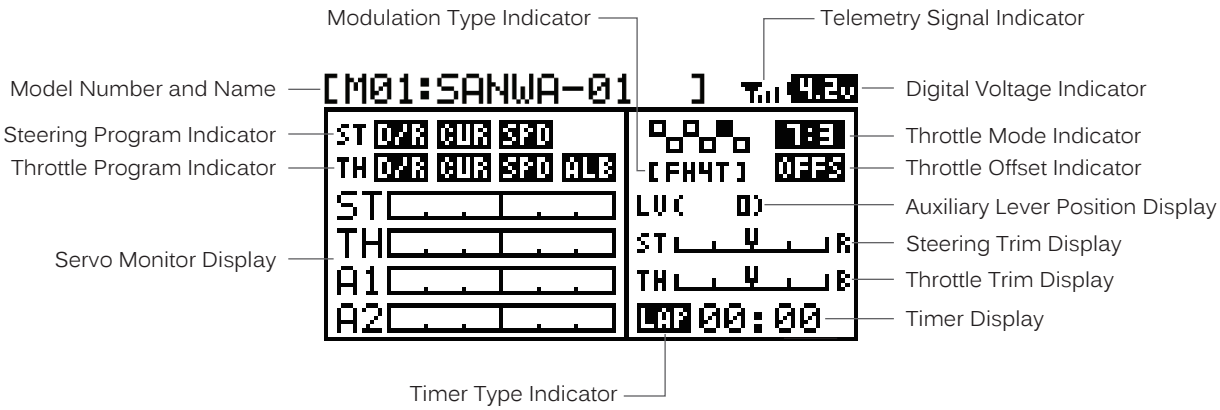
GENERAL

Use the information in this section to familiarize yourself with the layout and different indicators and displays that comprise the TOP screen and TELEMETRY screen.

The TOP screen will always be displayed when you turn the transmitter ON, regardless of which screen was last displayed.

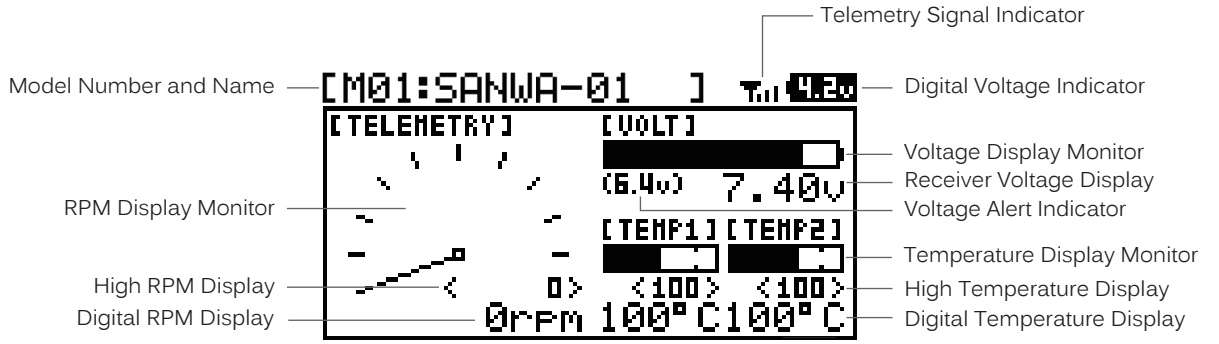
TOP Screen:

The TOP screen is displayed when you turn the transmitter ON. The TOP screen displays all pertinent information, such as the Model Name, Modulation Type, Timer, Servo Monitor and much more.



TELEMETRY Screen:

The TELEMETRY screen displays all pertinent telemetry information, such as RPM, Temperature and Receiver Voltage. To display the TELEMETRY screen, from the TOP screen scroll DOWN using the Push-Button Rotary Dial.



Full telemetry support requires the use of an Airtronics 2.4GHz FH4T telemetry-capable surface receiver, such as the RX-461 or RX-462 (available separately). The included RX-472 receiver can send telemetry data for the voltage of the receiver battery pack only, unless used with the Airtronics Super Vortex ZERO ESC (available separately), plugged into the BATT/SSL slot of the included RX-472 receiver.

Auxiliary Lever Position Display: Displays the current position of the Auxiliary Lever.

Digital RPM Display: Displays the current RPM from the RPM Sensor in digital format.

Digital Temperature Display: Displays the current temperature from the TEMP1 and TEMP2 Temperature Sensors in digital format.

Digital Voltage Indicator: Indicates the current Voltage of the transmitter batteries.

High RPM Display: Displays the last highest RPM value. This value can be Reset. For more information, see the Telemetry Clear Function section on page XX.

High Temperature Display: Displays the last highest Temperature value. These values can be Reset. For more information, see the Telemetry Clear Function section on page XX.

Modulation Type Indicator: Indicates the current Modulation Type that the transmitter is set to.

Model Number and Name: Displays the Model Number and Model Name of the currently selected model.

TOP SCREEN AND TELEMETRY SCREEN OVERVIEW, CONTINUED.... GENERAL

Receiver Voltage Display: Displays the current voltage of the receiver battery.

RPM Display Monitor: Displays the current RPM from the RPM Sensor in graphical format.

Servo Monitor Display: Displays the output levels of the four different channels in bar graph form, allowing you to monitor servo operation in a virtual manner.

Steering Program Indicator: Indicates up to four different programming options that are currently programmed to the Steering channel. The Steering Program Indicator will only be displayed if a Steering channel Programming Value is programmed.

Steering Trim Display: Displays the current position of the Steering Trim Switch.

Telemetry Signal Indicator: Indicates the current signal strength of the Telemetry connection between the transmitter and receiver. The Telemetry Signal Indicator will only be displayed when the receiver is turned ON and there is a Telemetry connection Active.

Temperature Display Monitor: Displays the current TEMP1 and TEMP2 temperatures in bar graph format.

Throttle Mode Indicator: Indicates the current Throttle Mode type.

Throttle Offset Indicator: Indicates that the Throttle Offset function is programmed. The Throttle Offset Indicator will only be displayed if a Throttle Offset percentage value is programmed.

Throttle Program Indicator: Indicates up to four different programming options that are currently programmed to the Throttle channel. The Throttle Program Indicator will only be displayed if a Throttle channel Programming Value is programmed.

Throttle Trim Display: Displays the current position of the Throttle Trim Switch.

Timer Display: Displays the time of the currently selected Timer.

Timer Type Indicator: Indicates the current Timer Type selected, either LAP or INT (Interval).

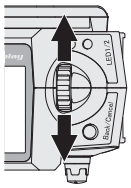
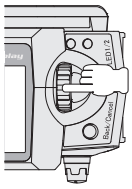
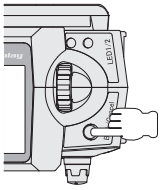
Voltage Alert Indicator: Indicates the currently programmed Voltage value that the receiver Voltage Alert alarm will sound at.

Voltage Display Monitor: Displays the current receiver battery voltage in bar graph format.

PROGRAMMING KEYS OVERVIEW AND FUNCTIONS GENERAL

The MT-4S transmitter features a Push-Button Rotary Dial and a BACK/CANCEL key that are used to facilitate transmitter programming. This section summarizes the functions of the Push-Button Rotary Dial and the BACK/CANCEL key.

PRO TIP: While navigating Programming Menus and changing Programming Values, keep the following in mind: to choose an option to program, scroll UP or DOWN to highlight the desired option. Press the ENTER key and the highlighted option will flash, indicating the Programming Value can be changed. Once you've changed the Programming Value, press the ENTER key again or press the BACK/CANCEL key and the highlighted option will stop flashing, indicating you can scroll UP or DOWN to highlight another programming option.

PROGRAMMING KEY	NAME	FUNCTION
	▲▼ Push-Button Rotary Dial (Scroll UP/DOWN)	Scrolls between TOP and TELEMETRY screens. Scrolls the Programming Cursor RIGHT or UP and LEFT or DOWN. Increases or Decreases Programming Values.
	Push-Button Rotary Dial (Push ENTER)	Opens the selected menu or programming option. Press and HOLD to reset the Selected programming option to its default value.
	BACK/CANCEL Key	Returns to the previous menu. Press and HOLD to return to the TOP screen.

BINDING THE TRANSMITTER AND RECEIVER

GENERAL

The Binding function allows you to 'Bind' the transmitter and receiver pair. When new, it is necessary to pair the transmitter and receiver to prevent interference from transmitters operated by other users. This operation is referred to as 'Binding'. Once the Binding process is complete, the setting is remembered even when the transmitter and receiver are turned OFF. Therefore, this procedure usually only needs to be done once.

⚠ Under some circumstances, the receiver may not operate after turning the transmitter and receiver ON. If this occurs, perform the Binding process again.

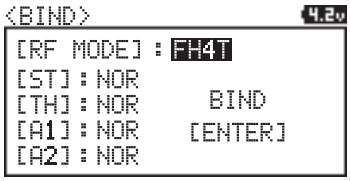
IMPORTANT: This section details Binding the RX-472 4-Channel 2.4GHz FH4T Super Response receiver with the Servo Operating Mode set to Normal mode. If you are Binding an FH2 or FH3 receiver, or if you prefer to change the Servo Operating Mode, see the *BIND Menu* section on pages XX through XX.

⚠ Before beginning the Binding process, connect your servos and receiver battery pack to the receiver. For more information, see the *Receiver Connections and Mounting* section on page XX. The transmitter and the receiver should be turned OFF.

Transmitter and Receiver Binding:

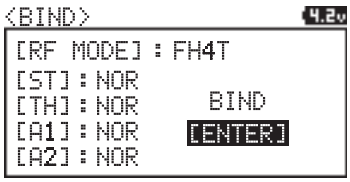
1) Turn the transmitter ON. The TOP screen will be displayed. Press the ENTER key (Push-Button Rotary Dial) to open the Programming Menu list, then scroll UP or DOWN to highlight the SYSTEM menu.

2) Press the ENTER key to open the SYSTEM menu, then scroll DOWN to highlight the BIND menu. Press the ENTER key to open the BIND menu.

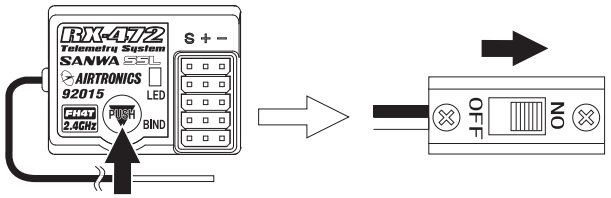


⚠ Verify that the Modulation is set to [RF MODE]: FH4T is displayed an that the Servo Operating Mode for each channel is set to NOR. If it isn't, change the Modulation Type to FH4T. If you need to change any of these settings, see the *BIND Menu* section on pages XX through XX.

3) Scroll UP or DOWN to highlight the [ENTER] command. Do not press the ENTER key yet.

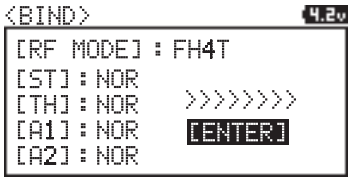


4) While holding down the Bind Button on the receiver, turn the receiver ON. The Bind LED on the receiver will flash slowly. After approximately 2 seconds, release the Bind Button. The Bind LED on the receiver will continue to flash slowly.



⚠ You must complete step 5 below within 10 seconds or the Bind LED will go out, indicating the receiver has timed out. If this occurs, turn the receiver OFF, then repeat step 4.

5) Press the ENTER key. The [ENTER] command will begin to flash and the Bind LED on the receiver will flash rapidly, then go out.



6) After the Bind LED on the receiver goes out, press the ENTER key a second time. The Bind LED on the receiver will illuminate solid blue and LED 2 on the transmitter will go out, indicating that the Binding procedure is complete and a Telemetry connection has been made.

7) Move the steering wheel and throttle trigger to verify that the servos are operating normally, then press and HOLD the Back/Cancel key to return to the TOP screen.

⚠ When the Binding procedure is successful, the Bind LED on the receiver and LED 1 on the transmitter will illuminate solid blue. If the Bind LED on the receiver is flashing rapidly or is not illuminated at all, the transmitter and receiver are not paired. In this case, turn both the transmitter and receiver OFF, then repeat the Binding procedure again.

OVERVIEW

To access the various Programming Menus, turn the transmitter ON, then press the ENTER key (Push-Button Rotary Dial). A list of Programming Menus will be displayed along the right side of the screen and the last Programming Menu when the transmitter was turned OFF will be highlighted. The currently highlighted Programming Menu will be displayed in the background.

The following Programming Menus are available by scrolling UP or DOWN using the Push-Button Rotary Dial:

PROGRAMMING MENUS

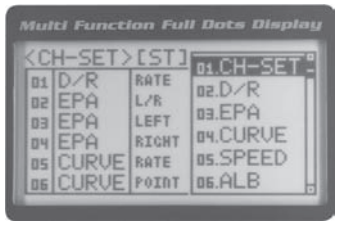
MENU	NAME	DESCRIPTION	PAGE #
01.CH-SET	Channel Set	Change Common Programming Options in One Convenient Location	PG. 19
02.D/R	Dual Rate	Adjust Channel Dual Rates	PG. 20
03.EPA	End Point Adjustment	Adjust Channel End Points	PG. 22
04.CURVE	Curve	Adjust Channel Exponential or Adjustable Rate Control (ARC)	PG. 23
05.SPEED	Servo Speed	Slow Down Servo Speed in the Forward and Return to Neutral Direc-	PG. 25
06.ALB	Anti-Lock Braking	tions	PG. 27
07.OFFSET	Throttle Offset	Program the Anti-Lock Braking Function	PG. 28
08.AUX1	Auxiliary 1	Program the Throttle Offset Position	PG. 29
09.AUX2	Auxiliary 2	Choose and Adjust Auxiliary 1 Channel 3 Functions and Programming	PG. 36
10.TRIM	Servo Trim	Choose and Adjust Auxiliary 2 Channel 4 Functions and Programming	PG. 42
11.REV	Servo Reversing	Adjust Servo Trim and Servo Sub-Trim	PG. 44
12.TIMER	Lap and Interval Timers	Change the Direction that the Servos Travel	PG. 44
13.LAP	Lap Times	Program the Lap Timer and the Interval Timer	PG. 47
14.F/S	Fail Safe	Displays Current, Past and Best Lap Times	PG. 48
15.LOGGER	Telemetry Logging	Program Fail Safe Settings	PG. 49
16.SYSTEM	System Menu	View Logs of Temperature, Voltage and RPM Telemetry Data	PG. 51

Access the System Menu

01.CH-SET (CHANNEL SET)

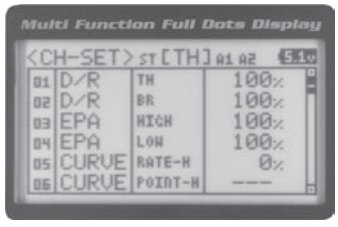
The Channel Set function allows you to make programming changes to each of the four channels without the need to enter each Programming Menu separately. Essentially, the Channel Set function encompasses the most common programming options in one convenient location. For example, you can make all of your desired programming changes, such as End Point Adjustment, Exponential, Servo Speed, Fail Safe settings, etc., for each channel, all from within the same menu.

⚠ This section details how to use the Channel Set function. For information about programming each of the Programming Menus within the CH-SET menu, refer to the specific Programming Menu sections on the pages shown in the table above.



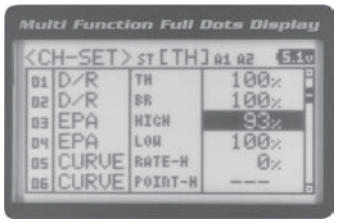
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the CH-SET menu, then press the ENTER key. The CH-SET menu will be displayed and the cursor will default to [ST].



3) Scroll DOWN to move the cursor to the channel you would like to make Programming Value changes to. Choose from <CH-SET> [ST] (Steering), <CH-SET> [TH] (Throttle), <CH-SET> [A1] (Auxiliary 1) or <CH-SET> [A2] (Auxiliary 2).

01.CH-SET (CHANNEL SET), CONTINUED....



4) Press the ENTER key to highlight the Programming Value in the upper right corner.

5) Scroll UP or DOWN to highlight the Programming Value you would like to change, then press the ENTER key to select it. The highlighted Programming Value will

6) After changing the desired Programming Value, press the ENTER key or the Back/Cancel key and the highlighted option will stop flashing, indicating you can scroll UP or DOWN to highlight another programming option. To change to another channel, press the Back/Cancel key, then scroll UP or DOWN to select the desired channel. Repeat steps 4 and 5 above to change the desired Programming Values for that channel.

01.D/R - RATE	01.D/R - TH	01.EPA - HIGH	01.EPA - HIGH
02.EPA - L/R	02.D/R - BR	02.EPA - LOW	02.EPA - LOW
03.EPA - LEFT	03.EPA - HIGH	03.CURVE - RATE	03.CURVE - RATE
04.EPA - RIGHT	04.EPA - LOW	04.CURVE - POINT	04.CURVE - POINT
05.CURVE - RATE	05.CURVE - RATE-H	05.CURVE	05.CURVE
06.CURVE - POINT	06.CURVE - POINT-H	06.CURVE	06.CURVE
07.SPEED - FORWARD	07.CURVE - RATE-B	07.SPEED - FORWARD	07.SPEED - FORWARD
08.SPEED - RETURN	08.CURVE - RATE-H	08.SPEED - RETURN	08.SPEED - RETURN
09.TRIM	09.SPEED - FORWARD	09.TRIM	09.TRIM
10.SUB-T	10.SPEED - RETURN	10.SUB-T	10.SUB-T
11.REV - NOR/REV	11.ALB - POINT	11.REV - NOR/REV	11.REV - NOR/REV
12.F/S	12.ALB - STROKE		
	13.ALB - LAG		
	14.ALB - RELEASE		
	15.ALB - HOLD		
	16.TRIM		
	17.SUB-T		
	18.REV - NOR/REV		

02.D/R (DUAL RATE)

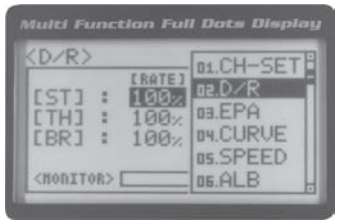
The Dual Rate function allows you to change the control authority of the Steering, Throttle High Side and Throttle Brake Side by changing the amount of servo travel relative to control input. For example, by increasing the Steering Dual Rate, you can make the steering servo travel more which might prevent your model from pushing during turns. If your model

IMPORTANT: Prior to programming the Dual Rate function, you should adjust the maximum Left and Right (or High and Low) End Points, using the End Point Adjustment function. For more information, see the End Point Adjustment section on pages 22 and 23.

⚠ Dual Rate is a percentage of End Point Adjustment. For example, if you set the Steering Dual Rate percentage value to 100%, the steering will travel the same amount as defined by your End Point Adjustment programming. If you

02.D/R (DUAL RATE), CONTINUED....

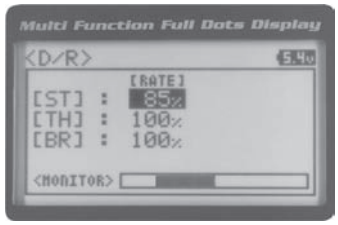
PRO TIP: Use the Servo Monitor at the bottom of the Dual Rate menu to see your programming changes in virtual real



Adjusting the Steering Dual Rate Percentage Value

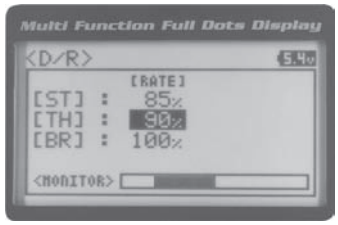
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the D/R menu, then press the ENTER key. The D/R



3) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Steering Dual Rate percentage value. When the Steering Dual Rate percentage value is decreased, steering servo travel is decreased. When the Steering Dual Rate per-

D/R ST RATE setting range is 0% to 100%. The default setting is 100%.

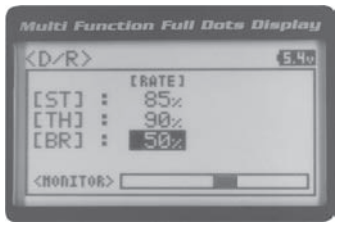


Adjusting the Throttle Dual Rate Percentage Value

1) From within the D/R menu, scroll UP or DOWN to highlight [TH] : RATE 100%.

2) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Throttle Dual Rate percentage value. When the Throttle Dual Rate percentage value is decreased, Throttle High side servo travel is decreased. When the Throttle Dual Rate

D/R TH RATE setting range is 0% to 100%. The default setting is 100%.



Adjusting the Brake Dual Rate Percentage Value

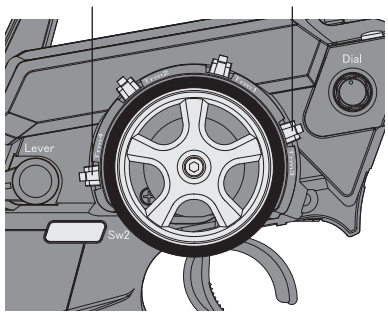
1) From within the D/R menu, scroll UP or DOWN to highlight [BR] : RATE 100%.

2) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Brake Dual Rate percentage value. When the Brake Dual Rate percentage value is decreased, Throttle Brake side servo travel is decreased. When the Brake Dual Rate

D/R BR RATE setting range is 0% to 100%. The default setting is 100%.

Controlling the Dual Rate Function

1) By assigning the Steering, Throttle and Brake Dual Rate programming functions to one or more of the Trim Switches, Auxiliary Lever or Dial Knob, these functions can be adjusted while driving without accessing the Programming Menu. In addition, these functions can be toggled OFF and ON by assigning them to one or more Push-Button Switches. For more information,



⚠ In the default configuration, the Steering and Throttle Dual Rate program-

03.EPA (END POINT ADJUSTMENT)

The End Point Adjustment function allows you to adjust servo travel in each direction. This makes it possible to balance servo travel in both directions and set the maximum desired amount of servo travel. For example, on a gas-powered model, if you pull the throttle trigger and the carburetor does not open completely, you can increase the Throttle High End Point Adjustment so that the carburetor opens completely. Another example is with steering. If your model turns sharper to the right than to the left, you can increase the Steering Left End Point Adjustment to balance the steering. The End Point Adjustment function can be adjusted for the Steering channel (Right and Left), the Throttle channel (Throttle High

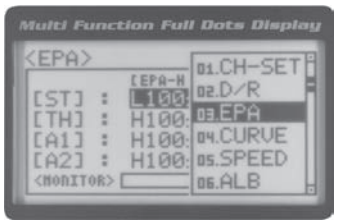
WARNING End Point Adjustment percentage values should not be increased to the point where your linkages and servos bind when moved all the way to the right or left. Binding will cause the servos to 'buzz', resulting in a quicker loss of battery power and eventual damage to the servos.

PRO TIP: Use the Servo Monitor at the bottom of the End Point Adjustment menu to see your programming changes in virtual real time.

Before making End Point Adjustments, the servo horn needs to be centered. Install the servo horn onto the servo, making sure it's as close to being centered as possible, then use the Servo Sub-Trim function to center the servo

Adjusting the Steering End Point Adjustment Percentage Values

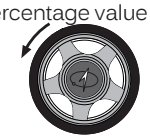
Your model's turning radius can differ from left to right because of variations in linkage, suspension balance, tire diameter, or weight distribution. In such cases, Left Steering servo travel and Right Steering servo travel are adjustable using the

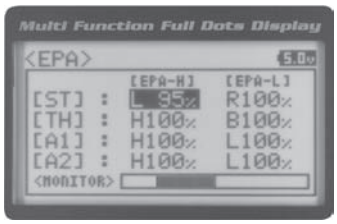


1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the EPA menu, then press the ENTER key. The

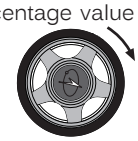
3) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Steering Left End Point Adjustment percentage value. Increasing the percentage value will increase steering servo travel in that direction and decreasing the percentage value

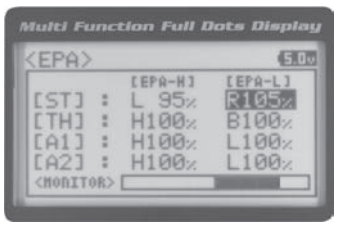




EPA ST L setting range is 0% to 150%. The default setting is 100%.

4) From within the EPA menu, scroll DOWN to highlight [ST] : EPA R100%. Press the ENTER key, then scroll UP or DOWN to increase or decrease the Steering Right End Point Adjustment percentage value. Increasing the percentage value will increase steering servo travel in that direction and decreasing





EPA ST R setting range is 0% to 150%. The default setting is 100%.

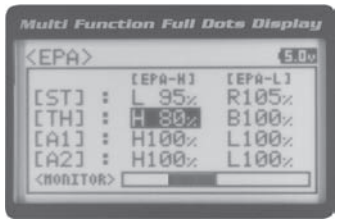
Steering EPA L/R can be adjusted from within the Channel Set menu. This option changes both Left and Right

Adjusting the Throttle End Point Adjustment Percentage Values

Your model's carburetor may not open completely, or it may open too much and cause the throttle servo to bind. If you're using an Electronic Speed Control, the Electronic Speed Control may not command full power, or the brake may not

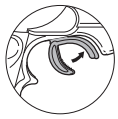
1) From within the EPA menu, scroll UP or DOWN to highlight [TH] : EPA H 100%.

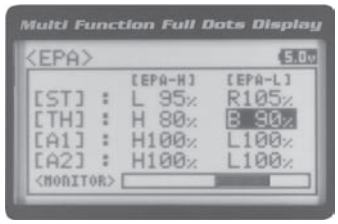
2) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Throttle High End Point Adjustment percentage value. Increasing the percentage value will increase Throttle High servo travel in that direction and decreasing



EPA TH H setting range is 0% to 150%. The default setting is 100%.

3) From within the EPA menu, scroll DOWN to [TH] : EPA B100%. Press the ENTER key, then scroll UP or DOWN to increase or decrease the Throttle Brake End Point Adjustment percentage value. Increasing the percentage value will increase Throttle Brake servo travel in that direction and decreasing





EPA TH B setting range is 0% to 150%. The default setting is 100%.

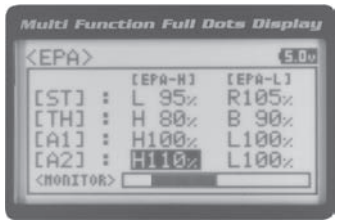
⚠ If you're using an Electronic Speed Control, the Throttle High and the Throttle Brake End Point Adjustment percentage values are both generally set to 100%, although the Throttle High direction may need to be increased to

Adjusting the Auxiliary 1 Channel 3 and Auxiliary 2 Channel 4 End Point Adjustment Percentage Values

Auxiliary 1 Channel 3 and Auxiliary 2 Channel 4 can be used for a number of different uses. One of the more common uses would be for the reverse function in a glow-powered monster truck. Often, the transmission only requires a small amount of throw, but the servo binds because of too much servo travel. In such a case, Auxiliary High servo travel and

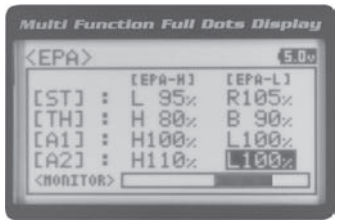
1) From within the EPA menu, scroll UP or DOWN to highlight [A1] : EPA H 100% or [A2] : EPA H 100%.

2) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Auxiliary High End Point Adjustment percentage value. Increasing the percentage value will increase auxiliary servo travel in that direction and decreasing the



EPA A1 H and EPA A2 H setting range is 0% to 150%. The default setting is 100%.

3) From within the EPA menu, scroll UP or DOWN to highlight [A1] : EPA L100% or [A2] : EPA L100%. Press the ENTER key, then scroll UP or DOWN to increase or decrease the Auxiliary Low End Point Adjustment percentage value. Increasing the percentage value will increase auxiliary servo travel in that direction and



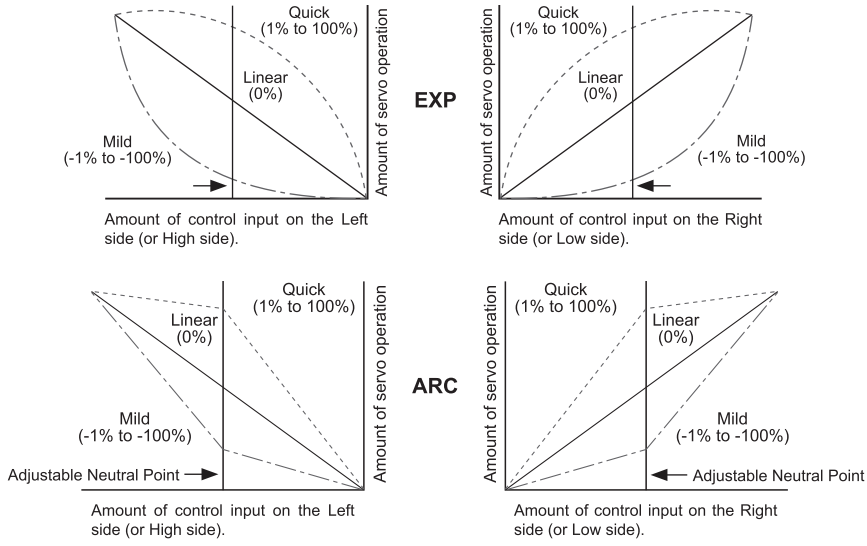
EPA A1 L and EPA A2 L setting range is 0% to 150%. The default setting is 100%.

04.CURVE (EXPONENTIAL AND ARC ADJUSTMENT)

The Exponential and Adjustable Rate Control (ARC) functions allow you to vary the amount of servo travel in relation to the movement of the steering wheel, throttle trigger and auxiliary lever near the Neutral positions to change the way those functions react to control movement. Decreasing the Exponential or Adjustable Rate Control percentage values will soften the control feel around Neutral and increasing the Exponential or Adjustable Rate Control percentage values will heighten the control feel around Neutral. Using a lower negative value allows for smoother control. Using a higher positive value may result in more 'twitchy' control response. The Exponential and Adjustable Rate Control functions can be adjusted for the Steering channel, the Throttle channel (Throttle High and Throttle Brake), Auxiliary 1 Channel 3 and

04.CURVE (EXPONENTIAL AND ARC ADJUSTMENT, CONTINUED...)

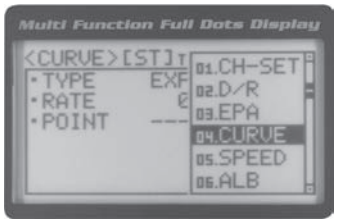
The Exponential and Adjustable Rate Control functions work the same, except the Exponential Rate percentage value is programmed from a fixed Neutral Point of 50% and the Adjustable Rate Control Rate percentage value is



Choosing the Channel

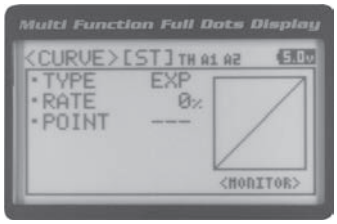
Exponential or Adjustable Rate Control percentage values can be adjusted from Mild through Linear to Quick to allow you to set the most effective control response for your model. For example, if your model over-steers, reduce the Steering Exponential or Adjustable Rate Control percentage value, and if your model under-steers, increase the Steering Exponential or Adjustable Rate Control percentage value. As another example, reduce the Throttle Exponential or Adjustable Rate Control percentage value on a slippery track or with a model that has a higher-torque motor or engine, and increase the

1) From the TOP screen, press the ENTER key to open the Programming Menu list.



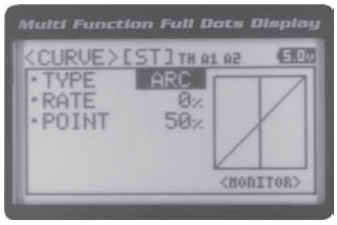
2) Scroll UP or DOWN to highlight the CURVE menu, then press the ENTER key. The

3) Scroll DOWN to move the cursor to the channel you would like to make Programming Value changes to. Choose from <CURVE> [ST] (Steering), <CURVE> [TH]



Choosing the Curve Type

1) Press the ENTER key to highlight TYPE EXP. Press the ENTER key a second time, then scroll UP or DOWN to choose the desired Curve Type. If you are programming the Curve function for the Throttle channel, you have the option of adjusting the

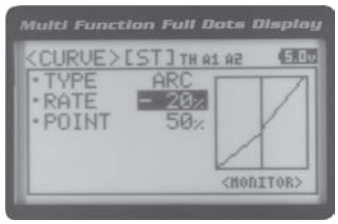


CURVE TYPE setting range is EXP and ARC. The default setting is EXP.

04.CURVE (EXPONENTIAL AND ARC ADJUSTMENT, CONTINUED....)

Adjusting the Rate Percentage Value

1) From within the CURVE menu, scroll DOWN to highlight RATE 0%. Press the ENTER key, then scroll UP or DOWN to increase or decrease the Rate percentage value. Using a negative Rate percentage value will soften the control feel around



CURVE RATE setting range is -100% (Mild) to 100% (Quick). The default setting is 0%

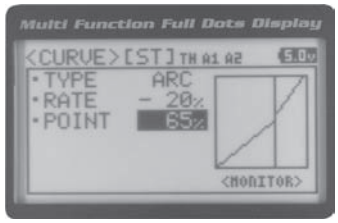
⚠ Changes to the Rate percentage value affects both the channel High side and Low side equally, except for the

Adjusting the Point Percentage Value

The Point percentage value determines the Neutral Point where the Rate percentage value begins. For example, you

⚠

1) From within the CURVE menu, scroll DOWN to highlight POINT 50%. Press the ENTER key, then scroll UP or DOWN to increase or decrease the Point percentage value. Increasing the Point percentage value will shift the Neutral Point to one side of center and decreasing the Point percentage value will shift the Neutral Point to



CURVE POINT setting range is 5% to 95%. The default setting is 50% (Centered).

Controlling the Curve Function

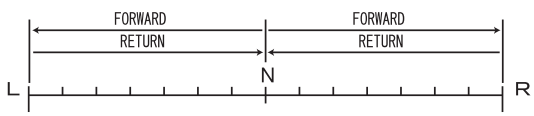
1) By assigning the Steering, Throttle High and Throttle Brake Rate and Point programming functions to one or more of the Trim Switches, Auxiliary Lever or Dial Knob, these functions can be adjusted while driving without accessing the Programming Menu. In addition, the Steering Curve and Throttle Curve functions can be Toggled OFF and ON by as-

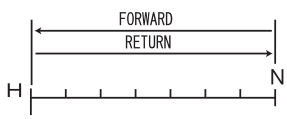
⚠

05.SPEED (SERVO SPEED)

The Servo Speed function allows you to slow the transit speed of the Steering, Throttle, Auxiliary 1 and Auxiliary 2 servos. Servo transit speed can be slowed in both the Forward and the Return to Neutral directions independently. When driving your model, proper steering and throttle control are vital. For example, lowering the transit speed of the steering servo can help to limit excessive steering, which will enable you to achieve smoother cornering. In addition, lowering the

PRO TIP: Use the Servo Monitor at the bottom of the Speed menu to see your programming changes in virtual real time.





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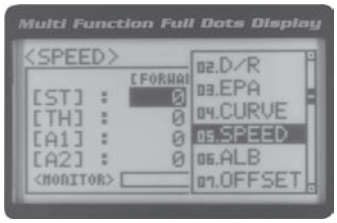
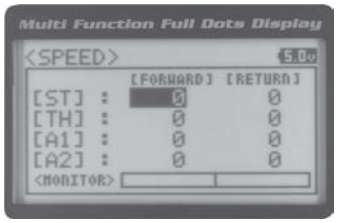
05.SPEED (SERVO SPEED), CONTINUED....



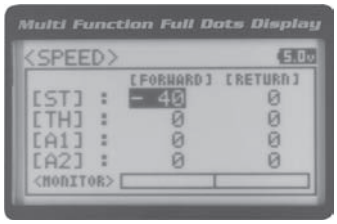
Adjusting the Forward Speed Value

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the SPEED menu, then press the ENTER key. The



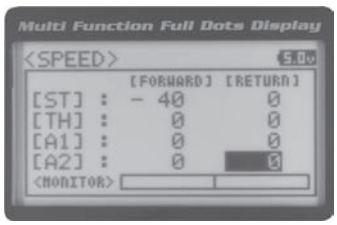
3) Scroll UP or DOWN to highlight the desired channel you would like to change the Forward Speed value for. Choose from either [ST] : FORWARD 0 (Steering), [TH] : FORWARD 0 (Throttle), [A1] : FORWARD 0 (Auxiliary 1) or [A2] : FORWARD 0



4) Press the ENTER key, then scroll DOWN to decrease servo Speed in the Forward direction. Decreasing the Forward Speed value will cause the servo transit time

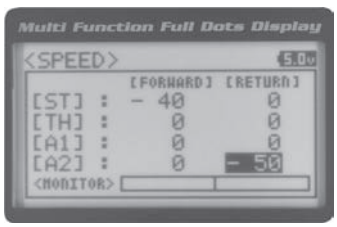
SPEED FORWARD setting range is -100 to 0. The default setting is 0 (Normal

IMPORTANT: Throttle Servo Speed affects only the Throttle High Side. The Throttle Brake Side is unaffected. See Throttle diagram on previous page.



Adjusting the Return to Neutral Speed Value

1) From within the SPEED menu, scroll UP or DOWN to highlight the desired channel you would like to change the Return to Neutral Speed value for. Choose from either [ST] : RETURN 0 (Steering), [TH] : RETURN 0 (Throttle), [A1] : RETURN 0



2) Press the ENTER key, then scroll DOWN to decrease servo Speed in the Return to Neutral direction. Decreasing the Return to Neutral Speed value will cause the

SPEED RETURN setting range is -100 to 0. The default setting is 0 (Normal Speed).

Controlling the Servo Speed Function

1) By assigning the Steering and Throttle Forward and Return to Neutral Speed programming functions to one or more of the Trim Switches, Auxiliary Lever or Dial Knob, these functions can be adjusted while driving without accessing the Programming Menu. In addition, the Steering Speed and Throttle Speed functions can be Toggled OFF and ON by

06.ALB (ANTI-LOCK BRAKING)

The Anti-Lock Braking function makes it possible to achieve stable braking even on a slippery surface. With stable braking, your model is better able to trace an exact line under braking. The Anti-Lock Braking function also enables you to set different braking characteristics depending on your particular model. Different Anti-Lock Braking function options can

PRO TIP: Use the Servo Monitor at the bottom of the ALB menu to see your programming changes in virtual real time.

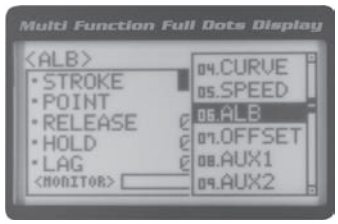
The Anti-Lock Braking function operates only when the throttle trigger is moved from Neutral to the Brake side. Set the hardest braking you can obtain from your model by carefully setting the Anti-Lock Braking function at the point

Adjusting the Stroke Percentage Value

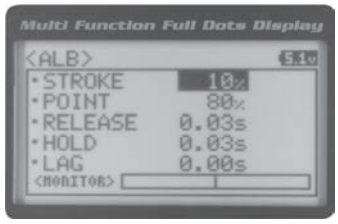
The Stroke percentage value determines the amount of Brake that's applied automatically when the Anti-Lock Braking function Activates. When set to OFF, the Anti-Lock Braking function will not work. A percentage value of 1% or greater

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the ALB menu, then press the ENTER key. The



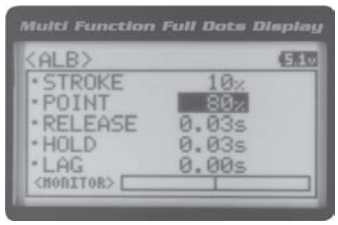
3) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Stroke percentage value. Increasing the Stroke percentage value will increase throttle servo travel in the Brake direction and decreasing the Stroke percentage value



ALB STROKE setting range is OFF to 100%. The default setting is OFF.

Adjusting the Point Percentage Value

1) From within the ALB menu, scroll DOWN to highlight POINT 80%. Press the ENTER key, then scroll UP or DOWN to increase or decrease the Point percentage value. Increasing the Point percentage value will cause the Anti-Lock Braking function to Activate later and decreasing the Point percentage value will cause



ALB POINT setting range is 5% to 100%. The default setting is 80%.

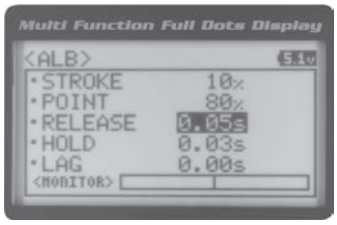
Adjusting the Release and Hold Values

The Release and Hold values determine the speed at which the brake pulsates. By adjusting the Release and Hold values, you can make the brake pulsate faster or slower. The Release value determines how quickly the Brake moves from Neutral to the percentage value determined by the Stroke setting and the Hold value determines how quickly the Brake

We recommend using equal Release and Hold values, although different values can be used to fine-tune how

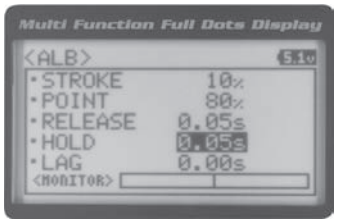
Adjusting the Release and Hold Values, Continued....

1) From within the ALB menu, scroll DOWN to highlight RELEASE 0.03s. Press the ENTER key, then scroll UP or DOWN to increase or decrease the Release value. Increasing the Release value will cause the Brake to move from Neutral to the Stroke setting slower and decreasing the Release value will cause the Brake to



ALB RELEASE setting range is 0.01s to 1.00s. The default setting is 0.03s.

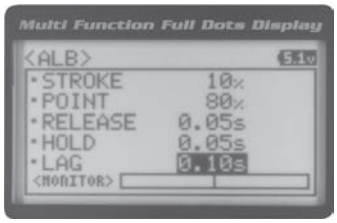
2) From within the ALB menu, scroll DOWN to highlight HOLD 0.03s. Press the ENTER key, then scroll UP or DOWN to increase or decrease the Hold value. Increasing the Hold value will cause the Brake to move from the Stroke setting to the Neutral position slower and decreasing the Hold value will cause the Brake to move from



ALB HOLD setting range is 0.01s to 1.00s. The default setting is 0.03s.

Adjusting the Lag Value

1) From within the ALB menu, scroll DOWN to highlight LAG 0.00s. Press the ENTER key, then scroll UP and DOWN to increase or decrease the Lag value. Increasing the Lag value increases the delay time to Activate the Anti-Lock Braking function after reaching the Point setting and decreasing the Lag value decreases



ALB LAG setting range is 0.00s to 1.00s. The default setting is 0.00s.

Controlling the Anti-Lock Braking Function

1) By assigning the Anti-Lock Braking Point, Stroke, Lag, Hold and Release programming functions to one or more of the Trim Switches, Auxiliary Lever or Dial Knob, these functions can be adjusted while driving without accessing the Programming Menu. In addition, the Anti-Lock Braking function can be Toggled OFF and ON by assigning it to one of

07.OFFSET (THROTTLE OFFSET)

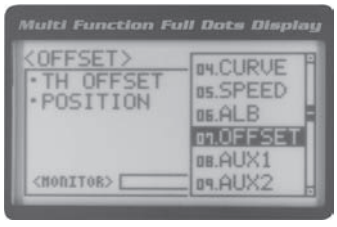
The Throttle Offset function allows you to shift the Neutral position of the throttle servo, either toward the High Side or the Brake Side. When used in conjunction with a Push-Button Switch, this function can be used several different ways. For example, if you're driving a glow- or gas-powered model, you can program the Throttle Offset function to shut down your

PRO TIP: Use the Servo Monitor at the bottom of the OFFSET menu to see your programming changes in virtual real

Turning the Throttle Offset Function ON or OFF

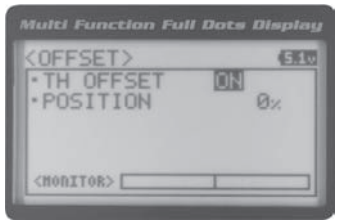
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the OFFSET menu, then press the ENTER key. The



Turning the Throttle Offset Function ON or OFF, Continued....

3) Press the ENTER key, then scroll UP or DOWN to change the Throttle Offset value

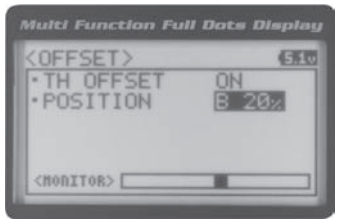


OFFSET TH OFFSET setting range is OFF to ON. The default setting is OFF.

⚠ Although the Throttle Offset value is set to ON, the Throttle Offset function will not operate until a Position percent-

Adjusting the Throttle Offset Position Percentage Value

1) From within the OFFSET menu, scroll DOWN to highlight POSITION 0%. Press the ENTER key, then scroll UP to shift the throttle servo Neutral position the desired amount toward the Throttle High Side or scroll DOWN to shift the throttle servo



OFFSET POSITION setting range is H100% to B100%. The default setting is 0%.

⚠ When a Position percentage value is programmed and the Throttle Offset function is Active, LED 1 (Blue) will flash

Controlling the Throttle Offset Function

1) By assigning the Throttle Offset Position programming function to one of the Trim Switches, Auxiliary Lever or Dial Knob, this function can be adjusted while driving without accessing the Programming Menu. In addition, the Throttle Offset function can be Toggled OFF and ON by assigning it to one of the Push-Button Switches. For more information,

08.AUX1 (AUXILIARY 1 PROGRAMMING)

The Auxiliary 1 Programming function allows you to program the five different Auxiliary Programming functions that are

S_AUX	Step Auxiliary	Controls Step Values That the Auxiliary Servo Travels
P_AUX	Point Auxiliary	Controls Specific Points That the Auxiliary Servo Travels
4WS	Four Wheel Steering Mixing	Controls Four Wheel Steering Options
MOA	Motor On Axle Dual Throttle Mixing	Controls Dual Throttle Options

IMPORTANT: Prior to programming an Auxiliary 1 Programming function you must first choose the desired Auxiliary Programming function in the SYSTEM AUX TYPE menu. Only one Auxiliary 1 Programming function can be Active at any given time.

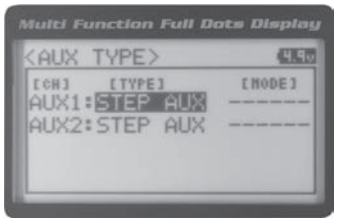
STEP (STEP AUXILIARY)

The Step Auxiliary function allows you to program the Auxiliary 1 servo to move a defined amount when toggled ON and OFF using a Push-Button Switch. For example, if you assign Auxiliary 1 to a Push-Button Switch, then program the Step Auxiliary percentage value to 50%, the Auxiliary 1 servo will travel from the Neutral position to 50% of travel when the Push-Button Switch is pressed. Press the Push-Button switch a second time and the Auxiliary 1 servo will travel back to the Neutral position. This is useful to control simple ON/OFF functions, such as a reverse servo for a transmission or a

⚠ The Step Auxiliary Position value can be adjusted while you're driving using one of the four Trim Switches, the Rotary Dial or the Auxiliary Lever. The Step Auxiliary function can be toggled OFF and ON by assigning Auxiliary 1

STEP (STEP AUXILIARY), CONTINUED....

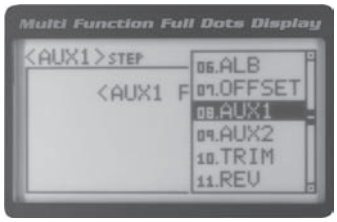
Choosing the Step Auxiliary Function



2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.

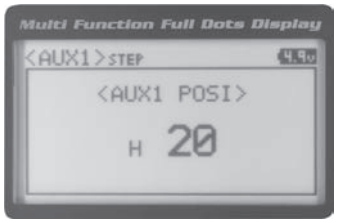
3) Press the ENTER key, then scroll UP or DOWN to choose the AUX 1: STEP AUX

Adjusting the Step Auxiliary Value



1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the AUX1 menu, then press the ENTER key. The



3) Press the ENTER key, then scroll UP or DOWN to change the Auxiliary 1 Position value. Increasing the value toward the High side (H) or Low side (L) will cause the Auxiliary 1 servo to travel to that specific position when you Activate the Auxil-

AUX1 STEP AUX1 POSI setting range is H100 to L100. The default setting is 0. This value is a percentage of Auxiliary 1 servo travel.

Controlling the Step Auxiliary Function

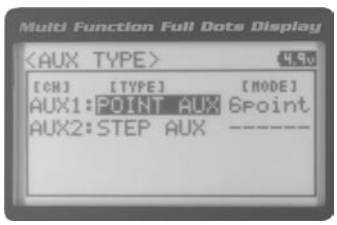
1) In the default configuration, Auxiliary 1 is controlled by the Rotary Dial which allows the Step Auxiliary function to be adjusted while driving without accessing the Programming Menu. Turn the Rotary Dial clockwise to increase the Position High Side value and turn the Rotary Dial counter-clockwise to increase the Position Low Side value. In addition, Auxiliary 1 can be assigned to one of the four Trim Switches or the Auxiliary Lever. The Step Auxiliary function can be toggled OFF and ON by assigning Auxiliary 1 to one of the two Push-Button Switches. This allows you to control

POINT (POINT AUXILIARY)

The Point Auxiliary function allows you to program the Auxiliary 1 servo to move up to 6 different Points along its travel, then cycle through those Points using one of the Trim Switches or the Rotary Dial. For example, if your model requires

⚠ Use one of the four Trim Switches or the Rotary Dial to cycle through the Point positions while you're driving. The Point Auxiliary function can be toggled OFF and ON while you're driving by assigning Auxiliary 1 to one of the two

Choosing the Point Auxiliary Function and the Number of Points

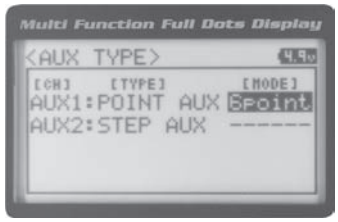


2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.

3) Press the ENTER key, then scroll UP or DOWN to choose the AUX 1: POINT AUX

Choosing the Point Auxiliary Function and the Number of Points, Continued....

4) From within the AUX TYPE menu, scroll DOWN to highlight [MODE] 6 POINT. Press the ENTER key, then scroll UP or DOWN to choose the desired number of

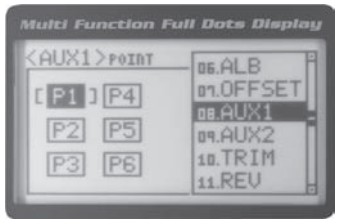


AUX TYPE POINT setting range is 2point to 6point. The default setting is 6point.

Adjusting the Point Auxiliary Values

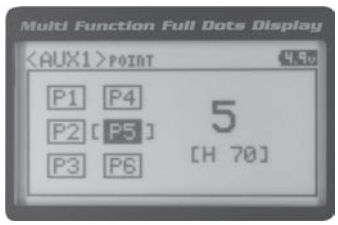
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the AUX1 menu, then press the ENTER key. The



3) Scroll UP or DOWN to move the brackets to the Point you would like to change, then press the ENTER key to highlight that Point.

4) Press the ENTER key, then scroll UP or DOWN to change the Point value. Increasing the Point value toward the High side (H) or Low side (L) will cause the Auxiliary 1 servo to travel to that specific position when you cycle through the various Points.



AUX1 POINT setting range is H100 to L100. The default setting for Point 1 is L100, for Point 2 is L60, for Point 3 is L20, for Point 4 is H20, for Point 5 is H60, and for Point 6 is H100. These values are a percentage of Auxiliary 1 servo travel.

Controlling the Point Auxiliary Function

1) In the default configuration, Auxiliary 1 is controlled by the Rotary Dial. Turn the Rotary Dial clockwise to cycle Forward through the programmed Point Auxiliary positions and turn the Rotary Dial counter-clockwise to cycle Backward through the programmed Point Auxiliary positions. The Auxiliary 1 servo will move to the specified Point positions as you cycle through the different Points. In addition, Auxiliary 1 can be assigned to one of the four Trim Switches. The Point Auxiliary function can be toggled OFF and ON by assigning Auxiliary 1 to one of the two Push-Button Switches. For

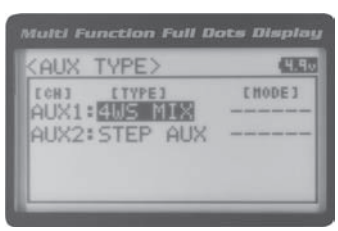
IMPORTANT: To operate correctly, the TRIM or DIAL Step value must be set to 1. If set to a value other than 1, Point positions will be skipped as you cycle through them. For more information, see the Key Assignments section on pages

4WS (FOUR WHEEL STEERING MIXING)

The Four Wheel Steering Mixing function allows you to use Auxiliary 1 Channel 3 as a second steering channel, allowing you to use two separate steering servos for Front and Rear steering. The Four Wheel Steering Mixing function allows you to control either the Front or Rear steering independently, or Mix the Front and Rear steering to have Parallel Four Wheel

Choosing the Four Wheel Steering Function

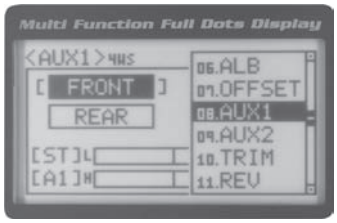
2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.



4WS (FOUR WHEEL STEERING MIXING), CONTINUED....

Use the Rotary Dial or one of the four Trim Switches to cycle through the different Four Wheel Steering options while you're driving. The Four Wheel Steering Mixing function can be toggled OFF and ON while you're driving

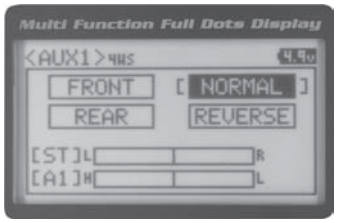
PRO TIP: Use the Servo Monitor at the bottom of the AUX 1 4WS menu to see your programming changes in virtual real



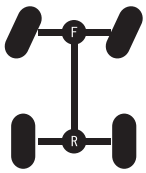
Choosing Four Wheel Steering Mixing Options

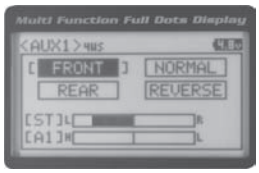
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

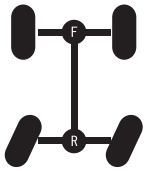
2) Scroll UP or DOWN to highlight the AUX1 menu, then press the ENTER key. The

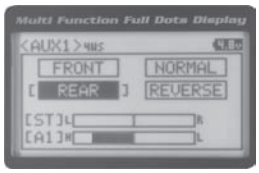


3) Scroll UP or DOWN to move the brackets to the Four Wheel Steering option you would like to use, then press the ENTER key to highlight that option. The high-

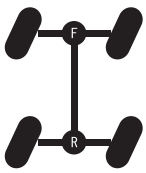


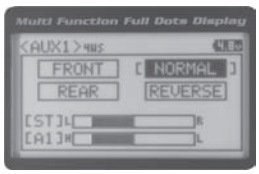




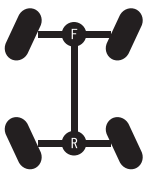


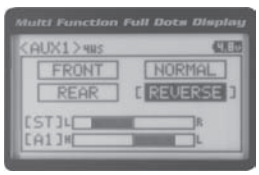
Parallel (Normal) Four Wheel Steering - When highlighted, both the Front





Tandem (Reverse) Four Wheel Steering - When highlighted, both the





If the steering servos do not operate as described above, you can use the Servo Reversing function to change the

4WS (FOUR WHEEL STEERING MIXING), CONTINUED....

Controlling the Four Wheel Steering Mixing Function

1) In the default configuration, Auxiliary 1 is controlled by the Rotary Dial. Turn the Rotary Dial clockwise to cycle Forward through the Four Wheel Steering options (FRONT > REAR > NORMAL > REVERSE) and turn the Rotary Dial counter-clockwise to cycle Backward through the Four Wheel Steering options (REVERSE > NORMAL > REAR > FRONT). In addition, Auxiliary 1 can be assigned to one of the four Trim Switches. The Four Wheel Steering Mixing function can be toggled OFF and ON by assigning Auxiliary 1 to one of the two Push-Button Switches. For more information, see

IMPORTANT: To operate correctly, the DIAL or TRIM Step value must be set to 1. If set to a value other than 1, Four Wheel Steering Mixing options will be skipped as you cycle through them. For more information, see the Key Assignments section on pages 56 ~ 61.

⚠ When using Four Wheel Steering, it's important to adjust the Steering Channel 1 and Auxiliary 1 Channel 3 Sub-Trim values to center both servos. This will ensure that your model tracks straight. In addition, remember that you are able to independently adjust the Auxiliary 1 Channel 3 Dual Rate, Exponential, Sub-Trim, Servo Speed settings and

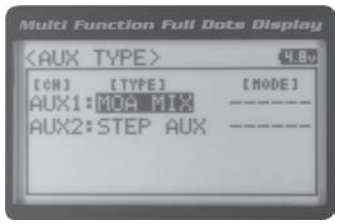
MOA (MOTOR ON AXLE MIXING)

The Motor on Axle Mixing function allows you to use Auxiliary 1 Channel 3 as a second throttle channel, allowing you to use two separate throttle servos or ESCs. The Motor on Axle Mixing function is typically used in Rock Crawling and allows you to control either the Front and Rear motors together or independently, giving you Normal (Balanced), Dig and Burn functions. And when coupled with the ability to variably change the power distribution between the Front and Rear mo-

⚠ Use the Rotary Dial, one of the four Trim Switches or the Auxiliary Lever to Activate the Dig and Burn functions while you're driving. The Motor on Axle Mixing function can be toggled OFF and ON while you're driving by assigning

PRO TIP: Use the Servo Monitor at the bottom of the AUX 1 MOA menu to see your programming changes in virtual real

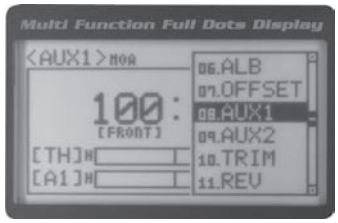
Choosing the Motor on Axle Function



1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.

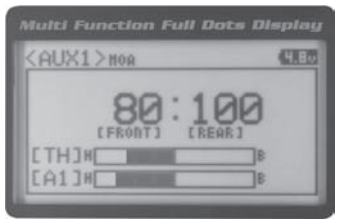
Changing Motor on Axle Power Distribution Options



You are able to program Normal (Balanced), Dig and Burn functions by changing the Power Distribution between the two motors.

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

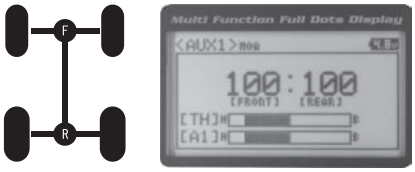
2) Scroll UP or DOWN to highlight the AUX1 menu, then press the ENTER key. The



3) Press the ENTER key, then scroll UP or DOWN to change the Power Distribution between the Front and Rear motors. Scrolling UP will reduce the available power

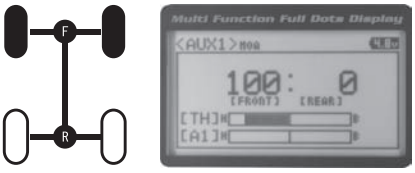
Changing Motor on Axle Power Distribution Options, Continued....

Normal (Balanced) - When set to 100:100, power will be evenly distributed



Front Throttle BURN - When set to 0:100, power will only be distributed to the Rear motor (Burn). Power can be distributed proportionally between the

Rear Throttle DIG - When set to 100:0, power will only be distributed to the Front motor (Dig). Power can be distributed proportionally between the



Controlling the Motor on Axle Mixing Function

1) In the default configuration, Auxiliary 1 is controlled by the Rotary Dial. Turn the Rotary Dial clockwise to reduce the available power to the Rear motor (Dig) and turn the Rotary Dial counter-clockwise to reduce the power to the Front motor (Burn). In addition, Auxiliary 1 can be assigned to one of the four Trim Switches or to the Auxiliary Lever. The Motor on Axle Mixing function can be toggled OFF and ON by assigning Auxiliary 1 to one of the two Push-Button

IMPORTANT: In the default configuration, the Rotary Dial Step value is set to 5. This allows you to adjust the Power Distribution in 5 percent increments. If you prefer to control the Dig and Burn functions as if they were assigned to an ON/OFF switch, change the DIAL Step value to 100. Alternately, the Motor on Axle Mixing function can be controlled by the Auxiliary Lever. This allows you to quickly switch between the Dig and Burn functions and still have the ability to variably change the Power Distribution between the Front and Rear motors. To set this up, change the Auxiliary Lever Function to AUX1, then change the TWEAK (H) value to +100 and the TWEAK (L) value to -100. For more information,

⚠ When using the Motor on Axle function, it's important to adjust the Throttle Channel 2 and Auxiliary 1 Channel 3 Sub-Trim values so both motors' idle (or OFF) settings are equal. This will ensure correct function. In addition, remember that you are able to independently adjust the Auxiliary 1 Channel 3 Dual Rate, Exponential, Sub-Trim, Servo

AUX MIX (AUXILIARY MIXING)

The Auxiliary Mixing function allows you to Mix either Steering Channel 1 or Throttle Channel 2 to Auxiliary 1 Channel 3, while maintaining separate Sub-Trim, End Point Adjustments, Servo Reversing and other channel-specific settings. The Auxiliary Mixing function is used when a custom Mix is necessary. For example, if your monster truck features dual Front steering servos, instead of using a Y-Harness to join the two steering servos together, you can use Steering Mixing to operate both steering servos together and still be able to make adjustments to each servo separately. In addition, if

⚠ The Auxiliary Mixing Rate percentage value can be adjusted while you're driving using one of the four Trim Switches, the Rotary Dial or the Auxiliary Lever. The Auxiliary Mixing function can be toggled OFF and ON while

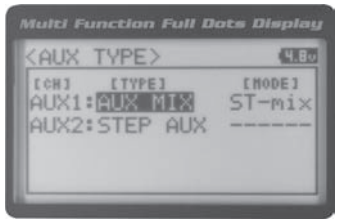
PRO TIP: Use the Servo Monitor at the bottom of the AUX 1 AUX MIX menu to see your programming changes in virtual real time.

AUX MIX (AUXILIARY MIXING), CONTINUED....

Choosing the Auxiliary Mixing Function and the Mixing Type

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.



4) From within the AUX TYPE menu, scroll DOWN to highlight [MODE] ST-mix. Press the ENTER key, then scroll UP or DOWN to choose the desired Mixing type you

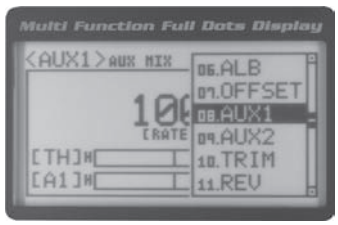
AUX TYPE MIX setting range is ST-mix and TH-mix. The default setting is ST-mix.

Adjusting the Rate Percentage Value

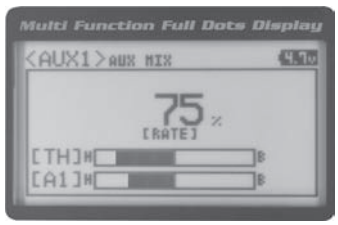
⚠ The Master channel (either Steering Channel 1 or Throttle Channel 2) always controls the Slave channel (Auxil-

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the AUX1 menu, then press the ENTER key. The



3) Press the ENTER key, then scroll UP or DOWN to change the Rate percentage value. Decreasing the Rate percentage value will reduce the amount the Auxiliary 1 servo travels relative to the Steering servo or Throttle servo and increasing the Rate percentage value will increase the amount the Auxiliary 1 servo travels



AUX1 AUX MIX RATE setting range is 100% to 0%. The default setting is 100%. This Mix is Linear. For example, if the Rate percentage value is set to 100%, the Auxiliary 1 servo will travel the same amount as the Steering servo. Additionally, if the Rate percentage value is set to 50%, the Auxiliary 1 servo will travel half the amount as the Steering servo.

⚠ In the default configuration, the Auxiliary 1 servo will travel in the same direction as the Steering servo or Throttle servo. To apply the Mix in the opposite direction, change the Servo Reversing value of Auxiliary 1 Channel 3. For

Controlling the Auxiliary Mixing Function

1) In the default configuration, Auxiliary 1 is controlled by the Rotary Dial. Turn the Rotary Dial clockwise to increase the Rate percentage value and turn the Rotary Dial counter-clockwise to decrease the Rate percentage value. In addition, the Auxiliary Mixing Rate function can be assigned to one of the four Trim Switches or the Auxiliary Lever. The Auxiliary Mixing function can be toggled OFF and ON by assigning Auxiliary 1 to one of the two Push-Button Switches. For

⚠ Remember that you are able to independently adjust the Auxiliary 1 Channel 3 Dual Rate, Exponential, Sub-Trim,

09.AUX2 (AUXILIARY 2 PROGRAMMING)

The Auxiliary 2 Programming function allows you to program the five different Auxiliary Programming functions that are

S _ A U X	Step Auxiliary	Controls Step Values That the Auxiliary Servo Travels
P _ A U X	Point Auxiliary	Controls Specific Points That the Auxiliary Servo Travels
4 W S	Four Wheel Steering Mixing	Controls Four Wheel Steering Options
M O A	Motor On Axle Dual Throttle Mixing	Controls Dual Throttle Options

IMPORTANT: Prior to programming an Auxiliary 2 Programming function you must first choose the desired Auxiliary Programming function in the SYSTEM AUX TYPE menu. Only one Auxiliary 2 Programming function can be Active at any given time.

STEP (STEP AUXILIARY)

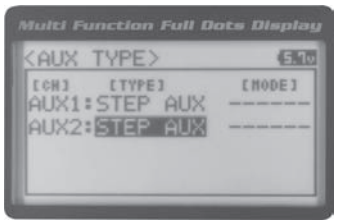
The Step Auxiliary function allows you to program the Auxiliary 2 servo to move a defined amount when toggled ON and OFF using a Push-Button Switch. For example, if you assign Auxiliary 2 to a Push-Button Switch, then program the Step Auxiliary percentage value to 50%, the Auxiliary 2 servo will travel from the Neutral position to 50% of travel when the Push-Button Switch is pressed. Press the Push-Button switch a second time and the Auxiliary 2 servo will travel back to the Neutral position. This is useful to control simple ON/OFF functions, such as a reverse servo for a transmission or a

The Step Auxiliary Position value can be adjusted while you're driving using one of the four Trim Switches, the Rotary Dial or the Auxiliary Lever. The Step Auxiliary function can be toggled OFF and ON by assigning Auxiliary 2

Choosing the Step Auxiliary Function

2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.

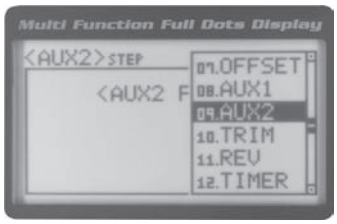
3) Press the ENTER key, then scroll UP or DOWN to choose the AUX 2: STEP AUX



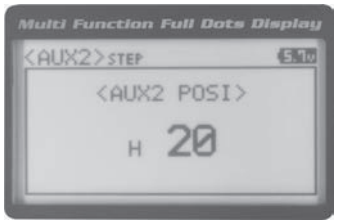
Adjusting the Step Auxiliary Value

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the AUX2 menu, then press the ENTER key. The



3) Press the ENTER key, then scroll UP or DOWN to change the Auxiliary 2 Position value. Increasing the value toward the High side (H) or Low side (L) will cause the Auxiliary 2 servo to travel to that specific position when you Activate the Auxil-



AUX2 STEP AUX2 POSI setting range is H100 to L100. The default setting is 0. This value is a percentage of Auxiliary 2 servo travel.

STEP (STEP AUXILIARY), CONTINUED....

Controlling the Step Auxiliary Function

1) In the default configuration, Auxiliary 2 is controlled by the Rotary Dial which allows the Step Auxiliary function to be adjusted while driving without accessing the Programming Menu. Turn the Rotary Dial clockwise to increase the Position High Side value and turn the Rotary Dial counter-clockwise to increase the Position Low Side value. In addition, Auxiliary 2 can be assigned to one of the four Trim Switches or the Auxiliary Lever. The Step Auxiliary function can be toggled OFF and ON by assigning Auxiliary 2 to one of the two Push-Button Switches. This allows you to control

POINT (POINT AUXILIARY)

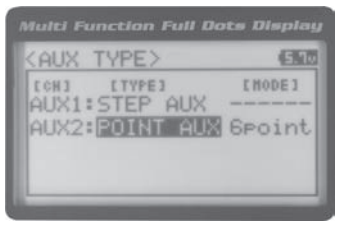
The Point Auxiliary function allows you to program the Auxiliary 2 servo to move up to 6 different Points along its travel, then cycle through those Points using one of the Trim Switches or the Rotary Dial. For example, if your model requires

⚠ Use one of the four Trim Switches or the Rotary Dial to cycle through the Point positions while you're driving. The Point Auxiliary function can be toggled OFF and ON while you're driving by assigning Auxiliary 2 to one of the two

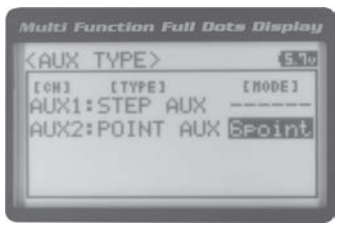
Choosing the Point Auxiliary Function and the Number of Points

2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.

3) Press the ENTER key, then scroll UP or DOWN to choose the AUX 2: POINT AUX



4) From within the AUX TYPE menu, scroll DOWN to highlight [MODE] 6 POINT. Press the ENTER key, then scroll UP or DOWN to choose the desired number of

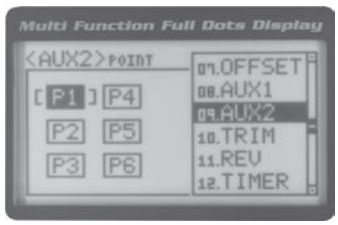


AUX TYPE POINT setting range is 2point to 6point. The default setting is 6point.

Adjusting the Point Auxiliary Values

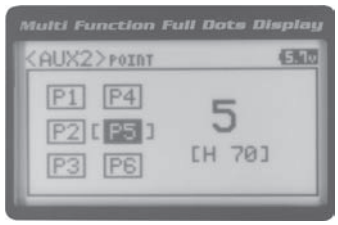
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the AUX1 menu, then press the ENTER key. The



3) Scroll UP or DOWN to move the brackets to the Point you would like to change, then press the ENTER key to highlight that Point.

4) Press the ENTER key, then scroll UP or DOWN to change the Point value. Increasing the Point value toward the High side (H) or Low side (L) will cause the Auxiliary 2 servo to travel to that specific position when you cycle through the various Points.



AUX2 POINT setting range is H100 to L100. The default setting for Point 1 is L100, for Point 2 is L60, for Point 3 is L20, for Point 4 is H20, for Point 5 is H60, and for Point 6 is H100. These values are a percentage of Auxiliary 2 servo travel.

POINT (POINT AUXILIARY), CONTINUED....

Controlling the Point Auxiliary Function

1) In the default configuration, Auxiliary 2 is controlled by the Rotary Dial. Turn the Rotary Dial clockwise to cycle Forward through the programmed Point Auxiliary positions and turn the Rotary Dial counter-clockwise to cycle Backward through the programmed Point Auxiliary positions. The Auxiliary 2 servo will move to the specified Point positions as you cycle through the different Points. In addition, Auxiliary 2 can be assigned to one of the four Trim Switches. The Point Auxiliary function can be toggled OFF and ON by assigning Auxiliary 2 to one of the two Push-Button Switches. For

IMPORTANT: To operate correctly, the TRIM or DIAL Step value must be set to 1. If set to a value other than 1, Point positions will be skipped as you cycle through them. For more information, see the Key Assignments section on pages

4WS (FOUR WHEEL STEERING MIXING)

The Four Wheel Steering Mixing function allows you to use Auxiliary 2 Channel 4 as a second steering channel, allowing you to use two separate steering servos for Front and Rear steering. The Four Wheel Steering Mixing function allows you to control either the Front or Rear steering independently, or Mix the Front and Rear steering to have Parallel Four Wheel

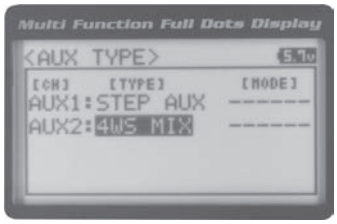
Use the Rotary Dial or one of the four Trim Switches to cycle through the different Four Wheel Steering options while you're driving. The Four Wheel Steering Mixing function can be toggled OFF and ON while you're driving

PRO TIP: Use the Servo Monitor at the bottom of the AUX 2 4WS menu to see your programming changes in virtual real

Choosing the Four Wheel Steering Function

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

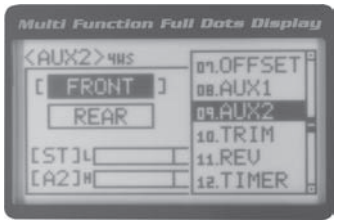
2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.



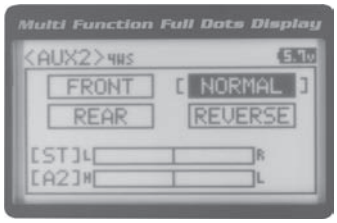
Choosing Four Wheel Steering Mixing Options

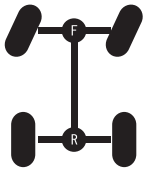
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

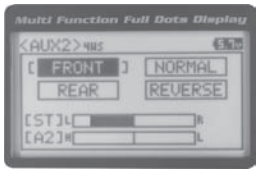
2) Scroll UP or DOWN to highlight the AUX2 menu, then press the ENTER key. The



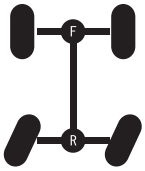
3) Scroll UP or DOWN to move the brackets to the Four Wheel Steering option you would like to use, then press the ENTER key to highlight that option. The high-

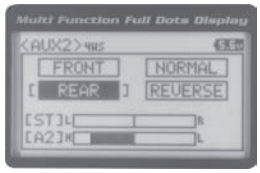




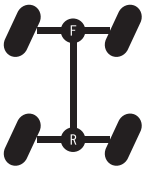


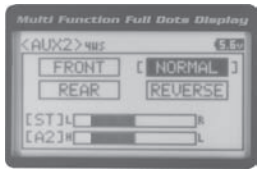
4WS (FOUR WHEEL STEERING MIXING), CONTINUED....



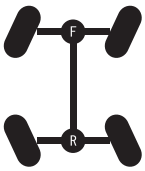


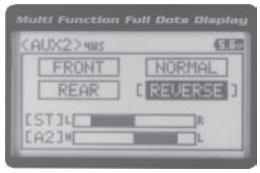
Parallel (Normal) Four Wheel Steering - When highlighted, both the Front





Tandem (Reverse) Four Wheel Steering - When highlighted, both the





If the steering servos do not operate as described above, you can use the Servo Reversing function to change the direction that each servo

Controlling the Four Wheel Steering Mixing Function

1) In the default configuration, Auxiliary 2 is controlled by the Rotary Dial. Turn the Rotary Dial clockwise to cycle Forward through the Four Wheel Steering options (FRONT > REAR > NORMAL > REVERSE) and turn the Rotary Dial counter-clockwise to cycle Backward through the Four Wheel Steering options (REVERSE > NORMAL > REAR > FRONT). In addition, Auxiliary 2 can be assigned to one of the four Trim Switches. The Four Wheel Steering Mixing function can be

IMPORTANT: To operate correctly, the DIAL or TRIM Step value must be set to 1. If set to a value other than 1, Four Wheel Steering Mixing options will be skipped as you cycle through them. For more information, see the Key Assignments section on pages 56 ~ 61.

When using Four Wheel Steering, it's important to adjust the Steering Channel 1 and Auxiliary 2 Channel 4 Sub-Trim values to center both servos. This will ensure that your model tracks straight. In addition, remember that you are able to independently adjust the Auxiliary 2 Channel 4 Dual Rate, Exponential, Sub-Trim, Servo Speed settings and

MOA (MOTOR ON AXLE MIXING)

The Motor on Axle Mixing function allows you to use Auxiliary 2 Channel 4 as a second throttle channel, allowing you to use two separate throttle servos or ESCs. The Motor on Axle Mixing function is typically used in Rock Crawling and allows you to control either the Front and Rear motors together or independently, giving you Normal (Balanced), Dig and Burn

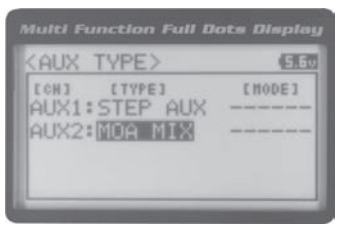
Use the Rotary Dial, one of the four Trim Switches or the Auxiliary Lever to Activate the Dig and Burn functions while you're driving. The Motor on Axle Mixing function can be toggled OFF and ON while you're driving by assigning

PRO TIP: Use the Servo Monitor at the bottom of the AUX 2 MOA menu to see your programming changes in virtual real

Choosing the Motor on Axle Function

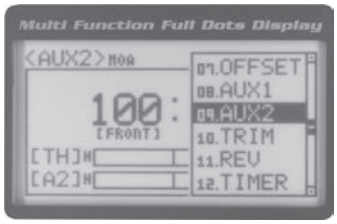
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.



MOA (MOTOR ON AXLE MIXING), CONTINUED....

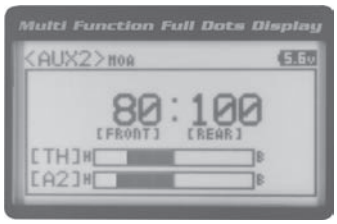
Changing Motor on Axle Power Distribution Options



You are able to program Normal (Balanced), Dig and Burn functions by changing the Power Distribution between the two motors.

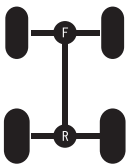
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the AUX2 menu, then press the ENTER key. The

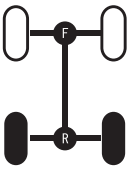


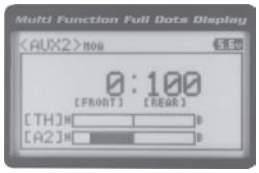
3) Press the ENTER key, then scroll UP or DOWN to change the Power Distribution between the Front and Rear motors. Scrolling UP will reduce the available power

Normal (Balanced) - When set to 100:100, power will be evenly distributed

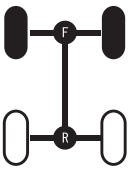


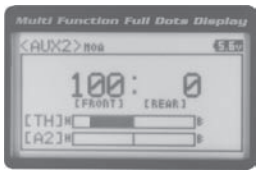
Front Throttle BURN - When set to 0:100, power will only be distributed to the Rear motor (Burn). Power can be distributed proportionally between the





Rear Throttle DIG - When set to 100:0, power will only be distributed to the Front motor (Dig). Power can be distributed proportionally between the





Controlling the Motor on Axle Mixing Function

1) In the default configuration, Auxiliary 2 is controlled by the Rotary Dial. Turn the Rotary Dial clockwise to reduce the available power to the Rear motor (Dig) and turn the Rotary Dial counter-clockwise to reduce the power to the Front motor (Burn). In addition, Auxiliary 2 can be assigned to one of the four Trim Switches or to the Auxiliary Lever. The Motor on Axle Mixing function can be toggled OFF and ON by assigning Auxiliary 2 to one of the two Push-Button

IMPORTANT: In the default configuration, the Rotary Dial Step value is set to 5. This allows you to adjust the Power Distribution in 5 percent increments. If you prefer to control the Dig and Burn functions as if they were assigned to an ON/OFF switch, change the DIAL Step value to 100. Alternately, the Motor on Axle Mixing function can be controlled by the Auxiliary Lever. This allows you to quickly switch between the Dig and Burn functions and still have the ability to variably change the Power Distribution between the Front and Rear motors. To set this up, change the Auxiliary Lever Function to AUX2, then change the TWEAK (H) value to +100 and the TWEAK (L) value to -100. For more information,

⚠ When using the Motor on Axle function, it's important to adjust the Throttle Channel 2 and Auxiliary 2 Channel 4 Sub-Trim values so both motors' idle (or OFF) settings are equal. This will ensure correct function. In addition, remember that you are able to independently adjust the Auxiliary 2 Channel 4 Dual Rate, Exponential, Sub-Trim, Servo

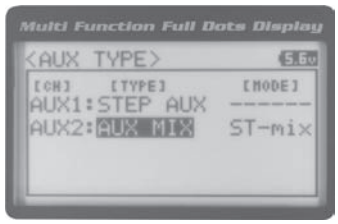
AUX MIX (AUXILIARY MIXING)

The Auxiliary Mixing function allows you to Mix either Steering Channel 1 or Throttle Channel 2 to Auxiliary 2 Channel 4, while maintaining separate Sub-Trim, End Point Adjustments, Servo Reversing and other channel-specific settings. The Auxiliary Mixing function is used when a custom Mix is necessary. For example, if your monster truck features dual Front steering servos, instead of using a Y-Harness to join the two steering servos together, you can use Steering Mixing to operate both steering servos together and still be able to make adjustments to each servo separately. In addition, if

⚠ The Auxiliary Mixing Rate percentage value can be adjusted while you're driving using one of the four Trim Switches, the Rotary Dial or the Auxiliary Lever. The Auxiliary Mixing function can be toggled OFF and ON while

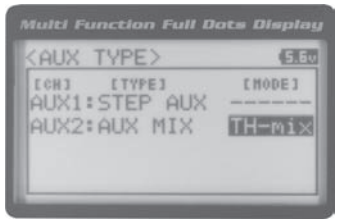
PRO TIP: Use the Servo Monitor at the bottom of the AUX 2 AUX MIX menu to see your programming changes in virtual real time.

Choosing the Auxiliary Mixing Function and the Mixing Type



1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the SYSTEM menu, then press the ENTER key. Scroll DOWN to highlight the AUX TYPE menu, then press the ENTER key.

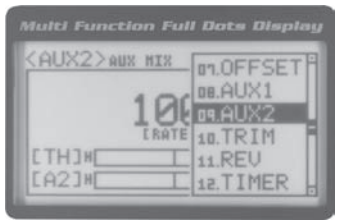


4) From within the AUX TYPE menu, scroll DOWN to highlight [MODE] ST-mix. Press the ENTER key, then scroll UP or DOWN to choose the desired Mixing type you

AUX TYPE MIX setting range is ST-mix and TH-mix. The default setting is ST-mix.

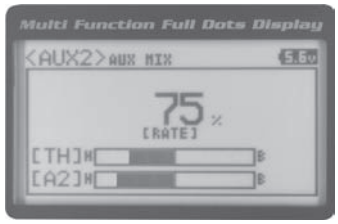
Adjusting the Rate Percentage Value

⚠ The Master channel (either Steering Channel 1 or Throttle Channel 2) always controls the Slave channel (Auxil-



1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the AUX2 menu, then press the ENTER key. The



3) Press the ENTER key, then scroll UP or DOWN to change the Rate percentage value. Decreasing the Rate percentage value will reduce the amount the Auxiliary 2 servo travels relative to the Steering servo or Throttle servo and increasing the Rate percentage value will increase the amount the Auxiliary 2 servo travels

AUX2 AUX MIX RATE setting range is 100% to 0%. The default setting is 100%. This Mix is Linear. For example, if the Rate percentage value is set to 100%, the Auxiliary 2 servo will travel the same amount as the Steering servo. Additionally, if the Rate percentage value is set to 50%, the Auxiliary 2 servo will travel half the amount as the Steering servo.

AUX MIX (AUXILIARY MIXING), CONTINUED....

⚠ In the default configuration, the Auxiliary 2 servo will travel in the same direction as the Steering servo or Throttle servo. To apply the Mix in the opposite direction, change the Servo Reversing value of Auxiliary 2 Channel 4. For

Controlling the Auxiliary Mixing Function

1) In the default configuration, Auxiliary 2 is controlled by the Rotary Dial. Turn the Rotary Dial clockwise to increase the Rate percentage value and turn the Rotary Dial counter-clockwise to decrease the Rate percentage value. In addition, the Auxiliary Mixing Rate function can be assigned to one of the four Trim Switches or the Auxiliary Lever. The Auxiliary Mixing function can be toggled OFF and ON by assigning Auxiliary 1 to one of the two Push-Button Switches. For

⚠ Remember that you are able to independently adjust the Auxiliary 2 Channel 4 Dual Rate, Exponential, Sub-Trim,

10.TRIM (TRIM AND SERVO SUB-TRIM)

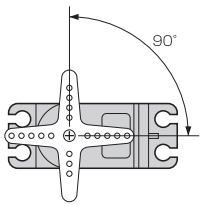
The Trim function allows you to view the currently programmed Trim value of each of the four channels and, if desired, allows you to change the Trim values using the Push-Button Rotary Dial from within the Trim menu. In addition to the

Adjusting the Servo Sub-Trim Values

It's not unusual that when you center a servo and install the servo horn, the servo horn is not perfectly centered as well. The Servo Sub-Trim function allows you to correct the Neutral Trim setting for the Steering, Throttle, Auxiliary 1 and Auxiliary 2 channels, making it possible to center the Trim Switches while ensuring the Steering, Throttle, Auxiliary 1 and

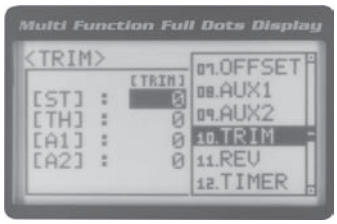
IMPORTANT: Before using the Servo Sub-Trim function, you should verify that all four Trim values are set to 0 (Centered). If they are not set to 0, adjust the Trim values to 0 using the Trim function. For more information, see the Adjusting the Trim Values sections on the next page.

1) Install the servo horn (or servo saver for the Steering servo) onto your servo, making sure that the servo horn (or servo saver) is as close to being centered as possible. In some cases, you

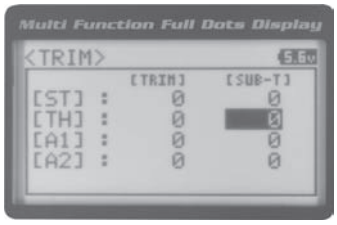


2) From the TOP screen, press the ENTER key to open the Programming Menu list.

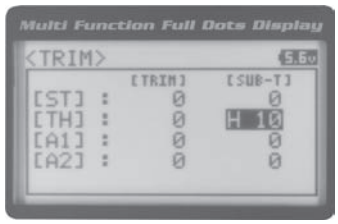
3) Scroll UP or DOWN to highlight the TRIM menu, then press the ENTER key. The



4) Scroll UP or DOWN to highlight the desired channel you would like to change the Sub-Trim value for. Choose from either [ST] : [SUB-T] 0 (Steering), [TH] : [SUB-T] 0



5) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Sub-



TRIM SUB-T setting range for the Steering channel is R150 to L150, for the Throttle channel is H150 to B150 and for Auxiliary 1 Channel 3 and Auxiliary 2 Channel 4 is H150 to L150. The default setting for all channels is 0.

⚠ After adjusting the Sub-Trim value, use the End Point Adjustment function to set the desired amount of maximum

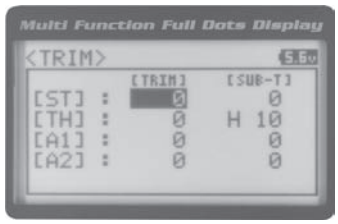
Adjusting the Trim Values

The MT-4 2.4GHz FHSS-4T transmitter features Digital Trim Memory. Any amount of Trim that you set during use using the Trim Switches is automatically stored in memory for that specific channel and for that specific model. The Trim values

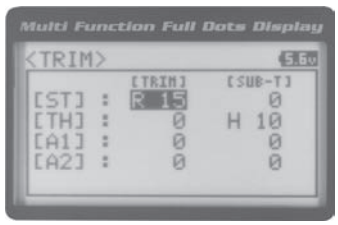
⚠ Before adjusting the Trim values, you should first adjust the servo Sub-Trim values to center the servo horns. For

⚠

1) From within the TRIM menu, scroll UP or DOWN to highlight the desired channel you would like to change the Trim value for. Choose from either [ST] : [TRIM] 0



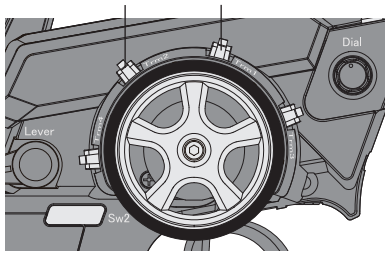
2) Press the ENTER key, then scroll UP or DOWN to increase or decrease the Trim



TRIM TRIM setting range for the Steering channel is R100 to L100, for the Throttle channel is H100 to B100 and for Auxiliary 1 Channel 3 and Auxiliary 2 Channel 4 is H100 to L100. The default setting for all channels is 0.

Controlling the Trim Function

1) In the default configuration, Trim Switch Trm1 controls the Steering Right and Left Trim and Trim Switch Trm2 controls the Throttle High and Brake Trim. When you move the Trim Switches, the Trim percentage value changes in 5% increments. When you use the Trim function to change the Trim value, the Trim value changes in 1% increments. Auxiliary 1 Trim and Auxiliary 2 Trim can be assigned to the remaining two Trim Switches, the Rotary Dial or

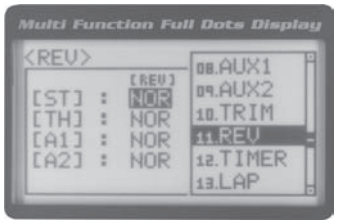


⚠ Each time you move a Trim Switch a single audible tone is heard. When the Trim value reaches 0 (Centered), an audible double-tone sounds. This indicates to you that the Trim is centered without the need to look down at the

PRO TIP: The Trim function features two different Trim Type options that you can choose from. Choose from either Center Trim or Parallel Trim. For more information, see the Trim Type section on pages 61 and 62.

11.REV (SERVO REVERSING)

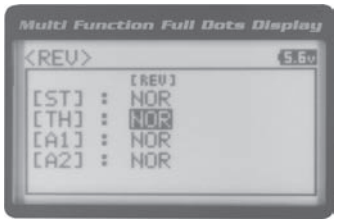
The Servo Reversing function allows you to electronically switch the direction of servo travel. For example, if you rotate the steering wheel to the right, and the steering servo moves to the left, you can use the Servo Reversing function to make



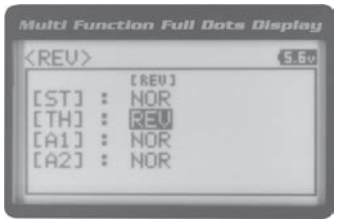
Changing the Servo Reversing Values

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the REV menu, then press the ENTER key. The



3) Scroll UP or DOWN to highlight the desired channel you would like to change the Servo Reversing value for. Choose from either [ST] : NOR (Steering), [TH] : NOR



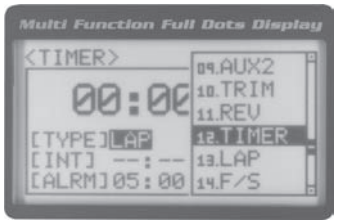
4) Press the ENTER key, then scroll UP or DOWN to change the direction of servo

REV setting range is NOR and REV. The default setting for all channels is NOR.

⚠ When you change the direction of servo travel, the servo horn may no longer be centered. If this occurs, use the Servo Sub-Trim function to center the servo horn. For more information, see the Adjusting the Servo Sub-Trim Val-

12.TIMER (TRACK TIMERS)

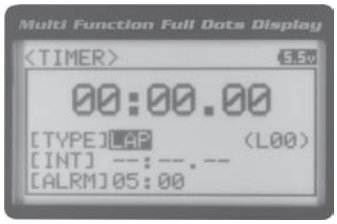
The Track Timers function features three different Timers. Timers are provided for measuring Lap Times, Interval Times,



Choosing the Timer Type

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the TIMER menu, then press the ENTER key. The



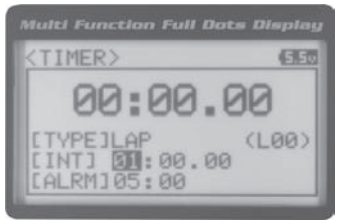
3) Press the ENTER key, then scroll UP and DOWN to select the desired Timer Type.

⚠ To program the Lap Timer function, see the Lap Timer section on the next page. To program the Interval Timer function, see the Interval Timer section on page 46. To program the Countdown Timer function, see the Countdown

12.TIMER (TRACK TIMERS), CONTINUED....

LAP (LAP TIMER)

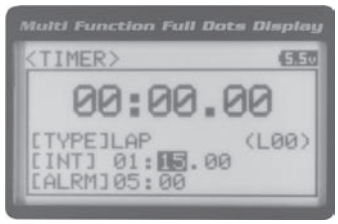
The Lap Timer function allows you to measure and record times for up to 99 laps. The number of laps completed is displayed in the Timer menu, and when a lap is completed, the lap time is displayed momentarily on the TOP screen. An Alarm (Goal Time) is featured that will sound when you reach your Goal Time and, if desired, the Interval Timer (Target



Setting the Interval Timer (Target Time)

1) From within the TIMER menu, scroll DOWN to highlight [INT] : --.

2) Press the ENTER key, then scroll UP or DOWN to set the desired Interval Timer

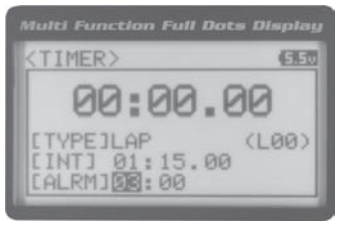


3) To set the Interval Timer Seconds value, press the ENTER key, then scroll DOWN to highlight --. Press the ENTER key a second time, then scroll UP and DOWN to set the desired Interval Timer Seconds value.

4) To set the Interval Timer 1/100th Seconds value, press the ENTER key, then scroll DOWN to highlight --. Press the ENTER key a second time, then scroll UP and

TIMER INT setting range is -- : -- . -- to 99 : 59 : 99. The default setting is -- : -- . -- (OFF). When the Lap Timer is counting up, an audible double-tone will sound each time the Lap Timer reaches the Interval Timer value. For example, if you set the Interval Timer for 30 Seconds, an audible double-tone will sound every 30 seconds.

Setting the Alarm (Goal Time)



1) From within the TIMER menu, scroll DOWN to highlight [ALRM] 05.

2) Press the ENTER key, then scroll UP or DOWN to set the desired Alarm Minutes value.

3) To set the Alarm Seconds value, press the ENTER key, then scroll DOWN to high-

TIMER ALRM setting range is 00:00 to 99:59. The default setting is 5:00 minutes. An audible tone will sound in 1 second intervals 5 seconds before reaching the Goal Time. When the Goal Time is reached, a long audible tone will sound.

Starting the Lap Timer

1) In the default configuration, Push-Button Switch Sw2 controls the Lap Timer. Press and HOLD the Push-Button Switch for 3 seconds. An audible double-tone will sound and LAP will flash on the TOP screen indicating the Lap Timer is in Stand-by. To start the Lap Timer, press the Push-Button Switch a second time or pull the Throttle Trigger. An audible double-tone will sound and the Lap Timer will start counting up. Pressing the Push-Button Switch a second time will store the first Lap Time, then begin counting a second Lap Time. Each time you press the Push-Button Switch, an audible tone sounds, the previous Lap Time is stored, a new Lap Time begins and the current Lap Time is displayed momentarily on the TOP screen. If desired, the Timer Function can be assigned to Push-Button Switch Sw1. For more

Stopping the Lap Timer

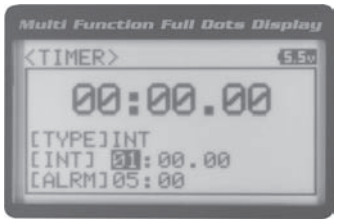
1) To stop the Lap Timer, press and HOLD the Push-Button Switch for 3 seconds. An audible double-tone will sound

⚠ The Cumulative Time cannot be manually cleared. It will be automatically cleared when the Lap Timer is put in

12.TIMER (TRACK TIMERS), CONTINUED....

INT (INTERVAL TIMER)

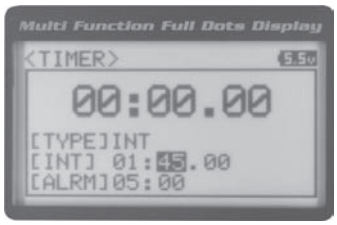
The Interval Timer (Target Time) function notifies you when a set interval elapses while you are driving, giving you an



Setting the Interval Timer (Target Time)

1) From within the TIMER menu, scroll DOWN to highlight [INT] : --.

2) Press the ENTER key, then scroll UP or DOWN to set the desired Interval Timer

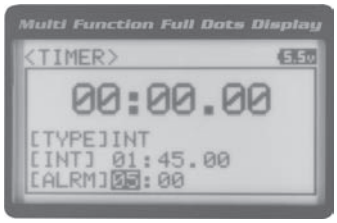


3) To set the Interval Timer Seconds value, press the ENTER key, then scroll DOWN to highlight --. Press the ENTER key a second time, then scroll UP and DOWN to set the desired Interval Timer Seconds value.

4) To set the Interval Timer 1/100th Seconds value, press the ENTER key, then scroll DOWN to highlight --. Press the ENTER key a second time, then scroll UP and

TIMER INT setting range is -- : -- . -- to 99 : 59 : 99. The default setting is -- : -- . -- (OFF). When the Interval Timer is started, an audible double-tone will sound each time the Interval Timer reaches the Interval Timer value. For example, if you set the Interval Timer for 1 Minute, an audible double-tone will sound every Minute.

Setting the Alarm (Goal Time)



1) From within the TIMER menu, scroll DOWN to highlight [ALRM] 05.

2) Press the ENTER key, then scroll UP or DOWN to set the desired Alarm Minutes value.

3) To set the Alarm Seconds value, press the ENTER key, then scroll DOWN to high-

TIMER ALRM setting range is 00:00 to 99:59. The default setting is 5:00 minutes. An audible tone will sound in 1 second intervals 5 seconds before reaching the Goal Time. When the Goal Time is reached, a long audible tone will sound.

Starting the Interval Timer

1) In the default configuration, Push-Button Switch Sw2 controls the Interval Timer. Press and HOLD the Push-Button Switch for 3 seconds. An audible double-tone will sound and INT will flash on the TOP screen indicating the Interval Timer is in Stand-by. To start the Interval Timer, press the Push-Button Switch a second time or pull the Throttle Trigger. An audible double-tone will sound and the Interval Timer will start counting up. Each time the programmed Interval Time elapses, an audible double-tone will sound and the Interval Timer will restart from zero and the Cumulative Time will be displayed on the TOP screen. You can manually restart the Interval Timer from zero by pressing the Push-Button Switch while the Interval Timer is running. If desired, the Timer Function can be assigned to Push-Button

Stopping the Interval Timer

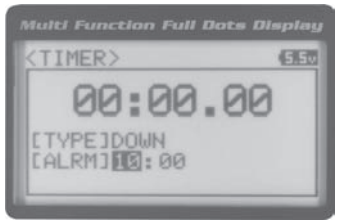
1) To stop the Interval Timer, press and HOLD the Push-Button Switch for 3 seconds. An audible double-tone will sound in-

⚠ The Cumulative Time cannot be manually cleared. It will be automatically cleared when the Interval Timer is put

12.TIMER (TRACK TIMERS), CONTINUED....

DOWN (COUNTDOWN TIMER)

The Countdown Timer function can be used to notify you of your model's running time. For example, you can set the Countdown Timer to alert you when it's time to refuel. When the Countdown Timer expires, a long audible tone will



Setting the Alarm

1) From within the TIMER menu, scroll DOWN to highlight [ALRM] 05.

2) Press the ENTER key, then scroll UP or DOWN to set the desired Alarm Minutes value.

3) To set the Alarm Seconds value, press the ENTER key, then scroll DOWN to high-

TIMER ALRM setting range is 00:00 to 99:59. The default setting is 5:00 minutes. An audible tone will sound in 1 second intervals 5 seconds before reaching the Countdown Alarm Time. When the Countdown Alarm Time is reached, a long audible

Starting the Countdown Timer

1) In the default configuration, Push-Button Switch Sw2 controls the Countdown Timer. Press and HOLD the Push-Button Switch for 3 seconds. An audible double-tone will sound and DWN will flash on the TOP screen indicating the Countdown Timer is in Stand-by. To start the Countdown Timer, press the Push-Button Switch a second time or pull the Throttle Trigger. An audible double-tone will sound and the Countdown Timer will start counting down. An audible tone will sound in 1 second intervals 5 seconds before reaching zero. When zero is reached, a long audible tone will sound and the Countdown Timer will begin counting Up. You can manually stop the Countdown Timer at any time by pressing the Push-Button Switch. Press the Push-Button Switch again will start the Countdown Timer from where it

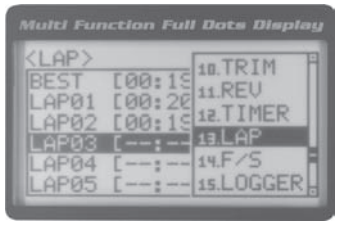
Stopping the Countdown Timer

1) To stop the Countdown Timer, press and HOLD the Push-Button Switch for 3 seconds. An audible double-tone will sound indicating the Countdown Timer is stopped and either the remaining Countdown Time or elapsed Count Up

⚠ The remaining Countdown Time or Count Up Time cannot be manually cleared. It will be automatically cleared

13.LAP (LAP TIMES)

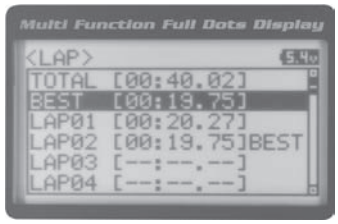
The Lap Times menu displays a total of up to 99 laps that are recorded using the Lap Timer function. Each Lap Time is



Viewing Lap Times

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the LAP menu, then press the ENTER key. The LAP



3) Scroll UP and DOWN to view the stored Lap Times. Lap Times are stored from the time you start the Lap Timer to the time you Stop the Lap Timer. The Total

⚠ Lap Times are stored until you restart the Lap Timer function. When the Lap

14.F/S (FAIL SAFE)

The Fail Safe function automatically moves 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 low transmitter battery. Several different setting options are available. The Fail Safe function can be set to Hold the servos in the last position they were in when the signal was lost, or each of the servos can be set to move to a custom position when the signal is lost. For example, the throttle servo moves to the Brake Side to engage the brakes and stop your model. If you're driving a gas- or glow-powered boat, the Fail Safe function could be set to lower the throttle to idle and turn the rudder slightly left or right so that the boat will continue in slow circles.

In addition, a Receiver Battery Voltage Fail Safe function is available which allows you to set a custom voltage that the

IMPORTANT: The Fail Safe function will NOT OPERATE if the receiver loses power. It will operate only if the transmitter and receiver signal is interrupted or if the transmitter loses power.

Setting the Fail Safe

Fail Safe settings can be programmed for each of the four channels individually. In addition, Fail Safe settings are Model-specific, meaning you can have different Fail Safe settings for each Model in memory. The Fail Safe settings will be retained even if the transmitter loses power or if the transmitter and receiver must be paired again. Three Fail Safe options are available for each channel as described below:

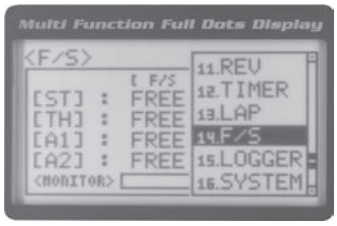
FREE - Fail Safe is disabled for this channel. Servos can move freely when the signal is lost.

HOLD - When Fail Safe Activates, the servo will be held in the last position it was in when the signal was lost.

PRO TIP: Use the Servo Monitor at the bottom of the F/S menu to see your programming changes in virtual real time.

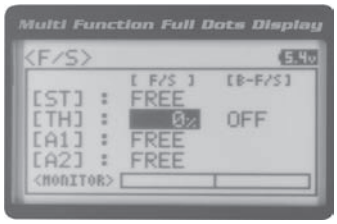
1) From the TOP screen, press the ENTER key to open the Programming Menu list.

2) Scroll UP or DOWN to highlight the F/S menu, then press the ENTER key. The F/S



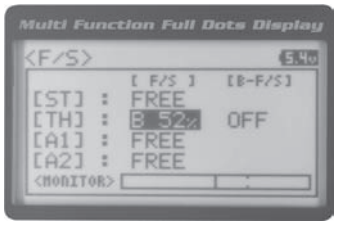
3) Scroll UP or DOWN to highlight the desired channel you would like to change the Fail Safe option for.

4) Press the ENTER key, then scroll UP or DOWN to choose the desired Fail Safe



F/S setting range is FREE, HOLD, or %. The default setting is FREE.

5) To program a Fail Safe percentage value, move the control the amount you want the servo to move to when the Fail Safe function Activates and HOLD it in that position, then press and HOLD the ENTER key until an audible tone sounds. The percentage and direction the servo will travel will be displayed. For example, to set the Throttle Brake to engage when the Fail Safe function Activates, push the throttle trigger toward the Brake side the desired amount, HOLD the throttle trigger in that position, then press and HOLD the ENTER key. The percentage value



6) Check to ensure your Fail Safe settings are working properly prior to running your model. For safety, it's preferable to have someone hold your model. To check the Fail Safe settings, make sure that both the transmitter and receiver are turned ON, then, while someone is holding your model, turn the transmitter OFF. The servos should react correctly

14.F/S (FAIL SAFE), CONTINUED....

Setting the Receiver Battery Voltage Fail Safe Function

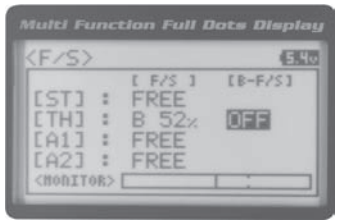
The Receiver Battery Voltage Fail Safe function allows you to set a custom voltage that the Receiver Battery Voltage Fail Safe function will Activate at. When your receiver battery voltage drops to the programmed voltage, the throttle servo will move to the predetermined position you programmed in step 5 in the Setting the Fail Safe section on the previous page. If

⚠ If FREE or HOLD is chosen for the Throttle channel, you cannot Activate the Receiver Battery Voltage Fail Safe

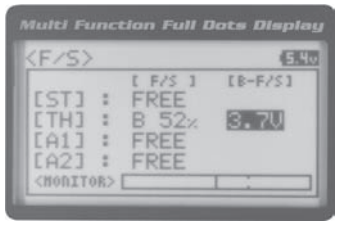
⚠ The Receiver Battery Voltage Fail Safe function works only with FHSS-4T and FHSS-3 receivers. When using an FHSS-2 receiver, these Fail Safe features are not supported. In this case, Fail Safe must be programmed through

1) Follow steps 1 through 5 in the Setting the Fail Safe section on the previous page to program a Throttle Fail Safe percentage value.

2) From within the F/S menu, press the ENTER key, then scroll DOWN to highlight



3) Press the ENTER key, then scroll UP or DOWN to choose the desired Receiver



F/S B-F/S setting range is 3.5v to 7.4v. The default setting is OFF.

⚠ The receiver will operate down to 2.5 volts, however, the minimum operating voltage of most servos is higher than that. The Receiver Battery Fail Safe Voltage should be set to a value that will allow all of your servos to operate.

15.LOGGER (TELEMETRY LOG)

The Telemetry Log function allows you to view a log of the Telemetry Data that is sent from the receiver to the transmitter. You are able to view Telemetry Data for both Temperature outputs, the RPM output and the receiver's Voltage. This information can be used to track specific information about your model, such as cylinder head temperature if you're running a nitro-powered model. The interval that Telemetry Data is read and stored can be adjusted so that Telemetry

Starting and Stopping the Telemetry Log

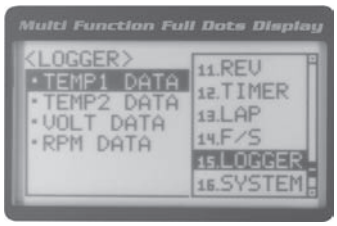
The Telemetry Log function must be Started in order for the transmitter to read and store Telemetry Data from the receiver.

1) In the default configuration, Push-Button Switch Sw1 controls the Telemetry Log. To start the Telemetry Log, press the Push-Button switch. LED1 (Blue) will flash, indicating the Telemetry Log is storing data. Telemetry Data is stored for all four Telemetry functions, whether the Telemetry Sensors are hooked up or not.

⚠ Each time the Telemetry Log is started, any old Telemetry Data is automatically erased. In addition, the Telemetry Log will stop automatically once the Telemetry Log is filled. The Telemetry Log can store 120 separate entries. If the Log Interval is set to 00.1 seconds, the Telemetry Log can record for 12 seconds. If the Log Interval is set to 45.1 seconds,

⚠ If a Telemetry Sensor is not connected, default Telemetry Data for that input will be shown in the Telemetry Log.

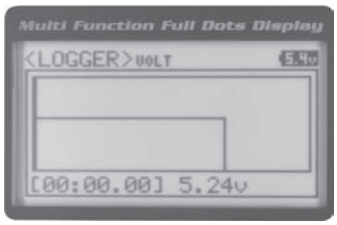
15.LOGGER (TELEMETRY LOG), CONTINUED....



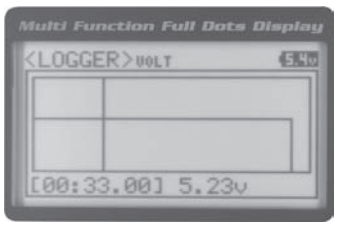
Viewing Telemetry Data

1) From the TOP screen, press the ENTER key to open the Programming Menu list.

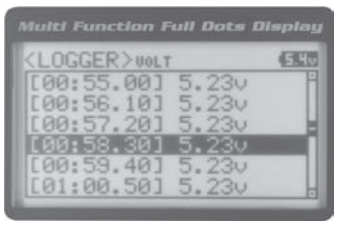
2) Scroll UP or DOWN to highlight the LOGGER menu, then press the ENTER key.



3) From within the LOGGER menu, scroll UP or DOWN to highlight the desired Telemetry Data you would like to view. Choose from TEMP1 DATA, TEMP2 DATA, VOLT DATA or RPM DATA.



5) Telemetry Data can be viewed a couple of different ways. To view the Telemetry Data at a specific point along the graph, scroll UP or DOWN to move the vertical line right or left. The Telemetry Data for each point the vertical line is at is dis-



6) To view all of the Telemetry Data points, press the ENTER key to open the Te-

The Telemetry Log can be started and stopped while viewing Telemetry Data. To start the Telemetry Log, press and

THIS SPACE INTENTIONALLY LEFT BLANK

SYSTEM MENUS

OVERVIEW

To access the various System Menus, turn the transmitter ON, then press the ENTER key (Push-Button Rotary Dial) to open the Programming Menu list. Scroll DOWN to SYSTEM, then press the ENTER key a second time to open the System Menu. A list of System Menus will be displayed and the first System Menu will be highlighted.

01.MODEL	Model	Model Select, Model Naming, Model Copy and Model Clear	PG. 51
02.BIND	Binding	Bind the Transmitter and Receiver, Select Modulation Type and Servo Mode	PG. 54
03.KEY ASSIGN	Key Assignments	Assign Functions to the Switches Rotary Dial and Auxiliary Lever	PG. 56
04.TRIM TYPE	Servo Trim Type	Change the Servo Trim Type	PG. 61
05.AUX TYPE	Auxiliary Type	Choose the Auxiliary 1 and Auxiliary 2 Programming Functions	PG. 62
06.TH TYPE	Throttle Type	Change the Throttle Servo Travel Proportion	PG. 63
07.BUZZER	Audible Key Tone	Turn Audible Key Tones ON or OFF and Control Their Pitch and Volume	PG. 63
08.BATTERY	Voltage Alarm	Specify the Low Voltage and Limit Alarms for the Transmitter Battery	PG. 64
09.LCD	Contrast	Adjust the Contrast of the Multi-Function LCD Screen	PG. 65
10.TELEMETRY	Telemetry	Program Telemetry Screen and Telemetry Log Options	PG. 66

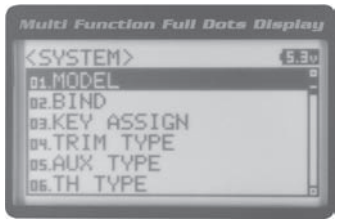
01.MODEL (MODEL SELECT, NAMING, COPY AND CLEAR)

The Model menu allows you to select different models using the Model Select function, name your saved models, using the Model Naming function, and copy Programming Data from one model to another, or clear Programming Data from one or more models using the Model Copy and Model Clear functions. Programming Data for up to 18 different models can be stored in the transmitter's memory. This allows you to use the transmitter with different models and quickly and easily select the Programming Data for each of them. In addition, a Model Select Shortcut function is also featured for

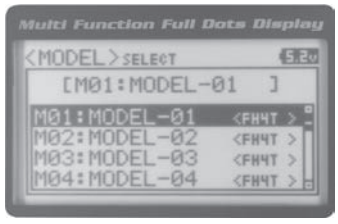
MODEL SELECT (MODEL SELECT)

The Model Select function allows you to load the Programming Data for the particular model you wish to drive. The Model Select menu displays the currently selected model, along with a list of available models that can be selected. The Modu-

Selecting a Model



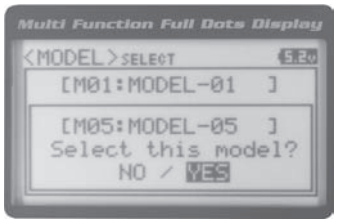
2) Press the ENTER key to open the MODEL menu. MODEL SELECT will be highlighted.



MODEL SELECT (MODEL SELECT), CONTINUED....

Selecting a Model, Continued....

4) Scroll UP or DOWN to highlight the model you would like to select, then press the ENTER key. Select this model? NO/YES will be displayed. Scroll DOWN to highlight YES, then press the ENTER key. The model that you just selected will be



⚠ When a model is selected, the Programming Data for that model will be load-

Model Select Shortcut (Direct Model)

The Model Select Shortcut function allows you to jump directly to the DIRECT MODEL menu when you turn the transmit-

1) Turn the transmitter OFF.

2) Press and HOLD the Back/Cancel key, then turn the transmitter ON. The DIRECT MODEL menu will be displayed. To

MODEL NAME (MODEL NAMING)

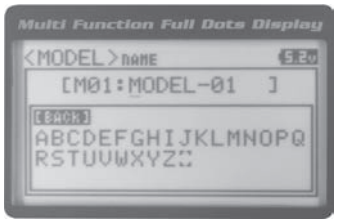
The Model Naming function allows you to name each of the 18 individual models. This makes it easy to keep track of multiple models. The Model Name can consist of up to 10 letters, numbers, or symbols. Choose from capital letters,

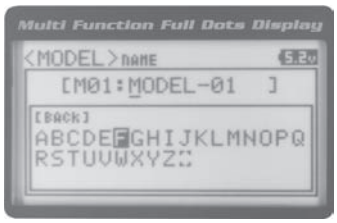
⚠ A model must be selected before a Model Name can be entered or modified. In the default configuration, M01:MODEL-1 is selected. To enter a Model Name for another model, that model must first be selected using the

Entering a Model Name

1) From within the MODEL menu, scroll DOWN to highlight MODEL NAME.

2) Press the ENTER key. The MODEL NAME menu will be displayed, [BACK] will be highlighted and the underscore will be flashing under the first editable character





3) Scroll UP or DOWN to move the underscore to the character you would like change.

4) Press the ENTER key, then scroll UP or DOWN to highlight a character in the Character List. Press the ENTER key a second time to select the highlighted character.

5) Repeat steps 3 and 4 to enter the rest of the characters. Up to ten characters can be entered. Press the Back/Cancel

⚠ To select lower case letters, numbers or symbols, continue to scroll UP or DOWN through the various Character

Deleting a Character

1) Scroll UP or DOWN to move the underscore under the character in your Model Name you want to delete. Press the

⚠ If you can't move the underscore, press the Back/Cancel key to re-gain control of the underscore (the underscore

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

Deleting a Model Name

1) Scroll DOWN to move the underscore under the last character in your Model Name.

2) Press the ENTER key. Scroll UP or DOWN to highlight [BACK], then continuously press the ENTER key to delete each

⚠ If you can't move the underscore, press the Back/Cancel key to re-gain control of the underscore (the underscore

MODEL COPY (MODEL PROGRAMMING DATA COPY)

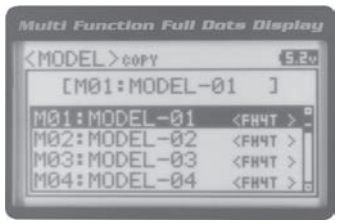
The Model Copy function allows you to copy the Programming Data from one model to another model. For example, if you have two models that are similar, you can copy the Programming Data from the first model to the second model to

⚠ The Model Copy function allows you to copy Programming Data FROM the currently selected model TO any other model in the Model Copy List. Make sure that prior to using the Model Copy function, you first select and load the

Copying Model Programming Data

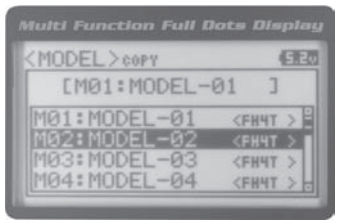
1) From within the MODEL menu, scroll DOWN to highlight MODEL COPY.

2) Press the ENTER key. The MODEL COPY menu will be displayed and the first

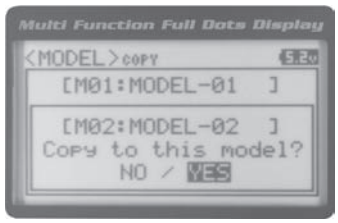


⚠

3) Scroll UP or DOWN to highlight the model you would like to copy the Program-



4) Press the ENTER key. Copy to this model? NO/YES will be displayed. Scroll DOWN to highlight YES, then press the ENTER key. After ~3 seconds, Executed



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

MODEL CLEAR (MODEL PROGRAMMING DATA RESET)

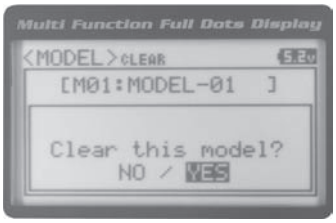
The Model Clear function allows you to Reset model-specific Programming Data for any model back to the factory

WARNING: When the Model Clear function is Executed, all custom Programming Data for that model will be lost!

Clearing Model Programming Data

MODEL CLEAR (MODEL PROGRAMMING DATA RESET), CONTINUED....

2) From within the MODEL menu, scroll DOWN to highlight MODEL CLEAR.



4) Scroll DOWN to highlight YES, then press the ENTER key. After ~3 seconds, Executed will flash, indicating the Program-

All model-specific Programming Data, including the Model Name and Modulation Type will be Reset to the default values. In addition, if you want to go back and change models or you don't want to Reset the Programming Data

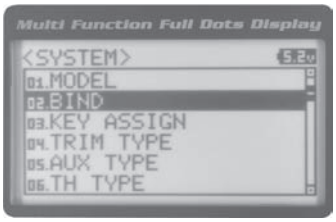
02.BINDING (BINDING, MODULATION TYPE AND SERVO MODE)

The Binding function allows you to 'Bind' the transmitter and receiver pair. When new, it is necessary to pair the transmitter and receiver to prevent interference from transmitters operated by other users. This operation is referred to as 'Binding'. Once the Binding process is complete, the setting is remembered even when the transmitter and receiver are turned

Changing the Modulation Type

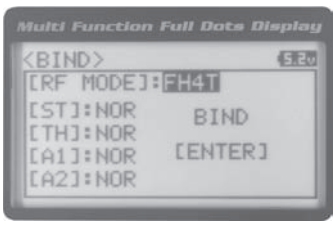
The Modulation Type function allows you to choose the transmitter Modulation Type. The Modulation Type can be changed to match the receiver you're using. For example, if you wish to use an Airtronics 2.4GHz FHSS-2 receiver with your transmitter, you would need to change the Modulation Type to FH2 prior to Binding your transmitter and receiver.

The Modulation Type must be chosen prior to Binding the transmitter and receiver. Make sure the Modulation Type



2) Press the ENTER key. The BIND menu will be displayed and [RF MODE] : FH4T will be highlighted.

3) Press the ENTER key, then scroll UP or DOWN to select the desired Modulation Type.



The following Modulation Type options are available:

FH2 - Select this Modulation Type when using Airtronics 2.4GHz FHSS-2 surface receivers.

FH3 - Select this Modulation Type when using Airtronics 2.4GHz FHSS-3 receivers.

FH3F - This Modulation Type is NOT used in North America. This Modulation Type is typically used in France.

FH4T - Select this Modulation Type when using Airtronics 2.4GHz FHSS-4T Telemetry receivers.

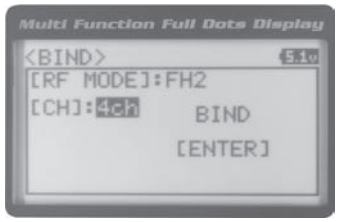
02.BINDING (BINDING, MODULATION TYPE AND SERVO MODE), CONTINUED....

Changing the Channel Mode - FH2 Modulation Type Only

⚠

1) From within the BIND menu, scroll DOWN to highlight [CH] : 4ch.

2) Press the ENTER key, then scroll UP or DOWN to choose the desired Channel Mode. Selecting 2CH will enable 2-channel operation (Steering and Throttle). Se-



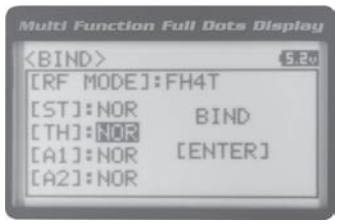
BIND CH setting range is 2CH and 4CH. The default setting is 4CH.

Changing the Servo Mode Setting

The Servo Mode setting can be changed to suit the type of servos you're using in your model. For example, using the SHR setting with Digital servos will increase the servo's response time, even above the manufacturer's stated specification. If you're using Airtronics SRG Digital servos, you can use the SSR setting for the fastest response time. The combination of using Digital servos and using the correct Servo Mode setting results in the ultimate feel and response, making you feel

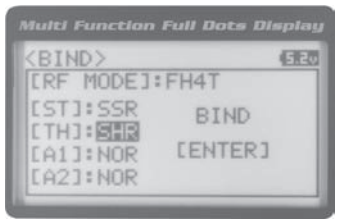
WARNING: If you're using Analog servos in your model, DO NOT use SHR or SSR Servo Mode options for that channel. Use the NOR (Normal) Servo Mode with Analog servos. Using SHR or SSR Servo Mode options with Analog servos can result in poor performance or even damage to the servos or the receiver! In addition, not all ESCs are compatible with SHR or SSR Servo Modes. If your ESC does not operate correctly, change the Throttle Channel Servo Mode setting to

⚠ SHR and SSR Servo Modes should only be used with Digital servos. While the SHR Servo Mode can be used with



1) From within the BIND menu, scroll UP or DOWN to highlight the desired channel you would like to change the Servo Mode option for. Choose from either [ST] :

2) Press the ENTER key, then scroll UP or DOWN to choose the desired Servo



SERVO MODE setting range is NOR, SHR and SSR. The default setting is NOR.

⚠

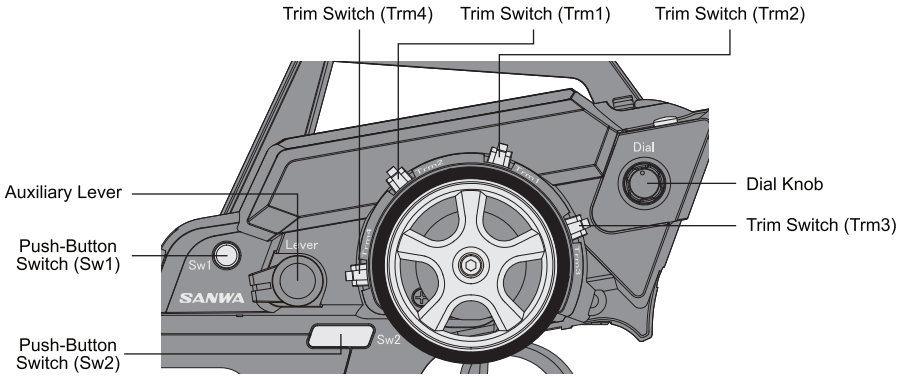
⚠ We recommend that you choose your desired Servo Mode options prior to Binding the transmitter and receiver. Servo Mode option changes will not take effect immediately. If you change the Servo Mode after Binding the trans-

Binding the Transmitter and Receiver

⚠

03.KEY ASSIGN (KEY ASSIGNMENTS)

The Key Assignments function allows you to assign different functions to each of the two Push-Button Switches, the four Trim Switches, the Dial Knob and the Auxiliary Lever. In addition, the ON/OFF behavior of some Push-Button Switch functions can be changed. The Key Assignments function also allows you to change the Direction of Travel and the Trim Resolution of the four Trim Switches and the Rotary Dial. This allows you to fine-tune the movement of the servos when



Trm1 - Steering Trim

Trm2 - Throttle Trim

Trm3 - Steering Dual Rate

Sw1 - Telemetry Logger ON/OFF

Dial Knob - Auxiliary 1 Channel 3

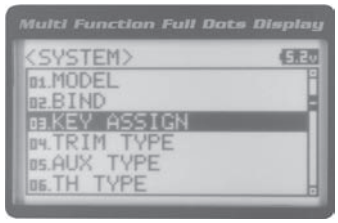
SWITCH (PUSH-BUTTON SWITCH KEY ASSIGNMENTS)

The Key Assignments function allows you to assign the ON/OFF control of various functions to Push-Button Switches Sw1 and Sw2. This allows you to use the Push-Button Switches to turn functions OFF and ON during use. One function can be assigned to each Push-Button switch, although both Push-Button Switches can be OFF or ON at the same time.

Inhibited	OFF		------	------
Dual Rate-Steering	D/R-ST		Toggle	ON
Dual Rate-Throttle	D/R-TH		Toggle	ON
Dual Rate-Brake	D/R-BR		Toggle	ON
Curve-Steering	CUR-ST		Toggle	ON
Curve-Steering	CUR-TH		Toggle	ON
Servo Speed-Steering	SPD-ST		Toggle	ON
Servo Speed-Throttle	SPD-TH		Toggle	ON
Anti-Lock Braking	ALB		Toggle	ON
Throttle Offset	OFFSET		Toggle	ON
Auxiliary 1 Channel 3	AUX1		Toggle	ON
Auxiliary 2 Channel 4	AUX2		Toggle	ON
Lap, Interval and Countdown Timers	TIMER	Sw2	------	OFF
Telemetry Clear	TE-CLR		------	OFF

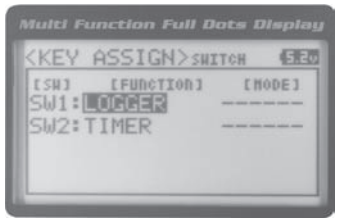
When you program a function, that function is ON (Active) by default, unless the function's default ON/OFF value is

SWITCH (PUSH-BUTTON SWITCH KEY ASSIGNMENTS), CONTINUED....



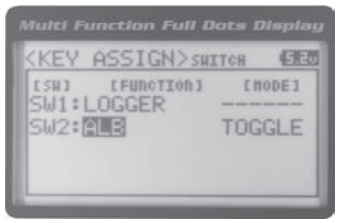
Changing the Push-Button Switch Function

1) From within the SYSTEM menu, scroll UP or DOWN to highlight the KEY ASSIGN



2) Press the ENTER key to open the KEY ASSIGN menu. SWITCH will be highlighted.

3) Press the ENTER key. The SWITCH menu will be displayed and SW1 : LOGGER



4) Scroll UP or DOWN to highlight the function you would like to change for either SW1 or SW2.

5) Press the ENTER key, then scroll UP or DOWN to choose the desired function for either SW1 or SW2. A list of functions that can be assigned to the Push-Button

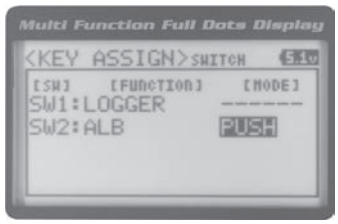
Changing the Switch Mode

Some functions allow you to change how the Push-Button Switch operates. The following Switch Modes are available:

TOGGLE - When selected, press the Push-Button Switch to turn the function ON and press the Push-Button Switch a second time to turn the function OFF. **See note at the bottom of the previous page**.

PUSH - When selected, press and HOLD the Push-Button Switch to turn the function ON. When the Push-Button

1) From within the KEY ASSIGN SWITCH menu, scroll DOWN to highlight the MODE you would like to change for either SW1 or SW2.



2) Press the ENTER key, then scroll UP or DOWN to choose the desired Switch

⚠ The Switch Mode cannot be changed for all functions. When [MODE] ------,

TRIM, DIAL AND LEVER (TRIM, DIAL AND LEVER KEY ASSIGNMENTS)

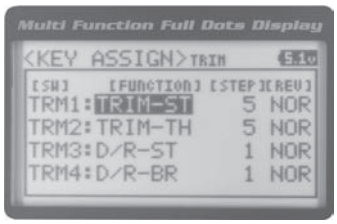
The Key Assignments function allows you to assign different functions to Trim Switches Trm1, Trm2, Trm3 and Trm4, the Rotary Dial and the Auxiliary Lever. This allows you to use the Trim Switches, Rotary Dial and Auxiliary Lever to control those functions while you're driving. In addition, the Direction of Travel (REV) and the Trim Resolution (Step value) of

Inhibited	OFF		------	------
Trim-Steering	TRIM-ST	Trm1	5	NOR

TRIM, DIAL AND LEVER (TRIM, DIAL AND LEVER KEY ASSIGNMENTS) CONTINUED....

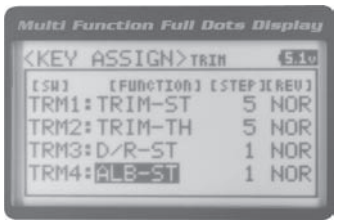
Trim-Auxiliary 1	TRIM-A1			
Trim-Auxiliary 2	TRIM-A2			
Dual Rate-Steering	D/R-ST	Trm3	1	NOR
Dual Rate-Throttle	D/R-TH			
Dual Rate-Brake	D/R-BR	Trm4	1	NOR
Curve-Rate-Steering	CU-R-ST			
Curve-Point-Steering	CU-P-ST			
Curve-Rate-Throttle	CU-R-TH			
Curve-Point-Throttle	CU-P-TH			
Curve-Rate-Brake	CU-R-BR			
Curve-Point-Brake	CU-P-BR			
Speed-Steering-Forward	SP-ST-F			
Speed-Steering-Return to Neutral	SP-ST-R			
Speed-Throttle-Forward	SP-TH-F			
Speed-Throttle-Return to Neutral	SP-TH-R			
Anti-Lock Braking-Point	ALB-PO			
Anti-Lock Braking-Stroke	ALB-ST			
Anti-Lock Braking-Lag	ALB-LG			
Anti-Lock Braking-Hold	ALB-HL			
Anti-Lock Braking-Release	ALB-RE			
Throttle Offset	OFFSET			
Auxiliary 1 Channel 3	AUX1	Rotary Dial	5	NOR
Auxiliary 2 Channel 4	AUX2		N/A	N/A

Changing the Trim Switch Function



1) From within the KEY ASSIGN menu, scroll UP or DOWN to highlight TRIM.

2) Press the ENTER key. The TRIM menu will be displayed and TRM1 : TRIM-ST will



3) Scroll UP or DOWN to highlight the function you would like to change for either TRM1, TRM2, TRM3 or TRM4.

4) Press the ENTER key, then scroll UP or DOWN to choose the desired function for Trim Switch Trm1, Trm2, Trm3 or Trm4. A list of functions that can be assigned to

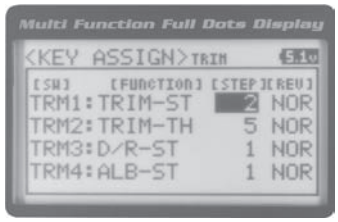
Changing the Trim Switch Step Value

The Step function allows you to adjust how far the servos travel when the Trim Switches are pressed. You can increase the Trim Resolution by decreasing the Step value, so that the servos travel less when you press the Trim Switches. This makes it possible to fine-tune servo movement extremely accurately. Alternately, you could decrease the Trim Resolution by increasing the Step values, so that the servos travel more when you press the Trim Switches. This setting may not be

Changing the Trim Switch Step Value, Continued....

1) From within the TRIM menu, scroll UP or DOWN to highlight the Step value you would like to change for either TRM1, TRM2, TRM3 or TRM4.

2) Press the ENTER key, then scroll UP or DOWN to choose the desired Step value



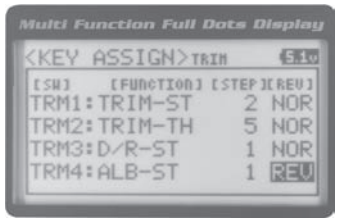
TRIM STEP setting range is 1 to 100. The default setting for TRM1 is 5, for TRM2 is 5, for TRM3 is 1 and for TRM4 is 1. The Step value is a percentage of servo travel.

Changing the Trim Switch Direction of Travel

The direction that the Trim Switches move the servos can be changed from Normal to Reverse. In Normal mode, the Trim Switches will move the servos toward the High Side when the Trim Switches are pushed Forward. In Reverse mode, the

1) From within the TRIM menu, scroll UP or DOWN to highlight the REV value you would like to change for either TRM1, TRM2, TRM3 or TRM4.

2) Press the ENTER key, then scroll UP or DOWN to choose the desired REV value

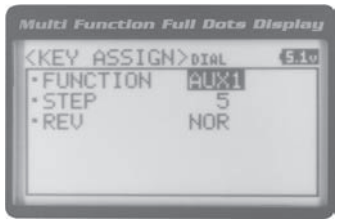


TRIM REV setting range is NOR and REV. The default setting for all Trim Switches is

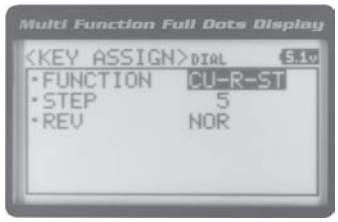
Changing the Rotary Dial Function

1) From within the KEY ASSIGN menu, scroll UP or DOWN to highlight DIAL.

2) Press the ENTER key. The DIAL menu will be displayed and FUNCTION AUX1 will



3) Press the ENTER key, then scroll UP or DOWN to choose the desired function for the Rotary Dial. A list of functions that can be assigned to the Rotary Dial is shown

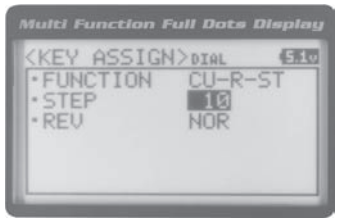


Changing the Rotary Dial Step Value

The Step function allows you to adjust how far the servo travels when the Rotary Dial is turned. You can increase the Dial Resolution by decreasing the Step value, so that the servo travels less when you turn the Rotary Dial. This makes it possible to fine-tune servo movement extremely accurately. In addition, you could decrease the Dial Resolution by increasing the Step value, so that the servo travels more when you turn the Rotary Dial. This setting may not be as ac-

1) From within the DIAL menu, scroll UP or DOWN to highlight STEP 5.

2) Press the ENTER key, then scroll UP or DOWN to choose the desired Step value



DIAL STEP setting range is 1 to 100. The default setting is 5. The Step value is a percentage of servo travel.

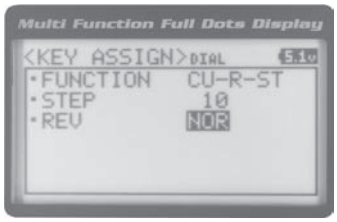
TRIM, DIAL AND LEVER (TRIM, DIAL AND LEVER KEY ASSIGNMENTS) CONTINUED....

Changing the Rotary Dial Direction of Travel

The direction that the Rotary Dial moves the servo can be changed from Normal to Reverse. In Normal mode, the Rotary Dial will move the servo toward the High Side when the Rotary Dial is turned clockwise. In Reverse mode, the Rotary Dial

1) From within the DIAL menu, scroll UP or DOWN to highlight REV NOR.

2) Press the ENTER key, then scroll UP or DOWN to choose the desired REV value



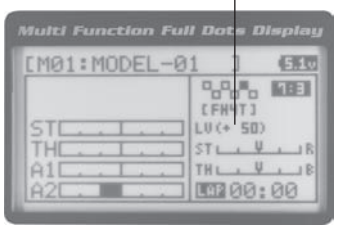
DIAL REV setting range is NOR and REV. The default setting is NOR.

Changing the Auxiliary Lever Function

In general, the Auxiliary Lever is used to control Auxiliary 1 Channel 3 or Auxiliary 2 Channel 4. Adjusting the High and Low Tweak values determines how far and in which direction the Auxiliary servo travels when the Auxiliary Lever is moved Up and Down. For example, if you assign AUX2 to the Auxiliary Lever and adjust the Tweak values to +50 and -50, the Auxiliary 2 servo will be centered when the Auxiliary Lever is centered and will travel 50% in one direction when the Auxiliary Lever is moved Up and travel 50% in the other direction when the Auxiliary Lever is moved Down. This allows you to use the Auxiliary Lever like a 2- or 3-position switch.

In addition, the Auxiliary Lever can be used to control the same parameter functions as the Trim Switches and the Rotary Dial. For example, if you assign TRIM-ST and adjust the Tweak values to +100 and -100, the Auxiliary Lever will control Steering channel Trim. The direction and amount the Trim moves when you move the Auxiliary Lever Up or Down is

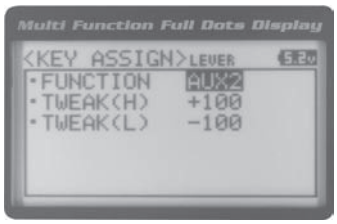
⚠ To control either the Auxiliary 1 or the Auxiliary 2 servos using the Auxiliary Lever, the Auxiliary Type in the AUX TYPE



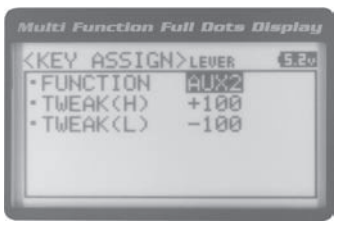
⚠ When you use the Auxiliary Lever to control a function, such as Steering Dual Rate or Exponential, the change in values will not be displayed on the TOP screen like they are when you use the Trim Switches or the Rotary Dial to make the

1) From within the KEY ASSIGN menu, scroll UP or DOWN to highlight LEVER.

2) Press the ENTER key. The LEVER menu will be displayed and FUNCTION AUX2



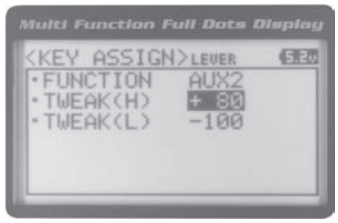
3) Press the ENTER key, then scroll UP or DOWN to choose the desired function for the Auxiliary Lever. A list of functions that can be assigned to the Auxiliary Lever is



TRIM, DIAL AND LEVER (TRIM, DIAL AND LEVER KEY ASSIGNMENTS) CONTINUED....

Changing the High and Low Tweak Values

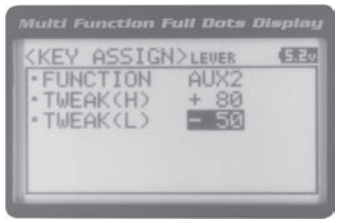
The High and Low Tweak values determine the direction and amount of Auxiliary 1 or Auxiliary 2 servo travel. In addition the High and Low Tweak values determine the direction and amount of parameter function changes, such as Steering



1) From within the LEVER menu, scroll DOWN to highlight TWEAK(H) +100.

2) Press the ENTER key, then scroll UP or DOWN to choose the desired High Side Tweak value. Increasing the Tweak value will increase servo travel in the High Side direction and decreasing the Tweak value will decrease servo travel in the

LEVER TWEAK(H) setting range is -100 to +100. The default setting is +100.



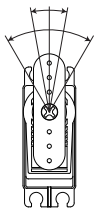
3) Scroll DOWN to highlight TWEAK(L) -100.

4) Press the ENTER key, then scroll UP or DOWN to choose the desired Low Side Tweak value. Decreasing the Tweak value will increase servo travel in the Low Side direction and increasing the Tweak value will decrease servo travel in the

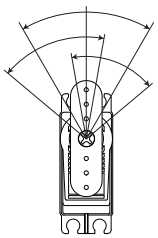
LEVER TWEAK(L) setting range is -100 to +100. The default setting is -100.

04.TRIM TYPE (TRIM TYPE)

The Trim Type function allows you choose the way servo Trim and servo End Point Adjustments interact with each other. When you apply Trim to a servo, the Neutral point of the servo shifts toward the High Side or the Low Side. When you do this, the servo travels less in one direction and more in the other direction because the servo End Points are stationary. In order to balance the servo travel, you would need to manually readjust the servo End Points. Using the Trim Type function allows you to make the servo End Points shift toward the High Side or the Low Side when you apply Trim. This maintains balanced servo travel without the need to manually readjust the servo End Points.

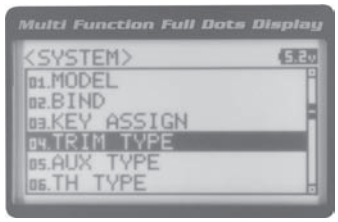


CENTER - When selected, servo End Points are stationary. In order to balance servo travel, you would need to



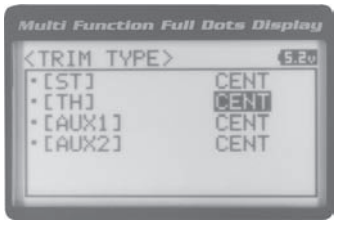
PARALLEL - When selected, servo End Points shift toward the High Side or the Low Side automatically when you apply Trim. This maintains balanced servo travel without the need to manually readjust the

Changing the Trim Type



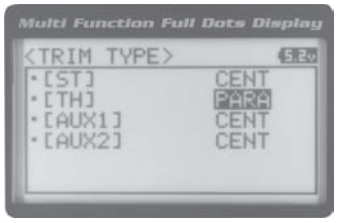
Changing the Trim Type, Continued....

2) Press the ENTER key. The TRIM TYPE menu will be displayed and [ST] CENT will be highlighted.



3) Scroll UP or DOWN to highlight the desired channel you would like to change the Trim Type option for. Choose from either [ST] CENT (Steering), [TH] CENT

4) Press the ENTER key, then scroll UP or DOWN to choose the desired Trim Type



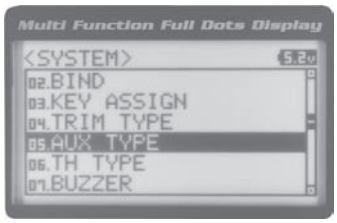
TRIM TYPE setting range is CENT and PARA. The default setting for all channels is

05.AUX TYPE (AUXILIARY TYPE)

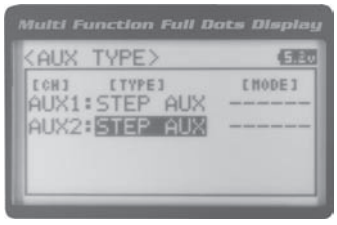
The Auxiliary Type function allows you choose which Auxiliary function is assigned to Auxiliary 1 Channel 3 or Auxiliary 2 Channel 4. One Auxiliary function can be assigned to each Auxiliary Channel and both Auxiliary Channels can be Active and controlled at the same time using different controls. For example, you can control Auxiliary 1 Channel 3 using the

⚠ This section details how to assign the different Auxiliary functions to the Auxiliary Channels. For details about programming and using each of the Auxiliary functions, see the Auxiliary 1 Programming section on pages 29 ~ 35 or

Changing the Auxiliary Function

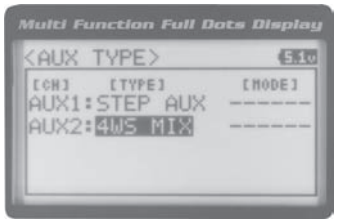


2) Press the ENTER key. The AUX TYPE menu will be displayed and AUX1 : STEP AUX will be highlighted.



3) Scroll UP or DOWN to highlight the desired channel you would like to change

4) Press the ENTER key, then scroll UP or DOWN to choose the desired Auxiliary



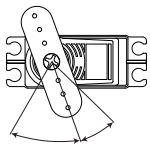
AUX TYPE setting range is STEP AUX, POINT AUX, 4WS MIX, MOA MIX and AUX MIX. The default setting for both channels is STEP AUX.

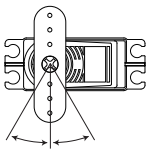
⚠ Some Auxiliary functions allow you to change the Mode. Details of the various Mode options and how to change them from within the Auxiliary Type function menu can be found in the specific Auxiliary function pro-

06.TH TYPE (THROTTLE TYPE)

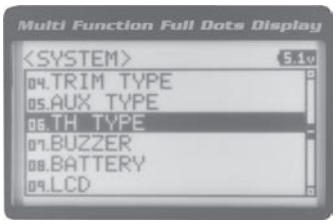
The Throttle Type function allows you to change the proportion between Throttle High Side servo travel and Throttle Brake Side servo travel. In the default configuration, the Throttle Type is set to F70:B30. This Throttle Type shifts the throttle Neutral point toward the Brake Side, resulting in more servo travel toward the High Side and less servo travel toward the Brake Side. Some users may prefer the proportion between Throttle High Side servo travel and Throttle Brake Side servo travel to be balanced (F50:B50). The F70:B30 Throttle Type is most common for general use and racing, while the F50:B50 Throttle Type is most common for Rock Crawling.

F70:B30 - When selected, the throttle Neutral point is shifted toward the Brake Side. This is most common



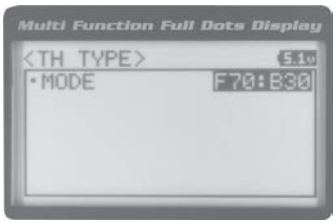


Changing the Throttle Type



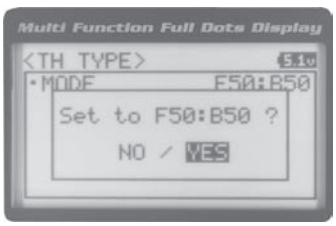
2) Press the ENTER key. The TH TYPE menu will be displayed and MODE F70:B30 will be highlighted.

3) Press the ENTER key, then scroll UP or DOWN to choose the desired Throttle Type



TH TYPE setting range is F70:B30 and F50:B50. The default setting is F70:B30.

4) Press the ENTER key. Either Set to F70:B30? NO/YES will be displayed or Set to F50:B50? NO/YES will be displayed. Scroll DOWN to highlight YES, then press the



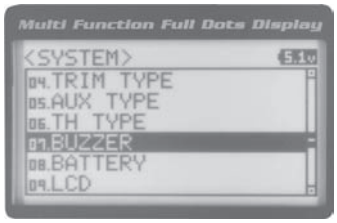
⚠ The current Throttle Type will be displayed on the TOP screen. 7:3 will be displayed to indicate the current

07.BUZZER (AUDIBLE KEY TONE)

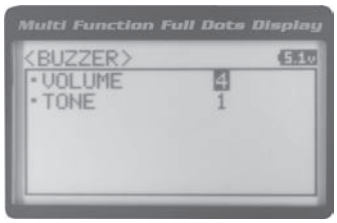
The Audible Key Tone function allows you to change the Volume and Tone of the audible sounds that are made when you use the Trim Switches, Rotary Dial, Auxiliary Lever, Push-Button Rotary Dial and the Timer function. The Volume can

⚠ Changes made using the Audible Key Tone function also affect the audible sounds that are part of the Timer function. For example, if you Mute the Audible Key Tones, the sounds that are part of the Timer function will

07.BUZZER (AUDIBLE KEY TONE), CONTINUED....



Changing the Audible Key Tone Volume

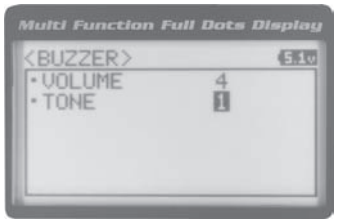


2) Press the ENTER key. The BUZZER menu will be displayed and VOLUME 4 will be highlighted.

3) Press the ENTER key, then scroll UP or DOWN to choose the desired Volume value. Increasing the Volume value will increase the Volume of the Audible Key

BUZZER VOLUME setting range is OFF to 5. The default setting is 4. When OFF is selected, Audible Key Tones will be

Changing the Tone



1) From within the BUZZER menu, scroll DOWN to highlight TONE 1.

2) Press the ENTER key, then scroll UP or DOWN to choose the desired Tone value. Increasing the Tone value will increase the Tone of the Audible Key Tones and de-

BUZZER TONE setting range is 1 to 7. The default setting is 1.

08.BATTERY (VOLTAGE ALARM)

The Voltage Alarm function allows to specify the voltage at which the Low Voltage Alert and Low Voltage Limit alarms will sound. This allows you to choose custom voltage settings to match the type of transmitter battery you're using. For example,if you're using a 6 cell Ni-MH battery pack or a 2S Li-Po battery pack, you can set the Low Voltage Alert alarm

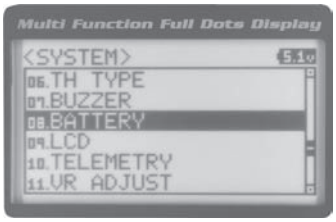
4	Cell	Alkaline	4.6 Volts	4.4 Volts
6	Cell	Ni-CD/Ni-MH	7.0 Volts	6.6 Volts
2S		Li-Po	7.2 Volts	6.8 Volts

⚠ To ensure the safety of your model and your transmitter battery, we suggest using the Alert and Limit Voltage

Changing the Low Voltage Alert Alarm Value

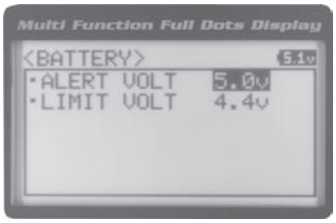
The Low Voltage Alert alarm will sound to indicate the transmitter batteries are getting low and should be replaced or recharged. We suggest stopping use as soon as safely possible and replacing or recharging the transmitter batteries. The Low Voltage Alert alarm will sound each time the transmitter battery voltage decreases by 0.1 volt. To clear this alarm,

Changing the Low Voltage Alert Alarm Value, Continued....



2) Press the ENTER key. The BATTERY menu will be displayed and ALERT VOLT 4.6v will be highlighted.

3) Press the ENTER key, then scroll UP or DOWN to choose the desired Low Voltage Alert alarm value. Increasing the Low Voltage Alert alarm value will cause the Low Voltage Alert alarm to sound at a higher voltage and decreasing the Low Voltage



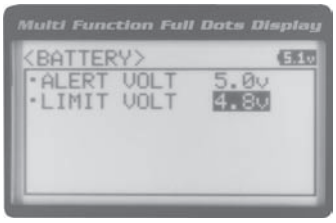
BATTERY ALERT VOLT setting range is 4.1v to 9.0v. The default setting is 4.6v.

Changing the Low Voltage Limit Alarm Value

The Low Voltage Limit alarm will sound to indicate the transmitter batteries are dangerously low and should be replaced or recharged right away. The Low Voltage Limit alarm cannot be cancelled. When the Low Voltage Limit alarm

1) From within the BATTERY menu, scroll DOWN to highlight LIMIT VOLT 4.4v.

2) Press the ENTER key, then scroll UP or DOWN to choose the desired Low Voltage Limit alarm value. Increasing the Low Voltage Limit alarm value will cause the Low Voltage Limit alarm to sound at a higher voltage and decreasing the Low



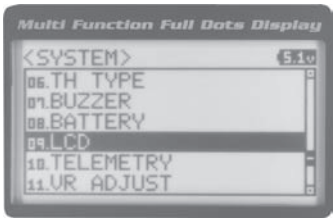
BATTERY LIMIT VOLT setting range is 4.0v to 4.9v. The default setting is 4.4v.

WARNING: Continuing to use the transmitter after the Low Voltage Limit alarm sounds can result in loss of control of your model. When the Low Voltage Alert alarm sounds, stop use as soon as is safe, then replace or recharge the trans-

9.LCD (LCD CONTRAST)

The LCD Contrast function allows you to change the contrast of the Multi-Function LCD to make it easier to read in all types of lighting conditions. In general, increasing the Contrast will make the Multi-Function LCD easier to read in bright

Changing the Contrast Value



Changing the Contrast Value, Continued....

2) Press the ENTER key. The LCD menu will be displayed and CONTRAST 15 will be highlighted.

3) Press the ENTER key, then scroll UP or DOWN to choose the desired LCD Contrast value. Increasing the LCD Contrast value will increase the Contrast of the Multi-Function LCD and decreasing the LCD Contrast value will decrease the

LCD CONTRAST setting range is 0 to 30. The default setting is 15.

⚠ Increasing or decreasing the LCD Contrast values to the extreme limits can result in blacking out the Multi-Function

10.TELEMETRY (TELEMETRY)

The Telemetry menu allows you to change different options to configure how the various Telemetry functions are displayed on the Telemetry Screen, and how the Telemetry Logger operates. For example, you are able to change the Telemetry Temperature reading from Fahrenheit to Celsius, change the values at which Telemetry Sensor alarms sound

⚠ For information about plugging the Telemetry Sensors into your receiver and installing them into your model, see the Telemetry Connections and Mounting section on page 13. For information about using the Telemetry function,

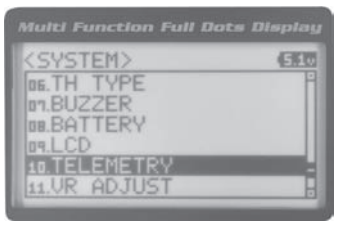
TEMP1 AND TEMP2 SETTING (TEMPERATURE TELEMETRY DISPLAY OPTIONS)

The Temperature 1 and Temperature 2 Settings allow you change how Temperature information is displayed on the

⚠ The MT-4 2.4GHz FHSS-4T radio control system includes one Temperature Sensor. If you want to utilize both Temperature Inputs on the receiver at the same time, you will need to purchase a second Temperature Sensor sepa-

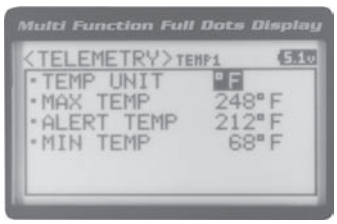
Changing the Temperature Unit Value

If desired, the Temperature Unit value can be changed from Fahrenheit to Celsius.



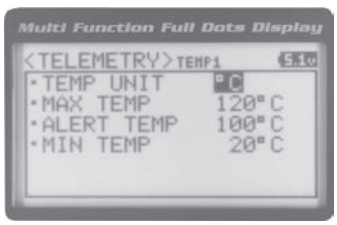
1) From within the SYSTEM menu, scroll UP or DOWN to highlight the TELEMETRY menu.

2) Press the ENTER key. The TELEMETRY menu will be displayed and TEMP1 SET-



3) Scroll UP or DOWN to highlight TEMP1 SETTING or TEMP2 SETTING.

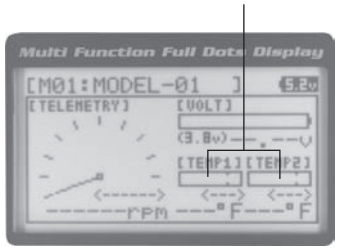
4) Press the ENTER key. The TEMP1 or TEMP2 menu will be displayed and TEMP



5) Press the ENTER key, then scroll UP or DOWN to change the Temperature Unit to the desired value. When ºF is chosen, all Telemetry Temperatures will be displayed in Fahrenheit and when ºC is chosen, all Telemetry Temperatures will be

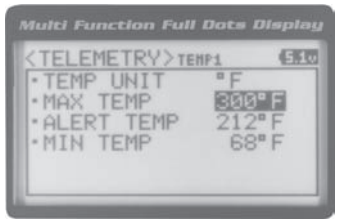
TELEMETRY TEMP UNIT setting range is ºF and ºC. The default setting is ºF.

TEMP1 AND TEMP2 SETTING (TEMPERATURE TELEMETRY DISPLAY OPTIONS), CONTINUED....



Changing the Maximum Temperature Value

The Maximum Temperature value determines the maximum temperature shown on the [TEMP1] or [TEMP2] Telemetry Screen Temperature Display Monitors. This allows you to calibrate each Temperature Display Monitor to match what the Tempera-



1) From within the TEMP1 or TEMP2 menu, scroll UP or DOWN to highlight MAX TEMP 248ºF (or 120ºC).

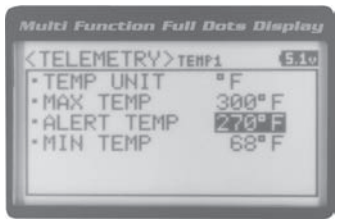
2) Press the ENTER key, then scroll UP or DOWN to change the Maximum Temperature value. The Temperature Display Monitor on the Telemetry Screen will

TELEMETRY MAX TEMP setting range is 68ºF to 302ºF (0ºC to 150ºC). The default setting is 248ºF (120ºC).

⚠ The Maximum Temperature value cannot be set lower than the Alert Temperature value or the Minimum Tempera-

Changing the Alert Temperature Value

The Alert Temperature value determines the temperature at which the Temperature Alert alarm will sound. For example, you can set an Alert Temperature value for your Nitro engine that will alert you when your engine's cylinder head temperature is getting too hot. When the Alert Temperature value is reached, the Temperature Alert alarm will sound and LED2 (Red) will flash. The Temperature Alert alarm will sound for approximately 5 seconds, however, LED2 will continue to flash until the temperature drops below the Alert Temperature value. The audible portion of the Temperature

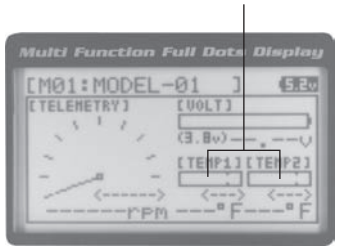


1) From within the TEMP1 or TEMP2 menu, scroll UP or DOWN to highlight ALERT TEMP 212ºF (or 100ºC).

2) Press the ENTER key, then scroll UP or DOWN to change the Alert Temperature value. The Alert Temperature value is the temperature that the Temperature

TELEMETRY ALERT TEMP setting range is 68ºF to 302ºF (0ºC to 150ºC). The default setting is 212ºF (100ºC).

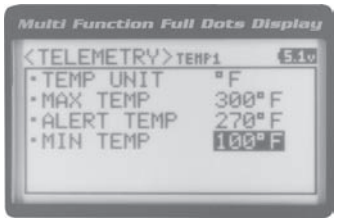
⚠ The Alert Temperature value cannot be set higher than the Maximum Temperature value. In addition, the Alert Temperature value cannot be set lower than the Minimum Temperature value. In some cases, you may need to



Changing the Minimum Temperature Value

The Minimum Temperature value determines the Minimum temperature shown on the [TEMP1] or [TEMP2] Telemetry Screen Temperature Display Monitors. This allows you to calibrate each Temperature Display Monitor to match what the Tem-

Changing the Minimum Temperature Value, Continued....



1) From within the TEMP1 or TEMP2 menu, scroll UP or DOWN to highlight MIN TEMP 68ºF (or 20ºC).

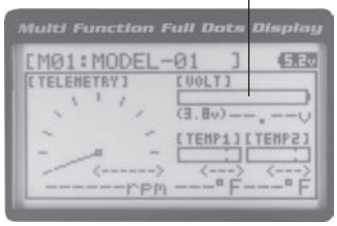
2) Press the ENTER key, then scroll UP or DOWN to change the Minimum Temperature value. The Temperature Display Monitor on the Telemetry screen will

TELEMETRY MIN TEMP setting range is 32ºF to 302ºF (0ºC to 150ºC). The default setting is 68ºF (20ºC).

⚠ The Minimum Temperature value cannot be set higher than the Alert Temperature value or the Maximum

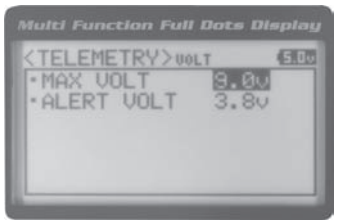
VOLT SETTING (RECEIVER BATTERY VOLTAGE TELEMETRY DISPLAY OPTIONS)

The Voltage Setting you to change the way receiver battery Voltage information is displayed on the Telemetry Screen

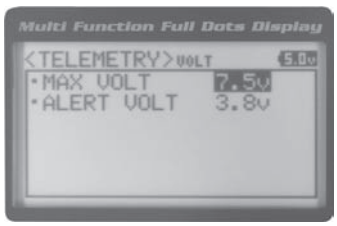


Changing the Maximum Voltage Value

The Maximum Voltage value determines the maximum receiver battery Voltage that will be shown on the [VOLT] Telemetry Screen Display Monitor. This allows you to calibrate the Voltage Display Monitor to match your model's receiver battery. This



1) From within the TELEMETRY menu, scroll UP or DOWN to highlight VOLT SETTING.



3) Press the ENTER key, then scroll UP or DOWN to change the Maximum Voltage value. The Voltage Display Monitor on the Telemetry Screen will not display re-

TELEMETRY MAX VOLT setting range is 3.0v to 9.0v. The default setting is 9.0v.

⚠ The Maximum Voltage value cannot be set lower than the Alert Voltage value. If necessary, you may need to lower

Changing the Alert Voltage Value

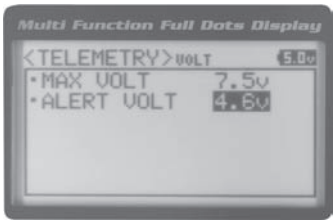
The Alert Voltage value determines the voltage at which the Voltage Alert alarm will sound. For example, you can set the Alert Voltage value to alert you to when your model's receiver battery is getting low and needs to be recharged. When the Alert Voltage value is reached, the Voltage Alert alarm will sound and LED2 (Red) will flash. The Voltage Alert alarm will sound for approximately 5 seconds, however, LED2 will continue to flash until you recharge the receiver battery. The

⚠ Refer to the manufacturer of your model's receiver battery to determine the safest Alert Voltage value to use. In general, the Alert Voltage value should be high enough to alert you when it's time to recharge your receiver battery,

Changing the Alert Voltage Value, Continued....

1) From within the VOLT menu, scroll UP or DOWN to highlight ALERT VOLT 3.8v.

2) Press the ENTER key, then scroll UP or DOWN to change the Alert Voltage value.



TELEMETRY ALERT VOLT setting range is 3.0v to 9.0v. The default setting is 3.8v.

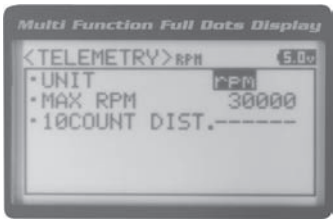
⚠ The Alert Voltage value cannot be set higher than the Maximum Voltage value. In some cases, you may need to

RPM SETTING (RPM TELEMETRY DISPLAY OPTIONS)

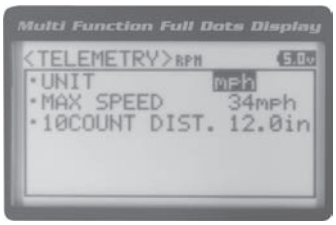
The RPM Setting allows you to change the way RPM information is displayed on the Telemetry Screen. For example, you can choose to display RPMs, MPH or KM/H. In addition, if MPH or KM/H is chosen, the RPM sensor can be calibrated

Changing the RPM Unit Value

1) From within the TELEMETRY menu, scroll UP or DOWN to highlight RPM SETTING.



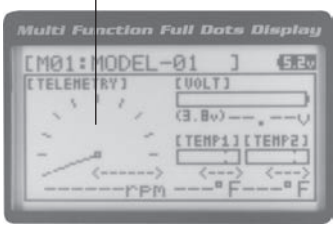
3) Press the ENTER key, then scroll UP or DOWN to change the RPM Unit to the desired value. When RPM is chosen, the Revolutions Per Minute of whatever the RPM Sensor is attached to will displayed. When MPH or KM/H is chosen, the



TELEMETRY RPM UNIT setting range is RPM, MPH and KM/H. The default setting is RPM.

Changing the Maximum Speed Value

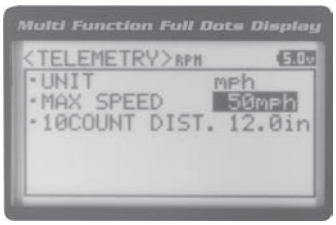
The Maximum Speed value determines the maximum RPM or Speed value that will



⚠ The RPM Gauge and RPM Digital Display names will change from RPM to MPH

1) From within the RPM menu, scroll UP or DOWN to highlight MAX RPM 30000 (or MAX SPEED 34mph or MAX SPEED 54km/h).

2) Press the ENTER key, then scroll UP or DOWN to change the Maximum RPM or Maximum Speed value. The RPM Gauge on the Telemetry Screen will not display



TELEMETRY MAX RPM setting range is 500 to 127500. The default setting is 30000. TELEMETRY MAX SPEED setting range is 1mph to 335mph (1km/h to 539km/h). The default setting is 34mph (54km/h). The Maximum Speed setting range will vary based on the 10 Count Distance value programmed when you calibrate the RPM Sensor. For more information, see the Calibrating the RPM Sensor section on page 70.

RPM SETTING (RPM TELEMETRY DISPLAY OPTIONS), CONTINUED....

Calibrating the RPM Sensor

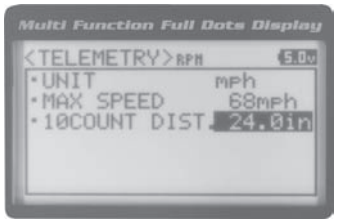
When you choose to use the RPM Sensor to display MPH or KM/H, the RPM Sensor must be calibrated to ensure that

IMPORTANT: Prior to Calibrating the RPM Sensor, you must connect the RPM Sensor to the receiver and correctly install the RPM Sensor onto your model. For more information, see the Mounting the RPM Sensor section page 13.

⚠ When the reflective tape attached to your model's clutch bell, flywheel, etc., crosses the RPM sensor, the Bind

1) With the MT-4 2.4GHz FHSS-4T radio control system turned ON and the RPM Sensor installed on your model as described in the Mounting the RPM Sensor section page 13, place your model on the ground.

2) Measuring from where you set your model on the ground, push your model and measure the distance covered to



3) From within the RPM menu, scroll UP or DOWN to highlight 10COUNT DIST. 12.0in (or 10COUNT DIST. 30cm).

4) Press the ENTER key, then scroll UP or DOWN to change the 10 Count Distance value to the measurement obtained in step 2 above. For example, if your mod-

TELEMETRY 10COUNT DIST setting range is 0.5in to 118.0in (1cm to 300cm). The default setting is 12.0in (30cm).

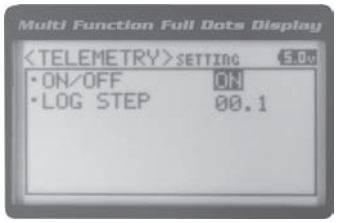
⚠ RPM Sensor calibration is only required if you choose to use the RPM Sensor to display MPH or KM/H. Calibration

⚠ Adjusting the 10 Count Distance value will change the Maximum Speed value you changed in the previous step.

TELEMETRY SETTING (TELEMETRY AND TELEMETRY LOG OPTIONS)

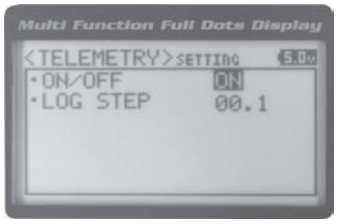
The Telemetry Setting allows you to choose whether the Telemetry System is turned ON or OFF and change the interval

Turning the Telemetry System ON and OFF



1) From within the TELEMETRY menu, scroll UP or DOWN to highlight TELEMETRY SETTING.

2) Press the ENTER key. The SETTING menu will be displayed and ON/OFF ON



3) Press the ENTER key, then scroll UP or DOWN to change the Telemetry ON/OFF value. When ON is selected, the Telemetry System is turned ON. When OFF is

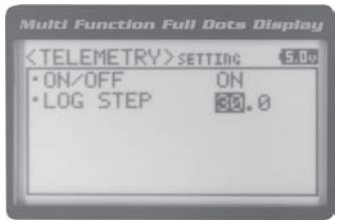
TELEMETRY SETTING ON/OFF setting range is ON or OFF. The default setting is

⚠ If the Telemetry Log function is started when the Telemetry System is OFF, default values will be stored in the

TELEMETRY SETTING (TELEMETRY LOG OPTIONS), CONTINUED....

Changing the Telemetry Log Step Value

The Telemetry Log Step value can be changed to customize how much Telemetry Data and the time interval Telemetry Data is recorded. The Telemetry Log can store up to 120 separate entries. If the Log Step value is set to 00.1 seconds, the



1) From within the SETTING menu, scroll UP or DOWN to highlight LOG STEP 00.1.

2) Press the ENTER key, then scroll UP or DOWN to change the Telemetry Log Step value. Programming a lower Telemetry Log Step value results in narrower, higher resolution readings, but for a shorter period of time. Programming a higher Telemetry Log Step value results in broader, lower resolution readings, but for

TELEMETRY LOG STEP setting range is 00.1 to 45.9. The default setting is 00.1.

TE-CLR (TELEMETRY CLEAR FUNCTION)

The Telemetry Clear function allows you to Reset the High Temperature 1, High Temperature 2 and High RPM values that are displayed on the Telemetry Screen. The Telemetry Clear function can be assigned to either Push-Button Switch Sw1 or Push-Button Switch Sw2. When you press the Push-Button Switch the Telemetry Clear function is assigned to, the High Temperature 1, High Temperature 2 and High RPM values will be Reset the Current values read by the Telemetry Sensors.

11.VR ADJUST (VARIABLE RATE ADJUSTMENT)

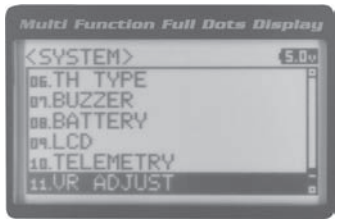
Over time during use, it's possible that the End Points and/or Neutral positions of the controls may change slightly or you may purposely limit the travel of the Steering Wheel to suit the best feel of the steering wheel and your driving style. The Variable Rate Adjustment function allows you to calibrate the operation of the Steering Wheel, Throttle Trigger and

⚠ We recommend using this function as part of a periodic maintenance schedule or after adjusting Steering Wheel

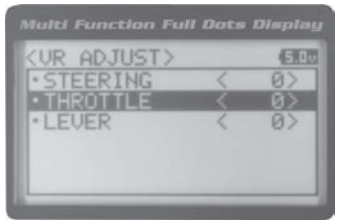
⚠ After using the Variable Rate Adjustment function, you should double-check the End Point Adjustments of each

⚠

Calibrating Control Operation



1) From within the SYSTEM menu, scroll UP or DOWN to highlight the VR ADJUST menu.

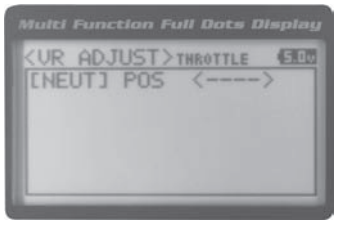


3) Scroll UP or DOWN to highlight the control you would like to calibrate. Choose

⚠ <0> indicates the current position of the specific channel relative to its specific control. For example, if the Steering Wheel is in the Neutral position, but an L or

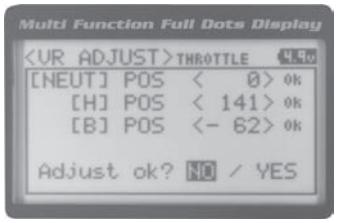
Calibrating Control Operation, Continued....

4) With the Steering Wheel, Throttle Trigger or Auxiliary Lever in the Neutral position,

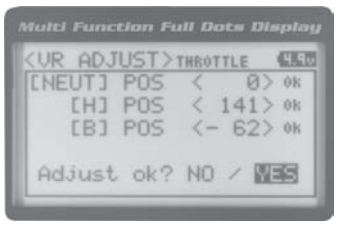


5) Press the ENTER key a second time. A menu with several position indicators will be displayed.

6) Slowly move the Steering Wheel, Throttle Trigger or Auxiliary Lever all the way in one direction. Allow the control to return to Neutral, then slowly move the Steering Wheel, Throttle Trigger or Auxiliary Lever all the way in the opposite direction. A



7) Scroll DOWN to highlight YES, then press the ENTER key. Executed will flash,



To cancel the calibration process, scroll UP or DOWN to highlight NO, then press the ENTER key. You can then

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TROUBLESHOOTING GUIDE

This troubleshooting guide can help you diagnose and solve some of the more common problems that you may encounter with your *MT-4 2.4GHz FHSS-4T* radio control system. If you cannot solve the problem using this troubleshooting guide,

PROBLEM	CAUSE	SOLUTION
Transmitter does not turn ON	Batteries not installed correctly	Reinstall batteries. Observe correct polarity
	Battery tray not plugged in	Plug in battery tray. 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	Modulation incorrect	Change Modulation Type to match receiver
	Too much time elapsed after pressing in the BIND menu	Quickly press the ENTER key after releasing the receiver Bind Button
	Attempting to bind incompatible receiver	Use only Airtronics 2.4GHz FHSS-2, FHSS-3 or FHSS-4T surfaces receivers
	Using ESC with BEC	Disconnect ESC and use dry cell battery for Binding procedure, then reconnect ESC after binding
Alarm beeps continuously	Low receiver battery voltage	Recharge receiver battery
	Transmitter battery voltage at Low Voltage Limit	Replace or recharge transmitter batteries
No sound when keys are pressed	Transmitter left ON more than 10 minutes without control input	Move steering wheel or throttle trigger, or press any button to continue use
No Timer function sounds		
Servo movement is slow	Audible Key Tones are Muted	Increase Audible Key Tone volume
	Audible Key Tones are Muted	Increase Audible Key Tone volume
	Receiver battery voltage low	Recharge receiver battery
Servo does not move when using Trim Switch	A negative Servo Speed value is programmed	Increase Servo Speed Programming Value
Inadequate transmitting range	Control linkages binding	Adjust control linkages to operate smoothly
	Trim is outside of operational range	Reset Trim to zero and center the servo horn and control linkage
Servo moves too much, or doesn't move enough, when Trim Switch is moved	Low transmitter or receiver battery voltage	Replace or recharge transmitter and receiver batteries
Throttle servo or ESC moves to programmed position without input	Receiver antenna not mounted correctly in your model	Mount receiver antenna as recommended
Cannot program receiver Battery Fail Safe Voltage level	Trim Step resolution requires adjustment	Adjust Trim Step resolution
No Telemetry connection	Receiver battery voltage has reached the programmed Battery Fail Safe voltage level	Recharge receiver battery
	Throttle channel Fail Safe set to FREE value or HOLD	Set Throttle channel Fail Safe to a percentage
RPM Sensor not functioning	Using FHSS-2 or FHSS-3 receiver	Use FHSS-4T receiver
	Telemetry System turned OFF	Turn Telemetry System ON
	Distance between transmitter and receiver too far	Shorten distance between transmitter and receiver
	Sensor Pickup not facing reflective faces	Mount RPM Sensor so that Sensor Pickup

GLOSSARY OF TERMS

Activate: To turn ON a particular function.

Antenna: Transmits the signal from the transmitter to the receiver in the model. Never touch the Antenna during use. Doing so may result in a weakened RF signal or complete loss of control of your model.

Antenna Reception Wire: The portion of the receiver antenna that receives the transmitter signal. The Antenna Reception Wire should never be bent or it could be damaged and limit the range of your model.

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

ARC: Adjustable Rate Control (ARC) allows you to vary the amount of servo travel in relation to the movement of the steering wheel, throttle trigger and auxiliary lever near the Neutral positions to change the way those functions react to control movement. The position that the Rate can be controlled from is adjustable along the length of control travel.

Audible Key Tone: An audible tone that is emitted from the transmitter each time the Push-Button Rotary Dial, Trim Switch, Push-Button Switch or Rotary Dial is used.

Auxiliary Lever: The Auxiliary Lever is programmable and will perform a different function depending on what function is assigned to it. For example, it can be used to control Auxiliary 1 Channel 3 or to control the Servo Speed function. The Auxiliary Lever features a detent and an audible tone to let you know it's in the Neutral position.

Auxiliary Lever Position Display: Displays the current position of the Auxiliary Lever on the TOP screen.

Auxiliary Mixing: Allows you to Mix either Steering Channel 1 or Throttle Channel 2 to Auxiliary 1 Channel 3 or Auxiliary 2 Channel 4, while maintaining separate Sub-Trim, End Point Adjustments, Servo Reversing and other channel-specific settings. The Auxiliary Mixing function is used when a custom Mix is necessary.

Back/Cancel Key: Returns to the previous menu. Press and HOLD to return to the TOP screen. In addition, cancels certain warning alarms, such as the Low Voltage Alert alarm.

Battery Compartment: Houses the four 'AA' Alkaline cells that power the transmitter. Alternatively, the transmitter can be powered using four 'AA' Ni-Cd or Ni-MH rechargeable batteries or a 2S Li-Po or 2S Li-Fe/A123 battery pack.

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 in the process of Binding the transmitter and receiver.

Bind LED: Displays the current status of the receiver.

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

Burn: Used with the Motor on Axle function (dual ESCs), the front motor is inhibited while keeping full control of the rear motor during rock crawling.

Center Trim Type: A Trim technology, that when selected, the servo End Points remain stationary when you apply Trim using the Trim Switches. This can result in unbalanced servo travel. In order to balance servo travel, servo End Points need to be manually readjusted.

Channel Set: Allows you to make programming changes to each of the four channels without the need to enter each Programming Menu separately.

Charging Jack: Used for onboard charging of optional Ni-Cd or Ni-MH batteries. Do not attempt to charge Alkaline batteries. Only the recommended Airtronics 110v AC charger should be used through the Charging Jack. If using an after-market Peak-Detection charger or other type of fast charger, the batteries should be removed from the transmitter to avoid damage to the transmitter circuitry and/or your batteries. Do not attempt to charge a Li-Po or Li-Fe/A123 battery pack through the Charging Jack.

Coaxial Cable: The portion of the receiver antenna that extends the Antenna Reception Wire. The Coaxial Cable can be bent into gentle curves, however, do not bend it acutely, or repeatedly bend it, or the antenna core can be damaged. The Coaxial Cable should be installed into a nylon tube (antenna tube) and positioned vertically in your model for the best reception.

Countdown Timer: Used to notify you of your model's running time. For example, you can set the Countdown Timer to alert you when it's time to refuel. When the Countdown Timer expires a long audible tone will sound and the Count Up Timer function begins automatically. This allows you to check the time elapsed since the timer ran out.

GLOSSARY OF TERMS, CONTINUED....

Dig: Used with the Motor on Axle function (dual ESCs), the rear motor is inhibited while keeping full control of the front motor during rock crawling.

Digital RPM Display: Displays the current RPM from the RPM Sensor in digital format on the Telemetry Screen.

Digital Temperature Display: Displays the current temperature from the TEMP1 and TEMP2 Temperature Sensors in digital format on the Telemetry Screen.

Dual Rate: The Dual Rate function allows you to change the control authority of the Steering, Throttle High Side and Throttle Brake Side by changing the amount of servo travel relative to control input. For example, by increasing the Steering Dual Rate, you can make the steering servo travel more which might prevent your model from pushing during turns. If your model oversteers during turns, you can reduce the amount of Steering Dual Rate.

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

Digital Voltage Indicator: Indicates the current Voltage of the transmitter batteries on both the Top Menu and the Telemetry Screen.

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

Enter Key: Opens the selected menu or programming option. Press and HOLD to reset the selected programming option to its default value.

Exponential: Allows you to vary the amount of servo travel in relation to the movement of the steering wheel, throttle trigger and auxiliary lever near the Neutral positions to change the way those functions react to control movement. The position that the Rate can be controlled from is fixed.

Fail Safe: Automatically moves 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 low transmitter battery.

FH2 Modulation: Frequency Hopping 2nd generation FHSS technology. FH2 Modulation is used in legacy Airtronics 2.4GHz FHSS-2 transmitters and receivers, such as the Airtronics M11, M11 FHSS-2, and MX-3FG radio control systems.

FH3 Modulation: Frequency Hopping 3rd generation FHSS technology. FH3 Modulation is used in new-generation Airtronics radio control systems, such as the M11X and MX-3X.

FH3F Modulation: Frequency Hopping 3rd generation FHSS technology used only in France. This is a special modulation type typically used in France. It should not be selected for use in North America.

FH4T Modulation: Frequency Hopping 4th generation FHSS technology. FH4T Modulation is the latest Airtronics 2.4GHz frequency modulation and supports Telemetry.

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.

Four Wheel Steering Mixing: Used to control either the Front or Rear steering independently, or Mix the Front and Rear steering so that they can be used together. Front or Rear Independent Steering, Parallel Four Wheel Steering and Tandem Four Wheel Steering options are available.

Grip: The Grip is molded from rubber in an ergonomic shape for increased comfort, control and feel. An optional Grip is included that is molded in a different shape that some users may find feels more comfortable.

High RPM Display: Displays the last highest RPM value on the Telemetry Screen.

High Temperature Display: Displays the last highest Temperature value on the Telemetry Screen.

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

Hold: Determines how quickly the Brake moves from the Stroke setting to Neutral when the Anti-Lock Braking function is Active.

Inactivity Alarm (Power ON Alarm): The Inactivity Alarm will sound if the transmitter is left on for a period of 10 minutes without any control input from the user. This alarm alerts you to prevent unwanted draining of the transmitter battery. To clear this alarm, either turn the transmitter OFF or press the Back/Cancel key or the Push-Button Rotary Dial.

GLOSSARY OF TERMS, CONTINUED....

Interval Timer: Notifies you when a set interval elapses while you are driving, giving you an idea of how close you are to your target time.

KM/H: Kilometers per Hour.

Lag: Controls the amount of delay before the Anti-Lock Brake Activates after reaching the POINT setting.

Lap Timer: Allows you to measure and record times for up to 99 laps. The number of laps completed is displayed in the Timer menu, and when a lap is completed, the lap time is displayed momentarily on the TOP screen.

LED 1/2: Displays the current signal output status of the transmitter (LED 1 - Blue) and the Telemetry connection (LED 2 - Red). In addition, one or both LEDs are used to indicate various transmitter conditions. For example, when a Throttle Offset percentage value is programmed, the blue LED will flash.

Low Voltage Alert Alarm: The Low Voltage Alert alarm will sound when the transmitter batteries reach the Alert Voltage value programmed in the SYSTEM - ALARM menu. The alarm will sound each time the transmitter battery voltage decreases by 0.1 volt. To clear this alarm, press the Back/Cancel key or the Push-Button Rotary Dial.

Low Voltage Limit Alarm: The Low Voltage Limit alarm will sound when the transmitter batteries reach the Limit Voltage value programmed in the SYSTEM - ALARM menu. This alarm can only be cleared by turning the transmitter OFF and recharging or replacing the transmitter batteries.

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.

Modulation Type Indicator: Indicates the current Modulation Type on the TOP screen that the transmitter is set to.

Model Number and Name: Displays the Model Number and Model Name of the currently selected model on both the TOP screen and the Telemetry Screen.

Model Clear: Used to reset the selected model's Programming Data to the default values. All model-specific Programming Data, including the Model Name and Modulation Type will be Reset to the default values.

Model Naming: Used to name the different models you have saved in the transmitter. This makes it easy to keep track of multiple models. The Model Name can consist of up to 10 letters, numbers, or symbols. Choose from capital letters, lower case letters, numbers, and various symbols.

Model Select: Used to store and retrieve Programming Data for any model 1 through 18. If you have Programming Data stored for more than one model, using the Model Select function to load the Programming Data for the particular model that you wish to use. The currently selected Model Number and Model Name is displayed on both the TOP screen and the Telemetry Screen.

Motor on Axle Mixing: Used to control either the Front and Rear throttles together or independently, giving you Dig and Burn functions. These functions are mostly used in Rock Crawling.

MPH: Miles Per Hour.

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.

Over Voltage Alarm: The Over Voltage Alarm will sound if the transmitter battery voltage is greater than 9.6 volts. To clear this alarm, turn the transmitter OFF and replace the transmitter battery with one that when fully charged does not exceed 9.6 volts.

Parallel Steering: Used with Four Wheel Steering, both front and rear wheels pivot right and left together.

Parallel Trim: A Trim technology that when selected, the servo End Points move in equal amounts as the Trim when you use the Trim Switches. This results in balanced servo travel without the need to manually readjust the End Points.

Point Setting: Locates the actual point in the servo travel that you want a specific programming setting to occur. This setting can vary depending on the actual programming setting the Point setting is controlling.

Point Auxiliary: Used to program Auxiliary Channel 3 or Auxiliary Channel 4 to move the servo to up to 6 different points along its travel, then cycle through those Points. For example, if your model requires a separate 3-position or more switch to operate a feature, the Point Auxiliary function can be customized to control this.

Power Switch: Turns the transmitter ON and OFF.

GLOSSARY OF TERMS, CONTINUED....

Push-Button Switch: The transmitter features two separate Push-Button Switches in different locations (Sw1 and Sw2). Each Push-Button Switch is programmable and will perform a different function depending on what function is assigned to it.

Receiver Battery Voltage Fail Safe: Used to set a custom voltage that the Receiver Battery Fail Safe function will Activate at. When your receiver battery voltage drops to the programmed voltage, the throttle servo will move to the predetermined position programmed using the Fail Safe function. If this occurs, recharge or replace your receiver batteries.

Receiver Voltage Display: Displays the current voltage of the receiver battery on the Telemetry Screen.

Release: Determines how quickly the Brake moves from Neutral to the percentage value determined by the Stroke setting when the Anti-Lock Braking function is Active.

RPM: Revolutions Per Minute.

RPM Display Monitor: Displays the current RPM on the Telemetry Screen from the RPM Sensor in graphical format.

Servo Monitor Display: Displays the output levels of the four different channels in bar graph form, allowing you to monitor servo operation in a virtual manner.

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

Servo Speed: Used to slow down the transit speed of the servos. Servo transit speed can be slowed in both the Forward and the Return to Center directions.

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

SHR Servo Mode: Using this setting with Digital servos will increase the servo's response time, even above the manufacturer's stated specification. Do not use with Analog servos!

SSR Servo Mode: If you're using Airtronics SRG Digital servos, you can use the SSR setting for the fastest response time. This results in the ultimate feel and response, making you feel more in control of your model than ever. Use only with Airtronics SRG Digital servos!

Steering Program Indicator: Indicates up to four different programming options that are currently programmed to the Steering channel. The Steering Program Indicator will only be displayed if a Steering channel Programming Value is programmed.

Steering Trim Display: Displays the current position of the Steering Trim Switch on the TOP screen.

Steering Wheel: Proportionally operates the model's right and left steering control. The Steering Wheel features a foam grip for increased comfort, control and feel. In addition, the Steering Wheel spring tension and travel limits can be adjusted.

Steering Wheel Tension Adjustment Screw: Used to adjust the spring tension of the steering wheel to best suit the feel of the user.

Step Auxiliary: Allows you to program the Auxiliary 1 servo or Auxiliary 2 servo to move a defined amount when toggled ON and OFF using a Push-Button Switch.

Step Value: A preset amount that the servo will travel when a Trim Switch is pressed once. The step value can be adjusted so that the servo either moves more or moves less when the Trim Switch is pressed.

Stroke: Determines the amount of Brake that's applied automatically when the Anti-Lock Braking function Activates.

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

Tandem Steering: Used with Four Wheel Steering, the front wheels pivot opposite to the rear wheels.

Telemetry: A connection between the receiver and the transmitter that transfers Sensor data from the receiver to the transmitter that can be viewed in real-time on the Telemetry Screen. Data such as Temperature, Receiver Voltage and RPM or Speed can be viewed.

Telemetry Inputs: Located under a removable protective cover, the Telemetry Inputs are where you plug the Temperature and RPM Sensors into. Two separate temperature inputs and one RPM input are available.

GLOSSARY OF TERMS, CONTINUED....

Temperature Alert Alarm: The Temperature Alert alarm will sound when the TEMP1 and/or TEMP2 temperature reaches the Alert Temperature value programmed in the SYSTEM - TELEMETRY menu. To clear this alarm, press the Back/Cancel key or the Push-Button Rotary Dial.

Temperature Display Monitor: Displays the current TEMP1 and TEMP2 temperatures in bar graph format on the Telemetry Screen.

Throttle Mode Indicator: Indicates the current Throttle Mode type on the TOP screen.

Throttle Offset: Allows you to shift the Neutral position of the throttle servo, either toward the High Side or the Brake Side. When used in conjunction with a Push-Button Switch, this function can be used several different ways. For example, if you're driving a glow- or gas-powered model, you can program the Throttle Offset function to shut down your engine with the press of a button. In addition, you can program the Throttle Offset function to increase to a steady idle while you're refueling during a race.

Throttle Offset Indicator: Indicates that the Throttle Offset function is programmed. The Throttle Offset Indicator will only be displayed if a Throttle Offset percentage value is programmed.

Throttle Program Indicator: Indicates up to four different programming options that are currently programmed to the Throttle channel. The Throttle Program Indicator will only be displayed if a Throttle channel Programming Value is programmed.

Throttle Trigger: Controls the speed of the model, both forward and backward, or the model's brake. The Throttle Trigger position, angle and spring tension can all be adjusted.

Throttle Trigger Position Adjustment Indicator: Indicates the current position of the Throttle Trigger. As the throttle trigger position is adjusted forward or backward, the Throttle Trigger Position Adjustment Indicator will move forward or backward.

Throttle Trigger Position Adjustment Screw: Used to adjust the position of the Throttle Trigger either forward or backward.

Throttle Trigger Tension Adjustment Screw: Used to adjust the spring tension of the throttle trigger to best suit the feel of the user. Turning the Throttle Trigger Tension Adjustment Screw clockwise increases throttle trigger tension and turning the Throttle Trigger Tension Adjustment Screw counter-clockwise decreases throttle trigger tension.

Throttle Trim Display: Displays the current position of the Throttle Trim Switch on the TOP screen.

Timer Display: Displays the time of the currently selected Timer on the TOP screen.

Timer Type Indicator: Indicates the current Timer Type selected, either LAP or INT (Interval) on the TOP screen.

Trim Switch: The transmitter features four separate Trim Switches positioned around the steering wheel (Trm1, Trm2, Trm3 and Trm4). Each Trim Switch is programmable and will perform a different function depending on what function is assigned to it. For example, Trm1 and Trm2 can be used to adjust steering and throttle Trim and Trm4 and Trm5 can be used to adjust Dual Rate and steering EPA.

Trim Step Resolution: Used to adjust how far the servos travel when the Trim Switches are pressed. You can increase the resolution, so that the servos travel less when you press the Trim Switches. This makes it possible to fine-tune the settings extremely accurately. In addition, you could decrease the resolution, so that the servos travel more when you press the Trim Switches. This setting may not be as accurate, although you can set large amounts of Trim faster.

Variable Rate Adjustment: The Variable Rate Adjustment function allows you to recalibrate the operation of the Steering, Throttle and Auxiliary Lever End Points and Neutral positions to ensure precise control operation.

Voltage Alert Alarm: The Voltage Alert alarm will sound when the receiver battery in your model reaches the Alert Voltage value you've programmed in the SYSTEM - TELEMETRY menu. To clear this alarm, press the Back/Cancel key or the Push-Button Rotary Dial.

Voltage Alert Indicator: Indicates the currently programmed Voltage value on the Telemetry Screen that the receiver Voltage Alert alarm will sound at.

Voltage Display Monitor: Displays the current receiver battery voltage on the Telemetry Screen in bar graph format.

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