



DX4R PRO

4-Channel 2.4GHz DSMR™ System



Instruction Manual
Bedienungsanleitung
Manuel d'utilisation
Manuale di istruzioni

NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, LLC. For up-to-date product literature, visit horizonhobby.com and click on the support tab for this Product.

MEANING OF SPECIAL LANGUAGE

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND little or no possibility of injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

WARNING: Procedures, which if not properly followed, create the probability of property damage, collateral damage and serious injury OR create a high probability of superficial injury.



WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, LLC. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.



WARNING AGAINST COUNTERFEIT PRODUCTS

Always purchase from a Horizon Hobby, LLC authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, LLC disclaims all support and warranty with regards, but not limited to, compatibility and performance of counterfeit products or products claiming compatibility with DSM or Spektrum.

NOTICE: This product is only intended for use with unmanned, hobby-grade, remote-controlled vehicles and aircraft. Horizon Hobby disclaims all liability outside of the intended purpose and will not provide warranty service related thereto.

Age Recommendation: Not for Children under 14 years. This is not a toy.

WARRANTY REGISTRATION

Visit community.spektrumrc.com today to register your product.

SAFETY PRECAUTIONS

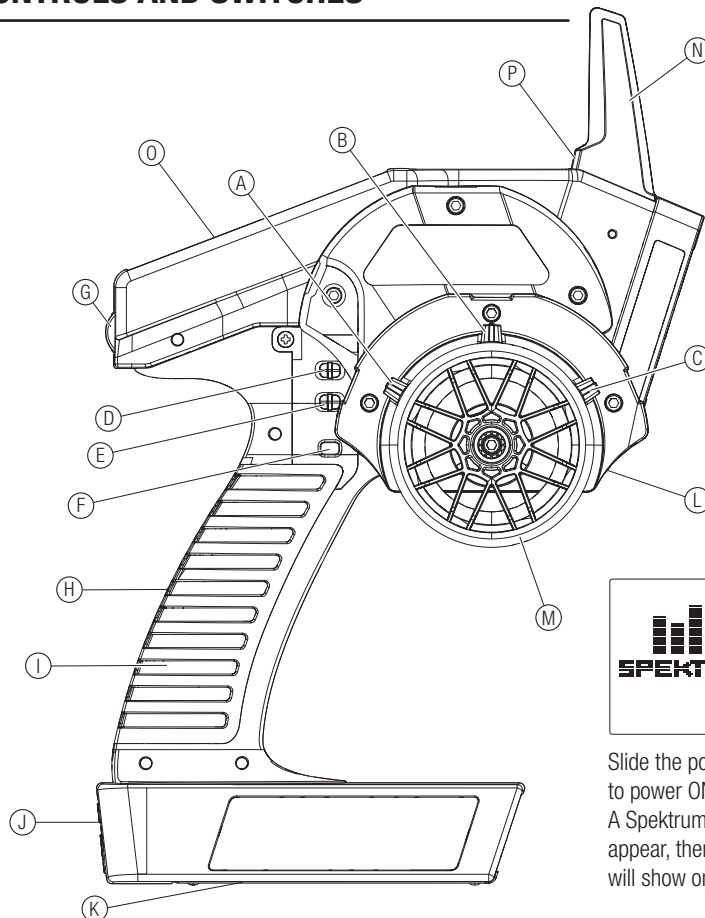
- Always ensure all batteries have been properly charged prior to using the model.
- Always check all servos and their connections prior to each run.
- Never operate your model near spectators, parking areas or any other area that could result in injury to people or damage of property.
- Never operate your model during adverse weather conditions. Poor visibility can cause disorientation and loss of control of your model.
- Never point the transmitter antenna directly toward the model. The radiation pattern from the tip of the antenna is inherently low.
- If at any time during the operation of your model you observe any erratic or abnormal operation, immediately stop operation of your model until the cause of the problem has been ascertained and corrected.

TABLE OF CONTENTS

Warranty Registration	2	Frame Rate.....	11
Identifying Controls and Switches.....	3	Servo Speed.....	12
Installing Batteries.....	4	Mixing	12
ModelMatch	4	Active Vehicle Control (AVC).....	14
Charging	5	ABS (Automatic Breaking System or pulse brakes)	14
The Rubber Grip	5	Idle Up	15
Updating the Firmware	5	Traction	15
Warning Screens	6	Trim Step.....	15
Low Battery Alarm		Reset	16
Inactivity Alarm		Monitor	16
Receiver Compatibility	6	System	17
Main Screen	7	Changing from Dropdown to Standard Wheel.....	19
Programming Guide	7	Changing to Left-Handed Configuration.....	20
Individual Direction Adjustments		Troubleshooting Guide.....	20
List	7	1-Year Limited Warranty	21
Model Select	8	FCC Information.....	22
Travel	8	IC Information	23
Steering Rate.....	9	Compliance Information for the European Union.....	23
Exponential	9		
Binding.....	11		

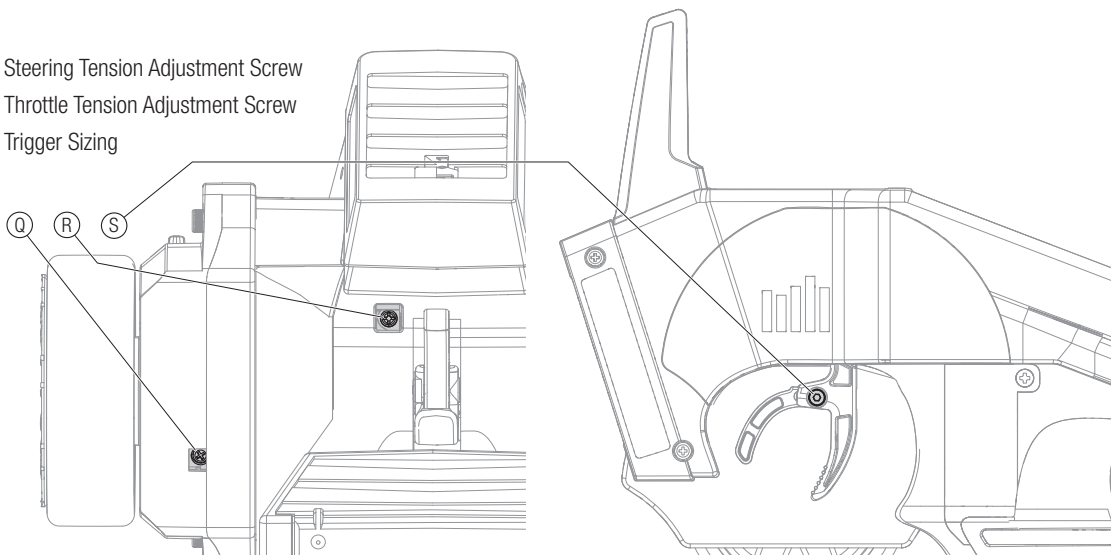
IDENTIFYING CONTROLS AND SWITCHES

- A. Switch A
- B. Switch B
- C. Switch C
- D. Switch D
- E. Switch E
- F. Switch F
- G. Roller Selector
- H. Rubber Grip
- I. Memory Card Port
(under rubber grip)
- J. Power Switch
- K. Battery Cover
- L. Throttle Trigger
- M. Steering Wheel
- N. Antenna
- O. LCD Screen
- P. RF LED



Slide the power switch (J) to power ON the transmitter. A Spektrum logo screen will appear, then the Main Screen will show on the LCD screen (O).

- Q. Steering Tension Adjustment Screw
- R. Throttle Tension Adjustment Screw
- S. Trigger Sizing



STEERING TENSION ADJUSTMENT

The steering tension is adjustable using the screw below the steering wheel. Turn the screw clockwise to increase the steering tension.

THROTTLE TENSION ADJUSTMENT

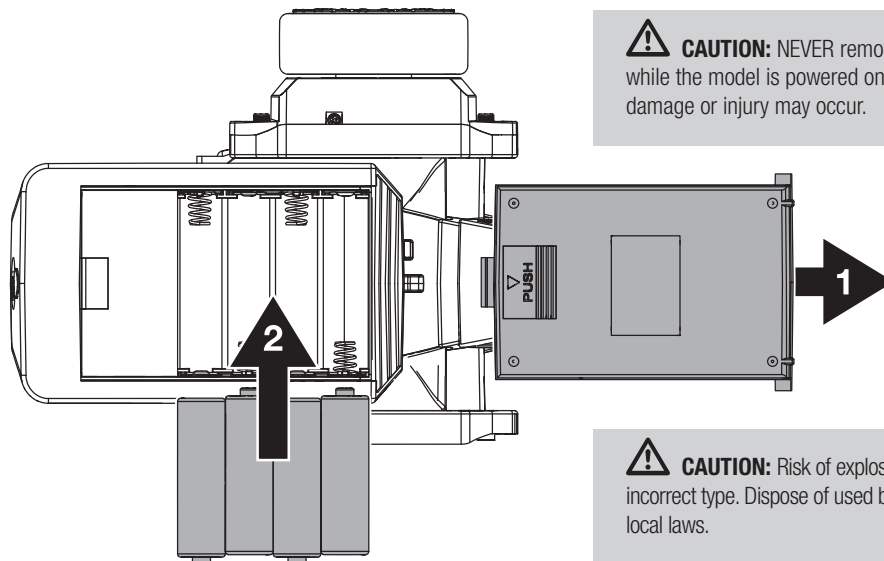
The trigger tension is adjustable using the screw in front of the throttle trigger. Turn the screw clockwise to increase the trigger tension.

TRIGGER SIZING

You can adjust the trigger to fit your driving style. To adjust the trigger:

1. Loosen the screw on the back of the trigger.
2. Adjust the trigger spacing as necessary.
3. Tighten the screw on the back of the trigger.

INSTALLING BATTERIES



CAUTION: NEVER remove the transmitter batteries while the model is powered on. Loss of model control, damage or injury may occur.

CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to state and local laws.

MODELMATCH

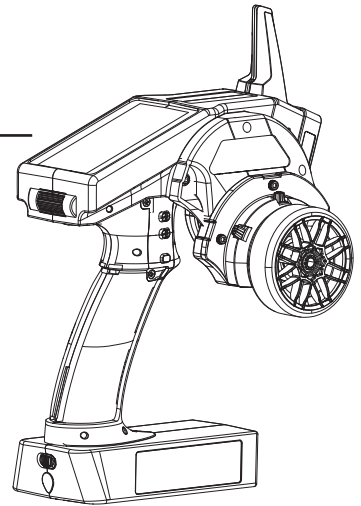
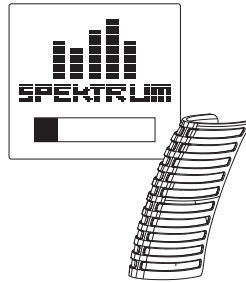
The Spektrum DX4R PRO transmitter features ModelMatch™ technology, preventing you from operating a vehicle when the wrong model memory is active in the transmitter. If you select the wrong model memory, the receiver will not respond to the transmitter.

THE RUBBER GRIP

This transmitter includes 2 sizes of grips. The small-size grip is installed at the factory.

To change the rubber grip

1. Lift the edge of the grip and pull the grip away from the handle.
2. Align the tabs on the new grip with the slots in the handle.
3. Press the grip against the handle.



UPDATING THE FIRMWARE

The DX4R PRO features an SD card reader, enabling you to update the transmitter when firmware updates are available. Register your transmitter at www.SpektrumRC.com to receive the latest information regarding firmware updates. To install firmware updates on your DX4R PRO transmitter:

1. Remove the grip from the back of the transmitter handle.
2. Download the latest firmware from www.SpektrumRC.com to an SD card. The transmitter serial number can be found by going to the About screen.
3. Install the SD card in the card reader slot on the DX4R PRO transmitter.
4. Power on the transmitter. A Spektrum logo and an installation bar will appear. Installation is complete when the Main screen appears.
5. Remove the SD card from the card slot on the transmitter.
6. Re-install the rubber grip on the transmitter handle.

WARNING SCREENS

LOW BATTERY ALARM

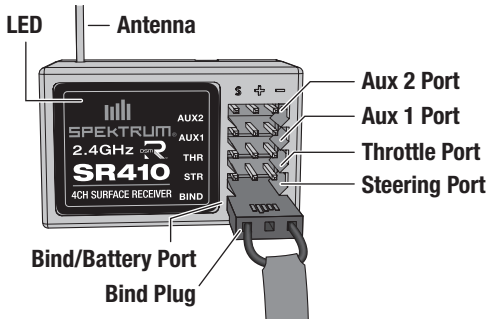
An alarm will sound and the voltage will flash on the main screen when the transmitter's battery power falls below a set limit. This alarm reminds you to stop using the vehicle immediately; power off the transmitter and replace the batteries. Set the low battery limit using the *System Screen*.

INACTIVITY ALARM



The alarm reminds you to power off the transmitter and save battery power. If the transmitter is powered on for more than 10 minutes and no control movement is detected, the inactivity alarm will sound. Moving any control stops the alarm.

RECEIVER COMPATIBILITY



The DX4R PRO transmitter is compatible with Spektrum™ DSMR™ and DSM2® receivers. The included SR410 DSMR receiver is only compatible with DSMR transmitters.

AVC – ACTIVE VEHICLE CONTROL

AVC™ technology is the newest Spektrum™ RC innovation from Horizon Hobby. This Spektrum stabilization system adds a whole new level of control to your RC driving experience. AVC technology utilizes sensors to adjust steering and throttle output, providing you with a more stable and controlled driving experience.

NOTICE: You must use digital servos with the SRS4210 receiver. Using analog servos will reduce the performance of the system and may cause analog servos to overheat.

Install the receiver in your vehicle using double-sided foam servo tape. Foam servo tape holds the receiver in place and protects the receiver from vibration. Position the antenna vertically and away from the vehicle in an antenna tube. The SR410 has a coax style antenna. The last 31mm of the antenna is the portion that receives the signal from the transmitter.

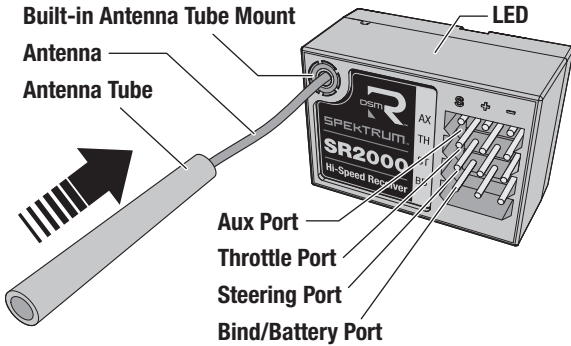
NOTICE: Do not cut or bend the antenna or it could become damaged.

SR2000 RECEIVER

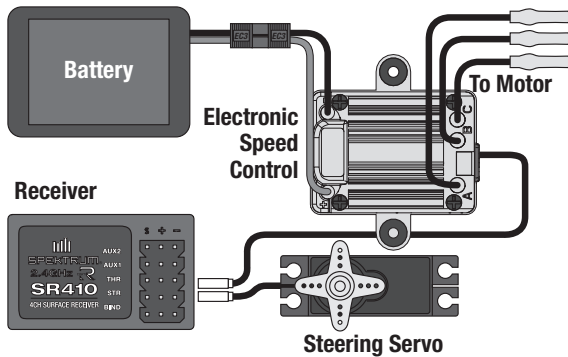
Built-in Antenna Tube Mount

Antenna

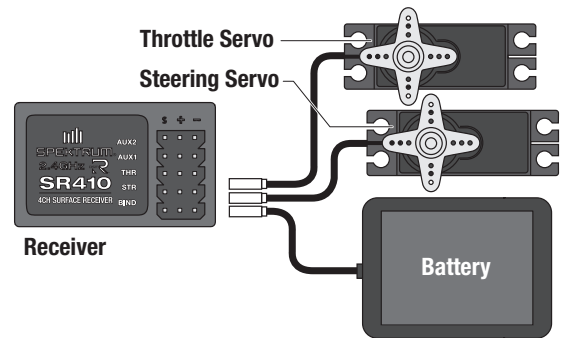
Antenna Tube



ELECTRIC VEHICLE INSTALLATION



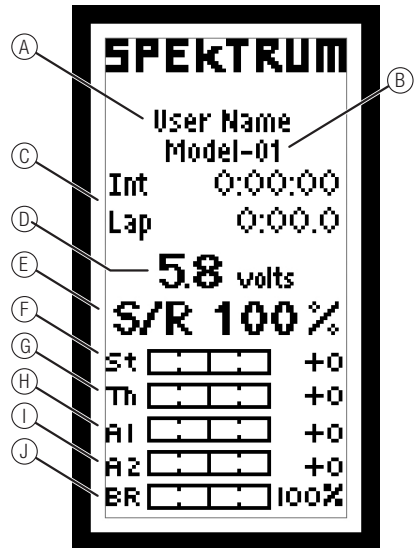
NITRO VEHICLE INSTALLATION



MAIN SCREEN

The Main Screen displays information about the active model, including the Timer (when activated). To return to the Main Screen at any time, press and hold the Rolling Selector for at least 3 seconds.

- A. User Name
- B. Name assigned to the Model memory
- C. Timers (when activated)
- D. Transmitter Battery Voltage
- E. Steering Percent
- F. Position of Steering (St) trim
- G. Position of Throttle (Th) trim
- H. Position of Aux 1 trim
- I. Position of Aux 2 trim
- J. Brake Percent



PROGRAMMING GUIDE

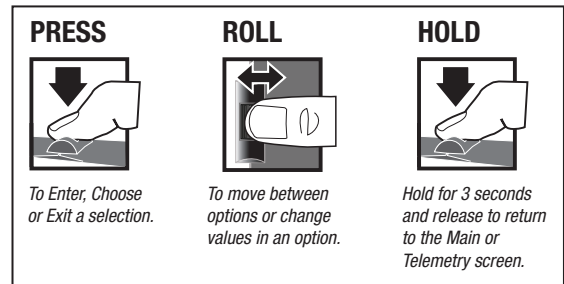
USING THE ROLLING SELECTOR

Press the Selector to enter a highlighted function.

Roll the Selector to highlight a function or change settings and values when selected.

Press and hold the Selector for more than 3 seconds in any screen to return the display to the List Screen or the Main Screen.

To program, always start with a press on the Selector, then roll, then press, then roll, and so on.



INDIVIDUAL DIRECTION ADJUSTMENTS

In some instances, you may find it necessary to independently adjust the control directions; for example, if you want more travel for left steering than right steering, perform the following steps:

1. Scroll to the value you wish to change and press the Rolling Selector.
2. When both directions are selected, move the control (steering or throttle) toward the control direction you wish to change. The selection box moves to the desired direction. You do not need to hold the control in the desired direction.
3. To change the opposite direction, simply move the control in that direction.
4. Press the Rolling Selector to save the selection.

LIST

The List Screen shows other screens to set programming in the transmitter. A dark box with a clear symbol or text represents the highlighted selection. The Active Screen name is displayed at the top of the screen. Choosing the arrow will open the next higher screen, such as Main Screen or this List Screen. A small bar shows the relative position of a highlighted screen name in the List.

MODEL SELECT

SELECT



Use the Model Select menu to change the model memory, to assign a model name or to copy a model. The DX4R PRO has 50 model memories available.

CAUTION: NEVER change the model in Model Select while operating a model. Changing the model memory interrupts the transmitter signal to the receiver and may cause loss of vehicle control, damage or personal injury.

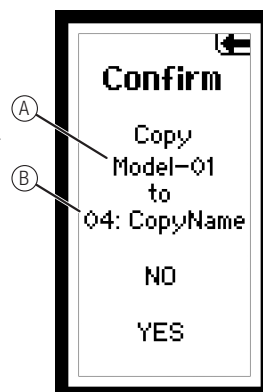
COPY

The Copy function shares active model memory settings with a selected model memory space. This is useful for saving setups for one model to adjust programming for track conditions or model setups.

Choosing *No* returns to the List Screen. Choosing Yes saves the active model settings to the selected model memory.

A. Active or source model memory number

B. Destination model memory number



NAME

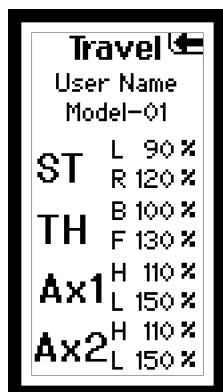


Enables you to name the selected model memory using up to ten characters.

1. Use the roller to select a Model Name in the List.
2. Select the character you want to change. A list of characters appear.
3. Select the character you want to use.
4. When you are finished naming the model memory, select the arrow to save the name and return to the list.

IMPORTANT: When using the Copy function, model information will be permanently overwritten by the active model settings.

TRAVEL

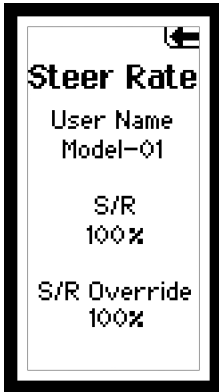


The Travel function supports precise endpoint adjustments in all channels. Travel values range from 0–150% (Default is 100%).

NOTICE: Always check the control directions at the extents of travel to be sure the linkages do not bind. Travel values that are too high will cause binding, which may result in damage to the vehicle.

Channel	Top	Bottom
Steering	L (left)	R (right)
Throttle	B (brake)	F (forward)
Aux 1	H (high)	L (low)
Aux 2	H (high)	L (low)

STEERING RATE



Steering rate (dual rate) allows you to make on-the-fly steering travel adjustments using any of the Programmable grip trimmers (A, B, C, D or E). The Steering Rate screen also offers a Steering override function, which allows you to access a second steering rate (normally 100%) at the touch of a button or trimmer. This is especially helpful for oval racers that program minimal steering throw to desensitize steering during racing, but requires maximum steering angle to drive out of a crash or get turned

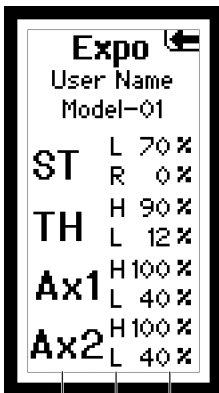
around on the track. The user name, model number and model name are also displayed in this screen.

- From the List screen, highlight the Steering Rate function. Press the roller to access.
- Use the roller to select the S/R function or the S/R Override function by placing the box around the desired function.
- Press the roller to access S/R or S/R Override, then use the roller to change to the desired Steering rate value.
- Press the roller to set the value.

You can assign the adjustable S/R to any of the trimmers (A, B, C, D and E). The default is trimmer D. This trimmer works in unison with the S/R Rate screen. You can adjust the value using the assigned trimmer from either the S/R Rate screen or the Main screen. If you don't want an on-the-fly adjustable Steering rate, you can inhibit the S/R trimmer.

IMPORTANT: In order for the S/R Override to operate, you must assign it to a switch or trimmer. The default position for this function is inhibited.

EXPONENTIAL

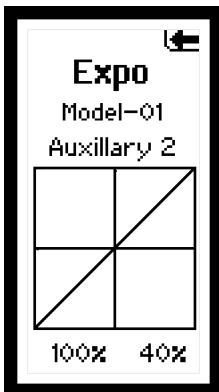
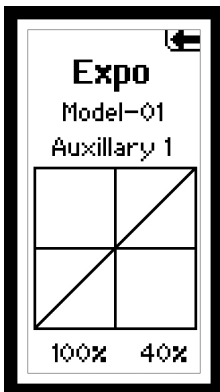
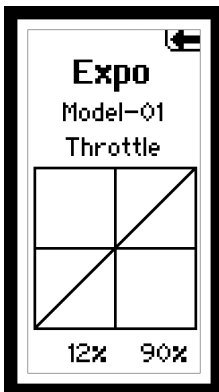
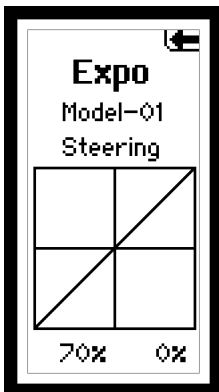


- Channel: *Steering, Throttle or Aux* (auxiliary)
- Direction
- Adjustable value (from -100% to +100% (0 is factory default or inhibit))

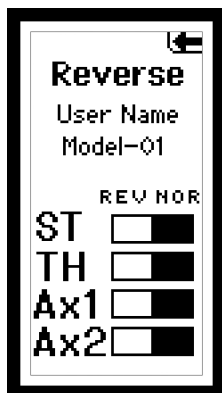
The Exponential (Expo) function affects the response rate of the steering, throttle and/or brake. A positive Steering Expo value, for example, decreases steering sensitivity around neutral to make it easier to drive at high speeds in a straight line while still allowing for maximum turning radius. While sensitivity with positive Expo is decreased around neutral, it increases the sensitivity near the end of travel.



IMPORTANT: Both positive and negative Expo values are available. A positive Expo value results in the center being less sensitive (desirable most of the time), while a negative value increases the sensitivity around center (normally not used).

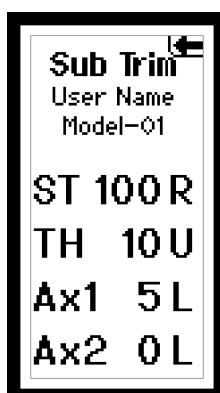


REVERSE



The Reverse function, also known as servo reversing, establishes the channel direction relative to the channel input. Use the reverse menu if, for example, the wheels turn left when you turn the steering wheel to the right. Reverse is available on all channels and is normally the first function you should test and adjust during programming.

SUBTRIM



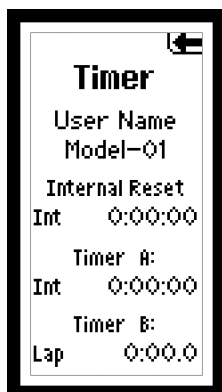
The Sub-Trim function enables you to correct minor servo arm offsets by electronically adjusting the center point of the servo. Sub-trim is available on all channels.

- From the List screen, highlight the Sub-Trim function.
- Press the roller to access the Sub-Trim function. The Sub-Trim screen appears.
- Use the roller to select the channel you wish to reverse.

-ST Steering -TH Throttle -AX Auxiliary

- Press the roller to highlight that channel. The surrounding box will flash. Rotate the roller to adjust the value and direction of the sub-trim.
- Press the roller to set the value.

TIMER



The DX4R PRO offers four types of timers:

Int Internal

Dn Tmr Down Timer

Up Tmr Up Timer

Lap Rolling Lap Timer

Timer A or B can be assigned to one of the four types. Both timers will be shown on the Main screen.

Internal Timer (Default Timer A)

Automatically records the time the transmitter is turned on. To

reset the internal timer, rotate the roller to highlight Internal Reset and then press the roller.

Rolling Lap Timer (Default Timer B)

The Rolling Lap Timer is programmable from 0:00.5 to 4:59.9 minutes in 1-second increments. Start the Rolling Lap Timer via a selectable programmable switch. When the timer expires, an alarm sounds and the Lap timer resets and begins to count down again. To pause the timer, press the button/switch the timer is programmed to. To reset the timer to its preprogrammed value, press and hold the programmed button for more than three seconds. Button F defaults to the timer.

Up Timer

The Up Timer is triggered via a selectable button/switch. It counts up from 00:00 seconds, functioning as a stopwatch. It is useful for timing a fuel run to determine fuel mileage/pit stop strategy or, for electrics, to time the run time of a pack to determine gear ratio and setup information. To pause the Up timer, press the button/switch the timer is programmed to. To reset the UP timer to 00:00, press and hold the programmed button for more than three seconds.

Down Timer

Is programmable for up to 99 minutes and 99 seconds in one-second increments. The Down timer is started via a selectable button/switch. When the down timer expires, an alarm sounds and the timer begins to count up. To pause the Down timer, press the button/switch the timer is programmed to. To reset the Down timer to its preprogrammed value, press and hold the programmed button for more than three seconds.

If Down timer is selected, press the roller again to change the time. Rotate the roller to change the time.

- From the List screen rotate the roller to highlight the Timer function.
- Press the roller to enter the Timer function. The Timer screen will display as shown below.
- Rotate the roller to highlight the desired Timer you choose to program (Timer A or Timer B).
- Press the roller to enter the highlighted Timer function.
- Rotate the roller to select the desired type within Timer A or Timer B:
 - Int- Internal
 - Dn Tmr- Down Timer
 - Up Tmr- Up Timer
 - Lap- Rolling Lap Timer

BINDING



Binding is the Process of teaching the receiver the specific transmitter's code called GUID (Globally Unique Identifier) and storing failsafe values. When a receiver is bound to a transmitter/model memory, the receiver will only respond to that specific transmitter/model memory (see ModelMatch for more information).

Frame Rate

DSM Protocol

FAILSAFE

The throttle failsafe position is set during binding. In the unlikely event that the radio link is lost during use, the receiver will drive the the throttle servo to its pre-Programmed failsafe position (normally full brakes) and all other channels will have no servo output. If the receiver is turned on prior to turning on the transmitter, the receiver will enter the failsafe mode, driving the throttle servo to its preset failsafe position. When the transmitter is turned on, normal control is resumed.

IMPORTANT: Failsafe activates only in the event that signal is lost from the transmitter. Failsafe will NOT activate in the event that receiver battery power decreases below the recommended minimums or power to the receiver is lost.

The Bind Screen shows the active model and supports binding the active model memory to a receiver.

BIND THE TRANSMITTER TO THE RECEIVER

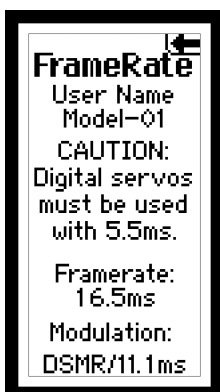
1. Insert a bind plug in the receiver's BIND port.
2. Power on the receiver and wait until the receiver LED begins flashing.
3. Power on the transmitter.
4. Select the Model Memory you wish to bind to.
5. Select Bind from the List menu.
6. Move the throttle channel to the desired failsafe position.

IMPORTANT: The throttle channel must stay in the failsafe position until binding is complete.
7. Scroll to Bind and press the Rolling Selector. The orange LED flashes on top of the transmitter.
8. When the bind process is complete, the transmitter and receiver LEDs stop flashing and turn solid orange.

NOTICE: Always remove the bind plug from the receiver when the bind Process is complete. Failure to do so will cause the receiver to enter bind mode the next time you power on the receiver.

9. Remove the bind plug from the receiver and keep it in a convenient place.

FRAME RATE



For compatibility with all types of servos, three frame rates are available.

5.5ms Gives the fastest response rate and is only compatible with with the SR2000 DSMR receiver and DSM2 receivers. Digital servos must be used with this frame rate.

IMPORTANT: When 5.5ms frame rate is selected, only two channels (steering and throttle) are operational.

11ms Offers good response rates and is compatible with most digital and analog servos (this is the default

position). Works with DSMR surface receivers.

16.5ms This is the least responsive rate and is needed for older analog servos. Works with DSM2 surface receivers.

22ms This frame rate works with DSMR receivers.

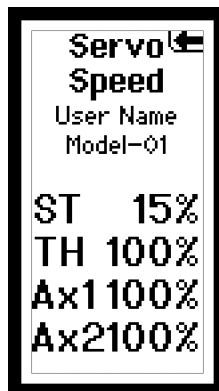
IMPORTANT: You should always use the fastest response rate the servos can handle. This gives the lowest latency and fastest response. If the frame rate is incompatible with the servo, the servo will move erratically or, in some cases, not at all. If this occurs, change the frame rate to the next highest value.

- In the List screen, use the roller to highlight the Frame Rate function.
- Press the roller to access.
- Rotate the roller to select and highlight Frame Rate, at the bottom of the screen.
- Press the roller to highlight the Frame Rate function. The box will flash. Rotate the roller to select the frame rate.

SERVO SPEED

The Servo Speed function allows you to change the speed of any of the four channels—steering, throttle and Aux. from 100% (default) to 1%. The maximum speed is 100% and is fixed by the specifications of the servo itself.

- In the List screen, use the roller to highlight the Servo Speed function. Press the roller to access the Servo Speed function. The Servo Speed screen appears.
- Use the roller to select the desired channel, then press the roller to access that channel. Rotate the roller to adjust the servo speed.

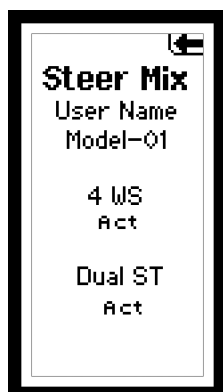


MIXING

The DX4R PRO features preset steering and throttle mixes and four programmable mixes. If AVC™ technology is active, only two channels, Steering and Throttle, are operational. The Aux channels can be used to power a personal transponder or lights.

If AVC technology is disabled (see Disabling the Stability Assist Function to disable AVC), the Aux channels will operate as servo channels. Aux channels are not available for use in mixes when AVC is active.

STEER MIX



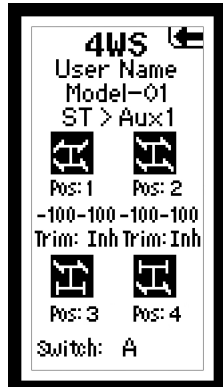
Use the Steer Mix for vehicles requiring either four-wheel steering (4WS) or dual steering servos (Dual ST).

Mix Options

1. Select Aux1 or Aux2 as the slave channel. Aux1 and Aux2 can only be assigned to one mix at a time. If Aux1 or Aux2 is assigned to another mix, it will not be available as a slave channel option.
2. Adjust the mix Value. The value shown is the percentage of slave channel input compared to master channel input.

For example, 100% means the slave channel movement is equal to the master channel movement. If you adjust the value to 50%, the slave channel moves half as far as the master channel. A negative value means the mix moves in the opposite direction.

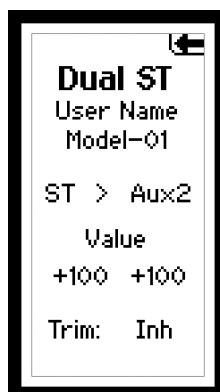
4WS (4-Wheel Steering)



Trim: Act or Inh (Default). When Trim is Active, adjustments to the steering trim affect both front and rear steering channels.

Switch: Assign the 4-Wheel Steering Options to a switch to select steering options. Each time you move the switch, the 4-Wheel Steering options appear on the Main Screen.

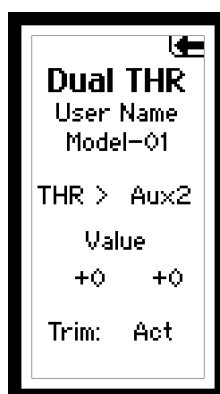
Dual ST (Dual Steering)



Trim: Act (Default) or Inh. We recommend activating the Trim, as it adjusts the trim for both the left and right steering servos. If you need to make small adjustments to the individual servos, you can do so in the Sub-Trim menu.

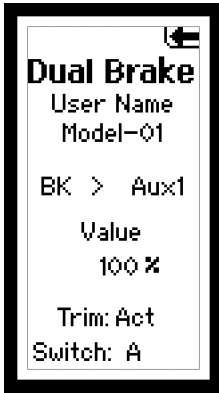
THROTTLE MIX

Dual TH Mix



Use the Dual TH Mix on vehicles that require two throttle channels.

1. Select Aux1 or Aux2 as the Slave channel. If Aux1 or Aux2 is assigned to another mix, it will not be available as a Slave channel option.
2. Adjust the Dual TH Mix Values to establish the throttle proportion between the throttle channels.



Brake Mix

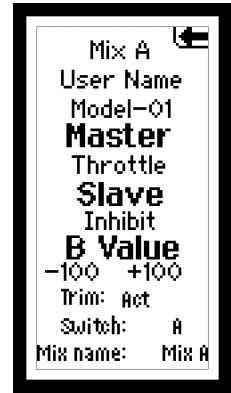
Use the Brake Mix on large scale vehicles that require separate front and rear brake servos. The mix value creates brake bias between the front and rear brakes. Assigning the Brake Mix to a switch enables you to adjust the mix value from any screen.

1. Select Aux1 or Aux2 as the Slavechannel. If Aux1 or Aux2 is assigned to another mix, it will not be available as a Slave channel option.
2. Adjust the Brake Mix Value to establish the brake bias between the front and rear brakes. Switch: You may assign the the Brake Mix to a switch. Assigning the Brake Mix to a switch enables you to adjust the brake bias from any screen.

PROGRAMMABLE MIX

The Programmable mixes enable you to assign any channel as a Master or Slave, which is particularly helpful when you need to assign an Aux channel as a Master.

1. Scroll to Inh. Press the rolling selector once and select a Master channel.
2. Select a Slave channel.
3. Adjust the A Value percentage.



You can assign custom names to the Programmable mixes, making it easier to remember what each mix does. Assign the names the same way you would for the Username or Model Name.

Mix Options

Trim: Inh or Act. When Trim is Active, trim adjustments to the Master channel also apply to the Slave channel.

Switch: You may assign the mix to a switch, enabling a B Value in the mix.

To adjust the B Value:

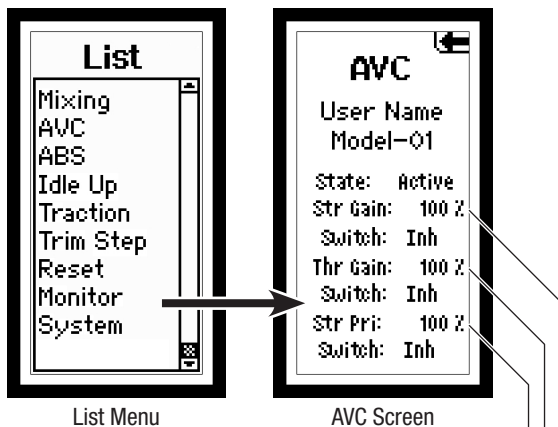
1. Assign a switch to the mix.
2. Press the switch forward or back. The A Value changes to B Value on the screen.
3. Select the B Value and move the scroll wheel to adjust the value.
4. Press the Rolling Selector to save the selection.

NOTICE: A negative value results in the secondary channel moving in a direction opposite the direction of the primary channel.

ACTIVE VEHICLE CONTROL (AVC)

If AVC™ technology is active, only two channels, Steering and Throttle, are operational. The Aux channels can be used to power a personal transponder or lights.

If AVC technology is disabled (see Disabling the Stability Assist Function to disable AVC), the Aux channels will operate as servo channels. Aux channels are not available for use in mixes when AVC is active.



Priority adjusts ST Gain based on the steering input.

TH Gain when active drives the Aux 2

ST Gain when active drives the Aux 1

OPTIONS

- ST Gain
- TH Gain
- Priority

1. Select AVC from the LIST menu.

2. Change the State field to ACT .

3. **Adjust the ST Gain and/or TH Gain Sensitivity**

The default value is 0% (ST Gain and TH Gain OFF). As the value increases, the AVC steering stability and throttle management increases.

Adjust the ST Gain until you reach the ideal amount of steering control. If the front wheels begin to shake, the ST Gain value is too high. Reduce the ST Gain value until the front wheels stop shaking. You can assign ST Gain and TH Gain to the same switch, enabling you to adjust both values at the same time.

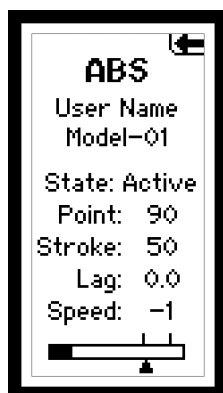
4. **Switch:** Assigning ST Gain and TH Gain to a switch enables you to adjust the sensitivity without using the AVC menu. ST GAIN and TH GAIN can be assigned to the same switch to adjust both simultaneously.

5. **Adjust the Steering Priority**

The Priority default value is 0%, meaning AVC technology is active when the steering is close to center. As you turn the steering wheel away from center (neutral), the transmitter controls have priority over the AVC system. Increasing the Priority value decreases how active AVC is as the steering wheel is turned left and right. For example, if you increase Priority to 80%, you reduce the AVC steering control by 80% at full left or full right steering. Increasing the Steering Priority enables you to make tighter turns.

ABS (AUTOMATIC BRAKING SYSTEM OR PULSE BRAKES)

ABS helps prevent brake lock-ups and improves braking performance by pulsing the brakes.



You can adjust the following ABS parameters:

State: Inhibit or Active

Point: The throttle position that the pulse braking takes place (0 to 100, default is 60).

Stroke: The distance the throttle travels during the pulse braking (0 to 100, default is 50).

Lag: The time delay before the pulsing takes place (0.0 to 2.0 in .01 increments, default is 0.5).

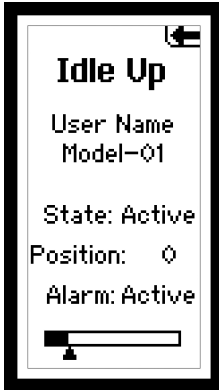
Speed: The pulsing speed or frequency of the pulse braking (-1 to -30, default is -1).

The bar at the bottom of the screen displays the parameters and shows how ABS will function.

To activate ABS:

1. Select ABS from the List screen.
2. Select the ABS parameter you want to adjust.
3. Scroll up or down to adjust the parameter.
4. Press the scroll wheel to save the settings.

IDLE UP



Idle up (also called high idle) is used to advance the throttle position on a gas car during startup to prevent the engine from dying before the engine is warmed up.

The following Parameters are available:

State: Inhibit or Active

Position: Adjusts the throttle position when idle up is engaged (0 to 100, default is 0)

Alarm: Activates an alarm when the Idle Up is active

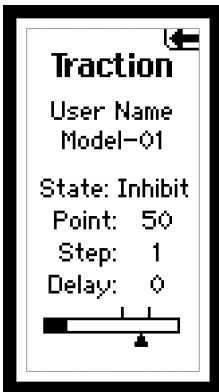
The State must be Active to turn on the Idle Up function.

- In the List screen use the roller to highlight the Idle Up function.
- Press the roller to access the Idle UP function. The Idle Up screen appears.
- Use the roller to select the Parameter you wish to adjust. Press the roller to highlight that Parameter. The associated box will flash, then rotate the roller to adjust that function.

IMPORTANT: Idle Up must be assigned to a button in the System Screen under Switch select in order to operate the Idle Up function (See page 15, 16 for more details).

The graphic bar at the bottom of the screen displays the parameters and shows how Idle Up will function.

TRACTION



Traction Control helps reduce wheel slippage and improve acceleration by gradually increasing the throttle.

The following adjustable throttle parameters can be programmed:

State: Inhibit or Active

Point: The throttle position that traction control disengages. (5 to 100, default is 50)

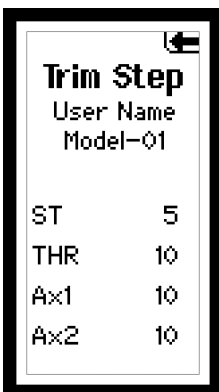
Step: The distance the throttle travels during the reduced rate. (1 to 100, default is 1)

Delay: The time after pulling the trigger traction control engages. (0 to 25, default is 0)

The graphic bar at the bottom of the screen graphically displays the parameters and shows how traction control will function. State must be Active to turn on the Traction Control function.

1. In the List screen use the roller to highlight the Traction function.
2. Press the roller to access the Traction function. The Traction screen appears.
3. Use the roller to select the Traction parameter you wish to adjust.
4. Press the roller to highlight that parameter and the associated box will flash. Rotate the roller to adjust that function.

TRIM STEP



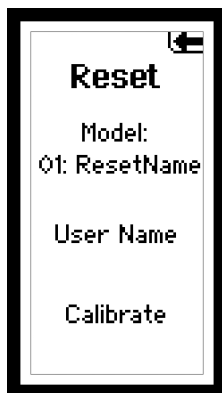
Trim Step affects the amount the servo travels with each click of the trim, but has no effect on the total trim travel.

The trim steps range from 1 to 20 (Default is 4).

To adjust the trim step:

1. Select Trim Step from the List menu.
2. Scroll to the desired channel and press the scroll wheel to activate the channel.
3. Rotate the scroll wheel to adjust the trim step.
4. Press the scroll wheel to save the selection.

RESET



The Model Reset function restores factory default settings for the active model memory.

- Choosing **Yes** affirms erasing saved settings for the active model memory and returns to factory defaults. A box shows around selected text.
- Choosing **No** returns to the List Screen.

If after calibration the steering or throttle does not function properly (the travel is reduced or no servo travel), you will need to recalibrate the transmitter.

- In the List screen, use the roller to highlight the **Reset** function.
- Press the roller to access the **Reset** functions.
- Use the roller to select **Calibrate**.
- Press the roller to access the **Confirm** screen.



CAUTION: Once **Yes** is selected, you must complete all the calibration steps described in this section or the radio will not function properly.

IMPORTANT: Model information saved in a memory is erased when that model memory is copied over or reset to factory default settings.

USER NAME

If you selected User Name, you will see a Confirm screen asking you to confirm the User Name Reset. Press the roller to select **Yes** or **No**.

CALIBRATE

The calibrate function recalibrates the transmitter's steering and brake potentiometers.



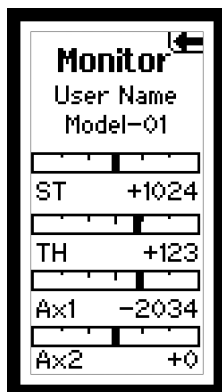
CAUTION: If calibration is not properly completed, the radio will not function correctly.

- Use the roller to highlight **Yes**, then press the roller to reset.

IMPORTANT: The values will change to correlate with the actual potentiometers.

- Rotate the steering wheel full right, then full left, then move the throttle trigger to full throttle and full brake.
- After realigning steering and throttle/brakes, highlight **SAVE**. Press the roller to save the settings.

MONITOR



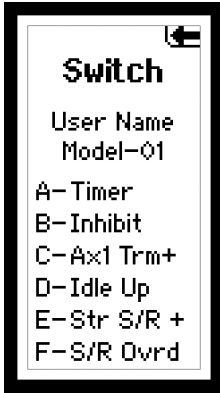
The servo monitor displays the servo output positions graphically and digitally. This monitor can be useful in troubleshooting setups, displaying mixing functions and how they interrelate.

- In the List screen, use the roller to highlight the Monitor function.
- Press the roller to access the Monitor function. The real-time servo output positions will display.

SYSTEM

The System function lets you adjust transmitter functions.

SWITCH



The Switch menu enables you to assign any of the seven switches to one of the following functions. Switches that have a +/- next to the name can be assigned to different directions. For example, ST trim+ causes right steering trim to trim the steering to the right. ST trim- causes right steering trim to trim steering to the left. Aux1 and Aux2 can only be assigned to one function at a time. For example, if Aux1 is assigned to 4WS Mix, then it will not be available as an option on the switch screen.

Switch A, B, C, D, E

<i>Inhibit</i>	<i>Ax2 Exp+</i>	<i>ROSS Ax1</i>
<i>Idle Up</i>	<i>Ax2 Exp-</i>	<i>ROSS Ax2</i>
<i>Ax1 Lin</i>	<i>Brake +</i>	<i>4WS Mix</i>
<i>Ax1 2P</i>	<i>Brake -</i>	<i>Brake Mix</i>
<i>AX1 3P</i>	<i>Thr Trm +</i>	<i>MOA Mix</i>
<i>Ax1 MT</i>	<i>Thr Trm -</i>	<i>TH BIAS</i>
<i>Ax1 Trm+</i>	<i>Thr Exp +</i>	<i>Mix A</i>
<i>Ax1 Trm-</i>	<i>Thr Exp -</i>	<i>Mix B</i>
<i>Ax1 Exp+</i>	<i>S/R Ovrđ</i>	<i>Mix C</i>
<i>Ax1 Exp-</i>	<i>Str Trm +</i>	<i>Mix D</i>
<i>Ax2 Lin</i>	<i>Str Trm -</i>	<i>Mix A Rate</i>
<i>Ax2 2P</i>	<i>Str S/R +</i>	<i>Mix B Rate</i>
<i>Ax2 3P</i>	<i>Str S/R -</i>	<i>Mix C Rate</i>
<i>Ax2 MT</i>	<i>Str Exp +</i>	<i>Mix D Rate</i>
<i>Ax2 Trm+</i>	<i>Str Exp -</i>	<i>Timer</i>
<i>Ax2 Trm-</i>	<i>ROSS Bnd</i>	

Switch F

<i>Inhibit</i>	<i>S/R Ovrđ</i>	<i>ROSS Bnd</i>
<i>Ax1 2P</i>	<i>ROSS Ax1</i>	<i>Timer</i>
<i>Ax2 2P</i>	<i>ROSS Ax2</i>	

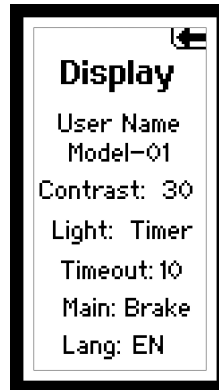
USERNAME



You can program a user name with up to 10 characters. This name is displayed on the Main Screen. In the System screen, highlight the User Name and press the roller to access the function. Use the roller to select the position, then press the roller to access a character. Username affects all models.



DISPLAY



Contrast

The contrast function provides adjustment to the brightness ratio of the lightest to the darkest part of the screen. You can set the contrast to a value from 0 to 30 (0 is lightest and 30 is darkest).

Light

You can set the backlight to one of three modes: *Timer*, *On* or *Off*.

Timer: The backlight will turn off after a preset delay.

On: The backlight never turns off when the transmitter is on.
Off: The backlight is always off.

1. Use the Rolling Selector to access Light.
2. Press the roller and the surrounding box will flash.
3. Rotate the roller to the desired backlight mode and press the roller to select it.

Timeout

You can adjust the amount of time the backlight is on. The timeout only applies when Light is set to Timer.

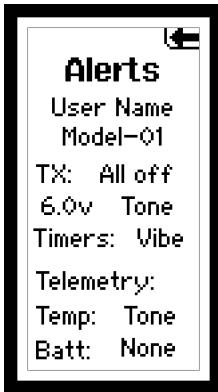
Trims

Changing the Trim values will change the bars shown at the bottom of the Main screen. For example, if you select ST Trim for Pos. 1, the Steering Trim will appear in the first bar on the Main screen.

Lang (Language)

The DX4R PRO can display the screen text in one of four languages: English (default), German, French and Italian. Use the roller and select the Language function.

ALERT



You can set an alarm to sound when the battery voltage gets to the limit set with the Alert. Battery voltage is displayed on the Main Screen.

Menu: *None, Tone, Vibe, Both*

Sets the alert type for scrolling through the menu items and selecting items.

Tone

You can adjust the buzzer to either *Low* or *High*.

IMPORTANT: Buzzer adjustment does not change the sound level for Inactivity or Low Battery warnings.

Tx Battery Voltage

Set an alarm to sound when the battery voltage gets to the limit set. The range is 4.0 to 7.0V.



CAUTION: Do not operate a model when the battery voltage is below 4.3V for AA batteries.

Tx Battery Alert Type:

None, Tone, Vibe, Both

Timer: *None, Tone, Vibe, Both*

Sets the alert type for the down timer.

Telemetry

Rx Battery Alert Type: *None, Tone, Vibe, Both*

Sets the alert type for the telemetry receiver battery voltage.

Temp Alert Type: *None, Tone, Vibe, Both*

Sets the alert type for the telemetry temperature. The telemetry alert settings are model specific.

All of the alert settings above affect all models.

ABOUT

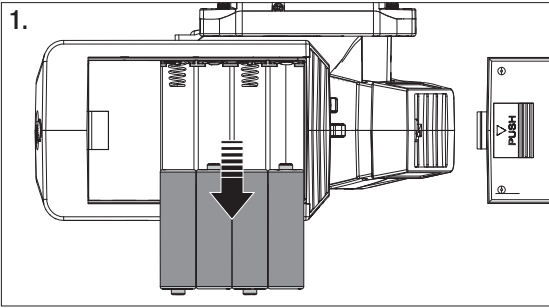
This screen displays the transmitter serial number (which is required when downloading firmware updates) and the release level of the transmitter's software. Refer to Memory Card instructions for updating transmitter firmware.

Serial

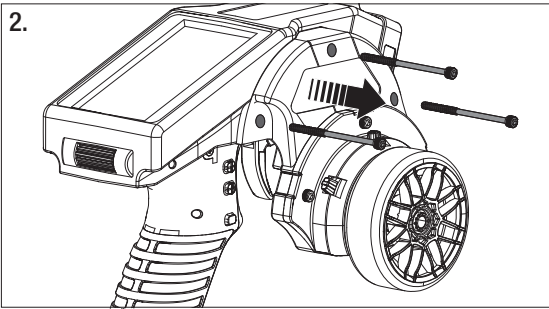
The Serial Number screen displays the transmitter serial number, as well as the RaceWare™ software version. You will need to provide the serial number when you register your transmitter on the Spektrum website.

CHANGING FROM DROPDOWN TO STANDARD WHEEL

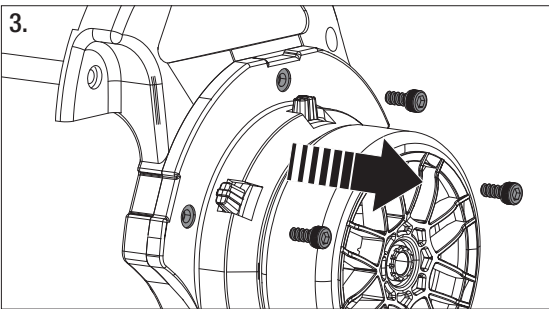
The DX4R PRO comes with the dropdown wheel installed and can be switched to the standard wheel. All the parts necessary to convert to the standard wheel are included. The included 3/32-inch hex wrench and a small Phillips screwdriver will be needed.



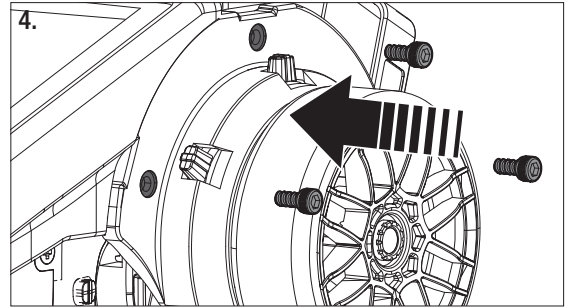
1. Remove the batteries from the transmitter. This prevents the possibility of accidentally causing a short during the conversion.



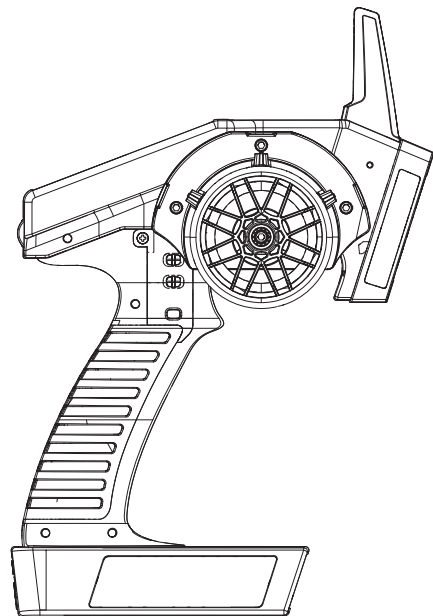
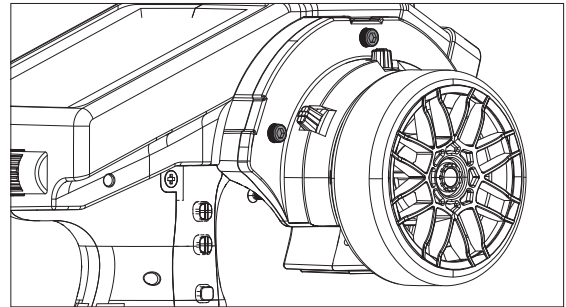
2. Using the 3/32-inch hex wrench, remove the three screws on the front of the steering housing as shown. Carefully remove the steering mechanism and unplug the steering connector. Also remove the steering shell but leave the backplate.



3. Using the 3/32-inch hex wrench, remove the three screws on the front of the steering drop-down as shown. Select the appropriate Left/Right standard steering spacer and pass the steering wheel mechanism connector through the hole in the shell.



4. Connect the steering wheel mechanism connector to the connector from the transmitter being sure the connection is tight. Note correct polarity. Fit the backplate in place and secure the standard steering wheel assembly using the three long cap screws.



CHANGING TO LEFT-HANDED CONFIGURATION

The DX4R PRO comes set up for right-handed use, but you can easily switch it to a left-handed configuration. All the parts necessary to convert to left-handed, including the grip plates, the back cover and the front shell, are included. The included 3/32-inch hex wrench and a small Phillips screwdriver will be needed.

1. Remove the batteries from the transmitter. This prevents the possibility of accidentally causing a short during the conversion.
2. Carefully remove the grip cover by prying with your fingers at the forward edge of the rubber grip.
3. Using the 3/32-inch hex wrench, remove the three screws on the front of the steering housing as shown.
4. Carefully remove the steering mechanism and unplug the steering connector. Also remove the backplate.
5. Using a small Phillips screwdriver, remove the four Phillips screws (two per side) that fasten the grip plates in place. Remove the grip plate that doesn't have the buttons attached.
6. Carefully pull out the grip plate that contains buttons D, E and F. Using a Phillips screwdriver remove the PC board and backplate from the grip plate. Note the positions of the three buttons.
7. Transfer the three buttons (D, E and F) to the other "handed" grip plate (included in the box). The buttons fit in a specific direction so that they fit the external contour of the grip plate.
8. Carefully screw the PC board and backplate in place and test that all buttons are depressing properly.
9. Place both grip plates in place and fasten them using four Phillips screws (two per side).
10. Push the steering wheel connector through the transmitter case to the opposite side.
11. Select the opposite "handed" steering shell and pass the steering wheel mechanism connector through the hole in the shell.
12. Connect the steering wheel mechanism connector to the connector from the transmitter. Make sure the connection is tight. Note correct polarity.
13. Fit the other handed backplate in place and secure the steering wheel assembly in place using the three long cap head screws.
14. Fit the grip in place and reinstall the batteries. Note that the buttons D and E now work in reverse. You will need to change the direction of these switches in the System menu.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
The system will not connect	Transmitter and receiver too near each other	Move transmitter 8 to 12 feet (2.4 to 3.6m) from receiver
	Transmitter and receiver too near large metal objects (vehicles, etc.)	Move away from large metal objects (vehicles, etc.)
	Selected model is not bound in transmitter	Make sure correct model memory is selected and that transmitter is bound to the model
	Transmitter accidentally put in bind mode so receiver is no longer bound	Rebind transmitter and receiver
The receiver goes into failsafe mode a short distance away from the transmitter	Check the receiver antenna to be sure it is not cut or damaged	Replace or contact Horizon product Support
		Make sure receiver antenna is in an antenna tube and is above vehicle
Receiver quits responding during operation	Low battery voltage	Completely recharge battery
	Loose or damaged wires or connectors between battery and receiver	Do a check of the wires and connection between battery and receiver. Repair or replace wires and/or connectors
Receiver loses its bind	Transmitter accidentally put in bind mode, ending bind to receiver	Bind transmitter to receiver
Receiver taking longer than usual to link with transmitter	Transmitter and receiver are operating on Marine model	Marine receivers can take longer to link with transmitter

1-YEAR LIMITED WARRANTY

What this Warranty Covers

Horizon Hobby, LLC (Horizon) warrants to the original purchaser that the product purchased (the "product") will be free from defects in materials and workmanship for a period of 1 year from the date of purchase.

What is Not Covered

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, (v) product not purchased from an authorized Horizon dealer, (vi) product not compliant with applicable technical regulations, or (viii) use that violates any applicable laws, rules, or regulations.

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

Purchaser's Remedy

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

Limitation of Liability

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Horizon exceed the individual price of the product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the product, purchaser is advised to return the product immediately in new and unused condition to the place of purchase.

Law

These terms are governed by Illinois law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

WARRANTY SERVICES

Questions, Assistance, and Services

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the product has been started, you must contact your local distributor or Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please visit our website at www.horizonhobby.com, submit a Product Support Inquiry, or call the toll free telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

Inspection or Services

If this product needs to be inspected or serviced and is compliant in the country you live and use the product in, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service Request is available at http://www.horizonhobby.com/content/_service-center_render-service-center. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

NOTICE: Do not ship Li-Po batteries to Horizon. If you have any issue with a Li-Po battery, please contact the appropriate Horizon Product Support office.

Warranty Requirements

For Warranty consideration, you must include your original sales receipt verifying the Proof-of-purchase date.

Provided warranty conditions have been met, your product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

Non-Warranty Service

Should your service not be covered by warranty, service will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of 1/2 hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing

to Horizon's Terms and Conditions found on our website http://www.horizonhobby.com/content/_service-center_render-service-center.

ATTENTION: Horizon service is limited to Product compliant in the country of use and ownership. If received, a non-compliant product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced product, through a carrier of the sender's choice and at the sender's expense. Horizon will hold non-compliant product for a period of 60 days from notification, after which it will be discarded.

Warranty and Service Contact Information

Country of Purchase	Horizon Hobby	Phone Number / Email Address	Address
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	4105 Fieldstone Rd Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	www.quickbase.com/db/bghj7ey8c?a=GenNewRecord 888-959-2305	
	Sales	sales@horizonhobby.com 888-959-2305	
United Kingdom	Service/Parts/Sales: Horizon Hobby Limited	sales@horizonhobby.co.uk +44 (0) 1279 641 097	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS, United Kingdom
Germany	Horizon Technischer Service	service@horizonhobby.de +49 (0) 4121 2655 100	Christian-Junge-Straße 1 25337 Elmshorn, Germany
	Sales: Horizon Hobby GmbH		
France	Service/Parts/Sales: Horizon Hobby SAS	infofrance@horizonhobby.com +33 (0) 1 60 18 34 90	11 Rue Georges Charpak 77127 Lieusaint, France
China	Service/Parts/Sales: Horizon Hobby - China	info@horizonhobby.com.cn +86 (021) 5180 9868	Room 506, No. 97 Changshou Rd. Shanghai, China 200060

FCC INFORMATION

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



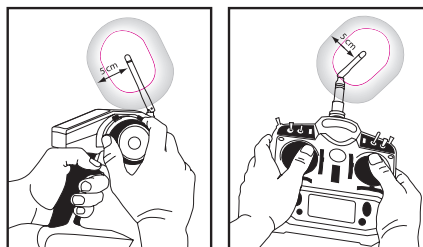
CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

ANTENNA SEPARATION DISTANCE

When operating your Spektrum transmitter, please be sure to maintain a separation distance of at least 5 cm between your body (excluding fingers, hands, wrists, ankles and feet) and the antenna to meet RF exposure safety requirements as determined by FCC regulations.

The illustrations below show the approximate 5 cm RF exposure area and typical hand placement when operating your Spektrum transmitter.



IC INFORMATION

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

COMPLIANCE INFORMATION FOR THE EUROPEAN UNION

DECLARATION OF CONFORMITY

(in accordance with ISO/IEC 17050-1)

No. HH2013092101U1

Product(s): Spektrum DX4R Pro 4-Channel DSMR
Racing System

Item Number(s): SPM4100W

Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the Provisions of the European R&TTE directive 1999/5/EC:

EN 300-328 V1.8.1

EN 301 489-1 V1.9.2: 2012

EN 301 489-17 V2.1.1: 2009

EN 60950-1:2006+A11:2009+A1:2010+A12: 2011+A2:2013

EN 62311:2008



Signed for and on behalf of:
Horizon Hobby, LLC
Champaign, IL USA
December 30, 2014

Mike Dunne
Executive Vice President Product Divisions
Horizon Hobby, LLC



INSTRUCTIONS FOR DISPOSAL OF WEEE BY USERS IN THE EUROPEAN UNION

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.