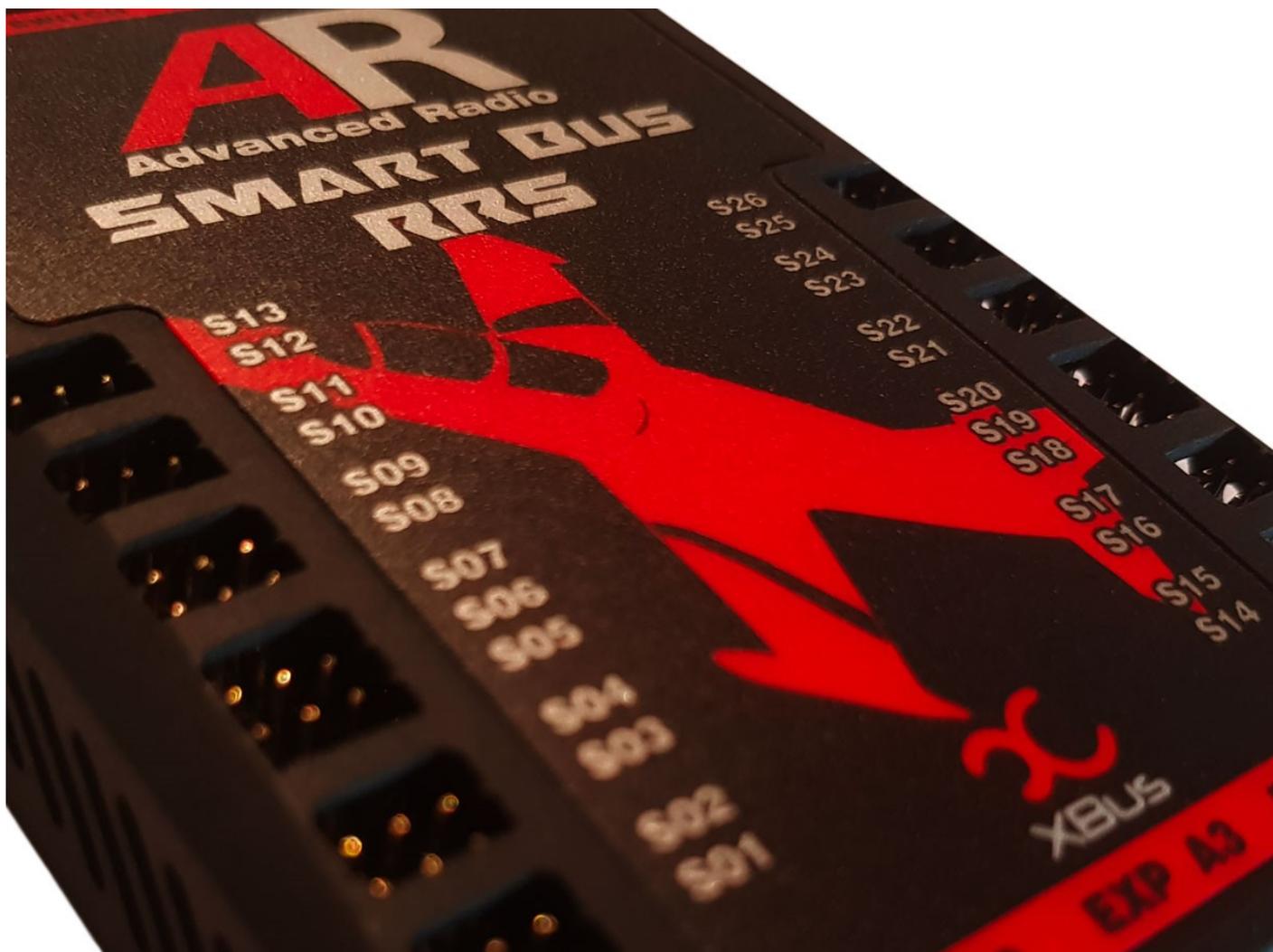


SMART BUS RRS



Quick Start Guide



Thank you for your purchase of the Advance Radio Smart Bus.

In this quick start guide we will show you how to connect your new Smart Bus, General use and Set Up. Please take the time to understand this guide before installation

IMPORTANT

The touch screen display supplied with the Smart Bus should be protected from vibration.

Before installation please ensure that your batteries are fully charged. The Smart Bus relies on this to know how much you have used in each pack.

WARNING

The Smart Screen shows you how much you have used out of each pack and displays this as an indicator on the Smart Screen. NEVER FLY WITH BATTERY PACKS THAT HAVE 35% OR LESS CAPACITY (RED ZONE ON THE BATTERY INDICATOR). Doing so might put your model at risk.

Included Items:

1 x Live feedback touch screen Smart display

1 x Smart Bus power distribution module.

2 x Receiver connection cable.

1 x Pinflag with Advance Radio Flag

1 x Power LED

Optional Items:

RF Switch

Receivers

Features:

- Built in Battery Guard Technology. The Smart Bus constantly monitors battery voltage and current draw and displays this on the Smart Screen display.
- Works with single or dual battery configuration. Recommended with dual battery.
- Works with all major battery chemistries. LiFe. LiPo, Lion, NiMh, NiCD. Battery voltage range can be from 6volts to 8.4volts.
- Full Dual Battery Redundancy - If one battery fails the other battery takes full control.
- Up to 20 input channels (depending on transmitter capability)
- 26 buffered and programmable servo outputs.
- Easy-to-use pre-routed servo routing.
- Independent servo reverse on all channels.
- 3 point matching on all channels.
- 15 point matching on all channels
- Digitally selectable regulator output via the Smart Screen.
- Regulator selectable to 6.0 volts, 7.4volts.
- Maximum Battery Power Balancing – Using dual battery perfect diode technology.

Installation and Mounting Instructions

In this section we will explain how to mount both the Smart Bus and the Smart Display.

The Advanced Radio Smart System gives you the choice of mounting the Smart Screen in the model or leaving it disconnected for normal flying and connecting the Smart Screen only when you need to review battery performance. The Smart Bus will operate in normal flying mode just fine without the Smart Screen Connected.

Smart Screen Mounting Preparation

Included with your new Smart Bus are 3M Velcro Dots. The dots provide an effective vibration damping system for mounting the Smart Screen in the selected model.

Before applying the 3M dots, we recommend cleaning both surfaces you wish to use the 3M Dots on with isopropyl alcohol or methylated spirits. Wait a moment for this to dry.



Mounting the Smart Bus

The Smart Bus is supplied with 4 rubber shock mounts in the base plate, Similar to rubber mounts on servos, these can be used to give the Smart Bus a Shock mount.

The Smart Bus RRS has a built in digital regulator that uses the base plate as a heat sink. It is important that the Smart Bus should be mounted so air can flow over the base plate to allow effective heat dissipation. We recommend mounting with minimum standoff spacers of 1/2 inch or 12mm to allow adequate air flow over the base plate.

Mounting the Smart Display

There are 2 options of mounting the Smart display.

NOTE: Which ever method of mounting you choose, ensure the cable that comes out of the Smart Display is not crushed in anyway. Doing so will reduce the longevity of the cables.

Option 1. Using the 3M Velcro Dots, we can mount the back of the screen to a surface.

NOTE: This is a semi hard mount, and will provide a good resistance to vibration. AVOID MOUNTING IN HIGH VIBRATION AREAS. VIBRATION DAMAGE IS NOT COVERED UNDER WARRANTY. Clean both the back of the Smart Screen and surface that it is being mounted on. Place one of the 3M dots each side of the cable. Trimming as necessary. **IMPORTANT: DO NOT APPLY FORCE DIRECTLY ON TO THE SCREEN** Press on the black case around the screen to ensure it is secure

Option 2. For hard mounting, the screen case has 2 eyelet holes on each edge of the screen. If you are mounting the screen in a scale cockpit, or in a non vibration model. (e.g. Turbine) these holes can be used to affix the Smart Display.

Simply place the Smart Display where you wish to mount it. Holding it in place, make a dot using a pen or pencil in each eyelet hole. Removing the screen, drill a hole where you placed the dots.

Now simply screw the Smart Display in place.

NOTE: Hard mounting the Smart Display provides little to no protection against vibration. Use this method if you are using a non vibration model or only where there is little to no vibration. AVOID MOUNTING IN HIGH VIBRATION AREAS.

Installing the Receiver

The Smart Bus includes two receiver connection cables, these are designed to be plugged into the R1 and R2 at the base of the Smart Bus. This cable can then be connected to the XBus port on your receiver. The Smart Bus system will work with either a single or dual receiver setup. The receivers MUST BE capable of 7.4V .

We recommend using two HV (high voltage) RG812BX receivers or similar.

Smart Bus is designed to supply the power to all the servos. NEVER connect servos directly to the receiver when using Smart Bus.

It is very important that the polarity is connected correctly between the Smart Bus and the receiver, if the polarity is connected incorrectly this may damage the receiver and Smart Bus, this will not be covered under warranty.

Note: For more information on how to setup and bind single or dual receivers, please consult your transmitter and receiver manual supplied by the manufacturer.



Please note cable polarity on a RG812BX receiver

Channel Assignment

With the Smart Bus RRS system, all output channels are freely assignable to any input channels.

Some pre-routing is already done at factory, however this can be changed at anytime by using the Smart Screen.

We will go into this later in the manual.



Ensure that the RRS cables supplied is plugged into the R2 and R1 port of the Smart Bus



General Usage and Screen Information

Important: The Smart Display that is supplied with the Smart Bus is a touch screen display. It is used in both setup and provides feedback to the user about battery voltage and milliamps used. The screen is designed to be mounted in a model for quick and easy use. However the Smart Bus will operate in normal flying mode without the Smart Screen connected.

Below is an overview of each screen on the Smart Bus

Main Smart Screen

Battery 1 (B1) and Battery 2 (B2)

Shows input voltage of both battery packs.

Servo

Shows Regulated voltage to servos

Total mA

Shows total milliamps since last charge.

Press here to enter the **Main Menu**

Last mA

Shows milliamps used since model was last powered up and resets when model is turned off. Press here to reset **flight timer** and **Last mA**.

FL-T

Flight timer since model was turned on. The timer only operated while on the main screen.

FL-N

Flight number since reset. Gives an indication about how many flights on the models airframe.

Battery Indicators

Shows the remaining capacity in the batteries from 100% - 0%. **NEVER FLY IF THE INDICATORS ARE IN THE RED.**



Main Menu

Return

Returns you back to the previous screen.

Power

Press here to go to the battery setup and reset menu.

Monitor

Press here to go to the Servo programming menu.

I/O Routing

Pressing here will take you to the channel routing screen.

Servo Match

Pressing here will take you to the 3 point and 15 point servo matching screen,

Receiver

Pressing here will take you to the receiver and frame rate monitor screen.

System

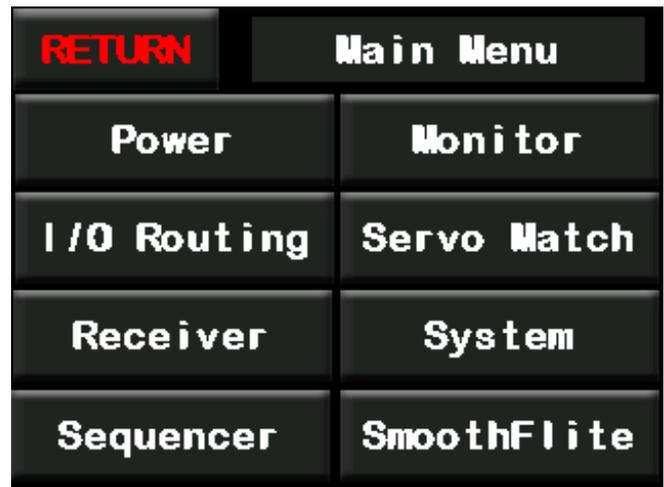
Pressing here will take you to the system page which contains credits and system information

Sequencer

Pressing here will take you to the sequencer page. (available on sequencer versions of the Smart Bus RRS).

SmoothFlite

Pressing here will take you to the SmoothFlite page (available on SmoothFlite versions of Smart Bus RRS)



Power Setup Screen

Return

Takes you back to the previous screen.

RES-mA

Resets total mA used. Please ensure both packs are **FULLY** charged before you reset.

RES-FLT

Resets flight counter and timer to zero. Use this feature mostly when installing in a new airframe or before the maiden flight.

Bat Capacity mA

Shows the capacity of the batteries you are using. We will go through how to set this in the First Time Setup section on page 10.

Servo Voltage selector

Pressing the 6.0v or 7.4v will set the regulator, Note: if using a battery with a voltage lower than 7.4v the 7.4v button will be greyed out.

For example: if you are using Lion 2S packs then the choice will be 6.0v or 7.4v.

Servo voltage choices when using different battery types:

LiFe 2S packs = 6.0v

Lion2S and Lipo 2S = 6.0v or 7.4v



I/O Routing Screen

Save

Takes you back to the previous screen and saves your routing choices.

- and + buttons

Changes the input channel from 1 to 20

Note: you can only assign servos to channels that are available from your Receiver.

Example: you can not assign a servo to channel 18 when using a 10 channel radio

S01 to S26

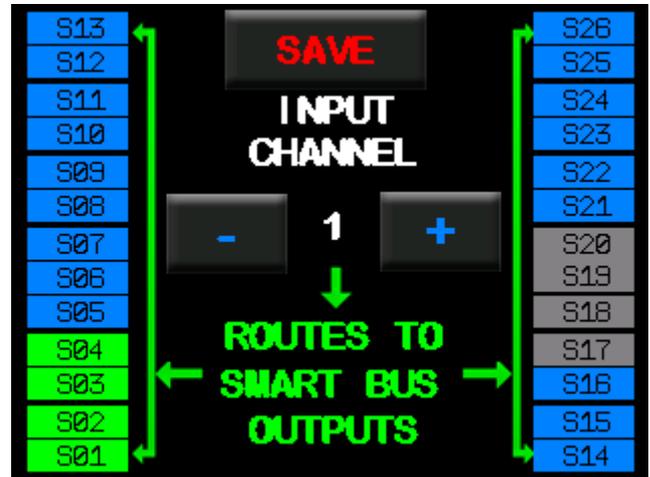
These buttons correspond to the outputs on the Smart Bus RRS.

They have 3 colours,

Green = they are assigned to the current receiver channel.

Blue = they are not assigned to any receiver channel.

Grey = they have been assigned to a different receiver channel and cannot be selected for this channel



Servo Matching screen

Return

Takes you back to the previous screen.

S01—S26

Pressing any of these buttons will take you to the servo matching page for the corresponding servo output on the Smart Bus. Here you can match the servos with the 3 point and 15 point matching.

Channel Monitor screen

Return

Takes you back to the previous screen.

Arrow

Changes the page to the next 10 channels.

Channel Bars

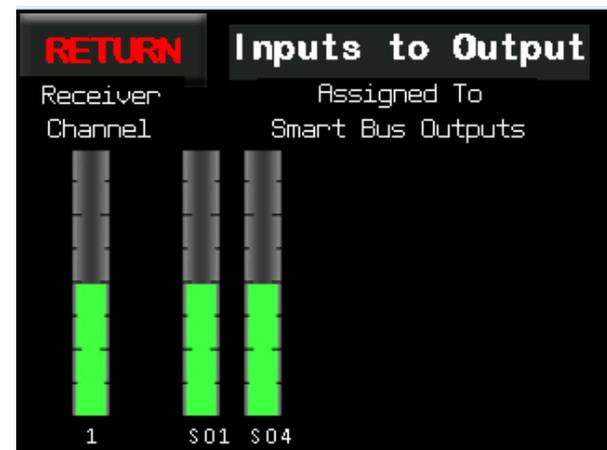
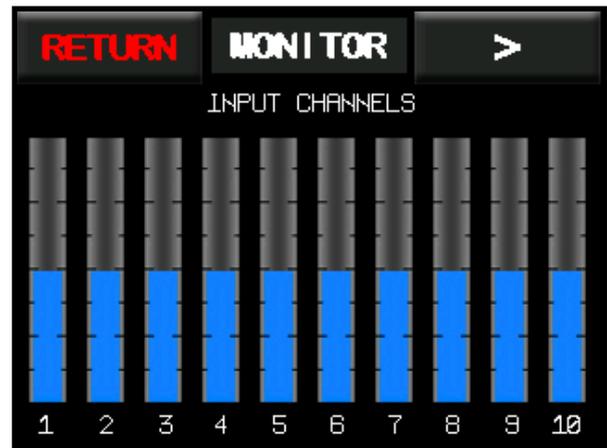
The bars show the current input channels and position.

Note: The bars have two colours.

Blue = no servo output has been assigned.

Green = one or more servo outputs has been assigned to this channel.

Tapping any of the green bars will take you to the inputs to outputs screen and show corresponding assigned input to output channel(s). We will expand on this feature in the servo matching section.



3 Point Match

Return

Returns you back to the previous screen.

Norm/Reverse

Reverses the selected servo direction.

Reset

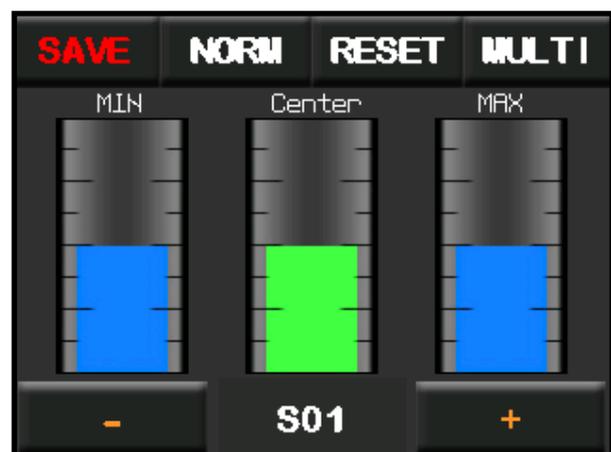
Resets sub trim values to default.

Multi

Takes you to the Multi-point match page (only available on Smart Bus Extreme).

Vertical Bars

Shows the current sub trim amount at the center and endpoints for that servo. These values are changed by the **INC**, **DEC** buttons.



15 Point Servo Matching

Return

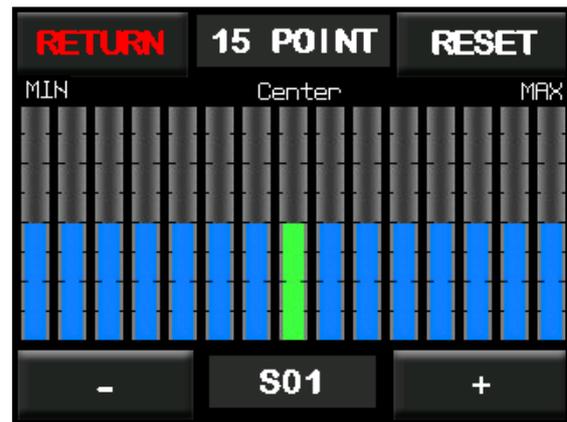
Takes you back to the previous screen.

Reset

Resets the sub trim values back to default.

Vertical Bars

Shows the sub trim applied to the servo. The sub trim values can be changed using the **DEC**, **INC** buttons.



Receiver Page

Return

Takes you back to the previous screen.

Reset

Resets the receiver values back to zero.

Frames

Shows good frames received by each receivers.

Drops

Shows frames not used by the receivers.

Fails

Shows frames received by Smart Bus with an incorrect checksum value.

Frame Rate

Set the output frame rate of the signal to the servos.

Fail Safe

Takes the user to the fail safe screen

RETURN		BIND		RESET	
Rec	Frames	Drops	FailSafe		
1	0	0	0		
2	0	0	0		
3	0	0	0		
4	0	0	0		
Fail Safe			Frame Rate		

Fail Safe Screen

Return

Takes you back to the previous screen.

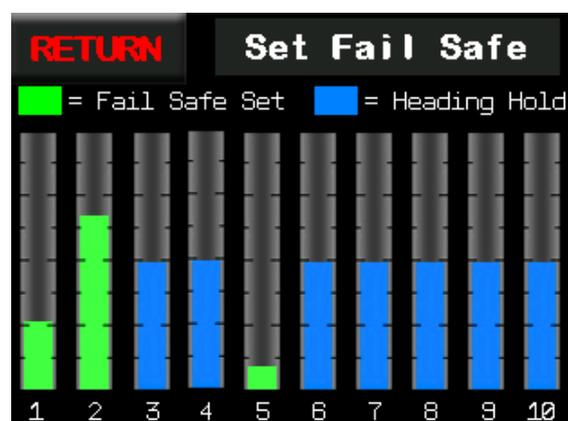
Vertical Bars

Shows the fail safe values based on stick position from the radio. Fail safe is set by pressing the corresponding blue bar.

Note: The bars have two colours.

Blue = Fail safe is set to heading hold for that transmitter channel.

Green = Fail safe is set to a specific position based on the radio



First Time Battery Setup

We are now going to go proceed with a first time setup of the Smart Bus . **Please ensure your batteries are fully charged before you setup the Smart Bus.** If you need any additional help with what each button or item does please read the General Usage and Screen information page located on page 7 of this manual. **We recommend you do not have any servos connected to the Smart Bus during the first time setup.**

Step 1

Ensure that both batteries are plugged into the Smart Bus. You will also need to ensure the Smart display is plugged into the switch as it is used for programming.

Upon power up, you will see the AR logo. After a few seconds the Smart Screen will be shown.

Step 2

Press the green **Total mA** text on the Smart Screen, this will take you to the main menu.



Step 3

You should now see the Main Menu Screen. Press the **POWER** button on the screen.

Step 4

This is the battery setup screen. Using the arrows (DEC, INC) next to **Bat Capacity mA** cycle through until you see the correct capacity that matches your battery packs.

Note: Step 4 is extremely important, Please ensure the capacity is set correctly to the battery packs you are using.

The Smart Bus uses this capacity value to show the remaining battery capacity on the main screen. If you set this value incorrectly then the remaining capacity indicators may not show the correct remaining battery capacity.



Step 5

Using the 6.0v and 7.4v buttons, select the regulator voltage of your choice. This will change the output voltage to your servos and receivers. The regulator may take some time, please wait until the voltage you select is the same as the number on the screen.

Note: Please ensure your servos are capable of the voltage you select. Selecting a higher voltage than your servos are capable of might cause damage to them.

Step 6

Once you have setup these parameters, press the **RETURN** button to save and return to the main menu. Press **RETURN** again to go back to the Smart Screen. You have successfully setup the Smart Bus Battery monitoring.

Important

The Smart display main Screen shows how much capacity you have left using the battery indicators on the left and right of the battery screen. It is important that the capacity you enter is correct and accurate. If you are unsure about the capacity of your batteries or if your packs are not new. We recommend cycling your packs by discharging them and recharging them to full. This will give you the best possible result for the battery packs you are using.

Input Channel to Servo Output Routing

During this stage, we will install the receiver and servos. **Note: Before plugging any servos into the Smart Bus, ensure you have set the regulator to the desired voltage range.** **Important: Check the recommended voltage range of your servos, supplying excessive voltage to your servos may cause damage to the servos, this is not covered under warranty.**

Before connecting any servos to the Smart Bus we recommend reading through the following steps. This will allow you to familiarise yourself with the product in order to use it to its fullest potential.

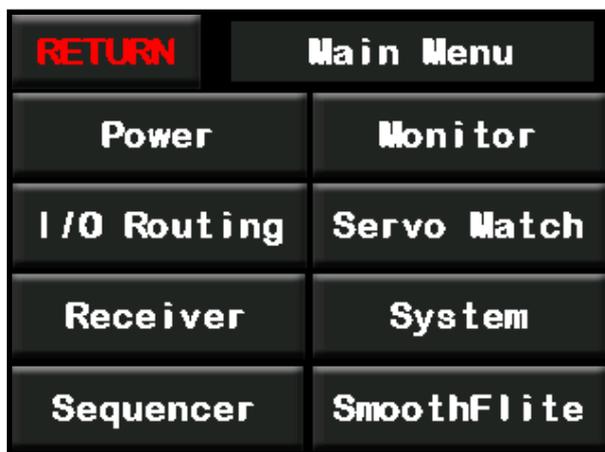
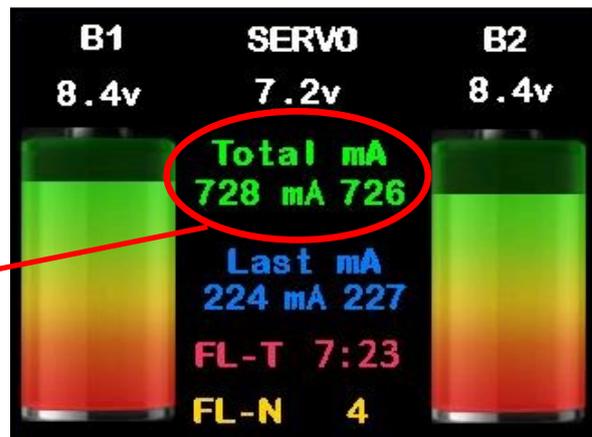
During the setup if you have multiple servos on a control surface (Example: 2 servos on an aileron). We recommend setting up the master servo before mechanically connecting the slave.

Step 1

Ensure that both batteries are plugged into the Smart Bus. You will need to plug the Smart Screen as it is used for programming. Ensure your receiver is plugged into the Smart Bus and your transmitter is on and bound to your receiver. For more information on this see page 6.

Step 2

Press the green **Total mA** text on the Smart Screen, this will take you to the main menu.



Step 3

You should now see the Main Menu Screen. Press the **MONITOR** button on the screen. This will take you into the receiver input channel monitor.

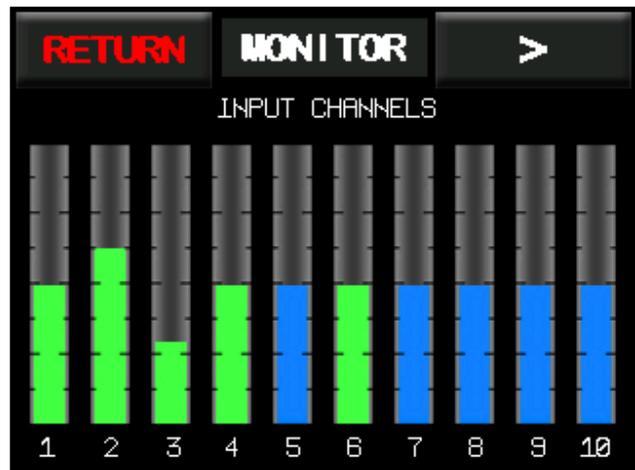
Note: The monitor gives you a visual indication of the assigned input channels from your receiver. Your new Smart Bus RRS comes with primary control surfaces pre-assigned to simply your set-up.

Hint: Create a new model on your transmitter with dual aileron channels, single elevator and single rudder channels. If all is connected correctly, moving the transmitter sticks will cause the green bars on the monitor screen to move.

As you can see, the monitor screen is a good tool for viewing input channel assignments.

For advance setups, we have included a blank servo assignment sheet.

The following steps will show you how you can reassign channels from the factory setup. Press return from the monitor screen to return to the main menu.



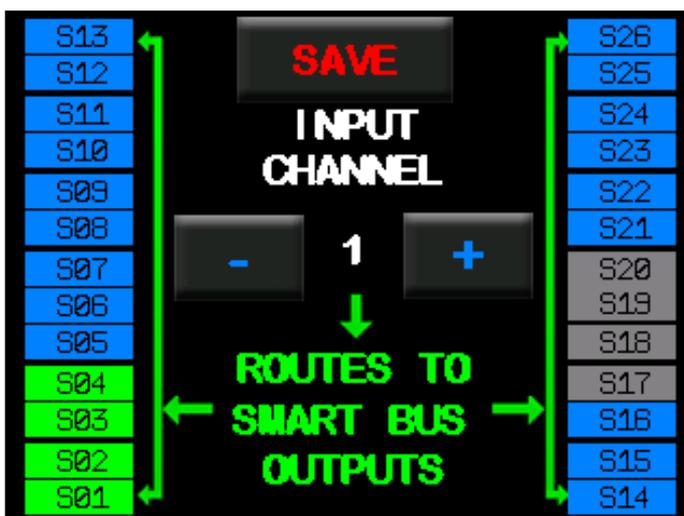
Step 4

From the main menu, tap the I/O Routing button. The screen (on the left) should appear. As you can see, transmitter input channel 1 (coloured white) routes to servo outputs S01, S02, S03 and S04, which are coloured green.

Lets show how easy it is to assign and de-assign additional servo outputs to transmitter channel 1.

With the Stylus supplied, tap the Blue S13 button on the Smart Screen. The S13 should turn green. We have now added servo output 13 (S13) to transmitter input channel 1. Smart Bus makes it that simple.

Tapping S13 a second time, will de-assign it turning it back to blue.



Note: The servo channels are colour coded.

Green = they are assigned to the current transmitter input channel.

Blue = they are not assigned to any transmitter input channel and are available .

Grey = they have been assigned to a different transmitter input channel other than the one currently selected and cannot be selected for this channel.

Step 5

Lets now show you how to move through transmitter input channels. With the Stylus, tap the Plus (+) button once. You should see the input channel change to 2 (coloured white) and S05, S06 become green. This tells you that input channel 2 is routed to S05 and S06. tapping the minus sign will take you back to input channel 1.

Note: you must press the **SAVE** button in order to confirm any changes to the channel routing. Pressing save also returns you to the Main Menu.

Servo Sub-trim, Reversing Method 1

There are two methods to access the servo matching function in the Smart Bus RRS.

The following example assumes channel 1 from your transmitter has been assigned to S01 on the Smart Bus as per factory setup.

From the **Main Menu**, tap on the **SERVO MATCH** button. This will take you directly to the servo match and sub-trim screen as pictures to the right.

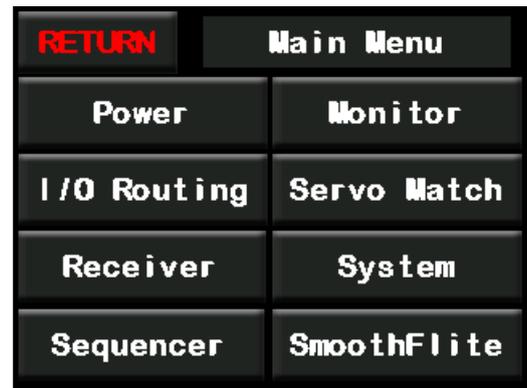
Lets have a look at how to sub-trim and reverse channel S01 on the Smart Bus.

Simply tap on the servo output S01. You should now see the 3-point matching screen for S01. The Servo channel (S01) will be shown at the bottom on the screen. This can be used to check you have selected the correct channel.

Lets now reverse the servo. Tap the **NORM/REVERSE** button. This will change the direction of rotation on the servo. Tapping the **NORM/REVERSE** button a second time will set it to its original direction.

Now lets have a look at sub-trimming a servo using the 3-point matching.

With the transmitter stick in the middle, the centre column should change colour to **green**. Use the **-**, **+** buttons to adjust the centre point of the servo.



Now move and hold the transmitter stick to one end point, either the **MIN** or **MAX** columns will change colour from **blue** to **green**.

Use the **-**, **+** buttons to move and sub trim the servo at this point.

Finally, move and hold the transmitter stick in the opposite direction, the other **MIN** or **MAX** column will change colour from **blue** to **green**. Use the **-**, **+** buttons to move and sub trim the servo at this point.

Simply repeat this process until there is little to no buzz from your servos. Press the save button to save your changes and return to the previous screen. This process can be repeated as many times as you wish with each programmable output. **Note: you can press the reset button at any time to reset the sub-trim values back to default.**

Note: you MUST press the SAVE button in order to confirm any changes to the Servo matching. Pressing save also returns you to the previous screen.

Servo Sub-trim, Reversing Method 2

The more advance method is to access servo matching via the **MONITOR** screen.

The following example assumes channel 1 from your transmitter has been assigned to S01 on the Smart Bus as per factory setup.

From the Main Menu tap on the **MONITOR** button.

The **MONITOR** screen will appear as pictured right.

From the **MONITOR** screen, tap the green bar for transmitter input channel 1. This will take you to the **INPUTS TO OUTPUTS** screen for transmitter input channel 1 (see right).

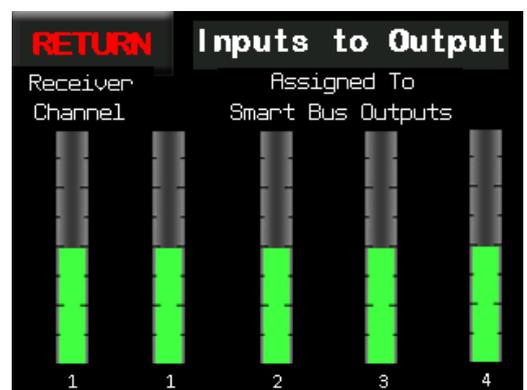
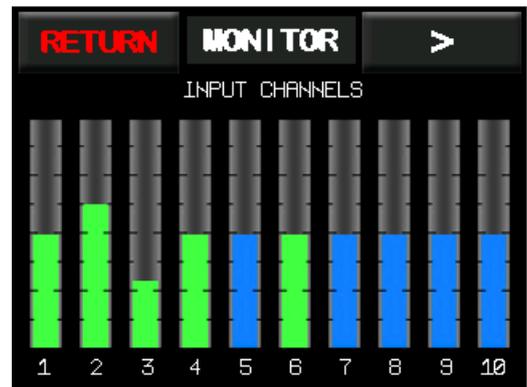
With reference to this screen, "Receiver channel" 1 (left most column) is "Assigned to Smart Bus outputs" S01, S02, S03 and S04 shows as column 1,2,3 and 4.

Simply tap on "Assigned to Smart Bus output" 1 . You should now see the 3-point matching screen for S01. The Servo channel (S01) will be shown at the bottom on the screen. This can be used to check you have selected the correct channel.

Lets now reverse the servo. Tap the **NORM/REVERSE** button. This will change the direction of rotation on the servo. Tapping the **NORM/REVERSE** button a second time will set it to its original direction.

Now lets have a look at sub-trimming a servo using the 3-point matching.

With the transmitter stick in the middle, the centre column should change colour to **green**. Use the **-**, **+** buttons to adjust the centre point of the servo.



Now move and hold the transmitter stick to one end point, either the **MIN** or **MAX** columns will change colour from **blue** to **green**.

Use the **-**, **+** buttons to move and sub trim the servo at this point.

Finally, move and hold the transmitter stick in the opposite direction, the other **MIN** or **MAX** column will change colour from **blue** to **green**. Use the **-**, **+** buttons to move and sub trim the servo at this point.

Simply repeat this process until there is little to no buzz from your servos. Press the save button to save your changes and return to the previous screen. This process can be repeated as many times as you wish with each programmable output. **Note: you can press the reset button at any time to reset the sub-trim values back to default.**

Note: you MUST press the SAVE button in order to confirm any changes to the Servo matching. Pressing save also returns you to the previous screen.

15 Point Matching

(Smart Bus All Versions)

15 point matching is useful for getting the best possible match between servos. This includes mechanically matched servos (aileron) or non mechanically matched (left and right elevator). We are now going to go through the 15 point servo matching process. For best results please do 3 point match before proceeding.

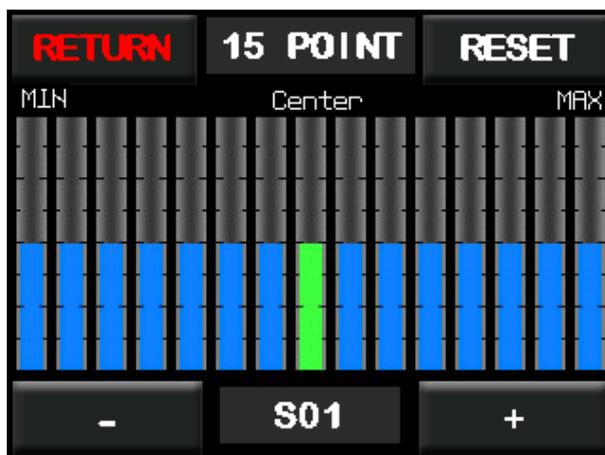
Note: If the servo is only moving a small amount. (Example: 10-15 degrees each way) You will only be able to use a small number of bars on the 15 point match. To use more bars, we recommend you increase the servo range by using a smaller servo arm.

Step 1

From the 3 point matching screen. Press the **MULTI** button.

Step 2

You should now see the multi point match screen. Similar to the 3 point match, as you move the transmitter stick for that channel. The bars will change colour from blue to green.



Note: You can return the servos sub trim values back to default by pressing the Reset button.



Step 3

Slowly move the transmitter stick for that channel from one side to the other, if at any point you hear servo buzz. Hold the transmitter stick in that position and use the -, + buttons to sub trim at that point. Sub trim the servo until the servo buzz lessens or disappears.

Step 4

Repeat step 3 for the entire range of the servo, this can be repeated as many times as you wish.

Step 5

Once you are happy with the sub-trim press the **back** button to move back to the 3-point sub-trim page. Pressing back again from the 3-point sub-trim page will save the trim values to memory.

Receiver Menu

Smart Bus RRS has the added feature of monitoring the connection between the Receiver and the transmitter. This can be used to assist in the optimal placement of your receivers during setup.

We will now go through a process of how to check the quality of the connection between your receiver and your transmitter.

Note: At the bottom of the receiver page you will see 3 buttons, these will change the output frame rate to your servos. Factory frame rate is 14ms which will work with all high quality digital servos. Before changing this, double check that your servos will handle the selected frame rate.

Warning: By changing the frame rate, the Smart Bus matching will be erased and servo reversing will be reset to default. Please ensure that all servos are not mechanically connected to avoid possible damage to your model and servos.

Step 1

Using the Smart Display, From the **MAIN MENU** tap the **RECEIVER** button.

Step 2

Here you can see the receiver **FRAMES** received, these indicate good packets of information sent from the receiver to the Smart Bus i.e. received by your receiver.

You can also see **DROPS**, these are packets have been received by the Smart Bus from the receiver with a mismatched checksum rendering the frame useless.

Note: If the number of Drops (dropped frames) is unusually high, it may indicate there is a problem with your receiver or receiver placement inside the model.

NOTE: It is quite normal to see these numbers with values higher than 0.

Ratios of 1000000 good received frames to 1000 (0.1%) dropped frames have been noted to be acceptable for a single RG812BX receiver during testing. When using dual RG812BX receivers you can expect higher dropped frame to good frame values per receiver due to crosstalk between receivers.



RETURN		BIND		RESET	
Rec	Frames	Drops	FailSafe		
1	0	0	0		
2	0	0	0		
3	0	0	0		
4	0	0	0		
Fail Safe			Frame Rate		

If you are experiencing extremely high drop ratios, please consult your receiver manufacturer for more details on receiver placement.

The third column shows **FAILS** (Fail safe events PER RECEIVER) this value shows the number of failed-to-send events from a receiver to the Smart Bus i.e. the receiver stopped sending frames.

Powering down the transmitter before powering down the Smart will cause the receivers to send Fail Safe events.

PLEASE NOTE FOR A SYSTEM WIDE FAILS SAFE EVENT TO HAPPEN BOTH RECEIVERS MUST BE IN THE FAILS SAFE CONDITION

Setting Fail Safe

Smart Bus RRS has failsafe function built into the Bus, this gives the user a peace of mind when using the Smart Bus RRS unit.

Note: It is extremely important that fail Safe is set in the Smart Bus. We recommend at least setting failsafe on throttle to either idle or off as a matter of safety.

Note: Please make sure that failsafe is not set in the radio. If failsafe is set in both the radio and the Smart Bus, you may experience servo jumping.

Note: In the Smart Bus RRS, for failsafe to occur, both receivers must enter failsafe. If only one receiver enters failsafe then the system will function on the remaining receiver. This is one of the outstanding safety features of the Smart Bus RRS.

Step 1

Using the Smart Display, From the **MAIN MENU** tap the **RECEIVER** button. Now tap **FAILSAFE**.

You should see the Fail Safe Page (picture on the right). The **Blue** bars will follow the stick positions of your radio (just like the monitor screen).

The bars represent the first 10 channels outputted from your radio.

Note: The bars have two colours.

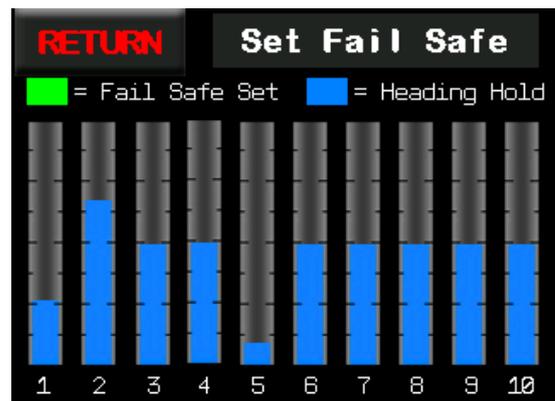
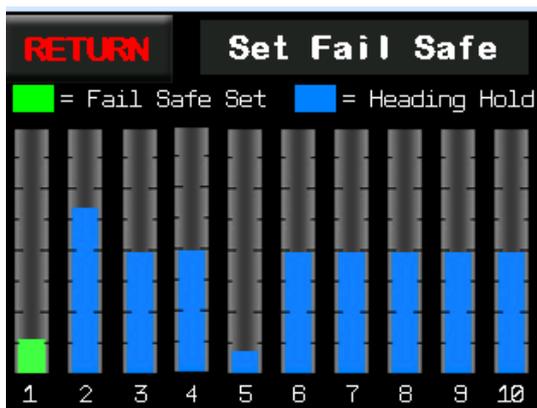
Blue = Fail safe is set to heading hold. In a failsafe event the channel and associated servos will hold the last good received channel value.

Green = Fail safe is set to a specific position. The channel and associated servos will move to the pre-set fail safe channel value.

The default setting for all channels is heading hold. (**Blue** bars)

Step 2

To set failsafe on any channel tap on the channel bar.



The blue bar will now turn green capturing the current stick position. Alternate tapping of the Channel bar will cycle between heading hold (**Blue** bar) and Fail Safe modes (**Green** bar).

Below is an example of how to set failsafe on throttle assuming channel 1 is throttle:

On the Set Fail Safe screen, move your throttle transmitter stick, the blue bars above channel 1 will move. With your throttle stick at the Idle position, tap the channel bar for channel 1.

The channel bar will now turn green.

you have successfully setup failsafe for throttle.

To test the fail safe function is correctly set up power off the transmitter. Channels set to fail safe should move servos to the pre-set position.

IT IS EXTREMELY IMPORTANT TO SET AND TEST FAILS SAFE PRIOR TO OPERATING THE MODEL

Factory Reset

When you use the sub-trim and other functions these functions are saved to the permanent memory of the Smart Bus. There may be situations where you will want to initialise your Smart Bus back to the original factory settings. Switching the Smart Bus to a different model for example would be one of the situations. When you select the Factory Reset feature all the sub-trim data and battery settings will be erased and the Smart Bus will be returned to “Out-Of-The-Box” settings.

WARNING

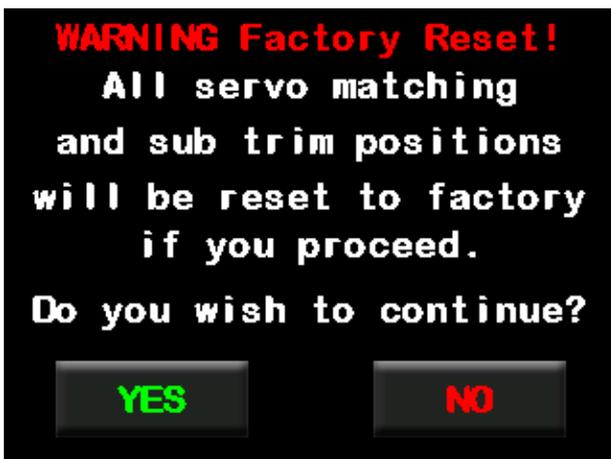
Performing a Factory Reset will erase all sub-trim data and is an irreversible process. Only do this if you are sure you want to reset the Smart Bus to factory settings.

Step 1

Using the Smart Display, go into the system menu, once here press the FACTORY RESET button.

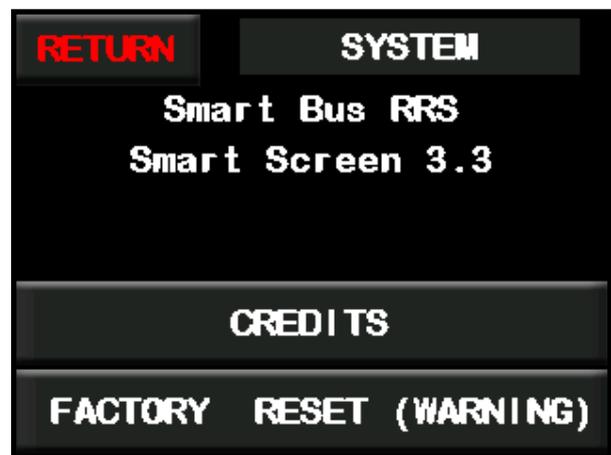
Step 2

A warning and instructions will appear on screen. Please Read this as it is an important process. When ready press **Yes** to continue or **No** to go back to the system screen.



Step 4

After the Factory Reset process is complete the Saving Data Screen will disappear indicating you have reset all data.



Step 3

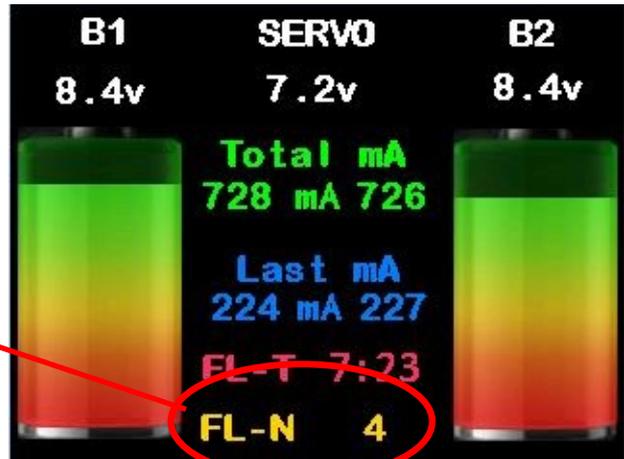
During the reset process the saving data screen will show for up to 20 seconds. Please DO NOT turn off the Smart Bus during this process.



Additional Screens

Cockpit Simulation Screens

The Smart Bus also comes with additional simulation screens that simulate a real cockpit. These include an artificial horizon and instrumentation. To view these new screens touch the bottom center of the Smart Screen page. An example can be seen to the right. If you want to return to the Smart Screen, simply press the centre of the display.



FAQ

Can I mount the Smart Display in my model.

Yes, the Smart Display was designed to be mounted as a simulation cockpit for RC aircraft, However it should be shock mounted to protect against vibration.

After setup, do I have to leave the Smart Screen in my model.

No you don't. The Smart Bus will work perfectly without the Smart Display attached. As soon as you plug in the display it will show you the all the information.

What are the 2 battery/bar pictures on the front screen for?

These pictures show you a percentage of the battery you have left. They will range from 100% to 0% and update as the battery packs are used. Never fly if the packs are in the RED ZONE and always make sure you have set up the correct battery capacity for your battery packs.

If I change the batteries in my model or move the Smart Bus to a different model will I have to setup the switch again?

Yes, The switch relies on the information that you program into it to be accurate. It can not work to its best if this information is not accurate.

Does the Smart Bus Regulate the voltage?

Yes, the Smart Bus Extreme versions offer output voltage regulation which can be set to 8.4v (3s version when using 3S battery packs) 7.2v or 6v for 2S battery packs.

Can I Plug 2 different voltages into the Smart Bus? For example a 3S lipo and a 2S lipo battery

No, you should always use the same voltage (S rating) and capacity packs on both sides of the switch.

Can I plug 2 different chemistries into the Smart Bus? E.g A LiFE and a Li-ion battery

No, you should always use the same chemistries for both batteries.

Channel Routing for Model _____

Smart Bus Servo Output	Transmitter Input	Function	Function	Transmitter Input	Smart Bus Servo Output
S13					S26
S12					S25
S11					S24
S10					S23
S09					S22
S08					S21
S07					S20
S06					S19
S05					S18
S04					S17
S03					S16
S02					S15
S01					S14

12 Month Replacement Warranty

Advance Radio will replace this product within 12 months if found to be defective in material and/or workmanship when used in the intended purpose. The warranty does not cover - Shipping charges related to any warranty claim. An over voltage or over current usage beyond stated specification. Damage due to system failure, negligence, abuse, accident, improper installation, vibration damage, damage to improper mounting or freezing. Loss of time, inconvenience, loss of model, or other incidental or consequential damages.

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