RealGear Direct-Drive Button Box User Guide

Mounting the Button Box (only when used with your own wheel and servo)

The mounting screws for your button box will vary based on the type of steering wheel you are using and the device it is being mounted to. As a result, the mounting screws are not included. The heads of the screws may need to be socket, round or flat as shown below. The button box will accept an M5 screw which is the most commonly used screw for steering wheels of this type. The button box is 19mm in thickness. This will need to be added to the mounting thickness of the wheel you are using and the length needed to mount to your device (motor flange, quick release, etc). For example, if the mounting thickness of your wheel is 4mm and the threaded holes on your mounting flange are 5mm deep then the screw length should be 19mm + 4mm + 5mm = 28mm. Since a 28mm length screw is not an available length you would need to use a 30mm screw. The resulting screw would be an M5 x 30 screw. Screws like these can be sourced at your local hardware store.
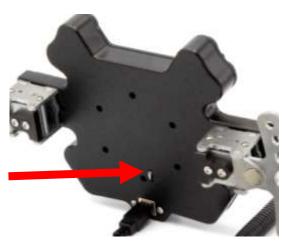

Socket Head Screws   Flat Head Screws   Rounded Head Screws

Be sure the grounding contact is making a clean contact to metal at the mounting flange.

Connecting your wheel

Your button box shipped with a coiled cable. Connect the "B" end to the back of the button box and the "A" end to a USB hub or USB extension cable under or near your wheel motor. Locate the "A" end of the cable so as to prevent the cable from getting tangled with the shifter paddles. DO NOT STRETCH THE CABLE TO REACH YOUR COMPUTER. The coiled cable is the weakest point of the assembly and is a sacrificial component. Replacements are available at www.ricmotech.com but care should be taken to avoid unnecessary stress on the cable.

Adjusting Paddle Positions

The overall width of the paddles can be adjusted by loosening the screws shown on the next page and sliding the paddle assembly in or out to your liking.

5mm Homes for M5 screws

Quad Function Encoders
Turn left/right
Push + Turn left/right

Paddles can be positioned further inward using these slots

The encoders are quad function. Simply turning the knob left and right is two functions (2 buttons) and turning while pushing down on the knob will activate a second pair of functions (another 2 buttons).

To program the first function you would go into your game settings and select the desired action, for example "decrease traction control". When prompted by the software you would turn the knob to the left one click. Then select the "increase traction control" and when prompted you should turn the knob to the right one click.

To program the second function you would go into your game settings and select the desired action, for example "decrease ABS". When prompted by the software you would push + turn the knob to the left one click. Then select the "increase ABS" and when prompted you should push + turn the knob to the right one click.

Then repeat this for the other knob for two additional functions.

Programming the buttons and switches is done by selecting the action in the game and then pressing the button or moving the switch as desired.

Adjusting paddle range of motion

The paddles are adjustable for a short or long throw. To adjust, loosen the screw indicated at the right on each side of the paddle. Slide the screws to the forward or rearward position and tighten the screws to set the range to the shorter or longer setting.

Troubleshooting

"Ghost" Button Presses Buttons are triggering by themselves or are not responsive when I press them.	Direct-Drive motors emit EMI (electro-magnetic interference) that disrupts other electronics. Check by removing power from the direct-drive motor to see if the problem goes away. Grounding is the proper solution. Check that the ground tap on the back of the "sandwich" box is making clean contact to metal. Paint, powder coating, or anodizing can prevent good contact. Also be sure there is continuous contact through to the motor shaft. In some cases, the motor itself requires grounding. Use a length of wire and touch one end to a point on the wheel or motor and the other end to a grounding point such as the PC case or sim chassis to determine the grounding required. Touch the wire to different points at each end until the problem goes away. Then find a suitable solution for grounding the two points together.
I get zapped off the steering wheel and the PC makes the USB disconnect sound.	When the wheel I properly grounded it becomes the best conductor for static electricity. If your seat generates static in your clothes then that static gets discharged through the wheel and the electronics may react adversely to this. Rubbing a dryer sheet on the seat can help to prevent static buildup. Anti-static sprays are also available to prevent this from happening. If the static is being caused by the carpet then touching a different grounded object will discharge the static before getting into your sim.
The buttons and paddle shifters become unresponsive when I wiggle the connector.	The cable or connector may be bad. The connector is a military grade spec to resist false contact, but if the cable is stressed then it can get damaged. Try replacing the cable with a spare or any standard USB "printer" type cable. A standard USB cable can be used with your wheel until a replacement cable can be obtained.

Need Help?

If you run into any problems during the installation of the adapter or plates, please contact us directly at technical support at (305) 417-9241 or via email at support@ricmotech.com.

Due to constant improvements to our products, the product you receive may vary slightly from the product shown in the illustrations.

Ricmotech Sim-Racing Equipment
(305) 417-9241

www.ricmotech.com