

Setup Guide for Ricmotech RealGear RACEpro Switch Panel

This guide will help you mount and configure your RACEpro switch panel for use. There are many configurations for the various knobs, and switches that can be tailored to your preference. Please read this entire manual carefully if you wish to get the most out of your new switch panel.

Mounting

Mounting the switch panel can be easily accomplished by using the threaded holes on the back of the panel. The holes are drilled in two sets of VESA 75x75 and 100x100. These is the same mounting pattern found on typical PC monitors therefore you can mount the panel using a PC monitor arm of your choosing so long as it can be fixed into place. We do not recommend monitor brackets that are designed to allow the monitor to be moved freely. Ricmotech has several options available which have been tested to work effectively.



There is also a flush mount kit to secure it into a 5 inch by 10 inch panel opening.

PC Installation

Plug a USB A-male to B-Male cable from the back of the switch panel to the PC. Windows should automatically install drivers for it. After the drivers have been installed, click Start and type [joy.cpl](#), this will open the game controllers panel. Toggle some of the switches and observe the red dots changing color on screen to confirm the switch panel is working correctly.

Basic Principles of a Switch Panel

Both Windows and Sim-racing titles are designed so that all auxiliary functions in the sim are controlled with a push-button controller or a keyboard. However, neither of these devices is found on a real race car, so we prefer to use switches, and knobs. So the RACEpro Switch Panel will take all the inputs and output them to the game as button presses. The RACEpro will allow you to change the way some of the button presses are output when a knob is turned or a toggle switch is flipped.

Latching Toggle Switch

The latching toggle switch will output a short button press when the switch is flipped on (up position) and another short button press when the switch is flipped off (down position). If the switch is toggled on then off quickly, or off then the Re-Sync function is triggered. The Re-Sync function allows the user to easily correct an "out-of-sync" condition.

Here is an example of how an "out-of-sync" condition occurs. Suppose a latching toggle switch is used for the pit lane speed limiter. The user enters a practice session and is placed in pit lane with the limiter already turned on but the switch on the switch panel is in the off (down) position. Since the game only responds to a button press to toggle the limiter on/off, flipping the switch on (up) will result in turning the limiter off and flipping it off (down) will turn it on. This is an "out-of-sync" condition. To get the game in sync with the switch just flip the switch on then off very quickly, which triggers the Re-Sync.

One-Way Momentary Toggle

When the toggle switch is flipped, the panel will output a button press and hold it pressed for as long as the toggle is held in the flipped position. When the toggle is released it will return to its normal position and the output will stop.

Push-Button Switch

The push-button operates the same as the one-way momentary toggle. When the button is pressed, the panel will output a button press and hold it pressed for as long as the button is held down. When the button is released it will return to its normal position and the output will stop.

Two-Way Momentary Toggle

The two-way momentary toggle may be oriented in an up-down orientation (Dv) or a side-to-side orientation (Dh). It functions as two one-way toggles combined into one.

Two-Function Mode: When the toggle is flipped in one direction it outputs a button press for as long as it is held down and when flipped in the opposite direction it outputs a different button press for as long as it is held down.

These can be assigned as a next and previous function, where up is previous and down is next. They can also be assigned to perform completely unrelated functions such as flipping up toggles ABS on and off and flipping down toggles traction control on and off.

One-Function Mode: There may be situations where it may be desirable to have the switch perform the same function regardless of whether it is toggled up or down. Each two-way momentary toggle may be configured to operate in one-function mode by following the programming instructions.

Multi-Function Encoders

The encoder will output a short button press for every click on one of two buttons depending on which direction it is turned. Therefore, turning it slowly to the left 3 clicks will output 3 short button presses on one button while turning it slowly to the right 3 clicks will output 3 short button presses on a different button. It is important to note that due to a limitation in games the encoder will only output up to 3 button presses per second. Button presses are only output while the knob is in motion to give the knob a natural feeling response.

Each encoder can perform the functions of 4 encoders. By default, the LED next to the encoder is off indicating the encoder is operating at the first function. Pressing the encoder knob inwards selects a different function and turns the LED on to one of three colors, red, green, or amber. While the LED is illuminated to a different color, the encoder acts upon a different pair of buttons.

Very similar to how the tuning knob on a car stereo changes the station, but pressing it once lets the user change the Bass setting, and pressing it again lets the user adjust the Treble setting, the encoders on the RACEpro Switch Panel can let you adjust the master volume, then pressing it once can let you adjust the

spotter volume, then pressing it again can let you adjust the chat volume, and pressing it again can let you change the radio channel.

Each encoder can perform up to 4 functions, but they can be limited to less if they will not be used. If the encoder is limited to a single function, then the select push-to-select becomes available to be used as a pushbutton (Type C). Please see the programming instruction for reducing the encoder functions.

Brake Bias Encoder

The brake bias encoder has been specially designed for adjusting front-to-rear brake bias. Turning the knob to the left triggers a short button press and turning to the right triggers a short button press on a different button. These buttons should be assigned in game to the front bias and rear bias functions respectively. The sensitivity of the knob is adjustable from as little as one button press per full turn to 16 button presses per turn. This creates a realistic feeling bias adjustment knob. To set the sensitivity of the knob please refer to the programming instructions.

Programming the operation of each switch and knob.

Many knobs and switches can operate differently as desired. Entering program mode will allow you to change their operation. The operating mode can be changed by performing the indicated action to the switch and the feedback LED will indicate the current operating mode that switch is now in.

Enter program mode by pressing the "#13" button or toggle for 10 seconds. Release the button/toggle when the "Program Feedback" LED flickers green. If the button/toggle is not released then the LED will flicker red and the unit will abort program mode. While in program mode, the buttons will not respond in the game.

Two-Way Momentary Toggle : Flip the toggle switch up or right. The Feedback LED will indicate the operating mode as follows:

1 Blink	One-Function Mode
2 Blinks	Two Function Mode

Multi-Function Encoder: Press in on the knob. The Feedback LED will indicate the operating mode as follows:

1 Blink	One-Function + Push Button Mode
2 Blinks	Two Function Mode
3 Blinks	Three Function Mode
4 Blinks	Four Function Mode

Brake Bias Encoder: Turn the knob one click in either direction. The Feedback LED will indicate the operating mode as follows:

1 Blink	16 Increments per Revolution
2 Blinks	8 Increments per Revolution
3 Blinks	4 Increments per Revolution
4 Blinks	1 Increment per Revolution

When done changing the settings, flip/press the designated "Program Mode" switch to exit program mode.

Assigning Game Functions to Buttons/Toggles/Knobs

Assigning functions to each control must be done individually in each game. In other words, setting a switch as the ignition in one game does not make it the ignition switch in any other game. Assigning the buttons on the switch panel is very much like assigning buttons on your wheel to functions in the game. You must go to the 'controls settings' screen of each game and select the function you want to have a switch for and activate the button/switch/knob in the direction you wish for it to operate when prompted by the game.

Labeling the Controls

The RACEpro Switch Panel is designed to have labels applied to the controls and a sheet of pre-printed labels is provided. We suggest you do not apply the labels right away, instead use the spaces provided on the controls layout diagram to map out the desired functions and try them out for a few days to be sure you are happy with their designated functions.

You will find that different games have different controls available to be assigned. One game may have controls for wipers while another one may not. We have provided labels marked "AUX 1", "AUX 2", "A", "B", etc. for this purpose. This way you may assign these uncommon game functions to these buttons/switches.

Also, many games vary slightly in the more common functions. For example, some games may have KERS,

while another may have TURBO. Using vague labeling such as "Boost" will keep the button/switch name relevant even though it may not be the exact function in the game.

Need Help?

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

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

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