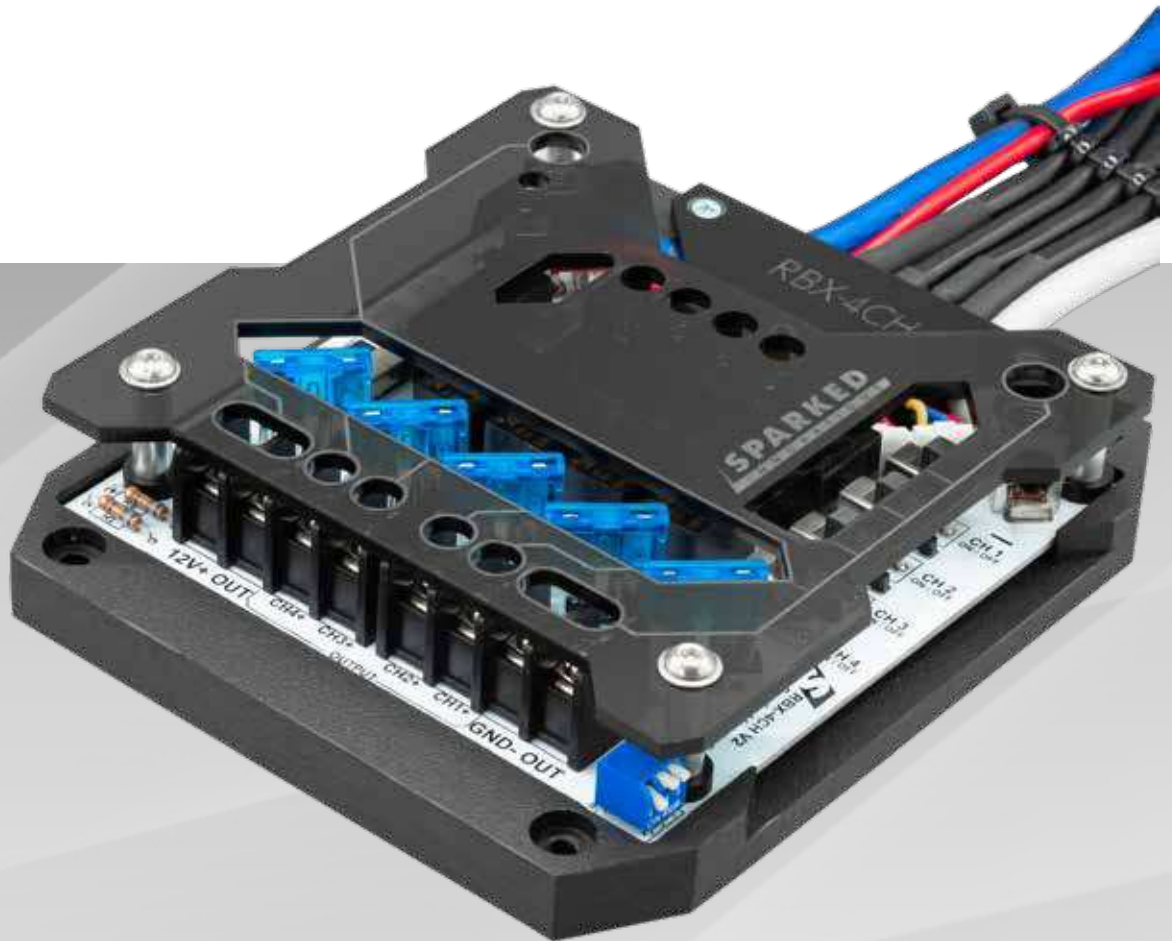# RBX-4CH
User Manual

English

INTRODUCTION

The RBX-4CH is a self-contained relay box designed by Sparked Innovations to simplify relay installation and offer a cleaner looking install than traditional methods. It's useful in conventional applications, such as amplifier remote turn-on via an external switch, but what makes it unique is that it's adaptable.

Versatile

The RBX-4CH can be activated using ANY positive trigger, which enables it to integrate with factory 12VDC sources. Switch on the channels using ignition leads, dome lights, and many others. The ignition interrupt feature enables full relay box control with a single wire.

Powerful

The RBX-4CH has multiple, higher current, positive switched outputs. These can be used to drive a wide range of DC accessories and products from fog lights and air horns to large air ride compressors and high power audio equipment.

Safe

The RBX-4CH comes equipped with isolated and fused protection on the positive outputs and a negative lead is provided for convenience to act as a distribution center from which to run all accessories, ensuring a safe and clean looking install.

> ⚠️ **WARNING**
>
> Sparked Innovations recommends that you have a qualified 12-volt technician or specialist install the RBX-4CH. Any deviation from these installation guidelines could cause damage to oneself, the relay box, vehicle, or accessories. Damage caused due to improper installation is not covered under warranty. The RBX-4 CH is not waterproof; as a result, Sparked Innovations does not recommend underhood or exterior mounting. Externally mounting the unit may cause a person to suffer ridicule from friends and risks the possibility of becoming an internet meme.

INSTALLATION GUIDE

Running Power Wire

1. Disconnect the vehicle's Negative (-) Battery Terminal from the Negative (-) Battery Post to reduce the risk of sparks flying
2. Choose an interior mounting location for the RBX-4CH Relay Box
3. Check and double check what's behind your mounting surface before drilling to avoid screwing into wires or fuel tanks
4. Mount and secure the Relay Box housing using four M4 or #8 screws
5. Select an appropriate gauge power wire to run from the Positive (+) Battery Post to the Relay Box

> Recommended wire gauge is 8 AWG for runs < 10ft and 4 AWG for runs > 10ft

6. Connect the Positive (+) Power Wire to the Positive (+) Battery Post
7. Install an Inline Fuse Holder on the Positive (+) Power Wire within 18 inches of the Positive (+) Battery Post (leave the fuse out of the fuse holder until the installation is complete)
8. Connect the Ignition Wire to the Ignition terminal on the relay box
9. Run the Positive (+) Power Wire from the Inline Fuse Holder to the RBX-4CH Relay Box

> If running the Power Wire through the firewall or interior body panels of a vehicle, be sure to use an appropriately sized grommet

10. Connect the Positive (+) Power Wire to "B+" on the Input End of the RBX-4CH and secure Set Screw with included Hex Tool
11. Find a clean Negative (-) Grounding Location to ground the Negative (-) Power Wire

> We recommend grounding directly to the Negative (-) Battery Post, vehicle's metal body, or a bare metal spot on the chassis. The Negative (-) Power Wire length should be as short as possible. Recommended wire gauge is 8 AWG for runs < 10ft and 4 AWG for runs > 10ft

12. Connect the Negative (-) Power Wire to the chosen Negative (-) Grounding Location
13. Run the Negative (-) Power Wire from the Negative (-) Grounding Location to the RBX-4CH
14. Connect the Negative (-) Power Wire to "GND" on the Input End of the RBX-4CH and secure Set Screw with included Hex Tool
15. Connect your Sparked Innovations Pre-wired Plug-in Switches (sold separately) to the "CH1", "CH2", "CH3", and "CH4" Switch Ports on the Input End of the RBX-4CH. Alternatively, connect Remote Trigger Wires to the Remote Input Screw Terminals on the same end.

Connecting Input Triggers

Remote Trigger Wires can be connected using bare wire or crimp-on fork terminals

16. **Onboard Channel Switches**

    Setting an onboard switch to OFF (e.g. CH1) allows that particular channel to activate using an external trigger or SPARKED switch (connected at the terminals). Moving the channel's onboard switch to ON allows that channel to activate with or without an external trigger or SPARKED switch. This mode of activation can be used to test a channel or to eliminate the need of an external trigger or SPARKED switch and provide activation of any connected accessories directly from the relay box.

17. **Onboard Ignition/Accessory Trigger and Illumination Switches**

    The RBX-4CH comes with ignition/accessory trigger and illumination functionality - both OFF by default ("SW Ign" is down and "Switch Illum" is up by default). To use ignition/accessory trigger functionality, move "SW Ign" to the ON position (up) and connect an 18~12AWG wire to the "IGN" terminal (next to "B+" terminal) and hook the other end to the vehicle's accessory (ACC) wire. This will turn on the relay box when the vehicle is started. "SW Ign" to ON also enables the "Switch Illum" switch. Move "Switch Illum" to the ON position (down) to illuminate all SPARKED pushbutton switches with ACC wire activation **regardless of whether they are** in their ON position. Leave "Switch Illum" in the OFF position (up) to illuminate SPARKED switches **only when they are** in their ON position.

18. **Master Switch and Master/Slave Functionality**

    Similar to the Ignition/Accessory trigger functionality, the Master and Slave ports become active when the "SW Ign" is moved to the ON (up) position. The Master port can accept **EITHER** a SPARKED switch to be used to control the ON/OFF functionality of the entire relay box, **OR** a jumper cable from the Slave port of another RBX-4CH (if using one relay box to control a second).
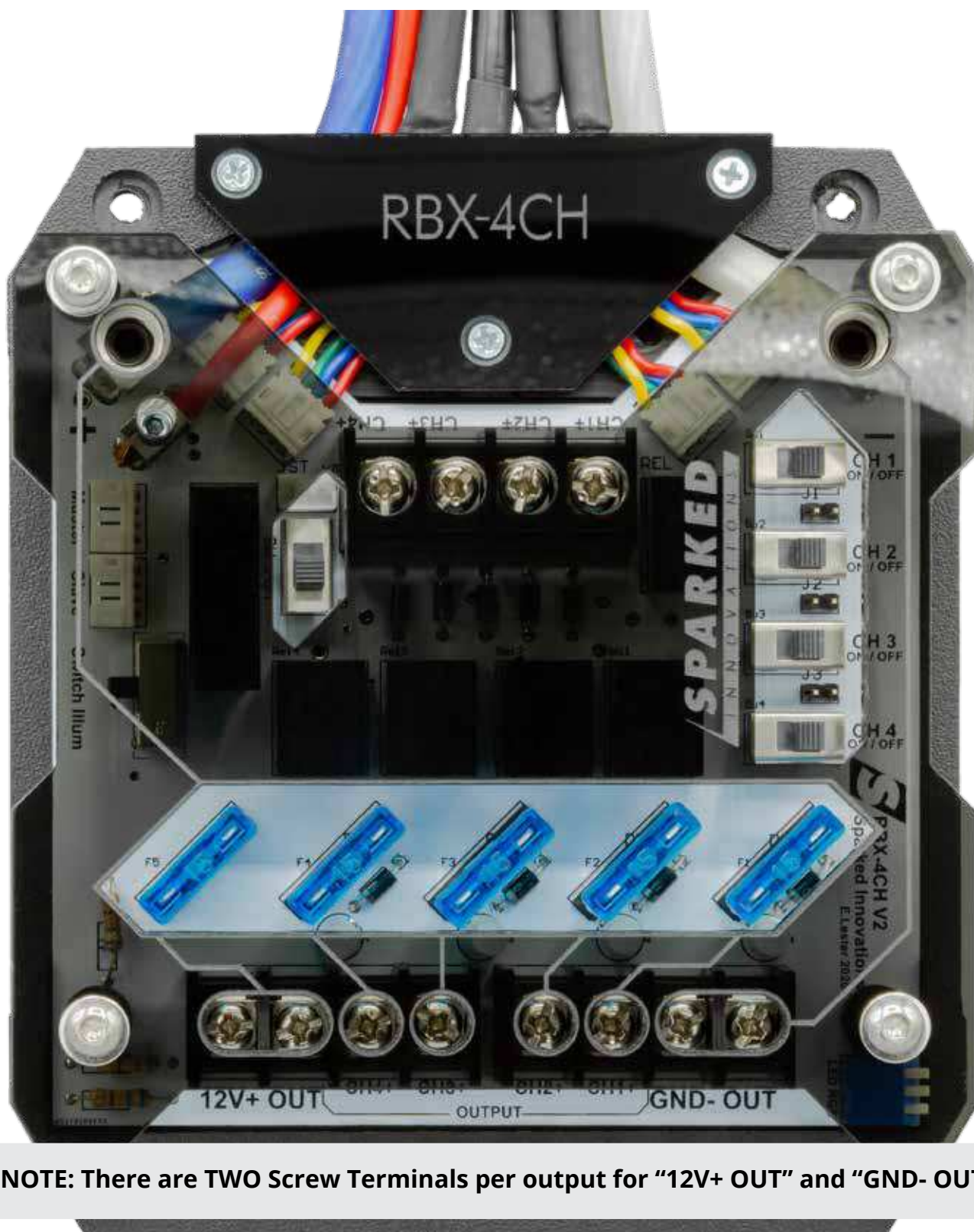
19. **Wire Hold-Down Plate**

    Power wire and input wires can be held down and concealed by the wire hold-down plate. Just remove the plate containing the unit's model number. Remove the three Phillips screws with a PH1 driver. Run any input wiring down through the recessed channels in the base. Reinstall the plate over the wires using the same three Phillips screws.

Connecting Output Accessories

20. Connect to the output terminals all items to be controlled and powered by the Relay Box. Make sure to match Positive (+) Wire Leads from your accessories to one of the four triggerable Positive (+) Output Terminals. For convenience, you may use the GND- OUT Terminal to provide the Negative (-) power for your accessories.

The Output End of the RBX-4CH consists of a Constant "12V+ OUT", Switched "CH1+", Switched "CH2+", Switched "CH3+", and Switched "CH4+" Output Terminal. ALL of those terminals are fuse protected. The Negative (-) side of the RBX-4CH's Output End consists of a Constant "GND- OUT" Output Terminal.

21. Double check all wiring and ensure the Relay Box is secure.
22. Install an appropriately sized fuse into the Inline Fuse Holder on the Positive (+) Power Wire near the Positive (+) Battery Post. Sparked Innovations recommends a 60~75A fuse.
23. Activate the Relay Box by switching on a Sparked Innovations Pre-wired Plug-in Switch or activating the Positive Remote Trigger. The LEDs should illuminate for each activated channel and items connected to the outputs should energize.

NOTE: There are TWO Screw Terminals per output for "12V+ OUT" and "GND- OUT"
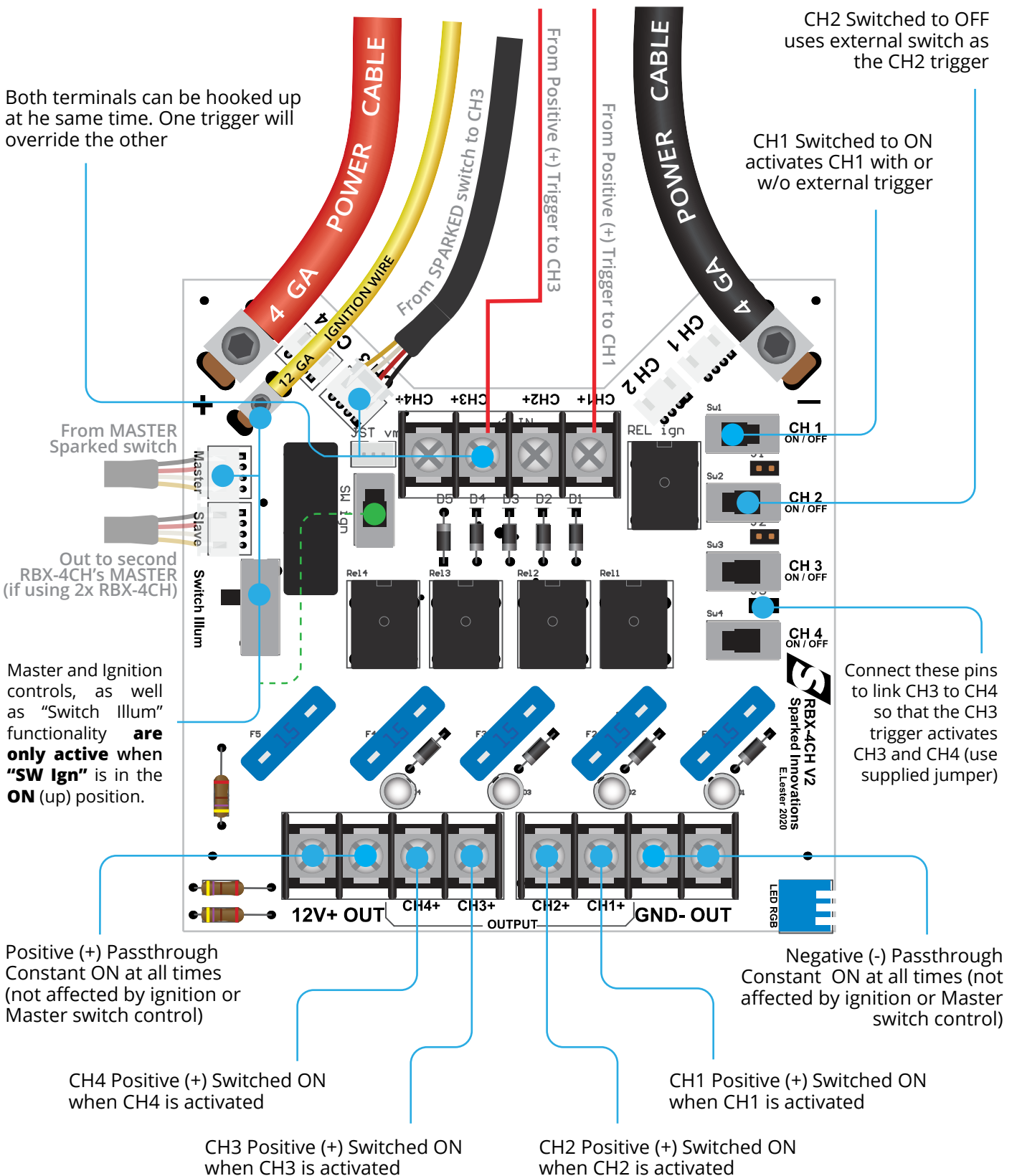
EXAMPLE SETUPS

POSITIVE (+) SWITCHED APPLICATION

Use this configuration to activate the relay channel of your choice using a Positive (+) Trigger.

Option 1: Connect an external switch inline with a Positive (+) Wire Lead and run it to the corresponding Remote Input for the chosen channel

Option 2: Connect a Positive (+) Trigger from the vehicle such as a remote turn-on for a head unit or ignition lead and run it to the corresponding Remote Input for the chosen channel

Both terminals can be hooked up at he same time. One trigger will override the other

From Positive (+) Trigger to CH3

From Positive (+) Trigger to CH1

From SPARKED switch to CH3

CH2 Switched to OFF uses external switch as the CH2 trigger

CH1 Switched to ON activates CH1 with or w/o external trigger

4 GA POWER CABLE

IGNITION WIRE

From MASTER Sparked switch

Out to second RBX-4CH's MASTER (if using 2x RBX-4CH)

Master and Ignition controls, as well as "Switch Illum" functionality **are only active** when **"SW Ign"** is in the **ON** (up) position.

CH 1 ON / OFF
CH 2 ON / OFF
CH 3 ON / OFF
CH 4 ON / OFF

Connect these pins to link CH3 to CH4 so that the CH3 trigger activates CH3 and CH4 (use supplied jumper)

RBX-4CH V2 Sparked Innovations E.Lester 2020

Positive (+) Passthrough Constant ON at all times (not affected by ignition or Master switch control)

12V+ OUT   CH4+   CH3+   CH2+   CH1+   GND- OUT
OUTPUT

LED RGB

Negative (-) Passthrough Constant ON at all times (not affected by ignition or Master switch control)

CH4 Positive (+) Switched ON when CH4 is activated

CH3 Positive (+) Switched ON when CH3 is activated

CH2 Positive (+) Switched ON when CH2 is activated

CH1 Positive (+) Switched ON when CH1 is activated

SPECIFICATIONS

Features

- All-in-one wire distribution, protection, and control
- High current output relays
- Diode and relay isolation from input to output
- LED indicators for channel activation
- High quality PCB circuit integration
- Integrated switch ports
- Fused protection
- Positive (+) activation
- Positive (+) switch outputs
- Fused distribution for constant positive (+) and negative (-) outputs
- Designed, engineered, and handcrafted in the U.S.A.
- Ignition/Accessory activation and master switch functionality
- Onboard switches
- Convenient wire hold-down plate

Technical Data

Dimensions	6.0"L x 5.2"W x 1.2"H
Operation voltage	9 ~ 18V DC
Remote input voltage	Positive (+) 9 ~ 18V DC
Number switched of channels	4
Number of un-switched channels	1
Total peak current capacity	90A
Total continuous current capacity	75A
Current capacity per channel	15A
Fuses	5 x 15A ATC
Power and ground input terminals	4 ~ 10 AWG bare wire
Remote input and output terminals	10 ~ 22 AWG Fork terminals or bare wire
Ignition input terminals	12 ~ 18 bare wire
Weight	12.2 oz

1-Year Limited Warranty

Sparked Innovations warranties this product to be free from defects in material or workmanship for one (1) year following the date of purchase, provided that the product is used in the proper environment. This limited warranty does not cover failures due to abuse, accidental damage, or when repairs have been made or attempted by anyone other than Sparked Innovations. A defective product meeting the warranty conditions set forth herein will be replaced or repaired at the discretion of Sparked Innovations.

Warranty service can be obtained in two (2) ways. Firstly, the item can be returned to the dealer from which it was originally purchased, within their designated time period as stated in their return policies, for either replacement or repair service. Secondly, the item can be shipped to Sparked Innovations under warranty claim once a return authorization is granted. To obtain a return authorization, simply email Sparked Innovations at support@sparkedinnovations.com for warranty service.

This warranty does not apply to accessories. This product is not intended for commercial use, and accordingly, such commercial use of this product will void this warranty. All other guarantees, expressed or implied, are hereby disclaimed.

NOTES

NOTES

Will anyone read this?

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because it has words and stuff on it.

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