



Ground inputs to trigger relays externally from ECU or manual button (see pg 4 of instructions)

THIS SWITCH FUNCTION IS TO HAVE RELAY # 1 (TYPICALLY IGNITION) AS THE MASTER FOR ALL THE OTHER RELAYS EITHER SET ON OR OFF. WHAT THIS MEANS, IS IF THE SWITCH IS SET IN THE POSITION OF #1 RELAY BEING THE MASTER, WHEN RELAY # 1 IS OFF ALL OTHER RELAYS WILL TURN OFF. IF THE SWITCH IS SET TO BYPASS ALL RELAYS INCLUDING RELAY #1 WILL ALWAYS WORK. SEE PG 2 FOR FURTHER INSTRUCTIONS.

FUSED BI COLOUR LED'S, ORANGE WHEN FUSE IS GOOD, "RED" WHEN FUSE IS BLOWN

3 AMP MAX RATING PROTECTION FUSE FOR SWITCH PANEL

OUTPUT LED'S GREEN WHEN RELAY IS ON.

MAIN POWER CABLE 8 -6 GAUGE DEPENDING ON AMPERAGE DRAW OF APPLICATION

GROUND FOR RELAY BOARD 18-14 GAUGE AS THIS IS ONLY USED TO GROUND COMPONENTS SUCH AS LED LIGHTS AND CIRCUITRY.

GROUND INPUTS TO ACTIVATE RELAYS EXTERNALLY WITH ECU GROUND OUTPUT OR MANUAL SWITCH, FOR RELAYS 1 TO 6. FOR EXAMPLE PIN 1 ACTIVATES RELAY #1, PIN 4 ACTIVATES RELAY # 4, AND SO ON.

BUMP START SWITCH EXAMPLE

EXTERNAL 12v ignition input (optional with selection switch)

NEUTRAL SWITCH OUT
NEUTRAL SWITCH IN

GROUND INPUTS TO ACTIVATE RELAYS EXTERNALLY WITH ECU GROUND OUTPUT OR MANUAL SWITCH, FOR RELAYS 7 AND 8

IGNITION BYPASSED ON OR OFF. IF IGNITION IS BY PASSED RELAY BOARD WILL ALWAYS WORK WHEN POWER AND GROUND IS APPLIED AT THE MAIN STUDS, IF IGNITION SWITCH IS NOT BYPASSED, A 12 V POSITIVE INPUT MUST BE APPLIED AT THE IGNITION TERMINAL AS SHOWN ON TERMINAL STRIP. SEE PG 2 FOR FURTHER INSTRUCTIONS

TECH TIP: If your relay controller has spare relays and you wanted them to activate with a switch, for example you wanted to have the IGN switch turn on multiple relays, you can use a jumper on the grey terminal from position 1 (IGN relay signal to pin position 6 if that was to be your spare relay. This jumper can be small gauge wire as it is only a trigger signal output. This will have both relays turn on with your switch.

12V input from trans brake connected here will interrupt relay #8, for example if a trans brake interrupt feature is needed perfect for staging a NITROUS car when at full throttle and on trans brake.

IMPORTANT !!!!!!! PLEASE READ!!!!!!

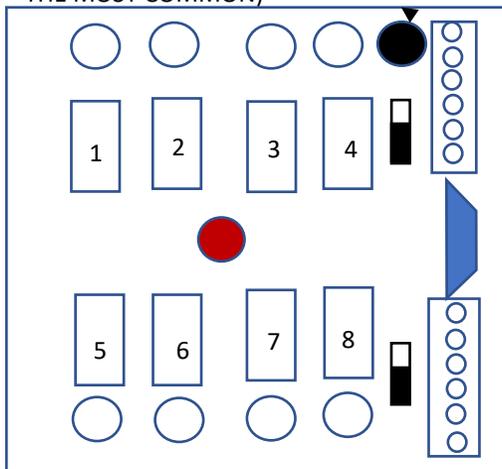
THESE RELAY CONTROLLERS HAVE A BUILT IN NEUTRAL SAFETY PROVISION FOR RELAY #2, FOR THIS RELAY TO WORK (START RELAY) YOU MUST IMPLEMENT A NEUTRAL SAFETY SWITCH AS SHOWN OR BYPASS AND LOOP THE TWO TERMINALS LABELLED S/N. FOR EXAMPLE IF THE RELAY BOARD WAS USED FOR A NITROUS RELAY BOARD YOU MUST LOOP THESE TWO PINS FOR #2 RELAY TO WORK. THIS WILL COMPLETE THE CIRCUIT AND THE STARTER RELAY WILL OPERATE. IN A NITROUS BOARD APPLICATION BY LOOPING THE TWO PINS STAGE 2 WILL BE FUNCTIONAL WHEN THESE PINS ARE LOOPED.

POSITION AND FUNCTION OF SELECTOR SWITCHES

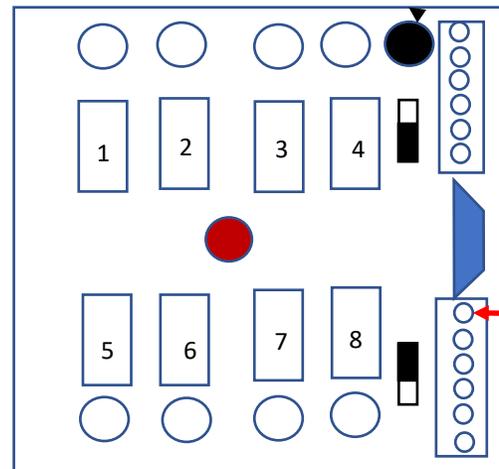
There are 4 modes of operation of the selection switches for different applications.

IN MOST APPLICATIONS THE RELAY CONTROLLER WILL BE CONFIGURED AS IN MODE 1

MODE 1 BOTH SWITCHES IN THE UP POSITION, RELAY BOARD WILL BE ARMED AND RELAYS WILL TURN ON WITH SWITCH PANEL OR IF ANY GROUND INPUT IS APPLIED AT TERMINAL STRIP INPUTS (THIS WOULD BE NORMAL OPERATION AND THE MOST COMMON)

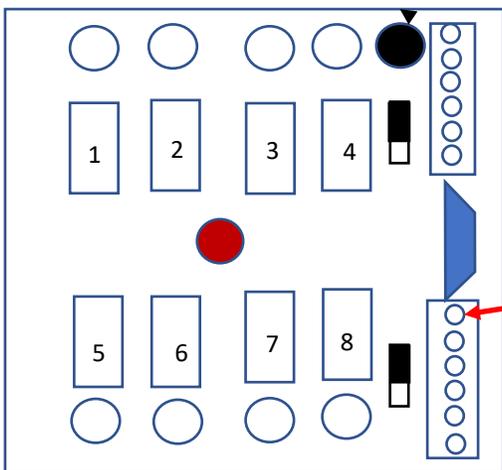


MODE 2 THE IGNITION BY PASS SWITCH IS IN THE ON POSITION. IN THIS POSITION THE RELAY CONTROLLER WILL NOT WORK UNLESS THERE IS A 12V POSITIVE INPUT AT TERMINAL PIN AS SHOWN, FROM EITHER A MANUAL SWITCH OR FOR STREET CAR THE FACTORY IGNITION SWITCH. THE 12V INPUT WILL ENABLE THE CONTROLLER TO OPERATE AND IS THE MASTER ENABLE.



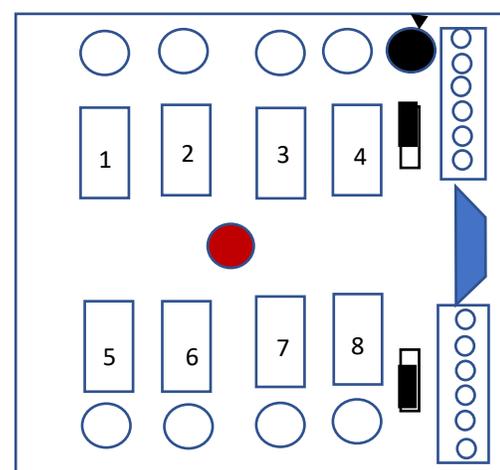
12V POSITIVE MUST BE APPLIED AT THIS TERMINAL FOR RELAY CONTROLLER TO OPERATE FROM EXTERNAL SWITCH OR KEY

MODE 3, WHEN SWITCHES ARE IN THIS POSITION, IGNITION SWITCH POSITION IS IN (ON) POSITION MEANING YOU WILL NEED 12V POSITIVE INPUT AT TERMINAL STRIP AS SHOWN. THE RELAY #1 IS THE MASTER FOR THE REST OF THE RELAYS TO OPERATE. IN SUMMARY YOU WILL NEED 12V IGNITION INPUT AND RELAY# 1 TURNED ON FOR THE REST OF THE RELAYS TO OPERATE, IF ONE OF THESE SCENARIOS IS NOT ACTIVE THE RELAY CONTROLLER WILL NOT TURN ON

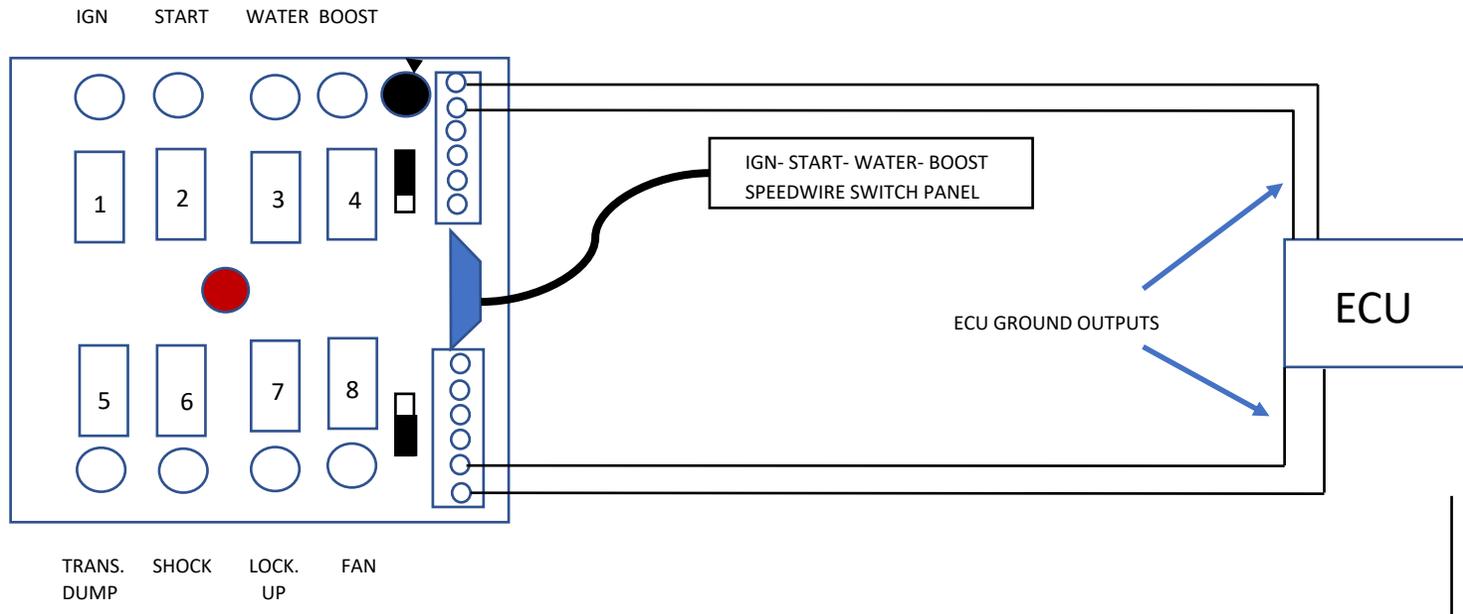


12V POSITIVE MUST BE APPLIED AT THIS TERMINAL FOR RELAY CONTROLLER TO OPERATE FROM EXTERNAL SWITCH OR KEY

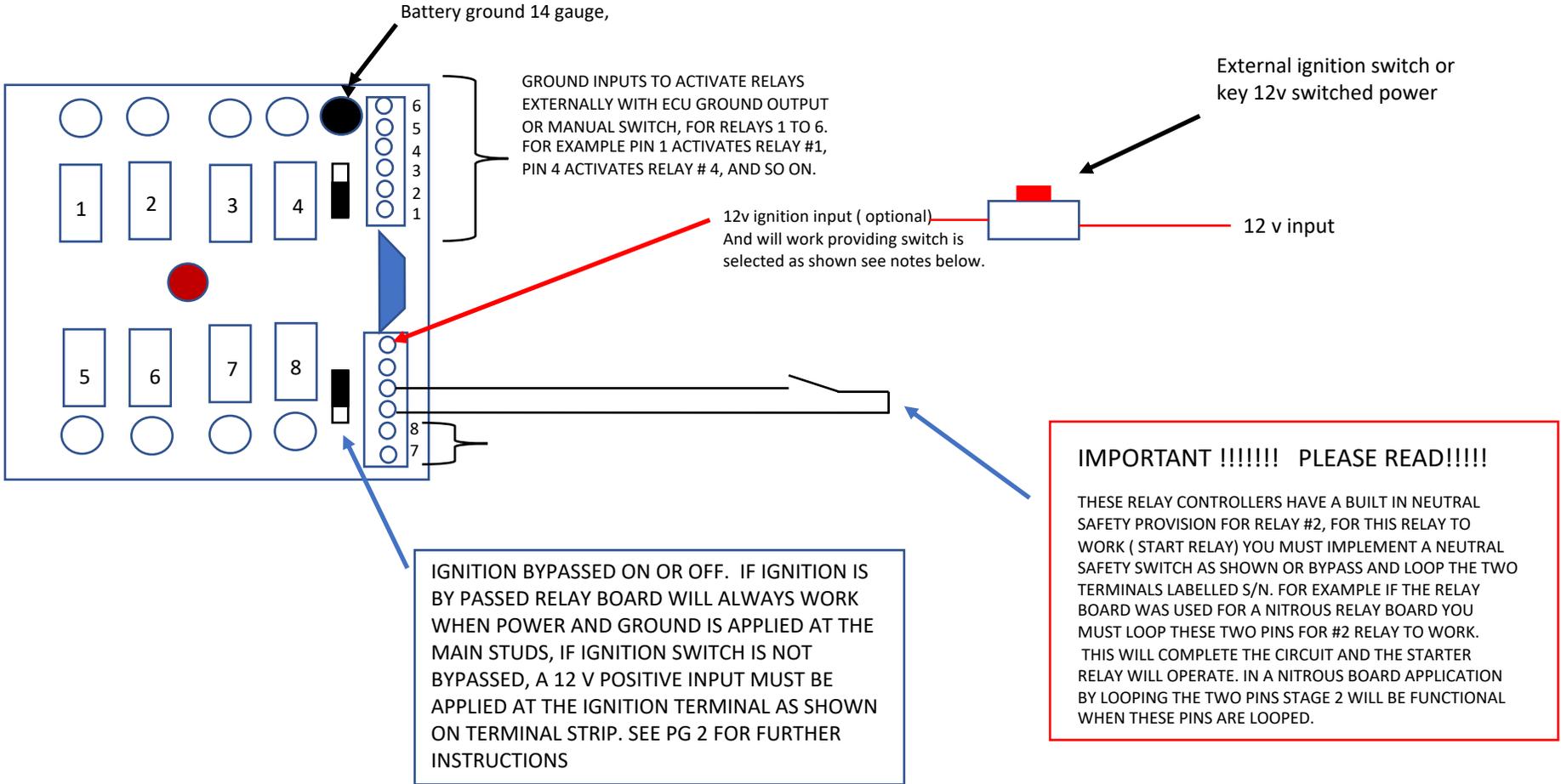
MODE 4, WHEN SWITCHES ARE IN THIS POSITION RELAY # 1 IS THE MASTER FOR ALL THE RELAYS TO OPERATE, AND IGNITION INPUT IS BYPASSED. IF RELAY #1 IS NOT ACTIVE THE OTHER 7 RELAYS WILL NOT OPERATE. THIS IS A COMMON SCENARIO IS YOU WANTED ALL THE RELAYS TO TURN OFF WITH RELAY # 1. FOR EXAMPLE IF YOUR EFI DEFAULTS TO GROUND WHEN IT IS TURNED OFF THIS WOULD WORK PERFECTLY, AS THE OTHER RELAYS WILL TURN OFF REGARDLESS IF THE TERMINALS ARE ACTIVE WITH GROUND.



MODE 4, WHEN SWITCHES ARE IN THIS POSITION RELAY # 1 IS THE MASTER FOR ALL THE RELAYS TO OPERATE, AND IGNITION INPUT IS BYPASSED. IF RELAY #1 IS NOT ACTIVE THE OTHER 7 RELAYS WILL NOT OPERATE. THIS IS A COMMON SCENARIO IF YOU WANTED ALL THE RELAYS TO TURN OFF WITH RELAY # 1. FOR EXAMPLE IF YOUR EFI DEFAULTS TO GROUND WHEN IT IS TURNED OFF THIS WOULD WORK PERFECTLY, AS THE OTHER RELAYS WILL TURN OFF REGARDLESS IF THE TERMINALS ARE ACTIVE WITH GROUND. THIS EXAMPLE SHOWS THE RELAY CONTROLLER CONNECTED TO OUR SWITCH PANEL, AND ECU GROUND OUTPUTS ARE TURNING ON RELAYS 5 TO 8 WITH GROUND OUTPUTS BASED ON SOFTWARE PARAMETERS DURING A RUN, WHEN IGNITION IS TUNED OFF AT THE SWITCH PANEL IT WILL TURN OFF AND DISARM ALL RELAYS.



Example of using relay controller with ECU ground outputs to trigger relays with no switch panel, and having ignition input as master to turn off all relays once 12v is removed from IGN input



Remote battery disconnect layout for Marine applications

