



MULTIPLE RELAY CENTER INSTALLATION & OPERATION MANUAL

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INSTALLATION

Using #8 screws through the rubber grommets in the base, mount the MRC-1 away from heat and vibration. Wire as shown in the following diagrams using quality automotive wire. Make sure to use a solid chassis point for all grounds. Sheet metal and tin work grounds are not reliable.

OPERATION

Relays are used to handle the load of a high current draw component. When a relay is triggered, the contacts move, connecting or disconnecting the component. To trigger a relay, power must be supplied to one side of the relay's coil and ground to the other side.

The MRC-1 was designed to simplify the installation of multiple relays in a race car. Relays #1, 2, 3 & 4 are all normally open (NO) and have the commons (COM) tied together and one side of the coil tied together. They can be used to supply power or ground to components and can be triggered with either power or ground, but all four relays must be triggered the same and all four outputs must be the same. Relay # 5 is completely isolated and can be used normally open (NO) or normally closed (NC). It can also supply power or ground and be triggered with power or ground but because it is isolated it can be wired to perform differently than relays # 1 through 4.

Most of the wiring diagrams in these instructions show the relays wired for a positive trigger and positive output. This is the most common way to wire a relay and especially in nitrous applications, the safest. If you wish to wire your MRC-1 with either a negative trigger, negative output, or both, call Dedenbear for a custom diagram.

FUSES

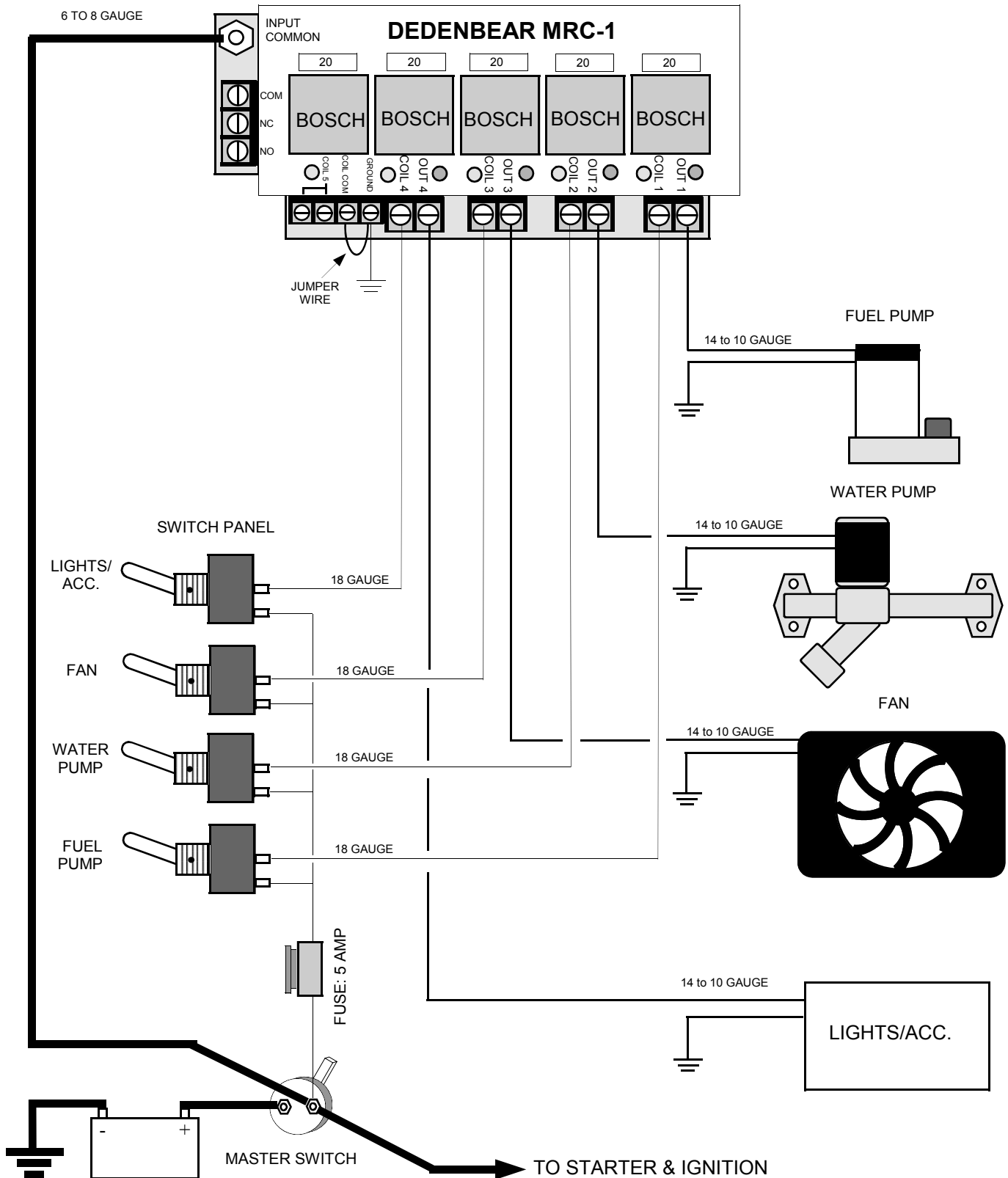
All 5 relays are individually protected by 20 amp fuses. Choose a fuse of appropriate size for each output depending on the current draw of the component. Pick a fuse rated about 5 amps greater than the draw, for example if your fuel pump draws 20 amps, use a 25 amp fuse, if your nitrous solenoids draw 10 amps, use a 15 amp fuse. Each output is rated at a maximum of 30 amps.

INDICATOR LED'S

There are a series of trouble shooting LED's on the face of the MRC-1. Each green light indicates the coil of a relay, each red light indicates the output of a relay (relay #5 has no output LED due to it's NO & NC capabilities).

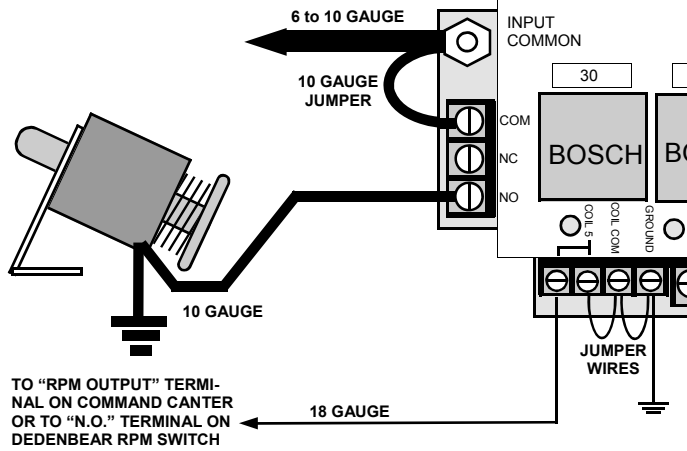
When a relay is triggered the green LED will illuminate. When the relay outputs, the red LED will illuminate. Use the troubleshooting chart below to help find problems.

WIRING RELAYS # 1 TO # 4

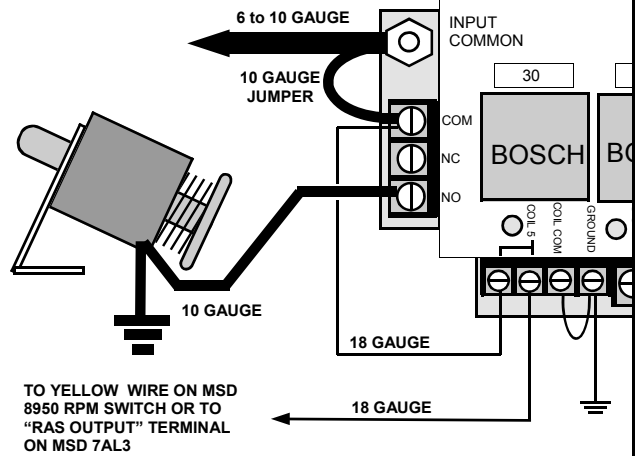


RELAY # 5 WIRING OPTIONS

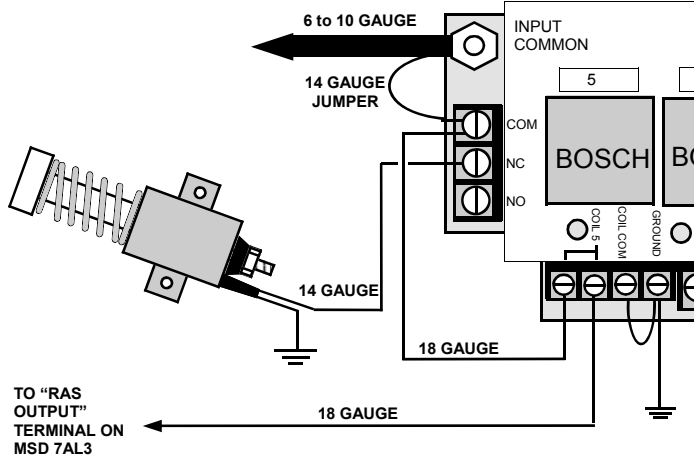
Wiring for push style electric shifter with Dedenbear RPM switch or Command Center



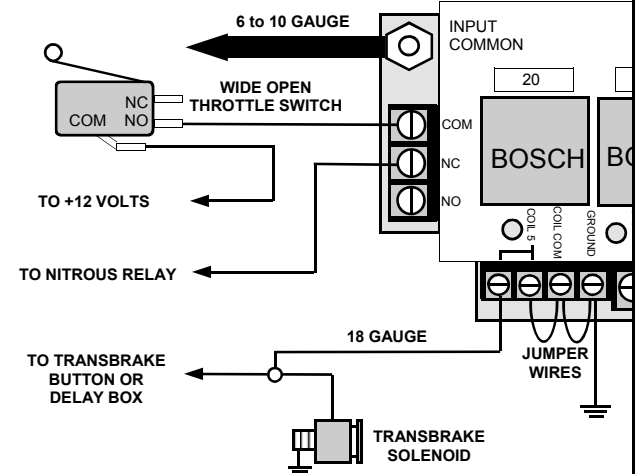
Wiring for push style electric shifter with MSD 8950 or MSD 7AL3 RPM switch



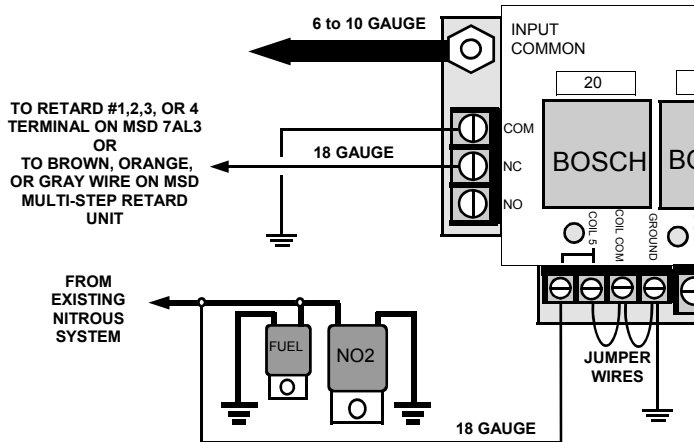
Wiring for hold style electric shifter with MSD 7AL3 RPM activated switch



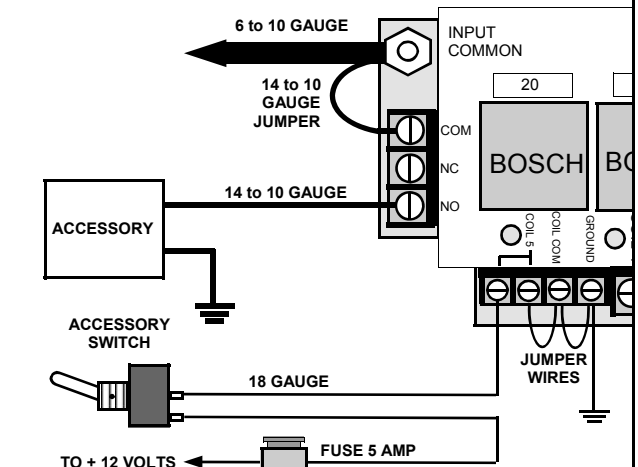
Wiring for single stage nitrous staging relay (keeps nitrous off until transbrake release)



Wiring for positive MSD retard activation of MSD 7AL3 or MSD multi-step retard



Wiring to function the same as relays #1 to #4



TROUBLESHOOTING

Indication	Possible causes
Green coil light will not turn on	Problem is “before” the MRC-1. The power or ground (whichever you are using to trigger) is not making it to the affected coil terminal. The coil common is not properly grounded (for power triggered coils) or is not properly powered (for ground triggered coils).
Green coil light turns on, but red output light will not turn on	Problem is “in” the MRC-1. The input common is not properly powered (for positive output) or grounded (for negative output). The fuse is blown due to a short circuit on the output. The relay is defective.
Green coil light and red output light turn on but the accessory does not turn on	Problem is “after” the MRC-1. The wiring between the MRC-1 and accessory is defective. The accessory itself is defective. The accessory is not properly grounded.

LIMITED 1 YEAR WARRANTY

DEDENBEAR Products, Inc. warrants to the consumer that all DEDENBEAR Products purchased from an Authorized DEDENBEAR Reseller will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12 month warranty period will be repaired or replaced at DEDENBEAR's option, when determined by DEDENBEAR that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of parts in the DEDENBEAR Product and the necessary labor done by DEDENBEAR to effect the repair or replacement of the DEDENBEAR product. In no event shall DEDENBEAR's cost to repair or replace a DEDENBEAR under this warranty exceed the original purchase price of the DEDENBEAR Product. Nor shall DEDENBEAR Products, Inc. be responsible for special, incidental or consequential damages or costs incurred due to the failure of a DEDENBEAR Product. This warranty applies only to the original purchaser of the DEDENBEAR Product and is non-transferable. This warranty also applies only to DEDENBEAR Products purchased from an Authorized DEDENBEAR Reseller. All implied warranties shall be limited in duration to the said 12 month warranty period. Breaking the instrument seal, improper use or installation, accident, water damage, abuse, unauthorized repairs or alterations voids this warranty. DEDENBEAR disclaims any liability for consequential damages due to the breach of any written or implied warranty on all products manufactured by DEDENBEAR Products, Inc.

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