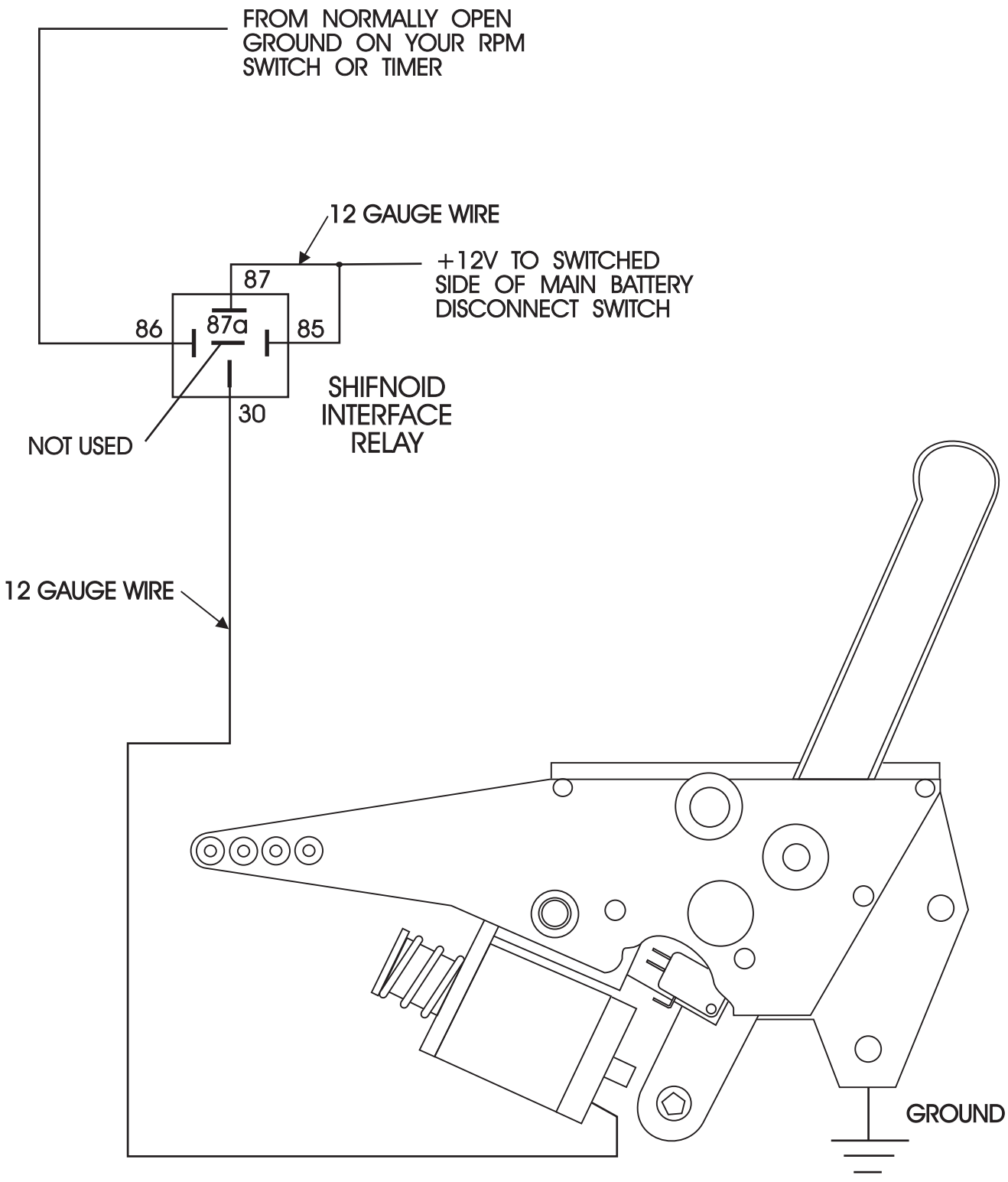
SHIFNOID WIRING DIAGRAM

FOR CMW CALLIS SHIFTER with a SHIFNOID SN5100 KIT



INSTALLATION INSTRUCTIONS
"SHIFNOID" tm AUTO SHIFTER SOLENOID KIT
PART # SN5100

FOR STANDARD "FORWARD" PATTERN 2 SPEED
TRANSMISSIONS ON A "CMW" SHIFTER tm

Shift Activator manufactured by SHIFNOID LTD.
Shifter manufactured by CALLIS MACHINE WORKS

CABLE INFORMATION

If having a cable built by a "Morse style cable dealer" the following numbers will inform your builder of the exact information needed to build a cable that will fit this shifter.

STYLE 1 - SERIES 3 - TRAVEL 3 - CONDUIT 2 - BULKHEAD 3 - LENGTH IN INCHES ?

MOUNTING THE UNIT

If the SHIFNOID kit was purchased with a CMW shifter, it came pre assembled, ready to wire and bolt in. The shifter can be side mounted by using the two inline 5/16" holes or installed on the optional floor brackets using the front 5/16" hole and the lower rear 5/16" hole. To install your cable, you must have a compatible cable that uses a 3/8" end piece. This 3/8" end will clamp in the cable clamp on the back of the shifter. Remove the two button head screws from the top of the cable clamp and insert one end of the cable through the clamp. If your cable has a locking tab, you will need to remove it. Reinstall and tighten the two screws. Next, put the shifter in 1st gear exposing the cable mounting adapter on the handle. The shifter end of your cable must have a 10/32 threaded end. This end will thread into the existing rod end that is already hooked to the shifter handle. Use a locking, jam nut and or a thread locking fluid on the threads of your cable. When attaching your cable to your transmission verify that you have a transmission selector lever with a 2" center to center dimension. Measure this from the center of the selector lever to the hole for the cable swivel. If you do not have this style of mount it will have to be replaced with an after market style lever. Mount your cable from the rear (front on rear cable exit models) of the transmission. Make sure all cable mounts and routing allow the cable to operate in a smooth and non binding manner. Adjust your cable at either or both ends as needed to properly place your transmission in gear. Manually place your transmission in neutral, before attaching cable at the transmission end, then adjust your cable length so that your shifter is also in neutral. Attach cable to transmission and reverify both transmission and shifter are in neutral. Do this to ALL gears, one at a time, making sure your transmission is in the gear that matches your shifter indicator. Failure to do this can cause your transmission to be in a different gear than your shifter shows or not all the way in gear. The hold down nut on the reverse lock out is loose allowing you to position the lock out lever where it works best for the driver. Be sure to tighten this nut once you have the handle in the position you want. This shifter can be converted to a rear cable exit model by simply removing the side plate screws and the reverse lock out. Turn the plate over reinstalling the side plate screws and reverse lock out. The reverse lockout will attach to the threaded hole next to the hole you removed it from. This will place the lock out in the correct position to work. If you use this as a rear cable exit model, you will need to run your cable in from the front of the transmission or turn the shift arm up.. This typically will result in custom brackets needing to be built to hold your cable to your car.

WIRING THE UNIT

Follow the wiring diagram supplied, and the instructions that came with your RPM switch so that the signal coming from the RPM switch at the the preset time closes to ground. (N.O. Ground). Some RPM switches close to +12 Volts when activated. (N.O. + Volts) The included relay can be used either way. If your RPM switch supplies a normally open ground, attach this wire from your RPM switch to post 86 on the relay and supply power to post 87 and 85. Connect post 30 to the solenoid. If your RPM switch supplies normally open power, (+12 volts), attach this wire to post 86, a separate power line to 87, ground 85, and connect 30 to the solenoid.

POWER: The power line, (+12 Volts), feeding post 87 on the relay and the wire running from post 30 to the solenoid must be able to carry the full load of the current required by the solenoid. These wires must be 12 AWG or larger and connected to a suitable point to supply up to 30 amps.

GROUND: The solenoid gets it's ground from the shifter. Sometimes mounting the shifter to the car does not supply a sufficient ground. A insufficient ground will result in a solenoid that will be weak and have a short life. If in doubt, add a ground wire from the solenoid or shifter and attach it to your chassis.

If your car does not have a built in neutral safety switch you will need to use the one installed on the CMW shifter. Cut the wire that hooks your battery to your starter button or your starter relay to your starter button and connect one side to the COMMON or bottom post on the switch and the other wire to the NO (normally open) or middle post on the switch. This will disconnect the power to your starter when your shifter is in any gear other that Park or Neutral.

TESTING

You must test the neutral safety circuit to confirm you have wired it correctly before use. Disconnect the coil wire to your distributor so your car cannot start. Get in the car so that you have full control over the car to prevent it's movement. Put the car in one gear at a time starting with Park and verify that your starter can only turn over when the shifter is in Park or Neutral. Do this to all gears. If this does not work as intended STOP, DISCONNECT the shifter and call for assistance. Failure to have a properly installed neutral safety switch can result in your car starting or moving in gear, possibly causing injury or death. After completing installation, turn all power on but do not start car. Place the shifter in first gear. If you have wired your shifter per the wiring diagram, your RPM switch will be supplying a ground when you rev your engine to it's preset RPMs. You can simulate this by using a jumper wire from a good ground to the relay. Momentarily touch the jumper to the same terminal on the relay that your RPM switch attaches to. If you have used the alternate method and are using your RPM switch to supply +12 volts, then momentarily touch your jumper wire from +12 volts to the same terminal on the relay the RPM switch is hooked to. Your solenoid should now activate. Do this as many times as necessary to test but do not leave this on as you will overheat the solenoid.

WARNING

Be Prepared! If you are using an RPM switch or Timer, you must be aware that at any time RFI (Radio Frequency Interference) could stop your RPM switch or Timer from activating. This in turn could cause your automatic shifter to not activate and you will need to shift manually. Always pay attention to your car and be prepared to manually shift or lift off of the accelerator to prevent the over revving of your engine. One of the best ways to protect your engine under these conditions is to also install some type of over rev control so that the engine cannot reach an RPM beyond it's safe limits. Please read the enclosed information on RFI included with this kit.

QUESTIONS?

If you have questions or concerns on the installation or use of this product, do NOT contact the retailer where you purchased the kit. Most retailers are not equipped to help you with in depth tech questions. SHIFNOID LTD. has arranged for all tech and warranty to be handled by it's distributor: CONTENDER PERFORMANCE PRODUCTS INC. Phone: 740-927-0060 www.contenderperformance.com