

# Model 12001/12004 Instructions

1. Overhead units mount using two hose clamps to clamp the switch panel to the roll bar. Dash units mount with Velcro system supplied.
2. Using 4 screws provided mount the relay board.
3. Clamps are supplied on the switch panel to retain the ribbon cables. Swing the support bar aside, insert cable and tighten using Allen wrench or pliers. Plug ribbon cables from switch panel into relay board connector. Follow color coding, the colored marker tape on each ribbon cable should line up over the colored tape marker on the switch panel and relay board. The blue labeled connector is to plug in an optional under hood switch unit (Model 4000F12). Use a small bead of silicone at the junction of the connector plug on the relay board to prevent any loosening of the cable due to vibration.
4. Do NOT use plastic cable ties to secure the ribbon cables to roll bar. Use the included fabric hook and loop cable wraps or use black electrical tape to secure the ribbon cable to the roll bar.
5. Label switches, switch #1 is intended for starter, switch #2 is ignition/master. Using an X-Acto knife or small flathead screwdriver to hold the label will help position the label square in the recess over the light bar. If the label is not installed square, light will leak out around the edges. The label set includes blank labels which can be used to block off the light on any unused switches.
6. Relay board numbers match switch panel numbers. Connect the output leads on the relay board to the corresponding accessory. Use white labels on the relays to match switch functions. The output terminals on the relay board are lugless terminals. Strip approximately ½" of insulation off the wire, loosen the screw, insert bare wire under the clamp and tighten screw.
7. Connect the red 6 gauge cable to battery + .
8. Plug a grounded wire onto the **two** ¼ inch push on terminals marked GND. Switch panel does not require any ground connection.
9. The relay board has **two** jumpers for 12V or 16V operation. They come installed in the 12V position, for 16V batteries move the jumpers to the 16V position.
10. The switch panel is designed to be lighted whenever the battery disconnect is on. If it is desired to shut the switch panel off independently then an 18 gauge switched 12V (or 16v) wire (such as from a factory key switch) can be run to the relay board 12V/16V jumper terminal block. Remove the jumper and discard. Install the switched + wire to the terminal in the jumper block marked 12V or the terminal marked 16V in cars with 16V batteries. Now when this switched wire is turned off the entire switch panel will then shut off.

## Set up and use

### Switches 1-8

There are two programming dip switch banks at the #1 switch end of the unit. On the bank marked "momentary" place any switch # you desire to be momentary move into the up position. On the bank marked "master" place any switch you desire to shut off with the master switch (switch #2) into the up position. All programming switch numbers match the numbers on the front panel switches. Move the programming switches up or down with a small tip such as a ballpoint pen. When finished stick the included black plastic cover patch over the cutout.

### Switches 9-12

There are two programming dip switch banks on the right side of the switch panel. If you choose you can have a second master kill switch at switch 10 by pushing the dip switch marked "M" down. This is perfect for a nitrous section using the last four switches. Switch 2 will also act as a master kill for switches 9-12. If you desire any of switches 9,10,11 or 12 to turn off with switch 2 or 10 push the corresponding dip switch in the up position. The other dip switch bank is marked "momentary". Move any of the corresponding dip switches to the up position to select momentary operation for that switch. Leave in the down position for regular on/off maintained operation.

# Troubleshooting

1. It is possible to plug the ribbon cable into the relay board off center to the left or right. If the switch panel does not light up or is not working correctly unplug the ribbon cable from the relay board and plug it in making sure to plug it centered on the connector.
2. The ribbon cable must plug into the switch panel with the cable entering from the rear of the switch panel.
3. Do not unplug the ribbon cable from the switch panel until it is disconnected from the relay board. The relay board sends power to the switch panel and if the cable is unplugged from the switch panel while it is still live, the pins can short out and damage the relay board or cable.
4. If the relay board does not have good grounds the switch panel will function intermittently or not at all. Make sure the **two** male tabs marked "GND" are connected to a good ground.
5. Do not use a battery charger as a power supply to "bench test" the unit. Battery chargers can output a pulsing DC which will make the relays buzz and could damage the switch panel. Also note that the switch panel should not be operated when charging the battery.
6. If running a 16V battery make sure to set the jumper to 16V or the switch panel will run warm, and the LEDs will be overly bright and will fail prematurely.
7. If the switch panel lights up red but some or all switches do not turn on, check the following: make sure 12V/16V jumpers are set to the correct battery voltage. Make sure the battery is fully charged and in good condition. A weak battery can have enough voltage to light the LEDs on the switch panel but not enough to latch the relays. Also, if the ribbon cable is damaged or the pins are allowed to short to ground it can damage a circuit foil on the relay board.

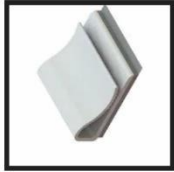
## Nightglow Function

ARC's new black overlay night glow switch panels are designed to provide switch outline visibility in low light conditions; similar to how a battery charges and then gives light back out. You will notice that after coming out of the shipping box the nightglow will be mostly discharged. It will require some 20-30 minutes in ambient light to recharge. The lit LEDs on the switch panel will also charge the nightglow material.

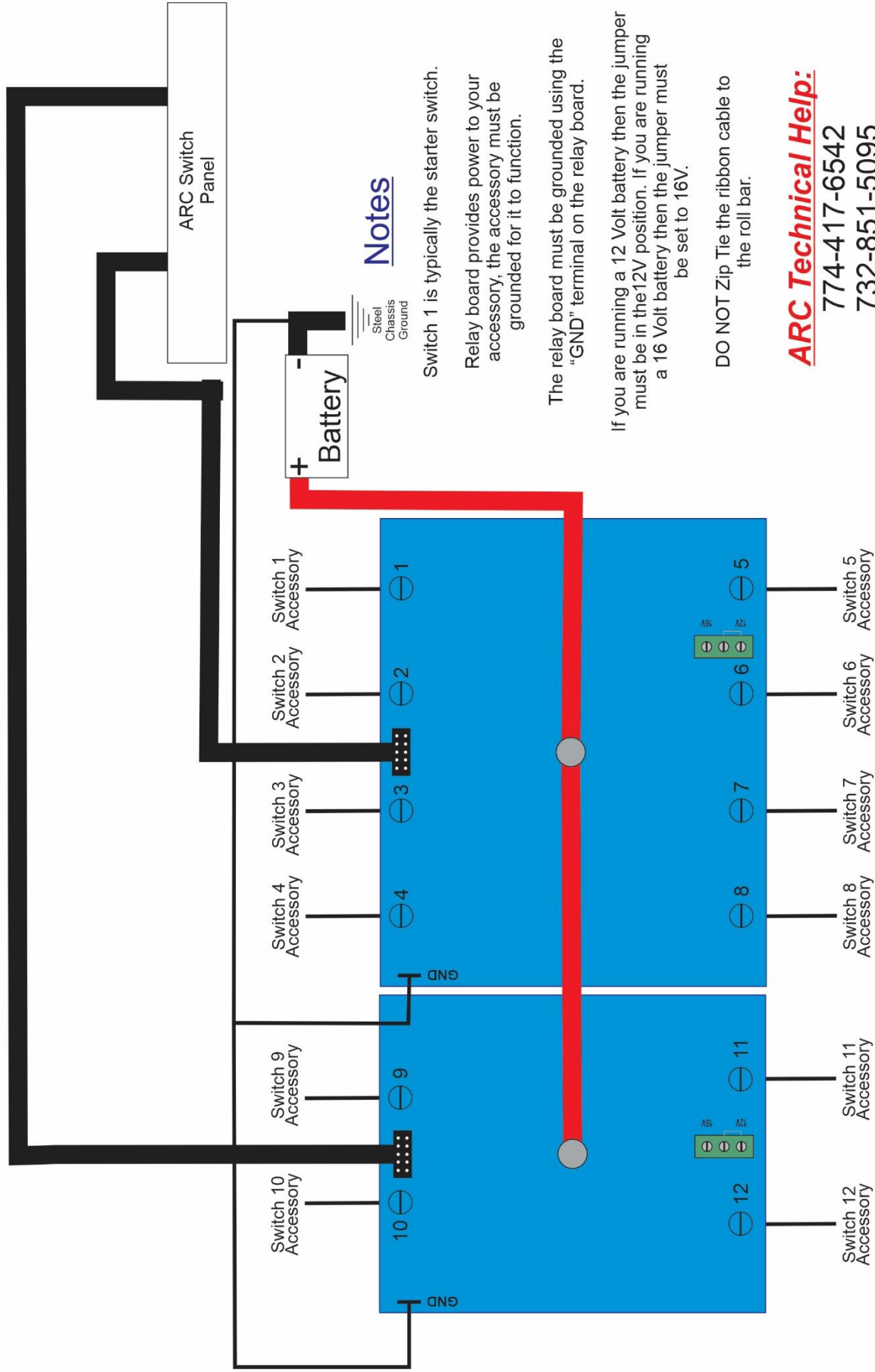
The night glow will become increasingly visible as the ambient light level goes down. An obvious greenish glow will be seen in extremely low light conditions.



Use supplied hook and loop fabric cable straps or electrical tape to secure Ribbon Cable to the roll bar. DO NOT USE TIE WRAPS!



Use supplied white plastic retention clip to mount Ribbon Cable to a flat surface.



**ARC Technical Help:**

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