

## Monitor/Control System Wiring Guide

Our Controller Wires:	Color	What they are normally hooked to
1 AC Neutral	Black	Neutral on the 120V transformer
2 Aux 2 In	Orange/red	the power (usually 120v) for the auxiliary relay that you are controlling - if used
3 Aux 2 Out	Orange/blue	output to control the auxiliary you are controlling - if used
4 Aux 1	yellow/red	120v output to control an auxiliary - if used (sometimes we use this to control a relay to open the irrigation panel circuit to the pump when we are controlling it. ((some pumps are hardwired with no external relay - in that case to control the pivot and run dry we need to disable the pump with a relay - using this)) - similar uses: use a relay to disconnect power to a computer board, use a relay to disconnect forward/reverse wires to the contactors in some valley panels, etc.... )
5 Safety relay	orange/black	120v to control a relay that breaks (opens) the safety circuit when we tell a pivot to shut off ( it makes sure the pivot indeed shuts off)
6 Pressure Switch	brown	Input from the pressure switch (120v) so we know the system has pressure
7 Pump In	red/blue	power to turn on the pump relay (usually 120v, or 24v)
8 Pump Out	black/blue	output to control the pump relay
9 Duty Cycle%	black/red	output to control the duty cycle - goes into panel terminal strip
10 End Gun	orange	output to control the end gun - goes to terminal strip
11 Reverse2	blue/black	output for reverse - goes to contactor - if needed
12 Reverse	blue	output for reverse - goes to terminal strip
13 Forward2	yellow/black	output for forward - goes to contactor - if needed
14 Forward	yellow	output for forward - goes to terminal strip
15 Safety Monitor	red/black	input from the safety circuit 120v
16 120v AC	red	120v ac on the 120v transformer

**FOR MOST SYSTEMS WITH 120v Safety circuit**

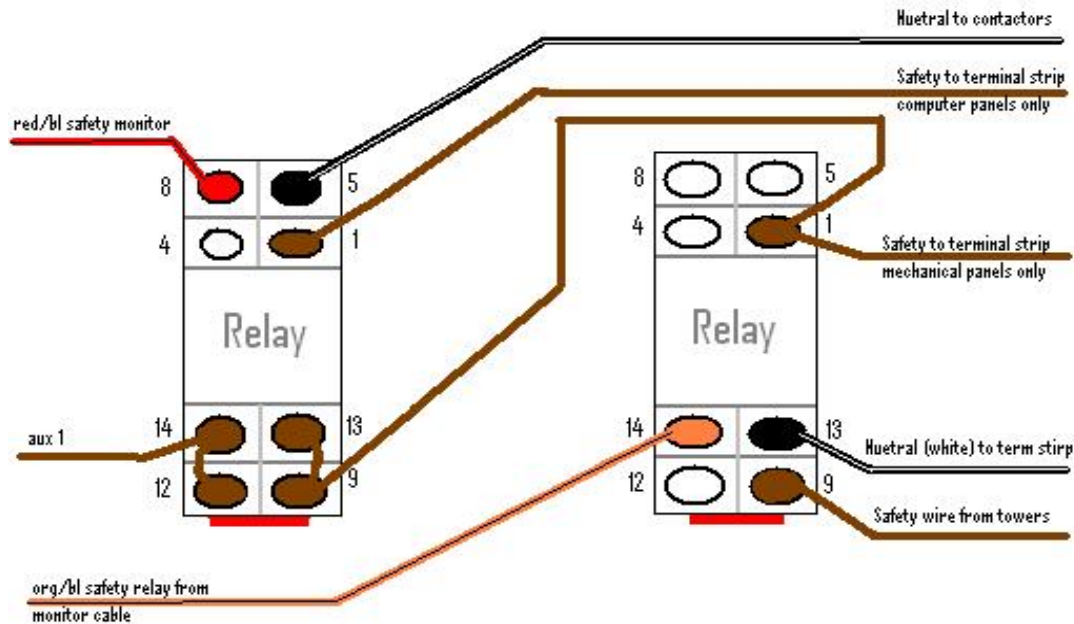
picture of the relay to hook into the safety circuit



- 1 Safety (Terminal Strip)
- 9 Safety (from towers)
- 13 Orange/BLK from our controller
- 14 Neutral

take the safety wire from the towers out of the terminal strip and put it in terminal 9 of our relay with our red/black safety monitor wire  
 make a wire to run from terminal 1 of our relay and put it into the terminal strip for safety  
 take our orange/black wire and put it into terminal 13 of our relay  
 make a wire to run from terminal 14 of our relay and run it to neutral

**FOR SYSTEMS WITH NEUTRAL SAFETY CIRCUIT:**

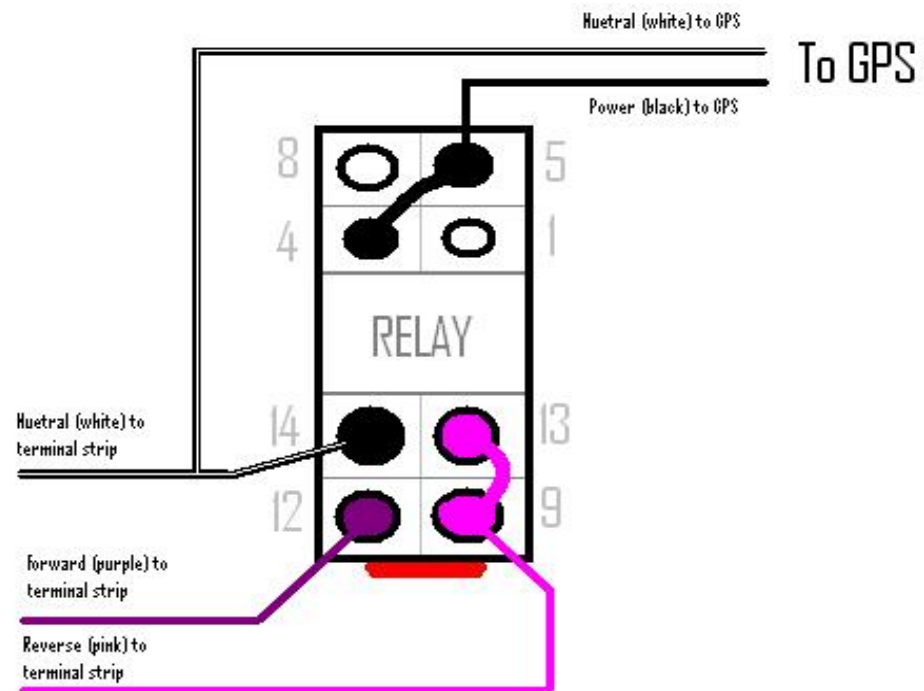


**GPS units:**

**FOR SYSTEMS WITH 120v SAFETY**

Black wire goes to Safety on terminal strip  
white wire goes to Neutral

**FOR SYSTEMS WITH NEUTRAL SAFETY**

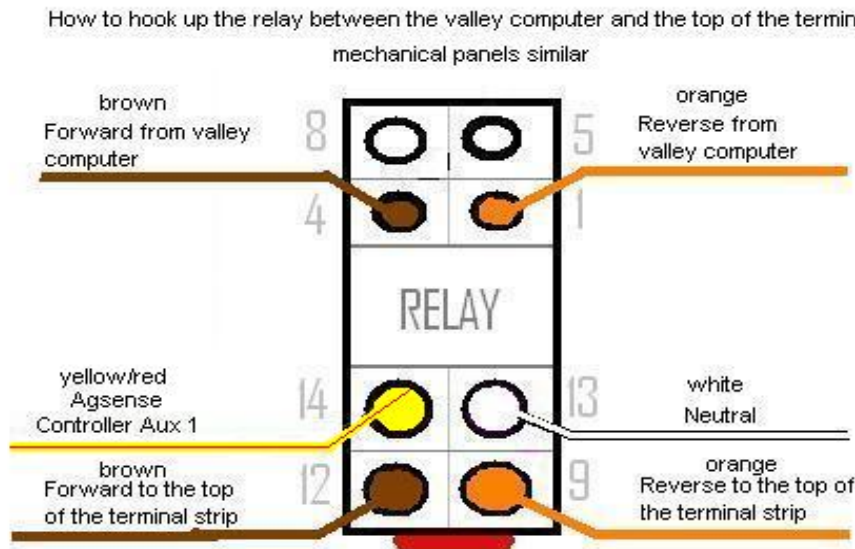


**Extra Relays that are needed to be able to control all valley computer/and some mechanical panels.**

1. The forward and reverse wires (orange, and brown) from the valley computer/ or from the panel switches on mechanical panels, that are going to the top of the terminal strip - need to be disconnected by a relay while the Agsense Controller is being used.
2. The forward and reverse wires (orange/white, and brown/white) from the valley computer/ or from the panel switches on mechanical panels, that are going to the contactors - need to be disconnected by a relay while the AgSense controller is being used.

**Use the yellow/red wire from the Agsense Controller to power both relays. When using this, please call Agsense before controlling the pivot so we can re-configure the controller properly to have Aux 1 and Aux 2 always on when the pivot is controlled by Agsense.**

**Also, these valley panels need to have our Aux 2 wired to give the safety Out wire 120v. To do this, connect our Aux 2 IN wire to 120v, and connect our Aux 2 OUT wire to the safety Out (yellow/red) in the valley panel**



How to hook up the relay between the valley computer and the contactors  
Mechanical panels similar

