

Option			Current to Activate Relays					
			Single Relay / 4 Relays		18 Relay Total			
			Trigger Current, mA (from Mega)	Coil Curent, mA (from separate supply)	Trigger Current, mA (from Mega)	Coil Curent, mA (from separate supply)	Contact State	
Option	Sketch State	Relay State					N/O Contact	N/C Contact
1	LOW	HIGH (Energized)	0 / 0	75 / 300	0	1,350	made	open
2	HIGH	LOW (De-energized)	2 / 8	0 / 0	36	0	open	made

- NOTE: The relay boards are pre-set to activate the relays when written LOW.
- This application requires open relay contacts most of the time.
- Relays each have N/O and N/C contacts, so two contact wiring options exist.
- The total application run time is about 15 seconds and runs only once about every 5-20 minutes over a 2-3hr time period.
- 18 total devices powered by the relays run sequentially, with some overlap, over the 15 seconds.
- Only a max of 4 devices run simultaneously during the 15 second application run time (only 4 device loads at a time, max time for a device is 3.6 sec.).
- So, whether N/O or N/C contacts are chosen for use depends on both the instantaneous and ongoing total relay power requirement.
- Working backwards from the Contact State options determines the sketch arguments.
- For Option 1 in the table above, keeping open contacts (required most of the time) requires 1.4A to the servo coils. Lots of wasted battery capacity!
- For Option 2, keeping open contacts (required most of the time) requires no coil load, but the Mega needs to put out 5mA/pin and 80mA/board total most of the time.
- Option 2 chosen.....wire to N/O relay contacts and set sketch argument to HIGH to de-activate relays.
- Now write the sketch, after figuring out the LOW servo default state. I'm slowly learning.....