PES-5200 Programmable 3 Event Board

LCD

Backlight Disable Jumper

Relay Active LED

Remote Trigger

Board Power LED

Menu   **Up**   **Down**   **Enter**

Alt Power Connector

Power Switch

Programming Buttons

2.1mm Barrel Connector
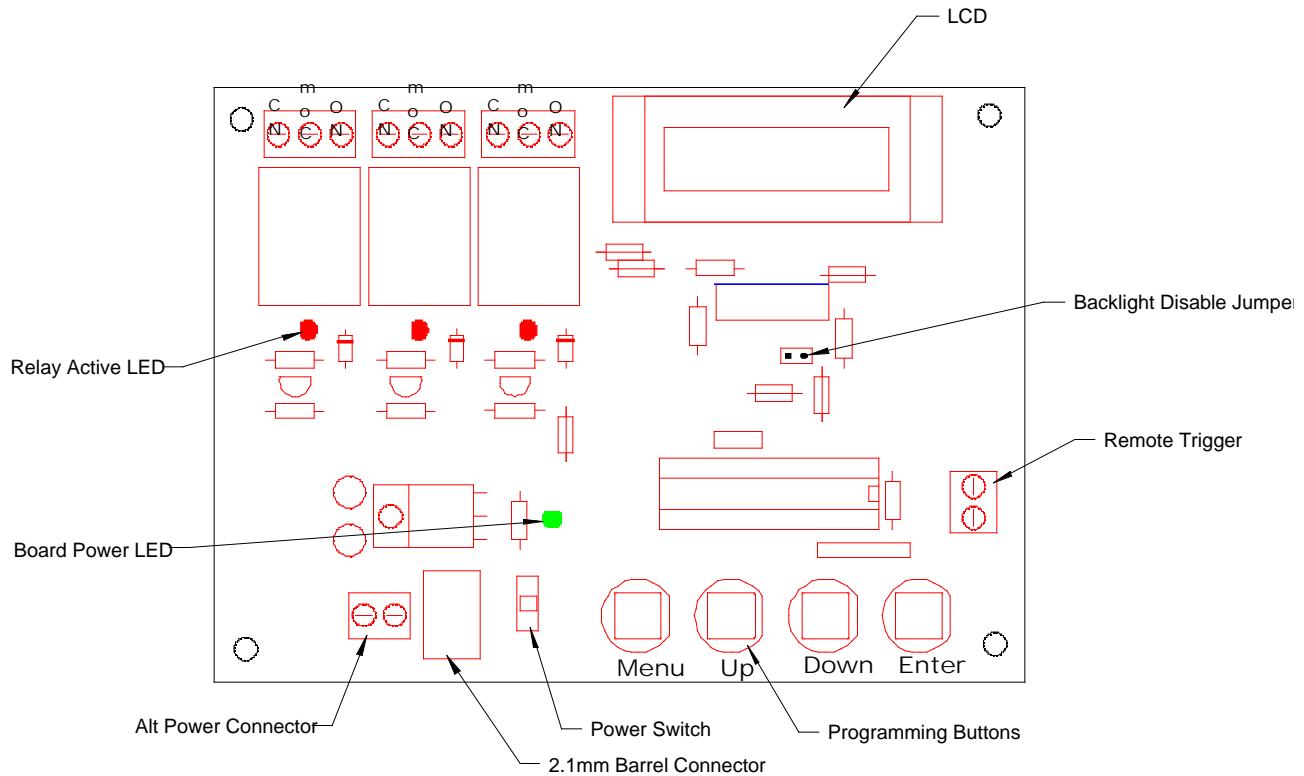
Notes on Operation:

This board controls the timed operation of 3 relays. For each relay there is a delay. The order that the delays and relay triggering is: Delay 1, Relay 1, Delay 2, Relay 2, Delay 3, Relay 3. We will call each of these a Sequence. The time for each Sequence can be set from 0 to 4 minutes 15 seconds in _ second increments. To set these times and trigger the event, there are 4 pushbuttons. One for Menu, one for Up, one for Down and one for Enter. The times for each Sequence are displayed on a backlit LCD display.

When the board is first powered up, it will display "Sequence Timer" for about 2 seconds and then will display "Ready!". This is the top level of the menu tree. During this startup, the microcontroller reads in the time values for each of the sequences that were previously set from non-volatile memory and the entire event can be triggered by pressing the Enter button or by a dry contact closure at the Remote Trigger terminal block. Triggering the event can only happen when the board is in "Ready!" Mode. You review and set the times for each of the 6 Sequences by pressing the Menu Button. Pressing it once will display "Delay 1=" on the top line of the LCD and the current time that is stored. You can leave the time unchanged by pressing Menu again (at which time it will display "SAVED!" and step to the next Menu Level) or you can change the time. This is done by pressing either the Up or Down buttons. Pressing either of those buttons momentarily will increment or decrement the displayed time in _ second increments. To change the times faster, press and hold the button for about 2 seconds and the time will rapidly change by 1 second intervals. Once you have set the desired time, press the Menu Button and "SAVED!" will be displayed and then the time for the next sequence will be displayed. Repeat this procedure for each sequence. When you enter the time for the last sequence, Relay 3, the LCD will display "Loop?" and "Yes" or

"No". Pressing the Up or Down button will toggle the Yes or No display. This setting tells the microcontroller whether to repeat the entire event over and over or just run through it once. Pressing the Menu button will save your choice and return to the top menu level, "READY!". At this time, all of the time values have been saved in memory and will remain there even if power is removed. While in READY! Mode, pressing the Enter button or a dry contact closure at the Remote Trigger terminal block will start the event playback beginning with the first delay. When triggered, the LCD will display the current sequence and count down the time remaining for that sequence. When it reaches 0, it will go to the next sequence. After the last sequence has finished, it will loop back to the first sequence if you set the Loop parameter to "Yes" or go back to READY! if it was set to "No" waiting to be triggered again. You can abort the event at anytime during any sequence by pressing the Menu button. Doing this will turn off the relay, if one was on, and return the board to READY! Mode.

Each Relay has Normally Open (NO) and Normally Closed (NC) Contacts and a LED that indicates when Relay is activated.

The LCD is backlit to allow setting and monitoring in low light conditions. There is a jumper on the board that, when removed, will disable the backlight. The board requires a minimum of 200 mA at 12 VDC for operation (higher mA is better) that can be attached at the 2.1mm barrel connector or at the adjacent terminal block.