DIGITAL TIMER MODES rev. 5.6

This is a detailed explanation of all the behaviours available. Refer to the chart for the jumper positions. This corresponds with the marking on the circuit board as well.

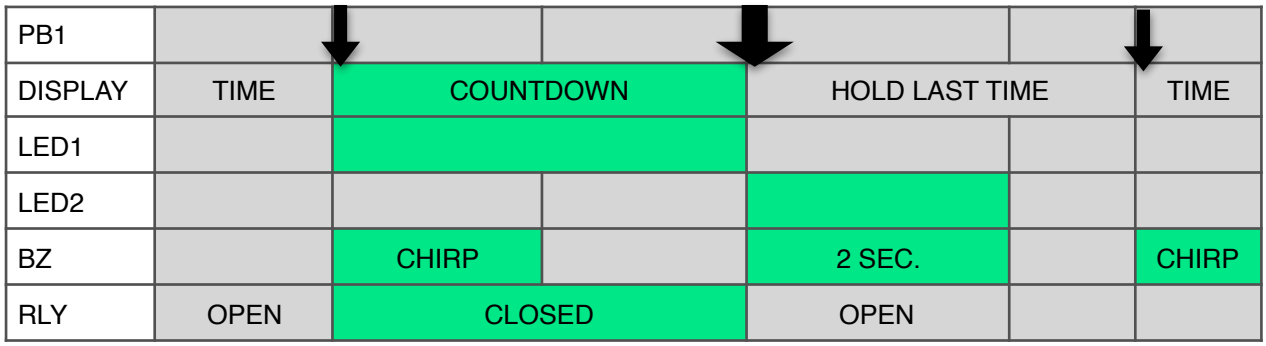
MODE	JUMPER			DESCRIPTION
	B	C	D	
1	ON	ON	ON	MANUAL STOP WITH CANCEL
2	OFF	ON	ON	MANUAL STOP - CANNOT CANCEL
3	ON	OFF	ON	MACHINE MODE
4	OFF	OFF	ON	PAUSING
5	ON	ON	OFF	AUTOMATIC STOP - WITH CANCEL
6	OFF	ON	OFF	AUTOMATIC STOP - CANNOT CANCEL
7	ON	OFF	OFF	GUARD DUTY
8	OFF	OFF	OFF	EARLY LED1

Notation: LED 1 is usually connected to the illuminated pushbutton if available. LED2 is for the bacon LED. PB1 = pushbutton. BZ = buzzer. RLY = relay.

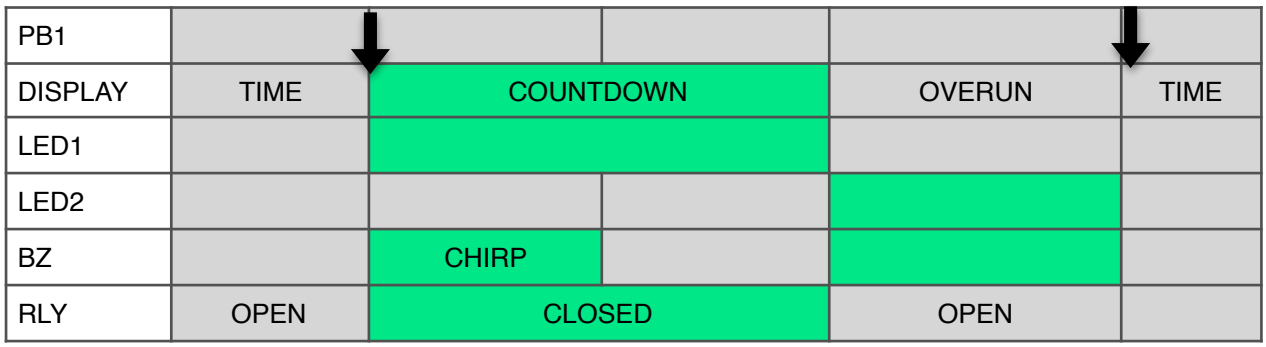
Mode 1 - MANUAL STOP

Timer counts down from set time. When time has elapsed, the buzzer sounds and red LED flashes until cycle is acknowledged by pressing front button.

If the starting time is set to zero, timer will count *up* until front button is pressed to stop the count.



MODE 1 - MANUAL STOP BEING CANCELLED



MODE 1 - MANUAL STOP MODE WITHOUT BEING CANCELLED

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Mode 2 - MANUAL STOP, CANNOT CANCEL

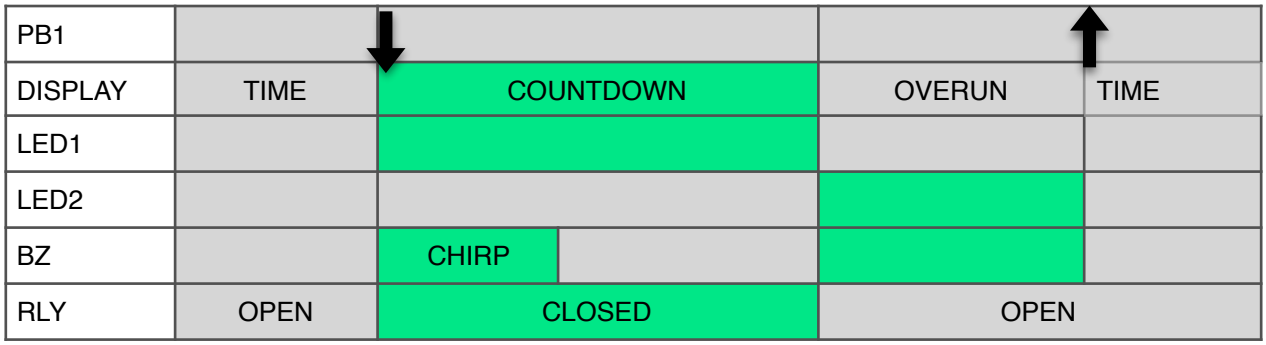
Same as cycle 1 but cycle cannot be cancelled.

Mode 3 - MECHANICAL TRIGGER

For automation applications where terminal PB1 on the circuit board is closed for the entire cycle. (by a mechanical switch for example)

The cycle cannot be cancelled during timing.

If the mechanical switch is interrupted during the cycle, red LED2 illuminates for the duration of the cycle to let you know.

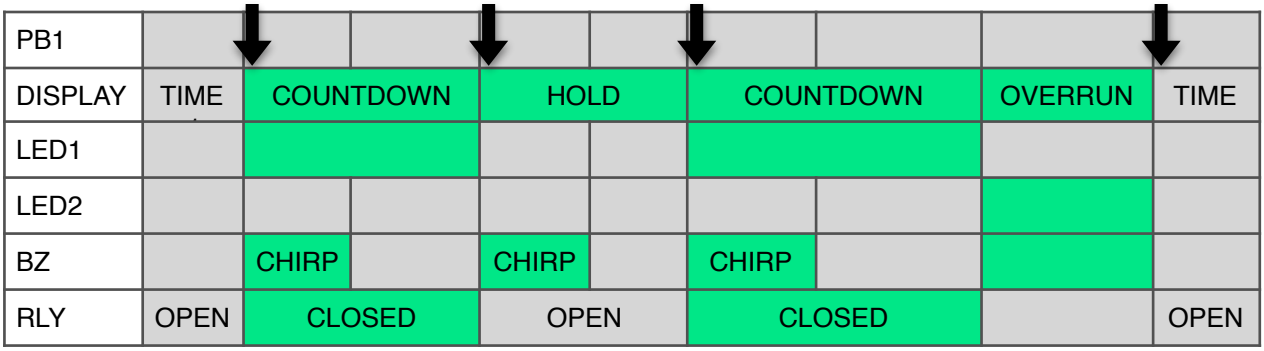


MODE 3 - MECHANICAL TRIGGER WITH NO INTERRUPTION

Mode 4 - PAUSING

Counts down from a set value but time can be paused by pressing PB1. When paused, the display flashes the time. If PB1 is pressed again the countdown resumes. (and display stops flashing) PB1 can be pressed to pause the timing an unlimited number of times. After the set time has elapsed, BZ/LED1/LED2/relay act as usual.

If set time starts is zero then it counts *up* and can be paused/resumed in the same way. Count-up can be terminated when by holding from button PB1 for 2 seconds. In this case BZ sounds to indicate the cycle is cancelled.



MODE 4 - PAUSING COUNT DOWN

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Mode 5 -AUTO STOP WITH CANCEL

Buzzer does not sound at the end of a cycle that runs to completion - it only sounds if the cycle is cancelled. (as shown)

PB1		↓		
DISPLAY	TIME	COUNTDOWN		TIME
LED1				
LED2				2 SEC
BZ		CHIRP		
RLY	OPEN	CLOSED		OPEN

MODE 5 - AUTO STOP WITH NO CANCELLATION

				2 SEC.		
PB1		↓		↓		↓
DISPLAY	TIME	COUNTDOWN		LAST TIME FLASHING		TIME
LED1						
LED2						
BZ		CHIRP		2 sec.		CHIRP ††
RLY	OPEN	CLOSED		OPEN		

MODE 5 - AUTO STOP WITH A CANCELLATION

Mode 6 - AUTO STOP (CANNOT CANCEL)

Counts down and then cycle ends without pressing front button PB1.

Cycle cannot be cancelled.

PB1		↓			
DISPLAY	TIME	COUNTDOWN		00:00	TIME1
LED1					
LED2				2 SEC	
BZ		CHIRP			
RLY	OPEN	CLOSED		OPEN	

MODE 6 - AUTO STOP

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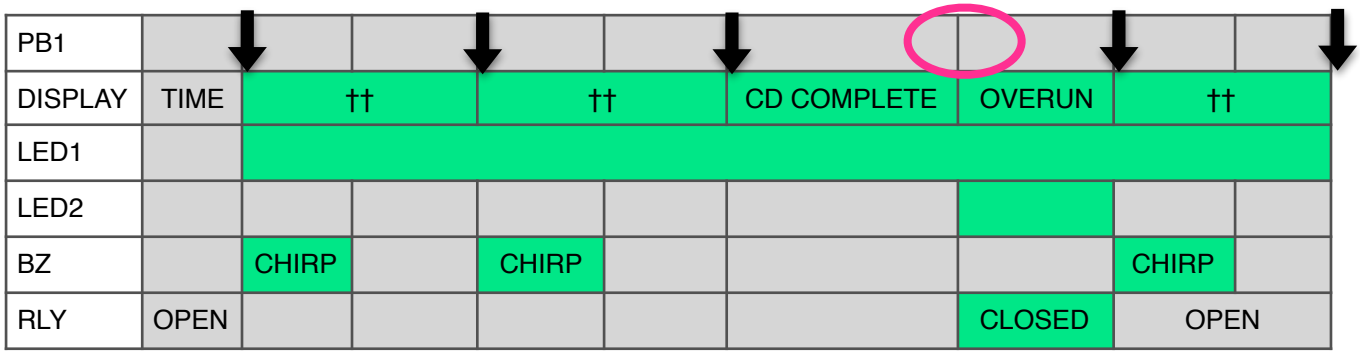
Mode 7 - GUARD DUTY

Counts down but the time is reset to the starting value if front button PB1 is pressed anytime before the end of a cycle. If time elapses then beacon LED2 and relay activate. (this is like the doomsday counter on the TV show “Lost”) Cycle cannot be stopped except by disconnecting power.



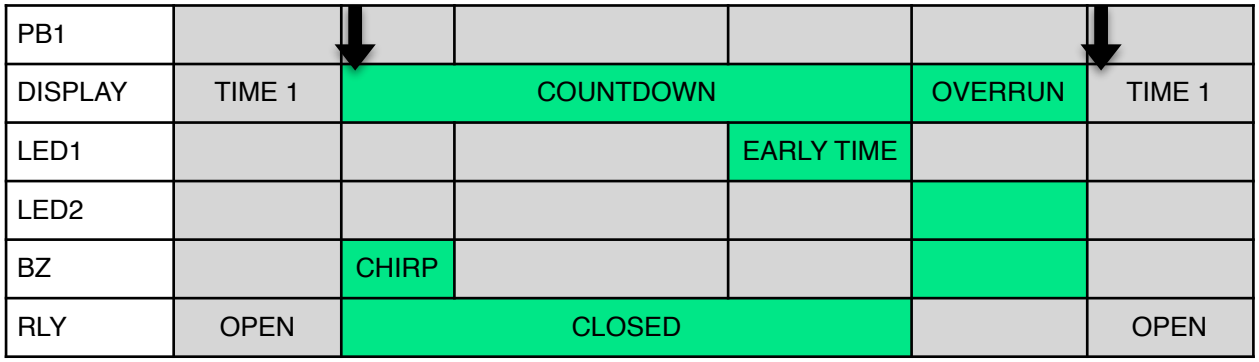
†† = PARTIAL COUNTDOWN

MODE 7 - GUARD DUTY

Mode 8 - EARLY WARNING LED

During a cycle, LED1 activates before the end of a cycle. to give an early warning to an operator. The amount of “early warning” time is settable as follows: hold all three buttons simultaneously for 6 seconds. The display will flash to let you know its ready to set the “early” time. The “early” time is set in the same way as the time is normally set with the blue buttons.. After 3 seconds of no activity, the display briefly flashes the time which indicates that the “early time” is “locked in”. Then set the total cycle time in the usual way.

For example:all 3 buttons are depressed for 6 seconds, then released. The “early time” desired is 10 seconds, set using the blue buttons. After 3 seconds of no activity, the 10s flashes and then displays steadily. Now it is ready to set the desired total countdown time. say, 30 seconds. When the next cycle is started, output LED1 will illuminate 10 seconds before the end of the cycle. At the end off the cycle, BZ/LED2/relay activate as usual.



MODE 8 - EARLY LED