

## V1.2 New Features

- added momentary/tactical mode via 5X clicks in ramping mode (full turbo only when switch is held down) - only active til a power reset. It's only accessible from ramping mode, not Mode Set operation. It's very responsive, can handle high speed repetitive fast clicks, can be used to do Morse Code or manually controlled strobes.

- operation change: make click&hold in MODES or STROBES wrap from 1st mode to last. This should make it easier to get quickly to beacon modes, for example, if strobes are disabled, a 2X click from 2X turbo should restore the previous level you were at

### Bug Fixes:

- in LVP switch LED control: the LED sometimes is left on after an LVP drop, and is not blinking the way it should be. The "bug" is that I'm trying to control the switch LEDs from multiple places so it's getting turned off quickly after turned on, and left on when it should be left off. It's a timing thing, so has sort of a random pattern - sometimes left on, sometimes left off. The 8 sec LVP blink need to be qualified better, and should not be calling Setlevel() as is because it wants to control the LED.

- 4X clicks in modes operation engages lockout - not supposed to, fixed this so it no longer does

- temp stepdown should not happen right away from turn ON. Delay it by 15 seconds.

- for temperature stepdown, in moon mode, a temp stepdown is actually done because moon mode is marked as special level 255, which is considered as a high level of output instead of very low. The stepdown results in the light switching much brighter. This should only happen if the temperature threshold is set to a low temp, or the light is still hot and not cooled down when moon mode is chosen. It can also result in an immediate jump to the stepdown level as soon as the light is turned on in moon mode. Might appear as a bright flash when ramping first starts.

## Original V1.0 Operation Reference

### Ramping Operation

- From OFF, press&hold ramps up with a pause at moon level -- click to turn ON at last level
- From ON, press&hold ramps up or down, changing direction unless paused for at least 1.2 sec – click to turn OFF
- Double-click from OFF or ON to go to max level (the max level does not override the last level)
- Triple-click from OFF or ON to engage Battery Check mode
- 4X-click from OFF or ON to Lock-Out the light (4 blinks to confirm, indicator LED off in Lock-Out). Same to unlock.
- When at max level, a double-click will turn the 1<sup>st</sup> Strobe ON, if enabled
- When in Strobe, clicks without pausing will skip to the next special mode (strobe or beacon). Just like normal mode set operation: press &hold goes to the previous special mode, paused in a mode will lock it in
- In Battery check mode, a double-click blinks out temperature in Celsius (not factory calibrated), another double-click blinks out the firmware version # (v1.0 is 1 blink followed by a pause)
- To turn off the Indicator LED: from OFF, click once ON, then click quickly for OFF – the Ind. LED should remain off

## Mode Set Operation

- From OFF, a click goes to 1<sup>st</sup> mode, while a press&hold (~1/3 sec) goes to last mode
- When ON, a click goes to next mode, while a press&hold goes to the previous mode
- if paused in a mode (over 1.2 secs), the mode locks in and then a click will turn the light OFF
- If you are locked in a mode, a press&hold will still work to go to previous mode, and the lock-in cancels
- in any mode, including OFF, a long hold (over 1.2 secs) will turn the 1<sup>st</sup> Strobe ON
- To engage Battery Check, from OFF, do a click quickly followed by a press&hold
- To Lock-Out the light, From OFF, 2 clicks in quick sequence followed quickly by a press&hold. Same to unlock.
- When in Strobe, clicks without pausing will skip to the next special mode (strobe or beacon). The special modes work just like normal modes: press&hold goes to the previous special mode, paused in a mode will lock it in
- In Battery check mode, a double-click blinks out temperature in Celsius (not factory calibrated), another double-click blinks out the firmware version # (v1.0 is 1 blink followed by a pause)

## Mode Sets

Mode Set Order	Mode Count	Approx. Percentages	Notes
1	1	full only	(full is always max FET, no 7135)
2	2	3 - full	max 7135, max FET
3	3	1.4 - 29 - full	1.4%=1/2 7135, 29%=mixed
4	4	0.25 - 3 - 33 - full	3%=max 7135, 33%=mixed
5	5	0.25 - 1.4 - 3 - 33 - full	3%=max 7135, 33%=mixed
6	6	TK BLF A6 7 mode	6 well evenly spread modes
7	7	0.18 - 0.7 - 1.8 - 3 - 29 - 56 - full	3%=max 7135, 29%=mixed
8	3	3 - 16 - 43	3%=max 7135, 16%=mixed
9	3	0.25 - 11 - full	0.25%=1/5 7135, 11%=mixed
10	3	0.25 - 33 - full	0.25%=1/5 7135, 33%=mixed
11	3	3 - 29 - full	3%=max 7135, 29%=mixed
12	4	TK BLF A6 4 mode	4 well evenly spread modes

\*\* Note: Special (blinky) modes in order: 18 Hz strobe, police strobe, bike strobe, 2 sec beacon, 10 sec beacon

## Configuration UI Operation

For Ramping, hold the button for 8 seconds, and for Mode Sets, hold the button for 3.2 seconds to activate the main Configuration UI settings. The light blinks 2 times quickly, and once slowly to indicate Configuration UI mode is active. As listed below, you can change or leave any of these settings – there's no need to set each one. Clicks choose the value for each setting, and each click will blink the light to acknowledge the click. If you disable Ramping, then the next setting will be #2 under Mode Sets, and vice versa. If no clicks are entered in 3.5 seconds, the light jumps to the next configuration setting indicated by 2 quick blinks and slow blinks of the number for what setting it is (ex: 3 slow blinks means the 3<sup>rd</sup> setting). You can bypass the timeout by doing a press&hold to skip to the next setting. If you continue to hold it, it will exit configuration UI settings mode altogether, indicated by 4 quick blinks.

For thermal stepdown, the main LEDs will go to max output, if you click in under 5 secs, the set temperature will be unaffected, but more than 5 secs, the current temperature reading will be recorded as the new temperature to use for the stepdown – be sure you set it high enough – light should be hot enough to barely hold, or even hotter. Factory default temperature is 55C, but calibration will vary from unit to unit. When timed stepdown is chosen, it will blink, prompting to enter the choice of time, 1-7 clicks as described below.

To reset settings to factory defaults, in firmware version # display, press&hold for at least 1.2 seconds.

### Configuration Settings – Ramping

Setting #	Function	Clicks	Defaults
1	Ramping Mode	1=disable, 2=enable	2
2	Set Moonlight Level	1 - 7 (PWM value)	3
3	Thermal/timed stepdown	1=disable, 2= Temperature, 3=timed Timed: 1=60secs, 2=90secs, 3=2 mins, 4=3 mins, 5=5 mins, 6=7 mins	3-4
4	Blinky mode	1=disable, 2=one strobe, 3=all strokes/beacons	3

### Configuration Settings – Mode Sets

Setting #	Function	Clicks	Defaults
1	Ramping Mode	1=disable, 2=enable	2
2	Choose Mode Set	1-12 (1-7 is # of modes) – see Mode Sets	4
3	Moon Mode	1=disable, 2=enable	2
4	Mode ordering	1= sets lo→hi, 2=sets hi→lo	1
5	Mode Memory	1=disable, 2=enable	1
6	Set Moonlight Level	1 - 7 (PWM value)	3
7	Thermal/timed stepdown	1=disable, 2= Temperature, 3=timed Timed: 1=60secs, 2=90secs, 3=2 mins, 4=3 mins, 5=5 mins, 6=7 mins	3-4
8	Blinky mode	1=disable, 2=one strobe, 3=all strokes/beacons	3

### Advanced Configuration UI Operation

Activated from Battery Check mode by doing a press&hold for at least 1.2 seconds. The light blinks twice quickly, and once slowly. 3 settings summarized below, and operates the same as the main configuration UI.

Setting #	Function	Clicks	Defaults
1	Locator LED feature	1=disable, 2=enable	2
2	Battery level Indicator LED Only	1=disable, 2=enable	1
3	Indicator LED Enable	1=disable, 2=enable	2