

# Using your Bisun Flexitwin V2

The Flexitwin V2 (as of November 2012) has three main ways of operating.

Most likely to be used is the new 'variblend' mode, which gives the power of the old advanced mode with real simplicity of operation.

To avoid overcomplication, this manual only explains operation of the variblend mode, leaving the details of the old 'classic' and 'advanced' modes to a secondary instruction manual.

Note that in all modes, all normal operation of the light is by manipulation of the power switch on the left hand end of the host lamp unit.

The focussing adjustment knob on the right-hand end of the outer casing does nothing, and should be ignored.

In variblend mode, the unit runs with the power switch in the centre ('off') position, and controls power level and beam-blend independently.

## **Power control**

Cycling through power levels is achieved by brief down-and-back movement of the power switch to nudge the unit into the next power level in sequence.

The power sequence runs high->medium->low->extra-low->high, etc.

To turn the unit off, the switch is moved down and kept down.

After two seconds with the switch down, the unit switches to having an extra-low power flood beam, after which returning the switch to the centre position will cause the unit to turn off completely.

## **Beamshape control**

Similarly to the way power control is achieved, beamshape control operates by brief up-and-back movements of the power switch to cycle through a selection of beam blends, in the order:

pure-flood->flood-with-low-spot->equal-flood/spot-blend->pure-spot->pure-flood, etc.

To temporarily engage full spot for checking out distant targets, the switch is moved upwards and kept up.

After  $\sim 0.75s$ , the spot beam comes on at full power, and on returning the switch to the centre position, the light goes back to its previous settings (including going off it was off before spot beam was engaged).

## Turning on

If a unit which is off is turned on by moving the switch lever down, it will initially come on at an extra-low power flood.

If the lever is left down for >2s, the unit will turn off when the switch is re-centred, otherwise the unit will start up at the power/beamshape it had before being previously turned off.

If a unit which is off is turned on by moving the switch lever up, it will briefly come on with an extra-low power spot beam but after 0.75s will switch to a full spot beam, and on returning to the centre position will restart at the settings it was at before the unit was last turned off.

The 'memory' function which causes the unit to restart at previous settings when turned on is cleared by changing batteries.

Given the operation of the light, if it is off it can be turned straight on to being either a bright spot or dim flood, and if left running like that for more than a few seconds, it will go out when the switch is re-centred.

As with all modes, three power ranges are available in variblend mode.

The 'standard' power range gives good brightness while limiting the maximum power to give good runtime even at the highest level

The 'high range' gives provides the maximum output (double that of the standard range) while widening the steps between power levels to give extended runtime at low power levels

The 'boost' range is an intermediate one, with the lower power levels being the same as the standard range, but with the highest power setting being a boosted one - for the first minute after either selecting high power or changing the beam blend at high power, the light runs at a high setting, after which it slowly dops to the standard high power level.

This means that unless high power is being repeatedly re-selected, in the boost range, the runtime will be basically the same as in the standard range, but with more light available for brief periods for things like lighting up chambers, looking up shafts, entering caves from daylight or use in photography.

## Power consumption

In variblend mode, the power consumption at a given power level is independent of the beam blend chosen.

	Extra-low	Low	Medium	High	Boosted High
Standard range	22mA	55mA	140mA	360mA	N/A
Boost range	22mA	55mA	140mA	360mA	700/1000mA*
High range	27mA	80mA	230mA	700mA	N/A

(\*In boost mode, while in the initial boost period of high power, the power con-

sumption is 700mA except for the 50:50 flood:spot mode, where it is 1000mA

### **Selecting variblend mode.**

To select variblend mode, first open the headset to get access to the configuration button on the front of the mounting plate, and make sure the light has power.

- a) Set power switch to appropriate position for the power range desired (see later)
- b) Press the configuration button (above the spot LED)
- c) The spot LED will flash between 1 and 7 times to indicate the currently programmed mode. Wait until the pulsing stops and the light begins animating the functions of the current program
- d) Return the power switch to the centre position if it is not there already
- e) Press and hold the configuration button until both LEDs come on at full power
- f) Release the configuration button
- g) The spot LED will flash 7 times to indicate variblend mode and then the light will begin animating the functions of variblend mode.
- h) Operate the main power switch to exit configuration and save the mode for future use.

Finally, close the headset.

Selection of the power range depends on the position of the main power switch when entering setup.

Switch central - standard range

Switch up - high range

Switch down - boost range

If the light is already in variblend mode, changing between power ranges is simpler than the above steps - steps e) through g) can be skipped.

### **Photography and slaves**

Due to the nature of the power control in the Flexitwin, when operating normally at any power level it is quite capable of setting off slave triggers for flashguns.

The extra-low flood beam that the Flexitwin produces with the switch left down should be slave-safe, and so be usable for [human] photography slaves to keep oriented without setting off [electronic] slaves they might be holding.

### **Thermal limiting, etc**

The Flexitwin has built-in thermal limiting to ensure the unit does not get too hot if running at the highest power levels, especially in warm environments.

This operates subtly, adjusting the power down (and potentially back up) to keep the temperature at an acceptable level.

For added peace of mind, the Flexitwin has redundant electronics to provide a low power level to the spot and flood beams whenever their respective halves of the switch are operated, irrespective of the rest of the control circuitry.

The low flood before the unit turns off is the result of one of these redundant pathways.