Using your Bisun Flexitwin
(old 'classic' and 'advanced' modes)

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 simplicity of operation.
This is the most likely mode to be used, and its operation is described elsewhere.

These instructions are for the 'classic' and 'advanced' modes which were also available in the first version of the flexitwin.
Please note that pre-v2 flexitwins can be upgraded to v2 by the manufacturer - email for details.

Note that in all modes, all 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 classic and advanced modes the beam operation and available power levels are the same for the wide (flood) and spot beams.
The word 'beam' is used for simplicity, but it can refer to a situation where both LEDs run at once, but one is running as a 'slave' to the other, providing some fill-in lighting.

Classic modes
The 'classic' modes operate similarly to the common 14-LED inserts and many multipower LED torches, where a beam is off unless turned on by moving the power switch lever in the appropriate direction (down for flood beam, up for spot beam).
There are four power levels, arranged in the order high-medium-low-extralow, and to get to the next power level in the sequence, a beam is turned off and quickly back on again.
There is a per-beam memory function, so if a beam is turned off for more than 2 seconds, when turned back on it will restart at the level it was previously at. This means a light can be turned off and restarted without needing to go all the way round the power sequence.
The memory function also operates if the light is switched from one beam to the other and back again even if that is done in less than 2 seconds, meaning that if, for example, the spot beam was set to run at high power and the light then switched to run the flood beam at any chosen power, the user can switch to the spot beam (which will come on at the last-used high setting) for a quick look at some distant target and on switching back to the flood beam it will come on at whatever level it had been at before.
This memory only operates while the unit is powered, so opening the battery pack will clear the memory function.

There are four versions of the classic mode to cover various user preferences. The first (mode number 2) is the 'no-blend' mode, where only one LED gets power at any particular time.

In mode 3, the 'low-blend' mode, when one or other beam is operated, not only is power supplied to the relevant LED but the other LED is powered at a small fraction of the power of the main one, so in the 'down' position of the switch, the flood LED lights at high/medium/low or extra-low level, and the spot LED lights at roughly 10% of the power level of the flood LED, and vice-versa if the switch is in the up/spot position.

Mode 4, the 'high-blend' mode, is similar to mode 3 but with the 'other' LED having about 25% of the power the main one has.

In mode 5, with the switch up, the spot and flood LEDs run at equal power. To avoid duplicating the same operation with the switch down, when in the down position the light operates as in mode 3, with a flood-dominated low blend.

Advanced mode

In advanced mode, the flood and spot beams are controlled entirely independently. Whenever the switch is turned to operating position for a beam, the beam runs at high power, and when the switch is moved back to the central position, a beam drops to a lower power level or goes off, depending on the history of the beam.

The basic power sequence for a beam in advanced mode is:

off-high-extralow-high-low-high-medium-high-off

This means that turning a running beam off involves running through the sequence from wherever the beam is to reach the the 'off' position.

There is a 'memory' function in advanced mode which means that if a beam is left running at high power for more than three seconds, when the switch is moved back to the centre position, the beam returns to the state it was in before the beam was running at high power.

While running the light, the memory is most likely to be used by someone temporarily turning the spot beam onto full power for spotting distant objects of looking up/down shafts.

Alternatively, if a beam (or the whole light) is off, the memory allows a beam to be turned on for brief use without having to go all the way through the sequence to turn the beam off afterwards, as the memory will remember the beam was previously off.

Mode 6 operates similarly to mode 1, except the sequence is extended to cope with particularly poor switches - the sequence in mode 6 is
off-high-extralow-high-low-high-medium-high-high-low-off

This means that even if a switch can't be relied on to keep good contact, it is still possible to set a beam into the high power setting, but it does make the sequence longer.

It might be thought that for consistency, the sequence should have ended 'high-high-high-off', but that would make it harder to work out when the switch was being operated

Configuration

The forward-facing button on the flexitwin backplate is used to set a unit into one of the possible operating modes.

If the headset is open and the button is pressed, the spot beam will flash a number of times correseponding to the current mode number, and the unit will then give an animation as a reminder of the mode to assist in setup without needeing instructions to hand.

If the button is pressed during the animation, the mode is advanced to the next one in sequence, which is indicated by further flashes of the spot beam and then animation of that mode is commenced.

Moving the main power switch either up or down from the centre position will exit configuration and store the currently-animated mode for future use.

If the unit is left animating for more than a minute, it will leave setup itself and store the currently animating mode.

To enable easy access to the likely-most-wanted variblend mode, if the pushbutton is held down for 2 seconds while the unit is displaying an animation, both LEDs come on full and then mode 7 is selected

Mode 1	Mode 2	Mode 3	Mode 4	Mode 5	Mode 6	Mode 7
Advanced	Classic no-blend	Classic low blend	Classic high blend	Classic equal blend	Advanced (for poor switch)	Variblend (factory default)