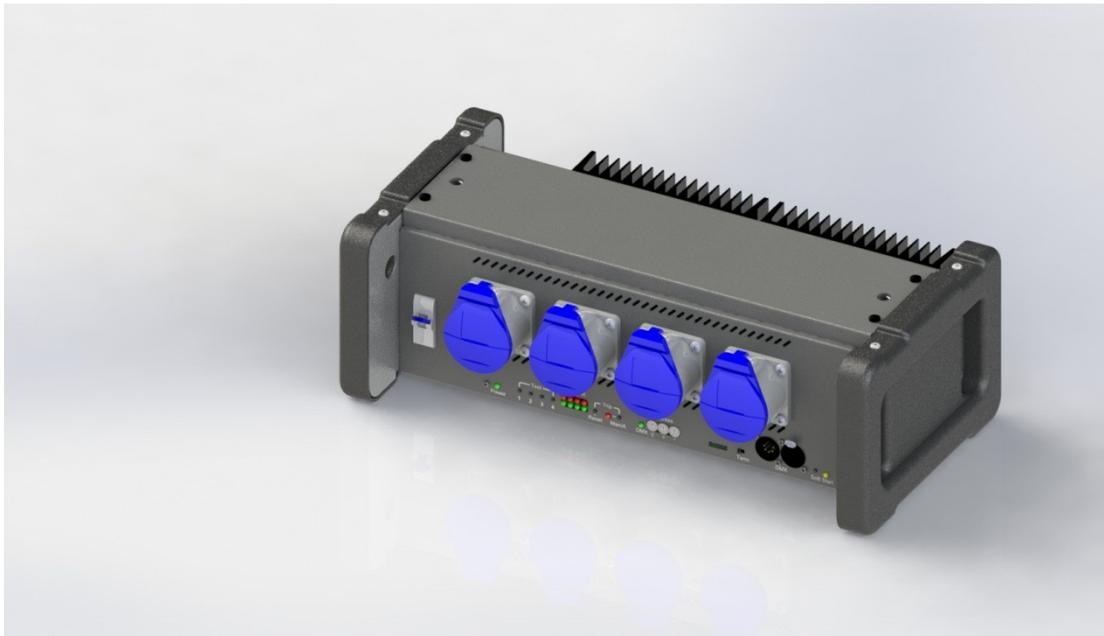# Four Channel Dimmer Pack

The Photon Beard Four Channel Dimmer is a light weight current limiting reverse phase control dimmer using IGBT devices. It is intended to control incandescent light sources of up to 2kW per channel with a maximum total load of either 16A or 32A depending on the model.

Reverse phase dimming control has a number of advantages including:

1. Inherently quiet in operation and can be sited within a studio area.
2. Very lightweight and easily suspended on standard clamp mountings.
3. Able to limit output current in fault conditions.

Output level control is entirely digital and control input can be either by standard DMX512 line or a Photon Beard Wi-Light dongle if fitted.

An important feature of the dimmer is the per-channel overload trip which takes the place of an individual channel circuit breaker. Power is disconnected from any output which attempts to feed an overload or short circuit. A channel which has "tripped" may be reset manually or automatically by reducing the control input to zero.

Power input is via a circuit breaker of either 16A or 32A which may also be an RCCD depending on specification.

Control Settings

There are a number of control buttons and leds on the dimmer front panel. The function of these from left to right is as follows:

Power indicator

This green led will light to indicate power is connected. It will also flash if the total current load for the dimmer has been exceeded.

Test Buttons

Each of these four buttons will switch one of the channels on at 80%. This is confirmed by one of the green leds to the right of the test buttons. Any channel with test active will ignore the control input.

The test function is toggled on and off by repeatedly pushing the button.

Trip Leds

Immediately above the green Test leds are a row of red Trip indicators. Each of these will only light if the corresponding channel has tripped and that output is now disconnected.

Reset Button

Pressing this button will reset any trip condition on any output provided that manual reset has been selected.

Auto/Manual Button and Led

The Auto/man button selects the mode for trip reset. If the red led is lit, any trip must be reset manually using the Reset button. If the red led is off, a trip condition may be cleared by taking the control input for that channel down to zero. Auto reset is desirable when a dimmer is mounted in an inaccessible place and manual resetting is not possible.

Note that when using Wi-Light this control may be over-ridden to Auto by the Wi-Light transmitter.

DMX Indicator

This green led will light to indicate connection to valid DMX512 data. If a Wi-Light dongle is fitted the DMX indicator will light to show that the Wi-Light transmitter has valid DMX512 data.

DMX Address

These three rotary switches are preset with the DMX address corresponding to channel 1 of the dimmer pack. They have the same function when using the Wi-Light system.

Wi-Light Port

This port is provided for the fitting of a Wi-Light dongle if required.

Termination Switch

A small slide switch is provided to add a built in terminator to the DMX512 input line. This should only be used if the dimmer is the last unit on the DMX control line. The terminator is switched on by sliding it towards the DMX sockets.

DMX Connectors

A standard 5-pin DMX input and output connection.

Soft Start Button

This button will toggle on and off the Soft Start function. If selected a soft fade up of around 5 seconds is added to all inputs. Note that when Soft Start is selected any fade down is still immediate. Soft Start is confirmed by a yellow led.

Preheat

This button will toggle on and off the Preheat function. When selected Preheat will add a constant minimum of about 5% to each output. This will speed up the response of larger loads to sudden increases in level.

Note that when controlling the dimmer pack via Wi-Light, this control may be over-ridden by the transmitter.

Preheat is confirmed by a yellow led.

DMX Hold-Last-State

In the event of losing DMX control the default setting is a two second time-out after which all outputs will be cleared. The alternative is to hold the last state before DMX was lost and this can be set by entering a special code using the address switches.

To change to hold-last-state do the following:

1. Power down the unit by switching off the circuit breaker.
2. Set the number 884 on the address switches.
3. Switch on power after which the DMX led should flash once.
4. Power down and re-set the address.

To clear back to the default setting, repeat the above but enter the number 880.

Specification

Number of channels	4
Maximum load per channel	8A
Supply voltage	200 - 250V 50Hz AC
Supply Current	Maximum 16A or 32A (check model)
Temperature range	0 - 40deg C
Control input	USITT DMX512, (optional Photon Beard Wi-Light)
Mounting	Two M10 bushes in the top surface of the case, maximum screw depth 30mm.
Safety bonding	One 20 mm diameter hole at each end of the case to take wire safety bonds.
Dimensions	400 mm wide x 237 mm deep x 164 mm high (16" x 91/2" x 61/2").
Weight:	8 kg (17 lb 10 oz)

Warranty

Photon Beard Products are guaranteed against faulty materials and workmanship for a period of one year from the date of the original user's purchase, and is limited to repair or replacement at our discretion. This guarantee does not cover product misuse or any consequential loss arising from product failure. Your statutory rights are not affected.

RoHS Photon Beard products do not contain more than the maximum permitted levels of hazardous substances as laid down in the European directive on the restriction of use of certain hazardous substances
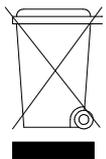
WEEE Under the European directive on the disposal of waste electrical and electronic equipment should only be disposed of through approved recycling facilities.