

INSTALLATION/OPERATING INSTRUCTIONS FOR D610"CB"

The D610"CB" is a six channel dimming pack rated at 2.5Kw @ 230v (11Amp) per channel. It is available in either 192 (19" x 2U) or 194 (19" x 4U) formats, and is designed for 3 phase Star or single phase supplies. Both formats have Circuit Breaker output protection.

FRONT PANEL

On the left of the front panel are the 3 phase indicators, phase 1 powers channels 1 and 2, phase 2 channels 3 and 4 phase 3 channels 5 and 6, in addition phase 1 powers the electronics so if this phase fails the pack will not function.

Next come the circuit breakers, one for each channel, odd numbered channels on the upper breaker, even numbered on the lower breaker. On the 194 series the output sockets are located above the breakers.

To the right of the last pair of breakers are the monitor LEDs, one for each channel. These are positioned in the circuit at the point where the low voltage section couples to the live electronics, and so provide a useful reference point should a fault occur in any channel of the pack.

In-between the monitor LEDs and the electronics power LED is the test switch, which provides individual channel checking at a 50% level. Mounted above the monitor and power LEDs will be the optional local control board, providing individual control of each channel from 0 to 100%. If you have local control on your unit then you will not have a test switch. On the 192 series a local control on/off switch is provided, this is positioned to the right of the power LED.

On the right hand side of the front panel is the mounting position for the optional DMX card, if the DMX card is not fitted a blanking panel secured by the front panel mounting screws will cover the DMX address information. (Please note it is possible to retro fit the DMX card if the need arises).

Finally, and this is only on the 194 series, there are the two ring locking Din sockets for the analogue inputs, one with the more common pin out configuration as used by ourselves and Zero 88 etc, and the other using the pin out favoured by Pulsar.

REAR PANEL

Starting from the left hand side of the dimmer are the two 12.5mm holes with grommets fitted, these provide access to the screw terminals for a multi-core cable if required in fixed installations when using analogue signals. Below these are the two ring locking Din sockets, for a removable analogue connection. (These sockets are fitted on the front of the series 194.) The two sockets offer different pinouts, the lower socket uses the more common version, as used by ourselves, and Zero 88 etc while the other one matches that used by Pulsar.

To the right of the Din sockets is a 22mm hole giving access to the P.C.B mounted 8 pin Din socket, the pinout of which is detailed on the lid, but briefly matches that commonly used on four channel chaser units,(and in all honesty you will probably never use it!)

Above and to the right of this are the holes for the 5 pin XLR sockets, one male one female which will be fitted when the D.M.X decode card is installed in the dimmer. (The lower hole is for the non-unified male socket.)

Finally there is the 32mm hole for the mains cable entry, this is fitted with a cable gland capable of accepting cable diameters from 18mm to 25mm.

The remainder of the rear of the dimmer is taken up by the output plate, on the Series 194 this is a blank plate as it is only there to enable a triac to be changed should the need arise. There are a range of output plates available, hardwired (six 20mm holes with grommets fitted) twelve IEC sockets, two per channel, plates with two or four holes to accept the 19 pin socapex socket and a plate which will take two 16 pin harting sockets. We can supply any of these plates should you wish to change the output arrangement at some future time.

MAINS INPUT CONNECTIONS

As mentioned above the mains supply cable enters via the 32mm gland on the rear of the unit. It is connected to the P.C.B via a four way screw clamp connector marked L1, L2, L3 and N, that is the three Lives and a Neutral. The Earth must be made off into the brass earth bar mounted on the chassis above the cable entry point.

On the Series 194 a 32mm hole is provided on the side of the case as an alternative cable entry point.

If the dimmer is to be run on a Single Phase supply you will need to link the three Live terminals together. This can be done by inserting the bridging bar, which you will find held in one of the spare points in the earth bar, into the other side of the screw clamp connector and tightening down all three screws. The single phase cable can then be attached to any of the three Live terminals, the Neutral and the Earth.

MAINS OUTPUT CONNECTIONS

The Live and Neutral output connections are clearly marked on the P.C.B mounted above the suppression chokes. The Earth connections must be made off in the Earthing bar above the cable entry point. There are holes in the output P.C.B which will accept cable ties to keep unruly cables under control.

DIMMING PACK OPERATION

The dimming pack is designed to operate on either externally generated analogue or D.M.X signals, its own local control or a combination of all three. The D.M.X card can be retro fitted by any fairly competent individual, if however you wish to add local control we would recommend that this should be done either at the factory or by your supplier.

LOW VOLTAGE ANALOGUE INPUTS

These are via either the ring locking Din sockets or screw terminals on the board. The dimming pack will accept incoming analogue levels in the range of 5>25v + or - (some early Strand desks had a minus control voltage.) There are six presets, on the P.C.B one per channel, marked MAX LEVEL CONTROLS which, if set fully clockwise will cause the dimmer to give full output for only 5v in, while set fully anticlockwise an input of 25v would be needed to give full output. These will be factory set for a 0>10v input as this is the most common nowadays. Apart from trimming the input level to suit the dimmer they can be used to limit the level reached by any particular channel. No damage would be done to the pack if these controls were set fully clockwise and then driven by a 10v control level, but the top half of the slider would have no effect as the maximum output has already been reached.

There are three other presets on the board, these are marked PREHEAT and there is one per phase. Preheat is used to keep the lamps 'warm' by supplying a trickle voltage even when the control source is off. This has several desirable features: it increases lamp life, it will reduce the surge current normally encountered when turning on high wattage lamps from cold and it can be used to avoid a 'dead spot' at the bottom of the slider on the desk. These controls will be factory set immediately prior to the onset of preheat.

Finally there is an Inhibit input which allows the whole pack to be enabled from a single 10v switched signal. This is selected via the jumper plug on the P.C.B which has the following action.

Jumper in position A = pack works normally.

Jumper in position B = take Inhibit input to +10v to enable the pack.

D.M.X INPUTS (OPTIONAL)

When a D.M.X card is fitted the address switch and status LEDs will be visible through the front panel on the right hand side of the dimmer. The rear panel will have the two 5 pin XLR sockets, one male (input) and one female (through) fitted. The D.M.X card decodes the digital serial data to a 0>10v signal which joins the main P.C.B at the same point as the analogue inputs. The D.M.X card is protected from + going analogue inputs but it must not be used in conjunction with - going analogue inputs.

The address switches are labelled in binary code 1,2,4,8,16 etc. to 256 and are used to set the start address, so to select start address 25, switches 16, 8 and 1, should be moved to the on position, to select start address 146, switches 128, 16 and 2 should be moved to the on position. The electronics will automatically select the next five channels. The data LED should be lit as long as an address has been set and the desk is connected and turned on.

The top switch is marked TEST and if selected will override any incoming data and run a pre-programmed test sequence at a 50% level. The test LED will light

and the data LED will be extinguished. Please note that the test sequence is based on

the fully loaded P.C.B which has sixteen channels. Therefore there will be a dead spot in the test between channels 6 or 12 and channel 1.

When using the D.M.X digital control protocol it is good practise to fit a terminator, this is simply a resistor of between 120R and 180R connected across pins 2 and 3 of the last socket in the line. This should be a female socket, therefore the easiest option is to solder the resistor into a male plug and insert into the socket.

LOCAL CONTROL

Both the Series 192 and 194 can be supplied with On Board Level Controls (Local Control.) They allow the dimmer to be used as a stand alone unit without the need for a separate control desk, or they can be used as minimum level controls when the dimmer is being used with another desk.