

# HUB 24

15 X 2.4kW DIMMER, 2 X DMX OPTO-ISOLATOR  
AND 3 X 4.8kW POWER DISTRIBUTION UNIT

**JANDS**

## DESCRIPTION

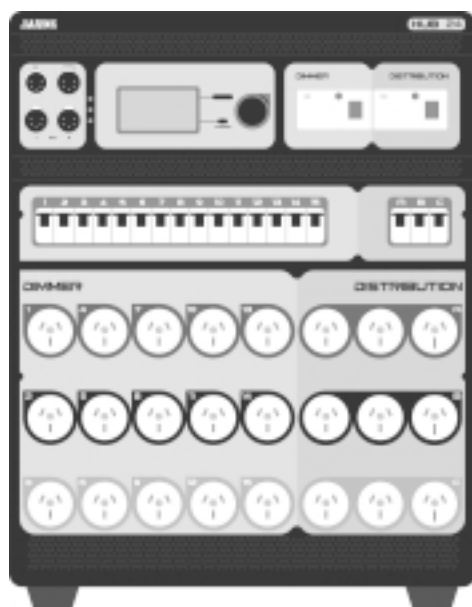
The J ands HUB 24 incorporates a 15 channel dimmer rack, 9 way power distribution unit and a 2 way opto-isolator into one compact unit. Designed for live shows, school auditoriums, trade shows and other similar applications, the HUB 24 offers a complete system approach for todays lighting systems.

The HUB 24 is the ideal choice for anyone using a mixture of conventional and automated lighting fixtures, offering a host of powerful control options, such as a stand-alone mode for use without a control desk.

The HUB 24 uses a chokeless IGBT output topology for reduced weight and noise.

## FEATURES

- \* 15 x 2.4kW dimmer channels
- \* 3 x 4.8kW Power Distribution circuits (3 outlets per circuit - 9 outlets total)
- \* Separate RCD protection for dimmer and power distribution sections
- \* Software selectable current monitoring/control facility actively limits mains current draw.
- \* DMX in, thru, plus two opto-isolated DMX outputs, all fault protected to 240VAC.
- \* Microprocessor control with 128x64 pixel graphics LCD
- \* Easy to use menu driven user interface
- \* Front panel "Select" and "Cancel" buttons, and encoder wheel for function/level select
- \* Storage for eight DMX snapshots and eight chases
- \* Inbuilt self tests and error logging
- \* Software downloadable from a PC or laptop
- \* Software selectable DMX termination
- \* 14.8 bit firing resolution
- \* IGBT output drive
- \* Low acoustic noise
- \* Battery backed memory holds settings when unit is switched off
- \* Stand alone operation
- \* Four selectable fade curves (two user definable)
- \* 50 or 60Hz operation
- \* Neutral failure detect
- \* DMX start address on any channel
- \* DMX cross patch
- \* Wall or bar mountable (option kits required)
- \* CE & RoHS approved



◀ front panel

## OVERALL SPECIFICATIONS

### GENERAL

Power supply type: 3 phase star (neutral required) with earth  
Power requirements: Nominal 240V +10/-20% phase to neutral 45-66Hz

Mains Input  
Connector Rating: 32A (40A, 50A and hardwire tails available on request)

Dimensions: 432mm (19") (W) x 300mm (D) x 560mm (H)

Net/Shipping Weight: 29/35 kg

### DIMMER

Dimmer Channels: 15  
Power Rating: 2.4kW per channel @ 240VAC  
Dimmer curve: Linear/switched/user definable x 2  
Max ambient temp: 40°C for 100% duty cycle  
Dissipation: <1% of output load  
Output connectors: Australian 3 pin 10A sockets  
Control Input: USITT DMX512/1990 5-Pin AXR  
Isolated DMX output: 2 x USITT DMX512/1990 5-Pin AXR  
Mains tone Rejection : 15VRMS @ 750Hz  
Output risetime: 120µs Nominal\*  
Output protection: 10A thermal magnetic circuit breaker per channel plus overall RCD

### POWER DISTRIBUTION

Output Channels: 9 sockets on 3 circuits  
Output Sockets: 2 x Australian 10A & 1 x Australian 15A per circuit  
Power Rating: 4.8kW per circuit  
Output protection: 20A thermal magnetic circuit breaker per circuit plus overall RCD

## SUPPLIED ACCESSORIES

- HUB 24 User Manual

## ORDERING INFORMATION

MODEL/PART	PART NO.
• HUB 24 FITTED WITH 32A MAINS PLUG	JND-HUB24
• WALL MOUNTING BRACKET	JND-HUB24WMB
• RAIL MOUNTING BRACKET	JND-HUB24HRB
• REINFORCED PROTECTIVE BAG	JND-DC-HUB24
• FLIGHTCASE	JND-FC-HUB24
• HUB 24 DOWNLOAD KIT	JND-HUB24DOWNLOAD

**\* Note on IGBT Switching:** The risetime of a conventional choke dimmer reduces as the load is reduced, meaning a conventional risetime of 200µs for a 2.4kW load would be much less for a load of 1.2kW. With IGBT switching, this reduction is minimised to a negligible level, meaning a risetime of 120µs will remain close to 120µs regardless of load.

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## ARCHITECTS AND ENGINEERS SPECIFICATIONS

### Electronics

The dimmer shall receive and decode control signals complying with USITT DMX512/1990 specification. The dimmer shall default to receiving continuous banks of 15 channels on any valid start channel, or channels may be patched out of sequence. If the DMX512 control signal is interrupted, the user shall have a number of options regarding how the dimmer shall respond, but in all cases the output will dim to off if the DMX control is not restored within 10 minutes.

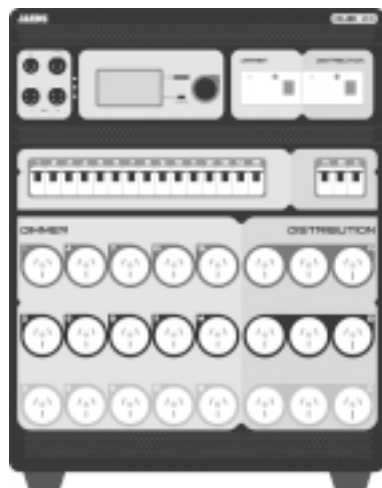
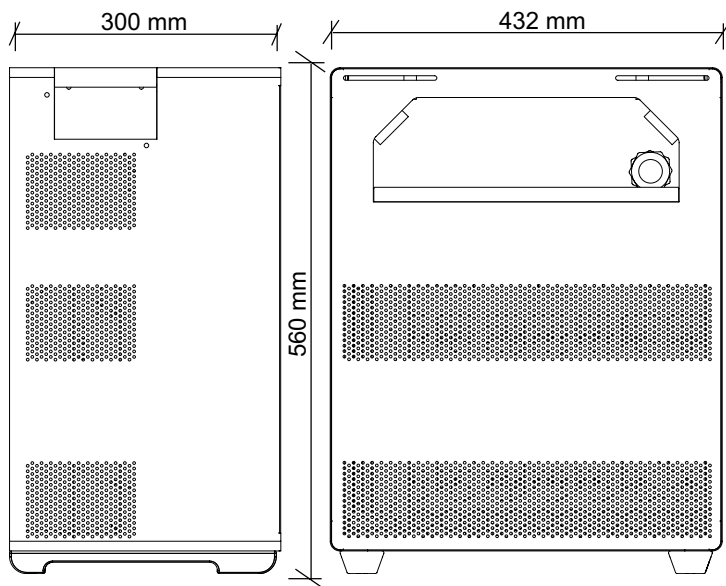
The dimmer shall have a control response time of not more than twenty (20) milliseconds, input to output.

The dimmer shall utilise a 128x64 pixel graphic LCD to provide parameter and editing information to the user. The display shall be the basis for an interactive menu driven user interface that is easy to use.

The dimmer shall have a data memory capacity of at least 512KBytes and shall be battery backed to prevent memory loss when switched off. The battery shall have a life of at least 4 years.

The dimmer shall have a program memory capacity of at least 512KBytes. The dimmer operating software shall be upgradeable without removing the lid, via the front panel DMX input connector.

The dimmer shall provide DMX In and Thru connections on 5 pin AXR connectors. The dimmer shall also provide two opto-isolated DMX outputs on 5 pin AXR connectors. The opto isolated outputs shall provide full isolation up to voltages of 500V peak using high voltage opto isolators and floating power supplies.



### Dimmer Output

The dimmer shall default to a digitally generated control curve to accurately map control input to output power in a linear relationship. Additionally a switch curve and two user definable curves shall be available for use on a per channel basis. The dimmer channels shall operate using IGBT technology to reduce weight and limit noise. The dimmer channels shall control incandescent loads from 60W to 2400W with a risetime of 100µs.

The dimmer shall be primarily convection cooled and operate in ambient temperatures up to 40°C. Each heatsink shall have a fan that will activate when the heatsink temperature rises above 85°C. The dimmer shall shut down channels when the heatsink temperature rises above 100°C. Adequate ventilation must be provided by the operator. The dimmer shall constantly monitor the supply current consumed over all outputs. Inbuilt soft limits shall prevent the dimmer from drawing more current than the supply connector rating by reducing the level of the dimmed outputs when necessary.

### Distribution Output

The dimmer shall provide 3 circuits, each with 3 output connectors. Each circuit shall be protected by a single phase 20A fast acting thermal-magnetic circuit breaker.

### Electrical

The dimmer shall operate from a 3 phase plus neutral and earth mains supply of 415VAC phase to phase with a frequency range of 45 to 66 Hz. All channel outputs shall be protected by fast acting thermal-magnetic circuit breakers. Separate three phase RCDs shall protect the dimmer and distribution outlets. The dimmer shall be supplied with a 3.0 metre power cable fitted with a 32A three phase connector as standard. 40A, 50A and hardwire tails shall also be available as a factory fitted option.

The dimmer shall be cyclically burned in for a minimum of 12 hours.

### Mechanical

The dimmer shall be designed to operate as a free standing unit, with a recess suitable for cable storage. Optional mounting kits shall be available for bar/gantry rail or wall mounting if required.

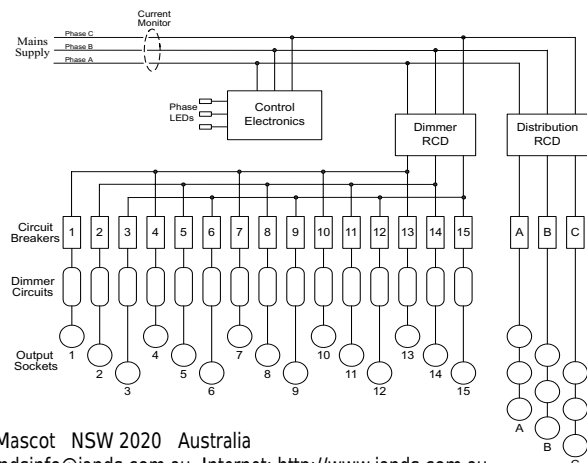
The dimmer shall be constructed from 1.2mm steel. Two integral carry handles shall be provided in the top face.

All metal surfaces shall be properly treated and finished in powdercoat or zinc.

The control surface shall be scratch resistant 0.25mm Lexan with legends reverse printed from behind.

A transportation bag shall be supplied as an option. The dimmer must not be operated with the bag in place.

The dimmer shall be a J ands HUB 24.



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