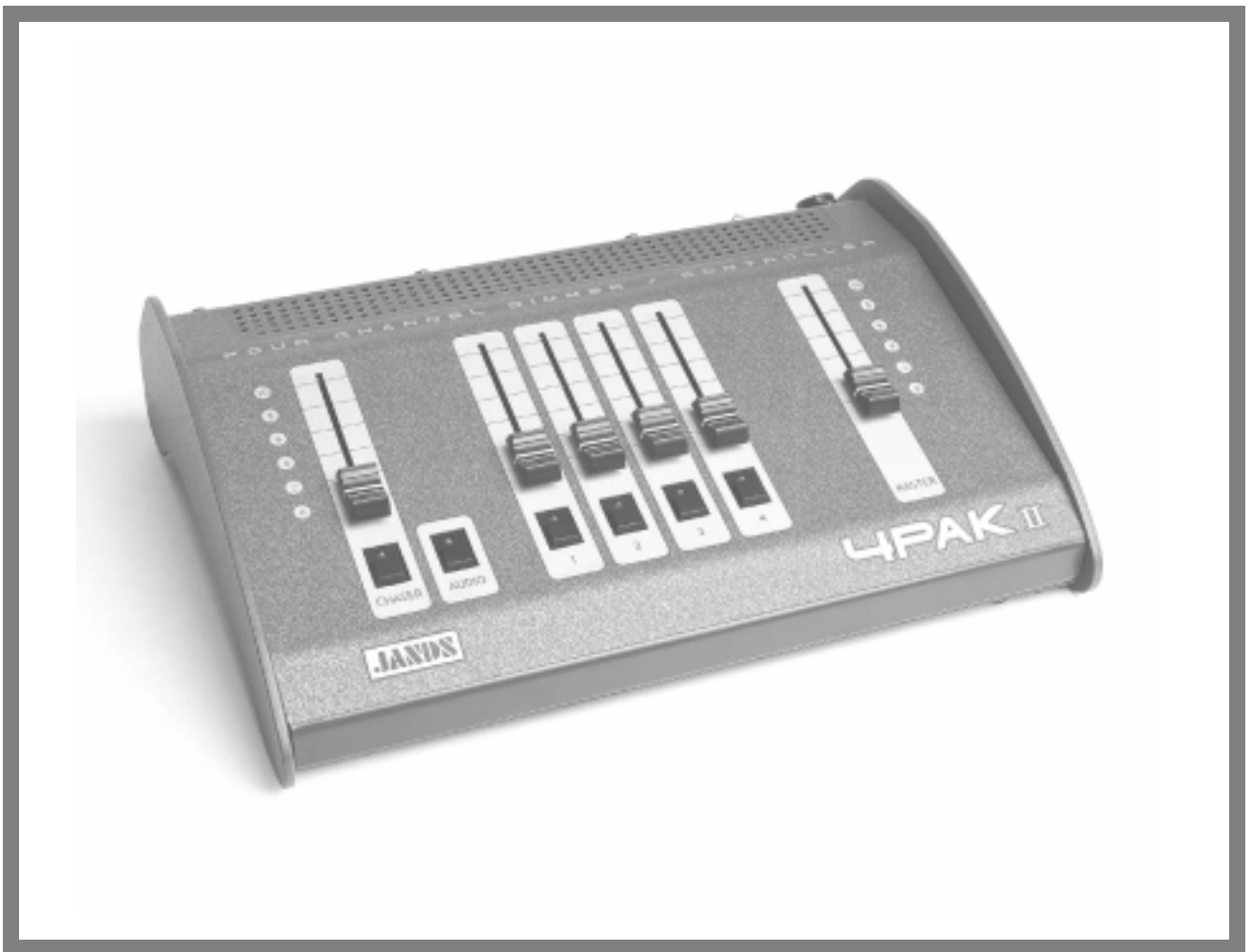


# 4PAK II

FOUR CHANNEL CONTROLLER/DIMMER



# OPERATING GUIDE

**JANDS**

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# Introduction

The 4PAKII is a four channel integrated desk/dimmer unit with both normal and audio chase, flash facility and full mastering over all channels. It has been designed for lower budget applications where portability and ease of operation are prime considerations. When used as a stand-alone dimmer, the 4PAKII features:

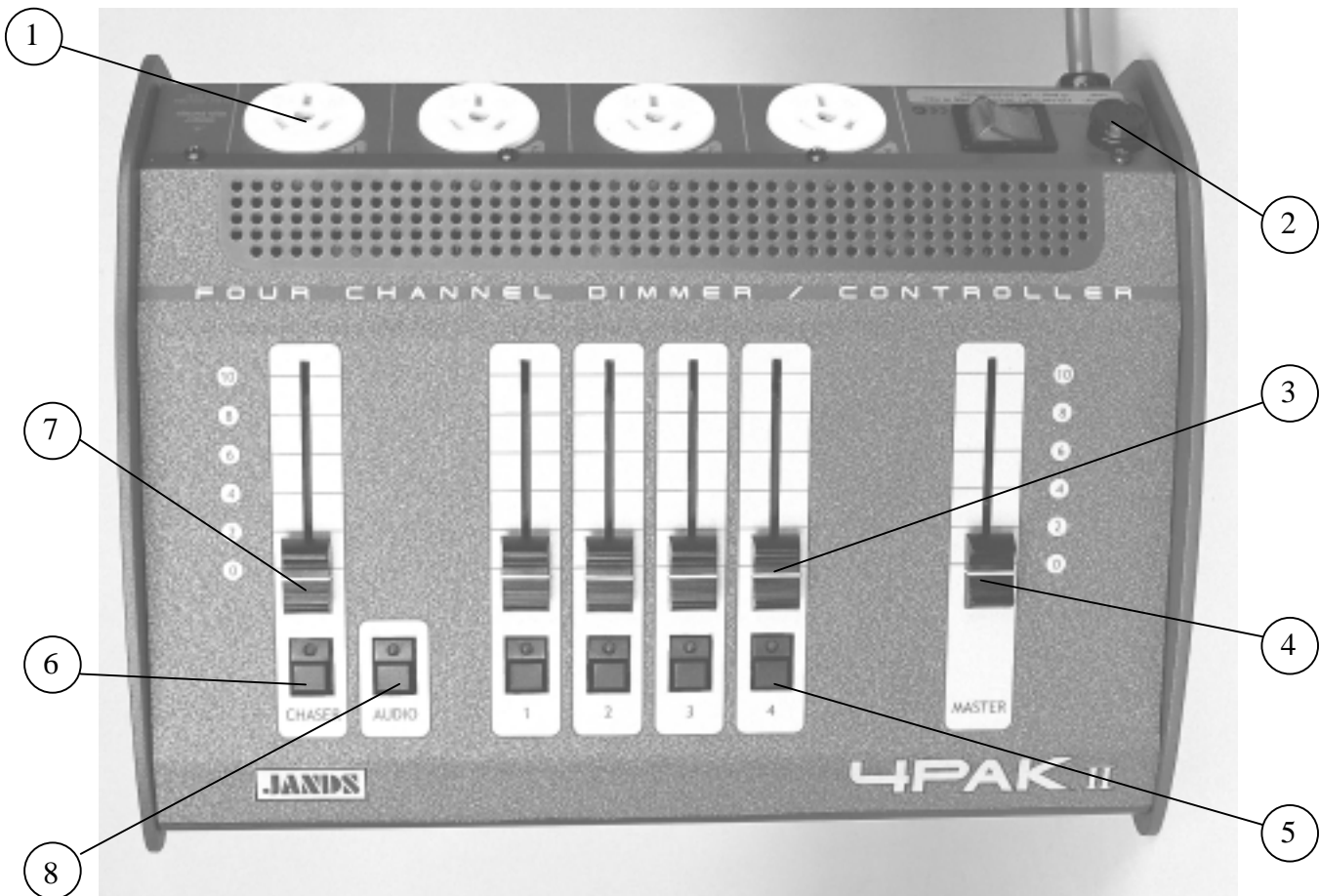
- Individual channel level control faders;
- Full mastering over all channels;
- Four channel chaser with level and speed control;
- Audio chase facility;
- Flash buttons on all channels;
- Fully isolated from mains;
- Soft turn on (protects bulbs and wiring);
- Overvoltage limit (regulates output against mains voltage variations);
- Sloping front panel;
- Solid two piece steel chassis and base;
- 2.4kW total load;
- Aesthetic appearance;
- Low electrical and audible noise;
- End cheeks for fascia protection;
- Hand insert in base for portability;
- Internal microphone.

The 4PAKII will drive loads of up to 2400 Watts per channel (although total loading is limited to 2400 Watts, which is the maximum power available from any standard 240V AC GPO outlet).

Each unit comes complete with anti-scratch rubber feet and 2 metre mains power cord. The 4PAKII is fully guaranteed for 2 years against parts and labour.

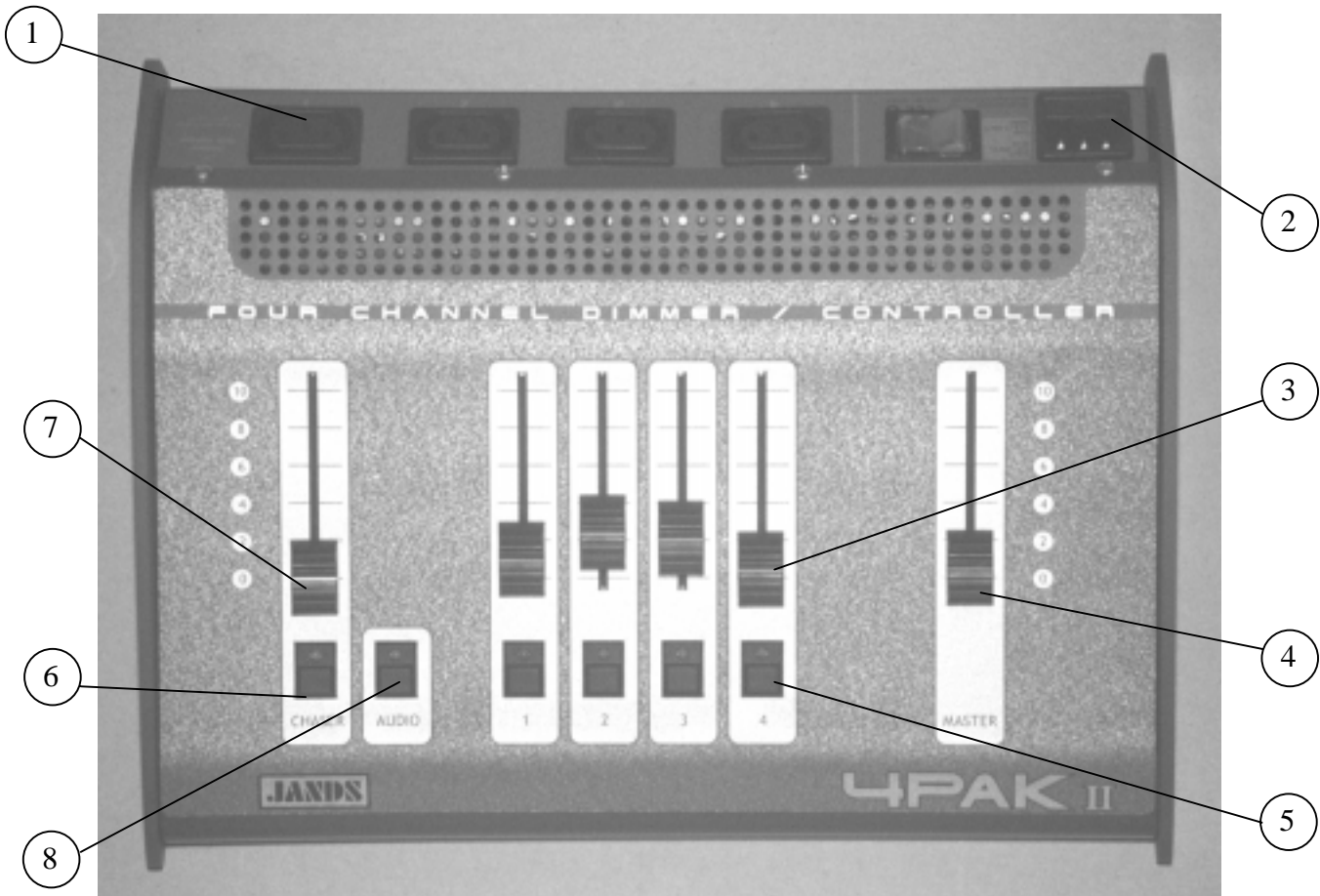
# Equipment Description

## 4PAKII Layout



1. **Channel output sockets:** The four output sockets connect to the lamps.
2. **Power fuse:** The fuse protects the 4PAKII from faults.
3. **Channel faders:** These faders control the channel output levels.
4. **Master Fader:** Controls the overall level from the channel faders and from the chaser.
5. **Flash buttons:** Allow each channel to be flashed to maximum.
6. **Chase button:** Activates the internal four channel chaser.
7. **Chase Fader:** Controls the Chase rate.
8. **Audio Chase button:** Turns on the internal microphone for the audio-triggered chaser. The Chase Fader controls the minimum chase rate in the absence of sound.

## 4PAKII IEC Layout



1. **Channel output sockets:** The four output sockets connect to the lamps.
2. **Fused power inlet:** The fuse protects the 4PAKII from faults.
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# Dimmer Operation

After unpacking, check for any obvious faults or defects. If any are apparent, return the unit to the place of purchase.

Unwrap the power cord and plug into a GPO. Plug four lamps into the four output sockets and switch the power on at the wall and the rear panel. Advance the **Master** fader and a channel fader. The mimic LED for that channel will light, at an intensity corresponding to the lamp connected to that channel.

The **Master** fader provides overall control over all four output channels, and also provides level control for the chaser.

The **Flash** buttons below the channel faders will always flash to full irrespective of the **Master** level.

To operate the chaser, advance the **Master** fader, and press the **Chaser On** switch. The Chase rate is adjustable from zero to maximum by the **Rate** fader on the left. To disable the chaser, press **Chaser On** again.

If desired, the chaser can be triggered by audio sound levels at the 4PAKII. With the chaser on, press the **Audio** switch. In the absence of any sound, the chaser will now step at a rate determined by the rate control as before. Any loud sounds will be detected by the internal microphone and advance the chaser accordingly.

Both the **Chaser** and **Audio** functions have LED indicators showing when each function is on.

Note that at no time should the total load on the 4PAKII exceed 2400Watts. If this occurs, the fuse will blow. Turn the power off, replace the fuse and take the **Master** to zero before turning the power on again. This maximum power (2400W) may be supplied by one channel, or any combination of channels.

For example: If four 2400W lamps were connected to the four outputs, only one could ever be fully on at any one time. Eight 300W lights (such as PAR 56) may be run continuously at "full" without risk of overload.

Note that the warranty will be voided if the fuse is replaced with one of a different type or rating to the one supplied.

## Maintenance

With care, the 4PAKII will require little or no maintenance. Covering the unit while not in use prevents entry of dust into the faders, increasing their useful life. This also minimises the risk of entry of liquids inside the chassis, which would be both damaging to the unit and dangerous to the operator. During cleaning, do not spray directly onto the unit, but onto a rag and wipe clean.

## Fault finding guide

FAULT SYMPTOM	POSSIBLE CAUSE	REMEDY
One channel is not working	Faulty load or wiring Internal channel fault	Try the same load on a different channel to confirm. Workshop service.
Fuse blows when desk channel flashed to full or near full	Large incandescent load Excessive load	Set fader to 5% to preheat lamp. Reduce channel loading
Fuse blows after prolonged operation	Excessive load Lamp or wiring fault	Reduce channel loading Check lamps and wiring
Fuse blows immediately when channel is driven	Output short Triac short circuit	Check lamps and wiring Workshop service
One channel flickers when dimmed Same load flickers on another channel	Faulty dimmer channel Insufficient or very inductive load	Workshop service Connect 100W lamp in parallel
Radio interference	Faulty EMC component	Workshop service

## Technical Data and Specifications

PARAMETER	4PAKII
No. of Channels:	4
Input Power Requirements:	230 Volts AC Phase-Neutral (220V-240V $\pm$ 5%) Consumption: 10 A maximum
Output Loading:	25 W – 2400 W (10 amps) per channel 2400 W (10 amps) total maximum
Protection Fuse:	10 amp Buss BK/ABC-10 ceramic-filled or equivalent
Max Ambient Temp:	40°C
Output Risetime:	130 $\mu$ s (2400 watt incandescent load, 50% dimmed)
LED Indicators:	Four Channel levels, Chase, Audio Chase
Protection:	10 Amp HRC fuse 90°C cutout PTC transformer protection
Control Law:	Linear RMS output power versus fader control Output power regulated at 1% change per 2% mains variation
Power entry:	2 metre cable with 3-pin 10A amp plug (Australia only)
Output Connectors:	1 x 10 Amp Clipsal 415 per channel (Australia only)
Size (mm):	330 (w) x 95 (h) x 250 (d)
Weight:	4 kg nett
Ingress Protection	IP20

**EMC COMPLIANCE**

This product is approved for use in Europe and Australia/New Zealand and conforms to the following standards:

<b>European Norms</b>	<b>Australian / New Zealand Standards</b>
EN 55014	AS/NZS 1044
EN 50082-1	AS/NZS 4251.1
EN 60335-1	AS/NZS 3350.1

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**DISCLAIMER**

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It is recommended that all service and repairs on this product be carried out by JANDS ELECTRONICS P/L or it's authorised service agents.

JANDS 4PAKII dimmers must only be used for the purpose they were intended by the manufacturer and in conjunction with the operating manual.

JANDS ELECTRONICS P/L cannot accept any liability whatsoever for any loss or damage caused by service, maintenance or repair by unauthorised personnel, or by use other than that intended by the manufacturer.

Disconnect mains power when not in use.

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