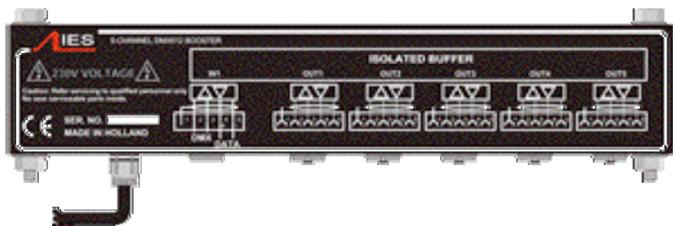




Operator Manual

DMX Boosters



9601-B 5 channel, bar mounted



9601-R 5 channel, 19" rack mounted



9815 10 channel, 19" rack mounted



9815-D 10 channel, 19" rack mounted, DimSTAT output



9815-RJ 10 channel, 19" rack mounted, DimSTAT output, 5V 300mA output on RJ45 connectors

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1 Introduction

1.1 Product range

This handbook describes the operation of the IES DMX booster range. The products covered by this handbook are:

9601-B	DMX booster, 5-channel, bar model, pin 4-5 linked
9601-R	DMX booster, 5-channel, 19" rack model, pin 4-5 linked
9815	DMX booster, 10-channel, 19" rack model, pin 4-5 linked
9815-D	DMX booster, 10-channel, 19" rack model, with DimSTAT output
9815-RJ	DMX booster, 10-channel, 19" rack model, with DimSTAT output, RJ45 connectors and 5V 300mA supplies on each RJ45

1.2 9601-B overview

This small compact 5-channel DMX booster is designed to be mounted in a lighting rig. It is supplied with a fixed mains cable and two bolts for use with suspension clamps. It accepts a DMX input and provides 5 optically-isolated outputs. Termination is not included (see xxx section on termination). Pins 4 and 5 of all DMX sockets are linked through to provide continuity for a DimSTAT network operating on a 4-wire DMX data distribution scheme.

1.3 9601-R overview

This 5-channel DMX booster is designed for 19" rack mounting. It is supplied with a fixed mains cable and 1U rack mounting points. It accepts a DMX input and provides 5 optically-isolated outputs. Termination is not included (see xxx section on termination). Pins 4 and 5 of all DMX sockets are linked through to provide continuity for a DimSTAT network operating on a 4-wire DMX data distribution scheme.

1.4 9815 overview

This 10-channel DMX booster is designed for 19" rack mounting. It is supplied with a fixed mains cable and 1U rack mounting points. It accepts a DMX input and provides 10 optically-isolated outputs. Termination is not included (see xxx section on termination). Pins 4 and 5 of all DMX sockets are linked through to provide continuity for a DimSTAT network operating on a 4-wire DMX data distribution scheme.

1.5 9815-D overview

Similar to the 9815 booster, this version is equipped with a serial port and interface for

connection to a DimSTAT computer (serial cable not supplied).

1.6 9815-RJ overview

Similar to the 9815-D booster with DimSTAT output, this version is designed for Cat5 cable systems using RJ45 connectors for distributing DMX. Note that this version is not Ethernet compatible. In addition to the direct connection for a DimSTAT PC, this version also provides 5V @ 300mA per RJ45 connector to power remote socket panel indicators.

2 Unpacking and installation

2.1 Unpacking & checking

The IES booster is self-contained and only requires mounting components and a suitable mains input plug. The IES booster is packed to withstand normal transportation, but before operating the unit, check there is no sign of transit damage which could affect the operation and safety of the unit.

2.2 Positioning

Usual levels of care should be taken when positioning a DMX booster. Avoid very hot environments, particularly when using the bar mounted version. Although the 9601-B bar version is designed for lighting rigs, avoid rigging it too close to luminaire cases and ensure there is sufficient air flow around the bar to maintain safe operating temperatures for the electronic circuits.

2.3 Connections

2.3.1 Mains connection

The DMX booster is supplied with a 3-core mains cable. Ensure that the mains plug used includes and earth connection and is correctly connected as follows: Brown = Live, Blue = Neutral, Green/yellow = earth.

2.3.2 DMX data signals

All boosters accept standard DMX 512 data connected by a shielded two-pair high-speed data cable with XLR 5-pin connectors (male = input; female = output) or RJ45 connectors for Cat5 cable with booster 9815-RJ. It is also possible to use IES boosters with any standard single-pair DMX network where DimSTAT communications and fault reporting are not required. But it is not possible to use DimSTAT unless the network is connected with two pairs and pins 4-5 are linked through.

XLR pin connections:

- 1 0V shield
- 2 DMX -
- 3 DMX +

- 4 DimSTAT –
- 5 DimSTAT +

RJ45 connectors*

- 1 DMX + (XLR pin 3)
- 2 DMX – (XLR pin 2)
- 3 DimSTAT + (XLR pin 5)
- 4 Isolated +5V
- 5 Isolated ground
- 6 DimSTAT – (XLR pin 4)
- 7 Isolated +5V @400mA
- 8 Isolated ground

* Looking at the front of the booster's RJ45 socket with pins at the base, pin 1 is right hand side and pin 8 is left hand side.

Any DMX network supports up to 32 devices connected to one booster output. Termination is required for both DMX and DimSTAT data on all networks. The last output socket in the line should be terminated with two 120Ω 1/4 Watt resistors connected between XLR pins 2 and 3 (DMX) and between XLR pins 4 and 5 (DimSTAT). A 'dummy plug' XLR male connector with termination resistors is recommended. The same is required with RJ45 and Cat5 cables. Refer to the equivalent RJ45 pin numbering above to match the XLR specification.

2.4 Safety

All normal electrical safety procedures must be followed. Do not use the dimmer if the mains input cable has been damaged, or the enclosure is damaged. Ensure the unit is properly earthed.

3. Panel LED displays



All rack mounted versions of the DMX booster have 4 LED indicators: TX and RX adjacent to DimSTAT in and out, DMX and Power next to DMX in and out.

POWER LED

Illuminates green when power is applied, and the supply RCBO or MCB is switched on.

DMX LED

Illuminates red continuously when valid DMX is present and flashes when there is no DMX signal.

TX LED

Illuminates red continuously when connected to a DimSTAT network and when valid DimSTAT data is present and flashes when transmitting data to the network.

RX LED

Illuminates red continuously when connected to a DimSTAT network and when valid DimSTAT data is present and flashes when receiving data from the network.

4. Fault finding

4.1 Power failure

If DMX fails and no LEDs are illuminated, check power is connected and switched on.

If the supply plug is fitted with a fuse, check the fuse. Note: as the DMX booster draws only about 100mA, the failure of a mains fuse is a clear sign that a serious fault may be present within the booster.

If the supply plug fuse is intact, open the case and locate the power supply fuse (on PCB near the low voltage transformer). If this has blown, replace it with a fuse with an identical rating, and investigate the probable cause of the fuse failure, as this may indicate the presence of an internal PCB fault.

4.2 No DMX outputs

Check all DMX output ports to see if the fault is limited to one port or all.

If all ports are dead, check the DMX LED. If this is flashing (no valid DMX) check the source of the signal, and intermediate cable connections.

If only one port has failed, the unit should be returned for servicing.

4.3 Flickering output

Ensure that the DMX line is correctly terminated.

Check the DMX booster is correctly earthed.

Check the integrity of the source DMX signal by plugging the DMX input to the booster directly to the output DMX cable. If the problem persists, the booster should be returned for service.

4.4 First line maintenance

With the exception of the internal power supply fuse mounted on the PCB, there are no user replaceable components in an IES booster. For further information, refer to your local service centre or IES service department.

5. Declaration of conformity



I.E.S. B.V.

DECLARATION OF CONFORMITY

According to ISO / IEC Guide 22

Manufacturer's name: I.E.S. B.V.
Manufacturer's address: Wageningse laan 52-54
3903 LA Veenendaal
Netherlands

Declares that the product:

Product name: DMX Booster
Model number: 9601-B, 9601-R, 9815, 9815-D, 9815-R

Conforms to the following product Specifications:

The product complies with EMC Directive 89/336/EEC and 76/23/EEC.

Veenendaal
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J.H.D. de Jonge
Technical Manager