

# *j*Ω Electronics

## OBM-3 Parallel Output Booster Module

### Installation Instructions

#### **Product Description**

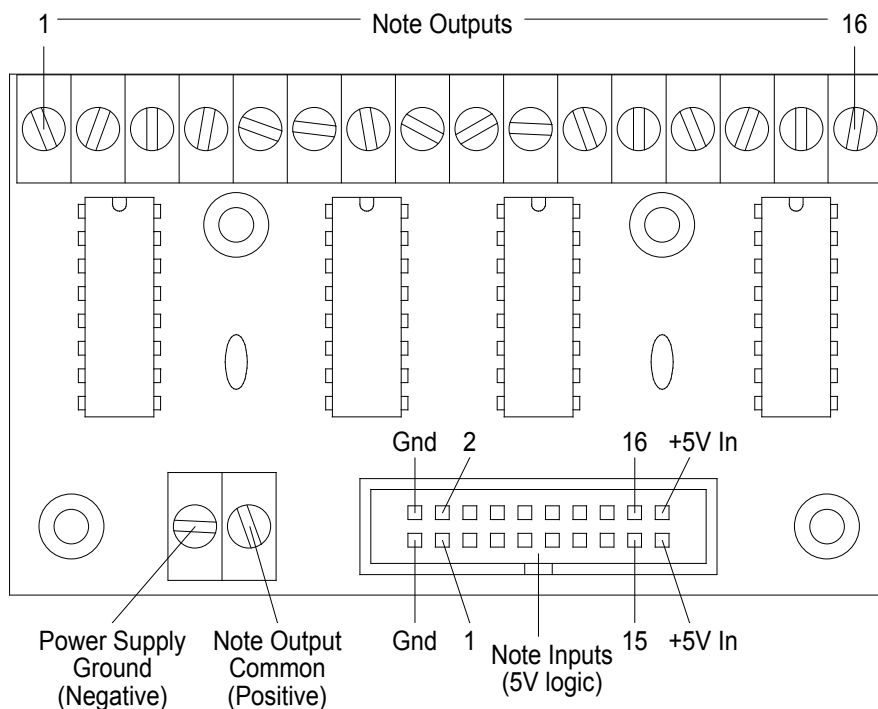
The OBM-3 from j-Omega Electronics is an accessory that allows a logic-output circuit such as the MTP-9 MIDI-to-Parallel converter to control inductive or resistive loads of greater voltage and/or current rating than would be driveable from the logic outputs on their own.

#### **Installation**

Carefully remove the OBM-3 circuit from its protective packaging, handling the board by its edges only. Four mounting holes of 3.2 mm diameter are provided on the circuit board to allow it to be fixed inside the instrument that it controls. Suitable methods of fixing include self-adhesive pillars and screws or bolts with insulating spacers. Whatever method is used, ensure that no metal can come into contact with any wiring tracks or components on the circuit board.

#### **Connection**

The logic signal input connections for the OBM-3 are provided via the 20-way IDC header shown in the diagram below. This is pin-compatible with the output headers of the j-Omega Electronics MTP-9 and can be linked to an MTP-9 using a 20-way ribbon cable with cable headers at each end.



The OBM-3 outputs are on the 16 screw terminals along one edge of the circuit board. These outputs are active-low (pull down) types which are effectively open circuit when the corresponding input is low and then pull close to ground potential when the corresponding input is active (high). The switching ground current sunk at each output is passed to the 'Power Supply Ground' terminal. This terminal must be connected to the ground (negative) terminal of the power supply being used to power the loads connected to the output terminals

Each output has a built-in freewheel diode between its output terminal and the Note Output Common terminal, allowing the OBM-3 to drive inductive loads. To allow the diodes to carry out their function, the OBM-3 'Note Output Common' terminal must be connected to the positive terminal of the load power supply.

The OBM-3 circuitry itself requires a low-current 5V power supply, supplied via the two '+5V In' pins of the Note Inputs connector. An MTP-9 will provide this power via its logic output connector, but if using the OBM-3 with a different circuit then provision must be made for a 5V regulated supply to be connected to at least one of the '+5V In' pins.

Note that the 'Gnd' terminals of the Note Inputs are internally connected to the 'Power Supply Ground' terminal and these must therefore be at the same voltage potential at all times.

### ***Electrical Specifications***

Output voltage switching capability: 35 V DC maximum

Output current capability: 1.5 A maximum continuous per output at 25 °C.

+5V logic supply current requirement: 24 mA maximum

For the latest product information and support, please visit:

[www.j-omega.co.uk](http://www.j-omega.co.uk)