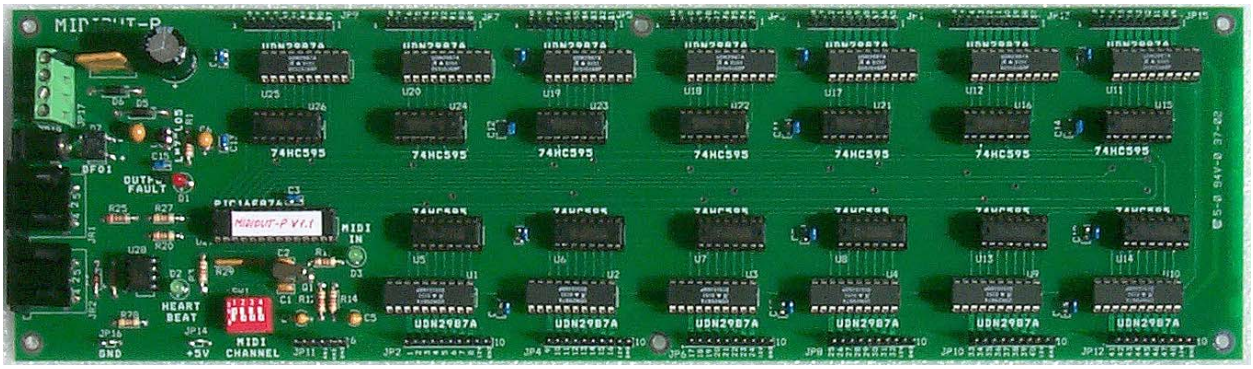
MIDI OUTPUT BOARD
MIDIOUT-P



General

The Classic MIDI Output Board may be used as a pipe driver to allow operation of wind-blown pipes with an electronic organ. Outputs are capable of driving relays or pipe-chest magnets requiring up to 0.35A at 12V. This MIDI product allows up to 104 individual pin outputs to be activated and deactivated through standard MIDI Note-On and Note-Off messages. Outputs are nominally +12V when on and 0V when off.

Brief Description

The MIDIOUT-P unit consists of a single printed-circuit board.
Output connectors may be made with pluggable headers using crimped pins (Molex) or mass-termination insulation-displacement connectors (MAS-CON).
Standard 5-pin DIN connectors are used for MIDI input and output.
Several MIDIOUT-P boards may be cascaded to drive more then 104 outputs as each may have a unique channel number.

Principal Features

- 104 outputs, which can drive relays, motors, solenoids, LEDs, and incandescent lamps.
- All outputs have over-current protection, and include thermal shutdown and output transient protection/clamp diodes for use with voltages up to 35V.
- MIDI input and MIDI output allow cascading several MIDIOUT-P boards.
- Three LEDs indicate working status of board.
- MIDI Channels 1–16 set by DIP-Switch.

MIDI Features

Any output pin of board can be turned On or OFF by sending MIDI Note On and Note Off messages. Output 1 corresponds to key number 24, output 2 to key number 25 and so on up to output 104 (key number 127).

Unit Configuration

A 4-section DIP-Switch allows the MIDIOUT-P to receive on any one of sixteen channels. See Installation Notes for details.

Power Supply

Power for MIDIOUT-P can be from any standard DC supply providing between +7 and +35 Volts at a minimum current of 50 mA. The maximum current depends on the total output driving current but should not exceed 5 Amps.

SPECIFICATIONS

Dimensions

Width	14.0 inches, 35.56 cm
Height	4.00 inches, 10.16 cm
Depth	1.00 inches, 2.54 cm

Installation:

Mounting	Should be spaced away from any woodwork or other panels. No special ventilation necessary if mounted clear of obstructions.

Controls

Configuration	4-section DIP-Switch to select input channel (1-16).
Board Enable	Shunt on JP-11 between pins 4 & 5 to enable all outputs.

Connections:

Inputs:

MIDI In	DIN 5-pin Socket. Standard MIDI signals, optically isolated.
Power In	+7 to +35V, 50mA to 5A (depends on output loading). 4 way Terminal Block, or 2.1mm ID Co-axial Power Jack.

Outputs:

MIDI Out	DIN 5-pin Socket. Standard MIDI signals as per input.
Drive Out	Output voltage +7 to +35V (depends on input voltage), Max. current per output 370mA. 13 groups of 10 pins: (Pins 1–8 for Drive Outputs Pins, +V on pin-9, 0V Ground pin-10 0.025" Square, 0.3" long, 0.1" pitch (for 8-pin Molex or MAS-CON connectors)

MIDI PARAMETERS
MIDIOUT-P

FUNCTION	TRANSMITTED	RECOGNIZED	COMMENTS
Channel 1-16	Yes (*Note 1*)	Yes (*Note 2*)	Key On/Off Data
Mode	Mode 3	Mode 3	OMNI OFF, POLY
Note Number	0-127 (*Note 1*)	24-127	
System Exclusive	Yes	Yes	*(Note 4)*
System Common	Yes (*Note 1*)	Yes (*Note 1*)	
System Real Time Clock Start Stop System Reset	Yes (*Note 1*)	Yes (*Note 1*) No No No Yes (*Note 1*)	
All notes off	Yes (*Note 1*)	Yes (*Note 1*)	

Notes:

1. *All MIDI data received by MIDI-In is re-transmitted on MIDI-Out.*
2. *Note data is recognised on whichever channel is selected (Channel is set by DIP-Switch).*
3. *Program-Change messages may be sent on the currently-active channel or on Channel 16.*
4. *SysEx messages received in MIDI-In will be re-transmitted on MIDI-Out.*