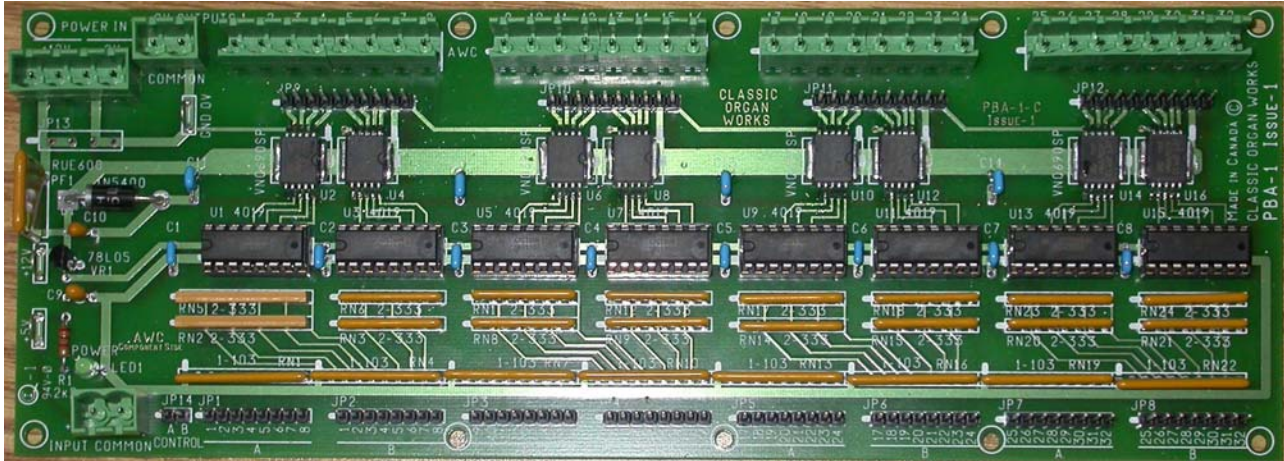


# Classic Organ Works

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## PBA-1: Pedal Borrow Action Board



### Description

The PBA-1 Pedal Borrow Action Switch board is used to select one, or both, sets of 32 inputs to one set of 32 outputs.

The intended use is to allow the bottom 32 pipes of a Swell rank to be played either by the Swell division or by the Pedal division, or both. In effect it is like a double 32-pole coupler relay such as Kimber-Allen used to make but it uses solid-state switching.

Other uses may be found for this unit. For instance, several could be used to expand an existing unit rank to two or more sources. By parallel wiring the second inputs 12 inputs distant, an octave coupler can be created.

All inputs must be positive-going and exceed approximately +3V in order to turn on an output. All inputs pass via 33k-Ohm series resistors that prevent excessive voltages from causing damage so that typical positive-going +12V sources are acceptable. Each input has a pull-down resistor of 10k-Ohm to 0V.

Outputs provide high-side switching to the board supply (typically +12V) and are open-circuit when off. Output current capacity for each output is typically a maximum of 10 Amps with short-circuit protection.

A self-resetting fuse of 6 Amps rating is included in the power input system to protect the drivers in case of faults or overloads. A green LED indicates that the board input power is on and the total current is within the fuse limit.

Mount the board via clips or spacers (using #4 screws) to keep it away from any woodwork. Not all the holes need be used unless inserting connectors causes excessive flexing of the board. No special ventilation is necessary and the board may be orientated as desired.

### Features

- Stand-alone unit.
- Compatible with most normal pipe ranks.
- 32 outputs for pipe magnets.
- Two sets of 32 inputs.
- Either or both sets of inputs can be routed to the outputs by means of two control inputs.
- Inputs and outputs use 0V Common.
- Input signals greater than +3V, typically +12V, +18V Max.
- Outputs typically +12V On, open-circuit when Off.
- Outputs short-circuit and overload protected.
- Outputs will run low-resistance magnets.
- Self-resetting fuse to protect board.
- Inputs on 0.1"-pitch header pins.
- Outputs on pluggable connectors of 0.2" pitch.
- Output connectors supplied.
- Parallel outputs on 0.1" headers allow OUTT-1 LED tester board sections to be used to check outputs.
- Power LED on board.
- Approximate size: 9.5" x 3.45" (24.2x8.8 cm) (w x h).

### Applications

To be used when a single rank of pipes is to be played by either, or both, of two divisions – typically a Swell rank bass end played by both Swell and Pedals. Standard positive-going, high-side switching is used (0V Common).