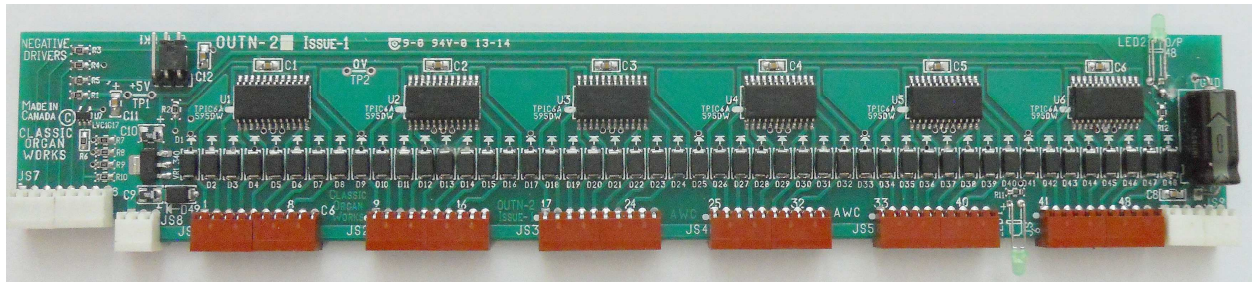


# Classic Organ Works

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## OUTN-2A Magnet Driver Board

### Description

The Classic Output Driver Board (OUTN-2A) accepts standard Classic serial data and uses it to turn the appropriate output pins on or off for applications such as the magnets of a rank of organ pipes or dual-magnetic stops.

The board has 48 active-low outputs for (positive common) relays and pipe chest magnets and is intended to be used in the CCU and PCU units ("Grey Boxes") as well as the MCU-1. It is also used in the MDKC-1 MIDI-driven Drawknob Controller.

It can drive any kind of stop-action magnet with a resistance of as low as 20 Ohms (when pulsed) or a pipe magnet of 40 Ohms minimum steady state.

All output devices are protected against reversed back-emf voltages from inductive loads by using either diodes or varistors (for higher voltages). Boards with diodes would be used for stop-action magnets where speed is not too important. Varistors may be used on pipe drivers as they are required to be faster.

A large capacitor on the supply line permits high-current pulsed loads when all outputs may be activated together.

Supply voltage range +7V to +24V, nominally +12V.

### Features

- Active-low drive outputs.
- 48 protected outputs can drive magnets, relays, motors, solenoids, LEDs and incandescent lamps (or a mix of them all).
- Output loads 40 Ohms minimum. (20 Ohms if pulsed).
- Diodes or Varistors protect outputs from inductive back-emf.
- Two optional 'Stop On' LEDs on Output-48.
- Surface-mount technology.
- Approximate dimensions:  
10.15" x 1.85" x 0.6" (w x h x d)

### Applications

While the Magnet Driver Board is intended to be used by organ-builders, it can also be used to operate incandescent lamps, LEDs, drive motors and solenoids for other applications such as model railroad systems.

Organ-builders typically use the OUTN-2A Board fitted with diodes in a packaged system (CCU) to operate stop-action magnets on a console.

It can also be used, with a faster action (when varistors are fitted), to drive a rank of wind-blown pipes.