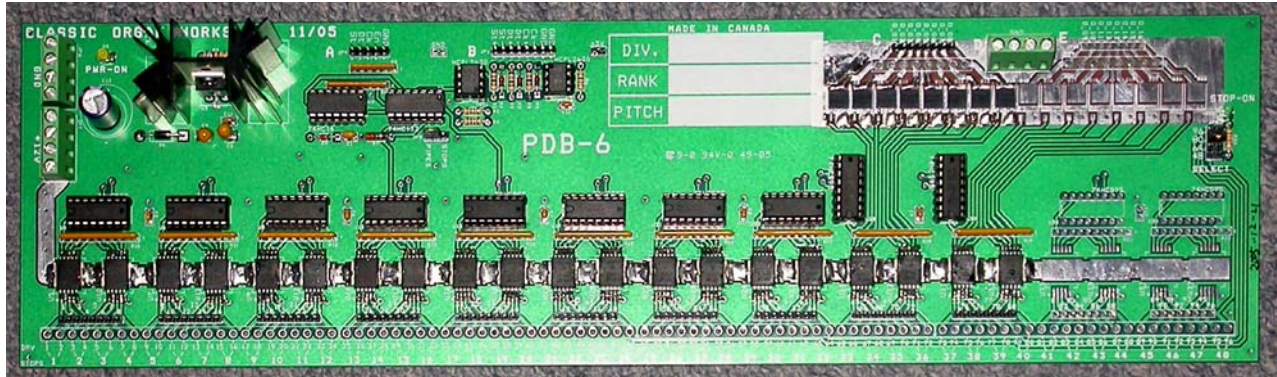


Classic Organ Works

2800 JOHN STREET, UNIT 4, MARKHAM, ONTARIO CANADA L3R 0E2
WWW.ORGANWORKS.COM 905-475-1275 OR 1-888-812-9717 INFO@ORGANWORKS.COM

PDB-6: High-Power Pipe Magnet Driver



Description

The Classic Organ Works High-Power Driver Board (PDB-6) can drive most kinds of low-resistance pipe magnets. In particular, it is suited to handle Direct-Electric matrixed chests where the stop controls require heavy currents (each stop requiring the sum of all its active note-magnet currents).

In its simplest form, the board can provide up to 96 high-current positive-drive outputs for normal pipe magnets (common 0V ground).

If used to drive matrixed chests, up to 16 of these outputs (65-80) are not used and high-power negative-drive outputs are used instead (common positive). However, these 16 can be used simultaneously with their positive-drive counterparts if necessary.

In matrixed configurations, there will be 61 notes and up to 16 stops but as many as 80 note outputs can be used. In normal configurations, the topmost outputs (81-96) would be used for expression shade motors, tremulants or short offset ranks. One output would normally be reserved for use as an indicator output for the Stop-On LED on the board.

The PDB-6 requires a single power source of +12V. The current drawn depends on the use, being the sum of all active outputs and can be considerable, depending on the resistance of the chest magnets and how many stops and notes are activated.

The common returns are only needed for normal use and are placed near the appropriate outputs.

The PDB-6 can be used for low-resistance dual-magnetic stop-action magnets (console drawknobs, tabs, etc.) if a link is moved to suit pulsed operation.

The board can be driven by Classic's RS-422 signals (via optically-isolated inputs) or by Classic's serial inputs.

Features

- o 96 High-powered positive-drive pipe magnet drivers, 10 Amps maximum, 7 Amps nominal
- o 16 High-powered negative-drive magnet drivers, 10 Amps Maximum
- o Outputs overload and short-circuit protected
- o All outputs have choice of 0.156" or 0.100" pitch header pins
- o Signal Inputs can be:
 - Optically-isolated Serial RS-422 or
 - Serial Classic for Classic control systems
- o Stop LED, selectable to Output 48, 64, 80 or 96
- o Link to select basic function for Pipes or Stops
- o Single-voltage power input, +12V nominal
- o Power LED on board
- o Terminal Blocks for supply input
- o Terminal blocks for common returns when used for non-matrixed outputs
- o Approximate size: 15.625" x 4.15" (w x h)

Applications

Single-board application for a matrixed direct-electric pipe chest with up to 80 notes and 16 stop controls.

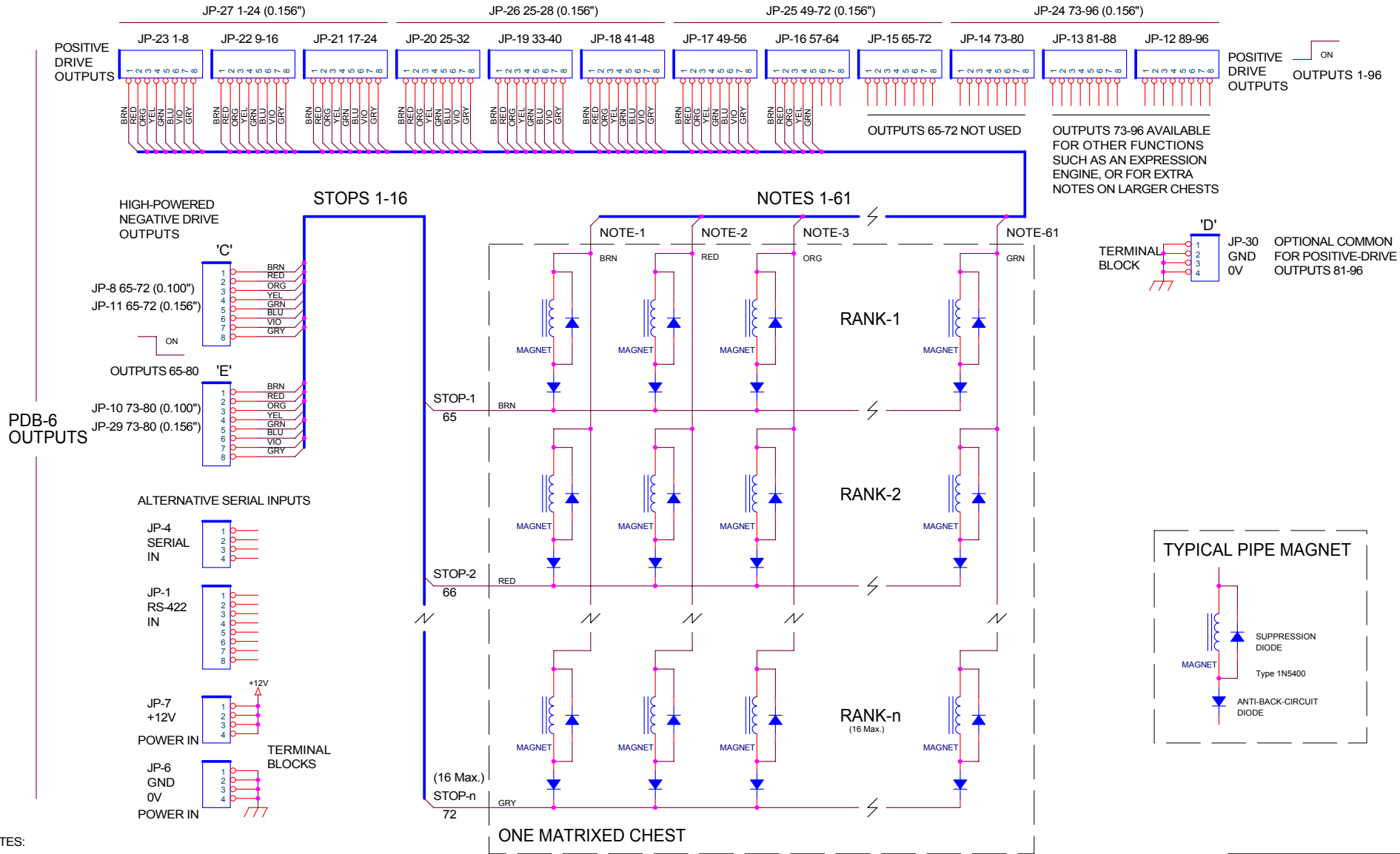
Can drive up to 96 low-resistance pipe magnets if used as a normal magnet driver.

Can be used to drive up to 48 low-resistance dual-magnetic stoptab actions (pulsed operation).

High-current pipe magnet drivers, 7 Amps nominal (for magnets less than 2 Ohms).

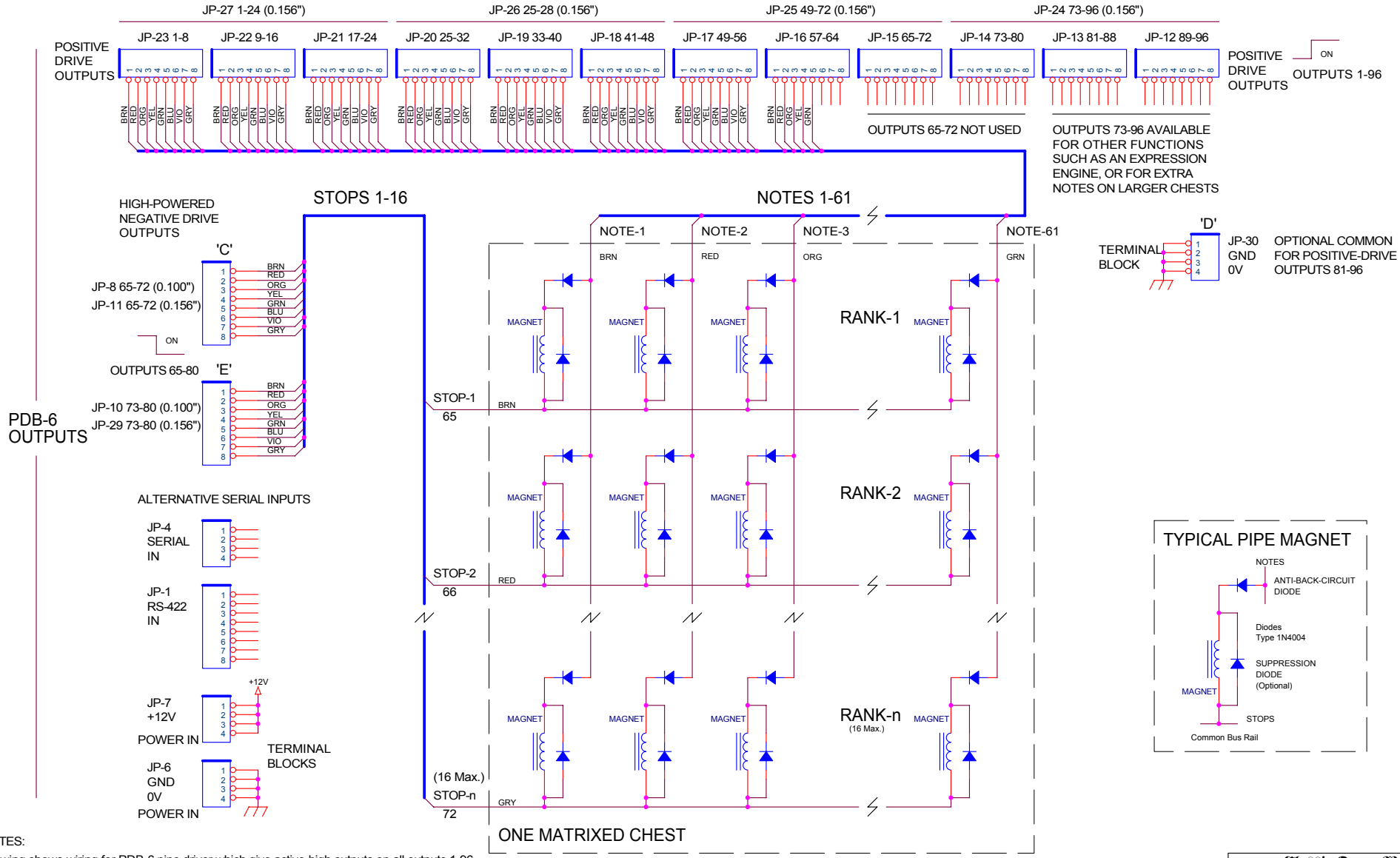
Controlled by Classic serial or optically-isolated RS422 serial inputs.

ChestPDB6-M.SCH Chest Wiring, PDB-6 MATRIX MATRIXED OUTPUTS (DIRECT-ELECTRIC)

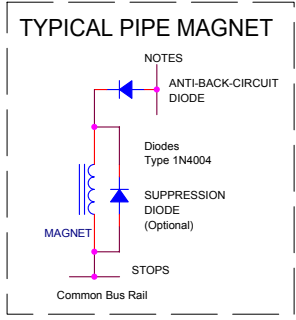


NOTES:
 Drawing shows wiring for PDB-6 pipe driver which give active-high outputs on all outputs 1-96. Their commons are at 0V which is supplied by the Stop drivers. Separate commons are not required.
 Board supplies Outputs 1-96 as Positive-drives as well as Outputs 65-80 as Negative-drives. The Negative-drive outputs are high-powered so that Matrixed (Pitman) chests can be driven.
 All outputs are available on both 0.100" or 0.156" pitch headers.
 Wiring details will be found in the PCWTCnnc.doc and DRVOCnnc.doc documents.

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2800 JOHN STREET, UNIT 4 MARKHAM, ONTARIO, CANADA L3R 0E2 Tel: (905) 475-1275 Fax: (905) 475-2735		
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Size	Document Number	Rev
Custom (B)	ChestPDB6-M.SCH	AWC
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For version with diodes on other side of magnets, see ChestPDB6-M.Sch.