

Digital Out Guide

For the Plexon MAP System



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Introduction and Terminology

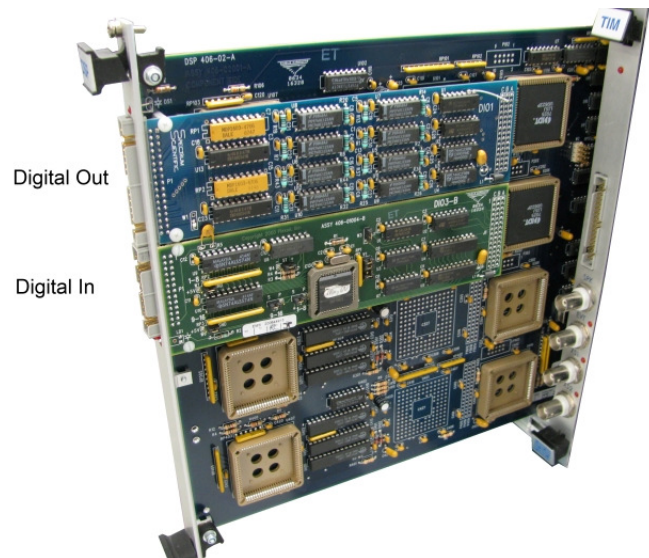
The Digital Out (DO) board is a 34-pin daughter-board to the MAP DSP board that autonomously outputs TTL pulses for the first two units sorted on a channel range determined by where the DO board is positioned.

Hardware Components

Each DSP board has up to four DSP chips, and each DSP chip handles 8 channels of spike data for a total of 32 channels. These DSP chips are arranged vertically on the DSP board and have mounts for daughter-boards such as the DO and Digital Input (DI). There is only room for one daughter-board per chip position – you cannot have a DO board for channels 1-8 if there is a DI board occupying the topmost DSP chip.

For each channel on the DO board, there is a pin for unit A, and a pin for unit B. Unit A and B are the first two units on a channel sorted in SortClient (the MAP Server's primary client for thresholding, sorting, and recording included in the RASPUTIN software suite).

When a sorted unit is detected on a channel that has a DO board, a TTL pulse is output on the pin respective to the channel and unit.



Chan 1 Unit A	1 ○ 2 ○	GND	A DO board can be placed in any position with a DSP chip that is not occupied by another DO or DI board.
Chan 1 Unit B	3 ○ 4 ○	GND	
Chan 2 Unit A	5 ○ 6 ○	GND	To the left is the DO board pinout. This pinout is true when the DO board is on the topmost position (channels 1-8). Adjust channel ranges accordingly for other positions
Chan 2 Unit B	7 ○ 8 ○	GND	
Chan 3 Unit A	9 ○ 10 ○	GND	DI boards are available in configurations that send a 220uS pulse, or a 330uS pulse.
Chan 3 Unit B	11 ○ 12 ○	GND	
Chan 4 Unit A	13 ○ 14 ○	GND	
Chan 4 Unit B	15 ○ 16 ○	GND	
Chan 5 Unit A	17 ○ 18 ○	GND	
Chan 5 Unit B	19 ○ 20 ○	GND	
Chan 6 Unit A	21 ○ 22 ○	GND	
Chan 6 Unit B	23 ○ 24 ○	GND	
Chan 7 Unit A	25 ○ 26 ○	GND	
Chan 7 Unit B	27 ○ 28 ○	GND	
Chan 8 Unit A	29 ○ 30 ○	GND	
Chan 8 Unit B	31 ○ 32 ○	GND	
NC	33 ○ 34 ○	NC	

Software Components

There is no software configuration required to make the DO board function. It simply outputs pulses for the first two units on each channel on its respective channel range (DSP slot). All that is required is sorting units in SortClient on a channel that has a DO board available.

Document History

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- Initial creation of DO overview document