



MODEL 504 SERIES

Valve Drive Board

- Adjustable RAMP & PWM Frequency
- Independent Low-High current adjustment
- Dual Output Range (Mid/Hi)
- Swap Feature
- RAMP duration between MID and HI Ranges
- Current sourcing w/feedback outputs
- 2.5 amp FET on/off outputs
- Over-signal protection
- Short circuit protection
- Reverse Polarity Protection
- Voltage Supply Transient Protection
- EMI & RFI Resistant



The Model 504 series of valve drive boards are an electronic interface between a command source (potentiometer, joystick, footpedal, etc.) and an electro-hydraulic valve or pump. The board receives analog signals from the command source, and provides Pulse Width Modulated Output (PWM) to drive most electrically modulated valves and pumps available today. The board also provides On/Off outputs and other features to smoothly stroke a valve or pump with greater control and flexibility over conventional hydraulic components. The 504 family of valve boards are designed for use on mobile equipment where extreme environments (Both weather and electrical) are encountered.

**For a complete description of the product, please see the M504 Manual.*

Electrical Data	
Supply Voltage	10-30 VDC
PWM Outputs (A, B)	Configurable from 10 - 2500mA
	Regulated Output Current Fixed within 2%
Auxiliary Outputs (A, B, Common*)	2.5 amps
Protection	Reverse Polarity, Over-Voltage, Open/Shorted Signal Leads, EMI/RFI Hardened, Transient Voltage Supply
Regulated Power Out (PT+, PT-)	5 VDC (may be used to power 5V CSource)
Signal Input	1 - 4 VDC, 2.5 Neutral (30% Signal Swing)
Environmental Data	
Operating Temperature	-40° to 85°C
Protection	Sealed Epoxy Potting (Black)
Resistance	Humidity, Rain/Water, Sun/UV exposure



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EXAMPLE MODEL - 504 PART NUMBERING

For special configurations, please call for assistance

504 C 5 N R C S 3 - XXX

MODEL

504 = [180-2500mA 45-450Hz]
 514 = [180-2500mA 451-1000Hz]
 524 = [10-800mA 45-450Hz]
 534 = [10-800mA 451-1000Hz]

MID RANGE

N = No Mid Range or Swap
 C = Swap w/common Mid Adjust
 S = Swap w/Separate Mid Adjust

COMMAND SOURCE VS

5 = 5VDC Regulated
 6 = 6VDC Regulated

INTERNAL RESISTORS

N = No On-board Resistors
 1 = 180Ω Padding Resistors
 2 = 360Ω Padding Resistors
 3 = 18Ω Padding Resistors

CALIBRATION NUMBER

OUTPUT CONFIGURATIONS

1 = PWM A & PWM B
 2 = PWM A&B, Aux A&B
 3 = PWM A&B, Com Aux
 4 = PWM A&B, Aux A&B, Com Aux
 5 = PWMA, Aux A&B, Com Aux
 (Flow Control Arrangement)
 6 = PWM A&B, Aux A&B, Com Aux
 (Floating connection)

HI RANGE

C = Common HI Trimpot Adjust
 S = Separate HI Trimpot Adjust

LOW RANGE

C = Common LO Trimpot Adjust
 S = Separate LO Trimpot Adjust
 R = Range Dependent LO

RAMP FEATURE

N = No Ramp
 R = Ramp Feature (0-5 Second Adj.)
 C = Ramp Cancel



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Technical Drawing Example

