

Drive Electronics

Product Description

The JetDrive™ V drive electronics, built on the robust JetDrive™ III architecture, is designed to provide complex drive waveforms to MicroFab's MJ microdispensing devices. It is computer controlled via USB communication and an external trigger is provided for real-time control during printing operations. An output to drive an LED strobe for drop observations is also provided, including a delay that is controlled either through the computer interface or a knob on the front panel. A Windows® based control program (JetServer™) is provided, along with the command set for customers who want to integrate control of the JetDrive™ V into their own software. An optional LabView® sample program is available. The JetDrive™ V comes in single output configuration for now.

Standard Features

- Computer controlled; Windows® based control program provided, along with command set.
- 8-parameter bipolar trapezoidal, sine, and 12-point arbitrary waveform modes.
- External trigger for real-time control; LED strobe output / delay.
- Storage of two waveforms – one for outputting a pulse and other for editing a waveform.
- Integrated into VaportJet™, SphereJet™, Jetlab® II, and the Jetlab® 4 family.



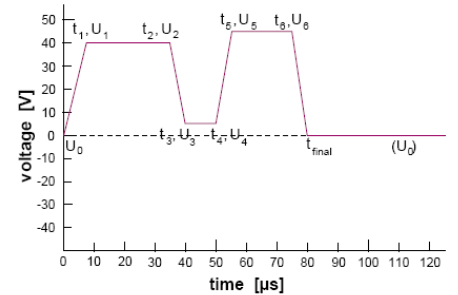
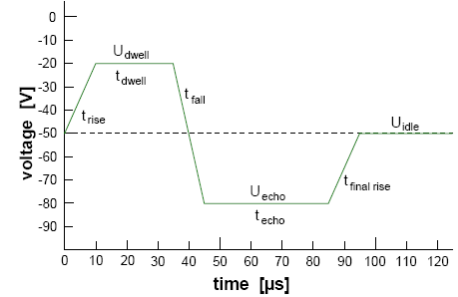
Note: The multiple output configurations will be available in near future.

Available Options

- USB relay unit for multiplexing of a single channel output.
- LabView® sample program.

Ordering Information

- CT-M5-01** JetDrive™ V controller, including command set and Windows® based Jetserver™ control program. Includes built in strobe delay. Level 02 firmware (complex waveform) included.
- CT-MX-01** Eight channel relay unit for multiplexing output of JetDrive™ V. External USB model.
- JetServer™-L** LabView® based Jetserver™ sample program.



Specifications

Bipolar mode:	
DC voltage offset (U_{idle})	-140 to +140 V
Voltage level 1 (U_{dwell})	-140 to +140 V
Voltage level 2 (U_{echo})	-140 to +140 V
Rise time, DC to V1	1 - 3276 μ s
V1 time	3 - 3276 μ s
Fall time V1 to V2	1 - 3276 μ s
V2 time	3 - 3276 μ s
Rise time, V2 to DC	1 - 3276 μ s
Arb mode:	
Number of V,t points	12
Voltages	-140 to 140 V
Times	1 - 3276 μ s
Sine Mode:	
DC voltage offset	-140 to 0 V
Amplitude	0 to 140 V
V limits	-140 to 140 V
Period	1 - 3276 μ s

Common Functions:	
Pulse generation control	(1) USB 2.0 (2) external TTL trigger
External trigger TTL	2.5-5 V > 0.5 μ s rising flank sets timing
Strobe delay	-500 μ s to +2500 μ s relative to trigger
Strobe output	1 TTL per 1-64 triggers
Strobe control	programmable and manual
Total pulse length	< 4095 μ s
Frequency	1 Hz – 30 kHz
Resolution	1V, 1 μ s
Pulse modes	single, burst, continuous
Burst count	1-1 million
Strobe connector	BNC
Trigger connector	BNC
USB	2.0
HV connector	DIN
Power cable and Power supply	C13 SJT Cable, 10A rating; 100VAC – 240VAC, 50/60Hz, 2A, \pm 10% fluctuation
CT-M5-01 Size	3¾×9½×13¼" (10×24×34cm)