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JetDrive™ III

Drive Electronics

Product Description

The JetDrive™ III drive electronics is designed to provide complex drive waveforms to MicroFab's MJ microdispensing devices. It is computer controlled via serial communications (RS-232) 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™ III into their own software. An optional LabView® sample program is available. The JetDrive™ III comes in single output and multiple output configurations.


Standard Features

- Computer controlled; Windows® based control program provided, along with command set.

- 8 point bipolar trapezoidal waveform plus 12 point arb waveform mode.

- External trigger for real-time control; LED strobe output / delay.

- Integrated into VaportJet™, SphereJet™, Jetlab® II, and the Jetlab® 4 family.

Available Options

- USB relay unit for multiplexing of a single channel output.

- Multichannel units for simultaneous drive. Configurations for up to 4 and up to 16 output channels.

- LabView® sample program.

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Ordering Information

CT-M3-02   JetDrive™ III 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™ III. External USB model.

CT-MC3-4   Multichannel JetDrive™ III controller. Maximum number of output channels = 4.

CT-MC3-16   Multichannel JetDrive™ III controller. Maximum number of output channels =16.

JetServer™-L   LabView® based Jetserver™ sample program.

CT-SI-01   CT-SI-01 strobe delay unit and LED. 6V power supply included.
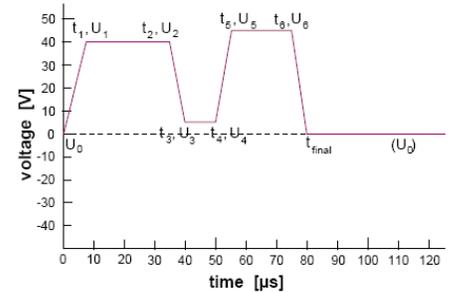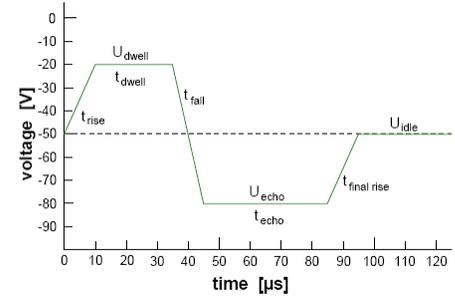
Specifications

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 µs
V1 time	3 - 3276 µs
Fall time V1 to V2	1 - 3276 µs
V2 time	3 - 3276 µs
Rise time, V2 to DC	1 - 3276 µs
Arb mode:	
Number of V,t points	12
Voltages	-140 to 140 V
Times	1 - 3276 µs
Sine Mode:	
DC voltage offset	-140 to 0 V
Amplitude	0 to 140 V
V limits	-140 to 140 V
Period	1 - 3276 µs

Common Functions:	
Pulse generation control	(1) RS-232-C (2) external TTL trigger
External trigger TTL	2.5-5 V >0.5 µs rising flank sets timing
Strobe delay	-500 µs to +2500 µs relative to trigger
Strobe output	1 TTL per 1-64 triggers
Strobe control	programmable and manual
Total pulse length	< 4095 µs
Frequency	1 Hz - 30 kHz
Resolution	0.1V, 1µs
Pulse modes	single, burst, continuous
Burst count	1-999
Strobe connector	BNC
Trigger connector	BNC
RS-232 connector	9-pin female
HV connector	DIN
Power	110 V or 220 V (internally set)
CT-M3-02 Size	2¾×7½×9¾″ (7×19×25 cm)
CT-MC3-4 Size	7×9×16″ (18×23×41 cm)
CT-MC3-16 Size	14×19×17″ (36×48×43 cm)

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