

## Benchtop LCD Drivers

### Features

- Complete, out-of-the box functionality
- Convenient standalone operation
- Complete user documentation
- Operates in minutes

### Applications

- Mates perfectly with BNS MS Series of Optical Shutters and Polarization Rotators
- General purpose LCD driver
- Laboratory LCD evaluation
- Product development

### Benefits

- Full functionality
- High reliability
- Convenience
- Ease of use

### Description

Boulder Nonlinear Systems, Inc. (BNS) now offers a versatile line up of liquid crystal device (LCD) drive electronics for general purpose and laboratory requirements. Our new MS Series Benchtop LCD Drivers are designed to drive the MS Series of Optical Shutters and Polarization Rotators.

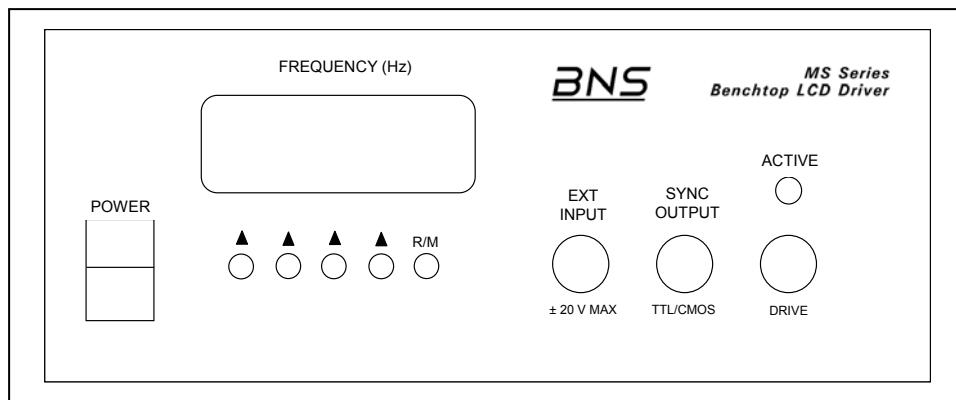
These Benchtop LCD Drivers produce a pre-conditioned drive electronics signal, perfect for the MS Series Optical Shutters and Polarization Rotators.

Drive waveform shape is optimized to provide maximum switching speed performance with MS Series Optical Shutters and Polarization Rotators.

Simple push button operation enables user adjustment of your device Switching Frequency. By design, the internal signal source always operates with a 50% duty cycle (ratio between open and closed states).

Switching between the two states can also be regulated externally by any low voltage square wave or digital signal (such as TTL) up to 20 volts.

MS Series Benchtop LCD Drivers are high quality instruments, provided to support evaluation and development applications using MS Series Optical Shutters and Polarization Rotators. Boulder Nonlinear Systems manufactures and sells liquid crystal based Optical Shutters and Polarization Rotators for OEM and laboratory applications.



*Figure 1 ~ Front control panel of MS Series Benchtop LCD Driver, now available from Boulder Nonlinear Systems, Inc.*

## Benchtop LCD Drivers

### MS Series

#### Specifications (Preliminary)

<b>Current Load</b>	1 A (maximum)	
<b>Drive Voltage</b>	$\pm 15$ V ac overshoot, $\pm 5$ V ac hold	
<b>Drive Waveform</b>	Variable frequency square wave, custom controlled voltage overshoot with 50% duty cycle	
<b>External Modulation (input)</b>	<i>Minimum</i> TTL levels	<i>Maximum</i> $\pm 20$ V
<b>Output Bias</b>	$\pm 2$ mV dc (maximum)	
<b>Power Consumption</b>	25 W (maximum)	
<b>Power Requirement (selectable)</b>	110 V ac ( $\pm 10\%$ ), 50/60 Hz	
	220 V ac ( $\pm 10\%$ ), 50/60 Hz	
<b>Replaceable Fuse</b>	110 V ac, 0.2 A	
	220 V ac, 0.1 A	
<b>Switching Frequency</b>	<b>internal (50% duty cycle)</b>	0.1 – 19,990 Hz
	<b>external (variable duty cycle)</b>	0 – 20 kHz

<b>External Dimensions (width x depth x height)</b>	330 x 364 x 128 mm (8.40 x 9.25 x 3.25 inches)
<b>Operating Temperature</b>	10 to 60° C
<b>Storage Temperature</b>	0 to 70° C
<b>Weight</b>	1.5 kg (3.25 lb)

Above specifications are subject to change without notice. Please contact Boulder Nonlinear Systems for additional updates.

### Company Profile

Boulder Nonlinear Systems, Inc. (BNS) is an innovative technology company specializing in dynamic liquid crystal polarization control solutions for both laser-based and imaging systems. Company strengths in scientific research and development are leveraged into OEM and standard product offerings targeted for astronomy, biomedical, defense, microscopy, optical computing, optical storage, and telecommunications applications.

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