

## C-844

# Multi-Axis Precision DC-Motor Controllers



C-844 DC-Motor Controller with  
M-500 series micropositioning stages.

## Ordering Information

### C-844.20

DC Motor Controller, 2 Axes,  
19" Rackmount, RS-232 and  
IEEE 488

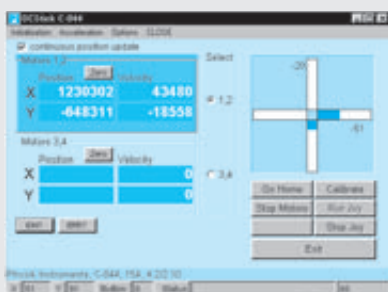
### C-844.40

DC Motor Controller, 4 Axes,  
19" Rackmount, RS-232 and  
IEEE 488

### Options

#### C-819.10

Analog Joystick



DC Stick software allows joystick  
operation of the C-844 motor controller  
from any PC.

- **Simultaneous Control of up to 4 DC Servo-Motors**
- **Fast 32-Bit Digital PID V-ff Servo Loop**
- **Integrated Linear Power Amplifiers (12-bit) and PWM Outputs**
- **Trapezoidal Curve, S-Curve & Velocity Contouring**
- **LabView™ Drivers, Libraries for C, PASCAL etc.**
- **IEEE-488.2 and RS-232 Interfaces**
- **SCPI Command Language**
- **Non-Volatile Macro-Command Storage**
- **16 I/O Lines for Flexible Automation**
- **4 Analog Input Lines**
- **12 TTL Inputs for Limit & Origin Switches**
- **Electronic Gearing**
- **Programmable Torque Limit**

The C-844 is a flexible, multi-purpose, rackmount positioning and motion controller for DC servo-motors. It is designed for general positioning tasks in research and industry.

### Multi-Processor Architecture

The C-844 is based on a multi-processor architecture. It includes a fast DSP motion-control chip set (providing trajectory generation and closed-loop digital servo-control based on position information supplied by incremental encoders) and a host processor for communication and command handling.

The host processor provides flexible and fast high-level-command handling and has advanced features such as stackable macro commands (up to 16 macros with up to 100 commands per macro in non-volatile storage). The command language complies with the SCPI (standard commands for programmable instruments) standard, which is a user-friendly, tree-structured language reflecting the device's functionality. The C-844 comes prepared for future firmware updates via the RS-232 interface.

The C-844 offers advanced features such as S-curve profile generation, electronic gearing, velocity contouring, real-time origin position capture and fast 32-bit PID + V-ff servo-control (parameters can be changed on-the-fly).

### Integrated Drivers

Integrated, low-noise, 15-watt linear power amplifiers allow operation of any PI micropositioning system without additional external amplifiers, reducing costs and simplifying the setup.

In addition to the analog motor output, PWM (pulse width modulation) output signals are available to drive PI micropositioning stages equipped with ActiveDrive™ motors (e.g. M-511.DD, M-126.PD) or external PWM power amplifiers from other manufacturers.

### SCPI Command Language

C-844 motor controllers are computer controlled using the SCPI (standard command language for programmable instruments) language. This language is well established for instruments such as oscilloscopes, signal generators, programmable power supplies, etc. and saves valuable programming time by its simple and easy-to-remember structure.

### Partial Command Listing:

#### TARG 5000

Moves motor to position 5000

#### TARG:RPOS 250

Moves 250 counts relative to current position

#### OUTP:SERV ON

Activates the servo loop

#### TARG?

Reports the target position

#### MVEL 75000

Sets the maximum velocity to 75000 c/s

#### MVEL?

Reads programmed maximum velocity