

# THE IDEAL WAY



ISO 9001  
Ideal Aeromsmith, Inc.  
CERTIFIED

## TEST TABLE CONTROLLER AERO 900

The Aero 900 is used to control various single and multi-axis test table systems.

### Standard Features:

- Digital PID Control using 32-bit Microprocessor
- Standard IEEE-488 computer interface, RS-232 Optional
- Up to three axes of enhanced performance per Motion Control Card (MCC)
- Front Panel keypad and LCD Display enable convenient local operation and programming
- Programmable Rate Pulse Output
- Sinusoidal Motion Profile
- Trapezoidal Velocity Profile



### Optional Features:

- User defined Motion Profiles
- 12-bit Analog Position Input with user defined ranges
- 12-bit Analog Rate Input with user defined ranges
- Automatic Data Capture (Data Logging)

### DESCRIPTION

The AERO 900 Test Table Controller is designed to control single-axis and multi-axis test tables with unparalleled accuracy and precision. Components such as the 32-bit Galil multi-axis servo controller add expertise, reliability, and economy to the design. The AERO 900 is integrated with interface hardware and software to create an extremely easy-to-use motion simulation instrumentation. The Aeromsmith Table Language (ATL) assists the test engineer with a simple command set and protocol. Its 486DX CPU with flash EPROM and battery-backed SRAM enhance its reliability over mechanical disk drives.

## SPECIFICATIONS

<b>Aero 900</b>	
Position Accuracy	+/- 1 quadrature count (system dependent)
Velocity Accuracy	Phase-locked, Crystal and system dependent
Position Range	+/- 2147483647 counts per move
Velocity Range	Up to 8000000 counts/sec
Velocity Resolution	2 counts/sec
Acceleration Range	1024 to 67107840 counts/sec <sup>2</sup>
Acceleration Resolution	1024 counts/sec <sup>2</sup>
Motor Command Resolution	14 Bits or .0012V
Servo Loop Update Time	1 millisecond
Rate Pulse Range	1 to 16777215 counts
Rate Pulse Resolution	1 count

(Note: These specifications describe the control system performance capability. System performance for a specific system is dependent upon the mechanical structure and the servo system components such as the encoder and drive motor.)

### Controller Operating Modes:

#### **ATL Mode**

The ATL mode is the standard remote digital interface of the test table controller. It has a special command set and protocol. All parameters may be set and monitored in this mode.

#### **Local Mode**

The local mode is classified as the operations that use the special programmed keys of the front panel keypad. All ATL commands can be entered from the keypad.

#### **Analog Position Input Mode (Optional)**

The user can input a  $\pm 10V$  analog signal for each axis which represents the absolute position. The position range may be set by the user.

#### **Analog Velocity Input Mode (Optional)**

The user can input a  $\pm 10V$  analog signal for each axis which represents and angular velocity. The velocity range may be set by the user.

#### **Real-Time Motion Simulation**

The user may update the commanded velocity for each axis at a rate of 1000 Hz.

For special requirements or custom specifications, contact Ideal Aerosmith, Inc.

Prices and specifications are subject to change without notice

Price is in U.S. Dollars

Revision A