MODEL 4000 CONTROLLER

Motion controller system can drive *all* of Kensington's motion control products

- Communication with host using simple ASCII character strings.
- User-configurable communications options.
- Non-volatile storage of performance and application parameters.
- Built-in test and setup functions simplify axis board adjustment.
- Software and hardware motion limits.
- Emergency "motor-off" feature removes motor power to the axis boards without losing position information.
- Built-in axis autocalibration, preventive maintenance, and service diagnostics.
- 72-hour burn-in with temperature and load cycling for enhanced reliability.

The Model 4000 controller performs all command tasks for the movement of robot, prealigner, stage, and tilt/scanner modules. Each controller contains a power supply, SBC (Single Board Computer) board, motherboard, power transistors, and a variety of axis boards (up to six boards). A large heat sink on the back of the controller contains the power-drive transistors for each drive motor. The controller has a main circuit breaker mounted near the input power cord The controller is given instructions by computer interfacing via an RS232 port or an optional IEEE-488 port.

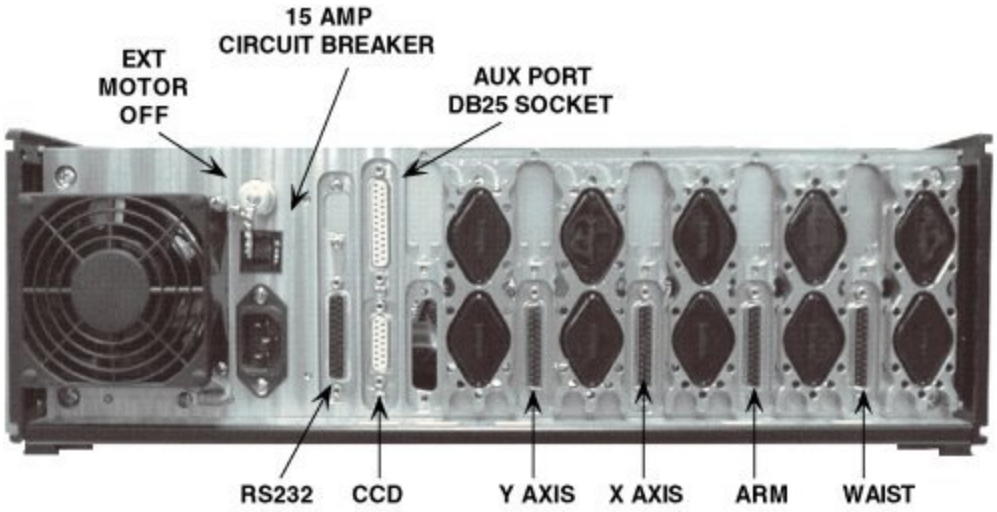
The Model 4000 Controller is designed to move robots and position stages with sub-micron repeatability over large travels. Kensington motion devices incorporate DC servomotors with optical encoder position feedback for smooth and accurate motion. System operation is based on commands sent from a host computer. The Model 4000 utilizes high-level commands supported by the firmware to free the host program from having to coordinate complex combinations of motion, timing, data gathering, error handling, and error recovery.

The same basic axis and controller boards are used for all Kensington motion products. Each board is individually configured (for motor speeds, compensation, hardware, and firmware) for its particular application. This means that one controller can drive a wide selection of motion products.

The Model 4000 command set uses ASCII character strings that communicate according to RS232 or IEEE488 standards. The commands may be issued from a terminal emulator or a host program. No specific requirements are placed upon the host beyond conformance to the communications standards.

The basic linear axis command set is powerful and easy to use, with instructions that allow control over axis motions. For instance, programmable acceleration and loop gains enable total system performance optimization for specific applications. The host computer can change commands, read positions, or interrogate status at any time, even during motion execution. More complex motion devices utilize "system" commands that coordinate multiple axis functions. These additional commands simplify the host program and reduce communications overhead.

The status of the axis or system is continuously available to the host upon query. If an error is detected, an error code will be returned to the host, identifying the cause of the error.



(SAMPLE CONFIGURATION–YOUR SYSTEM MAY BE DIFFERENT)

SPECIFICATIONS :

WEIGHT: 30 LBS
MOUNTING: TRIPPLE SPACE RACK MOUNT (19")
POWER REQUIREMENTS: 85-265 VAC, 47-63 HZ, FUSED AT 15 AMPS MINIMUM
COMMUNICATIONS: 4S232 OR CCD (IEEE-488)