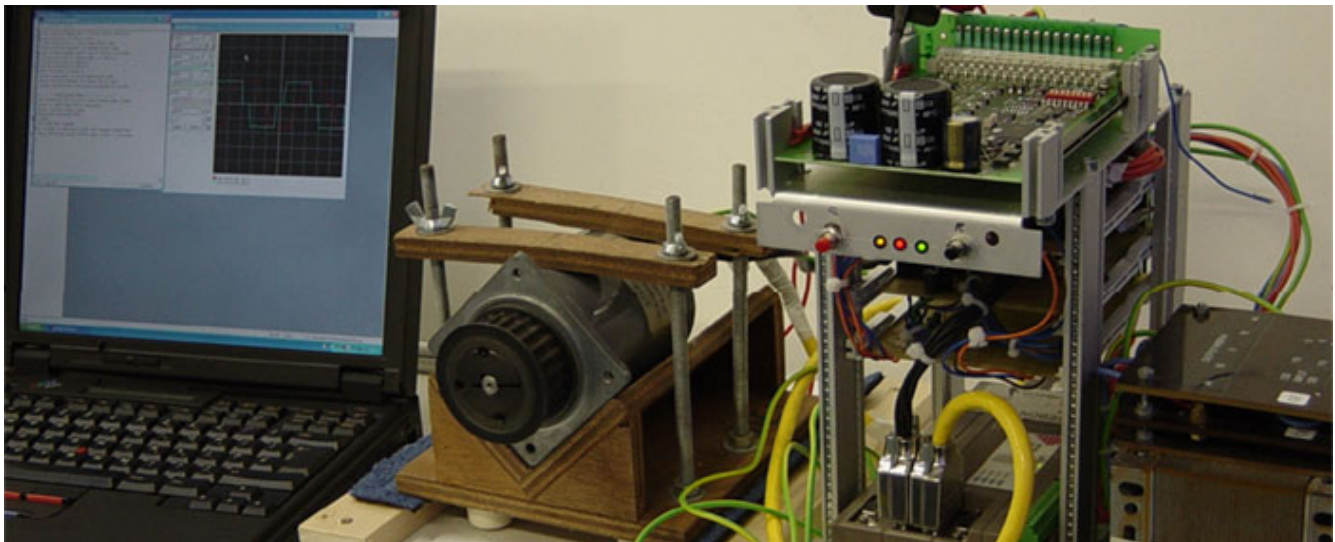


## NEWS RELEASE March 2005

### *Stepper Drive Product Tester...*

Greenwave Electronics Ltd on behalf of Total Motion Systems Limited has developed a product testing strategy for its new GSD1x drives around the MC206 controller.



The parallel process and machine control capabilities of the Trio Motion Coordinator platform are exploited successfully to provide a full product test. The product test cycle completes in less than 2½ minutes compared to at least 30 minutes that would be required to complete the test with individual non automated lab test equipment.

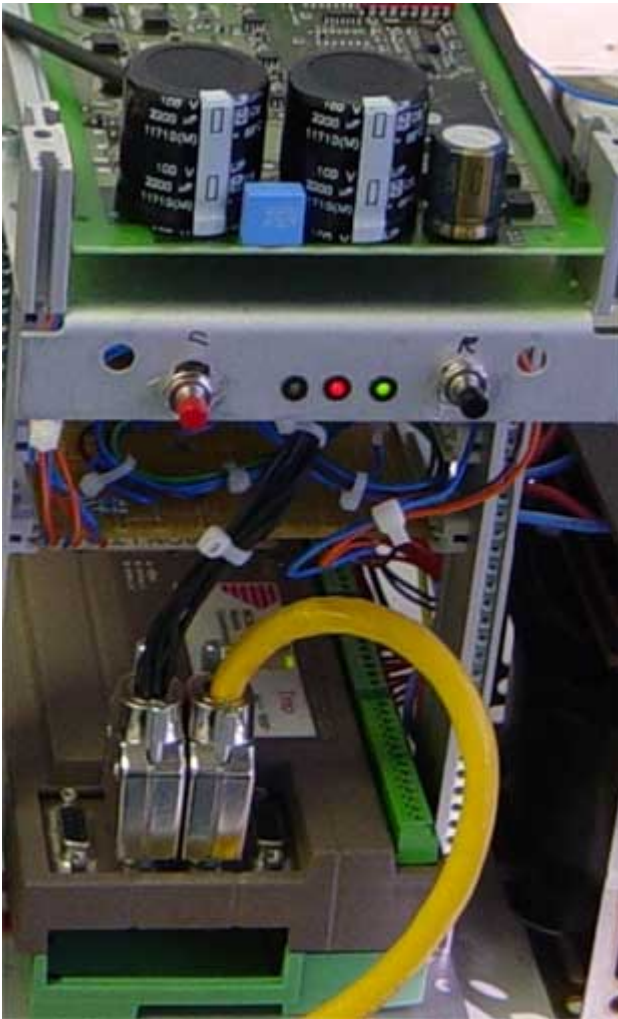
The clarity and flexibility of the Trio basic language allows quick design and adjustment of the function test code to allow accommodation of new product variants. Routine program flow, variables and maths functions are used to good effect in the test program. The tester was designed at minimal cost and in service within two weeks, including dedicated custom interface circuits. It has realised a high performance tester at a much lower cost than alternatives.

The powerful IO interface is used to its full. The Analogue input is used through multiplexer relays to measure motor current and DC bus voltage. Eight high current digital outputs are used to control relays and apply control inputs to the drive under test. Six digital inputs are used to monitor drive outputs and operator interface. Two of the available four axis interfaces are used to provide the stepper command and encoder interface.

The product under test is a high performance stepper drive with on board step oscillator and built in power supply suitable for feeding directly from a mains transformer.

In order to test the drive in all operating modes the drive mounted bitswitches needs to be adjusted manually at different points in the test. The host PC screen is used to prompt the operator to make the changes and for displaying test results and test progress. Use is also made of the powerful scope function to display the motor current waveforms...

The functional tester carries out tests including:-



- Step accuracy in different resolutions
- Current levels and current profile timings
- different modes
- Over voltage tests
- Regenerative braking circuit tests
- Short circuit tests
- Onboard oscillator functions

The drive product tester demonstrates that not only can Trio Motion products be used to control motion they can also be used for process control applications and for product testers. The Trio Motion Coordinator product range should be considered for providing more than just a motion controller and in particular situations they can be used to integrate other process functions including data logging to a file.