



PressRelease

For Immediate Release:

September 13, 2011

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Galil Motion Controller is Used to Help Guide Remote Controlled Vehicle for Hyper-Realistic Military Training

(Rocklin, CA) — Strategic Operations, Inc (STOPS) uses a Galil DMC-4080 8-axis Ethernet motion controller and servo drive package in their Ballistic Unmanned Ground Vehicle (BUGV) used in their Hyper-Realistic™ training environments for military, law enforcement and homeland security operations.

Designed for training operations, no live driver sits in the BUGV; just hyper realistic foam mannequins. Real people operate the vehicle via a sophisticated remote control device. Key driving functions are managed by the Galil DMC-4080 8-axis Ethernet motion controller which incorporates two Galil D3040 4-axis, 500 W drives operating at voltages between 20 V and 80 V and peak currents up to 10 A per axis.

Three of the axes of the Galil DMC-4080 control the steering, shifting and throttle actions, while a fourth axis is used for additional steering requirements. Another axis is used for controlling a machine gun mounted inside the vehicle which fires blanks at the trainees. The remaining three axes are reserved for testing and other features. STOPS uses some of the controller input/output (I/O) to operate relays that energize such functions as the ignition or turn signals.

A key factor why STOPS specified the Galil controller is its ability to function with utmost reliability inside a vehicle subject to extremely harsh conditions, like wide-ranging temperatures of -10° C to 65° C; dusty, loose and uneven terrain; real ammunition and explosives; and chemicals. For STOPS, failure is not an option with the controller.

“The overall robustness of the Galil controller is impressive,” said Kit Lavell, executive vice president for Strategic Operations, who liked how the Tell Torque feature of the DMC-4080 takes readings from the motor of the BUGV to determine the harshness of the terrain it is on, and then delivers its findings to the remote control “driver” so he can either ease down or rev up the engine accordingly.

Other Galil features play significant roles in operating the BUGV, such as the Homing Routine and Limits feature which allows for safe power-up of the vehicle and re-centering of the wheels for each training session.

“We also use Galil’s Position Tracking Mode to send position data streams from the host to the four axes used for driving the BUGV. The data throughput is excellent, with no issues, no latency,” said Lavell.

STOPS engineers found the native Galil programming language easy-to-use, which helped enable them to incorporate several safety routines into the operating system. For example, whenever the controller does not receive a data stream, it goes into a fail-safe routine that brings the vehicle to a stop.

Since 2002, Strategic Operations has provided training to over 450,000 Marines, soldiers, sailors and Coast Guard personnel to prepare them for the battlefields of Iraq, Afghanistan and other hostile places. For more information about Strategic Operations see www.strategic-operations.com.

For more information about the Strategic Operations application story, see <http://www.galilmc.com/support/customers/strategic-operations.pdf>. A video of the STOPS vehicle in motion is at <http://www.youtube.com/user/GalilMC> along with other customer videos showing Galil controllers in action. Detailed specifications for Galil’s DMC-40x0 motion controllers can be found at <http://www.galilmc.com/products/dmc-40x0.php>

For more information about Galil, please see <http://www.galilmc.com/> or contact Lisa Wade, VP-Marketing and Sales, at Galil Motion Control, Inc., 270 Technology Way, Rocklin, CA 95765, Ph. 800-377-6329 or email lisaw@galilmc.com.

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About Galil Motion Control, Inc. (www.galilmc.com)

Privately held and profitable for over 100 consecutive quarters, Galil Motion Control, Inc. was founded in 1983 by Jacob Tal and Wayne Baron. Galil became the first company to produce a microprocessor-based servo motor controller without tachometer feedback. Since then, Galil has continued to advance motion control technology and has found industry-leading acceptance with over 500,000 controllers successfully installed worldwide. Various applications include machines for the medical, semiconductor, machine tool, food processing, and textile industries. Recently, Galil has introduced several motion and I/O controllers for the Ethernet including the high-speed Accelera motion controllers, lowest cost Econo motion controllers and the RIO Pocket PLC series.



Ballistic Unmanned Ground Vehicle (BUGV) from Strategic Operations, Inc (STOPS)



Galil DMC-4080 8-axis Ethernet motion controller