

- 03\_Three-Axis Test Table
- 04\_Large Torque Simulator
- 07\_ACUTRONIC Olten expanding

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# Newsletter



Astronaut working on International Space Station

Source: NASA, National Aeronautics and Space Administration

## Editorial

### Dear reader

Many of the past newsletters – and its editorials – were marked by traditional themes such as process reengineering programs, customer orientation activities or quality management. All these topics marked the milestones of a growing company. Being the leader in our market, we will now enter new areas to continue our path for growth. The question remains how a highly specialized company as ACUTRONIC can grow. With its strong technology skills, a capability based strategy approach is the path to go. Currently we explore ways to enter into new markets and applications based on our existing capabilities. We will keep you updated.

Thomas W Jung  
Group CEO ACUTRONIC

## ACUTRONIC USA Designs / Manufactures a Three-Axis HWIL Motion Simulator

Paul Hollinger, ACUTRONIC USA

ACUTRONIC USA has manufactured a Three-Axis Missile Motion Simulator (TAMMS) which maintains payload orientations with a maximum composite error of 50 micro radians.

ACUTRONIC USA, Inc. has designed, manufactured, and is currently testing a Model AC371-1 Three-Axis Motion Simulator designed to test and evaluate missile systems and their components for Lockheed Martin. This “turn-key” Three-Axis Motion Simulator includes a three-axis

simulator, drive power amplifier consoles, simulator control console containing an ACUTROL 3000 motion controller, and a SCRAMNet high speed reflective memory remote interface along with system instal-

Continued on page 02

# ACUTRONIC

Continuation cover story

lation, integration, and startup at Lockheed Martin's facility. The Hardware-in-the-loop Simulation System will enable Lockheed Martin to simulate realistic engagement scenarios. Key features and performance specifications for the Model AC371-1 are as follows:

- Designed for large payloads; up to 12-inch diameter, 47-inch aft dimension, and 250 lbs.

- The Three-Axis Motion Simulator is designed to produce and maintain Payload Orientations with a maximum composite error of 50 micro radians (10.3 arc seconds).

- Controlled by the truly digital ACUTROL 3000 servo system with SCRAMNet shared memory interface for real time Hardware-in-the-loop (HWIL) simulations.

- AC brushless servomotors drive all three axes with the Pitch axis peak torque being greater than 55,000 ft-lbs (74,580 N-M). ]

For further information please contact:

**Paul Hollinger**  
ACUTRONIC USA Inc.  
640 Alpha Drive  
Pittsburgh, PA 15238

Phone: 412-963-9400  
phollinger@acutronic.com  
www.acutronic.com



**Model AC371-1**  
Three-Axis Missile Motion Simulator

Performance Specifications	Roll	Yaw	Pitch
<b>Displacement, deg</b>	Continuous	± 50	± 45
<b>Position accuracy, 0 to peak, arc-sec</b>	2	2	2
<b>Rate, maximum, deg/sec</b>	1,440	400	400
<b>Acceleration, deg/sec<sup>2</sup></b>	15,000	6,000	6,000
<b>Frequency Response, Hz (with 100 lb. payload)</b>	35	35	35