



CREATIVE DIGITAL SYSTEMS INTEGRATION

# Telemetry Environment Simulator (TES)

## Validate Electromechanical Performance of Tracking Systems

CDSI's TES is designed to test your Telemetry System in preparation for high-value target engagements. The TES combines the input antenna position with the synthetic target scenario to produce analog AM & AGC signals that are fed to the ACU via the same analog inputs used by the receivers. The TES is an excellent way to test end-to-end ACU/pedestal operation as it is transparent to the antenna system. Used as part of an ATP, on a periodic basis, operator training, or before a critical mission.

### Key Capabilities

- Test Systems Electromechanical Performance
- Simulate & Test Complex Real-World Scenarios
  - Overhead Passes (Keyhole)
  - Close-Range Missile Launches
  - Hypervelocity Tracking
- Accepts Any Feed Scan Rates
- Option to use Measured or Simulated Antenna Patterns
- TES Matches ACU's AM Phasing Through a Calibration Process
- Automatic High Gain/AcqAid Switching
- Provide Operator Mission Training
- Accommodates Various Position Feedback
  - Parallel
    - Encoder, SSI, Synchro
  - External
    - IMU (Sea Stabilization)



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### Specifications

Form Factor.....	Portable Compact Real-Time Processor
Processor and I/Os.....	Based on PC/104 Form Factor
Real-Time Processor.....	Xilinx FPGA with Analog I/Os
Pedestal Feedback Inputs.....	Parallel (Encoder, Synchro) External (IMU on Yoke Arm) Ethernet Broadcast
Feed Input.....	Feed TDC ACU/Servo Sync Pulse
Variable Scan Rates.....	10-500Hz (Mechanical) 10-2kHz (Electrical)
Outputs.....	Up to 2 Receivers Included (AM + AGC or Am Modulated AGC)
User Interface.....	Provided on Included Laptop
Acquisition Gain Antenna.....	Supported
Antenna Patterns.....	User Provided Measurements Simulated
Tracking Rates.....	Up to 20°/second (Pedestal Feedback Dependent)

