

## FLIGHTLINE PROVEN END-TO-END TESTER IN COMPACT, USER-FRIENDLY SYSTEM

The Electronic Combat End-to-End Test System EC-ETETS provides performance verification of installed electronic combat equipment. The system provides the latest in state-of-the-art synthetic instrument (SI) technology. Using SI allows the test system to inhabit a smaller footprint than other testers with similar capabilities.

The major components of EC-ETETS System are:

- Digital Control & Interface Unit (DCIU) (PN: 900749-001)
- Radio Frequency Control & Interface Unit (RFCIU) (PN: 900750-001)
- Case, Accessory, EC-ETETS (PN: 900739-001)
- Control & Interface, EC-ETETS (PN: 900736-001)

SI technology reduces near-term obsolescence risks and also makes it possible to bring traditional instruments such as broadband radio frequency synthesizers,

spectrum analyzers, waveform analyzers, oscilloscopes, and power meters out to the flightline in a military qualified, manportable tester. The combination of increasingly available commercial-off-the-shelf SI hardware and DRS's vast library of graphic user interface software modules allows DRS to easily customize and reconfigure the tester to meet our customers' needs today, and well into the future.

The EC-ETETS capitalizes on proven test technology employed by the Royal Netherlands AF, United Kingdom RAF, Germany AF, Italian AF, Spanish AF, Royal Saudi SAF, and Qatar AF. The test system is the latest generation of DRS aircraft test equipment products and is being expanded beyond the Radar Warning Receiver (RWR) and RF Jammers into RF Missile Warning and RF Towed Decoy platforms.



Simulated Scope and Threat Monitoring Screen

# ELECTRONIC COMBAT END-TO-END TEST SYSTEM

## FULL RANGE OF TESTING

The tester allows the operator to run different test setups and scenarios in order to verify system operational status. Radar warning receivers and electronic countermeasures system performance is fully tested, including antennas, transmission lines, radomes, cockpit displays, system communication buses. Selectable, non-intrusive testing can be fully automatic, semi-automatic or manual. Test capabilities include:

- Sensitivity
- Power
- Selectivity
- Frequency
- System response to stimulus
- Rise/fall times
- Return loss/Voltage Standing Wave Ratio
- Amplitude
- Duty cycle
- Insertion loss
- Pulse repetition interval
- Distance to fault
- Electronic countermeasures technique analysis
- Pulse width measurements

## USER-FRIENDLY TEST PROGRAM SETS

DRS has over 50 years experience successfully integrating and developing electronic warfare (EW) avionics test program sets. DRS uses graphical user interface-based software like National Instruments LabVIEW to develop and field user-friendly operations-level test programs. As a commercial-off-the-shelf (COTS) programming environment, LabVIEW ensures the customer of a non-proprietary test program that can be organically maintained with little training, thereby reducing total cost of ownership. DRS has an existing library of over 300 application-specific test routine modules for testing EW and avionics systems so customers benefit from lower test program development costs. User instructions are presented to the EC-ETETS operator in a Microsoft Windows® format with commands and prompts using standard graphical interface controls, providing single-click operation of even the most complex tests.

## COMPATIBLE WITH EXISTING TEST INTERFACE HARDWARE

DRS is the world-leader designer and developer of antenna couplers. Our couplers provide real total system isolation from extraneous radio frequency (RF) and environmental signals. The antenna couplers also provide a secure testing environment for simulating real-world threats without compromise of sensitive emitter identification data. DRS antenna couplers are a low-cost, maintainable on-aircraft test capability that can be used with any approved RF source or test set. Most existing antenna couplers are fully compatible with the EC-ETETS.

## THE RIGHT SOLUTION FOR END-TO-END TEST

The DRS Electronic Combat End-to-End Test System uses state-of-the-art technology, has proven capabilities, and has a wide range of simulation and measurement test capabilities. This, along with its user-friendly system and test program software compatibility with existing antenna couplers, makes the test system the right choice for maintaining your electronic combat systems.

## PHYSICAL AND ENVIRONMENTAL DATA (DCIU / RFCIU)

CHARACTERISTIC	MEASUREMENT
Height	330 mm. / 13 in.
Width	610 mm. / 24 in.
Depth	762 mm. / 30 in.
Weight	DCIU 61 kg. / 136 lbs.; RFCIU 57 kg. / 126 lbs.
Color	Olive Drab
Temperature (Operating)	-40°C to 48°C; -40°F to 118.4°F
Temperature (Storage/Transport)	-70°C to 70°C; -94°F to 158°F
Humidity (Operating/Storage/Transport)	100% Relative Humidity (RH)
Max Operating Altitude	3048m

## ELECTRONIC DATA

### Panel Connectors

#### DCIU Front Interface Panel

Unit On/Off switch, Circuit Breaker, Aux power Interface, HHT Bus, 1553 Bus, RFCIU Interface (3), Voltage Standing Wave Ratio VSWR connector, Status Indicators

#### System Controller Panel

Ports: Video (VGA), 3 USB 2.0, removable hard-drive

#### RFCIU Front Interface Panel

DCIU Interface (3), RF Hood Interface (5 connectors; 10 RWR stimulus outputs, 4 missile approach warner inputs/outputs, 2 ECM inputs), Aux IN (3), Aux OUT, status indicator

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