



## Functional ATE & Power Supply Testers

Military and Aerospace Test Systems

Functional ATE Systems

Power Supply Test Systems

Hi-Pot Test Systems

ESS / Burn-In / Vibration Monitoring Systems

Manual Test Systems

Test Fixtures and ITAs

Box Builds and Sub-Assemblies

Switching and I/O Cards

Custom Cabinets and Accessories



# Functional ATE & Power Supply Test Systems



FineTest 1 Industry Drive, Palm Coast, FL 32137 Tel: (386) 446-0463 Fax: (386) 446-0465 email: [sales@finetest.com](mailto:sales@finetest.com)

## Military and Aerospace Test Systems

***FineTest Test Systems are used in support of projects for direct Military/Aerospace and subcontractors including the following:***

***US Air Force***

***US Navy***

***Raytheon***

***Lockheed-Martin***

***Harris***

***BAE Systems***

***DRS Technologies***

***GE Aviation***

***Boeing***

***Honeywell Flight Division***

***North Atlantic Industries***

***Motorola Satellite***

***Israel Aircraft Industries***

***Aselsan***

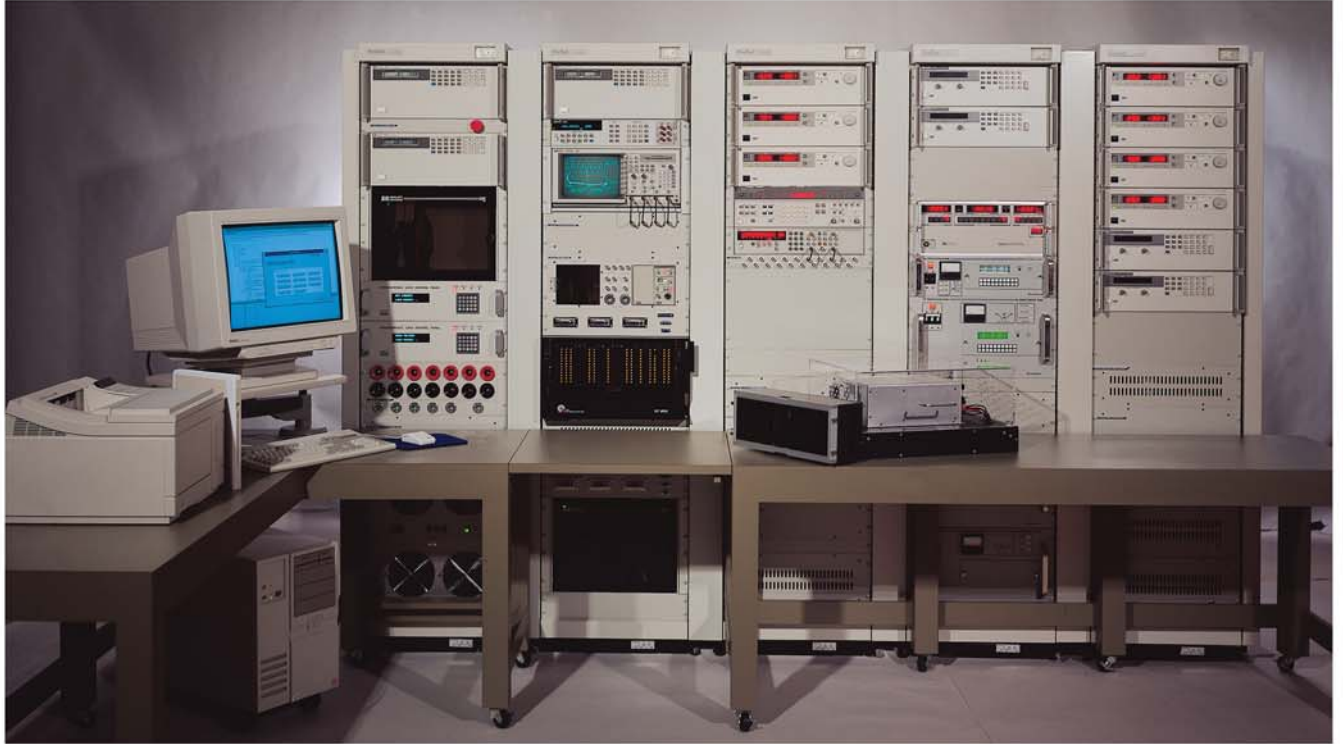
***Sandia National Labs***





# Power Supply Testers

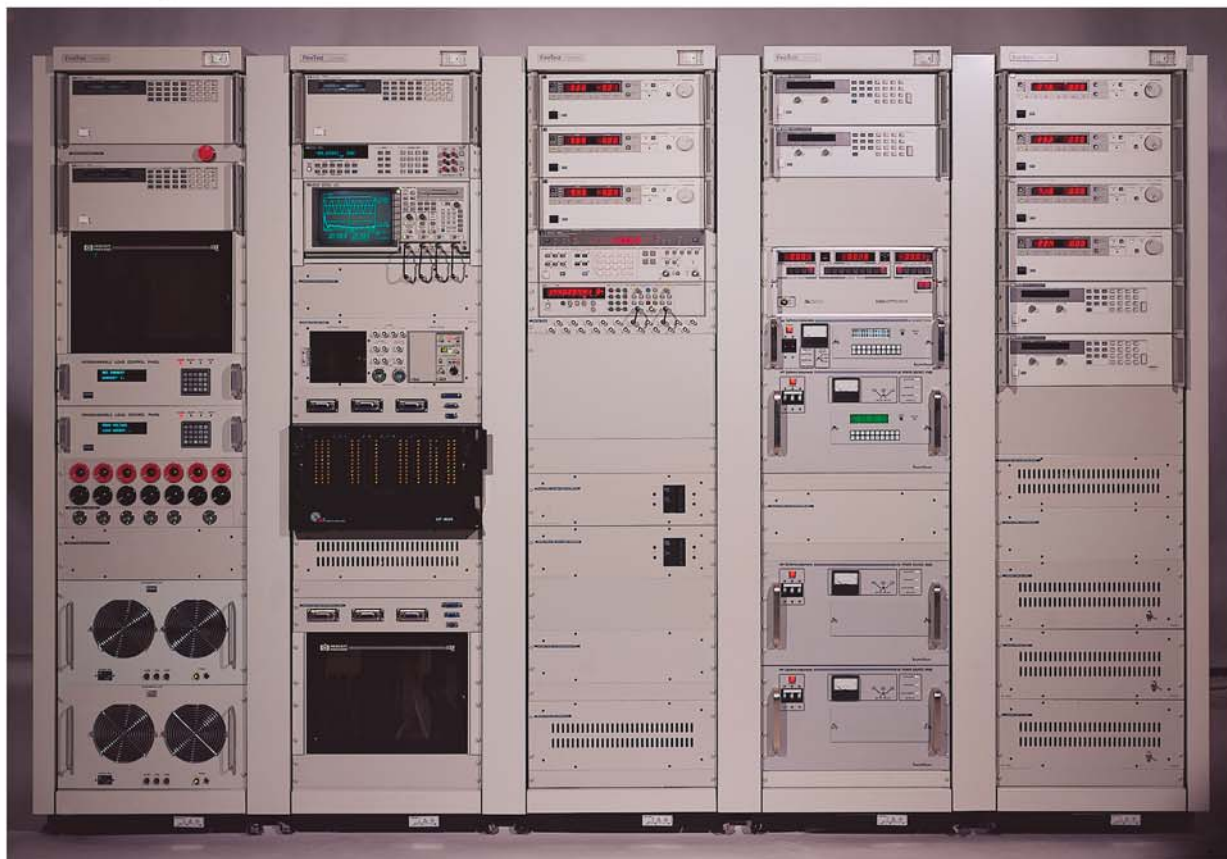
MILITARY & AEROSPACE TEST SYSTEMS



*Front view of Tester*

**Application:** Military AC/DC and DC/DC Power Supplies and Sub-Assemblies  
Repair and Test Depot

**Features:** FineSoft on LabWindows CVI platform  
2 Testers connected with Ethernet Hub to Dedicated Server  
GPIB Test  
128 x 8 Bus Matrix System  
Turn-key Multiple Testers including:  
ATE, Interface Test Adapters (ITAs), and Test Program Software (TPS)



*Full front view of Tester without Table*

- Equipment:**
- Function Generator
  - Timer Counter
  - Current Probe
  - Valhalla Power Meter
  - 8 1/2 Digit Multimeter
  - 3 Phase AC Source 4.5 kVA per Phase
  - Single Phase AC Source 1.5 kVA
  - 12 Programmable DC Power Supplies
  - 15 Electronic Loads
  - 2 C Size VXI Mainframes for switching
  - User Selectable High Frequency Filter

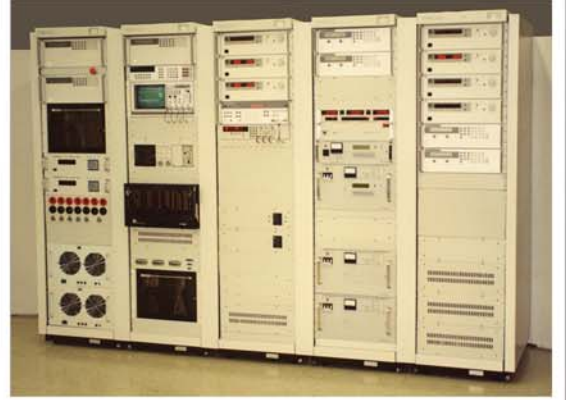


# Power Supply Testers

MILITARY & AEROSPACE TEST SYSTEMS



*Front view of duplicate Tester #2*



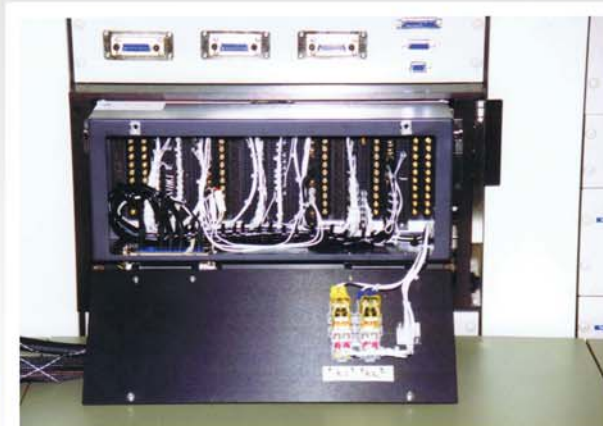
*Tester #2 without Table*



*Close-Up of Differential and Current Probes*



*System Calibration ITA*



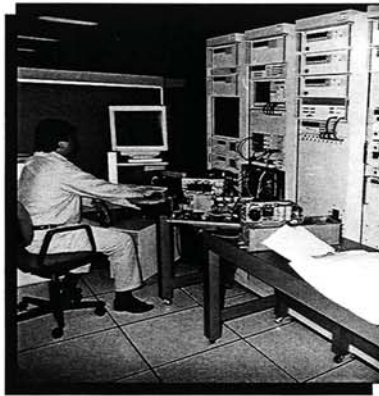
*System Self-Test ITA  
with Cover open  
showing wiring*

***San Antonio Air Logistics Center  
Kelly AFB, Texas***

***POWER SUPPLY TEST CENTER***



*The Advanced Power Supply Tester (APST) is the state-of-the-art system for testing most power supplies and low frequency analog assemblies. The APST is a commercial system produced by FineTest. The tester contains lab quality instrumentation and is programmed using GUI icon based software.*



***Facilities . . .***

*The Advanced Power Supply Tester is part of the Airborne/Engine Electronic Software section within the Mission Critical Computer Resources (MCCR) Software Division and it is located in building 178.*

*Flyer from Kelly AFB about the Testers*



*Acceptance Test and Training*



# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



*Full front view of Tester*

**Application:** Military Power Supplies  
Engineering & Production Test

**Features:** Dual Virginia Panel and ARINC front panel interface  
FineSoft on NI LabWindows/CVI and TestStand platform  
Spectrum Analyzer, Dual 20kW DC Input to UUT  
FineTest Dual DC Interface Unit with  
High Power Programmable Frequency  
AC Insertion to test UUT AC Rejection





*Front View showing ARINC Drop Down Interface*



*Rear View showing side doors open for easy access*

# Power Supply Tester

continued...

MILITARY & AEROSPACE TEST SYSTEMS

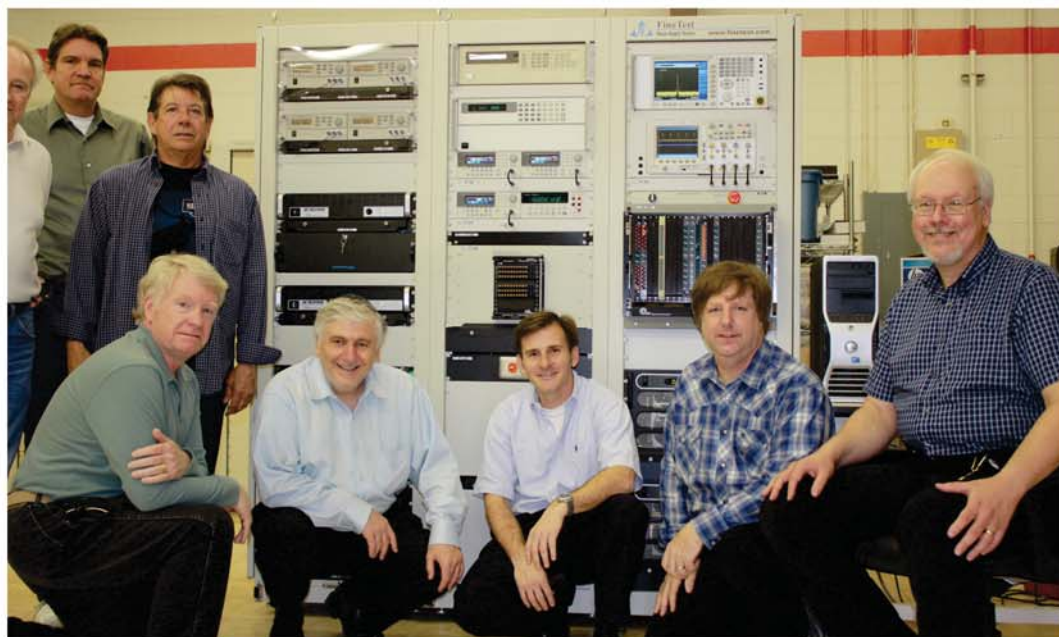


*Front view of Tester showing all equipment on pull out shelves*



*Front view close-up of DC Interface  
on pullout shelf showing easy access*

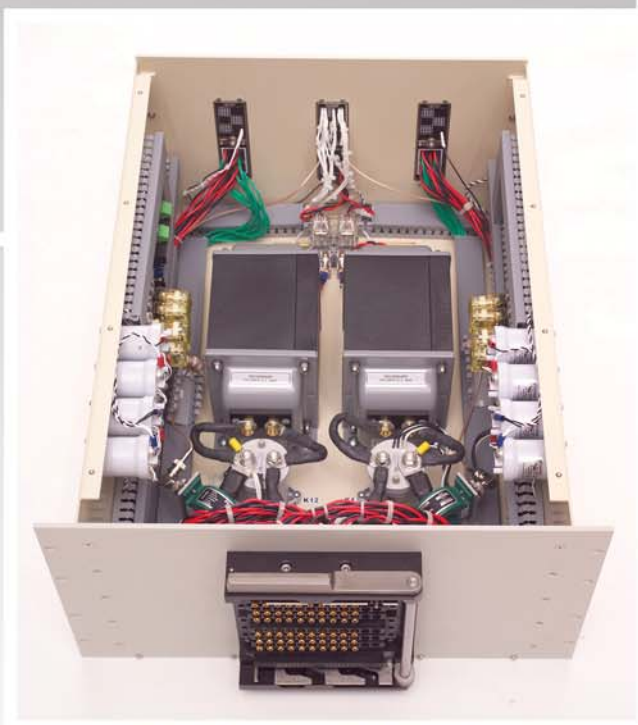




*Acceptance Test and Training*



*Close-up ARINC Interface*



*FineTest Dual DC Interface Unit  
with High Power Programmable Frequency  
AC Insertion to test UUT AC Rejection*



*Close-Up ARINC Interface dropped down  
showing VXI Chassis and Cards  
(All signals routed through Ferrite Cores)*



# Avionics Manual Test Stations

MILITARY & AEROSPACE TEST SYSTEMS



*Front view of Avionics Manual Test Station #1*

**Application:** Avionics Manual Test Station

**Features:**

- Manual Switches for UUT Digital I/O and Control,
- Loads On/Off, Power On/Off,
- Multiple Test Point Connections to Scope or DMMs
- Computer Communication to UUT, Fixture with Safety Cover



*Front view of Stations #1 and #2*



*Interface Unit is on Slide-Out Shelf,  
with removable Top and Front Door*

# DC Monitoring Systems

MILITARY & AEROSPACE TEST SYSTEMS

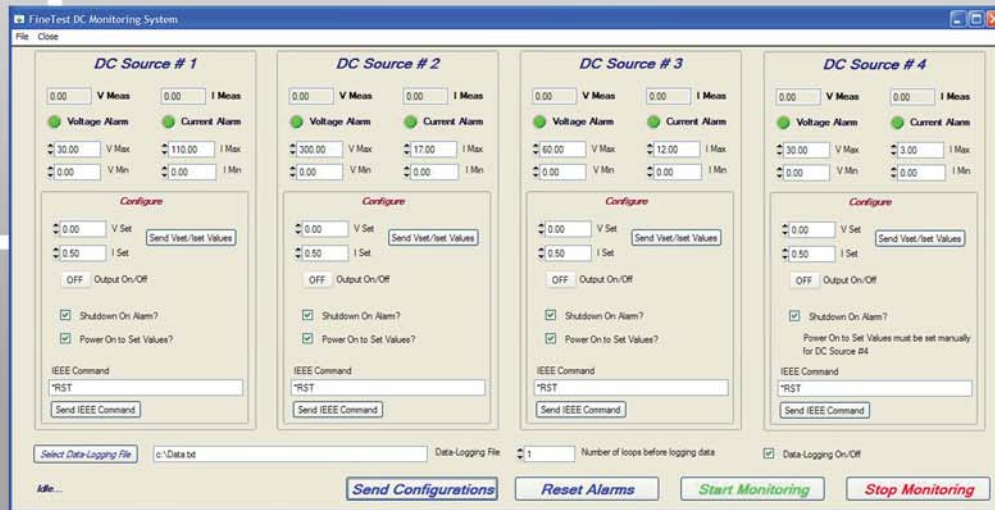


*Front view of two DC Monitoring Systems*

**Application:** Military Design Verification Test

**Features:** Virginia Panel front panel interface  
FineTest Monitoring Software





*FineTest Software monitors all DC Inputs to UUTs with Data-Logging*



*Accessory Storage Drawer*



*Cable Access in Front for Clip-On Meter*



*Pull-out Keyboard Shelf for Data Entry*



*Side Doors for Easy Access*



*All Cabling through Ferrite Cores to minimize noise*

**MILITARY & AEROSPACE TEST SYSTEMS**

# Power Distribution DVT Tester

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Front view of Design Verification Tester

**Application:** 100 Output Power Distribution Test

**Features:**

- Drop-Down Virginia Panel front panel interface
- FineSoft on LabWindows CVI platform
- CAN communications
- 100x1 High Power Electronic Load Mux





*Acceptance Test and Training*



*Three Duplicate Testers for Production Test*



# Power Distribution DVT Tester

continued...

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*View of left-side door open showing Resistive Load Banks*

## Features:

Minimum Resistive Load for all outputs during multiplex testing of each output with electronic load

Side door access for easy maintenance/repair



*View of right-side door open showing Load Mux and Control Relays*

- Features:**
- 100x1 High Power Load Mux
  - Easy Debug/Maintenance/Repair including:
  - Drop-Down Virginia Panel Interface
  - Pull-out sliding shelves for Interface Units
  - All wires labeled and Relays with LEDs indicators



# Manual/Automatic Test Station

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*Front view of Test Station*

**Application:** Military AC/DC Power Supplies

**Features:**

- Manual (Touchscreen) and Automatic Operation
- FineSoft on LabWindows CVI platform
- 3 Phase Motor Driven Transformer and Power Meter



*Close-Up showing Touchscreen Monitor  
for easy Manual Operation*



*Side View with Side Door Open showing  
Bus Bars, Control Relays, Resistive Loads  
Communications and Relay De-Bounce Cards  
easy access for service and maintenance*



*3 Phase 400 Hz Motor Driven Transformer*



# ESS, Burn-In and Vibration Monitoring

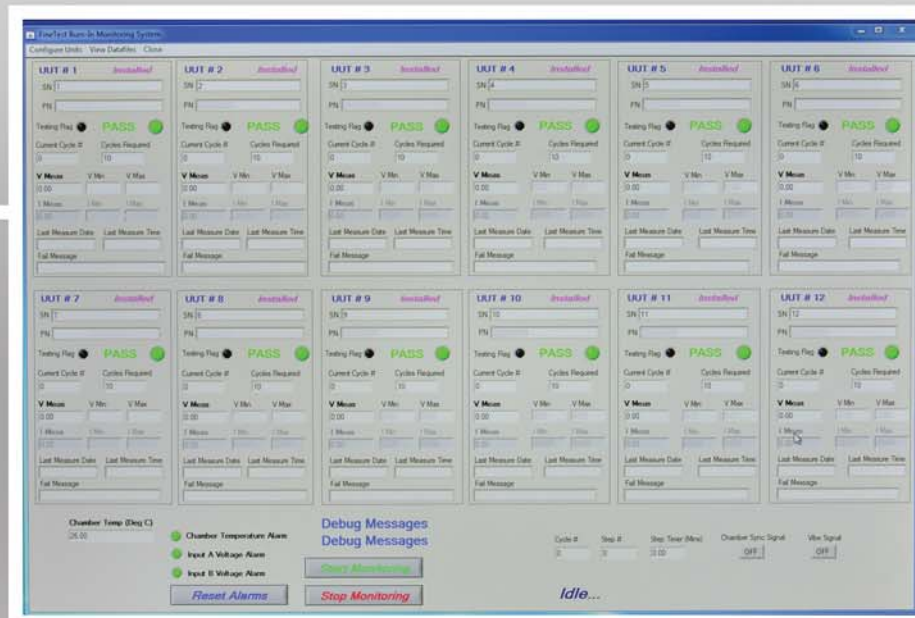
MILITARY & AEROSPACE TEST SYSTEMS



*Front view of ESS, Burn-In and Vibration Monitoring System*

**Application:** ESS, Burn-In, and Vibration Monitoring System

**Features:** 12 Units at a time  
FineTest Monitoring Software



FineTest Monitoring Software for 12 Units



Close-Up Opening Slide Out Unit



Slide Out Shelves for Easy Service



# ESS, Burn-In and Vibration Monitoring continued...

MILITARY & AEROSPACE TEST SYSTEMS



*Hinged ESS System Control Panel with Dual DC Input Voltage Monitors and Two Chamber Temperature Alarm Circuits*



*ESS UUT Interface for 2 Units with Dual Voltage and Current Monitors, individually controlled DC Input On/Off, Lighted Circuit Breaker and Output Load Pop-Out Fuse*



*Rear System Interface Panel Close-Up showing  
12 Unit Connections for Test Cables  
from Chamber to System*



*Rear View showing  
12 Thermally Rated and Color Coded  
UUT Test Cables from Chamber to System*



*Acceptance Test and Training*



# Simulator IO Racks

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*Front view of Simulator IO Racks #1 and #2*

**Application:** Design Verification Test

**Features:**

- Drop-Down Virginia Panel front panel interface
- Multiple connections for UUT Simulation/Stimulus
- Build to Print



*Front Panel Interface with VPC and High Power*



*Drop-Down Front Panel for easy service/repair*



*Close-Up of DC Bus Bars*



*Rear View showing clean wiring*



# Power Supply Testers

MILITARY & AEROSPACE TEST SYSTEMS



*Front view of Tester*

**Application:** Military AC/DC & DC/DC Power Supply/Sub-Assembly Production Test

**Features:** JTAG Programming and EEPROM Programming  
RS485 Communications, Integrated Thermal Hood/Chamber  
FineSoft on NI LabWindows CVI & TestStand platform

Turn-key Multiple Systems including:

ATE, Interface Test Adapters (ITAs), and Test Program Software (TPS)



Front view of Tester 4



Duplicate Tester 6 Acceptance Test and Training



# Power Supply Testers

continued...

MILITARY & AEROSPACE TEST SYSTEMS



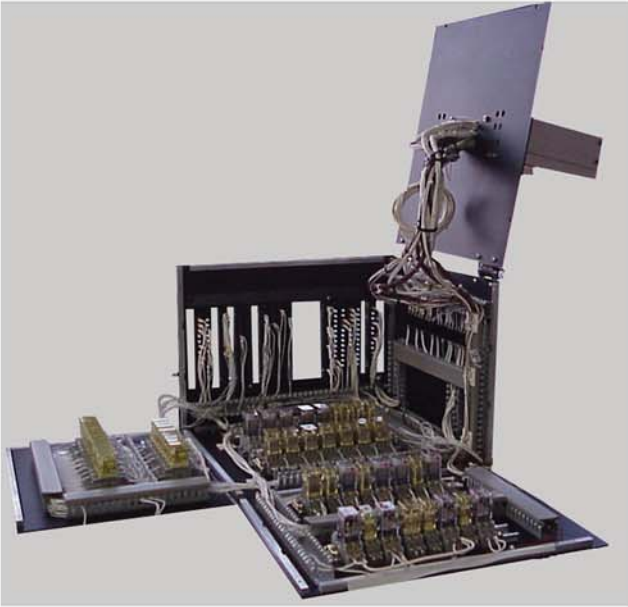
*Duplicate Tester with ITA installed*



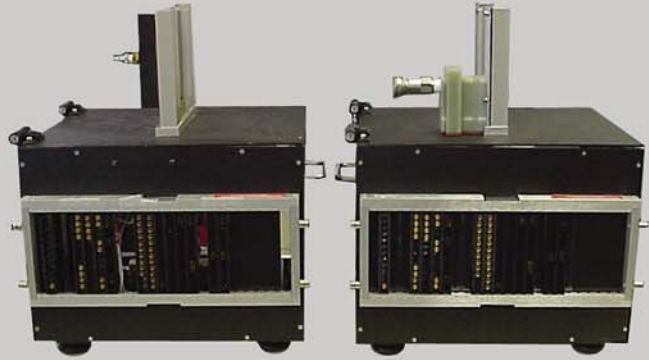
*ITA with hookup for Thermal Hood on top where the UUT is plugged in*



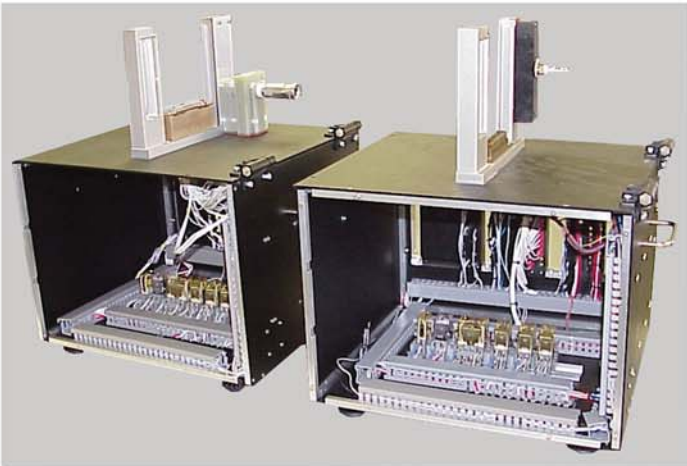
*ITA with the Top Cover open and front panel removed to show wiring*



*ITA for multiple output supply with Top Cover and Side Panels open to show wiring and ease of maintenance*



*Rear view of duplicate ITAs with alternate Thermal Hood hookups*



*Front view of duplicate ITAs with front panels removed to show wiring*

## System Self-Test ITA



*Self-Test ITA with cover open to show wiring*



*Front view of Self-Test ITA*



*Connector side of Self-Test ITA*



# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



*Front view of Tester*

**Application:** Military Power Supplies Production Test

**Features:** FineSoft on NI LabVIEW and TestStand platforms

Integrated Hi-Pot Testing

DC Interface Unit with High Power Programmable Frequency

AC Insertion to test UUT AC Rejection



*Front view of Tester with  
Interface Test Adapter installed*



*Front top view of Tester showing  
DC Interface box with sliding rails*



*Front view of Tester showing  
Drop-Down Virginia Panel Interface  
for easy troubleshooting/repair/maintenance*

**MILITARY & AEROSPACE TEST SYSTEMS**



# Environmental Stress Screening

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**Application:** Military Power Supplies  
Environmental Stress Screening with Monitoring

**Features:** FineTest Monitoring Software  
Thermal Chamber integration  
FineSoft on LabWindows CVI platform



*Rear view of System showing  
Color-Coded Temperature Rated Cables  
that connect the System to the  
UUTs inside the Thermal Chamber*



*Close-Up of Cable Connections  
on Rear Panel of System*

**MILITARY & AEROSPACE TEST SYSTEMS**

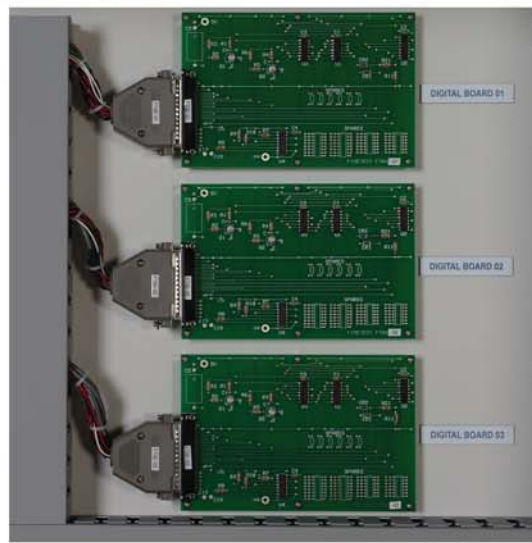


# Environmental Stress Screening continued...

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*Side view with Cabinet Side Door Open showing easy access to  
Communication Boards, Thermocouple/Temperature Monitor,  
400Hz Input AC Voltage Monitors, AC Cycling Relays*



*Close-Up of 3 Dual Port  
Digital Communication Boards*



*Close-Up of 6 Relays to switch  
AC Input Voltage On/Off  
to the UUTs for AC Cycling Tests*



*Close-Up of Thermocouple/Temperature Monitor  
to record temperature inside thermal chamber  
and disconnect Input Power to the UUTs if out of limits*



*Close-Up of 3 Phase 400Hz  
AC Input Voltage Monitor  
to immediately disconnect  
Input Power to the UUTs  
if the Input Voltage is out of limits*



# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



*Full front view of Tester*

**Application:** Military Power Supplies  
Engineering & Production Test

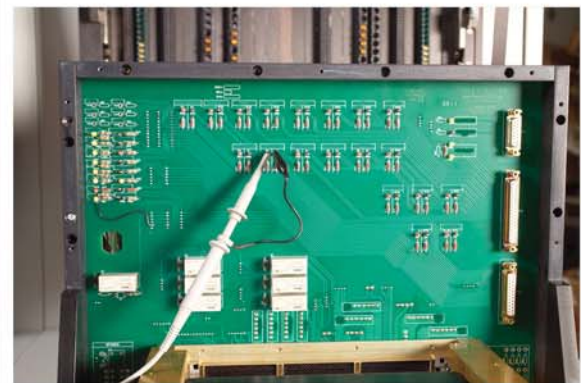
**Features:** Virginia Panel front panel interface  
FineSoft on NI LabVIEW and TestStand platform



*Tester during Acceptance Test and Training*



*Front View of Interface Test Adapter*



*Front View of ITA with Cover Removed  
allows access to test points  
with clips for Scope and DMM Probes*



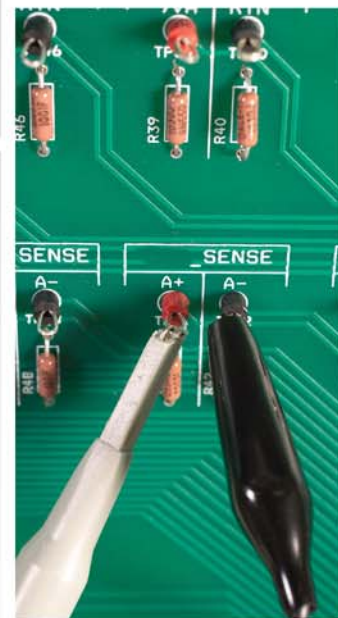
*Side View*



*Rear View*



*Adapter Opens to allow  
easy access to wiring*



*Close-Up clips for Scope Probes*

**MILITARY & AEROSPACE TEST SYSTEMS**



# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



*Front view of Tester 4*

**Application:** Military AC/DC and DC/DC Power Supplies  
High Volume Production

**Features:** FineSoft on LabWindows CVI platform  
Motor Driven Transformer  
Tektronix TDS Oscilloscope



*Front view of an ITA showing  
UUT Status Line LEDs*



*Front view of roll-up ITA*

**MILITARY & AEROSPACE TEST SYSTEMS**



*Duplicate Tester 2*



# ESS, Burn-In and Vibration Monitoring

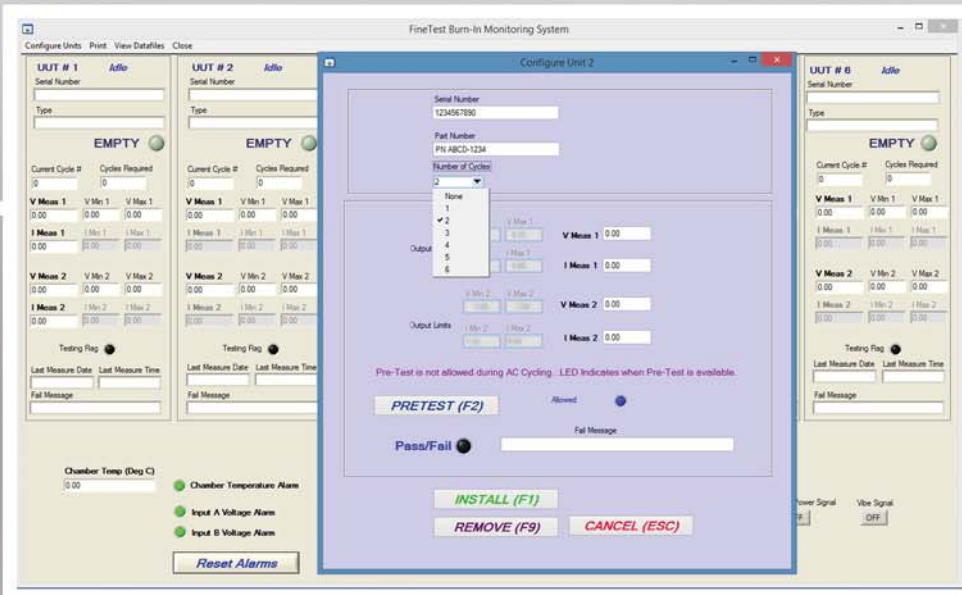
MILITARY & AEROSPACE TEST SYSTEMS



*Front view of ESS, Burn-In and Vibration Monitoring System*

**Application:** ESS, Burn-In, and Vibration Monitoring System

**Features:** 6 Units at a time  
FineTest Monitoring Software



*FineTest Monitoring Software with Unit Installation/Configuration*



*Close-Up Opening Slide Out Unit*



*Slide Out Shelves for Easy Service*



# ESS, Burn-In and Vibration Monitoring continued...

MILITARY & AEROSPACE TEST SYSTEMS



*ESS System Interface Unit with Dual 3Phase 400Hz AC Input Monitors  
and Two Chamber Temperature Alarm Circuits*



*ESS UUT Interface Unit with Dual Voltage and Current Monitors  
and individually controlled AC Input On/Off  
with Circuit Breaker and Indicators*



*Rear System Interface Panel Close-Up showing  
Thermocouple Connections, AC Input Power Connections,  
6 Unit Connections for Test Cables from Chamber to System,  
Cable Hooks for Test Cables*



*Rear View with Door Open showing  
Cable Arms for Each Pull-Out Box  
6 Unit Test Cables from Chamber to System*



*Rear View of System*



# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



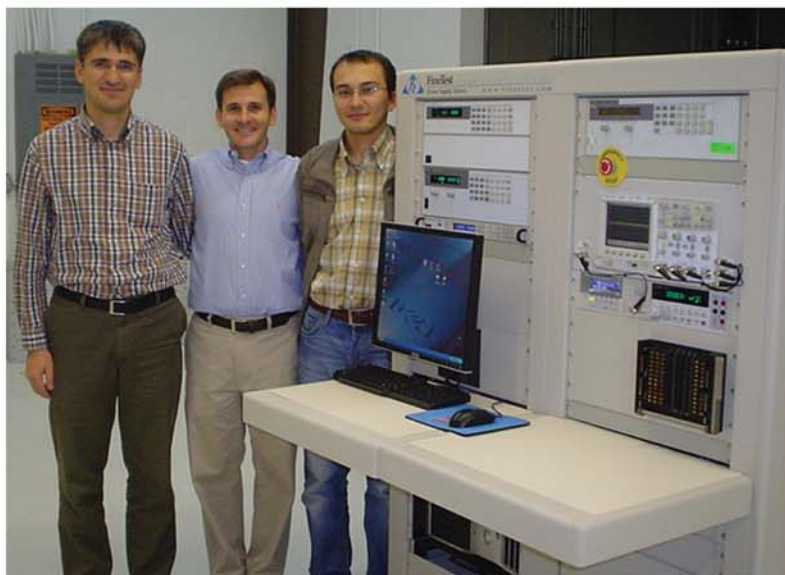
*Duplicate Tester #3*

**Application:** Military Power Supplies  
Engineering & Production Test

**Features:** Virginia Panel front panel interface  
FineSoft on Agilent VEE platform



*Tester #1*



*Tester #2 Acceptance Test and Training*



*Tester #3 Acceptance Test and Training*

MILITARY & AEROSPACE TEST SYSTEMS



# Power Supply Testers

MILITARY & AEROSPACE TEST SYSTEMS



*Front view of Tester 2*

**Application:** Military AC/DC Power Supplies Production Test

**Features:**

- Virginia Panel front panel interface
- Kikusui Electronic Loads
- FineSoft on LabWindows CVI platform



*Tester 1 and 2 on the Production Floor*



# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



*Front view of Tester # 2*

**Application:** AC/DC Power Supplies  
DC/DC Power Supplies  
Production Test

**Features:** FineSoft on LabWindows CVI platform  
Finesoft on HP Basic platform  
FineTest PAD Command



Front view of Tester # 1  
on the production floor



Tester #1 Installation and Training



# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



*Side view of Tester with  
Interface Test Adapter and UUT*

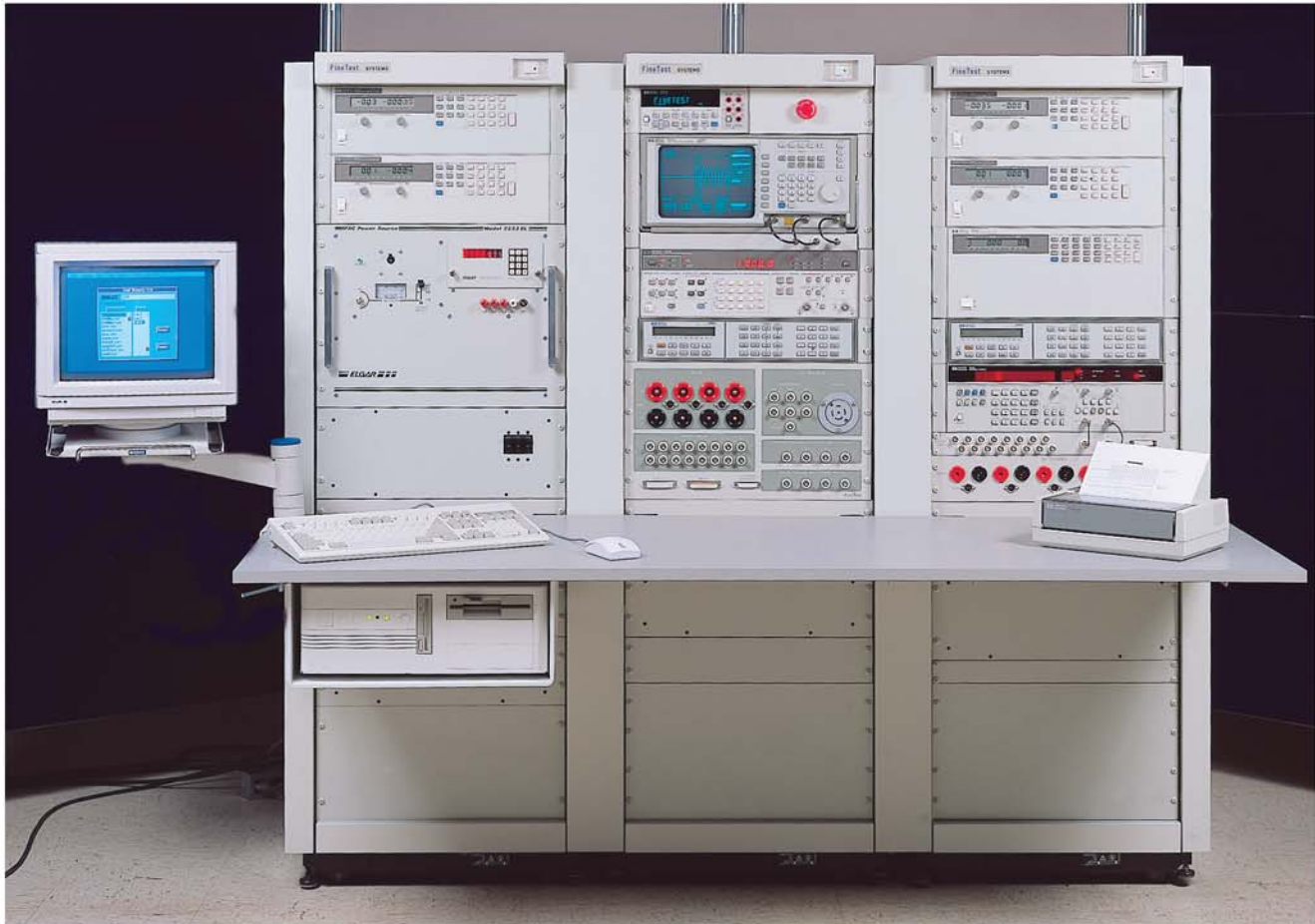
**Application:** Military: DC/DC Power Supplies  
Production Test

**Features:** FineSoft on LabView platform  
FineSoft on TestStand platform  
Side-mount Computer and Monitor Arm



*Front view of Tester with  
Interface Test Adapter and UUT*

# Power Supply Tester



MILITARY & AEROSPACE TEST SYSTEMS

*Front view of Tester*

**Application:** AC/DC and DC/DC Power Supplies

**Features:**

- All High Frequency Matrix
- Timer/Counter and Function Generator
- Engineering Quick Connect front panel interface
- FineSoft on LabWindows DOS platform

 **FineTest**  
[www.finetest.com](http://www.finetest.com)



# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



*Front view of Tester on the production floor*

**Application:** Satellite DC/DC Power Supplies  
Production Test

**Features:** Virginia Panel front panel interface  
FineSoft on LabWindows CVI platform  
Integrated with Production Line

# Power Supply Tester



MILITARY & AEROSPACE TEST SYSTEMS

*Front view of Tester*

**Application:** Military AC/DC and DC/DC Power Supplies  
Calibration, Repair and Test Depot

**Features:** FineSoft on LabWindows CVI  
Finesoft on HP Basic platform  
FineTest PAD Command  
Engineering Quick Connect front panel interface  
8 1/2 digit Multimeter

 **FineTest**  
[www.finetest.com](http://www.finetest.com)





FineTest Production Floor

FineTest Building at 1 Industry Drive



# FineTest

[www.finetest.com](http://www.finetest.com)



Solutions Partner

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