



# FineTest

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

Military and Aerospace Test Systems



## 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



FineTest 1 Industry Drive, Palm Coast, FL 32137 Tel: (386) 569-6189 Fax: (386) 446-0463 email: [sales@finetest.com](mailto:sales@finetest.com)

# 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

## 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

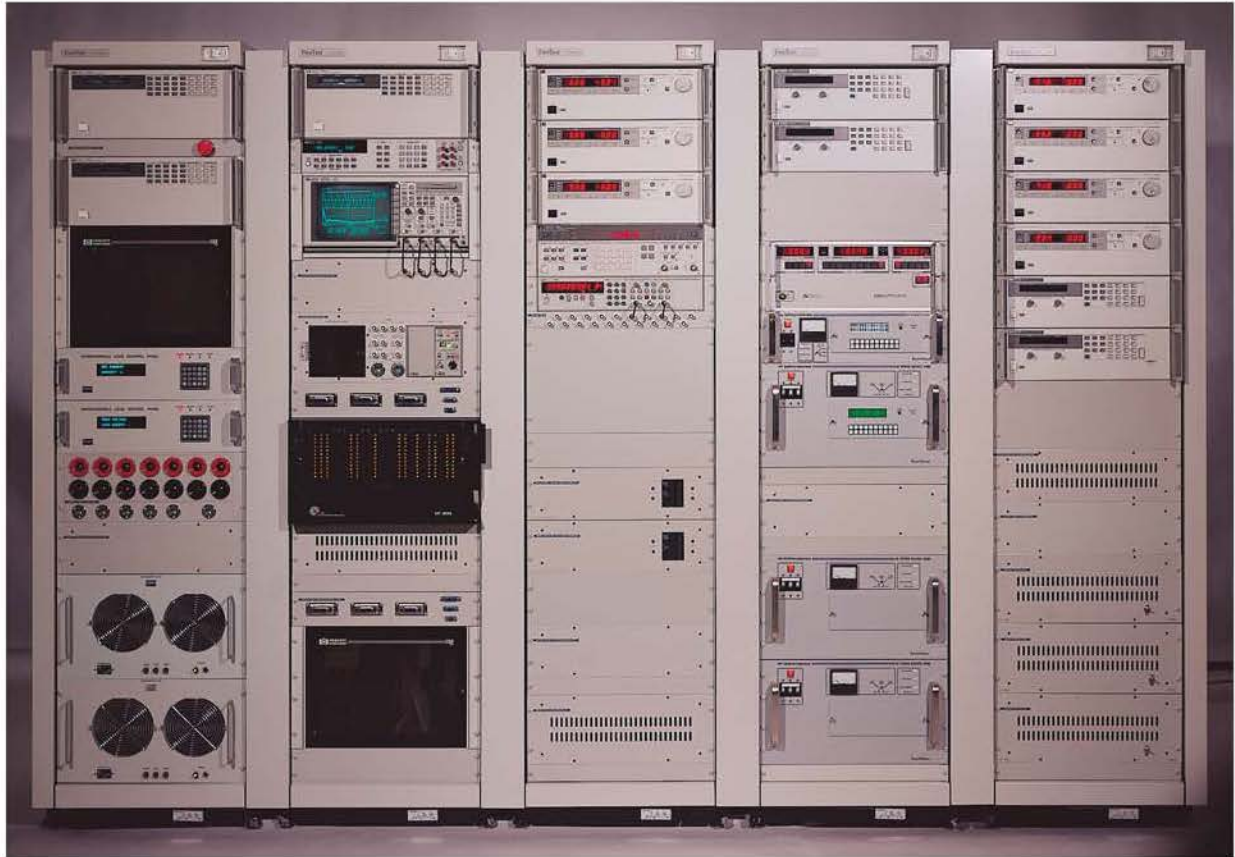
MILITARY & AEROSPACE TEST SYSTEMS



*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)



MILITARY & AEROSPACE TEST SYSTEMS

*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

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



# Power Supply Testers

MILITARY & AEROSPACE TEST SYSTEMS



Front view of duplicate Tester #2



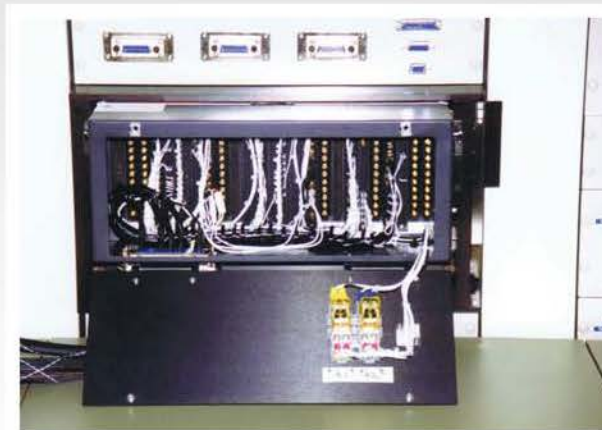
Tester #2 without Table



Close-Up of Differential and Current Probes



System Calibration ITA



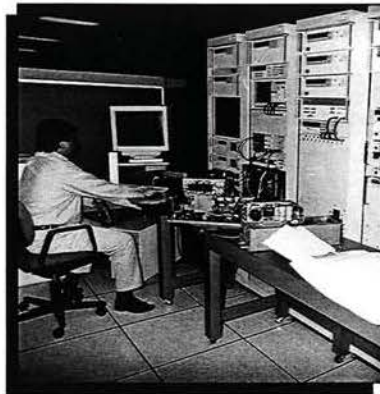
System Self-Test ITA  
with Cover open  
showing wiring

**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.*

**MILITARY & AEROSPACE TEST SYSTEMS**

*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

MILITARY & AEROSPACE TEST SYSTEMS



Rear View showing side doors open for easy access

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

# Power Supply Tester

continued...

MILITARY & AEROSPACE TEST SYSTEMS

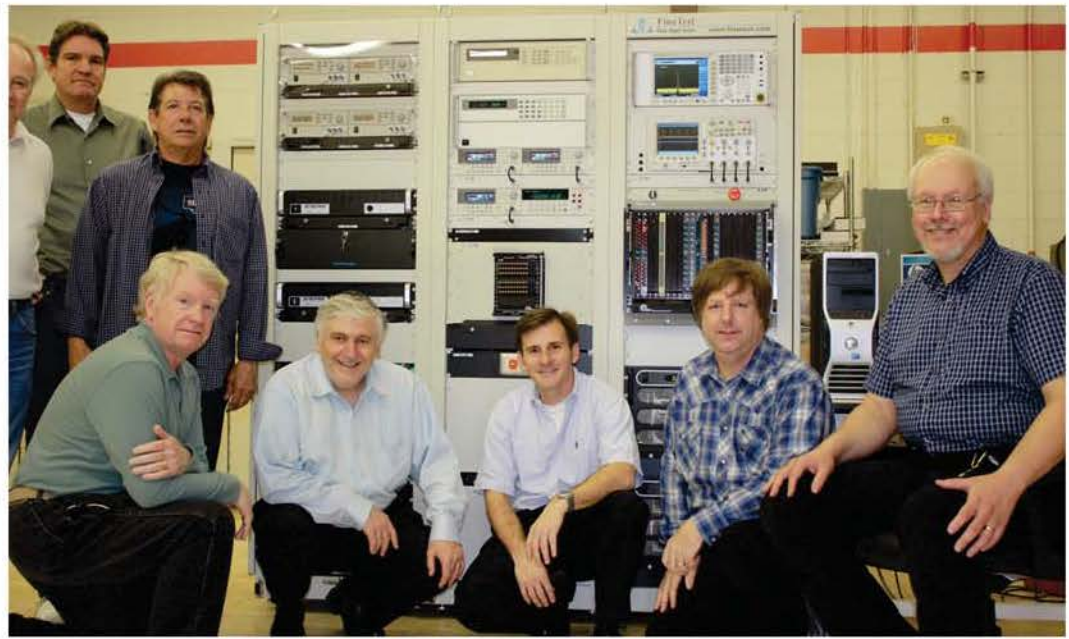


Front view of Tester showing all equipment on pull out shelves

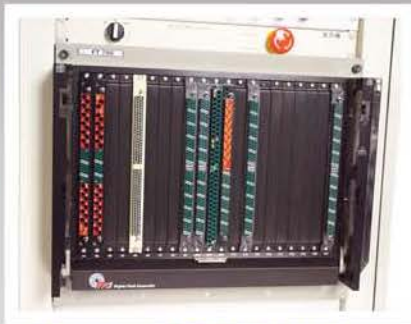


Front view close-up of DC Interface on pullout shelf showing easy access





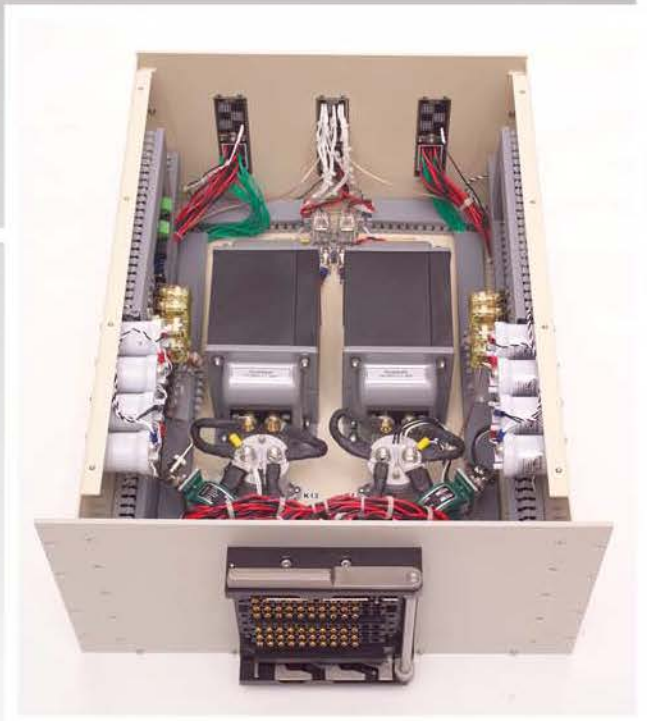
*Acceptance Test and Training*



*Close-up ARINC Interface*



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



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



# 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



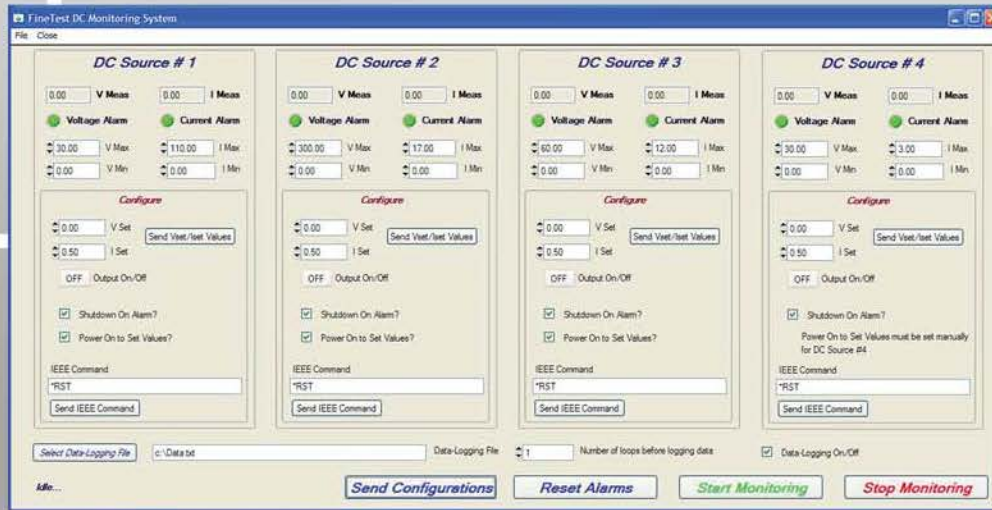
Front view of two DC Monitoring Systems

**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

MILITARY & AEROSPACE TEST SYSTEMS



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



# Power Distribution DVT Tester

MILITARY & AEROSPACE TEST SYSTEMS



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*

MILITARY & AEROSPACE TEST SYSTEMS



*Three Duplicate Testers for Production Test*

# Power Distribution DVT Tester

continued...

MILITARY & AEROSPACE TEST SYSTEMS



*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

MILITARY & AEROSPACE TEST SYSTEMS



*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

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





MILITARY & AEROSPACE TEST SYSTEMS

*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*

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

# ESS, Burn-In and Vibration Monitoring

MILITARY & AEROSPACE TEST SYSTEMS



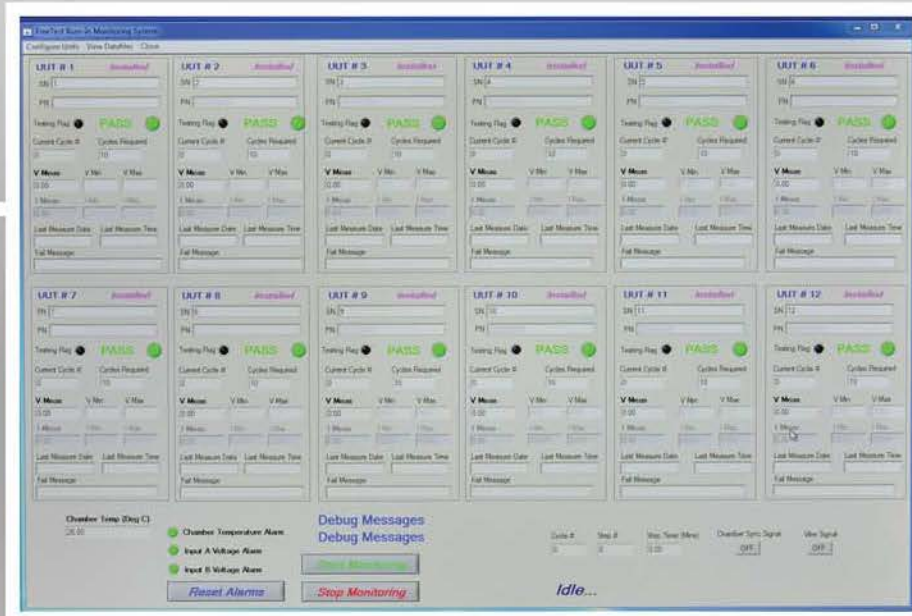
Front view of ESS, Burn-In and Vibration Monitoring System

**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

MILITARY & AEROSPACE TEST SYSTEMS



# 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*

**MILITARY & AEROSPACE TEST SYSTEMS**



*Acceptance Test and Training*



# Simulator IO Racks

MILITARY & AEROSPACE TEST SYSTEMS



*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



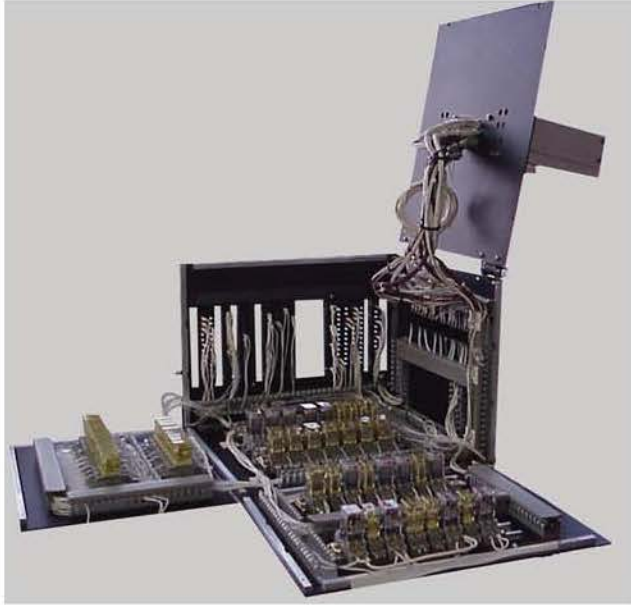
*ITA with hookup for Thermal Hood on top where the UUT is plugged in*

*Duplicate Tester with ITA installed*

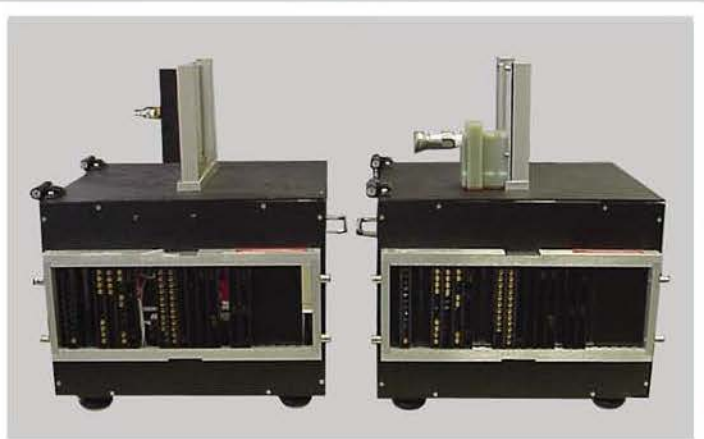


*ITA with the Top Cover open and front panel removed to show wiring*

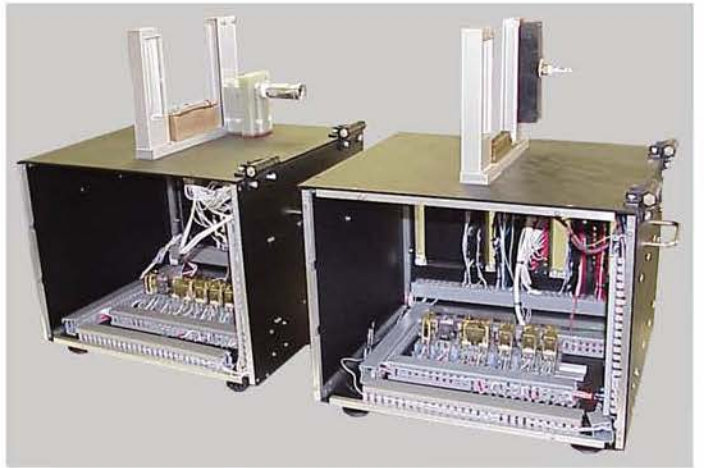




*ITA for multiple output supply with Top Cover and Side Panels open to show wiring and ease of maintenance*



*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





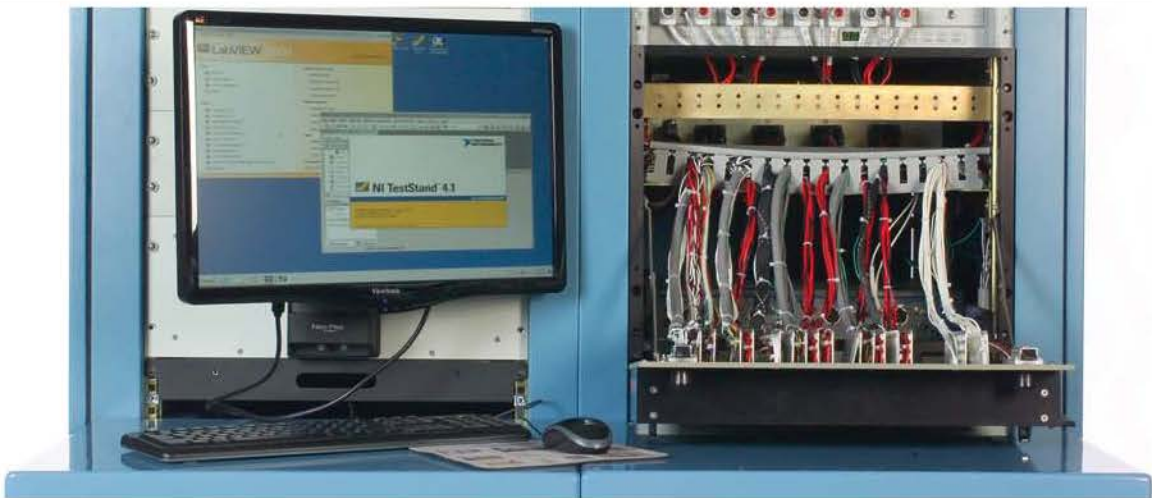


*Front view of Tester with Interface Test Adapter installed*



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

**MILITARY & AEROSPACE TEST SYSTEMS**



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

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

# Environmental Stress Screening

MILITARY & AEROSPACE TEST SYSTEMS



**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...

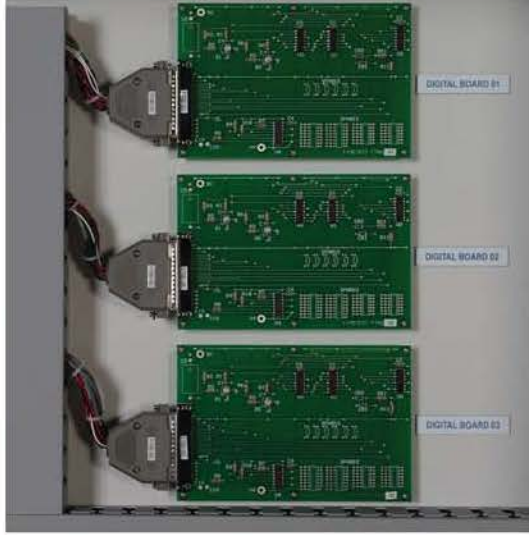
MILITARY & AEROSPACE TEST SYSTEMS



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



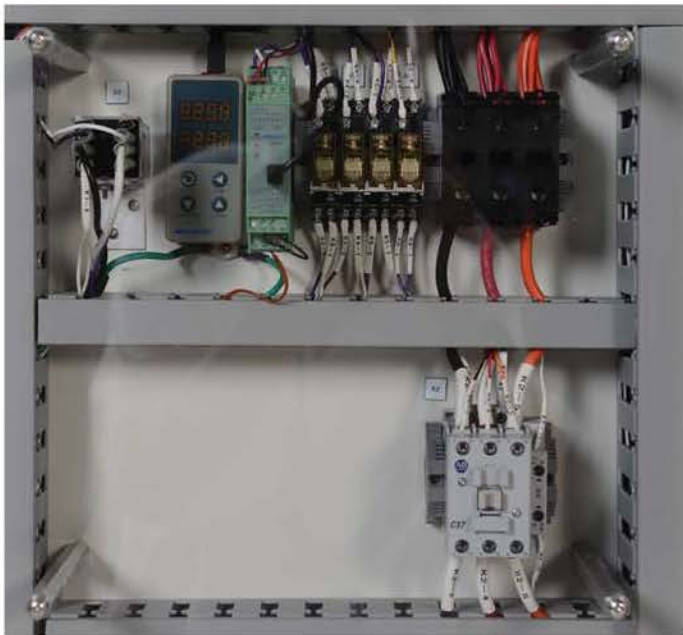




*Close-Up of 3 Dual Port  
Digital Communication Boards*



*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



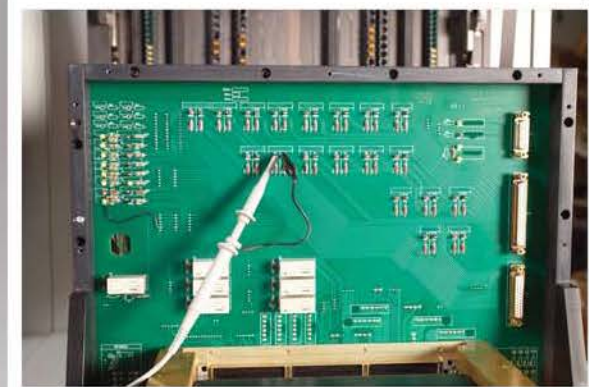




Tester during Acceptance Test and Training



Front View of Interface Test Adapter



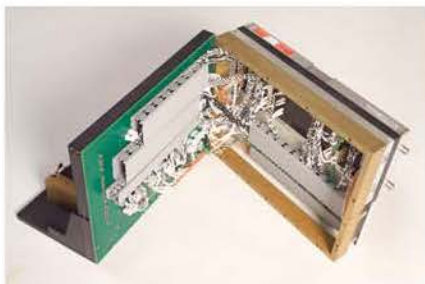
Front View of ITA with Cover Removed allows access to test points with clips for Scope and DMM Probes



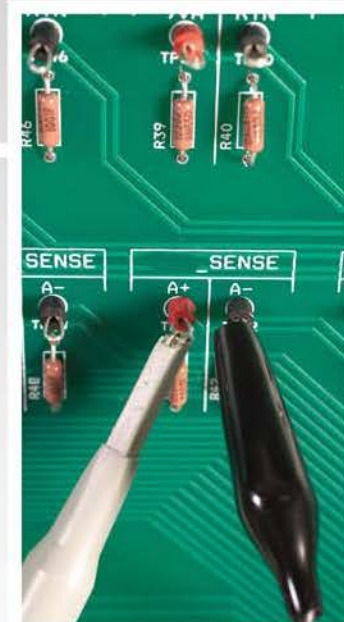
Side View



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



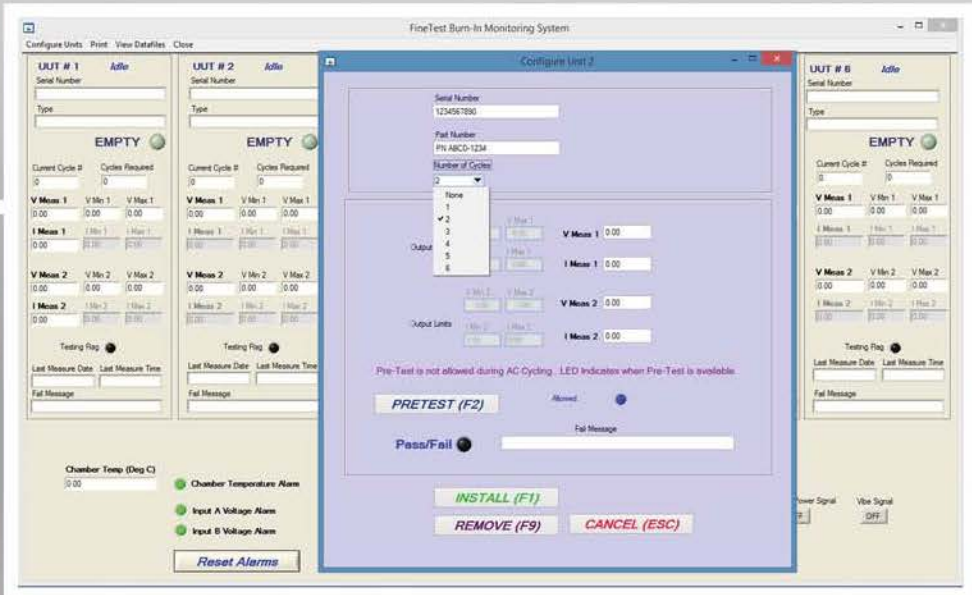
Front view of ESS, Burn-In and Vibration Monitoring System

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

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







FineTest Monitoring Software with Unit Installation/Configuration

MILITARY & AEROSPACE TEST SYSTEMS



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*

MILITARY & AEROSPACE TEST SYSTEMS

# Power Supply Tester

MILITARY & AEROSPACE TEST SYSTEMS



*Duplicate Tester #3*

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

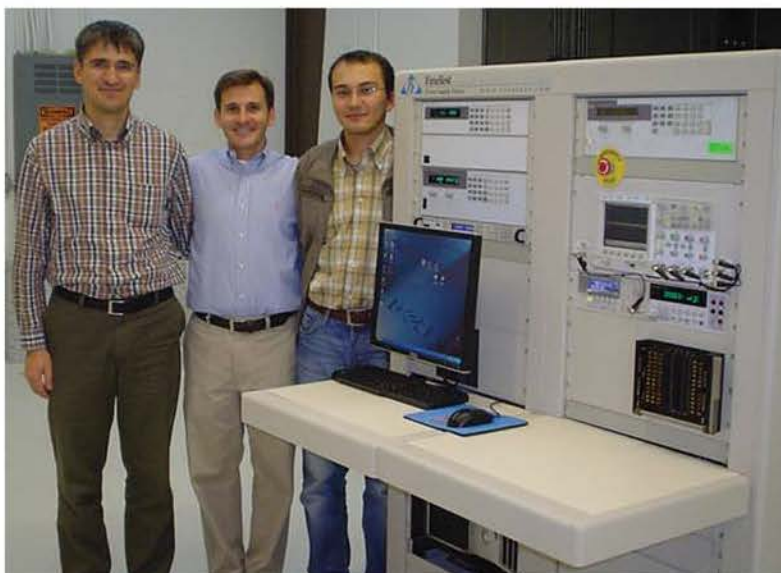
**Features:** Virginia Panel front panel interface  
FineSoft on Agilent VEE platform







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





MILITARY & AEROSPACE TEST SYSTEMS

*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

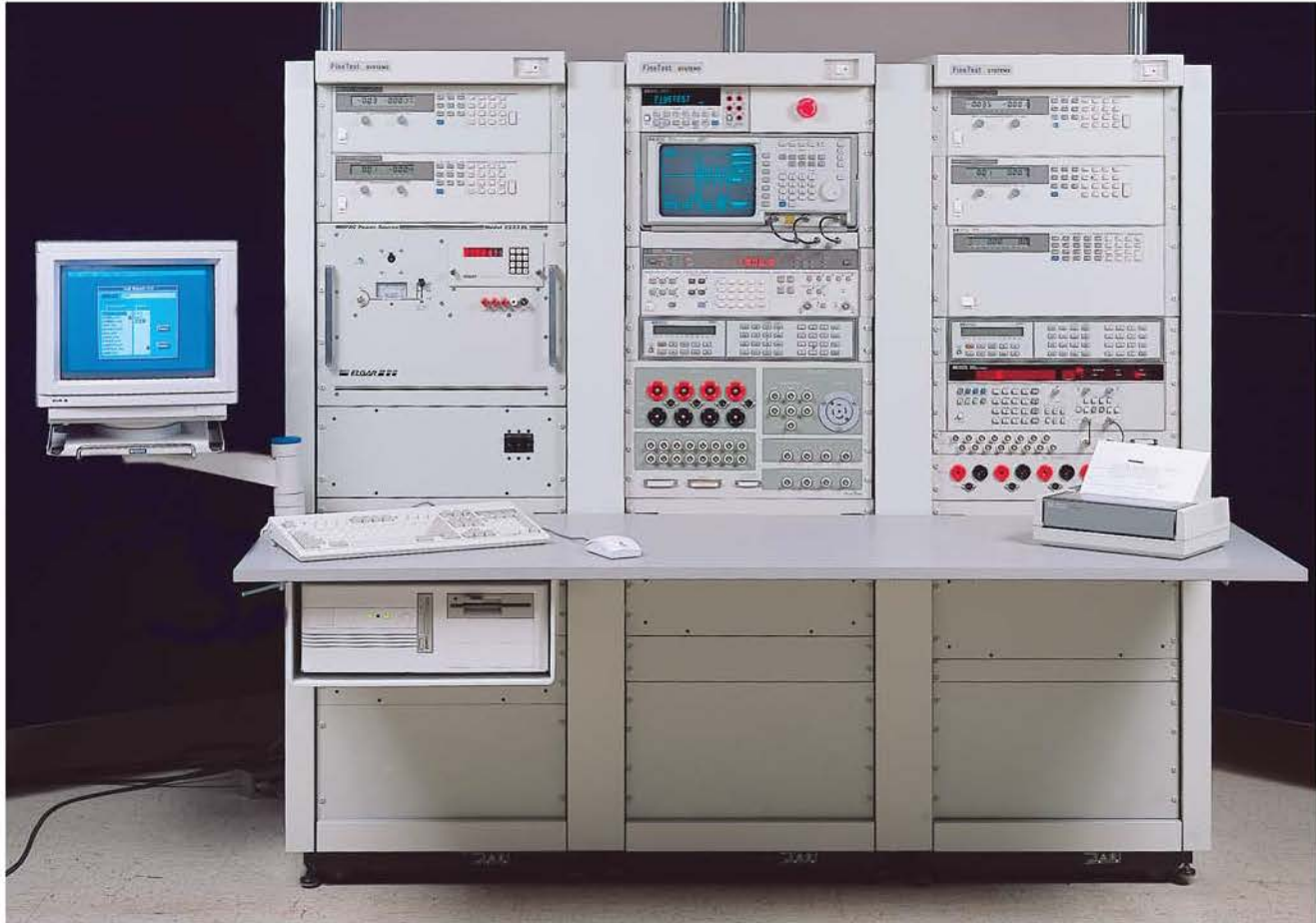
**Features:** FineSoft on LabView platform  
FineSoft on TestStand platform  
Side-mount Computer and Monitor Arm



*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



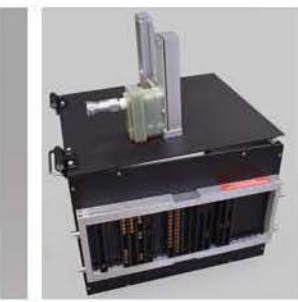
MILITARY & AEROSPACE TEST SYSTEMS

*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)



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