



## 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)

## Section 4

### ESS/Vibe/Burn-In Systems

***FineTest provides Test Systems for  
Environmental Stress Screening (ESS)  
Vibration Monitoring and Burn-In.***

***These systems are used in support of projects  
for Military/Aerospace and Telecom Applications.***

***FineTest ESS/Vibe/Burn-In Systems include:  
Test Stations (Loads, Power Cycling, Cabling etc.)  
Monitoring Software  
Burn-In Carts  
Life Test Carts  
Regenerative Loading***

# ESS, Burn-In and Vibration 12 Unit Monitoring System

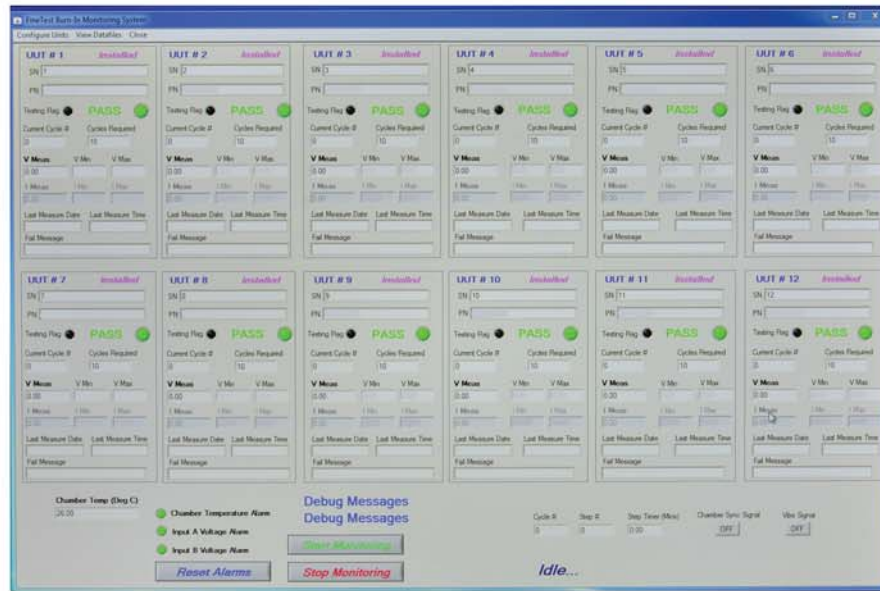
ESS / VIBE / BURN-IN SYSTEMS



*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 12 Unit Monitoring System

continued...

ESS / VIBE / BURN-IN 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*

**ESS / VIBE / BURN-IN SYSTEMS**



*Acceptance Test and Training*

# DC Monitoring Systems

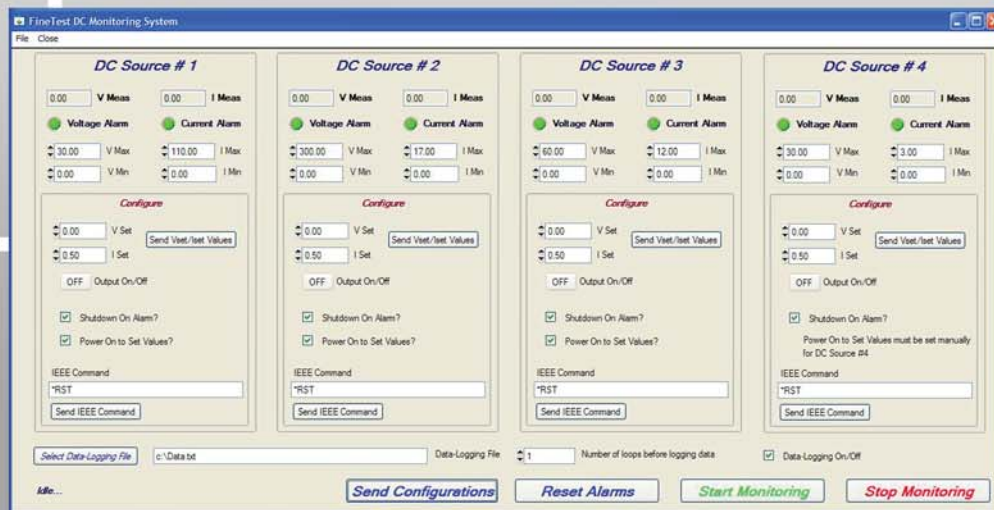
ESS / VIBE / BURN-IN SYSTEMS



*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*

**ESS / VIBE / BURN-IN SYSTEMS**

# ESS and Burn-In 6 Unit Monitoring System

ESS / VIBE / BURN-IN 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*

**ESS / VIBE / BURN-IN SYSTEMS**

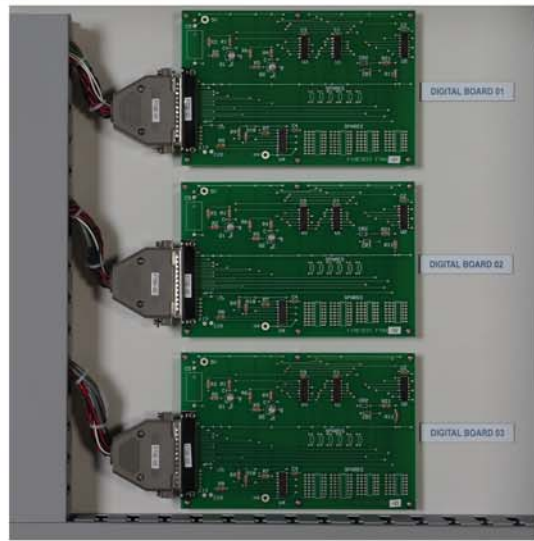
# ESS and Burn-In 6 Unit Monitoring System

continued...

ESS / VIBE / BURN-IN 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*

# ESS, Burn-In and Vibration 6 Unit Monitoring System

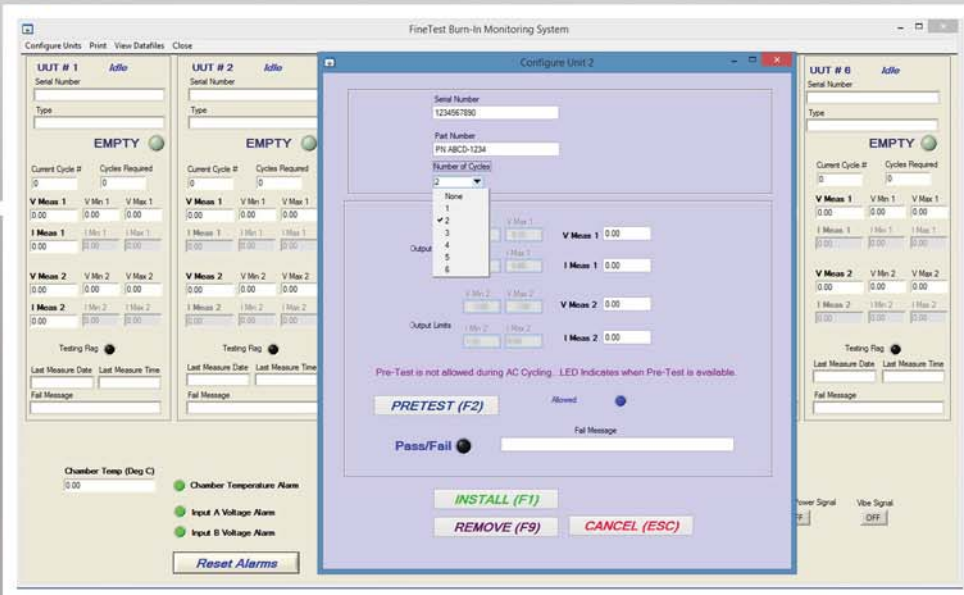
ESS / VIBE / BURN-IN SYSTEMS



*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 6 Unit Monitoring System

continued...

ESS / VIBE / BURN-IN 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*

ESS / VIBE / BURN-IN SYSTEMS

# Environmental Stress Screening Tester and Burn-In for Telecom Power

ESS / VIBE / BURN-IN SYSTEMS



*Front view of Tester showing 20 Burn-In Loads, Power Switching Units, VXI Switching*

## Application:

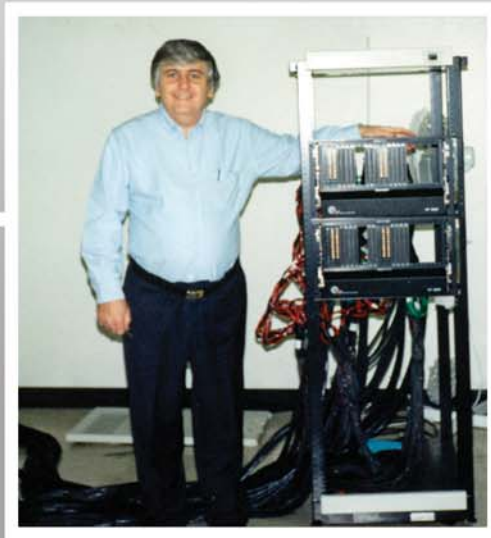
Telecom AC/DC and DC/DC Power Supplies  
Functional Test and Burn-In of 20 Power Supplies  
Thermal chamber for accelerated temperature stress screening  
Instrumental in customer winning Deming Award 1994

## Features:

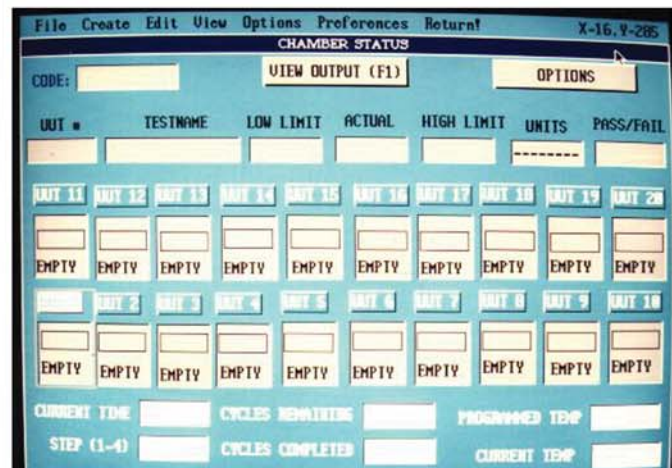
Dual 25 Module VP front panel interface inside thermal chamber  
C size VXI mainframe for switching  
20 plug in resistor load slots can accept different burn-in loads  
Switches AC or DC Power to the 20 UUTs  
Facility supplied AC, DC supplied by 20 DC Power Supplies  
FineSoft on LabWindows CVI platform



*20 DC Power Supplies and fused AC Power Switching Units*



*Close-Up of dual 25 Module interface located inside the thermal chamber*



*FineTest Software to both functionally test and monitor burn-in of the 20 UUTs*

## How it works:

The system functionally tests one supply, while the other 19 supplies burn-in at full load.

After the first supply has finished its functional test, it is connected to its burn-in load.

The tester then switches to the next supply for functional testing.

The functional test cycles through all of the 20 supplies.

The Thermal Chamber moves the temperature and the test/burn-in cycle begins again.

The entire test time is 48 hours.

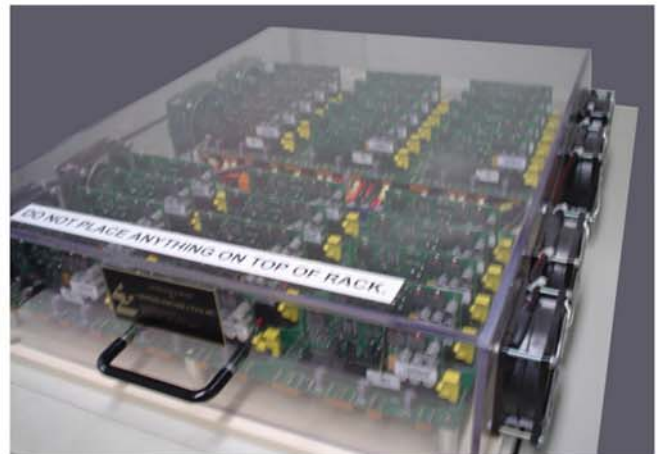
# Burn-In and Monitoring System

## 36 Voltage Regulator Modules

ESS / VIBE / BURN-IN SYSTEMS



*Front view of VRM Burn-In System*



*Close-Up of Slots on Top of System  
with 36 Slots loaded with UUTs*

**Application:** Voltage Regulator Modules

**Features:**

- 36 Slots for UUTs
- Cinch connectors to hold UUTs
- FineTest Burn-In Monitoring Software

# Functional ATE/Monitoring for Power Module Vibration Test



ESS / VIBE / BURN-IN SYSTEMS

*Front view of Vibration Monitoring System*

**Application:** Power Monitor Modules  
High Volume Production

**Features:** Monitors UUTs during Vibration for Power Glitches  
RS485 Communication to UUTs during Vibration  
to monitor UUT Status Registers  
FineSoft on LabWindows CVI

# Eight 48 Unit Burn-In Systems (384 Units Total)

ESS / VIBE / BURN-IN SYSTEMS



*Side view of Burn-In System #3  
and Burn-In Monitoring Software*



*Multiple Burn-In Systems*

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

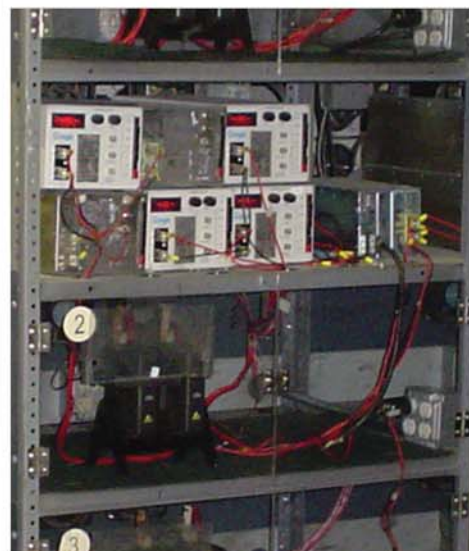
**Features:** 8 Burn-In Systems capable of 48 UUTs per System  
Temperature Controlled Chamber for each UUT  
Electronic Loads for each UUT  
FineTest Burn-In Monitoring Software  
Monitors Power-Good/Fail Lines from the UUTs



*Close-Up of Multiple Burn-In Systems*



*Side view of one Burn-In System*



*Close-Up of Electronic Loads and Temperature Controlled Chamber with 2 UUTs loaded*



*IOtech 64 Point Muxes for Monitoring*

**ESS / VIBE / BURN-IN SYSTEMS**

# 128 Unit Monitoring Systems and 8 Unit Burn-In Carts

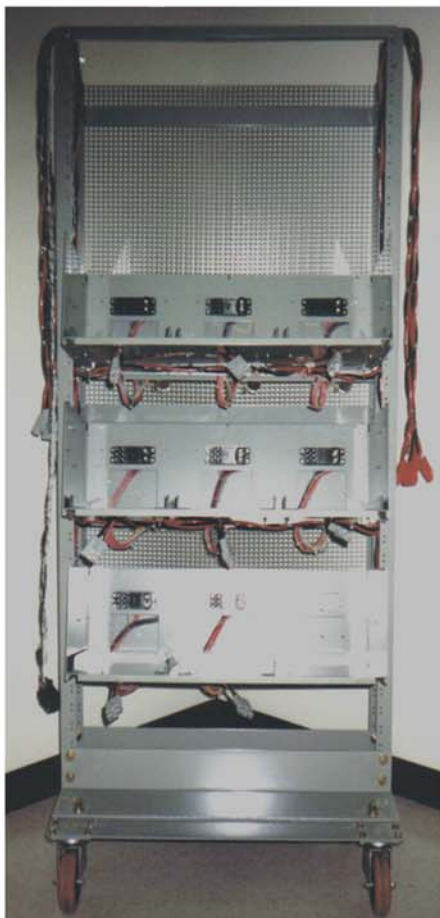
ESS / VIBE / BURN-IN SYSTEMS



*Front view of Multiple Burn-In Carts*

**Application:** AC/DC and DC/DC Power Supplies Burn-In  
High volume production

**Features:** FineTest Burn-In Monitoring System integrated with Thermal Chamber  
FineTest Burn-In Monitoring Software  
Measures AC or DC Input Voltage  
Measures DC Output Voltage or Power Fail Line  
256 Point Matrix in C Size VXI Mainframe

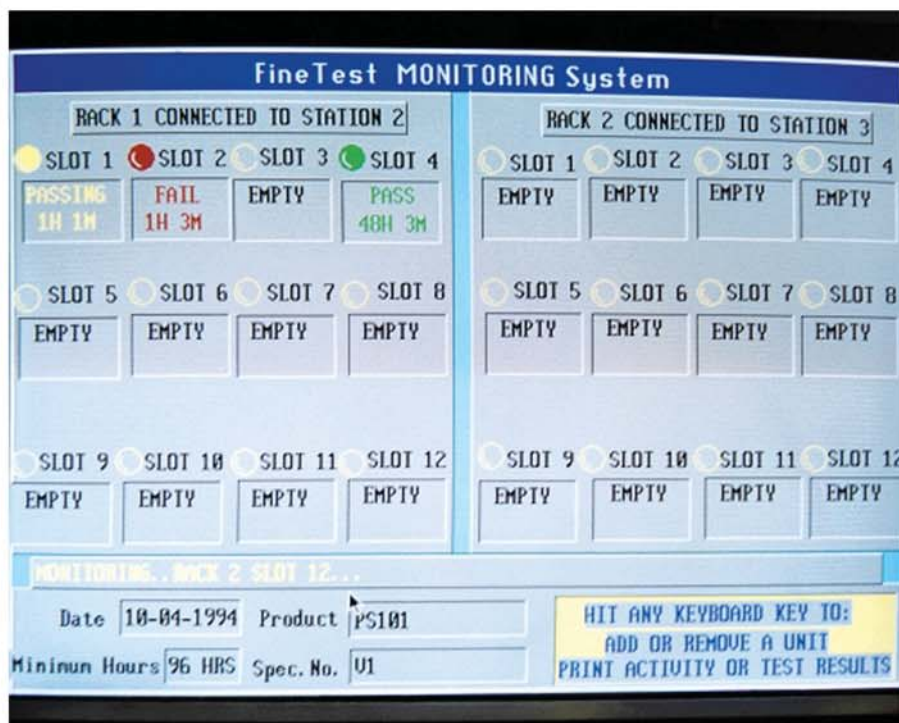


Front view of a Burn-In Cart



Front view of Burn-In Monitoring System  
Integrated with Thermal Chamber

ESS / VIBE / BURN-IN SYSTEMS



FineTest Burn-In Monitoring Software



# Ten 2 Unit Burn-In Carts and 20 Unit Monitoring System

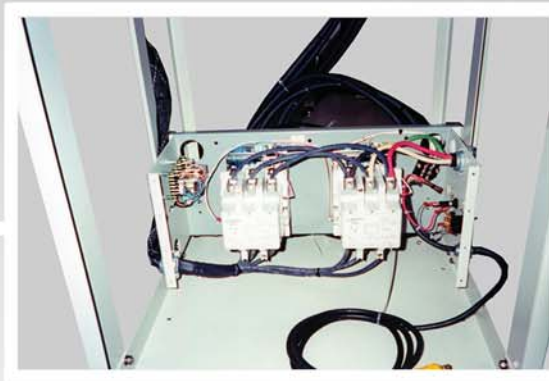
ESS / VIBE / BURN-IN SYSTEMS



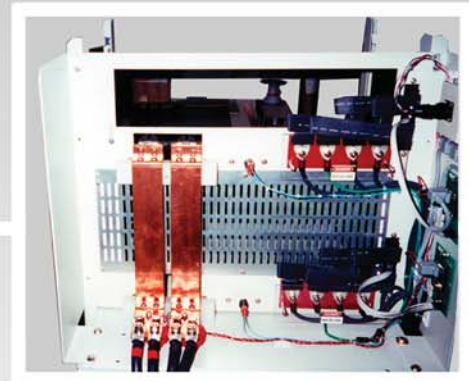
*Front view of 2 Vortex Burn-In Carts*



*Rear view of 2 Vortex Burn-In Carts*



*Power Cycling Contactors in Cart*



*Wiring inside Cart*

**Application:** 48V, 200A 10kW AC/DC Power Supplies Burn-In

**Features:**

- FineTest Burn-In Monitoring System integrated with Thermal Chamber
- FineTest Burn-In Monitoring Software
- RS485 Communication to UUTs to monitor Status Bits
- Power Cycling Contactors Controlled by Monitoring Software



*Burn-In Cart with lower cover removed showing contactors*



*Burn-In Monitoring System and Cart with 2 UUTs*



*Burn-In Monitoring System in production*

| STATION 1        |                  |                  |                  |
|------------------|------------------|------------------|------------------|
| 1                | 2                | 3                | 4                |
| SN 8888          | SN 8888          | SN 8888          | SN 8888          |
| P/F              | P/F              | P/F              | P/F              |
| L. MON. 00:47:23 | L. MON. 00:19:00 | L. MON. 00:10:07 | L. MON. 00:17:24 |
| BI. T. 0:29      | BI. T. COMPLETED | BI. T. 0:0       | BI. T. 0:29      |
| M. BI. 00:0      | M. BI. 0:1       | M. BI. 00:0      | M. BI. 00:0      |
| TRUE 10          | TRUE 10          | TRUE 10          | TRUE 10          |
| 5                | 6                | 7                | 8                |
| SN 8888          | SN 8888          | SN 8888          | SN 8888          |
| P/F              | P/F              | P/F              | P/F              |
| L. MON. 00:47:11 | L. MON. 00:47:11 | L. MON. 00:47:11 | L. MON. 00:47:11 |
| BI. T. 0:1       | BI. T. 0:1       | BI. T. 0:1       | BI. T. COMPLETED |
| M. BI. 00:0      | M. BI. 12:00     | M. BI. 12:00     | M. BI. 0:1       |
| TRUE 10          | TRUE 10          | TRUE 10          | TRUE 10          |

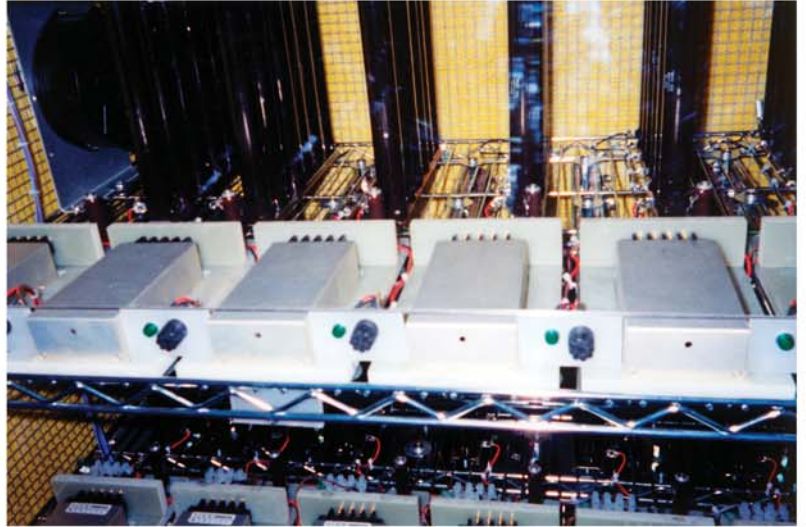
*FineTest Burn-In Monitoring Software*

# 24 Unit Burn-In Carts for Telecom Power *Mexico*

ESS / VIBE / BURN-IN SYSTEMS



*Front view of Fully Loaded Burn-In Cart*



*Close-Up of UUTs installed in a shelf*



*Close-Up of Temperature Controller  
and Power Control Box*

**Application:** AC/DC Power Supplies

**Features:**

24 Slots per Cart

LED and Fuse for each slot

Temperature Controlled Cart

Resistive loads inside Cart to heat UUTs

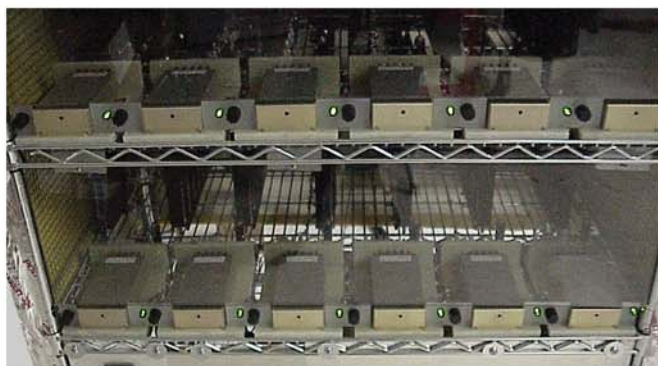
Pogo-Pin connection to UUT for easy installation



*Heat Exhaust Fans on Top of Cart*



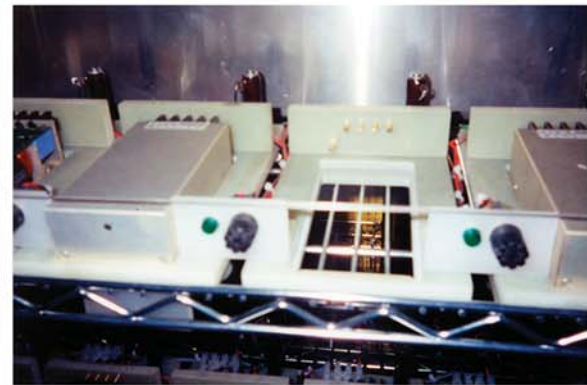
*Resistor Loads inside Cart to heat UUTs*



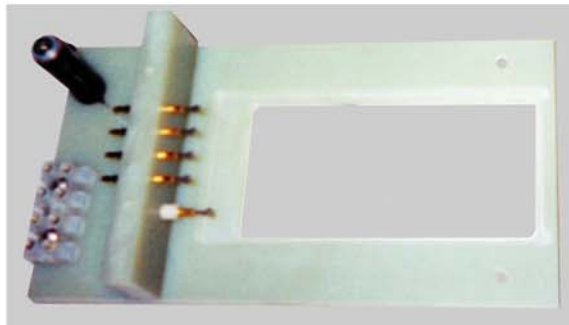
*Green LEDs ON when UUTs Passing*



*Heat Exhaust Fans on Side of Cart*



*LED and Fuse for each Slot*



*Pogo-Pin Connection to UUT*

**ESS / VIBE / BURN-IN SYSTEMS**

# 16 Unit Life Test Burn-In Cart for Telecom Power Supplies

ESS / VIBE / BURN-IN SYSTEMS



*Front view of Life Test Burn-In Cart*

**Application:** AC/DC Power Supplies Life Test Burn-In

**Features:**

- 16 Slots for UUTs
- Resistive Loads on bottom of Cart to heat UUTs
- AC Input Power Control Box with Power Cycling Timer
- Large Casters for easy mobility
- One piece frame for Heavy Power Supplies



Side view of Life Test Burn-In Cart showing AC Input Power Control Box with Power Cycling Timer



Close-Up of Resistive Loads on bottom of Cart



Side view of duplicate Cart with resistive loads on top



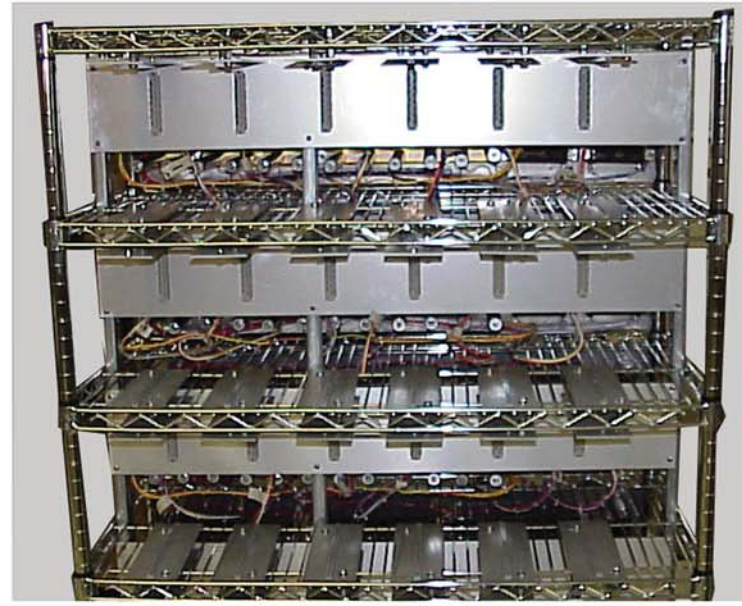
Rear view of duplicate Cart with resistive loads on top

# 24 Unit Burn-In Cart for DC-DC Converters

ESS / VIBE / BURN-IN SYSTEMS



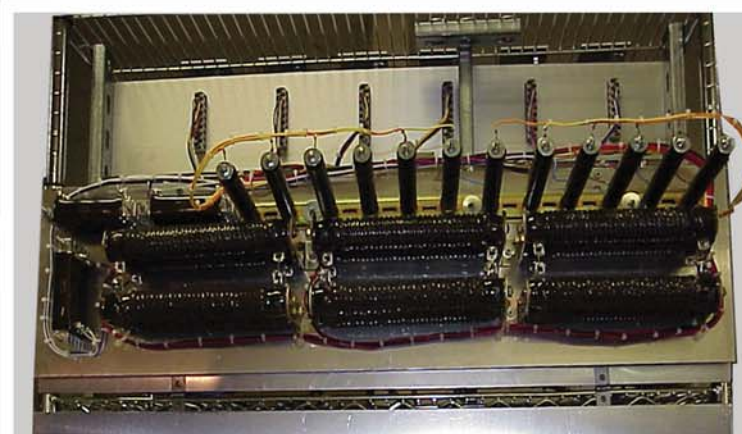
*Front view of Burn-In Cart*



*Close-Up front view of Burn-In Cart*



*Close-Up of Slots*



*Drop-Down Back Panel Resistor Loads*

**Application:** DC/DC Power Supplies

**Features:** 24 Slots for UUTs  
Drop-Down Back Panel Mounted Resistor Loads

# 15 Unit Burn-In Cart for Telecom Power Supplies



ESS / VIBE / BURN-IN SYSTEMS



*Close-Up of Burn-In Cart with  
AC Input Power Control Box  
on the side of the Cart*

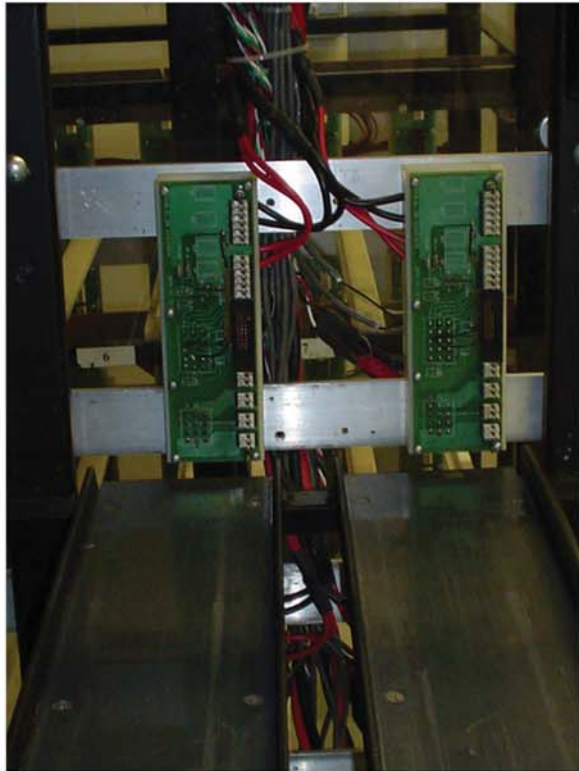
*Front view of Burn-In Cart  
with 15 UUTs loaded  
and connected to  
the DC Input Power Cabinet*

**Application:** Power Supply Burn-In

**Features:**

- AC/DC or DC/DC Power Supplies
- Resistive loads on top of Cart
- Large casters for greater mobility

# 24 Unit Burn-In Cart for 5kW Bulk Power Regulators



*Close-Up of 2 Slots showing  
PCBs with UUT Mating Connectors*



*Front view of Burn-In Cart with 24 Slots*

ESS / VIBE / BURN-IN SYSTEMS

**Application:** 3 Phase 5kW AC/DC Bulk Power Regulators Burn-In

**Features:**

- AC Input Power Control Box with Power Cycling Timer
- External Resistive Load Connection
- Strong one piece frame for heavy Power Supplies
- Large casters for easy mobility

# Regenerative Burn-In Systems Inverters to Re-Cycle Power



*Front view of Burn-In Cart and Inverters*



*Rear view of Burn-In Cart and Inverters*

ESS / VIBE / BURN-IN SYSTEMS



*Front view of Multiple Burn-In Systems*

**Application:** 3kW AC/DC Power Supplies Burn-In, 1.2kW Inverter Burn-In

**Features:** 32 Power Supply Slots per Burn-In System  
120 Inverter Slots per Burn-In System

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

# Monitoring Software

## ESS/Vibe/Burn-In Monitoring Software

ESS / VIBE / BURN-IN SYSTEMS

The screenshot displays the 'FineTest Burn-In Monitoring System' window. It features a grid of 12 UUT (Unit Under Test) monitoring panels, labeled UUT #1 through UUT #12. Each panel shows real-time test data for a specific unit, including SN (Serial Number), PN (Part Number), and various electrical measurements (V Meas, V Min, V Max, I Meas, I Min, I Max) over time. The status for each UUT is 'Testing' with a green 'PASS' indicator. Below the grid, there are controls for Chamber Temperature (26.00 Deg C), Chamber Temperature Alarm, Input A Voltage Alarm, and Input B Voltage Alarm. A 'Started' button is visible, along with 'Reset Alarms' and 'Stop Monitoring' buttons. At the bottom right, there are fields for Cycle #, Step #, Step Time (Mins), Chamber Sync Signal, and Vibe Signal, with a 'Check for Step Change...' button.

Main Screen of the FineTest Burn-In Monitoring Software showing  
 12 UUTs installed, Test Data displayed in Real-Time,  
 Temperature Alarm and Input Voltage Alarm LEDs,  
 Current Temperature inside the Thermal Chamber,  
 Power Cycling Control,  
 Number of Thermal Cycles performed,  
 and the current step in the cycle

Step 1: Cold Soak

Step 2: Cold to Hot Ramp Up

Step 3: Hot Soak

Step 4: Hot to Cold Ramp Down

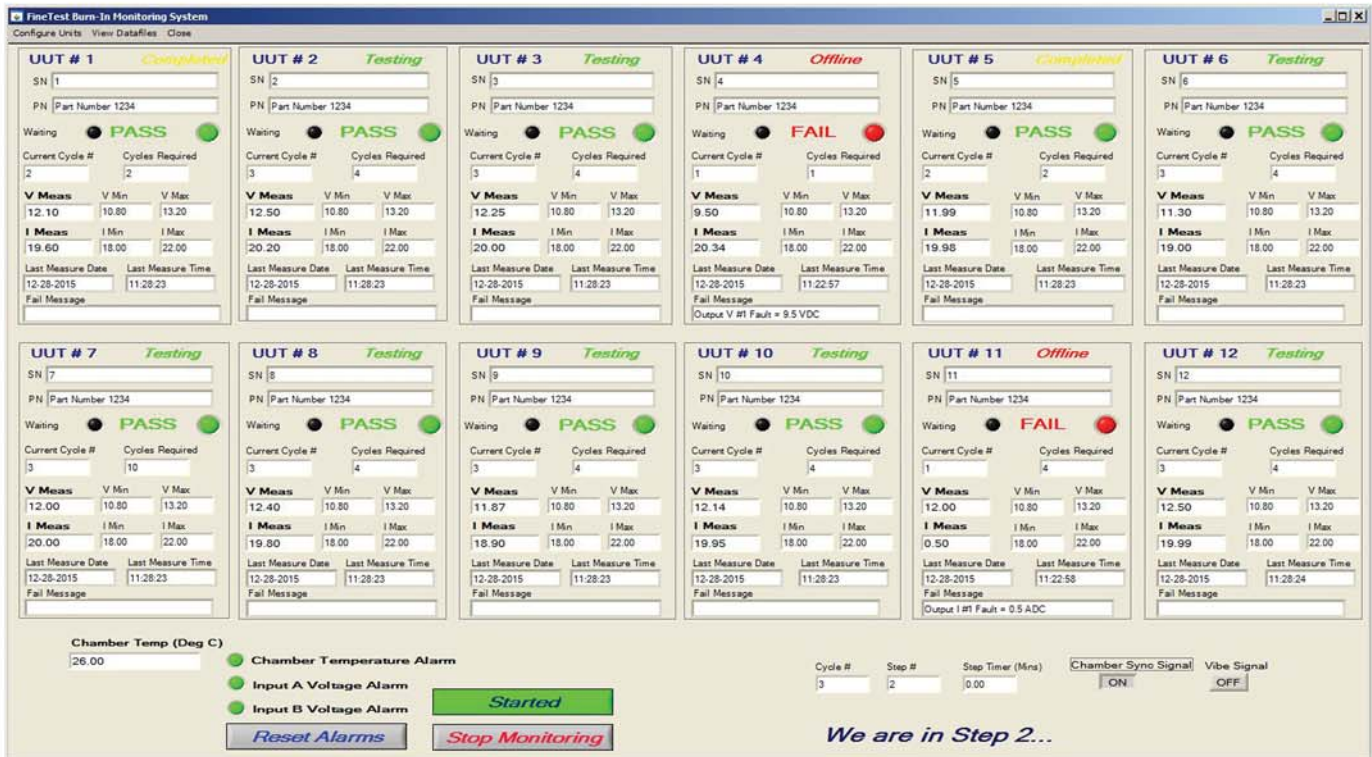
### Selecting Configure Units

The Configure Unit Panels  
allow the operator  
to enter UUT Serial Number  
and select the number of cycles

Pretest Failed

Pretest Passed

The operator can also  
run a pretest to verify  
the unit is operational  
and connected correctly  
before starting the  
ESS/Vibe/Burn-In cycles.



Sample Main Display Panel with 12 UUTs installed: 8 still Testing, 2 Completed and 2 Failures

Each Slot on the Main Panel displays the UUT's data including:

Serial Number and Part Number  
Testing/Offline, Completed, or Empty  
Pass or Fail Status,

Test Results Data (Voltage, Current),  
Last Measurement Date/Time Stamp  
Any Failure Message

Total cycles required & current cycle for the UUT  
Each UUT has unique cycle count/cycles required



Monitoring Started

Monitoring Stopped

Monitoring can be Started or Stopped at any time.

If either of the Dual Input Voltages, or the Chamber Temperature goes out of limits, this is considered an Alarm Condition and all UUTs are shutdown.

The display shows ALARM for all of the UUTs in red.

The software can be configured to automatically reset the alarm condition when the Input Voltage and/or Chamber Temperature are back in limits or require the Operator to click the Reset Alarms button.

|    | A                                                                  | B   | C                           | D | E |
|----|--------------------------------------------------------------------|-----|-----------------------------|---|---|
| 1  | ESS Datalog Counter                                                | 1   |                             |   |   |
| 2  | Vibe Datalog Counter                                               | 1   |                             |   |   |
| 3  | ESS Max Low Temperature                                            | -60 |                             |   |   |
| 4  | ESS Max High Temperature                                           | 65  |                             |   |   |
| 5  | 12V Vout Nominal                                                   | 12  |                             |   |   |
| 6  | 12V Vmax Multiplier in Percent (ex 110% of Nominal = 1.1)          | 1.1 |                             |   |   |
| 7  | 12V Vmin Multiplier in Percent (ex 90% of Nominal = 0.9)           | 0.9 |                             |   |   |
| 8  | 12V Iout Nominal                                                   | 20  |                             |   |   |
| 9  | 12V Imax Multiplier in Percent (ex 200% of Operational Load = 2.0) | 1.1 |                             |   |   |
| 10 | 12V Imin Multiplier in Percent (ex 50% of Operational Load = 0.5)  | 0.9 |                             |   |   |
| 11 | DCV Input Min in VDC                                               | 23  |                             |   |   |
| 12 | DCV Input Max in VDC                                               | 25  |                             |   |   |
| 13 | DCV Input Nominal                                                  | 24  |                             |   |   |
| 14 | Default Number of Cycles for configuration panels                  | 4   |                             |   |   |
| 15 | Part Number 1234                                                   | 0   | Default Type or Part Number |   |   |
| 16 | available                                                          | 0   |                             |   |   |
| 17 | available                                                          | 0   |                             |   |   |
| 18 | available                                                          | 0   |                             |   |   |
| 19 | available                                                          | 0   |                             |   |   |
| 20 | available                                                          | 0   |                             |   |   |
| 21 | available                                                          | 0   |                             |   |   |
| 22 | available                                                          | 0   |                             |   |   |
| 23 | available                                                          | 0   |                             |   |   |
| 24 | available                                                          | 0   |                             |   |   |
| 25 | available                                                          | 0   |                             |   |   |
| 26 | available                                                          | 0   |                             |   |   |
| 27 | available                                                          | 0   |                             |   |   |
| 28 | available                                                          | 0   |                             |   |   |
| 29 | available                                                          | 0   |                             |   |   |
| 30 | available                                                          | 0   |                             |   |   |
| 31 | available                                                          | 0   |                             |   |   |
| 32 | available                                                          | 0   |                             |   |   |
| 33 | available                                                          | 0   |                             |   |   |
| 34 | available                                                          | 0   |                             |   |   |

Configuration Data and Default Values for any of the test parameters can be set in an Excel File.

This includes the Min/Max Temperature, Nominal Output Voltages and Currents, Test Limits, Number of Cycles etc.

The file is read when the program starts and populates the variables, display boxes, etc.

# Monitoring Software Test Data Storage

Data is stored individually by  
Part #, Serial #, Slot #, and Cycle #.

Data is also stored as a Summary file  
of all cycles for each Slot.

Data is stored in Text and Excel Format

Part Number 1234\_4\_Temp\_slot4cycle-ALL - Notepad

| Cyc                                       | Temp   | Date       | Time     | Serial Number | Type                                   | P/F   | Fail Message |
|-------------------------------------------|--------|------------|----------|---------------|----------------------------------------|-------|--------------|
| 1                                         | 26.0   | 12-28-2015 | 11:20:12 | 4             | Part Number 1234_4_Temp_slot4cycle-ALL | PASS  |              |
| Test Name                                 |        |            |          |               |                                        |       |              |
|                                           | Min    |            | Measure  | Max           | Part Number                            | Units |              |
| Vout                                      | 10.800 |            | 12.000   | 13.200        | VDC                                    |       |              |
| Iout                                      | 18.000 |            | 20.140   | 22.000        | ADC                                    |       |              |
| Alarm Signals                             |        |            |          |               |                                        |       |              |
| Chamber Temperature Alarm (0=Ok, 1=Alarm) | = 0    |            |          |               |                                        |       |              |
| Input A Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |              |
| Input B Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |              |

| Cyc                                       | Temp   | Date       | Time     | Serial Number | Type                                   | P/F   | Fail Message |
|-------------------------------------------|--------|------------|----------|---------------|----------------------------------------|-------|--------------|
| 1                                         | 26.0   | 12-28-2015 | 11:20:14 | 4             | Part Number 1234_4_Temp_slot4cycle-ALL | PASS  |              |
| Test Name                                 |        |            |          |               |                                        |       |              |
|                                           | Min    |            | Measure  | Max           | Part Number                            | Units |              |
| Vout                                      | 10.800 |            | 12.000   | 13.200        | VDC                                    |       |              |
| Iout                                      | 18.000 |            | 20.140   | 22.000        | ADC                                    |       |              |
| Alarm Signals                             |        |            |          |               |                                        |       |              |
| Chamber Temperature Alarm (0=Ok, 1=Alarm) | = 0    |            |          |               |                                        |       |              |
| Input A Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |              |
| Input B Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |              |

| Cyc                                       | Temp   | Date       | Time     | Serial Number | Type                                   | P/F   | Fail Message |
|-------------------------------------------|--------|------------|----------|---------------|----------------------------------------|-------|--------------|
| 1                                         | 26.0   | 12-28-2015 | 11:22:15 | 4             | Part Number 1234_4_Temp_slot4cycle-ALL | PASS  |              |
| Test Name                                 |        |            |          |               |                                        |       |              |
|                                           | Min    |            | Measure  | Max           | Part Number                            | Units |              |
| Vout                                      | 10.800 |            | 12.000   | 13.200        | VDC                                    |       |              |
| Iout                                      | 18.000 |            | 20.140   | 22.000        | ADC                                    |       |              |
| Alarm Signals                             |        |            |          |               |                                        |       |              |
| Chamber Temperature Alarm (0=Ok, 1=Alarm) | = 0    |            |          |               |                                        |       |              |
| Input A Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |              |
| Input B Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |              |

| Cyc                                       | Temp   | Date       | Time     | Serial Number | Type                                   | P/F   | Fail Message |
|-------------------------------------------|--------|------------|----------|---------------|----------------------------------------|-------|--------------|
| 1                                         | 26.0   | 12-28-2015 | 11:22:16 | 4             | Part Number 1234_4_Temp_slot4cycle-ALL | PASS  |              |
| Test Name                                 |        |            |          |               |                                        |       |              |
|                                           | Min    |            | Measure  | Max           | Part Number                            | Units |              |
| Vout                                      | 10.800 |            | 12.000   | 13.200        | VDC                                    |       |              |
| Iout                                      | 18.000 |            | 20.140   | 22.000        | ADC                                    |       |              |
| Alarm Signals                             |        |            |          |               |                                        |       |              |
| Chamber Temperature Alarm (0=Ok, 1=Alarm) | = 0    |            |          |               |                                        |       |              |
| Input A Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |              |
| Input B Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |              |

| Cyc                                       | Temp   | Date       | Time     | Serial Number | Type                                   | P/F   | Fail Message                |
|-------------------------------------------|--------|------------|----------|---------------|----------------------------------------|-------|-----------------------------|
| 1                                         | 26.0   | 12-28-2015 | 11:22:17 | 4             | Part Number 1234_4_Temp_slot4cycle-ALL | FAIL  | Output V #1 Fault = 9.5 VDC |
| Test Name                                 |        |            |          |               |                                        |       |                             |
|                                           | Min    |            | Measure  | Max           | Part Number                            | Units |                             |
| Vout                                      | 10.800 |            | 9.500    | 13.200        | VDC                                    |       |                             |
| Iout                                      | 18.000 |            | 20.140   | 22.000        | ADC                                    |       |                             |
| Alarm Signals                             |        |            |          |               |                                        |       |                             |
| Chamber Temperature Alarm (0=Ok, 1=Alarm) | = 0    |            |          |               |                                        |       |                             |
| Input A Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |                             |
| Input B Voltage Alarm (0=Ok, 1=Alarm)     | = 0    |            |          |               |                                        |       |                             |

| Name                                         | Date modified       | Type            |
|----------------------------------------------|---------------------|-----------------|
| Part Number 1234_2_Temp_slot2cycle-ALL       | 12/28/2015 11:51 AM | Microsoft Excel |
| Part Number 1234_2_Temp_slot2cycle-Summary   | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_2_Temp_slot2cycle-Summary   | 12/28/2015 11:54 AM | Microsoft Excel |
| Part Number 1234_3_Temp_slot3cycle-ALL       | 12/28/2015 11:51 AM | Text Document   |
| Part Number 1234_3_Temp_slot3cycle-ALL       | 12/28/2015 11:51 AM | Microsoft Excel |
| Part Number 1234_3_Temp_slot3cycle-Summary   | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_3_Temp_slot3cycle-Summary   | 12/28/2015 11:54 AM | Microsoft Excel |
| Part Number 1234_4_Temp_slot4cycle-ALL       | 12/28/2015 11:51 AM | Text Document   |
| Part Number 1234_4_Temp_slot4cycle-ALL       | 12/28/2015 11:51 AM | Microsoft Excel |
| Part Number 1234_4_Temp_slot4cycle-Summary   | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_4_Temp_slot4cycle-Summary   | 12/28/2015 11:54 AM | Microsoft Excel |
| Part Number 1234_5_Temp_slot5cycle-ALL       | 12/28/2015 11:51 AM | Text Document   |
| Part Number 1234_5_Temp_slot5cycle-ALL       | 12/28/2015 11:51 AM | Microsoft Excel |
| Part Number 1234_5_Temp_slot5cycle-Summary   | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_5_Temp_slot5cycle-Summary   | 12/28/2015 11:54 AM | Microsoft Excel |
| Part Number 1234_6_Temp_slot6cycle-ALL       | 12/28/2015 11:48 AM | Text Document   |
| Part Number 1234_6_Temp_slot6cycle-ALL       | 12/28/2015 11:48 AM | Microsoft Excel |
| Part Number 1234_6_Temp_slot6cycle-Summary   | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_6_Temp_slot6cycle-Summary   | 12/28/2015 11:54 AM | Microsoft Excel |
| Part Number 1234_7_Temp_slot7cycle-Summary   | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_7_Temp_slot7cycle-Summary   | 12/28/2015 11:54 AM | Microsoft Excel |
| Part Number 1234_7_Temp_slot7cycle-ALL       | 12/28/2015 11:51 AM | Text Document   |
| Part Number 1234_7_Temp_slot7cycle-ALL       | 12/28/2015 11:51 AM | Microsoft Excel |
| Part Number 1234_8_Temp_slot8cycle-Summary   | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_8_Temp_slot8cycle-Summary   | 12/28/2015 11:54 AM | Microsoft Excel |
| Part Number 1234_8_Temp_slot8cycle-ALL       | 12/28/2015 11:51 AM | Text Document   |
| Part Number 1234_8_Temp_slot8cycle-ALL       | 12/28/2015 11:51 AM | Microsoft Excel |
| Part Number 1234_9_Temp_slot9cycle-Summary   | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_9_Temp_slot9cycle-Summary   | 12/28/2015 11:54 AM | Microsoft Excel |
| Part Number 1234_9_Temp_slot9cycle-ALL       | 12/28/2015 11:51 AM | Text Document   |
| Part Number 1234_9_Temp_slot9cycle-ALL       | 12/28/2015 11:51 AM | Microsoft Excel |
| Part Number 1234_10_Temp_slot10cycle-Summary | 12/28/2015 11:54 AM | Text Document   |
| Part Number 1234_10_Temp_slot10cycle-Summary | 12/28/2015 11:54 AM | Microsoft Excel |

Data is stored in Text and Excel Format

Test Data Summary in Text Format

Part Number 1234\_4\_Temp\_slot4cycle-ALL - Microsoft Excel

| 1 | Cycle Num | Chamber Temperature | Serial Number | Type             | Pass/Fail | Fail Message                | Last Measure Date | Last Measure Time | Vout Min | Vout Measure | Vout Max | Iout Min | Iout Measure | Iout Max | Chamber Alarm (0=Ok, 1=Alarm) |
|---|-----------|---------------------|---------------|------------------|-----------|-----------------------------|-------------------|-------------------|----------|--------------|----------|----------|--------------|----------|-------------------------------|
| 2 | 1         | 26                  | 4             | Part Number 1234 | PASS      |                             | 12/28/2015        | 11:20:12          | 10.8     | 12           | 13.2     | 18       | 20.34        | 22       | 0                             |
| 3 | 1         | 26                  | 4             | Part Number 1234 | PASS      |                             | 12/28/2015        | 11:20:14          | 10.8     | 12           | 13.2     | 18       | 20.34        | 22       | 0                             |
| 4 | 1         | 26                  | 4             | Part Number 1234 | PASS      |                             | 12/28/2015        | 11:22:15          | 10.8     | 11           | 13.2     | 18       | 20.34        | 22       | 0                             |
| 5 | 1         | 26                  | 4             | Part Number 1234 | PASS      |                             | 12/28/2015        | 11:22:16          | 10.8     | 11           | 13.2     | 18       | 20.34        | 22       | 0                             |
| 6 | 1         | 26                  | 4             | Part Number 1234 | FAIL      | Output V #1 Fault = 9.5 VDC | 12/28/2015        | 11:22:17          | 10.8     | 9.5          | 13.2     | 18       | 20.34        | 22       | 0                             |

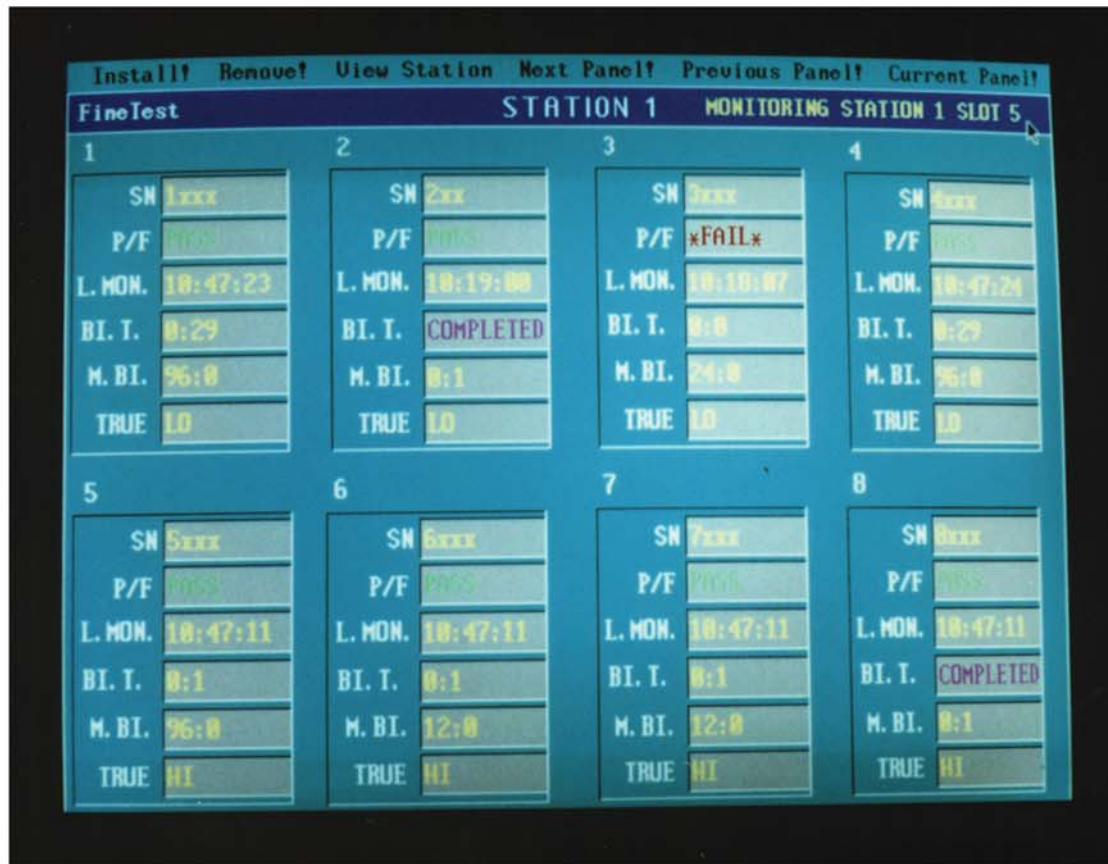
Test Data Summary in Excel Format



# FineTest

## Burn-In Monitoring Software

ESS / VIBE / BURN-IN SYSTEMS



Front view of FineTest Burn-In Monitoring Software

**Application:** Burn-In Monitoring for High Volume Production

**Features:**

- Install or Remove a UUT without disrupting other UUTs
- Independent slot monitoring enables different types of UUTs to be monitored side by side, in the same software, at the same time
- Monitors any combination of the following:
  - Input Voltage, Output Voltage, Digital Hi or Lo,
  - Status Bits from UUT through RS232, RS485 or i2c
- Controls Power Cycling and Thermal Chamber Temperature
- Facility Power Outage: Automatic Software Recovery to pre-fault state
- FineSoft on LabWindows CVI platform

# Station Display Panel



ESS / VIBE / BURN-IN SYSTEMS

The Station Display Panel shows all of the Slots in that Station,  
and also displays which Station # and Slot # is currently being monitored

Each Slot shows:

SN      Serial Number

P/F      Pass or Fail Status (UUT is passing until a failure has occurred)

L. Mon.   Last time this UUT was Monitored

BI T.      Time this UUT has been in Burn-In, or COMPLETED when max Burn-In Time reached

M. BI.      Maximum Burn-In Time for this UUT

TRUE      Digital Logic TRUE is Hi or Lo

When monitoring Output Voltage, the voltage is shown

When monitoring Status Bits, the Bit value is shown

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

# Printing Chamber Status and Viewing Station Display Panels

ESS / VIBE / BURN-IN SYSTEMS

## Print Status

| Install? | Remove? | View Station   | Next Panel? | Previous Panel?              | Current Panel? |
|----------|---------|----------------|-------------|------------------------------|----------------|
| FineTest |         | PRINT STATUS   | ON 1        | MONITORING STATION 1 SLOT 10 |                |
| 1        |         | STATION 1 F1   | 3           |                              |                |
| 2        |         | STATION 2 F2   | 4           |                              |                |
| 3        |         | STATION 3 F3   | 5           |                              |                |
| 4        |         | STATION 4 F4   | 6           |                              |                |
| 5        |         | STATION 5 F5   | 7           |                              |                |
| 6        |         | STATION 6 F6   | 8           |                              |                |
| 7        |         | STATION 7 F7   | 9           |                              |                |
| 8        |         | STATION 8 F8   | 10          |                              |                |
| 9        |         | STATION 9 F9   |             |                              |                |
| 10       |         | STATION 10 F10 |             |                              |                |

View entire Chamber Status on paper

## View Station

| Install? | Remove? | View Station   | Next Panel? | Previous Panel?              | Current Panel? |
|----------|---------|----------------|-------------|------------------------------|----------------|
| FineTest |         | PRINT STATUS   | ON 1        | MONITORING STATION 1 SLOT 10 |                |
| 1        |         | STATION 1 F1   | 3           |                              |                |
| 2        |         | STATION 2 F2   | 4           |                              |                |
| 3        |         | STATION 3 F3   | 5           |                              |                |
| 4        |         | STATION 4 F4   | 6           |                              |                |
| 5        |         | STATION 5 F5   | 7           |                              |                |
| 6        |         | STATION 6 F6   | 8           |                              |                |
| 7        |         | STATION 7 F7   | 9           |                              |                |
| 8        |         | STATION 8 F8   | 10          |                              |                |
| 9        |         | STATION 9 F9   |             |                              |                |
| 10       |         | STATION 10 F10 |             |                              |                |

View a specific station display panel

## Next Panel

| Install? | Remove? | View Station | Next Panel?                  | Previous Panel? | Current Panel? |
|----------|---------|--------------|------------------------------|-----------------|----------------|
| FineTest |         | STATION 1    | MONITORING STATION 1 SLOT 10 |                 |                |
| 1        |         | SN Exxx      | 2                            |                 |                |
| 2        |         | SN Exxx      | 3                            |                 |                |
| 3        |         | SN Exxx      | 4                            |                 |                |
| 4        |         | SN Exxx      | 5                            |                 |                |
| 5        |         | SN Exxx      | 6                            |                 |                |
| 6        |         | SN Exxx      | 7                            |                 |                |
| 7        |         | SN Exxx      | 8                            |                 |                |
| 8        |         | SN Exxx      | 9                            |                 |                |
| 9        |         | SN Exxx      | 10                           |                 |                |
| 10       |         | SN Exxx      |                              |                 |                |

View the next station display panel

## Previous Panel

| Install? | Remove? | View Station | Next Panel?                  | Previous Panel? | Current Panel? |
|----------|---------|--------------|------------------------------|-----------------|----------------|
| FineTest |         | STATION 1    | MONITORING STATION 1 SLOT 10 |                 |                |
| 1        |         | SN Exxx      | 2                            |                 |                |
| 2        |         | SN Exxx      | 3                            |                 |                |
| 3        |         | SN Exxx      | 4                            |                 |                |
| 4        |         | SN Exxx      | 5                            |                 |                |
| 5        |         | SN Exxx      | 6                            |                 |                |
| 6        |         | SN Exxx      | 7                            |                 |                |
| 7        |         | SN Exxx      | 8                            |                 |                |
| 8        |         | SN Exxx      | 9                            |                 |                |
| 9        |         | SN Exxx      | 10                           |                 |                |
| 10       |         | SN Exxx      |                              |                 |                |

View previous station display panel

## Current Panel

| Install? | Remove? | View Station | Next Panel?                  | Previous Panel? | Current Panel? |
|----------|---------|--------------|------------------------------|-----------------|----------------|
| FineTest |         | STATION 1    | MONITORING STATION 1 SLOT 10 |                 |                |
| 1        |         | SN Exxx      | 2                            |                 |                |
| 2        |         | SN Exxx      | 3                            |                 |                |
| 3        |         | SN Exxx      | 4                            |                 |                |
| 4        |         | SN Exxx      | 5                            |                 |                |
| 5        |         | SN Exxx      | 6                            |                 |                |
| 6        |         | SN Exxx      | 7                            |                 |                |
| 7        |         | SN Exxx      | 8                            |                 |                |
| 8        |         | SN Exxx      | 9                            |                 |                |
| 9        |         | SN Exxx      | 10                           |                 |                |
| 10       |         | SN Exxx      |                              |                 |                |

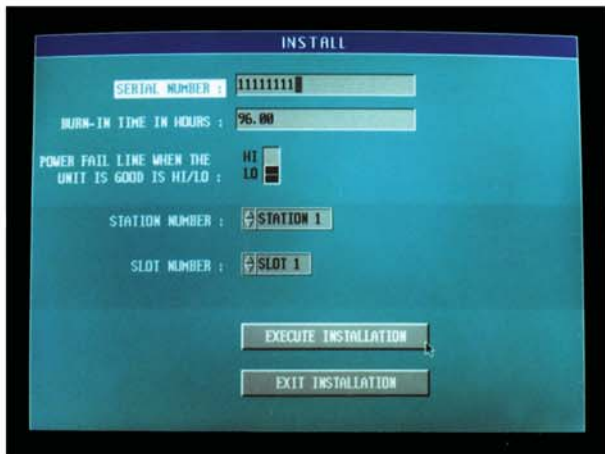
View station currently being monitored

# Installing & Removing a UUT

## Install a UUT



Click on Install! to install a new UUT



To install a UUT:

Enter the Serial Number

Enter the Burn-In Time

Select Power Fail Line Hi/Lo

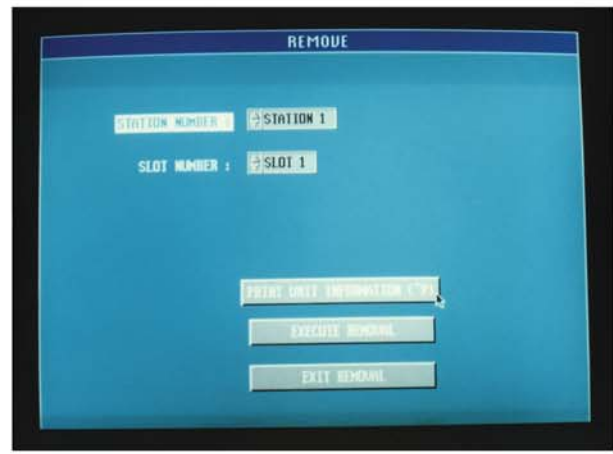
Select Station #

Select Slot #

## Remove a UUT



Click on Remove! to remove a UUT



To Remove a UUT:

Select Station #

Select Slot #



FineTest Production Floor

FineTest Building at 1 Industry Drive



# FineTest

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



Solutions Partner

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