Automated Connector Test System

GCI ACT

GCI's Automated Connector Tester (ACT) is a self-contained test bench providing reliable testing of filtered and non-filtered connectors. The ACT integrates off-the-shelf test instruments from Quadtech and Keithley with a GCI 150-point multiplexer. The GCI multiplexer's over-sized high-voltage relays promote high-reliability. Its modular construction provides expansion for up to 250 test points. Plug-in test fixtures provide interchangeable test adapters. The host controller is provided by a Pentium IV based computer. The user interface consists of a 15" flat-panel monitor, keyboard and mouse.

The ACT automates the tedious process of testing each pin against all others and shell for DC and AC leakage. For filter connectors, the ACT accurately measures pin to shell capacitance. For pins protected by diodes, the ACT provides leakage and breakdown measurements. The ACT also pins intentionally shorted to each other and/or shell.

The ACT provides an easy-to-use Graphical User Interface for test plan definition and operation. It includes troubleshooting options to assist in locating shorts faults between pins and shell. It also provides a mode to identify incorrectly shorted pins.

Specifications:

Dielectric Withstanding Voltage
50 to 2500 VDC, 0.1uA to 10mA DC
50 to 1750 VAC, 1 uA to 30 mA AC

Insulation Resistance
50 to 1000 VDC, 0.1 MΩ to 50 GΩ
Dwell and Fast Pass Test Modes

Capacitance
0 to 1uF, 1.0V @ 1 KHz

Dissipation Factor
0.00001 to 99.999, 1.0V @ 20Hz to 1 MHz
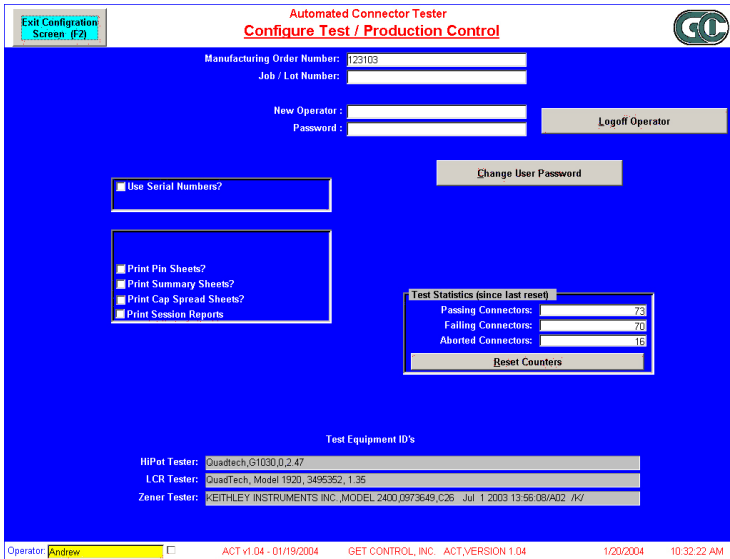
Diode Breakdown and Insulation Resistance

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Graphical User Interface Interface
- Easy to use menu based operator interface
- Test screen displays results for each pin tested
- Easy to program pin mapping and test plan entry
- Support for Manufacturing Order Number and Job/Lot Number to track and organize test results
- Support for serial numbered connectors
- Print detailed test results report that includes test measurements for each pin
- Print summary single-page test result with pass / fail stamp for each connector tested.
- Print capacitance spread reports for each connector tested
- Print test session reports for a summary of all tests in a given session

Test Fixtures
- Test fixtures adapt the test interface to the DUT.
- GCI provided or Customer controlled

System Security
- Unique user names and passwords for all users
- Operator level security for normal testing operations
- Supervisor level security for Test Plan and System access

Test Results Database
- Save detailed and statistical test results
- Export test results in Excel formatted files
- Archive test results for long term storage
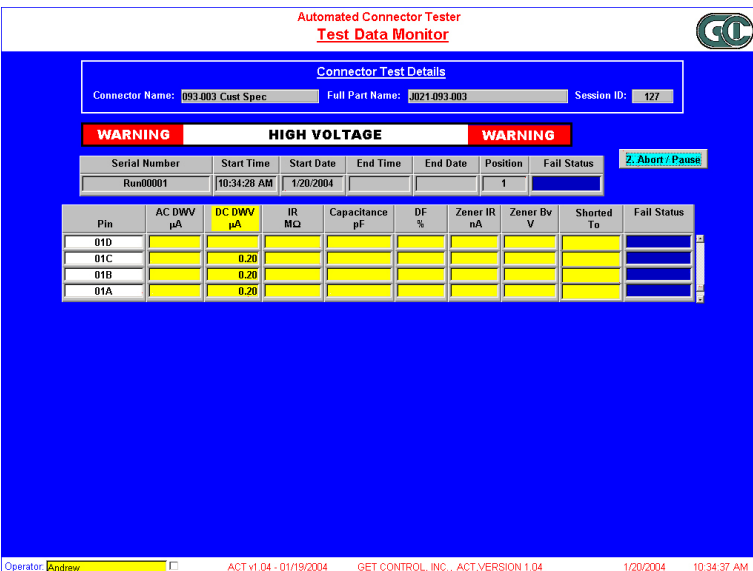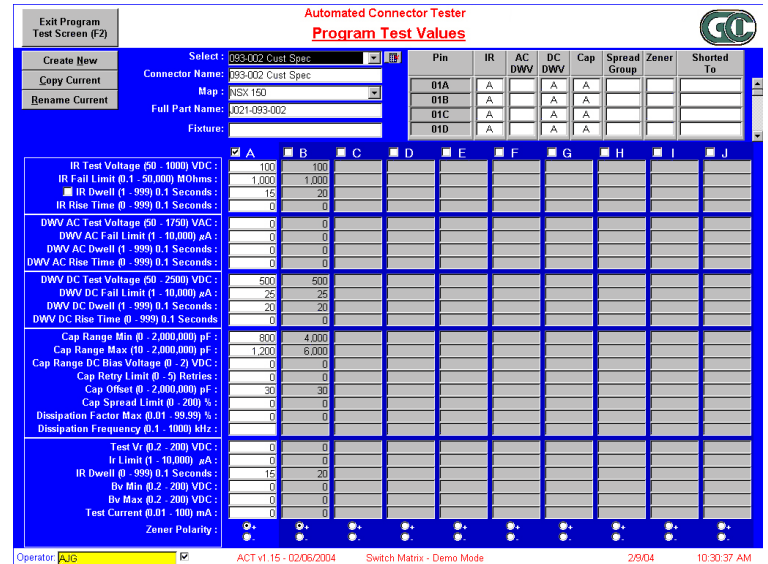
System Equipment
- 72" x 33" work surface with 19" instrumentation rack
- Pentium IV based computer system, with 15" flat screen monitor, keyboard and mouse.
- Custom Relay Matrix - selects the pin-to-test on the DUT
- Quadtech Guardian 1030 Hipot Tester - DWV and IR
- QuadTech 1920 Precision LCR Meter - Capacitance
- Keithley Model 2400 Series SourceMeter - Diodes / Shorts

Physical
- 72" W x 33" D x 30" H
- 350 lbs

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