



CPT1000™

Cable and Power Test System



Features and Benefits

- Identifies inter-module faults
- Resolves avionics diagnostic ambiguities in situ
- Isolates faults effectively
- Tests AC and DC power supplies
- Tests wire connections
- Allows fast and easy pass/fail operation-level testing

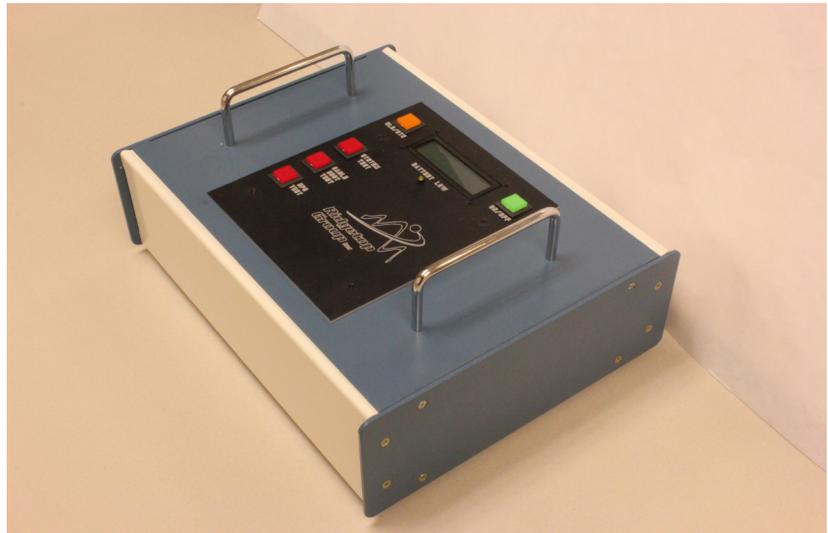
CPT1000: The Cable and Power System Testing Solution

The CPT1000 is a fast, reliable, high performance cable and power system tester. As the integrity of power transmission through main terminals, cables and power supplies is crucial in power systems, this tool effectively tests and isolates faults in power supplies and cabling. The portable handheld CPT1000 device provides signal monitoring, cable testing, and stimulus-and-response testing. The CPT1000 has two 37-pin cable ports for testing different types of power supplies and cables, and uses a rechargeable battery for portability.

Designed with both ease of use and high performance in mind, the CPT1000 can be set up, perform testing and provide results in less than five minutes. Ridgetop offers optional connector adapters to meet customers' needs.

CPT1000 offers a selection of three different test modes to choose from:

- **System Test:** Performs a self-test of the CPT1000.
- **Cable Host Test:** Checks for opens or shorts in the cable and connector paths.
 - **Remote Power Supply (RPS) Test:** Tests the voltages from the power supplies used in the system under test, and measures 440 Hz three-phase 115 VAC power; also analyzes the angles and voltages of each phase.



CPT1000 cable power test system



CPT1000 37-pin connectors

CPT1000 Unit Design

The CPT1000 control panel is user friendly and easy to navigate, consisting of:

- On/Off Switch
- System Test Button
- Cable Host Test Button
- Remote Power Supply (RPS) Test Button
- Clear/Return Screen
- Easy-to-read Liquid Crystal Display (LCD) Screen
- Low Battery Indicator

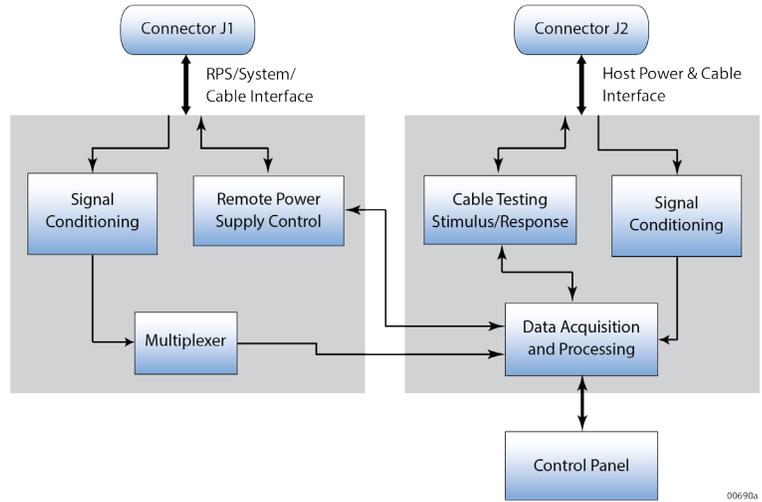
How the CPT1000 Works

The CPT1000 reads responses to stimuli to determine shorts and opens in cables and is able to measure and analyze peak power and voltage thresholds of **12 DC lines (nine 28 VDC, two VDC and one 350 VDC)**, phase angles, frequency changes, voltage thresholds and three-phase **115V 440 Hz** aircraft power, along with the discrete ranges of four discrete signals (three indicators and one control line).

The CPT1000 can also identify discontinuities and shorts in the cable sets.

CPT1000 specifications include:

DC output check:	12 VDC, 28 VDC, 350 VDC
AC output check:	440 Hz 115 VAC power check: amplitude, frequency, and phase
Cable set check:	Short circuits/discontinuities
Battery pack:	Six NiMH cells providing 9.6 V total; rechargeable
Dimensions:	L = 7.5 in. (19.05 cm) W = 6 in. (15.24 cm) H = 1.5 in. (3.81 cm)



CPT1000 operations diagram

CPT1000 Applications and Optional Uses:

- Power converters and inverters
- Power Supplies
- Shielded Cables
- Cable Connectors
- On-screen Tagging for Complex Harness Environments
- CPT1000 Internet of Things (IoT) Networking
- NightHawk NFF Reduction Tool I/F and Universal Cable I/F

The CPT1000 technology has been used by the U.S. Navy for testing power systems of military avionics such as those of the F/A-18.

About Ridgetop Group

Since its founding in 2000, Ridgetop has specialized in the development of advanced diagnostic and prognostic methods that are used to improve test coverage, improve reliability, reduce downtime, and reduce the mean time to repair (MTTR) of critical systems. Ridgetop also provides software-based development and monitoring tools supporting advanced condition-based maintenance (CBM) strategies.

Need modified or custom design? Contact Ridgetop at +1 520-742-3300 to discuss your ideal solution!

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