

Air Data Calibration Test System (ADCTS)

TestVonics™ Digital Air Data Test Systems

Complete calibration and test solution for
**Air Data / Pitot Static Test
Sets, Air Data Computers,
Altimeters, Airspeed
Indicators and other LRU's**

Perform automated testing locally or remotely with
ADCTS Air Data Calibrator

Easy to deploy into any environment, systems are
**Tailored to each Organizations
Test Requirement / Application**

TestVonics Part Number
P/N: ADCTS-1000 Series
(configured per customer requirements)



ADCTS-1000 Air Data Calibration Test Systems

A Complete Air Data Testing Solution

TestVonics Air Data Calibration Test System (ADCTS) is high precision advanced Secondary Air Data Controller-Monitor system. The ADCTS-1000 Series is a self-contained maneuverable rack mounted air data management system. The ADCTS is used in calibration labs, avionics engineering and avionics/instrument shops. The system is designed to perform both manual or automated test and calibration routines for a variety of air data test equipment (ie. test sets, air data computers, altimeters, airspeed indicators and line replaceable units). The ADCTS can be configured for use in both commercial and military environments.

Pneumatic Interface Options

The ADCTS can be equipped with several pneumatic connection options. The Air Data Calibrator features either front panel or rear panel Pitot (Pt) and Static (Ps) pneumatic connections. Additional options include:

- Optional Pneumatic Interface Panel is available to route rear panel Ps and Pt outputs to the front or rear panel.
- Optional Line Switching Unit (LSU) can provide multiple Pitot and Static outputs (4 Pitot and 4 Static). The LSU outputs can be operated locally through front panel controls or remotely through the RS-232 interface. This allows for testing of multiple outputs without having to disconnect hoses during testing.
- Standard pneumatic connections feature 37° Male JIC Flared AN4 for Pitot (Pt) and 37° Male JIC Flared AN6 for Static (Ps). Additional options are available for color coded quick disconnects couplings or customer specified connections.

Automated Test Routines

The ADCTS is very intuitive, after a few minutes of set up the operator can be testing. Automated test routines allow the operator to simply select the required test to perform and everything is automated from that point forward. Test routines can be designed and developed directly on the calibration using Test Program Mode. The calibrator can store thousands of test routines with an unlimited number of set points. Additionally, test routines can be copied and transferred over to other ADCTS systems. TestVonics can also delivery systems with custom test routines pre-installed upon customer request.

Automated test routines provide a consistent and repeatable automated test process. Test reports are automatically generated to be stored locally or printed. Performing test and calibration through automated means also provides greater confidence in calibration and test results for quality assurance purposes.

Automated Calibration and Verification

All ADCTS models features automated calibration software which includes verification and alignment for TestVonics ADTS Series Air Data Test Sets. Several models are available with automated calibration software for the TTU-205J Test Set and Precision Pressure Controller-Monitor (PPCM). Automated accuracy verification software is available for GE Druck Pitot Static Test Sets (TS4463/P, ADTS 401F, ADTS 403, ADTS 405F), Barfield Pitot Static Test Sets (DPS500, DPS501). In addition King Nutronics (3682, 3688), CME (ADTS 415F) as well as other manufacturers Pitot Static / Air Data Test Sets.

Benefits of Automatic Testing

Manually performing calibration can be a lengthy, time-consuming process. Automating calibration and test procedures with approved secondary air data calibrators will immediately generate cost savings, especially in touch labor. Most Air Data Test Sets and Pitot Static Test Sets include remote interfaces. TestVonics has designed the software to automate the calibration procedure for most of these test sets. Automating these calibration procedures has proven to reduce touch labor, in some cases 85% or greater. A calibration with 8-12 hours of touch labor could be reduced to 1-2 hours touch labor.

Tailored Air Data Solutions

ADCTS Configurations

ADCTS systems are available in a variety of configurations. Most systems are tailored to each customer's requirements and/or specifications. Pre-configured systems are also available. This page illustrates common components that can be integrated into the enclosure to create a tailored solution. Customer supplied equipment can be installed as well.

Note: Standard enclosures are 16U and 24" depth. Optional heights ranging from 3U - 20U, with depths of 20, 24 or 30 inches.



Note: sample configuration for illustrative purposes



Touchscreen Monitors and Remote Displays

- 10-inch Remote
- 15-inch Monitor
- 17-inch Monitor

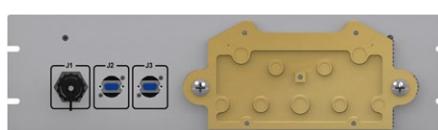


Air Data Calibrator

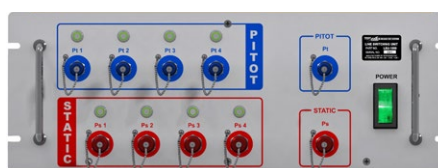
- ADC-2500
- ADC-2522
- ADC-2550
- ADC-2550C
- ADC-2555
- ADC-2575



Pneumatic Interface Panel



Communications Interface Panel



Custom Communications Interface Panel



Line Switching Unit

- LSU-1000



Storage Drawers and Work Surfaces



Universal and Fixed Power Supplies



Pressure Source

- PRU-1000
- PRU-2000
- VPU-1000



Surge Suppression and Power Strips

Vacuum Source

- ADC-2500-VAC-115
- ADC-2500-VAC-230 (rear panel mounted)

ADCTS Remote and Interfaces

The ADCTS can be operated locally from the front panel or remotely via the standard RS-232 interface. Remote communications can be developed using TestVronics Remote Communications SCPI commands. In addition to RS-232, TestVronics ADCTS can be used to communicate through other interfaces and busses, including: Ethernet (RJ45), Universal Serial Bus (USB), IEEE-488.2 GPIB, IEEE-488-1976 (Legacy Honeywell/Sperry), MIL-STD-1553 (through USB) and ARINC 429.

Automated Remote Operation

The system features a Test Program Mode, which allows the operator to automate their manual air data testing. Test Profiles can easily be created directly on the system without the need for additional software or a computer. Once a test program has been created, the operator can select the program and the system will acquire data and step through set points automatically.

About TestVronics

TestVronics is a leading manufacturer of Air Data Test Equipment and celebrated its 23rd anniversary in 2018. We are a dedicated Air Data company that directly supports the US Department of Defense, FMS Commercial Airlines / Airframes and various other organizations. TestVronics has built a strong reputation in the industry based on our well engineered products and our dedication to customer satisfaction. TestVronics Cage Code is 1A9E1, certified and registered as Service Disabled Veteran Owned Small Business (SDVOSB). TestVronics Quality Management System (QMS) is certified to ISO 9001:2015.

We strive to develop the highest quality products while maintaining the lowest sustainment costs. We strive to ensure our customers receive the very best products and services - with that we also deliver truly extraordinary customer support. Exceptional customer service and support is the cornerstone of our company.



ADCTS-1000-02 (left) with TestVronics ADTS-3350 Air Data Test Set, TTU-205J Test Set and GE Druck ADTS 405F

ADCTS Standard Configurations



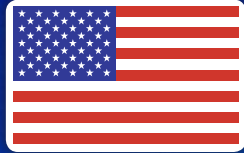
ADCTS-1000-02
Front Panel



ADCTS-1000-02
Rear Panel

	ADCTS-1000-01	ADCTS-1000-02
Static (Ps) Control Altitude Range ¹	-2,000 to 109,985 ft 32.1480 to 0.2046 inHg	-10,000 to 109,985 ft 42.4375 to 0.2046 inHg
Altitude Accuracy	0.01% or ± 0.002 inHg (± 0.0015 RVSM)	0.01% or ± 0.002 inHg (± 0.0015 RVSM)
Altitude Rate ²	0 to 50,000 ft/min / 20.0 inHg/min	0 to 50,000 ft/min / 20.0 inHg/min
Altitude Resolution	1 ft / 0.0001 inHg (Ps)	1 ft / 0.01 mbar / 0.0001 inHg (Ps)
Altitude Units ³	feet, meters, mBar, inHg, mmHg, inH ₂ O, PSIA	feet, meters, mBar, inHg, mmHg, inH ₂ O, PSIA
Pitot (Pt) Control Airspeed Range ¹	0.00 to 1050.0 kts 0.6449 to 112.3230 inHg	0.00 to 950.0 kts 0.6449 to 95.0810 inHg
Airspeed Accuracy	0.01% or ± 0.004 inHg	0.01% or ± 0.004 inHg
Airspeed Rate ²	0 to 800 kt/min / 40.0 inHg/min	0 to 800 kt/min / 40.0 inHg/min
Altitude Resolution	0.1 kt / 0.0001 inHg (Pt)	0.1 kt / 0.0001 inHg (Pt)
Airspeed Units ³	knots, Qc, mBar, inHg, mmHg, inH ₂ O, MACH, Total Pressure (Pt), kilometers, PSID, PSIA	knots, Qc, mBar, inHg, mmHg, inH ₂ O, MACH, Total Pressure (Pt), kilometers, PSID, PSIA
Control Stability	0.001% Full Scale	0.001% Full Scale
Display	10.4-inch LED backlit LCD	10.4-inch LED backlit Touchscreen LCD
Interfaces	RS-232, USB, Ethernet, VGA, TTU-205J	RS-232, USB, Ethernet, VGA, IEEE-488

¹ Standard ranges listed. Some calibrators, due to their ranges, are available only to US Military, airframes supporting US Military or NATO Programs, and other US DoD approved Programs. Additionally, ranges can be configured to comply with customer specific requirements. ² Slew Rates are load dependent and may vary based on volume of the DUT. ³ Standard units of measurement listed (at time of print). Additional units may be available upon user request.



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SDVOSB
C E R T I F I E D



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