



TestVONICS™ Air Data Test Sets

ADTS-1555ER Air Data Test Set

Perform calibrations on a variety of
Air Data Instruments

Industry leading, expansive
10.4" LED Display

Easy to use, intuitive and upgradeable
Graphical User Interface

TestVONICS Part Number
P/N: ADTS-1555ER



ADTS-1555ER Air Data Test Set

The ADTS-1555ER test set is designed as an RVSM compliant Air Data Controller Monitor. The test set can be used to test instrumentation as a bench top unit or remotely with Automated Test Equipment (ATE). As a controller, the ADTS requires external pressure and vacuum sources. The extended operational ranges can support testing of both commercial and military air data instrumentation, pressure transducers and pressure test gauges. Common instrumentation includes Altimeters, Airspeed indicators, Air Data computers, Rate of Climb indicators, Cabin Pressure instrumentation, Mach meters, pressure transducers, absolute and digital pressure gauges, air data monitors and air data computers.

Simple and Intuitive Interface

The ADTS software provides a familiar and intuitive graphical user interface. The ADTS can be operated manually through local controls, automatically through RS-232, or semi-automated using test program function. Semi-automated testing reduces touch labor during test by running pre-programmed routines with defined set points, eliminating the manual set point entry. This allows the operator to quickly run the unit under test through the procedure without any deviation from the routine. When operating with ATE Systems, the ADTS-1555 can be rack mounted and connected remotely using RS-232 or IEEE-488 (optional).

Features

The ADTS features a brilliant 10.4-inch display with a PCAP touchscreen which allows the test set to be controlled directly from the front panel. An on-screen keyboard appears automatically when operator input is required. Additionally, a USB keyboard and mouse are included with the test set for auxiliary data input. The test sets transducers provide

excellent reliability, stability and performance. Corrections to the test set are done through software requiring no mechanical adjustments and are capable of holding their accuracy for a period of one (1) year.

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Protection and Safety Features

The ADTS is designed with both hardware and software safety features designed for maximum protection when testing. The test set features input pressure regulation, over-range, over-limit and over-pressurization protection. Micro-porous filters and screening prevent debris from entering the system. The test set is equipped with pressure relief valves to protect the pneumatic system components and the unit under test (UUT) from damage. In the event that the test set loses power, the front panel manual vent can be used to safely vent both the test set and the UUT to ambient. The Test Program function allows the operator to create virtually unlimited number of test routines for automated testing. These test routines save time and provide improved test consistency.

Automated Calibration

The ADTS-1555ER can be calibrated automatically using approved secondary air data standards. These secondary standards include TestVONICS ADC-2500, ADC-2500V3, ADC-2550, ADC-2555 and ADC-2575 Calibrators. A Null Modem RS-232 calibration cable is provided.

TestVronics™ ADTS-1555ER Air Data Test Set

	Specifications
Altitude (Ps) Range ^{1†}	-10,000 to 80,000 ft (42.4375 to 0.815 inHg)
Static (Ps) Sensor	0.250 to 46.000 inHg
Altitude Accuracy	±3 ft @ -3,000 ft ±7 ft @ 30,000 ft ±36 ft @ 65,000 ft ±75 ft @ 80,000 ft or ±0.003 inHg Full Scale RVSM →
Altitude Rate ²	0 to 50,000 ft/min
Altitude Rate Accuracy	±2% of setting
Altitude Resolution	1 ft, 0.01 mbar, 0.0001 inHg (Ps), 0.01 mmHg
Altitude Units ³	feet, meters, mBar, inHg, mmHg, inH ₂ O, PSIA, hPa
Airspeed (Pt) Range ¹	0.00 to 1,000 knots (0.6449 to 103.4667 inHg)
Pitot (Pt) Sensor	0.250 to 112.000 inHg
Airspeed Accuracy	±0.003 inHg (0.250 to 46.000 inHg) ±0.005 inHg (50.000 to 60.000 inHg) ±0.007 inHg (70.000 to 80.000 inHg) ±0.012 inHg (90.000 to 110.000 inHg)
Airspeed Rate ²	0 to 800 kts/min
Airspeed Rate Accuracy	±2% of setting
Airspeed Resolution	0.1 kt, 0.01 mbar, 0.0001 inHg (Pt), 0.01 mmHg
Airspeed Units ³	knots, Qc, inHg, mmHg, mBar, PSID, PSIA, Pt, inH ₂ O, km, hPa, MACH, EPR (optional)
Display	10.4-inch LED backlit PCAP Touchscreen LCD
Interfaces	RS-232, USB, Ethernet, VGA, IEEE-488.2 (optional)
Altitude (Static) Port	37° Flare AN6 bulkhead - (1) front panel / (1) rear panel
Airspeed (Pitot) Port	37° Flare AN4 bulkhead - (1) front panel / (1) rear panel
Calibration Cycle	One (1) year
Operating Medium	Clean Dry Air ONLY
Power Requirements	90-260 VAC, 45 - 440 Hz, 1 Phase
Dimension / Weight	19 x 10.5 x 20 in (19-inch rackmount) / 39 lbs (17.24 kg)

ADTS-1555ER Test Set Features

Front Panel

Rear Panel

- 10.4-inch touchscreen display
- Manual Vent valve
- Power switch
- Airspeed Pitot (Pt) input
- Altitude Static (Ps) input
- Universal Serial Bus (USB)
- Ethernet (RJ-45) (optional)
- RS-232 (DB9)
- VGA (HD15)
- IEEE-488.2 (optional)
- Input Vacuum input
- Input Pressure input
- AC Power Input

Remote Touchscreen Displays

Remote Touchscreen displays can be used to command and control the ADTS from 10 feet (3 meters). Displays available in 10, 15, 17 and 19-inch models.

10-inch touchscreen display shown

Standard and Custom Hose Assemblies

TestVronics offers Pitot, Static, Vacuum and Pressure hose assemblies in standard and custom lengths. Hose assemblies are built with MIL-DTL-5593 hosing with female JIC 37° AN-flared end connections. Custom quick disconnects or connections available

Optional Pressure and Vacuum Sources

TestVronics oil-less compressor offers outstanding performance and is equipped with a pressure regulator, moisture trap, pressure gauge, safety valve, air intake filter, motor cooling fan and a built in desiccant dryer, providing clean, dry and particle free air. Connection mates with a 7/16-20" Male JIC AN-4 hose fitting.

Pressure Source

P/N: ADC-2500-PRES-115
NSN: 6830-01-653-2523
P/N: ADC-2500-PRES-230

Vacuum Source

P/N: ADC-2500-VAC-115
NSN: 4310-01-653-2521
P/N: ADC-2500-VAC-230
NSN: 4310-01-670-3652

TestVronics compact, high performance oil-free vacuum source. The innovative hermetic design provides a robust pumping speed of 60 Lpm and a low base pressure. Connection mates with a 9/16-18" Male JIC AN-6 hose fitting.

1) Standard ranges listed. Ranges may be configured to comply with customer specific requirements - contact TestVronics for more information † -10,000 to 99,000 ft Altitude Range is also available per customer requirement. 2) The Altitude and Airspeed Slew Rates are load dependent. Slew rates and load test requirements may vary based on volume of the DUT. 3) Standard units of measurement listed, additional units may be available upon user request. 4) Internal USB ports can be removed or disabled at customers request.