



D. Marchiori

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Air Data Test Sets and Ground Support Equipment



Transfer Standards



Tilt Tables



Angle Protractors



Pitot-static Adaptors



Air Data Test Sets





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Air Data Test Sets



With over 60 years experience in the design and manufacture of Air Data Test sets, DMA offer an extensive range of RVSM compliant testers for aircraft leak testing, troubleshooting and full certification.



DMA's Air Data Test Sets provide the accuracy, long term stability and low cost of ownership demanded by the world's leading aircraft manufacturers, repair stations and operators.







The wide range of Air Data Test Sets form the core of DMA's product range. Constant innovation and improvement with unique features such as battery backup has placed DMA amongst the top Air Data Test Set manufacturers in the world.





The test sets are all digitally controlled. The local display and keypad provides an intuitive user interface ideal for laboratory operation. For a remote location such as the flight-deck, three control options are available: the Hand Held Remote Control, the Touch Screen Remote Control or a wireless Bluetooth connected tablet PC.



With a wide range of base models and an extensive complement of options the ADTS are ideal for all pitot-static test requirements. All test sets meet the stringent requirements for RVSM certification testing. DMA also offer a range of pitot-static adaptors.

Feature Table

TYPE NO	MPS27C	MPS31C	MPS34C	MPS35C
Range/Type	Extended	Civil	Extended	3 Channel
Accuracy	RVSM	RVSM	RVSM +	RVSM +
Size	● ● ●	● ●	● ● ●	● ● ●
Range Alt	● ● ●	● ●	● ● ●	● ● ●
Pump capacity	● ● ●	● ●	● ● ●	● ● ●
Keyboard	✓	✓	✓	✓
Hand Terminal	Option	Option	✓	Option
USB port [1]	✓	✗ [2]	✓	✓
Battery (hours)	● ● ● ●	● ●	● ● ● ●	● ● ● ●
4+4 Isolate	Option	Option	✓	✓
3+3 Isolate	Option	Option	✗	✗
2+2 Isolate	Option	Option	✗	✗
Bluetooth [4]	✓	✓	✓	✓
Alt. Encoder	Option	Option	✓	Option
AoA Channel	✗	✗	✗	✓
GPIB IEEE488	Option	Option	Option	Option
28V DC	Option	Option	Option	Option
ARINC429	Option	Option	Option	Option
				

TYPE NO	MPS36	MPS39C/40C	MPS43	MPS46
Range/Type	Lab	3 Channel/4 Channel	Ultra Compact	Lab
Accuracy	RVSM +	RVSM	RVSM	RVSM +
Size	3U high	● ● ●	●	2U high
Range Alt	● ● ●	● ● ●	● ●	● ● ●
Pump capacity	n/a	● ●	●	n/a
Keyboard	✓	✓	✓	✓
Hand Terminal	Option	✓	✗	✗
USB port [1]	✗ [2]	✓	✗	✓
Battery (hours)	✗	● ● ● ●	●	✗
4+4 Isolate	Enquire	Option	✗	✗
3+3 Isolate	✗	✗	✗	Option
2+2 Isolate	✗	✗	✗	Option
Bluetooth [4]	✓	✓	✗	✗
Alt. Encoder [6]	Option	Option	Option	Option
AoA Channel	✗	✓ [5]	✗	✗
GPIB IEEE488	Option	Option	✗	Option
28V DC	✗	Option	✗ [3]	✗
ARINC429	Option	Option	✗	Option
				

NOTES

● = min, ● ● ● ● = max

1 USB port for USB memory device to store results and download test programs.

2 Available via the MPSRE Touch Screen Remote Terminal

3 EPU6 External battery option available to provide battery power. EPU6 extends MPS43 battery life.

4 The Bluetooth facility provides Tx/Rx ports when fitted.

5 Two AoA channels on the MPS40C.

6 Gray Code Altitude Device Read-out



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Features, Options and Associated Products

ACCURACY ACHIEVED BY THE END OF SELF TEST

The use of precision vibrating cylinder and silicon bridge transducers together with pressure and temperature characterisation result in high accuracy without any significant warm-up time at all operating pressure values.

EXCLUSIVE 5000 HOUR PUMP LIFE GUARANTEE

The low maintenance internal pressure and vacuum pumps run only on demand extending the pump life and reducing power consumption. In all but the MPS43, these pumps carry a 5000 hours (4 year maximum) industry exclusive guarantee.

AUTOMATIC CONTROL OF 3 OR 4 INDEPENDENT PRESSURES

The MPS35C and 39C offer independent control of 3 pressures – static and pitot for altitude and airspeed and additionally Angle of Attack to test those aircraft equipped with the Smart pitot probe. The MPS40C and 41C are 4 channel test sets with 2 AoA channels.

INTUITIVE INTERFACE

All the test sets are easy to use by both experts and first time users with all the important air data functions simultaneously displayed.

LOW POWER CONSUMPTION

The careful consideration during the design ensures low power consumption giving minimal temperatures internally which consequently results in high reliability and accuracy.

FLEXIBLE MULTIPLE LINE SWITCHING

Independently addressable output ports can be configured to control up to 8 lines of isolation controlled from the keypad. This multiple line switching permits fast and safe closing of the lines to isolate leaking channels or for functional testing of systems such as over speed switches.

INTERNAL BATTERY FOR SAFETY AND VERSATILITY

Many of the test sets are equipped with internal rechargeable batteries for two or four hours full operation. These also provide a seamless auto switch over emergency power supply.

BUILT IN SAFETY LIMITS FOR UUT PROTECTION

Key DMA design features protect both the test set and instruments under test. Preset or user programmed safe limits protect the UUT.

HAND TERMINAL, WIRELESS OR COMPUTER CONTROL

The front panel keypad and display or the remote hand terminal provide the versatility needed for flight line or laboratory operation. The instrument can be also be controlled via a wireless Bluetooth connection or from a PC using ADWIN software.

AIRCRAFT AND CONTROL INTERFACES

The ARINC429 interface displays aircraft data from the aircraft's ARINC429 bus alongside the associated test set parameters. The IEEE488 interface allows full control of the test set over the IEEE488 GPIB interface. An RS232 interface is provided as standard.

ALTITUDE READ-OUT DEVICE

Grey code encoded data from altitude devices can be displayed alongside altitude data on the test set display.

GROUND PROXIMITY WARNING COMPUTER

This option integrates GPW testing by generating a voltage output equivalent to the radio altimeter output.

AUTOMATED CALIBRATION

Calibration, performed by software, is fast and simple since no mechanical adjustments are required. Calibration factors are password protected for security.

PITOT-STATIC ADAPTORS

Available singly or in comprehensive kits, DMA design and manufacture pitot-static adaptors for a wide range of aircraft types.



- Kits feature the vacuum hold down fixtures on the Static adaptors together with the vacuum hose to allow the DMA air data tester to provide the vacuum source.
- The list of available adaptors is continuously growing.

EPU6 POWER UNIT

The EPU6 is an external power unit which extends the battery life of the MPS43 to 6 hours.

The system can be recharged while operating the ADTS.



PRESSURE AND VACUUM GENERATORS

The EPSR2 provides pressure and vacuum supplies for the MPS36 and MPS46. Available in flight line or rack mount.

The DMAKV2 provides vacuum for static adaptor hold down.



CONTROL OPTIONS

The handheld remote control, the touch screen remote terminal or the ATEX certified terminal provide alternative forms of remote control for the Air Data Test Sets.





ULTRA COMPACT AUTOMATIC AIR DATA TEST SET MPS43

The MPS43 is a unique instrument offering first class capabilities in terms of precision and performance. The rugged, lightweight and remarkably small enclosure meets the demanding requirements of the aerospace industry, while offering cost and ownership benefits unmatched by alternatives.

- Full automatic control for Altitude & Airspeed
- Fully RVSM compliant with 12 months recalibration period
- Integral pressure and vacuum pumps with 1000 hour life
- Universal a.c. power, aircraft and National, with battery backup power
- User programmable safety limits and test programs
- Lightweight rugged case, carry to the cockpit



MINIATURE TRANSFER STANDARDS

The PAMB10, PAMB11 and PAMB11H precision pressure indicators provide transfer standard accuracy in single or dual channel units.

- Single channel PAMB10
- Dual channel PAMB11 and PAMB11H
- High accuracy transfer standard PAMB11H
- Colour touch screen display and control
- Ultra low drift
- Ultra high sensitivity
- Unaffected by pressure media (Air or Nitrogen)



TILT TABLES

Various models of Tilt Table are available providing very accurate position and motion control for testing and calibrating attitude/heading and inertial reference units.

- High accuracy
- Independent settings for each axis
- Control by internal computer or PC
- Safety limits
- Fast zero position finder



ANGULAR PROTRACTORS

Electromechanical devices to measure the relative rotation between movable surfaces.

- Goniometric scale and/or angular position sensor with 0.01 deg. resolution.
- Transversal misalignment up to 20 mm (0.8 inch)
- Multi-channel computer controlled read-out system
- Screw or suction fixing plates





DMA

D. Marchiori (DMA) design and manufacture Aviation Ground Support Equipment (AGSE) such as; RVSM Air Data Test Sets, fly-by-wire flight control surface movement analysers, tachometer test sets, tilt tables and equipment designed to customer specifications. This precision aircraft ground test equipment is used worldwide by established overhaul bases, civil airlines and general aviation.

DMA traces its establishment back to 1938, mainly as a test equipment manufacturer to support European aviation requirements. As a growing and developing company DMA is committed to continual product improvement to meet and exceed the exacting standards required in the aviation industry today.

FACILITIES

D. Marchiori are based in Aprilia, just south of Rome in Italy, conveniently close to the international airports of Fiumicino and Ciampino, both only some 30 minutes away.

The plant is a large purpose built facility and all the activities associated with design, development and manufacture are carried out here, along with the internationally traceable Calibration Laboratory.



WORLDWIDE AGENTS

AMERICAS

Brazil
Canada
U.S.A.

ASIA

Brunei
China
Hong-kong
India
Indonesia
Japan
Korea
Malaysia
Pakistan
Philippines
Singapore
Sri Lanka
Taiwan
Thailand
Vietnam

AUSTRALASIA

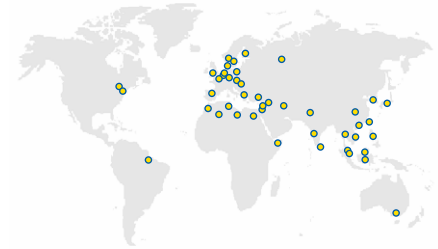
Australia

EUROPE

Belgium
Czech Republic
Denmark
Finland
France
Germany
Greece
Holland
Norway
Poland
Russia
Slovakia
Spain
Sweden
U.K.

MIDDLE EAST

Algeria
Egypt
Emirates
Iran
Jordan
Lebanon
Libya
Morocco
Syria
Tunisia
Turkey



SERVICE

The range of instrumentation products manufactured by DMA are all supplied with full repair manuals to enable the owner to undertake calibration, maintenance and repair within their own organization if they so wish.

For those users who prefer to have the equipment calibrated, maintained or repaired by DMA, all returned equipment will be fast-tracked to reduce the time spent away from the operator to an absolute minimum.

DMA offer training courses for operator's staff if the decision is made to carry out service activities within their own organization.

Lists of Recommended Spare Parts can be supplied to enable the operator to stock parts within their organization for rapid response.

CALIBRATION

The precision and accuracy of DMA Air Data Test Sets and Precision Barometric Indicators is supported by a first class calibration laboratory, enabling stringent accuracy requirements such as RVSM to be achieved. The DMA laboratory is approved to international standards via the ACCREDIA calibration system and is traceable through the accredited national laboratories.

ACCREDIA Calibration Center LAT N°106 Signatored of EA, IAF, ILAC Mutual Recognition Agreements AER-Q-2120

Ongoing development results in specifications being subject to change without notice



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