



D.MARCHIORI

MPS-30 Air Data Test Set



PRECISION FLIGHT LINE DIGITAL AIR DATA TEST SET

The DMA MPS-30 provides a complete air data test and envelope generation capability for troubleshooting and certification of aircraft pitot-static systems.

The MPS-30 is easy and fast to use by both experts and first time users. A single operator in the aircraft cockpit using a multifunction hand controller with a LCD display can perform testing and troubleshooting. All air data functions are simultaneously displayed, constant screen or menu changes are not required.

The MPS-30 ADTS exceeds all current requirements for test envelope generation specifications for military and commercial fixed and rotary wing aircraft including RVSM requirements. It uses precision vibrating element transducers for maximum accuracy of all altitude and airspeed parameters.

PROGRAMMABILITY

Up to 30 test user programmed routines can be entered and stored in onboard memory to cover custom or commonly used air data test requirements and airline work cards. Routines are single key executable.

FEATURES

- Accuracy ± 3 ft at sea level
- Exceeds RSVM accuracy requirements
- Lightweight hand held control; intuitive data entry supports first time users
- Simultaneous display of all functions; screen or menu changes not required
- Low maintenance design; industry exclusive 5000 hour pump guarantee
- Low power consumption
- Internal rechargeable battery option

SAFETY

Test set and instruments under test are protected by key MPS-30 design features. A pressure condition of P_s greater than P_t is prevented in both manual and automatic operation. With loss of power the test set circuit is safely isolated and can be manually vented preventing instruments and test set damage. Pre-set factory or user programmed safe limit factors prevent damage of instruments under test. Universal power supply prevents connection mistakes. The hand controller or other input devices can be switched during testing without loss of control.

MULTIPLE CIRCUIT ISOLATION

The MPS-30 can be optionally configured to control insulation of up to four static and four pitot circuits remotely using the hand controller. This feature can be installed in the MPS-30 case or in an external box.



CALIBRATION

Calibration can be performed quickly and simply by software adjustment of four coefficients. No mechanical adjustments are required. Calibration factors are password protected.



STANDARD SPECIFICATIONS

Operating temperature range, from -10°C to +50°C
 Control capability on load volumes (cu. in.) - Static: 0 to 250, Pitot: 0 to 100.
 (*) abbreviations: C = civil; M = military.

Parameter	Range (*)		Resolution		Accuracy	
	Measure	Control	Meas.	Contr.	Measure	Control
Altitude(ft)	-2,000 +80,000	-2,000 +65,000 (80000 ext pump)	1	1	±3 @ SL ±5 @ 30,000 ±20 @ 60,000	±2
Altitude slew rate (ft/min)	C: 0 to 6,000 M: 0 to 30,000	C: 0 to 6,000 M: 0 to 30,000	25 > 1000 5 < 1000	25	25±1% of reading	±2%
Airspeed (kt)	C: 10 to 830 M: 20 to 1,000	C: 10 to 830 M: 20 to 1,000	1 < 50 0.1 > 50	0.1	±0.5 @ 50 ±0.1 @ >500	±1
Ultra Low Speed funct.	ULS: 2 to 200		0.1 > 20		ULS:±0.001 inHg	
Mach No.	0 to 4	0 to 4	0.001	0.001	< 0.002	±0.002
Airspeed slew rate (kt/min)	0 to 700	0 to 700	10	10	10±1% of reading	±5%

FUNCTIONS

Pressure/vacuum generation
 Automatic leak check
 Controlled venting to ambient
 Altitude/airspeed input
 Static/total pressure input
 Altitude/ Airspeed rate input
 Mach Number input
 Plus:
 EPR generation
 TAS temperature correction
 Offset correction
 Automatic leak test

DISPLAY AND KEYPAD

Integral display and keypad in splash and shock protected hand-held terminal.
 LCD with backlighting displays all test parameters.

CALIBRATION

One year interval, performed using software

PHYSICAL SPECIFICATIONS

Weight: 33 kg (70 lb.)
 Dimensions: L 23.2", W 16", H 20"
 Control cable 60 ft (20 meters)

ENVIRONMENTAL

Waterproof and shockproof
 CE compliant

POWER SUPPLY

Universal—all world and aircraft currents

WARRANTY

Unit one year
 Pumps 5000 hours

OPTIONAL CONTROL SOFTWARE

Windows based PC control software

OPTIONS

Lightweight HDPE plastic case w/wheels
 Wireless remote control terminal
 Internal 4÷8 hours battery
 28 VDC power supply
 150 ft (50 m) extension control cable

INTERFACE PORTS (RS232 Standard)

IEEE-488 GPIB
 ARINC 429 and ARINC 629
 MIL-STD-1553 interface

Note: --- Specifications subject to change ---



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