MPS62
Innovative Compact Digital Air Data Test Set

DMA

D. Marchiori

- Ps to 55,000 ft, Pt to 700 kts, ROC to 6,000 ft/min
- Accuracy ±5 feet at sea level
- Integral Pumps with 1,500 Hour Warranty
- Vacuum Port Holds DMA Adaptors to Fuselage
- Weighs just 6.5 kg., Wi-Fi Connection, Touch Screen
- Powered by AC or 28VDC

MPS62 Innovative Compact Digital Air Data Test Set

SUPPLYING AIR DATA TEST SETS TO THE WORLD

DMA with its origins back to 1938, support the International aviation industry, manufacturing mainly test equipment. DMA supply precision Air Data Test Sets and other aviation ground support equipment to aircraft manufacturers, repair stations and operators throughout the world.

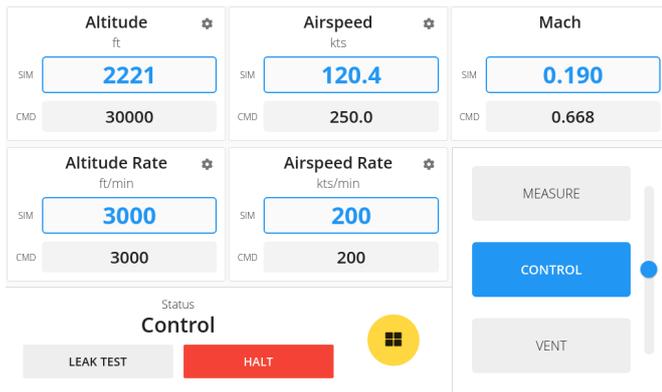## INNOVATIVE COMPACT FLIGHT LINE TESTER

The MPS62 is a digital technology portable Air Data Test Set incorporating a number of standard features usually found in more expensive products. It is a rugged and splashproof unit suited to demanding commercial and flight line applications.

USER INTERFACE

Easy and intuitive to both novice and expert users. Testing and troubleshooting is performed via an integrated next generation touch screen.

Readings of both commanded and measured test values are displayed at any time.

Unit incorporates an ergonomic user-friendly interface. Intelligent software prevents input values exceeding predefined limit ranges.

Altitude ⚙	Airspeed ⚙	Mach
ft	kts	
SIM **2221**	SIM **120.4**	SIM **0.190**
CMD 30000	CMD 250.0	CMD 0.668

Altitude Rate ⚙	Airspeed Rate ⚙	
ft/min	kts/min	MEASURE
SIM **3000**	SIM **200**	
CMD 3000	CMD 200	**CONTROL** ●

Status
Control

LEAK TEST	HALT	⊞	VENT

ACCURACY ACHIEVED BY THE END OF SELF TEST

Low power consumption results in low heat generation enabling a higher accuracy and product durability.

Temperature and pressure compensated "smart" transducers achieve greater accuracy at all altitude and airspeed values. A precision absolute sensor is utilised for the static, altitude channel, and a precision differential transducer for the Qc/Pt, airspeed, channel.

EXTENDED PUMP LIFE

The MPS62 is a rugged flight line instrument designed for low maintenance. The internal pressure and vacuum pumps run only when required, extending the pump life.

PROGRAM TESTING

Up to 30 independent test profiles can be stored in the MPS62, each of which consisting of 26 test points. Profile results, containing the readings of up to 3 UUTs can also be stored from each program, up to a maximum of 300 results.

AUTOMATED CALIBRATION

Calibration, performed by software, is fast and simple since no mechanical adjustments are required. The use of a traceable Pressure Standard is required with the relevant range and accuracy to match the needs of the MPS62 accuracies. Calibration factors are password protected for security. The MPS62 internal reservoirs make calibration easy, and help control stability.

AUXILLIARY VACUUM FOR ADAPTOR HOLD DOWN.

The MPS62 provides a front panel connector that gives a vacuum source for suction device Adaptors that use fuselage vacuum hold down.

BUILT IN SAFETY LIMITS FOR UUT PROTECTION

The MPS62 is designed for maximum safety during testing. Key DMA design features protect both the test set and the systems under test. Negative Qc, a pressure condition of Ps greater than Pt, is prevented in both manual and automatic operation. If all power is lost the Unit Under Test (UUT) is safely isolated.

Numerous preset factory or user programmed safe limits are provided to prevent damage to the UUT. These limits can be modified by the user either temporarily or permanently, with password protection if desired.

REMOTE CONTROL

The instrument can be remotely controlled by the MPSRC hand held control. The built-in Wi-Fi interface allows wireless control either from an optional MPSRW2 remote touchscreen terminal or iPad and Android tablets by downloading a dedicated APP from the Google Play or Apple Stores. Additionally the DMA ADWIN software can be used for operation from an external PC.

EPR

The MPS62 has the capability to work directly in units of EPR for engine sensor testing.

A wide range of pitot-static adaptors and adaptor kits are available from DMA

Optional MPSRC Hand held remote control unit: Multi-coloured backlit 3.5" LCD touchscreen and keypad

Vacuum supply for DMA adaptor fuselage hold down

2 Channels of independent pressure control for Static and Pitot. Includes EPR generation

Internal pumps run only when required, extending the pump life

Storage compartment

Universal AC or 28VDC power input. Low power consumption for high accuracy and reliability

Portable and rugged splashproof case. Easily carried to cockpit.

Embedded push button power switch

Store 30 test programs and results

Coloured back-lit touchscreen. Smart user interface showing all parameters at once

Fully automatic control. User programmable limits

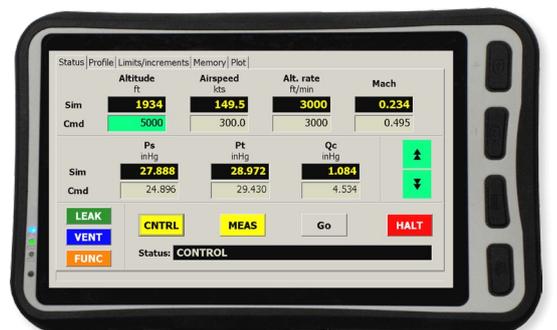Accuracy ± 5 ft at sea level
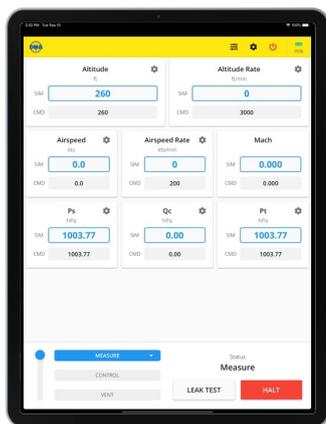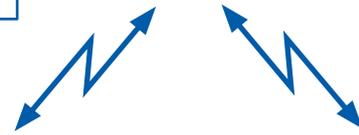
Wireless control from a tablet using the dedicated App

Optional MPSRW2 Wireless Touchscreen control

MPS62 Standard Specifications

PARAMETER			RANGE		RESOLUTION		ACCURACY [3]
			MEASURE	CONTROL	MEASURE	SETPOINT	
STATIC	Altitude	(ft)	-2,000→55,000	-2,000→55,000	1	1	± 5 @ SL ± 12 @ 30,000 ± 30 @ 50,000
STATIC	Vertical speed	(ft/min)	0→6,000	0→6,000	5 @ < 3,000[1] 25 @ > 3,000	25	± 1% of setting
STATIC	Static	(inHg abs) (hPa abs)	2.7→32 91→1090	2.7→32 91→1090	0.001 0.01	0.001 0.01	± 0.005 ± 0.17
PITOT	Airspeed	Standard (kts)	10→700	10→700	1 @ < 50 0.1 @ > 50	1	± 0.5 @ 50 ± 0.1 @ > 500
PITOT	Airspeed	Ultra low speed function [2] (kts)	2→200	2→200	0.1 @ > 20		± 0.06 hPa
PITOT	Airspeed slew rate	(kts/min)	0→500	0→500	10	10	± 10 ± 1% of setting
PITOT	Mach No.	(mach)	0→1.5	0→1.5	0.001	0.001	< ± 0.003
PITOT	Pitot (Qc)	(inHg diff) (hPa diff)	0→31 0→1040	0→31 0→1040	0.0001 0.01	0.0001 0.01	± 0.005 ± 0.17
PITOT	Engine Pressure Ratio	(EPR)	1→2.1 @ SL	1→2.1 @ SL	0.001	0.001	± 0.001

Notes: Control capability on all load volumes (cu. in.): Static: 0 to 1.5 L (92 cu. in.), Pitot: 0 to 1 L (61 cu. in.). Larger volumes acceptable with reduced ROC
[1] Selectable to ± 1 ft/min   [2] Activated on request, below 200 kts
[3] Total accuracy includes all metrological uncertainty contributions for the pressure measured. Metrological data has full traceability with International accredited Labs.

STANDARD TEST FUNCTIONS

- Pressure/vacuum generation
- Auxiliary vacuum for Adaptor hold-down
- Automatic leak check
- Controlled venting to ambient
- Altitude/airspeed input
- Static/dynamic(Qc)/total pressure input
- Altitude/airspeed rates input
- Mach Number input
- TAS / IAS toggle , TAS temperature correction
- Altitude offset correction
- 30 user test programmed profiles of 26 steps each. Results from 3 UUTs can be stored up to a total of 300 results.
- Ultra low speed (2 to 200 kts) for improved accuracy and stability
- EPR generation
- Various measure units selectable
- Audible indication when approaching set point

DISPLAY

Splashproof and shock protected integrated front panel LCD backlit capacitive touch screen, 178 mm (7") diagonal, all test parameters displayed

DISPLAYED UNITS

Altitude: ft, m, hm
Airspeed: kts, km/h, mph
Pressure: inHg, hPa, kPa, Pa, psi, mmHg, inH2O

CALIBRATION

One year interval, performed using software.
Requires traceable Pressure Standard.

PHYSICAL SPECIFICATIONS

Weight: 6.5 kg. (14 lbs.)
Dimensions: L 420 x W 220 x H 334 mm
               (L 16.4 x W 8.7 x H 13.15 in.)
Connections: Static: AN-4 37° flare
               Pitot: AN-3 37° flare
Auxiliary Vacuum: AN-3 37° flare

Fittings fitted with O-ring for finger-tight sealing.
Captive dust caps supplied.

ENVIRONMENTAL

Temperature range
Operating: -5°C to +50°C
Storage: -20°C to +70°C
Splashproof and shockproof.
CE compliant.

POWER SUPPLY

Universal power supply: 90-240 VAC; 50-400 Hz or 28VDC. 20 VA

WARRANTY

Unit: 2 Years
Pumps: 1500 hours or 2 years, whichever expires first.

OPTIONS

K1 AN4 (Ps), AN4 (Pt)
K2 AN6 (Ps), AN4 (Pt)
K5 Staubli red (Ps), Staubli black (Pt)
K11 AN6 Auxiliary vacuum
T0 Power cable 2m Schuko plug
T1 Power cable 2m American plug
T2 Power cable 10m Hubbel HBL5266C
T3 Power cable 2m Australian plug

INCLUDED ACCESSORIES

ADWIN PC Control software (MPS62 only)
USB cable
Power cable chosen from above options
28 VDC cable
Hoses and fittings

ASSOCIATED PRODUCTS

Pitot-static adaptors
MPSRC Hand held remote control
MPSRW2 Wireless remote control
Pressure indicators/transfer standards

Ongoing development results in specifications being subject to change without notice

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