



# Technical Note – MPa14

**D. Marchiori**

## Multi-port Switching Option

DMA-Aero offer as an option on many of their MPS range of air data testers the ability to have, built into the tester, the capability of Multiple Isolation Ports.

It is possible to have either 2 or 3 or 4 independent isolatable Static and Pitot ports on the front panel of the instrument instead of the normal 1x Ps and 1 x Pt.

With these remotely controllable, solenoid isolated ports, testing of aircraft with multiple probes is capable of being carried out all at the same time, saving considerably on overall test time.

Leak testing, for example, can initially be carried out with all probes being addressed, but if a leak is detected then the individual lines can be sequentially closed until it is obvious which particular line was causing the leakage.

All the operation of opening and closing the isolation valves is carried out from either the front panel keypad or the Remote Hand Held Control Unit, whichever is in use at the time. The display is entered into the switching mode by pressing the appropriate key. The display then indicates the state of the port valves, an = sign indicating the valve state is open, and an X sign indicating the valve state is closed.

The numeric keys then can open or close the ports as desired, for example keys 1,2,3,4 for the Static ports and keys 5,6,7,8 for the Pitot ports. This will vary dependant on the pneumatic arrangements on the individual MPS front panels.

The test set may also feature a third channel, not only altitude and airspeed, Ps & Pt , but additionally Angle of Attack, AoA. In this situation the various pneumatic individual lines can still be remotely selected and isolated as described above, but with the ports now re-allocated between the 3 parameters instead of only 2.

For example perhaps in the format 2 static, 2 AoA and 4 pitot.

Additionally the port switching can be controlled over the RS232 serial interface or the optional GPIB bus from a remote pc, making this valuable facility available to A.T.E. system designers.

Ongoing development results in specifications  
being subject to change without notice



**D. Marchiori srl**  
04011 Aprilia (Lt)  
Italy

Tel: +39 06 9282 733  
+39 06 9270 3073  
Fax: +39 06 9275 401

E-mail: [marchiori@dma-aero.com](mailto:marchiori@dma-aero.com)  
Web: [www.dma-aero.com](http://www.dma-aero.com)



The activities described on this data sheet are not certified by ACCREDIA  
<http://www.dma-aero.com/eu/dmarchiori-dma-accreditation>  
Representative