



Technical Note - BAa14

DMA-Aero

Battery Power in DMA Test Sets

In all the DMA air data test sets there is a battery powered capability to enable operation remote from ac supplies. The differing MPSXXX instruments vary in terms of the battery operating life offered dependant upon the case size and amount of room available, either 2 or 4 hours . In the ultra-compact MPS43, due to size, the battery is only for safe shut down.

The reason for adopting this design feature is not just for the obvious ability of operation distant from ac supplies, though this feature in itself is very beneficial.

Plus points are as follows;

1. Operation away from ac supplies. Particularly for testing at remote points from the usual ramp ac supply facilities, such as at remote dispersal points when the aircraft is parked far from hangar facilities.
2. All air data test sets need to have a safe shut down capability so that if power is lost unexpectedly the aircraft or UUT will not be damaged.

A variety of techniques are employed to return the un-powered test set to ground conditions, but they are all limited in that it is essentially an out of control situation – even when manual or carefully designed vents are employed there is potential for damage.

So much the better therefore to have fall back battery power allowing controlled shut down to be carried out. As ultimate back-up all MPS testers also have manual let down valves just in case of total power loss.

3. Air data test sets are regularly used for quick leak testing to locate problems. The ability to reduce the time taken to get this work done is a welcome benefit. On the flight line organising ac supplies can take extra time. The Battery powered instruments allow for quick operation.

All internal batteries employed are sealed, rechargeable and approved for flight enabling the MPS range to be transportable by air.

Ongoing development results in specifications
being subject to change without notice



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