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RD³ Electronic Digital Tap Hammer

The RD³ (Rapid Damage Detection Device) is a hand held, low cost non-destructive inspection instrument that can be used to detect voids, degradation, and delaminations in composite structures. No more tapping with a coin in a noisy environment for questionable results. The RD³, also known as the Electronic Digital Tap Hammer, supplements the subjective tonal discrimination of the operator with a quantitative, objective numeric readout that can be correlated to delaminations in the structure. The unit consists of a lightweight hammer containing an accelerometer, which is connected by flexible cable to a hand held module containing digital logic components and a liquid crystal display.

With its low cost, quantitative and recordable readout and ease of use, the RD³ will prove invaluable and indispensable to routine non-destructive examinations.

In a controlled comparison against another bondtester now on the market, the RD³ produced similar results and actually showed slightly greater relative signal change (sensitivity) at 4, 6 and 7 plies. (Their bondtester uses a solenoid-driven impact head to produce a controlled amplitude impact.) The RD³ did not show as great a signal change as the solenoid tapper did at 2 plies, but sensitivity is not an issue at this level because the signal difference between bonded and disbonded plies is so large. In terms of actual data, the RD³ compares favorably with the other much more complex and costly device.

For use on Composite and metallic Aircraft Structures for :

- Locating/measuring impact damage
- Repair evaluation
- Monitoring :
 - Matrix degradation
 - Delaminations and disbonds



P/N	Description	NSN	Size
F4TAP002	P/N F4TAP002, RD ³ Electronic Digital Tap Hammer	6625-01-459-0019	7" x 4" x 1 5/8"