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To: Mark IV Group

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Subject: Bulk Degausser Evaluations and Recommendations for VLBI

- AudioLabs TD-5: High-coercivity-media-rated version, up to 2200 Oe.

Best degausser [more than 70dB erasure of 900 Oe VLBI thin tape when used in High mode, 40dB in Low],  
Reliability implicit [no moving parts, simplest mechanical design],  
Inexpensive [\$1700].

Recommend as VLBI standard for lab and field low-duty-cycle use.

But NOT foolproof:

User must rotate reel by hand a few revolutions,  
flip reel over,  
rotate a few more times on other side,  
then slowly remove reel before timer cuts power to electromagnet.

- Data Security Type 1: Apparent mechanical clone of obsolete Bell & Howell [TD20903-4B] still working at Haystack after > 20 years

Foolproof [because of reel rotation and translation mechanism and magnet on both sides of reel];  
Reliability [assumed similar to the Bell & Howell in spite of moving parts complexity];  
Adequate degausser for thin VLBI tape, but 40 dB erasure is 13 dB inferior to Bell & Howell;  
Moderate price [\$2600].

Recommend (even as is) for routine high-duty-cycle degaussing at VLBI processing centers.

But improved performance margin is desirable and is known to be obtainable in the same mechanical design. Based on Haystack input, Data Security will now offer an improved performance configuration at little or no extra cost, which involves only using a different tap on the existing transformer.

Note: The high-performance and more expensive [\$3700] Data Security MP-14 was also evaluated. It drives tape reels on a belt through the gap between magnet poles. It is not recommended because 1) it will drop the reel where the belt turns around if it is not caught by hand, and because 2) adequate performance is not obtained without a second pass with the tape rotated about 90 degrees with respect to the first pass. It is the least foolproof, though fastest, degausser tested.