



Degaussing Magnetic Media

An alternating current (AC) bulk eraser (degausser) is used for complete erasure of data and other signals on magnetic media. Degaussing is a process where magnetic media is exposed to a powerful, alternating magnetic field. Degaussing removes any previously written data, leaving the media in a magnetically randomized (blank) state. The degausser must subject the media to an alternating magnetic field of sufficient intensity to saturate the media and then by slowly withdrawing or reducing the field, the magnetic media is left in a magnetically neutral state.

To erase recorded data, it is necessary for the strength of the degaussing field to be greater in value than the coercivity of the magnetic media. Simply stated, coercivity is the magnetic field strength, rated in oersteds (Oe), required to change the magnetic orientation of the magnetic material. Check with knowledgeable dealers or degausser manufacturers to identify degausser models that meet your requirements. Examples of typical coercivities for computer magnetic tapes and disks are shown in Table 1.

Data is typically not lost until its level has been decreased 65% to 75% (or more) below its original saturation recording signal level, dependent upon the drive system. A complete erasure level, for most users, is considered to be 60 dB below the original signal level – this of course depends on user requirements. A 60 dB signal decrease equates to reducing the signal to one tenth of one percent of its original value.

Magnetic media products that have factory prerecorded magnetic servo patterns should not be degaussed. Degaussing would erase the factory written magnetic servo signals and leave the media unusable. For all other magnetic media (without magnetic servo signals), after proper degaussing, the quality of subsequent data recording should be unchanged or even improved.

It is very important to understand and follow the degausser's operating instructions. This is especially important for manual units where the operator controls the media's movement through the degaussing field. For higher coercivity media, four passes are often recommended – two passes, with a 90° rotation for the second pass, and then repeat the process with the media turned upside-down. Of course, these and other important operating considerations will vary with the type, power and construction of the individual degausser models.

Table 1

Magnetic Tape Products	Typical Coercivity	Comments
9-Track Reel-to-Reel Computer Tape	300 Oe	
TK50, TK70	350 Oe	
3480, 3490E	520 Oe	
SLR1, SLR2, TR-1, DC2120, DC6150	550 Oe	
SLR3, SLR4, SLR5, TR-3, DC9100	900 Oe	
SLR24 ⁽¹⁾ , SLR32 ⁽¹⁾ , TR-4 ⁽¹⁾ , ADR30 ⁽¹⁾ , ADR50 ⁽¹⁾	900 Oe	Do Not Degauss, See Note 1
TR-5 ⁽¹⁾ , SLR40 ⁽¹⁾ , SLR50 ⁽¹⁾ , SLR60 ⁽¹⁾ , SLR100 ⁽¹⁾	1650 Oe	Do Not Degauss, See Note 1
DLTtape III, DLTtape IIIXT	1540 Oe	
DLTtape IV	1850 Oe	
SuperDLTtape1	1900 Oe	
D8: 8mm 112m, 8mm 160m	1600 Oe	
DDS1: 4mm 60m, 4mm 90m	1590 Oe	
DDS2 4mm 120m	1750 Oe	
DDS3 4mm 125m	2250 Oe	
DDS4 4mm 150m	2350 Oe	
DD-2 19mm	1550 Oe	
DD-2QD (QuadDensity) 19mm	1850 Oe	
DTF-1	1579 Oe	
DTF-2	2300 Oe	
Redwood SD-3	1515 Oe	
Magstar MP: 3570-B ⁽¹⁾ , 3570-C ⁽¹⁾ , 3570-C/XL ⁽¹⁾	1625 Oe	Do Not Degauss, See Note 1
Magstar: 3590 ⁽¹⁾ , 3590-E ⁽¹⁾	1600 Oe	Do Not Degauss, See Note 1
STK-9840 ⁽¹⁾ , STK-T9940 ⁽¹⁾	1625 Oe	Do Not Degauss, See Note 1
LTO-Ultrium1 ⁽¹⁾	1850 Oe	Do Not Degauss, See Note 1
Mammoth 8mm, AIT-1 8mm, VXA-1 8mm	1320 Oe	
AIT-2 8mm	1380 Oe	
M2 Mammoth2 8mm	1350 Oe	

Magnetic Disk Products

3.5" 720KB DD Microdisk	650 Oe	
3.5" 1.44MB HD Microdisk	720 Oe	
5¼" 360KB DD Minidisk	300 Oe	
5¼" 1.2MB HD Minidisk	650 Oe	
Zip 100 MB Disk ⁽¹⁾	1550 Oe	Do Not Degauss, See Note 1
Zip 250 MB Disk ⁽¹⁾	2250 Oe	Do Not Degauss, See Note 1
SuperDisk 120MB	1500 Oe	

NOTE 1: DO NOT DEGAUSS – This product has factory prerecorded *magnetic* servo tracks. The media will be unusable, if the servo tracks are bulk erased (degaussed). Products that use factory prerecorded magnetic servo signals should not be degaussed unless destruction of the recording media is desired.

IMPORTANT: Degaussers come in different sizes and strengths and with various features. Degausser manufacturers will be able to recommend specific models that meet your degaussing requirements.

For more information, please submit your question to "Ask the Expert" in the Technical Center at: www.fujifilmmediasource.com or contact Fujifilm Computer Products Division at 800-488-FUJI (3854).