

# Degaussing

It takes alot more power to erase DV tapes than what Hand Held Radio Shack Bulk Tape Erasers can handle.

Here's a chart showing the power needed to erase DV Tapes.  
(It takes 1700 Oerstedes to erase DV tapes.)

Coercivity is the property of a given magnetic pigment to resist changes in magnetic orientation or re-orientation (= "erasure"). It is defined by the level of the magnetic field needed for (re-)orientation, expressed in Oersted (Oe). The higher the coercivity, the higher the resistance of magnetic information to re-orientation (or erasure) by external magnetic fields.

## AUDIO Tapes Oerstedes

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350 Oerstedes = 1/2", 1" and 2"  
350 Oerstedes = Cartridge  
350 Oerstedes = Sep.mag.35mm film  
365 Oerstedes = Voice logging reel 1/2", 1"  
450 Oerstedes = Compact cassette ferric (IEC Type I)  
450 Oerstedes = Compact cassette chrome (IEC Type II)  
680 Oerstedes = 1/4", 1/2" digital audio reel  
745 Oerstedes = 3/4" digital audio cassette  
10/750 Oerstedes = Pancake various  
700 Oerstedes = DCC  
930 Oerstedes = ADAT  
1440 Oerstedes = RDAT

## COMPUTER/Data Tapes Oerstedes

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300/700/1500 Oerstedes = Floppy diskette 5 1/4", 3 1/2"  
550 Oerstedes = PC, Mini, Hard disk  
310 Oerstedes = Main-frame Spool 1/2"  
550/650 Oerstedes = Cartridge  
1500 Oerstedes = TK50 etc.  
700 Oerstedes = DCRSI cassette

310 Oersteds = Reel 1/2", 1"  
675/750 Oersteds = Cassette  
1050/1500 Oersteds = 8mm/4mm  
1440 Oersteds = DAT-R  
550 Oersteds = Cartridge 3480, DC600A  
1900 Oersteds = Digital backup cartridge

#### VIDEO Tapes Oersteds

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750 Oersteds = Reel 1" `B' and `C' format  
300 Oersteds = 2"  
675/750 Oersteds = VHS pancake  
2100 Oersteds = Mirror master  
675/700 Oersteds = Cassette VHS  
710 Oersteds = Beta  
1000 Oersteds = SVHS  
1050/1500 Oersteds = Hi8  
630 Oersteds = U-matic  
745 Oersteds = U-matic SP  
1700 Oersteds = Beta SP, MII  
850 Oersteds = D-1  
1700 Oersteds = D-2, D-3 Digital  
1700 Oersteds = Digital Betacam, D5 Digital  
1700 Oersteds = DV, DVC, DVCAM, DVC PRO

#### SECURITY formats Oersteds

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600 Oersteds = Credit card  
600 Oersteds = Library ticket  
600/3500 Oersteds = Rail/Air ticket  
600 Oersteds = Hotel door lock  
(INFO FROM: <a href="http://www.weircliffe.co.uk/degaussi.htm">Weircliffe</a>)

Here's something interesting:

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From: Art Munson <artmuns@tape.com>  
Subject: Degaussing, erasing and magnetism  
Date: Tue, 27 Aug 1996 11:58:42 -0500 (CDT)

## Degaussing, Erasing and Magnetism

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A lot of folks have asked about degaussing (erasing) media and particularly DAT tapes, so here's some info you might find helpful.

Gauss: A unit of measurement of magnetic flux density produced by a magnetic force (coils). Gauss is a measurement of coil strength.

Oersted: A unit of magnetic intensity of a magnetic field in a vacuum.

Oersted is a measurement applied to media. A 4mm DAT tape has a magnetic field strength of approximately 1500 oersteds.

Coercivity: The amount of applied magnetic field (of opposite polarity) required to reduce magnetic induction to zero. The ease or difficulty by which magnetic media can be de-magnetized.

A 4mm DAT tape is a high coercivity tape.

So:

- 1.) The higher the oersted rating, the more energy needed to \*properly\* demagnetize it.
- 2.) In order to degauss (erase) a magnetic tape, a magnetic force (gauss) of 2 2/3 to 5 times greater than that of the media to be degaussed must be created. In other words to demagnetize a media of a given oersted rating, it will take 2 2/3 to 5 times the amount of energy.
- 3.) A 1500 oersted tape would need a magnetic field strength in the neighborhood of at least 3000 gauss in order to \*properly\* erase it.

Hope this helps and thanks to David Partridge for his input.

There is a hand held DAT degausser available, with an oersted rating of 2800, that lists for \$169. Please give a call at 800-321-5738 if you are interested.

Art

\* Cassette House

\* e-mail:artmuns@tape.com

\* DAT tape - CDR's - Cassettes

\* web page <http://www.tape.com/ch>

\* 800-321-5738 "I will use no track before its time"

(INFO FROM: <<http://www.solorb.com/dat-heads/digests/V2.900/D921>>DAT Digest</a>)

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Radio Shack's High Power Gauss Field is 800 oersteds.

<[http://support.radioshack.com/support\\_video/doc14/14741.htm](http://support.radioshack.com/support_video/doc14/14741.htm)>Specs</a>

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So as you can see, degaussing DV tapes can be done with the right equipment. Let's see...to erase a DV tape of 1700 Oersteds I need a degausser that can handle 3400 Oersteds. Hmm, The Radio Shack High Power Bulk Tape Eraser handles 800 Oersteds. No wonder it didn't work.

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