

Ontrack® Eraser



Ontrack Eraser Degausser 3.0

User's Guide

KROLL ONTRACK®

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Welcome to Ontrack Eraser Degausser 3.0

The Ontrack Eraser Degausser, which is part of the Ontrack Eraser product suite, is a hardware based erase solution which can be used to erase data in a fast, secure and user-friendly way. With the Ontrack Eraser Degausser you can erase data from magnetic based storage devices, such as non-operational storage units and removable magnetic media such as tapes and ZIP drives.

The degausser erases the media by applying a strong magnetic field through the media. This removes all information recorded on the unit, including calibration and servo information. The result is, that the information is not recoverable, nor will it be possible to format and reuse the unit (some tape formats can be reused).

This User's guide is a description of the Ontrack Eraser Degausser, how it works and how to use it.

Ontrack Eraser Degausser is certified by the Norwegian authorities NSM (Nasjonal Sikkerhetsmyndighet), and British CESC. Ontrack Eraser Degausser is also recommended by German BSI.

Ontrack Eraser is a product suite which consists of two different solutions all focusing on secure erase of data from different storage devices. The solutions are: Ontrack Eraser Degausser and Ontrack Eraser software for PCs and servers.



Important

The Ontrack Eraser Degausser has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: This unit emits a very strong magnetic field. Be sure to remove wrist watches before operating the unit. Personnel fitted with a Cardiac Pacemaker should not stand within 0.5 metres of the unit.

If of one of the capacitors is short-circuiting the other one might get over-voltage and cells can start to leak some gas. The gas is easy to smell. Turn off the degausser and ventilate the room properly. The gas is potentially harmful with long exposure.

Caution: Having electronic equipment near the degausser, no particular caution regarding EMF (electromagnetic field) needs to be taken. Please contact your local Kroll Ontrack office.

Note: The degausser is equipped with an overheat function. If the degausser overheats, the overheat function will set the unit into a non-functional state. Once the degausser cools down, the unit will return to a functional state.

Use: To ensure a safe and effective erase process, only authorized personnel should operate the degausser.

Features and specification

Features:

- Logic controlled
- Remote controlled
- Front controlled
- Built-in Quality Control system
- Diagnosis mode
- Detection of insufficient field strength
- Usage counter
- Display functions: Gauss measure in center and in peak value

Volt measure

Ampere measure

Fast erasing: Less than 1 second (single pass)

Quick run time: Less than 5 seconds

Specification:

Model:	Ontrack Eraser Degausser 3.0		
Type:	Degausser		
Mounting:	Free standing front operated		
Origin:	Made in Norway		
Voltage:	AC 100-240V		
Frequency:	50Hz, 60Hz		
Current:	10-5A		
Fuse:	T10A - 250V		
Maximum Ambient Operating Temp:	40 degrees Celsius		
Dimension:	L x W x H - 455 x 702 x 268 mm		
Weight:	73 kg		
Field:	(gauss)	Peak	18.000
		Center	10.000
Caution:	Double Pole/Neutral Fusing		
Note:	The degausser must be connected to a grounded power socket		

Basic information

To meet the requirements for erasing today's high density magnetic storage devices Kroll Ontrack has designed and delivered an extremely powerful, 3rd generation degausser to the market. Whether you want to erase operational or non-operational magnetic based storage devices, you can now do it in a fast, secure and user friendly way thanks to this latest invention from Kroll Ontrack.

Using the Ontrack Eraser Degausser, the media is erased by exposing it to a strong DC magnetic field. This will drive the media into saturation and effectively erase all information. For hard drives, this method is destructive because the servo and maintenance information is also erased. This means that any drive erased using this method will not work afterwards.

How does it work?

To produce a magnetic field, the degausser uses an electromagnet which produces a very strong magnetic field by passing current through a coil. To provide the large current necessary the degausser is equipped with a bank of capacitors. The capacitors will become partly discharged after each erase cycle, but the built-in reload function will automatically recharge the capacitors to an operational state instantly. If the capacitors, for whatever reason, are not able to deliver the necessary current, the degausser will notify the user in the Operate display.

The degausser is equipped with an advanced control program which is operated via the Mode button. The status information is displayed in the Mode display and Value display. A description of the Mode button and the Mode display is provided on page 10.

The active erase area is located at the front of the degausser. Within the active erase area the magnetic field is strongest, and the unit you are erasing has to be placed in the erase area.

Unpacking and transportation

Unpack the degausser carefully before using the degausser. Please inspect the degausser for any physical damage before using the degausser. If the degausser is damaged please don't use the degausser. Instead, contact your local Kroll Ontrack office for further information. When transporting the degausser from one location to another you have to use the original transportation container which is delivered together with the degausser. Failing from doing so will void the warranty.

Powering on the unit

The main switch is placed on the backside of the unit.

Main fuses

The degausser main fuses are placed under the main switch. The fuses are placed under a plastic cover. It is necessary to open the plastic cover in order to remove/change the fuses.

Unit types

The Ontrack Eraser Degausser can handle unit types sized up to 3.5". The unit types can be both tapes and hard drives. The number of erase cycles required depends on the unit size. The guidelines are as follow:

- All units sized above 2.5" requires 2 cycles.
- All units sized under and equal to 2.5" requires 1 cycle.

Remote Control

You can operate the degausser by using the Operate button on the front of the degausser or by using a remote control (included with the degausser). Two buttons are placed on the remote control. The button on the left side is used for mode changes and the button on the right side is used for degaussing.

For erasing and programming the Remote Control, see appendix B.

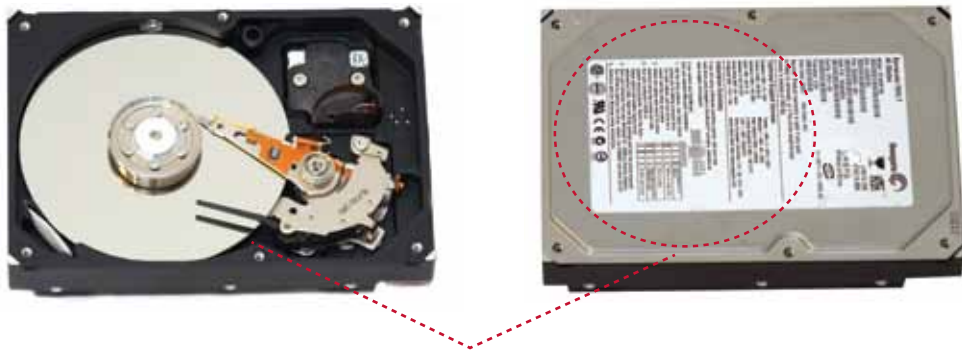


Operating guideline for the Ontrack Eraser Degausser

The following operating guideline should be followed in order to maintain a high level of security and quality.

Note: Before using the degausser please ensure that the degausser has been powered on at for at least 2 minutes. The operate button and the erase area will turn blue when ready.

1. Record the unit identification information (manufacturer, model and serial number)
2. Check the erasure authorization. The operator must obtain authorization from the rightful owner of the data
3. The operator must ensure that he/she has received the correct unit
4. The erasure process



The magnetic media

1) Units above 2,5" form factor

The magnetic media/disks needs to be near the erasure coil inside the degausser. Insert the magnetic media/unit with the magnetic disks first into the erase area. As a guideline, on a majority of disks the connectors will now be outside the erase area. If you are unsure on the position of the magnetic disks perform the erasure process with the unit oriented in both directions.

- a) Place the unit into the erase area with the electrical connectors pointing out as shown in picture 5.
- b) Push the unit gently until it meets resistance (for position see picture 5)
- c) Press the operate button to execute the first erasure cycle



- d) Push the unit further into the erase area until it stops in the inner end position (see picture 6.)
- e) Press the operate button to execute the second erasure cycle
- f) Push the unit gently 0.3 cm into the erase area and the unit will be ejected automatically
- g) The erasure process is finished, remove the unit from the erase area
- h) Mark the unit to indicate that it has been erased

2) Units on 2,5" form factor and smaller

- a) Place the unit into the erase slot in the 2,5" adapter (see picture 7)
- b) Insert the 2,5" adapter with the hook on platform first into the erase area (see picture 8)
- c) Push the 2,5" adapter gently until it meets resistance and continue until it stops in the inner end position (see picture 9)
- d) Press the operate button to execute the erasure cycle
- e) Push the 2,5" adapter gently 0.3 cm into the erase area and the adapter will be ejected automatically
- f) Pull the adapter out of the erase area
- g) The erasure process is finished, remove the unit from the 2,5" adapter
- h) Mark the unit to indicate that it has been erased



If the degausser fails to operate, the Operate display will show the Error. The error type can be found by using the Mode display function.

If the degausser fails to operate because the temperature gets too high, the Operate display will show Temp. The degausser will turn into a normal operate mode once the temperature returns to a normal.

Front

There are 3 display areas at the front of the degausser:

- Mode display
- Value display
- Operate display

At the left you will find the Mode display and the Value display. The Mode display is used to show error codes, for testing and service purpose and for remote control programming. The Value display will show values according to the selected mode in the Mode display. The Operate display is placed at the right side. The Operate display is used to show the status of the degausser.



There are 2 buttons at the front of the degausser, an Operate button and a Mode button. The Operate button, which is placed at the right, is used to start the erase cycle. The Mode button, placed on the left side, is used to navigate through the various modes.

A Lock is placed at the front panel of the degausser. The lock is used to switch the degausser into a non-cycling state. When the degausser is in a non-cycling state all Modes can still be used except for the cycling mode. When the degausser is set in a non-cycling state it is not possible to perform an erase cycle. Turning the lock clockwise places the degausser in a cycling state.

The erase area is placed in the middle of the front. Units which are going to be erased have to be placed into the erase slot. The erase area is equipped with an auto push mechanism. The auto push mechanism will assist the user pushing out the unit from the erase area.



The lock



The erase area

Back

At the backside of the degausser you will find the main power connector as well as the Cycle counter display. The Cycle counter display displays the number of cycles the degausser has performed in total. The display cannot be reset.



The main power connector



The cycle counter

Mode, Value and Operate display

The 3 displays at the front of the degausser all interact with each other. The main display of the degausser is the Operate display.

Operate Display

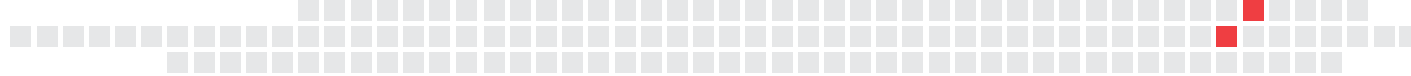
The Operate display will show the status of the degausser. The status can be:

- Error
- OK
- Temp

If the status is Error you can use the Mode display to see what type of error is present. If the status is OK it simply means the no error has occurred during the last erase cycle. If the status is Temp it's because the temperature of the degausser is too high. Once the degausser returns to normal operating temperature the degausser will automatically return to a Ready state.

Value display

The value display interacts directly with the Mode display. For example, if the Mode display is set to Volt the voltage value is shown in the Value display. The default value shown in the Value display is the gauss peak level.



Mode display

The mode display is used to show error codes for testing and service purpose, and for remote control programming. The Value display will show values according to the selected mode in the Mode display. You may use the Mode button to toggle between the different mode settings in the Mode display.

The degausser operates with 3 different values in the Mode display: Gauss, Ampere and Volt. The following matrix will guide you through the different options in the Mode display:

Considerations

The Ontrack Eraser Degausser is designed to erase hard drives and tapes. The following are some considerations when erasing modern hard drives and tapes.

There are two important things to consider when erasing modern drives with a degausser. The first is the so-called coercivity of the media used in the drive, and the second is the design and geometry of the drive.

Some combinations of coercivity and design/geometry are harder to erase than others. Typically combinations with high coercivity media, many platters, and large form factors are hard to erase. Furthermore, the media coercivity is one parameter which drive manufacturers constantly increase to get higher storage capacity.

Maintenance

The Ontrack Eraser Degausser is designed to require only a minimum of maintenance, and the degausser has a built in diagnostics system to ensure that the required magnetic field strength is always produced. If the diagnostics procedures detect a problem, it will show so on the front panel indicators.

In case the degausser needs service, please contact your nearest Kroll Ontrack office. Do not perform the service by yourself. If doing so, you will void the warranty.

Although no user calibration is required, the calibration of the diagnostics system should be checked every 2 years. This can be done using a standard gauss meter.

Safety issues

The degausser will produce a very strong field in a limited area. However, there will always be some leakage of the field outside the focus area, which may influence the surroundings. For anyone not comfortable with exposure to magnetic fields, we recommend to use the remote control. Since the Degausser produces a DC field, it exerts force on magnetic materials and it may accelerate metal objects. Therefore, the degausser must not be operated when there are small loose objects lying in the erase area. Also never operate the degausser while holding metal objects in your hands close to the erase area.

It's recommended to unload the capacitors before transporting or servicing the degausser. Push Mode button until the display indicates Test mode. Hold the Mode button until Test starts to flash. Start one erase cycle by pushing the Operat button to unload the capacitors. Turn off the power.

Contact and Legal Information

Notice to Users

Ontrack Eraser Degausser is a hardware product that has been developed by Kroll Ontrack. Use of the hardware is governed by the terms and conditions of the end user license agreement distributed with the product.

This manual should not be construed as any representation or warranty with respect to the hardware named herein. Occasionally, changes or variations exist in the hardware that is not reflected in the manual.

Generally, if such changes or variations are known to exist and affect the product significantly, a release note will accompany the User Guide, or will be available on the Ontrack Eraser Degausser site. In that event, please read the release notes before using the product.

Trademarks

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Appendix A:

The matrix gives an overview of the error codes you can get displayed in the display. These codes can be used in conjunction with the technical support team.

Measure unit	Test mode		Degausser is not in Ready mode	Remote control programming	Test only	Service
		Kgauss	Off	On	Off	On
Amp	Off	Off	Off	On	On	
Volt	On	On	On	On	On	
Measure function	Peak	[I Lo] Low power to the coil - reset error and try again	[Lo Bat] Remote control power - Insert new battery in remote control	Operate button is active	[Stop] Power stop signal (maximum reached)	
	Center	[IULo] Low power above the coil - reset error and try again	[Status] Remote control programming	Next button is active	[Iok] Current status from peak detector	
	Charge	[Field] Power in the coil (fatal)	[Reset] Error on the card (fatal)	Lock is in locked position	[Uok] Current status from current sampler	
	Current	[Charge] Capacitors are loading	[Stop Cap 1] Instant light - capacitor 1 defect possibility	n/a	n/a	
	Coil	[Lock] Degausser is locked	[Stop Cap 2] Instant light - capacitor 2 defect possibility	Coil temperature is above 50 degree C.	[Retrig] Inside strapp set - test-mode Burnin	
	Source	[Cap 1 Temp] Capacitor 1 is to hot - cooling	[Stop Cap 3] n/a	Capacitor 1 is above 36 degree C.	[FanCtrl] Inside strapp set - fan starts at 36 degree C.	
	Cap 1	[Cap 2 Temp] Capacitor 2 is to hot - cooling	[Stop Cap 4] n/a	Remote Operate button is active	[FixPW] Inside strapp set - cycle pulse is set to 250 ms.	
	Cap 2	[Coil Temp] Coil is to hot - cooling	[Istop Cap 4] n/a	Remote Mode button is active	[Test] Inside strapp set	
	Test	On	On	On	Test only	
Function for Operate	Reset Error	n/a	Light test	n/a		
When in Hold mode Press Mode button until all lights starts blinking	Unload capacitors	Remote control programming	Light test	n/a		

Appendix B:

To program or add new remote controls perform the following steps:
(Learning a New Transmitter Encoder)

Press and hold the 'Mode' button for 5-6 seconds until 'Test', 'Kgauss' and 'Volt' indicators turns on.

1. Briefly press the 'Operate' button
2. Center/[Status] lamp will illuminate.
3. Depress the transmitter once, Center/[Status] lamp will extinguish.
4. Depress the transmitter again, Center/[Status] lamp will flash. (Approx 10sec).
5. Wait for Center/[Status] lamp to stop flashing.
6. This transmitter will now operate the system.

Erasing the Memory

Push the 'Mode' button until 'Test', 'Kgauss' and 'Volt' indicators turns on.

Press and hold 'Operate' button for 10 seconds. Release 'Operate' button and Center/[Status] lamp flashes while the module erases its memory.

