Security Engineered Machinery Co., Inc

OPERATIONAL & MAINTENANCE MANUAL

SEM Model DX-CD2
DECLASSIFIER

Security Engineered Machinery Co., Inc.

NATIONWIDE SERVICE

Phone Toll Free: 1(800)225-9293

Email: Service@SEMSHRED.com

Fax: 508-366-6814

Website: WWW.SEMSHRED.COM

Rev. 0
Created: 01/07/08

INDEX

CD-ROM Destruction Process..……...…..3

Operation of DX-CD2……..…...4

Selecting Speed…….....5

Cutter and Adjustment……..…….6

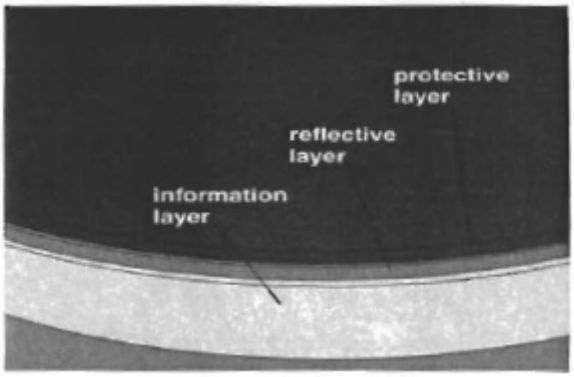
Cleaning and Dust Bag Removal.…….…….7

Troubleshooting……..……..…8

DX-CD2 Package Contents

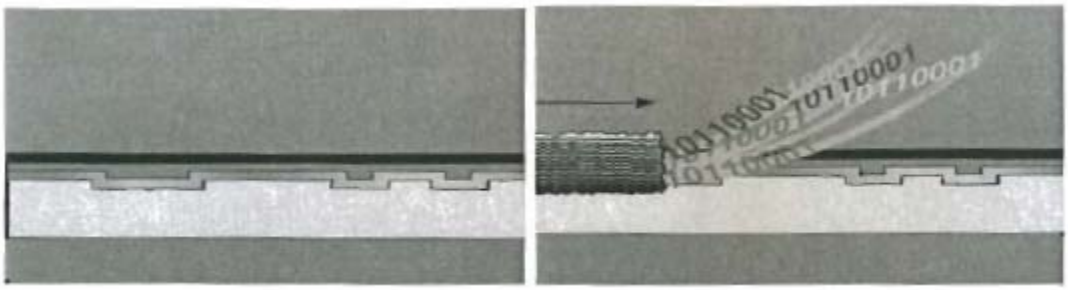
1. **DX-CD2 Machine**
2. **Instruction Manual**
3. **One Spare Dust Bag (Empty or Replace Every 500 Discs)**
4. **One Spare Cutter**
5. **One Cleaning Brush**
6. **One DX-DVD Manual Splitter**

CD-ROM Information Bearing Sub-layers
Destruction Process



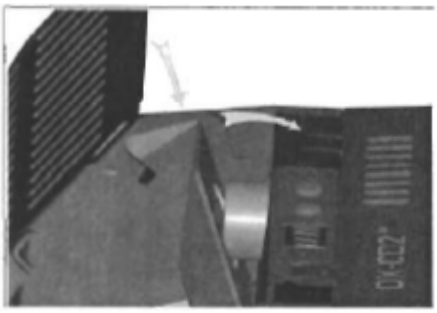
A CD_ROM is made up of multiple layers: Data resides in the “information layer” of pits and lands. Data is a sequence of 9 unique spaces of lands and 9 unique sizes of pits. Data is imbedded in the polycarbonate.

Data is contained in the polycarbonate surface of a commercially produced CD-ROM disc to a depth of @ 100 nanometers (0.001mm). To destroy the data 100% in a commercially produced disc, the grinding process needs to just penetrate the polycarbonate layer. Data is contained in the chemical layer on a recordable disc, between the polycarbonate layer and the protective surfacing on the discs. To destroy 100% of the data contained in a CD-R or CD-RW disc, the chemical surfacing above the polycarbonate needs to be removed. The grinding process of the DX-CD2 provides complete 100% destruction of the information layer of both commercially produced CD-ROM discs and CD recordable discs.



The DX-CD2’s technology physically removes the information layer from the CD-ROM permanently and safely while keeping the CD intact.

OPERATION



Position Dust Bag
Make certain the dust bag is inserted and properly seated before operation. If a vacuum bag is not present insert one before powering on the DX-CD2. Place one cardboard end of the vacuum bag down and behind the two small retaining stands located below the dust vent tube in the waste collection bin at the rear of the DX-CD2. Seat the throat of the vacuum bag over the dust vent tube and close the cover.

Apply Power
The DX-CD2 is equipped with a universal power supply; for use in Europe an adapter is required. Once the unit has been plugged into a power source simply toggle the power switch to the ON position.

Place Disc in Unit
Place disc in the DX-CD2 with label side down. Slide the center of the disc over the disc retaining spindle (hub ring up). The hub ring is a raised section on the disc surface near the center. While not immediately visible to the eye, the hub ring can be felt by sliding one's fingertips across the surface of the disc. If the disc has no label the hub ring position is the method used to differentiate the label side from the side of the disc that data is read from or written to. Data is on the opposite side from the raised hub.

Select Mode of Operation
The DX-CD2 has two modes of operation. See section on Selecting Speed to determine appropriate operational mode.

Warning: Do not attempt to handle the disc during the destruction phase.

Selecting Speed - (2) Options

Introduction: The basic material of a CD-ROM disc is Polycarbonate (plastic). This is overlaid with a reflective material that can be gold, silver or aluminum. Over this reflective material is a hard coating similar to varnish paint that minimizes scratching of the discs. The discs are 1.2mm in thickness but the variability from manufacturers is significant with as much as 0.15mm thickness differences. Coating on the discs and artwork on top of the coatings are also highly variable from one manufacturer to another. The DX-CD2 is designed to work all these factors in consideration.

Speed 1 is the fastest speed. This is suitable for CD-R / RW media. It processes the disc in 14 seconds. Actual cutting time of the information bearing sub-layers is 11 seconds. This is the default speed. Place the slide switch in the up position and press the blue button to activate speed 1. The right period indicator on the LED will illuminate when speed 1 is activated. If the results are not adequate, as measured by complete removal of the printed surface layer so that you can see the clear polycarbonate, then try
speed 2.

Speed 2 is the slowest speed. Use this speed for commercially produced CD-ROM media or if the results of speed 1 is not adequate. This speed processes the disc in 26 seconds. Actual cutting time of the information bearing sub-layers is 21 seconds. To activate speed 2 place the slide switch in the down position and press the blue button. The middle period indicator on the LED will illuminate when speed 2 is activated.

Sticky Labels on Classified CD-ROM Discs the Department of Defense uses a sticky label to identify a CD-ROM disc that contains classified information. The label is similar to an Avery label used in bulk mailings that have pre-printed addresses. These labels have two materials other than the ink: the paper the ink is printed on, and glue underneath the paper that holds the label to the disc. When removing sticky labels from the CD-ROM discs, it may be necessary to slow the DX-CD2 to speed 2 in order for the cutter, which spins at 8,000 RPMs to cut through the label and then into the information bearing sub-layers of the discs.

White Thermal CD-R Media Verbatim DataLife Plus and Mitsui ColorTherm white thermal media have a coating composition that can clog or gum the cutter teeth. If incomplete cutting of the information layer on these or similar discs are experienced, simply rotate the cutter arm assembly to the right and clean the cutter teeth with the included brush.

Cutter and Adjustment

The cutter is user replaceable. The cutter will service approximately 1000 discs.

Warning: Do not attempt to replace cutter while machine is in operation. Caution should be used when removing and installing cutter. Cutter teeth are sharp.

Remove Power
Turn power switch off prior to replacing cutter. Removing the DX-CD2 from the power source is acceptable; the memory control circuit contains a battery back-up and will retain the destroyed disc count.

Insert New Cutter
Insert the new cutter by aligning the plastic, keyed shaft into the cutter spindle receptacle. Gently press the cutter into position; press down and turn the cutter @ 1/8 turn counter-clockwise. Reposition pusher arm to the center over cutter.

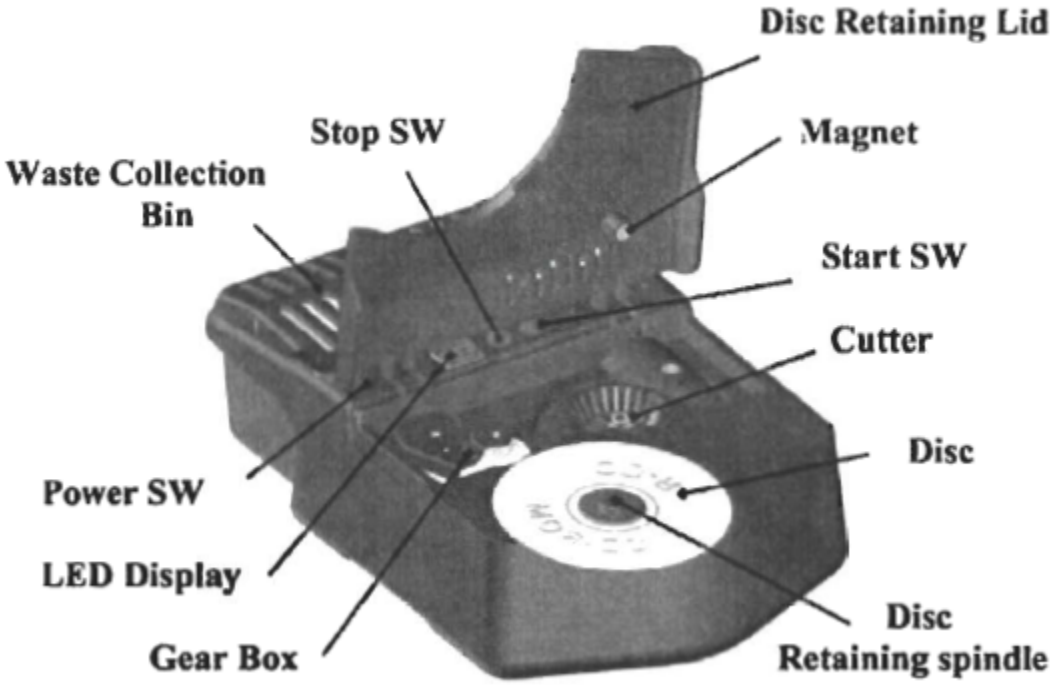
Adjustment of the cutter is not normally needed.

Dust Bag Removal

To remove and clean, or remove and replace the dust bag, open the back cover by pressing under one of the Waste Collection Bin tabs while lifting up – repeat on opposite side; remove the bag and insert a new bag. The dust bags are designed to hold the information bearing layers of a minimum of 500 discs. If needed, additional replacement bags may be purchased by contacting our Sales Department at 800-225-9293.

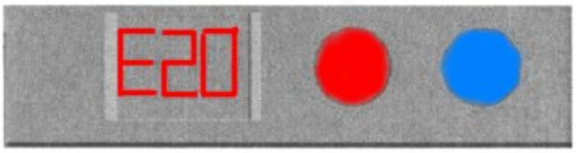
Cleaning the DX-CD2

To clean the DX-CD2, please remove the dust bag periodically and dispose of the dust bag in a trash receptacle, you can use a small vacuum cleaner to periodically vacuum any dust particles that have accumulated on the top surfaces of the unit. You may also use a moist cleaning towel to wipe the unit down. Please do not use chemical cleaning agents to clean the unit as the finish of the plastic parts will discolor.

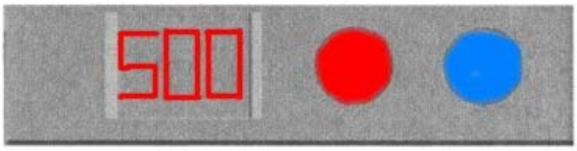


Trouble Shooting –Technical Support

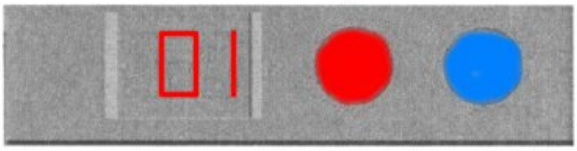
If the DX-CD2 LED indicator displays an error code consult the error code list below:



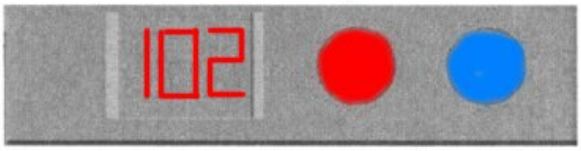
Error Code E20 – Carefully vacuum out particle debris. Remove the particle debris with a vacuum; thoroughly clean around the Disc Retaining Spindle. Reset the LED indicator by depressing the red buttons simultaneously. If the problem persists call technical support to resolve the issue.

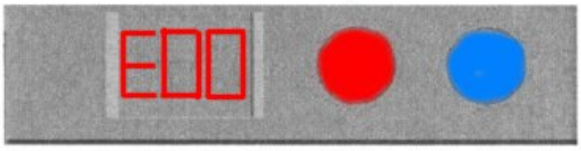


Error Code: 500 – This shows that 500 discs have been destroyed. Digital “500” will flash. This is a reminder to clean the unit and check both dust bag and cutter, replacing as necessary. To reset the LED indicator power the DX-CD2 off, depress and hold the blue “Start” button, power the DX-CD2 on while continuing to hold the blue “Start” button for two seconds or until a long beep is heard, then release the blue “Start” button.



After the **Error Code 500** is displayed and the unit is reset the LED will display the total discs destroyed. The example to the left represents 1,102 discs destroyed. The LED will first display 01 then 102. Push the red stop button to reset the counter to 000.





Error Code: E00- The DX-CD2 incorporates a safety feature to prevent the cutter from operating with the cover open. **E00** shows that the cover has been opened while power is applied to the unit. Simply shut the cover completely and the error will reset.

For NATIONWIDE SERVICE call 1(800)225-9293