



HDS 4000 IDE Copier

Users Guide

CORPORATE SYSTEMS CENTER

1 to 4 IDE Duplicator Features

Congratulations on your purchase. The 1 to 4 IDE copier is a stand-alone hardware package used to make identical duplicates of IDE hard disk drives. The copier offers these features:

- **Full drive duplication ability.** Any IDE drive can be copied, producing a perfectly identical backup copy. System builders can use the unit to quickly install identical drives and pre-load software.
- **Optional data verification.** Drives can automatically scanned for defects during the copy process. This option slows copying, but ensures that no recording errors are detected on the target drives.
- **Performance is unaffected by the number of drives attached.** Duplication speed is virtually unaffected by the number of drives attached. In addition, each IDE drive has a separate IDE port. The failure of one target drive will not affect the others.
- **Support for all IDE drives** including: IDE, Enhanced IDE, and Ultra DMA mode drives. No drive jumper changes are necessary. All drives are jumpered as "master" or "single drive".
- **A totally self-contained workstation** including drive power supply, LCD panel, and push buttons. No connection to a PC is required.

Package Contents

1. The 1 to 4 duplication chassis
2. A quick setup label with user instructions.
3. 40 pin IDE interface cables.
4. Drive power supply "Y" connection cables
5. Power Cord.
6. This Manual

Quick Setup

1. Remove the copier from its shipping carton. Save the carton and protective foam in case the copier ever requires service.
 2. Make sure that the top-panel power switch is in the OFF position.
 3. Attach the power cord.
 4. Ensure that nothing blocks either the ventilation slots on the bottom of the chassis or the fan on the rear panel of the chassis.
 5. Connect the IDE drive cables to the five connectors located on the top of the chassis. The cables are keyed so that they cannot be installed backwards.
 6. Connect the drive power supply cables to the top of the chassis.
 7. Place the hard drives to be duplicated on the anti-static pads on top of the unit. Be sure to place your original drive in the "source" location, and your blank target drives in the "target" locations. Jumper all drives as "master" or "single drive", depending on the drive.
 8. Switch the power ON. The copier will perform an internal self test. The duplication process will start automatically.
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Front Panel Display and Controls

The copier is controlled using the three top-panel buttons: next, on/off, and save. The next button scrolls through menus and options. The on/off button changes options. The save button saves the current settings. The next and on/off buttons may be pressed at the same time to abort an operation. To enter the set up menu, hold all three buttons down while turning the power on.

Physical Specifications

Line Voltage	100-127 or 200-240 VAC selectable
Frequency	50–60 Hz Single Phase
Power Consumption	245 Watts Maximum
Height	5.0 Inches
Width	16.0 Inches
Depth	18.0 Inches
Weight	22.3 lbs

Compatible Peripherals

IDE Hard Drives: IDE, E-IDE, UDMA, 2.5" notebook IDE. Notebook drives require the appropriate adapter, available from CSC.

Drive Handling Precautions

Don't risk connecting any drive with the power turned on. Damage to the drive or the copier may result. Switch the power off first, then connect and double-check the cabling. Be sure all cables are oriented correctly before switching the power on. Turn power on only after double-checking connections. The copier performs a power-up self-test. This allows time for drives to spin up and become ready. Use caution when handling drives to prevent damage from static electricity.

Setting Options

To enter the setup menu, hold all three buttons down while turning the power on. "CSC Setup" will be displayed.

Use the Next button to scroll through the following options. If you would like to change an option, press the on/off key. Press the Save button to permanently save the new settings. The settings will be retained even after the power is turned off.

Version 2.4 DAK setup options include:

Partial Copy

Enabling **Partial Copy** will permit duplication to target drives smaller than the source drive. Duplication to other than identical drives is *not* recommended. When cloning drives, exact

copies of the partition tables and drive structures are produced. If different sized drives are duplicated, the resulting drive may be unusable. Disabling **Partial Copy** ensures that only identical drives are cloned.

Verify

Enabling **Verify** will automatically scan target drives for data recording errors using the IDE Verify command during the copy process. This approximately doubles the time required to copy drives. Enable the **Verify** option if the quality of the target drives is in question, or if data integrity is of absolute importance. Disable the **Verify** option for top performance.

Verify Only

The **Verify Only** option disables the copying process. If **Verify Only** is enabled, all target drives will be scanned for errors. No data will be transferred to the targets. Errors will be reported on the LCD as they are detected. Enable **Verify Only** to test the target drives. Disable **Verify Only** for normal duplication.

Auto Start

The **Auto Start** option is used to automatically start the duplication process when the power is turned on. Enable **Auto Start** for ease of use in a production environment. Disable **Auto Start** for manual operation.

LBA Display

The **LBA Display** option sets the progress display in hexadecimal LBA mode. This displays the block number of the 512 byte sector currently being copied in hex. Enable **LBA Display** to see the current block number in hex. Disable **LBA Display** to display the progress as percent complete.

Defaults

The **Defaults** option re-sets all options to the factory default states below:

Partial Copy	Disabled
Verify	Disabled
Verify Only	Disabled
Auto Start	Disabled
LBA Display	Disabled

Technical Support

To save time and effort, please read this manual completely before calling for tech support. Start with our web site: www.corpsys.com. You may FAX questions to (408) 969-2655. To contact tech support, dial (408) 330-5595 and please have the following ready so we can better serve you:

1. A copy of your invoice and customer number.
2. The firmware revision level installed in the copier. This information is shown on the display during power-up.
3. A description of the drives on your SCSI and IDE chains including the IDs for each device, which devices are terminated, and which device(s) are providing termination power.

We completely support our own products, however we may not be able to provide full technical support for disk drives not purchased from CSC.

Limited One Year Warranty

The terms of this warranty may be legally binding. If you do not agree to the terms listed below, return the product immediately in original unopened condition for a full refund. The software, firmware, and accompanying written materials are provided "AS-IS" without warranty of any kind. The entire risk as to the results and performance of the unit is assumed by the purchaser. CSC warrants this hardware to be free from defects in materials and workmanship for a period of one year from the date of the CSC original invoice. CSC's entire liability and exclusive remedy as to defective hardware shall be, at CSC's option, either (a) return of the purchase price or (b) replacement or repair of the hardware that does not meet CSC's quality control standards and has been returned through proper RMA procedures. CSC's liability for repair or replacement is to CSC's customer ONLY. No warranty service will be provided without an original invoice from CSC and an RMA number provided by technical support. RMA material must be shipped prepaid to CSC. RMA numbers are valid for 15 days from date of issue. This warranty does not cover products modified, subjected to rough handling, or used in applications for which they were not originally intended. No oral advice or verbal warranties made by CSC's employees, dealers, or distributors shall in any way increase the scope of this warranty. CSC makes no warranty as to merchantability or fitness for any particular purpose. Due to the wide range of hardware and software available, CSC cannot guarantee compatibility with all system configurations. CSC assumes no liability for incidental or consequential damages arising from the use or inability to use this product. This warranty gives you specific legal rights. You may also have other rights that vary from state to state. Since some states do not allow the exclusion of liability for consequential damages, some of the above limitations may not apply to you.

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