

# D Y N A M O

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## Preface

Thank you for purchasing DynaMO 640Ux/1300Ux.

The DynaMO is a high-performance, high-reliability Magneto Optical (MO) disk drive unit that uses 1.3 GB (GIGAMO) disks and any ISO standard 128, 230, 540, and 640 MB 3.5" MO disk. Using Direct Over Write (DOW) MO disks you can improve the drive's performance. DOW disks, however, are only available in 540 and 640 MB capacity.

Before using your DynaMO, make sure that you have all the components printed on the packaging box. If any components are missing, please contact your reseller.

DynaMO U1	USB 1.1
DynaMO U2	USB 2.0

### Notice:



- Click [here](#) to get safety information about this product.
- Before using DynaMO, see also [Information for first time Users](#).



## ***Preface***

### ***System Requirements***

#### **PC:**

- CD-ROM Drive (Required to install the device driver.)
- USB 1.1 compliant system or USB 2.0 compliant system

#### **Operating System:**

- Microsoft Windows 98
- Microsoft Windows 98 Second Edition
- Microsoft Windows Millennium Edition
- Microsoft Windows 2000 Professional
- Microsoft Windows XP Home Edition/Professional  
(Windows XP 64-Bit Edition is not supported.)



# **Preface**

## **Getting started**

Installing your DynaMO is fast and easy. Please refer to the following instructions to set up your DynaMO and install the appropriate software:

1. **Install the DynaMO software for your operating system.**  
(Refer to "[Installing Software](#)" for details.)
2. **Connect the DynaMO drive to your PC.**  
(Refer to "[Connecting your DynaMO](#)" for details.)
3. **Using your MO drive is as easy as using a floppy disk drive.**  
(Refer to "[Using your DynaMO](#)" for details about using the MO drive.)
4. **Formatting MO disks.**  
(Refer to "[Formatting an MO Disk](#)" for details about the MO disk format.)

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## **Helpful Notes:**

Refer to "[Hardware Notes](#)" and "[Software Notes](#)" for additional information about your DynaMO.

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## **Help information**

Refer to "[Q & A](#)" if you need help while using the DynaMO.

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# ***Installation***

## ***Installing Software***

### **Notice:**



- If you are using Windows 2000 or Windows XP, log on with administrator privilege.
- Although some installer messages are displayed in English, you can use the DynaMO in a non-English environment without any problems.

**for Windows 98, Windows 98 Second Edition users Setup Installation**

**for Windows Millennium Edition users**

**for Windows 2000 users**

**for Windows XP users**

**for Windows 98, Windows 98 Second Edition users Setup Installation**

### **Notice:**



- Do not connect the USB cable first.
- If the hardware wizard has started, click "Cancel" to end it.

1. Place the DynaMO CD in the CD-ROM drive.
2. From Explorer, open the CD-ROM drive and double-click the following icon. Follow the displayed instructions.



*(CD-ROM Drive:\Win9x\Setup.exe)*

3. Restart your PC.

**for Windows Millennium Edition users**

### **Notice:**



- Do not connect the USB cable first.
- If the hardware wizard has started, click "Cancel" to end it.

1. Place the DynaMO CD in the CD-ROM drive.
2. From Explorer, open the CD-ROM drive and double-click the following icon. Follow the displayed instructions.



Setup.exe

(CD-ROM Drive:\Win9x\Setup.exe)

3. Restart your PC.

#### **for Windows 2000 users**

1. Place the DynaMO CD in the CD-ROM drive.
2. From Explorer, open the CD-ROM drive and double-click the following icon. Follow the displayed instructions.



(CD-ROM Drive:\Win2000\MOSUPPLE.MSI)

3. Restart your PC.

#### **for Windows XP users**

1. Place the DynaMO CD in the CD-ROM drive.
2. From Explorer, open the CD-ROM drive and double-click the following icon. Follow the displayed instructions.



(CD-ROM Drive:\WinXP\MOUTY.MSI)

3. From Explorer, open the CD-ROM drive and double-click the following icon. Follow the displayed instructions.



(CD-ROM Drive:\WinXP\MOSUPPLE.MSI)

4. Restart your PC.

#### **Notice:**



- The DynaMO is hot-pluggable. When connecting or removing your DynaMO, see "Connecting your DynaMO" or "Removing your DynaMO".

#### ***How to Uninstall Your DynaMO***

### **for Windows 98, Windows 98 Second Edition, and Windows Me users**

1. Click the [Start] button.
2. Select [Settings] and click [Control Panel].
3. Double-click [Add/Remove Programs].
4. Select "MO Supplement."
5. Click [Add/Remove] to uninstall.

### **for Windows 2000 users**

1. Click the [Start] button.
2. Select [Settings] and click [Control Panel].
3. Double-click [Add/Remove Programs].
4. Select [Change or Remove Programs].
5. Select "MO Supplement".
6. Click [Remove] to uninstall.

### **for Windows XP users**

1. Click the [Start] button.
2. Click [Control Panel].
3. Double-click [Add/Remove Programs].
4. Select [Change or Remove Programs].
5. Select "MO Utilities".
6. Click [Remove] to uninstall.
7. Select "MO Supplement for XP".
8. Click [Remove] to uninstall.



# *Using your DynaMO*

## *Inserting an MO Disk*

Gently insert the MO disk with the label side up, as shown below, until the disk clicks into place.

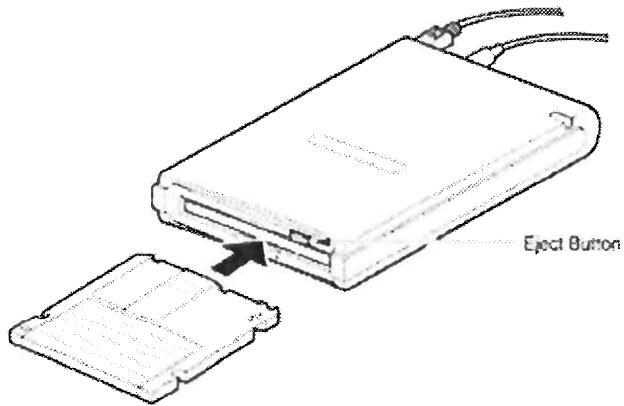
The busy indicator comes on when the MO disk is loaded. Wait for the busy indicator to go off before using the disk. A 1.3 GB MO disk takes a little longer to become ready after it is inserted.

### **Important:**

- Never force the disk into the drive or insert an MO disk upside down, since this may damage the drive.
- Since a floppy disk is about the same size as an MO disk, never insert a floppy disk into your DynaMO.
- Do not insert foreign objects into the DynaMO.
- Before using the drive, connect the AC adapter to the drive, and turn on the power. The shipping lock will be released

### **Notice:**

 If an MO disk has not been inserted properly, push the eject button and then try to insert the disk again.



# *Using your DynaMO*

## *Ejecting an MO Disk*

Right-click the removable disk icon and select "Eject" from the pop-up menu.

If the MO disk cannot be ejected properly as described above or appears to be jammed in the drive, the disk can be ejected using Emergency Eject.

### **Important:**

- **for Windows 2000 users**



When the MO disk cannot be ejected, see "Change eject and format privilege".

- **for Windows XP users**

When the MO disk cannot be ejected, see "Change eject and format privilege".

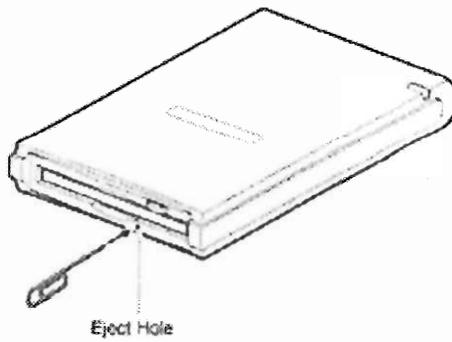
## *Emergency Eject*

### **Important:**



Never use emergency eject while your DynaMO is on.

1. Remove all cables from your DynaMO.
2. Straighten one end of a large paper clip.
3. Insert the straightened end of the paper clip into the eject hole, and push gently but firmly until the MO disk is ejected.

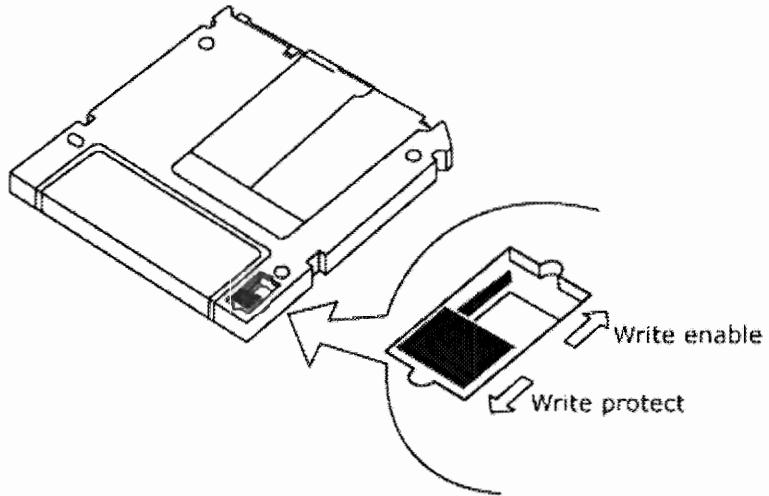


# ***Using your DynaMO***

## ***Write Protection***

Enabling write protection on the MO disk prevents data from being accidentally lost or altered.

The write protect switch is located on the bottom of the MO disk (see the figure below). Move the write protect switch up for "write enable" or down for "write protect."



## ***Using your DynaMO***

### ***Cleaning the MO Disk***

From time to time, dust may build up on the surface of the disk, making it necessary to clean.

If your MO disk appears dirty, use the MO disk cleaning kit (part number CA90003-0702) we offer or any MO disk cleaning kit on the market.

### ***Cleaning Your Drive***

In normal office environments, cleaning your DynaMO drive is not required. In some cases, however, dust may build up on the objective lens of the drive and cleaning may be required. To clean the objective lens, insert the optional head cleaner (part number CA90002-C980). Cleaning will take place automatically, and the head cleaner will be ejected after 15-30 seconds. Please contact your place of purchase for information on the DynaMO lens cleaning kit.



# *Using your DynaMO*

## *Formatting an MO Disk*

Most new MO disks are not formatted. If your MO disk is not formatted, you will need to format it before you can use it.

### **Important:**



Formatting will delete all existing data on the MO disk.

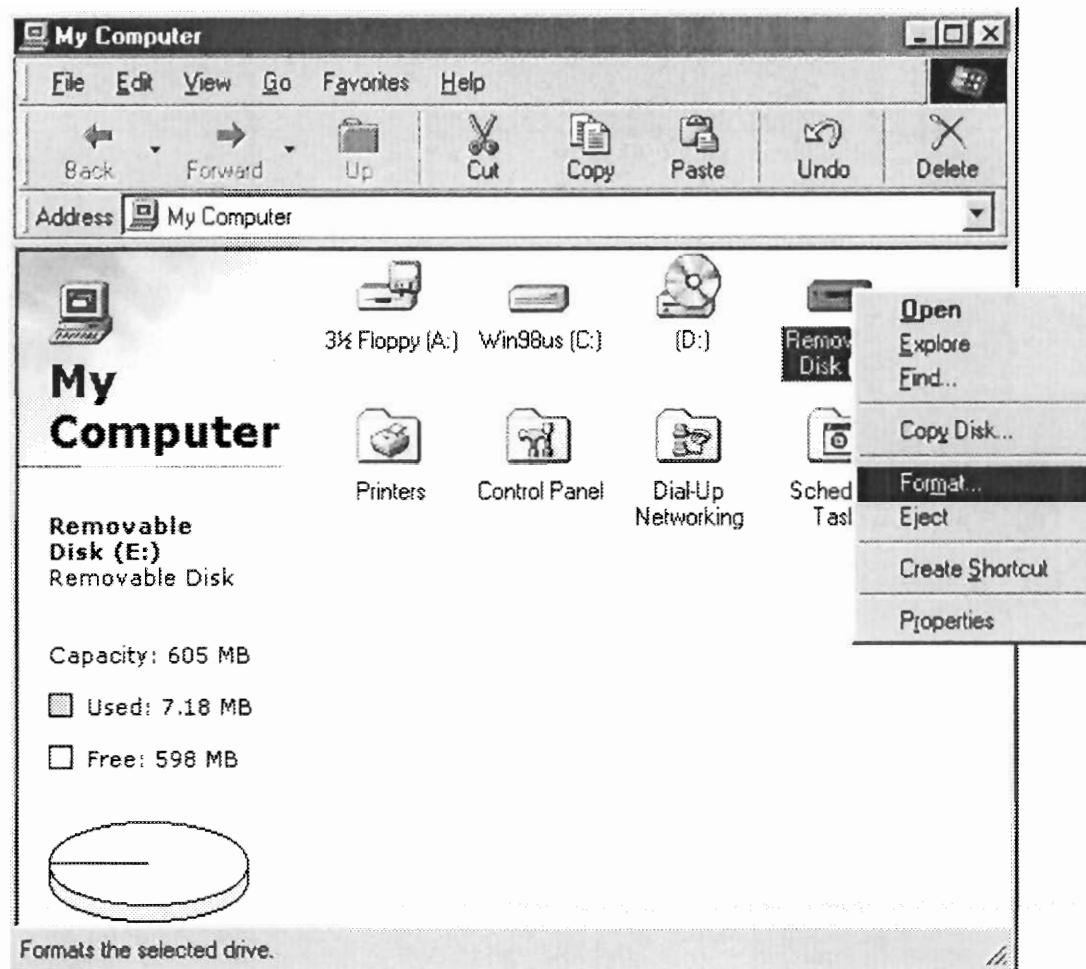
**for Windows 98, Windows 98 Second Edition, and Windows Millennium Edition users**

**for Windows 2000 users**

**for Windows XP users**

**for Windows 98, Windows 98 Second Edition, and Windows Millennium Edition users**

1. From Explorer, open My Computer.
2. Right-click the Removable Disk icon corresponding to the DynaMO and select [Format...].



3. Set the required items in the dialog box, and click the [Start] button.

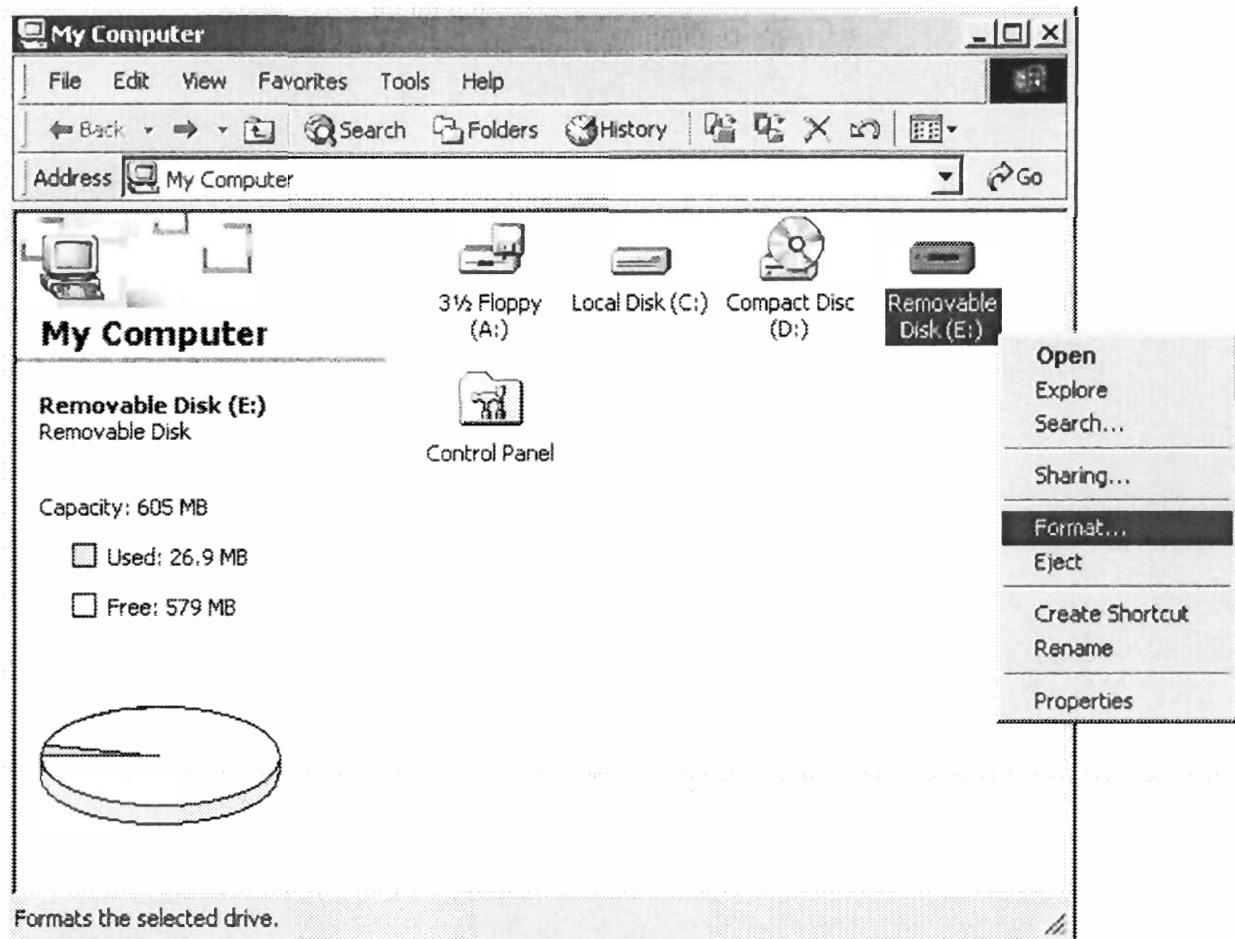
#### for Windows 2000 users

##### **Important:**



When you format an MO disk with non-administrator privilege, see [Change eject and format privilege](#).

1. From Explorer, open My Computer.
2. Right-click the Removable Disk icon corresponding to the DynaMO and select [Format...].



3. Set the required items in the dialog box and click the [Start] button

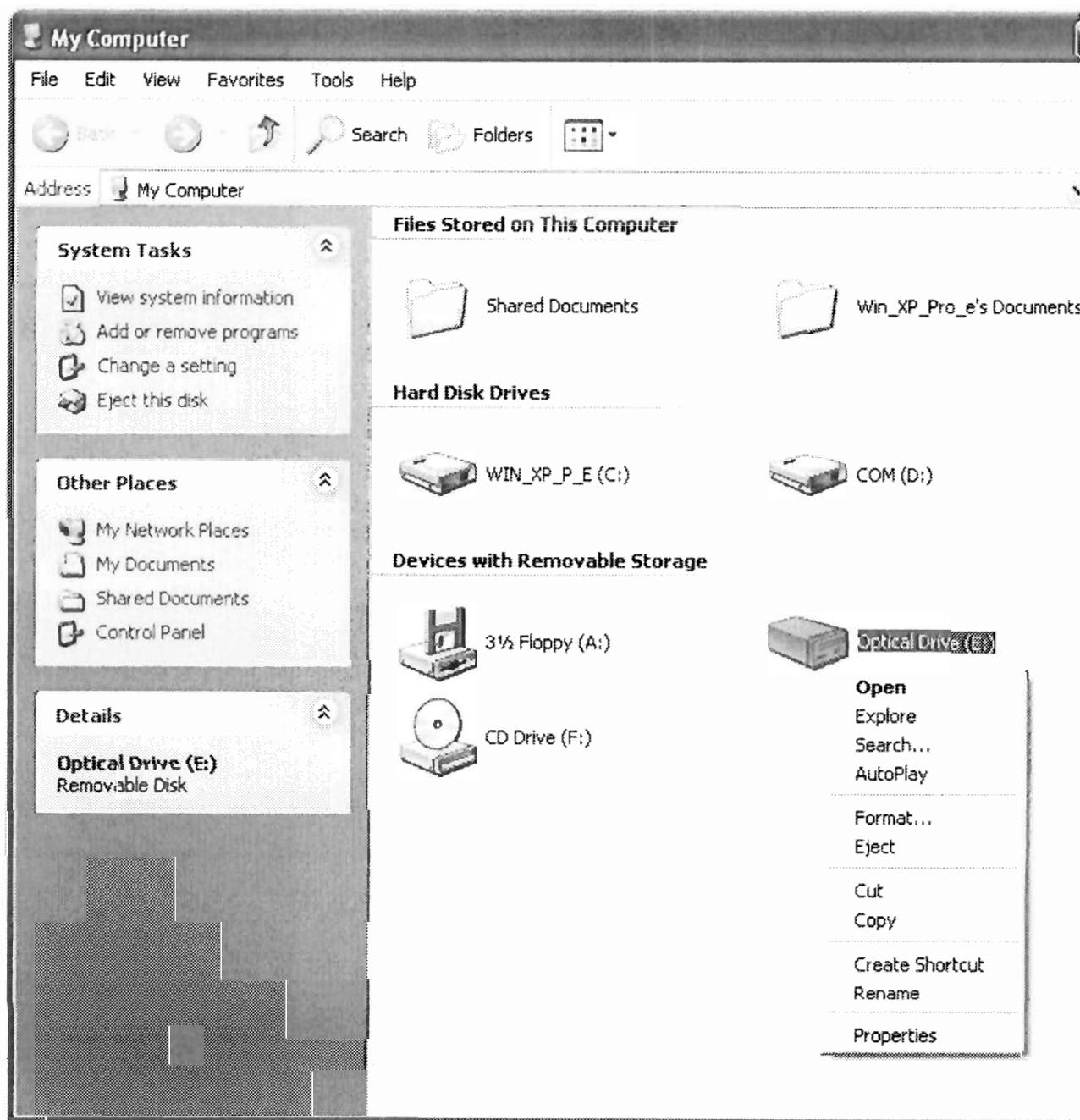
#### **for Windows XP users**

##### **Important:**



When you format an MO disk with non-administrator privilege, see Change eject and format privilege.

1. Open My Computer from [Start] button.
2. Right-click the Removable Disk icon corresponding to the DynaMO and select [Format...].



3. Set the required items in the dialog box and click the [Start] button



# ***Using your DynaMO***

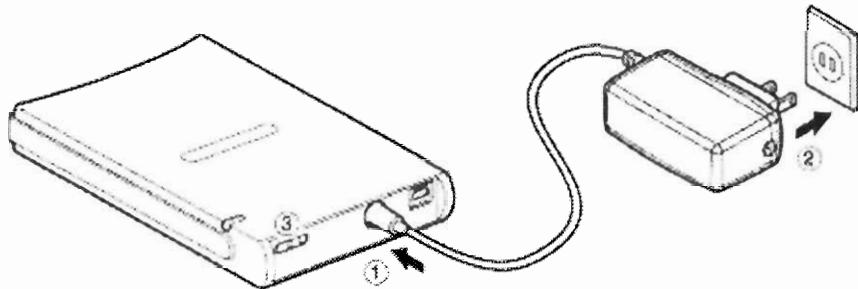
## ***Connecting your DynaMO***

### **Notice:**

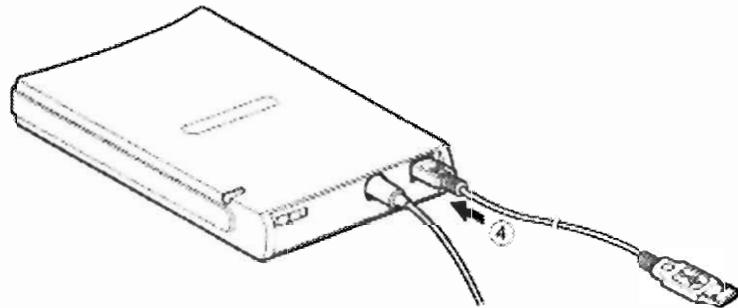


For PLUGGABLE EQUIPMENT, the socket-outlet shall be installed near the equipment and shall be easily accessible.

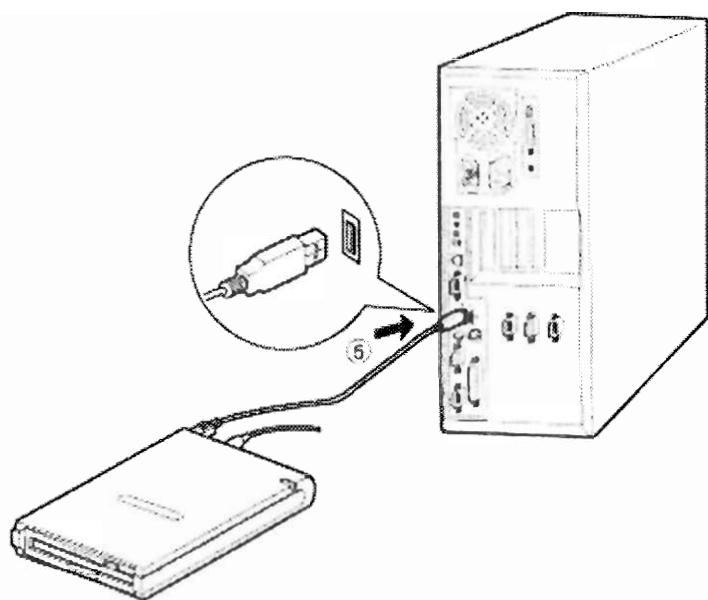
1. Connect the AC adapter to your DynaMO.
2. Connect the AC adapter to the AC power supply.
3. Turn on the power switch. Make sure that the Power Indicator lights.



4. Connect the USB cable to your DynaMO.

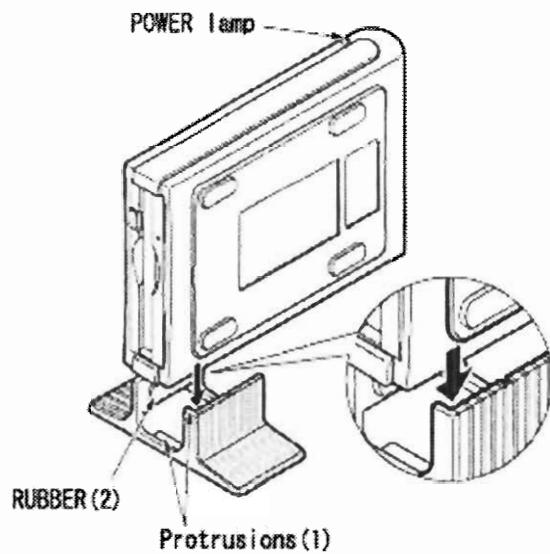


5. Connect the other end of the USB cable to the PC.



**Important:**

- You can use the DynaMO in an upright position. Be sure to use the mounting attachments provided with the DynaMO.
- When using the stand for mounting the DynaMO, orient the stand with the protrusions (1) facing the front, and place the DynaMO on the stand such that the RUBBER (2) attached to the stand faces the DynaMO side with the logo-label affixed to it.



## Notes

This Product is designed, developed and manufactured for general use, and is suitable without limitation for use in

- general office environments,
- for personal use and
- for household use.

It is NOT designed, developed and manufactured for use in environments bearing extremely high risk potentials like fatal risks or dangers, which require extremely high safety measures, and which could otherwise lead to death, personal injury, severe physical damage or other similar losses (hereinafter called "Use in High Safety Environments"). Such environments include without limitations, the:

- nuclear power core control,
- airplane control,
- air traffic control,
- mass transport operation control,
- life support, and
- weapon launching control.

You should NEVER use this product without making sure that all necessary safety measures have been sufficiently taken, to comply with the necessary requirements for its Use in High Safety Environments.

## Hardware Notes

### Important:

- Always make sure that the Busy Indicator is off before ejecting an MO disk.
- Remove the MO disk before moving your DynaMO.
- Never disassemble the DynaMO under any circumstances.
- Never drop your DynaMO.
- Never turn your DynaMO over while it is operating.
- Never force the disk into the drive or insert an MO disk upside down, since this may damage the drive.
- Since a floppy disk is about the same size as an MO disk, be careful never to insert a floppy disk into the DynaMO.
- Do not insert foreign objects into DynaMO.
- Do not use your DynaMO in areas where dust, dirt, extreme temperatures, or moisture is present.
- Always use the vertical mounting attachment when you use the DynaMO in an upright position.
- Do not use DynaMOs for a long time when they are stacked.
- Only use the AC adapter for the DynaMO Ux series delivered with the product, since it is designed specifically for use in the country of purchase.

U.S.:	FUJITSU CA05952-6611
UK:	FUJITSU CA05952-6612
Europe except UK:	FUJITSU CA05952-6613

Australia:	FUJITSU CA05952-6614
Korea:	FUJITSU CA05952-6617

- No operation warranty applies to connections to USB Keyboard.
- When an MO disk is accessed after it has been inserted in your DynaMO, do not touch the disk until it is ejected and is not moving anymore. Otherwise, normal operation of the device cannot be assured.
- If your DynaMO does not operate properly while connected via a hub, try connecting it using the USB port on your personal computer.
- Disconnect and then re-connect the USB cable in the following situations:
  - the DynaMO drive icon does not appear on the screen after you connect your DynaMO to your personal computer; or
  - the DynaMO drive icon does not re-appear after your PC resumes operation from the standby state.
- Do not connect or disconnect the USB cable connected to a USB device and do not turn on or off any USB device (including your DynaMO) connected to a USB port while the device is operating. Otherwise, normal operation of your DynaMO cannot be assured.
- Using a USB device, such as your DynaMO while music and/or motion pictures are being played back (real-time playback) by another USB device on the same bus might disturb the operation of such playback devices and cause jerky playback.
- Do not disassemble the DynaMO.
- Do not drop or turn over the DynaMO. Avoid any physical shocks.
- Before moving the DynaMO, remove the MO disk.
- Never insert any foreign objects, such as floppy disks and never insert MO disks upside down.
- Do not disconnect any cables or turn the power off when the busy indicator light is on.
- When you choose to position the DynaMO vertically (on its narrow side), never allow it to fall to the wide side. If dose, this will seriously damage the DynaMO, also making the guarantee void.



# Notes

## Software Notes

### Important:



- Use only the device driver provided by Fujitsu with this drive.
- Do not use the [Copy Disk...] command.
- Do not remove the MO drive or turn off the power of the MO drive or remove the MO disk from the drive while a file is being accessed or a disk is being formatted.
- Do not shut down the OS or place the system in standby or suspend mode while a file is being accessed or a disk is being formatted.



## Notes

### Q & A

Although the DynaMO is designed to be highly reliable, you may occasionally experience problems. This section describes problems you could encounter when using your DynaMO. If you experience any problems other than those outlined below, contact your dealer or Fujitsu subsidiary.

Q1: The PC hangs.

Q2: I connected the DynaMO but the removable disk icon does not appear.

Q3: I cannot access the MO disk.

Q4: I cannot eject a disk.

Q5: I can't eject or format an MO disk with user rights in Windows 2000.

Q6: I can't access an MO disk formatted for NTFS in Windows 2000.

Q7: I pressed the eject button, but the MO disk was not ejected from the MO drive in Windows 2000.

Q8: The MO disk is formatted for NTFS with user rights, but I can't access it with user rights.

Q9: I can't use an MO disk formatted for NTFS in Windows 2000 on NT 4.0.

Q1: The PC hangs.

A1:

- Be sure not to connect or disconnect a USB cable while the Busy Indicator of the DynaMO is on.
- Install the Fujitsu device drivers.
- If an error occurs during system startup, disconnect the DynaMO, then restart the system and reconnect the DynaMO.
- If the "Write cache enabled" check box is not selected, select it.

Q2: I connected the DynaMO but the removable disk icon does not appear.

A2:

- Disconnect the USB cable and then connect it again..
- Disconnect the USB cable, and then power off the drive . Next, power on the drive , and then connect the USB cable
- Make sure that the DynaMO and the USB interface card are recognized in Device Manager. From the Control Panel, select System click the Device Manager tab. Check whether the DynaMO and the USB interface card are recognized.
- Make sure the DynaMO is connected correctly. Refer to "Connecting your DynaMO".

Q3: I cannot access the MO disk.

A3:

- Make sure that the MO disk is properly formatted for your PC.
- Check that the MO disk is properly inserted. If it does not work properly, eject the disk and insert it again.
- If the Busy Indicator stays on for a long time (1 minute) after you insert the MO disk, your disk may be dirty or your DynaMO drive may be defective. Try another MO disk.
- Make sure that the DynaMO and the USB interface card are recognized in Device Manager. From the Control Panel, select System, click the Device Manager tab, and check whether the DynaMO and the USB interface card are recognized.

Q4: I cannot eject a disk.

A4: • Make sure that no other application is using your DynaMO drive.  
• Your PC may have a locked MO disk. Check your computer applications to make none of them has locked your MO disk.  
• Power off the drive, then power on again and try to eject the disk.  
• Power odd the drive and use emergency eject.  
• You may reboot the system and try to eject the disk again.

Q5: I cannot eject or format an MO disk with user rights in Windows 2000.

A5: With the standard OS settings, the MO disk cannot be ejected or formatted without administrator privilege. To eject or format an MO disk with user rights, enable the setting as explained at Changing eject and format privilege.

Note: If the OS is not rebooted, the new setting may not take effect. If they do not take effect, reboot the OS.

Q6: I can't access an MO disk formatted for NTFS in Windows 2000.

A6: The disk may be write-protected.

Q7: I pressed the eject button, but the MO disk was not ejected from the MO drive.

A7: An MO disk formatted for NTFS cannot be ejected by pressing the MO drive's eject button. Select the eject option from the pop-up menu displayed by right-clicking the MO drive icon.

Q8: The MO disk is formatted for NTFS with user rights, but I can't access it with user rights.

A8: This problem was first corrected in Windows 2000 SP2. Make sure you format NTFS with administrator privilege.

Q9: I can't use an MO disk formatted for NTFS in Windows 2000 on NT 4.0.

A9: It is OS specification



## Specifications

### Drive Specifications

#### DynaMO 1300U1/1300U2

<b>Drive</b>	MDG3130UA	MDG3130UB
<b>Interface</b>	USB 1.1	USB 2.0
<b>Data transfer rate (Drive)</b>	1.4 MB/s (128 MB) 1.6 - 2.6 MB/s (230 MB) 2.9 - 4.9 MB/s (540 MB) 2.9 - 4.9 MB/s (640 MB) 3.5 - 5.9 MB/s (1.3 GB GIGAMO)	1.65 MB/s (128 MB) 2.00 - 3.16 MB/s (230 MB) 3.54 - 5.94 MB/s (540 MB) 3.52 - 5.87 MB/s (640 MB) 3.92 - 6.70 MB/s (1.3 GB GIGAMO)
<b>Data transfer rate (Interface)</b>	12 Mbps (USB 1.1)	480 Mbps (USB 2.0)
<b>Average seek time</b>	23 ms (typ.)	23 ms (typ.)
<b>Average latency time</b>	6.7 ms (ISO-standard MO disks) 9.3 ms (GIGAMO disks)	5.5 ms (ISO-standard MO disks) 8.2 ms (GIGAMO disks)
<b>Rotational speed</b>	4558 rpm (ISO-standard MO disks) 3214 rpm (GIGAMO disks)	5455 rpm (ISO-standard MO disks) 3637 rpm (GIGAMO disks)
<b>Buffer</b>	2 MB	2 MB
<b>Input power</b>	100 - 240 VAC, 50/60 Hz	100 - 240 VAC, 50/60 Hz
<b>Dimensions</b>	122 mm (W) x 162 mm (D) x 34 mm (H)	122 mm (W) x 162 mm (D) x 34 mm (H)
<b>Power Consumption (Operating)</b>	15 W (max)	15 W (max)
<b>Weight (Drive)</b>	630 g	530 g
<b>Temperature (In Operation)</b>	5 - 35° C	5 - 35° C
<b>Temperature (Not in Operation)</b>	0 - 50° C	0 - 50° C

#### DynaMO 640U1/640U2

<b>Drive</b>	MDG3064UA	MDG3064UB
<b>Interface</b>	USB 1.1	USB 2.0
<b>Data transfer rate (Drive)</b>	1.1 MB/s (128 MB) 1.3 - 2.1 MB/s (230 MB) 2.2 - 3.8 MB/s (540 MB) 2.2 - 3.8 MB/s (640 MB)	1.65 MB/s (128 MB) 2.00 - 3.16 MB/s (230 MB) 3.54 - 5.94 MB/s (540 MB) 3.52 - 5.87 MB/s (640 MB)
<b>Data transfer rate (Interface)</b>	12 Mbps (USB 1.1)	480 Mbps (USB 2.0)
<b>Average seek time</b>	23 ms (typ.)	23 ms (typ.)
<b>Average latency time</b>	8.3 ms	5.5 ms
<b>Rotational speed</b>	3600 rpm	5455 rpm
<b>Buffer</b>	2 MB	2 MB
<b>Input power</b>	100 - 240 VAC, 50/60 Hz	100 - 240 VAC, 50/60 Hz

<b>Dimensions</b>	122 mm (W) x 162 mm (D) x 34 mm (H)	122 mm (W) x 162 mm (D) x 34 mm (H)
<b>Power Consumption (Operating)</b>	15 W (max)	15 W (max)
<b>Weight (Drive)</b>	630 g	530 g
<b>Temperature (In Operation)</b>	5 - 35°C	5 - 35°C
<b>Temperature (Not in Operation)</b>	0 - 50°C	0 - 50°C



## ***Specifications***

### ***MO Disks***

Only 3.5" MO disks that comply with ISO or GIGAMO standards can be used for the DynaMO.

The following is a list of 3.5" MO disk capacities. These 3.5" MO disks are manufactured and distributed by several manufacturers.

#### ***ISO standard***

Disk type	Sector size (bytes/sector)
128 MB	512
230MB	512
540MB	512
540MB (OW)	512
640MB	2048
640MB (OW)	2048

#### ***GIGAMO:***

Disk Type	Sector size (bytes/sector)
1.3GB	2048

#### **Notice:**



A GIGAMO (1.3 GB MO disk) can be used only on the DynaMO 1300. A GIGAMO cannot be used on the DynaMO 640.

### ***What is a Direct Over Write (DOW) MO disk?***

A standard MO disk requires three rotations of the disk to record data (erase, write, and verify). DOW disks allow your DynaMO to reduce the number of the rotations to two (write and verify). Eliminating one rotation improves the recording speed by 30%. DOW disks are only available in 540 MB and 640 MB capacities.



## ***Further Information***

### ***Fujitsu Subsidiaries***

For further information about Fujitsu products or customer support, please contact your local dealer or one of the following Fujitsu subsidiaries.

<b>Country</b>	<b>Phone</b>	<b>Web site</b>
Australia	61-2-9776-4555	<a href="http://www.fujitsu.com.au/">http://www.fujitsu.com.au/</a>
Canada	1-905-602-5454	<a href="http://www.fujitsu.ca/">http://www.fujitsu.ca/</a>
France	33-1-41-80-38-80	<a href="http://www.fujitsu-europe.com/">http://www.fujitsu-europe.com/</a>
Germany	49-89-32-378-0	<a href="http://www.fujitsu-europe.com/">http://www.fujitsu-europe.com/</a>
Great Britain	44-20-8606-4444	<a href="http://www.fujitsu-europe.com/">http://www.fujitsu-europe.com/</a>
Italy	39-26294-1	<a href="http://www.fujitsu-europe.com/">http://www.fujitsu-europe.com/</a>
Korea	82-2-3787-6000	<a href="http://www.fujitsu.co.kr/">http://www.fujitsu.co.kr/</a>
Philippines	63-2-812-4001	
Singapore	65-777-6577	<a href="http://www.fujitsu-computers.com.sg/">http://www.fujitsu-computers.com.sg/</a>
Spain	34-91-784-9000	<a href="http://www.mo.fujitsu.es/">http://www.mo.fujitsu.es/</a>
Sweden	46-8-626-4500	<a href="http://www.fujitsu-europe.com/">http://www.fujitsu-europe.com/</a>
Taiwan	886-2-2545-7700	<a href="http://www.fujitsu.com.tw/">http://www.fujitsu.com.tw/</a>
Thailand	66-2-512-6066	
U.S.A.	1-408-432-6333	<a href="http://www.fcpa.com/">http://www.fcpa.com/</a>
Brazil	55-11-245-0880	<a href="http://www.fujitsu.com.br/">http://www.fujitsu.com.br/</a>

The following web site also contains the related information:

<http://mo.fujitsu.com/global/>



## ***Further Information***

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- Microsoft, Windows, Windows 2000, Windows XP, Windows 98, and Windows Millennium Edition are trademarks of Microsoft Corporation registered in the United States and other countries.
- The USB logo is a trademark of Universal Serial Bus Implementers Forum, Inc. (USB-IF)

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