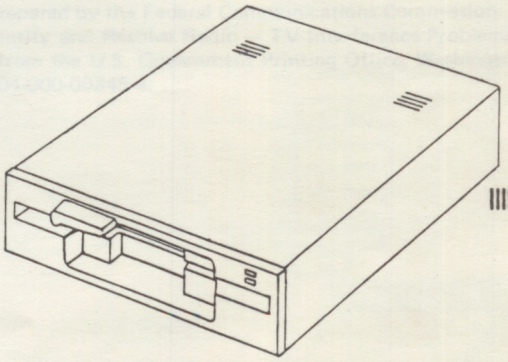
FD-103 APPLE® COMPATIBLE DISK DRIVE

USER'S INSTRUCTION MANUAL



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All information contained in this manual is subject to change without notice.

http://www.cvxmelody.net/AppleUsersGroupSydneyAppleIIDiskCollection.htm

1. FCC NOTICE

This equipment generates and uses radio frequency energy. If it is not properly installed and used in strict accordance with the manufacturer's instructions, this equipment may interfere with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B computing device peripheral in accordance with the specifications in Subpart J of Part 15 FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. If you suspect interference, you can test this equipment by turning it off and on. If you determine that there is interference with radio or television reception, try one or more of the following measures to correct it:

1.1 Reorient the receiving antenna.
1.2 Move the computer away from the receiver.
1.3 Change the relative positions of the computer equipment and the receiver.
1.4 Plug the computer into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may also wish to consult the following booklet which was prepared by the Federal Communications Commission:
"How to identify and Resolve Radio – TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

MODEL FD-103
5¼" HALF-HEIGHT APPLE COMPATIBLE DISK DRIVE

Description

FD-103 is 5¼" half-height disk drive that is compatible with the Apple II, Apple II+, Apple IIe, Apple IIc, Apple IIGS and Laser 128. FD-103 may install with two kinds of cable. One is the standard 20 pins that terminates with female connector. It is plugged into a standard Apple Disk Drive controller card which is usually used in the Apple II, Apple II+ and the Apple IIe computer. Another is the 19 pins that terminates with male connector. It is usually plugged into the back of the Apple IIc and Laser 128 'DISK PORT' or to daisy chain onto the rear panel of a 3.5" disk drive in the Apple IIGS.

Installation Procedure For The Apple II, Apple II+ and the Apple IIe

1. Unpack the 5¼" Disk Drive.
2. Turn off the computer.
3. Route the ribbon cable through the back panel of the computer.
4. See figure 1, plug the cable onto the controller card.

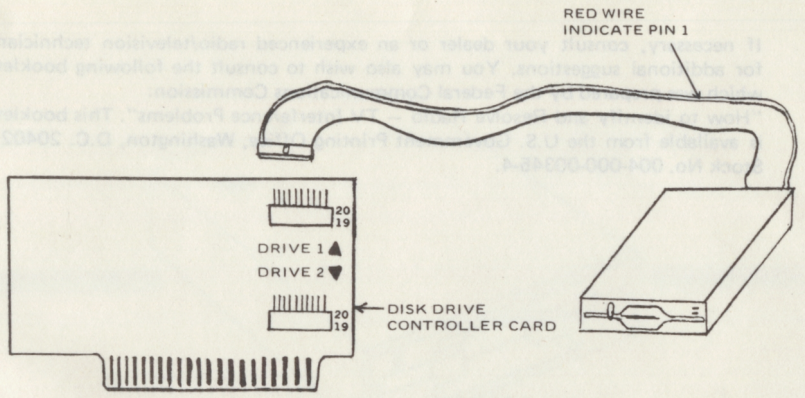

FIGURE 1

5. Install the controller card in slot 1-7 of the computer. Slot 6 is recommended. While the connector is plugged onto the 'Drive 1' location, this drive is assigned as slot 6 drive 1. While it is plugged onto the 'Drive 2' location, it is assigned as slot 6 drive 2.

Installation Procedure For The Apple IIc And Laser 128

1. Turn off the computer.
2. Connect the DB-19 male connector of the Disk Drive to the 'Disk Port' on the rear panel of the Apple IIc and Laser 128.
3. This drive is assigned as 'Drive 2' while internal 5¼" disk drive is assigned as 'Drive 1'.

Installation Procedure For The Apple IIGS

1. You may use 20 pins female connector disk drive on disk controller card, the same installation procedure as above description.
2. You may also use DB-19 male connector Disk Drive that its connector is plugged onto the 'Daisy-chain Port' on the rear panel of the Apple 3.5" Disk Drive. This method calls 'Daisy Chain'.

Note: If you use disk controller card that inserts in slot 6, you need to set the control panel of the Apple IIGS, assign slot 6 as 'Your Card'.
If you use the 'Daisy Chain' method, slot 6 must be set to 'Disk Port' while slot 5 must be set to 'Smart Port'. Then the computer will recognize the 5¼" Disk Drive as slot 6 drive 1, and the Apple 3.5" Disk Drive as slot 5 drive 1.

Replace The DB-19 Pins Male Connector Cable

1. Turn the Disk Drive upside down.
2. Remove the four screws from the bottom of the Disk Drive.
3. Slide the bottom cover back away from the front of the drive until it is clear of the Disk Drive.
4. Slide the top cover back until it is clear of the Disk Drive.
5. Place the Disk Drive upside.
6. Remove the three screws from the green circuit board. There is no need to remove any cable connection.
7. Remove the existing 20 pins ribbon cable from the bottom of the circuit board.
8. Plug the 20 pins female connector of the DB-19 pins cable onto the header at the bottom of the circuit board.
9. Be make sure that the red/blue first wire of the ribbon cable must be located as figure 2 shown.
10. Re-tighten three screws onto the green circuit board and replace the drive covers, top cover first.
11. Replace the four screws securing the disk drive cover.

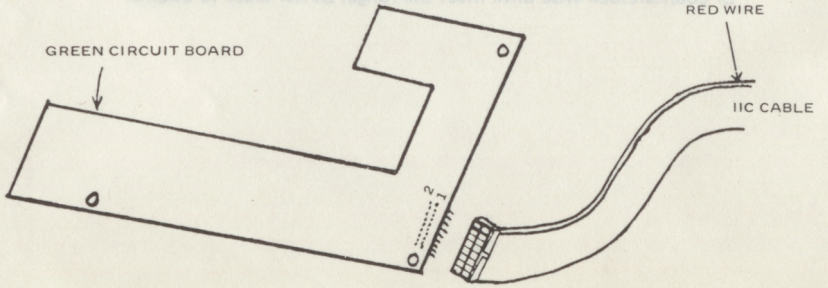

FIGURE 2

Indicator Lights: Red light indicates that the drive is in use. Green light indicates that the drive is writing or formatting a diskette.

Optional Parts:

Model no: FD-103P

Description: Built-in daisy-chain port for another drive to be plugged onto the back of this drive.* See figure 3. FD-103P is featured with 19 pins male connector cable.

Note: FD-103 doesn't feature this port, it must be the last one in Apple IIGS daisy chained configuration.

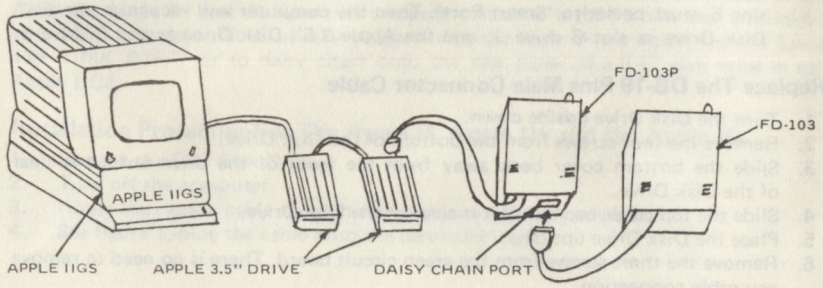

FIGURE 3 DAISY CHAIN CONFIGURATION

Remark: Laser 128 user may has a little problem in speed. They need to adjust the speed by using some softwares can read the drive's speed. We recommend 'Copy II+'. Boot up this software in the good drive and then tell the computer what drive is going to be tested. Insert a formatted diskette (under ProDos) into the drive to be adjusted. The corrected range should be 198 to 202ms. When the drive is out of range, insert a small slot screw driver into the bottom of the drive 'Speed Adjust' hole. Turn it clock-wise or counterclock-wise until meet the range. Better close to 200ms.

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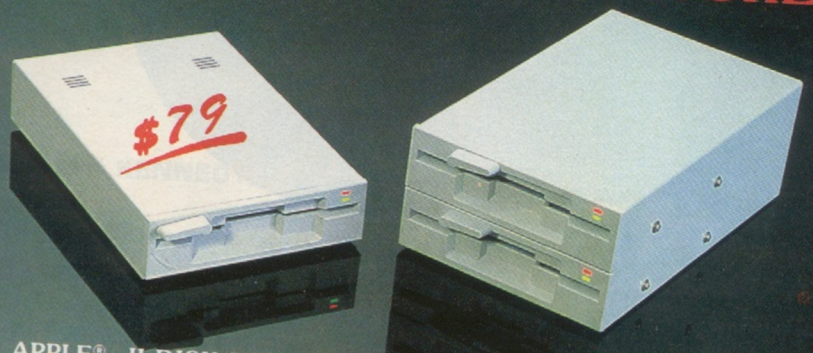

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- Apple ® II Series & Laser 128 series compatible
- Speed adjustable
- Brushless direct drive motor
- 48 hrs factory burnt-in

Apple IIc/IIgs cable installed — $7.00 extra
Unidisk Port option — $23.00 extra

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You can use our drive with PC Transporter to run MS-DOS programs on your Apple II like they do on IBM compatibles.

Single-drive system $169
Dual-drive system $259
Half-height drive $115
(Add to single-drive to make dual-drive system.)

NOW AVAILABLE-HARD DISKS FOR ALL APPLE II'S (YES, EVEN THE IIC')

20 MB SCSI Hard Drive for IIe/IIgs $619
30 MB SCSI Hard Drive for IIe/IIgs $719
20 MB SmartPort Hard Drive for IIc $719

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EXTERNAL 3.5" 800 K Drive for Apple IIgs

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Rockville Centre, NY 11570.
For inquiry please call (516) 763-0906
Fax (516) 763-0938

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Shipping: UPS ground: $6.00 per drive except $10.00 per drive for dual-drive.
Fed-Express (next day air):$9.00 per drive except $18.00 per drive for dual-drive.
NY Resident: Please add 8% sales tax.

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Apple is a trademark of Apple Computer. PC Transporter is the trademark of Applied Engineering.
IBM is the trademark of IBM Corp.
Terms: 15% restocking fee on non-defective goods. No return w/o RMA#. No refund on shipping.

Introducing Our High-Tech Floppy Disk Drive

We have designed and installed an integrated computerized Q.C. test system which acts like an engineer by inspecting and selecting drives for you. For more information, contact us at the address below.

The FD-100 Series provides a full range of slim line floppy disk drives for your choice — from mechanism (M*) to mechanism with printed circuit board (P+) and even to completed disk drive.

SPECIFICATIONS

ITEM \ MODEL		FD-103 FD-103P+ FD-103M*		FD-104 FD-104P+ FD-104M*		FD-105 FD-105P+ FD-105M*		FD-106 FD-106P+ FD-106M*	
		FM	MFM	FM	MFM	FM	MFM	FM	MFM
Recording Method									
Storage Capacity	Unformatted (Kbytes)	125	250	250	500	250	500	500	1000
	Formatted (Kbytes) (16 sectors/track)	–	164	164	328	164	328	328	656
Recording Density (BPI)		2768	5536	2938	5876	2961	5722	2961	5722
Data Transfer Rate (KBPS)		125	250	125	250	125	250	125	250
Track Density (TPI)		48		48		96		96	
Number of Tracks		40		80		80		160	
Rotational Speed (rpm)		300 ± 1.5%							
Number of Heads		1		2		1		2	
Mechanical Dimensions		146mm x 41mm x 210mm (W x H x D)							
Weight		1.45kg (Max.)							

Manufacturer and Exporter
Asia Commercial Co., Ltd.
Member of the Asia Commercial (Holdings) Ltd.
8, 11, 12/Fls, Hong Kong Industrial Bldg.,
444-452, Des Voeux Road, West, Hong Kong.
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Telex: 86057 ACCHK HX, 61031 ACCCD HX.
Cable: KWANASIA, HK.
Postal: P.O. Box 33753 Sheung Wan Post Office H.K.

Bankers: Bangkok Bank Ltd.
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KWANASIA TELE-COMPUTERS INC.
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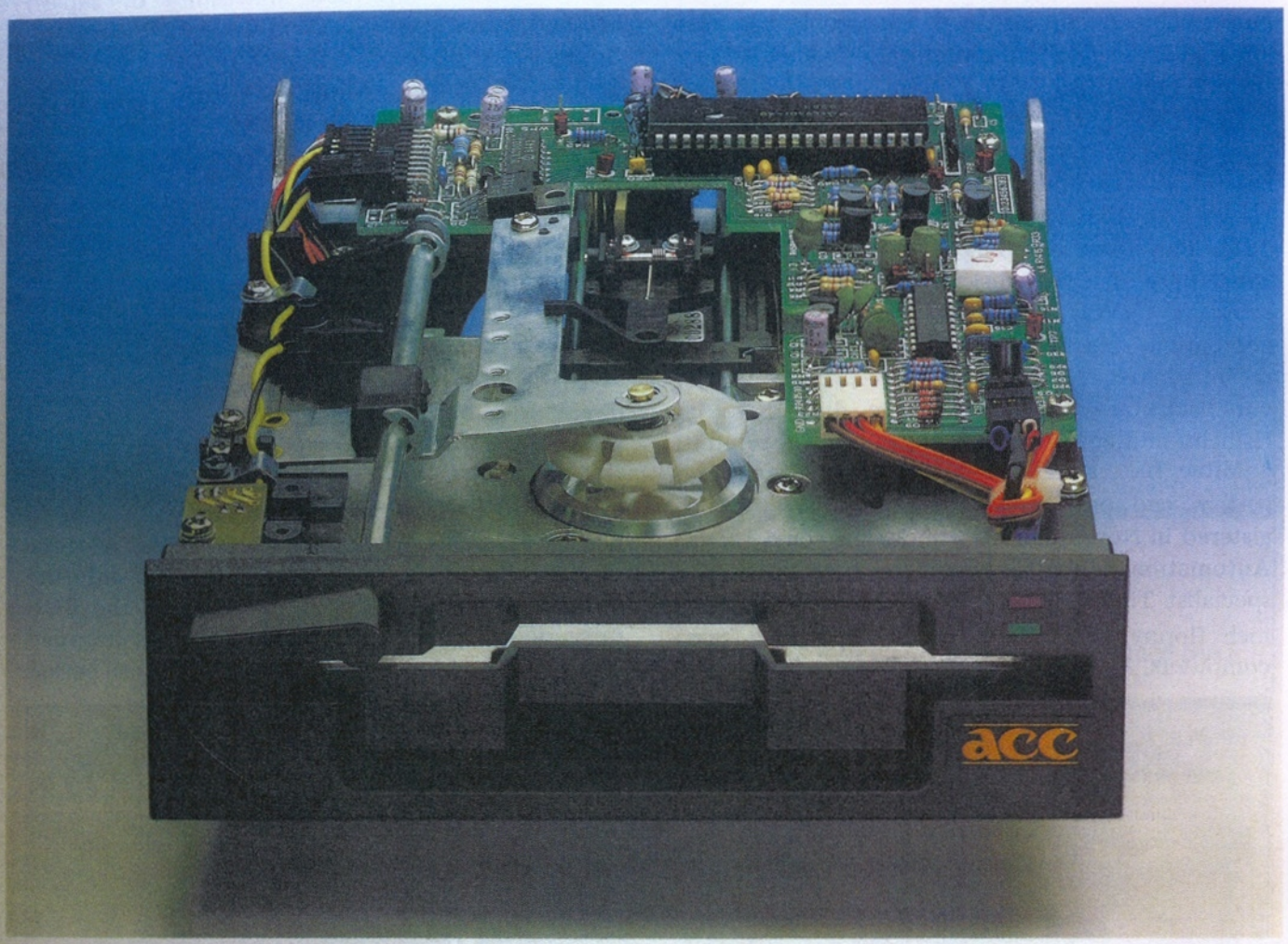

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Shipping: UPS ground: $6.00 per drive except $10.00 per drive for dual-drive. Fed-Express (next day air):$9.00 per drive except $18.00 per drive for dual-drive. NY Resident: Please add 8% sales tax.

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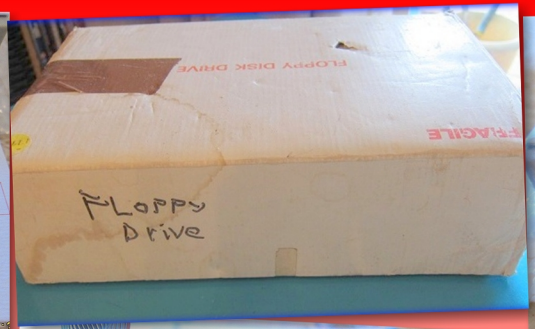
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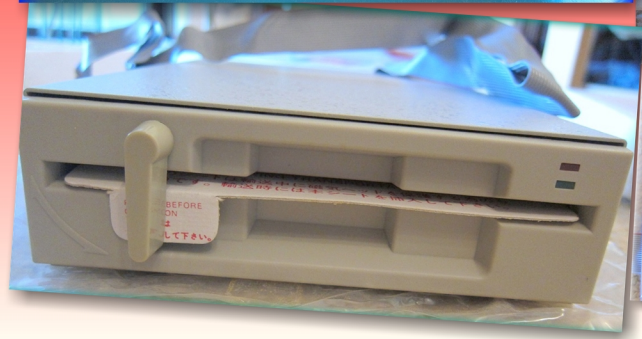

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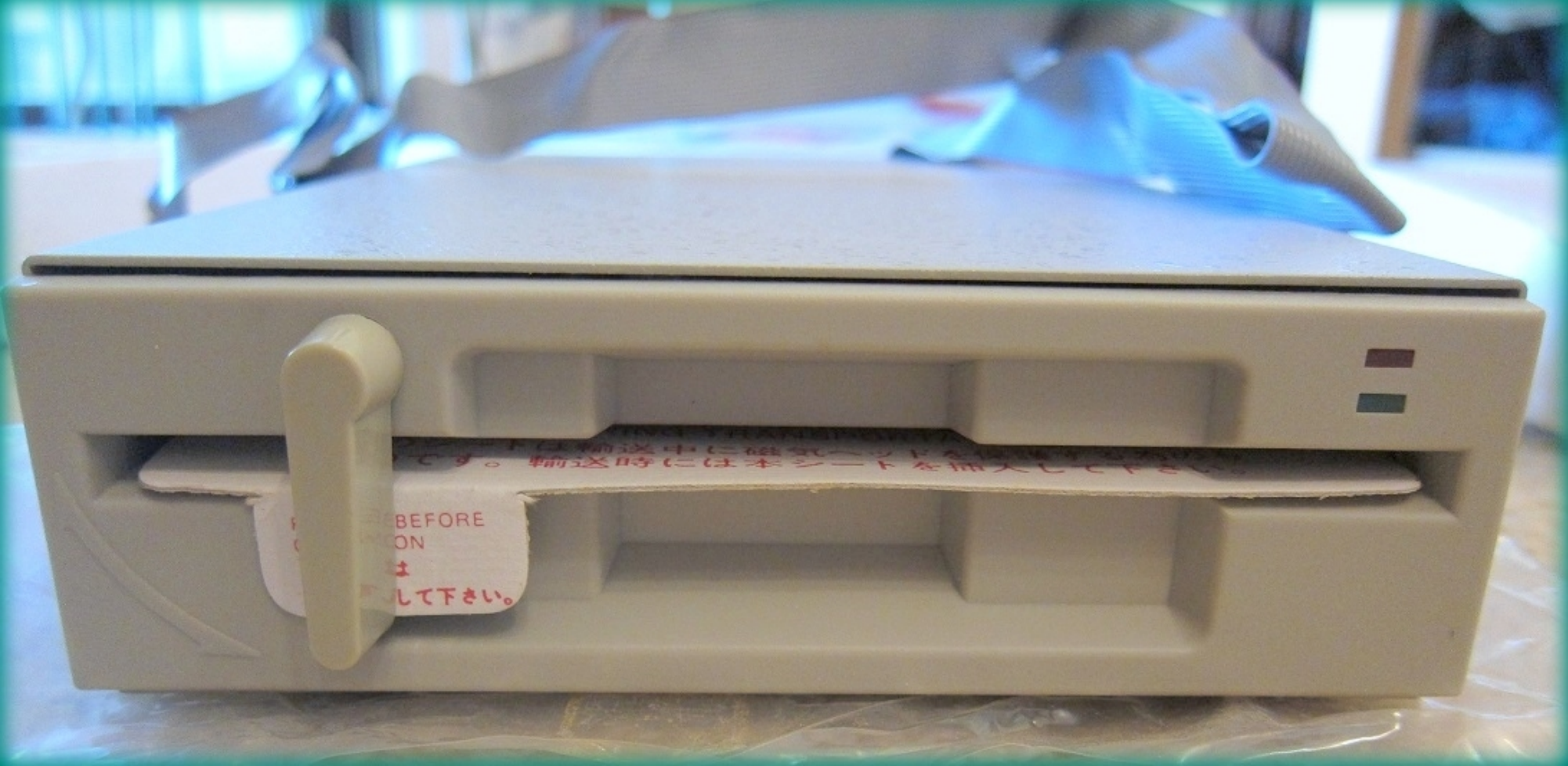
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