

1. OUTLINE

This specification provides a description for the TEAC FD-505, dual floppy disk drive. The FD-505 has two drives in the size of a conventional 41mm high 5.25 inch drive (equivalent to the TEAC FD-55GF), one is 1 inch high 5.25 inch mini floppy disk drive (TEAC FD-155GF, 1.6MB/1MB dual mode) and the other is 0.5 inch high 3.5 inch micro floppy disk drive (TEAC FD-05HF, 2MB/1MB dual mode).

Hereinafter, the FD-155GF part is abbreviated as the 5.25" FDD, the FD-05HF part as the 3.5" FDD, and the mixed part of the host interface for both FDDs as the Adapter PCBA.

Tables 1-1 through 1-3 show the outline of the dual FDD, the 5.25" FDD, and the 3.5" FDD.

Model name		FD-505-000
Safety standard on label		UL & CSA
Front bezel		Beige (PS)
Eject button		Beige (PS) for both 5.25"/3.5" FDDs
LED indicator color		Green for both 5.25"/3.5" FDDs
Disk installation and ejection method		One action manual installation and one action manual ejection for both 5.25"/3.5" FDDs
Frame ground terminal		Faston 187 tab on the rear side
Required power		+5 ± 5% and +12 ± 10%
Input signal terminator		1kΩ ± 5% each for 5.25"/3.5" FDDs, unremovable
Host interface connector	Signal	34 pin card edge, conventional 5.25" type
	Power	4 pin, conventional 5.25" type
Strap setting at delivery (See item 11.)	For 5.25"	On the Adapter PCBA: DS1, MON1 On the 5.25" FDD : DS1, U0
	For 3.5"	On the Adapter PCBA: DS2, MON4, DC
Host interface signal pin assignment at delivery		Pin 2 : HD IN input for 5.25" FDD, high density at high level (OPEN for 3.5" FDD) Pin 4 : OPEN Pin 10: MOTOR ON input for 3.5" FDD Pin 12: DRIVE SELECT input for 5.25" FDD Pin 14: DRIVE SELECT input for 3.5" FDD Pin 16: MOTOR ON input for 5.25" FDD Pin 34: DISK CHANGE for 5.25"/3.5" FDDs Others: The same as the conventional FDDs
Other optional function		Not equipped.

(Table 1-1) Dual FDD specification outline

Operation modes (unformatted capacity)	1.6MB mode Write/read	1MB mode Write/read	0.5MB mode Read only		
5.25 inch disk used	High density 2HD	Normal density 2DD	Normal density 2D		
Data transfer rate	500kbps	250kbps	300kbps	250kbps	300kbps
Disk rotational speed	360rpm	300rpm	360rpm	300rpm	360rpm
Track density	96tpi	96tpi	(48tpi)		
Track to track time	3msec				
Required power	+5V, +12V				
Head load mechanism	Not equipped. (CSS)				
Function setting at delivery	<ol style="list-style-type: none"> 1. LED on condition: DRIVE SELECT and Ready (U0 strap is on and IU strap is off.) 2. Spindle motor on condition: MOTOR ON 3. Speed mode: Single speed mode (360rpm for high/normal densities, I strap is on.) 4. Auto-chucking/Auto-recalibration: Equipped. 5. INDEX/READ DATA output condition: Ready and Seek-complete (Full mask, E2 strap is on.) 6. Density mode setting: Using HD IN signal on pin 2, High density at high level (LG strap is off.) 7. DISK CHANGE/READY selection: DISK CHANGE (RY/RD straps are off.) 				
Other optional function	Not equipped.				

(Table 1-2) 5.25" FDD specification outline

Operation modes (unformatted capacity)	2MB mode, write/read	1MB mode, write/read
3.5 inch disk used	High density (2HD)	Normal density (2DD)
Data transfer rate	500kbps	250kbps
Disk rotational speed	300rpm	300rpm
Track density	135tpi	135tpi
Track to track time	3msec	
Required power	+5V	
Function setting at delivery	<ol style="list-style-type: none"> 1. LED on condition: DRIVE SELECT and Ready 2. Spindle motor on condition: MOTOR ON 3. Auto-chucking/Auto-recalibration: Equipped. 4. INDEX/READ DATA output condition: Ready and Seek-complete (Full mask) 5. Density mode setting: Automatic setting by detecting HD hole of an installed disk 6. DISK CHANGE/READY: Select by DC/RD straps on Adapter PCBA (both are output from 3.5" FDD). 	
Other optional function	Not equipped.	

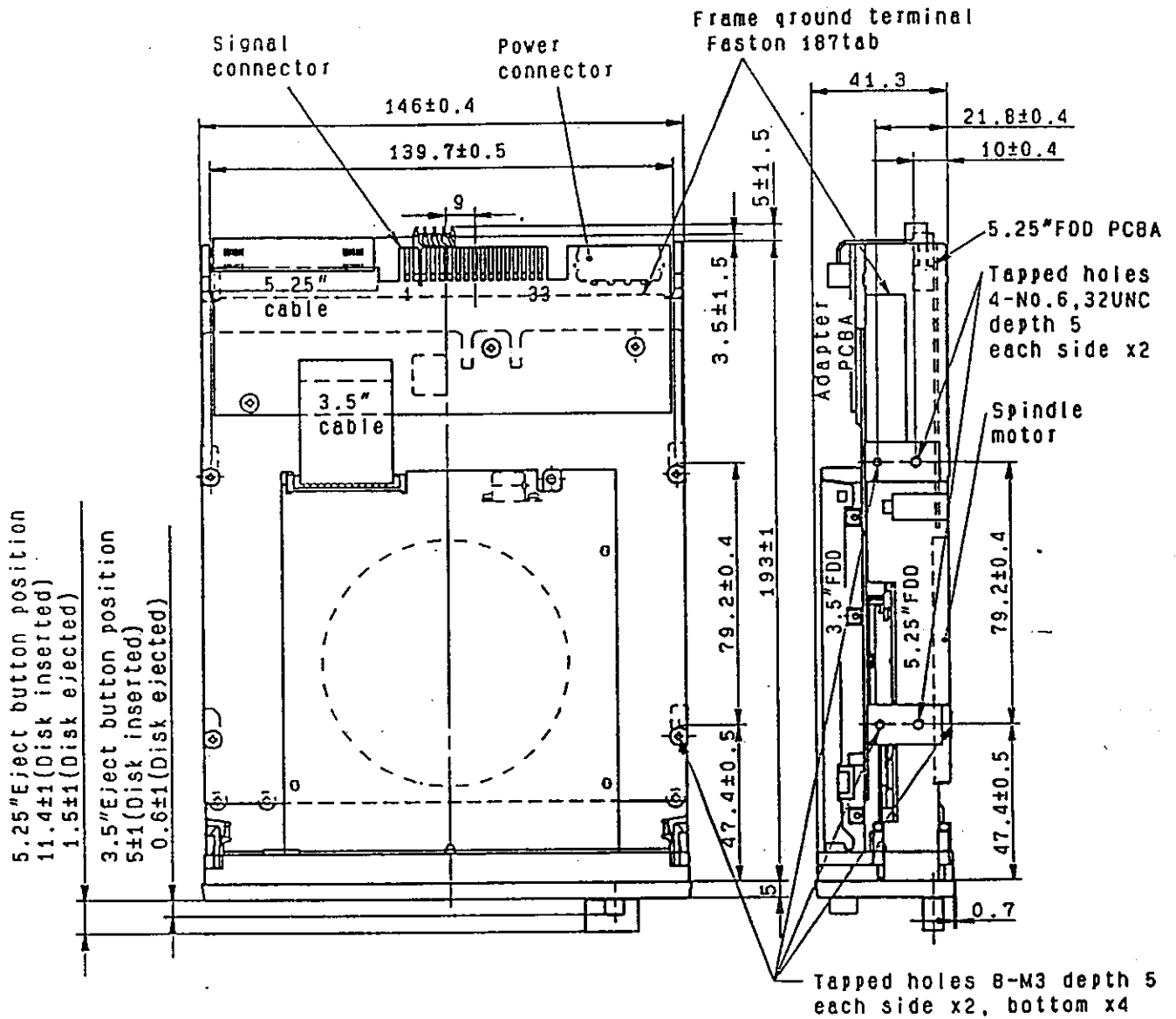
(Table 1-3) 3.5" FDD specification outline

Normal density 1MB mode, write/read: Normal density disk (2DD)
Host system cannot identify preliminary which type of disk is installed in the 3.5" FDD (the 3.5" FDD can know the installed disk type by discriminating the HD hole). It is required for the host controller to provide some control such as read trial without errors or previous designation of density mode for the host.

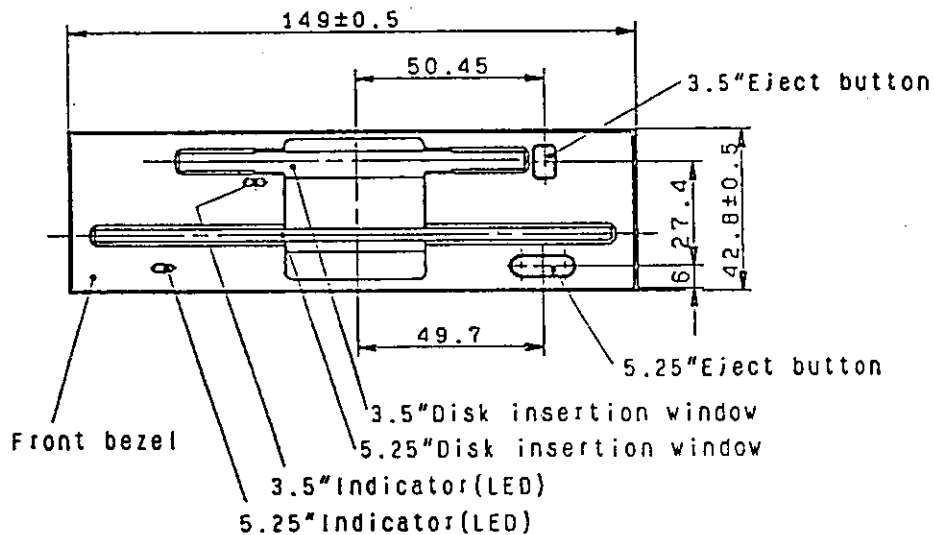
3. PHYSICAL SPECIFICATION

- (1) Width : 146mm (5.748 in), Nom.
- (2) Height : 41.3mm (1.626 in), Nom.
- (3) Depth : 198mm (7.795 in), Nom., excluding front bezel
203mm (7.992 in), Nom., including front bezel
- (4) Weight : 920g (2.03 lbs), Nom., 950g (2.09 lbs), Max.
- (5) External view : See Fig.1.
- (6) Cooling : Natural air cooling
- (7) Mounting: Mounting for the following directions are acceptable.
 - (a) Front loading, mounted vertically.
 - (b) Front loading, mounted horizontally with the 3.5" FDD up.
 - (c) Mounting angle in items (a) and (b) should be less than 15° with front bezel up.

Note: As to the other mounting directions than the above will be considered separately.
- (8) Installation : With installation holes on the frame of the FDD.
Refer to Fig.1.
- (9) Material of frame: Aluminum diecast
- (10) Material of front bezel: PPHOX (Zyron, complying with UL94-5V)



Tapped holes 8-M3 depth 5 each side x2, bottom x4



(Units: mm)

(Fig.1) FDD external view

5. ENVIRONMENTAL CONDITIONS

Note: The following requirements are applied for the unpackaged FDD.

(1) Ambient temperature

- (a) Operating : 4 ~ 51.7°C(39 ~ 125°F)
- (b) Storage : -22 ~ 60°C(-8 ~ 140°F)
- (c) Transportation: -40 ~ 65°C(-40 ~ 149°F)

(2) Temperature gradient

- (a) Operating : 20°C(36°F) or less per hour
- (b) Storage and transportation : 30°C(54°F) or less per hour

(3) Relative humidity

- (a) Operating : 20 ~ 80% (no condensation)
Max. wet bulb temperature shall be 29.4°C(85°F)
- (b) Storage : 5 ~ 90% (no condensation)
Max. wet bulb temperature shall be 40°C(104°F)
- (c) Transportation: 5 ~ 95% (no condensation)
Max. wet bulb temperature shall be 45°C(113°F)

(4) Vibration

- (a) Operating : 1.0G or less (10 ~ 100Hz, 1oct/min. sweep rate)
0.35G or less (100 ~ 600Hz, 1oct/min. sweep rate)
- (b) Transportation: 2G or less (10 ~ 100Hz, 1/4oct/min. sweep rate)

(5) Shock

(a) Operating

Write & read: 5G (11msec, 1/2 sine wave) or less

Read only : 10G (11msec, 1/2 sine wave) or less

Soft errors are allowed if they are recoverable within three retries.

(b) Transportation: 60G (11msec, 1/2 sine wave) or less

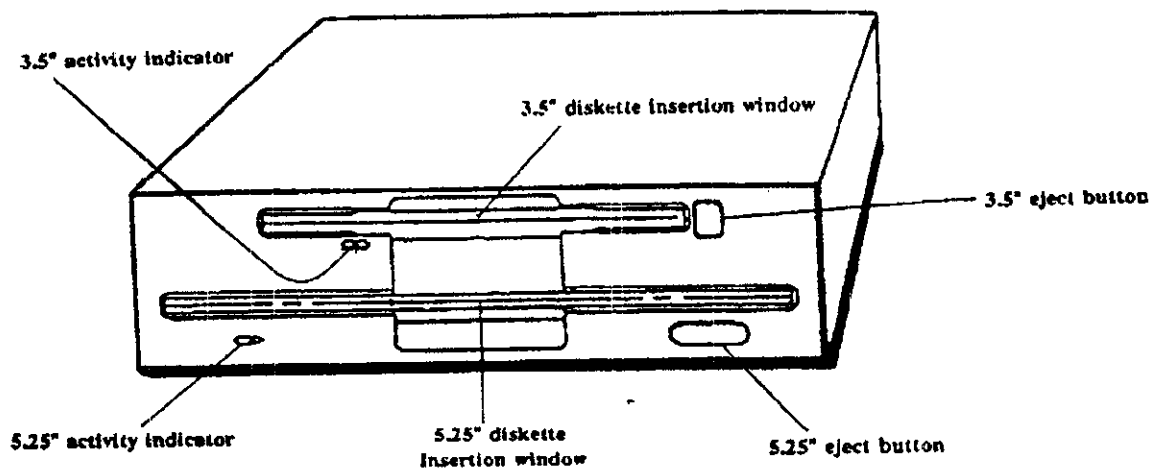
(6) Altitude (operating): -300m (-980 feet) ~ 5,000m (16,400 feet)

6. RELIABILITY

- (1) MTBF : 20,000 power on hours or more (for typical operation duty)
- (2) MTTR : 35 minutes
- (3) Design component life: 5 years
- (4) Disk life : 3×10^6 passes/track or more
- (5) Disk insertion: 3×10^4 times or more (each for 5.25"/3.5" FDD)
- (6) Seek operation life
: 1×10^7 random seeks or more (each for 5.25"/3.5" FDD)
- (7) Preventive maintenance: Not required (for typical operation duty)
- (8) Error rate
 - (a) Soft error: 1 or less per 10^9 bits read
A soft (recoverable) error is defined that it can be read correctly within three retries.
 - (b) Hard error: 1 or less per 10^{12} bits read
A hard (unrecoverable) error is defined that it cannot be read correctly within three retries. However, it is recommended to be followed by a recalibration to track 00 and four additional retries.
 - (c) Seek error: 1 or less per 10^6 seeks
A seek error is defined that it can seek to a target track within one retry including a recalibration to track 00.
- (9) Safety standard: Complying with UL and CSA
- (10) Electro-static discharge test: 15kV (150pF, 330 Ω) or more
No hard error and/or no component damage occur when the test is applied to the operator access area (front bezel area).

TEAC FD505 Combo Drive

Installation Manual



Your FD505 package includes:

- ▶ FD505 Combo Floppy Disk Drive
- ▶ Two AT type mounting rails
- ▶ Screws to mount AT rails
- ▶ Registration card/questionnaire
- ▶ Installation guide

Introduction

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Thank you for purchasing the TEAC FDS05 Combo Floppy Disk Drive. This product is intended for use in IBM® PC AT® and compatible computers. It allows you to expand the usefulness of your present computer by occupying one standard 5.25 inch computer bay, while providing 5.25 inch and 3.5 inch diskette compatibility. You can then utilize the other computer bay, normally occupied by a second floppy drive, for other peripherals, such as a CD-Rom, tape, or hard drive.

Tools You May Need

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Depending on the design of your computer, you may need the following tools to complete the installation.

- ▶ a flat blade screwdriver
- ▶ a Phillips screwdriver
- ▶ needle nosed pliers

Handling the FD-505 Combo Drive

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Please avoid placing your fingers on the upper cover. It is best to hold the FD-505 by the diecast frame, as indicated in Figure A.

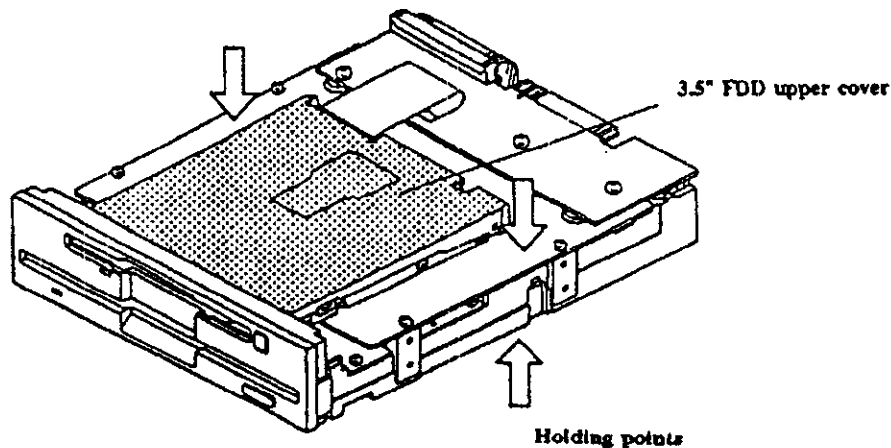
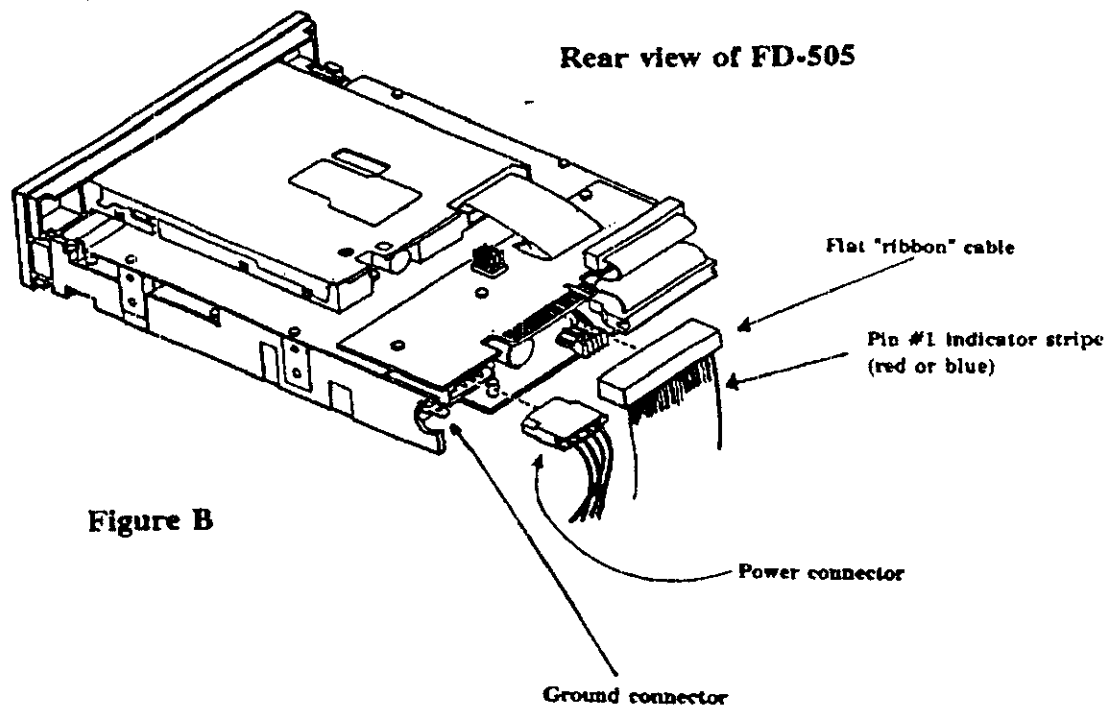


Figure A

Preparing your Personal Computer for FD505 Installation

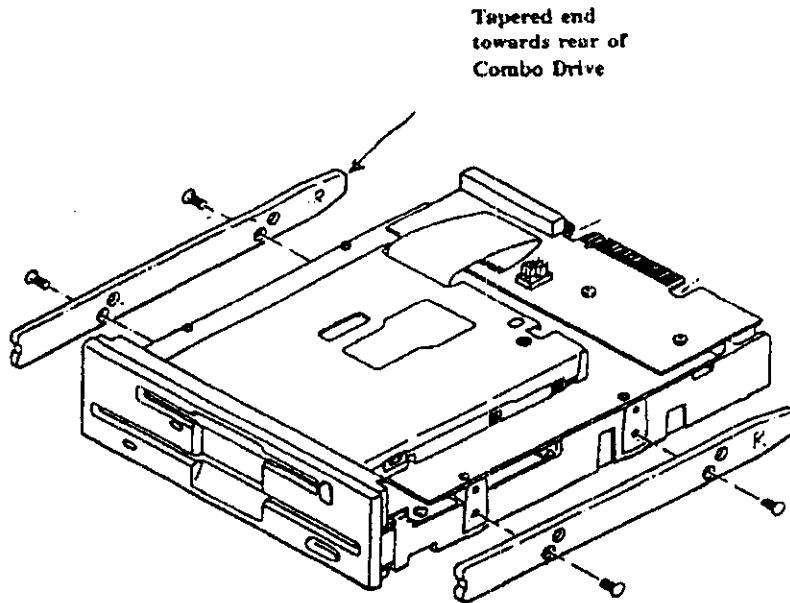
- =====
1. Unplug your computer.
 2. Detach all input and output devices from your computer, such as printer, keyboard, monitor, etc.
 3. Remove cover from your computer. Refer to your computer system manual for this procedure.
 4. Note the two cables that are connected to your current floppy disk drives, as these same cables will be required to install your FD505. The floppy interface cable is the flat "ribbon" type, and the power connector consists of the 4 separate wires attached to a single connector. See Figure B.
 5. Your system may also have a single ground wire attached to the floppy disk drive. Carefully remove all these cables from your floppy disk drive. Remove the current floppy drive from your system.
 6. Remove current floppy drives from your system and install the FD-505.



Attaching Mounting Rails, if Required

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Your system may or may not require rails to mount the floppy drives. If rails are required, attach as shown in Figure C.



Tapered end
towards rear of
Combo Drive

Attach mounting rail to bottom
hole set on both sides of the
Combo Drive (4 places)

Attach screws
through bottom
hole on mounting
rails

Figure C

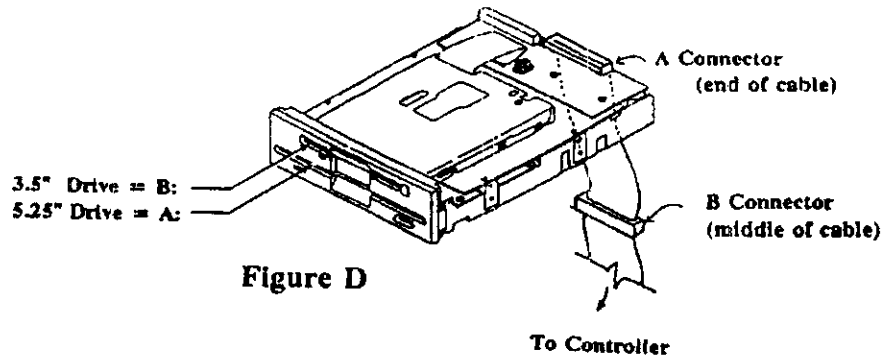
Configuring Drive A: and Drive B:

The following two user definable configurations are available to choose from at the time of installation. Your FD-505 Combo Drive is factory configured to Option #1.

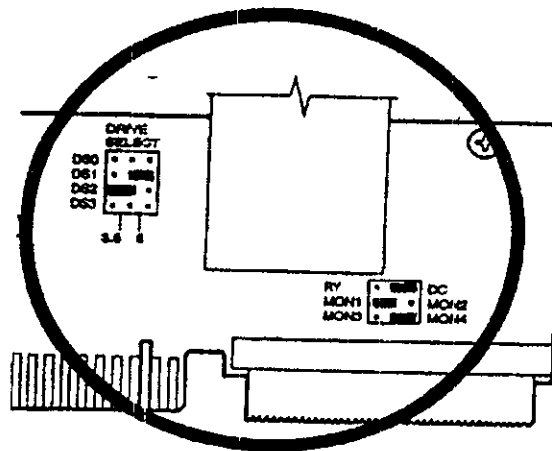
Option #1 - Factory Configuration

- ▶ Drive A: = 5.25 inch
- ▶ Drive B: = 3.5 inch

- a) Attach the "A" interface connector to the FD-505 (see Figure D)



- b) Set jumpers as indicated on Figure E.
- c) Connect ground cable, if your system requires.



Configuring Drive A: and Drive B:
Option #2

- ▶ Drive A: = 3.5 inch
- ▶ Drive B: = 5.25 inch

a) Attach the "A" interface cable to the FD-505 (see Figure F).

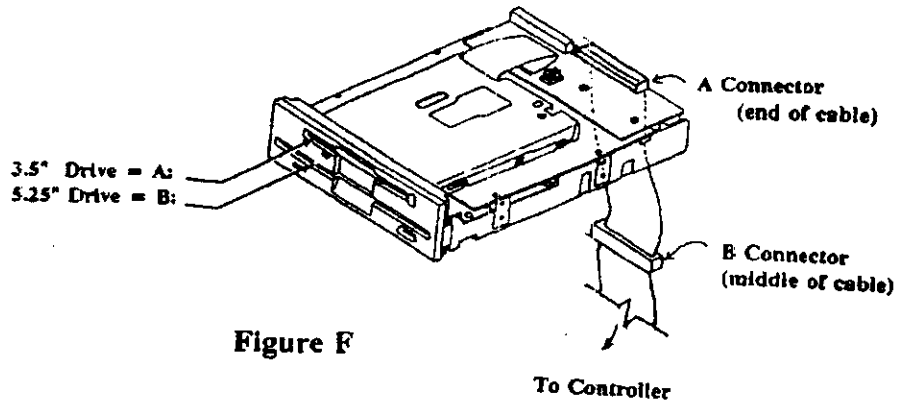


Figure F

- b) Set jumpers as indicated on Figure G.
- c) Connect ground wire, if your system requires.

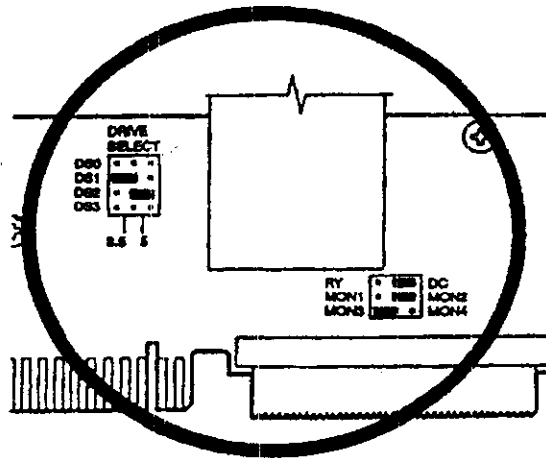


Figure G

Notes on Installing Your FD-505

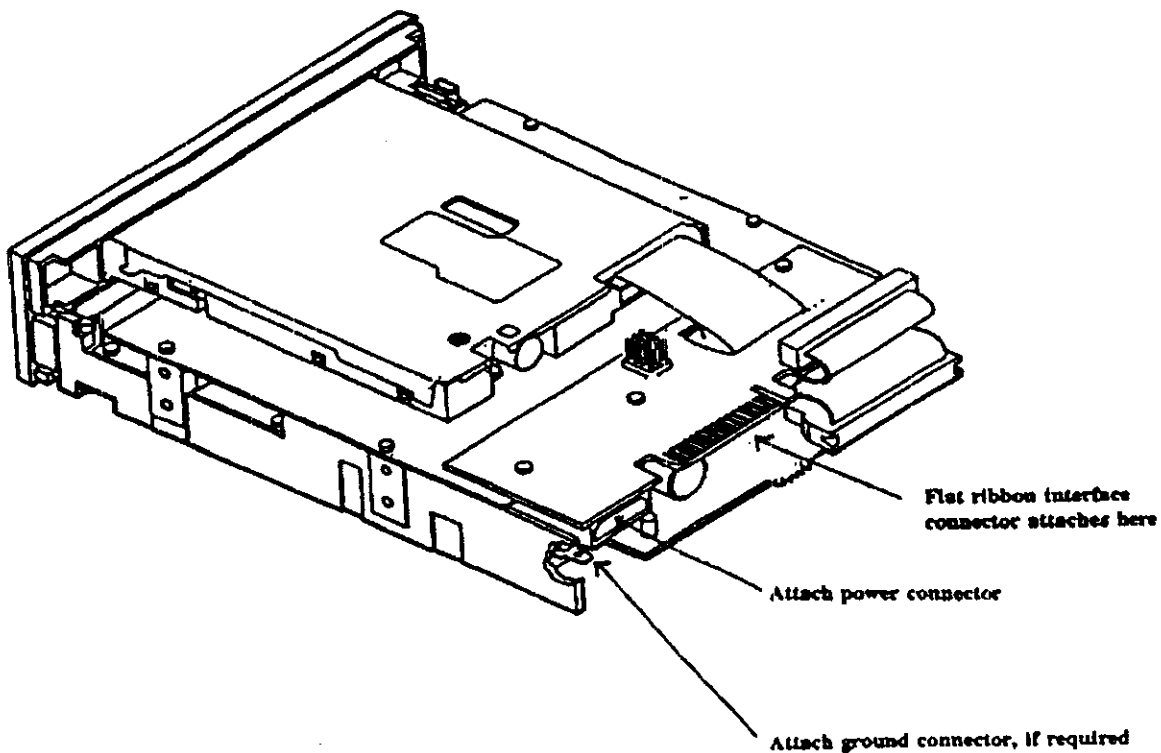
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Slide drive into any available bay. We recommend you use the uppermost bay.

- Make sure the mounting rails are aligned into the mating slots.
- Locate your system's floppy drive ribbon cable. The cable may be keyed to assist with alignment. If yours is not keyed, it should be attached, so that the color strip (red or blue) on the data cable is aligned with the edge of the floppy drive data connector that has the key slot. This is Pin 1.

Reattach power connector:

- Replace the cover.
- Reattach all input and output devices.
- Plug in computer.



Trouble Shooting

Symptom	Solution
Indicator light never turns on when executing READ or WRITE	Make sure that the interface cable and power cable are properly connected and drive address strap is set correctly. Refer to Pages 4 & 5.
Indicator light comes on as soon as power is applied and stays on	The ribbon cable may be reversed. Check cable pin #1 orientation.
Drive type mismatch during boot	Check CMOS setup for correct drive type. If the indicator comes on, check for head recalibration to Track 00, if it doesn't, drive is bad.
Invalid media or Track 00 bad when formatting	Attempted to format an HD diskette to 720K or an DD diskette to 1.44MB, drive is not properly set in CMOS setup, or controller card is not configured correctly. Check setup by referring to controller documentation.
The same directory is displayed for different diskettes	The disk change signal is not being output. Check the drive for the correct disk change strap setting (DC jumper). Or Pin #34 on the ribbon cable is broken.
Drive not ready error reading drive x	No diskette inserted in the drive or motor not spinning. Call TEAC Tech Support.
General failure error reading drive x	Diskette not formatted, drive out of alignment, 720K disk formatted to 1.44MB, or 1.44MB disk formatted for 720K in the 3 1/2" drive.
Sector not found error	Head seek error or drive out of alignment. Call TEAC Tech Support.

TEAC Tech Support hot line: (323) 727-4860
 8:30a.m. - 5:00p.m., PST. Otherwise, leave message on our voice mail, or fax the problem description to FAX (323) 869-8751 or EMAIL DSPDTSG@TEAC.COM

TEAC America, Inc., 7733 Telegraph Rd., Montebello, CA 90640

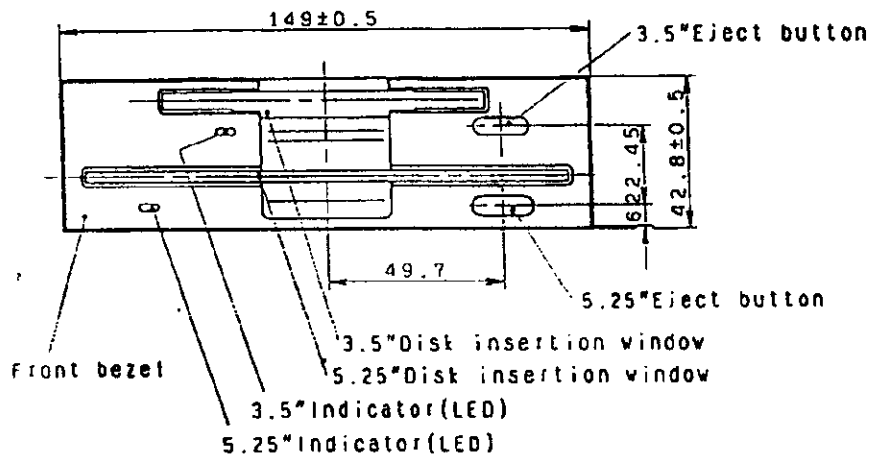
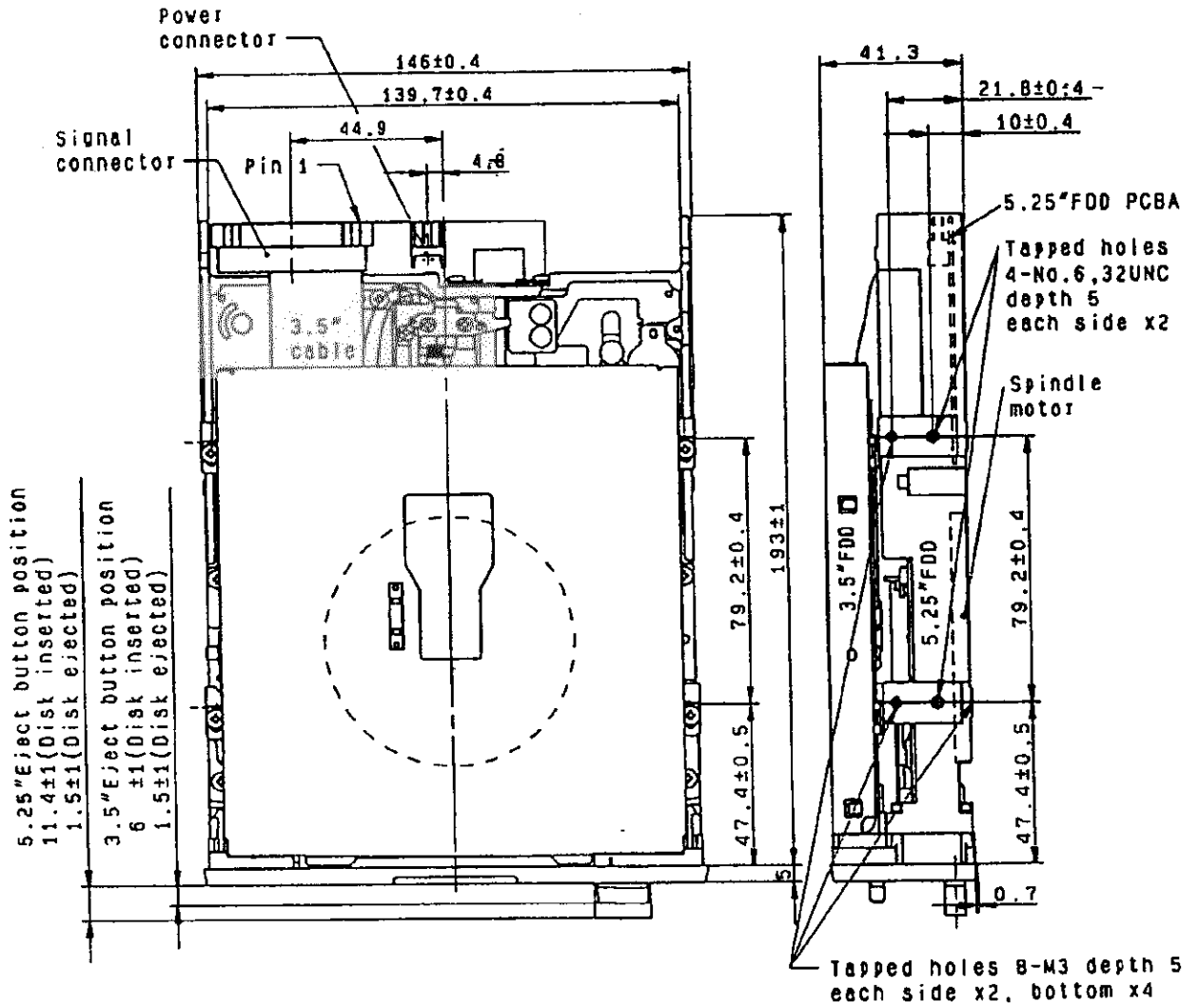
1. OUTLINE

This specification provides a description for the TEAC FD-505, dual floppy disk drive. The FD-505 has two drives in the size of a conventional 41mm high 5.25-inch drive (equivalent to the TEAC FD-55GF), one is 1 inch high 5.25-inch mini floppy disk drive (1.6MB/1MB dual mode) and the other is 0.6 inch high 3.5-inch micro floppy disk drive (2MB/1MB dual mode). Tables 1-1 through 1-3 show the outline of the dual FDD, the 5.25" FDD, and the 3.5" FDD.

Model name, (Bare FDD)	FD-505 -1XX -2XX -3XX
Safety standard	UL, CSA & IEC950(CB)

LED indicator color	Green for both 5.25"/3.5" FDDs
Disk installation and ejection method	One action manual installation and one action manual ejection for both 5.25"/3.5" FDDs
Frame ground terminal	Not equipped.
Required power	+5V \pm 5% and +12V \pm 10%
Signal output driver	Open collector TTL
Input signal terminator	1k Ω \pm 5% unremovable
Host interface connector	Applicable to the connectors of conventional 3.5" FDD.
Strap setting at delivery	5.25" FDD: 5D1, 3D2, 5M1, 3M2
Host interface signal pin assignment at delivery (Refer to item 8.2)	Pin 2 : HD IN input for 5.25" FDD, high density at high level (OPEN state for 3.5" FDD) Pin 4 : NO CONNECTION for 5.25"/3.5" FDDs Pin 6 : NO CONNECTION for 5.25"/3.5" FDDs Pin 10: MOTOR ON 2 input Pin 12: DRIVE SELECT 1 input Pin 14: DRIVE SELECT 2 input Pin 16: MOTOR ON 1 input Pin 34: DISK CHANGE output for 5.25"/3.5" FDDs Others: The same as the conventional FDDs
Accessory	Not equipped.
Other optional function	Not equipped.

Dual FDD specification outline



FDD external view

ENVIRONMENTAL CONDITIONS

Note: The following requirements are applied for the unpackaged FDD.

(1) Ambient temperature

- (a) Operating : 4 ~ 51.7°C(39 ~ 125°F)
- (b) Storage : -22 ~ 60°C(-8 ~ 140°F)
- (c) Transportation: -40 ~ 65°C(-40 ~ 149°F)

(2) Temperature gradient

- (a) Operating : 20°C(36°F) or less per hour
- (b) Storage and transportation : 30°C(54°F) or less per hour

(3) Relative humidity

- (a) Operating : 20 ~ 80% (no condensation)
Max. wet bulb temperature shall be 29.4°C(85°F)
- (b) Storage : 5 ~ 90% (no condensation)
Max. wet bulb temperature shall be 40°C(104°F)
- (c) Transportation: 5 ~ 95% (no condensation)
Max. wet bulb temperature shall be 45°C(113°F)

(4) Vibration

- (a) Operating : 1.0G or less (10 ~ 100Hz, 1oct/min. sweep rate)
0.35G or less (100 ~ 600Hz, 1oct/min. sweep rate)
- (b) Transportation: 2G or less (10 ~ 100Hz, 1/4oct/min. sweep rate)

(5) Shock

- (a) Operating
 - Write & read: 5G (11msec, 1/2 sine wave) or less
 - Read only : 10G (11msec, 1/2 sine wave) or less
 - Soft errors are allowed if they are recoverable within three retries.

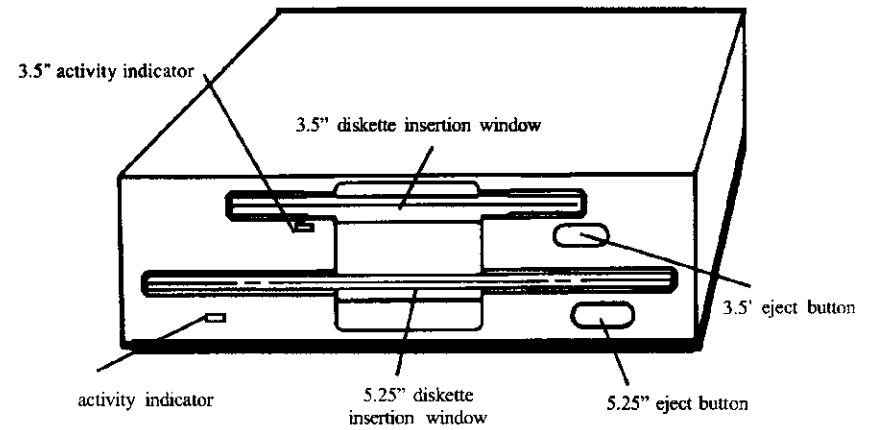
- (b) Transportation: 60G (11msec, 1/2 sine wave) or less

(6) Altitude (operating): -300m (-980 feet) ~ 5,000m (16,400 feet)

RELIABILITY

- (1) MTBF : 20,000 power on hours or more (for typical operation duty)
- (2) MTTR : 35 minutes
- (3) Design component life: 5 years
- (4) Disk life : 3×10^6 passes/track or more
- (5) Disk insertion: 3×10^4 times or more (each for 5.25"/3.5" FDD)
- (6) Seek operation life
: 1×10^7 random seeks or more (each for 5.25"/3.5" FDD)
- (7) Preventive maintenance: Not required (for typical operation duty)
- (8) Error rate
 - (a) Soft error: 1 or less per 10^9 bits read
A soft (recoverable) error is defined that it can be read correctly within three retries.
 - (b) Hard error: 1 or less per 10^{12} bits read
A hard (unrecoverable) error is defined that it cannot be read correctly within three retries. However, it is recommended to be followed by a recalibration to track 00 and four additional retries.
 - (c) Seek error: 1 or less per 10^6 seeks
A seek error is defined that it can seek to a target track within one retry including a recalibration to track 00.
- (9) Safety standard: Complying with UL and CSA
- (10) Electro-static discharge test: 15kV (150pF, 330 Ω) or more
No hard error and/or no component damage occur when the test is applied to the operator access area (front bezel area).

TEAC FD-505 Combo Drive Installation Guide



Your FD-505 package includes:

- FD-505 Combo floppy disk drive
- One edge card adapter
- One power connector adapter
- Registration card/questionnaire
- Installation guide

Introduction

Thank you for purchasing the TEAC FD-505 Combo Floppy Disk Drive. This product is intended for use in IBM@ PC AT@ compatible computers. Upgrading IBM/AT systems requires Bastech driver installation. It allows you to expand the usefulness of your present computer by occupying one standard 5.25 inch computer bay, while providing 5.25 inch and 3.5 inch diskette compatibility. You can then utilize the other computer bay, normally occupied by a second floppy drive, for other peripherals, such as a CD-ROM, tape, or hard drive.

This quality drive will provide trouble-free operation for your computer system if properly installed. PLEASE READ THE ENTIRE INSTALLATION GUIDE THOROUGHLY BEFORE YOU BEGIN THE INSTALLATION. Use a high density controller with optional bios to support 3.5 inch high density drive, if this option is not available on your system bios. If you have questions or comments on the installation, please call TEAC Technical Support Center at the telephone number listed on the back page of this Guide.

Tools You May Need

Depending on the design of your computer, you may need the following tools to complete the installation.

- a flat blade screwdriver
- a Phillips screwdriver
- needle-nosed pliers



Handling the FD-505 Combo Drive

Please avoid placing your fingers on the upper cover. It is best to hold the FD-505 by the diecast frame, as indicated by the arrows in Figure A.

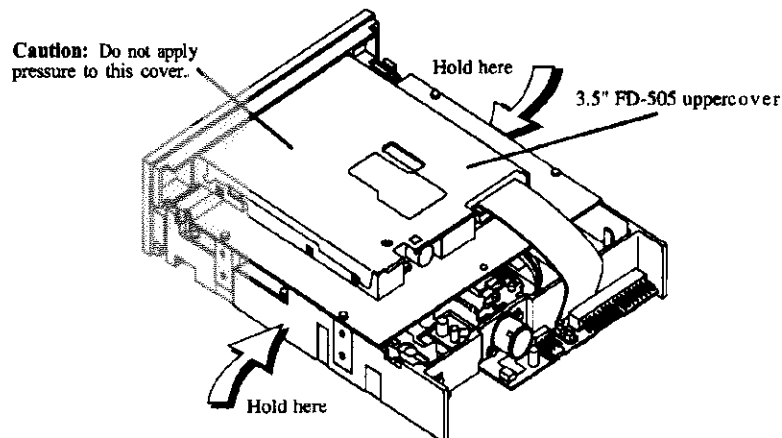


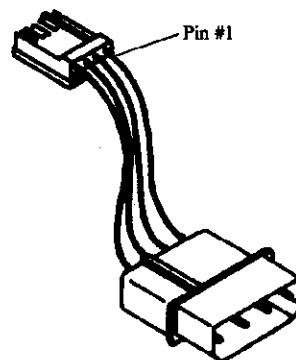
Figure A

Preparing your Personal Computer for FD-505 Combo Drive Installation

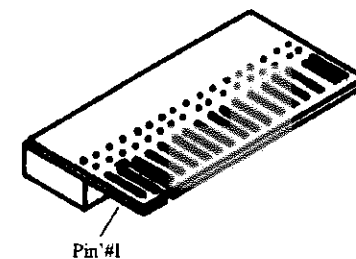
CAUTION: TURN OFF YOUR COMPUTER AND UNPLUG IT FROM THE AC POWER SOURCE BEFORE INSTALLING THE FD-505. FAILURE TO DO SO MAY RESULT IN ELECTRIC SHOCK.

1. Unplug your computer.
2. Detach all input and output devices from your computer, such as printer, keyboard, monitor, etc.
3. Remove cover from your computer. Refer to your computer system manual for this procedure.
4. Note the two cables that are connected to your current floppy disk drives, as these same cables will be required to install your FD-505. The floppy interface cable is the flat "ribbon" type, and the power connector consists of the 4 separate wires attached to a single connector. See Figure B on next page.
5. Your system may also have a single ground wire attached to the floppy disk drive(s). Carefully remove all cables from your floppy disk drive(s).
6. Remove current floppy drive(s) from your system and install the FD-505.

Note: The FD-505 comes with two optional pieces of hardware to assist you with correctly installing your Combo Drive. The two pieces are: a power connector adapter cable and an edge card adapter (see below).



Power Connector Adapter: You will need this adapter if your power supply cable does not have the smaller connector, like the one found on the FD-505 Combo Drive.



Edge Card Adapter: You will need this adapter if your interface cable has only the traditional edge card connector. The edge card connector is typically found on the 5.25 inch FDDs. However, if your cable has a pin header connector then you do not need this adapter.

Rear view of FD-505

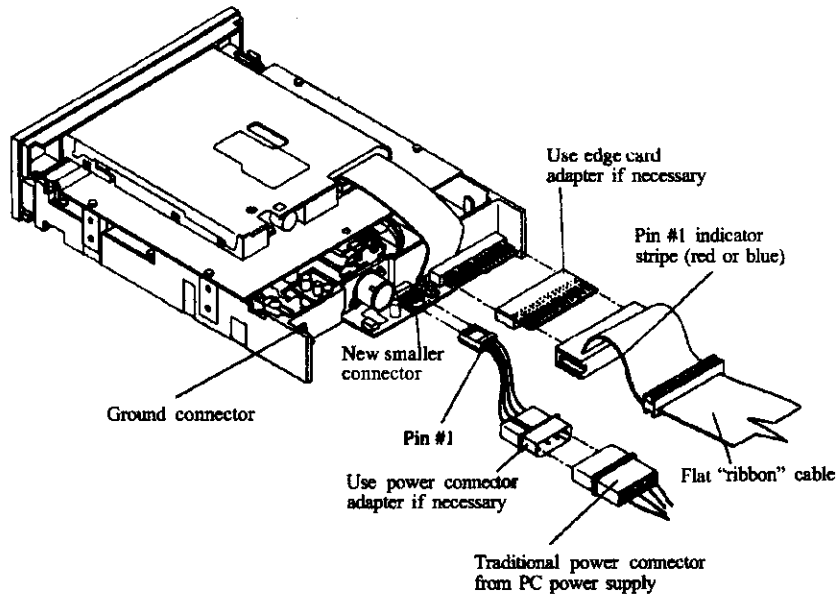


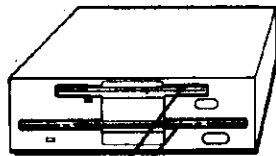
Figure B

Configuring Drive A: and Drive B:

Your Combo Drive can be configured in two ways at the time of installation. You can choose either option.

Option #1

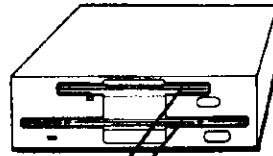
Drive A: = 5.25" (1.2 MB)
Drive B: = 3.5" (1.44 MB)



3.5" (1.44 MB) = B:
5.25" (1.2 MB) = A:

Option #2

Drive A: = 3.5" (1.44 MB)
Drive B: = 5.25" (1.2 MB)



3.5" (1.44 MB) = A:
5.25" (1.2 MB) = B:

Configuring for Option #1:

Using an IBM PC compatible cable with a twist at the end connector (Figure C) and the factory default strap settings 1 (shown in Figure D).

- a) Connect the FD-505 Combo drive to **connector A:**
Connector A: is at the end of the cable as shown in the sketch.
- b) Set the jumpers as indicated in Figure D.
- c) Connect the ground cable if your system requires it.

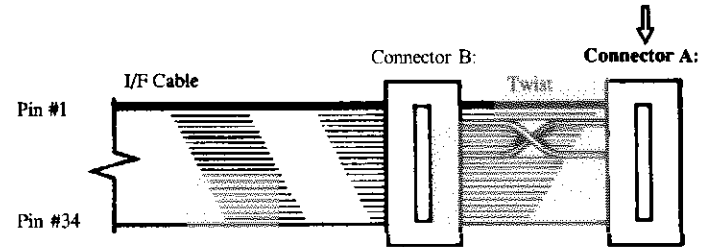


Figure C

FD-505 Jumper Matrix
Default strap settings 1:

AB 2 = 3D2
BC 1 = 5D1
DE 2 = 3M2
EF 1 = 5M1

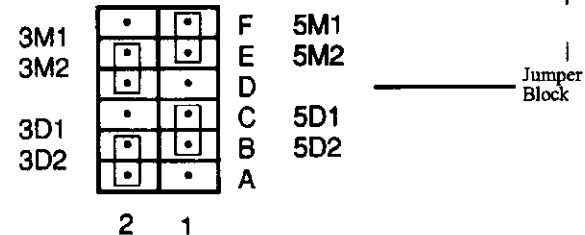
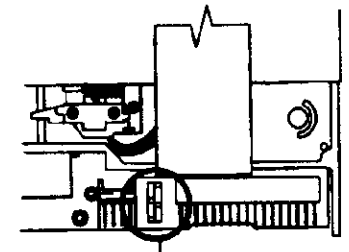


Figure D

Configuring for Option #2:

To reverse drive assignments using an IBM PC compatible cable (Figure E) with a twist at the end connector and the default strap settings.

- Connect the FD-505 Combo drive to **connector B:** (the untwisted connector).
Connector B: is the connector to left of the end connector.
- Set the jumpers as indicated on previous page in Figure D.
- Connect the ground wire if your system requires it.

This will create the Option 2 drive assignments, namely:

Option #2

Drive A = 3.5 (1.44 MB)
Drive B = 5.25 (1.2 MB)

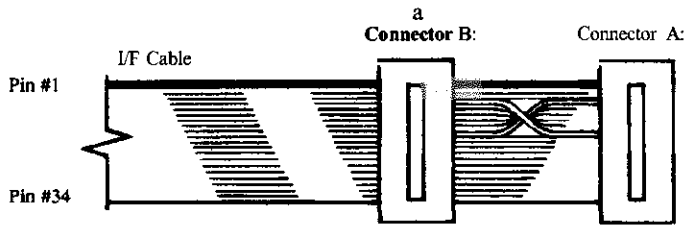


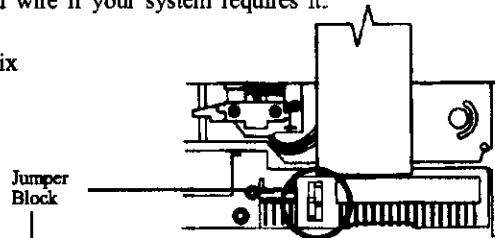
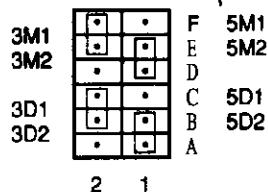
Figure E

To create the Option #2 drive assignments USING THE CONNECTOR A:

- Connect the FD-505 Combo drive to **connector A:**
- Set the jumpers as indicated in Figure F, i.e. **Strap setting 2.**
- Connect the ground wire if your system requires it.

FD-505 Jumper Matrix
Strap settings 2:

AB 1 = 5D2
BC 2 = 3D1
DE 1 = 5M2
EF 2 = 3M1



3.5" (1.44 MB) = A:
5.25" (1.2 MB) = B:

Figure F

Notes on Installing Your FD-505

Slide drive into any available bay. We recommend you use the uppermost bay. Make sure the mounting rails are aligned into the mating slots. (if rails are attached) Locate your system's floppy drive ribbon cable. The cable may be keyed to assist with alignment. If yours is not keyed, it should be attached, so that the color strip (red or blue) faces the center of the drive (jumper block). This is Pin 1.

- Reattach power connector.
- Replace the cover.
- Reattach all input and output devices.
- Plug in computer.

Attaching Mounting Rails, if required

Your system may or may not require rails to mount the floppy drives. If rails are required, please call TEAC parts department and order rail kit for the FD-235. Tel: 323 726-0303 Ext. 840 (TEAC P/N: 10000000-60). Attach rails as shown in Figure G.

The tapered end of each rail, when mounted, should point toward the back of the floppy drive.

Note: Each rail is marked on the inside surface with "R" indicating the right rail or an "L" for the left rail.

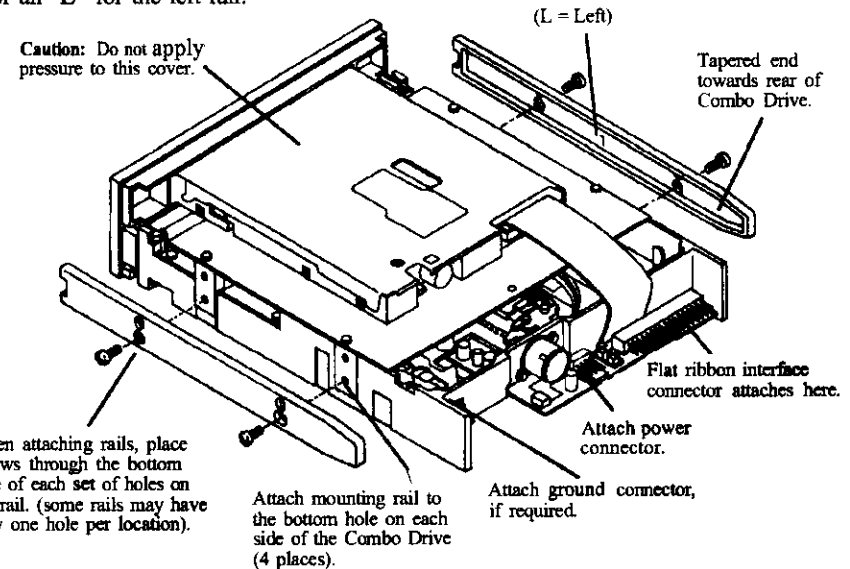


Figure G

Trouble Shooting

Symptom	Solution
Indicator light never turns on when executing READ or WRITE.	Make sure that the interface cable and power cable are properly connected and drive address strap is set correctly.
Indicator light comes on as soon as power is applied and stays on.	The ribbon cable may be reversed. Check the pin #1 orientation.
Drive type mismatch during boot.	Check CMOS setup for correct drive type. If the indicator comes on, check for head recalibration to Track 00; if it doesn't, drive may be malfunctioning.
Invalid media or Track 00 bad when formatting.	Attempted to format an HD diskette to 720K or DD diskette to 1.44MB. Drive is not properly set in CMOS setup. Or controller card is not configured correctly. Check setup by referring to controller documentation. For IBM/AT upgrade, Bastech driver must also be installed.
The same directory is displayed for different diskettes.	Controller card is not receiving disk change signal. Check the drive for the correct disk change strap setting. Pin #34 on the ribbon cable is broken. Or disk drive is malfunctioning.
Drive not ready error reading drive X.	No diskette inserted in the drive or motor not spinning. Drive may need service.
General failure error reading drive X.	Diskette not formatted. Drive out of alignment. LD or ND disk formatted to 1.44MB. HD disk formatted for 720K in the 3 1/2" drive.
Sector not found error.	Head seek error or drive out of alignment.

TEAC Tech Support: PHONE (323) 727-4860
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