

# APPLICATION

This specification provides a description for the TEAC FD-55BR, 5.25" double sided mini flexible disk drive (hereinafter referred to as the FDD). Table 100 shows the outline of the FDD.

Model name	FD-55BR-100	FD-55BR-000	
TEAC P/N	19307351-00	19307350-00	
Safety standard on label	UL & CSA	-	
Unformatted data capacity	500K bytes		
Data transfer rate	250K bits/sec		
Track density	48tpi		
Head load mechanism	Not equipped (CSS)		
Front bezel shape	TEAC standard		
Front lever shape	TEAC standard		
Bezel & lever color	Black		
LED indicator color	Red		
Pop-up mechanism	Not equipped		
Shield cover	Not equipped		
Frame ground terminal	Faston 187 tab		
Input signal terminator	1K $\Omega$ $\pm$ 5%, unremovable		
Customer selectable straps	D0 ~ D3, U0, U1, IU, ML, RY, FG Refer to item 1-11.		
Strap setting at shipment	D1, FG		
Other optional function & mechanism	Not equipped		

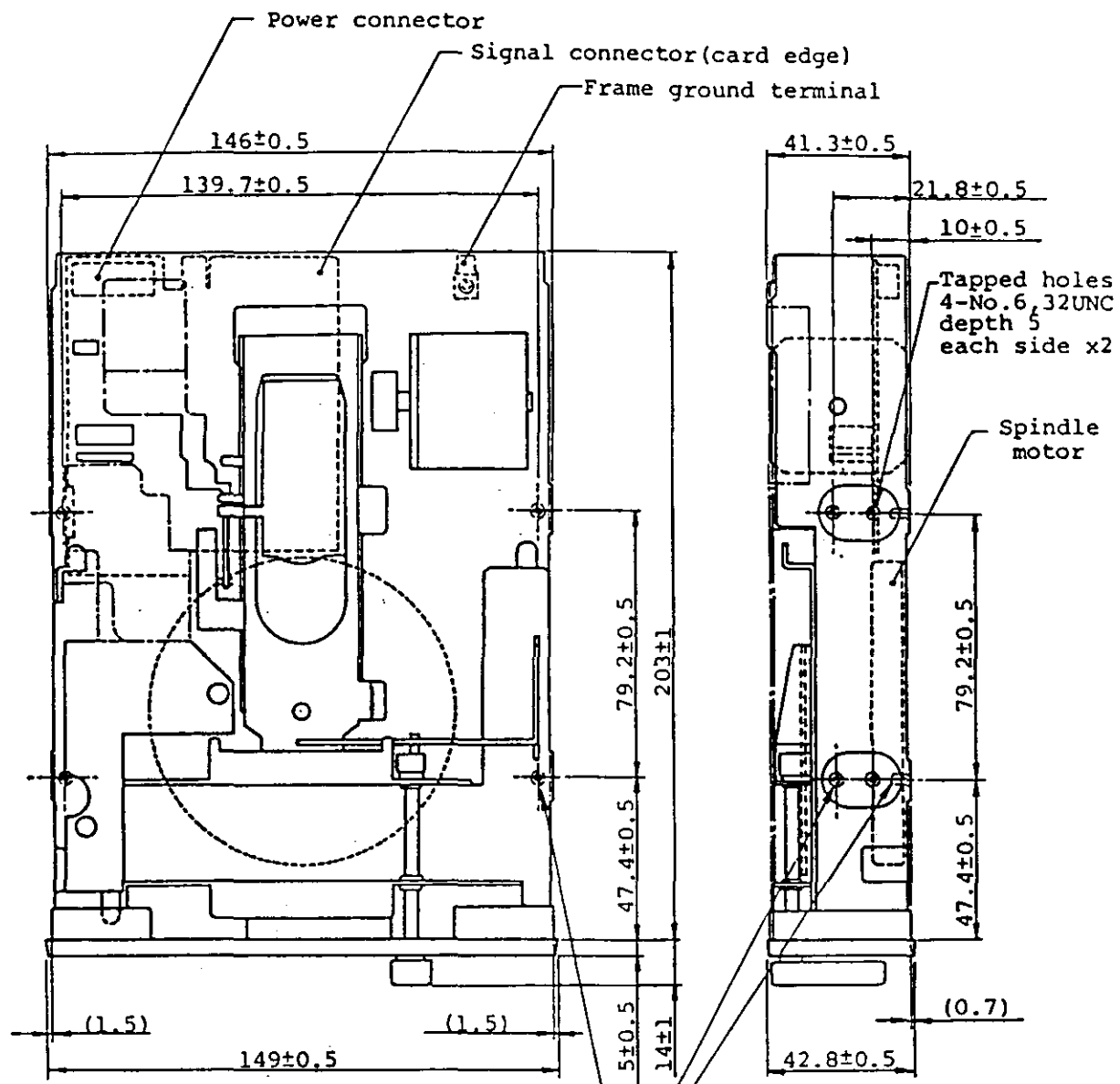
(Table 100) Specification outline

## DISK

5.25 inch, soft sectored flexible disks which comply with ISO, ANSI, or ECMA standard.

## PHYSICAL SPECIFICATION

- (1) Width: 146mm (5.75 in), Nom.
- (2) Height: 41.3mm (1.63 in), Nom.
- (3) Depth: 203mm (7.99 in), Nom. (excludes projections of interface connectors)
- (4) Weight: 1.00Kg (2.20 lbs), Nom., 1.10Kg (2.43 lbs), Max.
- (5) External view: See Fig.101.
- (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 indicator up. Do not mount horizontally with spindle motor up.
  - (c) Mounting angle in items (a) and (b) should be less than 30° 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 side frame or on the bottom frame of the FDD (see Fig.101)
- (9) Material, Frame : Aluminum diecast  
Front bezel : PPHOX (Xyron)



Top view

Right side view

Front view

External view

(Units:mm)

(a) Typical at operating: 3.9W

(b) Typical at waiting: 1.0W

(4) Power on sequence

Not specified (refer to Note below). Since the FDD is equipped with power reset circuit, disk and data on the disk will not be damaged by power on or off.

Note: If +12V power is turned on more than 320msec after the +5V power, auto-recalibration might not be executed. In such a case, execute ordinary recalibrate operation by commands from host side after turning on both powers.

(5) Power reset time in FDD: Less than 400msec,

Including general power resetting of internal circuit and auto-recalibration.

ENVIRONMENTAL CONDITIONS

(1) Ambient temperature

(a) Operating: 4°C ~ 46°C (40°F ~ 115°F)

(b) Storage: -22°C ~ 60°C (-8°F ~ 140°F)

(c) Transportation: -40°C ~ 65°C (-40°F ~ 149°F)

(2) Temperature gradient

(a) Operating: Less than 15°C (27°F) per hour

(b) Transportation and storage: Less than 30°C (54°F) per hour

(3) Relative humidity

(a) Operating: 20% ~ 80% (no condensation)

Maximum wet bulb temperature shall be 29°C (84°F)

(b) Storage: 10% ~ 90% (no condensation)

Maximum wet bulb temperature shall be 40°C (104°F)

(c) Transportation: 5% ~ 95% (no condensation)

Maximum wet bulb temperature shall be 45°C (113°F)

#### (4) Vibration

(a) Operating: Less than 0.5G (less than 55Hz)

Less than 0.25G (55 ~ 500Hz)

(b) Transportation: Less than 2G (less than 100Hz)

#### (5) Shock

(a) Operating: Less than 10G (less than 10msec)

(b) Transportation: Less than 40G (less than 10msec)

#### (6) Altitude

(a) Operating: Less than 5,000m (16,500 feet)

(b) Transportation: Less than 12,000m (40,000 feet)

Note: The above requirements are applied for the FDD without shipping box.  
When a long period is required for transportation such as by ship,  
the storage environmental conditions shall be applied.

## RELIABILITY

- (1) MTBF: 20,000 power on hours or more (for typical usage)
- (2) MTTR: 30 minutes
- (3) Design component life: 5 years
- (4) Preventive maintenance: Not required (for typical usage)
- (5) Error rates
  - (a) Soft read error: 1 per  $10^9$  bits (up to 2 retries)
  - (b) Hard read error: 1 per  $10^{12}$  bits
  - (c) Seek error: 1 per  $10^6$  seeks
- (6) Safety standard: Complying with UL, CSA

### Warning: EMI/RFI countermeasure

This FDD generates and uses radio frequency energy. If the FDD (including the interface cable and connector) is used without shielding, it may cause interference to radio and television reception around it. Be sure to install this FDD in the equipment which is designed for effective EMI/RFI countermeasure.

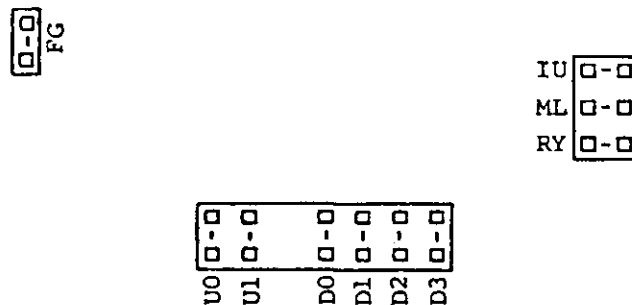
This FDD installed in a specific equipment has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation.

However, there is no guarantee that interference will not occur in a particular installation. If the equipment with this FDD does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measure.

- a) Reorient the receiving antenna.
- b) Relocate the equipment with respect to the receiver.
- c) Move the equipment away from the receiver.
- d) Plug the equipment into a different outlet so that the equipment and the receiver are on different branch circuits.

## CUSTOMER SELECTABLE STRAPS

All the straps are mounted on the main PCBA of the FDD. Insertion of a short bar onto the post pin is defined as the on-state of the strap. Fig.110 shows the assignment of the straps on the PCBA.



(Fig.110) Assignment of straps

### (1) Straps setting at shipment

See Table 100 in item 1-1.

### (2) D0 ~ D3 straps

- (a) In the multiplex control by daisy chaining, these straps designate the address of the FDD.
- (b) By the combination with the DRIVE SELECT 0 ~ 3 signals, four addresses of 0 through 3 can be designated. Refer to Fig.102 and item 1-8-3 (1). Never designate more than 2 FDDs to a same address.

### (3) U0 and U1 straps

- (a) Straps to select the turn-on condition of the front bezel indicator.
- (b) Five turn-on conditions can be selected including the IU strap.

# APPLICATION

This specification provides a description for the TEAC FD-55BR, 5.25" double sided mini flexible disk drive (hereinafter referred to as the FDD). Table 100 shows the outline of the FDD.

Model name	FD-55BR-300	FD-55BR-400	FD-55BR-500
TEAC P/N	19307273-00	19307274-00	19307275-00
Safety standard on label	-	UL	UL & CSA
Unformatted data capacity	500K bytes		
Data transfer rate	250K bits/sec		
Track density	48tpi		
Head load mechanism	Not equipped (CSS)		
Front bezel shape	TEAC standard		
Front lever shape	TEAC standard		
Bezel & lever color	Black		
LED indicator color	Red		
Pop-up mechanism	Not equipped		
Shield cover	Not equipped		
Frame ground terminal	Faston 187 tab		
Input signal terminator	330 $\Omega$ $\pm$ 5% on IC socket		
Customer selectable straps	D0 ~ D3, U0, U1, IU, ML, RY, FG Refer to item 1-11.		
Strap setting at shipment	D1, U1, FG		
Other optional functions & mechanism	Not equipped		

(Table 100) Specification outline



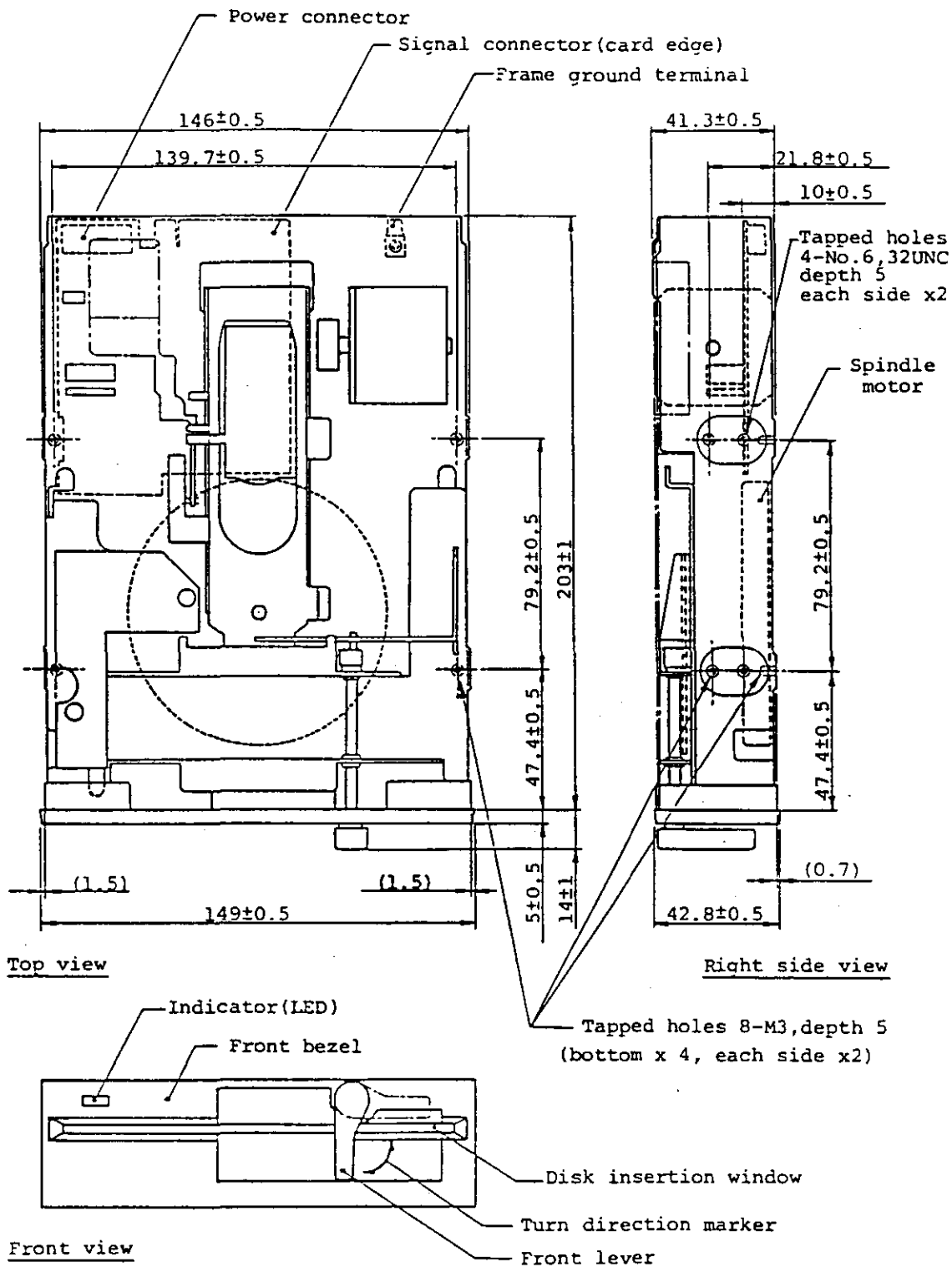
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## PHYSICAL SPECIFICATION

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- (2) Height: 41.3mm (1.63 in), Nom.
- (3) Depth: 203mm (7.99 in), Nom. (excludes projections of interface connectors)
- (4) Weight: 1.1Kg (2.43 lbs), Nom., 1.2Kg (2.65 lbs), Max.
- (5) External view: See Fig.101
- (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 indicator up. Do not mount horizontally with spindle motor up.
  - (c) Mounting angle in items (a) and (b) should be less than 30° 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 side frame or on the bottom frame of the FDD (see Fig.101)
- (9) Material, Frame : Aluminum diecast  
Front bezel : PPHOX (Xyron)



(Units:mm)

(a) Typical at operating: 4.1W

(b) Typical at waiting: 1.5W

(4) Power on sequence

Not specified (refer to Note below). Since the FDD is equipped with power reset circuit, disk and data on the disk will not be damaged by power on or off.

Note: If +12V power is turned on more than 320msec after the +5V power, auto-recalibration might not be executed. In such a case, execute ordinary recalibrate operation by commands from host side after turning on both powers.

- (5) Power reset time in FDD: Less than 400msec,  
Including general power resetting of internal  
circuit and auto-recalibration.

ENVIRONMENTAL CONDITIONS

(1) Ambient temperature

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Note: The above requirements are applied for the FDD without shipping box.

When a long period is required for transportation such as by ship,  
the storage environmental conditions shall be applied.

## RELIABILITY

- (1) MTBF: 10,000 power on hours or more (for typical usage)
- (2) MTTR: 30 minutes
- (3) Design component life: 5 years
- (4) Preventive maintenance: Not required (for typical usage)
- (5) Error rates
  - (a) Soft read error: 1 per  $10^9$  bits (up to 2 retries)
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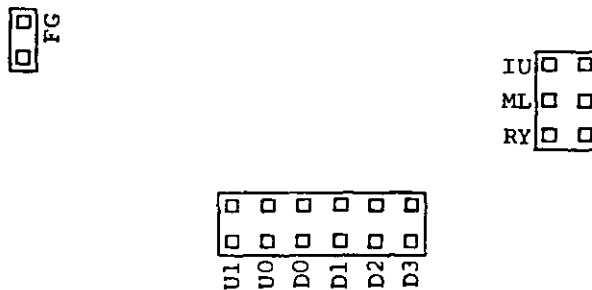
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