

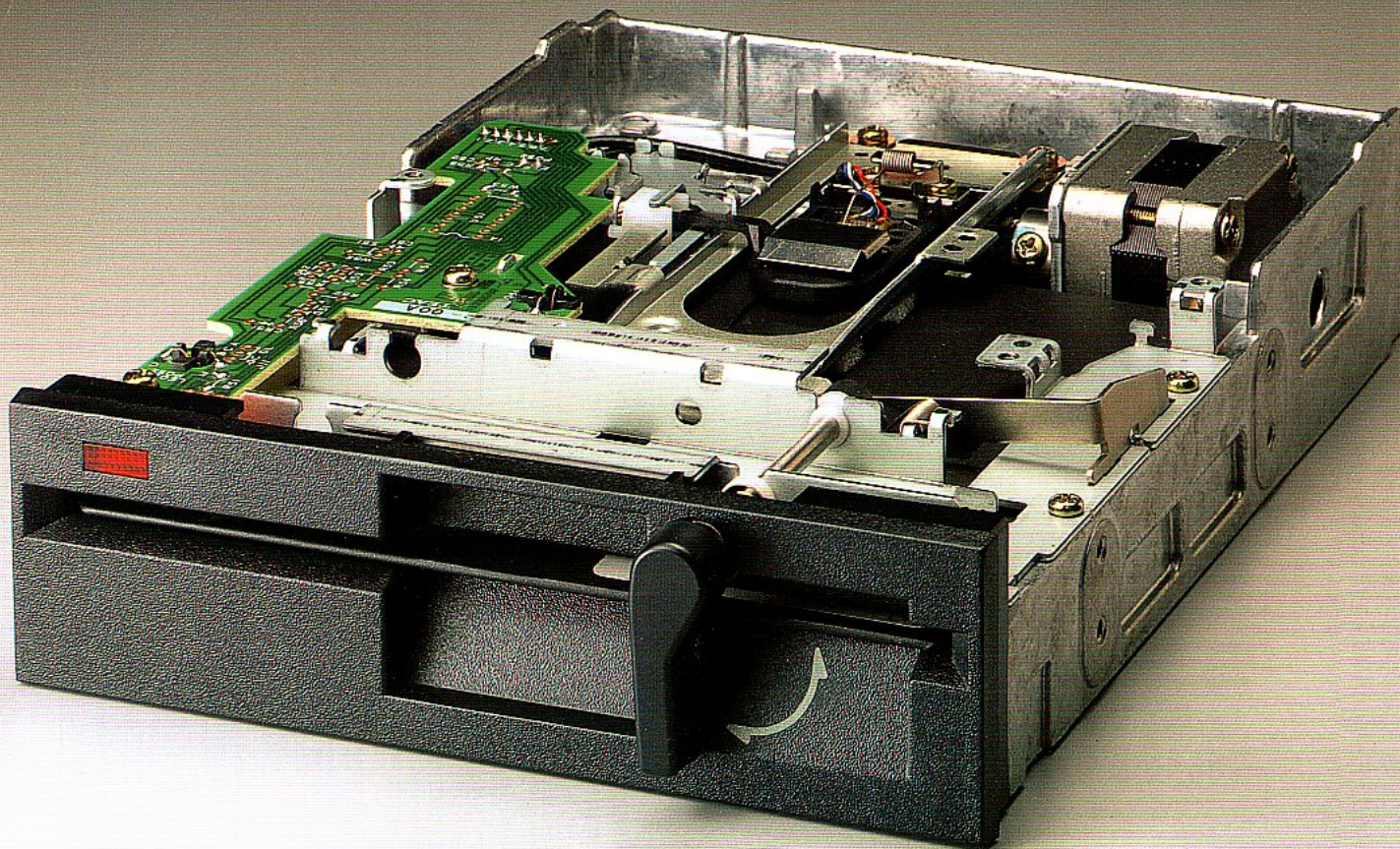
TEAC[®]

**5-1/4-inch
Mini Floppy
Disk Drive**

11/93
FD-55R SERIES

FD-55BR / FD-55FR / FD-55GR / FD-55GFR

- Four models to match all system needs
- Low power consumption (Standby: 1.0 W; Operating: 3.9 W)
- Reduced heat generation for increased reliability
- Simplified mechanism
- Complies with UL and CSA safety standards



The 5-1/4 inch mini FDD

assures low power consumption and high reliability.

FD-55R SERIES

TEAC's FD-55 Series of mini floppy disk drives are widely used as external memory devices. Now the new R Series, with a newly developed custom LSI and low energy circuitry, offers improved performance and functions.

The FD-55R Series consists of four models, from the double-sided, 48 tpi FD-55BR to the FD-55GFR, capable of reading from five different types of disks. You can choose the drive to best match your system requirements. Electronic and mechanical improvements have resulted in a simplified mechanism with low power consumption and reduced heat generation.

Low power consumption

TEAC has drastically reduced the number of components and achieved more efficient circuitry by integrating almost all circuits in two LSIs. The result is low power consumption: only 1.0 W waiting and 3.9 W in operation.

4 Models, 5 Types

The four models available include the FD-55BR, a 48 tpi double-sided 500 KB drive, and the powerful FD-55GFR that can read five types of disks.

Improved reliability

A thorough upgrading of electronic circuits has reduced power consumption, while heat generation has been substantially reduced. The result is high precision and reliability.

High precision head positioning

The high precision hybrid stepping motor com-

bined with a highly precise band actuator permits high accuracy in head positioning.

The Powerful FD-55GFR

The revolutionary FD-55GFR can read five types of 5-1/4 inch disks (from 48 tpi one-sided 250 KB to 96 tpi double-sided 1.6 MB type). The 1.6 MB type is its basic disk format.

Medium to be used	Normal density				High density
	48 tpi		96 tpi		
Track density	Single sided	Double sided	Single sided	Double sided	Double sided
Double sided/single sided					
Memory capacity	250 KB	500 KB	500 KB	1 MB	1.6 MB
Data transfer rate (K bit/sec)	250				500
Disk rotation speed	300 rpm				360 rpm
Data read	○	○	○	○	○
Data write	—	—	○	○	○

The simple mechanism is the fruit of repeated improvements.

Meets UL and CSA safety standards.

SPECIFICATIONS

Recording Method:	FM or MFM
Media:	5-1/4-inch mini floppy disks High density or normal density
Starting Time:	400 msec (300 rpm) 500 msec (360 rpm)
Average Latency Time:	100 msec (300 rpm) 83.3 msec (360 rpm)
Index:	1/revolution
MTBF:	More than 10,000 hours (FD-55FR/GFR) More than 20,000 hours (FD-55BR/GFR)
MTTR:	30 minutes or less
Error Rate:	Soft read error: less than 1/10 ⁹ bits (Retry up to two times) Hard read error: less than 1/10 ¹² bits Seek error: less than 1/10 ⁶ seeks
Safety Standards:	Complies with UL, CSA, TÜV
Ambient Temperature:	Operating 4 to 46°C (40 to 115°F) Transportation: -40 to 65°C (-40 to 149°F) Storage: -22 to 60°C (-8 to 140°F)
Temperature Gradient:	Operating: 15°C (27°F)/hour (no condensation) Storage and transportation: 30°C (54°F)/hour (no condensation)
Relative Humidity:	Operating: 20 to 80% (no condensation) Maximum wet-bulb temperature 29°C (84°F) Transportation: 5 to 95% (no condensation) Maximum wet-bulb temperature 45°C (113°F) Storage: 10 to 90% (no condensation) Maximum wet-bulb temperature 40°C (104°F)
Vibration:	Operating: less than 0.5 G (less than 55 Hz) less than 0.25 G (55 to 500 Hz) Transportation: less than 2 G (less than 100 Hz)
Shock:	Operating: less than 10 G (less than 10 msec) (FD-55FR) Transportation: less than 40 G (less than 10 msec) (FD-55FR) Operating: less than 5 G (less than 11 msec) (FD-55BR) Transportation: less than 50 G (less than 11 msec) (FD-55BR)
Dimensions:	146W × 41.3H × 203D (mm) 5-3/4W × 1-5/8H × 8D (inch)
Weight:	1.1 kg (2.42 lbs) (FD-55FR/55GR) 1.0 kg (2.2 lbs) (FD-55BR/GFR)

Features and specifications are subject to change without notice.

			FD-55BR	FD-55FR	FD-55GR	FD-55GFR	
						High density	Normal density
Data Capacity (Kbyte)	Unformatted	Per track	6.25	6.25	10,416	10,416	6.25
		Per disk	500	1000	1604	1604	1000
	Formatted (16 sectors/track) ¹	Per sector	0.256	0.256	0.512	0.512	0.256
		Per track	4.096	4.096	7.680	7.680	4.096
		Per disk	327.68	655.36	1182.7	1182.7 (1228.8)	655.36
Data transfer rate			250	250	500	500	250/300 ²
Single-sided/Double-sided			Double-sided				
Innermost track bit density (bpi)			5876	5922	9646	9646 (9870)	5922
Innermost track flux density (frpi)			5876	5922	9646	9646 (9870)	5922
Tracks/disk			80	160	154	154 (160)	160
Track density			48			96	
Number of cylinders			40	80	77	77 (80)	80
Track radius (mm)		Outermost	Side 0: 57.150 Side 1: 55.033				
		Innermost	Side 0: 36.513 Side 1: 34.396	Side 0: 36.248 Side 1: 34.131	Side 0: 37.042 Side 1: 34.925	Side 0: 37.042 (36.248) Side 1: 34.925 (34.131)	Side 0: 36.248 Side 1: 34.131
Average access time (msec)			93	94	91	91 (94)	94
Track to track time (msec)			6			3	
Settling time (msec)					15		
Rotation speed (rpm)			300		360	300/360	
Power Requirements (A)	DC + 12 V ± 5%	Permissible ripple	200 mVp-p				
		Standby	0.01 A typ, 0.02 A max	0.03 A typ, 0.04 A max		0.01 A typ, 0.02 A max	
		Operating	0.22 A typ, 0.54 A max				
	DC + 5 V ± 5%	Permissible ripple	100 mVp-p				
		Standby	0.18 A typ, 0.23 A max	0.23 A typ, 0.28 A max		0.18 A typ, 0.23 A max	
		Operating	0.25 A typ, 0.32 A max	0.3 A typ, 0.38 A max		0.28 A typ, 0.35 A max	
Power Consumption (W)	Operating	3.9	4.1		4.0		
	Standby	1.0	1.5		1.0		

¹ The FD-55GR/FD-55GFR (high density) is for 15 sectors/track.

² Value for when the left side is 300 rpm and the right side is 360 rpm.

* The value in () for FD-55GFR is for 160 tracks.

* Specifications apply when the MFM recording method is used.

External Dimensions (units mm)

