TEAC
5-1/4" FLOPPY
DISK DRIVES

FD-55 Series

- 6 models of 5-1/4" floppy disk drives
- 1/2 the height of conventional drives
- Choice of capacity from 125 KBytes to 1.6 MBytes
- New TEAC LSIs reduce power consumption, increase reliability
- Brushless DC direct drive motor
- High-speed data access
The FD-55 Series Gives You More Performance

1/2-Height Size
All models in the FD-55 Series are only 41 mm high—half the height of conventional drives. You can double your data storage capacity without doubling the space your equipment takes up.

New LSIs
Two new TEAC-developed LSIs handle the control and read/write functions, replacing two PCBs which ate up space in previous models. They provide increased reliability, reduced power consumption (4.9 W while operating), and more space for options.

Perfect Disk Registration
The extra space afforded by the LSIs also let TEAC employ a new disk registration method. When the disk is inserted, the spindle motor starts automatically and runs for 10 seconds, ensuring that the disk is perfectly centered when it is clamped down.

Low Power, Heat Generation
TEAC floppy disk drives have always been low power consumers, and the FD-55 models are even more so, due to a new motor and circuitry. This low power consumption makes system planning a whole lot easier. Their low heat generation is important, too, since the compact size means two can be used where one was formerly.

Brushless DC Direct Drive Motor
This motor is so durable (lifetime over 10,000 hours) that it can be left running continuously, so there is no start-up time. And the electrical noise caused by brushes in conventional motors has been eliminated.

High Speed Access
Data access in the FD-55 series is super-fast. Track-to-track access time is 3 msec. in the E, F and G models, and 6 msec. in the A and B models.

LED/Photo Sensor System
Mechanical sensors have been eliminated in the FD-55 Series. Write protect, index, and track 00 sensing are all done by an LED and photo sensor system. Precision and reliability are both significantly higher.

Other features
- Full compatibility with TEAC FD-50 Series
- High-accuracy band positioner
- FM and MFM recording methods
- Protection against accidental erasure
- Voltage-sensing circuit prevents spurious writes when power switched on and off
- Daisy-chain up to four drives
- Optional Head Load Solenoid
FD-55GF

The FD-55GF is the latest refinement in TEAC's outstanding FD-55 series floppy disk drives. What makes this disk drive totally unique is its dual density capability—it's actually two disk drives in one. It can read standard 5-1/4", 48 tpi, normal density, single/double sided disks, as well as read and write normal and high density, 96 tpi, single/double sided disks. These highly popular disk formats are used on many microcomputers which means that the FD-55GF will let you read a wide variety of disk formats. What's more, while the standard 48 tpi, single/double sided disk is limited in capacity, TEAC's FD-55GF floppy disk drive provides a roomy 1.6 MBytes in its high density mode for those jobs requiring large external memory storage. No longer will you be limited by lack of data capacity and the inability to read other disk formats. The FD-55GF—one disk drive that does the work of two.

Choice of 6 Models

FD-55A
- Single sided
- Track density: 48 tpi
- Tracks/disk: 40
- Data capacity: 250 KBytes

FD-55B
- Double sided
- Track density: 48 tpi
- Tracks/disk: 80
- Data capacity: 500 KBytes

FD-55E
- Single sided
- Track density: 96 tpi
- Tracks/disk: 80
- Data capacity: 500 KBytes

FD-55F
- Double sided
- Track density: 96 tpi
- Tracks/disk: 160
- Data capacity: 1 MByte

FD-55G
- Double sided
- Track density: 96 tpi
- Tracks/disk: 154
- Data capacity: 1.6 MBytes

FD-55GF
- High Density
  - Double sided
  - Track density: 96 tpi
  - Tracks/disk: 154
  - Data capacity: 1.6 MBytes

- Normal Density
  - Double sided
  - Track density: 96 tpi
  - Tracks/disk: 160
  - Data capacity: 1 MByte

Floppy Disk Controller
The FC-55 5-1/4" Floppy Disk Controller makes interfacing FD-55 Series drives to microprocessors an easy matter. Two versions are available—one for the A, B, E and F models, and one for the G model. The FC-55 is even smaller and more reliable than previous TEAC controllers, thanks to incorporation of the VFO into an LSI.
Multiple Disk Drive Systems Made Easy

The FD-55G-51(L) and FD-55G-56(L)

In addition to the many features of TEAC’s FD-55 series Floppy Disk Drives, TEAC offers two special versions of FD-55 series: the FD-55G-51(L) and the FD-55G-56(L). Both disk drives are double sided, 96 tpi, high density, 1.6 MBytes data capacity, 5-1/4” mini floppy disk drives that give you the reliability and performance of all our disk drive products. The special feature of these two drives is that they act in tandem to create a multiple drive system—doubling, tripling, or even quadrupling your external storage capabilities. The FD-55G-51(L) acts as a master FDD incorporating a PLO circuit for data acceptance and separation. Up to now, the incorporation of a PLO circuit has been an exclusive option of larger, bulkier 8” disk drives. This new option, along with the large data capacity of the FD-55G-51(L) and the 56(L), means that you can do away with your space-consuming 8” floppy once and for all. Only the master FD-55G-51(L) requires a PLO circuit and host connector/controller. As many as three slave FD-55G-56(L)’s can be “daisy chained” to the master FD-55G-51(L) without using a separate connector—saving you unnecessary connection cost.

### Signal Connector Numbers

<table>
<thead>
<tr>
<th>Connector No.</th>
<th>FD-55A/B/E/F/G</th>
<th>FD-55GF</th>
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<td>16</td>
<td>15</td>
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<td>21</td>
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</tr>
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*Side one select signal is only used with double sided FDD.*
THE BEST JUST GOT BETTER

The FD-55 series is the culmination of TEAC's long experience in producing 5-1/4" floppy disk drives. The six models in the series provide a wide selection of data storage capacity options: single-sided or double-sided, FM or MFM recording—so total capacity ranges from 125 KBytes to 1.6 MBytes. When first introduced, FD-55 series drives offered a number of distinct advantages over other floppy disk drives, including 41-mm height and 3 msec. track access time. They have now been further improved with the use of two new TEAC LSIs that reduce power consumption, simplify internal layout, and increase reliability. For the finest performance and greatest flexibility in floppy disk drives—choose the TEAC FD-55 Series.
Specifications

Recording Method:
FM (single density), MFM (double density)

Motor Starting Time:
400 ms [400 ms (Normal density) 500 ms (High density)]

Index:
1

MTBF:
more than 10,000 hours

Error Rates:
- Soft Errors: 1 per 10^8 bits (up to 2 retries)
- Hard Errors: 1 per 10^12 bits
- Seek Errors: 1 per 10^8 seeks

Temperature:
- Operating: 4°C — 46°C
- Transportation: -40°C — 65°C
- Storage: -22°C — 60°C

Relative Humidity:
- Operating: 20—80% (noncondensing)
  Max. Wet Bulb Temperature: 29°C

Transportation:
5—95% (noncondensing)
Max. Wet Bulb Temperature: 45°C

Storage:
10—90% (noncondensing)
Max. Wet Bulb Temperature: 40°C

Power Requirements:
DC + 12 V ± 5% 0.25 A typ., 0.9 A max.
DC + 5 V ± 5% 0.38 A typ., 0.6 A max.
[0.45 A typ., 0.55 A max.]

Power Consumption:
- Operating: 4.9 W [5.25 W]
- Non-Operating: 1.6 W [2.0 W]

Dimensions:
(W x H x D): 146 x 41 x 203 mm
(5-3/4" x 1-5/8" x 8")

Weight:
less than 1.5 kg (3 lbs. 5 oz.)

Component Life:
5 years

Safety Standard:
UL and CSA

*FD-55G: 15 sectors/track

**Also FD-55GF Normal Density
***Also FD-55GF High Density
Features and specifications are subject to change without notice.

Front panel available in three colors

---|---|---|---|---
Transfer Rate (K bits/sec)
Unformatted
Per Track | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 250 | 500
Formatted
Per Sector | 0.128 | 0.256 | 0.128 | 0.256 | 0.128 | 0.256 | 0.128 | 0.256 | 0.128 | 0.256 | 0.128 | 0.256 | 0.512
Per Disk | 81.92 | 163.84 | 163.84 | 327.68 | 163.84 | 327.68 | 327.68 | 655.36 | 591 | 1,183 | 5922 | 9646
Inside Track Recording Density (bpi)
2768 | 5536 | 2936 | 5876 | 2788 | 5578 | 2961 | 5922 | 4823 | 9646
Inside Track Flux Density (trpi)
5536 | 5876 | 5576 | 5922 | 9646
Tracks/Disk
40 | 80 | 80 | 160 | 154
Track Density (tp)
48 | 96
Track Radius (mm)
Outside | 57.150 | 57.150 | 57.150 | 57.150
Inside | 36.513 | 36.513 | 36.248 | 36.248
Average Access Time (ms)
93 | 94 | 91
Track Access Time (ms)
6 | 3
Setting Time (ms)
15
Disk Rotational Speed (rpm)
300 | 360

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