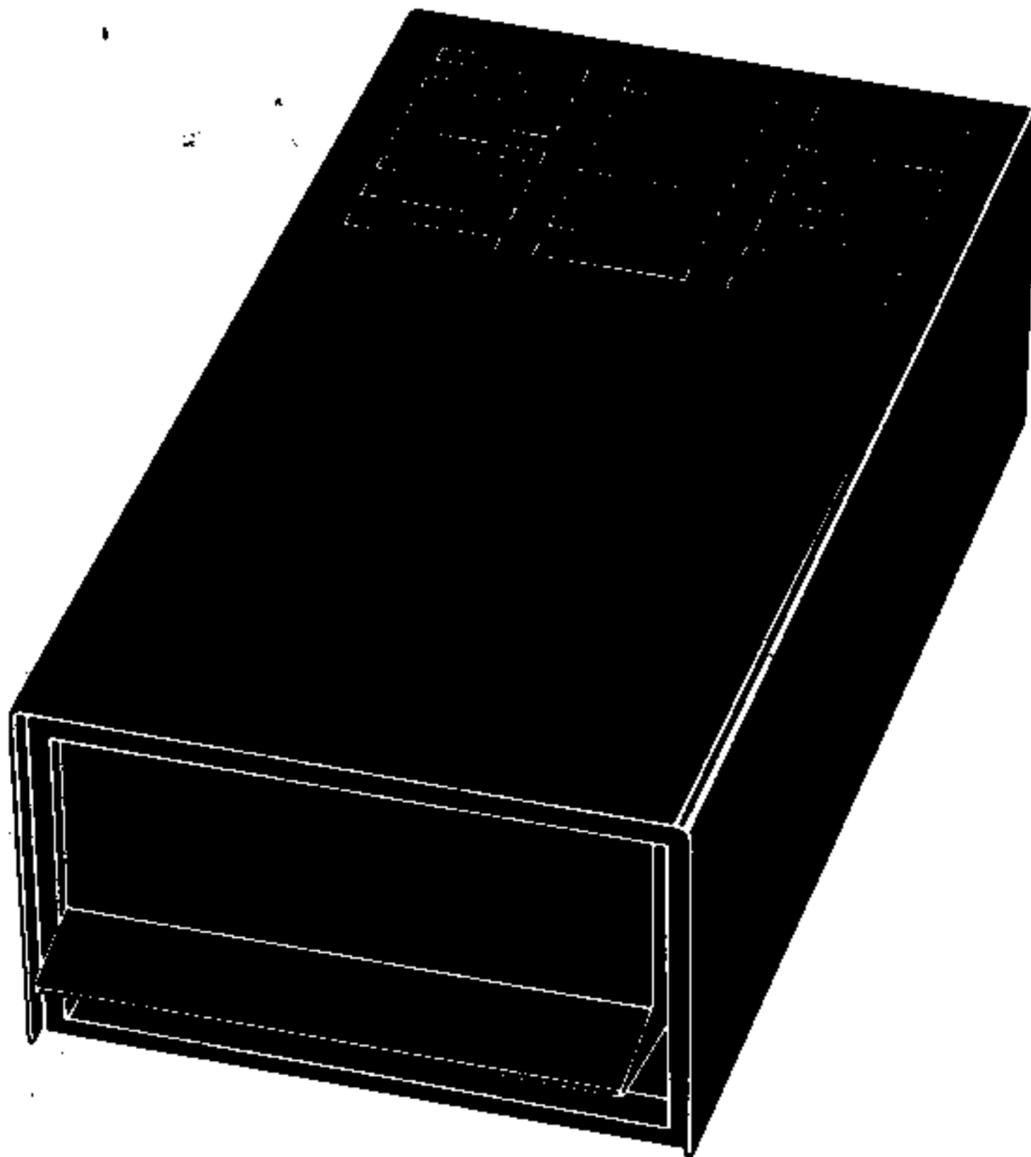


Texas Instruments
Home Computer
Accessory

Disk Memory
Drive Model PHP1850



SS/SD



INTRODUCTION

The Texas Instruments Disk Memory Drive is a high-speed, high-volume memory device. The disk drive reads information from and writes information on a 5-1/4 inch diskette (not included). It can read or write information from any place on the diskette, and can rapidly locate any position or file on the diskette. The disk drive spins the diskette at a constant speed and controls the movement of the magnetic head.

To function properly, a disk drive must have a disk controller. The Disk Drive Controller tells the disk drive where to position the magnetic head in order to read or write information properly. The controller also puts a catalog on the disk, making the data that has been written easy to locate. The controller does these things in response to commands which you choose with the Disk Manager *Solid State Software*[™] Command Module or in response to the statements in a TI BASIC program.

This manual contains only the set-up, service, and warranty information for the Disk Memory Drive. For instructions regarding setup, tests, and operation of the complete disk system, please refer to the *Disk Memory System* manual included with the Disk Drive Controller.

IMPORTANT

Record the serial number from the bottom of the Disk Memory Drive and purchase date in the space below. The serial number is identified by the words "SERIAL NO." on the bottom case. Always reference this information in any correspondence.

PHP1850

Model No.

Serial No.

Purchase Date

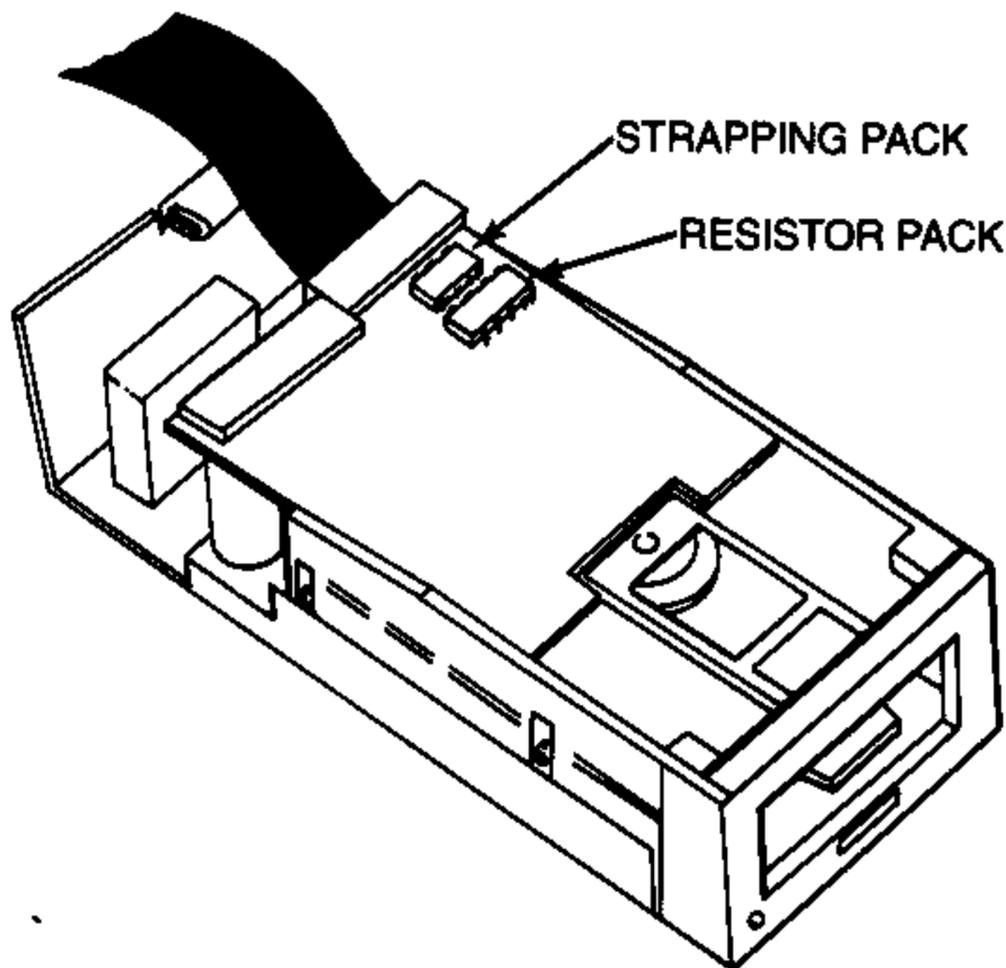
SET UP INSTRUCTIONS

Carefully unpack the Disk Memory Drive and its cable. The disk drive is a precision device which uses moving parts with exacting tolerances, so handle it carefully. Save the packing materials and cartons so that you can safely transport the unit later.

The drive as it comes from the factory is ready to run as the only drive on your system. If you are using more than one drive, the following process must be done to all but one of the drives that you are using. The last drive should be connected without being altered.

DO THE FOLLOWING ONLY IF YOU ARE USING TWO OR THREE DRIVES!

1. **WARNING: ALL POWER CORDS MUST BE DISCONNECTED FROM THE POWER OUTLETS DURING THE FOLLOWING PROCEDURE!**
2. On all but one of your drives, use a Phillips head screwdriver to remove the six screws that hold the cover. Lift the cover off.
3. Locate the main printed circuit board. On it, locate the termination resistor pack. It has 14 leads and looks like an integrated circuit. (The main boards look slightly different on the two different kinds of drives, but the pack is in the same place on each.) Be careful not to disturb the strapping pack (which is also removable) located very near the resistor pack.



4. Remove the termination resistor pack by prying each end up slightly with a small screwdriver and then lifting it out by your thumb and forefinger. Pull straight up.

5. Save the single drive termination resistor pack so that you can reinsert it if the drive is ever to be used as a single or last disk drive. Note that if the socket for the resistor pack has more holes than there are pins on the pack, install the pack toward the outer edge of the circuit board, leaving the unused holes toward the center of the board.
6. Reattach the cover on the drive, aligning and tightening the screws carefully. **DO NOT OPERATE ANY UNITS WITHOUT REATTACHING THE COVER.**

General Notes

The drives should be located conveniently so that you can insert and remove diskettes. The drives should be placed horizontally. Stacking of disk drives increases internal temperatures and may adversely affect the diskettes.

Disk drives and diskettes are affected by static electricity, magnetic fields, and dust. The drives should not be near the monitor screen, as it generates a powerful magnetic field. If possible, the drives should be in a low humidity, dust-free environment, free from static electricity. If static electricity is a problem in your area, treating your carpet with an anti-static preparation may be helpful.

Setting up the controller and disk drives is a simple process. First, connect them to the Home Computer, and then test their operation as outlined in the *Disk Memory System* manual.

CAUTION

The electronic components of the controller and disk drives can be damaged by static electricity discharges. To avoid damage, do not touch the connector contacts or expose them to static electricity.

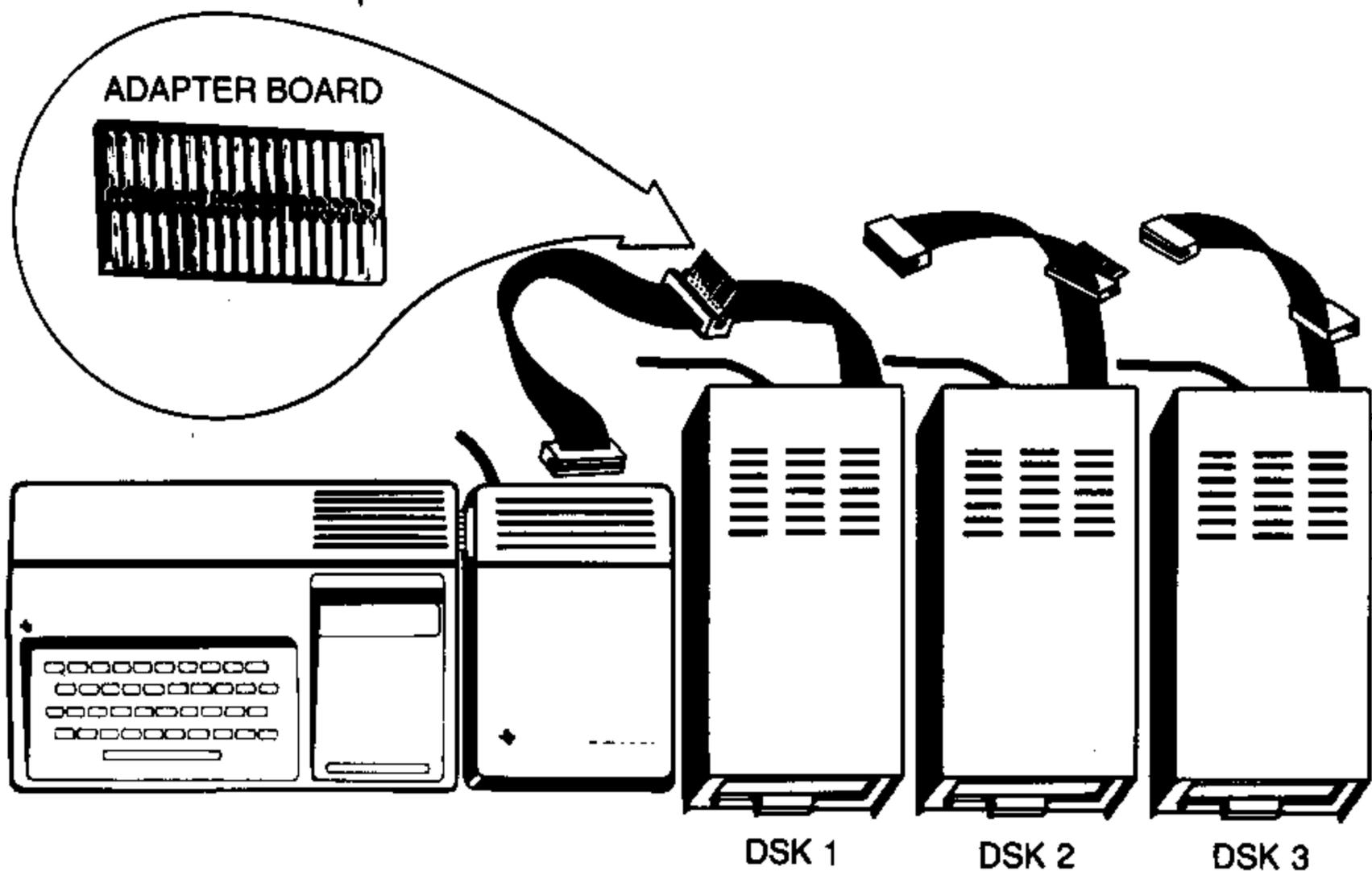
Once you've unpacked the units and made any modifications necessary to the disk drives, you're ready to connect the units to the Home Computer.

Connecting the Disk Drives

Each drive has an attached cable with two connectors, one at the end of the cable and one near the middle of the cable. The connector on the end goes into the port on the rear of the controller or, in the case of multiple disk drives, into the middle connector on the preceding drive unit, using the adapter board (see illustration below). *Note:* It may be necessary to rotate the connector in order to insert it. It goes in easily if you have it positioned correctly.

If you have one drive, connect it to the controller. (Remove and save the adapter board in the event a drive is added later.)

If you have more than one drive, connect them to the controller in series, with all but the last one (the one farthest away from the controller) modified as described above. Connect the first drive to the port on the rear of the controller. The connector on the end of the second drive's cable plugs into the adapter board in the middle of the first drive's cable. The third drive is connected to the second drive in the same way. Whether you have two or three drives, the drive farthest away from the controller should be the one that has *not* been modified.



The first drive, the one connected directly to the controller, is identified as DSK1 by TI-BASIC. The second drive, connected to the cable of DSK1, is DSK2. The third drive is DSK3. The labels provided with your drive(s) can be used to identify each drive.

SERVICE AND WARRANTY INFORMATION

In Case of Difficulty

If the disk system does not appear to be working properly, check the following:

1. *Power* — Be sure all devices are plugged in. Then turn on the power to the units in the proper sequence: disk drives and controller first, and then the console and monitor.
2. *Connector Separation* — Check for proper alignment of the console and the controller (they should be parallel).
3. *Cable* — Check that the proper cables are being used. Check the cables for loose or broken leads. Check to see that the cables are properly connected, right side up.
4. *Software* — Be sure all commands and statements are used as described in this manual. If the disk system works properly with the Disk Manager Command Module but not with a program, the problem is probably with the program. Especially check the use of OPEN, INPUT, and PRINT.
5. *Diagnostic Tests* — Check that the diskette, controller, and disk drives are working properly by running the diagnostic tests.
6. *Home Computer* — Check to see that the Home Computer works properly with all accessories disconnected.
7. If none of the above procedures corrects the difficulty, consult "If You Have Questions or Need Assistance" or see the "Service Information" portion of the *User's Reference Guide*.

Diskette Failure Indicators

Diskettes can lose information because of a scratch on their surface. The information lost depends on the shape of the scratch. A circular scratch, probably caused by something being ground into the diskette by the magnetic head, may destroy an entire track, usually losing data from one file.

A straight scratch, such as one made by a pencil or fingernail being run across the exposed area of the diskette, may destroy all the information on a number of sectors. This usually causes information to be lost from most of the files on the diskette. If the scratch goes through sector 0 or 1, all contents of the diskette are lost, since those sectors hold the catalog which the computer uses to find files.

Scratches too small to be visible to the naked eye can cause information to be lost.

Information can also be lost due to exposing diskettes to magnetic fields or excessive heat or cold and by bending or striking them.

Exchange Centers (Local Service Options)

If some part of your disk system requires service, instead of returning it to a service facility for repair or replacement, you may elect to exchange it for a factory reconditioned unit by going in person to one of the exchange centers which has been established across the United States.

A handling fee will be charged by the exchange center for in-warranty exchanges. Out-of-warranty exchanges will be charged at the rates in effect at the time of the exchange. Please refer to the enclosed Exchange Service listing or call the Consumer Relations Department for exchange fee information and the location of the nearest exchange center.

If You Have Questions or Need Assistance

If you have questions concerning disk system repair or peripheral, accessory, or software purchase, please call our Consumer Relations Department at 800-858-4565 (toll free within the contiguous United States except Texas) or 800-692-4279 within Texas. The operators at these numbers cannot provide technical assistance.

For technical questions about programming, specific applications, etc., you can call 806-741-2663. Please note that this is not a toll-free number, and collect calls cannot be accepted.

As an alternative, you can write to:

Consumer Relations Department
Texas Instruments Incorporated
P.O. Box 53
Lubbock, Texas 79408

Because of the number of suggestions which come to Texas Instruments from many sources containing both new and old ideas, Texas Instruments will consider such suggestions only if they are freely given to Texas Instruments. It is the policy of Texas Instruments to refuse to receive any suggestions in confidence. Therefore, if you wish to share your suggestions with Texas Instruments, or if you wish us to review any BASIC language program which you have developed, please include the following statement in your letter:

"All of the information forwarded herewith is presented to Texas Instruments on a nonconfidential, nonobligatory basis; no relationship, confidential or otherwise, expressed or implied, is established with Texas Instruments by this presentation. Texas Instruments may use, copyright, distribute, publish, reproduce, or dispose of the information in any way without compensation to me."

THREE-MONTH LIMITED WARRANTY

THIS TEXAS INSTRUMENTS DISK MEMORY DRIVE WARRANTY EXTENDS TO THE ORIGINAL CONSUMER PURCHASER OF THE ACCESSORY.

WARRANTY DURATION

This Disk Memory Drive is warranted for a period of three (3) months from the date of original purchase by the consumer.

WARRANTY COVERAGE

This Disk Memory Drive is warranted against defective materials or workmanship. **THIS WARRANTY IS VOID IF THE ACCESSORY HAS BEEN DAMAGED BY ACCIDENT, UNREASONABLE USE, NEGLIGENCE, IMPROPER SERVICE OR OTHER CAUSES NOT ARISING OUT OF DEFECTS IN MATERIALS OR WORKMANSHIP.**

WARRANTY DISCLAIMERS

ANY IMPLIED WARRANTIES ARISING OUT OF THIS SALE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE ABOVE THREE-MONTH PERIOD. TEXAS INSTRUMENTS SHALL NOT BE LIABLE FOR LOSS OF USE OF THE DISK SYSTEM OR OTHER INCIDENTAL OR CONSEQUENTIAL COSTS, EXPENSES, OR DAMAGES INCURRED BY THE CONSUMER OR ANY OTHER USER.

Some states do not allow the exclusion or limitation of implied warranties or consequential damages, so the above limitations or exclusions may not apply to you.

LEGAL REMEDIES

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

WARRANTY PERFORMANCE

During the above three-month warranty period, your Disk Memory Drive will be repaired or replaced with a new or reconditioned unit of the same or equivalent model (at TI's option) when the unit is returned by prepaid shipment to a Texas Instruments Service Facility listed below. The repaired or replacement unit will be warranted for three months from date of repair or replacement. Other than the postage requirement, no charge will be made for the repair or replacement of in-warranty units.

Texas Instruments strongly recommends that you insure the unit for value prior to shipment.

TEXAS INSTRUMENTS CONSUMER SERVICE FACILITY

U.S. Residents

Texas Instruments Service Facility
2303 North University
Lubbock, Texas 79415

Canadian Residents

Geophysical Services Incorporated
41 Shelley Road
Richmond Hill, Ontario, Canada L4C5G4

Consumers in California and Oregon may contact the following Texas Instruments offices for additional assistance or information.

Texas Instruments Consumer Service
831 South Douglas Street
El Segundo, California 90245
(213) 973-1803

Texas Instruments Consumer Service
10700 Southwest Beaverton Highway
Park Plaza West
Beaverton, Oregon 97005
(503) 643-6758

TEXAS INSTRUMENTS
INCORPORATED
DALLAS, TEXAS

PRINTED IN U.S.A.

1040361-1