

In addition to this installation manual, the Hard Disk Controller kit includes:

- * The Hard Disk Controller Board.
- * One 34-pin Hard Disk Controller Cable.
- * Four Shock Isolators and four screws for installing a hard disk in the bottom drive slot of a Tandy 3000. (These are not required for a Tandy 3000 HL installation.)
- * One hard disk drive LED. (This is not required for a Tandy 3000 HL installation.)

INSTALLATION

CAUTION: Static electricity can destroy integrated circuits. Be sure to discharge any built-up static electricity by touching a grounded metal object before handling the Hard Disk Controller board or touching any of the computer's logic boards.

If you have any doubts about your ability to install this board, have the service technicians at your Radio Shack Service Center install it for you. doing this not only ensures expert installation, but also enables the technicians to quickly check to be sure all the equipment is functioning properly.

Remember, you must have any internal disk drives installed before the Hard Disk Controller board installation. If you are installing the Hard Disk Controller board in a Tandy 3000 HL, you must also have the Universal Mounting Kit already installed. After you complete the disk drive installation, use the following procedures to install the Hard Disk Controller board in your computer.

REMOVING THE COVER

If you have not already done so, remove the system unit cover for access to your computer's internal components. Follow these steps to remove the cover

1. Be sure your computer and all peripherals are turned off. Disconnect the power cord from the back of the computer.
2. Remove the three large cover mounting screws from the computer's back panel. Remove the cover by sliding the entire housing toward the front of the computer.

The cover removal procedure is illustrated in the Installation and Operation Manual supplied with your computer.

NOTE: If your computer has a fan filter in the front of the unit, you might find it easier to remove the fan filter, Unfasten the Velcro tab that secures the filter to the bottom of the unit housing, and pull the filter straight down to remove it. Be sure to replace the fan filter after you complete the installation.

DISABLING YOUR COMPUTER'S FLOPPY DISK CONTROLLER

The Hard Disk Controller board also controller also controls your floppy disk drives. If you have not already done so, you must disable the floppy disk controller that comes with your computer so that it does not conflict with the Hard Disk Controller board.

Use the following steps to disable your computer's floppy disk controller. Note that the steps are different for a Tandy 3000 and a Tandy 3000 HL. If you are installing the Hard Disk Controller board in a Tandy 3000, remove the Floppy Disk Controller board that comes with the computer. If you are installing the Hard Disk Controller board in a Tandy 3000 HL, disable the Floppy Disk Controller that is on the computer's main logic board.

CAUTION: Wait at least ten seconds after turning off the power before beginning this procedure. Discharge any built-up static electricity by touching a grounded metal object.

TANDY 3000

1. Locate the Floppy Disk Controller board (usually in Option Slot 9), and disconnect the Floppy Disk Cable from this board. Disconnect the other end of the cable from the floppy disk drives. Save this cable to reconnect the floppy drives later.
2. Remove the screw that anchors the Floppy Disk Controller board's mounting bracket to the back panel of the computer, and gently lift the board out of the slot to remove it. Save this screw for later use during the Hard Disk Controller board installation.

Store the Floppy Disk Controller board in a safe place. If you later remove the hard disk controller board from your system, you must reinstall the Floppy Disk Controller board.

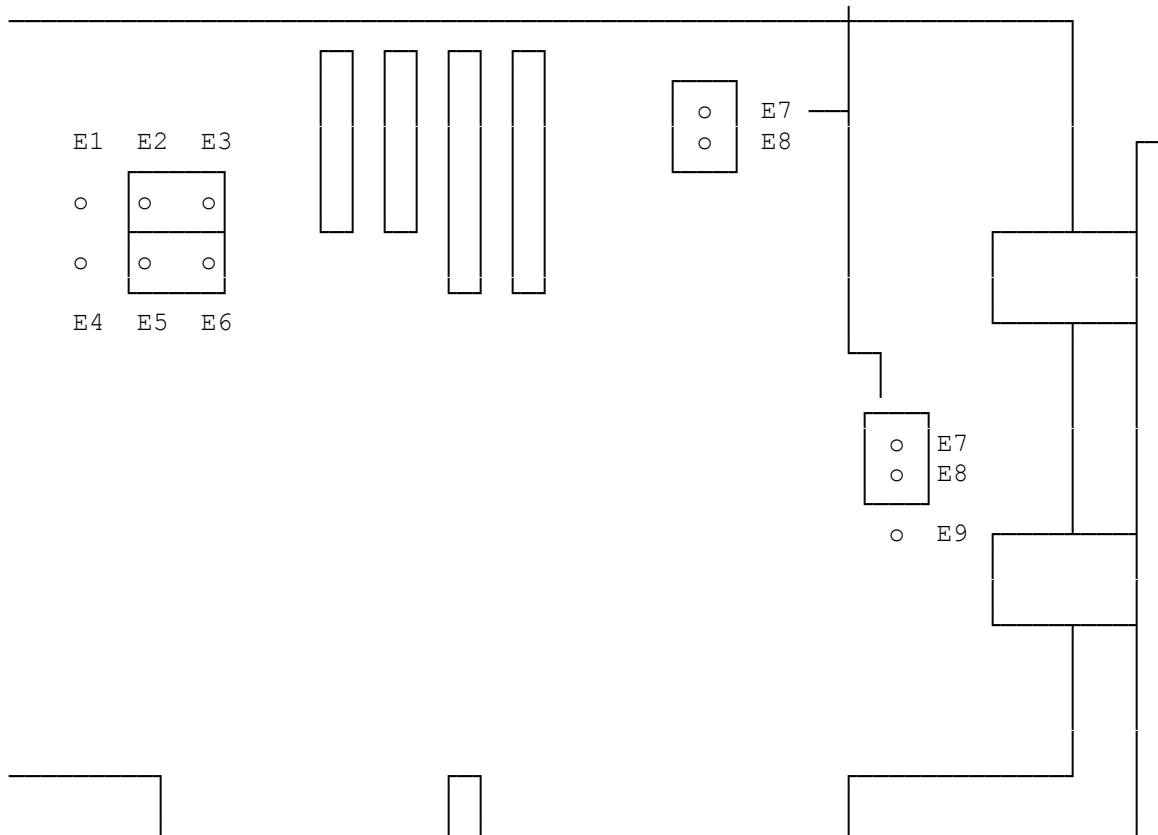
TANDY 3000 HL

1. Locate and disconnect the Floppy Disk Cable from the Floppy Disk Cable from the Floppy Disk Pin Connector (J15) on the main logic board. Disconnect the other end of the cable from the floppy drives late.
2. Now, locate the Floppy Disk Jumper Pins (E6-E7) on the main logic board. Remove the jumper from Pins E6 and E7 to disable the Floppy Disk Controller on the main logic board. You can either store this jumper or "hang" it on Pin E6.

INSTALLING THE HARD DISK LED

If you are installing the Hard Disk Controller Board in a Tandy 3000 computer, you must now install the Hard Disk LED. (This procedure is not necessary for a Tandy 3000 HL installation.) Snap the LED light into the small hole marked "HD ACTIVE" at the bottom left of the front of the computer housing. Then, run the LED cable along the inside front of the computer housing so that you can connect it to the Hard Disk Controller board after you install the board.

NOTE: If your computer has a fan filter in front of the unit, or a fan housing, follow the instructions in "Removing the Fan Housing" to install



2. Connect the 34-pin floppy Disk Cable to Connector J1 on the Hard disk Controller board. (This is the cable you previously removed.)

NOTE: Do not force these cables when connecting them to the Hard Disk Controller board. The connectors on the Tandy 3000 are keyed so that you can insert them in only one direction. The Tandy 3000 HL connectors are NOT keyed; however, take care to connect the cables gently.

3. Connect the 34-pin Hard Disk Controller Cable to Connector J5 on the Hard Disk Controller board.

4. Connect your primary drive's 20-pin Data Cable (included with the hard disk kit) to Connector J4 on the Hard Disk Controller board.

5. If you have two internal hard disk drives installed, connect the secondary drive's Data Cable to Connector J3 on the Hard Disk Controller board.

For 25-4001 Route Floppy Disk Controller Cable to the left.

6. After you connect these cables, fold them over as shown in the following illustration.

For 25-4001 Fold Floppy Disk Controller Cable as shown.

INSTALLING THE HARD DISK CONTROLLER BOARD

Now you are ready to install the Hard Disk Controller board. follow these

steps to install this board.

NOTE: If you have not yet install your optional internal disk drive(s), you should do so now. Refer to the installation instructions that come with your disk drive.

1. Select an empty, full-size option slot in which to install the Hard Disk Controller board. The best location for this board (so that the drive cables can easily reach the drive) is usually slot 9 in a Tandy 3000 or Slot 7 in a Tandy 3000 HL.
2. If you are installing the Hard Disk Controller board in a Tandy 3000 HL, you must first remove the slot cover. Remove the screw from the slot cover on the computer's pack panel. Then, tilt the slot cover away from the opening, and lift it out.

If you are installing the Hard Disk Controller board in a Tandy 3000, use the open Slot 9 form which you previously removed the Floppy Disk Controller board.

3. Slip the front edge of the Hard Disk Controller board into the plastic card guide at the front of the computer, and insert the board's metal mounting bracket into the slot opening. As you slide the front end of the board down the card guide, push the board's edge connector firmly into the option slot socket. Be sure the board is fully seated.
4. Use the screw you removed previously to secure the Hard Disk Controller board's mounting bracket to the back panel of the computer.

If you are installing the Hard Disk Controller Board in a Tandy 3000 HL, you are now ready to connect the cables. Skip the next two sections, "Removing the Drive Tower" and "Removing the Load Resistor", and proceed with the instructions in "Completing the Installation." Otherwise, continue with the next two sections before you complete the installation.

REMOVING THE DRIVE TOWER

For easy access to the disk drives in a Tandy 3000, you can remove the chassis that houses them (the drive tower). Before you remove the drive tower, note the location of and disconnect any cables still attached to internal drives. Then, remove the four screws that secure the tower to the bottom and the three screws that secure the tower to the front of the computer chassis.

NOTE: It is not necessary to remove the drive tower for a Tandy 3000 HL installation.

REMOVING THE LOAD RESISTOR

If your computer is a floppy-based Tandy 3000, a Load Resistor is attached to the side bottom drive slot. Pull apart the white cable connector to disconnect the Load Resistor from its cable. Now, remove the two screws that secure the Load Resistor to the side of the drive tower. Remove the Load Resistor and store it in a safe place. If you later remove the Hard Disk Controller Board and hard disk(s) from your computer for a floppy-only system, you must re-install the Load Resistor.

Now, carefully lift the drive tower up and out of the system unit. You are now ready to complete the installation.

COMPLETING THE INSTALLATION

To complete the Hard Disk Controller board installation, connect all internal disk drive cables. Do not force the cables as you connect them. These cables are keyed to connect in only one way. Try not to twist the cables as you connect them. The easiest way to assure that the disk drive cables lie flat is to thread them under the power cables.

1. Disconnect the main power cable connector from the main logic board by pressing in on the tabs as you lift the connector.
2. Connect your primary drive's Data Cable to the 20-pin card edge on your primary hard disk drive. (This cable is connected to J4 on the Hard Disk Controller board.)
3. If you have two internal hard disk drives installed, connect your secondary drive's Data Cable to the 20-pin card edge on your secondary hard disk drive. (This cable is connected to J3 on the Hard Disk Controller board.)
4. Connect one of the Hard Disk Controller Cable's edge connectors to the 34-pin card edge on your primary hard disk drive. (This cable is connected to J5 on the Hard Disk Controller board.)

You can connect either of the two edge connectors to the primary hard disk drive. However, it is easier to connect a secondary hard disk drive if you use the middle connector for the primary drive.

5. If you have two internal hard disk drives installed, connect the remaining edge connector on the Hard Disk Controller Cable to the 34-pin card edge on the secondary hard disk drive.
6. Connect the Floppy Disk Cable's end edge connector to the 34-pin card edge on your primary floppy disk drive. (This cable is connected to J1 on the Hard Disk Controller board.)
7. If you have two floppy disk drives installed, connect the middle edge connector on the Floppy Disk Cable to the 34-pin card edge on Drive B.
8. Connect the 4-pin power cables to your internal disk drives. These power cables are identical and can be connected interchangeably to any internal disk drives.
9. If you previously removed the drive tower, replace the drive tower. Use the screws you removed to secure it to the computer chassis. Be sure that no cables are under the drive tower when you replace it.
10. Reconnect the main power cable connector to the main logic board.
11. If you previously installed the Hard Disk LED in your computer, connect the black and orange hard disk drive LED cable to Connector J6 on the Hard Disk Controller board. Be sure the connector is oriented so that the two cables are toward the back of the computer.

12. After all internal cables are properly connected, replace the cover with the lip of the cover under the lower rail on the system unit's frame, slide the entire housing toward the back of the computer. Replace the cover mounting screws on the computer's back panel. Replace the fan filter if you previously removed it.
13. Reconnect all peripheral cables to the appropriate connectors on the back of the computer. Reconnect the power cord.

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