Introduction

Western Digital manufactures three AT adapter boards for use with intelligent or integrated hard disk drives. These drives have their own controller electronics mounted directly on the drive assembly. Many AT systems require an adapter card in order to accommodate these drives. The WD-AT adapter boards all provide an integrated hard disk interface that sup-ports two daisy chained drives. The WDAT-240 and WDAT-440 also provide a floppy controller which can support two daisy chained floppy drives. Two serial interfaces and a parallel interface are available on the WDAT-440.

MODEL	DESCRIPTION
WDAT- 140	Provides one hard drive interface
WDAT-240	Provides one hard drive interface and one floppy drive controller
WDAT-440	Provides one hard drive interface, one floppy controller, two serial ports, and one parallel port

Unpacking The Adapter Board

CAUTION

Hold the adapter board by the ends. Static electrical discharge can permanently damage components if the board is not carefully handled.

Remove the board from its anti-static pouch and inspect it for any visible signs of damage (scratches, loose components, broken connectors). Contact the dealer if there is damage.

Retain any packing materials for reuse if it becomes necessary to return your WDAT board.

This board does not work with XT drives or systems. If you have an XT drive and system, you need the WDXT-140 or WDXT-150.

You need to know the types of devices that you plan to connect to your adapter board in order to configure the board properly.

Identify Board

Figures 1-1 through 1-3 show the connector and jumper locations for the WDAT- 140, WDAT-240, and WDAT-440 adapter boards.

Look at the illustration for the board you are using and locate each connector and jumper block. Familiarize yourself with these locations. Note that the connector and jumper names are also marked on the board itself.

CAUTION
Handle the WDAT by the ends of the board. Some of the chips are static sensitive and damage may occur if the board is incorrectly handled.
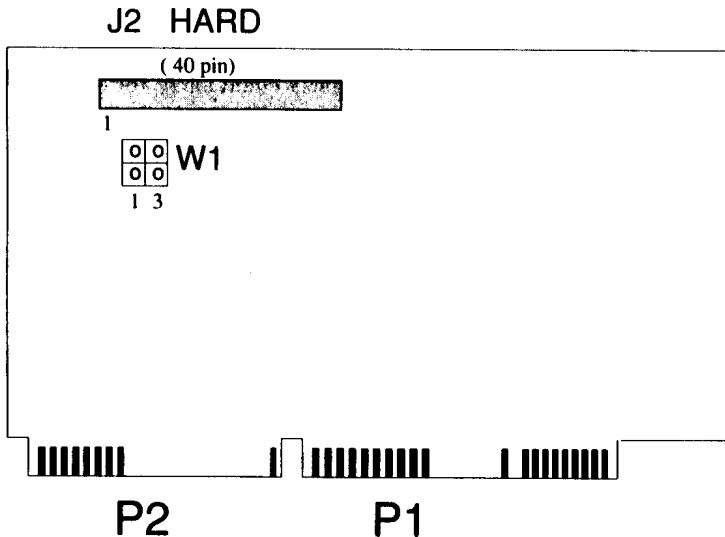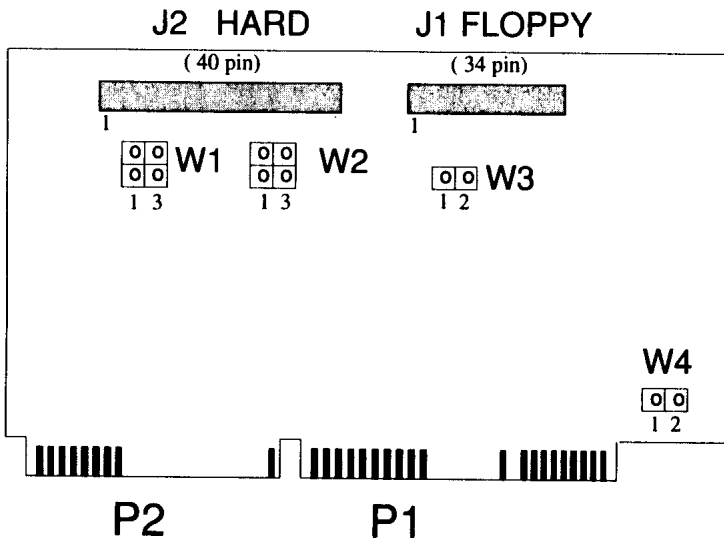

Figure 1-1. WDAT- 140 Adapter Board

J2 HARD   J1 FLOPPY

Figure 1-2. WDAT-240 Adapter Board
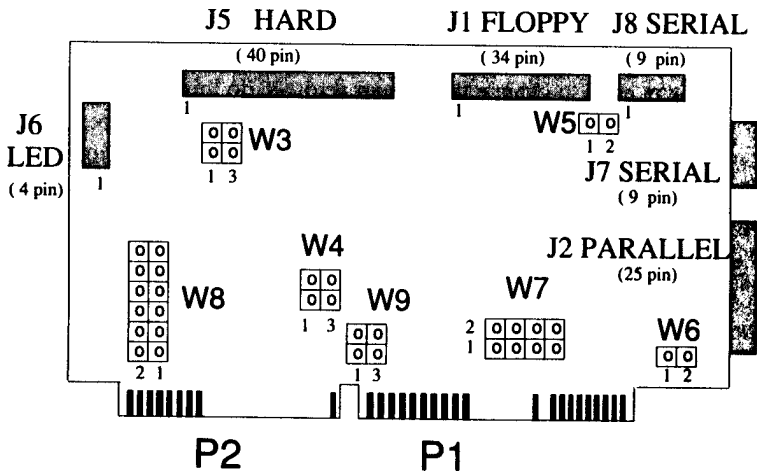
J5 HARD   J1 FLOPPY J8 SERIAL

Figure 1-3. WDAT Adapter Board

Jumpers

Installing a jumper shunt or removing a jumper shunt from the pins on a jumper block turns certain functions on or off. These functions define the peripheral hardware to your computer.

Western Digital configures the jumpers for the most common applications. It is unlikely that you will need to change any of the jumper settings.

Jumper Settings for the WDAT-140

The WDAT-140 board contains one jumper block, W1, which allows the DIRQl4 signal to pass directly to the host.

Do I Need to Change Any Jumpers?

No. Do **NOT** change any jumper settings on your WDAT- 140 board, ***unless*** you have an original Conner CP342 or CP3022 intelligent drive in an IBM AT. The factory default jumper setting is shown below. Jumper settings are discussed in detail in Appendix B, Table B-1.
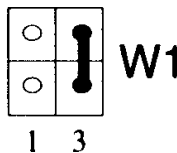
If you need to change the jumper settings, do this before you install the WDAT- 140 board into your computer. You change the jumper settings by installing or removing the jumper shunts on the W1 jumper block. Go to Appendix B for exact instructions **BEFORE** you change the jumper settings. If you do not need to change the jumpers, you can proceed to Chapter 2.

Jumper Settings for the WDAT-240

The WDAT-240 board contains four jumper blocks (W1, W2, W3, and W4) which define hardware parameters. By moving the jumper shunts, you can change the definition of the hardware which is attached to your computer. The jumpers must be configured to match your system hardware.

Do I need to Change Any Jumpers?

Probably not. We recommend that you not change any of the jumper settings unless you have one of the following conditions:

- You have an original Conner CP342 or CP3022 intelligent drive in an IBM AT.

- You want to disable the floppy drive controller or set an alternate address at 370-377.

- You have a two-speed floppy drive.

- You want to connect logic ground to the chassis.

The factory default jumper settings are shown below. WI jumper block allows the DIRQ14 signal to pass directly to the host. Jumper blocks W2 and W3 define the floppy address and floppy drive speed. W4 defines the ground connection. Jumper settings are discussed in detail in Appendix B, Tables B-2 through B-5.

W1   DIRQ14 passed directly to host bus 13

W2   Floppy controller enabled
Floppy primary address is 3F0-3F7

W3   Single speed floppy drive
(Dual speed floppy drive is selected, if this jumper block is installed and jumpered.)

W4   Logic ground is not connected to chassis
(Logic ground is connected to chassis, if this jumper block is installed and jumpered.)

If you need to change the jumper settings, do this before you install the WDAT-240 board into your computer. You change the jumper settings by installing or removing the jumper shunts on the jumper blocks (WI through W4). Go to Appendix B for exact instructions **BEFORE** you change the jumper settings. If you do not need to change the jumpers, you can proceed to Chapter 2.

Jumper Settings for the WDAT-440

The WDAT-440 board contains seven jumper blocks, W3 through W9, which define hardware parameters. By moving the jumper shunts, you can change the definition of the hardware which is attached to your computer. The jumpers must be configured to match your system hardware.

Do I Need to Change Any Jumpers?

Probably not. We recommend that you not change any of the jumper settings unless you have one of the following conditions:

- You have an original Conner CP342 or CP3O22 intelligent drive in an IBM AT.

- You want to set an alternate address at 370-377.

- You have a two-speed floppy drive.

- You want to change printer port or serial port definitions or addresses. You can change the jumper settings to re-configure the parallel port as LPT2. You can also re-configure the external serial port as COM3 and the internal serial port as COM4 by moving the jumpers.

- You want to connect logic ground to the chassis.

The factory default jumper settings are shown below. Jumper blocks W3 and W9 define the hard disk drive interface and W4 and W5 define the floppy address and floppy drive speed. The jumpers at W7 and W8 define the parallel and serial ports. W6 defines the chassis-to-ground logic (chassis ground is independent of logic ground). Jumper settings are discussed in detail in Appendix B, Tables B-6 through B-12.

If you need to change the jumper settings, do this before you install the WDAT440 board into your computer. You change the jumper settings by installing or removing the jumper shunts on the jumper blocks (W3 through W9). Go to Appendix B for exact instructions **BEFORE** you change the jumper settings. If you do not need to change the jumpers, you can proceed to Chapter 2.
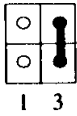
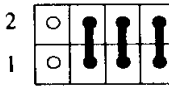**W3**   W3 DIRQI4 passed directly to host bus

1   3
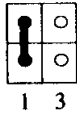
W4   W4 Floppy controller enabled
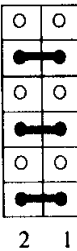   Floppy primary address is 3F0-3F7

1   3

W5   W5 Single speed floppy drive

1   2

W6   W6 Logic ground not connected to chassis

1   2

W7   W7   COM 1 Interrupt = IRQ4
               COM2 Interrupt = IRQ3
               Parallel printer interrupt = IRQ7

2
1

W8

     W8   Internal serial port = COM2 (2F8-2FF)
             External serial port = COM1 (3F8-3FF)
             Printer address, LPTl = 378-37F
             Printer enabled

2   1

W9   W9   Hard disk drive enabled

1   3