

Revision Record

ECO#	Rev	Date	Description
	A	06-17-88	Initial release
	B	08-08-88	AT LED connector
	C	10-05-88	BIOS address jumpers



DATA TECHNOLOGY

C O R P O R A T I O N

5150X DISK CONTROLLER

INSTALLATION GUIDE

TABLE OF CONTENTS

	<u>PAGE</u>
1.0 Introduction.....	1
2.0 Jumper Option Setup Instructions.....	1
2.1 BIOS Address Jumpers.....	1
2.2 Software Readable Jumper.....	2
2.3 AT LED Connector.....	2
3.0 Cable Requirements.....	2
4.0 Formatting The Disk.....	2
4.1 Drive Type Table for CXD BIOS	5

Data Technology corporation Part Number 09-00440C-1
Revision C October 5, 1988

This installation guide and the associated software and
firmware are copyright protected.
(C) 1988, Data Technology Corporation

IBM and PC/XT are registered trademarks of International
Business Machines Corporation.

* * * WARNING * * *

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * Reorient the receiving antenna.
- * Relocate the computer with respect to the receiver.
- * Move the computer away from the receiver.
- * Plug the computer into a different outlet so that computer and receiver are on different branch circuits.
- * If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from:

U.S. Government Printing Office
Washington, DC 20402.

Stock No. 004-000-00345-4

NOTE: When interfacing with an external device, a shielded cable must be used to comply with FCC regulations.

1.0 Introduction

This easy to install hard disk controller is able to control a maximum of two ST-506 type industry standard 3-1/2" or 5-1/4" Winchester disk drives under IBM PC DOS version 2.0 or later on an IBM PC/XT or compatible.

PLEASE READ THIS INSTALLATION GUIDE CAREFULLY BEFORE STARTING INSTALLATION

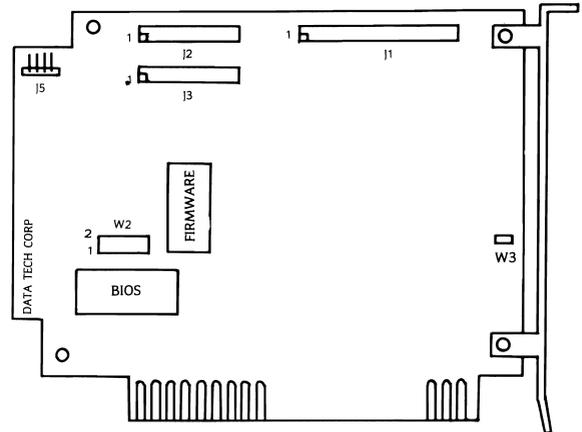


FIGURE 1. JUMPER AND CONNECTOR LOCATIONS ON DTC-5150X

2.0 Jumper Option Setup Instructions

The following information pertains to the DTC-5150X when used with Data Technology Corporation's CXD BIOS.

2.1 BIOS Address Jumpers (W2)

The BIOS address jumpers (W2 pins 3-4 and 5-6) allow the BIOS address to be relocated. The default setting places it at address C800:0000. As shown below, alternate addresses can be selected by changing the jumpers.

2.1 Con't

A reserved jumper (W2 pins 7-8) is for internal use only and must be installed for the controller to operate properly.

W2:	3-4	5-6	BIOS ADDRESS
	ON	ON	C800:0000
	ON	OFF	CA00:0000
	OFF	ON	D800:0000
	OFF	OFF	F400:0000

2.2 Software Readable Jumper (W3)

This jumper is used to manually set the Winchester drive type. The factory setting is for W3 to be installed for ST225 drive types. By removing W3, a screen menu for drive definition (See Section 4.1) will be selected.

2.3 AT LED Connector (J5)

If the controller is used in AT-type systems, this connector is provided for the proper operation of the drive activity LED indicator.

3.0 Cable Requirements

a. The following ribbon cables are required for these configurations.

1. One internal drive:
One 20-conductor cable
One 34-conductor cable
2. Two internal drives:
Two 20-conductor cables
One 34-conductor twisted or flat daisy-chain cable

b. This 34 pin cable connects to J1 on the 5150X, (Note: When using a twisted cable, both drives must be set to drive select 2.)

c. The 20 pin cable connects to J2 and/or J3. The drive logical unit number is determined by a setting on the disk drive, not by the choice of cable connector J2 or J3

(See Figure 1 for location of cable connectors)

4.0 Formatting The Disk

Warning! The Data Technology Corporation hard disk formatting utility will erase all data on the hard disk! It should only be run once, the first time you install your hard disk.

4.0 Con't

a. Place a copy of IBM DOS 2.0 or later into floppy drive A: and apply power to the system in the normal sequence.

b. After booting DOS successfully from the floppy drive, execute the following command upon receiving the "A>" prompt:

debug

(If your DOS came on two diskettes, the DEBUG program may be on the second diskette). Debug will respond with a "-" prompt.

c. Respond to the "-" prompt with the command:

g=c800:5

d. This will initiate the hard disk format utility and the following message will appear:

* Format Utility *

Drive no (1-2): (Enter the drive number that you want to format.)

Interleave (2-9): (Enter the interleave factor desired. For optimal system performance an interleave of 3 is recommended).

e. With jumper W3 installed, the following information is displayed:

* Cyl: 615

* Heads: 4

* Precomp: 256

* Reduced write current: 615

* Step rate: 10 micro sec

Enter drive defect table? (Y/N)

Is above all correct? (Y/N)

Ready to ERASE entire disk? (Y/N)

f. If jumper W3 is not installed, a drive table (See Section 5.1) will appear on the screen.

After you have selected the correct drive type by the table number, the system will display the drive configuration that has been selected. Answer the following questions that will appear below the drive configuration.

4.0 Con't

Correct drive type (Y/N)?
Split into 2 logical units? (Y/N)
Enter drive defect table? (Y/N)
Is above information correct? (Y/N)
Ready to ERASE entire disk? (Y/N)

- g. If the drive type that you have is not listed in the drive table, select table number 15 for FREE FORMAT. The following questions will appear:

Cylinders (1-2048):

Heads (1-16):

Step rate (micro sec): (default = 40)
(5, 10, 20, 30, 40, 50, 60, 70)

Reduced Write Current at Cylinder:
(0 to Max Cylinders) (default = NONE)

Write Precompensation at Cylinder:
(0 to Max Cylinder) (default = NONE)

Split into 2 logical units? (Y/N)
Enter drive defect table? (Y/N)
Is above all correct? (Y/N)
Ready to ERASE entire disk? (Y/N)

- h. When the format is done, the following message will appear:

Format Complete.

Insert DOS diskette in drive A
Proceed to FDISK and FORMAT.
Hit any key to reboot the system.

- i. If you have more than one hard disk, repeat the same procedure for the next physical hard disk.
- j. Proceed with the normal DOS procedure for bringing up a hard disk using FDISK and FORMAT commands. See your DOS manual for further instructions.

4.1 Drive Type Table for CXD BIOS

<u>Drive Type</u>	<u>Hds</u>	<u>Cyl</u>	<u>Precomp</u>
0: ST-225	4	615	256
1: ST-4038	5	733	300
2: Miniscribe-3425	4	615	128
3: ST-212	4	306	
4: Priam-V150	5	987	
5: Priam-V170	7	987	
6: Miniscribe-8425 Kyocera-20A/20B	4	615	
7: ST-138	6	615	
8: ST-4051	5	977	
9: ST-251/251-1	6	820	
10: Microscience-725	4	612	
11: ST-4053 Miniscribe-3053/6053	5	1024	
12: Maxtor-1085 Newbury Data-1085 Miniscribe-6085	8	1024	
13: ST-4096	9	1024	
14: Maxtor-1140 Newbury Data-1140	15	918	
15: Free Format			