



# DATA TECHNOLOGY

C O R P O R A T I O N

## 5160X DISK CONTROLLER

### INSTALLATION GUIDE

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trademarks of their respective companies.

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 RLL hard disk controller is able to control a maximum of two ST-506 type industry standard 3-1/2" or 5-1/4" Winchester RLL 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

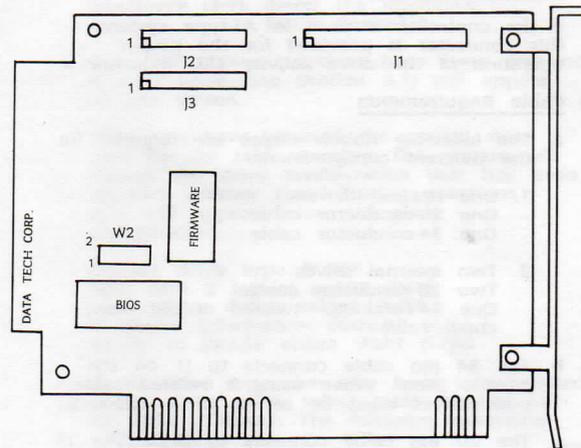


FIGURE 1. JUMPER AND CONNECTOR LOCATIONS ON DTC-5160X

## 2.0 Jumper Option Setup Instructions

The following information pertains to the DTC-5160X when used with Data Technology Corporation's CRD BIOS.

### 2.1 BIOS Address Jumpers

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.

Cont

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

### AT LED Connector

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

### Cable Requirements

a. The following ribbon cables are required for the different 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. The 34 pin cable connects to J1 on the 5160X. (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)

### 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.

a. After starting DOS successfully from the floppy drive, execute the command: debug

(If you DOS came on two diskettes, the DEBUG program may be on the second diskette). Debug will respond with a “.” prompt.

### 4.0 Cont

b. Respond to the “.” prompt with the command:

g=c800:5

c. 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.)

d. Once the above questions have been answered, a drive table (See Section 3.1) will appear on the screen.

e. 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.

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)

f. If the drive type that you have is not listed in the drive table, select table number 12 for FREE FORMAT. The following questions will appear:

Cylinders (1-2048):

Heads (1-16):

Sectors (default = 26):

Please enter the default setting of 26 sectors per track unless the Seagate ST-250R RLL 40MB disk drive is used. The ST-250R requires a format of 31 sectors per track.

Step Rate (micro sec): (default = 20)

(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 Cylinders) (default = NONE)

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

Format Complete.

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

- h. If you have more than one hard disk, repeat this procedure for the next physical hard disk.
- i. 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 CRD BIOS

<u>Drive Type</u>	<u>Hds</u>	<u>Cyl</u>	<u>Precomp</u>
0: ST-238R/138R, Fuji-39R Kyocera-30A/30B	4	615	
1: ST-251R	4	820	
2: ST-157R, Fuji-58R	6	615	
3: Miniscribe-3438/8438 NEC-5126	4	615	128
4: ST-277R	6	820	
5: Miniscribe-6128 Maxtor-1120R	8	1024	
6: ST-4144R	9	1024	
7: Maxtor-1240R	15	1024	
8: Microscience-738	4	612	
9: PTI-238R	4	615	410
10: PTI-357R	6	615	410
11: CDC-Wren II	5	989	
12: Free Format			

## Revision Record

ECO#	Rev	Date	Description
	A	06-30-88	Initial release
	B	08-08-88	AT LED connector
	C	10-05-88	BIOS address jumpers