

8510/a
Graphics Computer System

Auxiliary Drive Cable Converter
Installation Guide
Part No. 50-0019-001 Rev. A

This document describes the installation of a TERAk Auxiliary Drive Cable Converter in an 8510/a Graphics Computer System that has an original Single Density-only Disk Drive Controller in the 8510 unit and has drives in the 8515 and/or 8512 units that are configured for Variable Density operation. The installation consists of fitting the Converter in series with one of the "daisy chain" cables that interconnect the drives.

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8510/a GRAPHIC COMPUTER SYSTEM
AUXILIARY DRIVE CABLE CONVERTER
INSTALLATION GUIDE
FIRST EDITION
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1. ORIGINAL SINGLE DENSITY CONTROLLER-NEW VARIABLE DENSITY CONTROLLER EIB INTERCONNECTION

Drives that have been configured to operate with the Variable Density Controller can still be used with 8510 units that contain the original Single Density-only Disk Drive Controller. An optional Auxiliary Drive Cable Converter, (P/N 92-0030-001), is required.

This module fits in series with one of the "daisy chain" cables used to interconnect the drives, as shown in Figure 1-1. This conversion can only be performed once per "daisy chain". For example, if 3 drives have been modified for Variable Density operation, the Cable Converter would be attached between the Single Density Controller-equipped 8510 Drive EIB and the next Variable Density drive in the chain. A mixture of Single Density and Variable Density-configured drives can be utilized; the Cable Converter is attached so that the Variable Density drives are always the last ones in the chain.

Forty-circuit "daisy chain" cables are used to interconnect the drive _units, as shown in Figure 1-2. The top connector of the 8510 Single Density EIB should be attached to the center connector of the next Single Density EIB in the chain, and so on. The center connector, of the Drive EIB of the Variable Density-configured unit connected to the Cable Converter, should be attached to the bottom connector of the next Variable Density EIB in the chain, and so on.

The daisy chain cables that interconnect the original Single Density drive EIBs are keyed to prevent misconnection. The daisy chain cables for the new Variable Density drive EIBs are also keyed, but not on the same pins as the Single Density daisy chain cables. The daisy chain cables for the Variable Density drive EIBs, and the EIBs themselves, are color coded orange and blue, to aid interconnection. A daisy chain cable for Variable Density drive EIBs cannot be used to interconnect Single Density drive EIBs, and, conversely, a Single Density daisy chain cable cannot be used to interconnect Variable Density drive EIBs.

The Cable Converter connectors are also keyed. The connector soldered directly to the Converter board is color-coded orange and must be connected to the cable that should be attached to the bottom connector of the first Variable Density Drive EIB in the chain, as shown in Figure 1-2. The other connector, at the end of the Converter cable, should be attached to the top connector of the last Single Density EIB in the chain.

NOTE: When a Cable Converter is installed, the resistor terminator DIP (Dual-In-line-Package), shown in Figure 1-2, must be installed on the 8510 Single Density Controller EIB with pin 1 oriented as shown. The drives installed after the Cable Converter must not be terminated with a resistor DIP.

2. VARIABLE DENSITY DRIVE EIB ADDRESS SELECTION

In the original Single Density-only configured 8510/a system, the drive addresses of the units were assigned by means of jumpers on the drive PWBs. Those jumpers were accessed via a cover plate on the bottom of the units. Now, switches on the Variable Density EIBs allow the user to assign a Variable Density-configured drive to any unit number (between 0 and 3), without any further alterations to the drive PWB jumpers. For instance, the first Variable Density-configured drive, after the Auxiliary Drive Cable Converter shown in Figure 1-2, could be assigned as Unit 0 and the second Variable Density-configured drive could be assigned as Unit 3. In that particular instance, the 8510 drive and the other Single Density drive would have to be jumper-selected as Units 1 and 2. Each drive, regardless of its density configuration, can be assigned any unit number (0 through 3).

The Variable Density-configured drives are assigned unit numbers, by means of the DIP switches (shown in Figure 1-2) on their Variable Density EIBs, as follows:

Switch Settings								Unit Selected
SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	
ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	0
OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	1
OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	2
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	3

NOTE: DO NOT ASSIGN THE SAME UNIT NUMBER TO MORE THAN ONE DRIVE, REGARDLESS OF ITS CONFIGURATION.

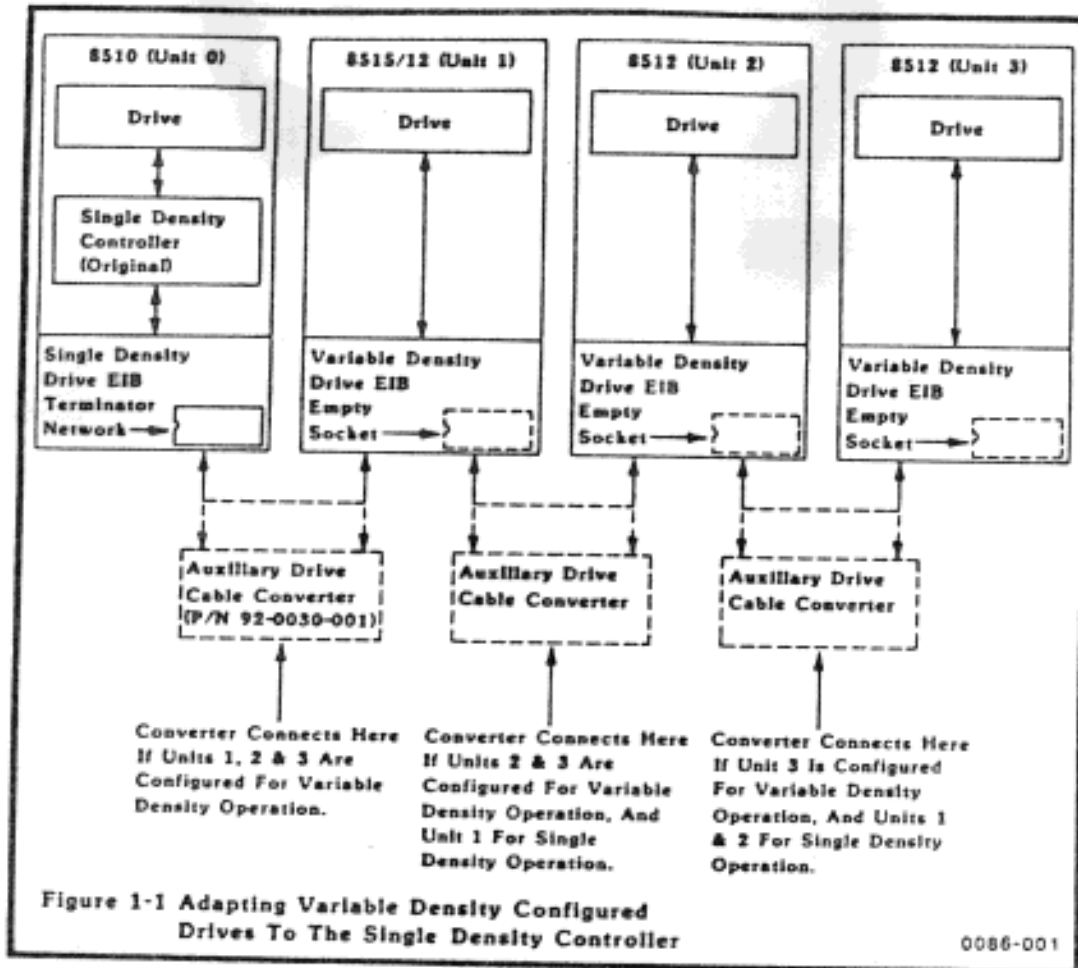


Figure 1-1 Adapting Variable Density Configured Drives To The Single Density Controller

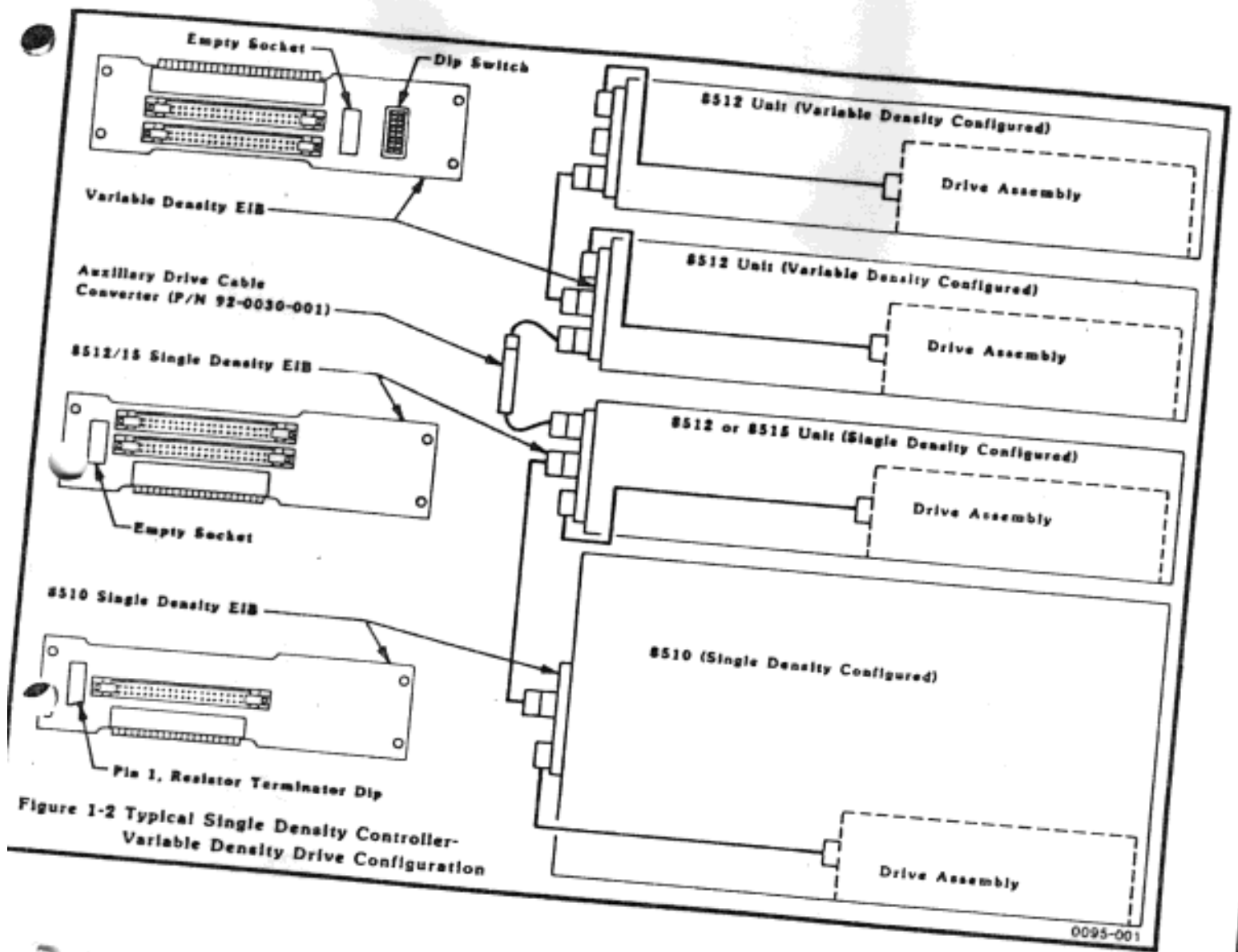


Figure 1-2 Typical Single Density Controller-
Variable Density Drive Configuration