

## COPY UNIT MODEL NO. DS596

Before installing this option, a **TECHNICALLY QUALIFIED INDIVIDUAL**, who is familiar with this type of equipment and hazards involved, should **READ** this **ENTIRE INSTRUCTION SHEET**.

### INTRODUCTION

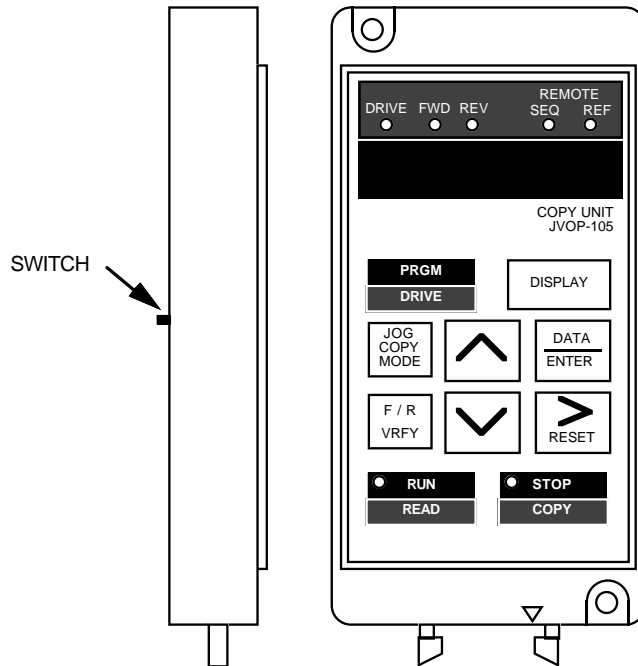
When installed, the Copy Unit (DS596) is used to read out constant settings from a drive and to copy them into other drives easily from a remote location, up to 9.8 ft (3 m) from the drive. The Copy Unit is similar to Digital Operator, Model No. DS393.

**NOTE:** Constants cannot be read from and copied to different types of drives.

**EXAMPLE:** GPD 333 ———> GPD 503.

### IMPORTANT

The appropriate length Remote Operator Cable for connecting the Copy Unit, and the Remote Interface Panel, Model DS390 (for the GPD 333), must be ordered separately.



**Figure 1. Copy Unit**

CHANGE RECORD			

DWG. NO. 02Y00025-0415  
SHEET NO. 1 OF 5  
REL. 10/28/96 (m-df)

## COPY UNIT SPECIFICATIONS

DRIVE TYPE	ADDITIONAL ITEMS NEEDED FOR COPY UNIT INSTALLATION
GPD 333	Remote Interface Panel, Model No. DS090, + Remote Operator Cable (1)
GPD 503	Remote Operator Cable (1)

(1) Remote Operator Cables available: 1 m cable - Model No. DS351; 3 m cable - Model No. DS353

- The external dimensions, LED display section and connections with the drive are the same as Digital Operator, Model No. DS393.
- Backup power supply is not required, because EPROM is used as a data memory element.
- Number of writing times: Up to 100,000.
- Copy Unit has the same functions as Digital Operator, Model No. DS393.
- The Copy Unit is capable of storing three (3) different sets of constants.
- Prohibition of constant read out can be set by the switch located on the rear side of the Copy Unit.

### CAUTION

1. Turn power off when you connect or remove the Copy Unit. If you remove the connection cable during Copy Unit operation, the drive may not operate normally.
2. Constants cannot be read from/copied to different types of drives.  
EXAMPLE: You cannot read constants from a GPD 333 and copy them to a GPD 503.
3. When the Copy Unit is used for a drive on which a special PROM is mounted, contact your MagneTek representative.

## INSTALLATION

### WARNING

**Hazardous voltage can cause severe injury or death. Lock all power sources feeding Drive in "OFF" position.**

1. Disconnect all electrical power to Drive.
2. For GPD 333: Refer to option instruction sheet 02Y00025-0352 to install the Remote Interface panel on the GPD 333.

Connect one end of the Remote Operator Cable to the connector on the Remote interface panel, and the other end to the connector at the bottom of the Copy Unit.

For GPD 503: Remove Drive front cover.

Disconnect the ribbon cable of the Digital Operator from the connector on the Control PCB. (The Digital Operator can remain in its mounting location.)

Connect one end of the Remote Operator Cable to the connector on the Control PCB, and the other end to the connector at the bottom of the Copy Unit.

3. Reconnect power to the Drive.

## OPERATION

On power up, the Copy Unit will always be in the Digital Operator mode ("DRIVE" LED is illuminated).

### Change From Digital Operator Mode to Copy Mode:

In the Copy mode, the user can read out, write in and verify drive parameters.

1. Press the PRGM / DRIVE key to change from the Drive mode to the Program Mode ("DRIVE" LED extinguishes).
2. Press the STOP / COPY and JOG / COPY MODE keys simultaneously.
3. The display will blink "----" for approximately five seconds; then the "DRIVE" LED will begin blinking, indicating that the Copy Unit is in the Copy mode.
4. Use the "up arrow" and "down arrow" keys to select from three memory locations.

NOTE: Drives classified as high horsepower are restricted to one memory location, namely SEL-1.

5. The user may at this point either READ parameters from the drive or COPY parameters stored in the Copy Unit to the drive.

### READ (Read-Out):

1. Use the "up arrow" and "down arrow" keys to select a desired memory location.
2. Press the RUN/READ key for two seconds, which causes the display to blink " *r EAD* ". After completion, the display will indicate completion by flashing " *END* ".
3. The display returns to memory selection display.

### COPY (Write-in):

1. Use the "up arrow" and "down arrow" keys to select a desired memory location.
2. Press the STOP/COPY key for two seconds, causing the Copy Unit's memory selection parameters to be copied into the Drive, during which the display will blink " *CoPY* ". After completion, the display will flash " *END* ".
3. The display returns to memory selection display.

### Verification Function (VRFY):

The purpose of this operation is to verify the Copy Unit's internal constants with the Drive's internal constants.

NOTE: VRFY is enabled only between the same models - i.e. drives of the same capacity.

1. Using the "up arrow" and "down arrow" keys, make a memory selection.
2. Execute verification by pressing the F/R / VRFY key for two seconds, which in turn causes " **urFY** " to be flashed on the display.
3. If unmatched constants are detected, the constant number is displayed (e.g. **Sn-04** ). By pressing the DATA / ENTER key, the Drive's internal value for that constant is displayed (e.g. **00 11** ). Pressing the DATA / ENTER key again will cause the display to show the Copy Unit's internal value for that constant ( e.g. **00 10** ).
4. To continue the process, simply press F/R / VRFY key again. If more unmatched constants are detected, step three procedure should be repeated.
5. Once the verification function is complete, " **END** " appears on the display, followed by a return to the memory selection display (e.g. SEL-2).
- 6 Pressing the "right arrow" / RESET key during the verification process causes the verify operation to be canceled, followed by a return to the memory selection display.

### Change From Copy Mode to Digital Operator Mode:

To exit the Copy mode and return to the Digital Operator mode, press the JOG / COPY MODE key.

NOTE: When returning to the Digital Operator mode from the Copy mode, a GPD 333 will be in the Drive mode, while a GPD 503 will be in the Program mode.

### Additional Features:

While the memory selection is displayed, the user can enter a 5-digit value which identifies a particular set of constants (called memo), determine the voltage class & capacity of the Drive and the last five digits of the PROM installed.

To identify a particular set of constants, first press the DATA / ENTER key, then use the "up arrow", "down arrow" and "right arrow" / RESET keys to change the display to the desired ID number. Press the DATA / ENTER key again and the voltage class and applicable motor capacity is displayed (e.g. **23P7** ). Press the DATA / ENTER key again to display the last five digits of the PROM No. Return to the memory selection display by pressing the DATA / ENTER key.

If no memory data is contained in a memo selection, the display will blink " **nodAT** " for three seconds, and then the display returns to the memory selection.

**LIST OF COPY UNIT DISPLAYS**

DISPLAY	DESCRIPTION	TROUBLESHOOTING
<b>SEL-1</b>	Memory selection display	n/a
<b>rEAD</b>	During read-out	n/a
<b>CoPY</b>	During write-in	n/a
<b>urFY</b>	During verification	n/a
<b>noDAT</b> (NO DATA)	No constant data found at the entered memory (memo) location.	n/a
<b>ProEr</b> (PROHIBIT ERROR)	An attempt to read was made when READ prohibit SW is turned on.	Turn off the switch on the Copy Unit to enable reading.
<b>CAPEr</b> (CAPACITY ERROR)	An attempt to copy or verify between different Drive models was made.	n/a
<b>d iFPS</b> (DIFFERENT PASSWORD)	Connected Drive has a different password from that of stored data. EXMAPLE: Copy from GPD 503 to GPD 333.	n/a
<b>noAPL</b> (NOT APPLICABLE)	READ, COPY or VRFY was attempted for special PROM Drive.	Special setting for special PROM is needed.
<b>CSEr</b> (CHECKSUM)	An error occurred by checksum calculation for the stored data.	Stored constants cannot be used. Try READ again.
<b>E2PEr</b> (E2 PROM ERROR)	Although an attempt to store constants in the Copy Unit, they cannot be stored correctly.	Use other memory No. E2 PROM fault in the Copy Unit.
<b>iFER</b> (I/F ERROR)	An error occurred in communication with the Drive.	Check connection between the Copy Unit and Drive.
<b>CPYEr</b> (COPY ERROR)	Data could not be written in normally to the Drive in COPY operation.	Try COPY operation again.
<b>CPF04</b> (DRIVE CPF04 FAULT)	An attempt to write in constants to the Drive was made but they could not be written in normally at the Drive.	Execute initialization of constants in the Program mode. Drive constant memory element (NVRAM, EPROM) fault. If the same fault occurs again, replace the Drive's Control PCB.