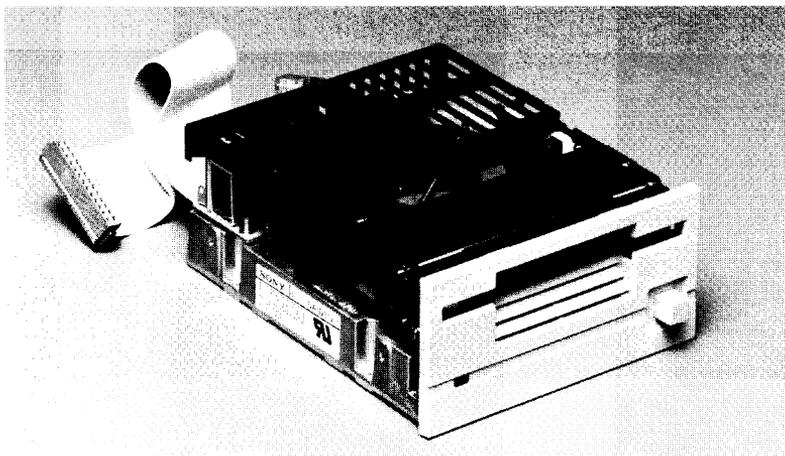


3 1/2-INCH FLEXIBLE DISC DRIVE MECHANISM



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INTRODUCTION

The 3 1/2-inch Flexible Disc Drive is a random-access drive, available in both single-and dual-head configurations. The single-head version is used in the HP 9121D/S and HP 9133 A/B/V/XV products. The dual-head drive is used in the 3 1/2-inch products: HP 9133D/H, HP 9122D/S, HP 9114A and HP 9153A.

SPECIFICATIONS

	Single-Sided	Double-Sided
Dimensions		
Net Weight	650g	(1.5 lbs)
Height	51mm	(2.0 in.)
Depth	130mm	(5.1 in.)
Width	102mm	(4.0 in.)
Format		
Surfaces used per disc	1	2
Encoding		MFM
Rotational speed		600 RPM
Track density		135 tracks per inch
Tracks/surface	70	80
Capacity		
Bytes/sector		
Sectors/track	SEE SPECIFIC PRODUCT SECTION	
Tracks		
Bytes/drive (Formatted)		
DC Voltage Requirements		
	+12V \pm 5% @ 0.4A typical	
	+ 5V \pm 5% @ 0.6A typical	
Power Dissipation		
	7.5 Watts continuous	
	3.3 Watts standby	

Operating Limits

Temperature	10 to 40°C (50 to 104°F)
Humidity	20 to 80% with maximum wet bulb temperature (non-condensing) not to exceed 29°C (85°F).
Altitude	0 to 4600 m (0 to 15,000 ft)

Non-operating Limits (storage and transit)

Temperature	-40 to 60°C (-40 to 140°F)
Altitude	-304 to 15240 m (-1000 to 50,000 ft)

CONFIGURATION**UNIT SELECT SWITCH CONFIGURATION**

The drive mechanism has 2 switches to configure: the Unit Select Switch, and the Motor-Control Switch.

The Unit Select Switch position will vary with the product and drive unit number. Use Figures 1 and 2 for location and proper setting of these switches.

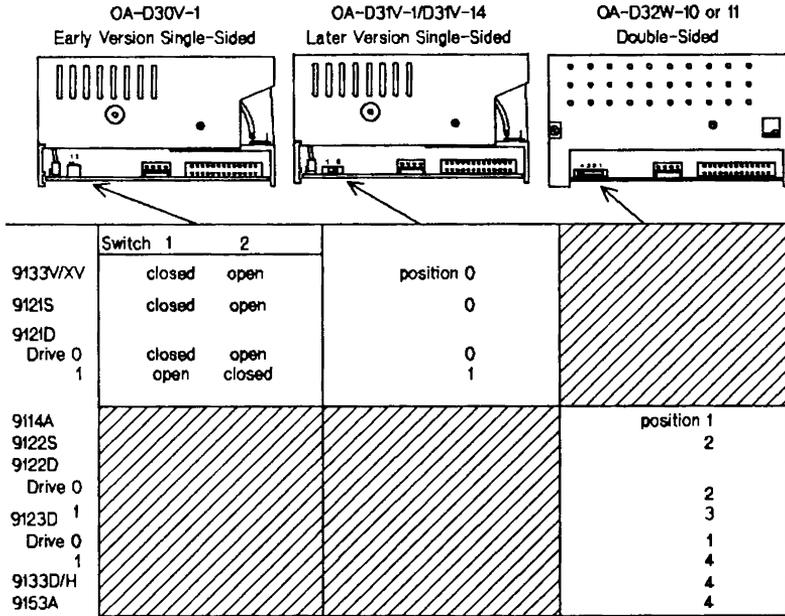


Figure 1. Unit Select Switch Configuration.

MOTOR-CONTROL SWITCH CONFIGURATION

The Motor-Control switch determines the following: in one position, the motor is turned on when accessed, ONLY when a disc is in the drive; in the other, the motor turns on, momentarily, with or without a disc installed. All HP 3 1/2-inch drive products use the second position (motor-on with or without a disc) to check the index pulses generated by the motor.

Refer to Figure 2 in the following explanation of the switches and jumpers.

- Position "A" of the switch = motor on only when a disc is in the drive.
- Position "1" of the jumper
- Position "B" of the switch = motor turns on, momentarily, with or without disc in the drive.
- Position "2" of the jumper

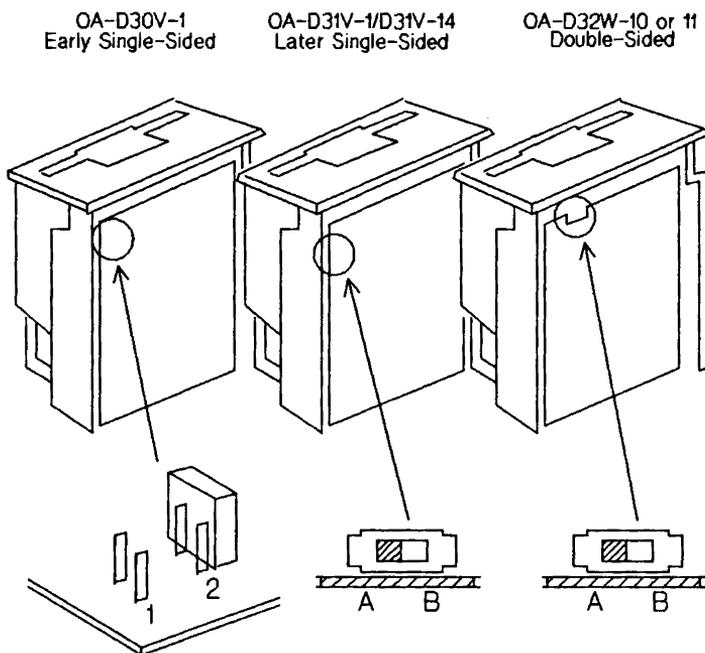


Figure 2. Motor-Control Switch Configuration.

TROUBLESHOOTING PROCEDURES

Field repairs of the 3 1/2-inch mechanism are limited to head cleaning, load pad replacement, and complete unit (mechanism and Drive Electronics PCA) replacement.

The troubleshooting procedure is as follows:

1. For initial problem isolation, see the appropriate product-numbered tab.
2. When **READ/WRITE** problems occur with a particular drive: first clean the head(s) with the cleaning disc; replace the load pad on single-sided drives (see "LOAD PAD ASSEMBLY REPLACEMENT" for this information).

3. When **SEEK** or **HEAD-POSITION** problems occur on a particular drive, replace the drive mechanism.

LOAD PAD ASSEMBLY REPLACEMENT

A new load pad (09121-88877) comes with an attached plastic mounting tab. If replacement of the load pad on an early version (0A-D30V-1) drive is necessary, replace the drive assembly. The older pad is not available.

Verify drive operation. If read errors occur, rotate the pad assembly 90 degrees with a small screwdriver and test again.

REPLACEABLE PARTS

Exchange Assemblies

09121-69521	3 1/2-inch Drive Assembly (single)
09114-69511	3 1/2-inch Drive Assembly (double)

Non-Exchange Assemblies

09121-88877	Load Pad Assembly
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