HEWLETT-PACKARD
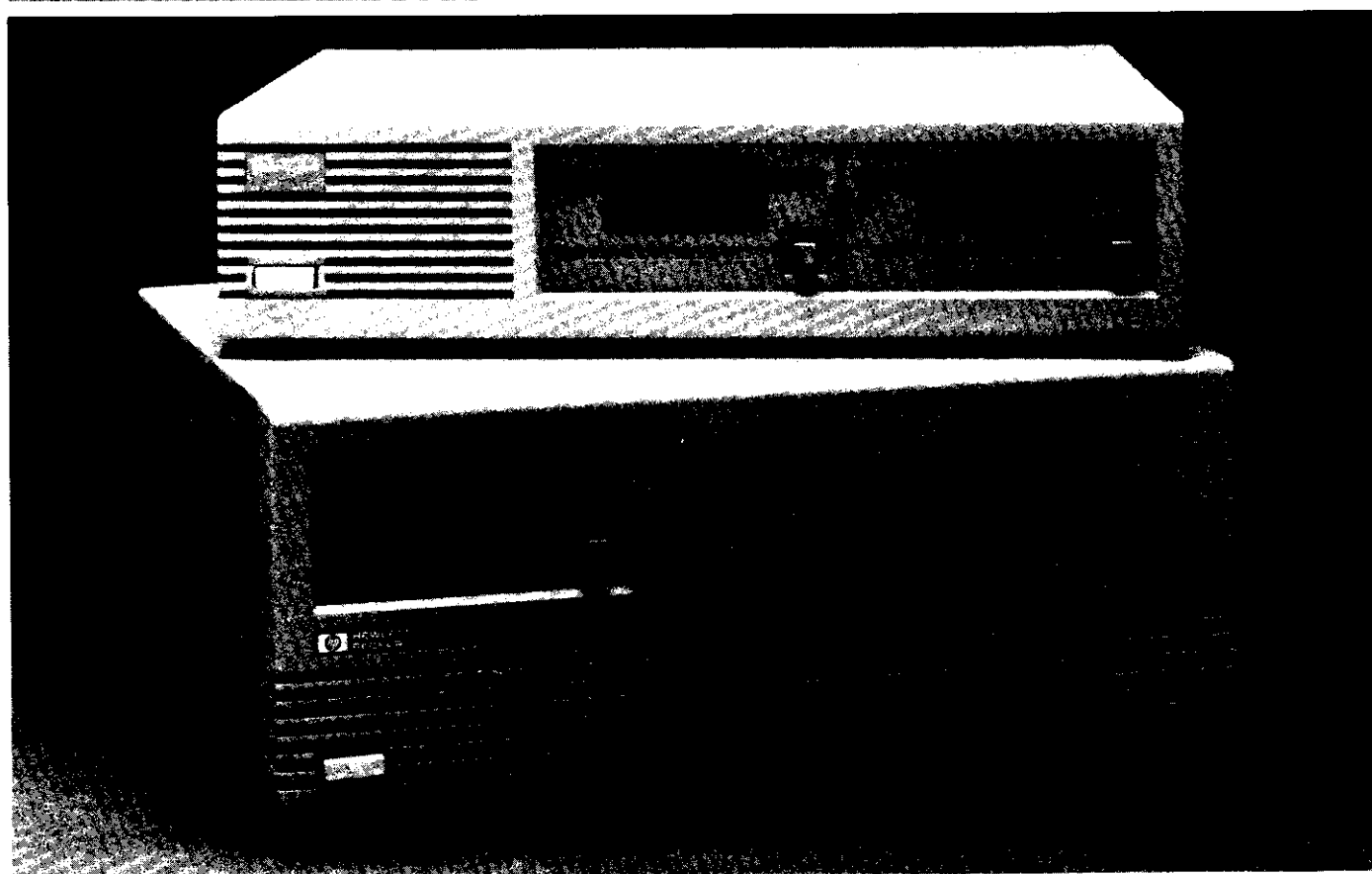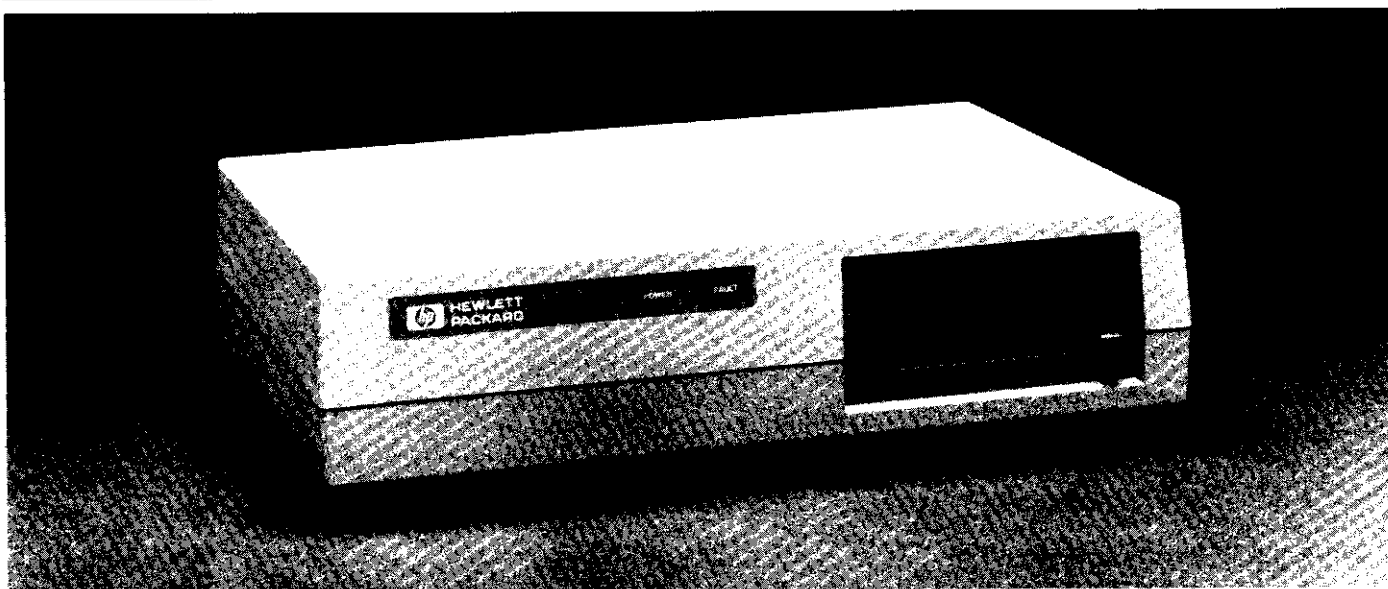
HP Mass Storage for
Personal and Portable Computers

Hewlett-Packard provides a family of low-cost, reliable disc drives, designed to match the power of HP's wide range of computers and your varying application needs.

Featuring HP-IB or HP-IL interfacing, the HP family of low-cost 3 1/2", 5 1/4" and 8" flexible disc drives, and the 5 1/4" Winchester disc drives, provides fast access to volumes of information on HP portable, personal and micro-computers.

The range of disc drives covers the various price, capacity and performance needs of personal, heavy-usage and data interchange mass storage applications.

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3 1/2" MICROFLOPPY MASS STORAGE SYSTEMS

The 3 1/2" microfloppy disc drives combine the speed of random access with low-cost, removable media in a compact package. These features are ideal for applications which require reliable, on-line access, including small business and professional applications such as spread sheets, graphics presentations and word processing.

Rugged and Reliable

There are three possible causes for data loss: damage to the media through careless handling; contamination from dirt, dust, smoke or scratches; and failure to replace a disc before it is worn out.

The 3 1/2" microfloppy products employ a number of features to guard against these dangers. By enclosing the media in a hard plastic case with an automatic metal shutter, dirt, fingerprints and other contaminants are locked out. A write-protect tab guards against accidental erasure and a metal center firmly positions the disc to read and write accurately and reliably. The hard plastic case allows you to handle the disc more conveniently than other types of floppies without damaging the media.

In addition, because the read/write head of floppy discs comes in direct contact with the media, floppy discs wear out. To alert you that the media has reached the end of its useful life, we've included a "media monitor", special electronics that flash the drive access light, signaling you to replace the media.
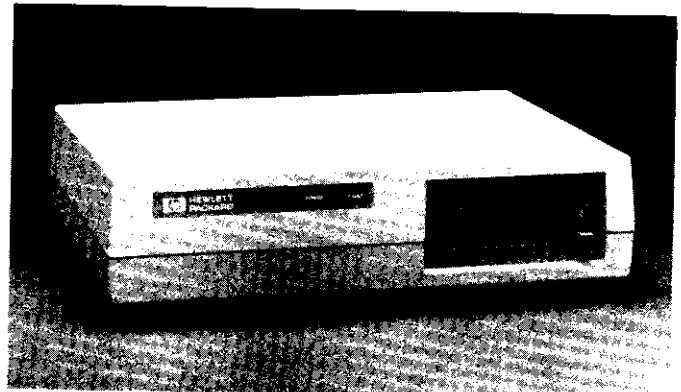
High Capacity

The protection features of the media allow you to store more data on a 3 1/2" piece of media than on most 5 1/4" media. The double-sided, double-density 3 1/2" media stores 630 to 788K* bytes of user formatted data or programs. The specific capacity is dependent upon the computer system and programming language used. Most users will be able to take advantage of at least 710K bytes. This capacity is equivalent to 263,000 8-digit numbers, 175 pages of single-spaced text, 3500 data base records (200 characters each) or a 1400 employee payroll list (500 characters each).

Compact Size

HP's personal mass storage systems are designed to efficiently use desk space. Stacked directly under HP's small footprint computers the system looks like a totally integrated unit, but allows you the flexibility to mix and match capacity and performance without losing the integrated look. All of HP's personal mass storage products occupy only one square foot of desk space; about the same amount of space as an open looseleaf notebook.

HP's portable mass storage, the 9114A, can be stacked under HP's ThinkJet printer occupying about the same amount of work space as a standard sheet of letterhead.

The 3 1/2" media is also compact and easily portable, so you can carry many of your files in your pocket or briefcase.

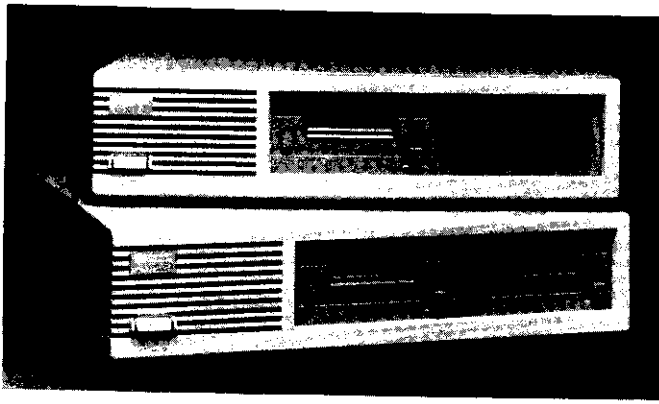## 9114A Portable 3 1/2" Disc Drive Battery Operated

The HP 9114A is a highly reliable 3 1/2" microfloppy designed for HP's family of portable computers. It provides up to 710K bytes of formatted capacity in a portable, battery-operated package. The HP 9114A works with HP PORTABLE, Series 40 and Series 70 portable computers via HP-IL.

The double-sided 3 1/2" drive mechanism and disc format are identical to those in the HP 9122D and HP 9133D. This allows you to transfer data between HP's portable and personal computers. These new 3 1/2" disc drives can also read, write, and format in single-sided format making them compatible with the single-sided drives currently in use.

The HP 9114A weighs only 5 pounds, 9 ounces and measures 3 inches by 11.5 inches by 8 inches.
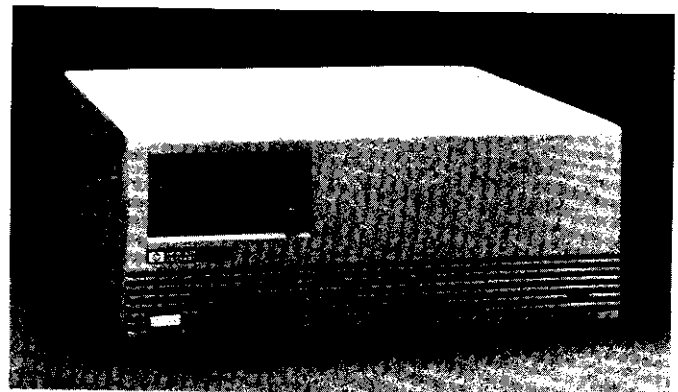

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* K equals 1,000

9122D Double-Sided 3 1/2" Dual-Drive
9122S Double-Sided 3 1/2" Single-Drive

The new double-sided 3 1/2" microfloppy is available in both single and dual configurations for use with HP's personal and desktop computers. Each drive mechanism can format disc media to store 630 to 788K bytes depending on the computer system and programming language used. The double-sided 3 1/2" microfloppy rotates at 600 RPM and is capable of a sustained transfer rate of up to 18K bytes/sec (system dependent). These new double-sided 3 1/2" microfloppy drives can also read, write and format in single-sided format making them compatible with the single-sided drives currently in use.

The single-sided 3 1/2" products are also available in a single, 9121S, and dual, 9121D, configuration for use with HP Series 80, HP 150, and Series 200. The single-sided media store 270K bytes of formatted data per disc.

5 1/4" WINCHESTER MASS STORAGE SYSTEMS

HP's Winchester Systems provide up to 16.6M bytes of formatted capacity for HP computer systems, transfer rates of up to 145 Kbytes per second (system dependent), and a drive that is sealed from most contaminants. In addition to business applications, the HP 5 1/4" Winchester can satisfy the mass storage needs often found in production and other industrial applications. On-line, heavy usage applications need the high-speed transfer rates, fast random access and large capacity of the HP 5 1/4" Winchester mass storage systems. The high capacity of the Winchester systems allow you to keep entire software libraries resident on disc; this not only eliminates the time and trouble of re-loading frequently used programs but actually increases the speed with which most programs will run.

9133D Winchester/Microfloppy
9134D Winchester Stand-Alone

The 9133D combines the performance of a 14.8M byte 5 1/4" Winchester with a double-sided 3 1/2" microfloppy. The Winchester provides high speed, large capacity, and durability for heavy-usage while the microfloppy provides removable storage for loading operating systems and software, exchanging data among computers and selective file back-up. The removable media is fully compatible with the 9122D/S and 9114A mass storage units. The disc drive can also read, write and initialize double-sided discs in single-sided format to give backward and forward compatibility to single-sided microfloppy drives.

The 9134D is a 14.8M byte stand-alone Winchester mass storage system for those who have previously purchased a floppy disc system and now need to add Winchester capabilities.

The 9133D and 9134D are also available as an option 001 for UNIX 2.2 users. This option provides 1024 byte/sectors and 16.6M bytes of formatted capacity.
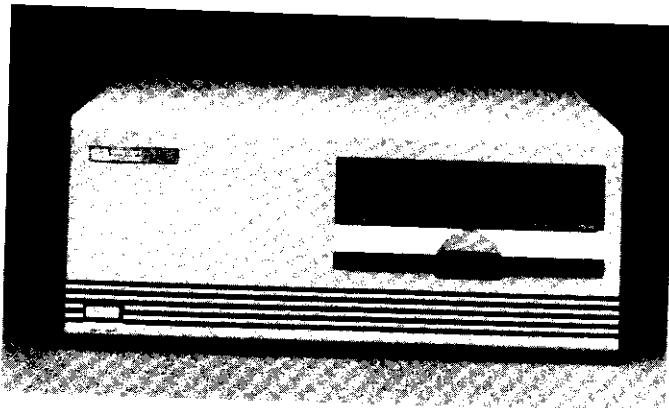
With Series 200 technical computers, the 9133/34D Winchester can be configured in a variety of ways to allow you to separate BASIC and Pascal languages. This provides much improved data file management.

HP's previous line of 4.6, 4.8, 9.6 and 14.5 Mbyte Winchesters are also available for use with HP Series 80 and the HP 150. The HP 9133V/XV is a combination Winchester and single-sided 3 1/2" microfloppy. The 9133s vary in capacity as follows:

9133V – 4.8M byte, 1 volume
9133V Opt. 004 – 4.6M byte, 4 volumes
9133XV – 14.5M bytes
9133XV Opt. 010 – 9.6M byte.

The 9134XV is a 14.5M byte stand-alone Winchester and is available as a 9.6M byte Winchester by ordering Opt. 010.
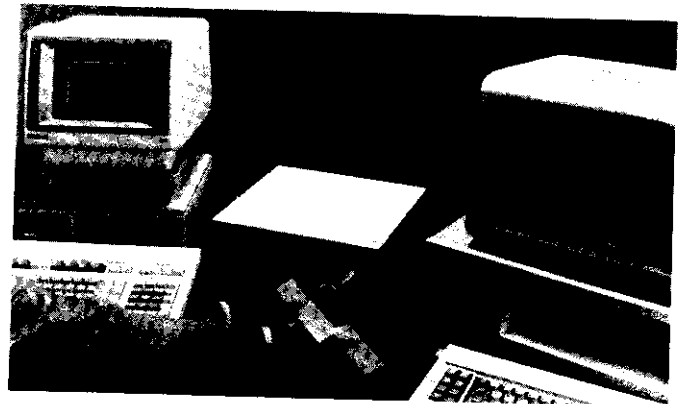
9144A – 1/4" Tape Cartridge

The HP 9144A is a compact, in-basket size 1/4" cartridge tape subsystem designed for easy to use, low cost backup of HP fixed discs with capacities of 15 to 132M bytes. The tape drive operates in streaming mode for fast efficient backup. It has the capability, depending on the system, for both selective file and image backup, and is used for data interchange on HP systems as well as for software distribution. An important consideration is that the drive is fully compatible with existing cartridge subsystems built into other HP discs; media written on one drive may be read by the other just by inserting the cartridge.

HP reliability is designed into the tape drive. Read after write capability offers immediate data verification. An integral media monitor warns when media wear may become a concern. Extensive internal diagnostics pinpoint potential problems for faster repair.

DATA INTERCHANGE

IBM-PC 3 1/2" Data Interchange

Data Interchange is easily accomplished between the IBM-PC and HP's personal and portable computers. By using the HP 82973A Portable Desktop Link card for the IBM-PC with the HP 9114A portable disc, 3 1/2" media can be formatted by the IBM-PC in HP format. This allows MS/DOS data files to be moved beween the HP 150, HP PORTABLE, HP TOUCHSCREEN PC's and the IBM-PC.

IBM-PC 5 1/4" Data Interchange

The HP 9125S is a single 5 1/4" disc drive that gives the Touchscreen Personal Computer and the Touchscreen MAX data compatibility with the IBM-PC via 5 1/4" discs. Connected by HP-IB to the Touchscreen computers, the drive can read and write in IBM PC formats (1.0, 1.1, 2.0 and 2.1). Thus, 5 1/4" discs can be exchanged between the IBM and HP computer systems.

The HP 9125S also provides data exchange between HP systems. Using this drive, HP 3 1/2" disc-based technical desktop computers are able to exchange disc with HP 5 1/4" disc-based desktop computers.

IBM 3740 8" Data Interchange

Data Interchange with HP and non-HP systems is possible through HP's 8" flexible disc drives. The 9895A can read and write industry-standard IBM 3740 single-sided, single-density format when used with the appropriate mainframe utility software.

HP 5 1/4" Data Interchange

HP 5 1/4" flexible disc compatibility for most HP computer systems is possible with the HP 82901/2M. The 82901/2M also allows single-sided HP 3 1/2" disc based systems to maintain disc compatibility with HP 5 1/4" disc based systems. With the exception of HP's Series 1000, any HP system that supports the 9121D will also support the 82901/2M.

SYSTEM/DISC CONFIGURATION GUIDE

COMBINATIONS		DISC DRIVE			HOST		
Host	Disc Drive	Maximum No. of Mass storage systems	Type of Inter-face	Cables Sent with disc	Interface and/or cable required	ROM Driver or system required	Notes
HP 41 HP 71 HP 75	9114A	8/HP-IL Loop	HP-IL	One HP-IL cable	HP41:82160A HP-IL module HP71:82401A HP-IL module 82167A/B/D HP-IL cable	The required Op. sys. is built into all hosts	
Series 80, 9915	8290xM 9121D/S 9133V 913xXV opt. 010 9895A	2/HP-IB Interface	HP-IB	None	HP83/85/86A - 82937A HP-IB interface HP86B/87-45529 HP-IB cable (or 10833) (86B and 87 ship w/cable)	HP85B/86B built-in for all discs HP83/85A/9915: 00085-15001 Mass Storage ROM HP86A/87: 00087-15012 ROM required for 10 Mbyte support	(Notes table:) 8290xM: HP83/HP85A YES, HP85B/HP86B YES, HP86A/HP87 YES; 9121D/S: YES, YES, YES; 9133V: NO, YES, YES; 9133V #004: YES, YES, YES; 913xXV #010: NO, YES, W/ROM; 9895A: YES, YES, YES
The Portable HP 110	8290xM 9114A 9121D/S 9122D/S 9133V/XV 9134XV 9895A	8/HP-IL Loop	9114A:HP-IL All others: HP-IB	9114A: One HP-IL cable All others: none	All sys. require 82167A/B/D HP-IL cable All HP-IB drives require 10833 HP-IB cable and the HP 82169A HP-IB to HP-IL convertor (S/N 2406 and higher)	The required operating system is built-in for all drives	Reference application note 5954-1143 for the use of the HP-IB drives
HP 150A HP Touch-Screen PC HP Touch-Screen Max	8290xM 9121D/S 9122D/S 9125S 9133D 9133V/XV 9134D 9134XV 9144A	8/HP-IB Interface	HP-IB	None	10833 HP-IB cable Note: Series 100 shipped with one HP-IB cable	Note: 9122D/S, 9125S, 9133D, 9134D, and the 9144A are only supported by the HP Touchscreen PC & the Touchsceen Max. All the drives are supported by the HP Touchscreen personal computers.	
HP 9000 FAMILY Series 200	8290xM 9121D/S 9122D/S 9125S 9133D 9133V/XV 9134D 9134XV 9895A 9144A	2/HP-IB Interface	HP-IB	None	10833 HP-IB cable Note: Series 200 shipped with one HP-IB cable	Earliest Supporting Op. system – All later versions work. (BASIC / PASCAL / HPL / HP-UX): 8290xM 2.0/2.0/1.0/NO; 9121D/S 2.0/2.0/1.0/NO; 9122D/S 3.0/3.0/NO/NO; 9125S 3.0/3.0/NO/NO; 9133D 3.0/3.0/NO/2.2; 9133V 2.1 Rev. A/2.1/NO/NO; 9133V #004 2.0/2.0/2.0/NO; 9133XV 2.1 Rev. B/2.1/NO/NO; 9134D 3.0/3.0/NO/2.2; 9134XV 2.1 Rev. B/2.1/NO/NO; 9895A 2.0/1.0/1.0/NO; 9144A 2.1/2.1/NO/2.0	
Series 500	8290xM 9895A 9144A	2/HP-IB Interface	HP-IB	None	27110A one shipped with each host computer	Drivers are in RAM Basic or HP-UX	Cannot be system boot discs.
9825T	9895A	2/HP-IB Interface	HP-IB	None	98034A Revised or later HP-IB interface (98034A revised card is not certified by FCC for Class A regulations)	98228A ROM	
9835A	9895A	2/HP-IB Interface	HP-IB	None	98034A Revised or later HP-IB interface	Supports 9895A with 98331B ROM	A separate HP-IB interface is required for discs when using 98413B.
9845B/C	8290xM 9121D/S 9122D/S 9133D 9133V/XV 9134D 9134XV 9144A 9895A	2/HP-IB interface	HP-IB	None	98034A revised or later HP-IB interface. (98034A revised card is not certified by FCC for Class A regulations.)	Supports 9895A with; 98413B/C ROM All disc are supported by third party ROM; supported by: Structured Software Systems 609-267-1616	A separate HP-IB interface is required for discs when using 98413B ROM.
1000 E,F Series	9895A	2/HP-IB Interface	HP-IB	None	12821A (HP-IB cable included)	Disc driver; DVA 32 (included with: RTE-IVB, RTE-IVE, RTE-6VM)	--
1000 A,L Series	9121D/S 9133V #004 913xXV opt. 010 9895A 9144A	2/HP-IB Interface	HP-IB	None	12009A (HP-IB cable included)	Interface driver ID.37 device driver DD.30 included with: RTE-XL, RTE-A	913xXV opt. 010 supported only with RTE-A
HP 3000 Series 30/33,37, 40/40SX, 44/64,39/ 42/48/58	9895A opt. 010 9144A	1 maximum	HP-IB	None	GIC 45529 HP-IB cable (or 10833)	MPE	--

SPECIFICATIONS

Disc Performance

	3 1/2" Flexible Discs		5 1/4" Flexible Discs		8" Flexible Discs	5 Mbyte Winchester	10 Mbyte Winchester	15 Mbyte Winchester
	Double-sided 9114A, 9122D/S, 9133D	Single-sided 9121D/S, 9133V/XV	82901M, 82902M	9125S	9895A	9133V	9133XV Opt. 010 9134XV Opt. 010	9133D/9133XV 9134D/XV
Formatted Capacity:								
Bytes per Unit:								
Single Drive								
256 Bytes/Sector	630K	270K	270K	‡See chart below	1.15M	4.6M (Opt. 004) 4.8M	9.68M	
512 Bytes/Sector	710K	–	–		–	–	–	14.8M/14.5M
1024 Bytes/Sector	788K	–	–		–	–	–	
Dual Drive								
256 Bytes/Sector	1.3M	540K	540K	–	2.3M	–	–	16.6M
512 Bytes/Sector	1.4M	–	–	–	–	–	–	–
1024 Bytes/Sector	1.6M	–	–	–	–	–	–	–
Sectors per Track								
256 Bytes/Sector	16	16	16	‡See chart below				
512 Bytes/Sector	9	–	–		30	31 (30 for Opt. 004)	31	32/31
1024 Bytes/Sector	5	–	–	–	–	–	–	–
Tracks per Inch	135/in	135/in	48/in	48/in	48/in	345/in	345/in	11
Recording Format	dbl density	dbl density	dbl density	dbl density	dbl density	MFM	MFM	345/in MFM
Max Sustained Transfer Rate (system dependent, see note below)	18 Kb/sec**	17.5 Kb/sec	6.8 Kb/sec	11.0 Kb/sec	25.6 Kb/sec	50 Kb/sec	50 Kb/sec	145 Kb/sec / 50 Kb/sec‡
Average Access Time	485 msec (on) 885 msec (off)	415 msec (on) 1415 msec (off)	187 msec (on) 435 msec (off)	187 msec (on) 435 msec (off)	179 msec (on)	85 msec	85 msec	85 msec
Functional Characteristics								
Tracks per Surface	80	70	35	40	75	305	305	303/305
Recording Surfaces/disc	2	1	2	2	2	2	2 (4 surfaces per unit)	2 (6 surfaces per unit)
Rotational Speed	600 rpm	600 rpm	300 rpm	300 rpm	360 rpm	3600 rpm	3600 rpm	3600 rpm

Note: *Mainframe dependent; These specifications are actual user data transfer rates that have been achieved in testing. For comparison to other manufacturers' specifications, the following mechanism specifications are provided: 3 1/2" – 500 Kbit/sec; 5 1/4" – 250 Kbit/sec; 8" – 500 Kbit/sec; 5 1/4" Winchester – 5 Mbits/sec.

System transfer rate
**9114 / HP Portable – 5.5K bytes/sec
**9122 / HP Touchscreen – 9.1K bytes/sec
**9122 / Series 200 – 18.0K bytes/sec
‡9133/34D / HP Touchscreen 20K bytes/sec

9133/34D / Series 200 – 145K bytes/sec, with 98620A DMA 98625A HP-IB Disc Interface
– 108K bytes/sec, with 98620A DMA
– 64K bytes/sec, without DMA
9133/34XV / Series 200 – 50K bytes/sec

hp museum

‡9125S Disc Format	Bytes/ Sector	Sectors/ Track	Tracks/ Surface	Surfaces	Capacity Kbytes
With Touchscreen PC					
IBM PC-DOS 1.0*	512	8	40	1	160
IBM PC-DOS 1.1	512	8	40	1	320
IBM PC-DOS 2.0*	512	9	40	2	360
IBM PC-DOS 2.1	512	9	40	2	360
HP MS-DOS*	256	16	35	2	270
With Series 200					
HP Format*	256	16	35	2	270

* The HP 9125S can initialize 5 1/4-inch discs in these formats with appropriate software.

1/4" Tape Performance

Storage Capacity	
Tracks/Tape	16.7 and 67.1M byte cartridges
User Blocks/Track	16
16 Mbyte (150')	1024 maximum
67 Mbyte (600')	4096 maximum
Frames/Block	6 (4 frames for user data plus 2 frames for data recovery)
Bytes/Frame	256
Transfer Rate	
Maximum Sustained Transfer Rate†	2 Mbytes/minute
Tape Speed	60 inches/second (read/write) – 90 inches/second (search/rewind)
Interface	HP-IB (using CS80 protocol)
Format	
Encoding	MFM
Bit Density	10,000 bits/inch (bpi)

† Maximum sustained transfer rate does not necessarily reflect system throughput which varies depending upon application, file structures and host/tape driver implementation.

SPECIFICATIONS

	9114A*	9122S/D	9121S/D	9125S	9133/34/XV	9133D/34D	9144A	82901M 82902M	9895A
Power Requirements									
Nominal Voltage (selected by rear panel switch)		100-120V ~ (115V Setting) 200-240V ~ (230V Setting)	100-120V ~ (115V Setting) 200-240V ~ (230V Setting)	100-120V ~ (115V Setting) 200-240V ~ (230V Setting)	100-120V ~ (115V Setting) 200-240V ~ (230V Setting)	100-120V ~ (115V Setting) 200-240V ~ (230V Setting)	90-125V ~ (115V Setting) 180-250V ~ (230V Setting)	100-120V ~ (115V Setting) 200-240V ~ (230V Setting)	100V ~ ± 10% 120V ~ ± 10% 220V ~ ± 10% 240V ~ ± 10%
Voltage Range		86-127V ~ (115V Setting) 195-253V ~ (230V Setting)	86-127V ~ (115V Setting) 195-253V ~ (230V Setting)	86-127V ~ (115V Setting) 195-253V ~ (230V Setting)	86-127V ~ (115V Setting) 195-253V ~ (230V Setting)	86-127V ~ (115V Setting) 195-253V ~ (230V Setting)	86-127V ~ (115V Setting) 195-253V ~ (230V Setting)	86-127V ~ (115V Setting) 195-253V ~ (230V Setting)	
(selected by recharger)	90-120 Vac								
Line Frequency Nominal	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Frequency Range	48-66 Hz	48-66 Hz	48-66 Hz	48-66 Hz	48-66 Hz	48-66 Hz	48-66 Hz	48-66 Hz	50-60 Hz ±2%
Power Consumption (max)	6W	67W	67W	75W	125W	125W	125W	80W (82901M) 55W (82902M)	180W (dual) 130W (single)
Environmental Range									
Operating Temperature	10° to 40°C (50° to 104°F)	10° to 40°C (50° to 104°F)	5° to 45°C (41° to 113°F)	10° to 40°C (50° to 104°F)	10° to 40°C (50° to 104°F)	10°C to 40°C (50° to 104°F)	5°C to 40°C (41°F to 104°F)	10°C to 40°C (50° to 104°F)	10°C to 40°C (50° to 104°F)
Storage Temperature	-40° to 60°C (-40° to 140°F)	-40° to 60°C (-40° to 140°F)	-40° to 60°C (-40° to 140°F)	-40° to 60°C (-40° to 140°F)	-40° to 60°C (-40° to 140°F)	-40° to 60°C (-40° to 140°F)	-40° to 75°C (-40° to 167°F)	-40° to 75°C (-40° to 167°F)	-40° to 60°C (-40° to 140°F)
Operating Humidity (non-condensing) 26°C max. wet bulb temperature	20% to 80%	20% to 80%	20% to 80%	20% to 80%	20% to 80% (33V/XV) 8% to 80% (34V/XV)	20% to 80% (33D) 8% to 80% (34D)	20% to 80%	20% to 80%	20% to 80%
Storage Humidity (non-condensing)	8% to 80% (media) 5% to 95% (drive)	8% to 80% (media) 5% to 95% (drive)	8% to 80% (media) 5% to 95% (drive)	8% to 80% (media) 5% to 95% (drive)	8% to 80% (media) 5% to 95% (drive)	8% to 80% (media) 5% to 95% (drive)	8% to 80% (media) 5% to 95% (drive)	8% to 80% (media) 5% to 95% (drive)	8% to 80%
Operating Altitude	0 to 4572m (0 to 15000 ft)	0 to 4572m (0 to 15000 ft)	0 to 4572m (0 to 15000 ft)	0 to 4572m (0 to 15000 ft)	0 to 4572m (0 to 15000 ft)	0 to 4572m (0 to 15000 ft)	0 to 4572m (0 to 15000 ft)	0 to 4572m (0 to 15000 ft)	0 to 4572m (0 to 15000 ft)
Storage Altitude	-304 to 15240m (-1000 to 50000 ft)	-304 to 15240m (-1000 to 50000 ft)	-304 to 15240m (-1000 to 50000 ft)	-304 to 15240m (-1000 to 50000 ft)	-304 to 15240m (-1000 to 50000 ft)	-304 to 15240m (-1000 to 50000 ft)	-304 to 15240m (-1000 to 50000 ft)	-304 to 15240m (-1000 to 50000 ft)	-304 to 15240m (-1000 to 50000 ft)
Size/Weight									
Height	78mm (3.1 in) 287.5mm (11.5 in)	81mm (3.2 in) 325mm (12.8 in)	81mm (3.2 in) 325mm (12.8 in)	107mm (4.2 in.) 325mm (12.8 in.)	132mm (5.2 in) 325mm (12.8 in)	132mm (5.2 in) 325mm (12.8 in)	132mm (5.2 in) 325mm (12.8 in)	109mm (4.31 in)	193mm (7.6 in) 483mm (19 in)
Width dual single	200mm (8.0 in)	285mm (11.2 in)	285mm (11.2 in)	285mm (11.2 in)	285mm (11.2 in)	285mm (11.2 in)	285mm (11.2 in)	425mm (16.75 in) 279mm (11 in) 374mm (14.74 in)	574mm (22.6 in)
Depth									
Net Weight dual single	2.68 kg (5.9 lbs)	4.5 kg (10 lbs) 3.8 kg (8.4 lbs)	4.5 kg (10 lbs) 3.8 kg (8.4 lbs)	7.3 kg (16 lbs)	10 kg (22 lbs) (33V/XV) 8.64 kg (19 lbs) (34V)	10 kg (22 lbs) (33D) 8.64 kg (19 lbs) (34D)	8.67 kg (19 lbs)	9.07 kg (20 lbs)	26.8 kg (59 lbs)
Shipping Weight dual single	5.85 kg (12.9 lbs)	7.7 kg (17 lbs) 6.9 kg (15.4 lbs)	7.7 kg (17 lbs) 6.9 kg (15.4)	10.4 kg (23 lbs)	13.1 kg (29 lbs)	16.8 kg (37 lbs) (33D) 15.5 kg (34 lbs) (34D)	21.1 kg (27 lbs)	12.7 kg (28 lbs) 9.98 kg (22 lbs)	31.8 kg (70 lbs) 25.9 kg (57 lbs)

* 9114A Battery Life: Continuous use: 100% duty cycle . . . . 40 minutes
Typical duty cycle (5%) . . . . 8 hours
Uses a 6-volt lead-acid dry cell battery
Sleep State (stand-by): unit is powered on but not being accessed . . . . 24 hours
Service life: total life of battery . . . . 3-5 years
Replacement battery . . . . HP 88014A

ORDERING INFORMATION

3 1/2" FLEXIBLE DISCS

Dual-Drive, 1,576 Kbytes formatted 9122D
Single-Drive, 788 Kbytes formatted 9122S
Single Battery-Operated Drive, 710 Kbytes formatted 9114A
Dual-Drive, 540 Kbytes formatted 9121D
Single-Drive, 270 Kbytes formatted 9121S
Media, HP Double-sided (9122D/S, 9133D, 9114A) 92192A
    Box of 10 Discs
Single-sided (9121D/S, 9133V/XV) 92191A
    Box of 10 Discs

Accessories Supplied

9122D, 9122S, 9121D, 9121S

Power cord, operator's manual, two fuses, one flexible disc per drive.

9114A

Operator's Manual, One meter HP-IL cable, Battery Pac, Battery
Recharger, one flexible disc.

Accessories Available

9114A Replacement Battery Pac 88014A
HP-IB cables, right angle .3 meter 92220R
.5 meter 10833D
1.0 meter 31389A
2.0 meter 31389B
4.0 meter 31389C

5 1/4" WINCHESTER DISCS

4.6 Mbyte formatted Winchester (4-1.15 Mb volumes)
  with 270 Kbyte 3 1/2" Microfloppy .... 9133V Opt. 004
4.8 Mbyte formatted Winchester (1-4.8 Mb volume)
  with 270 Kbyte 3 1/2" Microfloppy 9133V
9.6 Mbyte formatted Winchester (1-9.6 Mb volume)
  with 270 Kbyte 3 1/2" Microfloppy .... 9133XV Opt. 010
9.6 Mbyte formatted Winchester (1-9.6 Mb volume) ... 9134XV Opt. 010
14.5 Mbyte formatted Winchester (1-14.5 Mb volume)
  with 270 Kbyte 3 1/2" Microfloppy 9133XV
14.8 Mbyte formatted Winchester (1-14.8 Mb volume)
  with 788 Kbyte 3 1/2" Microfloppy 9133D
14.8 Mbyte formatted Winchester (1-14.8 Mb volume) 9134D

Accessories Supplied

9133D/V/XV, 9134D/XV

Power cord, operator's manual, two fuses

9133D/V/XV

One flexible disc per drive

Accessories Available

Rack Mount (9133D/V/XV, 9134D/XV) Standard 19" 19500A
HP-IB cables, right angle .3 meter 92220R
.5 meter 10833D
1.0 meter 31389A
2.0 meter 31389B
4.0 meter 31389C

1/4" TAPE BACKUP

1/4" Cartridge Tape Drive 9144A
For use with Touchscreen PCs .... Opt. 150

Accessories Supplied

Power cord, operator's manual, one fuse, 600' tape cartridge, head
cleaner*, swabs.

* Periodic cleaning required to ensure proper operation (after a new cartridge is
inserted, when read/write errors occur or at least once a week).

Accessories Available

HP-IB Interface
.5 meter 10833D
1 meter 31389A
2 meter 31389B
4 meter .... not recommended

19" Rack Mount Kit 19500A
Cartridges
  16.7 Mbyte formatted/certified (box of 5) 88140SC
  67 Mbyte formatted/certified (box of 5) 88140LC
Cleaning Supplies
  Magnetic Head Cleaning Kit 92193H
Individual Cleaning Supplies
  Tape Head Cleaner, 6 4 oz bottles 92193X
  Foam Swabs (50 per package)
    wooden shaft 9300-0468
    plastic shaft 9300-0767
  Lint-free Wipes (100 per bag) 92193W

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5 1/4" FLEXIBLE DISCS

Single-Drive, IBM compatible 9125S
Dual-Drive Master, 540 Kbytes formatted 82901M
Single-Drive Master, 270 Kbytes formatted 82902M
Media, HP (box of 10 discs) 92190A

Accessories Supplied

9125S

Power cord, operator's manual, two fuses, one flexible disc, software for
use with Touchscreen PC's.

82901M, 82902M

Power cord, one flexible disc per drive, operator's manual, two fuses

Accessories Available

Padded Carrying Case 1540-0685
Rack Mount (82901M)** 88136F
HP-IB cables, right angle .3 meter 92220R
.5 meter 10833D
1.0 meter 31389A
2.0 meter 31389B
4.0 meter 31389C

8" FLEXIBLE DISCS

Dual-Drive Master (with Control Board),
  2.3 Mbytes formatted 9895A
Single-Drive Master (with Control Board),
  1.15 Mbytes formatted .... 9895A Opt. 010
50 Hz Line Frequency .... Opt. 001

Accessories Supplied

Power cord, operator's manual, one flexible disc per drive.

Accessories Available

HP-IB Interface Cable 2m (1) 10833B
HP-IB Cable, right angle .3 meter 92220R
.5 meter 10833D
1.0 meter 31389A
2.0 meter 31389B
4.0 meter 31389C
Drive Accessory (to upgrade a 1 drive unit
  to a 2 drive unit) 60 Hz* 98952A
Drive Accessory (to upgrade a 1 drive unit
  to a 2 drive unit) 50 Hz* .... 98952A Opt. 001
Rack Mount Kit** 09895-88022
Disc Kit containing 10 double-sided, double-density flexible discs . 92195A

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* In order to insure proper operating performance, these kits should be
installed by a Hewlett-Packard Customer Engineer. For installation by
HP specify Opt. 101.

** For mounting in most HP rack systems also order 30" racking support
rails--12679C. These rack mounts contain only front mounting
hardware. Additional structural support is required.

SAFETY and EMI COMPLIANCE

Underwriters Laboratories, Inc.
  UL 478: Electronic Data
    Processing Equipment (EMRT)

  UL 114: Office Appliances
    and Business Equipment (QAOT)

Canadian Standards Association
  CSA C22.2 #154: Data Processing
    Equipment

International Electrotechnical Commission
  IEC 380 and 435

FCC
  Class B Part 15 for computing equipment

VDE
  Level B with a Level B SPU

  Questions concerning regulatory agency compliance should be directed to the local Hewlett-Packard Sales and Service Office.

PURCHASE PLANS

  Contact one of the Hewlett-Packard worldwide sales and service offices for specific prices and plans in your area.

WARRANTY and SERVICE

  HP peripheral disc products are warranted against defects in material and workmanship for 90 days following date of delivery. HP will repair or replace products which prove to be defective during the warranty period either on-site or at the service center, depending on the computer system with which the product was sold. A copy of the complete warranty statement is available upon request.

  HP offers complete service and maintenance worldwide. Maintenance agreements are available for all HP peripheral products. Advantages of these agreements to the customer include a fixed annual cost, individualized cost-effective contracts, a choice of response time, and the option of either on-site or service center repair. Current U.S. rates can be determined by contacting your local HP Sales Office.

  The selection and use of media, supplies and consumables is the customer's responsibility. Hewlett-Packard reserves the right to exclude from this agreement any repairs for damage to HP products which HP reasonably determines or believes was caused by use of non-HP media. Hewlett-Packard will, upon request, repair such damage on a time material basis.

* The information and specification presented in this data sheet are subject to change without notice.

For assistance call the HP regional office nearest you: Eastern 301/258-2000, Midwest 312/255-9800, Southern 404/955-1500, Western 213/506-3700, Canadian 416/678-9430. Or write to Hewlett-Packard, 700 71st Ave., Greeley, Colorado 80634; in Europe, Hewlett-Packard, S.A., P.O. Box, 150, Route Du Nant D'Avril, CH-1217, MEYRIN 2 (Geneva) Switzerland; elsewhere in the world, Hewlett-Packard Intercontinental, 3495 Deer Creek Road, Palo Alto, California 94304.

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