Diskette Reference Manual

3M

DISKETTE REFERENCE MANUAL

INDEX

 Effective Date: May 1, 1983

Ia. 3M DISKETTE PRODUCT DESCRIPTION CODES

SS	SINGLE SIDE
DS	DOUBLE SIDE
SD	SINGLE DENSITY
DD	DOUBLE DENSITY
32	32 SECTORS
R	REVERSIBLE
W/WP	WITH WRITE PROTECT
/F	BYTE FORMAT (ie: 128/F)
RH	REINFORCED HUB
10	10 SECTORS
16	16 SECTORS

I. INTRODUCTION

Very simply, a diskette is a storage device for a computer system. It is used to augment the computer's memory capacity. The information on diskettes can be deleted and/or updated. The recording process is similar to audio tape recording where sound waves of varying amplitude and frequency are recorded on magnetic tape--but there the analogy ends. In diskette recording, information is digitally encoded on the magnetic surface using sophisticated techniques much different than that of audio recording. It is these recording techniques and the various parameters which affect diskette storage capacity that will be addressed in this manual.

Diskettes are currently offered in two sizes - an 8" (200 mm) version, and a 5 1/4" (130 mm) mini-version. The dimensions refer to the side length of the square-shaped jacket (cartridge) within which the circular recording disk is enclosed.

The flexible diskette cartridge is inserted into a diskette drive whose function is to a) rotate the media within the jacket, b) write information onto the disk as dictated by the system, and c) read information back from the diskette. One of the main reasons that diskettes are so popular is that the recorded information can be accessed readily.

The purpose of this manual is to provide technical information on diskettes. With this knowledge you will be able to meet the sales and service needs of almost every user of diskettes.

II. DISKETTE DESCRIPTION

All diskettes have three major components: the jacket, the liner, and the media itself. The full cartridge assembly is enclosed in an envelope to protect it when not in use. See Figure 1.

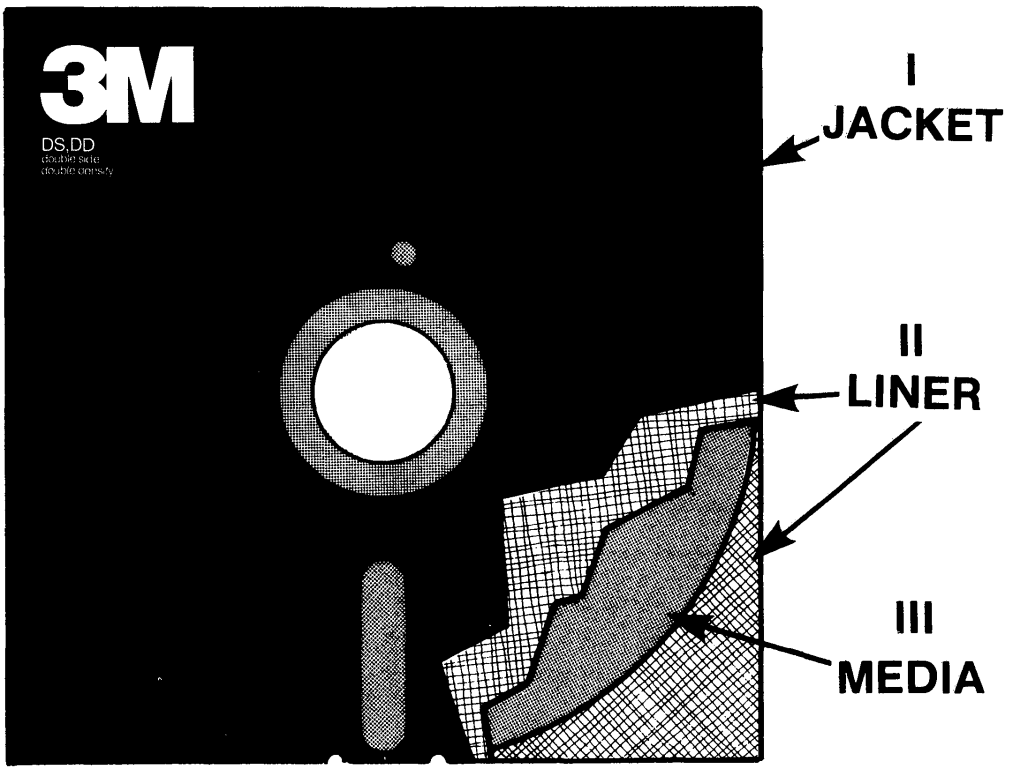


Figure 1

I. The jacket is made of polyvinyl chloride (PVC). It protects the media from physical damage caused by handling and storage.

There are various holes, slots, and notches punched in the jacket (See Fig. 2 - note that jackets pictured are void of media).

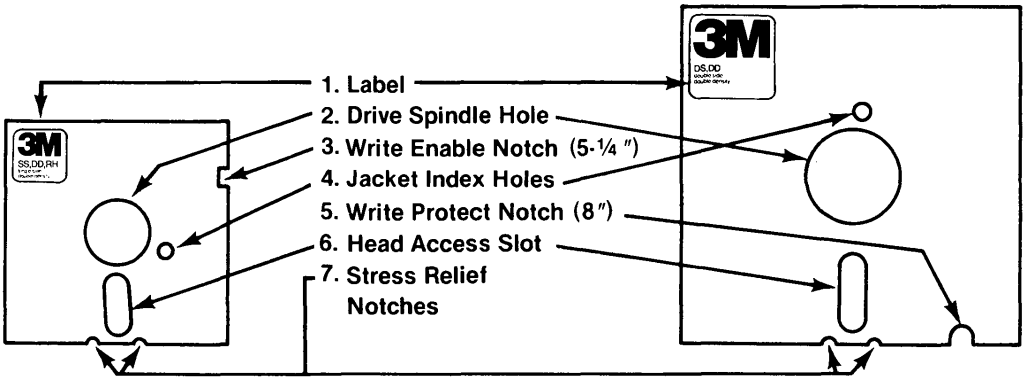


Figure 2

1. Permanent identification label - identifies diskette, its usable sides, format, density, and product number.

2. Drive Spindle Hole - allows the drive clamping mechanism and spindle access to the media for rotation within the jacket.

3. Write Enable Notch (5 1/4" only) - This is currently a standard feature on all 5 1/4" diskettes. In most cases, if the notch is uncovered, the diskette is "write enabled." Information can be written on the surface when the notch is uncovered. However, there are some systems that use the opposite convention, and still others who ignore it entirely.

Again, the "write enable" notch is standard on all 5 1/4" diskettes and the way it is used is dictated by the system.

4. Jacket Index Hole - an opening that, when aligned with an index hole punched in the media, permits the system to start the read/write operation.

   The location of the index hole varies on 8 inch (200 mm) diskettes, so it can be used to help identify the type of product the customer needs. The intent of the OEM's in placing the jacket index hole(s) in different locations is to ensure compatibility of diskettes with the hardware. As an example, a single side/single density diskette (3M SS-SD diskette) cannot function on a double side/double density system.

   Currently, the index hole location is the same for all 5 1/4" (130 mm) diskettes.

   Figure 3 shows the various locations of the index hole in different types of jackets:

5. Write Protect Notch (8" only) - This is an optional physical feature which is dictated by the system. Some systems manufacturers design this for diskettes whose contents need to be protected, i.e., system master or program diskettes. If the notch is uncovered, the

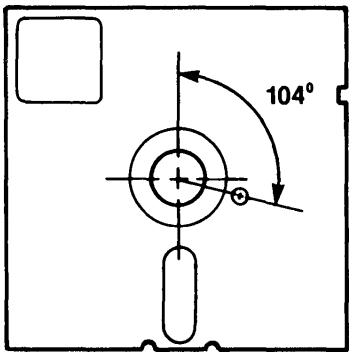
diskette is "write protected." The contents previously written on the diskette cannot be altered. When the notch is covered by a tab, the information can be changed at any time.

6. Head Access Slot - permits the read/write heads of the drive to load on the media, access the individual tracks on which the data is contained and to perform the actual recording operations. This is the most important area of the diskette jacket.

7. Stress Relief Notches - distribute the force of any jacket stress near the head access slot. This prevents damage to the media caused by bending, which can result in degradation of its storage ability.

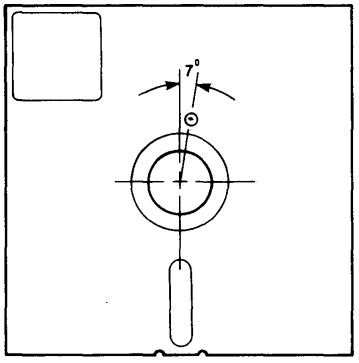
Figure 3

A. 5 1/4" (130 mm) diskettes



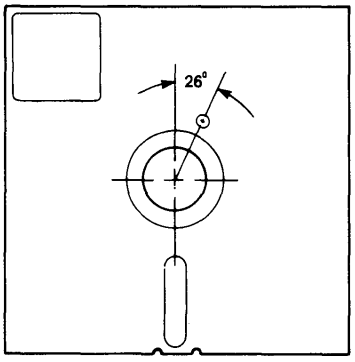
The index hole is located at approximately 104° for all 3M 5¼" diskettes.

B. 8" (200 mm) diskettes



The index hole for 3M SS-SD and SS-DD diskettes is located at approximately 7°.

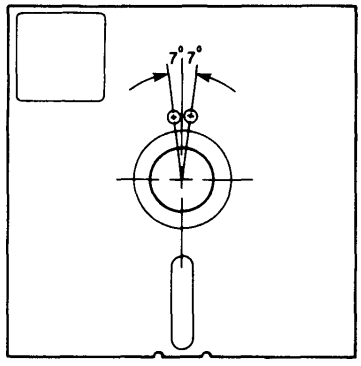
C.



The index hole for 3M DS-DD diskettes is located at approximately 26°.

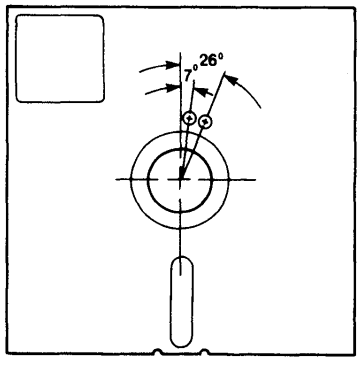
Figure 3 (cont.)

D.



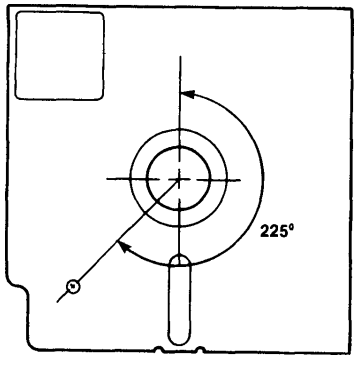
The index holes for 3M SS-SD-R and SS-DD-R-128/F reversible diskettes are located at approximately 7° on each side.

E.



The index holes for 3M DS-DD-32 hard sectored diskettes are 7° and 26°.

F.



The index hole for the 3M Vydec compatible diskette is located at approximately 225°. Also, notice the extra notch in the lower left corner of the jacket.

III. MANUFACTURING FLOW

Figure 4 shows the flow of events and the process that is followed during the manufacturing of a diskette. Throughout this process there are numerous mechanical and electrical tests/controls that must be satisfied to produce a quality product.

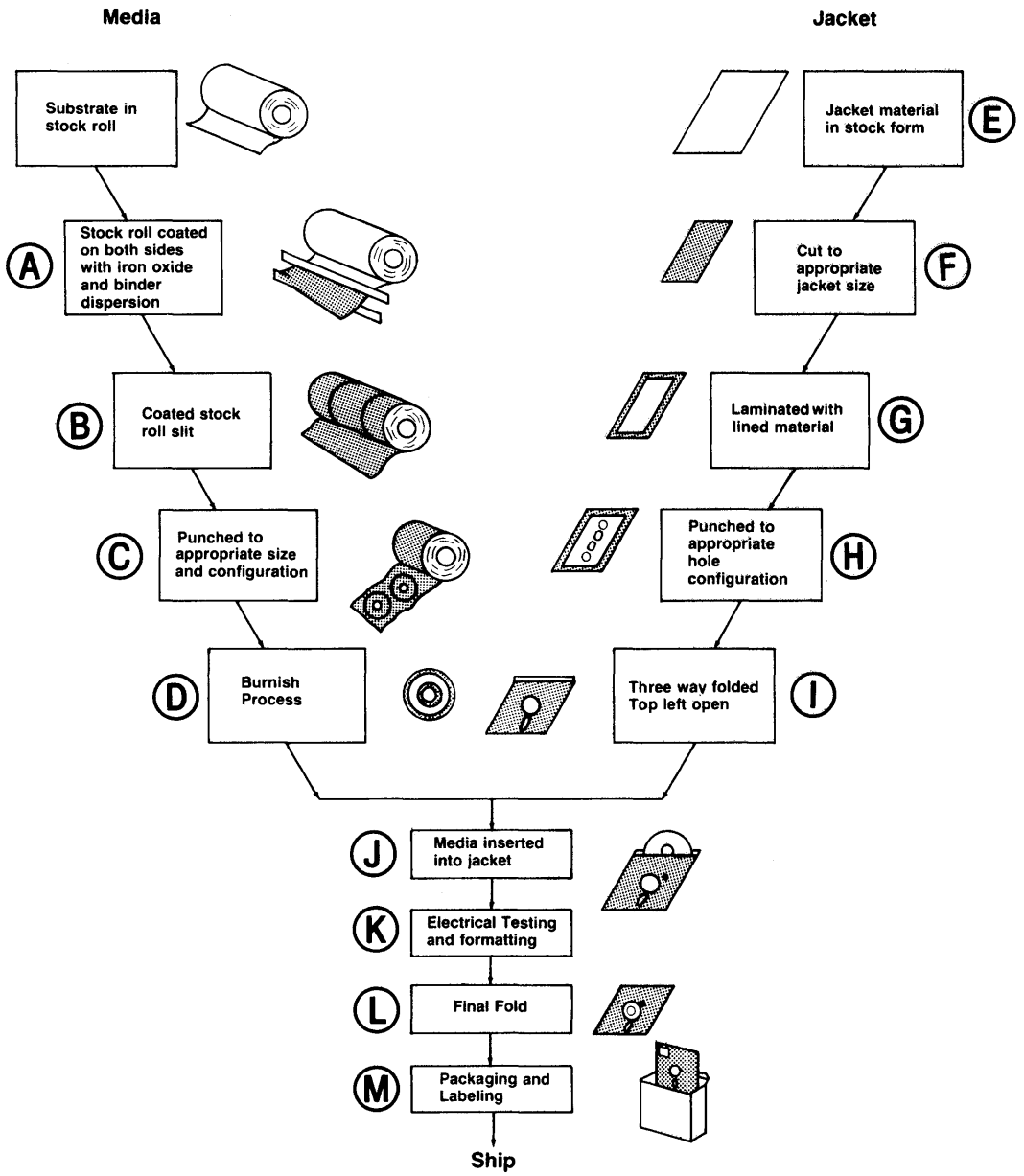


Figure 4

IV. MAGNETIC RECORDING OF DISKETTES

In basic terms, any digital magnetic recording is accomplished by the magnetization of minute areas on the surface of a diskette. (See Figure 5.)

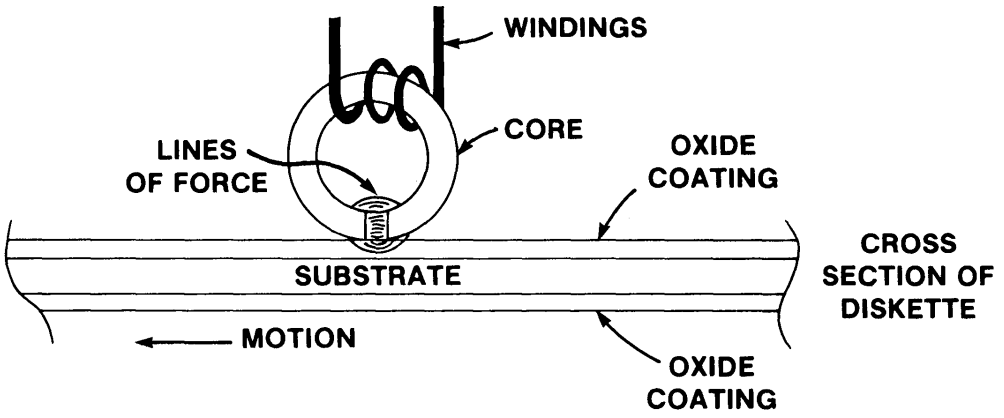


Figure 5

A current in the coil of a read/write head (electromagnet) induces a magnetic field through the core and across the gap. The lines of force, or magnetic flux, take the most conductive path across the gap in the head, which is the magnetic surface of the diskette.

The oxide coating becomes magnetized and remains so after the diskette leaves the field of the read/write head.

Now, reverse the process and pass the same portion of the diskette under the head. The magnetization of this section is sensed by the record head and a current is induced in the core windings. This is how the system reads back signals previously recorded on the surface.

The capability now exists through a host of electronic control devices of writing and reading a series of these minute magnetized areas. Let it be assumed that the presence of a magnetized area represents a logical "1" and the absence of such an area represents a logical "0". These logical "1's" and "0's" are referred to as bits. An eight-bit combination is called a byte. These bytes are directly translatable to letters, characters, and numbers.

For instance, assume during a read operation the drive head sensed the flux pattern of 0-1-0-0-0-0-0-1. This corresponds to a unique pattern of 1's and 0's recognized by a system as the letter "A" (In ASCII code).

Density relates to the number of bits that can be recorded in a given length of a track. Therefore, a double-density diskette stores twice the amount of information as a single-density. Double-density media must be more reliable than single-density media because critical information is recorded on a smaller area of the diskette.

V. DISKETTE ARCHITECTURE AND FORMATS

The information stored in a diskette is organized by addressable locations. These locations are designated by a track and sector number. The recording surface of a diskette is similar to a pie cut up into evenly-spaced sections, or sectors, and concentric rings for tracks. The data is searched track-by-track and then recorded or read serially on a specific track.

Tracks on a diskette are sequentially numbered, starting from the outside diameter (OD) and going to the inside diameter (ID). Track 0 is the outermost track on all diskettes with higher number tracks being found at inside diameter. Reference Figure 7.

Note: Diskette drive manufacturers have recognized an opportunity to increase diskette recording capacity by increasing the number of tracks on the recording surface. These products are referred to as "96 TPI" or "Quad-density." They have double the number of tracks per inch (TPI) as standard diskettes. The SS-DD-RH, DS-DD-RH diskettes and all 8" diskettes are recorded at 48 TPI.

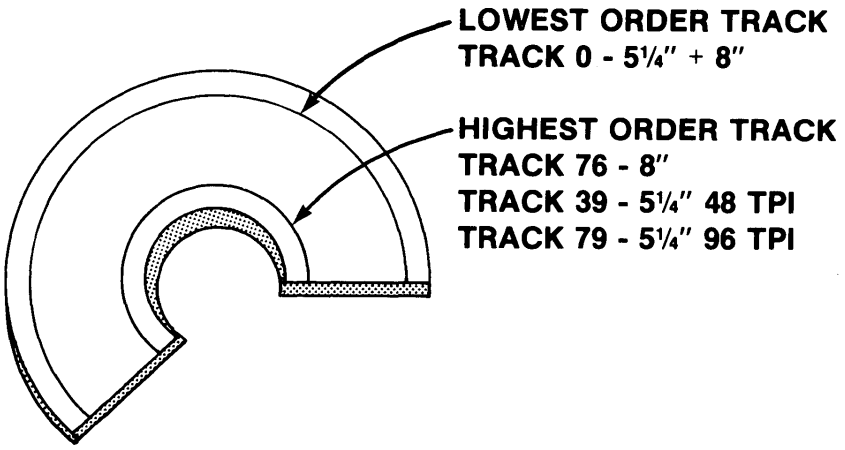
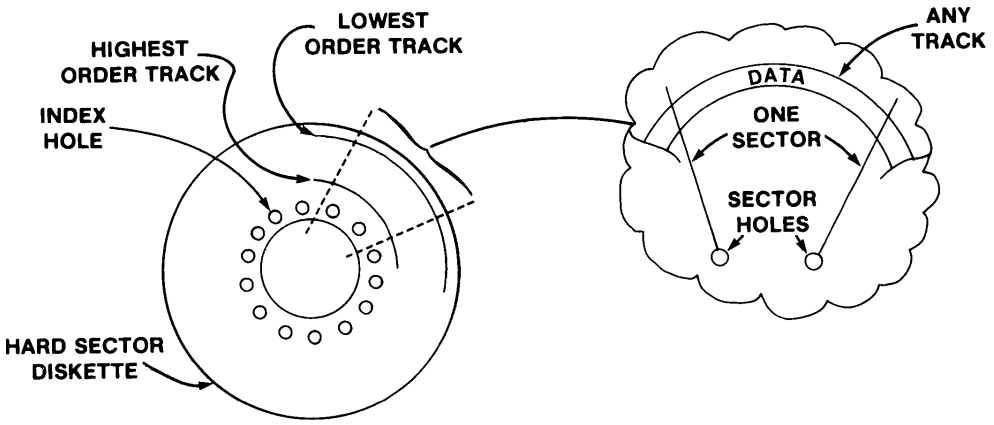


Figure 7

The data on each track of a diskette is stored in sectors. A soft-sectored diskette is one whose sector boundaries are determined by specific bit patterns recorded on the media. These specific bit patterns combine to form the ID area and define the sector boundaries. The hard-sectored diskette boundaries are determined by holes punched in the media.

HARD SECTOR



SOFT SECTOR

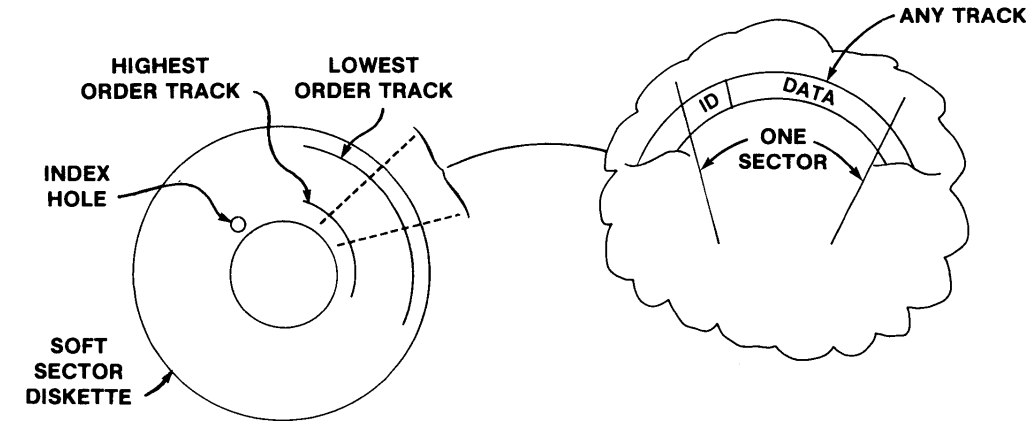


Figure 8

All diskettes, hard or soft sectored, have one index hole punched in the media. This index hole acts as a clocking or timing device between the spinning media and the diskette drive.

One hard-sectored configuration (32 hole plus one) exists for 8 inch (200 mm) diskettes. 5 1/4 inch (130 mm) diskettes are currently available in two hard-sector configurations. These are 10 plus one and 16 plus one. Figure 9 shows the currently available hard and soft-sectored diskettes.

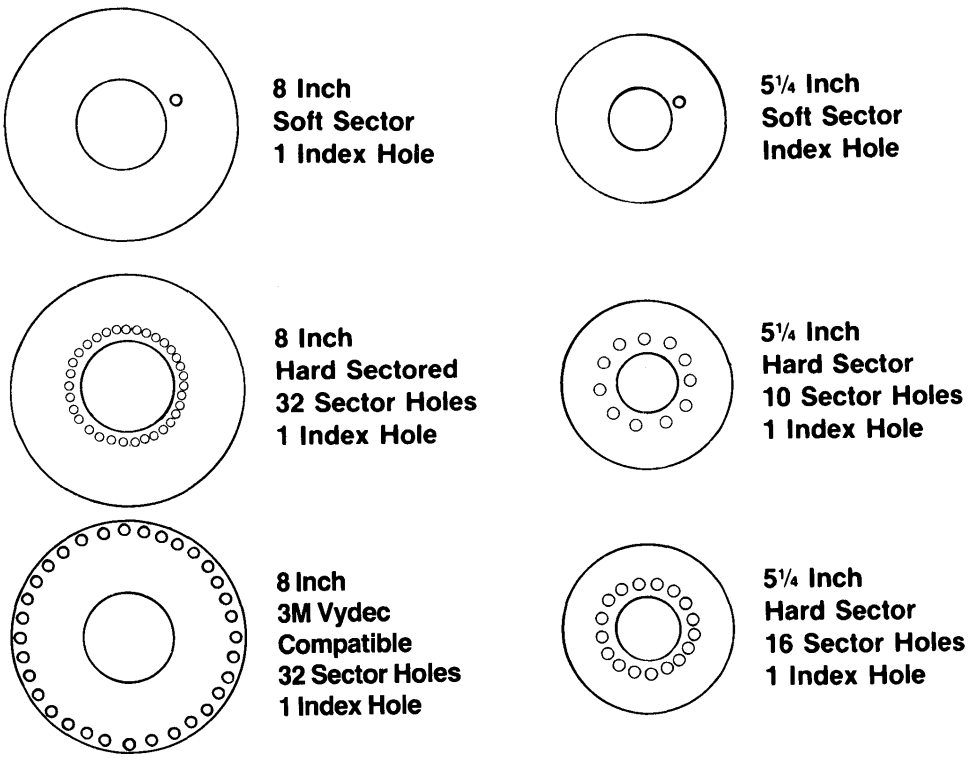


Figure 9

Before a diskette (both hard and soft sectored) can be used on a system, it must be formatted and initialized.

Before initialization, a diskette must be formatted. A formatted diskette has sector address identification (ID) information written on the surface, and space has been allotted for the data field. Formatting is done by the manufacturer. At times it can be done by the customer on the system.

Initialization is the process of preparing a formatted diskette for system use. This process identifies the specific use for the diskette.

A pre-programmed diskette is a diskette that has already been formatted, initialized and has specific data written in the data field portions of the sectors. This data is then read by the system and prompts either the system or the operator to perform a certain task. Examples of these kinds of diskettes are self-teaching aids and specific functions, such as accounting and inventory control.

VI. PRODUCT COMPATIBILITY DETERMINATION

It is important to ensure that the proper 3M diskette is recommended for use on a customer's system. Diskette drive manufacturers have designed drives which require a wide range of diskette configurations and formats.

This section provides the following:

A. A step-by-step method of determining diskette/ hardware compatability.

B. A list of the available 3M diskettes.

C. A systematic approach to analyze and solve customer problems.

Diskette Compatibility

I. **What is the system manufacturer (OEM) and model number?**
Refer to 3M diskette cross reference/compatibility list and recommend proper product.

II. **What is the diskette you are currently using, name and part number?**
Refer to 3M diskette competitive cross reference list and recommend proper product.

If no 3M product can be recommended, ask the customer the following questions to determine **physical compatibility:**

III. **If the customer uses 8″ diskettes,**

Size	Recording Surface	Density	Sectoring	Diskette
8″ Diskettes	Single Recording Surface	Single Density	Soft	SS-SD
			Hard	SS-SD-32
		Double Density	Soft	SS-DD-W/WP* SS-DD-128F
			Hard	SS-DD-32*
	Dual Recording Surface	Single Density	Soft	——
			Hard	——
		Double Density	Soft	DS-DD
			Hard	DS-DD-32*

* A Write Protect Notch is located in lower right corner of jacket.

IV. **If the customer uses 5-¼ ″ diskettes,**

Size	Recording Surface	Density	TPI	Number of Sector Holes	Diskette
5¼″ Diskettes	Single Recording Surface	Single/ Double Density	48 TPI	0	SS-DD-RH*
				10	SS-DD-10RH*
				16	SS-DD-16RH*
			96 TPI	0	SS-DD-96TPI-RH
				10	SS-DD-96TPI-10RH
				16	SS-DD-96TPI-16RH
	Dual Recording Surface	Double Density	48 TPI	0	DS-DD-RH
				10	DS-DD-10RH
				16	DS-DD-16RH
			96 TPI	0	DS-DD-96TPI-RH
				10	DS-DD-96TPI-10RH
				16	DS-DD-96TPI-16RH

All 5¼″ Diskettes have a write enable notch located in the upper right hand corner of the jacket.
A reinforced hub is available on all 5¼″ Diskettes.
*The SS-DD-RH is compatible with single and double density drives.

B. 3M DISKETTE PRODUCT LIST (8")

Product #	Available Format	Sector/ Track	Byte/ Sector	Tracks/ Side	Usable Sides	Density	Capacity Unformatted (U) Formatted (F)	Write/ Protect	Comments
Vydec Compatible		32	128	77	1	SINGLE	305K (F) 400K (U)	OPTIONAL	A HARD SECTOR DISKETTE WITH THE SECTOR HOLES ON THE O.D. GENERAL USE FOR WORD PROCESSOR SYSTEMS.
SS-SD	26 x 128	26	128	77	1	SINGLE	246K (F) 400K (U)	OPTIONAL	A SINGLE SIDE, SINGLE DENSITY 8" DISKETTE.
Wang Compatible SS-SD-32RH		32		77	1	SINGLE	400K	YES	REINFORCED HUB.
SS-SD-32		32		77	1	SINGLE	400K	YES	A HARD SECTOR SS-SD.
SS-SD-R	26 x 128	26	128	77	2	SINGLE	492K (F) 800K (U)	NO	A REVERSIBLE SS-SD. HAS 2 INDEX HOLES IN THE JACKET.
CPT 6000-8000 Compatible	16 x 256	16	256	77	1	SINGLE	303K (F) 400K (U)	YES	FOR USE WITH CPT WORD PROCESSING SYSTEMS.
SS-DD-W/WP				77	1	DOUBLE	800K	YES	A SINGLE SIDED, DOUBLE DENSITY DISKETTE.
SS-DD-128/F	26 x 128	26	128	77	1	DOUBLE	492K (F) 800K (U)	NO	A SINGLE SIDED, DOUBLE DENSITY 8" DISKETTE FOR USE ON DEC SYSTEMS. FORMAT IS SINGLE DENSITY. DATA IS DOUBLE DENSITY.
SS-DD-32		32		77	1	DOUBLE	800K	YES	A HARD SECTOR SS-DD-W/WP.
SS-DD-R-128/F	26 x 128	26	128	77	2	DOUBLE	984K (F) 1600K (U)	NO	A REVERSIBLE SS-DD-W/WP. FOR USE ON DEC SYSTEMS (SEE ABOVE). HAS 2 INDEX HOLES IN THE JACKET.
DS-DD*				77	2	DOUBLE		OPTIONAL	A DOUBLE DENSITY DOUBLE SIDED DISKETTE.
DS-DD-1024/F	8 x 1024	8	1024	77	2	DOUBLE	1212K (F) 1500K (U)		
DS-DD-32		32		77	2	DOUBLE	1600K	YES	A HARD SECTOR DS-DD.

*MAY BE FORMATTED TO ANY BYTE CONFIGURATION (IE 256, 512 AND 1024).

3M DISKETTE PRODUCT LIST (5¼")

Product #	Available Format	Sector/ Track	Byte/ Sector	Tracks/ Side	Usable Sides	Density	Capacity Unformatted (U) Formatted (F)	Write/ Enable	Comments
APPLE FILEWARE™ COMPATIBLE		SOFT*		46	2	HIGH	871K	YES	FOR USE ON APPLE COMPUTER'S UNIFILE™ AND DUOFILE™ DISKETTE DRIVES AND APPLE LISA™ COMPUTER SYSTEMS.
DS-DD-RH		SOFT		40	2	DOUBLE	500K	YES	
DS-DD-10RH		10		40	2	DOUBLE	500K	YES	A HARD SECTOR DS-DD-RH.
DS-DD-16RH		16		40	2	DOUBLE	500K	YES	A HARD SECTOR DS-DD-RH.
SS-DD-RH		SOFT		40	1	DOUBLE	250K	YES	A SINGLE SIDED, DOUBLE DENSITY SS-DD-RH.
SS-DD-10RH		10		40	1	DOUBLE	250K	YES	
SS-DD-16RH		16		40	1	DOUBLE	250K	YES	
SS-DD-96TPI-RH		SOFT		80	1	DOUBLE	500K	YES	A SINGLE SIDED 96TPI 5¼" DISKETTE.
SS-DD-96TPI-10RH		10		80	1	DOUBLE	500K	YES	A HARD SECTOR SS-DD-96TPI-RH.
SS-DD-96TPI-16RH		16		80	1	DOUBLE	500K	YES	A HARD SECTOR SS-DD-96TPI-RH.
DS-DD-96TPI-RH		SOFT		80	2	DOUBLE	1.0M	YES	A DOUBLE SIDED 96TPI 5¼" DISKETTE.
DS-DD-96TPI-10RH		10		80	2	DOUBLE	1.0M	YES	A HARD SECTOR DS-DD-96TPI-RH.
DS-DD-96TPI-16RH		16		80	2	DOUBLE	1.0M	YES	A HARD SECTOR DS-DD-96TPI-RH.

*Has two head access slots. No index hole.

GENERAL CATEGORIZATION - 3M BRAND

1. 8-INCH DISKETTES - SOFT SECTOR

   A. SS-SD's ARE SINGLE SIDED AND SINGLE DENSITY UNLESS FOLLOWED BY A "/2" WHICH INDICATES A REVERSIBLE (2 USABLE SIDES).

   B. SS-DD's ARE SINGLE SIDED AND DOUBLE DENSITY UNLESS FOLLOWED BY A "/2" WHICH INDICATES A REVERSIBLE (2 USABLE SIDES).

   C. DS-DD's ARE DOUBLE SIDED AND DOUBLE DENSITY.

2. 8-INCH DISKETTES - HARD SECTORED

   A. SS-SD's, SS-DD's AND DS-DD's HAVE 32 SECTOR HOLES PUNCHED NEAR THE I.D. FOR SECTOR BOUNDARY.

   B. VYDEC COMPATIBLE DISKETTES HAVE 32 SECTOR HOLES PUNCHED NEAR THE O.D. FOR SECTOR BOUNDARY AND ARE USED ONLY ON VYDEC SYSTEMS.

3. 5¼" DISKETTES - SOFT SECTOR

   A. SS-DD-RH's ARE SINGLE SIDED AND DOUBLE DENSITY.

   B. DS-DD-RH's ARE DOUBLE SIDED AND DOUBLE DENSITY.

   C. SS-DD-96TPI-RH's ARE SINGLE SIDED AND DOUBLE DENSITY FOR 96 TPI APPLICATIONS.

   D. DS-DD-96TPI-RH's ARE DOUBLE SIDED AND DOUBLE DENSITY FOR 96 TPI APPLICATIONS.

4. 5¼" DISKETTES - HARD SECTORED

   A. SS-DD-RH's, DS-DD-RH's, SS-DD-96TPI-RH's and DS-DD-96TPI-RH's ARE AVAILABLE IN 10 or 16 SECTOR HOLES PUNCHED IN THE I.D. FOR SECTOR BOUNDARY.

C. CUSTOMER PROBLEM ANALYSIS

This section reviews methods of handling some of the most common customer complaints.

One of the first priorities to handling a customer complaint is to attempt to isolate the problem to media or hardware. Ask the customer the following questions:

Is the problem repeatable on the same drive?

Can the problem be duplicated on other drives?

Is the same type of failure occurring consistently?

Can the mode of failure be localized on the diskette to tracks, sectors, or addresses?

If the answers to any of these questions is no, there may be a hardware problem. Recommend that the customer contact his equipment representative for service. Uncovering this information will enable you to provide quick and efficient service to the customer.

If you cannot isolate the problem based on those questions, this section contains some suggestions on how to effectively troubleshoot customer complaints.

In this section, the following symptoms are discussed:

1. After inserting the diskette, the drive will not become ready.
2. The customer can read but not write.

3. The customer can write but not read back the data at a later time.
4. While reformatting a diskette, the customer encounters write errors.

1. Symptom: AFTER INSERTING THE DISKETTE, THE DRIVE WILL NOT BECOME READY.

Corrective Action:

a. Verify product compatability.

b. Check for damage by examining the diskette through the head access slot and in the centerhole area. Point out the damage and isolate the source that caused the damage.

c. Have the customer attempt to do a "read certification" of the diskette. This will indicate if one or all tracks cannot be read. If none of the tracks can be read, the format on the diskette may have been destroyed. Reformat the diskette, if possible.

d. Consult drive maintenance personnel to examine diskette drive index sensing device.

2. Symptom: THE CUSTOMER CAN READ BUT NOT WRITE.

Corrective Action:

a. Examine the diskette to ensure it is not write-protected. Remember, when an 8" diskette has the write protect notch uncovered, the information cannot be altered or written over.

The 5 1/4" diskette is write protected only when the write enable notch is covered.

3. Symptom: THE CUSTOMER CAN WRITE BUT NOT READ BACK THE DATA AT A LATER TIME.

Corrective Action:

a. Check the diskette for physical damage on the recording surface and at the hub centerhole.

b. Have the customer perform a "read certification" on the diskette. This checks all the data and address fields for errors without destroying the recorded data. Record the failing address of each error encountered during the read certification. If only data field errors are encountered, this is a good indication that the drive is not properly writing information on the diskette. If address field errors are encountered, there may be an alignment problem on the drive or a drive

malfunction. At this point, consult the drive maintenance personnel. If the "read certification" detects read errors on the high-numbered tracks which are closest to the inner diameter of the media, have the drive

maintenance personnel examine the drive for proper head load pressure pad force and pressure pad condition. Excessively worn pressure pads will result in read errors.

c. Have the drive maintenance personnel examine the drive for proper head alignment.

d. Have the drive maintenance personnel examine the drive for proper electronic calibration (this includes logic levels in the power supplies, electrical response from the drive head, and write currents).

4. Symptom: WHILE REFORMATTING A DISKETTE, THE CUSTOMER ENCOUNTERS WRITE ERRORS.

Corrective Action:

a. Examine the diskette for physical damage that could cause write errors.

b. Have the customer assign an alternate track when possible.

c. Have the drive maintenance personnel examine the drive for proper head load pressure pad force, pad condition, and head cleanliness.

If the problem continues, 3M's Customer Quality Engineers should be consulted.

VII. PROPER USE AND HANDLING RECOMMENDATIONS

A. Proper care and handling of a diskette can eliminate damaged diskettes and lost data.

1. Refrain from smoking, eating, or drinking when handling a diskette to keep from contaminating the media surface.

2. Never allow the diskette to be placed near a magnetic field created from objects such as magnets, electric motors, transformers, etc. Contact with these objects could and probably will result in a loss of data.

3. Do not bend or fold a diskette. This will result in damage to the media such as an indentation and head to media contact will be degraded. This, in turn, will cause a loss of data during a read operation.

4. Never use paper clips or rubber bands on a diskette. This could cause jacket and/or media damage resulting in possible operation failure.

5. Do not touch or attempt to clean the media exposed by the jacket openings. This could result in media contamination and possible system failure.

6. Never allow a diskette to be exposed to excssive heat (greater than 125o (52oC)) or direct sunlight. This can cause distortion in the PVC jacket and, thus, may result in data loss due to head conformance problems. Expansion or contraction of the media results in performance degradation.

7. Never place heavy objects on a diskette. Heavy objects could either bow the jacket or cause permanent damage to the media.

8. Whenever a write-on label is full, replace it with a new one. Never stack these labels on top of each other, as eventually the diskette thickness could be such that drive insertion problems could result.

9. Never try to erase information written on the write-on label as the eraser debris could get into the diskette and could lead to diskette and/or drive damage.

10. Use only a soft felt-tip pen to write on the labels. Indentations could result from ballpoint pens or pencils and result in read errors.

B. The proper environment for diskette operation and storage will enhance performance.

1. Operating and storage temperature range:

   (48TPI: 50°F to 125° --10°C to 52°C)

   (96TPI: 50°F to 115° --10°C to 46°C)

2. Operating and storage relative humidity range:

   (48TPI: 8% to 80% RH - Wet Bulb less than 85°F)

   (96TPI: 20% to 80% RH - Wet Bulb less than 80°F)

3. Test Environment:

   Temperature Range: 75° + 5°F
   (22.8° + 2.8°C)

   Relative Humidity Range: 40% to 60% after 24 hours of acclimatization

4. Transportation:

   Temperature Range: -40°F to 125°F
   (-40° to 51.6°C)

   Relative Humidity Range: 8% to 90% with no condensation allowed.

VIII. GLOSSARY OF DISKETTE AND COMPUTER TERMS

Address -	The location of any physical record on the diskette, specified by the cylinder number, head number, and record number.
Basic -	Beginner's all-purpose symbolic instruction code, the most popular personal computer programming language.
Bit -	Smallest unit of data storage represents either a 1 or a 0.
Block -	A set of adjacent logical records recorded as a unit.
BPI -	Bits per inch
Byte -	8 bits, the amount of storage needed for 1 character.
CPU -	Central Processing Unit, controls peripheral devices and stores program instructions. This is the "brains" of the computer.
Character -	A single letter or number.
CRT -	Cathode Ray Tube, the display screen for computers.
Digital -	Of or relating to data in the form of numerical digits.

Direct or Random Access - Made possible by rotating disks. The system can go directly to data without reading unwanted data.

Dropin - See Extra Pulse

Dropout - See Missing Pulse

Extra Pulse - Any Magnetic pulse, usually single, which remains after a data group or stream has been erased.

File - Groups of related records stored together.

Flag - A term used to describe a track on a diskette that is unusable: a "flagged" track is one that the computer will not access.

Hard Error - An error that is repeatable in the same track and sector location.

I.D. - Inner Diameter

I/O Device - (Input/Output) Any device used to enter or retrieve data from a computer (Examples: diskette drives, CRT's, printers).

Index Cylinder - Cylinder 00. This cylinder is used to store information about the contents of the diskette.

Initialization - The process of writing the addresses, index cylinder information, and other system information on the diskette. (Initialization is also used to assign alternate tracks.)

Magnetic Flux - Lines of force used to represent magnetic induction.

Magnetic Head - A small electromagnet used for reading, recording, or erasing on a magnetic surface.

Microcomputer - Also personal computer, a computer based on a microprocessor chip.

Missing Pulse - The absence of a pulse where one was expected.

OD - Outer Diameter

OEM - Original Equipment Manufacturer

Operating System - The software instructions used to control the work of a computer.

Pascal - A programming language for personal computers.

Pressure Pad - Part of read/write head assembly for single-sided diskette systems. Located on side 1 (unused), it provides support to a diskette for good side 0 head to media contact.

Program -	The instructions, either written by the user or purchased ready to run, that tell the computer how to perform a given task.
Retentivity -	The capacity of retaining a magnetic field after the magnetizing force has been removed.
Reversible -	Can be recorded on both sides by removing the diskette and turning it over to record on the reverse side.
Read -	The process of sensing the magnetic fields on the diskette recording surface and converting them into machine-usable code.
Sector -	The addressable units into which each track is divided.
Soft Error -	Errors that are non-repeatable. These types of errors are caused by debris on the diskette surface or are induced by the system.
Software -	A term given to those instructions, written in programming language, that tell the computer system how to operate and process data.

Track - That portion of the diskette recording surface available to one read/write head at each access position.

Write - The process of generating magnetic fields on the recording surface on the diskette. These magnetic fields represent interpretable codes to the system.

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