

SVI•707

MSX DISK DRIVE
USER'S MANUAL

SVI[™]
SPECTRAVIDEO

MSX

SVI•707

**MSX DISK DRIVE
USER'S MANUAL**

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RADIO INTERFERENCE

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Move the computer away from the receiver
- Plug the computer into different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

WARNING

This equipment has been certified to comply with the limits for a class B computing device, pursuant to Subpart J of Part 15 of FCC Rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this computer. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

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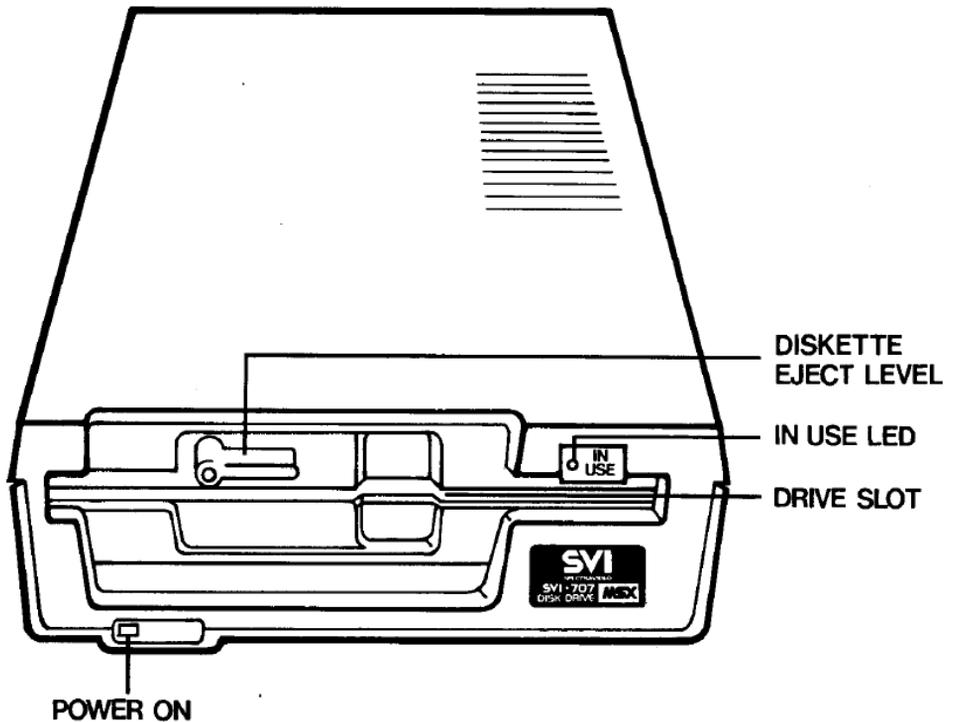
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CHAPTER 1 INTRODUCTION

Congratulations. You made a good choice. The SVI-707 is the perfect addition to any MSX system. It provides a large, long-term storage medium for your MSX computer. With it, you can access the library of software available on diskette, or store your own programs and data.

Nothing else is needed. The SVI-7D7 is complete with a built-in disk drive controller and all the software you need to get started. In fact, three popular microcomputer operating systems are included with the disk drive; you can run programs in MSX-DDS, disk BASIC and CP/M.



INTRODUCCION

This manual is your guide to the installation and application of the SVI-707. Other manuals, also included with the SVI-707, provide detailed instructions on using the commands available in MSX-DOS, disk BASIC, and CP/M. Read this manual over carefully before using your MSX disk drive. Then consult the appropriate software manual for information on software operation.

CHAPTER 2 PACKING LIST

Your SVI-707 MSX Disk Drive is securely packed in polyfoam. Save this packing and use it when transporting the disk drive.

The carton should contain the following items:

1. SVI-707 disk drive
2. This user's manual
3. MSX-DOS User's Manual
4. CP/M Operating System Manual
5. Disk BASIC User's Manual
6. MSX-DOS System Diskette
7. CP/M System Diskette
8. An AC adapter
9. Warranty Registration Card

CHAPTER 3 INSTALLATION

Follow the procedure outlined below to connect the disk drive to your computer.

- Step 1.** Make sure the power of the computer and disk drive is turned off.
- Step 2.** Position the disk drive cable so that the polarizing key on the connector is on top (see figure 1). Connect the cable to the Expansion Module Interface socket at the back of the computer.

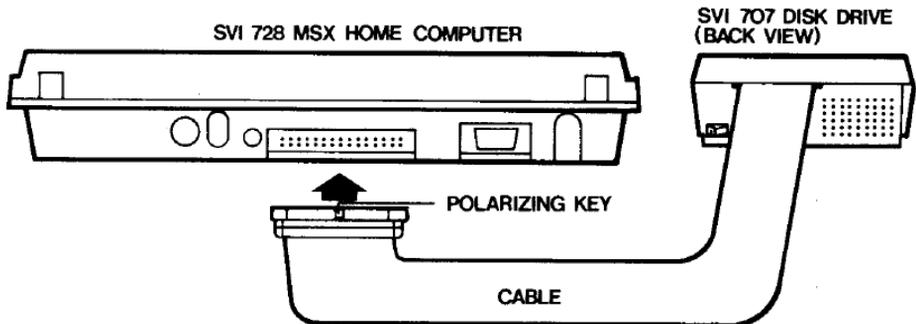


Figure 1 Connecting the Disk Drive to the Computer

Step 3. Close the ejectors on the socket to securely fasten the connector and the socket together (see figure 2).

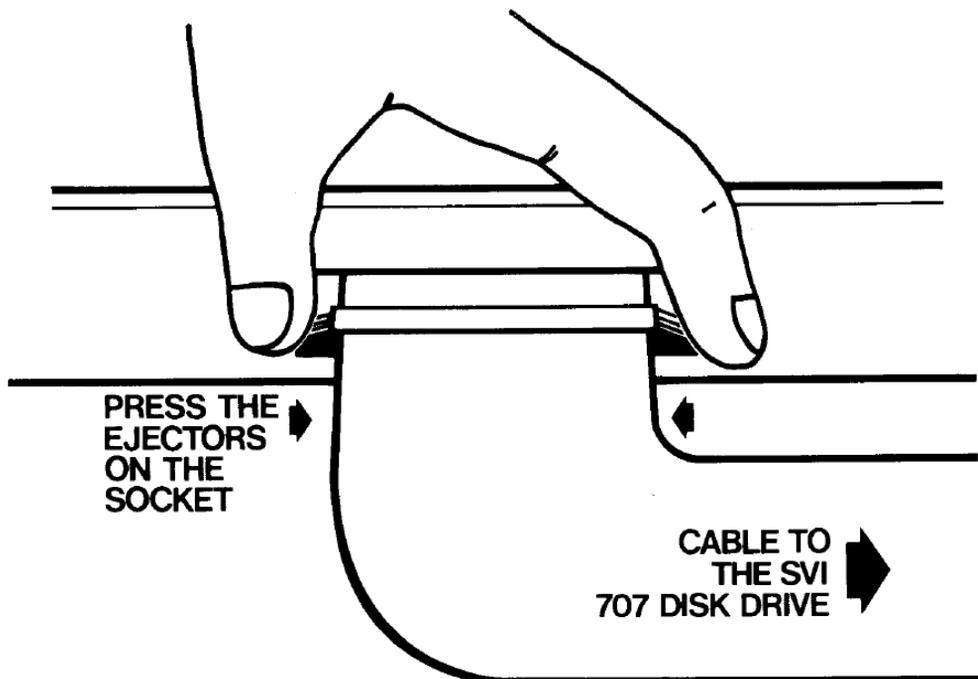


Figure 2 Closing the ejectors

- Step 4.** Plug one end of the AC adapter cable into the power socket at the back of the disk drive (see figure 3).

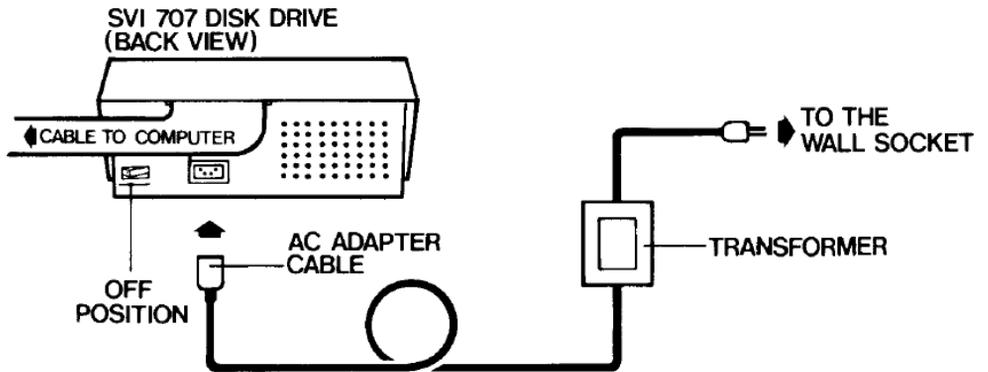


Figure 3 Installing the AC Adapter

- Step 5.** Plug the other end of the adapter cable into the wall socket.

CAUTION

Be sure that the power input printed on the adapter matches the power output from the wall socket.

CHAPTER 4

GENERAL OPERATION

4.1 Diskettes

The following rules apply to diskettes (also see figure 4).

- The SVI-707 is a double-sided, double-density disk drive and, consequently, it can only be used with diskettes designed for this standard (i.e., double-sided, double density diskettes).
- Do not touch, soil, or scratch the recording surface (i.e., any exposed area on the diskette especially the head window). It is never necessary to turn the diskette by hand.
- Do not bend or fold the diskette or it will become unusable.
- Keep diskettes away from magnetic fields (e.g. motors, telephones, T.V. sets, etc.) and from ferromagnetic material which could become magnetized. Strong magnetic fields can distort recorded data on disk.
- Do not write on the identification label with a lead pencil or ball point pen. Use a felt tip pen instead. Do not erase.
- When a diskette is not in use, put it in the envelope and file it away in a safe place. Replace storage envelopes when worn, cracked, or distorted. Envelopes are designed to protect disks.
- The safe storage temperature for diskettes is between 4 and 50 degrees celsius.
- Do not place diskettes in direct sunlight.

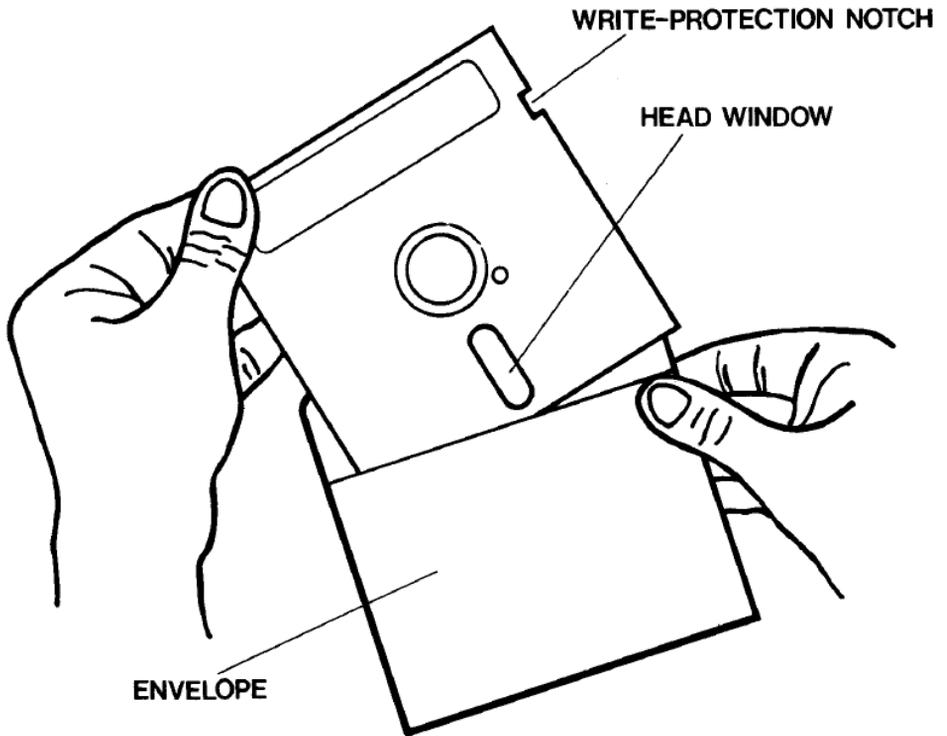


Figure 4 Diskette Handling

4.2 Inserting a Disk

- Step 1.** Move the diskette-eject lever to the horizontal position.
- Step 2.** Take the head-protection card out of the drive slot (see figure 5). Keep this card and insert it again before transporting.

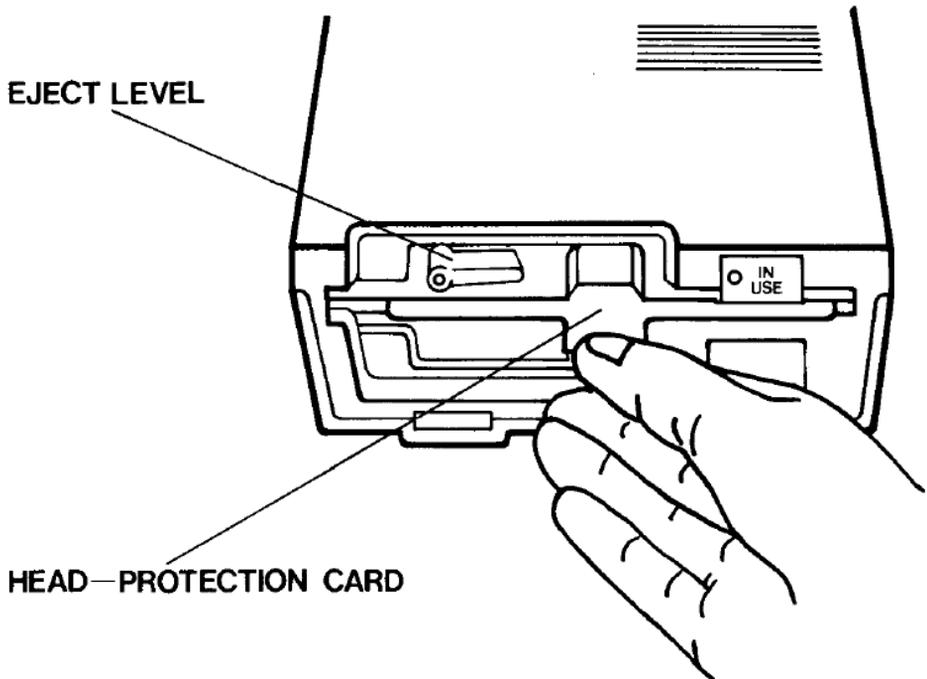


Figure 5 Removing the head protection card

- Step 3.** Be sure that the computer and all peripherals are properly connected, then switch on the power to the disk drive. (The LED on the front of the drive should turn on, indicating that the power is on.)
- Step 4.** Take the diskette out of its protective envelope. Do not touch any part of the diskette other than the label.
- Step 5.** With the diskette label facing up and the head window towards the slot on the 5VI-707 insert the diskette into the slot (see figure 6).

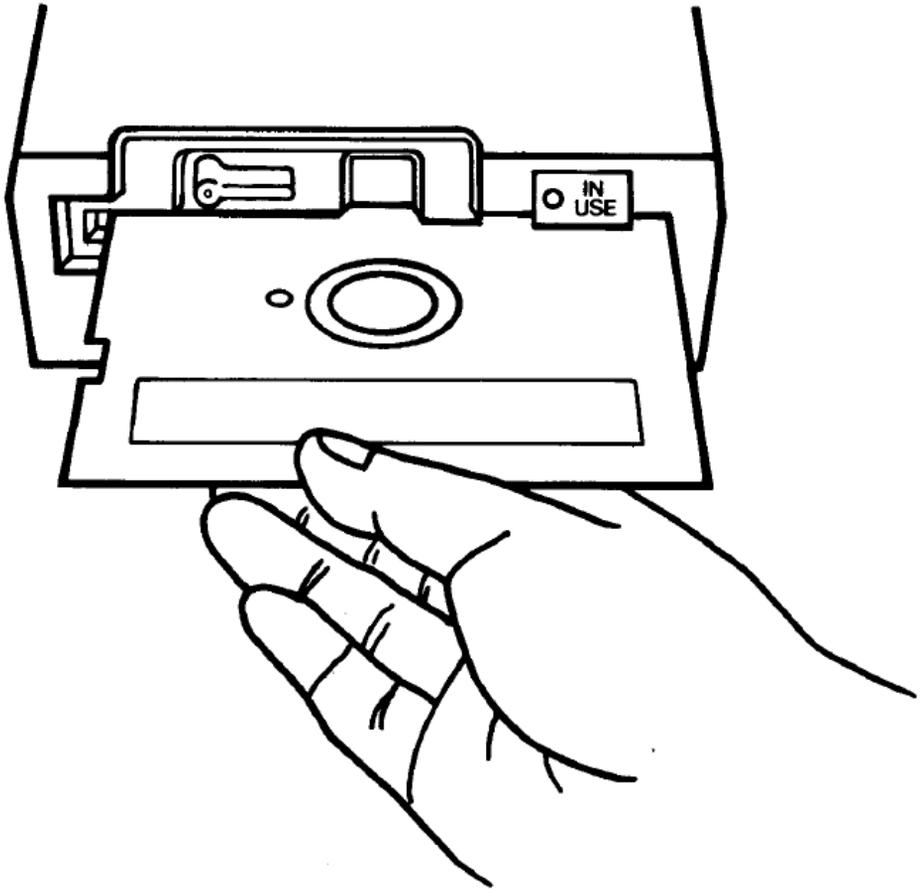


Figure 6 Inserting a disk

- Step 6.** Lightly push the diskette into the drive until it stops. Then turn the lever to the vertical position. If the diskette is not inserted all the way, the lever cannot move down. Hence, do not force the level, but instead remove the disk and try to insert it again.

4.3 Removing a Disk

- Step 1.** Make sure the in-use LED indicator is off before removing a diskette.
- Step 2.** Turn the disk ,lever to the horizontal position.
- Step 3.** Holding the diskette by the label, carefully remove it from the disk drive.

4.4 Disk Operating Systems

The SVI-707 can operate under three different disk operating systems: disk BASIC, MSX-DOS, or CP/M. A disk operating system is a program that controls the interaction between the computer and the disk drive.

The disk operating systems must be loaded from disk when the computer is turned on to establish a communication link between the computer and the disk drive. Indeed, without this program the disk drive cannot perform the simplest task.

The three disk operating systems are contained on two diskettes. Disk BASIC and MSX-DOS are stored on the disk labeled "MSX-DOS System Diskette"; whereas CP/M is stored on the disk labeled "CP/M System Diskette."

NOTE

Obviously, any diskette can be damaged or lost. Therefore, to safeguard against loss of valuable programs, we recommend that a second copy be made of all system diskettes. Details on this procedure, commonly referred to as "back up", can be found in the appropriate operating system manual (i.e., the MSX User's Guide for the MSX-DOS disk or the CP/M Operating System Manual for the CP/M disk).

4.4.1 Loading Disk BASIC or MSX-DOS

- Step 1.** Switch on the power of the disk drive and your T.V. or monitor.
- Step 2.** Insert the disk labeled "MSX-DOS System Diskette" into the disk drive.
- Step 3.** Switch on the power of the computer. The computer will load MSX-DOS from the disk drive. Then the MSX-DOS system prompt "A>" will appear on the screen.

At this point, if you wish to run disk BASIC, type BASIC and press ENTER .

- Step 4.** Refer to the MSX-DOS or Disk BASIC User's Manual for details on their respective commands.

4.4.2 Loading CP/M

- Step 1.** Switch on the disk drive and T.V. or monitor.
- Step 2.** Insert the diskette labeled "CP/M System Diskette" into the disk drive.
- Step 3.** Switch on the computer. The computer will load CP/M into its RAM and the CP/M system prompt "A>" will appear on the screen.
- Step 4.** Refer to your CP/M Operating System manual for details on CP/M commands.

4.4.3 Using Application Software

Most application programs come together with the operating system, hence they can be loaded into the computer without first loading the operating system from a separate diskette. Although the application loading procedure may vary slightly from one program to another, it is generally as follows.

NOTE

If an application disk does not contain the operating system, you can write the system on the disk using a special copy program. This program, called SYSGEN, is supplied with the system disk.

- Step 1.** Switch on the disk drive and T.V. or monitor.
- Step 2.** Insert the application diskette into the disk drive.
- Step 3.** Switch on the computer. The computer will load the operating system and application program into the memory and then execute the program.
- Step 4.** Refer to the instructions included with the software for information on software operation.

4.5 Write Protecting a Diskette

The write-protection notch is located on the upper right-hand side of the diskette. Left uncovered this notch enables the user to write files on the disk. However, when the notch is covered, the disk cannot be written on. Hence, the user is prevented from tampering with the software and data that the disk contains.

CHAPTER 5

ADDENDUM TO THE CP/M MANUAL

Since the CP/M Operating System manual describes only those commands and features common to all CP/M computers, commands and features unique to the SVI-707 are described in this chapter.

5.1 Accessing Data From Other Computers

Although the SVI-707 is, of course, only one physical drive, it can simulate eight logical drives. These logical drives enable the computer to access data stored by other brands of computer. Each logical drive simulates a particular disk format. The formats simulated include Osborne I; Kaypro II; Bondwell 12, 14 and 16; and SVI-605B.

To access data stored by a particular computer, simply change the drive designation to the appropriate logical drive. In other words, when you see the CP/M prompt "A>," type the letter representing the format you wish to access (followed by a colon) and press . The new prompt, reflecting the new drive designation, will appear on the screen. At this point, you have direct access to the data stored in the disk format specified by the new drive designation.

Files can also be copied from one format to another using the COPY707 command. This command is explained later in the chapter.

The logical drive assignments are as follows:

SVI-707 LOGICAL DRIVES

| LOGICAL DRIVE | FORMAT | COMPATIBLE TO | MAX. NO. OF DIRECTORY ENTRIES | CAPACITY |
|---------------|--------------------------------|---|-------------------------------|----------|
| A: | Double-sided Double-density | SVI-605B | 64 | 326K |
| B: | Double-sided Double-density | SVI-605B | 64 | 326K |
| C: | Single-sided Double-density | OSBORNE 1 5 1/4" floppy | 64 | 185K |
| D: | Single-sided Double-density | KAYPRO II 5 1/4" floppy | 64 | 195K |
| E: | Single-sided Double-density | Bondwell 12 | 128 | 170K |
| F: | Double-sided Double-density | Bondwell 14 and 16 | 128 | 342K |
| G: | Single-sided Double-density | SVI-605A + SVI-902 | 64 | 157K |
| H: | RAM Disk | * Requires the SVI-747 64K RAM card | 32 | 63K |

NOTE

When using the c, d, e, and f logical drives, the warm boot (`CTRL-C`) command is inhibited, because the location of the system tracks on these formats differs from that of the SVI computers.

5.2 Printer Spooling under CP/M

In CP/M, part of the computer's memory is used for spooling information sent to the printer. This means any information for the printer will be temporarily stored in the RAM before going to the printer. Since the data for printing is contained in the video RAM the rest of the computer is free to perform other tasks. However, when using the printer spooler, no direct access to the video RAM is allowed.

5.3 The FORMAT Command

Before any blank diskette can retain information, it must be formatted. Formatting organizes the disk so that it can be understood by the computer.

Follow this procedure to format your diskettes:

- Step 1.** Load the CP/M operating system.
- Step 2.** Type `FORMAT` to load the format program.
- Step 3.** Insert a blank diskette and press `ENTER` .

CAUTION

Formatting erases all information previously stored on the disk. Therefore, be sure the disk does not contain any valuable files before formatting.

- Step 4.** Type Y in answer to the "are you sure?" prompt. The computer will begin formatting. The number of each track as it is formatted will be displayed on the screen.
- Step 5.** The computer will then ask "format another disk?" Type Y if you have more disks to format; then follow the procedure from the beginning using a new blank disk. If, on the other hand, you do not wish to format another blank disk, type N; exchange the newly formatted disk for the CP/M system disk; and finally, press to return to the CP/M monitor.

5.4 The SYSGEN Command

This command copies the CP/M operating system to a formatted diskette. Upon completion of this process, your disk can be used to load (boot) the CP/M system.

Follow this procedure to write the system on a formatted disk.

- Step 1.** Load the CP/M system.
- Step 2.** When the CP/M system prompt "A>" appears, type SYSGEN.
- Step 3.** Insert the destination disk in the disk drive and press ENTER.
- Step 4.** Once the system is written on the destination disk, SYSGEN asks whether you want to copy the system on another disk. If you wish to continue copying, insert another destination disk and type Y. Otherwise, type N to exit SYSGEN and return to the CP/M monitor.

5.5 The COPY707 Command

COPY707 is a copy program especially designed for use with a single-drive system. Besides copying files from disk to disk, this program can transfer files from one disk format to another. It also supports the use of wild-card characters in the file name and thus can copy a number of files at one time.

Follow this procedure to use COPY707.

- Step 1.** Load the CP/M system.
- Step 2.** Type COPY707 to load the copy program. The 7 format options are then displayed on the screen.

```
0 -- MSX DOS
1 -- SVI-328 double-sided (728)
2 -- Osborne I
3 -- Kaypro II
4 -- Bondwell 12
5 -- Bondwell 14
6 -- SVI-328 single side
```

Step 3. Type the number adjacent the format in which the original (source) file was saved and press .

NOTE

If you wish to abort at anytime during the copying process, simply press -C. COPY707 will return to the main menu. Press -C a second time, if you wish to return to the CP/M monitor.

Step 4. Type the number adjacent the disk format that the file will be copied onto (i.e., the format of the destination disk) and press .

Step 5. Type in the name of the file to be copied and press . Note that the wild-card characters can be used to copy a number of related files.

Step 6. Insert the source disk into the disk drive and press `ENTER`. COPY707 will read the file into the computer's RAM. Once a file is read, the program will print the file I s name with the "read ok" message.

If there is more than one file to copy, COPY707 will continue to read files until the RAM allocated for file storage (buffer) is filled. An "incomplete" message will appear next to the name of the file that was being copied when the buffer was filled.

Step 7. Insert the destination disk and press `ENTER` in response to the message "insert destination ...".

Once a file is copied, its file name and the "copy ok" message is printed.

If some of the files where not completely loaded in step 6, steps 6 and 7 will be repeated until all files are loaded from the source disk and copied to the destination disk.

When all files are copied the "copy complete" message will appear.

5.6 The EDITFKEY Command

Function keys are time saving devices that enable you to enter whole commands with a single key. EDITFKEY allows you to use these keys in CP/M. With this program, you can define function keys to represent CP/M system or application program commands; then save these definitions on disk for use in future.

- Step 1.** Load the CP/M operating system.
- Step 2.** Type EDITFKEY .and press ENTER to load the function key editing program. The program will load and display this menu:

```
FUNCTION KEYS SET UP PROGRAM

no shift                                shift
-----                                -----
F1--> DIR                               F6--> DIR A:
F2--> STAT                               F7--> STAT
F3--> STAT *.*                           F8--> STAT A: *.*
F4--> LOADFKEY                            F9--> FORMAT
F5--> COPY707                             F10--> SYSGEN

-----                                -----
X--> exit   ESC--> end edit   <UP ARROW>--> up
E--> Edit   S--> Save/load   <DOWN ARROW>--> down

-----                                -----
<cr> is found           input command <  >
```

NOTE

The above screen display is based on the 80-column version of the program. Although the format for the 40-column version of EDITFKEY differs from that of the 80-column version the contents remain the same.

The display is arranged in an easy-to-read format. The two columns at the top of the screen show the current definitions of the 10 function keys. The cursor, the area highlighted in inverse video, is located over the function key currently being edited. In the center of the screen, the program commands are displayed. The message "<cr> is found" at the bottom of the screen indicates a carriage return (ENTER) is included in the current function key definition; whereas information printed after "input command" indicates the current editing mode (i.e., E for editing, U for up arrow, etc.).

- Step 3.** Use the up- or down-arrow keys to position the cursor over the function you wish to edit.

Step 4. Press E to enter the edit mode. Type in the function-key definition. Then, either press **ENTER** to confirm a definition that includes a carriage return, or press **ESC** to confirm a definition without a carriage return.

Repeat steps 3 and 4 until all function keys are defined to your satisfaction.

NOTE

If, while editing, you wish to exit from the EDITFKEY program without saving the definition, simply type X. You will return to the CP/M monitor and all new definitions will be ignored.

Step 5. Once you have finished editing, press S to save the definitions. Five options are available:

- 1 Save the edited function keys onto the disk with the default filename LOADFKEY.
- 2 Save the edited function keys in the computer's memory.
- 3 Load the edited function keys from the disk into memory.
- 4 Load the original set of function-key definitions from the memory when you don't want to save the edited set.
- X Exit from the save option to the set-up menu.

Enter your option by typing the character adjacent the desired operation.

- Step 6.** Whenever you wish to use the new definitions, type LOADFKEY and press ENTER. This will load the function keys from-the disk into the computer's memory.

ADDENDUM TO THE SVI-707 USER'S MANUAL

CP/M VERSION 2.24 SYSTEM DISK RELEASE 1.20

1. The system is applicable to American, British, French, German and International Version of MSX computers.
2. The system consists of a dump screen routine which is a set of instructions that are capable of transferring text displayed on the screen to the printer. The text is then printed in exactly the format that is shown on the screen.

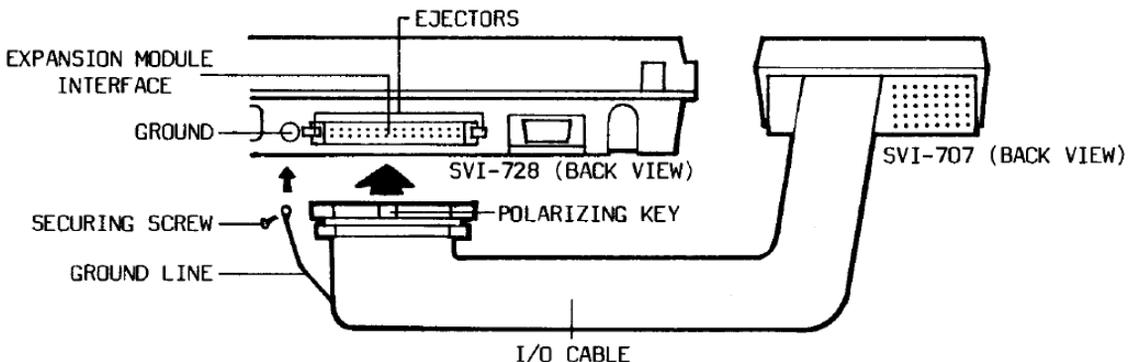
The system can operate with any text displayed in either 39 or 80 columns.

The dump screen routine is very useful when you want to print just a screenful of text of a file. The routine is invoked by pressing **CTRL**, **SHIFT** and **F1** all together. The text that is currently displayed on the screen will be printed immediately. Do not forget to prepare the printer before you press the keys.

3. The system can be copied onto a newly formatted disk by using SYSGEN.COM, version number 1.0 or higher.

NEW Y/O CABLE

The revised version of the SVI-707 I/O cable includes a ground line so as to suppress radio frequency noise. This new cable is connected as shown in the following illustration.



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