



SVI • 727

MSX 80 COLUMN VIDEO CARTRIDGE

USER'S MANUAL



SVI-727 USER'S MANUAL STATEMENT

WARNING:

This equipment generates, uses, and can radiate radio frequency energy if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class B computing device pursuant to subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

INTRODUCTION

SVI-727 MSX 80 Column Video Cartridge is specially for use with the SVI-728 or other MSX computer. This cartridge allows the users to switch from 40 column to 80 column display. With the cartridge, user may run any of the sophisticated CP/M programs already available in the market.

Read the instruction manual thoroughly to become familiar with the 80 Column Video Cartridge. It is your guide to proper installation and operation.

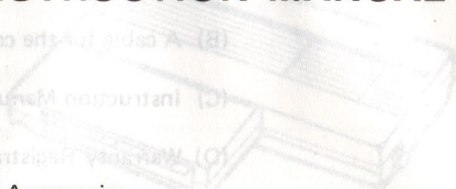
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SVI-727-UM

SVI-727 MSX 80 COLUMN VIDEO CARTRIDGE INSTRUCTION MANUAL



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3. MAIN FEATURES

(A) The main feature of SVI-727 80 Column Video Cartridge allows you to have an 80 Column display instead of a 40 column display on the screen. The display has 24 rows by 80 columns.

(B) With the purchase of the SVI-727 together with your SVI-728 or other MSX computer and the SVI-107 Disk Drive, you can get all of the operations of CP/M software already available at the moment.

(C) The cartridge is designed for ease of installation and for durability.

(D) Power is supplied by the computer.

1. ACCESSORIES

The package of SVI-727 MSX 80 Column Video Cartridge should contain the following items:

- (A) The 80 Column Video Cartridge you have purchased
- (B) A cable for the connection to a monitor
- (C) Instruction Manual
- (D) Warranty Registration Card.

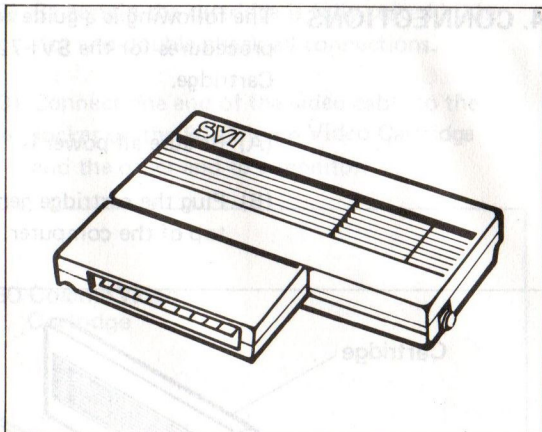
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2. EXTERNAL VIEW



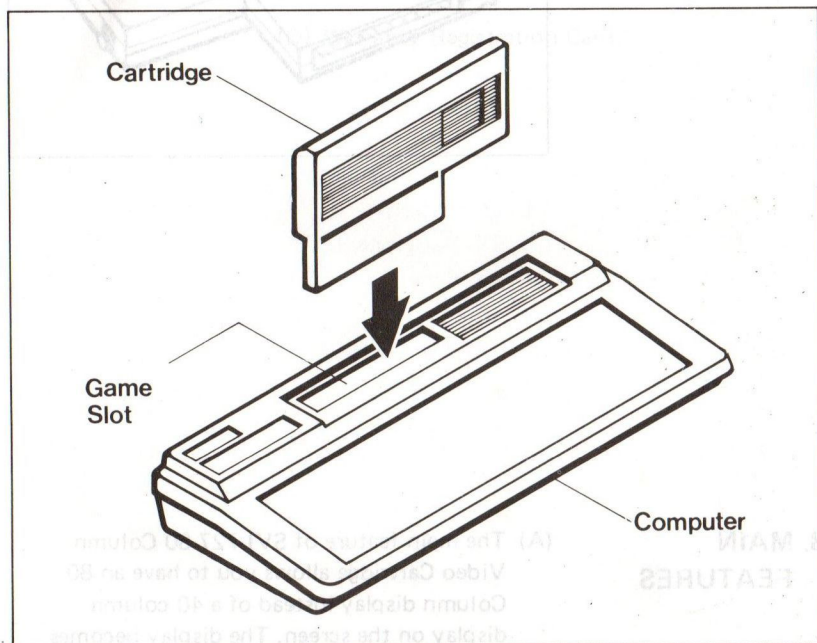
3. MAIN FEATURES

- (A) The main feature of SVI-727 80 Column Video Cartridge allows you to have an 80 Column display instead of a 40 column display on the screen. The display becomes 24 rows by 80 columns.
- (B) With the purchase of the SVI-727 together with your SVI-728 or other MSX computer and the SVI-707 Disk Drive, you can run any of the sophisticated CP/M programs already available in the market.
- (C) The cartridge is designed for ease of insertion and for durability.
- (D) Power is supplied by the computer.

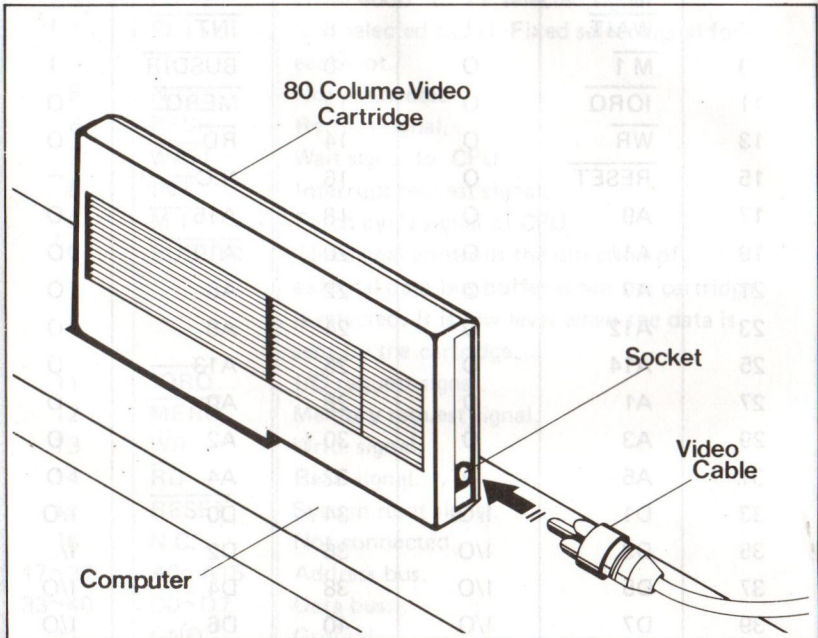
4. CONNECTIONS

The following is a guide to the proper hook-up procedures for the SVI-727 80 Column Video Cartridge.

- (A) Be sure all power is "OFF" for the computer.
- (B) Plug the cartridge gently into game slot at the top of the computer. Do not force.



- (C) Be certain the cartridge is fully seated in the slot and double check all connections.
- (D) Connect one end of the video cable to the socket on the 80 Column Video Cartridge and the other end to a monitor.



5. OPERATIONS

The SVI-728 or other MSX computer can only provide display of 24 rows x 40 columns on the video monitor. However with the installation of the SVI-727 80 Column Video Cartridge in the computer and running CP/M diskette, it automatically defaults to 80 column. It can be easily shifted back to 40 column display on TV by typing in

"STAT CON: = CRT:"

and typing in

"STAT CON: = URI:"

back to the 80 column display on video monitor.

6. I/O ASSIGNMENT

PIN NO.	NAME	I-O*	PIN NO.	NAME	I-O*
1	CS 1	O	2	CS 2	O
3	CS 12	O	4	SLTSL	O
5	N.C.	—	6	RFSH	O
7	WAIT	I	8	INT	I
9	M 1	O	10	BUSDIR	I
11	IORQ	O	12	MERQ	O
13	WR	O	14	RD	O
15	RESET	O	16	N.C.	—
17	A9	O	18	A15	O
19	A11	O	20	A10	O
21	A7	O	22	A6	O
23	A12	O	24	A8	O
25	A14	O	26	A13	O
27	A1	O	28	A0	O
29	A3	O	30	A2	O
31	A5	O	32	A4	O
33	D1	I/O	34	D0	I/O
35	D3	I/O	36	D2	I/O
37	D5	I/O	38	D4	I/O
39	D7	I/O	40	D6	I/O
41	GND	—	42	CLOCK	O
43	GND	—	44	SW1	—
45	+5V	—	46	SW2	—
47	+5V	—	48	+12V	—
49	SUNDIN	I	50	—12V	—

* The I/O is based on the computer.

SIGNAL PIN ILLUSTRATION

PIN NO.	NAME	DESCRIPTION
1	<u>CS 1</u>	ROM 4000~7FFF selected signal
2	<u>CS 2</u>	ROM 8000~BFFF selected signal
3	<u>CS 12</u>	ROM 4000~BFFF selected signal
4	<u>SLTSL</u>	Slot selected signal. Fixed select signal for each slot.
5	<u>N.C.</u>	Not connected.
6	<u>RFSH</u>	Refresh signal.
7	<u>WAIT</u>	Wait signal to CPU.
8	<u>INT</u>	Interrupt request signal.
9	<u>M 1</u>	Fetch cycle signal of CPU
10	<u>BUSDIR</u>	This signal controls the direction of external data bus buffer when the cartridge is selected. It is low level when the data is sent by the cartridge.
11	<u>IORQ</u>	I/O request signal.
12	<u>MERQ</u>	Memory request signal.
13	<u>WR</u>	Write signal.
14	<u>RD</u>	Read signal.
15	<u>RESET</u>	System reset signal.
16	N.C.	Not connected.
17~32	A0~A15	Address bus.
33~40	D0~D7	Data bus.
41	GND	Ground
42	CLOCK	CPU clock 3579 MHz
43	GND	Ground
44, 46	SW1, SW2	Insert/remove protect
45, 47	+5V	+5V power supply
48	+12V	+12V power supply
49	SUNDIN	Sound input (−5dbm)
50	−12V	−12V power supply

7. CAUTIONS

Proper cautions should be observed when handling the SVI-727 80 Column Video Cartridge and all other interface.

- (A) Never remove or insert a 80 Column Video Cartridge or any peripheral cartridge with the power "ON". This could cause serious damage to your system.
- (B) Never remove the protective casing surrounding the printed circuit board.
- (C) Never bang or drop the cartridge. This could cause irreparable damage to its circuit board.

8. MAINTENANCE

The performance of preventive maintenance on any peripheral cartridge is essential to the life of the cartridge. The following is a description of preventive maintenance you may perform on your 80 Column Video Cartridge.

- (A) Use a cleaning solvent, preferably freon based, to clean the bus fingers located at the bottom of the card.
- (B) The use of a wire brush is also recommended when cleaning bus fingers.
- (C) Never smoke, eat or drink anything near the cartridge. Particles of food and dust can get lodged in the printed circuit board, affecting performance and perhaps causing damage.

9. TROUBLE SHOOTING CHART

Please disconnect the cartridge from the computer and check whether the computer can function properly.

SYMPTON	POSSIBLE CAUSE	REMEDY
80 Column not displayed	Improper connection of the cartridge	Make sure power is OFF. Plug the cartridge firmly into the game slot at the top of the computer.
No display	Loose video cable	Make sure the video cable is properly connected to the monitor and the cartridge.
	Low brightness and contrast on monitor	Adjust the brightness and contrast level.
No steady display	Improper tuning of the horizontal centering and vertical hold	Adjust the horizontal centering and vertical held.

- 10. SPECIFICATIONS**
- Character: 7 x 9 dot matrix
 - Characters (column & row) Total:
80 x 24
 - Display characters: 128 ASCII characters
 - Video output: composite video 2Vp-p

First disconnect the cartridge from the computer, and check whether the computer can function properly.

REMEDY

Make sure power is OFF. Plug the cartridge firmly into the game slot at the top of the computer.

Make sure the video cable is properly connected to the monitor and the cartridge.

Adjust the brightness and contrast level.

Adjust the horizontal centering and vertical field.

POSSIBLE CAUSE

Improper connection of the cartridge

Game is not set properly.

Loose video cable

The performance is deteriorated to some extent and the picture is distorted. The picture is not clear and the brightness and contrast on monitor are poor.

(A) The picture is distorted, turning away from the horizontal centering and vertical field.

(B) The picture is distorted with a 1:1 ratio.

10. SPECIFICATIONS

Character: 7 x 9 dot matrix
Character: column & row Total
80 x 24
Display character: 128 ASCII characters
Video output: composite video 2Vp-p



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