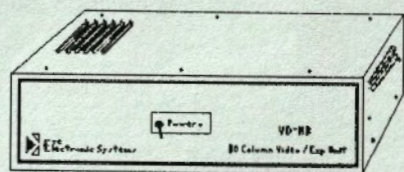


Eve Electronic Systems

VD-MB / MON-80

80 Column Video Display Systems



for the ADAM computer

NOTICE

Eve Electronic Systems reserves the right to make changes in the product and software described in this manual at any time, without notice. Revised manuals will be published as needed, and may be ordered from **Eve Electronic Systems** at the address below.

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>>>> VD-MB / MON-80 <<<<

>>>> 80 Column Expansion System Description <<<<

The software provided with the **VD-MB** or **MON-80** is further explained in the **ZBASIC** and **WORD PROCESSOR** manuals.

The **Eve Electronic Systems VD-MB** and **MON-80** are designed to expand and enhance the capabilities of the **ADAM** computer system. These units and the support software provided will allow you to use your **ADAM** with literally thousands of **CP/M** programs, most of which were designed for a *full 80 column display system*. The **VD-MB** and **MON-80** are normally configured to emulate the **Heath H19** terminal system, as was the normal **ADAM** video driver. However, in the **VD-MB** and **MON-80**, **Eve Electronics** has implemented a superset of the H19, and not a subset as in **ADAM**. This will allow for easier program configuration and system control. Several options of the **VD-MB** and **MON-80** are available on a '**CUSTOM ORDER**' basis. One such option is the emulation of a **VT-100** terminal system. For further information on options, contact **Eve Electronic Systems**.

The **VD-MB** incorporates a four slot expansion bus for use with various other Eve products, and some Coleco products such as the AutoDialer (requires adapter unit, and removal from case).

The Disks provided with the **VD-MB** and **MON-80** contain a modified **CP/M** system which will allow bootup directly into 80 column mode. This system also contains the **SP-1** drivers and initialization routines as well as those for the **VD-MB** and **MON-80**. In order to make switching from **ADAM** video to 80 column video as easy as possible, the 'auto-switching' routines have been linked to the **CP/M IOBYTE**. That is, when console

output is sent, the IOBYTE is checked and the system will switch in the proper video driver. This switching may be accomplished in several ways. The first method is with the use of the STAT program.

STAT CON:=-CRT:[return]

will change the IOBYTE to the ADAM video display.

STAT CON:=-UC1:[return]

will change the IOBYTE to the 80 column video display system.

Another way to change the 'default' settings of the IOBYTE is with the use of the CONFIG program provided with your ADAM CP/M. Follow the directions in your ADAM CP/M manual for this method. The device drivers included in the 'PATCHED SYSTEM' on these disks is as follows:

LPT: ADAM Printer
TTY: SP-1 Serial Printer port
UL1: SP-1 Parallel printer port
CRT: ADAM normal video system
UC1: 80 column video system

In order to allow those users who desire special device IO, the system has also been changed to all SP-1 serial input by assigning TTY: to the RDR:

If other than the default parameters are desired for the SP-1 serial port, the SERINIT program provided with the SP-1 must be used.

If you wish to perform switching within your own ZBASIC program, you could incorporate the following into your program.

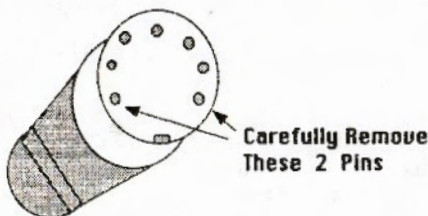
100 B=PEEK(3)	'MEMORY LOCATION OF IOBYTE
110 B=B AND 252	'DUMP BITS 0 & 1
120 A=B+1	'MAKE ADAM VIDEO
130 U=B+3	'MAKE 80 COLUMN VIDEO
150 POKE 3,A	'SET FOR ADAM VIDEO
or	
150 POKE 3,U	'SET 80 COLUMN VIDEO

The equivalent of the above basic program may also be performed in 8080 or Z80 assembly language, by experienced programmers.

The Expansion Bus in the **VD-MB** is designed to accept the **SP-1** board, the **SS-CC** board, and other future **EVE** products. These products were designed to be used either 'standalone', or removed from their plastic boxes and installed into the **VD-MB** expansion Bus. The removal of these boards has been obvious to most **VD-MB** users, and care should be used to remove the boards from their boxes and to install the boards into the **VD-MB**. If you have any questions on this procedure, please call **Eve Electronic Systems** for technical assistance between **9 AM and 4 PM Eastern time M-F**.

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**** NOTE:** Some of the Video Monitor Cables distributed by COLECO use a 7 pin DIN Jack instead of the more commonly available 5 pin Jack. The extra 2 pins on the 7 pin jack are not used, and must be removed for use in the **VD-MB**. This may be done easily with a small set of needle nose pliers. The pins should each be grasped with the pliers and bent back and forth until they 'snap' off. See the diagram below for the correct pins to remove. The **VAC-1** Audio / Video cable assembly is also available from Eve Electronic Systems.



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As previously mentioned, the **VD-MB** and **MON-80** are normally configured as a superset of the Heath H19 terminal system. In addition to the standard terminal command sequences, described below, are some additional 'special purpose' sequences which may be incorporated into your programs if desired for special effects.

The **ZBASIC** disk provided contains some sample programs to demonstrate the use of some of the following escape sequences. These sequences may be incorporated into your own programs as subroutines if desired to perform such functions as clear screen, cursor addressing, etc.

The following commands sent to the **00-MB** or **MON-80** unit will be recognized as selection / parameter control codes.

Set Mode Controls - This command will allow various operating modes to be enabled under software control. The format is **ESC x 0-9** as follows:

- 0 Blinking Cursor (default setting)**
- 4 Block Character Cursor (default setting)**
- 5 No Cursor**

Reset Mode Controls - Disables the modes set by the Set Mode Controls Command. Format is **ESC y 0-9** as follows:

- 0 No Blinking Cursor**
- 4 Underscore Cursor**
- 5 Enable Cursor (default setting)**

** other sequences in the above families will cause test conditions and video switching (false) to take place. **These should not be used.**

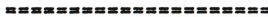
Escape and Control Code Table

The following escape sequences and control codes may be used to perform control functions on the VD-MB or MON-80.

<u>Cursor Function</u>	<u>Escape Ctl</u>	<u>Functional Description</u>
Carriage return	M	Perform carriage return
Line Feed	J	Perform line feed
Back Space	H	Space back one character
Tab	I	Advance to next tab stop
Home	H	Return Cursor to upper left corner
Up	A	Move cursor Up one line
Down	B	Move Cursor Down one line
Right	C	Move cursor Right one position
Left	D	Move cursor Left one position
Reverse Line Feed	I	Move cursor Up one line
Direct Cursor Addressing	Y	Position Cursor @ X Y
Save Cursor Position	j	Store cursor's current position
<u>Editing and Erasing</u>		
Clear Display	E	Clear Screen and Home Cursor
Erase to Top	b	Erase Screen from Cursor to Top of screen
Erase to end	J	Erase Screen from cursor to End of screen
Erase Line	l	Erase line cursor is on
Erase Left	o	Erase line left of cursor
Erase Right	K	Erase line right of cursor
Insert Line	L	Insert new line at cursor position
Delete Line	M	Delete line at cursor position
Insert Character Mode	@	Insert characters at cursor position
Insert Chr. Mode Off	O	End insert character mode
Delete Character	N	Delete character at cursor position
<u>Mode Control</u>		
Reverse Video	p	Begin reverse video display
Normal Video	q	Begin normal video display
Enter Graphics mode	F	Start Graphics Mode
Exit Graphics Mode	G	End Graphics Mode
Wrap around ON	v	CR and LF at end of line
Wrap around OFF	w	No CR and LF at end of line
80 Column Video	f	Use full 80 Column Video Display **
ADAM Video	g	Revert to ADAM Video output **
Set Mode Controls	x	Allow Mode settings
Reset Mode Controls	y	Reset Mode settings
Reset to Power on State	z	Reset system to default settings **

** Use of these commands will not change the CP/M IOBYTE, and should only be used by experienced programmers !!

90 DAY LIMITED WARRANTY



Eve Electronic Systems, Inc. warrants to the original consumer purchaser in the United States of America that this EVE VD-MB or MON-80 unit and disks will be free of defects in material or workmanship for 90 days from the date of purchase under normal in-house use.

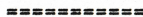
The sole and exclusive liability of Eve Electronic Systems, Inc. for defects in material and workmanship shall be limited to repair or replacement by an authorized Eve Electronic Systems, Inc. Service Station. This warranty does not obligate Eve Electronic Systems, Inc. to bear the cost of transportation charges in connection with the repair or replacement of defective parts.

This warranty is invalid if damage or defect is caused by accident, act of God, consumer abuse, unauthorized alteration or repair, vandalism, or misuse.

Any implied warranties arising out of the sale of the EVE VD-MB or MON-80 unit and disks including the implied warranty of merchantability and fitness for a particular purpose are limited to the above 90 day period. Eve Electronic Systems, Inc. shall in no event be liable for incidental, consequential, contingent or any other damages.

This warranty gives you specific legal rights, and you may have other rights which vary from State to State. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

Service Policy



Please read the EVE VD-MB / MON-80 documentation carefully before using the product. If the VD-MB or MON-80 unit or disks fail to operate properly, please check the installation instructions. If you cannot correct the malfunction after checking the installation instructions, please call Eve Electronic Systems, Inc. Customer Service at (617)653-3003 between **9:00 am and 5:00 pm Eastern Time, Monday through Friday.**

If Customer Service advises you to return your EVE VD-MB or MON-80 unit, and disks, please return it postage prepaid and insured, with your name, address, proof of purchase (dated), a brief description of the problem, and all cables connected to the unit at the time of malfunction to the Service Station you have been directed to return it to by the Customer Service representative. If your VD-MB or MON-80 unit or disks is found to be factory defective during the first 90 days, it will be repaired or replaced at no cost to you. If the VD-MB or MON-80, and disk is found to have been damaged or abused and therefore not covered by the warranty, then you will be advised, in advance, of repair costs.

If your VD-MB or MON-80 unit or disk requires service after expiration of the 90 day Limited Warranty period, please call Eve Electronic Systems, Inc. Customer Service for instructions on how to proceed: (617)653-3003 Monday thru Friday 9 AM - 5 PM Eastern time.

IMPORTANT: SAVE YOUR RECEIPTS SHOWING DATE OF PURCHASE.

