



EMULATOR CARTRIDGE

FOR USE WITH THE CAT
PERSONAL COMPUTER

INSTALLATION MANUAL

INTRODUCTION

The CAT Emulator Cartridge provides you additional 16K RAM at the same location of ROM.

By using this Emulator Cartridge, most of the existing software programs written for the 64K APPLE® II computer can run on the CAT personal computer.

HOW TO GET CONNECTED

- 1) Turn off all power to computer.
- 2) Plug the EMULATOR CARTRIDGE into the slot on the right hand side of your computer.

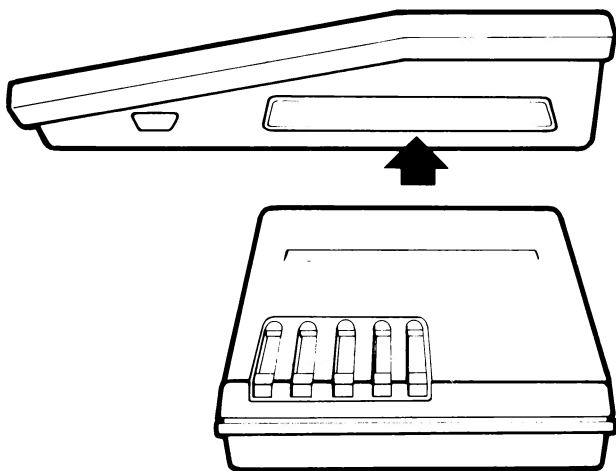


Fig. 1 Diagram of installation

- 3) Turn on the power to your computer.

TECHNICAL INFORMATION

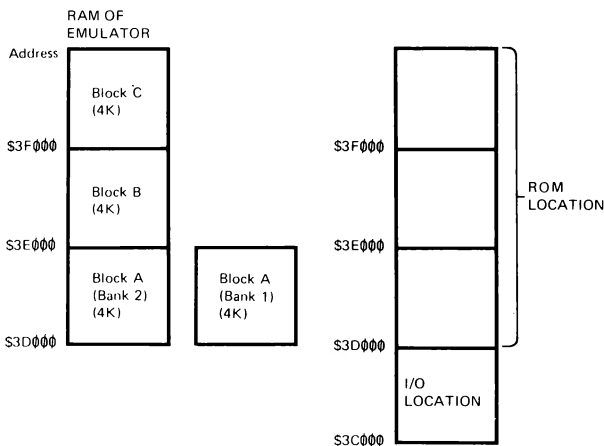


Fig . 2 Memory map for the Soft Emulator

The Emulator Cartridge occupies the same location as the internal ROM. As the ROM takes up 12K address location, there is only 12K memory location for the emulator to share. Consequently, the remaining 4K RAM block shares the same 4K location (i.e. 3D000 to 3D FFF) with its upper 4K RAM block.

As we see from the memory map in Fig. 2, the RAM blocks and ROM blocks, (and even between RAM blocks themselves) have the same address. A special technique called bank switching is used to identify which one is being used. On the other hand, the user must set up his desired READ/WRITE condition to fulfill his purpose. This is accomplished by accessing some special I/O addresses allocated to this soft emulator.

RAM Selection For first 8K RAM (Block B and C) with		RAM/ROM SELECTION			
Block A bank 2	Block A bank 1	RAM WRITE READ		ROM READ	REMARK
Hexadecimal Decimal	\$C080 -16256	X	✓	X	RAM is WRITE-ENABLED only after TWO successive reads
	\$C081 -16255	✓	X	✓	
	\$C082 -16254	X	X	✓	
	\$C083 -16253	✓	✓	X	RAM is WRITE-ENABLED only after TWO successive reads

- NOTE :
- 1 Either read - enable ROM or RAM but not both.
 - 2 Only 12K RAM can be used at the same time.
 - 3 RAM can be write-protected.
 - 4 \$C080 to \$C083 have the same usage as the corresponding \$C084 to \$C087, and so as \$C088 to \$C08B with corresponding \$C08C to \$C08F.
 - 5 After power up reset , the emulator is defaulted to be ROM-read and RAM (with Block A bank 2 selected) - Write mode.
 - 6 Once the main console is ON, pressing the system reset button does not affect the Emulator Cartridge.
 - 7 There are two special soft switches at location \$C380 & C381.
Read or write to \$C380 protect the present READ/WRITE status of the emulator cartridge. Read or write to \$C381 makes the status of the emulator cartridge able to be changed again.

OPERATION

The CAT personal computer is APPLE®II Software compatible, it can run most but not all of the APPLE®II software due to its own special design and outstanding features.

Once this Emulator Cartridge has been installed, you can use it to run nearly all software programs written for the APPLE®II computer.

SOME APPLICATIONS

(A) HIGH LEVEL LANGUAGES

The CAT with Emulator Cartridge can now support most software written for 64K APPLE®II as well as normal 48K APPLE®II software.

Some of these 64K Language software packages are:

APPLE® PASCAL
APPLE® FORTRAN
APPLE® LOGO
APPLE® SUPER PILOT

(B) CP/M®

This soft emulator also supports 56K or 60K CP/M. All 44K, 56K or 60K CP/M software can now run on your computer since those 56K CP/M or 60K CP/M software now can make use of the additional RAM from the Emulator Cartridge.

Those software includes:

Word Star®56K

Microsoft®'s COBOL – 80

Microsoft®'s FORTRAN – 80

Microsoft®'s BASIC – 80

etc.

SPECIAL OPERATION

Examples are shown below to guide you to run those very few software packages that cannot run using normal procedure.

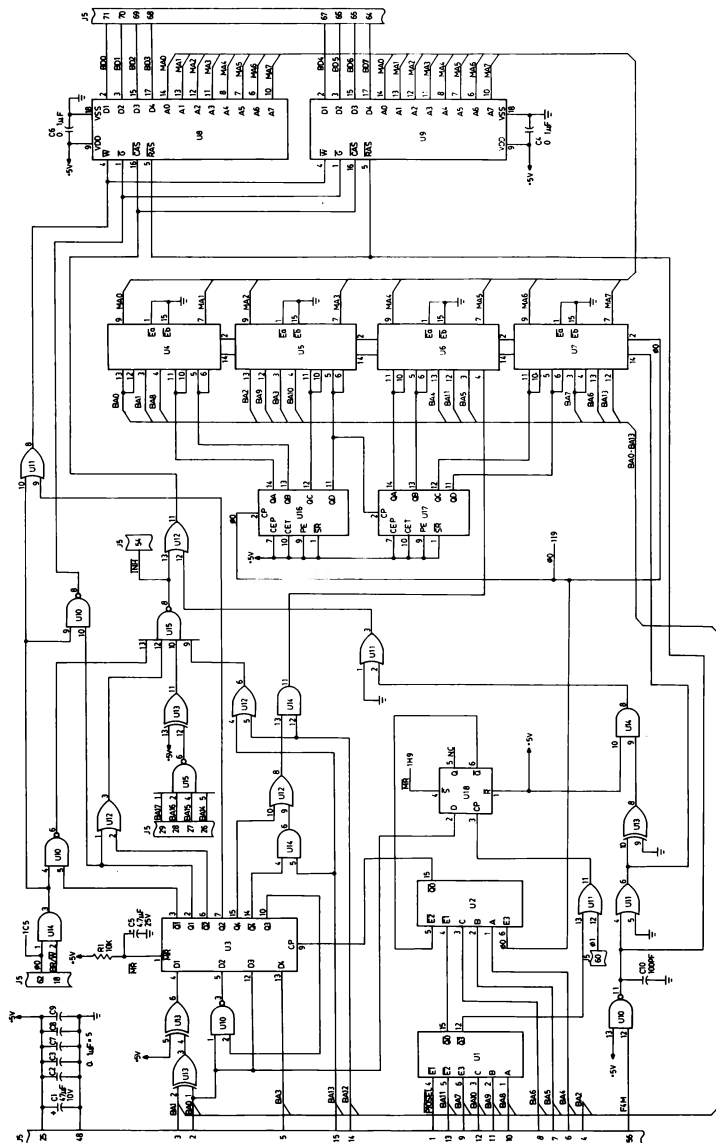
(A) Integer BASIC software

As our computer contains extended Microsoft Floating Point BASIC, those software written by APPLE®II integer BASIC is obviously unable to run.

Try the following steps to run those integer BASIC software.

- 1) Get an APPLE®II SYSTEM MASTER diskette and insert it into the first drive.
- 2) Boot this disk till the integer BASIC has been loaded into the Emulator Cartridge.
- 3) Now, you can run any integer BASIC programs, or you may type INT to get the Integer BASIC active and write your own Integer BASIC program.

CIRCUIT DIAGRAM



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MICROSOFT is a registered trademark of Microsoft Inc., U.S.A.
CP/M is a registered trademark of Digital Research Inc..
WordStar is the registered trademark of MicroPro International Corporation.

MADE IN HONG KONG

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