

## Everything You Always Wanted To Know About Commodore Computers



**PET**

1. Q: Is Pascal available for the 4016 computer?

A: Pascal is available for the 4016 computer from Abacus Software, which is located in Grand Rapids, Michigan at (616) 241-5510. This package is called Tiny Pascal Plus.

2. Q: Where can a video adapter for a large-screen PET be obtained?

A: A video adapter for a large-screen PET is available from Madison Computer, which is located in Madison, Wisconsin at (608) 255-5552.

3. Q: Can a joystick be interfaced with the 4032 computer?

A: It is possible to interface a joystick with the 4032 through the user port. However, the software to do this must be developed by the individual who is doing the interfacing.

4. Q: How many disk drives can be attached to the 8K PET computer?

A: If the 8K PET has the upgrade ROMs, then as many as eight disk drives can be daisy-chained together.

5. Q: Can the IEEE port on a PET be interfaced to an RS232 port?

A: Devices that convert the IEEE

port of the PET to an RS232 port can be obtained from TNW (called TNW 2000) at (714) 225-1040, or from Connecticut Microcomputer (called ADA 1450 or SADI) at (203) 775-4595. Also, Madison Computer at (608) 255-5552, can provide a program called McTerm, which converts the user port to an RS232 port.



**CBM**

1. Q: Can the character set on the 8032 computer be changed?

A: The character set on the 8032 computer can be changed by changing the ROM in UA 3 slot. Character information is contained in the ROM and can be replaced with an EPROM or ROM from companies that sell custom character generator ROMs.

2. Q: Is the character generator on the 8032 addressable?

A: The character generator is not directly addressable, but it is connected to the CPU chip by its own special "character bus." This technique saves valuable addressable memory space.

3. Q: Is it possible to do word processing in Spanish on the CBM computer?

A: Yes. A special character set is needed in the character generator ROM. These ROMs are available through West River Electronics Research & Development, which is located in New York.

4. Q: Is a BASIC compiler available for the 8032 or the 4032? How many times faster does it execute the program?

A: Yes, a BASIC compiler is available for the 8032 and the 4032. The Commodore Integer BASIC Compiler runs about 100 times faster than BASIC, but it only handles integer math. It generates true machine code and is best for compiling subroutines. Another compiler is PETSPEED, which generates pseudocode and increases execution speed by a factor of approximately 3 to 20 times, depending on the task. It handles floating point math, and is easier to use to compile previously written programs since it handles PET/CBM BASIC syntax.

5. Q: What assembler is available for the 8032 computer?

A: The Commodore Assembler Development is available through Authorized Commodore Dealers. Assemblers are also available from several other sources.

6. Q: Can the 8032 computer be upgraded to a SuperPET?

A: The SuperPET requires an additional board, which is not currently available for the 8032 computer as a separate item.

7. Q: Which port can be used on the CBM to interface it to a digital voltage meter?

A: Either the user port or the IEEE

port can be used to interface the CBM with a digital voltage meter or similar devices.

8. Q: Is training available for customers on CBM machines?

A: Many Authorized Commodore Dealers provide training on Commodore equipment to their customers. For information regarding training, contact your local Commodore dealer.



### SuperPET

1. Q: Which modem does Commodore recommend to be used with the SuperPET?

A: No specific modem is recommended for use with the SuperPET. Any good quality RS232 modem will work well with the SuperPET.

2. Q: How many characters can fit within a logical record on the SuperPET?

A: On the SuperPET, 254 characters can fit within a logical record.

3. Q: How does the 8096 computer compare with the SuperPET given that the price is the same for both computers?

A: The 8096 is an expanded 8032 computer. It does not have the 6809 chip in it, and the Waterloo micro languages will not run on it. The SuperPET has the additional 6809 microprocessor, a serial port (RS232), and Waterloo micro language software.

4. Q: Can the SuperPET be expanded beyond 96K RAM?

A: No. The maximum amount of RAM allowed for the SuperPET is 96K.

5. Q: Could a hard disk unit be interfaced with the SuperPET?

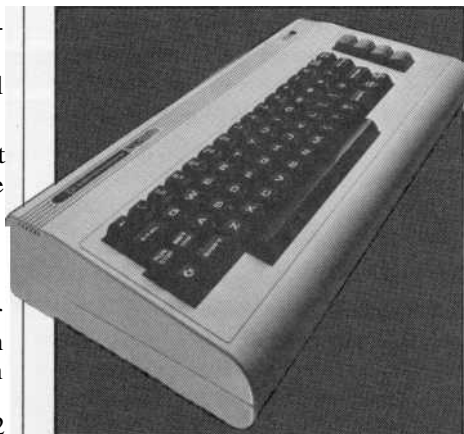
A: Yes. Hard disks can be interfaced the SuperPET and most other Commodore computers.

6. Q: How can I print to the printer in BASIC using the 6809 chip on the SuperPET?

A: To print from a BASIC program, use the OPEN statement with 'printer' as the file name (see pages 166-170 of the Waterloo microBASIC book). To LIST a program while using BASIC, enter: save 'printer'.

7. Q: How do you run an 8032 program that needs ROM slots UD 11 and UD 12 on the SuperPET?

A: A retrofit kit number 9000029 is needed on original double-board SuperPETs to run 8032 programs using ROM slots UD 11 and UD 12. This kit is available at no charge from an Authorized Commodore Dealer.



### VIC 20 Personal Computer

1. Q: Can VICMON and the Super Expander be used at the same time with the expansion module?

A: No. Although some functions may operate correctly, some memory locations in each cartridge are the same, which would interfere with programming.

2. Q: Can scrolling be made to reverse itself on the VIC 20?

A: It is possible to make scrolling reverse itself with a machine language routine. However, there is no routine located in ROM that will accomplish this. The routine must be developed by individuals who wish to make scrolling reverse itself.

3. Q: Are any commands assigned to function keys in the Programmer's Aid Cartridge?

A: Yes. There are two sets of commands assigned to the function keys in the Programmer's Aid Cartridge. However, these commands can be redefined.

4. Q: Is it possible to restore the VIC back to the unexpanded VIC with the expander cartridges plugged in?

A: No, it is not possible to restore the VIC back to the unexpanded VIC with the expander cartridges plugged in. The cartridges must be un-plugged to restore the VIC back to its un-expanded mode.

5. Q: What controls the clock on the serial I/O port of the VIC 20?

A: The 6522 chip in the VIC has a crystal clock in it which controls the rate of transfer on the serial I/O port.

6. Q: Where is the start of BASIC located when the 8K and 16K Memory Expander cartridges are plugged in?

A: BASIC starts at 4096 decimal with the 8K and 16K Memory Expander cartridges plugged in.

7. Q: Is the user port of the VIC 20 analog or digital?

A: The user port of the VIC 20 is digital.

8. Q: How much usable memory is

available of the full 32K RAM in the VIC?

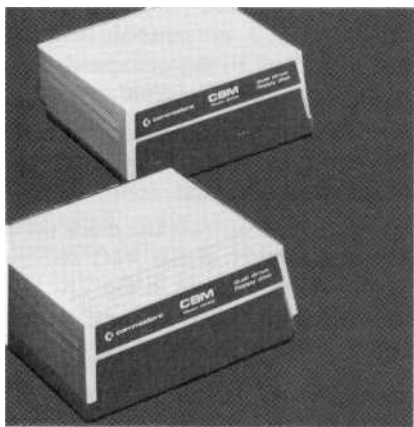
A: There is 27 1/2 K usable memory available.

9. Q: How can screen memory be moved around on the VIC 20?

A: Screen memory can be moved around by altering the upper four bits of location 36869. This is the screen memory pointer location in the VIC chip. Also, you must tell the screen editor where the screen has been moved by POKEing the high byte of the starting screen address into location 648. Then warm start the system by either holding the run/stop and restore keys down or by typing the command: SYS 65234.

10. Q: Where does RAM start on the VIC 20?

A: RAM starts at 4097 decimal on the VIC.



## Disk Drives

I. Q: Does the 8050 disk drive contain Tandon or Micropolis drives? Which drive is upgradeable to an 8250 unit?

A: The 8050 disk drive was produced with both Tandon and Micropolis drives. Tandon is the later drive.

Neither drive is upgradeable to an 8250 unit.

2. Q: What is the availability of the 2040 and 4040 disk drive upgrade kits?

A: Upgrade kits may be ordered through Authorized Commodore Dealers. The part number for this kit is 321523-01.

3. Q: How can diskettes be backed up with a single disk drive?

A: Diskettes can be backed up with a single disk drive by LOADING the program into memory, and then SAVEing the program onto another diskette.

4. Q: What is the DOS for the VIC 1540 disk drive?

A: The DOS for the VIC 1540 disk drive is standard Commodore DOS version 2.6.

5. Q: Can programs stored on tape be converted to the disk drive?

A: Programs stored on tape can be converted to disk by LOADING the program into memory and then SAVEing the program onto a diskette.

6. Q: Can programs stored on diskette be copied to tape?

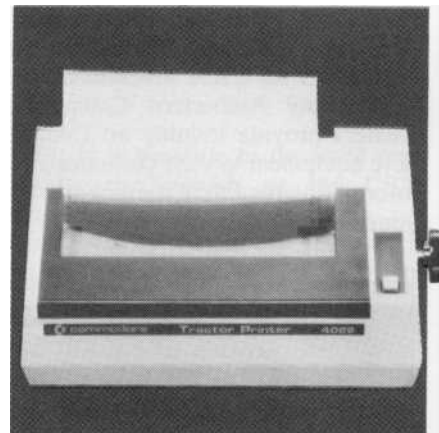
A: Programs stored on diskette can be copied to tape by LOADING the program from the diskette into memory and then SAVEing the program on tape.

7. Q: Can a Commodore Dual Disk Drive be connected to the VIC?

A: By using the IEEE-488 interface cartridge, any Commodore disk drive can be connected to the VIC 20.

8. Q: Can the VIC 1549 disk drive be connected to the PET?

A: No. The VIC 1540 disk drive connects to the VIC 20 serial port. The PET does not have a serial port like the one on the VIC. Instead, it has an IEEE port and a programmable parallel port.



## Printers

1. Q: What is the difference between the 04 and 07 printer ROMs for the 2022?

A: The 07 printer ROM is the newer version of the 04 ROM. These ROMs are available from your local Authorized Commodore Dealer.

2. Q: What print wheels could be used for the 8300p printer?

A: Over 150 different print wheels are listed in the Diablo Print Wheel Book. This book is a Diablo publication (part number 90044-01).

3. Q: Are the VIC 1515 printer settings documented in any hardware manual?

A: The VIC 1515 Printer Manual has documentation on the settings. C=

*In past issues, a full-page advertisement for MAG, Inc. contained an incorrect spelling of Lenox Industries. The correct spelling of this Texas-based company is Lennox Industries Inc.*