

**** P C D T ****
Personal Computer Debugging Tool
For IBM PC/XT and compatible computers.

What do you do if your Diagnostic Disk won't Boot?

PCDT is the ANSWER.

PCDT is in a PROM that temporarily replaces your existing BIOS rom. It talks to a serial card (supplied with PCDT) to an external computer or terminal. PCDT does not require the use of ram, interrupts, DMA, CTC, floppy, video, keyboard, switches, any COM channels, or any LPT ports and allows you to do the following:

A - Address Set	B - Back to previous address
C - Configure	D - Dump Memory
E - EXIT	F - Fill Memory
H - HELP	I - Input from PORT
J - Jump to memory address	K - Keyboard TEST
L - Loops for scopes	M - Modify memory
N - Noisemaker	O - Output to port
P - Port Set	R - RESET
S - Segment Set	T - Test Memory
U - Urge Floppie	V - Video TEST
W - What Memory (memory map)	X - Xfer from Smart terminal

If you have spent any time trying to repair a IBM PC/XT or compatible you can see how much PCDT will help. You can find out what memory and proms are installed and where they are located. You can verify switch settings. You can modify memory, which allows you to write special test programs to diagnose special problems. You can test memory and dump memory and proms. You can play with the disk drives for alignment or simply making sure they are working. There are several scope loops to aid you in trouble shooting memory and I/O ports. You can test video boards and the keyboard. The fact that PCDT does very little before sending the sign-on message to the serial port will also help on the few boards which will not run PCDT the first time. If you have a board which will not run PCDT, simply making PCDT run will probably be all you need to do to fix the board.

The Xfer command allows you to transfer data over the serial line into the board's memory. This allows you to develop programs which you want to run and load them into the board with out having a keyboard, drives, or display. This opens up a lot of possibilities for using inexpensive PC clone boards for slave processors to other computers.

PCDT comes in a 2764 EPROM with a special serial interface card plus a manual on a disk. PCDT costs \$129.95. To order send a check or money order to:

Fischer Computer Systems
445 Bay Street
Angwin, CA 94508

For more information CALL (707)965-2414. Dealer inquiries welcome.

Getting Started with PCDT

It is a good idea to go through the following steps using a known good computer as the computer under test. This will allow you to find out what to expect from PCDT and not be confused by the problems of a bad computer.

PCDT start-up using a COMPUTER as a terminal.

1. Obtain a cable that has two female DB-25 connectors and at least three wires connected end to end. The minimum connection is pin 2 to 2, pin 3 to 3 and pin 7 to 7.
2. Make sure the computer you are going to use as a terminal has a Serial Port setup as COM1.
3. Start the computer you are using as a terminal and boot your standard MS/Dos disk.
4. Load a Terminal Program in the computer. TERM.EXE supplied on the Manual disk that comes with PCDT will work.
6. Install the PCDT prom in place of the BIOS rom of the computer under test.
7. Install the TEST board supplied with PCDT in an open slot on the computer under test.
8. Connect the Cable from the TEST board to the serial port (COM1) on the computer being used as a terminal.
9. Power up the computer under test. It is very likely that the PCDT sign-on message will appear on the terminal computer.
10. Enter 'HC' on the terminal computer to get a list of possible commands.

PCDT start-up using a 'dumb' RS-232 terminal.

1. Obtain a cable with a female DB-25 connector on one end and the proper connector for the terminal on the other end. The terminal most likely needs a MALE DB-25 connector. Connect at lease pins 2 to 2, pin 3 to 3 and pin 7 to 7.
2. Make sure the terminal is set for 9600 baud, 8 data bits, 2 stop bits and no parity.
3. Install the PCDT prom in place of the BIOS rom othe the computer under test.
4. Install the TEST board supplied with PCDT in a open slot on the computer under test.
5. Connect the cable form the TEST board to the serial port on the terminal being used.
6. Make sure that the terminal being used is powered on.
7. Power up the computer under test. It is very likely that the PCDT sign-on message will appear on the terminal.
8. Enter 'HC' on the terminal to get a list of possible commands.

The diskette supplied with PCDT contains a file called MANUAL. This file contains a detailed list of the commands and other information that will be helpful when using PCDT. Boot your computer and 'TYPE MANUAL' to get a listing. If you want it printed, set up your printer and enter a control-P before 'TYPE MANUAL'.