PCMCIA
Portable CD-ROM
Installation Manual

CD-940E

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EXP MEMORY PRODUCTS.

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INTRODUCTION

The PCMCIA CD-ROM consists of a double-speed, low-power CD-ROM drive and a PCMCIA interface card. It is compatible with any computer with a PCMCIA 2.1 Type I or II slot. The fast PCMCIA interface delivers a true double-speed data transfer rate in excess of 300K bytes per second. Plus, unlike those CD-ROM drives using SCSI or parallel port interfaces, this PCMCIA CD-ROM requires *no external power supply!* The PCMCIA CD-ROM provides true multimedia portability.

SYSTEM REQUIREMENTS

1. Notebook or desktop computer with a PCMCIA 2.1 Type I or II slot
2. MS-DOS Version 6.0 or later and MSCDEX.EXE

FEATURES

- Complies with PCMCIA 2.1 Standard
- MSCDEX compatible
- Easy-to-install device driver software
- No external power supply required
- Single 5V operation, Low power consumption; 120 mA (Sleep), 250 mA (Standby), 800 mA (Peak value in accessing)
- Ultra slim PCMCIA Card
  85.6 x 54.0 x 3.3 mm (Type I)
- Easy to carry CD-ROM Drive
  Size: 245x 150 x 48 mm
  Weight: 1.3 Kg (2.8*lb*)
- Data capacity 635 MB
- Windows 95 Ready
- OS/2 Warp Ready
- Double speed data transfer rate: 307.2 Kbytes/sec
- Average access time 350 ms (1/3 stroke)
- 128 Kbytes Memory Buffer
- Motorized tray loading, no caddie required
- Supports CD-DA, CD-ROM mode 1 and 2, CD-XA, Multi-session Photo CD and CD-I
- 16 bit, 44.1 kHz sampling Audio output with front volume control
- Data integrity 1 error in 10^{-16} bits
- CD-Audio direct play with Play/Skip track button

PART NAMES AND FUNCTIONS

FRONT PANEL OF THE CD-ROM DRIVE

Disc Tray:

This disc tray is used to insert the compact disc to access the disc database.

Headphone Jack:

3.5 mm audio headphone jack.

Power LED:

This LED will blink when the drive is accessing the disc.

Headphone Volume Control Knob:

This rotary knob is used to adjust the headphone jack volume.

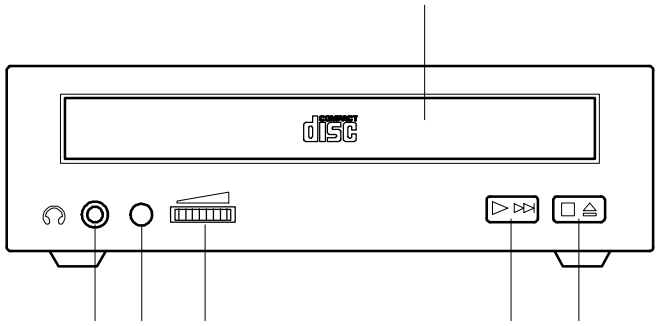
Play/Skip Button:

- If the drive is in stop state, press the button will activate the drive to start playing.
- If the drive is in play state, press the button will skip to the next track.

Open /Close/Stop Button:

This button has three function: OPEN, CLOSE, and STOP:

- If the tray is opened, press the button will close the tray;
- If the tray is closed, press the button will open the tray;
- If the CD-ROM drive is in play state, press the button will stop it.



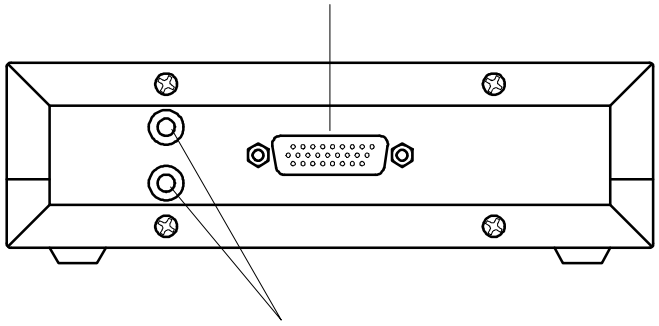
Rear panel of the CD-ROM DRIVE

Interface Connector:

This interface connector is used to connect the CD-ROM drive with the PCMCIA interface card.

Audio Output Jacks:

Left and right channel audio output for connection to external speakers.



HARDWARE INSTALLATION

Before you begin, make sure you turn OFF all power to your system before connecting the PCMCIA CD-ROM to your computer.

1. Connect the PCMCIA interface card to the CD-ROM drive. Press firmly until the CD-ROM connector is seated, and tighten the two screws on the cable connector.

2. Place the CD-ROM drive in the horizontal position, for the CD-ROM is designed to operate only in the flat position. Operating the CD-ROM drive in any abnormal position is prohibited.

3. Consult your computer's documentation and locate the PCMCIA slot.

4. Align the PCMCIA interface card with the arrow sign pointing to the computer's slot. (Please note that the card is keyed to guide proper orientation.)

5. Slowly insert the PCMCIA interface card into the slot and press firmly until the connector is seated.

6. You are now ready to install the PCMCIA CD-ROM device driver. Please follow the Software Installation procedures.

CAUTION

You should connect the PCMCICA interface card to CD-ROM drive first before inserting the PCMCIA interface card into your computer. DO NOT connect/disconnect the CD-ROM PCMCIA interface card to/from the PCMCIA interface card when the system is in power-on state.

SOFTWARE INSTALLATION FOR DOS/WINDOWS 3.1

AUTOMATIC INSTALLATION

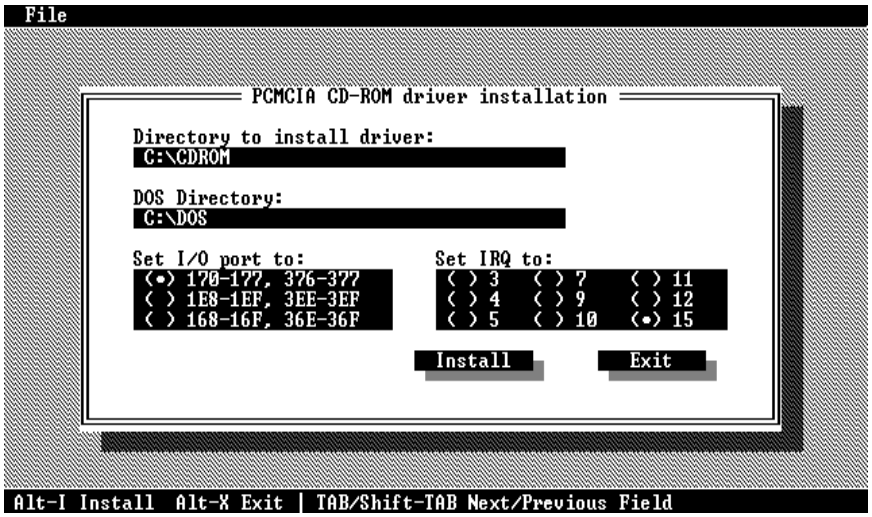
The INSTALL program helps you install the device driver into the computer easily. Please follow the instructions below to proceed with automatic installation.

1. Insert the device driver diskette into a floppy disk drive on your computer.

2. Change the working directory to the floppy drive containing the device driver diskette by typing "**A:**" or "**B:**" then press ENTER.

3. At the DOS prompt (A:\> or B:\>), type "**INSTALL**" followed by the ENTER key.

4. Press ENTER or click on the OK button to continue. When the opening screen appears, a dialog box will be displayed for you to specify the 1), directory to install the device driver; 2), the DOS directory: to specify the location of the MSCDEX driver, 3), the I/O port and 4),the IRQ desired for the PCMCIA CD-ROM. Enter the directory you select to install the driver and press the TAB key to forward to the next field to indicate the DOS Directory. Press the TAB key again to set the I/O port and then the IRQ. The default setting of the I/O ports are (170-177, 376-377), and the default IRQ is 15. After completing the selection, click on **Install** button to continue.



MANUAL INSTALLATION

You may also manually install the PCMCIA CD-ROM device driver if the default setting conflicts with your system. Perform the following procedure to complete the manual installation.

1. Copy the files EXPCDI.EXE from the PCMCIA CD-ROM device driver disk to your hard disk.

2. Add "**LASTDRIVE=Z**" to the *TOP* of your CONFIG.SYS file. If you already have a LASTDRIVE line with a letter other than Z, change it to Z.

3. Add the following lines to the *BOTTOM* of your CONFIG.SYS file:
   DEVICE=*drive:\path***\EXPCDI.EXE /P:1 /I:15 /D:MSCD001**
   where *drive:\path* specifies the directory containing file EXPCDI.EXE.

Note: If your CONFIG.SYS file is already loaded with PCMCIA software, such as Cardsoft of SystemSoft or Cardtalk of Databook, *it is necessary to add the above line AFTER the PCMCIA software*. Otherwise, the PCMCIA interface card will not be initialized properly. To make sure if any PCMCIA software has been loaded in your system and to know more about PCMCIA, please refer to the section titled "PCMCIA Software Information".

EXPCDI.EXE is the device driver for the PCMCIA CD-ROM. The parameters of EXPCDI.EXE are described as below:

/P is used to set the I/O ports, and the valid numbers are 1, 2, and 3. Each number represents the I/O port pairs of (170-177, 376-377); (1E8-1EF, 3EE-3EF), and (168-16F, 36E-36F) respectively. The default setting is **/P:1**.

/I is used to set the IRQ number. The valid IRQs are 3, 4, 5, 7, 9, 10, 11, 12 and 15, and the default setting is **/I:15**.

/D is used to set the device name. It can be any name up to 8 characters. This name must be the same as the name you will specify in the MSCDEX.EXE option /D: *name* in the next step

4. Add the following line at the *TOP* of your AUTOEXEC.BAT:

   *drive:\path***MSCDEX.EXE /D:MSCD001 /M:4**

   where *drive:\path* specifies the DOS directory or the directory containing the file MSCDEX.EXE.

Note: If your AUTOEXEC.BAT file loads a menu program such as DOSSHELL or Windows, you have to add the above line to start your menu program. Otherwise, MSCDEX will not have a chance to load before your menu program begins.

The example above shows the default setting. The **/D:** switch indicates the device name. It MUST be the same name as you specified by the **/D:** switch of EXPCDI.EXE in your CONFIG.SYS file. The **/M:** switch indicates how much memory to allocate for caching information on the CD-ROM. The default **/M:4** caches 8KB.

For more information about the switches of MSCDEX, please type "**help MSCDEX**" at the DOS prompt.

5. Now, reboot your computer to activate the CD-ROM drive drivers.

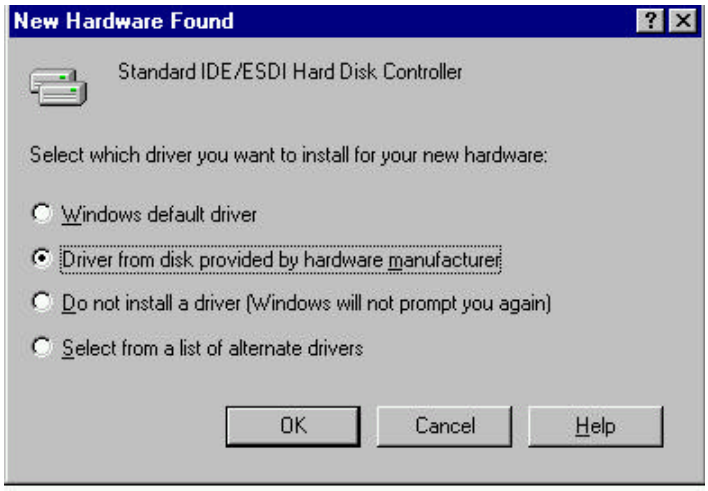
SOFTWARE INSTALLATION FOR WINDOWS 95

If your computer does not have Windows 95 installed yet, please refer to the section titled “Using PCMCIA CD-ROM to Install Windows 95”.

USING PCMCIA CD-ROM UNDER WINDOWS 95

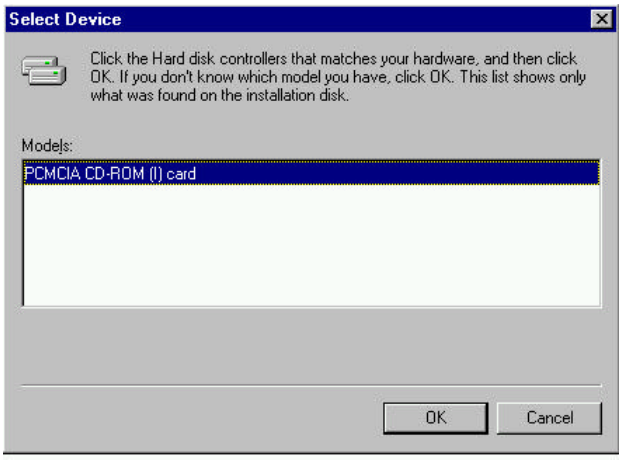
The following dialog box will appear when you are using the PCMCIA CD-ROM under Windows 95 the very first time.

If the dialog box does not appear and the CD-ROM folder can not be found in My Computer, please refer to the section titled “Enabling 32-Bit Card Support”.



Select “Driver from disk provided by hardware manufacturer” and click on OK button, Windows 95 will then prompt you to insert the manufacturer’s installation disk. Insert the PCMCIA CD-ROM device driver disk into your floppy drive. Specify the directory as A:\WIN95 (or B:\WIN95 whichever containing the diskette) and select OK.

When the following dialog box appear, select PCMCIA CD-ROM (I) card and click on OK bottom.



Follow the on-screen instruction to continue. After finishing, remember to shutdown Windows and restart your computer if you are using the PCMCIA CD-ROM to install Windows 95.

Note that it is not necessary to connect the PCMCIA CD-ROM every time you reboot your computer, plug it just when you need to use it.

USING PCMCIA CD-ROM TO INSTALL WINDOWS 95

If you are about to upgrade your operating system from DOS/Windows to Windows 95 using the PCMCIA CD-ROM, the PCMCIA CD-ROM DOS device driver as described in the “Software Installation for DOS/Windows” section should be properly installed first before proceeding further. Then, perform the following steps to install Windows 95.

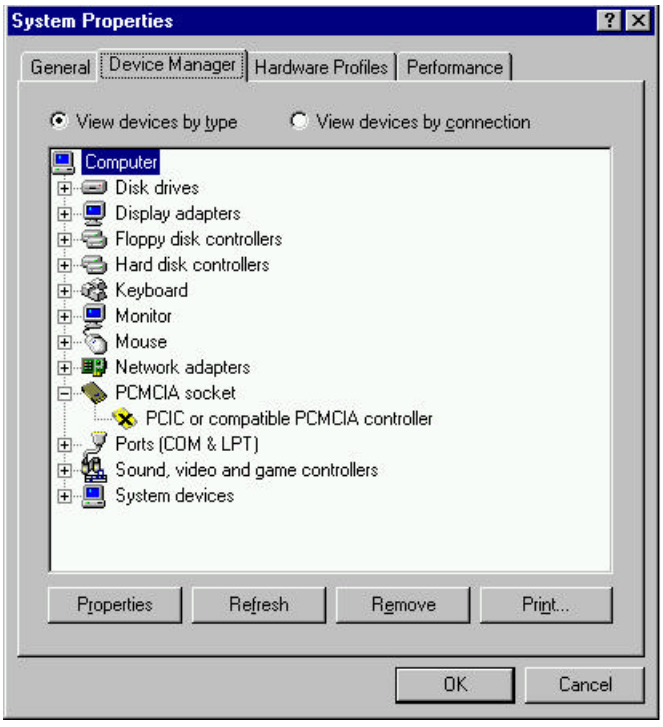
1. Start Windows 3.1.
2. Insert the Windows 95 CD into the PCMCIA CD-ROM.
3. Run File Manager and select the PCMCIA CD-ROM drive.
4. Find and double-click the file **setup.exe.**
5. Follow the on-screen instructions to complete the installation of Windows 95.

6. After the installation is completed, please refer to the next section titled “Enabling 32-BIT CARD SUPPORT”.

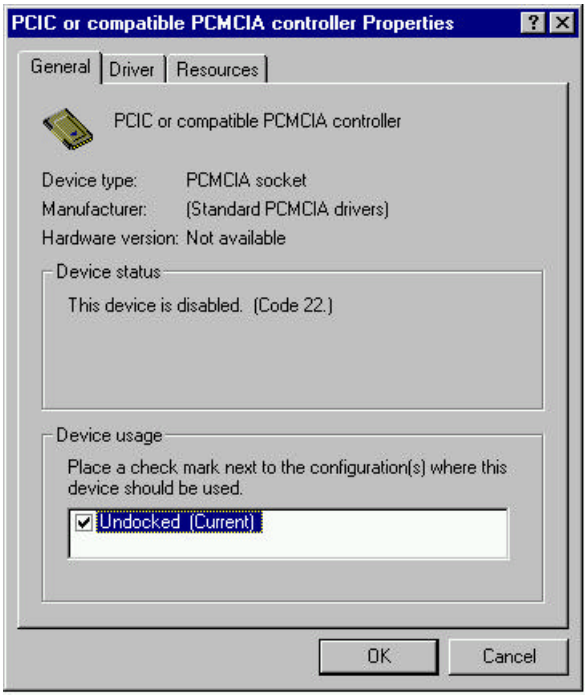
ENABLING 32-BIT CARD SUPPORT OF WINDOWS 95

Your system should be ready for PCMCIA socket support prior to operating the PCMCIA CD-ROM. To check whether your computer is PCMCIA Socket supported, first, double-click on the “System” icon from “Control Panel” folder (you can select the “Control Panel” under “Settings” from the “Start” menu to open the “Control Panel” folder).

Click on Device Manager Tab, if “PCMCIA Socket” is found with a cross (x) sign next to the PCMCIA Controller as the Figure shown below, it means the PCMCIA device driver is not using 32-Bit Card Support.



In this case, double click the PCMCIA Controller, and a dialog box will be displayed as below, please place a check mark next to the current configuration of Device usage box, then select OK.



After the PCMCIA 32-Bit Card support is installed, Windows will ask you reboot your computer. Then you should refer to the first section titled “Using CD-ROM Under Windows 95” to configure the PCMCIA CD-ROM.

If the PCMCIA Socket is not found, then you must add a PCMCIA socket to your system. Please click on the “Add New Hardware” icon in the Control Panel folder and select “PCMCIA socket”. Select the appropriate type of PCMCIA Controller matches with yours and follow the on-screen instruction.

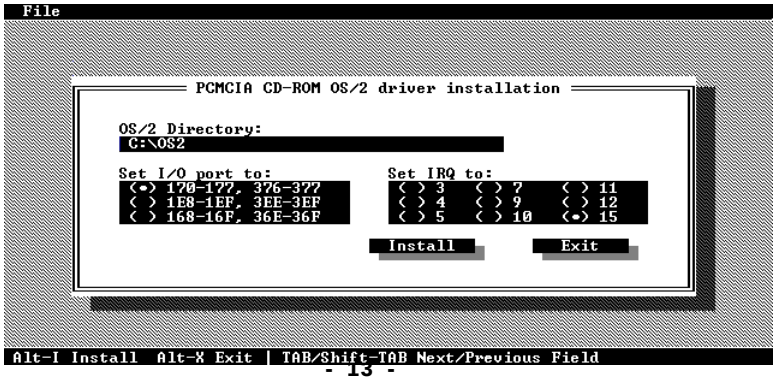
SOFTWARE INSTALLATION FOR OS/2 WARP

Before installing PCMCIA CD-ROM device driver for OS/2 WARP, make sure your computer is PCMCIA supported. If you are not sure about this, please refer to the last part of this section for “ADDING PCMCIA SUPPORT”.

AUTOMATIC INSTALLATION

To perform the automatic installation of PCMCIA CD-ROM for OS/2 WARP, follow the below steps,

1. Insert the device driver diskette into a floppy disk drive on your computer.
2. Open OS/2 System.
3. Open Drives.
4. Select Drive A or B depending on which floppy drive containing the device driver diskette.
5. Open “OS/2 WARP” folder.
6. Double-click on “**INSTALL2.EXE**” file.
7. A dialog box will be displayed for you to specify the OS/2 directory, the I/O address for the PCMCIA CD-ROM and the IRQ number. After specifying the OS/2 directory, press TAB to set the I/O port and then the IRQ. The default setting of the I/O ports are (170-177, 376-377), and the default IRQ is 15. After completing the selection, click on **Install** button to continue.
8. The rest of the installation should proceed automatically. At last, the on-screen instruction will prompt to restart your computer to activate the new device driver for OS/2 Warp.



MANUAL INSTALLATION

You may also manually install the PCMCIA CD-ROM OS/2 device driver if the default setting conflicts with your system. Perform the following procedure to complete the manual installation.

1. Copy EXPCD2.FLT file from A:\OS2WARP to the BOOT subdirectory of OS/2 directory (for example: C:\OS2\BOOT.)

2. Add the following line to the BOTTOM of your CONFIG.SYS file:

   BASEDEV=EXPCD2.FLT /P:1 /I:15

The parameters of EXPCD2.FLT are described as below:

/P is used to set the I/O ports, and the valid numbers are 1, 2, and 3. Each number represents the I/O ports group of (170-177, 376-377); (1E8-1EF, 3EE-3EF), and (168-16F, 36E-36F) respectively. The default setting is **/P:1**.

/I is used to set the IRQ number, the valid IRQs are 3, 4, 5, 7, 9, 10, 11, 12 and 15, and the default setting is **/I:15**.

/V verbose mode, displays the initialization message. The default is quiet mode.

Meanwhile, check if the following lines exist in CONFIG.SYS, if not, add the following lines:

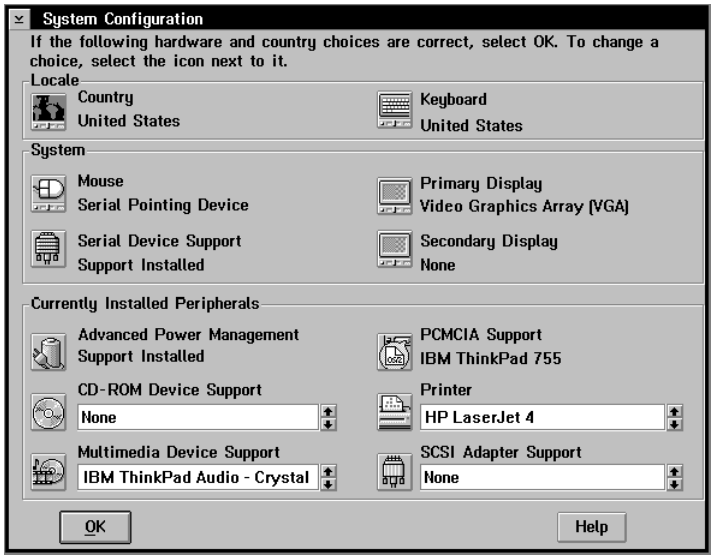
```
DEVICE=C:\OS2\BOOT\OS2CDROM.DMD /Q
IFS=C:\OS2\BOOT\CDFS.IFS /Q
DEVICE=C:\OS2\MDOS\VCDROM.SYS
```

ADDING PCMCIA SUPPORT

PCMCIA Support can be automatically installed during OS/2 installation or it can be installed through Selective Install after OS/2 installation.

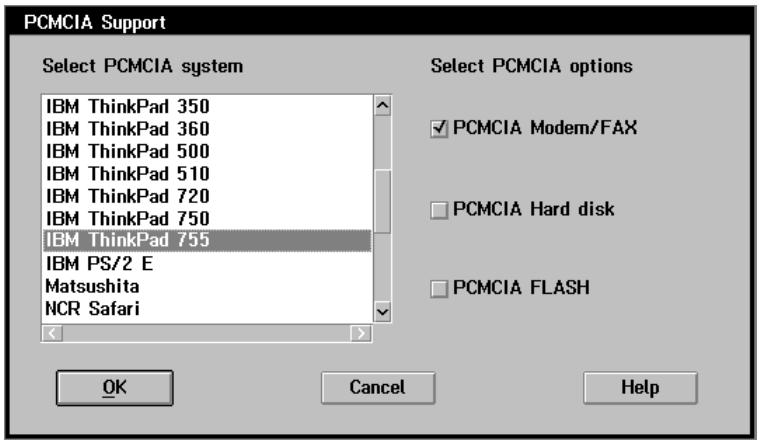
To check or install PCMCIA support, perform the following steps:

1. Open OS/2 System.
2. Open System Setup.
3. Open Selective Install.
4. Check the System Configuration window to see if PCMCIA Support has been installed as displayed below. If so, you may exit now, otherwise, perform the following steps to continue.



5. Select the check box to the left of the PCMCIA Support to display the Select PCMCIA system window.

6. Select the appropriate system (this should either be a direct match with your target install system or a known compatible system).



7. Select OK.
8. Select Install.
9. Follow the on-screen instructions to carry through the installation.

USE PCMCIA CD-ROM TO INSTALL OS/2 WARP

Before you begin, make a backup copy of the “Diskette for CD-ROM #1” of OS/2 Warp.

1. Copy EXPCD2.FLT file from A:\OS2WARP to the Diskette for CD-ROM #1. (You may copy EXPCD2.FLT to harddisk, then copy it to the “Diskette for CD-ROM #1”).

2. Edit CONFIG.SYS file of the “Diskette for CD-ROM #1” by adding the following line to the BOTTOM of the file,

   BASEDEV=EXPCD2.FLT /P:1 /I:15

3. Insert “OS/2 WARP Installation Diskette” into drive A.

4. Restart your computer.

5. Follow the on-screen instruction to remove the “Installation Diskette” from drive A and insert “Diskette for CD-ROM #1”. Then press Enter.

6. The screen will prompt you to insert OS/2 CD into the CD-ROM drive, then press Enter.

7. Follow the on-screen instruction to proceed with the installation. When the OS/2 Installation is completed, you will be prompted to shut down and restart your computer.

TROUBLE SHOOTING

This section explains the most common error messages that DOS/Windows users may experience.

After rebooting your computer, the following messages will be displayed on your screen, which are generated by EXPCDI.EXE and MSCDEX.EXE.

```
Configure card to:
          I/O Port:170-177, 376-377
          IRQ number: 15
          Device Name: MSCD001
PCMCIA CD-ROM card is present in socket 1
             :
             :
Drive D: = Driver MSCD001 unit 0
```

If any error occurs or the PCMCIA CD-ROM does not work, you should reboot your computer again. When the system displays 'Starting MS-DOS...', press the F8 key to make the system executes the CONFIG.SYS and AUTOEXEC.BAT step by step, so that you can consistently press the 'Y' key to see each command's message.

Error messages generated by EXPCDI.EXE:

```
Error: PCMCIA CD-ROM card is not present!
```

If the above message appears, it means EXPCDI can't find any PCMCIA CD-ROM card in your PCMCIA slots. Make sure the card is inserted firmly.

```
Error: Illegal arguments!
For help, type "EXPCDI /?".
```

The above error message means that there are invalid arguments in the EXPCDI line of CONFIG.SYS. Please refer to the section titled "MANUAL INSTALLATION" for the usage of EXPCDI.EXE.

```
Error: I/O port and IRQ number must be specified!
```

The above message means you have not specified the I/O port and IRQ number argument in the EXPCDI line of CONFIG.SYS.

```
Error: Illegal I/O port!
```

The above message means invalid I/O ports in the EXPCDI line of CONFIG.SYS has been selected. The legal I/O port numbers are: 1, 2, and 3.

```
Error: Illegal IRQ number!
```

The above message means an invalid IRQ number in EXPCDI line of CONFIG.SYS has been selected. The legal IRQ numbers are 3, 4, 5, 7, 9, 10, 11, 12 and 15.

```
Error: There is no available 4K memory for mapping!
```

The above message means EXPCDI can't find available 4K memory between C000:0 to EFFF:0. This error can be corrected by changing the EMM386 line of CONFIG.SYS to exclude at least 4K memory for mapping. For example,

```
DEVICE=C:\DOS\EMM386.EXE ... X=D000-D3FF
```

```
Error: The INTEL 82365SL PCMCIA controller is not
detected in your system. You should contact your
dealer to get PCMCIA support software.
```

The above message means the PCMCIA controller for your system is not INTEL 82365SL compatible. In this case, you should install PCMCIA support software which should be supplied by the notebook manufacturer.

```
CD-ROM Drive is not found!
```

The above message means EXPCDI.EXE can't find the PCMCIA CD-ROM drive. Please make sure the CD-ROM drive is properly connected to the PCMCIA interface card cable.

Error message generated by MSCDEX.EXE:

```
Device driver not found: 'MSCD001'
```

This means that EXPCDI.EXE is not installed properly or you have entered a different **/D:** switch in the MSCDEX line of AUTOEXEC.BAT. The **/D:** switch must be the same as the **/D:** switch in the EXPCDI.EXE line of CONFIG.SYS.

If the error message displayed is none of the above, please contact your dealer to obtain customer support.

BASIC OPERATING PROCEDURES

The PCMCIA CD-ROM is designed for both multimedia applications and for entertainment purposes; it can be used with your computer for business or you can use it alone as a portable Audio CD player.

Before using the PCMCIA CD-ROM, you should first load the CD properly by following the instructions below:

1. Push the Open/Close/Stop button at the CD-ROM drive front panel. The tray will automatically slide out.
2. Place the CD on the tray with the *label side facing up*.
3. Push the Open/Close/Stop button again. The tray will automatically load.
3. After a few seconds, the "Power LED" should illuminate when the spindle reaches its desired speed. The CD-ROM is ready to use.

While operating the PCMCIA CD-ROM, the speed of your computer's CPU and display card will dominate the overall performance, especially when playing full motion video. Slow display speed often causes "still frames". In our testing, some computers are capable of performing as high as 15 frames/sec; however, some can only achieve 2 frames/sec.

NOTE: To play the sound portion of the Multimedia CD Titles, your computer must be equipped with a sound card.

You can play Audio Only CDs directly by pressing the Play/Skip button or by using CD Audio software utilities, such as the Media Player in Windows 3.1.

If your computer has been loaded with ExCA compliant PCMCIA software, you are allowed to hot insert/remove the PCMCIA CD-ROM; that means you can connect/remove the PCMCIA CD-ROM at any time without rebooting your system. Remember, however, if your system doesn't have the software, you must connect the PCMCIA CD-ROM first before your computer is booted, and whenever you remove the PCMCIA CD-ROM and need to use it again. You must enable the PCMCIA CD-ROM by typing **`EXPCDI /E`** at the DOS prompt.

PCMCIA SOFTWARE INFORMATION

If you have installed the PCMCIA software, such as SystemSoft's CardSoft or Databook's Cardtalk, then EXPCDI.EXE will call these PCMCIA software to enable the card. If you don't have one, EXPCDI still can directly access your hardware to enable the card. In this case, your computer should have an Intel 82365SL Personal Computer Interface Controller (PCIC) or another compatible controller.

PCMCIA software contains several components: Socket services, Card services, Resource Initialization Utility and Card Installation Utility. The remainder of this section will explain the four components and list the device driver names for the major PCMCIA software.

Socket Services provide the interface between a system's BIOS and the host controller chips (such as the Intel 82365SL PCIC, Vadem 468, etc) Socket Services includes functions such as configuring a socket for an I/O or memory interface and controlling socket power voltages. The Socket Services driver you have varies with the host computer chip of your computer.

Card Services provides the interface between the PC Card and the PCMCIA sockets. Card Services must be aware of the I/O, IRQ, and memory resources already used by the system so it can accurately assign unused resources to the PC Cards.

To ensure Card Services will operate reliably regardless of the system it is installed on, some PCMCIA software provides its own resource initialization utility, which will check I/O ports, IRQs, and memory addresses and then report that information to Card Services.

The Card Installation Utility detects the insertion and removal of PC cards, and automatically determines the card type upon insertion so the card and socket will be configured properly.

The device driver names of the major PCMCIA software are listed below:

Software/Device Driver	SystemSoft CardSoft	Phoenix	Award Cardware	IBM ThinkPad
Socket Services	SS365SL.EXE, SS365LP.EXE, SSCIRRUS.EXE, SSDBOOK.EXE, SVADEM.EXE, SSVLSI.EXE	PCMSS.EXE	SSPCIC.EXE	IBMDSS02.SYS
Card Services	CS.EXE	PCMCS.EXE	PCCS.EXE	IBMDOSCS.SYS
Resource Initialization Utility	CSALLOC.EXE	PCMRMAN.SYS	PCRM.EXE	DICRMU02.SYS
IDE/ATA Driver	ATADRV.EXE	PCMATA.SYS		
SRAM Card Driver	MTSRAM.EXE			
Flash Card Support	MTAA.EXE, MTAB.EXE, MTI1,EXE MTI2P.EXE			
Memory Card Driver	MEMDRV.EXE			
Card Installation Utility	CARDID.EXE	PCMSCD.EXE	PCENABLE.EXE	AUTODRV.SYS
Card Services Power Management	CS_APM.EXE			$ICPMDOS.SYS

If you are not sure which PCMCIA software you are using, you may check it by typing **TYPE CONFIG.SYS** at the DOS prompt followed by the ENTER key. The file should come up and look like one of the following examples.

SYSTEMSOFT PCMCIA SOFTWARE SAMPLE CONFIG.SYS FILE

```
LASTDRIVE=Z
DEVICE=C:\DOS\HIMEM.SYS
DEVICE=C:\DOS\EMM386.EXE NOEMS X=D000-D3FF
```

```
FILES=40
BUFFERS=20
STACKS=9,256
DEVICEHIGH=C:\CARSOFT\SS36SSL.EXE
DEVICEHIGH=C:\CARDSOFT\CS.EXE
DEVICEHIGH=C:\CARDSOFT\CSALLOC.EXE
REM** The REM's should be removed from thefollwing
REM** lines to enable memory and hard drive card support
REM** DEVICEHIGH=C:\CARDSOFT\ATADRV.EXE
REM** DEVICEHIGH=C:\CARDSOFT\MTSRAM.EXE
REM** DEVICEHIGH=C:\CARDSOFT\MTDDRV.EXE
DEVICEHIGH=C:\CARDSOFT\CARDID.EXE
DEVICE=C:\CDROM\EXPCDI.EXE /P:1 /I:15 /D:MSCD001
```

PHOENIX PCMCIA SOFTWARE SAMPLE CONFIG.SYS FILE

```
LASTDRIVE=Z
DEVICE=C:\DOS\HIMEN.SYS
DEVICE=C:\DOS\EMM386.EXE NOEMS X=D000-D3FF
DOS=HIGH, UMB
STACKS=9,256
DEVICE=c:\PCMPLUS3\CNFIGNAME.EXE/DEFAULT
DEVICE=C:\PCMPLUS3\PCMSS.EXE
DEVICE=C:\PCMPLUS3\PCMCS.EXE
DEVICE=C:\PCMPLUS3\PCMRMAN.EXE
DEVICE=C:\PCMPLUS3\PCMSCD.EXE
DEVICE=C:\CDROM\EXPCDI.EXE /P:1 /I:15 /D:MSCD001
```

AWARD PCMCIA SOFTWARE SAMPLE CONFIG.SYS FILE

```
LASTDRIVE=Z
DEVICE=C:\DOS\HIMEN.SYS
DEVICE=C:\DOS\EMM386.EXE NOEMS X=D000-D3FF
FILES=40
BUFFERS:20
STACKS=9,256
DEVICE=C:\CARDWARE\SSPCIC.EXE
DEVICE=C:\CARDWARE\PCCS.EXE
DEVICE=C:\CARDWARE\PCRM.EXE/AUTODETECT
DEVICE=C:\CARDWARE\PCENABLE.EXE
DEVICE=C:\CDROM\EXPCDI.EXE /P:1 /I:15 /D:MSCD001
```

IBM PCMCIA SOFTWARE SAMPLE CONFIG.SYS FILE

```
LASTDRIVE=Z
DEVICEHIGH=C:\DOS\HIMEN.SYS/TESTMEM:OFF /MACHINE:2
DEVICEHIGH=C:\DOS\EMM386.EXE NOEMS X=D000-DFFF
BUFFERS=40
FILES=40
STACKS=9,256
```

```
DOS=HIGH
DEVICEHIGH=C:\THINKPAD\IBMDSS02.SYS /S0=2
DEVICEHIGH=C:\THINKPAD\IBMDOSCS.SYS
DEVICEHIGH=C:THINKPAD\DICRMU02.SYS /MA=D000-DFFF
DEVICEHIGH=C:\THINKPAD\$ICPMDOS.SYS
DEVICE=C:\THINKPAD\AUTODRV.SYS C:\THINKPAD\AUTODRV.INI
DEVICE=C:\CDROM\EXPCDI.EXE /P:1 /I:15 /D:MSCD001
```

POWER SAVING

The PCMCIA CD-ROM drive will automatically enter the sleep mode (spindle off) when it has not been accessed for about 4 minutes. Also, you can manually get into the sleep mode by removing the Compact Disc (CD) from your CD-ROM drive. The operating current will then be reduced to 120 mA.

The “Hot insert/remove” feature of a PCMCIA card helps to save power. If PCMCIA software that is Exchangeable Card Architecture (ExCA) compliant has been loaded on to your computer, then you can remove the PCMCIA CD-ROM interface card from your system after being booted, and insert it again when you need to use the CD-ROM device. For notebook computer users, removing the card will preserve power and prolong battery life.

Note: It is acceptable to remove and insert the PCMCIA CD-ROM from your computer at any time, however, DO NOT disconnect the PCMCIA card from your CD-ROM drive.

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