

Using the Mwave Audio Function

Using the Audio Function for Windows



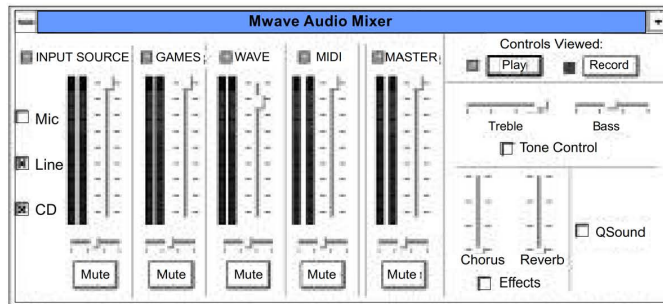
To use Mwave audio in Windows, open an audio application such as **Media Player** or **Sound Recorder** in the Windows Accessories group.

Note:

To use the Mwave audio features in WIN-OS2, install the Mwave DSP support software for Windows in the full screen WIN-OS2 session.

To control the audio input or output, do the following:

- 1 Select **Mwave ThinkPad** from Windows.
- 2 Select **Audio Control**. The following window appears:



To install the Mwave DSP support software:

→ Chapter 7.

This window allows you to maintain control over volume, balance, tone, and effects for all audio components and input sources. For more information, see **Mwave Help** in the Mwave ThinkPad window.

Using the Audio Function for DOS



The Mwave feature supports audio for DOS games through *Sound Blaster* support.

To enable Sound Blaster support for DOS games:

- 1 Type **FASTCFG** at the command prompt; then press **Enter**.
The FASTCFG utility opens.
- 2 Select **Games**; then select **OK**.

Using the Mwave Audio Function

Solving a Memory Shortage Problem for Your Games

If you do not have enough memory for your games, you should make a *boot diskette* before starting the DOS games. To make a boot diskette, do the following:

- 1** Start DOS and insert a blank diskette into the diskette drive.
- 2** Type MAKEBOOT at the DOS prompt; then press **Enter**.

A boot diskette is created. Before starting your games, restart the computer with this boot diskette inserted in the diskette drive.

Some sample files, such as the CONFIG.SYS file, are created on the boot diskette. You might need to modify these files by referring to the manuals that came with your games.

Default Values for DOS Games Audio

Most games automatically determine the IO address, interrupt level (IRQ), and DMA channel settings for the audio for DOS games. If the game asks for this information, specify the default settings for Sound Blaster as follows:

IO Address	220
IRQ	5
DMA Channel	1

ThinkPad Features program:
➔ Page 35.

If you need to change these settings, use the ThinkPad Features program.

Using the Mwave Telephony Function


Using the Telephony Function

Note:

In some countries, the Mwave telephony functions are only available with the DAATelephony Kit option installed. To install a DAATelephony Kit on the computer, see "Installing the DAATelephony Kit" on page 149 and the documentation that came with the option.

The computer is equipped with a modemfax port on its side that connects a telephone cable. This section describes how to connect the cable to the computer, and it describes the telephony features that can be used for communication.

Note

Non-US. users must run the Country Selection program () in the Mwave window after the Mwave installation is complete. (See page 58)

CAUTION:

Your computer can use only a public-switched telephone network (PSTN). Do not use a PBX (private branch exchange) or other digital telephone extension lines. Use of phone lines other than PSTN can damage your modem. If you are not sure which kind of phone line you are using, contact your telephone company. Many hotels or office buildings use digital telephone extension lines, so check before connecting the telephone cable in such places.

To use the telephony functions, you need to connect a telephone line to your computer.



DANGER

To avoid shock hazard, do not connect the cable to or disconnect the cable from the telephone outlet on the wall during electrical storms.

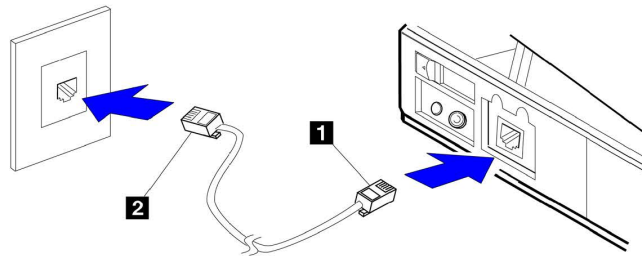
Using the Mwave Telephony Function

Note:

If you use both the computer and a telephone with one telephone cable, use the telephone cable supplied with your computer.

If you use the DAATelephony Kit (available as an option), see page 151.

When your computer has a modemfax port with a square receptacle, first connect the ferrite-core end (connector 1) of the telephone cable to the modemfax port; then connect the other end (2) to the telephone outlet on the wall.



Important

Make sure you use the correct telephone line so your modem operates correctly. When you are:

At home: Use an *analog* line, a standard household telephone.

In your office: Use a line connected to a fax machine or another modem.

In a hotel: Request a room with a data or normal telephone line.

Your RJ11 jack must be wired for an analog line. If you are not sure what type of line you are connecting, check with the telephone company.

Using the Modem with OS2



To start the Mwave modem with OS2 Warp, do the following:

- 1 Open the **Mwave ThinkPad** folder.
- 2 Double-click on the **Mwave Modem** icon.
The Mwave modem starts automatically.
- 3 Start your communication program.

Using the Mwave Telephony Function

Using the Modem with DOS



To start the Mwave modem with DOS, do the following:

- 1 Type **FASTCFG** at the DOS prompt; then press **Enter**.
The FASTCFG utility opens.
- 2 Select **Advanced Modem**; then select **OK**.
- 3 Start your communication program.

Using the Modem with Windows



When you start Windows, the Mwave modem automatically starts and will be ready to use.

Using Country Selection



Important

Each country has restrictions on communication that uses telephone lines. Use this window whenever you travel to other countries.

The Country Selection window allows you to change the country name currently supported by the Mwave telephony features. When you travel to other countries and use the Mwave telephony function, you need to select the country name from the list of countries in this window.

Using the ESS AudioDrive Sound feature



This section provides information about the audio functions supported by the *ESS AudioDrive Sound* feature. The ESS AudioDrive supports for Sound Blaster Pro applications.

Note:

Do not enter suspend mode when using the audio functions.

Using the Audio Function for OS2

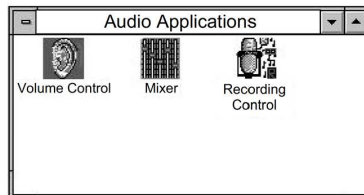


The ESS AudioDrive feature supports audio in the OS2 environment through the Multimedia Presentation Manager2 (MMPM2). To use the ESS AudioDrive functions with OS2, open the **Multimedia** folder from the OS2 desktop.

Using the Audio Function for Windows



To use ESS AudioDrive in Windows, click on the **Audio Applications** icon in the Main Program group. The following screen appears:



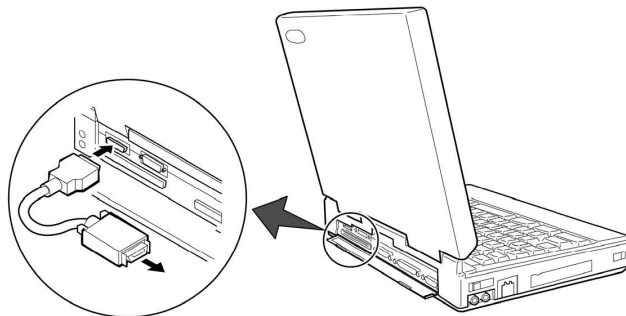
Using the MIDI/Joystick Port



The Enhanced Video model provides a MIDI/joystick port on the rear of the computer for MIDI (musical instrument digital interface) equipment or a joystick for playing games. A MIDI/joystick cable is supplied with the computer to connect a joystick. When connecting MIDI equipment, *you have to purchase a MIDI connector to connect musical instruments with MIDI ports.*

To attach the MIDI/joystick cable to the computer:


- 1 Turn off the computer and connect the MIDI/joystick cable to the computer as shown:




- 2 Connect the other side of the cable to a MINI-DIN cable or a connector that connects to your MIDI equipment or joystick.



- 3 Enable the MIDI/joystick port using the ThinkPad Features program:

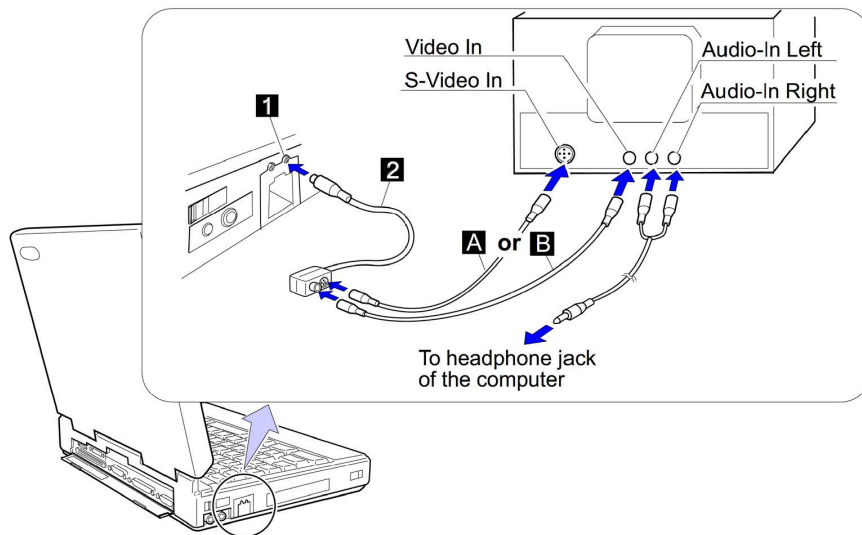
- a) Start the ThinkPad Features program.
- b) Select the **MIDI/joystick** () icon.
- c) Click on **Enable** for MIDI or joystick; then click on **OK**.
- d) Restart the computer.

Attaching a Television to the Computer

 You can attach a television (NTSC or PAL) to the computer and display the computer output on it.

To display the computer output on the attached television, do the following:

- 1 Attach the television to the computer as follows:
 - a) Turn off the computer and television.
 - b) Connect the video in-out cable 2 to the video-out port (1) at the left side of the computer; then connect your television.



Cables, except for the video in-out cable 2, are not supplied with the computer.

If you are using video equipment with S-video input, connect the S-video port of the video in-out cable to the S-video-in connector of your video equipment (A) for better picture quality.

How to Attach a Television to the Computer


If you are *not* using video equipment with S-video input, connect the composite video port of the video in-out cable and the video-in connector of your video equipment (B).

If your video equipment has only one audio input connector, use the left-audio connector on the audio cable.

2 Enable the video-out port:

- a) Start the ThinkPad Features program. and select the **Enhanced Video** () icon.
- b) Click on **Enable Video-Out**.

Note

Do not select **Enable Video-out** in the ThinkPad Features program's Enhanced video () screen, unless you have attached a television to the computer. Otherwise, the LCD screen becomes blank. In this case, use the **Fn+F7** keys to restore the LCD screen.

3 Select the appropriate television color standard: *NTSC* (default) or *PAL*. To do this, start the ThinkPad Features program and select the **Enhanced video** () icon; then select **NTSC** or **PAL**.

4 Restart the computer to make the change effective, if you switch the color standard between NTSC and PAL.

When you use a PAL television attached to the computer, you can select 800×600 and 640×480 resolution modes. When you use an NTSC television attached to the computer, you can select only 640×480 resolution mode.

How to Attach a Television to the Computer

Switching Output between the LCD and the Television

Note:

Even if you selected television output, whenever you turn on the computer, its output is *always* displayed first on the LCD.



Note:

You cannot display the computer output on the LCD and television at the same time.

When you attached a television to the computer, you can select where to display computer output using:

The **Fn+F7** keys.

The ThinkPad Features program:

- **CRT** () for the television
- **LCD** () for the LCD

Entering a **PS2 SC** command from the command prompt.

For OS2

When you use OS2 on a television attached to the computer, do not switch between a full-screen session and an OS2 Presentation Manager (PM) session: Otherwise, the screen will black out or be corrupted. To avoid this, switch to the LCD using the **Fn+F7** keys, before you go to the full-screen session or return to the PM session. And then switch to the television.


How to Attach a Television to the Computer

Displaying Output on the External SVGA Monitor

Note

You can attach both a television and an SVGA monitor to the computer; however, you can display the computer output on only one of the two at the same time. To switch between those two, you need to use the ThinkPad Features program.

To display computer output on the attached external SVGA monitor after using the television, do the following:

- 1** Turn off the computer and attach the SVGA monitor to the external-monitor connector at the rear of the computer.
- 2** Turn on the computer and start the ThinkPad Features program.
- 3** Click on the **CRT** () icon; then click on **Enable External Display**.

Using the Enhanced VideoMPEG Features



The Enhanced Video feature provides the video overlay/capture and MPEG functions and video in-out port on the side of the computer to attach your home video equipment. It also provides the total image video with MPEG-1 and MPEG-2 HHR (half-horizontal resolution).

With the Enhanced Video feature, you can take advantage of the following:

MPEG playback: The MPEG playback viewer can play back many available CD-i movies, video CDs, and karaoke MPEG video titles. No DOSCD-i game titles are currently supported. MPEG2 titles are restricted to HHR at 4 Mbps.

Video-in (video capture):

- Capture still images or motion video from the video-in port.
- Overlay motion video from the video-in port.

Video-out: To use the video-out function, see “Attaching a Television to the Computer” on page 61.

When using the video overlay/capture and MPEG functions, keep the following in mind:

You cannot enable or disable the Enhanced Video feature, or change from video-in to video-out, while the playback or capture window is open. Close the playback or capture window before you make changes.

The MPEG playback and the video-in (video capture) functions use the same hardware resources. Only one of the two functions can be used at the same time. For the same reason, two MPEG functions cannot be used at the same time.

Using the Video OverlayCapture and MPEG Functions for OS2 Warp



This section describes how to use the video overlaycapture and MPEG functions in OS2.

You need at least 12MB of memory to play MPEG or to capture video from the video-in port using Video IN.

When reinstalling the video overlaycapture and MPEG device drivers, install **Video IN** from the BonusPak, preloaded on the computer, prior to the device drivers.

When the Enhanced Video feature is enabled by the ThinkPad Features program, and any of the following is being played or used, do not enter suspend mode:

- AVI file
- MPEG file
- Video CD
- CD-i
- Video-in feature

Make sure you close the application that plays any of these files before entering suspend mode.

Using the MPEG Playback for OS2

To use MPEG playback function in OS2, open the **Multimedia** folder and do one of the following:

When you want to play MPEG files:

- 1** Select the **Digital Video 3** icon, and click on **File** on the tool bar.
- 2** Select **Open** to specify the **MPEG** file name.
- 3** Select **OK**.

Using the Enhanced VideoMPEG Functions

Note:

The Video CD Player program cannot play some video CDs. If you cannot play your video CD, click on the **Digital Video 3** icon instead; then follow the instructions on the screen.

When you want to play a video CDs or CD-i movies from the CD-ROM drive of your computer, select the **Video CD Player** icon.

MPEG under WIN-OS2

WIN-OS2 does not support the playing of MPEG files. When you select **IBM MPEG-2**, **MPEG Video**, or **CD-iVideoCD** in the Device Driver folder of Media Player, the following error message might appear:

```
IBM MPEG: This driver can NOT be loaded under Win-OS2
```

When you click on **Video CD Player**, the following error message appears:

```
Win32s Error ...
```

Ignore any error messages; then click on **OK** to exit the error message screen.

The following shows considerations when using the MPEG playback in OS2 Warp:

When you run other tasks while an MPEG file is being played, the MPEG file image might be distorted temporarily.

The bar displaying the running time for the video CD might not be exact.

You cannot play two MPEG files at the same time. Also, you cannot play the MPEG file while using the video-in function. If you try to do this, the following error message is displayed:

```
Unable to open device 'IBM MPEG-enh Vid 3', use the  
Multimedia Set up program to ensure that the file  
is associated to a MMPM/2 device.
```

Using the Video-in (Video Capture and Video Overlay) for OS2

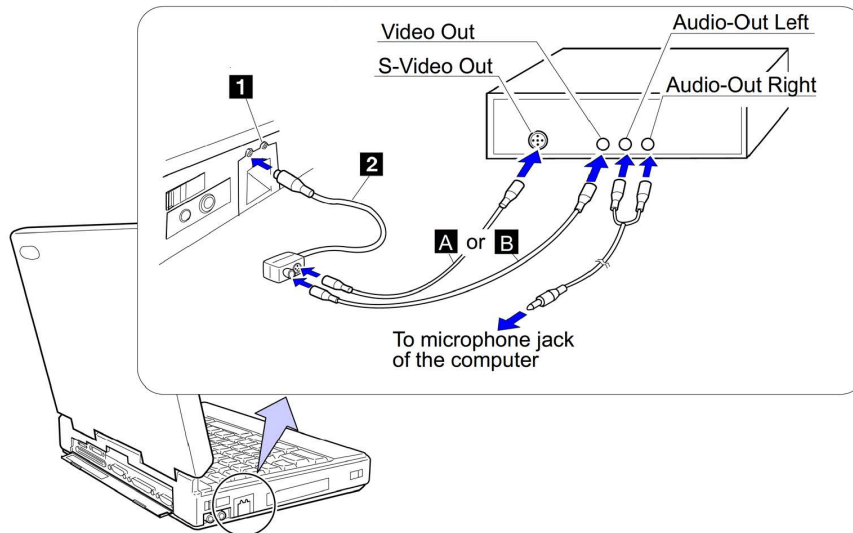
You can capture still images or motion video using video capture application **Video IN** supported by MMPM2, and the video-in port of the computer.

Using the Enhanced VideoMPEG Functions

To capture motion video:

- 1 Turn off the computer and connect the video in-out cable 2 to the video-in port () 1 of the computer; then connect your video equipment.

Cables, except for the video in-out cable 2, are not supplied with the computer.



If you are using video equipment with S-video output, connect the S-video port of the video in-out cable to the S-video-out connector of your video equipment A for better picture quality.

If you are **not** using video equipment with S-video output, connect the composite video port of the video in-out cable and the video-out port of your video equipment B.

If your video equipment has only one audio output connector, use the left-audio connector on the audio cable for connection.

- 2 Check the Enhanced Video status.
 - a) Open the ThinkPad Features program and select the **Enhanced Video** () icon.

Using the Enhanced VideoMPEG Functions

b) If **Video captureMPEG status** is enabled, go to step 4 on page 69.

If not, continue to the next step.

c) Click on **Advanced**; then click on the **1st IRQ** list box and assign an IRQ for the device. (The default IRQ is 11.)

3 Restart the computer to make the IRQ setting take effect.

4 Open the **Multimedia** folder in OS2.

5 Click on the **Video IN Recorder** icon.

For more information on how to use video-in function in OS2, use *Help*.

Note

When you use the video-in recorder in OS2, you can use only **Ultimotion Real-Time Compression** as the compression type. Other compression types are not supported even if they are listed on the screen.

The following shows considerations when using the video-in feature or video capture in OS2:

Only one capture window can be open at a time.

Video-IN Recorder is an OS2 MMPM2 application for video capture and video overlay. Its video capture size (width and length) is limited to up to 320×240 pixels (for a NTSC video source) or 384×288 pixels (for a PAL video source).

Also, largesize capture, for example, 640×480 for NTSC or over 768×576 for PAL, might be not available with your computer. If you try capturing large images, the captured image will not look as expected, or the capture application will be suspended with the following error message:

```
SWVR118: The recording initialization failed return code is
          5 8 - system out of memory
```

If you have this error message, close Video-IN; then restart it. Before trying again, set the capture size to a smaller one.

Using the Enhanced VideoMPEG Functions

Common Restrictions for Video CaptureOverlay and MPEG Playback

You must be aware of the following when using the video captureoverlay functions or the MPEG playback functions. Otherwise, the video image might not be visible on the computer screen or the television, or the computer might become locked up or suspended. In these cases, close the Video-IN Recorder or Digital Video Player and restart it, or restart the computer.

You can use only one video application at a time—for example, you cannot capture video while playing back an MPEG file. If you use multiple applications, an error message appears on the screen and the computer might become locked up or suspended. In that case, restart the computer.

Do not enter suspend mode while attempting video capture or overlay.

Do not use the Enhanced Video functions (such as capturing or overlaying video using the Video-IN Recorder, or playing back the MPEG files using the Digital Video Player) in the following display modes:

- 1024×768 resolution, 256 color depth, and 75Hz refresh rate
- 1024×768, 65536, and 75Hz
- all 1280×1024 resolution mode

Otherwise, the image might be corrupted.

Do not select virtual screen in the ThinkPad Features program.

Video overlay and capture are not supported in virtual screen mode, such as 1024×768 on an LCD or 800×600 on a television.

Using the Video Overlay Capture and MPEG Functions for Windows 3.11 and Windows 95



This section describes how to use the video overlay/capture and MPEG functions in Windows 3.11 and Windows 95.

To use the MPEG playback in Windows 3.11: See “Using the MPEG Playback for Windows 3.11.”

To use the MPEG playback in Windows 95: See “Using the MPEG Playback for Windows 95” on page 73.

To use the video-in (video capture and overlay) in Windows 3.11 and Windows 95: See “Using the Video-in (Video Capture and Video Overlay) for Windows 3.11 and Windows 95” on page 75.

Using the MPEG Playback for Windows 3.11



To use MPEG playback in Microsoft Windows 3.11, do the following:

- 1** Open **Media Player**.
- 2** Click on **Device**.
- 3** Do one of the following:
 - When you want to play MPEG files, select **IBM MPEG-2**.
 - When you want to play a movie or CD, select **CD-iVideoCD**.
- 4** When you want to play a video CD or CD-i movie from the CD-ROM drive of your computer, click on the **Play** (▶) icon. Otherwise, select the MPEG file you want to play; then click on the **Play** (▶) icon.

You can also use the IBM Video CD Player program to play a video CD or CD-i in Windows. For information on how to use this application, *Help* is available in the Video CD Player screen.

Using the Enhanced VideoMPEG Functions

The following are considerations when using the MPEG playback function in Windows 3.11:

Smart drive caching of the CD-ROM drive

To be able to play CD-i movies, do not cache the CD-ROM drive by the SMARTDRV Version 5.0 or 5.1, which is supplied with PC DOS Version 7.0.

Video CD Player program

- The chapter-control-related functions might not work with some karaoke CDs.
- Check the following if you do not have enough audio volume with the Video CD Player program:
 - The audio volume of the Video CD Player program
 - The WAVE and MASTER volume control of the Mwave Audio Control menu
 - The speaker volume control on the computer

Drive letter for MCI* video CDCD-i and Video CD Player

To change the drive letter for MCI video CDCD-i and Video CD Player:

- 1** Select **Control Panel** from the Main folder.
- 2** Select **Drivers**.
- 3** Select **[MCI] CD-i/VideoCD**.
- 4** Click on **Setup**.
- 5** Change the drive letter.

Using the Enhanced VideoMPEG Functions

Using the MPEG Playback for Windows 95



The MPEG feature enables hardware to decode MPEG playback files under playback application programs.

Important—Before Using Video CDs in Windows 95

When you play your video CDs, the playback speed might be slow or playback might stop intermittently. To get a smooth playback of video CDs, disable the current CD-ROM driver and install the CD-ROM driver for DOSWindows. Do the following:

- 1** Start Windows 95.
- 2** Disable the 32-bit storage driver:
 - a) Select **My Computer**, **Control Panel**, and then **System**.
 - b) Click on the **Performance** tab; then click on the **File System** button.
 - c) Click on the **Troubleshooting** tab.
 - d) Check **Disable all 32 bit protect-mode disk drivers**.
 - e) Click on **Apply**, **OK**, and then **Close**.
 - f) Select **Yes** to the question “Do you want to restart your computer now?” to make the change effective.
- 3** Install the CD-ROM device driver for DOSWindows:
 - a) Insert the ThinkPad CD-ROM Driver Diskette in the diskette drive.
 - b) Select **Start** and **Run**.
 - c) Type **A:\UINSTALL**; then click on **OK**.
 - d) Follow the instructions on the screen.
 - e) After the installation is complete, remove the diskette; then restart the computer.

You can play video CDs at a normal speed.

Note: This procedure might cause the following:

- Some functional restrictions (such as the auto sense function)
- Decreasing computer performance

Using the Enhanced VideoMPEG Functions

To use MPEG playback in Windows 95, do the following:

- 1** Open **Media Player**.
- 2** Click on **Device**.
- 3** Do one of the following:
 - When you want to play MPEG files, select **IBM MPEG-2**.
 - When you want to play a movie or CD, select **CD-iVideoCD**.
- 4** When you want to play a video CD or CD-i movie from the CD-ROM drive of your computer, click on the **Play** (▶) icon. Otherwise, select the MPEG file you want to play; then click on the **Play** (▶) icon.

You can also use the IBM Video CD Player program to play a video CD or CD-i in Windows. For information on how to use this application, *Help* is available in the Video CD Player screen.

The following are considerations when using the MPEG playback function in Windows 95:

CD-i support

Windows 95 does not support playing of CD-i movies.

Video CD Player program

- The chapter-control-related functions might not work with some karaoke CDs.
- If you do not have enough audio volume with the Video CD Player program, check:
 - The audio volume of the Video CD Player program
 - The WAVE and MASTER volume control of the Mwave Audio Control menu
 - The speaker volume control on the computer

Drive letter for MCI Video CDCD-i and Video CD Player

To change the drive letter for MCI video CDCD-i and Video CD Player:

- 1** Select **Control Panel** from the **My Computer** folder.

Using the Enhanced VideoMPEG Functions

- 2** Click on the **Multimedia** icon.
- 3** Select **Advanced**.
- 4** Click on **Media control device**.
- 5** Click on **[MCI] CD-iVideoCD**.
- 6** Confirm that "Use this Media Control device" is selected; then select **Settings**.
- 7** Change the drive letter.

Using the Video-in (Video Capture and Video Overlay) for Windows 3.11 and Windows 95



You can use the capture applications supported by Video for Windows™ and your computer. You can also overlay motion video from the video-in port by using applications supported by MCI (Media Control Interface) overlay.

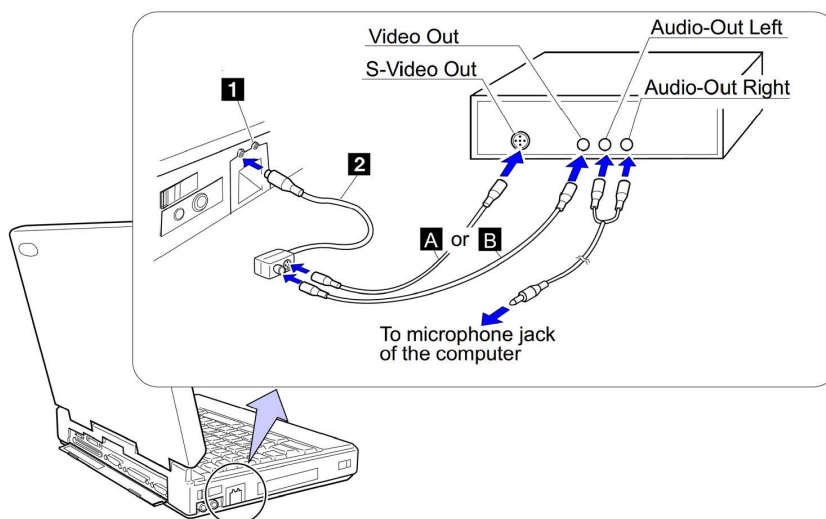
Notes:

Only one capture window can be open at a time. When you use video capture with the overlay screen on, the capturing screen might be distorted. However, the data is correctly captured.

To capture motion video:

- 1** Turn off the computer.
- 2** Connect the video in-out cable **2** to the video-in port **(□)** **1** of the computer; then connect your video equipment.

Using the Enhanced VideoMPEG Functions




Cables, except for the video in-out cable 2, are not supplied with the computer.

If you are using video equipment with S-video output, connect the S-video port of the video in-out cable to the S-video-out connector of your video equipment A for better picture quality.

If you are **not** using video equipment with S-video output, connect the composite video port of the video in-out cable and the video-out port of your video equipment B.

If your video equipment has only one audio output connector, use the left-audio connector on the audio cable for connection.

- 3 Check the Enhanced Video status.
 - a) Open the ThinkPad Features program.
 - b) Select the **Enhanced Video** () icon.
 - c) If **Video captureMPEG status** is enabled, go to step 5 on page 77.
If not, continue to the next step.

Using the Enhanced VideoMPEG Functions

- d) Click on **Advanced**.
- e) Click on the **1st IRQ** list box and assign an IRQ for the device. (The default IRQ is 11.)
- 4** Restart the computer to make the IRQ setting take effect.
- 5** Start the video capturing application program.
 - If you use the Digital Video Producer (DVP) program, see "Using the Digital Video Producer for Windows."
 - If you use the Media Player, see "Using the Overlay with Media Player for Windows" on page 81.

Using the Digital Video Producer for Windows



Digital Video Producer (DVP) is an application program that has the following functions:

- Capturing, compressing, and building a video file
- Capturing a still image (see page 80)

Capturing, Compressing, and Building a Video File

This sample procedure describes how to capture a video clip, import it in DVP, and build a compressed .AVI file that you can use in a presentation and other computer-based materials. The video file created in this example has the following characteristics. (You need approximately 17MB of hard disk space to capture a video file.)

Frame size	160 pels by 120 pels
Frame rate	15 frames per second
Number of seconds	30 seconds
Audio sampling rates	8-bit, 11.025 kHz, mono

Important

Make sure your video source (such as a VCR or video camera) is correctly connected to your computer before you start the video capture. If you select overlay mode from the Options menu in DVP Capture, you can verify the connection and look at your video both before and during the capture.

Using the Enhanced VideoMPEG Functions

To capture, compress, and build a video file:

- 1** Start DVP; then select **Video Capture** from the Tools menu.
- 2** Select **Set Capture File** from the File menu.
- 3** Enter a name for your capture file (such as CAPTURE.AVI) and specify the directory in which to save the file; then click on **OK**.
- 4** Select **Allocate File Space** from the File menu and enter 17MB as the hard disk space to set aside for your capture file; then click on **OK**.
- 5** Select **Audio Format** from the Options menu.
- 6** Select these sound options: **8-bit**, **11kHz**, and **Mono**. Then click on **OK**.
- 7** Select **Video Format** from the Options menu.
- 8** Select **160x120** for Image Dimensions and **Overlay YUV422** or **Compressed YUV422** for Image Format; then click on **OK**.
- 9** Select **Video Source** from the Options menu, the type of video connector your video source uses (video or S-video), and the type of video signal (NTSC or PAL).
To see the supported color standard list of countries, see the ThinkPad Features program help.

- 10** Select **Settings** from the Capture menu and specify the following options:

Frame Rate	15 frames per second
Enable Capture Time Limit	30 seconds
Capture Storage	Capture to Disk
End Capture Using	Escape Key

- 11** Check **Capture Audio**; then click on **OK**.
- 12** To start the video capture, select **Video** from the Capture menu.
DVP Capture saves the file with the name you specified in step 3. You can then save the file to a new name by choosing **Save Captured File As** from the File menu.

Using the Enhanced VideoMPEG Functions

- 13** Select **Exit** from the File menu to close DVP Capture and return to DVP.

DVP automatically imports the video file you just captured and displays it in the Media window.

- 14** Drag your video clip from the Media window onto the tick bar (directly above the video A track on the timeline).

Dragging a clip onto the tick bar is an efficient way to lay out your clip because the video and audio information in the file appears automatically on both the video A and audio A tracks. You can also lay out a video clip on the timeline by dragging it first from the Media window to a video track, and then from the Media window to an audio track.

- 15** Select **Compression** from the Video menu to specify the compression/decompression (CODEC) routine you want to use.

- 16** Select **Intel** Indeo** Video R3.2** for Compressor and accept the default values for Key Frame Every and Data Rate; then click on **OK**.

- 17** Select **Build** from the Video menu. Enter the name and location of your final .AVI file (making sure to keep the .AVI extension); then click on **Build**.

The Build Progress dialog box opens, so you can look at the percentage-complete bar and the preview window to track the progress of the build. Building a video can take anywhere from a few minutes to several hours, depending on its length and complexity, and on the type of compressor you select.

Using the Enhanced VideoMPEG Functions

Capturing a Still Image

This section describes how to capture a still image.

Important

Be sure your video source (such as a VCR or video camera) is correctly connected to your computer before you capture the still image. If you select overlay mode from the Options menu in DVP Capture, you can verify the connection and look at your image before you capture it.

To capture a still image, whose frame size is 320 pels by 240 pels:

- 1 Start DVP; then select **Video Capture** from the Tools menu.
- 2 Select **Video Format** from the Options menu; then select **320 × 240** for Image Dimensions and **Overlay YUV422** or **Compressed YUV422** for Image Format; then click on **OK**.

For the best color display, make sure that you install and select the 65536 (16-bit) video display driver. For detailed information about the display driver, see the *User's Guide*.

- 3 Select **Video Source** from the Options menu; then select the type of video connector your video source uses (video or S-video) and the type of video signal (NTSC or PAL) for Video Standard. Then click on **OK**.

To see the supported color standard list of countries, see the ThinkPad Features program help.

- 4 When the image you want to capture appears in the Preview window, select **Single Frame** from the Capture menu.
- 5 Select **Save Single Frame** from the File menu to save it as a bitmap file (with a .BMP extension).

Using the DVP Help System

To learn more about DVP or DVP capture, use the DVP online Help system.

Note:

Because many paint programs, such as Windows Paintbrush, do not yet support 16-bit still images, you will typically capture 8-bit or 24-bit still images.

Using the Enhanced VideoMPEG Functions

Using the Overlay with Media Player for Windows



To view a video by using the overlay function with Windows Media Player, do the following:

- 1 Open **Media Player** in Windows.
- 2 Click on **Device**.
- 3 Select **MCI OVERLAY Driver**.

Operational Restrictions

The following shows restrictions when using the Enhanced Video functions in Windows 3.11 or Windows 95:

You can use only one video application at a time—for example, you cannot capture video while playing back an MPEG file.

Some types of video CDs cannot be viewed.

Video overlay, capture, and MPEG playback functions do not work under the following video modes:

- 1024×768 resolution, 256 color depth, and 75Hz refresh rate
- 1024×768, 65,536, and 75Hz
- 1280×1024 and 256
- All 16 color modes

Do not select virtual screen in the ThinkPad Features program.

Video overlay, capture, and MPEG playback functions are not supported in virtual screen mode, such as 1024×768 on an LCD or 800×600 on a television.

For Windows 3.11 only: When you load QuickTime™ for Windows as the MCI driver, the MPEG video might not be played correctly. To avoid this, open **Control Panel** in the Main window and click on **Drivers**; then remove QuickTime for Windows from the driver list.

Using the Enhanced VideoMPEG Functions

Installing Software for Windows Version 3.11








This section describes the installation procedures for Windows Version 3.11 and its device drivers for your ThinkPad computer.

Important

Before reinstalling the operating system and device drivers, you need to create all installation diskettes using the Diskette Factory program (a diskette backup program that is preloaded on your computer).


The following shows the software already installed at the time of purchase. For your computer to work as it did at the time of purchase, install all of this software:

- 1 Install DOS → Page 185.
 -  Install the CD-ROM device driver for DOS → Page 186.
 - Install the ThinkPad Features program for DOS → Page 187.
- 2 Install Windows 3.11 (with Advanced Power Management) → Page 190.
- 3 Install the ThinkPad display driver → Page 193.
- 4 Install the ThinkPad Features program for Windows → Page 194.
- 5 Install the PC Card Director → Page 194.
- 6 Install one of the following:
 -  Mwave support software → Page 195.
 - or**
 -  ESS AudioDrive support software → Page 196.
- 7  Install the MIDI Port device driver → Page 196.
- 8 Install the Infrared device driver → Page 197.
- 9  Install the Enhanced VideoMPEG device driver and Video CD Player → Page 197.

Installing Microsoft Windows Version 3.11

Windows 3.11 operates in a DOS environment. Install the following before installing Windows:

DOS Version 7.0 (see your DOS manuals)

 CD-ROM Device Driver for DOS (see page 186)
ThinkPad Features program for DOS (see page 187)

Important

During installation, do the following for Windows to operate correctly:

When the Windows Setup program asks you to select either **Express Setup** or **Custom Setup**, select **C** for Custom Setup.

Install Windows 3.11 with the default VGA display driver that came with Windows. After you complete the installation of Windows, install the ThinkPad display driver.

Do the following to install Windows Version 3.11 with Advanced Power Management (APM):

- 1 Install Windows Version 3.11 *with* the APM option:
 - a) Start the installation as specified in the Windows manual.
 - b) When the Windows Setup program asks you to select **Express Setup** or **Custom Setup**, type **C** for **Custom Setup**.

Note:

If you have installed OS2, the path to install Windows may have changed to C:\OS2\MDOS\WINOS2 (C is the drive on which you installed OS2). If so, change the path to:

C:\WINDOWS

Installing Windows 3.11 Software

- c) Continue installing Windows Version 3.11 until the following screen appears:

```
Windows Setup
=====

Setup has determined that your system includes the following hardware
and software components. If your computer or network appears on the
Hardware Compatibility List with an asterisk, press F1 for Help.

Computer:      MS-DOS System
Display:       VGA
Mouse:         Microsoft, or IBM PS/2
```

- d) Using the Up Arrow (`↑`), highlight **MS-DOS System** and press **Enter**.
- e) Select **MS-DOS System with APM** from the list and press **Enter**.

Verify that **Computer** has changed to **MS-DOS System with APM**. If the item has not changed, return to step 1d.

- 2** Make sure the **Display:** choice is set to **VGA**. (Do not change this choice.)

Note:

When Windows Version 3.11 is installed, the computer is automatically configured to use the MOUSE.COM driver provided by Windows Version 3.11. However, for correct operation, your computer must use the MOUSE.COM driver that came with DOS.

- 3** When you have completed the installation of Windows, edit the AUTOEXEC.BAT file so that the computer will use the correct mouse driver:

- At the DOS command prompt (usually C:\>), type `E \AUTOEXEC.BAT` and press **Enter**.
- Find the line: `C:\WINDOWS\MOUSE.COM Y`
- Change it to: `C:\DOS\MOUSE.COM /Y`
- Find the line that includes SHARE.EXE and delete that line.
- Save the file and restart the computer.

Installing Windows 3.11 Software

- 4 After installing Windows, you should check the creation date of the following drivers in the DOS subdirectory and the Windows subdirectory:

EMM386.EXE (loaded by CONFIG.SYS)

HIMEM.SYS (loaded by CONFIG.SYS)

SMARTDRV.EXE (loaded by AUTOEXEC.BAT)

 MSCDEX.EXE (loaded by AUTOEXEC.BAT)

Then use the newest program between the one for DOS and the one for Windows for each drivers.

You can easily use the newer one by changing the subdirectory name in the CONFIG.SYS or AUTOEXEC.BAT as follows:

```
C: \WINDOWS\SMARTDRV . EXE
```

```
C: \DOS\SMARTDRV . EXE
```

When you start Windows from the DOS prompt, do not close the LCD while the program is loading; if you do, the computer will stop running.

Installing the ThinkPad Display Driver for Windows 3.11

Note:

When installing an operating system, you need to install the ThinkPad display driver.

Note:

You can change the display resolution type by using the ThinkPad Features program after completing the installation of the ThinkPad Features program for Windows.

Note:

Cyberxxxx in the right screen means:

For the TFT model: Cyber9385
For the DSTN model: Cyber9320

Do the following to install the ThinkPad display driver for Windows 3.11 so that you can get a correct display setting and a better performance:

- 1 Start DOS; then go to the WINDOWS subdirectory.
- 2 Type **SETUP** to start the Windows setup program.
- 3 Using the Up Arrow (**↑**), highlight **Display** and press **Enter**.
- 4 Select **Other (Requires disk...)** from the list.
- 5 Insert the Video Features Diskette for Windows into the diskette drive; then type **A:** and press **Enter**.
- 6 Select your desired resolution from the menu and press **Enter**.

Verify that **Display** has changed to your desired resolution type (an example is shown in the following screen). If the item has not changed, return to step 3.

```
Windows Setup
=====
```

```
Setup has determined that your system includes the following hardware
and software components. If your computer or network appears on the
Hardware Compatibility List with an asterisk, press F1 for Help.
```

```
Computer:      MS-DOS System with APM
Display:       Cyberxxxx 1 24x768 256 small font
Mouse:         Microsoft, or IBM PS/2
```

- 7 Press **Enter** to continue the installation.
- 8 After the installation is complete, remove any diskette from the diskette drive and restart the computer.

Installing the ThinkPad Features Program for Windows 3.11

Note:

When installing an operating system, you need to install the ThinkPad Features program.

If you are going to use Windows, install the ThinkPad Features program for DOS first (see page 187); then do the following to install the ThinkPad Features program for Windows 3.11:

- 1 Start Windows.
- 2 Select **File** from the Program Manager window; then select **Run...** from the pull-down menu.
- 3 Insert the Utility Diskette for Windows into the diskette drive; then type `A:\INSTALLW` and press **Enter**.
- 4 Follow the instructions on the screen.

Default choices are already highlighted at the Installation Options screen.

Installing the PC Card Director for Windows 3.11

Note:

The PC Card Director for Windows 3.11 must be installed with Windows 3.11 or a later version with enhanced mode. Otherwise, it cannot be installed.

When installing Windows 3.11, you need to install the PC Card Director. You must install the following device drivers and software associated with PCMCIA before you can use the PC Cards:

- Card Services device driver
- Socket Services device driver
- Resource Map Utility device driver
- PC Card Power Management device driver
- PC Card Director Utility
- PC Card client device drivers (only when PC Card Director does not support the PC Card)

To use PC Card Director:

➔ Page 44.

To install the PC Card Director:

- 1 Start Windows.
- 2 Select **File** from the Program Manager window; then select **Run...** from the pull-down menu.
- 3 Insert the PC Card Director Diskette for DOS and Windows into the diskette drive; then type `A:PCMINSTW` and press **Enter**.

Installing Windows 3.11 Software

- 4 Follow the instructions on the screen to complete the installation.

Default choices are already highlighted at the choice screens.

- 5 After the installation is complete, remove any diskette from the diskette drive and restart the computer.

Installing the Mwave DSP Support Software for Windows 3.11



To install the Mwave DSP support software:

- 1 Start Windows.
- 2 Select **File** from the Program Manager window; then select **Run...** from the pull-down menu.
- 3 Insert the Mwave DSP Features Diskette 1 for Windows into the diskette drive; then type `A:SETUP` and press **Enter**.
- 4 Follow the instructions on the screen.
Default choices are already highlighted at the choice screens.
- 5 After the installation is complete, remove any diskette from the diskette drive and restart the computer.

Note:

When installing an operating system, you need to install the Mwave DSP support software.

Attention:

Before you install the Mwave DSP support software, close all open applications.

Note

Non-U.S. users must run the Country Selection program in the Mwave window after the Mwave installation is complete. Restart the computer after you run Country Selection.

If this is your first time to install the Mwave DSP support software for Windows, also install the MIDI sample files as follows:

- 6 Follow the same procedures from step 2 to step 5; however, use the MIDI Samples Diskette 1 instead of the Mwave DSP Features Diskette 1 for Windows.
- 7 After the installation is complete, remove any diskette from the diskette drive and restart the computer.

Installing the MIDI Port Device Driver for Windows 3.11



To use the MIDI port, when connecting a MIDI keyboard device or external synthesizer, install the Mwave MIDI Port device driver:

- 1 Select the **Control Panel** from the Main window in the Windows Program Manager; then select **Drivers**.
- 2 Select **Add...**; then select **Unlisted or Updated Driver**.
- 3 Select **OK**.
- 4 Type `C:\MWW\MIDIPOINT` and select **OK**.
MIDIPOINT is the subdirectory name where you have installed the Mwave DSP support software.
- 5 Select **Mwave MIDI Port Driver**; then select **OK**.

Installing the ESS AudioDrive Support Software for Windows 3.11



To install the AudioDrive support software:

- 1 Start Windows.
- 2 Select **File...** from the Program Manager window; then select **Run...** from the pull-down menu.
- 3 Insert the AudioDrive Features Diskette for Windows into the diskette drive of your computer; then type `A:\SETUP` and press **Enter**.

Follow the instructions on the screen to complete the installation.

Installing the Infrared Device Driver for Windows 3.11

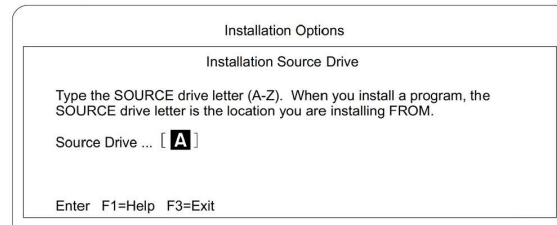
Note:

When installing an operating system, you need to install the Infrared device driver.

To install the infrared device driver:

- 1 Start Windows; then insert the Infrared Features Diskette into the diskette drive.
- 2 Go to the DOS command prompt; then type `A:UINSTALL` and press **Enter**.

The following screen appears:



- 3 Press **Enter**; then follow the instructions on the screen.
Select **Install Windows ThinkPad InfraRed Driver** when you are asked.

Installing the Enhanced VideoMPEG Device Driver and the Video CD Player for Windows 3.11



To use the Enhanced Video functions in Windows 3.11, you must install the ThinkPad display driver (Cyber...) and the Mwave DSP support software before installing the Enhanced Video device drivers.

Installing the Video OverlayCapture Device Driver for Windows 3.11

The Video OverlayCapture device driver enables the video in-out port on Video for Windows or compatible software. Install Video for Windows or compatible software; then do the following to install the video overlaycapture device driver:

- 1 Start Windows.

Installing Windows 3.11 Software

- 2** Select **File** from the Program Manager window; then select **Run...** from the pull-down menu.
- 3** Insert the MPEGVideo Capture Driver Diskette for Windows into the diskette drive; then type `A:SETUP` and press **Enter**.
Follow the instructions on the screen.
- 4** After the installation is complete, remove the diskette and restart the computer to activate the Video OverlayCapture device driver.

To run the video capture and playback functions, refer to the Video for Windows or compatible software manuals. To install the MPEG device driver, proceed to the following section.

Installing the MPEG Device Driver for Windows 3.11

The MPEG device driver enables playback for MPEG motion videos, CD-i movies, and video CDs.

Important

If this is not your first time installing the MPEG device driver for Windows 3.11, remove **IBM MPEG-2** and **CD-iVideoCD** from the Installed Driver list in the Drivers menu.

To install the MPEG device driver:

- 1** Install the Microsoft Win32s** driver:
 - a) Start Windows.
 - b) Select **File** from the Program Manager window; then select **Run...** from the pull-down menu.
 - c) Insert the Microsoft Win32s Setup Diskette 1 into the diskette drive; then type `A:\SETUP` and press **Enter**. Follow the instructions on the screen.
 - d) After you have completed the installation, restart Windows.
- 2** Click on **Control Panel** from the Main window.
- 3** Click on **Drivers**; then click on the **Add** button.
- 4** Select **Unlisted or Updated Driver**; then click on **OK**.

Installing Windows 3.11 Software

- 5** Insert the MPEG Features Diskette for Windows into the diskette drive of the computer.
- 6** Make sure the drive letter is A:; then click on **OK** and follow the instructions on the screen.

Install all the drivers listed by repeating steps 2 on page 198 to 6. After you have completed the installation, restart Windows.

Installing the IBM Video CD Player for Windows 3.11

The IBM Video CD Player for Windows enables playback of video CDs or CD-i movies with more options than with the Media player:

- 1** Start Windows.
- 2** Select **File** from the Program Manager window; then select **Run...** from the pull-down menu.
- 3** Insert the Video CD Player Install Diskette into the diskette drive; then type `A:SETUP` and press **Enter**.

Follow the instructions on the screen.

Installing Software for Windows 95






This section describes the installation procedures for Windows 95 and its device drivers for your ThinkPad computer.

Important

Before reinstalling the operating system and device drivers, you need to create all installation diskettes using the Diskette Factory program (a diskette backup program that is preloaded on your computer).

The following shows the software already installed at the time of purchase. For your computer to work as it did at the time of purchase, install all of this software:

- 1 Install Windows 95 → Page 201.
- 2 Install the ThinkPad display driver → Page 201.
- 3 Install the ThinkPad Features program → Page 203.
- 4 Install the PC Card Director → Page 204.
- 5 Install one of the following:
 -  Mwave support software → Page 207.
 - or*
 -  ESS AudioDrive support software → Page 208.
- 6 Install the Infrared support software → Page 209.
- 7  Install the CD-ROM device driver → Page 210.
- 8 Install the Enhanced videoMPEG device driver and Video CD Player → Page 212.

Also, if you use the docking station, see page 214 and page 215.

Installing Microsoft Windows 95

Install Windows 95 as described in its documentation.

To Avoid Problems While Installing

If you encounter a problem while installing Windows 95, refer to the following:

If the screen blacks out during installation, do the following:

1. When the screen blacks out, wait until the hard disk activity stops (until the hard disk indicator disappears); then restart the computer.
2. Start the Windows 95 setup from the beginning.
3. On the Safe Recovery screen of the Windows 95 Setup Wizard, select **Use Safe Recovery (recommended)** ; then click on the **Next>** button.
4. On the Setup Options screen of the Windows 95 Setup Wizard, select **Custom**; then click on the **Next>** button.
5. On the Analyzing Your Computer screen of the Windows 95 Setup Wizard, select **Yes, redetect now**; then click on the **Next>** button.

Follow the instructions to complete the installation of Windows 95.

If you encounter `Unknown Hardware Found` messages during installation, select **Do not install a driver (Windows will not prompt you again)**.

Installing the ThinkPad Display Driver for Windows 95

To install the ThinkPad display driver for Windows 95, do the following:

- 1 Start Windows 95.
- 2 Open **My Computer**, **Control Panel**, and **System**; then click on the **Device Manager** tab.

Installing Windows 95 Software

- 3** Click on the + mark for **Display adapters**.
- 4** Click on the **Trident** Super VGA**, and click on the **Remove** button. Click on **OK** when prompted to remove the device.
- 5** Select **No** when prompted to restart Windows 95.

Windows 95 will restart.

- 6** Click on the + mark for **Other devices**.
- 7** Click on **PCI VGA-Compatible Display Adapter** and click on the **Properties** button.
- 8** Click on the **Driver** tab, and click on the **Change driver** button.
- 9** In the **Select Hardware Type** dialog, select **Display adapters** and click on **OK**.
- 10** Insert the Video Features Diskette for Windows 95 into the diskette drive; then click on the **Have Disk** button and click on **OK**.
- 11** Make sure the following is shown as the selection:
For TFT model: IBM ThinkPad (Cyber938582) PCI
For DSTN model: IBM ThinkPad (Cyber9320) PCI
Then click on **OK**.
- 12** Click on **OK** to install the driver into the computer.
- 13** When prompted to restart, click on **Yes**; then remove the diskette from the drive and restart Windows 95.

Installing Windows 95 Software

If you want to change the monitor type, screen resolution, or color depth, do the following:

- 14** Move the mouse pointer to the desktop and click the right mouse button.

When pop-up menu appears, select **Properties**.

- 15** In the **Display Properties** window, click on the **Setting** tab; then click on the **Change Display Type** button.

- 16** Click on the **Change** button in the **Monitor Type** box.

Note:

If you are attaching an external monitor and not sure what to choose, select **Super VGA 1280x1024**.

- 17** If you are attaching an external monitor, select the appropriate monitor from the list. If not, select **Laptop Display Panel (1024x768)** or **Laptop Display Panel (800x600)**.

- 18** Click on **OK**; then click on **Close**.

- 19** In the **Desktop area** box, drag the slider to the appropriate resolution, such as **1024 by 768 pixels**; then click on **OK**.

- 20** Select your favorite color depth (for example, 256 color) from the Color palette.

- 21** When prompted to resize the desktop, click on **OK**.

The desktop size (screen resolution) changes.

Installing the ThinkPad Features Program for Windows 95

The ThinkPad Features program for Windows also works for Windows 95.

If you installed Windows 95 on a computer in which DOS, Windows, and the ThinkPad Features program were already installed, the ThinkPad Features program is migrated into the "Start Menu" of Windows 95 automatically.

To start the ThinkPad Features program:

- 1** Click on **Start**; then select **Programs**.
- 2** Select **ThinkPad**; then select **ThinkPad Features**.

If you installed Windows 95 on a blank hard disk or if you have not installed the ThinkPad Features program, install the

Installing Windows 95 Software

ThinkPad Features program using the Utility Diskette for Windows supplied with the computer:

- 1** Insert ThinkPad Utility Diskette for Windows into the diskette drive.
- 2** Click on **Start**; then click on **Run....**
- 3** Type `a:INSTALLW` and click on **OK**.
Follow the instructions on the screen.

Installing the PC Card Director for Windows 95

Note:

The ThinkPad computer has three different sets of PCMCIA Feature software: one for DOS/Windows, one for OS/2 Warp, and one for Windows 95.

Note:

CardBus PC Cards cannot be used in Windows 95.

The following is a summarized procedure to use the PCMCIA features in Windows 95 (each step is explained in detail later):

1. If you have already installed the PC Card Director for DOS and Windows, disable it (enable the Windows 95 Integrated PCMCIA support software).
2. Install the Socket Services device driver.
3. Install the PC Card Director for Windows 95.

Disabling the PC Card Director for DOS and Windows

If the PC Card Director for DOS and Windows has been already installed on your computer, you must remove the PC Card Director for DOS and Windows before installing the PCMCIA support software for Windows 95. This is because the Windows 95 installation program does not automatically remove the PC Card Director for DOS and Windows.

To remove the PC Card Director for DOS and Windows, do the following (this procedure also enables the Windows 95 Integrated PCMCIA support software):

- 1** Start Windows 95; then select **My Computer, Control Panel**, and then **PC Card**.
- 2** Select **No** for the question "Are you using a PC card to install Windows?" and click on **Next**.

Installing Windows 95 Software

- 3** Select **No** for the question “Do you want to review your system files and select real-mode PC card drivers so Windows can disable them?” and click on **Finish**.
- 4** Complete the Windows 95 PCMCIA support setup; then restart your computer.

You have removed the PC Card Director for DOS and Windows. To install the ThinkPad PC Card Director for Windows 95, do the following section.

Installing the Socket Services Device Driver

Prepare your Windows 95 product diskettes or CD-ROM, if you do not already have the Windows 95 integrated PCMCIA support software installed on your computer.

To install the ThinkPad Socket Services device driver for Windows 95:

- 1** Start Windows 95; then select **My Computer, Control Panel,** and then **System**.
- 2** Click on the **Device Manager** tab.
- 3** Click on the + mark for **PCMCIA socket**.
- 4** Double-click on **PCIC or compatible PCMCIA controller**.
- 5** Click on the **Driver** tab to see the Driver files: list.
- 6** Click on the **Change Driver...** button.
- 7** Click on the **Have Disk...** button.
- 8** Insert the PC Card Director Diskette for OS2 and Windows 95 into the diskette drive; then click on the **OK** button.

You will see the “PCIC or compatible PCMCIA controller on IBM system” item in the “Models:” list.
- 9** Click on the **OK** button.

IBMCSS01.VXD and IBMPCDIF.VXD will be listed in the Driver files: list.

Installing Windows 95 Software

- 10 Click on the **OK** button.

Windows 95 now starts copying files. The **Insert Disk** panel asks for one of the Windows 95 installation diskettes or the CD-ROM.

- 11 Change the source for **Copying files from:** to **A:** when Windows 95 tries to copy IBMCSS01.VXD or IBMPCDIF.VXD.

- 12 Insert the PC Card Director Diskette for OS2 and Windows 95 into the diskette drive; then click on **OK**.

IBMCSS01.VXD and IBMPCDIF.VXD are copied from the diskette.

- 13 Click on the **OK** button at the Insert Disk panel.

- 14 Click on the **Skip File** button at the Copying Files... panel when Windows 95 tries to copy the following files:

CARDDRV.EXE
CSMAPPER.SYS
FLS1MTD.VXD
FLS2MTD.VXD
PCCARD.VXD
SRAMMTD.VXD

- 15 Restart the computer.

Note:

These files were copied when you installed the Windows 95 integrated PCMCIA support software.

Installing the PC Card Director for Windows 95

To install the PC Card Director for Windows 95, do the following:

- 1 Start Windows 95; then open **My Computer**, **Control Panel**, and then **AddRemove Programs**.
- 2 Click on the **Install** button.
- 3 Insert the PC Card Director Diskette for OS2 and Windows 95 into the diskette drive; then click on the **Next>** button.
- 4 Click on the **Finish** button when you see "A:\INSTALLP.EXE" on the screen.
- 5 Click on the **Continue** button when the opening panel of the installation program appears on the screen. Follow the instructions on the screen.

Installing the Mwave DSP Support Software for Windows 95



Do one of the following:

If you are installing the Mwave DSP support software for Windows for the first time, you need to install Mwave DSP support software for Windows 95 and MIDI sample files.

If you have already installed the Mwave DSP support software for Windows, you need to install only the Mwave DSP support software. You do not need to install the MIDI sample files.

Installing the Mwave DSP Support Software

To install the Mwave DSP support software:

- 1** Start Windows 95; then click on **Start**, and then **Run...**
- 2** Insert the Mwave DSP Features Diskette 1 for Windows 95 into the diskette drive; then type **A:SETUP** and press **Enter**.

The Mwave installation window appears and prompts you to input the destination directory for the software. If the default directory is OK, press **Enter**. Otherwise, type a directory name and press **Enter**.

Follow the instructions on the screen.
- 3** If you are installing the Mwave DSP support software for the first time, go to "Installing the Mwave MIDI Sample Files" on page 208 and follow the instructions. Otherwise, remove any diskette from the diskette drive and restart Windows 95.

Note

Non-U.S. users must run the Country Selection program in the Mwave window after the Mwave installation is complete. Restart the computer after you run Country Selection.

Installing Windows 95 Software

Encounter a problem?

If you encounter a problem when using the Mwave DSP features for Windows 95 after installation, verify that "C:\MWW\DLL" is included in the PATH statement of AUTOEXEC.BAT.

Installing the Mwave MIDI Sample Files

To play MIDI files on your computer, install the Mwave MIDI sample files as follows:

- 1 Start Windows 95; then click on **Start**, and then **Run....**
- 2 Insert the MIDI Samples Diskette 1 into the diskette drive; then type `A:SETUP` and press **Enter**.

The Mwave installation window appears and prompts you to input the destination directory for the software. If the default directory is OK, press **Enter**. Otherwise, type a directory name and press **Enter**.

- 3 Follow the instructions on the screen. After the installation is completed, remove any diskette from the diskette drive; then restart Windows 95.

Installing the AudioDrive Support Software for Windows 95



When you install Windows 95, it might detect the AudioDrive chip installed in your computer, and automatically install the required audio software in your hard disk drive. However, the version of the AudioDrive support software supplied with Windows 95 might be an earlier version than the one needed for your computer.

In any case, you should reinstall the AudioDrive support software as follows:

- 1 Start Windows 95; then open **My Computer**.
- 2 Click on **Control Panel** and then **System** to open the System Properties window.
- 3 Click on the **Device Manager** tab; then double-click on **Sound, video, and game controllers** from the list.

Installing Windows 95 Software

- 4 Double-click on **ESS AudioDrive**; then click on the **Driver** tab.
- 5 Click on the **Change Driver** button; then click on the **Have Disk...** button.
- 6 Insert the AudioDrive Features Diskette for Windows 95 into the diskette drive; then type **A:** and click on **OK**.

If an error message appears on the screen, do steps 7 to 9. If the installation begins without any problem, go to step 10.

- 7 Click on **OK** until you see the following message:



- 8 Make sure the AudioDrive Features Diskette for Windows 95 is inserted in the diskette drive; then click on **OK**.
- 9 Type **A:** at the Copy Files From window; then click on **OK**.
- 10 After the installation is complete, click on the **Close** button.

Installing the Infrared Device Driver for Windows 95

To install the infrared device driver for Windows 95, do the following:

- 1 Start Windows 95; then go to the MS-DOS command prompt.
- 2 Insert the Infrared Features Diskette into the diskette drive; then type **A:UINSTALL** and press **Enter**.
- 3 At the Installation Options screen, press **Enter** to accept the default source drive.
Follow the instructions on the screen.
- 4 Select **Install Windows ThinkPad Infrared Driver** when you are asked.
Make sure you specify the directory where you have installed Windows 95 when asked.

To make sure that the infrared port is configured correctly, do the following:

Installing Windows 95 Software

- 1 Start Windows 95 and select **My Computer**.
- 2 Click on **Control Panel** and then **System**.
- 3 Click on the **Device Manager** tab; then see if the **Generic IrDA Compatible Device** node has **COM1** or **COM2** .

If not, do the following:

- a) Go to the MS-DOS command prompt.
- b) Type `edit c:\windows\inf\msports.inf` and press **Enter**.
- c) Locate the following line:

```
% PNP 51 .DeviceDesc%=NoDrv, PNP 51
```

Change this line to:

```
% PNP 51 .DeviceDesc%=ComPort, PNP 51
```
- d) Save the changed file and exit the MS-DOS command prompt.
- e) In the Device Manager panel, click on **Generic IrDA Compatible Device** node.
- f) Click on **Remove** and then **Yes** to remove this node temporarily.
- g) Click on **Refresh**, then **Yes** to register this node using the new port definition.
- h) Restart Windows 95.

Installing the CD-ROM Device Driver for Windows 95



This section describes how to disable unnecessary DOS/Windows CD-ROM device driver.

If you installed Windows 95 on a blank hard disk drive without DOS and Windows, Windows 95 has automatically installed a generic ATAPI CD-ROM device driver for your ThinkPad's CD-ROM drive. You do not need to do the following procedure. Go to "Installing the Enhanced VideoMPEG Device Driver and the Video CD Player for Windows 95" on page 212.

Installing Windows 95 Software

If you installed Windows 95 in a computer on which DOS and Windows had been already installed, you need to disable the DOS/Windows CD-ROM device driver to use the correct Windows 95 generic ATAPI CD-ROM device driver.

To disable the DOS/Windows CD-ROM device drivers:

Note:

The default subdirectory for C:\xxxxxx is C:\CDROM.

1 Start Windows 95 and go to the MS-DOS command prompt.

2 Open the CONFIG.SYS file; then find the following line:

```
DEVICE=C:\xxxxxx\IBMTPCD.SYS /R
```

xxxxxx is the subdirectory where you have installed the CD-ROM device driver. If you cannot find the line, quit the file and go to step 4.

3 Comment out the line to change it as follows:

```
REM DEVICE=C:\xxxxxx\IBMTPCD.SYS /R
```

If the line is already commented out, quit the file and go to the next step.

4 Open the AUTOEXEC.BAT file; then find the following line:

```
C:\xxxxxx\MSCDEX.EXE /D:TPCD 1 /M:15
```

xxxxxx is the subdirectory where you have installed the CD-ROM device driver. If you cannot find the line, quit the file and go to step 6.

5 Comment out the line to change it as follows:

```
REM C:\xxxxxx\MSCDEX.EXE /D:TPCD 1 /M:15
```

If the line is already commented out, quit the file and go to the next step.

6 Exit the DOS command prompt; then reboot the system.

Note:

The default subdirectory for C:\xxxxxx is C:\CDROM.

Installing the Enhanced VideoMPEG Device Driver and the Video CD Player for Windows 95



To use the Enhanced Video functions in Windows 95, you must install the ThinkPad display driver (Cyber...) and the Mwave DSP support software before installing the Enhanced Video device drivers.

Installing the Video OverlayCapture Device Driver for Windows 95

The Video OverlayCapture device driver enables the video in-out port and Video for Windows (a standard component in Windows 95) or its compatible software.

To install the Video OverlayCapture device driver for Windows 95:

- 1** Start Windows 95; then click on **My Computer, Control Panel,** and then **Add New Hardware.**
- 2** Click on **Next>**; then select **No** to the question **Search for your new hardware?**
- 3** Click on **Next>**; then select **Sound, video, and game controllers.**
- 4** Click on **Next>**; then click on **Have Disk.**
- 5** Insert the MPEGVideo Capture Driver Diskette for Windows 95 into the diskette drive; then select **OK.**
- 6** Install all the drivers listed on the screen.
You cannot install multiple drivers at the same time.
- 7** After the installation is complete, remove the diskette from the diskette drive.
- 8** Restart the computer to make the video overlaycapture device driver effective.

To use the video capture and playback functions, refer to the Windows 95 documentation or your video captureplayback software manual.

Installing Windows 95 Software

To install the MPEG device driver, proceed to the following section.

Installing the MPEG Device Driver for Windows 95

The MPEG device driver enables playback for MPEG motion video, CD-i movies, and Video CDs on your computer. To install the MPEG driver for Windows 95:

- 1** Start Windows 95; then click on **My Computer**.
- 2** Click on **Control Panel** and then **Add New Hardware**.
- 3** Click on **Next>**; then select **No** to the question **Search for your new hardware?**
- 4** Click on **Next>**; then select **Sound, video and game controller**.
- 5** Click on **Next>**.
- 6** Insert the MPEG Features Diskette for Windows 95 into the diskette drive; then click on **Have Disk...**
- 7** Highlight **IBM MPEG CD-iVideoCD (nci)** ; then click on **OK**.
- 8** Click on **OK**; then click on **Finish**.
- 9** Click on **Finish**.
- 10** When Windows 95 prompts you to restart the computer, click on **No**, and repeat steps 2 to 9 to install IBM MPEG FilesISO9660 (nci), by selecting **IBM MPEG FilesISO9660 (nci)** in step 7.
- 11** When Windows 95 prompts you to restart the computer, click on **No**, and repeat steps 2 to 9 to install IBM MPEG PCI Bridge by selecting **IBM MPEG PCI Bridge** in step 7.

If this is the first installation of the IBM MPEG PCI Bridge, you must do the following once. This procedure removes the device from the unknown class and adds it to the sound, video, and game controllers.
 - a) Select **Control Panel, System**, and then **Device Manager**.
 - b) Select **Other Devices** and **PCI Multimedia Device**.
 - c) Select **Remove**; then click on **OK**.
- 12** Shut down Windows 95 and restart the computer.

Installing Windows 95 Software

Installing the IBM Video CD Player for Windows 95

The IBM Video CD Player application enables the playback of video CDs and CD-i movies with more options than the Windows 95 standard Media Player. To install the IBM Video CD Player:

- 1 Start Windows 95; then click on the **Start** button and click on **Run....**
- 2 Insert the Video CD Player Install Diskette into the diskette drive; then type **A:SETUP** and press **Enter**.

Follow the instructions on the screen.

Disabling the Docking Control Program

All docking functions, once provided by the ThinkPad Docking Control Utility program for Windows, are now supported by the ThinkPad Plug-and-Play BIOS and Windows 95.

If you have installed Windows 95 on a computer in which the Docking Control Utility for Windows had already been installed, stop this utility program from working as follows:

Note:

To open the WIN.INI file, type **EDIT WIN.INI** and press **Enter**.

- 1 Open the WIN.INI file using your editor; then remove the following statement:

```
[windows]
:
load=C:\THINKPAD\DOCKWIN.EXE   Remove this statement
:
```

- 2 Save and close the file.
- 3 Open the SYSTEM.INI file using your editor; then remove this statement:

```
[386Enh]
:
device=IBMPNP.386   Remove this statement
```

- 4 Save and close the file; then restart Windows to make the changes effective.

Using Windows 95 with the Dock II

When you use the Dock II with your computer and Windows 95, you need to disable the host adapter SCSI BIOS for Dock II. You can disable the host adapter SCSI BIOS by using either the Dock II SCSISelect** utility or the DIP switches in the Dock II:

Using the Dock II SCSISelect Utility

- 1** Attach your computer to the Dock II and turn on the computer.
- 2** Press and hold the **Ctrl** key; then press the **A** key when prompted at boot time.
- 3** Select **Configure/View Host Adapter Settings** and disable the Host Adapter BIOS.

Using the DIP Switches in the Dock II

To use the DIP switches, refer to the section "Using the SCSI controller" in the *Dock II User's Guide*.