
**Chapter
2**

The Windows Setup Information Files

This chapter contains information that can be used to create custom Microsoft Windows setup information files (SETUP.INF, CONTROL.INF, and APPS.INF) for multiple installations.

Note You should only modify the setup information files if you want to specify custom drivers, applications, and machine types for multiple systems.

- Related information*
- *Windows User's Guide*: Chapter 15, "Maintaining Windows with Setup"
 - *Windows Resource Kit*: Chapter 3, "The Windows Files"; Chapter 4, "The Windows Initialization Files"; "Troubleshooting Setup" in Chapter 13, "Troubleshooting Windows 3.1"

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About the Setup Information Files

Three files supply information used by the Windows Setup program: `SETUP.INF`, `CONTROL.INF`, and `APPS.INF`. The entries in each of these files are discussed in detail in separate sections of this chapter.

- `SETUP.INF` is the key file that Setup uses to install the Windows system files and application files, and to create program groups that you can use to run applications from Program Manager. This file is on the Windows installation disk #1 and is not compressed.

Setup checks information in `SETUP.INF` during both MS-DOS Mode Setup and Windows Mode Setup. The `SETUP.INF` entries specify which files to copy based on the system hardware configuration and the choices specified during installation. You can modify the `SETUP.INF` entries to accommodate specific hardware and software configurations for installing Windows on multiple machines.

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- `APPS.INF` is the file that contains information for installing applications with Windows. You can modify this file to install PIF information for custom applications during Windows installation. Setup places the `APPS.INF` file in the `SYSTEM` subdirectory during installation.

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- `CONTROL.INF` is the file that contains specific information about printers and international settings. You can modify this file to install custom printer drivers. Setup places the `CONTROL.INF` file in the `SYSTEM` subdirectory during installation.

For other ways to customize Setup to meet the installation needs for your site, see the Custom Installation Decision Tree in Chapter 1, “Windows 3.1 Installation.”

The setup information (`.INF`) files are text files in a format similar to `WIN.INI` and `SYSTEM.INI`. The `.INF` files are broken into logical groups called sections. Each section has a header that is an identifier in square brackets, such as **[shell]**, with values assigned

under each section header. Brief comments are included below many section headers to explain the contents of that section.

Each section has a format similar to this:

```
[section]  
keyname = value           ; comment
```

<i>Entry</i>	<i>Meaning</i>
[<i>section</i>]	The name of a section. The enclosing brackets ([]) are required, and the left bracket must be in the leftmost column on the screen.
<i>keyname</i>	The name of an entry, which can consist of any combination of letters and digits. Some <i>keyname</i> entries must be followed immediately by an equal sign (=).
<i>value</i>	The value of each entry, which can be an integer, a string, or a quoted string, depending on the entry. Any entry listed in this chapter that does not appear in your .INF file has the default value.
<i>; comment</i>	Some entries include brief comments below the header or on the same line as an entry. You can include comments anywhere in an .INF file by prefacing the comment with a semicolon (;).

In this chapter, the items that appear in bold in an entry are actual words included in the entry. For example: [**win.net**]. Values that must be substituted in the entry are shown in italics. For example:

keyname = profile, description, filesize

Case (capital or lowercase letters) does not matter for values, unless specified for a particular item. Some items must be enclosed in double quotation marks (" "). For example: **caption= "Windows Setup"**.

Note The order of the sections in an .INF file is not important, except for the placement of the [**blowaway**] section in SETUP.INF. Also, the entries do not necessarily appear alphabetically as they are listed in this chapter. So to change an entry, you must search for it within the section.

To change entries in a setup information file:

1. Create a backup copy of the .INF file and save the original version in its unedited form.
2. Open the copy of the .INF file with a text editor.
3. Edit the specific entries and save the file in ASCII (text-only)

format.

Important Always back up the .INF file before you open it, and use care when making changes with a text editor. Incorrect changes can lead to unexpected results when you run Setup. Also, some editors can damage characters with ANSI values of greater than 127. Use a nonformatting text editor to change these files, or make sure to save the files in ASCII (text-only) formats.

SETUP.INF: The Setup Information File

This discussion describes details about each section in SETUP.INF, and how and when to modify entries. The discussion follows roughly the same order as sections appear in SETUP.INF, in these topical categories:

- General installation sections
- Display driver sections
- Keyboard and code page sections
- Mouse driver sections
- Network installation sections
- System fonts and other font sections
- Copy-files sections
- Program Manager group sections
- Incompatible driver sections
- Miscellaneous sections
- System configuration sections

The following table summarizes the purpose of the sections in SETUP.INF.

<i>of section</i>	<i>Section name</i>	<i>Purpose</i>
General installation sections	[setup]	Defines the Windows Setup Help file
	[run]	Defines programs to run after Setup
	[dialog]	Defines installation screen text
	[data]	Defines general data to support Setup
	[winexec]	Defines core fields for Windows Mode Setup
	[disks]	Defines disks that Setup can use
	[oemdisks]	Defines extra disks that Setup can use
	[user]	Defines the location of TEMP file containing user information

	[windows]	Defines the minimum files for WINDOWS directory
	[windows.system]	Defines the minimum files for SYSTEM subdirectory
	[windows.system.386]	Defines the minimum files for 386 machine; plus
	[bluemax] and [386max]	
		subentries for 386 expanded memory managers
	[shell]	Defines the shell entry in SYSTEM.INI for Setup
display driver sections	[display]	Defines a set of display drivers
	[.3gr]	Defines font files for specific 386 grabbers
keyboard and code page sections	[keyboard.drivers]	Maps keyboard short names and descriptors
	[keyboard.types]	Defines keyboard short names
	[keyboard.tables]	Maps keyboard names for international support
	[codepages]	Maps code pages for international support
mouse driver sections	[pointing.device]	Defines mouse driver keynames
	[dos.mouse.driver]	Maps Windows mouse driver names with MS-DOS mouse drivers
	[lmouse]	Defines data for Logitech MS-DOS mouse drivers
network installation sections	[network]	Defines names for network files and .INI file
changes for networks		
	[Network_Version]	Defines information for specific versions of network drivers
	[Network_Specific]	Defines entries for .INI files for specific networks
system fonts sections	[sysfonts]	Defines system font files by display resolution
	[fixedfonts]	Defines fixed-pitch font files by display resolution
	[oemfonts]	Defines OEM system font files by display resolution
Type of section	Section name	Purpose (continued)
copy-files sections	[win.copy]	Defines files to copy for 80286 PCs
	[win.copy.net]	Defines files to copy for network workstations
	[win.copy.net.386]	Defines files to copy for 80386 and higher PCs for network workstation
	[win.copy.386]	Defines files to copy for 80386 and higher PCs
	[DelFiles]	Defines files to delete when upgrading to Windows 3.1
	[RenFiles]	Defines files to rename when upgrading to Windows 3.1
	[win_copyFiles]	Sections that define files to copy for specific items
Program Manager groups sections	[new.groups]	Defines Program Manager groups to modify for Windows 3.1 upgrade
	[progman.groups]	Defines Program Manager groups to be created
	[group#]	Defines properties for items in program groups
fonts sections	[fonts]	Defines vector and raster screen font files based on display resolution
	[tffonts]	Defines TrueType font files to copy
compatible driver sections	[compatibility]	Defines drivers to remove in CONFIG.SYS
	[incompTSR1]	Defines TSRs and drivers that cause problems during Setup

	[incompTSR2]	Defines TSRs and drivers that cause problems if running with Windows
Miscellaneous sections	[block_devices]	Defines incompatible block devices
	[installable.drivers]	Defines data for multimedia drivers
	[translate]	Defines filename translation data for version 3.0 OEM disks
	[update.files]	Defines installable drivers to update to version 3.1
	[ini.upd.patches]	Temporarily maps .INI file updates
System configuration sections	[blowaway]	Defines end of installation and start of configuration sections
	[ini.upd.31]	Defines .INI file updates for Windows 3.1
	[system]	Maps system short names and descriptors
	[machine]	Defines names for specific computers
	[special_adapter]	Defines special data for EtherLink MC cards
	[ebios]	Defines extended BIOS names
	[language]	Defines language DLL names

General Installation Sections

The following sections in `SETUP.INF` define the installation options and specify the filenames and locations of related files for MS-DOS Mode Setup:

[setup]	[data]	[windows.system]
[run]	[disks],[oemdisks]	[windows.system.386]
[dialog]	[user]	[386max], [bluemax]
[winexec]	[windows]	[shell]

[setup]

This section contains the location of the help file for the Setup program. If you want online help to be available during installation, there must be an entry similar to this:

```
[setup]
help= setup.hlp
```

[run]

The entries in this section specify which programs should run at the end of Setup. If you want to run an application when Setup is completed, enter its name here. For example, to run Control Panel after Setup is completed, include this entry:


```
[run]
"control"
```

[dialog]

This section contains the text strings used in the Setup dialog boxes. Some of the keynames and the default text assigned are:

```
[dialog]
caption = "Windows Setup"
exit = "Exit Windows Setup"
title = "Installing Windows 3.1"
options = "In addition to installing Windows 3.1, you can:"
printwait = "Please wait while Setup configures your printer(s)..."
copywait = "Welcome to Microsoft Windows 3.1! . . ."
(other copywait entries)
```

[winexec]

This section provides data needed by MS-DOS Mode Setup so that Setup can copy the correct Kernel file for Windows Mode Setup. You probably do not need to change these entries.

```
[winexec]
execstd= "dosx.exe " ; MS-DOS Extender for standard mode
execcmd= " krnl286.exe /b /q:" ; command and switches for kernel
exechemem= "xmsmmgr.exe" ; extended memory manager for Setup
himemcmd= "" ; switches for HIMEM.SYS
Krn1386= 2:krnl386.exe ; kernel for 386 enhanced mode
Krn1286= 2:krnl286.exe ; kernel for standard mode
dosx= 2:dosx.exe ; disk location for DOSX.EXE file
```

[data]

This section defines a series of default settings for Setup. The first half of these entries specifies the hard disk space and minimum memory required for basic running without options. If you plan to install additional files during Setup, you must increase the minimum disk space required for installation. The second half of these entries refers to the default files and other data used by Setup.

These are the standard entries for the **[data]** section:

```
[data]
netadmin= 16000000                ; 16.0 MB
netadminupd= 16000000            ; 16.0 MB
upd2x386full= 10500000,8000000  ; 10.5 MB, 8.0 MB
upd2x386net= 300000              ;.3 MB
upd3x386full= 5500000,5000000   ; 5.5 MB, 5.0 MB
upd3x386net= 300000             ;.3 MB
upd2x286full= 9000000,6500000   ; 9.0 MB, 6.5 MB
upd2x286net= 300000             ;.3 MB
upd3x286full= 5500000,5000000   ; 5.5 MB, 5.0 MB
upd3x286net= 300000             ;.3 MB
new386full= 10500000,8000000    ; 10.5 MB, 8.0 MB
new286full= 9000000,6500000     ; 9.0 MB, 6.5 MB
new386net= 300000,300000        ;.3 MB, .3 MB
new286net= 300000,300000        ;.3 MB, .3 MB

startup= WIN.COM                 ; file referred to when starting Windows
defdir= C:\WINDOWS               ; default directory for installation
short name= Windows
welcome= "Windows 3.1"
deflang= enu                     ; default based on [language]
defxlat= 437                     ; default based on [codepage]
defkeydll= usadll               ; default based on [keyboard.tables]
register= "regedit /s /u setup.reg" ; default file for registration database
tutor= "wintutor.exe "          ; tutorial to run at end of installation
NetSetup= FALSE                 ; TRUE allows only SETUP /N
MouseDrv= TRUE                  ; Setup uses the mouse
Version= "3.1"                  ; current Windows version
```

Note If you want to force users to set up using network installation (**setup /n**), make sure **netsetup=true** in **[data]**. For more information, see “Setting Up Windows for a Network” in Chapter 1, “Windows 3.1 Installation.”

[disks] and [oemdisks]

These sections describe the disks that might be requested during installation. The format for entries in **[disks]** and **[oemdisks]** is:

n= path, disk name, disk tag

<i>Entry</i>	<i>Meaning</i>
<i>n</i>	A disk “number” as 1–9 and A–Z (single character only). The disk number 0 is reserved to represent the Windows Setup directory.
<i>path</i>	The path of disk <i>n</i> . The symbol “.” tells Setup to look for the disk in the same drive as the Windows Setup disks.
<i>disk name</i>	The label of disk <i>n</i> , enclosed in quotes. There must be a disk name for each disk number used.
<i>disk tag</i>	The volume name for disk <i>n</i> (used to determine if the correct disk is in the drive).

This is a sample entry for Windows installation disks:

```
[disks]
1=. ,"Microsoft Windows 3.1 Disk #1",disk1
2=. ,"Microsoft Windows 3.1 Disk #2",disk2
3=. ,"Microsoft Windows 3.1 Disk #3",disk3
4=. ,"Microsoft Windows 3.1 Disk #4",disk4
5=. ,"Microsoft Windows 3.1 Disk #5",disk5
6=. ,"Microsoft Windows 3.1 Disk #6",disk6

[oemdisks]
Z=. ,"HP DeskJet Series v2.0 disk (from printer box or contact HP)",diskz
```

If you want to install other applications from disk during Windows installation, you can add an entry in the **[disks]** section. For details, see “Modifying .INF Files for Custom Installations” later in this chapter.

Note In other entries in SETUP.INF, a number followed by colon, such as **1:**, identifies which Windows installation disk contains that file, based on the entries in the **[disks]** section. If Windows is installed from a network server where all files exist in a single directory, Setup ignores the disk numbers.

[user]

This section describes which installation disk contains the user and company identification. This is a temporary file.

[windows]

This section identifies which files MS-DOS Mode Setup will copy into the WINDOWS directory. The assignment of **Net** for the **win.src** and **system.src** entries tells Setup to copy these files only for the Windows Administrative Setup option (**setup /a**), to prepare a shared copy of Windows for running Setup over a network.

```
[windows]
1:setup.hlp
1:setup.txt
3:control.hlp
2:win.src,           Net           ; for shared Windows setup
1:system.src,       Net           ; for shared Windows setup
1:winhelp.exe
```

[windows.system]

This section defines which files MS-DOS Mode Setup will copy into the Windows SYSTEM subdirectory. For details about the files copied during Windows Mode Setup, see “Copy-Files Sections” later in this chapter.

```
[windows.system]
1:gdi.exe
1:user.exe
1:win.cnf
1:lzexpand.dll
2:ver.dll
```

[windows.system.386] and Related Sections

These sections describe files to be copied into the SYSTEM subdirectory for 80386 machines:

```
[windows.system.386]
1:cpwin386.cpl

[386max]                               ; files copied if system is using 386Max
2:386max.vxd
2:windows.lod

[bluemax]                               ; files copied if system is using BlueMax
2:bluemax.vxd
2:windows.lod
```

[shell]

This section tells Setup which application to install as the Windows shell. The default shell is Program Manager.

```
[shell]
progman.exe, "Windows Program Manager"
```

Display Driver Sections

Windows display drivers require three kinds of files:

- **The Windows display driver** (a .DRV file; for example, VGA.DRV), which contains code for communication between the display adapter board and Windows. These files are specified in the **[display]** section.
- **The grabber file** (.2GR for standard mode; .3GR for 386 enhanced mode), which contains code to support data exchange between Windows and non-Windows applications. These files are specified in entries in the **[display]** section. The fonts for 386 grabbers are specified in **[.3gr]** sections. In Windows 3.0, these files had .GR2 and .GR3 filename extensions.
- **The Virtual Display Driver** (VDDX.386), which provides virtual display support in 386 enhanced mode. The related VDD files are specified in entries in the **[display]** section.

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The naming conventions listed parenthetically are not required. However, most drivers use this naming convention.

If you are using a display driver other than those in the Windows package, you can add a custom entry that contains the display driver data in **[display]**. For Setup to correctly install third-party display drivers, you must copy the driver and the appropriate grabber files, and you must also update the **286grabber=** or **386grabber=** entries in the **[boot]** section of SYSTEM.INI.

During Custom Setup, you can specify the display type. Setup copies the matching system fonts for that display type. For information about the related system font files, see “System Fonts Sections” later in this chapter.

[display]

This section specifies information about various display devices. This is the format for entries in this section:

keyname= driver, description, resolution, 286grabber, logo code, VDD, 386grabber, ega.sys, logo data, optional section

<i>Entry</i>	<i>Meaning</i>
<i>keyname</i>	The profile of the driver, used to refer to the driver in other sections of SETUP.INF.
<i>driver</i>	The filename of the display device driver.
<i>description</i>	A description of the driver, enclosed in quotes, which appears in the Change System Settings dialog box in Setup.
<i>resolution</i>	The aspect ratio for the display, as three comma-separated numbers enclosed in quotes.
<i>286grabber</i>	The filename of the appropriate 286 grabber, which supports data exchange between Windows and non-Windows applications in standard mode.
<i>logo code</i>	The filename for the Microsoft Windows logo code.
<i>VDD</i>	The filename for the Virtual Display Driver.
<i>386grabber</i>	The filename for the appropriate 386 grabber, which supports data exchange in a virtual machine under 386 enhanced mode.
<i>ega.sys</i>	The filename for the data that determines whether an EGA.SYS driver needs to be installed.
<i>logo data</i>	The filename for the appropriate Microsoft logo bitmap.
<i>optional section</i>	The name of a section that contains additional information about the display driver.

Important Do not change description strings for drivers, because they are used during installation to make a decision to upgrade files, depending on which driver is already installed. Changing description string can cause errors in updating drivers.

These *optional sections* in SETUP.INF define details about display drivers:

[v7vga] [8514] [tiga2] [v7d] [xgasm]

[vgamono]**[8514s]
[tiga1]****[v7b]
[v7c]****[v7f]
[v7e]****[xgalg]
[xgalo]**

The *optional sections* have this format:

file, destination, ini file, section, OldEntry, NewEntry

<i>Entry</i>	<i>Meaning</i>
<i>file</i>	An optional file to be copied; this item can be left null.
<i>destination</i>	The directory where the file is to be copied; this is null if <i>file</i> is null. The value is 0: if the file is to be copied to the WINDOWS directory or 0:system if the file is copied to the SYSTEM subdirectory.
<i>ini file</i>	Any .INI file to be modified or created, such as WIN.INI or SYSTEM.INI; this item is optional.
<i>section</i>	The section of the .INI file that is to be modified.
<i>OldEntry</i>	Any entry, enclosed in quotes, to be removed from the .INI file; this item is optional.
<i>NewEntry</i>	Any new entry, enclosed in quotes, to be added in the .INI file.

This example shows the default entry for the 8514 display, which is a high-resolution IBM display:

```
[display]
8514= 2:8514.drv, "8514/a", "100,120,120", 3:vgacolor.2gr, 2:vgalogo.lgo,2:vdd8514.386,
      3:vgadib.3gr,, 2:vgalogo.rle, 8514
```

This is the *optional section* for the 8514 driver, which modifies the **dpi=** entry in the **[8514.drv]** section in SYSTEM.INI:

```
[8514]
,,system.ini,8514.DRV,"dpi=","dpi=120"
```

[.3gr] Font Sections

The 386 grabber supports copying text and graphics in a non-Windows application and translating it for Windows to use. The **[vga.3gr]**, **[vga30.3gr]**, **[v7vga.3gr]**, **[ega.3gr]**, **[vgadib.3gr]**, **[plasma.3gr]**, **[herc.3gr]**, and **[tiga.3gr]** sections specify which font files to copy for the 386 grabber described in the section name. (The 386 grabber itself is specified in an entry for the specific display device in **[display]**.)

Each entry in a **[.3gr]** section is a list of filenames for the

appropriate fonts, including the installation disk number. For example, this entry specifies fonts for the 386 grabber that supports Video 7 VGA:

```
[V7VGA.3gr]
2:CGA40WOA.FON,2:CGA40850.FON
2:CGA80WOA.FON,2:CGA80850.FON
2:EGA40WOA.FON,5:EGA40850.FON
2:EGA80WOA.FON,2:EGA80850.FON
```

If code page 437 is used (the default for character support in the U.S.), then Setup copies the *WOA.FON files. If the code page is not 437, Setup copies the *WOA.850 files.

Keyboard and Code Page Sections

These sections specify the files for the keyboard drivers and code page support for Windows:

```
[keyboard.drivers]      [keyboard.types]
[keyboard.tables]      [codepages]
```

You might want to change these sections of SETUP.INF if you want to use a different keyboard driver, or if you want to use different foreign language support than is specified in SETUP.INF. If you change the keyboard support in these sections, you should also modify the **deflang=**, **defxlat=**, and **defkeydbl=** entries in the **[data]** section earlier in SETUP.INF.

[keyboard.drivers]

This section maps the actual keyboard driver filenames to the keyboard short names defined in **[keyboard.types]**:

```
[keyboard.drivers]
kbd= 2:keyboard.driv
kbdhp= 2:kbdhp.driv
```

[keyboard.types]

This section creates the keyboard short names used in the **[machine]** section. Each entry in this section also specifies whether a keyboard-specific DLL must be installed. The format for entries in this section is:

short name=description, DLL filename

<i>Entry</i>	<i>Meaning</i>
<i>short name</i>	The abbreviated descriptor to be used in the [machine] section.
<i>description</i>	A description, enclosed in quotes, that appears in the Change System Settings dialog box in Setup.
<i>DLL filename</i>	The filename for any supporting DLL required; this can be null.

The standard entries for this section are:

```
[keyboard.types]
t3s0alat= "All AT type keyboards (84 - 86 keys)" ,nodll
t1s2at&t= "AT&T '301' keyboard",nodll
t1s4at&t= "AT&T '302' keyboard",nodll
t4s0enha= "Enhanced 101 or 102 key US and Non US keyboards" ,nodll
t3s0hp1= "Hewlett-Packard Vectra keyboard (DIN)",nodll
t4s40oliv= "Olivetti 101/102 A keyboard" ,nodll
t1s0oliv= "Olivetti 83 key keyboard" ,nodll
t3s10oliv= "Olivetti 86 Key keyboard" ,nodll
t2s1oliv= "Olivetti M24 102 key keyboard" ,usadll
t1s42oliv= "PC-XT 83 key keyboard" ,nodll
t1s0pcxt= "PC/XT - Type keyboard (84 keys)",nodll
```

[keyboard.tables]

This section maps short names for DLLs to disk locations and filenames for the DLLs required by specific keyboard types. This section is useful only if you need foreign language support for Windows.

Note

Changes to this section can affect **defkeydll=** in **[data]**.

```
[keyboard.tables]
beldll= 2:kbdbe.dll , "Belgian"
bridll= 2:kbduk.dll , "British"
cafdll= 2:kbdfc.dll , "Canadian Multilingual"
dandll= 2:kbdda.dll , "Danish"
dutdll= 2:kbdne.dll , "Dutch"
findll= 2:kbdfi.dll , "Finnish"
fredll= 2:kbdfr.dll , "French"
candll= 2:kbdca.dll , "French Canadian"
gerdll= 2:kbdgr.dll , "German"
icedll= 2:kbdic.dll , "Icelandic"
itadll= 2:kbdit.dll , "Italian"
latdll= 2:kbdla.dll , "Latin American"
nordll= 2:kbdno.dll , "Norwegian"
pordll= 2:kbdpo.dll , "Portuguese"
spadll= 3:kbdsp.dll , "Spanish"
swedll= 2:kbdsw.dll , "Swedish"
swfdll= 2:kbdsf.dll , "Swiss French"
swgdll= 2:kbdsg.dll , "Swiss German"
nodll= , "US"
usadll= 2:kbdus.dll , "US"
usddll= 2:kbdv.dll , "US-Dvorak"
usxdll= 2:kbdusx.dll , "US-International"
```

[codepages]

Setup refers to this section when any code page other than code page 437 is installed in the system. If Setup detects another code page, it installs the correct files for the translation table and (for VGA displays) the correct OEM font.

Note

Changes to this section can affect **defxlat=** in **[data]**.

This is the format for entries in this section:

codepage = xlat table, OEM font, WOA font, description

Entry	Meaning
<i>codepage</i>	The table number used to associate the keys on the keyboard with the appearance of characters on the display.
<i>xlat table</i>	The filename for the translation table used to associate the OEM font file with the code page.
<i>OEM font</i>	The filename, with installation disk number, containing the correct OEM font.
<i>WOA font</i>	The filename, with installation disk number, containing the correct font to be used by the Windows grabber.
<i>description</i>	A string, enclosed in quotes, showing the country for which the code page is used.

[codepages]

863= 1:xlat863.bin, 2:vga863.fon, 2:app850.fon, "Canadian-French (863)"

861= 2:xlat861.bin, 2:vga861.fon, 2:app850.fon, "Icelandic (861)"

865= 2:xlat865.bin, 2:vga865.fon, 2:app850.fon, "Nordic (865)"

850= 2:xlat850.bin, 2:vga850.fon, 2:app850.fon, "Multi-Lingual (850)"

860= 3:xlat860.bin, 2:vga860.fon, 2:app850.fon, "Portuguese (860)"

437= , , 2:dosapp.fon, "English (437)"

Mouse Driver Sections

The **[pointing.device]**, **[dos.mouse.driver]**, and **[lmouse]** sections define information about the pointing device used while running Windows. If you want to use a mouse driver that is not included with Windows, you can add custom mouse driver references in these sections.

[pointing.device]

This section provides a table of information for the pointing devices supported by Windows 3.1. This is the format for each entry in this section:

keyname= *mouse driver*, *mouse descriptor*, *VMD*, *optional section*

<i>Entry</i>	<i>Meaning</i>
<i>keyname</i>	The profile name.
<i>mouse driver</i>	The filename for the mouse driver, including the installation disk number.
<i>mouse descriptor</i>	A description of the driver, enclosed in quotes, that appears in the Change System Settings dialog box in Setup.
<i>VMD</i>	The filename with installation disk number for the Virtual Mouse Device support file (for using the mouse with non-Windows applications in 386 enhanced mode). If multiple VMDs are specified, they must be separated by commas and enclosed in quotes. Example: " x:*vmd,2:1vmd.386 ".
<i>optional section</i>	The name of a section that contains additional information about a mouse driver.

The assignment of ***vmd** as the *VMD* value indicates that this file is built into WIN386.EXE (and therefore is not a separate file on the installation disks); **x:** refers to the disk where WIN386.EXE is located.

```
[pointing.device]
hpmouse= 2:hpmouse.driv, "HP Mouse (HP-HIL)", x:*vmd
lmouse= 3:lmouse.driv, "Logitech", 2:lvmd.386, lmouse
ps2mouse= 2:mouse.driv, "Microsoft, or IBM PS/2", x:*vmd
genius1= 2:mscmouse.driv, "Genius serial mouse on COM1", 1:mscvmd.386
genius2= 2:msc3bc2.driv, "Genius serial mouse on COM2", 1:mscvmd.386
msmouse2= 2:mscmouse.driv, "Mouse Systems serial or bus mouse", 1:mscvmd.386
msmouse1= 2:msc3bc2.driv, "Mouse Systems serial mouse on COM2", 1:mscvmd.386
nomouse= 2:nomouse.driv, "No mouse or other pointing device", x:*vmd
kbdmouse= 2:kbdmouse.driv, "Olivetti/AT&T Keyboard Mouse", x:*vmd
```

[dos.mouse.driver]

This section maps the Windows mouse driver to the appropriate MS-DOS mouse driver. Setup updates the MS-DOS mouse driver for compatibility with Windows 3.1.

```
[dos.mouse.drivers]
mouse.sys= 4:mouse.SYS, "MS DOS Mouse driver .SYS ver 7.XX"
mouse.com= 4:mouse.com, "MS DOS Mouse driver .COM ver 7.XX"
mousehp.sys= 3:mousehp.SYS, "HP DOS Mouse driver .SYS ver 7.XX"
mousehp.com= 3:mousehp.com, "HP DOS Mouse driver .COM ver 7.XX"
```

[lmouse]

This section provides data to support the Logitech MS-DOS mouse driver.

```
[lmouse]
2:lmouse.com,0;,,,
```

Network Installation Sections

The network installation sections in SETUP.INF are in three parts:

- The basic **[network]** section.
- **[Network_Version]** sections that provide information for specific versions of network drivers.
- **[Network_Specific]** sections that describe SYSTEM.INI entries and other information for specific networks.

The information that you might add to customize these sections for your site could include entries for updated network drivers in the **[Network_Version]** sections, or entries in the **[Network_Specific]** sections to specify information for SYSTEM.INI, such as **emmexclude=** entries.

[network]

This section is used to associate the network *keyname* with the appropriate files that must be installed to support the network from within Windows.

This is the format for entries in this section:

network keyname= driver, description, HelpFile, optional file, WininiSectName, SysiniSectName, VDD, VDD, . . .

<i>Entry</i>	<i>Meaning</i>
<i>network keyname</i>	The profile for the specific network driver.
<i>driver</i>	The network driver filename and installation disk number.
<i>description</i>	A description of the driver, enclosed in quotes, that appears in the Change System Settings dialog box in Setup.
<i>HelpFile</i>	The filename for any associated help file.
<i>optional file</i>	The filename for any optional file to be installed.
<i>WininiSectName</i>	The section name to add or modify in WIN.INI.
<i>SysiniSectName</i>	The section name to add or modify in SYSTEM.INI.
<i>VDD</i>	The filenames for the Virtual Display Device support files for non-Windows applications in 386 enhanced mode. Any number of filenames can be specified.

These are the standard entries for the **[network]** section:

```
[network]
nonet= ,"No Network Installed"
3open= ,"3Com 3+Open"
3share= ,"3Com 3+Share" ,,,msnet_stuff
lantastic= ,"Artisoft LANtastic"
banyan= ,"Banyan Vines"
dlr= ,"IBM OS/2 LAN Server"
pclp= ,"IBM PC LAN Program"
lanman= ,"Microsoft LAN Manager"
msnet= ,"Microsoft Network (or 100% compatible)", ,,,msnet_stuff
novell= ,"Novell Netware"
pathworks= ,"DEC Pathworks"
10net= ,"TCS 10Net"
```

[Network_Version] Sections

These sections provide information about specific network versions.

<i>Section name</i>	<i>Network</i>
[10net.versions]	TCS 10Net
[3open.versions]	3Com 3+Open
[banyan.versions]	Banyan Vines
[dlr.versions]	IBM OS/2 LAN Server
[lanman.versions]	Microsoft LAN Manager
[lantastic.versions]	Artisoft LANtastic
[novell.versions]	Novell Netware
[pathworks.versions]	DEC Pathworks
[pclp.versions]	IBM PC LAN Program

The format for these sections is:

version #=description, optional files, optional sections

<i>Entry</i>	<i>Meaning</i>
<i>version #</i>	The version number for the network driver.
<i>description</i>	A descriptive string, enclosed in quotes.
<i>optional files</i>	Any optional files to be installed.
<i>optional sections</i>	One or more [<i>Network_Specific</i>] sections in SETUP.INF.

For example, this is the entry describing Microsoft LAN Manager versions:

```
[lanman.versions]
xx000000="versions 1.X",,lmbasic
00020000="version 2.00 Basic",,lmbasic
01020000="version 2.00 Enhanced",,lmenh20
00021000="version 2.10 Basic",,lmbasic21
01021000="version 2.10 Enhanced",lanman21.drv,lmenh21nodrv,lmenh21
```

This entry describes additional details for five different versions of LAN Manager, including references to the **[lmbasic]**, **[lmenh20]**, and **[lmbasic21]** network-specific sections.

[Network_Specific] Sections

These [*Network_Specific*] sections specify data that Setup must add to WIN.INI or SYSTEM.INI, as indicated by the *WininiSectName* and *SysiniSectName* entries in the **[network]** section described earlier in this chapter.

These are the [*Network_Specific*] sections in SETUP.INF:

[10net41]	[dec41]	[lmenh20]
[10net41a]	[dlr12]	[lmenh21]

[10net42]	[dlr12csd]	[lmenh21nodrv]
[10net42def]	[dlr13]	[msnet_stuff]
[10net50]	[lant3]	[novell301]
[3open1]	[lant4]	[novell321]
[ban4]	[lant4def]	[old_pclp]
[ban41]	[lmbasic]	[pclp132]
[ban41def]	[lmbasic21]	[unsupported_net]
[dec4]		

This is the format for these sections:

```
[network keyname]
ini-keyname=section, entry-keyname, value
```

<i>Entry</i>	<i>Meaning</i>
<i>network keyname</i>	The keyname defined in the [network] section.
<i>ini-keyname</i>	Initialization filename (such as SYSTEM.INI).
<i>section</i>	The section name in the .INI file.
<i>entry-keyname</i>	The keyname for the entry in the .INI file.
<i>value</i>	The value to be assigned to the .INI entry.

For example, this is the entry for Novell NetWare version 3.01:

```
[novell301]
warning=2
driver=2:netware.drv
vxd=x:*vnetbios,2:vnnetware.386,2:vipx.386
sysdir=2:netware.hlp,2:nwpopup.exe
windir=2:ipx.obj,2:ipxodi.com,2:netx.com,2:lsl.com
windir=2:tbmi2.com
```

System Fonts Sections

Setup refers to the **[sysfonts]**, **[fixedfonts]**, and **[oemfonts]** sections to install a set of fonts to use as the system font. Setup determines the appropriate fonts to install by finding the nearest match for the display resolution defined in the **[display]** section. This is the format for entries in the system fonts sections:

font filename, description, resolution

These are the standard system fonts sections:

```
[sysfonts]
1:egasys.fon,"EGA (640x350) resolution System Font", "133,96,72"
1:vgasys.fon,"VGA (640x480) resolution System Font", "100,96,96"
1:8514sys.fon,"8514/a (1024x768) resolution System Font", "100,120,120"
1:egasys.fon,"AT&T (640x400) resolution System Font", "120,96,80"

[fixedfonts]
2:egafix.fon,"EGA (640x350) resolution Fixed System Font", "133,96,72"
1:vgafix.fon,"VGA (640x480) resolution Fixed System Font", "100,96,96"
1:8514fix.fon,"8514/a (1024x768) resolution Fixed System Font", "100,120,120"
2:egafix.fon,"AT&T (640x400) resolution Fixed System Font", "120,96,80"
```

```
[oemfonts]
1:egaem.fon,"EGA (640x350) resolution Terminal Font (USA/Europe)", "133,96,72",1
1:vgaoem.fon,"VGA (640x480) resolution Terminal Font (USA/Europe)", "100,96,96",1
1:8514oem.fon,"8514/a (1024x768) resolution Terminal Font (USA/Europe)",
    "100,120,120",1
1:egaem.fon,"AT&T (640x400) resolution Terminal Font (USA/Europe)", "120,96,80",1
```

For more information about fonts, see “Fonts Sections” later in this chapter, and see Chapter 9, “Fonts.”

Copy-Files Sections

Windows Mode Setup uses these sections to identify which files to copy to the `WINDOWS` directory or to the `SYSTEM` subdirectory. Setup uses these copy-files section names to determine which groups of files to copy for the appropriate configuration of Windows:

- **[win.copy]** for 80286 machines
- **[win.copy.net]** and **[win.copy.net.win386]** for network workstations
- **[win.copy.win386]** for 80386 machines

Under each copy-files section is a set of entries in this format:

from, to

<i>Entry</i>	<i>Meaning</i>
<i>from</i>	A file or a reference to a group of files.
<i>to</i>	The destination for the files, as either 0: to indicate the <code>WINDOWS</code> directory, or 0:system to indicate the <code>SYSTEM</code> subdirectory.

For example, the entry **1:myfile.txt,0:** copies the file `MYFILE.TXT` from disk #1 to the `WINDOWS` directory. If the **[win.copy.win386]** section contains an entry **#pwin386,0:system**, then Setup copies all files in the **[pwin386]** section to the `SYSTEM` subdirectory. If the name of an entry in any copy-files section is preceded by a “#” character, the entry refers to a group of files in a separate entry in `SETUP.INF`. For example, the **[win.copy]** section is:

```
[win.copy]
#net, 0:
#win.shell, 0:
#win.other, 0:system
```

The **#net, 0:** entry indicates that Setup should copy the files listed in the **[net]** section into the user's `WINDOWS` directory. For all items in the copy-files sections, a text string, enclosed in quotes, shows the text that Setup displays to indicate which files are currently being installed.

Basic Copy-Files Sections

The main copy-files sections include:

- **[win.copy]**, which specifies that the files listed in **[net]**, **[win.shell]**, and **[win.other]** be copied for 80286 machines.
- **[win.copy.net]**, which specifies that the files listed in **[net]** be copied for network setup.
- **[win.copy.net.win386]**, which specifies that the files listed in **[net.win386]** be copied for network setup for 80386 machines..
- **[win.copy.win386]**, which specifies that the files listed in **[net]**, **[win.shell]**, **[pwin386]**, and **[win.other]** be copied for 80386 machines.

The following describes the contents of the supporting copy-files sections:

- The entries in **[net]** specify Control Panel source files and memory driver files to copy for network setup:


```
[net]
5:CONTROL.SRC, "Windows User Files"
4:WINVER
```
- The entries in **[win.devices]** and **[win.devices.386]** specify the memory drivers to install:


```
[win.devices]
; These devices will be copied on all machines
5:HIMEM.SYS, "XMS Memory Manager"
3:SMARTDRV.EXE, "Disk Caching Program"
3:RAMDRIVE.SYS, "RAM Drive Program"

[win.devices.win386]
; These devices will be copied on 386 machines only
5:HIMEM.SYS, "XMS Memory Manager"
4:EMM386.EXE, "LIM Expanded Memory Manager"
3:SMARTDRV.EXE, "Disk Caching Program"
3:RAMDRIVE.SYS, "RAM Drive Program"
```
- The **[win.other]** entries specify various drivers, DLLs, and font files to copy, plus the Windows core files. Example:

```
[win.other]
4:WINOLDAP.MOD,"Windows Drivers"
4:WIN87EM.DLL
5:SYSEdit.EXE
5:COMMDLG.DLL
(other entries)
```

- The **[win.shell]** entries specify files for applications that are installed with the Windows shell. Example:

```
[win.shell]
4:PROGMAN.EXE, "Windows Program Manager"
5:TASKMAN.EXE, "Windows Task Manager"
4:WINFILE.EXE, "Windows File Manager"
3:CLIPBRD.EXE, "Windows Clipboard Viewer"
3:CLIPBRD.HLP, "Windows Clipboard Viewer help"
(other entries)
```

- The **[pwin386]** entries specify files that provide alternate executable files for 386 enhanced mode:

```
[pwin386]
4:WINOA386.MOD,"386 Enhanced Mode files"
5:WIN386.PS2
4:WIN386.EXE
5:VTDAPI.386
```

[DelFiles] and [RenFiles] Sections

These sections lists files that will be deleted or renamed when Setup upgrades Windows version 3.0 to version 3.1. You can add or remove items from these lists, using wildcards in filenames wherever appropriate. For example, some of the standard entries in these sections are:

```
[DelFiles]
; The first files in the list are deleted from Windows System directory (for local setup).
; Note that DelFiles section always is processed before RenFiles section.
tmsr?.fon
helv?.fon
swapfile.exe
kernel.exe
(other entries)
```

```
[RenFiles]
; Similar section but for file renaming to create .bak if needed
MIDIMAP.CFG,MIDIMAP.OLD
ADLIB.DRV,MSADLIB.DRV
```

Copy-Files Sections for Applications

The entries in the **[win.apps]**, **[win.games]**, **[win.dependents]**, **[win.scrs]**, **[win.bmps]**, and **[win.readme]** sections describe the Windows applications, screensaver, and README files to be copied if the user requests these files during Custom Setup. All files listed are copied in Express Setup.

For details about adding information for custom applications, see

“Modifying .INF Files for Custom Installations” later in this chapter.

These sections have this format:

#:filename, description, filesize, profile string

<i>Entry</i>	<i>Meaning</i>
<i>#:filename</i>	The disk number and filename of the application or other element to be copied.
<i>description</i>	The string, enclosed in quotes, that will be displayed in the Windows Setup dialog box for selecting applications to copy during Custom Setup.
<i>filesize</i>	The expanded size of the file, in bytes.
<i>profile string</i>	The string used by Setup to find the item in the appropriate [group#] section, to determine if and how the item is added to a Program Manager group with DDE. The <i>profile string</i> is also used to find any needed .DLL files in the [win.dependents] section.

The end of each section contains an entry that specifies the disk space required for all the files in that section. If you add an entry to any section, you must also increment the disk space number.

The following summarizes the contents of the application copy-file sections:

- The **[win.apps]** entries specify the Windows applications, utilities, and help files. Example:

```
[win.apps]
3:CALC.EXE, "Calculator" , 42944, calc
3:CALENDAR.EXE, "Calendar", 58432, calendar
3:CARDFILE.EXE, "Cardfile", 88576, cardfile
(other entries)
diskpace=1075780
```

- The **[win.dependents]** entries specify the DLL files for utilities. Example:

```
[win.dependents]
pbrush= 3:PBRUSH.DLL
recorder= 3:RECORDER.DLL
```

- The **[win.games]** entries specify the game files and their help files. Example:

```
[win.games]
3:SOL.EXE,"Windows Solitaire" , 180688, sol
3:WINMINE.EXE, "Windows Minesweeper", 27728, winmine
3:SOL.HLP,"Windows Solitaire help", 18072
3:WINMINE.HLP, "Windows Minesweeper help" , 18072
diskpace=242008
```

- The **[win.scrs]** entries specify the screensaver files. Example:

```
[win.scrs]
3:SSMARQUE.SCR, "Marquee Screen Saver" , 16752
(other entries)
```

- The **[win.bmps]** entries specify the bitmap files for wallpaper, wave-form audio files, and MIDI sample files. Example:

```
[win.bmps]
3:ARCADE.BMP,"Arcade Wallpaper", 630
3:tada.wav, "Trumpet Sound", 27804
5:passport.mid, "Passport MIDI Song" , 40294
(other entries)
```

- The **[win.readme]** entries specify the README text files:

```
[win.readme]
3:readme.wri,"General Readme" , 80768, readme
3:networks.wri, "Networks Readme" , 45568
3:winini.wri,"Win.ini Readme" , 85120
3:sysini.wri,"System.ini Readme" , 135040
3:printers.wri, "Printers Readme" , 17920
diskpace=306176
```

Program Manager Groups Sections

After Setup copies files to the appropriate Windows directories, it tells Program Manager to create the groups listed in the **[new.groups]** or **[progman.groups]** section. Related **[group#]** sections contain entries that describe the contents of the groups that Program Manager will create.

This is the format for entries in the **[new.groups.]** and **[progman.groups]** sections:

section = Progman group, Min/Max

<i>Entry</i>	<i>Meaning</i>
<i>section</i>	The name of the [group#] section that contains the group definition.
<i>Progman group</i>	The profile name that identifies the group in Program Manager.
<i>Min/Max</i>	A switch defining whether to minimize or maximize the group when loading Windows, where 1 =maximize, nothing=minimize.

For details about installing a custom group in Program Manager, see “Modifying .INF Files for Custom Installations” later in this chapter.

[new.groups]

If you are updating Windows from 3.0 to 3.1, Setup uses the **[new.groups]** section instead of the **[progman.groups]** section.

This is the standard entry for this section:

```
[new.groups]
group7=Main,1
group1=StartUp
group2=Accessories
group6=Games
```

[progman.groups]

This section contains a list of the Program Manager groups that are built for new installations of Windows 3.1. These are the standard entries in this section:

```
[progman.groups]
group3=Main,1
group4=Accessories
group5=Games
group1=StartUp
```

[group#] Sections

After the Program Manager groups are created, program items are installed in the groups based on the **[group#]** section entries. This is the format for entries in these sections:

description, filename.exe, icon filename, icon n, profile

Entry	Meaning
<i>description</i>	A string, enclosed in quotes, that defines the text that appears below the icon in Program Manager.
<i>filename.exe</i>	The executable filename, including the extension, to be represented in the group. If <i>filename.exe</i> is null, the item will be deleted from the group.
<i>icon filename</i>	The filename of the icon extraction file that contains the icon for the program item. If this is blank, the first icon in <i>filename.exe</i> is used.
<i>icon n</i>	The number from the icon extraction index, which defines the offset of the icon specified in <i>icon</i>

filename. If this item is null, the first icon is used. If you want to use the *n*th icon, use the number *n*-1. That is, for the third icon, specify **2**.

profile A string that defines whether the item is added to the group. If this value is null, the item will always be added to the group. Otherwise, the item will only be added if it was installed with the Add/Remove Files dialog box in Custom Setup.

These are the standard entries for the [group#] sections:

```
[group3]                                ; for [progman.groups]
"File Manager", WINFILE.EXE
"Control Panel", CONTROL.EXE
"Print Manager", PRINTMAN.EXE
"Clipboard Viewer", CLIPBRD.EXE
"MS-DOS Prompt", DOSPRMPT.PIF, PROGMAN.EXE, 9
"Windows Setup", SETUP.EXE
"PIF Editor", PIFEDIT.EXE
"Read Me", README.WRI,,,readme

[group4]                                ; for [progman.groups]
"Write", WRITE.EXE
"Paintbrush", PBRUSH.EXE,,,pbrush
"Terminal", TERMINAL.EXE,,, terminal
"Notepad", NOTEPAD.EXE,,, notepad
"Recorder", RECORDER.EXE,,, recorder
"Cardfile", CARDFILE.EXE,,, cardfile
"Calendar", CALENDAR.EXE,,, calendar
"Calculator", CALC.EXE,,, calc
"Clock", CLOCK.EXE,,, clock
"Object Packager", PACKAGER.EXE,,, packager
"Character Map", CHARMAP.EXE,,, charmap
"Media Player", MPLAYER.EXE,,, mplayer
"Sound Recorder", SOUNDREC.EXE,,, soundrec

[group5]                                ; for [progman.groups]
"Solitaire", SOL.EXE,,,sol
"Minesweeper", WINMINE.EXE,,, winmine

[group1]                                ; for [progman.groups] and [new.groups]

[group2]                                ; for [new.groups]
"Object Packager", PACKAGER.EXE,,, packager
"Character Map", CHARMAP.EXE,,, charmap
"Media Player", MPLAYER.EXE,,, mplayer
"Sound Recorder", SOUNDREC.EXE,,, soundrec
"PIF Editor"
"Write", WRITE.EXE
"Control Panel"

[group6]                                ; for [new.groups]
"Solitaire", SOL.EXE,,,sol
"Minesweeper", WINMINE.EXE,,, winmine

[group7]                                ; for [new.groups]
"PIF Editor", PIFEDIT.EXE
"Read Me"
"Read Me", README.WRI,,,readme
"Tutorial"
```

Fonts Sections

The last files that Setup copies are the raster, vector, and TrueType font files, based on the resolution of the display as defined in the **[display]** section. Three vector fonts (ROMAN.FON, MODERN.FON, and SCRIPT.FON) are resolution independent and are installed by default.

This is the format of entries in the **[fonts]** section:

filename, description, resolution

<i>Entry</i>	<i>Meaning</i>
<i>filename</i>	The filename of the file containing the font.
<i>description</i>	The font description, enclosed in quotes, that will appear in the Fonts dialog box in the Control Panel, plus the point sizes that are installed.
<i>resolution</i>	Three comma-separated numbers, enclosed in quotes, that represent the font aspect ratio.

For example, the entries for VGA displays in the **[fonts]** section are:

```
[fonts]
(other entries)
6:SSERIFE.FON, "MS Sans Serif 8,10,12,14,18,24 (VGA res)", "100,96,96"
(other entries)
6:COURE.FON, "Courier 10,12,15 (VGA res)", "100,96,96"
(other entries)
6:SERIFE.FON, "MS Serif 8,10,12,14,18,24 (VGA res)", "100,96,96"
(other entries)
6:SYMBOLE.FON, "Symbol 8,10,12,14,18,24 (VGA res)", "100,96,96"
(other entries)
6:SMALLE.FON, "Small (VGA res)", "100,96,96"
```

This is the format for entries in the **[ttrfonts]** section:

font header file, description, font file, fontfamily/flags

<i>Entry</i>	<i>Meaning</i>
<i>font header file</i>	The filename for the TrueType header source file.
<i>description</i>	The string, enclosed in quotes, that will appear in the Fonts dialog box. The first letter of each word in the string needs to

be capitalized.

font file The filename for the TrueType font.

fontfamily/flags The name of the font family plus a flag, where **0000** is a normal-weight font, **0100** is a bold font, and **1000** is an italic font. The *fontfamily/flag* value must be enclosed in quotes.

These are the entries for the **[tfonts]** section:

```
[tfonts]
5:ARIAL.FOT, "Arial (TrueType)", 5:arial.ttf, ""
5:ARIALBD.FOT, "Arial Bold (TrueType)", 5:arialbd.ttf, "Arial0100"
5:ARIALBI.FOT, "Arial Bold Italic (TrueType)", 5:arialbi.ttf, "Arial1100"
5:ARIALI.FOT, "Arial Italic (TrueType)", 5:ariali.ttf, "Arial1000"
5:COUR.FOT, "Courier New (TrueType)", 5:cour.ttf, ""
5:COURBD.FOT, "Courier New Bold (TrueType)", 5:courbd.ttf, "Courier0100"
5:COURBI.FOT, "Courier New Bold Italic (TrueType)", 5:courbi.ttf, "Courier1100"
5:COURI.FOT, "Courier New Italic (TrueType)", 5:couri.ttf, "Courier1000"
3:TIMES.FOT, "Times New Roman (TrueType)", 4:times.ttf, ""
3:TIMESBD.FOT, "Times New Roman Bold (TrueType)", 4:timesbd.ttf,
  "Times New Roman0100"
3:TIMESBI.FOT, "Times New Roman Bold Italic (TrueType)", 4:timesbi.ttf,
  "Times New Roman1100"
4:TIMESI.FOT, "Times New Roman Italic (TrueType)", 4:timesi.ttf, "Times New Roman1000"
5:SYMBOL.FOT, "Symbol (TrueType)", 5:symbol.ttf, ""
```

Incompatible Driver Sections

W

Some MS-DOS drivers and TSRs are not compatible with Windows 3.1. Setup checks these sections in SETUP.INF for names of incompatible drivers and TSRs: **[compatibility]**, **[incompTSR1]**, **[incompTSR2]**, and **[block_devices]**. You can add to the lists of drivers and TSRs in any of these sections.

Some manufacturers are updating their drivers for compatibility with Windows 3.1. To determine whether you have the latest version of a driver, check with the driver manufacturer.

If Setup finds a command in the CONFIG.SYS file that loads any of the files listed in **[compatibility]**, it removes the command and leaves a blank line. You can reinstall these files at a later time.

Setup checks three other sections: **[incompTSR1]**, **[incompTSR2]**, and **[block_devices]**. The TSRs and drivers listed in **[incompTSR1]** prevent Setup from running and should be removed from memory and from AUTOEXEC.BAT and CONFIG.SYS before running Setup. The TSRs and device drivers listed in **[incompTSR2]** can cause problems if they are running during Setup or when you start Windows. The block devices listed in the **[block_devices]** section are not compatible with Windows 3.1.

Note Check the current entries in SETUP.INF on your disk, and check also the information in the Readme file in your Windows package. Microsoft will update the entries in the incompatible driver sections when new information is known about these and other programs. For more information about these TSRS and Setup, see “Troubleshooting TSRS During Setup” in Chapter 13, “Troubleshooting Windows 3.1.”

Miscellaneous Sections

Several sections provide information about files to update and translate filenames for OEM installation disks.

[installable.drivers]

This section specifies drivers that can be installed for multimedia Windows, including drivers for MIDI, sequencers, waveform audio, SoundBlaster boards, and device timers. The format for entries in this section is:

keyname= filename, types, description, VxDs, default parameters

<i>Entry</i>	<i>Meaning</i>
<i>keyname</i>	The profile name of the driver.
<i>filename</i>	The filename of the device driver, with disk number.
<i>types</i>	The kinds of multimedia device, enclosed in quotes.
<i>description</i>	A descriptive string, enclosed in quotes.
<i>VxDs</i>	Filenames for any supporting files for virtual devices.
<i>default parameters</i>	The default parameters for the device, if any.

The standard entries for this section are:

```
[installable.drivers]
adlib= 3:adlib.drv,"MIDI","Ad Lib",4:vadlibd.386,
lapc1= 3:mpu401.drv,"MIDI","Roland LAPC1",,
midimapper= 4:midimap.drv,"MidiMapper","MIDI Mapper",,
mpu401= 3:mpu401.drv,"MIDI","Roland MPU401",,
sequencer= 4:mciseq.drv,"Sequencer","[MCI] MIDI Sequencer",,
soundblaster= 3:sndblst.drv,"Wave,MIDI","Creative Labs Sound Blaster 1.0",
3:vsbd.386,,adlib
soundblaster2= 3:sndblst2.drv,"Wave,MIDI","Creative Labs Sound Blaster 1.5",
3:vsbd.386,,adlib
timer= 5:timer.drv,"Timer","Timer",5:vtdapi.386,
thunder= 3:sndblst2.drv,"Wave,MIDI","Media Vision Thunder Board",3:vsbd.386,,adlib
wave= 4:mcwave.drv,"WaveAudio","[MCI] Sound",,4"
```

[translate]

This section specifies translated OEM filenames, with their installation disk filenames and locations. Some examples of entries in this section include:

```
[translate]
WinDiskName=25,"Microsoft Windows 3.0 Disk"
WinDiskName=14,"Windows Disk #"
*vddvga=2:vddvga30.386
cti.lgo=2:herclogo.lgo
herclogo.rle=1:herclogo.rle
vddega=2:vddega.386
vgacolor.gr2=3:vgacolor.2gr
vgalogo.lgo=2:vgalogo.lgo
vgalogo.rle=2:vgalogo.rle
rgdi.lgo=2:vgalogo.lgo
rgdi.rle=2:vgalogo.rle
vga.gr3=1:vga30.3gr
(other entries for font, keyboard, DLL, and code page filename translations)
```

[update.files]

This section describes installable drivers to be updated if earlier versions of the files are found on the user's hard disk. The format for this section is:

location, filename

<i>Entry</i>	<i>Meaning</i>
<i>location</i>	The location for the file to be updated, as either 0: to indicate the WINDOWS directory, or 0:system to indicate the SYSTEM subdirectory.
<i>filename</i>	The filename of the file to be updated, with the disk number.

These are the standard entries for this section:

```
[update.files]
0:system,3:sndblst.drv
0:system,3:sndblst2.drv
0:system,3:adlib.drv
0:system,3:mpu401.drv
0:system,5:vtdapi.386
0:system,3:vsbd.386
0:system,4:vadlibd.386
```

Setup uses the **[Update.Dependents]** section to update dependents

of files listed in **[Update.Files]**. These are the standard entries for this section:

```
[Update.Dependents]
msadlib.drv = 4:vadlibd.386
sndblst.drv = 4:vsbd.386
sndblst2.drv = 4:vsbd.386
```


[ini.upd.patches]

This section is used by MS-DOS Mode Setup and Windows Mode Setup to temporarily rename profile strings for .INI entries during Setup if the original profile string exists in the .INI file and has a value defined. The format for this section is:

ini file, section, temporary profile, original profile

Entry	Meaning
<i>ini file</i>	The initialization file.
<i>section</i>	The section name in the .INI file.
<i>temporary profile</i>	The profile to be replaced, enclosed in quotes.
<i>original profile</i>	The value to be added in the .INI file, enclosed in quotes.

These are example entries for this section:

```
[ini.upd.patches]
system.ini, Boot, "olddrivers", "drivers"
win.ini, Desktop, "oldwallpaper", "wallpaper"
system.ini, Boot, "oldtaskman", "taskman.exe"
```

[blowaway]

This section marks the end of the installation information and the beginning of the configuration sections. This section tells Windows Mode Setup where to stop reading the SETUP.INF file, because Windows Mode Setup does not need this information.

[ini.upd.31]

This section tells Setup which lines in SYSTEM.INI and WIN.INI are to be replaced with new values in the upgrade from Windows version 3.0 to version 3.1. This is the format for entries in this section:

ini file, section, OldEntry, NewEntry

Entry	Meaning
<i>ini file</i>	The .INI file that is to be changed.

<i>section</i>	A section name in the .INI file.
<i>OldEntry</i>	The old entry to be replaced, enclosed in quotes. If this value is null, Setup assumes that the <i>NewEntry</i> is to be added.
<i>NewEntry</i>	The new entry to be added, enclosed in quotes.

Some of the entries in this section include:

```
[ini.upd.31]
system.ini, 386Enh, "keyboard=bpvkd.386", "keyboard=*vkd"
system.ini, 386Enh, "device=vpicda.386", "device=*vpicd"
system.ini, 386Enh, "device=*vhd", "device=*blockdev"
system.ini, 386Enh, "device=*vpd",
system.ini, 386Enh, "device=*pagefile"
win.ini, FontSubstitutes, "Helv=MS Sans Serif"
win.ini, FontSubstitutes, "Tms Rmn=MS Serif"
win.ini, FontSubstitutes, "Courier=Courier New"
win.ini, FontSubstitutes, "Times=Times New Roman"
win.ini, FontSubstitutes, "Helvetica=Arial"
(other entries for fonts that have been replaced or removed for Windows 3.1)
```

System Configuration Sections

These sections provide information for installing appropriate system files for various machines.

[system]

The **[system]** section is used to map system short names used in the **[machine]** section to the appropriate system files. This section lists drivers that are selected only by the **[machine]** settings; these drivers can vary from system to system, and do not have special selections in the Setup menus:

```
[system]
system= 2:system.driv
sound= 1:mmsound.driv
comm= 1:comm.driv
hpsystem= 2:hpsystem.driv
```

[machine]

This section is used by Setup to install the appropriate system files for various machines. Most machines use the "MS-DOS System" option, but some specific original equipment manufacturers (OEMs) need special drivers or specific switches to be set in the SYSTEM.INI file for compatibility.

A system description for each entry in **[machine]** appears in the System Settings list in Setup. An asterisk (*) in the menu means that Setup will use the device specified in this section, overriding the description of the detected device for keyboards, mouse

drivers, displays, and other elements.

This is the format for the entries in this section:

keyname= description, system drv, kbd drv, kbd type, mouse drv, disp drv, sound drv, comm drv, himem switch, ebios, Cookz

<i>Entry</i>	<i>Meaning</i>
<i>keyname</i>	The profile string for the system.
<i>description</i>	A string describing the system, enclosed in quotes, that will appear in the system-description dialog box in Setup.
<i>system drv</i>	The short name for the system driver, identified in [system] .
<i>kbd drv</i>	The short name for the keyboard driver, as defined in [keyboard.drivers] .
<i>kbd type</i>	The short name for the keyboard type, as defined in [keyboard.types] .
<i>mouse drv</i>	The name of the mouse driver, which is the <i>keyname</i> defined in [pointing.device] .
<i>disp drv</i>	The name of the display driver, which is the <i>keyname</i> defined in [display] .
<i>sound drv</i>	The name of the sound driver, as defined in [system] .
<i>comm drv</i>	The name of the communications driver, as defined in [system] .
<i>himem switch</i>	A number (1–8) that identifies the A20 handler, which allows HIMEM.SYS to access extended memory. For a list of these numbers, see Chapter 13, “Troubleshooting Windows 3.1.”
<i>ebios</i>	The EBIOS support, defined in [ebios] .
<i>Cookz</i>	A [Cookz] section (called “cookies” in the SETUP.INF comments) that contains information for modifying entries in the .INI files, usually to define [386enh] entries in SYSTEM.INI.

Important Do not change the order of entries in the **[machine]** section.

The list of drivers in **[machine]** is a default list. If Setup detects a different display adapter than the type listed for the machine, the detected display driver will be installed.

For example, this shows the first three entries in the **[machine]** section:

```
[machine]
ibm_compatible= "MS-DOS System",system,kbd,t4s0enha,nomouse,egahires,
               sound,comm,,ebios,
ast_386_486= "AST: all 80386 and 80486 based machines",system,kbd,
             t4s0enha,nomouse,egahires,sound,comm,,ebios,ast_cookz
at_and_t= "AT&T PC",system,kbd,t4s0enha,nomouse,lolibw,sound,comm,,ebios,
(other entries)
```

These are the default *[Cookz]* specified in **[machine]** entries:

[apm_cookz]	[everex_cookz]	[nec_pm_cookz]
[apm_sl_cookz]	[ibml40_cookz]	[t5200_cookz]
[ast_cookz]	[ncr386sx_cookz]	[zen386_cookz]

The entries in the *[Cookz]* sections have this format:

ini file, section, cookie, needed file

<i>Entry</i>	<i>Meaning</i>
<i>ini file</i>	The .INI file that is to be modified.
<i>section</i>	The section to be changed in that .INI file.
<i>cookie</i>	The specific entry to be added to the section, enclosed in quotes.
<i>needed file</i>	Any related file that might be required.

For example, this *[Cookz]* section for the AST system specifies that the entry **emmexclude=E000-EFFF** should be added to the **[386enh]** section of SYSTEM.INI:

```
[ast_cookz]
system.ini,386enh,"emmexclude=E000-EFFF",
```

The *[Cookz]* section for MS-DOS systems with Advanced Power Management (APM) defines special drivers to be copied plus SYSTEM.INI additions:

```
[apm_cookz]
specialdriver,,5:power.drv
system.ini,386enh,"device=vpowerd.386",5:vpowerd.386
,,5:power.hlp
```

[special_adapter]

This section is used by MS-DOS Mode Setup to provide support for special adapters that require additional files or other changes to the standard Windows installation. For example, for the EtherLink MC adapter, the entry **DMABufferSize=32** is placed in the **[386enh]** section of SYSTEM.INI.

The default entries in **[special_adapter]** are:

```
[special_adapter]
eitherlink= DMAbuffersize,32 ; Needed if EtherLink MC is detected.
cdrom= 2:lanman10.386 ; Needed for CD ROM extensions.
```


[ebios]

This section is used by the **[machine]** section to indicate which files are copied for extended BIOS support on the specific configuration. EBIOS means Extended Basic Input/Output System.

```
[ebios]
ebios= x:*ebios                ; Required for most 386 machines.
hpebios= 2:hpebios.386,x:*ebios ; Required for HP 386 machines.
```

[language]

Setup uses this section to install the language libraries that come with Windows. A language DLL must be installed for systems needing language support other than U.S. English. Each entry in this section has this format:

keyname=language DLL, DLL description, language ID

<i>Entry</i>	<i>Meaning</i>
<i>keyname</i>	The profile string for the short name for the language.
<i>language DLL</i>	The filename of the language DLL, including the installation disk number.
<i>DLL description</i>	A string, enclosed in quotes, that will be used to describe the language in Control Panel.
<i>language ID</i>	A special identifying code.

The default entries for this section are:

```
[language]
dan= 2:langscs.dll, "Danish",1030
nld= 2:langdut.dll, "Dutch" ,1043
enu=, "English (American)" ,1033
eng= 2:langeng.dll, "English (International)" ,2057
fin= 2:langscs.dll, "Finnish",1035
fra= 2:langfrn.dll, "French",1036
frc= 2:langeng.dll, "French Canadian" ,3084
deu= 2:langger.dll, "German",1031
isl= 2:langscs.dll, "Icelandic",1039
ita= 2:langeng.dll, "Italian",1040
nor= 2:langscs.dll, "Norwegian",1044
ptg= 2:langeng.dll, "Portuguese" ,2070
esp= 2:langspa.dll, "Spanish (Classic)" ,1034
esn= 2:langeng.dll, "Spanish (Modern)",3082
sve= 2:langscs.dll, "Swedish" ,1053
```

Note

Changes to this section can affect **deflang=** in **[data]**.

APPS.INF: The Application Installation Information File

W

Setup places the APPS.INF file in the SYSTEM subdirectory during Windows installation. The APPS.INF file contains information in these basic sections:

- **[dialog]** contains the title text used when Setup displays the Setup Applications dialog box.
 - **[base_PIFs]** defines a batch file for creating the _DEFAULT.PIF file, and specifies settings for COMMAND.COM.
 - **[enha_dosprompt]** defines memory requirements for the MS-DOS Prompt when it runs under 386 enhanced mode Windows.
 - **[dontfind]** lists Windows applications to be ignored during the Setup Existing Applications stage of installation. This section is described later in this section.
 - **[pif]** contains PIF parameters for non-Windows applications. Additional sections define information for optimizing PIFs. This section is described later in this section.

If you have a custom PIF you want to install for multiple systems, or if you want to tailor application setup in other ways, you can change entries in APPS.INF.

Note Installing non-Windows applications with Setup helps to avoid conflicts in setting up PIFs for applications that use the same executable filename.

[dontfind]

This section is used when Setup is searching the hard disk for Windows applications. The entries in this section are overlooked by Setup, and these items are not placed in the Program Manager Applications Group. This prevents Setup from creating duplicate copies of standard Windows applications.

Some of the files in the **[dontfind]** section are listed in the following table. Check SETUP.INF in your system for the most up-

to-date list.

Filenames

APM.EXE	IMAGEDIT.EXE	PRINTMAN.EXE	
TASKMAN.EXE	IMPLIBW.EXE	PROGMAN.EXE	TBOOK.EXE
CALC.EXE	JFPRINT.EXE	QT.EXE	TERMINAL.EXE
CALENDAR.EXE	LIBW.EXE	RCPPW.EXE	TRANS.EXE
CARDFILE.EXE	LINKW.EXE	RCW.EXE	WHELP.EXE
CHARMAP.EXE	LWINHELP.EXE	RECORDER.EXE	WIN2WRS.EXE
CLIPBRD.EXE	MACRODE.EXE	REGEDIT.EXE	WINBBS.EXE
CLOCK.EXE	MCWIN.EXE	REGLOAD.EXE	WINCBT.EXE
CONTROL.EXE	MPLAYER.EXE	REVERSI.EXE	WINFILE.EXE
CVPACKW.EXE	MSDOS.EXE	SDKPAINT.EXE	WINHELP.EXE
DDESPY.EXE	MSDRAW.EXE	SETUP.EXE	WINMINE.EXE
DEWPROJ.EXE	MXWIN.EXE	SHAKER.EXE	WINTUTOR.EXE
DIALOG.EXE	NOTE-IT.EXE	SHED.EXE	WINVER.EXE
DLGEDIT.EXE	NOTEPAD.EXE	SOL.EXE	WORDART.EXE
DRWATSON.EXE	PACKAGER.EXE	SOUNDREC.EXE	WPCDLL.EXE
EQNEDIT.EXE	PAINT.EXE	SPOOLER.EXE	WPWINFIL.EXE
FONTEDIT.EXE	PBRUSH.EXE	SPY.EXE	WRITE.EXE
FTP.EXE	PIFEDIT.EXE	STRESS.EXE	ZOWOMIN.EXE
GRAPH.EXE	PLAY.EXE	SWAPFILE.EXE	
GRAFLINK.EXE			
HEAPWALK.EXE	PPTGRAPH.EXE	SYSEDIT.EXE	

[pif]**W**

Complete setup information for PIFs in Windows 3.1 is stored in APPS.INF (rather than a subset of options in SETUP.INF, as in earlier versions of Windows). Several related sections also appear in APPS.INF, the details of which are described below.

A PIF is always created for any non-Windows application when you install it to run under Windows, and a program item is added to the Applications group in Program Manager. You can add PIFs during Setup by specifying the disk location of a custom PIF in a [win_copyFile] section in SETUP.INF, or by letting Setup create a PIF from custom entries in APPS.INF.

For a list of the applications for which PIF information is included in APPS.INF, see “Applications with PIF Data in APPS.INF” in Chapter 7, “Setting Up Non-Windows Applications,” in the *Windows Resource Kit*.

This is the format for each entry in the **[pif]** section:

exe file= pif name, window title, startup directory, close-window flag, icon filename, icon n, standard pif, 386 pif, ambiguous exe, optimized pifs

<i>Entry</i>	<i>Meaning</i>
<i>exe file</i>	The filename, with extension, for the application's executable file.
<i>pif name</i>	The filename for the PIF, without the extension.
<i>window title</i>	The string, enclosed in quotes, that will appear in the title bar.
<i>startup directory</i>	The directory that is the current directory when the application starts.
<i>close-window flag</i>	The flag that indicates whether the application window is automatically closed when the user quits the application. The value is cwe if the application window should be closed on exit; the value is null if the window should not be closed on exit.
<i>icon filename</i>	The filename from which to extract the program icon. The default is PROGMAN.EXE; in Windows 3.1, many PIFs list icons from MORICONS.DLL.
<i>icon n</i>	The number from the icon extraction table; the default is 0 .
<i>standard pif</i>	The APPS.INF section that contains the PIF settings for standard mode; the default is [std_dflt] .
<i>386 pif</i>	The APPS.INF section that contains the PIF settings for 386 enhanced mode; the default is [enha_dflt] .
<i>ambiguous exe</i>	The APPS.INF section that lists applications with same executable filename specified in <i>exe file</i> .
<i>optimized pifs</i>	Other APPS.INF sections that contain optimized PIF settings.

Important The list in **[pif]** must remain in alphabetical order by executable filename.

These are the entries for **[std_dflt]** and **[enha_dflt]**, which specify the values for the default standard mode and 386 enhanced mode

PIFS:

```
[std_dflt]
; Default is a text mode application that does not directly modify COM ports.
; Other possible options are given for reference.
; (or) means the entry corresponds to a radio button group
minconvmem= 128
videomode= txt ; (or) gra
xmsmem= 0,0 ; ##,, ## (min, max)
checkboxes= ; c1,c2,c3,c4,kbd,nse,pps,ata,aes,ces,psc,aps,nss
```

```
[enha_dflt]
; Other possible options are given for reference.
; (or) means entry corresponds to radio button group
convmem= 128,640 ; ##,## (Required, Limit)
emsmem= 0,1024 ; ##,## (Required, Limit)
xmsmem= 0,1024 ; ##,## (Required, Limit)
dispusage= fs ; (or) win
execflags= ; bgd, exc
multaskopt= 50,100 ; ##,## (Bgd Pri, Fgd Pri)
procmemflags= dit,hma ; eml,xml,lam
dispoptvideo= txt ; (or) lgr,hgr
dispoptports= hgr ; txt,lgr
dispflags= emt ; rvm
otheroptions= afp ; cwa,ata,aes,ces,psc,aps,asp,aen
```

The options for `[std_*]` and `[enha_*]` entries are the same kinds of settings you make in the PIF Editor dialog boxes for standard and 386 enhanced mode.

The following example shows the basic **[pif]** entry for an application that uses LEARN.EXE as the executable filename:

```
LEARN.EXE= LEARN ,"Learning Microsoft Works",,cwe,moricons.dll,5,
std_LEARN,enha_LEARN,amb_learn
```

These are the *optimized pifs* sections for Learning Microsoft Works:

```
;Learning Works (LEARN.EXE)
[std_LEARN]
minconvmem= 185
videomode= gra
xmsmem= 0,1024
checkboxes= kbd,pps
```

```
[enha_LEARN]
dispoptvideo= hgr
convmem= 185,520
emsmem= 0,4096
xmsmem= 0,4096
dispusage= win
execflags= exc
procmemflags= hma
dispoptports=
dispflags= emt,rvm
```


When you choose to have Setup install other applications to run under Windows, Setup displays a list of applications that use the same *exe file* so that you can choose which application you want to install. For example, these are the default *ambiguous exe* entries in APPS.INF for other applications besides Microsoft Works that use LEARN.EXE as the *exe file*:

```
[amb_learn]
;MS quick pascal, learning works, learning word (LEARN.EXE)
LEARN.EXE= LEARN ,"MS Quick Pascal Express 1.0",,cwe,moricons.dll,5,
    std_PASEXPES,enha_PASEXPES
LEARN.EXE= LEARN ,"Learning Microsoft Word 5.0",,cwe,moricons.dll,5,
    std_LEARN5,enha_LEARN5
LEARN.EXE= LEARN ,"Learning Microsoft Word 5.5 ",,cwe,moricons.dll,5,
    std_LEARN55,enha_LEARN55
```

And, as an example, these are the *optimized pifs* sections for Learning Microsoft Word 5.5:

```
[std_LEARN55]
minconvmem= 180
videomode= gra

[enha_LEARN55]
disoptvideo= hgr
convmem= 180,195
emsmem= 0,0
xmsmem= 0,0
disoptports=
```

You might want to include custom entries in APPS.INF if, for example, you want to use different PIFs for the same application. During Setup, users would be prompted to specify which PIF to install. This example adds PIF information for a custom application and uses a custom *optimized pif* section:

```
XYZAPP.EXE= xyzapp,"XYZ - Example APP",C:\XYZAPP,cwe,moricons.dll,25,
    std_dflt,enha_dflt,opt_xyz

[opt_XYZ]
XYZAPP.EXE= xyzapp2,"XYZ - Enhanced",C:\XYZAPP,cwe,moricons.dll,27,,enha_XYZ2,

[enha_XYZ2]
minconvmem= 204
videomode= gra
xmsmem= 320,1024
disoptports= txt
```

Note Be sure you thoroughly understand the settings in PIF Editor before you attempt to edit APPS.INF to incorporate new standard settings. For details, see Chapter 8, “PIFS and PIF Editor.”

CONTROL.INF: The Control Panel Information File

W

The CONTROL.INF file contains information that Control Panel uses during setup to install printer drivers and to provide international support. The three sections are:

- **[io.device]**, which defines the printers supported in Windows.
- **[io.dependent]**, which defines supplementary files required for some printer drivers.
- **[country]**, which defines international formats used by Control Panel.

Printer Driver Sections

The **[io.device]** and **[io.dependent]** sections provide information about printer drivers. If you want to install a printer driver during Setup other than a driver that is supplied with Windows, add references in these two sections.

A custom printer driver might be able to use the fonts already installed in Windows, or it might require additional files to be installed with it and specified in the **[sysfonts]**, **[fixedfonts]**, and **[oemfonts]** sections of SETUP.INF.

[io.device]

This section lists all of the supported printers for Windows 3.1. This section is used by Control Panel to install printer support. This is the format for each entry in this section:

filename, description, scaling string, scaling string

<i>Entry</i>	<i>Meaning</i>
<i>filename</i>	The filename and extension, with the installation disk number.
<i>description</i>	The string, enclosed in quotes, that appears in Control Panel and that is used in WIN.INI.

scaling string One or two strings, enclosed in quotes, that indicate the scaling for the device.

A driver can have more than one entry in **[io.device]** to specify settings that correspond to different printers.

Some of the entries in this section include:

```
[io.device]
6:TTY.DRV,"Generic / Text Only","DEVICESPECIFIC"
6:HPPCL.DRV,6:unidrv.dll,"Agfa Compugraphic Genics","DEVICESPECIFIC"
6:pscript.DRV,"Apple LaserWriter II NTX","DEVICESPECIFIC"
6:HPPCL.DRV,6:unidrv.dll,"Apricot Laser","DEVICESPECIFIC"
6:HPLOT.DRV,"AT&T 435","CONTINUOUSSCALING"
6:CITOH.DRV,6:unidrv.dll,"AT&T 470/475","DEVICESPECIFIC"
6:EPSON9.DRV,6:unidrv.dll,"Epson DFX-5000","DEVICESPECIFIC"
6:HPPCL.DRV,6:unidrv.dll,"HP LaserJet IID","DEVICESPECIFIC"
(other entries)
```

[io.dependent]

Control Panel checks this section to see if the printer driver requires other files to be copied to the SYSTEM subdirectory. The files to be copied might be soft font installers, font files, help files, or other support for the printer. This is the format for each entry in this section:

driver filename, files to be copied with the driver

The default entries in this section are:

```
[io.dependent]
pscript.drv = 6:pscript.hlp, 6:testps.txt
tty.drv = 6:tty.hlp
ibm4019.drv = 6:sf4019.exe
lbpIII.drv = 6:can_adf.exe
lbpII.drv = 6:can_adf.exe
pg306.drv = 6:sfinst.exe
hppcl.drv = 6:finstall.dll, 6:finstall.hlp, 6:unidrv.hlp
hpdkjet.drv = 6:finstall.dll, 6:finstall.hlp, 6:unidrv.hlp
hppcl5a.drv = 6:finstall.dll, 6:finstall.hlp, 6:hppcl5a.hlp, 6:hppcl5op.hlp
paintjet.drv = 6:dmcolor.dll, 6:unidrv.hlp
thinkjet.drv = 6:unidrv.hlp
canon130.drv = 6:unidrv.hlp
canon10e.drv = 6:unidrv.hlp
epson9.drv = 6:dmcolor.dll, 6:unidrv.hlp
epson24.drv = 6:dmcolor.dll, 6:unidrv.hlp
escp2.drv = 6:unidrv.hlp
fuji9.drv = 6:dmcolor.dll, 6:unidrv.hlp
fuji24.drv = 6:dmcolor.dll, 6:unidrv.hlp
ibmcolor.drv = 6:dmcolor.dll
oki9.drv = 6:unidrv.hlp
oki9ibm.drv = 6:unidrv.hlp
oki24.drv = 6:dmcolor.dll, 6:unidrv.hlp
nec24pin.drv = 6:dmcolor.dll, 6:unidrv.hlp
panson24.drv = 6:dmcolor.dll, 6:unidrv.hlp
panson9.drv = 6:dmcolor.dll, 6:unidrv.hlp
proprint.drv = 6:unidrv.hlp
propn24.drv = 6:unidrv.hlp
```

[country]

This section is used by Control Panel for international formats. We recommend that you only make international modifications by choosing the Country icon in the Control Panel.

For example, these are the two entries for Canada. The “!” symbol is a field delimiter.

```
"Canada (English)", "2!1!0!2!1!1!0!2!1!1!!$!,!;!;!;!dd/MM/yy!MMMM d, yyyy!ENG"
"Canada (French)", "2!2!3!2!1!1!0!2!8!1!!$! !;!;!;!yy-MM-dd!d MMMM, yyyy!FRC"
```

The [country] section contains entries for these countries:

Australia	Germany	Spain
Austria	Iceland	Sweden
Belgium (Dutch)	Ireland	Switzerland (French)
Belgium (French)	Italy	Switzerland (German)
Brazil	Mexico	Switzerland (Italian)
Canada (English)	Netherlands	Taiwan
Canada (French)	New Zealand	United Kingdom
Denmark	Norway	United States
Finland	Portugal	Other Country
France	South Korea	

Modifying .INF Files for Custom Installations

You can create custom Windows installations for multiple systems by changing entries in the Setup information files to modify the following:

- The hardware options available for installation on individual workstations.
- The Setup options available for network installation.
- The files copied into the user’s Windows directories.
- The applications that are installed automatically during Setup.

This section summarizes the activities related to modifying the .INF files for custom installations.

Modifying .INF Files to Install Custom Windows

If you want the users at your site to run a customized version of Windows, you can modify the SETUP.INF file before setting up Windows for the workstations.

You can change default Program Manager groups, create other groups, and add applications to these groups. You should only modify SETUP.INF if you want to set up a customized Windows desktop; you do not need to modify this file if you want the default Windows configuration.

Removing Hardware Devices from Lists in Setup

During Setup, users might be required to specify hardware devices from a list of supported devices. For example, when setting up a printer, the user is presented with a list of printers. The user must know what kind of printer the system is connected to and select that printer from the list. Users might also have to select their particular display, pointing device, network, or other hardware devices.

You can remove from these lists any devices that your users do not have by modifying the SETUP.INF and CONTROL.INF files. Be careful not to remove a device that a user might have, because this might cause the Setup program to run incorrectly.

To remove a printer from the list of printers:

1. Make a backup copy of the original .INF files, and edit the copies.
2. In the **[io.device]** section of CONTROL.INF, delete the entry for any printers you do not want to display in the Setup lists.

To remove other hardware devices from the lists in Setup:

- In SETUP.INF, delete the entry for the hardware device you do not want to display in the Setup lists.

You can delete entries from **[display]**, **[system]**, **[keyboard.types]**, **[network]**, **[machine]**, and **[pointing.device]**.

If you remove an entry from SETUP.INF or CONTROL.INF, the entry will not appear when users install a printer from Control Panel or change system settings by running Setup from within Windows.

Specifying Windows Applications to Install

You can create a custom list of Windows applications, bitmaps, and screensavers to be installed with Windows if you want to restrict or customize the installation for multiple systems. To do this, add or remove entries in the **[win.apps]**, **[win.dependents]**, **[win.games]**, **[win.scrs]**, and **[win.bmps]** sections of SETUP.INF.

Forcing the Network Setup Option

If you want to make sure that users set up a shared copy of Windows (the **setup /n** option), you can modify SETUP.INF so that even if the user types **setup** without the **/n** option, the Setup program installs a shared copy of Windows on the workstation.

To do this, make sure **netsetup=true** in the **[data]** section of SETUP.INF. The default entry is **netsetup=false**, which allows users to run any of the Setup options.

Modifying .INF Files to Install Custom Applications

If you want Windows to install a custom application for multiple systems, you can make changes in .INF files to install the application during Setup.

The examples in the following discussion show the steps for installing a custom application, QB.EXE, with its help file and PIF.

Copying Additional Files to a User's Directory

If you want the application files to be copied to the user's WINDOWS directory during Setup, you can specify additional files to copy during Setup in the **[net]** section of SETUP.INF for network setup, or specify files in **[win.copy]** to copy for stand-alone systems.

The files you want to copy must be either on a floppy disk or in the same directory as the Windows files on the network server. If the files are on a floppy disk, you must first assign a disk number in the **[disks]** section of SETUP.INF and then specify that disk

number in the **[net]** or **[win.copy]** sections.

To specify an additional disk that Setup can prompt for:

- Add an entry to the **[disks]** section of SETUP.INF, including the disk number, path of the disk, name of the disk, and disk tag (used to determine if the disk is in the drive). Example:

```
[disks]
(other entries)
7=, "Quick Blibbet Application",disk7
```

The disk number refers to the Windows Setup disk where the file is located. Make sure the values for the *disk name* and *disk tag* items in the **[disks]** entry match the actual disk label and volume name.

To copy additional files to a user's system:

1. Add one or more entries to the **[win.copy]** or **[win.net]** sections in SETUP.INF for the files that Setup should copy. Or add a reference in one of these sections to an optional **[win_copyFiles]** section.

You can also specify that the files be copied to a subdirectory of the WINDOWS directory.

For example, to place the file in the user's C:\WINDOWS\APPDIR subdirectory, you might change the **[win.net]** section as follows:

```
[win.net]
(other entries)
#custom.apps,0:appdir ; files are specified in [custom.apps]
```

2. If you specify a **[win_copyFiles]** section as the value in **[win.net]** or **[win.copy]**, add that section to SETUP.INF with a list of the files to copy. For each file you want to copy, include a disk number, a colon, the filename, and a description (optional).

If the files are on the network, you can specify any disk number; the number will be ignored, but you must still specify a number. If the files are on a floppy disk, use the number specified in the **[disks]** section.

For example, to install the custom application QB.EXE and its related PIF and help file, the **[custom.apps]** section should contain these entries:

```
[custom.apps]
7:QB.EXE,"Quick Blibbet",165000,qblibbet
7:QB.PIF,"QBlibbet",545
7:QB.HLP,"QBlibbet Help",15000
diskspace=180545
```

3. If you have a custom Windows application that uses a DLL, add an entry to the **[win.dependents]** section to install the DLL file.

Example:

```
[win.dependents]
qblibbet= 7:QBLIBBET.DLL
(other entries)
```

Adding Custom Groups to Program Manager

You can edit SETUP.INF to change the content of the default Program Manager groups or to add your own custom groups. You should only modify SETUP.INF for this purpose if you want to create a custom Windows desktop for multiple systems. Otherwise, individual users can use the menu commands in Program Manager to customize their personal desktops.

If this SETUP.INF file will be used both for updating and for new installations, add the group to both the **[program.groups]** and the **[new.groups]** sections.

To add an application to a Program Manager group:

1. Add entries to the **[progman.groups]** and **[new.groups]** sections of SETUP.INF to install a custom Program Manager group. Example:

```
[progman.groups]          [new.groups]
(other entries)          (other entries)
group9=QBlibbet         group9=QBlibbet
```

2. Add one or more **[group#]** sections to SETUP.INF with an entry that describes the program item.

Type the program title in double quotes (" ") followed by a comma (,) and then the application filename and icon information. If the application is not in the WINDOWS directory, include the path. Example:

```
[group9]
"Quick Blibbet",k:\qb\qblibbet.pif,moricons.dll,24,qblibbet
```

This example specifies the icon extraction file as MORICONS.DLL, a file that comes with Windows 3.1.

A custom group for your application will be created in Program Manager, with a program item in that group, when the other

Program Manager groups are installed during Setup.

If the application is on a network, make sure each user has access to the appropriate network drive. After Setup, you might also want to specify a working directory for user files so that personal files don't remain in the shared application directory. You or a user can specify a working directory by modifying the Program Item Properties in Program Manager. For details, see Chapter 3, "Program Manager," in the *Windows User's Guide*.

Adding Custom PIF Information in APPS.INF

W If your custom application uses the same executable filename as other applications listed in the **[pif]** section in APPS.INF, add entries in that file to define specific information about your application.

To add custom PIF information in APPS.INF:

1. In the basic entry in **[pif]**, add an *ambiguous exe* item.

Example:

```
QB.EXE = QB,"Microsoft QuickBASIC",,cwe,moricons.dll,14,  
std_QB,enha_QB,amb_QB
```

2. Add a new **[amb_*]** section to define the PIF information for your application. Example:

```
[amb_QB]  
;"Microsoft QuickBASIC" and "Quick Blibbet" both use QB.EXE  
QB.EXE= QBlibbet,"Quick Blibbet",,cwe,moricons.dll,24,std_QB1,enha_QB1
```

3. Add **[std_*]** and **[enha_*]** sections if you want to define custom PIF information. Example:

```
[std_QB1]  
minconvmem= 192  
videomode= gra
```

```
[enha_QB1]  
convmem= 380,640  
execflags= bgd
```

