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Welcome to FileMaker Pro

Welcome to the FileMaker® Pro application from Claris Corporation. FileMaker Pro is designed to help you manage information easily and effectively.

This installation guide, the *FileMaker Pro User's Guide*, and the onscreen Help system work together to give you the information you need to know as you learn about FileMaker Pro.

For a complete description of what's in the documentation set, see "Getting Help" in the *FileMaker Pro User's Guide*.

About this guide

This *FileMaker Pro Installation & New Features Guide* includes instructions for installing the application on your hard disk.

- Chapter 1, "Installing FileMaker Pro," gives instructions for installing the application, registering your ownership, and everything else you need to do before you can use FileMaker Pro.
- Chapter 2, "New features in FileMaker Pro," provides an overview of the new features in FileMaker Pro 3.0. This chapter is especially helpful for users upgrading from previous versions of FileMaker Pro.
- Appendix A, "Setting up the MacIPX control panel," provides information on using MacIPX for networking.

Using this book

This guide presents special information in the following ways:

Descriptive heading messages give extra information about a procedure.

Note messages provide background or supplemental information.

Important messages alert you to situations that require special attention, such as an action that you can't undo.

Getting customer support

To learn about Claris Technical Support and Claris Customer Assistance, their hours of operation, and their telephone numbers, see the *Claris® Service Directory* included in the product package.

Chapter 1: Installing FileMaker Pro

This chapter gives step-by-step instructions for installing the FileMaker Pro application and associated files on your Macintosh® computer.

Note These instructions assume that you're familiar with standard mouse techniques such as clicking and dragging. If you need more information about mouse techniques or working with disks, see the documentation that came with your Macintosh.

What you need

To use FileMaker Pro, you need the CD-ROM disc (or the floppy disks, if you don't have a CD-ROM drive) in the FileMaker Pro package and the following equipment and software.

Minimum hardware and software requirements

To install and use FileMaker Pro for Macintosh, you need the following minimum equipment and software:

- any Macintosh, Power Macintosh®, or compatible computer running System 7 or newer (System 7.1 or newer recommended)
- a hard disk and 4 MB of RAM (8 MB RAM recommended for 680x0 Macintosh and required for Power Macintosh computers)
- a CD-ROM drive or a floppy disk drive that can read 1.4-MB floppy disks

System 7 note If you are using System 7.0 or 7.01, you must also install System 7 Tune up, version 1.1.1. System 7 Tune up is available from Apple Computer, Inc. or your Apple® Dealer.

Memory settings To see the minimum and preferred application memory settings for FileMaker Pro, select the FileMaker Pro application icon after installation and choose Get Info from the File menu. For information about adjusting the memory allocated to FileMaker Pro, see “Adjusting memory” on page 1-11.

Networking requirements

To share files among users on a network, you can use AppleTalk®, IPX/SPX, or TCP/IP networking. You can use one of the following solutions to share files on a mixed Macintosh and PC network.

Macintosh platform	Windows platform
MacIPX version 1.2.1	IPX/SPX or compatible protocol
MacTCP® 2.0.6 or later or Open Transport 1.0.7 or later	Microsoft TCP/IP-32

See the documentation that came with your Macintosh or network software for more information.

[Using MacIPX with AppleTalk](#) When you choose MacIPX for networking, you can still access your AppleTalk printers and AppleShare® servers. MacIPX is used for networking FileMaker Pro files only.

[If you are using a 68000 Macintosh](#), such as a Macintosh Plus, Macintosh SE, or PowerBook® 100, you should use only the AppleTalk protocol. MacIPX and MacTCP have only limited support on these computers.

Before you begin

Before you begin the installation process, lock your FileMaker Pro disks and turn off virus protection and file sharing.

Lock the FileMaker Pro disks

To write-protect the 3.5-inch floppy disks, slide the tab in the upper-right corner of the disk so that the small “window” is open. The CD-ROM is already write-protected.

Turn off virus protection and file sharing

Virus protection utilities and personal file sharing can interfere with the operation of the FileMaker Pro Installer. Before you install FileMaker Pro, disable these system utilities and turn off file sharing.

Installing FileMaker Pro

You must use the installation program to install FileMaker Pro—you can't install the application by dragging files to your hard disk.

The FileMaker Pro CD-ROM contains information, such as additional templates and support information, that is not found in the disk set. If you have a CD-ROM drive, you should use the CD-ROM disc; you do not need to use the floppy disks. The floppy disks are included as a convenience for users who do not have CD-ROM drives.

[If you don't have a CD-ROM drive](#) The floppy disks included with FileMaker Pro 3.0 contain the application and all the files you need to start working.

Installing from the FileMaker Pro CD-ROM disc

To start the FileMaker Pro Installer:

1. Disable virus protection and file sharing if you haven't already.

See “Turn off virus protection and file sharing” on page 1-2 for more information.

2. Insert the CD-ROM disc into your CD-ROM drive.

You see the disc's window on your screen. If you see only the disc icon, double-click the icon to open its window.



Start Here

Double-click this icon

3. Double-click the file named “Start Here”.

4. Follow the instructions provided on the screen to start the Installer.

5. When you see the FileMaker Pro Installer welcome screen, click OK.

You see the FileMaker Pro Installer dialog box.

6. Follow the steps described in one of the following sections:

- If you want to install all the available files, skip to “Easy installation” on page 1-4.
- If you want to install a subset of the FileMaker Pro files, skip to “Custom installation” on page 1-6.

Installing from the FileMaker Pro floppy disk set

Important Because the CD-ROM contains additional templates and other information not available on floppy disk, you should install from the floppy disks only if you do not have a CD-ROM drive.

To start the FileMaker Pro Installer:

1. Disable virus protection and file sharing if you haven't already.

See “Turn off virus protection and file sharing” on page 1-2 for more information.

2. Insert *Disk 1* in the floppy disk drive.

You see the disk's window on your screen. If you see only the disk icon, double-click the icon to open its window.

3. Double-click the FileMaker Pro Installer icon to start the FileMaker Pro Installer.



FileMaker Pro Installer
Double-click this icon

4. Click OK to dismiss the FileMaker Pro Installer welcome screen.

You see the FileMaker Pro Installer dialog box.

5. Follow the steps described in one of the following sections:

- If you want to install all the available files, go to the next section, “Easy installation.”
- If you want to install a subset of the FileMaker Pro files, skip to “Custom installation” on page 1-6.

Easy installation

Follow these steps to install the complete FileMaker Pro package on your hard disk. The Installer automatically installs the correct version for either 680x0 Macintosh or Power Macintosh computers.

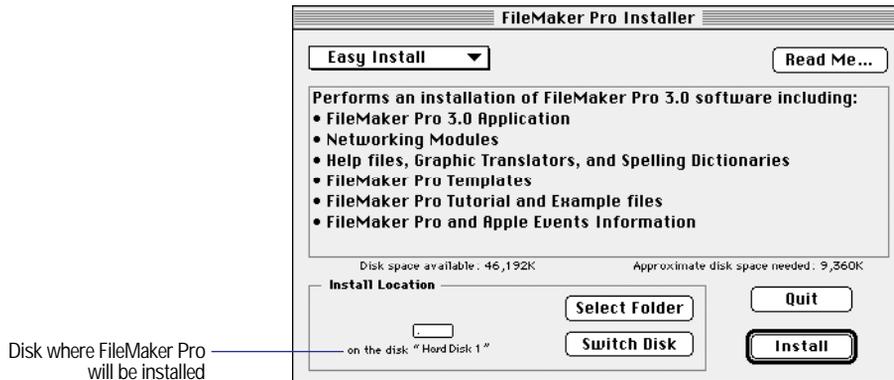
Important To install a subset of FileMaker Pro files, see the next section, “Custom installation.”

To install FileMaker Pro on your hard disk:

1. If you have not done so already, start the Installer.

To do so, use the steps described in “Installing from the FileMaker Pro CD-ROM disc” on page 1-3 or “Installing from the FileMaker Pro floppy disk set” on page 1-4.

You see the FileMaker Pro Installer dialog box.



- If you don't see the name of the hard disk where you want to install FileMaker Pro, click the Switch Disk button, which appears only when you have more than one volume mounted.

If you switch to a disk that isn't a hard disk or is locked, the Install button is dimmed and the dialog box tells you why you can't install onto that disk.

- To select the folder in which you want to install the FileMaker Pro 3.0 Folder, click Select Folder and select the desired folder.

2. Click Install.

The Installer begins copying files. A dialog box tells you what the Installer is doing.

You receive a message if the selected drive doesn't have enough space. You can delete files in the Finder™ to make more room on the disk or choose not to install some files (like the tutorial or template files) by doing a custom installation. (See the next section, "Custom installation.")

3. Follow the instructions provided on the screen. Click Stop if you want to cancel the installation process.

After all the files are installed, a final dialog box tells you the installation on your hard disk was successful.

4. Click Quit to leave the Installer.
5. If you turned off virus protection and file sharing before installing, remember to turn them back on now.

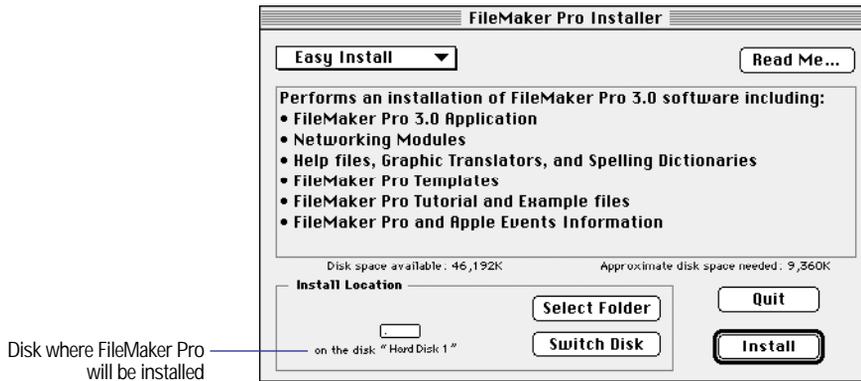
Custom installation

To install a subset of FileMaker Pro files on your hard disk:

1. If you have not done so already, start the Installer.

To do so, use the steps described in either “Installing from the FileMaker Pro CD-ROM disc” on page 1-3 or “Installing from the FileMaker Pro floppy disk set” on page 1-4.

You see the FileMaker Pro Installer dialog box.



- If you don't see the name of the hard disk where you want to install FileMaker Pro, click the Switch Disk button, which appears only when you have more than one volume mounted.

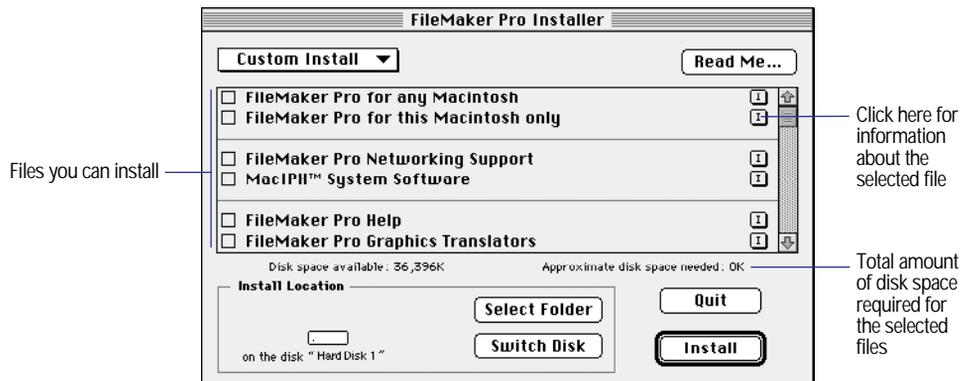
If you switch to a disk that isn't a hard disk or is locked, the Install button is dimmed and the dialog box tells you why you can't install onto that disk.

- To select the folder in which you want to install the FileMaker Pro 3.0 Folder, click Select Folder and select the desired folder.

2. Choose Custom Install from the pop-up menu.



The dialog box lists the files you can install.



3. Click the files you want to install.
4. Click Install.

The Installer begins copying files. A dialog box tells you what the Installer is doing.

You see a message if the selected drive doesn't have enough space for the files you select. You can delete files in the Finder to make more room on the disk or choose not to install some files (like the tutorial or template files) by deselecting those files in the scrolling list.

5. Follow the instructions provided on the screen. Click Stop if you want to cancel the installation process.

After the selected files are installed, a final dialog box tells you the installation on your hard disk was successful.

6. Click Quit to leave the Installer.

If you installed the MacIPX networking software, the final dialog box allows you to restart your computer. You must restart your computer before you can use the new network software.

7. If you turned off virus protection and file sharing before installing, remember to turn them back on now.

Where files are stored on your hard disk

The following table shows the files and folders you can install, and the preferred location for them on your hard disk. If you install onto the current system disk, the FileMaker Pro Installer places all the files you need in their preferred locations.

File or folder	Description	Preferred location on hard disk
FileMaker Pro	The FileMaker Pro 3.0 application	FileMaker Pro 3.0 Folder
FileMaker Pro Help	The FileMaker Pro onscreen Help system	FileMaker Pro 3.0 Folder
FileMaker Pro Balloon Help	The FileMaker Pro onscreen Balloon Help™ system	FileMaker Pro 3.0 Folder
FileMaker Tutorial	A FileMaker Pro file that introduces you to the main features of FileMaker Pro 3.0	FileMaker Tutorial folder in the FileMaker Pro 3.0 Folder
Template files	Pre-designed templates that help you use FileMaker Pro right away	FileMaker Templates folder in the FileMaker Pro 3.0 Folder
Example files	Example databases that show you the advanced features of FileMaker Pro	FileMaker Examples folder in the FileMaker Pro 3.0 Folder
Apple Events Reference	A FileMaker database that documents how to use Apple events with FileMaker Pro, and scripting examples and sample AppleScript® and HyperCard® applications	FileMaker And Apple Events folder in the FileMaker Pro 3.0 Folder
AppleTalk Network MacIPX Network TCP/IP Network	Modules that support AppleTalk, MacIPX, and TCP/IP networks	FileMaker Extensions folder in the FileMaker Pro 3.0 Folder
ClarisWorks DBF	ClarisWorks® and DBF database translation filters	FileMaker Extensions folder in the FileMaker Pro 3.0 Folder
Claris Help Viewer	The application that accesses the FileMaker Pro Help file	Claris folder in your System Folder
US English - Spelling	The primary dictionary of 100,000 words that FileMaker Pro uses to spell check your files	Claris folder in your System Folder
User Dictionary	The dictionary that stores your customized list of spelling exceptions and additions to the US English - Spelling dictionary	Claris folder in your System Folder (the Installer doesn't install a User Dictionary if you already have one in your Claris folder)
Claris Spelling Enabler	Software that enhances the performance of the Claris spelling engine	Claris folder in your System Folder (Power Macintosh only)
Claris Translators folder	Translators that FileMaker Pro uses to read graphics files created in other applications	Claris folder in your System Folder
Claris XTND System	Software that you use to open graphics in other formats	Claris folder in your System Folder
MacIPX control panel, MacIPX AppleTalk, MacIPX Ethernet, MacIPX Token Ring	Control panel for configuring MacIPX, and MacIPX interface files. These files are installed only in a Custom installation.	Control panel in your Control Panels folder and remaining files in the Extensions folder in your System Folder

File or folder	Description	Preferred location on hard disk
XTND enabler	Extension that enhances the XTND graphics importing capabilities of Claris products	Extensions folder in your System Folder (Power Macintosh only)

Personalizing your copy of FileMaker Pro

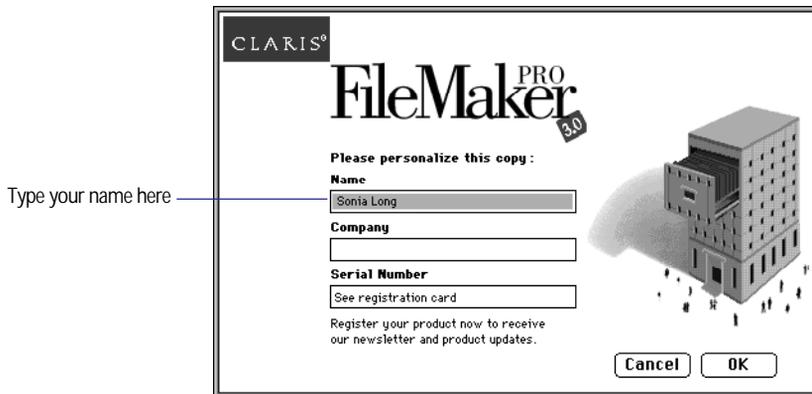
The first time you start FileMaker Pro, you're asked to supply your name, company name (if applicable), and software registration number. The information you type appears each time you start the application and in the dialog box that you see when you choose About FileMaker Pro from the Apple menu and click Info.

To personalize your software:

1. If necessary, open the FileMaker Pro 3.0 Folder by double-clicking its icon.
2. Start FileMaker Pro by double-clicking the application icon.



You see the Personalize dialog box.



3. In the Name box, type your name and press the Tab key.
The insertion point moves to the next box.

4. Type your company name, if applicable, and press Tab.

If you don't have a company name, you can put other information (like your address) in the box or leave it blank.

5. Type the serial number from your FileMaker Pro registration card.

The serial number is optional, but Claris recommends typing it here in case you lose your registration card. You need the serial number if you call Claris Technical Support or Customer Assistance.

Check your typing carefully. After you click OK, you can't change the name, company, or serial number unless you reinstall FileMaker Pro.

6. Click OK.

Now you can create a new database file or open an existing file. For more information on creating and working with FileMaker Pro documents, see the *FileMaker Pro User's Guide*.

Registering with Claris

Take a minute to register FileMaker Pro in one of the following ways:

- complete and mail the postage-paid product registration card
- call (800) 356-6657 to register by phone
- use the onscreen registration database by clicking the Register button in the New Database dialog box, which appears when you start FileMaker Pro. You can fax the completed registration card to Claris or send it by mail.

Keep the part of the registration card with your serial number on it in a safe place.

Adjusting memory

The Macintosh sets aside a certain amount of memory for FileMaker Pro. However, you might need to change the amount of memory reserved for FileMaker Pro if you plan to:

- work on a large database file
- work on several database files at once
- host database files
- use a database file that contains many graphics
- insert a large graphic into a database file
- run several applications at the same time and you have a limited amount of memory (RAM) installed

For more information on managing Macintosh memory, see the documentation that came with your Macintosh computer.

Changing the amount of memory used

If you want to change the amount of memory reserved for FileMaker Pro, keep the following points in mind:

- The amount of memory you give to FileMaker Pro affects your ability to run other applications. If the System and FileMaker Pro take up all the available memory, you won't be able to open other applications.
- Avoid specifying less memory than the Suggested size in the FileMaker Pro Info dialog box.

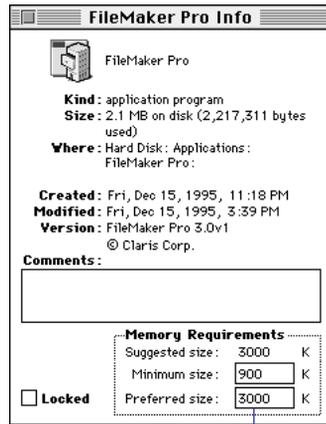
To change the amount of memory FileMaker Pro uses:

1. If FileMaker Pro is open, quit the application by choosing Quit from the File menu.
2. In the Finder, open the FileMaker Pro 3.0 Folder and click the FileMaker Pro application icon.

Note If you click the application icon twice, you start FileMaker Pro. If that happens, choose Quit from the File menu and try again.

3. Choose Get Info from the File menu.

You see the FileMaker Pro Info window.



Change the amount of memory FileMaker Pro uses here

4. In the Memory Requirements area at the bottom of the window, double-click the Preferred size number and type a number to change the memory allocated for FileMaker Pro.

If you can't type into the box, make sure you've quit FileMaker Pro.

5. Click the close box.

The next time you start FileMaker Pro, the amount of memory you specified is available for the application.

Choosing a network protocol

You must choose a network protocol if you want to use FileMaker Pro over a network, either as a guest or as a host. For more information about your network, consult your network administrator.

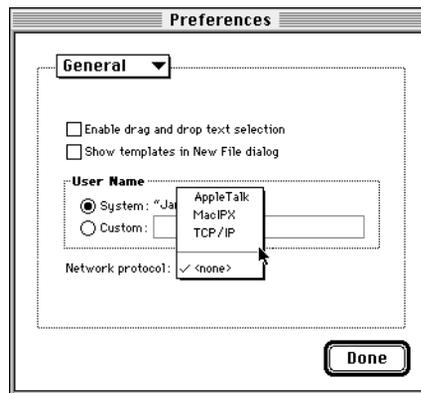
Important The network protocol setting in FileMaker Pro must be the same on the host and guest computers.

To choose a network protocol:

1. Choose Preferences from the Edit menu.

You see the Preferences dialog box. If necessary, click the pop-up menu at the top of the dialog box to choose General.

2. Choose a network protocol from the Network protocol pop-up menu.



Changes to this setting don't take effect until you quit FileMaker Pro and then start it again.

Opening files from previous versions

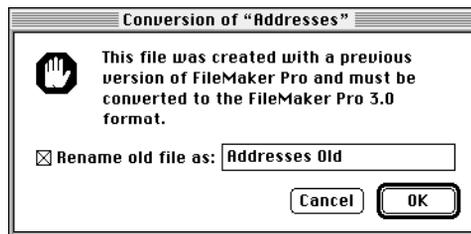
FileMaker Pro 3.0 can open files from FileMaker Pro 1.x or 2.x for Macintosh and FileMaker Pro 2.x for Windows. To use files created with FileMaker Pro 1.x or 2.x, you must convert them to FileMaker Pro 3.x.

To convert and open a file:

1. Start FileMaker Pro 3.0.
2. Choose Open from the File menu and select the file you want to convert in the Open dialog box.

You see the conversion dialog box.

3. Type a name to rename the original file, or uncheck the Rename old file checkbox to retain the name of the file.



The original file remains in the older format.

After you click OK, you see another dialog box where you can name the file that will be created and saved in the new format. You cannot use the converted file with versions of FileMaker Pro earlier than 3.0.

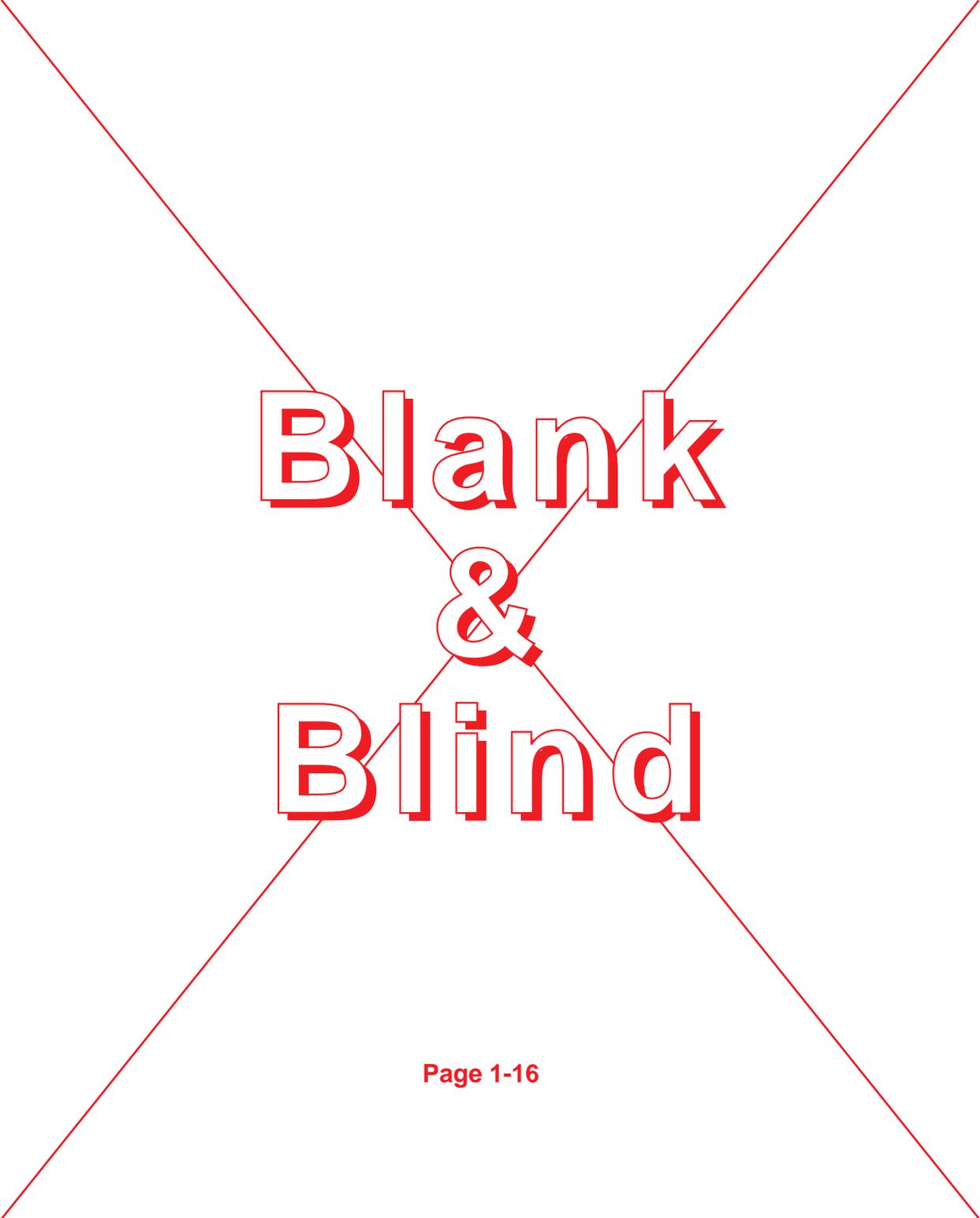
4. Click Save to start the conversion.

FileMaker Pro converts the file and opens it.

Where to go from here

After you install FileMaker Pro, you can immediately begin working with the application. Here are some suggestions on where to go in the documentation to get started:

- If you're new to databases, read chapter 1, "FileMaker Pro basics," in the *FileMaker Pro User's Guide* to learn basic database concepts.
- If you're new to FileMaker Pro, work through the online tutorial, which is automatically copied to your hard disk when you do an Easy Install.
- If you've used FileMaker Pro before, read chapter 2 of this guide to find out about the new features available in FileMaker Pro 3.0.



Blank & Blind

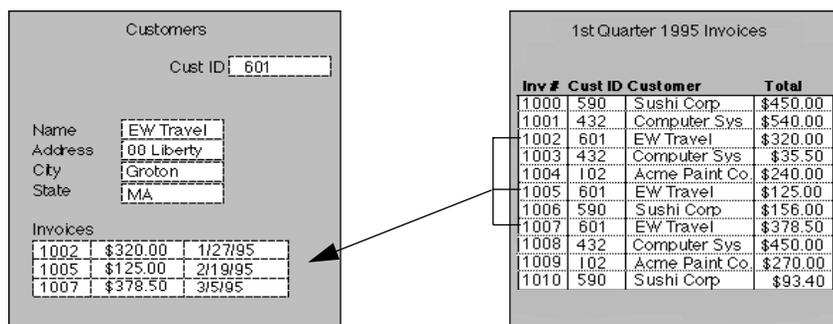
Chapter 2: New features in FileMaker Pro

This chapter introduces the new features available in FileMaker Pro 3.0.

Relational database capability

FileMaker Pro 3.0 supports relational features that you can use to display the contents of a field from another database file. You can display records from the related file in a layout of the current file.

A *relational database* is one or more discrete database files that contain all the data you need to do your work. In a relational database, each occurrence of data is stored in only one file at a time, but you can access and work with that data from any file.



In this relational database, the Customer layout displays invoices from the Invoices file. The two files are related by the Cust ID field.

For more information about relational databases, see chapter 10, “Using data from related files,” in the *FileMaker Pro User’s Guide*.

Improved networking

You can now use the Preferences dialog box to choose the network protocol that FileMaker Pro uses to communicate over a network. For more information about setting this preference, see “Choosing a network protocol” in chapter 1 of this manual.

FileMaker Pro now ships with TCP/IP support for Macintosh and Windows.

FileMaker Pro 3.0 can be used with FileMaker Pro Server 3.0 for enhanced performance and to allow up to 100 guests to share databases. FileMaker Pro Server 3.0 supports simultaneous AppleTalk, IPX/SPX, and TCP/IP networking with both Macintosh and Windows guests. Guests can use the protocol of their choice to network with FileMaker Pro. (AppleTalk networking is not available for Windows guests.) For more information, see the documentation provided with FileMaker Pro Server 3.0 (available separately).

Enhanced calculations

The enhanced user interface for defining calculations gives you easy access to more than 45 new and improved functions. In addition, you control when FileMaker Pro calculates the results, saving space in the database file. For more information about calculations, see “Understanding formulas” in chapter 2 of the *FileMaker Pro User’s Guide*.

ScriptMaker enhancements

With the new script steps available in the ScriptMaker® feature, you can:

- control script execution (create If/Else and looping procedures, allow user abort, capture script errors)
- manage windows (freeze or refresh windows, toggle or lock the status area, set the zoom level)
- manage data entry (paste the result of a calculation, set the contents of a field, perform a replace, revert the contents of a record)
- dial phone numbers
- show messages to the user
- go to a related record or portal row
- and much more...

Scripts can now be executed when a file is opened and/or when a file is closed. You can use the Duplicate button to quickly duplicate scripts or script steps.

For more information about using ScriptMaker, see chapter 5, “Using ScriptMaker and buttons,” in the *FileMaker Pro User’s Guide*.

Browse and Find mode improvements

You can now revert changes after you modify a record or a find request.

You can save space in a database file by storing graphics by reference. With this feature, you can store a graphic once but display it in many places throughout the database.

FileMaker Pro now supports and works with empty found sets.

You can replace a field's contents with other text, serial numbers, or a calculation result.

For more information about these features, see chapter 4, "Working with information in records," in the *FileMaker Pro User's Guide*.

Editing enhancements

FileMaker Pro now supports "drag and drop" for text and graphics. You can use drag and drop to move objects within a field, between fields, and between files.

Additional text editing features allow you to:

- insert tabs in fields and text objects
- use a new text ruler to format text in fields and text objects
- specify paragraph margins, indentation, and spacing above and below a paragraph (in addition to line spacing)
- format text in text objects or fields on a paragraph-by-paragraph basis

For more information about working with text and graphics on a layout, see chapter 3, "Laying out and arranging information," in the *FileMaker Pro User's Guide*.

Field definition improvements

With the new options for field definitions, you can:

- use global fields to show the same value in every record
- validate data entry by calculation or a value list
- auto-enter a value from the previous record or based on the result of a calculation

- specify a custom validation message

In addition, you can define new storage options for text, number, date, time, and calculation fields. You can specify:

- whether FileMaker Pro should always index the field, index the field when required, or never index the field
- what language to use for indexing text
- whether to store a calculated value or to calculate the value when it is required

For more information, see “Choosing data entry options” in chapter 2 of the *FileMaker Pro User’s Guide*.

More flexibility with value lists

Value lists are no longer attached to specific fields. This change means that one value list can be shared by several fields. In addition, you can base a value list on the contents of a field.

You can now edit a value list:

- during data entry
- during layout design, even over a network

For more information, see “Defining value lists” in chapter 3 of the *FileMaker Pro User’s Guide*.

New options in Layout mode

New features in Layout mode allow you to:

- insert the contents of a field into a text object on a layout using merge fields
- define buttons more easily using a new button tool
- edit the text within buttons or groups without having to ungroup or undefine the button
- remove a layout from the Layout pop-up menu that appears in Browse mode
- work with additional zoom levels
- set custom page margins for your layouts

- use a new context pop-up menu to edit a selection in both Layout and Browse modes

Sample data in Layout mode now comes from your own records, so you can design your layouts more accurately.

Label layout creation has been simplified. The new interface avoids the need to use sliding.

For more information about layouts, see chapter 3, “Laying out and arranging information,” in the *FileMaker Pro User’s Guide*.

More powerful file handling

FileMaker Pro file sizes are no longer limited to 32 MB. In addition, you can now have up to 50 database files open at the same time. For more information, see “Managing files” in chapter 1 of the *FileMaker Pro User’s Guide*.

Automatic database creation

FileMaker Pro can automatically create a new FileMaker Pro database from a file created in another application. Simply open a file (such as a tab-separated text file) in FileMaker Pro, and a new database file is automatically created, containing the fields from the original file, a Standard layout and a Columnar report layout, and the data. For more information, see “Importing data into a new file” in chapter 8 of the *FileMaker Pro User’s Guide*.

Expanded import and export

New import and export features allow you to:

- import and export in additional file formats
- create field definitions while setting up an import
- apply auto-entry options while importing data

For more information about importing and exporting, see chapter 8, “Importing and exporting data,” in the *FileMaker Pro User’s Guide*.

New ways to limit user access

You can disable all or most of the menus using new access privileges, and you can disable the status area using ScriptMaker. For more information see chapter 7, “Networking and access privileges,” and chapter 5, “Using ScriptMaker and buttons,” in the *FileMaker Pro User's Guide*.

Appendix A: MacIPX control panel

You can use the MacIPX control panel to:

- select the network interface for your MacIPX-based applications
- change parameters that MacIPX uses (if necessary)

Using an Ethernet or token-ring network interface for MacIPX

The MacIPX control panel displays icons for the available network interfaces, such as Ethernet, AppleTalk, and token ring. MacIPX automatically configures itself for the first networking environment it detects when the Macintosh starts.

AppleTalk users For information on selecting an AppleTalk interface and related options, see “Using an AppleTalk interface for MacIPX” on page A-4”.

PCI Power Macintosh users (such as Power Macintosh 7200, 7500, 8500, 9500) These Macintosh models use Open Transport networking.

Warning Be sure to use Open Transport version 1.0.7 or later.



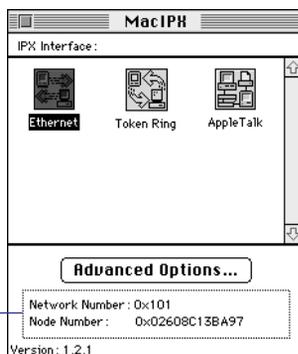
MacIPX

MacIPX control panel

To switch between network interfaces (Ethernet, token ring, or AppleTalk):

1. Open the MacIPX control panel.
2. Click one of the icons to select it.

After you select the IPX interface, the control panel displays the network number and node number of your Macintosh on the selected interface



The software on your computer system determines which icons you see.

3. Click OK, and then close the MacIPX dialog box.

Note MacIPX 1.2.1 supports most Ethernet interface cards, as well as the token-ring interface card from Apple Computer.

Selecting a frame type

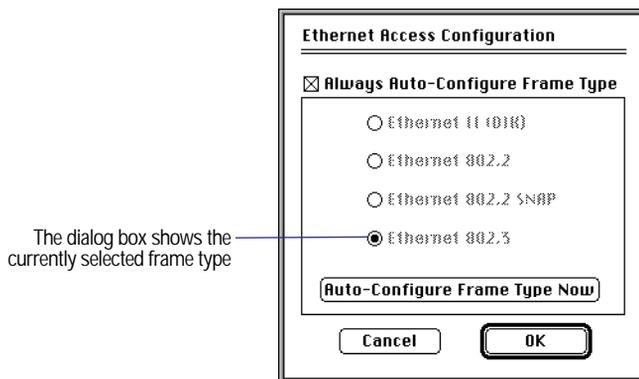
Each packet of information on the network must conform to a specific frame type to communicate with other devices on the network. After you select the network interface, you can let MacIPX select a frame type, or you can select one yourself.

Note All computers communicating with each other on the network must use the same frame type. If you have questions about your frame type, check with your network administrator.

To have MacIPX select the frame type:

1. In the MacIPX control panel, double-click the selected network interface icon.

You see the Access Configuration dialog box for your chosen network interface. For example, if you click the Ethernet icon, you see the Ethernet Access Configuration dialog box, where you can set parameters for working with Ethernet.



2. In the Access Configuration dialog box, click Always Auto-Configure Frame Type.

3. Click OK to close the dialog box.

When you start up your Macintosh, MacIPX determines the appropriate frame type by monitoring packets on the network. When this option is checked, the buttons for the frame types are unavailable.

Note When IPX is using more than one frame type on a network, MacIPX might not choose the frame type you require. If, after configuring the MacIPX control panel, you are unable to connect to FileMaker Pro databases using the Network Access dialog box, you may have the wrong frame type selected for your network. Try turning off Always Auto-Configure Frame Type and then select the appropriate frame type. Consult your network administrator if you have questions.

To select a frame type manually:

1. In the Access Configuration dialog box, deselect Always Auto-Configure Frame Type.
2. Click one of the frame types, and then click OK.

Choose from four frame types for Ethernet and two for token ring. Check with your network administrator if you're not sure which frame type to select.

When you close the dialog box, you see an alert dialog box.

3. Click OK.

To have MacIPX determine the appropriate frame type at any moment:

1. In the Access Configuration dialog box, click Auto-Configure Frame Type Now. Then click OK to dismiss the message.

In the dialog box, MacIPX highlights buttons in sequence until it determines the appropriate frame type.

2. Click OK to close the dialog box.

Using an AppleTalk interface for MacIPX

If your Macintosh is connected to an Apple LocalTalk® network, you must specify an AppleTalk interface to use MacIPX networking. When you use AppleTalk, you must also select an IPX gateway.

Important Novell supplies MACIPXGW.LAN, a LAN driver (IPX gateway) that can be run on Novell NetWare v3.11 or later servers, which lets you use AppleTalk to share information with other computers on the IPX network. Contact your Novell dealer or use an online service to get this driver. To install the LAN driver on your Novell server, see your Novell system administrator or the documentation that came with the driver.

To select an AppleTalk network interface:

1. Open the MacIPX control panel.

The MacIPX control panel is installed in the Control Panels folder inside the System Folder.

2. If necessary, click the AppleTalk icon to select it and then click the close box.

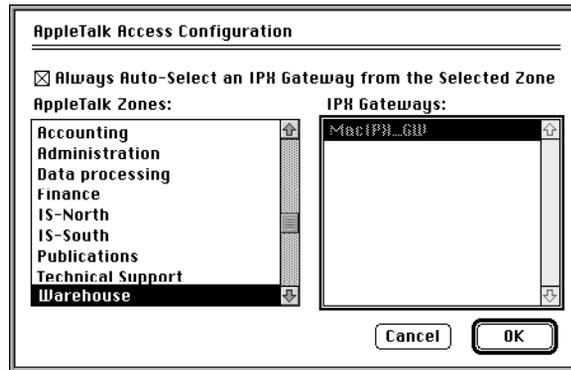
Your Macintosh then sends IPX packets encapsulated in AppleTalk, which are delivered on the LocalTalk network to an IPX gateway. The gateway decapsulates these packets and routes them over an IPX network. See the following steps for information on selecting a gateway.

To have MacIPX select an available IPX gateway:

1. In the MacIPX control panel, click the selected AppleTalk icon.

You see the AppleTalk Access Configuration dialog box.

2. In the AppleTalk Access Configuration dialog box, choose an AppleTalk zone that has an IPX gateway.



3. Click Always Auto-Select an IPX Gateway from the Selected Zone.
4. Click OK to close the dialog box.

When the Macintosh starts up and detects that it's connected to an AppleTalk networking interface, such as LocalTalk, it selects an appropriate IPX gateway in the specified zone. In some cases (for example, if you get an error message), you need to select the gateway yourself.

To select an IPX gateway yourself:

1. In the AppleTalk Access Configuration dialog box, deselect Always Auto-Select an IPX Gateway from the Selected Zone.
2. Choose an AppleTalk zone where an IPX gateway is installed.
When you click a zone name, you see a list of available IPX gateways.
3. Click an IPX gateway.
4. Click OK to close the dialog box.

Setting advanced MacIPX parameters

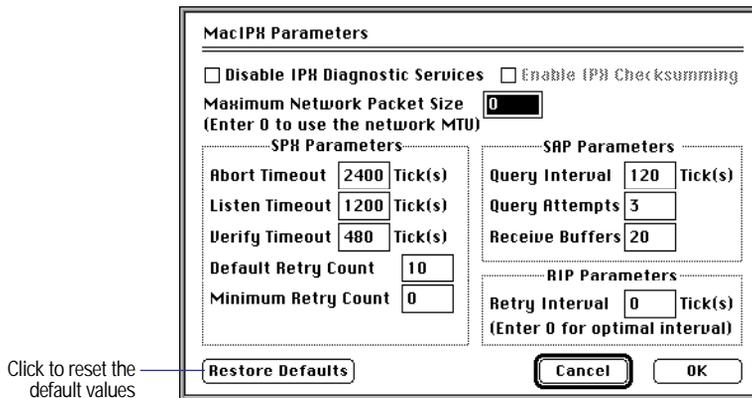
From the MacIPX control panel, you can set other parameters that affect MacIPX operations.

Important Only a certified network engineer or administrator should change the advanced parameters. Changing the parameters without a good understanding of their functions can adversely affect the performance of MacIPX. For more information, see your network administrator or contact your Novell dealer.

To set advanced parameters:

1. In the MacIPX control panel, click Advanced Options.

You see the MacIPX Parameters dialog box.



2. Set the parameters you want and click OK to save your changes. You must restart your computer for the changes to take effect.

Note To restore the parameters to the default settings provided by Novell, click Restore Defaults and restart your system. If you make changes to the settings and want to restore the parameters to what they were when you opened the dialog box, click Cancel.

Use the information in the following tables to set parameters for:

- MacIPX
- SPX (Sequenced Packet Exchange)
- SAP (Service Advertising Protocol)
- RIP (Routing Information Protocol)

MacIPX parameter	Function
Disable IPX Diagnostic Services	Disables the IPX Diagnostic Services, used by some network management tools. Disabling IPX Diagnostic Services can reduce the amount of memory that MacIPX uses. Click this parameter if you don't use any network management tools, or if your tool doesn't use IPX Diagnostic Services.
Maximum Network Packet Size	Limits the maximum network packet size. The value can't be greater than the maximum value supported by the physical network. Enter 0 (zero) to let MacIPX determine for itself what value to use.
Enable IPX Checksumming	Enables checksumming of IPX packets. The option is unavailable if the current network doesn't support IPX checksumming.

For the following SPX parameters, you can enter any value between 0 and 9999. The values for Abort Timeout, Listen Timeout, and Verify Timeout apply only to those SPX connections using the “watchdog,” such as those used by FileMaker Pro 3.0

SPX parameter	Function
Abort Timeout	Sets the amount of time that SPX waits, without receiving any response from the other side of the connection, before it terminates the session. The timeout number is expressed in ticks (with 60 ticks per second). The default value is 2400 ticks, or 40 seconds.
Listen Timeout	Sets the time that SPX waits, without receiving a packet from the other side of the connection, before it requests the other side to send back a packet assuring that the connection is still valid. If SPX hasn't heard from the other side of the connection within this time, it sends packets to the other side asking for verification that the connection still exists. The default value is 1200 ticks, or 20 seconds.
Verify Timeout	Sets the frequency at which SPX sends a packet to the other side of a connection to inform it that its side is still active. If no packets are being exchanged on the SPX connection by the software that established the session, SPX sends packets at regular intervals to make sure that the connection is still working. The default value is 480 ticks, or 8 seconds.
Default Retry Count	Specifies the maximum number of times that SPX attempts to retransmit a packet before determining that the packets can't be sent, and then closes the connection. The default value is 10 times. An application can override the value in this field.

SPX parameter	Function
Minimum Retry Count	Specifies the minimum number of times that an SPX packet must be retransmitted. If an application has a retry count setting that is too low, you can override it by setting this parameter. The default value is 0 (zero) times.

For the following SAP parameters, you can enter any value between 0 and 9999, but an application can override the values you set.

SAP parameter	Function
Query Interval	Specifies the time that must elapse before an SAP query is retransmitted. The default value is 120 ticks, or 2 seconds.
Query Attempts	Specifies the number of times that an SAP query is transmitted. The default value is 3 times.
Receive Buffers	Specifies the number of buffers to handle responses returned from SAP queries. The default is 20 buffers.

For the following RIP parameter, you can enter any value between 0 and 9999.

RIP parameter	Function
Retry Interval	Specifies the time that must elapse before a RIP request is retransmitted. The default value is 0 ticks, which lets the MacIPX determine what the interval should be, based on the network configuration.