



Macintosh Programmer's Workshop (MPW)

Macintosh Programmer's Workshop Features

State-of-the-Art Programming Tool

- Complete, integrated Macintosh programming environment
- Time-saving incremental linker that quickly relinks an application after a minor change—even large applications take well less than a minute
- Built-in Projector source code management software helps manage complex projects with multiple programmers

Ease of Use

- Multiwindow user interface, command shell, and scripting language provide easy access to MPW tools and capabilities
- Thorough on-line help and on-line reference materials for efficient access to needed information

Add-on Products

- Integrated MPW C, C++, and Object Pascal compilers add high-level languages
- SADE debugger provides a sophisticated debugging environment with a multiwindow interface and powerful scripting language

The Apple Macintosh Programmer's Workshop (MPW) is the proven, professional software development system for Apple Macintosh applications. Used to develop best-selling Macintosh software, MPW excels in handling large projects with many programmers. MPW version 3.3 provides powerful programming tools that support the latest programming techniques and standards.

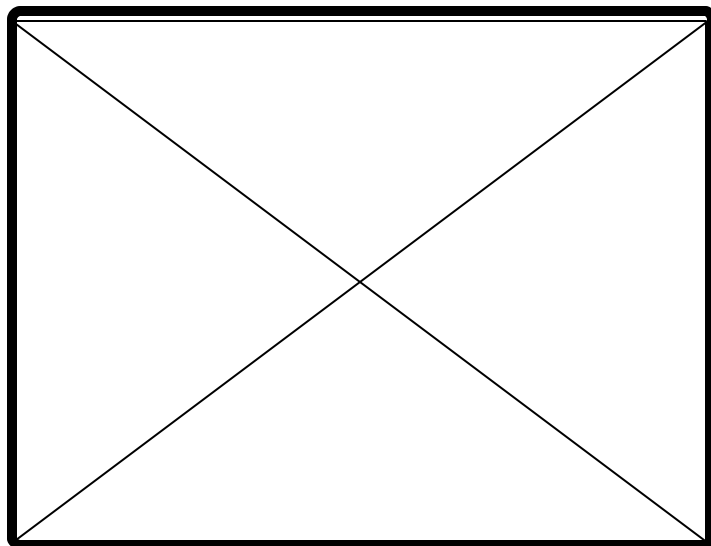
The MPW Development System includes a complete set of tools for developing complex Macintosh applications. At the heart of MPW is an integrated, multiwindow/text editor and command shell with a sophisticated scripting language. Use it to write source code, build applications, and access other MPW tools. MPW also provides a powerful source code management system, an incremental linker, support for multiple programming languages, a 68000 family assembler, and many other useful utilities. For debugging code, MPW includes SourceBug, an easy-to-use source-level debugger with all the basic debugging capabilities. On-line help databases and technical reference materials are also included.

MPW add-on products complete your development environment. Apple

provides MPW-compatible compilers for C, C++, and Object Pascal. MPW compilers include comprehensive function libraries. The MPW C++ and Object Pascal compilers have additional features that support object-oriented programming techniques. Apple's Symbolic Application Debugging Environment (SADE), also available as an MPW add-on product, provides a sophisticated debugging environment with a multiwindow interface and powerful scripting language.

Owners of previous versions of MPW can purchase an update package to take advantage of MPW version 3.3's powerful new features. Key enhancements include the incremental linker, support for advanced System 7 features, and improved documentation. The MPW product line has also been reorganized and simplified to make it easier to choose the products you need. Order the MPW Development System update and updates for any add-on products that you currently use.

MPW version 3.3 is Apple's most complete Macintosh programming environment ever. It provides the power and flexibility you need to quickly turn your creative ideas into Macintosh software products.



Use SourceBug to set breakpoints, examine the stack, and display the contents of variables.



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Technical Specifications

Tools Included

- MPWShell includes a multiwindow text editor and command shell with built-in commands and scripting language.
- MPWToolSuite provides over 50 tools and scripts including an incremental linker, make tool, and a source file comparison tool.
- MPWAssembler supports the 68000 family of microprocessors, the 68851 Paged Memory Management Unit (PMMU), and the 68881/882 floating-point coprocessors.
- SourceBug, a source-level debugger, provides basic debugging capabilities and special tools for debugging object-oriented code.
- ToolServer and SourceServer let you access the features of MPW in the background on your Macintosh or on a remote Macintosh connected via an AppleTalk network.
- ResEdit, a graphical resource editor, lets you create user interface elements such as windows, icons, and dialog boxes.
- MacsBug assembly language debugger provides power, expandability, and reliability.
- MPWToolbox Interfaces and Libraries provide access to the Macintosh Toolbox and Operating System from assembler, C, and Object Pascal source code.
- MPW411 (included on CD-ROM only) supplies extensive on-line help and Macintosh technical reference information from within the MPWShell.
- Developer Essentials (included on CD-ROM only) contains additional tools, sample code, technical notes, and on-line documentation.

Add-on Products

Apple's MPW add-on products are fully integrated with the MPW environment. Compilers generate optimized code for the 68000 family of microprocessors and optionally for the 68881/882 floating-point coprocessors.

- MPWC compiler, version 3.3
 - Supports K&R C with many ANSI extensions
 - Includes ANSI C function library
- MPWObjectPascal, version 3.3,
 - Supports ANSI Pascal, Apple Pascal extensions, and implements industry-standard Object Pascal

- MPWC++, version 3.3
 - Converts object-oriented C++ code into C code for use with the MPWC compiler
 - Supports UNIX System Laboratories C++ Release 2.1
 - Supports data abstraction, object-oriented programming, multiple inheritance, operator overloading, and type-safe linking
 - Allows you to debug C++ programs at the source level using SourceBug or SADE
 - Includes libraries for complex math and I/O stream processing
 - Requires MPWC compiler
- Symbolic Application Debugging Environment (SADE), version 1.3.3
 - Supports source and assembly level debugging of applications built with MPW tools
 - Provides a powerful scripting language
 - Uses MPW symbols to provide complete information about program elements
 - Displays source code and debugger command input and output in a multiwindow editor

Licensing Information

No special license is required to sell a product built with MPW compilers. Resale (for inclusion within other development systems) and site licenses are available.

System Requirements

- Macintosh computer with 68020, 68030, or 68040 microprocessor
- At least 5 MB of RAM, 8 MB required to use the incremental linker, 16 MB or more is strongly recommended
- System 7 or later or A/UX 3.0 or later
- Hard disk drive with at least 15 MB of free space
- CD-ROM drive (for CD-ROM version)

Ordering Information

Order MPW products from APDA, Apple's worldwide source for over 300 development tools, technical resources, training products, and information for anyone interested in developing applications on all Apple platforms. Customers receive the quarterly APDA Tools Catalog featuring all current versions of Apple and the most popular third-party development tools.

To order an APDA product or to get a free catalog, contact:

APDA
Apple Computer, Inc.
P.O. Box 319
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U.S.: 1-800-282-2732
Canada: 1-800-637-0029
International: (716) 871-6555
Fax: (716) 871-6511
AppleLink: APDA
AmericaOnline: APDA
CompuServe: 76666,2405
Internet: APDA@applelink.apple.com

MPW Development System, version 3.3

CD-ROM version, Order No. R0505LL/A \$250.00
Floppy disk version, Order No. R0503LL/A \$300.00

- One CD-ROM disc (both versions)
- Eight Macintosh disks (disk version only)
- Reference manuals and release notes

MPW Development System Update, version 3.3

For owners of an earlier version of MPW
CD-ROM version, Order No. R0501LL/A \$100.00
Floppy disk version, Order No. R0502LL/A \$125.00

- One CD-ROM disc (both versions)
- Eight Macintosh disks (disk version only)
- Reference manuals and release notes

MPWC, version 3.3

Order No. M0022LL/G \$100.00

- One Macintosh disk
- Reference manual and release notes

MPWC Update, version 3.3

For owners of an earlier version of MPWC
Order No. M0325LL/G \$15.00

- One Macintosh disk
- Release notes

MPWC++, version 3.3

Order No. M0346LL/G \$150.00

- One Macintosh disk
- Reference manual and release notes

MPWC++ Update, version 3.3

For owners of an earlier version of MPWC++
Order No. M0852LL/D \$15.00

- One Macintosh disk
- Release notes

MPWObjectPascal, version 3.3

Order No. M0021LL/F \$100.00

- One Macintosh disk
- Reference manual and release notes

MPWObjectPascal Update, version 3.3

For owners of an earlier version of MPWObjectPascal
Order No. M0321LL/F \$15.00

- One Macintosh disk
- Release notes

SADE, version 1.3.3

Order No. M0026LL/G \$100.00

- Two Macintosh disks
- Reference manual and release notes

SADE Update, version 1.3.3

For owners of an earlier version of SADE
Order No. M0614LL/F \$15.00

- Two Macintosh disks
- Release notes