About the Microsoft C Compiler

Welcome to the Microsoft® C Compiler for MS-DOS®. Microsoft C is a full implementation of the C language, a language known for its efficiency, economy, and portability.

Some of the major features and strengths of this 4.0 release of the Microsoft C Compiler are listed below:

- Advanced optimization capabilities. Optimization is performed automatically whenever you compile. Command-line options are available to select alternative optimization procedures or to turn off optimization in the early stages of program development.
- Compatibility with both the 286 XENIX® operating system and the developing American National Standards Institute (ANSI) C standard.
- The Microsoft CodeView™ window-oriented symbolic debugger that includes such features as popup menus, mouse support and single-keystroke commands.
- **MAKE**, the Microsoft Program Maintenance Utility, which automatically maintains high-level-language programs.
- Use of all available memory for the symbol table, allowing the compilation of much larger programs.
- Implementation of register variables to optimize processing.
- Five memory models—small, compact, medium, large, and huge—that let you set up your program in the most efficient way, taking advantage of the segmented architecture of the Intel® 8086 family of processors.
- The ability to combine features from different memory models in "mixed-model" programs.
- More than 200 run-time library routines to provide you with an extensive base of built-in functions for use in your C programs. The MS-DOS C run-time library is designed to make writing portable programs easier by providing compatibility with the XENIX run-time library for 80286 systems, most of the UNIX™ System V library, and increased support of the forthcoming ANSI standard.

- A simple command structure with a flexible set of options to accommodate all levels of programming experience.
- Linking of C routines with object files created with Microsoft FORTRAN (versions 3.3 and later), Microsoft Pascal (versions 3.3 and later) or Microsoft Macro Assembler. This allows you to mix these different languages to get the best features of each.
- Three math libraries that allow you to generate in-line 8087/80287 instructions or floating-point calls.
- Inclusion of C start-up code to allow modification of initial values.
- Support for MS-DOS path names and input/output redirection.
- Support for file sharing and record/file locking. This gives you MS-DOS network support and IBM local area network support.
- A broad range of numbered error and warning messages to help you locate errors and potential problems. A special command-line option lets you adjust the level of warning messages to suit your own needs.

Package Contents

Your Microsoft C Compiler package contains the following programs, stored on floppy disks:

- The compiler software
- **LINK**, the Microsoft Overlay Linker utility
- **CODEVIEW**, a symbolic debugger
- **LIB**, the Microsoft Library Manager utility
- **MAKE**, the Microsoft Program Maintenance Utility
- **EXEPACK**, the Microsoft EXE file compression utility
- **EXEMOD**, the Microsoft EXE file header utility
- **SETENV**, the Microsoft environment expansion utility

Three documentation binders are included with the package.

System Requirements

To use the Microsoft C Compiler, your machine must run MS-DOS Version 2.0 or later. You must have at least two double-sided disk drives and a minimum of 260K (kilobytes) of *available* memory (the available user memory can be determined using the MS-DOS **CHKDSK** utility); a hard disk is recommended for this product. You must use Microsoft **LINK** Version 3.0 or later (included in this package). You cannot use earlier versions of Microsoft **LINK** with the compiler.

About These Manuals

The three documentation binders in your Microsoft C Compiler package hold the four manuals listed below:

- *Microsoft C Compiler User's Guide*

  The *Microsoft C Compiler User's Guide* gives you the information you need to set up and operate the Microsoft C Compiler and explains how to compile, link, and run your C programs. Refer to the *Microsoft C Compiler User's Guide* when you have questions about invoking the compiler and linker or about this particular implementation of C on MS-DOS.

- *Microsoft C Compiler Language Reference*

  The *Microsoft C Compiler Language Reference* defines the C language as implemented by Microsoft. Use the *Microsoft C Compiler Language Reference* when you have questions about the rules or behavior of the C language.

- *Microsoft C Compiler Run-Time Library Reference*

  The *Microsoft C Compiler Run-Time Library Reference* describes the run-time library routines provided for use in your C programs. The first part of the *Microsoft C Compiler Run-Time Library Reference* gives an overview of the run-time library, while the second section presents the routines in alphabetical order for quick reference.

- *Microsoft CodeView*

  Microsoft CodeView explains how to use the CodeView window-oriented, source-level symbolic debugger, to examine your programs and locate program errors.