Chapter 2 Installing the Windows version

This chapter describes the installation you have to do before using this compiler. If the compiler has already been installed in your system, it is not necessary to read this chapter.

Follow the steps below to install the Windows version.

1. Run the installer “setup.exe”. When the installer starts running, it prompts you to input a serial number and license key of this software product. Input a serial number and license key correctly. If these numbers are incorrect, you cannot install the compiler. In the installation, the installer copies necessary files and makes the environmental variable setup examples and configuration files.

2. Set up the environmental variables while referring to the setup examples made by the installer.

2.1 Files to be copied by the installer

The installer copies the following files.

Standard setup	Commands, Header files, All libraries, On-line manual, Library sources
Minimum setup	Commands, Header files, S-model libraries
Custom setup	Selected files only

Table 2.1 shows the configuration of the installed files. In this table, files in directories under the directories “include” and “src” are omitted. Additionally, the actually installed files may slightly vary from those stated in this table.

The directory “bin” contains the executable program files, such as compilers and tools, and configuration (setup) files.
The directory “include” and sub-directory “sys” contain the header files.

bin\		Execution files
	lcc86.exe	Compiler driver
	cpp.exe	Preprocessor
	cf.exe	Purser
	cg86.exe	Code generator
	r86.exe	Assembler
	lld.exe	Linker
	_lcc86	Configuration file
	prof.exe	Profiler
	ip86.exe	Tools for profiler
	oar.exe	Librarian
	kmmake.exe	Program maintenance tool
	makedef	Default rule file
	merc.exe	Assembler output and C merging tool
	libr86.exe	Library compiler driver
include\		Header file
	sys\	
lib\		Library file
	s\, p\, d\, l\	
	cdos.obj	Initial setup routine
	cpro.obj	Initial setup routine for profiler
	expand.obj	Makes the wildcard process simpler.
	noexpand.obj	Stops the wildcard process.
	tinymain.obj	Stops the quart process.
	knjlib.lib	Japanese language process functions
	mathlib.lib	Mathematical functions
	intlib.lib	printf/scanf for only integers
	doslib.lib	Library functions other than above
src\		
	bin\	Source codes of attached programs
	lib\	Source codes of libraries
	rom\	Sample program for making ROM
man\		On-line manual

Table 2.1: Details of files to be installed (Windows version)

The directory “lib” contains the standard libraries. Depending on the memory model, the subdirectories “s”, “p”, “d”, and “l” are provided. Actual library files are located in the subdirectories.

The directory “src” contains source codes of several tools and libraries. The subdirectory “bin” contains the source codes of the attached programs, such as lcc86 (compiler driver) and kmmake (program maintenance tool). The source codes of the standard libraries are located in the subdirectory “lib”.
The initial setup routine and sample program for making ROM that are used to make a ROM program are located in the subdirectory “rom”. The directory “man” contains the on-line manual.

Files necessary to run the compiler are located in the directories, “bin”, “include”, and “lib”. If all of these files cannot be copied due to insufficient disk space, remove the libraries for memory models not in use or prepare a disk for different memory model.

2.2 Setting up the environment

Next, you must set up the environment necessary to run the compiler. The environment described herein means the information on directories containing the compiler main body, headers, and libraries. This information is set up using the environmental variables and configuration files.

As described previously, the installer makes the environmental variable setup example “env86.bat” and configuration file “_lcc86” in the directory “bin” under the installation directory “instpath”. Since the installer does not set up the environmental variables, it is absolutely necessary that you must set up the environmental variables while referring to the setup examples.

First, the following briefly describes the environmental variables you need to set up. Note that upper and lower case Windows environmental variable names are not distinct, that is, PATH and path are equivalent.

PATH	This variable shows which directory contains an executable command. For compilation, directories containing at least lcc86.exe and lld.exe must register in this variable.
TZ	This variable does not relate to execution of the compiler. However, this variable is necessary to correctly run a program made by LSI C-86. Among library functions, the time function refers to the environmental variable TZ to calculate a time difference between the current time of the system and standard time. For example, when using the compiler in Japan, set this variable as follows. set TZ = JST-9
MAKEDEFAULT	This variable specifies the default rule file that the kmmake command uses.

Follow the steps below to set up the environmental variables.

Windows95

Add a statement that calls env86.bat at the last of autoexec.bat as shown below.

```
IF NOT EXIST instpath\bin\env86.bat GOTO END
instpath\bin\env86.bat
:END
```

The above changes become effective after restarting the computer.

Windows NT

Environmental variable setup procedures are described in the help of Windows NT. This section explains the operation steps briefly.
First, double-click the [System] icon of [ControlPanel]. Then, select the [Environment] tab and make necessary setup. The following explains the steps assuming that the installation directory is c:\lsij\lsic.

In most case, add current values since PATH has already been set up. Input PATH in the variable box and input c:\lsij\lsic\bin;%path% in the value box. If PATH has not been set up, input only c:\lsij\lsic\bin in the value box.
Check that the inputs are correct and click the [Setup] button to complete the setup.

To newly set up the environmental variables (such as MAKEDEFAULT and TZ), input an environmental variable name you wish to set up in the variable box and a value for that variable in the value box, and then click the [Setup] button.

The above changes become effective by the instance of the command interpreter, which is started after that.

Compiler default options are registered in the file “_lcc86”. It is recommended to first use the standard setup made by the compiler.