

# FlagShip



**Object Oriented  
Database  
Development System**

**Cross-Compatible to Unix,  
Linux and MS-Windows**

 **MULTISOFT**

**Release 8.1**

**Section**

**GEN**

## The whole FlagShip 8 manual consist of following sections:

<b>Section</b>	<b>Content</b>
<b>GEN</b>	General information: License agreement & warranty, installation and de-installation, registration and support
<b>LNG</b>	FlagShip language: Specification, database, files, language elements, multiuser, multitasking, FlagShip extensions and differences
<b>FSC</b>	Compiler & Tools: Compiling, linking, libraries, make, run-time requirements, debugging, tools and utilities
<b>CMD</b>	Commands and statements: Alphabetical reference of FlagShip commands, declarators and statements
<b>FUN</b>	Standard functions: Alphabetical reference of FlagShip functions
<b>OBJ</b>	Objects and classes: Standard classes for Get, Tbrowse, Error, Application, GUI, as well as other standard classes
<b>RDD</b>	Replaceable Database Drivers
<b>EXT</b>	C-API: FlagShip connection to the C language, Extend C System, Inline C programs, Open C API, Modifying the intermediate C code
<b>FS2</b>	Alphabetical reference of FS2 Toolbox functions
<b>QRF</b>	Quick reference: Overview of commands, functions and environment
<b>PRE</b>	Preprocessor, includes, directives
<b>SYS</b>	System info, porting: System differences to DOS, porting hints, data transfer, terminals and mapping, distributable files
<b>REL</b>	Release notes: Operating system dependent information, predefined terminals
<b>APP</b>	Appendix: Inkey values, control keys, ASCII-ISO table, error codes, dBase and FoxPro notes, forms
<b>IDX</b>	Index of all sections
<b>fsman</b>	The on-line manual " <b>fsman</b> " contains all above sections, search function, and additionally last changes and extensions



*multisoft Datentechnik, Germany*

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***Object Oriented Database Development System,  
Cross-Compatible to Unix, Linux and MS-Windows***

Section GEN

Manual release: 8.1

For the current program release see your Activation Card,  
or check on-line by issuing *FlagShip -version*

*Note: the on-line manual is updated more frequently.*

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# Headquarter Address

multisoft Datentechnik  
Schönaustr. 7  
84036 Landshut  
Germany

**E-mail:** [support@flagship.de](mailto:support@flagship.de)  
[support@multisoft.de](mailto:support@multisoft.de)  
[sales@multisoft.de](mailto:sales@multisoft.de)

**Phone:** (+49) 0871-3300237

**Web:** <http://www.fship.com>

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# 1. Welcome

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In recent years there has been a silent revolution going on. Revolutions are usually driven by young, new forces. This one is driven by something that is more than 20 years old:

The Unix operating system.

Many of us might even not be aware that a revolution is going on, but there is no other word to describe today's situation when almost every known computer hardware platform can run some version of Unix. For the first time in the history of computers we have the chance to come use a computer we have never worked on, perhaps never even heard of before, and in spite of that be able to operate its most important functions and to learn about its specific differences without a single hour of specific training.

In the years to come (especially with the trend towards further Unix standardization) we will discover what it means when most of the computers in the world speak Unix and when a programmer can port his application from his computer to, virtually, any type of computer (at least at the source code level).

We at multisoft strongly believe in the need for a standard, world wide operating system and in Unix as the first such case and opportunity in history. Therefore, we have dedicated ourselves to helping Unix come to the masses and become their operating system.

From the very first, it was clear to everyone that the speed of adopting Unix would depend directly on the number of available tools and applications. This was the field in which we feel we could help.

Being dBASE and Clipper users from the CP/M days, we feel that these systems are an example of good, helpful tools that can influence the popularity and usability of computer hardware and software to their greatest extent. We also feel that, inspite of packages like Informix, Unify, Ingres, Progres, Oracle and mySQL, Unix is lacking in simple and popular tools. At the same time, Unix needs a way to port all of the successful applications written in dBASE, Fox or Clipper for MS-DOS.

Therefore, we decided to design a database tool that will be to Unix what dBASE and Clipper were to MS-DOS, allowing applications written for dBase, Fox and Clipper to run on Unix. In addition to, several users still need or wish to stay with

Microsoft Windows system

and to use **the same** sources and databases as in DOS/Clipper (or FoxPro), or to create portable, multi-platform applications for Unix/Linux as well as 32bit and 64bit MS-Windows systems.

This tool is now in your hands. It is called **FlagShip**. We chose this name because we want FlagShip to show the way to a new computer era. We don't want to claim that FlagShip is the best database tool, there is no such tool, but we want to claim that FlagShip is one of the best tools to start using Unix without regretting having left MS-DOS, and also to save time and money by reusing tried and tested existing applications.

We hope that we have succeeded in reaching our goals. But you, our fellow fighters for a better tomorrow, must be aware that no software producer can make a good product without your help. You are the ones that will direct further development and help discover and exterminate all those smaller and larger bugs that no software is ever totally free of. Thus we ask you to kindly help us in our efforts in the way you know best: by using FlagShip and reporting all bugs you discover or think you've discovered and all suggestions you might have. The number of your reports will show how successful we are.

Thank you and now, off to work with you!

## 2. License Agreement & Warranty

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Last revised: 4-March-2004.

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# 3. Installation

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FlagShip is easy to install. The system is delivered either as on-line download, or on CD-ROM. The installation can be done either by rpm or via script (Unix/Linux), or is performed via the common FlagShip\*setup.exe installer in MS-Windows.

## 3.1 Hardware and Software Requirements

The requirements for FlagShip to work properly on your computer are:

- that your hardware and your version of Unix (or MS-Windows) corresponds with the label on the original media and on the activation card,
- Internet access or CD-ROM drive (not required for downloaded media),
- an already installed Unix/Linux (or MS-Windows) operating system,
- at least 50 MB free disk capacity for the installation,
- at least 2 GB total RAM (depending on the operating system, more RAM in GUI mode is highly recommended).

To compile and link the application you will need also

- C compiler (cc, gcc, cl, bcc) and system libraries,
- linker (ld, link).

These are usually delivered with the Unix operating system, but sometimes you must order them separately as a "developer's package". For MS-Windows, the compiler is available separately from Microsoft or from Borland. For applications running in GUI mode, X11 on Linux (or Microsoft Windows NT, 2000, 2008, XP, Vista, Windows-7 OS) is required.

## 3.2 Summary of distribution

The FlagShip package contains:

- FlagShip manuals (on-line and in .pdf format),
- Installation media (FlagShip8\*.tgz for Linux, or FlagShip8\*setup.exe for MS-Windows) or CD-ROMs with FlagShip programs and files,
- Activation Card for the required license type (Personal FlagShip, or FlagShip PRO license, or for the free Test/Eval version).

The CD-ROM is in common ISO9660 format with RockRidge/Joliet extension.

## 3.3 FlagShip Installation

FlagShip may easily be installed. Generally, the install script (or FlagShip\*setup.exe for MS-Windows) will un-pack and copy the files from the distribution media into default or into directory of your choice (noted below as <FlagShip\_dir>) and will then serialize the licensed FlagShip development package with your Activation Key.

Note: the <FlagShip\_dir> is usually the directory /usr/local/FlagShip8 in Unix and Linux, or C:\FlagShip8 in MS-Windows, but may differ according to your setup choice and MS-Windows defaults. The real, installed path is displayed by "**FlagShip -v**" or "**FlagShip -h**".

The installation is described step-by-step in the booklet available on the Web:

- For FlagShip/Linux ports, see <http://www.fship.com/linux.html>
- For FlagShip/Windows ports, see <http://www.fship.com/windows.html>

In all cases, you will need an Activation Key corresponding to the used media/port. For evaluation purposes, there is a free Activation Key available via <http://www.fship.com/eval.html>, licensed FlagShip can be obtained from your distributor or via <http://www.fship.com/order.html>

Please note, according to the License Agreement, you may install and use the FlagShip development package on one computer at a time. Additional sub-licenses are available upon request. The produced executable(s) does not have such licensing limitations.

## 3.4 De-installing FlagShip

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If you want to move the FlagShip package to another computer system (of the same type, of course) perform the deinstallation step on the original system and then the installation step on the new system.

If you want to update the FlagShip package with a newer release or version perform the Deinstallation step first and then the Installation step with the new media and the new activation card.

### 1. Uninstall FlagShip on Unix/Linux:

- a. Log into your computer system as root or super-user (su)
- b. invoke "FS8uninstall" or "FS7uninstall" or "FS6uninstall" or "FS5uninstall" or "FSuninstall" (depending on the installed version)
- c. leave the root or su mode by "exit"

The FS\*uninstall script removes the installed FlagShip files in the <FlagShip\_dir> directory as well as the symbolic links to /usr/bin and /usr/lib created during the installation process

### 2. Uninstall FlagShip on MS-Windows:

Simply use the un-installer in "Start->Programs->FlagShip->Uninstall", or select Uninstall via "Start->System->Software->FlagShip"

The un-installer removes the installed FlagShip files in the <FlagShip\_dir> directory as well as the few entries in registry created during the installation process.

If you are updating a new release of Flagship, you can do the new installation now, following the above instructions in GEN.3.3.

# 4. Registration, Support

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## 4.1 Registration

Please don't forget: register your FlagShip package immediately after installation. Fill in (by any editor) the registration form available in the file <FlagShip\_dir>/docu/REGCARD and forward as binary attachment to your e-mail to <support@flagship.de>. Only **registered users** are eligible to receive our **free technical support**. Please refer also to <http://www.fship.com/support.html> for current details.

## 4.2 Support

Our free tech support can be reached by each registered user for 6 months (license dependent, see details on <http://www.fship.com/support.html>) after receiving this package. The support includes:

- e-mail support during the installation of FlagShip,
- e-mail support for the whole FlagShip package,
- free updates or upgrades within free period,
- news about new FlagShip development,
- information about tools and libraries for FlagShip, also from third party, and more.

To help us to help you, please do the following before calling:

- Read the FlagShip documentation in this (or the printed) manual.
- Check the FAQs in <http://www.fship.com/faqsupp.html>
- Write down your serial number and FlagShip version available via "FlagShip -version" (or from the Activation Card when not installed yet),
- Note the used operating system and the i/o mode (GUI, Terminal, Basic),
- Isolate your problem to a small fragment of code (max. 200 lines) to be able to reproduce it

For technical support, please call your **local** dealer or distributor. Support direct from multisoft is only available for registered customers and for countries where distributors are not available yet.

When the free support period has run out, you may choose following support by:

- the FlagShip Support Contract for one year, including unlimited free technical support by e-mail (or phone, fax), free updates, significant discount on Upgrades, technical info and much more. See the Support Contract Form on <http://www.fship.com/support.html>,
- or technical support on demand, charged per call, see above link.

Bugs: as with every piece of software, it may be possible that you will detect an incompatibility or a bug within the FlagShip package. We would like to ask you to help us by reporting them (and also your work-arounds) using the error-report-form from appendix or via e-mail to <bugs@flagship.de>.

Please report problems, but also let us know if you are satisfied, because this is what helps to make a developer's life easier :-)

# 5. Manual Notation

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## **KEYWORDS**

FlagShip keywords, commands and standard functions are given in uppercase. In the user program, upper and/or lowercase letters may be used (except for the extend system).

### **<item>**

the text within the angle brackets informs you which type of information you should specify; not the item itself. Do not enter the brackets themselves.

### **item1 | item2**

if more then one syntax is allowed, the different syntax or keywords are separated with the | sign. The items are mutually exclusive, you may use only one of them. Do not type the | sign itself.

### **item [item ...]**

multiple entry of the item is possible. Do not type the [ ] brackets themselves.

### **[option]**

the input is optional, you may either specify it or not. Do not type the [ ] brackets themselves.

### **[option1 [,option2]]**

the entry of option1 and option2 are optional, you may either specify them or not. If you wish to enter option 2, you must enter option1 as well as the "," separator. You may however enter option1 w/o option 2. Do not type the [ ] brackets themselves.

### **expC, expN, expD, expL**

constant, variable or expression of type Character, Numeric, Date or Logical.

### **expS**

Variable of type screen.

### **on/OFF([expL])**

different flags (on/off) or logical constant, variable or expression within brackets. The flag given in uppercase is the default setting.

### **Example**

example programs or usage

### **\$ input**

user input from the standard Unix shell

### **# input**

user input from the standard Unix shell being superuser

### **C:> input**

user input from the standard DOS/Windows console

**<FlagShip\_dir>**

specifies the directory path where FlagShip was installed:

- On **Unix/Linux**, the default VFS 8.x installation, and hence the <FlagShip\_dir> is the /usr/local/FlagShip8 directory
- In **MS-Windows**, the default installation of <FlagShip\_dir> is C:\FlagShip8 - but the directory name may depend on the current system localization and Windows setting.

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**multisoft Datentechnik**  
**Schönastr. 7**  
**D-84036 Landshut**

**<http://www.fship.com>**  
**[sales@multisoft.de](mailto:sales@multisoft.de)**  
**[support@flagship.de](mailto:support@flagship.de)**