

The Emacs Editor

Emacs is the extensible, customizable, self-documenting real-time display editor. This manual describes how to edit with Emacs and some of the ways to customize it; it corresponds to GNU Emacs version 25.2.

The homepage for GNU Emacs is at <http://www.gnu.org/software/emacs/>.

To view this manual in other formats, click [here](#).

You can also purchase a printed copy from the [FSF store](#).

For information on extending Emacs, see [Emacs Lisp](#).

This is the GNU Emacs Manual, updated for Emacs version 25.2.

[Distrib](#) How to get the latest Emacs distribution.

[Intro](#) An introduction to Emacs concepts.

Important General Concepts

[Screen](#) How to interpret what you see on the screen.

[User Input](#) Kinds of input events (characters, buttons, function keys).

[Keys](#) Key sequences: what you type to request one editing action.

[Commands](#) Named functions run by key sequences to do editing.

[Entering Emacs](#) Starting Emacs from the shell.

[Exiting](#) Stopping or killing Emacs.

Fundamental Editing Commands

[Basic](#) The most basic editing commands.

[Minibuffer](#) Entering arguments that are prompted for.

[M-x](#) Invoking commands by their names.

[Help](#) Commands for asking Emacs about its commands.

Important Text-Changing Commands

[Mark](#) The mark: how to delimit a region of text.

[Killing](#) Killing (cutting) and yanking (copying) text.

[Registers](#) Saving a text string or a location in the buffer.

[Display](#) Controlling what text is displayed.

[Search](#) Finding or replacing occurrences of a string.

[Fixit](#) Commands especially useful for fixing typos.

[Keyboard Macros](#) Recording a sequence of keystrokes to be replayed.

Major Structures of Emacs

[Files](#) All about handling files.

[Buffers](#) Multiple buffers; editing several files at once.

[Windows](#) Viewing multiple pieces of text in one frame.

[Frames](#) Using multiple windows on your display.

[International](#) Using non-ASCII character sets.

Advanced Features

Modes	Major and minor modes alter Emacs's basic behavior.
Indentation	Editing the white space at the beginnings of lines.
Text	Commands and modes for editing human languages.
Programs	Commands and modes for editing programs.
Building	Compiling, running and debugging programs.
Maintaining	Features for maintaining large programs.
Abbrevs	Defining text abbreviations to reduce typing.
Dired	Directory and file manager.
Calendar/Diary	Calendar and diary facilities.
Sending Mail	Sending mail in Emacs.
Rmail	Reading mail in Emacs.
Gnus	A flexible mail and news reader.
Host Security	Security issues on a single computer.
Network Security	Managing the network security.
Document View	Viewing PDF, PS and DVI files.
EWW	A web browser in Emacs.
Embedded WebKit Widgets	Embedding browser widgets in Emacs buffers.
Shell	Executing shell commands from Emacs.
Emacs Server	Using Emacs as an editing server.
Printing	Printing hardcopies of buffers or regions.
Sorting	Sorting lines, paragraphs or pages within Emacs.
Picture Mode	Editing pictures made up of text characters.
Editing Binary Files	Editing binary files with Hexl mode.
Saving Emacs Sessions	Saving Emacs state from one session to the next.
Recursive Edit	Performing edits while within another command.
Hyperlinking	Following links in buffers.
Amusements	Various games and hacks.
Packages	Installing additional features.
Customization	Modifying the behavior of Emacs.

Recovery from Problems

Quitting	Quitting and aborting.
Lossage	What to do if Emacs is hung or malfunctioning.
Bugs	How and when to report a bug.
Contributing	How to contribute improvements to Emacs.
Service	How to get help for your own Emacs needs.

Appendices

Copying	The GNU General Public License gives you permission to redistribute GNU Emacs on certain terms; it also explains that there is no warranty.
GNU Free Documentation License	The license for this documentation.
Emacs Invocation	Hairy startup options.
X Resources	X resources for customizing Emacs.
Antinews	Information about Emacs version 24.
Mac OS / GNUstep	Using Emacs under Mac OS and GNUstep.
Microsoft Windows	Using Emacs on Microsoft Windows and MS-DOS.
Manifesto	What's GNU? Gnu's Not Unix!
Glossary	Terms used in this manual.
Acknowledgments	Major contributors to GNU Emacs.
Indexes (each index contains a large menu)	
Key Index	An item for each standard Emacs key sequence.
Option Index	An item for every command-line option.
Command Index	An item for each command name.
Variable Index	An item for each documented variable.
Concept Index	An item for each concept.

Detailed Node Listing

Here are some other nodes which are really subnodes of the ones already listed, mentioned here so you can get to them in one step:

The Organization of the Screen

Point	The place in the text where editing commands operate.
Echo Area	Short messages appear at the bottom of the screen.
Mode Line	Interpreting the mode line.
Menu Bar	How to use the menu bar.

Basic Editing Commands

Inserting Text	Inserting text by simply typing it.
Moving Point	Moving the cursor to the place where you want to change something.
Erasing	Deleting and killing text.
Basic Undo	Undoing recent changes in the text.
Basic Files	Visiting, creating, and saving files.
Basic Help	Asking what a character does.
Blank Lines	Making and deleting blank lines.
Continuation Lines	How Emacs displays lines too wide for the screen.

Position Info	What line, row, or column is point on?
Arguments	Numeric arguments for repeating a command N times.
Repeating	Repeating the previous command quickly.
The Minibuffer	
Basic Minibuffer	Basic usage of the minibuffer.
Minibuffer File	Entering file names with the minibuffer.
Minibuffer Edit	How to edit in the minibuffer.
Completion	An abbreviation facility for minibuffer input.
Minibuffer History	Reusing recent minibuffer arguments.
Repetition	Re-executing commands that used the minibuffer.
Passwords	Entering passwords in the echo area.
Yes or No Prompts	Replying yes or no in the echo area.
Completion	
Completion Example	Examples of using completion.
Completion Commands	A list of completion commands.
Completion Exit	Completion and minibuffer text submission.
Completion Styles	How completion matches are chosen.
Completion Options	Options for completion.
Help	
Help Summary	Brief list of all Help commands.
Key Help	Asking what a key does in Emacs.
Name Help	Asking about a command, variable or function name.
Apropos	Asking what pertains to a given topic.
Help Mode	Special features of Help mode and Help buffers.
Package Keywords	Finding Lisp libraries by keywords (topics).
Language Help	Help relating to international language support.
Misc Help	Other help commands.
Help Files	Commands to display auxiliary help files.
Help Echo	Help on active text and tooltips.
The Mark and the Region	
Setting Mark	Commands to set the mark.
Marking Objects	Commands to put region around textual units.
Using Region	Summary of ways to operate on contents of the region.
Mark Ring	Previous mark positions saved so you can go back there.
Global Mark Ring	Previous mark positions in various buffers.
Shift Selection	Using shifted cursor motion keys.
Disabled Transient Mark	Leaving regions unhighlighted by default.

Killing and Moving Text

Deletion and Killing	Commands that remove text.
Yanking	Commands that insert text.
Cut and Paste	Clipboard and selections on graphical displays.
Accumulating Text	Other methods to add text to the buffer.
Rectangles	Operating on text in rectangular areas.
CUA Bindings	Using C-x/C-c/C-v to kill and yank.

Deletion and Killing

Deletion	Commands for deleting small amounts of text and blank areas.
Killing by Lines	How to kill entire lines of text at one time.
Other Kill Commands	Commands to kill large regions of text and syntactic units such as words and sentences.
Kill Options	Options that affect killing.

Yanking

Kill Ring	Where killed text is stored.
Earlier Kills	Yanking something killed some time ago.
Appending Kills	Several kills in a row all yank together.

Cut and Paste Operations on Graphical Displays

Clipboard	How Emacs uses the system clipboard.
Primary Selection	The temporarily selected text selection.
Secondary Selection	Cutting without altering point and mark.

Registers

Position Registers	Saving positions in registers.
Text Registers	Saving text in registers.
Rectangle Registers	Saving rectangles in registers.
Configuration Registers	Saving window configurations in registers.
Number Registers	Numbers in registers.
File Registers	File names in registers.
Keyboard Macro Registers	Keyboard macros in registers.
Bookmarks	Bookmarks are like registers, but persistent.

Controlling the Display

Scrolling	Commands to move text up and down in a window.
Recentering	A scroll command that centers the current line.
Auto Scrolling	Redisplay scrolls text automatically when needed.
Horizontal Scrolling	Moving text left and right in a window.
Narrowing	Restricting display and editing to a portion of the buffer.

View Mode	Viewing read-only buffers.
Follow Mode	Follow mode lets two windows scroll as one.
Faces	How to change the display style using faces.
Colors	Specifying colors for faces.
Standard Faces	The main predefined faces.
Text Scale	Increasing or decreasing text size in a buffer.
Font Lock	Minor mode for syntactic highlighting using faces.
Highlight Interactively	Tell Emacs what text to highlight.
Fringes	Enabling or disabling window fringes.
Displaying Boundaries	Displaying top and bottom of the buffer.
Useless Whitespace	Showing possibly spurious trailing whitespace.
Selective Display	Hiding lines with lots of indentation.
Optional Mode Line	Optional mode line display features.
Text Display	How text characters are normally displayed.
Cursor Display	Features for displaying the cursor.
Line Truncation	Truncating lines to fit the screen width instead of continuing them to multiple screen lines.
Visual Line Mode	Word wrap and screen line-based editing.
Display Custom	Information on variables for customizing display.

Searching and Replacement

Incremental Search	Search happens as you type the string.
Nonincremental Search	Specify entire string and then search.
Word Search	Search for sequence of words.
Symbol Search	Search for a source code symbol.
Regexp Search	Search for match for a regexp.
Regexps	Syntax of regular expressions.
Regexp Backslash	Regular expression constructs starting with `\'.
Regexp Example	A complex regular expression explained.
Lax Search	Search ignores some distinctions between similar characters, like letter-case.
Replace	Search, and replace some or all matches.
Other Repeating Search	Operating on all matches for some regexp.
Search Customizations	Various search customizations.

Incremental Search

Basic Isearch	Basic incremental search commands.
Repeat Isearch	Searching for the same string again.

Isearch Yank	Commands that grab text into the search string or else edit the search string.
Error in Isearch	When your string is not found.
Special Isearch	Special input in incremental search.
Not Exiting Isearch	Prefix argument and scrolling commands.
Isearch Minibuffer	Incremental search of the minibuffer history.

Replacement Commands

Unconditional Replace	Replacing all matches for a string.
Regexp Replace	Replacing all matches for a regexp.
Replacement and Lax Matches	Lax searching for text to replace.
Query Replace	How to use querying.

Commands for Fixing Typos

Undo	The Undo commands.
Transpose	Exchanging two characters, words, lines, lists...
Fixing Case	Correcting case of last word entered.
Spelling	Apply spelling checker to a word, or a whole file.

Keyboard Macros

Basic Keyboard Macro	Defining and running keyboard macros.
Keyboard Macro Ring	Where previous keyboard macros are saved.
Keyboard Macro Counter	Inserting incrementing numbers in macros.
Keyboard Macro Query	Making keyboard macros do different things each time.
Save Keyboard Macro	Giving keyboard macros names; saving them in files.
Edit Keyboard Macro	Editing keyboard macros.
Keyboard Macro Step-Edit	Interactively executing and editing a keyboard macro.

File Handling

File Names	How to type and edit file-name arguments.
Visiting	Visiting a file prepares Emacs to edit the file.
Saving	Saving makes your changes permanent.
Reverting	Reverting cancels all the changes not saved.
Autorevert	Auto Reverting non-file buffers.
Auto Save	Auto Save periodically protects against loss of data.
File Aliases	Handling multiple names for one file.
Directories	Creating, deleting, and listing file directories.
Comparing Files	Finding where two files differ.

Diff Mode	Mode for editing file differences.
Misc File Ops	Other things you can do on files.
Compressed Files	Accessing compressed files.
File Archives	Operating on tar, zip, jar etc. archive files.
Remote Files	Accessing files on other machines.
Quoted File Names	Quoting special characters in file names.
File Name Cache	Completion against a list of files you often use.
File Conveniences	Convenience Features for Finding Files.
Filesets	Handling sets of files.
Saving Files	
Save Commands	Commands for saving files.
Backup	How Emacs saves the old version of your file.
Customize Save	Customizing the saving of files.
Interlocking	How Emacs protects against simultaneous editing of one file by two users.
File Shadowing	Copying files to shadows automatically.
Time Stamps	Emacs can update time stamps on saved files.
Backup Files	
Backup Names	How backup files are named.
Backup Deletion	Emacs deletes excess numbered backups.
Backup Copying	Backups can be made by copying or renaming.
Auto Reverting Non-File Buffers	
Auto Reverting the Buffer Menu	Auto Revert of the Buffer Menu.
Auto Reverting Dired	Auto Revert of Dired buffers.
Supporting additional buffers	How to add more Auto Revert support.
Auto-Saving: Protection Against Disasters	
Auto Save Files	The file where auto-saved changes are actually made until you save the file.
Auto Save Control	Controlling when and how often to auto-save.
Recover	Recovering text from auto-save files.
Using Multiple Buffers	
Select Buffer	Creating a new buffer or reselecting an old one.
List Buffers	Getting a list of buffers that exist.
Misc Buffer	Renaming; changing read-only status; copying text.
Kill Buffer	Killing buffers you no longer need.
Several Buffers	How to go through the list of all buffers and operate variously on several of them.
Indirect Buffers	An indirect buffer shares the text of another buffer.
Buffer Convenience	Convenience and customization features for buffer handling.

Convenience Features and Customization of Buffer Handling

Uniquify	Making buffer names unique with directory parts.
Icomplete	Fast minibuffer selection.
Buffer Menus	Configurable buffer menu.

Multiple Windows

Basic Window	Introduction to Emacs windows.
Split Window	New windows are made by splitting existing windows.
Other Window	Moving to another window or doing something to it.
Pop Up Window	Finding a file or buffer in another window.
Change Window	Deleting windows and changing their sizes.
Displaying Buffers	How Emacs picks a window for displaying a buffer.
Temporary Displays	Displaying non-editable buffers.
Window Convenience	Convenience functions for window handling.

Displaying a Buffer in a Window

Window Choice	How display-buffer works.
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Frames and Graphical Displays

Mouse Commands	Moving, cutting, and pasting, with the mouse.
Word and Line Mouse	Mouse commands for selecting whole words or lines.
Mouse References	Using the mouse to select an item from a list.
Menu Mouse Clicks	Mouse clicks that bring up menus.
Mode Line Mouse	Mouse clicks on the mode line.
Creating Frames	Creating additional Emacs frames with various contents.
Frame Commands	Iconifying, deleting, and switching frames.
Fonts	Changing the frame font.
Speedbar	How to make and use a speedbar frame.
Multiple Displays	How one Emacs instance can talk to several displays.
Frame Parameters	Changing the colors and other modes of frames.
Scroll Bars	How to enable and disable scroll bars; how to use them.
Window Dividers	Window separators that can be dragged with the mouse.
Drag and Drop	Using drag and drop to open files and insert text.
Menu Bars	Enabling and disabling the menu bar.
Tool Bars	Enabling and disabling the tool bar.
Dialog Boxes	Controlling use of dialog boxes.
Tooltips	Displaying information at the current mouse position.
Mouse Avoidance	Preventing the mouse pointer from obscuring text.
Non-Window Terminals	Multiple frames on terminals that show only one.

[Text-Only Mouse](#) Using the mouse in text terminals.

International Character Set Support

[International Chars](#) Basic concepts of multibyte characters.

[Language Environments](#) Setting things up for the language you use.

[Input Methods](#) Entering text characters not on your keyboard.

[Select Input Method](#) Specifying your choice of input methods.

[Coding Systems](#) Character set conversion when you read and write files, and so on.

[Recognize Coding](#) How Emacs figures out which conversion to use.

[Specify Coding](#) Specifying a file's coding system explicitly.

[Output Coding](#) Choosing coding systems for output.

[Text Coding](#) Choosing conversion to use for file text.

[Communication Coding](#) Coding systems for interprocess communication.

[File Name Coding](#) Coding systems for file *names*.

[Terminal Coding](#) Specifying coding systems for converting terminal input and output.

[Fontsets](#) Fontsets are collections of fonts that cover the whole spectrum of characters.

[Defining Fontsets](#) Defining a new fontset.

[Modifying Fontsets](#) Modifying an existing fontset.

[Undisplayable Characters](#) When characters don't display.

[Unibyte Mode](#) You can pick one European character set to use without multibyte characters.

[Charsets](#) How Emacs groups its internal character codes.

[Bidirectional Editing](#) Support for right-to-left scripts.

Major and Minor Modes

[Major Modes](#) Text mode vs. Lisp mode vs. C mode...

[Minor Modes](#) Each minor mode is a feature you can turn on independently of any others.

[Choosing Modes](#) How modes are chosen when visiting files.

Indentation

[Indentation Commands](#) More commands for performing indentation.

[Tab Stops](#) Stop points for indentation in Text modes.

[Just Spaces](#) Using only space characters for indentation.

[Indent Convenience](#) Optional indentation features.

Commands for Human Languages

[Words](#) Moving over and killing words.

[Sentences](#) Moving over and killing sentences.

[Paragraphs](#) Moving over paragraphs.

[Pages](#) Moving over pages.

Quotation Marks	Inserting quotation marks.
Filling	Filling or justifying text.
Case	Changing the case of text.
Text Mode	The major modes for editing text files.
Outline Mode	Editing outlines.
Org Mode	The Emacs organizer.
TeX Mode	Editing TeX and LaTeX files.
HTML Mode	Editing HTML and SGML files.
Nroff Mode	Editing input to the nroff formatter.
Enriched Text	Editing text enriched with fonts, colors, etc.
Text Based Tables	Commands for editing text-based tables.
Two-Column	Splitting text columns into separate windows.
Filling Text	
Auto Fill	Auto Fill mode breaks long lines automatically.
Fill Commands	Commands to refill paragraphs and center lines.
Fill Prefix	Filling paragraphs that are indented or in a comment, etc.
Adaptive Fill	How Emacs can determine the fill prefix automatically.
Outline Mode	
Outline Format	What the text of an outline looks like.
Outline Motion	Special commands for moving through outlines.
Outline Visibility	Commands to control what is visible.
Outline Views	Outlines and multiple views.
Foldout	Folding means zooming in on outlines.
Org Mode	
Org Organizer	Managing TODO lists and agendas.
Org Authoring	Exporting Org buffers to various formats.
TeX Mode	
TeX Editing	Special commands for editing in TeX mode.
LaTeX Editing	Additional commands for LaTeX input files.
TeX Print	Commands for printing part of a file with TeX.
TeX Misc	Customization of TeX mode, and related features.
Enriched Text	
Enriched Mode	Entering and exiting Enriched mode.
Hard and Soft Newlines	There are two different kinds of newlines.
Editing Format Info	How to edit text properties.
Enriched Faces	Bold, italic, underline, etc.
Enriched Indentation	Changing the left and right margins.
Enriched	Centering, setting text flush with the left or right margin, etc.

[Justification](#)[Enriched Properties](#) The ``Special text properties'' submenu.**Editing Text-based Tables**[Table Definition](#) What is a text based table.[Table Creation](#) How to create a table.[Table Recognition](#) How to activate and deactivate tables.[Cell Commands](#) Cell-oriented commands in a table.[Cell Justification](#) Justifying cell contents.[Table Rows and Columns](#) Inserting and deleting rows and columns.[Table Conversion](#) Converting between plain text and tables.[Table Misc](#) Table miscellany.**Editing Programs**[Program Modes](#) Major modes for editing programs.[Defuns](#) Commands to operate on major top-level parts of a program.[Program Indent](#) Adjusting indentation to show the nesting.[Parentheses](#) Commands that operate on parentheses.[Comments](#) Inserting, killing, and aligning comments.[Documentation](#) Getting documentation of functions you plan to call.[Hideshow](#) Displaying blocks selectively.[Symbol Completion](#) Completion on symbol names of your program or language.[MixedCase Words](#) Dealing with identifiersLikeThis.[Semantic](#) Suite of editing tools based on source code parsing.[Misc for Programs](#) Other Emacs features useful for editing programs.[C Modes](#) Special commands of C, C++, Objective-C, Java, IDL, Pike and AWK modes.[Asm Mode](#) Asm mode and its special features.[Fortran](#) Fortran mode and its special features.**Top-Level Definitions, or Defuns**[Left Margin Paren](#) An open-paren or similar opening delimiter starts a defun if it is at the left margin.[Moving by Defuns](#) Commands to move over or mark a major definition.[Imenu](#) Making buffer indexes as menus.[Which Function](#) Which Function mode shows which function you are in.**Indentation for Programs**[Basic Indent](#) Indenting a single line.[Multi-line Indent](#) Commands to reindent many lines at once.[Lisp Indent](#) Specifying how each Lisp function should be indented.[C Indent](#) Extra features for indenting C and related modes.[Custom C Indent](#) Controlling indentation style for C and related modes.

Commands for Editing with Parentheses

Expressions	Expressions with balanced parentheses.
Moving by Parens	Commands for moving up, down and across in the structure of parentheses.
Matching	Insertion of a close-delimiter flashes matching open.

Manipulating Comments

Comment Commands	Inserting, killing, and aligning comments.
Multi-Line Comments	Commands for adding and editing multi-line comments.
Options for Comments	Customizing the comment features.

Documentation Lookup

Info Lookup	Looking up library functions and commands in Info files.
Man Page	Looking up man pages of library functions and commands.
Lisp Doc	Looking up Emacs Lisp functions, etc.

C and Related Modes

Motion in C	Commands to move by C statements, etc.
Electric C	Colon and other chars can automatically reindent.
Hungry Delete	A more powerful DEL command.
Other C Commands	Filling comments, viewing expansion of macros, and other neat features.

Fortran Mode

Fortran Motion	Moving point by statements or subprograms.
Fortran Indent	Indentation commands for Fortran.
Fortran Comments	Inserting and aligning comments.
Fortran Autofill	Auto fill support for Fortran.
Fortran Columns	Measuring columns for valid Fortran.
Fortran Abbrev	Built-in abbrevs for Fortran keywords.

Fortran Indentation

ForIndent Commands	Commands for indenting and filling Fortran.
ForIndent Cont	How continuation lines indent.
ForIndent Num	How line numbers auto-indent.
ForIndent Conv	Conventions you must obey to avoid trouble.
ForIndent Vars	Variables controlling Fortran indent style.

Compiling and Testing Programs

Compilation	Compiling programs in languages other than Lisp (C, Pascal, etc.).
Compilation Mode	The mode for visiting compiler errors.
Compilation Shell	Customizing your shell properly for use in the compilation buffer.
Grep Searching	Searching with grep.
Flymake	Finding syntax errors on the fly.

Debuggers	Running symbolic debuggers for non-Lisp programs.
Executing Lisp	Various modes for editing Lisp programs, with different facilities for running the Lisp programs.
Lisp Libraries	How Lisp programs are loaded into Emacs.
Lisp Eval	Executing a single Lisp expression in Emacs.
Lisp Interaction	Executing Lisp in an Emacs buffer.
External Lisp	Communicating through Emacs with a separate Lisp.

Running Debuggers Under Emacs

Starting GUD	How to start a debugger subprocess.
Debugger Operation	Connection between the debugger and source buffers.
Commands of GUD	Key bindings for common commands.
GUD Customization	Defining your own commands for GUD.
GDB Graphical Interface	An enhanced mode that uses GDB features to implement a graphical debugging environment.

GDB Graphical Interface

GDB User Interface Layout	Control the number of displayed buffers.
Source Buffers	Use the mouse in the fringe/margin to control your program.
Breakpoints Buffer	A breakpoint control panel.
Threads Buffer	Displays your threads.
Stack Buffer	Select a frame from the call stack.
Other GDB Buffers	Other buffers for controlling the GDB state.
Watch Expressions	Monitor variable values in the speedbar.
Multithreaded Debugging	Debugging programs with several threads.

Maintaining Large Programs

Version Control	Using version control systems.
Change Log	Maintaining a change history for your program.
Xref	Find definitions and references of any function, method, struct, macro, ... in your program.
EDE	An integrated development environment for Emacs.
Emerge	A convenient way of merging two versions of a program.

Version Control

Introduction to VC	How version control works in general.
VC Mode Line	How the mode line shows version control status.
Basic VC Editing	How to edit a file under version control.
Log Buffer	Features available in log entry buffers.
Registering	Putting a file under version control.
Old Revisions	Examining and comparing old versions.

VC Change Log	Viewing the VC Change Log.
VC Undo	Canceling changes before or after committing.
VC Ignore	Ignore files under version control system.
VC Directory Mode	Listing files managed by version control.
Branches	Multiple lines of development.
Miscellaneous VC	Various other commands and features of VC.
Customizing VC	Variables that change VC's behavior.

Introduction to Version Control

Why Version Control?	Understanding the problems it addresses.
Version Control Systems	Supported version control back-end systems.
VCS Concepts	Words and concepts related to version control.
VCS Merging	How file conflicts are handled.
VCS Changesets	How changes are grouped.
VCS Repositories	Where version control repositories are stored.
Types of Log File	The VCS log in contrast to the ChangeLog.

Basic Editing under Version Control

VC With A Merging VCS	Without locking: default mode for CVS.
VC With A Locking VCS	RCS in its default mode, SCCS, and optionally CVS.
Advanced C-x v v	Advanced features available with a prefix argument.

VC Directory Mode

VC Directory Buffer	What the buffer looks like and means.
VC Directory Commands	Commands to use in a VC directory buffer.

Version Control Branches

Switching Branches	How to get to another existing branch.
Pulling / Pushing	Receiving/sending changes from/to elsewhere.
Merging	Transferring changes between branches.
Creating Branches	How to start a new branch.

Miscellaneous Commands and Features of VC

Change Logs and VC	Generating a change log file from log entries.
VC Delete/Rename	Deleting and renaming version-controlled files.
Revision Tags	Symbolic names for revisions.
Version Headers	Inserting version control headers into working files.

Customizing VC

General VC	Options that apply to multiple back ends.
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[Options](#)

[RCS and SCCS](#)

Options for RCS and SCCS.

[CVS Options](#)

Options for CVS.

Change Logs

[Change Log](#)

Commands for editing change log files.

[Commands](#)

[Format of](#)

[ChangeLog](#)

What the change log file looks like.

Xref

[Find Identifiers](#)

Commands to find where an identifier is defined or referenced, to list identifiers, etc.

[Tags Tables](#)

Tags table records which file defines a symbol.

[Select Tags Table](#)

How to visit a specific tags table.

Find Identifiers

[Looking Up](#)

[Identifiers](#)

Commands to find the definition of a specific tag.

[Xref Commands](#)

Commands in the `*xref*` buffer.

[Identifier Search](#)

Searching and replacing identifiers.

[List Identifiers](#)

Listing identifiers and completing on them.

Tags Tables

[Tag Syntax](#)

Tag syntax for various types of code and text files.

[Create Tags Table](#)

Creating a tags table with `etags`.

[Etags Regexp](#)

Create arbitrary tags using regular expressions.

Merging Files with Emerge

[Overview of](#)

[Emerge](#)

How to start Emerge. Basic concepts.

[Submodes of](#)

[Emerge](#)

Fast mode vs. Edit mode. Skip Prefers mode and Auto Advance mode.

[State of Difference](#)

You do the merge by specifying state A or B for each difference.

[Merge Commands](#)

Commands for selecting a difference, changing states of differences, etc.

[Exiting Emerge](#)

What to do when you've finished the merge.

[Combining in](#)

[Emerge](#)

How to keep both alternatives for a difference.

[Fine Points of](#)

[Emerge](#)

Miscellaneous issues.

Abbrevs

[Abbrev Concepts](#)

Fundamentals of defined abbrevs.

[Defining Abbrevs](#)

Defining an abbrev, so it will expand when typed.

[Expanding Abbrevs](#)

Controlling expansion: prefixes, canceling expansion.

[Editing Abbrevs](#)

Viewing or editing the entire list of defined abbrevs.

[Saving Abbrevs](#)

Saving the entire list of abbrevs for another session.

Dynamic Abbrevs	Abbreviations for words already in the buffer.
Dabbrev Customization	What is a word, for dynamic abbrevs. Case handling.
Editing Pictures	
Basic Picture	Basic concepts and simple commands of Picture Mode.
Insert in Picture	Controlling direction of cursor motion after self-inserting characters.
Tabs in Picture	Various features for tab stops and indentation.
Rectangles in Picture	Clearing and superimposing rectangles.
Dired, the Directory Editor	
Dired Enter	How to invoke Dired.
Dired Navigation	Special motion commands in the Dired buffer.
Dired Deletion	Deleting files with Dired.
Flagging Many Files	Flagging files based on their names.
Dired Visiting	Other file operations through Dired.
Marks vs Flags	Flagging for deletion vs marking.
Operating on Files	How to copy, rename, print, compress, etc. either one file or several files.
Shell Commands in Dired	Running a shell command on the marked files.
Transforming File Names	Using patterns to rename multiple files.
Comparison in Dired	Running <code>diff</code> by way of Dired.
Subdirectories in Dired	Adding subdirectories to the Dired buffer.
Subdir Switches	Subdirectory switches in Dired.
Subdirectory Motion	Moving across subdirectories, and up and down.
Hiding Subdirectories	Making subdirectories visible or invisible.
Dired Updating	Discarding lines for files of no interest.
Dired and Find	Using <code>find</code> to choose the files for Dired.
Wdired	Operating on files by editing the Dired buffer.
Image-Dired	Viewing image thumbnails in Dired.
Misc Dired Features	Various other features.
The Calendar and the Diary	
Calendar Motion	Moving through the calendar; selecting a date.
Scroll Calendar	Bringing earlier or later months onto the screen.
Counting Days	How many days are there between two dates?
General Calendar	Exiting or recomputing the calendar.

Writing Calendar Files	Writing calendars to files of various formats.
Holidays	Displaying dates of holidays.
Sunrise/Sunset	Displaying local times of sunrise and sunset.
Lunar Phases	Displaying phases of the moon.
Other Calendars	Converting dates to other calendar systems.
Diary	Displaying events from your diary.
Appointments	Reminders when it's time to do something.
Importing Diary	Converting diary events to/from other formats.
Daylight Saving	How to specify when daylight saving time is active.
Time Intervals	Keeping track of time intervals.
Advanced Calendar/Diary Usage	Advanced Calendar/Diary customization.

Movement in the Calendar

Calendar Unit Motion	Moving by days, weeks, months, and years.
Move to Beginning or End	Moving to start/end of weeks, months, and years.
Specified Dates	Moving to the current date or another specific date.

Conversion To and From Other Calendars

Calendar Systems	The calendars Emacs understands (aside from Gregorian).
To Other Calendar	Converting the selected date to various calendars.
From Other Calendar	Moving to a date specified in another calendar.

The Diary

Format of Diary File	Entering events in your diary.
Displaying the Diary	Viewing diary entries and associated calendar dates.
Date Formats	Various ways you can specify dates.
Adding to Diary	Commands to create diary entries.
Special Diary Entries	Anniversaries, blocks of dates, cyclic entries, etc.

More advanced features of the Calendar and Diary

Calendar Customizing	Calendar layout and hooks.
Holiday Customizing	Defining your own holidays.
Mayan Calendar	Moving to a date specified in a Mayan calendar.
Date Display Format	Changing the format.

Time Display Format	Changing the format.
Diary Customizing	Defaults you can set.
Non-Gregorian Diary	Diary entries based on other calendars.
Diary Display	A choice of ways to display the diary.
Fancy Diary Display	Sorting diary entries, using included diary files.
Sexp Diary Entries	More flexible diary entries.
Sending Mail	
Mail Format	Format of a mail message.
Mail Headers	Details of some standard mail header fields.
Mail Aliases	Abbreviating and grouping mail addresses.
Mail Commands	Special commands for editing mail being composed.
Mail Signature	Adding a signature to every message.
Mail Amusements	Distracting the NSA; adding fortune messages.
Mail Methods	Using alternative mail-composition methods.
Mail Commands	
Mail Sending	Commands to send the message.
Header Editing	Commands to move to header fields and edit them.
Citing Mail	Quoting a message you are replying to.
Mail Misc	Attachments, spell checking, etc.
Reading Mail with Rmail	
Rmail Basics	Basic concepts of Rmail, and simple use.
Rmail Scrolling	Scrolling through a message.
Rmail Motion	Moving to another message.
Rmail Deletion	Deleting and expunging messages.
Rmail Inbox	How mail gets into the Rmail file.
Rmail Files	Using multiple Rmail files.
Rmail Output	Copying message out to files.
Rmail Labels	Classifying messages by labeling them.
Rmail Attributes	Certain standard labels, called attributes.
Rmail Reply	Sending replies to messages you are viewing.
Rmail Summary	Summaries show brief info on many messages.
Rmail Sorting	Sorting messages in Rmail.
Rmail Display	How Rmail displays a message; customization.
Rmail Coding	How Rmail handles decoding character sets.
Rmail Editing	Editing message text and headers in Rmail.
Rmail Digest	Extracting the messages from a digest message.
Rmail Rot13	Reading messages encoded in the rot13 code.

Movemail	More details of fetching new mail.
Remote Mailboxes	Retrieving mail from remote mailboxes.
Other Mailbox Formats	Retrieving mail from local mailboxes in various formats.

Rmail Summaries

Rmail Make Summary	Making various sorts of summaries.
Rmail Summary Edit	Manipulating messages from the summary.

Gnus

Buffers of Gnus	The group, summary, and article buffers.
Gnus Startup	What you should know about starting Gnus.
Gnus Group Buffer	A short description of Gnus group commands.
Gnus Summary Buffer	A short description of Gnus summary commands.

Document Viewing

DocView Navigation	Navigating DocView buffers.
DocView Searching	Searching inside documents.
DocView Slicing	Specifying which part of a page is displayed.
DocView Conversion	Influencing and triggering conversion.

Running Shell Commands from Emacs

Single Shell	How to run one shell command and return.
Interactive Shell	Permanent shell taking input via Emacs.
Shell Mode	Special Emacs commands used with permanent shell.
Shell Prompts	Two ways to recognize shell prompts.
Shell History	Repeating previous commands in a shell buffer.
Directory Tracking	Keeping track when the subshell changes directory.
Shell Options	Options for customizing Shell mode.
Terminal emulator	An Emacs window as a terminal emulator.
Term Mode	Special Emacs commands used in Term mode.
Remote Host	Connecting to another computer.
Serial Terminal	Connecting to a serial port.

Shell Command History

Shell Ring	Fetching commands from the history list.
Shell History Copying	Moving to a command and then copying it.
History References	Expanding ‘!’-style history references.

Using Emacs as a Server

Invoking	Connecting to the Emacs server.
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Emacs client startup options.

Printing Hard Copies

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Printing buffers or regions as PostScript.

[PostScript](#)[Variables](#)

Customizing the PostScript printing commands.

[Printing Package](#)

An optional advanced printing interface.

Hyperlinking and Navigation Features

[Browse-URL](#)

Following URLs.

[Goto Address mode](#)

Activating URLs.

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Finding files etc. at point.

Emacs Lisp Packages

[Package Menu](#)

Buffer for viewing and managing packages.

[Package](#)[Installation](#)

Options for package installation.

[Package Files](#)

Where packages are installed.

Customization

[Easy Customization](#)

Convenient way to browse and change settings.

[Variables](#)

Many Emacs commands examine Emacs variables to decide what to do; by setting variables, you can control their functioning.

[Key Bindings](#)

The keymaps say what command each key runs. By changing them, you can redefine keys.

[Init File](#)

How to write common customizations in the initialization file.

Easy Customization Interface

[Customization](#)[Groups](#)

How settings are classified.

[Browsing Custom](#)

Browsing and searching for settings.

[Changing a](#)[Variable](#)

How to edit an option's value and set the option.

[Saving](#)[Customizations](#)

Saving customizations for future Emacs sessions.

[Face Customization](#)

How to edit the attributes of a face.

[Specific](#)[Customization](#)

Customizing specific settings or groups.

[Custom Themes](#)

Collections of customization settings.

[Creating Custom](#)[Themes](#)

How to create a new custom theme.

Variables

[Examining](#)

Examining or setting one variable's value.

[Hooks](#)

Hook variables let you specify programs for parts of Emacs to run on particular occasions.

Locals	Per-buffer values of variables.
File Variables	How files can specify variable values.
Directory Variables	How variable values can be specified by directory.

Local Variables in Files

Specifying File Variables	Specifying file local variables.
Safe File Variables	Making sure file local variables are safe.

Customizing Key Bindings

Keymaps	Generalities. The global keymap.
Prefix Keymaps	Keymaps for prefix keys.
Local Keymaps	Major and minor modes have their own keymaps.
Minibuffer Maps	The minibuffer uses its own local keymaps.
Rebinding	How to redefine one key's meaning conveniently.
Init Rebinding	Rebinding keys with your initialization file.
Modifier Keys	Using modifier keys in key bindings.
Function Keys	Rebinding terminal function keys.
Named ASCII Chars	Distinguishing <TAB> from C-i, and so on.
Mouse Buttons	Rebinding mouse buttons in Emacs.
Disabling	Disabling a command means confirmation is required before it can be executed. This is done to protect beginners from surprises.

The Emacs Initialization File

Init Syntax	Syntax of constants in Emacs Lisp.
Init Examples	How to do some things with an init file.
Terminal Init	Each terminal type can have an init file.
Find Init	How Emacs finds the init file.
Init Non-ASCII	Using non-ASCII characters in an init file.

Dealing with Emacs Trouble

DEL Does Not Delete	What to do if doesn't delete.
Stuck Recursive	'[...] ' in mode line around the parentheses.
Screen Garbled	Garbage on the screen.
Text Garbled	Garbage in the text.
Memory Full	How to cope when you run out of memory.
Crashing	What Emacs does when it crashes.
After a Crash	Recovering editing in an Emacs session that crashed.
Emergency Escape	What to do if Emacs stops responding.

Reporting Bugs

Known Problems	How to read about known problems and bugs.
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Understanding Bug	How to report a bug effectively.

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Steps to follow for a good bug report.

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How to send a patch for GNU Emacs.

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Arguments to visit files, load libraries, and call functions.

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Arguments that take effect while starting Emacs.

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Certain system-specific variables.

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Basic usage of GTK+ resources.

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