

# 6 Communicating with Other Users

*symbolics*



# 6 Communicating with Other Users

*symbolics*<sup>™</sup>

---

# Communicating With Other Users

# 999022

July 1986

**This document corresponds to Genera 7.0 and later releases.**

The software, data, and information contained herein are proprietary to, and comprise valuable trade secrets of, Symbolics, Inc. They are given in confidence by Symbolics pursuant to a written license agreement, and may be used, copied, transmitted, and stored only in accordance with the terms of such license. This document may not be reproduced in whole or in part without the prior written consent of Symbolics, Inc.

Copyright © 1986, 1985, 1984, 1983 Symbolics, Inc. All Rights Reserved.

Portions of font library Copyright © 1984 Bitstream Inc. All Rights Reserved.

Portions Copyright © 1980 Massachusetts Institute of Technology. All Rights Reserved.

**Symbolics, Symbolics 3600, Symbolics 3670, Symbolics 3675, Symbolics 3640, Symbolics 3645, Symbolics 3610, Genera, Symbolics-Lisp<sup>®</sup>, Wheels, Symbolics Common Lisp, Zetalisp<sup>®</sup>, Dynamic Windows, Document Examiner, Showcase, SmartStore, SemantiCue, Frame-Up, Firewall, S-DYNAMICS<sup>®</sup>, S-GEOMETRY, S-PAINT, S-RENDER<sup>®</sup>, MACSYMA, COMMON LISP MACSYMA, CL-MACSYMA, LISP MACHINE MACSYMA, MACSYMA Newsletter and Your Next Step In Computing** are trademarks of Symbolics, Inc.

UNIX is a trademark of AT&T Bell Laboratories.

VAX and VMS are trademarks of the Digital Equipment Corporation.

## Restricted Rights Legend

Use, duplication, and disclosure by the Government are subject to restrictions as set forth in subdivision (b)(3)(ii) of the Rights in Technical Data and Computer Software Clause at FAR 52.227-7013.

Symbolics, Inc.  
4 New England Tech Center  
555 Virginia Road  
Concord, MA 01742

Text written and produced on Symbolics 3600-family computers by the Documentation Group of Symbolics, Inc.

Text masters produced on Symbolics 3600-family computers and printed on Symbolics LGP2 Laser Graphics Printers.

Cover design: Schafer/LaCasse

Printer: CSA Press

Printed in the United States of America.

Printing year and number: 88 87 86 9 8 7 6 5 4 3 2 1

## Table of Contents

	Page
<b>I. Zmail Reference Guide</b>	<b>1</b>
<b>1. Overview of Zmail</b>	<b>3</b>
1.1 Format Conventions for Zmail Commands	3
1.2 Online Help for Zmail	5
1.3 Zmail Architecture	8
1.3.1 Conceptual Architecture	8
1.3.2 Top-Level Interface to Zmail	10
<b>2. Basic Zmail</b>	<b>15</b>
2.1 Entering Zmail	15
2.2 Exiting Zmail	15
2.3 Commands for Sending Mail	16
2.4 Commands for Reading Mail	17
2.4.1 Commands to Read Your Inbox	18
2.4.2 Commands to Read Your Mail	19
2.5 Mail Commands	20
2.5.1 Summary of Mail Commands	20
2.5.2 Mail Mode in Zmail	21
2.5.3 Zmail Reply Command	26
2.6 Message Movement and Deletion	29
2.6.1 Message Movement Commands	29
2.6.2 Message Deletion Commands	32
2.7 Other Zmail Commands	32
2.7.1 Entering Mail Mode Recursively	33
2.7.2 Adding Bug Lists to Zmail	33
2.7.3 Encrypting Messages	34
<b>3. Getting Out of Trouble in Zmail</b>	<b>35</b>
3.1 Recovering From Stuck States in Zmail	35
3.2 Undoing Commands in Zmail	36
<b>4. Managing Your Mail</b>	<b>39</b>
4.1 Manipulating Messages	39
4.1.1 Replying and Remailing	39

---

4.1.2	Moving a Message to a File	40
4.1.3	Hardcopying	40
4.1.4	Editing	41
4.1.5	Reordering	41
4.1.6	Operating on Zmail Messages Referred to by the Current Message	41
4.2	Classifying Messages	43
4.2.1	Setting Zmail Keywords	43
4.2.2	Saving Keywords	44
4.3	Mail Buffers	45
4.3.1	Listing Zmail Buffers, Mail Files and Collections	45
4.3.2	Selecting Mail Buffers and Files	45
4.3.3	Copying a Message to Another Buffer	46
4.3.4	Saving a List of Mail Files	46
4.4	Mail Collections	46
4.4.1	Creating a Mail Collection	46
4.4.2	Operating on a Mail Collection	48
4.4.3	Operating on a Message in a Mail Collection	49
4.5	Operating on a Group of Messages	50
4.6	Saving, Expunging, Killing, and Renaming	50
4.7	Hints for Using Keywords, Mail Collections, and Mail Files	51
<b>5.</b>	<b>Reference Information</b>	<b>53</b>
5.1	Fundamental Techniques	53
5.1.1	Customizing Zmail	53
5.1.2	Testing Zmail Message Characteristics	54
5.1.3	Defining Message Search Spaces	60
5.2	Zmail Profile Options	62
5.2.1	Zmail Options for Window Configuration	62
5.2.2	Zmail Options for Reading Mail	63
5.2.3	Zmail Options for Saving Mail	64
5.2.4	Zmail Options for Sending Mail	65
5.2.5	Zmail Options for Replying to Mail	67
5.2.6	Zmail Options for Including Messages in a Reply	69
5.2.7	Zmail Options for Forwarding Messages	70
5.2.8	Zmail Options for Deleting Messages and Moving Around	70
5.2.9	Zmail Option for Ordering Keywords	72
5.2.10	Zmail Option for the Format of Mail Files	73
5.2.11	Zmail Options for Moving Messages and Creating Collections	73
5.2.12	Zmail Options for Calendar Mode	74

5.3	Header Formats	75
5.4	System Dependencies	77
5.4.1	Disk File Names	77
5.4.2	Mail File Formats	78
5.4.3	Binary Format for Storing Mail Files	79
5.4.4	Converting Existing Mail Files to KBIN Format	79
5.4.5	Support for Internet Domain Addressing	80
5.4.6	Features Not Supported by Zmail	80
6.	Dictionary of Zmail Commands	83
	<b>II. Converse</b>	<b>113</b>
7.	Introduction to Converse	115
8.	Using Converse	117
8.1	Sending and Replying to Messages with Converse	117
8.2	Converse Commands	119
8.3	Lisp Listener Commands for Converse	120
9.	Customizing Converse	123
	<b>III. Symbolics Store-and-Forward Mailer</b>	<b>125</b>
10.	Overview of the Mailer	127
11.	Mailer Functions	129
12.	Files and Directories Used by the Mailer	133
13.	What to Do When the Mailer Crashes	137
	<b>Index</b>	<b>139</b>

## List of Figures

Figure 1.	Help for a Keyboard Command	6
Figure 2.	Help for a Menu Command	7
Figure 3.	Help for a $m-x$ Command	7
Figure 4.	Messages, buffers, files, and collections.	9
Figure 5.	Main Zmail window.	14
Figure 6.	[Save (R)]	16
Figure 7.	[Quit (R)]	16
Figure 8.	[Reply (R)]	28
Figure 9.	Local Mail	28
Figure 10.	Profile mode display	55
Figure 11.	Filter Selection Display.	58
Figure 12.	Filter Creation Display.	59
Figure 13.	Universe Selection Display.	61
Figure 14.	Mail Mode Display (Zero-Window Mode)	83
Figure 15.	[Continue (R)]	88
Figure 16.	[Jump (M)]	94
Figure 17.	[Sort (R)] Menu	109
Figure 18.	A Fresh Converse Window	117
Figure 19.	A Converse Message About to be Sent	117
Figure 20.	A Converse Conversation	118

## **PART I.**

# **Zmail Reference Guide**





## 1. Overview of Zmail

Zmail is a display-oriented mail system for Genera. Using Zmail, you can send and receive mail, archive your mail in disk files, and operate on groups of messages selected according to very flexible criteria. Note that Zmail is not a facility for exchanging immediate, interactive messages with another user; that facility is called Converse. See the section "Converse", page 113.

Zmail provides the Zmacs editing commands for composing and editing messages. See the section "Zmacs Manual" in *Text Editing and Processing*.

### 1.1 Format Conventions for Zmail Commands

Zmail command descriptions are formatted as follows:

*Command* (*How*) This represents the description of the command *Command*.  
*How* tells how to invoke the command.

Here are the different kinds of Zmail commands:

- |                |  |
|----------------|--|
| Menu           | The command is an item to be clicked on in the top-level command menu. See the section "Top-Level Interface to Zmail", page 10.  |
| Editor Menu    | (Mail-mode commands only.) The command is an item to be clicked on in the editor menu that you get by clicking right in mail mode. See the section "Mail Mode in Zmail", page 21.  |
| Kbd            | The command is a character or key to press at the keyboard, such as <code>c-m-SPACE</code> or <code>ABORT</code> .   |
| m-X            | The command is an extended command. Type <code>m-X</code> (or just <code>X</code> ) followed by the command, exactly as written. See below for an example description that includes more information on <code>m-X</code> . |
| Summary Window | The command is a click to be made on the summary window, such as Click left on Summary Line.   |

For example, the description of a Zmail menu item looks like this:

**[Next] Zmail Menu Item**

[Next] This would describe the left click on [Next].

[Next (M)] This would describe the middle click on [Next]. Frequently the behavior of the middle click can be set in your Zmail Profile. See the section "Zmail Profile Options", page 62.

[Next (R)] And this would describe the right click on [Next].

The descriptions of command typed from the keyboard look like this:

*n* J (Kbd) This is what the description for the J command looks like. The "n" means that J can take an optional numeric argument. To give the argument, type an integer (positive, negative, or zero) before typing J. (The number is echoed in the mode-line window. If you mistyped the number you were entering, type c-G (before typing J) and start over.)

*n* Move to Default Previous Point (m-X)

This is the description for a m-X command that takes a numeric argument. To give an argument, type an integer, then X or m-X, then the words Move to Default Previous Point, then press RETURN. After you type the X, the mode line changes to a Zwei minibuffer into which you type the m-X command. (If you have typed an argument, 53, for example, a note appears saying "Arg = 53".)

While you are typing in the minibuffer, you can use several special characters:

RUBOUT	Deletes last character typed.
ABORT	Aborts the m-X command. The minibuffer disappears and Zmail is ready for a new command.
COMPLETE	Completes as much of the command as possible. (For example, typing "mov COMPLETE" would complete to "Move", because there are several commands beginning with "move". If you then type " to d COMPLETE", this completes to "Move to Default Previous Point" because no other commands begin with "Move to d".)
RETURN	Performs completion (like COMPLETE) and then executes the command (if it is able to do completion).
c-?	Shows the possible completions for the partial command being entered.
c-sh-?	Shows the command names containing the string typed.
HELP	Gives information on the special characters and show possible completions.

There are other special characters and commands available in the minibuffer. See the section "Zmacs Manual" in *Text Editing and Processing*.

$m-X$  is not the only command that uses the minibuffer; most commands that prompt for keyboard input (for example, for entry of filenames) use the minibuffer. Such commands often specify a default for the data they prompt for; if so, you can get the default by just pressing RETURN to the minibuffer. You can also press  $c-m-Y$  to yank the default into the minibuffer for editing. Commands or subcommands that use the minibuffer can always be aborted by pressing ABORT when the minibuffer appears.

One point to keep in mind is that many of the commands have options and defaults that you can customize for yourself. See the section "Setting and Saving Zmail Options", page 53.

## 1.2 Online Help for Zmail

Some online documentation is available. This comes in five forms:

- Explanations displayed automatically: Often, useful information about what Zmail is doing is automatically displayed on the screen. This information is usually displayed in the mode line.
- Mouse documentation line: Tells what clicking the mouse buttons would do with the mouse in its current position. You can read short documentation for many commands by watching the mouse documentation line as you move the mouse around the screen.
- Describe Command ( $m-X$ ): Prompts for the name of a  $m-X$  command and displays its help documentation.
- Apropos ( $m-X$ ): Prompts for a character string and displays a list of the  $m-X$  commands containing that string in their names.
- HELP key: While at top level, documentation on any top-level command is available by pressing HELP and then typing a character or key, or clicking on a command from the command menu. For example, to get information on the N command, press HELP N. (See Figure 1.)

For information on the Next command, press HELP and then click (any button) on [Next]. (See Figure 2.)

To learn about the Move to Default Previous Point (m-X) command, press HELP X and then type Move to Default Previous Point and press RETURN. (See Figure 3, which shows the screen just before RETURN was pressed.)

Some of the documentation states that some command normally does such-and-such, but "is controlled by \*...-...-...\*". What this means is that the exact action performed by the command is an option that you can set in your profile. See the section "Customizing Zmail", page 53.

If you press HELP \*, you get a list of Zmail commands and short explanations. The command names you are given are the m-X names; the list also tells if the command is available from the keyboard or command menu.

While in mail or edit mode, you can get documentation on the keyboard versions of mail or edit mode commands by pressing HELP C for Keyboard commands, or HELP D for m-X commands, followed by the command itself.

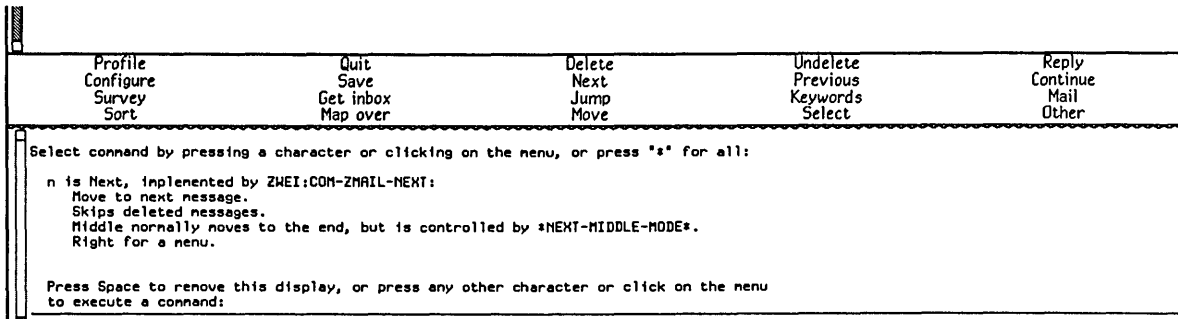


Figure 1. Help for a Keyboard Command

Profile Configure Survey Sort	Quit Save Get inbox Map over	Delete Next Jump Move	Undelete Previous Keywords Select	Reply Continue Mail Other
<p>Select command by pressing a character or clicking on the menu, or press "*" for all:</p> <p>This selection is Next, implemented by ZHEI:COM-ZMAIL-NEXT:          Move to next message.          Skips deleted messages.          Middle normally moves to the end, but is controlled by *NEXT-MIDDLE-MODE*.          Right for a menu.</p> <p>Press Space to remove this display, or press any other character or click on the menu to execute a command: █</p>				

Figure 2. Help for a Menu Command

Profile Configure Survey Sort	Quit Save Get inbox Map over	Delete Next Jump Move	Undelete Previous Keywords Select	Reply Continue Mail Other
<p>Select command by pressing a character or clicking on the menu, or press "*" for all:</p> <p>* is Extended Command, implemented by ZHEI:COM-ZMAIL-EXTENDED-COMMAND:          Execute any top-level command</p> <p>This command is Move To Default Previous Point, implemented by ZHEI:COM-ZMAIL-MOVE-TO-DEFAULT-PREVIOUS-POINT:          Rotate the point pd1.          A numeric argument specifies the number of entries to rotate, and sets the new default.</p> <p>Press Space to remove this display, or press any other character or click on the menu to execute a command: █</p>				

Figure 3. Help for a m-X Command

## 1.3 Zmail Architecture

Zmail runs in two processes. The foreground process is the main process; the background process performs file operations. Only one main Zmail window exists; by contrast, many editor windows or Dynamic Lisp Listener windows can coexist. Input into text buffers is processed by Zwei, the text-handling subsystem used by the editor. Zmail submits mail to and receives mail from a *mailer* program running on a mail server. See the section "Symbolics Store-and-Forward Mailer", page 125.

### 1.3.1 Conceptual Architecture

The objects Zmail manipulates are of the following types:

- messages*            Composed of a *text field* and a number of *header fields*. The text field is the body of the message, while the headers supply routing information such as sender, recipient(s), date, and so forth. Messages have a variety of *properties* (for example, Answered, meaning that you have replied to the message) and can have any number of *keywords*, which are simply user-defined tags. The message you are examining at any particular time is called the *current message*.
- mail buffers*        Named groups of messages. Each mail buffer is associated with a disk file from which it was read, or to which it will be saved, or both. It bears the same name as its associated file. Each mail buffer stores various attributes specifying its format and other properties. You can set or alter these by using [File Options] in Profile Mode. See the section "Zmail Profile Options", page 62.
- mail collections*    Named groups of messages drawn from one or more mail buffers. (A single message exists in exactly one buffer and any number of collections.) The name of the collection indicates how it was created. Mail collections allow you to group related messages from one or more mail buffers. Collections cannot be saved on disk. However, you can copy the collection to a buffer and save the buffer. See the section "Saving, Expunging, Killing, and Renaming Zmail Messages", page 50.
- mail sequences*     Buffers and collections. The last mail sequence selected is called the *current mail sequence*.
- mail files*          Mail buffers saved on disk. When mail buffers are invoked,

their associated files are automatically read in if they are not present already; you never actually manipulate the file itself with Zmail. Mail buffers and mail files are analogous to editor buffers and text files.

*inbox files (or inboxes)*

The files in which new mail appears. When you ask for your new mail, the contents of your inbox are appended to your *default mail file* and displayed. (Thus, unless you delete or move them, messages are saved in your default mail file. Zmail does not use a single file as both default mail file and inbox, as some mail systems do.)

Figure 4 shows the relationships among objects of the above types.

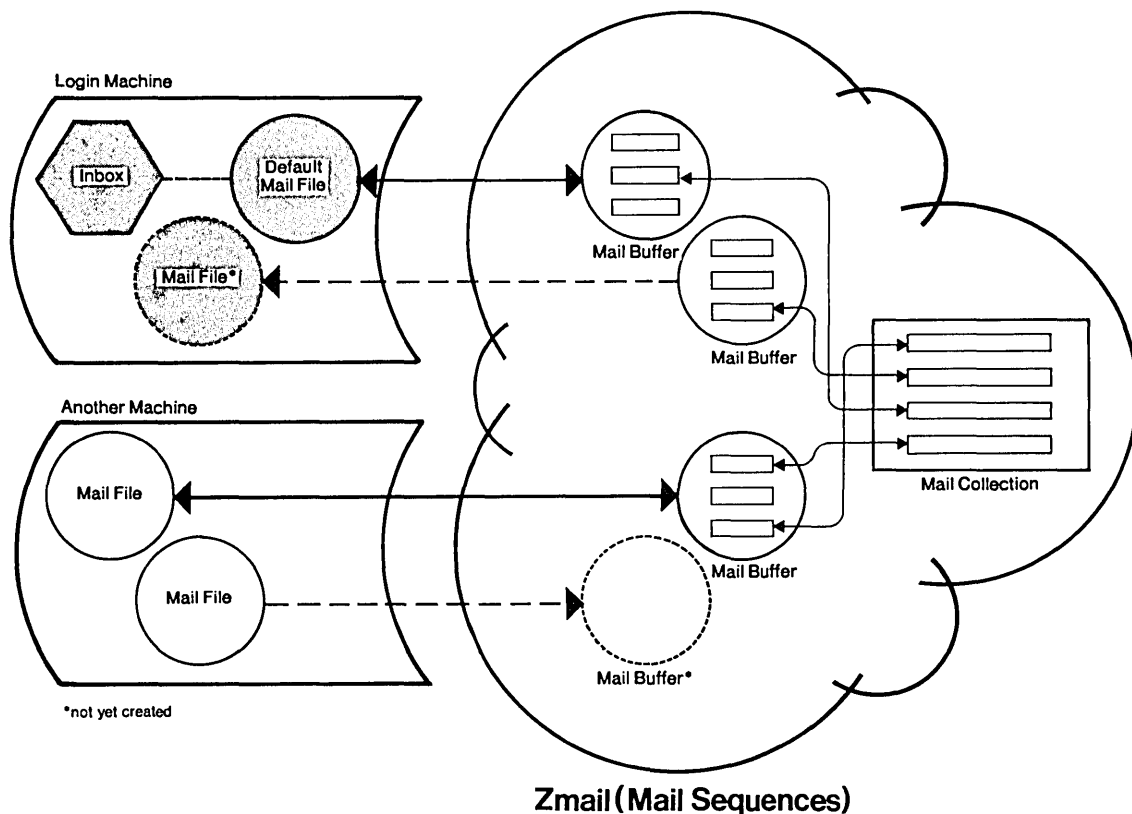


Figure 4. Messages, buffers, files, and collections.



### 1.3.1.1 Zmail Inboxes

The relationship of Zmail inboxes to other Zmail objects is a dynamic one, defined by the operation of the [Get inbox] command, which works like this:

1. Zmail starts reading your default mail file into a mail buffer (if it has not been read in already), and that buffer is selected as the current buffer.
2. Zmail checks to see if your inbox exists. If not, you have no new mail and Zmail displays a message to that effect. If your inbox does exist, it is renamed according to the limitations of the file system, and in such a way that it is evident that it is Zmail's temporary file, and its contents are read in by the background process and appended to the mail buffer.
3. While you read your mail, the background process saves the new version of the buffer onto the disk and deletes the renamed inbox. When this is done can be controlled in your profile. See the variable `zwei:*inhibit-background-saves*`, page 65.

When Zmail checks to see if your inbox exists, it checks first for the existence of a renamed inbox. Thus the renaming ensures that no mail is lost due to a system crash. The next use of [Get inbox] after a crash results in the old renamed inbox being included first, and after that is processed, the inbox containing newer mail is renamed and read.

### 1.3.2 Top-Level Interface to Zmail

Zmail accepts input from the keyboard and the mouse. Output is displayed on, and mouse input is accepted from, the display shown in Figure 5. This display has four regions, all of which are mouse-sensitive:

#### 1.3.2.1 Summary Window

The *Summary Window* displays a line for each message in the current sequence, with an arrow indicating the current message.

The information provided in the summary line is:

**No.**                   The *message number*. Whenever Zmail displays a list of messages, it numbers them for easy reference. The numbers refer only to the position of the message in the list, so when you list subsets of the mail file, the messages show up with different numbers. And when you delete or rearrange messages, the numbers change accordingly.

*status letter*       The *status letter* is the letter or symbol following the message number. Possible status letters are:

- The message has not yet been displayed.
- : The message has been or is being displayed.
- A The message has been answered.
- D The message has been deleted.

(The above list is in reverse order of precedence; that is, a deleted message is marked D whether or not it has been answered.)

Lines	The message length in lines.
Date	The date the message was sent.
From→To	The sender (From field) and as much of the recipients (To field) of the message as will fit, summarized on either side of the →. A missing name before or after the arrow means the message was from or to you. For example, →PJF, ,MJH represents a message from you to PJF, yourself, and MJH. Only the To: recipients are listed, not the Cc: or Bcc: recipients. See the section "Sending Your Mail" in <i>User's Guide to Symbolics Computers</i> . See the section "Commands for Sending Mail", page 16.
<i>Keywords</i>	The keywords attached to the message are enclosed in braces.
Subject or Text	The Subject: field of the message, or in the absence of a Subject: field, the first non-blank line of text in the message.

### 1.3.2.2 Command Menu

The *Command Menu* provides a mouse-sensitive menu of the most useful top-level commands. In Zmail documentation, when we say, for example, "[Get inbox]", we mean the Get inbox command in this menu. Some of these commands (for example, [Delete]) apply only to the current message.

### 1.3.2.3 Message Window

The *Message Window* displays the current message. The message window is an editor buffer.

Initially, there is no current message; instead, there is a short note explaining how to read and send mail. When you read your mail, the first new message becomes the current message; if there is no new mail, the first old message is the current message. As you move around the mail file to inspect other messages, they are selected as the current message and displayed.

### 1.3.2.4 Zmail Minibuffer

The minibuffer contains the mode line. It is also where some short notifications get displayed.

#### Zmail Mode Line

The *Mode Line* gives status information about Zmail and about the current message, including its properties and keywords.

The various information in the mode line is:

<i>Program status</i>	The mode the program is in. Possibilities are:
Zmail	Zmail is at top level.
Zmail Mail	Zmail is in mail mode, in which mail is sent. Following the word Mail is the mode in which the message to be sent is being edited, for example (text). The editor mode is followed by either Message, Headers, or Mail, indicating which window the cursor is in. (For a description of these windows, see the explanation of the c-X 0, c-X 1, and c-X 2 commands. See the section "Configuring and Selecting Zmail Windows", page 22. See the section "Sending Your Mail" in <i>User's Guide to Symbolics Computers</i> . See the section "Replying to Mail" in <i>User's Guide to Symbolics Computers</i> .)
Zmail Profile	Zmail is in Profile mode, in which you can customize Zmail. See the section "Customizing Zmail", page 53. Following the word Profile is the name of your Zmail init file, in which the customizations are stored.
Zmail Marking	Zmail is in Marking mode, executing the Mark Survey command.
Zmail Editing Message	Zmail is in Editing Message mode, in which you can edit your copy of a previously received message.
<i>Current mail file</i>	The name of the current mail file, or "No current mail file" if there is none.
<i>Current message number/total number of messages</i>	
<i>Message properties</i>	Properties describing the current message, in parentheses. Possible properties are:
unseen	Message is now being displayed for the first time
deleted	Message has been marked for deletion

recent	Message was new mail in the current session
last	Message is the last in the file
filed	Message has been copied to another file
answered	Message has been answered
forwarded	Message has been forwarded
redistributed	Message has been redistributed
badheader	Message has a bad header

*Keywords* Any keywords that have been saved on this message, in braces.

--More ---- Indicates that there is more of the message off the screen.

--More Below-- There is more text following this screen, use SCROLL to see it.

--More Above-- There is more text before this screen, use n-SCROLL to see it.

--More Above and Below-- You are in the middle of the message.

## Second Mode Line

The second mode line gives useful information on what the program is doing at various times. In Figure 5, for example, the new mail message means Zmail detected new mail in your inbox. Other messages that appear in the second mode line tell you what file the program is reading or writing, what error just occurred (Zmail flashes the screen also), or what certain keys do (for example, END and ABORT). It is a good idea to check the mode lines if you are unsure where you are in the program or how to get elsewhere.

The Summary and Message Windows can both be scrolled using the *scroll bar*. See the section "Scrolling" in *User's Guide to Symbolics Computers*. The Summary Window can also be scrolled forward by pressing c-n-v and backward by pressing c-n-sh-v. The Message Window can be scrolled forward with the SCROLL key, by pressing SPACE or by clicking left on the --More Below-- message in the mode line, and backward by n-SCROLL, n-v, or by clicking on the --More Above-- message in the mode line.

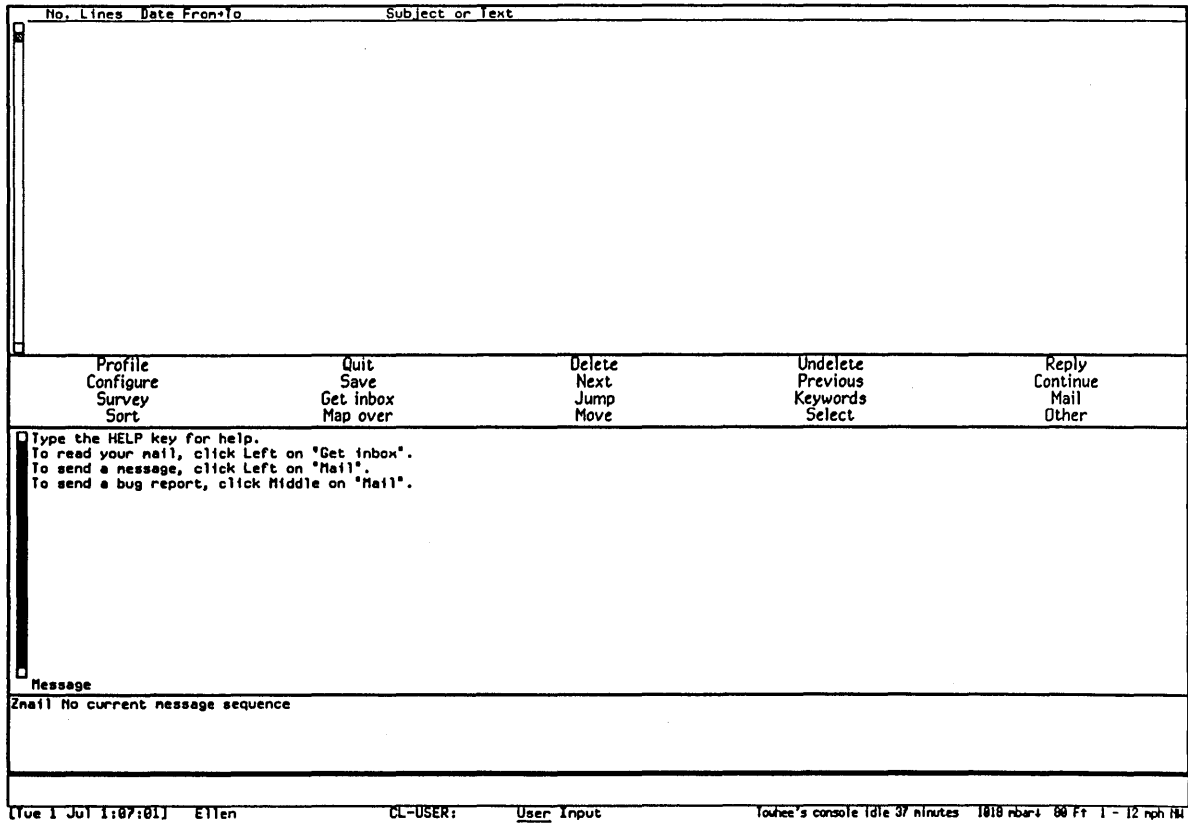


Figure 5. Main Zmail window.

## 2. Basic Zmail

### 2.1 Entering Zmail

Zmail can be started in several ways:

- By pressing `SELECT M` (the most common way)
- By giving the command `Select Activity Mail`
- By typing `(zmail)` to a Lisp Listener
- By clicking on `[Mail]` in the System menu

When started via `(zmail)`, Zmail begins reading in your primary mail file and inbox (if any). See the section "Commands for Reading Mail", page 17.

When invoked using the `SELECT` key, the command processor, or System menu, Zmail displays an explanatory message and allows commands that do not require a mail file. Click on `[Get inbox]` in the Zmail menu or press `G` to read in your mail file; click on `[Mail]` or press `M` to send mail.

You can start up Zmail from your init file by using the function `zwei:preload-zmail`. See the function `zwei:preload-zmail` in *User's Guide to Symbolics Computers*.

### 2.2 Exiting Zmail

The usual way to exit Zmail is to save your mail file by clicking on `[Save]`, or by pressing `S`, and then select another program using the `SELECT` key or the System menu. Clicking right on `[Save]` pops up a menu listing the loaded mail files. See the section "`[Save]` Zmail Menu Item", page 106.

Another way to exit is to click on `[Quit]`, or press `Q`. This saves your mail files just as `[Save]` does, and then returns you to the window from which you selected Zmail. Clicking right on `[Quit]` pops up a menu. See the section "`[Quit]` Zmail Menu Item", page 103.

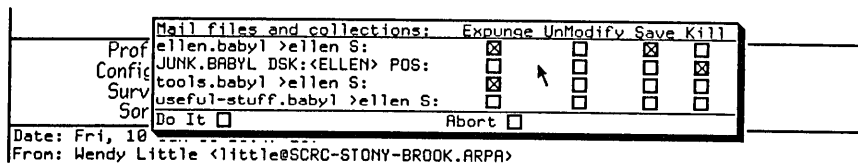


Figure 6. [Save (R)]

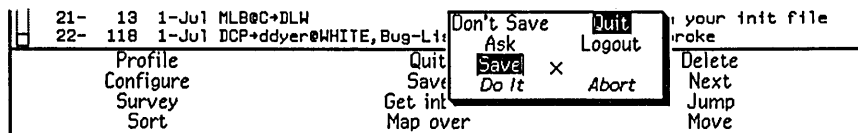


Figure 7. [Quit (R)]

## 2.3 Commands for Sending Mail

This section describes how to send and reply to mail. Included are brief descriptions of the Mail and Reply commands, which are used for sending various types of mail. For complete descriptions of these commands:

See the section "Zmail Mail Commands", page 20.

See the section "Zmail Reply Command", page 26.

For a complete description of the commands available in *mail mode*, in which you actually write your mail: See the section "Mail Mode in Zmail", page 21.

To send a message, click on [Mail], which is displayed in the command menu.

*Command*            *Meaning*

[Mail] or M (Kbd) Starts up a window for composing a mail message.

[Mail (M)]            Starts up a window for composing a bug report. You can control the behavior of click middle in your profile. See the variable `zwei:*mail-middle-mode*`, page 65.

[Mail (R)]            Calls up a menu of mail sending operations.

To reply to the current message, click on [Reply].

*Command*            *Meaning*

[Reply] or R (Kbd) Starts up a window to reply to the current message. You can customize the window configuration. See the variable `zwei:*reply-window-mode*`, page 68.

[Reply (M)]            Starts up a window to reply to the current message with the message being replied to included. You can control the behavior of click middle in your profile. See the variable `zwei:*middle-reply-mode*`, page 68.

[Reply (R)]            Calls up a menu of reply options.

Either [Mail] or [Reply] place you in *mail mode*. This is an editor buffer and most Zmacs editing commands are available. See the section "Mail Mode in Zmail", page 21. See the section "Zmail Reply Command", page 26.

## 2.4 Commands for Reading Mail

There are two types of commands for reading mail:

- Commands that read your inbox file and either load the contents into Zmail or display the contents on the screen.
- Commands that you use as you read your mail.

This section describes both types of mail reading commands, first the [Get Inbox] command and the other commands that read your inbox and then the commands that you might use as you read your mail.



### 2.4.1 Commands to Read Your Inbox

The commands to read your inbox are:

[Get Inbox] Reads in the inbox associated with the current sequence. See the section "[Get Inbox] Zmail Menu Item", page 92.

Check for New Mail (m-X) Checks the inbox for the current sequence for new mail.

Show Mail (m-X) Displays the contents of the inbox for the current sequence. See the section "Show Mail (m-X) Zmail Command", page 108.

In reading your mail, there are two files involved: your mail file (more properly, your *primary mail file*), which contains messages you have already seen, and your *inbox*, which contains messages you have not seen yet. If you do not have a mail file the Get Inbox command offers to create one for you. This is case the first time you run Zmail. Press RETURN to let Zmail create the file, or ABORT if for some reason you do not want a mail file. There is no similar problem with inbox files; they are created when needed, and deleted once read.

The reading is done in a background process, so the display of the first message should come up rapidly. The background process continues to read in the mail file and inbox and write out the updated mail file, if necessary. You are therefore allowed some limited interaction while this is going on.

New messages have the (unseen) and (recent) properties and the "-" status letter.

(unseen)	Applies up to and including the first time the message is displayed.
"-"	Applies up to but not including the first display.
(recent)	Applies to any message that was read in as new mail during the current terminal session.

A warning: if you use c-m-ABORT to abort out of [Get Inbox], you might end up with your mail file partially read in. To see if this is the case, check the Expunge/Save/Kill menu (use [Save (R)]: See the section "[Save] Zmail Menu Item", page 106.). If the name of the file appears there, but the file was not selected – that is, messages from the file did not appear on your screen – then you should use the menu to kill the file. (This does not kill the disk copy of the file, only the copy in memory.)

## 2.4.2 Commands to Read Your Mail

### 2.4.2.1 Commands to Use While Reading Mail

[Delete] or D (Kbd) Deletes the current message and move to the next.

[Next] or N (Kbd) Moves to the next message.

[Previous] or P (Kbd) Returns to the previous message.

For more details on moving from message to message or selecting groups of messages: See the section "Zmail Message Movement Commands", page 29. See the section "Zmail Mail Collections", page 46.

[Reply] or R (Kbd)

Replies to the current message. See the section "Replying to Zmail Messages", page 39.

Click right on summary line

Pops up a menu of operations on a message. See the section "Zmail Message Summary Line", page 19.

Undigestify (m-~~x~~) Separates a digest into its messages. See the section "Undigestify (m-~~x~~) Zmail Command", page 111.

For more suggestions about ways to handle your mail: See the section "Managing Your Mail", page 39.

### 2.4.2.2 Zmail Message Summary Line

You can perform a large number of mail handling operations by clicking on the summary line of a message. Mouse-L  
Selects the message as current.

Mouse-M By default, deletes or undeletes the message (toggles the delete flag). You can select the action for the middle click in your profile. See the variable `zwei:*summary-mouse-middle-mode*`, page 72.

Mouse-R Pops up a menu of commands to operate on the message. Where appropriate, clicking left, middle, or right on the item in the menu has the same effect as clicking on the Zmail menu item of the same name.

Keywords Adds keywords to this message. See the section "[Keywords] Zmail Menu Item", page 94.

Delete or Undelete

Deletes or undeletes this message.

Reply	Starts a reply to this message. See the section "[Reply] Zmail Menu Item", page 105.
Move	Moves this message. See the section "[Move] Zmail Menu Item", page 98.
Concatenate	Prompts for the number of a message to concatenate with this message.
Filter	Lists the predefined filters that characterize this message and then starts a collection based on the one you select.
Forward	Forwards this message.
Redistribute	Redistributes this message.
Survey Conversation	Displays the summary lines of all the other messages in this conversation.
Select Conversation	Starts a collection of all the messages in this conversation.

## 2.5 Mail Commands

The Mail command and its variants are used for most mail sending operations: sending normal mail, sending bug reports, forwarding and redistributing mail you have received, and sending local mail. The most common mail operation not handled by the Mail command is replying to a message you have received; this is done using the Reply command. See the section "Zmail Reply Command", page 26.

### 2.5.1 Summary of Mail Commands

[Mail]	Starts a new mail message. (M) and (R) offer options. See the section "[Mail] Zmail Menu Item", page 96.
M (Kbd)	Starts a new mail message. See the section "M (Kbd) Zmail Command", page 95.
Bug (m-X)	Starts a bug report. This inserts information about your machine's software versions for bug-tracking purposes. See the section "Bug (m-X) Zmail Command", page 86.
Forward (m-X)	Forwards the current message. See the section "Forward (m-X) Zmail Command", page 91.
F (Kbd)	Forwards the current message. See the section "F (Kbd) Zmail Command", page 91.

**Redistribute Message (m-X)**

Sends this message to some new recipients. See the section "Redistribute Message (m-X) Zmail Command", page 104.

**Redirect Message (m-X)**

Sends the current message to some new recipients, removing some others. See the section "Redirect Message (m-X) Zmail Command", page 104.

These commands all put you into mail mode.

**2.5.2 Mail Mode in Zmail**

When you compose a message, either a new message or a reply to a message you have received, you are in *mail mode*. The configuration of your screen varies depending on whether you are sending a new message or operating on a message you have received. If you are starting a message you are placed in *one-window* mode, that is, just a header window and a single message window. If you are replying to a message the configuration depends on how you have set up your profile. The default is *two-window* mode, that is, one window containing the message to which you are replying and the other for your reply. You can *yank* the message being replied to into your reply (See the section "`c-X c-Y` (Kbd) Yank Replied Messages Zmail Command", page 112.) or you can set an option in your profile to automatically do the yank when you reply. See the variable `zwei:*reply-window-mode*`, page 68.

This section lists the commands available in mail mode. In addition, since the windows in mail mode are editor windows, most Zwei commands are available.

Many commands are available via the editor menu (click right on any of the editor windows in mail mode). These commands are marked "(Editor Menu)".

Except as noted, all these commands can be used regardless of which window (Headers, Mail, or Message) is selected.

This section also includes a description of the Continue command, a top-level command whose use is closely related to mail mode.

**2.5.2.1 Altering Header Fields**

The commands in this section provide a convenient way to add or alter various header fields. Click right while composing a mail message to get a menu of these items. Of course, since the headers window is just an editor window, the usual editor commands can be used instead of the commands listed here. Note also that the word Subject: can be typed in as S:, a convenience if you choose not to use the Add Subject Field (m-X) command. See the section "Zmail Header Formats", page 75.

Add To Field  
 Add Cc Field  
 Add Fcc Field  
 Add From Field  
 Add In-reply-to Field  
 Add Subject Field  
 Add File-References Field  
 Change Subject Pronouns

### 2.5.2.2 Configuring and Selecting Zmail Windows

(Note: The Add xxx Field commands are also window selection commands, in that they select the headers window. See the section "Altering Zmail Header Fields", page 21. In addition, you can select a window by clicking left on it.)

The explicit window configuration and selection commands are:

Add More Text (Editor Menu)

Selects the mail window.

c-X 0 (Kbd) Selects another exposed window. See the section "c-X 0 (Kbd) Zmail Command", page 101.

END (Kbd) Adds more text or sends the message. See the section "END (Kbd) Zmail Command", page 91.

c-X 0 (Kbd) Selects zero-window mode. See the section "c-X 0 (Kbd) Zmail Command", page 83.

c-X 1 (Kbd) Selects one-window mode. See the section "c-X 1 (Kbd) Zmail Command", page 83.

c-X 2 (Kbd) Selects two-window mode. See the section "c-X 2 (Kbd) Zmail Command", page 84.

### 2.5.2.3 Saving and Restoring Message Drafts

If you are composing a long, complicated message, you might wish to save intermediate drafts of it. Or perhaps you want to be able to interrupt your work and come back later. The draft message and draft file facilities provide a convenient way to do this.

#### Zmail Draft File Facility

Using the commands listed below, draft files allow you to save messages you are composing into disk files. Draft files are written out to disk immediately, making them useful as protection against a crash. (Note: only one message can be stored per disk file; reusing the file name writes a higher-numbered version.)

**[Save Draft File] (Editor Menu)**

c-X c-S (Kbd) Saves the message being composed in a disk file. The first time it is used, it prompts for entry of a filename; subsequently, it uses the same filename.

**[Write Draft File] (Editor Menu)**

c-X c-W (Kbd) Saves the message being composed in a disk file. Prompts for entry of a filename.

**[Restore Draft File] (Editor Menu)**

c-X c-R (Kbd) Restores a previously saved draft. The current contents of the Headers and Mail windows are lost.

[Continue (R)] Pops up a menu of messages you have composed. Click right on [All Drafts].

**[Restore Draft File]**

Prompts for a filename of a saved draft and enters mail mode with the Headers and Message windows restored from the file.

**Zmail Draft Message Facility**

The draft message facility allows you to save message drafts in mail files using the commands listed below. Since mail files are not written out until explicitly requested, draft messages are unsuitable for protection against crashes. See the section "Exiting Zmail", page 15. But since they sit visibly at or near the end of your mail file, draft messages are good when you wish to interrupt your work and return later. A draft message is harder to forget than a draft file would be.

**[Save Draft As Message] (Editor Menu)**

c-X c-m-S (Kbd) Saves the message being composed as a draft message in the current mail file. Subsequent uses do not create new draft copies, but update the old draft.

[Continue (R)] Pops up a menu of messages you have composed. Click right on [All Drafts].

**[Restore Draft Message]**

Enters mail mode with the Headers and Mail windows restored from the current message, if it is a draft message. If it is not, flashes the screen and ignores the Continue command.

**[Restore Draft Message (R)]**

Waits for you to click on a draft message in the summary window or type a message number in the mini-buffer, then enters mail mode with the Headers and Mail windows restored from that message. (If the selected message is not a draft message, Zmail flashes the screen and ignores the Continue command.)

**Reply (Menu) *n* R (Kbd)**

If the current message is a draft message, any form of the Reply command enters mail mode with the Headers and Mail window restored from the draft message. (If the current message is not a draft message, the Reply commands operate as described. See the section "Zmail Reply Command", page 26.)

**Click Right on Summary Line**

Note: Once mail mode has been reentered, it is just as if you had used the Mail command and retyped the message. All the mail mode commands operate as expected; in particular, END from the Mail window mails the message and ABORT returns you to Zmail top level without sending the message.

**2.5.2.4 Leaving Mail Mode in Zmail**

You can leave mail mode in two ways: by sending the message, or by aborting.

If you send the message, Zmail normally responds "Message sent" and returns you to top level. If there is a problem, Zmail tells you about it and remains in mail mode to allow you to fix things up. Typical problems are omitting the To: field, trying to send mail to a nonexistent user, or mistyping a user name.

After you have sent the message, you can use Show Draft Dispositions (*m-X*) to find out which mail server sent your message, to whom, at what time.

After a message has been sent, you can edit and resend it, perhaps to different recipients, by using the Continue command. See the section "Continuing Completed or Aborted Zmail Messages", page 25.

If you abort, Zmail says Aborting, use the "Continue" command to continue. and returns to top level. You can continue using the Continue command.

**END (Kbd)** Sends the message or add more text. If typed while in the Mail window (or the Message window in zero-window mode), sends the message. Otherwise, selects the Mail window to allow you to add more text.

**[Send Message] (Editor Menu) *c*-ESCAPE (Kbd)**

Sends the message.

**ABORT (Kbd) [Abort Send] (Editor Menu) *c*-] (Kbd)**

Aborts mail mode.

### 2.5.2.5 Continuing Completed or Aborted Zmail Messages

The commands in this section allow you to reenter mail mode to continue editing messages already written. Already written messages are of four types:

- Messages that were sent successfully.
- Messages that were aborted. See the section "Leaving Mail Mode in Zmail", page 24.
- Draft messages saved in draft files.
- Draft messages saved as messages.

This section describes how to continue sent and aborted messages. All the messages you have composed during your current Zmail session, whether you sent them or not, are saved by Zmail and you can return to them and edit them and transmit or retransmit them. To save messages you are composing from one Zmail session to another, you must save them as drafts. Draft messages are continued in other ways. See the section "Saving and Restoring Zmail Message Drafts", page 22.

There are three ways to return to the last message you edited:

- clicking left on [Continue]
- pressing the RESUME key
- pressing C

To return to other messages, you use [Continue]: Clicking middle on [Continue] selects the last unsent (aborted) message you edited. Clicking right on [Continue] pops up a menu of Unsent Drafts, Sent Drafts, and All Drafts. When you click on one of these, a list of the header lines of that type of message pops up, allowing you to select individual messages. See the section "[Continue] Zmail Menu Item", page 87.

Note: Once mail mode has been reentered, it is just as if you had used the Mail or Reply command and retyped the message. All the mail mode commands operate as expected; in particular, END from the Mail window mails the message and ABORT aborts the send.

### 2.5.2.6 Commands for Including Files and Prepared Text In Messages

*n* c-X c-Y (Kbd) Yanks the message(s) being replied to into the buffer. (Used most often when replying to the current message.) If in two-window mode, go into one-window mode. Indent the yanked



message unless an argument *n* is given. The arguments to `c-X` `c-Y` control the indentation and the pruning of headers, as follows:

<i>Argument</i>	<i>Options</i>
none	Indentation, pruning per the <i>Prune headers of yanked messages</i> profile option.
1	No indentation, pruning per <i>Prune headers of yanked messages</i> .
2	Indentation, pruning per reverse of <i>Prune headers of yanked messages</i> .
3	No indentation, pruning per reverse of <i>Prune headers of yanked messages</i> .

`c-X Y` (Kbd)

[Prune Yanked Headers] (Editor Menu)

Deletes the less essential headers of a message that was yanked in via `c-X c-Y`. Leaves only the Date: and From: headers; these are sufficient to identify the message. The profile option *Prune headers of yanked messages* controls the automatic pruning of message headers yanked into a reply. See the variable `zwei:*prune-headers-after-yanking*`, page 70. The default is to not prune headers.

Insert File (`m-X`) Prompts for a pathname and inserts the contents of the file in the mail buffer.

### 2.5.3 Zmail Reply Command

The Reply command and its variants are used for replying to mail you have received. The Reply command is like the Mail command, except that it displays the original message, and it sets up the headers automatically, based on the headers of the original message.

The various forms of Reply differ in two ways: who the reply is sent to (this is called the *reply mode*), and what display format is used (the *reply window mode*). The reply mode affects the contents of the To: and CC: fields written by the Reply command. The default is to reply to everybody in the headers field, with headers like this:

```
To: old From
To: old To
Cc: old Cc
```

You can control reply mode in your Profile. See the variable `zwei:*reply-mode*`, page 67.

The possible reply window modes are:

Two-windows	Displays the original message and the reply being composed. (It uses three windows: Message, Headers, and Text. It is called Two-windows because the little Headers window does not count.)
One-window	Displays only the reply, similar to Figure 9. (Uses two windows, Headers and Text.)
Yank	Displays only the reply, but first yanks the text of the original message, indented, into the text of the reply.

You can specify the reply window mode you prefer in your profile. See the variable `zwei:*reply-window-mode*`, page 68.

The reply commands are described below. The descriptions are simply an indication of the reply mode and reply window mode used by each command.

[Reply]	Two-windows/All.
[Reply (M)]	Two-windows/Sender.
[Reply (R)]	Pop up a two-column menu of reply modes and reply window modes. (See Figure 8.)
<i>n</i> R (Kbd)	<i>n</i> =1, Two-windows/Sender. <i>n</i> omitted, Two-windows/All.

#### Click Right on Summary Line (Summary Window)

Pop up a menu, one entry of which is Reply. Left, Middle, and Right clicks on this entry have the same effect as corresponding clicks on the word [Reply] in the command menu. In addition, the message replied to is selected as current, if it is not already.

A few notes concerning Reply:

- It is possible to add an In-reply-to field to the reply to identify the original message. See the section "Zmail Header Formats", page 75. See the section "Altering Zmail Header Fields", page 21.
- Replying to a message gives it the (answered) property and the A status letter.
- Replying to a draft message simply continues it. See the section "Saving and Restoring Zmail Message Drafts", page 22. Replying to a COMSAT or XMAILR (mail server) message retries the failed message, rather than replying to anything. If the problem is a nonexistent address at another host, you are prompted to supply a corrected address.

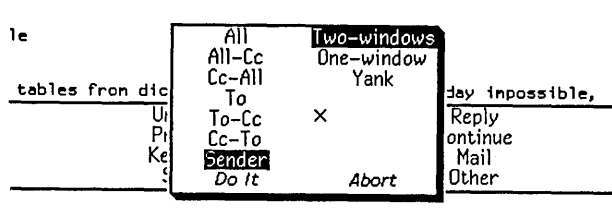


Figure 8. [Reply (R)]

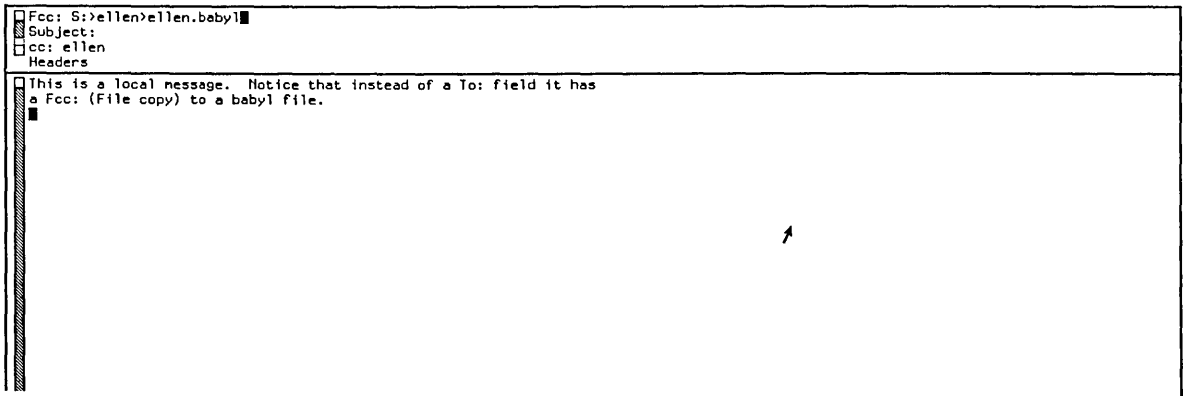


Figure 9. Local Mail

## 2.6 Message Movement and Deletion

This section describes how to move around in your mail sequence, how to locate specific messages, and how to delete and undelete messages.

### 2.6.1 Message Movement Commands

#### 2.6.1.1 Simple Message Movement Commands

The simple commands to move around in a mail sequence, selecting messages either by position (next, previous, or by number) or by other characteristics, are:

[Next] or N (Kbd)

Selects the next undeleted message. See the section "[Next] Zmail Menu Item", page 100.

$n$  c-N (Kbd)

Selects the  $n$ th next message in the sequence, whether or not it is marked for deletion. If  $n$  is omitted, selects the next message, whether or not it is deleted.

[Previous] or P (Kbd)

Move to previous undeleted message. See the section "[Previous] Zmail Menu Item", page 102.

$n$  c-P (Kbd)

Selects the  $n$ th previous message in the sequence, whether or not it is marked for deletion. If  $n$  is omitted, selects the previous message, whether or not it is deleted.

Click Left on Summary Line

Selects the message whose summary line was clicked on. See the section "Zmail Message Summary Line", page 19.

$n$  J (Kbd)

Jumps to message number  $n$ , even if it is marked for deletion. If  $n$  is omitted, jumps to the first message in the sequence. Z J jumps to the last message in the sequence.

[Jump]

Jumps to an arbitrary message using filters or the message stack. See the section "[Jump] Zmail Menu Item", page 93.

Find String (m-X) or c-F (Kbd)

Prompts for a string and selects the next message containing that string. See the section "Find String (m-X) Zmail Command", page 91.

Occur (m-X)      Prompts for a string and displays lines of text containing that string. You can select the message containing the string by clicking on the line of text. See the section "Occur (m-X) Zmail Command", page 101.

### 2.6.1.2 Moving Among Zmail Messages Using the Message Stack

Sometimes when you have been jumping around the mail file a lot, perhaps using commands like J or Click Left on Summary Line, you find that you would like to go back to the last message you read. If the mail file is large and you have moved great distances, you might no longer remember where you were. Rather than force you to make scribbled notes, Zmail keeps an eight deep stack of messages from which you have jumped, called the message stack. The commands are similar to the commands for the point-pdl (stack) in the editor. See the section "What is a Zmacs Region?" in *Text Editing and Processing*.

For example, suppose you are reading message 45 and then select message 22 from the summary line. The message stack looks like this:

```
45
.
.
.
```

Zmail has noted the fact that you were reading message 45 by pushing this information on the message stack. Now you use [Next] and you are reading message 23. (The message stack does not change, because it is easy for you to undo the effect of using [Next]; the idea of the message stack is to help when you have been moving around in a more arbitrary way.) You then type 58J and message 58 becomes the current message. The stack now looks like this:

```
23
45
.
.
.
```

If you now want to return to where you were – message 23 – but do not remember the message number, you can press c-U c-SPACE. Message 23 becomes the current message and the message stack is:

```
45
.
.
.
23
```

This is called popping the message stack, because the top element is popped off and used as the current message. As you can see, it also gets tucked under the bottom of the stack. To get back to message 45, press `c-U c-SPACE` again. The message stack is now:

```

.
.
.
23
45

```

If you had wanted to get from message 58 directly to 45 without looking at 23, you could have pressed `c-U c-U c-SPACE c-U c-SPACE`. The `c-U c-U c-SPACE` command pops the 23 from the top of the message stack, but instead of becoming the current message, the 23 is simply discarded (not the message itself, just the stack entry.)

Stack entries are actually internal pointers, not message numbers. This means that if a message number changes – because other messages were expunged or the file was sorted – the message stack still points to the correct message, even though its number changed. And if a message is expunged, all stack references to it disappear.

Note that the stack entries keep track not just of the message itself, but also of what mail file it is in. This is helpful if you are using multiple mail files.

The following are the commands for using the message stack:

- |  |  |
|--|--|
| <code>c-SPACE</code>   | Push the current message onto the stack. See the section " <code>c-SPACE</code> (Kbd) Zmail Command", page 109.  |
| <code>c-U c-SPACE</code>                                     | Pop the top message from the message stack and make it the current message.  |
| <code>c-U c-U c-SPACE</code>                                 | Pop the top message from the message stack and discard it.   |
| [Jump (M)]   | Selects an arbitrary message from the message stack. See the section "[Jump] Zmail Menu Item", page 93.  |
| <i>n</i> Move to Point ( <code>m-X</code> )                  | Exchanges the current message and the top of the message stack. See the section "Move to Point ( <code>m-X</code> ) Zmail Command", page 99.   |
| <i>n</i> Move to Default Previous Point ( <code>m-X</code> ) | With an argument <i>n</i> , performs the same rotation as <code>n c-m-SPACE</code> and makes <i>n</i> the new default argument. Without an argument, uses the default. (The initial default is 3.) |

## 2.6.2 Message Deletion Commands

Messages can be deleted when they are no longer wanted. Deletion does not actually mean the removal of a message; rather it means flagging a message for later removal. Messages flagged for deletion bear the status letter D and have the deleted property; these messages are passed over by the Next and Previous commands. The actual removal of deleted messages is called "expunging" and is done by the Save and Quit commands. See the section "Exiting Zmail", page 15.

The deletion and undeletion commands are:

- [Delete]           Deletes the current message. (L), (M), and (R) offer options. See the section "[Delete] Zmail Menu Item", page 89.
- D (Kbd)           Deletes the current message. Takes numeric argument. See the section "D (Kbd) Zmail Command", page 88.
- c-D (Kbd)         Deletes current message and moves to previous message.
- Delete Duplicate Messages (n-X)  
                  Deletes duplicate messages in the current sequence. See the section "Delete Duplicate Messages (n-X) Zmail Command", page 89.
- [Undelete]        Removes the delete flag from a message. See the section "[Undelete] Zmail Menu Item", page 111.
- U (Kbd)           Removes the delete flag from a message. See the section "U (Kbd) Zmail Command", page 110.
- Click Middle on Summary Line  
                  Toggles Delete flag. See the section "Zmail Message Summary Line", page 19.

## 2.7 Other Zmail Commands

### Commands for Editing the Recipient List of a Message

If you are editing a message with a long list of recipients, it is occasionally useful to be able to manipulate the addresses.

- h-F (Kbd)         Move forward over an address.
- h-B (Kbd)         Move backward over an address.
- h-T (Kbd)         Transpose the two surrounding addresses.

- h-K (Kbd) Kill the next address.
- h-Rubout (Kbd) Kill the previous address.

### 2.7.1 Entering Mail Mode Recursively

- c-X M (Kbd) Enters mail mode recursively; the window configuration remains the same, but the Headers and Mail windows are reinitialized as if the Mail command had just been executed (Headers window contains the word "To:" followed by a blinking cursor; Mail window is empty.) Exiting recursive mail (either by sending the message or by aborting) returns to the higher level mail.

### 2.7.2 Adding Bug Lists to Zmail

You can add a new bug-mail recipient to the list of bug recipients. Two mechanisms are available.

1. Use the **:bug-reports** option to **defsystem**.

```
(:bug-reports system-name documentation-string)
```

*documentation-string* is the mouse-line documentation for the menu item. *system-name* appears on the Zmail menu. For example,

```
(defsystem print
  (:pretty-name "In-House Printers"
   :default-pathname "sys: print;"
   :maintaining-sites :acme
   :default-module-type :lisp
   :bug-reports "Print" "Report a bug in the hardcopy facility."
   ...)
```

2. Use the function **zwei:add-bug-recipient**.

**zwei:add-bug-recipient** *name* &optional *documentation* (*menu-name* *Function*  
**zwei:name**)

**zwei:add-bug-recipient** adds a new recipient to the menu available from [Mail (M)]. All arguments are strings. *name* is the name of the mailing list or recipient of the bug note; *documentation* appears in the mouse documentation line; *menu-name* is the name as it should appear on the menu. This uses the site option **host-for-bug-reports** to determine the rest of the address.



### 2.7.3 Encrypting Messages

Zmail supports encryption. Commands are available both when you are composing mail and when you are reading mail. Encrypted messages contain a new header field to indicate that they contain encrypted text.

#### Encrypt Text (m-X)

Encrypts a message. Use it after you have completed the message draft but before you send it. Zmail prompts for an encryption key that the recipient must provide in order to decrypt the message. It converts the draft to a form that you cannot read. Decrypt Text is also available for message drafts. Both of these commands appear on the draft editor menu.

#### Decrypt Message (m-X)

Displays an encrypted message as plain text, prompting for the encryption key. By this operation, you are only viewing the plain text form; use a numeric argument to store the plain text version in the mail file.

Text yanked by Forward and Reply prompts for a decryption key rather than yanking unreadable text.

The only encryption algorithm currently supported is the NBS algorithm, used by Hermes.

## 3. Getting Out of Trouble in Zmail

This chapter describes what to do if Zmail seems to be stuck and how to undo a command.

### 3.1 Recovering From Stuck States in Zmail

Zmail is a complex program and sometimes becomes stuck. This section lists a few common problems and what to do about them.

- *Everything looks correct, but Zmail does not respond to commands.* – Select another window and reselect Zmail. The most convenient way to do this is to press SELECT L SELECT M. Pressing c-m-ABORT might also work; this throws you back to top level, aborting any other command (for example, Mail, Profile). Before pressing c-m-ABORT, you might first try pressing ABORT.
- *Zmail does not respond to commands, and the process state is Wait Forever.* – Press SELECT L SELECT M or c-m-ABORT.
- *Zmail does not respond to commands, and the process state is Output Hold.* – Press FUNCTION ESCAPE. The window that appears might be in the Debugger; follow the instructions below the line "An error has occurred, and Zmail has entered the Debugger". After exiting the Debugger, a background window might remain on the screen overlaying part of the normal Zmail window; to deexpose it, press FUNCTION c-T.
- *Zmail does not respond to commands, and the process state is Arrest.* – Press FUNCTION - A (that is three keystrokes).
- *An error has occurred, and Zmail has entered the Debugger.* – Press ABORT to get out of the Debugger; this exits from one command level. For example, if you are in mail mode and an error occurs, ABORT gets you out of the Debugger and leaves you in Mail mode. You are not forced back to top level.

Before you press ABORT, you might wish to send a bug report. Do this by pressing c-M. This puts you in a mail window with appropriate information about the system and machine you are using included in the message. Finish the message with an explanation of the circumstances that led up to the error. Send the bug report by pressing END.

- *A window pops up telling you that an error occurred in the background process.* – Press FUNCTION-0-S and see what the error is. A window should pop up with the Debugger in it. Typically it is a file system error or a host-down error for the file server containing your mail, but it could also be a program bug. Follow the instructions as for An error has occurred ...; pressing ABORT restarts the background process and puts you back into Zmail.
- *Another window is partially overlaying the main Zmail window.* – Click left on the main Zmail window. If this does not work, try pressing FUNCTION c-T, which gets rid of "temporary" windows such as pop-up menus.
- *Zmail obeys commands, but timeout remains on the screen following an error.* – Press REFRESH or FUNCTION REFRESH. It might also help to select another window and reselect Zmail (for example, press SELECT L SELECT M). If you are at Zmail top level, you might also try using [Configure] (to display only the message), and then [Configure] again (to display both message and summary).
- *After an error, Zmail does not obey commands, and the process state is Nil.* – Press FUNCTION 1 W. If the process state is still Nil, press SELECT L SELECT M.
- *SELECT M flashes the screen and refuses to select Zmail.* – Use the System menu: shift click right to get the menu, then use [Mail].
- *Zmail is irreparably stuck.* – Enter a Lisp Listener (SELECT L) and type Initialize Mail. See the section "Initialize Mail Command" in *User's Guide to Symbolics Computers*. Caution: any mail sequences currently in memory are lost. This operation reloads Zmail without disturbing the rest of the system.
- *The mouse is broken.* – Almost all Zmail mouse commands have keyboard or m-X equivalents. If the mouse is broken, you can use the keyboard and m-X commands.

## 3.2 Undoing Commands in Zmail

If you are in the middle of a command you did not mean to use, you can *abort* it. If you have executed a command that prompts for keyboard input or wants you to select messages from the summary window, press ABORT. If the command is asking you to choose something from a menu, click on Abort if that is a choice, or move the mouse outside the menu and see if it goes away. If you are inside mail

mode, press ABORT. If you are in edit mode, press END. If you are choosing a filter or defining a filter or universe, use [Abort]. If you are choosing a universe, move the mouse outside the menu. If you are in profile mode, use [Exit]. If all else fails, pressing c-m-ABORT works, but might be a bit drastic.

If you execute a command or send a message and then change your mind, there are several options to try to *undo* the action:

- Undo (m-X)           Undoes the last command. See the section "Undo (m-X) Zmail Command", page 111.
- Redo (m-X)           Undoes the effect of the last Undo (m-X).
- Revoke Message (m-X)  
                      Tries to "get back" a message that has been sent. See the section "Revoke Message (m-X) Zmail Command", page 105.
- [Continue (R)]       Allows you to resend a message you have already sent, giving it a *supersedes* header. See the section "[Continue] Zmail Menu Item", page 87.



## 4. Managing Your Mail

When you start getting more than a few messages a day, it becomes difficult to keep things in order. Messages requiring future action begin to pile up and just sorting through old messages leaves no time for new. For situations like this, Zmail provides the following management capabilities:

- Classifying messages by adding keywords to them
- Sorting messages based on their subject or other characteristics (filters)
- Working with groups of related messages (mail collections)
- Storing groups of related messages into separate mail files

### 4.1 Manipulating Messages

This chapter summarizes useful techniques for manipulating messages within a mail sequence.

#### 4.1.1 Replying and Remailing

##### 4.1.1.1 Replying

To reply to a message, click on [Reply] or press R. Zmail initializes the headers of the reply for you: the Subject is copied from the original message; the To and Cc fields include the original sender and recipients of the message. (The exact set-up depends on the mouse button you click and the options in your profile.) You can see the original message while you write your reply.

People frequently include some or all of the original message, indented four spaces, in their reply. You can yank (copy) the message into your reply by pressing `c-X c-Y` after starting your reply. To prune some of the less useful headers from a yanked message, press `c-X Y`. `c-X c-Y` takes numeric arguments which control indentation and header pruning. See the section "Commands for Including Files and Prepared Text in Messages", page 25.

To reply to several messages at once use the following procedure:

1. Select a conversation using Select Conversation (`m-X`).
2. Click on [Map Over / Reply] in the main Zmail menu.

3. Yank all the messages in the conversation into the reply using `c-X c-Y`.

By setting profile options, you can make the [Reply] command do most of this automatically. See the section "Zmail Options for Replying to Mail ", page 67.

#### 4.1.1.2 Forwarding, Redistributing, and Redirecting

To forward or redistribute a message, clicking right on [Mail]. [Forward] lets you edit the message or add to it. You can also invoke Forward by pressing F. [Redistribute] simply prompts for addressees and sends the message with the *Redistributed-by*, *To*, and *Date* fields added.

You can redirect a message using Redirect Message (`m-X`). Redirecting allows you to remove some or all of the original recipients and send the message to new recipients. See the section "Redirect Message (`m-X`) Zmail Command", page 104.

#### 4.1.2 Moving a Message to a File

You can move a message to a file by clicking on [Move] or by pressing O. Pressing O prompts for filename to which to move the current message The message is first moved to a sequence and then to the file when you save out your files. Using [Move] moves the message to the *default move-destination file*. The initial setting for the default move-destination file can be defined using the profile editor. (See the variable `zwei:*default-move-mail-file-name*`, page 73. ) After you use [Move] the default move-destination is the last file to which a message was moved. Clicking right on [Move] pops up a menu offering a list of your mail files and several options for moving the message. See the section "Saving a List of Mail Files", page 46.

#### 4.1.3 Hardcopying

Hardcopy Message (`m-X`)            Hardcopies the current message.

Hardcopy All (`m-X`)            Hardcopies all the messages in the current sequence.

You can click right on [Other] in the Zmail menu and select Hardcopy to hardcopy the current message.

You can also click right on [Move] and select Hardcopy.

For any individual message you can click right on its summary line then click right on [Move] and select Hardcopy.

To copy all messages in current sequence click right on [Map Over] then right on [Move] and select Hardcopy.

In any of these commands you can click right on Hardcopy to get a menu that

permits you to specify the number of copies and which printer to use. The Other option in the list of printers allows you to specify an arbitrary printer, using either its pretty name or its namespace name. This printer becomes the selected printer, and remains in the menu for subsequent hardcopy commands.

You can check the status of a printer from Zmail.

Show Printer Status (m-X)

Prompts for the name of a printer and displays its print queue.

#### 4.1.4 Editing

It is sometimes handy to edit a message saved in your mail file. To do so, select it as current and press c-R or click left on the message window. Press END when you finish editing.

#### 4.1.5 Reordering

You can rearrange a mail sequence in two ways: by sorting the messages or by appending messages to one another.

If you click right on [Sort] a menu of sort keys and directions pops up. (See the section "[Sort] Zmail Menu Item", page 109.)

You can click right on the summary line of a message you wish to concatenate to another; then click on [Concatenate]. Clicking right on [Concatenate] allows you to choose to which message it gets appended. (See the section "Zmail Message Summary Line", page 19.)

You can place the messages you want to combine in a collection. (See the section "Creating a Mail Collection", page 46.) Then you can click on [Map over / Concatenate] to combine them. (See the section "[Map Over] Zmail Menu Item", page 97.) The messages that get appended are deleted.

#### 4.1.6 Operating on Zmail Messages Referred to by the Current Message

Often, when you receive a reply to a message, you want to delete the original one or refer back to it. If your mail files are more than 30 or 40 messages long it might be difficult to find the original message. Zmail can help by searching for messages referenced by the current one.

The current message *references* a message *x* if it includes:

- a citation to *x* in an In-reply-to or References header
- the yanked-in headers of message *x*



Usually, this means that the current message is a reply to message *x*.

The following referenced message commands are available:

Select Referenced Message (*m-x*)

Selects the referenced message as current.

Delete Referenced Messages (*m-x*)

Deletes the referenced messages.

Append To Referenced Message (*m-x*)

Appends this message to the referenced message.

Move In Place Of Referenced Message (*m-x*)

Moves this message to where the referenced message is, and deletes the referenced message.

Select References (*m-x*)

Creates a mail collection of all messages referenced by the current message.

Select Conversation by References (*m-x*)

Defines a conversation and selects it as a collection. This command is very similar to Select References.

Delete Conversation By References (*m-x*)

Deletes all the messages in a conversation.

Select All Conversations by References (*m-x*)

Selects messages to which any message in the sequence refers, or that refer to any message in the sequence, recursively. See the section "Select All Conversations by References (*m-x*) Zmail Command", page 107.

Append Conversation by References (*m-x*)

Append messages to which this message refers, or which refer to this message, recursively.

The commands with the word "reference" in their names use hash tables rather than searching. With a numeric argument, the Reference commands offer a menu of universes for searching.

If the current message has references to several messages, Select Referenced Message, Append To Referenced Message, and Move In Place Of Referenced Message ask which message to choose. Delete Referenced Messages and Select References choose all referenced messages.

To find the referenced message(s), Zmail looks in the current sequence. If the message is not there, Zmail tells you about the references not satisfied. If given a numeric argument, Zmail pops up a menu of other sequences to search first.

Often, though, you know in *advance* where referenced messages can be found. For example, you might store all your messages about hardware in a particular file. If you get a message about hardware, the messages it refers to are probably also about hardware, and thus they are probably in that file. You can give Zmail this type of knowledge by setting the *filter-universe alist* in profile mode. See the section "Filter-universe Alist".

See the section "Testing Zmail Message Characteristics", page 54. See the section "Defining Zmail Message Search Spaces", page 60.

## 4.2 Classifying Messages

Zmail allows you to classify and categorize messages by adding keywords to them. Keywords are useful in many ways, among them:

- Topic Indicators    Indicate the major topic of the message. If your work involves designing natural language interfaces, for example, you might use keywords such as dictionary, parser, and syntax-checker. The topic indicators you need depend on the sort of messages you get.
- Classifiers            Indicate the type of message. For example, you might use keywords such as bug, feature-request, documentation-bug, and issue to categorize messages as bug reports, requests for features, reports of documentation bugs, and issues under discussion.
- Status Flags          Indicate the status or priority of the message. For example, you might use a keyword such as to-do to flag messages that require you to do something and a keyword such as timing-out to flag messages on which you are awaiting action from other people. You could use P1, P2, and P3 to indicate the priority of a message requiring further action.

### 4.2.1 Setting Zmail Keywords

- [Keywords]            Adds the last used keyword(s) to the current message.
- [Keywords (M)]        Adds keywords according to which filters the message satisfies. See the section "Zmail Filters", page 44.

[Keywords (R)] or L

Allows you to select or specify keywords for the current message.

You can use keywords in association with filters (See the section "Zmail Filters", page 44.) to semi-automatically tag messages. For example, you can associate filters and keywords as follows:

<i>Filter</i>	<i>Keyword(s)</i>
Grammar	Syntax-Checker
Dictionary	Dictionary
Parser	Syntax-Checker, Parser

With this scheme, a message about the grammar constructions the parser understands would get the keywords Syntax-checker and Parser. if you use [Keywords (M)].

You can save such filter-keyword associations in your Zmail Profile. To set the filter-keyword alist, click middle on [Filters] or [Keywords] in profile mode. Using [Filters (M)] allows you to alter the associations of a given filter; using [Keywords (M)] allows you to alter the associations of a given keyword. You will probably want to save the alist (and the filter definitions) in your profile. See the section "Zmail Profile Options", page 62.

See the section "[Keywords] Zmail Menu Item", page 94.

#### 4.2.2 Saving Keywords

You can store keywords, so that they appear on the keyword menu before you have ever used them. This is useful if you anticipate needing particular keywords in the future. To do so, click left on [Keywords] in profile mode. A small editing buffer pops up containing the names of the mail files loaded into your Zmail. If there are any keywords already used in those files, they are listed on the line with the appropriate file. You can add or delete keywords from the those listed as well as add file-keyword lists to this buffer. The format looks like this:

```
acme>kjones>baby1.text::bugs,documentation-bugs,grammar,parser
```

The keywords are actually stored in the individual mail files. The list of keywords stored in a particular mail file includes all keywords associated with any message ever in the file, plus any you add using [Keywords]. The keywords list displayed in the menu is the union of the lists in all mail buffers.

#### Zmail Filters

Filters are sets of criteria to use in testing messages. (See the section "Testing Zmail Message Characteristics", page 54.) You can use filters in association with keywords to sort messages or to move messages of a particular type to a separate mail buffer or collection. There are two types of filters:

1. Predefined filters
2. User defined filters

You can use predefined filters by clicking right on [Survey] or by clicking on Filters in the menu produced by clicking right on the message summary line.

You can define your own filters using New Filter in the menu produced by [Survey (R)]. See the section "Creating Zmail Filters", page 56.

## 4.3 Mail Buffers

### 4.3.1 Listing Zmail Buffers, Mail Files and Collections

Your current Zmail session consists of mail buffers (with associated mail files) and collections. Collectively these are referred to as *sequences*. You can list all the sequences in your current Zmail session as well as any mail files (known to your profile) that have not yet been read in. You do this with List Sequences (*m-x*). The items on the list are mouse sensitive.

### 4.3.2 Selecting Mail Buffers and Files

To select another mail buffer or file, use [Select (R)]. See the section "[Select] Zmail Menu Item", page 107. Click on the name of the desired buffer or file (if it appears) or use [Read/Create file] to specify the name of a file. Specify the name of the file to be read into a buffer. The buffer then takes the name of the file. The following are all possibilities:

- *The buffer exists:* it is selected.
- *The buffer doesn't exist, but a file of the same name does:* the file is read into a buffer and selected.
- *Neither exist:* a new buffer is created. Saving the buffer creates a new file.

Using [Select (L)] returns you to the previously selected sequence. Subsequent left clicks alternate between the two sequences.

*c-m-l* is like [Select (L)]. With an argument of 0 it works like [Select (R)]. With an argument of 1 or greater, it works as in Zmacs and selects from the stack of previously selected sequences. See the section "Changing Buffers" in *Text Editing and Processing*.

### 4.3.3 Copying a Message to Another Buffer

- [Move (R)]        Pops up a menu of mail files from which you select an existing file or collection or create a new one to which to move the current message. See the section "[Move] Zmail Menu Item", page 98.
- [Move]            Copy current message to same buffer as the last move.
- [Move (M)]        Move the message to the file(s) corresponding to any filters you have defined.

A filter-mail file alist associates a single mail file with each filter in the list. Using [Move (M)] moves the message to the files corresponding to the filters in the list satisfied by the message.

For example, if you associated your Hardware filter with the file `HARDWARE.XMAIL` and a Software filter with `SOFTWARE.XMAIL`, you could use [Move (M)] to move your messages to the appropriate mail buffer. With two or three mail files and filters, this is a very powerful tool.

To move a group of related messages to another mail buffer, you have to use mail collections. See the section "Zmail Mail Collections", page 46.

As with [Select], if the buffer doesn't exist, it is read in or created.

### 4.3.4 Saving a List of Mail Files

You can store a list of mail files in your Zmail profile, so that their names appear in the various mail file menus. Use [Mail files] in profile mode. Zmail does not load the files on this list automatically (See the function `zwei:preload-zmail` in *User's Guide to Symbolics Computers*.), it just makes the names easily accessible by placing them in the menu offered by [Select (R)]. As you request Zmail to load files into your Zmail, their names appear in bold at the top of the menu.

## 4.4 Mail Collections

To work with a group of related messages, you first put them all in a mail collection.

### 4.4.1 Creating a Mail Collection

There are three ways to create a mail collection:

1. Starting with a single message
2. By using filters
3. By marking individual messages

### **Creating a Mail Collection Starting with a Single Message**

To start a new mail collection with the current message, click right on [Move]. (See the section "[Move] Zmail Menu Item", page 98.) The items in the [Move] menu that relate to creating mail collections are [New Collection] and [Recycled Collection]

If you want to give the collection a name, click on [New Collection]. Zmail prompts you for a name for the new collection. This name shows up in the menu of mail sequences for subsequent [Move] and [Select] commands.

If you do not care about naming the collection, click on [Recycled Collection]. Zmail will create a temporary collection. The first such collection is named Temp, the second Temp-1, and so on. If you kill one of these collections, its name is re-used (*recycled*) for the next temporary collection.

### **Creating a Mail Collection by Using Filters**

You can use filters to create a collection in two ways:

1. Using predefined filters associated with the message. Click right on the summary line of a message and then click on Filters. A list of filters based on the header fields of the message pops up. You select one of these filters and Zmail searches through the current sequence for any messages that satisfy that filter and selects them along with the current message as a collection.
2. Choosing a filter from Filter Selection Display. Click right on [Select] and then click on Filters. Select one of the filters from the display. The messages in the current sequence that satisfy that filter are selected as a collection.

To include messages from more than one sequence, select or define a universe by clicking left on Universes in the Filter Selection Display. See the section "Selecting Zmail Universes", page 60. See the section "Defining Zmail Message Search Spaces", page 60. Messages from the sequences in the universe are then filtered to select a new collection.

### Creating a Mail Collection by Marking Individual Messages

The menu produced by clicking right on [Select] offers the item [Mark Survey]. See the section "[Select] Zmail Menu Item", page 107. Clicking on this permits you to mark the summary lines of messages in the current sequence to be selected as a collection. You mark messages using the mouse or the keyboard. Clicking right or pressing END terminates marking and selects the marked collection. The mouse clicks and keyboard commands are:

<i>Mouse click</i>	<i>Keyboard command</i>	<i>Meaning</i>
Left	Space	Toggle marking of message for inclusion in the collection.
	c-N	Move summary cursor forward.
	c-P	Move summary cursor backward.
	c-U, c-m-U	Scroll summary window forward.
	m-U, c-m-sh-U	Scroll summary window backward.
	Help	Print this help text.
Middle	Abort	Abort the mark survey operation.
Right	End	Finish marking and select the marked collection.

#### 4.4.2 Operating on a Mail Collection

Once you have a collection there are a number of things you can do with it:

Select any collection as current sequence

Click right [Select]. See the section "[Select] Zmail Menu Item", page 107.

Add message to collection

Click right on [Move]. Message is not deleted if it is just moved to a collection.

Click right on its summary line then click on [Move].

**Remove message from a collection**

Click right on its summary line then click on [Remove]. ([Remove] exists as a menu choice only when the current sequence is a collection). The message disappears from the collection but is not deleted from the buffer the collection is drawn from.

To do something to every message in a mail collection (or mail buffer) use [Map over (R)]. See the section "[Map Over] Zmail Menu Item", page 97.

Three particularly useful commands are:

**[Map over / Move (M)]**

Like using [Move (M)] for each individual message; that is, each message is moved to the appropriate file, based on the filter-mail file alist. See the section "Testing Zmail Message Characteristics", page 54.

**[Map over / Move / By Individual Filters]**

A synonym for [Map over / Move (M)].

**[Map over / Keywords (M)]**

Like using [Keywords (M)] for each individual message; that is, each message is given the appropriate keywords, based on the filter-keyword alist. See the section "Setting Zmail Keywords", page 43.

**4.4.3 Operating on a Message in a Mail Collection**

Remember that mail collections are sequences of messages drawn from mail buffers. The message exists in its original mail buffer. Therefore, *any change you make to the message appearing in the mail collection (for example, adding keywords to it) is reflected in the mail buffer, and vice versa.*

A single message can exist in several mail collections (some of which could have been created by filtering or marking on *another* mail collection). Changes made to any image of the message are reflected in the buffer and all collections in which it appears.

<i>Action</i>	<i>Effect</i>
---------------	---------------

Deleting a message	
--------------------	--

	All images of message marked as deleted.
--	--

Expunging buffer	Deleted message disappears from buffer containing actual message and all collections in which it appears.
------------------	---



**Expunging collection**

Deleted message disappears from that collection only. (The actual message and all remaining images are still marked as deleted.)

**4.5 Operating on a Group of Messages**

To do something to a group of messages, create a temporary collection containing just those messages. See the section "Creating a Mail Collection by Marking Individual Messages", page 48. Then you can use [Map Over] to operate on the collection. See the section "Operating on a Mail Collection", page 48.

**4.6 Saving, Expunging, Killing, and Renaming**

To expunge and save your mail sequences

[Save] or S      Expunges any buffers or collections with deleted messages and saves all buffers. See the section "[Save] Zmail Menu Item", page 106.

**Start Background Save (n-X)**

Suppresses background mail checks and starts a save in the background. This allows you to compose and send mail messages while the save is being done.

[Quit] or Q      Expunges any buffers or collections with deleted messages, saves all buffers, and returns to the window from which Zmail was called. See the section "[Quit] Zmail Menu Item", page 103.

[Save (M)] or E      Expunge current sequence.

[Save (R)]      Pops up a menu of all your mail sequences. From the menu you can determine what [Save] or S would do and either modify it or make it happen. The menu also allows you to use [Kill] on a buffer or collection, that is, simply get rid of Zmail's image of it. Files on disk are not affected.

To rename a mail file, perhaps because the host it usually is stored on is down, click on its filename in the Zmail mode line at the bottom of the screen. Zmail prompts you for a new filename for the buffer and you can then save the file to a different location.

To turn collections into mail files use [Map over / Move] (See the section "[Map Over] Zmail Menu Item", page 97.) to change the collection into a real buffer.

## 4.7 Hints for Using Keywords, Mail Collections, and Mail Files

Using the mechanisms described in this chapter is an art. Here are some suggestions.

Familiarize yourself with the range of options in profile mode. (See the section "Zmail Profile Options", page 62.) Try out different settings.

Decide on some useful topic, classifier, and status keywords and store them in your default mail file. Start using them; new ones added later will be stored automatically. After you've gained some experience with them, define some filters and create a filter-keyword alist so you can add keywords with click middle.

When your mail file starts getting big - 100 messages is certainly big for a default mail file, 200 for others - split it into two files by following these steps:

1. Filter on some message attribute to make a mail collection. If you've chosen your keywords well, you can just use a keyword filter. (To simply split the file into old and new messages, use [Before] on the Filter Creation Display.)
2. If you used a keyword filter in step 1, use [Map over / Unkeywords] to remove the keyword you filtered on, since everything in the new collection has that keyword.
3. Use [Map over / Move / Find file] to move the collection to another file.
4. Use [Save] to save your buffers and dispose of the collection.

When you have two or more mail files, create a filter-mail file alist so that you can use [Move (M)]. Create a filter-universe alist so that you can use the referenced message commands more effectively.

With files, keywords, and alists set up, your response to a new message might be among the following:

- Delete it.
- Reply to it.
- Put some keywords on it.
- Move it to another file.
- Look at the message it refers to.
- Delete the message it refers to.

If you have a lot of new mail, you might not want to read it in the order in which it arrived.

1. Use [Unseen] on the Filter Selection Display to put the new mail in a mail collection.
2. Use [Map over / Move (M)].
3. Read the new mail in each of the files to which it was moved.

(You must have a Filter-Mail File alist set up in order to use this procedure.)

## 5. Reference Information

### 5.1 Fundamental Techniques

#### 5.1.1 Customizing Zmail

The Profile command allows you to customize Zmail by setting various display and command options to your personal taste. You can set an option temporarily or permanently, the latter by saving the option in your *Zmail Profile*.

Classes of options you can set include the following:

- Format used for hardcopies of messages
- Mail-file attributes
- Lists of mail files and other objects that Zmail knows about at startup
- Associations between certain objects
- (M) actions for many top-level commands
- Screen configurations
- Default actions taken when reading, sending, replying to, or forwarding mail
- Command Tables

Customizing is done in *profile mode*, entered by clicking on [Profile] in the command menu at top level. The profile mode display (Figure 10) shows the text of your profile and the current settings of various options.

#### Setting and Saving Zmail Options

Option settings are stored in eight distinct places:

1. *Your mind*: your conception of how the options should be set.
2. *The Zmail environment*: the way the options are actually set at the moment.
3. *The defaults*: the way the options are actually set before you alter them.
4. *The editor buffer*: the in-memory buffer of your profile.

5. *The source version of your profile:* on disk.
6. *The compiled version of your profile:* also on disk.
7. *Mail buffers:* options associated and stored with the individual mail buffers.
8. *Mail files:* options associated with a mail buffer saved as a file.

Enter Profile Mode by clicking on [Profile] in the Zmail menu. The simplest way to use profile mode is:

1. Make the changes you want using the menu items or user options window, two regions of the display indicated in Figure 10. For a list of the various options and what they mean: See the section "Zmail Profile Options", page 62.
2. Click on [Exit] to leave profile mode. Check to see that you like your changes.
3. To save your changes, reenter profile mode and click on [Save]. Before you do this for the first time, use [Save (M)] and press RETURN to the question Zmail asks. This specifies that you want your file compiled, which makes it load and run faster. Answer *yes* to any questions about inserting changes or recompiling your file. At this point Lisp code corresponding to your option settings will be stored in your profile. Options changed using [File options] or [Keywords] are stored in the individual mail buffers and must be saved using [Save] on the top-level command menu.

What [Save] actually does is move option settings from the environment (where you altered them in the first step) to the editor buffer, then from the editor buffer to the source copy of your init file, and finally from the source file to the compiled file (by recompiling). You can also move option settings one step at time, by using [Reset] and [Default], and the menu options available by using [Save].

### 5.1.2 Testing Zmail Message Characteristics

*Filters* are logical predicates that apply to messages. They take a message as input and return a True or False answer based on its characteristics. For example, a filter might test whether the message was sent to a particular person or on a particular date. If the answer is True, the message is said to *satisfy* the filter.

Zmail commands use filters in one of two ways:

1. The [Survey], [Jump], and [Select] commands form subsets of all messages that satisfy a particular filter. ([Select] forms a mail collection; the other two form the subset implicitly.)

```

Filters  Universes  Mail files  File options  Keywords  Hardcopy
User options:
                                                    Top
People not to reply to: SCRC, SCRC1, SCRC2, SCRC3, SCRC4, SYMBOLICS, SCH, SPA, SHW, SDC, SCC, BBOARD, DOC-CHANGES, INFO-s, The-Real-SCRC,
Predicate for sorting keywords in keyword menu: Alphabetic Reverse alphabetic None
Add header fields to other msgs when expunging msg: Yes No
Delete message when moved into buffer: Yes No
Show headers and ask before expunging deleted messages: Yes No
Forwarded messages are supplied with a subject: Yes No
Move to first message even when no new mail in inbox: Yes No
Just show headers and text after yanking in message: Yes No
Automatically save buffer after reading inbox: No Yes
Read in inbox in the background: Yes No
Periodically check for new mail in the background: No Yes
Prune headers of yanked messages: Yes No
Direction to move after delete: Backward Forward Remove No Forward/Remove Backward/Remove
Direction to move for click middle on delete: Backward Forward Remove No Forward/Remove Backward/Remove
                                                    More below
Exit  Reset  Defaults  Save  Edit
Ellen's ZMAIL profile -*-Mode:LISP;Package:ZHEI-*-
;;; *** This block contains forms representing the non-default settings of user
;;; options that you made using the profile menus. It is generated
;;; automatically. Avoid inserting any other forms before the end of the block.

(LOGIN-SETQ *QUERY-BEFORE-EXPUNGE* T)
(LOGIN-SETQ *INHIBIT-BACKGROUND-SAVES* T)
(LOGIN-SETQ *PRUNE-HEADERS-AFTER-YANKING* T)
(LOGIN-SETQ *DELETE-MIDDLE-MODE* ':NO)
(LOGIN-SETQ *REQUIRE-SUBJECTS* ':INIT)
(LOGIN-SETQ *DEFAULT-CC-LIST* '((:NAME "ellen" :HOST NIL)))
(LOGIN-SETQ *DELETE-EXPIRED-MSGS* ':ASK)
(LOGIN-SETQ *REPLY-MODE* ':SENDER)
(LOGIN-SETQ *IR-REPLY-MODE* ':ALL)
(LOGIN-SETQ *MIDDLE-REPLY-WINDOW-MODE* ':YANK)
(LOGIN-SETQ *FORWARDED-MESSAGE-BEGIN* ""-----Begin Forwarded Message-----")
(LOGIN-SETQ *FORWARDED-MESSAGE-SEPARATOR* ""-----")
(LOGIN-SETQ *FORWARDED-MESSAGE-END* ""-----End Forwarded Message-----")
(LOGIN-SETQ *ZMAIL-STARTUP-FILE-NAME* ""S:ellen>ellen.baby1")
(LOGIN-SETQ *DEFAULT-MOVE-MAIL-FILE-NAME* ""S:ellen>ellen.xmail")
(LOGIN-SETQ *DEFAULT-DRAFT-FILE-NAME* ""S:ellen>doc27-stat-nsg.temp")

Profile
-----
Zmail Profile S:Ellen>zmail-init.lisp (39)

-----
Mouse-L: Edit; Mouse-R: Menu.
To see other commands, press Shift, Control, or Meta-Shift.
[Tue 1 Jul 1:18:34] Ellen ZHEI: User Input * S:Zmail>ellen.baby1 182 148838

```

Figure 10. Profile mode display

2. The [Keywords] and [Move] commands act upon a single message in a particular way depending upon which filters the message satisfies.

### 5.1.2.1 Selecting Filters

Filters are of two types:

1. *Predefined filters* are simple, and come in four varieties:
  - [All] is a filter satisfied by any message.

- *Keyword filters* test whether the message has a particular keyword or any keywords.
- *Property filters* test whether the message has a particular property, such as Answered.
- *Header filters* test whether the message headers meet specified characteristics, such as a Subject field that includes the word "Lisp".

2. *User-defined filters* are arbitrarily complex logical expressions whose operands are predefined filters and other user-defined filters.

When you invoke a Zmail command that uses a single filter (a command that forms a subset of messages) you select the filter you want from the menu shown in Figure 11. By first using [Not], you can negate the action of the filter you choose, that is, select those messages that *fail* to satisfy the filter.

#### 5.1.2.2 Creating Filters

Filters are Lisp functions, constructed using the menu-based programming tool shown in Figure 12. This display can be obtained in two ways:

- By using [New filter] in Figure 11: use this when none of the existing (pre- or user-defined) filters is suitable.
- By using [Filters] in profile mode (Figure 10) before using [New filter]: use this to define a filter whose utility you anticipate before you actually need to use it. The filter will be saved in your profile. See the section "Saving Zmail Filters", page 59.

The Filter Creation Display is divided into three main sections:

- The *summary window*. You can click left on a message's summary line to select predefined filters based on its characteristics.
- The menu items are the primary tool for defining the filter. The menu items are divided into four rows:
  - A row of *programming* items, [Not], [And], [Or], and [Close]. The first three are logical functions; the last closes a level of parentheses in the expression being constructed.
  - A *documentation* item, [Documentation], which adds documentation to a filter. This documentation appears as the mouse documentation line when you are pointing with the mouse to that filter in the filter selection menu.
  - A row of *processing* items, [Sample], [Done], and [Abort]:
    - [Sample] Displays the summary lines of messages that satisfy the filter you have defined so far.
    - [Done] Exits definition mode and executes the command that called for the filter.
    - [Abort] Aborts the command.
  - Two rows of *filter menus*, similar to the Filter Selection Display. These allow one filter to call another.
- The *editor buffer* displays the filter as it is being created.

So, how do you actually define a filter? Let's walk through an example. Suppose we want a filter that selects messages dealing with hardware. The first thing to do when defining a filter is to use the menu item above the editor buffer: right for a menu of existing filters to edit, or click left and give a name to create a new filter. Let's call this filter "Parser".

The next step is to determine the explicitly definable characteristics of the messages we're looking for. In this case, we might decide that messages about the parser are either from PJF (but only if dated after 2/5/86), or contain the word "parser" in the Subject field. Expressed in Lisp, the filter looks like:



```
(DEFINE-FILTER |Parser| (MSG)
  "Messages relating to the Parser"
  (OR (AND (MSG-HEADER-RECIPIENT-SEARCH ':FROM #"PJF")
           (MSG-DATE-GREATERP "5-Feb-86")))
      (MSG-HEADER-SEARCH ':SUBJECT #"Parser")
  ))
```

To create it, we follow these steps, clicking on the items in the menu:

- [Or]
- [And]
- [From], type PJF, and press RETURN
- [After], type 2/5/86, and press RETURN
- [Close]
- [Subject], type parser, and press RETURN
- [Documentation] type in a mouse documentation string followed by RETURN
- [Done]

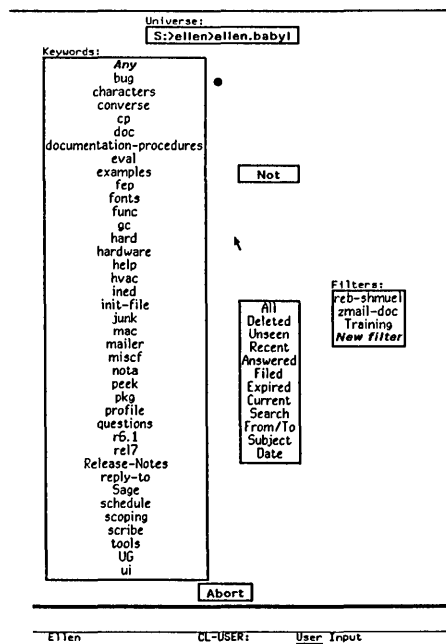


Figure 11. Filter Selection Display.

No.	Lines	Date	From*To	Subject or Text
1A	39	16-Jan	MHCN*Doc-Changes	CHAR-MOUSE-N-CLICKS is gone
2:	48	20-Feb	*MHCN	CHAR-MOUSE-N-CLICKS is gone
3:	19	9-Feb	MHCN*UI-Project,Bug-Zwe	Dynamic Editor again
4:	13	10-Feb	MHCN*bug-zmail	zmail meets the dynamic editor
5:	32	10-Feb	*DCP	(new) who-calls goes in
6:	95	24-Feb	DCP*Doc-Changes	who-calls replaced
7:	50	10-Feb	jlw*CD+nancy,bug-lisp#	Warning: Address space low!
8:	77	10-Feb	Margulies*	standard values
9:	95	10-Feb	DDYER*Margulies,user-in	concept for review
10:	30	1-Jul	SMM*schatsky@M,BUG-LISP	CL:DELETE doesn't work for first element
11-	28	1-Jul	Cyphers*schatsky@M,BUG-	CL:DELETE doesn't work for first element
12-	12	1-Jul	Strollo*SCRC	New OS person
13-	9	30-Jun	ALANZMK.LCS*USER-ACCCOUN	New Variable setting in PHWORD
14-	63	1-Jul	DLW*York	Running commands from your init file
15-	16	30-Jun	Gunby@RI.AI.*RICH@OZ.AI.	Console screen abuse
16-	11	30-Jun	ALAN@RI.AI.*User-R@MX.L	PHR
17-	9	30-Jun	GUMBYZMK.LC*USER-ACCCOUN	New Variable setting in PHWORD
18-	131	1-Jul	Stryker*DODDS,Stryker,J	Remove select-&
19-	64	1-Jul	Palter*RSL@C	Care and feeding of Elephant Butte
20-	264	1-Jul	DCP*rsl@CD,Bug-LHFS,Bug	Set LHFS FGPI Unit doesn't appear to work.
21-	72	1-Jul	crowley*Palter,RSL@C	Care and feeding of Elephant Butte
22-	288	1-Jul	Spool*Bug-Sage	This is probably Benson's fault...

Noname-1

Not    And    Or    Close

Sample    Done    Abort

Documentation

Deleted  
Unseen  
Recent  
Answered  
Filed  
Expired  
Current  
Search

To  
To/Cc  
From  
Subject  
Other

Before  
On  
After

Keywords:

Any  
bug  
characters  
converse  
cp  
doc

Filters:

reb-shmuel  
zmail-doc  
Training

(DEFINE-FILTER |Noname-1| (MSG)

Filter Definition

Zmail Filter

Mouse-L: Edit.  
To see other commands, press Shift, Control, Meta-Shift, or Super.  
[Tue 1 Jul 1:14:08] E)ten    ZHEI:    User Input    s: >ellen@ellen.baby 28 27301

Figure 12. Filter Creation Display.

Notice the [Close] command. It *closes* the [And]. The optional mouse documentation string, added in the next to last step, is very useful; it shows up as the mouse documentation line for the filter whenever you are asked to select a filter from a menu.

### 5.1.2.3 Saving Zmail Filters

Any filters you have defined during the current login session show up in the filter menus, but they are gone when you cold boot the next time. To save a filter permanently, you must save it in your profile.

1. Enter Profile mode (See the section "Setting and Saving Zmail Options", page 53.)
2. Click left on [Filters]. A menu pops up listing the filters you have saved in your profile plus any you have defined in your current Zmail session. The filters that are already saved in your profile are highlighted.
3. Click on the filter(s) you want to save. They appear highlighted.
4. Click on [Do It].
5. After the menu disappears, click on [Save] to save your profile.

The filters you have selected are then saved.

### 5.1.3 Defining Message Search Spaces

*Universes* are programs that define sets of messages. For example, the universe "Hardware" could be the set of messages in two mail files, `PRINTER-HARDWARE.BABYL` and `3640-HARDWARE.BABYL`. Universes are dynamic objects; if the contents of one of the files were to change, the contents of "Hardware" would change. Like filters, universes come in both predefined and user-defined varieties. Universes are implemented using flavors. You can define arbitrary universes; see `sys: zmail; universe lisp` for information.

Zmail commands use universes in one of two ways; in both cases, the universe acts as a search space:

- The [Survey], [Jump], and [Select] commands use universes to define the set of messages from which a filter extracts its subset.
- The referenced message commands use universes to find messages related to one you are looking at. See the section "Operating on Zmail Messages Referred to by the Current Message", page 41.

#### 5.1.3.1 Selecting Universes

When you use a universe in conjunction with a filter ([Survey], [Jump], or [Select] command), you do so by using the universe menu item in Figure 11 prior to selecting a filter. This menu item displays the universe to be used with the filter you select; the usual default is the rest of the current mail file. Using the universe menu item causes a menu to pop up similar to the one in Figure 13.

Using this menu, you can choose one of the following predefined universes:

- The messages in a particular mail file, buffer, or collection.
- The union of messages in all files, buffers, and collections listed in the menu.
- The union of messages in all buffers and collections.
- The messages in the current buffer or collection following the current message.
- The messages in the current buffer or collection preceding the current message.

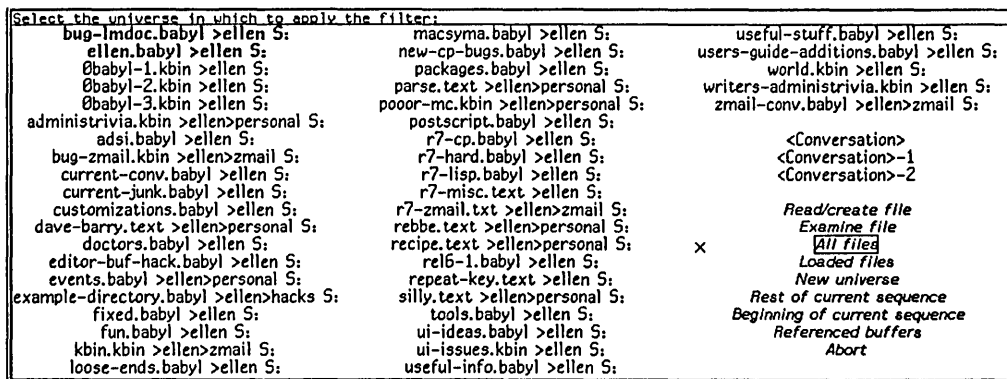


Figure 13. Universe Selection Display.

### 5.1.3.2 Creating Universes

New universes are defined using a menu tool similar to the Filter Creation Menu. You can obtain this display in two ways:

- By using [New universe] in Figure 13: use this when none of the existing (predefined or user-defined) universes is suitable.
- By using [Universes] in profile mode (Figure 10) before using [New universe]: use this to define a universe whose utility you anticipate before you actually need to use it. The universe will be saved in your profile. See the section "Saving Zmail Universes", page 62.

The Universe Creation Display is quite similar to the Filter Creation Display. By clicking on menu items, you construct a universe as unions, intersections, and complements of mail files, buffers, collections, and universes. These include the special universe [Current] (the current sequence), and the special universe [Loaded] (all loaded buffers). The precise definitions of the set operations are as follows:

- Union*            A message is in the union of  $n$  universes if it is in any of the universes in the union.
- Intersection*    A message is in the intersection of  $n$  universes if all contain the same message (not a copy from another buffer).
- Complement*     A message is in the complement of a universe if it is not in that universe, but is in [Loaded].

One caveat about the use of mail collections in universes: be sure that the collection you name actually exists when you use the universe. A universe used several times or stored in your profile might refer to a collection that no longer exists. If so, Zmail attempts to find a mail file with the same name as the collection. This results in an error.

### 5.1.3.3 Saving Universes

To save a universe in your profile, use [Universes] in profile mode. When you save your profile, the universes you select are saved. Those universes, plus any you have defined during the current login session, show up in the universe menus.

## 5.2 Zmail Profile Options

The profile menu allows you to customize Zmail. Here are the various options in the order in which they appear in the menu. Many of them are self-explanatory.

### 5.2.1 Zmail Options for Window Configuration

**zwei:\*default-initial-window-configuration\*** *Variable*

*Profile Option:* Default startup window setup

Controls the configuration of your Zmail windows when you invoke Zmail for the first time. The choices are: Summary only, Both (the default), Message only, and Experimental.

**zwei:\*default-summary-template\*** *Variable*

*Profile Option:* Default summary window format

Specifies the format for message summary lines. The possible values are:

<i>Format</i>	<i>Headings for Summary Window</i>		
Standard	No. Lines	Date From→To	Subject or Text
No Date	No. Lines	From→To	Subject or Text
Reminder	No. Date	Time	Subject or Text

**zwei:\*summary-window-fraction\*** *Variable*

*Profile Option:* Fraction of the frame occupied by the summary

Controls the percentage of the screen occupied by the summary window in the default window configuration. The default is 45 percent, which means that the command window divides the screen in half, with approximately equal sized summary and message windows above and below respectively.

**zwei:\*summary-subject-trim-spaces\*** *Variable*

*Profile Option:* Spaces are trimmed from the left of the subject in summary

**zwei:\*summary-scroll-fraction\*** *Variable*

*Profile Option:* Amount by which to glitch summary window

**zwei:\*filter-summary-window-fraction\*** *Variable*

*Profile Option:* Fraction of the frame occupied by the summary in filter mode

## 5.2.2 Zmail Options for Reading Mail

**zwei:\*zmail-startup-file-name\*** *Variable*

*Profile Option:* File read in at startup

Your mailbox file.

**zwei:\*new-mail-file-append-p\*** *Variable*

*Profile Option:* Appending of inboxes to new mail files

Controls the order in which messages appear in a new mail file you create. The choices are:

Append	New mail files append messages.
Prepend	New mail files prepend messages.
Sticky	(The default.) New mail files inherit whether they append messages from the current buffer.
Ask	You are queried when creating a new mail file as to whether it appends messages.

- zwei:\*complete-get-inbox-in-background\*** *Variable*  
*Profile Option:* Read in inbox in the background
- zwei:\*inhibit-background-mail-checks\*** *Variable*  
*Profile Option:* Periodically check for new mail in the background
- Controls the checking of your inbox for new mail. If you leave it *yes* (*nil*, the default), Zmail will check periodically and notify you if there is new mail. If you change it to *no* (*t*), this action will be inhibited.
- zwei:\*always-jump-after-get-new-mail-from-inbox\*** *Variable*  
*Profile Option:* Move to first message even when no new mail in inbox
- zwei:\*always-select-saved-current-msg\*** *Variable*  
*Profile Option:* Reselect previous current message even if current message in sequence
- When set to *t* (the *yes* response to the profile question), saves your place in a sequence when you select another sequence. For example: you come across an interesting message (say, #200) in your *babyl* file and do Select Conversation by References. Messages #200, #225, #250, and #300 are selected. You look at the messages and reselect your *babyl* file. If (**zwei:\*always-select-saved-current-msg\***) is *t*, you are returned to message #200 in your *babyl* file. If (**zwei:\*always-select-saved-current-msg\***) is *nil* (the default), you are returned to message #300 in your *babyl* file.
- zwei:\*run-gmsgs-p\*** *Variable*  
*Profile Option:* Run GMSGs before getting new mail
- If you keep your mail on an ITS host at M.I.T. and use the GMSGs facility, this option allows you to use it from Zmail.
- zwei:\*gmsgs-other-switches\*** *Variable*  
*Profile Option:* Other switches to supply to GMSGs server
- Allows you to specify arguments to the GMSGs command if you keep your mail on an ITS host at M.I.T.

### 5.2.3 Zmail Options for Saving Mail

- zwei:\*query-before-expunge\*** *Variable*  
*Profile Option:* Show headers and ask before expunging deleted messages
- Controls whether you are asked for confirmation when messages are being expunged from the mail file. If you leave it *no* (*nil*, the default), you are not asked. If you change it to *yes* (*t*), the headers of the messages to be expunged are displayed and you are asked to confirm the expunge.

**zwei:\*inhibit-background-saves\*** *Variable*

*Profile Option:* Automatically save buffer after reading inbox

Controls the automatic saving of your mail buffer. If you leave it *yes* (*nil*, the default), your buffer is automatically written out when your inbox has been read. If you change it to *no* (*t*), the buffer is not saved until you save it explicitly.

## 5.2.4 Zmail Options for Sending Mail

**zwei:\*mail-middle-mode\*** *Variable*

*Profile Option:* Middle button on Mail command

Controls the action of [Mail (M)]. The choices are: Bug (send a bug message, the default), Mail, Forward, Redistribute, and Local.

**zwei:\*default-mail-window-configuration\*** *Variable*

*Profile Option:* Default window configuration when mailing

Allows you to specify how the window is configured in mail mode.. The choices are:

- |              |   |
|--------------|---|
| Both         | The message is composed in the the lower (message) window, the command pane and the summary window remain as usual.                       |
| Experimental | The message is composed in the lower (message) window. The command pane is divided into three sections providing a variety of operations. |
| Send         | (The default.) The screen is divided into two windows, the header window and the message window.  |
| Message only | The screen consists of one window with the headers at the top.  |

**zwei:\*header-window-nlines\*** *Variable*

*Profile Option:* Number of lines (or fraction) occupied by headers in mail mode

Controls the number of lines in the header window in mail mode. The default is 3.

**zwei:\*prompt-for-missing-headers\*** *Variable*

*Profile Option:* Use the minibuffer to read missing headers



- zwei:\*require-subjects\*** *Variable*  
*Profile Option:* Require subjects on outgoing messages  
 Controls whether or not you are required to supply a Subject: line on messages you send. The choices are:
- Yes                   (t, the default.) Require a Subject: line on each message.
- No                    (nil) Do not require a Subject: line. You can add one yourself if you want one.
- On bug reports      Require a Subject: line on bug reports but not on other messages.
- Initial but not required  
                           Supply a Subject: line in the generated header for a message, but do not require that it be used.
- zwei:\*send-header-format\*** *Variable*  
*Profile Option:* Format of headers sent  
 The choices are: Short, Long, Include personal (the default), and Use original.
- zwei:\*local-mail-header-force\*** *Variable*  
*Profile Option:* Header force for local messages  
 Controls the format of headers on messages sent on your local system. The possibilities are none, RFC733 (Arpanet standard), Network, and ITS (M.I.T. Incompatible Time Sharing). The default is ITS.
- zwei:\*local-mail-include-subject\*** *Variable*  
*Profile Option:* Local mail starts out with a subject
- zwei:\*default-cc-list\*** *Variable*  
*Profile Option:* Default initial Cc list  
 Allows you to specify a list of recipients of copies of messages you send.
- zwei:\*default-fcc-list\*** *Variable*  
*Profile Option:* Default initial Fcc list  
 Allows you to specify a list of files to which copies of your messages are sent.
- zwei:\*default-mail-buffer-major-mode\*** *Variable*  
*Profile Option:* Default major mode when composing messages.  
 Controls the editing mode in which mail buffers and reply buffers start out. The choices are:

Text  
 Fundamental  
 Lisp

The default is Text. You can set the mode as you can for a Zmacs buffer. See the section "Zmacs Major Editing Modes" in *Text Editing and Processing*.

**zwei:\*default-draft-file-name\*** *Variable*

*Profile Option:* Default file for saving draft

Allows you to specify a pathname to use for saving draft messages.

**zwei:\*mail-file-for-drafts\*** *Variable*

*Profile Option:* Mail file to store drafts in

### 5.2.5 Zmail Options for Replying to Mail

**zwei:\*reply-mode\*** *Variable*

*Profile Option:* Default reply to

Controls the automatic generation of to and cc fields in the header of a reply. The default is to reply to all addressees in the original message.

Possible reply modes are:

**All**                      Send the reply to everyone who saw the original message.  
 Headers are:

To: *old From*

To: *old To*

Cc: *old Cc*

That is, the To: field of the reply becomes the old From: and To:, and the Cc: field of the reply becomes the old Cc:.

**All-Cc**                    Reply is primarily for original sender, but is of interest to all who saw the original message. Headers are:

To: *old From*

Cc: *old To*

Cc: *old Cc*

**Cc-All**

Reply is primarily for original recipients, but is also of interest to original sender and CC: recipients. Headers are:

	To: <i>old To</i> Cc: <i>old From</i> Cc: <i>old Cc</i>
To	Like All, but omit the original CC: recipients. Headers are:  To: <i>old From</i> To: <i>old To</i>
To-Cc	Like All-Cc, but but omit the original CC: recipients. Headers are:  To: <i>old From</i> Cc: <i>old To</i>
Cc-To	Like Cc-All, but but omit the original CC: recipients. Headers are:  To: <i>old To</i> Cc: <i>old From</i> .
Sender	Reply is just for the sender of the message. Headers are:  To: <i>old From</i>

**zwei:\*1r-reply-mode\*** *Variable*

*Profile Option:* Default reply with argument of 1 to

Controls the automatic generation of to and cc fields in the header of a reply when a reply command is given an argument of 1. The default is to reply only to the sender of the message. For an explanation of the choices: See the section "Zmail Reply Command", page 26.

**zwei:\*middle-reply-mode\*** *Variable*

*Profile Option:* Default reply to for middle button

Controls the automatic generation of to and cc fields in the header of a reply you click middle on Reply. The default is to reply to the sender of the message. For an explanation of the choices: See the section "Zmail Reply Command", page 26.

**zwei:\*reply-window-mode\*** *Variable*

*Profile Option:* Default reply window setup

Two windows	(The default.) The message you are replying to is displayed in the upper window. You compose your reply in the lower window.
One window	The message you are replying to is not displayed.
Yank	The message you are replying to is included in your reply.

**zwei:\*middle-reply-window-mode\*** *Variable*

*Profile Option:* Default reply window setup for middle button

Controls the configuration of the windows in reply mode when you click middle on Reply. The default is two windows.

**zwei:\*reply-header-format\*** *Variable*

*Profile Option:* Format of headers inserted for reply

The choices are: Short (the default), Long, Include personal, and Use original.

**zwei:\*generate-in-reply-to-field\*** *Variable*

*Profile Option:* Automatically generate In-reply-to fields

Controls whether the headers on a reply will contain an In-reply-to: field, referencing the original message. If you leave it *yes* (t, the default) an In-reply-to: field is generated. If you change it to *no* (nil) this field is not generated.

**zwei:\*dont-reply-to\*** *Variable*

*Profile Option:* People not to reply to

Allows you to specify a list of addresses to avoid sending a reply to automatically. For example, if a message were broadcast to a large mailing list asking a question, you probably want to reply only to the sender, not the entire mailing list.

## 5.2.6 Zmail Options for Including Messages In a Reply

**zwei:\*one-window-after-yank\*** *Variable*

*Profile Option:* Just show headers and text after yanking in message

Controls the window configuration in a reply when the text of the message being replied to is included. If you leave this *yes* (t, the default), only one window is used after the message being replied to is yanked into the reply. If you change this to *no* (nil), both windows are kept, even though the text of the message being replied to is included in the reply window.

**zwei:\*prune-headers-after-yanking\*** *Variable*

*Profile Option:* Prune headers of yanked messages

Controls how much of the header information is kept on messages included in replies. If you leave it *no* (nil, the default), the entire header of the included message is kept. If you change it to *yes*, (t) only the date and from lines are kept.

### 5.2.7 Zmail Options for Forwarding Messages

**zwei:\*forwarded-message-begin\*** *Variable*

*Profile Option:* Format line before forwarded messages

Allows you to specify a string to use to introduce a forwarded message.

**zwei:\*forwarded-message-separator\*** *Variable*

*Profile Option:* Format line between forwarded messages

Allows you to specify a string to use in between two forwarded messages.

**zwei:\*forwarded-message-end\*** *Variable*

*Profile Option:* Format line after forwarded messages

Allows you to specify a string to use after a message being forwarded.

**zwei:\*forwarded-add-subject\*** *Variable*

*Profile Option:* Forwarded messages are supplied with a subject

### 5.2.8 Zmail Options for Deleting Messages and Moving Around

**zwei:\*delete-middle-mode\*** *Variable*

*Profile Option:* Direction to move for click middle on delete

Controls which message to select as current when you delete the current message using [Delete (M)]. The choices are: Backward (the default), Forward, No, Forward/Remove, and Backward/Remove.

**zwei:\*next-after-delete\*** *Variable*

*Profile Option:* Direction to move after delete

Controls which message to select as current when you delete the current message. The choices are: Backward, Forward (the default), No, Forward/Remove, and Backward/Remove.

**zwei:\*next-middle-mode\*** *Variable*

*Profile Option:* Middle button on Next command

Controls the action of [Next (M)]. The choices are:

Next undeleted	Selects the next undeleted message.
Next	Selects the next message in the sequence, whether or not it has been marked for deletion.
Next unseen	Selects the next unseen message.
Next recent	Selects the next message in the recent sequence.
Last undeleted	(The default.) Selects the last undeleted message in the sequence.
Last	Selects the last message in the buffer, whether or not it has been marked for deletion.
Last unseen	Selects the last unseen message in the sequence.
Last recent	Selects the last message in the recent sequence.

**zwei:\*previous-middle-mode\****Variable**Profile Option:* Middle button on Previous command

Controls the action of [Previous (M)]. The choices are:

Previous undeleted	Select the previous undeleted message.
Previous	Selects the previous message, whether or not it is marked for deletion.
Previous unseen	Selects the previous unseen message in the sequence.
Previous recent	Selects the previous message in the recent sequence.
First undeleted	(The default.) Selects the first undeleted message in the sequence.
First	Selects the first message in the sequence, whether or not it has been marked for deletion.
First unseen	Select the first unseen message in the sequence.
First recent	Select the first message in the recent sequence.

**zwei:\*map-middle-mode\****Variable**Profile Option:* Middle button on Map command

Controls the action of [Map (M)].

Delete	Deletes all messages.
Undelete	Undeletes all messages.
Type	Types out (displays) all messages in the typeout window.

Find string	Shows lines within messages containing the given string. You can select the message containing a line by clicking on the line of text. This provides a handy way to search through a collection for a message you only vaguely remember.
Keywords	Puts specified keywords on all messages. Clicking (L), (M), and (R) on Keywords work just as for [Keywords] in the Zmail menu. See the section "[Keywords] Zmail Menu Item", page 94.
Unkeywords	Removes specified keywords from all messages.
Move	Moves all messages to the specified file.
Hardcopy	Hardcopies all messages.
Forward	Forwards all messages (concatenated into one message). See the section "[Mail] Zmail Menu Item", page 96.
Redistribute	Redistributes all messages, individually but to the same recipient(s).
Reply	Replies to all messages (concatenated into one message).
Concatenate	Appends all messages to the first message.
Select conversation	Selects messages to which a message in the sequence refers, or that refer to a message in the sequence, recursively; this is implemented by <b>zwei:com-zmail-select-all-conversations-by-references</b> .
Undefined	(The default.)

**zwei:\*summary-mouse-middle-mode\***

*Variable*

*Profile Options:* Middle button on summary window

Controls the action when you click middle on a message header in the summary window. The default is Delete/Undelete which means if the message is not deleted, mark it for deletion. If it is marked for deletion, unmark it.

### 5.2.9 Zmail Option for Ordering Keywords

**zwei:\*keyword-alist-sort-predicate\***

*Variable*

*Profile Option:* Predicate for sorting keywords in keyword menu

### 5.2.10 Zmail Option for the Format of Mail Files

**zwei:\*text-mail-file-separator\*** *Variable*

*Profile Option:* Line between messages in text mail file

Allows you to specify a format control string to be used to separate messages when you hardcopy a mail file or sequence and have not specified that each message be on a separate page.

For example, to get some white space and a row of dashes, you might use something like this:

```
(format t "~2&-----~%")
```

See the section "Formatted Output" in *Reference Guide to Streams, Files, and I/O*.

### 5.2.11 Zmail Options for Moving Messages and Creating Collections

**zwei:\*default-move-mail-file-name\*** *Variable*

*Profile Option:* Default file for moving to a new file

Allows you to specify the pathname of the file to which you usually want to move messages.

**zwei:\*delete-after-move-to-buffer\*** *Variable*

*Profile Option:* Delete message when moved into buffer

Controls the automatic deletion of a message from one buffer when it is moved to another buffer. If you leave it *yes* (*t*, the default) the message is deleted from its original buffer when it is moved to a new one. If you change it to *no* (*nil*) the message appears in both buffers.

**zwei:\*default-mail-buffer-generation-retention-count\*** *Variable*

*Profile Option:* Generation retention count set on newly created mail files

Controls the automatic deletion of copies of a new mail file. If it is left blank (*nil*) no deletion of earlier copies is done. Otherwise, the specified number are kept and others deleted. The UNIX file system does not handle this variable, so if your mail is stored on a UNIX system, leave this variable *nil*.

**zwei:\*query-before-selecting-empty-sequence\*** *Variable*

*Profile Option:* Confirmation is required to select an empty sequence

**zwei:\*preserve-msg-references-across-expunge\*** *Variable*

*Profile Option:* Add header fields to other messages when expunging message



Controls whether the backward and forward references among messages in a conversation should be preserved when a message is deleted and expunged from the middle of the conversation. If you leave it *no* (**nil**, the default), the references will not be preserved. If you change it to *yes* (**t**), appropriate header fields will be added to the messages referred to by the deleted message or referring to the deleted message so that the conversation continues to hold together.

### 5.2.12 Zmail Options for Calendar Mode

**zwei:\*configure-middle-mode\*** *Variable*  
*Profile Option:* Middle button on Configure

Controls the action of clicking middle on Configure. The choices are: Summary only, Both (the default), Message only, Experimental, Calendar, Month, Four weeks, Week, Year.

**zwei:\*calendar-mode-week-starts-on-monday\*** *Variable*  
*Profile Option:* The week starts on Monday rather than Sunday in calendar mode

**zwei:\*delete-expired-msgs\*** *Variable*  
*Profile Option:* Automatically delete expired messages

Controls whether or not you are asked before expired reminders in calendar mode are deleted. The default is per file, meaning that you can set it differently for each file.

Some of the menu items in the profile display also write information into your profile. These are:

[Mail Files] Profile Menu Item

[Mail Files] Other Mail Files. Allows you to add files to the list of mail files to be remembered in your profile.

[Mail Files (M)] Filter associations. Selects a mail file whose filter associations to edit.

[Mail Files (R)] Pops up a menu of Other Mail Files and Filter associations.

File Options (Menu)

Select one of your mail files whose file options to edit.

You can set up lists of keywords and associate them with specific mail files or filters by clicking on [Keywords] in the Profile menu.

- [Keywords] Edits keyword list for all your mail files.
- [Keywords (M)] Selects a keyword whose filter associations to edit.
- [Keywords (R)] Pops up a menu of Mail Files Keywords and Filter associations.

### 5.3 Header Formats

There are three header formats known to Zmail: RFC733, Network, and ITS. This section describes the various header fields in each format. You can insert various header fields into the Headers window, which contains the headers for the message being written. See the section "Altering Zmail Header Fields", page 21.

A message with bad header format gets the (badheader) property.

- Date:** The day, date, and time the message was sent. Generated automatically when a message is sent.
- From:** The user name and host name of the sender of the message. Generated automatically. If you choose, you can explicitly provide this field, in which case a Sender: field is automatically generated with the user name and host name of the sender. This is useful if you send a message from a machine logged in under someone else's name; give a From: field with your user name in it.
- To:** The user names and possibly host names of the primary recipients of the message. Depending on the mail server, one can also include names of mailing lists (distribution lists) and file names in the To: lists. If a mailing list name is included, the message is sent to everyone on the mailing list; if a filename is included, the message is sent to the file.
- CC:** A list of secondary recipients of the message, in the same format as the To: field.
- BCC:** For "blind carbon copies". The field contains recipient names. The recipients in a BCC: field do not appear in the copy of the message that is delivered to the ordinary recipients; they do appear in the copy that is delivered to BCC: recipients.
- FCC:** For filing a copy of a message that is being sent. The recipients see the field in the message. For example,
- FCC: F:>JHW>MAIL>OUTGOING.BABYL

- The file has to exist already; FCC: cannot result in a file being created.
- BFCC:** For filing a "blind" copy of a message that is being sent. The recipients of the message do not see the BFCC: field. For example,
- BFCC:** F:>JHW>MAIL>OUTGOING.BABYL
- The file has to exist already; BFCC: cannot result in a file being created.
- File-References:** One or more pathnames, separated by commas. This is useful when you want to direct someone to a file. The pathname becomes the default for the Compile File, Load File, Edit File, Show File, Format File and Hardcopy File commands.
- Included messages:**  
A collection of all message ID fields; added by Zmail when user concatenates messages.
- Included references:**  
A collection of all "in-reply-to" fields; added by Zmail when user concatenates messages.
- Forward-References:**  
Field added by Zmail when the variable **zwei:preserve-msg-references-across-expunge\*** is set, so that conversations remain intact even when some messages are expunged. See also Backward-References:.
- Backward-References:**  
Field added by Zmail when the variable **zwei:preserve-msg-references-across-expunge\*** is set, so that conversations remain intact even when some messages are expunged. See also Forward-References:.
- Encrypted:** For flagging the message as containing encrypted text. Zmail generates this header field itself when it is sending a message. The value of the field is the name of the kind of encryption that was used.
- Subject:** A line of text giving the subject of the message.
- In-reply-to:** An identification of the message being replied to. The message

is typically identified by giving the Message-ID:, or, in its absence, the contents of its Date: and From: fields, but different mail systems form this field in different ways.

- Sender:** The user name and host name under which the message was sent, when different from the From: field; automatically inserted if a From: field is given (see above).
- Redistributed-to:** The recipients of the redistributed message; a list in the same format as the To: field. Resent-to: is a synonym.
- Redistributed-by:** The name of the user who redistributed the message. Resent-by: is a synonym.
- Redistributed-date:** The date the message was redistributed. Resent-date: is a synonym.
- Expiration-date:** A date, intended as the date on which some mail systems will automatically delete the message.
- Reply-to:** An address, in the same format as the To: field. Intended as the address to which to send replies to this message, when that is different from the From: or Sender:.
- Message-ID:** A unique character string that distinguishes this message from all others.

## 5.4 System Dependencies

### 5.4.1 Disk File Names

The files discussed in this document (mail files, default mail files, inboxes, renamed inboxes, and source and compiled init files) have distinctive file names that vary depending upon the host system you use. The following table gives the names, assuming your user id (login name) is *user-id*. Except as indicated, all files are in your standard login directory (homedir). ("LMFS" means Genera's own file system.) Names in the column *Other mail files* are conventional but not required.

<u>System</u>	<u>Default mail file</u>	<u>Other mail files</u>
LMFS	babyl.text	*.babyl or *.xmail
UNIX	mbox or user-id.bb	*
TENEX/TOPS-20	user-id.BABYL	*.BABYL or *.XMAIL
ITS	user-id BABYL or user-id RMAIL	* BABYL or * XMAIL
<u>System</u>	<u>Inbox</u>	<u>Renamed inbox</u>
LMFS	mail.text	mail.-zmail-text
UNIX	/usr/spool/mail/user-id or ~/.mail	/usr/spool/mail/user-id.zmail ~/.mail/zmail
TENEX	MESSAGE.TXT;1	MESSAGE.-ZMAIL-TXT
TOPS-20	MAIL.TXT.1	MAIL.-ZMAIL-TXT
ITS	user-id MAIL	user-id _ZMAIL
<u>System</u>	<u>Source files</u>	<u>Compiled file</u>
LMFS	zmail-init.lisp	zmail-init.bin
UNIX 4.1	zmail-init.l	zmail-init.bn
UNIX 4.2	zmail-init.lisp	zmail-init.bin
TENEX/TOPS-20	zmail-init.lisp	zmail-init.bin
ITS	ZMAIL >	user-id ZMAIL

If your init file is not compiled, or if you delete your compiled file, rename the source file to the name in the column *Compiled file*.

#### 5.4.2 Mail File Formats

Zmail understands five mail file formats: BABYL, RMAIL, KBIN, TENEX, and UNIX. In most cases, the format is transparent to the user. However, the following information is useful if you transfer files between systems.

Zmail recognizes the format of a mail file from its contents, never from its file name, but with the following limitation: certain formats are only recognized on certain systems:

<i>Mail file format</i>	<i>System(s)</i>
BABYL	All
KBIN	All
UNIX	UNIX
RMAIL	LMFS, ITS
TENEX	TENEX/TOPS-20
VAX/VMS	Not supported at present

To select a mail file whose format does not satisfy these expectations, use Select Arbitrary Format Mail File, which allows you to specify the format explicitly. See the section "Select Arbitrary Format Mail File (m-x) Zmail Command", page 108. (Inbox files have a different format on each system, and can only be read on the type of system on which they were written.)

For UNIX, if you want your default mail file to be a BABYL file (which cannot be processed using the UNIX mail reading program, but which is more useful when using Zmail), the file *user-id.bb* must be created in your home directory and the Mail option in that file set to:

Mail:*homedir*/mbox/usr/spool/mail/*user-id*

### 5.4.3 Binary Format for Storing Mail Files

KBIN format stores messages as binary data rather than text. In addition to the actual message text, KBIN files contain the parsed representation of the message. As a result, KBIN files are usually between 30% and 50% larger than BABYL or RMAIL files. This means that it normally takes between 30% and 50% longer to save a KBIN file.

However, once a KBIN file is read into your machine, all the information needed by Zmail to process its contents is already present. Zmail does not have to reparse the messages which is where most of the time is actually spent while loading mail files. Thus, KBIN files show a marked improvement in loading times.

### 5.4.4 Converting Existing Mail Files to KBIN Format

Note: KBIN Files can only be read with Genera 7.0. Once you have converted a file to KBIN format it can no longer be read with Release 6.1 or earlier software.

Existing mail files can be converted to use KBIN format by the following procedure:

Enter Zmail and click on [Profile] in the command menu.

1. Click on [File Options] in the profile frame and select a mail file that you want to convert to KBIN format.
2. If the mail file's pathname contains a component which reflects its format (for example kjones.babyl), you might want to rename it. Do this by clicking on the pathname.
3. Click on the KBIN format.
4. Click on [Do It]. If you have renamed the mail file to the name of an existing file, Zmail asks if you really want to overwrite the old file. If you have renamed the mail file, Zmail automatically updates any references to it in your profile and reminds you to click on [Save] to permanently record these changes in your profile. Zmail then announces that it is converting the mail file's format and asks you to stand by. Unfortunately, it takes some time to convert mail file formats.

Repeat these steps for each mail file that you wish to convert to KBIN format.

Then, to make the conversion permanent:

1. Click on [Save]. Answer yes to the queries to insert changes and, optionally, recompile your profile.
2. Click on [Exit] to leave the profile editor.
3. Use the Save command to actually write out the converted mail files.

#### 5.4.5 Support for Internet Domain Addressing

Zmail supports the Internet RFC822 domain-addressing formats, for the purpose of parsing and replying to messages with domain-format addresses in their headers. If the machine name is registered in the ARPA network host table, that name is used in the address. If the machine name is not registered, the network address is used, in the form [address], where *address* is the four integer numbers which specify the host in Internet addressing.

#### 5.4.6 Features Not Supported by Zmail

Some mailers and file formats do not support all of the features described in this document.

UNIX and RMAIL format do not support keywords, properties, or file attributes. TENEX format does not support keywords or file attributes. Mail buffers for files in these formats can use these features, but the information is not saved in the disk copy.

VAX/VMS mail is presently unsupported; that is, VMS format inboxes and mail files cannot be read or written. However, mail files in any the four standard formats can be stored on VMS.





## 6. Dictionary of Zmail Commands

### . (Kbd) Zmail Command

- . (period) Scrolls back to the beginning of the current message.

### c-X 0 (Kbd) Zmail Command

- c-X 0 (Kbd) Zero window mode. The Message window on the *top-level display* is used for the message being composed. When the c-X 0 command is issued, the screen is restored to its format at top level, except the Message window displays the headers and text of the message being written. (See Figure 14.)

```

No. Lines Date From:To Subject or Text
606- 35 1-Jul JWalker@DLW Running commands from your init file
607- 21 1-Jul RLBOC@DCP Have I missed something here?
608- 96 1-Jul DCP@uol@CD,BUG-LISP# nsubst-if seems to expect its arguments in the wrong order
609- 52 1-Jul DCP@uol@CD,York,schats CL:DELETE doesn't work for first element
610- 39 1-Jul rsl@C@DLW,RLB,York Running commands set from your init file but from other files
611- 13 1-Jul roads@LYONS,bug-Indoc sys:2region-number
612- 11 2-Jul HMcH@bug-donains sys:network:donains.lisp
613- 33 2-Jul HMcH@Hobblies new world status
614- 8 2-Jul schatsky@M@bug-Indoc@M NETI:WITH-STREAM-TIMEOUT
615- 27 2-Jul Cyphers@Bug-Lisp# c-a-j has problems
616- 24 2-Jul reg@Hoon,Bug:Documentat aside comment left in documentation
617- 35 2-Jul York@DCP,innan nbs:auto-add-fep-host
618- 253 2-Jul JR@rel7-0-beta,bug-lisp multiple-file-plist - please release me, let me go!
619- 269 2-Jul schatsky@M@Bug-Lisp# Doc Ex and more breaks breaks
620- 131 2-Jul lerner@Bug-Lisp#rel7-0 File system lock-up
621- 22 2-Jul skeene@schatsky@M Documentation on file access paths and nail access paths
622- 85 2-Jul DCP@Bug-Lisp# can't open serial streams in Release 7
623- 81 2-Jul DCP@Bug-Lisp# Can't do output to OBS serial streams once they are open
624- 29 2-Jul skeene@schatsky@M NETI:WITH-STREAM-TIMEOUT
625- 56 2-Jul dplerce@Bug-Lisp#rel7- neek
626- 16 2-Jul Jrd@HMcH,bug-donains sys:network:donains.lisp

```

Profile	Quit	Delete	Undelete	Reply
Configure	Save	Next	Previous	Continue
Survey	Get inbox	Jump	Keywords	Mail
Sort	Map over	Move	Select	Other

```

To:
Subject:
cc:

Message
Zmail Mail (Text) Message End nails, Abort aborts
Type END when done editing.

Operate on this message: L: Select; M: Delete/Undelete; R: menu.
[Wed 2 Jul 10:26:44] E11en CL-USER: User Input 1006 abort 55 Fd 10 - 19 rch 1E

```

Figure 14. Mail Mode Display (Zero-Window Mode)

### c-X 1 (Kbd) Zmail Command

- c-X 1 (Kbd) One-window mode. The mail mode display is configured with two windows, Headers and Mail, used for the headers and text of the message being written.

### **c-X 2 (Kbd) Zmail Command**

c-X 2 (Kbd) Two-window mode. The mail mode display is configured with three windows, Message, Headers, and Mail, which display the current message (which is the message being replied to, if using the Reply command), and the headers and text of the message being written.

### **Add to Field Zmail Command**

[Add To Field] (Editor Menu)

*n* c-X T (Kbd) Adds another To: recipient. Positions cursor at the end of the To: field, set up to add another name. (Creates a To: field if there is not one already.) With an argument *n* = 0, positions cursor at beginning of To: field. With a negative argument, deletes the To: field.

### **Add Cc Field Zmail Command**

[Add Cc Field] (Editor Menu)

*n* c-X C (Kbd) Adds another CC: recipient. Positions cursor at the end of the CC: field, set up to add another name. (Creates a CC: field if there is not one already.) With an argument *n* = 0, positions cursor at beginning of CC: field. With a negative argument, deletes the CC: field.

### **Add Fcc Field Zmail Command**

[Add Fcc Field] (Editor Menu)

*n* Add Fcc Field (*m-X*)  
Adds another FCC: recipient. Positions cursor at the end of the FCC: field, set up to add another name. (Creates an FCC: field if there is not one already.) With an argument *n* = 0, positions cursor at beginning of FCC: field. With a negative argument, deletes the FCC: field.

### **Add From Field Zmail Command**

[Add From Field] (Editor Menu)

*n* Add From Field (*m-X*)  
Creates or replaces From: field. Creates a From: field and positions cursor for entry of user name. If a From: field exists already, it is deleted and replaced. With an argument *n* = 0,

positions cursor at beginning of From: field. With a negative argument, deletes the From: field.

### Add In-reply-to Field Zmail Command

[Add In Reply To Field] (Editor Menu)

Add In Reply To Field (m-X)

Creates In-reply-to: field. Creates an In-reply-to: field specifying the message being replied to. This command can be used only if mail mode was entered using one of the Reply commands. You can control the generation of [In-reply-to:] fields in your Profile. See the variable `zwei:*generate-in-reply-to-field*`, page 69.

### Add Subject Field Zmail Command

[Add Subject Field] (Editor Menu)

`n c-X S` (Kbd)

Creates or replaces Subject: field. Creates a Subject: field and positions cursor for entry of text. If a Subject: field exists already, delete and replace it. With an argument `n = 0`, positions cursor at beginning of Subject: field. With a negative argument, deletes the Subject: field.

### Add File-References Zmail Command

[Add File Reference Field] (Editor Menu) Add File References (m-X)

Creates a File-References: field and positions the cursor for entry of a pathname or pathnames separated by commas. Pathnames in the file-references field can be operated on directly from Zmail by the Zmail file manipulation commands:

- Compile File (m-X)
- Edit File (m-X)
- Format File (m-X)
- Hardcopy File (m-X)
- Load File (m-X)
- Show File (m-X)

### Add More Text Zmail Command

Add More Text (Editor Menu)

`c-X R` (Kbd)

Select the Mail window.

**Append Conversation by References (m-X) Zmail Command**

Append Conversation by References (m-X)

Append messages to which this message refers, or which refer to this message, recursively.

**Append to Referenced Message (m-X) Zmail Command**

Append To Referenced Message (m-X)

Appends this message to the referenced message.

**Apropos (m-X) Zmail Command**

Apropos (m-X)

Prompts you for a character string and returns a list of the m-X commands containing that string in their name or the first line of their help documentation. You can use Apropos (m-X) in mail or edit mode also.

**Bug (m-X) Zmail Command**

Bug (m-X)

Send a bug report. Prompts for the name of a bug list to send to, then puts you into mail mode with the To: field set to that name. The mail window is selected; the first line of text identifies what version of the software you are using. You can now type in your bug report and send the message.

**C (Kbd) Zmail Command**

C (Kbd)

Continue the most recently aborted message.

**Change Subject Pronouns Zmail Command**

[Change Subject Pronouns] (Editor Menu)

Change Subject Pronouns(m-X)

Fix up the pronouns in the Subject: field of a reply. "I" is replaced by "you," "you" by "I," "mine" by "yours," "yours" by "mine."

**Check for New Mail (m-X) Zmail Command**

Check for New Mail (m-X)

Checks in the foreground for new mail in the inbox(es) associated with the default buffer. This is similar to what the background process does periodically. In addition to printing a

message, this command prevents the background process from telling you about the same new mail. Thus the command can also be used as a way of "noticing" new mail that you might have read in the editor or with Show Mail (m-X). The next "you have new mail" message from the background refers to really new mail.

### **Click Middle on Summary Line Zmail Command**

#### **Click Middle on Summary Line (Summary Window)**

Toggle the deleted property of the message whose summary line was clicked on. That is, delete a nondeleted message, undelete a deleted message. Do not select the message as current message. If the current message is being deleted, move to the next undeleted message. See the section "Zmail Message Deletion Commands", page 32.

### **Compile File (m-X) Zmail Command**

#### **Compile File (m-X)**

Prompts for a pathname and compiles the file specified by the pathname. The default is the first pathname specified in the File-References: header field.

### **[Continue] Zmail Menu Item**

- [Continue] Continue the most recently edited message, whether sent or aborted. See the section "Continuing Completed or Aborted Zmail Messages", page 25.
- [Continue (M)] Continue the most recently aborted message.
- [Continue (R)] Pop up a menu offering Sent Drafts, Unsent Drafts, or All Drafts. Clicking on one of these offers a list of the messages you have composed in your current Zmail session. The messages are identified by their headers; see Figure 15.) Click on a message to continue it. Two other items on the menu are [Restore draft file] and [Restore draft message]. See the section "Saving and Restoring Zmail Message Drafts", page 22.
- [Restore Draft Message] Enters mail mode with the Headers and Mail windows restored from the current message, if it is a draft message. If it is not, flashes the screen and ignores the Continue command.

**[Restore Draft Message (R)]**

Waits for you to click on a draft message in the summary window or type a message number in the mini-buffer, then enters mail mode with the Headers and Mail windows restored from that message. (If the selected message is not a draft message, Zmail flashes the screen and ignores the Continue command.)

**[Restore Draft File]**

Prompts for a filename of a saved draft and enters mail mode with the Headers and Message windows restored from the file.

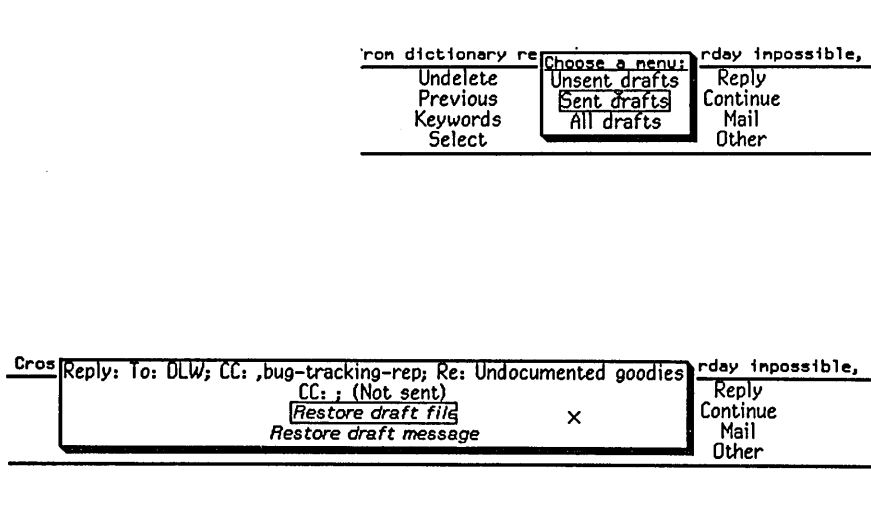


Figure 15. [Continue (R)]

**D (Kbd) Zmail Command**

*n* D (Kbd) Deletes message *n*. If *n* is negative or if it is greater than the number of messages in file, Zmail complains "Argument out of range". If *n* is omitted, D deletes the current message.

**c-D (Kbd) Zmail Command**

c-D (Kbd) Delete current message and move to previous undeleted message, like clicking [Delete (M)].

## Decrypt Text (m-X) Zmail Command

### Decrypt Message (m-X)

Displays an encrypted message as plain text, prompting for the encryption key. By this operation, you are only viewing the plain text form; use a numeric argument to store the plain text version in the mail file.

## Delete Duplicate Messages (m-X) Zmail Command

### Delete Duplicate Messages (m-X)

Delete duplicated messages from the mail file, retaining only the first copy of a duplicated message. Two messages are duplicates if and only if they have the same From:, Date:, To: (if any), Cc: (if any), and Subject: (if any) fields. (The other headers and the text of the message are not checked.) Duplicate messages can arise from merging two mail files, for example. See the section "Zmail Message Deletion Commands", page 32.

You can automatically delete duplicate messages from your new mail by adding the following form to your Zmail init file after the automatically generated forms:

```
(login-setq *insert-inbox-hooks* '(:delete-duplicates-new))
```

Then each time your inbox is read, those new messages are searched for duplicates and the duplicates eliminated. Note: since this only searches the new messages, if a message already exists in your mail file and a new copy arrives, this duplication will not be detected.

## [Delete] Zmail Menu Item

- [Delete] Delete current message and move to next undeleted message. (Do not move if this is last message.) You can select the direction for the move after deleting the current message in your profile. See the variable `zwei:*next-after-delete*`, page 70.
- [Delete (M)] Delete current message and move to previous undeleted message. (Do not move if this is first message.) You can select the direction for the move after delete in your profile. See the variable `zwei:*delete-middle-mode*`, page 70.
- [Delete (R)] Pop up a menu of:
- |          |  |
|----------|--|
| Backward | Delete current message and move to previous undeleted message. |
|----------|--|



Forward	Delete current message and move to next undeleted message.
Remove	Remove message from this temporary mail file.
No	Delete current message and do not move.

### Delete Conversation by References (m-X) Zmail Command

Delete Conversation By References (m-X)  
Deletes all the messages in a conversation.

### Delete Referenced Messages (m-X) Zmail Command

Delete Referenced Messages (m-X)  
Deletes the referenced messages.

### Describe Command (m-X) Zmail Command

Describe Command (m-X)

### E (Kbd) Zmail Menu Item

E (Kbd) Expunges the current sequence, that is removes all the messages marked for deletion.

### Edit File (m-X) Zmail Command

Edit File (m-X) Prompts for a pathname and creates an editor buffer with the specified file in it for editing. The default is the first pathname specified in the File-References: header field.

### Encrypt Text (m-X) Zmail Command

Encrypt Text (m-X)  
Encrypts a message. Use it after you have completed the message draft but before you send it. Zmail prompts for an encryption key that the recipient must provide in order to decrypt the message. It converts the draft to a form that you cannot read. Decrypt Text is also available for message drafts. Both of these commands appear on the draft editor menu.

### END (Kbd) Zmail Command

END (Kbd) Add more text or send the message. If typed while in the Message or Headers window, selects the Mail window to allow you to add more text. If the Mail window is already selected, pressing END sends the message. See the section "Leaving Mail Mode in Zmail", page 24. (If typed while in the Message window in zero window mode, sends the message.)

### F (Kbd) Command

F (Kbd) Forwards the current message (using `zwei:com-zmail-forward`). See the description of the Forward option of [Mail (R)].

### c-F (Kbd) Zmail Command

c-F (Kbd) Prompts for a string and selects the next message containing that string (using `zwei:com-zmail-find-string`).

### Find String (m-X) Zmail Command

Find String (m-X) Prompts for a string in the minibuffer and finds the next message containing that string (in text or header) and selects it. If it cannot find a message containing the given string, it flashes the screen.

### Format File (m-X) Zmail Command

Format File (m-X) Prompts for a pathname and displays the specified file formatted using the editor's formatting capability. `c-U m-X` Format File formats the file and sends it to a printer. The default pathname is the first pathname specified in the File-References: header field.

### Forward (m-X) Command

Forward (m-X) Send a message with current message as its text. Puts you in mail mode with headers window selected. Cursor is prompting you to specify the To: field. The Subject: field is initialized as "[PJF: Forwarded]" (if the original message was from PJF). The mail window contains the headers and text of the current message, followed by a (nonblinking) cursor. Supply the To: field, edit or add headers and text as you wish, and send the message. Forwarding differs from Redistributing or Redirecting in that a new message (with its own unique message id) is created.

(Note: The forwarded message (that is, the current message) is given the (forwarded) property.)

### G (Kbd) Zmail Command

G (Kbd) Reads in your new mail. If your old mail is currently read into Zmail, your new messages are appended or prepended to that buffer. If you are just starting a Zmail session, your new mail is read in and then your old mail is appended or prepended to it. Appending or prepending are controlled by your Zmail profile. See the variable `zwei:*new-mail-file-append-p*`, page 63.

If your current buffer is not your primary mail file and the buffer has no associated inbox, Zmail prompts for an inbox to read for the current buffer. Inboxes can be associated with mail files other than your primary file by using the [File Options] Profile Menu item.

### [Get Inbox] Zmail Menu Item

[Get Inbox] Reads in your new mail. If your old mail is currently read into Zmail, your new messages are appended or prepended to that buffer. If you are just starting a Zmail session, your new mail is read in and then your old mail is appended or prepended to it. Appending or prepending are controlled by your Zmail profile. See the variable `zwei:*new-mail-file-append-p*`, page 63. You can have Zmail delete duplicate messages from your new mail when your inbox is read. See the section "Delete Duplicate Messages (m-X) Zmail Command", page 89.

If your current buffer is not your primary mail file and the buffer has no associated inbox, Zmail prompts for an inbox to read for the current buffer. Inboxes can be associated with mail files other than your primary file by using the [File Options] Profile Menu item.

[Get Inbox (M)] Prompts for an inbox name to read into the current buffer. Use this command to recover from file computer crashes that write your inbox in a nonstandard place.

Caution: if you specify a file that is not in the proper format – for example, if you type the name of your primary mail file – you are in trouble. Zmail becomes caught in an error loop, and has to be reloaded (or the machine cold booted).

(Remember, the file you specify is the *inbox* – the file where new mail lives – not the *mail file*, which is where old mail resides.)

**[Get Inbox (R)]** Pops up a menu of your mail files. You specify the file for which to read the inbox. That buffer is selected and its inbox is read.

### **H (Kbd) Zmail Command**

**H (Kbd)** Scrolls back to the top ("Head") of the current message.

### **Hardcopy All (m-X) Zmail Command**

**Hardcopy All (m-X)** Hardcopies all the messages in the current sequence.

### **Hardcopy File (m-X) Zmail Command**

**Hardcopy File (m-X)** Prompts for a pathname and sends the specified file to the printing device specified in Hardcopy Options in your Zmail profile. The default is the first pathname specified in the File-References: header field.

### **Hardcopy Message (m-X) Zmail Command**

**Hardcopy Message (m-X)** Hardcopies the current message.

### **Insert File (m-X) Zmail Command**

**Insert File (m-X)** Prompts for a pathname and inserts the contents of the file in the mail buffer.

### **J (Kbd) Zmail Command**

**n J (Kbd)** Jumps to message number *n*, even if it is marked for deletion. If *n* is omitted, jumps to the first message in the sequence. **Z J** jumps to the last message in the sequence.

### **[Jump] Zmail Menu Item**

**[Jump]** Jumps to the message selected based on the filter of the last jump command. There is no initial default, so the first time you want to use jump in a new Zmail session you must click right for the filter menu.

**[Jump (M)]** Selects an arbitrary message from the message stack. (Does nothing if the stack is empty. See the section "Moving Among Zmail Messages Using the Message Stack", page 30. Otherwise, displays summary lines for the elements of the message stack, partially overlaying the summary window. (The message numbers displayed are meaningless, but if the current message is on the stack, it is indicated by the usual arrow.) The summary lines are mouse sensitive; clicking Left on a line selects the corresponding message. Pressing ABORT aborts the Jump command; typing or clicking on any other command aborts Jump and executes that command. (See Figure 16.)

No.	Lines	Date	From*To	Subject or Text
1D	19	30-Jun	DLW+BSG,tln@WHITE,FUN@W	Bionically-fortified forearns
2D	19	30-Jun	DLW+BSG,tln@WHITE,FUN@W	Bionically-fortified forearns
3D	47	30-Jun	sfisher@HII+BSG,sfisher	Bionically-fortified forearns, an observation
4D	47	30-Jun	sfisher@HII+BSG,sfisher	Bionically-fortified forearns, an observation
5D	47	30-Jun	sfisher@HII+BSG,sfisher	Bionically-fortified forearns, an observation
6:	50	1-Jul	palerno@V+tk@V,filkins@	[palerno@SCRC-VALLECITO.ARP: Teknowledge drops LISPM for *C*]
7D	50	1-Jul	rs1@C+cur@WHITE,DLW,BSG	Bionically-fortified forearns
8D	50	1-Jul	rs1@C+cur@WHITE,DLW,BSG	Bionically-fortified forearns

Done.

Figure 16. [Jump (M)]

**[Jump (R)]** Pops up the filter selection menu. You select a filter to use to choose the message to which to jump.

#### **[Keywords] Zmail Menu Item**

**[Keywords]** Adds the last used keywords to the current message. There is no initial default so the first time you want to add keywords to a message in a Zmail session you must click right for the menu. See the section "Setting Zmail Keywords", page 43.

- [Keywords (M)] Adds the appropriate keywords to the current message automatically. "Appropriate" is determined using a *filter-keyword alist*, similar to the alist used by the referenced-message commands. Each filter is associated with a list of keywords; clicking middle on [Keywords] adds the keywords corresponding to all filters which the message satisfies. The mouse documentation line tells you which keywords are to be added, so you can check first. If none are to be added, the mouse documentation line shows nothing for [Keywords (M)].
- [Keywords (R)] Pops up a highlighted menu of your keywords, in addition to the entry [New] for adding a new keyword. If you have never specified keywords for any messages, the menu contains only three items: [Do It], [Abort], and [New]. Click on [New] and type a keyword. The keyword appears on the menu, highlighted. Click on [Do It] and the keyword appears in braces on the summary line of the message. Keywords are stored in the mail files of the messages they are attached to. You can specify keyword/mail file associations explicitly in your Profile. See the section "Zmail Profile Options", page 62.

#### L (Kbd) Zmail Command

- L (Kbd) "Labels" the current message. Prompts in the minibuffer for keywords for the current message (using `zwei:com-zmail-keywords`)

#### List Sequences (n-X) Zmail Command

##### List Sequences n-X

Lists all the sequences in your current Zmail session, as well as any mail files saved in your profile that have not yet been read in.

#### Load File (n-X) Zmail Command

- Load File (n-X) Prompts for a pathname and loads the specified file into the Lisp environment. The default is the first pathname specified in the File-References: header field.

#### M (Kbd) Command

- M (Kbd) Send a message. Puts you into mail mode, with the headers window selected. See the section "Sending Your Mail" in *User's*

*Guide to Symbolics Computers.* See the section "Mail Mode in Zmail", page 21.

### c-X M (Kbd) Zmail Command

c-X M (Kbd) Enters mail mode recursively; the window configuration remains the same, but the Headers and Mail windows are reinitialized as if the Mail command had just been executed (Headers window contains the word "To:" followed by a blinking cursor; Mail window is empty.) Exiting recursive mail (either by sending the message or by aborting) returns to the higher level mail.

### Mail Menu Item

- [Mail] Send a message. Puts you into mail mode, with the headers window selected. See the section "Sending Your Mail" in *User's Guide to Symbolics Computers*. See the section "Mail Mode in Zmail", page 21.
- [Mail (M)] Send a bug report. Pop up a menu of program names and [Other]. Clicking on a program name puts you into mail mode, with the To: field set up to send a bug report about that program. Clicking on [Other] prompts for the name of a bug list to send to, then puts you into mail mode. In either case, the mail window is selected; the first several lines of text identifies what version of the software you are using. You can now type in your bug report and send the message. See the section "Adding Bug Lists to Zmail", page 33.
- [Mail (R)] Pop up a menu of:
- Bug Send a bug report. Use [Bug] to send report to same bug list as last report; use [Bug (R)] for menu of programs. See description of [Mail (M)]. See the section "Adding Bug Lists to Zmail", page 33.
  - Mail Send an ordinary message, like clicking left on [Mail].
  - Forward Send a message with current message as its text. You are placed in mail mode with the headers window selected, and the cursor positioned after to:. The text of the current message is placed in the mail window inside the delimiters for forwarded messages specified in your profile. See the variable `zwei:*forwarded-message-begin*`, page 70. You enter the recipient(s) and then press END, which leaves you in the mail window so you can add comments to the text of the message if you so desire. Pressing END again sends the forwarded message.

- Redistribute**     Redistribute the current message to other recipients. You are prompted for a new recipient or recipients (separated by commas) to whom to send the message.
- Local**             Create a new message in the current mail file. A new message draft is created with an Fcc: destination of the current inbox. (See Figure 9.)
- You are placed in mail mode with the headers window selected, and the cursor positioned after "Subject:". Type the subject of the message, press END, then the text.
- Local messages never actually get sent as messages; they are just added to your mail file. They are useful for making notes to yourself.

### **[Map Over] Zmail Menu Item**

Performs an operation on all messages in the current sequence.

- [Map Over]**             Performs the last map over operation. There is no initial default so in a new Zmail session you must first click right for the menu.
- [Map Over (M)]**        You can specify an operation from the menu provided by [Map Over (R)] to put on this key in your profile. See the variable `zwei:*map-middle-mode*`, page 71.
- [Map Over (R)]**        Pops up a menu of operations to perform on all messages in the current sequence:
- Delete**             Deletes all messages.
- Undelete**            Undeletes all messages.
- Type**                Types out (displays) all messages in the typeout window.
- Find string**        Prompts for a string and shows those lines within messages that contain the given string. You can select the message containing the string by clicking on the line of text. This provides a handy way to search through a collection for a message you only vaguely remember. See the section "Occur (n-X) Zmail Command", page 101.
- Keywords**            Puts specified keywords on all messages. Clicking (L), (M), and (R) on Keywords work just as for [Keywords] in the Zmail menu. See the section "[Keywords] Zmail Menu Item", page 94.
- Unkeywords**         Removes specified keywords from all messages.



Move	Moves all messages to the specified file.
Hardcopy	Hardcopies all messages.
Forward	Forwards all messages (concatenated into one message). See the section "[Mail] Zmail Menu Item", page 96.
Redistribute	Redistributes all messages, individually but to the same recipient(s).
Reply	Replies to all messages (contatenated into one message).
Concatenate	Appends all messages to the first message.
Select conversation	Selects messages to which a message in the sequence refers, or that refer to a message in the sequence, recursively; this is implemented by <b>zwei:com-zmail-select-all-conversations-by-references</b> .

### **[Move] Zmail Menu Item**

[Move]	Moves the current message to the same buffer as last [Move]. There is no initial default so the first time in a Zmail session that you want to move a message, you must click right on [Move] for the menu. Whether or not the moved message is deleted from its original buffer is determined by your profile (the default is delete). See the variable <b>zwei:*delete-after-move-to-buffer*</b> , page 73.
[Move (M)]	Moves the current message to a buffer based on the filter it satisfies. If the current message does not satisfy any of your predefined filters, nothing is offered in the mouse documentation line for the middle click.
[Move (R)]	Moves the current message to the buffer specified from a menu of all the mail sequences in your current Zmail, any mail files stored in your profile but not yet read into Zmail (See the section "Saving a List of Mail Files", page 46.), and five other options:
New Collection	Starts a new mail collection, prompting for a name for the collection, and copies the current message to that collection.
Recycled Collection	Starts a temporary mail collection and copies the current message to that collection. See the section "Creating a Mail Collection Starting with a Single Message", page 47.

**Read/Create File**

Prompts for a mail file, creating the file if it does not exist, and moves the current message to that file.

**Just Text**

Prompts for a file name and moves the current message to that file as simple text for editing with Zmacs.

**Hardcopy**

Hardcopies the current message.

**Move In Place of Referenced Message (m-x) Zmail Command****Move In Place Of Referenced Message (m-x)**

Moves this message to where the referenced message is, and deletes the referenced message.

**Move to Default Previous Point (m-x) Zmail Command****n Move to Default Previous Point (m-x)**

With an argument *n*, performs the same rotation as *n* c-m-SPACE and makes *n* the new default argument. Without an argument, uses the default. (The initial default is 3.)

**Move to Point (m-x) Zmail Command****n Move to Point (m-x)****n c-m-SPACE (Kbd)**

Without an argument, exchanges the current message and the top of the message stack. (The top of the stack is popped into the current message and the old setting of the current message is pushed onto the stack.) With an argument *n* > 1, rotates the top *n* entries of the list formed from the current message followed by the message stack. (*n* = 2 is equivalent to no argument.) With an argument of 1, rotates the whole list. Negative arguments rotate the other way.

An example: if *n* is 3, Stack[1] is the top of stack, and Stack[2] is the element just below the top of stack, then:

*Old Stack*

new current message  
new Stack[1]  
new Stack[2]

*New Stack*

old Stack[1]  
old Stack[2]  
old current message

**N (Kbd) Zmail Command**

*n* N (Kbd)           Selects the *n*th next undeleted message in the current sequence. If *n* is omitted, selects the next undeleted message.

**c-N (Kbd) Zmail Command**

*n* c-N (Kbd)         Selects the *n*th next message in the sequence, whether or not it is marked for deletion. If *n* is omitted, selects the next message, whether or not it is deleted.

**[Next] Zmail Menu Item**

[Next]                Select the next undeleted message in the current sequence.

[Next (M)]           Selects the last undeleted message in the current sequence. You can set the action for this click to any of the possible message selection options as in the menu for [Next (R)]. See the variable `zwei:*next-middle-mode*`, page 70.

[Next (R)]           Pops up a menu of choices:

Next undeleted   Selects the next undeleted message.

Next                Selects the next message in the sequence, whether or not it has been marked for deletion.

Next unseen        Selects the next unseen message.

Next recent        Selects the next message in the recent sequence.

Last undeleted    Selects the last undeleted message in the sequence.

Last                Selects the last message in the buffer, whether or not it has been marked for deletion.

Last unseen        Selects the last unseen message in the sequence.

Last recent        Selects the last message in the recent sequence.

**o (Kbd) Zmail Command**

o (Kbd)             "Outputs" the current message to a file, similar to [Move]. Prompts in the minibuffer for a pathname. The default is taken from your profile. See the variable `zwei:*default-move-mail-file-name*`, page 73.

**c-X 0 (Kbd) Zmail Command**

c-X 0 (Kbd)        Select another exposed window. Repeated use cycles through the two or three exposed windows. (Headers and Mail or Message, Headers, and Mail.)

**Occur (m-X) Zmail Command**

Occur (m-X)        Prompts for a string and shows those lines within messages that contain the given string. You can select the message containing the string by clicking on the line of text. This is a handy way to search through a collection for a message you only vaguely remember. It is like the Find String option in the [Map Over] menu. See the section "[Map Over] Zmail Menu Item", page 97.

**[Other] Zmail Menu Item**

[Other]            Repeats the last command given. There is no initial default so the first time you want to use one of these commands you must click right to get the menu.

[Other (M)]        No option has been assigned to this mouse gesture.

[Other (R)]        Pops up a menu of additional commands. Currently it includes:

    Show File        Prompts for a filename and shows the file in the typeout window.

    Hardcopy        Hardcopies the current message. Clicking left on Hardcopy uses the default printing device. Clicking right pops up a menu that allows you to select the device and other parameters. The device selected becomes the default for subsequent hardcopy commands.

    Whois            Prompts for a user-id or surname and shows the information in that person's namespace entry. If you specify *name@host*, it searches the namespace and contacts *host* to obtain the information. It uses the ARPANET Name protocol so if your site is on the ARPANET, you can access ARPANET name servers.

**P (Kbd) Zmail Command**

n P (Kbd)        Selects the *n*th previous undeleted message in the current sequence. If *n* is omitted, selects the previous undeleted message.

**c-P (Kbd) Zmail Command**

*n* c-P (Kbd)      Selects the *n*th previous message in the sequence, whether or not it is marked for deletion. If *n* is omitted, selects the previous message, whether or not it is deleted.

**[Previous] Zmail Menu Item**

[Previous]      Selects the previous undeleted message in the current sequence.

[Previous (M)]      Selects the first undeleted in the current sequence. You can set the action for this click to any of the possible message selection options as in the menu for [Previous (R)]. See the variable **zwei:\*previous-middle-mode\***, page 71.

[Previous (R)]      Pops up a menu of choices:

    Previous undeleted

        Select the previous undeleted message.

    Previous

        Selects the previous message, whether or not it is marked for deletion.

    Previous unseen

        Selects the previous unseen message in the sequence.

    Previous recent      Selects the previous message in the recent sequence.

    First undeleted      Selects the first undeleted message in the sequence.

    First

        Selects the first message in the sequence, whether or not it has been marked for deletion.

    First unseen

        Select the first unseen message in the sequence.

    First recent

        Select the first message in the recent sequence.

**[Profile] Zmail Menu Item**

[Profile]      Puts you in the Profile window so you can edit your Zmail init file and alter the various profile options. See the section "Zmail Profile Options", page 62. See the section "Customizing Zmail", page 53.

**Q (Kbd) Zmail Command**

Q (Kbd)      Expunge and save loaded mail files just like [Save], then return from Zmail to the window from which it was called.

**[Quit] Zmail Menu Item**

[Quit] Expunge and save loaded mail files just like [Save], then return from Zmail to the window from which it was called.

[Quit (R)] Pop up a menu of save and exit options. (See Figure 7.)

The menu has two columns; one entry in each column is highlighted. The Save column has the following options:

- Don't Save - Do not save any files before exiting.
- Ask - Pop up an Expunge/Save/Kill menu to determine which files to expunge, save, or kill. See the description of [Save (R)].
- Save - Expunge and save loaded mail files like [Save].

The Exit column has the following options:

- Quit - Return from Zmail to the window from which it was called, burying the Zmail window.
- Logout - Log out from the machine, then return to the calling window.

Initially, Save and Quit are highlighted; this combination is equivalent to clicking left on [Quit]. Clicking on an unhighlighted entry highlights it and unhighlights the others in its column. Clicking on Do It does the saving and exiting indicated in the menu; clicking on Abort aborts the Quit command.

**R (Kbd) Zmail Command**

R (Kbd) Starts a reply to the current message. With an argument of 1, replies only to the sender of the message. You can set the behavior of reply commands with an argument of 1 in your profile. See the variable `zwei:*1r-reply-mode*`, page 68. The numeric arguments accepted are:

<i>argument</i>	<i>Reply Window Mode/Reply Mode</i>
$n = 1$	Two-windows/Sender.
$n = 2$	Two-windows/All.
$n = 3$	Yank/All.

See the section "Zmail Reply Command", page 26.

**c-R (Kbd) Zmail Command**

c-R (Kbd) Puts you in an editing window with the current message. This is the same as clicking left on the message window. The headers of the message are expanded to their full form in the editing window.

**Redirect Message [m-X] Command****Redirect Message (m-X)**

Redirects a message to a different group or individual. It prompts for recipients to be removed from the recipient list and then for recipients to be added. Then it sends the message, with its original headers, to the new recipients, sends a *redirected* message to the original recipients, referencing the message and informing them that it has been redirected, and revokes the original message (See the section "Revoke Message (m-X) Zmail Command", page 105.) Finally, it updates the recipient fields of the message in your current sequence and prompts you to reply to the redirected message immediately.

The redirected message (that is, the current message) is given the (redirected) property; but this property is not written out for Babyl files.

**Redistribute Message (m-X) Command****Redistribute Message (m-X)**

Redistribute the current message to other recipients. Prompts in the mode line for entry of the recipients of the redistributed message. Enter a list of user names or mailing lists, separated by commas and followed by pressing RETURN. The recipients you specify receive a copy of the current message with three additional header fields (Redistributed-to:, Redistributed-by:, and Redistributed-date:) describing the redistribution. Redistributing differs from Forwarding in that the original message is passed on, with its original message id, to additional recipients, no new message is created. Redirecting (See the section "Redirect Message (m-X) Zmail Command", page 104.) is similar to Redistribute except that it is a two step process, some recipients are removed and others added.

(Note: The redistributed message (that is, the current message) is given the (redistributed) property.)

**Redo (m-X) Zmail Command**

Redo (m-X)           Undoes the effect of the last Undo (m-X).

**[Reply] Zmail Menu Item**

[Reply]               Starts a reply to the current message with the reply window mode Two-windows and the reply mode All. See the section "Zmail Reply Command", page 26.

[Reply (M)]          Starts a reply to the current message with the window mode Two-windows and the reply mode Sender.

[Reply (R)]          Pop up a two-column menu of reply modes and reply window modes.

Initially, All and Two-windows are highlighted; this combination is equivalent to using [Reply]. Clicking on an unhighlighted entry highlights it and unhighlights the others in its column. Clicking on Do It enters mail mode; clicking on Abort aborts the Reply command.

**Restore Draft File Zmail Menu Item**

[Restore Draft File] (Editor Menu)

c-X c-R (Kbd)       Restores a previously saved draft. The current contents of the Headers and Mail windows are lost.

**Revoke Message (m-X) Zmail Command**

Revoke Message (m-X)

Pops up a menu of all the messages sent in the current Zmail session. You select the one you wish to revoke by clicking on it with the mouse.

If the message to be revoked was sent to someone who receives their mail on a Symbolics Computer and the message has not been read yet, Revoke Message (m-X) will delete the message from the inbox file. If the message has been read or if the addressee does not receive mail on a Symbolics Computer, Revoke Message will add a *revoke* message to the inbox, that is a message whose header says Revoke Message and gives the message id.



**s (Kbd) Zmail Command**

s (Kbd) Expunge (that is, get rid of all messages marked for deletion) and save all loaded mail files that have been modified since the last save. See the section "Zmail Message Deletion Commands", page 32.

**[Save] Zmail Menu Item**

[Save] Expunge (that is, get rid of all messages marked for deletion) and save all loaded mail files that have been modified since the last save. See the section "Zmail Message Deletion Commands", page 32.

[Save (M)] Expunge the current mail file or sequence.

[Save (R)] Pop up a multiple choice Expunge/Save/Kill window. (See Figure 6.)

Each row of the menu lists a loaded mail file and boxes for three choices: Expunge, Save, and Kill. An x in the Expunge box means expunge the file; an x in the Save box means save the file; and an x in the Kill box means kill the loaded copy – *not* the disk copy – of the file, that is, make Zmail forget about the file. The initial configuration of x's and blanks shows what using [Save] would do, which is to expunge files with deleted messages and save files modified since the last save.

Clicking left or right on a box complements its status, removing an x if present, adding one if not. Marking a file for expunging or saving clears the Kill box; marking a file for killing clears the Save and Expunge boxes. Clicking on Do It performs the selected Expunge, Save, and Kill operations; clicking on Abort aborts the Save files command.

**Save Draft as Message Zmail Menu Item**

[Save Draft As Message] (Editor Menu)

c-X c-m-S (Kbd) Saves the message being composed as a draft message in the current mail file. Subsequent uses do not create new draft copies, but update the old draft.

**Save Draft File Zmail Menu Item**

[Save Draft File] (Editor Menu)

**c-X c-S (Kbd)** Saves the message being composed in a disk file. The first time it is used, it prompts for entry of a filename; subsequently, it uses the same filename.

### **[Select] Zmail Menu Item**

**[Select]** Selects the previously selected mail collection. There is no initial default so the first time in a Zmail session that you want to select another mail file, you must click right on **[Select]** for the menu.

**[Select (M)]** Selects messages by a filter, using the Filter Selection Display. See the section "Selecting Zmail Filters", page 55.

**[Select (R)]** Selects the mail sequence specified from a menu of all the mail sequences in your current Zmail, any mail files stored in your profile but not yet read into Zmail (See the section "Saving a List of Mail Files", page 46.), and four other options:

#### **Read/Create File**

Prompts for a mail file, creating the file if it does not exist.

**Examine File** Prompts for a mail file and reads it in No Save mode.

**Mark Survey** Allows you to select messages by their summary lines to create a new collection. See the section "Creating a Mail Collection by Marking Individual Messages", page 48.

**Filter** Pops up the Filter Selection Display. See the section "Selecting Zmail Filters", page 55.

### **Select All Conversations by References (m-X) Zmail Command**

#### **Select All Conversations By References (m-X)**

Selects messages to which a message in the sequence refers, or that refer to a message in the sequence, recursively; this is implemented by

**zwei:com-zmail-select-all-conversations-by-references**. It is equivalent to appending together all sequences gotten from Select Conversation By References (m-X) for each message in the current sequence. An argument gives a menu of universes to search. The command defaults to loaded files. You can also perform this operation using **[Map Over (R) / Select Conversation]**.

**Select Arbitrary Format Mail File (m-X) Zmail Command****Select Arbitrary Format Mail File (m-X)**

Prompts for a mail file and then for the format to read that file in. Use this command if you need to read or create a mail file that is not in the standard format for the machine on which it is stored.

**Select Conversation by References (m-X) Zmail Command****Select Conversation by References (m-X)**

Defines a conversation and selects it as a collection. This command is very similar to Select References.

**Select Referenced Message (m-X) Zmail Command****Select Referenced Message (m-X)**

Selects the referenced message as current.

**Select References (m-X) Zmail Command****Select References (m-X)**

Creates a mail collection of all messages referenced by the current message. The collection also includes messages referenced by the referenced messages, messages referenced by *them*, and so forth.

**Show File (m-X) Zmail Command**

**Show File (m-X)** Prompts for a pathname and displays the specified file. The default is the first pathname specified in the File-References: header field.

**Show Mail (m-X) Zmail Command**

**Show Mail (m-X)** A command for showing your inbox file. It uses the standard mail pathname for your home directory. When no new mail has been delivered recently, it reports "No new mail". This command uses Show File.

**Show Printer Status (m-X) Zmail Command****Show Printer Status (m-X)**

Prompts for the name of a printer and displays its print queue.

**[Sort] Zmail Menu Item**

**[Sort]** Sorts the current sequence using the same sort keys as the previous sort. The default is Forward by Date.

**[Sort (M)]** No option has been assigned to this mouse gesture.

**[Sort (R)]** Pops up a highlighted menu of sort keys.

You can sort Forward or Backward and by several other keys. Selecting Backward by Date sorts your mail into "most recent first" order.

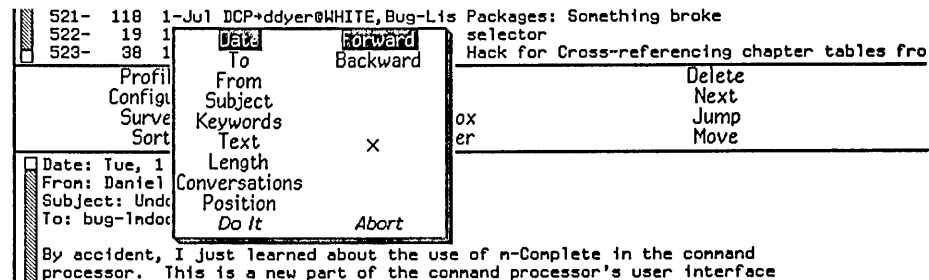


Figure 17. [Sort (R)] Menu

**[Survey] Zmail Menu Item**

Displays the summary lines of messages in the current sequence. The display is mouse sensitive. See the section "Zmail Message Summary Line", page 19.

**[Survey]** Displays summary lines of all the messages in the current sequence. This is an easy way to semi-automatically scroll through all your messages.

**[Survey (M)]** Displays summary lines of the messages in the same conversation as the current message.

**[Survey (R)]** Pops up the filter selection menu so that you can specify a filter to select the summary lines to be displayed. See the section "Selecting Zmail Filters", page 55.

**c-SPACE (Kbd) Zmail Command**

**c-SPACE** Push or pop the message stack, depending on the argument. There are three meaningful forms:

**c-SPACE** Push the current message onto the stack. (Does not change the current message.) The stack can hold up to eight elements; pushing onto a full stack causes the bottom element to be lost.

A message is automatically pushed on the stack by Zmail whenever you use a command that causes or can cause movement from the current message, except the following:

N, c-N

P, c-P

D, c-D

[Next] or [Previous]

[Delete], [Delete (M)], or [Delete (R)]

[Next (R)] – ([Next] and [Next undeleted] options.)

[Previous (R)] –

([Previous] and [Previous undeleted] options.)

*n* J – (When *n* is equal to the current message number.)

Clicking left on the summary line of the current message.

None of these commands moves very far from the current message, unless they move over a long string of deleted messages. Also, none of the message stack commands automatically push a message on the stack.

**c-U c-SPACE** Pop the top message from the message stack and make it the current message. (The element popped is also tucked back under the stack as the new bottom element.) If the stack is empty Zmail flashes the screen.

**c-U c-U c-SPACE** Pop the top message from the message stack and discard it. The setting of the current message does not change. (The element popped is also tucked back under the stack as the new bottom element.) If the stack is empty Zmail flashes the screen.

#### **U (Kbd) Zmail Command**

***n* U (Kbd)** Undeletes message number *n*. If *n* is negative or larger than the number of messages in file, it complains "Argument out of range". If message *n* is not deleted, it complains "Message not deleted." If you omit *n*, it is the same as [Undelete]. See the section "[Undelete] Zmail Menu Item", page 111. See the section "Zmail Message Deletion Commands", page 32.

**[Undelete] Zmail Menu Item**

[Undelete] (Menu) Start at current message and searches backward for a deleted message, undeletes it, and select it as the current message. Complain "No deleted messages" if there are none. [Undelete (M)] and [Undelete (R)] are the same as clicking left on [Undelete]. See the section "Zmail Message Deletion Commands", page 32.

**Undigestify (m-X) Zmail Command**

Undigestify (m-X) Converts a "standard arpanet" digest message into smaller messages. These messages are inserted into the current buffer right after the digest message. A References: header is added to the original message pointed to all the exploded messages, allowing use of the conversation commands to select the digest messages into a collection, delete them all, and so forth.

**Undo (m-X) Zmail Command**

Undo (m-X) Undoes the last nontrivial, potentially destructive command; Using Undo (m-X) successively undoes earlier and earlier commands.

For example, after using the Sort menu command, Undo (m-X) restores the previous order of messages in the file.

**Write Draft File Zmail Menu Item**

[Write Draft File] (Editor Menu)

c-X c-W (Kbd) Saves the message being composed in a disk file. Prompts for entry of a filename.

**c-X Y Prune Yanked Headers Zmail Command**

c-X Y (Kbd)

[Prune Yanked Headers] (Editor Menu)

Deletes the less essential headers of a message that was yanked in via c-X c-Y. Leaves only the Date: and From: headers; these are sufficient to identify the message. The profile option *Prune headers of yanked messages* controls the automatic pruning of message headers yanked into a reply. See the variable **zwei:\*prune-headers-after-yanking\***, page 70. The default is to not prune headers.

**c-X c-Y (Kbd) Yank Replied Messages Zmail Command**

*n* c-X c-Y (Kbd) Yanks the message(s) being replied to into the buffer. (Used most often when replying to the current message.) If in two-window mode, go into one-window mode. Indent the yanked message unless an argument *n* is given. The arguments to c-X c-Y control the indentation and the pruning of headers, as follows:

<i>Argument</i>	<i>Options</i>
none	Indentation, pruning per the <i>Prune headers of yanked messages</i> profile option.
1	No indentation, pruning per <i>Prune headers of yanked messages</i> .
2	Indentation, pruning per reverse of <i>Prune headers of yanked messages</i> .
3	No indentation, pruning per reverse of <i>Prune headers of yanked messages</i> .

**Yank Current Message (m-X) Zmail Command**

Yanks Current Message (m-X)

Yanks the current message into the message being composed.

**PART II.**

**Converse**





## 7. Introduction to Converse

Converse is a facility for communicating interactively with other logged-in users. A message sent with Converse pops up on the screen of the recipient almost instantaneously. The recipient has the choice of replying right in the pop up window, entering Converse to reply, or doing nothing.

The Converse interactive message editor is operated by a window with its own process. Converse keeps track of all of the messages that you have received or sent. The Converse window shows all of the messages that have been sent or received since the machine was cold booted.

Messages sent between you and another user are organized into a *conversation*. Conversations are separated from each other by a thick black line. Within each conversation are all messages, outgoing and incoming, arranged in chronological order, and separated by thin black lines.

You can use Converse to look at conversations, send messages, and receive messages. Converse is built on the Zwei editor, so you can edit your message as you type it, or pick text up and move it around between one message and another, or among messages, files, and pieces of mail.

To enter Converse, do one of the following:

- Press SELECT C.
- Evaluate (`qsend`).
- Click on [Select / Converse] in the System menu.
- Answer C in the Converse pop-up window when a message arrives.



## 8. Using Converse

### 8.1 Sending and Replying to Messages with Converse

When you enter Converse for the first time, the window is empty except for a blank message at the top of the screen, starting with To:.

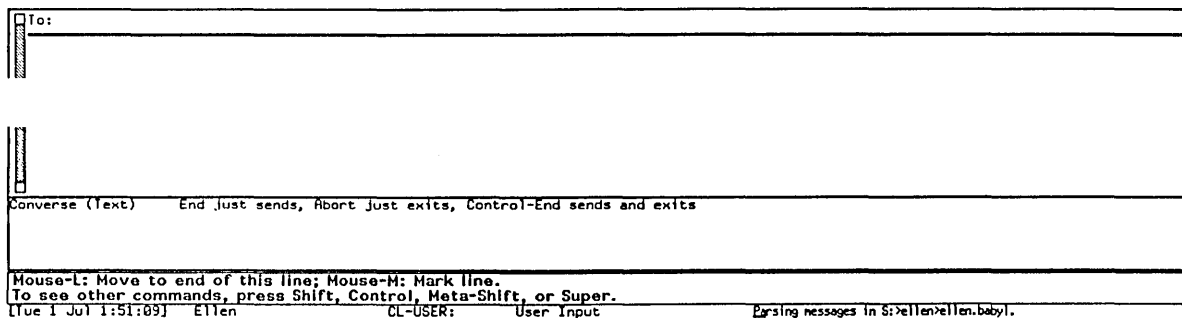


Figure 18. A Fresh Converse Window

You start a message by filling in a recipient after the To:, pressing RETURN and then typing the message text. It is not necessary to know what machine the person is using, but if you do know and give the recipient as *name@host* the message is sent considerably faster since it is not necessary to search the namespace to find the machine. To send the finished message, press END.

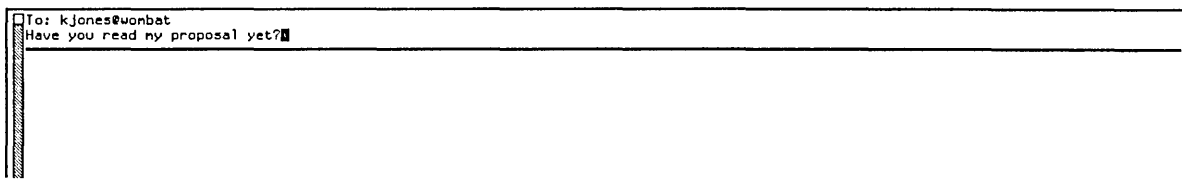


Figure 19. A Converse Message About to be Sent

When the message has been sent successfully, it appears as part of a conversation. A blank message remains at the top of the screen, and just below that, a heavy black line delimits the message(s) of the conversation you just started. Just below the heavy black line is another blank message, but this one has the name of the

person to whom you sent the message filled in. Below this blank message, separated by a thin black line, the message you just sent appears, with the date and time it was sent.

To:	
To: kJones@WOMBAT.SCRC.Symbolics.COM	To: kJones@WOMBAT.SCRC.Symbolics.COM
kJones@WOMBAT.SCRC.Symbolics.COM 7/01/86 14:02:53 I think your idea is excellent. Let's talk it through over lunch tomorrow.	
Message sent to kJones@WOMBAT.SCRC.Symbolics.COM (7/01/86 13:52:53) Have you read my proposal yet?	

Figure 20. A Converse Conversation

When the person to whom you sent the message replies, the reply appears in the conversation above the message you sent, and below the blank message. Your cursor is left in the blank message so you can reply easily.

You use regular editor commands to move around in the Converse window. Two commands, specific to Converse, are particularly useful: `c-m-]` (move to next conversation) and `c-m-[` (move to previous conversation).

You exit from Converse by pressing `ABORT` or by selecting another window. You can also press `c-END` when sending a message to send the message and exit from Converse.

To start a conversation, enter Converse, go to the top of the Converse window and fill in the blank message, starting with the `To:` line to specify the new recipient. Finish by pressing `END` to send the message. To send the message and exit Converse, finish by pressing `c-END`.

To send a message as part of an existing conversation, find that conversation in Converse and fill in the blank message at the beginning of the conversation, finishing by pressing `END` to send the message, or by pressing `c-END` to send the message and exit Converse.

You do not have to be in the main Converse window to receive messages. Converse will deliver a message to you in any window. Since this might be annoying, you can customize what happens when a message arrives by using the variable `zwei:*converse-mode*`. See the section "Customizing Converse", page 123.

When you are in a window other than Converse and a new message arrives, a window pops up at the top of the screen displaying the message. You can respond `R` to type in a reply, `N` (for "no action") to make the message window deexpose, or `C` to enter Converse. Entering Converse has several advantages: you can look over the previous messages in the conversation, and you can use the editor to help you construct a reply.

Converse remembers all messages that you send or receive, even if you did not use the main Converse window to send them or reply to them.

Converse lets you know as soon as a message comes in, by beeping or flashing the screen, and if it is supposed to notify you, it does so without waiting for the main Converse process to wake up. In pop-up mode, if the pop-up message window is already in use, an incoming message causes the message window to beep or flash but not to display the message. This is necessary since only one message at a time should pop up. When the message window is deexposed it is reexposed immediately with the new message in it.

If the main Converse window is exposed, a new message is shown there with its conversation; it is never shown via a notification or a pop-up message window. If the main Converse window is exposed but its process is busy (typically, when it is in the Debugger or in an editor command and waiting for typein), Converse beeps or flashes but does not display the message. You can display the message by clearing the Converse process. You can usually clear the Converse process by pressing `ABORT`.

## 8.2 Converse Commands

Converse has several commands for managing your conversations.

<code>HELP</code>	Displays a summary of Converse commands.
<code>END</code>	Sends the current message. The behavior of this key can be changed by the variable <code>zwei:*converse-end-exits*</code> .
<code>c-END</code>	Sends the current message and exits from Converse. The behavior of this key can be changed by the variable <code>zwei:*converse-end-exits*</code> .
<code>ABORT</code>	Exits Converse.

`c-M`               Mails the current message instead of sending it. This is useful if Converse reports that the person you want to send the message to is not logged in anywhere.

`c-m-[`             Moves to the previous conversation.

`c-m-]`             Moves to the next conversation.

Delete Conversation (`m-X`)

Deletes the current conversation from the Converse window.

Write Buffer (`m-X`)

Writes the entire Converse buffer (all conversations) to a file. It prompts for a pathname.

Write Conversation (`m-X`)

Writes only the current conversation to a file. It prompts for a pathname.

Append Buffer (`m-X`)

Appends the entire Converse buffer (all conversations) to the end of a file. It prompts for a pathname.

Append Conversation (`m-X`)

Appends only the current conversation to the end of a file. It prompts for a pathname.

Regenerate Buffer (`m-X`)

Rebuilds the structure of the Converse buffer. This might be necessary if you damage the buffer in some way, for instance by removing one of the black lines separating conversations. Some error messages might ask you to give this command and try again. The message you are currently typing might be lost, but you can prevent this by putting the text on the kill ring by marking it and using `m-W` before issuing the `m-X` Regenerate Buffer command.

### 8.3 Lisp Listener Commands for Converse

`zwei:qsends-off` &optional (*gag-message* *t*)

*Function*

Sometimes, you might wish not to be interrupted with interactive messages. A function called `zwei:qsends-off` exists for such occasions. If you give it a string argument, *gag-message*, the variable `zwei:*converse-gagged*` is set

to this string and the string is returned to anyone who tries to send a message to you. Otherwise, they just get a note saying that you are not accepting messages. **zwei:qsends-on** toggles **zwei:\*converse-gagged\***.

**zwei:qsends-on***Function*

After using **zwei:qsends-off** to notify interactive message senders that you are not accepting messages, **zwei:qsends-on** allows interactive messages to be received again.

**chaos:notify-local-lispms** &optional *message* &key (*report t*)*Function*

Sends *message* to all Lisp Machines at your site based upon information it gets from the namespace database about the Lisp Machines at the local site. *message* should be a string; if it is not provided, the function prompts for a message. Each recipient receives the message as a notification, rather than as an interactive message.

If *report* is **t** (the default), the function reports whether it succeeded or failed to deliver the message to each machine at your site. If *report* is **nil**, it only reports its failures.

**zl:qsend** &optional *destination message**Macro*

Sends interactive messages to users on other machines on the network.

*destination* is normally a string of the form *name@host*, to specify the recipient. If you omit the *@host* part and just give a name, **zl:qsend** looks at all of the Lisp Machines at your site to find any that *name* is logged into; if the user is logged into one Lisp Machine, it is used as the host; if more than one, **zl:qsend** asks you which one you mean. If you leave out *destination* altogether, doing just (**zl:qsend**), Converse is selected as if you had pressed SELECT C.

*message* should be a string. For example:

```
(qsend kjones@wombat "Want to go to lunch?")
```

If *message* is omitted, **zl:qsend** asks you to type in a message. You should type in the contents of your message and press END when you are done.

The input editor is used while you type in a message to **zl:qsend**. So you get some editing power, although not as much as with full Converse (since the latter uses Zwei). See the section "Editing Your Input" in *User's Guide to Symbolics Computers*. **zl:qsend** predates Converse and is retained for compatibility.

**print-sends** &optional (*stream zl:standard-output*)*Function*

Prints out all messages you have received (but not messages you have sent), in forward chronological order, to *stream*. Converse is more useful for looking at your messages, but this function predates Converse and is retained for compatibility.



**qreply** &optional *text*

*Function*

Sends a reply to the Converse message received most recently. You can supply a string as the text of the message or omit it and let **qreply** prompt for it. It returns a string of the form "*user@host*", indicating the recipient of the message. This function predates Converse and is retained for compatibility.

## 9. Customizing Converse

The following variables allow you to customize Converse's behavior. You can set them in your init file.

**zwei:\*converse-mode\*** *Variable*

Controls what happens when an interactive message arrives. It should have one of the following values:

- :pop-up**            (This is the default.) A message window pops up at the top of the screen, displaying the message. You are asked to type R (for Reply), N (for Nothing), or C (for Converse). If you type R, you can type a reply to the message inside the message window. When you type END, this reply is sent back to whomever sent the original message to you, and the pop-up message window disappears. If you type N, the message window disappears immediately. If you type C, the Converse window is selected. The input editor is used while you reply to a message in the pop-up message window, so you get some editing power, although not as much as with full Converse (since the latter uses Zwei).
- :auto**                The Converse window is selected. This is the window that shows you all of your conversations, letting you see everything that has happened, and letting you edit your replies with the full power of the Zwei editor. With this window selected, you can reply to the message that was sent, send new messages, participate in other conversations, or edit and write out messages or conversations. You can exit with c-END or ABORT (c-END sends a message and exits; ABORT just exits), or you can select a new window by any of the usual means (such as the FUNCTION or SELECT keys).
- :notify**             A notification is printed, telling you that a message arrived and from whom. If you want to see the message, enter Converse by pressing SELECT C. There you can read the message and reply if you want to.
- :notify-with-message**    A notification is printed, which includes the entire contents of the message and the name of the sender. If you want to reply, you can enter Converse.

**zwei:\*converse-append-p\*** *Variable*

If the value is **nil** (the default), a new message is prepended to its conversation. If the value is not **nil**, a new message is appended to its conversation. **print-sends** is not affected by this variable; it always displays messages in forward chronological order.

**zwei:\*converse-beep-count\*** *Variable*

The value is the number of times to beep or flash the screen when a message arrives. The default value is two. Beeping or flashing occurs only if the Converse window is exposed or if the value of **zwei:\*converse-mode\*** is **:pop-up** or **:auto**. (Otherwise, notification tells you about the message and includes the usual beeping or flashing.)

**zwei:\*converse-end-exits\*** *Variable*

Controls the behavior of **END** and **c-END**. If **zl-user:\*converse-end-exits\*** is set to **nil**, the default, **END** sends the message and you remain in Converse. **c-END** sends the message and exits Converse. Setting **zl-user:\*converse-end-exits\*** to **t** reverses this, so that **c-END** sends the message and remains in Converse and **END** sends and exits.

**PART III.**

**Symbolics Store-and-Forward Mailer**



## 10. Overview of the Mailer

The Mailer is a program that provides mail forwarding and delivery services to users at a site. It is distinct from Zmail, which is a user program for reading and composing mail. It is a *store-and-forward* mailer, meaning that when a network connection cannot be made immediately to the receiving machine, it saves the mail and retries the transmission until it is successful. In other words, store-and-forward mailers guarantee, within reason, that mail transmissions are reliable regardless of the state of the network when a user sends or replies to a message.

The Mailer can be installed at one or more hosts at your site, which then act as *mail servers* on the local network. Like other services, it is invisible to users. The Mailer is automatically selected as the mail service if it is operating on the network. The Mailer must be explicitly installed and configured on a Symbolics machine acting as a mail server. See the section "Installing and Configuring the Mailer" in *Site Operations*.

The mailer provides the following features:

- Delivery of mail to user inboxes
- Local delivery of mail to archive files
- Special handling of hardcopy mail (for users who prefer their mail in printed form)
- Support for mailing lists
- Alternative delivery paths
- Transaction logging



## 11. Mailer Functions

The Mailer is operated by a set of functions in the **mailer:** package.

### **mailer:start-mailer**

*Function*

Cold boots (initializes) the Mailer, if the Mailer is not running; otherwise, prints an error message. The Mailer discards all of its important state from virtual memory and restores all of it from the file system. The function is invoked by **sys:enable-services**, which in turn is invoked whenever the machine is warm or cold booted; that is how the Mailer is automatically started when you boot a world saved with the Mailer loaded. This function is most often invoked by clicking on Start Mailer in the Mailer Log frame on the mail server.

### **mailer:restart-mailer**

*Function*

Warm boots the Mailer, if the Mailer is not running; otherwise, prints an error message. The Mailer assumes that its state in virtual memory is valid and resets and enables the foreground process. The foreground process is responsible for restarting the other processes. You must invoke this function by hand.

### **mailer:halt-mailer**

*Function*

Asks all the Mailer processes to finish delivering any mail they already have queued and then to stop themselves. Attempts to deliver mail to this host are rejected. The function waits for all of the Mailer processes to stop and then returns. This function is invoked by **sys:disable-services**, which in turn is called at logout time automatically. **mailer:halt-mailer** may also be invoked by clicking on Halt Mailer in the Mailer Log frame on the mail server.

### **mailer:stop**

*Function*

Asks all the Mailer processes to stop themselves in an orderly way, if the Mailer is running; otherwise, it prints an error message. Attempts to deliver mail to this host are rejected. This function is invoked whenever one of the Mailer processes encounters an error it cannot handle.

### **mailer:start**

*Function*

Asks all the Mailer processes to start up again, if the Mailer has been stopped; otherwise, it prints an error message. It also prints an error message if the Mailer has not yet been launched. You must invoke this function by hand. It is meaningful only after **mailer:stop**.



- mailer:disable** *Function*  
Disables all the Mailer processes immediately, regardless of the state of any Mailer process. Attempts to deliver mail to this host are rejected. This is useful for immediately stopping the Mailer in an emergency, for instance a bug that was causing damage to the file system. This function must be used with care, since a Mailer process might be arrested with the LMFS lock held. You invoke this function by hand. It works by calling **process-disable**.
- mailer:enable** *Function*  
Enables all the Mailer processes, regardless of their state. This function is meaningful only after **mailer:disable** has been called. You invoke by hand; it works by calling **process-enable**.
- mailer:update-mailbox-table** *Function*  
Forces the file mailboxes.text to be read. If this Mailer distributes forwarding tables, the function also forces new forwarding tables to be written. (See the section "Files and Directories Used by the Mailer", page 133. )
- mailer:update-forwarding-tables** *Function*  
Forces new forwarding tables to be written if this Mailer distributes forwarding tables.
- mailer:update-options** *Function*  
Forces the file options.lisp to be read.
- mailer:hardcopy-all-mail** *Function*  
Prints all the saved hardcopy mail, for all users who receive hardcopy mail. Hardcopy mail is discarded after a given number of days (the number is specified as a host option).
- mailer:hardcopy-new-mail** *Function*  
Prints all mail that has arrived since the last printing, for all users who receive hardcopy mail.
- mailer:hardcopy-last-mail** *Function*  
Reprints the mail that was just printed, for all users who receive hardcopy mail. It is useful after a printer failure.
- mailer:hardcopy-all-mail-for-user user** *Function*  
Prints all the saved hardcopy mail for the designated user. Hardcopy mail is discarded after the number of days specified as a host option.

**mailer:hardcopy-new-mail-for-user** *user* *Function*

Prints all mailed that arrived since the last printing, for the designated user.

**mailer:hardcopy-last-mail-for-user** *user* *Function*

Reprints the mail just printed, for the designated user. It is useful after a printer failure.



## 12. Files and Directories Used by the Mailer

The Mailer operates by using several files stored on the file system (LMFS) of its server machine. Files in the directory >Mail>Dynamic> are read and written by the Mailer only. A file in this directory is the only place where mail of any kind is written, and it is not backed up. Files in >Mail>Static> record customizations that pertain to your site and are prepared during the Mailer installation procedure. (See the section "Installing and Configuring the Mailer" in *Site Operations*.) Files in the static directory include log files and failed mail; this directory is backed up.

### >Mail>Static>Options.lisp

This file records options that customize the Mailer's operation; for instance, one option controls the timing of deferred delivery of mail to be sent over telephone lines. (See the section "Symbolics Dialnet" in *Networks*.) The file is kept here so that the Mailer can be initialized (with `mailer:start-mailer`) even if the Sys host is unavailable. You create its initial version when you configure the Mailer on a particular host. The Mailer starts and this file is read, when you load a world saved with the Mailer and enable services, or when the Mailer is loaded and started manually (for example, by a File-Server init file).

### >Mail>Static>Mailboxes.text

This file defines mailing lists and delivery paths for mail handled by this server. You create its initial version when you configure the Mailer on a particular host. For an example of a Mailboxes.text file: See the section "Installing and Configuring the Mailer" in *Site Operations*.

### >Mail>Dynamic>Forwarding.text

Forwarding files are written by the Mailer. They are for use at sites with multiple mail servers. One mail server sets up (for example, via the File-Server init file) a list of hosts for which it should write forwarding tables. It writes these forwarding tables whenever its Mailer is booted, or whenever its mailboxes.text file changes.

### >Mail>Dynamic>\*.mail

These files hold actual messages being processed.

### >Mail>Dynamic>\*.work

These files are working files created and managed by the Mailer. One is created for each \*.mail file. These files record

information about the message's recipients, and they are processed in such a way as to prevent a message from being sent twice to the same recipient if the Mailer fails during a transmission to several hosts.

The following options can be set with `setq` forms in your `>Mail>Static>Options.lisp` file (See the special form `setq` in *Symbolics Common Lisp*.); the initial version of this file is set up when you configure the Mailer on a mail server (See the section "Installing and Configuring the Mailer" in *Site Operations*.):

**mailer:network-bad-gateways**

A list of hosts and/or (host network) pairs that should be avoided as gateways. All host and network names are strings.

**mailer:forwarding-table-hosts**

A list of host objects to which to write forwarding tables. (This option is usually set in a server's init file rather than in the options file; see the example later in this section.)

**mailer:log-file-retention-count**

A number giving the generations of old log files to keep.

**mailer:hardcopy-mail-retention-count**

A number giving the generations of old hardcopy mail to keep.

**mailer:deferred-delivery-times**

A value that specifies how to handle "deferred" mail (for instance, mail that you allow to accumulate for transmission with Dialnet, during a single phone session). `nil` means "never initiate deliveries; wait for the connection to be opened from the other end." `t` means "initiate delivery immediately; deliver mail as soon as possible". You can specify interval, such as "8 hours", meaning to deliver deferred mail at that interval. Finally, you can specify a list of times, for deferred delivery, for example: `'("10:10pm" "6:45am" "2:30pm")`.

**mailer:deferred-receipt-hosts**

A list of host objects to probe for incoming mail.

**mailer:deferred-receipt-times**

A value that specifies when to probe deferred-receipt hosts. `nil` means never, a time interval specifies how often, or a list of times gives specific times of day, as with `mailer:deferred-delivery-times`.

**mailer:notify-hosts**

A list of hosts (symbols) to notify when mailer errors occur.

**mailer:failed-mail-reply-mail**

A value other than nil means to send mail about failed mail to the mail's originator. For example:

```
Date: Friday, 6 June 1986, 15:31-EDT
From: Postmaster at ACME.CSNET.COM
Subject: Unable to deliver letter
Message-ID: <860606153146.5.FILE-SERVER@ACME.CSNET.COM>
To: KJones@WOMBAT
```

```
Unable to deliver letter to the following recipient:
"A:>JSmith>mail.text"@ACME: No such address.
```

```
----- Text of letter follows -----
...
```

**mailer:failed-mail-reply-file**

A value other than nil means to copy failed mail to a special log file.

Here is a simple example of an Options.lisp file:

```
;;; -*- Mode: LISP; Package: MAILER; Base: 10; Syntax: Common-Lisp -*-

(setq mailer:deferred-delivery-times t) ;; send dial mail immediately
(setq mailer:failed-mail-reply-file t) ;; archive failed mail
```

Here, the deferred-delivery feature is disabled, and failed mail is archived in a special log file.



## 13. What to Do When the Mailer Crashes

If a Mailer process encounters an error it is not expecting to catch, a top-level error handler sends a stop message to all the Mailer processes. If all of the processes, except the one which is now in the debugger, are running normally, they enter a wait state in which they do nothing except wait for a start command from `mailer:start`. Incoming mail connections are refused.

In addition to the usual restart handlers, two are offered by the Mailer. One "warm boots" the Mailer, which is the same as calling `mailer:restart-mailer`, and the other "cold boots" the Mailer (reinitializes its from the file system), which is the same as calling `mailer:start-mailer`. You should not reboot the Mailer unless you have identified the cause of the problem and you believe that it will not happen again. It is always safer to cold boot the Mailer than to warm boot it. If you are certain that the virtual memory state of the Mailer is consistent, then you can warm boot the Mailer, which will be faster. When in doubt, cold boot the Mailer.

If the Mailer crashes when trying to read one of the `.Mail` files or deliver a message, then rename the offending `.Mail` and `.Work` files, and cold boot the Mailer. The `.Mail` and `.Work` files are stored in `>Mail>Dynamic<`.

To flush a queued but not yet delivered message, first invoke `mailer:stop`, then rename or delete the `.Mail` and `.Work` files, then invoke `mailer:start-mailer`.

It does not work to delete or rename a `.Mail` file while the Mailer is running; the Mailer will err.





## Index

.		.
	. (Kbd) Zmail Command 83	
<b>0</b>	<b>0</b>	<b>0</b>
	c-X 0 (Kbd) Zmail Command 83	
<b>1</b>	<b>1</b>	<b>1</b>
	c-X 1 (Kbd) Zmail Command 83 zwel: *1r-reply-mode* variable 68	
<b>2</b>	<b>2</b>	<b>2</b>
	c-X 2 (Kbd) Zmail Command 84	
<b>A</b>	<b>A</b>	<b>A</b>
	c-X A Zmail Command 85	
	ABORT command 24	
Continuing Completed or	Aborted Zmail Messages 25	
	[Abort] Filter Creation Display menu item 56	
	Aborting Zmail Commands 36	
	[Abort Send] Editor menu item 24	
	zwel: add-bug-recipient function 33	
	Add Cc Field Zmail Command 84	
	Add Fcc Field Zmail Command 84	
	Add File-References Zmail Command 85	
	Add From Field Zmail Command 84	
	Adding Bug Lists to Zmail 33	
	Adding Keywords to a Message 43	
	Adding keywords to messages 43	
	Add In-reply-to Field Zmail Command 85	
	Add Keywords 95	
	Add More Text Zmail Command 85	
Zmail Support for Internet Domain	Addressing 80	
h-B Move Backward Over	Address Zmail Command 32	
h-F Move Forward Over	Address Zmail Command 32	
h-K Kill	Address Zmail Command 32	
h-RUBOUT Kill Previous	Address Zmail Command 33	
h-T Transpose	Address Zmail Command 32	
	Add Subject Field Zmail Command 85	
	Add to Field Zmail Command 84	
Garbage on Screen	After Zmail Error 36	
No Response	After Zmail Error 36	
Filter-keyword	alist 43	
Filter-mail file	alist 45, 46, 51	
Select	All Conversations by References (m-X) Zmail Command 107	
Sending message to	all Lisp Machines at site 121	
Hardcopy	All (m-X) Zmail Command 40, 93	
	Altering Zmail Header Fields 21	

	<b>zwei:</b>	<b>*always-jump-after-get-new-mail-from-inbox*</b> variable 64
	<b>zwei:</b>	<b>*always-select-saved-current-msg*</b> variable 64
Moving		Among Zmail Messages Using the Message Stack 30
		[And] Filter Creation Display menu item 57
Copying a Zmail Message to		Another Buffer 46
Sending message to		another user 121
		Append Buffer (m-X) Converse Command 120
		Append Conversation by References (m-X) Zmail Command 42, 86
		Append Conversation (m-X) Converse Command 120
		Appending messages 41
		[Append] Message Summary Line menu item 41
		Append to Referenced Message (m-X) Zmail Command 42, 86
		Apropos (m-X) command 5
Describe Command (m-X) and		Apropos (m-X) Zmail Command 86
Select		Apropos (m-X) Zmail Commands 5
		Arbitrary Format Mail File (m-X) Zmail command 78, 108
Conceptual Zmail		Architecture 8
Zmail		Architecture 8
Zmail Options for Deleting Messages and Moving		Around 70
		Arpanet digest messages 111
	Zmail in	Arrest Process 35
	Zmail in	Arrest Process State 35
	File	attributes 80
Zmail: Help Displayed		Automatically 5

**B**

		<b>B</b>
Starting up Zmail in the		BABYL mail file format 78
		Background 15
		Background processes 8, 10
Start		Background Save (m-X) Zmail Command 50
h-B Move		Backward Over Address Zmail Command 32
Zmail		Backward-References: Field 76
		Badheader message property 75
Selecting messages		based on position 29
Selecting messages		based on string 29
		Basic Zmail 15
	Zmail	Bcc: Field 75
		Beeping 119
		[Before] Filter Creation Display menu item 51
	Default	Behavior of Converse 119
	Zmail	Bfcc Field 76
		Binary Format for Storing Mail Files 79
Using Zmail with a		Broken Mouse 36
Copying a Zmail Message to Another		Buffer 46
Deleting messages from mail		buffer 32
Expunging		buffer 49
Restoring messages to mail		buffer 32
	Append	Buffer (m-X) Converse Command 120
	Regenerate	Buffer (m-X) Converse Command 120
	Write	Buffer (m-X) Converse Command 120
	Editor	buffers 10
Expunging zmail		buffers 50
Mail		buffers 8, 10, 45
Zmail Mail		Buffers 45

**B**

Selecting Zmail Mail Buffers and Files 45  
 Listing Zmail Buffers, Mail Files and Collections 45  
 Zmail bug lists 33  
 Adding Bug Lists to Zmail 33  
 Bug (m-X) Zmail Command 86  
 Bug mail recipients 33  
 :bug-reports option for defsystem 33

## C

## C

## C

SELECT C command 115  
 C (Kbd) Zmail Command 86  
 C Zmail command 25  
 c-X C Zmail Command 84  
 c-D (Kbd) Zmail Command 88  
 c-END Converse command 119  
 c-F (Kbd) Zmail Command 91  
 c-M Converse Command 119  
 c-m-L Zmail command 45  
 c-X c-m-S Zmail command 22  
 c-m-SPACE (Kbd) Zmail Command 99  
 c-m-SPACE Zmail command 30  
 c-m-[ Converse Command 120  
 c-m-] Converse Command 120  
 c-N (Kbd) Zmail Command 29, 100  
 c-N Zmail command 29  
 c-P (Kbd) Zmail Command 29, 102  
 c-P Zmail command 29  
 c-R (Kbd) Zmail Command 104  
 c-X c-R Zmail command 22  
 c-X c-S Zmail command 22  
 c-SPACE (Kbd) Zmail Command 109  
 c-SPACE Zmail command 30  
 c-U c-SPACE Zmail command 30  
 c-U c-SPACE Zmail command 30  
 c-U c-SPACE Zmail command 30  
 c-U c-U c-SPACE Zmail command 30  
 c-U c-U c-SPACE Zmail command 30  
 c-W Zmail command 22  
 c-X 0 (Kbd) Zmail Command 83  
 c-X 1 (Kbd) Zmail Command 83  
 c-X 2 (Kbd) Zmail Command 84  
 c-X A Zmail Command 85  
 c-X C Zmail Command 84  
 c-X c-m-S Zmail command 22  
 c-X c-R Zmail command 22  
 c-X c-S Zmail command 22  
 c-X c-W Zmail command 22  
 c-X c-Y (Kbd) Yank Replied Messages Zmail  
 Command 25, 112  
 c-X M (Kbd) Zmail Command 33, 96  
 c-X 0 (Kbd) Zmail Command 101  
 c-X S Zmail Command 85  
 c-X T Zmail command 84  
 c-X Y Prune Yanked Headers Zmail Command 26,  
 111  
 c-X c-Y (Kbd) Yank Replied Messages Zmail  
 Command 25, 112  
 c-] Zmail command 24  
 Zmail Options for Calendar Mode 74  
 zwei: \*calendar-mode-week-starts-on-monday\*  
 variable 74

- Cannot [SELECT M] Zmail 36
- Cannot select Zmail 35
- Zmail Cc: Field 75
- Add Cc Field Zmail Command 84
- Change Subject Pronouns Zmail Command 86
- chaos:notify-local-lispms** function 121
- Characteristics 54
- Check for New Mail (m-X) Zmail Command 86
- Classifiers 43
- Classifying messages 43
- Classifying Zmail Messages 43
- Click Middle on Summary Line Zmail Command 87
- [Close] Filter Creation Display menu item 57
- Collection 46
- collection 49
- Collection 48
- Collection 49
- Collection by Marking Individual Messages 48
- Collection by Using Filters 47
- collection filters 54
- collection messages 49
- [collection] Move menu item 47
- [collection] Move menu item 47
- Collections 45
- Collections 8
- collections 46
- Collections 46
- Collections 73
- Collections, and Mail Files 51
- collections in universes 61
- Collection Starting with a Single Message 47
- Command 83
- command 24
- Command 84
- Command 84
- Command 85
- Command 84
- Command 85
- Command 85
- Command 85
- Command 85
- Command 84
- Command 120
- Command 42, 86
- Command 120
- Command 42, 86
- command 5
- Command 86
- Command 86
- Command 86
- command 25
- Command 88
- command 119
- Command 91
- Command 119
- command 45
- Command 99
- command 30
- Command 120
- Command 120
- Command 29, 100

c-N Zmail	command 29
c-P (Kbd) Zmail	Command 29, 102
c-P Zmail	command 29
c-R (Kbd) Zmail	Command 104
c-SPACE (Kbd) Zmail	Command 109
c-SPACE Zmail	command 30
c-U c-SPACE Zmail	command 30
c-U c-U c-SPACE Zmail	command 30
c-X 0 (Kbd) Zmail	Command 83
c-X 1 (Kbd) Zmail	Command 83
c-X 2 (Kbd) Zmail	Command 84
c-X A Zmail	Command 85
c-X C Zmail	Command 84
c-X c-m-S Zmail	command 22
c-X c-R Zmail	command 22
c-X c-S Zmail	command 22
c-X c-W Zmail	command 22
c-X c-Y (Kbd) Yank Replied Messages Zmail	Command 25, 112
c-X M (Kbd) Zmail	Command 33, 96
c-X 0 (Kbd) Zmail	Command 101
c-X S Zmail	Command 85
c-X T Zmail	command 84
c-X Y Prune Yanked Headers Zmail	Command 26, 111
c-] Zmail	command 24
Change Subject Pronouns Zmail	Command 86
Check for New Mail (m-X) Zmail	Command 86
Click Middle on Summary Line Zmail	Command 87
Compile File (m-X) Zmail	Command 87
D (Kbd) Zmail	Command 88
Decrypt Text (m-X) Zmail	Command 34, 89
Delete Conversation by References (m-X) Zmail	Command 42, 90
Delete Conversation (m-X) Converse	Command 120
Delete Duplicate Messages (m-X) Zmail	Command 89
Delete Referenced Messages (m-X) Zmail	Command 42, 90
Describe Command (m-X) Zmail	Command 90
Dot Zmail	Command 83
E Zmail	command 50
Edit File (m-X) Zmail	Command 90
Encrypt Text (m-X) Zmail	Command 34, 90
END	command 24
END Converse	command 119
END (Kbd) Zmail	Command 91
F (Kbd) Zmail	Command 91
Find String (m-X) Zmail	command 29, 91
Format File (m-X) Zmail	Command 91
Forward (m-X) Zmail	Command 91
G (Kbd) Zmail	Command 92
G Zmail	command 18
H (Kbd) Zmail	Command 93
h-B Move Backward Over Address Zmail	Command 32
h-F Move Forward Over Address Zmail	Command 32
h-K Kill Address Zmail	Command 32
h-RUBOUT Kill Previous Address Zmail	Command 33
h-T Transpose Address Zmail	Command 32
Hardcopy All (m-X) Zmail	Command 40, 93
Hardcopy File (m-X) Zmail	Command 93
Hardcopy Message (m-X) Zmail	Command 40, 93
Insert File (m-X) Zmail	Command 26, 93
J (Kbd) Zmail	Command 29, 93
J Zmail	command 29
L (Kbd) Zmail	Command 95

L Zmail	command 43
List Sequences (m-X) Zmail	Command 95
List Sequences (m-X) Zmail	Command 45
Load File (m-X) Zmail	Command 95
M (Kbd) Zmail	Command 95
[Mail (R)] Zmail	command 40
Move in Place of Referenced Message (m-X) Zmail	Command 42, 99
[Move (M)] Zmail	command 45
Move to Default Previous Point (m-X) Zmail	command 30, 31, 99
Move to Point (m-X) Zmail	Command 99
Move to Previous Point (m-X) Zmail	command 30
N (Kbd) Zmail	Command 100
N Zmail	command 29
O (Kbd) Zmail	Command 100
Occur (m-X) Zmail	command 29, 101
P (Kbd) Zmail	Command 101
P Zmail	command 29
Period Zmail	Command 83
[Profile] Zmail	command 53
Q (Kbd) Zmail	Command 102
Q Zmail	command 15
R (Kbd) Zmail	Command 103
R Zmail	command 22
Redirect Message (m-X) Zmail	Command 104
Redistribute Message (m-X) Zmail	Command 104
Redo (m-X) Zmail	Command 105
Regenerate Buffer (m-X) Converse	Command 120
Reply with Draft Messages Zmail	Command 24
RESUME Zmail	command 25
Revoke Message (m-X) Zmail	Command 105
S (Kbd) Zmail	Command 106
S Zmail	command 15, 50
SELECT C	command 115
SELECT M	command 15
Select All Conversations by References (m-X) Zmail	Command 107
Select Arbitrary Format Mail File (m-X) Zmail	command 78, 108
Select Conversation by References (m-X) Zmail	Command 42, 108
Select Conversation (m-X) Zmail	command 39
Select Referenced Message (m-X) Zmail	Command 42, 108
Select References (m-X) Zmail	Command 108
[Select (R)] Zmail	command 45
Show Draft Disposition (m-X) Zmail	command 24
Show File (m-X) Zmail	Command 108
Show Mail (m-X) Zmail	Command 108
Show Printer Status (m-X) Zmail	Command 41, 108
Start Background Save (m-X) Zmail	Command 50
U (Kbd) Zmail	Command 110
Undigestify (m-X) Zmail	Command 111
Undo (m-X) Zmail	Command 111
View Mail (m-X)	command 108
Write Buffer (m-X) Converse	Command 120
Write Conversation (m-X) Converse	Command 120
Yank Current Message (m-X) Zmail	Command 112
(zmail) Lisp	command 15
Zmail Reply	Command 26
Describe	Command (m-X) and Apropos (m-X) Zmail
	Commands 5
Describe	Command (m-X) Zmail Command 90
Zmail	Command Menu 11
Aborting Zmail	Commands 36
Converse	Commands 119

- Describe Command (m-X) and Apropos (m-X) Zmail Commands 5
- Dictionary of Zmail Commands 83
- Format Conventions for Zmail Commands 3
  - Keyword-setting commands 43
  - List of Zmail commands 5
  - Message-copying commands 45
  - Message stack commands 30
  - Other Zmail Commands 32
  - Referenced message commands 41
  - Reply commands 26
- Simple Zmail Message Movement Commands 29
  - Substitutes for mouse commands 35
  - Summary of Mail Reading Commands 18
  - Summary of Zmail Mail Commands 20
  - Zmail Mail Commands 20
  - Zmail Message Deletion Commands 32
  - Zmail Message Movement Commands 29
  - Lisp Listener Commands for Converse 120
  - Zmail Commands for Editing the Recipient List 32
  - Commands for Including Files and Prepared Text in Messages 25
    - Commands for Reading Mail 17
    - Commands for Sending Mail 16
    - Commands in Zmail 36
    - Commands to Read Your Inbox 18
    - Commands to Read Your Mail 19
    - Commands to Use While Reading Mail 19
    - Compiled file names 77
    - Compile File (m-X) Zmail Command 87
    - Complement of a universe 61
    - Completed or Aborted Zmail Messages 25
    - \*complete-get-inbox-in-background\*** variable 64
    - computer crash 10
    - [Concatenate] Map over menu item 41
    - Concatenating messages 41
    - Conceptual Zmail Architecture 8
    - Configuration 11
    - Configuration 62
    - Configuration 10
    - \*configure-middle-mode\*** variable 74
    - Configuring and Selecting Zmail Windows 22
    - [Continue] 23, 88
    - [Continue] 23, 87
    - [Continue] Zmail menu item 25, 87
    - Continuing Completed or Aborted Zmail Messages 25
- Undoing
  - Commands to Read Your Inbox 18
  - Commands to Read Your Mail 19
  - Commands to Use While Reading Mail 19
  - Compiled file names 77
  - Compile File (m-X) Zmail Command 87
  - Complement of a universe 61
  - Completed or Aborted Zmail Messages 25
  - \*complete-get-inbox-in-background\*** variable 64
  - computer crash 10
  - [Concatenate] Map over menu item 41
  - Concatenating messages 41
  - Conceptual Zmail Architecture 8
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- Continuing
  - Completed or Aborted Zmail Messages 25
  - \*complete-get-inbox-in-background\*** variable 64
  - computer crash 10
  - [Concatenate] Map over menu item 41
  - Concatenating messages 41
  - Conceptual Zmail Architecture 8
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- zwei:
  - computer crash 10
  - [Concatenate] Map over menu item 41
  - Concatenating messages 41
  - Conceptual Zmail Architecture 8
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- Host
  - computer crash 10
  - [Concatenate] Map over menu item 41
  - Concatenating messages 41
  - Conceptual Zmail Architecture 8
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- Zmail Message Window
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- Zmail Options for Window
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- Zmail Summary Window
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- zwei:
  - computer crash 10
  - [Concatenate] Map over menu item 41
  - Concatenating messages 41
  - Conceptual Zmail Architecture 8
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- Restore Draft File Using
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- Restore Draft Message Using
  - Configuration 11
  - Configuration 62
  - Configuration 10
  - \*configure-middle-mode\*** variable 74
  - Configuring and Selecting Zmail Windows 22
  - [Continue] 23, 88
  - [Continue] 23, 87
  - [Continue] Zmail menu item 25, 87
  - Continuing Completed or Aborted Zmail Messages 25
- Format Conventions for Zmail Commands 3
- Append
  - Conversation by References (m-X) Zmail Command 42, 86
- Delete
  - Conversation by References (m-X) Zmail Command 42, 90
- Select
  - Conversation by References (m-X) Zmail Command 42, 108
- Append
  - Conversation (m-X) Converse Command 120
- Delete
  - Conversation (m-X) Converse Command 120
- Write
  - Conversation (m-X) Converse Command 120
- Select
  - Conversation (m-X) Zmail command 39
  - Conversations 115
- Select All
  - Conversations by References (m-X) Zmail Command 107
  - Converse 113



- Customizing Converse 123
- Default Behavior of Converse 119
- Interactive message system (Converse) 3
- Introduction to Converse 115
- Lisp Listener Commands for Converse 120
- Sending and Replying to Messages with Converse 117
- Using Converse 117
  - zwl: *\*converse-append-p\** variable 124
  - zwl: *\*converse-beep-count\** variable 124
- Append Buffer (m-X) Converse Command 120
- Append Conversation (m-X) Converse Command 120
  - c-END Converse command 119
  - c-M Converse Command 119
  - c-m-[ Converse Command 120
  - c-m-] Converse Command 120
- Delete Conversation (m-X) Converse Command 120
  - END Converse command 119
- Regenerate Buffer (m-X) Converse Command 120
- Write Buffer (m-X) Converse Command 120
- Write Conversation (m-X) Converse Command 120
  - Converse Commands 119
  - zwl: *\*converse-end-exits\** variable 124
  - zwl: *\*converse-gagged\** 120
- Turning off Converse messages 120
- Turning on Converse messages 121
  - zwl: *\*converse-mode\** variable 123
- Converse Pop-up Message Window 119
- Converse variables 123
- Converting Existing Mail Files to KBIN Format 79
- Copying a Zmail Message to Another Buffer 46
- Copying messages 46
- Copy message into reply 39
- Covered 36
- Zmail Window Partly
  - Host computer crash 10
- What to Do When the Mailer Crashes 137
  - Create a new message 20
  - Creating a Mail Collection 46
  - Creating a Mail Collection by Marking Individual Messages 48
  - Creating a Mail Collection by Using Filters 47
  - Creating a Mail Collection Starting with a Single Message 47
- Zmail Options for Moving Messages and
  - Creating Collections 73
  - Creating Zmail Filters 56
  - Creating Zmail Universes 61
  - Creation Display 56
  - Creation Display menu item 56
  - [Abort] Filter Creation Display menu item 57
  - [And] Filter Creation Display menu item 57
  - [Before] Filter Creation Display menu item 51
  - [Close] Filter Creation Display menu item 57
  - [Done] Filter Creation Display menu item 56
  - [Not] Filter Creation Display menu item 57
  - [Or] Filter Creation Display menu item 57
  - [Sample] Filter Creation Display menu item 56
- Current message 8, 10
- Current Message 41
- current message 20
- Current Message (m-X) Zmail Command 112
- Customizing Converse 123
- Customizing Zmail 53

## D

## D

## D

- Zmail
- Zmail in the Debugger
- Getting Out of the Debugger in Zmail 35
- Decrypt Text (m-X) Zmail Command 34, 89
- Default Behavior of Converse 119
- zwei: **\*default-cc-list\*** variable 66
- zwei: **\*default-draft-file-name\*** variable 67
- zwei: **\*default-fcc-list\*** variable 66
- zwei: **\*default-initial-window-configuration\*** variable 62
- zwei: **\*default-mail-buffer-generation-retention-count\*** variable 73
- zwei: **\*default-mail-buffer-major-mode\*** variable 66
- Default mail file 9, 10
- Default mail file names 77
- zwei: **\*default-mail-window-configuration\*** variable 65
- Default move-destination file 40
- zwei: **\*default-move-mail-file-name\*** variable 73
- Move to Default Previous Point (m-X) Zmail command 30, 31, 99
- [Default] Profile Mode menu item 53
- zwei: **\*default-summary-template\*** variable 62
- Defining a Filter Example 57
- Defining Zmail Message Search Spaces 60
- defsystem 33
- :bug-reports option for zwei: **\*delete-after-move-to-buffer\*** variable 73
- Delete Conversation by References (m-X) Zmail Command 42, 90
- Delete Conversation (m-X) Converse Command 120
- Deleted message property 32
- Delete Duplicate Messages (m-X) Zmail Command 89
- zwei: **\*delete-expired-msgs\*** variable 74
- zwei: **\*delete-middle-mode\*** variable 70
- Delete Referenced Messages (m-X) Zmail Command 42, 90
- [Delete] Zmail menu item 48, 89
- Deleting messages 49
- Zmail Options for Deleting Messages and Moving Around 70
- Deleting messages from mail buffer 32
- Zmail Message Movement and Deletion 29
- Zmail Message Zmail Message Deletion Commands 32
- Zmail System Dependencies 77
- Describe Command (m-X) and Apropos (m-X) Zmail Commands 5
- Describe Command (m-X) Zmail Command 90
- Dictionary of Zmail Commands 83
- Arpanet digest messages 111
- Files and Directories Used by the Mailer 133
- maller: disable function 130
- Disk File Names for Zmail 77
- Saving messages in disk files 22
- The Filter Creation Display 56
- Universe Selection Display 60
- Zmail display 10
- Zmail: Help Displayed Automatically 5
- [Abort] Filter Creation Display menu item 56
- [And] Filter Creation Display menu item 57
- [Before] Filter Creation Display menu item 51
- [Close] Filter Creation Display menu item 57

[Done] Filter Creation	Display menu item 56
[New filter] Filter Selection	Display menu item 56
[New universe] Universe Selection	Display menu item 61
[Not] Filter Creation	Display menu item 57
[Or] Filter Creation	Display menu item 57
[Sample] Filter Creation	Display menu item 56
[Unseen] Filter Selection	Display menu item 51
Show Draft	Disposition (m-X) Zmail command 24
Online	D message status 32
Zmail	documentation 5
Mouse	documentation item 57
Zmail: Mouse	documentation line 5, 43
Zmail	Documentation Line 5
Zmail Support for Internet	Does Not Respond 35
Internet RFC822	Domain Addressing 80
zwei:	domain-addressing formats 80
What to	[Done] Filter Creation Display menu item 56
Save	*dont-reply-to* variable 69
Show	Dot Zmail Command 83
Restore	Do When the Mailer Crashes 137
Save	Draft as Message Zmail Menu Item 23, 106
Zmail	Draft Disposition (m-X) Zmail command 24
Restore	Draft File 22
Save	Draft File 22
Write	Draft File Facility 22
Restore	Draft files 22
Restore	Draft File Using [Continue] 23, 88
Save	Draft File Zmail Menu Item 23, 105
Write	Draft File Zmail Menu Item 22, 106
Restore	Draft File Zmail Menu Item 23, 111
Save	Draft Message 23
Zmail	Draft Message 23
Reply with	Draft Message Facility 23
Restore	Draft Messages Zmail Command 24
Delete	Draft Message Using [Continue] 23, 87
Saving and Restoring Zmail Message	Drafts 22
Delete	Duplicate Messages (m-X) Zmail Command 89

**E****E****E**

	E (Kbd) Zmail Menu Item 90
	E Zmail command 50
	Edit File (m-X) Zmail Command 90
	Editing messages 41
	Editing Mode for Zmail 66
Zmail Commands for	Editing the Recipient List 32
	Editing Zmail Messages 41
	Editor buffers 10
	Editor menu item 24
	Editor menu item 24
	enable function 130
	Encrypted: Field 76
	Encrypting Zmail Messages 34
	encryption 34
	Encrypt Text (m-X) Zmail Command 34, 90
	END command 24
	END Converse command 119
	END (Kbd) Zmail Command 91
	Entering Mail Mode Recursively 33
	Entering Zmail 15
Garbage on Screen After Zmail	Error 36

No Response After Zmail Error 36  
 Zmail Error Window 35  
 Defining a Filter Example 57  
 Converting Existing Mail Files to KBIN Format 79  
 Exiting Zmail 15  
 [Exit] Profile Mode menu item 53  
 Zmail Expiration-Date: Field 77  
 Expunging buffer 49  
 Expunging collection 49  
 Saving, Expunging, Killing, and Renaming Zmail  
 Messages 50  
 Expunging zmail buffers 50

## F

## F

## F

Zmail Draft File  
 Zmail Draft Message  
 Retrying  
 Zmail  
 Add  
 Unsupported  
 References  
 Resent-by  
 Resent-date  
 Resent-to  
 Zmail Backward-References:  
 Zmail Bcc:  
 Zmail Bfcc  
 Zmail Cc:  
 Zmail Date:  
 Zmail Encrypted:  
 Zmail Expiration-Date:  
 Zmail Fcc:  
 Zmail File-References:  
 Zmail Forward-References:  
 Zmail From:  
 Zmail Included Messages:  
 Zmail Included References:  
 Zmail In-Reply-to:  
 Zmail Message-id:  
 Zmail Redistributed-by:  
 Zmail Redistributed-Date:  
 Zmail Redistributed-to:  
 Zmail Reply-to:  
 Zmail Sender:  
 Zmail Subject:  
 Zmail To:  
 Text  
 Altering Zmail Header  
 Header  
 Pruning header  
 Header  
 Add Cc  
 Add Fcc  
 Add From  
 Add In-reply-to  
 Add Subject  
 Add to  
 F (Kbd) Zmail Command 91  
 Facility 22  
 Facility 23  
 Failed mail retransmission 26  
 failed message 26  
 Fcc: Field 75  
 Fcc Field Zmail Command 84  
 features 80  
 Features Not Supported by Zmail 80  
 field 75  
 field 75  
 field 75  
 field 75  
 Field 76  
 Field 75  
 Field 76  
 Field 75  
 Field 75  
 Field 76  
 Field 76  
 Field 75  
 Field 76  
 Field 76  
 Field 75  
 Field 76  
 Field 76  
 Field 76  
 Field 77  
 Field 75  
 Field 76  
 Field 76  
 Field 75  
 Field 76  
 Field 76  
 Field 75  
 Field 76  
 Field 76  
 Field 77  
 Field 77  
 Field 77  
 Field 77  
 Field 77  
 Field 77  
 Field 77  
 Field 77  
 Field 76  
 Field 75  
 field in Zmail messages 8  
 Fields 21  
 fields 53  
 fields 39  
 fields in Zmail messages 8  
 Field Zmail Command 84  
 Field Zmail Command 84  
 Field Zmail Command 84  
 Field Zmail Command 85  
 Field Zmail Command 85  
 Field Zmail Command 84

- Default mail file 9, 10
- Default move-destination file 40
- Insert File 25
- Moving a Zmail Message to a File 40
- Primary mail file 18
- Restore Draft File 22
- Save Draft File 22
- Filter-mail file alist 45, 46, 51
- File attributes 80
- File Facility 22
- Zmail Draft file format 78
- BABYL mail file format 78
- KBIN mail file format 78
- RMAIL mail file format 78, 80
- TENEX mail file format 78, 80
- UNIX mail file format 78, 80
- VAX/VMS mail file format 78
- Standard mail file formats 78
- Mail File Formats for Zmail 78
- Compile File (m-X) Zmail Command 87
- Edit File (m-X) Zmail Command 90
- Format File (m-X) Zmail Command 91
- Hardcopy File (m-X) Zmail Command 93
- Insert File (m-X) Zmail Command 26, 93
- Load File (m-X) Zmail Command 95
- Select Arbitrary Format Mail File (m-X) Zmail command 78, 108
- Show File (m-X) Zmail Command 108
- [Find file] Map over Move menu item 51
- Compiled file names 77
- Default mail file names 77
- Inbox file names 77
- Other mail file names 77
- Renamed inbox file names 77
- Source file names 77
- Disk File Names for Zmail 77
- [File options] Profile Mode menu item 46
- [File Options] Zmail Profile Menu Item 74
- Zmail File-References: Field 76
- Add File-References Zmail Command 85
- Binary Format for Storing Mail Files 79
- Draft files 22
- Hints for Using Keywords, Mail Collections, and Mail Files 51
- Inbox Files 9, 10
- Mail Files 8
- Mailer forwarding files 133
- Saving a List of Mail Files 46
- Saving messages in disk files 22
- Selecting mail files 45
- Selecting Zmail Mail Buffers and Files 45
- Zmail Option for the Format of Mail Files 73
- Listing Zmail Buffers, Mail Files and Collections 45
- Files and Directories Used by the Mailer 133
- Files and Prepared Text in Messages 25
- [Mail files] Profile Mode menu item 46
- Converting Existing Mail Files to KBIN Format 79
- VAX/VMS file system 80
- Restore Draft File Using [Continue] 23, 88
- [Find file] Zmail menu item 45
- Restore Draft File Zmail Menu Item 23, 105
- Save Draft File Zmail Menu Item 22, 106
- Write Draft File Zmail Menu Item 23, 111
- [Read/Create file] Zmail Select menu item 45

- The Filter Creation Display 56
- [Abort] Filter Creation Display menu item 56
- [And] Filter Creation Display menu item 57
- [Before] Filter Creation Display menu item 51
- [Close] Filter Creation Display menu item 57
- [Done] Filter Creation Display menu item 56
- [Not] Filter Creation Display menu item 57
- [Or] Filter Creation Display menu item 57
- [Sample] Filter Creation Display menu item 56
- Defining a Filter Example 57
- [New filter] Filter Selection Display menu item 56
- Filter-keyword alist 43
- Filter-mail file alist 45, 46, 51
- Filter menus 56
- [Filter] Message Summary Line menu item 46
- Filters 54, 55
- Creating a Mail Collection by Using Filters 47
- Creating Zmail Filters 56
- Mail collection filters 54
- Predefined filters 55
- Satisfying filters 54
- Saving Zmail Filters 59
- Selecting Zmail Filters 55
- User-defined filters 55
- Zmail Filters 44
- [New filter] Filter Selection Display menu item 56
- [Unseen] Filter Selection Display menu item 51
- [Filters] Profile Mode menu 43
- [Filters] Profile Mode menu item 59
- zwei:** **\*filter-summary-window-fraction\*** variable 63
- [Find file] Map over Move menu item 51
- [Find file] Zmail menu item 45
- Find String (m-X) Zmail command 29, 91
- Status Flags 43
- Foreground processes 8
- Zmail in Wait Forever 35
- Zmail in Wait Forever Process State 35
- BABYL mail file format 78
- Converting Existing Mail Files to KBIN Format 79
- ITS header format 75
- KBIN Format 79
- KBIN mail file format 78
- Network header format 75
- RFC733 header format 75
- RMAIL mail file format 78, 80
- TENEX mail file format 78, 80
- UNIX mail file format 78, 80
- VAX/VMS mail file format 78
- Format Conventions for Zmail Commands 3
- Format File (m-X) Zmail Command 91
- Format for Storing Mail Files 79
- Format Mail File (m-X) Zmail command 78, 108
- Format of Mail Files 73
- formats 80
- formats 78
- Formats 75
- Formats for Zmail 78
- zwei:** **\*forwarded-add-subject\*** variable 70
- zwei:** **\*forwarded-message-begin\*** variable 70
- zwei:** **\*forwarded-message-end\*** variable 70
- zwei:** **\*forwarded-message-separator\*** variable 70

Forwarding and Redistributing Zmail Messages 40  
 forwarding files 133  
 Forwarding Messages 70  
 Forward (m-X) Zmail Command 91  
 [Forward] Mail menu item 40  
 Forward Over Address Zmail Command 32  
 Forward-References: Field 76  
 From: Field 75  
 From Field Zmail Command 84  
 From Stuck States in Zmail 35  
 Recovering  
 chaos:notify-local-lispms function 121  
 maller:disable function 130  
 maller:enable function 130  
 maller:halt-maller function 129  
 maller:hardcopy-all-mail function 130  
 maller:hardcopy-all-mail-for-user function 130  
 maller:hardcopy-last-mail function 130  
 maller:hardcopy-last-mail-for-user function 131  
 maller:hardcopy-new-mail function 130  
 maller:hardcopy-new-mail-for-user function 131  
 maller:restart-maller function 129  
 maller:start function 129  
 maller:start-maller function 129  
 maller:stop function 129  
 maller:update-forwarding-tables function 130  
 maller:update-mailbox-table function 130  
 maller:update-options function 130  
 print-sends function 121  
 qreply function 122  
 zwel:add-bug-recipient function 33  
 zwel:qsends-off function 120  
 zwel:qsends-on function 121  
 Mailer Functions 129  
 Fundamental Zmail Techniques 53

## G

## G

## G

G (Kbd) Zmail Command 92  
 G Zmail command 18  
 Garbage on Screen After Zmail Error 36  
 zwel: \*generate-in-reply-to-field\* variable 69  
 [Get inbox] Zmail menu item 10, 92  
 Getting Out of the Debugger in Zmail 35  
 Getting Out of Trouble in Zmail 35  
 zwel: \*msgs-other-switches\* variable 64  
 Group of Zmail Messages 50  
 Operating on a Zmail Reference Guide 1

## H

## H

## H

H (Kbd) Zmail Command 93  
 h-B Move Backward Over Address Zmail Command 32  
 h-F Move Forward Over Address Zmail Command 32  
 h-K Kill Address Zmail Command 32  
 h-RUBOUT Kill Previous Address Zmail Command 33  
 h-T Transpose Address Zmail Command 32  
 maller: halt-maller function 129  
 Hardcopy All (m-X) Zmail Command 40, 93

- mailer:** **hardcopy-all-mail** function 130
- mailer:** **hardcopy-all-mail-for-user** function 130
- Hardcopy File (m-X) Zmail Command 93
- Hardcopying Zmail Messages 40
- mailer:** **hardcopy-last-mail** function 130
- mailer:** **hardcopy-last-mail-for-user** function 131
- Hardcopy Message (m-X) Zmail Command 40, 93
- mailer:** **hardcopy-new-mail** function 130
- mailer:** **hardcopy-new-mail-for-user** function 131
- Header fields 53
- Altering Zmail Header Fields 21
- Pruning header fields 39
- Header fields in Zmail messages 8
- ITS header format 75
- Network header format 75
- RFC733 header format 75
- Zmail Header Formats 75
- Headers 75
- Prune Headers 25
- Prune headers of yanked messages 70
- c-X Y Prune Yanked Headers Zmail Command 26, 111
- zwei:** **\*header-window-nlines\*** variable 65
- HELP key 5
- Zmail: Help Displayed Automatically 5
- Online Help for Zmail 5
- Zmail: Help Key 5
- Hints for Using Keywords, Mail Collections, and Mail Files 51
- Zmail in Output Hold 35
- Zmail in Output Hold Process State 35
- Zmail Hopelessly Stuck 36
- Host computer crash 10
- Host system 77

<ul style="list-style-type: none"> <li>Commands to Read Your</li> <li>Zmail</li> <li>Renamed</li> <li>[Get</li> <li>Zmail</li> <li>Zmail</li> <li>Commands for</li> <li>Zmail Options for</li> <li>Topic</li> <li>Creating a Mail Collection by Marking</li> <li>Zmail Mode Line</li> <li>Zmail Reference</li> <li><b>zwei:</b></li> <li><b>zwei:</b></li> <li>Zmail</li> <li>Add</li> <li>Sending</li> </ul>	<ul style="list-style-type: none"> <li>Inbox 108</li> <li>Inbox 18</li> <li>Inboxes 9</li> <li>Inboxes 10</li> <li>Inbox file names 77</li> <li>inbox file names 77</li> <li>Inbox Files 9, 10</li> <li>inbox] Zmail menu item 10, 92</li> <li>Included Messages: Field 76</li> <li>Included References: Field 76</li> <li>Including Files and Prepared Text in Messages 25</li> <li>Including Messages in a Reply 69</li> <li>Incoming messages 119</li> <li>Indicators 43</li> <li>Individual Messages 48</li> <li>Information 12</li> <li>Information 53</li> <li><b>*inhibit-background-mail-checks*</b> variable 64</li> <li><b>*inhibit-background-saves*</b> variable 65</li> <li>In-Reply-to: Field 76</li> <li>In-reply-to Field Zmail Command 85</li> <li>Insert File 25</li> <li>Insert File (m-X) Zmail Command 26, 93</li> <li>interactive messages 117</li> <li>Interactive message system (Converse) 3</li> </ul>
---	--



Top-Level Interface to Zmail 10  
 Zmail Support for Internet Domain Addressing 80  
 Internet RFC822 domain-addressing formats 80  
 Intersection of universes 61  
 Introduction to Converse 115  
 Zmail programming items 56  
 ITS 77, 78  
 ITS header format 75

**J****J****J**

J (Kbd) Zmail Command 29, 93  
 J Zmail command 29  
 [Jump] Zmail menu item 29, 30, 54, 60, 93

**K****K****K**

c-X c-Y (Kbd) Yank Replied Messages Zmail Command 25,  
 112  
 . (Kbd) Zmail Command 83  
 C (Kbd) Zmail Command 86  
 c-D (Kbd) Zmail Command 88  
 c-F (Kbd) Zmail Command 91  
 c-m-SPACE (Kbd) Zmail Command 99  
 c-N (Kbd) Zmail Command 29, 100  
 c-P (Kbd) Zmail Command 29, 102  
 c-R (Kbd) Zmail Command 104  
 c-SPACE (Kbd) Zmail Command 109  
 c-X 0 (Kbd) Zmail Command 83  
 c-X 1 (Kbd) Zmail Command 83  
 c-X 2 (Kbd) Zmail Command 84  
 c-X M (Kbd) Zmail Command 33, 96  
 c-X 0 (Kbd) Zmail Command 101  
 D (Kbd) Zmail Command 88  
 END (Kbd) Zmail Command 91  
 F (Kbd) Zmail Command 91  
 G (Kbd) Zmail Command 92  
 H (Kbd) Zmail Command 93  
 J (Kbd) Zmail Command 29, 93  
 L (Kbd) Zmail Command 95  
 M (Kbd) Zmail Command 95  
 N (Kbd) Zmail Command 100  
 O (Kbd) Zmail Command 100  
 P (Kbd) Zmail Command 101  
 Q (Kbd) Zmail Command 102  
 R (Kbd) Zmail Command 103  
 S (Kbd) Zmail Command 106  
 U (Kbd) Zmail Command 110  
 E (Kbd) Zmail Menu Item 90  
 KBIN Format 79  
 Converting Existing Mail Files to KBIN Format 79  
 KBIN mail file format 78  
 HELP key 5  
 Zmail: Help Key 5  
 zwei: \*keyword-allst-sort-predicate\* variable 72  
 Keywords 8, 10, 80  
 Add Keywords 95  
 Saving keywords 44  
 Saving Zmail Keywords 44  
 Setting Zmail Keywords 43

Zmail Keywords 43  
 Zmail Option for Ordering Keywords 72  
 Keyword-setting commands 43  
 Hints for Using Keywords, Mail Collections, and Mail Files 51  
 [New] Keywords menu item 43  
 [Keywords] Profile Mode menu item 43, 44  
 [Keywords (R)] Zmail Menu Item 95  
 Adding Keywords to a Message 43  
 Adding keywords to messages 43  
 [Keywords] Zmail menu item 43, 54, 94  
 [Keywords] Zmail Profile Menu Item 74  
 h-K Kill Address Zmail Command 32  
 Saving, Expunging, Killing, and Renaming Zmail Messages 50  
 h-RUBOUT Kill Previous Address Zmail Command 33  
 [Kill] Zmail menu item 50

## L

## L

## L

L (Kbd) Zmail Command 95  
 L Zmail command 43  
 Label message 95  
 Leaving Mail Mode in Zmail 24  
 line 5, 43  
 Line 19  
 Line 12  
 Zmail: Mouse Documentation Line 5  
 Zmail Second Mode Line 13  
 Zmail Mode Line Information 12  
 [Append] Message Summary Line menu item 41  
 [Filter] Message Summary Line menu item 46  
 Click Middle on Summary Line Zmail Command 87  
 (zmail) Lisp command 15  
 Lisp Listener Commands for Converse 120  
 Lisp Machines at site 121  
 List 32  
 Listener Commands for Converse 120  
 Listing Zmail Buffers, Mail Files and Collections 45  
 List of Mail Files 46  
 List of Zmail commands 5  
 lists 80  
 lists 33  
 List Sequences (m-X) Zmail Command 95  
 List Sequences (m-X) Zmail Command 45  
 Lists to Zmail 33  
 LMFS 77, 78  
 Load File (m-X) Zmail Command 95  
**zwei:** **\*local-mail-header-force\*** variable 66  
**zwei:** **\*local-mail-include-subject\*** variable 66  
 [Local] Mail menu item 20

## M

## M

## M

SELECT M command 15  
 M (Kbd) Zmail Command 95  
 c-X M (Kbd) Zmail Command 33, 96  
 Describe Command ( m-X) and Apropos (m-X) Zmail Commands 5  
 Apropos ( m-X) command 5  
 View Mail ( m-X) command 108  
 Append Buffer ( m-X) Converse Command 120  
 Append Conversation ( m-X) Converse Command 120

Delete Conversation (	m-X)	Converse Command	120
Regenerate Buffer (	m-X)	Converse Command	120
Write Buffer (	m-X)	Converse Command	120
Write Conversation (	m-X)	Converse Command	120
Append Conversation by References (	m-X)	Zmail Command	42, 86
Append to Referenced Message (	m-X)	Zmail Command	42, 86
Apropos (	m-X)	Zmail Command	86
Bug (	m-X)	Zmail Command	86
Check for New Mail (	m-X)	Zmail Command	86
Compile File (	m-X)	Zmail Command	87
Decrypt Text (	m-X)	Zmail Command	34, 89
Delete Conversation by References (	m-X)	Zmail Command	42, 90
Delete Duplicate Messages (	m-X)	Zmail Command	89
Delete Referenced Messages (	m-X)	Zmail Command	42, 90
Describe Command (	m-X)	Zmail Command	90
Edit File (	m-X)	Zmail Command	90
Encrypt Text (	m-X)	Zmail Command	34, 90
Find String (	m-X)	Zmail command	29, 91
Format File (	m-X)	Zmail Command	91
Forward (	m-X)	Zmail Command	91
Hardcopy All (	m-X)	Zmail Command	40, 93
Hardcopy File (	m-X)	Zmail Command	93
Hardcopy Message (	m-X)	Zmail Command	40, 93
Insert File (	m-X)	Zmail Command	26, 93
List Sequences (	m-X)	Zmail Command	95
Load File (	m-X)	Zmail Command	95
Move in Place of Referenced Message (	m-X)	Zmail Command	42, 99
Move to Default Previous Point (	m-X)	Zmail command	30, 31, 99
Move to Point (	m-X)	Zmail Command	99
Move to Previous Point (	m-X)	Zmail command	30
Occur (	m-X)	Zmail command	29, 101
Redirect Message (	m-X)	Zmail Command	104
Redistribute Message (	m-X)	Zmail Command	104
Redo (	m-X)	Zmail Command	105
Revoke Message (	m-X)	Zmail Command	105
Select All Conversations by References (	m-X)	Zmail Command	107
Select Arbitrary Format Mail File (	m-X)	Zmail command	78, 108
Select Conversation (	m-X)	Zmail command	39
Select Conversation by References (	m-X)	Zmail Command	42, 108
Select Referenced Message (	m-X)	Zmail Command	42, 108
Select References (	m-X)	Zmail Command	108
Show Draft Disposition (	m-X)	Zmail command	24
Show File (	m-X)	Zmail Command	108
Show Mail (	m-X)	Zmail Command	108
Show Printer Status (	m-X)	Zmail Command	41, 108
Start Background Save (	m-X)	Zmail Command	50
Undigestify (	m-X)	Zmail Command	111
Undo (	m-X)	Zmail Command	111
Yank Current Message (	m-X)	Zmail Command	112
Describe Command (m-X) and Apropos (	m-X)	Zmail Commands	5
Sending message to all Lisp		Machines at site	121
qsend		macro	121
Commands for Reading		Mail	17
Commands for Sending		Mail	16
Commands to Read Your		Mail	19
Commands to Use While Reading		Mail	19
Managing Your		Mail	39
New		mail	9, 10, 18
Printing		mail	40
Rearranging		mail	41
Zmail:		Mail	17

- Zmail Options for Reading Mail 63
- Zmail Options for Replying to Mail 67
- Zmail Options for Saving Mail 64
- Zmail Options for Sending Mail 65
- Deleting messages from mail buffer 32
- Restoring messages to mail buffer 32
- Mail buffers 8, 10, 45
- Mail Buffers 45
- Mail Buffers and Files 45
- Mail Collection 46
- Mail Collection 48
- Mail Collection 49
- Mail Collection by Marking Individual Messages 48
- Mail Collection by Using Filters 47
- Mail collection filters 54
- Mail collection messages 49
- Mail Collections 8
- mail collections 46
- Mail Collections 46
- Mail Collections, and Mail Files 51
- Mail collections in universes 61
- Mail Collection Starting with a Single Message 47
- Mail Commands 20
- Mail Commands 20
- Mailer 133
- Mailer 127
- Mailer 125
- maller:disable** function 130
- maller:enable** function 130
- maller:halt-maller** function 129
- maller:hardcopy-all-mail** function 130
- maller:hardcopy-all-mail-for-user** function 130
- maller:hardcopy-last-mail** function 130
- maller:hardcopy-last-mail-for-user** function 131
- maller:hardcopy-new-mail** function 130
- maller:hardcopy-new-mail-for-user** function 131
- maller:restart-maller** function 129
- maller:start** function 129
- maller:start-maller** function 129
- maller:stop** function 129
- maller:update-forwarding-tables** function 130
- maller:update-mailbox-table** function 130
- maller:update-options** function 130
- Mailer Crashes 137
- Mailer forwarding files 133
- Mailer Functions 129
- Mailer options 133
- Mailer program 8
- mail file 9, 10
- mail file 18
- \*mail-file-for-drafts\*** variable 67
- mail file format 78
- mail file format 78
- mail file format 78, 80
- mail file format 78, 80
- mail file format 78, 80
- mail file format 78
- mail file formats 78
- Mail File Formats for Zmail 78
- Mail File (m-X) Zmail command 78, 108
- mail file names 77
- Zmail
- Selecting Zmail
- Creating a
- Operating on a
- Operating on a Message in a
- Creating a
- Creating a
- Naming
- Zmail
- Hints for Using Keywords,
- Creating a
- Summary of Zmail
- Zmail
- Files and Directories Used by the
- Overview of the
- Symbolics Store-and-Forward
- What to Do When the
- Default
- Primary
- zwei:**
- BABYL
- KBIN
- RMAIL
- TENEX
- UNIX
- VAX/VMS
- Standard
- Select Arbitrary Format
- Default

	Other	mail file names 77
		Mail Files 8
	Binary Format for Storing	Mail Files 79
Hints for Using Keywords, Mail Collections, and		Mail Files 51
Saving a List of		Mail Files 46
Selecting		mail files 45
Zmail Option for the Format of		Mail Files 73
Listing Zmail Buffers,		Mail Files and Collections 45
Converting Existing		[Mail files] Profile Mode menu item 46
View		Mail Files to KBIN Format 79
Check for New		Mailing lists 80
Show		Mail (m-X) command 108
[Forward]		Mail (m-X) Zmail Command 86
[Local]		Mail (m-X) Zmail Command 108
[Redistribute]		Mail menu item 40
zwei:		Mail menu item 20
		Mail menu item 40
		*mail-middle-mode* variable 65
		Mail mode 22, 25
Recursive		Mail Mode 33, 96
		Mail Mode in Zmail 21
Leaving		Mail Mode in Zmail 24
Entering		Mail Mode Recursively 33
Summary of		Mail Reading Commands 18
Bug		mail recipients 33
Failed		mail retransmission 26
		[Mail (R)] Zmail command 40
		Mail Sequences 8
		[Mail] Zmail Menu Item 96
		Main Zmail window 8, 10
		Managing Your Mail 39
		Manipulating Zmail Messages 39
	zwei:	*map-middle-mode* variable 71
	[Concatenate]	Map over menu item 41
	[Unkeywords]	Map over menu item 51
	[Find file]	Map over Move menu item 51
		[Map Over] Zmail menu item 39, 41, 51, 97
Creating a Mail Collection by		Marking Individual Messages 48
[Filters] Profile Mode		menu 43
Save-Exit		menu 15
Zmail Command		Menu 11
[Abort] Filter Creation Display		menu item 56
[Abort Send] Editor		menu item 24
[And] Filter Creation Display		menu item 57
[Append] Message Summary Line		menu item 41
[Before] Filter Creation Display		menu item 51
[Close] Filter Creation Display		menu item 57
[Concatenate] Map over		menu item 41
[Continue] Zmail		menu item 25, 87
[Default] Profile Mode		menu item 53
[Delete] Zmail		menu item 48, 89
[Done] Filter Creation Display		menu item 56
E (Kbd) Zmail		Menu Item 90
[Exit] Profile Mode		menu item 53
[File options] Profile Mode		menu item 46
[File Options] Zmail Profile		Menu Item 74
[Filter] Message Summary Line		menu item 46
[Filters] Profile Mode		menu item 59
[Find file] Map over Move		menu item 51
[Find file] Zmail		menu item 45
[Forward] Mail		menu item 40

- [Get inbox] Zmail menu item 10, 92
- [Jump] Zmail menu item 29, 30, 54, 60, 93
- [Keywords] Profile Mode menu item 43, 44
- [Keywords (R)] Zmail Menu Item 95
- [Keywords] Zmail menu item 43, 54, 94
- [Keywords] Zmail Profile Menu Item 74
- [Kill] Zmail menu item 50
- [Local] Mail menu item 20
- [Mail files] Profile Mode menu item 46
- [Mail] Zmail Menu Item 96
- [Map Over] Zmail menu item 39, 41, 51, 97
- [Move (R)] Zmail menu item 40
- [Move] Zmail menu item 40, 45, 46, 47, 48, 50, 51, 54, 98
- [New collection] Move menu item 47
- [New filter] Filter Selection Display menu item 56
- [New] Keywords menu item 43
- [New universe] Universe Selection Display menu item 61
- [Next] Zmail menu item 29, 100
- [Not] Filter Creation Display menu item 57
- [Or] Filter Creation Display menu item 57
- [Other] Zmail Menu Item 101
- [Previous] Zmail menu item 29, 102
- [Profile] Zmail menu item 53, 102
- [Quit] Zmail Menu Item 103
- [Read/Create file] Zmail Select menu item 45
- [Recycled collection] Move menu item 47
- [Redistribute] Mail menu item 40
- [Remove] Zmail menu item 48
- [Reply] Zmail menu item 39, 105
- [Reset] Profile Mode menu item 53
- Restore Draft File Zmail Menu Item 23, 105
- [Sample] Filter Creation Display menu item 56
- Save Draft as Message Zmail Menu Item 23, 106
- Save Draft File Zmail Menu Item 22, 106
- [Save] Zmail menu item 50, 51, 53, 106
- [Select] Zmail menu item 46, 48, 54, 60, 107
- [Send Msg] Editor menu item 24
- [Sort] Zmail menu item 41, 109
- [Survey] Zmail menu item 54, 60, 109
- [Undelete] Zmail Menu Item 111
- [Universes] Profile Mode menu item 61, 62
- [Unkeywords] Map over menu item 51
- [Unseen] Filter Selection Display menu item 51
- Write Draft File Zmail Menu Item 23, 111
- Filter menus 56
- Adding Keywords to a Message 43
- Create a new message 20
- Creating a Mail Collection Starting with a Single Message 47
- Current message 8, 10
- Label message 95
- Operating on Zmail Messages Referred to by the Current Message 41
- Redistribute the current message 20
- Restore Draft Message 23
- Retrying failed message 26
- Save Draft Message 23
- Yank Message 25
- Testing Zmail Message Characteristics 54
- Referenced message commands 41
- Message-copying commands 45
- Zmail Message Deletion Commands 32

Saving and Restoring Zmail	Message Drafts 22
Zmail Draft	Message Facility 23
Zmail	Message-id: Field 77
Operating on a	Message in a Mail Collection 49
Copy	message into reply 39
Append to Referenced	Message (m-X) Zmail Command 42, 86
Hardcopy	Message (m-X) Zmail Command 40, 93
Move in Place of Referenced	Message (m-X) Zmail Command 42, 99
Redirect	Message (m-X) Zmail Command 104
Redistribute	Message (m-X) Zmail Command 104
Revoke	Message (m-X) Zmail Command 105
Select Referenced	Message (m-X) Zmail Command 42, 108
Yank Current	Message (m-X) Zmail Command 112
Zmail	Message Movement and Deletion 29
Simple Zmail	Message Movement Commands 29
Zmail	Message Movement Commands 29
Zmail	Message Properties 12
Badheader	message property 75
Deleted	message property 32
Recent	message property 18
Unseen	message property 18
	Message recipients 20, 21
Adding keywords to	messages 43
Appending	messages 41
Arpanet digest	messages 111
Classifying	messages 43
Classifying Zmail	Messages 43
Commands for Including Files and Prepared Text in	Messages 25
Concatenating	messages 41
Continuing Completed or Aborted Zmail	Messages 25
Copying	messages 46
Creating a Mail Collection by Marking Individual	Messages 48
Deleting	messages 49
Editing	messages 41
Editing Zmail	Messages 41
Encrypting Zmail	Messages 34
Forwarding and Redistributing Zmail	Messages 40
Hardcopying Zmail	Messages 40
Header fields in Zmail	messages 8
Incoming	messages 119
Mail collection	messages 49
Manipulating Zmail	Messages 39
New	messages 18
Operating on a Group of Zmail	Messages 50
Printing	messages 40
Properties of	messages 8, 10
Prune headers of yanked	messages 70
Redirecting Zmail	Messages 40
Referenced	messages 60
Reordering Zmail	Messages 41
Replying to	messages 39
Replying to and Remailing Zmail	Messages 39
Replying to Zmail	Messages 39
Reprint	messages 121
Saving, Expunging, Killing, and Renaming Zmail	Messages 50
Sending interactive	messages 117
Sorting	messages 41
Text field in Zmail	messages 8
Turning off Converse	messages 120
Turning on Converse	messages 121
Yanking	messages 39

- Zmail
  - Zmail Options for Forwarding
  - Zmail Options for Moving
  - Zmail Options for Deleting
    - Selecting
    - Selecting
    - Defining Zmail
    - Zmail Included
      - Deleting
    - Zmail Options for Including
      - Saving
      - Delete Duplicate
      - Delete Referenced
      - Operating on Zmail
  - Moving Among Zmail Messages Using the
    - D
      - Restoring
        - Zmail
          - [Append]
          - [Filter]
        - Moving Among Zmail
        - Sending and Replying to
          - Interactive
        - c-X c-Y (Kbd) Yank Replied
          - Reply with Draft
          - Moving a Zmail
            - Sending
        - Copying a Zmail
          - Sending
          - Restore Draft
      - Converse Pop-up
        - Zmail
        - Zmail
      - Save Draft as
        - Click
        - zwl: **\*middle-reply-mode\*** variable 68
        - zwl: **\*middle-reply-window-mode\*** variable 69
        - Zmail
        - Mail
        - Profile
        - Recursive Mail
        - Using Zmail Profile
        - Zero window
      - Zmail Options for Calendar
        - Editing
        - Leaving Mail
          - Mail
          - Zmail
        - Zmail Second
          - Zmail
          - [Filters] Profile
          - [Default] Profile
          - [Exit] Profile
          - [File options] Profile
          - [Filters] Profile
          - [Keywords] Profile
          - [Mail files] Profile
          - [Reset] Profile
  - Messages 8
  - Messages 70
  - Messages and Creating Collections 73
  - Messages and Moving Around 70
  - messages based on position 29
  - messages based on string 29
  - Message Search Spaces 60
  - Messages: Field 76
  - messages from mail buffer 32
  - Messages in a Reply 69
  - messages in disk files 22
  - Messages (m-X) Zmail Command 89
  - Messages (m-X) Zmail Command 42, 90
  - Messages Referred to by the Current Message 41
  - Message Stack 30
  - Message stack commands 30
  - message status 32
  - messages to mail buffer 32
  - Message Summary Line 19
  - Message Summary Line menu item 41
  - Message Summary Line menu item 46
  - Messages Using the Message Stack 30
  - Messages with Converse 117
  - message system (Converse) 3
  - Messages Zmail Command 25, 112
  - Messages Zmail Command 24
  - Message to a File 40
  - message to all Lisp Machines at site 121
  - Message to Another Buffer 46
  - message to another user 121
  - Message Using [Continue] 23, 87
  - Message window 22
  - Message Window 119
  - Message Window 11
  - Message Window Configuration 11
  - Message window scrolling 10
  - Message Zmail Menu Item 23, 106
  - Middle on Summary Line Zmail Command 87
  - Minibuffer 12
  - mode 22, 25
  - mode 53
  - Mode 33, 96
  - Mode 54
  - mode 22
  - Mode 74
  - Mode for Zmail 66
  - Mode in Zmail 24
  - Mode in Zmail 21
  - Mode Line 12
  - Mode Line 13
  - Mode Line Information 12
  - Mode menu 43
  - Mode menu item 53
  - Mode menu item 53
  - Mode menu item 46
  - Mode menu item 59
  - Mode menu item 43, 44
  - Mode menu item 46
  - Mode menu item 53



- [Universes] Profile Mode menu item 61, 62
- Profile mode options 53
- Entering Mail Mode Recursively 33
- Reply modes 26
- Add More Text Zmail Command 85
- Using Zmail with a Broken Mouse 36
- Substitutes for mouse commands 35
- Mouse documentation line 5, 43
- Zmail: Mouse Documentation Line 5
- h-B Move Backward Over Address Zmail Command 32
- Default move-destination file 40
- h-F Move Forward Over Address Zmail Command 32
- Move in Place of Referenced Message (m-X) Zmail Command 42, 99
- Zmail Message Movement and Deletion 29
- Simple Zmail Message Movement Commands 29
- Zmail Message Movement Commands 29
- [Find file] Map over Move menu item 51
- [New collection] Move menu item 47
- [Recycled collection] Move menu item 47
- [Move (M)] Zmail command 45
- [Move (R)] Zmail menu item 40
- Move to Default Previous Point (m-X) Zmail command 30, 31, 99
- Move to Point (m-X) Zmail Command 99
- Move to Previous Point (m-X) Zmail command 30
- [Move] Zmail menu item 40, 45, 46, 47, 48, 50, 51, 54, 98
- Moving Among Zmail Messages Using the Message Stack 30
- Zmail Options for Deleting Messages and Moving Around 70
- Zmail Options for Moving a Zmail Message to a File 40
- [Send Msg] Editor menu item 24
- List Sequences (m-X) Zmail Command 45
- Cannot [SELECT M] Zmail 36
- [Move (M)] Zmail command 45

## N

## N

## N

- N (Kbd) Zmail Command 100
- N Zmail command 29
- names 77
- Compiled file names 77
- Default mail file names 77
- Inbox file names 77
- Other mail file names 77
- Renamed inbox file names 77
- Source file names 77
- Disk File
- Names for Zmail 77
- Naming mail collections 46
- NBS encryption 34
- Network header format 75
- [New collection] Move menu item 47
- [New filter] Filter Selection Display menu item 56
- [New] Keywords menu item 43
- New mail 9, 10, 18
- \*new-mail-file-append-p\* variable 63
- zwei: New Mail (m-X) Zmail Command 86
- Check for new message 20
- Create a New messages 18
- [New universe] Universe Selection Display menu

- item 61
    - zwei: **\*next-after-delete\*** variable 70
    - zwei: **\*next-middle-mode\*** variable 70
    - [Next] Zmail menu item 29, 100
    - No Response After Zmail Error 36
    - No response in Zmail 35
    - [Not] Filter Creation Display menu item 57
  - chaos: **notify-local-lispms** function 121
  - Zmail Does Not Respond 35
  - Features Not Supported by Zmail 80
- O
- 0 (Kbd) Zmail Command 100
  - c-X 0 (Kbd) Zmail Command 101
  - Zmail objects 8
  - Occur (m-X) Zmail command 29, 101
  - Turning off Converse messages 120
  - zwei: **\*one-window-after-yank\*** variable 69
  - Online documentation 5
  - Online Help for Zmail 5
  - Operating on a Group of Zmail Messages 50
  - Operating on a Mail Collection 48
  - Operating on a Message in a Mail Collection 49
  - Operating on Zmail Messages Referred to by the Current Message 41
  - :bug-reports option for **defsystem** 33
  - Zmail Option for Ordering Keywords 72
  - Zmail Option for the Format of Mail Files 73
  - Mailer options 133
  - Profile mode options 53
  - Setting and Saving Zmail Options 53
  - Zmail Profile Options 62
  - Zmail Options for Calendar Mode 74
  - Zmail Options for Deleting Messages and Moving Around 70
  - Zmail Options for Forwarding Messages 70
  - Zmail Options for Including Messages in a Reply 69
  - Zmail Options for Moving Messages and Creating Collections 73
  - Zmail Options for Reading Mail 63
  - Zmail Options for Replying to Mail 67
  - Zmail Options for Saving Mail 64
  - Zmail Options for Sending Mail 65
  - Zmail Options for Window Configuration 62
  - [File options] Profile Mode menu item 46
  - User Options Window 41, 53
  - [File options] Zmail Profile Menu Item 74
  - Zmail Option for Ordering Keywords 72
  - [Or] Filter Creation Display menu item 57
  - Other mail file names 77
  - Other Zmail Commands 32
  - [Other] Zmail Menu Item 101
  - Getting Out of the Debugger in Zmail 35
  - Getting Out of Trouble in Zmail 35
  - Zmail in Output Hold 35
  - Zmail in Output Hold Process State 35
  - Overview of the Mailer 127
  - Overview of Zmail 3
  - [Map Over] Zmail menu item 39, 41, 51, 97

## P

Zmail Window  
     Move in  
         Move to  
 Move to Default Previous  
     Move to Previous  
         Converse  
 Selecting messages based on  
  
 Commands for Including Files and  
     **zwel:**  
         h-RUBOUT Kill  
             **zwel:**  
                 Move to  
                 Move to Default  
                 Show  
                 Zmail  
                 Zmail in Arrest  
                     Background  
                     Foreground  
                 Zmail in Arrest  
                 Zmail in Output Hold  
                 Zmail in Wait Forever  
                 Zmail  
                 [File Options] Zmail  
                 [Keywords] Zmail  
                 Using Zmail  
                     [Filters]  
                     [Default]  
                     [Exit]  
                     [File options]  
                     [Filters]  
                     [Keywords]  
                     [Mail files]  
                     [Reset]  
                     [Universes]  
                 Zmail  
                 Mailer  
                 Zmail  
                     **zwel:**  
                         Change Subject  
                         Zmail Message  
                         Badheader message  
                         Deleted message

## P

P (Kbd) Zmail Command 101  
 P Zmail command 29  
 Partly Covered 36  
 Period Zmail Command 83  
 Place of Referenced Message (m-X) Zmail  
     Command 42, 99  
 Point (m-X) Zmail Command 99  
 Point (m-X) Zmail command 30, 31, 99  
 Point (m-X) Zmail command 30  
 Pop-up Message Window 119  
 position 29  
 Predefined filters 55  
 Predefined universes 60  
 Prepared Text in Messages 25  
**\*preserve-msg-references-across-expunge\***  
     variable 73  
 Previous Address Zmail Command 33  
**\*previous-middle-mode\*** variable 71  
 Previous Point (m-X) Zmail command 30  
 Previous Point (m-X) Zmail command 30, 31, 99  
 [Previous] Zmail menu item 29, 102  
 Primary mail file 18  
 Printer Status (m-X) Zmail Command 41, 108  
 Printing mail 40  
 Printing messages 40  
**print-sends** function 121  
 problems 35  
 Process 35  
     processes 8, 10  
     processes 8  
 Process State 35  
 Process State 35  
 Process State 35  
 Profile 54  
 Profile Menu Item 74  
 Profile Menu Item 74  
 Profile mode 53  
 Profile Mode 54  
 Profile Mode menu 43  
 Profile Mode menu item 53  
 Profile Mode menu item 53  
 Profile Mode menu item 46  
 Profile Mode menu item 59  
 Profile Mode menu item 43, 44  
 Profile Mode menu item 46  
 Profile Mode menu item 53  
 Profile Mode menu item 61, 62  
 Profile mode options 53  
 Profile Options 62  
 [Profile] Zmail command 53  
 [Profile] Zmail menu item 53, 102  
 program 8  
 programming items 56  
**\*prompt-for-missing-headers\*** variable 65  
 Pronouns Zmail Command 86  
 Properties 80  
 Properties 12  
 Properties of messages 8, 10  
 property 75  
 property 32

## P

Recent message property 18  
 Unseen message property 18  
 Prune Headers 25  
 zwel: **\*prune-headers-after-yanking\*** variable 70  
 Prune headers of yanked messages 70  
 c-X Y Prune Yanked Headers Zmail Command 26, 111  
 Pruning header fields 39

## Q

## Q

## Q

Q (Kbd) Zmail Command 102  
 Q Zmail command 15  
 qreply function 122  
 qsend macro 121  
 zwel: **qsends-off** function 120  
 zwel: **qsends-on** function 121  
 zwel: **\*query-before-expunge\*** variable 64  
 zwel: **\*query-before-selecting-empty-sequence\***  
 variable 73  
 [Quit] Zmail Menu Item 103

## R

## R

## R

R (Kbd) Zmail Command 103  
 R Zmail command 22  
 [Read/Create file] Zmail Select menu item 45  
 Summary of Mail Reading Commands 18  
 Commands for Reading Mail 17  
 Commands to Use While Reading Mail 19  
 Zmail Options for Reading Mail 63  
 Commands to Read Your Inbox 18  
 Commands to Read Your Mail 19  
 Rearranging mail 41  
 Recent message property 18  
 Zmail Commands for Editing the Recipient List 32  
 Bug mail recipients 33  
 Message recipients 20, 21  
 Entering Mail Mode Recovering From Stuck States in Zmail 35  
 Recursively 33  
 Recursive Mail Mode 33, 96  
 [Recycled collection] Move menu item 47  
 Redirecting Zmail Messages 40  
 Redirect Message (m-X) Zmail Command 104  
 Zmail Redistributed-by: Field 77  
 Zmail Redistributed-Date: Field 77  
 Zmail Redistributed-to: Field 77  
 [Redistribute] Mail menu item 40  
 Redistribute Message (m-X) Zmail Command 104  
 Redistribute the current message 20  
 Forwarding and Redistributing Zmail Messages 40  
 Redo (m-X) Zmail Command 105  
 Referenced message commands 41  
 Append to Referenced Message (m-X) Zmail Command 42, 86  
 Move in Place of Referenced Message (m-X) Zmail Command 42, 99  
 Select Referenced Message (m-X) Zmail Command 42, 108  
 Referenced messages 60  
 Delete Referenced Messages (m-X) Zmail Command 42, 90  
 Zmail Reference Guide 1  
 Zmail Reference Information 53  
 References field 75

- Zmail Included
- Append Conversation by
- Delete Conversation by
  - Select
  - Select All Conversations by
  - Select Conversation by
- Operating on Zmail Messages
  - References: Field 76
  - References (m-X) Zmail Command 42, 86
  - References (m-X) Zmail Command 42, 90
  - References (m-X) Zmail Command 108
  - References (m-X) Zmail Command 107
  - References (m-X) Zmail Command 42, 108
  - Referred to by the Current Message 41
  - Regenerate Buffer (m-X) Converse Command 120
  - reload 36
  - Remailing Zmail Messages 39
  - [Remove] Zmail menu item 48
  - Renamed inbox file names 77
  - Renaming Zmail Messages 50
  - Reordering Zmail Messages 41
  - Replied Messages Zmail Command 25, 112
  - reply 39
  - Reply 17
  - Reply 69
  - Reply Command 26
  - Reply commands 26
  - \*reply-header-format\*** variable 69
  - Replying to and Remailing Zmail Messages 39
  - Replying to Mail 67
  - Replying to messages 39
  - Replying to Messages with Converse 117
  - Replying to Zmail Messages 39
  - \*reply-mode\*** variable 67
  - Reply modes 26
  - Reply-to: Field 77
  - \*reply-window-mode\*** variable 68
  - Reply with Draft Messages Zmail Command 24
  - [Reply] Zmail menu item 39, 105
  - Reprint messages 121
  - \*require-subjects\*** variable 66
  - Resent-by field 75
  - Resent-date field 75
  - Resent-to field 75
  - [Reset] Profile Mode menu item 53
  - Respond 35
  - Response After Zmail Error 36
  - response in Zmail 35
  - mailer:** restart-mailer function 129
  - Restore Draft File 22
  - Restore Draft File Using [Continue] 23, 88
  - Restore Draft File Zmail Menu Item 23, 105
  - Restore Draft Message 23
  - Restore Draft Message Using [Continue] 23, 87
  - Restoring messages to mail buffer 32
  - Restoring Zmail Message Drafts 22
  - RESUME Zmail command 25
  - retransmission 26
  - Retrying failed message 26
  - Revoke Message (m-X) Zmail Command 105
  - RFC733 header format 75
  - RFC822 domain-addressing formats 80
  - RMAIL mail file format 78, 80
  - \*run-gmgs-p\*** variable 64
  - [Mail] (R) Zmail command 40
  - [Select] (R) Zmail command 45
  - [Keywords] (R) Zmail Menu Item 95
  - [Move] (R) Zmail menu item 40
- zl:zmail :
  - Replying to and
- Saving, Expunging, Killing, and
  - c-X c-Y (Kbd) Yank
  - Copy message into
    - Zmail:
- Zmail Options for Including Messages in a
  - Zmail
  - zwei:**
    - Zmail Options for
    - Sending and
      - zwei:**
        - Zmail
        - zwei:**
          - Zmail Does Not
          - No
          - No
          - mailer:**
      - Saving and
      - Failed mail
    - Internet
      - zwei:**
      - [Mail]
      - [Select]
      - [Keywords]
      - [Move]

## S

## S

## S

- c-X
  - S (Kbd) Zmail Command 106
  - S Zmail command 15, 50
  - S Zmail Command 85
  - [Sample] Filter Creation Display menu item 56
  - Satisfying filters 54
  - Save Draft as Message Zmail Menu Item 23, 106
  - Save Draft File 22
  - Save Draft File Zmail Menu Item 22, 106
  - Save Draft Message 23
  - Save-Exit menu 15
- Start Background
  - Save (m-X) Zmail Command 50
  - [Save] Zmail menu item 50, 51, 53, 106
  - Saving a List of Mail Files 46
  - Saving and Restoring Zmail Message Drafts 22
  - Saving, Expunging, Killing, and Renaming Zmail Messages 50
  - Saving keywords 44
- Zmail Options for
  - Saving Mail 64
  - Saving messages in disk files 22
  - Saving universes 62
  - Saving Zmail Filters 59
  - Saving Zmail Keywords 44
  - Saving Zmail Options 53
  - Saving Zmail Universes 62
- Setting and
  - Garbage on
    - Message window
    - Summary window
  - Defining Zmail Message
    - Zmail
- Configuring and
  - Universe
    - [New filter] Filter
    - [New universe] Universe
    - [Unseen] Filter
    - [Read/Create file] Zmail
  - Cannot
    - Cannot
- Cannot
  - [Abort Zmail
    - Sender: Field 77
- Scrolling 10
- Search Spaces 60
- Second Mode Line 13
- SELECT C command 115
- SELECT M command 15
- Select All Conversations by References (m-X) Zmail Command 107
- Select Arbitrary Format Mail File (m-X) Zmail command 78, 108
- Select Conversation by References (m-X) Zmail Command 42, 108
- Select Conversation (m-X) Zmail command 39
- Selecting mail files 45
- Selecting messages based on position 29
- Selecting messages based on string 29
- Selecting universes 60
- Selecting Zmail Filters 55
- Selecting Zmail Mail Buffers and Files 45
- Selecting Zmail Universes 60
- Selecting Zmail Windows 22
- Selection Display 60
- Selection Display menu item 56
- Selection Display menu item 61
- Selection Display menu item 51
- Select menu item 45
- [SELECT M] Zmail 36
- Select Referenced Message (m-X) Zmail Command 42, 108
- Select References (m-X) Zmail Command 108
- [Select (R)] Zmail command 45
- select Zmail 35
- [Select] Zmail menu item 46, 48, 54, 60, 107
- Send] Editor menu item 24

- zwel:** **\*send-header-format\*** variable 66
- Sending and Replying to Messages with
  - Converse 117
  - Sending interactive messages 117
- Commands for
  - Sending Mail 16
- Zmail Options for
  - Sending Mail 65
  - Sending message to all Lisp Machines at site 121
  - Sending message to another user 121
  - [Send Msg] Editor menu item 24
- Mail
  - Sequences 8
- List
  - Sequences (m-X) Zmail Command 95
- List
  - Sequences (m-X) Zmail Command 45
  - Setting and Saving Zmail Options 53
  - Setting Zmail Keywords 43
  - Show Draft Disposition (m-X) Zmail command 24
  - Show File (m-X) Zmail Command 108
  - Show Mail (m-X) Zmail Command 108
  - Show Printer Status (m-X) Zmail Command 41, 108
  - Simple Zmail Message Movement Commands 29
  - Single Message 47
  - site 121
  - Sorting messages 41
  - [Sort] Zmail menu item 41, 109
  - Source file names 77
- Creating a Mail Collection Starting with a
  - Sending message to all Lisp Machines at
    - site 121
    - Sorting messages 41
    - [Sort] Zmail menu item 41, 109
    - Source file names 77
- Defining Zmail Message Search
  - Moving Among Zmail Messages Using the Message
    - Message
      - Spaces 60
      - Stack 30
      - stack commands 30
      - Standard mail file formats 78
- maller:**
  - start function 129
  - Start Background Save (m-X) Zmail Command 50
  - Starting up Zmail in the Background 15
  - Starting with a Single Message 47
  - start-maller function 129
  - State 35
  - Zmail in Arrest Process
    - State 35
  - Zmail in Output Hold Process
    - State 35
  - Zmail in Wait Forever Process
    - State 35
  - Recovering From Stuck
    - D message
      - Zmail
        - States in Zmail 35
      - status 32
      - Status 12
      - Status Flags 43
      - Status (m-X) Zmail Command 41, 108
    - stop function 129
    - Store-and-Forward Mailer 125
    - Storing Mail Files 79
    - string 29
    - String (m-X) Zmail command 29, 91
    - Stuck 36
    - Stuck States in Zmail 35
    - Subject: Field 76
    - Subject Field Zmail Command 85
    - Subject Pronouns Zmail Command 86
    - Substitutes for mouse commands 35
    - Summary Line 19
    - [Append] Message
      - Summary Line menu item 41
    - [Filter] Message
      - Summary Line menu item 46
    - Click Middle on
      - Summary Line Zmail Command 87
  - zwel:** **\*summary-mouse-middle-mode\*** variable 72
  - Summary of Mail Reading Commands 18
  - Summary of Zmail Mail Commands 20
  - zwel:** **\*summary-scroll-fraction\*** variable 63
  - zwel:** **\*summary-subject-trim-spaces\*** variable 63

Summary Window 22  
 Zmail Summary Window 10  
 Zmail Summary Window Configuration 10  
 zwel: **\*summary-window-fraction\*** variable 63  
 Summary window scrolling 10  
 Features Not Supported by Zmail 80  
 Zmail Support for Internet Domain Addressing 80  
 [Survey] Zmail menu item 54, 60, 109  
 Symbolics Store-and-Forward Mailer 125  
 Host system 77  
 VAX/VMS file system 80  
 Interactive message system (Converse) 3  
 Zmail System Dependencies 77

## T

## T

## T

c-X Fundamental Zmail T Zmail command 84  
 Techniques 53  
 TENEX 77, 78  
 TENEX mail file format 78, 80  
 Testing Zmail Message Characteristics 54  
 Text field in Zmail messages 8  
 Text in Messages 25  
 Text (m-X) Zmail Command 34, 89  
 Text (m-X) Zmail Command 34, 90  
 zwel: **\*text-mail-file-separator\*** variable 73  
 Add More Text Zmail Command 85  
 Zmail To: Field 75  
 Topic Indicators 43  
 Top-Level Interface to Zmail 10  
 TOPS-20 77, 78  
 h-T Transpose Address Zmail Command 32  
 Getting Out of Trouble in Zmail 35  
 Turning off Converse messages 120  
 Turning on Converse messages 121

## U

## U

## U

U (Kbd) Zmail Command 110  
 [Undelete] Zmail Menu Item 111  
 Undigestify (m-X) Zmail Command 111  
 Undoing Commands in Zmail 36  
 Undo (m-X) Zmail Command 111  
 Union of universes 61  
 Complement of a universe 61  
 Universes 60  
 Creating Zmail Universes 61  
 Intersection of universes 61  
 Mail collections in universes 61  
 Predefined universes 60  
 Saving universes 62  
 Saving Zmail Universes 62  
 Selecting universes 60  
 Selecting Zmail Universes 60  
 Union of universes 61  
 User-defined universes 61  
 Universe Selection Display 60  
 [New universe] Universe Selection Display menu item 61  
 [Universes] Profile Mode menu item 61, 62  
 [New universe] Universe Selection Display menu item 61



UNIX 77, 78  
 UNIX mail file format 78, 80  
 [Unkeywords] Map over menu item 51  
 [Unseen] Filter Selection Display menu item 51  
 Unseen message property 18  
 Unsupported features 80  
 maller: **update-forwarding-tables** function 130  
 maller: **update-mailbox-table** function 130  
 maller: **update-options** function 130  
 Starting up Zmail in the Background 15  
 Files and Directories Used by the Mailer 133  
 Sending message to another user 121  
 User-defined filters 55  
 User-defined universes 61  
 User Options Window 41, 53

## V

## V

## V

**zwei:\*1r-reply-mode\*** variable 68  
**zwei:\*always-jump-after-get-new-mail-from-inbox\*** variable 64  
**zwei:\*always-select-saved-current-msg\*** variable 64  
**zwei:\*calendar-mode-week-starts-on-monday\*** variable 74  
**zwei:\*complete-get-inbox-in-background\*** variable 64  
**zwei:\*configure-middie-mode\*** variable 74  
**zwei:\*converse-append-p\*** variable 124  
**zwei:\*converse-beep-count\*** variable 124  
**zwei:\*converse-end-exits\*** variable 124  
**zwei:\*converse-mode\*** variable 123  
**zwei:\*default-cc-list\*** variable 66  
**zwei:\*default-draft-file-name\*** variable 67  
**zwei:\*default-fcc-list\*** variable 66  
**zwei:\*default-initial-wlndow-configuration\*** variable 62  
**zwei:\*default-mail-buffer-generation-retention-count\*** variable 73  
**zwei:\*default-mail-buffer-major-mode\*** variable 66  
**zwei:\*default-mail-window-configuration\*** variable 65  
**zwei:\*default-move-mail-file-name\*** variable 73  
**zwei:\*default-summary-template\*** variable 62  
**zwei:\*delete-after-move-to-buffer\*** variable 73  
**zwei:\*delete-expired-msgs\*** variable 74  
**zwei:\*delete-middle-mode\*** variable 70  
**zwei:\*dont-reply-to\*** variable 69  
**zwei:\*filter-summary-window-fraction\*** variable 63  
**zwei:\*forwarded-add-subject\*** variable 70  
**zwei:\*forwarded-message-begin\*** variable 70  
**zwei:\*forwarded-message-end\*** variable 70  
**zwei:\*forwarded-message-separator\*** variable 70  
**zwei:\*generate-in-reply-to-field\*** variable 69  
**zwei:\*gmsgs-other-switches\*** variable 64  
**zwei:\*header-window-nlines\*** variable 65  
**zwei:\*inhibit-background-mail-checks\*** variable 64  
**zwei:\*inhibit-background-saves\*** variable 65  
**zwei:\*keyword-allst-sort-predicate\*** variable 72  
**zwei:\*local-mail-header-force\*** variable 66  
**zwei:\*local-mail-include-subject\*** variable 66  
**zwei:\*mail-file-for-drafts\*** variable 67  
**zwei:\*mail-middle-mode\*** variable 65  
**zwei:\*map-middle-mode\*** variable 71  
**zwei:\*middle-reply-mode\*** variable 68  
**zwei:\*middle-reply-window-mode\*** variable 69  
**zwei:\*new-mail-file-append-p\*** variable 63

zwel:\*next-after-delete\* variable 70  
 zwel:\*next-middle-mode\* variable 70  
 zwel:\*one-window-after-yank\* variable 69  
 zwel:\*preserve-msg-references-across-expunge\* variable 73  
 zwel:\*previous-middle-mode\* variable 71  
 zwel:\*prompt-for-missing-headers\* variable 65  
 zwel:\*prune-headers-after-yanking\* variable 70  
 zwel:\*query-before-expunge\* variable 64  
 zwel:\*query-before-selecting-empty-sequence\* variable 73  
 zwel:\*reply-header-format\* variable 69  
 zwel:\*reply-mode\* variable 67  
 zwel:\*reply-window-mode\* variable 68  
 zwel:\*require-subjects\* variable 66  
 zwel:\*run-gmsgs-p\* variable 64  
 zwel:\*send-header-format\* variable 66  
 zwel:\*summary-mouse-middle-mode\* variable 72  
 zwel:\*summary-scroll-fraction\* variable 63  
 zwel:\*summary-subject-trim-spaces\* variable 63  
 zwel:\*summary-window-fraction\* variable 63  
 zwel:\*text-mail-file-separator\* variable 73  
 zwel:\*zmail-startup-file-name\* variable 63  
 Converse variables 123  
 VAX/VMS file system 80  
 VAX/VMS mail file format 78  
 View Mail (m-X) command 108

## W

## W

## W

Zmail in Wait Forever 35  
 Zmail in Wait Forever Process State 35  
 What to Do When the Mailer Crashes 137  
 What to Do When the Mailer Crashes 137  
 While Reading Mail 19  
 Commands to Use Window 119  
 Converse Pop-up Message window 8, 10  
 Main Zmail Message window 22  
 Message window 22  
 Summary Window 22  
 User Options Window 41, 53  
 Zmail Error Window 35  
 Zmail Message Window 11  
 Zmail Summary Window 10  
 Zmail Message Window Configuration 11  
 Zmail Options for Window Configuration 62  
 Zmail Summary Window Configuration 10  
 Zero window mode 22  
 Zmail Window Partly Covered 36  
 Configuring and Selecting Zmail Windows 22  
 Message window scrolling 10  
 Summary window scrolling 10  
 Write Buffer (m-X) Converse Command 120  
 Write Conversation (m-X) Converse Command 120  
 Write Draft File Zmail Menu Item 23, 111

## Y

c-X Y Prune Yank Current Message (m-X) Zmail Command 26, 111  
 Yanked Headers Zmail Command 26, 111  
 Prune headers of yanked messages 70  
 Yanking messages 39  
 Yank Message 25  
 c-X c-Y (Kbd) Yank Replied Messages Zmail Command 25, 112  
 Commands to Read Your Inbox 18  
 Commands to Read Your Mail 19  
 Managing Your Mail 39

## Y

## Y

## Z

Zero window mode 22  
 z!:zmail :reload 36  
 Adding Bug Lists to Zmail 33  
   Basic Zmail 15  
   Cannot select Zmail 35  
 Cannot [SELECT M] Zmail 36  
   Customizing Zmail 53  
 Disk File Names for Zmail 77  
   Editing Mode for Zmail 66  
   Entering Zmail 15  
   Exiting Zmail 15  
 Features Not Supported by Zmail 80  
 Getting Out of the Debugger in Zmail 35  
   Getting Out of Trouble in Zmail 35  
   Leaving Mail Mode in Zmail 24  
   Mail File Formats for Zmail 78  
   Mail Mode in Zmail 21  
   No response in Zmail 35  
   Online Help for Zmail 5  
   Overview of Zmail 3  
 Recovering From Stuck States in Zmail 35  
   Top-Level Interface to Zmail 10  
   Undoing Commands in Zmail 36  
     z!: zmail :reload 36  
       Zmail Architecture 8  
 Conceptual Zmail Architecture 8  
   Zmail Backward-References: Field 76  
   Zmail Bcc: Field 75  
   Zmail Bfcc Field 76  
 Expunging zmail buffers 50  
   Listing Zmail Buffers, Mail Files and Collections 45  
   Zmail bug lists 33  
   Zmail Cc: Field 75  
   . (Kbd) Zmail Command 83  
   Add Cc Field Zmail Command 84  
   Add Fcc Field Zmail Command 84  
 Add File-References Zmail Command 85  
   Add From Field Zmail Command 84  
   Add In-reply-to Field Zmail Command 85  
   Add More Text Zmail Command 85  
   Add Subject Field Zmail Command 85  
   Add to Field Zmail Command 84  
 Append Conversation by References (m-X) Zmail Command 42, 86  
   Append to Referenced Message (m-X) Zmail Command 42, 86  
   Apropos (m-X) Zmail Command 86  
   Bug (m-X) Zmail Command 86

## Z

## Z

C	Zmail command	25
C (Kbd)	Zmail Command	86
c-]	Zmail command	24
c-D (Kbd)	Zmail Command	88
c-F (Kbd)	Zmail Command	91
c-m-L	Zmail command	45
c-m-SPACE	Zmail command	30
c-m-SPACE (Kbd)	Zmail Command	99
c-N	Zmail command	29
c-N (Kbd)	Zmail Command	29, 100
c-P	Zmail command	29
c-P (Kbd)	Zmail Command	29, 102
c-R (Kbd)	Zmail Command	104
c-SPACE	Zmail command	30
c-SPACE (Kbd)	Zmail Command	109
c-U c-SPACE	Zmail command	30
c-U c-U c-SPACE	Zmail command	30
c-X 0 (Kbd)	Zmail Command	83
c-X 1 (Kbd)	Zmail Command	83
c-X 2 (Kbd)	Zmail Command	84
c-X A	Zmail Command	85
c-X C	Zmail Command	84
c-X c-m-S	Zmail command	22
c-X c-R	Zmail command	22
c-X c-S	Zmail command	22
c-X c-W	Zmail command	22
c-X c-Y (Kbd) Yank Replied Messages	Zmail Command	25, 112
c-X M (Kbd)	Zmail Command	33, 96
c-X O (Kbd)	Zmail Command	101
c-X S	Zmail Command	85
c-X T	Zmail command	84
c-X Y Prune Yanked Headers	Zmail Command	26, 111
Change Subject Pronouns	Zmail Command	86
Check for New Mail (m-X)	Zmail Command	86
Click Middle on Summary Line	Zmail Command	87
Compile File (m-X)	Zmail Command	87
D (Kbd)	Zmail Command	88
Decrypt Text (m-X)	Zmail Command	34, 89
Delete Conversation by References (m-X)	Zmail Command	42, 90
Delete Duplicate Messages (m-X)	Zmail Command	89
Delete Referenced Messages (m-X)	Zmail Command	42, 90
Describe Command (m-X)	Zmail Command	90
Dot	Zmail Command	83
E	Zmail command	50
Edit File (m-X)	Zmail Command	90
Encrypt Text (m-X)	Zmail Command	34, 90
END (Kbd)	Zmail Command	91
F (Kbd)	Zmail Command	91
Find String (m-X)	Zmail command	29, 91
Format File (m-X)	Zmail Command	91
Forward (m-X)	Zmail Command	91
G	Zmail command	18
G (Kbd)	Zmail Command	92
H (Kbd)	Zmail Command	93
h-B Move Backward Over Address	Zmail Command	32
h-F Move Forward Over Address	Zmail Command	32
h-K Kill Address	Zmail Command	32
h-RUBOUT Kill Previous Address	Zmail Command	33
h-T Transpose Address	Zmail Command	32
Hardcopy All (m-X)	Zmail Command	40, 93
Hardcopy File (m-X)	Zmail Command	93

Hardcopy Message (m-X)	Zmail Command 40, 93
Insert File (m-X)	Zmail Command 26, 93
J	Zmail command 29
J (Kbd)	Zmail Command 29, 93
L	Zmail command 43
L (Kbd)	Zmail Command 95
List Sequences (m-X)	Zmail Command 95
List Sequences (m-X)	Zmail Command 45
Load File (m-X)	Zmail Command 95
M (Kbd)	Zmail Command 95
[Mail (R)]	Zmail command 40
Move in Place of Referenced Message (m-X)	Zmail Command 42, 99
[Move (M)]	Zmail command 45
Move to Default Previous Point (m-X)	Zmail command 30, 31, 99
Move to Point (m-X)	Zmail Command 99
Move to Previous Point (m-X)	Zmail command 30
N	Zmail command 29
N (Kbd)	Zmail Command 100
O (Kbd)	Zmail Command 100
Occur (m-X)	Zmail command 29, 101
P	Zmail command 29
P (Kbd)	Zmail Command 101
Period	Zmail Command 83
[Profile]	Zmail command 53
Q	Zmail command 15
Q (Kbd)	Zmail Command 102
R	Zmail command 22
R (Kbd)	Zmail Command 103
Redirect Message (m-X)	Zmail Command 104
Redistribute Message (m-X)	Zmail Command 104
Redo (m-X)	Zmail Command 105
Reply with Draft Messages	Zmail Command 24
RESUME	Zmail command 25
Revoke Message (m-X)	Zmail Command 105
S	Zmail command 15, 50
S (Kbd)	Zmail Command 106
Select All Conversations by References (m-X)	Zmail Command 107
Select Arbitrary Format Mail File (m-X)	Zmail command 78, 108
Select Conversation by References (m-X)	Zmail Command 42, 108
Select Conversation (m-X)	Zmail command 39
[Select (R)]	Zmail command 45
Select Referenced Message (m-X)	Zmail Command 42, 108
Select References (m-X)	Zmail Command 108
Show Draft Disposition (m-X)	Zmail command 24
Show File (m-X)	Zmail Command 108
Show Mail (m-X)	Zmail Command 108
Show Printer Status (m-X)	Zmail Command 41, 108
Start Background Save (m-X)	Zmail Command 50
U (Kbd)	Zmail Command 110
Undigestify (m-X)	Zmail Command 111
Undo (m-X)	Zmail Command 111
Yank Current Message (m-X)	Zmail Command 112
Zmail Command Menu	11
Aborting	Zmail Commands 36
Describe Command (m-X) and Apropos (m-X)	Zmail Commands 5
Dictionary of	Zmail Commands 83
Format Conventions for	Zmail Commands 3
List of	Zmail commands 5
Other	Zmail Commands 32
Zmail Commands for Editing the Recipient List	32
Zmail Date: Field	75

- Zmail display 10
- Zmail documentation item 57
- Zmail Does Not Respond 35
- Zmail Draft File Facility 22
- Zmail Draft Message Facility 23
- Zmail Encrypted: Field 76
- Garbage on Screen After  
No Response After Zmail Error 36
- Zmail Error 36
- Zmail Error Window 35
- Zmail Expiration-Date: Field 77
- Zmail Fcc: Field 75
- Zmail File-References: Field 76
- Zmail Filters 44
- Creating Zmail Filters 56
- Saving Zmail Filters 59
- Selecting Zmail Filters 55
- Zmail Forward-References: Field 76
- Zmail From: Field 75
- Altering Zmail Header Fields 21
- Zmail Header Formats 75
- Zmail: Help Displayed Automatically 5
- Zmail: Help Key 5
- Zmail Hopelessly Stuck 36
- Zmail in Arrest Process 35
- Zmail in Arrest Process State 35
- Zmail Inboxes 10
- Zmail Included Messages: Field 76
- Zmail Included References: Field 76
- Zmail in Output Hold 35
- Zmail in Output Hold Process State 35
- Zmail In-Reply-to: Field 76
- Starting up Zmail in the Background 15
- Zmail in the Debugger 35
- Zmail in Wait Forever 35
- Zmail in Wait Forever Process State 35
- Zmail Keywords 43
- Saving Zmail Keywords 44
- Setting Zmail Keywords 43
- (zmail) Lisp command 15
- Zmail: Mail 17
- Selecting Zmail Mail Buffers 45
- Zmail Mail Buffers and Files 45
- Zmail Mail Collections 46
- Zmail Mail Commands 20
- Summary of Zmail Mail Commands 20
- [Continue] Zmail menu item 25, 87
- [Delete] Zmail menu item 48, 89
- E (Kbd) Zmail Menu Item 90
- [Find file] Zmail menu item 45
- [Get inbox] Zmail menu item 10, 92
- [Jump] Zmail menu item 29, 30, 54, 60, 93
- [Keywords] Zmail menu item 43, 54, 94
- [Keywords (R)] Zmail Menu Item 95
- [Kill] Zmail menu item 50
- [Mail] Zmail Menu Item 96
- [Map Over] Zmail menu item 39, 41, 51, 97
- [Move] Zmail menu item 40, 45, 46, 47, 48, 50, 51, 54, 98
- [Move (R)] Zmail menu item 40
- [Next] Zmail menu item 29, 100
- [Other] Zmail Menu Item 101
- [Previous] Zmail menu item 29, 102

- [Profile] Zmail menu item 53, 102
- [Quit] Zmail Menu Item 103
- [Remove] Zmail menu item 48
- [Reply] Zmail menu item 39, 105
- Restore Draft File Zmail Menu Item 23, 105
- [Save] Zmail menu item 50, 51, 53, 106
- Save Draft as Message Zmail Menu Item 23, 106
- Save Draft File Zmail Menu Item 22, 106
- [Select] Zmail menu item 46, 48, 54, 60, 107
- [Sort] Zmail menu item 41, 109
- [Survey] Zmail menu item 54, 60, 109
- [Undelete] Zmail Menu Item 111
- Write Draft File Zmail Menu Item 23, 111
- Testing Zmail Message Characteristics 54
- Zmail Message Deletion Commands 32
  - Zmail Message Drafts 22
  - Zmail Message-id: Field 77
  - Zmail Message Movement and Deletion 29
  - Zmail Message Movement Commands 29
  - Zmail Message Movement Commands 29
  - Zmail Message Properties 12
  - Zmail Messages 8
- Simple
    - Classifying Zmail Messages 43
    - Continuing Completed or Aborted Zmail Messages 25
    - Editing Zmail Messages 41
    - Encrypting Zmail Messages 34
    - Forwarding and Redistributing Zmail Messages 40
    - Hardcopying Zmail Messages 40
    - Header fields in Zmail messages 8
    - Manipulating Zmail Messages 39
    - Operating on a Group of Zmail Messages 50
    - Redirecting Zmail Messages 40
    - Reordering Zmail Messages 41
    - Replying to Zmail Messages 39
    - Replying to and Remailing Zmail Messages 39
    - Saving, Expunging, Killing, and Renaming Zmail Messages 50
    - Text field in Zmail messages 8
    - Defining Zmail Message Search Spaces 60
    - Operating on Zmail Messages Referred to by the Current Message 41
    - Zmail Message Summary Line 19
    - Zmail Messages Using the Message Stack 30
    - Moving Among
      - Moving a Zmail Message to a File 40
      - Copying a Zmail Message to Another Buffer 46
    - Zmail Message Window 11
    - Zmail Message Window Configuration 11
    - Zmail Minibuffer 12
    - Zmail Mode Line 12
    - Zmail Mode Line Information 12
    - Zmail: Mouse Documentation Line 5
    - Zmail objects 8
    - Zmail Option for Ordering Keywords 72
    - Zmail Option for the Format of Mail Files 73
  - Setting and Saving Zmail Options 53
    - Zmail Options for Calendar Mode 74
    - Zmail Options for Deleting Messages and Moving Around 70
    - Zmail Options for Forwarding Messages 70
    - Zmail Options for Including Messages in a Reply 69
    - Zmail Options for Moving Messages and Creating Collections 73

- Zmail Options for Reading Mail 63
- Zmail Options for Replying to Mail 67
- Zmail Options for Saving Mail 64
- Zmail Options for Sending Mail 65
- Zmail Options for Window Configuration 62
- Zmail problems 35
- Zmail Profile 54
- [File Options] Zmail Profile Menu Item 74
- [Keywords] Zmail Profile Menu Item 74
- Using Zmail Profile Mode 54
- Zmail Profile Options 62
- Zmail programming items 56
- Zmail Redistributed-by: Field 77
- Zmail Redistributed-Date: Field 77
- Zmail Redistributed-to: Field 77
- Zmail Reference Guide 1
- Zmail Reference Information 53
- Zmail: Reply 17
- Zmail Reply Command 26
- Zmail Reply-to: Field 77
- Zmail Second Mode Line 13
- [Read/Create file] Zmail Select menu item 45
- Zmail Sender: Field 77
- zwei: **\*zmail-startup-file-name\*** variable 63
- Zmail Status 12
- Zmail Subject: Field 76
- Zmail Summary Window 10
- Zmail Summary Window Configuration 10
- Zmail Support for Internet Domain Addressing 80
- Zmail System Dependencies 77
- Fundamental Zmail Techniques 53
- Zmail To: Field 75
- Creating Zmail Universes 61
- Saving Zmail Universes 62
- Selecting Zmail Universes 60
- Main Zmail window 8, 10
- Configuring and Selecting Zmail Window Partly Covered 36
- Using Zmail Windows 22
- Zmail with a Broken Mouse 36
- Zwei 8
- zwei:**\*1r-reply-mode\*** variable 68
- zwei:**add-bug-recipient** function 33
- zwei:**\*always-jump-after-get-new-mail-from-inbox\*** variable 64
- zwei:**\*always-select-saved-current-msg\*** variable 64
- zwei:**\*calendar-mode-week-starts-on-monday\*** variable 74
- zwei:**\*complete-get-inbox-in-background\*** variable 64
- zwei:**\*configure-middle-mode\*** variable 74
- zwei:**\*converse-append-p\*** variable 124
- zwei:**\*converse-beep-count\*** variable 124
- zwei:**\*converse-end-exits\*** variable 124
- zwei:**\*converse-gagged\*** 120
- zwei:**\*converse-mode\*** variable 123
- zwei:**\*default-cc-list\*** variable 66
- zwei:**\*default-draft-file-name\*** variable 67
- zwei:**\*default-fcc-list\*** variable 66
- zwei:**\*default-initial-window-configuration\*** variable 62



zwei:\*default-mail-buffer-generation-retention-count\* variable 73  
zwei:\*default-mail-buffer-major-mode\* variable 66  
zwei:\*default-mail-window-configuration\* variable 65  
zwei:\*default-move-mail-file-name\* variable 73  
zwei:\*default-summary-template\* variable 62  
zwei:\*delete-after-move-to-buffer\* variable 73  
zwei:\*delete-expired-msgs\* variable 74  
zwei:\*delete-middle-mode\* variable 70  
zwei:\*dont-reply-to\* variable 69  
zwei:\*filter-summary-window-fraction\* variable 63  
zwei:\*forwarded-add-subject\* variable 70  
zwei:\*forwarded-message-begin\* variable 70  
zwei:\*forwarded-message-end\* variable 70  
zwei:\*forwarded-message-separator\* variable 70  
zwei:\*generate-in-reply-to-field\* variable 69  
zwei:\*msgs-other-switches\* variable 64  
zwei:\*header-window-nlines\* variable 65  
zwei:\*inhibit-background-mail-checks\* variable 64  
zwei:\*inhibit-background-saves\* variable 65  
zwei:\*keyword-alist-sort-predicate\* variable 72  
zwei:\*local-mail-header-force\* variable 66  
zwei:\*local-mail-include-subject\* variable 66  
zwei:\*mail-file-for-drafts\* variable 67  
zwei:\*mail-middle-mode\* variable 65  
zwei:\*map-middle-mode\* variable 71  
zwei:\*middle-reply-mode\* variable 68  
zwei:\*middle-reply-window-mode\* variable 69  
zwei:\*new-mail-file-append-p\* variable 63  
zwei:\*next-after-delete\* variable 70  
zwei:\*next-middle-mode\* variable 70  
zwei:\*one-window-after-yank\* variable 69  
zwei:\*preserve-msg-references-across-expunge\* variable 73  
zwei:\*previous-middle-mode\* variable 71  
zwei:\*prompt-for-missing-headers\* variable 65  
zwei:\*prune-headers-after-yanking\* variable 70  
zwei:qsend-off function 120  
zwei:qsend-on function 121  
zwei:\*query-before-expunge\* variable 64  
zwei:\*query-before-selecting-empty-sequence\* variable 73  
zwei:\*reply-header-format\* variable 69  
zwei:\*reply-mode\* variable 67  
zwei:\*reply-window-mode\* variable 68  
zwei:\*require-subjects\* variable 66  
zwei:\*run-gmsgs-p\* variable 64  
zwei:\*send-header-format\* variable 66  
zwei:\*summary-mouse-middle-mode\* variable 72  
zwei:\*summary-scroll-fraction\* variable 63  
zwei:\*summary-subject-trim-spaces\* variable 63  
zwei:\*summary-window-fraction\* variable 63  
zwei:\*text-mail-file-separator\* variable 73  
zwei:\*zmail-startup-file-name\* variable 63