

This information pertains to the library modules as a whole, as well as the interaction among modules, and contains changes that have occurred in the library modules since the Lyric release. Medley changes are indicated with revision bars in the right margin.

In general:

- There are several new modules and enhancements to existing modules.
- Several modules have been taken out of the *Lisp Library Modules*, and put into the *LispUsers' Modules*.
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## What You Should Look For

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Before running the modules, pay particular attention to the file dependencies section below. Most modules call other files, which then must be accessible to the system, and often you'll also need files that are not loaded automatically.

Load the library modules with the FILESLOAD function, using the module's name without an extension. Most modules on the distribution contain the extensions .LCOM or .DFASL in their names to designate their compiled form. The exceptions are ETHERRECORDS and SYSEDIT, which are currently distributed in source form. We have attempted to include the correct extension in the descriptions of each module contained in this manual. However, (FILESLOAD...) normally loads the correct files, regardless of their form.

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## Modules that are New, Moved, or Replaced

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### Modules Moved from the Library to LispUsers

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Big  
BitMapFns  
BusExtender  
BusMaster  
CirclPrint  
CheckSet  
CompileBang  
Color  
C150Stream  
DECL  
DInfo

FileCache  
HelpSys  
Iris  
LambdaTran  
PCallStats  
ReadAIS

### **Modules Moved from LispUsers to the Library**

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Cash-File  
Hash-File  
SysEdit  
TableBrowser

### **Modules Moved to Their Own Manuals**

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TEdit  
Sketch  
CML, CMLArray, CMLArrayInspector (part of Xerox Common Lisp)

### **Modules Moved From the Sysout Into the Library**

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DEdit  
Masterscope  
Match  
Press

### **Modules Moved From the Library Into the Sysout**

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IconW  
FreeMenu

### **Modules Replaced**

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Old: FX-80stream, FastFX-80stream, FXprinter  
New: FX-80Printer

Old: Wherels  
New: Where-Is

### **New Modules**

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SysEdit  
TableBrowser  
TextModules

## **Details of Changes**

The following modules were significantly changed or added to the library with the Medley Release.

### **4045XLStream**

Enabled its graphics capabilities; added 1108 cable/connector pin-outs.

A new function has been added to allow owners of the international 4045 (non-USA model) to use the 4045XLStream software.

(4045XL.CHANGE.MODE mode)

[Function]

This function changes the internal parameters of the software to allow printing on A4 paper with the international fonts. Mode is a string, either "USA" or "INTERNATIONAL", with the default being "USA". Do not use this function unless you have the international font set and A4 paper tray on a non-USA 4045. A4 page size is 2475 pixels wide by 3525 pixels high in portrait, and 3525 x 2475 in landscape mode.

### **Cash-File**

The new library module Cash-File was formerly in LispUsers. Cash-File is a front end to Hash-File which uses a hash table to cache accesses to hash files. This can provide a significant performance improvement in applications which access a small number of keys repeatedly. For example, the Where-Is library module uses this module to achieve acceptable interactive performance.

### **Centronics**

Added cable/connector pin-out.

### **Chat**

Added information about EMACS.

### **CopyFiles**

When told to copy to a non-existent NS subdirectory, it now asks if it should create it.

### **DataBaseFns**

Clarifications in the documentation of LOADDBFLG and SAVEDBFLG are included in Medley.

**EditBitMap**

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Added a description of its user interface.

**FileBrowser**

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Added enhanced features to Load, Compile, Edit; it now preserves path name of source files when copying to another machine or user, sorts files by attributes, and prints hard copies of directory listings.

The FB command now ignores the package of the attributes you optionally specify, so you can easily use it from a non-Interlisp exec.

The enclosing '\*'s are now included with the names of the variables \*EDITMODE\* and \*DEFAULT-CLEANUP-COMPILER\*.

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In addition to having outstanding problems fixed, FileBrowser has several new features and NS enhancements.

New features:

- There is an Abort button available during any operation of indefinite duration.
- You can scroll or reshape a FileBrowser that is "busy", e.g., while doing a Recompute.
- The browser title includes a timestamp of when the browser contents were last Recomputed.
- There is a new subcommand of See, "FileBrowse", which opens a FileBrowser on the selected subdirectory. This replaces the odd functionality of the old See/Edit commands that assumed that any file with null name and extension must be a directory; those commands now always treat the selection as a file. FileBrowse is mainly useful in the following situations:
  - When browsing NS directories with depth set finite, or when browsing the top level of a server, which is automatically depth 1.
  - When browsing on Unix, a device that gives Lisp no indication of whether a filename is a directory or not.
- There is a subcommand of Recompute, "Set Depth" that can be used to set the enumeration depth for future recomputes and recursive FileBrowses. You can also set the depth in an FB command by appending :DEPTH n to the command line, e.g., FB "{Pogo:}<Carstairs>" :DEPTH 1.

The depth counts levels of directories below the last directory in the pattern not containing a wildcard; depth 1 means just the immediate descendants of that directory. Depth is ignored for nontrivial patterns, i.e., anything but "\*.\*".

- Another new subcommand of Recompute, "Shape to Fit", widens or narrows the browser so that all fields, and no more, are visible but not wider than the screen.
- Directory items are now displayed like files, e.g., you'll see a single line

Lisp>

rather than the double line

<Carstairs>Lisp>

NIL

In addition, the "page" count for a directory item is now the total page size of the directory subtree rooted there.

- FileBrowser consumes somewhat less storage now, and there have been some performance improvements, especially for very large browsers.

## **FTPServer**

FTPServer now supports DELFILE.

The Medley Release fixes several bugs in Lisp's handling of PUP FTP connections relating to password handling and filename recognition.

## **FX-80Driver**

New software, new text, and 1108/1186 cable/connector pin-outs have been added.

Comments are now printed in a compressed font.

## **GCHax**

Documentation contains a new description of the STORAGE function.

## **Grapher**

Grapher can now print graphs larger than one page. The variable GRAPH/HARDCOPY/FORMAT is used to control the format of the graph when printing to paper. See the function HARDCOPYGRAPH and the variable GRAPH/HARDCOPY/FORMAT in the documentation for Grapher for more information.

A new GRAPH.PROPS field has been added to Graph record, which produces a list in property-list format, and is accessed by the function GRAPHERPROP.

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## Hash

Hash is provided for backwards compatibility. New applications should use the Medley library module Hash-File instead of this module.

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## Hash-File

Hash-File is a new library module, upgraded from LispUsers. Hash-File is similar to but not compatible with the Lyric library module, Hash. Hash-File is modeled after the Common Lisp hash table facility, and Hash was modeled after the Interlisp hash array facility.

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## Kermit

Reference to an excellent text/reference book has been added.

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## MasterScope

Break when graying a browser has been fixed.

In Medley, MasterScope .LCOM files have been changed to .dfasl file extensions. MasterScope now recognizes Common Lisp structures.

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## NSMaintain

The module NSMaintain has been completely revised and has all new documentation. Most commands auto-complete on one or two keystrokes. The Change Password command works again, and there are several new commands for listing objects in the Clearinghouse data base and for manipulating the access lists of groups. There is a more rational set of default inputs offered for most commands, and better feedback is given as to whether a command succeeded or failed.

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## RS232

The RS232 TRACE function is now documented in the Medley release.

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## Spy

This version of SPY library module works better with Common Lisp and incorporates several new features:

- Enters the pending mode when you bring up the SPY menu by pressing the left or middle button while the control key is down. Any action invoked from the menu is deferred until you next press the left or middle mouse button. For example, you can delete several nodes and then do one update.
- Keeps track of non-symbol frame names.
- Shows the package prefix of symbols in the display.

- Invokes "Merge" menu item from a node menu allowing for a node to merge with its caller.
- Updates SPY.NOMERGEFNS to correspond more closely to "system" functions in Medley.
- Knows about the Medley interpreter.

## TableBrowser

- New functions TB.UNSELECT.ITEM and TB.UNSELECT.ALL.ITEMS fill an inadvertent void in the Lyric version.
- Several off-by-ones in the display algorithms have been fixed.
- Performance on large browsers is improved.
- Clarification of TBAFTERCLOSEFN documentation is included in the Medley release.
- New options to TB.MAKE.BROWSER:
  - The option LINESPERITEM, previously documented but not implemented, is now supported. Alternatively, you can specify explicitly the height of items by giving the options ITEMHEIGHT (total height of each item) and/or BASELINE (the height of the "baseline" relative to the bottom of the item; zero if you don't set it). The BASELINE is used for two things: (1) the ypos of the window is set there when the browser's print function is called, and (2) selection and deletion marks are centered between the baseline and the top of the item. Specifying LINESPERITEM is a shorthand for setting ITEMHEIGHT to fontheight\*#lines and BASELINE to fontheight\*(#lines-1) + fontdescent (i.e., font's baseline for the first line of the item), so that the selection marker, deletion lines, and positioning for printing all point at the first line of a multi-line item. One further difference: If you change the font of the browser, TableBrowser will recompute the height and baseline parameters if you specified LINESPERITEM, but not if you specified ITEMHEIGHT.
  - You can specify an auxiliary window that is to be horizontally scrolled in parallel with the main window by giving the window as the HEADINGWINDOW option. The WIDTH of the window's EXTENT property is maintained in synch with main window. You still need to create the auxiliary window, attach it where you want it and supply it with a REPAINTFN. This is how FileBrowser implements its header line consisting of "Name" and the attribute names.
  - The option LINETHICKNESS specifies how thick to draw deletion lines. It defaults to TB.DELETEDLINEHEIGHT, initially 1. Making it the height of an item gives an alternative "total blackout" method of deletion.

TCP-IP

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Added revised/expanded installation procedure.

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DIR to VMS via TCP now works.

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TCP Chat hosts can now be lowercase.

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(TCPFTP.SERVER) now spawns process and runs in it.

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TCP-IP to a Sun returns the top-level directory.

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TCPFTP.DEFAULT.FILETYPES now contains correct entries for LCOM, lcom, DFASL, and dfasl.

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Files loaded by the high-level modules TCPFTP, TCPFTPSRV, TCPCHAT, and TCPTFTP automatically load their dependencies. If you load files by hand, you must also load their dependencies first. See the section "File Dependencies," or the TCP-IP documentation for more information.

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There is a new flag:

`TCP.ALWAYS.READ.HOSTS.FILE`

[Variable]

This flag is initially T. Setting it to NIL will cause the system to parse the hosts.txt file only when the filename (stored in the configuration file) is different from the previously read filename, or the write date of the file has changed. The hosts.txt file will always be read at least once when loading the software into a clean sysout.

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If you change your IP.INIT file while TCP-IP is running, you will be prompted to confirm **Restarting TCP**. In most cases, you should confirm the restart.

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TExec

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A TEXEC executive window no longer has GET in the menu of possible actions, since GETting text into an executive window makes no sense.

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TextModules

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TextModules is a new library module with the Medley release. It can be used to import and export textfiles and File Manager files. It can bring portable Common Lisp sources into the File Manager without losing any of their contents, and create new textfiles based on the File Manager's description of the textfile contents.

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## Virtual Keyboards

The Standard-Russian virtual keyboard now has uppercase Be ( . . ) and Ve ( . . . ) in the right places.

Loading VirtualKeyboards now adds the item KEYBOARD to the default window menu as well as the background menu. Selecting this item from the default window menu allows you to specify a keyboard for an individual window.

## Where-Is

Where-Is is a new library module, upgraded from LispUsers. This module replaces the Lyric library module Wherels. This is a new implementation of a facility similar to but not compatible with the Lyric library module Wherels. Where-Is indexes all definers, but Wherels only indexed Interlisp FNS definitions.

## File Dependencies

Some modules require that another module be loaded into the sysout in order to run. Automatic dependencies are implemented in the source code, so that the module will load the files it depends on. Contingent dependencies are those files that you may need to load via commands typed into the executive window.

Some modules also depend of specific FONT files. As of this writing the best advice we can give to help you avoid difficulty is that you should make sure all your English font files are loaded in an accessible directory and that your DISPLAYFONTDIRECTORIES and INTERPRESSFONTDIRECTORIES variables are set accordingly.

### LIBRARY MODULE

AUTOMATIC DEPENDENCIES (not including system files)	CONTINGENT DEPENDENCIES (of module)
4045XLPSTREAM	DLRS232C or DLTTY or CENTRONICS
BROWSER	MASTERSCOPE
GRAPHER	
CASH-FILE	
HASH-FILE	
CHAT	PUPCHAT or NSCHAT or RS232CHAT or
DMCHAT	TTYCHAT
CHATTERMINAL	and DMCHAT (default) or TCPCHAT or VTCHAT or TEDITCHAT and the corresponding explicit dependencies:

PUPCHAT	
CHAT	
RS232CHAT	
DLRS232C	see "RS232C" below
CHAT	
TTYCHAT	
DLTTY	
	see "RS232C" below
RS232CHAT	
	see above
CHAT	
DMCHAT	
	CHATTERMINAL
TCPCHAT	
	see "TCP-IP" below
VTCHAT	
	VT100KP
DATABASEFNS	MASTERSCOPE
DEDIT	
DEDITPP	
EDITBITMAP	SCALEBITMAP
READNUMBER	
FILEBROWSER	Printer drivers, fonts
TABLEBROWSER	TEDIT, SEDIT, DEDIT
FONTSAMPLE	FONTSHEETx.IP
FX-80DRIVER	DLRS232C or DLTTY
GRAPHZOOM	
GRAPHER	
HRULE	IMAGEOBJ
	EDITBITMAP
	TEDIT
KERMIT	CHAT
	RS232 or TCP protocols
KERMITMENU	
KERMIT	
KEYBOARDEDITOR	
VIRTUALKEYBOARDS	
see below	
MASTERSCOPE	BROWSER, DATABASEFNS, a Lisp editor
MSPARSE	
MSANALYZE	
MSCOMMON	
MS-PACKAGE	

MINISERVE	NS or PUP or XNS
NSMAINTAIN	
DES	
PRESS	FONT.WIDTHS
PUPPRINT	
RS232	KERMIT
RS232 port :	
DLRS232C	
DOVERS232C	
RS232CMENU	
DLRS232C	
see above	
RS232CHAT	
see above	
TTY port :	
DLTTY	
DOVERS232C	
see above	
DLRS232C	
see above	
TTYCHAT	
see CHAT above	
RS232CMENU	
see above	
SPY	
GRAPHER	
READNUMBER	
IMAGEOBJ	
EDITBITMAP	
see above	
SYSEDIT	MASTERSCOPE
EXPORTS.ALL	
CMLARRAY-SUPPORT	
TCP-IP	
TCP	
TCPLLIB	see below
TCPCHAT	
TCP	see above
CHAT	see above
TCPCONFIG	
TCPDEBUG	
TCP	see above
TCPFTP	
TCPNAMES	

TCP	see above
TCPFTPSRV	
TCPFTP	see below
TCPHTE	
TCPLLAR	
TCPLLICMP	
TCPLLIP	
TCPHTE	
TCPLLICMP	
TCPLLAR	
TCPNAMES	
TCPTFTP	
TCPUDP	see below
TCPUDP	
TCPLLIP	see above

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TELERAID

REMOTEVMMEM  
READSYS  
RDSYS  
VMEM

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TEXEC

TEDIT

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VIRTUALKEYBOARDS

DANDELIONKEYBOARDS or  
DAYBREAKKEYBOARDS or  
DORADOKEYBOARDS or  
DOVEKEYBOARDS

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WHERE-IS

HASH-FILE

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## Additional Notes

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DEdit is not error-protected. Doing a ↑ in a DEdit break window closes the DEdit window, too...

In addition, the modules work under all Lisp environments (Interlisp-D, Common Lisp, Xerox Common Lisp). However, many of the functions and variables used within the modules are those of Interlisp-D, and therefore you'll have to make sure that, when you are not in Interlisp, you use the IL: prefix (see the *Release Notes* for more details).

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## Koto CML Library Module

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If you have files that used the Koto CML library module, with its package-style symbol naming conventions, you will need to convert them to use the correct symbols in Lyric and Medley. The procedure is briefly as follows: see the *Lyric Common Lisp Implementation Notes*, chapter 11, "Reader compatibility feature" for complete details on this mechanism:

First, set the global variable LITATOM-PACKAGE-CONVERSION-ENABLED to T. Then for each of your files, do

(LOAD *file* 'PROP)

(MAKEFILE *file* 'NEW)

Afterwards be sure to set the global variable LITATOM-PACKAGE-CONVERSION-ENABLED back to NIL.

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