

# INDEX

## A

Abort a Print Job 101,102  
Aborting Commands 76  
Access Functions 251  
Add New Keyboards to the List 310  
**add-form** (Function) 299  
**ADD.BORDER.TO.BITMAP** (Function) 65  
**ADD.PROCESS** (Function) 266  
Adding FileBrowser Commands 92  
Address space of the internetwork 261  
**ADJUSTCOLORMAP** (Function) 37  
Administrator Commands for NSMaintain 206  
**ADVISE** (Function) 283  
Aliases 203  
**ALLOCATE.ETHERPACKET** (Function) 270  
Analyzing user Functions 157  
Application layer 261  
ARPANET 253  
Array Functions 193  
Array operations 29  
Assignments 189

## B

**BACKWARD FIND** (Command) 288  
**BEGIN DST** (Variable) 199  
**BIN** (Function) 222  
**BIT.IN.COLUMN** (Function) 65  
**BIT.IN.ROW** (Function) 65  
**BITBLT** (Function) 116  
**BITMAPCREATE WIDTH HEIGHT BITS PER PIXEL**  
(Function) 38  
**BITS PER PIXEL BITMAP** (Function) 38  
**BOUT** (Function) 222  
**BREAK** (Function) 283  
Broadcast address 262  
Browser 111  
    describe window 12  
    printout window 12  
BROWSER window 74  
**BROWSERBOXING** (Variable) 12  
**BROWSERFORMAT** (Variable) 12

## C

C-Shell 303  
C4 printed circuit board 1  
**CACHE/NODE/LABEL/BITMAPS** (Variable) 116  
Call graph 233  
Call stack 233  
Calling the Keyboard Editor 150  
**CALLS** (Function) 175  
**CALLSCCODE** (Function) 175  
Cash-File 15  
Centronics 17  
    cable 17  
    port 1  
**CENTRONICS.RESET** (Function) 17  
**CH.DEFAULT.DOMAIN** (Variable) 206  
**CH.DEFAULT.ORGANIZATION** (Variable) 206  
Changing an Existing Keyboard 150  
Character framing errors 224  
CharCodeTables 19

Chat 21,303  
**CHAT** (Function) 22,303  
Chat connections 22  
Chat Menu 23  
Chat window 146  
**CHAT.ALLHOSTS** (Variable) 25  
**CHAT.DISPLAYTYPES** (Variable) 24  
**CHAT.EMACSCOMMANDS** (Variable) 25  
**CHAT.FONT** (Variable) 25  
**CHAT.IN.EMACS?** (Variable) 26  
**CHAT.INTERRUPTS** (Variable) 24  
**CHAT.KEYACTIONS** (Variable) 24  
**CHAT.PROTOCOLTYPES** (Variable) 26  
**CHAT.TTY.PROCESS** (Variable) 25  
**CHAT.WINDOW.REGION** (Variable) 25  
**CHAT.WINDOW.SIZE** (Variable) 25  
Chatting to a host 258  
**CHECKSAMEDIR** (Function) 231  
Clean-Up After Copying Files 46  
Clearinghouse 26  
Clearinghouse service 203  
**CLOSE** (Function) 305  
**close-hash-file** (Function) 134  
**CLOSECHATWINDOWFLG** (Variable) 25  
**CLOSEF** (Function) 9,222  
**CLOSEHASHFILE** (Function) 128  
CmlFloatArray 29  
**CMYCOLORMAP** (Function) 36  
**COLLECTINUSE** (Function) 108  
**COLLISIONS** (Function) 108  
**COLORDISPLAY** (Function) 33  
**COLORDISPLAYP** (Function) 33  
**COLORIZEBITMAP** (Function) 44  
**COLORLEVEL** (Function) 37  
**COLORMAPCOPY** (Function) 36  
**COLORMAPCREATE** (Function) 36  
**COLORNAMES** (Association List) 34  
**COLORNUMBERP** (Function) 35  
**COLORSCREEN** (Function) 39  
**COLORSCREENBITMAP** (Function) 38  
COMMAND menu 74  
Common Lisp 288  
**COMPILE** (Command) 86  
Conjunctions of Sets 168  
Connecting to a host 258  
**Control-E** (Command) 76  
**Control-F** (Command) 53  
**Control-O** (Command) 139  
**Control-P** (Command) 280  
**Control-Q** (Command) 75,87  
**Control-S** (Command) 53  
**Control-Z** (Command) 53  
Conversation Mode 45  
**convert-loaded-files** (Variable) 292  
**COPY** (Command) 78  
Copy-Selection 53,77  
**COPYFILE** (Function) 46,267  
CopyFiles 45  
**COPYFILES** (Function) 45  
**COPYHASHFILE** (Function) 130  
CPE FP 17  
CPE-FP upgrade 1  
Create a Key Pad for Repeated Use 216  
**CREATE-PROCESS-STREAM** (Function) 305  
**CREATE.NUMBERPAD.READER** (Function) 216  
**CREATEHASHFILE** (Function) 128

**CREATEW** (*Function*) 41

Creating

- 4045XLP Master Files 4
- a graph 112
- a key pad 215
- a new bitmap 64
- a new keyboard 149
- a TableBrowser 247
- horizontal rules 139
- HOST.TXT file 254
- new keyboard configurations 153
- objects 206
- the local IP.INIT file 256

Creation dates 46

Cumulative mode 238

**CURSORPOSITION** (*Function*) 44

**CURSORSscreen** (*Function*) 44

Customizing

- Chat 24
- FileBrowser 89

Cyclic graphs 111

## D

DataBaseFns 49

Databases 313

- using 313,314

Datamedia 2500 21

Daughter 114

Debuggee 279

Debugger 279

**DECREASING.FONT.LIST** (*Variable*) 125

DEdit 51,307

- Command menu 54

- Functions 54

- idioms 59

- parameters 57

- window 52

**DEDITLINGER** (*Variable*) 57

**DEDITTYPEINCOMS** (*Variable*) 57

**DEFAULT-CLEANUP-COMPILER** (*Variable*) 86

**DEFAULT.GRAPH.WINDOWSIZE** (*Variable*) 117

**DEFAULTCHATHOST** (*Variable*) 22,25

**DEFAULTPRINTERTYPE** (*Variable*) 2

**DEFAULTPRINTINGHOST** (*Variable*) 2,213

**defdefiner-macros** (*Variable*) 292

**DEFINEKEYBOARD** (*Function*) 311

Defining a Virtual Keyboard 310

**DEGREES-TO-RADIANS** (*Function*) 196

**DELETE** (*Command*) 77

Deleting objects 206

Device Errors 17

Differences between TExec and TEdit 287

Digital VT100 21

Directed acyclic graph 113

**DIRECTORIES** (*Variable*) 2,258

Directory-only lines 75

**DIRECTORYNAME** (*Function*) 231

Display-Only a Keyboard 309

Displayer 233

**DISPLAYFONTDIRECTORIES** (*Variable*) 100

**DISPLAYGRAPH** (*Function*) 117

Displaying

- a graph 116

- a stack 280

Displaystream graphics 288

DM2500 Chat 27

**DODIP.HOSTP** (*Function*) 272

Domain 203  
     manipulating 208  
**DOMAIN.GRAPH** (Function) 276  
**DOMAIN.INIT** (Function) 276  
**DOMAIN.LOOKUP** (Function) 276  
**DOMAIN.LOOKUP ADDRESS** (Function) 276  
**DOMAIN.LOOKUP NAMESERVER** (Function) 276  
**DOMAIN.TRACE** (Function) 276  
**DRAWBETWEEN** (Function) 43  
**DRAWLINE** (Function) 43  
**DRAWTO** (Function) 43  
**DSPBACKCOLOR** (Function) 42  
**DSPCOLOR** (Function) 42  
**DT.EDITMACROS** (Variable) 58  
**DUMPDATABASE** (Function) 177  
**DUMPDB** (Function) 50  
**DUMPGRAPH** (Function) 121  
 Dvorak keyboard 311  
 Dynamic structure 233

## E

E-30 option kit 1  
 E30 option 219  
**EDIT** (Command) 84  
 Edit buffer window 52  
**EDIT.BITMAP** (Function) 61  
 EditBitMap 61  
     sub-menu 62  
     window 62  
**EDITBM** (Function) 61  
**EDITCOLORMAP** (Function) 37  
**EDITCONFIGURATION** (Function) 154  
**EDITEMBEDTOKEN** (Variable) 57  
**EDITGRAPH** (Function) 121  
**EDITGRAPHMENU** 119  
**EDITGRAPHMENUMCOMMANDS** (Variable) 119  
 Editing  
     a bitmap in a document 64  
     editing a graph 117  
     existing bitmap 63  
     keyboard configuration 154  
**EDITKEYBOARD** (Function) 150  
**EDITMODE** (Function) 52  
**EDITMODE** (Variable) 84  
 Effecting MasterScope Analysis 171  
 Element patterns 185  
 Embedding and extracting 59  
**ENDDST** (Variable) 199  
 Entering DEdit Commands 54  
 Environmental and Lisp mappings 95  
**EOLCONVENTION** (Variable) 272  
 Error Condition Reporting 224  
**ERRORPUP** (record) 70  
**ERRORXIP** (record) 69  
 Establishing a Connection 143  
 et FX-80 Fast Mode 101  
**ETHERHOSTNUMBER** (Variable) 4,280  
 Ethernet 260  
 Ethernet packet 264  
 EtherRecords 69  
**EVALUATE-POLYNOMIAL** (Function) 31  
 expr definitions of Functions 171  
**EXPUNGE** (Command) 86  
 Extend the selection 75  
 Extended Processor board 17  
 Extended processor option 29  
 External Communication Service 27

## F

**FASSOC** (Function) 121  
 Fast mode FX-80 101  
**FASTFX80-DEFAULT-DESTINATION** (Variable) 100  
**FB** (Command) 90  
**FB.ALLOW.ABORT** (Function) 94  
**FB.BROWSERFONT** (Variable) 92  
**FB.DEFAULT.EDITOR** (Variable) 84,92  
**FB.DEFAULT.INFO** (Variable) 87,90  
**FB.DEFAULT.NAME.WIDTH** (Variable) 91  
**FB.FETCHFILENAME** (Function) 93  
**FB.HARDCOPY.DIRECTORY.FONT** (Variable) 92  
**FB.HARDCOPY.FONT** (Variable) 92  
**FB.ICONFONT** (Variable) 91  
**FB.INFO.FIELDS** (Variable) 91  
**FB.INFO.MENU.ITEMS** (Variable) 91  
**FB.MENU.ITEMS** (Variable) 92  
**FB.PROMPTFONT** (Variable) 92  
**FB.PROMPTLINES** (Variable) 92  
**FB.PROMPTW.FORMAT** (Function) 93  
**FB.PROMPTW.PRINT** (Function) 93  
**FB.PROMPTFORINPUT** (Function) 94  
**FB.SELECTEDFILES** (Function) 93  
**FB.TABLEBROWSER** (Function) 93  
 File Manager functions, changed 313  
 File name translation Function 269  
 File transfer using RS232 226  
**FILEBROWSE** (Command) 84  
 FileBrowser 71  
     Functions 89  
     Variables 90  
**FILEBROWSER** (Function) 89  
**filecom-specifier** (Function) 299  
 Filing operations 267  
**FILING.ENUMERATION.DEPTH** (Variable) 92  
**FIND-ARRAY-ELEMENT-INDEX** (Function) 31  
**FINDPOINTER** (Function) 109  
**FINDPOINTERS.OF.TYPE** (Function) 109  
**FLIPNODE** (Function) 120  
 Floating-point vector 29  
**FNT.DISLOOK** (Function) 96  
**FNT.DISPTBLE** (Function) 96  
**FNT.MAKEBOOK** (Function) 95  
 Font mappings 95  
 FontSample 95  
**FORCEOUTPUT** (Function) 222  
 Forest 113  
**form-specifier** (Function) 299  
**FORWARD FIND** (Command) 288  
**FREEVARS** (Function) 175  
**FROM.SCREEN.BITMAP** (Function) 66  
 FTP service 268  
**FTPDEBUG** (Function) 268  
 FTPserver 97  
**FTPSEVER** (Function) 4,97  
**FTPSEVER.DEFAULT.HOST** (Variable) 97  
 Function-calling structures 111  
 Functions for saving work 283  
 Functions for writing routines 176  
 FX Printer Compatibility 102  
 FX-80  
     DIP Switch Settings 100  
     driver 99  
     family 99  
     serial Interface 99  
**FX80-PRINT** (Function) 102

**G**

GapTelnet 26  
 Garbage collector 284  
 Gateway Access Protocol 26  
 GCHax 105  
 General Purpose Records 69  
 Get, Set Parameters via Inspector Window 7  
**get-cash-file** (Function) 15  
**GETBOXSCREENPOSITION** (Function) 40  
**GETBOXSCREENREGION** (Function) 41  
**GETFILEINFO** (Function) 267  
**GETHASHTEXT** (Function) 129  
**GETHASHVILE** (Function) 129  
**GETRELATION** (Function) 176  
**GETSCREENPOSITION** (Function) 40  
**GETTEMPLATE** (Function) 174  
**GETTERMTABLE** (Function) 288  
 Getting Hardcopy Directory Listings 77  
 Ghost boxes 238  
 Graph 11  
     data structure 120  
     nodes 111  
**GRAPH** (record) 121  
**GRAPH/HARDCOPY/FORMAT** (Variable) 117  
 Grapher 111,233  
 Grapher image objects 120  
**GRAPHEROBJ** (Function) 120  
**GRAPHERPROP** (Function) 121  
 Graphics interface 99  
**GRAPHNODE** (record) 122  
**GRAPHREGION** (Function) 120  
 GraphZoom 125  
**GRAYCOLORMAP** (Function) 36  
 Groups 207

**H**

HANZON Universal Card 99  
**HARDCOPY** (Command) 81  
**HARDCOPYGRAPH** (Function) 117  
 Hash tables 178  
 Hash-File 133  
**HASHFILEDEFAULTSIZE** (Variable) 130  
**HASHFILEDTBL** (Variable) 130  
**HASHFILENAME** (Function) 129  
**HASHFILEP** (Function) 129  
**HASHFILEPLST** (Function) 130  
**HASHFILEPROP** (Function) 129  
**HASHLOADFACTOR** (Variable) 130  
**HFGROWTHFACTOR** (Variable) 131  
**HLS** (Record) 35  
**HLSP** (Function) 35  
**HOST&DIRECTORYFIELD** (Function) 231  
**HOSTS.TEXT.DIRECTORIES** (Variable) 276  
 HOSTS.TXT files, parsing 276  
**HPRINT** (Function) 121  
**HQFX80-DEFAULT-DESTINATION** (Variable) 100  
**HQFX80-FONT-DIRECTORIES** (Variable) 100  
 HRule 139  
**HRULE.CREATE** (Function) 139  
**HTE.READ.FILE** (Function) 276  
 Hue-Lightness-Saturation Triples 35

**I**

I/O processor 226  
**IDENTITY-3-BY-3** (Function) 194  
**IDENTITY-4-BY-4** (Function) 194  
**il:typesof** (Function) 313  
**il:whereis** (Function) 313  
 Imagestream 5  
 Include all files, both deleted and undeleted 75  
 Individual moe 239  
  
 INFO menu 74  
 Info Options window 87  
 Input conventions for FileBrowser commands 75  
 Inserting a segment 59  
**install-form** (Function) 299  
**INTENSITIESFROM** (Function) 36  
**INTERACT&ADD.BORDER.TO.BITMAP** (Function) 66  
**INTERACT&SHIFT.BITMAP.DOWN** (Function) 66  
**INTERACT&SHIFT.BITMAP.LEFT** (Function) 66  
**INTERACT&SHIFT.BITMAP.RIGHT** (Function) 66  
 Interactive File Transfers With Kermit or Modem 146  
 Interactive Terminal Service 27  
 Internal fields 241  
 Internet layer 260  
**INTERPRESSFONTDIRECTORIES** (Variable) 19  
 Interpreter 239  
 Interrupt character 234  
**INVERT.BITMAP.B/W** (Function) 65  
**INVERT.BITMAP.DIAGONALLY** (Function) 65  
**INVERT.BITMAP.HORIZONTALLY** (Function) 65  
**INVERT.BITMAP.VERTICALLY** (Function) 65  
 Invisible characters 288  
 IP  
     addresses 262  
     networks primer 261  
     packet building 274  
     packet sending 275  
     socket access 272  
**IP.ADD.PROTOCOL** (Function) 273  
**IP.APPEND.BYTE** (Function) 275  
**IP.APPEND.CELL** (Function) 275  
**IP.APPEND.STRING** (Function) 275  
**IP.APPEND.WORD** (Function) 275  
**IP.CLOSE.SOCKET** (Function) 274  
**IP.DELETE.PROTOCOL** (Function) 274  
**IP.OPEN.SOCKET** (Function) 274  
**IP.SETUPIP** (Function) 275  
**IP.TRANSMIT** (Function) 275  
**IPHOSTNAME** (Function) 273  
**IPINIT** (Function) 272  
**IPTRACE** (Function) 273  
 Iterative statement operator 177

**J**

**join-comments** (Variable) 292

**K**

Kermit 144,226  
 Kermit menu 146  
**KERMIT.RECEIVE** (Function) 145  
**KERMIT.SEND** (Function) 144  
**KEYACTION** (Function) 153  
 Keyboard editor menus 150

KeyboardEditor 149

## L

Landscape mode 1  
 Landscape printing 103  
 Lattices 111  
 Laying out a graph for display 112  
**LAYOUTGRAPH** (Function) 112  
**LAYOUTSEXPR** (Function) 115  
**LDESHELL** (Variable) 303  
 Library module changes 5-9  
     summary 5-9  
 Library module dependencies 9  
 Linguistic tree 120  
 Link layer 260  
 Lisp interrupts 22  
**LISPUSERSDIRECTORIES** (Variable) 258  
**LISPXREAD** (Function) 53  
 List of nodes 112  
 List structure editor 51  
**LISTFILES** (Function) 3,213  
**LOAD** (Command) 84  
**LOAD** (Function) 49  
 Load New Keyboards 310  
**load-textmodule** (Function) 290  
**LOADDB** (Function) 50  
**LOADDBFLG** (Variable) 50  
**LOADFROM** (Function) 49,85  
 Loading TCP 258  
**LOOKUPHASHFILE** (Function) 129  
 Lost characters 224  
 Low-level TCP Functions 272

## M

Macro 177  
 Macro Expansion 170  
**MAINSCREEN** (Function) 39  
 Maintenance panel halt 279  
**make-cash-file** (Function) 15  
**make-hash-file** (Function) 133  
**MAKE-HOMOGENEOUS-3-BY-3** (Function) 193  
**MAKE-HOMOGENEOUS-3-VECTOR** (Function) 193  
**MAKE-HOMOGENEOUS-4-VECTOR** (Function) 194  
**MAKE-HOMOGENEOUS-N-BY-3** (Function) 193  
**MAKE-HOMOGENEOUS-N-BY-4** (Function) 194  
**make-specifier** (Function) 297  
**make-textmodule** (Function) 291  
**MAKEFILE** (Function) 49,78,231  
**MAKEFILEFORMS** (Function) 231  
 Making a sysout that contains TCP-IP 259  
 Manipulating  
     domains 208  
     groups 207  
     remote Vmem 284  
**MAP-ARRAY** (Function) 29  
**MAPGC** (Function) 110  
**MAPHASHFILE** (Function) 130  
**MAPOFACOLOR** (Function) 37  
**MAPRELATION** (Function) 176  
**MASTERSCOPE** (Function) 175  
 MasterScope 11,49,157  
     Commands 158  
     database 157  
     entries 175

relations 161  
 set specifications 164  
 templates 164

Match 183  
 MatMult 193  
**MATMULT-133** (Function) 195  
**MATMULT-144** (Function) 195  
**MATMULT-331** (Function) 195  
**MATMULT-333** (Function) 195  
**MATMULT-441** (Function) 195  
**MATMULT-444** (Function) 196  
**MATMULT-N33** (Function) 195  
**MATMULT-N44** (Function) 196  
 Matrix Creation Functions 193  
 Matrix multiplication 193  
 Matrix Multiplication Functions 195  
 Merged node 237  
**MIGRATIONS** (Variable) 231  
 MiniServe 199  
 mlFloatArray 196  
 Modem 145,226  
**MODEM.RECEIVE** (Function) 145  
**MODEM.SEND** (Function) 145  
 Moving an expression 59  
**MSMACROPROPS** (Variable) 170  
**MSMARKCHANGED** (Function) 177  
**MSNEEDUNSAVE** (Function) 176  
 Multiple DEdit commands 58  
 Multiple streams 9  
**MY.NSHOSTNUMBER** (Variable) 200

## N

Network addresses 261  
 Network protocols 21,26  
**NETWORKOSTYPES** (Variable) 257  
 NEW INFO FileBrowser Command 87  
**NODECREATE** (Function) 112  
 Notecards 9  
 Noticing changes that require recompiling 177  
 NS characters 213  
 NS Chat 26  
 NS Records 69  
**NS.TO.PUP.ALIST** (Variable) 200  
**NS.TO.PUP.FILE** (Variable) 200  
**NSHOSTNUMBER** (record) 69  
 NSMaintain 203  
**NSMAINTAIN** (Function) 204  
**NSTIMESERVER** (Function) 199  
**INTERACT&SHIFT.BITMAP.UP** (Function) 66  
**NUMBERPAD.READ** (Function) 216

## O

Objects 203  
     creating 206  
     deleting 206  
 Obtaining information in NSMaintain 204  
 Obtaining network addresses 254  
**open-hash-file** (Function) 133  
**OPENHASHFILE** (Function) 128  
**OPENIMAGESTREAM** (Function) 9,101  
 Opening  
     a 4045 Stream 7  
     a Centronics Stream 17  
     a Chat Connection 22  
**OPENP** (Function) 222  
**OPENSTREAM** (Function) 222

**OPENWINDOWS** (Function) 42  
 Operations on Multiple Items 249  
 Organization 203  
**OVERFLOWS** (Function) 108

**P**

Packages 124, 286  
 Parents 114  
 parity errors 224  
**PARSERRELATION** (Function) 176  
**PATLISPCHECK** (Variable) 184  
 Pattern  
   elements 185  
   match compiler 184  
   match expressions 185  
**PATVARDEFAULT** (Variable) 185  
**PERSPECTIVE-4-BY-4** (Function) 195  
 Place Markers 189  
 Portrait mode 1  
**PORTSTRING** (Function) 4,280  
**PPTCB** (Function) 266  
 Press 213  
**PRESSFONTWIDTHFILES** (Variable) 213  
 Primitive relationship 178  
**PRINTERMTABLE** (Variable) 288  
**PRIN3** (Function) 124  
 Print  
   a file 101,102  
   source code in high-quality mode 103  
   source code on fast FX-80 103  
   TEdit file in fast FX-80 mode 103  
   TEdit file in high-quality mode 104  
   text and graphics in high-quality mode 103  
**print-filecom** (Function) 299  
 Printer drivers 99  
 Printer's point 139  
 Printing  
   in fast mode 101  
   in high-quality mode 102  
   source or TEdit Files 3  
   speed 9  
   via FTPserver 4  
   windows 4  
 Programmer's Assistant 288  
**PROJECT-AND-FIX-3-VECTOR** (Function) 196  
**PROJECT-AND-FIX-4-VECTOR** (Function) 196  
**PROJECT-AND-FIX-N-BY-3** (Function) 196  
**PROJECT-AND-FIX-N-BY-4** (Function) 196  
 PROMPT window 73  
 Properties 203  
 Protocol number 273  
**PUP** (record) 70  
 PUP  
   Chat 26  
   FTP 97,232  
   ID service 200  
   records 70  
   time service 200  
**PUP.ID.SERVER** (Function) 199  
**PUPADDRESS** (record) 70  
**PUPNUMBER** (Variable) 200  
**PUPTIMESERVER** (Function) 199  
**PUTHASHFILE** (Function) 128  
**PUTHASHTEXT** (Function) 129

**Q**

**QABLEITEM** (record) 69  
 Query Mode 45  
 Queue multiple arguments 60  
 Quick-scrolling 74  
 Quitting the FileBrowser 76

**R**

**RANDACCESSP** (Function) 272  
**READ-BYTE** (Function) 219  
**READ-CHAR** (Function) 219  
**READGRAPH** (Function) 121  
 Reading the Remote Vmem 284  
 ReadNumber 215  
 ReadNumber window 66  
**READP** (Function) 222  
**READSYS** (Function) 284  
**REALFRAMEP** (Function) 239  
**RECOMPILEDEFAULT** (Variable) 178  
**RECOMPUTE** (Command) 86  
 Reconstruction 190  
 Record declaration 177  
 Recursive loads 97  
 Redefine Existing Keyboards 310  
**REDUCE-ARRAY** (Function) 30  
 Red-Green-Blue Triples 34  
**REFCNT** (Function) 108  
 Reference counting 284  
**REHASHFILE** (Function) 130  
**REHASHGAG** (Variable) 131  
 Relations between sets 157  
**RELDRAWTO** (Function) 43  
 Remote  
   Kermit in Server Mode 144  
   Kermit not in Server Mode 144  
   system administration 27  
   system executive 27  
 Removing Keyboards From the Men 310

**RENAME** (Command) 81  
**REPACKFILENAME.NEW.TRANSLATION**  
   (Function) 269  
**REPACKFILENAME.OSTYPE.TABLE** (Variable)  
   269  
**REPACKFILENAME.STRING** (Function) 268  
 Replace All Known Keyboards 310  
 Replacements 190  
**RESET/NODE/BORDER** (Function) 120  
**RESET/NODE/LABELSHADE** (Function) 120  
**RESETDEDIT** (Function) 54  
 Resetting 4045XLPstream 8  
 Restarting MiniServe 201  
**RGB** (Record) 34  
**RGBCOLORMAP** (Function) 36  
**RGBP** (Function) 35  
**RNUMBER** (Function) 215  
 Ross referencing user programs 157  
**ROTATE-3-BY-3** (Function) 194  
**ROTATE-4-BY-4-ABOUT-X** (Function) 194  
**ROTATE-4-BY-4-ABOUT-Y** (Function) 194  
**ROTATE-4-BY-4-ABOUT-Z** (Function) 194  
**ROTATE.BITMAP.LEFT** (Function) 65  
**ROTATE.BITMAP.RIGHT** (Function) 65  
**ROTATECOLORMAP** (Function) 37  
 RS232 143,219  
 RS232

Chat 27  
 port 219  
 RS232C port 1  
**RS232C.CLOSE-STREAM** (Function) 222  
**RS232C.DEFAULT.INIT.INFO** (Variable) 220  
**RS232C.ERROR.STREAM** (Variable) 224  
**RS232C.GET.PARAMETERS** (Function) 221  
**RS232C.INIT** (Function) 220  
**RS232C.OTHER.STREAM** (Function) 222  
**RS232C.OUTPUT.PACKET.LENGTH** (Function) 222  
**RS232C.READP.EVENT** (Function) 223  
**RS232C.REPORT.STATUS** (Function) 224  
**RS232C.SET.PARAMETERS** (Function) 220  
**RS232C.SHUTDOWN** (Function) 221  
 RS232CHAT 225  
 RS232CMENU 225,228  
**RS232MODEMCONTROL** (Function) 223  
**RS232MODEMHANGUP** (Function) 224  
**RS232MODEMSTATUSP** (Function) 223  
**RS232MODIFYMODEMCONTROL** (Function) 223  
**RS232SEENDBREAK** (Function) 223  
 RS232TRACE 224

## S

S-expression 115  
 SameDir 231  
 Sampler 233  
**SAVEDBFLG** (Variable) 50  
 Scale factors 9  
**SCALE-3-BY-3** (Function) 194  
**SCALE-4-BY-4** (Function) 195  
**SCALEDBITBLT** (Function) 9  
**SCREENBITMAP** (Function) 39  
**SCREENCOLORMAP** (Function) 36  
**SCREENPOSITION** (Record) 39  
**SCREENREGION** (Record) 39  
 Scroll bar 74  
**SEE** (Command) 82  
 Segment Patterns 186  
 Segment selection and manipulation 59  
 Selecting Files 74  
 Selecting Objects and Lists 52  
 Selection stack 53  
 Send text output to fast FX-80 103  
**SEND.FILE.TO.PRINTER** (Function) 3,213  
 Serial interface card 99  
 Server mode 144  
**SET DEPTH** (Command) 88  
 Set  
   destination 102  
   determiners 167  
   FX-80 Destination 101  
   FX-80 Page Size 101  
   HQ Mode 102  
   page Size 102  
   specifications by Blocktypes 167  
   specifications by Relation 166  
   types 167  
**SETCOLORINTENSITY** (Function) 37  
**SETSYNONYM** (Function) 175  
**SETTEMPLATE** (Function) 174  
**SETTIME** (Function) 199  
**SHIFT.BITMAP.DOWN** (Function) 65  
**SHIFT.BITMAP.LEFT** (Function) 66  
**SHIFT.BITMAP.RIGHT** (Function) 66  
**SHIFT.BITMAP.UP** (Function) 66

SHOW PATHS 180  
**SHOW PATHS** (Command) 169  
**SHOW PATHS** (Function) 11  
**SHOW.CLOSED.WINDOWS** (Function) 110  
**SHOWCIRCULARITY** (Function) 110  
**SHOWCOLORTTESTPATTERN** (Function) 44  
**SHOWCOMMONSETS** (Function) 20  
**SHOWCSET** (Function) 20  
**SHOWCSETLIST** (Function) 20  
**SHOWCSETRANGE** (Function) 20  
**SHOWGC** (Function) 107  
**SHOWGRAPH** (Function) 116,125  
**SHOWZOOMGRAPH** (Function) 125  
 Simple item operations 248  
**SINGLEFILEINDEX** (Function) 10  
 Sketch 10  
**SORT** (Command) 89  
 Special characters 307  
**specifiers** (Variable) 297  
 Specifying the files to browse 72  
 Spy 233  
**SPY.BORDERS** (Variable) 239  
**SPY.BUTTON** (Function) 234  
**SPY.END** (Function) 234  
**SPY.FONT** (Variable) 239  
**SPY.FREQUENCY** (Variable) 239  
**SPY.LEGEND** (Function) 239  
**SPY.MAXLINES** (Variable) 239  
**SPY.NOMERGEFNS** (Variable) 239  
**SPY.START** (Function) 234  
**SPY.TOGGLE** (Function) 234  
**SPY.TREE** (Function) 235  
**SPY.TREE** (Variable) 239  
 Stack 280  
 Stack architecture 58  
 Stacking several rules in a single object 140  
 Starting FileBrowser 71  
 Starting TExec 287  
**STARTMINISERVE** (Function) 199  
 Static structure 233  
 stderr 305  
 stdin 305  
 stdout 305  
**STOPIP** (Function) 272  
**STORAGE** (Function) 105  
 Store keyboards 309  
**SUBNETMASK** (Variable) 262  
 Subnetworks 262  
 Sun,TCP to a 254  
 SunOS, interface to 305  
 Switch & Display a Keyboard 308  
 Switch A-2 2  
 Switch Keyboards 308  
 Switch settings 2  
**SWITCHKEYBOARDS** (Function) 311  
 SysEdit 241  
**SYSHASHFILE** (Variable) 131  
**SYSHASHFILELST** (Variable) 131  
 System sources 241

## T

TableBrowser 243  
**TABLEBROWSER** (record) 244  
**TABLEITEM** (record) 243  
 Tally window 73  
 Target-source-Command 59  
**TB.BROWSER.BUSY** (Function) 248

- TB.CLEAR.LINE** (Function) 249  
**TB.COLLECT.ITEMS** (Function) 250  
**TB.DELETE.ITEM** (Function) 248  
**TB.FIND.ITEM** (Function) 250  
**TB.FINISH.CLOSE** (Function) 248  
**TB.INSERT.ITEM** (Function) 249  
**TB.ITEM.DELETED?** (Function) 251  
**TB.ITEM.SELECTED?** (Function) 251  
**TB.MAKE.BROWSER** (Function) 247  
**TB.MAP.DELETED.ITEMS** (Function) 250  
**TB.MAP.ITEMS** (Function) 250  
**TB.MAP.SELECTED.ITEMS** (Function) 250  
**TB.NORMALIZE.ITEM** (Function) 249  
**TB.NTH.ITEM** (Function) 250  
**TB.NUMBER.OF.ITEMS** (Function) 249  
**TB.REDISPLAY.ITEMS** (Function) 249  
**TB.REMOVE.ITEM** (Function) 249  
**TB.REPLACE.ITEMS** (Function) 248  
**TB.SELECT.ITEM** (Function) 248  
**TB.SET.FONT** (Function) 248  
**TB.UNDELETE.ITEM** (Function) 248  
**TB.USERDATA** (Function) 251  
**TB.WINDOW** (Function) 251  
**TCP**  
     and directory enumeration 254  
     Chat 27  
     debugging aids 277  
     segment 264  
**TCP-IP** 253  
     protocol 47  
     protocol layers 260  
**TCP.BYE** (Function) 268  
**TCP.CLOSE.SENDER** (Function) 265  
**TCP.DEFAULT.RECEIVE.WINDOW** (Variable) 265  
**TCP.DEFAULT.USER.TIMEOUT** (Variable) 265  
**TCP.DEFAULT.FILETYPE** (Variable) 267  
**TCP.ECHO.SERVER** (Function) 266  
**TCP.ECHOTEST** (Function) 266  
**TCP.FAUCET** (Function) 267  
**TCP.INIT** (Function) 265  
**TCP.OPEN** (Function) 264  
**TCP.OTHER.STREAM** (Function) 265  
**TCP.SINK.SERVER** (Function) 266  
**TCP.STOP** (Function) 265  
**TCP.URGENT.EVENT** (Function) 265  
**TCP.URGENT.MARK** (Function) 265  
**TCP.URGENTP** (Function) 265  
**TCPCHAT.TELNET.TTY TYPES** (Variable) 269  
**TCPCHAT.TRACEFILE** (Variable) 269  
**TCPCHAT.TRACEFLG** (Variable) 269  
**TCPFTP.DEFAULT.FILETYPES** (Variable) 267  
**TCPFTP.EOL.CONVENTION** 267  
**TCPFTP.INIT** (Function) 268  
**TCPFTP.SERVER** (Function) 268  
**TCPFTP.SERVER.USE.TOPS20.SYNTAX** (Variable) 268  
**TCPTTRACE** (Function) 266  
**TEdit** 9,21,139,287,307  
**TEdit Chat** 28  
**TeleRaid** 279  
**TELERAID** (Function) 280  
**TeleRaid Commands** 280  
**Teletype editor** 51  
**TELNET protocol** 261,269  
**Ten-key calculator pad** 215  
**Terminal emulators** 21  
**Testing the connection between two Xerox Lisp machines** 228  
**TESTRELATION** (Function) 176  
**TExec** 287  
**TEEXEC** (Function) 287  
**TEXTMODULES** 289  
**TFTP.CLOSEFILE** (Function) 272  
**TFTP.GET** (Function) 272  
**TFTP.OPENFILE** (Function) 272  
**TFTP.PUT** (Function) 271  
**TFTP.SERVER** (Function) 272  
**Thumbing** 74  
**TIMEZONECOMP** (Variable) 200  
**Tracing and test Functions** 265  
**Trailer encapsulation** 277  
**Transferring files** 143,258  
**TRANSLATE-3-BY-3** (Function) 195  
**TRANSLATE-4-BY-4** (Function) 195  
**Translating between the file-naming conventions** 268  
**Transport layer** 260  
**Transport control protocol** 264  
**Trees** 111  
**TRIM.BITMAP** (Function) 66  
**Trivial file transfer protocol** 271  
**Troubleshooting Problems With FileBrowser** 94  
**TTY port** 1,219  
**TTY.DEFAULT.INIT.INFO** (Variable) 226  
**TTY.GET.PARAMETERS** (Function) 228  
**TTY.INIT** (Function) 226  
**TTY.SET.PARAMETERS** (Function) 227  
**TTY.SHUTDOWN** (Function) 228  
**TTYCHAT** 228  
**Typing Characters to DEdit** 53
- ## U
- UDP.APPEND.BYTE** (Function) 271  
**UDP.APPEND.CELL** (Function) 271  
**UDP.APPEND.STRING** (Function) 271  
**UDP.APPEND.WORD** (Function) 271  
**UDP.CLOSE.SOCKET** (Function) 270  
**UDP.EXCHANGE** (Function) 271  
**UDP.GET** (Function) 270  
**UDP.INIT** (Function) 270  
**UDP.OPEN.SOCKET** (Function) 270  
**UDP.SEND** (Function) 271  
**UDP.SETUP** (Function) 270  
**UDP.SOCKET.EVENT** (Function) 270  
**UDP.SOCKET.NUMBER** (Function) 270  
**UDP.STOP** (Function) 270  
**UNCOLORIZEBITMAP** (Function) 44  
**UNDELETE** (Command) 77  
**Unechoed input mode** 288  
**UNIX** 232,272  
**UNIX-STREAM-CLOSE** (Function) 305  
**UNIXChat** 303  
**UNIXComm** 305  
**Unread** 54  
**UNSAVEFNS** (Function) 177  
**UPDATECHANGED** (Function) 177  
**UPDATEFN** (Function) 177  
**Updating the MasterScope Data Base** 174  
**upgrade-semicolon-comments** (Variable) 292  
**User Commands for NSMaintain** 204  
**User datagram protocol** 270  
**USERWORDS** (Function) 288  
**Using**  
     4045XLP stream 8  
     4045 as a default printing host 3



FileBrowser window 73  
 Keyboard editor 150  
 modems 223  
 RS232 streams 222  
 TExec 288  
 TTY port 226  
 TTY streams 228

## V

Verifying TCP connections 258  
 Version Control 46  
**VFIND.PACKAGE** (Function) 286  
**VFIND.SYMBOL** (Function) 286  
**VGETBASE0** (Function) 285  
**VGETDEFN** (Function) 285  
**VGETPROPLIST** (Function) 285  
**VGETTOPVAL** (Function) 285  
**VGETVAL** (Function) 285  
 Viewing  
   an existing bitmap 64  
   frames from a stack 281  
   system stack 282  
 Violation of the IP standard 262  
 Virtual graph nodes 113  
 Virtual memory 279  
 Virtual terminal I/O 269  
 VirtualKeyboards 149,307  
**VKBD.CONFIGURATIONS** (Variable) 154  
**VKBD.KNOWN-KEYBOARDS** (Variable) 311  
**VLOADFNS** (Function) 283  
**VLOADVAR** (Function) 283  
**VPUTBASE0** (Function) 286  
**VRAID** (Function) 284  
**VSAVEWORK** (Function) 283  
**VSETTOPVAL** (Function) 285  
 VT100 Chat 28  
**VTYPENAME** (Function) 285  
**VUNSAVEDEF** (Function) 283  
**VVAG2** (Function) 285  
**VYANKDEF** (Function) 283  
**VCOPY** (Function) 285  
**VUNCOPY** (Function) 285

## W

Weitek floating-point chip set 29  
 When To Copy 46  
 Where-Is 313  
 Wild cards 72  
**WINDOWPROP** (Function) 42  
**WORPCURSOR** (Function) 43  
 Wrapper Functions 193

## X

XCVR interface cable 253  
 Xerox 2700-II laser printer 1  
 Xerox 4045 Laser CP 1  
 Xerox Character Codes 19  
 Xerox/Diablo 630 1  
**XIP** (record) 69  
 XNS host number 200  
 XNS Time Service 199

## (

**(GETSCREENREGION** (Function) 40  
**(MAKE-HOMOGENEOUS-4-BY-4** (Function) 194

## 4

4045 configuration cartridge 2  
 4045 Emulation Mode Selection 2  
 4045 Fonts 9  
 4045 Parameter Names and Values 5  
 4045 Port Initialization 3  
 4045 Port Selection 2  
 4045 PROM and Software Compatibility 1  
**4045XLP.CHANGE.MODE** (Function) 5  
**4045XLP.DEFAULTS** (Variable) 5  
**4045XLP.GET.PARAMETERS** (Function) 7  
**4045XLP.PARAMETERS** (record) 5  
**4045XLP.SET.PARAMETERS** (Function) 6  
 4045XLPStream 1  
 4045XLPstream Options 5  
**4045XLPSTREAM.VERSION** (Variable) 1