

## Cast of Characters

@ (at sign, wildcard) C96, C153, P32, P114, T40

# (number sign) P76

#D (date stamp) U195–196

#P (page number) U195–196

#T (time stamp) U195–196

\$ (dollar sign) P9, P28

& (AND operations) C151, C155, C156, P5, T149

& (exclusive superimposition) P155

\* (asterisk) P76

\* (multiplication sign) C114

\* (point symmetry) P158

\*+ (horizontal scaling) P159

\*/ (vertical scaling) P160

+ (horizontal concatenation) P155

+ (horizontal move) P156

– (hyphen) C48

. (period) C48

.data files U349

.enum files U349

.Index files U350

.res files U350

.struct files U350

/ (slash) C48

/ (vertical concatenation) P155

/ (vertical move) P157

:= (assignment operator) P17–18, P152

<> (angle brackets) P153

= (relational operator) C153, P17–18

^ (caret) P76

` (accent mark) P32

| (inclusive superimposition) P155

± (between operator) C153

## A

Abort button C223, C224

ABORT command C16, C17, C116, P147

Abs function C13, C18

accent mark ( ` ), for comments P32, T142

Accept button P88–89, U110

After function and C22

DISABLE BUTTON command and C58

ENABLE BUTTON command and C64

ACTIVATE LINK command C6, C18

Add button C233

Add Field palette tool T64, U73, U96–97, U98

Add or Change Field dialog box T50, U19

ADD RECORD command C4, C19, C43, C51, C91, C120, T146, T149

ADD SUBRECORD command C5, C20, C45, C146, P61

ADD TO SET command C6, C21, C41, C180, P135, P138

adding records. See data entry

After function C7, C22, U47, U227–

228, U229

ABORT command and C17

CREATE LINKED RECORD

command and C42

DISPLAY SELECTION command

and C61

LOAD LINKED RECORD

command and C97

MODIFY RECORD command and

C108

REJECT command and C140

After, in input layout procedures T175–176, T177

Alert box C23, C40, C84, C173, U304–305

ALERT command C10, C23, U305

Align palette tools T65, U86

Align to Grid command (Layout menu)

U86, U342

aligning fields U72–73

aligning to grid U86

ALL RECORDS command C3, C23, C62, C109, P49

ALL SUBRECORDS command C5, C24, C202, C203, P58

Alpha field type U20

See also Text field type

changing U22–23

alphanumeric constants P9, P13

Alphanumeric field type P3, P31, P37,

T50

formatting P75

specifications for T52

alphanumeric variables P87

AND (&) operator C151, C155, C156, P5, T149

And button T88

And conjunction U171, U177

angle brackets (<>) P153

Append button T54, T55

Append Item command (Menu menu)

U300, U344

Append Menu command (Menu menu)

U300, U344

Apple menu C36, C59, C63, C65,

C103, P147

custom menus and U291, U292,

U348

Scrapbook U209

applications T12

backing up U7

custom Uxxvi

starting U3–6

applications programming, commands

and functions for C15–16

applications, writing P31–32

Apply Formula command (Enter menu)

C226–228, U187–188, U189–191, U346

Apply Formula editor U187–188,

U189–191

APPLY TO SELECTION command C2,

C25, C226–228, P138, U187

APPLY TO SUBSELECTION

command C4, C26

Arctan function C13, C26

Are you sure? dialog box U138

Area chart U198

See also Graph reports

Area variables U111

arithmetic functions C13

array table P33–34

arrays, creating U352–353

ascending sort order T83

ASCII codes C35, C117, C258–259

ASCII format U210

Ascii function C14, C27

- ASCII map C70, C71, C85, C86, C87, C179, P166–168, T32, U219, U220–221
  - changing U220
  - loading U221
  - saving U220–221
- aspect ratio U319
- assigned keyboard equivalents U298
- assignment operator (:=) P17–18, P152, T133
  - in global procedures T149
- asterisk (\*) P76
- at sign (@), as wildcard character C96, C153, P32, P114, U158, U172, U238, U288
- attributes. See field attributes
- automatic layouts U50, U267, U272–285
  - Picture field type and U92
  - Subfile field type and U93
- automatic link procedure T166–169, U272–285
  - example with U273–285
- Average function C13, C28, C129, C228

## B

- Back–Tab (Shift–Tab) U151
- backing up T6–7, U7
- Backspace key T81, U139, U251
- backup procedures T6–7
- bar graph P163
- BEEP command C10, C29
- Before function C7, C8, C30, U47, U227–228, U229
  - ABORT command and C17
  - CREATE LINKED RECORD command and C42
  - DISPLAY SELECTION command and C61
  - During function and C63
  - In break function and C88
  - In footer function and C89
  - In header function and C90
  - in input layout procedures T169–172, T177
  - in output layout procedures T181, T189, T190, T197
  - MODIFY RECORD command and C108
  - SORT SUBSELECTION command and C166
- Before selection function C3, C31, C90, C111, C124, C129
- Before subselection function C5, C32, C112, C125
- between operator ( $\pm$ ) C153
- Boolean functions C16
- Boolean variables P32, P87
- Borders command (Layout menu) U342
- borders, patterns and U85
- boxes U354
- branching structure P19–20
- Break control line T184, U125, U133
  - See also breaks; In Break
- break field P72
- break points U254, U255
  - setting U261
- breaks C88, C95, C171
- breaks (Quick reports), setting U201
  - See also Break control line; In Break
- bullet character U240, U245, U254
- Button button C58, P90
- button panel U150–151, U154, U178–179
- Button Text box T127
- BUTTON TEXT command C9, C33, C58, C64
- button variables C33, C58, C64, T133–134, U109–110
  - in global procedures T149
- buttons C40, C64, U309
  - Accept P88–89

- Button P90
- Cancel button customization T128–130
  - control panel and T77
  - customizing for input layout T124
- Don't Accept P88–89
- duplicate and edit T128–130
  - in the User environment T130–132
- OK and Next button customization T128–130
- OK button customization T125–127
- radio P90
- variable programming T133–134

## C

- Calculator command (Utilities menu) T44
- Cancel P88
- Cancel button
  - After function and C22
  - CONFIRM command and C40
  - Request function and C142
- Cancel button customization T128–130
- canceling commands T48
- Can't modify field attribute P3, P41, T53, U24
- Caps Lock key C252
- caret (^) P76
- case U172
  - passwords and U327
- Case of...Else...End case statement C15, C34, C69, P19, P21–22, P88, P90, U248
- Caution Alert box. See Alert box
- Change Field command (Structure menu) P36, U39, U341
- Char function C14, C27, C35
- charts. See Graph reports
- check boxes C33, C58, C64, P90, T134, U110
- CHECK ITEM command C9, C35, C36, C59, C65, C103, P147, P149
- Choice of mode dialog box U322, U355
- Choices List
  - create a custom list T5–56
  - data entry T39
  - procedure to display T172–174
  - Standard Choices field attribute T53
- choices. See Standard Choices field attribute
- choose commands T2
- Choose File/Layout command (File menu/User environment) P43, T131, U145, U148–149, U161, U204, U215, U217, U345
- Choose File/Layout dialog box U148–149
- Choose print layout dialog box U164
- circles, drawing U78
- Clear command (Edit menu) T81, U193, U251, U334
- CLEAR SEMAPHORE command C12, C36
- CLEAR SET command C6, C37, P135

- CLEAR VARIABLE command C15, C38, C177, P28
- click T2
- clicking (mouse technique) U151
  - shortcuts with U352–355
- Clipboard C82
- Clipboard, subfile layout and T115
- cloning layouts U134–135
- Close command (File menu/Design environment) U339
- Close Layout command (File menu) U134
- Close Procedure command (File menu) U242, U253
- CLOSE WINDOW command C10, C39, C68
- Color menu U83, U90
  - layout elements and T65
- Column chart U198
  - See also Graph reports
- Command key U338
  - shortcuts with U352–355
- command(s) P4, P8
  - ABORT P147
  - ADD RECORD T146, T149
  - ADD SUBRECORD P61
  - ADD TO SET P135, P138
  - ALERT U305
  - Align to Grid U86, U342
  - ALL RECORDS P49
  - ALL SUBRECORDS P58
  - Append Item U300, U344
  - Append Menu U300, U344
  - Apply Formula U187–188, U189–191, U346
  - APPLY TO SELECTION P138, U187
  - Borders U342
  - Calculator T44
  - canceling T48
  - Case of P19, P21–22, P88, P90
  - Change Field P36, U39, U341
  - CHECK ITEM P147, P149
  - Choose File/Layout (User environment) P43, T131, U145, U148–149, U161, U204, U215, U217, U345
  - Clear T81, U193, U251, U334
  - CLEAR SET P135
  - CLEAR VARIABLE P28
  - Close (Design environment) U339
  - Close Layout U134
  - Close Procedure U242, U253
  - communications P166
  - CONFIRM U305
  - Copy U155, U302
  - CREATE EMPTY SET P135, P136
  - CREATE LINKED RECORD P122–128
  - CREATE SET P135, P136
  - Custom (Design environment) U340
  - Custom (User environment) U346
  - Cut T115, U139
  - DEFAULT FILE T148
  - Define Grid U86, U342
  - Define Units U87, U121, U131, U342
  - Delete Field P36, U40, U341
  - Delete File P36, U40, U341
  - Delete Item U303, U344
  - Delete Menu U303, U344
  - Design (Design environment) U340
  - Design (User environment) U346
  - DIALOG U307
  - DIFFERENCE P135, P140
  - DISABLE ITEM P149, T141–144

disable menu commands procedure T141–144  
Duplicate U85, U342  
Edit ASCII Map U220–221, U348  
ENABLE ITEM P149, T144–145  
enable menu commands procedure T144–146  
EXECUTE P13  
Execute Procedure T150, T194, U222, U348  
Export Data (User environment) U215–216, U345  
EXPORT DIF P166  
EXPORT SYLK P166  
EXPORT TEXT P166  
Fill U84, U342  
Find U239, U241, U343  
Find Next U239, U241, U343  
FIRST SUBRECORD P58  
Format U87, U343  
GRAPH P91, U206–207, U325, U348  
GRAPH FILE U323–324  
Hide Rulers U87, U131, U342  
If P21, P22, P88  
Import Data (User environment) U217–218, U345  
IMPORT DIF P166  
IMPORT SYLK P166  
IMPORT TEXT P166  
incorrect T148  
INPUT LAYOUT T148  
Insert Item U300, U344  
Insert Menu U300, U344  
INTERSECTION P135, P139  
Labels U205, U348  
Layout U60, U64–65, U233, U340  
Level T190  
LOAD LINKED RECORD P98, P110–115, P118, P122, P127, T107, T172–173, T188–189, U158, U272, U286–288  
LOAD OLD LINKED RECORD P120–121, P128  
LOAD SET P135  
Menu U299, U302, U340  
MENU BAR P146, P149  
menus and U296, U300, U301, U303  
MESSAGE U306  
MESSAGES OFF U308  
MESSAGES ON U308  
Modify U331, U332–333, U334, U344  
Modify Field U31  
Modify Record T90, T120, U193, U346  
MODIFY SUBRECORD P61  
Move to Back U85, U342  
New Database (Design environment) U339  
New Database (User environment) U345  
New Field P36, T112, U19, U29, U36–37, U341  
New File P36, U14, U341  
New Record T131, U150, U154, U346  
New Step U249, U343  
New Sub-Password U331, U333, U344  
New Test U249, U343  
NEXT RECORD P51  
NEXT SUBRECORD P58  
NO TRACE U255  
Open Database T81, U147  
Open Database (Design environment) U339  
Open Database (User environment) U345  
OPEN WINDOW U308  
Page Setup U69, U122, U208, U252

Page Setup (Design environment) U339  
Page Setup (User environment) U345  
Passwords U332, U341  
Paste T117, U155  
Pixel Lines U84, U342  
Preferences U11, U144, U147  
Preferences (Design environment) U339  
PREVIOUS RECORD P51  
PREVIOUS SUBRECORD P58  
Print T152, U164, U208, U252  
Print (Design environment) U339  
Print (User environment) U345  
Procedure U230–234, U340  
Quick U200, U348  
Quit T44, T155–156, U6–7, U144, U146, U293  
Quit (Design environment) U339  
Quit (User environment) U345  
RECEIVE BUFFER P166  
RECEIVE PACKET P166, U211, U219  
Receive Record U219  
REDRAW P92  
Rename File P36, T47–48, U12, U341  
Replace U239, U241–242, U343  
Replace Next U239, U242, U343  
REQUEST U306  
Revert to Saved (Design environment) T62, U134, U137, U242, U253, U339  
Save (Design environment) U339  
Save Layout U134, U137  
SAVE LINKED RECORD P115–119, P121  
SAVE OLD LINKED RECORD P120–121, P128, T175–176  
Save Procedure U242, U253  
SAVE RECORD P51  
SAVE SET P135  
Save Structure U8, U11  
Search T86  
SEARCH P49, U162, U168, U169–173, U174–175, U347  
Search and Modify P49, T37–38, T91, U162, U168, U176–177, U178–179, U347  
Search by Formula P49, U162, U168, U180–183, U184–185, U186–187, U347  
SEARCH BY INDEX P49, P98, P113  
SEARCH SELECTION P49, U180  
Select All T183, U161, U193  
SEND PACKET P166, U211, U219  
Send Record U219  
Set as Start U248, U252, U343  
SET CHANNEL P166  
Set Preferences U240  
Show All T89, T92, T151, U161, U347  
Show Custom Menus T161, U298, U303, U344  
Show Rulers U87, U131, U342  
Show Subset U161, U193, U347  
Sort T82, U167, U347  
Structure U340  
Subtotal U127–128  
TRACE U255  
Turn Grid Off U86, U342  
Turn Grid On U86, U342  
Undo U138–139  
UNION P134, P135, P139  
USE ASCII MAP P167, P168  
USE SET P135, P137, P140  
User U143, U146, U147  
User (Design environment) U340  
User (User environment) U346  
Command-. (period) C22, P88, U152–153

- Command-clicking (mouse technique) U161
- Command-Shift U245
- Command-Tab U151
- commands, selection C2
  - See also specific command
- comments, with accent mark (') T142
  - Flowchart editor and U248, U252
  - Listing editor and U236
- communications C11-12
- communications commands P166
- comparison operators P15-16
- compiler C221
- compound indexes U177
- concatenation operations P154, P155
- condition statements. See also If statements
  - in global procedures T149
- Confirm box U305
- CONFIRM command C10, C40, C142, U305
- conjunctions U171, U177
- constants P9, P13
- Continue button C223, C224
- contrast (between images) U322, U355
- Control key C252
- control lines U43, U67, U120, U123-130
  - Break U125, U133
  - Detail U125, U132
  - Footer U125, U133
  - Header U124, U132
  - included layouts and U123
  - order of U124
  - printing and U125-128
  - screen and U128-130
- control panel T77
- Copy command (Edit menu) U155, U302
- copying
  - in Menu editor U3
  - steps (Flowchart editor) U251
- Cos function C13, C40
- Create a report dialog box U200
- Create a report editor U200
- CREATE EMPTY SET command C6, C41, P135, P136
- CREATE LINKED RECORD command C6, C42, C144, P122-128, P128
- CREATE RECORD command C4, C17, C43, C135, C146
- CREATE SET command C6, C44, C180, P135, P136
- CREATE SUBRECORD command C5, C20, C45, C146
- Create Variable palette tool T64, U74, U115
  - OK button creation T126
- criteria. See search criteria
- Current date function C14, C46, P34
- current layout U66
- Current password function C10, C46
- current record P49-51, U159
- current selection P49, P134, U144, U159-160
  - changing U160
  - memory and U159
  - printing U163, U164-165
  - sets and C187
  - sorting P51, U166, U167
- Current time function C14, C47

- CursorEvt C241
- custom applications Uxxvi
- Custom command (Environment menu/Design environment) U340
- Custom command (Environment menu/User environment) U346
- Custom environment C210, P5, P166, T22, T32, U142, U290–291
  - menu bar U348
  - passwords and U330
  - quitting T44, U9
  - switching from Design environment to U145
  - switching from User environment to U145
  - switching to User environment from U144, U146
- custom layouts U50
- custom menus U290–298, U299–303
  - quitting from U293
- Custom Sort dialog box C219
- custom. See also input layout(s); output layout(s); reports
  - buttons T0–130
  - Choices List T54–56
  - menus T1–162, T35–36
  - passwords T35–36
  - screens T35
- Cut command (Edit menu) T115, U139

## D

- data
  - creating and assigning C227
  - entering U1–158, U150–153
  - exporting U2–216, U210–214
  - importing U2–218, U210–214
  - modifying C226
- .data files U349
- data entry T76–80
  - linked files and T104–105
  - records T30, T38–40
  - subrecords T41–43
- data output C8
- data types. See field types
- database(s). See also fields; records
  - applications T12
  - backup procedures T6–7
  - components of T10–11
  - create file T46–49
  - design errors in C229–232
  - design overview T13
  - file structures T14–17
  - file structures P3
  - input and output T17–20
  - modularizing P25–26
  - multiple-file P98
  - passed arguments in P–27
  - passwords P4
  - processing information T21
  - saving T6
  - setting up U7–8, U11–13
  - single-file P98–100
  - structure of P–116
  - three-file P105–106
  - two-file P–100–105, P1
  - updating C236
- date constants P9, P13
- date entry format T78
- date expression operators P15
- Date field type P3, P38, T51, U20, U155

- abbreviated format U100
- changing U22–23
- display format T65–67
- formatting P78, U100
- long format U100
- short format U100
- specifications for T52
- Date function C14, C48, C142
- date functions C14
- date stamp (#D) U195–196
- date variables P32, P87
- date, current C14, C46
- dates, entering U100, U155
- Day number function C14, C49
- Day of function C14, C49
- Debug window C223, C224, C225, U254, U257–259, U260–261
  - parts of U257–258
- debugger U254–256, U260–261
  - See also Flowchart editor; Listing editor
  - calling U354
  - entering U255
  - Flowchart editor and U259
  - quitting U261
- debugger message window U254, U255, U256, U260–261
- Dec function C13, C50
- default file U226
- DEFAULT FILE command C51, T148
- default input layout(s) T104, U145, U148–149
- default layouts U59
- default menus U292
- default output layout(s) T104, U145, U148–149
- default pixel width, changing U78
- Define Grid command (Layout menu) U86, U342
- Define grid dialog box U86
- Define Units command (Layout menu) U87, U121, U131, U342
- Define units dialog box U87, U131
- DelnitEvt C241
- Delete button C233, C249
- DELETE DOCUMENT command C11, C52
- Delete Field command (Structure menu) P36, U40, U341
- Delete File command (Structure menu) P36, U40, U341
- Delete Item command (Menu menu) U303, U344
- Delete Menu command (Menu menu) U303, U344
- DELETE RECORD command C4, C53
- DELETE SELECTION command C2, C21, C53, C54
- DELETE SUBRECORD command C5, C55
- deleting
  - field entry T81
  - fields U40
  - file procedures U233
  - files U40
  - global procedures U232
  - layout elements U139
  - layout procedures U233
  - layout(s) T73, U65, U138
  - menu bars U302
  - menus U303
  - passwords U334
  - record(s) T81, U192
  - Standard Choices U34
  - steps (Flowchart editor) U251
- delimiters U212, U213
- descending sort order T84
- design U8

Design command (Environment menu/Design environment) U340  
Design command (Environment menu/User environment) U346

- Design environment P5, P23, P30, P36, P41, P146, T22, U2–3, U142
  - Layout editor T25
  - menu bar U338–344
  - Menu editor T27
  - overview T23
  - Passwords editor T28
  - Procedure editor T26
  - Structure editor T24
  - switching to Custom environment from U145
  - switching to User environment from U143–144, U146
- Design menu P23, P30, U340–341
  - create layout T56–59
  - Layout command U60, U64–65, U233, U340
  - Menu command U299, U302, U340
  - Passwords command U332, U341
  - Procedure command U230–234, U340
  - Save Structure command U11
  - Structure command U340
- desk accessories, Scrapbook U209
- Detail control line U125, U132
  - in reports T185
- development version Uxxvi, U144
  - debugger and U254
  - passwords and U329
  - quitting and U293
- dialog box(es) C10, T36, U307
  - Add or Change Field T50
  - field P75
  - fields and U95
  - Format of field T66, T67
  - Format of variable T126–127
  - Layout P43, P44, P60–61, T57
  - Menubars T155
  - mode P80
  - New Layout T57–58
  - Procedure T139
  - Procedure type T140
  - record P112
  - Search and Modify T91
  - Sort P52, T82–83
  - Standard Choices P41–42, T54
  - variable P86, P91
  - variables and U95, U107
- DIALOG command C7, C9, C10, C56, U307
- dialog layout procedures C63
- dialog layouts U49
  - data entry to C7
- DIF format U210, U214
- DIFFERENCE command C6, C57, C180, P135, P140
- DISABLE BUTTON command C9, C58, C64
- DISABLE ITEM command C9, C59, C65, P149, T141–144
- display formats
  - See also format (of field)
  - Date field type T0–67
  - Numeric field type T67–69
- Display only field attribute T53, U24
- DISPLAY RECORD command C8, C47, C60
- DISPLAY SELECTION command C8, C61–62
  - Before function and C30
  - During function and C63
  - INPUT LAYOUT command and C91
  - MODIFY SELECTION command and C109
  - UserSet and C253
- document codes C255

- Document variable C15, C251
- documents, communicating with C11–12
- dollar amounts, display formats T67–69
- dollar sign (\$), local variables and P9, P28
- Don't Accept button(s) C20, C58, C64, C108, C110, C233, P88–89, U110
- dots, around incorrect commands T148
- double-clicking (mouse technique) U151
- drag T2
  - elements and objects T61–62
  - I-beam pointer T62
- Draw Line palette tool U77
- Draw Oval palette tool U78
- Draw Rectangle (rounded) palette tool U78
- Draw Rectangle (squared) palette tool U78
- Drawing palette tools T64
- drawing shapes U77–78
- Duplicate command (Layout menu) U85, U342
- Duplicate palette tool T65, U74, U85
  - button customization and T128
- duplicate records, linking to U285–288
- duplicating
  - layout elements U85
  - layouts U134–135
  - steps (Flowchart editor) U251
- During U47, U227–228, U229
  - in input layout procedures T172–174, T177
  - in output layout procedures T181, T190, T197
- During function C7, C8, C63
  - ABORT command and C17
  - In break function and C88
  - In footer function and C89
  - In header function and C90
  - Menu selected function and C103
  - MODIFY RECORD command and C108
  - REJECT command and C140
  - SORT SUBSELECTION command and C166

## E

- Edit an ASCII map dialog box U220–221
- Edit ASCII Map command (Special menu) U220–221, U348
- Edit menu C36, C59, C63, C65, C103, P147, U338
  - Clear command T81, U193, U251, U334
  - Copy command U155, U302
  - Custom environment and U348
  - custom menus and U291, U292
  - Cut command T115, U139
  - keyboard equivalents and U298
  - Paste command T117, U155
  - Select All command T183, U161, U193
  - Undo command T62, U138–139
- editing
  - formulas U183, U185, U190
  - in Listing editor U238
  - menu bars U299
  - procedures U234
  - steps (Flowchart editor) U250
- editors. See also specific editors; Flowchart editor; Listing editor
  - in the Design environment T23–28
- elements, in the Layout window T61–62

- Else statement, input layout procedures T171
  - See If command
- embedded variables U112–114, U118–119
  - field–like variables and U112–113
  - restrictions on U113–114
- Employees menu, Search and Modify command T37–38
- ENABLE BUTTON command C9, C64
- ENABLE ITEM command C9, C59, C65, P149, T144–145
- Enabled box P147
- Enabled check box T162
- End case. See Case of command
- End if statement, input layout procedures T170, T172, T175
- End if. See If command
- End of file break T186
- End selection function C3, C66
  - FIRST RECORD command and C74
  - In footer function and C89
  - NEXT RECORD command and C111
  - PREVIOUS RECORD command and C124
  - PRINT SELECTION command and C129
- End subselection function C5, C67, C112, C125
- End–of–field character U212, U213
- End–of–record character U212, U213
- Enter key C22, C63, C142, P88, U151
- Enter menu T76, U346
  - Apply Formula command U187–188, U189–191, U346
  - Modify Record command T90, T120, U193, U346
  - New Record command T131, U150, U154, U346
- Enterable field attribute P3, P87
- enterable variable type T134
- Enterable variables P87, U108
- entering data. See also data entry U150–153, U154–158
- entry layouts P101, P102
- Entry menu C227
- Entry window U150–151
- .enum files U349
- Enumerated field attribute P3
- Environment menu T76
- Environment menu (Design environment) U340
- Environment menu (User environment) U346
- Environment menu, User command U143, U146, U147
- environments P5
  - Custom environment T22, T32
  - Design environment T22, T23–28
  - User environment T22, T29–32
- environments, switching U143–145, U146–147
  - See also Custom environment; Design environment; User environment
- equal operator (=) C153, P17
- ERASE WINDOW command C10, C68, C80, C104
- error dialog C222
- error handling C116
- error messages C260–261
- Error variable C15, C251
- Error window C17
- errors U103
  - logic U254, U255
  - Not a Number (NaN) U103
  - syntax U240, U245, U254, U255
- event variables C252–253
- events T177
- Examples disk T3, T34
- Except conjunction U171
- Except operator P5
- exclusive superimposition (&) P155

EXECUTE command C16, C69, C217–220, P13  
 Execute Procedure command (Special menu) T150, T194, U222, U348  
 Execute Procedure dialog box U222  
 execution cycle C15, T164, U46–48, U123, U227–229
 

- external areas and C248
- for input to a record with a subfile P64
- for output with subfiles P65
- importing and U213
- input execution cycle T165–166, T177
- layout procedures and P45–48
- output execution cycle T181–183, T197

 Exp function C13, C69, C101  
 Expand button T70  
 Export Data command (File menu/User environment) U215–216, U345  
 Export dialog box U215–216  
 EXPORT DIF command C11, C70, P166  
 EXPORT SYLK command C11, C71, P166  
 EXPORT TEXT command C11, C72–73, C122, C158, P166  
 exporting
 

- data U210–214, U215–216
- files T32, U210–214, U215–216
- fixed field length data U214
- layouts and C215, U211–212

 expressions P8  
 expressions, tracing (Flowchart editor) U261  
 external area(s) C241–242, P95
 

- execution cycle and C248
- variables T135, U111
- with pictures C243–247

 external procedure(s) C237–248
 

- creating C238–240
- display of U237
- parameters for C237–238
- structure of C240

 ext\_FlipPic C243–244  
 ext\_GetFlipNum C243–244  
 ext\_SetFlipPic C243–244

## F

*f*, in folder names U3, U5  
 FALSE C12, C16, C30, C73, C113, C156  
 False function C16, C73, P17  
 field attributes P3, U19, U23–25
 

- See also specific field attribute
- assigning T49–51
- changing U31–32
- described T53
- selecting U30
- specifying P39–42

 field dialog box P75  
 field names P11  
 field types P8–9, U19, U20–23
 

- See also specific field type
- assigning T49–51
- changing U21–23, U31–32
- linked fields and T99
- selecting U29
- specifications T52, U337

- specifying P37–39
- field-like variables U108–109
  - embedded variables and U112–113
- fields C72, U15–16
  - See also linked fields
  - adding U96–97
  - aligning U72–73
  - attribute designation T24
  - boxes around U354
  - break P72
  - creating T49–51
  - delete entry T81
  - deleting U40
  - described
  - dialogs and U95
  - display format of T65–69
  - formatting U68, U87, U97
  - formatting within a layout P74–78
  - indexed U176–177
  - input and U95
  - input layout T38–40
  - layouts and U91–95, U96–97
  - linked C96, P113–115, U38–39, U157–158
  - linked for data entry T40
  - linking U38–39
  - movement in T42
  - naming U31–32
  - new U19, U29–30
  - output and U95
  - precedence of U72–73, U136
  - range checking T44
  - renaming U31–32
  - representation of T11
  - sort P72
  - type designation T24
  - variables and U106–107
- file box P36, P40
- file boxes, resizing U12
- File menu C130, C193, P147, U134, U338
  - Custom environment and U348
  - custom menus and U291, U292, U293
  - Open Database command T81, U147
  - Page Setup command U69, U122, U208, U252
  - Print command T152, U164, U208, U252
  - Quit command T44, T155–156, U6–7, U144, U146, U293
  - Set Preferences command U240
- File menu (Design environment) U339
  - Close command U339
  - Close Layout command U134
  - Close Procedure command U242, U253
  - New Database command U339
  - Open Database command U339
  - Page Setup command U339
  - Preferences command U11, U144, U147, U339
  - Print command U339
  - Quit command U339
  - Revert to Saved command T62, U134, U137, U242, U253, U339
  - Save command U339
  - Save Layout command U134, U137
  - Save Procedure command U242, U253
  - Save Structure command U8
- File menu (User environment) U345
  - Choose File/Layout command P43, T131, U145, U148–149, U161, U204, U215, U217, U345
  - Export Data command U215–216, U345

- Import Data command U217–218, U345
- New Database command U345
- Open Database command U345
- Page Setup command U345
- Print command U345
- Quit command U345
- file procedures P3, P44, U47, U225
  - creating U232
  - deleting U233
- filenames P10
- filenames, for database files T46
- files U15–16, U44–45, U349–351
  - See also linked files; subfiles
  - creating P36–37, T24, T46–49
  - default U226
  - deleting U40
  - described T10
  - exporting U210–214, U215–216
  - fields of P37
  - filenames for T46
  - folders and U3, U5
  - importing U210–214, U217–218
  - importing and exporting P166
  - index U176–177
  - linked U18, U38–39, U94, U266, U272–285
  - linking P106–110, U38–39, U94, U266, U272–285
  - links and U265, U268
  - moving U12
  - multiple U264
  - naming U8, U12
  - new U14
  - renaming T47–48, U8, U12
  - selecting C2, P49, U11
  - structure of T14–17
  - view T24
- Fill command (Layout menu) U84, U342
- fill patterns U84, U85
- Find command (Search menu) U239, U241, U343
- Find dialog box U239, U241
- Find Next command (Search menu) U239, U241, U343
- Finder T3
  - quitting to U144
- FIRST RECORD command C3, C74
- FIRST SUBRECORD command C5, C75, C112, C125, P58
- fixed field length data, exporting/importing U214
- Fixed Frame C130
- Fixed Frame (Multi–line) P62, P65
- Fixed frame (multiple records) U314, U316
- Fixed Frame (truncation) P62, P65, U314, U315
- FldDelimit variable C16, C72, C87, C251
- FlipPic program C244–246
- FlipPicNum program C247
- flow statements C69
- Flowchart editor C224, P4, P5, P23, P31, P32, U235, U243–248, U249–253
  - See also debugger; Listing editor
  - automatic link procedure and U272
  - debugger and U259
  - symbols U246–248
- Flowchart Formula editor U250
  - parts of U244–245
- Flowchart menu U343
  - New Step command U249, U343
  - New Test command U249, U343
  - Set as Start command U248, U252, U343

Flowchart method T140  
flowcharts, printing U252

- flowlines (Flowchart editor) U251
- Flush variable C251
- folders U349–351
  - files and U3, U5
  - names with – T47
- FONT command C8, C9, C76, C256
- Font menu U76, U83, U88, U342
  - text elements and T65
- font numbers C76
- FONT SIZE command C8, C9, C77
- font size, in input layout T58
- FONT STYLE command C8, C9, C77, C201, C256
- font styles C77, P147
- fonts U88
  - size of U76, U88
  - style of U76, U88
- Footer control line U125, U133
  - See also In Footer
  - in reports T184
- footers C66, C89, C168
  - See also Footer control line; In footer
- FORM FEED command C8, C78, C128, C129, C195
- format (of field) U98–105
  - editing U97
  - selecting U97
- Format command (Layout menu) U87, U343
- Format of an included layout dialog box U79–82, U311
- Format of field dialog box T66, T67, U87, U96–97
  - Date field type and U100
  - numeric field types and U98
  - Picture field type and U104
- Format of variable dialog box T126–127, U87, U106–108, U115
- formats. See display formats
- formatting
  - Date field type U100
  - fields U9, U87
  - numeric field types U101–103
  - Picture field type U103–105
  - variables U87
- Formula editor. See Apply Formula editor; Search by Formula editor
- formulas U150, U168
  - applying U187–188, U189–191
  - creating U184, U189–190
  - editing U183, U185, U190
  - executing U185, U191
  - searching by U180–183, U184–185, U186–187
- 4th Dimension
  - diskettes provided T3
  - hardware/software requirements T3
- 4th Dimension Command Reference T4
- 4th Dimension Program disk T3
- 4th Dimension Programmer's Reference T4
- 4th Dimension User's Guide T4
- 4th Dimension Utilities disk T3
- frames (Quick reports), setting U202
- Full Page layout C30, C63, T41–42
  - in subfiles T114, T118
- functions C13, C14, C16, P4, P8, P13, P19, P30–31
  - See also specific function
- functions, display of U237

## G

GET HIGHLIGHTED TEXT command C7, C14, C79

- global procedures T21, U226
  - add record to database procedure T146–150
  - button variables in T149
  - comment lines in T142
  - condition statement T149
  - creating T26, U231
  - deleting U232
  - disable menu commands T141–144
  - editing T144–146
  - enable menu commands T144–146
  - execute T150–151
  - naming U233
  - overview of T138
  - print procedure T152, T193–194
  - renaming U233
  - report generation T192–193
  - sorting U234
  - subroutines T21, T147
  - While loop T149
- global variables P28–30
- GO TO FIELD command C7, C79
- GO TO XY command C10, C68, C80, C104
- Graph area P91, T135, U111
- GRAPH command C8, C9, C81, C205, P91, U325
- Graph command (Report menu) U206–207, U348
- Graph definition dialog box U324
- Graph dialog box U206–207
- Graph editor U206–207
- GRAPH FILE command C8, C82, U323–324
- Graph menu C82
- Graph report dialog box U198–199
- Graph report editor U198–199
- Graph reports U194, U198–199, U317, U323–326
  - changing U209
  - creating U206–207
  - layouts and U325–326
  - numbers of U323
  - pictures and U209
  - printing U208
  - types of U323
  - X axis, setting U199, U206
  - Y axis, setting U199, U206
- Graph Type menu U208–209
- Graph variable type U317, U323–326
- graphs C81, C205–208
  - creation T31
  - line graph display T43
- greater-than symbol, embedded variables and U112, U119
- grid U86
- Grid On/Off palette tool T64, U86

## H

- handles, around elements and objects T61
- hard disk installation T5
- hardware requirements Uxxi, T3
- Header control line U124, U132
  - See also In Header
  - in reports T185
- headers C90
  - See also In header
- Hide Rulers command (Layout menu) U87, U131, U342
- HIGHLIGHT TEXT command C7, C14, C83, C140
- horizontal concatenation (+) P155

horizontal move (+) P156  
horizontal scaling (\*+) P159  
hyphen (-) C48

## **I, J**

I-beam pointer, drag T62  
icons U350–351  
icons, in the Layout editor T64–65  
identifiers P10  
If statement (Flowchart editor) U246  
If–Then–Else statement (Flowchart editor) U247

- If...Else...End if statement C15, C69, C84, P21, P22, P88
  - in input layout procedures T170–173, T175–176
  - in output layout procedures T189, T190, T191
- ImageWriter U122, U163
- Import Data command (File menu/User environment) U217–218, U345
- Import dialog box U217–218
- IMPORT DIF command C11, C85, P166
- IMPORT SYLK command C11, C86, P166
- IMPORT TEXT command C11, C87, C91, C158, P166
- importing T32
  - data U210–214, U217–218
  - fixed field length data U214
  - layouts and C85, C86, C216, U211–212
- In Break U47, U228
  - See also Break control line; breaks
- In break function C8, C88, C102, C106, C181
- In break, in output layout procedures T181, T190, T191, T197
- In Footer U47, U228
  - See also Footer control line
- In footer function C89, C102, C106, C129, C181
- In footer, in output layout procedures T181, T191, T197
- In Header U47, U228
  - See also Header control line
- In header function C8, C90, C129
- In header, in output layout procedures T181, T189, T190, T197
- Include Layout palette tool T64, U74, U79–82
- included layouts U43, U49, U79–82, U93, U94, U310–316
  - control lines and U123
  - entering data in U156
  - exporting and U211
  - importing and U211
  - screen and U312–314
  - subfile display T117
- inclusive superimposition (I) P155
- incorrect commands T148
- indentation (Listing editor) U236
- .Index files U350
- index files U176–177
- index table P107
- Indexed field attribute P3, P39–40, U24, U39
  - See also Unique field attribute
  - described T50, T53
  - search and modify T91–92
- indexed fields U176–177
- indexes U177
- indexing U24, U25
  - linked fields U25, U39
  - linked files P107
- indirection P33
- InitEvt C241
- initialize a variable, in an input layout procedure T169–172
- input T13
  - execution cycle for P46–47
  - phase functions for P45
- Input check box T70
- INPUT LAYOUT command C7, C9, C51, C60, C91, T148
- input layout procedures C97, C140, C209, C233–234
  - After procedure writing T175–176, T177
  - automatic link procedure T166–169
  - Before procedure writing T169–172, T177
  - During procedure writing T172–174, T177
  - Else statement T171
  - End if statement T170, T172, T175
  - execution cycle T165–166, T177

- If statement T170–173, T175–176
  - variable names T168
- input layout(s) P42–43, P123, U49, U130
  - Before function and C30
  - create T25, T56–59
  - customized T38–40
  - data entry to C7
  - default P61, U59, U145, U148–149
  - described T17–19
  - DISPLAY RECORD command and C60
  - During function and C63
  - for subfiles T113–114
  - IMPORT DIF command and C85
  - IMPORT SYLK command and C86
  - include linked field T100–103
  - INPUT LAYOUT command and C91
  - modify T60–63
  - procedures P64, P124–125
  - styles of U49–58
- Insert Item command (Menu menu) U300, U344
- Insert Menu command (Menu menu) U300, U344
- installation T5
- Int function C13, C92, C143
- Integer field type C171, P3, P38, U20
  - See also Long Integer field type; Real field type
  - changing U22–23
  - formatting P75–78
  - specifications for T52
- interpreter C16, C221–222
- interrupting procedures U255
- interrupts C16
- INTERSECTION command C6, C92, C180, P135, P139
- INVERT BACKGROUND command C9, C93

## **K**

- keyboard equivalents U338
  - assigned U298
  - box P147
  - reserved U297–298
- KeyCode variable C16, C35, C117, C252
- keyword operators (Search by Formula editor) U182
- keywords P8, P19, P21, P59, U9

## **L**

- label width triangle U67, U120, U132, U196–197
- labels U120, U132, U194
  - for Button variables U109–110, U117
  - overlapped U197
  - printing U196–197, U204–205
- Labels command (Report menu) U205, U348
- LaserWriter U122, U163

- report design and T183–184
- LAST RECORD command C3, C93
- LAST SUBRECORD command C5, C94, C112, C125
- Layout command (Design menu) U60, U64–65, U233, U340
- Layout dialog box P43, P44, P60–61, T57, U60, U64–65, U91–92, U138
- Layout editor T25
  - tools available T64–65
- layout elements T60–63, U43, U66, U83
  - aligning to grid U86
  - deleting U139
  - duplicating U85
  - moving U70
  - patterns and U84, U85
  - resizing U71
  - selecting U70, U75–76
- layout graphics U316, U317
- Layout menu T65, U78, U83, U84–87, U342–343
  - Align to Grid command U86, U342
  - Borders command U342
  - Define Grid command U86, U342
  - Define Units command U87, U121, U131, U342
  - Duplicate command U85, U342
  - Fill command U84, U342
  - Format command U87, U343
  - Hide Rulers command U87, U131, U342
  - Move to Back command U85, U342
  - Pixel Lines command U84, U342
  - Show Rulers command U87, U131, U342
  - Turn Grid Off command U86, U342
  - Turn Grid On command U86, U342
- layout names P10
- layout procedure(s) P3, P44–48, P153, T21, U45, U46–48, U130, U225, U267
  - creating T26, U231
  - deleting U233
  - described T164
  - entry P103–104
  - execution cycle and P45–48, T164
  - importing and U213
  - input P64, P124–125
  - input procedures T164–177
  - output procedures T180–197
  - subfile P64–65, P124–125
- layout variables C9, P85–86
  - buttons and T124
  - programming of T133–134
- Layout window T59, U2, U83, U120–122, U134–136
  - center element T62
  - elements in T61–62
  - expand T60–61
  - linked fields and T102
  - number open T71
  - objects in T62
  - parts of U66–68
- layout(s) C9, P3, P42–43, U42–43, U44–45, U134–136
  - See also dialog layout(s); input layout(s); output layout(s)
  - automatic U50, U92, U93, U267, U272–285
  - cloning U134–135
  - current U66
  - custom U50
  - default U59, U145, U148–149
  - deleting T73, U65, U138
  - dialog U49
  - displaying U65
  - duplicating U134–135

- entry P101, P102
- exporting and U211–212
- fields and U91–95, U96–97
- for screen output U128–129
- formatting fields within P74–78
- graphs and U325–326
- importing and U211–212, U213
- included U43, U49, U79–82, U93, U94, U123, U211, U310–316
- input P42–43, P60–61, P123, U49, U130, U145, U148–149
- list P101, P102, T70
- modifying U64–65
- naming U61
- new U60–63
- output P42–43, P60–61, P70, U49, U128–129, U145, U148–149
- passwords and U329–330
- print U163
- report P70–74
- saving U137
- size of U122
- styles of U49–58
- subfile P60–61, P123
- types of U48–49
- variables and U115–117

Length function C14, C94

less-than symbol (<) T68

less-than symbol, embedded variables and U112, U119

Level function C8, C95, P72, T190

Line box P147

Line chart U198

- See also Graph reports

Line check box T162

Line graph button T43

line length (Listing editor) U236

line width, setting U84

lines

- drawing U77
- patterns and U84

link arrow U17, U38–39, U266

- removing U39

link procedure, automatic U272–285

linked fields U38–39

- See also fields
- duplicate values in P113–115
- entering data from U157–158
- in input layout(s) T100–103
- indexing U25, U39
- variables T103

linked files U18, U38–39, U94, U266

- See also files
- access to T43–44
- automatic data entry T104–105
- automatic link procedure and U272–285
- data entry T40
- described T15
- linking files and T15, T99
- linking procedure T99–100
- selection list T40
- Structure editor T24
- update linked file T106–107
- use of T96–99

linked records P108–110

linking

- guidelines for U266–267
- to duplicate records U285–288

linking fields U38–39

linking files U38–39, U94, U266

automatic link procedure and U272–285

linking files, linked files and T15, T99

- links C6, C96–97, C98, C144, C209, U15–16, U17–18, U38–39, U93, U265–267
  - files and U265, U268
  - recursive C18, C123, C131, U270–271
  - subfiles and U265, U268–270
  - types of U267–271
- list layouts P101, P102
- Listing editor P32, U235–239, U240–242
  - See also debugger; Flowchart editor
  - automatic link procedure and U272
  - editing in U238
  - parts of U236–237
- Listing method T140
- Load dialog box U175
- LOAD LINKED RECORD command C6, C18, C42, C96–97, C98, C144, P98, P110–115, P118, P122, P127, T107, T171–173, T188–189, U158, U286–288
  - automatic link procedure and U272
  - parameters U287
- LOAD OLD LINKED RECORD command C6, C98, C145, C209, P120–121, P128
- LOAD RECORD command C12, C99
- LOAD SET command C6, C99, C147, P135
- LOAD VARIABLE command C11, C15, C100, C139, C148, C177
- loading
  - ASCII maps U221
  - Quick report definitions U202
  - search criteria U175
- local variables C38, P28–30
- Locked function C12, C100
- Log function C13, C101
- logic errors U254, U255
- logical functions P17
- logical operators P5, P16
- Long Integer field type C171, P3, P38, U20
  - See also Integer field type; Real field type
  - changing U22–23
  - formatting P75–78
  - specifications for T52
- loop structure P19–20
- loops, in global procedures T149
- lowercase U172
- Lowercase function C14, C101

## **M**

- MacDraw T60
- Macintosh hardware requirements
  - 512Ke T3
  - Plus T3
- Macintosh interface tools, creating T25
- mailing labels T31, T195–196
  - See also labels
- Make A List procedure, flowchart procedure for P26
- Mandatory field attribute P3, P40, P112–113, T50, T53, U24, U39
- margins U120
- Master Parts file, example with U273–285
- Max function C13, C102
- memory U159
- MENU BAR command C9, C36, C59, C65, C103, P146, P149
- menu bar(s) C149, P146–147, U290–298
  - creating U299
  - Custom environment U348
  - deleting U302
  - Design environment U338–344
  - editing U299
  - numbering of U294

- renumbering of U294
- splash screens and U298, U303
- title graphics and U298
- User environment U345–348
- Menu command (Design menu) U299, U302, U340
- menu editor C65, P23, T27, U291–298, U299–303
  - accessing T154–155
  - add picture T162
  - change style of items T159–160
  - copying in U302
  - enter titles and items T157–159
  - parts of U295–296
  - pasting in U302
  - preview menus T161–162
  - preview modified menu T160
- Menu menu U344
  - Append Item command U300, U344
  - Append Menu command U300, U344
  - Delete Item command U303, U344
  - Delete Menu command U303, U344
  - Insert Item command U300, U344
  - Insert Menu command U300, U344
  - Show Custom Menus command T161, U298, U303, U344
- Menu selected function C9, C61, C103, C107, C109, P147, P149
- menu window C163, P146, P147–148, U2, U291–298, U299–303
  - Menu menu and U344
- Menubars dialog box T155, U299–303
- menus C9, C65, C82, C103, P4, U290–291
  - See also specific menu
  - commands and U296, U300, U301, U303
  - components of P146–147
  - create and modify T27
  - creating U300
  - custom T35–36, T157–159, U290–298, U299–303
  - default U292
  - deleting U303
  - disable menu commands procedure T141–144
  - enable menu commands procedure T144–146
  - passwords and U302, U329–330
  - procedures and U296, U301
  - programmable features of P149
- Message box U306
- MESSAGE command C10, C39, C47, C104, C120, U306
- messages U308
  - error C260–261
  - NaN C262
- MESSAGES OFF command C10, C25, C104, C151, C155, C164, C165, U308
- MESSAGES ON command C10, C105, U308
- metasymbols, syntactic P6
- Min function C13, C106
- Mod function C107
- mode dialog box P80

- Modifiable field attribute P3
- Modified function C7, C107
- Modifiers variable C16, C117, C252
- Modify command (Passwords menu) U331, U332–333, U334, U344
- Modify Field command (Structure menu) U31
- Modify option P41
- Modify password dialog box U332–333, U334
- MODIFY RECORD command C4, C91, C108, C115
- Modify Record command (Enter menu) T90, T120, U193, U346
- MODIFY SELECTION command C2, C6, C8, C109
  - Before function and C30
  - DISPLAY SELECTION command and C61
  - During function and C63
  - INPUT LAYOUT command and C91
  - UserSet and C253
- MODIFY SUBRECORD command C5, C110, C146, P61
- ModLook procedure C252
- Monaco font C80, C120
- Month of function C14, C110
- MouseDown variable C16, C117, C241, C252
- Move to Back command (Layout menu) U85, U342
- Move to Back palette tool T65, U74, U85
- moving
  - files U12
  - layout elements U70
  - steps (Flowchart editor) U250
- Multi–line layout T41
  - subfile T115, T118
- multiple files, advantages of U264
- multiplication sign (\*) C114

## **N**

- Name of file dialog box U12
- Name of the database dialog box U5
- naming
  - conventions for U337
  - fields U31–32
  - files U8, U12
  - global procedures U233
  - layouts U61
  - variables U116
- NaN (Not a Number) errors C262, U103
- Negation (Not) P17, P161
- nesting subfiles U16
- New Database command (File menu/Design environment) U339
- New Database command (File menu/User environment) U345
- New Field command (Structure menu) P36, T112, U19, U29, U36–37, U341
- New File command (Structure menu) P36, U14, U341
- New Layout dialog box T57–58, U49–50, U61, U62, U88, U92–93, U94
- New Record command (Enter menu) T131, U150, U154, U346
- New Step command (Flowchart menu) U249, U343
- New Sub–Password command (Passwords menu) U331, U333, U344
- New Test command (Flowchart menu) U249, U343
- NEXT RECORD command C3, C66, C74, C111, C113, P51
- NEXT SUBRECORD command C5, C67, C112, P58
- No Trace button C174, C222, C224, C225
- NO TRACE command C16, C113, C175, C225, U255
- Non–enterable field attribute P3, P40, P87, P123
- Non–enterable variable(s) P87, T134, U109
- None pattern U84
- nonstandard choices. See Standard Choices field attribute
- Not a Number (NaN) errors U103
- Not function (Negation) C16, C113, P17, P161

Note Alert box. See Alert box  
Num function C13, C14, C16, C114, C142  
number entry format T78  
number sign (#) P76, U195–196  
number(s)  
    formats for T67  
    too large to display T68  
numbering of menu bars U294  
numeric constants P9, P13  
numeric expression operators P14  
numeric field types P75–78  
    See also Integer field type; Long Integer field type; Real field type  
    formatting T67–69, U101–103  
numeric functions C13  
numeric variables P32, P87

## O

objects, resize T62  
offspring data structure P54, P64  
OK and Next button customization T128–130  
OK button C40, C142  
OK button customization T125–127  
OK variable C16, C177, C249–250  
Old function C6, C7, C115, P115, P119  
On background pictures P80–85, P152, U319–322, U355  
ON ERR CALL command C10, C16, C17, C116, C223  
ON EVENT CALL command C10, C16, C35, C117–118, C252  
ON SERIAL PORT CALL command C11, C16, C119, C132, C160  
ONE RECORD SELECT command C3, C115, C123  
Open Database command (File menu) T81, U147  
Open Database command (File menu/Design environment) U339  
Open Database command (File menu/User environment) U345  
Open dialog box U190, U191, U202, U221  
OPEN WINDOW command C10, C120–121, U308  
    CLOSE WINDOW command and C39  
    ERASE WINDOW command and C68  
    GO TO XY command and C80  
    SET WINDOW TITLE command and C163  
operands P8  
operators P8, P14–17  
    See also specific operator  
    assignment operator (:=) T133

- logical AND T149
- search criteria order T86
- operators (Search by Formula editor) U182
- Option key C224, C252
  - shortcuts with U352–355
- Option–click C175, C222, C223, U255
- Option–F U9
- Option–space C133, C135
- Or conjunction U171
- OR operation(s) C151, C155, C156, P134
- Or operator P5
- Output check box T72
- OUTPUT LAYOUT command C8, C9, C122
- output layout procedures C88, C89, C90, C171
  - designing the layout T183–187
  - execution cycle P47–48, T181–183, T194, T197
  - global procedure for report T192–193
  - If statements T189, T190, T191
  - mailing labels T195–196
  - phase functions for P45
  - procedure writing T188–191
  - report design procedure T180–182
- output layout(s) P42–43, P70, U49, U128–129
  - create T25, T70–73
  - default P61, U59, U145, U148–149
  - described T17, T19–20
  - example C185, C188, C201, C204
  - EXPORT DIF command and C70
  - EXPORT SYLK command and C71
  - EXPORT TEXT command and C72
  - for subfiles T114–115
  - OUTPUT LAYOUT command and C122
  - PRINT LABEL command and C126
  - styles of U49–58
  - with subfiles P65
- ovals, drawing U78
- overlapped labels U197

## **P**

- page breaks C171, P74
- page breaks (Quick reports), setting U201
- page number (#P) U195–196
- page numbers
  - in the Footer marker T184
  - in the Header marker T185
  - initialize variable T192
- page overview U165
- Page Setup command (File menu) U69, U122, U208, U252
- Page Setup command (File menu/Design environment) U339
- Page Setup command (File menu/User environment) U345
- Page Setup dialog box U164, U203, U205, U208
- pages, showing U13, U69, U252
- palette U67, U72–74
- palette tools (icons) T64
- parent data structure P54, P64
- parent file T16, T17, U15–16
  - defined T110
  - subfile display and T116–119
  - top level U186
- password(s) P4, P147, U144, U326–330, U332–334
  - case and U327
  - create T28
  - current C46

- Custom environment and U330
  - customized T35–36
  - deleting U334
  - for menu items T27
  - hierarchies and U328–329
  - layouts and U329–330
  - menus and U302, U329–330
  - paths and U328–329
  - quitting and U293
  - User environment and U330
  - versions of 4th Dimension and U329
- Passwords command (Design menu) U332, U341
- Passwords editor U302, U326–327
- Passwords menu U344
  - Modify command U331, U332–333, U334, U344
  - New Sub–Password command U331, U333, U344
- Passwords window U3, U331, U332
  - Passwords menu and U344
- Paste command (Edit menu) T117, U155
- pasting, in Menu editor U302
- pathnames C52, C257
- Pattern dialog box U84, U85
- patterns U85
- period (.) C48
- Personnel database. See Examples disk
- Pick Ticket file, example with U273–285
- Picture chart U198
  - See also Graph reports
- Picture field type P3, P39, T44, U21, U155, U316, U318–322
  - automatic layouts and U92
  - displaying P78–85, P152
  - formatting U103–105
  - On background U103, U319–322
  - operations on P154–164
  - pixel handling in U355
  - Scaled to fit U103, U105, U319
  - specifications for T52
  - Truncated U103, U104, U318
- picture operators P16–17
- picture variables P32, P87
  - displaying and printing P152
- pictures U316, U318–322
  - entering U155
  - Graph reports and U209
  - On background P80–85, P152
  - Scaled to fit P79, P152
  - Truncated P79, P152
- Pictures menu C82, U208–209
- pictures, add to custom menus T162
- pictures, external areas with C243–247
- Pie chart C81, U198
  - See also Graph reports
- Pixel Lines command (Layout menu) U84, U342
- pixel transfer modes P81
- pixels C120, C149, C150, P81
  - contrast between U322
  - handling of, in Picture fields U355
  - width of (default), changing U78
- point symmetry (\*) P158
- POP RECORD command C3, C115, C123, C131
- ports, communicating with C11–12
- Position function C14, C123
- precedence of fields U72–73, U136

- Preferences command (File menu/Design environment) U11, U144, U147, U339
- Preferences dialog box U8–9, U146–147
- preferences, setting U8–9, U11
- PREVIOUS RECORD command C3, C31, C66, C124, P51
- PREVIOUS SUBRECORD command C5, C32, C94, C125, P58
- primary sort field T82
- print
  - from File menu T152
  - procedure to print report T193
  - report to screen T194
- Print command (File menu) T152, U164, U208, U252
- Print command (File menu/Design environment) U339
- Print command (File menu/User environment) U345
- Print dialog box U163
- PRINT LABEL command C8, C78, C126–127, C191
- Print Labels command C193
- PRINT LAYOUT command C8, C78, C128, C130, C195
  - printing with C194–201
- print layouts U163
- Print quality dialog box U165
- print scale U122
- PRINT SELECTION command C8, C129–130, C191–193
  - FORM FEED command and C78
  - In footer function and C89
  - In header function and C90
  - Level function and C95
  - OUTPUT LAYOUT command and C122
  - PRINT LABEL command and C126
- print sequence
  - standard U125–126
  - subtotal U127–128
- PRINT SETTINGS command C8, C128, C130, C195
- Printer Setup dialog box U203, U205
- printer, data output to C8
- printing C66, C128, C129, C171, C185–187, C188–190
  - See also reports
  - control lines and U125–128
  - current selection U164–165
  - flowchart procedure for P25
  - flowcharts U252
  - Graph reports U208
  - labels U196–197, U204–205
  - lists of records P71
  - options P62–63
  - PRINT LAYOUT command and C194–201
  - Quick reports U203
  - records P66, P71–74
- Printing layout C190
- printout frames U314–316
- Procedure command (Design menu) U230–234, U340
- Procedure dialog box T139, U230–234
- Procedure editor(s) P4, T26
  - See also Flowchart editor; Listing editor
  - accessing T139–140
- Procedure Type dialog box T140, U231–232
- Procedure window T141, U2
  - Flowchart menu and U343
  - linked fields and T102
  - Search menu and U343
- procedure(s) P4, P8, P13, P19, P23, T21, U224–226, U230–234
  - See also external, file, global, and layout procedures
  - calling P24
  - create T26
  - display of U237

- editing U234
- executing U222
- external U237
- file P3, P44, U47, U225, U232, U233
- global T138–152, U226, U231, U232, U233, U234
- input layout T164–177
- interrupting U255
- layout P3, P44–48, U130, U213, U225, U231, U233, U267
- link U272–285
- menus and U296, U301
- modular approach to P23–24
- output layout T180–197
- saving U242, U253
- user U237
- processing T13, T21
- processing indicator P161
- programming language P4
- programming structures P19–20
- Proportional Column chart U198
- See also Graph reports
- PUSH RECORD command C3, C123, C131

## Q

- queries U142
- Quick command (Report menu) U200, U348
- Quick report dialog box U195, U200
- Quick report editor C141, U200
- Quick reports U194–196, U200–203
  - breaks, setting U201
  - frames, setting U202
  - loading definitions U202
  - page breaks, setting U201
  - printing U203
  - saving definitions U202
  - subtotals, setting U201
  - title stamps U195–196
  - titles, setting U202
  - totals, setting U201
- Quit command (File menu) T44, T155–156, U6–7, U144, U146, U293
- Quit command (File menu/Design environment) U339
- Quit command (File menu/User environment) U345
- quitting U6–7
  - Custom environment U9
  - debugger U261
  - from custom menus U293
  - to Finder U144

## R

- Radio button(s) C58, C64, P90, T134, U110
- RAM, variable table in P9
- Random function C13, C131
- range checking T44
- READ ONLY command C12, C132
- READ WRITE command C12, C132
- Real field type C171, P3, P38, T51, U20
  - See also Integer field type; Long integer field type
  - changing U22–23
  - formatting P75–78
  - specifications for T52

- RecDelimit variable C16, C72, C87, C251
- RECEIVE BUFFER command C11, C119, C132, C160, C179, P166
- RECEIVE PACKET command C11, C133–134, C160, C179, P166, U211, U219
- RECEIVE RECORD command C11, C135, C158, C160, C179, U219
- RECEIVE VARIABLE command C11, C136, C148, C159, C160, C179
- record dialog box P112
- record selection icon T90
- record(s) U44–45
  - current U159
  - data entry T30, T38–40, T76–80
  - delete T81
  - deleting U192
  - described T10
  - duplicate U285–288
  - linked P108–110
  - manipulating C4
  - modify T37–38, T89–92
  - printing P66, P71–74
  - representation of T11
  - search T30, T86–89
  - selecting C3, U159–160, U161
  - sending and receiving C211–214
  - sort T30–31, T82–85
  - structure P57
  - subrecords T16, T41–43, T110
  - subsets of (selection) T86
- Records in file function C2, C136
- Records in selection function C2, C137, C138
- Records in set function C6, C137
- Records in subselection function C4, C137, C138
- rectangles, drawing U78
- recursive links U270–271
  - See also links
- REDRAW command C7, C9, C139, C166, C203, P92
- REJECT command C7, C140
- relational features. See linked files
- relational operator (=) P17–18
- Rename File command (Structure menu) P36, T47–48, U12, U341
- renaming
  - fields U31–32
  - files U8, U12
  - global procedures U233
- renumbering of menu bars U294
- Replace command (Search menu) U239, U241–242, U343
- Replace Next command (Search menu) U239, U242, U343
- Replace With dialog box U239, U241–242
- REPORT command C8, C141
- report layouts P70–74
- Report menu U348
  - Graph command U206–207, U348
  - Labels command U205, U348
  - Quick command U200, U348
- reports U194–199
  - creation T31
  - designing the layout T183–187
  - Graph U194, U198–199, U206–207, U208–209, U323–324
  - mailing labels T195–196
  - Quick U194–196, U200–203
- Request box U306
- Request function C10, C40, C142, U306
- requirements Uxxi
- .res files U350
- reserved keyboard equivalents U297–298
- resize an object T62

- resizing
  - file boxes U12
  - layout elements U71
  - Text Area U76
- Return key T77, U151
- Revert to Saved command (File menu/Design environment) T62, U134, U137, U242, U253, U339
- Round function C13, C143
- routines P19
- rulers U67, U87, U120–122, U131–133
  - hiding U87, U131
  - showing U87, U131
  - units, defining U87, U131
- runtime version Uxxvi, T32, U144
  - debugger and U254
  - passwords and U329
  - quitting and U293

## S

- Save button C233
- Save command (File menu/Design environment) U339
- Save dialog box U174, U184, U190, U191, U202, U220–221
- Save Layout command (File menu) U134, U137
- SAVE LINKED RECORD command C6, C42, C144, C145, P115–119, P121
- SAVE OLD LINKED RECORD command C6, C98, C145, C209, P120–121, P128, T175–176
- Save Procedure command (File menu) U242, U253
- SAVE RECORD command C4, C146, P51
  - ADD RECORD command and C19
  - ADD SUBRECORD command and C20
  - CREATE RECORD command and C43
  - CREATE SUBRECORD command and C45
  - DELETE SUBRECORD command and C55
  - MODIFY RECORD command and C108
  - MODIFY SUBRECORD command and C110
  - RECEIVE RECORD command and C135
- SAVE SET command C6, C37, C147, P135
- Save Structure command (Design menu) U11
- Save Structure command (File menu) U8
- SAVE VARIABLE command C11, C15, C148, C159
- saving
  - ASCII maps U220–221
  - databases T6
  - layouts U137
  - procedures U242, U253
  - Quick report definitions U202
  - search criteria U174
- Scaled to fit pictures P79, P152, U319
- scaling factor U69, U122
- Scatter chart U198
  - See also Graph reports
- Scrapbook (Apple menu) C82, U209

- Screen height function C10, C121, C149, C150
- Screen width function C10, C121, C149, C150
- screen(s)
  - control lines and U128–130
  - customized T35
  - data output to C8
  - included layouts and U312–314
  - output, layouts for U128–129
- Scrollable area(s) C232–235, P91–95, T135, U111, U310
- Scrollable window P114
- search
  - criteria order T86
  - records T30
  - save search criteria T87
- Search and Modify command (Select menu) C153, P49, T37–38, T91, U162, U168, U176–177, U178–179, U347
- Search and Modify dialog box T91, U176–177, U178–179
- Search by Formula command (Select menu) C151, P49, U162, U168, U180–183, U184–185, U186–187, U347
- Search by Formula dialog box U180–183, U184–185
- Search by Formula editor U180–183, U184–185
  - editing in U183, U185
  - operators in U182
  - parts of U181–182
- SEARCH BY INDEX command C2, C3, C151, C153–154, C155, C178, P49, P98, P113
- SEARCH command C2, C3, C151, C151–152, C153, C154, C155, C232, P49
- Search command (Select menu) T86, U162, U168, U169–173, U174–175, U239, U347
- search criteria P50
  - creating U172–173, U174
  - loading U175
  - saving U174
  - syntax U170–171
- Search dialog layout C211
- Search editor T87–88, U169–173, U174–175
- Search menu U238–239, U343
  - Find command U239, U241, U343
  - Find Next command U239, U241, U343
  - Replace command U239, U241–242, U343
  - Replace Next command U239, U242, U343
- SEARCH SELECTION command C2, C3, C151, C155, P49, U180
- SEARCH SUBRECORDS command C4, C156
- SEARCH SUBSELECTION command C4
- Search window C152
- searching C185–187, U168
  - and modifying U168, U176–177, U178–179
  - by criteria U168, U169–173, U174–175
  - by formula U168, U180–183, U184–185, U186–187
  - selecting by U162
  - subfiles U186–187
  - subrecords U186–187
- SearchLength procedure C228
- SearchMax procedure C227, C228
- secondary sort field T82
- security. See passwords
- Select All command (Edit menu) T183, U161, U193
- Select menu U347
  - Search and Modify command U162, U168, U176–177, U178–179, U347
  - Search and Modify command T37–38, T91
  - Search by Formula command U162, U168, U180–183, U184–185, U186–187, U347
  - Search command U162, U168, U169–173, U174–175, U347
  - Search command T86
  - Show All command U161, U347
  - Show All command T89, T92, T151
  - Show Subset command U161, U193, U347
  - Sort command U167, U347
  - Sort command T82

- Select palette tool T64, U70, U75–76, U139
- selection
  - current C187
  - manipulating C2
  - record subset T86
- selection (record subset) T86
- selection commands C2
- Selection window P115, U158, U286–288
- Semaphore function C12, C156
- SEND PACKET command C11, C157, C160, C179, P166, U211, U219
  - RECEIVE PACKET command and C133
  - SEND RECORD command and C158
- SEND RECORD command C12, C158, C160, C179, U219
- SEND VARIABLE command C12, C136, C159, C160, C179
- sequence structure P19
- serial port codes C254–255
- Set as Start command (Flowchart menu) U248, U252, U343
- SET CHANNEL command C12, C160–162, C254–255, P166
- Set Preferences command (File menu) U240
- SET WINDOW TITLE command C10, C163
- SetFlipPic program C246–247
- sets C6, C92, C99, C147, C178, P12
  - current selection and C187
  - defined P134–135
  - operations on P135–140
  - using P140–142
- Shift key C252
- Shift–clicking (mouse technique) U161
- Shift–Command U238
- Shift–Tab T42, U151
- shortcuts U352–355
- Show All command (Select menu) T89, T92, T151, U161, U347
- Show Custom Menus command (Menu menu) T161, U298, U303, U344
- Show Rulers command (Layout menu) U87, U131, U342
- Show Subset command (Select menu) U161, U193, U347
- Sin function C13, C163
- slash (/) C48
- software requirements Uxxi, T3
- SORT BY INDEX command C2, C164

- Sort command (Select menu) T82, U167, U347
- Sort dialog box P52, T82–83, U166, U167
- sort field P72
- sort field cells T82, T83
- sort order T82, T85
- SORT SELECTION command C2, C129, C164, C165
- SORT SUBSELECTION command C4, C139, C166, C203
- sorting C129, C185–187, P51–53
  - current selection (records) T30–31, T82–85, U166, U167
  - flowchart procedure for P25
  - global procedures U234
  - Standard Choices T54, U34
- space C48
- Special menu C200, C221, C228, C235, U348
  - Edit ASCII Map command U220–221, U348
  - Execute Procedure command T150, T194, U222, U348
- specifications U335–337
- splash screens U298, U303
- Squares sum function C13, C167
- squares, drawing U78
- Stacked Column chart U198
  - See also Graph reports
- Standard Choices U152–153
  - deleting U34
  - dialog box P41–42
  - entering data from U157
  - inserting U34
  - setting U33–35
  - sorting U34
- Standard Choices editor U27, U33–35, U153, U157
- Standard Choices field attribute U24, U25–27, U33–35, U152–153, U157
  - create a custom list T54–56
  - described T53
- Standard Choices window U152–153, U157
- starting T6–7, U3–6, U147
- statements P8
- statistical functions C13
- Std deviation function C13, C168
- steps (Flowchart editor) U243
  - See also Flowchart editor
  - changing size of U249
  - copying U251
  - creating U249
  - deleting U251
  - duplicating U251
  - editing U250
  - first, setting U248, U252
  - flowlines and U251
  - moving U250
  - selecting U250
- Stilldown C241
- Stop Alert box. See Alert box
- Stop button C70, C71, C85, C86, C87, C151
- string expression operators P15
- String function C14, C169
- string functions C14
- string lengths, scanning C227–228
- string repetition operator C114
- .struct files U350
- structural maximums U336
- structure T13, U8
  - of database files T14–17
- Structure command (Design menu) U340
- Structure editor T24

- Structure menu P36, U341
  - Change Field command U39, U341
  - create fields T49–51
  - Delete Field command U40, U341
  - Delete File command U40, U341
  - Modify Field command U31
  - New Field command T112, U19, U29, U36–37, U341
  - New File command U14, U341
  - Rename file command T47–48, U12, U341
  - Rename file command T47–48
- Structure window U2, U6, U7–8, U265–267
  - drawing a link in P107
  - field name and type display T51
  - file creation T46–49
  - Structure menu and U341
  - subfile appearance T112
- Style menu P75, P147, U76, U83, U88, U342
  - Center command T63
  - text elements and T65
- sub–passwords. See passwords
- subfields P3, P11–12, P54
- Subfile field type P3, P39, T111, U21, U36–37, U156
  - automatic layouts and U93
  - changing U21
  - specifications for T52
- subfile(s) C202–205, P3, P11–12, P54–68, U15–17, U94
  - create and name T24, T111–112
  - create subfields T112–113
  - creating U36–37
  - described T16–17
  - display in parent file T116–119
  - enter and view data in T120–122
  - exporting and U211
  - importing and U211
  - importing and exporting with C215–217
  - included U156
  - input layout for T113–114
  - Layout dialog box P60–61
  - layout procedures P64–65, P124–125
  - layouts P60–61, P123
  - levels P60
  - links and P128–131, U265, U268–270
  - nesting P60, U16
  - output layout for T114–115
  - overview of T110
  - printing labels from C191–193
  - searching P59, U186–187
  - structure P57
  - subfield P37
  - when to use P66–68
- subrecord(s) P54, P57
  - data entry P60–61
  - defined T16, T41–43, T110
  - manipulating C5
  - searching P58, U186–187
  - selecting C5
- subroutines T21
  - See also global procedures
  - select from list T147
- subselections, manipulating C4
- Substring function C14, C79, C170
- substructures P54
- Subtotal function C8, C13, C88, C95, C129, C171, C172, P72, T190, U127–128
- subtotals

in Quick reports U201  
print sequence for U127–128  
Sum function C13, C129, C171, C172, C228, P55  
superimposition operations P154, P155  
SYLK format U210, U214  
syntactic metasymbols P6

- syntactic symbols P6
- syntax errors U240, U245, U254, U255
- System file T3
- system requirements Uxxi
- system variables C15–16, C117, C249–252

## T

- TAB character C72
- Tab key U151
  - movement in fields T42
- Tan function C13, C173
- tests (Flowchart editor) U243
  - See also Flowchart editor
  - creating U249
- Text Area palette tool T62, T64, U70, U73, U75–76, U89, U112–113, U118
- Text Areas
  - adding U75
  - resizing U76
  - variables and U112–114
- Text field type P3, P38, U20
  - See also Alpha field type
  - changing U22–23
  - formatting P75
  - specifications for T52
- Text format U210
- Time function C14, C173
- time functions C14
- time stamp (#T) U195–196
- Time string function C14, C47, C174
- time, current C14, C47
- title graphics U298
- title screen T35
- title stamps (Quick reports) U195–196
- titles (Quick reports), setting U202
- top level parent file U186
- totals (Quick reports), setting U201
- Trace button C175, C223, C224
- TRACE command C16, C113, C175, C224, U255
- Trace window C17, C175, C224, C225
- transcendental functions C13
- TRUE C16, C175
  - Not function and C113
- True function C16, C175, P17
- Trunc function C13, C143, C176
- Truncated pictures P79, P152, U318
- Turn Grid Off command (Layout menu) U86, U342
- Turn Grid On command (Layout menu) U86, U342
- types. See field types or specific field type

## U

- Undefined function C15, C148, C177
- Undo command (Edit menu) T62, U138–139
- UNION command C6, C62, C178, C180, P134, P135, P139
- Unique field attribute P3, P40, U24
  - See also Indexed field attribute
  - described T53
- UNLOAD RECORD command C12, C178
- UpdateEvt C241
- uppercase U172
- Uppercase function C14, C179
- USE ASCII MAP command C12, C179, P167, P168
- USE SET command C6, C21, C44, C99, C178, C180, P135, P137, P140

- User command (Environment menu) U143, U146, U147
- User command (Environment menu/Design environment) U340
- User command (Environment menu/User environment) U346
- User environment P5, P57, P126, P166, T22, T29–32, U142–143
  - add records T76–80
  - ASCII map T32
  - data entry and modification T30
  - described T29
  - interpreter and C221
  - menu bar U345–348
  - passwords and U330
  - record searching and sorting T30–31
  - report creation T31
  - SET WINDOW TITLE command and C163
  - starting up in U147
  - switching from Custom environment to U144, U146
  - switching from Design environment to U143–144, U146
  - switching to Custom environment from U145
- user interface C9–10, C142, C210–211
- user interrupts U255
- user procedures, display of U237
- UserSet system set C6, C62, C109, C253, P143
- Utilities menu, Calculator command T44

## V

- value, search criteria order T86
- variable dialog box P86, P91
- Variable Frame P62, U314, U315
- variable table P33–34
- variable type P32
- variable(s) C40, C100, C136, C148, C159, C177, C205, P4, P8, P9–10, P12, U93, U94, U105–114
  - See also specific variable
  - Accept button U110
  - Area U111
  - assignment operator (:=) T133, T149
  - automatic link procedure and U272
  - boxes around U354
  - Button P88, T133–134, U109–110, U117
  - character length of T168
  - Check Box U110
  - creating arrays of U352–353
  - declaring U106
  - dialog boxes and U95, U107
  - Don't Accept button U110
  - embedded U112–114, U118–119
  - Enterable P87, U108
  - External Area U111
  - Field-like U108–109, U112–113
  - fields and U106–107
  - formats of U112, U116
  - formatting U68, U87
  - global P28–30
  - Graph Area U111
  - in linked fields T103
  - initialize T169–172
  - input and U95

- layout P85–86, T124, T134–135, U115–117
- local P28–30
- naming U116
- Non-enterable P87, U109
- output and U95
- Radio Button U110
- Scrollable Area U111, U310
- Text Areas and U112–114
- tracing (Flowchart editor) U261
- types of U107–112, U116
- Variance function C13, C181
- versions of 4th Dimension Uxxvi, U144
  - debugger and U254
  - passwords and U329
  - quitting and U293
- vertical concatenation (/) P155
- vertical move (/) P157
- vertical scaling (\*) P160
- view files T24
- views U17

## **W**

- Welcome dialog box U4
- Welcome screen T6
- While loop, in global procedures T149
- While statement (Flowchart editor) U247
- While...End while statement C15, C69, C113, C182
- White pattern U84
- widths (of boxes) U354
- wildcard character (@) C96, C153, P32, P114, T40, U158, U172, U238, U288
- windows C10, U308
  - See also specific window
  - CLOSE WINDOW command and C39
  - ERASE WINDOW command and C68
  - GO TO XY command and C80
  - MESSAGE command and C104
  - OPEN WINDOW command and C120–121
  - SET WINDOW TITLE command and C163

## **X, Y, Z**

- X axis (Graph reports), setting U199, U206
- Y axis (Graph reports), setting U199, U206
- Year of function C14, C183
- zoom box T60