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Lotus

Lotus 1-2-3^{for} UNIX System V

Quick Reference

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Cambridge, MA 02142

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1-2-3 for System V Quick Reference

Quick Reference summarizes command-line options, 1-2-3 function and pointer-movement keys, file types, label prefixes, arithmetic and logical operators, @functions, and macro commands.

UNIX Command Line Options

To invoke *1-2-3 for System V* with command line options, use the following general syntax:

```
123 [-cfknpw specifiers]
```

<i>Option</i>	<i>Explanation</i>
-c [upper lower]	specifies that 1-2-3 should run in uppercase or lowercase mode in MS-DOS file mode. This option is used in conjunction with a -f dos setting.
-f [unix dos]	specifies whether 1-2-3 should use UNIX filenames or DOS-style filenames. If you specify -f dos on the command line, 1-2-3 uses -c lower as the default case.
-k keyboard	specifies an alternate keymap definition in the keymaps database.
-n	suppresses output to the current display device. In effect this executes <i>1-2-3 for System V</i> as a noninteractive background process. Any file that you retrieve in non-interactive mode must have an autoexecute macro, a command to quit 1-2-3, and no interactive commands.

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<i>Option</i>	<i>Explanation</i>
-p [3-26]	specifies the maximum number of windows to display in perspective mode. The number of perspective windows that 1-2-3 can display is dependent upon the number of lines available on your terminal or workstation.
-w filespec	specifies an alternative file name for the 1-2-3 autoexecute worksheet file. By default 1-2-3 executes the autoexecute macro (\0) contained in a file named auto123.wk3 (in UNIX and DOS-lower file modes) or AUTO123.WK3 (in DOS-upper file mode). Note that 1-2-3 differentiates uppercase and lowercase names for this autoexecute worksheet file.

In specifying filespecs for the -w option, observe the following:

- A basic filename without a directory path specification refers to a file in your default 1-2-3 directory (specified with /Worksheet Global Default Dir).
- In UNIX mode, an absolute file specification such as /usr/sheets/file.wk3 does not require that the file be stored in your default 1-2-3 directory.
- In DOS file modes, file specifications are expanded to absolute file specs only in relation to your default 1-2-3 directory. The filespec c:\sheets\file.wk3 expands c:\ to the file specification of the default 1-2-3 directory. To specify an absolute file specification in DOS modes, include the u:\ drive specification to anchor the file specification to UNIX root.

Key Summary

The following tables list keys you use in 1-2-3 and the different modes you can use each key in. For more detailed descriptions on how each 1-2-3 function key is assigned to keys on several popular keyboards, see the keyboard template included with this the booklet.

Function Keys

<i>Key</i>	<i>Mode</i>	<i>Action</i>
ABS	EDIT, POINT, VALUE	Adjusts a cell or range reference between a relative, absolute, and mixed reference.
CALC	READY EDIT, VALUE	Recalculates formulas. Converts a formula to its current value.
COMPOSE	EDIT, LABEL, READY, VALUE	Creates characters in 1-2-3 that do not appear on the keyboard.
EDIT	EDIT LABEL, READY, VALUE	Switches 1-2-3 between EDIT and LABEL or VALUE mode. Puts 1-2-3 in EDIT mode so you can edit the entry in the current cell.
GOTO	READY	Moves directly to a specific cell, named range, worksheet, or active file.
GRAPH	All modes	Displays the current graph or creates an automatic graph using the data around the cell pointer.
HELP	All modes but HELP HELP	Displays the 1-2-3 Help screens. Displays the first screen that appeared when you first pressed HELP .

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<i>Key</i>	<i>Mode</i>	<i>Action</i>
NAME	EDIT, FILES, NAMES, POINT, VALUE	Displays a list of names related to the command you selected or the entry you are creating. See "1-2-3 Function Keys" in Chapter 1 of <i>User Reference</i> for more information on NAME.
QUERY	FIND, READY	Repeats the last Data Query command you selected or, during /Data Query Find, switches 1-2-3 between FIND mode and READY mode.
RECORD	READY	Lets you use the contents of the record buffer or turn STEP mode on.
	STEP	Turns STEP mode off.
RUN	READY	Selects a macro to run.
TABLE	MENU, READY	Repeats the last Data Table command you selected.
UNDO	READY	When the undo feature is on, cancels any changes you made since 1-2-3 was last in READY mode.
WINDOW	LABEL, POINT, READY, VALUE	Moves between windows you create with /Worksheet Window.
ZOOM	READY	Switches the current window between its original size and full-screen size.

Pointer-Movement Keys

<i>Key</i>	<i>Mode</i>	<i>Action</i>
→ or ←	EDIT	Moves right or left one character.
	FILES, HELP, MENU, NAMES	Moves right or left one item.
	LABEL, VALUE	Completes the entry and moves right or left one column.

(continued)

<i>Key</i>	<i>Mode</i>	<i>Action</i>
↑ or ↓	POINT, READY	Moves right or left one column.
	EDIT	If the entry occupies one line in the control panel, completes the entry and moves up or down one cell; if the entry occupies more than one line in the control panel, moves one line up or down in the entry.
	FIND	Moves to previous or next record that meets criteria.
BIG LEFT	FILES, HELP, NAMES	Moves up or down one item.
	LABEL, VALUE	Completes the entry and moves up or down one row.
	POINT, READY	Moves up or down one row.
	EDIT	Moves left five characters.
	FILES, NAMES	Moves to first item in a line.
BIG RIGHT	LABEL, VALUE	Completes the entry and moves left one screen.
	POINT, READY	Moves left one screen.
	EDIT	Moves right five characters.
	FILES, NAMES	Moves to last item in a line.
	LABEL, VALUE	Completes the entry and moves right one screen.
END	POINT, READY	Moves right one screen.
	EDIT	Moves to the last character.
	FIND	Moves to the first record that meets criteria.
	FILES, HELP, MENU, NAMES	Moves to the last item.
	LABEL, POINT, READY, VALUE	Completes an action when used with another pointer-movement key.

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<i>Key</i>	<i>Mode</i>	<i>Action</i>
END → or END ←	LABEL, VALUE	Completes the entry and moves right or left in the current row, to the next cell in the row that contains data and adjoins a cell on either side that does not contain data.
	POINT, READY	Moves right or left in the current row, to the next cell in the row that contains data and adjoins a cell on either side that does not contain data.
END ↑ or END ↓	LABEL, VALUE	Completes the entry and moves up or down the current column, to the next cell in the column that contains data and adjoins a cell above or below that does not contain data.
	POINT, READY	Moves up or down the current column, to the next cell in the column that contains data and adjoins a cell above or below that does not contain data.
END HOME	LABEL, VALUE	Completes the entry and moves to the lower right corner of the active area of the worksheet.
	POINT, READY	Moves to the lower right corner of the active area of the worksheet.
HOME	EDIT	Moves to the first character.
	FIND	Moves to the first record that meets criteria.
	FILES, HELP, MENU, NAMES	Moves to the first item.

(continued)

<i>Key</i>	<i>Mode</i>	<i>Action</i>
	LABEL, VALUE	Completes the entry and moves to A1 in the current worksheet unless column A is hidden or worksheet titles are set.
	POINT, READY	Moves to A1 in the current worksheet unless column A is hidden or worksheet titles are set.
PGUP or PGDN	EDIT, LABEL, VALUE	Completes the entry and moves up or down one screen.
	FILES, NAMES, POINT, READY	Moves up or down one screen.

Moving Around Multiple-Sheet Files

<i>Key</i>	<i>Mode</i>	<i>Action</i>
END NEXT SHEET	LABEL, VALUE	Completes the entry and moves back through worksheets in the current file to the next cell that contains data and adjoins a blank cell either in front of or behind it.
	POINT, READY	Moves back through worksheets in the current file to the next cell that contains data and adjoins a blank cell either in front of or behind it.
END PREV SHEET	LABEL, VALUE	Completes the entry and moves forward through worksheets in the current file to the next cell that contains data and adjoins a blank cell either in front of or behind it.
	POINT, READY	Moves forward through worksheets in the current file to the next cell that contains data and adjoins a blank cell either in front of or behind it.

(continued)

<i>Key</i>	<i>Mode</i>	<i>Action</i>
FIRST CELL	EDIT, LABEL, VALUE	Completes the entry and moves to cell A:A1 in the current file unless worksheet A or column A is hidden, or worksheet titles are set.
	POINT, READY	Moves to cell A:A1 in the current file unless worksheet A or column A is hidden, or worksheet titles are set.
LAST CELL	EDIT, LABEL, VALUE	Completes the entry and moves to the last nonblank cell in the current file.
	POINT, READY	Moves to the last nonblank cell in the current file.
NEXT SHEET	EDIT, LABEL, VALUE	Completes the entry and moves to the next worksheet.
	POINT, READY	Moves to the next worksheet.
PREV SHEET	EDIT, LABEL, VALUE	Completes the entry and moves to the previous worksheet.
	POINT, READY	Moves to the previous worksheet.

Moving Between Active Files

<i>Key</i>	<i>Mode</i>	<i>Action</i>
FIRST FILE	EDIT, LABEL, VALUE	Completes the entry, then moves to the cell you last highlighted in the first active file.
	POINT, READY	Moves to the cell you last highlighted in the first active file.
LAST FILE	EDIT, LABEL, VALUE	Completes the entry, then moves to the cell you last highlighted in the last active file.
	POINT, READY	Moves to the cell you last highlighted in the last active file.

(continued)

<i>Key</i>	<i>Mode</i>	<i>Action</i>
NEXT FILE	EDIT, LABEL, VALUE	Completes the entry, then moves to the cell you last highlighted in the next active file.
	POINT, READY	Moves to the cell you last highlighted in the next active file.
PREV FILE	EDIT, LABEL, VALUE	Completes the entry, then moves to the cell you last highlighted in the previous active file.
	POINT, READY	Moves to the cell you last highlighted in the previous active file.

Special Keys

<i>Key</i>	<i>Mode</i>	<i>Action</i>
ALT	All modes	Starts a macro when used in combination with a single-letter macro name.
BACK-SPACE	EDIT, LABEL, VALUE	Erases the character to the left of the cursor.
	POINT	Returns the cell pointer to wherever it was before 1-2-3 entered POINT mode and if the range is anchored, removes the anchor.
	HELP	Displays the previous Help screen.
BREAK	All modes	Cancels the current operation and returns 1-2-3 to READY mode.
DEL	EDIT, LABEL, VALUE	Erases the character above the cursor.
ENTER	All modes	Completes an entry, a selection, a command, or part of a command.

(continued)

<i>Key</i>	<i>Mode</i>	<i>Action</i>
ESC	All modes	Cancels the current entry or range, or returns to the previous command step.
INS	EDIT, LABEL, VALUE	Switches between inserting the character to the left of the cursor and replacing the character above the cursor with the character you type.
SCROLL LOCK	All modes	Switches arrow keys between moving the cell pointer and moving the window.

File Types

1-2-3 automatically adds an extension appropriate to the type of file you are naming. In UNIX file mode, 1-2-3 displays, retrieves, and saves files in the case that you specify. By default, file extensions appear in lower case. In DOS-upper or DOS-lower modes, 1-2-3 displays, retrieves, and saves files stored exclusively in uppercase and lowercase respectively.

<i>File type</i>	<i>Description</i>
Backup	.BAK or .bak
Encoded	.ENC or .enc
Graph	.CGM or .cgm, .PIC or .pic, depending on current file mode and /Worksheet Global Default Graph setting
Temporary	.TMP or .tmp
Text	no default
Worksheet	.WK3 or .wk3 unless you specify another extension with /Worksheet Global Default Ext

Label Prefixes

Label prefixes determine how a label is aligned in a cell.

<i>Prefix</i>	<i>Effect on label display</i>
'	Aligns the label with the left edge of the cell (initial alignment for labels).
"	Aligns the label with the right edge of the cell.
^	Centers the label in the cell.
\	Repeats the label to fill the cell.
	Creates a nonprinting label. 1-2-3 displays the label on the screen but will not print it.

Arithmetic and Logical Operators

The following table shows the arithmetic, string, and logical operators you can use in formulas, and their order of precedence. **Precedence numbers** represent the order in which 1-2-3 performs operations in a formula. The lower the precedence number, the earlier 1-2-3 performs the operation. Operations with the same precedence number are performed sequentially from left to right.

<i>Operator</i>	<i>Operation</i>	<i>Precedence number</i>
^	Exponentiation	1
- +	Identification of value as negative or positive	2
* /	Multiplication and division	3
+ -	Addition and subtraction	4
= <>	Equal-to and not-equal-to tests	5
< >	Less-than and greater-than tests	5
<=	Less-than-or-equal-to test	5

(continued)

<i>Operator</i>	<i>Operation</i>	<i>Precedence number</i>
>=	Greater-than-or-equal-to test	5
#NOT#	Logical-NOT test	6
#AND# #OR#	Logical-AND and logical-OR tests	7
&	String concatenation	7

@Functions

NOTE Arguments in [] (brackets) are optional.

NOTE You can select from a list of all 1-2-3 @functions by typing @(and pressing NAME.

Database @Functions

@DAVG(*input,field,criteria*) averages the values in a field of a database table, based on certain criteria.

@DCOUNT(*input,field,criteria*) counts the nonblank cells in a field of a database table, based on certain criteria.

@DGET(*input,field,criteria*) extracts a value or label from a field of a database table, based on certain criteria.

@DMAX(*input,field,criteria*) finds the largest value in a field of a database table, based on certain criteria.

@DMIN(*input,field,criteria*) finds the smallest value in a field of a database table, based on certain criteria.

@DQUERY(*function,ext-arguments*) sends a command to an external database management program.

@DSTD(*input,field,criteria*) calculates the population standard deviation of the values in a field of a database table, based on certain criteria.

@DSTDS(*input,field,criteria*) calculates the sample standard deviation of values in a field of a database table, based on certain criteria.

@DSUM(*input,field,criteria*) adds the values in a field of a database table, based on certain criteria.

Date and Time @Functions

@DVAR(*input,field,criteria*) calculates the population variance of the values in a field of a database table, based on certain criteria.

@DVARs(*input,field,criteria*) calculates the sample variance of values in a field of a database table, based on certain criteria.

@DATE(*year,month,day*) calculates the date number for *year*, *month*, and *day*.

@DATEVALUE(*string*) calculates the date number for a *string* that looks like a date.

@DAY(*date-number*) calculates the day of the month, an integer from 1 to 31, in *date-number*.

@D360(*start-date,end-date*) calculates the number of days between two date numbers, based on a 360-day year (12 months, each with 30 days).

@HOUR(*time-number*) calculates the hour, an integer from 0 to 23, in *time-number*.

@MINUTE(*time-number*) calculates the minutes, an integer from 0 to 59, in *time-number*.

@MONTH(*date-number*) calculates the month, an integer from 1 to 12, in *date-number*.

@NOW calculates the date and time number that corresponds to the current date and time in system memory.

@SECOND(*time-number*) calculates the seconds, an integer from 0 to 59, in *time-number*.

@TIME(*hour,minutes,seconds*) calculates the time number for *hour*, *minutes*, and *seconds*.

@TIMEVALUE(*string*) calculates the time number for a *string* that looks like a time.

@TODAY calculates the date number that corresponds to the current date in system memory.

@YEAR(*date-number*) calculates the year, an integer from 0 (1900) to 199 (2099), in *date-number*.

Financial @Functions

@CTERM(*interest, future-value, present-value*) calculates the number of compounding periods it takes for an investment (*present-value*) to grow to a *future-value*, earning a fixed *interest* rate per compounding period.

@DDB(*cost, salvage, life, period*) calculates the depreciation allowance of an asset for a specified *period*, using the double-declining balance method.

@FV(*payments, interest, term*) calculates the future value of an investment, based on a series of equal *payments*, earning a periodic *interest* rate, over the number of payment periods in *term*.

@IRR(*guess, range*) calculates the internal rate of return expected from a series of cash flows generated by an investment.

@NPV(*interest, range*) calculates the net present value of a series of future cash flows discounted at a fixed, periodic *interest* rate.

@PMT(*principal, interest, term*) calculates the amount of the periodic payment needed to pay off a loan, given a specified periodic *interest* rate and number of payment periods.

@PV(*payments, interest, term*) calculates the present value of an investment.

@RATE(*future-value, present-value, term*) calculates the periodic interest rate necessary for an investment (*present-value*) to grow to a *future-value* over the number of compounding periods in *term*.

@SLN(*cost, salvage, life*) calculates the straight-line depreciation allowance of an asset for one period.

@SYD(*cost, salvage, life, period*) calculates the sum-of-the-years' digits depreciation allowance of an asset for a specified *period*.

@TERM(*payments, interest, future-value*) calculates the number of payment periods in the term of an investment necessary to accumulate a *future-value*, assuming *payments* of equal value, when the investment earns a periodic *interest* rate.

@VDB(*cost,salvage,life,start-period,end-period,[depreciation-factor],[switch]*) calculates the depreciation allowance of an asset for a length of time specified by *start-period* and *end-period*. @VDB uses the double-declining balance method if no optional arguments are entered. An optional *depreciation-factor* argument lets you calculate depreciation for rates other than double-declining balance. An optional *switch* argument can make @VDB never switch to an ongoing straight-line depreciation calculation, even when that depreciation is greater than the declining-balance calculation.

Logical @Functions

@FALSE returns the logical value 0 (false).

@IF(*condition,x,y*) evaluates *condition* as true or false and takes one of two actions, depending on the result of the evaluation. If *condition* is true, @IF returns *x*. If *condition* is false, @IF returns *y*.

@ISERR(*x*) tests *x* for the value ERR. If *x* is the value ERR, @ISERR returns 1 (true); if *x* is not the value ERR, @ISERR returns 0 (false).

@ISNA(*x*) tests *x* for the value NA. If *x* is the value NA, @ISNA returns 1 (true); if *x* is not the value NA, @ISNA returns 0 (false).

@ISNUMBER(*x*) tests *x* for a value. If *x* is a number, the value ERR, the value NA, or a blank cell, @ISNUMBER returns 1 (true); if *x* is a string, @ISNUMBER returns 0 (false).

@ISRANGE(*range*) tests *range* for a defined range name or valid range address. If *range* is a defined range name or valid range address, @ISRANGE returns 1 (true); if *range* is not a defined range name or valid range address, @ISRANGE returns 0 (false).

@ISSTRING(*x*) tests *x* for a string. If *x* is a literal string or reference to a cell that contains a label, @ISSTRING returns 1 (true); if *x* is a number, the value ERR, the value NA, or a blank cell, @ISSTRING returns 0 (false).

@TRUE returns the logical value 1 (true).

Mathematical @Functions

- @ABS(x) calculates the absolute (positive) value of x .
- @ACOS(x) calculates the arc cosine of x .
- @ASIN(x) calculates the arc sine of x .
- @ATAN(x) calculates the arc tangent of x .
- @ATAN2(x,y) calculates the four-quadrant arc tangent of y/x .
- @COS(x) calculates the cosine of angle x .
- @EXP(x) calculates the value of e (approximately 2.718282) raised to the power x .
- @INT(x) calculates the integer portion of x , without rounding the value.
- @LN(x) calculates the natural logarithm (base e) of x .
- @LOG(x) calculates the common logarithm (base 10) of x .
- @MOD(x,y) calculates the remainder (modulus) of x/y .
- @PI returns the value π (calculated at 3.14159265358979).
- @RAND generates a random number between 0 and 1.
- @ROUND(x,n) rounds the number x to n places.
- @SIN(x) calculates the sine of angle x .
- @SQRT(x) calculates the positive square root of x .
- @TAN(x) calculates the tangent of angle x .

Special @Functions

- @@(*location*) returns the contents of the cell whose name or address is specified in *location*.
- @CELL(*attribute,location*) returns information about an *attribute* for the first cell in *location*.
- @CELLPOINTER(*attribute*) returns information about an *attribute* for the current cell.
- @CHOOSE(*offset,list*) returns the value or string in *list* that is specified by *offset*.
- @COLS(*range*) counts the columns in *range*.
- @COORD(*worksheet,column,row,absolute*) creates a cell address from values that correspond to *worksheet*, *column*, and *row*; the address is absolute, relative, or mixed, depending on the value in *absolute*.

@ERR returns the value ERR (error).

@HLOOKUP(*x,range,row-offset*) returns the contents of a cell in a specified row of a horizontal lookup table.

@INDEX(*range,column-offset,row-offset,[worksheet-offset]*) finds the value in the cell located at a specified *column-offset*, *row-offset*, and *worksheet-offset* of *range*.

@INFO(*attribute*) returns system information for the current session.

@NA returns the value NA (not available).

@ROWS(*range*) counts the rows in *range*.

@SHEETS(*range*) counts the worksheets in *range*.

@VLOOKUP(*x,range,column-offset*) returns the contents of a cell in a specified column of a vertical lookup table.

Statistical @Functions

@AVG(*list*) averages the values in *list*.

@COUNT(*list*) counts the nonblank cells in a *list* of ranges.

@MAX(*list*) finds the largest value in *list*.

@MIN(*list*) finds the smallest value in *list*.

@STD(*list*) calculates the population standard deviation of the values in *list*.

@STDS(*list*) calculates the sample standard deviation of the values in *list*.

@SUM(*list*) adds the values in *list*.

@SUMPRODUCT(*list*) multiplies the values in corresponding cells in multiple ranges and sums the products.

@VAR(*list*) calculates the population variance of the values in *list*.

@VARS(*list*) calculates the sample variance of the values in *list*.

String @Functions

@CHAR(*x*) returns the character that the LMBCS code *x* produces.

@CLEAN(*string*) removes control characters from the specified *string* or cell.

@CODE(*string*) returns the LMBCS code for the first character in *string*.

@EXACT(*string1*,*string2*) returns 1 (true) if *string1* and *string2* are the same or 0 (false) if they are not the same.

@FIND(*search-string*,*string*,*start-number*) calculates the position in *string*, beginning with *start-number*, at which 1-2-3 finds the first occurrence of *search-string*.

@LEFT(*string*,*n*) returns the first *n* characters in *string*.

@LENGTH(*string*) counts the characters in *string*.

@LOWER(*string*) converts all the letters in *string* to lowercase.

@MID(*string*,*start-number*,*n*) returns *n* characters in *string*, beginning with the character at *start-number*.

@N(*range*) returns the entry in the first cell in *range* as a value. If the cell contains a value, @N returns that value; if the cell contains a label, @N returns the value 0.

@PROPER(*string*) converts the letters in *string* to proper capitalization: the first letter of each word uppercase and the remaining letters lowercase.

@REPEAT(*string*,*n*) duplicates *string* *n* times.

@REPLACE(*original-string*,*start-number*,*n*,*new-string*) replaces *n* characters in *original-string*, beginning at *start-number*, with *new-string*.

@RIGHT(*string*,*n*) returns last *n* characters in *string*.

@S(*range*) returns the entry in the first cell in *range* as a label. If the cell contains a label, @S returns that label; if the cell contains a value, @S returns an empty string.

@STRING(*x*,*n*) converts a number (*x*) into a string with *n* decimal places.

@TRIM(*string*) returns *string* with no leading, trailing, or consecutive spaces.

@UPPER(*string*) converts all the letters in *string* to uppercase.

@VALUE(*string*) converts a number entered as a *string* into its corresponding numeric value.

Macros

NOTE You can select from a list of all 1-2-3 macros by typing { and pressing NAME.

Macro Names for Special Keys

The default key bindings for the following 1-2-3 key names are printed on the keyboard templates at the end of *Quick Reference*.

<i>1-2-3 key</i>	<i>Macro key name</i>
↓	{DOWN} or {D}
↑	{UP} or {U}
←	{LEFT} or {L}
→	{RIGHT} or {R}
ABS	{ABS}
BACKSPACE	{BACKSPACE} or {BS}
BIG LEFT	{BIGLEFT}
BIG RIGHT	{BIGRIGHT}
CALC	{CALC}
DEL	{DELETE} or {DEL}
EDIT	{EDIT}
END	{END}
ENTER	~ (tilde)
ESC	{ESCAPE} or {ESC}
FILE	{FILE}
FIRST CELL	{FIRSTCELL} or {FC}
FIRST FILE	{FIRSTFILE}, {FF}, or {FILE}{HOME}
GOTO	{GOTO}
GRAPH	{GRAPH}
HELP	{HELP}
HOME	{HOME}
INS	{INSERT} or {INS}
LAST CELL	{LASTCELL} or {LC}
LAST FILE	{LASTFILE}, {LF}, or {FILE}{END}

(continued)

<i>1-2-3 key</i>	<i>Macro key name</i>
NAME	{NAME}
NEXT FILE	{NEXTFILE}, {NF}, or {FILE}{NS}
NEXT SHEET	{NEXTSHEET} or {NS}
PGUP	{PGUP}
PGDN	{PGDN}
PREV FILE	{PREVFILE}, {PF}, or {FILE}{PS}
PREV SHEET	{PREVSHEET} or {PS}
QUERY	{QUERY}
TABLE	{TABLE}
WINDOW	{WINDOW}
ZOOM	{ZOOM}
/ (slash) or < (less-than symbol)	/, <, or {MENU}
~ (tilde)	{~}
{ (open brace)	{{ }
} (close brace)	{ }

1-2-3 does not have macro key names for the following 1-2-3 key names: ALT, COMPOSE, RECORD, RUN, SCROLL LOCK, SHIFT, and UNDO.

Advanced Macro Command Summary

NOTE Arguments in [] (brackets) are optional. For arguments that are not italicized, you must include that word as the argument in the command.

{*subroutine* [*arg1*],[*arg2*],...[*argn*]} performs a subroutine call.

{?} suspends macro execution, to let you move the cell pointer or menu pointer, complete part of a command, or enter data for the macro to process.

{APPENDBELOW *target-location*,*source-location*} copies the contents of *source-location* to the rows immediately below *target-location*.

{APPENDRIGHT *target-location*,*source-location*} copies the contents of *source-location* to the columns immediately to the right of *target-location*.

{BEEP [*tone-number*]} sounds the terminal's bell.

{BLANK *location*} erases the contents of *location*.

{BRANCH *location*} transfers macro control from the current column of macro instructions to *location* for further macro instructions.

{BREAK} returns 1-2-3 to READY mode during data entry or selection of a 1-2-3 command.

{BREAKOFF} disables BREAK during a macro.

{BREAKON} restores use of BREAK after a {BREAKOFF} command.

{CLEARENTRY} or {CE} clears all text from the third line in the control panel.

{CLOSE} closes a text file, if one is open.

{CONTENTS *target-location,source-location,[width],[cell-format]*} copies the contents of *source-location* to *target-location* as a label.

{DEFINE *location1,location2,...locationn*} stores arguments passed to a subroutine in a {*subroutine*} command so those arguments can be used later in the subroutine.

{DISPATCH *location*} performs an indirect branch by transferring macro control to the cell whose name or address is entered in *location*.

{FILESIZE *location*} determines the number of bytes in the open text file and enters the number in *location*.

{FOR *counter,start-number,stop-number,step-number,subroutine*} creates a for loop -- it repeatedly performs a subroutine call to *subroutine*.

{FORBREAK} ends a for loop created by a {FOR} command.

{FORM *input-location,[call-table],[include-list],[exclude-list]*} suspends a macro temporarily so you can enter and edit data in the unprotected cells in *input-location*.

{FRAMEOFF} suppresses display of the worksheet frame (worksheet letter, column letters, and row numbers).

{FRAMEON} redisplay the worksheet frame (worksheet letter, column letters, and row numbers).

{GET *location*} suspends macro execution until you press a key, then records your keystroke as a label in *location*.

{GETLABEL *prompt,location*} displays *prompt* in the control panel, waits for you to enter a response, and stores whatever you entered as a label in *location*.

{GETNUMBER *prompt,location*} displays *prompt* in the control panel, waits for you to enter a response, and stores whatever you entered as a number in *location*.

{GETPOS *location*} determines the current byte-pointer position in the open text file and enters it as a number in *location*.

{GRAPHOFF} removes from the screen a graph displayed by a {GRAPHON} command and redisplay the worksheet.

{GRAPHON [*named-graph*],[*nodisplay*]} does one of the following, depending on the arguments used: displays the current graph; makes the *named-graph* the current graph and displays *named-graph*; makes the *named-graph* the current graph without displaying the graph.

{IF *condition*} evaluates *condition* as true or false. If *condition* is true, 1-2-3 continues to the macro instruction immediately following the {IF} command. If *condition* is false, 1-2-3 goes immediately to the next cell in the column, skipping any further instructions in the same cell as the {IF} command.

{IFKEY *Key-name*} compares the contents of a cell with the names of valid 1-2-3 key names. If the cell contains a *key-name*, 1-2-3 continues the macro instruction immediately following the {IFKEY} command. If the contents of the cell do not contain a valid *key-name*, 1-2-3 goes immediately to the next cell in the column, skipping any further instructions in the same cell as the {IFKEY} command.

{INDICATE [*string*]} displays *string* as the mode indicator.

{LET *location,entry*} enters a number or left-aligned label in *location*.

{LOOK *location*} enters the first keystroke you made during noninteractive parts of a macro as a left-aligned label in *location*.

{MENUBRANCH *location*} displays in the control panel the macro menu found at *location*, waits for you to select an item from the menu, and then branches to the macro instructions associated with that menu item.

{MENUCALL *location*} displays in the control panel the macro menu found at *location*, waits for you to select an item from the menu, and then performs a subroutine call to the macro instructions associated with that menu item.

{ONERROR *branch-location*, [*message-location*]} traps and handles errors that occur while a macro is running and continues macro execution at *branch-location*.

{OPEN *file-name*, *access-type*} opens a text file for read-only processing or for read-and-write processing, depending on the type of access you specify.

{PANELOFF [*clear*]} freezes the control panel and status line, optionally clearing the control panel and status line's current contents.

{PANELON} unfreezes the control panel and status line after a {PANELOFF} command.

{PUT *location*, *column-offset*, *row-offset*, *entry*} enters a number or left-aligned label in a cell within *location*.

{QUIT} ends a macro immediately, returning keyboard control to the user.

{READ *byte-count*, *location*} starts at the current byte-pointer position in the open text file, copies a specified number of bytes (*byte-count*) to *location*, and advances the byte pointer *byte-count* bytes.

{READLN *location*} starts at the current byte-pointer position in the open text file, copies the remainder of the current line to *location*, and advances the byte pointer to the beginning of the next line in the file.

{RECALC *location*, [*condition*], [*iterations*]} recalculates the values in *location*, proceeding row by row for the specified number of *iterations* or until *condition* is met.

{RECALCCOL *location*, [*condition*], [*iterations*]} recalculates the values in *location*, proceeding column by column for the specified number of *iterations* or until *condition* is met.

{RESTART} is used in subroutines to clear the subroutine stack.

{RETURN} affects flow of control in subroutines. In a subroutine called by *subroutine* or {MENUCALL}, {RETURN} immediately returns macro control from the subroutine to the location from which the *subroutine* or {MENUCALL}

command was issued. In a subroutine called by a {FOR} command, {RETURN} ends the current iteration of the subroutine and immediately starts the next iteration.

{SETPOS *offset-number*} positions the byte pointer in the open text file *offset-number* bytes from the first byte in the file.

{SYSTEM *command*} temporarily suspends the 1-2-3 session and executes the specified operating system command.

{WAIT *time-number*} suspends macro execution and displays WAIT as the mode indicator until the time specified by *time-number*.

{WINDOWSOFF} freezes the worksheet area of the screen during a macro.

{WINDOWSON} restores normal updating of the worksheet area after a {WINDOWSOFF} command.

{WRITE *string*} copies *string* to the open text file, starting at the current byte-pointer position.

{WRITELN *string*} copies *string* and an end-of-line sequence to the open text file, starting at the current byte-pointer position.

The /X Commands

<i>/X command</i>	<i>Function</i>	<i>Corresponding advanced macro command</i>
<i>/XClocation~</i>	Calls the subroutine at <i>location</i> .	{subroutine}
<i>/XGlocation~</i>	Branches to <i>location</i> .	{BRANCH}
<i>/XIcondition~...</i>	If <i>condition</i> is true, performs the next instruction in the same cell. Otherwise, skips to the next cell for further instructions.	{IF}
<i>/XLprompt~[location]~</i>	Displays <i>prompt</i> in the control panel. Enters response as a label in <i>location</i> .	{GETLABEL}
<i>/XMlocation~</i>	Activates the macro menu stored at <i>location</i> .	{MENUBRANCH}
<i>/XNprompt~[location]~</i>	Displays <i>prompt</i> in the control panel. Enters response as a number in <i>location</i> .	{GETNUMBER}

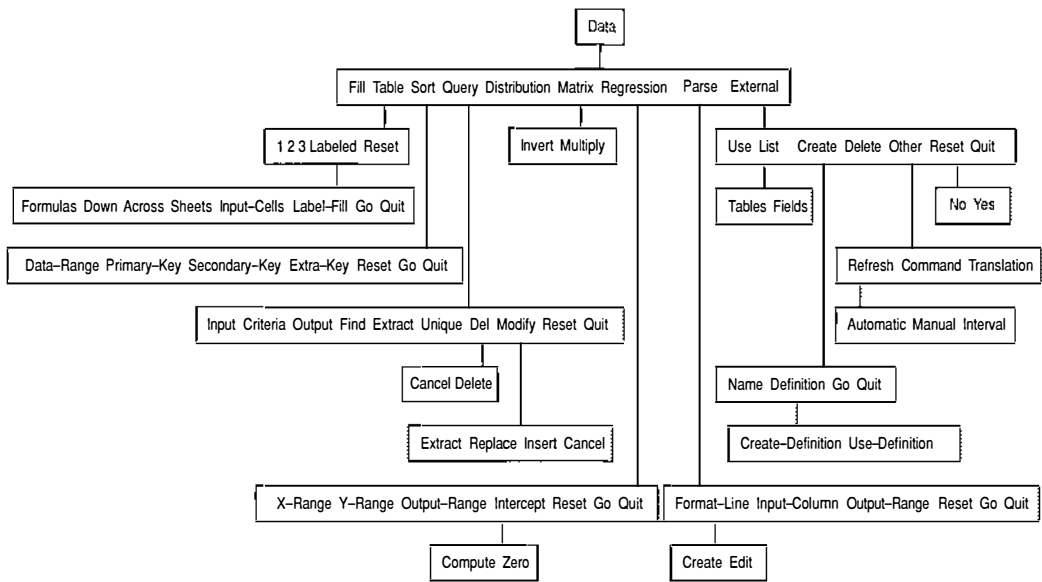
(continued)

<i>/X command</i>	<i>Function</i>	<i>Corresponding advanced macro command</i>
/XQ	Ends the macro.	{QUIT}
/XR	Returns control from the current subroutine to the main macro, or ends the current loop through the subroutine and starts the next loop.	{RETURN}

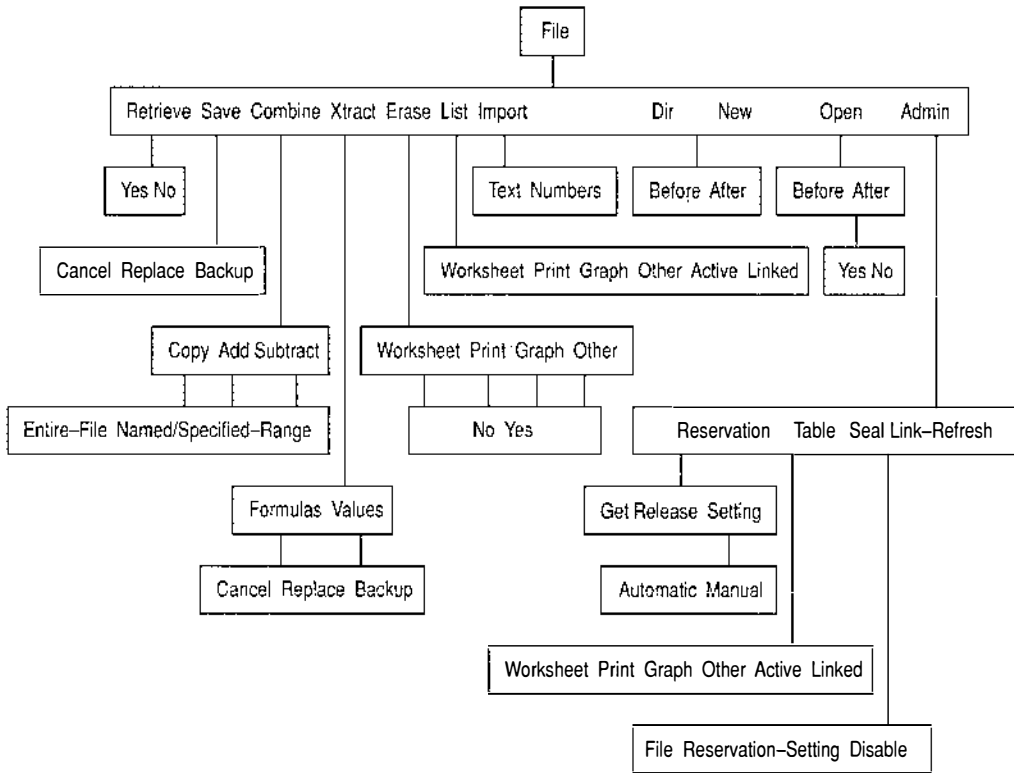
Menu Trees

This section contains menu trees for the Data, File, Graph, Print, Range, and Worksheet commands. These menu trees are the same as those that appear in Chapter 2 of *Reference*.

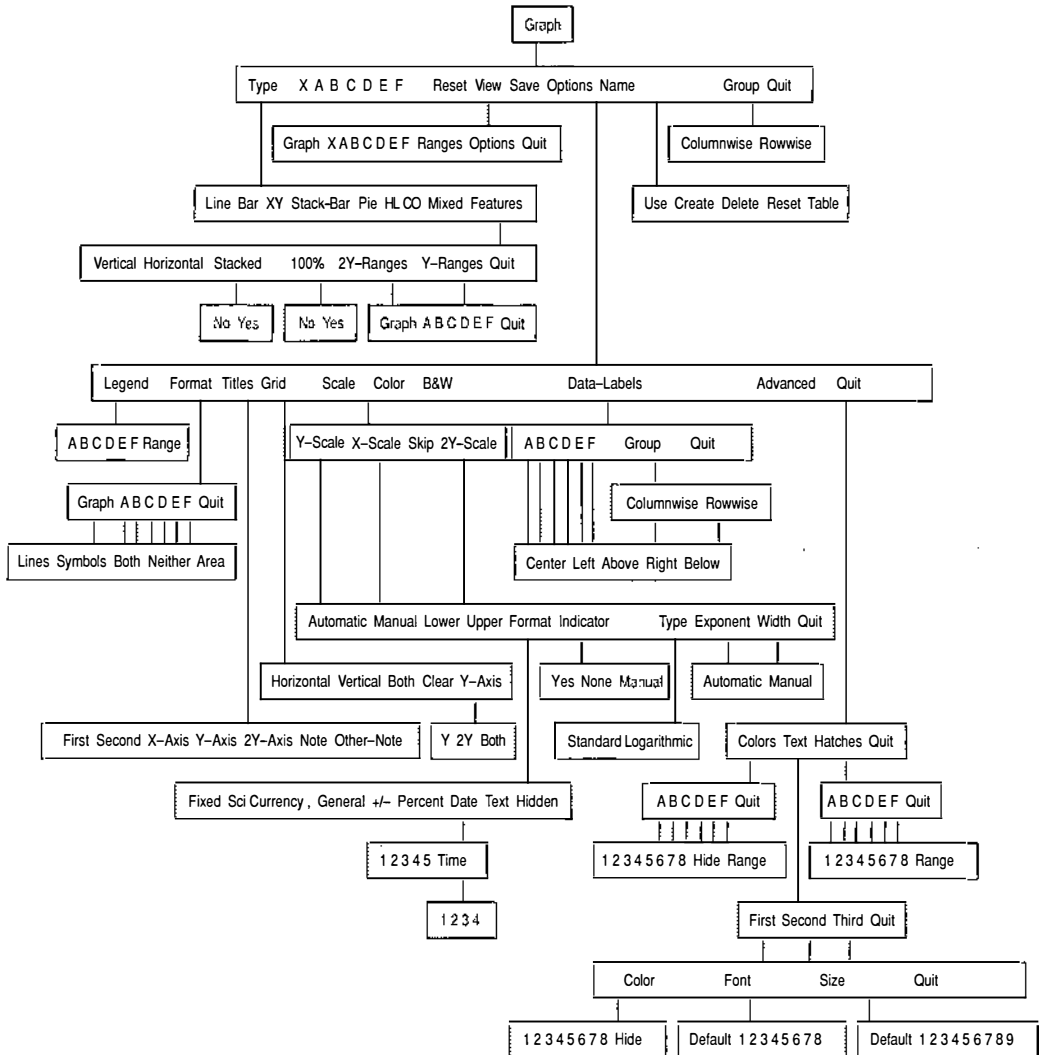
Data Commands



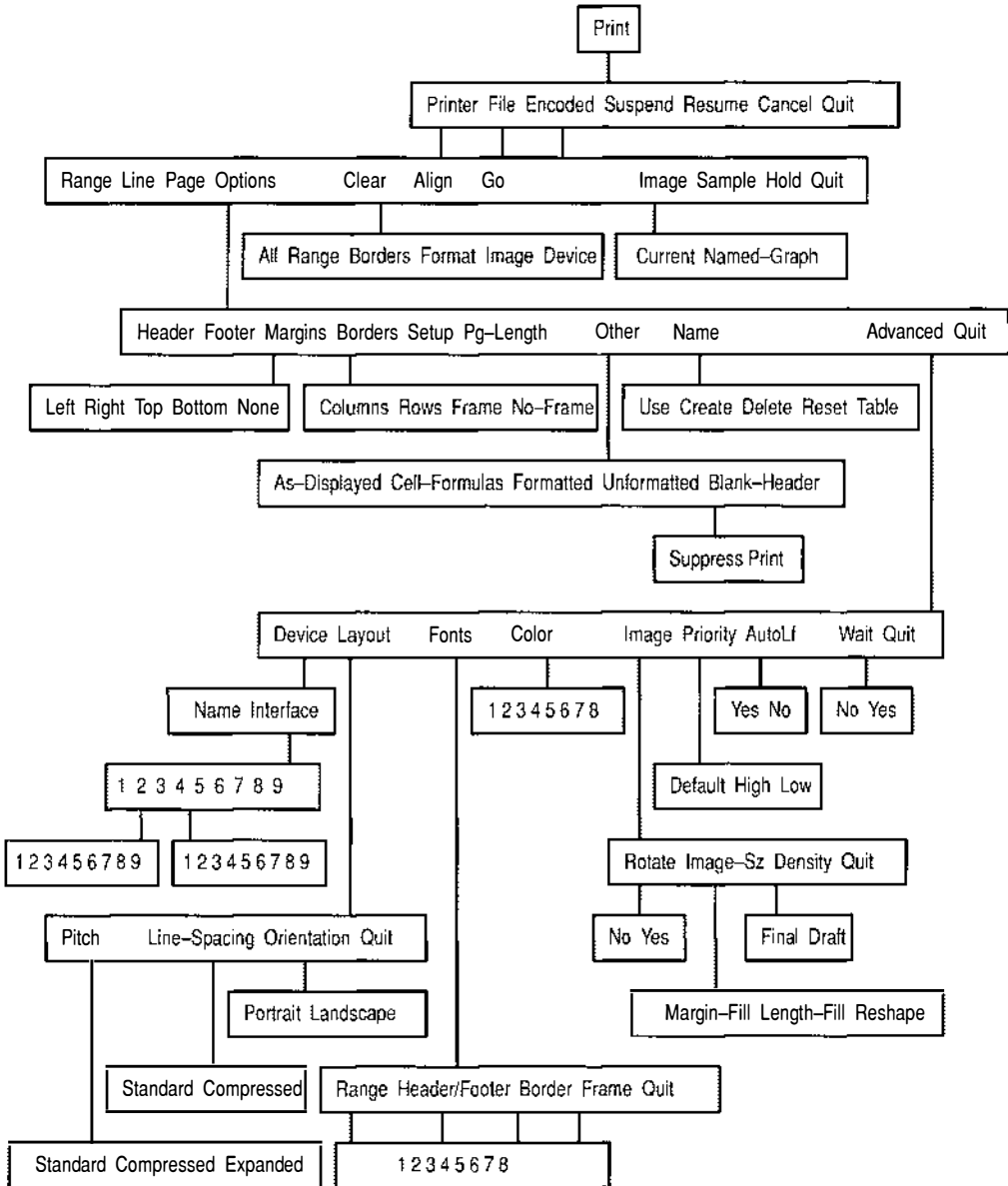
File Commands



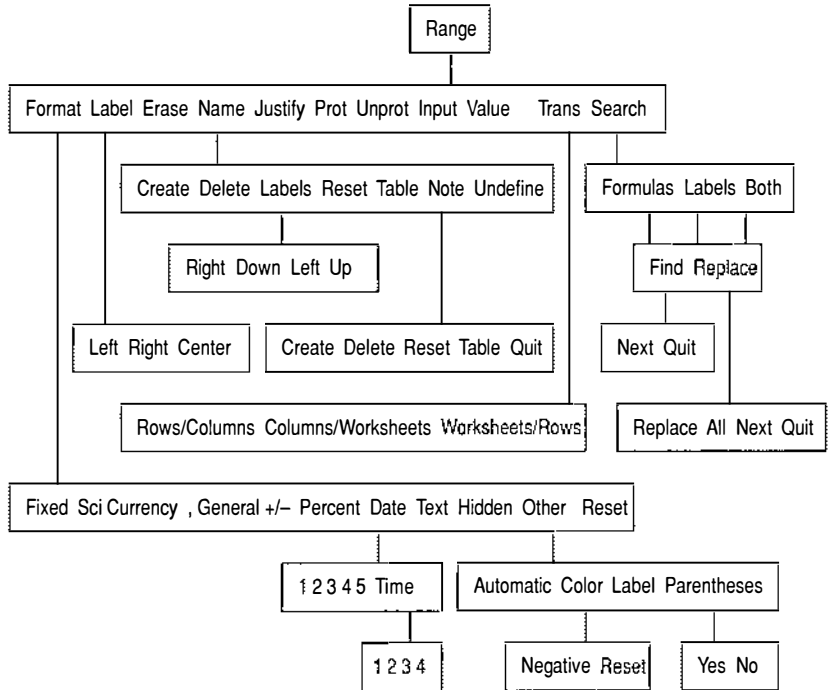
Graph Commands



Print Commands



Range Commands



Worksheet Commands

