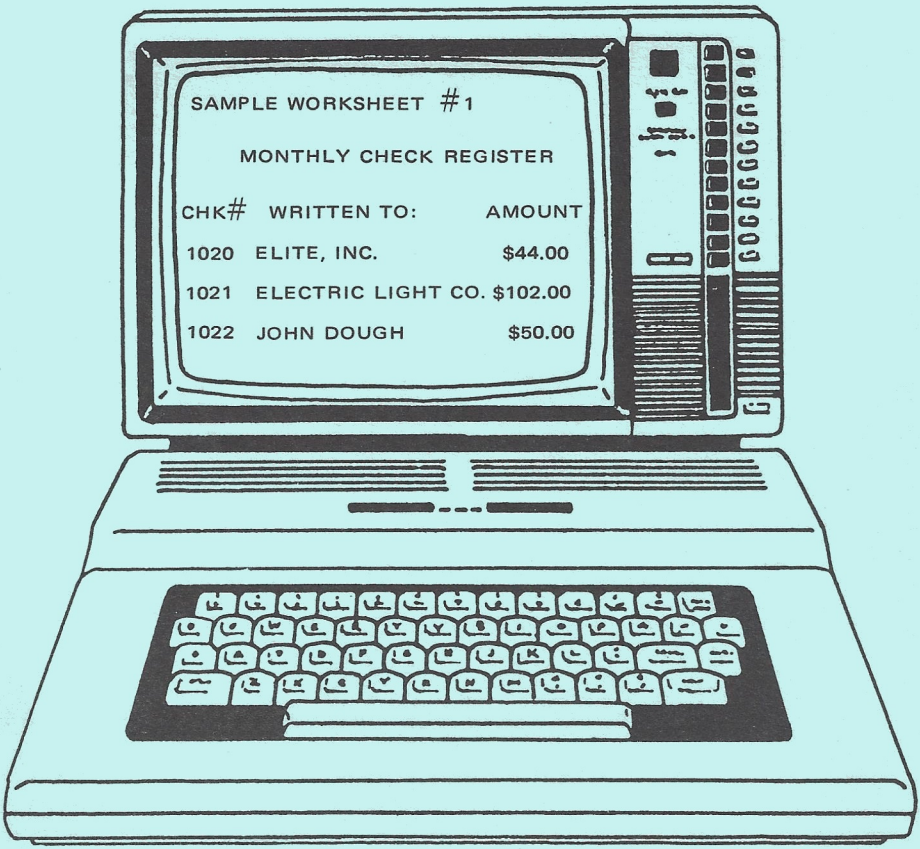
Elite•Calc™

Elite Software
BOX 11224, PITTSBURGH, PA 15238 (412) 795-8492

★ COLOR COMPUTER WORKSHEET ★

Elite-Calc™

INSTRUCTION MANUAL



Elite Software Box 11224 • Pittsburgh, PA 15238 • (412) 795-8492

E L I T E * C A L C©

* Color Computer Worksheet *

by Bruce M. Cook

INSTRUCTION MANUAL

REVISION 2

(c) 1983 B.M. Cook

ELITE Software
Box 11224
Pittsburgh, PA 15238

ELITE*CALC©

Introduction -- Congratulations! You've purchased a very powerful program for your Color Computer. ELITE*CALC is a full featured worksheet calculator which has been designed especially for the Color Computer. With this software you can answer "What if" questions, prepare reports, maintain records and perform other tasks that until now required sophisticated business computers. ELITE*CALC is a powerful tool for serious Color Computer applications.

While you may want to use this software right away, please take time to read the entire manual. It will familiarize you with the full potential of this program and prevent costly time consuming errors during your use of the program.

LOADING AND RUNNING

To load your ELITE*CALC program from disk, insert the disk in drive #0. Type RUN "CALC".* The program is transferred into your computer memory at this point. Your ELITE*CALC program is now ready for you to begin your worksheet. Disk users should also make a back-up of the disk, and store the original in a safe place.

To load ELITE*CALC from tape, place the cassette in your recorder, push the PLAY button, then type CLOADM "CALC". When the OK appears on the screen, type EXEC. You are now ready to begin. There are two copies of ELITE*CALC and the sample worksheets on tape. If you encounter problems with the first copy, try the second.

WHAT IS A WORKSHEET?

What's a Worksheet? -- In this application a worksheet refers to any form of columnated data. Any information which is organized as a grid of rows and columns is a worksheet.

*64K Disk users, type RUN "CALC64".

With ELITE*CALC, columns are designated by letters, and rows are designated by numbers. Rows are easy; there are 255 of them on your worksheet. They are numbered from 1 to 255. Columns are more difficult. The first 26 are lettered A thru Z, then AA thru AZ, etc. - all the way to column "IU" (column 255). You can place information anywhere on this grid which is 255 x 255 until you run out of available computer memory.

ELITE*CALC will run with all memory sizes 16K, 32K and 64K. The amount of memory which is available at any given time is constantly displayed in the upper righthand corner of the screen.

Using the above information it is possible to reference any location on the information grid. ELITE*CALC uses a COLUMN/ROW format. For example, if you say A5 this represents column A (the first column on the left) and row 5 (the fifth row from the top). The intersection of any column and row on the grid is called a CELL. All cells are specified in the COLUMN/ROW format. It is correct to say, cell A5. It is not correct to say cell 5A. The concept of a large grid with defined cells should now be clear. If it is not, please reread the previous paragraphs.

Now that the concept of a cell is understood, let's talk about a RANGE of cells. Range follows a CELL:CELL format. For example, the first 10 rows of column A are referred to as A1:A10. Also, the first 10 columns of row 1 are A1:J1.

A BLOCK is a group of cells. A block is not confined to a particular row or column but may include several columns and several rows. A block is designated by the first and the last cell in the block, that is, the upper left corner cell and the lower right corner cell. For example, if you want to refer to the block that contains the first five rows of column A, the first five rows of column B, and the first five rows of column C, you would call this block A1:C5.

Please note that blocks are always rectangular in shape; that is, in the previous example there would be no way to include cell B6 without including both A6 and C6. If you want to include B6 you must also include both A6 and C6. To do this, call the block A1:C6.

CELL CONTENTS

Information can be stored in any cell in four different fashions. These are numbers, text, repeat text, and formulas.

NUMBERS- To enter any number into a cell, simply type the number. All number entries are automatically given two decimal places. This can be changed using the Format command which will be discussed later.

TEXT- To enter text into a cell, the text must be preceded by a quote symbol ("). Then just type the text. Lower case text may be entered by first typing "<SHIFT> 0" (just as in Basic); the shift key will now work just like a typewriter. Lower case is displayed as inverse video. A second "<SHIFT> 0" locks capitals again. If you are entering a lot of text, refer to the Text Lock feature which is discussed later.

REPEAT TEXT- Use this feature to draw lines across your worksheet, or to "string" a line of asterisks in the same row as a separater. Do this by typing an apostrophe followed by one or more characters that you wish to repeat (i.e. '*, or '-). This text will repeat across the worksheet until it reaches a cell containing information. The repeated text can also be stopped by entering an apostrophe at the beginning of the cell which you want the repeat text to stop at. By entering this apostrophe, any repeat text after the apostrophe will disappear.

FORMULA- This is the most confusing of the four. A formula is any mathematical expression using any extended basic operators and functions, with cell locations used as variable names. For example, to add the contents of cell A1 to the contents of A2 and keep the results in cell A3, the formula in A3 would be A1+A2. To enter a formula into a cell it must be preceded by an equal sign (=) to distinguish it from a text entry. Another example would be to add 16 to

Separate calculations by colon (:) (Rainbow, 12/84, P.242)

the contents of cell D4, and store the results in D5. You would put the cursor in cell D5, and type =16+D4.

A word of caution on formula entries. If you use forward references to cells in higher numbered rows, or in higher lettered columns in the same row, you may find some unexpected results. If your calculations must include forward references, the "!" command should be used repeatedly to iterate the calculation.

CURSOR MOVEMENT

By now you must be wondering, "How do I get to a cell?". It's easy. When you first load ELITE*CALC the cursor is sitting in the first row, first column (cell A1). To move the cursor use the "ARROW" keys on your keyboard. Holding the arrow key down will give repeat movement. As you move the cursor through the worksheet (cell contents are displayed with inverse video), you will notice numbers at the top of your screen that change. These numbers are the present location of your cursor and the location of the very last cell of your worksheet. This tells you the overall size of the worksheet you are working with since it is the bottom right corner of your worksheet.

After you make an entry in a cell, the cursor will automatically move to the next cell in the direction of the last move. This feature speeds up data entry and may be turned on and off as will be described later in the AUTOMATIC Command section. There is a faster way to move around your worksheet. This faster way is described in the JUMP command later in the manual.

COMMAND PROMPT

The command prompt is what the system gives you when it needs your input from the keyboard. It looks like an arrow without a tail (>). When you see the command prompt, you may enter numbers, text, repeat text, formulas, or any of the commands which will be described next in this manual. For a quick list of the commands available type "?" at the command

prompt. This will give you a HELP DISPLAY. The HELP DISPLAY will list the available commands with a brief description of each command.

COMMANDS

There is quite a selection of commands available to you in ELITE*CALC. The more you familiarize yourself with these commands, the more powerful ELITE*CALC will become. The commands will be listed in alphabetical order for your ease in finding them. A quick reference summary is at the end of your manual, and don't forget the HELP DISPLAY you get by typing "?" at the command prompt.

Any command can be aborted by pressing the red <BREAK> key. This will return you to the command prompt mode with your worksheet intact.

EXAMPLE WORKSHEETS

At the end of the manual you will find a section titled ELITE*CALC SAMPLE WORKSHEETS. In this section you will find three sample worksheets that you can load into ELITE*CALC for practice. Use these samples to familiarize yourself with the system before entering your own worksheet. Practice using the different commands so that you understand the total capabilities of this program.

REFERENCE INFORMATION

A list of error codes is shown on page 29 of this manual. When ELITE*CALC encounters an error, a code number will be displayed in an error message. A list of these error messages has been included.

The functions available in ELITE*CALC are summarized on page 30. Many of these functions can be found in the Extended Basic reference manual. The other functions are described in a more comprehensive manner.

For your convenience a command summary is included on page 32. This summary includes all of the commands available in ELITE*CALC. It also lists some individual key commands. This page is also your index for the commands.

AUTOMATIC COMMAND

At the command prompt (>), type "A" to enter the Automatic command. This command allows the user to choose whether or not the cursor will automatically advance to the next cell upon completion of the entry of the current cell. The system will prompt you with "AUTOMATIC (CALC,NEXT)".

If you type "C" and the system says "NOW OFF", then as you enter new data to your worksheet, the formulas will not calculate new values using this new data. You may want to turn the Calculate option off until the end of your session to save the time it takes for your computer to make all the calculations at every step. While the automatic calculate mode is turned off, new values may be calculated for the formulas by typing an exclamation point "!" at the command prompt (>).

If you type "C" and the system says "NOW ON", then every time you enter new data into your worksheet, the formulas will calculate new values using this new data.

If you type "N" and the system says "NOW OFF", when you return to the worksheet the cursor will always stay at the cell in which the last entry was made. You must move it to the next entry position using the four "Arrow" keys. Use this feature when you have already created your worksheet and desire to make a few small changes in several cells.

If you select "N" and the system says "NOW ON", when you return to the worksheet, the cursor will automatically move to the next cell in the same direction from which the last cursor move was made. For example, if you were in cell B3 and moved to cell B4, the cursor will automatically move next to cell B5 after your entry. Or, if you were in cell C6 and moved to cell D6, the cursor will move next to cell E6. Use this feature when you wish to consecutively enter cell data - For instance, a column of names or a row of numbers.

BLANK RANGE

At the command prompt (>), type "B" to execute the Blank command. This command is used to erase the contents of a particular cell, range, or block of cells. It can also be used at the onset of a new worksheet to establish the total matrix size. This would be done only to allow the system to work more efficiently, thus saving the user time.

After typing "B", the system prompts you with "ENTER RANGE". At this point, type the letter and number corresponding to the cell that you want to erase. If you had previously positioned the cursor on the cell you wish to erase, just press <ENTER> when "ENTER RANGE" appears. This action will erase the cell contents at the preset cursor position.

If you wish to blank a range of cells, you must enter the letter and number corresponding to the cell in the upper or left cell of the range, then type a colon and immediately follow the colon with the letter and number of the cell at the bottom or right cell of the range you wish to erase (i.e., A1:A10 or A1:F1). After you press <ENTER>, the Blank command will delete all cell contents of the specified range.

If you wish to blank a block of cells, you must enter the letter and number corresponding to the cell in the upper left corner of the block, then type a colon and immediately follow the colon with the letter and number of the cell in the bottom right corner of the block you wish to erase (i.e., A1:D12). After you press <ENTER>, the Blank command will delete all cell contents of the specified block. Cannot do row 255 (Hangs up)

COPY COMMAND

At the command prompt (>), type "C" to enter the Copy command. This command allows you to copy the contents of a single cell, range, or a block of cells to another location while leaving the original cell or cells as they were.

The system will prompt you with "COPY RANGE". If you want

to copy a single cell just type the cell location (i.e., A5). If you want to copy a range of cells, type the cell location of the upper or left cell, followed by a colon, followed by the cell location of the bottom or right cell (example A1:A5 or A1:F1). The system then prompts you with "COPY TO". This is where you specify the new location of the copied cell or cells. If you are only copying one cell, this is where you specify its new location. If you are copying a range of cells, this is where you specify ONLY the location of the upper or left cell. The system knows from there how many cells it will need to fill.

If you want to copy a block of cells, type the cell location of the upper left corner, followed by a colon, followed by the cell location of the bottom right corner (example: A1:G5). The system then prompts you with "COPY TO". This is where you specify the new location of the copied block of cells. When copying a block of cells, this is where you specify ONLY the location of the upper left corner. The system knows from there how many cells it will need to fill.

The copy command will overwrite previous cell entries. Be careful that you don't overwrite cell entries you wish to keep.

After you have entered the new location for the copy, the system will prompt you with "OPTIONS (V,N,Q)".

V= VALUES only. This is used when the contents of a cell that you want to copy were created by a formula. You want to copy the VALUE ONLY of that cell, but NOT the way which that value was created. One use of this option would be to fix values by copying a block to itself with the "V" option. An example would be "COPY A1:B10 TO A1 OPTION V". This eliminates the formulas that generated the numbers; therefore, they won't change with subsequent data changes.

N= NO adjust of formula. When this option is chosen, the formula which was in the cell that you are copying remains exactly the same in the cell which it was copied to. There is no adjustment of the formula to reflect its new location.

Q= QUERY for adjustment of the formula to reflect its new location. This option will stop at each new cell reference in the formula to be copied and ask you if you want that cell reference to be adjusted to reflect the formula's new position in the matrix.

If NONE of the above options are chosen, all formulas are automatically adjusted to reflect their new location. This is done by pressing <ENTER> at the system prompt of "OPTIONS (V,N,Q)".

DELETE COMMAND

At the command prompt (>), type "D" to begin the Delete command. This command is used to delete a column or row. After pressing "D" the system prompts you with the question "DELETE (C,R)?". At this point type "C" for column or "R" for row.

If you have selected a column delete, then type the letter of the column which you want to remove. When deleting a column, all column contents are lost. The system will reconfigure by relettering all subsequent columns. For example, if you chose to delete column B, the old column C will become the new column B, etc.

If you have selected a row delete, then type the number of the row which you want to remove. When deleting a row, all row entries are lost. The system will reconfigure by renumbering all subsequent rows. For example, if you chose to delete row 2, the old row 3 becomes the new row 2, etc.

Please note that DELETE removes entire columns or rows. To erase the contents of individual cells use the BLANK command.

EDIT CELL

At the command prompt (>), type "E" to enter the Edit Cell command. The Edit command is used to change the contents of any

existing cell entry. Also use the Edit Command to examine formulas which may be stored in cells.

After typing "E", the system prompts you with "EDIT CELL". Here you type the letter and number corresponding to the cell location you want to edit (i.e. D6). The system then shows the contents of that cell. The number that appears to the left of the cell contents will be a 1,2,3, or 4. This number corresponds to the type of data contained in the cell. They are listed here.

1 Formula or Number
2 Value (from 'V' option, see Copy)
3 Text
4 Repeat Text String

The Edit command works exactly the same as the edit command in Extended Basic. You can now edit the cell contents just like you would edit any line of a BASIC program. This was done to omit confusion to the Extended Basic user.

There are two additional features to the Edit command. If you type an "A" while in Edit, the edit of that cell will be aborted and restarted. You are still in the edit mode for the same cell.

The other feature is the "Q" feature in Edit. Q, as in Quit, ends the editing session on that cell and puts you back into your worksheet with the cell contents unchanged.

For more details on the Edit command refer to your Extended Basic manual. A summary of the commands available is:

A	Abort edit and restart.
nC	Change n characters.
nD	Delete n characters.
H	Delete remaining line & Insert.
I	Insert.

nKc	Kill up to n'th occurrence of c.
L	List line & Edit.
Q	Quit edit, no changes.
nSc	Search for n'th occurrence of c.
X	Extends line.
<SHIFT>	Escape from subcommand.
n<SPACE>	Move n to right.
n	Move n to left.

(n is any integer, for example 1 or 5 or 12, if n is 5 the n'th occurrence means the fifth occurrence)

FORMAT COMMAND

At the command prompt (>), type "F" to enter the Format command. This command is used to define the structure of information that will be entered into cells. Don't panic! ELITE*CALC provides 15 different structures.

When the format command is entered, the system will prompt you with "ENTER RANGE". You can enter the range as a cell (i.e., A5), a row (i.e., 5), a column (i.e., B), a range of columns (i.e., A:E), a range of rows (i.e., 1:5), a range of cells (i.e., A5:A25), or a block (i.e., A5:C10). When the range is entered, three lines of text appear on your screen. The first line has the heading "NUMBER:" followed by "C,D,F#,I,L,R,S#,$,G,+,-". These are your numeric options, each of which will be described below.

The second line which appears on your screen deals with your text options. You will see the heading "TEXT:" followed by your options of "TA,TL,TR". These will also be described in detail below.

If you've been counting you will notice that only fourteen options have been mentioned so far. The fifteenth option is shown on the third screen line. This option deals with column width and row height.

Column Width

The system has a default column width of nine. This can be changed by simply typing the letter corresponding to the column you wish to change at the system prompt "ENTER RANGE", then just type the number corresponding to the width you want that column to be. You can change the width of consecutive columns by entering a range of columns at the system prompt "ENTER RANGE", then type the number corresponding to the width you want all of the columns in that range to be. The maximum column width for any column is twenty-eight. However, adjacent blank columns may be used to allow longer text entries to overflow.

Row Height

Changing the row height is very similar. The system default row height is one. Changing the row height gives the effect of adding blank rows below your text. To do this, at the system prompt "ENTER RANGE", type the number of the row whose height you want to change. Then type the number corresponding to the height you want that row to be. You can change the height of consecutive rows by entering a range of rows at the system prompt "ENTER RANGE". This allows you to change a range of rows to the same height. You may want to do this to double space your rows. The maximum row height is twelve.

The following is a list of the format options and a description of each.

C-Commas. By choosing this option, you will have commas automatically inserted in your numbers that are more than three digits long. The commas are inserted in the standard grouping of three digits (i.e., 1,000,000.00). This is done for ease in reading large numbers.

D-Default. The default format for numbers is only a decimal with two digits to the right, and the integer portion to the left. Use the default command to clear a selected cell, or cells of all other format options. Please note that format

options are added to each other, and if you have selected an option which is no longer desired, you must use the default option and then put the options you did want back in.

F#-Fixed point with the number of decimal places chosen by you. If you type F4, all numbers within your selected cell(s) will have four decimal places.

I-Integer. In this format only integer values (no decimal places) are shown. If you enter a real number (a number with decimal places), the integer format will round the real number to its appropriate integer value. If the decimal portion is greater than or equal to .5, the number will be rounded to the next higher integer. If the decimal portion is less than .5, the number will be rounded to the next lower integer.

L-Left justified number. Using this format will place each number in the leftmost portion of the selected cell(s).

R-Right justified number. Using this format will place each number in the rightmost portion of the selected cell(s).

S#-Scientific notation. This format displays the number using standard scientific notation. The number you input into this format is the number of digits you want displayed to the right of the decimal sign. The exponent's sign is displayed with the exponent.

$-Dollar. This format will automatically place a dollar sign in front of any number entered into a cell with this format. NOTE: Dollar format also sets two decimal places. To print only whole dollars enter "$,I".

G-Graphics. This format displays the number that is contained in the cell as a string of graphic symbols whose length is equal to the integer portion of the number. This

format is useful for generating bar charts. The graphic symbol may be chosen by using the Printer Output command which is described in a later section, it is initially set to (*). The reader can also study the sample worksheet called PROFILE for the proper use of this command.

+ -Plus. This format displays a plus or positive sign to the left of all positive numbers, and a minus or negative sign to the left of all negative numbers.

- -Minus. This format displays a minus or negative sign to the right of all negative numbers. This format may be desired for accounting purposes.

TA- Text alternate font. This format is for printed outputs. The alternate font available depends upon your printer and is set in the Printer Output command which is discussed later.

TL- Text left justified. The text left justified format displays all text with the first letter in the leftmost portion of the cell. Text will be automatically formatted this way, unless specified otherwise.

TR- Text right justification. This format displays all text with the last entry in the rightmost portion of the cell. Use this format option when you desire to title columns with names such as JAN, FEB, MARCH, etc.

Please be aware that the format commands are additive in nature. That is, you can enter a string of more than one format, and all will be used. For example, the number (123456.789) with "C,F3,+,-" will be displayed as (123,456.789+). If you decide that you no longer want the (-) format on that number you must use the default (D) format on that cell, then re-enter the (D,C,F3,+) formats which will result in (+123,456.789).

FORMAT PRIORITIES: Formats may be entered in cells, rows or columns. When displaying or printing the text or number in a given cell, ELITE*CALC first checks to see if a format has been entered in that particular cell. If not, the program then checks the row that the cell is in for a format. Next, the column will be checked and finally, if no format has been entered, default formats will be used. The default for numerical entries is D,L and the default for text entries is TL. The format priority, cell then row, then column, then default is applied on a cell by cell basis. If an entry is made into a formatted cell and the entry is too large for the format (overflows the format), a (%) appears in the display or on the printed output to make you aware of the problem.

HIDE/UNHIDE COMMAND

At the command prompt (>), type "H" to enter the Hide/Unhide command. This command allows the user to remove a column or a row from the worksheet display or printout without actually removing (destroying) the column or row from the memory of the worksheet.

If you are wondering why one might want to hide data, here is an example: A salesman has a worksheet with his products in column A, the price he paid for these products in column B, and the retail price which he choses to sell these products in column C. A customer asks for a price list and the salesman, not wanting to show his cost, creates a printout of his worksheet with column B, the price which he paid, hidden.

To do this all that had to be done was press "H" for the Hide command. At the system prompt of "HIDE/UNHIDE (C/R)" type "C". At the prompt "COLUMN", type "B". Immediately column B was hidden from view. If it is a row that you want to hide, the procedure is the same. At the system prompt of "HIDE/UNHIDE (C/R)" type "R". At the prompt "ROW", type the number of the row you want to hide.

Also notice, when moving the cursor that it will disappear from the screen display when a hidden row or column is encountered. The cursor will reappear on the other side of the hidden data. This was done to remind you that data has been hidden.

If you store a worksheet on disk or tape which contains hidden data, it will reload with the same hidden data. However, all data is preserved and any row or column can be unhidden at any time.

To unhide a column or a row that is already hidden follow the same procedure that was used to hide that column or row.

Another excellent use of HIDE is to scroll a window of the worksheet. For example, row titles are placed in column A, and monthly entries are made in columns B through M. The current month's entries can be displayed next to the titles by hiding all of the columns in between. You can also hide row titles and their corresponding information using the row hide. This gives the effect of scrolling the bottom rows up to the top.

INSERT COMMAND

At the command prompt (>), type "I" to begin the Insert mode. This command is used to insert a column or row anywhere within the worksheet. The system prompts you with the question "INSERT (C,R)?". At this point type "C" for column or "R" for row.

If you have selected a column insert, type the letter of the column which you want the new column to precede. Then press <ENTER>. The worksheet will display the new column with all subsequent columns relettered. For example, if you insert a column before column B, the old column B will become the new column C, etc. The contents of the old columns will be carried with the insert, and all formulas will be redefined to include their new column references. There is no need to correct formulas or column contents after a column insert.

If you have selected a row insert, type the row number which you want the inserted row to precede. The worksheet will display the new row with all subsequent rows renumbered. For example, if you insert a row before row 2, the old row 2 becomes the new row 3, etc. The contents of the rows will be carried with the insert, and all formulas will be redefined to include their new row references. There is no need to correct formulas after a row insert.

If, before entering the insert mode, you position the cursor at the point where you want the insert to occur, you can then insert a column or row in the same manner as before. This time, after you press "R" or "C", for a row or column insert, simply press <ENTER>. This will automatically cause the insert to precede the cell where the cursor was positioned.

JUMP COMMAND

At the system prompt (>), type "J" to execute the Jump command. This command allows you to move freely within the worksheet. You can "jump" the cursor in all directions within the worksheet.

After you press "J", the system will prompt you with the question "JUMP TO?". At this point enter the cell column letter immediately followed by the cell row number that you wish to jump to. For example, to jump to row 5, column C, type "C5" as the response to the question "JUMP TO?". The worksheet will reconfigure the display such that cell C5 is in the top left hand corner.

If you answer the question "JUMP TO?" with a number only (say 50), the screen display will keep the same columns and move to row 50. Conversely, if you answer with a column letter (say "Z"), the screen display will keep the same rows and move column "Z" to the left most screen position.

If you want to reposition the cursor at the first cell on the worksheet (A1), simply press <ENTER> at the prompt "JUMP TO?". This is referred to as "jumping home" because it places cell "A1" in the uppermost lefthand corner of the worksheet.

KONSTANT DEFINITION

At the command prompt (>), type "K" to enter the Konstant Definition mode. This mode allows the user to define up to twenty-six predetermined constants. The Konstant Definition mode prompts the user with "K". A display showing all twenty-six constants will appear below the prompt. The constants are labeled KA,KB,KC,...KZ. To select the constant you want to define, type the letter corresponding to that constant. For example, if you want to define constant KB, type a "B". An equal sign (=) will then appear. After the equal sign type the value that you want that constant to be. It will appear in the table, and you will remain in the Konstant Definition mode. You may enter and/or change up to twenty-six constants without leaving this mode. To return to your worksheet press the red <BREAK> key.

These constants may now be referenced in formulas that are entered into cells and would typically be used for worksheet parameters like interest rates, frequently used multipliers (PI), etc. These values will only be changed with the "K" command.

A constant can take on the value of a number, an expression (i.e., 4*D6), or a function (i.e. SIN(A4)). However, the value of that constant is only created once (at the time it is entered) so if an expression or a function is used, please be aware that the value of the constant will not change even though the value of cells or other constants referenced in the expression or function may change.

LOAD FILE

At the command prompt (>), type "L" to Load a worksheet file. The system will prompt you with "LOAD FILE NAME?". At this point type the name of the file which can be up to eight alphanumeric characters. Disk files may also include a three character extension separated from the name by a slash (/), or a period (.). If you omit the extension, it will look for a file with the extension ".CAL". For disk users, if there is not an

existing file with the extension ".CAL", you will get a DISK ERROR 26. You will also get this error if you try to load any file.ext (filename.extension) which is not on the disk.

If you want to load a file but don't know what files exist on your drive, type "?" at the system prompt "LOAD FILE NAME?". This will give you a directory listing of all the files on your disk. If you have more than one disk drive, type "?#", where # is the number of the drive containing the disk which you want a directory listing. After the directory has been listed the system will prompt you again with "FILE NAME?". Now that you know the existing file names you can respond with "FILE.EXT" followed by <ENTER>. NOTE: Do not press the <BREAK> key while a DIR command is being executed. You can use the <BREAK> key to abort this command only when the system is waiting for a response.

MOVE

At the command prompt (>), type "M" to enter the Move command. This command is used to move a row or a column to a new position. The system will prompt you with "MOVE ROW/COLUMN" If you respond with a "R" for row, it will respond with "ROW". Here you type the number corresponding to the row that you want to move. It then asks "MOVE TO". Now you type the number where you want that row to be. Move adjusts the worksheet without destroying any data or any formatting. It moves a specified row up or down and inserts it into a new location. The rows in between move to fill the old location. That is, they move in the opposite direction to the basic move.

If you respond to the prompt "MOVE (C,R)" with a "C" for column, the system will ask "COLUMN". Type the letter corresponding to the column you want to move. It then asks "MOVE TO". Here you type the letter corresponding to the new column where you want that column to be. It moves the specified column left or right and inserts it into its new position. As in the row move, the columns in between move to fill the old location which means that they will move in the opposite direction to the basic move.

NEW WORKSHEET

At the command prompt (>), type "N" to begin a New worksheet. Use this command when you want to erase an entire worksheet. The system will ask you "NEW, ARE YOU SURE?". If you respond with a "Y" for yes, it will kill the entire current worksheet and a new blank worksheet will appear. When executing the "N" command, all entries in the current worksheet will be lost. If you have entered the "N" command and want to keep your current worksheet, type "N" as the response to the question "NEW, ARE YOU SURE?". This will abort the command and not change the current worksheet. Another way to abort this command is by pressing the <BREAK> or <ENTER> key.

OUTPUT TO PRINTER

At the command prompt (>), type "O" to Output a complete worksheet file or partial worksheet file to a printer. Be sure that you have already used the "P" command to set up your printer before you try to output a file.

After you type "O", the system will respond with "OUTPUT TO PRINTER, RANGE". If you press <ENTER>, the entire worksheet will be output to the printer. If you only want part of the worksheet to be output, type in the upper left corner cell followed by a colon, then the lower right corner. For example, if you have a worksheet that is ten rows down and five columns across, but you only want to output the first five rows and the first two columns, type "A1:B5". Also, selected rows and/or columns may be hidden from a printout with the use of the HIDE command.

The printout can be aborted before it is completed by pressing the red <BREAK> key. This will return you to the command mode with your worksheet intact.

It is good operating practice to write your worksheet to disk or tape before using printer output commands. A security worksheet on disk or tape is a good thing to have.

PRINTER FORMAT

At the command prompt (>), type "P" to enter the Printer Format command. This command is used to set up your printer so that it is compatible to ELITE*CALC. This is the command you use to set the alternate font, page length and width, baud rate, graphics character, and the title of your worksheet.

When you type "P", a display will appear on the screen. It will have eight lines, with the first letter in each line flashing in sequence. To choose one of the eight options, just press the flashing letter corresponding to the option you want. Any number of the options may be changed. To return to the worksheet press the <BREAK> key. The eight options will be examined more closely.

"TITLE:ELITE*CALC" This line is the title of your worksheet. The default title is ELITE*CALC. To change the title, type "T". The cursor will sit on the first letter of the title. Now, just type in the new title followed by <ENTER>. The title that you select will appear at the top of every worksheet page.

"SETUP:" This option is where you input the functions of your printer such as condensed print, emphasized print, double strike, or any other control code that you would want your printer to see before outputting the entire worksheet. These codes are the decimal values of the ASCII codes required by your printer. Refer to your printer manual for these values. This string of characters will be sent to the printer prior to outputting the worksheet with the "O" command.

15=underline, 31=double-width

"ALT. FONT:" This option is where you input the decimal values corresponding to the ASCII codes you need to send to your printer to specify an alternate font text. Again, you must refer to your printer manual for the codes available for your printer. This set of codes is output to your printer

prior to outputting a cell whose format contains a "TA" option (see Format command). Use this command if you want a certain cell or block of cells printed in italics (if your printer supports italics).

"NORM FONT:" This set of codes will be sent to your printer immediately following the end of an output which used the "TA" format. This set of codes returns your printer to its normal font. Once again, this set of codes is the decimal value of the ASCII codes which can be found in your printer manual.

"PAGE LEN.: 66" This is the length of a printed page. The default value is 66, which is the standard for an eleven inch long sheet of paper. To change this value, select "P" then type your new value.

When 66 is used, the top margin is 6 lines, the title (if included) is on line 4, and the first row of the worksheet will be printed on line 7. Using this format the last printed line on the page will be worksheet row 54 (assuming no previous lines were hidden). After worksheet row 54 is printed, ELITE*CALC will leave 6 blank lines for a bottom margin. Page 2 will begin with worksheet row 55.

"LINE WIDTH: 80" This option is the length of one line of printed text. The default value is 80. This is the standard length for a line on an 8 1/2" sheet of paper. To change this value select "L", then type in your new value. With a 14" sheet of computer paper, you can have a line width up to 132 characters.

If you specify a line width which is less than the width of the worksheet which you want printed, ELITE*CALC will automatically break the width of the worksheet between columns, such that the break occurs prior to the specified line width. The remaining columns of the worksheet will be printed on the following page.

"BAUD RATE:0 87" The baud rate is given using the decimal value of the ASCII code coresponding to the baud rate (printer speed). The commonly used codes for the baud rate are listed for your convenience.

110 BAUD	1,241
300 BAUD	0,179
600 BAUD	0, 87
1200 BAUD	0, 41
2400 BAUD	0, 18
4800 BAUD	0, 6

The preset value of the baud rate is 600 baud which is the standard for the Color Computer. Both numbers, i.e., the zero and the following number, must be set.

"GRAPH CHAR: 42" This is where you tell ELITE*CALC which symbol you want to use to create the graphs in your worksheet. The preset value is 42 which is the decimal value for the ASCII code corresponding to an asterisk (*). You can change this by inputting the appropriate decimal value for the ASCII code corresponding to the new symbol. To do this type "G", then type in your new decimal value. You can study the PROFILE sample worksheet to see how the graphics character was used.

QUIT

At the command prompt (>), type "Q" to enter the Quit command. This command is used only when you want to quit work on your worksheet and return to BASIC.

If you want to preserve a copy of your worksheet, you must write it to a file before using the Quit command. If you want to delete your worksheet but remain in the ELITE*CALC program, use the New Worksheet command NOT the Quit command.

Upon entering the Quit command the system will ask "ARE YOU SURE?". If you answer with "Y" for yes, your worksheet will be deleted, the ELITE*CALC program is erased from memory, and the user is back in BASIC. Color computer users with 64K must also press the reset button on the back of the computer after executing this command. This command has the exact same effect as a cold start. If you answer with a "N" for no, you are returned to your worksheet with everything intact.

REPLICATE

At the command prompt (>), type "R" to enter the Replicate command. This command is used to copy the contents of one cell throughout a range of other cells. You can replicate a cell whose contents are text, numbers or formulas.

This command is very powerful and not obvious to most first time users. It is normally used when one wants to enter the same formula in many consecutive cells. Perhaps you want a column to represent the SUM of two previous columns (i.e. A1+B1=C1). Type the formula (=A1+B1) in the first cell of column C, and use the Replicate command for the rest.

The system will prompt you with "REPLICATE RANGE". You enter the cell which you want replicated (i.e., C1), then press <ENTER>. The system then prompts you with "REPLICATE TO:". Here you type the first cell, a colon, and the last cell (example C2:C25), or you can enter a single cell.

After you have entered the range the system will prompt you with "OPTIONS (V,N,Q)". These options are detailed below:

V= VALUES only. This is used when the contents of a cell that you want to replicate were created by a formula. You want to replicate the VALUE ONLY of that cell, but NOT the way which that value was created.

N= NO adjust of formula. When this option is chosen, the formula which was in the cell which you are replicating remains exactly the same in the cells which it was replicated to. There is no adjustment of the formula to the new location.

Q= QUERY for adjustment of formula for new location. This option will stop at each new cell reference in the formula to be replicated and ask you if you want that cell reference in the formula to be adjusted to reflect its new position in the matrix.

If none of the above options are chosen, all formulas are automatically adjusted to reflect their new location. This is done by pressing <ENTER> at the system prompt of "OPTIONS (V,N,Q)".

You can replicate a partial row or partial column to fill an entire block. For example: "REPLICATE RANGE A1:C1", to "A2:C12". This could be used as a quick method to reproduce the formulas in any row, that are specific to one entry, to fill the entire worksheet to prepare for additional entries.

SORT COMMAND

At the command prompt (>), type "S" to enter the Sort command. The Sort command allows the user to sort text entries in alphabetical order. It also allows one to sort text in descending alphabetical order (from Z to A). In alphabetical sorts, upper and lower case letters are considered equal. It will also sort numbers in increasing order or decreasing order. If a sort is done on a row or column with both number and text entries, the text entries have priority over the numbers. If there are blank cells within the range, they will have priority over both text and number entries.

Upon entering the Sort command the system will prompt you with "SORT ON RANGE". The range can either be a column, row,

partial column or a partial row. It CANNOT be a block. To enter the range use the same format as shown here;

column: "A1:A12"
row: "A1:G1"

The system will then ask "ASCENDING OR DESCENDING ORDER". You then respond by typing "A" for Ascending or "D" for Descending order.

If you need to perform a sort on multiple fields do the least priority sort first, and work up to the highest priority sort.

Note that when performing a sort on a column, all other columns will be moved along with the column that is being sorted. For example, if column A's contents are student's names, and column B's contents are the students exam grades, a sort on column A to alpabetize the students names, will also move the student's exam grades along with their names. The same procedure holds true for all sorting procedures.

Care must be taken when sorting rows that contain formulas. As a general rule, rows that are to be sorted may not contain formulas that reference other rows. Formulas that only reference cells in the same row are permissible. Otherwise, the formulas may yield unexpected results. Similarly, columns that are to be sorted may not contain formulas that reference other columns.

One common occurrence where sorting can lead to erroneous formulas is to have a block of row entries that is followed by a row containing formulas with SUMs of the columns. When the block of row entries is sorted the range references in the SUM formulas are adjusted to follow the rows they originally referenced. This is not the desired result. To overcome this condition, an additional row should be inserted above and below the block which is to be sorted. These rows may be blank or may contain titles or dividing lines without affecting the results of the formulas. The range of the SUM formulas should reference the extra rows. This way the SUM formulas will not be changed. These extra rows

also facilitate the addition of new entries at the top or bottom of the list.

A good general rule is to perform all sorts BEFORE you enter cell formulas. If this is not possible, check to make sure that each formula is still performing its desired function after a sort.

When the Sort is used the largest cell in the sort is displayed on the command line. When performing very large sorts, the cell location which the sort routine is currently working with is also displayed. The sort routine may appear to stop for many seconds. This means that the system is doing a memory clean-up. The sort will proceed after this is done.

TEXT LOCK

At the command prompt (>), type "T" to enter the Text Lock mode. At this point, the user can enter text without having to use the quote symbol (") at the beginning of each cell entry. After each cursor movement to a new cell, text can be input without the quote ("). This is a convenient feature when continuously entering lists of titles, column headings, months of the year, names, accounts, etc. The arrow keys will still move the cursor while in this mode. To exit from the text lock state, simply press the <BREAK>. This will put you back in the command mode.

WRITE FILE

At the command prompt (>), type "W" to Write a worksheet file to disk or tape. The system will prompt disk users with "WRITE TO DISK". Before writing a file, the program compacts the memory. During this time period a black square will flicker in the upper left corner of the screen to let you know the program is working fine. This may take several seconds for a large worksheet. When it is done, it will ask you if you want to write the file in ASCII format. Usually you will answer "N" indicating

that you want to store a normal ELITE*CALC file. The program will then ask for the file name. At this point you must type in a name for your file. This name must be no longer than eight alphanumeric characters. Disk files can also be given an extension up to three alphanumeric characters separated from the name by a slash (/), or a period (.). If you neglect to assign an extension to your file, the extension ".CAL" will automatically be assigned.

For disk users, if you have more than one disk drive, enter "FILE.EXT:#"; where # is the number of the drive you wish to write to. If you press <ENTER> when it asks for a file name, the last file name entered (i.e., the name of the file you just loaded) will be used. This is a very convenient feature used especially when updating existing files.

Also for disk users, if you want a directory listing type "?" at the command prompt of "WRITE TO DISK". If you have more than one drive type "?#", where # is the number of the drive. If you type a drive number for a drive that doesn't exist, you will get a "DISK ERROR 19".

If you answer the ASCII format question with a "Y", the program will write a file that is formatted just like the printer output. This format is compatible, as an input file, with most word processors. Use this feature to include your worksheets as figures within text reports. The default extension for disk ASCII files is ".TXT". WARNING... Once you have written a file in ASCII format, it may not be loaded back into ELITE*CALC. You should write the file FIRST using the normal format, then write the file using the ASCII format.

ERROR CODES

If something goes wrong, ELITE*CALC will display an error message at the top of the screen. The code numbers for those errors are explained below.

GENERAL ERRORS

Input Error
Out of Memory

FORMULA ERROR TYPES

1	Syntax Error
4	Function Call Error
5	Overflow Error
10	Divide by Zero

DISK ERRORS (disk version only)

18	File Already Open
19	Drive Number Error
20	I/O Error
21	File Mode Error
26	File Does Not Exist
28	Disk Full
30	Write Protect Error
31	File Name Error
32	File Structure Error (Bad Directory)
36	Verify Error

TAPE ERRORS (tape version only)

20	I/O Error
21	File Mode Error

FUNCTION SUMMARY

ABS(exp)	Absolute value.*
ATN(exp)	Arctangent in radians.*
AVERAGE(range)	Returns the average value of all numeric entries within the range specified. Inclusion of text or blank entries in the range does not effect the value. To average the first 10 cells in column A, enter =AVERAGE(A1:A10) in the desired cell.
COS(exp)	Cosine.*
COUNT(range)	Returns the number of numeric (i.e. non-text, non-blank) entries within the range specified. For example, =COUNT(A1:A55)
FIX(exp)	Returns truncated value.*
IF(exp) THEN(exp) ELSE(exp)	This allows the contents of a cell to be dependent upon the contents of another cell. If the relational expression following the IF is true, the cell will be given the value of the expression following the THEN, otherwise it will be given the value of the expression following the ELSE. The ELSE portion of the command can be omitted in which case a value of 0 will be inserted in the cell if the IF portion of the statement is not true. For example, enter the following function in any desired cell: =IF A5=3 THEN 2*A7 ELSE 20. Nested (one within another) IF statements are NOT permitted.
INT(exp)	Converts number to integer.*
EXP(exp)	Natural exponential.*

LOG(exp)	Natural logarithm.*
LOOKUP(exp,range)	Select value from table. The specified range must be a partial column (or partial row) but not a block. The range should contain numeric values in ascending order. The expression is evaluated and the range searched for the first value that is equal to or greater than the value of the expression. The corresponding value from the adjacent column to the right (or row beneath) is returned as the value of the function. Refer to sample worksheet #3 for example.
MAX(range)	Returns the maximum value of the numeric entries within the range specified. i.e. =MAX(A1:A5)
MIN(range)	Returns the minimum value of the numeric entries within the range specified. i.e. =MIN(A1:A5)
RND(val)	Random number up to value.*
SIN(exp)	Sine.*
SGN(exp)	Returns sign (+1,0,-1) of expression.*
SQR(exp)	Square root.*
SUM(range)	Returns the summation of all numeric (i.e. non-text, non-blank) entries in the range specified. For example, =SUM(A1:A35) will add all the numeric values in the range A1 to A35.
TAN(exp)	Tangent.*

* Refer to Extended Basic manual for further explanation.

(exp) Is an expression, which can be a number, cell reference (e.g. A5), or a function, or any combination of these using standard math operators (+,-,*,/, ,(),<,>,=,<=,=>,<>,AND,OR,NOT).

COMMAND SUMMARY

A	Automatic	p. 6
B	Blank Range	p. 7
C	Copy Block	p. 7
D	Delete a Row or Column	p. 9
E	Edit Cell Entry	p. 9
F	Format Range	p. 11
H	Hide/Unhide Row or Column	p. 15
I	Insert a Row or Column	p. 16
J	Jump to Cell	p. 17
K	Constant Definition	p. 18
L	Load a File	p. 18
M	Move Block	p. 19
N	New Worksheet	p. 20
O	Output to Printer	p. 20
P	Printer Format	p. 21
Q	Quit Worksheet & Return to Basic	p. 23
R	Replicate One to Many	p. 24
S	Sort by Row or Column	p. 25
T	Text Lock	p. 27
W	Write a File	p. 27

<BREAK>	Abort Command
Arrows	Cursor Movement
?	Help Display
"	Enter Text
=	Enter Formula
'	Enter Repeat Text
!	Calculate New Values

SAMPLE WORKSHEETS

Three sample worksheets have been included on the disk or tape you purchased. The intent of these samples is to demonstrate a few of the features of ELITE*CALC and give you some hints to help you quickly generate your own reports. Load each of these samples into ELITE*CALC and examine them. The actual formula in any cell can be seen by using the EDIT command on that cell.

The first sample worksheet is a monthly checkbook balance sheet on the file "CHECK.CAL". The worksheet allows you to enter checks and deposits. Column A shows a quick way to input sequential numbers. The first number is entered in cell A4. Cell A5 contains the formula A4+1. This formula is then replicated (R command) to as many rows as you need. This column is displayed in the I (integer) format. Columns C and D show how you can use adjacent columns to display text entries that are longer than the column width limit of 28. The formulas in the Balance column (column H) are of the form "=H4-F5+G5". Again, the entire column was filled using the Replicate command. This is an easy way to get a cumulative sum.

The second sample worksheet is a three year loan analysis schedule on file "LOAN.CAL". In this worksheet, the amount borrowed is entered into C3 and the interest rate is entered into C4. The monthly payment is calculated in C5 by the formula "=(C4/1200)/(1-(1+C4/1200))↑-36)". This formula shows the extensive calculational capabilities of ELITE*CALC. The worksheet then calculates a month by month analysis of the payback of the loan. When the "pay to principal" column formula was replicated to fill the column, the Q option was used to obtain adjustment of the reference to the cell in column D while holding the reference to cell C5 fixed. As an exercise, you should try to change this to a 48 month analysis by editing the formula in C5 to reflect 48 instead of 36 payments and by adding 12 additional rows to the payback analysis table. You could also add a cumulative interest paid column. Note the format of the

"Principal" column of the table. It is a combination of dollar and comma formats ($,C).

The final sample worksheet demonstrates some advanced ELITE*CALC features. It's on the file "PROFILE.CAL". In this worksheet, a list of salesmen is contained in column A, with an identification number for each salesman in column B. His gross sales are listed in column C. The net sales are determined using the LOOKUP function. The formulas in column D are like the following in cell D5: "C5*LOOKUP(B5,F5:F14)". When the matching number is found, the corresponding multiplier from the adjacent column, in this case H5 is picked up and multiplied by the gross sales to obtain the net sales. The net sales are plotted as a bar chart in column E. This is done by using the graphic format (G) mode. In this case the numbers were scaled down by first dividing each by 1000.

SAMPLE WORKSHEET #1

MONTHLY CHECK REGISTER

BALANCE FORWARD: $1243.56

CHK #	WRITTEN TO:	DATE	AMOUNT	DEPOSIT	BALANCE
1020	ELITE, INC.	4/12/83	$44.95		$1198.61
1021	ELECTRIC LIGHT CO.	4/13/83	$102.50		$1096.11
1022	JOHN DOUGH		$50.00		$1046.11
		4/15/83		$500.00	$1546.11
1023	INFERNAL REVENUE SERVICE		$1200.00		$346.11
1024	RAINBOW MAGAZINE	4/20/83	$14.00		$332.11
1025	ELITE, INC.		$24.95		$307.16
1026	RADIO SHACK	4/25/83	$123.95		$183.21
1027	ELITE, INC.		$29.95		$153.26
1028					$153.26
1029					$153.26

SAMPLE WORKSHEET #2

THREE YEAR LOAN ANALYSIS

PRINCIPAL	$10,000.00
INTEREST	11.90
PAYMENT	$331.67

PAYMNT #	PRINCIPAL	INTEREST	PAY TO PRNCPL
1	$10,000.00	$99.17	$232.50
2	$9,767.50	$96.86	$234.80
3	$9,532.70	$94.53	$237.13
4	$9,295.56	$92.18	$239.48
5	$9,056.08	$89.81	$241.86
6	$8,814.22	$87.41	$244.26
7	$8,569.96	$84.99	$246.68
8	$8,323.28	$82.54	$249.13
9	$8,074.15	$80.07	$251.60
10	$7,822.56	$77.57	$254.09
11	$7,568.47	$75.05	$256.61
12	$7,311.85	$72.51	$259.16
13	$7,052.70	$69.94	$261.73
14	$6,790.97	$67.34	$264.32
15	$6,526.65	$64.72	$266.94
16	$6,259.71	$62.08	$269.59
17	$5,990.12	$59.40	$272.26
18	$5,717.85	$56.70	$274.96
19	$5,442.89	$53.98	$277.69
20	$5,165.20	$51.22	$280.44
21	$4,884.75	$48.44	$283.23
22	$4,601.53	$45.63	$286.03
23	$4,315.49	$42.80	$288.87
24	$4,026.62	$39.93	$291.74
25	$3,734.89	$37.04	$294.63
26	$3,440.26	$34.12	$297.55
27	$3,142.71	$31.17	$300.50
28	$2,842.21	$28.19	$303.48
29	$2,538.73	$25.18	$306.49
30	$2,232.24	$22.14	$309.53
31	$1,922.71	$19.07	$312.60
32	$1,610.11	$15.97	$315.70
33	$1,294.41	$12.84	$318.83
34	$975.58	$9.67	$321.99
35	$653.59	$6.48	$325.18
36	$328.41	$3.26	$328.41
		$1939.96	$10000.00
	TOT PAY =		$11939.96

SAMPLE WORKSHEET #3

MONTHLY SALES PROFILE BY SALESMAN

SALESMAN	CODE #	GROSS	NET	SALES PROFILE
JOHN	1	$11,345	$9,076	#########
ROB	4	$13,546	$10,837	###########
CHARLEY	7	$23,546	$18,837	###################
BILL	10	$22,897	$18,318	##################
HARV	2	$21,786	$17,429	#################
RALPH	5	$9,453	$7,562	########
ED	8	$11,853	$9,482	#########
SAM	3	$10,988	$8,790	#########
AL	6	$13,243	$10,594	###########
JIM	9	$12,657	$10,126	##########

MULTIPLIER TABLE

CODE #	MLTPLR
1	0.800
2	0.750
3	0.850
4	0.770
5	0.650
6	0.890
7	0.660
8	0.780
9	0.670
10	0.890

LIMITED WARRANTY

You've purchased one of the best Worksheet calculators for the Color Computer. ELITE*CALC© has users from coast to coast. Like most computer software it is not warranted for fitness in your specific application. However, every effort has been made to make this software sufficiently flexible to a wide variety of uses. Like most good software, it is under constant revision in order to provide improved features and performance. Every effort has been made to thoroughly test each feature. However this software is not warranted to be free from defects. The cassette tape or disk is warranted to be free from defects that would prevent the program from loading on your computer. In the event you encounter such a problem, the tape or disk will be replaced at no cost upon your return of the original to:

ELITE Software
Box 11224
Pittsburgh, PA 15238

★ COLOR COMPUTER WORKSHEET ★

Elite·Calc™

NOW . . . The worksheet calculator program you've been waiting for is waiting to work for you. ELITE•CALC™ is a powerful, full featured worksheet calculator designed especially for the Color Computer. Answer "what if" questions, prepare reports, maintain records and perform other tasks that, until now, required sophisticated business computers. ELITE•CALC™ is a serious tool for those who want to do more than play games with their Color Computer.

Features include:

- Single character commands
- Help Displays
- Enter text or formulas to 255 characters long
- Repeat text entries
- 255 maximum rows
- 255 maximum columns
- Available memory always displayed
- Rapid Entry modes for text and data
- Selectable Automatic Cursor movement
- Insert, Delete, Move entire rows or columns
- Replicate one cell to fill a row or column with selectable formula adjustment
- All machine language for speed
- Extended BASIC required for ROM routine calls
- Automatic memory size detection for 16K, 32K or 64K
- > 20K bytes, storage available in 32K systems
- BASIC style formulas
- Math Operators: +,−,X,/,↑,(,),=
- Relation Operators: =,>,<,<=,>=,<>
- Logic Operations: AND, OR, NOT
- Conditional Formula: IF . . . THEN . . . ELSE
- Trig Functions: SIN, COS, TAN, ATN

- **EASY TO USE**
- **INDIVIDUAL CELL FORMULAS**
- **COPY BLOCKS OF CELLS**
- **FULL CELL-EDIT CAPABILITY**
- **COMPATIBLE WITH ALL PRINTERS**
- **EASY 132 COLUMN PAGE WIDTH**
- **CHANGEABLE BAUD RATES**
- **GRAPH FORMAT FOR BAR CHARTS**
- **SORT IN ASCENDING OR DESCENDING ORDER**
- **COMPREHENSIVE MANUAL INCLUDED**
- **NATIONWIDE USER GROUP**
- **HANDSOME VINYL BINDER**

THE BEST FOR ONLY

$59.95

Specify: **Disk or Tape**

— Shipping from stock NOW

— Dealer Inquiries Invited.

Add $2 Postage & Handling

PA residents add 6% sales tax

- Log Functions: LOG, EXP, SQR.
- Misc. Functions: INT, FX, ABS, SGN.
- Range Functions: SUM, AVERAGE, COUNT, MIN, MAX, LOOKUP
- Nine digit precision
- Definable constant table
- User definable printer set-up commands
- Individual column width settings
- Adjustable row height to insert blank lines without wasting memory
- Hide columns or rows
- Alternate print font selectable on cell by cell basis
- Display/Print formats set by cell, row, or column
- Dollar format, comma grouping; prefix or postfix sign
- Scientific notation, fixed point and integer formats
- Left and Right cell contents justification
- Full page formatting
- All formats stored with worksheet on disk(tape)
- Save & Load Disk(tape) files in compact memory form
- Scan disk directories
- Output ASCII file for word processor input compatibility
- Memory resident code . . . no repeated disk calls

Sample worksheets included

Elite Software Box 11224 • Pittsburgh, PA 15238 • (412) 795-8492

MasterCard VISA

*"Elite * Calc is a great spreadsheet program ! This professional quality program has the performance required for serious home applications as well as small businesses."*

Stuart Hawkinson, Rainbow

"Truly one of the best programs I have seen."

John Steiner, Micro

*"Elite * Calc is an extremely powerful worksheet . . . "*

Jack Lane, Color Micro Journal

*"Bruce Cook's Elite * Calc is a very fine program indeed; potentially one of the great Color Computer Programs." " . . . a very impressive product."*

Scott L. Norman, Hot CoCo