

## SYSTEM 3 Ver 1.0. Operating Instructions

System 3 is the ultimate toolkit and guarantees to cut your programming and debugging time by AT LEAST half! Once loaded, System 3 gives your Sorcerer 15 new commands, some of which you'd never have thought possible. This is a professionally written piece of software and we offer you a total satisfaction guarantee or your money back. That's how confident we are! System 3 loads into memory with a simple LOG command. The program is recorded twice on the front of the tape at 1200 baud, and then once again on the reverse side at 300 baud. If you have trouble loading at 1200 baud, simply issue the monitor command: SE T=1 then LOG the 300 baud copy. Once loaded, the program looks in location F000 to find the top of RAM and relocates itself to high memory. It is not important what memory configuration you have. A true relocater is used. With System 3 loaded, you have the following commands:

### EDIT xx[.yy]

Edit line xx with optional parameter yy. For compatability, the numeric keypad is used in the same way as the Wordprocessor Pac. Basic lines may be 250 characters long, where a Basic command is regarded as one character. This allows program lines, in some cases, in excess of 500 characters! EDIT has a Graphic shortform of GRAPHIC E. When the editor is called, the Basic line is printed between two special characters with an inverse cursor over the first statement.

Edit commands:

Keypad right-arrow	Move right. Note no SHIFT required
Keypad left-arrow	Move left
Keypad X	Scan cursor
Keypad '=' or CLEAR	Delete character under cursor
Keypad '.'	Truncate line
Keypad divide	Toggle replace to expand mode (Note 'X' or 'R' at top right of screen)
RUB	Backspace. Mode dependent
TAB	It works!
REPEAT	Use it!
CTRL C	Quit without editing
RETURN	Enter edited line
Keypad down-arrow	Enter current line and edit next
Keypad up-arrow	Enter current line and edit previous

If the down-arrow command is given where the current line being edited is the last in the program, a new line number is displayed having the value yy greater than the last.

## AUTO [xx[,yy]]

2/

Enter AUTO mode. After RETURN, the next line number is typed on the screen in readiness for a new program line. This saves lots of thinking, as well as mistakes, especially when the line numbers are up in the 10,000's. If the line number is duplicated in the program, a full colon is displayed under the cursor. If you do not wish to enter a line, hit LINEFEED. All EDIT commands are available in AUTO mode, thus allowing quick entering and editing of new program lines. Parameter xx is the initial line number with increment yy. eg. AUTO 1000,10

## REN [a[,b[,c[,d]]]]

Renumber BASIC program with first new line number a, increment b, first line of original program to be renumbered c, and the last to be renumbered d. Parameters a & b default at 10 while c & d default to the beginning and end of the original program respectively. When renumbering a section of program, take care to ensure that the new line numbers will not overlap the original. A powerful but simple command. eg REN 1000,20

## TRACE [xx[,anything]]

Trace the logical flow of a running program. If the TRACE command is given without any parameters, the current program line number is printed within square brackets after being executed. The run begins at line xx if included. 'Anything' will be printed after each line number, and may be any list of numeric or string variables that would normally follow a PRINT statement. In this way, it is possible to trace the values of specific variables as the program is running. This command will trace over any BASIC statement. eg. TRACE 10;A\$,B\$,Z\$;

## HELP\_x

Sometimes an error will occur without it being obvious exactly which characters in the program line are erroneous. By issuing this command with the relevant line number, the program line is printed in EDIT mode with the cursor over or near the error. Although this command is particularly good at finding errors in mathematical equations, there are errors that it is unable to detect. When this command is issued, the program line is actually executed in command mode until the error occurs, thus GOTO statements will be executed! eg. HELP 220

## FIND["]\_Anything

List all program lines having the string 'Anything'. If it is anticipated to be within PRINT or REM statements, the quote should be included. Wildcard character '#' can be used within 'Anything' to represent any single character. eg. FIND S\$

### DEF x

3/  
Define a function key, where x is any single digit number. After hitting RETURN, type in the function which may be from 1 to 1000 characters long. A sophisticated memory efficient fool-proof editor is used, that allows up to 10 functions to be defined, or re-defined, at the one time. CTRL C terminates input. Graphic RAM is used as the buffer, starting at F000 and going down. To activate function key, depress CTRL and the number x simultaneously. A special input character 'i' may be used within a function to stop output and wait for keyboard input until RETURN is hit. (Much like the Basic INPUT statement.) The following function would make multiple CSAVES.

DEF 1

N=i

FOR A=1 TO N:CSAVE MYPROG:NEXT

To save your program now, hit CTRL and 1, then enter the number of times the program is to be saved. You may go and have a stretch while System 3 works for you!

### VAR

List the values of any numeric or string variables currently defined in BASIC. This feature is most commonly used during or after running a program.

### LIST [xx], [yy]

List program lines from line xx to yy. The normal Graphic Shortform character may substitute LIST. Parameter xx defaults to the beginning of the program while yy defaults to the end. eg. 'LIST' 'LIST 10' 'LIST 10,' 'LIST ,100' 'LIST 10,100'

### DEL [[xx], [yy]]

Delete lines from xx to yy. Parameters default in the same way as in the LIST command.

### CLOSE

Eliminate all blanks other than those in REM and PRINT statements. This command reduces the amount of memory required to store your Basic program.

### OLD

Recover BASIC program after CLOAD, NEW or RESET. If RESET was hit, go into the monitor and type GO F070 before issuing this command. Location F070 is the System 3 warm start address.

## CTRL\_P

4/

Output may be directed to a printer by holding the CTRL key down and hitting 'P'. This may be used in either BASIC or monitor mode, as well as after RUNSTOP has temporarily halted output. Hitting CTRL P again cancels output to the printer. System 3 is initially set up to drive a Centronics printer, but this may be changed by placing your own printer GO address in location F074 & F075 (HEX). Note that System 3 uses memory locations F002 through F07F for temporary storage. This area of RAM is not otherwise used by either the monitor or ROM PACs. System 3 is transparent to the monitor SE 0=xxxx

## CLOAD?

Verify that a BASIC program was CSAVED correctly without the risk of contaminating memory contents in the case of a tape error. Issue this command and play the tape to be verified. The tape header will be printed. If no CRC ERROR occurs, 'READY' will be printed after check has been completed.

## MERGE

Merge the next BASIC program on tape to the end of the BASIC program currently in memory. If there is not enough memory available for the MERGE, an 'FC ERROR' message will be printed. Be careful that there will be no duplicated line numbers. The second program will only be merged if no CRC ERROR occurs.

General Features: TAB works in all modes; BASIC orientated commands will only work in BASIC command mode; Returns if applicable, to BASIC after TAPE CRC ERROR; Checks for CRLF and Buffer overflow; Filters meaningless characters from BASIC; Underscore character changed to RUB in all modes; RUNSTOP works (even during monitor dumps); Doesn't effect output vectors and uses high memory only.

NB. Parameters enclosed in square brackets '[]' are optional.

If you wish have a customised version of System 3 with your own extra commands, or you have any problems or queries, write to SYSTEM SOFTWARE, 1 Kent St., BICTON, Australia 6157.