2.3.5.8 TOUT (NAME,START,SIZE)

TOUT is the procedure which is used to save variables on tape. The first parameter is of type ARRAY[1..8] OF CHAR and is the name of the file to be saved. SIZE bytes of memory are dumped starting at the address START. Both these parameters are of type INTEGER.

E.g. to save the variable V to tape under the name 'VAR ' use:

TOUT('VAR ',ADDR(V),SIZE(V))

The use of actual memory addresses gives the user far more flexibility than just the ability to save arrays. For example if a system has a memory mapped screen, entire screenfuls may be saved directly. See Appendix 4 for an example of the use of TOUT.

2.3.5.9 TIN (NAME,START)

This procedure is used to load, from tape, variables etc. that have been saved using TOUT. NAME is of type ARRAY[1..8] of CHAR and START is of type INTEGER. The tape is searched for a file called NAME which is then loaded at memory address START. The number of bytes to load is taken from the tape (saved on the tape by TOUT).

E.g. to load the variable saved in the example in Section 2.3.5.8 above use:

TIN('VAR ',ADDR(V))

Because source files are recorded by the editor using the same format as that used by TIN and TOUT, TIN may be used to load text files into ARRAYs OF CHAR for processing (see the HP4T Alteration Guide).

See Appendix 4 for an example of the use of TIN.

2.3.5.10 OUT(P,C)

This procedure is used to directly access the Z80's output ports without using the procedure INLINE. The value of the integer parameter P is loaded into the BC register, the character parameter C is loaded into the A register and the assembly instruction OUT (C),A is executed.

E.g. OUT(1,'A') outputs the character 'A' to the Z80 port 1.