

SPECIFICATION

GIER
ELECTRONICS

SLIP INPUT PROGRAM

SOFTWARE

<u>b</u>	<declaration>	: core store block head (<u>b</u> alone dummy)
<u>b</u>	i=<predefined address>	: core store block head
<u>b</u>	k=<predefined address>	: drum block head
<u>c</u>	<integer>	
<u>d</u>	<name>=<predef. address>,	: definition of serial address and/or label (<u>d</u> superfluous)
<u>e</u>		: termination of block
<u>e</u>	<predefined address>	: termination of input
<u>f</u>		: floating-point numbers
<u>h</u>	<HELP routine name>	: call of HELP routine
<u>l</u>		: input via tape
<u>m</u>		: fixed-point numbers
<u>n</u>		: cancel automatic relative addressing
<u>r</u>		: establish automatic relative addressing
<u>s</u>		: input via typewriter
<u>t</u>		: text
<u>u</u>	<predefined address>	: definition of exit address
<u>x</u>		: dump table of labels
<u>x</u>	<predefined address>	: dump table of labels
<u>z</u>		: restore table of labels
<u>z</u>	<predefined address>	: restore table of labels

All other underlined letters (except g) have the same effect as s.



SLIP (Symbolic Language Input Program) is a symbolic loader program incorporated as a subroutine in HELP and always called via the HELP Administrator. Thus the basic programming language used with the GIER Computer is called the SLIP language, i.e. the language accepted by the SLIP input routine.

SLIP reads instructions, strings of text, and three types of numbers, viz. fixed-point numbers, floating-point numbers, and integers, which can be packed with a maximum of four integers per cell. Input may include comments [in square brackets for instance] which are ignored by SLIP.

SLIP permits symbolic addressing, an important advantage meaning that the address constant and the increment of an instruction may be symbolic names, the values of which are defined through the use of the names as labels elsewhere in the program. Although the class of names available is restricted, the SLIP language has a block structure much like ALGOL with regard to the use and scope of such names:

1. names must be declared in a block head before use and may be used within the block, the head of which contains the declaration, viz. that they are local to that block;
2. if a name is declared in each of several blocks within one another, the name may have different values on each block level.

In designing SLIP special consideration has been taken for ease in using symbolic names in connection with relative addressing.

During input an extensive syntactical check is made: whenever an error is found, an appropriate message is typed out, after which SLIP continues to read in the program, skipping the remainder of the erroneous material or numbers. This means:

1. all syntactical errors can frequently be detected in one run;
2. if there are only one or two minor errors in a program, they can be corrected at once by means of HELP;
3. a test run can be completed despite these errors.

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