

BASIC RC 6000 REFERENCE SHEET

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BASIC RC 6000 REFERENCE SHEETSystem load

Switch power to the RC 6000 by turning the POWER key. Insert the disc cartridges as follows:

UNIT NUMBER	DISC NAME	UNIT NUMBER	DISC NAME
0 (standard)	simulator + drum	2 (optional)	disc 1
1 (standard)	disc	3 (optional)	disc 2

Shut the doors and set the LOAD/RUN switches to RUN. When the READY lamps light, press the AUTOLOAD button. (The shut-down procedure is the reverse of this. When all programs have reached a defined end-of-job status, set the LOAD/RUN switches to LOAD. When the LOAD lamps light, open the doors and remove the cartridges. Remove power from the RC 6000 by turning the POWER key.)

The system will first list any missing discs as follows: <disc name> result 5. If <disc name> is disc 1 and disc 2 and these options are not included, the message should be ignored.

The system will then make the request "initialize date." To reply, type the day, month, year, hour, minute, and second using digits and the format: dd mm yy hh mm ss. Example: 21 08 75 13 57 15. After this the system will indicate that it is ready.

Start-up

To send a command to the operating system, S, press the ESC key to get S's attention. S will reply by outputting the text: att. Then type the letter s and press the RETURN key. S will reply by outputting the character ~~#~~. When ~~#~~ has been received, type the command line and press the RETURN key.

If a typing mistake is made, press the & or the RUB OUT key once to delete the last character typed (or repeatedly to delete further characters).

Pressing the % or the LINE FEED key will delete the whole line. A new line (NL character) is produced by pressing the RETURN key.

To start a job process, a single user at the main console should type:
all <name> base 0 9 0 100 run

This S command (actually three commands) will, among other things, give the job process <name> all available resources, provide the job process

with a user base and a project base in the catalog, and load the executive program, FP, into the job process.

The start-up dialog, then, will have the following form:

```
|ESC| att s |RETURN|
# all <name> base 0 9 0 100 run |RETURN|
```

the text att and the character **#** being output by S.

When S has processed this command, it will output:

```
ready
to <name>
#
```

the third line indicating that the job process <name> is waiting for input.

Another S command - which will be needed later in order to stop and remove the job process from the system - has the form:

```
|ESC| att s |RETURN|
# remove |RETURN|
```

All S commands are fully described in the publications "Multiprogramming System" and "Monitor 3" (RCSL 55-D140 and 31-D300).

Some useful FP commands

<name>=algol <name> <parameters>	Calls the Algol compiler. Example: p=algol ptext list.yes
clear <scope> <names>	Removes catalog entries. Example: clear user tex4
<name>=copy <names>	Copies one or more files into another file. Example: tpe=copy tex1 tex2
<name>=edit <names> <parameters>	Calls the utility program Edit. Example: newt=edit tex3
finis	Terminates the job. Example: finis
i <name>	Selects a new file as current input. Examples: i tex3, i trf
lookup <names>	Finds and lists catalog entries. Example: lookup tex3
o <name>	Selects a new file as current output. Examples: o list, o c, o lp
scope <scope> <names>	Makes catalog entries permanent, as areas with scope temp are removed on a new system load. Example: scope user newt

search <scope>	Finds and lists catalog entries with a given scope. Example: search user
<name>=set <parameters>	Creates new or changes existing catalog entries with scope temp. Example: pip=set 20 disc2
<program name>	Calls a program. Example: p

Reserved file names

c (primary output), catalog, fp, s, terminal, v (primary input); printer, punch, reader, and other device names.

Standard file names

tre, trf	tape reader (even parity / Flexowriter code)
tpe, tpf, tpt	tape punch (even parity / Flexowriter code / Teletype code)
lp	printer
mto	magnetic tape (odd parity)

FP (executive program) commands are executed as soon as they are entered. An FP command can be simple, i.e. a text line terminated by NL, or compound, i.e. a number of simple commands enclosed in parentheses, in which case FP reads the command as a unit and then executes the simple commands one by one.

The executive program and all utility programs are fully described in the publication "System 3 Utility Programs, Parts 1 and 2" (RCSL 31-D364 and 31-D345).

Example of a job file for an Algol program

all pss base 0 9 0 100 run	S command. Starts the job process pss.
p=set 1 disc	FP command. Creates a new catalog entry, p, on the disc.
scope user p	FP command. Makes p a permanent file.
p=edit	FP command. Calls the utility program Edit.
i/	Edit command. Inserts an Algol program in p.
algol program text	
/	
f	Edit command. Terminates the edit.
pop=algol p	FP command. Calls the Algol compiler with p as the source file and pop as the object file.
pop	FP command. Calls the object program pop.
2 3	Data for the object program.
finis	FP command. Terminates the job.
remove	S command. Stops and removes the job process pss.

The Algol programming language is fully described in the publication "Algol 6 User's Manual" (RCSL 31-D322).

Example of text file editing using Edit

tex3:	newt:
<pre> p = algol begin real a,b; read(in,a,b); write(out,a**b); end p 2 10 </pre>	<pre> p = algol list.yes begin real a,b; rep: read(in,a,b); write(out,a**b); goto rep; end p 1 2 2 3 </pre>
newt = edit tex3	FP command. Calls Edit with tex3 as the source file and newt as the object file.
m e	Standard Edit command. Defines all characters as having their normal meaning.
1./algol/	Copy from tex3 to newt until the line with the pattern 'algol' is met.
r/ol/ol list.yes/	In this line, replace the pattern 'ol' with 'ol list.yes'.
1./read/	Copy on until the line with 'read'.
r/ /rep:/	Replace the first four spaces with 'rep:'.
1./end/	Copy on until the line with 'end'.
i/ goto rep;	Insert 'goto rep' before the line with 'end'.
/	
1./2 10/	Copy on until the line with '2 10'.
d	Delete the line.
i/	Insert these two new lines.
1 2	
2 3	
/	
f	Copy on to the end of tex3. Return from Edit to FP.

Edit has many other facilities besides these. For a complete description see the publication "System 3 Utility Programs, Part 2" (RCSL 31-D345).