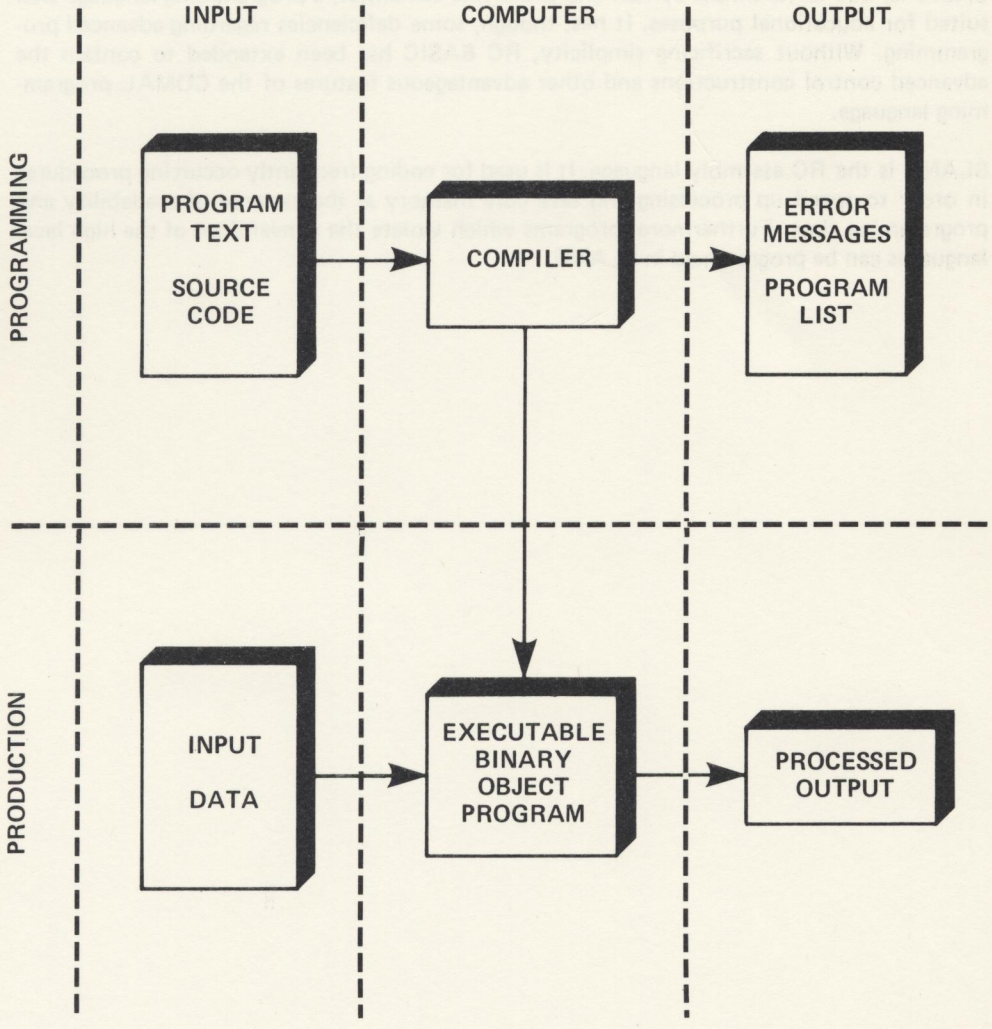
RC 8000 Programming Languages



GENERAL

A number of different programming languages are available for the RC 8000 System. The primary high level language is ALGOL 6 which is an RC extension of the general programming language ALGOL 60.

Other languages are available for special requirements. These include FORTRAN, BASIC and SLANG.

CHARACTERISTICS

ALGOL 6 is an extended version of the general purpose ALGOL 60. The introduction of the "zone" concept is the basis for a general input/output system, where the user may work on varying levels of complexity. He can use high level standard input/output but can also intervene at the most basic level. He may in fact program his own operating systems. The library routines include sort/merge programs; new routines are easily inserted and may be programmed in machine language (SLANG). All RC application programs are written in ALGOL 6.

FORTRAN is a scientifically orientated language based on the ISO recommandation R 1539 (FORTRAN IV). RC FORTRAN has been extended to allow the use of the basic ALGOL 6 input/output system and as a result some of the terms defined in the ISO recommandation are not required. A "pre-compiler" translating these nonexistent terms into RC FORTRAN terms is available. Library routines written in ALGOL 6 or machine language (SLANG) can be inserted.

BASIC is, due to its simple syntax and prose like semantics, a programming language well suited for educational purposes. It has, though, some deficiencies regarding advanced programming. Without sacrificing simplicity, RC BASIC has been extended to contain the advanced control constructions and other advantageous features of the COMAL programming language.

SLANG is the RC assembly language. It is used for coding frequently occurring procedures in order to speed up processing and save core memory at the expense of readability and programming time. Furthermore, programs which violate the conventions of the high level languages can be programmed in SLANG.