IDENTIFICATION

Product Code:	DEC-08-BA1C-D
Product Name:	PDP-8, 8S, 8I, 8L System Program Index
Date Created:	October 16, 1968
Maintainer:	Program Library

DEC-08-AJAC-D FOCAL

FOCAL (for FOrmula CALculator) is an on-line, conversational, service program for the PDP-8 family of computers, designed to help scientists, engineers, and students solve numerical problems. The language consists of short imperative English statements which are relatively easy to learn. Mathematical expressions are typed, for the most part, in standard notation. No previous programming experience is needed either to understand this manual or to use FOCAL at the Teletype console. However, the best way to learn the FOCAL language is to sit at the Teletype and try the commands, starting with the examples given in the manual.

DEC-08-AFAC FORTRAN Compiler and Operating System

The one pass FORTRAN Compiler and Operating System compiles FORTRAN source language statements into an object program tape. The operating system executes the program. This operating system contains the interpreter, arithmetic function subroutines and input/output packages.

DEC-08-AFA2 Symbol Print

Loaded over the FORTRAN Compiler, this program lists the variables used and where they will be located in core. It also indicates the section of core not used by the compiled program and data.

DEC-08-A2A0 FORTRAN (8K)

Describes a more powerful version of FORTRAN designed specifically for the PDP-8 family of computers with 8K words of core memory. The manual details the FORTRAN language elements and statements, compiler and operating system, Symbolprint, Linking Loader, Run-Time Monitor, and the complete library of arithmetic subprograms. The appendices include a summary of library calling sequences, format and statement specifications, storage allocation, error diagnostics, and operating procedures for the entire system.

DEC-08-ASAB PAL III Symbolic Assembler

PAL III is a two pass symbolic machine language assembler which converts program coded in symbolic machine language to binary machine language. It has an optional third pass to produce a side-by-side octal/symbolic assembly listing. The basic process performed by the assembler is the substitution of numeric values for symbols, according to associations defined in the symbol table. In addition, the user may request that the assembler itself assign values to the user's own symbols at assembly time. These symbols are normally used to name memory locations, which may then be referenced by name.

DEC-08-CDDA DDT-8 (Dynamic Debugging Tape)

DDT-8 provides a means for on-line program debugging at the symbolic or mnemonic level. By typing commands on the console teleprinter, memory locations can be examined and changed, program tapes can be inserted, selected program tapes can be inserted, selected portions of the program can be run, and the updated program can be punched.

DEC-08-CMAA MACRO-8 Assembler

The MACRO-8 symbolic assembler accepts source programs written in symbolic language and translates them into binary form in two passes. MACRO-8 produces an object program tape (binary), a SYMBOL table (for use with DDT), an Octal/Symbolic assembly listing, and useful diagnostic messages. MACRO-8 is compatible with PAL III, and has the following additional features: user defined macros; double precision integers, floating point constants; arithmetic and Boolean operators, literals, text facilities and automatic link generation.

DEC-08-COC0 ODT-8 (Octal Debugging Technique)

ODT-8 (Octal Debugging Technique) is a debugging aid for the PDP-8, which facilitates communication with, and alteration of, the program being run. Communication between operator and program occurs via the Teletype, using defined commands and octal numbers. ODT-8 is a subset of DDT-8 and occupies three pages of core storage.

The program may be relocated to occupy any three consecutive pages of core.

DEC-08-ESAB Symbolic Editor

The PDP-8 Symbolic Editor allows the user to prepare and edit symbolic tapes on-line in ASCII code with the Teletype and/or high-speed reader/punch. The tedious task of correcting symbolic program tapes using the Teletype off-line is thereby avoided. Proper use of the PDP-8 Symbolic Editor can substantially ease the labor and reduce the number of passes necessary to correct symbolic program tapes.

The Editor reads a page, or section, of symbolic tape into a buffer in core storage, where it is available for examination and correction upon keyboard command. The page buffer occupies all of core not taken up by the Editor itself and has a capacity of approximately 6000_{10} characters. When the Editor has finished reading a page into the buffer, a bell rings to signal the user that he may begin editing. The user may then call for a listing of individual (numbered) lines, in any order, and insert desired changes and corrections. In addition, text may be added to the buffer, or inserted between specified lines. Groups of lines or individual lines may be moved or deleted by a single command, or the entire page

may be erased if desired. Searches may be made and parts of lines changed without retyping the entire line. Upon keyboard command, the Editor will then either list or punch out the corrected lines or page on paper tape. The Editor can also be used to generate a new symbolic tape by typing new text directly on the keyboard. Errors in typing may be corrected simply by typing a rubout.

DEC-LB-SYYB Lab 8 Averager

Conversational package to do signal averaging; back averaging, dual resolution averaging. Computation of point to point standard deviation and trend; signal sorting features; 1024 data points; preset sweep counting. User may do on line signal editing.

DEC-08-NGCB Console Manual

DEC-08-UDCA Calculator-8

The calculator is a program written to evaluate FORTRAN-like equations. It differs from FORTRAN in that functions to be evaluated are entered via the keyboard and calculated immediately upon termination of the entry. Format control and the ability to call common function subroutines are provided.

F-85 PDP-8 Users Handbook

DEC-08-YQYA Floating-Point System

Includes Floating-Point Interpreter and I/O subsystems. Allows the programmer to code his problem in floating-point machine language.

Floating-point operations automatically align the binary points of operands, retaining the maximum precision available by discarding leading 0s. In addition to increasing accuracy, floating-point operations relieve the programmer of scaling problems common in fixed-point operations. This system includes elementary function subroutines programmed in floating-point. These subroutines are sine, cosine, square root, logarithm, arc tangent, and exponential functions. Data being processed in floating-point is maintained in three words of memory (12-bit exponent, 24-bit mantissa). An accuracy of seven decimal places is maintained.

Digital-8-16-S Master Tape Duplicator

This program will duplicate and verify 8-channel paper tapes using the PDP-8 with high-speed reader and high-speed punch. The program uses the program interrupt and allows both the reader and the punch to operate at maximum speed.