

Software Product Description

PRODUCT NAME: **BASIC-PLUS/RT-11, Version 3.2**

SPD 12.05.14

DESCRIPTION

BASIC is a conversational programming language developed at Dartmouth College that uses simple English language-like statements and familiar mathematical notations to perform operations.

BASIC-PLUS/RT-11 is an interactive, incremental compiler operating under the RT-11 Operating System.

The BASIC-PLUS/RT-11 language processor is comprised of a compiler and run-time system. The BASIC-PLUS/RT-11 compiler produces a compact pseudo-code that is interpreted by the run-time system. Being an incremental compiler, it checks each program line for syntax errors and immediately returns an appropriate message if an error is found. The user can then make corrections by re-typing program lines or by using an EDIT command. Debugging is facilitated by the ability to make incremental source-code corrections to an active program.

BASIC-PLUS/RT-11 programs can be saved in either source form or in compiled form (compact pseudo-code).

The immediate mode feature of BASIC-PLUS/RT-11 allows single-line statements typed without a line number to be compiled and executed immediately. This is a particularly useful feature in interactive debugging of BASIC-PLUS/RT-11 programs.

FEATURES

- Variety of program manipulation commands including commands for saving, editing, running, and retrieving BASIC programs
- Support for real (single or double-precision), integer, string and numeric string data types
- Support for manipulation and testing of logical values and for manipulation of integers at the bit level
- Mechanisms for control of arithmetic precision: scaled, double-precision, floating point arithmetic and string arithmetic
- Incremental compilation, allowing a program to be changed during a pause, and execution to then be continued
- Immediate mode statements for debugging and desk calculator usage

- String capability, including string arrays and functions
- Sequential and random access data storage using the RT-11 file system
- Disk virtual arrays for string, integer, and real data types
- Formatted output using the PRINT USING statement
- Block I/O, including direct access (random and sequential) to individual blocks of a disk file
- Matrix manipulation operations
- 31-character variable names
- IF...THEN...ELSE construct
- Programmable error handlers
- Statement modifiers: IF, UNLESS, WHILE, UNTIL, FOR
- Multi-statement lines
- Multi-line statements
- Program chaining, with retention of variables, array aggregates, and open I/O channels
- Access to user written assembly language routines
- In-place editing through KED editor

Note: BASIC-PLUS/RT-11 may be configured by the user to include or exclude a number of features. Inclusion of features reduces the amount of memory available for the user's programs. The user can configure several copies of BASIC-PLUS for different uses.

Source Code Information

Source code for the following modules is provided on all available machine-readable distribution for the product: Configuration Utility, Installation Verification Program.

This source code is provided on an "**AS IS**" basis without any warranty of any kind, either express or implied.

HARDWARE REQUIREMENTS

Any valid RT-11 Operating System configuration on a PDP-11 with a minimum of 32K bytes of memory. Configuration options allow BASIC-PLUS/RT-11 to take advantage of additional memory which may be available under the RT-11 XM monitor.

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OPTIONAL HARDWARE

Supports any mass storage, unit record, or terminal device supported by RT-11, with the additions of:

- KE11-B Instruction Set
- FP11 Floating Point Unit
- KEV11 Floating Point Instruction Set

PREREQUISITE SOFTWARE

RT-11 Operating System

Refer to the RT-11 Optional Software Cross Reference Table (SPD 20.96.xx) for the required version.

OPTIONAL SOFTWARE

None

LICENSE OPTIONS

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

SERVICE OPTIONS

A variety of service options is available. For more information on these or other services, please contact your local Digital Office.

SOFTWARE WARRANTY

Warranty for this software product is provided by Digital with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

SOFTWARE OPTIONS CHART

The distribution Media Codes used in the Software Options Chart are described below. You specify the desired Media Code at the end of the Order Number, e.g., QJ913-H3 = binaries on RX50 Floppy Diskette.

- 3 = RX50 Floppy Diskette
- 5 = TK50 Cartridge
- H = RL02 Disk Cartridge
- M = 9-track 1600 BPI Magtape (PE)
- Q = RL01 Disk Cartridge
- X = RX02 Double Density Diskette
- Y = RX01 Floppy Diskette
- Z = No hardware dependency

Note: The availability of these software product options and services may vary by country. Customers should contact their local Digital office for information on availability.

Note: TK50 distribution media requires installation to a hard disk system device.

SOFTWARE OPTIONS CHART

OPTIONS	ORDER NUMBER
LICENSE OPTIONS: A LICENSE IS REQUIRED FOR EACH CPU.	
Single-Use License for Class H Systems ¹	QJ913-UZ
Single-Use License for Class L Systems ²	QY913-UZ
MATERIALS AND SERVICE OPTIONS:	
Distribution and Documentation Option	QJ913-H3 QJ913-H5 QJ913-HH QJ913-HM QJ913-HQ QJ913-HX QJ913-HY
Software Revision Right-To-Copy Option	QJ913-HZ
Documentation-Only Option	QJ913-GZ
Installation Service Option	QJ913-I3 QJ913-I5 QJ913-IH QJ913-IM QJ913-IQ QJ913-IX QJ913-IY
DECsupport Service	QJ913-93 QJ913-95 QJ913-9H QJ913-9M QJ913-9Q QJ913-9X

Software Options Chart (cont.)

OPTIONS	ORDER NUMBER
Basic Service	QJ913-83
	QJ913-85
	QJ913-8H
	QJ913-8M
	QJ913-8Q
	QJ913-8X
QJ913-8Y	
Self-Maintenance Service	QJ913-33
	QJ913-35
	QJ913-3H
	QJ913-3M
	QJ913-3Q
	QJ913-3X
	QJ913-3Y

¹ Class H Systems

- All UNIBUS models and systems

² Class L Systems

- All Q-bus models and systems (Including the MicroPDP-11/83)
- KD11, KDF11, KDJ11 CPU modules
- DCT11, DCF11, DCJ11 microprocessor chips

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