

FLEX for Acorn 6809 Systems

FLEX is a very flexible operating system that has become the standard for 6800 and 6809 systems in industry and education. Acorn 6809 systems are now available in a configuration to support FLEX, thus providing a combination of the versatility of Acorn hardware with the wide range of FLEX 6800/6809 software.

FLEX Operating System

FLEX is comprised of three parts: the Utility Command Set, the File Management System, and the Disk Operating System. The Utility Command Set consists of a number of useful commands that reside on the system disk, and which are only loaded into memory when needed. The set of commands can easily be extended without altering the operating system.

The Disk Operating System features fully dynamic file-space allocation, the automatic removal of defective sectors from the disk, automatic space compression and expansion on all text files, and uniform disk wear due to the high-performance dynamic space allocator.

The programmer has access to the routines in the File Management System so that disk files can be used directly from assembler programs.

FLEX Utilities

The following utilities are provided with the Acorn FLEX operating system:

APPEND	ASN	BUILD	CAT	COPY	DATE	DELETE
EXEC	I	JUMP	LINK	LIST	MCOPY	NEWDISK
0	P	PRINT	PROT	QCHECK	RENAME	SAVE
SAVE.LOW	STARTUP	TTYSET	VERIFY	VERSION	XOUT	

Acorn FLEX is also supplied with full documentation, and replacement address-decode and monitor ROMs to convert the Acorn 6809 card for FLEX operation.

System Configurations

FLEX requires 8K of memory at \$C000 for the operating system, and a minimum of 16K of user memory at \$0000. A total of 48K of user memory can be accommodated, although this can be increased with the memory-banking option. Addresses from \$E000 to \$EFFF are used for peripherals, and for the Acorn Teletext VDU, and the monitor ROM, containing the disk bootstrap and machine-code monitor, resides at \$F800.

The minimum recommended configuration consists of:

- 3 x 8K static memory cards
- Acorn teletext VDU
- Acorn 6809 processor card
- Mini-floppy disk drive and controller
- Backplane, rack, and power-supply unit.

For most applications it will be advantageous to have two disk drives, for rapid disk archiving, and at least 32K of memory, for running the program packages; we therefore recommend the following configuration:

5 x 8K static memory cards
(or 1 x 32K dynamic + 1 x 8K static)
Acorn teletext VDU
Acorn 6809 processor card
2 x Mini-floppy disk drives and controller
Backplanes, double-height rack, and power-supply unit.

Software Packages

A wide range of software packages for educational, industrial, and research applications are available to run under the FLEX operating system. These include a 6809 Assembler, 6809 BASIC, FLEX Editor, Text Processing System, and Pascal.

6809 Assembler

The 6809 Mnemonic Assembler is a fast and powerful disk-based assembler, accepting all standard Motorola mnemonics as well as all the standard 6800 and 6801 mnemonics. The assembler provides macros and conditional assembly, and can accept any size disk file, requiring memory only for the symbol table.