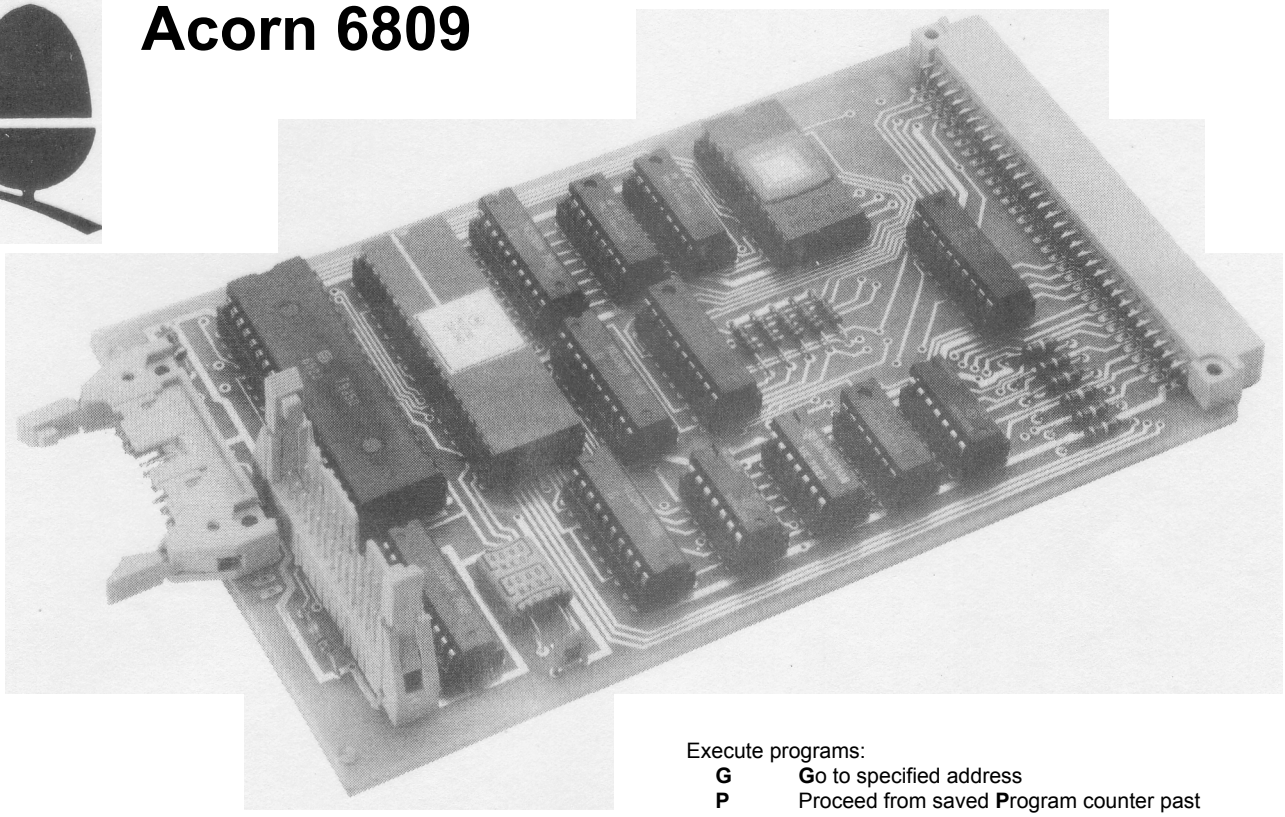
Acorn 6809



This Acorn eurocard is a plug in replacement for the 6502 C.P.U. card for those who wish to upgrade their system to make use of the advanced facilities of Motorola's most powerful 8-bit processor the 6809, this microprocessor is generally considered to be the programmer's processor and is ideally suited to run high level languages such as Pascal which Acorn is at present preparing for this card. The Acorn 6809 is provided with an operating system in 2K which handles the Acorn V.D.U., ascii encoded keyboard and printer; it is designed to be readily expanded and very easy to use.

The hardware provides for direct plug-in connection to Anadex type printers and encoded keyboards and all the 6809 signals are taken off the board via the Acorn bus 64 way edge connector. The address and data lines are fully buffered and 1K of user RAM is provided.

TECHNICAL SPECIFICATIONS

Hardware

Standard eurocard 160mm x 100mm
DIN. standard indirect edge connector
20 way and 26 way IDC connectors for keyboard and printer
MC 6809 microprocessor
2K ROM (Initially 2716) 4K and 8K compatible
1K RAM (2 x 2114)
BIPOLAR PROM for address decoding
6522 — two ten bit parallel 1/0 port for keyboard and printer
Random logic devices
Bus buffers

Monitor Commands

Modify memory:

M	**M**odify starting at specified address
MR	**M**odify **R**egisters
MG	**M**odify from **G**o address
MV	**M**odify from breakpoint address
MP	**M**odify from saved **P**rogram counter

Execute programs:

G	**G**o to specified address
P	Proceed from saved **P**rogram counter past specified number of breakpoints

Debugging aids:

V	Insert/delete breakpoint
T	Trace one, or more, instructions
.	Do trace, displaying register contents at each step

Cassette interface:

S	**S**ave memory to named file
L	**L**oad named file, with optional offset
F	**F**inish loading — no name search

Printer interface:

C	**C**opy to parallel printer

Disk capability:

D	**D**isk bootstrap

Multiple commands can be strung together on one line and the keyboard is interrupt driven so that commands can be entered in advance while a program is executing, to be carried out when the program finishes.

Expandability:

The monitor provides a range of input and output routines, all call-able from user programs.

Addresses for 1/0 routines, used by the monitor, can be replaced by addresses of user-provided routines.

The set of monitor commands can be added to, or replaced, by user-written commands.

The keyboard functions can be added to, or replaced, to enable special control functions to be implemented.

The interrupt vector table can be replaced so that all interrupts, including SWI, are available for user programs if required.

Disk boot routine provided so that the monitor will form the basis for a disk operating system.

Monitor checks for the presence of an extra ROM, which can be added at a later stage to upgrade its capabilities.

The Acorn 6809 card is provided with a User's Manual which describes how to use the Monitor's commands, and includes programming examples.