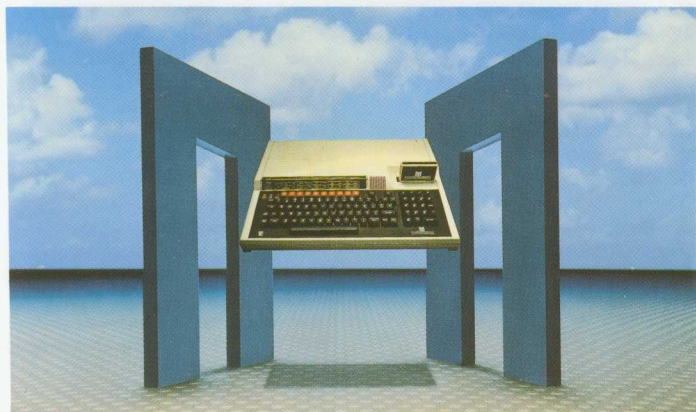
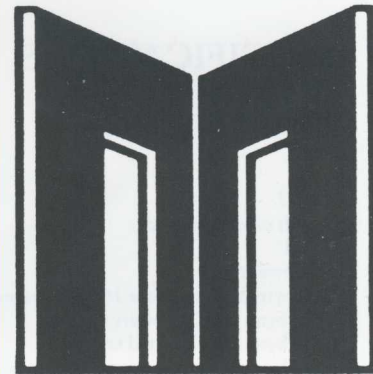


THE MASTER 128



MASTER 128

The Master 128 is the foundation stone of the Master Series.

For a start, it is a word processor. The professional typewriter keyboard and powerful word-processing software enable you to prepare reports, essays and letters which are word perfect.

It is also a spreadsheet calculator. The popular and easy-to-learn spreadsheet program is ideally suited to applications involving budgeting, planning, estimating or any repetitive calculations.

The sophisticated graphics facilities are ideally suited to computer aided drawing and design or for the computer generation of graphs, charts and diagrams.

If your interest is in creating your own programs, the Master 128 provides you with version 4.0 of BBC BASIC, widely regarded as the best BASIC in the world.

MASTER TURBO

By the addition of an easy-to-fit plug-in card the Master 128 can be upgraded at any time to the Master Turbo.

In the Turbo version, the Master 128 achieves speeds of execution which are faster than virtually any other microcomputer in its class.

NETWORKING

Econet – Acorn's low cost local area network – has proved a significant advantage in terms of communication. Ten years of experience and sales of more than 12,000 installations throughout Europe have ensured a well-supported, reliable and versatile network. In general, linking individual microcomputers means three things – sharing hardware and peripherals, sharing information and fast communication between users.

COMPATIBILITY

The Master 128 represents a continuous evolutionary development of the British Broadcasting Corporation microcomputer, upwardly compatible with previous micros, unlike some other computer families where each 'new generation' leaves you looking for a missing link.

This means that an enormous range of add-ons and peripheral devices, plus a vast software library with many thousands of titles, are available for use with the Master Series.

THE CHOICE OF EXPERIENCE

The Master 128 incorporates the experience gained by Acorn Computers over ten years of operation with more than 1,250,000 microcomputers sold. The series is supported by many thousands of software titles to suit an immense range of applications and new ones are still being added.

Acorn's design skills and production expertise ensure that the Master 128 maintains the British Broadcasting Corporation micro's tradition of high engineering standards and its reputation of reliability. If you want advice or assistance, it is readily available from a wide network of dealers throughout the UK.



SPECIFICATIONS

THE MASTER 128

CPU

65C12

2 MHz clock frequency

RAM

64 Kbytes main

64 Kbytes sideways, four 16 Kbyte pages

50 bytes CMOS battery backed

20 bytes used by fitted firmware

10 bytes reserved for future Acorn use

10 bytes reserved for 3rd party

applications

10 bytes available to user applications

User RAM is not affected by filing system workspace

Character set (ASCII 32–255) can be redefined with no loss of user RAM

ROM

128 Kbytes

CONTENTS:

35 Kbytes Operating System with extended graphics and Terminal software

16 Kbytes British Broadcasting

Corporation BASIC v 4.0

16 Kbytes EDIT, program and text Editor

13 Kbytes VIEW v 3.0, wordprocessor

16 Kbytes ViewSheet, spreadsheet

16 Kbytes ADFS, Advanced Disc Filing System

16 Kbytes 1770 DFS, British Broadcasting Corporation model B+ compatible

Internal ROM Sockets

2 × 128 or 256 Kbit capability

1 × 128 Kbit capability

Total sideways memory usable at any time (ROM or RAM)

256 Kbytes inc 96 Kbyte fitted firmware

Cartridge Sockets

2 Enhanced Acorn cartridge sockets

Internal '1 MHz bus' uprated to 2 MHz bus speed

256 Kbyte ROM capacity, per socket

Sound input and output

Disc Interface

Shugart standard

SUPPORTS:

MFM, double data density

FM, single data density

40 or 80 track drives with a 6 mS step rate or better

Formatted capacity, 320 Kbytes – MFM, 80 track, per surface – total 1.28 Mbyte

on twin 80 track double sided drives

34 way IDC connector

Optional Network Interface

Acorn ECONET

16 Kbytes ANFS ROM

5 pin DIN socket

Parallel Printer Interface

8 bit Centronics compatible

26 way IDC connector

Serial Interface

RS423 75–9600 baud software selectable

Independent Rx/Tx baud rate selection

5 pin DIN socket

Display

MODES:

8 standard modes + 8 'Shadow' modes

Mode 0 2 colour

80 × 32 text 640 × 256 graphics

Mode 1 4 colour

40 × 32 text 320 × 256 graphics

Mode 2 8 colour + 8 flash options

20 × 32 text 160 × 256 graphics

Mode 3 2 colour

80 × 25 text only

Mode 4 2 colour

40 × 32 text 320 × 256 graphics

Mode 5 4 colour

20 × 32 text 160 × 256 graphics

Mode 6 2 colour

40 × 25 text only

Mode 7 8 colour

40 × 24 'Teletext' text and graphics

8 Shadow modes provide the same displays

without affecting user memory

Graphics commands extend colour range by colour mixing

OUTPUTS:

Phono socket

UHF channel 36, full colour

BNC connector

Composite Video IV peak to peak,

monochrome

6 pin DIN socket

RGB TTL level/+5V/+ve or –ve sync.

Sound

4 channels full software control

Internal speaker 5.0 cm

Phono socket output for 16 Ohm speaker

or pre-amp

User Port

10 bit memory mapped bi-directional

TTL compatible

+5 volts available

20 way IDC connector

1 MHz Bus

General purpose Bus extender

Audio output and input

Internal or external, software selectable

34 way IDC connector (external)

External TUBE

Custom interface for the connection of second processors

40 way IDC connector (external)

Internal TUBE

Custom interface for the connection of co-processors

2 × 12 way connectors

Internal or External TUBE selectable by software

Analogue Input

4 channel Analogue to Digital conversion

8 bit accuracy

1.8 volt reference voltage

Light pen strobe connection

to CRT

15 way D-type connector

Accepts external reference voltage for higher precision

Cassette Interface

300 – 1200 CUTS standard, speed is

software selectable

Output 200 mV peak to peak

Input 50 mV to 5 V

Motor control relay, 1 Amp at 24 Volts

DC

7 pin DIN connector

Real Time Clock

Battery back-up, minimum 1 year life

Information can be called from MOS,

BASIC and other languages

Time/Day/Date/Year

Keyboard

64 key QWERTY keyboard with 2 key

rollover and auto repeat (rate and delay

selectable by software)

10 function keys

19 key numeric pad

Screwdriver operated BREAK key lock

Auxiliary Power Socket

+12 Volts

+5 Volts

–5 Volts

Power available is dependent on internal options

Power Input (UK)

198 to 264 V.AC (50 Hz) Rating

100 Watts 0.5 Amps

Dimensions

Width: 476 mm

Depth: 346 mm

Height: 79 mm

Software

1 tape + 1 disc (40/80 format)

Welcome suite

Welcome utilities

ADFS utilities

BAS 128 – British Broadcasting

Corporation BASIC for sideways RAM

use, 64 K free RAM

Documentation

Welcome Guide, this provides an

introduction to the Master 128's

hardware and firmware

VIEW and ViewSheet reference cards

FUNCTION KEY STRIPS:

VIEW/ViewSheet/EDIT/Terminal

OPTIONAL REFERENCE GUIDES:

Reference Guides 1 and 2

VIEW and ViewSheet Guides

THE MASTER TURBO

I/O processor – uses the Master

Series 128 CPU

All features of the Master 128 are provided as described above with the following additional features:

Language Processor

65C102 8 bit CMOS

Clock frequency 4 MHz

MEMORY:

RAM 64 Kbytes

ROM 4 Kbytes – TUBE communications code

VIEW automatically relocated on

transfer from I/O processor memory

Typical speed increase, 50% (HI-BASIC vs BASIC v 4, PCW benchmarks)

Operating system support for parallel processing (eg. 'GOIO')

HI-BASIC, HI-EDIT and Printer-Buffer extender supplied on disc

MASTER 128 OPTIONAL SYSTEM ROM

(Additional purchase upgrade)

Aimed at programmers and professional software developers, this ROM incorporates many detail enhancements:

MOS

Handles characters in 8 bit as well as 7 bit

Enables extended alphabets

More flexible for foreign language use.

*BUILD and *APPEND can handle

8 bit characters

Alternative character sets supported

Alternative keyboard layouts supported

More effective use of Master Turbo Board

ADFS

Improved floppy drive access speed

*BACKUP, *FORMAT and *VERIFY in

ROM

*DRIVE command added for DFS

compatibility

DFS

4 potential drive step rates available

OSGBPB now executes more quickly

Handles files larger than 64K

BASIC

Full use of additional 6502 Second

Processor Memory

Some trigonometric and logarithmic

functions run faster

EDIT

Handles 8 bit characters

Full use of additional 6502 Second

Processor Memory

Handling of both carriage returns and line feeds as line terminators

VIEW

Handles 8 bit characters from 134 to 255

*CONFIGURE VIEW SETUP [F], [J],

[I] in CMOS RAM

EPSON printer driver included in ROM as default driver

VIEWSheet

Handles 8 bit characters

Compatibility

Almost all software written for current and earlier version of standard BBC Master 128

ROM will run without modification on the new optional ROM,

but compatibility is not 100%.

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