

## GRAPHICS ROM



£33.35 incl.

This utility ROM includes over 28 new graphics related commands. These can be types in like any normal commands and can of course, be included in BASIC programs. The commands are split into 3 distinct areas.

### 1.

#### Sprite graphics

These are multi-coloured shapes up to 24 x 24 pixels in size.

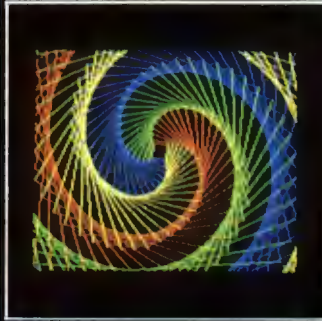
Once a prite has been designed (using in-built routine) it can be plotted at any position on the screen and easily moved around. A sprite can also be part of a 'film' - a sequence of frames allowing animation. Up to 32 sprites or 'films' can be active on the screen at any time. A 'film' can contain up to 47 frames, each frame being any sprite image.



### 2.

#### LOGO 'turtle' graphics

By using simple FORWARD, BACKWARD, LEFT and RIGHT commands a 'turtle' can be moved very quickly around the screen, producing intricate patterns by the most user-friendly means. Including these commands in structured BBC BASIC programs provides a system faster and more powerful than many of the packages currently used to demonstrate the LOGO language.



### 3.

The third section consists of a large number of general purpose commands, such as:-

\*FILL which will fill an area on screen.  
Fast circle and arc drawing

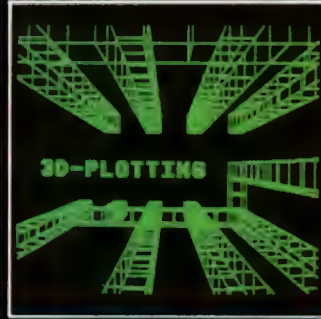
3D graphics routines allowing X, Y, Z coordinate plotting

Large character printing in a range of patterns

Scaling - allowing any part of the screen to be expanded or diminished.

A rotate command that will rotate all plotting by any angle around the origin.

Because this is a ROM, all the commands are instantly available. It has a built-in help menu showing the syntax of all commands. Supplied with a comprehensive manual and step-by-step fitting instructions, suitable even for the inexperienced.



**Coming Soon**  
**full BASIC**  
**compiler**

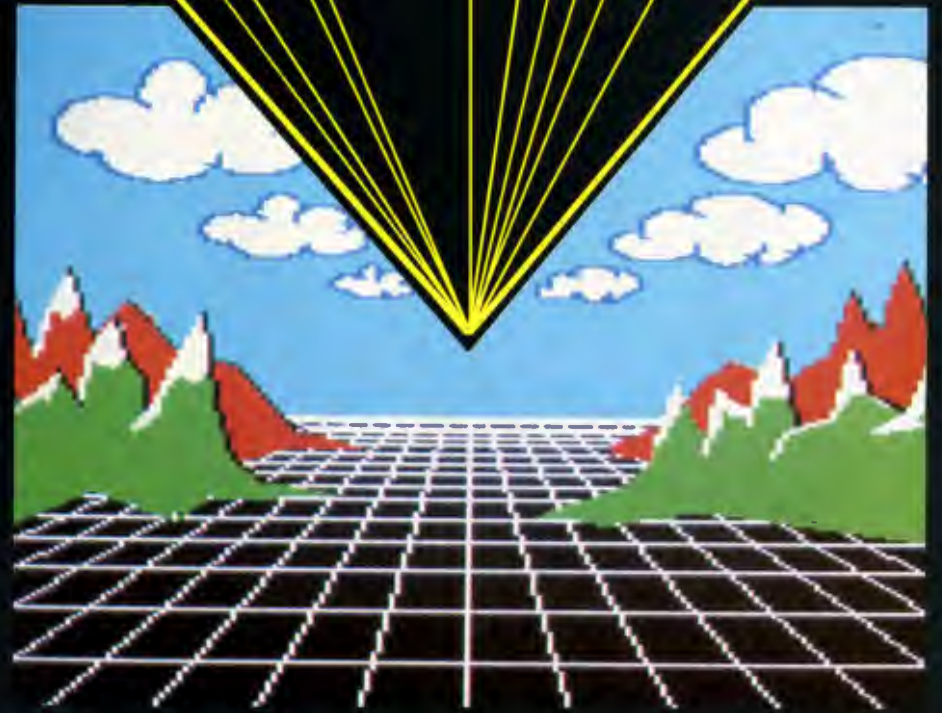
All ROM software consists of single chips that plug into spare sockets (or extension board) inside the BBC machine. Full fitting instructions are included with each ROM and no soldering is required. Alternatively your local dealer would be able to fit the chip for you. More detailed specifications of all the above ROM products are available from us. All ROM based software requires the version 1.0 Operating System or later. Type "\*HELP" to find which version you have. We can supply the O.S. chip for £5. extra.

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for the BBC micro

# ROMS



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## WORDWISE

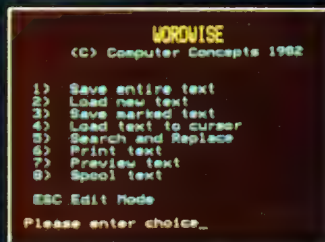


£46.00 incl.

This ROM based word processor is simple to fit and simple to operate. Its greatest strength lies in its ease of use, yet it is a fully fledged text processing system, with all the features you would expect to find in many more expensive programs.

Once entered the user has total control over the text. Any section may be marked, this may be a word, sentence or any larger piece of text. The marked section may then be instantly deleted, moved or copied to any other point in the document. The more complex operations are menu driven so that the user is always prompted when necessary. When printing a document the user may specify the line length, line spacing, page length etc. WORDWISE even handles automatic page numbering, centering of text, justification and many more powerful features.

This word processor has become the best selling program for the BBC machine. In the year since its launch it has outsold all other available ROM, cassette or disc based word processors and continues to outsell them.



## GREMLIN



£33.35 incl.

This is a machine language monitor ROM designed for use as an aid to development and debugging of machine code programs.

Anyone writing machine code programs will at some time come across a bug in the program. Trying to track down the bug is usually far from easy and this is where GREMLIN will prove invaluable. The ROM contains a full machine code monitor including features such as a disassembler, memory move and search routines etc.

GREMLIN includes many advanced features like a full expression evaluator, and an assembler. It can single step through programs both in RAM and ROM and allows operation on any sideways ROM. Variables may be declared and used in expressions and with most commands much like BASIC. This makes the system very powerful but simple to use. Other features include

- WORKS IN ANY SCREEN MODE
- DISASSEMBLER & ASSEMBLER
- FULL STATUS SHOWS REGISTERS, STACK etc.
- UP TO 8 BREAKPOINTS
- SINGLE STEPS THROUGH ANY ROM
- BUILT IN HELP MENU
- SPECIAL MODE FOR DEBUGGING GRAPHICS PROGRAMS



## DISC DOCTOR



£33.35 incl.

This general purpose ROM adds 20 new commands to the BBC Micro. Most of these are concerned with disc operation although some of the commands are totally general purpose.

The extensive range of disc commands includes a disc search routine, a sector editor allowing any byte to be changed on the disc. The built-in formatting has a special option allowing dual catalogues on each side of the disc, so the user can have up to 60 files per side - almost twice the normal.

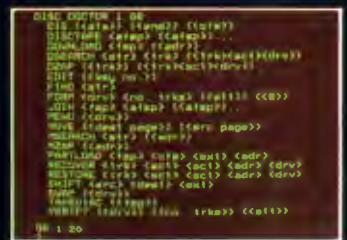
Two commands allow the recovery of data direct from the disc, helping in the restoration of deleted or corrupted files.

\*JOIN allows two or more files to be joined together on the disc.  
\*PARTLOAD allows part of a file to be loaded into memory.

The more general purpose commands include two memory search routines. One will find any sequence of bytes in memory and enter the \*MZAP memory editor when found. The other will list the lines of a BASIC program containing the search string. \*SHIFT can be used to move sections of memory around while \*MOVE will move BASIC programs from one PAGE to any other.

A very powerful disassembler is included as well as two routines to automatically transfer programs from tape to disc and vice versa. Finally \*EDIT will list out the definition of any function key for editing.

The ROM contains a full help menu listing all the commands and their syntax.



## COMMUNICATOR

£69.00 incl.



## AND TERMI ROM

£33.35 incl.

COMMUNICATOR and TERMI are designed to turn a BBC Micro into an easy-to-operate communications terminal. The BBC terminal can be used to connect to other BBC terminals, or most other micro, mini or mainframe computers with a serial RS232 interface. Connection can either be direct or via a modem. The rate at which information is transmitted or received is easily set within either ROM. TERMI operates up to 4800 Baud and COMMUNICATOR operates up to 19200 Baud with full handshaking.

Both ROMs allow files to be transmitted from disc, or a copy of incoming data to be sent to a file or to a printer, with the ability to pause these operations at any point.

TERMI is an 8K ROM which can operate as a semi-intelligent terminal e.g. VT52 (and the user may alter many of the actions of the terminal), it can operate as a slave BBC graphics terminal, or simply as a dumb terminal. 40 or 80 column operation is selectable whilst online.

COMMUNICATOR is a 16K ROM designed to operate as a full VT100 terminal (please ask for a specification that details the VT100 operation). It is by design a superior product to TERMI, and because of the extensive use of menus is far easier to use, but has a higher cost due to use of the expensive 16K chip. 80 column operation only excludes its use on poor quality colour TV sets.

Note: Neither TERMI nor COMMUNICATOR are suitable for use on 'PRESTEL' type systems, though they are widely used on electronic mail systems. Please note that the actual MODEMS used for connection to PRESTEL/MICRONET are suitable for use on other mail systems or bulletin boards etc.

## PRINTMASTER



£33.35 incl.

Joining our already extensive range comes PRINTMASTER a sophisticated printer handling utility ROM.

PRINTMASTER will be released in several versions catering for each of the most popular printers on the market. This first PRINTMASTER ROM supports a range of EPSON printers: MX80, RX80, FX80 etc. All commands in the ROM must be preceded by an asterisk and can be used like all normal operating system commands from BASIC programs etc. It is also possible to use them from other language ROMs.

PRINTMASTER supports three types of screen dumps. The most flexible (\*GDUMP) allows any graphics on the screen to be dumped onto the printer. This will operate in any graphics mode, the colours being displayed as shades. Any part of the screen may be printed at any position on the paper in any one of four orientations. It is also possible to magnify the screen dump by any factor x2, x3, x4 etc.

A special feature allows true Mode 7 screen dumps with TELETXT text and graphics, colours (as shades), double height etc.

\*TDUMP allows any text mode to be dumped and \*FDUMP will automatically print the contents of a file on disc to the printer WHILE the BBC machine is doing other things, running other programs etc.

\*WINDOW allows the user to interactively define a graphics window, this controls the part of the screen printed in \*GDUMP. A very much easier method of defining graphics windows than the normal VDU statement.



## CARETAKER THE BASIC UTILITY ROM £33.35 incl.

The latest addition to our range of quality ROMs for the BBC Micro. This includes 17 new commands -

\*RENUMBER can renumber parts of programs and move them to any other position in the program \*SQUASH can compact a program removing redundant spaces or REMs and putting as many statements on each line as possible.

One special feature allows single key entry of BASIC keywords - exactly the same as the ELECTRON. This speeds up the program entry enormously.

\*EXCHANGE can search and replace any occurrence of a string.

\*INSERT allows any routine or program on tape or disc to be inserted into any point in the program, and \*PARTSAVE can save any part of a program.

\*TABSTOP allows the setting of true TAB positions. Once defined pressing the TAB key moves the cursor to the next TAB position. This will work in most programs (e.g. WORDWISE).

The above list is only a few of the commands - others allow the saving/loading of function keys, variable listing, status display, merging two or more programs etc.

Supplied with full manual, fitting instructions and special stickers for the key fronts.