SPECTACULAR PROGRAMS
FOR THE BBC MICROCOMPUTER
FROM ACORNSOFT

Autumn 1984

Acornsoft's spectacular programs open your eyes to the exciting world of personal computing. Specially designed program packs covering games, educational and home and business applications are available for your BBC Microcomputer. You can teach yourself to program. Do your own accounting. Run your home life more efficiently. Design your garden. Play an active part in your children's education. And generally increase the pleasure you get from your computer. If games are your passion, Acornsoft offers a variety of scintillating games for all the 'children' in your family.

By looking at our special symbols, you can tell in what form the programs are available:

📼 on cassette

💽 on disc

40/80 on dual format 40/80 track disc

▱ via plug-in Read Only Memory (ROM) which can be specially fitted by your dealer*

Ⓐ suitable for Model A

Ⓑ suitable for Model B

♟ indicates you can use joysticks

6502 requires 6502 Second Processor

*To use ROM software your computer should be fitted with the 1.0 machine operating system, or later versions. This will be supplied free of charge if required.

The home education range has been designed to help people of all ages to enjoy and control their learning. The fascinating activities, facilities and

simulations in the range stimulate interest and concentration. The success of many of these programs has been well established, while

those which are more recent include the very latest developments in educational software.
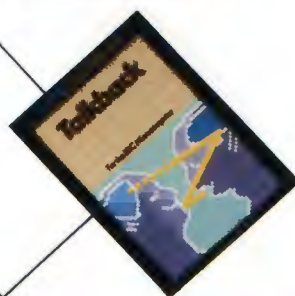
Spooky Manor
[icons] 🖥️ ⓑ

For over 100 years the old manor house has been empty. It is said to be haunted and to contain hidden treasure. One day you set out with some friends to explore the house and solve the mystery. While you are looking around the house you hear the front door slam and find that you are shut inside the manor with night approaching!

Spooky Manor is an adventure game for up to four players that encourages planning and logical thinking. It is especially suitable for children aged seven and upwards but many adults will enjoy it too. The game provides stimulus for discussion and decision making and, although it can be played competitively, the advantages of co-operation quickly become apparent.

Spooky Manor is designed for use with the BBC Microcomputer. Up to four Microwriter Quinkey keyboards can be used with OS 1.2.

ABC
[icons] 🖥️ ⓑ

ABC is a writing tool designed to meet the needs of young writers aged seven and upwards. It is easily operated and quickly understood. For example, blocks of text can be moved using the 'tug', which actually tows words from one place to another. Users can begin writing immediately and then move on to ABC's more sophisticated features whenever they wish.

ABC offers three types of screen displays: 'write', 'read and write' and the 'slate'. Switching between the displays is a simple matter of pressing the red function keys. Text can be printed, displayed, edited and stored. Experienced word processers will appreciate the facilities for word wrap-around, right-justification, centering and formatting.

Talkback
[icons] 🖥️ ⓑ

Talkback is an educational game inspired by a famous computer program called ELIZA in which users held 'conversations' with the computer by typing in sentences, and the program responded by displaying sentences that were apparently replies.

Talkback is not just another version of ELIZA. It has two major facilities which add to its educational potential. Firstly, it allows users to create their own computer 'characters' capable of holding simple conversations on the screen. Secondly, it enables users to make any one of the characters they have created 'talk' with any other one, so that users may observe the conversation, print it out or even join in!

The process of creating 'computer characters' with Talkback is both entertaining and demanding, providing, in an amusing context, valuable lessons in both English and computer literacy for learners of ten and above.
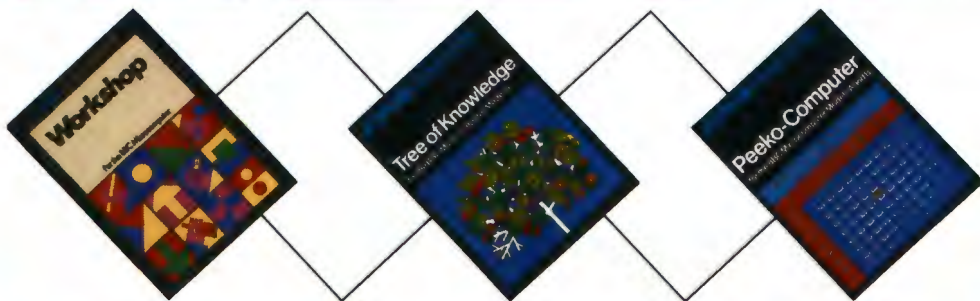
Workshop
👥 🖼 Ⓑ
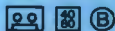
Workshop is an invitation to play with thinking. It provides an unusual environment in which the user discovers by experiment what each of the program's amazing 'machines' can do with simple geometrical shapes.

In exploring the functions of these strange machines, creative thinking can be as effective as a logical approach, though users who wish to review their strategies will enjoy the lively replay sequences. The program uses a minimal number of words, the function keys have picture-labels and each machine generates its own peculiar sounds, so Workshop will serve as an amusing and imaginative introduction to the computer for young learners from the age of three upwards.

Tree of Knowledge
👥 🖼 Ⓑ
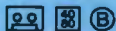
Tree of Knowledge is an interactive program for users aged eight and above. It illustrates some of the more imaginative aspects of computing in that the user first educates the computer, building up a branching data structure by answering and asking questions, and the resulting database is then used to play games of deduction and logic. Databases can be saved and loaded from within the program, and two sample databases are supplied with the pack.

Peeko-Computer
👥 🖼 Ⓐ Ⓑ
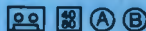
Peeko-Computer simulates the operation of a simplified microcomputer in order to demonstrate the fundamentals of machine-code programming. The Peeko-Computer has 20 easily-learned instructions, and the display gives a visual analogy of the operation of a real microcomputer. Programs can be entered, single-stepped or run, with the memory and register contents being displayed at every step. To aid comprehension each instruction mnemonic is displayed as it is encountered.

Peeko-Computer comes complete with a 16-page instruction manual including exercises and examples, and includes five demonstration Peeko-Computer programs. Suitable for 12 year olds and above.
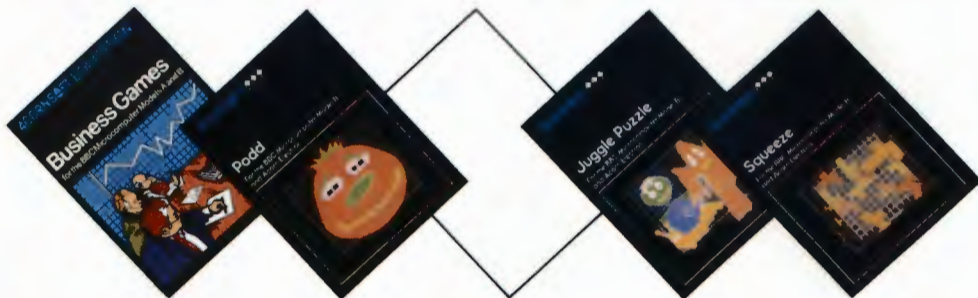
Business Games
[icons]

Two educational games designed for economics, business, general studies and general interest. For users aged 12 upwards.

In STOKMARK one to eight players compete in buying and selling shares. The first to turn his or her initial capital of £1200 into £5000 is the winner. The screen displays information about shares such as you would find in the City pages of newspapers: prices, dividends, yields and price/earnings ratio.

TELEMARK is a business game based upon making and selling televisions, the objective being to make the largest total profit or to win more than half the total market for televisions.

By playing STOKMARK and TELEMARK the participants learn the significance of financial terms such as purchase or sale of shares, dividends, yield, price to earnings ratio, overheads and depreciation.

Podd
[icons]

Podd is a delightful character who captures the imagination of young children whilst improving their vocabulary and developing their language skills. Ask Podd to perform an action such as run, jump, laugh or cry, and, if he 'knows' the word he will perform that action. Podd 'knows' 120 words (some are synonyms) and children have to guess what they are. Older children can join in by asking Podd to perform up to five actions one after the other.

Podd helps children develop memory skills and improve spelling.

Juggle Puzzle
[icons]

Juggle Puzzle is a jigsaw puzzle of a special kind. It is a challenging game designed to exercise and increase mental agility.

Choose from six colourful and fun to draw puzzles. Each can be divided into a nine or sixteen piece board which is then broken into a puzzle on the screen. The greater the number of pieces mixed, the more difficult the game. A square frame is used to twist any set of four pieces to rebuild the original picture.

Juggle Puzzle helps to develop memory and logic in children of all ages.

Squeeze
[icons]

Squeeze is a graphic and entertaining way of introducing children to geometrical concepts and problem solving using unusual shapes.

Each player is allocated a particular shape and the aim of the game is to get as many shapes on to a board as possible by squeezing your opponent out. The shapes are picked at random which ensures that each game is different. There are eleven board sizes from which to choose and three levels of difficulty.

This unusual and interesting game encourages children to visualise how shapes relate to each other and promotes the ability to think and plan clearly.

Facemaker
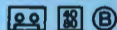
Children of all ages are enthralled by Facemaker. Starting with the eyes, and proceeding at your own pace, you can build up one of over a million possible identikit-type faces on the television screen. The program asks you to select features from a series of choices: mouths, ears, noses, hair-styles, even earrings and hats! This teaches children to read and spell the names of the features with their associated quality/adjective, and then later to follow the sentence structures in which they appear. Children have fun drawing each other, or working together on the program, and this helps improve their reading ability, social interaction, and powers of observation.

Words Words Words

Words Words Words is a stimulating game which uses the element of fantasy to help young children with their reading and spelling. Pictures are shown on the screen and the child has to type in the name of the object shown; where common alternatives arise (eg truck or lorry) the computer will usually accept both. If the answer is correct the object takes its place in a scene. Once all of the pictures in a scene have been identified correctly then the scene comes to life! Over 85 words are introduced for which a dictionary is provided. Children can link the eight scenes together in almost any order they choose to build up their own action-packed stories!

Hide & Seek

Hide & Seek is designed to encourage and develop reading skills. Objects are put into boxes and hidden by shutters. The player then has to remember where the objects were hidden! Sounds easy? With six very different objects young children will succeed quickly, but try remembering the whereabouts of nine different flowers. Since only the Space Bar and RETURN keys are used, very young children can play this game, while even adults find the more difficult memory games challenging!

The last two games help with reading and spelling by improving short term memory. The player has to remember which picture is missing from the set that was shown, and either 'read it' or 'spell the name'.

Children from Space
[icons]

Follow the adventures of Beng and Zoma as they explore the earth. Having only recently arrived from their home in space, they have a few problems with their English – they get words mixed up, spellings muddled and don't always know the right words to use. What they need is earth children to help them out by correcting their daily reports. Having helped Beng and Zoma, children will spot errors in their own written work much more quickly. But there's much more to Children from Space than dry exercises in grammar – critical analysis is encouraged by asking the player to choose the better of two words. The events which involve these two friendly visitors are by turns humorous, surprising and endearing.

Let's Count
[icons]

Let's Count provides an introduction to the numbers one to nine and the fundamental concepts involved in counting. The scenes, chosen to capture a young child's imagination, include ships visiting islands, rockets flying from the moon, and a fairground stall. While playing the child learns to count objects, match them to numerals, recognise their order and compare their magnitude.

Number Gulper
[icons]
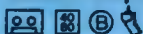
Number Gulper is a gripping, fast moving game that helps develop arithmetic skills using all four arithmetic operators – add, subtract, multiply and divide. The player has to build a number between 10 and 9999 by gulping numbers on a track on the screen using a manoeuvrable gulper, before its energy runs out. At higher levels there are scramblers which change the number if they are touched by the gulper, ruining any plans previously made. The game works with both joystick and keyboard, and 19 levels of difficulty cater for children of all abilities. Even adults find the upper levels testing! There is also a self-test option to enable children to monitor the improvement in their mental arithmetic as they play the Number Gulper.

Number Puzzler
[icons]
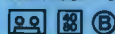
The four games in Number Puzzler are an exciting way of improving your ability at addition and subtraction. Three of the games are like noughts and crosses, but with the numbers up to 9 or 99, depending on the level chosen. Using a three by three or six by six grid, you can play against a friend or the computer; the skill comes in developing a winning strategy. In the fourth game, Magic Square, you have to fill a square with numbers so that the rows, columns and diagonals add up to the same number. A self-test is also provided as a means of checking how much you have improved.

Number Chaser

Since calculators have become such common household objects, fewer people now resort to mental arithmetic. Children brought up on calculators may never acquire a feel for numbers. Number Chaser provides children with the opportunity to practise estimation with an exciting race game, featuring advanced graphics and a choice of four different vehicles corresponding to four levels of difficulty. You race against the computer's car, all the time estimating the answers to a series of multiplication sums. You may be able to win the race, but can you make it to world champion?

Cranky

Cranky the crazy calculator doesn't like rain. On wet days Cranky's circuits get damaged, so that some of the calculator keys don't work any more. The fault is shown on a 1-100 number square, and you can repair Cranky by constructing the numbers in the pattern. You've only got two numbers with which to do this though. If you make the repair successfully, then you can use Cranky as a calculator! Sometimes it's easy, but sometimes you have to make lots of calculations. Careful planning will help you repair Cranky quicker.

Repairing Cranky will give children a chance to explore the interesting relationships between numbers by free experimentation at their own pace, thus giving confidence with number manipulation.

Table Adventures

Table Adventures is an exciting way of helping young children with their tables, approaching them through factorisation rather than multiplication. The four games involve finding gold at the rainbow's end, canoeing across rapids, escaping from underground, and using skill and logic to minimise your score. Each game starts off very simply but is progressively more challenging, eventually providing a tough problem (even for adults!). A self-test is also provided so that you can see how you are improving.

Acornsoft languages extend the power of your BBC Microcomputer, allowing you to take advantage of software in other languages or giving you greater speed and flexibility.

The languages are ideal for applications such as artificial intelligence, graphics, and system development. Each Acornsoft language comprises extensions to take advantage

of the special features of your BBC Microcomputer. Programming books which support the Acornsoft languages explain the special applications.

FORTH

Acornsoft FORTH is a complete implementation of the FORTH language to the 1979 standard specification for the BBC Microcomputer Model B. FORTH is a compiled language so programs run very fast (typically five times faster than BASIC).

The cassette or disc includes a FORTH dictionary and compiler, a tape interface/screen editor, a macro-assembler, and a high-resolution graphics demonstration.

In addition to a comprehensive set of arithmetic and stack operators, control transfer words and defining words, Acornsoft FORTH includes full graphics commands and the more advanced features for defining the actions of defining words themselves. This opens the door to 'meta-FORTH' and user-defined FORTH-based languages.
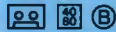
LISP

LISP is the fundamental language of artificial intelligence research and offers more flexibility in data and control structures than traditional languages. Acornsoft LISP includes 5.5K of machine code interpreter, plus 3K of initialised LISP workspace containing utilities and constants.

The system contains a number of extensions to basic LISP, including PEEK, POKE, CALL, and VDU, LOOP, WHILE and UNTIL functions, and disc input/output control functions.

LISP Demonstrations

The LISP Demonstrations, taken from the book *LISP on the BBC Microcomputer*, are for use with the LISP pack. They show how LISP can be used in a wide variety of applications, including artificial intelligence, computer graphics and the compilation of computer languages.

The programs are easy to use, and it is a simple task to include them in your own LISP applications. Full instructions are included with each pack.

Microtext

Developed by the National Physical Laboratory

Microtext is an authoring package designed to simplify the production of a wide range of man/computer dialogues. Using Microtext's simple commands the user can draw up any number of 'frames', each containing text and/or graphics. A series of frames builds up to a complete module, whose maximum size depends on available memory. Each Microtext program can consist of more than one module, and its size is therefore limited only by the capacity of the cassette or disc.

Using Microtext, experts in any field can construct their own complete courses of computer-based instructional material. Applications include interviewing systems, teaching packages, training courses and interactive demonstrations and simulations.

The pack contains the Microtext authoring system plus a comprehensive user guide. Also included are a series of demonstration programs and an easy-reference summary card of all Microtext facilities and commands.

BCPL

BCPL is one of the most flexible of modern structured languages and is easy to learn. BCPL is particularly good at handling input and output, and is thus often used to write utility programs. It is also used to develop games programs and commercial packages, to develop system software such as screen editors, to write control systems, and to produce programs which would otherwise need to be written in assembler.

The Acornsoft BCPL system consists of the BCPL language ROM and a 40/80 track disc containing the BCPL compiler, a screen editor, a 6502 assembler, other utilities and program development aids, and some examples of BCPL code. A comprehensive 450-page user guide is included in the package.

The BCPL language ROM can be used with either a disc or an Econet filing system, and automatically takes advantage of the 6502 Second Processor if fitted, claiming all available memory.

BCPL Calculations Package

This package is designed for use with the Acornsoft BCPL system and familiarity with this system is assumed. The package supports floating point, fixed point and fast integer calculations, which meet the requirements of a wide range of applications.

The calculations package is provided on disc, containing the BCPL calculation files and some example files. A comprehensive user guide is included.

BCPL Stand Alone Generator

This package greatly increases the usefulness of the BCPL system by permitting easy distribution of BCPL programs. It converts developed programs into stand alone programs which can be run on any BBC Microcomputer, even without the BCPL language ROM. It can also be used to develop stand alone programs for other 6502-based computers.

Stand alone programs can be produced either as files, stored on any suitable medium, or as language ROMs. Conversion of programs to run in a stand alone environment is very straightforward, and very few, if any, modifications are required.

The package comprises a disc containing the utility programs, a comprehensive user guide, and a licence allowing distribution of up to 100 copies of a program developed using this system. A separate licence permitting unlimited distribution is available.
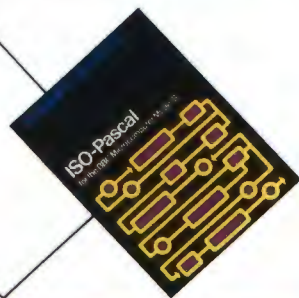
Turtle Graphics
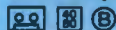
Turtle Graphics is designed as an introductory package for teaching geometry, mathematics and graphics at an elementary level.

The interpreter supports a subset of the full LOGO implementation featuring only the simpler turtle graphics facilities. The facilities provided are powerful enough to allow development of fairly complex programs, and include multiple parameter procedures, looping primitives, elementary and transcendental functions and keyword abbreviation. A user manual is included in the pack.

S-Pascal

A compiler for a subset of Pascal – one of the most popular computer languages in use today.

The Acornsoft implementation supports integer, character and boolean types, as well as multi-dimensional arrays. Like the full Pascal implementation it is block-structured and completely recursive. Error messages are comprehensive, aiding in teaching and debugging. It is aimed at the educational user, particularly as an introduction to structured programming languages, where the power of the full Pascal implementation is not required. Since S-Pascal compiles to 6502 machine code it is also eminently suitable for writing small fast utilities. A comprehensive user guide is included in the pack. (The user guide is also available separately.)

ISO-Pascal

This is a full implementation of Pascal to the ISO standard, with extensions to take advantage of the BBC Microcomputer's special facilities (sound, graphics etc) approved by ISO. It is the natural language for large-scale programming, compiling to a compact intermediate code, which is then interpreted, to give a performance superior to interpreted BASIC, without the complexities of machine code.

It is ideal for teaching at all levels, and is the natural successor to S-Pascal for advanced students. The pack comes with a comprehensive user guide, and an introduction to Pascal (both available separately).

LOGO

LOGO is designed to introduce children and students to elementary programming techniques. Acornsoft LOGO is a full implementation of LOGO, containing all the standard turtle graphics and list processing functions. Additional features include changeable screen mode allowing multi-colour graphics, sound commands for four-part harmonies, multiple screen turtles which can be independently controlled, split and variable sized graphics and text windows, and a 'NIB' feature to plot solid or dotted lines. These facilities can be used in a wide range of applications, and fully exploit the power of the graphics of the BBC Microcomputer.

The LOGO package consists of the LOGO interpreter on two 16K ROMs, a disc/cassette containing the floor turtle drivers and other utilities, two easy-to-follow manuals and a reference card.

COMAL

Acornsoft COMAL is a block-structured language, similar to Pascal and BASIC, selecting the better features of both. It includes a number of features which encourage well-structured programming and facilitate debugging and maintenance of software. Reals, integers, booleans and strings are all supported, as well as multi-dimensional arrays, and file I/O is simplified by extensive file handling facilities. This general-purpose language has been chosen as the educational standard in many European countries.

COMAL is supplied on ROM and comes with a comprehensive user guide, which contains a tutorial section for beginners and a reference section for more experienced BASIC or Pascal users.

6502 Development Package

This package, for use with the 6502 Second Processor, is intended for the serious programmer developing large programs in assembly language. There are six utilities in the package:

MASM – a 6502 macro-assembler providing a comprehensive range of facilities including looping, recursive calls and conditional assembly.

XREF – a cross-referencer for use in conjunction with MASM.

SRCXREF – a source code cross-referencer.

TTRACE – a trace package for debugging programs.

PRINT – a program to produce formatted assembly listings without using MASM.

EDIT – a versatile screen editor.

In addition, there are versions of TTRACE and PRINT for use on the BBC Microcomputer without a second processor.

The package comes complete with a comprehensive user guide describing all these facilities.

The Acornsoft business programs enable you to make the most of the computing power of the BBC Microcomputer. Each program has been especially designed to take advantage of its many facilities, to provide you with all you need to run your business more efficiently. Aimed at both the beginner and the professional, these programs will save you time and effort in many routine tasks.
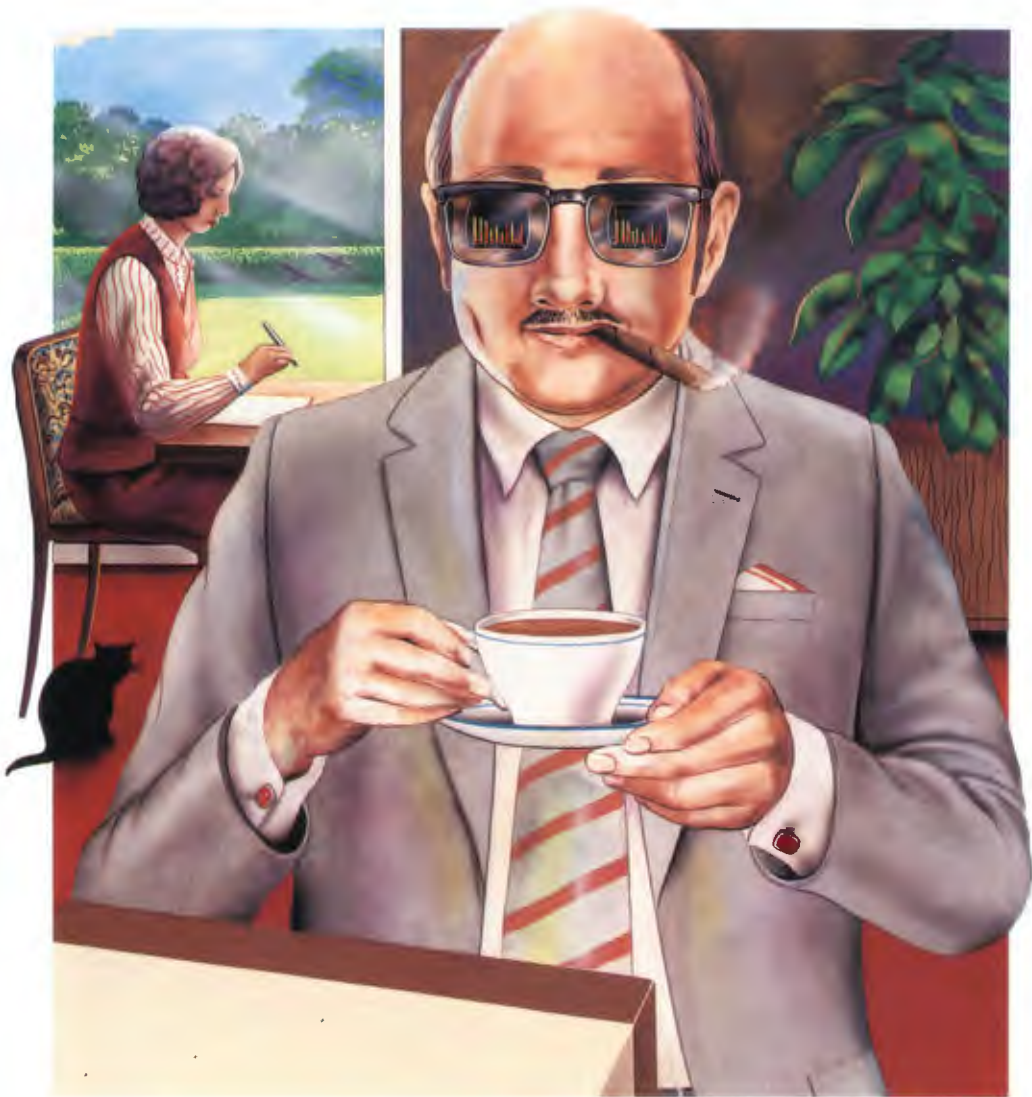
VIEW
🖳 Ⓑ

VIEW offers all the facilities of a professional word processor. Important features include the choice between 40 and 80 column modes, insert or over-type editing modes, the flexible search and replace commands, automatic page numbering, macros and global or selective formatting. VIEW supports bold or underlined type, microspacing and has a facility for editing files larger than the text area would normally allow.

VIEW has been designed for the convenience of businesses and individuals alike. For the less experienced user, VIEW is straightforward and easy to use; no prior knowledge of word processing is necessary, and the accompanying manuals assume only that the user is familiar with the operation of a typewriter.

The VIEW package consists of a 16K ROM, the teaching manual *Into VIEW*, the reference manual *VIEW Guide* and a function key card.

Printer

You can use any printer that is compatible with the BBC Microcomputer to print out from VIEW and you can print the text in memory or from cassette or disc.

Some printers offer special facilities such as bold or underline; to use these facilities you will need a 'printer driver' program. See the VIEW Printer Driver Generator package.

Installation

We recommend that your local dealer should install the VIEW ROM in your computer. However, ROM-fitting instructions are included in the pack.

Hi-VIEW
🔢 Ⓑ 6502
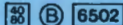
This is a special version of the VIEW word processor, designed for use on the BBC Microcomputer with the 6502 Second Processor. Available on disc, it offers 47K of text memory, a useful addition for those users of the 6502 Second Processor who need more text space than is normally available with the VIEW ROM.

ViewIndex
🔢 Ⓑ

A comprehensive and accurate index adds the professional touch to your documents. This program automatically creates the index for you, sorts it into alphabetical order and notes each page or section number where the reference occurs. While you are using VIEW, you simply mark the words or phrases within the text which are to appear in the index or you can do this after you have written the file. Optional facilities allow you to edit the index and format it as you wish. A user guide provides clear instructions on how to use the system.
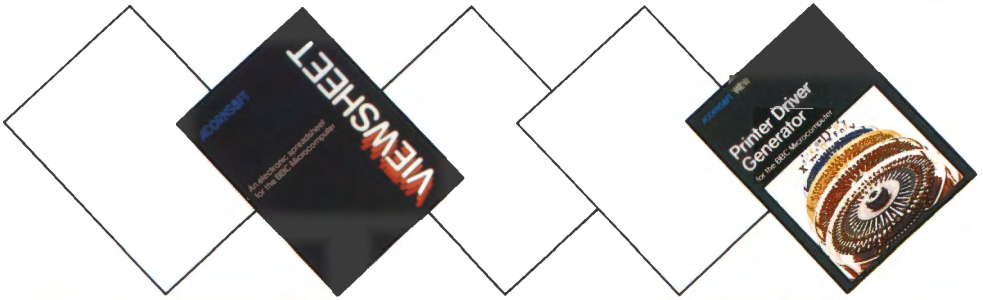
ViewSheet
🖨️ Ⓑ

ViewSheet is an electronic worksheet, the numerical equivalent to a word processor on your BBC Microcomputer. The ViewSheet is 255 columns wide and 255 rows deep/long, the display showing small sections of the sheet at a time.

ViewSheet works in any screen mode. Figures and formulae can be typed on to the sheet, and in whatever format you please. You can redefine row and column headings and insert and delete rows and columns. Values can be formatted in pounds and pence, ranged right or left, and with up to nine decimal places.

ViewSheet distinguishes between values, labels (usually headings), and formulae. A formula can relate to any other sheet position such that if you change any value, all other values depending on it will also change.

Sections of the sheet, described as 'windows', can be printed out or arranged as required on the screen.

ViewSheet can be used with any printer that works with the BBC Microcomputer, and can also be used with any of the printer drivers in the VIEW Printer Driver Generator package to give bold and underlined printing.

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ViewSheet files can also be converted into VIEW files, and data may be transferred between BASIC (and other languages) and ViewSheet, and between worksheets.

Operations supported by ViewSheet are: addition, subtraction, multiplication, division, exponentiation and bracketed operations.

Functions supported are: ABS, ACS, ASN, SIN, SGN, RAD, ATN, COS, DEG, EXP, INT, LN, LOG, PI, SQR, TAN, MIN, AVERAGE, MAX, CHOOSE, LOOKUP, IF, ROW, COL.

Printer Driver Generator
💾 📠 Ⓑ

This program enables you to generate a standard interface between VIEW and the special facilities of any printer. Using a simple question and answer procedure, the Generator creates the appropriate driver, enabling you to take advantage of the special effects of your printer. Typically, these include superscripts, subscripts, bold, underline, italics and extended character sets. The Screen Driver program allows you to simulate a print-out on the screen. MPRINT enables you to print several files at once and to include the contents of memory among them.

The Printer Driver Generator can be used with ViewSheet to produce bold and underline effects. The accompanying manual provides a step-by-step guide to creating your own drivers, and gives some useful examples to show you how it's done.

The Printer Driver Generator package is sold complete with ready-made printer drivers for the following printers: Epson FX80, Olivetti JP101, Ricoh Flowriter 1600, Juki 6100 and Facit 8105.

Database
📟 🎛 Ⓑ
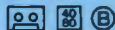
Acornsoft Database enables you to use your BBC Microcomputer to store, retrieve and analyse large quantities of information quickly and easily. On disc, Database has a capacity limited by that of the disc and on cassette by the amount of memory remaining. This allows 32 fields per record and up to 240 characters per field.

A flexible search facility enables you to look for information either numerically or by pattern matching, and this can then be sorted into alphabetical or numerical order. The search facility can be used on complete files or subsets of files.

The program also caters for statistical analysis: you can obtain the sum, mean and standard deviation of any numerical fields in the complete file or subset.

Also included is a facility to allow you to convert Acornsoft Database files to VIEW files, and you can use records from the Database as parameters for VIEW macros.

Personal Money Management
📟 Ⓑ

Personal Money Management is designed to help you control your personal finances more effectively.

Entries can be recorded in up to nine expense categories. Headings are provided, but can be changed to headings of your own choice. The program allows you to set budgets for each category and to compare your projections against actual expenditure.

With the information you record in these categories Personal Money Management can:

– help you set budgets for regular expenditure
– automatically record standing order payments
– compare actual versus budgeted savings
– give information about expenditure in each category for particular months over a whole year
– calculate banking requirements each month to help you keep ahead of your bills
– record your banking transactions

The pack contains a 24-page instruction booklet.

Desk Diary
📟 Ⓐ Ⓑ

This pack consists of two programs plus instructions for an address book and diary/planner on the BBC Microcomputer Models A and B.

ADDRESS BOOK can hold a file of several hundred names, addresses and telephone numbers which can be retrieved by name, or by matching with other information specified in the entry. Applications include mailing lists and customer records.

PLANNER works just like a written diary but with a real-time alarm and many automatic features. There is space for 300 entries, which may be of three kinds: appointments at a specified time of day; regular events, such as birthdays and bill payments which automatically get carried forward; and exclusive entries, for trips and holidays, which prevent appointments from being made over a specified period.

Forecast
⊡ Ⓑ

These programs can be used at home or in the office to predict the likely outcome of any intended financial project.

FORECAST provides you with instant financial predictions which allow you to make informed decisions at a moment's notice. The program calculates trends by applying sophisticated statistical techniques to the data you supply. The results can be printed out for circulation.

CAPITAL allows you to evaluate an investment proposal by calculating its likely returns; these are based on assumptions which you can vary as you please. You are given a swift and automatic analysis of the current value of such proposals where the costs arise in the present and the profits accrue in the future.

An instruction booklet is included in the pack.

Acornsoft
Small Business Software

These packages can significantly reduce office paperwork and help you to manage your business more efficiently and easily. Each of the seven programs in the series is sold and can be used separately, or you can link them together to make up a complete business system.

Order Processing
⊡ Ⓑ

Maintains customer, product and sales order details. It records the progress of orders, and produces order confirmation and despatch note print-outs. Picking sheets are produced for back order analysis.

Accounts Receivable
⊡ Ⓑ

The package maintains sales ledger details, and gives instant access to customer account status. Features include: cash allocation, calculation of output VAT, credit limit records, debtor analysis and production of statements.

Accounts Payable
⊡ Ⓑ

Provides accurate maintenance of purchase ledger details and supplier account status. The package calculates input VAT and, among other facilities, it will highlight settlement discounts, produce remittance advices and provide an analysis of creditors.

Purchasing
⊡ Ⓑ

This maintains a full list of all your suppliers' names and addresses. It will register deliveries, provide validation against suppliers' invoices and produce instant recall of order data whenever necessary. You can also check your commitment to suppliers.

Invoicing
🖭 Ⓑ

The system stores names and addresses of customers, and details of products and VAT rates. You record orders on your order update files and then print out invoices or credit notes, automatically. The system allows for variable terms of trading and will calculate and print discounts. VAT rates are easily adjusted for individual products.

Stock Control
🖭 Ⓑ

Efficient stock control is important for any business, and this package will ensure that you always know the latest stock position. It provides an automatic analysis of stock by quantity and value, highlights stock-out situations and maintains stock balances. There is a manual override facility for reconciliation of physical stock.

Mailing System
🖭 Ⓑ

This allows you to create files of all your customers and put them into categories, so that when you produce mailshots, you can select which customers to include. You can create categories by any criteria you wish: size of company, type of business, location or whether the customer is a good or bad payer. When you select a category, you can print out names and addresses on to either gummed labels or printer paper.
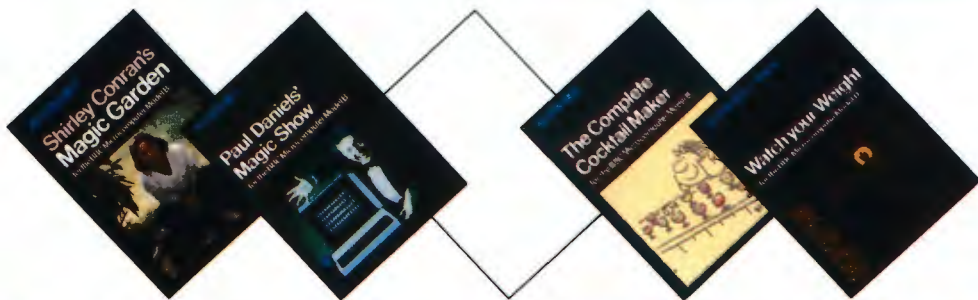
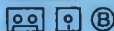Try your hand at magic tricks, or conjure up an exotic cocktail with the help of your BBC Microcomputer. The Acornsoft home interest programs are easy to follow and fun to use. You can teach yourself a language, plan and follow a diet and even take the backache out of organising your garden.

Shirley Conran's Magic Garden
[oo] [?] (B)

Based on Shirley Conran's successful book, this is a problem-solving program which provides the complete beginner with instant answers to the questions of what to plant, and where.

Simply tell the computer whether you prefer a shrub or a flower, the type of soil, light and shade conditions and required flowering time and the computer will come up with a selection of possible plants.

The program comes complete with two ready-made databases containing full information on 55 flowers and 47 shrubs. You can add to these and save them on cassette to build up your own library of garden and household plants.

An instruction booklet is included in the pack.

Paul Daniels' Magic Show
[oo] [▦] (B)

The pack contains ten magic tricks and some simple props for you, the conjurer, to use. Ideal as a party piece or simply to baffle your friends, here are mind-reading, birthday-guessing, card-divining, money-making tricks, and more besides – all designed to challenge the credibility of what is possible and what your audience sees before it.

The Complete Cocktail Maker
[oo] [▨] (B)
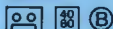
A 'must' for every party. Amaze your friends with your versatility in mixing cocktails. With over three hundred drinks to choose from, you'll be sure of finding something to suit everyone's taste. Give your guests the fun of selecting their own drinks from the colourful recipes, each of which is graphically illustrated. Browse through the entire selection to conjure up a host of exotic images of faraway places. Or tell the computer which ingredients you have and let it transform them into cocktails beyond your imagination.

Your parties will never be the same again.

Watch Your Weight
[oo] (B)

Here, at last, is a weight-loss program designed for you. With it, your computer becomes an expert wholly conversant with, and sympathetic to. your needs.

Under the guidance of the Consumers' Association, dieticians have produced a definitive diet for health. First, you must share your personal details with the computer; then, in response, the computer will help you choose an appropriate and individual weight-loss plan.

Next it offers you a calorie counter and a series of apposite menu suggestions to help stimulate your imagination when you just can't think what to eat. All this is set in the context of advice about the composition of your diet and its effect on your health. Finally, once a week, you can go to the computer and ask how well you are doing.

If you fail to meet the computer's (or your) expectations, you will find it a compassionate counsellor. By encouragement and realistic assessment of what you can manage, it will guide you to your target weight.

LINKWORD
📼 Ⓑ

Acornsoft's LINKWORD courses have been specially developed by psychologist Dr Michael Gruneberg to provide a unique and imaginative approach to learning a foreign language. By associating words with images, you will find it easy to pick up a vocabulary of around 350 words in a very short time.

For example, you are told that: The Italian for CAT is GATTO. You are asked to imagine a cat eating a GATEAU.

You will soon learn the words you need to make yourself understood in a variety of situations, without having to spend hours learning them 'parrot fashion'. You will cover a wide range of topics, from restaurants, food and the beach to business, numbers and the car. The courses will appeal equally to travellers wanting to learn quickly for a business trip or holiday and to children who find conventional learning methods boring or difficult.

There are four languages to choose from – French, German, Spanish and Italian. Each course comes with a program cassette, an instruction booklet with glossary, and an audio tape to help with pronunciation. The programs are very easy to use, prompting you on what to do next, pointing out differences in grammar, hinting on how to remember genders, and advising on when to listen to the audio cassette.

Acornsoft Graphics

Acornsoft graphics programs are designed to bring out the artist in you. Powerful graphics software makes maximum use of the colour and superb high resolution graphics facilities on your BBC Microcomputer. Ingenious programs draw animated pictures. You can construct intricate charts, graphs and diagrams or create your own masterpieces in dazzling colour.

Picture Maker

Picture Maker is a complete graphics system for preparing, on the screen, diagrams, designs, or simply pictures. Applications include the design of transparencies or overhead projector slides, thus offering scope for the professional as well as the budding artist.

Each picture is built out of units which the user defines, and which may be used repeatedly to construct more complex units with optional rescaling, rotation, or colour change. Text of any size and orientation may also be used.

Basic drawing functions include lines, solid triangles, arcs, circular sectors and shape filling. There is an automatic 'cursor home' position memory and an editing feature. Actual and logical colours can be changed easily, and pictures can be drawn in one screen mode and then replayed in another.

Pictures may be saved on disc or cassette.

Graphs and Charts

These programs produce a set of graphics routines which can be incorporated into programs to present data graphically in a wide range of applications. The graphs include automatic scaling, labelling of axes, and use of colours. Routines are included to draw two-dimensional graphs, three-dimensional graphs, stereo pairs, two-dimensional contour maps, three-dimensional contour maps, bar charts and pie charts.

Complete listings and detailed explanations of the programs are given in the book *Graphs and Charts on the BBC Microcomputer*; although sold separately we recommend the use of the book with this pack.

Creative Graphics

36 programs producing a spectacular range of pictures and patterns in full colour, including animated pictures, recursively-defined curves, and rotating three-dimensional shapes. A full discussion of the techniques and principles involved plus program listings are given in the book *Creative Graphics on the BBC Microcomputer*, available separately.

Help is now at hand for compulsive games players. Acornsoft games take full advantage of the colour graphics and sound features on your BBC Microcomputer.
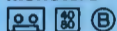
The wide variety of games test your skill, reaction speed and resourcefulness. Put your wits against the monsters and meteors. Enjoy the fiendish adventure games. Challenge your intellect with chess and the dreaded Rubik Cube. Acornsoft games bring new excitement to leisure time. Make sure life's not all work and no play.

Monsters

Pursued by monsters your man is chased up and down ladders and along walls; the only hope of survival is to dig holes in the walls and trap the monsters by filling them in. Score more by dropping the monsters through several levels, but watch your oxygen level. With sound effects and table of high scores.

Snapper

This colourful game is a superb example of the best in games entertainment. Guide the Snapper through the maze eating dots and fruit and avoiding the creatures that chase you. The game gets progressively faster, and with higher scores as the fruit increase in value. Complete with full sound effects, score and a table of high scores.

Planetoid

An amazing fast-action graphics game. Save the life-forms from their attackers and return them safely to their planetoid while trying to fend off five kinds of hostile space-beings. Complete with sound effects, table of high scores and hyperspace jump.

Arcade Action
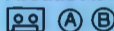
Four games in one pack for a variety of entertainment:

INVADERS – fight off the waves of advancing aliens while dodging behind four shelters to avoid being hit by their missiles.

BREAKOUT – an all-time favourite where you knock bricks out of a multi-coloured wall. There are seven variations on the standard game.

DODGEMS – your racing car has to outwit the computerised car which is programmed to crash into you.

SNAKE – guide the hungry snake towards its prey and watch it grow as it consumes different kinds of food. Score as many points as possible while preventing the snake from bumping into itself or the walls.

Rocket Raid

Your mission is to raid a heavily-guarded Martian fuel depot; fly your rocket over mountains and through caverns, avoiding enemy missiles and dodging convoys of deadly phizzers. You have to bomb fuel tanks to replenish your fuel.

Includes full sound effects and table of high scores.

Meteors

Manoeuvre your laser-ship
through a hail of meteors,
smashing them with your laser
bolts as they hurtle towards
you on all sides. Avoid being
hit by the missiles from hostile
flying saucers which fire at you
as they pass. Your ship is
equipped with as many laser
bolts as you can fire and as a
last resort you can escape
through hyperspace.
Complete with sound effects
and table of high scores.

Arcadians
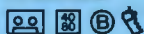
A fast-moving arcade-style
space game, your task being
to demolish an onslaught of
warring aliens. Your laser-base
moves along the surface of the
planet while above you the
arcadians fly in formation.
Without warning, some of them
suddenly swoop down
towards you dropping bombs.

You are awarded a flag for
each screen cleared, and the
game gets harder as you
progress. Arcadians is a
challenging game, even for the
expert player! Complete with
music, full sound effects and
table of high scores.

Hopper
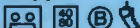
Hop the frog across the busy
motorway trying to avoid four
lanes of fast-moving traffic. To
get across the river to the
safety of the frog's lair you must
leap on to logs and turtles'
backs, but beware of the
diving turtles, the crocodiles
and the snake.

Complete with music and full
sound effects, dragonfly, timer
and table of high scores.

Missile Base

As moon base commander,
you must ward off the salvos of
deadly neutron missiles falling
from space on to your base.

Sitting at your control console,
with command of three
defence stations at your
fingertips, you must knock out
as many hostile missiles as
possible.

Beware the multiple war-head
missiles, as these fragment on
reaching a certain height, and
then devastate your bases with
missile fire.

As the game progresses,
intelligent missiles arrive on the
scene. These avoid your fire,
and must be destroyed with
cunning.

Complete with satellites,
planes and table of high
scores.

Starship Command

Command a starship against
the attacking alien ships in this
demanding high-resolution
graphics game. You control
the forward drive and rotational
thrust on your ship which is
equipped with shields, long
and short range scanners and
a sector display of the stars
and alien ships.

This game includes a table of
high scores and comes
complete with an instruction
booklet.

JCB Digger
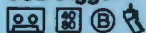
One of a range of dynamic, new arcade-style games for the BBC Microcomputer from Acornsoft. You are put in charge of a JCB Excavator-Loader. You can move the JCB digger in four directions, or dig holes and fill them in, so you can dig traps for the Meanies who chase you. Fill the holes in quickly to kill the Meanies, or pick them up in your shovel and dump them in the sea! The action takes place on an island, with the screen acting as a 'window', which scrolls to accommodate the movement of the JCB.

Developed in conjunction with JC Bamford Excavators Ltd, this game is a must for the games connoisseur.
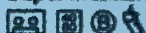
Carousel

A musical shooting range in which you fire at the ducks, rabbits and owls which move across the screen.

Watch out for the diving ducks – if they are allowed to land you lose ten bullets. Score more when you hit caged ducks and polar bears.

Complete with full sound effects and table of high scores.

Super Invaders

You are being bombarded by waves of invading aliens. The only way to resist invasion and avoid subsequent annihilation is to destroy the aliens before they land.

You have three defenders, whose hyper-velocity missiles will instantly vaporise their target on impact. The defenders can shelter from the onslaught behind four bastions, although even these cannot survive indefinitely.

The alien attacks can vary in their ferocity. Sometimes, you may only have a MILD ENCOUNTER; alternatively, you may find yourself in an UNCOMFORTABLE SITUATION, where a faster moving enemy releases a deadlier barrage of bombs. The worst is yet to come with the TERRIFYING EXPERIENCE, where, in addition to all the other hazards, the bombs have a homing capacity and steer themselves towards your defender.

Crazy Tracer
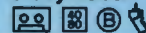
Guide your paint roller round the edge of a maze of rectangles, while avoiding the monsters which are trying to stop you by crushing the roller. As you complete four sides of the rectangle, it is automatically coloured in. You gain extra points by colouring a rectangle containing one of the objects which appear at random. Your second task is to ensure that you don't run out of paint. And beware, as the number of monsters chasing you will increase.

Free Fall

When the Alphoid battleship attacked Deep Space Station Coriolis, the Alphoids injected their cyanide-based atmosphere into the air supply. Only one crewman managed to don his space suit in time and he must now defend the vital computer records held in the Space Station. With no weapons he is in mortal danger. You control the crewman, manoeuvring him around the Space Station, as he tries to kill as many Alphoids as possible. In this battle to the death, he can punch, kick, ram or bomb the enemy to death, but they are deadly creatures which bite, sting and breathe fire.

Aviator
[cassette] [disc] Ⓑ [joystick]
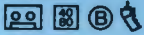
A breath-taking flight simulator which puts you in the pilot's seat of a Spitfire Mark II single seater fighter. You can make it fly just like the real thing – taking off, climbing, turning and landing. Adventurous pilots can loop the loop and roll, and perform all kinds of aerobatics. Take care though, because things can go disastrously wrong, and you may find yourself plummeting to the ground in an uncontrollable nose dive.

Your score is based on successful landings and tests of skill such as flying between skyscrapers or under bridges. There is also a chance to select a Theme in which you repel unfriendly life forms from outer space both on the ground and in the air; a combined test of flying skill, navigation and tactics as you seek and destroy. The game comes complete with a map and a flying manual to help you to become an ace pilot.

Drogna
[cassette] [disc] Ⓑ [joystick]

This is an exciting and unpredictable game of strategy and deduction in which two players compete to carry treasure across a maze of coloured tiles.

The aim of the game is to score points by collecting diamonds from two vaults and depositing them in your home base. A diamond is either loot, swag or dump, and the rules determining possible routes across the tiles change with each move. You will need daring and cunning to successfully guard your swag, attack your opponent and work out your forward routes.

Drogna is fully compatible with either keyboard or joysticks. The game makes full use of colour, so is unsuitable for black and white televisions.

Maze
[cassette] [disc] Ⓑ [joystick]

You have entered a top-secret installation with the aim of stealing company secrets from your rival. You have to find your way round a maze of corridors, while avoiding or killing the robot guards which shoot on sight. A computer-controlled lift is your only way to each level of the building and you have to find the key to operate it.

A superb real-time game with fast 3D graphics.

## Meteor Mission
[cassette] [disc] Ⓑ [joystick]

Your mission is to rescue six fellow astronauts stranded on the surface of an alien planet. Launch the Emergency Space Capsule from the Mothership and guide it safely to land on a platform on the planet surface. You must take care to avoid the meteors which drift above the planet, and the deadly missiles being fired at you by an alien pursuit ship. Take one astronaut at a time back to the Mothership, and score points by firing back at the missiles and meteors.

Includes sound effects, colour graphics and table of high scores.

Tetrapod
[cassette] [disc] Ⓑ [joystick]

Crash-landing your spacecraft on an alien planet, you find yourself taken prisoner and dumped into an arena littered with dormant lizards and other hostile creatures. Battle to the death with Killer Bees, Red Devils and Poison Orbs by blasting them with your laser bullets, or setting the lizards on to them by firing at their dormant pods. All bullets, yours or an opponent's, will bounce around the wall of the arena until they hit something – so beware, as even your own could be lethal; keep an eye on the lizards too as they'll pursue the nearest creature, even if it happens to be you!
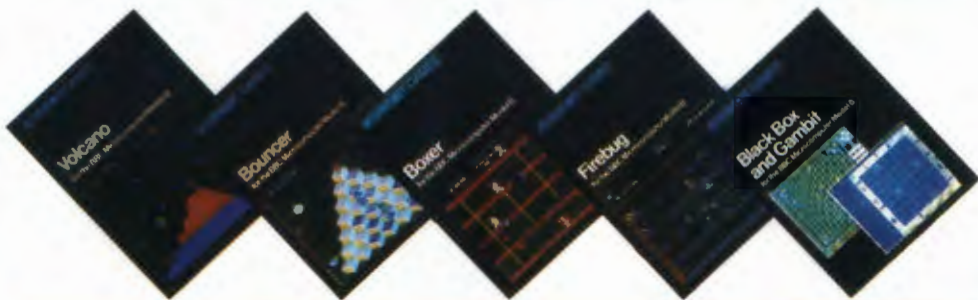
Volcano

Fly your Emergency Rescue Helicopter to rescue four men stranded on Mount Crona, an erupting volcano. In constant danger from the boulders flying from the mouth of the volcano, you have to haul each man to safety. It is a race against time as the flow of molten lava pours down towards the stranded men. If the lava reaches them, they will die and become ghosts – dangerous and indestructible!

Complete with table of high scores.

Bouncer
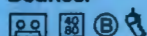
Bounce around the pyramid of cubes, landing on each one to change its colour and score points. Beware of Sid Snake who will bounce after you until he can be tricked into jumping over the edge of the pyramid, while you escape on one of the magic lifts. As the game progresses, Creepy Crabs and Sideways Sam join in the chase, and Joe Sleuth will start changing all the cubes back again to their original colour.

As you complete more pyramids, you move on to higher levels where jumping just once on each cube is not enough.

Bouncer is complete with colour graphics, sound effects and table of high scores.

Boxer
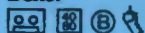
You and your opponent are rivals for the affections of a young lady. She is releasing balloons which drift up from the floor of a gym into the rafters. While you are desperately trying to catch the balloons, your opponent will be doing his best to stop you. You have to avoid running into him, and watch out for the weights he throws at you. Just to complicate things, you'll have to punch or jump over the hammers, boxing gloves and dumb-bells which are thrown over the rafters.

Complete with sound effects, full colour graphics and table of high scores.

Firebug

In this full colour arcade-style game, you are a fireman. Your objective is to rescue some buckets of highly inflammable liquid and carry them to the safety of a water tank. While you are engaged in this heroic task, a firebug is rushing around lighting fires. Armed with a fire extinguisher, you have to put the fires out – if you can get there in time!

Black Box and Gambit
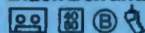
This pack contains two strategy games for up to four players.

BLACK BOX – hidden within an eight by eight grid, four or five atoms represent a secret molecular structure. The object of the game is to deduce the exact position of the atoms by examining the path taken by rays fired into the grid. This computer version of the Black Box game is produced under licence from Waddingtons Limited.

GAMBIT – the object of this original game is for each player to try to get all his four men back to the central 'home' area. Throughout the game, players can place walls to block their opponents and to direct their own men home. Gambit is fully compatible with either keyboard or joysticks.

These games make use of colour and sound, and are not suitable for black and white televisions.

Philosopher's Quest
📟 🎛 Ⓑ
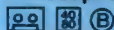
An advanced adventure in which you tell the computer what you want to do, and it describes in plain English your progress through a fascinating world full of fiendish puzzles to be solved. To complete your quest you need to think hard about everything you do!

Castle of Riddles
📟 Ⓑ

A magical adventure with wizardry and hocus pocus of all kinds. Booby traps and fiendish riddles are the least of your worries as you follow the tortuous route to the Magic Ring of Power. Your reward is to keep the treasure that you find on the way.

Sphinx Adventure
📟 🎛 Ⓑ

A full-sized classic adventure game in which you move through caves, fight with trolls, collect treasure, and finally make your way to the sphinx to collect your reward.

Countdown to Doom
📟 🎛 Ⓑ

A mind-boggling adventure in which your ship has crashed on the treasure-laden but inhospitable planet Doom. Grounded on Doom, your ship is both damaged and threatened with total disintegration due to the corrosive effects of the Doom atmosphere. Repairs to the ship must be made before you can escape, and there's also a tempting array of treasure to be collected; but the clock is ticking away all the while, and it's only a matter of time before the ship will disappear in a cloud of dust . . .

Kingdom of Hamil
📟 🎛 Ⓑ

You are the rightful heir to the Kingdom of Hamil, but, stolen from your royal parents as a child, you have only just discovered your birthright. Unfortunately, many other evil people have tried to prevent you from making your rightful claim, and usually by force. Pursued by hostile beings, you have fought your way to a sanctuary, safe for the moment from the terrors outside. You seem to be trapped . . . but there may be more to this place than meets the eye . . . You must prove your identity and gather all your treasure to win – but many problems, puzzles and dangers lie in your path!

Gateway to Karos

Enter a fantasy world through the Gateway to Karos in this exciting adventure game. Your objective is to find the legendary Talisman of Khoronz, a powerful object used in the great battles between the powers of light and darkness. Your search takes you through forests and moors and out to sea. You will find many valuable treasures and useful objects which, with the Talisman, must be collected and taken back through the Gate. Finding your way back will not be easy, and you will encounter many hostile beasts – and also some people who may help or hinder you!

The Seventh Star

Travelling back to earth from your starbase, a violent magnetostorm forces you to crash-land on Seventh Star. The object of this adventure is to return safely to earth. Using the computer as your eyes and hands, you will explore the mysterious city on the planet, searching for the equipment that you need in order to survive long enough to find your way back to earth. A witty adventure with many interesting puzzles and sound effects.

Quondam

For experienced adventurers only, this is a journey through the mysterious world of Quondam. Set in the medieval ages, the magical land you explore is full of wonders, and also full of traps for the unwary. Your objective is to find and collect the treasures scattered through Quondam, and to deposit them in a safe place. Be cautious, though, for many things are not as they seem . . .

Acheton

Acheton is a disc-based game for advanced adventurers. Your journey begins in the deceptively peaceful setting of an English landscape but will lead you on to discover over 400 different locations. Your objective is to survive long enough to find a hidden cave, huge beyond imagination. Once inside, your task is to collect as much treasure as you can find, while exploring this strange and mysterious world.

Draughts and Reversi

Try your hand against the computer with these two popular games:

DRAUGHTS – the traditional game has been faithfully reproduced on screen for you to try your hand at playing the computer. The computer will make sure you follow the rules, insisting that you make all possible jumps or suffer the consequences – the computer has the option of 'huffing' the offending piece.

REVERSI – in this board game each player tries to surround his opponent's pieces, the objective being to gain as many pieces as possible by the end of the game. (Reversi is also known as Othello.)

In both games you challenge the computer, with a choice of difficulty levels, and at the higher levels the machine plays an accomplished game.

Both programs take advantage of all available memory, and so on the Model A the board is displayed in teletext mode, and on the Model B it is displayed in screen mode 1.

Chess
📟 Ⓑ ♟

A chess-playing program with a high-resolution graphics display of the board, and the following features:
– Play white or black against the computer, or play against another player, or in auto-mode the computer plays against itself
– Ten levels of play, giving novice to professional standards
– Computer moves in ten seconds at lowest level
– Board display with joystick, cursor or coordinate entry of moves, and rejection of illegal moves
– Plays according to current FIDE-ratified rules (for example, 50-move rule etc), and displays moves as standard FIDE notation
– Continuous clock display for tournament chess
– Allows any position to be set up, and 'mate in n' problems to be solved
– Whole games or single board positions can be saved to cassette or disc

Cube Master
📟 Ⓑ

A must for Rubik Cube enthusiasts. You can choose the number of shuffling moves made to a completed cube, and then try to solve it. The computer will tell you how many moves you make. Cube Master is special because it will also solve the cube of your choice: you colour in a cube on the screen to match the cube you are trying to solve, and then let the program take you through the solution at your chosen speed. Illegal configurations will be spotted and dealt with.

Snooker
📟 🎱 Ⓑ ♟

This is a game for two players and is suitable for both experienced players and learners. Full instructions and the rules of the game are contained in the pack.

You play and score as in the real game. The strength of the shot is controlled by varying the length of the cue, and you are given the option of using backspin and topspin in addition to ordinary shots.

Acornsoft Snooker is unsuitable for black and white televisions.

Sliding-Block Puzzles
📟 Ⓑ

The Sliding-Block Puzzle is based on the '14-15 Puzzle' invented by Sam Lloyd in the last century when it was the popular equivalent of today's Rubik Cube. On this cassette are six Sliding-Block Puzzles: Alphabet, Numbers, Sunscape, Logo, Pattern and Swans. You can choose how many shuffling moves are made before attempting to solve the puzzle. The computer will tell you how many moves you make, and will actually solve it for you if you get absolutely stuck.

A specially commissioned range of books is available to help you explore the capabilities of your BBC Microcomputer. The books will teach you to program effortlessly. You can produce stunning graphics and complex charts and graphs with the help of example programs given. And get more from your micro by experimenting with other Acornsoft languages.

Graphs and Charts on the BBC Microcomputer

Robert D Harding, A5, 104pp

This book describes a set of graphics routines which can be incorporated into programs to present data graphically in a wide range of applications. The graphs include automatic scaling, labelling of axes, two-dimensional graphs, three-dimensional graphs, stereo pairs, two-dimensional contour maps, three-dimensional contour maps, bar charts and pie charts. The programs presented in the book are also available on cassette.

Creative Graphics on the BBC Microcomputer

John Cownie, A5, 110pp plus 12 colour plates

This book explores the excellent graphics facilities provided by the BBC Microcomputer. There are complete listings for 36 programs which will run on either the A or B Model to produce a dazzling range of pictures and patterns in full colour. Starting from first principles this book proceeds to explore more advanced routines, explaining in detail the individual procedures that go to make up whole programs.

The programs presented in the book are also available on cassette and disc.

FORTH on the BBC Microcomputer

Richard de Grandis-Harrison, A5, 300pp

This book serves as a general introduction to FORTH, and includes a full description of Acornsoft FORTH with a glossary defining the actions of all the standard words. The chapters are illustrated by many practical examples. The author, Richard de Grandis-Harrison, is Chairman of the UK FORTH Interest Group.

LISP on the BBC Microcomputer

Arthur Norman and Gillian Cattell, A5, 192pp

A comprehensive guide to Acornsoft LISP, with a complete glossary describing all the pre-defined LISP functions. It includes a general introduction to LISP, with several example programs to illustrate the features of the language.

Creative Assembler How to Write Arcade Games for the BBC Microcomputer and Acorn Electron

Jonathan Griffiths, A5, 192pp

The assembler available on your BBC Microcomputer is a very powerful programming tool. As well as being free of the constraints imposed by high-level languages, it is very much faster. Speed is one of the major reasons for choosing it to write fast-moving arcade games. The book provides an introduction to the more useful assembler instructions, with some simple examples, progressing on to more complex techniques. Finally, it shows how the routines are linked together to produce a complete arcade game.

A cassette of the programs featured in the book is also available.

How to Write Adventure Games for the BBC Microcomputer and Acorn Electron

Peter Killworth, A5, 214pp

With some experience in BBC BASIC, you can use this book to learn how to write adventure games, progressing from some simple games to tackle straightaway, to more complex adventures as you work through the book. A multi-purpose 'shell' adventure program and a database creation program help you to compile any number and type of adventure games. Several chapters are devoted entirely to plotting and puzzle creation, emphasising new and different puzzle types.

With three example games created in the book, you will find everything you need to know on the subject, presented in an interesting and easy to follow style.

A cassette of the programs featured in the book is also available.

The BASIC ROM User Guide

This book is an essential guide to the BASIC system on the BBC Microcomputer and Acorn Electron.

The operation of BASIC is thoroughly explained in a very lucid manner. BBC BASIC 1, BBC BASIC 2 and Electron BASIC are all covered. Using this information, the book describes how to add new commands and functions to enhance programs and increase the flexibility of your machine. Numerous useful examples are provided including a complete disassembler (which uses the Assembler table in BASIC) and facilities such as listing active variables, overlaying of procedures and intelligent renumbering are all described.

There are extensive reference sections covering the ROM routines and error recovery, including changing MODE inside procedures, reallocating memory if you run out and salvaging bad programs, all thoroughly cross-referenced and indexed.

The detailed appendices contain token lists, 6502 instruction set summary, OSBYTE/*FX summary, a complete syntax definition of BBC BASIC, a summary of the ROM routines, BASIC memory map and the differences between the various BASIC ROMs.