ACORN COMPUTER

Music 500

SYNTHESISER

MUSIC 500

The Acorn Music 500 is a sound and music synthesiser package consisting of hardware and software which will turn your BBC Microcomputer into a sophisticated music composition aid and sound effects generator. Applications for the Music 500 can be found in the home, classroom and recording studio. The sound quality and the flexibility of the custom software make Music 500 suitable for composition, experimentation, performance and education.

The Music 500 connects to the BBC Microcomputer Model B via the 1MHz bus and the stereo audio output can be connected to amplification or recording equipment (a home stereo for instance) via a standard DIN socket .

The synthesiser has 16 sound generation channels organised as 8 musical voices which can be spread over 7 stereo positions. The basic sound is obtained from user defined waveforms selected from a table of 14, at any one time. The output is high quality thanks to a 750KHz sampling rate (46.875KHz per channel) and the ultra-fine frequency resolution which ensures perfect intonation. When used as musical voices the two channels in each voice are independently tuneable, and can be used with frequency and ring modulation to extend the range of timbres. Waveform synchronisation can be used to create strongly coloured formant-type timbres. Control over the voice parameters by user definable envelopes provides enormous potential for synthesis. The amplitude control is logarithmic, giving an envelope shape which closely resembles acoustic instruments. The voices can also be used to generate 'coloured' noise similar to white noise passed through filters.

Both pitch and amplitude envelopes are available, they can be of the simple attack and decay type, for straightforward synthesis, or complex envelopes of up to 12 segments.

To control all these possibilities the Acorn Music 500 comes with a new programming language – AMPLE. AMPLE is specially designed for sound and music manipulation and in order to achieve its goals is a true computer language with many advanced features. It has both interpreted and compiled modes of operation and has multi-tasking, allowing a master control program to run simultaneously with a multi-player music score program, whilst still allowing real time control from the computer keyboard.

Music is entered directly at the computer keyboard by note name, no knowledge of musical notation is necessary. All key signatures, intervals, chords and rests can be input using simple, easy to learn

commands and then played, edited and stored using AMPLE.

Despite its enormous power and flexibility AMPLE is easy to learn and easy to use, a complete novice at both computers and music will be entering tunes and learning how to manipulate sound almost immediately. However the language has many advanced features and as well as the music and sound words a set of programming words is included. These enable the user to perform operations on numbers and strings, modify control structures and access the computer input/output facilities. All three word types can be freely mixed and together give enormous potential to the system for sound and music experimentation.

*16 generators	Frequency range	0 to 20KHz
	Pitch resolution	1/16th semitone
	Frequency resolution	0.0056Hz
	Sampling rate	46.875/sec
	Waveform precision	8-bit logarithmic
	Stereo positions	7
*Envelopes	Pitch and amplitude	
	Number of segments	12
	Time per segment	0 to 320s
	Time resolution	10ms
*Waveforms	14 per table	
	User definable	
	Harmonic definition	16 harmonics
	Geometrical definition	128 points
*Timebase	Control range	2.55ms to 655ms/cycle
*Concurrency	Maximum number of processes	9

AMPLE is provided on cassette tape and can be transferred to floppy disc.

For further details ask your nearest dealer or write to:
Acorn Computers Limited
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The BBC Microcomputer system is designed and marketed in the UK by Acorn Computers Limited. The Acorn Music 500 was developed by Hybrid Technology Limited and is produced and marketed by Acorn Computers Limited.

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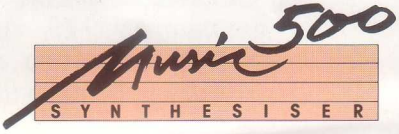
Every effort is made to ensure that the information in this leaflet is correct, but we reserve the right to make alterations to the specification at any time.



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