MULTI-BASIC

Is your BBC BASIC Multi-Tasking ? - Ours is !

CMS Soft proudly announce the Worlds first MULTI-TASKING environment for BBC BASIC users.

Already used in demanding Industrial environments, MULTI-BASIC is a well-proven system which is now available for BBC Micro users.

MULTI-BASIC allows facilities hitherto only found on much larger machines, and the program is supplied as a 16K Eprom ready to fit as a sideways ROM in any BBC Micro.
The program can be in the 'default' socket, or alternatively called up with:

        *MULTI

when:

MULTI-BASIC

>

will be displayed on the screen. BASIC functions as normal, except that the interpreter is now FULLY MULTI-TASKING. The features briefly are:

* Fully MULTI-TASKING - up to 8 'background' BASIC tasks may be run concurrent with the main program.

* Enhances BBC BASIC with very powerful control facilities.

* Real-Time programs now possible on the BBC Micro.

* Control of physical I/O

* Five Real-Time counter/timers.

* Eight Real-Time Task interval timers.

* Comprehensive manual describes each command in detail, together with many examples, full explanation of the concurrency facilities, controlling physical input/output etc., etc.

The multi-tasking facilities have been designed with ease of use and clarity of purpose in mind, and in no way interfere with the operation of 'normal' BASIC functions, but serve to convert BBC BASIC into what is undeniably the most powerful BASIC Interpreter in use on small machines.

Using the new constructs:

   TASK ..... EXIT

and:

   ENABLE ..... EVERY

or:

   ENABLE ..... WHENEVER

it is possible to define up to 8 BASIC Tasks which are executed at regular intervals, or on an 'event', irrespective of what the 'main' program is doing. Never before has such power been given to the BBC BASIC user.

The following example demonstrates how easy it is to implement the printing of the time every second, whilst the main program is doing something else:

```
   20 TASK time
   30     X%=POS:Y%=VPOS
   40     time%=TIME
   50     sec%=(time% DIV 100)MOD 60
   60     min%=(time% DIV 6000)MOD 60
   70     hrs%=(time% DIV 360000)MOD 24
   80     PRINTTAB(21,1);"        ";
   90     PRINTTAB(21,1);hrs%;":";min%;":";sec%;
  100     PRINTTAB(X%,Y%);
  110 EXIT

  120 ENABLE time EVERY 100cs

  120 REM more TASK definitions and main program
```

As has been mentioned earlier, the system can perform up to 8 tasks concurrently. The user may,

however, have as many tasks defined in the program as space allows, and using the commands OMIT and then ENABLE, inaugurate the execution of any selection of tasks.

Briefly the commands used for the concurrency facilities are as follows:

TASK ..... EXIT   Define the operation of a task.

ENABLE ... EVERY   Enable execution of a quoted task at regular intervals.

ENABLE ... WHENEVER   Enable the execution of a quoted task whenever a certain criteria is fulfilled.

DISABLE ....   Disable the task but leave it in the 'current' list.

OMIT ....   Disable the task and remove it from the 'current' list allowing the addition of
                      another task to the list.

The BBC hardware can also be accessed with new, easy-to-use commands:

CONFIGURE, FETCH, SETBITS, UNSET, TGGLE SHITFL, SHIFTR

etc., and these, together with the Multi-Tasking facility can transform the BBC Machine into a powerful ROBOTICS controlller. These commands are summarised below, together with their respective actions:

CONFIGURE configure the device/register to specified bit-pattern
SETBITS   set only specified bits
UNSET   clear only secified bits
TGGLE   toggle (invert) specified bits
SHIFTR   shift register contents right
SHIFTL   shift register contents left
FETCH   get bits from register logically ANDed with given bit-pattern

Space does not permit us to describe in fuller detail all the facilities available in this ROM, but whether your interest is in the sheer computing power released to you with Multi-Tasking, or the advanced control features the package contains, this ROM is an absolute must for every BBC Micro owner.

Available ONLY from CMS Soft at £39.95.

Orders taken at the ACORN USER EXHIBITION, or placed before 5th August 1985 will be subject to £5.00 discount i.e £34.95, and these prices include post/packing and VAT.

                                      ORDER FORM

Please supply ...... copy(s) of MULTI-BASIC for the BBC Microcomputer.

Name...Address.................................

....Telephone.................................

I enclose cheque/postal order valued........................

Signed..

(Cheques/P.O.s should be crossed and made payable to CMS Soft Ltd.)

I would like to know more about the CMS range of Microprocessors and Euro-cards together with the services offered by CMS Soft.

Company..

Address..

Position...

Telephone...............................

All orders to:-

        CMS Soft Ltd.,
        Unit 18, Industrial Estate,
        Chelmsford Road,
        GREAT DUNMOW,
        ESSEX CM6 1XG

        Telephone 0371-5666
        (MAIL ORDER ONLY)

CMS SOFT