

This is also the case if you don't want the results where I have put them.

```

0400    CD  07  04  CD  15  04  C9  F5
      08    C5  D5  E5  21  50  0C  11  00
      10    00  0E  06  18  0C  F5  C5  D5
      18    E5  21  53  0C  11  00  00  0E
      20    07  3E  FF  ED  79  3E  FC  ED
      28    79  3E  03  0D  0D  ED  79  3E
      30    00  ED  79  3E  03  ED  79  ED
      38    78  CB  5F  28  04  36  00  18
      40    02  36  FF  23  ED  78  CB  7F
      48    28  10  14  CB  77  28  01  1C
      50    3A  56  0C  47  F5  F1  10  FC
      58    18  EA  CB  77  20  F1  72  23
      60    73  E1  D1  C1  F1  C9

```

Calling 0400 reads both joysticks, to read only one, call either 0407 or 0415, depending on which socket the joystick is plugged into. The format of the results is;

```

OC50      Trigger A          00 normal, FF if trigger pressed.
OC51/2    Pot A/1, A/2      One byte for each pot in the joystick.
OC53      Trigger B          00 normal, FF if trigger pressed.
OC54/5    Pot B/1, B/2      One for each pot of other joystick.
OC56      RANGE SETTING     The value set in this byte controls the
range of the results. For example, if 10 is used, each pot returns
a number between 01 and 48, approximately. The smaller the number
in OC56 is, the larger the range of the results becomes.

```

"What else is there in this Darkbug"

Quite a lot, is the answer to that question, but a lot of it relates to the graphics board I mentioned in my earlier effort. There's the spiral screen wipe, for instance; or the automatic graph plotting routine. Pretty boring, really, isn't it? NO? In that case, here is one I use a lot, in games, and in "wall-paper" programs. It is relocatable, it is called SWAP, and it has the effect of replacing all of a given character on the screen with another. Just put the character you wish to remove in B and its replacement in C, then call this subroutine:

```

F5  D5  E5  21  0A  08  11  FA
OB  7E  B8  20  01  71  23  B7
ED  52  19  20  F4  E1  D1  F1
C9

```

Those of you with sharp eyes will have spotted that I have used something from INMC News No 2, without which the routine would have been a lot longer, to compare HL and DE. Finding that proved the value of the club to me, and I only hope this lot does as much for your programs as that did for mine!