Memotech Owners Club Public Domain Software Library
Document LL04 - RST10 Codes Explained

Screen Output Using RST 10

Sending Messages To The Screen

```
RST 10
DB £8D,"MEMOTECH LTD"
RET
```

The byte following the RST 10 is made up in the following way:

RST 10 Control byte - Bit Format

```
7  6  5  4  3  2  1  0
1  0  C  é-----n-----ç
```

Where bit 5 indicates that the routine should continue to interpret data after this instruction. n is the number of bytes in the string.

Control Codes and RST 10

In the ASCII character set there are 32 invisible characters before the first printable character (space). These invisible characters are called control characters. These codes are extremely powerful in the MTX when used with RST 10.

The following is a list of commands available through RST 10:-

ASCII CODE	FUNCTION
1	PLOT x,y
2	LINE x1,y1,x2,y2
3	CURSER x,y
7	BELL
10	LINE FEED,CURSER DOWN
11	VERTICAL TAB
12	CLS & HOME (FF)
13	CARRIAGE RETURN
14	CTLSPR p,x
15	GENPAT p,n,d0,d1,d2,d3,d4,d5,d6,d7
16	COLOUR p,n
17	ADJSPR p,n,v
18	SPRITE n,p,xp,yp,xs,ys,col
19	MOVSPR p,n,d
20	VIEW dir,dis
21	INSERT KEY
22	DELETE KEY
23	BACK TAB
25	TAB KEY
26	HOME KEY
27,65	ATTR p,state

```
27,89       CRVS n,t,x,y,w,h,s
27,90       VS n
27,67       GR$ x,y,b
```

The following program demostrates the use of Control codes:-

```
LOOP:    RST 10
         DB £8B,15,0,"*",£10,£10,£38
         DB £54,£10,£10,£10,£38
         CALL PAUSE
         RST 10
         DB £8B,15,0,"*",0,0,£10,£54
         DB £38,£10,£7C,£44
         CALL PAUSE
         JP LOOP 1
         RET
PAUSE:   LD B,50
PAUSE1:  HALT
         DJNZ PAUSE1
         RET
```

This program is demonstrating the use of GENPAT in mode 1 (Re-define an ASCII character).

<u>Output BC Register to the screen</u>

The RST 10 call also allows the transfer of the BC Reg. to the screen:-
 It's format is:-

   <u>RST 10 Control Byte - Bit Format</u>

```
      7  6  5  4  3  2  1  0
      1  1  c  *  *  *  *  *
```

Where c is the continuation bit
* = don't matter

The following is an example of RST 10 and CALL £79, Keyboard input:-

```
START:   CALL £79
         JR Z,START        (The principle of this program is that it
         LD C,A             reads the keyboard äwith de-bounceü and
         LD B,0             returns a value in the Accumulator)
         RST 10
         DB 192            (Rem:- To get into Assembler to type this
         CP 13              program in type ASSEM 10 éRETç,éRETç &
         JR NZ,START        don't forget the label `START:'.)
         RET
```
This routine reads the keyboard & echo's it to the screen.