THE DESIGNER

THE DESIGNER

This is an introduction which may assist you in gaining maximum benefit from this utility. The enclosed instruction sheet has been laid out in such a way that quick reference can be made to the various modes available.

Making the most of the MTX'S resolution.

To produce highly detailed screens needs a little knowledge of how the MTX'S screen display is set out, if for example you imagine an 8 x 8 square at the top left corner of the screen, if you now place the pixel cursor on the top line of the square and select your paper and ink colour you can then have a different ink and paper colour for that one line. By moving the cursor down a pixel you can then select ink and paper for that line of pixels. There are 6144 of these lines on the graphic screen so by selecting 'M' mode and continually selecting ink and paper colours and then plotting pixels you can create highly detailed images using all fifteen colours. Drawing could not be simpler, allowing the full graphic screen to be worked on with only the maximum of three small display mode characters on the screen which can be toggled to the top or bottom of the screen allowing the minimum of distraction. You can draw freehand in all eight directions changing ink colour as you go also the ability to change cursor colour and shape for the intricate areas of full colour.

Painting in odd shapes no matter how complex can be achieved by filling the area with ink colour, which can be any of the fifteen, the fill command can be stopped halfway through filling and new colours selected allowing great flexability.

If you continue to save your screen to memory you can experiment with all modes with the knowledge that if you make a mistake you can recall your saved screen instantly. Using the rubberband mode will draw lines continuously of any length from a single pixel in any direction, also you can stipple areas of the screen with pixels to create shading.

Lines of acute angles can be drawn by using 'L' mode, pressing 'L' then moving about the screen and pressing 'L' again a line will be drawn between the two points.

Circles can be drawn anywhere and any size, if the circle is too big or will go off the screen it will return without doing anything. When a circle is drawn a pixel will be left in the middle, this enables you to erase the circle at a later date by placing the cursor at this point and using erase mode.

If you have designed a screen and wish to print text or UDG'S or find a shape which is too far left or right then by 'G' you will utilise a powerful feature of the MTX and that is direct screen input. This will allow you to wander about the screen with a text cursor and print anything to the screen or move detailed drawings by either inserting spaces which will push your design to the right one block at a time or delete a space which will move it to the left.

The UDG graphic blocks can be printed to the screen by pressing F1 - F8 +shift. All UDG'S can be printed within your program by printing the CHRS No. of that UDG.

It is always better to design all your graphics first as these are always saved along with the designer screen.

Designing Sprites, Udg's and Character sets have never been easier on the MTX using the Designers Udg Editor.

When you first enter the designer you will have to input the size of sprite you wish to design, either 8 x 8 sprites or 16 x 16 sprites, if you have 16 x 16 sprites in memory and enter the editor and input size 0 (8 x 8) you may not be able to retrieve and store your sprites in the correct order, to rectify this leave the editor and enter the screen designer then on returning to the editor you will be able to input the correct size.

The UDG EDITOR screen.

There are three main modes that you will work in, these are SPRITE MODE, UDG MODE and CHR$ MODE. The commands that are available in these modes are GET, STORE, ROTATE INVERSE and REFLECT.

The mode you are currently in will be displayed directly below the grid and can be changed anytime. To the left of the grid the pattern numbers are displayed and to the right of the grid a 8 x 8 graphic next to the mode that you are in will constantly change as you design your character on the grid.

If you design a sprite on the grid and then select another mode the character will also be displayed next to the new mode setting and can be stored in any character in that mode, this allows you to swap designs from mode to mode.

The Animation of sprites can be achieved by selecting 'A' this will allow you to see what your patiently designed sprites look like when up to three of them are animated across the screen, for instance if you are animating a man walking across the screen you can alter the delay time between printing sprite to achieve a more realistic walking motion, if it's not quite right call the character back to the grid make some alterations and try again, there is no need to worry what all those genpat statements and paper and pen drawings will look like when using sprites within your programs.

Enter the editor and press 'A' then input 0, 1, 2 and a delay of approximately 125 and see how easy it is.

UDG CHARACTERS are displayed at the top of the screen on pressing 'U', sixteen of them will be white and eight will be coloured.

Designing Udg's in the range 129 - 146 will be displayed in their relative position and will be seen, but MULTICOLOURED Udg's when stored may not be seen, the reason for this is that no colour has been defined for that particular Udg, simply press 'M' enter the Udg number and then input 8 colours (see attached instructions) and your Multicoloured Udg will be displayed. To use them in your own programs just print the CHR$ number in which they were stored.

Designing CHARACTER SET. If you alter any of the standard CHRS they will effect the on screen text, this will make sure you don't alter the text so much as not to be able to read it when used in your program.

If you require graphic characters only, then use the load and save routines F1 - F4 as no DESIGNER SCREEN is saved with any UDG screen only unfinished graphics and UDG screen or finished graphics. If you save a finished DESIGNER screen your graphics are always saved with that screen.

NOTE 500 version only.

If you wish to design a loading screen (or backdrop screen) and sprites then we recommend designing the sprites first, the reason for this is that sprites are displayed on the UDG screen as they are stored, leaving this screen and entering the DESIGNER screen will clear the UDG screen and sprites. When you return to the UDG EDITOR your sprites will not be displayed but can still be recalled to the grid and stored again this will re-display them. This does not apply to the 512 version.

THE DESIGNER

When loaded you will be presented with a menu, from this you will find the DESIGNER split into two parts, the UDG EDITOR and the SCREEN DESIGNER. The following instructions will explain each individually.

THE UDG EDITOR

Press F1 to enter the EDITOR. On entry you will be prompted to input the size of sprite you wish to design either Ø or 1. Mode Ø allows 8 x 8 size sprites and Mode 1 allows 16 x 16 sprites.

You can now select which characters you wish to design e.g. S=SPRITE C=CHR$ or U=UDG.
To design a pattern use the arrow keys to move about the grid, pressing HOME to fill or delete. The pattern number will be displayed to the left of the grid.
THE FOLLOWING COMMANDS CAN BE USED IN ALL MODES.

'G' This will allow you to get any character in the range of the selected mode. When getting SPRITES or UDGS input the number. When getting CHR$ enter the character from the keyboard, using ALPHA LOCK for lower case characters.

'T' Allows you to store the character (the same conditions apply in this mode as in 'G' mode.)

'R' Reflects the character.　　　　　　　　　'D' Rotates the character.

'I' Inverse the character.　　　　　　　　　　'W' Clears the grid.

SPRITE MODE.

MODE Ø allows 127 8 x 8 sprites.　　　　MODE 1 allows 32 16 x 16 sprites.
Sprites will be displayed at the bottom of the screen.

To store a sprite in MODE 1 press 'T', you will be prompted to input which sprite number you wish to store your design in. Input the number. You will then be prompted to input which quarter of the sprite either 1,2,3,4. The sprite is made up in this order:
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1  3   1=Top Left      3=Top Right

2  4   2=Bottom Left   4=Bottom Right
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MODE Ø only allows a single input.

ANIMATE

'A' This is available in both modes.
　　　Press 'A' and then input the first sprite number you wish to Animate. Press <RET>. Input the second sprite number. Press <RET>. Input the third sprite number of your animation sequence. Press <RET>. Now you will be prompted to input the DELAY TIME, 1 being the fastest. Your sprite will be animated across the screen until you press a key.
If only two sprites are to be animated then input Ø for the third animation input. If you have sprites 1,2 or Ø to animate sprite Ø must not be the third sprite.
Animation or sprites can be obtained by the Adjspr command in your own program with a delay. (Refer to manual).

CHR$ MODE

On pressing 'C' the standard character set will be displayed above the grid. Pressing 'G' will allow you to get any character directly from the keyboard, using alpha lock to obtain lower case characters. Altering these characters will affect the program text, this allows you to see what your new characters will look like within a program. Lower case letters do not affect the program.

UDG MODE

Pressing 'U' will display the UDG'S above the grid. UDG'S 129–146 when designed and stored will be visible but UDG'S 147–154 may not be seen as they are MULTICOLOUR and have not yet had colour assigned to them.(See Multicolour)'

MULTICOLOUR

Select 'M' then input the number of the MULTICOLOUR UDG that you wish to assign colour to (147–154). You will then be prompted to input 8 numbers, each number being the colour code for 8 horizontal lines that make up the UDG pattern.
e.g. 16 x INK + PAPER

WHITE INK ON CYAN PAPER = 247
16 x 15(ink no) + 7(paper no) = 247

THE SCREEN DESIGNER

On entering the SCREEN DESIGNER you will be asked to select paper colour and ink colour, using the arrow keys up and down, press HOME to select colour.

Use the keypad to move the cursor about the screen. (Including radially).

The cursor colour can be changed. Press 'I' or 'P' use up and down arrow keys to select colour then press 'A'.

The mode that you are currently working in will be displayed at the bottom left hand corner of the screen. The letter displayed will be the ink colour that you have selected, also a coloured block will show current paper.

These modes are available:

I=INK	P=PAPER	E=ERASE	F=FILL	M/J=MOVE CURSOR
L=LINE	C=CIRCLE	V=PLOT	B=ERASE PLOT	R=RUBBERBAND
T=BAND OFF	G=GRAPHIC	Ø=CLS SCREEN		S=STIPPLE
X/Z=CSR ON/OFF	U=GET SCREEN			Q=STORE SCREEN
SPACE BAR=X—Y CO-ORDINATES		A=CSR COLOUR		W=MOVE MODE DISPLAY

'D' Mode this will draw anywhere the csr is moved.

'E' Mode this will erase anywhere the csr is moved.

'M' Mode this will move the csr without affecting anything upon the screen.

'L' Mode press 'L' then move the cursor to any position on the screen. Press 'L' again and a line will be drawn between the two positions. 'L' will be displayed when in this mode.

'R' Mode press 'R' and this will set an anchor point and any further press of 'R' will draw from the anchor. (You must either be in 'E' mode or 'D' mode) 'T' removes anchor point.

'C' When in 'D' mode press 'C' then input the radius of circle. Max 95 (Circles off the screen will not be drawn, 'E' will erase circle).

'V' Plots a pixel in any mode.

'B' Unplots a pixel in any mode.   'O' This will clear the screen.

'F' Fills any shape.   'J' Toggles cursor speed fast or slow.

'Z'—'X' Cross hatch cursor or pixel cursor.

'S' Stipples in an area of the screen at the current cursor position.

'G' Mode press 'G' and move the flashing cursor over the required position and press CHR$ keys to print any character from the keyboard or the function keys (plus shift) for the UDG'S.

'Q' This allows you to save a screen in memory instantly. The border will flash white to confirm the screen has been stored.

'U' Press 'U' to retrieve your saved screen.

'W' This toggles the displayed modes to the top or bottom of the screen.

<SPACEBAR> Will display the current X, Y co-ordinations.

MENU

The Menu is self explanatory, but we shall explain them more clearly.

'F1' This will take you into the UDG EDITOR.

'SHIFT/F2' This will load your unfinished graphics plus UDG EDITOR screen.

'F3' Saves your unfinished graphics and UDG EDITOR screen.

'F4' Saves your finished graphics.

'F5' Enters the DESIGNER SCREEN.

'SHIFT/F6' Will load your unfinished DESIGNER SCREEN plus graphics.

'F7' Save unfinished DESIGNER SCREEN.

'F8' This will save your finished DESIGNER SCREEN together with all GRAPHICS.

'9' Save screen to printer.

To enable you to load your finished screen or graphics independent of THE DESIGNER a loading header is provided at the end of the tape. You and save this header to tape by loading it and typing GOTO 20 this will save the header and auto run. Then save your finished graphics or screen after this.