FOR THE AMSTRAD
CPC464, CPC664, CPC6128

REMBRANDT
Icon Driven
Drawing Package

REMBRANDT

FOR THE AMSTRAD CPC 464, CPC 664 & CPC 6128

by S.POTTER

Contents

1. INTRODUCTION

1.1 Overview

Rembrandt is a comprehensive screen designing program specially developed for the Amstrad Computers. It will provide you with a sophisticated tool for designing and drawing the most interesting and intricate pictures.

All the commands in Rembrandt are selected from Icons, making the package extremely easy to use. As with any sophisticated package, though, it will take some time to master all of the features and become fully conversant with them.

The recommended approach for less experienced users is initially to explore each of the Simple Drawing Commands detailed in Section 4 of this manual where the use of each command is fully described. Once these commands have been fully mastered, the user should progress to Sections 5 and 6.

1.2 Compatibility

Rembrandt is compatible with the Amstrad CPC 464, CPC 664, and CPC 6128 computers, and will work with keyboard or joystick. Screens may be saved to tape or disc. The program includes commands to copy screen displays to the Amstrad DMP1 printer or any Epson compatible printer.

1.3 Features Of Rembrandt

PLOTTING   of lines, circles, triangles, rectangles, and polygons.

FILL.   Fast machine code fill in any standard colour.

STIPPLE FILL   giving a whole range of new colours.

MODES.   Operates in all screen modes.

JOYSTICK.   Operates with keyboard or joystick.

ICONS   are used to select the operation required.

AIR BRUSH and PAINTBRUSH   modes.

MAGNIFY   any part of a picture.

SCROLL   screen one pixel in any direction.

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BLOCK   Copy and Move

SCREEN DUMPS   for Amstrad and Epson printers.

LOAD   and Save pictures to tape or disc.

TEXT   easily positioned at any pixel position.

COLOURS.   Up to 16 colours may be used in Mode 0.

LOGICAL   plotting – Normal, And, Or, and Xor.

PALETTE   may be changed to any of the 27 colours available.

GRID   option may be used in any mode.

CURSOR   coordinate values can be displayed.

CIRCLES   etc. can be accurately positioned before final fixing.

SCREEN.   The whole screen area is available for creating pictures.

2. LOADING INSTRUCTIONS

2.1 Loading The Cassette Version

Insert the cassette into the datacorder ensuring that it is fully rewound. Hold down the **CTRL** key and press the small **ENTER** key on the numeric keypad. You will be prompted to press the play button on the datacorder and then press any key on the keyboard. Rembrandt will now load and run automatically.

If you want to load the cassette version on a CPC 664 or CPC 6128 then you must type ιtape before loading. If your tape recorder does not use remote control then remember to stop the recorder when the main program has loaded.

2.2 Loading The Disc Version

Insert the disc into the disc drive and type:

run"disc

Press **ENTER** and the program will load and run automatically. If you have more than one drive connected to your computer then the disc should be inserted into drive A.

● A sample screen entitled 'LYNX' is included on the tape/disc with its own data file.

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3. GETTING STARTED

3.1 The Screen Display

After Rembrandt has loaded, the screen will clear and display a row of icons at the top of the screen. Underneath the icons there is a row of coloured blocks which shows the range of colours available for painting. This is called the Palette. Somewhere in the centre of the screen will be a small cross which will be referred to as the Cursor.

The letter 'N' is also displayed at the top right hand side of the screen, and indicates that Normal plotting is selected (see Section 6.6 for more details).

3.2 Using a Joystick

Rembrandt will work from the keyboard or with a joystick. In the instructions that follow the use of the keyboard is assumed, so if a joystick is used then any reference to the **SPACE BAR** (or just **SPACE**) should be interpreted as the joystick fire button.

3.3 The Cursor

This is used to select which commands you wish to use, and indicate where you want to draw on the screen. It is moved around the screen using the arrow keys situated at the right hand side of the keyboard.

Speed of movement may be increased by pressing **SHIFT** together with an arrow key. For more precise control, cursor movement may be slowed down by pressing **CTRL** together with an arrow key. Diagonal cursor movement may be achieved by pressing two arrow keys at the same time.

It is sometimes helpful for precision work to have the cursor coordinates displayed on the screen whilst drawing. Coordinates may be switched on and off by pressing **SHIFT** together with **TAB** .

Rembrandt allows the whole screen to be used for drawing, so if you move the cursor into the area occupied by icons, they will automatically be re-positioned at the bottom of the screen.

3.4 The Icons

Icons are small pictures displayed on the screen to represent the commands available to the user. In Rembrandt there are 24 icons, but only 8 are visible at any one time. A summary of the icons and which commands they represent

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is given in Section 8 of this booklet. Only one icon may be selected at any time, and it is displayed in inverse video (black lines on white background) to distinguish it from the other icons. When you first run Rembrandt the Dot/Line icon is automatically selected; this is the first icon on the left hand side of the screen.

Icon select mode may be entered at any time by pressing **ESC**. The normal cursor will then disappear and a small arrow will appear underneath the currently selected icon. Use the left and right arrow keys to move the arrow to any other icon and press **SPACE** to select it. If the icon that you require is not one of the eight currently displayed then press **TAB** to display the next set of icons.

After pressing **SPACE**, the icon selected will be displayed in inverse video and the cursor redisplayed in it's original position. You are now ready to use the newly selected feature. A comprehensive description of each feature available is given in Sections 4, 5 and 6 of this booklet.

Pressing **CTRL** together with **CLR** will remove the icons from the screen leaving the whole of your picture in view. This is useful if you want to take screen photographs. Press **CTRL** together with **CLR** again to re-display the icons.

3.5 The Palette

Rembrandt starts up in screen mode 0 which allows a maximum of 16 out of the 27 colours to be used. These 16 colours are shown across the top of the screen and represent the default pallette. The first colour at the left hand side is the background colour and initially this is set to black.

A small arrow above the palette indicates the currently selected colour; all painting is done in the current colour. You may change this colour at any time by pressing keys **1** or **2**, which moves the arrow left and right through the palette.

The border colour may also be changed at any time by pressing keys **3** or **4** to step up and down through the complete range of 27 possible colours.

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4. SIMPLE DRAWING COMMANDS

4.1 Dot and Line

This is the default command and is automatically selected when you first use Rembrandt. Move the cursor to the required position on the screen and each time **SPACE** is pressed, a dot will be drawn beneath the cursor in the current colour. Lines may be drawn by keeping **SPACE** depressed and moving the cursor in the required direction. You may continue drawing dots and lines until **ESC** is pressed and another icon selected.

Pressing **CTRL** together with **SPACE** will lock the **SPACE** key; this is useful if you just want to doodle on the screen. Press **CTRL** together with **SPACE** to unlock it.

Remember that all drawing is done in the current colour, which may be changed at any time using keys **1** and **2**.

4.2 Line

After selecting the icon, move the cursor to the start of the line that you wish to draw and press **SPACE**. Now move the cursor and you will see a line traced out behind it; this is known as the 'elastic band cursor'. If **DEL** is pressed at this stage the line will be deleted. When **SPACE** is pressed again the line will be fixed and added to the screen permanently. You may continue drawing more lines until **ESC** is pressed and another icon selected.

Remember that **SPACE** must be pressed to fix the beginning and end of every line that is drawn.

4.3 Rectangle

Select the rectangle icon, and a flashing rectangle will appear on the screen at the cursor position. The rectangle may be moved around the screen by using the arrow keys as usual.

The size and shape of the rectangle may be altered by pressing **COPY** together with one of the arrow keys. Pressing **COPY** together with the right or left arrow keys will respectively increase or decrease the width of the rectangle. Pressing **COPY** together with the up or down arrow keys will correspndingly increase or decrease the height of the rectangle.

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Once again the shape has only been added to the screen in a temporary form and may be moved or altered using the elastic band cursors until it is finally fixed to the screen. When you are happy with the rectangle press **SPACE** to fix it, or press **ESC** to select another icon. You may continue drawing rectangles until **ESC** is pressed and another icon selected.

4.4 Solid Rectangle

Select the solid rectangle icon, and a flashing rectangle will appear on the screen at the cursor position. The rectangle may be moved around the screen by using the arrow keys as usual.

The size and shape of the rectangle may be altered by pressing **COPY** together with one of the arrow keys. Pressing **COPY** together with the right or left arrow keys will respectively increase or decrease the width of the rectangle, pressing **COPY** together with the up or down arrow keys will correspondingly increase or decrease the height of the rectangle.

Press **SPACE** to fix the rectangle on the screen, or press **ESC** to select another icon. You may continue drawing solid rectangles until **ESC** is pressed and another icon selected.

4.5 Circle

Select the circle icon, and a flashing circle will appear on the screen at the cursor position. The circle may be moved around the screen by using the arrow keys as usual.

The diameter of the circle may be increased or decreased by pressing **COPY** together with the up or down arrow keys. You may find that small circles look a little bit untidy especially in mode 0; this is due to the fairly low screen resolution.

Press **SPACE** to fix the circle on the screen, or press **ESC** to select another icon. You may continue drawing circles until **ESC** is pressed and another icon selected.

4.6 Solid Circle

Select the solid circle icon, and a flashing circle will appear on the screen at the cursor position. The circle may be moved around the screen by using the arrow keys as usual.

The diameter of the circle may be increased or decreased by pressing **COPY** together with the up or down arrow keys. You may again find that small circles look a little untidy in mode 0; because of the low screen resolution.

Press **SPACE** to fix the circle on the screen, or press **ESC** to select another icon. You may continue drawing solid circles until **ESC** is pressed and another icon selected.

4.7 Triangle

Select the triangle icon and a flashing triangle will appear on the screen at the cursor position. The triangle may be moved around the screen by using the arrow keys as usual.

The size and shape of the triangle may be altered by pressing **COPY** together with the arrow keys. Press **COPY** together with the right or left arrow key to increase or decrease the width of the triangle base. Press **COPY** together with the up or down arrow key to increase or decrease the height of the triangle.

Press **SPACE** to fix the triangle on the screen, or press **ESC** to select another icon. You may continue drawing triangles until **ESC** is pressed and another icon selected.

4.8 Polygon

After selecting the icon you will be prompted to enter the number of sides that you require in your polygon. Key in a number from 3 to 16 and then press **ENTER**. The maximum number of sides allowed is 16. The polygon which appears on the screen may be moved around by using the arrow keys as usual.

Use the **COPY** key together with the up or down arrow keys to increase or decrease the size of the poygon. You may find that small polygons with many sides look distorted; this is due to the fairly low screen resolution.

Press **SPACE** to fix the polygon on the screen, or press **ESC** to select another icon. You may continue drawing polygons until **ESC** is pressed and another icon selected.

5. ADVANCED DRAWING COMMANDS

5.1 Fill Shape

This command will fill almost any shape with a single colour, or with a stipple of two colours, allowing a wide range of new colours to be created.

Select the icon and three coloured boxes will appear at the top right hand side of the screen. The first two boxes show the two colours that make up the stipple, and the third box shows the resulting colour. The first colour may be changed by using keys **1** and **2**. The second colour may be changed by pressing keys **1** and **2** together with the **SHIFT** key. As you change the colours the third box shows what the final stippled colour looks like.

If you just want a single colour fill, then simply set the first two boxes to the same colour. When you have completed making your colour selection, press **SPACE**.

To fill a shape move the cursor to within the shape boundary and press **SPACE**. The icon display will disappear whilst filling is in progress. The boundary should have no gaps or the fill may 'leak' and extend into unwanted areas. If this should happen the fill may be instantly stopped by pressing **ESC**. Very complex shapes may require several goes to fill them, but most should fill completely.

After the fill is complete you will be prompted Unfill Y/N. If you are happy with the results press **N** and the fill will become a permanent part of the screen. Alternatively, if for any reason you are dissatisfied with the results, answer **Y** and the area will become 'unfilled' and revert back to it's previous colour. You may continue filling other areas until **ESC** is pressed and another icon selected.

5.2 Text

This command allows text or User Defined Graphics to be printed at any position on the screen. Select the icon and then press **T** for text, or **U** for graphics characters.

Having pressed **T**, you should then type in your text (max 19 characters) and then press **ENTER**.

Alternatively press **U** and type in a character number between 32 and 255, finally press **ENTER**. A complete list of graphics characters available is printed in your computer manual. Please note that characters 128 to 225 are used by the Rembrandt program itself.

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The text or character will be displayed flashing on the screen and you may move it around by using the arrow keys as usual. Press **SPACE** to fix it on the screen. You may continue entering and printing text (or graphics characters) on the screen until **ESC** is pressed and another icon selected.

5.3 Air Brush

This command will plot a random pattern of dots around the cursor, and is extremely useful for shading and special effects.

After selecting the icon simply move the cursor to the required position and press **SPACE** for the air brush to commence. Keep **SPACE** pressed and move the cursor to paint across the screen. The size of the spray may be changed by pressing the **COPY** key together with the up and down arrow keys.

Remember that you may change the brush colour at any time by pressing keys **1** and **2**. To leave this mode press **ESC** and select another icon.

5.4 Paint Brush

This command allows the screen to be painted with different width brushes. Select the icon and the flashing cursor will appear on the screen. The size of the cursor represents the width of the brush.

To change the brush width press **COPY** together with the up and down arrow keys. To paint, move the cursor to the required position on the screen, depress **SPACE** and then move the cursor in the required direction. You may continue in this mode until **ESC** is pressed and another icon selected.

5.5 Grid

This command allows the number of units that the cursor moves to be increased from one pixel to a maximum of 32 pixels. This is useful for aligning the corners of shapes and for setting out grids and tables.

Select the icon and type in the size grid required, then press **ENTER**. The symbol '#' will appear at the top right hand side of the screen to indicate that a grid has been set. After entering the grid size you are returned to the icon select mode. A grid may be turned off by entering a grid size of 1.

Note-If a grid is set and the cursor is moved using **CTRL** or **SHIFT** together with an arrow key, the cursor moves at it's usual speed i.e. it is not affected by the grid setting.

5.6 Magnify

Select the magnify icon and a flashing box will appear on the screen at the cursor position. Locate the box, using the usual keys, over the area that you wish to magnify. Then press **SPACE** and a new screen will be displayed, showing the area that you selected magnified approximately 8 times.

You may now edit this area by moving the block cursor around, using the arrow keys as usual, setting points to the current colour by pressing **SPACE**. Pressing **SHIFT** together with the arrow keys will increase the speed of the block cursor movement. The current colour may be changed by pressing **1** and **2** in the usual way.

When editing is complete press **ENTER** to return to your full size picture. You will observe that any alterations made to the magnified image have been added to your picture. Alternatively, press **ESC** to return to the full size picture without adding any alterations to it.

You may now magnify another part of the screen, or press **ESC** to select another icon.

5.7 Cut and Paste

This option allows you to take any part of your picture and copy or move it to somewhere else on the screen. It is particularly useful if you need to repeat some detail at many positions across your picture.

Select the icon and a flashing box will appear at the cursor position. Move the box, using the usual keys, over the area that you wish to copy. Now press **SPACE** to 'cut' the area within the box. At this point you may choose to either move the area that you have selected, (in which case a 'hole' will be left in you picture) or to copy it (in which case the original area will remain unchanged).

To Copy – Move the box to a new screen position and press **SPACE** to redraw the area at the new position.

To Move – Move the box to a new screen position and press **M** to delete the area from its original position and redraw it at the new position.

You may continue copying or moving parts of the screen around until **ESC** is pressed and another icon selected.

5.8 Scroll

Select the scroll icon and the icons will disappear leaving the whole of your picture on view. You may now use the arrow keys to scroll the picture in any direction. The picture will automatically 'wrap-round' the edges of the screen. When you have finally positioned your picture press **ESC** to select another icon.

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6. SYSTEM COMMANDS

6.1 Tape Commands

Select this icon to load or save your pictures to tape or to catalogue the tape itself. When prompted press **S** to save a picture, **L** to load a picture, or **C** to catalogue your tape.

Save

This option will save your pictures on tape. You will be prompted to enter the speed at which you wish to save the screen; Slow, Fast or Turbo. Enter **S**, **F** or **T**. For most users Fast is probably the best speed to save pictures (Turbo speed will save your pictures very quickly, but reloading them may not be so reliable).

Now enter a filename for the picture using a maximum of 8 characters, and then press **ENTER**. Insert a tape into the datacorder press the **RECORD** and **PLAY** buttons, and then press any key on the keyboard to save the screen.

Two files are saved on the tape; the first is a data file which contains details of the screen mode and palette. The second is the screen file containing the picture itself. The data file is automatically given the suffix . D A T , and the screen file the suffix . S C R.

Load

This option will load a previously saved screen. When prompted enter the screen name and then press **ENTER**. When you are given the prompt L o a d D a t a (Y/N) press **Y**. Insert the correct tape into the datacorder, press the **PLAY** button and then press any key on the keyboard to load the screen.

If you reply **N** to the prompt L o a d D a t a (Y/N) then the data file containing the original screen mode and palette will not be loaded. This is useful if you wish to load screens that were not originally saved by Rembrandt.

Catalogue

This option will give a list of all the files on your tape. Insert the tape into the datacorder and press the **PLAY** button. Cataloguing will continue until **ESC** is pressed where upon you will be returned to icon select mode.

6.2 Disc Commands

Select this icon to load or save your pictures to disc or to catalogue the disc itself. When prompted press **S** to save a picture, **L** to load a picture, or **C** to catalogue your disc.

Save

This option will save your pictures on disc. You will be prompted to enter a filename for the picture using a maximum of 8 characters, and then press **ENTER**. Ensure the correct disc is in the drive and press any key on the keyboard to save the screen.

Two files are saved on the disc; the first is a data file which contains details of the screen mode and palette. The second is the screen file containing the picture itself. The data file is automatically given the suffix . D A T , and the screen file the suffix . S C R.

Load

This option will load a previously saved screen. When prompted enter the screen name and then press **ENTER**. When you are given the prompt L o a d D a t a (Y / N) press **Y**. Ensure the correct disc is in the drive and press any key on the keyboard to load the screen.

If you reply **N** to the prompt L o a d D a t a (Y / N) then the data file containing the original screen mode and palette will not be loaded. This is useful if you wish to load screens that were not originally saved by Rembrandt.

Catalogue

This option will give a list of all the files on the disc in your drive. When the catalogue is complete press **SPACE** to return to icon select mode.

6.3 Change Palette

This command allows you to change any of the colours in the current palette to any of the 27 inks available on the computer.

After selecting the palette icon, use keys **1** or **2** to select the colour that you wish to change. Two numbers will be displayed at the top right hand side of the screen; these represent the Steady and Flashing ink numbers for the colour selected. If these two numbers are the same, then the colour will be steady, otherwise it will flash between the two colours.

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The current colour may be changed by pressing the right or left arrow keys to increase or decrease both the Steady and Flashing ink numbers. A full list of inks and their numbers is displayed in your computer manual.

Press **SHIFT** together with the right or left arrow key to increase or decrease the Flashing ink number only. This will cause the current colour to flash between the Steady and Flashing ink colours.

Press **SPACE** when you have finished changing colours and you will be returned to icon select mode.

6.4 Screen Dump

Rembrandt can dump any picture to the Amstrad DMP1 or Epson compatible printers. First ensure that your printer is switched on, connected to the computer and 'on line'. Select the printer icon and press **D** for an Amstrad printer or **E** for an Epson printer. A fully shaded screen dump will then be printed. The dump may be stopped at any time by pressing **ESC**.

6.5 Mode Change

This command allows you to change the screen mode that Rembrandt operates in. Amstrad computers support 3 screen modes:

Mode 0	160×200 pixel resolution	20×25 text	16 colours
Mode 1	320×200 pixel resolution	40×25 text	4 colours
Mode 2	640×200 pixel resolution	80×25 text	2 colours

Changing mode will completely clear any picture in the computer, so you will first be asked to confirm that you want to change mode. Press **Y** and then enter the mode number that you require.

6.6 Ink Modes

There are four ink modes:

N – Normal Mode
A – AND Mode
O – OR Mode
X – Exclusive OR Mode

Normal is the default mode and should be suitable for the needs of most users. In this mode newly plotted lines or shapes completely overwrite anything in their way.

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The other modes may be used by advanced users for producing some special effects. By using OR mode, for example, it is possible to draw a solid circle that will overwrite part of the existing picture but disappear behind another part of it. For more information on ink modes refer to your computer manual.

6.7 Clear Screen

This command will clear your picture from the computer's memory. To prevent accidental erasure you are prompted for confirmation; press **Y** to clear the screen.

6.8 Quit Rembrandt

This command will return you to Amstrad Basic, erasing your picture completely. To prevent accidental erasure you are prompted for confirmation; press **Y** to exit to Basic or **N** to continue painting. Should you wish to use Rembrandt again, having returned to Basic, the program will need to be reloaded from tape or disc.

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7. SUMMARY OF KEYS

ESC   Halts current operation and allows new icon to be selected.

SPACE   Fixes points on the screen and selects icons.

ARROW KEYS   Move cursor around the screen.

SHIFT/ARROW   Increase step of cursor movement.

CTRL/ARROW   Slow cursor movement for precise control.

COPY/ARROW   Change size and shape of rectangle, circle, triangle and polygon.

ENTER   Terminate all user input.

1 & **2**   Change current pen colour.

3 & **4**   Change border colour.

TAB   Display next set of icons.

SHIFT/TAB   Switch On/Off cursor coordinate display.

CTRL/CLR   Switch On/Off icon display.

CTRL/SPACE   Lock Space Bar (Dot mode only).

8. FILE FORMAT

When a screen drawn with Rembrandt is saved a second file is also saved called the data file. This file contains the screen mode number that the picture was drawn in, and the inks that the palette was set to. If you want to load a screen without using Rembrandt then this data file must also be loaded to reproduce the screen in the correct mode and colours. The following Basic program will load the data and screen files for the picture called 'Screen1'.

```
100 MEMORY HIMEM-35
110 h=HIMEM+1
120 n$="Screen1"
130 LOAD "!"+n$+".dat",h
140 MODE PEEK(h)
150 BORDER PEEK(h+1)
160 FOR i=0 TO 15
170 INK i,PEEK(h+i*2+2),PEEK(h+i*2+3)
180 NEXT
190 LOAD "!"+n$+".scr"
```

The character '!' in lines 130 and 190 is added to the beginning of the filename to prevent tape loading messages from being printed on the screen. Disc users may omit them if they wish.

You can, of course, load the picture without loading the data file. To do this set up the mode, border and palette colours yourself and then just use line 190 to load the screen.

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BEEBUGSOFT FOR THE AMSTRAD

Beebugsoft has earned the reputation of producing quality 'Serious Software' for the BBC Micro. With this background we have now launched a range of utilities and tools for the Amstrad computers.

Our Amstrad range includes:

● TOOLKIT

A whole host of programming tools for the Basic programmer, written in machine code and supplied on tape, disc or rom. Toolkit will save hours of time in programming and will put at your fingertips over 30 new commands, including:

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A general purpose file management package, supplied on disc or tape, allowing large amounts of information to be stored and processed. It is extremely powerful yet flexible and easy to use.

Once set up, the information may be retrieved, sorted on any field, displayed, updated, printed etc as required.
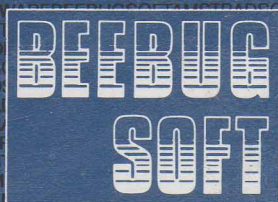
● REMBRANDT

An exciting new 16 colour painting and design package, controlled by icons. It allows you to create amazing screens on the Amstrad computer using some very advanced features. All options are selected from an on-screen icon menu and are extremely easy to use. This must be the ultimate drawing package for the Amstrad. Supplied on disc or tape.

● BEEBUGSOFT

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The Software Manager, Beebugsoft, Dolphin Place, Holywell Hill, St. Albans, Herts. AL1 1EX.

Alternatively, you may call our telephone hotline service on St. Albans (0727) 40303