TASCOPY QL

The Screen Copier

TASCOPY is designed to produce high resolution screen copies, both black and white and [illegible] in two sizes which produce different dot densities for [illegible]

TASCOPY QL has been tested with the following printers:

Admate DP-80
BMC BX80
Brother HR5, M1009
Canon PW-1080A
Cosmos CP-80
Epson FX-80, RX-80, MX-80
Mannesman Tally MT-80
NEC PC-8023B
Seikosha GP-550A
Shinwa CP-80, JP-80A
Star DP 510, 515
Star Gemini 10X
Tarung TP-80
Taxan Kaga KP810

TASCOPY QL will drive any 8 pin dot matrix printer capable of bit image printing.

Printed by [illegible]

TASCOPY QL

The Screen Copier

A
Tasman Software Program
for the
Sinclair QL

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1. INTRODUCTION

The TASCOPY QL package contains programs to produce grey scale, monochrome and poster size screen copies.

The grey scale screen copies produce the effect of colour by printing each screen pixel (dot) as a pattern of dots on the printer. Different colours on the screen have different densities when printed with the darker colours having greater dot densities. There are two programs to produce grey scale screen copies, one for the TV screen and one for the Monitor although it must be noted that either may be used with either a TV or monitor.

The QL screen is composed of tiny dots called pixels. There are two screen [illegible] called mode 0 and mode 8. In mode 8, there are 256 pixels across and 256 pixels [illegible] in mode 0 there are 512 pixels across and 256 pixels down. The Tascopy programs will produce screen copies of any area of the screen (called a window).

The TV version will only print up to 480 screen pixels across [illegible] down in mode 8 but in return you get a much better grey scale [illegible] printers a choice between two printing modes (N.B. if you have a Mannesman [illegible] 80, a Shinwa CP-80, an Admate DP 80 or a Tatung TP 80 printer [illegible] restricted by the window size).

The monitor mode version will print out any size of window [illegible] 512×256 in mode 0 or 256×256 in mode 8.

The monochrome program produces a fast monochrome screen copy [illegible] which colours will be represented by a dot on the printer and [illegible] represented by no dot.

The poster size screen copies are very large versions of the grey scale screen copies and are printed on more than one sheet of paper. Depending on the window size the poster will be printed on 1, 2 or 4 sheets.

2. USING TASCOPY FOR THE FIRST TIME

Press the reset button on the side of the computer and place the microdrive cartridge in microdrive 1 when the Sinclair copyright message appears on the screen. Press F1 or F2 as normal, this will load the BASIC program "BOOT" and start it running.

The screen copy programs are in machine code and are loaded by the program "BOOT" into memory so that they can be configured to your printer and your requirements.

The "BOOT" program then merges in the large BASIC configuring program which customises the TASCOPY code.

Some introductory text is followed by a list of printers next to the letters A to O. If your printer is on the list then press the appropriate letter. If your printer is not on the list then you will need to use the "OTHER" option. It is necessary to refer to and understand the appropriate sections of the printer manual to use this option. If you need to use this option then refer to section 6.

If your printer is capable of printing in two graphics modes then you will be asked which mode you wish to print in. In double density mode the grey scale resolution is twice that of the double density mode but takes twice the amount of time to print.

You will then be asked if your printer is set up to:

(A) do an automatic line feed on receipt of a carriage return from the computer; or

(B) require a line feed code from the computer in addition to a carriage return.

Select A or B as appropriate, or, if in doubt take the course of action suggested by the program.

The next section enables you to redefine the way in which TASCOPY represents colour in the grey scale and monochrome programs. The first time user is advised to press N for no in response to the two questions concerning colour redefinition. For instructions on how to redefine the colours see section 5.

3. SAVING CUSTOMISED TASCOPY SOFTWARE

Load and run the software as described above and press the appropriate key when given the option to save to microdrive. The program will prompt you to take the necessary steps.

The saved TASCOPY code can have two forms. In the first instance it can be saved in such a way that you can load it using the BASIC CALL command. This will set up TASCOPY as a new BASIC keyboard which will remain effective until you reset the computer.

In the second instance it can be saved so that you can load and run TASCOPY by using the EXEC command. This method uses the multitasking capability of the QL and allows you to do some other task on the computer once the screen copy has been initiated. The disadvantages of this method are that you cannot pass the window channel number to the program and the break key cannot be used to stop the printing.

4. LOADING AND USING THE CUSTOMISED TASCOPY SOFTWARE

Before running the Tascopy machine code for the first time after loading you must set up the baud rate for your printer by executing:

BAUD xxxx

where xxxx is the baud rate that your printer is set up for.

4.1 Using Tascopy as a New Keyword

To load your customised Tascopy software, put the microdrive cartridge containing the customised software into microdrive 1 and type in the following instructions on the computer:

```
a = RESPR(X)
LBYTES MDV1_filename
CALL a
```

where X is one of the following numbers.

1088	for the monochrome program
1512	for the TV version grey scale program
1088	for the monitor version grey scale program
1404	for the poster program

filename is the name of the customised program.

To run the Tascopy machine code, type one of the following:

TASMONO	to run monochrome program
TASCOPY_TV	to run TV version grey scale program
TASCOPY_MON	to run monitor version grey scale program
TASPOSTER	to run poster program

The 4 words above are extensions to basic and can be used as basic keywords.

The TASCOPY software will print out any of the screen windows or the whole screen (512×256 mode 0, 256×256 mode 8). If you are using a TV screen and you want to print out the whole screen then use the monitor version, you do not have to use the TV version with a TV screen or the monitor version with a monitor. The only difference between the programs is the size of the window that the TV program will print on a printer which is only capable of printing 480 dots across. To print out the contents of a certain window then type the command (TASMONO, TASCOPY_TV, TASCOPY_MON or TASPOSTER) followed by the symbol "#" and the channel number e.g.

```
TASPOSTER #1
TASCOPY_TV #0
TASMONO #7
```

The channel specified must be a screen channel which is currently open otherwise TASCOPY will give an error. If you are using TASCOPY_TV then the window must not exceed the size limits (unless using a Mannesman Tally MT-80, an Admate DP-80, a Shinwa CP-80 or a Tatung TP-80 printer) otherwise the error 'Window too big' will be returned. The error 'Invalid channel' will be given if the channel open is not a screen channel or a console channel.

If a channel is not specified then a default window will be used. TASCOPY_TV will use the #1 default printing screen but all of the others will use the whole screen (512×256 mode 0, 256×256 mode 8).

The Tascopy code resides in the resident procedure area and will not be removed by the operating system until you reset the computer.

It is important to note that the loading and initialisation of the customised TASCOPY software, as described at the beginning of this section, must be performed BEFORE a BASIC program containing TASCOPY keywords is loaded.

4.2 Using Tascopy with an Exec Command

To load and run TASCOPY as a multitasking job, place the microdrive into drive 1 and type the following:

EXEC MDV1_filename

where 'filename' is the name of the customised program which has been saved for use in this way.

You can change the window which the exec program will use by saving it for use as a basic keyword and typing in the following.

reset the computer and type:

```
a=RESPR(X)
LBYTES MDV1_filename , a
CALL a
```

Run the machine code by typing the appropriate new BASIC keyword and then hold down the CTRL key and press the space bar until the message 'Not complete' appears. Now type:

```
SEXEC MDV1_new_filename, a+12,X-12,0
```

See section 4.1 for the value X and the BASIC Keyword.

Now the new machine code will have been saved and you can use the EXEC command as previously described.

5. REDEFINING THE COLOURS

The first question regarding redefining the colours asks whether or not you want to alter the colours that are printed as a dot in the monochrome program. The monochrome program prints one dot for every screen pixel and so only 2 colours are represented on the paper. By default, the program will only print a dot for a pixel if it is white, however this can be changed by pressing Y here and following the instructions.

The dot patterns which are printed out to represent colours in the grey scale programs can be redefined. The program enables you to do this with ease. If you want to redefine any colours, type Y in response to the question 'Do you want to redefine the colours for any of the grey scale programs'. You will then be asked which colour you wish to redefine. The QL uses 8 colours numbered 0 to 7 and you may choose any of these colours by typing in a number between 0 and 7 and pressing ENTER. When you have chosen your colour you will see a grid which shows the dot pattern for that colour. On the right of the screen are instructions which tell you how to edit the pattern.

When you have finished editing a pattern be sure to press R before quitting, otherwise the old pattern will not be replaced with the new one.

When you have finished editing the dot patterns you will be informed that the TASCOPY machine code programs have been configured and you will be given the choice of saving a copy of the configured code, running the basic program again, entering basic or printing a test screen dump. The program will ask you to enter your printer baud rate and will return to the menu when the screen dump has been printed.

6. INSTALLING YOUR PRINTER USING THE "OTHER" OPTION

After selecting the "Other" option you will see some information on the screen, read this and press ENTER. There now follows a series of questions asking for printer control codes.

The control codes are ASCII codes used by your printer to switch on its different functions. They can be found in your printer manual, usually in a list on the back. The better printer manuals have whole sections explaining each code in detail. In the TASCOPY configuring program, these codes are typed in as a sequence of numbers. Many sequences of codes are written down using letters and the special symbol ESC which stands for Escape, has a code of 27. Thus if a control code sequence was written in your manual as:

ESC A 8 — then the codes for Tascopy would be:
27,65,8 — where 27 is the code for ESC, 65 is the code for capital A and 8 is a decimal number

A SECURITY BACKUP COPY OF TASCOPY

rogram on the TASCOPY cartridge which is run by entering the

```
LRUN  MDV1_CLONE
```

to put the master cartridge into microdrive 1 and the unformatted
odrive 2. The program will format the cartridge in microdrive 2 and
SCOPY programs onto the new cartridge. The program takes about
and will not prompt the user further until the backup is complete

uals warn that the continuous printing of bit image data can damage
hilst no such damage was detected in comprehensive testing of the
are, Tasman Software Ltd can assume no responsibility for any

NOTICE

ware in both the machine code and the basic programs is the copyrigh
are Ltd both in the form that it is supplied and in any customised o