



# DRAG'N'DROP

RISC OS **Pi** and all RISC OS 5 machines

Autumn 2020  
Volume 10 Issue 3  
£3.75

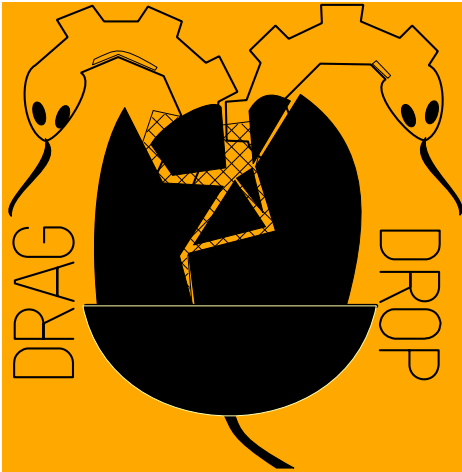
Draw  
Celtic Art

**RISC OS 5.28**

Apps  
Do-It

Reviews  
Scuba Diver

Tutorials  
Schema2  
Programming in PostScript



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Produced on RISC OS computers

This issue has been blessed with contributions from the following people:  
Norman Lawrence (Schema2)  
Christopher Dewhurst (everything else)

The views expressed in this magazine are not necessarily those of the editor. Alternative views are always welcome and can be expressed by either writing an article or a short editorial.

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Contact Information  
Editor: Christopher Dewhurst  
Email: [editor@dragdrop.co.uk](mailto:editor@dragdrop.co.uk)  
[www.dragdrop.co.uk](http://www.dragdrop.co.uk)

## EDITORIAL

Welcome to this edition of *Drag 'N Drop*. Like millions of others in the world my schedule was knocked completely off course in 2020 by the Covid pandemic so I can only apologise for the late arrival of the magazine.

I'm pleased to say I'm now settling in Scotland with my partner Kirsty. The editor of the 'other' RISC OS mag is in Northern Ireland having taken up the reigns after the sad death of Jim Nagel. We have an almost-UK-wide representation! It's really inspiring to see the campaigns like Direct and Cloverleaf reaching out to more people than ever before; RISC OS needs to shed its reputation as just a hobbyist's pursuit. Do support the campaigns in whatever way you can and enjoy your *Drag 'N Drop*.

Chris.

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# Beginners

## ⚙️ How do I get the BBC Basic prompt?



Press F12 and type \*BASIC and press Return. You can change the screen mode with MODE n where n is a number e.g. MODE 7 or MODE 0.

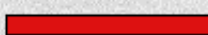
Type AUTO for automatic line numbering. Press Escape to stop and type SAVE "myprog" followed by Return to store myprog on hard disc.

To return to the desktop type \*QUIT.

Programs listed in Drag 'N Drop are assumed to work on all machines with RISC OS 5 e.g. Raspberry Pi, unless otherwise stated.

## ⚙️ How do I open a Task window?

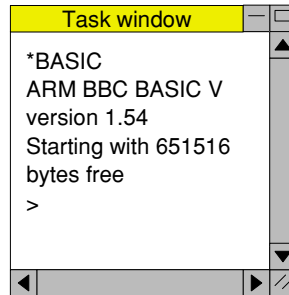
Menu click over the Raspberry icon on the right side of the iconbar and select click on Task window. Or press Ctrl + F12.

Next 1440K 

You may need to reserve more memory for the task in which case adjust-click on the Raspberry icon and under Application tasks click

and drag the Next slide bar out to the right.

You can also type programs in a task window, hold down Ctrl and press F12. You can't use the cursor editing facility or change MODE, however.



```
Task window
*BASIC
ARM BBC BASIC V
version 1.54
Starting with 651516
bytes free
>
```

You can also program and run Basic programs from the desktop. Double-clicking on the filer icon runs it, holding down Shift and double clicking loads it into your text editor.

## ⚙️ What does 'currently selected directory' mean?

Articles may tell you to set the CSD (currently selected directory). Just click menu over filer window and choose Set directory ^W. It's where the computer stores the file when you type SAVE "myprog".

## ⚙️ How do I open an Application Directory?

Application directories begin with a ! called 'pling'. Hold down the shift key and double click select to open the directory.

## ⚙️ I get a blank screen when running games listings

Check you have the Anymode module installed. You can download it from [www.pi-star.co.uk/anymode](http://www.pi-star.co.uk/anymode). It goes in !Boot.Choices.Boot.Predesk.

Open the !Boot application directory, in the root directory of the SD Card, that is SDFS::RISCOSPi.\$.!Boot. Locate the Loader which is a multi-coloured directory with PC written on it. With Shift held down double click it to open it. Create a text file in Edit with the following line (press Return at the end):

```
disable_mode_changes
```

Save it inside Loader as CMDLINE/TXT and restart your machine.

## ⚙️ Sounds are strange

Some listings need the RDSP module installed. Download it from [www.amcog-games.co.uk/rdsp.htm](http://www.amcog-games.co.uk/rdsp.htm) where you'll find instructions on how to install it.

# News and App Updates

## London Show

The first ever online RISC OS computer show took place on Saturday 24th October 2020, the Covid pandemic preventing it from taking place at the usual venue. If you missed it, the show is available on catch-up, see

[www.riscoslondonshow.co.uk/](http://www.riscoslondonshow.co.uk/)

## RISC OS 5.28

The London show marked the release of version 5.28 of the operating system with the highlights being a global clipboard and overhauled Paint plus 366 other improvements. Head over [www.riscosopen.org/](http://www.riscosopen.org/) or just order a new SD card from the RISC OS Open shop.

## Drag 'N Drop website

Your favourite magazine's website has been overhauled to create what we hope is a smoother buyer experience. [www.dragdrop.co.uk](http://www.dragdrop.co.uk) takes you to the top 20 products or access the whole shop by menu at [www.dragdrop.co.uk/shop.php](http://www.dragdrop.co.uk/shop.php).

After Paypal checkout as well as being returned to a page with the appropriate download link you will also be automatically sent an email with your order confirmation and copy of the link.



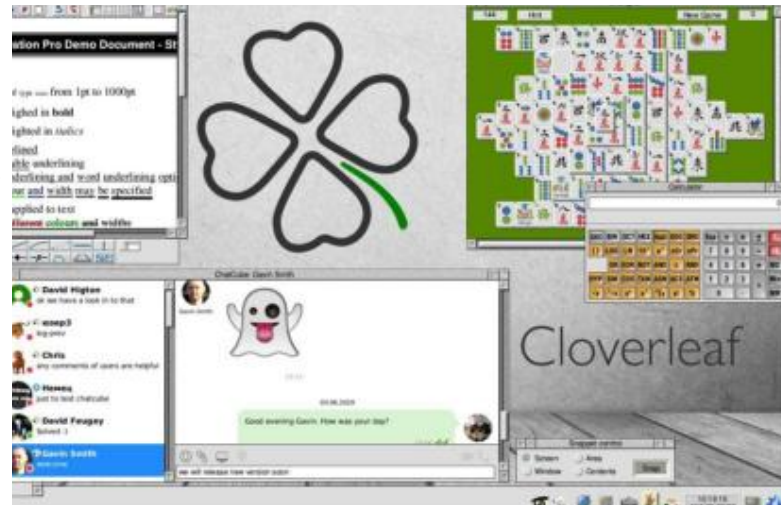
## RISC OS Direct

The first of two RISC OS campaigns to bring the world-beating OS to a wider audience than ever, RISC OS Direct, spearheaded by Tom Williamson, is a free SD card image download of just over a *gigabyte*. It contains an enormous amount of software as well as the operating

system itself. You'll need a 'foreign' OS to actually write the SD image, though... Point your browser at [www.riscosdev.com/direct/](http://www.riscosdev.com/direct/) for more.

## RISC OS Cloverleaf

The second campaign Cloverleaf is an ambitious crowdfunded project being steered by German developer Stefan Fröling. If €50,000 (about £44,500) is raised by 16th January 2021 then a completely new range of fully-integrated RISC OS computers will be marketed with a



range of new software. You can make a pledge for anything from £17 for a T-shirt to £450 for a high-end RISC OS notebook. Your card won't actually be charged unless the project takes off so whatever you can pledge to support this exciting new project counts, head over to [riscoscloverleaf.com/](http://riscoscloverleaf.com/) to find out more.

## Ghostscript 9.26

The very latest version of the cross-platform PostScript interpreter is available for RISC OS and with *Drag 'N Drop's* very own series on programming in PostScript starting in this issue, head over to [www.riscosports.co.uk/downloads.html](http://www.riscosports.co.uk/downloads.html) to update your copy. Beware the download weighs in at 43 megs!

## Archive Magazine

The longest running RISC OS mag in the world has taken on a new life after the death of editor Jim Nagel earlier this year.



Gavin Smith is now editor of the RISC OS highbrow periodical so if you like your irreverent tabloid then keep reading *Drag 'N Drop*. Annual subscriptions start at £40 for 6 issues delivered by post. More details at [www.archivemag.co.uk/home.php](http://www.archivemag.co.uk/home.php).

## Pluto 3.18

The freeware RISC OS email app has been upgraded and available from [www.avisoft.f9.co.uk/](http://www.avisoft.f9.co.uk/). Check out the article in this issue of *Drag 'N Drop* for how to get up and running.



## LibraOffice to HTML

Clive Semmens has released a free app to slim down bloated HTML files saved by the open-source

LibreOffice suite of programs. Download from [clive.semmens.org.uk/RISCOS/](http://clive.semmens.org.uk/RISCOS/) where you will find a whole host of other usefulties.

## Studio Sound 2.09

The 32-track audio sequencing software has been updated and free to

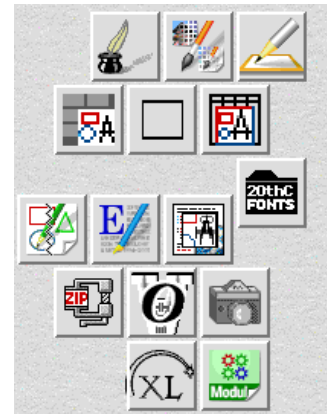
download from [henrikbp.riscos.fr/](http://henrikbp.riscos.fr/)

## PushSend 0.11

This is a small application which lets a RISC OS app send a real-time notification to your mobile phone using the Pushover service. Download from [davehigton.me.uk/](http://davehigton.me.uk/)

## Launcher 1.10

This is one of those handy apps you didn't know how you survived without... [www.stevetryatt.org.uk/risc-os/launcher](http://www.stevetryatt.org.uk/risc-os/launcher) puts a button on the side of your desktop and when clicked a panel pops up onto which you can place shortcuts for your desktop apps. Unlike the built-in Pinboard you can launch programs with just one click of the mouse.



# RISC OS 5.28

In this article we show you how to safely upgrade your RISC OS Pi machine to the latest version of the operating system, then look at some of the new features in the built-in RISC OS applications.

The process is essentially in three stages:

- Download two Zip (archive) files from RISC OS Open website.
- Upgrade the ROM image and restart your machine.
- Upgrade the !Boot sequence and restart your machine.

I recommend storing the downloaded files on a memory stick, you'll need about 19 megabytes of free space so the *Drag 'N Drop* back issues stick, available to buy from the website, is perfect.



## RPi ROM stable

2020-10-22 15:45:56

0823e7ca2ce9fb4ab3ef30cac174f91b

Raspberry Pi ROM and firmware for stable RISC OS 5.28. See our [press release](#) for more information.

5.28 5.4 MB



First go to [www.riscosopen.org](http://www.riscosopen.org) > Downloads > Raspberry Pi. Scroll down to 'ROM releases' and click on download RPi ROM Stable. Save the BCM2835/5/28/zip on your memory stick.

Now go to Downloads > Miscellaneous and scroll down to 'Disc based components'. Click on HardDisc4 to download HardDisc4/5/28/zip.



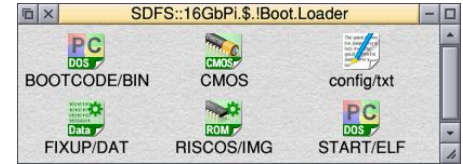
Double click on BCM2835/5/28/zip.

Hold down the shift key and double click on your Pi's !Boot file. Release the shift key.



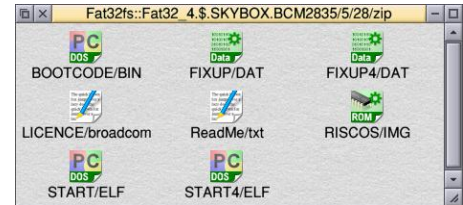
Look for the Loader file with an icon which looks like a Microsoft Windows logo with PC written on it:

Double click it (n.b. don't hold down Shift) and it will open. You will see a display which looks like the following:



These are the 'firmware' files. You may have more than six. Make a backup of them by dragging them out and onto your memory stick. This is so if anything goes wrong you can copy them back.

Double click BCM2935/5/28/zip open.



Select click anywhere on this window and press menu > select all. Drag the files into the !Boot.Loader window.

Restart your Raspberry Pi by pressing Shift+Ctrl+F12 or clicking Menu over the Raspberry Pi switcher icon at the bottom right of the icon bar and choosing Shutdown, and clicking on Restart

Product: Scuba Hunter

Cost: £9.99

Supplier: AMCOG, [www.amcog-games.co.uk](http://www.amcog-games.co.uk)

**Scuba Hunter is the latest exciting offering from Tony Bartram at AMCOG and the action takes place underwater.**

On loading Scuba Hunter you are presented with the AMCOG splash box and title screen which helpfully summarises the controls.

You can click one of three options with the mouse to start the game at level 1, input a code for a higher level, or quit the game to return to the desktop.

You begin outside your diving bell, near the surface of the sea. Atmospheric music fades up and you start swimming down to the depths. The watery backdrop scrolls nicely in parallax behind the scenery.

Scuba Diver is essentially a 'Repton' style game in which you collect diamonds and clear the earth to release boulders to kill assorted marine nasties like jellyfish.

The diver character is well

designed and I liked the way he shrinks to nothing when you run into a monster and lose a life.

The number of diamonds you need to find to complete the current level is shown, which is helpful, and I liked the LCD-style font for the score.

New levels can be designed in a text editor although it would have

been nicer to have a graphical editor.

Scuba Diver isn't as immersive as recent 3D outings from AMCOG but the usual high standard of graphics and music composed especially for the game make it a pleasant addition to your collection.

## Review



# PostScript

**PostScript (PS)** is a programming language invented in the early 1980s used to specify the layout of the printed page.

You don't have to have a printer to program in PostScript, these days you can view the output on your computer screen.

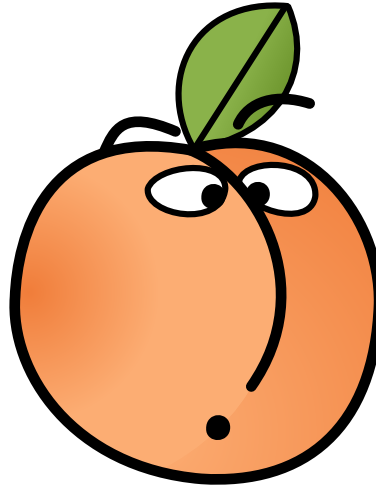
We begin this series with an introduction to the language which works on virtually any computer platform, including RISC OS.

## But why learn PostScript?

Why should we go to the trouble of learning another language, particularly an 'arse-about-face' one (because its commands are written back-to-front)?

After all we have a perfectly good, free package called Draw to produce diagrams with ease, and which itself can produce PostScript.

Well, it's not uncommon for packages like Draw to produce errors in their PS output. Drawings with repetitive elements are time-consuming to produce. Accessing PS directly often results in better quality and more efficient files.



*Postscript is an arse-about-face language.*

## Editing and viewing

PostScript files are plain text files and they can be written by hand in a text editor like Edit. They are filetype PoScript (FF5) in the filer and look like one of the following icons:



There are three ways of viewing the output:

- Double click the PoScript file to open it in GView
- Drag the PoScript file to !PrintPDF icon bar to convert it to a PDF, then double click the PDF file

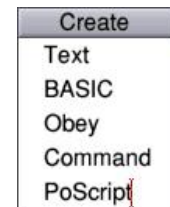
to view it in !PDF. **Series**  
This way you have the option of exporting to Draw for further editing or dragging into a DTP package like Impression Style.  
● Drag the PoScript file to the printer icon, assuming you have a driver like PoScript2F or the more superior PS3 installed.

If you bought your Pi's Micro SD card from RISC OS Open then Ghostscript, GView and !PrintPDF come pre-installed.

If not you'll need to download and install them yourself. We've given the relevant web links at the end of this article.

## Creating a PostScript file

Load up Edit and press Menu over the icon bar icon and choose Create and type PoScript at the bottom, then press Return.



Type in Listing 1 and save it somewhere convenient as 1/ps. The /ps isn't necessary unless you're



# Getting started with Email on RISC OS

Many newcomers to RISC OS find setting up email software on their Raspberry Pi quite daunting and if you are one of those people then this article is for you.

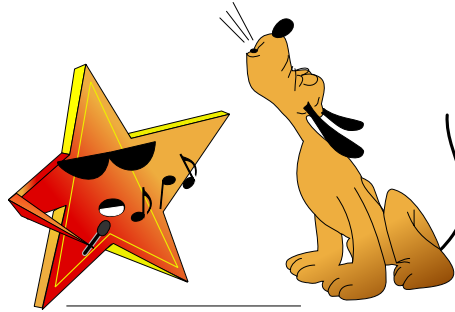
For various reasons two applications need to be present on your machine to use email. One retrieves and sends email data (the transport) and the other is for reading and replying to the messages themselves.

We use the free POPStar and Pluto applications – commercial software is available but isn't necessarily superior.

You'll need your email address, password plus POP and SMTP settings. If you aren't sure about POP and SMTP just Google for the likes of “TalkTalk POP” or “BT email settings” or whatever your Internet Service Provider (ISP) is.

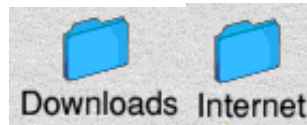
## 1. Create two directories

If they aren't already present, create two new directories on your Pi's SD card called Downloads and Internet. the icon bar to open a filer window



*Pluto is named after a famous cartoon dog and POPStar after, well, whoever your favourite pop singer is!*

Do this by clicking on the :0 icon on your your Pi's SD card. Click menu over the filer display and choose New Directory.



Open both directories by double clicking on them with select.

## 2. Download POPStar and Pluto

We are going to put three files from the internet into Downloads. Firstly using Netsurf or your favourite browser navigate to <https://downloads.sourceforge.net/project/plutoemail/pluto/>

[pluto318.zip](https://pluto318.zip).

Set its filetype to Archive (ddc) by clicking menu over it and choosing File 'pluto318/zip' > Set type > and type 'Archive' then press Return.

Go to <https://www.heenan.me.uk/acorn/download.html>. Download POPStar and save popstr205/zip in the Downloads directory. You don't need to set the filetype.

Go to [www.aconet.org/tools](http://www.aconet.org/tools), download SocketWatch version 0.07. Save socketwatch/zip inside Downloads folder. You should now have three files in your Downloads directory:



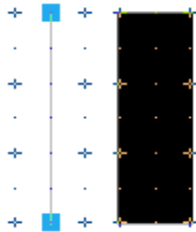
## 3. Install POPStar and Pluto

Open the popstr205/zip by double clicking with select.

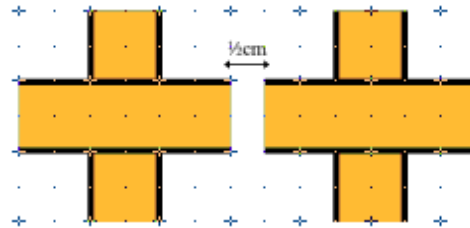
You will see a filer window which looks like the following:



# A Celtic Knot in 5 minutes

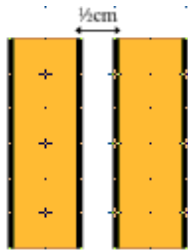
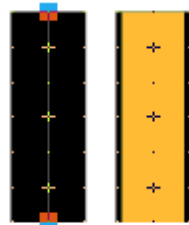


**1.** F1 turn grid on.  
F2 Shift+F1 grid lock.  
Select line tool.  
Menu>Style>Line width 30.  
Draw a vertical line 3cm long.



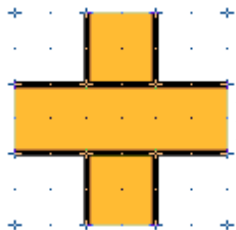
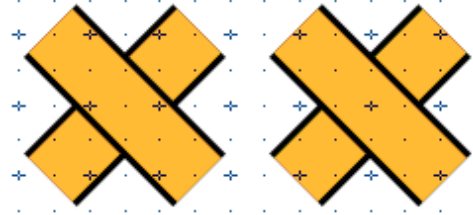
**5.** Group the two parts of the '+'.  
Ctrl+C copy and position second '+' 1/2cm away from the first.

**2.** Line tool.  
Menu>Style>Line width 25.  
Colour of your choice.  
Draw another line 3cm over the top.

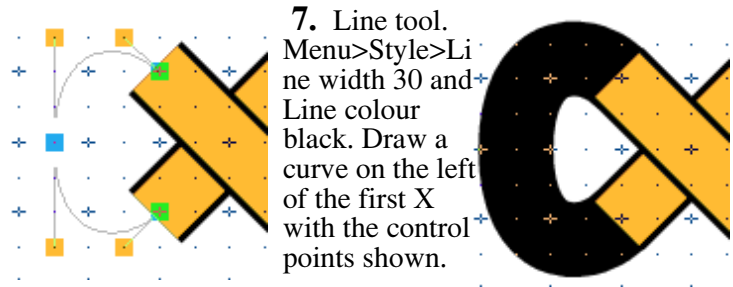


**3.** Ctrl+A, select the two lines  
Ctrl+G to group.  
Ctrl+C to make a copy.  
Position the copy 1/2cm away from the original.

**6.** Ctrl+A select all.  
Menu>Transform>Rotate>45 to make two X's.

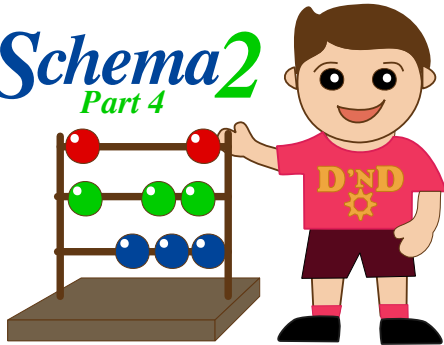


**4.** Select one of the lines.  
Menu>Transform>Rotate>90  
Place it on top of the other one to form a '+' shape.



**7.** Line tool.  
Menu>Style>Line width 30 and Line colour black. Draw a curve on the left of the first X with the control points shown.

# Schema2 Part 4



## Importing Files

Here at the College of Knowledge, our dean introduced a new prize worth \$1000 for the best student completing our Engineering Diploma course.

Beginning with the course just completed in 2019, I have been tasked by the dean to create a certificate for this award.

He helpfully suggested I automate the process and gave me a memory stick containing an Excel spreadsheet with the results for the two years of the Diploma Course.

Well that got me thinking: how could I do this on RISC OS using Schema2? Then I remembered Anton Reiser developed viewXLS and xlsConverterSch, available from <http://home.allgaeu.org/areiser/riscos/software/index.htm>. Thanks

Anton for making my day!

ViewXLS is great for opening Excel xls workbooks on RISC OS. First ensure that ViewXLS can be seen by the filer, double click on the Excel file and ViewXLS will display one of the spreadsheets that it contains.

For workbooks containing multiple sheets, simply click the menu button in the Excel spreadsheet being displayed, choose Sheet and then select the worksheet you want to view.

The other zip file xlsConversionSch contains two Schema2 related files (!sch2xls and !xls2sch) that can be used for converting between Schema2 and Excel and vice versa.

As before, ensure that these two files can be seen by filer at startup. My ARMbook laptop had no problem reading the dean's memory stick which was Fat32 formatted and the conversion into Schema2 files was remarkably simple. Just start !xls2sch and drop the Excel file onto the xls2sch iconnbar icon.

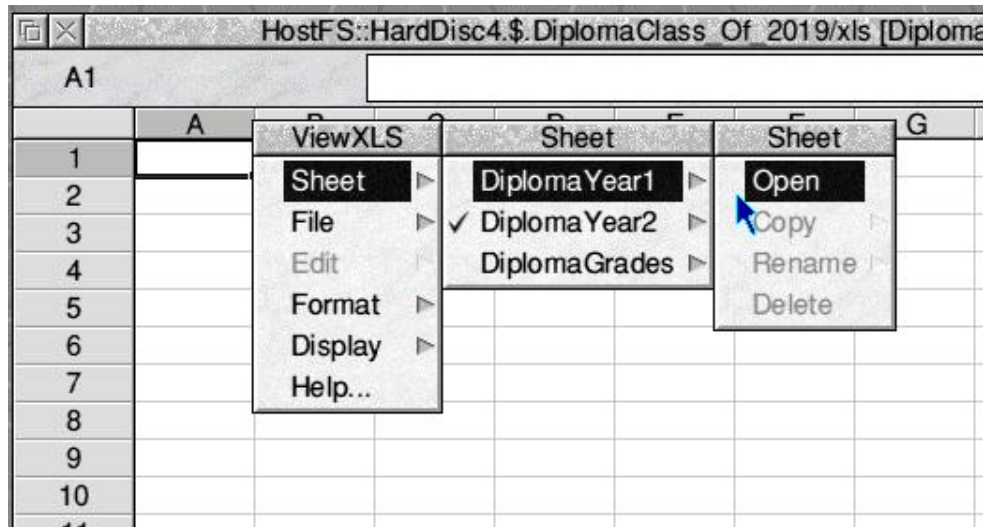


Figure 1 Selecting which Excel spreadsheet to Open in ViewXLS.

