



Language lesson

Easier than you think: Mark Whitehorn shows you how to **program your Psion**.

OPL is the built-in programming language for the Psion. It has been there from the first Series 3 and is on the Series 5. I have received multiple requests for help with getting started using OPL, including this one from reader, Jamie Ingilby <jwfigilby@hotmail.com>.

'I have a friend with a Siena who is drastically puzzled by OPL programming even though we are both very at ease with other languages. My friend is not prepared to buy a big book and is wondering if there are any other ways of approaching OPL, or even whether you could get him started?'

So, if existing programmers want to learn OPL, is there any point in non-programmers giving it a go? Yes — it's fun! Programming is the biggest and cheapest game you can play on a computer. Most games are about overcoming hurdles, repeating a move until you get it cracked:

programming's like that. If it works first time, it's no fun; the thrill comes from beating the bugs. The only problem is that getting started can be difficult, hence this introduction which comes with a couple of warnings. One is a health warning — programming is highly addictive. The other is that this OPL series is an introduction so

Programming is the biggest and cheapest game you can play

CALENDAR CONUNDRUM

Readers Peter Sheldrake <PeteShel@mcmail.co> has a problem with dates. He writes: 'I recently purchased an Ericsson MC12 which I upgraded to CE2. I'd like you to test and comment on what follows. I know this occurs on MC16s and HP360s but I don't know about other machines: Go into

Calendar and then to April 1999. Enter a full-day event for Monday 5th and exit Calendar. Next go into Month at a Glance, go to April and check your entry: if it is listed for Monday, OK; if it is Sunday, then you have the same problem as me. Also, the data transferred to Microsoft Schedule is similarly incorrect. Ericsson has checked and admitted

that it gets the same problem.'

This is an interesting one. I tried this on my trusty HP620 LX and it didn't display the fault described.

• If readers want to try this on their machines and let me know, I'll compile a list of affected machines and we can try to work out whether it is machine-specific or CE version-specific.

you will not, by the end of it, be writing Tomb Raider 98 for the Psion although

you will be writing words to the screen, making the Psion play crude tunes and maybe writing simple text-style games.

But then, that's where everyone starts — even those who write flight-simulator programs. I'm going to assume you are using a Psion 5 but if you have one of the 3 series, including the new MX, the steps will be much the same, so I'll throw in Psion 3-specific information where appropriate.

1 From the Extras menu select Program (which has an icon, OPL) and a fairly blank screen appears [Fig 1]. On a Psion 3, select the OPL icon from the System menu.

2 You are looking at the bare bones of what is known as a procedure — hence the word 'PROC'. Large programs can be split into multiple procedures, a process that makes maintenance easier. Small programs don't have to be subdivided in this way so they usually consist of a single procedure, as will be the case for our program.

3 Every procedure has to be named, so call this 'Penguin' or whatever

you fancy. Do this by adding a name after the word PROC and before the colon that should appear at the end of the first line. Your

► **FIG 1** THE OPENING SCREEN FOR OPL PROGRAMMING
▼ **FIG 2** THE COMPLETED PROGRAM

```
PROC Penguin:
AT 5,5
PRINT 'Hello World'
PAUSE 40
ENDP
```

```
PROC :
ENDP
```



program should look like this:

```
PROC Penguin :
ENDP
```

The colon at the end of the first line is

important, as the program will not run without it. These two lines define the start and end of the procedure and the program will then be contained between the lines.

4 It is traditional for the first program you write to be one that puts the words 'Hello World' on the screen. Failure to obey this tradition will have absolutely no effect at all. Your life won't be blighted and your teeth won't fall out. But why not do it anyway? Add this:

```
PRINT "Hello World"
```

into the space between the two existing lines. Congratulations! You have completed your first computer program on a Psion. All you need to do is translate it (see 'What is OPL?', right) and then you can run it. Press the Tran button, which should be visible on the right of the screen, or press Ctrl-L. On the 3 series, select Prog, Translate from the menu system or use Psion T.

5 If you have made any mistake at all in the program (perhaps leaving out the first ") then your Psion will lock up completely and have to be returned to Psion for a new motherboard... OK, that's a lie, but I bet it bumped up your adrenaline level fractionally!

Programmers make mistakes all the time without doing any damage. All that will happen is you will be told there is a 'syntax error' and the cursor will move to the approximate area where the problem lies, so you can fix it.

Once the program contains no syntax errors, the Psion will be able to translate it and will then ask if you want to run it. Answer 'Yes', and it will run. You will have to watch carefully though, as the words appear only briefly on the screen. No problem. We simply need to ensure that the program pauses for longer so we can read the magic words. Modify the program as follows:

```
PROC Penguin :
    PRINT "Hello World"
    PAUSE 40
ENDP
```

If you run this program (Ctrl-L followed by 'Yes') the words will remain on screen for about two seconds because the numbers after the word PAUSE tell the Psion how many twentieths of a second the pause should last.

6 Putting values after commands is a common way of modifying their behaviour. For example, you will

WHAT IS OPL?

OPL stands for Organiser Programming Language – the Organiser was the progenitor of the Series 3, 3a, and so on. It is a derivative of the BASIC language and both use a restricted subset of the English language. OPL consists of 'commands', such as PRINT and AT, and each has a specific meaning. For example,

PRINT means 'write the following words to the screen'. OPL is derived from English so humans can understand it, but sadly the Psion processor speaks machine code, which is a more terse language consisting entirely of binary numbers. The good news is that the Psion can translate your OPL program into a form the processor can

use. So, after you have written your program, you will have to translate it before you can try running it. The majority of shareware programs for the Psion are written in other languages, such as C, which can do this translation step more efficiently, but OPL is a great place to start programming, to see if you like it.

AN EASY WAY INTO OPL

For those readers who would like a gentle introduction to OPL programming, here is a helpful pointer from a reader. 'I saw the item about someone wanting a dummy's guide to OPL programming. Well,

here it is. The address is <http://members.xoom.com/wireplay/opl.html>. I hope people like it.'

SPANGLE

ANGO@MELLOWPARENTING.DEMON.CO.UK

The web site 404'd on me when I tried it, but

it may nevertheless be worth giving it a go.

- A decidedly less volatile source of information is the PsiWin CD-ROM, which has an OPL manual in both HTML and Word Doc format.

A WEB SITE FOR DOSSERS

Reader Mark Gardiner, at 100550.3170@compuserve.com, writes: "I know that the tide of WinCE is now overwhelming, but many original DOS palmtop users still remain faithful to their HP LXs and, like me, to their Sharp PC3000s. I have spent a great deal of time developing the functionality of my Sharp PC3100 and have published all my positive

findings and successes on my web page at www.geocities.com/SouthBeach/Strand/3387/home.html. I believe this information may be useful to many potential PDA or palmtop owners who perhaps cannot afford the current WinCE prices but could easily pick up an earlier DOS machine cheaply and equip it to be a productive mobile tool. I get a lot of response

from students in particular and am able to help them get started."

I am not convinced that domination by WinCE is inevitable. Psion is looking powerful at the moment, but whichever 'wins', DOS machines will be around for a long time to come. As an ex-DOSser myself, I recommend Mark's site to anyone who is still using a DOS-based PDA.



TIPS AND TRICKS

➤ **Cheap Psion-PC cables** was a subject I covered in the December column. Reader Alan Young <alanyoung@usa.net> writes: 'I caught the tail end of the "Psion Sense" item where you stated: 'you have to shell out for PsiWin if you want the connector cable"... Well, actually, no (puts on anorak and adopts smug expression). You can find all the details for making a cable and of a supplier for the special connector at www.sp.phy.cam.ac.uk/~jrb25/psicable.html. I didn't put it there, but I did use it to make a cable — and it works. It isn't cheap, but it costs less than PsiWin and is more satisfying than giving money to Psion for a product you don't really want.'

Thanks, Alan. That page is run by Justin Buckland who works at the Cavendish Laboratory at Cambridge.

➤ **Changing fonts on the Psion.**

Reader Andrew Bovett <a_bovett@csi.com> advises: 'In your December column you printed a GeoFox tip for changing the default font and commented that you had a problem doing it on a Series 5 because drive Z is read only. Here is how you do it.'

- Go to Z:\system\apps\word. You will find a word document called "Normal".
- Copy it to C:\system\apps\word.

➤ **Fig 4 REMEMBER, REMEMBER, THE WONDERFUL DEFENDER...**

▼ **Fig 5 ...AVAILABLE FOR THE SIENA, AS WELL**

Mark Wheadon's Defender



➤ **'PDA users may like to know that**

HENSA, the Higher Education National Software Archive, holds a current mirror of the software site PDACentral,' writes Sally Hadland <s.hadland@lancaster.ac.uk>.

Then open the copy you have just created and use the Style Gallery to change the font assigned to the "Normal" style.

- Now exit the file. The next time you create a new Word document, this file will override the file on Z (due to the search order, Z is searched last) and you will have a new default font.

Other preferences can be altered in the same way.' Nice one, Andrew.

▼ **Fig 3 PDA CENTRAL — PILOT, NEWTON, CE AND PSION ARE ALL REPRESENTED**



'We're currently the only official mirror of this site in the UK. It contains various shareware and public domain software for the Psion (Siena, 3 and 5), PalmPilot, Apple Newton and Windows CE. Each software item has a description and a rating to help users with their selection of software. As the site is UK-based, download times are significantly faster. The address is <http://hensa.pda-central.com/>.'

If this column had a star letter award, Sally's email would receive one. This site [Fig 3] is fantastic for UK users. Not only does it have a huge number of free and shareware programs (a tiny sample is on our PCW CD-ROM) but it also has links to other sites. For example, at Mark Wheadon's site <www.cs.ukc.ac.uk/people/staff/mcw/php/shareware.html> I found Defender for the Psion! Yes, that beloved chestnut from the BBC is alive and well on the Psion [Fig 4] and Mark's zipped file is on our cover CD for your pleasure. He even does a version for the Siena [Fig 5].

have noticed that the words 'Hello World' appear at the top left-hand corner of the screen. The AT command modifies this position, so the program shown in Fig 2 will move them down and to the right.

➤ **Homework**

Your homework this month is to find out the following:

- Does the first number move it down or to the right?
- What values do you need to put the words in the centre of the screen?

PCW CONTACTS

Mark Whitehorn welcomes your feedback on the PDAs column. He can be contacted via the PCW editorial office (address, page 10) or you can email him at pda@pcw.co.uk