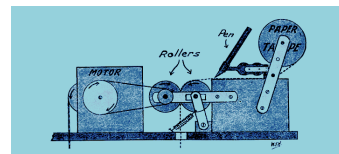




Instruments and Imaging Section
 Technical Tips No. 1
 5 October 2011



Director: Bob Marriott ram@hamal.demon.co.uk 01604 765190 http://britastro.org/iandi

I have often been asked for advice on technical matters: mechanical affairs, telescope drives, observatory construction, and so on – and more recently, computers and software. When I have not been able to help directly I have consulted Members whom I know have the necessary knowledge and skills. It is obvious, however, that I do not, and cannot, know everyone. Among the ranks of BAA Members there is a wealth of knowledge, experience, skills, and expertise, and it is therefore worthwhile consulting as many Members as possible, and then disseminating the results and information as widely and directly as possible throughout the Association. I recently received an enquiry from a Member who is having difficulties with webcam drivers – and, as can be seen below, he is not alone in being placed in this dilemma. It is gratifying to know that the Association has Members throughout Britain and around the world who are willing to help each other, and I thank you all for replying so swiftly. For these reasons, I have introduced this new Section publication. As with *I&I News*, it is being issued to around 1,700 Members. Therefore, if you have any queries, problems, or difficulties which you consider fall within the domain of the Instruments and Imaging Section, your colleagues in the Association will, if necessary, be asked for help and advice. If the results are extensive, and if considered worthwhile, they can be issued as *Technical Tips*. (Incidentally, here is a small competition – no prizes. What is the equipment shown in the diagram at top right?)



Keen imagers find a software writer

[Enquiry] Until recently I have been using capture software with the Windows Vista operating system, for imaging. Unfortunately, my new computer uses Windows 7, and neither of my webcams – a Meade LPI and a Philips PCVC840K – will work with it. I suspect that drivers have something to do with this. I have searched various websites, but without success.

Brian McInnery, Poole brianmcinnery@gmail.com

If you get a helpful answer, I would like to know too. I have a stack of legacy hardware gathering dust thanks to Win 7's policy on drivers.

Bev M. Ewen-Smith, Mexilhoeira Grande, Portugal info@coaa.co.uk

Read down this thread for the solution:

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k.html>

It worked for me!

David Hepwood, Hemel Hempstead dhepwood@dlhd.co.uk

It appears that drivers for the LPI on Windows 7 (32-bit) can be downloaded from here:

http://www.meade.com/support/Envisage_V7.9%20Win7.zip

The download page specifically notes, however, that the 7.09 version of the drivers only support the LPI on a 32-bit version of Windows 7. I am afraid I could not find anything specific to the Philips webcam on Windows 7, but the person might want to give the XP drivers a try from here:

http://download.p4c.philips.com/files/p/pcvc840k_00/pcvc840k_00_dxp_eng.exe

Russell Archer, Teddington russell.archer@mac.com

The drivers for Win 7 probably do not exist, and because the hardware is old, never will. The only options are to use Win 7 in XP Mode, a free download, or something like Sun Virtual Box, which allows XP or Vista to run under Win 7.

David Farn, Coventry david.farn@ntlworld.com

The following, partially at least, answers the query. I will check around for the Philips.

<http://meade4m.com/forum/index.php?topic=1747.0>

Andrea Tasselli, Lincoln andreatax@yahoo.com

This forum post appears to show instructions to get Philips PCVC840K to work (you need to read the whole thread, as there were a few tweaks of the original solution from steevecee):

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k.html>

I cannot vouch for the solution, but others appear to.

Jason Sessions, Coulsdon

jsessions@btinternet.com

Have you tried installing your software with the compatibility set properly (under property option)? I have installed all my astronomy software on a small Windows 7 starter computer, with SBIG and RS-232 to USB hardware, successfully (Maxim dl and ascom 4.1)

Robert Tremblay, Quebec

rtrembl@webnet.qc.ca

We have had a request like this before [1 December 2010]:

Indeed, it looks like Meade have not supported the LPI Imager recently, and there is plenty of gnashing of teeth on the 'net. One person has proposed this solution:

<http://meade4m.com/forum/index.php?topic=3027.0>

'I downloaded the Microsoft Windows 7 virtual machine and XP and installed them. Now the DSI, LPI, and USB to Serial adapter (for telescope control) work in the XP virtual machine. If I just want to use the DSI then I can run in Windows 7. For the LPI or both I run in the XP virtual machine.'

Or try this; it looks more promising:

<http://meade4m.com/forum/index.php?topic=1747.0>

If the Member feels he does not want to shell out any more money and is a little more adventurous he could try installing an XP virtual machine by using some of the free visualisation software available; a quick Google will soon dig out a good package. My only warning is that USB support is often fiddly to get working correctly

Tony Morris, Rotherham

tony.morris@btinternet.com

Just a thought: was the Vista OS previously used a 32-bit or 64-bit? Likewise the version of Win 7 used now; is that 32-bit or 64-bit? 32-bit drivers do not always work with a 64-bit OS, and vice versa. I have found that Vista 64-bit drivers work OK in Win 7 64-bit.

Simon Briggs, Lowestoft

briggs111@btopenworld.com

And here's how for the Philips:

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k-2.html>

Andrea Tasselli, Lincoln

andreatax@yahoo.com

Perhaps he does not have drivers needed. What I suggest is download the free Windows XP virtual machine from Microsoft website and install the imaging software there. It will work fine.

<http://www.microsoft.com/windows/virtual-pc/>

Ajith Dharmakeerthi, Enfield

apdharm@gmail.com

The best advice I can give, Bob, is for him to buy a DMK and Lucam Recorder, or download free 'firecapture' to run it. Oh yes, do not part with the old laptop, so they can continue to play with the old camera. No point getting a new lappy and still using old 10 fps technology.

Dave Tyler, Flackwell Heath

david.tyler10@btinternet.com

You should find that the Vista drivers will work with Windows 7 – unless it is 32-bit and 64-bit now, of course.

Rory Fairbairn, Aberdeen

rory.fairbairn@btinternet.com

If the OS is Windows 7 Professional 64-bit, then a possible easy solution is to use the XP mode which is available. It requires a (free) download of the virtual PC software from Microsoft, but it does allow legacy applications to run. I paid the relatively small premium for Win7Pro 64-bit for that reason, and saved myself over £100 updating old software; and in one case, having to go down a completely different – and less efficient – route.

Mike Carson-Rowland, Forres

Mike@Carson-Rowland.com

Does not Windows 7 Pro come with a 32-bit compatible mode? Would the cameras run under that?

Grant Privett, Fovant

g.privett@virgin.net

I am not sure about the Meade LPI, but with the Philips PCVC840K, Philips state on their website that they do not support this camera with Win7 and are providing no drivers. I am keeping Win XP on my observatory PC for just that reason.

Frank Johns, Newquay

frank@laplage.demon.co.uk

My son David sent me the attached suggestions. Maybe they will be useful:

I found instructions that may work for the Meade webcam, though there are no guarantees:

<http://meade4m.com/forum/index.php?topic=1747.0>

Something similar for the Philips webcam:

http://www.p4c.philips.com/cgi-bin/dcbint/cpindex.pl?ctn=PCVC840K%2F00&dct=FAQ&faqview=1&new_tmpl=1&refdisplay=WEBCAM_QAC_66387&refnr=0066387&scy=GB&slg=ENG

It reminds me a bit of what I had to do to get your laptop to recognize yours. The reality seems to be that these webcams are all quite old, and the companies seem to have little interest in officially supporting them in more recent versions of Windows.

Samuel Whitby, Prince George, Virginia

srwhitby@gmail.com

A bit of Googling produces this:

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k.html>

I have the same camera, but I have not tried this fix yet. I have got to find the camera! It is not clear if this works for 32-bit or 64-bit Win 7, or both.

Mike Smith, Cambridge

mike@ousetech.co.uk

A common problem with lots of old software/hardware. The bottom line is that these problems are going to become more common, and it is very unlikely that new drivers will appear. The hardware is simply too old, and there is no active development on it. I am not 100% sure of the exact solution, as I do not run W 7 (I run Linux and XP), but in W 7 there is a legacy XP mode of operation that may help. Information and download here:

<http://www.microsoft.com/windows/virtual-pc/download.aspx>

It is essentially a virtual machine running XP. VMs can be a bit tricky to set up, especially in regard to external devices, and unfortunately it is often a 'suck it and see' job. If the compatibility mode does not work, then running something like virtualbox, which is the sun/oracal VM program, may work. I am assuming that the Member still has his XP installation software with which to build a new XP installation.

Another solution – well, two solutions really ... Build a dual boot machine, with XP as one OS and W7 as the other. This puts the two OSs on separate HD partitions.

A very similar system, and one that I use for emergency use ... I have a fitted an HD caddy to my spare machine, so by simply plugging in a separate hard drive and selecting it from the BIOS boot menu I can run any OS I want without affecting any other. My spare machine is usually my Linux test machine, but if the Windows box ever fails I can plug in the spare XP drive and be up and running in a few minutes.

Lastly, with the very low prices of older second-user hardware, there is no reason why an XP system cannot be run on such a machine, and be kept dedicated to the telescope for imaging control. A simple network link between this and the new W 7 machine would allow any newer software to access the old machine via shared folders. Do things right and there is hardly any need to even have a monitor on the XP machine, and things like remote desktop, VNC, Teamviewer6, and so on, can be used to control it remotely. If you have not come across teamviewer6 before, see:

<http://www.teamviewer.com/en/index.aspx>

It is a remote access program, and it 'punches' through firewalls very nicely. However, unlike some on the remote access services which are web-based, it is dedicated between the two machines. Better still, it is available for Windows and Linux, and there is a user app that you can send to someone you want to help, and they just run it. It requires no installation. It is quite small – about 3.5 meg. When run, it pops up a numeric string as an ID, and a numeric password. You give these to whoever is going to log into your machine; and that is it – the connection is made. Once the connection is closed, these log-on codes no longer work. I have used this system to help out friends remotely. It is a commercial program, and costs about £400; however, the team viewer company actually allows the software to be used by private individuals free of charge, and you do not even need to register. Good advertising. I would have killed for a similar product in some of the jobs I have done in the past. Hope this gives a few ideas to try.

Andy Eskelson, Barking

aeskelson@gmail.com

I think that you should complain to Microsoft that the cause of astronomy is not helped by their actions, and you might get either no reply, or help, seeing it is supposed to be technology that has in the past helped astronomy.

Brian Topping, Colwyn Bay

brian.bdtopping@btinternet.com

Please forward these links.

Philips PCVC840K for Windows 7:

<http://www.toggle.com/lv/software/download/kl15622.htm>

http://www.support.philips.com/support/search/search_downloads.jsp?fetchWhatData=CountryCategoryData&_dyncharset=UTF-8&userLanguage=en&userCountry=gb&searchValue=Phillips+PCVC840K+

Meade LPI for Windows 7 – 'How to do it' link:

<http://meade4m.com/forum/index.php?topic=1747.0>

Some guest chat and info:

<http://www.iceinspace.com.au/forum/showthread.php?t=62294>

This might be of help:

<http://meade4m.com/forum/index.php?topic=1747.0>

Naimul Islam Opu, Dhaka, Bangladesh

opuastro@yahoo.com

I would suggest trying running the drivers in 'compatibility mode', as per this small tutorial I found online:

<http://www.techspot.com/blog/354/no-windows-7-drivers-yet-try-using-vistas/>

I have software on my machine (not astro-related) that runs under compatibility mode in Win7 without any problems at all. There is one drawback, however. Some really old software will not run on 64-bit systems no matter what mode you choose to run it in. If the Member in question has a 64-bit system and the 64-bit version of Win7 (obviously) in use, there may be other things to factor in. However, for now, compatibility mode is an avenue to try.

Richard Blake-Reed, Chippenham

consensus@talktalk.net

I did a bit of searching on the Internet, and found these two websites which may be of help:

<http://stargazerslounge.com/archive/index.php/t-119584.html>

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k.html>

Hopefully, someone else will come up with the answers you require, but this may be a starting point.

Gill England, Basingstoke

gillian.england@ntlworld.com

Unless he has changed from 32-bit to 64-bit Windows 7 he should be able to run the software in compatibility mode. If you right click on the application there should be an option 'Troubleshoot compatibility'.

Sheridan Williams, Leighton Buzzard

sheridan@clock-tower.com

This looks hopeful:

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k-2.html>

Rob Eadie, Northampton

rob.eadie@oucs.ox.ac.uk

I have the same problem with Windows 7 and a Philips webcam. Various sources have advised me to run Windows 7 in Windows XP mode, which will recognise the webcam. Unfortunately, my Windows 7 is the basic 'Home Premium' version – which does not have the XP mode facility! I am trying to resist the expenditure to upgrade to a higher level of Windows 7 (on the offchance that it will work), so I will be very interested to hear whether anyone has found the answer to this enquiry.

Shirley Morgan, Maidenhead

shirleymorgan547@btinternet.com

If you follow the detailed instructions on the following weblink this will resolve the problem by installing the Windows 7 driver for the SPC900 webcam, which is an upgraded version of the Toucam:

http://www.celestron.com/c3/support3/index.php?_m=knowledgebase&_a=viewarticle&kbarticleid=2364

David Arditti, Edgeware

d@davidarditti.co.uk

Apparently, there are many webcams that are not supported by Windows 7 (64-bit) any more. Browsing the web, I found the following very detailed and specific advice that concerns modifying the driver for the Philips SPC900NC to emulate the PCVC840K: [The same set of instructions as in the previous reply.] I do, however, like another piece of more practical advice. Keep an old laptop with Windows XP handy. They are now very cheap on E-Bay, and run all sorts of astronomical software (such as Redshift 2) no longer supported by Windows 7.

John Elder, Selborne

annajohn47@hotmail.com

I do not think you will obtain an LPI driver for Windows 7. There is certainly no mention of this on the Meade website, although there are notes about AutoStar compatibility with Windows 7. The best bet will be to install an XP virtual machine – assuming you have plenty of RAM, since Windows 7 will still be executing under the XP/VM (at least 4Gb recommended). Some useful notes about this can be found at:

http://www.weasner.com/etx/astrophotography/2010/lpi-dsi_win7.html

This solution should also take care of the Philips webcam as well, because you retain all the old XP drivers to operate under the VM. I hope this helps.

Gordon Dennis, Yatton, Somerset

gordon.dennis@koalapub.co.uk

Try this:

http://www.p4c.philips.com/cgi-bin/dcbint/cpindex.pl?ctn=PCVC840K%2F00&dct=FAQ&faqview=1&new_tmpl=1&refdisplay=WEBCAM_QAC_78819&refnr=0078819&scy=GB&slg=AEN

Further searching revealed this recipe. I had this problem when I switched over to Vista. I now use Windows 7, and have got the webcam working. Here is how:

1. Go to the Philips website and download the Win7 driver for the SPC900 webcam.
2. Install the driver software. You may need to reboot.
3. Go to the folder C:\Program Files (x86)\Philips\Philips SPC900NC PC Camera
4. Open the file Camvid40.inf with Notepad.
5. Make the following changes... (in the menu select View->Status Bar to see line numbers)
Edit line 66 to look like this: %USBVid.DeviceDesc%=USBVidX86,USB\VID_0471&PID_0311&MI_00
Edit line 69 to look like this: %USBVid.DeviceDesc%=USBVidXp64,USB\VID_0471&PID_0311&MI_00
Edit line 72 to look like this: %USBVid.DeviceDesc%=USBVidVista64,USB\VID_0471&PID_0311&MI_00
6. Save the file.
7. Open the file SPC900.txt with Notepad.
8. Edit line 2 to look like this: USB\VID_0471&PID_0311&MI_00
9. Save the file.
10. In the Start Menu, right-click Computer and select Properties. In the list on the left select Device Manager.
11. You should see a item in the list with a yellow exclamation dot and the words Unknown Device. This should be your webcam. Confirm this by unplugging it from the pc. It should disappear from the list.
12. Right-click the Unknown Device and select Update Driver Software. Select Browse My Computer and then Browse to C:\Program Files (x86)\Philips\Philips SPC900NC PC Camera. Tick Include Subfolders and click Next.
13. If all goes according to plan it should detect the webcam and install it.

Rejoice!

Peter Hobson, London NW3

hobsonpr@hobsonpr.free-online.co.uk

I had the same problem last year, and eventually found a solution which worked for me. After a bit of searching today I have found what appears to be the same solution at the following URL:

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k-2.html>

David Boyd, Wantage

drsboyd@dsl.pipex.com

Bring up Trust Webcam 14823 on the PC. It may provide some answers to the problem concerning the Meade LPI imager on Windows 7. I am not quite sure about the PCVC840K. I had the problem, and could not use the PCVC 840K with Windows Vista, as drivers do not exist. I therefore ended up purchasing an Imaging Source camera, DMK 21AU04.AS.

Anthony Stone, Bristol

anthony@anthonystone0.wanadoo.co.uk

I had the same problem with my Philips and Vista, but it works now. I cannot remember where I obtained them, but I have a zip file of the Toucam drivers. I could e-mail it to you or the third party if he wants it.

John Lockett, York

john.lockett@ntlworld.com

As I do not know what software versions you are using try this site, there is something regarding Windows 7 that may be relevant from the horse's mouth, so to speak (and software updates):

<http://meade.com/support/downloads.html>

The problem you refer to is not uncommon, usually with printers and occasionally with older software and new operating systems. However, on various forums you usually find that someone has engineered the drivers to work with new OSs, although the usual caveats apply when downloading anything from an unknown or untrusted source. Also look here:

<http://meade4m.com/forum/index.php?topic=1747.0>

Please advance with caution, as you will be making changes to registry files in Windows.

Chris Wren, Warrington

C.Wren@ljmu.ac.uk

In my humble opinion this is definitely a driver issue. The Member involved should delete all drivers associated with the Meade and the Philips CCDs. They should also delete the serial (or whatever port) drivers they are using. They should then undertake a full reboot. The next step is to install the new Windows compatible drivers for Windows 7, reboot once again, and connect the devices. You will also find updates for ASCOM software as well. I am using two separate laptops – both Windows 7 – with a Meade DPI and other associated bits of equipment. Once I sorted out the drivers it all worked according to the manuals. One further thought: most of the new laptops/PCs are shipping with 64-bit Windows 7. If this is the case, then the Member should ensure that he uses 64-bit drivers – to the extent that they are available.

John Alexander, Bellevue Hill, New South Wales John.Alexander@pangaea.net.au

Seven months ago, while researching information for the 'Advice for a more mature Novice' thread in the BAA forum, I found several website references for the later Philips SPC880/SPC900 (which seems to be pretty much identical in software terms) which said that Windows 7 could be used in 'Windows XP compatibility mode'. I do not use Win 7, so I did not follow it up, but might be a fruitful area for digging.

Roy Hughes, London SW18 royhugs@gmail.com

I too have a Philips CCD camera which I used with my old laptop that had Windows Vista. Unfortunately, my laptop broke down and could not be repaired, so I purchased a new laptop which has Windows 7 on it. Again, unfortunately, my CCD camera would not work with Windows 7, so I consulted the www.philips.com website for help. It suggested that I should refer to the Philips CCD download site; but I had no success, because all the downloads for my camera were for Windows XP or Windows Vista, and there was nothing for Windows 7. I could suggest trying the Microsoft website, but I doubt you will have much success. I look there myself, but I could not find anything to solve the problem. The only thing I could suggest (though I would not do it myself) is to delete Windows 7 from the laptop and download an old version of Windows XP or Windows Vista from the Microsoft website. I am sorry that I cannot help with this problem, but I hope you have more success than I did.

Clive Daghish, Blaydon-on-Tyne clive.daghish@hotmail.co.uk

My quick search appears to reveal:

1. Meade LPI. 'Envisage Version 7.09 is Meade's DSI camera control software.' (but does 'Envisage 7.09 not support the LPI device in 64-bit mode'; that is, try 32-bit mode?). Download Envisage Version 7.09 via:

<http://meade.com/support/downloads.html>

2. Philips PC Camera PCVC840K. Philips have stated: 'At the time this webcam was designed, Windows Vista and Windows 7 operating systems did not exist yet. Unfortunately, the internal hardware of the webcam does not match the requirements of these operating systems. Therefore we cannot provide a software upgrade (driver upgrade) to support Windows Vista or Windows 7. We apologize that we are not able to support you in this matter.' See:

http://www.p4c.philips.com/cgi-bin/dcbint/cpindex.pl?ctn=PCVC840K%2F00&dct=FAQ&faqview=1&new_tmpl=1&refdisplay=WEBCAM_QAC_78819&refnr=0078819&scy=GB&slg=ENG

John Kerr, Sheffield jrk@hotmail.co.uk

I found the following suggestions on astronomyforum.net:

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k-2.html>

I do not know whether they will work across the board, but the Member might want to give them a try. It appears that Philips do not provide a Win7 driver for the PCVC840K. The Win7 driver for the SPC900 can be found here:

http://www.p4c.philips.com/cgi-bin/dcbint/cpindex.pl?ctn=SPC900NC/00&slg=en&scy=GB&mid=Link_Software

I have not looked for the Meade LPI yet, but will try later this evening.

Mark Thurston, Bournville mrthurston@virginmedia.com

I had the same problem with my old Logitech web camera when I upgraded to Windows 7 from Vista. I had to wait about 18 months for Logitech to place an upgrade for download on their website. It seems that software writers are leaving pre-Windows 7 hardware to last before upgrading.

John Munro, Menstrie, Clackmannanshire obanjohn@hotmail.co.uk

Further to my previous note, I have found the following webpage which claims to enable the Meade LPI to work with Windows 7:

<http://meade4m.com/forum/index.php?topic=1747.0>

Again, I have no idea whether this will actually work, and indeed one should always be careful when editing the Windows Registry.

Mark Thurston, Bournville mrthurston@virginmedia.com

Use Windows 7 virtual XP mode. It works very well.

Howard Brown-Greaves, Fulham

howard.bg@wolas.org.uk

A post notifying the UK Astro Imagers forum members about this appeared recently, along with a link to this post:

http://www.facebook.com/groups/31297706950#!/permalink.php?story_fbid=10150292483881951&id=31297706950

Duncan Miller, Hartpury, Gloucestershire

dunc@dmiller.demon.co.uk

I ran into this problem when I acquired a new laptop with Windows 7, to replace my old one which had Windows XP. Fortunately, the XP machine still works, and has done so ever since when I use my Philips webcam. As suggested, the problem is that the driver is not compatible with Windows 7. There are two solutions.

1. Buy a second-hand machine with Windows Vista or XP operating system. The problem with this is that Microsoft no longer supports XP and will probably soon abandon Vista (if it has not already done so). These older, unsupported, systems may be more susceptible to hacking and viruses, so it may be best if they are not connected to the Internet.

2. There appears to be a fix available, discovered on the Astronomy Forum at:

<http://www.astronomyforum.net/astronomy-digital-cameras-forum/91582-philips-toucam-pro-pcvc840k.html>

Scroll down to post #9, from steevecee. It is a bodge that uses a modification to a different Philips camera driver. I have not tried this, but it seems plausible, although its use must be surrounded by the usual warnings as to fitness for purpose, health and safety, and the possibility of selling your body into slavery.

Jerry Grover, Cheadle Hulme

jerryg@globalnet.co.uk

Here are a couple of suggestions:

1. Run the software in Compatibility Mode. This worked for me with some programs that ran under XP, but would not initially work under Windows 7. The steps are: right click on the icon on the desktop (or find the program under Windows Explorer and right click); there is no need to find the driver itself, as just the main program will do (usually); select Properties/Compatibility tab; tick Run in Compatibility Mode; Select Vista SP1 or 2 in the drop-down box; Apply; and OK. Then try again. It might be worth rebooting first (and then checking again to ensure that you still have the compatibility setting). If that does not work, try other compatibility mode options such as XP, Vista, SP1, and so on.

2. If the software is licenced, check the software supplier websites for Win 7 driver updates, which should be available by now. Failing that (here be dragons), just Google the software name and 'for Windows 7' to see if any downloads are available. Note that you can install Win 7 in either 32-bit or 64-bit mode. The 32-bit is more likely to work with Vista drivers: but I realise that to go back to 32-bit if you use the 64-bit version is a major pain if you have a lot of software on the PC.

Barry Phillips, Belfast

b.a.phillips@ntlworld.com

I cannot personally help with this query, but try Qcuiag Quick Camera and Unconventional Imaging Astro Group:

<http://www.qcuiag.org.uk/>

Norman Pomfret, Ross-on-Wye

Brenda@Pomfret.wyenet.co.uk

There are big problems with the LPI and Windows 7 64-bit. There is some help here:

http://www.weasner.com/etx/astrophotography/2010/lpi-dsi_win7.html

Nick Rowland, Stowmarket

nickr@sunwharf.com

Some report that the PCV840K can be run under Windows 7 using the Windows XP drivers, as they are compatible. It may worth trying this first before taking the second option. These drivers can be found here:

http://www.p4c.philips.com/cgi-bin/dcbint/cpindex.pl?sct=WEBCAMS_SU&cat=PC_CAMERAS_CA&session=20060723062854_202.63.33.93&grp=MONITORS_PC_PERIPHERALS_GR&scy=AU&ctn=PCVC840K/00&slg=ENG&mid=Link_Software&hlt=Link_Software

Secondly, from StarGazers Lounge: 'The reason why your Toucam ProIII 840K will not install on your Win7 laptop is because the camera is not supported (too old). All is not lost, however, because you can modify the camera so that it appears to the computer as a Toucam ProIII SPC900NC. You will need to flash the camera with the SPC900 firmware using the instructions on the link Convert a Toucam Pro to a SPC900NC. After flashing the firmware, the camera will be recognised as an SPC900NC, and you will be able to use it on your Win7 laptop. The firmware update should be performed on the XP computer.' Further information can be found at:

<http://www.home.zonnet.nl/m.m.j.meijer/astronomy.htm>

Gerard Gilligan, Liverpool

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I have had similar problems when upgrading to a new Windows operating system. I used a ToUcam and a Starlight Xpress SXV-H9 camera with XP satisfactorily. However, when I bought a new laptop with Vista, neither would work. I checked with the manufacturers, who both said that they did not intend to upgrade their drivers for their cameras to work with Vista. I also searched the Web, but had no success, so I was forced to use the old laptop with these cameras.

Philip Withers, Romsey

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Read the SPC900 threads on stargazerslounge.com. There is lots of advice. In summary from what I can see: flash it to a SPC900; uninstall the drivers; reinstall the drivers. You will receive an error reported; but ignore it, as it will still work.

<http://stargazerslounge.com/astro-lounge/155519-philips-spc900-problem-windows7.html>

This is one of the reasons why I have stayed with XP for my astronomical work. Win7 seems very flaky with third-party drivers for such devices – for both astronomy and my work (retail tills)!

Kevin Lawrence, Scarborough

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Regarding the question posed, I have replied with a rather rambling response, as the details can be very complicated. Sorry! This is an issue I have to deal with almost on a daily basis in my own field of medical imaging. Hospitals buy new host PC systems without considering the impact this will have on existing software and hardware – the difference being that the NHS has bottomless pockets to find a solution, but the private user (astronomer) cannot afford this. There are only a few possible solutions, and the Member who submitted the question is correct: this is a driver issue. Windows 7 uses a completely different operating sub-code for hardware drivers from the previous Windows platforms from Windows 3.11 up to Windows Vista. The manufacturers of the Meade LPI and Philips webcams both have only released drivers that will work with Windows software up to Windows Vista. If you try to load the provided software onto a Windows 7 machine, it is likely that the software will either not install, with an error message, or install without an error message but not recognise the hardware when it is connected. The Member could e-mail Meade and ask whether a Windows 7 driver is under development for the LPI – which may be possible, since until recently the LPI was still being sold. The Philips PCVC840K is already superseded, and it is unlikely that Philips will update the driver for Windows 7.

So what to do? There are two easy options, and two difficult ones. The first is to buy a cheap second-hand laptop running Windows XP. There are plenty around, and you should be able to find one for around £50. I would then use that only for astronomical imaging but not image-processing, since the hard-drive would be too small and the processor too slow. I would use an external USB drive to capture my image files, and then transfer the drive to my new Windows 7 laptop for processing. The second option is to contact the manufacturer of the new Windows 7 laptop and see if they are able to supply the motherboard drivers for either Windows XP or Windows Vista. If this is the case, and several manufacturers can do this, then the Member can download the laptop motherboard drivers and load a second operating system on to his laptop, making it dual-boot. The good thing about this is that Windows 7 comes with dual-boot capability as standard, so the Member would only have to search for an old copy of Windows XP or Windows Vista to load as his second operating system. He then only has to choose at boot-up which operating system he wants to use, choose XP or Vista, load his LPI and Philips software, and then his cameras will work.

The last two options are the hardest – though even I would not try the first of these – but you can download all the development tools for free from Microsoft that will allow you to write your own hardware drivers for Windows 7. However, unless you are really good at programming this would be a steep learning curve – and if the Member was really able to this, he would not have asked the question in the first place. The second difficult option depends on which version of Windows 7 your Member has. There is the possibility to download for free a copy of Windows 7 Virtual PC and Windows 7 XP mode – together around 550 Mb – and this runs a virtual version of Windows XP within a shell on the Windows 7 desktop. This is very useful, and we use it often at work, although it is not good at handling hardware drivers for video processing. It might be worth a try as long as the Member has one of the applicable versions of Windows 7 (Professional or Ultimate). Go to

<http://www.microsoft.com/download/en/details.aspx?id=3702#overview>

for the virtual PC download and overview page, and then go to

<http://www.microsoft.com/download/en/details.aspx?id=8002>

for the XP-mode download. Follow the various links to discover the system requirements and installation instructions. If the Member's laptop and Windows 7 version does meet the requirements, he could download and install the Virtual PC and XP-mode emulator, launch XP mode, and try to install his LPI software and Philips webcam software from inside the Windows XP shell. This may allow him to use the cameras again, but I would caution him not to pay for the Microsoft Windows 7 upgrade if his existing Windows 7 version does not qualify for the free Virtual PC and XP mode package. The cost will be higher than a second-hand XP laptop, and there is no guarantee that it would solve the problem.

I am sorry not to have been able to reply with a positive solution. The technical bulletin boards are full of driver issues with Windows 7 software, where purchasers are not given enough guidance before shelling out for a new system – only to find that their favourite hardware will not transfer across to the new platform. It is worth noting that if you buy a new multi-million pound CT or MR scanner from my employer, it will still come with Windows XP, or sometimes Linux, installed, as these are the only software platforms that we can get the drivers to work on!

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