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Application Note - First Connection to an SBIG USB Camera

Installing the USB Drivers March 30, 2004

The Application Note describes the process of making the first connection to an SBIG USB camera. With USB devices you don't pre-install the drivers like you did in the past. With USB the first time you connect to a new USB device the system walks you through the driver installation procedure. It's a bit complicated, and it's easy to make a mistake so please follow these instructions for your OS to the letter for best results.

1. Installing CCDOPS and the Driver Checker

The first thing you should do in all cases is to install CCDOPS Version 5 and the Driver Checker utility. This is relatively simple:

- 1. Make sure the camera is not connected to the computer. You will do this later.
- 2. Run the CCDOps Installer. It can be found in the CCDOps directory of the CD-ROM that came with your camera. Follow the onscreen instructions to complete the installation.
- 3. First make sure you are the Administrator or have Administrator privileges if you're running under Windows 2000, or Windows XP. On Windows XP Home edition you are the administrator so you don't have to worry about that. Next run the Driver Checker Installer. It can be found in the Driver Checker folder of the CD-ROM.
- 4. Towards the end of the Driver Checker installation the installer will run the utility. This utility checks to make sure you have the latest version of the SBIG camera drivers installed on your system. When the SBIGDriverChecker utility is run you'll see a dialog like:

	SBIG Driver (Hit the About/He			Done
Currently In	stalled Drivers			About/Help
Driver Name	Version	Date	Current	-
				P
	4.35 Build 6		Yes	Download
	4.06	08-23-02	107773	-
sbiguldr.sys	1.0 Build 36	11-04-03	Yes	Update
sbiglldr.sys	1.00	11-04-03	Yes	
sbigfldr.sys	0.61	03-12-04	Yes	
sbigusbe.sys	1.1	09-05-03	Yes	
stfga.bin	08-28-03	08-28-03	Yes	Sel USB Drv
				Sel USB Dr

If you have previously installed CCDOPS you'll see some entries in the table. Most likely one or more drivers is not installed or is not up to date. Also if this is the first time you've run the Driver Checker you may get a warning something like "The sbigudrv service can not be found". Just ignore this error,

5. Using the Driver Checker to update your drivers is a two-step process:

A. If you have an internet connection, Click on the **Download** button then follow the instructions to download the current drivers from SBIG's Servers. If you don't have an internet connection on this machine then make sure you have downloaded the latest Driver Checker Installer from SBIG's web site, copied it to this machine and run it.

B. Whether you have an internet connection or not then click the **Update** button. This will copy the current drivers to your system and make sure they are properly installed. Some new computers without parallel ports will report that the SBIGUDRV.SYS was not started. Don't worry about that. The SBIGUDRV.SYS is the parallel port camera driver and is not use with USB cameras.

You may be asked to reboot your system as well. If so, click Done and do so. Otherwise simply click Done.

6. Follow the instruction in Sections 2A, 2B or 2C below depending on the version of Windows you have on your computer.

2A. Windows XP Users

- 1. With the camera disconnected from the computer, plug in the power to the camera and if your power supply has a power switch turn on the power to the camera.
- 2. Plug the camera into the computer with the supplied USB cable. The computer will then present you with the Found New Hardware Wizard. Click the "Install from a list..." radio button then click the Next button.

Found New Hardware Wizard		
	Welcome to the Found New Hardware Wizard	
	This wizard helps you install software for:	
	USB Device	
	If your hardware came with an installation CD or floppy disk, insert it now.	
	What do you want the wizard to do?	
	 Install the software automatically (Recommended) Install from a list or specific location (Advanced) 	
	Click Next to continue.	
	< Back Next > Cancel	

3. As shown below, click the "Search for the best driver..." radio button then check the "Include this location..." checkbox then click the Browse button.

Found New Hardware Wizard
Please choose your search and installation options.
⊙ Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
✓ Include this location in the search:
Bīowse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack <u>N</u> ext > Cancel

You will see the **Browse for Folder** dialog shown below:

Browse For Folder	
Select the folder that contains drivers for your hardware	ə.
Desktop	
Height My Documents My Computer	
E W Network Places	
To view any subfolders, click a plus sign above.	
OK	□

Navigate through the directory structure of you hard drive to the:

My Computer\C:\Program Files\SBIG\Driver Checker\SBIG Drivers

directory. Expand each section by clicking on the "+" next to the name. For example scroll to the top and click the "+" next to My Computer, then click the "+" next to C:, etc. Finally click on the **SBIG Drivers** folder to select it (it will turn blue as shown below) then click **OK**.

Installing the SBIG USB Drivers

Browse F	or Folder	? 🛛
Select the	e folder that contains drivers for your h	ardware.
	 Real RoboHelp Office SBIG CCDOP55 CCDOps5D CCDOps-Spect Driver Checker SBIG Drivers Alt Drivers 	
121	🗉 🚞 SereneScreen	×
<		2
To view a	any subfolders, click a plus sign above.	Cancel

You'll then be back in the Found New Hardware Wizard as shown below. Click the **Next** button.

Found New Hardware Wizard		
Please choose your search and installation options.		
⊙ Search for the best driver in these locations.		
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.		
Search removable media (floppy, CD-ROM)		
✓ Include this location in the search:		
C:\Program Files\SBIG\Driver Checker\SBIG Drivers 🔽 🛛 🛛 🛛 🖉		
O Don't search. I will choose the driver to install.		
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.		
< <u>B</u> ack <u>N</u> ext > Cancel		

4. Windows will show the dialog below while it is copying the driver:

Found New	Hardware Wizard			
Please wa	it while the wizard ir	nstalls the softward	e	
¢	SBIG USB Loader			
	Ď	Ø		
		< <u>B</u> a	ck <u>N</u> ext >	Cancel

5. You may be presented with the dialog below warning you the SBIG USB Loader driver has not passed the Windows Logo testing procedure. At this point click the **Continue Anyway** button.



6. Windows will continue installing the driver as shown in the dialog below:

Found New Hardware Wizard	
Please wait while the wizard installs the	e software
SBIG USB Loader	
sbigusbe.Inf To C:\WINDOWS\INF	
	< <u>B</u> ack <u>N</u> ext > Cancel

7. Windows will finish installing the SBIG USB Loader driver as shown in the dialog below



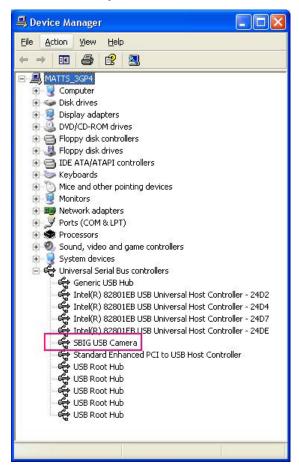
Hit the **Finish** button. **At this point the Camera's Fan and LED should come on.** You are half-way through the installation of the drivers. 8. Again you will be presented with the Found New Hardware wizard for the SBIG USB Camera driver as shown in the dialog below. Repeat steps 3 through 7 for this driver just like you did before.



9. At one point you may be presented with the following dialog:

SBIG USB Can	nera		
Description	Version	Manufacturer	Location
SBIG USB Camera	2.0.0.0	SBIG	c:\windows\inf\sbigusbe.inf
SBIG USB Camera	2.0.0.0	SBIG	c:\windows\inf\oem10.inf
This driver is not <u>Tell me why driver</u> s	and the second		

Select the top entry and hit the **Next** button. When you're all done if you open the **System Control Panel** from the **Start Menu**, select the **Hardware** tab then click the **Device Manager** button and finally expand the **Universal Serial Bus Controllers** section at the bottom you should see the SBIG USB Camera entry as shown below:



2B. Window 95/98/Me Users

- 1. With the camera disconnected from the computer, plug in the power to the camera and if your power supply has a power switch turn on the power to the camera.
- 2. Plug the camera into the computer with the supplied USB cable. The computer will then present you with the Found New Hardware Wizard shown below:



Click the Next button.

3. Click "Search for the best driver.." then click the Next button as shown below:



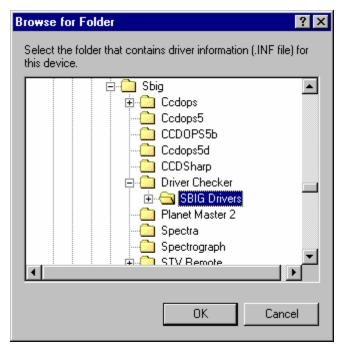
4. Uncheck all the options except "**Specify a location**" as shown below then click the Browse button

dd New Hardware Wizard			
	Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.		
	< <u>B</u> ack Next > Cancel		

5. Navigate through the Browser window to the

My Computer\C:\Program Files\SBIG\Driver Checker\SBIG Drivers

directory as shown below. Expand each section by clicking on the "+" next to the name. For example scroll to the top and click the "+" next to My Computer, then click the "+" next to C:, etc.:



Click on the **SBIG Drivers** folder until it is highlighted as shown above then click the **OK** button. This will get you back to the dialog shown above in step 4 but with the location filled out. Click the **Next** button.

6. You'll see the dialog below. Click the **Next** button.

Add New Hardware Wizard		
	Windows driver file search for the device:	
	SBIG USB Loader	
	Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.	
🕉 🍣 -	Location of driver:	
	C:\PROGRA~1\SBIG\DRIVER~1\SBIGDR~	
	, ,	
	< <u>B</u> ack Next> Cancel	

7. Windows will spin for a while and then present you with the dialog below. Click the **Finish** button and you're done. The SBIG cameras actually use two drivers and after you click Finish the system will automatically install the second driver. **At this point the Fan and LED should come on in the camera**.

Add New Hardware Wizard		
	SBIG USB Loader	
	Windows has finished installing the software that your new hardware device requires.	
*		
	< Back Finish Cancel	

8. If you have any question about whether the drivers were installed correctly open the Device Manager tab of the System Control Panel. Click the "View devices by type" button and expand the "Universal Serial Bus controllers" section by clicking the "+" to the left. You should see something like the dialog below where we have highlighted the SBIG USB Camera in red outline:

System Properties ? 🗙
General Device Manager Hardware Profiles Performance
View devices by type View devices by connection
Mouse
Multi-function adapters Multi-function adapters
Ports (COM & LPT)
🗄 🏰 Sound, video and game controllers
E System devices
Controllers Controllers Controller Controller
SBIG USB Camera
USB 2.0 Root Hub
USB Root Hub
USB Root Hub
VIA PCI to USB Enhanced Host Controller
VIA Tech 3038 PCI to USB Universal Host Controller
- Carlos Controller 🚽
Properties Refresh Remove Print
OK Cancel

2C. Windows 2000 Users

- 1. With the camera disconnected from the computer, plug in the power to the camera and if your power supply has a power switch turn on the power to the camera.
- 2. Plug the camera into the computer with the supplied USB cable. The computer will then present you with the Found New Hardware Wizard shown below. Click the **Next** button.



3. Click the "Search for suitable driver..." radio button as shown below:

ound New Hardware Wizard		
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.		
This wizard will complete the installation for this device: Image: USB Device A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next. What do you want the wizard to do? Image: Search for a suitable driver for my device (recommended) Image: Display a list of the known drivers for this device so that I can choose a specific driver		
< <u>B</u> ack <u>N</u> ext > Cancel		

then click the Next button.

4. Uncheck all the options other than "**Specify a location**" as shown below:

Found New Hardware Wizard
Locate Driver Files Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy <u>d</u> isk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< <u>B</u> ack <u>N</u> ext > Cancel

then click the Next button.

5. As shown below click the Browse button then navigate to the

My Computer\C:\Program Files\SBIG\Driver Checker\SBIG Drivers

directory. Expand each section by clicking on the "+" next to the name. For example scroll to the top and click the "+" next to My Computer, then click the "+" next to C:, etc. Click on the **SBIG Drivers** folder to highlight it then Click **OK** in the Find File dialog then click **OK** back at the New Hardware Wizard.

Found Nev	v Hardware Wizard		×
	Insert the manufacturer's installation disk into the drive selected, and then click OK.	OK Cancel	
	Copy manufacturer's files from:		_
	C:\Program Files\SBIG\Driver Checker\SBIG Driv	Browse)

6. Windows will find the driver and present you with the dialog below:

Found New Hardware Wizard
Driver Files Search Results The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
Windows found a driver for this device. To install the driver Windows found, click Next.
c:\program files\sbig\driver checker\sbig drivers\sbigusbe.inf
< <u>B</u> ack <u>Next></u> Cancel

Click the **Next** button.

7. Windows will spin for a while, then present you with the dialog below. Click the **Finish** button and you're done. The SBIG cameras actually use two drivers and after you click Finish the system will automatically install the second driver.

