

Sony Visca Camera Control

SonyVisca.exe

Version 3.0

Written by Andy Woodhouse

Contents

1 Overview.....	3
1.1 Description	3
1.2 CSI Version	3
1.3 Host Infodriver Version.....	3
1.4 Resilience and Redundancy	4
2 Driver Configuration.....	4
2.1 Ini file settings	4
2.1.1 [Visca] section	4
3 Infodriver Slot Use.....	5
4 Version History	6
4.1 Driver Version	6
4.2 Document Version.....	6

1 Overview

1.1 Description

Sony created the VISCA protocol to support the range of Pan Tilt Zoom (PTZ) cameras used for video conferencing and surveillance. As the cameras gained extra capabilities, the command set increased to support those features.

This driver has been developed to operate in V3 and later BNCS systems, and is compatible with the Infodriver slots used in an earlier V2 Visca driver enabling existing control panels to be used. A few extra slots have been activated to support red and blue gain controls available on some of the newer camera units.

Visca protocol supports a control network that has a controller and up to 7 devices connected in a daisy chain. This driver does not support the daisy chain connection; it only works with single camera. To control multiple cameras run multiple instances of the driver.

Older cameras used serial communications running at 9600 baud, 8-bits per character, no parity, and one stop bit. These are the default values installed in the device INI file when the driver is initially run. The baud rate can be increased to work with newer cameras that support 38400 baud.

This driver is an infodriver external, and communicates with the host infodriver using BNCS 32-bit messaging via a DLL.

Operation has been tested on Windows XP and Windows 7. The driver was compiled using Visual Studio Express 2013, and requires the run-time support for 2013. This is normally installed when using a current V4.5 host system. Otherwise download and install the run time libraries available from the Microsoft web site.

There are two versions of the driver, V3.0 and V3.1, this document describes version 3.0. Version 3.1 has added position readout and direct setting Infodriver slots.

1.2 Required CSI Version

The driver is a 32-bit application and uses CSI 32-bit messaging. The driver operation has been proved on V3CSI and CSI32.

Tested with:	V3CSI	version 3.05.09
	CSI32	version 1.2.56

1.3 Host Infodriver Version

This driver has been proven with both V3infdrv and Infodriver32.

1.4 Resilience and Redundancy

This driver does NOT support Tx/Rx switching, as there is only a single serial connection to the camera.

2 Driver Configuration

The host infodriver should be started before the Visca driver. Both drivers must be given the same BNCS driver number on their startup command lines.

The driver looks for a configuration file dev_XXX.ini where XXX is the driver ID passed on the command line. If the ini file is not found, a file with default settings is created.

The driver tests the host environment to establish if it is operating in a V3 or a V4.5 installation, and hence locates the folder for the INI file.

2.1 Ini file settings

There is only data section used by the driver – **Visca**.

2.1.1 [Visca] section

This section holds values relating to basic operations.

Item	Values and Defaults	Comment
Debug	0 or 1 Default is 0	1 to send debug data to the windows debug display and the list box in the driver dialog.
Port	1 to nn Default is 1	Windows com port number used to communicate with Visca camera.
Speed	9600 (Default)	Some cameras offer 19200 or 38400 baud.
DataBits	8 (Default)	
StopBits	1 (Default)	
Parity	N (Default)	

Infodriver Slot Use

The Infodriver slots and parameters are defined in the table below. There are many gaps in the table, as the original BNCS V2 driver also supported a JVC 55 camera, and that unit supported more commands. Slots 50 to 55 are only available on some models of camera.

Slot	R/W	Slot Name	Parameters
1	W	Reset Comms	1 = Reset serial comms to camera
2		---	
3	W	Iris & Gain	0 = Auto 1 = Manual
4	W	White Balance	0 = Auto 1 = Indoor 2 = Outdoor
5	W	Auto White	1 = Set white balance and hold
6	W	Gain	-3 0 3 6 9 12 15 18 dB. IRIS MUST be set to Manual. -3dB is not available on older cameras such as the D30/D31.
7		Shutter	Not implemented (Too much dependency on exact camera)
8	W	Zoom	0=Stop 1=Tele_Slow 2=Wide_Slow 3=Tele_Fast 4=Wide_Fast
9	W	Focus	0=Stop 1=Near_Slow 2=Far_Slow 3=Near_Fast 4=Far_Fast 6=Auto 7=Manual
10-20			Were used by JVC 55
21	W	Iris Level	0=Closed 1=F28 2=F22 3=F19 4=F16 5=F14 6=F11 7=F9.6 8=F8 9=F6.8 10=F5.6 11=F4.8 12=F4 13=F3.4 14=F2.8 15=F2.4 16=F2 17=F1.6
22		Black Level	
23-30			
31	W	Pan Speed	1=Slowest 24=Fastest
32	W	Tilt Speed	1=Slowest 20=Fastest (D30/D31 Camera) 24=Fastest (BRC-300 Camera)
33	W	Pan Command	0=Stop 1=Up 2=Down 3=Left 4=Right 5=UpLeft 6=UpRight 7=DownLeft 8=DownRight 9=Home
34-39			
40	W	Shot Box Set	1, 2, 3, 4, 5, 6. Some later camera models support 1 to 16
41	W	Shot Box Recall	1, 2, 3, 4, 5, 6.
42	W	Shot Box Reset	1, 2, 3, 4, 5, 6.

Slot	R/W	Slot Name	Parameters
43-50		---	
50	W	Manual White Balance	1=Manual (See slots 4 and 5 for other options)
51	W	Reset Red Gain	1=Reset
52	W	Red Gain	0 – 255
53	W	Reset Blue Gain	1=Reset
54	W	Blue Gain	0 – 255
55	W	Camera Tally	0=Off 1=On

4095	R/W	Toggle 1	Data written to this slot is copied to slot 4096
4096	R/W	Toggle 2	Data written to this slot is copied to slot 4095

3 Version History

3.1 Driver Version

Version No	Date	Details	Name
V3.0.0	10/09/2016	Initial release	Andy Woodhouse

3.2 Document Version

Version No	Date	Details	Name
V1.0	10/09/2016	First release	Andy Woodhouse
V1.1	11/03/2017	Updated to include reference to driver version 3.1	