

RVision, Inc.

pSEE™ Control Software

Installing pSEE™ Software

pSEE™ is not currently available on the Web and can only be downloaded by submitting a request via e-mail. To obtain the pSEE™ URL, send an e-mail to RVision at the following address.

techsupport@rvisionusa.com

NOTE: If the computer running pSEE™ is networked, the network administrator may be required to install pSEE™. Contact your network administrator for any additional instructions.

To install pSEE™ perform the following steps.

Enter the URL sent by RVision Web browser address bar and press Enter. Click to allow your browser to download the file if prompted.

NOTE: pSEE is downloaded as a zipped file. Firewalls may have issues with applications, speak with your IT department if you are unable to receive the file through your system.

- Open the zip file pSEE.zip.
- Drag the file pSEE.exe application onto the Desktop and launch it.



Figure 1: pSEE™ application icon

Using pSEE™ Software

The pSEE™ graphical user interface (GUI) consists of eight tabbed pages that contain functions controlling the payloads attached to the PTZ.

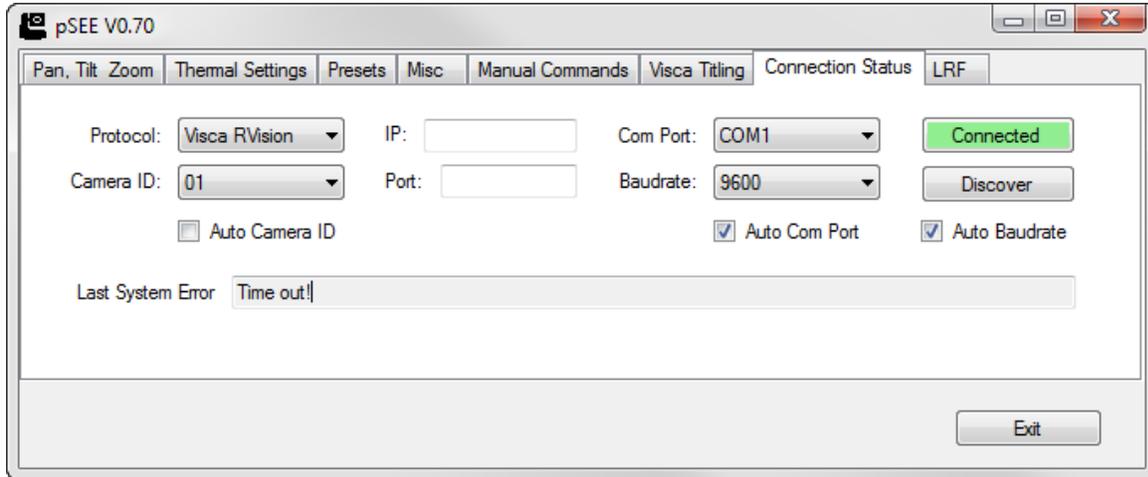


Figure 2: pSEE™ Software Window

The Tabs within PSEE are as follows:

Tab	Function
Connection Status	Communication setup between computer and the attached PTZ camera.
Pan, Tilt, Zoom	Controls the pan and tilt function of the PTZ camera. Controls the color or thermal camera zoom and focus (if equipped). This tab also controls other optional system attributes.
Thermal Settings	Controls polarity, focus, zoom and calibration (if equipped)
Presets	Configurable presets for pan, tilt and zoom functionality. Presets are enabled with single button execution.
Misc (Miscellaneous)	Checks system functions and enables other system attributes.
Manual Commands	Sends any command in the API to the PTZ camera.
Visca Titling	Allows entry of on-screen text. Only for Sony color camera.
LRF	Laser Rangefinder Readings (if equipped)

Connection Status Tab

Upon launching the application, the Connection Status tab is displayed. Select the camera parameters (if known) or click “Discover” to autodetect the camera first (see table below). Click “Connect” to establish control the camera. Clicking “Exit” at any time will exit the application.

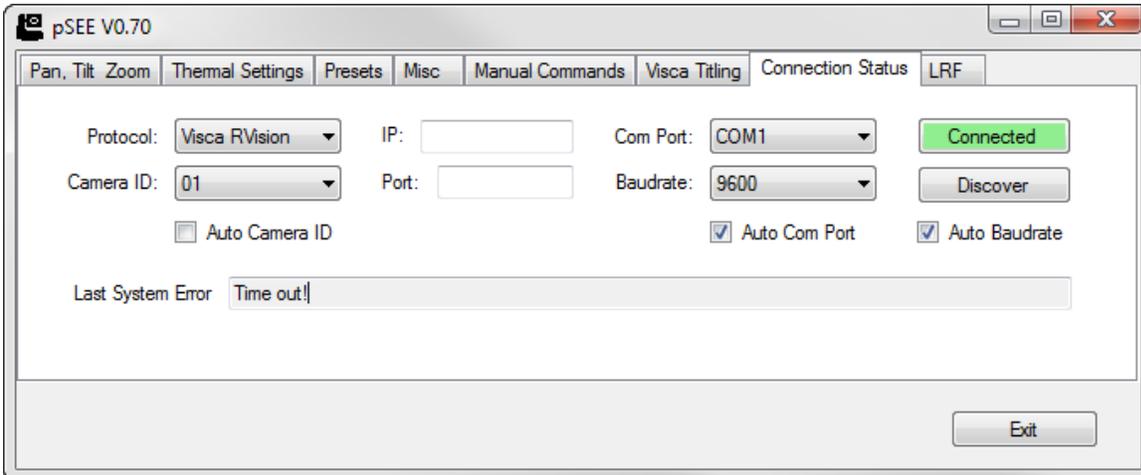


Figure 3: Connection Status Tab

Connection status tab functions are as follows:

User Interface	Description
Protocol	Visca R/Vision only supported.
Camera ID	ID number of connected camera.
Auto camera ID	Autodetect camera ID (when “Discover” is clicked)
IP	IP address of camera (if attached to IP encoder)
IP Port	IP port of camera (if attached to IP encoder)
Com Port	Serial com port of PC attached to camera
Baud Rate	Serial baud rate of attached camera
Auto Com Port	Autodetect com port (when “Discover” is clicked)
Connect (or Connected)	Attempt to Connect/Disconnect from camera.
Discover ^a	Attempt to find attached serial camera by testing camera ID, port, and baud rate (as checked).
Auto Baud Rate	Autodetect camera baud rate (when “Discover” is clicked)

a. If the camera is factory set to RS422, it must be adapted to RS232 before connecting. pSEE™ will still sense the camera is “RS232” because of the adapter.

Pan, Tilt, Zoom Tab

The Pan, Tilt, Zoom tab controls the horizontal and vertical position of the pan/tilt and the zoom function of the camera.

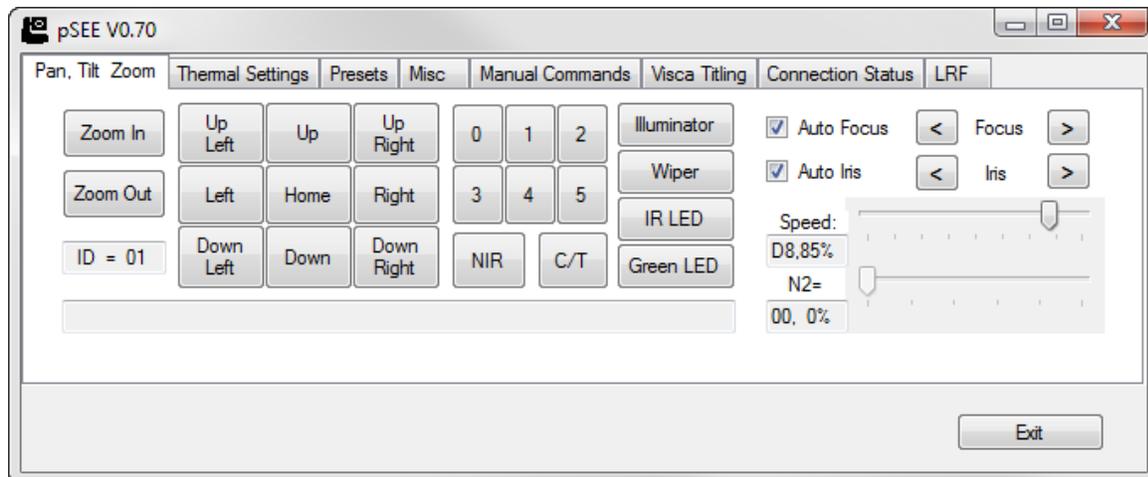


Figure 4: Pan, Tilt, Zoom tab

Pan/Tilt tab functions are as follows:

Function	Description
Pan/Tilt Control	
Up Left	Move left and up.
Left	Move left.
Up Left	Move left and up.
Left	Move left.
Down Left	Move left and down.
Up	Move up.
Home ^a	Move camera back to its preset home position
Down	Move down.
Up Right	Move up and right.
Right	Move right.
Down Right	Move right and down.
0,1,2,3,4,5	Go to one of six presets. See Presets Tab.
Speed	Slider bar to adjust camera movement speed.

Camera Control	
NOTE: This section applies only to the Sony color camera.	
Auto Focus	Enables the automatic mode of object focus when checked. Unchecking the "Auto Focus" enables the "Focus" slider for manual operation.
Auto Iris	Toggles Auto iris and allows for manual iris control with slider.
Focus	Manual focus adjustment for the color CCTV camera. Must uncheck Auto-focus to be used.
Zoom In	Narrow field of view.
Zoom Out	Wide field of view.
Miscellaneous	
C/T	Switch between thermal and color video. Only for video switch units.
Illuminator	Toggle lamp power (if equipped).
Wiper	Toggle wiper (if equipped).
N2=	Displays the amount of Nitrogen left in the camera. Slider cannot be moved. Only for Sony color camera.
IR LED	Toggles LED or Laser illuminator (if equipped). Control key must be held down while activating.
Green LED	Toggles LED or Laser illuminator (if equipped). Control key must be held down while activating.

a. The default home position is set so that the camera is pointed towards the eye-bolt and optically level to the horizon. The specific home Az/EI varies based upon the type of PTZ camera. The home position can be modified by the user. Contact RVision support for assistance in modifying this position.

Thermal Settings Tab

The Thermal Settings tab contains functions to control a thermal camera core and lens, if present.

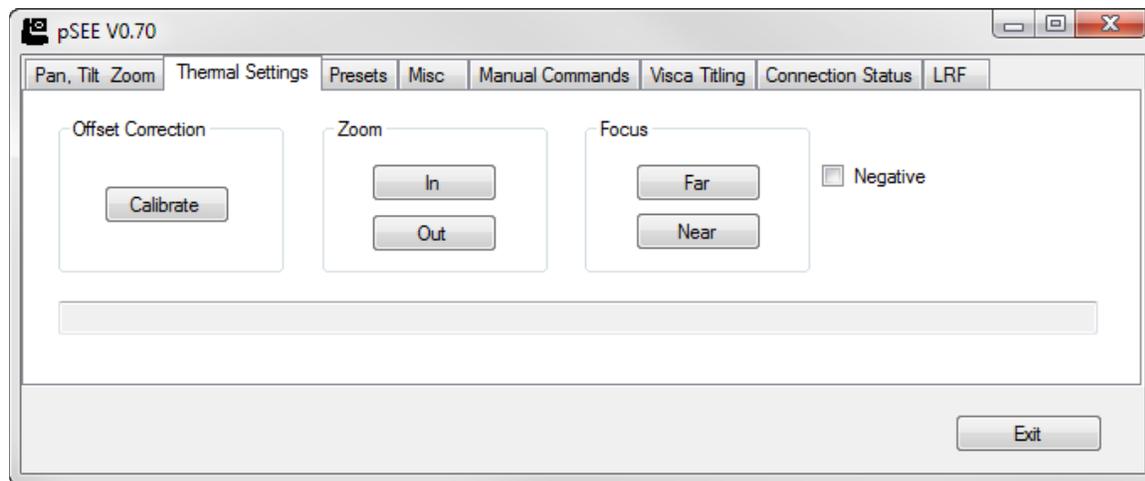


Figure 5: Thermal Settings tab

Misc tab functions are as follows:

Function	Description
Calibrate	Cycles the shutter in the camera to perform non-uniformity correction (NUC) to clear accumulated image artifacts. Imagery will freeze briefly while NUC calibration is performed.
Zoom In	Zoom in to enlarge thermal imagery on-screen ^a .
Zoom Out	Zoom out to reduce thermal imagery on-screen ^a .
Focus Near	Adjusts thermal focus to be nearer to the camera ^b .
Focus Far	Adjusts thermal focus to be farther from to the camera ^b .
Negative	Toggles between white hot/black hot palettes

a. If an optical-zoom lens is not present, digital zoom may be performed, either in steps (1/2/4/8x) or continuous fashion, depending on the system configuration.

b. Thermal focus only available on some camera models. Fixed-lens cameras focus is set from minimum practical distance to infinity and does not require further adjustment.

Presets Tab

The Presets tab controls the configuration of up to 100 preset pan and tilt functions.

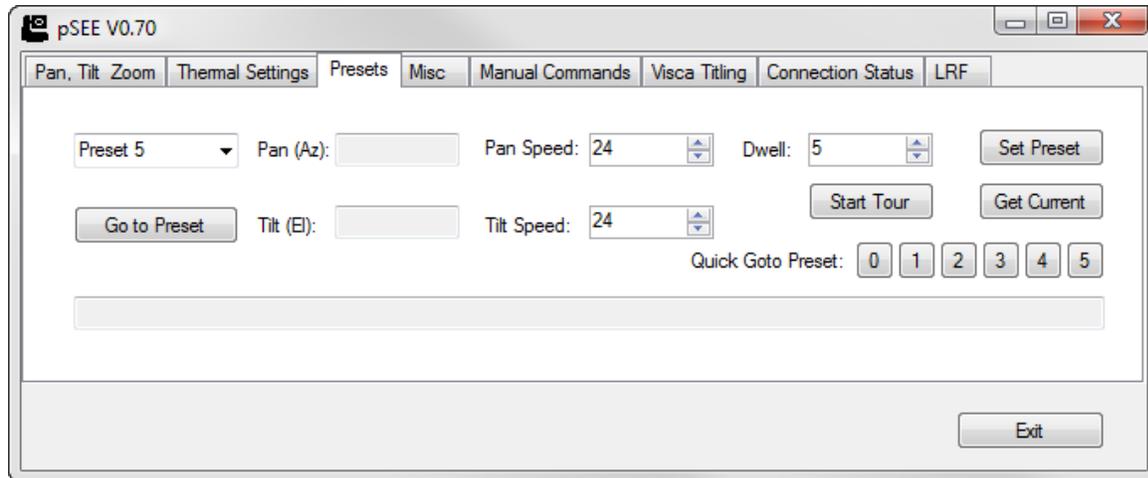


Figure 6: Presets tab

Preset tab functions are as follows:

Function	Description
Preset <i>n</i>	Pull-down menu allows single selection of 100 presets. When a tour is started, the preset shown in this drop-down menu will be the last in the tour before looping back to the beginning.
Get Current	Detects the current position of the camera.
Pan	Horizontal camera position to store.
Tilt	Vertical position to store.
Pan Speed	Speed of horizontal movement. (1-24)
Tilt Speed	Speed of vertical movement. (1-24)
Dwell	Dwell time is the amount of time the PTZ remains at the preset and includes travel time. For example, if it takes 1 second to travel to the preset, and the dwell time is set to three, then the PTZ remains at that position for two seconds.
Goto Preset	Execute one of 100 preset commands.
Set Preset	Save the position displayed.
Tour Mode	Enable the continued loop of preset commands.

Storing a Preset

1. Move the camera to the desired position.
2. Select desired preset from the pull-down menu located in the upper left corner of the Presets tab.
3. Click Get Current.
4. Enter the desired pan and tilt speed (1-24).
5. If the preset is to be used in a tour, check "Last preset in tour" if it will be the final preset in the tour.
6. If used as part of a tour, enter the dwell time in seconds.
7. Click Set Preset.

NOTE: Many camera settings such as color camera zoom will be stored as part of the preset.

Misc (Miscellaneous) Tab

The Misc (Miscellaneous) tab contains several general camera functions.

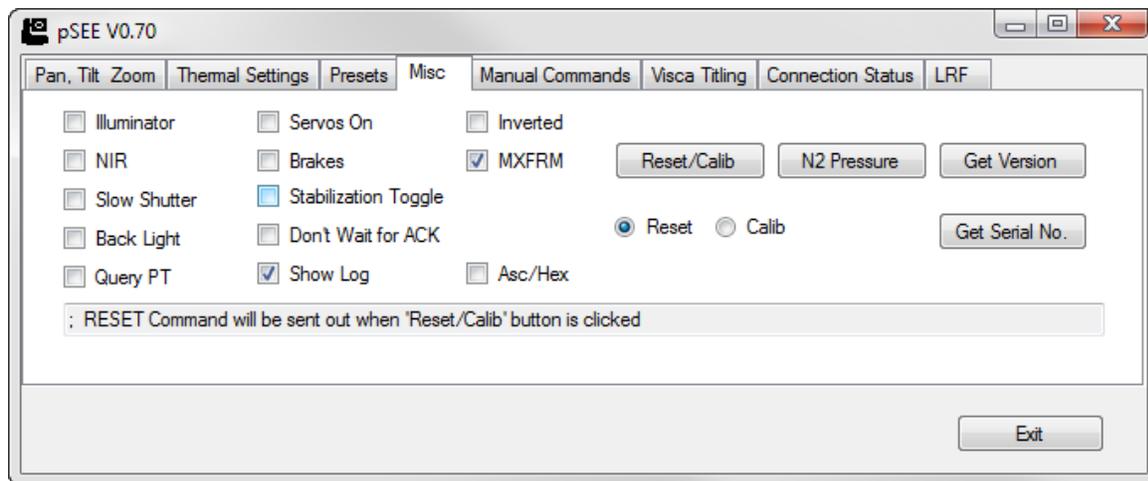


Figure 7: Misc tab

Misc tab functions are as follows:

Function	Description
Illuminator	Toggle lamp power (if equipped)
NIR toggle ^{a,b}	Toggle the color cameras near infrared mode on and off. Sony color camera only.
Slow shutter ^{b,c}	Increase camera sensitivity for slow-moving or fixed subjects in very low light. Sony color camera only.
Backlight	Check when light source is behind subject. Sony color camera only.
Query PT	Continuously queries pan/tilt to update pan/tilt position in Pan/Tilt/Zoom tab.
Servos On	Not supported. Leave off.
Brakes	Not supported. Leave on.
Stabilization Toggle	Turn video image stability off or on. Corrects low frequency vibration. Sony color camera only.
Don't wait for ACK	Check to continue next command without waiting for software or device ACKnowledgement. Necessary on one-way links or slow COM connections.

Misc tab functions (Continued)

Function	Description
Show Log	Check to display sent commands and device acknowledgements in a separate "log window".
Inverted	Flips camera video and motion to inverted mounting of pan/tilt.
MXFRM	MXFRM mode- for use with XFRM camera systems only.
Asc/Hex	Choose character mode for logfile window.
Reset/Calib (Button)	Either send a soft-reset or calibrate command to the PTZ (depends on radio buttons below)
Reset (Radio Button)	Pick Reset function for Reset/Calib button
Calib (Radio Button)	Pick Calibrate function for Reset/Calib button
N2 Pressure	Check N2 Pressure; results will appear below.
Get Version	Display Camera firmware version. Results will appear below.
Get Serial No.	Display Camera serial number. Results will appear below.

- a. Auto-NIR enabled at the factory. Sony color camera only.
- b. Contact RVision support for camera API to modify the default setting
- c. Auto-slow shutter enabled at the factory. Sony color camera only.

Manual Commands Tab

The Manual Commands tab is used to enter and transmit up to three hexadecimal format commands, for example, commands to change the communications, baud rate and camera ID.

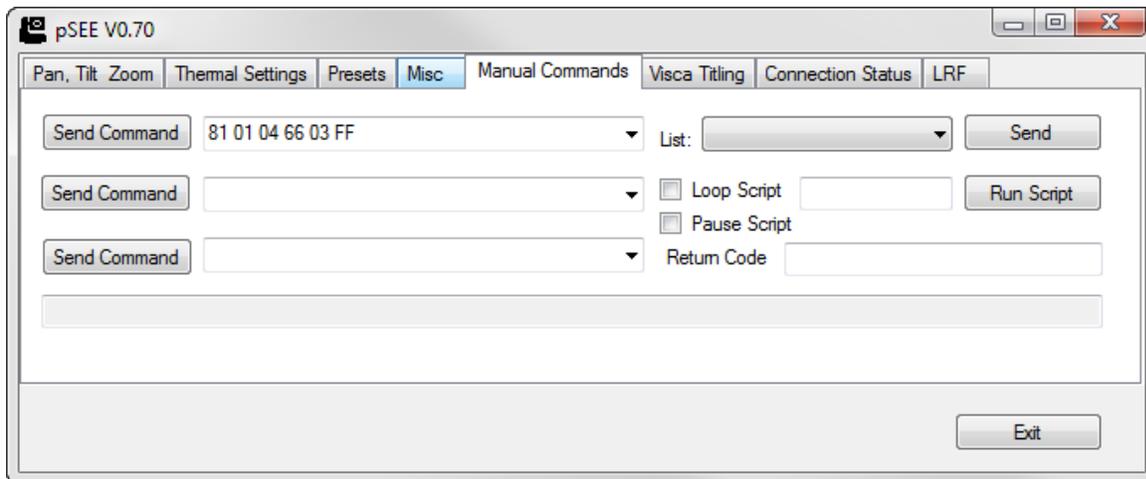


Figure 8: Manual Commands tab

Manual Commands tab functions are as follows:

Function	Description
Send Command	Transmit displayed command string to the Carbide-16™.
List	Select from one of multiple pre-formatted commands.
Send	Send selected command from the list.
Run Script	Runs selected script.
Pause Script	Pauses Running script.
Loop Script	Repeatedly run selected script.
Return Code	Display device acknowledgement or system response to last command sent.

NOTE: Use Show Log in Misc tab to display a running log file of commands sent and camera acknowledgments.

Titling Tab

The Titling tab contains functions for inserting text into the video image. Applies to Sony color camera only.

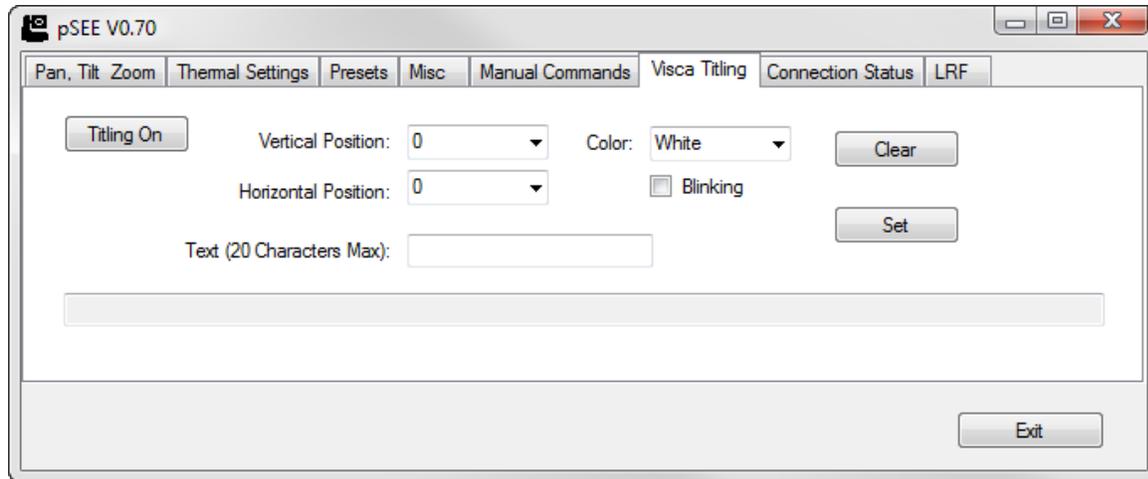


Figure 9: Titling Tab

Titling tab functions are as follows:

Function	Description
Titling On	Enables title mode. The text must be set for the title to be displayed.
Vertical Position	Increase value to move title down.
Horizontal Position	Increase value to move title right.
Text	Twenty characters maximum, alphanumeric, and uppercase only.
Color	Color of title text white, yellow, violet, red, cyan, green or blue.
Blinking	Turn blink mode on or off.
Clear	Clears text.
Set	Sends text into image title position. "Titling on" must be set to display the text.

LRF Tab

The LRF tab contains functions for controlling the LRF, if installed in the camera. The LRF (Laser Rangefinder) uses a laser pulse to test the distance to a target. Consult the manual section specific to your product to determine proper laser safety procedures. LRFs have differing resolution and range depending on model, and performance may be affected by inclement weather, object clutter, or reflectivity of the target.

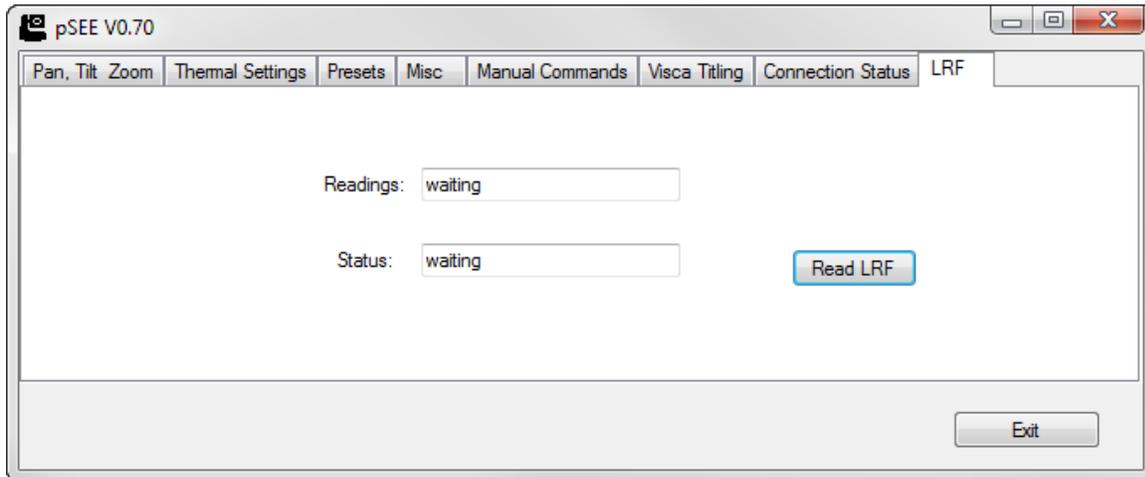


Figure 10: LRF Tab

LRF (Laser-Rangefinder) tab functions are as follows:

Function	Description
Readings	Displays range to target, measured in meters.
Status	Displays status of LRF, such as readiness to range or error states
Read LRF	Press button to range target. LRFs have a maximum repeated repetition rate, see product specs for more information. .

Changing Camera Configurations

Cameras shipped from RVision are set to RS232, 9600 bps, ID1, unless a different configuration is requested at time of purchase. Most RVision cameras can be reconfigured after purchase using the pSEE™ application. These common configuration steps are illustrated below.

Changing the Baud Rate

To change the baud rate, go to the Manual Commands tab and select the baud rate from the List pull down menu. Click 'Send' to set the baud rate.

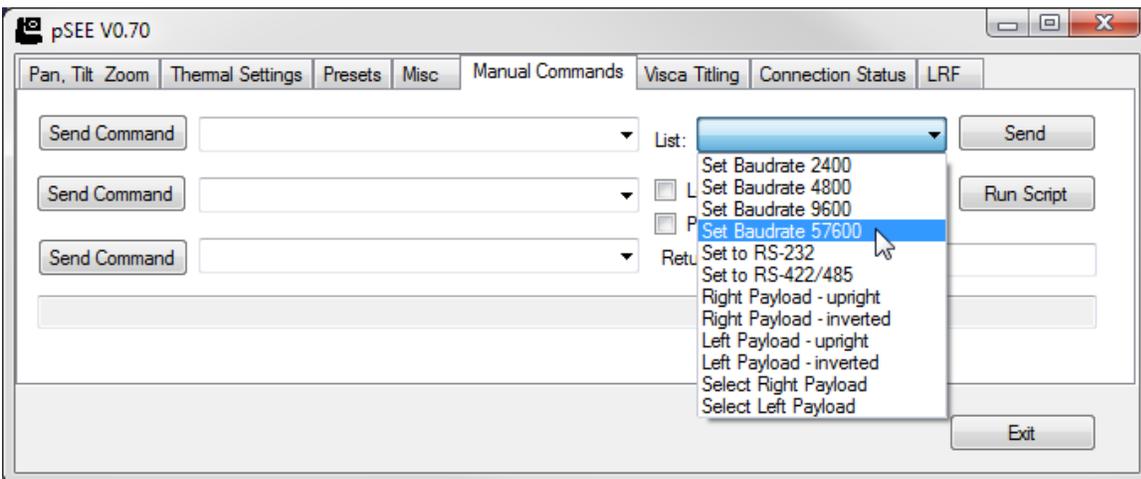


Figure 11: Changing Baud Rate

Once the baud rate is set, exit pSEE™ and reset power to the camera.

The new baud rate can be verified by restarting pSEE™. The new baud rate should be displayed when the camera is auto-detected using the 'Discover' button.

Changing the Camera ID

The camera ID can be changed to suit an installation with multiple cameras on a single RS485 communication bus. By setting each camera to a unique camera ID, each camera can be controlled independently from a suitable controller. The camera ID is changed through a command entered manually in the Manual Commands tab.

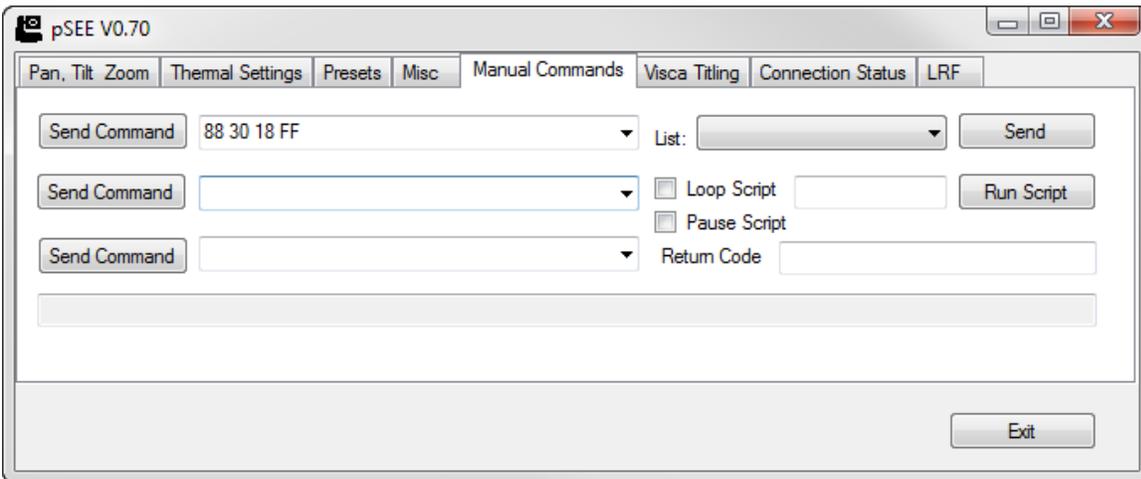


Figure 12: Changing the Camera ID

NOTE: Additional configuration may be required in third-party controllers and matrix switchers to accommodate this change. In order to avoid confusion, it is advised to connect each camera on its own directly to a computer to set camera IDs. Once this is complete, place the cameras into a larger installation.

To change the camera's ID (factory default is set to 1) use the Send Command field in the Manual Commands tab enter the following command:

88 30 AB FF

Where AB is the hexadecimal camera address.

As an example, to set the camera ID to 24 the AB parameter is hexadecimal 18.

88 30 18 FF

NOTE: Camera ID 08 is reserved for the system. ID 0 is not used.

Contact RVision support at techsupport@rvisionusa.com to request Camera API which lists the supported commands.

Set RS-232 or RS-422/485

When the camera is set to RS232, communications to a computer with a serial port is possible with the use of a breakout cable. Third-party systems may use RS232 or may require switching to RS422/485. If RS485 is required, pSEE can set this format with a simple drop-down menu.

NOTE: Computers that have a serial port normally use RS232. When the camera is set for RS422/485, this serial connection must be adapted back to RS232 to communicate with the computer. A 4-wire full-duplex RS422/485 to RS232 adapter (Telebyte TB253P or similar, RVision P/N: 200310 & 700510) with the proper end-wiring will adapt this connection.

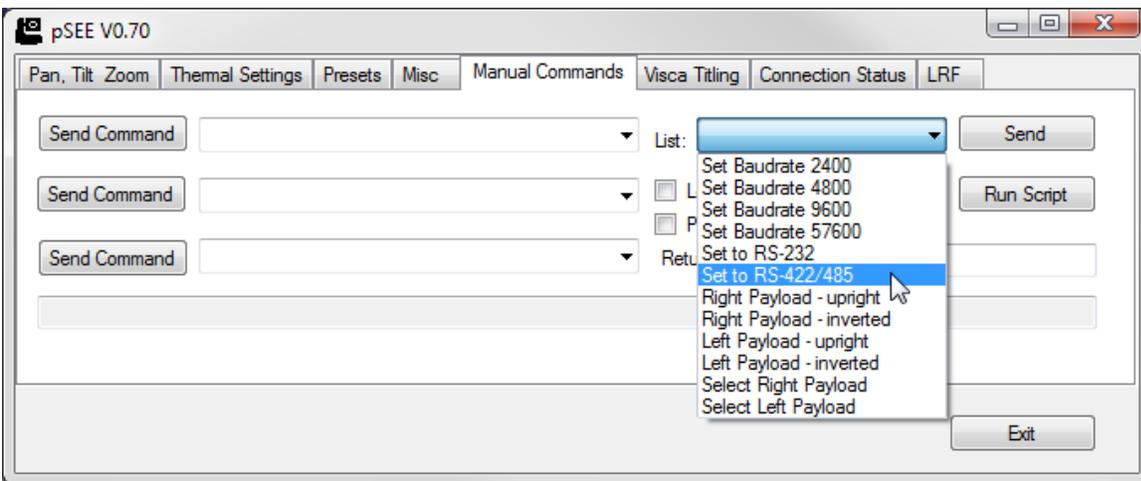


Figure 13: Set RS-232 or RS-422/485

Hook up the proper cabling and establish a connection to the camera. In the 'Manual Commands' tab, select the dropdown to set to RS-232 or RS-422/485 and click 'Send'.

To test the new setting, turn off the camera and exit pSEE™. Change the serial cabling between RS232 and RS422/485 with adapter as required. Turn on the camera power and restart pSEE™. Click Discover to locate the camera.

If pSEE™ cannot locate the camera, double-check connections and adapter wiring. Contact RVision for assistance.