

Documentation

Pelco Crosspoint Matrix Switcher RTU Guide **Version 3.x**

OSSI

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Intelli-Site

Security Management Software

3xLogic Video RTU Guide

PC Software RTU Interface Guide

For Windows 7 SP1, 2008 R2 SP1, XP SP3 & 2003 SP2

Version 3.x

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Section 1 – Introduction

This section describes the following:

- Overview
- Technical Support Assistance

Overview

The Pelco Crosspoint Switcher RTUs (Receiver/Transmitter Units) are the Intelli-Site software representations of the Pelco 6800-series and 9700-series Crosspoint Matrix Switchers (Switchers). For purposes of this document, the term RTU is synonymous with a Pelco 6800-series or 9700-series Crosspoint Matrix Switcher and the term PEL with Pelco.

Technical Support Assistance

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Technical Support


Technical support is available via Telephone, Fax or Email. Contact OSSI Technical Support 8:00 AM to 5:00 PM Central Standard time. If calling after hours, please leave a detailed voice mail message, and someone will return your call as soon as possible.

E-Mail: support@ossi-usa.com

Fax: 262-522-1872 (Attention Technical Support)

Local: 262-522-1870

When calling, please be at the computer prepared to provide the following information:

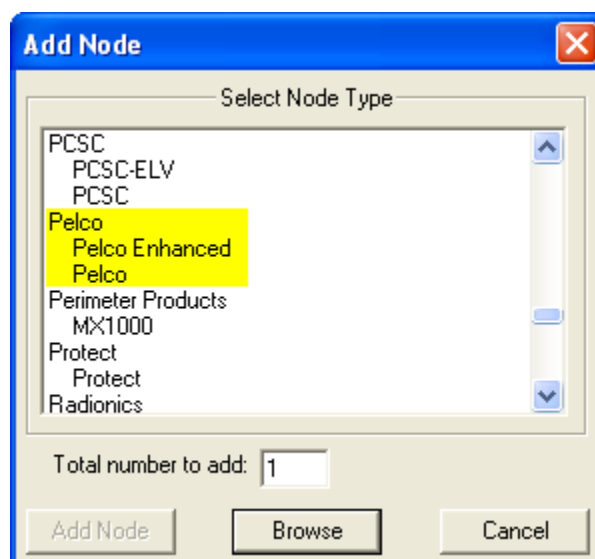
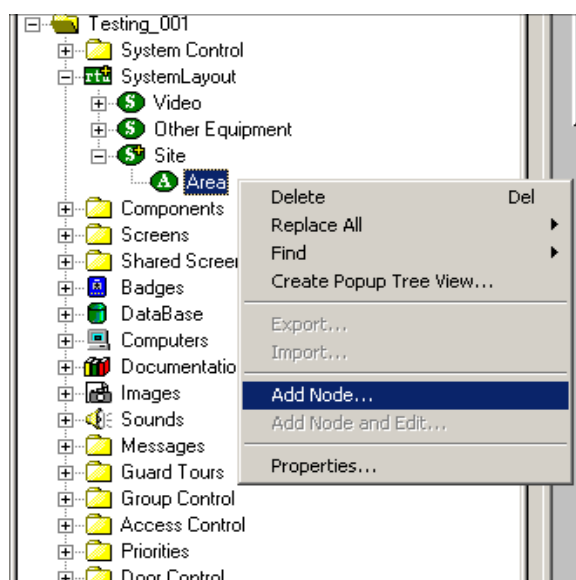
- Product version number, found by selecting the **About**  button from the Intelli-Site Menu Application Bar.
- Product serial number used for registration.
- The type of computer being used including, operating system, processor type, speed, amount of memory, type of display, etc.
- Exact wording of any messages that appear on the screen.
- What was occurring when the problem was detected?
- What steps have been taken to reproduce the problem?

Section 2 – Pelco Switcher Setup (Design Mode)

This section discusses the setup of PEL Switchers in the project in Graphic Design mode.

Adding PEL Switcher Nodes

PEL Switcher nodes are added at the Area level under System Layout. (See figures below):



As displayed, there are two choices for PEL Switcher RTUs:

- The Pelco Enhanced RTU allows for up to 2286 Cameras and 762 Monitors, up to 254 presets per camera, alarms, patterns, sequences, tours, macros, MUX Commands, System Alarms, Auxiliaries and Video Loss points. This RTU is suitable for use when integrating with Pelco 9700 (series) Switchers (up to CM9770).
- The Pelco RTU allows for up to 254 Cameras and 254 Monitors, up to 16 Presets (total), limited Commands and limited Alarms. This RTU is suitable for use when integrating with Pelco CM6800 and smaller CM9700 (series) Switchers.

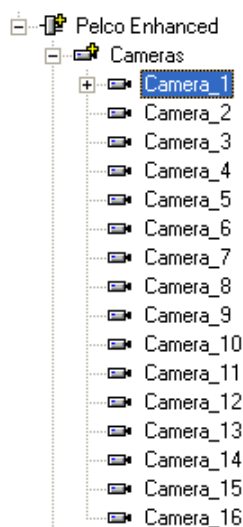
Configuring the PEL Switcher Node

After a PEL node has been added to an Area it needs to be configured. The following section details the configuration options available:

Note: Much of the configuration is dependent upon various settings options available to the user via the Pelco configuration software. A description of these options is beyond the scope of this document. The programmer should consult the appropriate Pelco documentation for detailed information on these configuration options.

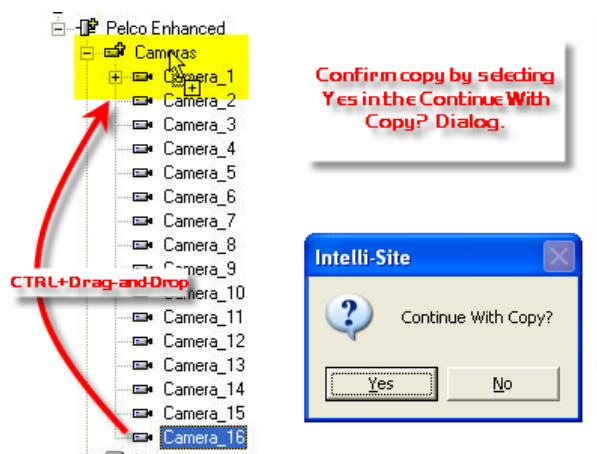
Configuring Cameras

Expand the Cameras Node as shown in the figure below:



When the PEL node is initially added to the tree, the Cameras Node is pre-populated with 16 Cameras. This node can accommodate Cameras 1 through 254. To add a camera:

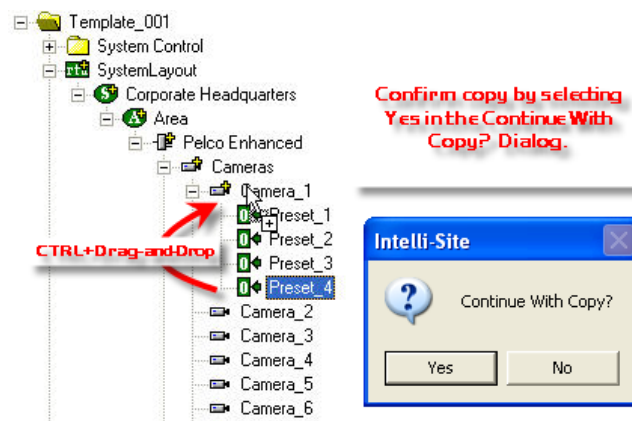
1. Left-Click on any camera in the list, then drag-and-drop your selection on to the Cameras node while holding the Control-key (CTRL+Drag-and-Drop).
2. Confirm the copy and this action will cause a copy of your selection to be added to the tree as shown below:



Note: The position of the Camera node in the tree corresponds to the physical camera input number on the Switcher: For Example: Camera_16 corresponds to the 16th video input on the switcher.

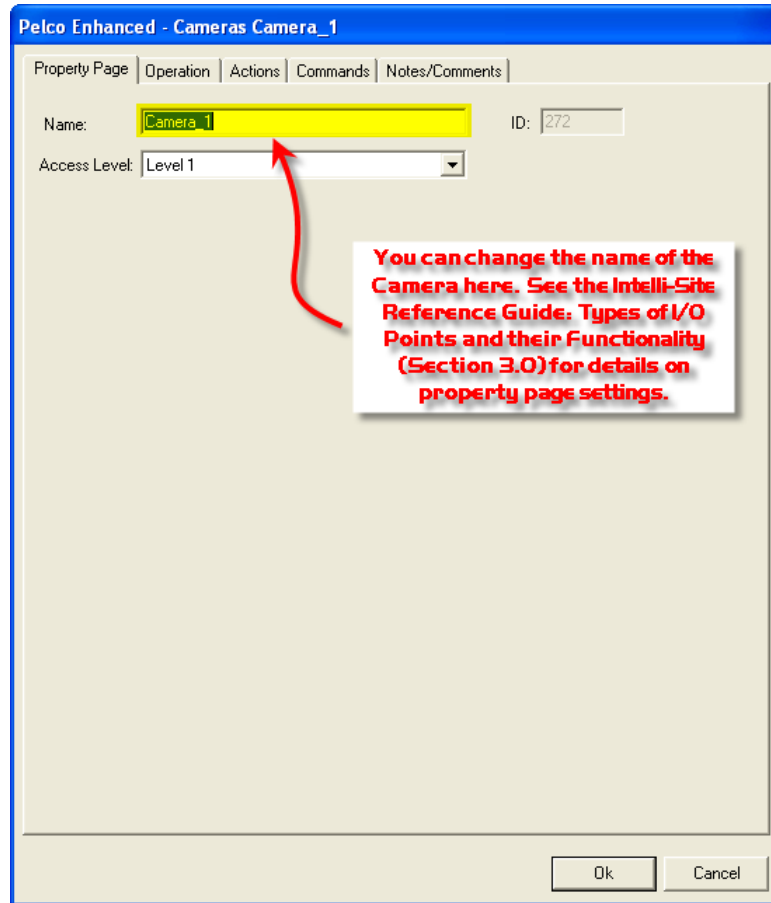
The Camera_1 node in a newly-added PEL RTU is pre-populated with 4 presets (as a template). Each Camera node may have up to 254 presets. To add a preset to a Camera node:

1. Left-Click on any preset in the list, then drag-and-drop your selection on to the Camera node while holding the Control-key (CTRL+Drag-and-Drop).
2. Confirm the copy and this action will cause a copy of your selection to be added to the tree as shown below:



Camera nodes (and their preset subnodes) can be configured just like any other I/O point in the system. To configure the properties of a Camera node:

1. Right-Click on any Camera node in the list then select **Properties...** from the configuration dialog.
2. Configuration of node properties is covered in detail in the Intelli-Site Reference Guide under **Types of I/O Points and their Functionality** (Section 3.0).



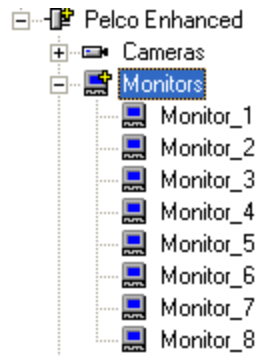
In order to accommodate camera numbers higher than 254 additional Cameras nodes are located in the PEL RTU. These additional Camera nodes are numbered Cameras_2 through Cameras_9. The table below is a map of the Cameras nodes and their respective camera numbers as these relate to the physical video inputs on a Pelco Switcher:

Cameras Node ID	Starting Camera Number	Ending Camera Number
Cameras	1	254
Cameras_2	255	508
Cameras_3	509	762
Cameras_4	763	1016
Cameras_5	1017	1270
Cameras_6	1271	1524
Cameras_7	1525	1778

Cameras_8	1779	2032
Cameras_9	2033	2286

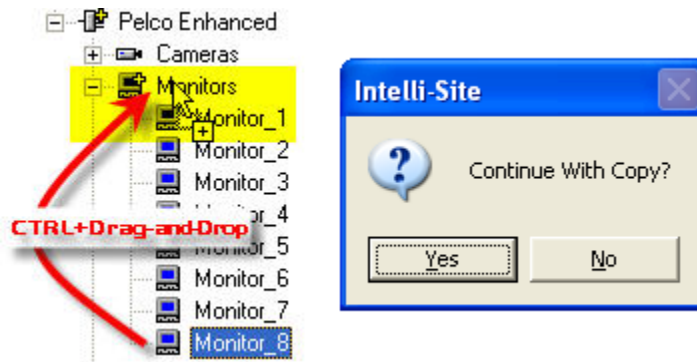
Configuring Monitors

Expand the Monitors Node as shown in the figure below:



When the PEL node is initially added to the tree, the Monitors Node is pre-populated with 8 Monitors. This node can accommodate Monitors 1 through 254. To add a monitor:

1. Left-Click on any monitor in the list, then drag-and-drop your selection on to the Monitors node while holding the Control-key (CTRL+Drag-and-Drop).
2. Confirm the copy and this action will cause a copy of your selection to be added to the tree as shown below:



Note: The position of the Monitor node in the tree corresponds to the physical monitor output number on the Switcher: For Example: Monitor_6 corresponds to the 6th video output on the switcher.

Monitor nodes can be configured just like any other I/O point in the system. Configuration of node properties is covered in detail in the Intelli-Site Reference Guide under **Types of I/O Points and their Functionality** (Section 3.0).

In order to accommodate Monitor numbers higher than 254 additional Monitors nodes are located in the PEL RTU. These additional Monitors nodes are numbered Monitors_2 and Monitors_3. The table below is a map of the Monitors nodes and their respective monitor numbers as these relate to the physical video outputs on a Pelco Switcher:

Monitors Node ID	Starting Monitor Number	Ending Monitor Number
Monitors	1	254
Monitors_2	255	508
Monitors_3	509	762

Configuring Keyboards

Expand the Keyboards Node as shown in the figure below:



When the PEL node is initially added to the tree, the Keyboards Node is pre-populated with 4 Keyboards. This node can accommodate Keyboards 1 through 254. To add a keyboard:

3. Left-Click on any Keyboard in the list, then drag-and-drop your selection on to the Keyboards node while holding the Control-key (CTRL+Drag-and-Drop).
4. Confirm the copy and this action will cause a copy of your selection to be added to the tree as shown below:



Note: The position of the Keyboard node in the tree corresponds to the physical Keyboard output number on the Switcher: For Example: Keyboard_4 corresponds to the 4th keyboard on the switcher.

Monitor nodes can be configured just like any other I/O point in the system. Configuration of node properties is covered in detail in the Intelli-Site Reference Guide under **Types of I/O Points and their Functionality** (Section 3.0).

Configuring Patterns

When the PEL node is initially added to the tree, the Patterns Node is pre-populated with 4 Patterns. This node can accommodate Patterns 1 through 254. Adding Patterns is accomplished using the ***CTRL+Drag-and-Drop*** method as described for adding Cameras, Monitors and Keyboards.

Configuring Sequences

When the PEL node is initially added to the tree, the Sequences Node is pre-populated with 4 Sequences. This node can accommodate Sequences 1 through 254. Adding Sequences is accomplished using the **CTRL+Drag-and-Drop** method as described for adding Cameras, Monitors and Keyboards.

Configuring Tours

When the PEL node is initially added to the tree, the Tours Node is pre-populated with 4 Tours. This node can accommodate Tours 1 through 254. Adding Tours is accomplished using the **CTRL+Drag-and-Drop** method as described for adding Cameras, Monitors and Keyboards.

Configuring Macros

When the PEL node is initially added to the tree, the Macros Node is pre-populated with 4 Macros. This node can accommodate Macros 1 through 254. Adding Macros is accomplished using the **CTRL+Drag-and-Drop** method as described for adding Cameras, Monitors and Keyboards.

Configuring System Alarms

When the PEL node is initially added to the tree, the System Alarms Node is pre-populated with 4 System Alarms. This node can accommodate System Alarms 1 through 254. Adding System Alarms is accomplished using the **CTRL+Drag-and-Drop** method as described for adding Cameras, Monitors and Keyboards.

Configuring Auxiliaries

When the PEL node is initially added to the tree, the Auxiliaries Node is pre-populated with 4 Auxiliaries. This node can accommodate Auxiliaries 1 through 254. Adding Auxiliaries is accomplished using the **CTRL+Drag-and-Drop** method as described for adding Cameras, Monitors and Keyboards.

Configuring Video Loss

When the PEL node is initially added to the tree, the Video Loss Node is pre-populated with 4 Video Loss Points. This node can accommodate Video Loss Points 1 through 254. Adding Video Loss Points is accomplished using the ***CTRL+Drag-and-Drop*** method as described for adding Cameras, Monitors and Keyboards.

Programming Examples

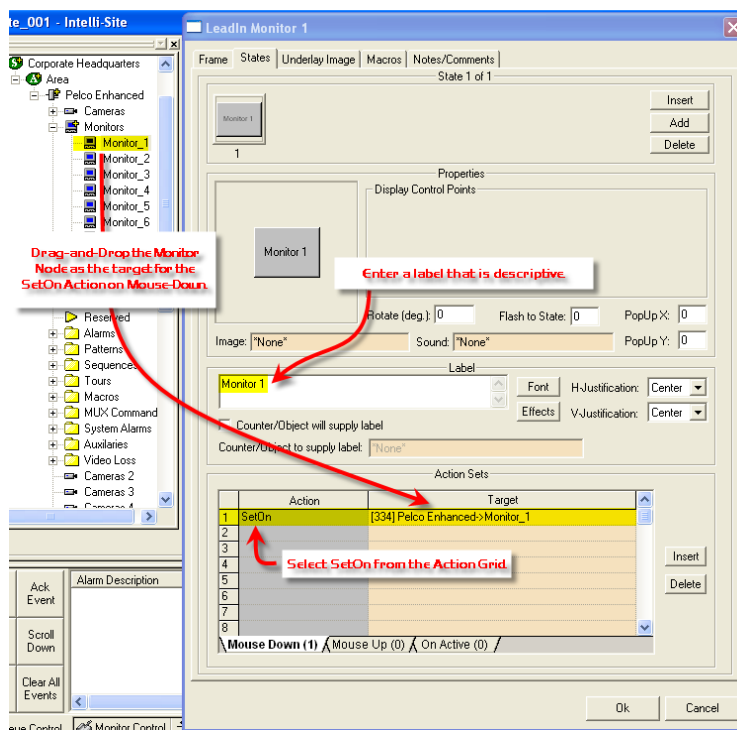
The following section describes some basic programming for PEL Switcher RTU functionality in Run Mode. The first step in adding PEL Switcher RTU functionality is to understand the concept of a "hot" switcher object. In order to execute a camera switch to a particular monitor, the user must identify the currently-selected elements – these are the "hot" objects. The Action SetOn is used to select the "hot" objects and then another SetOn is used to execute the command against a special target called Camera Select (Camera Sel). The Camera Sel target acts, essentially as the Enter Key on the keyboard. The following table details the sequence:

Action	Target	Result
SetOn	Monitor_n	Sets Monitor_n as the "hot" monitor.
SetOn	Camera_n	Sets Camera_n as the "hot" camera.
SetOn	Camera Sel	Sends the command – Switch Camera_n to Monitor_n.

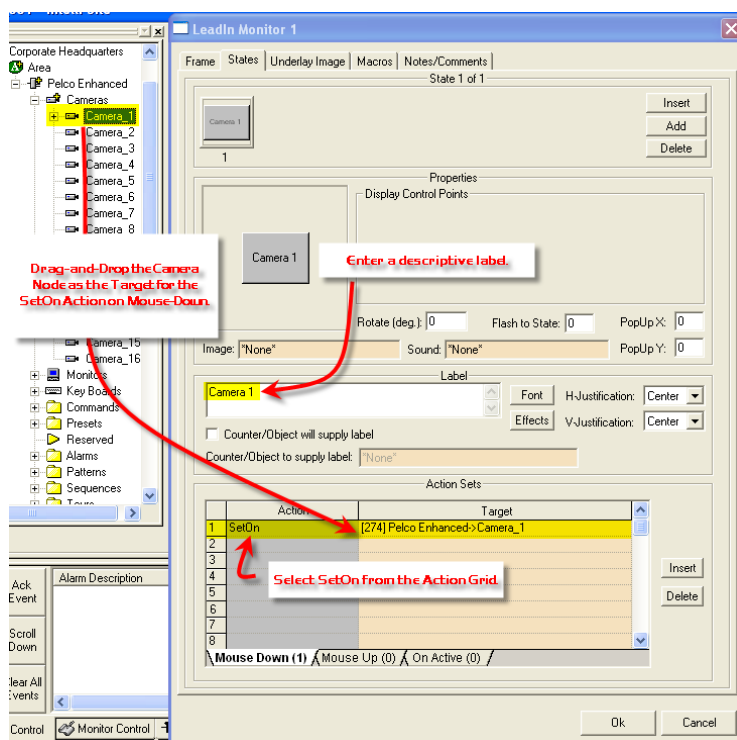
Camera-Monitor Switching – Discrete Controls

In this programming example we will build a simple, camera-to-monitor switch control using discrete buttons.

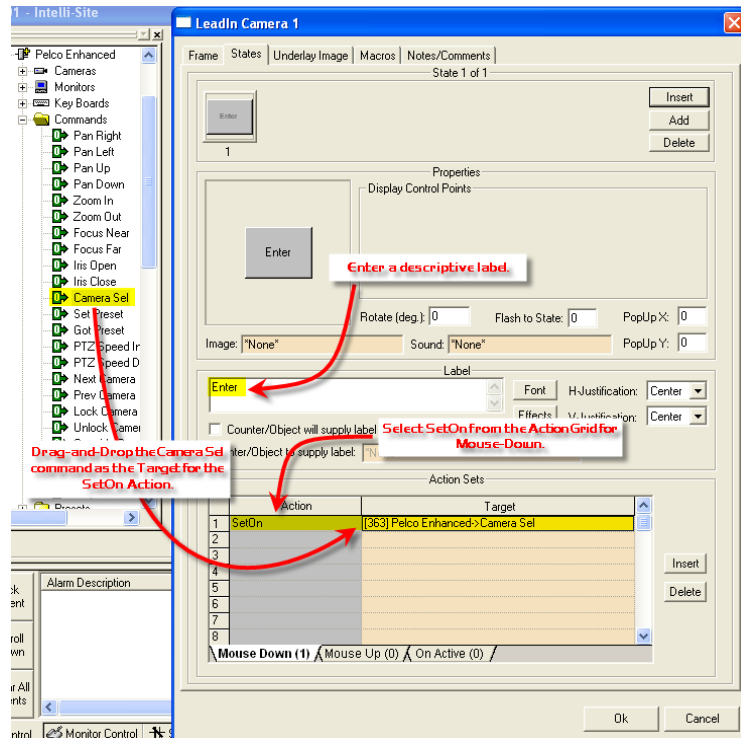
1. In Design Mode Create a *SetOn Monitor* button (screen object) using the drawing tools.
2. Modify the properties of the button as shown below:



3. Create a *SetOn Camera* button and modify the properties of the button as shown below:



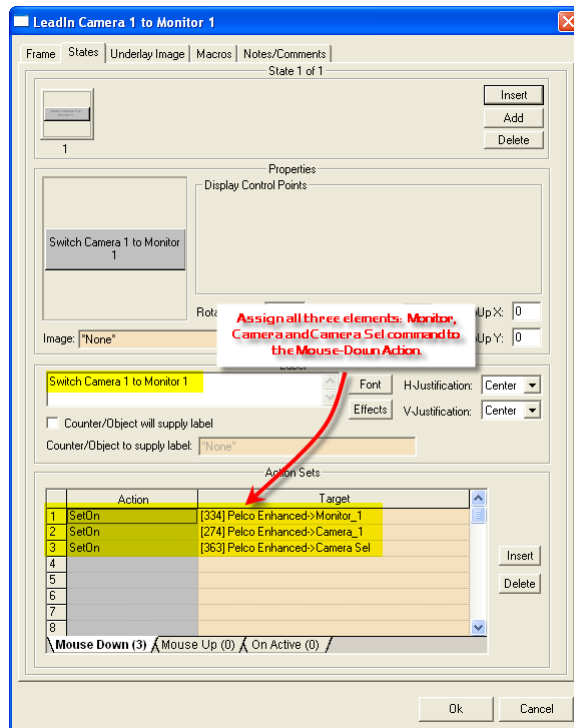
4. Create a *Camera Select (Enter)* button and modify the properties of the button as shown below:



Camera-Monitor Switching – Combined Control

In this programming example we will build a simple, camera-to-monitor switch control using a single button.

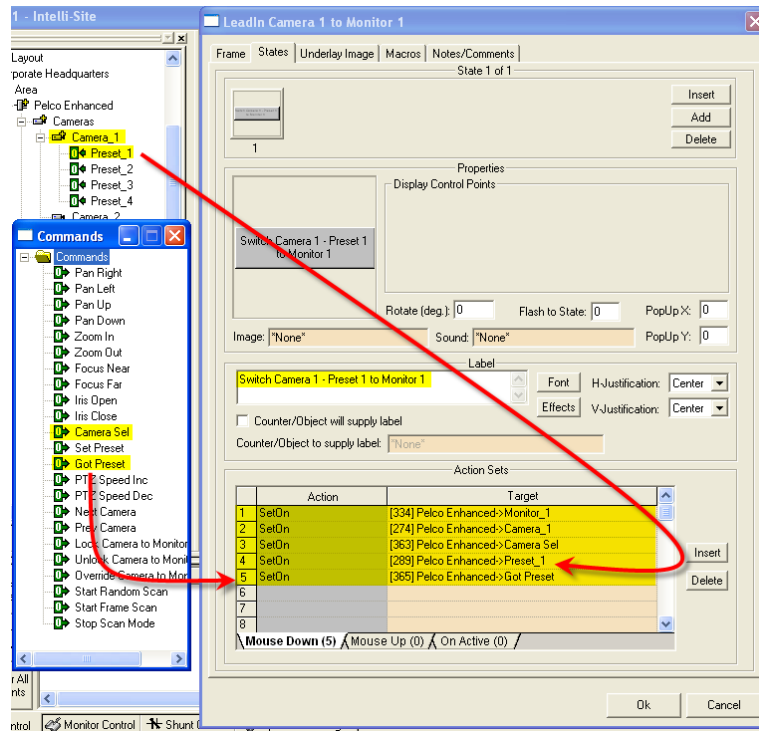
1. In Design Mode Create a *Camera-Monitor Switch* button (screen object) using the drawing tools.
2. Modify the properties of the button as shown below:



Camera-Monitor Switching With Presets – Combined Control

In this programming example we will build a simple, camera-with-preset-to-monitor switch control using a single button.

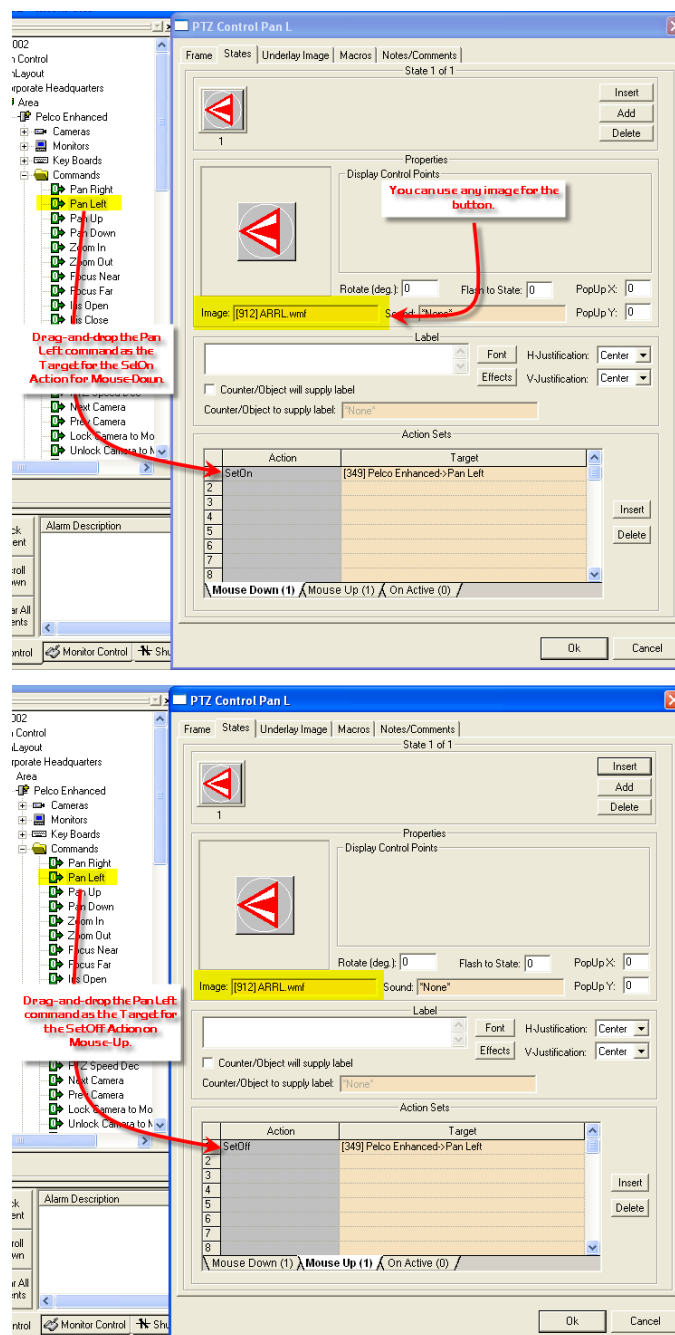
1. In Design Mode Create a *Camera-Monitor Switch* button (screen object) using the drawing tools.
2. The reason a SetOn Preset action/target is required is to set the “hot” preset. The SetOn Got Preset (command) action/target combination works something like the SetOn Camera Sel (command): it executes the action.
3. Modify the properties of the button as shown below. Note the addition of the Preset and the Got Preset (command) Targets in the Action Grid for Mouse-Down:



Pan-Tilt-Zoom and Focus (PTZF) Control

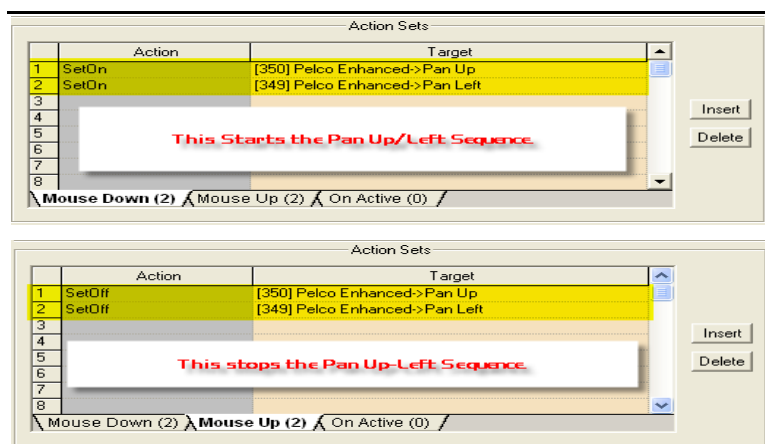
In this programming example we will build a typical PTZF control button.

1. In Design Mode Create a *Pan Left* button (screen object) using the drawing tools.
2. Modify the properties of the button as shown below:



In the above example the SetOn Action on Mouse-Down will start the Pan Left and the SetOff Action on Mouse-Up will stop the Pan Left. The same method can be used for all PTZF functions.

Note: In order to Pan diagonally you must SetOn a combination of Up-Down/Left-Right Pan commands. Here's an example of the programming required for a Pan UP-Left diagonal:



Other Functions In the Commands Node

The following table lists the other commands available in the Commands Node and a description of their functions. All of the commands may be assigned as targets to SetOn or SetOff Actions:

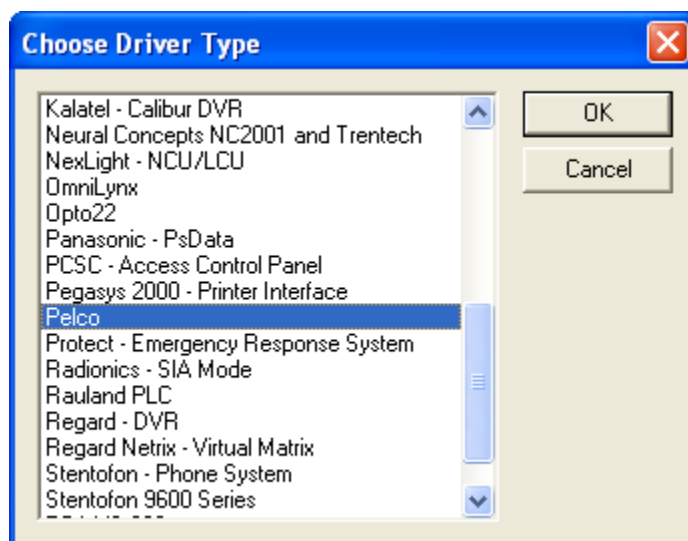
Command	Function
Zoom In	Start variable zoom to telephoto.
Zoom Out	Start variable zoom to wide.
Focus Near	Start variable focus to close-in.
Focus Far	Start variable focus to far-field.
Iris Open	Start variable iris to open.
Iris Close	Start variable iris to close.
Set Preset	Sets the current PTZF setting on the "hot" camera to the current preset.
PTZ Speed Inc	Increase the PTZF speed.
PTZ Speed Dec	Decrease the PTZF speed.
Next Camera	Increments the currently-displayed camera on the current "hot" monitor to the next camera on the switcher.
Prev Camera	Decrements the currently-displayed camera on the current "hot" monitor to the previous camera on the switcher.
Lock Camera to Monitor	Locks the current camera to the current monitor.
Unlock Camera to	Unlocks a previously-locked camera-to

Monitor	monitor.
Override Camera to Monitor Lock	Overrides a camera-to-monitor lock that was issued by another user if properly authorized.
Start Random Scan	Starts a random scan for the currently-selected camera.
Start Frame Scan	Starts a frame scan for the currently-selected video channel.
Stop Scan Mode	Stops scans.

Section 4 – PELCO Driver Setup

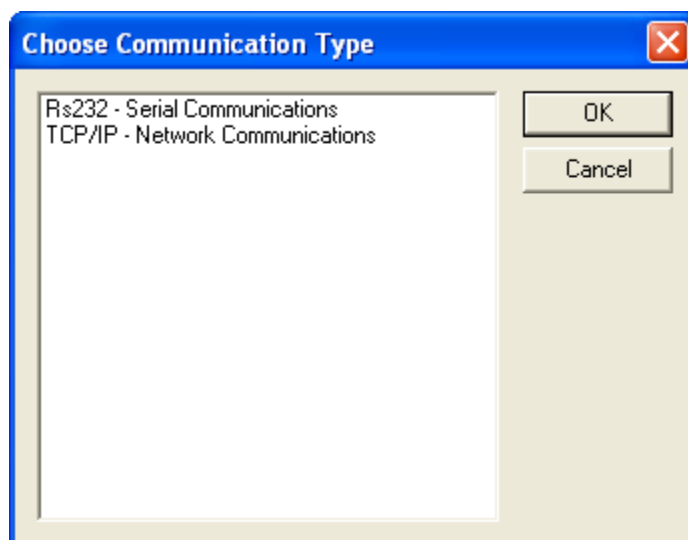
This section discusses the setup of the PELCO Driver.

Open the Driver Service window and select the Add button:



Select the 'PELCO' item and select OK.

Select RS-232 – Serial Communications if the PELCO switcher is connected via serial port. Select TCP/IP – Network communications if the PELCO switcher is connected via LAN. Select OK to continue the configuration.



Server Tab – Configure the fields on the Server Tab as follows:

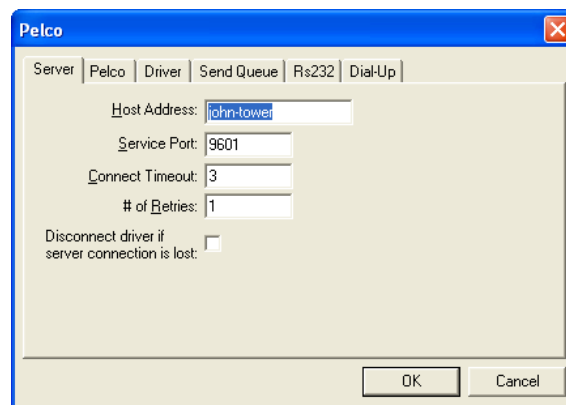
Host Address: Enter the name of the computer that is running the Server.exe application.

Service Port: This number's last digit must match the last digit of the project file name, i.e.: If your project file is named Test_001, and your base port setting is 9600, then the Service Port number needs to be 9601.

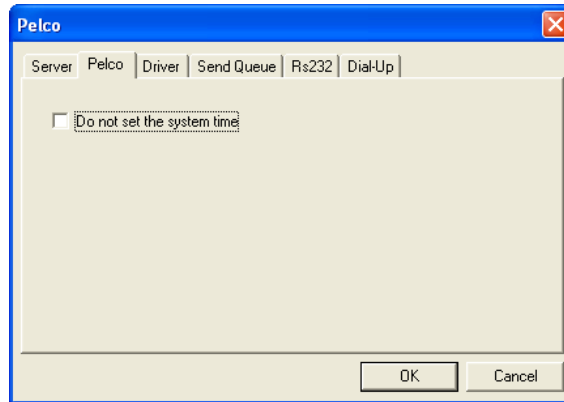
Connect Timeout: Enter the time duration (in seconds) that, when exceeded, would indicate a connection timeout.

of Retries: Enter the number of retry attempts to be made upon loss of communications.

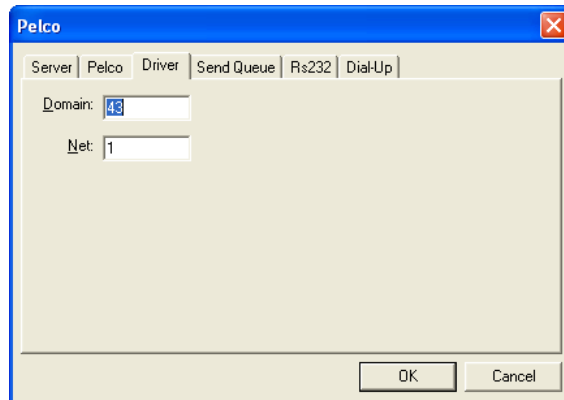
Disconnect driver if server connection is lost: Check this box if you want to disconnect the driver in the event you lose communications with Server.exe.



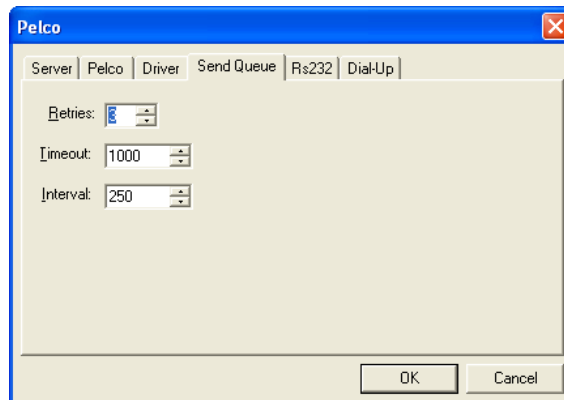
Pelco Tab – select the Do not set system time if you do not want a time set command to be sent to the PELCO switcher. It is necessary to use this checkbox for older PELCO CM6800 switchers.



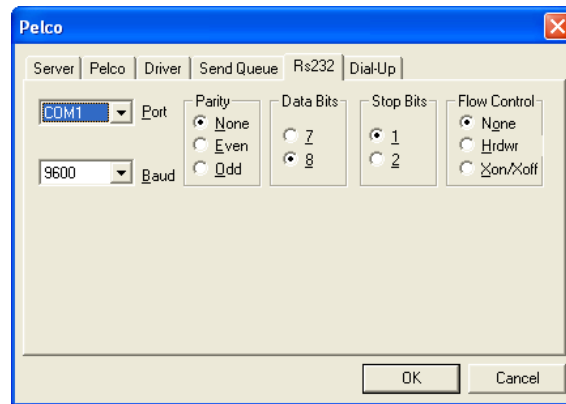
Driver Tab - Set the Domain and Net to match the Domain and Net of the PELCO RTU in the tree.



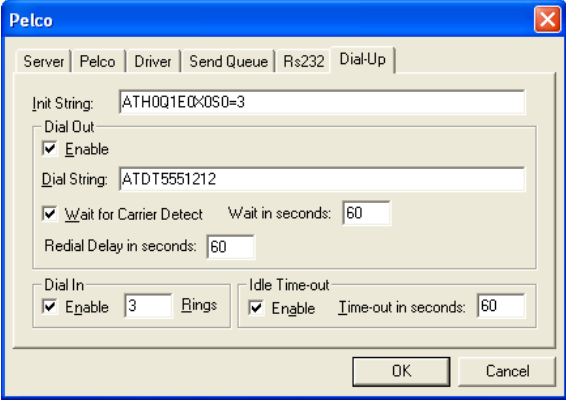
Send Queue Tab - These settings should not be changed.



Rs232 Tab - Adjust communications port settings to match the settings of the switcher.

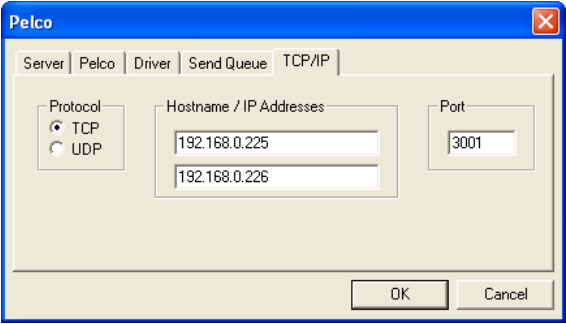


Dial-Up Tab – Adjust dial-up communications settings if the switcher is connected via modem.



The image shows the 'Pelco' configuration window with the 'Dial-Up' tab selected. The window has a blue title bar and a standard Windows-style interface. The 'Dial-Up' tab is active, showing fields for 'Init String' (ATH0Q1E0X0S0=3), 'Dial Out' (checked 'Enable', 'Dial String' ATDT5551212, 'Wait for Carrier Detect' checked with a 60-second wait), and 'Redial Delay in seconds' (60). Below these are 'Dial In' (checked 'Enable', 3 Rings) and 'Idle Time-out' (checked 'Enable', 60 seconds). 'OK' and 'Cancel' buttons are at the bottom right.

TCP/IP Settings – Set the LAN parameters if the PELCO is connected via Ethernet.



The image shows the 'Pelco' configuration window with the 'TCP/IP' tab selected. The window has a blue title bar and a standard Windows-style interface. The 'TCP/IP' tab is active, showing 'Protocol' (radio buttons for TCP and UDP, with TCP selected), 'Hostname / IP Addresses' (two text boxes containing 192.168.0.225 and 192.168.0.226), and 'Port' (a text box containing 3001). 'OK' and 'Cancel' buttons are at the bottom right.