System Galaxy Quick Guide

CONFIGURATION AND OPERATION

Integrating CCTV with System Galaxy

JAN 2021

SG 11.7.0
to
Current

System Galaxy Quick Guide

For CCTV Integration
Configuration & Operation

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Galaxy Control Systems

3 North Main Street
Walkersville MD 21793

www.galaxysys.com

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Graphics and illustrations by Candace Roberts, SQA & Technical Writer.

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Chapter 1: Overview of SG Interface to CCTV

System Galaxy allows the SG Operator to control video distribution via the external CCTV switch. Readers and input devices are (associated) linked to the CCTV switch in System Galaxy. Then **reader events** and **inputs** are mapped to the cameras and monitors. Once this is done, video from a specified CCTV Camera can be displayed on the mapped CCTV Monitor when activity occurs at its associated reader or input. Operators can manually demand video also.

FIGURE 1 - SYSTEM DIAGRAM:
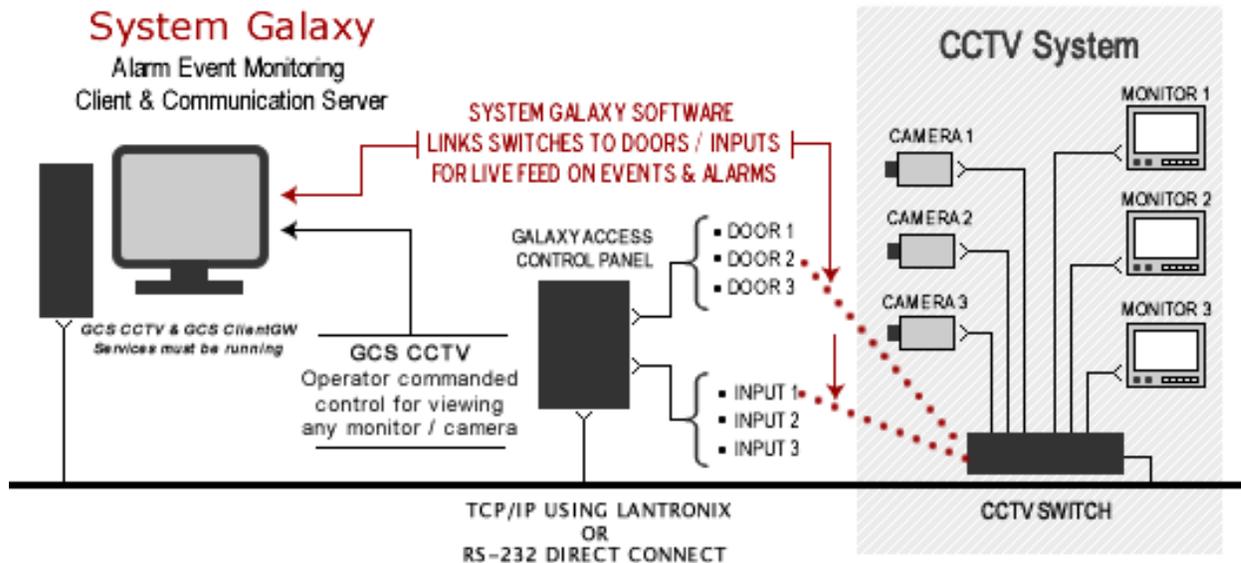
List of CCTV Brands that Galaxy Supports

System Galaxy (SG) integrates with following CCTV brands.

CCTV Brands
• **American Dynamics**
• **Blue Allegiant**
• **Kalatel**
• **Panasonic MUX**
• **Panasonic WJ-SX550A**
• **Pelco CM 9750-DT**
• **Vicon**

SEE: the ***CCTV Manufacturer's Documentation*** for instructions on how to install and configure the CCTV, cameras, or any client-side components associated with the CCTV.

SUPPORT: Consult a Galaxy Representative for recent additions compatible.

CCTV Features Listed

- You can add/connect multiple CCTV Switches to your system (site-wide)

- CCTV Monitors can be excluded/included for access on a *per workstation* basis.

- Link/map reader events and input devices to CCTV Switches, cameras and monitors to provide operators with video for various reader and input activities.

- Galaxy supports programming the preferred camera positions for individual events and inputs.

- CCTV Monitor 'hot buttons' on the SG toolbar to allow operator to swap between video

- Operator commanded view of Web Cam – 1 web cam per device (reader, input)

- Operator commanded view of DVR Cam – 1 DVR cam per device (reader, input)

- Operator "manual" command of designated CCTV monitors – 1 mon per device (reader, input)

- Operator can request CCTV video from the *incoming reader events* – readers must be linked to monitors/cameras in the system programming. Distinct events are configurable (i.e. door forced & open too long, invalid attempt, duress, passback violation, valid access).

- Operator can request CCTV video from the *incoming inputs events* - inputs must be linked to monitors/cams in system programming.

- Operator can request CCTV video from *incoming SG ARMED ALARMS* - Linked inputs must be configured to trigger armed alarms in system.

IMPORTANT:

CCTV MONITOR HOT BUTTONS:

Hot buttons call the. confirm with Kevin if these are linked to the manual command monitor or take the camera last used

SG ARMED ALARMS FROM INPUTS and READER EVENTS:

In order to trigger an ***armed alarm*** In System Galaxy (SG), the input or reader must be:

  ~ linked to an I/O Group
  ~ configured to require 'acknowledgement'
  ~ be in the armed state
  ~ and become active

Alarm Priorities are configurable and determine whether alarms come in as they happen or are sorted by order of priority.

CCTV Requirements

This section covers the minimum requirements that apply specifically to the SG CCTV Interface.

REQUIREMENTS FOR THE GALAXY COMMUNICATION SERVER

1. the *GCS CCTV Service* should be set up to start automatically when the PC starts

2. the following Galaxy services must be running and ports must be open:

Name of Service	Ports Used
GCS CCTV	n/a
GCS ClientGW	Port 5010
	Port 4002
GCS Comm	Port 4000
	Port 3001
GCS DBWriter	Port 4001
GCS Event Service	Port 4003

3. the CCTV Switch must be able to connect to the Galaxy communication server

4. the connection type is either direct RS-232 serial connection or TCP/IP using a Lantronix

5. you must assign/match the *alarm numbers* from the CCTV System to the readers and inputs during the mapping cameras in monitors in System Galaxy

GALAXY PRODUCT REGISTRATION REQUIREMENTS

1. System Galaxy must be registered for *CCTV Support* in order to function. CCTV Support can be registered during the initial system registration or added at any time.

2. Registration must be performed by a certified Galaxy Dealer.

PRODUCT LEVELS	CCTV SUPPORT
Professional	*NO*
Corporate	YES
Enterprise	YES

Chapter 2: Register & Configure the CCTV & Cameras

This chapter describes the registration and configuration of the CCTV feature.

QUICK STEPS: SETTING UP THE CCTV INTERFACE

PART 1.   Registering System Galaxy for CCTV Integration

PART 2.   Enabling CCTV Support in Workstation Options

PART 3.   Adding the CCTV Switch& Connection Settings in System Galaxy

PART 4.   Adding the CCTV Camera Names in System Galaxy

PART 5.   Linking Cameras to hardware devices in System Galaxy

SEE: the brand *Manufacturer's CCTV Documentation* for instructions on how to install and configure the CCTV and camera hardware or client-side components associated with branded CCTVs.

SEE: the *System Galaxy Software Installation Guide* for instructions on how to install System Galaxy software. These installation instructions are found on the HELP module on CD 1 menu.

Registering System Galaxy for CCTV Support

You can register System Galaxy for CCTV Support during the initial System Registration. However CCTV support can be added at anytime to an existing system.

1) **Open the Product Registration screen** - from menu *Configure> Options> Registration> System*.

   - In the *System-Wide Features*, you will check the CCTV option to enable it.
   - ☑ Check the "**CCTV Support**" option. *Unchecked means the option is disabled.*

   - Complete the normal registration process as needed

   - Enter the Registration Code

   - Click [Apply] button

   - Click [OK] button

2) **Complete the workstation registration as needed**

3) **Restart System Galaxy** software after registration is complete

FIGURE 2 - PRODUCT REGISTRATION SCREEN – CCTV SUPPORT OPTION
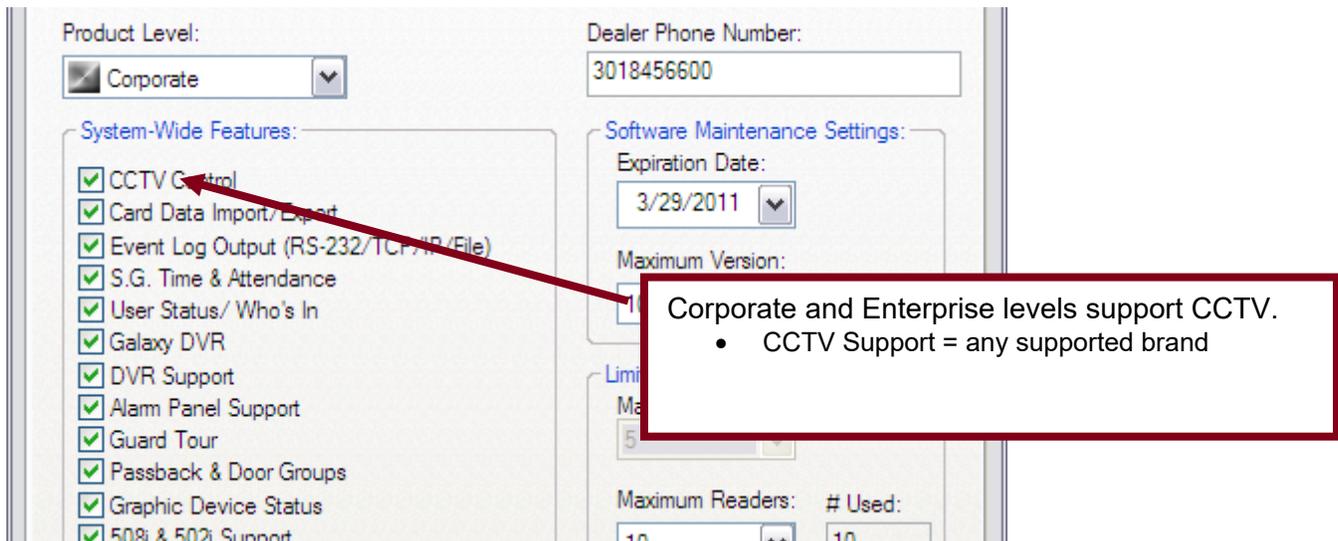
SUPPORT: Dealers may use the *GCS Online Registration* website 24/7, or contact customer service. A valid maintenance agreement is required for upgrading systems. Dealer online logon is required.

Enabling CCTV Support per Workstation

You can enable (and disable) the CCTV Interface at each workstation individually through the Galaxy Workstation Options screen. You may not want some workstations in the system to be able to start up and view video from the Galaxy CCTV Viewer.

ENABLING CCTV SUPPORT AT SG WORKSTATIONS

1) **Open the Workstation Options screen** - from menu *Configure> Options> Workstation Options*

2) In the *CCTV Options tab*, you will **check** the **CCTV Enabled** option to enable CCTV. *Unchecked means the option is disabled and you will not be able to add CCTV systems to Galaxy.*

3) Click the APPLY button and OK button to save your changes.

4) Restart the System Galaxy software to initiate the changes. (NOTE: see next section before restarting)

FIGURE 3 – ENABLE CCTV SUPPORT IN WORKSTATION OPTIONS SCREEN
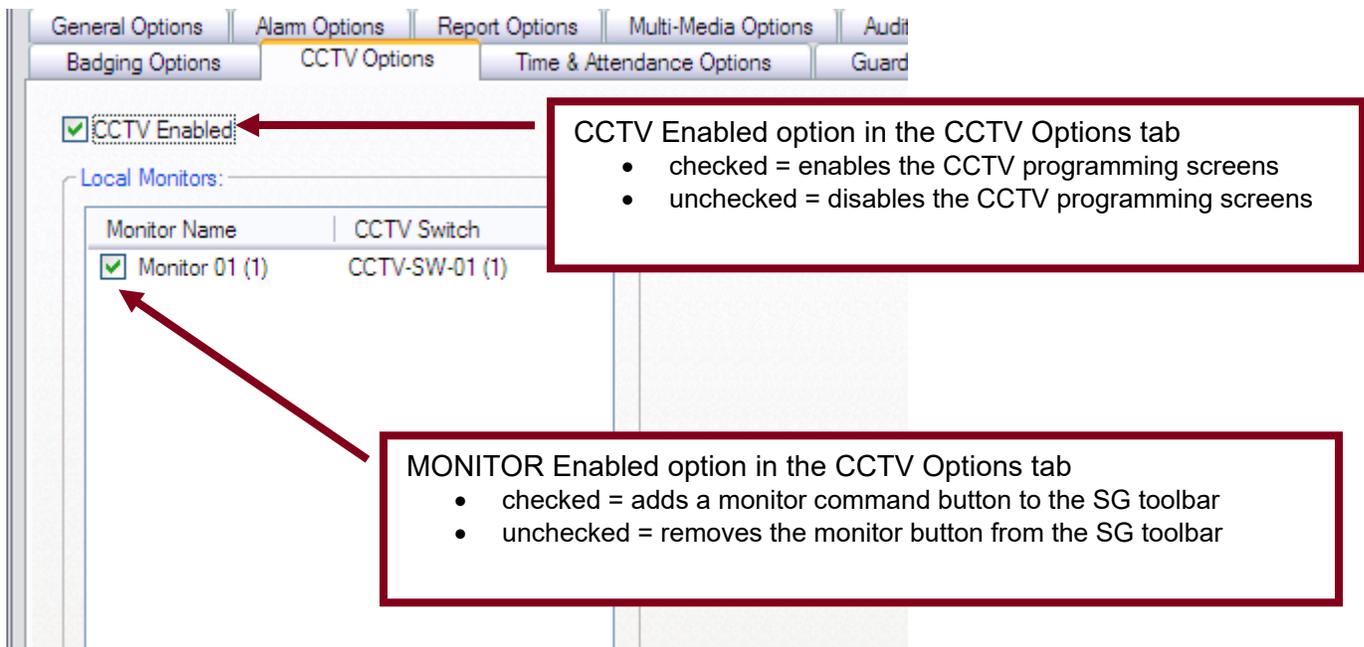
Assigning a CCTV Monitor to a Workstation

After you have finished programming your CCTV switches, cameras and monitors, you must assign the CCTV Monitors to the workstation(s) you wish to have control and view of the monitor. This is done in the Workstation Options screen.

IMPORTANT:

▶ You must be signed on as a master operator to open or edit workstation options.

▶ You must have completed programming your CCTV switches, cameras, and monitors.

▶ Each workstation must have it's monitors mapped in the local Workstation Options screen.

▶ Monitors are mapped to the workstation and not filtered by operator sign-on privileges.

❖ Open the *Workstation Options screen*, follow the menu selection **Configure > Options > Workstation Options.**

1. Select the **CCTV Options** (tab)

2. *the **Enable CCTV** checkbox should remain "checked"*

3. The **Local Monitors** list will be populated with the list of all available monitors. "Check" the boxes for the monitors you want to view from the current workstation. Leaving monitors "unchecked" means they will not be viewable from this workstation by any operator.

4. Click **Apply** and **OK** to save changes.

5. Click **YES** to restart your software.

FIGURE 4 – ENABLE INDIVIDUAL MONITORS PER WORKSTATION
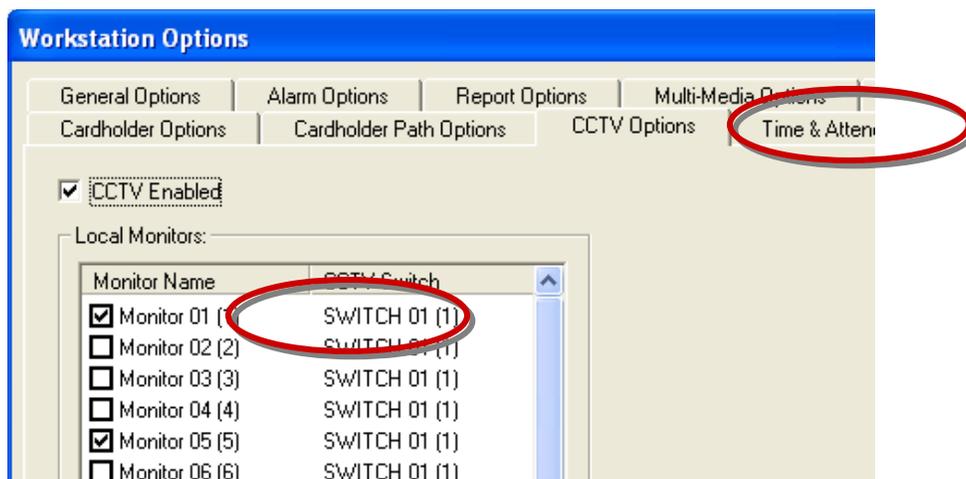
Adding a CCTV Switch

Once CCTV Interface is registered and enabled, you must <u>program your switches</u>.

❖ Open the *CCTV Switches screen*, follow the menu selection **Configure > Hardware > CCTV Systems > CCTV Switches.**

TO ADD A NEW SWITCH:

1. Click the **ADD NEW** button
2. Type in a **NAME** for your switch
3. Choose a **CCTV type** from the droplist
4. Select your **connection type** from the droplist (TCP/IP w/ Lantronics or Serial Com Port)

   If using TCP/IP with Lantronics:
   ▸ Type the **IP Address** of the Lantronics unit you will use with the switch
   ▸ The **port number** should default to **3001**

   If using Serial Com port:
   ▸ pick the **com port number** you will be using
   ▸ Set the **baud rate** according to manufacturer's programming
   ▸ Set the **parity** according to the manufacturer's programming

5. Set the *machine name* or *IP Address* of the computer running the GCS CCTV Service (typically the Communication Server).
6. Click the **APPLY** button to save settings; *a dialog box opens to let you set the camera count*
7. Choose the **number of cameras** that are associated with the switch
8. Choose the **number of monitors** that are associated with the switch
9. Click **OK** to save settings

You may need to refresh (re-open) your Hardware Tree to see your switch icon(s) in the tree. Simply close the hardware tree and select **View > Hardware Tree** from the SG menu.

Adding CCTV Cameras

Once you have programmed your switch, you must program your cameras.

❖ Open the *CCTV Camera screen*, follow the menu selection **Configure > Hardware > CCTV Systems > CCTV Cameras.**

In the CCTV Cameras programming screen you can add a new camera or edit an existing camera.

TO EDIT A DEFAULT CAMERA NAME:

1. Select the switch name
2. Select the camera name you want to change
3. Click the **EDIT** button
4. Change the camera **name** to something descriptive
5. You do not need to change the camera number unless it does not match the physical camera position at the switch
6. the pan-tilt checkbox is only effective if your software have been designed to support it and you have the correct hardware installed.
7. Click **APPLY** to save settings

TO ADD A NEW CAMERA:

1. Select the **switch name** of the switch you need to add the camera
2. Click the **ADD** button
3. Type the **camera name** using something descriptive
4. Set the **camera number** to the physical position of the camera on the switch.
5. the pan-tilt checkbox is only effective if your software have been designed to support it and you have the correct hardware installed.
6. Click **APPLY** to save settings

You may need to refresh (re-open) your Hardware Tree to see your camera icon(s) in the tree. Simply close the hardware tree and select **View > Hardware Tree** from the SG menu.

Adding CCTV Monitors

Once you have programmed your switch, you must program your monitors.

❖ Open the *CCTV Monitor screen*, follow the menu selection **Configure > Hardware > CCTV Systems > CCTV Monitors.**

In the CCTV Monitors programming screen you can add a new monitor or edit an existing one.

NOTE: if you added the monitors in the last step of the switch programming, then System Galaxy will have already built your monitor list using default names (monitor 01, monitor 02, etc.).

TO EDIT A DEFAULT MONITOR NAME:

1. Select the **switch name**
2. Select the **monitor name** you want to change
3. Click the **EDIT** button
4. Change the **monitor name** to something descriptive
5. You do not need to change the **monitor number** unless it does not match the physical position of the monitor
6. Click **APPLY** to save settings

TO ADD A NEW MONITOR:

1. Select the **switch name** of the switch you need to add the monitor
2. Click the **ADD** button
3. Type the **monitor name** using something descriptive
4. Set the **monitor number** to the physical position of the monitor
5. Click **APPLY** to save settings

You may need to refresh (re-open) your Hardware Tree to see your monitor icon in the tree. Simply close the hardware tree and select **View > Hardware Tree** from the SG menu.

Mapping SG Events to CCTV Cameras and Monitors

Once the Switches, Cameras and Monitors are added into System Galaxy programming screens, you can map the SG CCTV Events to the desired cameras and monitors.

This is done by assigning a CCTV Switch, CCTV alarm number, and camera(s) to the input or door/reader event. Then you will mapping the cameras to the desired CCTV monitors you want the video to display on when the event occurs.

System Galaxy inputs and certain doors/reader events can be used to trigger a CCTV Events for a CCTV Switch. When the event occurs, the assigned camera's video is distributed to the assigned monitor(s).

NOTE: CCTV events are not bi-directional. They are generated or issued from System Galaxy to the CCTV switch. System Galaxy does not receive events from the CCTV System.

Mapping Inputs to CCTV Cameras/Monitors

❖ Open the ***Input Properties screen,*** follow the menu selection **Configure > Hardware > Input Devices**. You must add your inputs in your *controller properties screen* first.

In the ***CCTV Events tab*** you can configure which camera is controlled by the input and map which monitor(s) the camera's image appears on. You can assign as many as two cameras to an input and you can map each camera to as many as four monitors.

▸ Select the **CCTV Events** (tab)
▸ Select the **CCTV Switch** that you want the input to trigger alarms for.

FOR EACH CCTV EVENT YOU WILL SET THE FOLLOWING DATA:

▸ **Alarm Number:** the *alarm number* is the number that the CCTV Switch will use to activate the its monitors. The alarm number you put in this field must match the alarm number the CCTV system will use.

▸ **Camera Number:** this is the camera number the video will come from for this event.

▸ **Position number:** this is a code number for the position/angle that the CCTV system will use to point a pan-tilt camera (if supported).

▸ **Monitors:** these four fields are the monitors you want the camera's video to be distributed to. These monitors would be divided among several workstations (security desks) located throughout the building.

▸ **Manual Commands and Web Camera:** these work like the manual commands for the reader/doors. See the next section for description of manual commands.

Mapping Door/Reader Events to CCTV Cameras/Monitors

❖ Open the *Reader Properties screen,* follow the menu selection **Configure > Hardware > Doors/Readers.** You must add your reader ports in *controller properties screen* first.

In the *CCTV Events tab* you can configure which Event controls which camera and map which monitor(s) the camera's image appears on. You can assign as many as two cameras to an event and you can map each camera to as many as four monitors.

▸ Select the **CCTV Events** (tab)
▸ Select the **CCTV Switch** that you want the reader/door events to trigger alarms for.

For each CCTV Event you will set the following data:

▸ **Alarm Number:** enter the alarm number is the number the CCTV switch will use to activate the monitors. The alarm number you put in this field must match the alarm number the CCTV system will use.

▸ **Camera Number:** enter the camera that the video will come from for this event.

▸ **Preset:** enter the number for the position/angle that the CCTV system uses to point a pan-tilt camera (if camera is a PTZ camera).

▸ **Monitors:** these four fields are the monitors you want the camera's video to be distributed to. These monitors would be divided among several workstations (security desks) located throughout the building.

CCTV Events can be assigned Up to 2 cameras and up to 4 monitors each (thus a total of 8 monitors can be controlled by an individual event).

▸ **Click Apply button to save settings.**

	Alarm	Camera	Preset	Monitors				Camera	Preset	Monitors			
Door Forced Open:	2	1	0	1	2	0	0	2	0	4	5	0	0
Open Too Long:	7	1	0	1	2	0	0	2	0	4	5	0	0
Invalid Attempt:	3	1	0	1	2	3	9	3	0	4	5	0	0
Duress:	0	0	0	0	0	0	0	0	0	0	0	0	0
Passback Violation:	0	0	0	0	0	0	0	0	0	0	0	0	0
Valid Access:	1	1	0	1	0	0	0	0	0	0	0	0	0
Manual Command:		1	0	8									

CCTV Switch: SWITCH 01

DVR Camera: 1

Web Camera URL: www.galaxysys.com
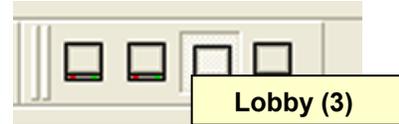
‣ **Manual Command:** you can also map a camera and monitor to the door/reader for manual control. The operator can issue the command to 'View CCTV' by right-clicking the reader icon in the Hardware Tree and selecting the menu option. The video displays on the preset monitor. If the monitor field is set to "0" (zero), the operator can override any monitor at the workstation by clicking it on the SG tool bar before issuing this manual command.

‣ **DVR Camera:** you can assign a camera from your DVR system to record video to your DVR when events at this door/reader trigger a CCTV alarm.

‣ **Web Camera:** this is also a manual command that the operator issues from the SG Hardware Tree. You provide the URL of a web camera in this field. The operator can issue the command to 'View Web Camera' from the shortcut menu by right-clicking the door/reader icon. The web page will open up inside the System Galaxy software.

SG Tool bar

Lobby (3)

SG Hardware Tree

CCTV Pan - Tilt - Zoom Control
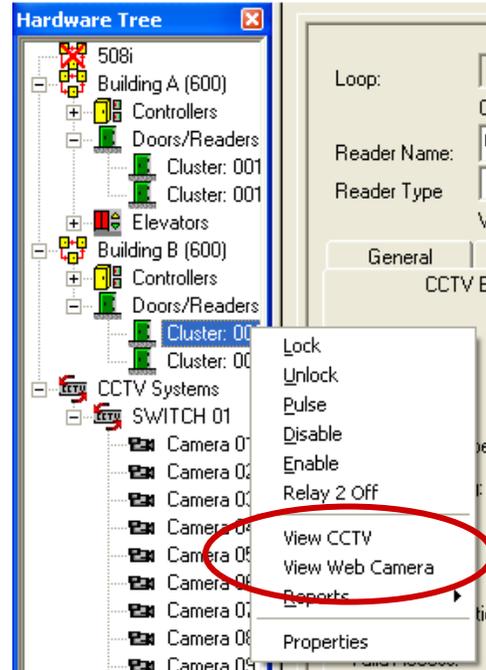
SETTING THE CCTV SERVICE TO RUN AUTOMATICALLY

❖ Click on the Windows® *start* button and navigate to **Programs > System Galaxy > Utilities** and select the Service Manager.

▸ Select the **GCSCCTV** service in the Service Manager screen
▸ Click on the **Properties** button
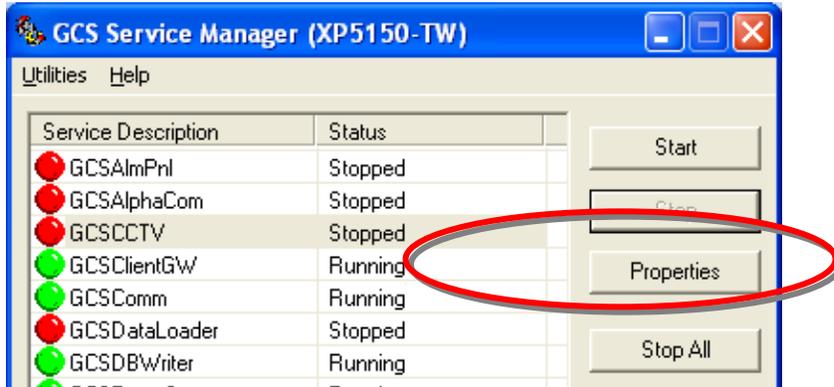
▸ Set the **Start Type** to **"Automatic"**
▸ Click **OK** button to save settings
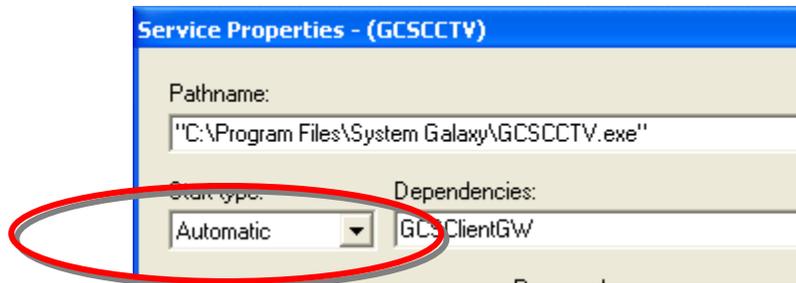
▸ Select the **GCSCCTV** service in the Service Manager screen again
▸ Click on the **Start** button; the status indicator on the CCTV Service will turn green.
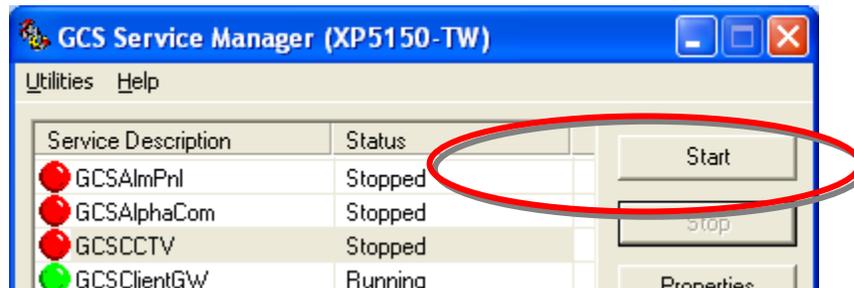
CONFIRMING THE CCTV SERVICE CONNECTIONS

When the CCTV Service starts, the CCTV icon will display in the Windows® task tray.

❖ Double-click on the CCTV icon to open its connection status window.

The first tab shows the status of the connections to the CCTV Switch.
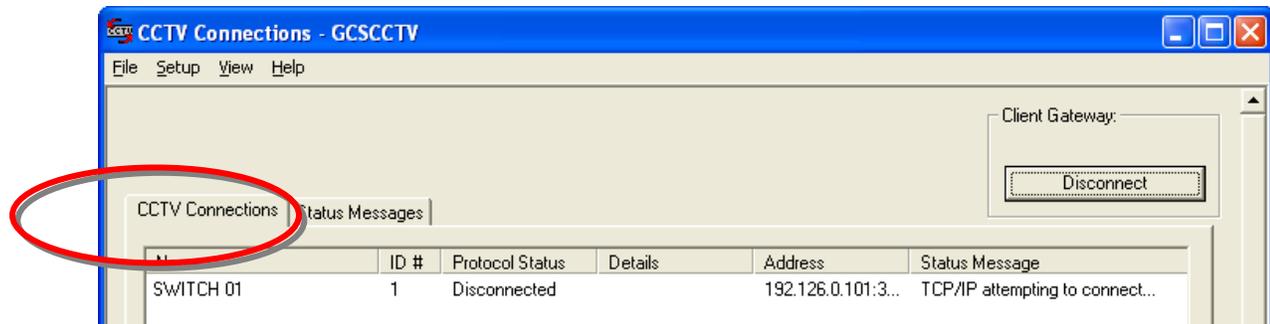
The second tab shows the status messages which are logged from the CCTV Service. You can use the Connect/Disconnect button to force a connection attempt or to disconnect from the GCS Client Gateway.
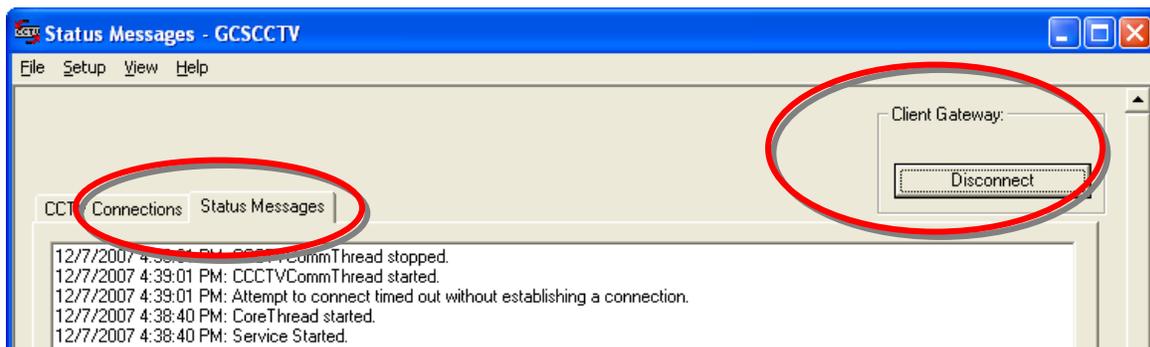
The Setup > Configure menu allows you to set the Data Source for the CCTV Service to the database. This should be correctly set from the install if you did a full installation from the CD using the default database technology.

Appendix E: Keywords and Terms

Table 1 Document Keywords

Keyword/Term	Description
"associated" or "linked" device	A door/reader/input that has been configured with a DVR unit and Camera in its property screen; when the associated device generates and event, a SG menu option can be selected to retrieve the video feed from that message's timestamp.
CCTV	Closed Circuit Television; i.e. the physical CCTV unit (acronym).
CCTV Interface	The CCTV Interface is the System Galaxy software feature that allows interaction between the Access Control System and the CCTV System.
GCS	Galaxy Control Systems (acronym).
GCS CCTV Service	System Galaxy uses services to handle message transmission between the CCTV switch, SG client, server, and database. The service must be running in order to actively integrate with the CCTV equipment.
Communication Server or *LCS*	Loop Communication Server is the PC that hosts the System Galaxy software and communicates with the Loops/Controllers and the System Galaxy Database for SG 6.x Software.
SG	System Galaxy (acronym); Refers to the SG System (its hardware and/or software).
SG Workstation	A PC that runs to System Galaxy, but is not the LCS or SG Server.
Mapping	The term mapping refers to the process of configuring which cameras are linked to which device in the System Galaxy software.