

System Galaxy Quick Guide

CONFIGURATION AND OPERATION



Integrated Video Management Systems

DVR ♦ NVR ♦ VMS

JAN 2023 | SG 11.8.X

System Galaxy

Quick Guide

For DVR Integration Configuration & Operation

11th Edition

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Table of History - Document and Feature

Date	Editions	Descriptions
Retro 2005	SG 7 1 st Edition	<p>SG 7 – This guide was created to provide a general reference guide for the DVR Integration to System Galaxy (SG). This guide provides the general instructions for configuring and operating the SG DVR interface. This guide also includes SG software requirements and any known DVR requirements that directly impact the SG integration with an individual DVR (i.e. DVR configuration, and client-side components). <i>Any DVR requirements that do not directly impact the SG integration are not included in this guide (see your manufacturer's documentation for requirements and compatibilities related to OS, install/set up, cameras, codecs, etc).</i></p> <p>Galaxy may also offer separate guides to some 3rd Party Brand DVR's (i.e. DVTel, Gen. Solutions, RapidEye).</p>
Retro	SG 8/9 2 nd Edition	<p>SG 8/9 – this edition includes updates to the DVR integration:</p> <ol style="list-style-type: none"> 1) Discovery OEM Brand added to DVR Type list in DVR Programming Properties screen. 2) Included instructions for enabling and disabling DVR viewer on a per-PC basis. This allows customer to control whether the Built-in GCS Video Viewer is available at one workstation vs. another. Defaults to disabled from SG installation. 3) Begin including 3rd Party DVR client-side requirements in <i>Requirements Section</i> of this guide.
Retro	SG 10 3 rd Edition	<p>SG 10 – introduces the .NET Framework which opens support to NVRs over several releases of SG-10 :</p> <ol style="list-style-type: none"> 1) SG System Registration changed: Separated the registration options for OEM and 3rd Party DVR. <ol style="list-style-type: none"> a) SG allows simultaneous registration for both <u>DVR Support (OEM)</u> and <u>3RD Party DVRs*</u> <ul style="list-style-type: none"> • the DVR Type droplist will dynamically include or omit DVR Names based on registration choices. b) SG supports unlimited number of Galaxy OEM DVRs (i.e. Discovery) in all 3 product levels. c) SG supports 3rd Party DVR registration* in corporate & enterprise levels. d) When registering <u>3rd Party DVR support</u>, the installer must set the <i>Unit count</i>. 2) The .NET Framework added - allows SG to integrate with NVRs and Embedded models. Discovery-3 (.NET), Discovery-3 H264, Discovery-3 Embedded Linux OEMs are supported and use the new NVR Viewer. Also Avigilon, Salient, OnSSI Ocularis v5 were added to the 3rd Party list. 3) Importing Camera Names is supported with the NVR and .NET models. 4) Added a concept diagram depicting the hardware linked with cameras for auto-popup of live video. 5) Added a DVR Programming table that lists all supported brands and known default ports.
OCT 2015	SG 10.4.8 4 TH Edition	<p>SG 10.4.8 – Merge all current NVRs/DVRs into this one guide:</p> <ol style="list-style-type: none"> 1) Merges and updates in this manual to reflect adding newer NVRs and obsoleting older models from content throughout. 2) Specific request for faxable, 1-sheet instructions for any NVR/DVR that requires client-side components. 3) Chapter 1: Updated the System Concept Diagram of the Linked Cameras. 4) Chapter 1: Updated the <u>List of Supported NVRs/DVRs</u> (excluded obsoleted models, include ExacqVision). 5) Chapter 1 Overview: Replaced the <u>Supported Features table</u> with a new split table that breaks-down the Supported Features for built-in Video Viewers by NVRs vs DVRs Viewers. 6) Chapter 1 Overview & Requirements sections: Updated the <u>NTS Notice</u> to stipulate that DVRs, NVRs, and Embedded VMS Systems must use the same NTS source as System Galaxy 7) Chapter 2 Configuration: updated DVR Programming Table for Default Port#s and Vendor/Adapter Codes 8) Chapter 2 Configuration: Added separate subsections for NVRs/DVRs that require manual installation of client-side components (Avigilon, Pelco, OnSSI) 9) Chapter 3 Operation: Added screenshots (with callouts) of GCS NVR Viewer in Live mode and Recorded mode.
2017		<p>SG 10.5.1– UPDATES:</p> <ol style="list-style-type: none"> 1) minor changes for consistency and update cover release version 10.5.1.
2018	SG10.5.6	reversioned

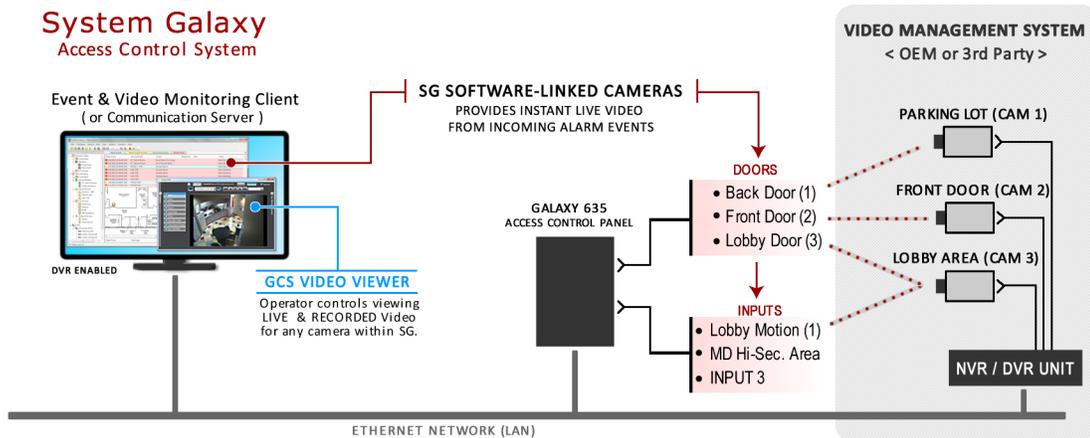
Chapter 1: System Galaxy Overview & Requirements

This guide describes how to register and configure System Galaxy to integrate with compatible DVRs & NVRs; as well as how to operate the integrated GCS Video Viewer within the System Galaxy software.

The System Galaxy integrated GCS Video Viewer supports playing live and historic video:

- ▶ The GCS Video Viewer automatically launches and plays Live Video when triggered by incoming alarms for any cameras that are linked to a hardware device (inputs, readers, elevator readers, ...).
- ▶ The GCS Video Viewer can be manually launched and play Live or Historic Video when the SG Operator invokes the 'View Video' command from icons in the SG Hardware Tree or Graphic Screen (camera, reader, inputs), or from incoming events and alarms in the SG Events/Alarm screens or from the device activity report.

FIGURE 1 - SYSTEM DIAGRAM: System Galaxy integrated with a Video Management System



List of Galaxy OEM and supported 3rd Party NVRs / DVRs (VMS)

Galaxy OEM NVR/DVRs

- Discovery 3 (.NET)
- Discovery 3 Embedded H.264
- Discovery 3 Embedded Linux
- Discovery 2
- Discovery*

* A separate DVR manual exists for some older models.

(1) NVRs from specified manufacturers are also supported by configuring the Vendor Codes using the "Discovery-3 .NET" setting.

3RD PARTY NVR/DVRs

- Avigilon
- ExacqVision
- Honeywell⁽¹⁾ Fusion
- OnSSI Ocularis V5
- Open-Eye⁽¹⁾ Xseries
- Pelco - DX8-series*
- Salient - CompleteView
- Toshiba⁽¹⁾ Surveillix

Some Legacy Models may be discontinued: DVTeI Latitude*, General Solutions*, Integral, Kalatel, Loronix, RapidEye*.

Early versions of SG-10 also supported Milestone, NiceVision, OnSSI-V2, Pelco-Endura, which should continue to work after SG-10 upgrade.



SUPPORT: Consult Galaxy Support if you have a DVR/NVR not shown on this list since newer models are continually being added to the system.

Table of Features in the GCS Video Viewers (NVR vs DVR)

SUPPORTED FEATURES AT THE GALAXY VIEWERS	VIEWER TYPES		CAMERA FUNCTIONS(2)		CAMERAL CONTROLS (3)			RECORDED VIDEO FUNCTIONS	
	.NET VIEWER	GCS VIEWER	IMPORT NAMES	MULTI-CAM GRID VIEW	PTZ	FOCUS	PRESET	SEARCH RANGE	PLAYBACK CTLs.
					SPEED	+ IRIS	CLEAR / SET		(PB. CLOCK / RATE)
DISCOVERY-3 (PC-based) Also see Embedded & H.264	(1)	YES		YES 4X, 9X, 16X	YES <i>IN SETTINGS</i>	FOCUS ONLY	PRESET ONLY	FROM START DATE - TIME	YES CLOCK (NO SPEED CTL)
Honeywell Fusion Also see Embedded & H.264	(1)	YES		YES 4X, 9X, 16X	YES <i>IN SETTINGS</i>	FOCUS ONLY	PRESET ONLY	FROM START DATE - TIME	YES CLOCK (NO SPEED CTL)
Toshiba Surveillix Also see Embedded & H.264	(1)	YES		YES 4X, 9X, 16X	YES <i>IN SETTINGS</i>	FOCUS ONLY	PRESET ONLY	FROM START DATE - TIME	YES CLOCK (NO SPEED CTL)
OpenEye Also see Embedded & H.264	(1)	YES		YES 4X, 9X, 16X	YES <i>IN SETTINGS</i>	FOCUS ONLY	PRESET ONLY	FROM START DATE - TIME	YES CLOCK (NO SPEED CTL)
Pelco ** DX-series / 8-series	--	YES		YES 4X, 9X, 16X	YES <i>IN SETTINGS</i>	FOCUS ONLY	PRESET ONLY	FROM START DATE - TIME	YES CLOCK (NO SPEED CTL)

** Pelco models may no longer be supported by later versions of System Galaxy. Contact Technical Support for information.

NOTE (1) Discovery, Honeywell, OpenEye, and Toshiba can use the .NET Viewer by configuring the DVR type to the .NET setting – see below for .NET Viewer features.

Galaxy DISCOVERY-3 (Emb.)	.NET	--	YES	--	PTZ & SLIDER	FOCUS + IRIS	PRESET ONLY	START DATE - TIME	YES CLOCK & SPEED CTL
Galaxy DISCOVERY-3 (H.264)	.NET	--	YES	--	PTZ & SLIDER	FOCUS + IRIS	PRESET ONLY	START DATE - TIME	YES CLOCK & SPEED CTL
Galaxy DISCOVERY-3 (.NET) <i>Honeywell, Toshiba, OpenEye</i>	.NET	--	YES	--	PTZ & SLIDER	FOCUS + IRIS	PRESET ONLY	START DATE - TIME	YES CLOCK & SPEED CTL
Avigilon	.NET	--	YES	--	PTZ & SLIDER	FOCUS + IRIS	PRESET & CLEAR / SET	START & STOP DATE - TIME	YES CLOCK & SPEED CTL
ExacqVision	.NET	--	YES	--	PTZ & SLIDER	FOCUS + IRIS	PRESET ONLY	START DATE - TIME	YES CLOCK & SPEED CTL
OnSSI Ocularis – v5 (4)	.NET	--	YES	--	PTZ - SEE NOTE 4	FOCUS	PRESET ONLY	START DATE - TIME	PLAYBACK CTLs LIMITED NO CLOCK/SPEED CTL
OnSSI Ocularis – v5 Recorder	.NET	--	YES	--	PTZ	FOCUS	PRESET ONLY	START DATE - TIME	PLAYBACK CTLs LIMITED CLOCK/SPEED CTL
Salient ClearView	.NET	--	YES	--	PTZ & SLIDER	FOCUS + IRIS	PRESET ONLY	START DATE - TIME	YES CLOCK & SPEED CTL

NOTE 2: Camera Names must be configured at the DVR/NVR unit before you import them into System Galaxy. If camera names appear in Viewer, but do not import into System Galaxy; reissue the import command while viewer is still open. Sometimes the DVR response exceeds the import timeout. Also the Hardware Tree can be refreshed to ensure names imported by collapsing and re-opening the Hardware Tree.

NOTE 3: Camera controls like IRIS, PRESETS, PTZ, require the NVR/DVR programming to be configured to support the feature. SG controls are dynamically enabled according to how the camera is configured at the DVR UNIT. Options are dynamically enabled based on the DVR programming, not the actual camera. If you change or downgrade a camera without changing the DVR configuration, the buttons may appear enabled but will not work.

NOTE 4: OnSSI Base models support “digital PTZ” which uses the PC Mouse (M1-button) *click-n-drag* control to perform pan/tilt and *click-n-hold* to zoom-in, double-click to zoom-out.

GENERAL NOTICES

SYSTEM PRODUCT REGISTRATION:

Galaxy Discovery DVR Support and 3rd Party DVR Support are enabled in System Registration according to the purchase agreement.

- OEM/Discovery DVR Support is available with all product levels (Professional, Corporate, & Enterprise).
- 3rd Party DVR Support is available with Corporate and Enterprise levels and you must also configure the Unit Count.

AUTOMATIC LIVE FEED FROM ARMED INPUT/DOOR:

Automated video pop-up requires the camera to be correctly linked to a hardware device and enabling workstation option.

AUTOMATIC LIVE FEED FROM ARMED INPUT/DOOR:

Automated video pop-up requires the camera to be correctly linked to a hardware device and enabling workstation option.

CAMERA CONTROLS & VIDEO CONTROLS IN THE GALAXY VIEWERS:

Video & Camera controls available in Galaxy Viewers are based on the Manufacturer’s Development Kit (SDK). Specific camera controls such as PTZ, Iris, etc. are dynamically enabled based upon the camera configuration at the NVR/DVR for each video channel.

MANAGING ASSETS:

See the Manufacturer’s DVR instruction manuals for saving and backing up video assets (historic video files).

NETWORK TIME SYNCHRONIZATION:

System Galaxy is NTS compliant. The DVR/NVR must use the same time-source as System Galaxy. Consult the manufacturer’s instructions for your DVR/NVR to determine whether the unit can reside on a domain and how to apply time synchronization.

DVR Compatibility Requirements

This section covers the minimum requirements that apply specifically to the SG DVR Interface in SG-9.

- 👁 System Galaxy's requirements may not be the same as your DVR/NVR system. Always consult the manufacturer's requirements to be sure you meet all the needed specs for your system.
- 🔒 **To prevent security issues you should choose a different, unused port number than the default port number set by the manufacturer.** For your convenience, this guide provides the *default port numbers* known at the time each DVR was originally added to the manual (in case you need to get back to the default value). Galaxy never recommends you permanently use the default port number.

GALAXY CLIENT-SIDE DVR COMPONENT REQUIREMENTS

A few DVRs require a client-side component to be installed on the same PC as the SG Client software. *Rapid-Eye is a brand that requires a DVR client application to be installed.*

Most brands, including Discovery DVR, do not require a client-side application to be installed on the Galaxy client workstation. See the configuration section for details on your model.

- ▶ **Avigilon*** requires a client-side runtime component to be installed on the Galaxy workstation.
- ▶ **Discovery-3** offers a client-side viewer but **this is not required** to use the Galaxy Viewer.
- ▶ **OnSSI Ocularis*** requires a client-side runtime component to be installed on the Galaxy workstation.
- ▶ **Open-eye** offers a client-side viewer but **this is not required** to use the Galaxy Viewer.
- ▶ **Pelco DX-series*** requires a client-side runtime component to be installed on the Galaxy workstation.

* See the related section in Chapter-2 under **Adding the DVR / NVR for exact location of the file.**

OS & IT REQUIREMENTS

- ▶ **Network Time Synchronization:** The DVR/NVR must use the same NTS time-source as System Galaxy. This requirement ensures the timestamps on historic/recorded video will match the timestamps of the corresponding System Galaxy events.
- ▶ The **SG Server** or **Workstation PC** must have the correct port unblocked used by the DVR/NVR.
- ▶ You must meet requirements and best-practice for port, speed, bandwidth, peak demands, and security when implementing the DVR/NVR interfaces.

GALAXY PRODUCT REGISTRATION REQUIREMENTS

System Galaxy must have the appropriate DVR Support enabled in System Registration before you can add or connect to DVR/NVRs, import cameras, view live or recorded video, etc.

- ▶ **Galaxy Discovery/OEM:** can be registered under all product levels.
- ▶ **Brand-Name DVRs** can be registered under Corporate or Enterprise levels.

	PROFESSIONAL	CORPORATE	ENTERPRISE	UNIT COUNT
GALAXY OEM DVRS	✓	✓	✓	UNLIMITED
BRANDED DVRS	--	✓	✓	<u>UNIT COUNT</u> MUST BE REGISTERED

Chapter 2: Register & Configure the DVR /Cameras

This chapter describes the registration and configuration in System Galaxy.



QUICK STEPS: SETTING UP THE DVR INTERFACE

- PART 1.** Install DVR Unit and connect and configure all camera (inclu. camera names)
- PART 2.** Install any Client-side components as appropriate
- PART 3.** Register System Galaxy for the DVR Support
- PART 4.** Enable DVR Support in System Settings
- PART 5.** Configure DVR Alarm Settings as appropriate
- PART 6.** Add the DVR Unit(s) to System Galaxy with the correct Connection Settings
- PART 7.** Import Camera Names from the DVR Icon in the SG Hardware Tree
- PART 8.** Linking hardware to Cameras in System Galaxy

After the initial system programming is completed, the SG Operator can begin using the SG DVR features.



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



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

Part-1 & -2 Installing DVR's Server and Client-Side Software

PART-1 DVR UNIT AND SERVER SOFTWARE:

The DVR unit and any camera configuration should be completed **before** you try to add it to System Galaxy.



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

PART-2 DVR CLIENT-SIDE SOFTWARE:

If your DVR also requires client-side software or runtime components, you **must** install them according to the manufacturer's documentation before you can connect to the DVR from System Galaxy.

- ▶ **Avigilon** requires a client-side DXSETUP. exe to be installed on the SG workstation.
 [CD Drive SG_Disk2]:\ \ DVR Software \ Avigilon \ DirectX \ DXSETUP.exe
Right-click on the filename and Run as Administrator.
- ▶ **OnSSI Ocularis** requires a client-side runtime component to be installed on the Galaxy workstation.
 [CD Drive SG_Disk2]:\ \ DVR Software \ OnSSI\ OnssiOcularis \ Onssi Ocularis SDK Runtime_5.0.1.105.exe
Right-click on the filename and Run as Administrator.
- ▶ **Discovery-3** offers a client-side viewer but **this is not required** to use the Galaxy Viewer.
- ▶ **Open-eye** offers a client-side viewer but **this is not required** to use the Galaxy Viewer.
- ▶ **Honeywell / Toshiba** may offer a client-side viewer but this is not required for the Galaxy Viewer.
- ▶ **Pelco Endura** requires two client-side runtime components to be manually installed on the Galaxy workstation.
 The technician must manually install the **directx_aug2009_redist.exe** and **PelcoAPISDK-1.2.0.-1755.vc9.msi (Disk-2)**
 Dotnetfx35.exe (.NET Framework v3.5) and the vcredist_x86.exe are automatically installed by System Galaxy
- ▶ **Pelco DX/8-series** offers a client-side module that is not mandatory (SG can connect without it).
 The DX IP Security Policy Flag must be configured to allow the SG client PC's IP Address to be accepted if the client module is not installed. **Right-click on the filename and Run as Administrator.**
 It may be necessary to create an additional *DVR Login ID* for the SG Viewer to use. Pelco limits the number of connections allowed under a single Login ID at the Pelco unit.

Part-3 Registering System Galaxy for DVR Support

DVR Support is registered during the initial System Registration (14-day grace period applies). DVR Support can also be added to an existing system. A new registration code must be acquired from Galaxy Control Systems when adding DVR support after initial registration (Certified Dealer required).

Open the **Product Registration screen** - from menu **Configure ▶ Options ▶ Registration ▶ System**.

1) In the **System-Wide Features**, you will check the appropriate DVR option to enable it. Unchecked means the option is disabled.

- OEM Discovery DVR/NVR:** check the "Galaxy DVR" option. You do not have to count the DVRs.
- 3rd Party DVR/NVR:** Check "3rd Party DVRs" and enter the number of units you will install.

NOTE: You can register both branded and OEM in the event the customer has multiple DVRs to be installed or is adding to an existing system. You do not have to count the OEM/Discovery DVR/NVRs.

2) **Complete the normal registration process as needed.**

3) **Enter the new Registration Code and click [Apply] button, then click [OK] button.**
Restart System Galaxy software application after registration is complete.

FIGURE 2 - PRODUCT REGISTRATION SCREEN – DVR SUPPORT OPTION

The screenshot shows the 'Product Registration' window with the following fields and options:

- System Registration:**
 - Current System ID: 1686864626
 - Registered System ID: 1686864626
 - Created Date/Time: 6/18/2013 12:09:48 PM
 - Workstation Co: 1
- Customer Name:** GCS
- Authorized Galaxy Dealer Name:** CER
- Deal:** 800
- Product Level:** Corporate
- System-Wide Features:**
 - CCTV Control
 - Card Data Import/Export
 - Event Log Output (RS-232/TCP/IP/File)
 - S.G. Time & Attendance
 - User Status/ Who's In
 - Galaxy DVR
 - 3rd Party DVRs
 - Alarm Panel Support
 - Guard Tour
 - Passback & Door Groups
 - Graphic Device Status
 - 508i & 502i Support
 - Biometric Interface Support
 - Unlimited Card Capacity (600 only)
 - Access Rule Override (600 only)
- DVR Limit:** 4
- Software Maintenance Settings:**
 - Expiration Date: 7/ 2/2020
 - Maximum Version: 10.xx
- Limits:**
 - Maximum Clients: 5
 - Maximum Readers: 16
 - # Used: 10
 - Maximum Biometric Readers: 0
 - Maximum DSI-Based Readers: 0
- Web Client Options:**
 - Web Client (ASP Mode)
 - Photo ID Badge Printing
 - * Requires Card Exchange
- Badge Printing System:** Card Exchange Inside
- Registration Code:** T2BGFX5J
- Last Registered Date/Time:** 10/9/2014 2:51:26 PM
- Buttons:** OK, Cancel, Apply

Annotations in the image:

- Blue box: **Enabled the appropriate DVR option.** Also, set the [DVR limit] to the correct number if installing 3RD Party brand of DVR/NVR. (Points to 'Galaxy DVR' and '3rd Party DVRs' checkboxes and the 'DVR Limit' dropdown).
- Blue box: **Enter the correct Registration Code.** After you have completed all other settings. (Points to the 'Registration Code' field).
- Blue box: **Click the APPLY button.** (Points to the 'Apply' button).



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.

Part-4 Enabling & Disabling DVR Support per Workstation

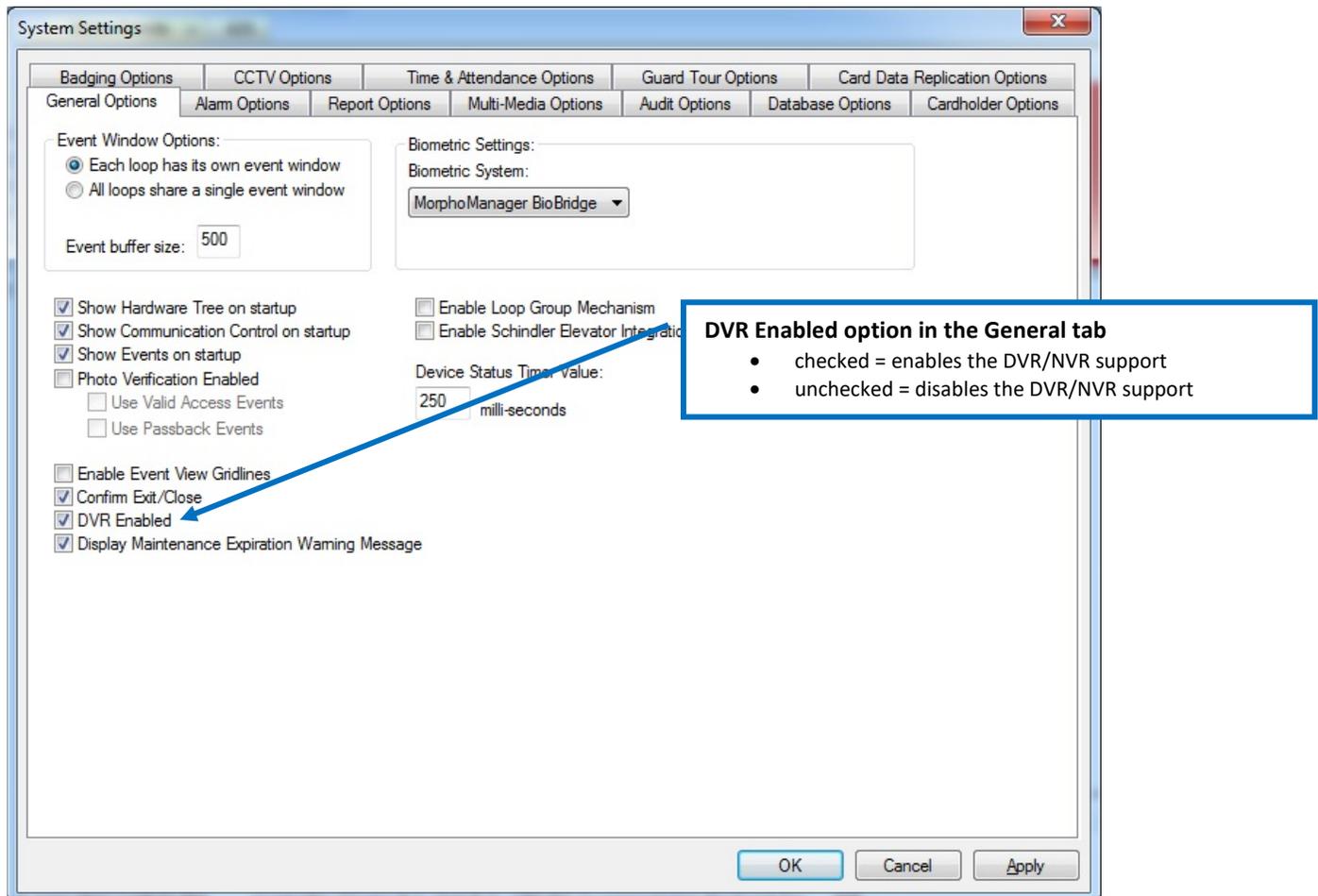
The **DVR Enabled** option allows owner to enable or disable the DVR Support at each individual workstation through the Galaxy System Settings screen. You may not want some workstations in the system to be able to start up and view video from the Galaxy DVR Viewer. **This option is ON/enabled by default.**

ENABLING DVR SUPPORT AT SG WORKSTATIONS

Open the **System Settings** screen - from menu [Configure](#) ▶ [Options](#) ▶ [System Settings](#)

- 1) Place a “check” in the **DVR Enabled** option - in the *General tab*.
 - **Unchecked means the option is disabled**
 - user will not be able to add a DVR, or Cameras, and cannot view video.
- 2) Click the APPLY button then OK button to save your changes.
- 3) Restart the System Galaxy software to initiate the changes. (NOTE: see next section before restarting)

FIGURE 3 – ENABLE DVR SUPPORT IN SYSTEM SETTINGS SCREEN



Part-5 Automatic Call-up of LIVE Video for Armed Alarms (per Workstation)

You can configure the workstation to automatically show INSTANT LIVE FEED when an **armed alarm** occurs in the System Galaxy system. This is enabled by checking the '**Automatically Call-up DVR Video**' option in System Settings screen.

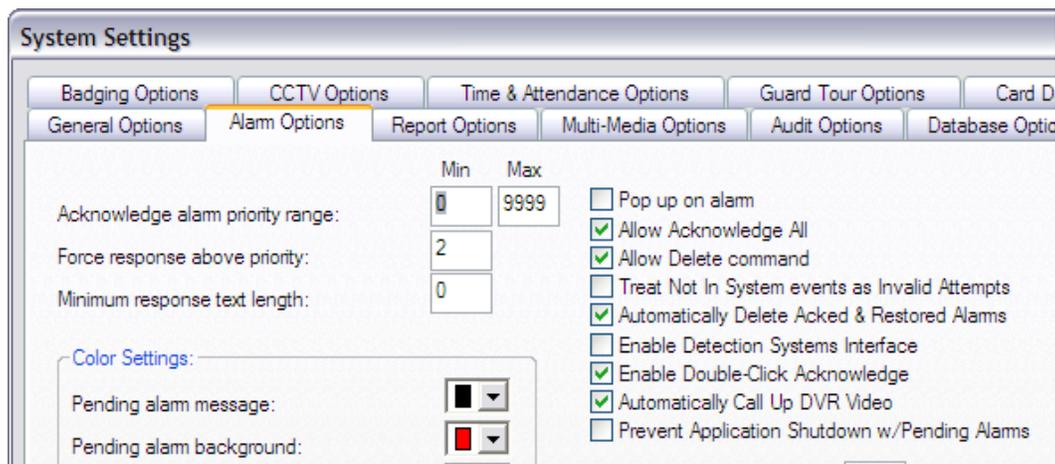
IMPORTANT:

- ▶ This is a **per workstation setting**, and will not affect other workstations in the Galaxy system.
- ▶ A master operator login is required to edit System Settings (or System Settings) screen.
- ▶ The '**Automatically Call-up DVR Video**' shows video for cameras that are linked to an input or door/reader that has been configured to need acknowledgement and that are armed.
- ▶ Alarm Priority: Be aware that if you if you are using alarm priorities, that the live feed will come from the camera with the highest priority, not necessarily from the most recent incoming event.

Open the **System Settings** screen - from menu [Configure](#) ▶ [Options](#) ▶ [System Settings](#)

- 1) Select the *Alarm Options* tab.
- 2) "Check" the '**Automatically Call-up DVR Video**' option to enable it. (Unchecked means the option is disabled and the DVR Viewer will not Auto-call LIVE feed for any armed alarms.)
- 3) Click the **APPLY** button and **OK** button to save your changes.
- 4) Restart the System Galaxy software to initiate the changes.

FIGURE 4 – ENABLE DVR SUPPORT IN SYSTEM SETTINGS SCREEN



Part-6 Adding an NVR or DVR in System Galaxy

This section assumes you have already taken care of the prerequisites (listed below):

PREREQUISITES

1. The NVR/DVR unit and all the cameras are correctly installed /configured (**including camera names**).
2. The login ID /PASSWORD for SG has been created at the NVR/DVR.
3. The correct client-side components have been installed if required (Avigilon, OnSSI, Pelco see next pages)
4. System Galaxy is properly installed & registered for the appropriate DVR (OEM vs 3rd Party).
5. The System Galaxy *DVR ENABLED* option is checked in the System Settings Screen/General tab.
6. *Automatically call up Video* option is set (checked = ack'd alarms will pop video) System Settings Screen/Alarm tab.

ADDING A DVR (General Instructions)

Open the DVR Programming Screen - from menu [Configure](#) ▶ [Hardware](#) ▶ [DVR's](#)

- 1) Click the **[Add]** button in the DVR screen to add a DVR.
- 2) Enter a unique **name** for the DVR in the [Name] field (i.e. "DVR Unit 01"). This name will appear in [DVR droplists] in the *Camera Programming screen* and in the *Reader/Input Programming screens*.
- 3) Choose a **DVR type** from the [Type] droplist that matches the type of DVR you will connect to.
- 4) The **Vendor Code** or **Adapter Type** droplist must be set to a value matches the type of DVR are adding.
- 5) Enter the **IP address** or DNS Name of the DVR Unit.
- 6) Enter **IP Port Number** if it will be different from the default value automatically shown.
- 7) Enter the **User Name & Password** (logon): The login used here must exist at the DVR Unit and does not necessarily need to be the highest logon, but must allow viewing and controlling video.
- 8) Click the **[Apply]** button to save settings.
- 9) **Restart System Galaxy software.**

FIGURE 5 – DVR PROGRAMMING SCREEN & TABLE

* Specified models use the GCS Viewer.

(1) If you have a newer Honeywell, OpenEye, or Toshiba that uses the G-3 embedded (H.264) or XM3100(E-Series), then set the **DVR Type** field to "Discovery-3 .NET" and set the **Vendor Code** appropriately.

(2) Some DVRs have a separate Guide.

(3) For OnSSI Ocularis .NET API select the appropriate Vendor Code.

Type DVR/NVR	Dflt Port	Vendor Codes	Viewer
Discovery (GCS)	6808	Normal DVR	GCS Viewer
Discovery 2	9871	Normal DVR	GCS Viewer
Discovery 3 *	2000	Normal DVR	GCS Viewer
Discovery 3 (.NET)	2000	G3 Embed. H.264	.NET Viewer
Honeywell, OpenEye, Toshiba (1)	2000	XM3100 (E-series)	.NET Viewer
Discovery 3 Emb. H264	2000	Normal DVR	GCS Viewer
Discovery 3 Emb. Linux	2000	Normal DVR	GCS Viewer
Avigilon	38880	Normal DVR	.NET Viewer
ExacqVision	22609	Normal DVR	.NET Viewer
DVTel Latitude	--	Normal DVR	GCS Viewer
Diva HTTP (2)	80	Normal DVR	GCS Viewer
General Solutions (2)	--	Normal DVR	GCS Viewer
Honeywell Fusion *	4000	Normal DVR	GCS Viewer
OnSSI NetDVMS v2	80	Normal DVR	GCS Viewer
OnSSI Ocularis v5	8080	Normal DVR	.NET Viewer
OnSSI Ocularis (.NET)	81	NetDVMS Adapter	.NET Viewer
<i>various models supported (3)</i>		NetEVS Adapter	
		OC Adapter	
Open-eye Xseries *	2000	Normal DVR	GCS Viewer
Toshiba Surveillix *	2000	Normal DVR	GCS Viewer
Salient CompleteView	80	Normal DVR	.NET Viewer

ADDING AVIGILON .NET NVR

This section assumes you have already taken care of the prerequisites (listed below):

PREREQUISITES

1. The NVR unit and all the cameras are correctly installed /configured (**including camera names**).
2. The login ID /PASSWORD for SG has been created at the NVR/DVR.
3. The correct client-side components have been installed if required (see below)
Avigilon requires a client-side DXSETUP. exe to be installed on the SG workstation.
[\[CD Drive SG_Disk2\]:\ \ DVR Software \ Avigilon \ DirectX \ DXSETUP.exe](#)
Right-click on the filename and Run as Administrator.
4. System Galaxy is properly installed & registered for the 3rd Party DVR and number of units must be set.
5. The System Galaxy DVR ENABLED option is checked in the System Settings Screen/General tab.
6. Automatically call up Video option is set (checked = ack'd alarms will pop video) System Settings Screen/Alarm tab.

Open the DVR Programming Screen - from menu [Configure](#) ▶ [Hardware](#) ▶ [DVR's](#)

- 1) Click the **[Add] button** in the DVR screen to add a DVR.
- 2) Enter a unique **name** for the DVR in the [Name] field (i.e. "DVR Unit 01"). This name will appear in [DVR droplists] in the *Camera Programming screen* and in the *Reader/Input Programming screens*.
- 3) Choose "Avigilon" as the **DVR type**.
- 4) The **Vendor Code** droplist must be set to a value matches the type of NVR being added.
- 5) Enter the **IP address** or DNS Name of the DVR Unit.
- 6) Enter **IP Port Number** – it should be different from the default value automatically shown.

Type DVR/NVR	Dflt Port	Vendor Codes	Viewer
Avigilon	38880	Normal DVR	.NET Viewer

- 7) Enter the **User Name & Password** (logon): The login used here must exist at the DVR Unit and does not necessarily need to be the highest logon, but must allow viewing and controlling video.
- 8) Click the **[Apply] button** to save settings.
- 9) **Restart System Galaxy software.**



Use the [edit] and [delete] buttons to change or delete an existing DVR Unit's configuration.

ADDING ONSSI .NET NVR

This section assumes you have already taken care of the prerequisites (listed below):

PREREQUISITES

1. The NVR unit and all the cameras are correctly installed /configured (**including camera names**).
2. The login ID /PASSWORD for SG has been created at the NVR/DVR.
3. The correct client-side components have been installed if required (see below)
OnSSI Ocularis requires a client-side runtime component to be installed on the Galaxy workstation.
[\[CD Drive SG_Disk2\]:\DVR Software \ OnSSI \ Onssi Ocularis \ Onssi Ocularis SDK Runtime_5.0.1.105.exe](#)
Right-click on the filename and Run as Administrator.
4. System Galaxy is properly installed & registered for the 3rd Party DVR and number of units must be set.
5. The System Galaxy DVR ENABLED option is checked in the System Settings Screen/General tab.
6. Automatically call up Video option is set (checked = ack'd alarms will pop video) System Settings Screen/Alarm tab.

Open the DVR Programming Screen - from menu [Configure](#) ▶ [Hardware](#) ▶ [DVR's](#)

- 1) Click the **[Add] button** in the DVR screen to add a DVR.
- 2) Enter a unique **name** for the DVR in the [Name] field (i.e. "DVR Unit 01"). This name will appear in [DVR droplists] in the *Camera Programming screen* and in the *Reader/Input Programming screens*.
- 3) Choose "OnSSI OCULARIS .NET" (or appropriate type) as the **DVR type**.
- 4) The **Vendor Code** droplist must be set to a value matches the type of NVR being added.
- 5) Enter the **IP address** or DNS Name of the DVR Unit.
- 6) Enter **IP Port Number** – it should be different from the default value automatically shown.

Type DVR/NVR	Dflt Port	Adapter Codes	Viewer
OnSSI NetDVMS v2	80	Normal DVR	GCS Viewer
OnSSI Ocularis v5	8080	Normal DVR	.NET Viewer
OnSSI Ocularis (.NET) various models supported (3)	81	NetDVMS Adapter NetEVS Adapter OC Adapter	.NET Viewer

- 7) Enter the **User Name & Password** (logon): The login used here must exist at the DVR Unit and does not necessarily need to be the highest logon, but must allow viewing and controlling video.
- 8) Click the **[Apply] button** to save settings.
- 9) **Restart System Galaxy software.**



Use the [edit] and [delete] buttons to change or delete an existing DVR Unit's configuration.

ADDING PELCO DVR

This section assumes you have already taken care of the prerequisites (listed below):

PREREQUISITES

1. The DVR unit and all the cameras are correctly installed /configured (**including camera names**).
2. The login ID /PASSWORD for SG has been created at the DVR.
3. The correct client-side components have been installed if required (see below)
 - **Pelco Endura** requires two client-side runtime components to be manually installed on the Galaxy workstation.
 - **directx_aug2009_redist.exe (Disk-2)**
 - **PelcoAPISDK-1.2.0.-1755.vc9.msi (Disk-2)**
4. System Galaxy is properly installed & registered for the 3rd Party DVR and number of units must be set.
5. The System Galaxy DVR ENABLED option is checked in the System Settings Screen/General tab.
6. Automatically call up Video option is set (checked = ack'd alarms will pop video) System Settings Screen/Alarm tab.

Open the DVR Programming Screen - from menu [Configure](#) ▶ [Hardware](#) ▶ [DVR's](#)

- 1) Click the **[Add] button** in the DVR screen to add a DVR.
- 2) Enter a unique **name** for the DVR in the [Name] field (i.e. "DVR Unit 01"). This name will appear in [DVR droplists] in the *Camera Programming screen* and in the *Reader/Input Programming screens*.
- 3) Choose the appropriate Pelco model as the **DVR type**.
- 4) The **Vendor Code** droplist must be set to a value matches the type of DVR/NVR being added.
- 5) Enter the **IP address** or DNS Name of the DVR Unit.
- 6) Enter **IP Port Number** – it should be different from the default value automatically shown.
NOTE: The Pelco Endura and other brands may no longer be supported in Galaxy.
- 7) Enter the **User Name & Password** (logon): The login used here must exist at the DVR Unit and does not necessarily need to be the highest logon, but must allow viewing and controlling video.
- 8) Click the **[Apply] button** to save settings.
- 9) **Restart System Galaxy software.**



Use the [edit] and [delete] buttons to change or delete an existing DVR Unit's configuration.

Part-7 Importing or Adding Camera Names to System Galaxy

This section describes how to import camera names as well as how to manually add a camera.

On newer integrations, SG will import the camera names, however older DVRs did not support this and the cameras had to be manually added. If you are manually adding the camera names you must be careful to program the camera 1 name to match the camera name on channel-1 of the DVR.

IMPORTING CAMERA NAMES

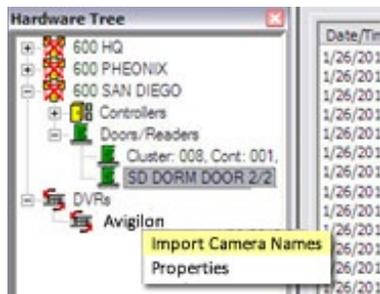
This section assumes you have already taken care of the prerequisites (listed below):

PREREQUISITES

1. The DVR unit and all the cameras are correctly installed /configured (**including camera names**).
2. You must have added the NVR / DVR unit to System Galaxy (see prior section) and met all the requirements listed.
3. You must be able to connect to the NVR / DVR unit.

Launch System Galaxy and sign-in - the Hardware Tree should be showing the DVR/NVR just added.

- 1) **Click the [+] button** to expand the “DVRs” list in the Hardware Tree.
- 2) **Right-click on the NVR/DVR Name** in the hardware tree – to open the shortcut menu
- 3) **Choose ‘Import Cameras’ from the menu** – the viewer opens and cameras will populate (don’t close viewer) .

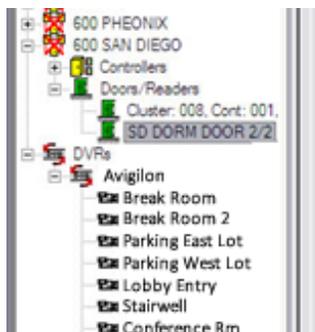


- 4) **Refresh the Hardware Tree to see the cameras:**

a. HINT: Close the Hardware Tree and reopen it from the SG menu – [View ▶ Hardware Tree](#)

- 5) **Now Click the [+] button** to expand the “DVRs” list in the Hardware Tree.
- 6) **Now Click the [+] button of the DVR/NVR NAME** – to see the imported camera names in the Hardware Tree.

! IF the names are not shown yet, then **redo step 2 thru 3 while the viewer is still open**. Camera names should populate the hardware tree. If cameras still don't import, check your connection settings or manually map/program the camera names.



- 7) **Now you can start linking cameras to the readers / inputs as desired.**

MANUALLY ADDING CAMERA NAMES

This section assumes you have already taken care of the prerequisites (listed below):

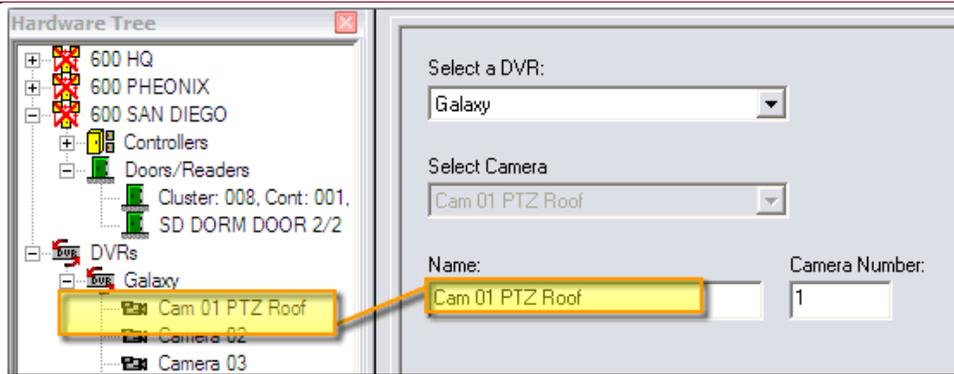
PREREQUISITES

1. The DVR unit and all the cameras are correctly installed /configured (**including camera names**).
2. You must have added the NVR / DVR unit to System Galaxy (see prior section) and met all the requirements listed.
3. You must be able to connect to the NVR / DVR unit.

Open the Camera Programming Screen - from menu **Configure ▶ Hardware ▶ DVR Cameras**

- 1) **Click the [Edit] button** in the Camera screen to rename a Camera.
- 2) **Select a DVR name** from the [Select DVR] droplist that you wish to configure the cameras for.
- 3) **Type a unique name for the Camera** in the [Name] field (i.e. "Lobby 01"). This name will appear in [Camera droplists] in the *Reader/Input Programming screens*.
- 4) **Click the [Apply] button** to save settings. **Camera Name will appear in the SG Hardware Tree**. *Refresh the hardware tree by re-opening it from the View menu.*

FIGURE 6 – CAMERA PROGRAMMING SCREEN



Part-8 Linking Cameras to Hardware in System Galaxy

Cameras can be linked with a Door Reader, Elevator Reader or Input Device.

LINKING A CAMERA TO A READER

Open the Reader Programming Screen - from menu [Configure](#) ▶ [Hardware](#) ▶ [Door/Reader](#)

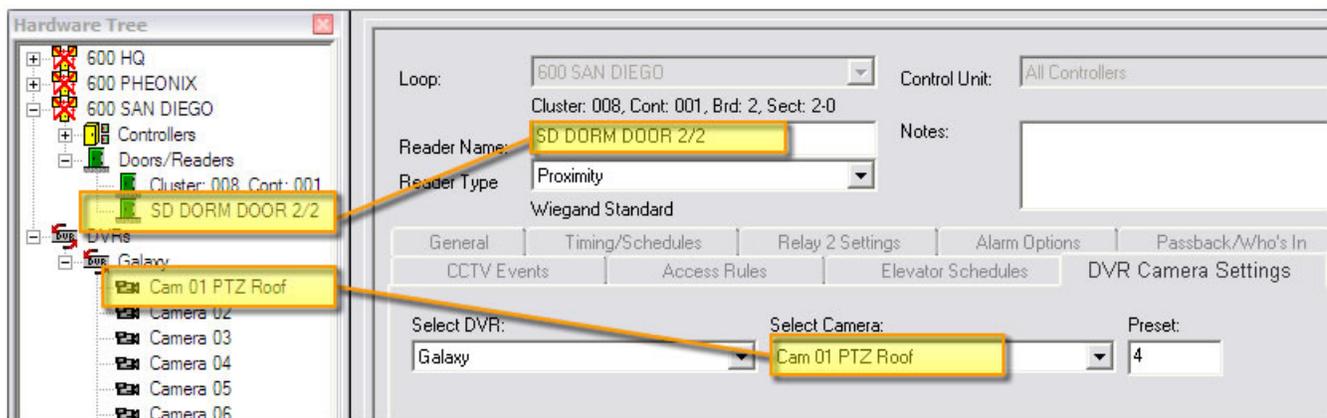
- 1) Select the Loop, Control Panel, and Reader you want to link to a camera.
- 2) Select the '*DVR Camera Settings*' tab and click [Edit] button.
- 3) Click EDIT to configure the CAMERA link.
 - Select the *DVR* then *Camera* you want to link to.
 - If the chosen camera is a PTZ and your DVR supports client-side presets (such as Discovery-3)
- 4) (optional) To cause this device to trigger an alarm condition within System Galaxy, set the **Ack option** to "checked". This option is in the *Alarm Options* tab. NOTE: see the section on *Auto Calling Video on Alarm* to configure automatic start up GCS DVR Viewer and live video feed plays back. The highest priority alarm will be displayed.
- 5) Click [Apply] button to save changes.

NOTES

LINKING MULTIPLE READERS TO A CAMERA: You can link more than one reader to the same camera.

UNLINKING READERS FROM A CAMERA: You can UN-link a camera from a reader by setting the DVR field to "NONE" or by changing which camera the reader is linked to.

FIGURE 7 – LINK CAMERA TO A DOOR/READER - PROGRAMMING SCREEN



LINKING A CAMERA TO AN INPUT

Open the Input Properties screen - from menu **Configure ▶ Hardware ▶ Input Devices**

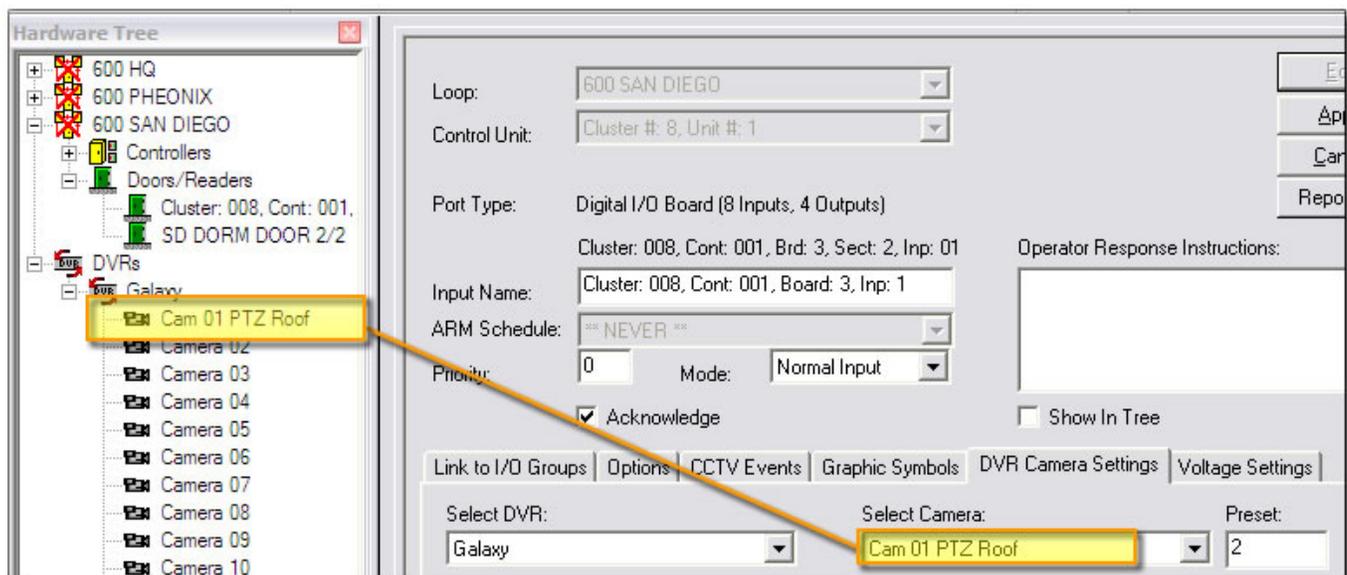
- 1) Choose the desired **Loop, Control Unit and Input Name** from drop lists as necessary.
- 2) Select the **'DVR Camera Settings'** tab and click **[Edit]** button.
- 3) Select the desired **DVR and Camera** from the drop lists.
- 4) Set the **Show in Tree** option to "checked" to allow the input's camera option to be selectable from the short-menu in the SG Hardware Tree.
- 5) Set the **Acknowledge** option to "checked" to allow the input to trigger an alarm if desired. NOTE: that an alarm condition can be used to automatically start up GCS DVR Viewer and live video feed.
- 6) Click **[Apply]** button to save changes, then refresh Hardware Tree (close and re-open) to display the input icon in the tree. Hardware Tree can be reopened from the **View Menu**.

NOTES

LINKING MULTIPLE INPUTS TO A CAMERA: You can link more than one Input with a Camera.

UNLINKING READERS FROM A CAMERA: You can UN-link a camera from an input by setting the DVR field to "NONE" or by changing which camera is linked to the input.

FIGURE 8 – LINK CAMERA TO AN INPUT - PROGRAMMING SCREEN



VALIDATING CAMERA MAPPING IN SG

After the configuration is complete, you should test the input / reader devices to prove they are correctly mapped to the corresponding camera and that you can connect to each camera / display video for the area you expect.

Follow the numbered steps to test each device. (The table below assists your verification).

- 1) Select the Event Monitoring Screen (System Galaxy is running and connected to loops)
- 2) Open the Hardware Tree and expand the objects to see all inputs and readers.
- 3) Induce an event for the device from hardware tree icon (i.e. right-click the icon and pulse / shunt).
- 4) Select the resulting event on the Event screen and right-mouse-click to pick the 'View Live Video' option from the short-menu. See Figure-8 in Chapter 3 for an example.
- 5) Verify the DVR Viewer opens/displays video for correct area.
- 6) Unshunt any input after verification is complete. (inputs only)
- 7) Repeat steps 3 through 6 for each device in the list.

Camera Connections Validation List (extra copy in the back – see Appendix A)

DVR NAME:		DVR LOCATION:		
Device Name/type	Camera #	Camera Name	Location/Area Displayed	Check
	1			<input type="checkbox"/>
	2			<input type="checkbox"/>
	3			<input type="checkbox"/>
	4			<input type="checkbox"/>
	5			<input type="checkbox"/>
	6			<input type="checkbox"/>
	7			<input type="checkbox"/>
	8			<input type="checkbox"/>
	9			<input type="checkbox"/>
	10			<input type="checkbox"/>
	11			<input type="checkbox"/>
	12			<input type="checkbox"/>
	13			<input type="checkbox"/>
	14			<input type="checkbox"/>
	15			<input type="checkbox"/>
	16			<input type="checkbox"/>

Chapter 3: Operating the DVR Viewer in SG

Methods of Retrieving Video

You can retrieve (or 'call up') video manually or automatically in System Galaxy.

AUTOMATIC VIDEO CALL-UP (ALARM TRIGGERED)

- ▶ **(Automatic call-up / instant Live Feed)** happens when an **armed alarm** occurs from an input or door that is linked to a camera (provided the workstation **auto call-up** option is ON and that device's ACK option is ON).

MANUAL VIDEO CALL-UP (OPERATOR COMMANDED)

- ▶ **(Live Feed)** Operator calls video from the icon of a camera-linked device (reader/input)
- ▶ **(Recorded Retrieval)** Operator calls historic/recorded video from a status or event message
- ▶ **(Live or Recorded)** Operator calls video for any selected camera from the Viewer when it is already open

The example below shows operator calling video for a door/reader that is linked to a camera.

- 1) right-click the **door** or **input icon** in the Hardware Tree to see the command-menu
- 2) choose **View Live Video** option to start live feed for that camera in the GCS DVR Viewer



Note: some brands such as Avigilon, Salient, or ExacqVision will use the .NET style viewer.

FIGURE 9 – MANUALLY CALL LIVE VIDEO FROM A COMMAND-MENU



Runtime Modes for Galaxy's DVR Viewer

There are two runtime modes for the GCS DVR Viewer; Normal/Integrated Mode and Standalone Mode.

NORMAL INTEGRATED MODE

The Viewer runs in *Integrated Mode* when Live or Recorded video is called up from within System Galaxy. Video is called by either manual operator commands or automatically triggered by armed alarms.

NOTES:

- ▶ The 'View Live Video' option only displays on command menus from the device icons or event messages provided the device is linked to a camera.
- ▶ Manual and automatic calling video is covered in the previous section of this chapter.
- ▶ See chapter 2 for instructions on linking cameras.

STANDALONE MODE (DIAGNOSTIC ONLY)

The DVR Viewer can operate independently or outside of System Galaxy. This can be done for trouble shooting purposes. You must supply the connection parameters and logon/password.



Blocking Video per Workstation: The GCS DVR Viewer can be disabled on a per workstation basis. See Chapter 2 in this manual for info on enabling/disabling the Viewer at individual workstations.

Viewing Modes of the DVR & NVR Viewers

The DVR Viewer has two viewing modes, LIVE and RECORDED.

	WHERE VIDEO CALLS FROM...	SINGLE CAM	GRID VIEW
Automatic call up	from an incoming armed alarm	YES	N/A
Operator Commanded	from SG Hardware Tree <ul style="list-style-type: none"> ▶ a device icon ▶ a camera icon ▶ an incoming event 	YES	N/A
	from SG Graphic Floor plan <ul style="list-style-type: none"> ▶ an icon on a floor plan 		
Operator Selected	from DVR Viewer LIVE <ul style="list-style-type: none"> ▶ a chosen camera (droplist) 	YES	N/A
Operator Selected	from DVR Viewer RECORDED <ul style="list-style-type: none"> ▶ a chosen camera (droplist) 	YES	N/A
	from SG HISTORY REPORT <ul style="list-style-type: none"> ▶ historical event 		
Operator Selected	from DVR Viewer's GRID VIEW <ul style="list-style-type: none"> ▶ a chosen set cameras (droplist) 	N/A	YES

LIVE VIDEO FEED

System Galaxy allows the operator to select live video from a single camera or multiple cameras at once.

NOTES:

- PAN / TILT / ZOOM controls are supported provided the DVR and camera are capable.
- PRESET controls are supported provided DVR and camera supports preset programming.
- Galaxy is **Net Time Sync compliant** as are the Discovery 3 & selected brand DVRs.

RECORDED VIDEO (HISTORIC RETRIEVAL)

NOTES:

- See manufacturer's information for DVR memory limits
- DATE and TIME controls are available to refine your selection
- Split screen or GRID VIEW view is not available in this mode.
- The 'Playback Controls' (start, stop, pause, fwd, rew) are available in this mode.
- System Galaxy adds an approximate 30-second lead-time to recorded video. Thus, video retrieval begins playing at approximately 30 seconds before the requested timestamp.

DVR Viewer User Interface (PC-based DVR Units)

Buttons and fields are dynamically enabled or disabled based on the selected Viewing Mode.

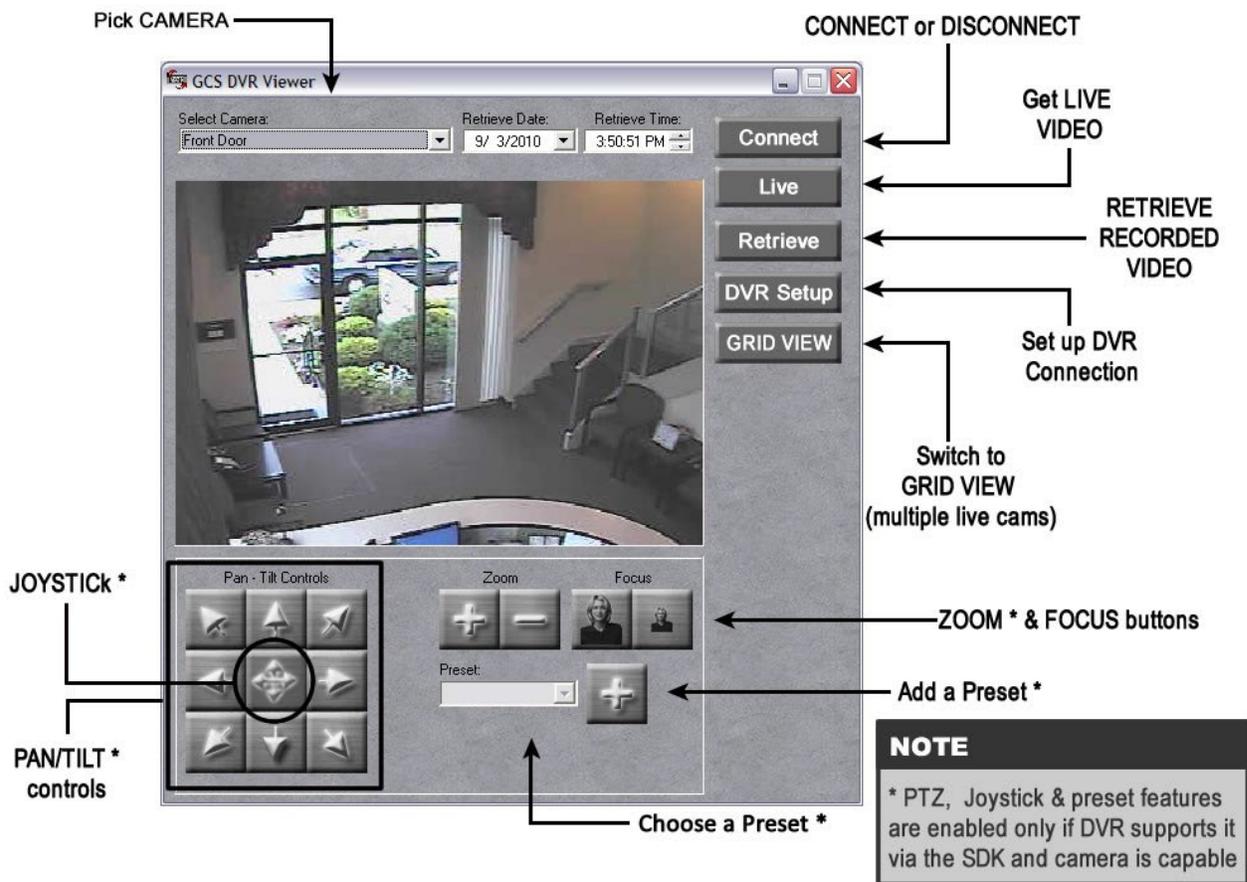
Camera controls are also dynamically enabled or disabled based on the *selected camera* as well as on how the camera is configured at the DVR unit.

- Connection settings are available in Live Mode.
- PTZ Control buttons enable in Live Mode if supported*.
- Playback Controls display in Retrieval (recorded) Mode.

DVR VIEWER SHOWN IN LIVE MODE

The figure below shows the DVR Viewer running in LIVE mode. Be aware that some options are available only if the DVR and camera are capable of supporting the option or control (i.e. Joystick, PTZ, Presets).

FIGURE 10 - GCS DVR VIEWER / LIVE MODE



DVR VIEWER SHOWN IN GRID VIEW

The figure below shows the DVR Viewer running in GRID VIEW.

GRID VIEW is only available in live mode.

Several camera sets are available:

- ▶ 2x2 (4 cameras showing live feed) choose to see 1 thru 4, 5 thru 8, 9 thru 12, 13 thru 16.
- ▶ 3x3 (9 cameras showing live) choose to see 1 thru 9 or 10 thru 16
- ▶ 4x4 (16 cameras showing live) this shows 16 cameras simultaneously

FIGURE 11 - DVR GRID VIEW / MULTI-CAMERA LIVE MODE



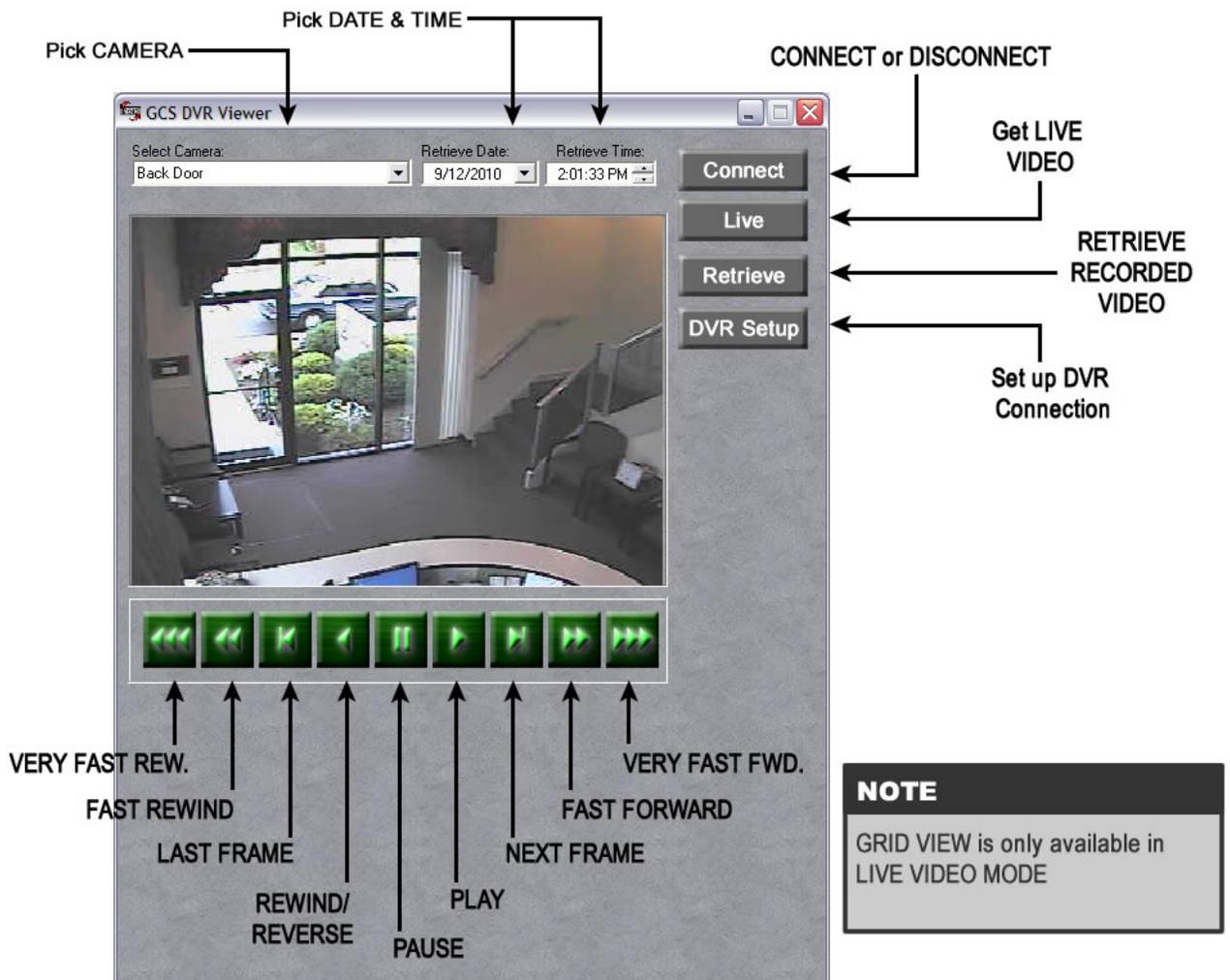
Any cameras that are not connected or not operating will not display video.

DVR VIEWER SHOWN IN HISTORICAL (RECORDED) MODE

The figure below shows the DVR Viewer running in RECORDED MODE.

The availability of recorded or historic video is based on the memory settings and capabilities of the DVR. This varies by brand. Refer to the DVR manufacturer’s documentations for memory specifications and instructions on how often to back up your video.

FIGURE 12 - GCS DVR VIEWER / RETRIEVAL MODE (HISTORICAL/RECORDED)



NVR .NET Viewer User Interface

Buttons, drop lists, and fields are dynamically enabled/disable based on the selected Viewing Mode.

 See the previous section in this chapter for more info on viewing modes.

NOTES:

- User may start **Live Mode** by selecting it from the SG Camera list in the SG Hardware Tree, as well as from incoming events and alarms.
- If selecting or switching cameras from within the Viewer window, user will click the [View Live Mode] button to initiate the digital feed. *Some model NVRs will switch to the live feed when the camera button is clicked. Other models require user to select the camera button and then click the view button.*
- Use the [show/hide] buttons to reveal or hide the controls as desired.
- PTZ Control buttons are enable in Live Mode if the NVR unit is configured to have a PTZ camera. If the controls appear enabled but the camera doesn't move, then the wrong camera is attached or the configuration is not set up correctly at the NVR unit for that camera/video channel
- Playback Controls pertain to retrieving Historical Video (Recorded Mode). These may also vary from one NVR brand to another.
- GRID VIEW (multi-camera view) is not typically available in this viewer.

NVR .NET VIEWER SHOWN IN LIVE MODE

The figure below shows the NVR Viewer running in LIVE mode. Be aware that certain options are available only if the brand/model of NVR or Camera are capable of supporting the option (i.e. Joystick, PTZ, Focus, Presets, etc.).

FIGURE 13 – SG .NET VIEWER / LIVE MODE



*The availability of certain features is based on the brand of camera or recorder you purchased.

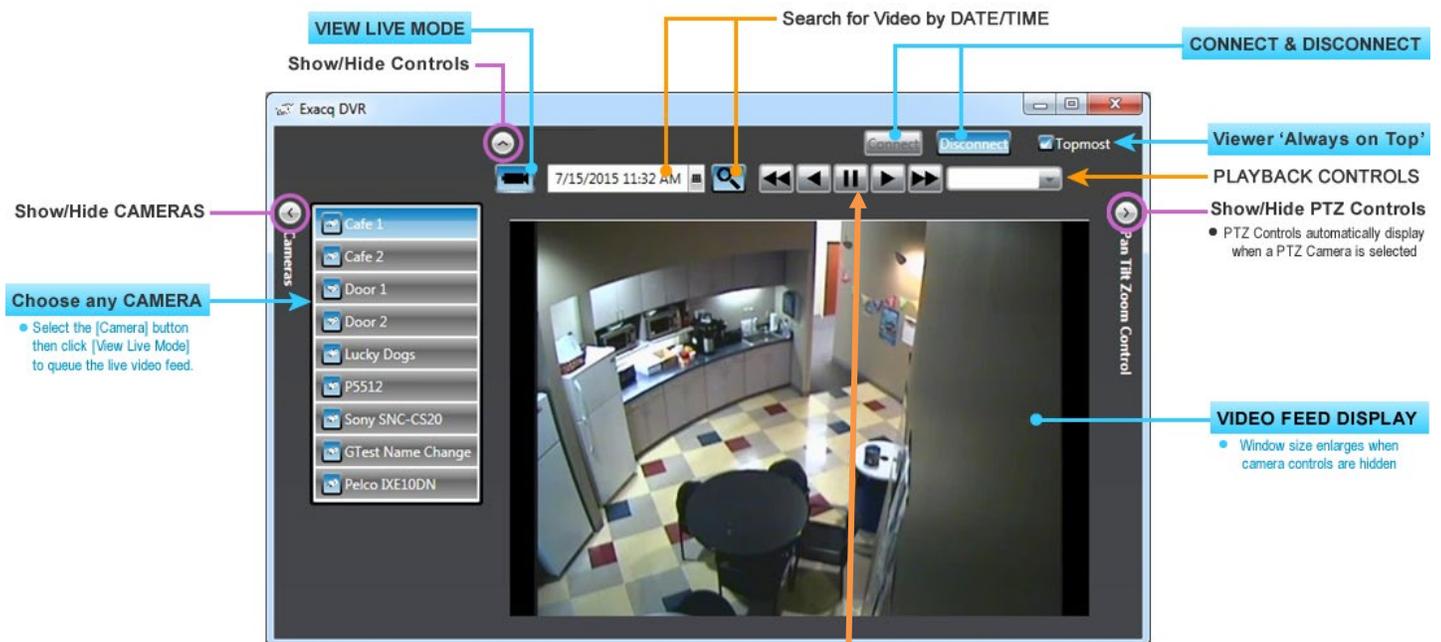
NVR .NET VIEWER SHOWN IN LIVE PTZ MODE

The figure below shows the NVR Viewer running in LIVE MODE.

Certain features such as **Iris control** or **PTZ Preset positions** are not available in every brand of Camera/NVR. NOTE: Presets must be preconfigured at the DVR/NVR unit before they are available in the Galaxy Viewer.

Also NOTE that the availability of **recorded or historic video** is based on the memory settings and capabilities of the DVR/NVR. This varies by brand. Refer to the manufacturer's documentations for memory specifications and instructions on how often to back up your video.

FIGURE 14 - GCS NVR VIEWER / RETRIEVAL MODE (HISTORICAL/RECORDED)



Playback controls include:

- Fast Reverse (at selected speed)
- Reverse (normal speed)
- Play/Pause toggle button
- Forward (normal speed)
- Fast Forward (at selected speed)
- Speed selection droplist (affects FF and FR)

<controls may vary for each 3rd Party NVR>

Chapter 4: Getting Video with the GCS DVR Viewer

Calling Live Video

There are several ways to get Video from System Galaxy – such as from the Hardware Tree, from the incoming events, from icons on the

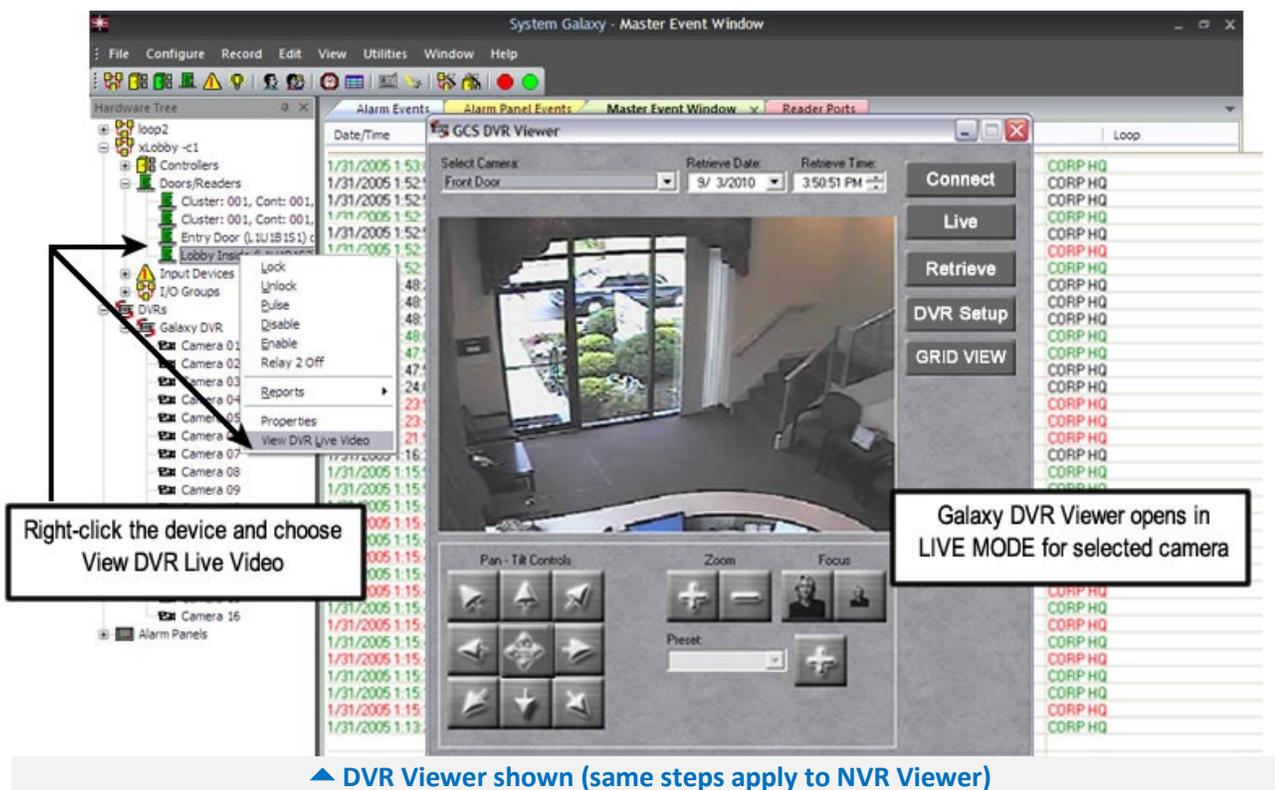
CALL LIVE VIDEO FROM THE HARDWARE TREE

The 'View Live Video' option is available on the short-menu when a [Door/Reader icon] or an [Input icon] is selected from the *Hardware Tree* in System Galaxy.

- 1) **Right-click on a [Reader Icon] or an [Input Icon] in the SG Hardware Tree** that has been linked to a camera.
 - ▶ Elevator icons (red door icon) will behave the same as standard door icon.
 - ▶ You can also get video from a camera icon in the Hardware Tree.
- 2) **Select the 'View Live Video' option from the short-menu:** This opens the GCS DVR Viewer and shows Live Video feed for the camera linked to the device.

IMPORTANT: For trouble shooting tips see Chapter 5.

FIGURE 15 - PLAYBACK FROM AN ICON ON HARDWARE TREE



CALL LIVE VIDEO FROM THE DEVICE STATUS SCREEN

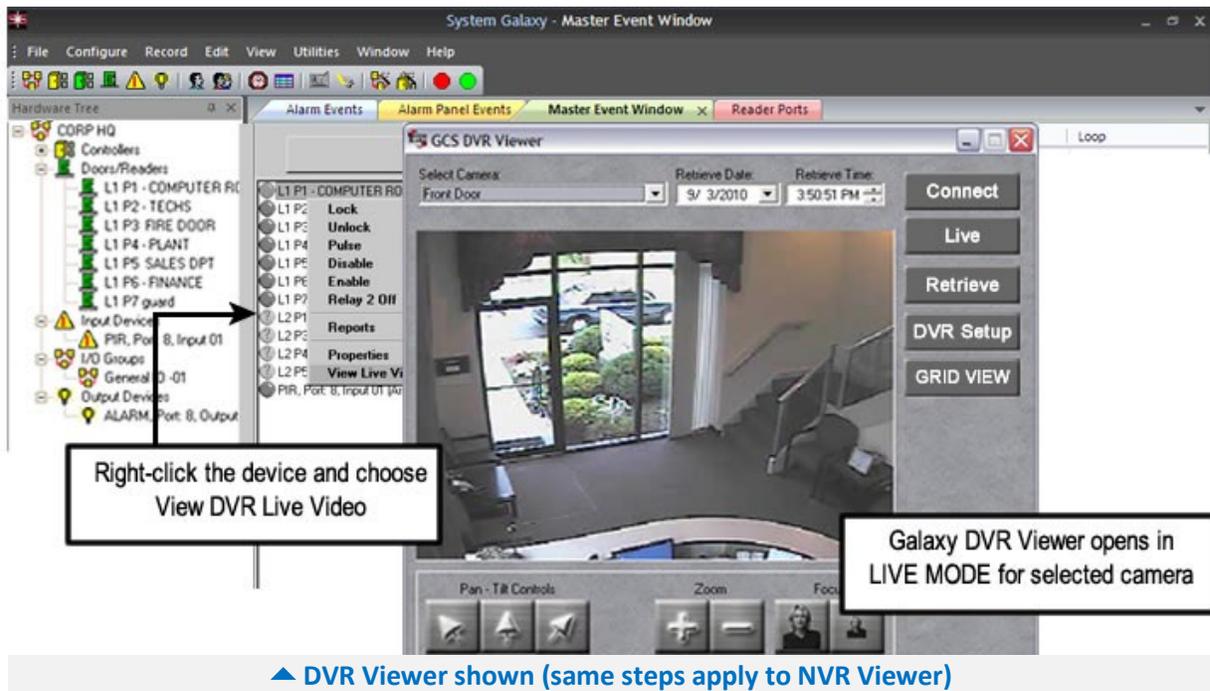
The 'View Live Video' option is available on the short-menu from a Device Status item:

Open the Device Status window from the menu [View ▶ Device Status](#)

- 1) select the desired 'Status Group' with the desired readers and inputs included (or add/edit a Status Group as needed). Click [OK] to open the Device Status screen.
- 2) **Right-click a [Device Status icon/item]** linked to a camera to get the short-menu.
- 3) **Select the 'View Live Video' option from the short-menu:** This opens the GCS DVR Viewer and shows Live Video feed.

IMPORTANT: For trouble shooting tips see Chapter 5.

FIGURE 16 - PLAYBACK FROM A DEVICE STATUS



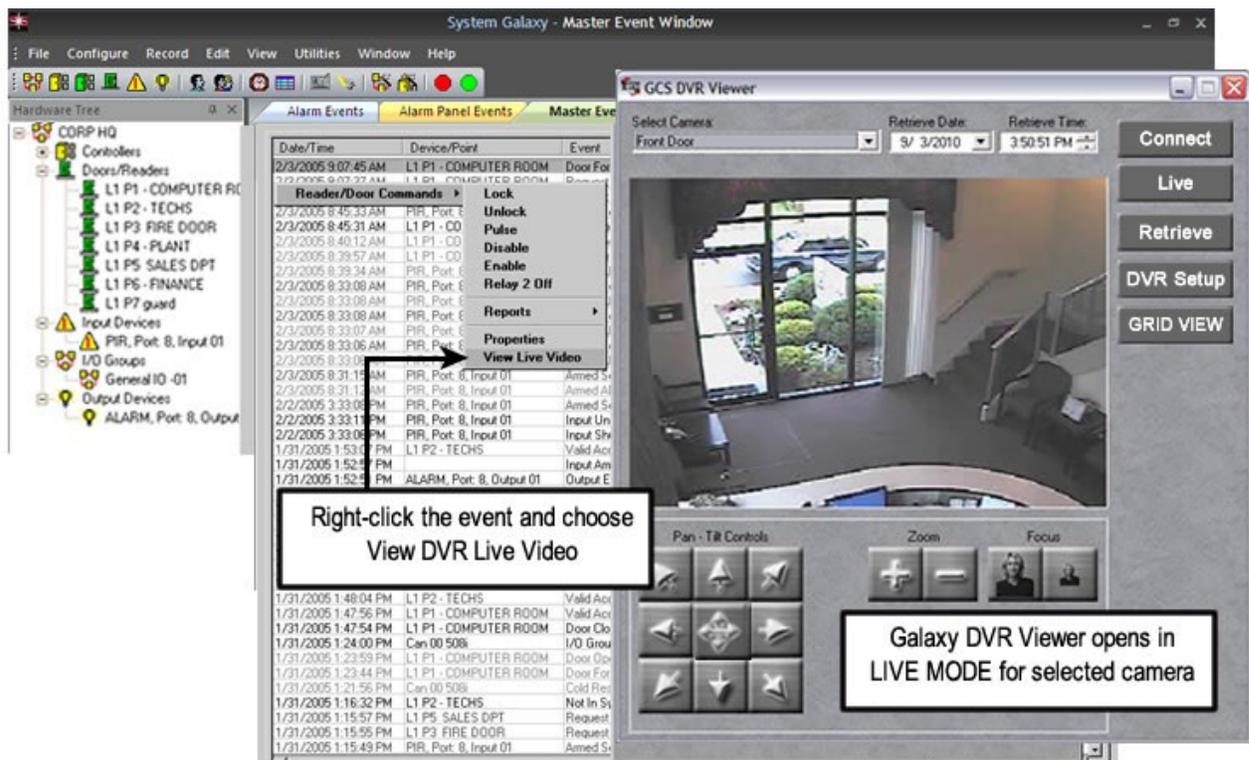
CALL LIVE VIDEO FROM AN EVENT

The 'View Live Video' option is available on the event item's short-menu in the Loop Monitoring screen. The *Loop Monitoring* screen and the *Alarm Event* screen are opened by default when System Galaxy is started running. The screens show active logging of events and alarms depending on configuration of readers and alarm priority settings, and other workstation options.

- 1) From the Event screen, right-click an Event which is linked to a camera to get the short-menu.
- 2) Select the 'View Live Video' option from the short-menu: The DVR Viewer opens and shows Live Video feed.

IMPORTANT: For trouble shooting tips see Chapter 5.

FIGURE 17 - PLAYBACK FROM LOOP MONITOR EVENT SCREEN



▲ DVR Viewer shown (same steps apply to NVR Viewer)

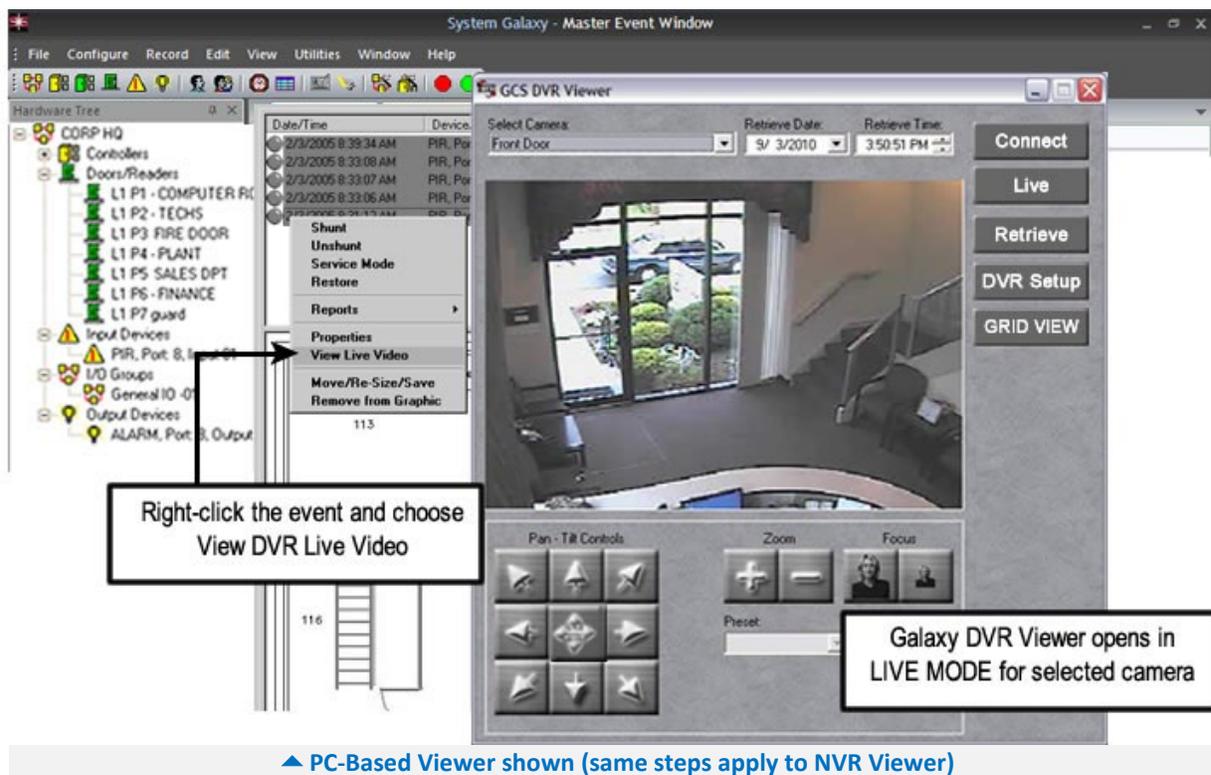
CALL LIVE VIDEO FROM AN ARMED ALARM EVENT

Viewing live video is available from the Alarm screen. There are several ways to see video from this screen.

- a) **Automatic Call-up:** The GCS DVR Viewer automatically opens when an armed alarm comes in for a device that is linked to a camera (if the Automatic Call-up Video) is enabled in System Settings.
 - ▶ The GCS DVR Viewer shows live video feed **for the priority alarm** when the alarm device is in the “ARMED” condition. Thus, if more than one device is in the alarm state, and priorities are used, the video comes from the device with highest priority
 - ▶ If a device becomes activated in the unarmed condition, the DVR Viewer will not automatically start up.

- b) **Manual Call-up:** Operators can right-click an Alarm Event from the Alarm events List. Select the ‘View Live Video’ option from the short-menu.

FIGURE 18 - PLAYBACK FROM ALARM SCREEN WITH ALARMS



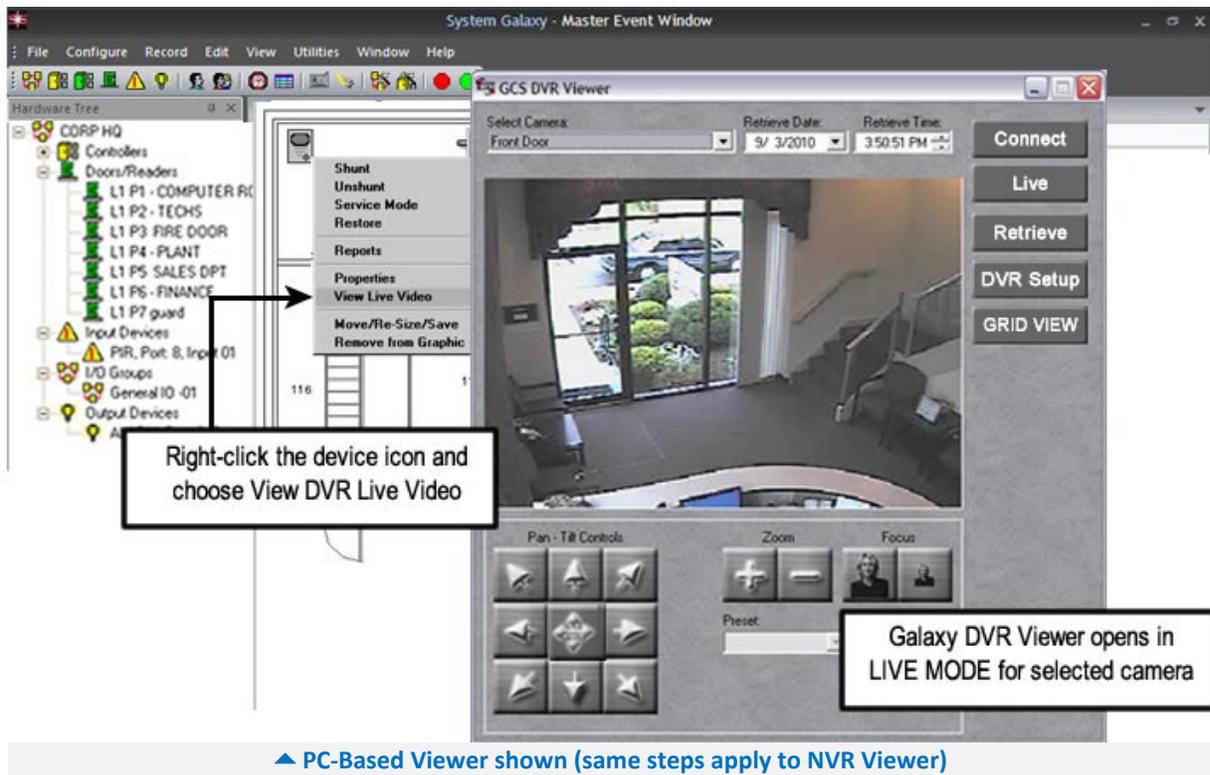
GET LIVE VIDEO FROM THE GRAPHICS SCREEN

The 'View Live Video' option is available on the short-menu from the Graphics screen:

- 1) From the SG menu, select View>Graphics and right-click a Door or Input icon of a device that has been linked to a camera to get the short-menu.
- 2) Select the 'View Live Video' option from the short-menu: The GCS DVR Viewer opens and shows video feed with Real-Time clocking/time stamp.

Remember that the clocks on the System Galaxy PC's and the DVR unit should be synchronized to a common master clock source for accurate clocking/time stamping.

FIGURE 19 - PLAYBACK FROM GRAPHICS SCREEN WITH DOOR AND INPUT ICONS



Once the Report Selections screen is open, user must choose the desired events by checking the appropriate options to specify which activities (events) to include.

- 2) **Select the desired loop and the devices** to select by on the left side of desired tabs.
- 3) **Click (check) the events to include** in the *'Reader/Door'* tab from the *'Specify activities to include'* group of check-boxes.
- 4) **Click (check) the events to include** in the *'Input Devices'* tab from the *'Specify activities to include'* group of check-boxes.
- 5) **Click (check) the DVR View check-box on the bottom right corner** of the Report Selections screen.
- 6) **Click [View Report] button** to open the DVR Report screen in the System Galaxy window.

FIGURE 21 - ACTIVITY HISTORY REPORT SELECTIONS SCREEN

After choosing desired readers and inputs and setting up desired options, the user must check the DVR View checkbox

<< continue to next page for instructions >>

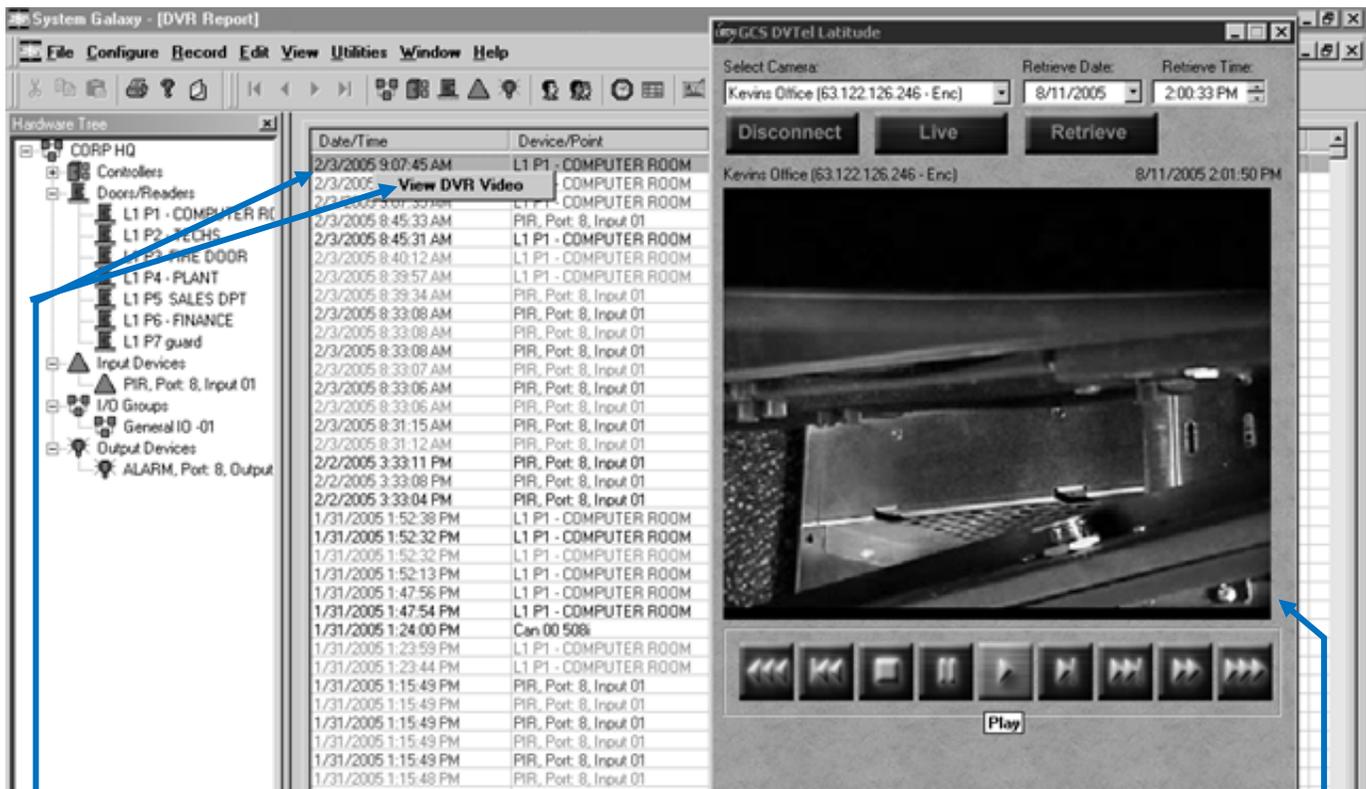
Once the SG DVR Report screen is open, user may start recorded video for certain events where device (reader/door/input) is linked to a camera/DVR Unit. Choose the desired events by checking the appropriate options to specify which activities (events) to include.

- 7) **Right-click the desired event** (line item) on the DVR Report screen.
- 8) **Select the short-menu option** to 'View DVR Video'.
- 9) **The GCS DVR Viewer will open and start video** from 30 seconds prior to the event's timestamp.



Remember that the system clocks on both the [System Galaxy PC's] and the [physical DVR Unit] should be synchronized to the same *master clock source* for accurate clocking/time stamping and synchronization between the System Galaxy device and the video stream.

FIGURE 22 – RECORDED PLAYBACK FROM THE DVR REPORT SCREEN



- ❶ Right-mouse-click the selects event that is linked to a camera
- ❷ Then select the *View DVR Video* option on the short-menu

- ❸ The Viewer opens and plays live video session for the camera linked to that reader/input device.

Chapter 5 ~ Troubleshooting Tips

Calling video for the wrong camera/area

1. Check that the correct camera is linked to the device in the SG software screens (revisit Section 2.6 about linking readers and input devices to cameras). If the *device-to-camera mapping* appears to be correct, then check the physical connections between the cameras and DVR – either swap your physical camera connections or rename your cameras in System Galaxy Programming screen (section 2.5.2).
2. Check that the camera name in SG is correctly programmed to the desired Camera ID number. If the *device-to-camera mapping* appears to be correct, then check the physical connections between the cameras and DVR – either swap your physical camera connections or rename your cameras in System Galaxy Programming screen (section 2.5.2).
3. Check that the camera is physically installed in the position expected and the cable is physically connected to the camera and to the DVR Unit to the video port intended for the desired area. Correctly connect the cameras at the DVR Unit.
4. Restart System Galaxy after programming changes or to ensure previous changes were initialized.

'DVR Settings' tab not available in Door/Input screen

1. Verify that the DVR Support System Registration is complete and valid (not expired). Section 2.4.
2. Verify that the DVR Enabled option is set correctly. See Section 4.1 for instructions.
3. Verify that the correct DVR Type is set in the DVR programming screen (Section 2.5.1).

'View Video' option not displayed in SG short-menus

1. Verify that the DVR Support System Registration is complete and valid (not expired). Section 2.4.
2. Verify that the DVR Enabled option is ON in Client Gateway. See Section 2.4.2.
3. Verify that the DVR BLOCKING is not enabled section 4.1
4. Verify that the correct DVR Type is set in the DVR programming screen (Section 2.5.1).
5. Check that the reader/input device is correctly linked to a camera (Section 2.6).
6. Verify that incoming events are time-stamped later than the time of the camera linking in SG Camera Programming screen. Events that came in from that device before the linking will not have the option to view video. User may wish to restart/re-open the target screen (i.e. Hardware Tree, Event Screen, Device Status Screen, Graphic screen or DVR Report screen) to reset software. Also user can restart System Galaxy.
Note: video cannot be initiated or retrieved for messages, alarms or graphics that occurred before the camera is linked to the device. Once the camera is linked, messages from that point on can be use to initiate video streaming.
7. Restart System Galaxy after programming changes or to ensure previous changes were initialized.

'View Video' option not displayed in Graphics Screen

1. Check that the target device is correctly linked to a camera. See Section 2.6 for instructions.
2. Remove and re-add the graphic icon on the Graphic screen to begin seeing the video linking option. (The device must be linked to the camera and saved to the database before it is added to a Graphic Screen. You may have added the graphic icon before it was linked or updated in the database.).
3. Restart the Graphic Screen and/or restart System Galaxy to pick up change if necessary.

“DVR NAME” not in DVR Type droplist (Adding a DVR)

1. Verify that the correct option “DVR Support” is checked in the SG Product Registration screen. Contact Galaxy Control System as appropriate for information on or changes to your registration.
2. Check the DVR Enabled option is set correctly (Section 4.1) at the workstation in question.

“DVR NAME” Name is not on the GCS DVR Viewer

1. Verify that the correct option “DVR Support” is checked in the SG Product Registration screen.
2. Verify that other DVR options are NOT checked (i.e. RapidEye, Loronix, Integral, etc) Section 2.4.
3. **Restart SG after correcting Registration.**

GCS Viewer opens but does not display video

1. **Open the GCS DVR Viewer in Standalone Mode** (Section 3.1.1); click the [Settings] button and enter the correct IP Address, port number (6808) and login parameters; select desired camera and live mode.
 - a. **If you can get video in standalone mode then check the following:**
 - Check that System Galaxy DVR Programming screen has the correct network IP Address, login and passwords are correct and entered into the appropriate fields (section 2.5.1)
 - Check that SG DVR Programming screen has the IP Port number set to 6808 (section 2.5.1)
 - Check the DVR Enabled option is set correctly (section 4.1) and registration is current.
 - b. **If you cannot get video in standalone mode then see Section 5.8**

Cannot get Video in Standalone Mode

1. **Check that you can ping the DVR Unit from the System Galaxy PC.** See Appendix B for instructions on pinging from System Galaxy PC.
 - a. If you can ping go to step 2 in this section to telnet the DVR’s listening port.
 - b. If you cannot ping the DVR Unit go to step 3 in this section.
2. **Check that you can telnet to your intended port from System Galaxy.** See Appendix C or D for instructions on Telnet from System Galaxy PC.
 - a. If you can telnet port go to step 4 in this section.
 - b. If you cannot telnet port number go to step 3 in this section.
3. **Check that the DVR Unit is powered up and running (software program is running).**
 - a. You might consider restarting the DVR Unit and software after you make sure that the IP Address of the DVR is STATIC and not dynamically obtained. Dynamically obtained IP Addressing will require you to update all the IP Address settings at the System Galaxy PC’s every time a power interrupt occurs at the DVR. See the setup/configuration screen at the DVR Software to set this to a Static Address. An IT Professional can obtain a static Address.
 - b. Enlist the help of your IT Professional if needed to verify routing/switching between System Galaxy PC/Workstations ant the DVR Unit.
4. **Check that the IP Address and Port ID at System Galaxy’s software match the DVR’s settings.** Run the “ipconfig” command at the DOS prompt on the DVR Unit and confirm the IP Address at the DVR. Then verify that SG programming matches. (Set the SG Programming to match the IP Address of the DVR Unit. See Sections 2.2 and 2.5.1 for instructions on SG.

IMPORTANT: The software must be running. Note that the DVR has an option to control whether the DVR Unit’s IP Address is static or dynamically assigned. **It is recommended that the DVR IP ADDRESS is set to be static (always the same).**

GCS DVR Viewer is not popping/starting on Alarms

If the GCS DVR Viewer is not popping up when an alarm occurs, user should verify the following things:

1. **Confirm that the ‘DVR Support Enabled’ checkbox is checked** in the GCS Client Gateway Service. See Section 2.4.2
2. **Confirm that the ‘Automatically Call Up DVR Video’ option is checked** in the System Settings/Alarm Options tab. (User may need to restart the SG Software Application for changes to System Settings to take effect).
3. **Confirm that the PC/Workstation is not “blocked” from Viewing (see section 4.1)**
4. **Confirm that the device (reader/input/motion detector/etc.) is configured to require acknowledgement.** This is done by opening the Properties Screen of the Device via the Hardware Menu or Hardware Tree. The ‘ack’ checkbox should be checked if an alarm event is desired.
5. **Confirm whether an Alarm Priority has been configured** in System Settings/Alarm Options tab:
 - a. if a priority range is set to anything other than 0-9999 then user must verify whether the device in question has been given a priority number that is within the programmed range.
 - ▶ If a device has no priority value configured, it will not throw an alarm event
 - ▶ If a device has a priority value that is not equal to or within the min and max values of the range set in System Settings, then the video will not pop.
 - ▶ If a device is within the programmed priority range but is a lower priority than another active device, then the Viewer will display the video from the device with the highest-unacknowledged alarm event.
 - ▶ If the device is not armed, then the Viewer will not pop.
6. **Confirm that the device is linked to a functioning camera** – the linking of camera’s to a device is found in Section 2.7. If the software configuration is correct, consider investigating physical wiring/connections to the DVR unit and to the actual camera.
7. **Confirm that the device is in the “Armed/Alarm state.** If a device is not armed, then the Viewer will not pop when the device is active.

GENERAL NOTE: Certain Alarm Options (i.e. Alarm Priority Range and ‘Automatically Call Up DVR Video’) are configured in the Alarm Options tab, which is located in Workstations Options Screen. This means that the feature is configured on a “per workstation” basis.

- ▶ **To open the System Settings screen go to the main System Galaxy menu and select *Configure>Options>System Settings*, then select the Alarm Options tab.**
- ▶ **Set the desired configuration and click [Apply] button**
- ▶ **The System Galaxy software must be restarted for changes to take effect**
- ▶ **Alarm Option programming is described in this manual in Section 4.1.2 and in detail in the main Software Manual for System Galaxy.**

SG 7 NOTE: ‘DVR Support Enabled’ checkbox must be “ON” in Client Gateway to support *menu options* and *DVR Viewer popping* .(see Section 2.4.2 for instructions).

Appendix A: Camera Validation List

Additional Camera Mapping Validation check list - photocopy as needed.

Table 1 System Galaxy Camera Mapping Validation check list

DVR NAME:		DVR LOCATION:		
Device Name/type (Front Door / reader)	Camera # (1)	Camera Name (Lobby Cam)	Location/Area Displayed (Front Door and Lobby Area)	Check Good
	1			<input type="checkbox"/>
	2			<input type="checkbox"/>
	3			<input type="checkbox"/>
	4			<input type="checkbox"/>
	5			<input type="checkbox"/>
	6			<input type="checkbox"/>
	7			<input type="checkbox"/>
	8			<input type="checkbox"/>
	9			<input type="checkbox"/>
	10			<input type="checkbox"/>
	11			<input type="checkbox"/>
	12			<input type="checkbox"/>
	13			<input type="checkbox"/>
	14			<input type="checkbox"/>
	15			<input type="checkbox"/>
	16			<input type="checkbox"/>

Appendix B: Ping the DVR

To ping a DVR Unit from the command prompt at the System Galaxy PC/Workstation do the following.

Open a Command Window:

1. Click [Start] button on the Windows® Task Bar
2. Select the 'Run' option
3. Type "cmd" in the field provided.
4. Click [OK] button



To ping: Once the Command Window opens, type the ping command with the target (DVR) IP Address. See figure below. **Syntax is important, so type one space between command and IP Address.** Type "**ping nn.nnn.nnn.nnn**"; where "**n**" stands for the numeric characters in the IP Address

Example 1 shows a reply. Example 2 shows that the target IP Address is not able to reply.

Example 1 – Ping with Reply – good connection

```
C:\WINNT\system32\cmd.exe

C:\WINNT\Profiles\croberts>ping 61.111.140.130

Pinging 61.111.140.130 with 32 bytes of data:

Reply from 61.111.140.130: bytes=32 time=10ms TTL=128
Reply from 61.111.140.130: bytes=32 time<10ms TTL=128
Reply from 61.111.140.130: bytes=32 time<10ms TTL=128
Reply from 61.111.140.130: bytes=32 time<10ms TTL=128

Ping statistics for 61.111.140.130:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 2ms
```

Example 2 – Example Ping with Request Time Out – failed to connect

```
Copyright 1985-2000 Microsoft Corp.

C:\WINNT\Profiles\croberts>ping 61.111.140.130

Pinging 61.111.140.130 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

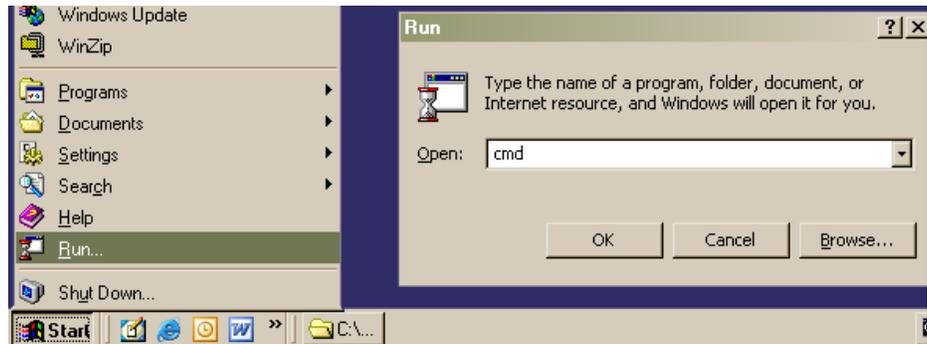
Ping statistics for 61.111.140.130:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Appendix C: Telnet DVR Port ID via Command Prompt

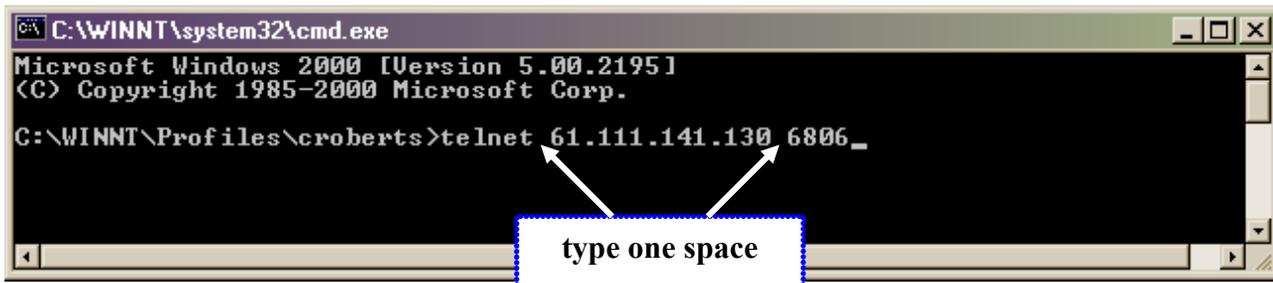
To telnet DVR Unit from the System Galaxy PC/Workstation you can run from the CMD command line.

Open a Command Window:

1. Click [Start] button on the Windows Task Ba
2. Select the 'Run' option
3. Type "cmd" in the field provided.
4. Click [OK] button



To telnet: Once the Command Window opens, type the *telnet command* with the *target (DVR) IP Address* and *Port ID*. **Syntax is important, so type one space between command and parameters.** Type **"telnet nn.nnn.nnn.nnn pppp"**; where **"n"** stands for the **numeric characters in the IP Address** and **"p"** stands for the **numeric characters in the port ID**. *If you prefer using HyperTerminal to telnet, see Appendix C.*

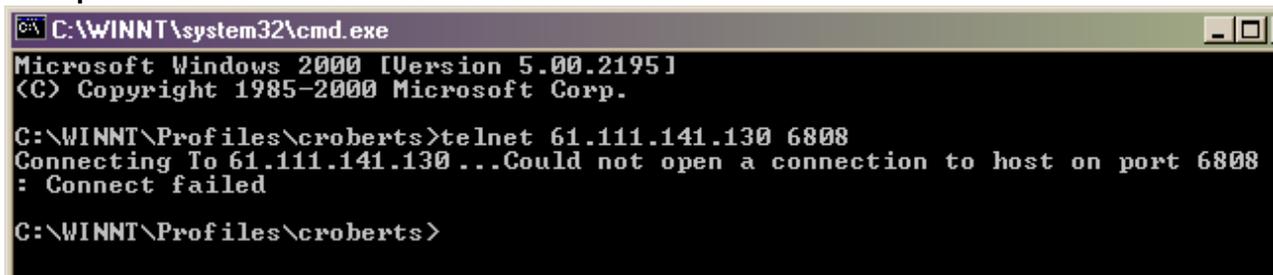


Example 1 shows a reply. Example 2 shows that the target port ID Address is not able to reply.

Example 1 – telnet with NO Conflict – good connection



Example 2 – telnet with conflict – failed to connect

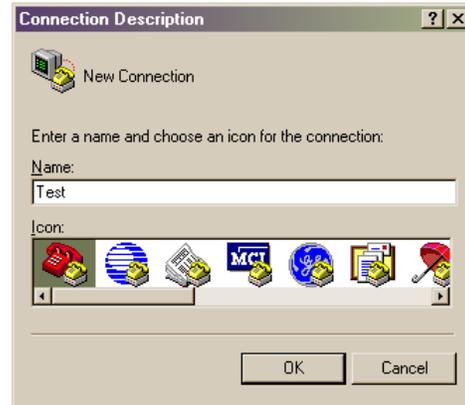


Appendix D: Telnet DVR from HyperTerminal

Follow these instructions to telnet the Port ID using HyperTerminal from the System Galaxy PC/Workstation. This verifies whether the Galaxy PC can call the listening port at the DVR Unit.

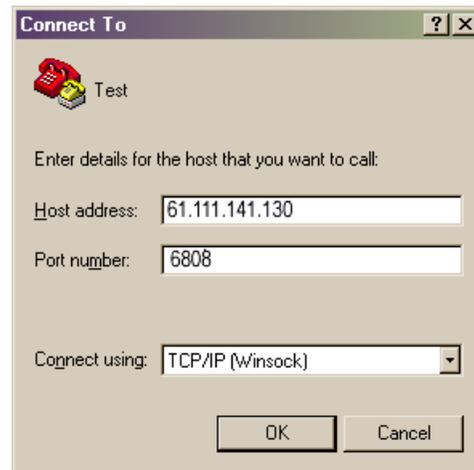
From the Windows Task Bar:

1. Click the [Start] button and select the menu path "Programs > Accessories > Communications > HyperTerminal".
2. When the 'Connection Description' window opens, enter a name for you connection (in our example we typed "Test").
3. Click [OK]



In the 'Connect To' window:

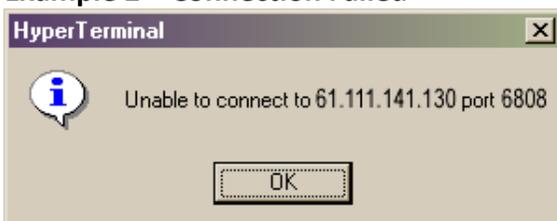
1. Type in the DVR's IP Address in the in the [Host address] field.
2. Type in the Port ID "6808" in the [Port number] field.
3. Select "TCP/IP Winsock" in the [Connect] field.
4. Click [OK] to connect.



Example 1 – Good Connection



Example 2 – Connection Failed



Appendix E: Keywords and Terms

Table 2 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 an event, a SG menu option can be selected to retrieve the video feed from that message’s timestamp.
<i>DVR Client Software</i>	The DVR software that resides on a PC/Workstation and is able to interface with the DVR. Discovery, Rapid-Eye and DVR NAME Products offer a client-side application.
<i>DVR Server Software</i>	The DVR software that resides on the DVR Unit itself and is used to operate the DVR. Refer to the DVR Product Manuals for installation and operation of this equipment.
DVR	Digital Video Recorder (the physical DVR unit).
<i>DVR Interface</i>	The DVR Interface is the software feature that allows interaction between the Access Control System and the Video Surveillance System. (GCS DVR Interface).
GCS	Galaxy Control Systems (acronym).
GCS DVR Viewer	The System Galaxy window that opens from an operator command or alarm and allows user to view video.
<i>Communication Server or LCS</i>	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).
<i>SG Workstation</i>	A PC that runs to System Galaxy, but is not the LCS or SG Server.
NVR	Network DVR Video Recorder – an embedded application that resides on the network.