GATEKEEPER

Y35

User Manual & Install Guide

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GLOSSARY

Term/Abbreviation	Description
ACC	Accelerometer
CAN	Controller Area Network is a vehicle bus standard designed to allow microcontrollers and devices to communicate with each other in applications without a host computer.
Y35	Digital Video Recorder – a device which records audio and video input from the cameras and stores it to a hard disk drive and/or an SD card for retrieval and viewing.
FTP	File Transfer Protocol is a standard network protocol used to transfer computer files from one host to another host over a TCP-based network, such as the Internet.
GPS	Global Positioning System – it is a radio navigation system that allows land, sea, and airborne users to determine their exact location, velocity, and time 24 hours a day, in all weather conditions, anywhere in the world.
H.264	Also known as MPEG-4 Part 10, Advanced Video Coding (MPEG-4 AVC), this is a video coding format that is currently one of the most commonly used formats for the recording, compression, and distribution of video content.
ICD / ICD2	Interactive Control Display, purpose built touch screen monitors for operating Gatekeeper Systems Y35.
IO	Input/Output
IP Camera	An Internet protocol camera, or IP camera, is a type of digital video camera commonly employed for surveillance, and which, unlike analog closed circuit television cameras, can send and receive data via a computer network and the Internet.
LAN	Local Area Network – it is a computer network that interconnects computing devices within a limited area such as a school, work area, or an office building.
LCD Monitor	Liquid Crystal Display Monitor – it is a display screen that uses electronically modulated segments controlling a layer of liquid crystals and arrayed in front of a light source (backlight) or reflector to produce images and text.
MAC Address	Media Access Control address – it is a unique identifier assigned to network interfaces for communications on the physical network segment.
OSD	On Screen Display – an image superimposed on a screen commonly used to display information such as volume, channel, date/time, device status, etc. It also forms the basis of the menu system display which is used to configure the system settings of the digital video recorder.
SD	Secure Digital Card – an ultra-small flash memory card designed to provide high-capacity memory in a small form factor. It is a commonly used high performance portable storage standard for video and audio capture devices.

TCP	TCP is one of the main protocols in TCP/IP networks which enables two hosts to establish a connection and exchange streams of data. TCP guarantees delivery of data and also guarantees that packets will be delivered in the same order in which they were sent.
UDP	UDP is a simple connectionless transmission model with a minimum overhead of protocol mechanisms.
USB	Universal Serial Bus – it is an industry standard that defines the cables, connectors and communications protocols used in a bus for connection, communication, and power supply between computers and electronic devices.
UTC	Coordinated Universal Time is a time standard based on International Atomic Time with leap seconds added at irregular intervals to compensate for the Earth's slowing rotation. It is the primary time standard by which the world regulates clocks and time.

Event Abbreviations.

When recorded video is viewed in G4 Viewer+ the abbreviations displayed on the screen for events are specific to their default values.

SENSOR	OSD NAME
BRAKE	BK
WARNING LIGHTS	WN
STOP ARM	SA
DOOR	DR
LEFT TURN	LT
RIGHT TURN	RT
EXTRA1	EX1
EXTRA2	EX2

1 Introduction

1.1 Welcome to Your New Y35

Congratulations on the purchase of your new Gatekeeper Systems Y35. This Mobile Digital Video Recorder offers H.264 compression, the same compression technique as used in Blu-Ray disk players that produces crystal clear, best in class, video imagery.

The Y35 records to a removable SD (Secure Digital) card. The Y35 is built to withstand the shocks, vibration and environmental stresses inherent in vehicle operation. In order to play back the recorded video the Y35 utilizes custom video viewing software, “G4 Viewer Plus”, an easy to use application that allows users to quickly find the video of interest and save a clip. With the press of a button, users can print images and then send them to authorized staff. G4 Viewer Plus is available as a free download from www.gatekeeper-systems.com

1.2 Important Safety and Handling Information

Before using the product, please ensure that you observe the safety precautions described below. Always ensure that the product is used correctly and in accordance with the listed instructions. Be sure to also check the manuals included with any other product accessories that you may use.

SAFETY AND INFORMATION SYMBOLS USED IN THIS MANUAL	
	This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying this product. Failure to heed these warnings or instructions may damage the product or cause it to operate incorrectly.
	This symbol indicates text of importance or special significance in the accompanying product literature. These may be important operating instructions or supplemental information.
	This symbol draws the user’s attention to time-saving tips and helpful guidelines for using the product’s features.
	This symbol draws the user’s attention to recommended best practices which should be observed when installing and using the product.

The battery must be disconnected from the vehicle before working on the electrical system of the vehicle when installing, servicing or removing Gatekeeper products.

Preparing to Install

- Customers shall be responsible for addressing any systems on the bus that require attention as a result of disconnecting the bus battery. This includes, but is not limited to, entering a radio theft code, programming radio stations etc.

Installing the product

- All Gatekeeper Systems employees or contractors who perform electrical work (e.g. installing, servicing or removing a Y35, installing a backup camera system, etc.) on a customer vehicle shall ensure that the battery in the vehicle is disconnected before work commences.

Operating the product

- The Y35 has an operating temperature range of -40°C to +65°C. It is good practice to ensure that the product is mounted in a suitable location which does not exceed acceptable temperature ranges during the course of normal operations.
- Do not remove the cover of the product as this will void the warranty.
- When a system has shipped with a GPS antenna, please ensure that the GPS antenna is mounted externally on the roof of the bus with a clear view of the sky, and with the magnetic side facing down.
- The SD Card is specially formatted for use in your Y35. Please do not format it yourself using Microsoft Windows. A SD card from a Gatekeeper G4-304SD is not compatible with the Y35 and so would require to be formatted in the Y35 prior to use.

Prior to removing the SD card for viewing video on a pc, it is essential that the Y35 be fully powered down before removal of the SD card. Failure to do this will result in data corruption and thereby loss of video.

Updating the product

- Firmware updates (available from www.gatekeeper-systems.com) are system and product model specific. These firmware updates must be applied to the Y35 system only.

Repairing the product

- Your Y35 doesn't have any user-serviceable parts. Do not open or disassemble it, or attempt to repair it or replace any components.
- Disassembling the Y35 may damage it or may cause injury to you. If your product needs service, is damaged, or malfunctions, contact Gatekeeper Systems for assistance. If you attempt to open it, you risk damaging your product, and such damage isn't covered by the warranty on your Y35.

If at any time there is a question about how to proceed, please contact Gatekeeper Systems immediately at either 1-888-666-4833 or 1-604-864-6187 for assistance. Review all available installation documentation, including technical bulletins. Additional resources, technical bulletins and product tutorials can be found in the Support section of www.gatekeeper-systems.com.

2 Your Y35 at a Glance

2.1 Take a Tour

This is the front panel of the Y35:

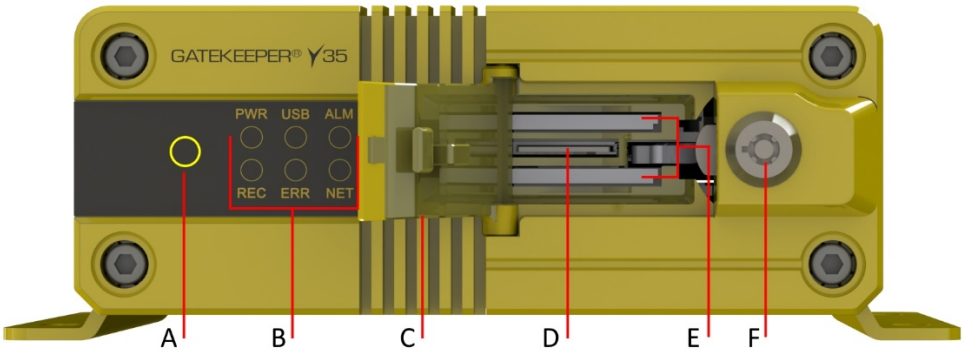


Figure 2-1 Front View of the Y35

- *A. IR Receiver*: If installed, used in conjunction with the IR Remote control for system navigation.
- *B. LED Status Indicators:* Status indicator lights which light up and/or flash to alert the user to the device's operational status and/or alarm status.
- *C. USB Port (Currently hidden behind Open Door):* Supports external USB flash drives which can be used for saving/uploading configuration files, updating system firmware and downloading of recorded video/event files.
- *D. SIM Card Slot.* Allows for a SIM Card to be inserted. Currently not supported by Gatekeeper. For SIM Card use please talk with your Gatekeeper Sales Manager about Gatekeepers MWM solution.
- *E.* SD Card Slots. Allows for up to 2 SD cards to be present within the Y35 system.
- *F.* Lock. Allows access to the SD Card Slot (E).

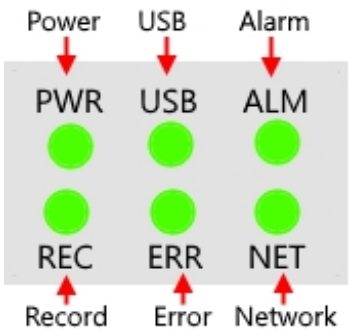


Figure 2-2 Close Up View of the Y35 Status Indicator Lights

LED	Description
PWR	Illuminated blue indicates the device is powered.
USB	Illuminated green indicates that the device is connected.

LED	Description
ALM	Illuminated red indicates that a sensor has triggered an alarm.
REC	Illuminated green indicates that the device is recording.
ERR	Illuminated orange indicates for hardware error.
NET	Illuminated green indicates network connection is available. (Note: The LAN LED status light is currently not supported)

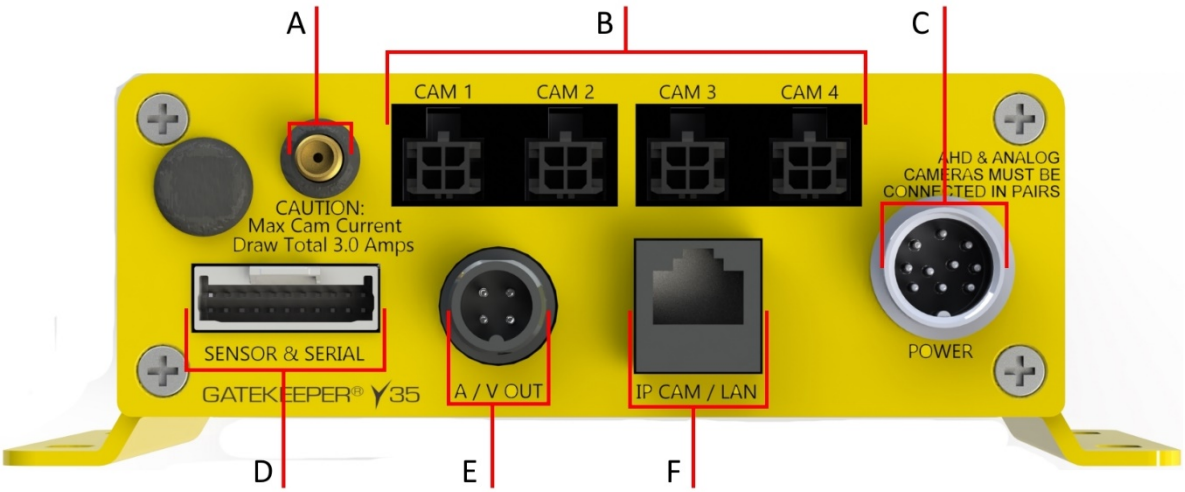
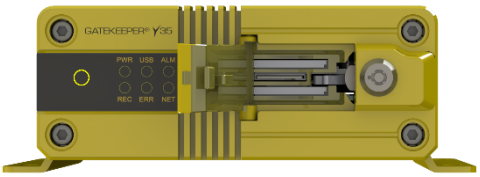


Figure 2-3 Rear View of the Y35

- *A. GPS Antenna In:* This is the connection point for the external GPS antenna. If there is no GPS antenna attached, this port should be covered with a rubberized cap.
- *B. Analog and analog HD camera connectors.* If Analog HD cameras are to be used they must be used in pairs. 1+2 or 3+4.
- *C. Power In:* This is the power input port for the device.
- *D. Serial/Sensor Cable (CAB000376) connection.*
- *E. A/V Out port.*
  NOTE: Only used at setup.
- *F. IP Camera / LAN connector*.

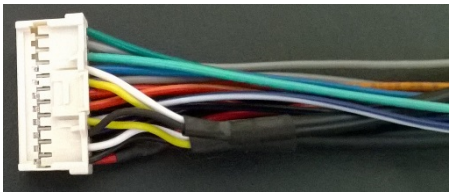
2.2 What's Included

The following items are included as part of your basic product package.

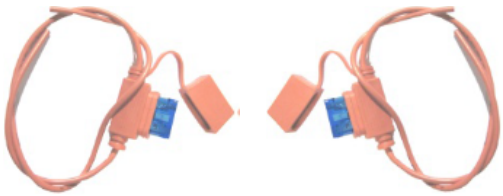


Y35 Digital Video Recorder
(Y35 Assembly)
Your new mobile digital video recorder with a state of the art hard disk drive suspension system and smart thermal management technology.

Power Cable
(CAB000360)
This is the vehicle power ignition cable for powering the Y35 and its connected accessories.



Sensor Cable
(CAB000376)
This is the sensor cable for connecting the various sensor input to the Y35.



Power Line Fuse

Ignition Line Fuse

Fastening Screws

Front Cover Key

There are numerous customisable options and accessories which can tailor the product installation to fit your unique operating environment and requirements.

Please contact Gatekeeper Systems for information on optional download kits and other accessories for use with your product.

2.3 SD Card – Overview.

The Y35 utilizes a SD (Secure Digital) card for the storage of Video. SD cards are very simple to use, and very reliable. The SD cards supplied by Gatekeeper Systems have been extensively tested and are the only approved SD cards for use in the Y35.

Inserting the Card Into A Reader.

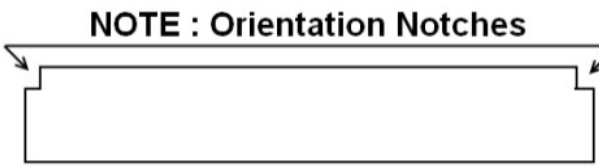
Please Note: When using a SD Card from a Y35 in a Microsoft Windows based system, you will be prompted to format the SD Card, Click CANCEL. If you choose to format the SD Card ALL VIDEO will be deleted from the SD Card.

If you are using a Notebook PC, or a recently purchased desktop, your system may have been supplied with a SD card reader.

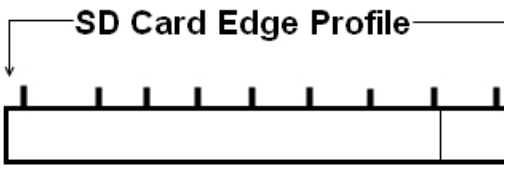
Please check the documentation that came with your computer system, or, speak with your I.T. department staff to determine if you have an internal SD reader and how to insert the SD card into your system.

If you are using and external SD card reader it is essential that the SD Card is inserted into the reader in the correct orientation or permanent damage may occur to the SD card, the Card reader, or both.

1. Select the slot on the reader. Please check the documentation which came with your SD Card reader as to where the SD Card slot can be found.
2. If your personal computer has an integral reader, select the appropriate slot on that system.
3. Carefully push the card into the slot, check the orientation. The edge which has this profile is the edge which must be inserted into the reader.
4. Ensure that the SD Card is fully inserted.



SD Card Reader Slot



SD Card Edge View

2.4 GPS

The Y35 can be outfitted with optional GPS functionality. It is recommended that the GPS antenna be exterior mounted utilizing the magnetic base with the cable protected by a suitable grommet. The GPS antenna should have an unobstructed 360 degree view of the sky. Failure to mount the GPS antenna in this manner may result in loss of GPS signal.

3 Getting Started

3.1 Learning How to Navigate

Your Y35 comes with a simple graphical user interface from which you can access all the features and functions. You can select from a choice of intuitive interface devices with which to navigate the system. Depending on your product package, your Y35 will have come bundled with one of the following accessories for accessing the user interface.

If there is access to either an Android or IPad Gatekeeper offers an application, G4 Connect, available as a free download. G4 Connect is custom software with which to connect to Gatekeeper Systems range of Hybrid MDVR's using a G4 Connect Wi-Fi dongle. With G4 Connect you can Playback previously recorded video; configure the MDVR; Export video for viewing later even on a different system. Please see separate document "G4 Connect Getting Started" for more information.

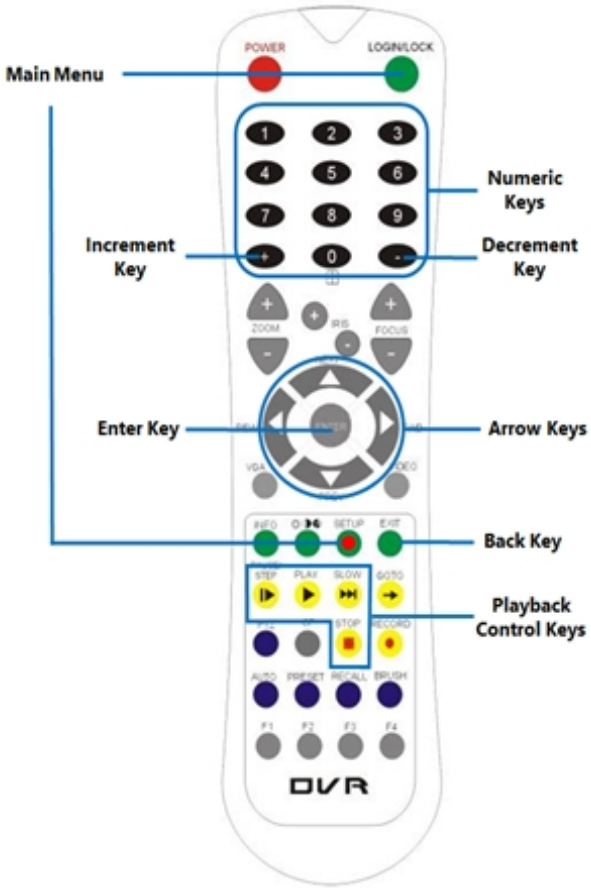
		
IR Remote Control *(Y35 RemoteCtrl)* This is an infra-red remote control which can be used to access the DVR functions and menu system. The DVR screens and menu options are displayed on the accompanying LCD monitor. The IR Remote Control enables you to move an on-screen cursor which allows you to select an on-screen button or option by highlighting it. Pressing the buttons on the IR Remote Control will then allow you to perform the selected action.	**Finger Mouse** *(FDM-G51)* This is a trackball mouse which enables access to the Y35 functions and menu system through a simple point-and-click interface. The Y35 menu and navigation actions are displayed on the accompanying LCD monitor. You will be able to move the on-screen pointer using the Finger Mouse, and interact with the system by positioning the pointer over the various on-screen buttons or options, and clicking the buttons on the Finger Mouse to perform an action.	**Interactive Control Display** *(G4-ICD2 Assy)* This interactive control display (ICD2) is a touchscreen LCD display which allows access to the Y35 functions and menu system through an intuitive touch interface. The Y35 screens and menu options are presented on the ICD2 screen itself, and you will be able to interact with the system and perform actions by touching or tapping the on-screen buttons and options.

3.1.1 Using the IR Remote Control

The infra-red remote control, together with the accompanying LCD monitor, allows you to access the DVR functions and menu system.

Front View of the IR Remote Control

(Please Note: The remote you receive may appear slightly different to the one depicted here)



Setup: To access the menu use the Setup button. It is also possible to use the Login/Lock screen button.

- *Arrow Keys:* These buttons can be used to move the cursor or menu highlight to the left and right as well as up and down in order to select a button or menu item.

- *Enter Key:* Pressing this button will select the highlighted menu item.

- *Numeric Keys:* These buttons are used for entering numeric input.

When viewing video streams, pressing any button (from 1-9) will immediately jump to the video stream from the corresponding camera. Pressing the button zero (0) will cycle through the camera channels iteratively.

- *Increment Key:* This button provides a quick way to increase the parameter value by one unit (in configuration screens).

- *Decrement Key:* This button provides a quick way to decrease the parameter value by one unit (in configuration screens).

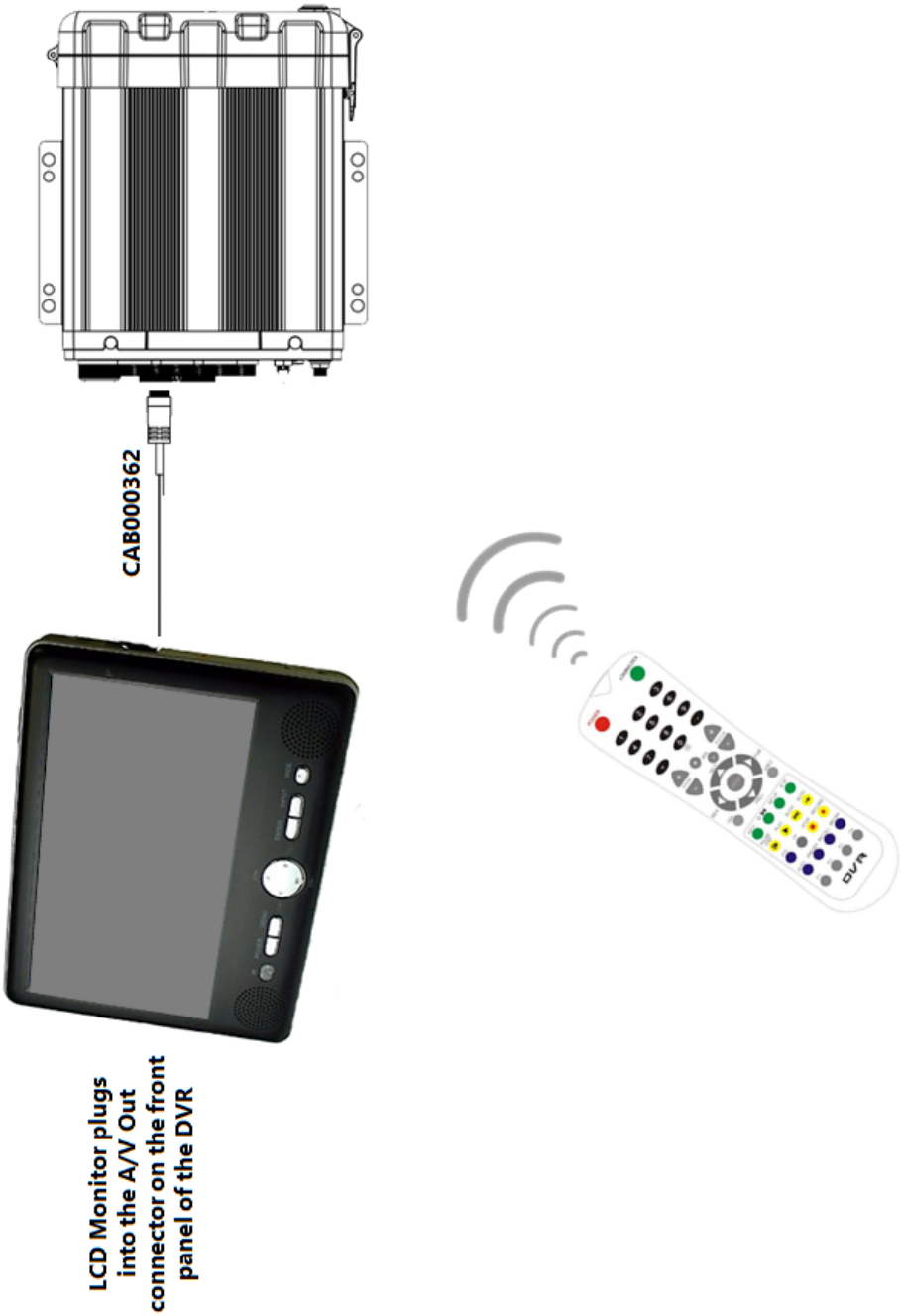
- *Main Menu:* This two buttons provide a quick way to return to the main menu.

Access to the main menu requires that the user is logged into the system with correct username and password.

- *Back Key:* Pressing this button will return you to the previous screen. If you are at the live video view screen, this button will toggle the on-screen quick menu on and off.

- *Playback Control Keys:* When you are viewing video playback, these keys will allow you to easily ***Pause/Step*** through the video frame by frame, ***Play*** the video at normal speed, play the video at ***Slow*** speed (pressing repeatedly cycles through the available slow motion speed settings), and ***Stop*** the video playback.

How to Connect the IR Remote Control and LCD Monitor



Connecting the IR Remote Control and LCD Monitor

3.1.2 Using the Trackball Mouse.

The trackball mouse, together with the accompanying LCD monitor, provides one way to access the Y35 menu and functions using a familiar graphical user interface point-and-click system.

Figure 3-1 Side View of the Finger Mouse

- *Right Button:* When viewing video streams, pressing this button will toggle between showing and hiding the on-screen quick menu.
- *Track Ball:* This is a finger-operated mouse ball which moves the on-screen mouse pointer in response to the movement of the track ball. This is used to move the pointer to the left and right as well as up and down in order to point to a desired button or menu item.
- *Trigger Button:* Pressing this button will select the screen area, button or menu item that the on-screen pointer is currently pointed at.

Pressing and holding the ***Trigger Button*** whilst simultaneously moving the ***Track Ball*** will enable you to perform a click-and-drag action. This allows you to interact with moveable screen options such as slider bar controls, and to reposition moveable text visually and intuitively.

How to Connect the Finger Mouse and LCD Monitor

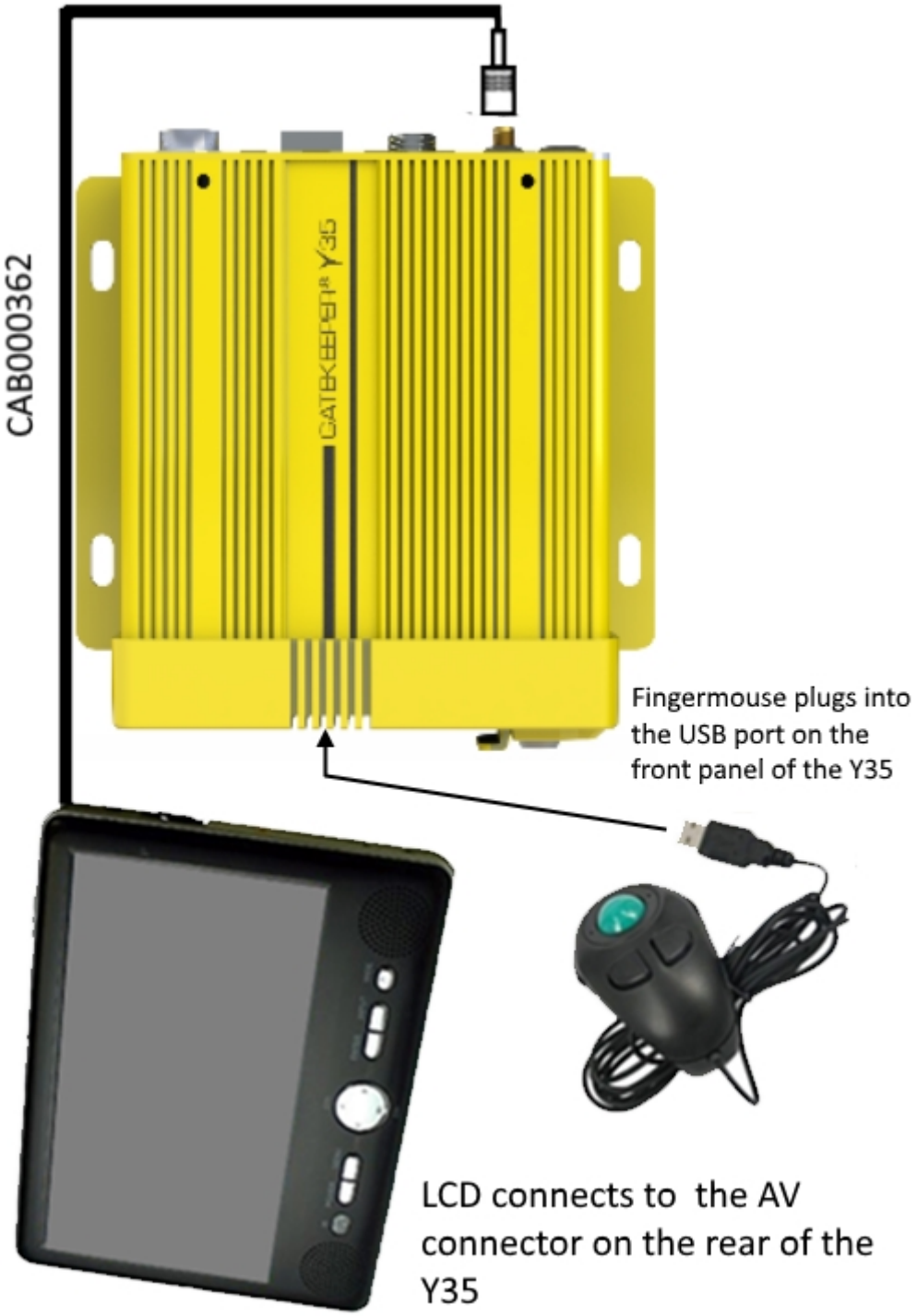


Figure 3-2 Connecting the Finger Mouse and LCD Monitor

3.1.3 Using the Interactive Control Display (ICD2)

The ICD2 is a full featured touch display that makes navigating the device menu system very intuitive. Besides the touch function, this accessory also has a number of buttons which act as hotkeys allowing the user to quickly select and go to different functions.

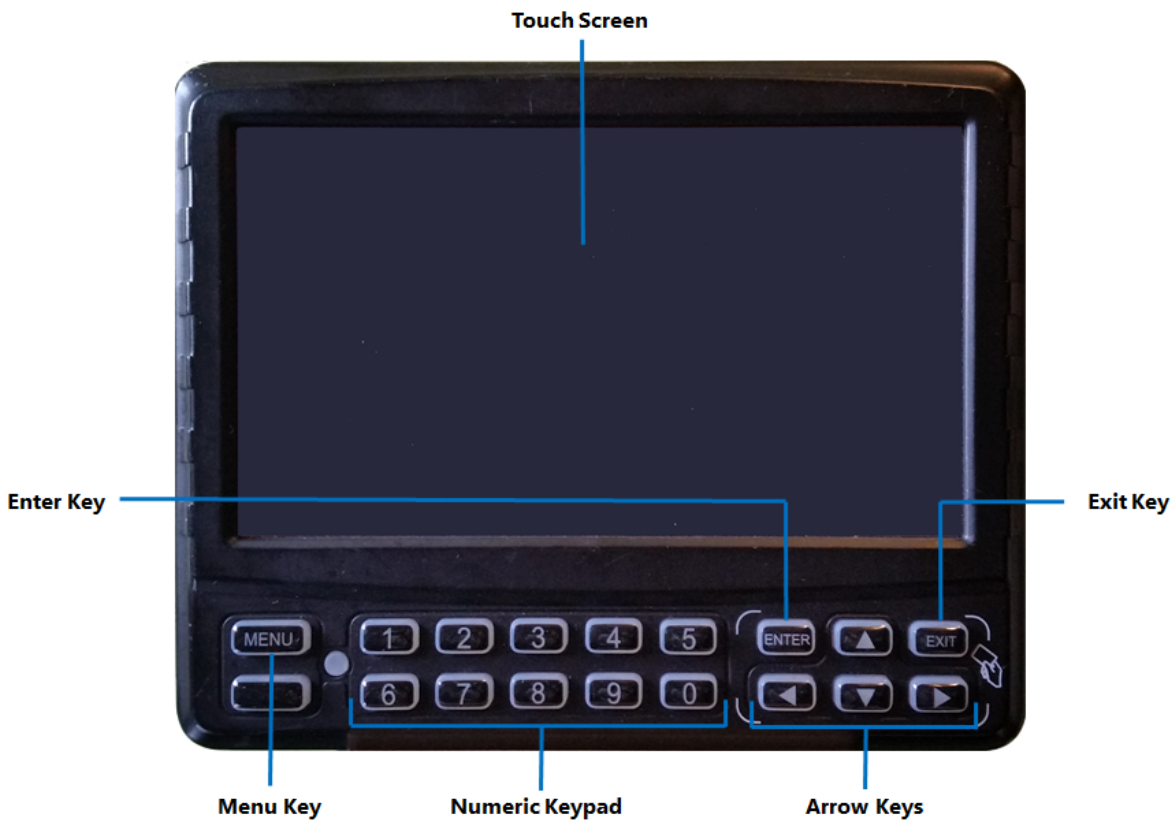
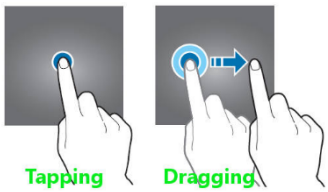


Figure 3-3 Front View of the ICD2

- *Touch Screen:* A single tap anywhere on the screen (when showing video streams) will bring up the on-screen quick menu. Another single tap anywhere on the screen will hide the quick menu again. At all times, tapping on an on-screen field, tab or button in the menu system will select it. Tapping, holding and dragging will also work for sliders and moveable items – allowing you to perform click-and-drag actions.



- *Menu Key:* When viewing video streams, pressing this button will immediately jump to the main menu screen.

  Access to the main menu requires that the user is logged into the system with a correct username and password.

- *Exit Key:* Pressing this button will move the user back to the previous screen. If viewing video streams, then pressing this button will toggle between showing and hiding the on-screen quick menu (similar to a single tap on the touch screen).

- *Arrow Keys:* These buttons can be used to move the cursor or menu highlight to the left and right as well as up and down in order to select a button or menu item.

- *Enter Key:* Pressing this button will select the highlighted menu item (similar to tapping on it).
- *Numeric Keypad:* These buttons are used for entering numeric input.

When viewing video streams, pressing any button (from 1-9) will immediately jump to the video stream from the corresponding camera. Pressing the button zero (0) will cycle through the camera channels.

How to Connect the ICD2

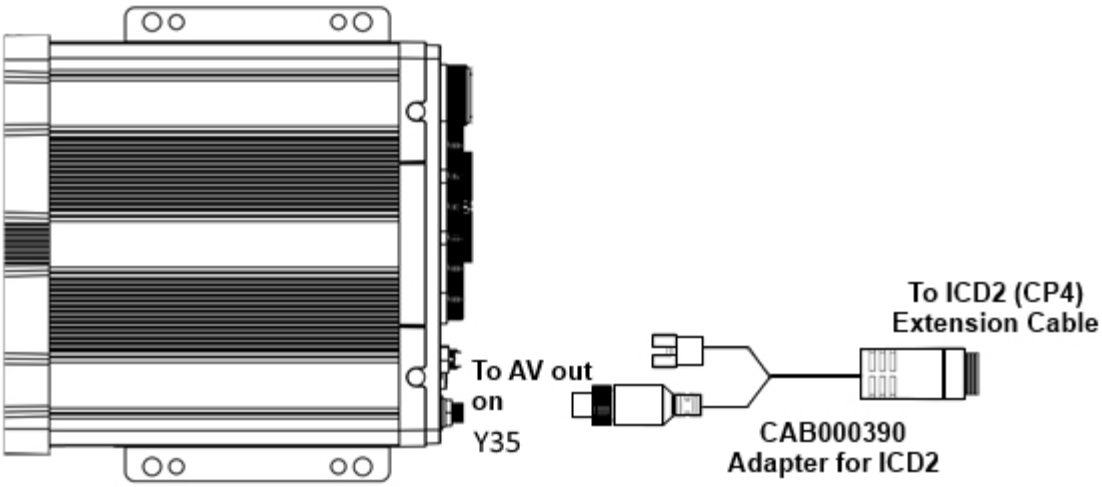


Figure 3-4 Connecting the ICD2

If using an ICD2 (CP4), you must first configure the DVR for it. First, plug the 4-Pin Female Aviation end of (CAB000390) into the A/V output on the back of the unit also 4-Pin Male Aviation. Next connect the 3 pin connector on CAB000390 to the 3 pin connector on CAB000376 (Serial/Sensor cable), and connect the ICD2 connector cable (CAB000391) to CAB000390 and to the ICD2. Using the remote or mouse, log into the Y35 and under: Setup -> Collection -> Serial Port -> RS232, set this connection to CP4 and ensure Baud is set to 57600, hit ***apply*** and then restart the unit. Note that you cannot connect a Driver Alert button and an ICD2 at the same time.

3.2 Guide to Common Navigation Actions

The following table provides a summary of commonly used navigation functions.

No.	Action	IR Remote	Finger Mouse	ICD2
1	**Navigating through the screens.**	Use the ***Arrow Keys*** to move the cursor to highlight different menu options.	Move the on-screen pointer using the ***Track Ball*** and point to the desired menu option.	Use your finger to tap the desired menu option.
2	**Selecting an item on the screen.** *Note: Also referred to as clicking the item.*	Move the cursor using ***Arrow Keys*** until the desired item is highlighted, then press the ***Enter Key*** to select it.	Move the on-screen pointer until it points to the desired item, then click the ***Trigger Button*** to select it.	Tapping on the desired item with your finger will select it.
3	**Pressing an on-screen button.** *Note: Also referred to as clicking the button.*	Move the cursor using ***Arrow Keys*** until the on-screen button is highlighted, then press the ***Enter Key***.	Move the on-screen pointer using the ***Track Ball*** until it is situated over the on-screen button, then click the ***Trigger Button***.	Tap the on-screen button with your finger.
4	**Entering text into a selected alphanumeric field.**	Move the cursor using ***Arrow Keys*** until the desired text field is highlighted, then press the ***Enter Key***. An on-screen keyboard will be displayed. Type your text by moving the cursor with ***Arrow Keys*** to highlight each letter and pressing the ***Enter Key***.	Move the on-screen pointer using the ***Track Ball*** until it is situated over the text field, then click the ***Trigger Button***. An on-screen keyboard will be displayed. Type your text by moving the pointer with ***Track Ball*** to each letter and clicking the ***Trigger Button***.	Tap on the text field with your finger. An on-screen keyboard will be displayed. Use the on-screen keyboard to type the text with your fingers.
5	**Entering numbers into a selected numeric field.**	Move the cursor using ***Arrow Keys*** until the desired numeric field is highlighted, then press the ***Enter Key***. An on-screen keypad will be displayed. Type the number by moving the cursor with ***Arrow Keys*** to highlight each digit and pressing the ***Enter Key***. Alternatively, you may also use the ***Numeric Keys*** on the IR Remote Control to type the	Move the on-screen pointer using the ***Track Ball*** until it is situated over the numeric field, then click the ***Trigger Button***. An on-screen keypad will be displayed. Type your numbers by moving the pointer with ***Track Ball*** to each digit and clicking the ***Trigger Button***.	Tap on the numeric field with your finger. An on-screen keypad will be displayed. Use the on-screen keypad to type the numbers with your fingers. Alternatively, you may also use the ***Numeric Keypad*** on the ICD2 to type the numbers directly, once the numeric field has been selected.

No.	Action	IR Remote	Finger Mouse	ICD2
		numbers directly, once the numeric field has been selected.		
6	**Click and drag an item.**	This action can't be performed using an IR Remote.	Move the on-screen pointer using the ***Track Ball*** until it is situated over the item, then click and hold the ***Trigger Button***. Whilst still holding the ***Trigger Button***, now simultaneously move the on-screen pointer using the ***Track Ball***. This will drag the item in the direction which you are moving the pointer.	Tap your finger on the item and continue to hold. Now, without releasing your finger, move it in the direction you desire. This will drag the item in the direction which you are moving your finger.
7	**Go back to previous screen.**	Press the ***Exit*** button on the IR Remote.	Not applicable. Use the on-screen controls.	Press the ***Exit*** button on the ICD2.
8	**Display the on-screen quick menu.** *Note: On-screen quick menu is only accessible from the live video view screens.*	When you are at any live video view screen, press the ***Exit*** button on the IR Remote to toggle between displaying and hiding the on-screen quick menu. Note that at any other screen, the ***Exit*** button returns you to the previous screen.	When you are at any live video view screen, press the ***Right Button*** on the Finger Mouse to toggle between displaying and hiding the on-screen quick menu.	When you are at any live video view screen, press the ***Exit*** button on the ICD2 to toggle between displaying and hiding the on-screen quick menu. Note that at any other screen, the ***Exit*** button returns you to the previous screen.
9	**Jump to the main menu.**	Press either the ***Login/Lock*** button or the ***Setup*** button on the IR Remote. Note that if you are in the midst of video playback, then you need to ***Exit*** the playback first before you can jump to the main menu.	Not applicable. Use the on-screen controls.	Press the ***Menu*** button on the ICD2.
10	**Jump to a particular channel.**	While viewing video, press any one of the numbered buttons (from 1 to 9) on the numeric keys of the IR	Not applicable. Use the on-screen controls.	While viewing video, press any one of the numbered buttons (from 1 to 9) on the numeric keypad of the ICD2, or

No.	Action	IR Remote	Finger Mouse	ICD2
		Remote to switch the view to the corresponding channel number.		double tap the channel on the screen to switch to the corresponding channel.
11	**Cycle to the next channel.**	Press the **(0)** button on the numeric keys of the IR Remote.	Not applicable. Use the on-screen controls.	Press the **(0)** button on the numeric keypad of the ICD2.
12	**Playback controls for video.**	When you are viewing video playback, press the ***Setup*** key to display/hide the on-screen video playback controls which you then use to adjust the video playback. Besides that, you may also use the following dedicated keys on the IR Remote to perform the following actions: ***Pause/Step*** through the video frame by frame. ***Play*** the video at normal speed. ***Slow*** motion playback (pressing repeatedly cycles through the available slow motion speed settings). ***Stop*** the video playback.	When you are viewing video playback, press the ***Right Button*** to display/hide the on-screen video playback controls. You may then use the on-screen controls to adjust the video playback.	When you are viewing video playback, tap anywhere on the screen to display/hide the on-screen video playback controls. You may then use the on-screen controls to adjust the video playback.

3.3 The Y35 Startup Screen Layout

Upon startup, the screen of the Y35 will display the live video streams from the various cameras attached to the Y35. Users can select and configure how many video channels to be displayed on the screen for monitoring purposes. The screen also serves as an interface into the menu system of the Y35 where users can playback recorded video, and access the configuration menu to change the device configuration settings.
The screen layout will stay the same regardless of whether an ICD2 is being used, or an LCD monitor being used along with a Finger Mouse or IR Remote control. This ensures that the user always has a familiar interface and consistent methodology to interact with the menu system and device functions.

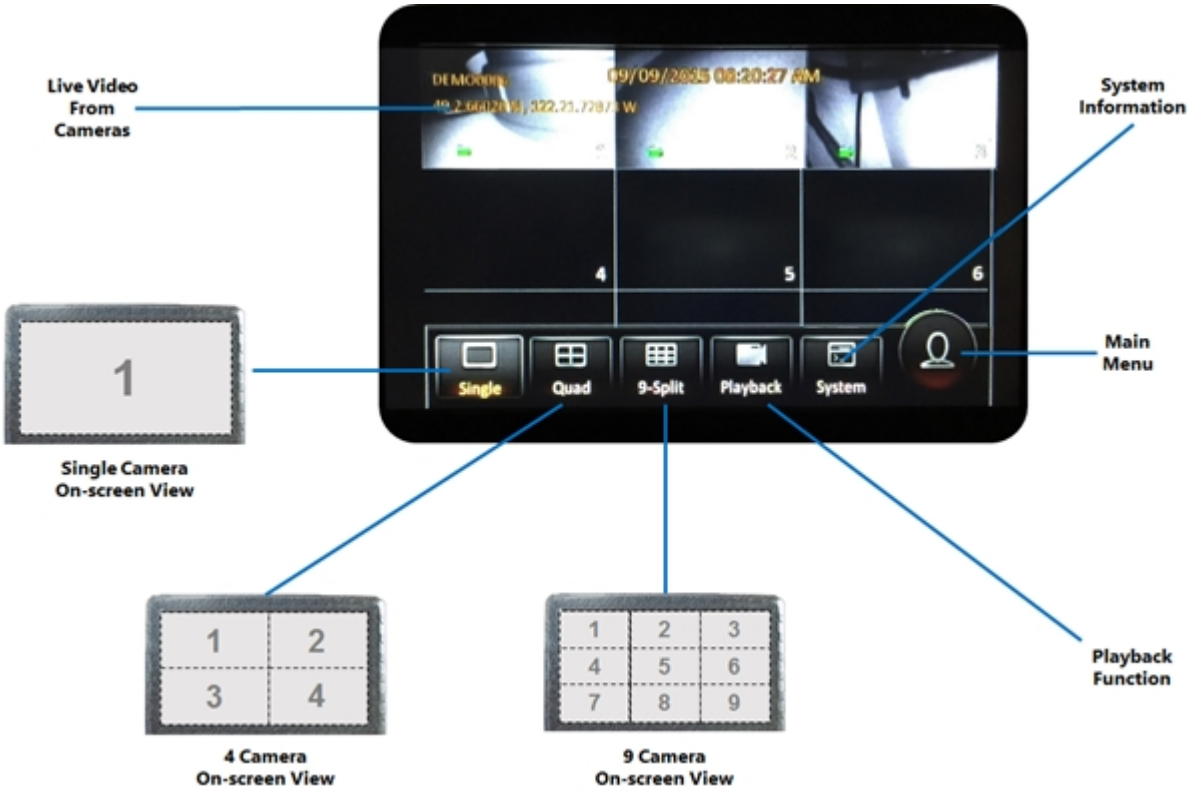


Figure 3-5 Y35 Startup Screen

- *Live Video From Cameras:* By default upon system startup, the screen will display live video from the camera attached to channel one in single camera full onscreen view. Clicking anywhere on the video screen will bring up the on-screen quick menu where the user can select from several different display options.

- *Single Camera On-screen View:* This view displays the video stream from a single camera on the entire screen.

- *4 Camera On-screen View:* This view splits the screen into four sections (using a 2x2 grid layout), and displays the video streams from four cameras simultaneously on the screen.

- *9 Camera On-screen View:* This view splits the screen into nine sections (using a 3x3 grid layout), and displays the video streams from cameras simultaneously on the screen.

- *System Information:* This displays the system information screen where the user can view various device information such as version information, active modules, server status, environment data, and storage size.

- *Main Menu:* This opens up the main menu screen. This function requires the user to be logged in. If the user is not logged in yet, the system will display the login screen.

- *Playback Function:* This opens up the recorded video playback screen. This function requires the user to be logged in. If the user is not logged in yet, the system will display the login screen.

3.4 Viewing Live Video

Single Camera On-screen View

- When the screen is in Single Camera On-screen View mode, camera from a single camera channel will be shown on the entire screen.
- In order to select a specific camera for viewing, you may press any of the keys [1-5] on the ICD2 to immediately jump to that channel and display the video stream from the corresponding camera.
- You can also cycle through the channels iteratively by pressing the key zero [0] on the ICD2.

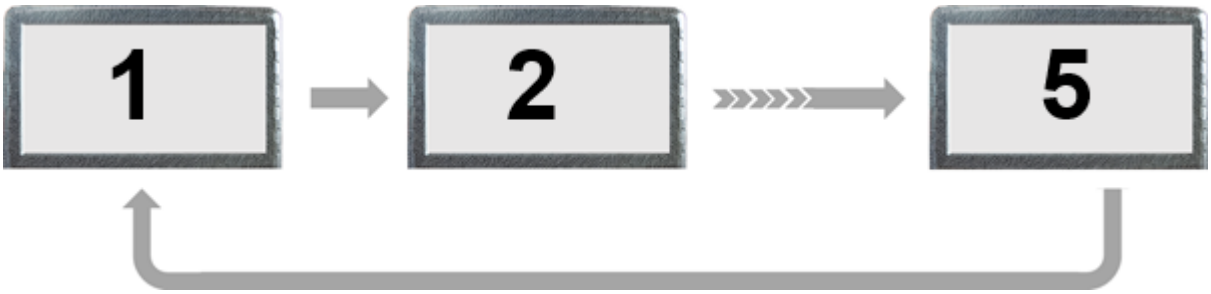


Figure 3-6 Cycling through the Video Channels in Single View

4 Camera On-screen View

- In 4 Camera (Quad) On-screen View mode, the screen is split into four sections (using a 2x2 grid layout) and video from four cameras is simultaneously shown on the screen.
- In order to select a specific camera for viewing, you may press any of the keys [1-5] on the ICD2 to immediately jump to that channel and display the video stream from the corresponding camera. This will switch the display to Single Camera On-screen View to display the video from the selected camera.
- Alternatively, with the Finger Mouse or the ICD2, you could also click on any video stream on the (2x2) grid display to immediately jump to that channel and display the video from the corresponding camera. This will switch the display to Single Camera On-screen View to display the video from the selected camera.
- Once you have selected a channel to view, you can cycle through the available channels iteratively in quad grid display mode by pressing the key zero [0] on the ICD2.

9 Camera On-screen View

- In 9 Camera On-screen View mode, the screen is split into nine sections (using a 3x3 grid layout) and video from all connected cameras is simultaneously shown on the screen. Note: all other areas will display a black box.
- In order to select a specific camera for viewing, you may press any of the keys [1-5] on the ICD2 to immediately jump to that channel and display the video stream from the corresponding camera. This

will switch the display to Single Camera On-screen View to display the video from the selected camera.

- Alternatively, with the Finger Mouse or the ICD2, you could also click on any video stream on the quad grid display to immediately jump to that channel and display the video from the corresponding camera. This will switch the display to Single Camera On-screen View to display the video from the selected camera.

Notes

- Channels which do not have cameras configured on them will just show a black display.
- Any channel which is configured with a camera, but is not receiving any video signal from that camera will show a Video Loss message on the screen.

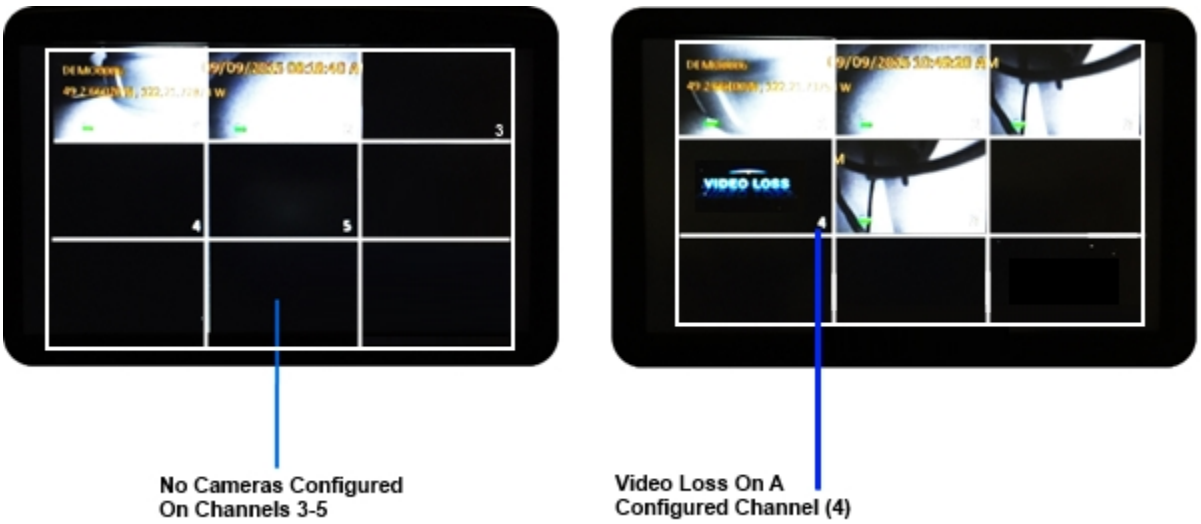


Figure 3-7 Example of Video Loss

3.5 Quick View of System Status Information

Selecting the System Information button on the on-screen quick menu will display the system information screen where the user can view various device information such as version information, active modules, server status, environment data, and storage size.

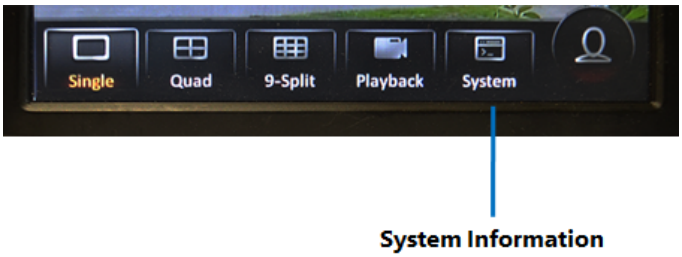
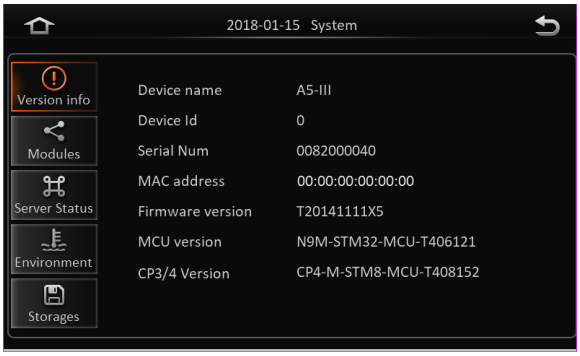


Figure 3-8 System Information Function on Quick Menu

The System Information function is a quick and easy way to access and view all the important information about your device's status and configuration from one central location. It can be accessed directly from the on-screen quick menu without the need to log in.

The following is a list of the device information which can be viewed by the user from the System Information function.

1. Version



This screen shows a summary of the various device hardware identification numbers, and also the version numbers of the firmware that is running on the device.

The information shown is as follows:

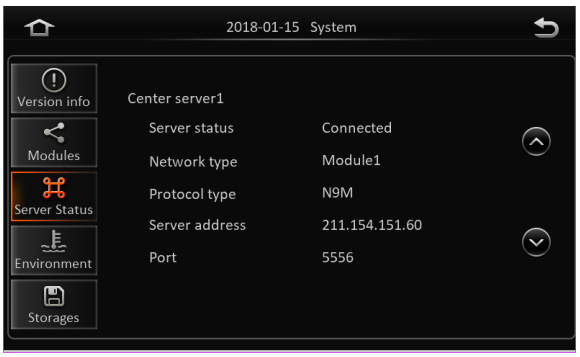
- *Device Name*
- *Device ID*
- *Serial Number*
- *MAC Address – this is the Y35 LAN MAC*
- *Firmware Version*
- *MCU Version*
- *CP3/4 Version – this is the ICD firmware*

2. Modules – Location.
(Not supported by Gatekeeper)

This screen shows a summary of the Location of the Y35.

Location status defines the physical location of the Y35 using GPS co-ordinates.
Location source defines where the Location is sourced.
Location Plant Number is an internal marker.
Location angle is the degrees east of true north.
Speed is the speed of the vehicle when the location was relayed to the Y35.

3. Server Status



This screen shows the details of the Center Server that the device is setup for connection to (summarising the connection status and type, as well as the connection address and port number).

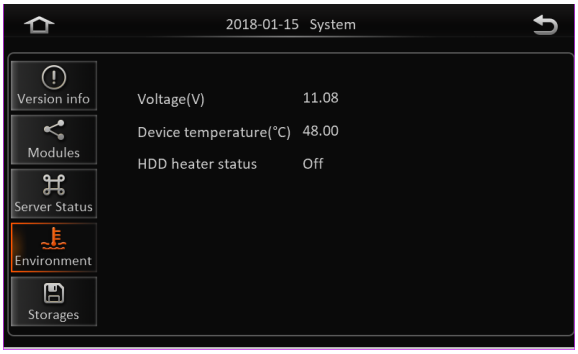
Note: These settings are only applicable when the device is setup for a network connection within a Gatekeeper Wireless Configuration.

The information shown is as follows:

- *Server Status*
- *Network Type*
- *Protocol Type*
- *Server Address*
- *Port*

You can click the **(^)** and **(v)** buttons to scroll through the status information for different servers which are set up in the system.

4. Environment

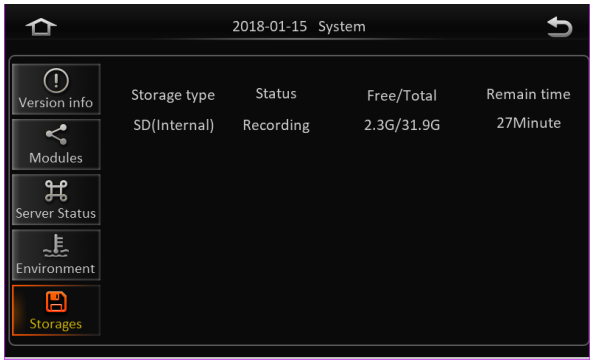


This screen summarises the current environmental conditions of the device. It shows the operating voltage, device temperature in Celsius, and whether the device's smart thermal management system is currently active.

The information shown is as follows:

- *Voltage*
- *Device Temperature (°C)*
- *HDD Heater Status*

5. Storage



This screen lists the storage devices which are currently attached to the device. It also indicates whether the device is currently recording to the listed storage devices, their total storage capacity, as well as remainder capacity in storage space as well as estimated recording time.

The information shown is as follows:

- *Storage Type*
- *Status*
- *Free/Total*
- *Remain Time*

3.6 Logging into the System

In order to access many of the Y35 advanced functions, you will need to be logged in to the system. This is a security measure to ensure that access to sensitive functions and video data is restricted to authorised users. Also, the system keeps an operations log which tags particular actions to usernames for accountability and audit purposes.

Access to the following functions require the user to be logged in:

<u>Access from the on-screen quick menu:</u>

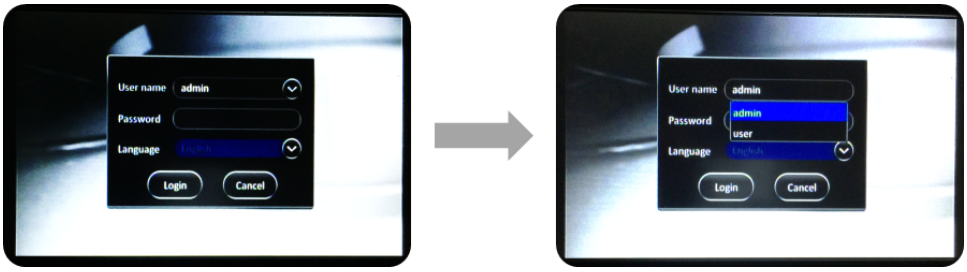
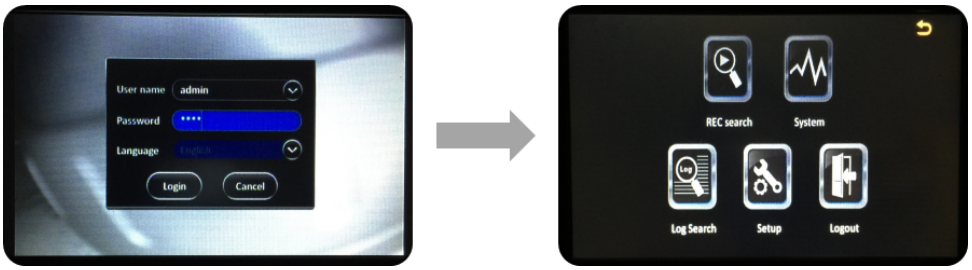
- Playback

<u>Access to the Main Menu and the following functions:</u>

- REC Search
- Log Search
- Setup *(* this function requires the user to be logged in as an administrator)*

How to Log In

When attempting to access any of these functions, the system will check the log-on status of the user before granting access to the function. If the user is not already logged in, the system will automatically prompt the user to log in.

Step 1	▪ System will display the log-in dialog box as shown below.  ▪ Click on the drop down **(v)** button at the right corner of the *User Name* field. ▪ A drop down menu will appear which will list all the users who are set up to access the system. ▪ Select the user name to use for this log-in by clicking on the desired user name in the list. ▪ Your selected user name will be displayed in the *User Name* field.
Step 2	▪ Click on the *Password* field to enter the password.  ▪ Using the on-screen keyboard which is displayed, key in the password. ▪ When done, press the Enter **(↵)** key on the on-screen keyboard.
Step 3	▪ Click the **(Login)** button.  ▪ If the password is correct, you will be logged-in and allowed to access the advanced functions of the Y35 and the Main Menu. ▪ At any time, you may also cancel the log-in process by clicking the **(Cancel)** button.

Notes

- The system ships with the following two default user credentials:

User name : admin *(* default administrator account)*
Password : admin

User name : user
Password : user

- You may change the default administrator user password, and also edit/add additional users through the user management function in the configuration settings.

Normal users can access the Playback, REC Search and Log Search functions, but only administrator level users can access all those functions, as well as the Setup function for configuring the Y35.

3.7 Understanding the Main Menu

The Main Menu can be accessed by clicking the Person icon on the far right of the on-screen quick menu.

Figure 3-8 Accessing the Main Menu

The Main Menu has five options as shown in the following figure.

Figure 3-9 Options in the Main Menu

- *REC Search:* Search for, view and save recorded video.
- *System Information:* View important system information.

- *Log Search:* Search for, view and save log files.
- *Setup:* View and make changes to the device configuration options.
- *Logout:* Logout the current logged-in user. This will return the system to the live video view.

The REC Search and Log Search functions will be explained in the chapter on Viewing Recorded Data, whilst the Setup function will be explained in the chapter on Configuring the Y35.

4 Basic System Quick Start

Your Y35 will have already come pre-configured by Gatekeeper Systems with the most common default settings which are applicable to most deployments – and you will only need to verify and adjust the basic settings to get up and running. The following sections will guide you through the basic setup process so that you can begin using your new product as soon as possible.

4.1 Step 1: Powering Up the Y35

The Gatekeeper Project Team are able to mount and install the device into the vehicle based on your requirements and in accordance with industry best practices from years of experience. If you prefer to mount the device yourself, please read ***Chapter 9*** for detailed hardware installation instructions.

Turning your vehicle ignition on will automatically power up the Y35. When your vehicle ignition is turned off, the device will automatically shut down after 5 minutes (you will be able to change this later in the device settings).

4.2 Step 2: Connecting your Navigation Device

Once the device has powered up, please verify that you can see the display on your LCD monitor or ICD2 with live video from connected cameras shown.

Figure 4-1 Live Camera View Shown on Device Startup

You may now use the supplied navigation device (Remote Control, Finger Mouse, G4 Connect or ICD2) to perform the rest of the basic setup process. For more details on connecting and using the navigation devices, please read ***Section 3.1*** and ***Section 3.2***.

4.3 Step 3: Logging In and Accessing System Configuration

You may now log into the system and go to the Main Menu where you can access the device Setup and configuration settings.

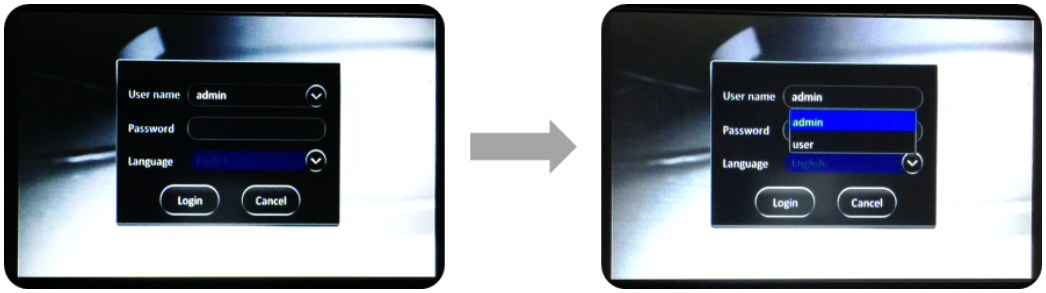
Step 3.1

- If you are using a Finger Mouse, click the **Right Button**, whereas ICD2 users can just tap on the screen.

- On the quick menu, click the Person icon. This will prompt you to login to the system.

Step 3.2

- System will display the log-in dialog box as shown below.



- Ensure that **admin** is displayed in the *User Name* field.
- If not, then click on the drop down **(v)** button at the right corner of the *User Name* field. A drop down list of user names will appear where you will be able to click on **admin** to select it.

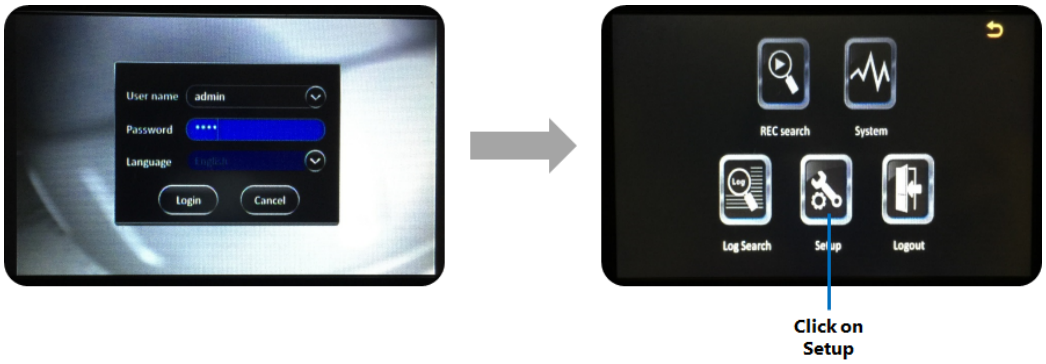
Step 3.3

- Click on the *Password* field to enter the password.

- Using the on-screen keyboard which is displayed, key in the password. For this initial login, please key in the default password, which is: **admin**
- When done, press the Enter **(↵)** key on the on-screen keyboard.

Step 3.4

- Click the **(Login)** button.



- The Main Menu will be shown.
- Click on the **(Setup)** button to go to the device configuration screen.

Understanding the Setup Menu System for System Configuration

The Y35 comes with a comprehensive setup menu system where you will be able to tailor almost every aspect of the device operations to your unique fleet requirements.

The configuration options in the menu are broken into 5 major sections:

- **Basic** – where you will be able to configure all the basic device preferences and operational settings. For a detailed explanation, please see ***Section 6.3***.

- **Surveillance** – where you will be able to configure camera viewing; recording settings, as well as set up new cameras. For a detailed explanation, please see ***Section 6.4***.

- **Collection** – where you will be able to configure all the settings related to collection of vehicle and operations data from the device sensors, and also configure settings for taking snapshots based on pre-set triggers. For a detailed explanation, please see ***Section 6.5***.

- **Alarm** – where you will be able to configure recording, snapshot and other actions which the device will perform when an alarm event occurs. For a detailed explanation, please see ***Section 6.6***.

- **Maintenance** – where you will be able to perform various maintenance actions, including data export and firmware upgrades. For a detailed explanation, please see ***Section 6.7***.

Each of these major configuration sections have their separate subsections as shown in the following diagram.

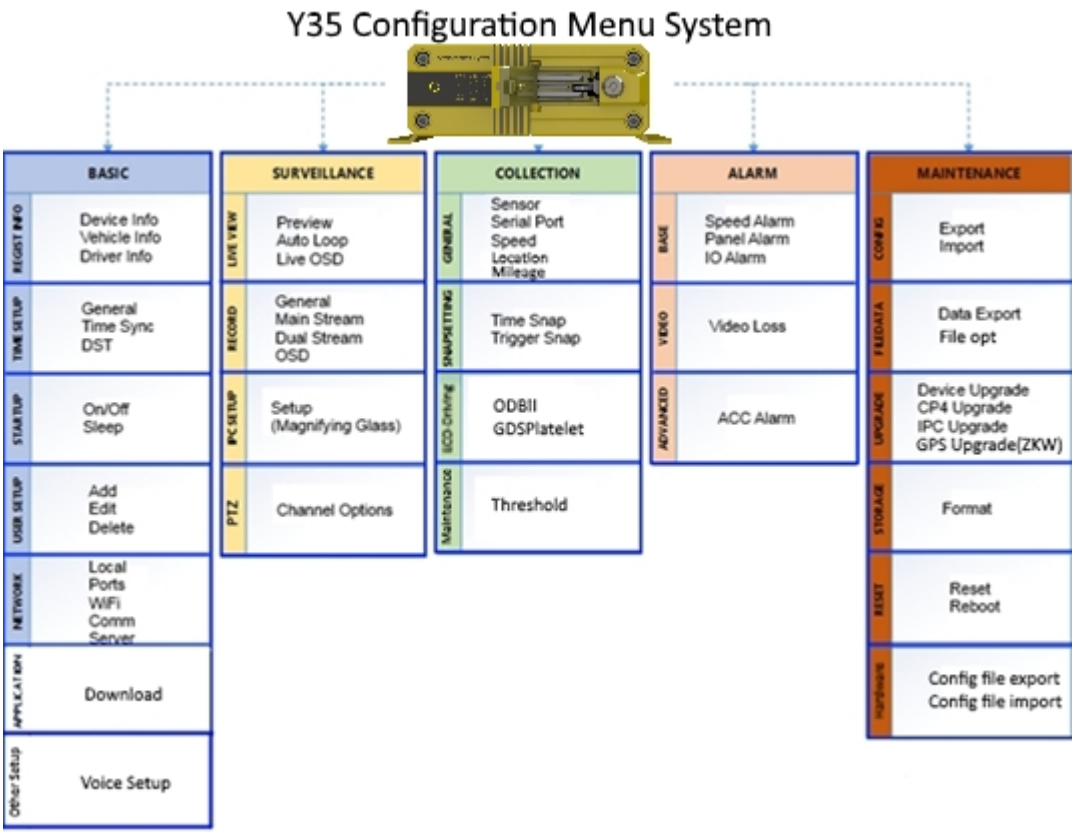


Figure 4-2 Setup Menu System for Device Configuration

For the basic setup process, we will just need to verify and/or configure the settings in the subsections highlighted with the red dotted lines in the diagram, as follows:

Under the Basic section:

- Regist Info options
- Time Setup options
- Startup options
- User Setup options
- Network
- Application
- Other setup

Under the Surveillance section:

- Record options
- IPC Setup options

4.4 Step 4: Setting the Date and Time

The first step is to ensure that the date and time is set correctly in the device.

Navigate to: ***Main Menu → Setup → Basic Setup → Time Setup***

Please verify that the following default settings are correctly configured. For a detailed explanation of each setting, please see ***Section 6.3.2***.

General	*Date Format*	DEFAULT SETTINGS: ▪ **MONTH/DAY/YEAR**

	Time Format	DEFAULT SETTINGS: ▪ **24 Hours**
	Time Zone	DEFAULT SETTINGS: ▪ **(GMT-08:00) PACIFIC TIME (US & CANADA)** If this is not your time zone, please change this setting as appropriate to the actual time zone that your fleet will be operating in.
Time Sync	*Date/Time*	DEFAULT SETTINGS: Please verify the time and date. If the time and/or date is not correct, please change them to the correct values.
	Satellite	DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Center Server	DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	NTP Sync	DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
DST	*Enable*	DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Offset	DEFAULT SETTINGS: ▪ **One Hour**
	Mode	DEFAULT SETTINGS: ▪ **Week**
	Start	DEFAULT SETTINGS: ▪ **MAR** *(month)* ▪ **2ND** *(week)* ▪ **SUNDAY** *(day)* ▪ **02:00:00** *(time)*
	End	DEFAULT SETTINGS: ▪ **NOV** *(month)* ▪ **1ST** *(week)*

		▪ **SUNDAY** *(day)* ▪ **02:00:00** *(time)*

4.5 Step 5: Setting the Vehicle Identity Information

The next step is to set up the identification information for the device, so that it is tied to the vehicle for easy report generation and tracking purposes.

Navigate to: ***Main Menu → Setup → Basic Setup → Regist Info***

Please key in the vehicle and driver information of the vehicle that this device is mounted in. For a detailed explanation of each setting, please see ***Section 6.3.1***.

Device Info	*Device ID*	Leave this value as it is, unless directed to change by Gatekeeper Project Team.
Vehicle Info	*Vehicle Plate*	You can use this field to key in the vehicle registration plate number. Maximum of: **10 characters**
	Vehicle Num	Key in the identification code which will be used to identify this particular vehicle in the fleet. Maximum of: **10 characters**
	Line Number	You may use this field to identify a particular route (if any) that the vehicle will be operating on. Maximum of: **10 characters**
Driver Info	*Driver Number*	If the vehicle will have a specific driver, you may use this field to key in the identification number of the driver (if required). Maximum of: **10 characters**
	Driver Name	If desired, you may also key in the name of the vehicle driver here. Maximum of: **10 characters**

4.6 Step 6: Setting Basic Preferences

Next you will need to setup the ignition on/off delay time.

Navigate to: ***Main Menu → Setup → Basic Setup → Startup***

Please verify that the following default settings are correctly configured. For a detailed explanation of each setting, please see ***Section 6.3.3***.

ON/OFF	*ON/OFF Mode*	DEFAULT SETTINGS: ▪ **Ignition**
	DVR Power Off Delay	DEFAULT SETTINGS: ▪ **300** This means that when the vehicle is turned off, the device will continue to record for another 300 seconds (5 minutes) before shutting down. Please change this setting to reflect the preferred duration of time you wish to continue recording after the vehicle is turned off.

After that, you need to select the preferred speed measurement unit which will be used by the device.

Navigate to: ***Main Menu → Setup → Collection → General → Speed***

Please verify that the following default settings are correctly configured. For a detailed explanation of each setting, please see ***Section 6.5.1***.

Speed	*Unit*	DEFAULT SETTINGS: ▪ **MPH** Please set the preferred speed measurement unit used in your region of operations. Fleets operating in North America will typically use MPH. Fleets operating in most other parts of the world (including Canada) where the metric system is adopted will typically choose KM/H.

4.7 Step 7: Setting Up Authorised Users

Next you can add additional user login accounts to the device if required.

Navigate to: ***Main Menu → Setup → Basic Setup → User Setup***

Your Y35 comes pre-configured with the following two default user accounts:

Default administrator user

- Username – **admin**
- Password **- admin**

Default normal user

- Username **– user**
- Password **- user**

It is highly recommended that you do not change the password on the default administrator account, as this account will be used by authorised Gatekeeper Systems engineers to troubleshoot your device during support and maintenance.

You may change the password for the default normal user account, and also add an additional normal user account if required. For a detailed explanation on how to do this, please see ***Section 6.3.4***.

4.8 Step 8: Setting Up Recording

The Y35 is a hybrid DVR. It has the capability of having a combination of analog; analog HD and a single IP camera connected at the same time.

Please Note: that the cameras, if using a combination of analog and analog HD cameras, must be used in pairs, e.g. CAM 1 and CAM 2 (Analog) or CAM 3 and CAM 4 (Analog HD). The IP camera is a separate device and uses its own settings.

This next step is a crucial step, where you will select which cameras to record video from, and also set up the quality and resolution of the recorded video.

Navigate to: ***Main Menu → Setup → Surveillance → Record***

Please review and adjust the following default settings to match your actual camera configuration. For a detailed explanation of each setting, please see ***Section 6.4.2***.

General	*System*	DEFAULT SETTINGS: ▪ **NTSC**
	Overwrite	DEFAULT SETTINGS: ▪ **By Capacity**
	Lock Duration	DEFAULT SETTINGS: ▪ **7 days**
	Pre-Recording	DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
Main Stream	*Channel Name*	DEFAULT SETTINGS: ▪ Channel 1 – set name as – **CH1** ▪ Channel 2 – set name as – **CH2** ▪ Channel 3 – set name as – **CH3** ▪ Channel 4 – set name as – **CH4** ▪ Channel 5 – set name as – **CH5** The device comes pre-configured with standard names for the camera channels. You may change these names if desired to give each channel an easily remembered and/or location-specific name. Maximum of: **5 characters** *Notes:* - *Channels 1 to 4 are analog/analogHD channels.* - *Channel 5 is a Digital IP camera channel.*

	Enable	For channels 1 to 4, only enable the channels which actually have cameras connected. Please note that the system will show a video loss message on channels which are enabled, but do not have a connected camera (i.e., no incoming video stream). Likewise, for channel 5 (Digital IP Camera channel), only enable this channel if it actually has a camera connected.
	Resolution	DEFAULT SETTINGS: For channels 1 to 4 (analog camera channels), set the following: ▪ **D1** For AnalogHD cameras 1+2 or 3+4 the option for 720P will become available. For channel 5 (IP camera channel), set the following: ▪ **720P**
	Frame Rate	DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **15**
	Quality	DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **1 (Best)**
	Record Mode	DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **Power Up**
	Audio	DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **Checkbox – Selected**
	Alarm Quality	DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **1 (Best)**
	Encode Mode	DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **CBR**

Dual Stream	*SD Write Resource Ratio*	DEFAULT SETTINGS: ▪ **0.0%**
	Record Storage	DEFAULT SETTINGS: ▪ **Internal SD**
	Record Mode	DEFAULT SETTINGS: ▪ **Loop Record.**
	Alarm CH	DEFAULT SETTINGS: For channels 1 to 4 (analog/analogHD camera channels), set the following: ▪ **Checkbox - Unselected** For channels 5 (IP camera channel), set the following: ▪ **Checkbox - Unselected**
OSD	*Time*	DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Vehicle Plate	DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Channel Name	DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Speed	DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	GPS	DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Vehicle Num	DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Alarm Info	DEFAULT SETTINGS: ▪ **Checkbox – Unselected**

4.9 Step 9: Setting Up IP Cameras

If you have a Digital IP Camera, after being connected physically, it will need to be configured in the system before it will work.

Navigate to: ***Main Menu → Setup → Surveillance → IPC Setup***

Please follow the steps in ***Section 6.4.3*** to setup the IP Camera in your system.

4.10 Step 10: Finish

Your new Y35 system is now setup and ready to go!

Please also review ***Chapter 5*** to learn about viewing and clipping the recorded video.

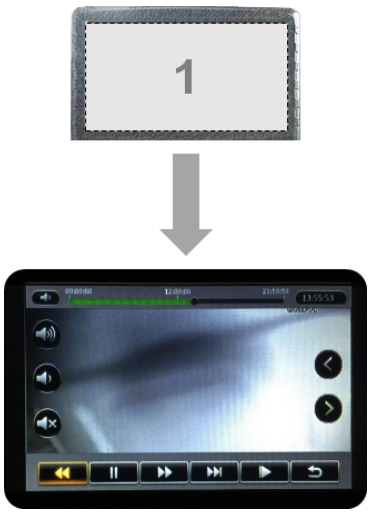
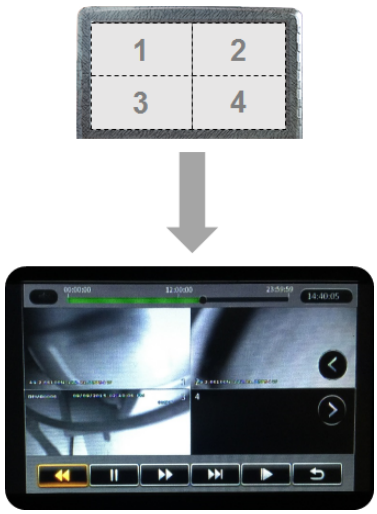
5 Viewing Recorded Data

5.1 Using the Playback Feature

The Playback feature can be accessed from the on-screen quick menu after logging in. It functions as a shortcut which allows the user to immediately access and view recorded video from the start of the current day (beginning 00:00:00H) till the current time of the day.

Figure 5-1 Accessing the Playback Feature

The videos can either be viewed full screen (single camera channel) or in quad view (four camera channels simultaneously).

In order to access single camera playback, please click the Playback button while in Single Camera On-screen View.  Besides using the **(<)** and **(>)** on-screen buttons to cycle between channels, they can also be directly selected using the buttons [1-5]. E.g. Press [3] for channel 3.	In order to access quad camera playback, please click the Playback button while in 4 Camera On-screen View.  Besides using the **(<)** and **(>)** on-screen buttons to cycle the quad view, channels can also be selected using the buttons [1-5] or clicking on the selected channel in the quad view screen. E.g. Press [3] for channel 3.

The Video Playback On-Screen Controls

If you are using a Finger Mouse, you can toggle the on-screen controls by pressing the **Right Button**, whereas with the ICD2, you would just tap anywhere on the video. If there is no user input, then the on-screen playback controls will auto-hide after 15 seconds of inactivity.

You can easily determine whether you are in live camera view mode, or in playback mode, by attempting to toggle the on-screen controls – if you are in live camera view mode, the on-screen quick menu will be displayed, whereas if you are in video playback mode, then the playback on-screen controls would be displayed instead.

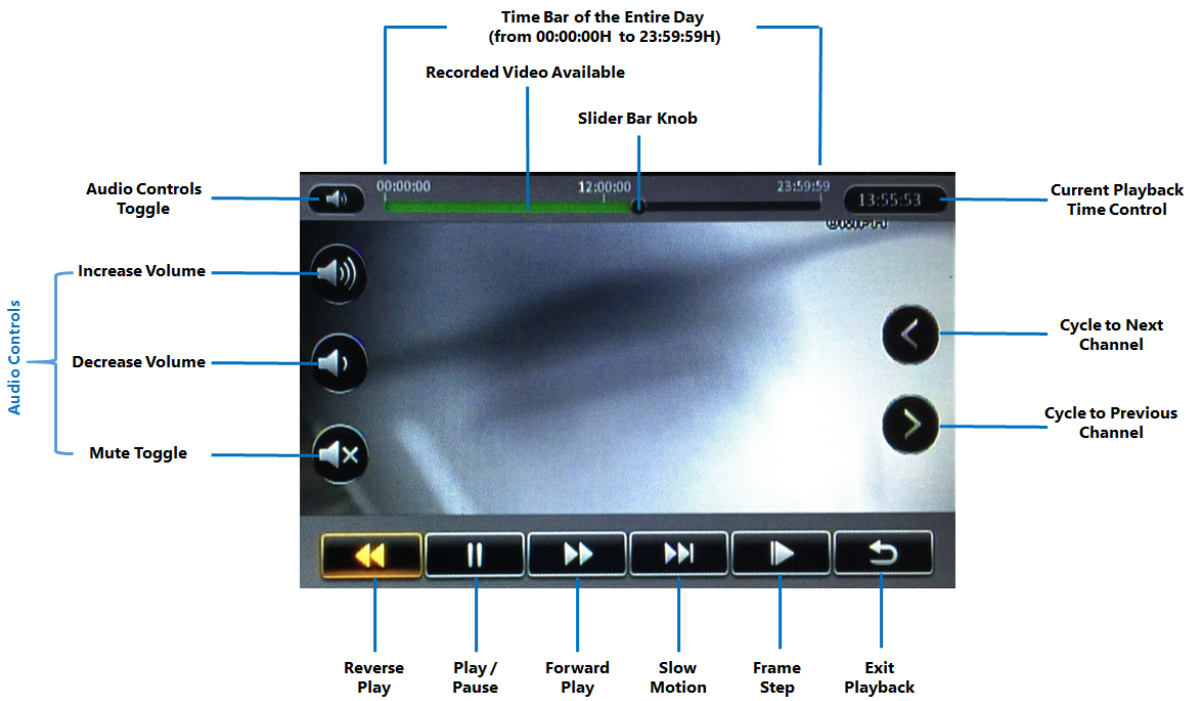
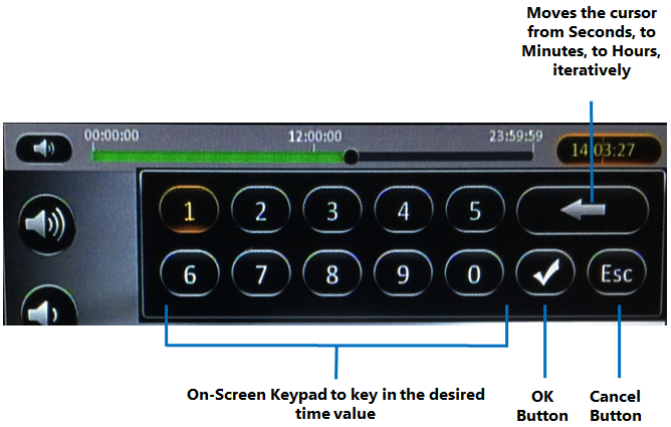


Figure 5-2 Playback On-Screen Controls

- *Time Bar:* This time bar represents the entire day from 00:00:00H to 23:59:59H.
- *Recorded Video Available:* The green shaded areas in the time bar lets you easily identify time periods during the day where recorded video is available.
- *Slider Bar Knob:* If you are using a Finger Mouse or an ICD2, you can click-and-drag this moveable knob to the time of day where you wish to begin viewing the recorded video.
- *Audio Controls Toggle:* This toggle button lets you show or hide the audio controls.
- *Increase Volume:* Increase the volume of the audio in the video recording currently being played back.
- *Decrease Volume:* Decrease the volume of the audio in the video recording currently being played back.
- *Current Playback Time Control:* This shows the current playback time. Selecting it will bring up the time control dialog which allows you to key in a specific time (in hh:mm:ss 24-hour time format) from which to begin the playback.



- *Cycle to Next Channel:* Switch playback to the next camera channel. For example, if the system is currently playing recorded video from Camera 3, then clicking this button will switch to playing recorded video from Camera 4.

- *Cycle to Previous Channel:* Switch playback to the previous camera channel. For example, if the system is currently playing recorded video from Camera 3, then clicking this button will switch to playing recorded video from Camera 2.

- *Reverse Play:* Clicking this button will cycle the reverse playback speed iteratively through the following speed settings – 2x, 4x, 8x and 16x.

- *Play / Pause:* Clicking this button will toggle the video between playback and pause. If the video is playing in either fast forward or reverse play direction, then clicking this button will revert to forward playback in real-time speed (1x).

- *Forward Play:* Clicking this button will cycle the forward playback speed iteratively through the following speed settings – 2x, 4x, 8x and 16x.

- *Slow Motion:* Clicking this button will cycle the forward playback speed iteratively through the following slow motion speed settings – 1/2x, 1/4x, 1/8 x and 1/16x.

- *Frame Step:* This button allows the user to step through the recorded video frame by frame.

- *Exit Playback:* Clicking this button exits playback mode and will return you to the live camera view mode.

Please note that the Playback feature only lets you view video from the current day's recording (from beginning of the day till the current time of day). To search and view older video from previous days, please use the REC Search feature.

5.2 Using REC Search

The REC Search feature can be accessed from the Main Menu after logging in. It allows the user to search for and view any recorded video which is stored on the Y35 storage SD card. Users can also select and export video clips of specific time periods to an external storage device (such as USB flash drive) for later viewing.

REC Search Step 1: Selecting the Date

Essentially, the REC Search screen allows you to select a date to view the recorded video. It uses a calendar view to enable the user to easily visualise the availability of recorded video, and also employs color coding to provide easy identification of dates for which the recorded video has special characteristics (e.g. locked video, or alarm events).

What is locked video?
The device setup allows you to configure the recording settings such that video is always retained for at least a minimum number of days after it is recorded. Locked video refers to recorded video which falls within the stipulated duration, and hence is protected against being deleted or overwritten by the device.

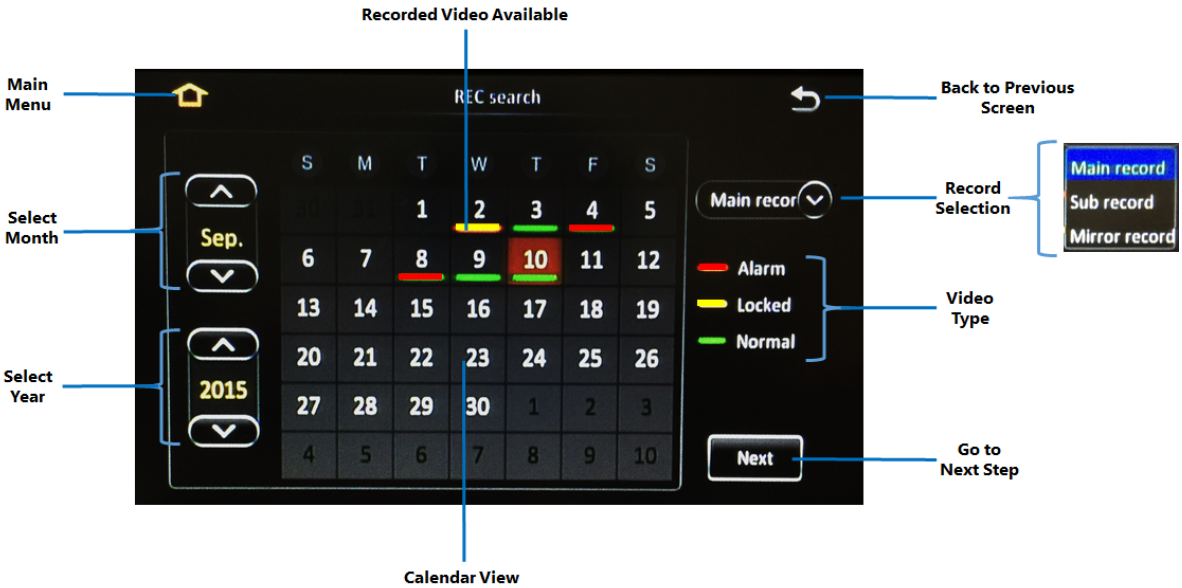


Figure 5-3 REC Search Date Controls

- *Main Menu:* Click this icon to return to the Main Menu.
- *Back to Previous Screen:* Click this icon to return to the Previous Screen that you were at.
- *Recorded Video Available:* A colored bar below the date indicates that recorded video exists for that particular date.
- *Video Type:* The color of the bar provides information as to the type of recorded video available.
  RED line: Recorded video exists on this date and has alarm events.
  YELLOW line : Recorded video exists on this date and has been locked.
  GREEN line : Recorded video exists on this date.
- *Record Selection:* Clicking the **(v)** button displays a drop down menu which allows you to select the source to search the availability of recorded video (whether from the Main Record, Sub Record, or Mirror Record). By default, it always searches from the Main Record first.
- *Select Month:* The **(^)** and **(v)** buttons allow you to scroll through and select the month.
- *Select Year:* The **(^)** and **(v)** buttons allow you to scroll through and select the year.
- *Calendar View:* The calendar shows the dates for the month and year which has been selected. Clicking on the date of interest will select it.

- *Next Step:* After selecting the date, clicking on the **(Next)** button will proceed to the camera channel selection screen.

REC Search Step 2: Selecting the Camera Channels

In a complex multi-camera configuration such as the Y35 which can have up to 5 connected cameras in total, even a single day may contain a lot of recorded video data. This next step allows you to filter the data by selecting only the camera channels of interest to view.

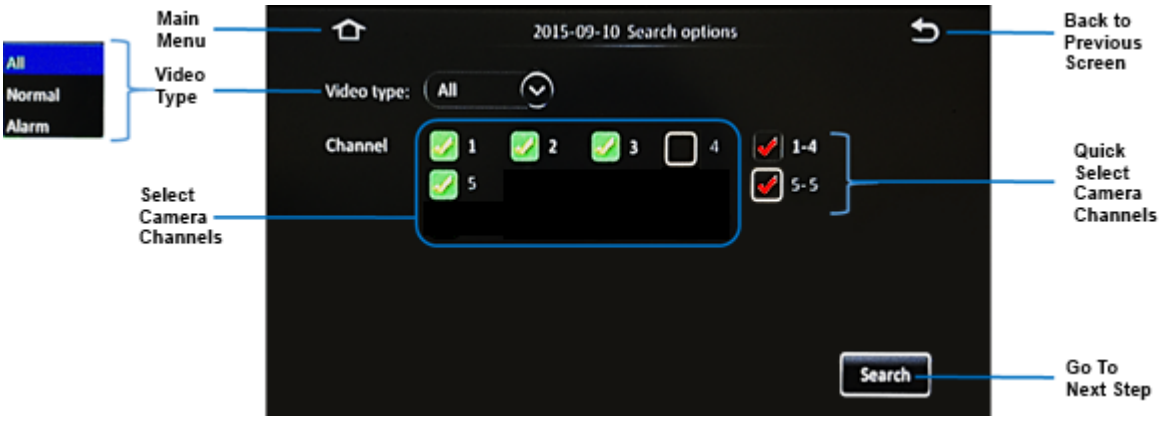


Figure 5-4 REC Search Camera Channel Controls

- *Main Menu:* Click this icon to return to the Main Menu.

- *Back to Previous Screen:* Click this icon to return to the Previous Screen that you were at.

- *Video Type:* Clicking the **(v)** button displays a drop down menu which allows you to select the type of video to search for and retrieve.

  All : All available video.
  Normal : Normal video only (without any alarm events).
  Alarm : Only videos with alarm events.

- *Select Camera Channels:* Click to toggle select the camera channels to include. Selected camera channels are marked with a red check. Recorded video will only be retrieved for playback from the selected camera channels.

- *Search:* After selecting the video type and camera channels, clicking on the **(Search)** button will proceed to the playback screen for the recorded video.

REC Search Step 3: Selecting the Time Period

After the date and camera channels have been selected, the time period display screen allows you to visualise easily (using a time bar) when recorded video data is available, and on which channels. You may then select the time of interest from, as well as the specific camera channels, from which to commence playback. The system also allows you to export a video clip of the specified time period.

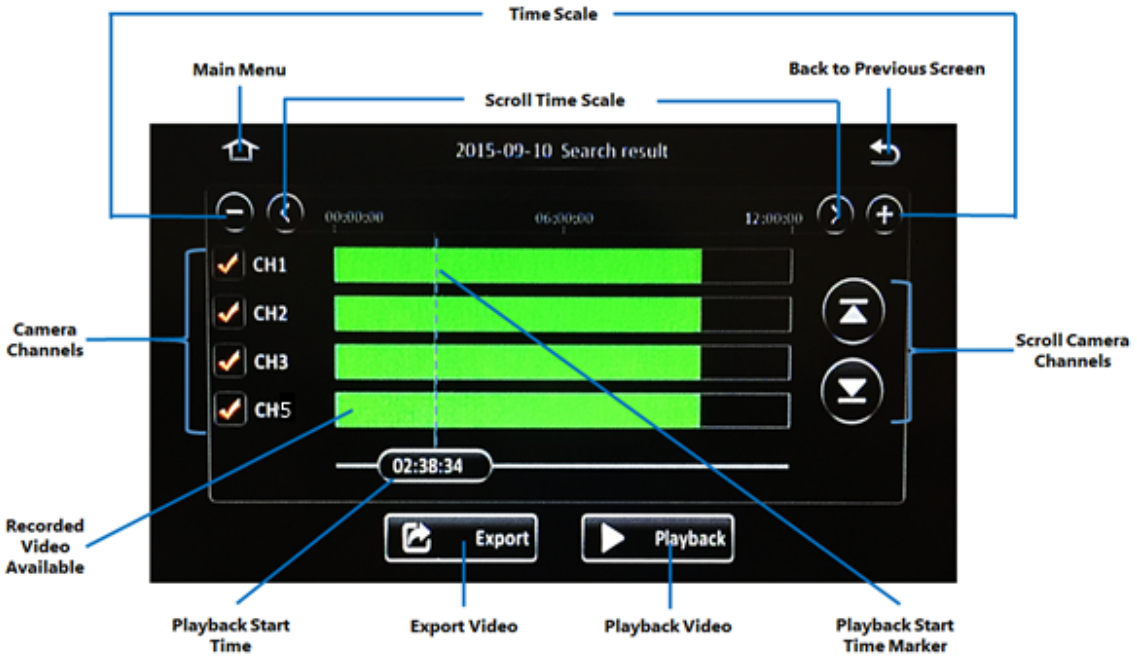
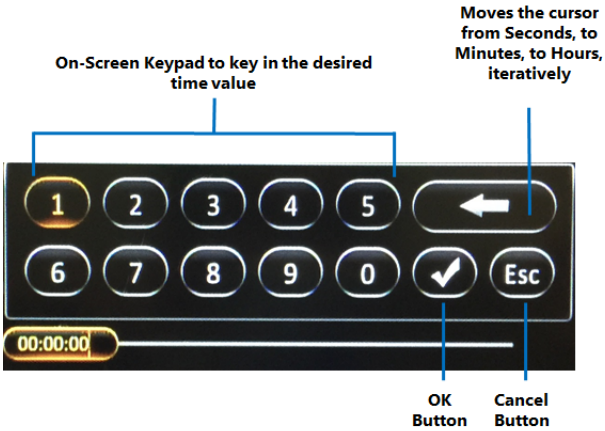


Figure 5-5 REC Search Time Controls

- *Main Menu:* Click this icon to return to the Main Menu.
- *Back to Previous Screen:* Click this icon to return to the Previous Screen that you were at.
- *Time Scale:* This is the time bar which shows recorded video availability for the day (from 00:00:00H to 23:59:59H). Click the **(+)** and **(-)** buttons to zoom in and zoom out respectively. Zooming in decreases the time scale, and zooming out increases the time scale – to allow for easier visualisation and selection of time periods.
- *Scroll Time Scale:* After zooming in, the entire day's time scale will not be able to fit on the screen display. Click the **(<)** and **(>)** buttons to scroll the time scale to the left and right respectively.
- *Camera Channels:* This shows the camera channels for which the recorded video is available. Use the checkboxes to select/deselect the camera channels which are to be included in the playback.
- *Scroll Camera Channels:* When more than four camera channels have recorded video available, click the **(^)** and **(v)** buttons to scroll up and down in the list of available channels.
- *Recorded Video Available:* The colored bar shows the times for which recorded video is available. The bar is colored coded to indicate the type of video available.

RED	:	Recorded video at this time period has alarm events.
YELLOW	:	Recorded video at this time period is locked.
GREEN	:	Normal recorded video at this time period.

- *Playback Start Time:* This shows the selected playback time. Clicking on it will bring up the time control dialog which allows you to key in a specific time (in hh:mm:ss 24-hour time format) from which to begin the playback.



- *Playback Start Time Marker:* This vertical blue dotted line indicates the playback start time across the camera channels. If you are using a Finger Mouse or an ICD2, you can click and drag left and right along the colored bars to quickly move the marker in order to select a different playback start time.

- *Playback Video:* After selecting the playback start time and specifying the camera channels, clicking **(Playback)** will proceed to the playback screen for the recorded video.

- *Export Video:* Clicking the **(Export)** button will allow you to export the recorded video as a clip from a specified start and end time.

REC Search Step 4: Playing the Recorded Video

If you are using a Finger Mouse, toggle the on-screen controls by pressing the **Right Button**, whereas with the ICD2, you would just tap anywhere on the video. If there is no user input, then the on-screen playback controls will auto-hide after 15 seconds of inactivity.

If more than 1 camera channel was selected during the previous step, all selected channels will be displayed in quad screen mode (2x2 grid layout). With a Finger Mouse or ICD2, you can easily select a single channel to view in full screen by double-clicking on it.

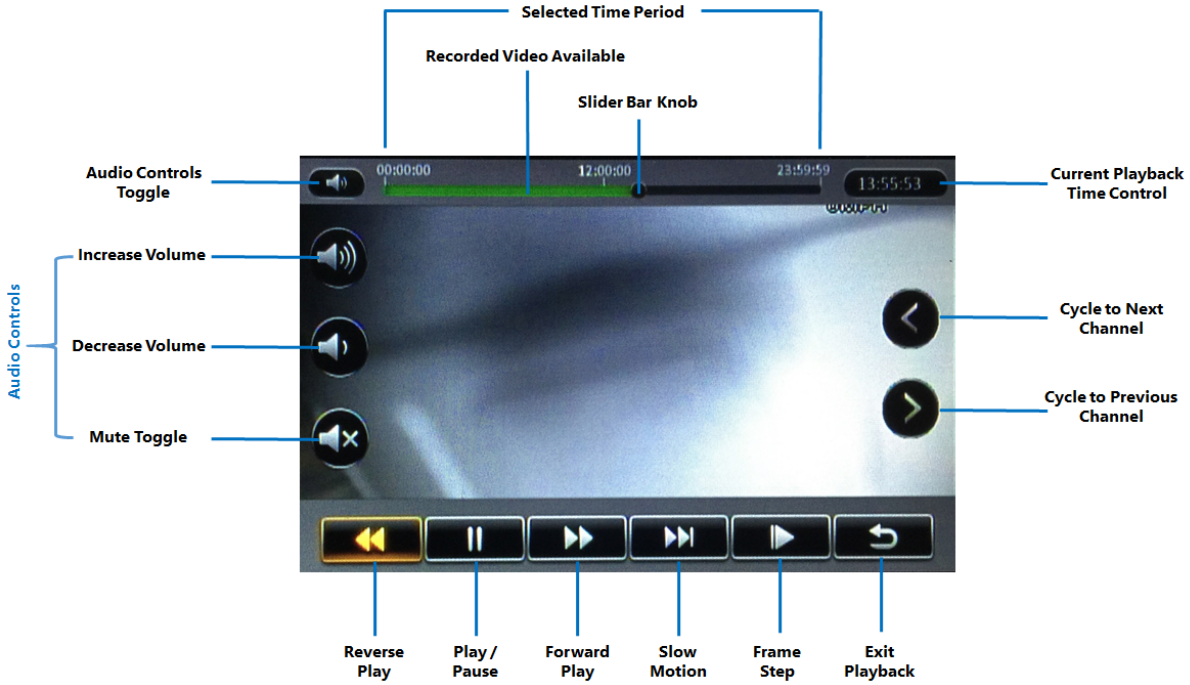
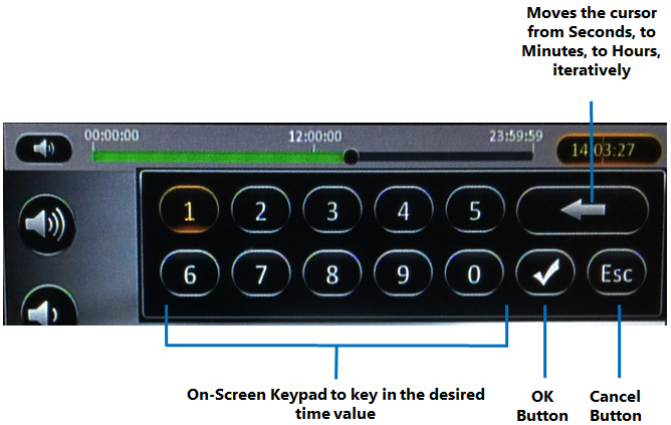


Figure 5-6 REC Search Playback Controls

- *Selected Time Period:* This time bar represents the selected time period.
- *Recorded Video Available:* The green shaded areas in the time bar lets you easily identify where the recorded video is available.
- *Slider Bar Knob:* Using a Finger Mouse or an ICD2, you can click-and-drag this moveable knob to the specific time where you wish to view the recorded video.
- *Audio Controls Toggle:* This toggle button lets you show or hide the audio controls.
- *Increase Volume:* Increase the volume of the audio in the video recording currently being played back.
- *Decrease Volume:* Decrease the volume of the audio in the video recording currently being played back.
- *Current Playback Time Control:* This shows the current playback time. Clicking on it will bring up the time control dialog which allows you to key in a specific time (in hh:mm:ss 24-hour time format) from which to begin the playback.



- *Cycle to Next Channel:* Switch playback to the next camera channel. For example, if the system is currently playing recorded video from Camera 3, then clicking this button will switch to playing recorded video from Camera 4.
- *Cycle to Previous Channel:* Switch playback to the previous camera channel. For example, if the system is currently playing recorded video from Camera 3, then clicking this button will switch to playing recorded video from Camera 2.
- *Reverse Play:* Clicking this button will cycle the reverse playback speed iteratively through the following speed settings – 2x, 4x, 8x and 16x.
- *Play / Pause:* Clicking this button will toggle the video between playback and pause. If the video is playing in either fast forward or reverse play direction, then clicking this button will revert to forward playback in real-time speed (1x).
- *Forward Play:* Clicking this button will cycle the forward playback speed iteratively through the following speed settings – 2x, 4x, 8x and 16x.

- *Slow Motion:* Clicking this button will cycle the forward playback speed iteratively through the following slow motion speed settings – 1/2x, 1/4x, 1/8 x and 1/16x.

- *Frame Step:* This button allows the user to step through the recorded video frame by frame.

- *Exit Playback:* Clicking this button returns you to the previous screen where you can select a different time period for playback.

REC Search Step 5: Exporting the Recorded Video

At the time period selection screen of the REC Search function, you may also choose to export a video clip of the recorded video data by specifying a start and end time for the video and clicking the **(Export)** button on the screen. At any time, you may return to the previous screen by clicking **(⮌)** or the **(Back)** button. You can also click the Home **(⇧)** icon to return to the Main Menu.

How to Perform the Export Operation

Step 5.1

- System will display the exporting selection screen as below.

- Click the checkboxes to toggle select/deselect the camera channels to export from.
- To export the entire day's video, just click on the **(Export)** button.
- A summary screen will be displayed showing the export time period (in this case, it will be 00:00:00 to 23:59:59), and the estimated file size of the video clip data to be exported.
- The video clip data will be exported to the external storage medium USB flash drive which is shown and selected on the screen. The system will only allow you to proceed if the available space on the selected external storage medium must be equal or more than the estimated file size.
  Please Note: If you are using the Finger Mouse/LCD combination to navigate you will need to use a Gatekeeper Systems USB Hub to allow two devices to share the one USB port.
- You will also need to select the file format that the exported video clip will be saved as:

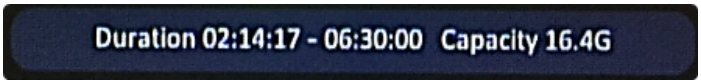
Proprietary Data	:	File format which is proprietary to the Y35. Can only be viewed using the viewer software provided by Gatekeeper Systems.
AVI Data	:	Standard AVI file format. Can be viewed using any standard media player.

- Click the **(Export)** button to proceed to clip and save the video data to the specified external storage device.
- If you wish to go back at any time to select a different time period, you may click the **(Cancel)** button.

Step 5.2

- After selecting the camera channels, you can also specify the time period of the video data that you wish to export.

- Click on the Playback Start Time to key in the specific start time of the video that you wish to export.
- If you are using the Finger Mouse or the ICD2, you may also click and drag the Playback Start Time Marker to the start time that you desire.
- Click the **(Start Time)** button to register this as the desired start time. Your selection will be displayed on the screen.
- Next, select the desired end time by once again clicking on the time and keying in, or moving the marker as before.
- When your desired end time is displayed, click the **(End Time)** button to register this.
- Your selected end time will be displayed on the screen.
- The system will calculate and display the estimated file size of the video clip for this selected time period.



- Click the **(Export)** button to proceed.
- You may also click the **(Cancel)** button in order to go back and select a different time period.

Gatekeeper Systems USB hub. Note the instructions for the correct order in which to connect devices.

Step 5.3

- Once you have selected both the camera channels and the time period, click the **(Export)** button to proceed.

- A summary screen will be displayed showing the selected time period and the estimated file size of the video clip data to be exported.
- The video clip data will be exported to the external storage medium USB flash drive which is shown and selected on the screen. The system will only allow you to proceed if the available space on the selected external storage medium must be equal or more than the estimated file size.
- You will also need to select the file format that the exported video clip will be saved as:

Proprietary Data	:	File format which is proprietary to the Y35. Can only be viewed using the viewer software provided by Gatekeeper Systems.
AVI Data	:	Standard AVI file format. Can be viewed using any standard media player.

- Click the **(Export)** button to proceed to clip and save the video data to the specified external storage device.
- If you wish to go back at any time to select a different time period, you may click the **(Cancel)** button.

5.3 Using Log Search

The Log Search feature can be accessed from the Main Menu after logging in. It allows the user to search for and view various operational logs. Users can also select and export the log files to an external storage device (such as USB flash drive) for later viewing.
Please Note: If you are using the Finger Mouse/LCD combination to navigate you will need to use a Gatekeeper Systems USB Hub to allow two devices to share the one USB port.

Log Search Step 1: Selecting the Date

The first step in the Log Search screen allows you to select a date to view the associated log files. It uses a calendar view to enable the user to easily visualise the availability of log files for viewing.

Figure 5-7 Log Search Date Controls

- *Main Menu:* Click this icon to return to the Main Menu.
- *Back to Previous Screen:* Click this icon to return to the Previous Screen that you were at.
- *Logs Available:* A green bar below the date indicates that log files exist for that particular date.
- *Select Month:* The **(^)** and **(v)** buttons allow you to scroll through and select the month.
- *Select Year:* The **(^)** and **(v)** buttons allow you to scroll through and select the year.
- *Calendar View:* The calendar shows the dates for the month and year which has been selected. Clicking on the date of interest will select it.
- *Next Step:* After selecting the date, clicking on the **(Next)** button will proceed to the camera channel selection screen.

Log Search Step 2: Selecting the Time and Log Type

The next step in the Log Search function allows you to select the time period, and the type of log that you wish to view.

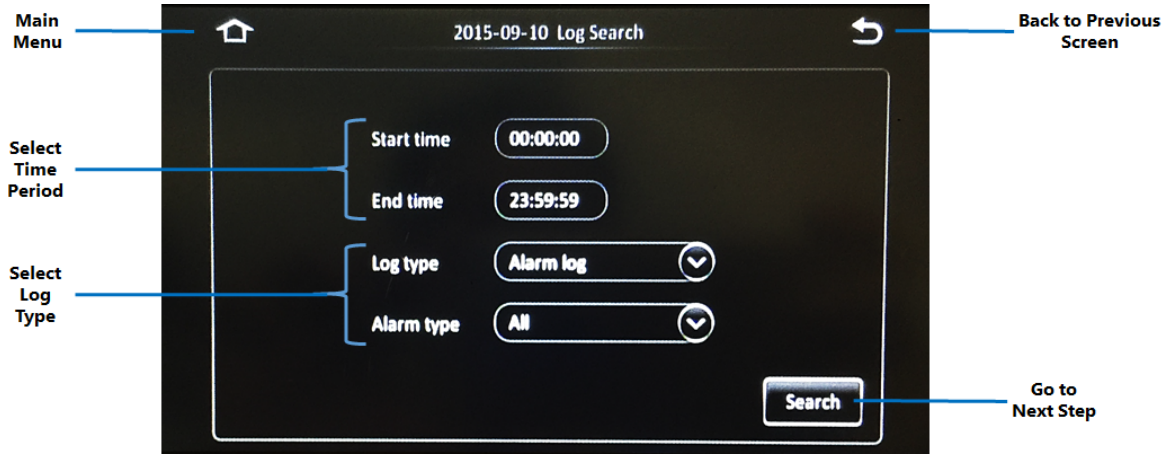
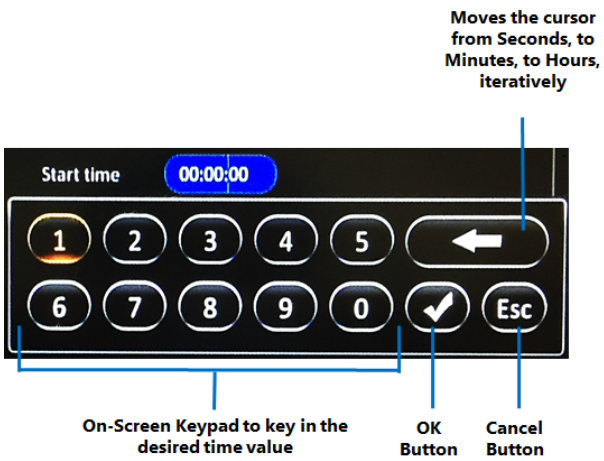


Figure 5-8 Log Time and Type Selection

- *Main Menu:* Click this icon to return to the Main Menu.
- *Back to Previous Screen:* Click this icon to return to the Previous Screen that you were at.
- *Select Time Period:* Clicking on the *Start Time* field or the *End Time* field will display the on-screen keypad which allows you to key in a specific time (in hh:mm:ss 24-hour time format).



- *Select Log Type:* This allows you to select the type of log file to be displayed.

Alarm	:	Log file listing alarm events.
Operation	:	Log file listing operational events.
Locked	:	Log file listing locked events.

<u>What are locked events?</u>
The device setup allows you to configure the recording settings such that video is always retained for a specified number of days after it is recorded. Locked video refers to recorded video which falls within the stipulated duration, and hence is protected against being deleted or overwritten by the device. Locked events are events for which the corresponding video is still in locked mode.

If the **Alarm** log type is selected, the log file can be filtered further by *Alarm Type*.

All	:	Show all alarm events.
IO Alarm	:	Only show IO alarm events.

Panel Alarm : Only show panel alarm events.
Speed Alarm : Only show speed alarm events.
Video Loss : Only show Video Loss events.

- *Next Step:* After selecting the time and log type, clicking on the **(Search)** button will proceed to display the log file data on the screen.

Log Search Step 3: View and Export the Log File

The final step in the Log Search function allows you to view the log file data and to export it to an external storage device for archival or later study.

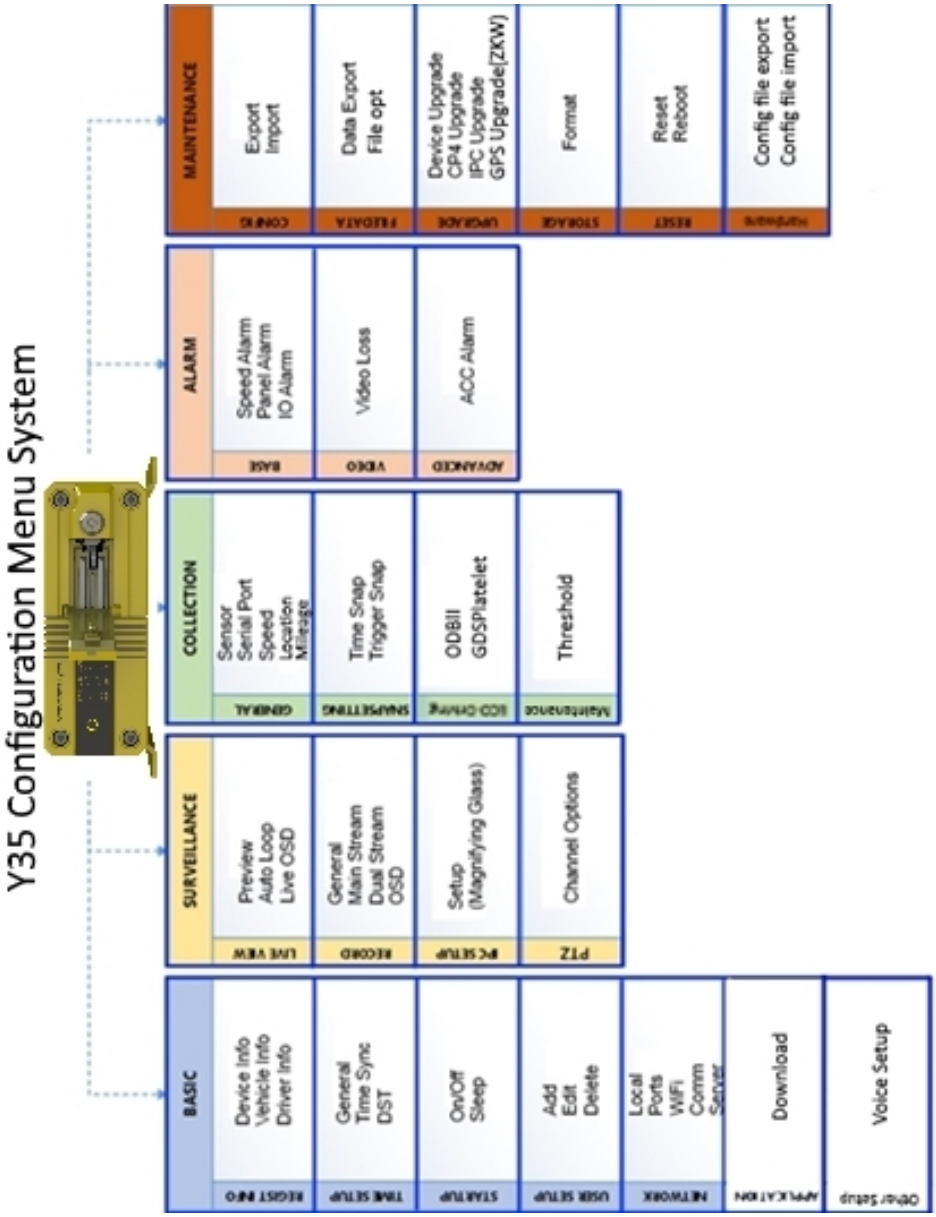
Figure 5-9 View and Export Log File

- *Main Menu:* Click this icon to return to the Main Menu.
- *Back to Previous Screen:* Click this icon to return to the Previous Screen that you were at.
- *Page Up/Down:* The **(^)** and **(v)** buttons allow you to scroll the pages of the log data.
- *Jump to Page:* Clicking on the field allows you to key in a specific page to immediately jump to.
- *Log Data:* This is the log data sorted by time. Clicking on any log data item will show additional details associated with the event (e.g. user name, etc.).
- *Video:* If there is any video linked with this log item, clicking this icon will allow you to playback the video for viewing.
- *Export:* Clicking this icon allows you to export the log file to an external storage USB flash drive.

6 Configuring the Y35

6.1 Quick Reference to Configuration Menu System

The following shows a high level map to the various settings in the Y35 configuration menu system. Please refer to the following sections for a detailed description of each section.



6.2 Navigating the Configuration Menus

The configuration menus are presented in a tabular format, where the main sections can be selected from the row of tabs at the top of the screen. The subsections within each main section are arrayed in columnar format, and can be selected from the column of page subsections on the left edge of the screen. Within each subsection page, there may also be nested tabs for different pages of settings.

The Layout of the Configuration Menu System

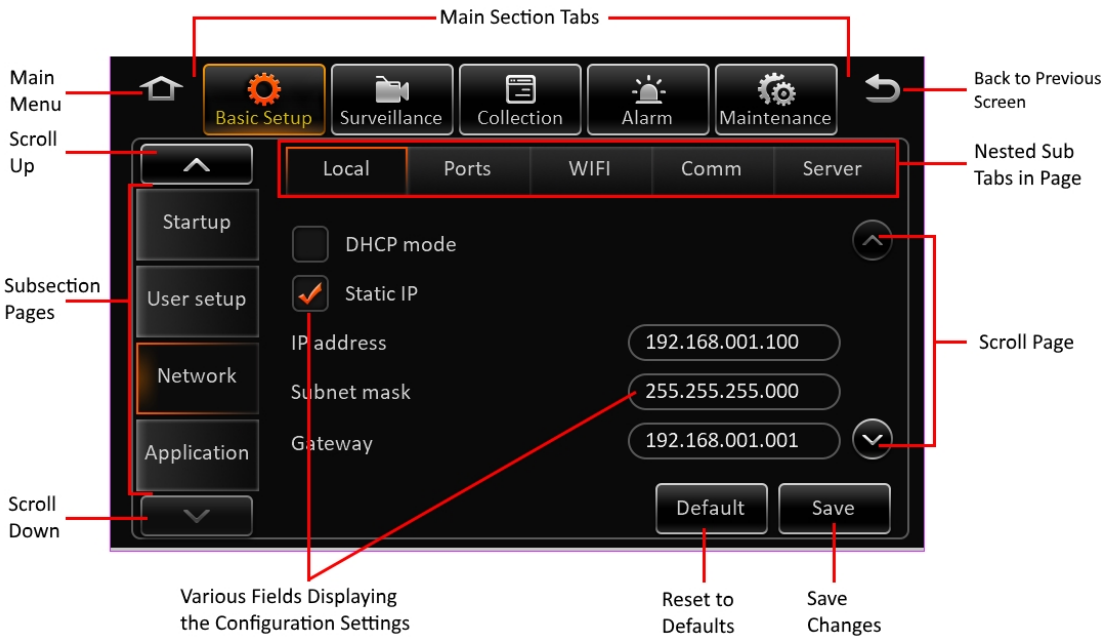


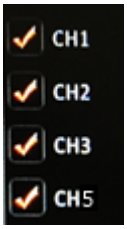
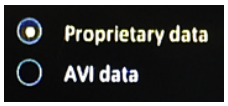
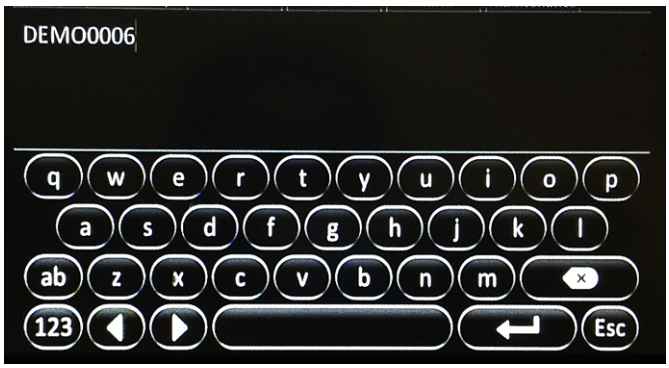
Figure 6-1 Layout of the Configuration Menu

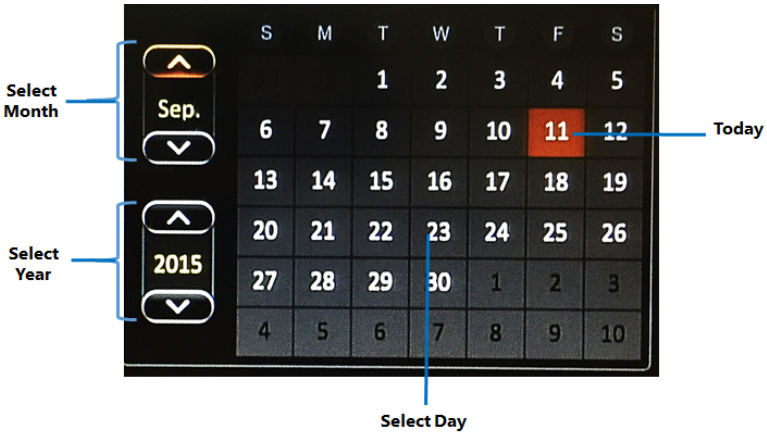
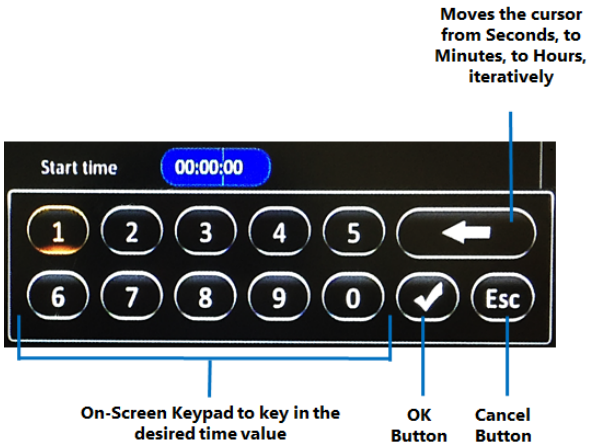
- *Main Menu:* Click this icon to return to the Main Menu.
- *Back to Previous Screen:* Click this icon to return to the Previous Screen that you were at.
- *Main Section Tabs:* Clicking on any of these tabs will open the configuration pages for that particular main section.
- *Subsection Pages:* This the list of subsections which are contained within the main section. Clicking on these will display the configuration settings related to this particular subsection.
- *Scroll Up:* Click this button to scroll up in the list of subsections.
- *Scroll Down:* Click this button to scroll down in the list of subsections.
- *Nested Sub Tabs in Page:* Some subsection pages will also have nested sub tabs to further subdivide the configuration settings. Click on the sub tab to open the related settings page.
- *Scroll Page:* Some pages will have many configuration settings that cannot be listed on the screen all at once. The **(^)** and **(v)** buttons allow you to scroll up and down in order to access all the settings available on the page.
- *Reset to Defaults:* Click the **(Default)** button to reset the settings on the current page to the factory defaults.
- *Save Changes:* Click the **(Save)** button to save any changes that you have made to the settings on the page.

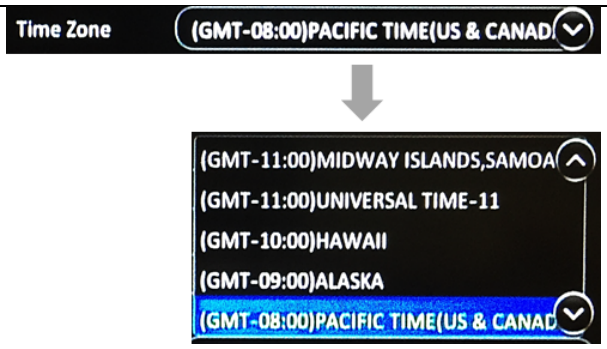
If you navigate away from the current page/tab without saving, any changes that you have made to the settings will be discarded.

Please note that your configuration settings have been set by Gatekeeper Systems engineers to meet your specific deployment requirements. Do not reset to factory defaults or change the settings unless you fully understand the changes you are making, or as directed by Gatekeeper Systems.

Data Entry Interfaces of the Configuration Menu System

Component	Description
Button	Clicking any button will either perform an action, or advance you to the next step in the process. 
Checkbox	Checkboxes allow you to toggle an item – clicking on it will select it, and clicking on a selected item will deselect it. If the checkbox is checked (has a checkmark in the box), then the item next to the checkbox is selected. An empty box (no checkmark) means the item is not selected. Multiple selections are allowed. 
Radio Button	Radio buttons allow you to make one selection from among a group of choices. Clicking on the radio button will select it (marked circle). Clicking on any other item in the group will select that item, and unselect the first item. Only one item can be selected at a time. 
Text Field	This is a general field which accepts user input. Clicking the field will display an on-screen full qwerty keyboard for the user to key in the text (both alphabetical and numbers). 

	However, if the field will only accept numeric values, clicking on the field will display an on-screen keypad for the user to key in numeric values. 
Date Field	This is an input field for dates. Clicking on this field will show a calendar from which the user can select the desired date. 
Time Field	This is an input field for time. Clicking on this field will show an on-screen keypad which the user can use to enter the time values. 
Drop List	This is a controlled input field which only accepts selections from a predefined list of items. This kind of field can be identified by a **(v)** button to the right of the field. Clicking this button will display a list of items which can be scrolled and selected.

6.3 Basic Settings

Navigate to: ***Main Menu → Setup → Basic Setup***

All the core device settings can be configured in this section. This includes key operational configurations such as device identifiers and vehicle information, user management, time setup, device startup behaviour and network settings and server configuration.

Figure 6-2 Basic Setup Tab in the Device Configuration Options

6.3.1 Regist Info

Navigate to: ***Main Menu → Setup → Basic Setup → Regist Info***

This subsection enables you to view and set the various identification codes to be associated with the device, as well as the vehicle it will be installed in, and the associated vehicle driver.

Device Info	*Device ID*	Numeric text field for setting a number to identify the device.

		You may input up to a maximum of: ▪ **5 digits** *Note:* - *This value is only set when the device is configured as part of a Gatekeeper Wireless deployment.* DEFAULT SETTINGS: Please refer to Gatekeeper Project Team, in consultation with customer/school district, for the value to set.
Vehicle Info	*Vehicle Plate*	Alphanumeric text field for setting the vehicle plate number. This is typically the vehicle registration plate number. You may input up to a maximum of: ▪ **10 characters** DEFAULT SETTINGS: Gatekeeper Project Team, in consultation with customer/school district, will determine the value to set.
	Vehicle Num	Alphanumeric field for setting the vehicle number. Typically the identification code used by the fleet operator to identify a particular vehicle . You may input up to a maximum of: ▪ **10 characters** DEFAULT SETTINGS: Gatekeeper Project Team, in consultation with customer/school district, will determine the value to set.
	Line Number	Alphanumeric text field for setting the vehicle line number. Typically the identification code used by the fleet operator to identify a route. You may input up to a maximum of: ▪ **10 characters** DEFAULT SETTINGS:

		Gatekeeper Project Team, in consultation with customer/school district, will determine the value to set.
Driver Info	*Driver Number*	Alphanumeric text field for setting the driver information. You may input up to a maximum of: ▪ **10 characters** DEFAULT SETTINGS: Gatekeeper Project Team, in consultation with customer/school district, will determine the value to set.
	Driver Name	Alphanumeric text field for setting the name of the driver. You may input up to a maximum of: ▪ **10 characters** DEFAULT SETTINGS: Gatekeeper Project Team, in consultation with customer/school district, will determine the value to set.

6.3.2 Time Setup

Navigate to: Main Menu → Setup → Basic Setup → Time Setup

The device contains a real time clock. This subsection enables you to view and set the date and time for the device, and also configure the options used for time synchronization as well as daylight savings.

General	*Date Format*	Drop list which allows you to choose the format in which date values will be displayed: ▪ **MONTH/DAY/YEAR** ▪ **YEAR-MONTH-DAY** ▪ **DAY/MONTH/YEAR** DEFAULT SETTINGS: ▪ **MONTH/DAY/YEAR**
	Time Format	Drop list which allows you to choose the format in which time values will be displayed: ▪ **24 Hours**

		▪ **12 Hours** DEFAULT SETTINGS: ▪ **24 Hours**
	Time Zone	Drop list which allows you to choose the time zone that the device will be operating in. DEFAULT SETTINGS: ▪ **(GMT-08:00) PACIFIC TIME (US & CANADA)** If this is not your time zone, please change this setting as appropriate to the actual time zone that your fleet will be operating in.
Time Sync	*Date/Time*	This is a set of fields allowing you to set the current date and time for the real time clock in the device. It consists of the following fields: ▪ Date field which enables you to set the current date. ▪ Time field which enables you to set the current time. ▪ Drop list which allows you to choose AM/PM (only applicable if Time Format is set to 12 Hours). DEFAULT SETTINGS: Please verify the time and date. If the time and/or date is not correct, please change them to the correct values.
	Satellite	Checkbox – if selected, the device will synchronize the date and time periodically with the GPS satellites. *Note:* - *This is the recommended setting to use when the Y35 is deployed in a mobile environment.* - *To use this setting, the Y35 must be equipped with the GPS option.* DEFAULT SETTINGS: ▪ **Checkbox – Selected**

	Center Server	Checkbox – specifies if the device will synchronize the date and time periodically with the Center Server. If this option is selected, you will also need to use the associated drop list to specify which Center Server will be used for the time synchronization. *Note:* - *This setting requires a constant network connection either via cellular or Wi-Fi.* DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	NTP Sync	Checkbox – specifies if the device will synchronize the date and time periodically with a selected Time Server. If this option is selected, you will also need to use the associated drop list to specify which Time Server will be used for the time synchronization. *Note:* - *This setting requires a constant network connection either via cellular or Wi-Fi.* DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
DST	*Enable*	Checkbox – selecting this will enable the device to calculate and adjust for daylight savings time. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Offset	Drop list which allows you to choose the offset value to be used for the daylight savings calculation: ▪ **One Hour** *(system will offset the time by an hour when daylight savings is active)* ▪ **Two Hours** *(system will offset the time by two hours when daylight savings is active)* DEFAULT SETTINGS:

		▪ **One Hour**
	Mode	Drop list which allows you to choose the mode to be used for the daylight savings calculation: ▪ **Week** *(enable the system to activate daylight savings based on a specified day of the week in the year)* ▪ **Date** *(set an actual hard date for when daylight savings is active)* DEFAULT SETTINGS: ▪ **Week**
	Start	This is a set of fields which allow you to choose the starting point of the period for which the device will adjust for daylight savings time. If the device is adjusting for daylight savings by Week, you will need to specify the following: ▪ Drop list to choose the start month (from JAN to DEC). ▪ Drop list to choose the start week (either 1ST, 2ND, 3RD, 4TH or LAST). ▪ Drop list to choose the start day (from SUNDAY to SATURDAY). ▪ Time field to choose the start time. If the device is adjusting for daylight savings by Date, you will need to specify the following: ▪ Date field to set the start date. ▪ Time field to set the start time. DEFAULT SETTINGS: ▪ **MAR** *(month)* ▪ **2ND** *(week)* ▪ **SUNDAY** *(day)* ▪ **02:00:00** *(time)*
	End	This is a set of fields which allow you to choose the ending point of the period for which the device will adjust for daylight savings time. If the device is adjusting for daylight savings by Week, you will need to specify the following: ▪ Drop list to choose the end month (from JAN to DEC). ▪ Drop list to choose the end week (either 1ST, 2ND, 3RD, 4TH or LAST). ▪ Drop list to choose the end day (from SUNDAY to SATURDAY).

		▪ Time field to choose the end time. If the device is adjusting for daylight savings by Date, you will need to specify the following: ▪ Date field to set the end date. ▪ Time field to set the end time. DEFAULT SETTINGS: ▪ **NOV** *(month)* ▪ **1ST** *(week)* ▪ **SUNDAY** *(day)* ▪ **02:00:00** *(time)*

6.3.3 Startup

Navigate to: Main Menu → Setup → Basic Setup → Startup

This subsection enables you to set the startup characteristics of the device, as well behaviour of the device whilst in sleep mode.

ON/OFF	*ON/OFF Mode*	Drop list to select the conditions for device startup and shutdown: ▪ **Ignition** – device will turn on when the vehicle ignition is on, and turn off when the vehicle ignition is off. ▪ **Timer** – device will turn on following the scheduled time, regardless of the vehicle ignition status. ▪ **Ignition or Timer** – device will start either when vehicle ignition is on, or when the scheduled time starts. However, the device will only turn off when BOTH ignition is off AND scheduled time ends. DEFAULT SETTINGS: ▪ **Ignition**
	DVR Power Off Delay	Numeric text field for setting the additional time period that the device will continue running after the vehicle ignition is off. The device will only stop recording and shutdown after this delay period is past. DEFAULT SETTINGS: ▪ **300**

		This means that when the vehicle is turned off, the device will continue to record for another 300 seconds (5 minutes) before shutting down.
	Timer From	This consists of two time fields to set the start time and end time for which the device will turn on and turn off respectively.
	Light off time	DEFAULT SETTINGS: Never
Sleep	*Sleep Mode*	Drop list to select the sleep mode option for the device: ▪ **No Consumption Standby** *Notes:* - *Currently, this is the only option available.* DEFAULT SETTINGS: ▪ **No Consumption Standby** This means that the device will not be consuming battery power when it is shut down.
	Low Volt Protect	Checkbox – selecting this option will enable the device to monitor battery voltage. If the battery voltage falls below the specified threshold, the device will turn off to protect the battery from being discharged. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Battery Low Voltage Protect	Numeric text field to set the battery low voltage threshold. If Low Volt Protect is selected, the device will turn off when battery voltage is detected to be consistently below this threshold value. For a vehicle with a 12V battery, the recommended threshold value is 9V. For a vehicle with a 24V battery, the recommended threshold value is 21V. DEFAULT SETTINGS: Disabled/not applicable.

	Voltage Startup	Numeric text field to set the recovery boot voltage threshold. When the vehicle battery recovers its charge and is consistently above this threshold value, the device will automatically turn on again. For a vehicle with a 12V battery, the recommended threshold value is 12.5V. For a vehicle with a 24V battery, the recommended threshold value is 24.5V. DEFAULT SETTINGS: Disabled/not applicable.
	Low Volt Upload	Checkbox – selected will enable the device to log and report if low voltage situation occurs. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**

6.3.4 User Setup

Navigate to: Main Menu → Setup → Basic Setup → User Setup

This subsection enables you to add and edit users, as well as change the passwords required to log into the system.

User Setup	*Idle Time*	Drop list which allows you to set the login time out period. Users will be automatically logged out after the specified period of inactivity: ▪ **30 Seconds** ▪ **1 Minute** ▪ **3 Minutes** ▪ **5 Minutes** ▪ **10 Minutes** ▪ **Never** DEFAULT SETTINGS: ▪ **3 Minutes**
	User Name / User Group	Llist of users who are set up in the system. The User Group shows the type of user. Checkboxes allow you to select the specified user to edit or delete. *Notes:*

		- *The user **admin** is the default administrator and cannot be deleted.* - *Only administrators can add/delete users.* - *In addition to the administrator, the maximum number of additional users that can be added is two.* DEFAULT SETTINGS: Default administrator user ▪ Username – **admin** ▪ Password **- admin** Default normal user ▪ Username – **user** ▪ Password **- user**
	Add	On the add user screen, the following fields will allow you to key in the user details: ▪ Alphanumeric text field to key in the user name. ▪ Alphanumeric text field to key in the user password. ▪ Alphanumeric text field to key in the user password a second time in order to confirm it. User name maximum of: ▪ **10 characters** For password, you may input up to a maximum of: ▪ **16 characters**
	Delete	After using the checkbox to select a user, this button will allow you to delete the selected user. A confirmation message will be displayed – clicking the **(Yes)** button on this prompt will confirm the action and proceed to delete the selected user from the device.
	Edit	After using the checkbox to select a user, this button will display the edit user screen. On the edit user screen, the following fields will allow you to modify the selected user's details: ▪ Alphanumeric text field to key in the user name. ▪ Alphanumeric text field to key in the new user password.

		▪ Alphanumeric text field to key in the new user password a second time in order to confirm it.

6.3.5 Network

Navigate to:* *Main Menu → Setup → Basic Setup → Network

This subsection enables you to view and set up all the network configuration options for the device communications. These include settings for the local network, web port settings, Wi-Fi, communications module, and center server settings.

Local	*DHCP Mode*	Checkbox – if selected, the device will attempt to obtain the IP Address, Subnet Mask and Gateway automatically from the DHCP server. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Static IP	Checkbox – if selected, the device will use the manually configured IP Address, Subnet Mask and Gateway. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	IP Address	Numeric text field allowing you to key in the IP address for the device. DEFAULT SETTINGS: ▪ **192.168.088.002**
	Subnet Mask	Numeric text field allowing you to key in the IP address subnet mask for the device. DEFAULT SETTINGS: ▪ **255.255.255.000**
	Gateway	Numeric text field allowing you to key in the IP address of the gateway for the device. DEFAULT SETTINGS: ▪ **192.168.088.001**

	Auto Get DNS	Checkbox – if selected, the device will attempt to obtain the DNS settings automatically. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Use Following DNS	Checkbox – if selected, the device will use the manually configured DNS settings. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Preferred DNS Server	Numeric text field allowing you to key in the IP address of the primary DNS server. DEFAULT SETTINGS: ▪ **192.168.001.001**
	Alternate DNS Server	Numeric text field allowing you to key in the IP address of the alternate DNS server. DEFAULT SETTINGS: ▪ **192.168.001.001**
Ports	*WEB Port*	Numeric text field to set the web port number. DEFAULT SETTINGS: ▪ **80**
NOTE: THE FOLLOWING SECTION (SERVER) IS ONLY APPLICABLE WHEN THE DEVICE IS BEING CONFIGURED AS PART OF A GATEKEEPER WIRELESS DEPLOYMENT.		
Server	*Center Server*	Drop list which displays a list of center servers configured in the device. Selecting one of them will display the currently set configuration values, and allow you to modify them. These configuration values are server specific. If you have more than one center server set up, you will need to select each in turn and configure them separately.

		Add – this button allows you to add a new center server name and configure its settings. **Delete** – this button deletes the selected center server and its associated configuration settings. *Notes:* - *You may add up to 5 center servers.* - *Server 1 is the default center server and it cannot be deleted.* DEFAULT SETTINGS: ▪ **Server 1**
	ON	Checkbox – selecting this will mark the selected server as active. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Protocol Type	Drop list to select the protocol type option for the selected center server: ▪ **N9M** *Notes:* - *Currently, this is the only option available.* DEFAULT SETTINGS: ▪ **N9M**
	Enable Network	Drop list to select the network mode used to communicate with the selected center server: ▪ **Local** ▪ **Auto Adaptation** DEFAULT SETTINGS: ▪ **Local**
	Register Server Add	Numeric text field to configure the IP address of the register server. DEFAULT SETTINGS: ▪ **174.1.68.160**

	Register Server Port	Numeric text field to configure the port values used by the register server for the following protocol types: ▪ **TCP** ▪ **UDP** DEFAULT SETTINGS: ▪ **TCP – 5556** ▪ **UDP – 6222**
	Media Server IP	Numeric text field to configure the IP address of the media server. DEFAULT SETTINGS: ▪ **174.1.68.160**
	Media Server Port	Numeric text field to configure the port values used by the media server for the following protocol types: ▪ **TCP** ▪ **UDP** DEFAULT SETTINGS: ▪ **TCP – 8081** ▪ **UDP – 6111**

6.3.6 Application

Navigate to: ***Main Menu → Setup → Basic Setup → Application***

This subsection enables you to view and edit the application settings of the device in regards to Download. Please note this option is currently not supported and is reserved for future development.

NOTE: GATEKEEPER DOES NOT SUPPORT THIS CONFIGURATION.		
Download	*Auto download Reconnect*	Checkbox – if selected, the device will use the configured settings. This item is unsupported and reserved for future development. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
Other Setting	*Voice Setting*	Checkbox – if selected, the device will use the configured settings.

		This item is unsupported and reserved for future development. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**

6.4 Surveillance Settings

Navigate to: ***Main Menu → Setup → Surveillance***

This section allows the user to setup the Digital IP Camera, and also configure the on-screen display and video capture and streaming settings for both the live viewing as well as the recording functions.

The settings here are crucial and will allow you to not only enable and disable cameras for viewing and recording, but also configure timings for when recording actually takes place, and adjust the resolution and quality of the recorded video.

Figure 6-3 Surveillance Tab in the Device Configuration Options

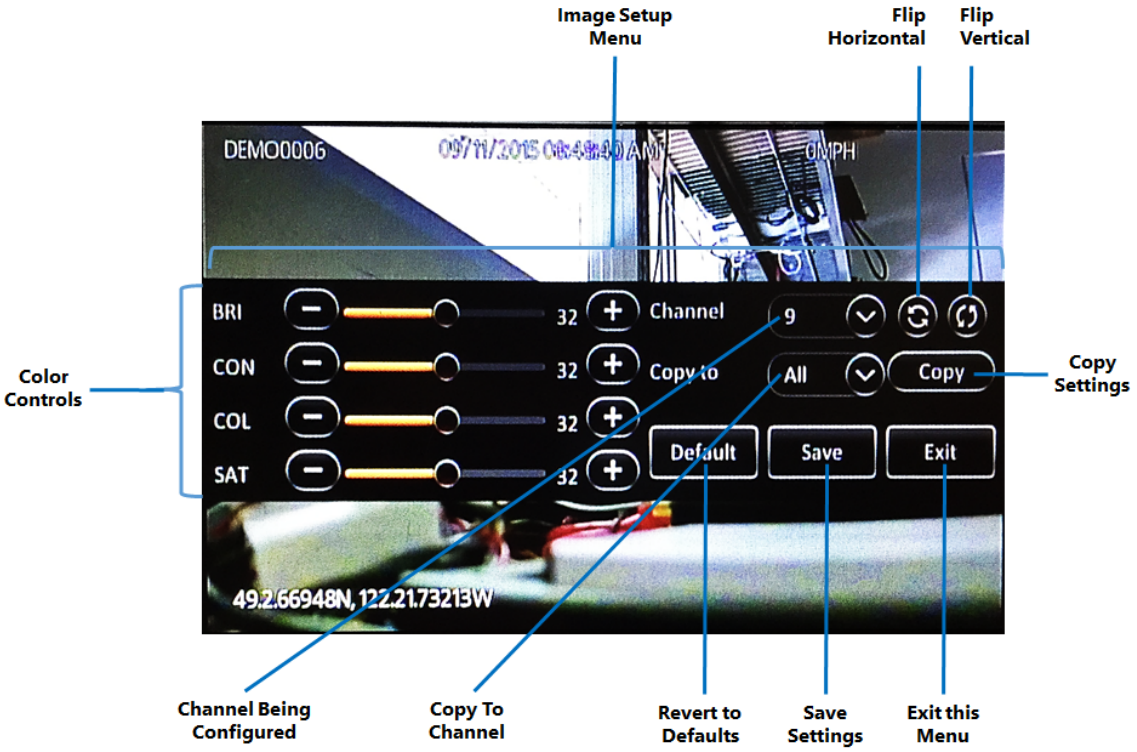
6.4.1 Live View

Navigate to: ***Main Menu → Setup → Surveillance → Live View***

This subsection enables you to configure the settings for the live view of the video coming from the cameras. These settings only affect the video being viewed on the LCD monitor or the ICD2 – they do not affect the recorded video.

Preview	*Preview Audio*	Checkbox – if selected, the audio stream will be played while during the live video view. Else, the audio will be muted by default. Nevertheless, the audio can still be toggled on and off from the video viewing screen itself. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**

	Image Setup	This button displays the image setup screen. DEFAULT SETTINGS: Please adjust the video from the various camera channels using the settings explained below to meet your preferences



- *Image Setup Menu:* The entire image setup menu is floating over the video from the live camera. You may click and drag the entire image setup menu up and down in order to look at different parts of the image.

- *Flip Horizontal:* This button flips the entire camera video along the horizontal axis. This is especially useful for cameras installed in upside-down orientation.

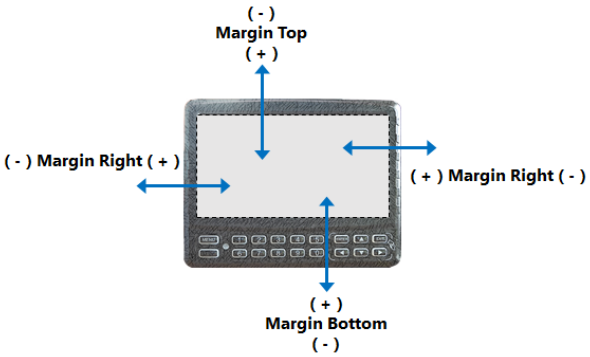
- *Flip Vertical:* This button flips the entire camera video along the vertical axis.

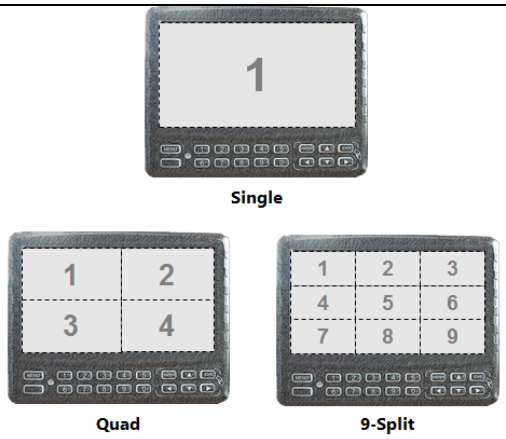
- *Color Controls:* The **(-)** and **(+)** buttons enable you to adjust the color values of the image. You may also click and drag the respective slider bar knob to adjust the setting quickly. There are 4 image color settings which can be adjusted.

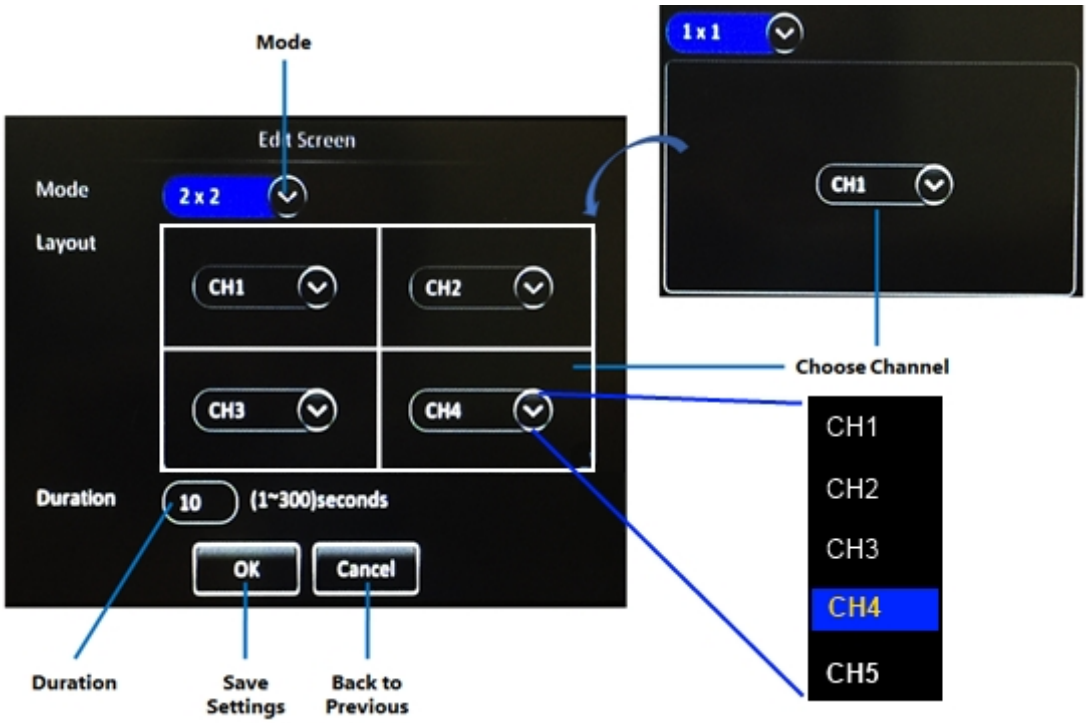
  BRI : Brightness
  CON : Contrast
  COL : Color Warmth
  SAT : Color Saturation

- *Channel Being Configured:* This drop list enables you to select a channel to configure. The video from the selected channel will be displayed, and you will be able to adjust the settings. Each channel can have specific settings, and you will need to adjust each in turn.

- *Copy To Channel:* In multi-camera installations, this feature allows you to easily copy the configuration of one camera channel to another channel, or even overwrite all channels with the

		settings from the currently selected channel. Use the drop list to select the camera channel that you wish to overwrite with the current settings. ▪ *Copy Settings:* After selecting the camera channel that you wish to overwrite with the current settings, clicking the **(Copy)** button will proceed to do so. ▪ *Revert to Defaults:* Click the **(Default)** button to revert the settings to the factory defaults. ▪ *Save Settings:* Click the **(Save)** button to save the settings to the currently selected camera channel. ▪ *Exit this Menu:* Click the **(Exit)** button to return to the previous screen. Please note that you will lose any changes unless you first save the settings.
	Margins	This button displays the margin setup screen which has the following options: ▪ **Margin-top** ▪ **Margin-bottom** ▪ **Margin-left** ▪ **Margin-right** You may use the **(+)** and **(-)** buttons or click and drag the slider knob to adjust the margins of the screen to fit the display within the limitations of your display monitor. This is especially useful if you find that parts of the display are off-screen.  DEFAULT SETTINGS: Please adjust the margins if necessary to ensure the entire screen fits comfortably within your installed display monitor.
	Startup Screen	Drop box for selecting the type of live video displayed by default after device startup: ▪ **Single** ▪ **Quad** ▪ **9-Split**

		 DEFAULT SETTINGS: ▪ **Quad**
	Channel	Checkboxes – allows you to select the cameras to be included as part of the live view displayed channels. *Notes:* - *You are allowed to select more display channels than there are cameras available.* - *However, the selected display channels which do not have cameras will be displayed in the live view as a black box.* DEFAULT SETTINGS: ▪ **Checkbox – Channel 1 – Selected** ▪ **Checkbox – Channel 2 – Selected** ▪ **Checkbox – Channel 3 – Selected** ▪ **Checkbox – Channel 4 – Selected** ▪ **Checkbox – Channel 5 – Unselected**
Auto Loop	*Screen / Mode / Channel / Duration / Setup*	This displays a list of screen layouts which have been configured in the device. If Auto-Loop is enabled, each of the screen layouts be displayed for the specified duration, and the display will cycle iteratively and repeatedly through the list of screen layouts.
		Clicking the **( )** button will allow you to edit the settings of the associated screen layout.



- *Mode:* This enables you to choose the display mode, whether channels will be displayed in single, quad or 9-split mode.

  1x1 : Single camera on the screen
  2x2 : Four cameras on the screen in 2x2 (quad) grid layout

- *Channel:* The drop lists are shown on-screen accordingly to the grid layout mode selected. You can easily choose each individual camera channel to be displayed in the selected grid segment visually. If you have less cameras than available grid segments, then those segments associated with an actual camera will be displayed as a black box. The drop down list will show for all connected cameras.

- *Duration:* This numeric text field allows you to specify the duration (in seconds) for which this layout will be displayed on the screen.

- *Save Settings:* The **(OK)** button allows you to save the settings for this screen layout.

- *Back to Previous:* The **(Cancel)** button allows you to return to the previous screen.

	Add Screen	Clicking the **(Add Screen)** button will add a new screen layout to the list. You can then use the **(🗎)** button to edit the new screen layout settings.
	x	Clicking the **(x)** button will delete the associated screen layout.
	Auto Loop	Checkbox – if selected will enable the auto-loop feature. DEFAULT SETTINGS:

		▪ **Checkbox – Unselected**
Live OSD	*Date/Time*	Checkbox – if selected, the date and time will be displayed as an overlay text on top of the live video view on the LCD monitor or ICD2. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Vehicle Plate	Checkbox – if selected, the vehicle Plate will be displayed as an overlay text on top of the live video view on the LCD monitor or ICD2. *Notes:* - *The Vehicle Plate data which the device will display on the OSD is actually the identifier data which is set in the Basic Setup → Regist Info → Vehicle Info → Vehicle Plate.* DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Alarm	Checkbox – if selected, any alarms will be displayed as an overlay text on top of the live video view on the LCD monitor or ICD2. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Vehicle num	Checkbox – if selected, the vehicle num will be displayed as an overlay text on top of the live video view on the LCD monitor or ICD2. *Notes:* ▪ *The Vehicle num data which the device will display on the OSD is actually the identifier data which is set in the Basic Setup → Regist Info → Vehicle Info → Vehicle num.* DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Speed	Checkbox – if selected, the speed will be displayed as an overlay text on top of the live video view on the LCD monitor or ICD2. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	GPS	Checkbox – if selected, the GPS coordinates will be displayed as an overlay text on top of the live video view on the LCD monitor or ICD2.

		DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Channel Name	Checkbox – if selected, the channel name will be displayed as an overlay text on top of the live video view on the LCD monitor or ICD2. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	G Sensor Info	Checkbox – if selected, the G Sensor information will be displayed as an overlay text on top of the live video view on the LCD monitor or ICD2. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**

6.4.2 Record

Navigate to: Main Menu → Setup → Surveillance → Record

The Y35 is a hybrid DVR. It has the capability of having a combination of analog; analog HD and a single IP camera connected at the same time.

Please Note: that the cameras, if using a combination of analog and analog HD cameras, Analog HD cameras must be used in pairs, e.g. CAM 1 and CAM 2 or CAM 3 and CAM 4. The IP camera is a separate device and uses its own settings. Analog HD cameras have a maximum frame rate of 15 Frames Per Second. This subsection enables you to configure the settings related to the video being recorded from the various cameras.

General	*System*	This drop list enables you to select what system format the video will be recorded in: ▪ **PAL** ▪ **NTSC** DEFAULT SETTINGS: ▪ **NTSC**
	Overwrite	The device records video cyclically. This drop list enables you to specify the conditions whereby older video will be overwritten: ▪ **By Days** – video older than a specified number of days will be overwritten by newer video. Selecting this will enable a numeric text field where you can specify the number of days to keep video retained before overwriting. ▪ **By Capacity** – video will be retained as long as storage capacity is available. As device storage capacity runs out, older

		video data will be overwritten by newer video data in First In First Out (FIFO) format. ▪ **Never** – video will never be overwritten. In order to ensure that the device still has storage to record new video, you will have to download and remove the older video on a regular basis. DEFAULT SETTINGS: ▪ **By Capacity**
	Lock Duration	Numeric text field setting the lock duration for video data. If the lock duration is set, then video will always be retained for at least this duration regardless of the Overwrite settings. DEFAULT SETTINGS: ▪ **7 days**
	Pre-Recording	Checkbox – if selected will enable the pre-recording feature, so that when alarms/events occur, video data leading up to the incident is available as well. Selecting this checkbox will enable a drop list where you can specify the duration of video to pre-record. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
Main Stream	*Channel*	Drop list which displays the list of available camera channels. Selecting one of them will display the currently set configuration values, and allow you to modify them. These configuration values are channel specific. You will need to select each channel in turn and configure them separately. *Notes:* - *For quick configuration, the copy function allows you to easily copy the settings of the current channel to another channel.*
	Channel Name	Alphanumeric text field for setting the channel name. This is useful for giving the channel an

		easily remembered and/or location-specific name. You may input up to a maximum of: ▪ **5 characters** *Notes:* - *Channels 1 to 4 are analog/analogHD channels.* - *Channel 5 is a Digital IP camera channel.* DEFAULT SETTINGS: ▪ Channel 1 – set name as – **CH1** ▪ Channel 2 – set name as – **CH2** ▪ Channel 3 – set name as – **CH3** ▪ Channel 4 – set name as – **CH4** ▪ Channel 5 – set name as – **CH5**
	Enable	Checkbox – if selected, enables this channel for inclusion into the main stream recording. DEFAULT SETTINGS: For channels 1 to 5, only enable the channels which actually have cameras connected. Please note that the system will show a videoloss message on channels which are enabled, but do not have a connected camera (i.e., no incoming video stream).
	Resolution	Drop list for selecting the resolution to record the video on this channel (applicable to channels 1 to 4): ▪ **CIF** *(352x240)* ▪ **WCIF** *(464x240)* ▪ **HD1** *(704x240)* ▪ **WHD1** *(928x240)* ▪ **D1** *(704x480)* ▪ **WD1** *(928x480)* For the Analog HD cameras (channels 1-4) and Digital IP Camera (channel 5), the drop list contents will change to reflect the supported resolutions of the currently attached Analog HD and IP cameras. Most commonly, these will typically be: ▪ **720P** *(1280x720)* DEFAULT SETTINGS: For channels 1 to 4 (analog camera channels), set the following:

		▪ **D1** For channels 1 to 4 (Analog HD channels), set the following: ▪ **720P** For the Digital IP Camera, 5, the drop list contents will change to reflect the supported resolutions of the currently attached IP camera. Most commonly, these will typically be: ▪ **720P** *(1280x720)* DEFAULT SETTINGS: For channels 1 to 4 (analog camera channels), set the following: ▪ **D1** For channel 5 (IP camera channel), set the following: ▪ **720P**
	Frame Rate	Drop list allowing you to select the frame rate (in terms of frames per second) that you would like to record at. DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **15**
	Quality	Drop list allowing you to select the encoding quality (on a scale of 1 to 8 – where 1 is best). DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **1 (Best)**
	Record Mode	Drop list allowing you to select the record mode: ▪ **Power Up** – device will record whenever it is powered on. ▪ **Timer** – device will record following the configured schedule. ▪ **Alarm** – device will record whenever there is an alarm event detected. If the Record Mode selected is Timer, a **(Schedule)** button will be enabled. Click this button to display the schedule management screen. You will be able to perform the following functions:

		▪ **Add a Plan** – use the drop list to select a day of the week (from Sunday to Saturday). Clicking the **(Add a Plan)** button will then add a timer recording schedule to the task list. ▪ **Start Time** – this is a time field which allows you to set the starting time to begin the recording. ▪ **End Time** – this is a time field which allows you to set the ending time to stop the recording. ▪ **Video Type** – this is a drop list which allows you to select the type of video to be record (either ***Normal*** video, or ***Alarm*** video only). ▪ **x** – you can always click the (x) button to remove the associated recording task from the list. ▪ **Copy To** – this feature allows you to copy the current timer recording settings scheduled for any particular day to another day, thus allowing you to easily and quickly replicate the timer recording schedule settings. Once you have selected the day to copy to, click on the **(Copy)** button to make the copy. DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **Power Up**
	Audio	Checkbox – if selected, then audio will be included in the recording. If this is not selected, then the video will not have any audio, DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **Checkbox – Selected**
	Alarm Quality	Drop list to select the recording video quality during an alarm event (on a scale of 1 to 8 where 1 is best). DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **1 (Best)**
	Encode Mode	Drop list to select the encoding mode to use: ▪ **CBR** (Constant Bit Rate)

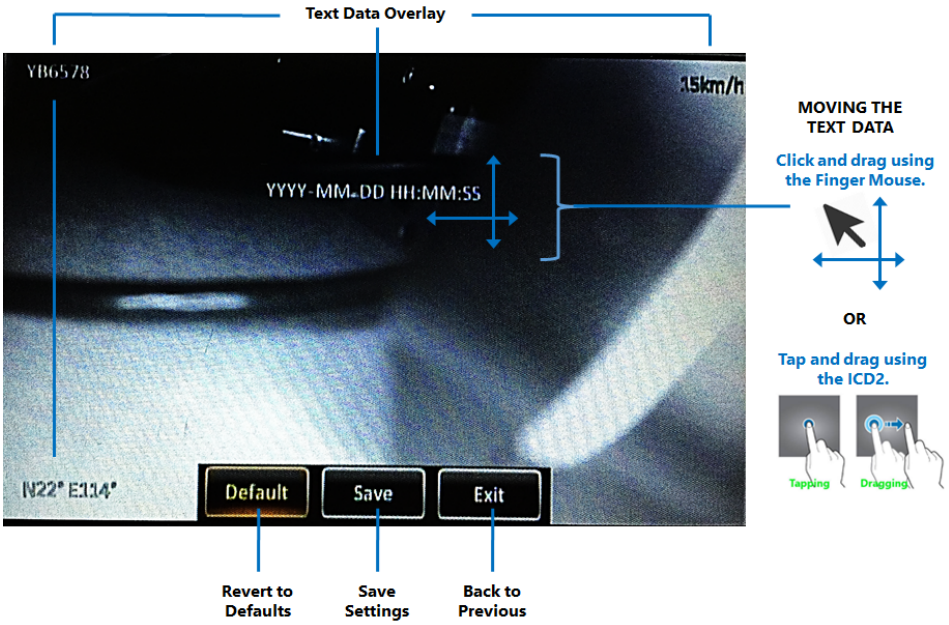
		▪ **VBR** (Variable Bit Rate) The CBR settings instructs the device to encode the video using a constant bit rate, thus ensuring consistent quality and predictable file size of the recorded video. When using VBR, the device will vary the bit rate according to the level of detail in the video at each given point in time, thus attempting to optimise quality against file size. However, for critical video (where detail must not be lost), and which also has a lot of fast movement, CBR is the better choice, as VBR would tend to introduce motion artifacts (jaggedness and blurriness) into the encoded video as the encoder attempts to keep up with the quick changing video scenes by continuously adjusting the bit rate. For optimal recorded video quality, Gatekeeper Systems recommends the use of the CBR setting throughout. DEFAULT SETTINGS: For all channels (1 to 5), set the following: ▪ **CBR**
	Copy	This feature allows you to easily copy the configuration settings on this channel to another selected channel. Use the drop list to select a channel – then clicking the **(Copy)** button will replicate all the current settings to the selected channel.
Dual Stream	*SD Write Resource Ratio*	Shows resources being used by the currently installed SD Card and the remaining resources on the installed SD Card. If the SD card is full this may indicate a potential Read/Write problem. Radio buttons that allow you to select the dual stream record storage from a choice of: ▪ **Internal SD** ▪ **External SD**
	Record Storage	Whilst the device records the video to the SD as the primary storage, this setting allows you to also record the video simultaneously to a secondary storage medium.

		The secondary storage can be an SD Card which is inserted into the device's secondary SD Card slot. Gatekeeper Systems provides a ruggedized external SD accessory called the FireBox, which is shock and fire-resistant, to keep a copy of your data safe in case of a vehicle crash or other catastrophic event, so that video of the incident can be retrieved for post mortem analysis. Please contact your Gatekeeper Systems sales representative for more details. DEFAULT SETTINGS: ▪ **Internal SD**
	Record Mode	Drop list where you can select the dual stream record mode: ▪ **Sub Record** – record a copy of the video from selected channels to the specified secondary storage, at a separately configured (usually lower) resolution and quality. ▪ **Mirror Record** – record a copy of the video from selected channels to the specified secondary storage, using the same resolution and quality as the main recording. ▪ **Alarm Backup** – record only the alarm-triggered video to the specified secondary storage. ▪ **None.** DEFAULT SETTINGS: ▪ **Mirror Record**
	Notes on Record Mode – Sub Record	If the Record Mode is set to Sub Record, then you may click on the **(Setup)** button to configure the quality and resolution of the recorded video to be stored to the secondary storage. This configuration needs to be done for each individual camera channel. The following options will be on the Substream Setup screen: ▪ **Channel** – drop list to select the particular channel to configure. When a channel is selected, the corresponding recording settings for that channel will be displayed for viewing and editing.

		▪ **Enable** – checkbox, if selected, would enable the substream recording for this channel. If unselected, would mean that video from this channel would not be recorded and stored as part of the substream. ▪ **Audio** – checkbox, if selected, would include audio into the recording. If unselected, there would be no audio recorded for this channel. ▪ **Resolution** – drop list to select the resolution to record this channel at. Available resolution options are ***QCIF*** (176x120), ***CIF*** (352x240), ***HD1*** (704x240) and ***D1*** (704x480). ▪ **Frame Rate** – drop list allowing you to select the frame rate (in terms of frames per second) that you would like to record at. ▪ **Quality** – drop list allowing you to select the encoding quality (on a scale of 1 to 8 – where 1 is best). ▪ **Copy To** – this feature allows you to copy the current channel's substream recording settings directly to another channel, thus allowing you to easily and quickly replicate the substream recording settings across channels. Once you have selected the channel to copy to, click on the **(Copy)** button to make the copy. ▪ **Copy** – select to copy the current settings to the selected channel. ▪ **OK** – select to save the current settings for the channel. ▪ **Cancel** – select to exit back to the previous screen without saving. <u>DEFAULT SETTINGS:</u> For all channels (1 to 5), set the following: ▪ **Enable – Checkbox – Selected** ▪ **Audio – Checkbox – Selected** ▪ **Resolution – CIF** ▪ **Frame Rate – 15** ▪ **Quality – 3**
	Mirror CH	Checkbox – select each checkbox to include the associated camera channel into the dual stream recording. <u>DEFAULT SETTINGS:</u>

		For channels 1 to 4 (Analog/Analog HD camera channels), set the following: ▪ **Checkbox - Selected** For channel 5 (Digital IP camera channels), set the following: ▪ **Checkbox - Unselected**
OSD	*Time*	Checkbox – if selected, the date and time will be displayed as an overlay text on top of the recorded video. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Vehicle Plate	Checkbox – if selected, the vehicle Plate will be displayed as an overlay text on top of the recorded video. *Notes:* - *The Vehicle Plate data which the device will overlay into the recorded video is actually the identifier data which is set in the Basic Setup → Regist Info → Vehicle Info → Vehicle Plate.* DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Channel Name	Checkbox – if selected, the channel name will be displayed as an overlay text on top of the recorded video. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Speed	Checkbox – if selected, the speed will be displayed as an overlay text on top of the recorded video. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	GPS	Checkbox – if selected, the GPS coordinates will be displayed as an overlay text on top of the recorded video. DEFAULT SETTINGS:

		▪ **Checkbox – Selected**
	Vehicle Num	Checkbox – if selected, the Vehicle Num will be displayed as an overlay text on top of the recorded video. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Alarm Info	This setting allows you to set the Alarm Info on the recorded video. Click the **(Setup)** button to display the position setting screen. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**



- *Text Data Overlay:* The selected data is displayed as a text overlay on top of the video.
- *Moving the Text Data:* The position of the text data can be easily customised by moving it to the desired location. In order to move it, just tap or click on the text, and then drag it to the desired location.
- *Revert to Defaults:* Clicking the **(Default)** button will revert all the text positions to their defaults.
- *Save Settings:* The **(Save)** button allows you to save the settings for text positions.
- *Back to Previous:* The **(Exit)** button allows you to return to the previous screen.

6.4.3 IPC Setup

Navigate to:* *Main Menu → Setup → Surveillance → IPC Setup

This subsection enables you to easily search for and configure the Digital IP camera connected to the Y35.

Selecting and Setting Up an IP Camera

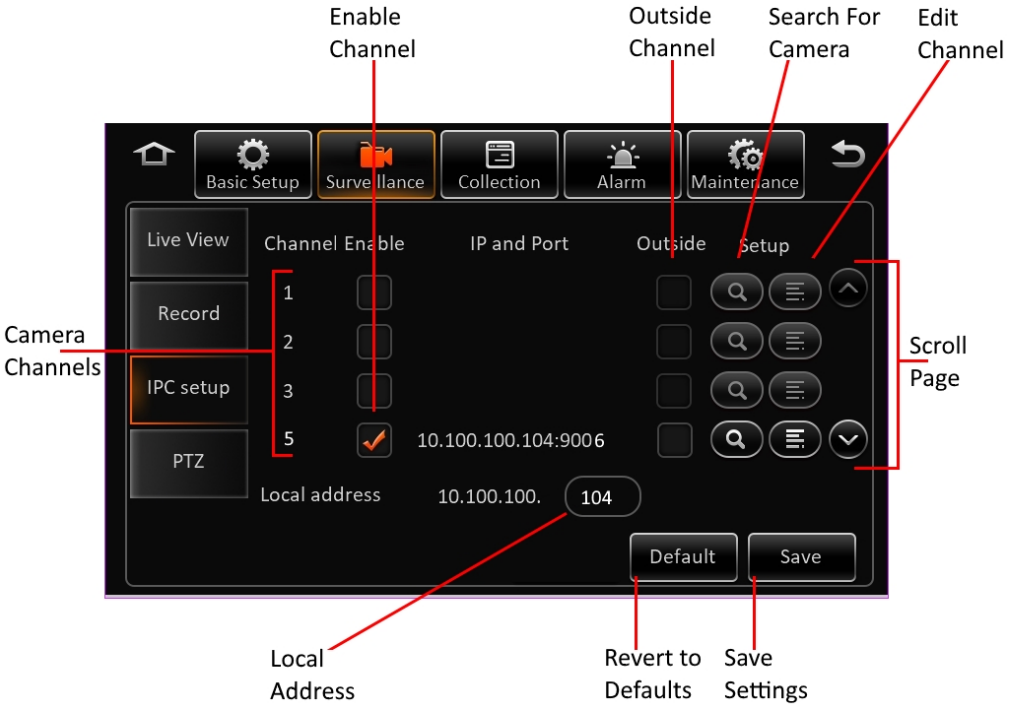


Figure 6-4 4 IP Camera Setup Screen

- *Camera Channels:* The available camera channels are listed on the screen along with their associated settings.

  Please Note: On a Y35 there is only One IP camera channel, channel 5.

- *Scroll Page:* Use the **(^) and (v)** buttons to scroll the list of camera channels up and down respectively.

- *Enable Channel:* The checkbox toggles the camera between enabled and disabled.

- *Outside Channel:* This checkbox marks an outside camera.

- *Local Address:* This is a numeric text field to set the local address.

- *Search for Camera:* Click on the **(🔍)** icon to search for an available IP camera to bind to the associated channel. This will display the IP camera search screen where you can select the desired camera for this channel.

  The available IP camera will be displayed in a list together with the default settings for IP address, port and protocol type which have be automatically configured by the Y35.

  Step 1 : Click on the checkbox to select the associated camera.

Step 2 : Click on the **(OK)** button to bind the camera to the selected channel.

At any time, you may click the **(Refresh)** button to re-scan and update the list. You may also click on **(Cancel)** to return to the previous screen.

- *Edit Channel:* Click on the **(▤)** button to edit the settings for the IP camera which is bound to that associated channel. This displays a pop-up screen with the settings that you can configure.

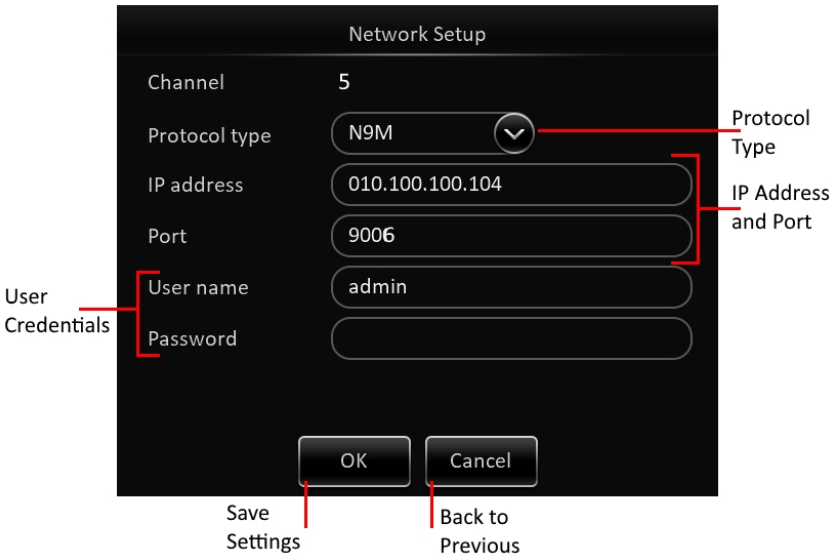


Figure 6-5 4 IP Camera Settings Configuration Screen

The settings for the IP Camera will be displayed and can be edited:

Protocol Type : The only currently available protocol type is N9M.

IP Address : Numeric text field for the IP address.

Port : Numeric text field for the port number.

User Name : Alphanumeric text field for the user name.

Password : Alphanumeric text field for the password.

Click the **(OK)** button to save the settings for this camera. At any time, you may also click the **(Cancel)** button to return to the previous screen.

Revert to Defaults: Clicking the **(Default)** button will revert all the settings to their defaults.

Save Settings: The **(Save)** button allows you to save the IP camera configuration settings.

6.5 Collection Settings

Navigate to: ***Main Menu → Setup → Collection***

This section allows the user to configure all the settings related to data collection. This includes event logging from sensor input as well as alarms. The user can also configure the options for automated snapshots from the cameras based on specified triggers.

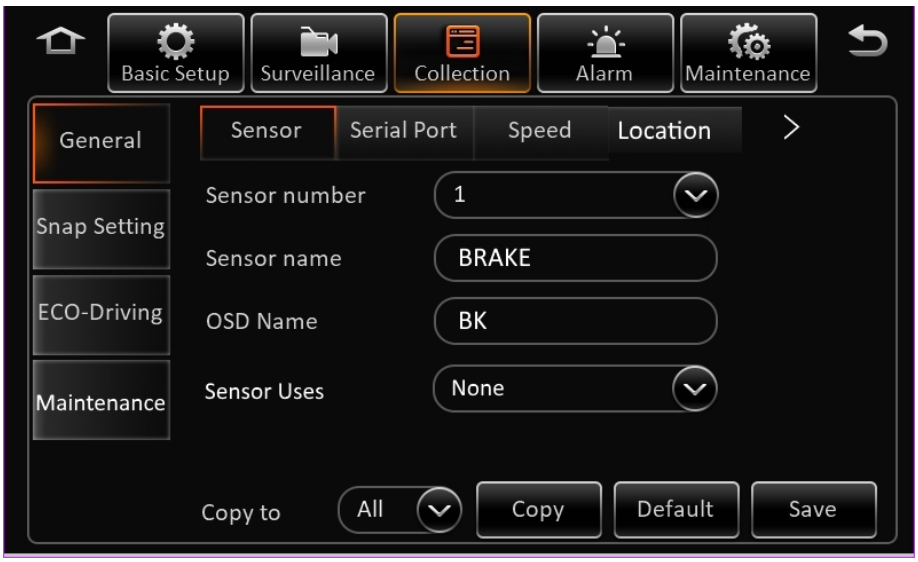


Figure 6-6 Collection Tab in the Device Configuration Options

6.5.1 General

Navigate to: ***Main Menu → Setup → Collection → General***

This subsection enables you to view and edit the data collection settings for sensors, alarms and other related events.

Sensor	*Sensor Number*	Drop list which displays the list of available sensors. Selecting one of them will display the currently set configuration values, and allow you to modify them. These configuration values are specific to each sensor (as identified by sensor number). You will need to select each sensor number in turn and configure them separately. *Notes:* - *For quick configuration, the copy function allows you to easily copy the settings of the current sensor to another sensor.*
	Sensor Name	Alphanumeric text field for setting a friendly name to easily identify the sensor. You may input up to a maximum of: ▪ **8 characters**

	OSD Name	Alphanumeric text field for setting a short code name identifying this sensor on the OSD (text data overlay on the video). You may input up to a maximum of: ▪ **5 characters**
	Sensor Uses	This feature allows you to easily copy the configuration settings for this sensor to another selected sensor. Use the drop list to select a sensor number – then clicking the **(Copy)** button will replicate the current sensor settings to the selected sensor.
		DEFAULT SETTINGS: Sensor Number: **1** ▪ **Sensor Name – BRAKE** ▪ **OSD Name – BK** Sensor Number: **2** ▪ **Sensor Name – WARNING** ▪ **OSD Name – WN** Sensor Number: **3** ▪ **Sensor Name – STOPARM** ▪ **OSD Name – SA** Sensor Number: **4** ▪ **Sensor Name – DOOR** ▪ **OSD Name – DR** Sensor Number: **5** ▪ **Sensor Name – LEFTTURN** ▪ **OSD Name – LT** Sensor Number: **6** ▪ **Sensor Name – RIGHTTRN** ▪ **OSD Name – RT** Sensor Number: **7** ▪ **Sensor Name – EXTRA1** ▪ **OSD Name – EX1** Sensor Number: **8**

		▪ **Sensor Name – EXTRA2** ▪ **OSD Name – EX2**
Serial Port	*RS232-1*	The first associated drop list allows the user to configure the port function: ▪ **None** ▪ **Extend** ▪ **Control Panel** ▪ **485 Bus** ▪ **External GPS** ▪ **3Axis Acc** ▪ **PTZ** ▪ **CP4** DEFAULT SETTINGS: ▪ **None** The second associated drop list allows the user to set the baud rate for the port: ▪ **4800** ▪ **9600** ▪ **19200** ▪ **38400** ▪ **56000** ▪ **57600** ▪ **115200** DEFAULT SETTINGS: ▪ **4800**
Speed	*Unit*	Drop list allowing the user to set the measurement unit for the speed: ▪ **KM/H** ▪ **MPH** *Notes:* - *Please set the preferred speed measurement unit used in your region of operations.* - *Fleets operating in the United States will typically use MPH.* - *Fleets operating in most other parts of the world (including Canada) where the metric system is adopted will typically choose KM/H.* DEFAULT SETTINGS: ▪ **MPH**

	Source	Drop list allowing the user to set the source for the speed measurement: ▪ **Satellite** ▪ **Pulse** *Notes:* - *If the measurement unit is set to Pulse, you will also need to select the calibration mode and perform a manual calibration.* - *Pulse mode is currently unsupported, and Gatekeeper Systems recommends the use of Satellite for this setting.* DEFAULT SETTINGS: ▪ **Satellite**
Location	*Location Data Source*	Drop list for setting Location Data Source: ▪ **GPS** *Notes:* - *Currently, this is the only available setting.* DEFAULT SETTINGS: ▪ **GPS**
Mileage	*Total*	Displays the total mileage which the vehicle has travelled.
	Base Mileage	Sets the mileage of the vehicle on first day of service on that route. This value can be entered manually.
	Operation	Correct: Allows the current mileage of the vehicle to be entered. Clear: Resets the mileage of the vehicle to 0.
Flow Limit	*Default, no limit*	Determines the limit for cellular data control. No limit means that the data will flow at its maximum attainable rate. DEFAULT SETTINGS: ▪ **Unchecked**
	Custom	Restricts the amount of data flowing through a cellular connection. E.G. if set to 512Kbps when using GV4+ and Live View the G4-504HD1a will control the bit rate for

		all channels ensuring that it will not exceed 512Kbps DEFAULT SETTINGS: ▪ **Unchecked**
Advanced	*T&H Sensor*	Currently unsupported by Gatekeeper Systems.

6.5.2 Snap Setting

Navigate to: ***Main Menu → Setup → Collection → Snap Setting***

This subsection enables you to view and edit the triggers and settings for capturing snapshots. Make sure to check mark the Time Snap option so as to be able to setup options.

Snap Setting	*Time Snap*	Checkbox – if selected, this feature allows you to set up a schedule to capture snapshots using the cameras. Clicking the **(Add)** button will add a snapshot schedule task to the displayed task list with the following settings that you can edit: ▪ **Start Time** – this is a time field which allows you to set the starting time to begin taking the snapshots. ▪ **End Time** – this is a time field which allows you to set the ending time to stop taking the snapshots. ▪ **x** – you can always click the (x) button to remove the associated snapshot task from the list. ▪ ▤ – this button will display the snapshot link set screen where you can edit the configuration settings for the snapshots taken during this snapshot task. In the configuration screen, you will be able to configure the snapshot settings for each individual camera channel in turn: ▪ **Channel** – this is a drop list allowing you to select a particular camera channel. The associated snapshot settings for this channel will be displayed for editing. ▪ **Snap Enable** – if the checkbox is selected, then this camera channel is included when the Y35 performs the snap shot task. ▪ **Resolution** – this drop list enables you to select the resolution for the snapshots. Available options are (**CIF, WCIF, HD1, WHD1, D1, WD1, 720P**).

		▪ **Quality** – this drop list enables you to select the quality of the snapshot on a scale of 1 to 8 (where 1 is best). ▪ **Upload Type** – checkboxes which allow you to select whether the snapshots are to be uploaded to FTP and/or Server. ▪ **Snap Numbers** – numeric text field to key in the number of snapshots that will be taken. ▪ **Interval** – numeric text field to key in the interval (in seconds) between snapshots. ▪ **Copy To** – this feature allows you to copy the current snapshot settings for this channel to another channel, thus allowing you to easily and quickly replicate the snapshot task settings. Once you have selected the channel to copy to, click on the **(Copy)** button to make the copy. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
Trigger Snap	*Alarm Snap*	Setting this enables the device to automatically take snapshots whenever an alarm event occurs. Clicking the **(Setup)** button displays the snap link settings page which allows you to configure the settings for the snapshots to be taken where there is an alarm event. In the configuration screen, you will be able to configure the snapshot settings for each individual camera channel in turn: ▪ **Channel** – this is a drop list allowing you to select a particular camera channel. The associated snapshot settings for this channel will be displayed for editing. ▪ **Snap Enable** – if the checkbox is selected, then this camera channel is included when the Y35 performs the snap shots. ▪ **Resolution** – this drop list enables you to select the resolution for the snapshots. Available options are (**CIF, WCIF, HD1, WHD1, D1, WD1, 720P**). ▪ **Quality** – this drop list enables you to select the quality of the snapshot on a scale of 1 to 8 (where 1 is best).

		▪ **Upload Type** – checkboxes which allow you to select whether the snapshots are to be uploaded to FTP and/or Server. ▪ **Snap Numbers** – numeric text field to key in the number of snapshots that will be taken. ▪ **Interval** – numeric text field to key in the interval (in seconds) between snapshots. ▪ **Copy To** – this feature allows you to copy the current snapshot settings for this channel to another channel, thus allowing you to easily and quickly replicate the snapshot settings for the different camera channels. Once you have selected the channel to copy to, click on the **(Copy)** button to make the copy. DEFAULT SETTINGS: Disabled/not applicable.
	Manual Snap	These settings are used for snapshots which are taken manually by the user. Clicking the **(Setup)** button displays the snap link settings page which allows you to configure the settings. In the configuration screen, you will be able to configure the snapshot settings for each individual camera channel in turn: ▪ **Channel** – this is a drop list allowing you to select a particular camera channel. The associated snapshot settings for this channel will be displayed for editing. ▪ **Snap Enable** – if the checkbox is selected, then this camera channel is included when the Y35 performs the snap shots. ▪ **Resolution** – this drop list enables you to select the resolution for the snapshots. Available options are (**CIF, WCIF, HD1, WHD1, D1, WD1, 720P**). ▪ **Quality** – this drop list enables you to select the quality of the snapshot on a scale of 1 to 8 (where 1 is best). ▪ **Upload Type** – checkboxes which allow you to select whether the snapshots are to be uploaded to FTP and/or Server. ▪ **Snap Numbers** – numeric text field to key in the number of snapshots that will be taken. ▪ **Copy To** – this feature allows you to copy the current snapshot settings for this

		channel to another channel, thus allowing you to easily and quickly replicate the snapshot settings for the different camera channels. Once you have selected the channel to copy to, click on the **(Copy)** button to make the copy. DEFAULT SETTINGS: Disabled/not applicable.

6.5.3 ECO-Driving.

This menu option is currently unsupported by Gatekeeper Systems and is reserved for future development.

Navigate to: ***Main Menu → Setup → Collection → ECO-Driving***

ODBII	Manufacturer Model	Currently Unsupported.
	Engine Link State	Currently Unsupported.
	Current Software Version	
	Calibration	Currently Unsupported.
GDS Platelet	Coefficient Mileage	Currently Unsupported.
	Coefficient Oil	Currently Unsupported.
	GDS Work Pattern	Currently Unsupported.
	Clear Statistical	Currently Unsupported.
	GDS Version	Currently Unsupported.
Maintenance	*Threshold*	Currently unsupported by Gatekeeper and reserved for future development.

Alarm Settings

Navigate to: ***Main Menu → Setup → Alarm***

All settings related to alarm events are contained in this section. The user can configure the settings for the various alarms such as speed, panel, IO, ACC, as well as video loss events.

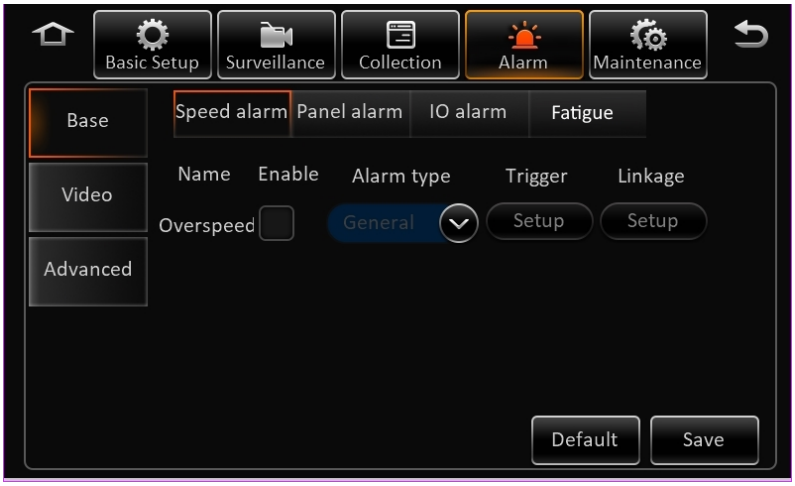


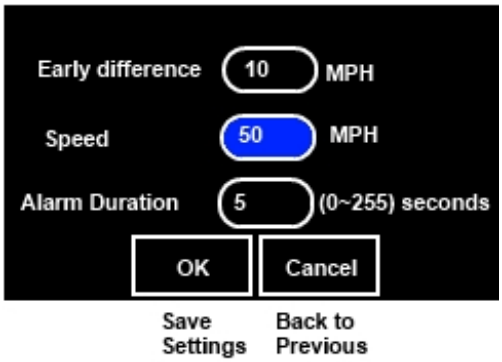
Figure 6-7 Alarm Tab in the Device Configuration Options

6.5.4 Base

Navigate to: ***Main Menu → Setup → Alarm → Base***

This subsection enables you to set up the trigger for alarm events based on speed, panel and IO input, and also to define the actions that will be taken when the alarm occurs.

Speed Alarm	*Overspeed / Enable*	Checkbox – if selected, enables the device to monitor for overspeed events. In case of speed exceeding the specified threshold, this alarm will be triggered. To set the volume to MUTE for this alarm go to Basic Setup → Other Setup → Voice Setup. TTS should be set to zero. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Alarm Type	Drop list to select the classification level for the alarm: ▪ **Event** ▪ **Alarm** DEFAULT SETTINGS: Disabled/not applicable.
	Trigger	Click the **(Setup)** button under Trigger to display the Trigger setup screen. DEFAULT SETTINGS: Disabled/not applicable.

<table>
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="3">


- Early Difference: Numeric field to key in a value for when the vehicle goes over a specified speed prior to the actual speed limit.
- *Speed:* Numeric field to key in the speed value over which the device will flag an over speed alarm.
- *Alarm Duration:* Numeric field to set the duration of the alarm (in seconds).
- *Save Settings:* Click the **(OK)** button to save the alarm settings.
- *Back to Previous:* Click the **(Cancel)** button to return to the previous screen without saving.
</td></tr>
<tr><td></td><td>Linkage</td><td>Click the (Setup) button under Linkage to go to the Linkage setup screen. This sets up the video display, recording and snapshot options associated with this alarm.

The Linkage setup screen enables you to configure the following options:
Channel – checkboxes which allow you to select any combination of the camera channels to be included in the display and recording.
Post Recording – drop list which allows you to select the duration for which video will continue to be recorded when the alarm is triggered.
Lock – checkbox, if selected will mark the recorded video associated with this alarm as locked video.
Linkage IO Output – checkboxes, if enabled, the device will send a signal to the selected IO output lines.
Output Delay Time – numeric text field to set the delay time for the IO output (in seconds).
Alarm Upload – checkbox, if selected will enable the device to upload the alarm to the center server.</td></tr>
</table>

		▪ **Linkage Screen** – drop list to select the options to display the video from the selected cameras on-screen when the alarm occurs. ***None*** : Not displayed. ***Single*** : Display 1 camera. ***Quad*** : Display 4 cameras. If Single (1x1) or Quad (2x2) display is selected, the **(Setup)** button allows you to select the layout of the channels to be displayed on-screen. The drop lists are shown on-screen accordingly to the grid layout mode selected. You can easily choose each individual camera channel to be displayed in the selected grid segment visually. If you have less cameras than available grid segments, then those segments associated with an actual camera will be displayed as a black box. ▪ **PB Alarm Duration** – numeric text field to set the duration of the video playback (in seconds) when the alarm occurs. ▪ **Alarm Snap** – checkbox – if selected, when the alarm occurs, the device will take snap shots using the selected cameras. DEFAULT SETTINGS: Disabled/not applicable.
Panel Alarm	*Panic*	Checkbox – if selected, enables the device to monitor for Driver Alert Button presses. In case of the panic button on the panel being pressed, this alarm will be triggered. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Alarm Type	Drop list to select the classification level for the alarm: ▪ **Event** ▪ **Alarm** DEFAULT SETTINGS: ▪ **Alarm**

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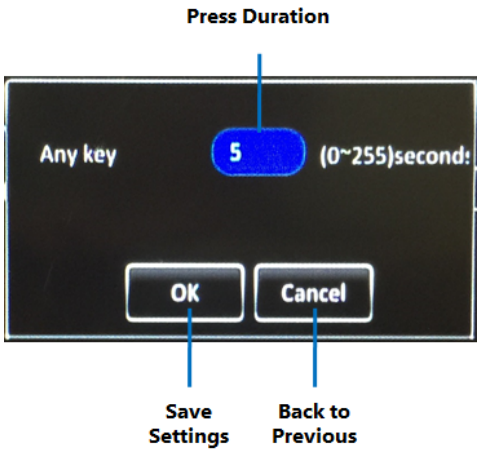
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="3">



- *Press Duration:* Numeric text field to key in the duration of panic button press on the panel for which the device will flag the panic alarm.
- *Save Settings:* Click the **(OK)** button to save the alarm settings.
- *Back to Previous:* Click the **(Cancel)** button to return to the previous screen without saving.

</td></tr>
<tr><td></td><td>Linkage</td><td>Click the (Setup) button under Linkage to go to the Linkage setup screen. This sets up the video display, recording and snapshot options associated with this alarm.

The Linkage setup screen enables you to configure the following options:
▪ Channel – checkboxes which allow you to select any combination of the camera channels to be included in the display and recording.
▪ Post Recording – drop list which allows you to select the duration for which video will continue to be recorded when the alarm is triggered.
▪ Lock – checkbox, if selected will mark the recorded video associated with this alarm as locked video.
▪ Linkage IO Output – checkboxes, if enabled, the device will send a signal to the selected IO output lines.
▪ Output Delay Time – numeric text field to set the delay time for the IO output (in seconds).
▪ Alarm Upload – checkbox, if selected will enable the device to upload the alarm to the center server.
▪ Linkage Screen – drop list to select the options to display the video from the</td></tr>
</table>

		selected cameras on-screen when the alarm occurs. ***None*** : Not displayed. ***Single*** : Display 1 camera. ***Quad*** : Display 4 cameras. If Single (1x1) or Quad (2x2) display is selected, the **(Setup)** button allows you to select the layout of the channels to be displayed on-screen. The drop lists are shown on-screen accordingly to the grid layout mode selected. You can easily choose each individual camera channel to be displayed in the selected grid segment visually. If you have less cameras than available grid segments, then those segments associated with an actual camera will be displayed as a black box. ▪ **PB Alarm Duration** – numeric text field to set the duration of the video playback (in seconds) when the alarm occurs. ▪ **Alarm Snap** – checkbox – if selected, when the alarm occurs, the device will take snap shots using the selected cameras. DEFAULT SETTINGS: Please choose the camera channels to display and record in the event of this alarm being triggered. These settings would need to be determined by the customer/client to match their specific business requirements.
IO Alarm	*Name*	The list of available IO inputs triggers are listed on the screen. You may use the **(^)** and **(v)** buttons to scroll the list.
	Enable	Checkbox – if selected, will enable the device to monitor the associated IO input line for an alarm trigger. DEFAULT SETTINGS: ▪ **BRAKE – Checkbox – Selected** ▪ **WARNING – Checkbox – Selected** ▪ **STOPARM – Checkbox – Selected** ▪ **DOOR – Checkbox – Selected**

		▪ **LEFTTURN – Checkbox – Selected** ▪ **RIGHTTRN – Checkbox – Selected** ▪ **EXTRA1 – Checkbox – Unselected** ▪ **EXTRA2 – Checkbox – Unselected**
	Alarm Type	Drop list to select the classification level for the alarm: ▪ **Event** ▪ **Alarm** DEFAULT SETTINGS: For all IO lines, set to: ▪ **Alarm**
	Trigger	Click the **(Setup)** button under Trigger to display the Trigger setup screen for the associated IO input line. This will display a drop list which allows you to select the trigger for this IO input line: ▪ **Low** *(0V)* ▪ **High** *(12V – 24V)* DEFAULT SETTINGS: By default, all the IO line triggers will be set to **High**. However, please adjust any or all of these values as appropriate, as whether the trigger value is High or Low will depend on the vehicle and the wiring.
	Linkage	Click the **(Setup)** button under Linkage to go to the Linkage setup screen. This sets up the video display, recording and snapshot options associated with this alarm. The Linkage setup screen enables you to configure the following options: ▪ **Channel** – checkboxes which allow you to select any combination of the camera channels to be included in the display and recording. ▪ **Post Recording** – drop list which allows you to select the duration for which video will continue to be recorded when the alarm is triggered. ▪ **Lock** – checkbox, if selected will mark the recorded video associated with this alarm as locked video.

		▪ **3G Network** – checkbox, if selected will enable alarm notification over the 3G network. ▪ **Linkage IO Output** – checkboxes, if enabled, the device will send a signal to the selected IO output lines. ▪ **Output Delay Time** – numeric text field to set the delay time for the IO output (in seconds). ▪ **Alarm Upload** – checkbox, if selected will enable the device to upload the alarm to the center server. ▪ **Linkage Screen** – drop list to select the options to display the video from the selected cameras on-screen when the alarm occurs. ***None*** : Not displayed. ***Single*** : Display 1 camera. ***Quad*** : Display 4 cameras. If Single (1x1) or Quad (2x2) display is selected, the **(Setup)** button allows you to select the layout of the channels to be displayed on-screen. The drop lists are shown on-screen accordingly to the grid layout mode selected. You can easily choose each individual camera channel to be displayed in the selected grid segment visually. If you have less cameras than available grid segments, then those segments associated with an actual camera will be displayed as a black box. ▪ **PB Alarm Duration** – numeric text field to set the duration of the video playback (in seconds) when the alarm occurs. ▪ **Alarm Snap** – checkbox – if selected, when the alarm occurs, the device will take snap shots using the selected cameras. DEFAULT SETTINGS: Please choose the camera channels to display and record in the event of this alarm being triggered. These settings would need to be determined by the customer/client to match their specific business requirements.

6.5.5 Driver Alert Button: Setup

A Driver Alert Panel is available as an optional accessory for the Y35. The Driver Alert Panel must be installed using the provide Tek screws. The Driver Alert allows for the driver of the vehicle to press the button and mark the recorded video with an Alert. This makes searching for Alerts far faster and easier as G4 Viewer Plus can be set to display Alarms/Alerts.

The Driver Alert Panel requires setting up in the configuration of the Y35. Navigate to Setup → Alarm → Panel Alarm. Check the Enable box. Alarm Type should be set to Alarm.

Trigger relates to the amount of time, in seconds, of pre-recording will be included from when the Driver Alert button was pressed. Linkage is currently unsupported by Gatekeeper Systems.

If the Driver Alert button has been pressed during the vehicle's route this alert will be easy to find using Gatekeeper Systems G4 Viewer Plus when playing back the video on a PC.

Serial Port Settings.

Dual LED Driver Alert	232-1	Control Panel	19200

6.5.6 Video

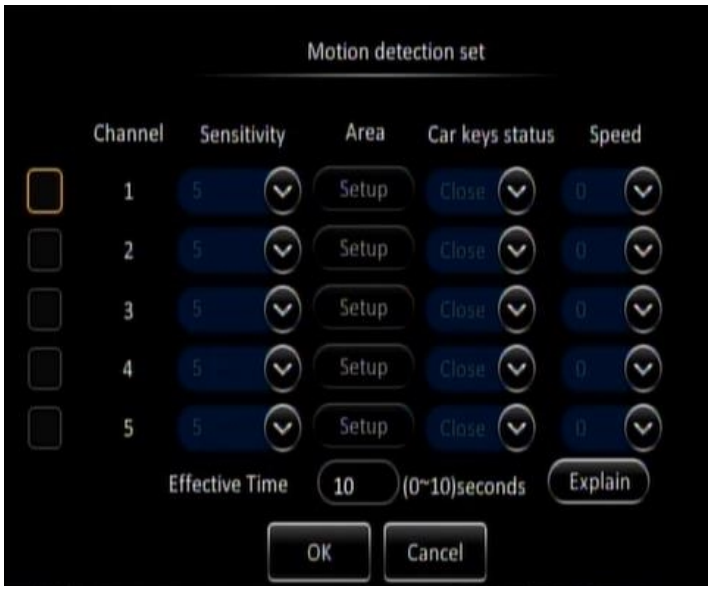
***Navigate to:* Main Menu → Setup → Alarm → Video**

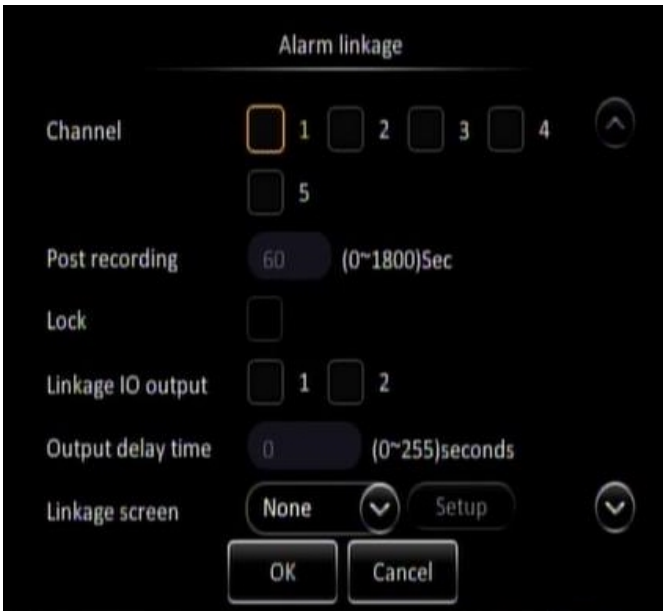
This subsection enables you to set up the trigger for alarm events based on video loss, and also to define the actions that will be taken when the alarm occurs.

Video	*Videoloss*	Checkbox – if selected, enables the device to monitor for videoloss events. In case of videoloss detected on the specified camera channels, this alarm will be triggered. DEFAULT SETTINGS: ▪ **Checkbox – Selected**
	Alarm Type	Drop list to select the classification level for the alarm: ▪ **Event** ▪ **Alarm** DEFAULT SETTINGS: ▪ **Alarm**
	Trigger	Click the **(Setup)** button under Trigger to display the Trigger setup screen for the videoloss detection. This will display a screen with a list of checkboxes allowing you to select a combination of camera channels for which the device will monitor for video loss events.
	Linkage	Click the **(Setup)** button under Linkage to go to the Linkage setup screen. This sets up the video display, recording and snapshot options associated with this alarm.

		The Linkage setup screen enables you to configure the following options: ▪ **Channel** – checkboxes which allow you to select any combination of the camera channels to be included in the display and recording. ▪ **Post Recording** – drop list which allows you to select the duration for which video will continue to be recorded when the alarm is triggered. ▪ **Lock** – checkbox, if selected will mark the recorded video associated with this alarm as locked video. ▪ **Linkage IO Output** – checkboxes, if enabled, the device will send a signal to the selected IO output lines. ▪ **Output Delay Time** – numeric text field to set the delay time for the IO output (in seconds). ▪ **Alarm Upload** – checkbox, if selected will enable the device to upload the alarm to the center server. ▪ **Linkage Screen** – drop list to select the options to display the video from the selected cameras on-screen when the alarm occurs. ***None*** : Not displayed. ***Single*** : Display 1 camera. ***Quad*** : Display 4 cameras. If Single (1x1) or Quad (2x2) display is selected, the **(Setup)** button allows you to select the layout of the channels to be displayed on-screen. The drop lists are shown on-screen accordingly to the grid layout mode selected. You can easily choose each individual camera channel to be displayed in the selected grid segment visually. If you have less cameras than available grid segments, then those segments associated with an actual camera will be displayed as a black box. ▪ **PB Alarm Duration** – numeric text field to set the duration of the video playback (in seconds) when the alarm occurs. ▪ **Alarm Snap** – checkbox – if selected, when the alarm occurs, the device will take snap shots using the selected cameras. DEFAULT SETTINGS: Choose the camera channels to display and record in the event of this alarm being triggered.
Motion	*Name*	Set to Motion.
	Enable	Enables whether or not motion detection will be enabled. Default settings: ▪ Unselected.
	Alarm Type	Sets whether or not Motion detection will be triggered by and Event or an Alarm. Default settings: ▪ Alarm.

	Trigger	▪ Setup: Click the setup button and a separate window will appear for Motion detection setup. In this window several options are available. Select the channel on which you want the motion detection to be recorded. The area setup button of the selected channel will display a grid pattern. Select the area required to be covered by Motion detection.



	Linkage	Setup: When the setup button is selected a separate window will appear with options with multiple choices.  This option is currently unsupported by Gatekeeper Systems and is reserved for future development.
	Tampering	Currently Unsupported. Reserved for future development.

6.5.7 Advanced

***Navigate to:* Main Menu → Setup → Alarm → Advanced**

This subsection enables you to set up the trigger for alarm events based on ACC input, and also to define the actions that will be taken when the alarm occurs.

G Sensor	*Name*	Checkbox – if selected, enables the device to monitor for G Sensor trigger events. In case of G Sensor exceeding the threshold values, this alarm will be triggered. DEFAULT SETTINGS: ▪ **Checkbox – Unselected**
	Alarm Type	Drop list to select the classification level for the alarm: ▪ **Event** ▪ **Alarm** DEFAULT SETTINGS: **Alarm**
	Trigger	Click the **(Setup)** button under Trigger to display the Trigger setup screen to setup the G Sensor threshold values: ▪ **X** – numeric text field to set the threshold value for the G forces along the x-axis. ▪ **Y** – numeric text field to set the threshold value for the G forces along the y-axis. ▪ **Z** – numeric text field to set the threshold value for the G forces along the z-axis. DEFAULT SETTINGS: Disabled.
	Linkage	Click the **(Setup)** button under Linkage to go to the Linkage setup screen. This sets up the video display, recording and snapshot options associated with this alarm. The Linkage setup screen enables you to configure the following options: ▪ **Channel** – checkboxes which allow you to select any combination of the camera channels to be included in the display and recording. ▪ **Post Recording** – drop list which allows you to select the duration for which video

		will continue to be recorded when the alarm is triggered. ▪ **Lock** – checkbox, if selected will mark the recorded video associated with this alarm as locked video. ▪ **Linkage IO Output** – checkboxes, if enabled, the device will send a signal to the selected IO output lines. ▪ **Output Delay Time** – numeric text field to set the delay time for the IO output (in seconds). ▪ **Linkage Screen** – drop list to select the options to display the video from the selected cameras on-screen when the alarm occurs. ***None*** : Not displayed. ***Single*** : Display 1 camera. ***Quad*** : Display 4 cameras. If Single (1x1) or Quad (2x2) display is selected, the **(Setup)** button allows you to select the layout of the channels to be displayed on-screen. The drop lists are shown on-screen accordingly to the grid layout mode selected. You can easily choose each individual camera channel to be displayed in the selected grid segment visually. If you have less cameras than available grid segments, then those segments associated with an actual camera will be displayed as a black box. ▪ **PB Alarm Duration** – numeric text field to set the duration of the video playback (in seconds) when the alarm occurs. ▪ **Alarm Snap** – checkbox – if selected, when the alarm occurs, the device will take snap shots using the selected cameras. DEFAULT SETTINGS: Disabled.
Electric Fence		Unsupported by Gatekeeper Systems. Reserved for future development.

6.6 Maintenance Settings

Navigate to: ***Main Menu → Setup → Maintenance***

This section allows the user to perform various maintenance operation such as import and export of data and configuration files, firmware upgrades, and storage media formatting.

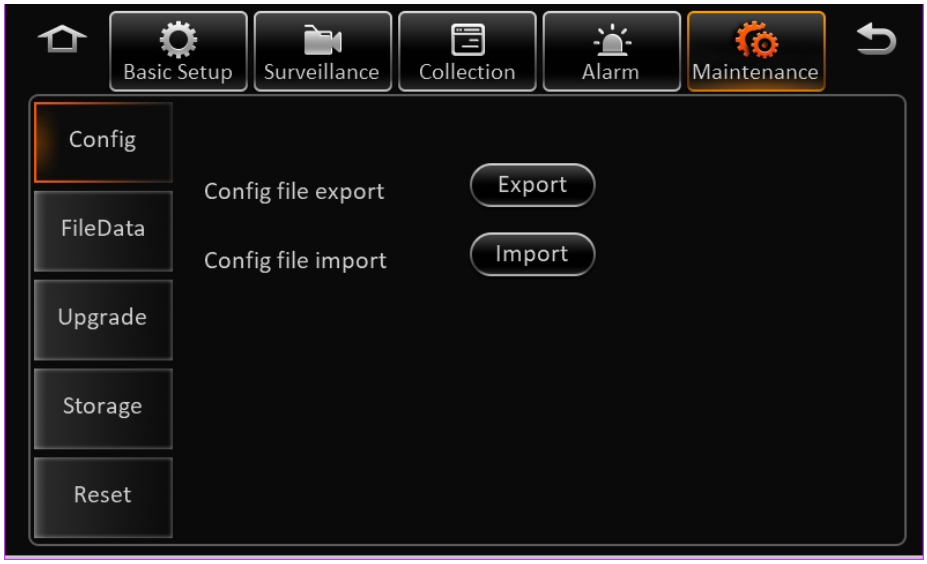


Figure 6-8 Maintenance Tab in the Device Configuration Options

6.6.1 Config

Navigate to: ***Main Menu → Setup → Maintenance → Config***

This subsection enables you to import and export configuration files for easy configuration of multiple Y35.

Please Note: If you are using the Finger Mouse/LCD combination to navigate you will need to use a Gatekeeper Systems USB Hub to allow two devices to share the one USB port.

Config	*Config File Export*	Click the **(Export)** button to export the entire device configuration settings to a file. This file will be saved on an external storage device (most commonly a USB flash drive attached to the device USB port).
	Config File Import	Click the **(Import)** button to export the device configuration settings from a file. You will need a compatible configuration file saved on an external storage device (most commonly a USB flash drive attached to the device USB port).

6.6.2 Filedata

Navigate to: ***Main Menu → Setup → Maintenance → Filedata***

This subsection enables you to export the device data files for viewing and archival.

Please Note: If you are using the Finger Mouse/LCD combination to navigate you will need to use a Gatekeeper Systems USB Hub to allow two devices to share the one USB port.

Data Export	*All / Export Time*	Radio buttons which enable you to choose between either exporting all data, or data from a specified time period: ▪ **All** ▪ **Export Time**
	Start Time	This consists of the following two input fields: ▪ **Date** – date field to select the start date of the specified time period. ▪ **Time** – time field to select the start time of the specified time period. *Notes:* - *Start time is only applicable if exporting data using the Export Time option*
	End Time	This consists of the following two input fields: ▪ **Date** – date field to select the end date of the specified time period. ▪ **Time** – time field to select the end time of the specified time period. *Notes:* - *Start time is only applicable if exporting data using the Export Time option*
	File Type	Drop list which allows you to specify the type of data to be exported: ▪ **GPS Data File** ▪ **Vehicle Info File** ▪ **ACC Info File** ▪ **CAN Info File** ▪ **Dial Info File** ▪ **Captured Picture** ▪ **Alarm Log** ▪ **Operation Log**

6.6.3 Upgrade

Navigate to: ***Main Menu → Setup → Maintenance → Upgrade***

This subsection enables you to upgrade the firmware for selected system components.

Please Note: If you are using the Finger Mouse/LCD combination to navigate you will need to use a Gatekeeper Systems USB Hub to allow two devices to share the one USB port.

Upgrade	*Device Upgrade*	Click the **(Upgrade)** button to retrieve the device update from a file and apply it to the system. You will need a compatible update file saved on an external storage device (most commonly a USB flash drive attached to the device USB port).
	CP4 Upgrade	Click the **(Upgrade)** button to retrieve the CP4 update from a file and apply it to the system. You will need a compatible update file saved on an external storage device (most commonly a USB flash drive attached to the device USB port).
	IPC Upgrade	Click the **(Upgrade)** button to retrieve the IPC update from a file, and select the target IPC camera in order to apply the update to it. You will need a compatible update file saved on an external storage device (most commonly a USB flash drive attached to the device USB port).
	GPS Upgrade	Click the **(Upgrade)** button to retrieve the GPS update from a file and apply it to the system. You will need a compatible update file saved on an external storage device (most commonly a USB flash drive attached to the device USB port).

6.6.4 Storage

Navigate to: ***Main Menu → Setup → Maintenance → Storage***

This subsection enables you to view and format the storage devices attached to the Y35.

Storage	*Storage Type*	This shows the various storage devices which are attached to the Y35. Available storage devices shown may include any combination of SD Card and/or USB flash drives.
	Free/Total	This shows the total storage capacity of the device, and the remaining free space on it.
	Format	Click the **(Format)** button format the associated storage device. All data on that storage device will be erased.

6.6.5 Reset

Navigate to:* *Main Menu → Setup → Maintenance → Reset

This subsection enables you to reset the Y35.

Reset	*Default All Settings*	Click the **(Reset)** button in order to reset all settings on the device to their factory default values.
	System Reboot	Click the **(Reboot)** button in order reboot the device.

6.6.6 Hardware.

Navigate to:* *Main Menu → Setup → Maintenance →Hardware

This subsection enables you to Import and Export Hardware configurations to the Y35

Hardware	Hardware Config Import	Click the **(Import)** button to export the Hardware configuration settings from a file. You will need a compatible configuration file saved on an external storage device (most commonly a USB flash drive attached to the device USB port).
	Hardware Config Export	Click the **(Export)** button to export the entire Hardware configuration settings to a file. This file will be saved on an external storage device (most commonly a USB flash drive attached to the device USB port).
	General Super Buttons	Unsupported by Gatekeeper Systems. Reserved for future development.

7 Special Topics

7.1 Setting Up an IP Camera

In contrast to setting up analog cameras, which just involves wiring up the camera to the appropriate channel input on the device, there is an extra step required for an IP Camera. After being connected physically, the IP Camera need to be configured in the system with the appropriate settings and IP address before it will work.

In the Y35 though, adding a new IP camera to the system can easily be done through the automated setup options available in the setup menu.

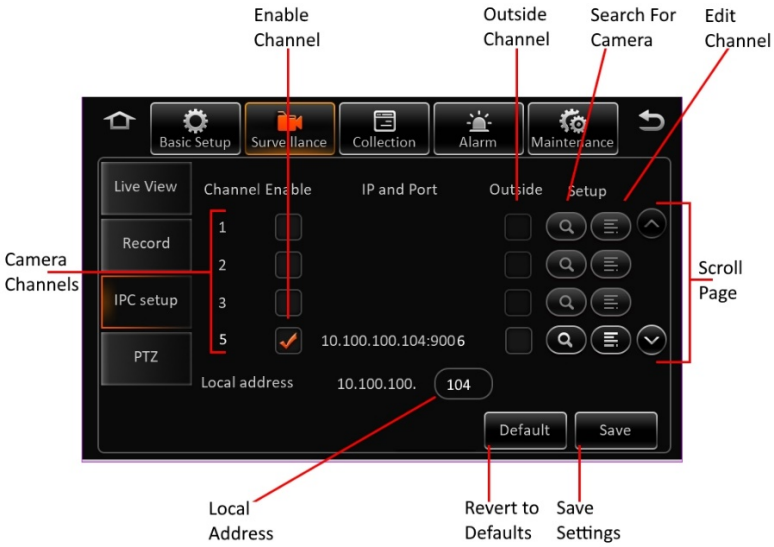
7.1.1 Adding an IP Camera

The steps below provide a quick guide to adding a new IP Camera to the system manually.

For a detailed discussion on the configuration options available, please refer to ***Section 6.4.3***.

Step 7.1.1.1 **Navigate to:** ***Main Menu → Setup → Surveillance → IPC Setup***

Enable the channel that you wish to set up the new IP Camera on, by selecting the checkbox next to the channel number.



Click on the (🔍) icon which is on the same row as channel 5 to add the new IP Camera.

Step 7.1.1.2

Your new IP Camera's IP address will now be added to the list on the channel which you had previously selected when you performed the search. Ensure the Enable checkbox next to the channel is selected.

Click on the (Save) button to save the settings and exit from this screen. Your new IP Camera is now configured, and will stream video to the selected channel for viewing and recording.

7.2 Configuring Substream Recording Quality

When you choose to record the substream to a secondary storage device using the ***Sub Record*** option, you can also choose a different set of quality settings to use for this substream recording. To configure this, first go to the Record settings under the Surveillance tab in the Setup menu as follows:

[Navigate to: ***Main Menu → Setup → Surveillance → Record → Dual Stream*****]**

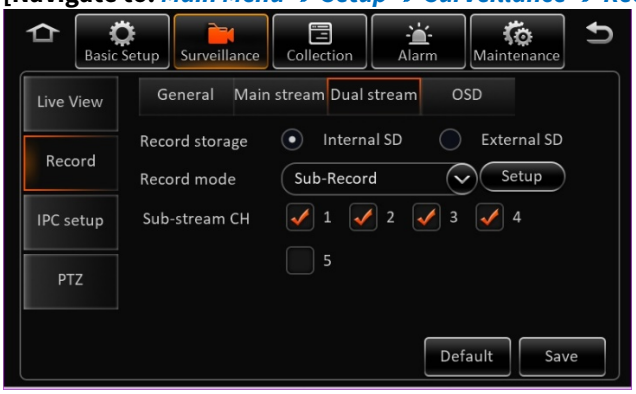


Figure 7-1 Setting Up for Substream Recording

Click the **(Setup)** button to set up the recording options for the substream.

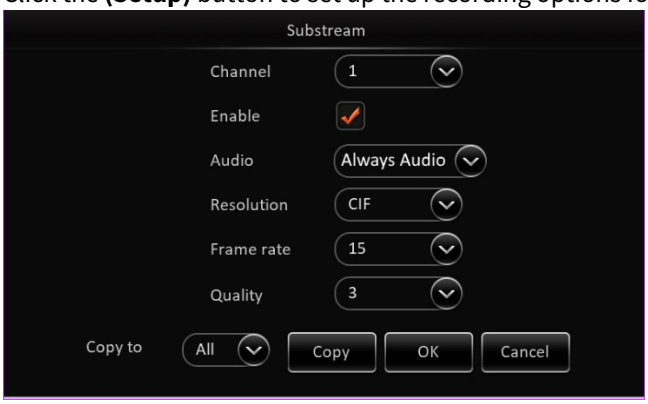


Figure 7-2 Substream Recording Settings

This substream recording settings configuration needs to be done for each individual camera channel separately.

The following options will be available for configuration:

- **Choose Channel** – drop list to select the particular channel to configure. When a channel is selected, the corresponding recording settings for that channel will be displayed for viewing and editing.
- **Enable Channel** – checkbox, if selected, would enable the substream recording on this channel. If unselected, would mean that video from this channel would not be recorded and stored as part of the substream.
- **Enable Audio** – checkbox, if selected, would include audio into the recording. If unselected, there would be no audio recorded for this channel.
- **Choose Resolution** – drop list to select the resolution to record this channel at. Available resolution options are ***QCIF*** (176x120), ***CIF*** (352x240), ***HD1*** (704x240).
- **Choose Frame Rate** – drop list allowing you to select the frame rate (in terms of frames per second) that you would like to record at.
- **Choose Quality** – drop list allowing you to select the encoding quality (on a scale of 1 to 8 – where 1 is best).
- **Select Copy To Channel** – this feature allows you to copy the current channel's substream recording settings directly to another channel, thus allowing you to easily and quickly replicate the substream recording settings across channels. Once you have selected the channel to copy to, click on the **(Copy)** button to make the copy.
- **Copy Settings** – click the **(Copy)** button to copy the current settings to the selected channel.
- **Save Settings** – click the **(OK)** button to save the current settings for the channel.
- **Back to Previous** – click the **(Cancel)** button to exit back to the previous screen without saving.

7.3 Using a New SD Card

The Y35 uses a propriety filesystem format to store data to the SD Card. As such, any new SD Card would need to be formatted in the device itself prior to use.

When there is a need to review the video recorded on the SD card, ensure that the Y35 is powered down prior to removing the SD card else data corruption will occur.

To do this, just insert the SD Card into the SD Card slot on the Y35.

Then **Navigate to:** ***Main Menu → Setup → Maintenance → Storage***.

Figure 7-3 Formatting a New Storage Medium

Click the **(Format)** button next to the SD Card to format it for use in the device.

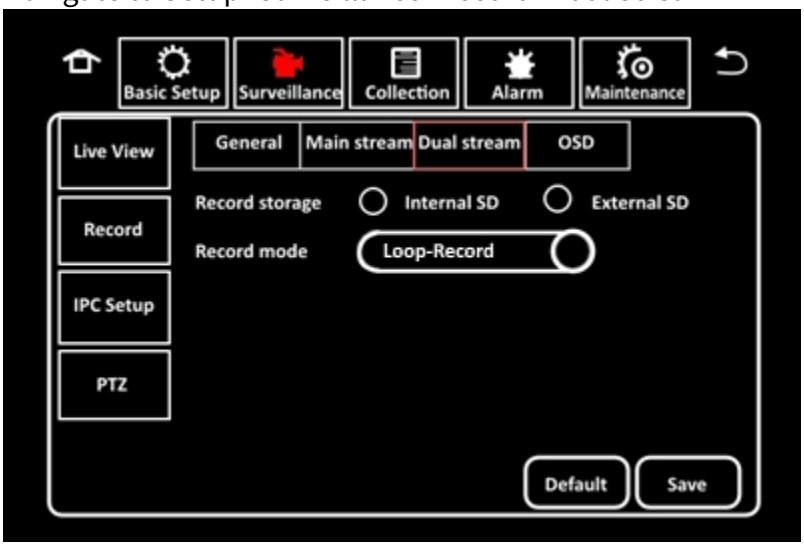
Please note that formatting any storage media will remove all the data stored on it. If this is not a new storage media, please ensure that the data on it is no longer required, or that you have already made a backup of the data on it.

7.4 Sequential Recording (Requires Two SD Cards).

Y35 DVR supports recording video to two SD cards sequentially. The Y35 can be configured to write video to the first SD card and when full, to continue recording on the second SD card. This feature increases the available storage when two SD cards are in the DVR. This feature is called “Sequential Recording”.

In order to enable Sequential Recording, the Y35 must be configured as follows:

Navigate to Setup>Surveillance>Record>Dual Stream



Record storage: Internal SD
Record Mode: Loop-Record
This will enable the DVR to sequentially record.

During the changeover phase (from one SD card to the other) there will be about 15 seconds of the same video on both cards. This is done to ensure there is no loss of video.

7.5 Upgrading Device Firmware

Periodically Gatekeeper Systems may release new firmware updates for your device which will improve performance and reliability.

In order to update your device, please download the correct firmware update compatible with your device. If you have any doubts, please contact Gatekeeper Systems for assistance.

Once you have obtained the appropriate firmware update file, copy this file to a USB flash drive.

Please Note: If you are using the Finger Mouse/LCD combination to navigate you will need to use a Gatekeeper Systems USB Hub to allow two devices to share the one USB port. Please follow the insertion process noted on the Gatekeeper Systems USB hub.

Then **Navigate to:** ***Main Menu → Setup → Maintenance → Upgrade***.

Figure 7-4 Upgrading Device Firmware

Click the appropriate **(Upgrade)** button next to the component that you wish to update. Browse to the folder on your USB flash drive and select the correct firmware update file to apply.

The device will update the firmware accordingly and reboot.

Please ensure that you have the correct Gatekeeper Systems authorised firmware update. Installing third-party, wrong, or otherwise unauthorised updates will void your warranty and may cause permanent damage to your device.

8 Maintenance and Troubleshooting

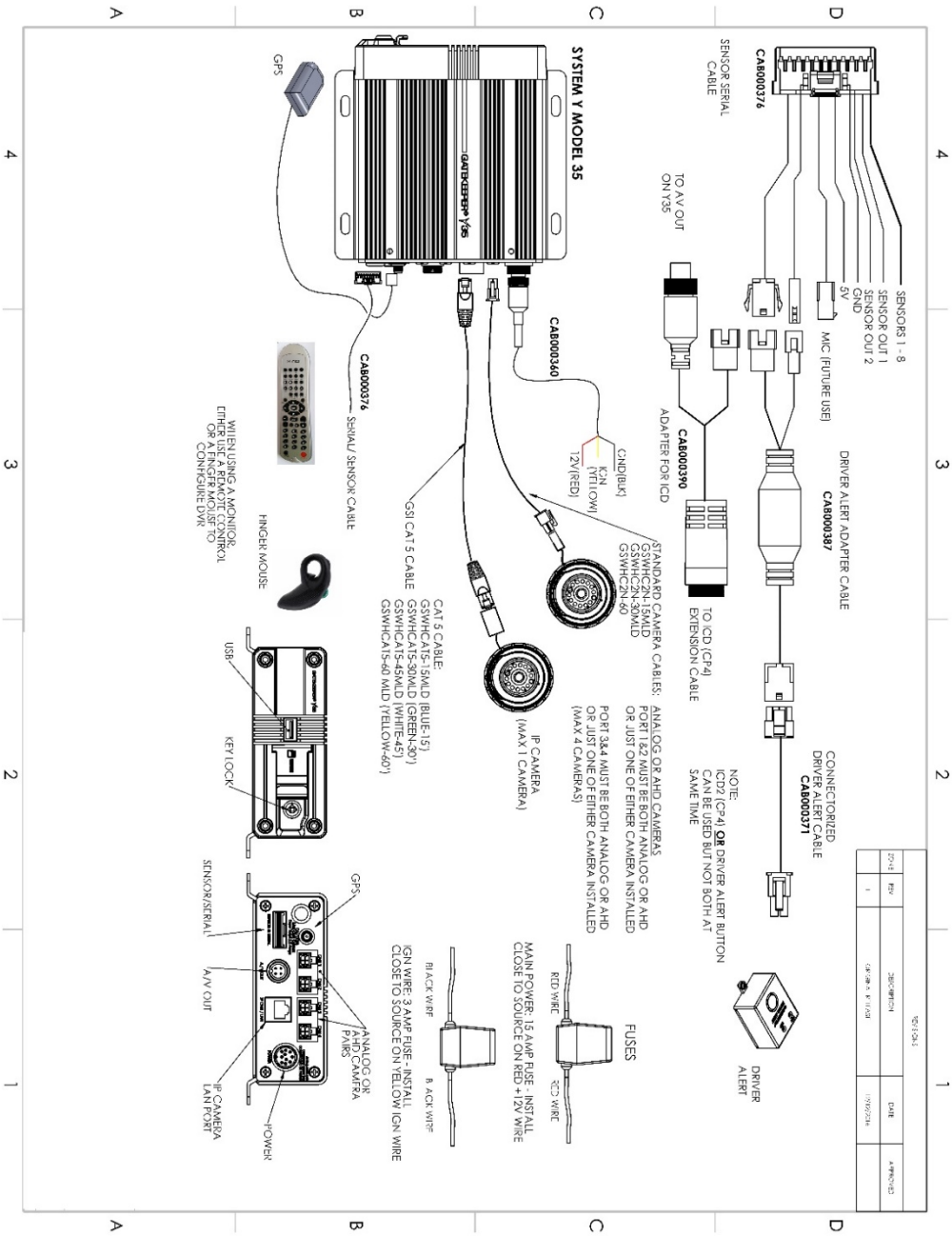
Maintenance
Whilst the Y35 is a dependable and robust piece of equipment, it is still a complex electronic device and as such, will require maintenance occasionally. To ensure optimal performance, Gatekeeper Systems strongly recommends that a proper Preventive Maintenance Schedule be set up and adhered to.

Besides that, it is recommended that the following seven basic maintenance steps be performed at least twice a year:

No.	Maintenance Item	Check (✓)
1	Check that there are no loose mounting screws and that the Y35 is still securely mounted.	
2	Wipe down the Y35 and cameras using a clean microfiber cloth.	
3	Check cables on the back of the Y35 to ensure they have not vibrated loose. Make sure that the cables do not show signs of wear, cracks, etc. If so, contact your Gatekeeper Systems sales representative to arrange for replacements.	
4	Pull out the SD Card and check to ensure that the Y35 has been recording video. It is critical that the Y35 is powered down prior to the removal of the SD card.	
5	Check that the cameras are still positioned properly by playing back the recorded video.	
6	Check the system clock to ensure the proper date and time is shown. Be sure to check that daylight savings time is set properly and the system time is not out by an hour.	
7	Verify that the settings for the Y35 and the cameras are still set properly.	

9 Hardware Installation

9.1 Quick Reference Guide for Installation



Installation Guidelines

Please note the following:

- The device must be secured to an interior surface of the vehicle using the Tek Screws provided.
- Wire the device into the vehicle according to the Quick Reference Guide and the appropriate cabling diagram.
- DO NOT disassemble the device. There are no user serviceable parts inside.

Configuration Guidelines

- The device firmware must be configured before using the Y35.
- Use a ICD2 , G4 Connect, Monitor/Finger Mouse combination or remote control to access the setup menu.
- Enter the following login information when prompted:

  User name : admin
  Password : admin
- You can also use the ICD2's touch screen to perform these tasks starting with the Menu button.
- Move the cursor to the Setup icon and press Enter.
- Navigate to *Surveillance>Record>Mainstream* to setup the analog channels (one through four).
- To set up IP Channel navigate to *Surveillance>IPC Setup*.
- To set Vehicle ID, navigate to *Basic Setup>Regist Info>Vehicle Info*.
- After setting the configurations, with the SD Card inserted, access the Setup menu. Navigate to *Setup>Maintenance>Storage* to format the SD Card.

  Please note: non-Gatekeeper branded SD cards may not function reliably. If used, non-Gatekeeper branded SD cards must be formatted in the Y35 prior to use.

- Start vehicle, and wait for recorder to boot up (approximately two minutes). Confirm live camera video is visible on monitor (small Green camera in each camera image – indicates the Y35 is recording).
- Confirm Y35 is recording by observing the LED's as per the following table.

Record Mode			**Safe To Remove SD Card**		
LED	COLOR	Flashing Status	LED	COLOR	Flashing Status
PWR	Blue	Constant On	PWR	Blue	Off
REC	Green	Constant On	REC	Green	Off
USB	Green	Constant On	USB	Green	Off
ERR	Orange	Constant On	ERR	Orange	Off
ALM	Red	Constant On	ALM	Red	Off
NET	Green	Constant On	NET	Green	Off

Note: The NET status LED is currently not supported.

To access the SD Card, turn key to unlocked position open the SD card door and press the SD card in to release.

9.2 Instructions for Mounting the System

Installation Requirements

The device has an operating temperature range of -40° C to +65° C. Please ensure that the device is mounted in an area in which acceptable temperature ranges are experienced.

As part of installation best practices, it is recommended to mount the device in the vehicle cabin area where there is environmental control (i.e. heating and/or air-conditioning). This will extend the device operating life by not exposing it unnecessarily to adverse environmental conditions.

Please take a moment to read and understand the following important installation conditions to ensure the Customer Warranty will not be voided.

- The device operates between 6V ~ 36V. Please ensure a regulated, consistent power source is available for the device.
- DO NOT remove any enclosures/covers associated with the device as this will void the warranty.
- Remove the In-Line Power fuse prior to jump starting the vehicle.
- Select a solid ground connection for the device.
- DO NOT use any third party accessories, unless approved by Gatekeeper Systems.
- The device is designed for interior use only. Do not install in areas that are exposed to excessive moisture.
- Mount the device in a location that has good airflow and is not subject to excessive heat/cold variations.
- Ensure that the device is mounted where it is not easily accessible by non-authorized personnel.
- Ensure that ALL provided Split Loom are used around exposed cables. Grommets are to be used as directed by install sheet. Failure to use provided Split Loom and Grommets will void the warranty.
- Gatekeeper Systems provides Tek Screws with which to mount the Y35 – these have been tested and are approved for mounting.

Power Connection

- Plug the power cable into the DC6-36V connector. The device will operate between 6 and 36 volts DC, however the lower the voltage the higher the current. The power source should be clean and preferably right from the battery or the power bus.
- The supplied fuses MUST be used. Failure to protect the system with the correct value fuse may lead to the warranty being voided.
- The 3AMP fuse must be installed as close as possible to the power source on the Yellow Ignition wire on CAB000360.
- The 15AMP fuse must be installed as close as possible to the source on the Red (+12V) wire on CAB000360.

GND	**(A)** *(Black)*	Connect to the negative terminal of the battery, -12V. Typically, grounds are established in the fuse panel, and installers would need to connect there.

IGNITION	**(B)** *(Yellow)*	Connect to the vehicle ignition, +12V, signal required to activate the device. Ensure that the provided 3 AMP fuse is used. Ignition is obtained from the "cold" side of the solenoid.
POSITIVE	**(C)** *(Red)*	Connect to the positive terminal of the battery, +12v. Ensure that the provided 15 AMP inline fuse is used. +12V is obtained from the "hot" side of the solenoid, or the cables that connect directly to the battery from the fuse panel

Sensor Cable

- The sensor cable CAB000376 connects to the connector marked "SERIAL/SENSOR" on the back of the device. The sensor portion of the cable is 5 metres sheathed together. Wires are colour coded and labelled with its corresponding Sensor number.
- There is a 4 pin flat Molex connector for attaching a Driver Alert Button or Alert Panel.

ICD

- The ICD connector is used to connect an optional ICD2 touch screen panel to the device. The panel can be used for configuring the recorder, configuring the IP camera, viewing live video and playing back video. CAB000391 is used to connect the ICD2 Panel to the recorder.

GPS

- If this option is included, a GPS module must be installed and a 5 GHz antenna must be attached to imbed the vehicle location and speed into the video.

9.3 Detailed Cabling Diagrams

9.3.1 Fuse Connections

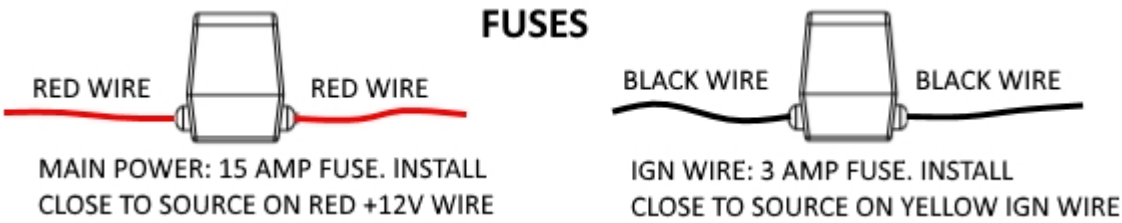


Figure 9-1 Y35 Fuse Connections

9.3.2 Cabling Diagrams

Please refer to the following pages with detailed cabling diagrams for the different installation configurations of the Y35.

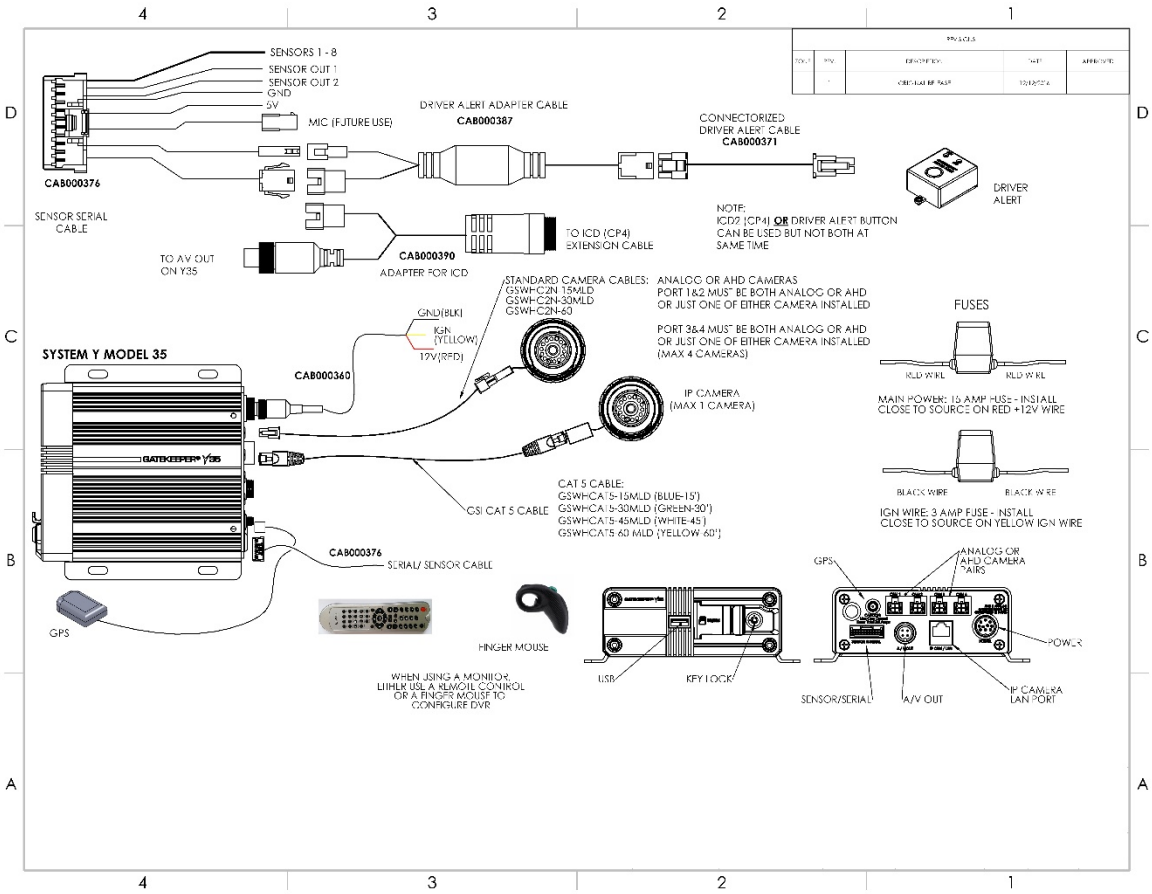


Figure 9-2: Basic Connection

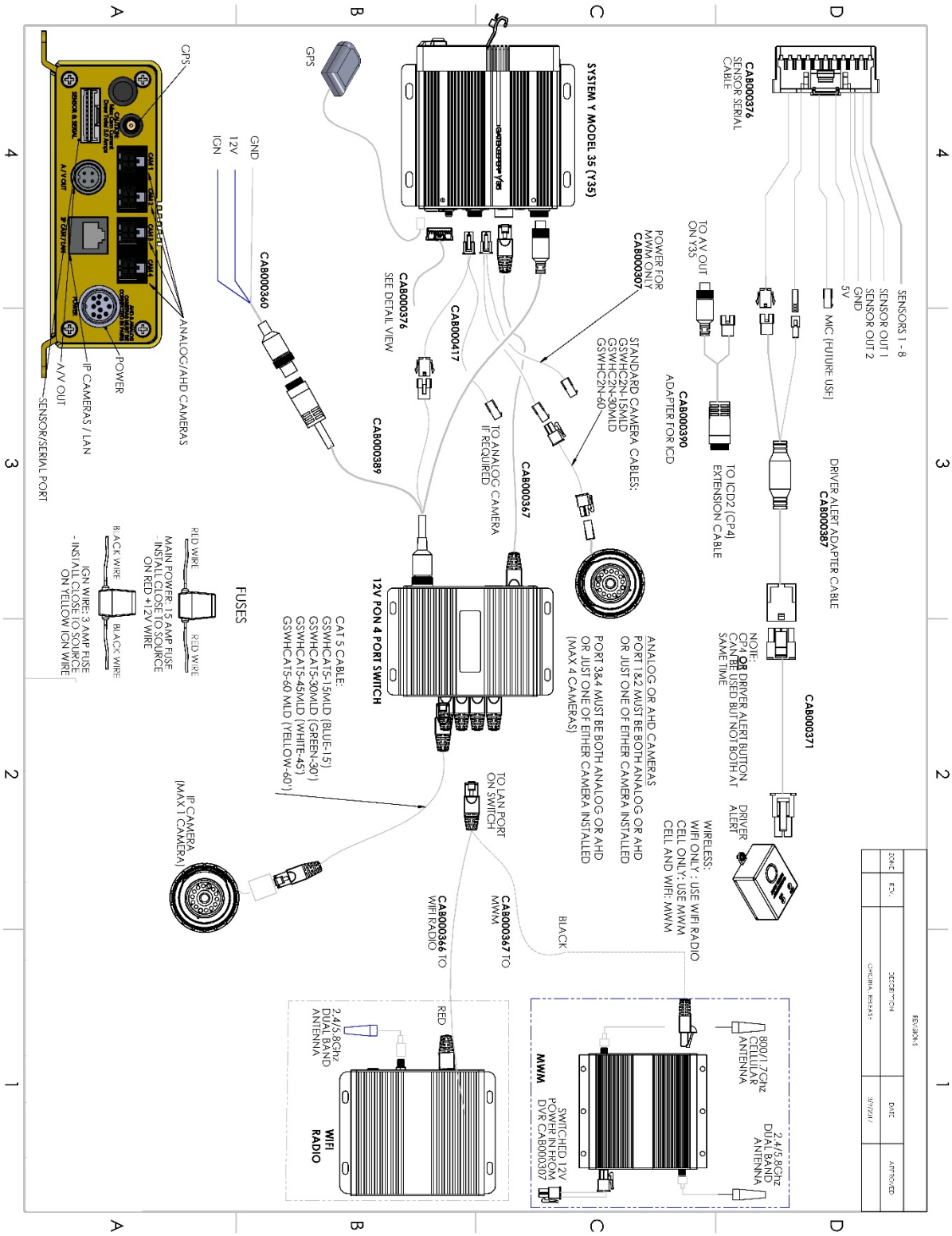


Figure 9-3: Y35 Wiring with Wireless.

9.4 Camera Mounting and Connections

General Considerations

- Camera mounting locations are to be determined by the customer/client.
- Cameras should be mounted to the ceiling whenever possible. Install the rubber pad provided with each camera and cut a small notch in the rubber pad to accommodate the camera cable. The audio hole on the front of the camera can be used as an aiming guide for the direction the camera needs to be facing.
- All camera harnesses must be carefully routed to the Y35 unit to avoid pinching or piercing the shielded camera cable.
- All cables running through holes in sheet metal (ceiling, bulkhead, etc.) must be protected with grommets.
- Ensure included gasket is in place between dome base plate and mounting surface.

When installing multiple cameras, mark camera harness wires so the school district knows which camera is front and back by looking at the marked Molex output connectors.

Important Notes

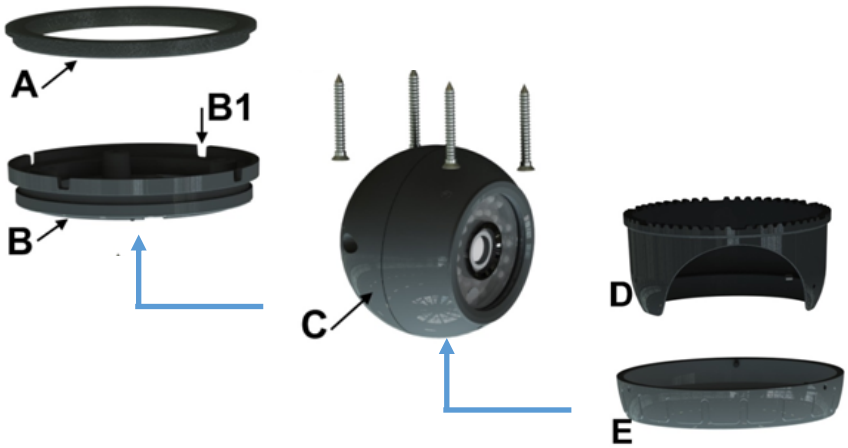
Routing the Camera Harness (GSWHC2N-XX):

- Always use grommets when running the harness through sheet metal holes.
- Avoid excessively tight bends especially around metal surfaces.
- Coil and tie off excess harness in a safe place.

DO NOT disassemble the Camera Ball unless directed to, and under the supervision of an authorised Gatekeeper Systems support technician.

Camera Body Parts

A : ***Rubber Gasket***
B : ***Base Plate***
B1 : ***Cut Out Notches***
C : ***Camera Ball***
D : ***Camera Collar***
E : ***Retainer Ring***



Camera Installation Instructions

Step 1	▪ Disassemble the camera into its five major parts, **A, B, C, D, E** and carefully place all parts in a clean work area.
Step 2	▪ Position the Base Plate **(B)**, in the mounting location. ▪ Ensure that there are no gaps between the Base Plate **(B)** and the mounting surface. ▪ If there are gaps, relocate the camera to a position where there are no gaps.
Step 3	▪ Note the location where the camera harness will come though the bodywork of the vehicle. ▪ Drill a 1” hole in this location. This 1” hole MUST be directly in the center of the Base Plate **(B)** to allow for the terminal end of the camera harness to correctly connect to the Camera Ball **(C)**. ▪ When access behind the camera is not possible, the cable can be routed from the side through one of the cut out notches (**B1)** in the camera base. The supplied grommets must be used as part of this procedure.
Step 4	▪ Center the camera over the 1” hole and mark the location of the 4 screws used to secure the camera base to the vehicle. ▪ Ensure that one of the camera cut out notches **(B1)** is aimed at the viewing target. ▪ Use the supplied TEK, self-tapping, screws to fix the camera base to the vehicle.
Step 5	▪ Connect the Camera Ball Molex connector to the connector at the end of the camera harness. ▪ Hold the Camera Ball firmly against the Base Plate with the Microphone pointing downwards. ▪ Position Camera Collar **(D)** over Camera Ball **(C)** with the lens window centred in the arched cut away in the Camera Collar.
Step 6	▪ Hold Camera Collar **(D)** securely while threading on the Retainer Ring **(E)** until finger tight. Be careful not to cross-thread the components.
Step 7	▪ To aim the Camera Ball **(C)**, video from the camera can be viewed by connecting a portable LCD/Monitor with an RCA connection to the front of the Y35, or, by use of the ICD2 accessory available from Gatekeeper Systems.
Step 8	▪ Re-position Camera Collar **(D)** prior to tightening down the Retainer Ring **(E)** so that it does not interfere with line of sight of the camera and IR LED’s in the Camera Ball **(C)**. ▪ Ensure the Camera Ball and Harness pigtail are not pinched or trapped between the Camera Ball **(C)** or the Base Plate **(B)** – it must be able to move freely.
Step 9	▪ Tighten all accessible set screws on the Retainer Ring **(E)** and Camera Collar **(D)**. ▪ In some installations several of the set screws will not be accessible due to close proximity of the camera to the vehicles bodywork. In this situation tighten down the set screws that are accessible.

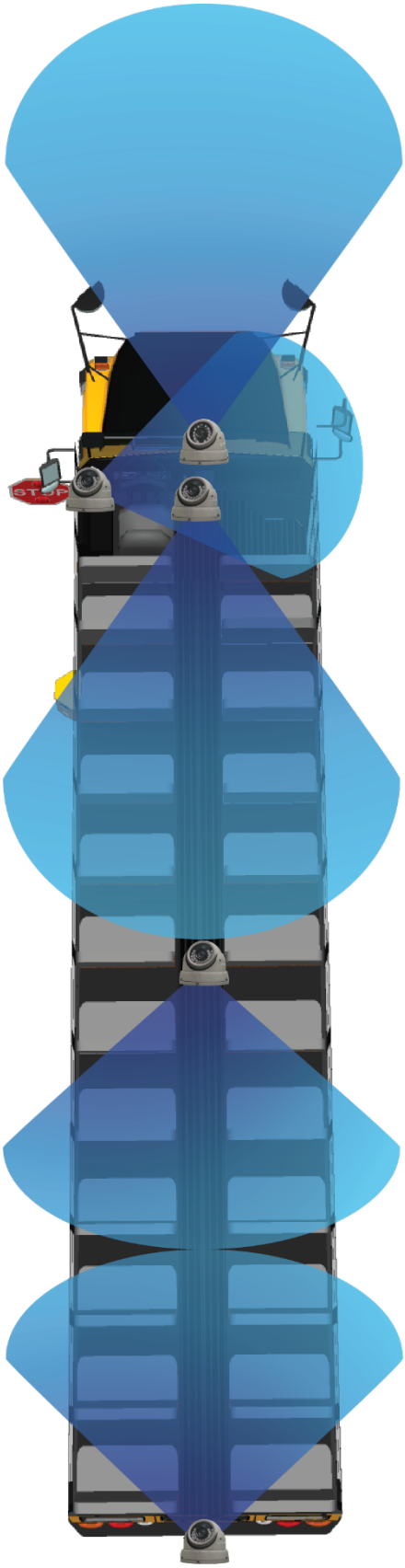
Suggested Camera Mounting Locations

Check For:

- Ceiling mount recommended.
- Do not obstruct walkways.
- Avoid contact with abrasive metal to prevent short circuits.

Wire Routing:

- Camera harness to be connected through opening in base.
- Use existing wire paths wherever possible, e.g. radio, speakers, etc.
- Avoid excessively tight bends especially around metal surfaces.
- Always use grommets when routing through sheet metal holes.
- Coil and tie off excess harness or tuck up into ceiling.



10 Customer Limited Warranty

GATEKEEPER SYSTEMS INC. (Company) warrants that any product manufactured or supplied by Gatekeeper Systems and found in the reasonable judgment of Gatekeeper Systems to be defective in material or workmanship will be repaired or replaced by Gatekeeper Systems without charge for parts and labor.

This warranty shall cover the following periods and equipment:

Gatekeeper System
Interior Cameras - 5 years
Exterior Cameras - 3 years
G series G4-304SD1a's – 3 years
Gatekeeper Branded SD Cards – 3 years
Hard Drives – 1 Year

All Accessories and Other Products Not Identified above - 1 year

The warranty periods commence on the date of shipment. During the period of the warranty the Company, at its discretion will repair and/or replace all improperly functioning equipment caused by a manufacturer's defect. This warranty does not protect against accidental or intentional damage, vehicle electrical systems generating steady state or transients, voltages or currents exceeding product specification, loss, acts of nature, water damage, or any other event that did not originate during the manufacturer of the product. G4-304SD1a's must be returned once every twelve months for service otherwise warranty may be void.

The Gatekeeper Systems product including any defective part must be returned to Gatekeeper Systems within the warranty period. The expense of delivering Company product to Gatekeeper Systems for warranty work will be paid by the customer. The expense of delivering Company product back to the customer will be paid by Gatekeeper Systems. Gatekeeper Systems' responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale. Proof of purchase complete with the serial numbers of the products purchased will be required by the customer to substantiate any warranty claim. All warranty work must be performed by an authorized Gatekeeper Systems service representative.

This warranty does not cover any Gatekeeper Systems' product that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified by Gatekeeper Systems either verbally, in writing, by instructions written on the product or in the Gatekeeper Systems Installation and Operating Manual.

This warranty does not apply to any damage to the Gatekeeper Systems product that is the result of improper maintenance or to any Gatekeeper Systems' product that has been altered or modified so as to adversely affect the products' operation, performance or durability or Gatekeeper Systems' is not responsible for lost or missing video.

The warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the Company product or adversely affect its operation, performance or durability.

Gatekeeper Systems reserves the right to change or improve the design of any Company product without assuming any obligation to modify any product previously manufactured.

ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE SPECIFIED PERIOD FOR EACH PRODUCT CATEGORY AS LISTED IN THIS DOCUMENT. ACCORDINGLY, ANY SUCH IMPLIED WARRANTIES INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE DISCLAIMED IN THEIR ENTIRETY AFTER THE EXPIRATION OF THE APPROPRIATE WARRANTY PERIOD. GATEKEEPER SYSTEMS' OBLIGATION UNDER THIS WARRANTY IS STRICTLY AND EXCLUSIVELY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS, AND GATEKEEPER SYSTEMS DOES NOT ASSUME OR AUTHORIZE ANYONE TO ASSUME FOR THEM ANY OTHER OBLIGATION.

GATEKEEPER SYSTEMS ASSUMES NO RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO THE EXPENSE OF RETURNING THE COMPANY PRODUCT TO GATEKEEPER SYSTEMS CORPORATE HEAD OFFICE, MECHANIC'S TRAVEL TIME, CUSTOMER LABOR EXPENSES, TELEPHONE OR TELEGRAM CHARGES, RENTAL OF LIKE PRODUCT DURING THE TIME WARRANTY SERVICE IS BEING PERFORMED, TRAVEL, LOSS OF USE OF THE PRODUCT, LOSS OF TIME OR INCONVENIENCE.

Warranty Service
To obtain warranty service, the purchaser must notify the Company during the warranty period. The Purchaser will discuss the defect or problem with a Company technician, and once the problem has been verified the Company will issue a return material authorization number (RMA) authorizing the purchaser to return faulty merchandise to the Company for repair or replacement as determined by the Company. It may be necessary for the customer to assist Gatekeeper Systems in assessing failed product. Gatekeeper Systems may require the customer to remove hardware, manipulate software and/or perform other diagnostic activities. Failure to assist in and allow remote diagnostic activities may result in a service fee being charged.

Advance replacements will be issued for the first 45 days from the date of shipment.

This Warranty applies to all Company products manufactured by Gatekeeper Systems and sold in the United States and Canada.

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