



304SD Police System Setup and Install User Guide.



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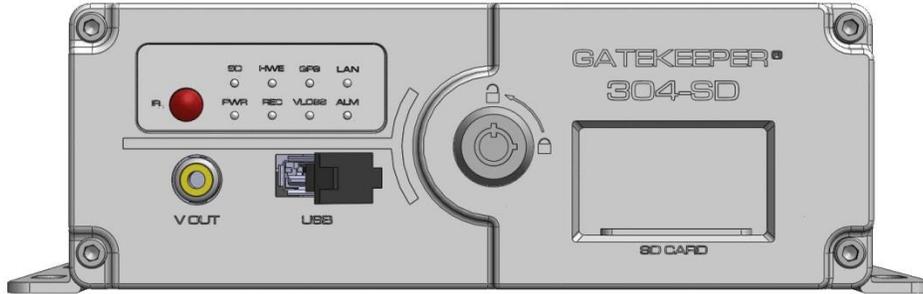
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304SD - PTZ System Components.



304SD Digital Video Recorder.



ICD (Interactive Control Display)



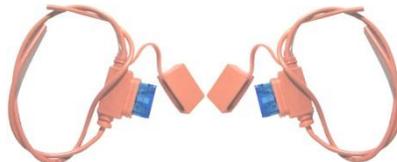
Driver Alert Button.



CAB000353



Sensor Cable: P/N: CAB000356



Power Line/Ignition Line Fuse's



Power Cable: P/N: CAB000309



Fastening (TEK) Screws



Key



CAB000357



CAB000352



CAB000319

Figure 1: System Components.



Optional Accessory.

G4-WM2400CHS

Wireless Microphone: Charging Station Only.



System Overview.

Front View

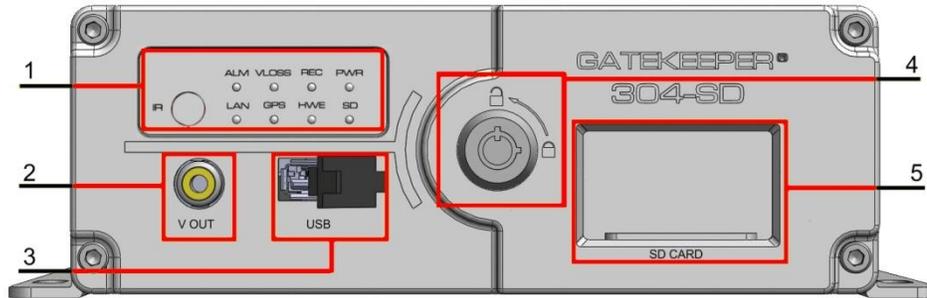


Figure 2: Front View

1. LED Status Indicators.
2. V OUT. Connects to External Display, e.g. portable DVD player
3. USB. Used for Saving/Uploading configurations and updating the system firmware.
4. Lock. Allows access to the SD Card Slot (5) and can start & stop recording of video.
5. SD Card. Houses the SD Card used for recording Video.

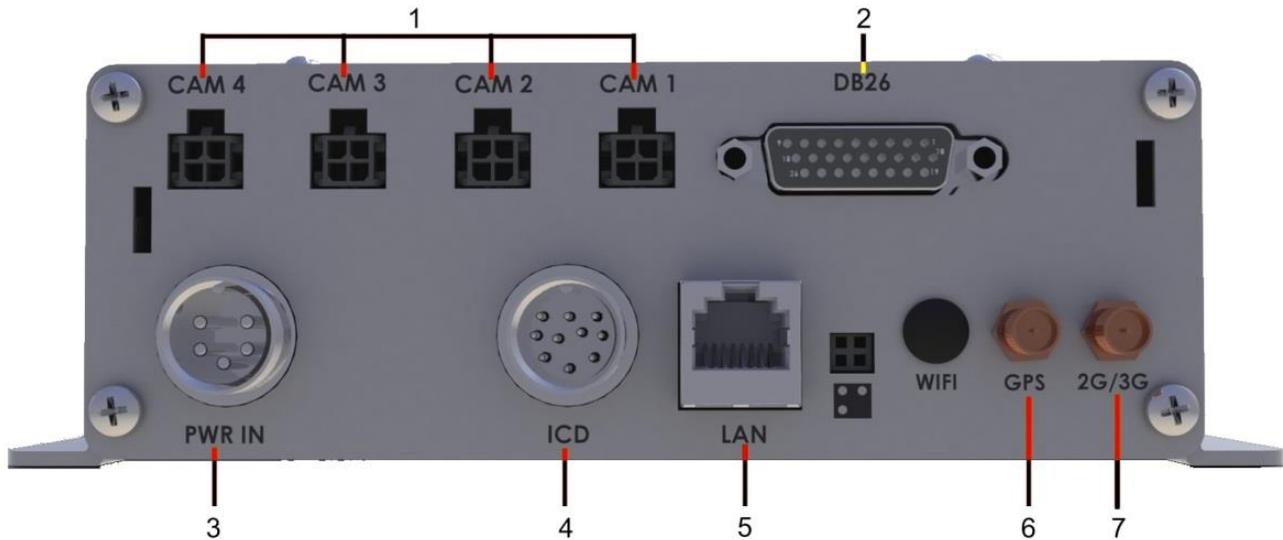
TEXT	ITEM	DESCRIPTION
V OUT	Video Out	Video output to an external display, e.g. TV / Portable DVD Player.
SD	The various LED's are status indicators.	Flashes to indicate 304SD is recording
GPS		Illuminated when GPS signal is present
LAN		Displays Network activity
PWR		Illuminated when power present
REC		Normal Recording
HWERR		A Physical Hardware error, or, no SD Card.
ALM		Signifies the 304SD has received an Alarm input.
VLOSS		Flashes if Video Loss has occurred.
IR	IR receiver	For receiving signals from the Remote Control.
USB	USB Interface	Use to backup recorded video files; download/upload configurations and firmware upgrade



The SD card slot needs to be locked before booting up the system, otherwise, the boot sequence will be unsuccessful. The 304SD will be in standby mode anytime the SD slot is unlocked.



Rear View



1. Camera Inputs. The 304SD accommodates up to four video channels. Use CAB GSWHC2N-XX (Where XX = Length in Feet, e.g. GSWHC2N-15 for a 15 foot cable).
2. Sensor Connector. CAB000356, Connects to Stop Arm; Warning Lights, etc.
3. Power Connector. CAB000309, has keyed connection to eliminate incorrect installation.
4. Interactive Control Display. Optional accessory for configuration.
5. RJ45 Connection. Used when the 304SD requires a connection to an external Router/Radio.
6. GPS. Optional GPS module accessory.
7. 2G/3G. Optional Cellular accessory.

Figure 3: 304SD Rear View.

Power Connector (CAB000309)



GND [A] Input (Black): Connect to the negative terminal of the battery, -12V.

Ignition [B] (Yellow): Connect to vehicle ignition, or trigger from diode pack. +12V signal required to activate the 304SD. Ensure that the provided 1 AMP In-Line fuse is used

Positive [C] (Red): Connect to the positive terminal of the battery, +12V. Ensure that the provided 15AMP In-Line fuse is used



SD Card – Overview.

The 304SD 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 304SD. SD cards from Gatekeeper Systems are available in 32GB and 64GB depending upon the product purchased.

Inserting the Card Into A Reader.

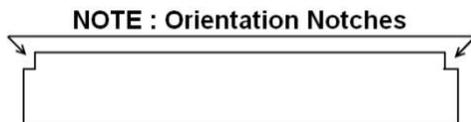
Please Note: When using a SD Card from a 304SD in a Microsoft Windows based system, you will be prompted to format the SD Card, Click CANCEL. If you choose to format the SD Card ALL VIDEO will be deleted from the SD.

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

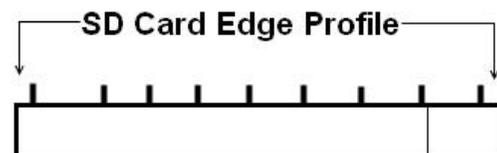
Please check the documentation that came with your computer system, or, speak with your I.T. department staff to determine if you have an internal SD reader and how to insert the SD card into your system.

If you are using an 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

Driver Alert Button.

A Driver Alert Panel is available as an optional accessory for the 304SD. 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 the G4 viewer can be set to display Alarms/Alerts.

The Driver Alert Panel is connected to CAB000356.

CAB000356 has two bundles of wires labeled 485-3 and 485-4.

Connect the Driver Alert Panel to bundle 485-4 using the supplied connectors.





304SD PTZ Install Guide.

For a successful install of a 304SD / PTZ system, initial configurations are essential.

Please note the following:

User ID = 31127 Password = 20020818

Network Settings.

Local settings are used to allow the 304SD to have network connectivity. The settings in Figure 4 are set as default on the 304SD. For web connection the client PC must be on the same network as the 304SD. Currently only Internet Explorer is supported as the web UI utilizes ActiveX controls. ActiveX controls must be enabled for the web UI to function. Use the IP Address as stated in Local Network to access the Web UI.

To access the Network settings on the 304SD navigate to Advanced → Network.

Local Network Settings.

1. IP. This is the IP Address for which the 304SD has been pre-configured.
2. SUB. The subnet the 304SD will be using.
3. GATE. Gateway information
4. Client Port and Web Port. These are the ports to be opened to allow communication of the 304SD to the network.
5. DNS. Allows communication between the 304SD and the host network.
6. MAC Address. The MAC address of the 304SD

LOCAL NETWORK

IP TYPE:

IP: 192.168.088.002

SUB: 255.255.255.000

GATE: 192.168.088.001

CLIENT PORT: 00081

WEB PORT: 00080

DNS SERVER: 255.255.255.2555

MAC ADDRESS: 00-18-F5-09-B8-94

OK CANCEL

Figure 4: Local Network Settings.

Wi-Fi should be set to Disable and Mobile should be set to None for this application.

Connecting the ICD (Interactive Control Display).

Use the supplied cable to connect the ICD to the corresponding port on the rear of the 304SD, item 4 in Figure 3. Ensure that the 304SD is powered down prior to the connection.

Once connected there are Two menu items which have to be configured both of which are listed within Advanced → Peripheral. These are for the PTZ and ICD.



Configuring the PTZ options.

Advanced → Peripheral → PTZ

1. Protocol: The PTZ cameras supplied by Gatekeeper Systems utilize PELCO-D protocol.
2. Baud Rate: Baud Rate for Gatekeeper Systems PTZ cameras must be set to 2400.
3. Data Bit: This must be set to 8
4. Stop Bit: Must be set to 1.
5. Verify: Set to NONE.
6. Address. This is the address of the PTZ camera and **MUST** match exactly the setting as configured within the cameras on-board setup.

PTZ				
CHANNEL	CH1	CH2	CH3	CH4
PROTOCOL	PELCO-D	PELCO-D	PELCO-D	PELCO-D
BAUD RATE	2400	2400	2400	2400
DATA BIT	8	8	8	8
STOP BIT	1	1	1	1
VERIFY	NONE	NONE	NONE	NONE
ADDRESS	001	001	001	001
				OK
				CANCEL

Figure 5: 304SD PTZ Settings.

ICD/Driver Alert Button Configuration.

Advanced → Peripheral → EXT. COM

1. MODE: Must equal Bus Mode.
2. COM1: Must be set to NONE
3. COM2: Must be set to Station Announcement 3RD
4. COM3: Set to PTZ.
5. COM4: Set to Driver Alert.

EXT. COM SETUP	
MODE:	BUS MODE
COM1:	NONE
COM2:	STATION ANNOUNCEMENT 3RD
COM3:	PTZ
COM4:	DRIVER ALERT
OK	
CANCEL	

Figure 6: EXT. COM Setup.



Using the ICD Controls.

The ICD (Interactive Control Display) can be used to control the PTZ Camera Zoom; Focusing and Irising features.

The user controls of the ICD can be broken down into Four main sections:

1. Directional Keys: These are un-used as controlling the PTZ camera uses the Numbered Keys [item 4 in this list].
2. MENU: Used to access the Menu of the 304SD. Please Note: User ID = 31127 Password = 20020818.
3. EXIT: Use this to gain control of the PTZ camera. Press a second time to release the PTZ camera controls.
4. Numbered Keys: Use these keys to control Zooming In and Out; Focusing; Irising (Light Level), etc.



Figure 7: ICD Control Keys.

ICD Numbered Keys.

When controlling a PTZ camera using the ICD, the Numbered Keys control different functions of the camera.

For the PTZ controls to register, first select the channel number to which the PTZ camera has been configured on the 304SD DVR, e.g. 01 for channel 1 would require the number 1 key to be pushed on the ICD This will make channel 1 full screen. Once the correct channel has been selected press the EXIT key on the ICD, PTZ ON will display on the top left corner of the ICD. On the ICD to leave PTZ control press the EXIT button a second time, PTZ OFF will display. Press the 0 (zero) key on the ICD to return to quad view.

KEY # / NAME.	
1	Focusinc. Sharpens the focus of the camera. Press and Hold to increase focus. Release and press a second time to Exit this option.
2	Irising. Increase the light saturation of the image. Press and Hold to increase Iris. Release and press a second time to Exit this option.
3	Zoominc. Zooms in on the target area. Press and Hold to increase Zoom. Release and press a second time to Exit this option.
6	Focusdec. Reduces the sharpness of the image. Press and Hold to decrease focus. Release and press a second time to Exit this option.
7	Irisdec. Reduces the amount of light in the image, effectively making it a darker image. Press and Hold to decrease Iris. Release and press a second time to Exit this option.
8	Zoomdec. Zooms out from the image. Used to return the camera to normal zoom level. Press and Hold to decrease Zoom. Release and press a second time to Exit this option.
4, 5, 9, 0	These keys are currently reserved for future development.



Wireless Microphone.

The Wireless microphone consists of three components; Base Station; Wireless Microphone Station and the actual clip-on microphone and is connected to the 304SD using CAB000357.

To ensure audio is picked up and recorded the wireless microphone must be set as the audio input on the forward facing, PTZ, camera, i.e. if Camera 1 has been configured as the forward facing camera in the 304SD configuration then the audio associated with it will be from the wireless microphone.

The Black Wire on the Six wire cable bundle, which typically goes to the RF Radio, can be used to send an Event to the 304SD when connected to a spare sensor input either 7 or 8 on CAB000356.

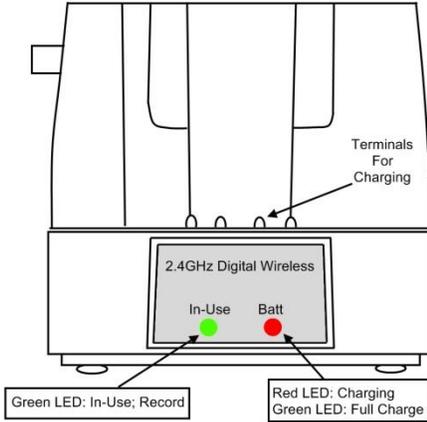
Once the EMG button on the Wireless Microphone Station has been pressed a +12V signal is sent to the 304SD and Event recording will begin. This Event recording will continue until the EMG button has been pressed a second time. Once the +12V signal is removed the 304SD will continue recording for the amount of time specified in the Record menu setup.



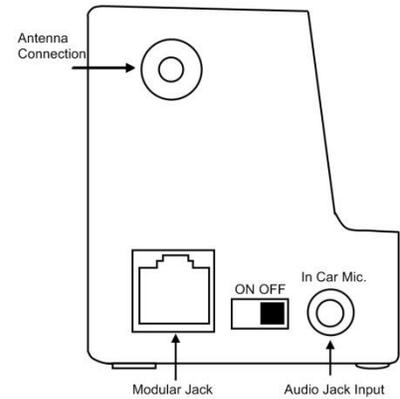
Figure 8: Wireless Microphone.



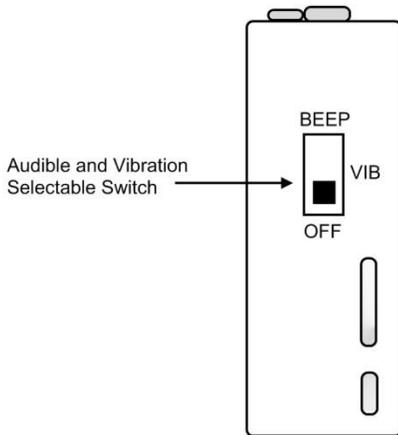
Wireless Microphone Components.



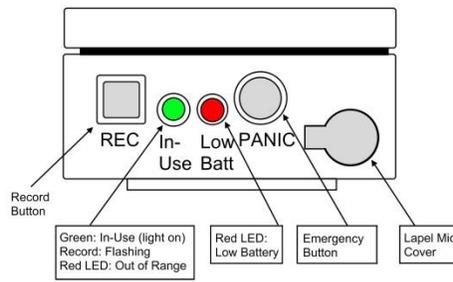
BASE (Receiver) FRONT VIEW



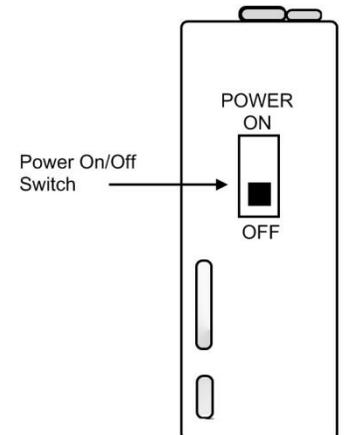
BASE (Receiver) SIDE VIEW



TRANSMITTER SIDE VIEW 1



TRANSMITTER



TRANSMITTER SIDE VIEW 2

Syncing the Transmitter and Base

Syncing of the Transmitter to the Base is a process which only needs to be performed the first time a system is to be used, or, when a new Body Pack is to be used with a Base which was previously synced to another different Body Pack.

Initial Setup.

1. Turn the Transmitter power switch to ON and place the transmitter in the recharge cradle of the base. The transmitter goes in the base with the belt clip facing out.
2. The recharge LED will illuminate (Green if fully charged, Red if charging). A full charge will take up to Four hours to complete.
3. Press the In-Use button on the Transmitter and hold until the In-Use LED on the Transmitter and Base begin to flash. Release the button.
4. After a few seconds the light will stop flashing, and a beep will sound (If Beep is enabled).
5. The Transmitter and base are now synced and will continue to be synced until another transmitter is linked to that base.



Normal Operation.

1. Remove the synched Transmitter from the cradle, and if used plug in the lapel microphone, and place the Transmitter on to the utility belt.
2. Press the In-Use button to begin recording. The In-Use LED will be a constant Green and you will hear a short beep.
3. Press the In-Use button a second time to Stop recording. The In-Use LED will turn off and a short beep will be audible.
4. At the end of a shift, turn off the Transmitter and place it in the charging cradle.

Out of Range.

1. If the Transmitter goes out of range it will emit Two-Tone warning beeps and the In-Use LED will flash in Red.
2. As the Transmitter moves closer to the Receiver Base the link will be re-established and the In-Use LED will switch to a constant Green.
3. If the link is not re-established within 30 seconds the Transmitter and Receiver will switch to Stand-By mode.
4. If you went out of range in Standby mode, or the unit reverted to standby mode, re-enter normal range and press the In-Use button. Operation will return to normal.
5. If you will be out of range for a long period of time, turn the Body Pack off.

Low Battery Warning.

1. If the Transmitter Low BATT indicator (Red) starts flashing warning beeps are emitted, return the Transmitter to its cradle on the receiver and allow the Transmitter to get fully charged.
2. The Charge LED indicator will light a constant green when the unit is fully charged.



PTZ Camera

SAMSUNG SCZ-3370.

The PTZ camera should be connected to Camera Port 1 on the 304SD.

Rear Camera Overview.

- (1) RJ-45 JACK: Terminal for RS-485 communications.
- (2) Left (F-NEAR) (5) Right (F-NEAR): Used to change the value of a selected item or adjust the focus.
- (3) SET (AF): Press and hold this for two seconds to display the menu. Use this if you wish to change the value of a selected item or change mode. Press for two seconds to confirm selection. Press and release for auto focus.
- (4) Up (TELE) (6) Down (WIDE): Use this if you want to move a menu item to a desired position or adjust the zoom factor.
- (7) Power Indicator.
- (8) Video Output Jack. Used to connect an external video monitor.
- (9) and (10) Power in. CAB000353 connections.
- (11) Camera Chassis ground.

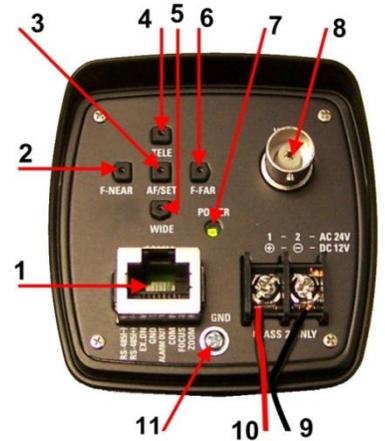


Figure 9: Samsung 3370 Rear View.

SCZ-3370 Menu Setup.

Use the five buttons on back of the SCZ-3370 to access the menu system.

Press the SET/AF button for 2 seconds to access the MAIN SETUP screen. (A short press the button will activate AUTO FOCUS).

Main Menu will be displayed on the output device.

Using the Navigation keys; UP/LEFT/DOWN/RIGHT navigate and highlight SPECIAL. Press the AF/SET button to confirm. Next navigate to COMM ADJ and Press the AF/SET button to menu option.

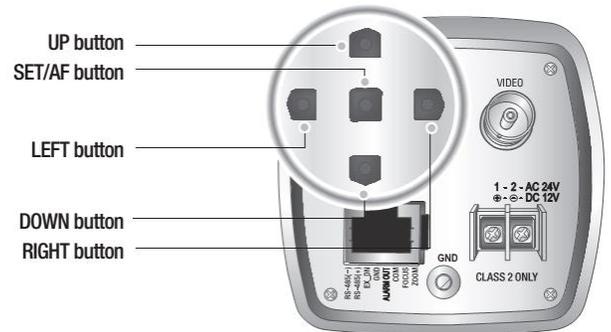
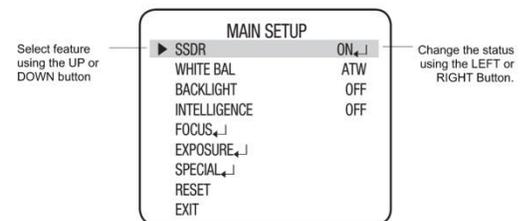


Figure 10: SCZ-3370 Menu Setup.



Select the Menu option required using either the UP or DOWN button
Change the status of the Menu item by using the LEFT or RIGHT button.
Once all options have been set, move the indicator arrow to EXIT and press the SET button.

--- denotes that this option is unavailable
Options marked with ◀ have associated sub-menu's

Once a Menu has been accessed options for that particular menu will be shown.

Figure 11: SCZ-3370 Menu Options.



SCZ-3370 Communication Setup.

For the PTZ Camera setup only the Communications menu should be changed.

1. PROTOCOL: Must be set to PELCO-D
2. CAM ID : This setting must exactly match the Address value as defined in the PTZ menu option of the 304SD. Advanced → Peripheral → PTZ.
3. BAUD RATE: = 2400
4. UART MODE: 8 - N - 1
5. RET PKT: Disable
6. COAX: OFF.

The settings for the Samsung SCZ-3370 must match those shown in Figure 12 for the device to function as expected.

COMMUNICATION SETUP	
▶ PROTOCOL	PELCO - D
CAM ID	* 1
BAUD RATE	2400
UART MODE	8 - N - 1
RET PKT	DISABLE
COAX	OFF
RETURN	

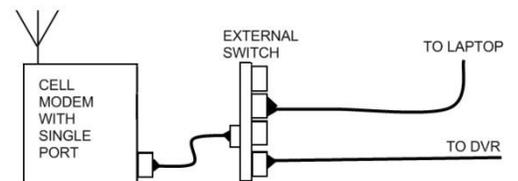
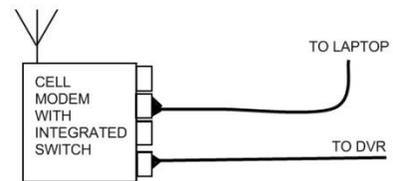
Figure 12: Samsung 3370 Communication.

Using a Personal Computer to Control the PTZ Camera.

It is possible to control the PTZ camera, ZOOM, FOCUS and APERTURE via a personal computer.

If a cellular modem is available inside the vehicle the cellular modem would require to either have an internal network switch with which to connect to both the 304SD and personal computer, or, have access to a mobile network switch with which to connect to both the 304SD and personal computer.

The 304SD must be set to be on the same network as personal computer, see Local Network Settings within this guide on how to configure the 304SD to match your network settings.



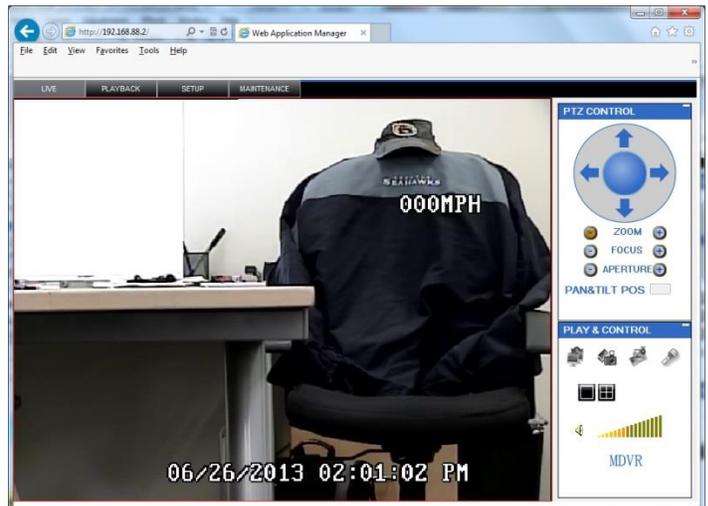


WEB Interface

To access the PTZ controls and system configuration via the web interface Internet Explorer must be used due to the requirement of ActiveX controls.

To bring up the web interface type the IP Address of the 304SD into the address bar of Internet Explorer, this is the IP address as listed in Local Network Settings. Once this IP address has been entered a User Login screen will appear. The password is blank so click Login, ensure network is set to LAN.

1. ZOOM. Use the - (Minus) to Zoom In on a subject. Use the + (Positive) to Zoom Out from the subject.
2. FOCUS. Use the - (Minus) to soften the focus of the subject. Use the + (Positive) to sharpen the focus of the subject.
3. APERTURE. Use the - (Minus) to decrease the ambient light in the image. Use the + (Positive) to increase the ambient light in the image.



Using the Web Interface to Zoom in on the subject.



Setting The Sensor/Event Configuration.

The 304SD has Eight sensors which can be individually set to be active or off. All sensors also have the ability to have their output files "Locked" for a specified number of days. This locking ensures that the video will not be over-written when the disk gets near to its capacity.

To change the duration of the LOCK navigate to:
RECORD → OPTIONS → OPTIONS 2 → LOCKED FILE RETENTION (DAY)

Using the drop down menu it is possible to select 7; 10; 15; 20; 30 or 45 days as the timespan for which the Files will remain locked. If no lock is required change the LOCK setting in EVENT → SENSOR to OFF.

MENU: EVENT → SENSOR.

In Figure 13, SENSORS on CAB000356 have been connected to specific inputs for activation when +12v is applied.

S1, GUNBOX, has been set to HIGH (+12V) with ALARM ON. When the GUNBOX has been opened a signal will be sent to the designated sensor on CAB000356 (S1) and video will begin to record (see Figure 14 for Event Record Timings) and the resulting video will be "Marked" making retrieval and viewing using G4 Viewer easier.

To set individual Sensors use the remote control to Enable and then type in the required NAME, please note that there is a Six character limit for the NAME of a Sensor and a Two character limit for the OSD (On Screen Display).

SENSOR						
	ENABLE	NAME	OSD	SET	ALARM	LOCK
S1	ON	GUNBOX	GB	HIGH	ON	ON
S2	ON	TRUNK	TR	HIGH	ON	ON
S3	ON	SIREN	SR	HIGH	ON	ON
S4	ON	RRDOOR	RD	HIGH	ON	ON
S5	ON	LRDOOR	LD	HIGH	ON	ON
S6	ON	LIGHTS	LT	HIGH	ON	ON
S7	ON	EMG	EB	HIGH	ON	ON
S8	OFF			HIGH		

Figure 13: SENSOR Configuration.

MENU: RECORD → OPTIONS → OPTIONS 1.

The length of time an Event is recorded for can be set for Pre and Post Event as well as actual Even Time.

To enable Event Recording select RECORD MODE and using the remote control use the drop down menu to select EVENT.

Post Event recording time can be set to between 0 and 1800 seconds (30 minutes)

The duration for the actual alarm duration can be set between 3 and 30 seconds.

If Pre EVENT marking is required select NEXT PAGE on OPTIONS 1, this will bring up a second window, OPTIONS 2. PRE RECORDING SWITCH should be set to ON. Once this has been set ALARM PRE-REC TIME (OPTIONS 1 page) can be set to between 1 and 60 minutes.

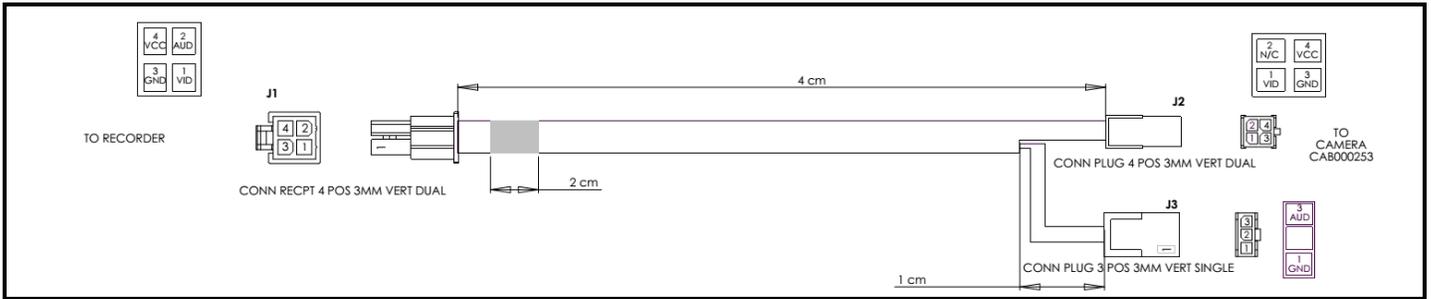
OPTIONS 1	
VIDEO TYPE	NTSC
RECORD MODE	EVENT
REC RATE NORMAL	NORMAL
ALARM PRE-REC TIME (1-60)MIN	1
ALARM DURATION(3-30)SEC	10
ALARM POST REC(0-1800)SEC	0010
ALARM TIME (SEC)	30

Figure 14: EVENT Configuration.

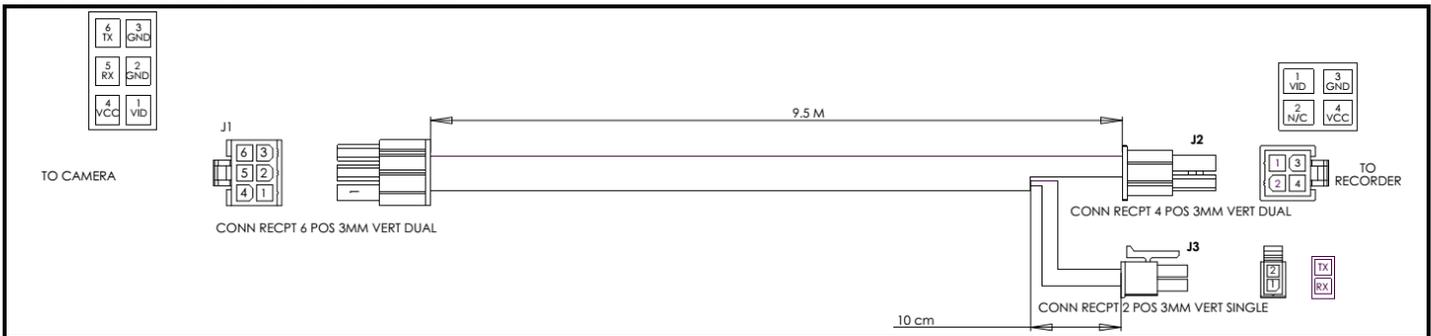


APPENDIX

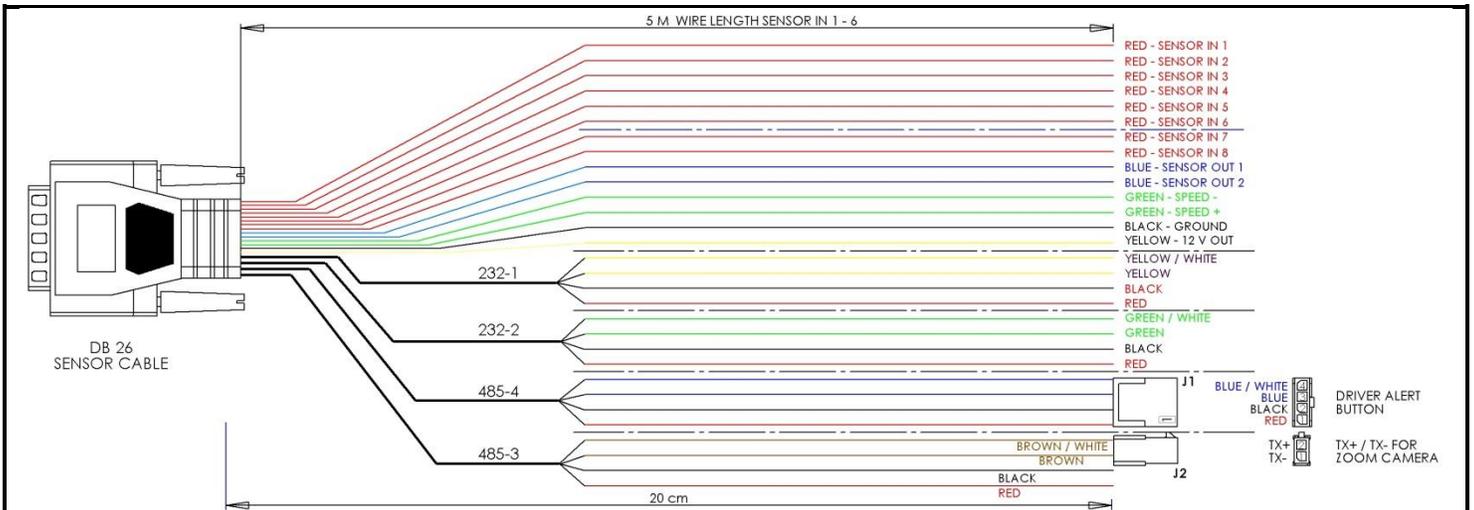
WIRING DIAGRAM: CAB000352



WIRING DIAGRAM: CAB000353

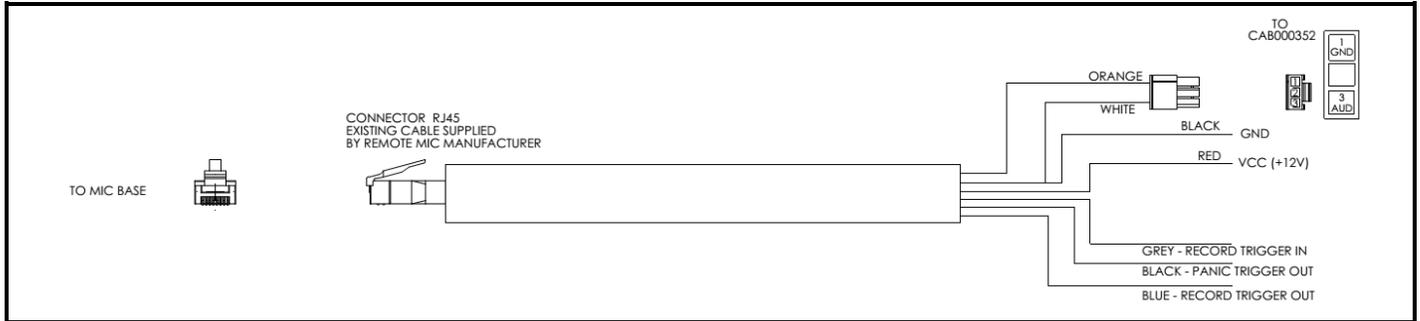


WIRING DIAGRAM: CAB000356





WIRING DIAGRAM CAB000357





COMPLETE SYSTEM WIRING OVERVIEW.

