

# EMCS-V USER GUIDE

# **Emergency Master Control Station Video Consolidator**









# **Quick Start Guide**

Configure PLM Group(s): Connect wiring: Cab Phones For each station, assign to either: Phone lines (TEL 1 and/or 2) Remote Phones to MR • Group 1 output • EMC-ALRMs to lobby alarm • Group 2 output boards • Disabled (ignore) Power (PWR IN) NiMH battery (BAT) Ethernet cable from router Learn Mode: Configure Email: From HOME screen, select MENU icon: • Provide one or more email addresses • Enter Building Address (will appear on subject line) From MENU screen, select Learn->Start Send test email Configure Camera(s): Line test: From MENU screen, select LINE TEST Select Station Number Provide Station Name Pan and zoom as desired Wait for dial tone then use the onscreen keypad to dial a test number (e.g. a cellphone). Hang-up to disconnect from the called party ending the call. Confirm Device: Settings menu: On the home screen, select MENU icon Review devices found Select Operating Mode: followed by SETTINGS icon • LOBBY if no phone line Call into the EMCS-MR from a remote

Customer Care: Call 1-844-EMERCOM (1-844-363-7266) for assistance.

mode

phone and enter remote programming

• TEL / Intell-split if phone line

found



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EMCS-V Software Version 0.0.3

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# 1. About the EMCS Emergency Consolidator

### 1.1 Key Features

- ASME A17.1/CSA B44 Safety Code for Elevators requires the means to call into any elevator from within a tall building with elevator travel greater than 60' (18m).
   The EMCS-V Consolidator manages this operation through its handset and any connected remote handsets, overriding off-site calls in progress.
- Video monitoring of 1 12 stations
- Email generated at start of each cab phone emergency call
  - Address and cab description on subject line
  - Snapshot inside cab at time call button pressed
  - Date and time of emergency
- Intuitive visual and audible indications for system operation and call routing
  - Colour-coded cab icons indicate each elevator phone status
  - Voice prompts announce current system status to any handset away from the main display, either on-site or off-site, with on-site CID display
- System-wide page (ALL CALL) from on- or off-site to all elevators
- 2 concurrent calls to reduce wait time in a broad emergency
- Ease of setup and operation
  - "Learn" mode to automatically configure the system
  - "Line Test" mode to assess the building phone line
  - Remote phones can call off-site
- Advanced diagnostics
  - Built-in Phone Line Monitoring (PLM) from each elevator to the EMCS and for each connected TEL line as required by Code
  - Watchdogs with counters for automatic fault recovery and reporting
  - Remotely simulate alarm call
- 3 PLM group alarm relays for every 6 cabs (fail safe closed when no alarm)
- Call off-site, via an available phone line, using any on-site phone
- Simple SD card firmware upgrades enable feature flexibility with optional customization
- Self-diagnostics continuously monitor its own operation and its environment
- Compatible with a wide range of power supply voltages (AC and DC)
- Vandal-resistant #16-AWG Brushed Stainless Steel
- Box width 14.25" to fit (recess) between wall studs
- Status and alarm messages displayed on Remote Phone CID



### 1.2 Emergency Call Email

At the start of every emergency phone call, the EMCS-V emails all the registered email recipients a snapshot of the cab and populates the subject line with details pertaining to the cab as shown in the sample below:

From: NoReply <dispatcher@emervideo.com>

Sent: September 27, 2022 9:07 AM

To: testemail@test.ca

Subject: Elevator emergency - Station 1: stn1 [ABC Building Address]

This email is to inform you that the elevator emergency button was pressed from the following station:

ABC Building Address - Station 1: stn1

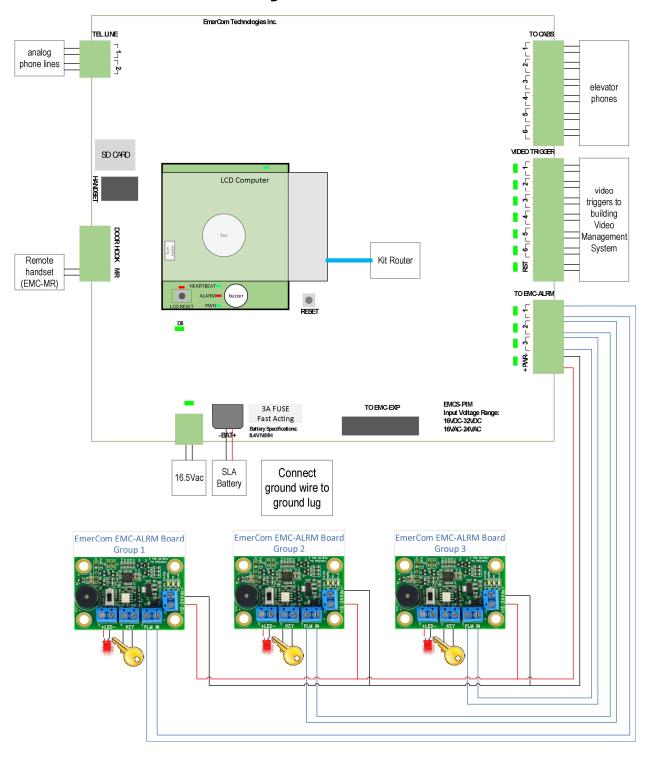
Our emails will never ask you for personal information or password. To access the camera click on the following link: <a href="https://monitor.emervideo.app">https://monitor.emervideo.app</a>







# 2. Circuit Board Layout & Connections





# 3. Description of Operation

In the event of an entrapment or other emergency, an elevator occupant may press the "phone" button on the elevator control panel, causing the elevator phone to automatically call for help. In TEL mode the Consolidator routes the call to either of two phone lines connected or to the Consolidator then a phone line in sequence in Intelli-Split mode or to the Consolidator in Lobby mode. The applicable elevator icon will turn green.

If the call is not acknowledged within a reasonable time, the phone is required to automatically hang up and dial a second phone number. If the phone line is busy, the Consolidator will notify the parties on the original call that another call is waiting.

The Video Consolidator can call into any of the elevator phones. The caller selects which cab by touching the appropriate icon which lights-up as soon as the consolidator door is opened. If an icon is illuminated green the cab phone is busy on a call which can be overridden by any of the in-building handsets.

Remote/Machine Room handsets can call into any cab, even overriding emergency calls or joining another internal call in progress.

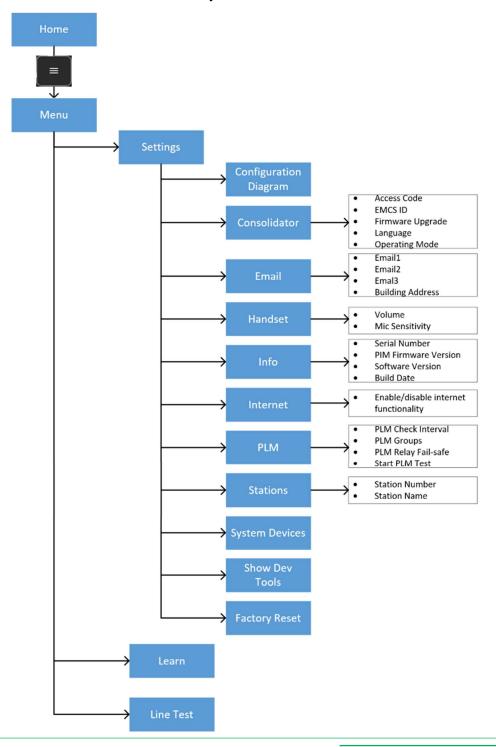
ALL CALL (system-wide paging) is available from all internal handsets as well as from off-site.

Phone Line Monitoring (PLM) verifies the operation of the external phone lines as well as the lines from each cab. Cabs are assigned to an alarm relay, with 3 group alarm relays available for every 6 cabs. Each relay signals the appropriate EMC-ALRM board.



# 4. Screen Navigation

Navigating the EMCS-V screens starts by accessing the MENU icon on the home screen. Below shows the EMCS-V screen hierarchy:





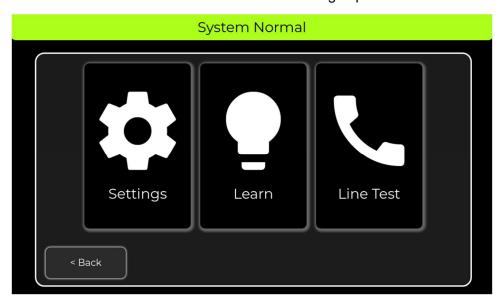
### 4.1 Home Screen

The Home Screen shows the video feed of all the configured cameras in 1 second updates. Selecting any of the induvial feeds brings up a full screen continuous view.



### 4.2 Menu Screen

Selecting the three bar MENU icon on the home screen brings up the MENU screen.





# 5. Information Bar

### 5.1 Information Bar (Alarms, Instructions, and Routing Status)

The Consolidator continuously monitors the operation of the communications system, reporting call routing status, phone line availability and any alarm conditions. These conditions can be observed on the top information bar of the EMCS-V screen or the CID display of an on-site remote handset or remotely through programming mode.

At a glance, the information bar colour informs the user the severity of the message:

- GREEN information
- ORANGE warning or emergency in progress
- Flashing WHITE incoming call
- RED alarm

The information bar tries to limit the message to the highest priority message; if multiple messages exist, the information bar informs the user to click on the bar to see all outstanding messages:



When the outer door is closed, the information bar can be view but not expanded. Authorized personal must open the outer door and click on the bar to view all the details.



### 5.1.1 Alarm Messages

Message	Type	Description
System Normal	Information	-normal operation; no alarms detected
PLM Alarm: No	Alarm	-station PLM alarm detected
TEL line		
PLM Alarm: No	Alarm	-no internet service detected
Internet		
Camera Alarm	Alarm	-camera unreachable on network
Battery Alarm	Alarm	-battery is low/faulty/absent
Phone Line	Alarm	-specified phone line unavailable
Alarm		
Main Power	Alarm	-system running on battery power; no mains
Alarm		power connected

# 6. Diagnostics

### 6.1 Learn Mode

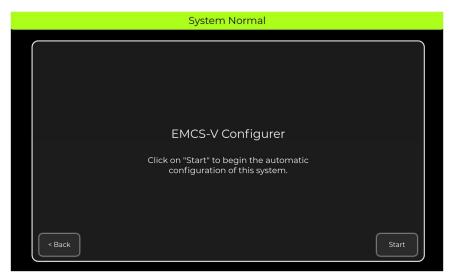
Learn mode automatically validates the wired communications system and configures the operating mode selected by the user.

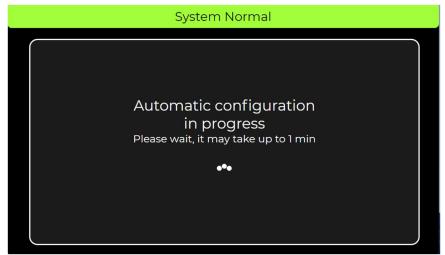
- Detects the number and position of active cabs wired to the Consolidator
- Verifies the operating mode selected (TEL, Lobby or Intelli-Split) by detecting the number of valid phone lines wired to the system
- Automatically configures EMC-60 phones "Consolidator Compatibility" mode
- In the case of any elevator phone exhibiting unusual behaviour the corresponding cab icon illuminates "RED" to flag the phone as "Failing to Connect".

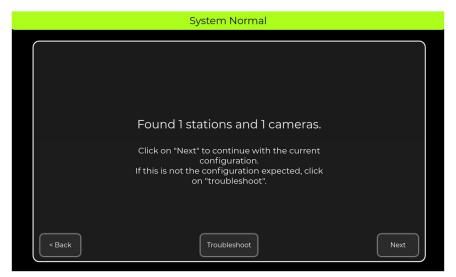
### 6.2 Learn Screens

The quickest way to configure the entire system is through the LEARN feature. The LEARN mode hunts all stations and cameras and allows the operator to configure the necessary parameters in an ordinally fashion.

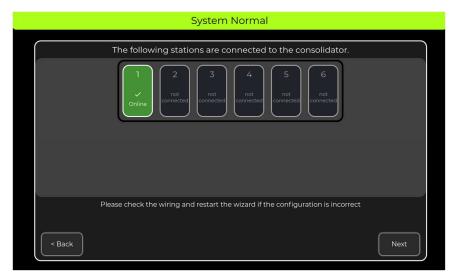


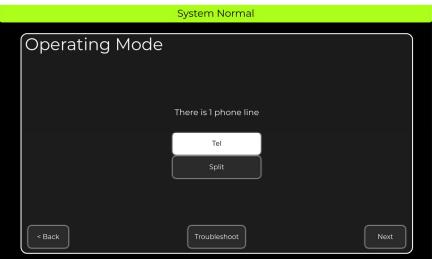






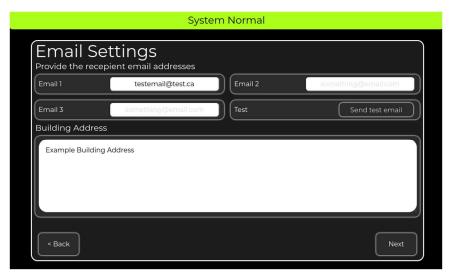


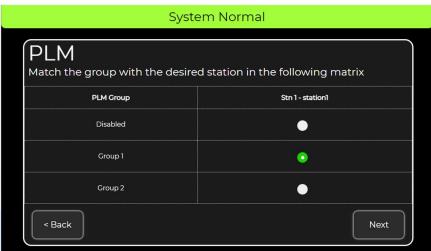


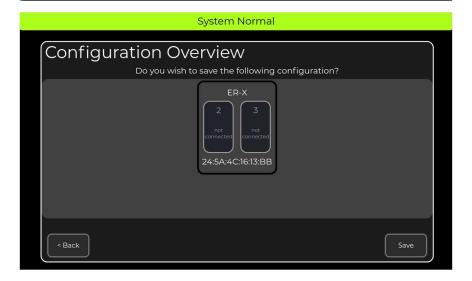












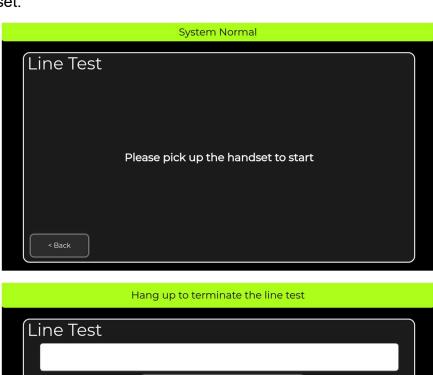


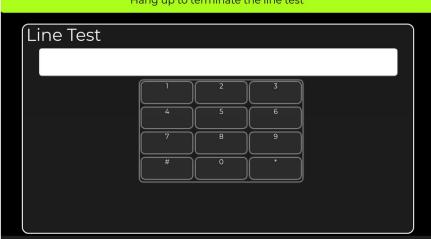
### 6.3 PLM (Phone Line Monitoring)

The Phone Line Monitoring (PLM) feature verifies the operability of the end-to-end communications link (e.g. for elevator phone connecting to a live phone line) as required by ASME A17.1/CSA B44 Code. Any fault detected generates an audible and visual alert in the elevator lobby for the assigned group. In an alarm state the communication link is re-tried every five minutes until the failed status is cleared.

### 6.4 LINE TEST (phone line)

A phone LINE TEST feature enables on-site personnel who have access to the consolidator screen to go off-hook, listen for dial tone and call any number to test the phone line operability. A similar off-site calling feature is available from any on-site remote handset.







# 7. Additional Features

### 7.1 Overriding an emergency call

The Consolidator overrides off-site calls in accordance with ASME A17.1/CSA B44 "Safety Code for Elevators and Escalators". Lift the handset and touch the station feed corresponding to the active off-site conversation (illuminated in GREEN). The handset will take over the existing conversation, connecting directly to the elevator phone after notifying all parties before overriding the off-site connection.

On-site remote phones can also override off-site conversations by following the selection prompts. If an on-site conversation is in progress, subsequent on-site handsets will join the active conversation.

### 7.2 System-wide paging (ALL CALL)

The all system page (ALL CALL) is available by dialing in from off-site or it can originate from on-site using either the handset and touchpad or by following the voice prompts using any remote/on-site phone. Once connected, the operator can broadcast to all elevator phones simultaneously. On-site initiated calls have a higher priority than those originating from off-site and override.

# Select the station you wish to call 1: Stn 1 All Call Remote



### 7.3 Internal Calling

Remote phones can call the Consolidator and vice-versa by following the extended voice selection prompts – providing a convenient feature when communicating from a machine room where cellphone service is unavailable to a "helper" in the lobby.

### 7.4 Non-emergency off-site calls

Any internal phone (the EMCS-V handset or any remote phone) can be used to call offsite in case of an emergency or for <u>Customer Care (1-844-363-7266)</u> via an available phone line. **Note:** The Consolidator considers these calls to have non-emergency priority which are automatically overridden by calls initiated by entrapment events.

### 7.5 Video Triggering

The Consolidator has one pair of potential-free, normally open contacts for each cab phone, which close during an emergency call to signal a video management system to display/record the video as required. An additional relay contact closes when there are no emergency calls in progress.

Note: Not activated during "Learn", "PLM check" or "ALL CALL".

# 8. Settings

### 8.1 Configuration Diagram

Shows network configuration map of the routers and switches, useful for troubleshooting

### 8.2 Consolidator

Key consolidator operating parameters

Access Code: 5-digit access code will be required for remote programming EMCS ID: Unique ID must be assigned to each Consolidator if more than one are connected in the system

**Firmware Upgrade**: Start sequence for updating PIM firmware; contact Customer Card for additional information

**Language**: Language for built-in language prompts **Operating Mode**: Routing mode for emergency calls

### 8.3 Email

• When the in-car help button is pressed an email will be sent to the following email addresses with the included building information.

Email1: 1st recipient's email address; cannot be blank

**Email2**: optional 2<sup>nd</sup> recipient's email address



Email3: optional 3rd recipient's email address

Building Address: Address of building and any additional information to display

in email subject line

### 8.4 Handset

• Parameters relating to the built-in handset of the consolidator.

**Volume**: sets the volume of the Consolidator handset speaker

**Mic Sensitivity**: sets the Consolidator handset microphone sensitivity.

### 8.5 Info

EMCS-V build settings

Serial Number: Serial number of EMCS-V unit as printed on board

PIM Firmware Version: Current PIM firmware version running on EMCS-V

Software Version: Current software version running on EMCS-V

Build Date: Date of when current software was compiled

### 8.6 Internet

 Describe the internet role for this system; note that internet is required for proper email operation

**Enable / disable internet functionality** : describe is system expects internet connection

### 8.7 PLM

• Phone Line Monitoring (PLM) configuration for each of the configured stations

**PLM Check Interval**: PLM check test frequency (Code requires at least once per day)

**PLM Groups**: Assignment of each station PLM output to either Group1, Group2, or disabled

PLM Relay Fail-safe : Logic of PLM relay when conditions are healthy

Fail-safe - open on alarm and on power failure

Inverted - closed on alarm (alarm will fail if wiring fails)

**Start PLM Test**: performs a PLM test to all the attached phones and flags all cab phones that fail.

### 8.8 Stations

• List of the configured cab cameras; use LEARN function to update current configuration

**Station Number**: Assigned station number (1 - 4); must match station programmed in phone

Station Name: Name of station; appears in emergency call email subject line



**Pan Arrows**: Press for fine positioning of camera view; physically move camera lens for more course adjustment

Pan Reset: Reset pan to default

Zoom In / Out : Zoom camera view closer or further away

Note: Pan and Zoom settings will be retained in non-volatile memory

### 8.9 System Devices

 List of all the network routers, switches, and cameras assigned to the EMCS-V; delete only as instructed by Emercom Support

### 8.10 Factory Reset

 Reset EMCS-V parameters to default; LEARN will automatically commence after Factory Reset

## 9. Switches and Indicators

### 9.1 Switches

Two reset switches exists to force reset operation of the two boards inside the EMCS-V:

- 1. PIM Reset (middle of board): press to reset the PIM board
- 2. LCD Reset (left of buzzer) : press 2seconds to clear communication channels, 4seconds to reset LCD computer

### 9.2 LEDs and Indicators

There are 17 PCB-mounted LEDs present on the main circuit board under the service panel. These LEDs provide essential diagnostic and status information at a glance:

- 3. Heartbeat D5 (pulsing green) (located above the large capacitors in the bottom left quadrant of the main board)
- 4. Power (input PWR present = green)
- 5. 3 x PLM (normal = green; fault = off) (located below the silkscreen label "TO EMC-ALRM")
- 6. PLM-PWR (output power present = green)
- 7. 6 x Video Triggers (idle = off; in-use = green)
- 8. 1 x Video Reset (idle = on; any cab in-use = off)
- 9. LCD Reset Status (normal = off, blink = start of boot, solid red = hard reset)
- 10. LCD Computer Heartbeat (after boot, blinks @ 1Hz)
- 11.LCD Computer Alarm (idle = off, temperature alarm = red)
- 12. LCD PWR (output power present = green)



# 10. Specifications

Elevator Wiring Requirements:	One shielded pair of communication cable, minimum 24AWG, with the shield grounded <b>at one end only</b> , preferably the controller-end of the traveling cable.
Internet connection	Minimum 1Mbps
requirements:	HTTP ports 80 and HTTPS port 443
Phone Line Requirements:	Standard analog loop-start voice grade telephone line.
Number of Phone Lines	2
Number of concurrent calls	2
Capacity (number of elevator phones)	6 (six) or 12 (twelve) with EMCS-EXP module (expandable)
Integrated Phone Line Monitoring (PLM)	up to 3 groups for 6 phones or 6 groups for 12 phones (with EMCS-EXP module)
Integrated Video triggers	Potential free contact per cab (6 or 12) Potential free contact for video reset (1)
Power Supply (supplied)	Class 2; 120V AC, 60Hz input; 16.5V AC, 40W output
Backup Power (Used if AC power is cut off)	8.4V rechargeable NiMH battery. Replace every 5 years or as required (factory supplied).
Operating Range	0 – 60°C
Ringer Equivalence (REN)	0.1B
Dimensions	EMCS-V Backbox: 14.25" (362 mm) wide x 10.50" (268 mm) high x 3.15" (80 mm) deep for surface mounting or recessing between studs
	EMCS-V Overall: 14.50" (368 mm) wide x 11.16" (283 mm) high x 3.50" (89 mm) deep



# 11. Precautions

Always follow basic safety precautions when using your telephone equipment to reduce the risk of fire, electrical shock, and injury.

- 1. Read and understand all instructions in the User Guide.
- 2. Read all warnings and follow all instructions.

CAUTION – <u>Do not replace the batteries with alkaline batteries</u>. Use only an identical rechargeable battery or a battery recommended and supplied by the manufacturer. Unplug the battery if the mains power will be disconnected and the system not used for long periods.

- 3. Do not use liquid or aerosol cleaners.
- 4. Do not use the device near water, a bathtub, wash bowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- 5. Use only the type of power source supplied by the manufacturer or specified in these instructions (must be current-limited to class 2). If you are not sure of the type of substitute power supply, consult your dealer or the manufacturer.
- 6. Never spill liquid on the equipment.
- 7. Do not disassemble this product unless qualified to do so. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electrical shock.
- 8. Do not overload outlets and extension cords if connecting the phone to AC power from an outlet. Overloading the outlets can result in fire or electric shock.
- 9. Avoid using a telephone during a local thunderstorm due to the potential risk of electrical shock from lightning.
- 10. Notify a building official if:
  - Liquid has been spilled into the telephone equipment
  - The telephone equipment has been exposed to rain or water
  - The telephone equipment exhibits a distinct change in performance.

CAUTION – Always disconnect the battery, power supply and telephone lines from the source before servicing this equipment

11. Save these instructions

Customer Care: Call 1-844-EMERCOM (1-844-363-7266) for assistance.



# 12. Warranty

### SHIPPING AND LIABILITY

Please verify that the shipment is received in good order ASAP.

EmerCom Technologies Inc warrants parts and labor on all equipment of its own manufacture for a period of 24 months from the date of shipment but cannot be held liable for any loss or damage resulting from causes beyond their reasonable control. Any abuse, vandalism, alteration or misuse of these products for purposes or in a manner other than that for which they were manufactured will void the warranty.

Please return defective products prepaid to your nearest service center after first calling 1-604-589-3899 for a Return Authorization (RMA) number. Please provide:

- Model and serial number
- Problem description
- Name of the person requesting the RMA, phone number and shipping address.

Reference the RMA number clearly on all packaging and paperwork.

Note: Statistically, more field problems are caused by wiring, connection, installation or programming issues rather than the phones themselves. Please have your field staff call EmerCom from site before concluding that an EmerCom product needs to be returned, to offer you the assistance to resolve the problem most conveniently over the phone.

All prices are F.O.B. our warehouse. Our responsibility ceases when the transportation company receives the material from us in good condition. Please check the shipment for completeness and for transportation damage upon receipt. If damaged a claim must be made with the transportation company immediately. We will provide the buyer all assistance possible to adjust such claims.

EmerCom Technologies Inc shall not be liable for any loss or damage resulting from causes beyond its reasonable control and in no event whatsoever shall we be liable for consequential damages resulting in personal injuries, property damage or economic loss to any party.



# 13. FCC Notice and Customer Information

This device complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the mounting plate of the phone is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this information must be provided to the telephone service provider.

### **FCC REQUIREMENTS**

This equipment complies with TIA-968-A,-1~5 of FCC Rules. On the base unit of this equipment is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. IF REQUESTED, THIS INFORMATION MUST BE GIVEN TO THE TELEPHONE COMPANY.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

If your equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC if you believe it is necessary. Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact the following address and phone number for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

COMPANY: EmerCom Technologies Inc.

ADDRESS: 121 – 3989 Henning Drive, Burnaby, BC, V5C 6P8

TEL NO.: 1-844-EMERCOM (1-844-363-7266)

This phone equipment contains no customer or user serviceable parts. Attempting to repair this equipment yourself will void the user's warranty. All repairs should be



referred to the Customer Care Center at 1-844-EMERCOM (1-844-363-7266) to determine if the phone equipment needs to be returned.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs. Contact your state public utilities commission, public service commission or corporation commission for information.

This equipment does not provide for data operation.

JACK (USOC): hardwired

RINGER EQUIVALENCE = 0.1 Class B

Facility Interface Code (FIC) = 02LS2

Service Order Code (SOC) = 9.0y

Caution - This equipment cannot report an alarm when other equipment (telephone, answering system, fax, etc.) connected to the same phone line is in use. If the phone line is shared with other users, ensure the priority of the emergency call is maintained. If in doubt, please contact us at 1-844-EMERCOM (1-844-363-7266).

Caution - To ensure proper operation, this equipment must be installed according to the enclosed installation instructions. To verify that the equipment is operating properly and can successfully report an alarm, this equipment must be tested immediately after installation, and periodically thereafter, according to the enclosed test instructions.

WHEN PROGRAMMING EMERGENCY NUMBERS AND/OR MAKING TEST CALLS TO EMERGENCY NUMBERS:

- 1) Remain on the line and briefly explain to the dispatcher the reason for the call.
- 2) Perform such activities in the off-peak hours.



# 14. Industry Canada Certification

### NOTICE:

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

Le présent matériel est conforme aux spécifications techniques d'Industrie Canada applicables au matériel terminal. Cette conformité est confirmée par le numéro d'enregistrement. Le sigle IC, placé devant le numéro d'enregistrement, signifie que l'enregistrement s'est effectué conformément à une déclaration de conformité et indique que les spécifications techniques d'Industrie Canada ont été respectées. Il n'implique pas qu'Industrie Canada a approuvé le matériel.

### NOTICE:

This product meets the applicable Industry Canada technical specifications.

Le présent matériel est conforme aux specifications techniques applicables d'Industrie Canada.

The Ringer Equivalence Number (REN) is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices not exceed five.

L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonniere de tous les dispositifs n'excéde pas cinq.