



EMC-60 USER GUIDE

EC Emergency Hands-free Phone



Quick start guide

□ 1

Connect wiring:

- Phone line (TEL) - preferably STP
- Power (PWR)
- Phone push button (CALL)
- LED
- PLM (Phone Line Monitoring)

□ 2

With power & battery connected, the green 'PWR' LED should be on and the red 'ALARM' LED should be off. Wake up the keypad by touching **WAKE**. The WAKE LED will turn on.

Select **PROG** for program mode. The PROG LED will turn on with the prompt "Program".

□ 3

Enter the Primary Phone Number:

Touch **ENTER**. Key-in the phone number after the prompt "Primary Phone Number", then touch **ENTER**.

□ 4

Enter the Secondary Phone Number:

Touch **2** **ENTER**. Key-in the phone number after the prompt "Secondary Phone Number", then touch **ENTER**.

□ 5

Record the Location Announcement:

Touch **4** **ENTER**. After "Location Announcement .. beep", record the location, cab number and that help is required, then touch **ENTER**.

Verify with **4** **REPLAY**.

□ 6

Enter the Station Number: (low-rise only)

Touch **5** **ENTER**. Key-in the Station # after the prompt "Station Number". Requires station # 1 to provide the prompts.

Touch **EXIT**.

□ 7

Check Alarm Status:

Touch **WAKE** then **ALARM STATUS**. If the phone voice response is "Normal" or "Charging battery" the phone is ready for testing.

□ 8

Line test:

Touch **LINE TEST**. The LINE TEST LED will turn on and the phone go off-hook. Wait for dial tone then use the keypad to dial a test number (e.g. a mobile phone). The phone should hang-up when the called party disconnects or touch **EXIT**.

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Latest changes:

Added PLM failsafe inversion option for competitor compatibility (NO or NC) (Command #26)

Added recommendation for STP (Shielded Twisted Pair) especially in traveling cable.

Added automatic Location Announcement broadcast to operator when answering call and option to play Location Announcement on phone speaker when playing to operator (#24).

Improved the PLM test feature to work with the EMCS Consolidator PLM test.

Added call-in-progress video camera trigger for IBC or 2019 Code applications (#96)

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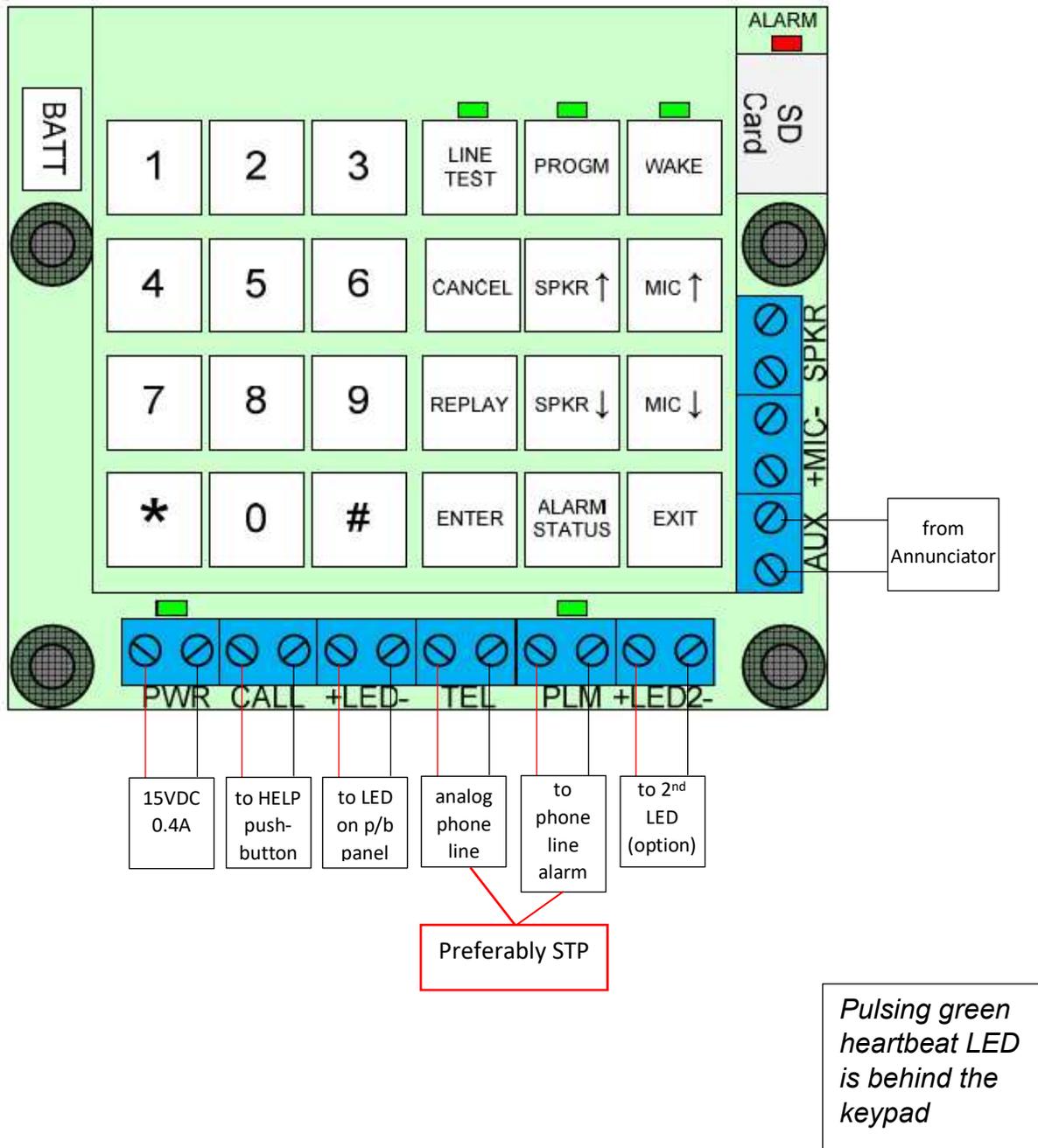
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1 About the EC Emergency Hands-free Phone

1.1 Key Features:

- Auto redial if not answered by operator or line busy
- Voice notifications if line busy or fault detected
- Three emergency call numbers
- Remote call-in, remote programming and remote alarm simulation
- Advanced diagnostics
 - Phone line test simulating a conventional speakerphone
 - Built-in Phone Line Monitoring (PLM) as required by ASME A17.1/CSA B44 Safety Code for Elevators.
 - PLM test
 - Phone operation verification call (“Remote Call”)
 - Test simulation of an “emergency” call (password protected)
 - Seven PCB mounted status LEDs provide the essential information at a glance.
 - Elevator door monitor (special order)
 - Notification of false entrapment alarm (special order)
- Ease of setup and operation
 - Extended touch keypad
 - Seven indication LEDs
 - Voice prompts in multiple languages
 - Setting for low-power, quiet phone lines
- Small PCB footprint (speaker can be mounted remotely)
- New digital technology enables feature flexibility with optional customization
- Excellent sound quality
- Ability to program many more features making it significantly more flexible than the analog models and the footprint of the circuit boards is miniature.
- Self-diagnostics continuously monitors its own operation and its environment.
- A wide range of power supply voltages is available and an auxiliary connection enables a voice/tone annunciator to use the phone speaker.
- Code requires the phone to be able to call into two separate locations and a third phone number can be programmed if required.
- The menus and prompts are available in multiple languages (French/English/Spanish) and when making an emergency call the phone can automatically “handshake” using SoundNet.
- Additional options of a second call button with 2nd button phone number or a 2nd LED are also available.

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 causing the EMC-60 to automatically call the primary phone number. The “PHONE” LED will illuminate immediately and begin flashing as soon as two-way voice communication with an authorized person is established.

If the call is not acknowledged within a reasonable time, the phone will automatically hang up and dial the second phone number, then the third number. If the phone line is busy, the phone will notify the caller that the system is in use and will redial automatically every 30 seconds.

The EMC-60 will automatically answer incoming calls, even if connected in parallel with other EC-Phones, prompting the caller to select which of the phones to begin two-way communication.

The phone may be easily programmed from the keypad or remotely as described in the following sections.

4 Diagnostics

4.1 Self-diagnostics

The EC-Phone continuously monitors its own operation and its environment and will report on its alarm status through the programming mode (locally or remotely) or if the <ALARM STATUS> button is pressed. Conditions reported are

- Normal
- Line in use
- No main power
- Phone line fault
- No emergency response (call centre no answer)
- No battery
- Low battery
- Charging battery
- Dead battery.

Advance notice of a non-functioning phone gives building managers and owners the opportunity to repair the fault, increasing safety and reducing liability.

Nine LEDs provide the essential information at a glance:

1. Alarm (off; flashing red = no power; solid red = other alarms)
2. Heartbeat behind the keypad (pulsing green)
3. Power (green)
4. PLM (green)
5. Keypad awake (green)
6. Program mode (green)
7. Line Test call in progress (green)
8. Emergency call status on car panel (solid red = connecting; flashing red = 2-way voice)
9. Optional 2nd LED on car panel (available for customized indication)

4.2 PLM (Phone Line Monitoring)

The Phone Line Monitoring (PLM) feature monitors the phone line as required by ASME A17.1/CSA B44 Code to generate an audible & visual alert in the elevator lobby. If a Consolidator or Rescue Station is installed the EC-Phone checks the line from the cab to the Consolidator. A pair of contacts is built-in, which will open on alarm (fail-safe), although this can be reversed to accommodate competitor alarm boards (Command #26).

A PLM test feature is available to simulate an alarm for the number of seconds entered, triggering the relay and disabling auto-answer for the EMCS PLM test, after which it returns to normal.

4.3 Phone Line test

A phone line test feature enables on-site personnel who have access to the phone keypad to go off hook, listen for dial tone, call any number and engage the speaker and microphone for volume adjustment, converting the EC emergency phone into a regular hands-free telephone.

4.4 False Alarm monitoring and reporting (option – special order)

In addition the EC-Phone can monitor whether the elevator door curtain has detected motion since the phone button was last pressed (door contact required), informing the emergency response phone operator that there is no longer an entrapment and assistance is probably no longer required.

4.5 Remote simulation of emergency call

The phone can be programmed remotely to the extent of initiating a test simulation of an “emergency” call (password protected).

4.6 Remote Call to verify phone operation on a regular basis:

The remote call feature is a means for building owners to perform daily end-to-end diagnostic calls. The phone can automatically call a programmed phone number to verify phone operation on a regular basis. During these calls the digital emergency phone checks for phone line issues then updates and reports the alarm status.

4.7 Setting for quiet (low-power) or noisy (static) phone lines:

The voice detection threshold can be adjusted to cater for the selection of “unregulated” phone lines becoming available (e.g. PSTN phones connected to optical fibre/VoIP systems).

5 Programming

5.1 Summary Table

The following section provides more detail information on each command

Cmd	Command	Range	Default
1	Primary Phone Number	0 - 23 digits; values 1,2,3,4,5,6,7,8,9,0,#(pause) Blank = ringdown/consolidator in Lobby mode	Blank
2	Secondary Phone Number	0 - 23 digits; values 1,2,3,4,5,6,7,8,9,0,#(pause) Blank = ignore	Blank
3	Third Phone Number	0 - 23 digits; values 1,2,3,4,5,6,7,8,9,0,#(pause) Blank = ignore	Blank
4	Location Announcement	3 seconds minimum; 20 seconds maximum (message "blank" if < 3 s)	Blank
5	Station #	1 – 99	1
6	Serial #	Replay only	Pre-set
7	Firmware	Replay version only	Pre-set
8	Alarm Status Playback	Replay only, one or more of the following: "Normal" "Charging Battery" "Low Battery" "Dead Battery" "No Battery" "No Main Power" "Phone Line Fault" "Line in use" "Emergency call not connect – simulate emergency call to reset"	N/A
9	Access Code	5 digits; values 1,2,3,4,5,6,7,8,9,0	12345
10	Language	0 = English 1 = French 4 = English/Spanish	0
11	Primary Ring Transfer Count	3 – 10 rings	5
12	Secondary Ring Transfer	3 – 10 rings	5
13	Third Ring Transfer Count	3 – 10 rings	5

Cmd	Command	Range	Default
14	Auto Answer	0 = OFF 1 = ON with cab ring tone 2 = ON with no Cab ring tone	1
15	Talk Time	3 – 10 minutes	5
16	Operator Wait Time	20 – 200 seconds	45
17	Operator Prompt	0 = OFF 1 = ON	1
18	Button 2	Special order only	
19	Remote Call Number	0 - 23 digits; values 1,2,3,4,5,6,7,8,9,0,#(pause) Blank = no remote call	Blank
20	Remote Call Dialing Frequency	0 = OFF 1 = Once (10sec delay after exiting PROG) 2 = Daily, with descriptive prompt	0
23	SoundNet Code	Blank or 11 digits; values 1,2,3,4,5,6,7,8,9,0	Blank
24	Play Location in Cab	0 = OFF – Location Announcement muted in cab 1 = ON – play Location Announcement on speaker	0
25	Start PLM Test	0 – 300 seconds (resets to 0 after test)	N/A
26	PLM Relay Fail-safe	0 = Fail-safe - open on alarm and on power failure 1 = Inverted – closed on alarm (no alarm if wire fault)	0
30	Volume Setting	0 = Soft 9 = Loud	5
31	Microphone Setting	0 = Least sensitive 9 = Most sensitive	5
32	Push & Hold	0 = OFF – instant single press 1 = ON – hold call button for >= 1sec or 3 times in a 5sec window	0
33	Service Notification	0 = OFF 1 = ON - played every 5min if call not answered	1
34	Voice Threshold	0 = Soft voice-activated speaker 9 = High threshold	3
35	Line Type	0 = “Quiet” phone line 1 = “Regular” phone line 2 = “Noisy” phone line (static)	1
36	Sounder	0 = OFF 1 = Alert Sounder plays as soon as button is pressed (suggest 32=1)	0
37	Protected WAKE	0 = OFF 1 = WAKE requires “Access Code” to enable keypad	0

Cmd	Command	Range	Default
40	Consolidator Compatibility	0 = OFF 1 = ON – EMCS Tel or Lobby 2 = ON – EMCS Intelli-split-ring (call off-site if lobby busy) 3 = ON – LS-250 (including with LA-LS) (see pg 21) 4 = ON – EMS5 (contact support for assistance)	0
41	Simulate Emergency call	1 = CONFIRM (10 sec delay after phone returns on-hook)	N/A
42	Settings Reset	1 = CONFIRM	N/A
43	Factory Reset	1 = CONFIRM	N/A
96	2 nd LED	0 = OFF 1 = ON 2 = Call in progress trigger 3 = LED2 mimics LED1	0

5.2 Programming Details

Touch <WAKE> to wake-up the keypad and illuminate the “WAKE” LED or call into the phone from a remote location (see next section for remote programming). Touch <PROG> to enter program mode and turn-on the “PROG” LED. The operator prompt “*program*” will be heard.

Touch the key(s) to select the command number required, touch <ENTER> and listen for the prompt to confirm the command. Input the parameters and touch <ENTER>. The prompt “*Input accepted*” will be heard if the parameters qualify or “*Incorrect entry, please re-enter*” if not. To check any entry, touch the command number followed by <REPLAY>. Touch <CANCEL> to exit a command without changing the parameter.

Touch <EXIT> to leave programming mode or a timeout will occur if no entry.

REPLAY

To check the current value of any memory location, enter the command number followed by the <REPLAY> key. For example, to hear what is stored in the primary memory location, press the <1> key followed by <REPLAY>. One will then hear the message “*Replay...primary phone number*” followed by whatever digits have been entered into that memory location. The phone will then return to programming mode.

5.2.1 Command # 1: PRIMARY PHONE NUMBER:

If digits are stored in the primary phone number register the phone dials this number when the PHONE button is pressed. If not connected to a live person, this number will be called 3 times, after which the phone will hang up and the button will have to be pressed again to resume the cycle. When the phone is connected to a consolidator in “Lobby Mode”, the primary phone number should be blank.

To enter the primary phone number, touch <1> <ENTER>. The voice prompt “**Primary phone number**” will be heard, after which the required phone number can be keyed-in, then touch <ENTER>

Note: If the EC-Phone is connected to an auto-dialer or to an off-hook service provided by the telephone company or to a ringdown device (including a Consolidator in Lobby mode or Rescue Station in Lobby or Split mode) the primary calling number should be left blank or contain only a pause. However, an off-hook service or a separate auto dialer is not recommended as it complicates maintenance and troubleshooting and may prevent emergency personnel calling back to the passenger.

Note: To access an outside line when connected to an analog extension of a PBX (switchboard) an initial digit (commonly an 8 or a 9) followed by a pause is required (program an 8# or 9# followed by the telephone number). Each # creates a 2 second pause and can be entered multiple times to match the delay for an external dial tone.

5.2.2 Command # 2: SECONDARY PHONE NUMBER:

If digits are stored in the secondary phone number register, the phone dials this number after the primary phone number did not connect to a live person. If not answered, the primary and secondary numbers will be called sequentially for three cycles. After 3 unsuccessful cycles, the unit will shut off and the button has to be pressed again to resume the cycle.

Voice Prompt: “**Secondary phone number**”

5.2.3 Command # 3: THIRD PHONE NUMBER

If digits are stored in the third phone number register, the phone dials this number after the primary and secondary phone numbers did not connect to a live person. If not answered, the three numbers will be called sequentially for three cycles. Press the PHONE button to start the cycle again.

Voice Prompt: “**Third phone number**”

5.2.4 Command # 4: LOCATION ANNOUNCEMENT

The location announcement is a voice recording of the building location (name & address), elevator number and that help is required (maximum 20 seconds), which may be played by the emergency response center operator by selecting <2> when answering, or at any time during the call.

To record the announcement, touch <4> <ENTER>. The prompt “*Location announcement – wait for beep*” and a beep will be heard, after which the announcement can be recorded for up to 20 seconds (minimum 3 seconds). Touch <ENTER> when complete. A quiet background is preferred so the message may be recorded remotely from a quiet location.

Voice Prompt: “***Location announcement – wait for beep – beep***”

5.2.5 Command # 5: STATION NUMBER

A unique ID number must be assigned to each EC-Phone in a system without a Consolidator or Rescue Station in order to select the required phone when calling-in from an off-site location and connect to the unit. The station number is ignored if the phone is attached to a Consolidator or Rescue Station.

If Auto Answer (Command # 14) is set to “1”, the passenger will see the call progress LED illuminate on an incoming call. After the caller selects the desired station, two way communications will be established. The caller will hear the word “*Connected*”, the call progress LED will begin flashing and the passenger will hear the phone ring. If Auto Answer is set to “2”, the LED will not turn on and the passenger will not hear the phone ring.

Note: for calling into a group of phones connected to a single phone line, one phone needs to be set to Station #1 for playback of the operator voice prompt.

Voice Prompt: “***Station number***”

5.2.6 Command # 6: SERIAL NUMBER PLAYBACK

Factory set. Use playback function to report the serial number (as on the sticker attached to the faceplate).

Voice Prompt: “***Serial number***”

5.2.7 Command # 7: FIRMWARE VERSION PLAYBACK

Replays the EC-Phone’s major and minor firmware versions.

Voice Prompt: “***Firmware version***”

5.2.8 Command # 8: ALARM STATUS PLAYBACK

The <ALARM STATUS> touch key duplicates the “Alarm Status” command.

Voice Prompt: “**Alarm status**”

Note: The battery is a rechargeable NiMH battery and should have a full charge within 1 day of the EC-Phone being connected to AC power. Replace the battery if the alarm status indicates a dead battery, although, even if the battery indicates a full charge, it should be replaced every 5 years.

5.2.9 Command # 9: ACCESS CODE

Entry of a 5 digit access code will be required for remote programming. Changing the access code to a unique number will prevent others calling in and modifying the settings. Default 12345.

Caution: Programming by calling in remotely will not be possible without the access code.

Voice Prompt: “**Access code**”

5.2.10 Command # 10: LANGUAGE

The EC-Phone has built-in voice prompts to assist both the passengers and emergency centre operator when an emergency call is in progress and to simplify programming. If the EC-Phone is set to either English (0) or French (1), voice prompts heard by the passenger, monitoring station and programmer will be played in the language chosen. The programmer can choose their language preference. With the English / Spanish setting (4), all operating status information heard by passengers will be played in English followed by Spanish, while the response for programmers and monitoring personnel are in English.

Voice Prompt: “**Language**”

5.2.11 Command # 11: PRIMARY RING TRANSFER COUNT

After dialing the “Primary Phone Number”, the “Primary Ring Transfer Count” is the number of rings the EC-Phone counts before concluding that there has been ‘no answer’. After the last ring, the phone hangs up and either calls the “Secondary Phone Number” if it has been programmed or calls the “Primary Phone Number” again until the end of 3 cycles after which it will return to idle mode and the PHONE button will have to be pressed again to resume the cycle.

Voice Prompt: “**Primary ring transfer count**”

5.2.12 Command # 12: SECONDARY RING TRANSFER COUNT

As for Command #11, this is the number of rings counted after dialing the “Secondary Phone Number” to determine ‘no answer’, after which the phone hangs up and either calls the “Third Phone Number” if it has been programmed or calls the “Primary Phone Number” again until the end of 3 cycles after which it will return to idle mode and the PHONE button will have to be pressed again to resume the cycle.

Voice Prompt: “**Secondary ring transfer count**”

5.2.13 Command # 13: THIRD RING TRANSFER COUNT

As for Commands #11 & #12, this is the number of rings counted after dialing the “Third Phone Number” to determine ‘no answer’, after which the phone hangs-up and calls the “Primary Phone Number” again until the end of 3 cycles after which it will return to idle mode and the PHONE button will have to be pressed again to resume the cycle.

Voice Prompt: “**Third ring transfer count**”

5.2.14 Command # 14: AUTO ANSWER

The auto answer setting determines whether or not the EC-Phone accepts calls, and if so, whether the phone will ring or remain silent. See Command #5 for more detail.

Voice Prompt: “**Auto answer**”

5.2.15 Command # 15: TALK TIME

Talk time is the length of time that the EC-Phone will stay on when a call is made, beginning as soon as 2-way conversation begins. Before the end of the programmed talk time, a voice prompt will instruct the operator to press <1> to extend the conversation, otherwise the phone will hang-up after the programmed time.

Note: The operator may press 1 at any time during the conversation to extend the time then either hang-up or end the conversation by pressing <*><#>.

Voice Prompt: “**Talk time**”

5.2.16 Command # 16: OPERATOR WAIT TIME

This is the length of time the EC-Phone will wait for acknowledgement after the call is answered before hanging-up and dialing the next number in the call sequence. The call has to be acknowledged by the operator by pressing <1> to speak to the caller. Pressing <2> for the location announcement does not qualify.

Note: This feature is intended to determine that the emergency call has connected to emergency personnel and not an automated answering device but can be disabled if “Operator Prompt” (Command # 17) is OFF (see below).

Voice Prompt: “**Operator wait time**”

5.2.17 Command # 17: OPERATOR PROMPT

The ‘Operator Prompt’ is played when the call is answered to guide the emergency response operator on how to play the location announcement and establish 2-way conversation as in the table below. This parameter also determines when the alert LED starts flashing.

Operator Prompt	Location Announcement	Message Played	When Alert LED Starts Flashing
0 (Off)	Blank or recorded	-	Monitoring station or consolidator goes off-hook
1 (On)	blank	<i>“Incoming emergency call. At the tone, push 1 to speak to caller”</i>	After operator presses <1>
1 (On)	recorded	<i>“Incoming emergency call. At the tone, push 1 to speak to caller or 2 to hear the location”</i>	After operator presses <1>

When “ON”, the operator prompt will play as soon as a voice is heard. When “OFF”, the EC-Phone will be in two-way communication mode as soon as the call is answered.

Note: If a “location announcement” has been recorded, the operator can press <2> at any time to replay the recording.

Caution: Without the “Operator Prompt” the operator will need other information for notification that the call may be an emergency and will have to rely on Caller ID to identify the location of the emergency, including which elevator.

Voice Prompt: “**Operator prompt**”

5.2.18 Command # 18: BUTTON 2 PHONE NUMBER

(Optional – special order). A second, alternate, custom “PHONE” button may be installed to call the “Button2 Phone Number”.

Voice Prompt: “**Button 2**”

5.2.19 Command # 19: REMOTE CALL PHONE NUMBER

The EC-Phone will call the ‘Remote Phone Number’ on a regular basis to verify the emergency phone operation end-to-end as described in Command # 20 below.

Voice Prompt: “**Remote phone number**”

5.2.20 Command # 20: REMOTE CALL DIALING FREQUENCY

The 'Remote Dialing Frequency' controls the remote call feature as follows:

When *Remote Dialing Frequency* = 1, the EC-Phone dials the remote phone number **once** and, upon detecting voice, plays the prompt "This is a diagnostic call to confirm telephone operation for "*Location Announcement*" ", after which the phone announces the alarm status and hangs-up. The phone hangs up if not answered after 5 rings.

When *Remote Dialing Frequency* = 2 (daily with descriptive prompt), the EC-Phone dials the remote phone number, and, upon detecting voice, plays the prompt "This is a diagnostic call to confirm telephone operation for "*Location Announcement*" ", after which the phone announces the alarm status and hangs-up.

Voice Prompt: "***Remote dialing frequency***"

5.2.21 Command # 21: FUTURE

5.2.22 Command # 22: FUTURE

5.2.23 Command # 23: SOUNDNET CODE

The "SoundNet Code" is an eleven-digit numeric code describing the elevator number, branch number, service type and the service contract number. The EC-Phone replays the DTMF 'SoundNet Code' on detecting "# 4" and enters 2-way conversation mode. The EC-Phone ignores the "#4" digits if "SoundNet Code" is blank.

Voice Prompt: "***SoundNet code***"

5.2.24 Command # 24: PLAY LOCATION ANNOUNCEMENT IN CAB

The "Location Announcement" can be set to play through the phone speaker whenever playing to the operator.

Voice Prompt: "***Play prompt in cab***"

5.2.25 Command # 25: PHONE LINE MONITORING TEST

Enter a value up to 300 to simulate the PLM alarm, de-energizing the relay and disabling auto-answer for the number of seconds entered to activate the phone alarm and for the EMCS PLM test. After the time expires, the 'PLM Test' value resets to 0.

Voice Prompt: "***PLM test***"

5.2.26 Command # 26: PHONE LINE MONITORING RELAY CONDITION

The PLM relay will be closed when conditions are healthy by default (the fail-safe condition). In order to be compatible with competitor phones in the same group with opposite logic the relay condition can be inverted to be open when healthy.

The green PLM LED will be green when the relay is closed.

0 = Fail-safe - open on alarm and on power failure;
1 = Inverted – closed on alarm (alarm will fail if wiring fails)

Voice Prompt: “**PLM relay failsafe**”

5.2.27 Command # 30: VOLUME

The ‘Volume Setting’ command sets the speaker volume level.

0 = Very quiet, 9 = Very loud

Voice Prompt: “**Speaker volume**”

5.2.28 Command # 31: MICROPHONE SENSITIVITY SETTING

This sets the microphone sensitivity. 0 = Least sensitive, 9 = Most sensitive.

Voice Prompt: “**Mic sensitivity**”

5.2.29 Command # 32: PUSH & HOLD

This sets how long the button has to be pressed to trigger an emergency call.

0 = Instant (single press), 1 = Push and Hold enabled; hold call button for 1 second or more or press 3 times in the space of 5 seconds.

Voice Prompt: “**Push and Hold**”

5.2.30 Command # 33: SERVICE PROMPT

If *Service Prompt* = 1 and the last emergency call was not answered, the service prompt is played on the speaker at the end of the call and every 5 minutes thereafter. The service prompt stops playing after a successful call or when the *Service Prompt* = 0.

Voice Prompt: “**Service Prompt**”

5.2.31 Command # 34: VOICE DETECTION THRESHOLD

If the voice in the cab is too quiet for the operator, increase the *Microphone Sensitivity* (#31) as required. If “chopping” occurs, increase the *Threshold* (default = 3).

Voice Prompt: “**beep**”

5.2.32 Command # 35: PHONE LINE TYPE

Set *Phone Line Type* to 0 if phone line is soft/quiet or to 2 if noise (static, interference, buzz or hum) is present.

Voice Prompt: “**beep**”

Sample settings for different line types

Phone line characteristics	Speaker #30	Microphone #31	Threshold #34	Line type #35
Quiet (magicJack)	6	5	0	0
Standard	5	5	3	1
Intermittent noise or interference	5	5	5	2
Call from machine room with loud fan	5	7	7	2

5.2.33 Command # 36: Alert Sounder

This activates an alert sounder which plays the moment the phone button is pressed to reduce prank calls (suggest 32=1).

Voice Prompt: “**beep**”

5.2.34 Command # 37: PROTECTED WAKE

If *Protected WAKE* is enabled, the keypad requires “*Access Code*” (Command # 9) to activate the keypad after touching <WAKE>.

Touch <WAKE>; the LED will flash. Input the “*Access Code*” (the buttons are silent); the LED will turn solid and beep.

If “*Access Code*” is not known, please call EmerCom Support at 1-844-EmerCom (1-844-363-7266) with the phone number for remote access.

Voice Prompt: “**beep**”

5.2.35 Command # 40: CONSOLIDATOR COMPATIBILITY

If *Consolidator Compatibility* is activated, the EC-Phone supports the connection to a consolidator or rescue station

Sets to 1 or 2 automatically if an EMCS Consolidator calls into the phone (or 3 for an LS-250 Rescue Station). Manually set to 4 for compatibility with EMS5 Call Director. See programming table.

Voice Prompt: “**Consolidator compatibility**”

Note: When an LS-250 calls into an EMC-60 from the Lobby Station handset or a Remote Phone on site, the phone automatically sets #40=3 for a *quiet line* and boosts the speaker volume because the LS-250 attenuates the external voice.

Initial EMC-60 auto-settings when an LS-250 calls into the EMC-60 from on-site (or #40 is initially changed to 3 manually):

Speaker Volume	Microphone Sensitivity	Threshold	Line Type	Consolidator Mode
# 30	# 31	# 34	# 35	# 40
5 (with boost)	5	0	0	3

But, if connected to an LS-250 with a hum or buzz on the line, override these initial settings by:

- increasing #35 to 2 and
- increasing #34 in steps until the operator can hear the cab, up to the maximum of 9.

The buzz may indicate that the LS-250 battery and power supply are due for replacement as the power supply develops a hum or buzz (to verify a noisy PSU the buzz should disappear when running on battery without mains). Another common cause of “noise” on the line is a shielded phone line with the shield grounded at *both* ends.

5.2.36 Command # 41: SIMULATE EMERGENCY CALL

This command provides a remote diagnostic tool to replicate a passenger pressing the “PHONE” button locally. Enter <1> to confirm. The remote call will terminate and the simulated emergency call will begin.

Voice Prompt: “**Simulate emergency call**”

5.2.37 Command # 42: SETTINGS RESET

This command sets all the parameters to factory default EXCEPT for the following:

‘Primary Phone Number’	‘Remote Call’
‘Secondary Phone Number’	‘Maintenance Call’
‘Third Phone Number’	‘Serial Number’
‘Location Announcement’	‘Language’
‘SoundNet Code’	

Enter <1> to confirm

Voice Prompt: “**Settings reset**”

5.2.38 Command # 43: FACTORY PARAMETERS RESET

All parameters are reset to factory default, including clearing the “Location Announcement”. Enter <1> to confirm.

Voice Prompt: “**Factory parameters reset**”

5.2.39 Command # 96: SECOND LED OUTPUT FUNCTION

LED2 outputs 5 -10 mA when active so requires a relay board for mode #2.

0 = OFF 1 = ON when call connected
 2 = Call in progress trigger for low-rise Video Management 3 = LED2 mimics LED1

Voice Prompt: “**Beep**”

5.3 Remote Programming

Calling into EC-Phones

For low-rise applications (without a consolidator), each elevator phone must be programmed with its own unique station number (Command #5).

If Auto Answer is set to “1” in all EC-Phones connected to the phone line (Command #14), all the phones will answer incoming calls after the first ring. Station #1 will play a voice prompt, directing the caller to enter the desired station number followed by the <*> key. Pressing <1><*> will connect to the EC-Phone with Station # = 1 and all phones with Station # ≠ 1 will hang-up. Press <2><*> to connect to the phone with Station # = 2, etc. Two way communications is not established until the Station Number is selected.

If a Consolidator or Rescue Station is in circuit, the Station Number is determined by the Consolidator or Rescue Station and the Station Number programmed into the phone has no effect.

To program remotely:

1. Call the telephone line to which the required EC-Phone is connected. Follow the voice prompt to select the required phone.
2. Enter 99* to enter programming mode. The phone will request the “access code” (Factory default is 12345) to which the phone will respond with “program” followed by a confirmation beep.

The same functions are available in remote programming as in programming locally on the EC-Phone keypad with the following codes for keypad functions:

Keypad	Equivalent Remote Sequence
PROGRAM	99* + “Access Code”
CANCEL	*1
ENTER	**
REPLAY	#
EXIT	*9

3. If the access code is incorrect, the prompt “incorrect entry, please re-enter” will play.
4. To remotely program another cab, hang up and call again, selecting the new cab number.

6 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 EMC-60 User Guide.
2. Read all warnings and follow all instructions.



CAUTION – Do not replace the batteries with alkaline batteries. 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 phone not in use for long periods.

3. Do not use liquid or aerosol cleaners.
4. Do not use the telephone near water, a bathtub, wash bowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
5. Use only the power source supplied by the manufacturer or specified in these instructions. If you are not sure of the type of substitute power supply, consult your dealer or the manufacturer.
6. Never spill liquid on the telephone or push objects of any kind through openings. Liquid or objects may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock.
7. Do not disassemble this product. 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. Do not use a telephone to report a gas leak in the vicinity of the leak.
11. Notify a building official if:
 - Liquid has been spilled into the telephone
 - The telephone has been exposed to rain or water
 - The telephone exhibits distinct change in performance.



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

12. Save these instructions

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

7 Mechanical

7.1 Dimensions

Dimensions

4.5" (114 mm) wide x 5.25" (133 mm) high x 1.75" (44 mm) deep with mounting holes to match the common stud patterns. LED hole ¼". N.B. Ensure microphone holes are aligned using the "programming reference" template.

7.2 Keypad

Key	Description
< * > (star)	special character used in program command sequences
< # > (pause)	each # represents a 2 second delay when used in phone numbers
<WAKE>	wake up keypad from sleep mode (LED turns on)
<PROG>	when unit is on-hook and keypad awake, initiates programming mode (LED turns on)
<LINE TEST>	when keypad awake, enables the phone to be used as a standard speakerphone and call out (LED turns on)
<CANCEL>	clears/cancels current entry AND returns to program menu
<REPLAY>	plays back entry if valid command # entered
<ENTER>	accepts current command or entry or ends the recording
<SPKR ↑ >	increments speaker volume by one (up to 9)
<SPKR ↓ >	decrements speaker volume by one (down to 1)
<MIC ↑ >	increments microphone sensitivity by one (up to 9)
<MIC ↓ >	decrements microphone sensitivity by one (down to 1)
<ALARM STATUS>	plays "NORMAL" or lists active alarms
<EXIT>	exits out of programming mode or ends a call

The key value/function prompt is played on the loudspeaker when a key is pressed (≠Fn37).

7.3 LEDs

There are nine LEDs present.

One panel-mount LED indicates the emergency call progress.

One panel-mount optional 2nd LED available.

Seven PCB-mounted LEDs provide the essential diagnostic and status information at a glance:

1. Heartbeat (pulsing green) (located behind the keypad)
2. Power (green)
3. PLM (normal = green; alarm = red; if no mains power = off to conserve battery)
4. Alarm (normal = off; solid red = alarm with power; flashing red = alarm on battery power)
5. Wake Keypad (awake = green)
6. Program mode (green)
7. Line test - test call in progress (green)

8 Ordering

EMC-60 ABC

EC Emergency Hands-free phone

With options:

A = Second call button with 2nd button phone number or

B = Second LED

C = False alarm monitoring (requires input from elevator door curtain contact)

EMC-60-BX Hands-free phone in stainless steel box

EMC-60-FP Hands-free phone on stainless steel Face Plate

EMC-60-RF Reduced-Footprint Hands-free phone (with SM-4 separable speaker-mic)

9 Specifications

Elevator Wiring Requirements:	<i>Shielded</i> pairs of communication cable, minimum 24AWG, with the shield <i>grounded only at the controller end</i> of the traveling cable.
Phone Line Requirements:	Standard analog loop start voice grade telephone line or PBX with DTMF pass-through.
AC/DC Transformer (supplied)	120V AC, 60 Hz input; 15V DC, 400 mA output Other power supply options are possible from 9-24VAC or 13-30VDC within regulated limits of safety (e.g. class 2)
Backup Power (Used if AC power is cut off)	9V/250 mAh rechargeable NiMH battery. Replace every 5 years or as required.
Maximum number of units in parallel if required to answer incoming calls:	6 sharing the same phone line.
Maximum number of units in parallel if not answering incoming calls:	No theoretical limit if "Auto Answer" is turned off but multiple phone lines are recommended if more than 10 phones connected
On-hook Phone Line Voltage	15V – 55V (nominal 48V DC)
Off-hook Phone Line Voltage	5V – 10V (nominal 6V DC)
On-hook Power Required	0 mA
Off-hook Loop Current	6 mA – 80 mA (nominal 40 mA)
LED (call progress)	Operating voltage 1.7V – 2.1V Operating current 10 – 25 mA
Microphone	Unidirectional electret condenser Frequency range 100 Hz – 12 kHz
Ringng Voltage	40V – 130V AC
Operational Loop Resistance	600 Ω
Operating Range	0 – 60°C
Ringer Equivalence (REN)	0.1B

10 Troubleshooting

EC-Phone keypad is not responding.

- Touch <WAKE> and confirm that the green wake LED is on (upper right of keypad).

EC-Phone is not responding. No response when PHONE button is pressed.

- Confirm that the green power LED is on (lower left of circuit board).
- Confirm the red alarm LED is not illuminated.
- If power is on, try touching the <EXIT> key on the keypad.
- Touch <WAKE> then <LINE TEST> then dial a test number.
- If still no response, check the speaker, phone line and call button connections.
- If connections are okay, connect a handset to the telephone line. If still no dial tone, the problem is likely with the phone line or PBX. Check wiring continuity to the telephone room or contact the telephone service provider. If STP (Shielded Twisted Pair – recommended) *check shield is grounded at one end only.*

Dial tone is present but the EC-Phone does not dial.

- Check the primary phone number is programmed (Command #1 - replay).
- Touch <WAKE> then <LINE TEST> then dial a test number.

Dial tone is present. The unit briefly dials but gets a busy signal.

- The phone is possibly connected to a switchboard which may require an 8 or a 9 followed by a pause to access an outside line, followed by the phone number, or the switchboard may not allow outside calls. Try the Line Test feature or contact the switchboard vendor.

Phone does not hang up when the external party ends the call.

- The phone is probably not receiving a “wink” or “CPC” signal which may need to be set in the PBX by the switchboard vendor.
- If the problem cannot be solved, lower the “Talk Time” value (Command #15) to compensate (minimum time to comply with Code is 3 minutes).
- The monitoring station also has the option to hang-up the call manually by pressing <*><#> at the end of the conversation.

Cannot call into an EC-Phone.

- Check the phone is on-hook
- Check the individual cab ID (Station Number) is programmed (Command #5 - replay) and that one of the phones is set to Station Number 1.
- If the EC-Phone is connected through a Consolidator, ensure that the phone has automatically set Function #40 to “1”, “2” or “3” (Command #40 - replay).

Audio related issues.

- Adjust the speaker volume or the microphone sensitivity. If the increased microphone sensitivity creates “chopping”, increase the Voice Detection Threshold (Command #34)
- Make sure the EC-Phone *microphone hole is aligned* with the panel hole (using the template provided), that it is not blocked, that the microphone gasket is in place and the phone is not spaced away from the panel (any gap will cause feedback).
- Check the EC-Phone speaker is aligned with the panel speaker perforations.

11 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 36 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. We would like to offer our assistance to resolve the problem most conveniently over the phone, so please have your field staff **call EmerCom from site** before concluding that an EmerCom product needs to be returned.

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.

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

12 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.: 1-604-589-3899

This phone contains no customer or user serviceable parts. Attempting to repair this phone yourself will void the user's warranty. All repairs should be referred to the Technical Support Center at 1-604-589-3899 to determine if the phone 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 = 0.7 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 1-604-589-3899.

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 off-peak hours.

13 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 spécifications 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 sonnerie de tous les dispositifs n'excède pas cinq.

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