



IA3100

Legacy Speakerphone

Installation | Configuration | Operation | Troubleshooting

Administrator Guide



Code Blue

800.205.7186 • www.codeblue.com



Table of Contents

Section	Page
2 Introduction.....	3
3 Getting Started.....	4
4 Installation.....	5
5 Basic Programming.....	7
6 Initial Calling In Commands.....	8
7 Important Initial Programming Information.....	9
8 First Time Programming Instructions.....	10
9 Advanced Programming.....	12
10 Troubleshooting.....	18
11 Warranty.....	23
12 Download Information.....	24



2 Introduction

Thank you for choosing the Code Blue **IA3100** analog speakerphone, intercom and paging device(s) for indoor and outdoor applications. These speakerphones are part of our Emergency Signaling group of products that are built to meet the latest regulations, withstand the harshest elements and be proactive solutions for when you need them most. This guide provides installation and setup information for obtaining the best performance with the **IA3100** speakerphone. For programming and troubleshooting, please refer to the **IA3100 User Guide**.



IA3100 Legacy Speakerphone

Note: The IA3100 has been discontinued, or “end of life,” in production and repair. However, if you need to replace the microphone, speaker or button(s), you may still order replacements through our customer service department.

Code Blue is pleased to announce the availability of the **Interact 4100** auxiliary powered analog speakerphone. Expanded programming capabilities, enhanced speaker and microphone sensitivity, extended battery backup hours and increased phone number and message storage make the **IA4100** the most advanced hands-free speakerphone available.



3 Getting Started

The IA3100 is a hands-free, ADA compliant emergency speakerphone designed for outdoor or indoor use. It is a highly vandal resistant unit incorporating both a .125" stainless steel faceplate and a self-healing, aluminum 1½" piezoelectric button.

When a user touches the button, IA3100 will automatically dial one of the three programmed numbers (determined by priority programming), or ring down to a PBX, and illuminate a 3/8" diameter vivid red LED indicating "Call placed." Upon receipt of the call, the IA3100 identifies itself with either a digital voice message and/or digital location identifier (if programmed to do so), and illuminates a separate 3/8" diameter green LED indicating "Call received." The IA3100 is also capable of activating peripheral devices, such as CCTV or strobe lights via its two auxiliary dry contact outputs. All functions of the IA3100 are remotely programmable via any touch-tone phone, and are protected by a user-defined security code.

NOTE: Programming via a cell phone is subject to the quality of the call's DTMF tone transmission.

Throughout this guide you will see the following two references:

Caller: This is the person activating the IA3100 speakerphone by pressing a button or activating the auxiliary input.

Called Party: This is the person receiving the call from the IA3100; typically guards, 911 operators, dispatch officers, etc.





4 Installation

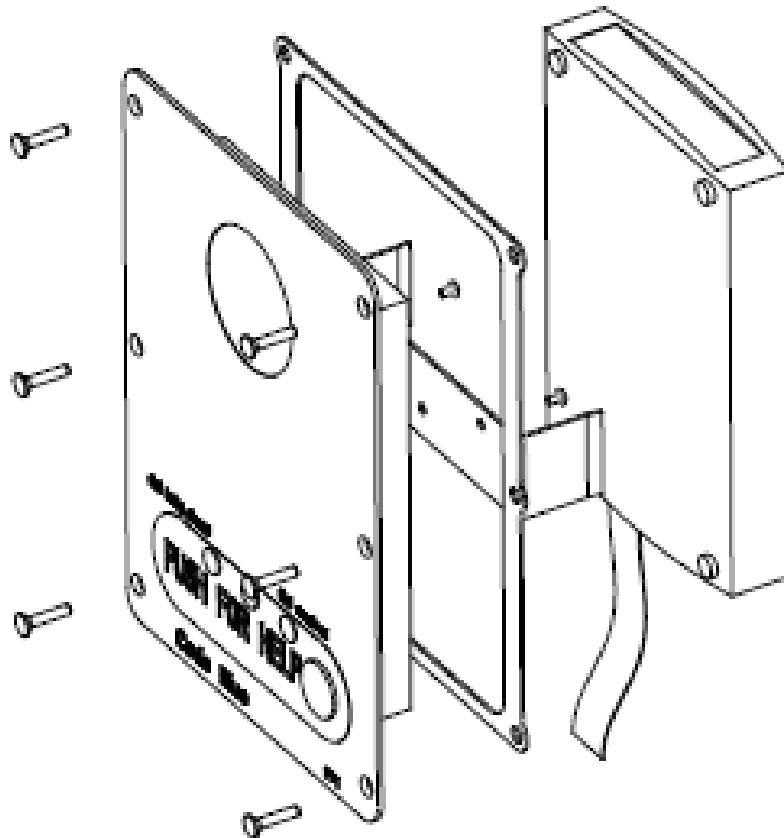
The IA3100 speakerphone comes with your choice of single button, dual button or dual button with keypad faceplate. The internal components consist of a speaker, microphone, PCB and mounting hardware.

Attach the Electronics Clip

1. Align the two holes in the steel clip with the two threaded holes on the back of the faceplate.
2. Attach the clip to the faceplate using two #6 screws (supplied).

Connect the IA3100 to the Faceplate

1. Plug the gray 20-pin ribbon cable into the faceplate.
2. Clip the IA3100 to the faceplate, tucking the excess ribbon cable under the IA3100.



(Continued on next page)



Connect Wiring Harness

The green, 14-pin Phoenix connector will plug into the IA3100. This connector is where all wiring connections are made.



Pin#	Function
1 2	Power input (12-30 volts DC or 12-24 volts AC)
3	Tip (Telephone Line)
4	Ring (Telephone Line)
5 6	Auxiliary Output #1 (100mA)
7 8	Auxiliary Output #2 (100mA)
9 10	Auxiliary Input #1
11 12	Auxiliary Input #2
13 14	Auxiliary Input #3

Install the IA3100 Faceplate into Unit

1. The phone/faceplate assembly is installed in the unit using six counter-sunk security screws.



5 Basic Programming

This Fast Start instruction sheet covers the most commonly utilized features of the IA3100

Programming

1. PROGRAMMING A PHONE NUMBER TO DIAL

Call the extension or phone number of the CB unit. After the RFA tone:

22258#	Programming Mode
90#	Defaults the Phone
50 <phone number> #	1st Phone, Button #1 Dials
51 <phone number> #	2nd Phone, Button #1 Dials
52 <phone number> #	3rd Phone, Button #1 Dials
53 <phone number> #	1st Phone, Button #2 Dials
54 <phone number> #	2nd Phone, Button #2 Dials
55 <phone number> #	3rd Phone, Button #2 Dials
#	Hold for 2 seconds to exit programming

2. PROGRAMMING RING DOWN/HOTLINE

Call the extension or the phone number of the CB unit. After the RFA tone:

22258#	Programming Mode
90#	Defaults the Phone
354#	Set phone for ring down
#	Hold for 2 seconds to exit programming

3. Recording Messages

Call the extension of the phone number of the CB unit, after the RFA tone:

22258#	Programming Mode
30#	Choose where the messages will play: 30 plays to operator when call answered
31#	31 plays at the unit upon red button touch - default
32#	32 message 10 plays at the unit, message, 11 plays to operator when call answered
33#	33 messages 10 & 11 plays to both parties when call answered
10	10 <Record 1st message>, hit # to end your recording
11	11 <Record 2nd message>, hit # to end your recording, only usable in modes 32 & 33
721#	Message Repetition; 0, 1, 2, 3, 4
#	Hold for 2 seconds to exit programming

Commands During A Call

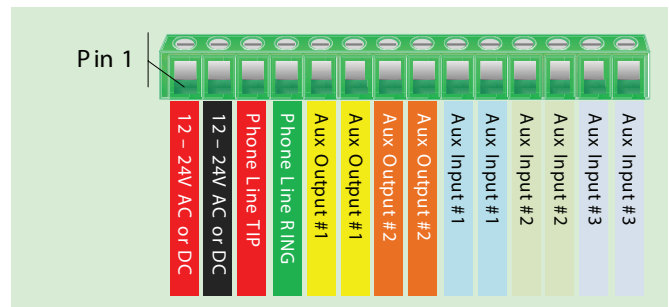
The following commands can be used by the called party after the IA3100 places a call. **These commands cannot be used in programming mode.**

0	Play 1st message
1	Extend off hook timer
2	Microphone gain toggle, (2 beeps = normal) (1 beep = high)
3	Stop playing voice message
4	Turn on auxiliary output #1
5	Speaker toggle, (2 beeps = off) (1 beep = on)
6	Turn auxiliary output #2 on (invalid when slaved)
7	Transmit ANI (Automatic Number Identifier)
8	Speaker volume up
9	Speaker volume down
*0	Mic on-off (2 beeps = off) (1 beep = on)
*1	Auxiliary output stays on for 10 mins
*2	Auxiliary output stays on for 20 mins
*3	Auxiliary output stays on for 30 mins
*4	Turns off auxiliary output #1
*5	Turns off auxiliary output #2 (invalid when slaved)
*6	Disable auxiliary input #1 (valid when cmd 85 has been programmed)
#	Hold for 2 seconds to exit call (hang up)

Auxiliary Outputs (default)

Auxiliary Output #1	Closed until end of the call
Auxiliary Output #2	Slaved to Auxiliary #1

IA3100 14 PIN PLUG DIAGRAM





6 Initial Calling In Commands

Commands on Initial Call In

Command	Explanation	Format/Default
1	Establish voice communication with IA3100 (two-way monitoring)	1<<monitor password>>#
2	Put the IA3100 into programming or diagnostic mode	2<<programming password>>#
4	Establish silent monitoring with the IA3100 (one-way monitoring)	4<<monitor password>>#



7 Important Initial Programming Information

In all instances, the information to be programmed into the phone is represented by <<name>>. Therefore, when the instructions call for the entering of **2<<programming password>>#**, simply press **2** and the appropriate digits followed by **#** on your telephone keypad. For example, since the default password on the IA3100 is **2258**, you would input **2 2258 #** to enter programming mode.

When you enter a command correctly, the unit will respond with a single beep. If a command has been entered incorrectly, the unit will respond with a triple beep (rejection tone). When commands are met with a triple beep, the command has not been accepted and will not affect the programming of the unit.

As a precaution against tampering, entering an incorrect Programming Password or Monitor Password will cause the phone to hang up.

While many of the instructions indicate calling the unit as a first step, other programming steps can be strung together. Any time the unit responds (with either a single beep or a rejection tone) it is capable of accepting another command.

The unit can be forced to hang up by pressing the pound button “#” for at least two seconds. Otherwise, hanging up the guard telephone will result in the phone hanging up once it has received a signal from the PBX (if capable), or once the programmed time-out period has expired (**Command 64**).

When you first dial into the IA3100, you will hear a Request for Acknowledge (RFA) tone. If a response is not received within five seconds, the IA3100 will hang up. Because your phone has not yet been programmed, you should press **2<<2258>>#** on your touch-tone keypad to enter programming mode.



8 First Time Programming Instructions

Enter Password

1. Call the unit from a touch-tone phone. The IA3100 will answer at the first ring. When the IA3100 answers and is ready to receive a command you will hear a Request For Acknowledge (RFA) tone.
2. From the time of the RFA, you have five seconds to enter a “2”. The “2” must be followed by the programming password (default is **2258**) and “#”. (**2 – 2258 – #**)
3. If the password is correct, you will hear a single beep and you can continue to enter your next command. If the password is incorrect, you will hear a triple beep and the IA3100 will hang up.

Enter Basic Programming

1. Enter “**2 - 2258#**” to enter programming.
2. Enter “**90 - #**” (resets phone to defaults) wait for beep.
3. Enter “**50<<1st Emergency Number>>#**” (Sets the first number to call when the red button is pressed). Wait for beep. Repeat for command 51, 52. (51 to 55 if using a IA3100-D or IA3100-K Faceplate)
4. Hold down “#” for two to three seconds to exit programming.

Ring Down Mode Programming

1. Enter “**2 - 2258#**” to enter programming.
2. Enter “**90 - #**” (resets phone to defaults), wait for beep.
3. For **Ring Down** or “**Hot-Line,**” enter “**35 - 4 - #**”. Wait for beep.



Commands During a Call

Command	Explanation	Format/Default
0	Play 1st message – Play first message to guard only (speaker and mic are disabled).	0
1	Extend the off hook time to the defined time. (see command 63)	1
2	Mic gain – The IA3100 responds with a single beep when put into high. The IA3100 responds with a double beep when put into low.	2 / Default = Low
3	Stop playing voice message	3
4	Turn on auxiliary output #1	4
5	Speaker – IA3100 responds with a single beep when the speaker is turned on. The IA3100 responds with a double beep when it is turned off.	5 / Default = On
6	Turn on auxiliary output #2 – Not valid if auxiliary output #2 is slaved (see command 44)	6
7	Transmit the ANI (see command 35)	7
8	Speaker volume up	8
9	Speaker volume down	9
*0	Mic – IA3100 responds with a single beep when the mic is turned on. The IA3100 responds with a double beep when it is turned off.	*0
*1	Auxiliary outputs stay on for 10 minutes – 10 minutes starts when command is given.	*1
*2	Auxiliary outputs stay on for 20 minutes (See command * 1)	*2
*3	Auxiliary outputs stay on for 30 minutes (See command * 1)	*3
*4	Turn off auxiliary output # 1 and output # 2 if slaved	*4
*5	Turn off Auxiliary output #2 – Not valid if auxiliary output #2 is slaved (see command 44)	*5
*6	Disable auxiliary input #1 – Disable for time defined by command 85 (This allows the guard to temporarily disable the actions of auxiliary input #1)	*6
#	Hang up	# must be held for 2 seconds



9 Advanced Programming

Information programmed into the phone is represented by <numbers, symbols and/or recording>. When the instructions call for entering 2<programming password>#, simply press **2** and the **default password**, followed by the # (pound) symbol on your telephone keypad. For example, the default password on the IA3100 is 2258. To put the IA3100 into Program Mode, dial **22258#**.

When you enter a command (CMD) correctly, the unit will respond with a single beep (DTMF “B”). If a command has been entered incorrectly, the unit will respond with a rejection triple beep (DTMF “BBB”). When commands are met with a triple beep, the command has not been accepted and will not affect the programming of the unit.

All necessary commands can be entered during one programming session. Any time the unit responds (with either a single beep or a rejection triple beep), it is capable of accepting another command.

When you first dial into the IA3100 speakerphone, you will hear a Request For Acknowledgment (RFA) tone. Because the unit has not yet been programmed, you should dial **22258#** on your touch-tone keypad to enter Program Mode.

The unit can be forced to hang up by pressing the # (pound) symbol for two seconds on the telephone keypad. If the # sequence is not used to hang up the IA3100, the phone is programmed to recognize a Disconnect Supervision, such as a WINK, reorder tones or revert to dial tone from the PBX or PSTN. Also available is a Silent Time Out (CMD 64). The speakerphone will hang up once it has received any of these standard end of call signals. If none of those Supervised Disconnects occur, the speakerphone will stay active (i.e., Call received LED light stays on) after the called party has hung up or until the Call Timer expires.

NOTE: You **MUST** program the speakerphone after installing the Code Blue unit.



Programming Command List

Command	Explanation	Format/Default
10	1st Voice message (See also command 30-34)	10<<voice message>>#
11	2nd Voice message (See also command 30-34)	11<<voice message>>#
30	1 st single instruction must be less than 18 seconds and will be played only to the guard	30
31	1 st message must be less than 18 seconds and will be played at the IA3100 until guard answers. (see command 72)	31 / Default
32	1 st instruction must be less than 9 seconds and will be played at the IA3100 until the guard answers. 2 nd message must be less than 9 seconds and will be played to the guard and at the IA3100 after the guard answers. (see command 72)	4
33	1 st message must be less than 9 seconds and will play at both ends after the guard answers. 2 nd message must be less than 9 seconds and will play at both ends after the 1 st message. (see command 72)	32
34	Recording playback level – This is the volume level that a recording will be played at.	34<<level>># / Default = 2 1=low 2=medium 3=high
35	Ring down selection & Automatic Number Identification: Command 0,1, 2 and 3 are for standard analog trunk line mode; Commands 4,5 and 6 are used for analog Ring Down lines. (ANI) The ANI is 27 DTMF tones sent at the beginning of the call. The ANI is translated by software at the guard station to give the units location, data input information, condition of inputs, and status of the phone's batteries.	35<<ANI Selection>># / Default = 0 <u>Regular line</u> 0=Disable ANI 1="Help" only 2="Info" only 3="Help"+"Info"
36	Call Button Function – This command is used with the IA3100-K Keypad faceplate to allow for a number to be automatically dialed before using the keypad. (<i>This feature only relates to the black "Call" button</i>)	36<<Function>># / Default = 0 0 = Auto Dial Off 1 = Auto Dial On
37	Call Progress Tone Detection – This command allows for the enabling and the disabling of the call progress tone monitor for hang up.	37<<mode>># / Default = 1 0 = Disabled 1 = Enabled
38	Disconnect Pulse Width (Wink) – This is the minimum amount of time that the phone line must drop or reverse polarity for the IA3100 to hang up. (0-9)	38<<time>># / Default = 2 0 = Disable 1 - 9 = 100 Milliseconds - 900 Milliseconds

(Continued on next page)



39	Commands During a Call – This command will enable or disable the operator from using the commands during a call. This feature is only usable with the FP1 or FP2 style faceplate.	39<<mode>># / Default = 1 0 = Disable 1 = Enable
43	Ring time counter – This command sets the amount of time that the IA3100 will wait for a call to be answered before moving on to the next number. (00-60 seconds)	43<<Ring time (two digits)>># / Default = 30
44	Slave auxiliary output #2 with auxiliary output #1.	44 / Default
45	Disable command 44	45
46	Enables auto connection of auxiliary output #2 during incoming calls. (This command is not available if auxiliary output #2 is slaved.)	46
47	Disable command 46	47 / Default
48	Time the auxiliary output #2 stays active. Time starts from the time auxiliary output #2 becomes active (i.e. command 6 or command 46)	48<<Active time (two digits)>># / Default = 00 00=ends when call ends 01-89=ends after 1-89 minutes 90-99=5-50 seconds (90=5 sec. / 91=10 sec. / 92=15 sec. / etc.)
50	First phone number for “Push for help” or “Emergency” button	50<<1 st Emergency number>># Up to 16 digits *=2-second pause
50*	Verifies the first Emergency number	50* <<1 st Emergency number>># Triple beep = rejected Single beep = OK
51	Second phone number for “Push for help” or “Emergency” button	51<<2 nd Emergency number>># Up to 16 digits *=2-second pause
51*	Verifies the second Emergency number	51* <<2 nd Emergency number>># Triple beep = rejected Single beep = OK
52	Third phone number for “Push for help” or “Emergency” button	52<<3 rd Emergency number>># Up to 16 digits *=2-second pause
52*	Verifies the third Emergency number	52* <<3 rd Emergency number>># Triple beep = rejected Single beep = OK
53	First phone number for “Info” or “Call” button	53<<1 st Information number>># Up to 16 digits *=2-second pause
53*	Verifies the first Information/Call number	53* <<1 st Information number>># Triple beep = rejected Single beep = OK

(Continued on next page)



54	Second phone number for “Info” or “Call” button	54<<2 nd Information number>># Up to 16 digits =2-second pause																				
54*	Verifies the second Information/Call number	54* <<2 nd Information number>># Triple beep = rejected Single beep = OK																				
55	Verifies the third Information/Call number	55<<3 rd Information number>># Up to 16 digits =2-second pause																				
55*	Verifies the third Information/Call number	55* <<3 rd Information number>># Triple beep = rejected Single beep = OK																				
57	<p>Assign progress tone table to each of the phone numbers. The IA3100 recognizes the four different tone tables.</p> <table border="1"> <thead> <tr> <th>Line</th> <th>Ring Back (Seconds)</th> <th>Busy Tones (Seconds)</th> <th>Recorder Tone</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2 On, 4 OFF</td> <td>½ ON, ½ OFF</td> <td>¼ ON, ¼ OFF</td> </tr> <tr> <td>2</td> <td>½ ON, ¼ OFF, ½ ON, 4 OFF</td> <td>½ ON, ½ OFF</td> <td>¼ ON, ¼ OFF</td> </tr> <tr> <td>3</td> <td>½ ON, ½ OFF, ½ ON, 2½ OFF</td> <td>½ ON, ½ OFF</td> <td>¼ ON, ¼ OFF</td> </tr> <tr> <td>4</td> <td>1 ON, 3 OFF</td> <td>½ ON, ½ OFF</td> <td>¼ ON, ¼ OFF</td> </tr> </tbody> </table>	Line	Ring Back (Seconds)	Busy Tones (Seconds)	Recorder Tone	1	2 On, 4 OFF	½ ON, ½ OFF	¼ ON, ¼ OFF	2	½ ON, ¼ OFF, ½ ON, 4 OFF	½ ON, ½ OFF	¼ ON, ¼ OFF	3	½ ON, ½ OFF, ½ ON, 2½ OFF	½ ON, ½ OFF	¼ ON, ¼ OFF	4	1 ON, 3 OFF	½ ON, ½ OFF	¼ ON, ¼ OFF	<p>57<<abcdefg>># / Default = 1111111</p> <p>a = 1st Emergency (cmd. 50) b = 2nd Emergency (cmd. 51) c = 3rd Emergency (cmd. 52) d = 1st Information (cmd. 53) e = 2nd Information (cmd. 54) f = 3rd Information (cmd. 55) g = Power loss warning (cmd. 59)</p>
Line	Ring Back (Seconds)	Busy Tones (Seconds)	Recorder Tone																			
1	2 On, 4 OFF	½ ON, ½ OFF	¼ ON, ¼ OFF																			
2	½ ON, ¼ OFF, ½ ON, 4 OFF	½ ON, ½ OFF	¼ ON, ¼ OFF																			
3	½ ON, ½ OFF, ½ ON, 2½ OFF	½ ON, ½ OFF	¼ ON, ¼ OFF																			
4	1 ON, 3 OFF	½ ON, ½ OFF	¼ ON, ¼ OFF																			
58	Cycle count – Number of cycles for the programmed numbers to repeat. (1-3)	58<<Cycle count>># / Default = 2																				
59	Power loss phone number – This is a number that will be called when the IA3100 has lost power for 15 minutes. This feature is best used when it has been programmed to dial a specific display phone.	59<<power loss number>># Up to 16 digits																				
60	Unique ID number – This number is sent with the ANI to identify the unit and is required with the Code Blue software. <i>(Also see command 65)</i>	60<<ID number>># Up to 16 digits																				
60*	Verifies the Unique ID number	60* <<ID number>># Triple beep = rejected Single beep = OK																				
61	Programming password (command 61* must follow immediately after command 61)	61<<new program password>># Default = 2258																				
61*	Verifies the new programming password – This action can only be used during this programming instance, meaning if you log out of programming and return to the programming sequence to verify the password you will not receive a OK confirmation tone.	61* <<new program password>># Triple beep = rejected Single beep = OK																				
62	Monitoring password (command 62* must follow immediately after command 62)	62<<new monitor password>># Default = 2258																				
62*	Verifies the new monitoring password – Same conditions apply as stated in 61*	62* <<new monitor password>># Triple beep = rejected Single beep = OK																				

(Continued on next page)



63	Off hook time – The maximum conversation time in minutes. (00-99) Minutes	63<<Off hook time (2 digits)>># Default = 10
64	Silent time out & Alternate Hang up method – If this command is enabled, the IA3100 will hang up after hearing silence for the set number of seconds consecutively. (05-99) Seconds	64<<silent time (2 digits)>># / Default = 00
		00 = Disabled 05-99 = 5-99 Seconds
65	User ID or ANI sends out select – This command may be used if the Unique ID is to be sent in place of the complete ANI. (see command 35 and 60)	65<<mode select. #/default = 0 0 = Complete ANI 1 = Unique ID only
72	Voice message repetition – This is the number of times that the recording in command 31 is to be repeated. (0-4)	72<<message repetitions>># / Default = 1
73	Enable auxiliary input #1 – Auxiliary #1 performs the same as the “Emergency” button.	73#
74	Disable auxiliary input #1	74 / Default
80	Speaker Operation (0-2) – Formally known on the CB3100 as “Call Progress Tone Monitoring,” this feature turns off or on the phone’s ability to allow a user to hear the IA3100 place its call and progress through the call sequences. Best use of this feature is when two IA3100s are sharing one phone line; Phone 1 is activated and then Phone 2 is activated. If this feature is “0” disabled, then User 2 will not hear Phone 1 call.	80<<mode>># / Default = 2
		0= Speaker is disabled during entire call. 1= Speaker is disabled during the placement of the call. 2= Speaker is enabled during the entire call.
85	Temporary disable time for auxiliary input #1 (see command *6) (00-99)	85<<disable time (2 digits)>># / Default = 30
		00-99 = 0-99 Minutes
86	Wait for dial tone – This time is the maximum time that the IA3100 will wait for dial tone (The phone will place the call as soon as it has verified dial tone for four seconds). On a standard trunk line or ring down trunk, this time period is the time that the phone will wait to hear the call progress tone (This is to eliminate any dial tone that may be present during the dialing of the ring down trunk). (0-99) Seconds	86<<wait time>># / Default = 0 Actual time is: programmed time + 5 sec.
87	Wait for call progress tone – This time is the maximum time that the IA3100 will wait for a call progress tone after the last digit has been dialed. (0-99 Seconds)	87<<wait time>># / Default = 0 sec. Actual time is: programmed time + 5 sec.
90	Return to defaults – Returns all commands to their defaults, including all passwords. (See command 92)	90#

(Continued on next page)



91	Data Input – This command enables and disables the RS485 Data input to initiate an Emergency Call.	91<<mode>># / Default = 1
		0= Disabled 1= Enabled
92	Partial Reset to default – Returns all commands to their defaults with the exception of stored phone numbers, passwords, tone tables, and voice recordings.	92#
93	Diagnostic Routine – This can be used to verify that the speakerphone is functioning correctly. This command will cause the IA100 to hang up and perform a self check. When the self check is complete, the IA3100 will call the “Call Back Number” and report with either a single tone for a failure or a double tone for a pass.	93<<Call Back Number>>#
#	Hang up - forced	# = forced hang up

10 Troubleshooting

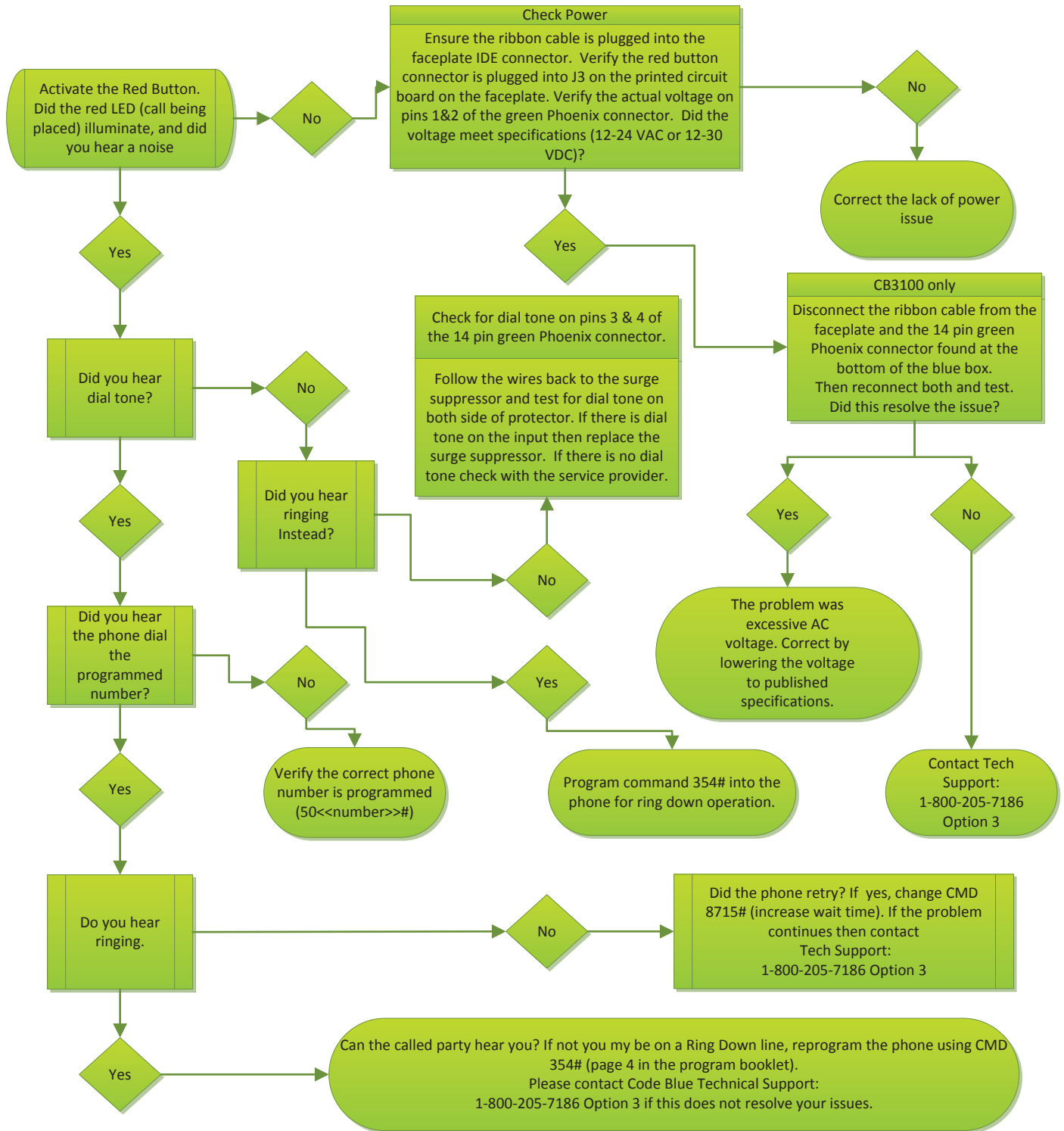
1.0 Required Tools

- 1.1 Lineman's Test Set (Buttset)
- 1.2 Digital Multi-meter
- 1.3 Phillips Screwdriver
- 1.4 Code Blue Security Bit

2.0 Begin Troubleshooting

- 2.1 Begin troubleshooting at the phone's faceplate.
- 2.2 Press the red button to begin and keep in mind that every step through a call attempt is a timed event. The phone commands referenced in this flowchart are elaborated on the CB3000 & CB3100 programming and operations instruction guide.

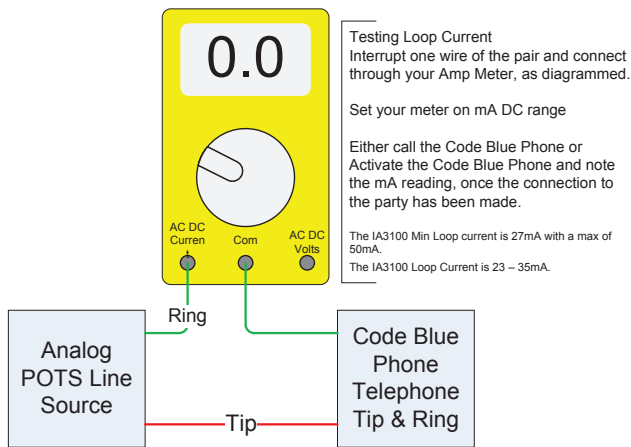
FLOWCHART ON NEXT PAGE



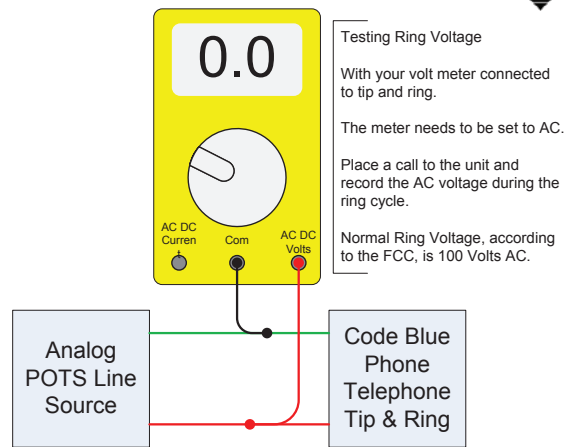


If the IA3100 doesn't seem to be functioning properly, follow the steps below to test line loop current, ring voltage and talk battery. These line levels are important to the proper function of the IA3100.

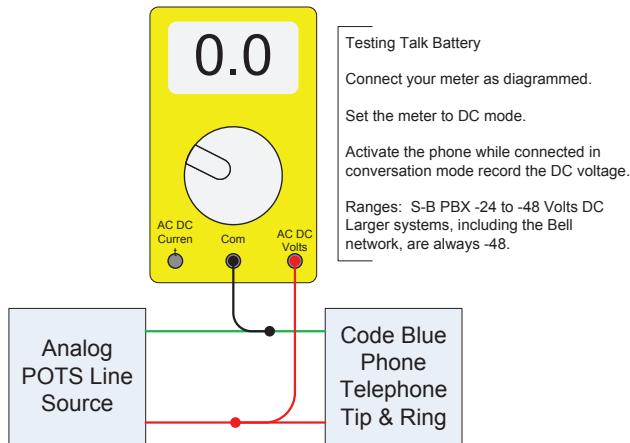
Loop Current Test Configuration



Ring Voltage Test Configuration



Talk Battery



Note

For those using non auto ranging meter. Please make sure you have proper polarity set up for each test.

For those with Fluke Meters, they are generally auto-ranging. Also they're bidirectional, meaning polarity is not an issue.

(Continued on next page)



Phone Line – Ensure that the phone line is free of static and the electrical characteristics are satisfactory:

Loop Current: 23 mA to 35 mA (required)

Talk Battery: -48V DC to -52V DC (typical)

Ring Voltage: 90 Vrms (typical)

Electrical – Ensure that the unit is powered with 12 to 24V DC or AC power. If the unit is Solar or NightCharge®, ensure the battery voltage is above 11.5V DC.

EMI – Some sources of EMI (Electromagnetic Interference) will interfere with the operation and audio quality of the unit. An example would be a bad ballast on a high pressure sodium or metal halide area light, or communication cable run by a transformer or florescent light ballast.

GSM/Cellular – GSM and/or cellular interfaces cause distortion of DTMF tones. You may need to program your IA3100 speakerphone with a line simulator or on a standard analog POTS/PBX station prior to connecting to GSM/Cellular gateway.

Disconnect Supervision – Ensure that supervised disconnect is enabled on any PBX system the IA3100 may be connected to. This will ensure the unit hangs up properly upon call completion. Some systems will provide a momentary Polarity Reversal which will also hang up the speakerphone.

Answer Supervision – If your system provides answer supervision, then it is possible that when the call is connected the IA3100 will disconnect the call. This is due to the IA3100 considering the WINK signal sent for answer supervision to be a disconnect signal.

Default Settings – Ensure your phone is programmed accordingly when connecting to auxiliary outputs. By default, the phone may be set to activate or not activate as required by your application. Refer to the programming commands for more information and default settings.

General Programming

How do I program an analog emergency speakerphone or “call box”?

To program an IA4100, IA3100 and IA500 series phone, you need to use an analog phone or an IP phone that pushes DTMF tones and call the extension or phone number of the emergency phone. When you dial the phone number to the Code Blue speakerphone you're trying to reach, you will hear an acknowledgement tone or RFA tone to let you know that the phone has picked up and is ready to be programmed. Then press the programming password for that particular model phone to enter programming mode and configure the phone.

For example, to program an IA3100:

Call into the speakerphone or “call box”, press 22258# and wait for acknowledgement tone.

50 <phone number> #, wait for acknowledgement tone, then press * # to hang up.

How do I program the IA3100 to work on a ring-down line?



Call into the Code Blue unit's phone number and enter program mode 2<password>#. Key in 354#. This will set the IA3100 to operate in ring-down mode. Press and hold # down for two seconds to exit program mode.

How do I resolve a IA3100 that appears to be locked up?

Try to reset or re-energize the circuit by disconnecting the **14-pin green Phoenix connector AND the gray ribbon cable** for a couple of seconds. Plug cables back in and test the unit. Check and make sure the operating voltage at the unit is between 12-24V AC/DC. An overvoltage condition for a period of time may cause the regulator to overheat and the speakerphone to go into a thermal shutdown.

Where can I find speakerphone programming manuals?

<http://codeblue.com/Support/downloads> or email ts@codeblue.com.



11 Warranty

Code Blue Corporation provides a limited warranty on this product. Refer to your sales agreement to establish the terms. In addition, Code Blue's standard warranty language, as well as information regarding support for this product while under warranty, is available at www.codeblue.com/support.

Notice: Every effort was made to ensure that the information in this document was complete and accurate at the time of printing. Information is subject to change.



12 Download Information

Code Blue now has a centralized location where you can find installation, setup, information, configuration and operation instructions.

1. Centry® Administrator Guide: www.codeblue.com/resources/guides
2. CB 1 Series Administrator Guide: www.codeblue.com/resources/guides
3. CB 2 Series Administrator Guide: www.codeblue.com/resources/guides
4. CB 4 Series Administrator Guide: www.codeblue.com/resources/guides
5. CB 5 Series Administrator Guide: www.codeblue.com/resources/guides
6. CB 9 Series Administrator Guide: www.codeblue.com/resources/guides
7. CB RT Administrator Guide: www.codeblue.com/resources/guides
8. Phone Enclosures Administrator Guide: www.codeblue.com/resources/guides
9. Stainless Steel Maintenance Guide: www.codeblue.com/support
10. IA4100 Administrator Guide: www.codeblue.com/resources/guides
11. IP5000 Administrator Guide: www.codeblue.com/resources/guides
12. IP1500/2500 Administrator Guide: www.codeblue.com/resources/guides
13. ToolVox® X3 Administrator Guide: www.codeblue.com/resources/guides
14. Public Address Administrator Guide: www.codeblue.com/resources/guides
15. Blue Alert® MNS User Guide: www.codeblue.com/resources/guides
16. Blue Alert® EMS User Guide: www.codeblue.com/resources/guides
17. IP1500/IP2500 Firmware: www.codeblue.com/support/firmware
18. IP5000 Versions 1.X & 2.X Firmware: www.codeblue.com/support/firmware

For Legacy Product Information:

www.codeblue.com/legacy-products

These guides should contain all the information needed for your application. If further information is required, please contact customerservice@codeblue.com.