Installation Manual

DI4000 & DI4500

Emergency Voice Dialers

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DOC NOTICE

NOTICE

The canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cuase to request the user to disconnect the equipment.

User should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION

Users should not attempt to make such connections themselves, but sould contact the appropriate electric inspection authority, or electrician as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all devices does not exceed 100.

The Load Number of this device is 1

DOC NOTICE

AVIS

L'étiquette du ministère des Communications du Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. Dans certains cas, les fils intérieurs de l'entreprise utilisés pour un service individuel à ligne unique peuvent être prolongés au moyen d'un dispositif homologué de raccordement (cordon prolongateur téléphonique interne). L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêchent pas la dégradation du service dans certaines situations. Actuellement, les entreprises de télécommunication ne permettent pas que l'on raccorde leur matériel a des jacks d'abonné, sauf dans les cas précis prévus par les tarifs particuliers de ces entreprises.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

AVERTISSEMENT

L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection électriques, ou à un électricien, selon le cas.

L'indice de charge (IC) assigné à chaque dispositif terminal indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être raccordée à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme de charge de l'ensemble des dispositifs ne dépasse pas 100.

L'indice de charge de ce dispositif est 1

FCC RULES PART 68

This equipment complies with Part 68 of the FCC rules. On the metal cover of the circuit board 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 and the USOC jack number required for connection, must be provided to the telephone company.

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See installation instructions for details.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive REN's on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total REN's contact the telephone company to determine the maximum REN for the calling area.

If the terminal equipment "Dialex model 4000 or 4500" causes harm to the telephone network, the telephone company will notify you, in advance, that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe this action is necessary.

The telephone company may make changes in it's facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in ordr for you to make the necessary modification in order to maintain uninterrupted service.

If trouble is experienced with this equipement "Dialex model 4000 or 4500", please contact Delta Vox Electronics Inc. at (514) 974-3244 for repair and (or) warranty information.

COSTOMER INFORMATION

If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment from the network until the problem is resolved.

No repairs can be performed by the user - return the unit for repair according to instructions from Delta Vox or its authorized representative

This equipment coannot used on public coin service provided by the telephone company. Connection to Party Line Service is subject to state tariffs. (Contact the state public utility commission, public service commission or corporation commission for information).

INTERFERENCE AND FCC RULES PART 15

This equipment has been tested and found to compiy with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

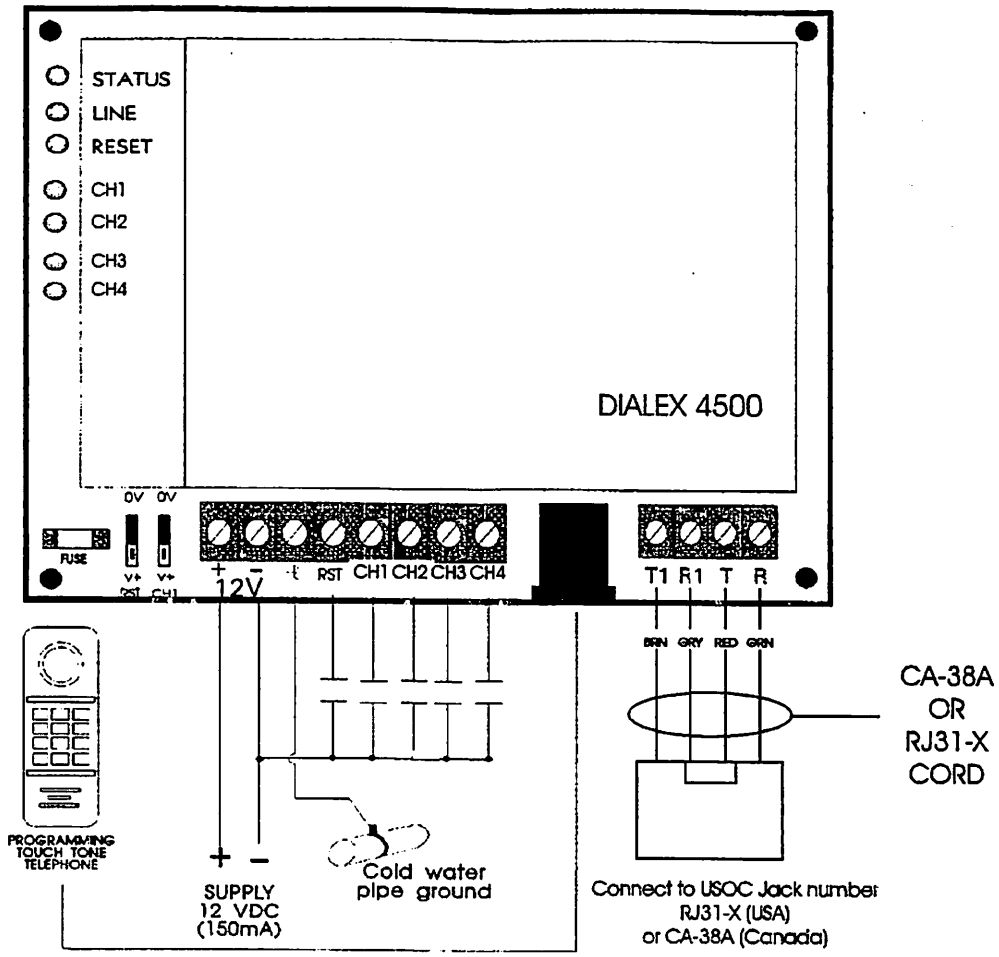
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmfull interference to radio or television reception, which can be deterrained by turning the equipment off an on, the user is encouraged to try to correct the interference by on or more of the following measures:

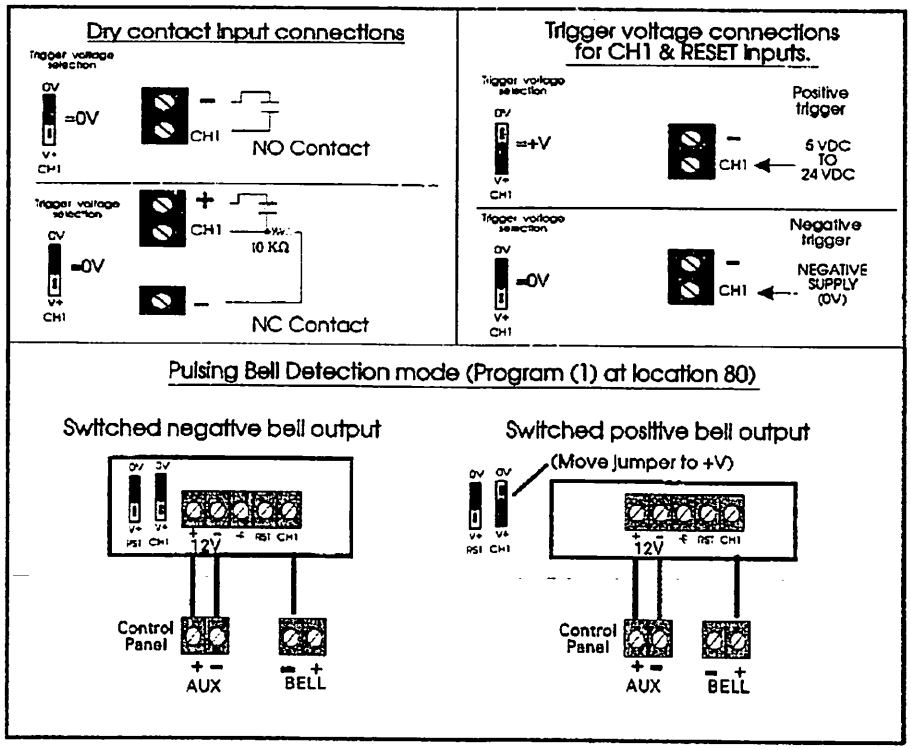
Re-orient or relocate your radio or TV antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult your dealer or an experienced radio/TV technician for help


STATUS
LINE
RESET
CH1
CH2
CH3
CH4
DIALEX 4500
FUSE
0V 0V
V+ V+
RST CH1
+ − 12V
RST CH1 CH2 CH3 CH4
T1 R1 T R
BRN GRY RED GRN
CA-38A
OR
RJ31-X
CORD
PROGRAMMING
TOUCH TONE
TELEPHONE
+ −
SUPPLY
12 VDC
(150mA)
Cold water
pipe ground
Connect to USOC Jack number
RJ31-X (USA)
or CA-38A (Canada)


Dry contact input connections
Trigger voltage selection
0V
=0V
V+
CH1
CH1
NO Contact
CH1
10 KΩ
=0V
NC Contact
Trigger voltage connections
for CH1 & RESET inputs.
=+V
Positive
trigger
CH1
6 VDC
TO
24 VDC
=0V
Negative
trigger
CH1
NEGATIVE
SUPPLY
(0V)
Pulsing Bell Detection mode (Program (1) at location 80)
Switched negative bell output
Switched positive bell output
(Move jumper to +V)
12V
RST CH1
Control
Panel
AUX
BELL

CHANNEL INPUTS

The DI-4000 has 2 channel inputs labelled "CH1" and "CH2", plus a reset input labelled "RST". The DI-4500 has 4 channel inputs labelled "CH1" to "CH4", plus a reset input labelled "RST". All inputs are designed to be connected to either:

a) Normally Open Dry Contacts which close to activate the input or, if necessary

b) a negative (0V) trigger, with + 4 to 24VDC as the idle (normal) condition. Connection to a burglary panel programmable output which switches to negative will also work if the panel negative (-) and the Dialex (-) are connected together.

Normally Closed contacts can be handled by adding a 10K resistor to (+) on each channel to be converted. (See the wiring diagram for more information).

CH1 and RST are special inputs designed to also accept a positive (+) voltage trigger for more flexibility. Each of these two inputs has a plug-in jumper to choose between normal operation (0V position) and + trigger operation (+V position). These two jumpers are located to the left of the terminal block. Move the jumper from the normal "0V" position only when positive voltage is being used to activate the input, with low voltage (0 to 1V) being the idle (normal) state.

RST INPUT

Activating this input will stop and reset all call sequences. Connect a NO/NC switch or use a programmable output from the burglar alarm system to activate the reset function.

CAUTION

Do not bundle input wiring with high voltage power cables. Failure to observe this caution could allow high voltage to be inductively coupled to the input wiring and possibly damage input circuitry or result in false operation.

INSTALLATION

PULSING BELL DETECTION MODE (PBDM)

The 80# programming location allows the user to set the DIALEX inputs to operate in Standard Detection Mode (SDM) or in Pulsing Bell Detection Mode (PBDM). PBDM provides a simple way to connect CH1 of the Dialex to the Bell/Siren output of a Burglary/Fire control panel. This bell output is usually steady for burglary alarm and pulsing for fire alarm. With this option enabled, the Dialex can distinguish between a steady or pulsing signal applied to CH1. The steady signal triggers the CH1 response in any case. However, the Dialex will react to the pulsing signal as if it came from an extra input channel, numbered one more than the highest real hardware input. For the 2 channel DI-4000, the pulsing signal will trigger channel 3, and the programming such as the phone numbers called and the message played, will be done at the channel 3 programming locations. For the 4 channel DI-4500, a pulsing signal applied to CH1 will trigger channel 5 and the Dialex operation will be what is programmed in the CH5 locations.

Many control panels actually switch the negative side of the Bell Output, while positive is always present on the + bell terminal. In this case, the CH1 jumper must be left in the normal "0V" position, and CH1 should be connected to the negative (-), active, side of the bell output. If the control panel switches the positive, then move the CH1 jumper to the "+V" position and connect Bell + to the CH1 input.

If the control panel bell output is (or may later be) connected to a sounding device which generates electrical noise, such as an electro-mechanical bell or horn, extra precautions may be required. Connect a suppression device such as .1mF 250V, capacitor or a diode, across the sounder to minimise the noise interference and a .1 mF capacitor between the CH1 input and (+) for negative trigger, or (-) for positive trigger.

Input CH2 (CH2, CH3 and CH4 on Dialex 4500) always has the standard SDM characteristics and operates the same way regardless of whether CH1 is configured as "Bell" PBDM or "Standard" SDM. However, CH2 (CH2, CH3 and CH4 on Dialex 4500) must be activated for at least 6 seconds in some operating modes to start a call procedure, when the CH1 input is configured as PBDM.

STANDARD DETECTION MODE (SDM)

In SDM, all inputs operate in the same manner: Activating a channel will start a call procedure corresponding to the triggered input.

In SDM, CH1 input can be configured to detect a positive voltage signal by moving its jumper, but cannot distinguish between steady and pulsing signals.

TELEPHONE LINE CONNECTIONS

The Dialex provides line seizure capability and should be connected as the first device after the telephone line enters the building. The telephone line is connected to the "T" and "R" terminals. The line continuing on to the building telephones, or other telephone equipment, is connected to "T1" and "R1". When properly connected in this way, the Dialex can disconnect any telephone left off hook or telephone equipment in use, in order to call out in an emergency. This requirement for line seizure is taken care of by using the proper CA-38A (Canada) or RJ31-X (USA) modular cord with the corresponding Telephone Company installed jack.

The wires from the RJ31X or CA-38A telephone jack are connected to the terminals in the following way:

From CA-38A (RJ31-X) cord	To terminals
Green Wire	T
Red Wire	R
Brown Wire	T1
Gray Wire	R1

Do not connect DC POWER until all other wiring has been connected

DC POWER CONNECTIONS

Use a power supply (Delta Vox DV1-24F) or alarm control panel that can supply filtered and regulated 12VDC, at least 150mA continuous.

Connect the positive 12 VDC (12 to 14 volts) to the "+" terminal. Connect the negative side to the "-" terminal.

INSTALLATION

POWER ON PROCEDURE

Note: On power up, each channel input already activated will start a calling sequence.

(1) Connect DC Power

(2) The Status LED should flash every 2 seconds. All other LED's must be off in ready mode. The RST and channel lights indicate an activated input when they are lit. Remove the alarm condition to enter ready mode.

If the STATUS light is on steady (indicating call procedure in operation), activate the RST input.

(3) When in ready mode, connect a Touch Tone Telephone to the board and start programming. You cannot enter programming if the DIALEX is not in ready mode

PROGRAMMING PROMPTS

AUDIBLE TONES

The following tones will guide you as you program the system:

One short tone: Acknowledges programming access. (Ready to accept programming option)
Two short tones: Dialex exits programming and saves the parameters programmed
One long tone: Access or function denied, incorrect entry

PROGRAMMING LED INDICATIONS

STATUS LED flashes slowly when you are in programming mode.
LINE LED goes on when programming phone is off hook.
STATUS LED flashes quickly when record or playback function is in use

PROGRAMMING OVERVIEW

During programming, all the data required by the Dialex to perform its desired functions will be entered in a step by step process. Data will be entered and voice messages recorded, using a Touch Tone TM telephone temporarily plugged into the programming socket. These instructions show the numbers to be entered, by pressing keys on the touch tone telephone, in square brackets, for example: [1 1 #]. A 2 digit number, followed by [#], will be entered to open each programming location. To make it easy to remember, the first digit is the step number, ie., the type of programming. The second digit is related to the programming, for example, the channel number.

First, a list of up to 8 telephone numbers will be entered. This list, called the "Telephone Number Directory" is used by the Dialex to look up specific numbers to dial, when it is time to call out to report a channel activation.

Next the format choice of either"Voice Message" or "Pager code message" is entered for each of the

PROGRAMMING

phone numbers in the directory. Typically, some phone numbers will be answered by a human listener expecting a voice message. One other number (or more than one) could be the phone number of a pager system which will display the DTMF digits sent to it on the user's portable pager screen.

TM "Touch Tone" is a trade mark of AT & A

The third programming step links the input channels to the Telephone Directory. It tells the Dialex which of the available numbers should be called, and in what order, for each of the possible input channels. Since the inputs may be triggered by different conditions requiring different people to respond, this programming step provides all the required flexibility of how many people, or pagers, who, and in what priority order will be called for each activation type.

Next, the common identification voice message and the individual channel messages are recorded for the human listeners.

If one or more phone numbers have the pager format, then the numerical messages to be displayed by the pager(s) for each channel are entered.

Next, some communications choices and the input mode choice are entered.

After the programming is completed, or after each step if desired, the data programmed can be displayed by a flashing LED light for verification. The operation of the unit can be tested, for each channel, by entering activation codes or triggerring the inputs.

TELEPHONE COMPATIBILITY

DIALEX 4000 series will work with most Touch Tone TM telephones that generate the standard 12 DTMF tones. Telephones that use the [*] and [#] keys for mute and memory redial cannot be used to program the DIALEX.

PROGRAMMING STEPS

Step 1	Telephone Numbers
Step 2	Communication Format
Step 3	Call List, Priority Order
Step 4	Not required and not functional on the
Dialex	models 4000 and 4500
Step 5	Emergency Message Recording
Step 6	Digital Pager Messages
Step 7	Communication Options
Step 8	Input Detection Mode
Step 9	Programming check and testing

PROGRAMMING PROCEDURE

GENERAL

To enter programming mode, the system must be in ready mode. Otherwise, access to programming will be denied. The programming process follows a simple sequence such as:

1) Enter the Location number followed by [#]ex: [1 1 #] for Location 11.
The DIALEX will acknowledge by one short "beep" if accepted or one long "beep" if a wrong key or unknown location has been entered.

1. Enter the programming parameters followed by the [#] key if needed. The ending [#] is omitted only when:

   a) All possible digits are entered, such as a Call List Priority Order, with 8 numbers

   b) For locations where you must enter the specified number of digits.

   ex: [6 0] [#] [0 8] Pager wait always 2 digits.The DIALEX will acknowledge by 2 short "beeps"

   The location is now programmed. You are back in ready mode and able to access a new location.

PROGRAMMING

4) You have to enter the location code followed by [#] with- in 5 seconds. Otherwise, the system will exit programming and go back to ready mode. After 30 seconds (once entered in a location) without pressing a key, the Dialex will return to the ready mode and will not save the (incomplete) programming of the last location.

STEP 1 TELEPHONE NUMBER DIRECTORY

Location	[#]	Telephone number	[#]
[1 1]	[#]	Phone number 1	[#]
[1 n]	[#]	Phone number n	[#]
[1 8]	[#]	Phone number 8	[#]

ex: To program 555-4444 as phone number 1
[1 1] [#] [5 5 5 4 4 4 4] [#]

Special digits: Special digits can be programmed by first entering [*]. To program a 4 seconds pause during dialing, enter [* 4] (Actually, entering [*] followed by any number other than "*" or "#" will provide the same 4 seconds pause).

To program an "*", enter [* *]
To program a "#", enter [* #]

STEP 2 COMMUNICATION FORMAT

Choose a communication format for each phone number of the directory. If not all phone numbers are used, 8 digits must still be entered.

[2 0] [#] [8 digits]

The 1st digit is the communication format of the 1st phone number.

The 8th digit is the communication format of the 8th phone number

Enter [0] to set a voice phone number
Enter [1] to set a pager number

ex: To program the first six numbers as voice phone telephone numbers and the last two as pager numbers.
[2 0] [#] [0 0 0 0 0 0 1 1]

STEP 3 CALL LIST, PRIORITY ORDER

You have already programmed your DIALEX unit with a telephone directory of up to 8 telephone numbers. Now, for each channel, program as the directory positions, the list of telephone numbers in the order they will be called.
[3 1] [#] [Priority list of channel 1] [#]
...
[3 5] [#] [Priority list of channel 3] [#]

You can enter up to 8 digits which are the directory positions of up to 8 phone numbers. Program a blank for each channel not used.

ex: To call the 1st, the 2nd and the 5th phone number for channel 1, in that order, program:
[3 1] [#] [1 2 5] [#]
If channel 2 is not used, program: [3 2] [#] [#]

STEP 4 EMERGENCY MESSAGE RECORDING

The DIALEX 4000 has a total recording time of 20 seconds. This time is split between the 4 messages. The DIALEX 4500 has 60 sec. of recording time split between 6 messages. On both models, the first message is the ID message (Name, address, ...) and the following messages are assigned to channel 1, channel 2, ...

You must record all messages in the right order. Begin with the ID message, followed by the channel 1 message, the channel 2 message etc. The recording procedure requires you to record all messages even though they are not needed for your application. Record a short blank for an unused message. The status LED will flash very fast during recording.

PROGRAMMING

RECORDING PROCEDURE

Prepare a written script of what you want to say, to help avoid mistakes and unwanted pauses.

[5 0] [#] Begin ID message recording (speak through the handset).
[#] Stop ID message recording, then wait 1 second.
[1] Begin channel 1 message recording.
[#] Stop recording, then wait 1 second.
[2] Begin channel 2 message recording.
[#] Stop recording, then wait 1 second.
[3] Begin channel 3 recording.
[#] Stop recording and end the recording procedure if DIALEX 4000 is used.
[4] Begin channel 4 recording, after 1 second wait for Dialex 4500.
[#] Stop recording, then wait 1 second
[5] Begin channel 5 recording
[#] Stop recording and end of recording procedure on DIALEX 4500

NOTE: [#] or [1] can be entered every time in place of [1], [2], [3], [4] or [5] to begin recording the next message. Use [1] instead of [#] to end recording of each message when the dialex calls a voice pager. Messages can be tested by entering [050] for the ID message, [051] for the channel 1 message, [052] for the channel 2 message, etc.

STEP 5 DIGITAL PAGER MESSAGES

Digital messages are used to call pagers which accept only digital encoding usually provided by the keypad of any Touch Tone TM telephone. Then, if a phone number is programmed as a pager format number in step 2, a digital message will be sent instead of a voice message.

Location [6 0] [#] allows the user to enter 2 digits to program the delay that the Dialex will wait for the end of the pager central voice prompt. After that wait time, the DIALEX will send its digital message.

If "Call Progress" is selected at location 70, 2nd and 3rd digits, this Pager Transmission Delay will start after the DIALEX hears the voice prompt start. Otherwise this Pager Transmission Delay is added to the "Delay Before Transmission" to make the total delay from the time dialing ends to the time the DIALEX sends its pager message.

You must enter 2 digits. Usually the delay should be around 8 seconds.

ex: To set a wait time of 8 seconds, program[6 0] [#] [0 8]

A digital message can have up to 8 digits. Program the message for each channel at locations 61 - 65.

[6 1] [#] [Channel 1 digital message] [#]
[6 5] [#] [Channel 5 digital message] [#]

Special characters can be programmed within the digital message (see step 1)

ex: To send the message [1 2 8 6 0 1] (address and channel 1) to a digital pager, program:
[6 1] [#] [1 2 8 6 0 1] [#]

STEP 6 COMMUNICATION OPTIONS

GENERAL OPTIONS

[7 0] [#] [D1, D2, D3, D4, D5] (5 digits)

D1 DBD/DTD (Delay Before Dialing / Dial Tone Detection)

Enter [1] to [9] to set a waiting time of 1 to 9 sec. before The Dialex dials out after picking up the line.

Enter [0] to activate the dial tone detection function. The Dialex will dial out as soon as the dial tone is detected. If no dial tone is detected during 2 trials, the unit will dial out within 10 seconds.

D2, D3 DBT/CPF (Delay Before Transmission / Call Progress Function)

Enter [01] to [19] to set a waiting time of 1 to 19 seconds between the end of dialing out and the begining of playing back messages.

PROGRAMMING

Enter 00 to activate call progress tone detection. In this case, the DIALEX quickly skips busy numbers and begins playback only when someone answers the phone. This feature may not work well on some telephone lines, depending on signal and noise levels.

D4 REP (Message Repeat)

Enter a number between [1] to [0] to set 1 to 10 message repeats on every call.

D5 Dialing Mode

Enter 0 to dial out in DTMF mode

Enter 1 to dial out in pulse mode

ex: The telephone line is capable of DTMF dialing and you want to use the dialer with maximum efficiency. So you set the DTD and CP functions and the message to be repeated 3 times. You set it to dial out in DTMF.
Program: [7 0] [#] [0 0 0 3 0]

CALL OPTIONS

The call options allow you to set the number of call sequences after which the system will automatically reset (first digit). The second option (D2, D3) sets the redial delay in minutes (delay between the end of a call sequence and the begining of a new one)

[7 1] [#] [D1 D2 D3] (3 digits) channel 1 option

[7 5] [#] [D1 D2 D3] (3 digits) channel 5 option

D1 Number of call sequences (Numbers of times that the list of phone numbers is called)
1 to 9 Set an automatic reset after 1 to 9 call sequences
D2, D3 Redial delay
00 to 99 Sets the time to wait before trying the sequence again "00" = 30 seconds

ex: On channel 1, you want the Dialex to stop after 5 call sequences if nobody acknowledges the system by pressing "0" on a touch tone TM phone (Remote Reset) and you want to set a redial delay of 2 minutes.
Program: [7 1] [#] [5 0 2]

STEP 7 INPUT DETECTION MODE

CH1 input detection mode can be set to Standard Detection Mode (SDM) or Pulse Bell Detection Mode (PBDM)

[8 0] [#] [1 digit]

0 Set SDM Operation
1 Set PBDM Operation

ex: You want to use the DIALEX in standard detection mode.
Program [8 0] [#] [0]

STEP 8 TEST FUNCTION

When the following locations are accessed, the DIALEX will start a call procedure on the assigned channel. Entering one of these test codes has the same effect as activating the corresponding input.

[9 1] [#] Initiate Channel 1 call procedure.

[9 5] [#] Initiate Channel 5 call procedure.

If tested using the programming telephone and if call progress is set in step 7, press a touch tone button 2 or 3 times after the phone number is dialed, to simulate ring and called party answering.

PROGRAMMING

PROGRAMMING VERIFICATION

The user can read the programming of a location by entering [0] before the location number. It is not necessary to enter a "#" after the location number. The DIALEX will display the programming content of that location, by flashing the value of each digit:

Number	Status LED Flashes:
1	Once
2	Twice
n	n times
9	9 times
0	10 times
*	11 times
#	12 times
Pause	13 times

ex: To check the first phone number, enter
[0 1 1]

The Status LED will flash for each digit with a delay of 1 second between digits: once for 1, twice for 2, ... ten times for 0, etc.

READY STATE

The unit is in ready mode when all red lights are off and the green status Led flashes every 2 seconds.

RESET

There are three ways to reset the DIALEX:

OPERATION

1) Hardware Reset, by activating the "RST" input
2) Remote Tone Reset, by pressing "0" between messages
3) Automatic Reset, after the programmed number of sequences

DON'T FORGET .

In Hardware Reset state, the Dialex is disabled and no function can operate.

OPERATION

LED STATUS INDICATORS

ID	ACTION	DESCRIPTION
STATUS	Flashes every 2 seconds Flashes slowly Flashes quickly Steady ON Steady OFF	Ready mode Programming mode Record or playback message Call mode Stand-by mode: Channel(s) activated and already reported
LINE	Steady on Intermittent flash	DIALEX or programming phone are off-hookFlash while dialing out
RST	Steady on	RST input is activated
CH1, CH2, ... CH5	Steady on	Channel input is activated

HARDWARE RESET

DIALEX goes to reset state each time the reset (RST) input is activated and it will remain inoperative as long as the reset input is activated.

REMOTE TONE RESET

The DIALEX can be reset by phone from a remote location. This function is used to acknowledge an alarm call and stop the calling sequence. The called party can invoke this function by pressing the [0] key. This option works only with a Touch Tone telephone.

REMOTE RESET

Use the [0] key to acknowledge and stop calling sequences. The Dialex accepts remote reset only at the end of the message. There is a 4 second pause before the message plays back again, during which time the [0] key can be detected.

AUTOMATIC RESET

The DIALEX will perform 1 to 9 calling sequences, according to the number programmed at location 71 to 75 for channels 1 to 5. It will reset itself after the last call.

CALL MODE

DIALEX is in call mode when the STATUS LED is on steady. If the LINE LED is also on, the Dialex is presently off hook. In the wait period of call redial mode, just the STATUS LED stays on after the last call of each sequence. While the Dialex is doing a call procedure, it will not see the activation of any other channel, except for CH1. CH1 can be detected during the redial wait time (between sequences of numbers called). If CH1 is activated then, the Dialex will immediately start the call procedure for CH1. When the CH1 call procedure has finished, the Dialex will restart the call procedure for the channel originally activated.

OPERATION

CHANNEL BY-PASS

When one or more channel inputs are not in use, by-pass these channel inputs by programming in a blank in the calling priority list.:

example. To by-pass channel input #2, program: [3 2] [#] [#]

AUDIBLE TONES

The called party may hear two different series of audible tones. When he answers a call from the DIALEX, he hears a special alert tone before the message playback. Secondly, a distinct series of "Beeps" can be heard after pressing the [0] key (Remote Reset) to acknowledge the reset.

BUSY LINE

During a call sequence, the DIALEX can detect a busy line or no answer if "call progress" is chosen at location 70. In either case, it will hang up and call the next number.

RECORDING TIME

The DIALEX 4000 provides 20 seconds of recording time. If your application needs more recording time, you can buy the model 4500 unit which provides up to 60 seconds of recording time and 4 channel inputs.

CALL PROGRESS

This feature may not work well on some telephone lines, depending on signal and noise levels. In that case, use a time delay instead, programmed at digits 2 and 3 of location 70. Test the operation as programmed before completing the installation.

SPECIFICATIONS

SPECIFICATIONS	DI4000/DI4500	
Power requirement	12 to 14VDC	
Stand-by Current	30mA	
Maximum Current Draw	130mA maximum	
Fuse F1	500mA, 2AG, "Small" Size	
Operating temperature	0°C to 50°C	
Input Detection Capability	All channels: N.O. Contacts, switch to (-) or N.C. with resistor added CH1: As above and also selectable for Positive (+) Voltage Trigger	
Dialing Mode	DTMF or pulse	
Telephone Interface	CA38A or RJ31X connection	
Telephone Numbers	8	
Telephone Priority list	For each channel	
Communication Option	Communication delays, call progress function, message repeat ...	
Call Options	Automatic reset after 1 to 9 call sequences and redial delay of 30 seconds or 1 to 99 minutes	
Dimensions, Circuit Board Only	13, 5cm x 11cm x 2cm (5 3/8" x 4 3/8" x 3/4")	
Weight	150 gr (5 1/4 oz)	
	4000	**4500**
Channel Inputs	2	4
Voice Messages	3 + 1 ID Message	5 + 1 ID Message
Total Recording Time	20 seconds	60 seconds
Pager Messages	3	5

LIMITED WARRANTY

Delta Vox Electronics Inc. warrants that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfilment of any breach of such warranty, Delta Vox Electronics Inc. shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Delta Vox Electronics Inc. such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied, and of all other obligations or liabilities on the part of Delta Vox Electronics Inc. This warranty constitutes the entire warranty. Delta Vox Electronics Inc. neither assumes, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

In no event shall Delta Vox Electronics Inc. be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation, operation or failure of this product.

Warning: Delta Vox Electronics Inc. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

PHONE NUMBERS DIRECTORY

1	1	#																#	Phone #1
1	2	#																#	Phone #1
1	3	#																#	Phone #1
1	4	#																#	Phone #1
1	5	#																#	Phone #1
1	6	#																#	Phone #1
1	7	#																#	Phone #1
1	8	#																#	Phone #1

COMMUNICATION FORMAT (FOR EACH TELEPHONE NUMBERS)

2	0	#								0= Speech	1=Pager (enter all 8 digits)

CALL LIST, PRIORITY ORDER

3	1	#								#	Channel 1 list	
3	2	#								#	Channel 2 list	
3	3	#								#	Channel 3 list	
3	4	#								#	Channel 4 list	(DI4500)
3	5	#								#	Channel 5 list	(DI4500)

EMERGENCY MESSAGE RECORDING

5	0	#		#	ID Message (name, Adress, Etc)
pause		1		#	Channel 1 Message
pause		2		#	Channel 2 Message
pause		3		#	Channel 3 Message
pause		4		#	Channel 4 Message
pause		5		#	Channel 5 Message

PAGER MESSAGE

6	0	#			Pager Transmission Delay							
6	1	#								#	Pager Message Channel 1	
6	2	#								#	Pager Message Channel 2	
6	3	#								#	Pager Message Channel 3	
6	4	#								#	Pager Message Channel 4	(DI4500)
6	5	#								#	Pager Message Channel 5	(DI4500)

COMMUNICATION OPTIONS									
7	0	#							
1st digit			Delay Before Dialing (0 = Dial Tone Detect, instead of a delay)						
2nd & 3rd			Delay Before Starting Message (1 to 19 sec.)						
4th			No. of Message Repetitions, 0 to 9 repetitions						
5th			Dialing Type 1 = Pulse 0 = Tone						
CALL OPTIONS									
7	1	#				Channel 1 Options			
7	2	#				Channel 2 Options			
7	3	#				Channel 3 Options			
7	4	#				Channel 4 Options (DI4500)			
7	5	#				Channel 5 Options (DI4500)			
1st digit 2nd-3rd			Auto Reset after "N" sequences, Program n = 1 to 3 Delay in minutes between redial sequences, 00 = 30 seconds						
CH1 INPUT OPTION									
8	0	#		0=Standard (SDM) 1= Detect Pulsing Bell on CH1 (PBDM)					
TEST FUNCTION									
9	1	#	Initiate Channel 1 Call Procedure						
9	2	#	Initiate Channel 2 Call Procedure						
9	3	#	Initiate Channel 3 Call Procedure						
9	4	#	Initiate Channel 4 Call Procedure (DI4500)						
9	5	#	Initiate Channel 5 Call Procedure (DI4500)						