DESIGNED, MANUFACTURED AND SUPPORTED IN THE USA

VIKING
SECURITY & COMMUNICATION

PRODUCT MANUAL

K-202-DVA
Two-Input Voice Alarm Dialer
December 06, 2021

Voice Alarm Dialing from Two Inputs

Viking's **K-202-DVA** is a fully programmable two-input, multi-number auto dialer, designed for emergency and non-emergency message notification. The **K-202-DVA** has two dry contact inputs, each of which can dial up to seven 32-digit phone numbers and play a message up to 1 minute in length specific to that input.

Messages can be recorded locally or remotely with a total message time for both inputs of two minutes. The **K-202-DVA** has call progress detection capability with normal and fast busy, call pickup, CPC and ring-no-answer detection. Programming is easily done with a Touch Tone phone.

Features

- Non-volatile memory (no batteries required)
- Stores up to seven 32-digit phone numbers per input (fourteen 32-digit numbers total)
- 2 minutes of record time (1 minute per input)
- Programmable message repeat counter
- Programmable lap counter
- Two inputs programmable for normally open or normally closed and enabled or disabled
- Programmable ring delay for remote programming and alarm polling
- Programmable qualifier timer for each input (time for an event to be qualified as an alarm)
- Programmable resume timer for each input (time following reset for input to become active again)
- Call progress detection
- Programmable ringback limit for call progress
- Remote security and access codes
- Local or remote programming and recording
- Compatible with the **RC-2A** and **RC-3** remote DTMF controllers
- Phone numbers may be programmed as pager numbers (no voice message played)
- Programmable hookswitch flash before dialing
- **Local reset input**
- **Local alarm state indication LED**

Applications

- Security/burglar/fire alarm notification
- System alarm or equipment malfunction notification
- Environmental warning notification
- Contacting personnel via numeric pagers

www.VikingElectronics.com
Information: 715-386-8861

Specifications

Power: 120V AC/12V DC 500 mA, UL listed adapter provided
Dimensions: 5.25" x 3.6" x 1.75" (133mm x 91mm x 44mm)
Shipping Weight: 1.5 lbs (0.68 Kg)
Environmental: 32°F to 90°F (0°C to 32°C) with 5% to 95% non-condensing humidity
Talk Battery: 12V DC
Touch Tone Dialing: 100 ms on/off, 50 ms on/off
CPC Detection Time: 320 ms minimum
Message Record Time: 2 minutes
Sampling Rate: 64 K (equivalent)
Input Detection Time: 90 ms with Qualifier Timer set to 0
Resolution Qualifier Timer: 1 second to 18 hours
Resolution Resume Timer: 1 second to 18 hours
Connections: (1) RJ11 jack for telco connection, (1) 6 position screw terminal block for inputs

Definitions

Alarm Dialer: The **K-202-DVA** calls the list of up to 7 phone numbers associated with an alarm input when the input has reached the alarm state.

Alarm Input: One of two inputs for alarm sensors which may be connected to the **K-202-DVA**. Each input may be configured as normally open, normally closed, or disabled. In addition, each input may be configured to require a momentary or continuous closure.

Alarm Message: One of two user-recorded announcements associated with a corresponding alarm input. Each message may be up to one minute in length.

Alarm State: An alarm input reaches this state when there has been a closure across the input (if normally open) or an open (if normally closed) for a minimum amount of time. If the Qualifier Timer is set to zero, this minimum time is about 90ms. Otherwise the time to reach the alarm state is the value the Qualifier Timer has been set to (ranging from 1 second to 18 hours).

Call Progress Detection: This feature enables the **K-202-DVA** to determine when the number it is calling has answered so that it can start playing the alarm message.

Forced Play Timer: The forced play timer is operational when the Call Progress Detection has been disabled. Instead of starting the alarm message when the call is picked up, the **K-202-DVA** waits a set period of time (from 1 - 99 seconds) after the number is dialed before it starts playing the message. This feature would ordinarily only be used when for some reason reliable call progress detection is not possible; for example: if one or more of the lines being called is very noisy.

Hookswitch Flash Before Dialing: In some alarm dialing applications, it is necessary for the **K-202-DVA** to provide a 500ms hookswitch flash before dialing any programmed phone number. This feature can be enabled or disabled on a global basis (applies to both inputs and all dial numbers).

Lap Counter: The Lap Counter is a programmable counter that sets how many times the **K-202-DVA** will cycle through its list of up to 7 numbers for a given input before it gives up and stops the alarm dialing procedure. The Lap Counter is set individually for each input and can be from 1 - 99.

Message Repeat Count: This is the number of times the alarm message is repeated per call. The Message Repeat Count is set individually for each input and can be from 1-99.

Pager Number: A phone number of up to 32 digits which can be used to dial pagers (no alarm message is played).

Priority: Input 1 has higher priority than Input 2.

PA (Public Address) Mode: In this mode, the **K-202-DVA** dials an access code to play the messages over a PA (public address) system, versus dialing telephone numbers that will be answered by live people.

Qualifier Timer: This is a user-programmable timer that can be set from 1 second to 18 hours and specifies the amount of time that a closure must stay in effect before the **K-202-DVA** enters the alarm state. The default value of the Qualifier Timer is 0, which is OFF.

Remote Access Code: A six-digit code required for remotely accessing the **K-202-DVA** in order to poll the alarm inputs to see if they have entered the alarm state and have not been reset.

Reset State: An alarm is reset if the called party or the remotely accessing user dials a touch-tone “9” during the alarm message. The alarm input resumes normal operation after the **Resume Timer** expires.

Ring Delay: This is the number of rings the **K-202-DVA** waits before answering an inbound call. The Ring Delay must be set from 0-9, with 0 specifying that incoming calls are not to be answered.

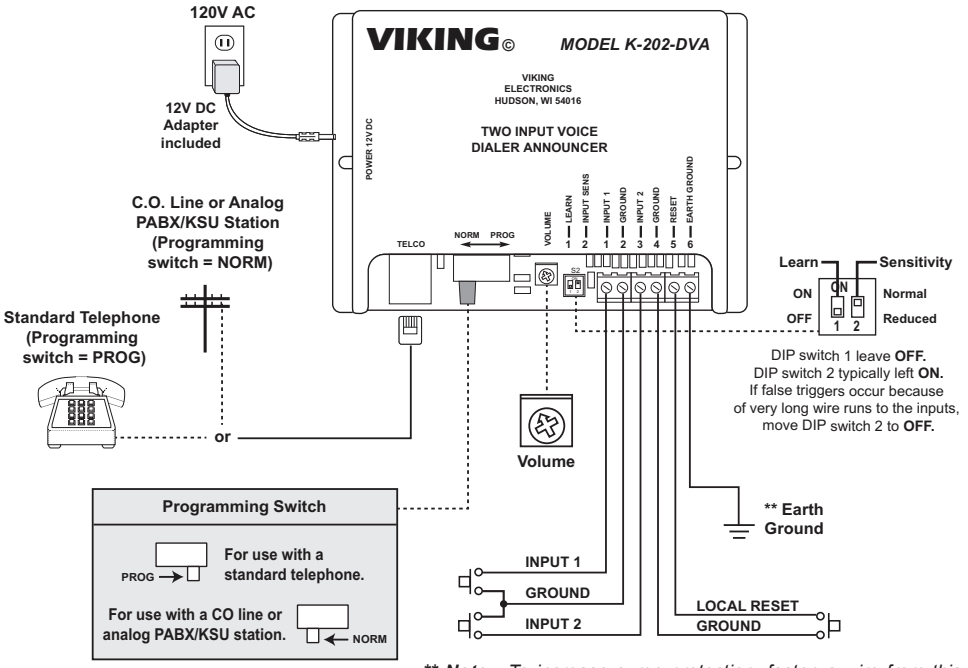
Ringback Limit: This is the number of times the **K-202-DVA** will allow the phone to ring when trying to reach a number on its phone number list before giving up and going on to the next number.

Resume Timer: This is a user-programmable timer that can be set from 1 second to 18 hours and specifies the amount of time after an alarm input is reset before it resumes normal operation and begins looking for alarms again. See Operation for a discussion of how the Resume timer determines when an alarm input leaves the reset state. The default value of the Resume Timer is zero, which is OFF.

Security Code: A six-digit code required for entering programming.

Installation

IMPORTANT: *Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges.*



***** Note:*** *To increase surge protection, fasten a wire from this screw terminal to Earth Ground (grounding rod, water pipe, etc.)*

Programming

A. Entering the Programming Mode

1. Local

Step 1.	Move the **PROG/NORM** switch to **PROG** and plug an analog phone into the **TELCO** jack.
Step 2.	After taking the phone off hook, wait for two beeps.
Step 3.	Program as shown in sections **B-U**.
Step 4.	To exit programming, hang-up. Set the **PROG/NORM** switch to **NORM**.

2. Remote

Step 1.	Make sure the **PROG/NORM** switch is set to the **NORM** position and that there is a CO line or analog PABX/KSU extension in the **TELCO** jack.
Step 2.	Call into the **K-202-DVA** on that line or extension. The unit will answer after the set ring delay (see **Programming** section **L**) and a single beep should be heard.
Step 3.	Enter a ∗ and the six-digit security code (factory default is **845464**). If the correct code is entered, two beeps should be heard. ***Note:*** *The security code must be entered within 20 seconds otherwise the* ***K-202-DVA*** *will time out and hang up. When in programming, if 20 seconds elapse without Touch Tones being entered or a message being recorded, the* ***K-202-DVA*** *will automatically exit programming and hang up.*
Step 4.	Program as shown in sections **B-U**.
Step 5.	To exit programming, hang-up. After the 20 second timeout has elapsed, the **K-202-DVA** will be ready for normal operation. Alternatively, dial **##7** and the **K-202-DVA** will immediately be ready for normal operation.

Note: *Correct programming entries are implemented and then acknowledged by two beeps. Incorrect programming entries are discarded and receive three beeps to indicate an error.*

B. Quick Programming Features (see sections D - U for detailed descriptions)

Description	Enter Digits	+	Location
To enter phone numbers for each input	**1-32 digits**	+	**#XY***
To clear a phone number	(no digits)	+	**#XY***
To enter pager numbers	**1-32 digits**	+	**#∗XY***
Contacts: First digit - 0 = NO, 1 = NC , 2 = enabled, 3 = disabled Second Digit - 0 = momentary closure, 1 = continuous closure	**2 digits**	+	**#X9***
Repeat/Lap Counter: First two digits - message repeat counter (01-99) Last two digits - lap counter (01-99)	**4 digits**	+	**#X0***
To program the Qualifier Timer (HHMMSS, 18 hour maximum)	**6 digits**	+	**#X∗***
To program the Resume Operation Timer (HHMMSS, 18 hour maximum)	**6 digits**	+	**#X#***
To program the Security Code	**6 digits**	+	**#90**
To program the Access Code	**6 digits**	+	**#91**
To program the Ring Delay (0-9)	**1 digit**	+	**#92**
To program the Ringback Limit (01-99)	**2 digits**	+	**#93**
To program the Forced Play Timer (01-99 seconds) (00 = clear)	**2 digits**	+	**#94**
To record messages for each input (1-2)	**∗1 - ∗2**		
To clear one message	**∗1 - ∗2** then immediately press any digit		
To play message for either input	**∗0X***		
To add a 4 second pause anywhere in the dialing string	**∗9**		
To add a ∗ anywhere in the dialing string	**∗∗**		
To add a # anywhere in the dialing string	**∗#**		
To set to normal dialing speed	**##1**		
To set to fast dialing speed	**##2**		
To program no hookswitch flash before dialing	**##3**		
To program a 500ms hookswitch flash before dialing	**##4**		
To disable the PA (public address) mode	**##5**		
To enable the PA (public address) mode	**##6**		
To hang up	**##7**		
To disable the Auto Resume mode	**##8**		
To enable the Auto Resume mode	**##9**		
To return programming to defaults	**###**		

X is an input number (1 or 2) and Y is the dialing order (1-7) of the seven memory locations for this input.

C. Factory Default Settings

Phone Numbers	Not programmed (section **D**)
Pager Number	Not programmed (section **E**)
Alarm Input Configuration	N/O (Enabled) Momentary (section **F**)
Lap Counter	1 (section **G**)
Message Repeat Counter	2 (section **G**)
Qualifier Timer	0 - disabled (section **H**)
Resume Timer	0 - disabled (section **I**)
Security Code	845464 (V-I-K-I-N-G) (section **J**)

Access Code	123456 (section **K**)
Ring Delay	1 (section **L**)
Ringback Limit	6 (section **M**)
Call Progress Detection	Enabled (section **N**)
Messages	Not recorded (section **O**,**P**)
Dialing Speed	Normal (section **Q**)
Hookswitch Flash Before Dialing	Disabled (section **R**)
PA Mode	Disabled (section **S**)
Auto Resume Mode	Disabled (section **T**)

D. Programming the Phone Numbers

To program one of the seven phone numbers for each alarm input enter: the desired 1-32 digit phone number **+ # + XY** (where X is the input number (1 - 2) and Y the dialing order (1-7) of the seven memory locations for this input). To add a 4-second pause to the dial string (this counts as one of the 32 digits) enter **∗9**. To add a ∗ to the dial string enter **∗∗**. To add a # to the dial string enter ∗#. To clear a number enter **# + XY** (where X is the input number (1 - 2) and Y is the dialing order (1-7) of the seven memory locations for this input) without any preceding digits.

E. Programming Pager Phone Numbers

To program one of the seven phone numbers for each alarm input as a pager number enter: the desired 1-32 digit pager phone number **+ #∗ + XY** (where X is the input number (1-2) and Y is the dialing order (1-7) of the seven memory locations for this input). As with normal phone numbers, 4-second pause, ∗ or **#** can be programmed by entering **∗9**, **∗∗** or **∗#** respectively. To clear a pager number enter **# + XY** without any preceding digits. When dialing pagers, the **K-202-DVA** is normally configured to send a certain character string when activated, that is easily recognized by the user on the pager display. To accomplish this, the **K-202-DVA** is programmed with the phone number for the pager, a series of pauses (usually 8 or 12 seconds), the character string that you want to appear on the pager display ("3333333333" for example), a **#** character (programmed as ∗#) to "end" the call with the paging equipment, followed by **#∗** plus **XY** (where X is the input number (1-2) and Y is the dialing order (1-7) of the seven memory locations for this input).

Pager Number Example:

“1 3035551212 ∗9∗9 3333333333 ∗# #∗11”

Pager Phone Number	Pause Time	String to appear on pager display	“#”	Location of Pager string

F. Contact Closures

Enter 2 digits + **#X9**, where X is the input number (1-2).

First Digit: **0 = normally open**
1 = normally closed
2 = enabled
3 = disabled

Second Digit: **0 = momentary closure**
1 = continuous closure

Note: *These parameters should be set for each input being used. If contacts are disabled through programming **30/31#X9**, they must be enabled with **20/21 #X9** before they will function. This allows wiring and contact style changes without causing false alarms.*

G. Message Repeat Counter and Lap Counter

Enter 4 digits + **#X0**, where X is the input number (1-2)

First two digits: 01 - 99 are the Message Repeat Counter
Last two digits: 01 - 99 are the Lap Counter

Note: *Each input can have its own Message Repeat Counter and Lap Counter.*

H. Qualifier Timer

Enter 6 digits + **#X∗**, where X is the input number (1-2). The format is 2 digits for hours, 2 digits for minutes, and 2 digits for seconds: **HHMMSS**. The qualifier timer can be set anywhere from zero to 18 hours, and has a 1 second resolution. ***Note:*** *Each input has its own Qualifier Timer.*

I. Resume Timer

Enter **6 digits + #X#**, where X is the input number (1-2). The format is 2 digits for hours, 2 digits for minutes, and 2 digits for seconds: **HHMMSS**. The resume timer can be set anywhere from zero to 18 hours, and has a 1 second resolution. ***Note:*** *Each input has its own Resume Timer.*

J. Security Code (memory location #90)

The security code allows the user/installer to program the **K-202-DVA** either locally or remotely. The factory set security code is 845464 (V-I-K-I-N-G). It is recommended that the security code be changed. **Example:** To store 654321 as the security code:

Step 1.	Access programming as shown in **Programming** section **A**.
Step 2.	Enter **654321 #90**.
Step 3.	Exit **Programming** as shown in section **A**.

Note: *The security code must be 6 digits, cannot include a ∗ or a **#**, and cannot be set the same as the remote access code.*

K. Remote Access Code

Enter a six-digit access code followed by **#91**. ***Note:*** *The remote access code must use only the digits 0-9, cannot contain ∗ or **#**, and cannot be set the same as the security code.*

L. Ring Delay

Enter one digit from 0-9 followed by **#92**. If the ring delay is set to **0**, ring detection is disabled, so that the **K-202-DVA** will not answer incoming calls. It is important to note that this prevents Remote Access and Remote Programming.

M. Ringback Limit

Enter two digits from 01-99 followed by **#93**.

N. Forced Play Timer and Call Progress Detection

Call Progress Detection is enabled by setting the Forced Play Timer to 0, which is done by entering the two digits 00 followed by **#94**. Call Progress Detection is disabled by setting the Forced Play Timer to a non-zero value from 1 to 99 seconds. Enter a two digit number from 01- 99 followed by **#94**.

O. Recording Messages

Recording of the voice messages may be done either locally or remotely. Once programming has been entered, touch tones are used to start and stop the recording process. To start a recording: enter ∗ followed by the number of the input. The **K-202-DVA** gives a single beep to indicate that it is recording and then starts the recording process. Speak into the handset of the telephone to record the message. The **K-202-DVA** has a maximum message time for each input of one minute. When finished recording the message, enter any touch tone to stop the recording process. At this point the **K-202-DVA** automatically plays back the message just recorded. If the recording process goes over one minute the **K-202-DVA** stops the recording and starts playing back the message. To clear a single message: enter ∗ followed by the number of the input and then immediately press any Touch Tone to stop the recording process.

P. Playing Back Messages

When in programming, enter ∗**0** followed by the number of the input to play back the message recorded for that input. If no message has been recorded, nothing will be heard.

Q. Selecting Dialing Speed

To select normal dialing speed (100 ms) enter **##1**. To select fast dialing speed (50 ms) enter **##2**.

R. Hookswitch Flash Before Dialing

In the majority of alarm dialing applications, the **K-202-DVA** simply goes off hook on the phone line or PBX extension, pauses one second, then begins dialing the programmed phone (or pager) number. In a few alarm dialing applications, the **K-202-DVA** must go off hook on the phone line or PBX extension and provide a 500 millisecond hookswitch flash before dialing the programmed phone number. This feature can be enabled or disabled on a global basis (applies to both inputs and all dial numbers). To enable the hookswitch flash before dialing enter **##4**. To disable the hookswitch flash before dialing enter **##3** (default). When hookswitch flash before dialing is enabled, the **K-202-DVA** goes off hook, waits 2 seconds, provides the 500 millisecond hookswitch flash, waits one second then dials the programmed phone number.

S. PA (Public Address) Mode

The PA mode allows the **K-202-DVA** to play recorded messages over a paging system. For a description of how the mode functions, see **Operation** section **C**. This feature is enabled or disabled on a global basis (applies to both inputs and all dial numbers). When in programming, enter **##6** to enable the PA mode. When the PA mode is enabled, the forced play timer should be set to 10 seconds (see **Programming** section **N**) and the lap counter should be set to a value higher than 1 (see **Programming** section **G**). To disable the PA mode enter **##5** (default). All options for the inputs are still programmable (normally open or normally closed, momentary or continuous, qualifier timer, etc). Note that the PA mode should not be enabled if the Auto-Resume mode has been enabled because the **K-202-DVA** will not function properly with both modes enabled.

T. Auto Resume Mode

See **Operation** section **D** for a functional description of this mode. The Auto-Resume mode is disabled by default but can be enabled by entering ##9 in programming. In addition, a value for the resume timer should be set so the unit knows how long to wait before repeating the alarm dialing procedure (see **Programming** section **I**). To disable the mode, enter **##8**. The Auto-Resume mode should not be enabled if the PA mode has been enabled because the **K-202-DVA** will not function properly with both modes enabled.

U. Return to Default

IMPORTANT: Executing the following programming erases all phone numbers and messages and returns the K-202-DVA to default settings. To erase all messages and phone numbers and to return the **K-202-DVA** to its original default settings enter **###** while in programming.

Operation

A. Alarm Dialer Mode

The **K-202-DVA** constantly monitors both alarm inputs to see if either of them leaves their normal state (N/O becomes closed or N/C becomes open) for more than 90 ms. In the event of two simultaneous closures, Input 1 has higher priority. What happens after a closure is detected depends on the Qualifier Timer setting for the input. If the Qualifier Timer is set to zero, the event qualifies as an alarm immediately and the input enters the alarm state. Otherwise the **K-202-DVA** counts down from the Qualifier Timer value to zero, all the while watching to see that the closure remains in effect. If the Qualifier Timer reaches zero and the closure has not gone away the event qualifies as an alarm and the input enters the alarm state.

When an input has entered the alarm state, the **K-202-DVA** dials the first phone number associated with that input. When dialing is completed, the **K-202-DVA** looks to see if call progress detection is enabled. If it is, the **K-202-DVA** counts ringbacks while looking for the called number to answer. If the call is not answered before the programmed ringback limit is reached, the **K-202-DVA** will hang up and dial the next number in the list. If the called party answers, the **K-202-DVA** starts playing the alarm message associated with that input. If call progress detection is not enabled, the **K-202-DVA** simply waits until the forced play timer has expired and then starts playing the alarm message regardless of whether the called party has answered or not. ***Note:*** *If the phone number is a pager number, the **K-202-DVA** does not play the alarm message, but instead pauses two seconds and hangs up.* When the called party answers there are 4 options available, as shown below.

Touch Tone	Result
1	Stops the current message if playing and plays message 1 if Input 1 has an alarm that has not been reset, followed by Message 2 if Input 2 has an alarm that has not been reset. If neither input has an alarm that has not been reset, the **K-202-DVA** gives three beeps.
2	Stops the current message if playing and plays the other message if the other input has an alarm that has not been reset. If the other input does not have an alarm that has not been reset the **K-202-DVA** gives three beeps.
3	Stops the current message if playing, hangs up and continues dialing if applicable.
9	Stops the current message if playing and resets the alarmed input.

Once the message repeat count has been met without a response, the **K-202-DVA** will give a single beep to indicate that it has delivered its messages and is about to hang up. The **K-202-DVA** will then pause for five seconds to allow the called party a final opportunity to exercise one of the above options.

If the **K-202-DVA** delivers its message and the called party does not reset the alarmed input the **K-202-DVA** hangs up and dials the next number on the list for that input. If all numbers have been dialed and the alarm is still not reset the **K-202-DVA** increments the lap counter for that input and starts the dialing process over again. This will continue until the lap counter has been met. At this point the **K-202-DVA** marks the input as an alarmed input and returns the input to its rest state.

If an alarm input is reset, the manner in which the input resumes normal operation is determined by the Resume Timer. If the Resume Timer is set to zero, the **K-202-DVA** starts looking at the input again right away. If the closure is still in effect, the **K-202-DVA** waits for it to go away. If the closure is no longer in effect but a short time later it returns, the **K-202-DVA** will start the alarm dialing procedure all over again for that input. However, if the Resume Timer is set to a non-zero value, the **K-202-DVA** counts down from that value to zero and then examines the input to see if the closure is still in effect. If it is, the alarm dialing procedure starts again. If not, the input goes back to the rest state.

Note that if a ∗ is entered while connected to the call the **K-202-DVA** will exit its current mode and if no touch tones are entered within 20 seconds, it will hang up and proceed. This 20 second wait is important, so that an **RC-2A** or **RC-3** can be used in conjunction with the **K-202-DVA**. For more information, see **DOD 878**.

B. Remote Access Polling

The **K-202-DVA** can be called from a remote location to check on possible alarm activity. When the phone line it is connected to is called, it answers and gives a single beep as a prompt. Enter ∗ followed by the 6 digit access code, the K-202-DVA gives 2 beeps, and the for options in Figure 1 on page 6 become available. When finished, dial 3 to disconnect (3 beeps are heard) or just hang up. Note that the K-202-DVA will give 3 beeps and hang up if 20 seconds go by without a touch tone entry.

C. PA (Public Address) Mode

The PA mode is useful in applications where the **K-202-DVA** is providing emergency or informational messages over a paging system, activated from an alarm system, panic buttons or doorbell buttons. When an input is activated, the **K-202-DVA** dials the access code or extension number for the PA system and listens for a busy signal. If it does not hear a busy signal the forced play timer expires and the recorded message plays for the programmed number of repeats. Unlike the alarm dialing mode, this mode does not produce a beep after the message has played, so beeps are not sent out over the speakers. If the **K-202-DVA** does hear a busy signal it hangs up, waits two seconds and then dials the access code for the PA system again, provided that the lap counter has not been reached yet. The **K-202-DVA** will keep repeating this process until a busy signal is not heard or the lap counter reaches its programmed value. Once the **K-202-DVA** plays the message or the lap counter expires it returns to idle and waits for another input trigger. The lap counter in this mode is actually a counter for the maximum number of times the **K-202-DVA** will attempt to call a busy paging port before it gives up. When playing emergency messages over the paging system, the lap counter should be set fairly high to ensure the emergency message eventually plays, especially on systems with heavy paging traffic.

D. Auto Resume Mode

At the end of the standard alarm dialing procedure when the lap counter has been met the **K-202-DVA** resets the input and marks it to keep track of the fact that there was an alarm that was not reset by the user. From this point on, while it is possible to call in to the **K-202-DVA** and poll it to discover that there was an alarm, the **K-202-DVA** does not initiate any more dialing.

This alarm situation is handled differently when the auto-resume feature is enabled. The **K-202-DVA** resets and marks the input, but it also starts the resume timer, the value of which is set in programming (see **Programming** section **I**). While the resume time is running, the unit will not call its programmed numbers, but it will play the alarm message of the marked input if it is polled, and the user can dial a touch tone 9 to return the input to its rest state. If the resume timer elapses without a call from the user and the closure is still in effect (to the input), the **K-202-DVA** clears the lap counter and starts the alarm dialing sequence again from the beginning. If the lap counter is reached again, the unit ceases dialing and the resume timer is started again. This will continue until one of the called numbers answers and resets the input by dialing a touch tone 9 or until a user calls in, polls the unit by dialing a touch tone 1, and resets the alarmed input by dialing a touch tone 9. See **Operation** section **B** for a description of the polling procedure.

E. Local Reset

A momentary switch can be connected between the Reset Terminal and chassis ground (not earth ground) to provide a local reset to both inputs. See the Installation diagram on page 3 to see how to hook this up. A closure resets either or both of the inputs if they are in alarm state, and will also clear either or both of the inputs if they are marked. Note that the inputs may alarm again if the resume timer is set to zero and the condition that caused the alarm has not been corrected.

F Status LED Alarm Indication

The Status LED gives an indication of the alarm status of the **K-202-DVA**. If neither of the inputs are in the alarm state or marked as the result of previous dialing that did not result in a remote reset, the Status LED remains lit steady. If Input 1 enters the alarm state, the Status LED gives a quick flash every second until reset. If Input 2 enters the alarm state, the Status LED gives a quick double flash every second. If both inputs are in the alarm state, the Status LED alternates between a single flash and a double flash every second. The Status LED flashes in the same way when either or both of the inputs are marked. To reset the **K-202-DVA**, either provide a closure between the reset terminal and chassis ground (not earth ground) or call the unit, and when it answers, enter ∗ plus the access code, then 1 and 9 while the message is playing (see B. Remote Access Polling on Page 7).

Warranty

IF YOU HAVE A PROBLEM WITH A VIKING PRODUCT, CONTACT VIKING TECHNICAL SUPPORT AT: 715-386-8666

Our Technical Support Department is available for assistance Monday to Friday 8:00am - 5:00pm central time. Before you call, please:

1. Know the model number, the serial number, and what software version you have (see serial label).
2. Have the Product Manual in front of you.
3. It is best if you are on site.

RETURNING PRODUCT FOR REPAIR

The following procedure is for equipment that needs repair:

1. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (RA) number. The customer MUST have a complete description of the problem, with all pertinent information regarding the defect, such as options set, conditions, symptoms, methods to duplicate problem, frequency of failure, etc.
2. Packing: Return equipment in original box or in proper packing so that damage will not occur while in transit. The original product boxes are not designed for shipping - an overpack box is required to prevent damage in transit. Static sensitive equipment such as a circuit board should be in an anti-static bag, sandwiched between foam and individually boxed. All equipment should be wrapped to avoid packing material lodging in or sticking to the equipment. Include ALL parts of the equipment. C.O.D. or freight collect shipments cannot be accepted. Ship cartons prepaid to:
   VIKING ELECTRONICS
   1531 INDUSTRIAL STREET
   HUDSON, WI 54016
3. Return shipping address: Be sure to include your return shipping address inside the box. We cannot ship to a PO Box.
4. RA number on carton: In large printing, write the RA number on the outside of each carton being returned.

RETURNING PRODUCT FOR EXCHANGE

The following procedure is for equipment that has failed out-of-box (within 10 days of purchase):

1. Customer must contact Viking's Technical Support at 715-386-8666 to determine possible causes for the problem. The customer MUST be able to step through recommended tests for diagnosis.
2. If the Technical Support Product Specialist determines that the equipment is defective based on the customer's input and troubleshooting, a Return Authorization (RA) number will be issued. This number is valid for fourteen (14) calendar days from the date of issue.
3. After obtaining the RA number, return the approved equipment to your distributor. Please reference the RA number on the paperwork being shipped back with the unit(s), and also the outside of the shipping box. The original product boxes are not designed for shipping - an overpack box is required to prevent damage in transit. Once your distributor receives the package, they will replace the product over the counter at no charge. The distributor will then return the product to Viking using the same RA number.
4. **The distributor will NOT exchange this product without first obtaining the RA number from you. If you haven't followed the steps listed in 1, 2 and 3, be aware that you will have to pay a restocking charge.**

TWO YEAR LIMITED WARRANTY

Viking warrants its products to be free from defects in the workmanship or materials, under normal use and service, for a period of two years from the date of purchase from any authorized Viking distributor. If at any time during the warranty period, the product is deemed defective or malfunctions, return the product to Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI., 54016. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (R.A.) number.

This warranty does not cover any damage to the product due to lightning, over voltage, under voltage, accident, misuse, abuse, negligence or any damage caused by use of the product by the purchaser or others. This warranty does not cover non-EWP products that have been exposed to wet or corrosive environments. This warranty does not cover stainless steel surfaces that have not been properly maintained.

NO OTHER WARRANTIES. VIKING MAKES NO WARRANTIES RELATING TO ITS PRODUCTS OTHER THAN AS DESCRIBED ABOVE AND DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

EXCLUSION OF CONSEQUENTIAL DAMAGES. VIKING SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE TO PURCHASER, OR ANY OTHER PARTY, FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR EXEMPLARY DAMAGES ARISING OUT OF OR RELATED TO THE SALE OR USE OF THE PRODUCT SOLD HEREUNDER.

EXCLUSIVE REMEDY AND LIMITATION OF LIABILITY. WHETHER IN AN ACTION BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR ANY OTHER LEGAL THEORY, ANY LIABILITY OF VIKING SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, OR AT VIKING'S OPTION, REFUND OF THE PURCHASE PRICE AS THE EXCLUSIVE REMEDY AND ANY LIABILITY OF VIKING SHALL BE SO LIMITED.

IT IS EXPRESSLY UNDERSTOOD AND AGREED THAT EACH AND EVERY PROVISION OF THIS AGREEMENT WHICH PROVIDES FOR DISCLAIMER OF WARRANTIES, EXCLUSION OF CONSEQUENTIAL DAMAGES, AND EXCLUSIVE REMEDY AND LIMITATION OF LIABILITY, ARE SEVERABLE FROM ANY OTHER PROVISION AND EACH PROVISION IS A SEPARABLE AND INDEPENDENT ELEMENT OF RISK ALLOCATION AND IS INTENDED TO BE ENFORCED AS SUCH.

FCC REQUIREMENTS

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

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive REN's on a 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 a line, as determined by the total REN's, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (*e.g.*, 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

The plug used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this K-202-DVA does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

If the K-202-DVA 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 the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

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

If trouble is experienced with the K-202-DVA, for repair or warranty information, please contact:

Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI 54016 (715) 386-8666

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

Connection to Party Line Service is subject to State Tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

WHEN PROGRAMMING EMERGENCY NUMBERS AND (OR) MAKING TEST CALLS TO EMERGENCY NUMBERS:

Remain on the line and briefly explain to the dispatcher the reason for the call. Perform such activities in the off-peak hours, such as early morning or late evenings.

It is recommended that the customer install an AC surge arrester in the AC outlet to which this device is connected. This is to avoid damaging the equipment caused by local lightning strikes and other electrical surges.

PART 15 LIMITATIONS

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

INDUSTRY CANADA REQUIREMENTS

This equipment complies with INDUSTRY CANADA CS-03, ISSUE 9, PART 1. IC REN = 0.3

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.

Product Support: (715) 386-8666

Due to the dynamic nature of the product design, the information contained in this document is subject to change without notice. Viking Electronics, and its affiliates and/or subsidiaries assume no responsibility for errors and omissions contained in this information. Revisions of this document or new editions of it may be issued to incorporate such changes.