



TECHNICAL Practice

TELECOM SOLUTIONS FOR THE 21ST CENTURY

K-1900-9

**AC Powered Single or
Multi-Number Dialer**

August 6, 2007

AC Powered Dialer with Increased Toll Restriction and Added Versatility



The **K-1900-9** will allow the user to enter a 1 or 2 digit Touch Tone code which will trigger the unit to speed dial one of up to 100 different telephone numbers. When programmed as a single number hot-line dialer, the **K-1900-9** will dial a single pre-programmed number when any off-hook condition is detected on the "PHONE" port.

The **K-1900-9** may be used with any standard Touch Tone phone to provide single number (hot-line) or multi-number speed dialing.

The **K-1900-9** is capable of storing 100 telephone numbers in non-volatile E² memory and will operate on any standard loop start C.O. line or analog PABX/KSU station with a standard Touch Tone phone.

When programmed as a multi-number dialer, the **K-1900-9** will allow the user to enter a 1 or 2 digit Touch Tone code which will trigger the unit to speed dial one of up to 100 different telephone numbers. When programmed as a single number hot-line dialer, the **K-1900-9** will dial a single pre-programmed number when any off-hook condition is detected on the "PHONE" port.

Phone...715.386.8861

Features

- Programmable as a single number hot-line dialer or a multi-number dialer
- Stores up to (100) 32-digit phone numbers
- Non-volatile E² memory (no batteries required)
- Local or remote programmable with a standard Touch Tone phone
- AC power allows installation on nearly any analog line
- Touch Tone dialing with normal or high speed settings
- Increased toll restriction (programmable on/off)
- Ring thru mode allows you to call the phone connected to the dialer
- LED status indicator
- Push button security code override
- Allows 911 dialing ⚠
- Programmable call timer

Applications

- Turn any standard phone into a dedicated 100 number speed dialing phone
- Security phones
- Interactive point of sale displays
- Kiosks
- Catalog sales
- ATM's
- Hot-Line reservation phones for hotels, airlines, car rentals, etc.
- Alarm dial pagers, etc.



*To protect against toll fraud during power failures, the **K-1900-9** will not allow any dialing. A UPS is suggested if the phone may be used for emergency 911 dialing.*

<http://www.vikingelectronics.com>

Specifications

Power: 120V AC/13.8V AC, 1.25A UL listed adapter provided
Dimensions: 70mm x 36mm x 120mm (2.8" x 1.4" x 4.7")
Shipping Weight: .45 kg (1lb)
Environmental: 0° C to 32° C (32° F to 90° F) with 5% to 95% non-condensing humidity
DTMF Dialing Speed: Normal = 120ms on/off, High Speed = 60ms on/off
Contact Closure Initialization: 100ms minimum
Connections: (1) RJ11 jack, (1) RJ11 plug

info@vikingelectronics.com

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

Our Technical Support Department is available for assistance Monday 8am - 4pm and Tuesday through Friday 8am - 5pm central time. So that we can give you better service, before you call please:

1. Know the model number, the serial number and what software version you have (see serial label).
2. Have your Technical Practice 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. Static sensitive equipment such as a circuit board should be in an anti-static bag, sandwiched between foam and individual-ly 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 R.A. 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 (R.A.) number will be issued. This number is valid for fourteen (14) calendar days from the date of issue.
3. After obtaining the R.A. number, return the approved equipment to your distributor, referencing the R.A. number. Your distributor will then replace the product over the counter at no charge. The distributor will then return the product to Viking using the same R.A. number.
4. **The distributor will NOT exchange this product without first obtaining the R.A. 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.**

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 one year from the date of purchase from any authorized Viking distributor or 18 months from the date manufactured, whichever ever is greater. 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.

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-1900-9 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-1900-9 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-1900-9, 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:

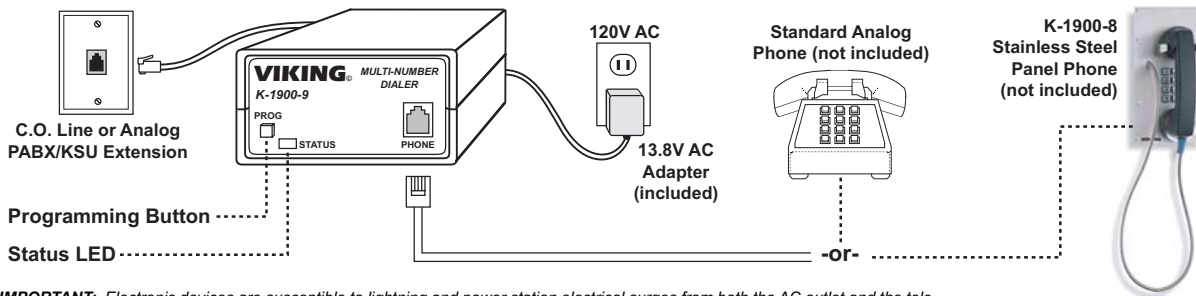
Remain on the line and briefly explain to the dispatcher the reason for the call. Perform such activities in the off-peak hours, such as early morning or late evenings.

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.

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. Contact Panamax at (800) 472-5555 or Electronic Specialists Inc. at (800) 225-4876.



Need More Information on the K-1900-8?
Call (715) 386-4345 and select 362.

Programming

A. Security Code

A six digit number may be used to access the programming mode. The security code has been factory set to **845464** (V-I-K-I-N-G). It is recommended that you change the security code to a personal 6 digit number as follows:

Step 1.	Access programming as shown in section B.
Step 2.	Enter your new security code followed by ##8 .
Step 3.	To exit remote programming, do NOT enter any Touch Tones for at least 20 seconds. To exit local programming simply hang up the phone.

Note: The security code must be six digits in length and **MUST NOT** contain a * or #. If you have forgotten your security code, see section "B, 2. Local Programming Without Using the Security Code."

B. Accessing the Programming Mode

1. Remote Programming

Step 1.	Connect the line cord on the K-1900-9 to a C.O. line or analog PABX/KSU station.
Step 2.	From a Touch Tone phone, call the line connected to the K-1900-9 .
Step 3.	When the K-1900-9 answers a single beep should be heard, enter “*” followed by the six digit security code, factory set to 845464 (see section A above). A double beep will indicate that programming has been entered.
Step 4.	Program as shown in sections C - I .
Step 5.	To exit programming, do NOT enter any Touch Tones for approximately 20 seconds. Three beeps will be heard, followed by an automatic disconnect.

2. Local Programming Without Using the Security Code

Step 1.	Connect the line cord on the K-1900-9 to a C.O. line or analog PABX/KSU station.
Step 2.	Press and hold the “ PROGRAM ” button on the front of the K-1900-9 .
Step 3.	Take the phone connected to the dialer off-hook. A double beep should be heard and the programming LED should brighten indicating you have entered programming. Release the button and begin programming as shown in sections C - I .
Step 4.	To exit programming, simply hang-up the phone.

C. Programming Features Quick Reference

	Enter Digits	- then -	Memory Location
Speed dial (telephone number) memory positions 00-99 (1-32 digits)	Phone number	+	# 00-99
Clear all speed dial numbers and reset programming to factory default	###		
PABX line access number (1 digit + 2 second pause, factory disabled)	1 digit (0-9)	+	##2
Disable PABX line access number			##2
Maximum call time (01 - 99 minutes, factory disabled)	2 digits (01-99)	+	##6
Disable maximum call time			##6
Security code (factory set to 845464)	6 digits (0-9)	+	##8
To add a * at any point in the dialing string	**		
To add a # at any point in the dialing string	##		
Set dialing speed to normal (DTMF: 120ms on/off, factory setting)	##3		
Set dialing speed to fast (DTMF: 60ms on/off)	##4		
Restrict user hookflash or pulse dialing (factory setting)	*1		
Allow user hookflash or pulse dialing	*2		
Restrict user Touch Tone dialing	*3		
Enable user Touch Tone dialing (factory setting)	*4		
Ring-thru mode OFF (factory setting)	*5		
Ring-thru mode ON	*6		
To add a four second pause at any point in the dialing string	*7		
To add a one second pause at any point in the dialing string	*8		
Single number hot-line dialer mode (automatically dials number in location 00)	*9		
Multi-number dialer mode (factory setting)	*0		
Hang-up	##7		

D. Dialer Mode

To set the dialer mode, enter Programming as shown in section **B**, then choose a mode as shown in the chart below.

To Set the K-1900-9 Mode to...	Description
...a multi-number dialer (see Operation section B - factory default)	Enter *0
...a hot-line single number dialer (see Operation section C)	Enter *9

E. Touch Tone Dialing Speed

While in programming, enter “**##3**” to set the **K-1900-9** to normal touch tone dialing speed (factory default) - 120ms Touch Tones with 120ms pauses between tones. Enter “**##4**” to set the **K-1900-9** to fast touch tone dialing speed - 60ms Touch Tones with 60ms pauses between tones.

F. Restrict User Touch Tone Dialing

While in programming, enter “***3**” to restrict user-dialing on the third digit or the first “0” manually dialed after the unit has dialed. Enter “***4**” to allow user-dialing (factory default).

G. Pauses in the Dialing String

While in programming, enter “*7” to place a four second pause at any point in the dialing string. Enter “*8” to place a one second pause at any point in the dialing string.

H. PABX Line Access

A PABX line access number may be programmed to allow the dialer to insert an outside line access number and a 2 second pause in front of every speed dial number. While in programming, to program the **K-1900-9** to dial a single digit (0-9) for outside line access, enter “1 digit (0-9) + ##2”. To disable outside line access, enter “##2”.

I. Programming Examples

These examples would be entered after accessing the Programming mode as shown in section B.

To Program the K-1900-9 to...	Enter Digits	Enter Location
...dial pager number 555-1212, pause 8 seconds, then dial call back number 386-8861 when a contact closure is activated (see section D)	5551212*7*73868861	#00
...store a 9 then pause 2 seconds prior to dialing all telephone numbers	9	##2
...clear the number stored in memory position 42		#42

Operation

A. 911 Dialing

When programmed as a multi-number dialer, the **K-1900-9** will allow 911 calls. When the user goes off-hook on the “Phone” port and dials 911, the **K-1900-9** automatically redials 911 on the outside line and bridges the phone line to the phone port. If a PABX access number is entered in location **##2**, this number will precede 911. **Note:** To protect against toll fraud during power failure, the **K-1900-9** will not allow any dialing. A UPS is suggested if the phone may be used for 911 dialing.

B. Multi-Number Dialer Mode

The multi-number dialer mode (see **Programming** section D) is useful when using the **K-1900-9** in applications such as Kiosks or any other user selectable speed dialing application when 100 phone numbers or less are required. An off-hook on the phone port will return simulated dial tone. The user can then enter their one or two digit speed dial memory position. The **K-1900-9** speed dials the phone number programmed in that memory position then bridges the phone to the line. The dialer can be programmed to allow or restrict manual user dialing, either to prevent any further dialing or to allow navigation through auto-attendants, etc. If user hook-switch and pulse dialing is disabled and the user attempts to pulse dial or flash the line for fresh dial tone (to make a toll call), the **K-1900-9** will restrict the call by switching the phone back to artificial talk battery with simulated dial tone. **Note:** If this phone is to receive in-bound calls, select the Ring Thru Mode (see section E below).

C. Single Number Hot-Line Dialer Mode

In the single number hot-line dialer mode (see **Programming** section D), any phone connected to the “phone” port goes off-hook, the **K-1900-9** speed dials the phone number programmed in memory location “00” then bridges the phone to the line. If user hook-switch and pulse dialing is disabled and the user attempts to pulse dial or flash the line for fresh dial tone (to make a toll call), the **K-1900-9** will restrict the call by switching the phone back to artificial talk battery with simulated dial tone. The dialer can be programmed to allow or restrict manual user dialing, either to prevent any further dialing or to allow navigation through auto-attendants, etc.

D. Ring Thru Mode

In the ring thru mode (see **Programming** section C), incoming calls are allowed to ring through the **K-1900-9** to the phone connected to the “PHONE” port. After the phone has answered, the **K-1900-9** is watching for the security code and will seize the line if a valid code is detected. In this manner, the **K-1900-9** may still be remotely programmed. If the ring thru mode is turned off, the **K-1900-9** will answer all inbound calls.

E. Status LED

The status LED indicates when the unit has seized the line, when the unit is dialing, outputting confirmation beeps, or simply that the unit has power.

K-1900-9 LED is...	Status
...on steady (dim)	Power/Idle/Phone has line
...on steady (bright)	In programming mode
...short dimming pulses	Confirmation tone output
...off	Dialer has seized line
...flashing on/off	Unit is Touch Tone dialing

Product Support Line...715.386.8666

Fax Back Line...715.386.4345

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