

Replace Dedicated Phone Lines with a Touch Tone Hot-Line Dialer

Why pay a premium for leased or dedicated phone lines?

The **K-1900-5** will automatically dial a preprogrammed number, of up to 32 digits, whenever an associated telephone is taken off hook. Using non-volatile memory, the **K-1900-5** is telephone line powered and will operate on any loop start central office line or analog PABX/KSU extension.

The **K-1900-5** is easily programmed remotely or locally using a standard touch tone phone.



This product does not automatically allow 911 dialing when set to speed dial a number other than 911. This product does not eliminate the possibility of toll fraud! To further protect against fraudulent calls, use with a TR-1 Toll Restrictor (DOD 705).

Features

- Touch tone programmable
- Telephone line powered
- Non-volatile memory, no batteries required
- Ring detection, won't dial on inbound calls
- User programmable security code
- Programmable pauses in one and four second increments
- Programmable to interrupt user touch tone dialing to help control fraudulent calls from hand held dialers, etc.
- Programmable dialing speed: normal or fast
- Can be configured to operate from a contact closure, see DOD 818

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

Applications

- Security and emergency phones
- Interactive point of sale displays
- Apartment security
- Catalog sales
- Automated Teller Machines (ATM)
- Replaces leased ring down circuits
- Hot-Line reservation phones for hotels, airlines, car rentals, etc.

Specifications

Power: Telephone line powered. Minimum 24V DC talk battery voltage, with minimum loop current of 20mA loop. Loop current may be boosted on low current lines with a Viking **TBB-1B** talk battery booster, DOD 632.

Dimensions: 2.9" x 2.1" x 1.0" (74mm x 53mm x 25mm)

Shipping Weight: 1 lb (0.45 kg)

Environment: 32°F to 90°F (0°C to 32°C) with 5% to 95% non-condensing humidity

Connections: (1) RJ11 plug, (1) RJ11 jack

Dialing Speed: Normal - 100ms on/off, Fast - 50ms on/off

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.

Install the **K-1900-5** in series between a telephone and a C.O. line or analog PABX/KSU station.



* An FXS port lets you connect an analog telephone or device to an IP network.

Programming

A. Accessing the Programming Mode

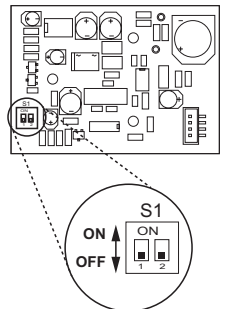
1. Accessing the Programming Mode Using a Security Code

Step 1	Connect the K-1900-5 to a CO line or analog PABX/KSU station.
Step 2	From a touch tone phone, call another phone connected to the K-1900-5 .
Step 3	Take the phone connected to the dialer off hook (answer the phone).
Step 4	Enter * followed by the six digit security code (see section B on the next page). A double beep will indicate that you have accessed the programming mode.
Step 5	You can now program your speed dial number and the following features listed in section C .
Step 6	When finished, hang up both phones to exit the programming mode.

Note: Programming from a cell-phone may not be suitable in areas with weak coverage.

2. Accessing the Programming Mode Without a Security Code

Step 1	Remove the cover of the K-1900-5 .
Step 2	Locate DIP switch 2 and move to the ON position (shown right).
Step 3	Connect the K-1900-5 to a CO line or analog PABX/KSU station.
Step 4	From a touch tone phone, call another phone connected to the K-1900-5 .
Step 5	Take the phone connected to the dialer off hook (answer the phone).
Step 6	Two beeps will be heard, indicating you have entered the programming mode.
Step 7	You can now program your speed dial number and the following features listed in section C .
Step 8	When finished, hang up both phones to exit the programming mode.
Step 9	Move DIP switch 2 to the OFF position.



Note: Programming from a cell-phone may not be suitable in areas with weak coverage.

B. Security Code

This six digit number is 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. To change the security code, follow the steps to the right. If you have forgotten your security code, follow the steps in **Programming section A, 2. Accessing the Programming Mode Without a Security Code**.

Step 1	Access programming as shown in Programming section A .
Step 2	Enter the new security code, followed by #47.
Step 3	Hang-up.

Note: The security code must be six digits in length and can NOT contain a * or #.

C. Programming Features

Descriptions of Features	Enter Digits	+ Location
* Speed dial number	1-32 digits	+ #00
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 (100ms on/off, factory setting)	*1	
Set dialing speed to fast (50ms on/off)	*2	
Restrict touch tone user dialing before, during and after the dialing string (factory setting)	*3	
Allow touch tone user dialing after speed dial	*4	
Set pause before dialing to normal (factory setting)	*5	
Set pause before dialing to short	*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	
Enable touch tone and flash restriction before and during speed dial (factory setting)	*01	
Disable touch tone and flash restriction (overrides & disables *3, *4, *09 and *00)	*02	
Enable user flash restriction (factory setting)	*09	
Disable user flash restriction	*00	
Clear programming and change back to factory settings	###	
Dialing delay timer (01 - 99 seconds, 00 disables, factory setting)	2 digits	+ #40
Change security code (factory set to 845464)	6 digits (0-9)	+ #47

* **Note:** Special features such as a pause, a touch tone "*" and a touch tone "#" count as a single digit.

C. Programming Examples

Programming the K-1900-5...	Enter Digits
... to dial 386-8861	3868861#00
... to dial 9 (for outside line), pause four seconds, and dial 1-612-555-1212	9*716125551212#00
... to dial *67	*67#00
... to enable unlimited user dialing after the K-1900-5 has speed dialed	*4

Note: *7 places a four second pause after digit 9.

E. Interrupt User Dialing **IMPORTANT: This is NOT complete toll fraud protection!**

The **K-1900-5** interrupts all pulse dialing and can be programmed to interrupt any Touch Tone dialing it did not generate. The **K-1900-5** reacts by continuously repeating Touch Tone #s until the associated phone has been hung up. To enable unlimited user dialing after the **K-1900-5** has speed dialed, enter *4 while programming. Entering a *3 will prohibit user dialing. When using the **K-1900-5** with a touch tone controlled relay, you will need to enable user dialing (*4) and disable the user flash restriction (*00) if the unit attempts to restrict while activating the relay. **Note:** This feature is factory set to block user dialing.

F. Dialing Delay Timer

The **K-1900-5** can be programmed to delay from 1 to 99 seconds before dialing the number programmed in its memory (see **Programming section C** above). During this delay time, a user may dial a phone number and the **K-1900-5** will allow the call to be placed and not speed dial. **Note:** Many CO's provide only 20 seconds of dial tone, so that if the delay is longer than 20 seconds the call would not be connected.

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 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 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. 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 logging 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 Viking product 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.**

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

Type of Service

The **K-1900-5** is designed to be used on standard device telephone lines. The **K-1900-5** is connected to the telephone line by means of a standard RJ-11 plug. Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party line service is subject to State tariffs.

Telephone Company Procedures

The goal of the telephone company is to provide you with the best service it can. In order to do this it may occasionally be necessary for them to make changes in their equipment, operations, or procedures. If these changes affect your service of the operation equipment, the telephone company will give you notice in writing, allowing you to make any changes necessary to maintain uninterrupted service. If you have any questions about your telephone line, such as, how many pieces of equipment you can connect to it, the telephone company will provide you information upon request. In certain circumstances, it may be necessary for the telephone company to request information from you, concerning the equipment which is connected to your telephone line. Upon request of the telephone company, provide the FCC registration number and the ringer equivalence number (REN) of the equipment which is connected to your line; both of these items are listed on the equipment label. The sum of all the REN's on your telephone lines should be less than five in order to assure proper service from your telephone company. In some cases, a sum of five may not be usable on a given line.

If Problems Arise

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC. In the event repairs are ever needed on your Viking product, they should be performed by Viking Electronics, Inc. and/or an authorized representative of Viking Electronic, Inc.. For more information contact Viking Product Support at (715)386-8666

FCC 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 have to correct the interference at his own expense.

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.