

## 3 Channel Long Play Digital Announcer



The **DVA-3003** is a professional and cost-effective three channel digital voice announcer specifically designed for ACD/UCD, hotel-motel wake up, auto attendant, intercept, night message, information applications and other announcement functions.

The **DVA-3003** will increase call handling capacity by answering on demand or during the first ring, automatically adjusting the announce cycle to the message length, disconnecting on C.P.C. and providing instant "rewind" for the next caller.

The **DVA-3003** is factory installed with 1 minute of record time per channel and may be expanded to 4 minutes per channel using the **ERAM-60** one minute memory expansion kits. In applications where a single, longer message is required, the **DVA-3003** can also be configured as a single channel 3 to 12 minute announcer.

<http://www.VikingElectronics.com>

### Features

- Record time expandable from 1 to 4 minutes per channel
- Configurable as a 3-12 minute 1 channel announcer
- Record and review announcements both locally and remotely
- Tape jack to load prerecorded announcements from a tape player
- Record 1, 2, or all 3 channels simultaneously
- Programmable ring delay for each channel
- Detects C.P.C. signal and disconnects
- Callers may be transferred after announcement
- Messages stored in Non-volatile memory (no batteries required)
- Recognizes handshake signals from virtually any PABX, Centrex or C.O.
- Provides both "Ring Trip" and 4 wire "E & M" interface
- Recording volume level LED indicator for consistently high-quality recordings
- One year warranty

### Applications

#### Repetitive Announcing for:

- School closings
- College events and schedules
- Wake-up calls
- Bank rates/commodity prices
- Movie theaters
- Help desks
- Ski reports
- Night Message
- ACD/UCD or any announce only application where a message is repeated continuously and may require frequent updating.

### Specifications

**Power:** 120V AC/12V DC 500mA UL listed adapter provided or power from 48V DC 0.1 A maximum

**Dimensions:** 480mm x 200mm x 45mm (19" x 8" x 1.75")

**Shipping Weight:** 3 Kg (7lbs)

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

**Message Length:** 1 minute/channel, field expandable to 2, 3, or 4 minutes/channel using model **ERAM-60** memory kits in (1) minute increments

**Sampling Rate:** 64 Kbps (equivalent)

**Connections:** Standard ring-trip with adjustable ring delay, 4-wire E & M with 600 ohm audio and switch selectable protocol

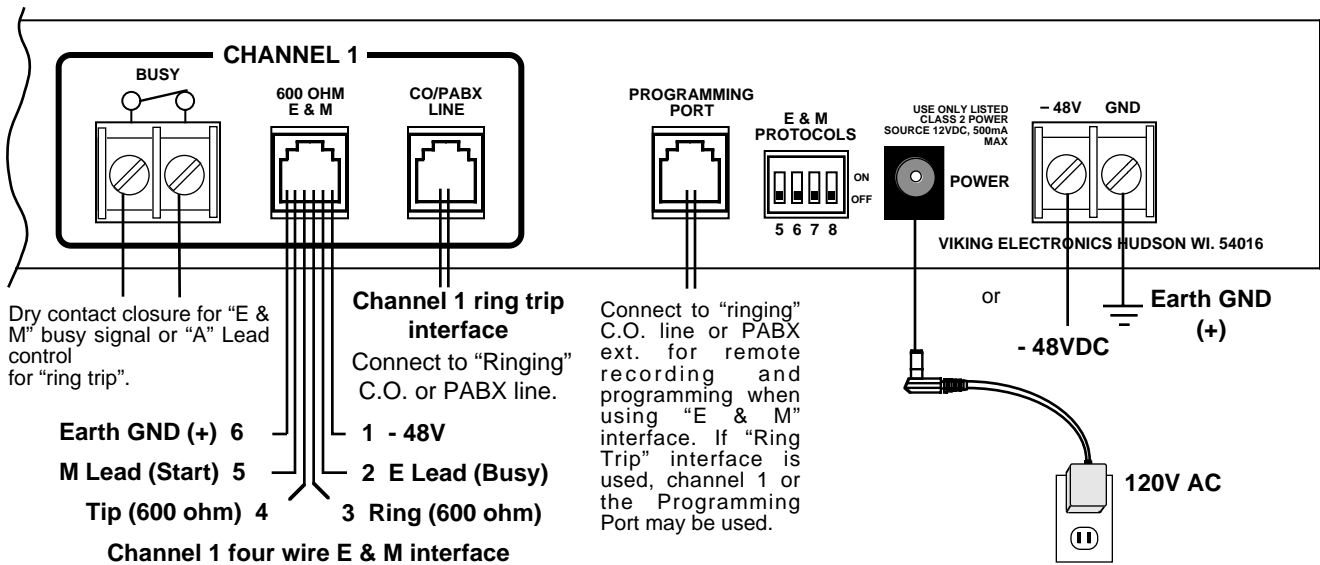
# Installation

## A. 120V AC Operation

The **DVA-3003** is provided with a 120VAC U.L. listed adaptor with a 12VDC 500mA output. The **DVA-3003** requires a 24 hour unswitched 115VAC outlet. To protect the internal electronics, the installation of a surge protector is recommended.

## B. 48VDC Operation

Connect -48VDC and Earth Ground to the terminal block as shown below. Nominal current draw is less than 100mA. If a power supply protection fuse is used in series with the -48V supply, a 500mA slow blow fuse is recommended. The initial start up current can surge as high as 600-700mA.



# Programming

## A. Standard Ring Trip Interface (Two Wire)

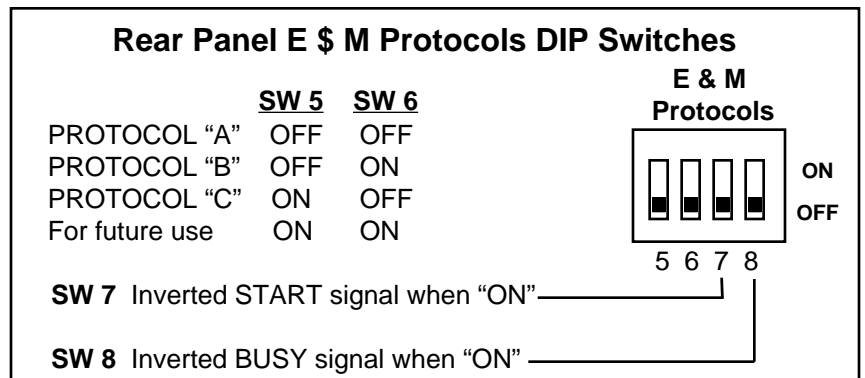
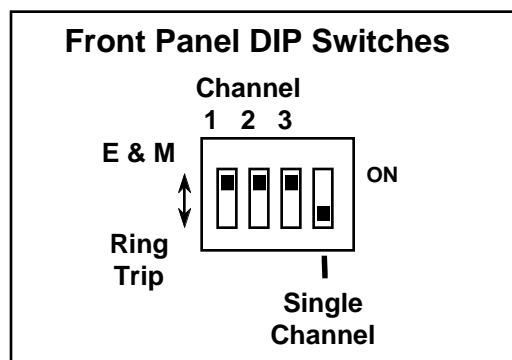
Any ringing C.O./PABX line will be answered, given an announcement and released. The **DVA-3003** is then immediately ready to answer the next incoming call. Set the front panel DIP switches to **RING TRIP** for each channel using "Ring Trip" Interface, then momentarily disconnect power. \*

## B. Continuous Play 4 Wire E & M Interface

Set the front panel DIP switches to **E & M** for each channel using E & M Interface. Set "E & M protocols" DIP switches to "A" (DIP switches 5 and 6 off). Invert the START signal (DIP switch 7 on). \*Momentarily disconnect the power. The announcement will be repeated continuously on pins 3 and 4 (600 ohm output).

## C. 600 Ohm 4 Wire E & M Protocols

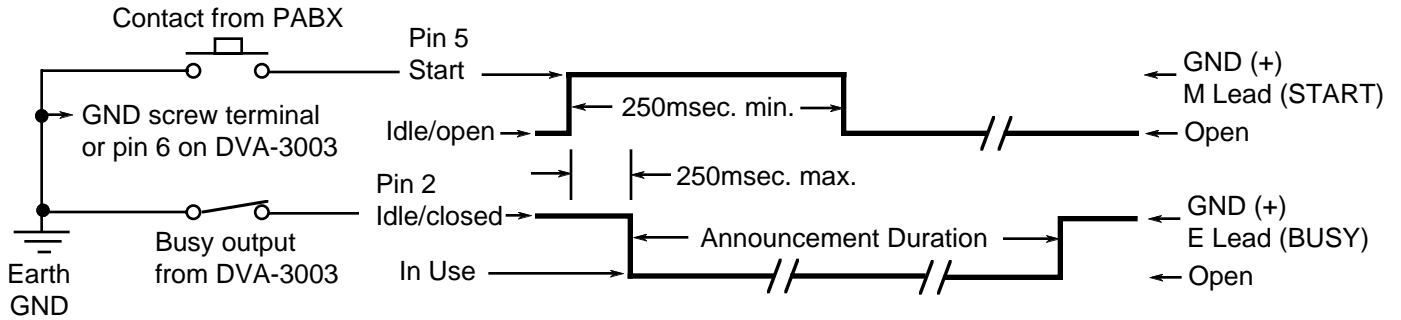
First set the front panel DIP switches to **E & M** for each channel using E & M Interface, then momentarily disconnect power.\* Four different protocols are now switch selectable for changing E & M timing, plus the ability to invert the START and/or BUSY signals.



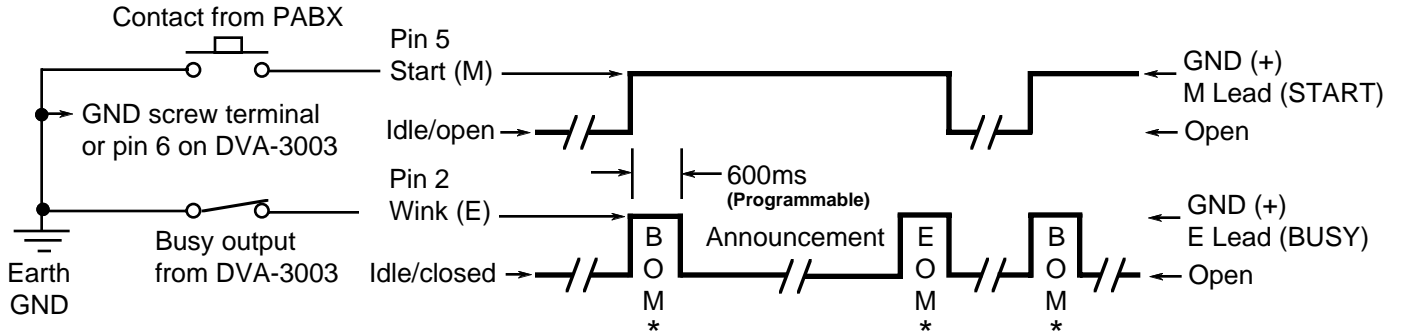
\* A momentary power down allows the **DVA-3003** to read the new DIP switch settings.

## D. 600 Ohm 4 Wire E & M Protocol Timing Specifications

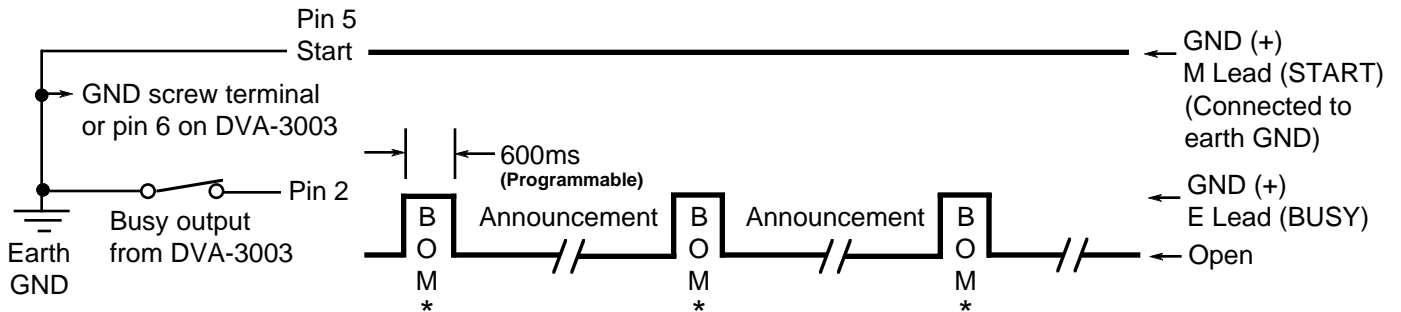
1. "ON DEMAND". Set DIP switches to protocol "A" (SW 5 and SW 6 - OFF).



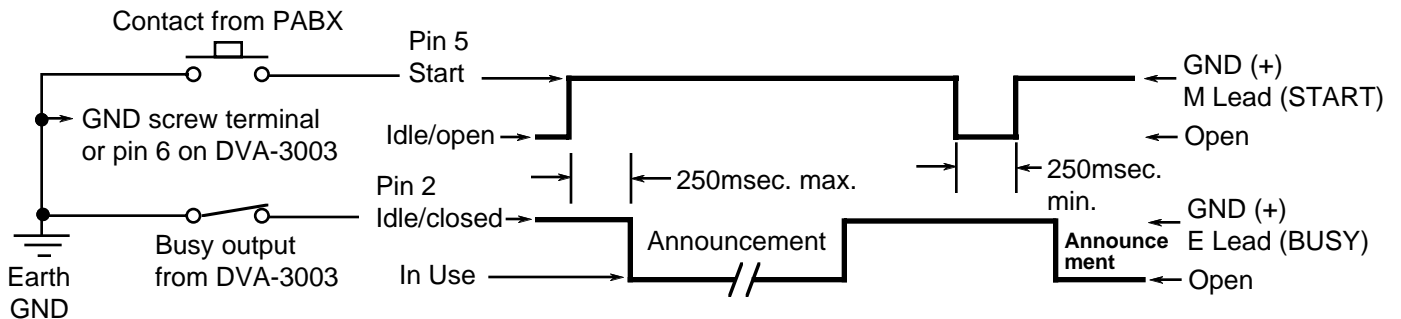
2. TYPE 5 E & M, WINK START. Set dip switches to protocol "B" (SW 5 - OFF, SW 6 - ON).



3. DRUM RECORDER REPLACEMENT. Set dip switches to protocol "A" (SW 5 and SW 6 - OFF).

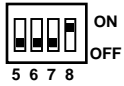



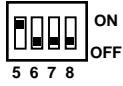

4. SINGLE PLAY ON DEMAND. Set dip switches to protocol "C" (SW 5 - ON, SW 6 - OFF).



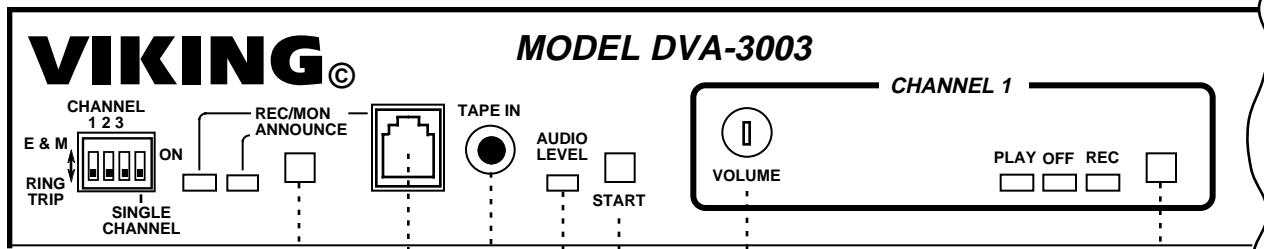
\*NOTE: BOM = "Beginning Of Message" pulse. EOM = "End Of Message" pulse.

## E. Using the DVA-3003 with Major PABX'S

Set Front Panel DIP Switches to:		Protocol Dip Switches	Notes:
Manufacturer			* Earth ground is the positive of the PABX system talk battery
ATT (Dimension, Horizon, etc. 4 Wire E & M)	E&M	<b>Protocol A</b> with inverted busy signal 	Use 4 Wire E & M Interface. Connections: T & R to pins 3 & 4, M to pin 5, E to pin 2 and Earth Ground* to GND screw terminal.
ATT (System 75)	E&M	<b>Protocol A</b> with inverted busy signal 	Use 4 Wire E & M Interface and BUSY screw terminals. T & R to pins 3 & 4, SZ to pin 5, SZ1 to GND screw terminal, and S and S1 to BUSY screw terminals.

<b>ATT (System 85)</b> SN231 Circuit Pack	E&M	<b>Protocol A</b> with inverted busy signal 	Use 4 Wire E & M Interface. Connections to SN231 Circuit Pack. T & R to pins 3 & 4, S to pin 5, and AL to pin 2. Set option switches 1 & 2 down and 3 up on the Circuit Pack.
<b>CONVEYANT</b>	E&M	<b>Protocol A</b> 	Use 4 Wire E & M Interface. Connections: T & R to pins 3 & 4. Strap pin 5 (from the <b>DVA-3003</b> ) to GND screw terminal (of the <b>DVA-3003</b> ). Don't connect any Earth Ground. RC-T1 (control input) lead to pin 2. CONVEYANT logic ground to -48V screw Terminal.
<b>GTE</b>	E&M	<b>Protocol A</b> with inverted start signal 	Use 4 Wire E & M Interface. Connections: T & R to pins 3 & 4, M to pin 5, E to pin 2 and Frame Ground to GND screw terminal.
<b>HARRIS (20-20)</b>	E&M	<b>Protocol B</b> 	Use 4 Wire E & M Interface. Connections: T1 & R1 to pins 3 & 4. M to pin 5. E to pin 2. Earth ground* to GND screw terminal.
<b>HITACHI (HCX 5000)</b>	E&M	<b>Protocol A</b> with inverted busy signal 	Use 4 Wire E & M Interface and BUSY screw terminals. Connections to ANIF card: T & R to pins 3 & 4, M to pin 5, E & SG to BUSY screw terminals. Do not strap SB & SG. SB to Ground screw terminal. Set ANIF for type 4 signaling. Program connection class of "TKTH" in the HITACHI.
<b>JISTEL (all models)</b> <b>MITEL (all models)</b> <b>ROLM (all models)</b>	Ring Trip	Protocol switches are not functional in Ring Trip mode	Use Ring Trip Interface. Connect T & R to pins 3 & 4 of the CO/PABX line jack.
<b>N.E.C. (2400)</b>	E&M	<b>Protocol C</b> 	Use 4 Wire E & M Interface. Connections to 40DT card: T1 & R1 to pins 3 & 4. M to pin 5. Earth ground* to GND screw terminal.
<b>NORTHERN (SL-1)</b> QPC74 Ran Truck	E&M	<b>Protocol A</b> 	Use 4 Wire E & M Interface. Connections to QPC74 RAN TRUNK circuit pack: T & R to pins 3 & 4. CPO to pin 2. S/MBO to pin 5. Earth ground* to GND screw terminal. Set C34 switch as follows: SW1.0 - closed, SW2.0 - closed, SW3.0 - open, SW4.0 - closed. Programming the SL-1: The <b>DVA-3003</b> emulates a Cook 201.
<b>NORTHERN (SL-1)</b> Universal trunk card	E&M	<b>Protocol A</b> 	Use 4 Wire E & M Interface. Connections to Universal TRUNK card: T & R to pins 3 & 4. Earth ground to GND screw terminal. Pin 5 to MB lead. Pin 2 to CP lead. The <b>DVA-3003</b> emulates a Audiochron RQ1-112.
<b>SIEMENS (SATURN)</b>	E&M	<b>Protocol A</b> 	Use 4 Wire E & M Interface. Connections to the TMBA-4 card: T & R to pins 3 & 4. MA to pin 5. Strap MA & EB together. Don't connect EA lead. Program Saturn for "Recann" and "Demand" and set "System Message" to be a min. of 2 sec. longer than actual announcement. Strap TMBA-4 for type 2 signaling.
<b>SIEMENS (40/80 Hybrid)</b>	E&M	<b>Protocol A</b> with inverted busy signal 	Use 4 Wire E & M Interface and BUSY screw terminals. Connections to APB (Applications Board): VT & VR to pins 3 & 4, RAN-CTL (#1-Yellow) to pin 5, RAN-CTL (#2-Black) to GND screw terminal, RAN-SNS (#1-Blue) and RAN-SNS (#2-White) to the BUSY screw terminals (reversible)
<b>STARTEL</b>	E&M	<b>Protocol A</b> 	Use 4 Wire E & M Interface. Connections: T & R to pins 3 & 4, M to pin 5, E to pin 2. No connection to the GND screw terminal.
<b>STROMBERG-CARLSON (CO Switch)</b>	E&M	<b>Protocol A</b> with inverted busy signal 	Use 4 Wire E & M Interface. Connect T & R to pins 3 & 4, Earth Ground* to GND screw terminal and pin 5 and E to pin 2. Strap the E & M Trunk card the same as for an Audichron HQ1 112 Drum Announcer. Programming the CO switch: The <b>DVA-3003</b> emulates the Audichron Drum Announcer.
<b>STROMBERG-CARLSON (DBX)</b>	E&M	<b>Protocol C</b> with inverted start and busy signals 	Use 4 Wire E & M Interface. Connections: T & R to pins 3 & 4, M to pin 5, E to pin 2. Earth Ground* to GND screw terminal.
<b>TADARAN (All models)</b>	Ring Trip	Protocol switches are not functional in Ring Trip mode	Use Ring Trip Interface. Connect T & R to pins 3 & 4 of the CO/PABX line jack. Program all <b>DVA-3003</b> channels for ring delay of 2.
<b>TOSHIBA (Perception)</b>	Ring Trip	Protocol switches are not functional in Ring Trip mode	Use Ring Trip Interface. Connect T & R to pins 3 & 4 of the CO/PABX line jack.

# Recording



## REC/MON/ANNOUNCE Button

Selects Record or Announce Mode.

## Handset Jack

Use a standard carbon handset.

## 1/8" Audio Input Jack

Permits downloading the announcement from a tape player.

## PLAY/OFF RECORD Button

Press this button to select Play, Off or Record modes.

--- **Playback Volume** Adjusts the playback volume.

--- **START Button** Momentarily press to start and stop recording.

--- **LED** Flickers to indicate correct tape in volume level.

## A. Local Recording

### 1. Recording Live

- Press the **REC/MON** button until the **REC/MON** LED lights to select **REC/MON** mode.
- One, any two, or all three channels may be recorded at the same time. Select **REC** for the channels to be recorded. Select **OFF** for any channels not to be recorded.
- Connect a standard carbon handset to the handset jack.
- Momentarily press the **START** button and begin speaking into the handset.
- When finished, press the **START** button to stop recording.

### 2. Recording from a Tape

- Press the **REC/MON** button until the **REC/MON** LED lights to select **REC/MON** mode.
- One, any two, or all three channels may be recorded at the same time. Select **REC** for the channels to be recorded. Select **OFF** for any channels not to be recorded.
- Insert a 3.5mm (1/8") phono plug cable into the **TAPE IN** jack.
- Adjust the tape player to the correct audio recording volume, play the recording from the tape player while watching the audio level LED. Increase or decrease the tape players volume until the LED flickers but is not mostly on or mostly off.

**Note:** A handset may be used to monitor the tape player while downloading the recording.

- When you are ready to record, momentarily press the **START** button and begin recording.
- When you are finished, press the **START** button to stop recording.

## B. Local Monitoring

- With the **REC/MON** mode selected, (see step a. above) place only one channel at a time into the **PLAY** mode and place the other two channels into the **OFF** mode.
- Momentarily press the **START** button to start and stop the announcement.
- Any or all of the announcements can be rerecorded if needed. Follow the "local recording" procedures listed above.

## C. Remote Recording and Programming

**Note:** Remove the handset and tape input plug from the **DVA-3003** before remote recording.

### 1. Ring Trip Interface Mode

To gain system access call (from a Touch Tone phone) the C.O. line or PABX extension connected to the **DVA-3003**'s channel 1 **CO/PABX LINE** port. When the unit answers, enter a **\***. When the recording stops, enter your six digit security code (factory set to 8,4,5,4,6,4,). Two beeps should then be heard, confirming the correct security code was entered. You are now in the remote recording mode. Follow the recording, monitoring, and programming steps in sections 3 - 5.

### 2. Four Wire E & M Interface Mode

To gain system access call (from a Touch Tone phone) the C.O. line or PABX extension connected to the **DVA-3003**'s **PROGRAMMING PORT**. The unit will answer and give two beeps. You are now in the remote recording mode. Follow the recording, monitoring, and programming steps in sections 3 - 5.

### 3. Recording

One, two, or all three channels can be recorded at the same time. Enter **1** and/or **2** and/or **3** to select the channel(s) to be recorded, then enter a **\*** to start and a **#** to stop recording.

### 4. Monitoring

- Enter **\* 4** to play back channel 1.
- Enter **\* 5** to play back channel 2.
- Enter **\* 6** to play back channel 3.

## 5. Ring Delay (Ring Trip Interface)

The ring delay is factory set to "Immediate Answer" (unit answers in less than one full ring). The ring delay can be programmed from "Immediate Answer" (0) to 9 rings. Example: If ring delay is set to 1, unit will answer after one full ring cycle.

Enter (0-9), #, 1, 1 to program ring delay for channel 1.

Enter (0-9), #, 1, 2 to program ring delay for channel 2.

Enter (0-9), #, 1, 3 to program ring delay for channel 3.

Enter (0-9), #, 1, 4 to program ring delay for programming port.

## 6. E & M Timing

The Beginning Of Message and End Of Message pulse width is factory set to 600msec. This may be programmed from 100msec. (enter 1) to 900msec. (enter 9) for each channel.

Enter (0-9), #, 2, 1 to program E & M timing for channel 1.

Enter (0-9), #, 2, 2 to program E & M timing for channel 2.

Enter (0-9), #, 2, 3 to program E & M timing for channel 3.

## 7. Transfer Phone Numbers

The transfer phone numbers are disabled from the factory. When a transfer phone number is programmed, the **DVA-3003** will perform a hook switch flash transfer (dialing the programmed phone number after the channel announcement has been played. **Note:** To disable the hook switch flash transfer for a channel, leave the 16 digit field blank.

Enter up to 16 digits (1-9), #, 0, 1 to program a transfer phone number for channel 1.

Enter up to 16 digits (1-9), #, 0, 2 to program a transfer phone number for channel 2.

Enter up to 16 digits (1-9), #, 0, 3 to program a transfer phone number for channel 3.

## 8. Message Repeat

Each channel has the ability to repeat the announcement up to 99 times before disconnecting or transferring an answered call. The factory default for the message repeat count is set to 01.

Enter 2 digits (01-99), #, 3, 1 to set the message repeat count for channel 1.

Enter 2 digits (01-99), #, 3, 2 to set the message repeat count for channel 2.

Enter 2 digits (01-99), #, 3, 3 to set the message repeat count for channel 3.

## 9. Changing Your Security Code

It is recommended that you change the security code from the "845464" factory setting to your own personal 6 digit number. To change the security code, enter your 6 digits \_ \_ \_ \_ \_ \_ plus #,4,7.

**Note:** The security code can not include a \* or #.

# Operation

After the **DVA-3003's** announcements have been recorded and monitored, place the unit into the **ANNOUNCE** mode. Use DIP switches 1, 2, and 3 on the front panel to select **Ring Trip** Interface or **E & M** mode for channels 1, 2 and 3. These switches are only read when first powered up. Momentarily disconnect power after changing the DIP switches.

## A. Ring Trip Interface

A standard C.O. line or PABX extension should be connected to the **CO/PABX LINE** input jack for that channel. The **DVA-3003** will answer after the programmed ring delay, play the announcement for the message repeat count, perform a hook switch flash transfer if a number is programmed, or disconnect. The **BUSY** screw terminals provide a contact closure during the announcement. If the caller hangs up during the announcement, the **DVA-3003** will detect the **C.P.C.** signal (if present) and disconnect that line. It is now immediately ready for the next incoming call.

## B. 4 Wire E & M Interface:

The **600 OHM E & M** jack provides a 600 ohm "Dry" output. Refer to the protocol timing specifications on page 3 and the PBX table on pages 4 and 5 for the control lead connections.

# Single Channel Mode

The **DVA-3003** may be configured as a single channel announcer with up to 12 minutes announcement time. In this mode of operation, channels 2 and 3 are disabled, and channel 1 utilizes the combined digital announcement memory time of all three channels. A stock **DVA-3003** has a total of 3 minutes of single channel announcement memory. **Viking** model **ERAM-60** memory expansion chips can be installed to extend the announcement memory to a total of 12 minutes. Each **ERAM-60** chip will add one minute of announcement memory. To enable the single channel mode, set front panel **SINGLE CHANNEL** DIP switch to **ON**, then momentarily disconnect power.

**Product Support Line...(715) 386-8666**

**Fax Back Line...(715) 386-4345**

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

## If you have a problem with a Viking product, please contact Technical Support at (715) 386-8666

Our Technical Support Department is available for assistance weekdays between 8 a.m. and 5 p.m. 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 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, Inc., 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 P.O. 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 Department 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.**

## 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.



## IMPORTANT SAFETY INSTRUCTIONS

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Read and understand all instructions. The Technical Practice delivered with your product contains Installation Instructions and other important information.
2. Follow all warnings and instructions marked on the product and contained in the Technical Practice.
3. Unplug this product from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water, for example, near bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
5. Do not place this product on an unstable cart, stand or table. The product may fall causing serious damage to the product.
6. This product should be operated only from the type of power source indicated on the markings label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
7. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
8. Do not overload wall outlets and extension cords as this can cause risk of fire or electric shock.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in the risk of fire or electric shock. Never spill liquid of any kind on the product.
10. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock when the appliance is subsequently used.
11. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - A. When the power supply cord or plug is damaged or frayed.
  - B. If liquid has been spilled into the product.
  - C. If the product has been exposed to rain or water.
  - D. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require other work by a qualified technician to restore the product to normal operation.
  - E. If the product has been dropped or the cabinet has been damaged.
  - F. If the product exhibits a distinct change in performance.
12. Avoid using a telephone (other than the cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
13. Do not use the telephone to report a gas leak in the vicinity of the leak.
14. Repairs to this telephone equipment can only be made by the manufacturer or its authorized agents.
15. Use the product only in the fashion, and in conjunction with the equipment, described in the Technical Practice.

**\*\* SAVE THESE INSTRUCTIONS! \*\***



