

# VIKING PRODUCT MANUAL

COMMUNICATION &amp; SECURITY SOLUTIONS

## Promote Your Business While Customers Hold and more ...

The **DVA-2WA** is a digital announcer with a built in 2 watt amplifier. Designed to provide music and promotion on hold, the **DVA-2WA** can playback in a continuous loop or alternate between promotions and an auxiliary music source in timed intervals. Any number of multiple messages may be recorded.

The announcer comes with four professionally pre-recorded promotion on hold messages, a power supply and cabling for an easy plug and play installation.

The output of the **DVA-2WA** may also be connected directly to loudspeakers for repeated messages or played at the push of a button for museum displays, information booths, point of interest locations, retail applications, etc.



The **DVA-2WA**'s non-volatile memory eliminates the need for batteries or costly built in tape decks. This provides the convenience of recording at the shop or professional studio and then shipping to the installation site.

### Features

- **7.5 minutes of user recordable memory**
- **Select from user recorded messages or four pre-recorded on-hold pacifier messages**
- Three playback options: on demand, continuous loop and timed intervals
- Non-volatile memory (no batteries required)
- Built-in 2 watt amplifier will drive up to three **25AE** Paging Horns, **30AE** Ceiling Speakers or equivalent
- **Record from electret mic, carbon handset, tape, CD, PC sound card or any line level device**
- **Monitor recording from a standard handset**
- **600 ohm audio output for high wattage amplifiers**
- Multiple message capabilities (total number of messages limited to 250 or the maximum record time)
- AGC (Automatic Gain Control) for trouble free recording
- Auxiliary audio (MOH) input for background music between messages
- Remote trigger input for on-demand playback from a remote contact closure
- **Press and hold play mode**
- Status LED for record and playback indication
- **Master and auxiliary input volume controls**
- **I.O. (Input/Output) communications port (allows only one DVA-2WA to announce at a time)**

### Applications

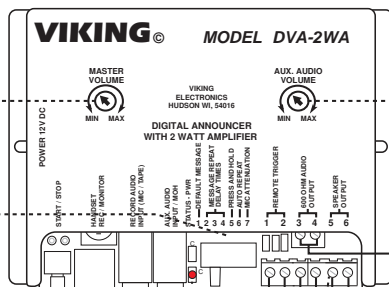
- On-hold promotion messages and background-music
- Non-volatile message repeater for...
  - Museum and information displays
  - Car rental "Leave the keys in the ignition..."
  - Airport "Loading and unloading only..."
  - Smoking "This is a non-smoking building..."
  - Amusement Parks "Please keep your hands in the vehicle at all times..."
  - Retail "Blue light special in aisle 5..."

### Specifications

**Power:** 120V AC/12V DC, 500mA adapter provided  
**Dimensions:** 5.25" x 3.5" x 1.75" (133mm x 89mm x 44mm)  
**Shipping Weight:** 2.2 lbs (1.0 kg)  
**Environmental:** 32°F to 90°F (0°C to 32°C) with 5% to 95% non-condensing humidity  
**Frequency Response:** 100-3.4KHz  
**Sampling Rate:** 64K (equivalent)  
**User Message Length:** 7.5 minutes maximum  
**Recording Audio Input Level:** 30mV - 1.0V RMS (AGC range)  
**600 Ohm Audio Output Level:** 0.3V RMS maximum (across a 600 ohm load)  
**Speaker Output Power:** 2 watt peak  
**Connections:** (1) 6-position cage clamp terminal block, (3) 3mm (1/8") audio jacks, (1) handset jack  
**Pre-recorded Pacifier Message Length:** 30 seconds total  
**Minimum Speaker Impedance:** 2.66 Ohms: (3) 8-Ohm speakers in parallel  
**I.O. Com Wire Run Length:** 1000 ft maximum (24 AWG)  
**Remote Trigger Wire Run Length:** 4000 ft maximum (24 AWG)

## Features Overview

**⚠ 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.



**Master Volume Control:**  
Adjusts audio output level of messages and auxiliary/MOH audio.

**Programming Switches:**  
Set message repeat times and unit configurations (see page 9).

**Record and Playback Start/Stop Button:**  
For starting and stopping recording and/or playback.

**Handset Record/Monitor Jack:**  
Only a carbon type handset can be used for recording. Any standard handset may be used for monitoring.

**Record Audio Input Jack:**  
For electret Mic or line level audio input from tape, CD, PC, etc. (1/8" mono jack)

**Auxiliary Audio/MOH Input:**  
For timed background music between promotional messages. (1/8" mono jack)

**Status LED:**  
Indicates which function the DVA-2WA is currently performing. See the chart below for function descriptions.

Status	Function
OFF	Idle
ON Steady	Ready to record
Fast Flash	Recording
Flash	Playback
Slow Flash	Delay time
Pulse Hi/Lo	Memory overflow

**Auxiliary Audio Volume Control:**  
Adjust to match background music volume to message volume.

**I.O. (Input/Output) Com Port:**  
Daisy-chain terminals A & B to multiple DVA-2WA's. With this connection made, the last DVA-2WA activated will turn off the current announcement of any previous DVA-2WA and allow only the last DVA-2WA activated to be heard.  
**Note:** This connection is polarity sensitive.

**Amplified Speaker Output:**  
Connect directly to speakers. Up to three 8-Ohm speakers maximum.

**⚠ Important:** If you experience hum during the playback of user-recorded messages, earth ground Speaker Output terminal 5 before recording messages.

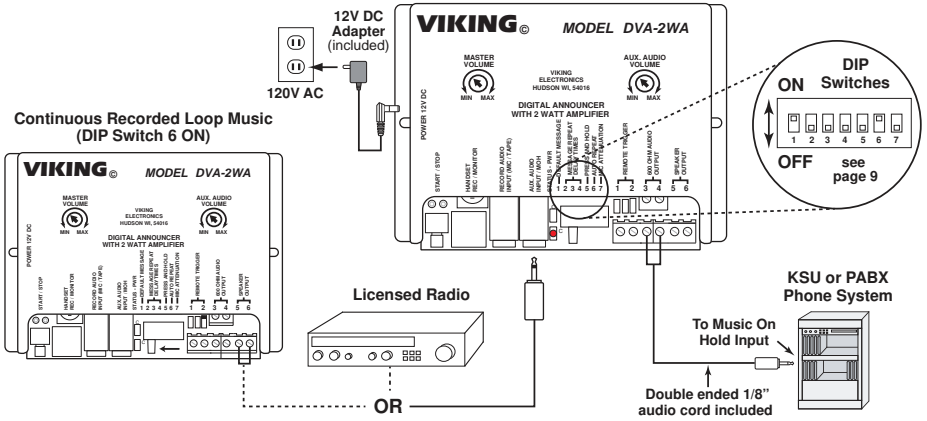
**600 Ohm Audio Output:** Connect to music input port of phone system or higher watt amplifier. (1/8" mono jack)

**Remote Trigger Input:** Connect to a momentary contact closure for single on-demand playback.

**PLAY/RECORD Selector Switch:**  
Move switch to the left to select the play mode. Move switch to the right to select the record mode.

## A. Pre-Recorded or User-Recorded Promotion and Music On Hold

In this application, the DVA-2WA will play a continuous loop to your phone system's music-on-hold port.

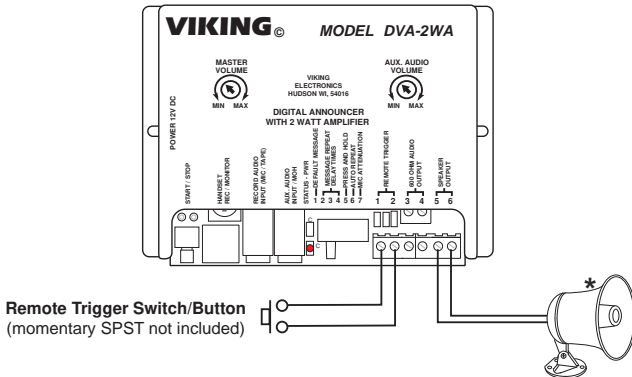


## B. Information On-Demand

### 1. On-Demand with Uninterruptible Announcement

This application is ideal for situations in which a momentary contact closure will trigger the announcement or message. Once triggered, the unit will play its entire message. When the message has finished, the switch can be activated again to play the next message (or repeat the first message if only one is recorded).

<b>Step 1</b>	Connect speakers to the DVA-2WA as shown in the diagram below.
<b>Step 2</b>	Connect a "Remote Trigger Switch/Button" (momentary SPST, not included).

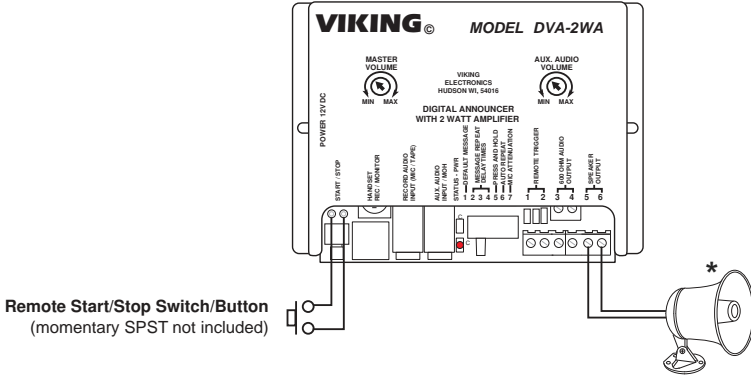


**\* Note:** Up to three 8-ohm speakers may be connected (not included). Viking models 25AE Paging Horn, 30AE Ceiling Speaker or equivalent are recommended. For more information, see DOD 498.

## 2. On-Demand with Uninterruptible Announcement (Single Start/Stop Switch/Button)

This application is ideal for situations in which a single switch or button is used to start or stop the message.

<b>Step 1</b>	Connect speakers to the <b>DVA-2WA</b> as shown right.
<b>Step 2</b>	Solder a momentary SPST switch/button to the “ <b>REMOTE SW</b> ” pads 1 & 2. This will allow users to start and stop messages from a single remote switch.

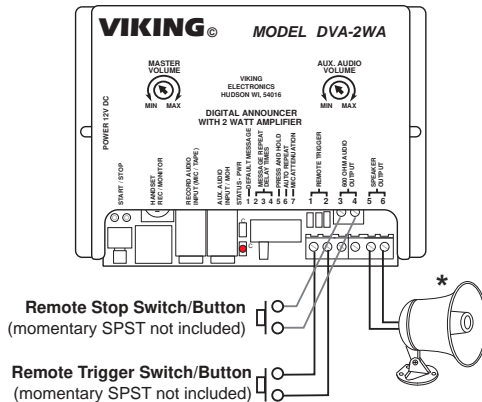


**\* Note:** Up to three 8-ohm speakers may be connected (not included). Viking models **25AE** Paging Horn, **30AE** Ceiling Speaker or equivalent are recommended. For more information, see **DOD 498**.

## 3. On-Demand with interruptible Announcement (Separate Start/Stop Switches/Buttons)

This application is ideal for situations in which separate switches or buttons are used to start or stop the message.

<b>Step 1</b>	Connect speakers to the <b>DVA-2WA</b> as shown right.
<b>Step 2</b>	Use the “Remote Trigger Switch/Button” for the “Start” Switch.
<b>Step 3</b>	Use the optional Remote Stop Switch on the <b>I.O.COM</b> connections <b>A &amp; B</b> for the “Stop” Switch.

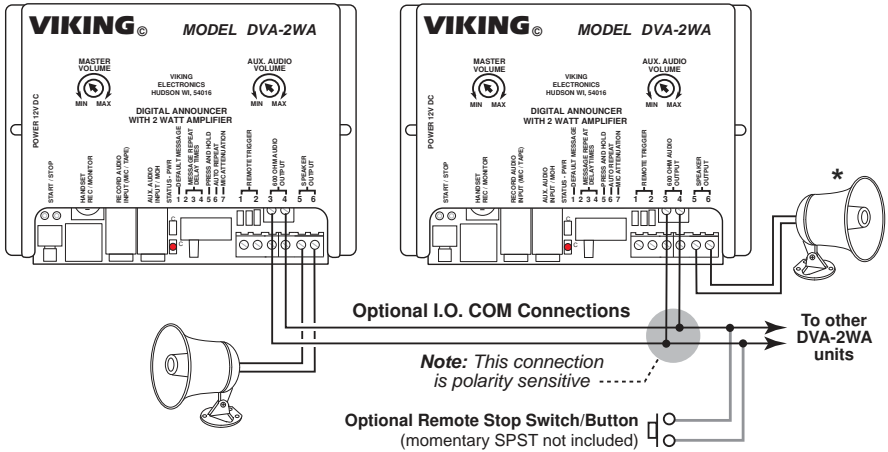


**\* Note:** Up to three 8-ohm speakers may be connected (not included). Viking models **25AE** Paging Horn, **30AE** Ceiling Speaker or equivalent are recommended. For more information, see **DOD 498**.

#### 4. Multiple Units with I.O. (Input/Output) Communication

When installing multiple **DVA-2WA**'s in displays that are close enough together to cause audible interference, the I.O. communication will allow only one **DVA-2WA** to announce at a time. The last unit to be triggered will announce its message, disabling any current messages played from any previously triggered **DVA-2WA**.

<b>Step 1</b>	Connect speakers and remote momentary switches to the <b>DVA-2WA</b> s as shown in <b>Installation</b> sections 1, 2 or 3.
<b>Step 2</b>	Connect the <b>I.O. Com</b> connections as shown below to prevent two announcers from playing at one time.
<b>Step 3</b>	A remote "stop" switch can be connected to the I.O Connections <b>A &amp; B</b> . A momentary closure will stop message.

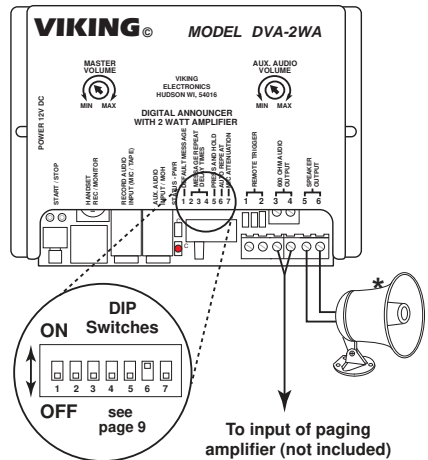


\* **Note:** Up to three 8-ohm speakers may be connected (not included). Viking models **25AE** Paging Horn, **30AE** Ceiling Speaker or equivalent are recommended. For more information, see **DOD 498**.

#### C. Continuous Loop (Repetitive Information)

Single or multiple informational messages may be repeated continuously or you may use the message repeat delay time option for adding timed intervals between messages.

<b>Step 1</b>	Adjust DIP switches 2, 3 and 4 for delay times of 2 seconds to 30 minutes (see page 9).
<b>Step 2</b>	Connect speakers or auxiliary amplifier. The Unit will power up to three 8-ohm speakers, or can provide a 600 ohm signal to auxiliary amplifiers.
<b>Step 3</b>	Set DIP switch 6 to the ON position for continuously repeated playback



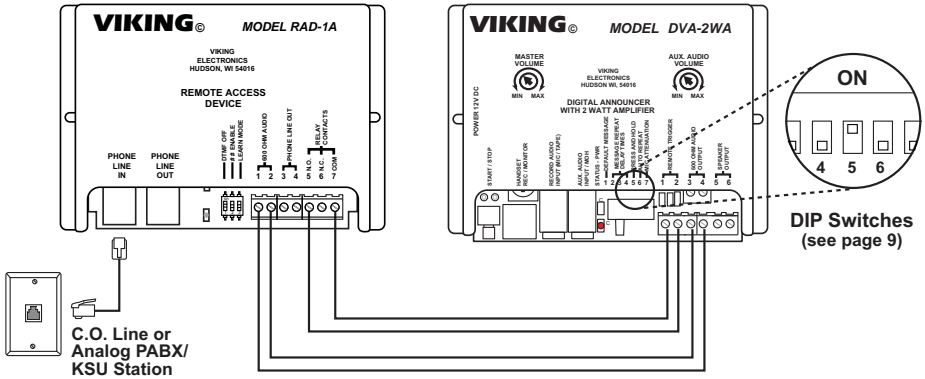
\* **Note:** Up to three 8-ohm speakers may be connected (not included). Viking models **25AE** Paging Horn, **30AE** Ceiling Speaker or equivalent are recommended. For more information, see **DOD 498**.

## D. Single Line 7.5 Minute Digital Announcer

In this application, the **RAD-1A** Remote Access Device will answer the line and trigger the message on the **DVA-2WA** to play from the beginning.

<b>Step 1</b>	Connect as shown.
<b>Step 2</b>	Turn DIP switch 5 <b>ON</b> (see page 9).
<b>Step 3</b>	Program the <b>RAD-1A</b> as shown in the <b>RAD-1A</b> Product Manual, <b>DOD 410</b> .

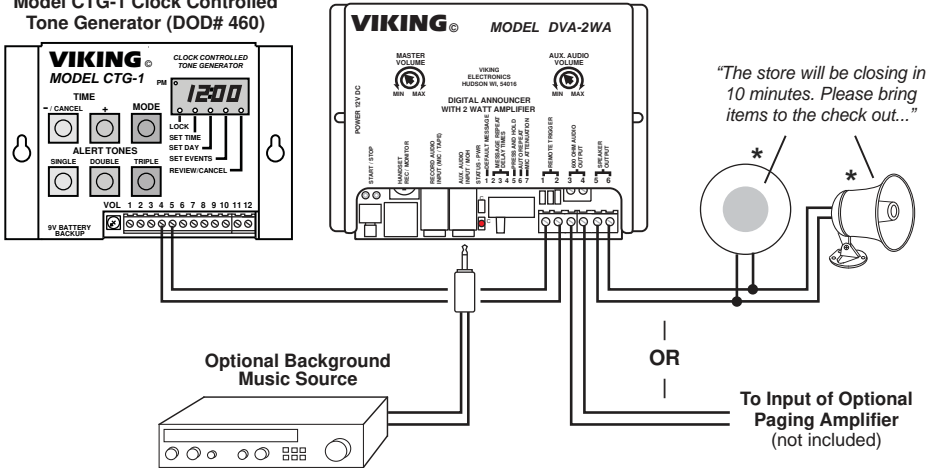
**Important:** The **RAD-1A** "Call Timer" must be programmed to a time long enough for the **DVA-2WA** to play its entire message. Please refer to the **RAD-1A** Product Manual, **DOD 410**.



## E. Time Activated Messages Over a Paging System

In this application, the **DVA-2WA** is used in conjunction with a Viking **CTG-1** Clock Controlled Tone Generator (**DOD 460**) to provide time activated promotional voice messages over an existing paging system.

### Model CTG-1 Clock Controlled Tone Generator (DOD# 460)

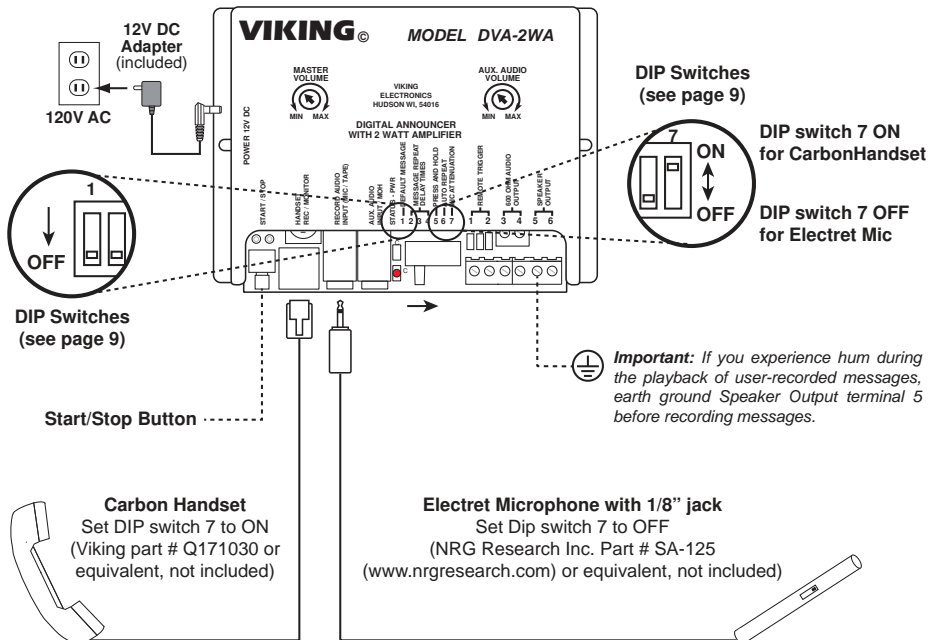


\* **Note:** Up to three 8-ohm speakers may be connected (not included). Viking models **25AE** Paging Horn, **30AE** Ceiling Speaker or equivalent are recommended. For more information, see **DOD 498**.

## A. Recording from an Electret Microphone or Carbon Handset

<b>Step 1.</b>	Set DIP switch 1 to the <b>OFF</b> position and remove any background music source from the <b>AUX AUDIO</b> input.
<b>Step 2.</b>	Connect the 1/8" Electret microphone plug to the Record Audio input and set DIP switch 7 to the <b>OFF</b> position or connect a carbon handset to the modular jack of the <b>DVA-2WA</b> and set DIP switch 7 to the <b>ON</b> position. See page 9.
<b>Step 3.</b>	Slide the <b>PLAY/RECORD</b> switch to the right, the LED will light steady to indicate the <b>DVA-2WA</b> is in the record mode. <b>Note:</b> To avoid feedback, turn the Master Volume control to "min" position.
<b>Step 4.</b>	Momentarily press the <b>START/STOP</b> button to begin recording. The LED will flash fast to indicate you are recording.
<b>Step 5.</b>	Momentarily press the <b>START/STOP</b> button again to stop recording, the LED will light steady.
<b>Step 6.</b>	Repeat steps 4 and 5 for each message you wish to record.
<b>Step 7.</b>	Slide the <b>PLAY/RECORD</b> switch to the left to place the <b>DVA-2WA</b> back into the play mode.
<b>Step 8.</b>	Turn up the Master Volume control and review recording(s) by momentarily pressing the <b>START/STOP</b> button and listening to messages in handset, speakers or 600 ohm output.

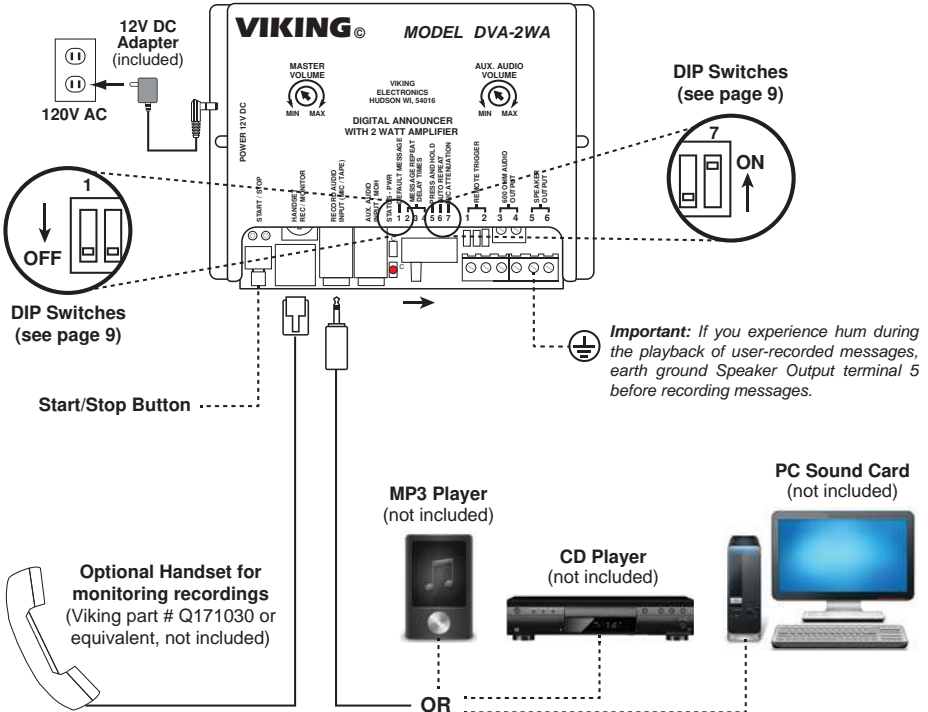
**Notes:** If the total available record time is surpassed while recording, the status LED will pulse hi-low. To re-record all user-recorded messages, move the switch to play then back to the record position. This will allow you to record over all the previous messages in memory.



## B. Recording from a Tape, CD Player or Any Line Level Source (PC sound card, etc)

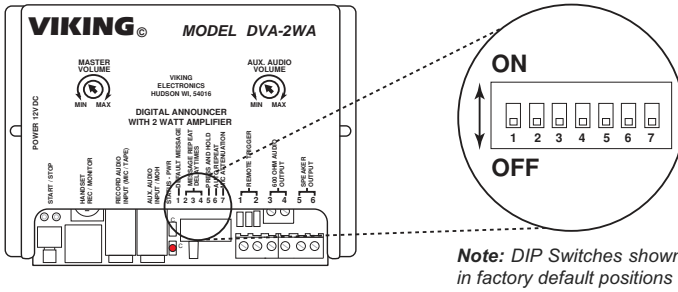
<b>Step 1.</b>	Set DIP switch 1 to the <b>OFF</b> position and DIP switch 7 in the ON position and disconnect any background music source from the <b>AUX AUDIO</b> input. See page 9.
<b>Step 2.</b>	Set the volume on the MP3 player / Tape player / CD player / PC to the middle position.
<b>Step 3.</b>	Connect the output from the MP3 player / Tape player / CD player / PC to the <b>RECORD AUDIO</b> input jack of the <b>DVA-2WA</b> using the double ended 1/8" audio cord provided.
<b>Step 4.</b>	Slide the Play/Rec switch to the right, the LED will light steady to indicate the <b>DVA-2WA</b> is in the record mode.
<b>Step 5.</b>	Momentarily press the <b>START/STOP</b> button to begin recording. The LED will flash fast to indicate you are recording.
<b>Step 6.</b>	Momentarily press the <b>START/STOP</b> button again to stop recording, the LED will light steady.
<b>Step 7.</b>	Repeat steps 5 and 6 for each message you wish to record.
<b>Step 8.</b>	Slide the <b>PLAY/RECORD</b> switch to the left to place the <b>DVA-2WA</b> back into the play mode.

**Notes:** If the total available record time is surpassed while recording, the status LED will pulse hi-low. To re-record all user-recorded messages, move the switch to play then back to the record position. This will allow you to record over all the previous messages in memory.





# DIP Switch Programming



## A. DIP Switch 1: Pre-Recorded or User-Recorded Messages

**ON** = Unit will only playback the professionally pre-recorded on-hold pacifier messages (4 messages, approximately 30 seconds of total playback time). See the table below for specifications.

**Note:** The 4 pre-recorded messages are stored in non-volatile memory and cannot be re-recorded or erased.

**OFF** = Unit will only playback the user-recorded message(s) (total number of messages limited to 250 or the maximum record time of 7.5 minutes).

Message #	Length	Message
1	4.5 sec	"Please continue to hold. We'll be back with you as soon as possible."
2	7.5 sec	"Thank you for holding, we look forward to talking with you. Please continue to hold and we'll be back with you in a moment."
3	6.5 sec	"Please continue to hold. Your call is very important to us. We'll be back with you in a moment."
4	6.5 sec	"Thank you for holding. We appreciate your patience. Please hold the line and we'll be right back with you."

## B. DIP Switches 2 / 3 / 4: Delay Time Between Message Playback

These DIP switches are used to select the delay time for background music between message playback. Use the table at the right to select your desired delay time.

Switch 2	Switch 3	Switch 4	Delay Time
OFF	OFF	OFF	2 seconds
OFF	OFF	ON	15 seconds
OFF	ON	OFF	30 seconds
OFF	ON	ON	60 seconds
ON	OFF	OFF	5 minutes
ON	OFF	ON	7.5 minutes
ON	ON	OFF	15 minutes
ON	ON	ON	30 minutes

## C. DIP Switch 5: Remote Trigger Operation

**ON** = Message will only play while a contact is maintained across terminals 1 and 2.

**OFF** = Message will continue to play after contact is removed.

## D. DIP Switch 6: Continuous/Normal Play Mode

**ON** = Continuous loop.

**OFF** = Normal play.

## E. DIP Switch 7: Input Gain Adjustment

**ON** = Reduce gain for line level devices.

**OFF** = High gain for electret mics.

## A. Recording

The **DVA-2WA** is designed to be recorded from any line level source (tape/CD player, PC soundcard, etc.) or live from an Electret microphone or carbon handset. Single or multiple messages may be recorded. You may record up to 250 messages, but the total length of all messages may not exceed the maximum record time. With the **PLAY/RECORD** switch in the **RECORD** (right) position follow the steps in the **Recording** section on pages 7 and 8.

## B. Information On-Demand

With the **PLAY/RECORD** switch in the **PLAY** position, the **DVA-2WA** is ready to play. Momentarily press the start switch on the front panel or a remote switch connected to the remote trigger terminals (or "**REMOTE SW**" pads **1 & 2**) to initiate a single message playback. Each message will playback one at a time in the order in which they were recorded. After a message has been played, the button must be pressed again for the next message. The **START/ STOP** switch on the front panel (or the switch connected to "**REMOTE SW**" pads **1 & 2**) can also be used to start and stop message playback. Momentarily pressing the switch during an announcement will stop playback and will also reset the unit to begin playback from the first message recorded on the next switch activation or remote trigger.

## C. Continuous Loop (DIP Switch 6 ON)

In the continuous loop mode (see **Installation** section **C**), the **DVA-2WA** will play all recorded messages one at a time in the order in which they were recorded with programmed delay times between each message. Delays between message playback are selectable from 2 seconds to 30 minute increments (see **DIP Switch Programming** section **B**). If a background music source is connected, music will be faded in and out during the delay times.

**Note:** *If the Auxiliary Audio is not loud enough, and the **AUX AUDIO** is at maximum, increase the volume of your music source (licensed radio, etc.)*

## Cost Effective Speakers for Indoor and Outdoor Use



For more info,  
see DOD 498

The **25AE**, **30AE**, **35AE**, and **40AE** paging speakers provide additional economical paging coverage to existing Viking paging units (**PA-2A**, **PA-15**, **PA-30**, **PA-60**, **HF-3W**, **M2W**) or to any system with an 8 ohm output.

In outdoor, factory or warehouse environments, **25AE** paging horns are the best method of producing

understandable sound. In these environments the directional design allows the installer to focus the sound cone down aisles and toward work areas.

In office and restaurant environments, it is best to distribute sound more evenly. Ceiling mounted **30AE**, **35AE**, or **40AE** speakers in close proximity offer the best distribution and are cost effective. The **35AE** speakers include a volume control.

## Line Powered Remote Access Device

The **RAD-1A** Remote Access Device gives authorized users remote access to PABX, Centrex and Electronic Key system features. It can also provide bridging to a second central office line. With two levels of access and programmable toll restriction, the **RAD-1A** provides the security required to help prevent phone system and toll abuse.

The **RAD-1A** answers on the first ring and disconnects on CPC, call time out, silence time out, return dial tone or by dialing #7. Separate 600 ohm audio and telephone line outputs are provided, allowing connection to audio amplifiers, digital announcers, telephone lines or analog PABX extensions. For "line extender" applications, the user does not have to hang up and redial the **RAD-1A** to make another call. The **RAD-1A** will also provide a hookswitch flash on the telephone line out ports to access PABX, Centrex or Electronic Key system features.



For more info, see DOD 410

## Add Time Controlled Alert Tones and Emergency Tones to Your Paging System



Viking's model **CTG-1** is a clock controlled tone generator designed to provide accurately timed alert tones or buzzer sounds over an existing paging system.

The **CTG-1** can be programmed to output single, double or triple alert tones or buzzer sounds with up to 128 events in a 24 hour period. These tone/buzzer sounds are ideal for indicating the start and end of shifts, break times, lunch periods, etc. for factories, schools, or any business requiring an audible indication of specified

times. Each day of the week can be programmed to either on or off, allowing you to turn off the alert tones during specific days of the week (weekends, etc.) The **CTG-1** has three contact closure inputs for triggering an emergency siren, evacuation signal or a door bell sound. See **DOD 460** for more information.

## 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 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 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.

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.