

# VIKING

# TECHNICAL Practice

**TELECOM SOLUTIONS FOR THE 21ST CENTURY**

**DVA-2WA**

**Digital Voice  
Announcer with  
Built-In Amplifier**

May 24, 2004

## 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 (Fax Back Document 498)
- 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)

Phone...715.386.8861

## 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:** 133mm x 89mm x 44mm (5.25" x 3.5" x 1.75")  
**Shipping Weight:** 1.0 kg (2.2 lbs)  
**Environmental:** 0°C to 32°C (32°F to 90°F) 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)

## 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 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 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.**

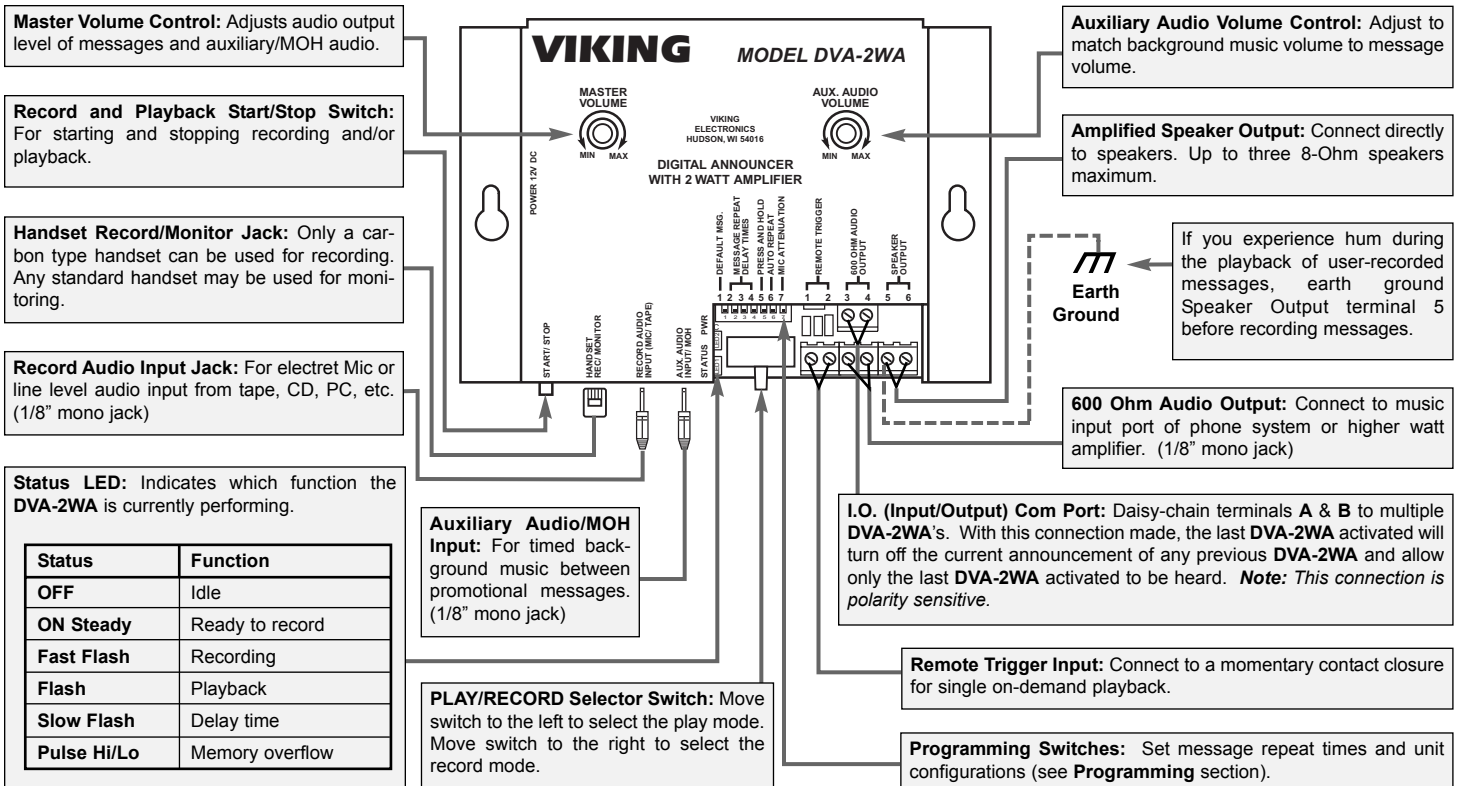
### WARRANTY

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. Vikings sole responsibility shall be to repair or replace (at Viking's option) the material within the terms stated above. VIKING SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND INCLUDING INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING DIRECTLY OR INDIRECTLY FROM ANY BREACH OF ANY WARRANTY EXPRESSED OR IMPLIED, OR FOR ANY OTHER FAILURE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY EXCLUDED BEYOND THE ONE YEAR DURATION OF THIS WARRANTY. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

## Installation

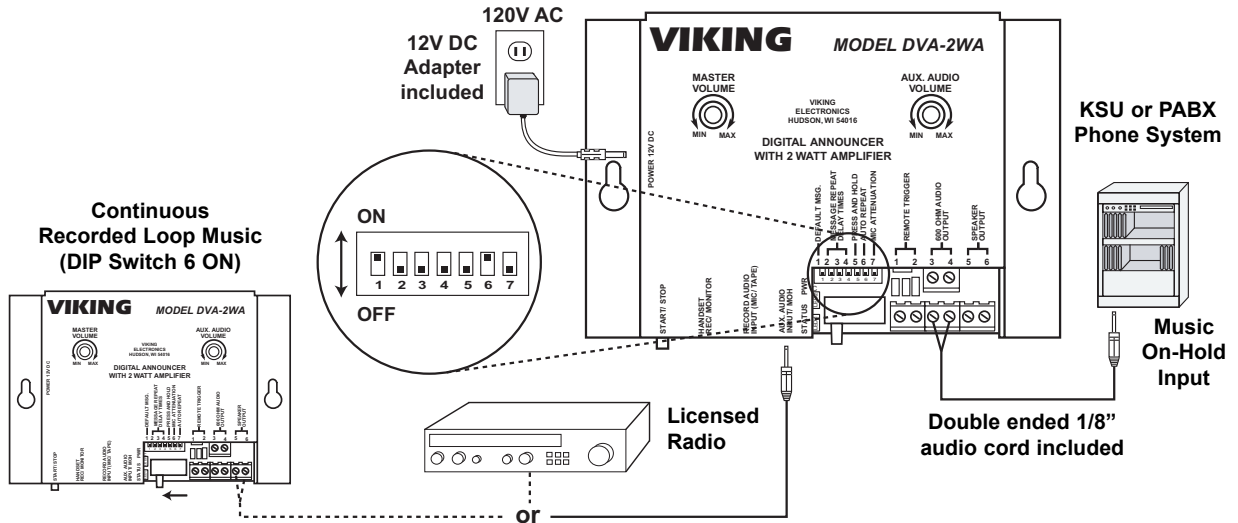


**! IMPORTANT:** Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges. Contact Panamax at (800) 472-5555 or Electronic Specialists Inc. at (800) 225-4876.

## 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>Step 1.</b>	Place DIP switch 1 in the ON position to play the four professionally recorded factory default on-hold pacifier messages (see <b>Programming section C</b> ) or place DIP switch 1 in the OFF position and record and play your own promotion on hold messages on the <b>DVA-2WA</b> (see <b>Programming</b> ).
<b>Step 2.</b>	Place DIP switch 6 in the ON position for continuously repeated playback.
<b>Step 3.</b>	Adjust DIP switches 2, 3 and 4 for the desired delay time between repeated messages (see <b>Programming section C</b> ).

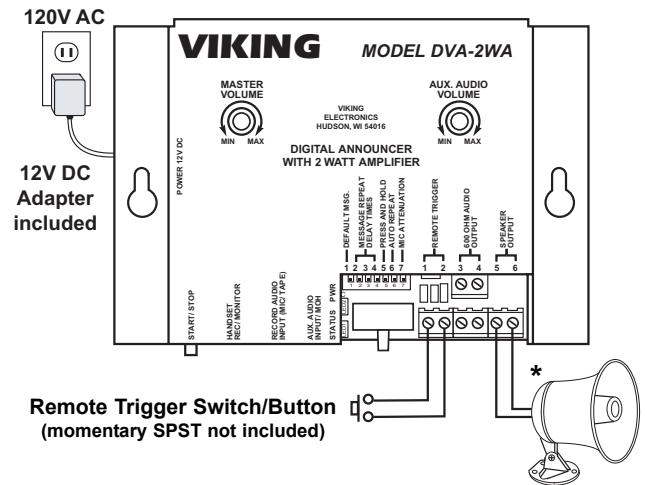


## B. Information On-Demand

### 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).

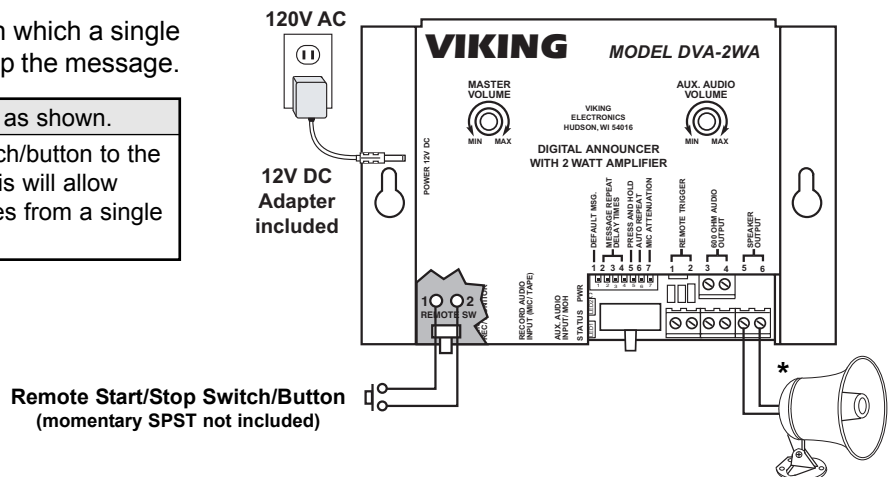
<b>Step 1.</b>	Connect speakers to <b>DVA-2WA</b> as shown.
<b>Step 2.</b>	Connect "Remote Trigger Switch/Button."



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

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

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

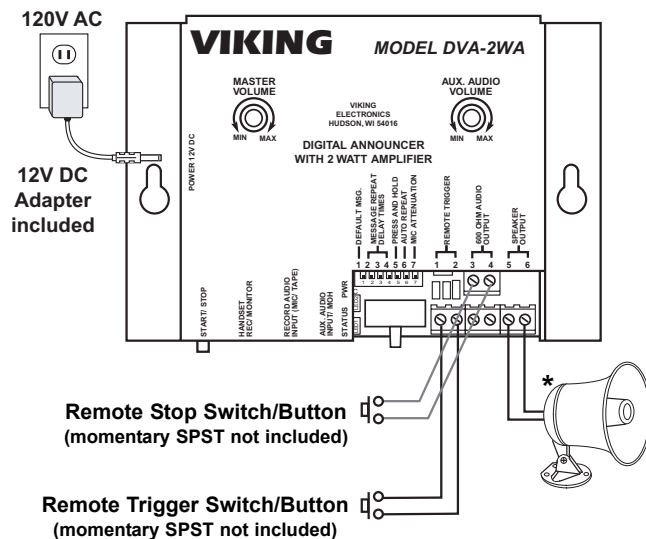


**\* Note:** Up to three 8-ohm speakers may be connected (not included). Viking models 25AE Paging Horn, 30AE Ceiling Speaker or equivalent are recommended. For more information, retrieve **Fax Back Document 498**.

### 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 and stop the message.

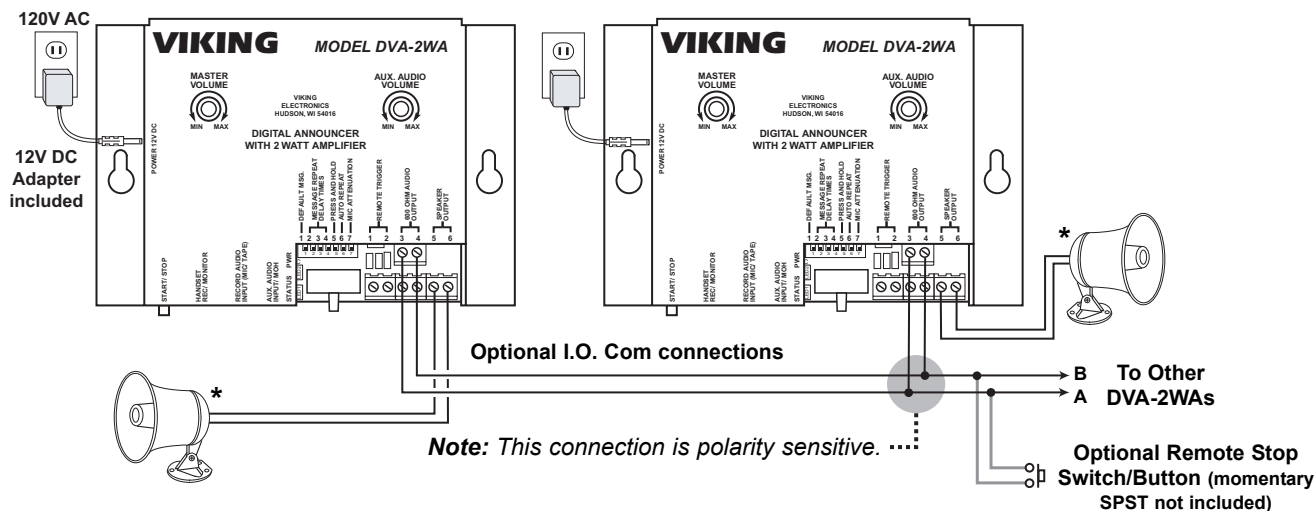
<b>Step 1.</b>	Connect speakers to <b>DVA-2WA</b> as shown.
<b>Step 2.</b>	Use the "Remote Trigger Switch/Button" for the "Start" switch.
<b>Step 3.</b>	Use the optional Remote Stop Switch on the <b>I.O.COM</b> connections <b>A &amp; B</b> for the "Stop" switch.



### 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**.

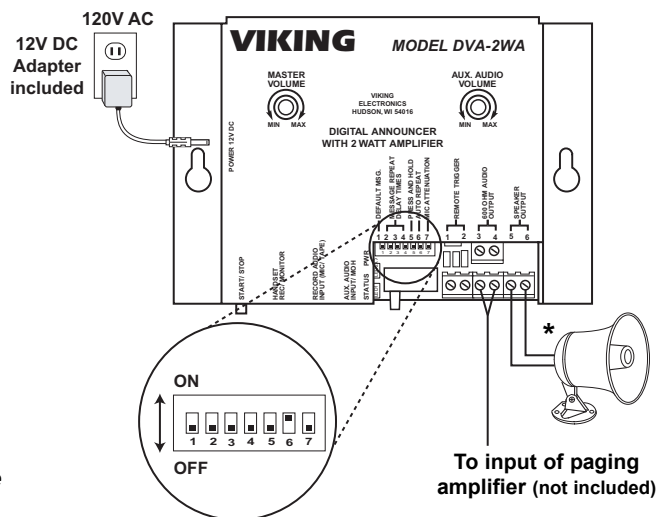
<b>Step 1.</b>	Connect speakers and remote momentary switches to <b>DVA-2WAs</b> as shown in sections 1, 2 or 3 above.
<b>Step 2.</b>	Connect <b>I.O. Com</b> connections as shown to prevent two announcers from playing at one time.
<b>Step 3.</b>	A remote "stop" switch can be connected to I.O. Connections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



### 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 - 30 minutes (see <b>Programming</b> section C).
<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.



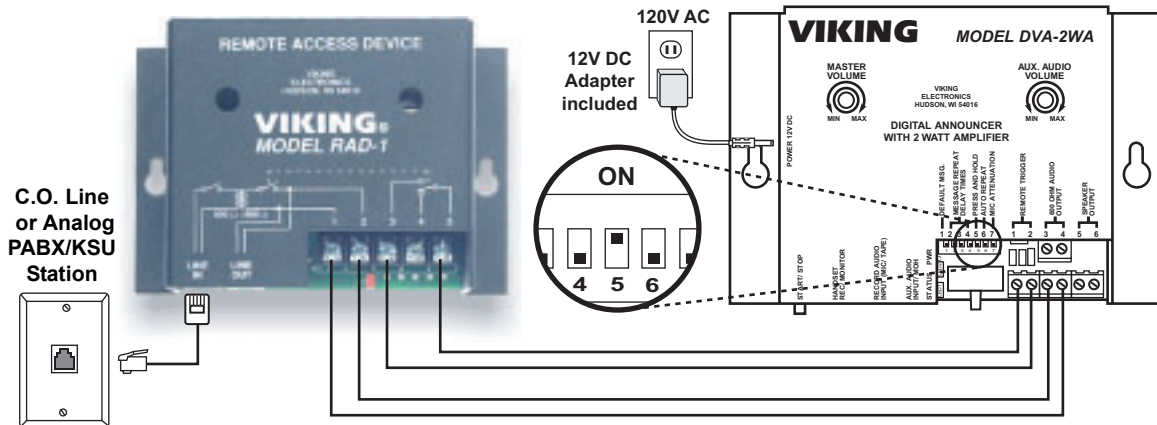
\* **Note:** Up to three 8-ohm speakers may be connected (not included). Viking models **25AE** Paging Horn, **30AE** Ceiling Speaker or equivalent are recommended. For more information, retrieve **Fax Back Document 498**.

## D. Single Line 7.5 Minute Digital Announcer

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

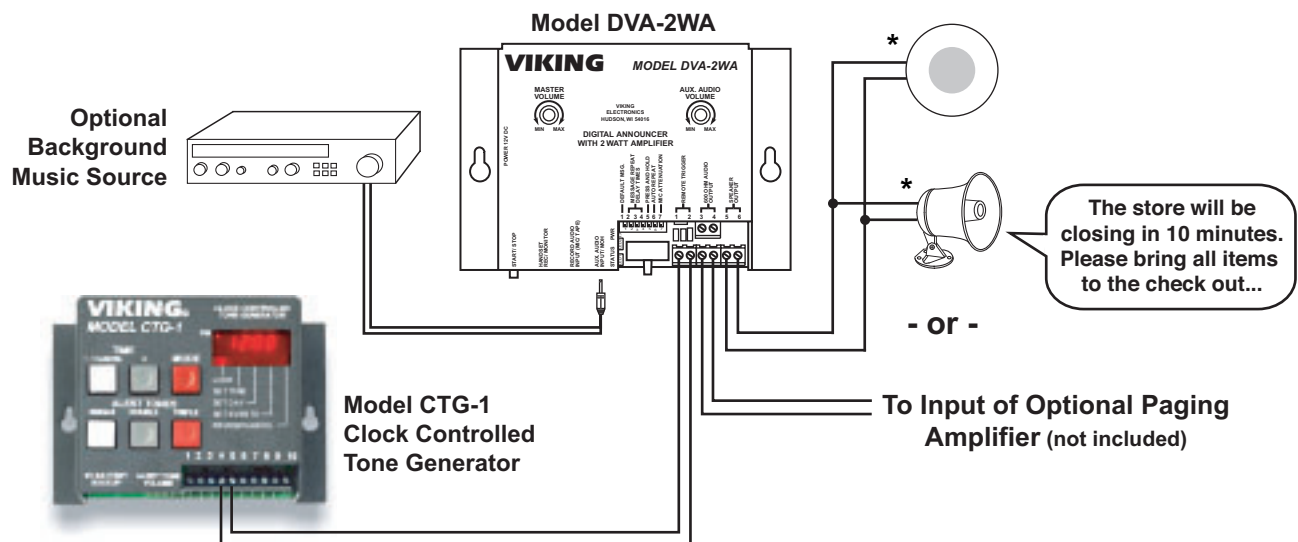
<b>Step 1.</b>	Connect as shown.
<b>Step 2.</b>	Turn DIP switch <b>5 ON</b> .
<b>Step 3.</b>	Program the <b>RAD-1</b> as shown in the <b>RAD-1</b> Technical Practice, <b>Fax Back Document 410</b> .

**Important:** The **RAD-1** "Call Timer" must be programmed to a time long enough for the **DVA-2WA** to play its entire message. Please refer to the **RAD-1** Technical Practice, **Fax Back Document 410**.



## E. Time Activated Messages Over a Paging System

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



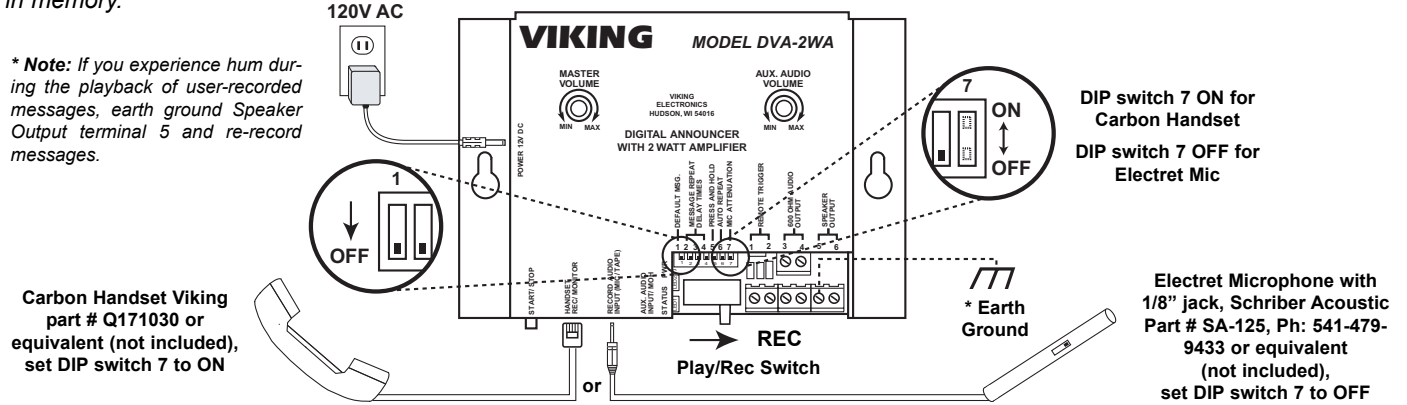
**\* Note:** Up to three 8-ohm speakers may be connected (not included). Viking models **25AE** Paging Horn, **30AE** Ceiling Speaker or equivalent are recommended. For more information, retrieve **Fax Back Document 498**.

# Programming and Recording

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

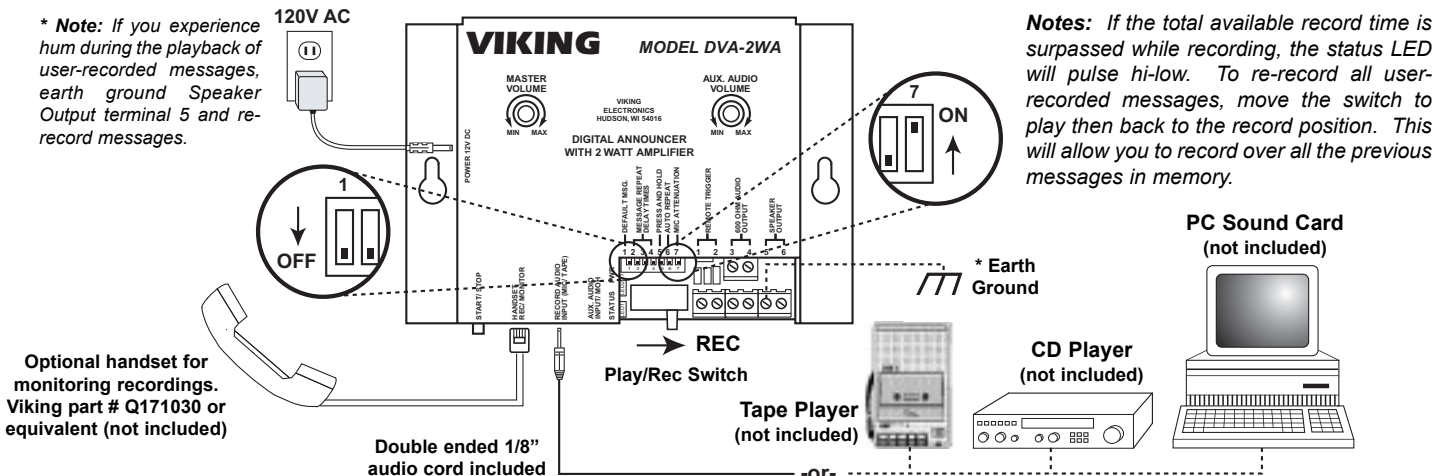
<b>Step 1.</b>	Set DIP switch 1 to the <b>OFF</b> position and remove any background music source from the <b>AUX AUDIO</b> input.
<b>Step 2.</b>	Connect the 1/8" Electret microphone plug to the Record Audio input and set DIP switch 7 to the OFF position or connect a carbon handset to the modular jack of the <b>DVA-2WA</b> and set DIP switch 7 to the ON position.
<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.

**Note:** 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>	Place DIP switch 1 in the OFF position and DIP switch 7 in the ON position and disconnect any background music source from the <b>Aux Audio</b> input.
<b>Step 2.</b>	Set the volume on the tape/CD player to a middle setting.
<b>Step 3.</b>	Connect the output from the Tape/CD player 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>	Start the tape/CD player and monitor when to start/stop the recording by listening through the speaker(s) connected to terminals 5 and 6 or monitor with handset connected to the handset <b>REC/MONITOR</b> jack (mouthpiece is disabled).
<b>Step 6.</b>	Momentarily press the <b>START/STOP</b> button to begin recording. The LED will flash fast.
<b>Step 7.</b>	Momentarily press the <b>START/STOP</b> button again to stop recording. The LED will light steady.
<b>Step 8.</b>	Repeat steps 5 through 7 for each message you wish to record.
<b>Step 9.</b>	Slide the <b>PLAY/REC</b> switch to the left position to place the <b>DVA-2WA</b> back into the play mode.



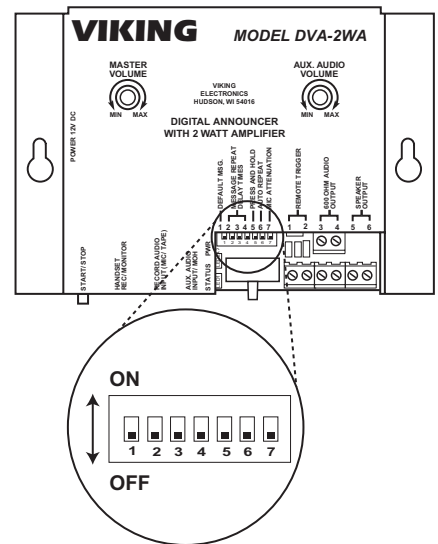
## C. DIP Switch Programming

### 1. 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. **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 just 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.



### 2. DIP Switches 2, 3 and 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.

### 3. 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.

### 4. DIP Switch 6 - Continuous/Normal Play Mode

**ON** = Continuous loop. **OFF** = Normal play.

### 5. DIP Switch 7 - Input Gain Adjustment

**ON** = Reduce gain for line level devices. **OFF** = High gain for electret mics.

Sw 2	Sw 3	Sw 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

# Operation

## 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 **Programming and Recording**.

## 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 **Programming** section **C**). 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.)

## Related Products



**?** Need More Information on the 25AE or 30AE?  
Call (715) 386-4345 and select 498.

The **25AE** and **30AE** paging speakers provide additional economical paging coverage to existing Viking paging units (**PA-2A**, **CPA-7B**, **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** speakers in close proximity offer the best distribution and are cost effective.

The **25AE** Paging Horn features: adjustable base for easy mounting and directional adjustment, compact design for out of the way mounting, and is designed to work with all of Viking's paging products.

The **30AE** Ceiling Speaker features: attractive white grill for flush mounting in office ceiling, mounting hardware included, large permanent magnet, excellent frequency response, and is designed to work with all of Viking's paging products.

The **RAD-1**, 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-1** provides the security required to help prevent phone system and toll abuse.

The **RAD-1** answers on the first ring and disconnects on CPC, time out or by dialing #7. The 600 ohm **LINE OUT** port provides loop closure for audio access to system features or an external device. For "line extender" applications, the user does not have to hang up and redial the **RAD-1** to make another call. The **RAD-1** will also provide a hookswitch flash on the **LINE OUT** port to access PABX, Centrex or Electronic Key system features.



**?** Need More Information on the RAD-1?  
Call (715) 386-4345 and select 410.



**?** Need More Information on the CTG-1?  
Call (715) 386-4345 and select 460.

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.

The **M15W** is designed to add more paging power to almost any amplified paging product, or it may be used as a primary paging amplifier.

Audio can be input from a 600 ohm source or from an 8-ohm amplified source. The 15 watt output can drive an eight to four ohm load, or two separate two-ohm loads, which simplifies installation of up to eight 8-ohm speakers. Installation of up to 32 speakers is possible. A power adapter and one **25AE** Paging Horn are included.

**?** Need More Information on the M15W?  
Call (715) 386-4345 and select 481.



**Product Support Line...715.386.8666**

**Fax Back Line...715.386.4345**

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