



# TECHNICAL Practice

**TELECOM SOLUTIONS FOR THE 21ST CENTURY**

**DVA-TNT**  
**Time and Temp**  
**Announcer**

April 21, 2009

## Time and Temperature Announcer



The **DVA-TNT** Time and Temperature Announcer combines a flexible, user recordable, digital announcer with pre-recorded, professional, time and temperature announcements. The announcer will interface directly with C.O. lines as well as analog PABX/KSU extensions.

Record up to 30 seconds of personalized messages both before and after the pre-recorded time and temperature announcements. The **DVA-TNT** can also play back a customized night message of

up to 15 seconds before playing the time and temperature.

The **DVA-TNT** may be programmed and recorded either locally or remotely. A remote temperature sensor is included along with an integral 24-hour clock. Rechargeable battery back-up is also provided to keep the clock accurate during power outages.

## Features

- Ring trip or drum recorder modes
- Local and remote recording and programming
- 75 total seconds of recordable non-volatile memory
- Customized recording of pre and post time and temperature announcements
- Customized night message
- Rechargeable battery backup for clock
- Weather resistant remote temperature sensor included
- Selectable Celsius or Fahrenheit readings
- Built-in call counter for caller statistics
- Disconnects on CPC

## Applications

- Provide announcements to Hotel/Motel wake up systems
- Courtesy time and temperature announcer for:
  - Banks
  - Utility companies
  - Phone companies
  - Private businesses
- Remote temperature monitoring
- Business promotion
- ACD/UCD drum recorder

## Specifications

**Power:** 120V AC/13.8 VAC adapter provided  
**Battery Back-up:** 9V NiMh rechargeable battery (factory installed) maintains clock time for up to 3 hours  
**Dimensions:** 211mm x 160mm x 46mm (8.30" x 6.30" x 1.80")  
**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  
**Audio Output:** 600 Ohms  
**Record Time:** 75 seconds  
**Sampling Rate:** 64K (equivalent)  
**Temperature Sensor Maximum Run:** 1500 feet  
**Temperature Sensor Range:** -55°C to 125°C (-67°F to 199°F)  
**Connections:** (2) RJ11 jacks, (1) 2-pin strip terminal strip, (1) 10-pin terminal strip

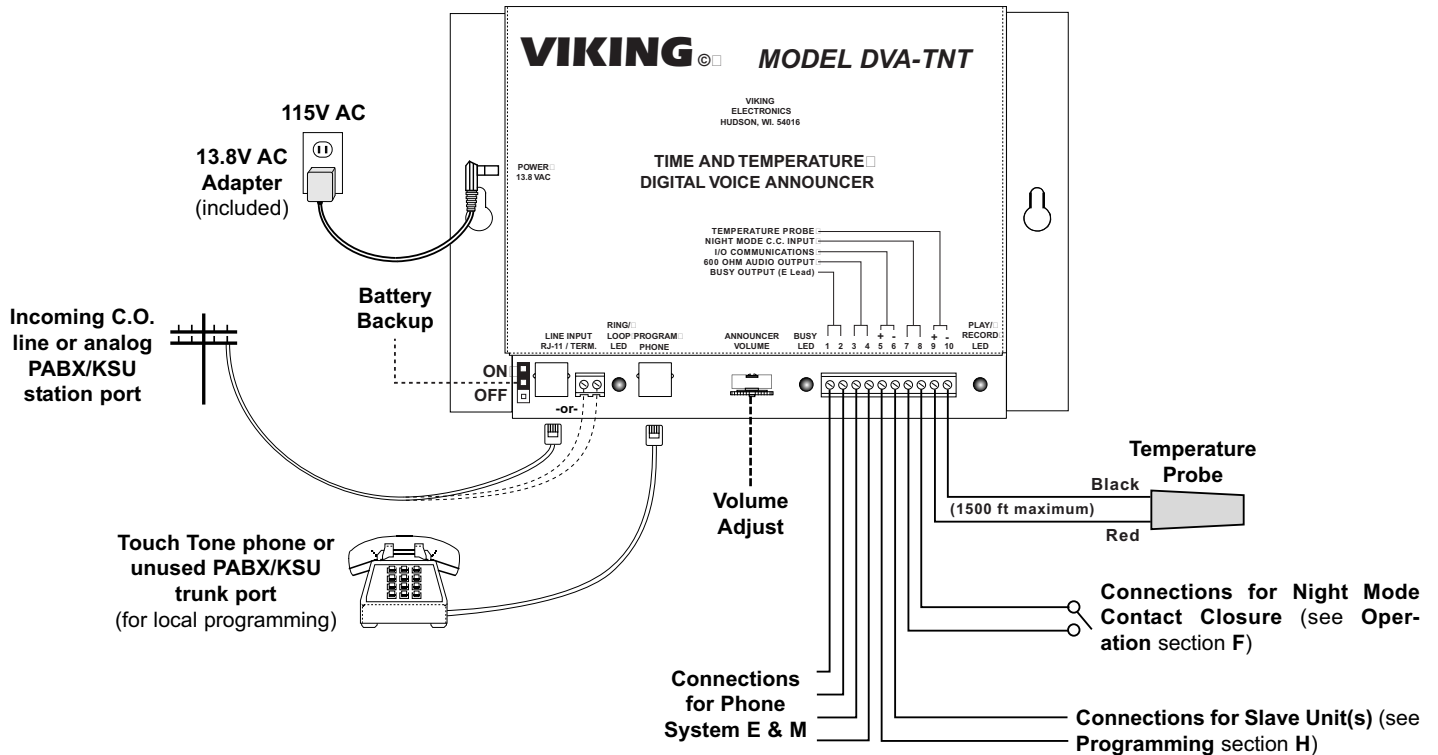
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# Installation

The **DVA-TNT** is designed to be wall mounted and should be placed near a source of A/C power. The temperature sensor is only installed if the announcement is to include temperature information.



After the **DVA-TNT** is mounted, the incoming phone line may be connected. An RJ11 jack is provided for modular connections, as well as a two-position terminal block for stripped wire.

## A. Ring Trip Interface

Connect a phone line or analog PABX/KSU station to the **LINE INPUT** jack or terminals.

## B. Drum Recorder Interface

The **DVA-TNT** provides an E-lead dry contact closure across pins 1 and 2 which can be programmed as N/O or N/C. Connect terminals 1 and 2 (E-lead) to the busy lead terminals of the phone system, and terminals 3 and 4 (600 ohm audio output) to the 600 ohm terminals.

## C. Temperature Sensor

The temperature sensor should be attached using the supplied mounting bracket on a secure surface, in an area where the temperature is to be monitored. If the sensor is located outdoors, it should be mounted in an area that is shaded and will not be submerged in water or covered by snow. If using additional wire is required, indoor/outdoor CAT2 or better is recommended. The maximum wire run from the **DVA-TNT** to the sensor is 1500 feet.

## D. Battery Backup

The **DVA-TNT** features a rechargeable battery backup. When the rest of the installation has been completed, battery backup of the unit should be activated by moving the battery backup shunt from **OFF** to **ON** (see diagram above).

# Programming

## A. Accessing Programming

Programming can be completed either locally with a Touch Tone phone connected to the “**Program Phone**” port, or by calling into the “**Line Input**” jack from a remote location.

### 1. Local Programming

- Attach the **PROGRAM PORT** jack to a phone or unused trunk port (see diagram above).
- Go off-hook on the phone or trunk port connected to the “**Program Phone**” port.
- If the **DVA-TNT** is in the ring-trip mode, two beeps will be heard indicating that the unit has entered programming. If the **DVA-TNT** is in the drum recorder mode, it will complete its current message cycle and then give two beeps to indicate it has entered programming.

## 2. Remote Programming

- a. Connect the **LINE INPUT** jack or terminals to an incoming phone line or analog station.
- b. Call the C.O. line or analog PABX/KSU station connected to the **DVA-TNT**.
- c. If the **DVA-TNT** is in the ring-trip mode, it will answer on the first ring. If the **DVA-TNT** is in drum recorder mode, it will allow the line to continue ringing until the current message cycle has been completed, at which time it will answer and produce a single beep as a user prompt.
- d. Enter a \* followed by the six digit security code (see section **C** below).
- e. Two beeps will be heard indicating that the unit has entered programming.

## B. Programming Features Quick Reference

Features	Digits	Memory + Location
Record night message (15 seconds maximum) .....	*0	
Record pre-time and temperature user recorded message (30 seconds maximum) .....	*1	
Record post-time and temperature user recorded message (30 seconds maximum) .....	*2	
Playback all 3 user-recorded messages .....	*3	
Set to "Good Morning"/"Good Afternoon"/"Good Evening" greetings (factory setting) .....	*4	
Set to "Thank you for calling" greeting .....	*5	
Set to Fahrenheit temperature (factory default) .....	*6	
Set to Celsius temperature .....	*7	
Check total call count (cleared on power down) .....	*8	
Clear call counter .....	*9	
Set to Master unit (factory default) .....	**1	
Set to Slave unit .....	**2	
Set to Ring trip mode (factory default) .....	**3	
Set to Drum recorder mode .....	**4	
Set Normal busy lead polarity (factory default) .....	**5	
Set Inverted busy lead polarity .....	**6	
Disable pre-time and temp user-recorded message (factory setting) .....	**7	
Enable pre-time and temp user-recorded message .....	**8	
Disable post-time and temp user-recorded message (factory setting) .....	**9	
Enable post-time and temp user-recorded message .....	**0	
Set time (two digits must be used for programming the hours and minutes) .....	HHMMX	+ #01
Program security code (factory set to <b>845464</b> ) .....	6 digits	+ #02
Set all programming to factory default .....	#44	

**Note:** *HH* = hours, *MM* = minutes and *X* = AM (0) or PM (1).

## C. Security Code

The Security Code is used to access the programming mode (see **Programming** section **A**) using only the numbers 0 - 9 in the security code. The factory set security code is "**845464**" and should be changed after installation to assure security.

To change the security code, enter programming (see **Programming** section **A**), then enter the desired digits followed by "**#02**". Two beeps will be heard to confirm that the security code has been successfully changed.

## D. Messages

The **DVA-TNT** comes from the factory with two sets of factory-recorded pre-time and temperature messages, a "Good Morning/Afternoon/Evening" message and a "Thank You for Calling" message. You may select one of these two options or record your own pre-time and temperature message (see section **E**).

### 1. Good Morning/Afternoon/Evening Message

This message is selected by entering "\*4" while in programming. There are three separate greetings that are automatically selected depending on the time of day (see chart to the right).

Time	Greeting
12:00am - 12:00pm	"Good Morning"
12:00pm - 06:00pm	"Good Afternoon"
06:00pm - 12:00am	"Good Evening"

### 2. Thank You for Calling Message

The greeting, "**Thank you for calling**", can be selected by entering "\*5" while programming.

## E. User-Recorded Messages

### 1. Pre-Time and Temperature Message

This message can be up to 30 seconds long and is played before the time and temperature is given, in place of the “Good Morning/Afternoon/Evening” message or the “Thank You for Calling” message. To enable this message, enter **\*8** while in programming, and to disable, enter **\*\*7**. Follow these steps to record the pre-time and temperature announcement:

- a. Enter **\*1** while in programming.
- b. The **DVA-TNT** will play “**record your message now**” followed by a single beep as a prompt to begin recording.
- c. When finished recording, enter any touch tone to stop the recording.
- d. The **DVA-TNT** will then playback the message just recorded. To listen to the message again, enter **\*3**, and the **DVA-TNT** will then playback all user-recorded messages in the following order: the night message (if recorded), the pre-time and temperature message (if recorded) and the post-time and temperature message (if recorded).

**Note:** If the available time is exceeded while recording, the **DVA-TNT** will automatically stop the recording process and begin playing back the message just recorded.

### 2. Post-Time and Temperature Message

This message can be up to 30 seconds long and is played after the time and temperature is given. After this message is played, the **DVA-TNT** disconnects if in the ring-trip mode or starts a new message cycle if in the drum recorder mode. To enable this message, enter **\*\*0** while in programming, and to disable, enter **\*\*9**. Follow these steps to record the post-time and temperature announcement:

- a. Enter **\*2** while in programming.
- b. Follow steps **b-d** shown in section 1 above.

**Note:** If the available time is exceeded while recording, the **DVA-TNT** will automatically stop the recording process and begin playing back the message just recorded.

### 3. Night Message

The night message can be up to 15 seconds long and is played before the time and temperature is given. After the time and temperature is given, the **DVA-TNT** disconnects if in the ring-trip mode or starts a new message cycle if in the drum recorder mode. To enable this message, provide a contact closure across the “**NIGHT MODE C.C. INPUT**” (terminals 7 and 8) on the front of the unit. Follow these steps to record the night announcement:

- a. Enter **\*0** while in programming.
- b. Follow steps **b-d** shown in section 1 above.

**Note:** If the available time is exceeded while recording, the **DVA-TNT** will automatically stop the recording process and begin playing back the message just recorded.

## F. Time of Day

The **DVA-TNT** uses a standard 12-hour clock and will announce the time as such. When the **DVA-TNT** is first powered up, or it has experienced a loss of power longer than the back-up battery could maintain, the time of day will need to be set.

**Note:** If the time of day is not set, the **DVA-TNT** will skip the time portion of the announcement. The **DVA-TNT** cannot play a “good morning/afternoon/evening” greeting until the time is set. If the time is not set, the **DVA-TNT** defaults to the “thank you for calling” greeting.

1. Enter programming (see **Programming** section A).
2. Enter two digits pertaining to the hour (**01 - 12**).
3. Enter the minutes (**00 - 59**).
4. The next digit signifies morning or afternoon, enter **0** for AM or **1** for PM.
5. Then enter “**#01**” to store the information.

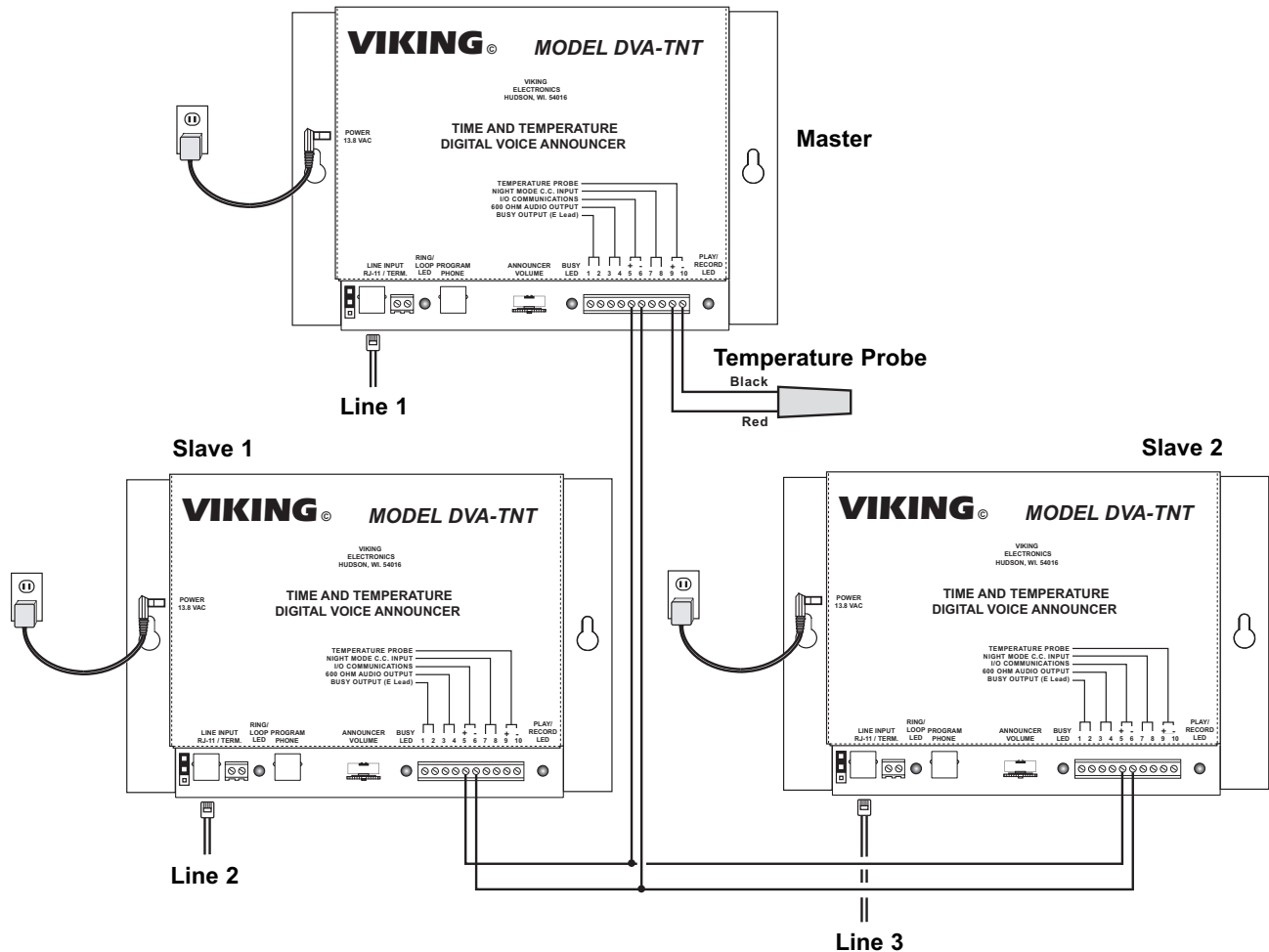
**Note:** To prevent the **DVA-TNT** from announcing the time of day, enter “**#01**” without any preceding digits.

## G. Call Counter

The **DVA-TNT** has a call counter that can be read and reset by entering the programming mode. The call counter capacity is 99,999 calls. To read the call counter, enter **\*8** while in programming. The **DVA-TNT** will play “**total calls**” and then speak the individual digits making up the call count number. For example, “**one, one, eight, nine**” would indicate that the call count was 1,189. The call counter can be reset by entering **\*9** while in programming. The **DVA-TNT** will reset the call counter to zero and play “**call counter has been reset.**” **Note:** The call counter is volatile and will be reset to zero when the unit is powered down.

## H. Slave Mode

For ring-trip applications where heavy usage of the **DVA-TNT** is expected, multiple units may be configured in master-slave mode to allow for multi-line capability without having to install additional temperature sensors for each **DVA-TNT**.



1. Since many PABX's can be programmed to play a message from a single **DVA-TNT** to several callers at once, you should determine if a multi-line installation is necessary.
2. Connect the temperature probe to the master unit (pins 9 and 10).
3. Program each unit individually to your desired messages and settings.
4. Connect the I/O communications terminal (pins 5 and 6) of the slaves in parallel to pins 5 and 6 of the master, being careful to observe polarity.
5. Access the programming mode (see **Programming** section **A**) of the master and enter **\*\*1**.
6. Access the programming mode (see **Programming** section **A**) of the slaves and enter **\*\*2**.
7. Assign the master unit to the first line in your hunt group. This is important, as the slave's temperature data will only be updated when the master unit receives a call.
8. Attach the slave units to the subsequent lines in your hunt group.

## Operation

The **DVA-TNT** can be set up in several modes of operation, including a time and temperature announcer, a time only announcer, a temperature only announcer, a standard ring trip announcer, a drum recorder, as well as a night mode announcer. The normal operating mode is for the main greeting to be given followed by "The time is XX:XX temperature XX". This basic operation can be customized in Programming.

### A. Time and Temperature Announcer

When the **DVA-TNT** is called, the unit will play a pre-recorded greeting or up to 30 seconds of custom recorded greeting followed by the time and temperature announcement. In addition, 30 seconds of additional announcement may be used after the time and temperature announcement.

## B. Time Only Announcer

If it is difficult to provide wiring for the temperature sensor, or you choose not to announce the temperature, the **DVA-TNT** can be used as a time only announcer. If no temperature sensor is detected, the **DVA-TNT** will automatically eliminate the temperature announcement. In this mode the **DVA-TNT** will send out the selected greeting or custom recorded greeting followed by the time of day. If recorded, an additional 30 seconds of voice recording may be used after the time message.

## C. Temperature Only Announcer

In some monitoring applications, it may be desirable to only announce the temperature. To set the **DVA-TNT** into this mode, do not set the time of day. If the time of day is not set after a power up, the **DVA-TNT** will omit this portion of the announcement. If recorded, an additional 30 seconds of voice recording may be used after the temperature message.

## D. Standard Ring-Trip Announcer

If no temperature sensor is connected, and the time is not set, the **DVA-TNT** will act as a simple announcer. When the unit is called, it will play the selected greeting, or the custom recorded greeting and hang up. If recorded, an additional 30 seconds of voice recording may be used after the message.

## E. Drum Recorder

If the drum recorder mode is selected, the message will be repeated continuously. At the end of the message, an end of message pulse will be sent out of the "Busy" terminal positions and the **DVA-TNT** will start a new message cycle. If normal busy lead polarity is selected, the busy lead terminals will be open during the message and close during the end of message pulse. If inverted busy lead polarity is selected, the busy lead terminals will be closed during the message and open during the end of message pulse.

## F. Night Mode Announcer

If the night mode is activated via a contact closure across the night mode terminal 7 and 8, the **DVA-TNT** will play the night message and then the time and temperature. If configured for ring-trip, the unit will then hang-up. If configured for the drum recorder, the unit will start a new message cycle.

# Other Digital Announcers

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### **DVA-2W - Promotion on Hold Announcer**

The **DVA-2W** is a digital record announce device with a built in 2 watt amplifier. Designed to provide music and promotions on hold, the **DVA-2W** can playback in a continuous loop or alternate between promotions and an auxiliary music source at 15 to 60 second intervals. Any number of multiple promotion messages may be recorded. For more information, retrieve **Fax Back Document 110**.

### **DVA-500A - Digital Announcer with Remote Recording and Transfer Capabilities**

The **DVA-500A** will increase call handling capacity by answering on demand or during the first ring, and automatically adjusting the announce cycle to the message length. It will then disconnect on CPC and provide instant "rewind" for the next caller. For more information, retrieve **Fax Back Document 115**.

### **DVA-LP - Line Powered Digital Announcer**

The **DVA-LP** can be used in any application that requires an inexpensive announcer to play a single message. The **DVA-LP** will answer the incoming call on the first ring, play a pre-recorded message and then disconnect. The message can also be remotely recorded using Touch Tone commands. For more information, retrieve **Fax Back Document 128**.

### **K-2000-DVA - Multi-Input Voice Dialer/Announcer**

The **K-2000-DVA** is a fully programmable multi-input, multi-number auto dialer with digitally recorded message capability, used for emergency and non-emergency message notifying. The **K-2000-DVA** has eight dry contact inputs which when tripped will sequentially dial up to 8 phone numbers and play a recorded message corresponding to the input tripped. For more information, retrieve **Fax Back Document 303**.

**Product Support Line...715.386.8666**

**Fax Back Line...715.386.4345**

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