CONTROL PRODUCTS

General Description

The VD-5300-MCS Voice Dialer monitors temperature, power status, security or an external contact, and offers remote switch control capability. Upon an alarm condition, the Voice Dialer automatically dials three phone numbers with a voice message. Current temperature and alarm conditions can be checked from a remote location.

Applications

Applications include remote temperature, power and security monitoring of refrigeration, heating and air conditioning equipment for buildings (homes, cabins and commercial buildings) and monitoring of any relay output system or sensor. The remote switch control feature can be used to control thermostats or equipment from any Touch Tone™ phone (additional parts and labor may be needed).

**Voice Dialer
Monitoring Control System**

**VD-5300-MCS-02
VD-5301-MCS-02**

Features

- Adjustable high/low temperature alarm setpoints
- Three telephone number call out, up to 16 digits each
- Paging feature - any or all of the call-to numbers can be to a digital number
- Power loss call out alarm
- Low battery call out alarm
- Remote access to programming menu and current condition status
- Monitors open or closed contact
- Battery back-up (9 volt-not included)

- Remote control switch / temp control relay
- Location identification
- Selectable 15 minute or 2 hour call out interval
- Selectable 10 or 2 ring call out
- Security coded access to programming menu
- Dials out in pulse
- LED status indicators
- Phone line status check

Specifications

Power requirements: Plugs into standard 110 VAC outlet (plug-in wall transformer with six foot long cord included)
Sensor: Semi-conductor sensor with 1.75" x .25" nickel plated copper cap and three foot cord
Operating range of sensor: -40° to 199°F (-40° to 93°C)
Accuracy: $\pm2°F$ ($\pm2°C$)

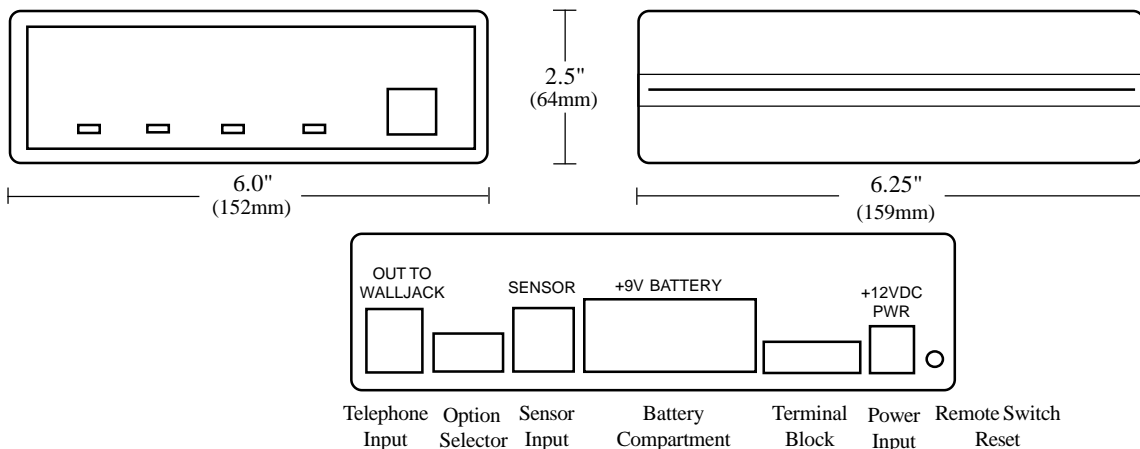**Remote switch/Control relay:** SPDT, 10 amps 24 volts resistive
Control relay differential: Fixed at 2°F
Ambient temperature range: 32° to 158°F (0° to 60°C)
Humidity: 90% non-condensing
Weight: 3.0 pounds (1.4kg)

Dimensions

2.5"
(64mm)

6.0"
(152mm)

6.25"
(159mm)

OUT TO WALLJACK   SENSOR   +9V BATTERY   +12VDC PWR

Telephone Input   Option Selector   Sensor Input   Battery Compartment   Terminal Block   Power Input   Remote Switch Reset

Installation

IMPORTANT: It is critical that the Voice Dialer be tested at the location of actual use, along with actual call-out to destination, since local and long distance telephone lines and systems vary and may affect performance.

1. <u>Before Starting</u>: Please read **Warranty** information before using this product.
2. Connect transformer adapter plug to +12VDC port on rear of unit.
3. Connect temperature sensor auxiliary alarm system (i.e. motion detector), and relay switching equipment (if applicable) to ports in back of unit (additional installation by a licensed professional may be required).
4. Plug transformer into 110 VAC wall outlet.
5. Install 9 volt alkaline battery (not included) in back of unit. If battery is not installed, low battery alarm will occur within 4 minutes.
6. Plug any standard Touch Tone™ telephone into receiver port located on the front panel of the Voice Dialer.
7. Follow procedure in **Programming Instructions** described below to program unit.
8. Select and set dip switch options on back of unit – see **Dip switch table (page 4)**.
9. Connect one end of the 7' phone cord provided to the OUT TO WALL JACK port on the back of the unit, and the other end to a standard telephone jack.

Programming Instructions

The Voice Dialer is programmed by following a series of menu driven voice commands and can be re-programmed remotely or locally (at unit) from any Touch Tone™ telephone.

MENU DESCRIPTIONS

CALL OUT TELEPHONE NUMBERS:	Follow verbal prompts to change call-out telephone numbers. You may enter the star (*) key to leave an entry blank (no number). Pressing the pound (#) key will place a 5 second pause between digits. Do not place pauses at the end of the telephone number(s). After call-out telephone numbers are programmed, press "1" to return to Call-Out Telephone Number Menu. Once in the Call-Out Telephone Number Menu, press "4" to return to the main menu.
PAGER DISPLAY NUMBER:	If you program your Voice Dialer to call a pager, you need to enter a pager display number. This number will appear on your digital pager during an alarm. You could select the location ID, the phone number for the Voice Dialer unit, or any other combination of numbers up to 16 digits. (If your paging service requires a pause before the numbers are entered, include a pound sign (#) before the pager display number. Each (#) entered delivers a 5-second pause. Test before using.) If you enter a pager display number and also receive a telephone call from the Voice Dialer during the alarm, you will hear the Touch Tones of the pager display number before the voice message begins.
AUXILIARY ALARM STATUS:	Monitors either an open or closed external contact from your auxiliary relay device. Reports the status of the external contact.
CURRENT TEMPERATURE:	Reports the current temperature of sensor.
TEMPERATURE ALARM SETPOINTS:	The Temperature Alarm Setpoints are the high and low temperatures at which the Voice Dialer will initiate an alarm call to your telephone numbers. Both setpoints need to be programmed.
TEMPERATURE CONTROL RELAY:	The Voice Dialer contains a Temperature Control Relay (TCR) which automatically activates when the temperature falls below the TCR Setpoint. To program the TCR setpoint, set dip switch "1" in the DOWN position and follow verbal prompts within the "Setpoint Menu".
REMOTE RELAY SWITCH:	The Remote Relay Switch (single pole/double throw) can be used to manually switch equipment over the phone. To operate the remote relay switch, dip switch "1" must be in the UP position. Follow verbal prompts to activate the relay. The Voice Dialer will report the position of the remote relay switch
SECURITY/LOCATION CODE:	The security code is factory set at "999". Follow verbal prompts to change security code. Security code is also the location ID code.
BATTERY STATUS:	The Low Battery Status alarm will occur at 7 volts. **Important:** Replace battery annually, or when battery voltage drops below 7 volts.
POWER STATUS:	The Voice Dialer will report that the *"power is off"* in the event of an electrical power failure which lasts for four consecutive minutes.

The following data must be programmed into the Voice Dialer:
- A. TEMPERATURE ALARM SETPOINTS – high and low temperatures at which an alarm call-out will be initiated and the temperature at which the control relay is activated (optional).
- B. CALL OUT TELEPHONE NUMBERS – up to three telephone numbers to be called in succession during an alarm condition.
- C. SECURITY/LOCATION CODE – three-digit code used to gain access to main menu, or to disable the unit and identify its location.

After connecting a Touch Tone™ telephone to the front receiver port, lift phone receiver and follow the verbal prompts. The Voice Dialer will say:

<u>*"You are now in the main menu:"*</u>

"To review or program call out telephone number, press 1."[sub-menu presents options]
"To review or program pager display number, press 2.
"To review or program auxiliary alarm status, press 3."
"To review or program the current temperature, press 4."
"To review or program setpoint menu, press 5."[sub-menu presents options]
"For remote switch status, press 6."
"To review or program security code, press 7."
"To review or program battery status, press 8."
"To review or program power status and duration of most-recent outage, press 9."

If the Voice Dialer does not recognize an entry, you will hear "*invalid entry*." Re-enter your menu selection within 15 seconds to continue with the programming sequence.

IMPORTANT: After programming, disconnect your telephone from the PHONE receiver port on the front of the Voice Dialer.

Operating Instructions

UPON ALARM

The Voice Dialer will call out with one or more of the following messages:
"There is a temperature alarm emergency at location (your three digit security/location code). *Help is needed immediately!"*

AND/OR

"There is an auxiliary alarm emergency at location (your three digit security/location code). *Help is needed immediately!"*

AND/OR

"There is a power alarm emergency at location (your three digit security/location code). *Help is needed immediately!"*

AND/OR

"There is a battery alarm emergency at location (your three digit security/location code). *Help is needed immediately!"*

The alarm message(s) is repeated once, followed by:
"To disable call out, enter security code followed by star key."
You must enter the correct security code within 15 seconds or the Voice Dialer will hang up and call again in the selected interval (15 minutes or 2 hours). If you enter the correct security code within 15 seconds you will hear:
"Call-out is now disabled. To return to main menu, press 1, otherwise hang up."
You now have the option of returning to the main menu to review or change the system data.

IMPORTANT: The Voice Dialer will continue to call out with an alarm message until disabled, even if alarm conditions have been corrected.

CALLING THE VOICE DIALER FROM A REMOTE LOCATION

When called from a remote location using a Touch Tone™ phone, the Voice Dialer will answer after five rings and you will hear:

"Enter security code followed by the star key."

If you enter the correct security code within 15 seconds, and the Voice Dialer is not in alarm, you will enter the main menu and hear:

"You are now in the main menu. Press 1 to. . ."

If the Voice Dialer is in alarm, you will hear one of the four alarm messages described in **Operating Instructions** above. The alarm message is repeated once, followed by: *"To disable call out, press 0. Otherwise, to return to the main menu, press 1."*

IMPORTANT INFORMATION

Alarm delay feature:	If dip switch #2 is placed in the DOWN position, the Voice Dialer will delay 45 minutes during a temperature alarm only. A temperature alarm condition must be present for 45 minutes before unit will call out.
NO/NC alarm select:	If dip switch #4 is in the UP position, auxiliary alarm will occur when contact is open (NC). If switch #4 is in the DOWN position, auxiliary alarm will occur when the contact is closed (NO). A one minute initial delay exists after programming and/or communicating with the unit.
Power/battery alarm delay feature:	Power or battery must be absent for four consecutive minutes before alarm will occur.
Reset button:	If the remote switch feature is being used, the reset button on back of unit will switch the relay position to the opposite setting.
Using Voice Dialer on the same phone line as telephone:	The Voice Dialer does not require a dedicated phone line and can share a phone jack with a telephone by using a dual plug adapter (not included). Caution: The Voice Dialer will not work on a PBX or multi-line systems, or a party line.
Phone answering machines at the occupied (call to) location:	To avoid unwanted long distance phone charges between the Voice Dialer and a remote answering machine when you are not at home, set your answering machine to pick up after four rings or higher and move dip switch #3 on the rear of the Voice Dialer to the DOWN position. This will cause the Voice Dialer to hang up after two rings, preventing the answering machine from picking up the alarm call. **Caution: Because of normal connection delays in long distance calls, unit may hang up before two rings are heard at call-to location. Test thoroughly!** If dip switch #3 is in the UP position, the Voice Dialer will hang up after ten rings. Depending on the length of your greeting, the answering machine may record a portion of the alarm message.
Phone answering machines at the same location as the Voice Dialer:	An answering machine normally will pick up a call before the Voice Dialer. To gain access to the Voice Dialer when used with an answering machine, set the answering machine's ring selector at four. Call the Voice Dialer's phone number and hang up before the answering machine answers. Wait two minutes, call again, and the Voice Dialer will pick up your call.
Monitoring multiple Voice Dialers using identification numbers:	Upon alarm, the Voice Dialer calls its programmed telephone numbers and announces the location of the alarm, using the SECURITY CODE as a location identification number. This enables you to monitor and identify up to 1000 Voice Dialer locations.
Using the Remote Relay Switch:	The Remote Relay Switch can be used to switch equipment or thermostats over the phone. Because types of equipment and systems vary, it is strongly recommended that a licensed professional perform the installation and wiring needed for your specific application.

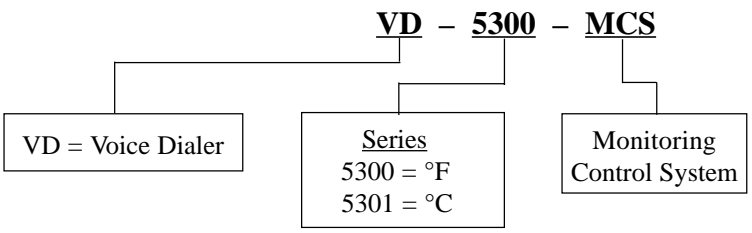Dip switch table: Factory settings are in the UP position.

Switch #	Function	Settings	
1	4.25 min or 100 millisecond outage detection	UP = 4.25 min	DOWN = 100 ms
2	45 minute delay for temperature alarm call out	UP = off	DOWN = on
3	Select between 10 or 2 ring call-out	UP = 10	DOWN = 2
4	Normally open/normally closed option	UP = NC	DOWN = NO
5	Select 15 minute or 2 hour call out frequency	UP = 15 min	DOWN = 2 hrs

Troubleshooting

Problem	Solution
1. Unit does not function	Check power supply and phone line service.
2. Phone does not ring at "call-to" location	Review telephone number and re-program. Switch Dip Switch #3 to the ten ring position (UP).
3. Cannot access Voice Dialer (same location)	Make sure Touch Tone™ telephone is plugged into front face plate. Try a different phone.
4. Cannot access Voice Dialer (remote location)	Make sure Touch Tone™ telephone is being used. Check Voice Dialer power and telephone connections. Try a different phone. Verify security code.
5. Receiving false alarms	Do not place temperature sensor near heat vents, drafts, or other areas that do not represent the ambient temperature being monitored. Raise or lower thermostat accordingly. Check rise and fall switch on back of unit to verify correct position.
6. Temperature reading –40°F	Check sensor connection to correct jack.

Ordering Information

Please use the following example when ordering:

VD – **5300** – **MCS**

VD = Voice Dialer	Series 5300 = °F 5301 = °C	Monitoring Control System

Other models are available: VD-5100-TM Temperature Monitor and VD-5100-SM System Monitor.

Custom Design & Modifications

In addition to standard models, Control Products specializes in complete custom design of electronic controls. Modifications of our standard controls are also available. Please consult factory for more information.

Limited Warranty

Limited Warranty:
1. Warrantor: Dealer, Distributor, Retailer,Manufacturer
2. Warranty and Remedy:

We believe this is a very fine product. Over the years, we have received many calls and letters from folks with thanks and stories on how our product alerted them to a potentially costly freeze-up. We have also heard from a few unhappy folks complaining that this product did not alert them during a freeze-up. Although we take extreme pride in producing and testing a product that will function properly, we cannot guaranty that there will never be a defective unit, or that a unit will function on all of the thousands of phone lines and communication equipment in existence. For this reason, **it must be clear that the Warrantors are <u>not</u> insuring your premises or guaranteeing that there will not be damage to your person or property if you use this Product.** If you are not comfortable with our Limited Warranty, or completely satisfied with the Product, we encourage you to return the unused Product for a full refund. Thank you for your understanding.

One Year Limited Warranty - Control Products, Inc. warrants its products to be free from defects in material and workmanship under normal use for one year, and is not responsible for consequential damages or installation costs of any nature. In the event that the Product does not conform to this Warranty at any time during the period of one year from original purchase date, Warrantor will repair the defect and return it to you at no charge. **<u>IMPORTANT:</u> The Warranty is limited to replacement of the Product ONLY. Secondly, because every phone line differs, we stongly encourage you to fully test this Product in its actual application. This should include a full test, involving the Product actually dialing to its designated location and someone verifying the proper response.**

This Warranty shall terminate and be of no further effect at the time the Product is 1) damaged by extraneous causes such as fire, water, lightning, etc., or not maintained as reasonable and necessary; 2) modified: 3) improperly installed; 4) repaired by someone other than the Warrantor; 5) used in a manner or purpose for which the Product was not intended.
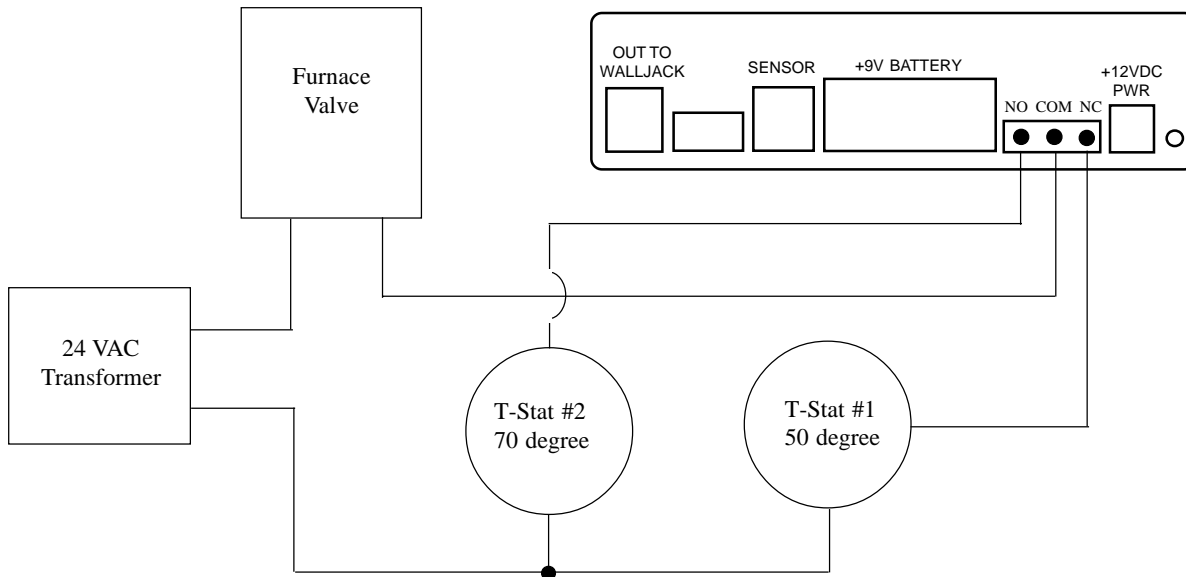
WARRANTORS' OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT OF THE PROD-UCT ONLY. <u>THIS WARRANTY DOES NOT COVER PAYMENT OR PROVIDE FOR THE REIMBURSEMENT OF PAYMENT FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.</u>

It must be clear that the Warrantors are not insuring your premises or guaranteeing that there will not be damage to your person or property if you use this Product. The Warrantors shall not be liable under any circumstances for damage to your person or property or some other person or that person's property by reason of the sale or use of this Product, or its failure to operate in the manner in which it is designed. The Warrantors' liability, if any, shall be limited to the original cost of the Product **<u>only</u>. <u>Use of this Product is at your own risk.</u>**

3. Procedures for Obtaining Performance for Warranty:
In the event that the Product does not conform to this Warranty, the Product should be shipped or delivered freight prepaid to a Warrantor with evidence of original purchase. **If in any way you are not comfortable with the product or its Limited Warranty, we encourage you return it unused for a full refund.**

Thermostat Connection

The wiring diagram above is for a typical 24 volt AC system. Other systems or configurations are possible. Please check with a licensed contractor for proper installation. The relay is acting as a two-position switch between the 24 volt power supply and the thermostats (T-stats). T-stat #1 will be controlling the "unoccupied" temperature. In this application, you are simply switching 24 volt power between the two thermostats.