

DiaLog

Temperature Monitor

Remote monitoring and
alarm notification system



User's Manual

Version 6.6
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1 Introduction

The DiaLog Temperature Monitor is the most user-friendly and reliable remote monitoring and alarm notification system available. Mounted in an industrial aluminum enclosure, the TM-series provides simple programming either locally through the integral keypad and display or remotely via a phone call.

Installation is made easy, whether the TM-series is installed in a panel or in a door. All wiring connections are made through quick disconnect type connectors, making it fast and simple.

1.1 General Operation

The TM has 2 modes of operation – PROGRAM and RUN. During PROGRAM mode you can change how the TM operates. During RUN mode the TM is monitoring and performing alarm notification.

The TM monitors up to 8 dry contacts and 2 or 4 analog inputs continuously. When any one of the inputs changes from the normal condition to the alarm condition, the TM sounds a local alarm out the speaker for up to 300 seconds and then starts calling the first of up to 8 phone numbers to deliver the user recorded alarm message.

If the alarm is acknowledged before any calls are started, the local speaker alarm stops.

When alarms are acknowledged from the keypad, when a person is called or by a person calling in, no further calls are made unless another channel goes into alarm or the Redial After Acknowledge timer expires.

This manual is applicable to firmware versions 6.6.x and later.

1.1.1 Acknowledging Alarms

Alarms are acknowledged remotely by pressing the '9' key on your phone keypad. The TM tells you that the channel has been "acknowledged".

Locally, alarms are acknowledged by pressing the ACK key while in RUN mode.

2 Installation

You can mount the TM to a panel or it can be flush mounted to a door. The brackets on the either side of the TM can be removed and turned around for panel mounting.

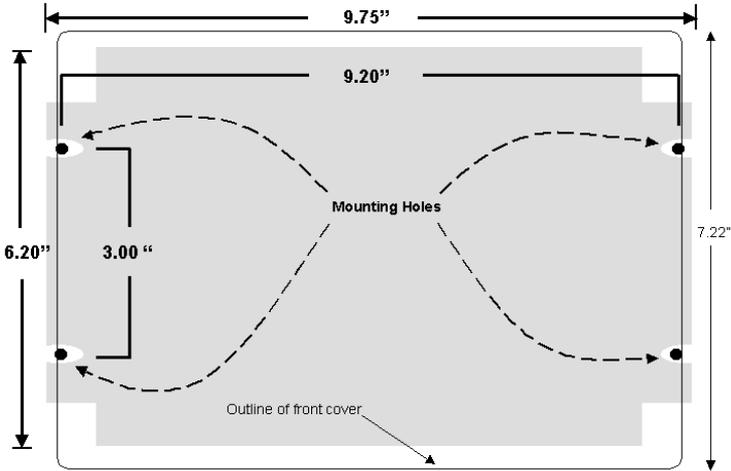


Figure 1 Panel Mount mounting holes

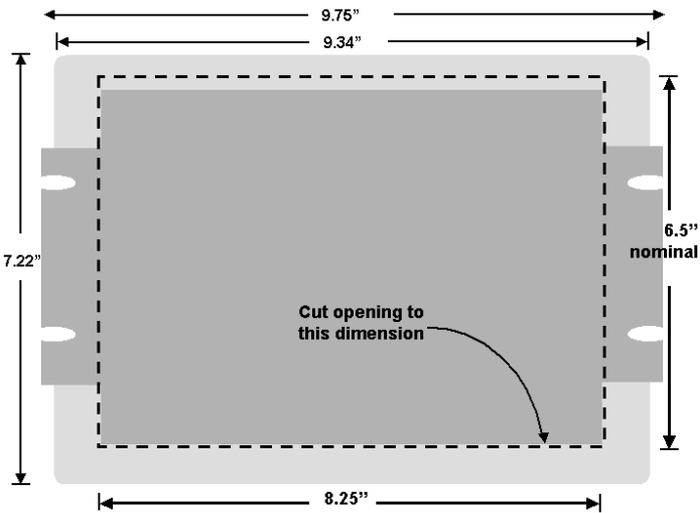


Figure 2 Flush Mount cut-out dimensions

The connectors for Primary Power, Phone and I/O use quick disconnect plugs. The diagram below shows the location of these connections.

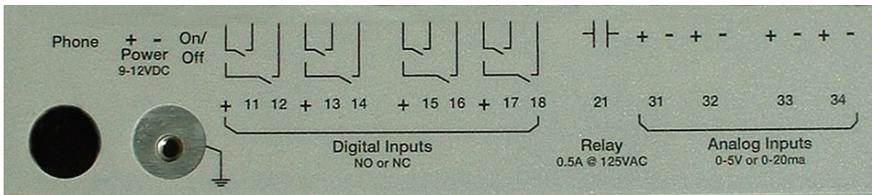


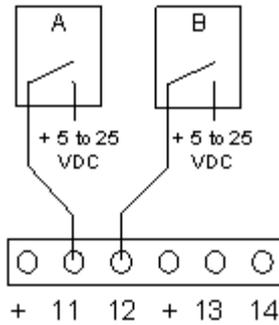
Figure 3 Field wiring diagram

Connection point	Function
Phone	Connect the included phone cord.
Power	Connect the included power connection from the wall-mount power supply to the TM.
On/Off	The TM will power up and the display will read “DiaLog Temp Monitor”.
Digital Inputs	<p>For Dry Contacts: Connect from the ‘+’ to one side of your dry contact and connect from the Channel # to the other side of your contact.</p> <p>NOTE: <i>There are 3 connections for 2 channels.</i></p>

For Voltage inputs up to 25 VDC:

Connect the positive voltage of your input to the Channel # input on the TM.

NOTE: Do not connect anything to the '+' input

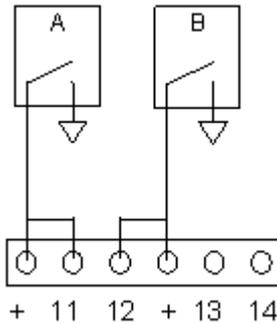


For Contacts that close to Ground:

Jumper the '+' and Channel # input together.
Connect another wire from the Channel # input to the contact that will close to ground.

NOTE: Set the channel to Normally Closed

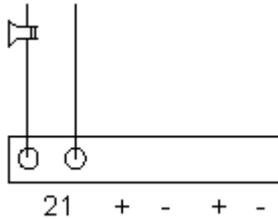
NOTE: You cannot use the same '+' for any other channel



Relay Output

Normally Open .5A relay output:

Connect your device or another interposing relay to the 2 contacts of the relay.



NOTE: If the system is equipped with a GSM cell phone, the relay channel is already used to cycle the power on the GSM phone and cannot be used by the user.

Analog Inputs

For Voltage inputs up to 5 VDC:

Connect the positive voltage to the (+) terminal and the negative to the (-) terminal.

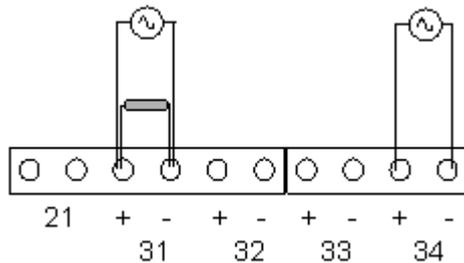
Example: channel 34 is wired as a voltage input

For Current inputs up to 20ma:

Connect the supplied precision resistor across the (+) and (-) terminals.

Connect the (+) terminal to the (-) lead of the sensor. Connect the (-) terminal to the (-) side of the external power supply.

Example: channel 31 is wired as a current input



2.1 Enabling power

Connect the provided DC power supply, or another source of 9 to 12VDC, to the Power connection. Move the On/Off switch to the up or On position. The TM will start its power up diagnostics.

3 Programming

The DiaLog TM is programmed from the front panel by pressing the keypad to access the various portions of the system. For the most basic application, you can simply program some phone numbers and put the TM into the RUN mode.

In more complex applications, you can program individual messages for each channel being monitored, adjust the amount of time channels must be in the alarm condition before starting the callout sequence and enter phone and pager numbers for alarm notification.

When programming, all prompts are displayed. To navigate the menu:

Key	Function	Key	Function
ENTER	Accept the current entry or move to next option	PREV	Moves to the previous selection in a menu
HOME	Go to the top of the Menu (HOME)	NEXT	Moves to the next selection in a menu
*7	Reset the value back to the factory default		

NOTE: *When you have finished programming, return the TM to the RUN mode by pressing the 1 key. If the TM is not in RUN mode, it will not perform any alarm call operations.*

NOTE: *If you forget to return the TM to RUN mode, it will automatically return to RUN mode after 30 minutes.*

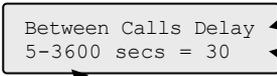
NOTE: *Configuration changes are not saved to non-volatile memory until RUN mode is activated*

3.1 How to Read the Menus



Mode or section of the system

Available selections. In this case valid inputs are 0 through 9.



Parameter to change or view

Current value of the parameter. For example, Between Calls Delay is currently set to 30 seconds

Valid range of values. Between 5 and 3600 seconds

3.2 How to use the Keypad

The DiaLog TM keypad is designed to make programming easy. At the bottom of the front panel is a legend to assist in programming the most common functions. The keypad components are:

BLUE – function of key in PROGRAM mode

RED – function of key in RUN mode

Text entry of letters and numbers



Move to previous selection

Move to next selection

Press at any time to go to the top of the PROGRAM menu

Enter this selection

The specific functions of each key are:

Key	Function in PROGRAM mode
1	Toggles the unit between PROGRAM and RUN mode.
3	Enter SYSTEM wide parameters
4	Enter PHONE numbers and parameters
9	Enter CHANNEL parameters
0	View STATUS of each channel
ENTER	Enter or keep the current setting Exit the View STATUS screen
PREV	Go to the PREVIOUS selection
NEXT	Go to the NEXT selection
HOME	Go to the top of the PROGRAM mode menu

3.3 How to Enter Text for Names

The DiaLog TM allows the user to enter names for the Site (Unit) and for each channel. Entering names is very similar to entering names on most cell-phones that are used today.

On the bottom of each key, there are letters and numbers. To select a specific letter or number, press that key the designated number of times. For example, to enter the letter 'L', press the 5 key 3 times.

Key to Press	Number of times to press the key				
	1	2	3	4	5
1	space	l			+
2	A	B	C	2	.
3	D	E	F	3	,
4	G	H	I	4	-
5	J	K	L	5	*
6	M	N	O	6	#
7	P	R	S	7	/
8	T	U	V	8	_
9	W	X	Y	9	
0	Q	Z	0	0	@
*	Erases previous letter				

3.4 Programming System Settings

System settings are generally programmed once during the initial setup of the TM. Options in this section are:

- Site Message
- Access Code
- Date and Time
- Country Code
- Numeric ID
- Rings to Answer
- Reset to System Defaults

	What you do:	What the display shows:
Step 1	Press the 1 key to enter PROGRAM mode. You can now enter options 0 – 9.	Program Mode [0-9]=
Step 2	Press 3 <i>Enter Access Code if requested.</i>	NOTE: <i>If an Access Code has been programmed, the TM will show a screen to enter it.</i>
Step 3	The pre-recorded Site Message is spoken through the speaker. Press 0 to listen to the current message, 1 to record a new message, or # to move to the next step.	Site ID Msg 0-play 1-rec =
	If you press 1, this message is displayed.	Press # to record
	Speak you message into the microphone and press the # key when finished. NOTE: <i>The speaker is intended only to confirm that you message was recorded as desired. The voice quality over the phone is excellent even though the voice quality over the speaker may be noisy.</i>	Recording. . . Press # to stop
Step 4	The Site Name that will display on a pager is shown. Press # to keep the current value or enter a new value then press the # key.	Site Name nnnnnnnnnnnnnnnnnnnn
Step 5	The Numeric ID that will display on a pager is shown. Press # to keep the current value or enter a new value then press the # key.	Numeric ID nnnnnnnnnnnnnnnnnnnn

What you do:	What the display shows:
<p>Step 6</p> <p>The Access Code is displayed. Press # if OK or enter a new 4-digit Access Code.</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Access Code nnnn </div>
<p>Step 7</p> <p>The Audio Volume can be adjusted to be louder (up) or softer (down). Press # when you have the level you desire. (7 is maximum volume)</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Audio Volume 0-dwn 1-up = 4 </div>
<p>Step 8</p> <p>Speaker Mode has 3 options. 0 – Off 1 – On 2 – On+Monitor If off, then the alarm call is not spoken over the local speaker. If On+Monitor, the any sounds coming in the phone line are also presented over the speaker.</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Speaker Mode 0-2 = On+Monitor </div>
<p>Step 8</p> <p>Rings to Answer is the number of times the TM detects an incoming ring before it answers. Press # if OK or enter a new value as nn (e.g. 03 for 3)</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Rings to Answer 1-20 = nn </div>
<p>Step 9</p> <p>When any channel goes into alarm, an alarm tone can be generated out the speaker for up to 300 seconds BEFORE any phone calls are made.</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Alarm Tone Duration 0 - 300 secs = 0 </div>
<p>Step 10</p> <p>Set the time and date as needed. Press the # key if the value is correct already. NOTE: <i>The TM uses a 24-hour clock.</i></p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Set Hour HH:MM:SS </div>
	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Set Minute HH:MM:SS </div>
	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Set Month MM/DD/YY </div>
	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Set Day MM/DD/YY </div>
	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Set Year MM/DD/YY </div>

	What you do:	What the display shows:
Step 11	Reset Config sets the unit back to the factory default values. Press 0 or # to keep your programming or 1 to reset back to the factory defaults.	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Reset Config 1-rst = </div>
Step 12	Reset Data clears the Data Log for a specific digital channel. Press # to clear the data or 0 to exit.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin-bottom: 10px;"> Reset Data Chan 1x-3x = </div> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Reset Data #-accept 0-exit = </div>

3.5 Programming Phone Settings

Phone settings consist of options to set for all calls in or out of the TM. They are generally setup once during initial installation.

Phone Settings include:

- Message repeat
- Phone numbers
 - Between call delay
 - Call Progress delay
- Acknowledge redial delay
- Teach mode (TM learns how the telephone system functions)

	What you do:	What the display shows:
Step 1	<p>Press the 1 key for PROGRAM mode.</p> <p><i>Enter Access Code if requested.</i></p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Program Mode 0-9 = </div> <p>NOTE: <i>If the TM is in RUN mode and an Access Code has been programmed, the TM will show a screen to enter it.</i></p>
Step 2	Press 4	
Step 3	<p>Msg Repeat is the number of times the alarm message will be repeated when an alarm call is made.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Msg Repeat 1-20 = nn </div>
Step 4	<p>The Ack Redial Delay specifies the number of minutes to wait after an alarm has been acknowledged before calling again.</p> <p>NOTE: <i>If the channel has returned to the normal condition, the TM will not call.</i></p> <p>Press # to keep the current value or enter a new value using 4 digits. (e.g. 0060 for 60 minutes)</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Ack Redial Delay 1-1440 min = nnnn </div>
Step 5	<p>There are 8 phone numbers that can be entered in the TM. These are processed in order from 1 to 8.</p> <p>Enter the position of the phone number you want to check or modify.</p> <p>Press # if you do not want to change any phone numbers.</p> <p>See Section 3.3 How to Enter Text for Names for specific details.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Enter Phone Pos 1-8 = </div>

	What you do:	What the display shows:								
Step 6	<p>The phone number in the position specified is shown. Press # if OK or enter a new phone number.</p> <p>NOTE: <i>The phone number can be up to 25 numbers long.</i></p> <table border="1" data-bbox="219 318 600 456"> <tr> <td>*2</td> <td>For a pager call</td> </tr> <tr> <td>*7</td> <td>Deletes phone number</td> </tr> <tr> <td>*8</td> <td>Detects a dialtone</td> </tr> <tr> <td>*9</td> <td>2-second delay</td> </tr> </table> <p>(e.g. 5124442233P would call a pager at 5124442233)</p>	*2	For a pager call	*7	Deletes phone number	*8	Detects a dialtone	*9	2-second delay	<div data-bbox="636 172 912 237" style="border: 1px solid black; padding: 5px;"> Pos 1 Phone Number nnnnnnnnnnnnnnnnnnn </div>
*2	For a pager call									
*7	Deletes phone number									
*8	Detects a dialtone									
*9	2-second delay									
	<p>NOTE: The TM waits 15 seconds after making a voice call until the next phone position is called. It waits 180 seconds after making any other type of call.</p>									
Step 7	<p>This is the amount of time the TM waits after issuing the last digit in the phone number before issuing the alarm or numeric pager message.</p> <p>NOTE: <i>0 means Call Progress is enabled. The TM will call and wait until the phone has been answered before the alarm message is delivered. If the TM calls and never delivers the message, then the TM is not able to determine that the phone has been answered, probably because the voice answering the phone is not loud enough.</i></p>	<div data-bbox="636 675 912 740" style="border: 1px solid black; padding: 5px;"> Pos 1 Call Prog Dly 0-60 secs = nn </div>								

Loop back to Step 6

3.6 Programming Channel Settings

This section allows you to configure the information specific to each channel or condition being monitored. For each channel the following options can be programmed.

Types of Channels	
System	
(01) - Power Fail , (02) - Low Battery, (03) - Low Low Battery, (04) Phone	channel name channel message channel mode (alarm or status) alarm delay activate relay (yes or no)
Digital Inputs	
(11-18)	channel message alpha ID channel mode channel state (Normally Open/Normally Closed) alarm delay activate relay (yes or no)
Relay Output	
(21)	channel message alpha ID pulse duration
Analog Inputs	
(31-34)	channel message alpha ID channel mode low limit high limit input type (0-5V or 1-5V – external resistor used for current) alarm delay activate relay (yes or no)

	What you do:	What the display shows:
Step 1	Press the 1 key to enter PROGRAM mode. You can now enter options 0 – 9.	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Program Mode 0-9 = </div>
Step 2	Press 9	
Step 3	Enter the Channel Number that you wish to examine or program. Press # to back-up the menu.	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Enter Chan Number 0x,1x,2x,3x = </div>

DIGITAL CHANNEL SETUP

For analog channels jump to Step 10.

For relay channel jump to Step 21.

Step 4	The TM repeats the current message. If the message is OK, press #. To record a new message, press 1 and speak your new 6-second message into the microphone followed by the # key. To listen to the current message again, press 0.	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 11 Alarm Msg 0-play 1-rec = </div>
Step 5	Each channel can have a 20 character name that will be displayed whenever the Status is shown or a channel is in alarm. To enter the name, press the key that corresponds to the letter or number that you want. To move to the next character, wait 1 second between entries. Press # key when finished.	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 11 Alpha ID nnnnnnnnnnnnnnnnnnnnnn </div>
Step 6	The Normal State is 0 for normally open and 1 for normally closed. NOTE: An alarm occurs when the input transitions out of the 'normal' state.	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 11 Normal State 0-n/o 1-n/c = 0 </div>
Step 7	The Channel Mode should be set to 1 for Call on Alarm conditions or 0 for Status Only. Press # if the value is OK.	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 11 Mode 0-status 1-alm = 1 </div>

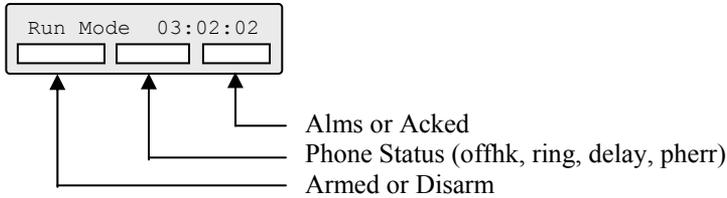
	What you do:	What the display shows:
Step 14	<p>The Zero specifies the engineering unit value at the lowest input level.</p> <p>For example, if the input is a 4-20ma signal, then this is the engineering unit value at 4ma.</p> <p>NOTE: Press ‘**’ to toggle between (+) and (-) values.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 31 Zero 0-999999 = -40 </div>
Step 15	<p>The Full Scale specifies the engineering unit value at the highest input level.</p> <p>For example, if the input is a 4-20ma signal, then this is the engineering unit value at 20ma.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 31 Full Scale 0-999999 = +120 </div>
Step 16	<p>The Channel Mode should be set to 1 for Call on Alarm conditions or 0 for Status Only.</p> <p>Press # if the value is OK.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 31 Mode 0-status 1-alm = 1 </div>
Step 17	<p>The Alarm Delay specifies the amount of time the input must be in the alarm condition before a call-out begins.</p> <p>Press # if OK or enter a new 5-digit value as nnnnn (e.g. 00300 for 300)</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 31 Alarm Delay 0-65535 sec = 3 </div>
Step 18	<p>Enter 1 to Activate the Relay when the channel goes into alarm or 0 to not activate. The relay will follow the channel into and out of alarm.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 31 Alarm Relay 0-no 1=yes = 0 </div>
If Mode is Alarm ...		
Step 19	<p>If the current reading is below the Low Limit, the channel goes into alarm and initiates a call and/or a relay activation.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 31 Low Limit 0-999999 = none </div>
Step 20	<p>If the current reading exceeds the High Limit, the channel goes into alarm and initiates a call and/or a relay activation.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Chan 31 High Limit 0-999999 = none </div>
Loop back to Step 3		

What you do:	What the display shows:
RELAY CHANNEL SETUP	
<p>Step 21</p> <p>The TM repeats the current message. If the message is OK, press #. To record a new message, press 1 and speak your new 6-second message into the microphone followed by the # key. 0 to listen to the current message again.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>Chan 21 Alarm Msg 0-play 1-rec =</p> </div>
<p>Step 22</p> <p>Each channel can have a 20 character name that will be displayed whenever the Status is shown or a channel is in alarm. To enter the name, press the key that corresponds to the letter or number that you want. To move to the next character, wait 1 second between entries. Press # key when finished.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>Chan 21 Alpha ID nnnnnnnnnnnnnnnnnnn</p> </div>
<p>Step 23</p> <p>The Pulse Duration specifies the length of time relay will stay activated. If you specify 0, then the relay will deactivate when all channels that reference it are in the normal condition.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>Chan 21 Pulse Dur 0-86400 sec = 0</p> </div>
<p>Loop back to Step 3</p>	

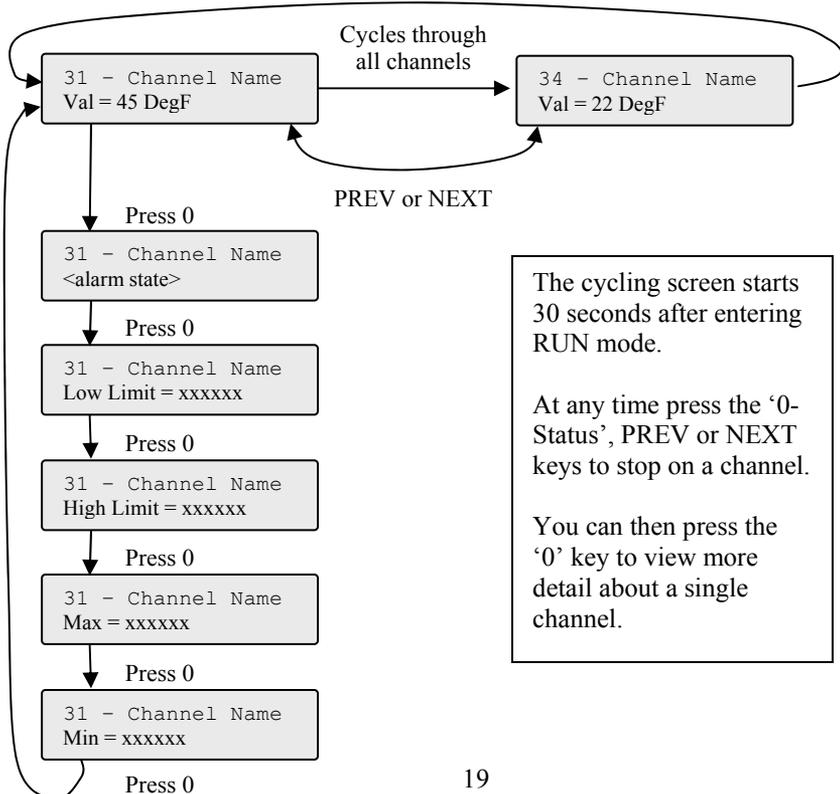
4 RUN Mode functions

While the TM is in RUN mode it is scanning all inputs, evaluating them for transitions into and out of alarm conditions, performing alarm calls and updating the display.

The default RUN mode display for a TM-SW unit looks like this:



The default RUN mode display for a TM-SN unit looks like this:



There are 7 functions that can be performed while in RUN mode.

Function	Capability
STATUS (Keypad 0)	Get status of each channel (use PREV and NEXT keys) NOTE: additional information is available for each channel by pressing the 0 key again when viewing a channel
PROG/RUN (Keypad 1)	Enter Program mode
ARM/DIS (Keypad 2)	Toggle Arm/Disarm
LOG (Keypad 5)	View Event Log or Data Log (use PREV and NEXT keys)
ACK	Acknowledge alarms
PHONE CHECK/ HANGUP	Test phone line (if phone is not in use) Hang Up phone (if phone is in use)

5 Getting System Status

System Status reports the current conditions of the DiaLog TM. It will report any channels that are in alarm or acknowledged, including the primary power and battery channels.

5.1 From the front panel

The TM displays the first channel (Power). To view the other channels **press the PREV key to move backward** or the **NEXT key to move forward** through all the channels.

The channels are: Power, Low Battery, Low Low Battery, Phone line status, each input channel and then the version of the firmware in the TM.

	What you do:	What the display shows:
Step 1	Press the 0 key.	
Step 2	<i>Primary power is being supplied.</i> Press the NEXT key.	Power normal
	<i>Battery level is normal.</i> Press the NEXT key.	Low Batt normal
	<i>Battery level is normal.</i> Press the NEXT key.	Low Low Batt normal
	<i>Phone line is connected and has a dial-tone.</i> Press the NEXT key.	Phone normal
	<i>Digital Input 11 is in the normal condition and is open.</i> Press the NEXT key.	DIN Chan 11 normal open
	<i>Digital Input 11 is in the alarm condition and is closed.</i> Press the NEXT key.	DIN Chan 12 in alarm closed
		<i>Loop through remaining channels</i>
	DiaLog TM version	Ver v6.6 TMxx

Loop back to Step 1

NOTE: *Press any key on the keypad to stop the System Status display.*

5.2 Remotely

The System Status can be retrieved remotely by calling into the TM from a phone.

The TM will answer after the number of rings specified by Rings to Answer. Then the TM will:

	What you do:	What the TM says:
Step 1	Dial the DiaLog TM phone number	Site ID Message (followed by any channels in alarm) <i>beep beep beep</i>
Step 2	Press the # key. (within 5 seconds)	“System ready. Enter selection.”
Step 3	Press 0	“System status.” The System Status report is spoken. “Enter channel number or press # to exit”
Step 4	Enter a channel number	Channel message “is normal/in alarm” “The present value is open/closed” or “The present value is xx.x %”
Loop back to Step 3 or enter # to exit		

6 Acknowledging alarms

A channel goes into alarm when it transitions out of the normal condition specified in the Alarm State.

For example, if a channel has an Alarm State of Normally Open, then the channel goes into alarm when the input closes. The channel will stay in alarm as long as the input is closed. If the Alarm Type is set to Latching, then it will stay in alarm, even if the input goes back to open, until the channel is acknowledged.

When any channel goes into alarm and the Channel Mode is set to Call on Alarm, the TM will start calling the phone numbers in the Phone List. It will continue to call through the list of phone numbers until the channel goes out of alarm or until it is acknowledged.

When acknowledged, the TM will stop calling and wait the time specified by the Ack Redial Delay before starting to call again if the channel is still in the alarm condition.

6.1 Acknowledge from the keypad

While in RUN mode, press the ACK key.

The TM will change the display information for the channel(s) in alarm from Alarm to Acknowledged and stop calling.

6.2 Acknowledge remotely when called

The TM calls the phone numbers programmed into the Phone List beginning with the first position. If the call is busy, the TM will go to the next number.

	What you do:	What the TM does:
Step 1		Calls next phone number.
Step 2		Waits time specified by the Call Progress Delay for that phone number.
Step 3		Says: Site Message ID Channel Message ID "is in alarm" "please acknowledge"
	You have 5 seconds to press the 9 key to acknowledge the alarm.	

If you do not acknowledge, loop back to Step 3 the number of times specified by Msg Repeat

If you do acknowledge

<p>If you do not press the # key.</p>	<p>“Channel acknowledged.” <i>beep beep beep</i></p> <p>NOTE: <i>After all the channels have been spoken, the TM will give you three (3) beeps. You have 5 seconds to press the # key if you wish to continue.</i></p> <p>“Good-bye”</p>
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6.3 Acknowledge when you call in

If you receive a pager notification that a channel is in alarm and you call into the TM, the TM asks you to acknowledge any alarms.

	What you do:	What the TM does:
Step 1	<p>Call into the TM</p>	<p>Says: Site Message ID Channel Message ID “is in alarm” “Please acknowledge”</p>
	<p>You have 5 seconds to press the 9 key to acknowledge the alarm.</p>	
If you do acknowledge	<p>If you do not press the # key.</p>	<p>“Channel acknowledged.” <i>beep beep beep</i></p> <p>NOTE: <i>After all the channels have been spoken, the TM will give you three (3) beeps. You have 5 seconds to press the # key if you wish to continue.</i></p> <p>“Good-bye”</p>

7 Arming and Disarming

At times it may be beneficial to Disarm the TM to prevent it from calling out. This is generally done when you are performing maintenance on equipment being monitored and do not want unnecessary alarms generated.

7.1 From the front panel

NOTE: *The TM must be in the RUN mode*

	What you do:	What the display shows:
Step 1	Press the 2 key to toggle between Armed and Disarmed.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Run Mode 03:04:07 armed </div>
	NOTE: <i>If the TM is Disarmed, it will automatically become Armed after 30 minutes.</i>	

7.2 Remotely

You can Arm or Disarm the TM when you call into it.

	What you do:	What the TM says:
Step 1	Dial the DiaLog TM phone number	Site ID Message (followed by any channels in alarm) <i>beep beep beep</i>
Step 2	Press the # key within 5 seconds <i>If an Access Code has been activated, you will be requested to enter it.</i>	“System ready. Enter selection.”
Step 3	Press 2 (ARM/DIS) to toggle between arm/disarm.	“System is armed/disarmed” “Return to arm in 30 minutes” “System ready. Enter selection.”
Loop back to Step 2		

8 Activating Relay

The relay (Channel 21) can be manually activated or deactivated from the keypad or remotely over the phone.

If the relay is also controlled via a digital or analog channel going into alarm, the relay will perform that function in addition to any manual operation.

8.1 From the front panel

NOTE: The TM must be in the RUN mode

	What you do:	What the display shows:
Step 1	Press the 7 (RELAY) key to see the Activate Relay selection screen.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> Activate Relay 0-deact 1-act = 0 </div>
	Press 1 to activate or 0 to deactivate the relay.	

8.2 Remotely

You can activate or deactivate the relay when you call into the TM or when the TM has called you during an alarm notification.

	What you do:	What the TM says:
Step 1	Dial the DiaLog TM phone number	Site ID Message (followed by any channels in alarm) <i>beep beep beep</i>
Step 2	Press the # key within 5 seconds <i>If an Access Code has been activated, you will be requested to enter it.</i>	“System ready. Enter selection.”
Step 3	Press 7 to listen to the Activate Relay prompt..	“Activate relay.” “Relay is energized (or deenergized)” “Enter new selection or press # to exit.”
Step 4	Press 1 to activate the relay or 0 to deactivate the relay.	“Relay is energized (or deenergized)” “Enter new selection or press # to exit.”

9 Retrieving the Event Log

The DiaLog TM keeps the last 100 events that occurred in a local non-volatile log. The Event Log can be viewed locally on the display or retrieved remotely over the phone.

The **PREV** moves backwards and the **NEXT** moves forwards through the logs.

9.1 To view the Event Log locally

	What you do:	What the display shows:
Step 1	Press the 1 key to enter Program Mode	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Program Mode 0-9 = </div>
Step 2	Press the LOG (5) key	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> View Log 0-Evt 1-Data = </div>
Step 2	Press 0 to view the Event Log Press 1 to view the Data Log	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> 1) PROG Mode date time </div>
Step 3	Press the NEXT key to advance forward through the Event Log or the PREV key to move backward. Press the # key when you are finished.	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> 2) DIN3 Cl Alm date time </div>
Press # when finished		

10 Retrieving the Data Log

The DiaLog TM keeps a Data Log for analog channels that have Reports enabled.

The Data Log contains:

Analog channels Date/Time stamped Daily Max and Min values

10.1 To view the Data Log locally

	What you do:	What the display shows:
Step 1	Press the 5 key	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> View Logs 0-Evt 1-Data = </div>
Step 2	Press the 1 key to select the Data Log	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> View Logs 0-Evt 1-Data = </div>
Step 3	<p>Press the NEXT key to advance forward through the Event Log or the PREV key to move backward.</p> <p>Press the # key when you are finished.</p> <p>For example, Channel 31 had a minimum value on 7/25 of 23 DegF</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> 01) 07/25 31 Min = 23 DegF </div>
Press # when finished		

Event #	Event Description	Event #	Event Description
0	NULL Event	42	GSM unsolicited reg event
1	Power On	43	GSM result of +CFUN cmd
2	Dead Task with task number	44	GSM attach to network
3	System Armed	45	GSM has reset
4	Armed	46	Pager call
5	RUN Mode	47	Phone check Telco/GSM
6	PROGram Mode	48	Sending SMS msg
7	Configuration Change	49	Sending e-mail msg
8	Reset to System Defaults	50	Sending GPRS UDP/PAD msg
9	Call Answered	51	Receiving SMS msg with cmd
10	No Dial Tone	52	Railed to execute SMS cmd
11	Call Busy	53	Automatic update call out
12	Call Error		
13	Call Aborted		
14	Call Timeout		
15	Call No Answer		
16	Call Incoming		
17	Call Complete		
18	Voice Call		
19	Data Call		
20	Alarms acknowledged locally		
21	Alarms acknowledged remotely		
22	Alarm call / phone position		
23	Open alarm / digital channel number		
24	Closed alarm / digital channel number		
25	Run time alarm / digital channel number		
26	Starts alarm / digital channel number		
27	Low alarm / analog channel number		
28	High alarm / analog channel number		
29	Totalization alarm / analog channel number		
30	Channel is normal / channel number		
31	Channel acknowledged / channel number		
32	Relay channel on / channel number		
33	Relay channel off / channel number		
34	Normal data value for channel		
35	Starts data for digital channel		
36	Run time data for digital channel		
37	Totalizer data for analog channel		
38	Maximum value for analog channel		
39	Minimum value for analog channel		
40	Send status report		
41	Send events report		
42	Unknown		

11 Replacing the Backup Battery

The Backup Battery is continually monitored by the TM to confirm that it is supplying enough power to run the TM. If it is not, then the Low Battery (02) alarm will be activated.

This alarm is caused by:

1. the TM has lost Primary Power, is running on the battery and is low on power, or
2. the battery cannot be recharged, which should take 6-12 hours.

The Backup Battery is located inside the enclosure. You will have to remove the front panel from the enclosure to expose the battery.

Battery replacement procedure	
Step 1	If panel mounted, dismount the enclosure by loosening the screws holding the enclosure to the panel.
Step 2	Remove the four (4) nuts that hold the front cover to the enclosure.
Step 3	Slowly tilt the top edge of the front cover away from the enclosure to expose the cable connecting the electronics to the battery.
Step 4	Put the front cover in a safe place and remove the battery bracket and battery.
Step 5	Put the new battery in the bracket with the leads facing the left-hand side of the enclosure.
Step 6	Reattach the battery cable and front cover.
Step 7	Mount the enclosure back in place.

NOTE: *be careful when removing the front panel as it holds the electronics and there is a cable between the electronics and the battery.*

12 Customer Service

Antx customer service can be reached toll-free at 877-686-2689.

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P.O. Box 200816
Austin, TX 78720
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custserv@antx.com

13 Certifications

The Federal Communications Commission (FCC) has established rules that permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin lines.

If this device is malfunctioning, it may also be causing harm to the telephone network. This device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.

The telephone company may make changes in its technical operations and procedures. If such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes. You will be advised of your right to file a complaint with the FCC.

If the telephone company requests information on what equipment is connected to their lines, inform them of:

- a. The telephone number this unit is connected to
- b. The ringer equivalence number: 0.2B
- c. The USOC jack required
- d. The FCC registration number: 60DAL02BTM

Items b and d are indicated on the label.

The ringer equivalence (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the REN's of all devices on any one line should not exceed five. If too many devices are attached, they may not ring properly.

Other DiaLog TM certifications:

Industry Canada registration number: IC: 4825A-TM

CE Mark



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