DTC-300A

Digital Transmitter Communicator

Installation and Operation Manual

LT-889 Rev. 1.2
May 2019

Contents

1.0 Industry Canada and FCC Notice

1.1 Notice for all DTC-300A Sold in the U.S.A.

Note: The Ringer Equivalence Number (REN) for this product is X.X.

Mircom's ***DTC-300A Digital Communicator*** described in this manual is listed by Underwriters Laboratories Inc. (ULI) under Standard 864 (Control Units for Fire Protective Signalling Systems). These Communicators comply with the National Fire Protection Association (NFPA) performance requirements for DACTs and should be installed in accordance with NFPA 72 Chapter 4 (Supervising Station Fire Alarm System). These Communicators should be installed in accordance with this manual; the National Electrical Code (NFPA 70); and/or the local Authority Having Jurisdiction (AHJ).

FCC Notice

This equipment complies with the Federal Communications Commission (FCC) rules and regulations governing telephone equipment and the Technical Requirements for Connection to the Telephone Network published by the industry's Administrative Council for Terminal Attachments (ACTA). On the door of this equipment is a label that contains, among other information, a product identifier in the format **US:XXXXXXXXDTC-300A**. If requested, this number must be provided to the telephone company. This equipment is capable of seizing the line. This capability is provided in the hardware.

The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of devices that may be connected to a telephone line. Excessive REN's on a telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total REN's contact the local telephone company. **The REN for this product is X.X.**

Telephone Company Procedures: The goal of the telephone company is to provide you with the best service it can. In order to do this, it may occasionally be necessary for them to make changes in their equipment, operations or procedures. If these changes might affect your service or the operation of your equipment, the telephone company will give you notice, in writing, to allow you to make any changes necessary to maintain uninterrupted service.

In certain circumstances, it may be necessary for the telephone company to request information from you concerning the equipment which you have connected to your telephone line. Upon request of the telephone company, provide the FCC registration number and the ringer equivalence number (REN); both of these items are listed on the equipment label. The sum of all of the REN's on your telephone lines should be less than five in order to assure proper service from the telephone company. In some cases, a sum of five may not be usable on a given line.

If Problems Arise: If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC. Contact your telephone company if you have any questions about your phone line. In the event repairs are ever needed on the Communicator, they should be performed by Mircom Technologies Ltd. or an authorized representative of Mircom Technologies Ltd. For information contact Mircom Technologies Ltd. at the address and phone numbers shown on the back page of this document.

2.0 Introduction and Features

The DTC-300A is a single board Digital Communicator (DACT) that can connect to any Fire Alarm Control Panel (FACP). It can transmit Alarm, Supervisory, Waterflow Alarm, Common Trouble, AC power trouble and Battery Trouble information on two telephone lines to a Digital Alarm Communicator Receiver (DACR).

Features:

- Scans up to 6 configurable input zones. The input zone type may be alarm, waterflow alarm, supervisory, trouble, AC trouble or Battery trouble.
- Reports to a DACR using **Ademco Contact ID** or **SIA DCS** reporting protocols.
- The DTC-300A has the ability of disconnecting the incoming and outgoing calls and capturing the line for transmission to the DACR.
- Provides telephone line monitoring and reports status via LED indication on-board.
- Provides LED indication for AC Power, Common Trouble, CPU Fail and Ground Fault.
- User configurable locally with on-board keypad and a **CFG-300 Configuration Tool** or using a UIMA and computer with serial port or USB. Remotely configurable via a personal computer, modem and telephone line connection.
- Provides event logs of 500 entries each to save events from local dialer or remote fire alarm panel. These logs can be reviewed locally with the CFG-300 Configuration Tool or remotely via modem.
- Requires 24V DC filtered or 24V DC Full Wave Rectified (FWR) power supply.

3.0 Mechanical Installation and Dimensions

The **DTC-300A** board is a single PCB assembly. It comes mounted in a 8.25” wide by 9” high by 1.5” deep box. There are four mounting holes, two at the top and two at the bottom. See Figure 1 below for mounting hole location and backbox dimensions. There are two conduit holes at the top of the box and two conduit holes at the bottom of the box.

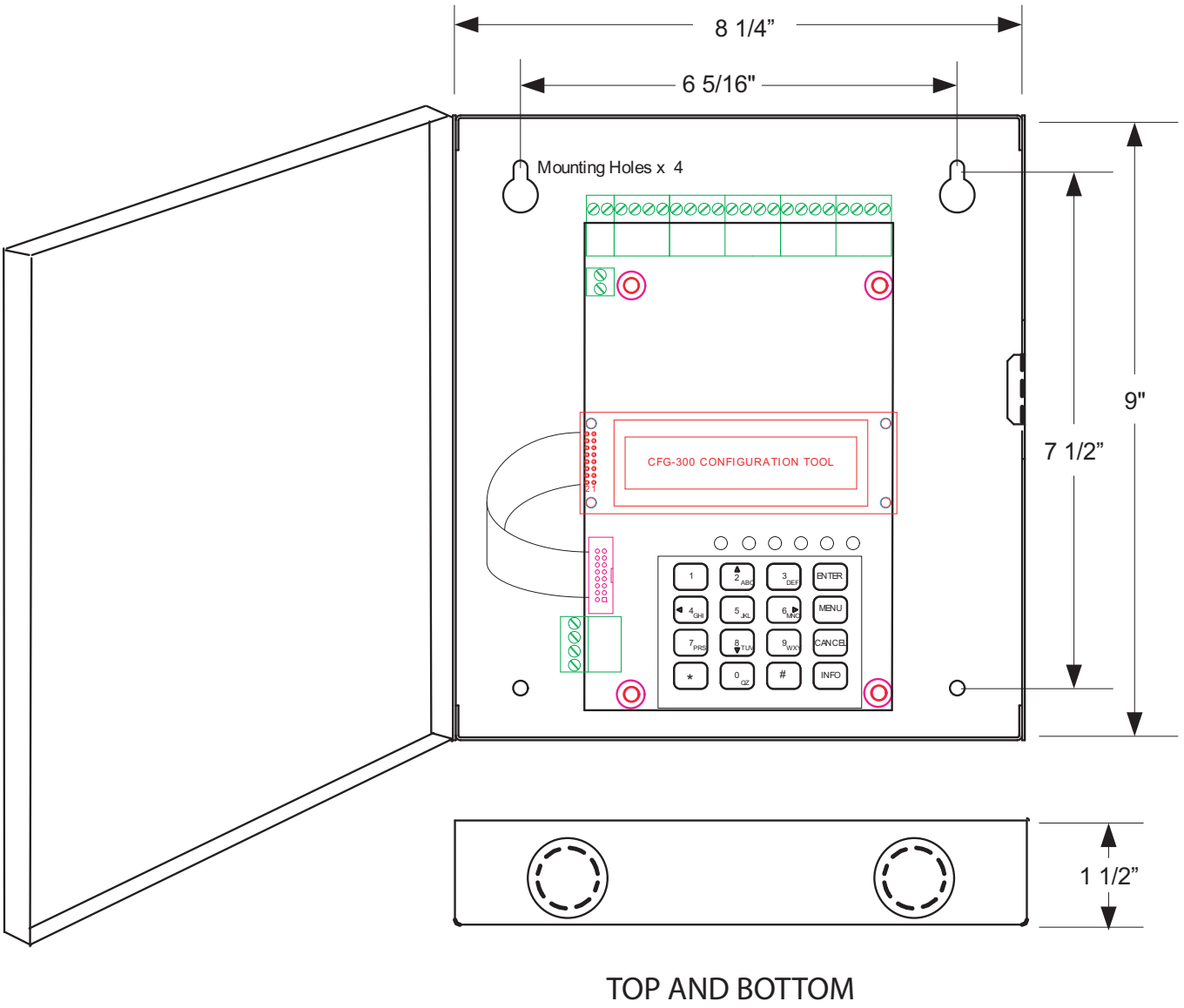


Figure 1 DTC-300A Backbox Dimensions for Mounting

4.0 Connections and Settings

4.1 DTC-300A Main Board

There are FOUR jumpers on the DTC-300A for operation/configuration purposes and 8 LEDs for status indication. Jumper JW1 is used to reset the default passcode. Jumper JW2 is required for configuring the DTC-300A. Jumper JW3 is used for enabling/disabling Ground Fault detection and JW4 is used to set the Trouble Relay. Refer to Figure 2 for the location of jumpers, cable connections, pushbutton and LEDs. Table 1 describes the connectors on the DTC-300A, Table 2 describes of the status LEDs, and Tables 3 and 4 provide information on the jumpers.

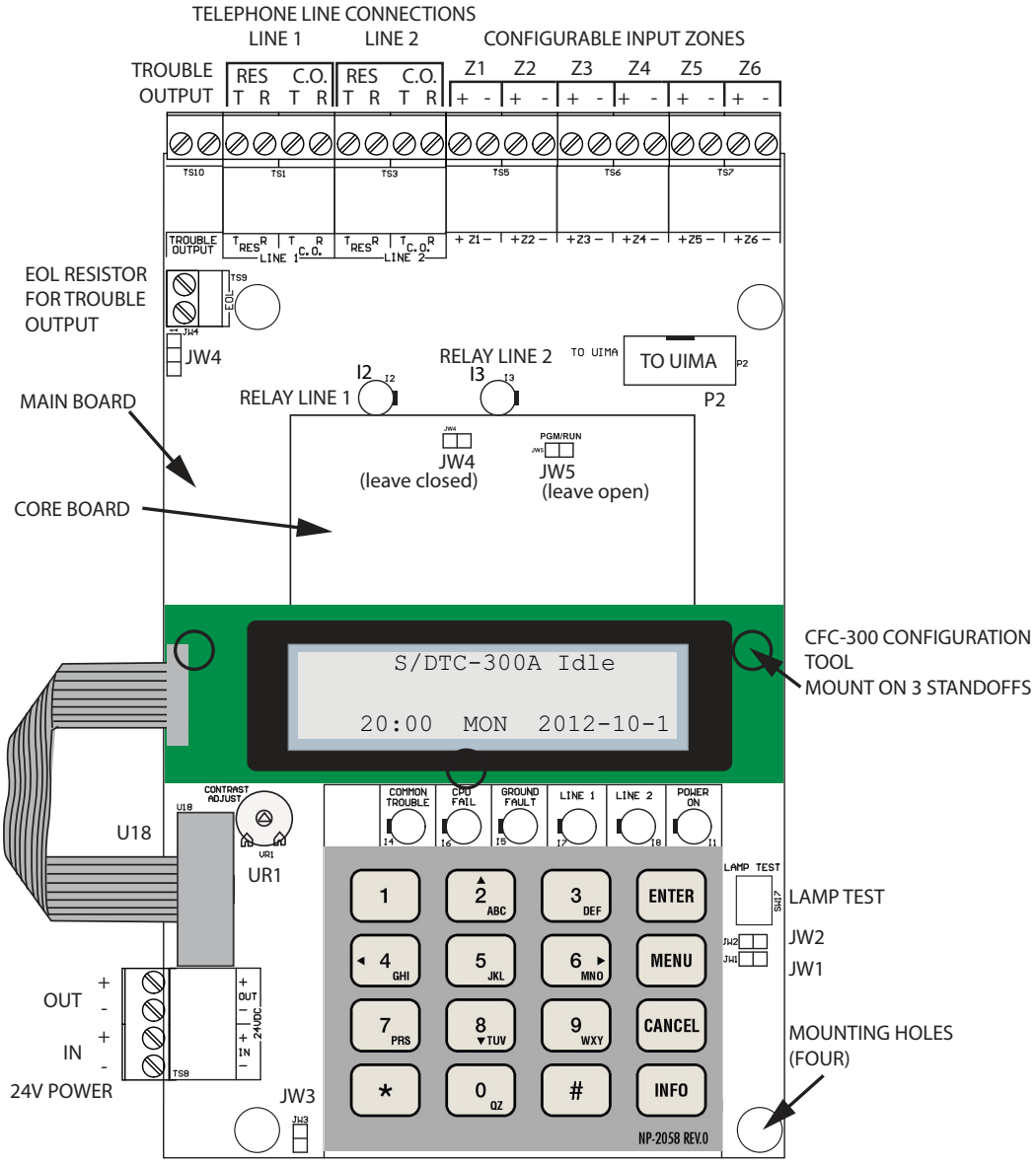


Figure 2 DTC-300A Board Layout

Table 1 Cable Connectors and Miscellaneous

Cable Connector	Function
P2	RS-232C/RS-485 Connection for computer configuration.
U18	Connector for CFG-300 Configuration Tool
Lamp Test button	Press and hold this button to test all the LEDs and LCD display
UR1 Potentiometer	This potentiometer is for adjustment of the CFG-300 LCD contrast.

Table 2 lists all the LEDs located on the DTC-300A board and states the function of each LED.

Table 2 DTC-300A List of LEDs and their Functions

LEDs	FUNCTION
Relay Line 1	Located below Line 1 terminal block. When Line 1 relay is energized, this green LED will illuminate steady.
Relay Line 2	Located below Line 2 terminal block. When Line 2 relay is energized, this green LED will illuminate steady.
Common Trouble	Steady amber for any troubles on the DTC-300A and/or the Fire Alarm panel.
CPU Fail	Steady amber for any on board CPU trouble.
Ground Fault	Steady amber for any ground faults on the DTC-300A main board.
Line 1	Telephone Line 1 status indicator LED; Red steady when the line is in use, Amber steady when there is a line fault.
Line 2	Telephone Line 2 status indicator LED; Red steady when the line is in use, Amber steady when there is a line fault.
Power ON	Green LED is ON steady when power is supplied to the board.

Table 3 List of Jumpers for Operation and Configuration on Main Board

JUMPER NUMBER	FUNCTIONS
JW1	RESET PASSCODE: Default is normally open. TO RESET PASSCODE: Place jumper here and power down the DTC-300A by disconnecting the 24V power source or power down the fire alarm panel (AC and Batteries), then power back up to revert to the default passcode. After the passcode is reset, remove the jumper.
JW2	BLOCK REMOTE CONFIGURATION: Default is normally open to BLOCK remote configuration via modem, PC with a UIMA converter module or using the LCD and keypad at the DTC-300A. A trouble is initiated when the jumper is ON showing that the DTC-300A is in configuration mode. Place jumper here to ALLOW any type of configuration. Remove jumper once configuration is complete, trouble will restore.
JW3	GROUND FAULT DETECTION: Default has jumper pins normally shorted allowing ground fault detection on the DTC-300A. Remove this jumper to DISABLE ground fault detection (Ground Fault LED on the DTC-300A will not operate). The Fire Alarm Panel Ground Fault is not affected.

Table 3 List of Jumpers for Operation and Configuration on Main Board (Continued)

JUMPER NUMBER	FUNCTIONS
JW4	TROUBLE RELAY: Short pins 1 and 2 to select the TROUBLE OUTPUT relay contacts as normally closed(N.C.) or short pins 2 and 3 to select the TROUBLE OUTPUT relay contacts as normally open (N.O.). Default has pins 2 and 3 shorted, check fire alarm panel for proper setting required for the TROUBLE OUTPUT contacts.

Table 4 List of Jumpers on Core Board

JUMPER NUMBER	FUNCTIONS
JW4	Leave closed (on).
JW5	Leave open (off).

5.0 Field Wiring

5.1 DTC-300A Main Board Telephone Wiring

Wire the two telephone lines to RJ31X Connector terminals as shown in Figure 3 below. The DTC-300A telephone line terminals are located on the top left hand corner of the board. For a cellular or wireless service, use the Line 2 interface connection.

Note: For a cellular or wireless service, use the Line 2 interface connection.

Most Authorities Having Jurisdiction (AHJ) do not allow the connection of premise telephones. See “Specifications” on page 36 for more information.

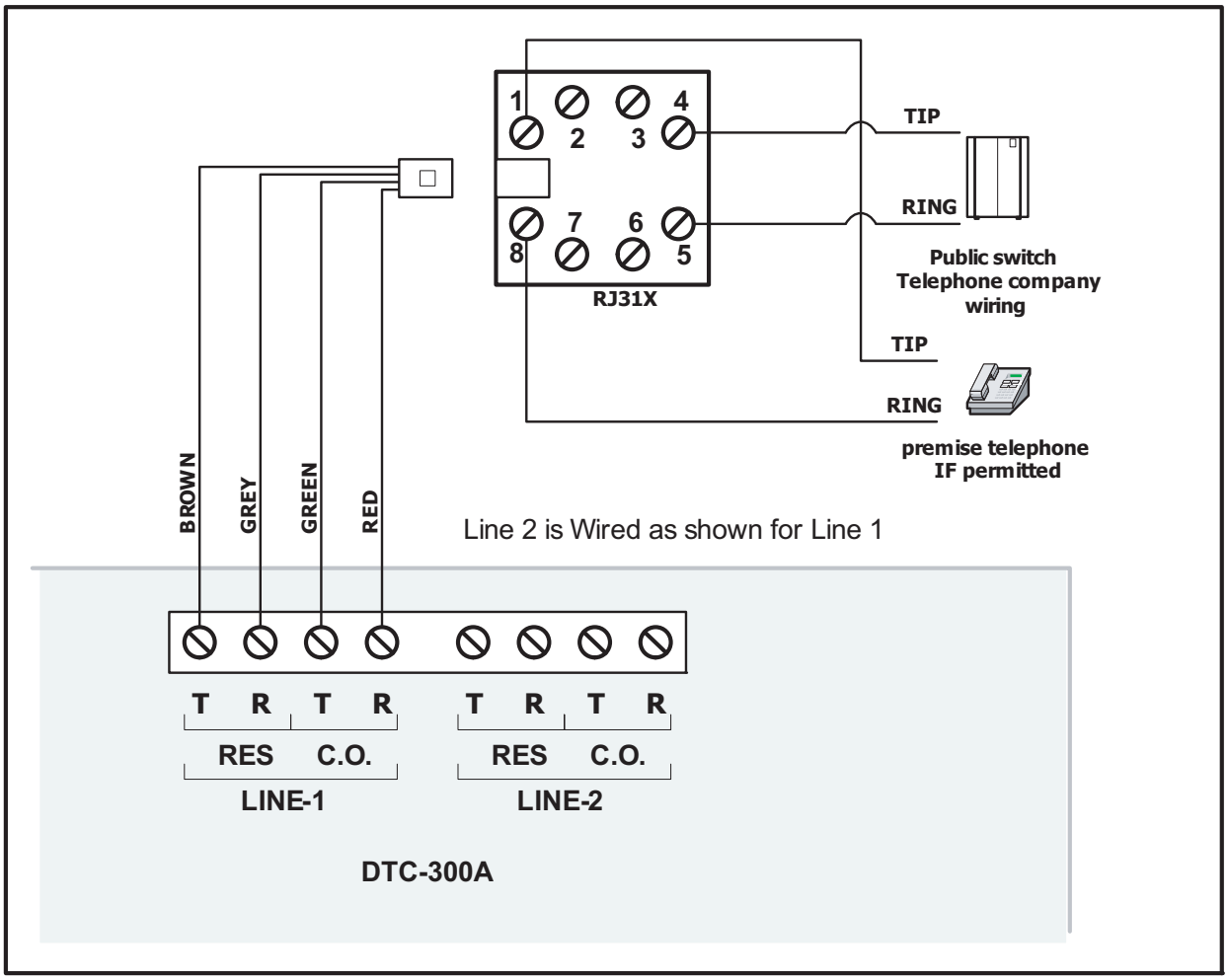


Figure 3 Telephone Line Wiring Diagram

5.2 DTC-300A Main Board Input Zone Wiring

There are terminals for six input zones. Zones 1 to 6 are configurable. The default zone settings are as follows:

Table 5 Zone Default Functions

ZONE	DEFAULT FUNCTION
Z1	Common Alarm Input
Z2	Common Supervisory Input
Z3	Common Trouble Input
Z4	Waterflow Alarm
Z5	AC Power Trouble Input
Z6	Battery Trouble Input

Input zones 1 through 6 can be connected to the form C relay contact outputs of an associated Fire Alarm panel. These relay outputs show the status of the Fire Alarm panel as Alarm, Supervisory, Waterflow Alarm, Common Trouble, AC Power Fail Trouble and Battery Trouble. Each input zone is supervised by an 820 ohms End of Line Resistor or equivalent MP-820R/W which is a resistor on a white or red plate.

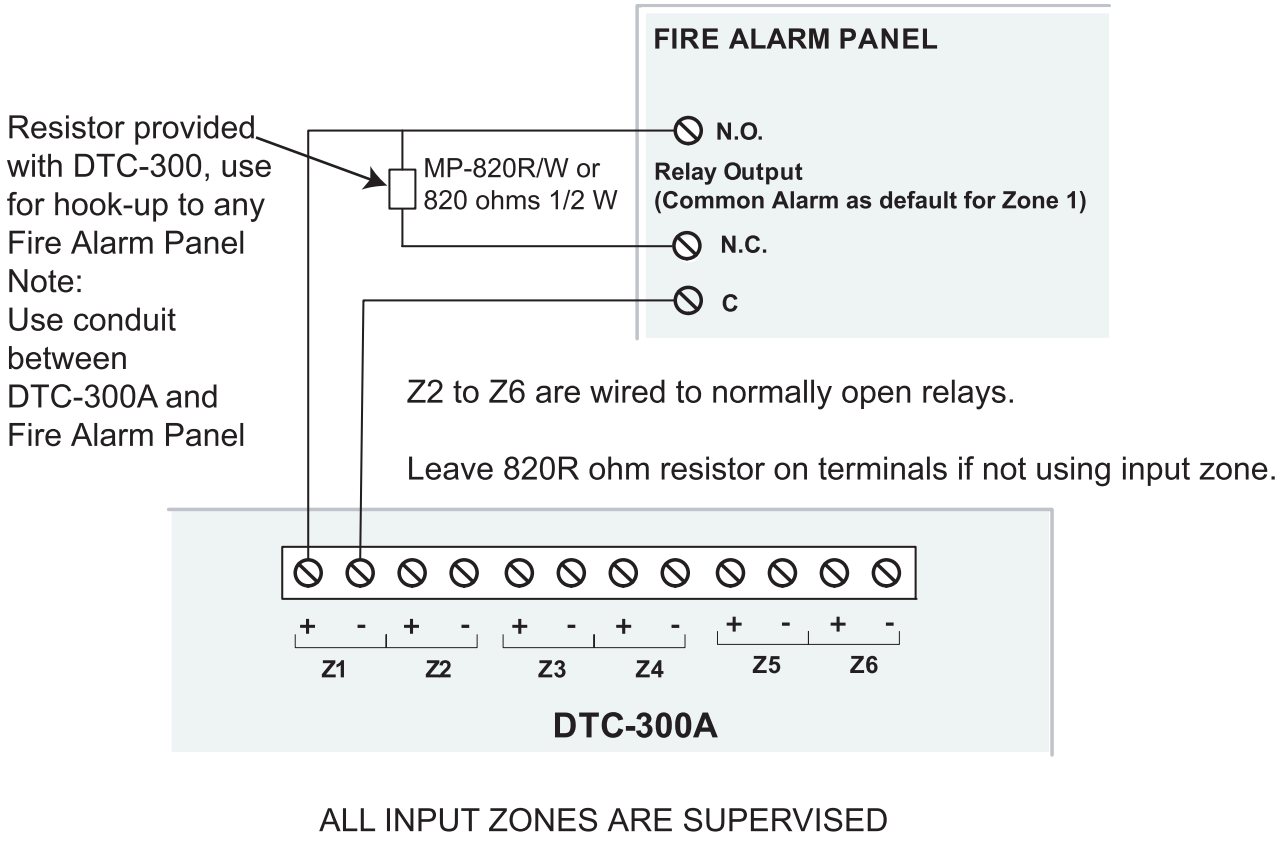


Figure 4 DTC-300A Zone Wiring

Table 6 DTC-300A Zone Wiring Chart

Wire gauge AWG	Maximum wiring run to last device	
	Feet	Meters
22	2990	910
20	4760	1450
18	7560	2300
16	12000	3600
14	19000	5800
12	30400	9200

Note: Maximum loop resistance should not exceed 100 ohms.

Maximum capacitance of 0.5 µF total on each zone.

5.3 Trouble Output Wiring

The trouble output is wired to a Fire Alarm Trouble Only monitor zone. This is done to monitor the DTC-300A. The E.O.L resistor required for this zone is to be placed on the terminals marked E.O.L. below the Trouble Output. The value of the E.O.L. resistor depends on the FACP used. For the Mircom FACP, use 3K9 ohms. The Trouble Output terminals are dry contacts. Use JW4 to select either normally closed (pins 1 and 2) or normally open (pins 2 and 3).

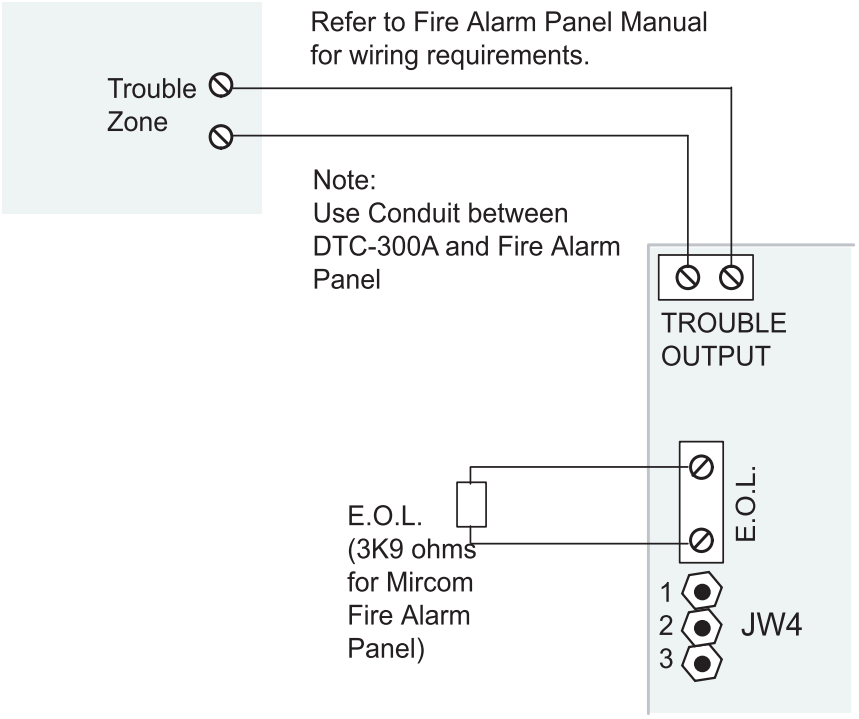


Figure 5 DTC-300A Trouble Output Wiring.

5.4 Power Supply Wiring

The DTC-300A requires power from a 24V DC regulated or 24V DC FWR supply. Connect to terminals marked 24V DC IN, positive and negative.

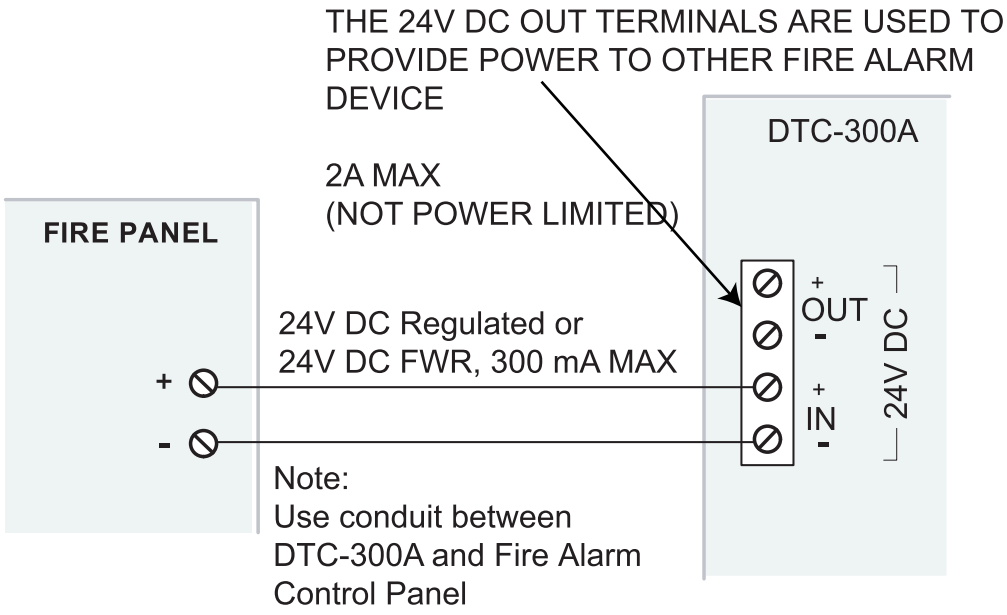


Figure 6 DTC-300A 24V Power Supply Wiring

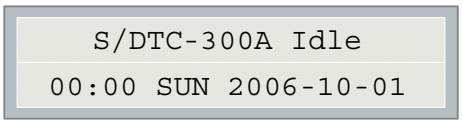
Use wire gauge for power supply wiring as specified per Table 7 below:

Table 7 Power Supply Wiring Chart

Wire gauge	Maximum wiring run to last device	
AWG	Feet	Meters
22	2530	770
20	3940	1200
18	5910	1800

6.0 Power Up Procedures

1. The DTC-300A should be securely mounted on a wall. Make sure ground wire is connected.
2. Check that the telephone lines are connected as shown in Figure 3.
3. Connect the CFG-300 Configuration Tool to the U18 connector and place over the mounting studs on the DTC-300A above the key pad and secure. This CFG-300 Configuration Tool can be removed once configuration has been completed.
4. Power up the Fire Alarm Panel and the message on the CFG-300 Configuration Tool should be:



7.0 Basic Operation and Supervision

The DTC-300A is able to supervise up to 6 local configurable input zones. Once the input zone is active (short condition), the corresponding event with input zone number will be reported to the monitoring station. If the input zone is open, a corresponding circuit trouble with input zone number will be reported. Each input zone can be defined as Alarm, Supervisory, Trouble, Waterflow, AC Power Trouble or Battery Trouble.

The DTC-300A is capable of reporting multiple events to a single account number, within a single call session. For a single event not yet reported, up to 4 retries will be made within a single call attempt. A failure to report to either or both accounts will generate corresponding events that will be queued for reporting. Once the DTC-300A fails to report on all telephone lines, it stops retrying, but an Alarm Event, Manual Test, 24-hour periodic test, 12-hour periodic test, or 6-hour periodic test will force the DTC-300A to seize the line and try reporting again. For two regular Telco telephone line connections, the DTC-300A checks each line operation by reporting the 24-hour periodic test, 12-hour periodic test, or 6-hour periodic test result on Line #1 or Line #2 alternately.

The DTC-300A continuously supervises the state of each of two connected Telco Lines at approximately 1 minute intervals.The regular line supervision includes DC voltage level validation and dial tone detection. Line supervision is skipped while (1) the dialer is busy reporting, (2) the modem is working or (3) there is ringing on the line. If the line supervision fails, a Line #1 or Line #2 Trouble will be reported after a 30 second verification. Once the line has been restored, a Line Trouble Restore will be reported.

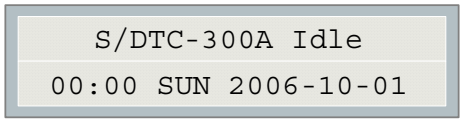
8.0 Configuration Set-up

There are 3 ways of configuring the DTC-300A.

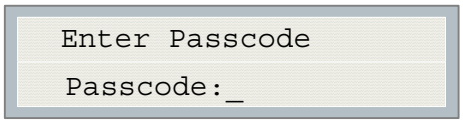
1. Locally with the on-board keypad and CFG-300 Configuration Tool.
2. Locally with a Personal Computer via the RS-232 connection, a UIMA and Mircom Software MSW-012.
3. Remotely with a computer, modem, UIMA and Mircom Software MSW-012.

8.1 Configuration via On-Board Keypad

1. Connect 24V DC power supply and zone inputs from the DTC-300A to the fire alarm panel.
2. Hook up the CFG-300 Configuration Tool ribbon cable to U18 on the DTC-300A board.
3. Hook up the telephone lines and telephone as shown in Figure 3.
4. Power up the fire alarm panel and the message of the CFG-300 Configuration Tool should be:



5. Place jumper on JW2, located in the bottom right hand corner of the DTC-300A board (this will generate a trouble on the DTC-300A and report this to the receiver). Press Menu on the keypad to enter the configuration menu and configure the DTC-300A. The following screen will ask for the passcode.



6. Enter the default passcode, 1111. Press Enter.

8.2 Configuration via UIMA and Computer (Local)

1. Set-up UIMA connection: the 10-pin cable connector of UIMA is connected to P2 on DTC-300A board. A serial cable or USB cable is needed to connect the UIMA to the computer.
2. Place a jumper at JW2 on the DTC-300A board to allow the configuration (a trouble is generated and reported to the receiver DACR).
3. Start the Mircom Software MSW-012 on the computer to configure the DTC-300A. Follow the instructions of MSW-012 menu to complete the configuration of the DTC-300A.
4. Remove jumper on JW2 after configuration is finished, otherwise a trouble will occur.

8.3 Configuration via Modem and Computer (Remote)

1. Set-up the modem connection on the computer. Make sure the phone line is working properly.
2. Place a jumper at JW2 on the DTC-300A board to allow the configuration (a trouble is generated and reported to the receiver DACR).
3. Start the Mircom Software MSW-012 on the computer to configure the DTC-300A. Follow the instructions of MSW-012 menu to complete the configuration of the DTC-300A.
4. Remove jumper on JW2 after configuration is finished, otherwise a trouble will occur.

9.0 Keypad Configuration & Operation

The following shows the configuration at the DTC-300A using the keypad and the CFG-300 Configuration Tool. The Mircom Digital Communicator is configured by connecting the cable of the **CFG-300 Configuration Tool** to the U18 connector on the DTC-300A Main Board and placing the LCD over the 3 standoffs as shown in Figure 2.

In order to configure the DTC-300A, place a jumper on JW2, remove once configuration is complete otherwise there will be a trouble.

To access configuration mode press the Menu button on the keypad. The CFG-300 LCD will display the Main Menu. The keypad on the DTC-300A board and the CFG-300 is shown together in Figure 7, below.

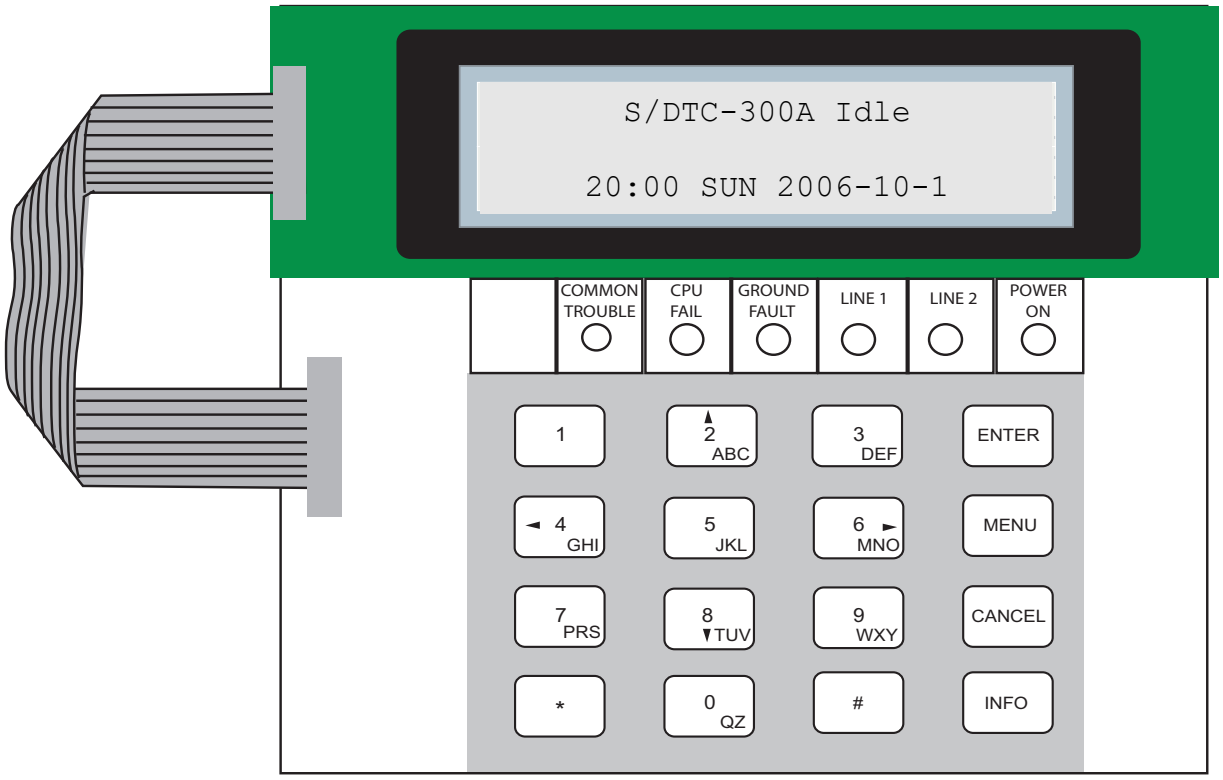


Figure 7 DTC-300A Configuration

9.1 Entering the Passcode

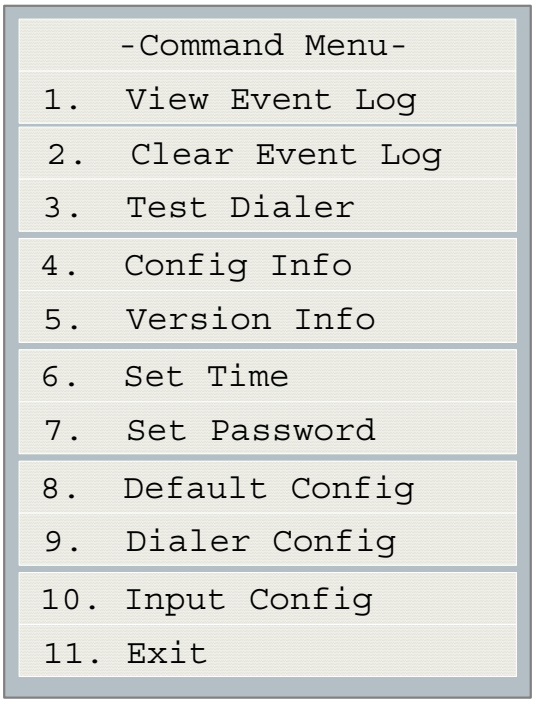
The programming section is passcode protected. The following image shows the message that is displayed to enter the passcode. The minimum number of digits allowed is four and the maximum allowable passcode is ten digits long; numerical values only. Press the “ENTER” key after entering the passcode. If the passcode is correct, it will take you to the main command menu. If the passcode is incorrect, the system will ask you to re-enter the passcode. The system will be exhausted after three retries and will then take you back to the Normal message display. The default password is 1111

Note: After you select a feature item by pressing the "ENTER" key, use the "UP" and "DOWN" keys to move through the different features. Use the "LEFT" and "RIGHT" keys to change the values. **To confirm the changes press the "ENTER" key.** To go one level back press the "CANCEL" key.

9.2 Command Menu

The main command menu is pictured below. The first line of the LCD will always show “-Command Menu-“, and the second line displays the different selections. Use the “UP” and “DOWN” keys to move through the menu, and press the “ENTER” key to make a selection. To exit from the main command menu, press “CANCEL” or select the “Exit” menu option and then press the “ENTER” key.

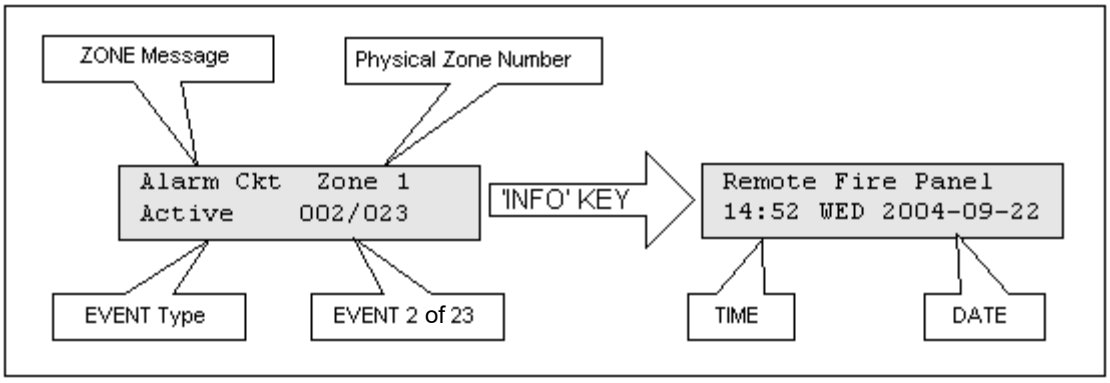
Note: Command Menu feature 9 and 10 can only be accessed if jumper JW2 is placed on the main board. See Table 3.



9.3 View Event Log (Command-Menu)

-View Event Logs- 1 Remote Log 2 Local Log Select the type of log to view. Press the "ENTER" key. The system will then show the log chosen.	Use this function to select the log to view. Either the local or remote log. The remote log contains all events associated with the fire alarm panel. The local log contains all events associated with the DTC-300A. Each log can hold up to 500 events.

Pressing the "INFO" key provides more information about the displayed event. The illustration below provides an example of how the "INFO" key works.

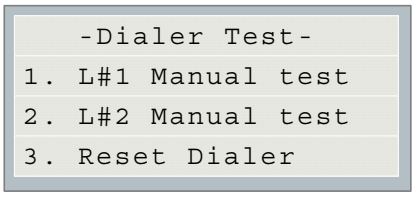


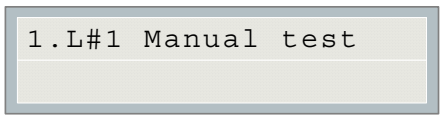
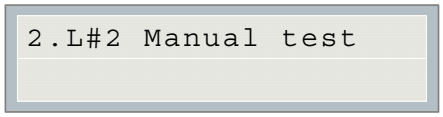
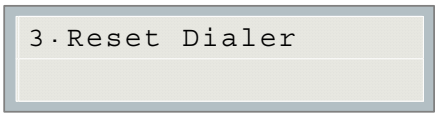
There are a maximum of 500 recent events saved in the event log. If the number of events goes beyond 500, all new incoming events will be ignored.

9.4 Clear Event Log (Command-Menu)

-Clear Log- 1 Remote Log 2 Local Log 3 All Logs Select the type of log to clear. Press the "ENTER" key. The system will then confirm before clearing logs. Clear all the selected log(s)? Y Press the "ENTER" key to confirm or the "CANCEL" key to cancel the operation. Log(s) cleared	Use this function to clear remote logs, local logs, or both. The remote log contains all events associated with the fire alarm panel. The local log contains all events associated with the DTC-300A. Each log can hold up to 500 events.

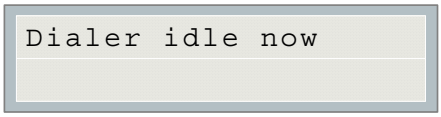
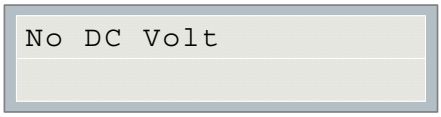
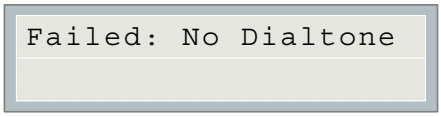
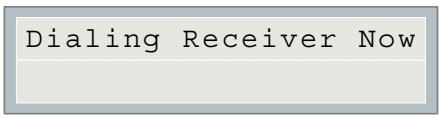
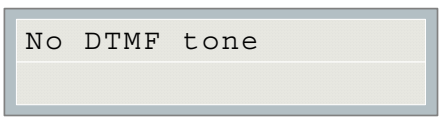
9.5 Test Dialer (Command-Menu)



	Press Enter to test Line #1. Press Cancel to exit this menu. For a description of test messages, see *Dialer Test Messages*.
	Press Enter to test Line #2. Press Cancel to exit this menu. For a description of test messages, see *Dialer Test Messages*.
	This feature flushes all reportable events from the buffer, clears all dialer troubles and resets the dialer operation. Press Enter to reset the dialer. Press Cancel to exit this menu.

9.5.1 Dialer Test Messages

The following messages will display during the test processes of Lines #1 and #2. The messages that will appear depend on the status of the dialer and the test results that are found.

	The dialer is checking the line for voltage. This message automatically displays when Manual Test is selected.
	No DC line voltage. The line is dead or no phone line is connected or the phone line operates at abnormal voltage.
	The dialer is waiting for a dial tone.
	This message may indicate a noisy telephone line.
	The dial tone was detected and telephone number dialing is in process.
	This message indicates that the dialer failed to send a DTMF tone.

Waiting for Acktone	Waiting for availability of the receiver. The receiver confirms the availability by sending an Ack tone.
Failed No Acktone	Dialer failed to detect Ack tone. This message indicates that either the telephone number may be wrong or the receiver is not available.
Reporting Event Now	Sending events to the receiver.
Waiting for Kissoff	The dialer is waiting for the Kissoff tone. The Kissoff tone indicates that the receiver has received the event reports.
No Kissoff	No Kissoff means dialer did not detect Kissoff tone.
Passed: Manual test	The line passed the test; everything is OK.

9.6 Config Info (Command-Menu)

Configuration type: Factory default Press down arrow key to see more information.	Configuration type will show how the panel was configured. “Factory default” means the panel has not been configured, it is as it came from the factory. “Front Panel” means it was configured at the panel. “Serial Port” means the configuration was done from a computer through the serial port. “Modem” means the configuration was completed remotely through a modem.
Job Name: No job loaded	If you upload a job configuration to the panel using the PC configuration utility, the job name will appear on this screen. The job name can be up to a maximum of 20 characters.
Technician ID: Unknown Press down arrow key for further info.	If you upload a job configuration to the panel using the PC configuration utility, the technician’s name (ID) will appear on this screen. The technician ID can be up to a maximum of 10 characters.
Cfg. Date and Time: hh:mm day year:mm:dd Press down arrow key for further info.	Configuration date and time will appear for all means of configuration, thus revealing date and time configuration was last changed.

Cfg. Tool S/W Vers.: Version:x.x.x.x	This specifies the configuration tool version. It will display 0.0.0.0 if no PC configurator has been used.

9.7 Version Info

```
S/DTC-300A
Version 1.0.1
```

The first line shows the model number and panel type and the second line shows the software version number. The version of the software is read as Major.Minor.Revision.

9.8 Set Time (Command-Menu)

```
1  Daylight Save
2  Time Clock
3  Compensation
```

Command Menu/Set Time 1. Daylight saving time Daylight Saving [X] DISABLE	[X] DISABLE ->Default [ ] ENABLE	Use this function to enable daylight savings time.
Command Menu/Time Clock 2. Set time and date HH:MM WKD YYYY-MM-DD 00:00 MON 2000-01-01	Default 00:00 MON 2000-01-01	Use this function to set the time and date. Use the “LEFT” and “RIGHT” keys to move the cursor to the desired location in the display and use the “UP” and “DOWN” keys to increase or decrease the values. Press the “ENTER” key to accept the changes and the “CANCEL” key to ignore the changes. **Note:** time is in 24hr format
Command Menu/Time Clock 3. Compensation Daily Compensation: 0 Once the compensation value is entered the display will be: Daily Compensation: Panel Config Updated	Compensation value can range from -15 to +15 seconds.	Use the up down arrow keys to select daily compensation value and press ENTER. For a fast clock adjust negatively. For a slow clock adjust positively. For example: for a clock which runs 5 minutes a month (based on 30 days) fast select -10 seconds.

9.9 Set Password (Command-Menu)

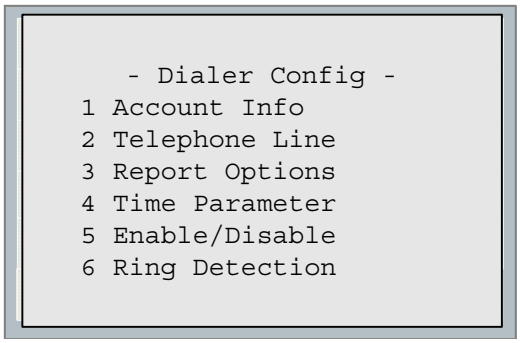
Command Menu/Set Password Enter new passcode [ ] Re-enter passcode [ ] If the passcode does not match, the following message appears and the system exit to the main menu. invalid passcode If the passcode is OK the following message appears and exits to the main menu. Passcode updated	1111 -> Default	Use this function to change the passcode. The minimum number of digits is 4 and the maximum number is 10. ONLY numeric digits are allowed.

9.10 Default Config (Command-Menu)

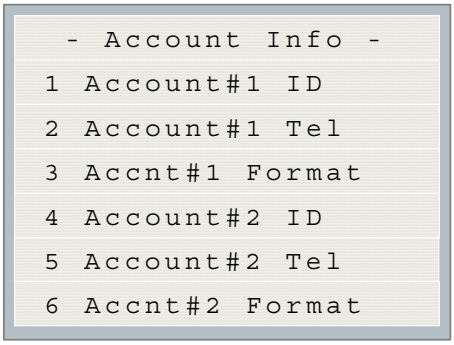
Command Menu/Default Config Load the default settings? Y Press “UP” and “DOWN” to select between Y/N. if “ENTER” is pressed the default configuration is restored. Default settings have been loaded	Use this function to load the default configuration in the panel. **Warning:** By loading default configuration all the previously programmed configuration is lost permanently.

9.11 Dialer Config (Command-Menu)

Press the Menu key on the keypad of the DTC-300A board to configure the DTC-300A. The following illustration shows the dialer configuration menu. Each item in this menu is described below in detail. Use the Up and Down keys to scroll through the menu and press the Enter key to make a selection. To exit from the menu, select the Exit menu option and then press either the Enter or Cancel key. Once a menu feature has been selected, use the Left and Right keys to change values or the numerical keys to enter account numbers.



9.11.1 Account Info Menu



Command Menu/Dialer Config/Account Info **1.Account# 1 Identification** Account#1 ID: 123456	123456->Default	Use this function to set the Account ID for the monitoring station to which the dialer reports events. The maximum number of digits allowed is six. For contact ID, only the first four digits are used; the last two are truncated. If you are using the Contact ID protocol, the allowed digits for the account ID are simple digits 0 to 9 and hexadecimal digits A to F. The SIA protocol only allows digits 0 to 9. To enter hexadecimal digits, press the INFO button. The letter “A” will appear. To scroll through the rest of the letters, press INFO repeatedly. Press # key to move the cursor to the right or press * key to move it to the left.

Command Menu/Dialer Config/Account Info **2.Account#1 Telephone Number** Account#1 Telnum: 101	101 ->Default	Use this function to set the telephone number of the monitoring station. The maximum number of digits allowed is 19 including commas "," and numerals. The commas will be treated as 1 sec delay. To enter a comma "," press the INFO button. Press the # key to move the cursor to the right or press the * key to move it to the left. An example of a typical telephone number is 9,,1234567008, 9 being the dial out where required.
Command Menu/Dialer Config/Account Info **3.Account#1 Reporting Format** ACCNT#1 Format: [X] Contact ID	[X] CONTACT ID-Default [ ] SIA 300 Baud [ ] SIA 110 Baud	Set the reporting format that is recognized or preferred by the monitoring station.
Command Menu/Dialer Config/Account Info **4. Account# 2 Identification** Account#2 ID: 654321	654321->Default	Same as Account#1.
Command Menu/Dialer Config/Account Info **5.Account# 2 Telephone Number** Account#2 Telnum: 101	101 ->Default	Same as Account#1.
Command Menu/Dialer Config/Account Info **6.Account# 2 Reporting Format** ACCNT#2 Format: [X] Contact ID	[X]ContactID->Default [ ] SIA 300 Baud [ ] SIA 110 Baud	Same as Account#1.

9.11.2 Telephone Line Menu

```
- Telephone Line -
1 Line1 Dialtype
2 Line2 Dialtype
3 Line1 Dialtone
4 Line2 Dialtone
5 Num of Retries
```

Command Menu/Dialer-Config/Telephone Line
1. Line#1 Dialing Type
`Line#1 Dialing Type:`
`[X] DTMF Dial`
	`[X] DTMF Dial->Def`
	`[ ] Pulse Dial`
		Set the dialing type for line #1 DTMF is the type recognized or preferred by the telephone company.

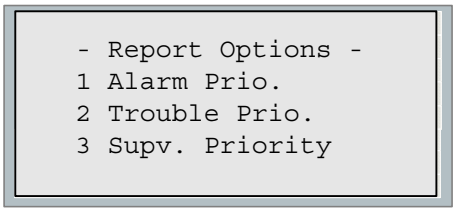
Command Menu/Dialer-Config/Telephone Line
2. Line#2 Dialing Type
`Line#2 Dialing Type:`
`[X] DTMF Dial`
	`[X] DTMF Dial->Def`
	`[ ] Pulse Dial`
		Same as Line#1.

Command Menu/Dialer-Config/Telephone Line
3. Line#1 wait for Dial tone
`Line#1 Wait Dialtone`
`[X] ENABLE`
	`[X] ENABLE ->Default`
	`[ ] DISABLE`
		Use this function to let the system know whether or not to wait for a dial tone before dialing.

Command Menu/Dialer-Config/Telephone Line
4.Line#2 wait for Dial tone
`Line#2 Wait Dialtone`
`[X] ENABLE`
	`[X] ENABLE ->Default`
	`[ ] DISABLE`
		Same as Line#1.

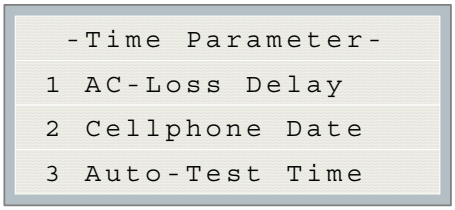
Command Menu/Dialer-Config/Telephone Line
5.Number of retries
`Number of Retries:`
`06`
	`06 ->Default`	Set the number of retries for both line#1 and line#2. This function lets the dialer retry on either line if it is busy or not available. If the retry count expires, the panel reports a line trouble.

9.11.3 Report Options Menu

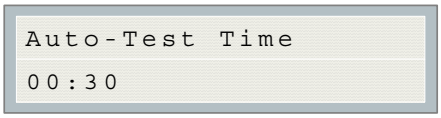


CommandMenu/Dialer-Config/Report Options *1.Alarm priority* Alarm Priority: [X] Account 1	[X] Account 1->Def [ ] Account 2	Use this function to set the account priority for reporting alarms. If the priority is set for account#1 then the dialer will try account#1 first for reporting.
CommandMenu/Dialer-Config/Report Options *2.Trouble priority* Trouble Priority: [X] Account 1	[X] Account 1->Def [ ] Account 2	Use this function to set the account priority for reporting trouble. If the priority is set for account#1 then the dialer will try account#1 first for reporting.
CommandMenu/Dialer-Config/Report Options *3.Supervisory priority* SUPV Priority [X] Account 1	[X] Account 1->Def [ ] Account 2	Use this function to set the account priority for reporting supervisory troubles. If the priority is set for account#1 then the dialer will try account#1 first for reporting.

9.11.4 Time Parameter Menu



Command Menu/Dialer-Config/Time Parameter **1.AC Loss delay** AC-Loss Delay(Hrs) 0	0 ->Default	Use this function to delay the reporting of AC loss trouble on the dialer for the programmed time period. Selection is from 0 to 20 hours.

Command Menu/Dialer-Config/Time Parameter **2.Cellular report date**  	0 ->Default	Use this menu to set the test report date for the cell phone setup. Set this menu to 0 if there is no test reporting for a cell phone, or if the phone line is a regular line. Set this menu from 01 to 28 to schedule a test for Line 2 on a certain day of the month. See section 9.11.5 on page 30 for more information. When a cell phone service is employed for the panel, it should only be connected to telephone line #2 CO interface. Also, the dial tone detection feature of Line 2 should be disabled for cell phone application.
Command Menu/Dialer-Config/Time Parameter **3.Auto test time**  	00:30 ->Default	Use this function to set the time for the automatic test. When this test is performed, the test report is sent to the monitoring station. This test must be performed at least once a day. The time is in 24 hour format, which means 00:30 is 30 minutes after midnight. The Auto test time can be configured to: 12:00 a.m. to 5:59 a.m.: test every 24 hours 6:00 a.m. to 11:59 a.m.: test every 6 hours 12:00 p.m. to 23:59 p.m.: test every 12 hours The test alternates between Line 1 and Line 2. See section 9.11.5 on page 30 for more information. To minimize receiver congestion, do not use the following test times: 00:00, 01:55, 02:00 and 03:00.

9.11.5 Auto Test Time and Cellular Report Date

If the Cellular report date is set to 0, then the dialer alternates between Lines 1 and 2 when performing the automatic test. If the Cellular report date is not set to 0, then the automatic test is performed on Line 1 except on the Cellular report date, when it is performed on Line 2. See examples in Table 8.

Table 8 Auto Test Time and Cellular Report Date

Cellular Report Date	Auto Test Time	Line 1 Tested	Line 2 Tested
0	00:30	12:30 a.m. every other day (alternates with Line 2)	12:30 a.m. every other day (alternates with Line 1)
0	6:00	6:00 a.m. and 6:00 p.m.	12:00 p.m. and 12:00 a.m.
0	12:00	12:00 p.m.	12:00 a.m.
15	00:30	12:30 a.m. every day except on the 15th of the month	12:30 a.m. on the 15th of the month
15	6:00	6:00 a.m., 12:00 p.m., 6:00 p.m., and 12:00 a.m. every day except on the 15th of the month	6:00 a.m., 12:00 p.m., 6:00 p.m., and 12:00 a.m. on the 15th of the month
15	12:00	12:00 p.m. and 12:00 a.m. every day except on the 15th of the month	12:00 p.m. and 12:00 a.m. on the 15th of the month

9.11.6 Dialer Enable/Disable

Command Menu/Dialer-Config/Enable/Disable		
Enable/Disable [X] ENABLE ------Warning------- Dialer Disabled!!!	[X] ENABLE ->Default [ ] DISABLE	The dialer is enabled by default. When the dialer is enabled or disabled, a warning message appears. **Warning:** The dialer cannot report any event to the monitoring station if it is disabled.

9.11.7 Ring Detection

Command Menu/Dialer-Config/Ring Detection		
-Ring Detect Number- [X]5	[ ] Disabled [ ] 1 [ ] 2 [ ] 3 [ ] 4 [X] 5->Default [ ] 6 [ ] 7 [ ] 8	Use this menu item to select the number of rings on which the panel's modem will answer. The default number of rings is five. The maximum number of rings you can define is eight. If you select the "Disabled" option, the modem will be disabled and the panel will not pick up the incoming call.

9.12 Input Config

```
-Input Zone Config-
1  Zone Type
2  Zone Label
```

This menu is used to program the process type and label (name) for the six input zones.

9.12.1 Zone Type

Command Menu/Input Cfg/Inp Zone Config
1. Type (Input Zone)
`Zone-1 Type`
`[X] ALARM`
6.Type (Input Zone)
`Zone-6 Type`
`[X] Battery Trouble`
	`[X] ALARM ->Default`
	`[ ] SUPV`
	`[ ] TROUBLE`
	`[ ] WTR-FLOW ALM`
	`[ ] AC TROUBLE`
	`[ ] BATTERY TROUBLE`
		Use this function to program the type of each input zone. Table 5 shows the default input types.

9.12.2 Zone Name

Command Menu/Input Cfg/Inp Zone Type
1. Label (Input Zone)
`Zone-1 Label`
`Zone-1`
6. Name (Input Zone)
`Zone-6 Label`
`Zone-6`
	`Zone-1 ...6 ->Default`	Use this function to set a name or label for each input zone.

9.13 Exit

Pressing “ENTER” after selecting “Exit” from the main menu will return the DTC-300A to normal operation.

10.0 Ademco Contact ID

10.1 DTC-300A Internal Events

Event Description	Event Family	Qualifier	Code	Group #	Contact #
Phone Line #1 trouble detected	Trouble	New event	1 351	00	000
Phone Line #2 trouble detected	Trouble	New event	1 352	00	000
Phone Line #1 trouble restored	Trouble	Restore	3 351	00	000
Phone Line #2 trouble restored	Trouble	Restore	3 352	00	000
Failure to report to an Account	Trouble	New event	1 354	Acct #	Acct #
Report to an Account successful	Trouble	Restore	3 354	Acct #	Acct #
RS-485 Communication Trouble	Trouble	New event	1 350	00	485
Periodic (24 hr) Test Event (NORMAL)	Test	New event	1 602	00	000
Periodic (24 hr) Test Event (OFF NORMAL)	Test	New event	1 608	00	000
Manually initiated dialer test	Test	New event	1 601	00	000

10.2 DTC-300A External Events

Event Description	Event Family	Qualifier	Code	Group #	Contact #
Zone Fire Alarm	Alarm	New event	1 110	00	NNN
Zone Fire Alarm restored	Alarm	Restore	3 110	00	NNN
Zone Trouble detected	Trouble	New event	1 300	00	NNN
Zone Trouble restored	Trouble	Restore	3 300	00	NNN
Zone Supervisory condition	Supervisory	New event	1 200	00	NNN
Zone Supervisory restored	Supervisory	Restore	3 200	00	NNN
Waterflow	Alarm	New event	1 113	00	NNN
Waterflow restored	Alarm	Restore	3 113	00	NNN
Indicating Zone Trouble	Trouble	New event	1 320	00	NNN
Indicating Zone Trouble restored	Trouble	Restore	3 320	00	NNN
General Alarm	Alarm	New event	1 140	00	NNN
General Alarm restored	Alarm	Restore	3 140	00	NNN
AC power lost	Trouble	New event	1 301	00	000
AC power restored	Trouble	Restore	3 301	00	000

Battery Low	Trouble	New event	1 302	00	000
Battery Low restored	Trouble	Restore	3 302	00	000
Ground Fault	Trouble	New event	1 310	00	000
Ground Fault restored	Trouble	Restore	3 310	00	000

NNN-Refers to Sensor number for zone causing event.

11.0 Security Industry Association DCS

11.1 DTC-300A Internal Events

Event Description	Event Family	Qualifier	SIA Event Code	Parameter
Phone Line #1 trouble detected	Trouble	New event	LT	001
Phone Line #2 trouble detected	Trouble	New event	LT	002
Phone Line #1 trouble restored	Trouble	Restore	LR	001
Phone Line #2 trouble restored	Trouble	Restore	LR	002
Failure to report to an Account	Trouble	New event	RT	Acct #
Report to an Account successful	Trouble	Restore	YK	Acct #
RS485 Communication Trouble	Trouble	New event	YS	485
Periodic (24 hr) Test Event (Normal)	Test	New event	RP	000
Periodic (24 hr) Test Event (Off-normal)	Test	New event	RY	000
Manually initiated dialer test	Test	New event	RX	000

11.2 DTC-300A External Events

Event Description	Event Family	Qualifier	SIA Event Code	Parameter
Zone Fire Alarm	Alarm	New event	FA	NNN
Zone Fire Alarm restored	Alarm	Restore	FH	NNN
Zone Trouble detected	Trouble	New event	FT	NNN
Zone Trouble restored	Trouble	Restore	FJ	NNN
Zone Supervisory condition	Supervisory	New event	FS	NNN
Zone Supervisory restored	Supervisory	Restore	FR	NNN
Waterflow alarm	Alarm	New event	WA	NNN
Waterflow alarm restored	Alarm	Restore	WH	NNN
General Alarm	Alarm	New event	QA	NNN
General Alarm restored	Alarm	Restore	QH	NNN
Indicating Zone Trouble (*)	Trouble	New event	UT	NNN
Indicating Zone Trouble restored (*)	Trouble	Restore	UR	NNN
AC power lost	Trouble	New event	AT	000
AC power restored	Trouble	Restore	AR	000
Battery Low	Trouble	New event	YT	000
Battery Low restored	Trouble	Restore	YR	000
Ground Fault	Trouble	New event	YP	000
Ground Fault restored	Trouble	Restore	YQ	000

* SIA protocol does not define indicating zone troubles, but lists it as Untyped Zone Trouble/ Restore.

12.0 Compatible Fire Alarm Control Panels

Mircom DTC-300A: Compatible with **Mircom FA-300 Series, FX-2000 Series and FA-1000 Series** Fire Alarm Control Panels and all other FACP that can provide 24V DC regulated or 24V DC FWR power, 60mA current MIN and 110mA MAX and normally open relay contacts rated 28V DC, 2A resistive load.

13.0 Compatible Receivers

The **Mircom DTC-300A** is compatible with the following **Digital Alarm Communicator Receivers (DACR):**

DACR Receiver Model	Protocols
SurGard MLR2 Multi-Line Receiver (ULC, ULI Approved)	SIA-DCS and Ademco Contact ID
SurGard SLR Single-Line Receiver (ULC, ULI Approved)	SIA-DCS and Ademco Contact ID
Osborne-Hoffman Quickalert! II Receiver (ULI Approved)	SIA-DCS and Ademco Contact ID
Osborne-Hoffman OH-2000 Receiver (ULI Approved)	SIA-DCS and Ademco Contact ID
Silent Knight Model 9500 Receiver (ULI Approved)	SIA-DCS and Ademco Contact ID
Radionics Model D6500 Receiver (ULI Approved)	Ademco Contact ID
Radionics Model D6600 Receiver (ULI Approved)	SIA-DCS and Ademco Contact ID

14.0 Specifications

All Circuits are Power Limited except 24V DC OUT

DTC-300A Digital Communicator

- Connects to two Telephone Lines and performs line supervision.
- Connects to a FACP via input zones and 24V DC regulated or 24V DC FWR power.
- Transmits user configurable Alarm, Supervisory, and Trouble status to a DACR, using either Ademco Contact ID or SIA DCS protocols.
- User configurable locally or remotely. Configuration is passcode protected.
- Current Consumption: **Standby**: 60 mA **Alarm**: 110 mA

15.0 Battery Calculations

The DTC-300A Battery Calculations are performed as part of the calculations for the Fire Alarm Control Panel it will be used in. See the appropriate Mircom Installation and Operation Manual.

16.0 Warranty and Warning Information

WARNING!

Please read this document **CAREFULLY**, as it contains important warnings, life-safety, and practical information about all products manufactured by the Mircom Group of Companies, including Mircom and Secutron branded products, which shall include without limitation all fire alarm, nurse call, building automation and access control and card access products (hereinafter individually or collectively, as applicable, referred to as "**Mircom System**").

NOTE TO ALL READERS:

1. **Nature of Warnings.** The within warnings are communicated to the reader out of an abundance of caution and create no legal obligation for Mircom Group of Companies, whatsoever. Without limiting the generality of the foregoing, this document shall NOT be construed as in any way altering the rights and obligations of the parties, governed by the legal documents that apply in any given circumstance.
2. **Application.** The warnings contained in this document apply to all Mircom System and shall be read in conjunction with:
    a. the product manual for the specific Mircom System that applies in given circumstances;
    b. legal documents that apply to the purchase and sale of a Mircom System, which may include the company's standard terms and conditions and warranty statements;
    c. other information about the Mircom System or the parties' rights and obligations as may be application to a given circumstance.
3. **Security and Insurance.** Regardless of its capabilities, no Mircom System is a substitute for property or life insurance. Nor is the system a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation. Building automation systems produced by the Mircom Group of Companies are not to be used as a fire, alarm, or life-safety system.

NOTE TO INSTALLERS:

All Mircom Systems have been carefully designed to be as effective as possible. However, there are circumstances where they may not provide protection. Some reasons for system failure include the following. As the only individual in contact with system users, please bring each item in this warning to the attention of the users of this Mircom System. Failure to properly inform system end-users of the circumstances in which the system might fail may result in over-reliance upon the system. As a result, it is imperative that you properly inform each customer for whom you install the system of the possible forms of failure:

4. **Inadequate Installation.** All Mircom Systems must be installed in accordance with all the applicable codes and standards in order to provide adequate protection. National standards require an inspection and approval to be conducted by the local authority having jurisdiction following the initial installation of the system and following any changes to the system. Such inspections ensure installation has been carried out properly.
5. **Inadequate Testing.** Most problems that would prevent an alarm a Mircom System from operating as intended can be discovered by regular testing and maintenance. The complete system should be tested by the local authority having jurisdiction immediately after a fire, storm, earthquake, accident, or any kind of construction activity inside or outside the premises.

The testing should include all sensing devices, keypads, consoles, alarm indicating devices and any other operational devices that are part of the system.

NOTE TO USERS:

All Mircom Systems have been carefully designed to be as effective as possible. However, there are circumstances where they may not provide protection. Some reasons for system failure include the following. The end user can minimize the occurrence of any of the following by proper training, testing and maintenance of the Mircom Systems:

6. **Inadequate Testing and Maintenance.** It is imperative that the systems be periodically tested and subjected to preventative maintenance. Best practices and local authority having jurisdiction determine the frequency and type of testing that is required at a minimum. Mircom System may not function properly, and the occurrence of other system failures identified below may not be minimized, if the periodic testing and maintenance of Mircom Systems is not completed with diligence and as required.
7. **Improper Operation.** It is important that all system users be trained in the correct operation of the alarm system and that they know how to respond when the system indicates an alarm. A Mircom System may not function as intended during an emergency situation where the user is unable to operate a panic or emergency switch by reason of permanent or temporary physical disability, inability to reach the device in time, unfamiliarity with the correct operation, or related circumstances.
8. **Insufficient Time.** There may be circumstances when a Mircom System will operate as intended, yet the occupants will not be protected from the emergency due to their inability to respond to the warnings in a timely manner. If the system is monitored, the response may not occur in time enough to protect the occupants or their belongings.
9. **Carelessness or Safety Hazards.** Moreover, smoke detectors may not provide timely warning of fires caused by carelessness or safety hazards such as smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits or children playing with matches or arson.
10. **Power Failure.** Some Mircom System components require adequate electrical power supply to operate. Examples include: smoke detectors, beacons, HVAC, and lighting controllers. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage Mircom Systems or other electronic equipment. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.
11. **Battery Failure.** If the Mircom System or any device connected to the system operates from batteries it is possible for the batteries to fail. Even if the batteries have not failed, they must be fully charged, in good condition, and installed correctly. Some Mircom Systems use replaceable batteries, which have a limited life-span. The expected battery life is variable and in part dependent on the device environment, usage and type. Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. Moreover, some Mircom Systems do not have a battery monitor that would alert the user in the event that the battery is nearing its end of life. Regular testing and replacements are vital for ensuring that the batteries function as expected, whether or not a device has a low-battery monitor.
12. **Physical Obstructions.** Motion sensors that are part of a Mircom System must be kept clear of any obstacles which impede the sensors' ability to detect movement. Signals being communicated by a Mircom System may not reach the receiver if an item (such as metal, water, or concrete) is placed on or near the radio path. Deliberate jamming or other inadvertent radio signal interference can also negatively affect system operation.

13. **Wireless Devices Placement Proximity.** Moreover all wireless devices must be a minimum and maximum distance away from large metal objects, such as refrigerators. You are required to consult the specific Mircom System manual and application guide for any maximum distances required between devices and suggested placement of wireless devices for optimal functioning.
14. **Failure to Trigger Sensors.** Moreover, Mircom Systems may fail to operate as intended if motion, heat, or smoke sensors are not triggered.
    a. Sensors in a fire system may fail to be triggered when the fire is in a chimney, walls, roof, or on the other side of closed doors. Smoke and heat detectors may not detect smoke or heat from fires on another level of the residence or building. In this situation the control panel may not alert occupants of a fire.
    b. Sensors in a nurse call system may fail to be triggered when movement is occurring outside of the motion sensors' range. For example, if movement is occurring on the other side of closed doors or on another level of the residence or building the motion detector may not be triggered. In this situation the central controller may not register an alarm signal.
15. **Interference with Audible Notification Appliances.** Audible notification appliances may be interfered with by other noise sources such as stereos, radios, televisions, air conditioners, appliances, or passing traffic. Audible notification appliances, however loud, may not be heard by a hearing-impaired person.
16. **Other Impairments.** Alarm notification appliances such as sirens, bells, horns, or strobes may not warn or waken a sleeping occupant if there is an intervening wall or door. It is less likely that the occupants will be alerted or awakened when notification appliances are located on a different level of the residence or premise.
17. **Software Malfunction.** Most Mircom Systems contain software. No warranties are provided as to the software components of any products or stand-alone software products within a Mircom System. For a full statement of the warranties and exclusions and limitations of liability please refer to the company's standard Terms and Conditions and Warranties.
18. **Telephone Lines Malfunction.** Telephone service can cause system failure where telephone lines are relied upon by a Mircom System. Alarms and information coming from a Mircom System may not be transmitted if a phone line is out of service or busy for a certain period of time. Alarms and information may not be transmitted where telephone lines have been compromised by criminal tampering, local construction, storms or earthquakes.
19. **Component Failure.** Although every effort has been made to make this Mircom System as reliable as possible, the system may fail to function as intended due to the failure of a component.
20. **Integrated Products.** Mircom System might not function as intended if it is connected to a non-Mircom product or to a Mircom product that is deemed non-compatible with a particular Mircom System. A list of compatible products can be requested and obtained.

Warranty

Purchase of all Mircom products is governed by:

https://www.mircom.com/product-warranty

https://www.mircom.com/purchase-terms-and-conditions

https://www.mircom.com/software-license-terms-and-conditions

DTC-300A INFORMATION FORM

Account #1 Identification (max. 6 digits): _ _ _ _ _ _

Account #1 Telephone number (including area code): _____

Telephone number of receiving station (including area code) : _____

Reporting Format: ☐ Contact ID

☐ SIA

Account #2 Identification (max. 6 digits): _ _ _ _ _ _

Account #2 Telephone number (including area code): _____

Telephone number of receiving station (including area code): _____

Reporting Format: ☐ Contact

☐ SIA

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