DIGITAL ALARM COMMUNICATOR

PRODUCT MANUAL

10-2256

Fike CORPORATION

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Fike Corporation – Offices

Fike Corporation

World Headquarters

704 South 10th Street
P.O. Box 610
Blue Springs, Missouri 64013
U.S.A.

Ph: (816) 229-3405
Fax: (816) 229-5082

Fike South East Asia

81, Loyang Way
Singapore, 1750
Singapore

Ph: 011-65-545-1188
Fax: 011-65-545-2139

Fike Canada

4140 Morris Drive
Burlington, Ontario L7L 5L6
Canada

Ph: (905) 681-3100
Fax: (905) 681-3107

Fike Europe

Toekomstlaan 52
B-2200 Herentals
Belguim

Ph: 011-32-14-210031
Fax: 011-32-14-210743

Fike Latina

Avenida Paulista 2202, 3°, cj34
Cerqueira Cesar, Sao Paulo
Brazil, CEP 01310-300

Ph: 011-55-11-251-5244
Fax: 011-55-11-284-8479

Fike United Kingdom

10-11 Enterprise Estate
Moorfield Road
P.O. Box 540
Guildford, Surrey GU1 1RB
United Kingdom

Ph: 011-44-8700-777-540
Fax: 011-44-7000-777-540

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Content

Section 1
Introduction

The Fike Model 10-2256 is a low-cost slave communicator that meets the requirements for UL 864, NFPA 72 Fire Alarm Systems for Central Station Service and NFPA 72 Remote Supervising Station Fire Alarm Systems.

1.1 Features

- Compatibility with the Security Industry Association (SIA) reporting format and several other standard reporting formats.
- Four channel (zone) inputs for system status reporting: fire alarm (channel or zone 1); system trouble—channel 2 (or zone 2); supervisory—channel 3 (or zone 3); and miscellaneous—channel 4 (or zone 4).
- Optional two-number dialing with same or different account codes and reporting formats. Alarms, troubles, disables, and tests can be programmed to be reported to either or both numbers.
- Programmable as rotary-only or as Touch-Tone/rotary dialing.
- Built-in dual phone line-seizure circuit.
- Dual phone line monitor circuits.
- Transient voltage protection of phone lines.
- Built-in audible trouble buzzer with a loudness of 80 decibels (dB) at 30 cm (that is, 300 mm or, approximately, 12 inches).
- One relay output, programmable for alarm or trouble conditions.
- Light-emitting diodes (LEDs), visible from front of enclosure, indicating: trouble condition (yellow); presence of DC power (green), phone line 1 trouble (red); and phone line 2 trouble (red).
- Easy, English-language programming using Model 10-2257 Remote Annunciator.
- Fuseless design, 24 VDC.
- Electrically erasable read-only memory (EEPROM) for nonvolatile storage of all programmable option data. Eliminates the need to reprogram the communicator if power is lost.

- Built-in watchdog circuit that monitors the operation of the 10-2256 and resets the communicator if a fault is detected.
- Operates by contact closure input from the control panel.
- Model 10-2256 can directly monitor control panel's primary power.
- Compatibility with many Underwriters Laboratories (UL) Fire Listed receivers. (See Section 1.3 for list.)
- Model 10-2256 housed in a 10" x 10" metal enclosure.

1.2 Optional Devices

The following accessories are available for use with the 10-2256:

- Model 10-2257 Remote Annunciator for programming, troubleshooting, and system operation. Only one model 10-2257 can be used. The 10-2257 can be permanently connected (but is not supervised).
- Cable for 10-2257, P/N 10-2258.
- 06-151 Downloading Software for remote programming.
- 10-2259 Modem. Required if the 06-151 downloading software is used.

1.3 UL Fire Listed Receivers Compatible with the 10-2256

The following UL Listed receivers are compatible with the 10-2256:

Receiver	Formats
Silent Knight Model 9000	BFSK14 BFSK23 FSK SK 3/1 SK 4+2 SIA8 SIA20
Osborn & Hoffman QuickAlert	BFSK14 BFSK23 SK 3/1 SK 4+2 SIA8 SIA20
Ademco 685	SK 3/1 SK 4+2
FBI CP220	SK 3/1 SK 4+2
Radionics D6500	BFSK14 BFSK23

1.4 How to Use this Manual

In this manual, a rectangle represents a key that you press if you are using the optional Model 10-2257 Remote Annunciator. For example, “Press ENTER" means “Press the <ENTER> key.”

Section 2
Agency Requirements

2.1 Telephone Requirements

1. If requested by the telephone company, the following information must be provided before connecting this device to the phone lines:

   A. Manufacturer: Silent Knight Security Systems

   B. Model Number: 10-2256

   C. FCC Registration Number: AC6USA-75160-AL-E
   Ringer equivalence: 0.1B

   D. Type of jack (to be installed by the telephone company): RJ31X

2. This device may not be directly connected to coin telephone or party line services.

3. This device cannot be adjusted or repaired in the field. In case of trouble with the device, notify the installing company or return to:

   Fike Protection Systems
   704 So. 10th St.
   Blue Spring, MO 64013
   816-229-3405

4. If the Model 10-2256 causes harm to the telephone network, the telephone company will notify the user in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the user as soon as possible. The user has the right to file a complaint with the Federal Communications Commission if he or she believes it is necessary.

5. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice so that you can make the necessary modifications to maintain uninterrupted service.

2.2 FCC Warning

WARNING:

This equipment generates and uses radio frequency energy. If not installed and used in strict accordance with this manual, it may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference. If this occurs, the user will be required, at his or her own expense, to take whatever measures may be required to correct the interference.

2.3 UL Listings and Requirements

Model	Listed As:	*NFPA 72 Chapter (for more information):
10-2256	Signaling device for use in Fire Alarm Systems for Central Station Service.	4-3
	Signaling device for use in Remote Supervising Fire Alarm Systems.	4-5

* From National Fire Alarm Code, 1993 Edition. Published by National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-9904.

All UL installations must comply with the requirements described below. Refer to the control unit's installation manual for complete information.

10-2256 Requirements:

1. The 10-2256 and the UL listed compatible fire control must be installed in the same room. All wiring between the 10-2256 and the UL Listed compatible fire control panel must be enclosed in conduit.
2. All electrical connections must comply with the ratings shown in section 3.2.4.
3. In a remote signaling installation, the control unit, slave dialer, and receiver at the remote site must all be UL listed for remote signaling.

Section 3
Panel Description and Installation

CAUTION:

To avoid the risk of electrical shock, make sure the main control power is OFF when wiring. DO NOT apply power until wiring is completed following the procedures described in this manual.

3.1 Panel Description

3.1.1 Phone Line Monitors

The 10-2256 dialer has two phone line monitor circuits, which detect phone line faults by monitoring their voltages. These circuits feature a 40 to 90 second delay before a line fault is reported as a trouble. When a fault is detected for longer than this amount of time, the audible trouble signal will sound, the message will be displayed on the 10-2257 annunciator liquid crystal display (LCD) (if used), and the trouble will be reported to the central station.

Note: To comply with industry standards, this product is equipped with line seizure. This means that any time the system's dialer needs to communicate with the central station, it will NOT be possible to use any telephones that are on the same line(s) as the fire system. Normally this condition will last less than one minute, but could last for as long as 15 minutes under adverse telephone circuit conditions.

3.1.2 Watchdog Circuit

If the 10-2256 stops running, the watchdog circuit automatically detects the problem and attempts to resume normal operation by resetting the communicator. Each time the watchdog circuit resets the system, it also sounds the trouble signal.

3.1.3 Power Loss Reporting

The 10-2256 will report low AC conditions. For Cheetah the 10-2256 monitors the trouble relay. For SHP/Rhino the 10-2256 monitors the control panel's main AC power input.

The AC report delay time is programmable. See Section 5, Step 20.

3.1.4 EEPROM

The electrically erasable read-only memory (EEPROM) is used to store specific information such as system configuration, telephone numbers, reporting format, and account numbers. The EEPROM retains the programmed information even when all electrical power is removed. It can be programmed more than 1,000 times without losing its ability to store information.

3.1.5 DC Power

The 10-2256 operates on 18-40 VDC rectified power from the main fire control panel.

3.1.6 Indicator Lights

The 10-2256 has four LEDs to indicate status.

TROUBLE LED (yellow)

ON - A system trouble condition exists.

OFF - No trouble condition exists.

DC POWER LED (green)

ON - The panel is running on DC power.

OFF - The panel has lost all power.

PHONE LINE 1 LED (red)

ON - Phone line 1 has a trouble condition.

OFF - Normal condition.

PHONE LINE 2 LED (red)

ON - Phone line 2 has a trouble condition.

OFF - Normal condition.

3.2 Wiring

3.2.1 Wiring Precautions

High and low voltage must be separated by at least one-quarter inch. See Section 3.2.5 for more information.

High current input/output: AC monitoring (if monitored directly)

Low current input/output: 24 VDC power and channel (zone) wiring

Audio input/output: Telephone wiring

High frequency noise, such as that produced by the inductive reactance of a bell, can also be reduced by running the wire through ferrite shield beads or by wrapping it around a ferrite toroid.

3.2.2 Connector Descriptions

PIN Connector	Function
P1	DC power
P2	Channel (zone) inputs
P4	10-2257 connect
P5	Low AC channel input

3.2.3 Wiring and Board Layout Diagram

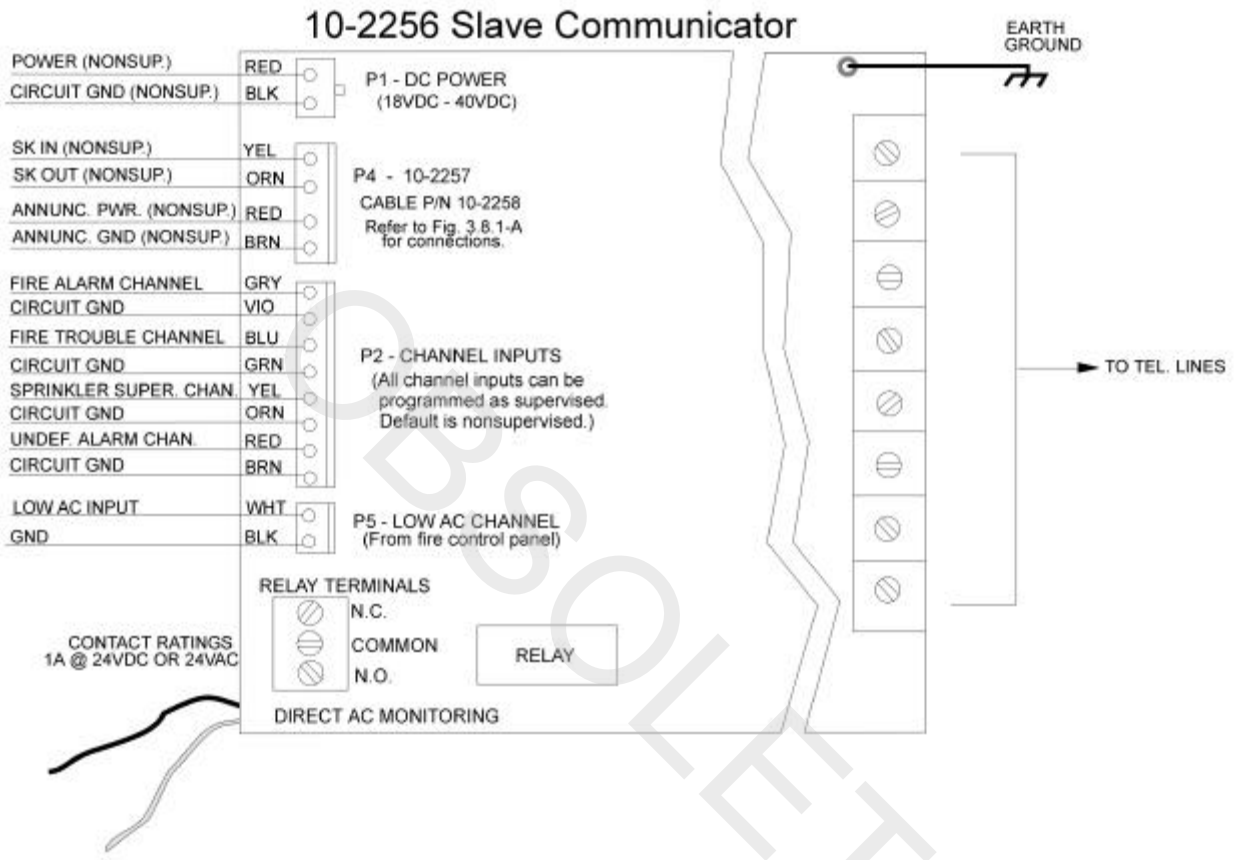

Figure 3-1 Model 10-2256 Wiring and Board Layout

3.2.4 Electrical Ratings

PRIMARY DC:	VDC: 18 - 40 **Current draw, standby at 24 VDC** 143 mA max. with annunciator attached 84 mA max. without annunciator **Current draw, alarm at 24 VDC** 227 mA max. with annunciator attached 154 mA max. without annunciator
AC RATING:	45 mA max.
CHANNEL (ZONE) INPUTS:	0 - 30 VDC input 10 mA max. current draw
MAX. WATCHDOG RESPONSE:	50 seconds

3.2.5 Wire Routing

High voltage and low voltage inputs must be separated by at least one-quarter inch and must be wired through different knockout holes in the fire control cabinet to maintain the separation.

Figure 3-2 below shows an example of how to route the wire.

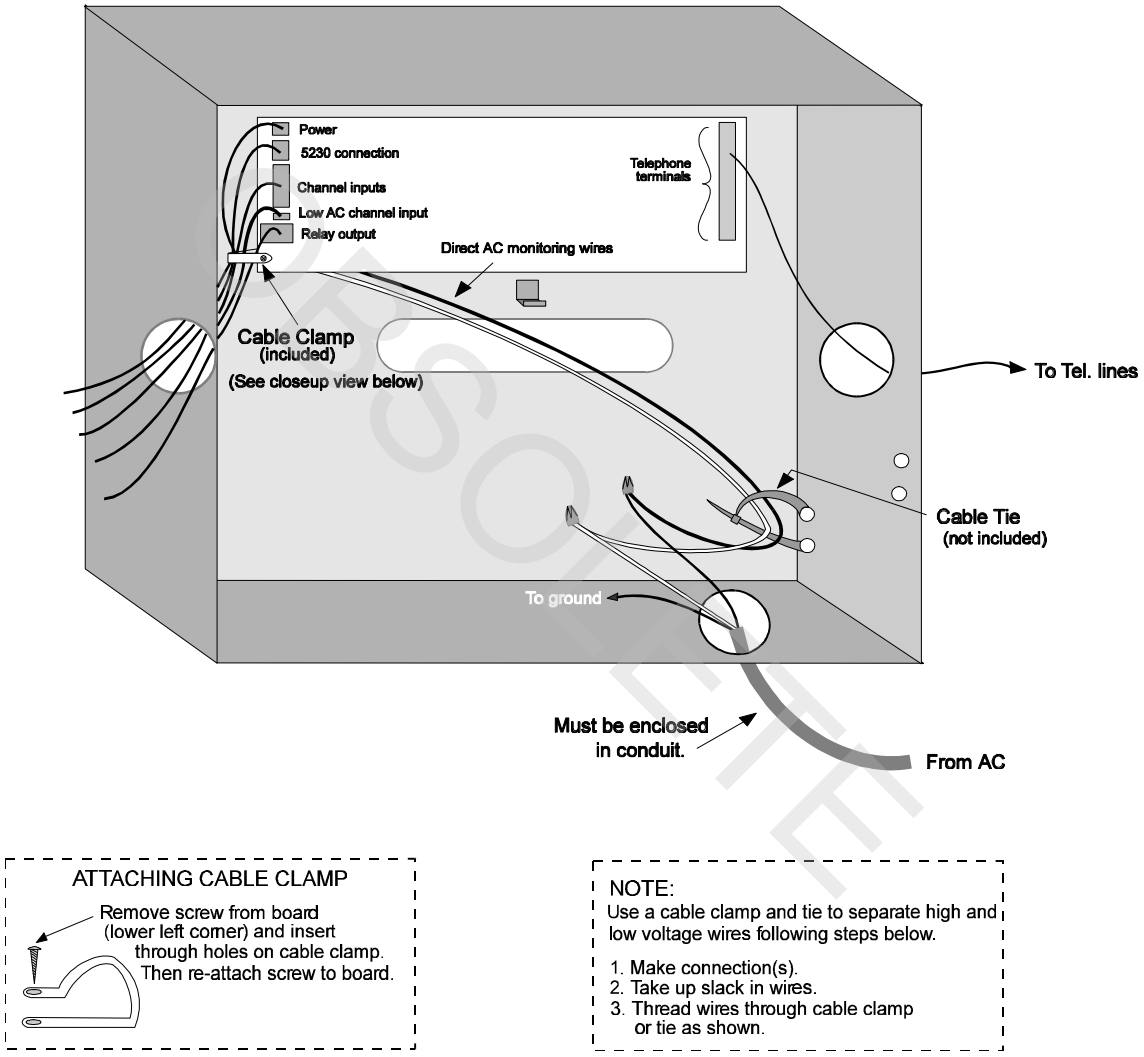

Figure 3-2 Routing Wire for the 10-2256

3.3 Mounting and Grounding

The 10-2256 cabinet should be installed in the same room as the control panel (wire in conduit). Mount the 10-2256 so it is firmly secured to the wall surface. When mounting on concrete, especially when moisture is expected, attach a piece of 3/4” plywood to the concrete surface before attaching the 10-2256.

3.3.1 Grounding the 10-2256 Board

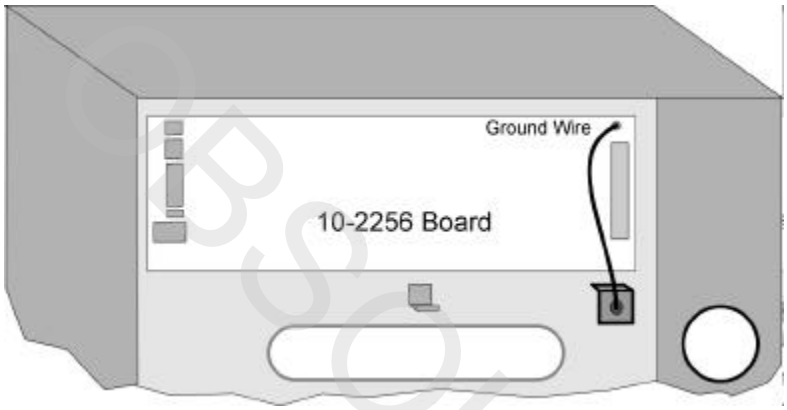

Figure 3-3 Grounding the 10-2256 Board to the Cabinet

3.3.2 Grounding the 10-2256 Cover

Before connecting power to the 10-2256, connect the earth ground wire to the base and cover. Make sure that the ring lugs are oriented properly. ^ shows the proper connection and orientation.

After the 10-2256's cover and base are attached, make a slight bend to the wire that is attached to the cover. This keeps the wire from getting caught between the cover and base when the cover is closed.

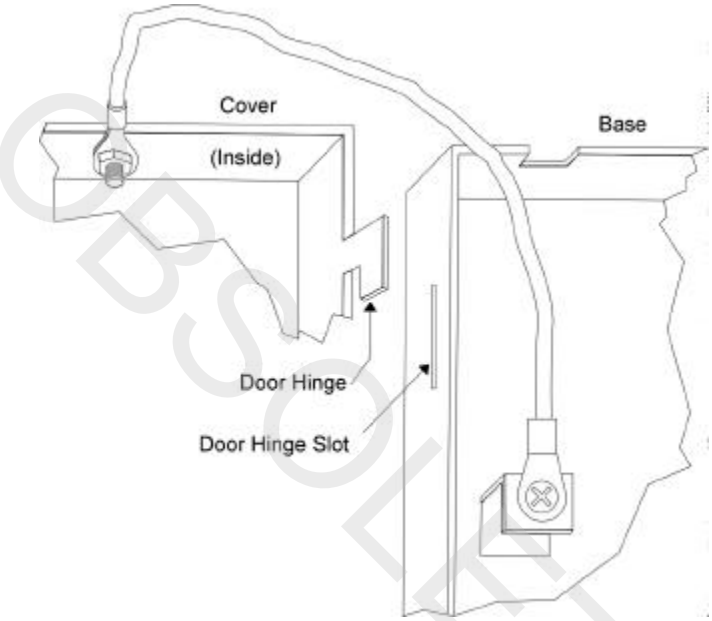

Figure 3-4 Connecting the Ground Wire

3.4 Channel Operation and Wiring

The 10-2256 features four fully supervised channel (zone) inputs. They can be programmed to accept three types of inputs. Contact closure, active high voltage input, or active low voltage input. **Do Not use active high or active low.**

CHANNEL 1 (ZONE 1): FIRE ALARM

CHANNEL 2 (ZONE 2): FIRE TROUBLE

CHANNEL 3 (ZONE 3): SPRINKLER SUPERVISORY

CHANNEL 4 (ZONE 4): UNDEFINED ALARM

Note: Channel 4 can be used to monitor an additional state, such as "predischarge" or "release," which is programmed to an optional relay such as the CRM4, SRM4 or RM4.

3.4.1 Dry Contact

A short across the end-of-line resistor (EOL) causes an active channel (zone). An open loop causes a trouble condition.

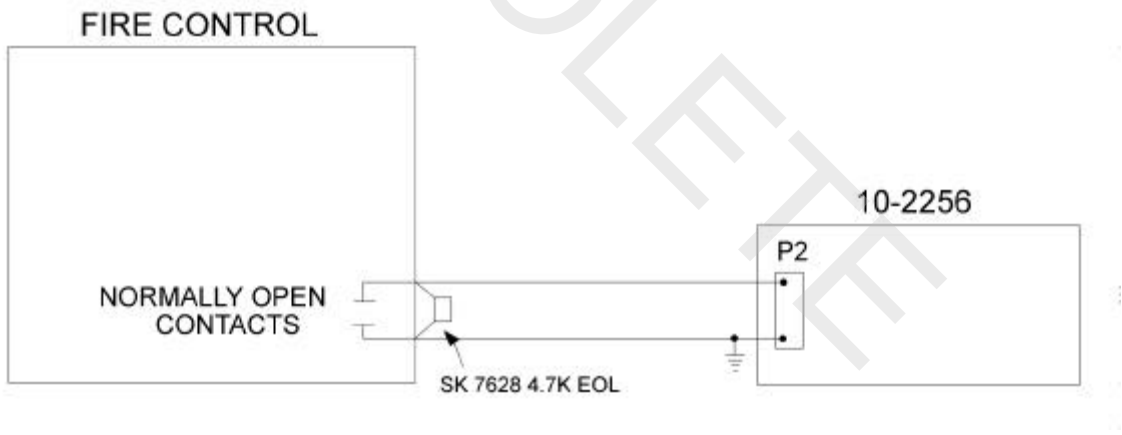

Figure 3-5 Contact Closure

3.5 AC Monitoring

Loss of AC is a reportable trouble condition, however, per NFPA 72 and UL864 cannot be reported until 25-50% or the standby battery has been depleted. (6-12 hrs for 24 hr backed up system, 15-30 hrs for 60 hr backed up system or 23-45 hrs for a 90 hr backed up system.)

AC monitoring/reporting for the Cheetah is done differently that the SHP or Rhino.

For SHP/Rhino:

The Model 10-2256 monitors the AC and delays the loss of AC reporting. See Section 5.3 step # 20 of the Model 10-2256 programming.

For Cheetah:

The trouble relay on the main board (CSC) can be configured for dialer operation. This allows the contacts to delay transfer (6-30 hrs) during a loss of AC condition. During a delay period, the trouble relay will transfer immediately if any additional trouble condition occurs (i.e. field wiring supervision trouble). Refer to the Cheetah installation instructions #06-130 for additional details on a Cheetah programming.

3.5.1 Monitor AC (SHP or Rhino)

The wires attached to the 10-2256 board can be connected directly to the AC as shown in Figure 3.5.3 below. Make sure you do not attach the low AC channel input here.

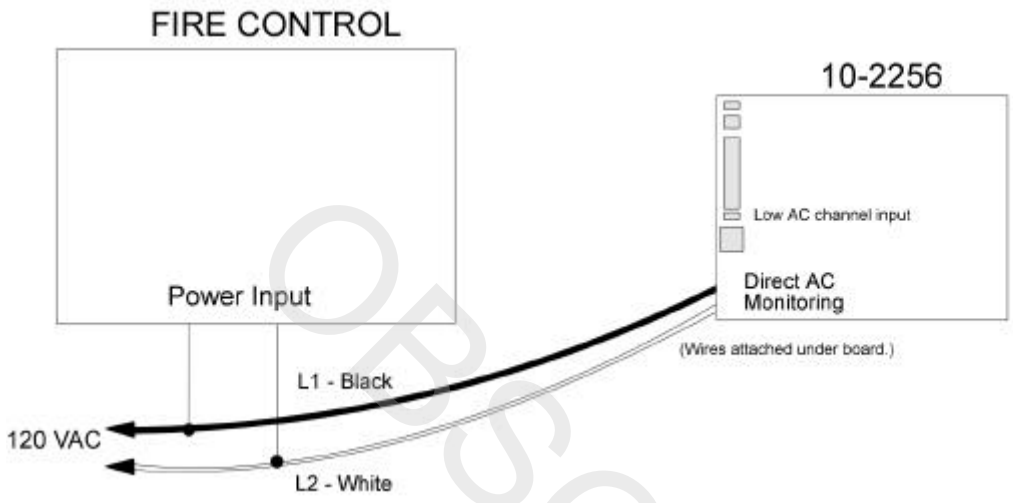

Figure 3-6 Direct AC Input

3.6 Relay Connection

The 10-2256 provides one relay output. You can connect the relay in normally open or normally closed configurations or both. The relay contacts are rated at 1 A, 24 VDC/24 VAC. See Figure 3.6-A for relay contact connections.

The relay can be used for either of the following:

- To activate for any alarm.
- To activate for system trouble conditions, loss of AC power, failure of the 10-2256 to communicate, and phone line troubles.

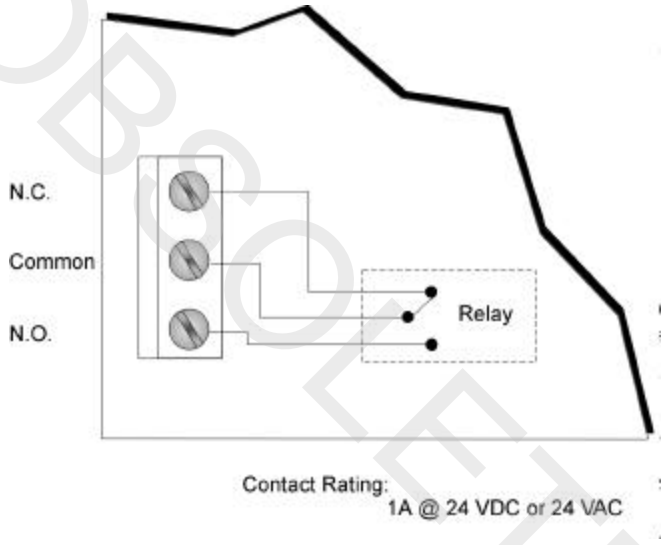

Figure 3-7 Relay Connection

3.7 Telephone Line Connection

To meet requirements for NFPA 72 Fire Alarm Systems for Central Station Service or NFPA 72 Remote Supervising Station Fire Alarm Systems, both telephone lines must be installed. Connect the 10-2256 to the phone lines using RJ31X type phone jacks as shown in Figure 3.7-A. The telephone company will install RJ31X jacks upon request.

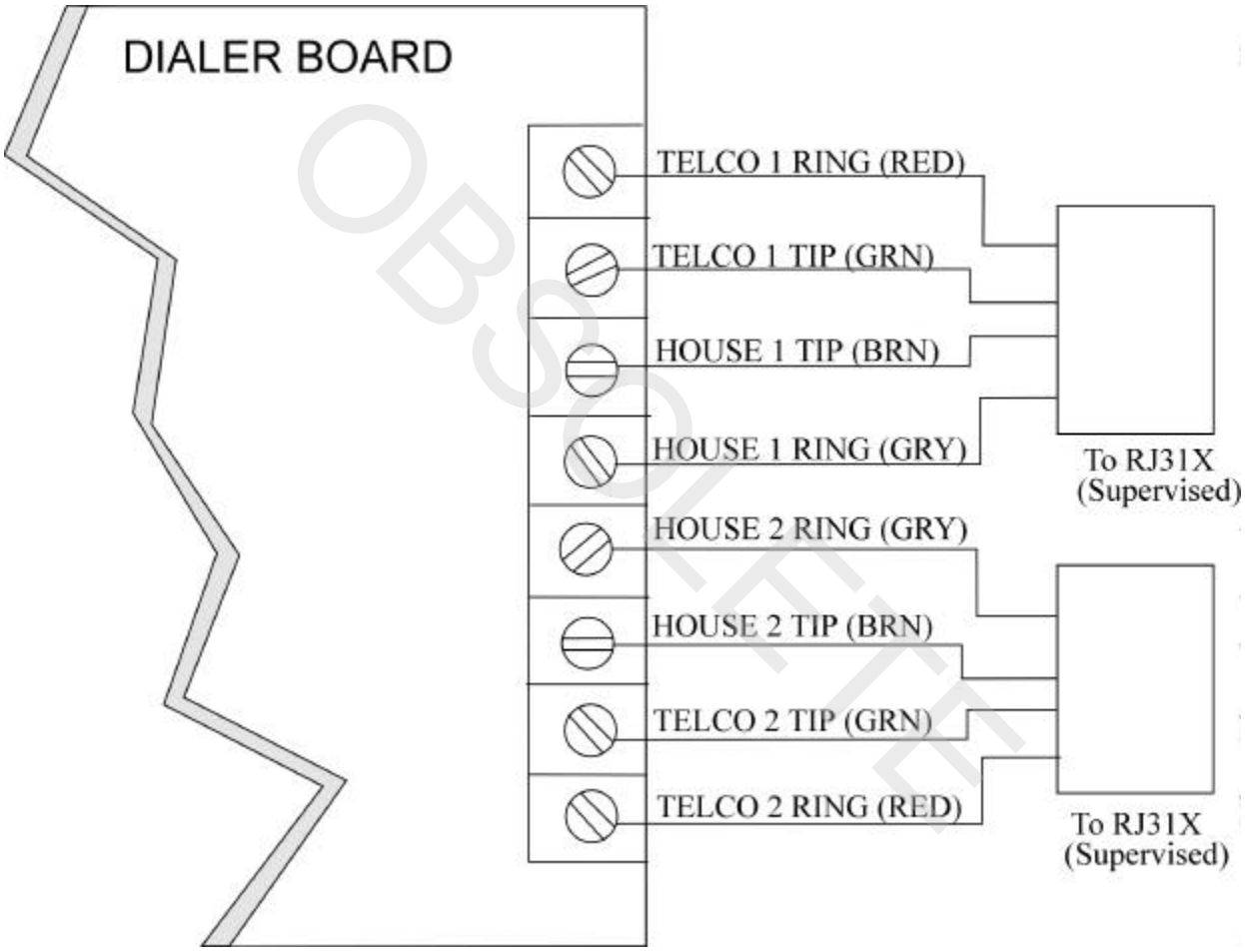

Figure 3-8 Telephone Wiring

3.8 Remote Annunciator Installation

The optional Model 10-2257 Remote Annunciator can be connected to the 10-2256 for system operation, programming, and troubleshooting. Note that only one 10-2257 can be used. If the 10-2257 is used, a cable, part number 10-2258 (ordered separately) is also needed.

Model 10-2257 key functions are described in Section 4.1.3; programming instructions are in Section 5.

3.8.1 10-2257 Connection

The table below shows how to make the connections. Figure 3.8.1-A below shows the location of the 10-2257 terminal block.

10-2257 Terminals	Cable Wire Colors (P/N 10-2258)
1 GROUND	BROWN
2 POWER	RED
3 OUTPUT	ORANGE
4 INPUT	YELLOW

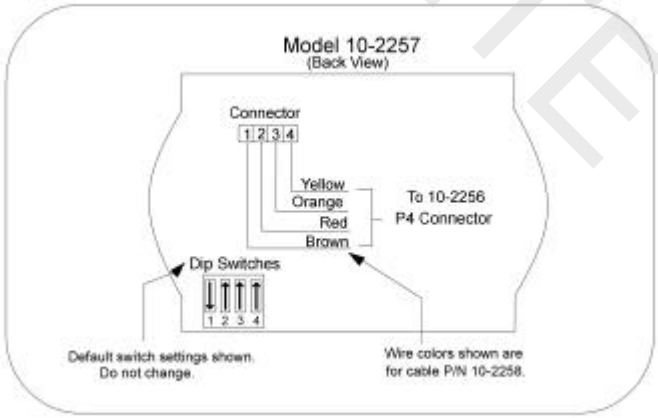

Figure 3-9 Model 10-2257 Back View

Section 4
Normal Operation

This section describes normal system operations using the 10-2257 remote annunciator.

4.1 10-2257 Operation

The 10-2257 is equipped with an LCD (liquid crystal display) that displays English-language messages. If the 10-2256 is not being programmed, the LCD cycles through all messages that are applicable at the time, showing a different one every 1.5 seconds. The messages are listed in the troubleshooting section of this manual (Section 7.2).

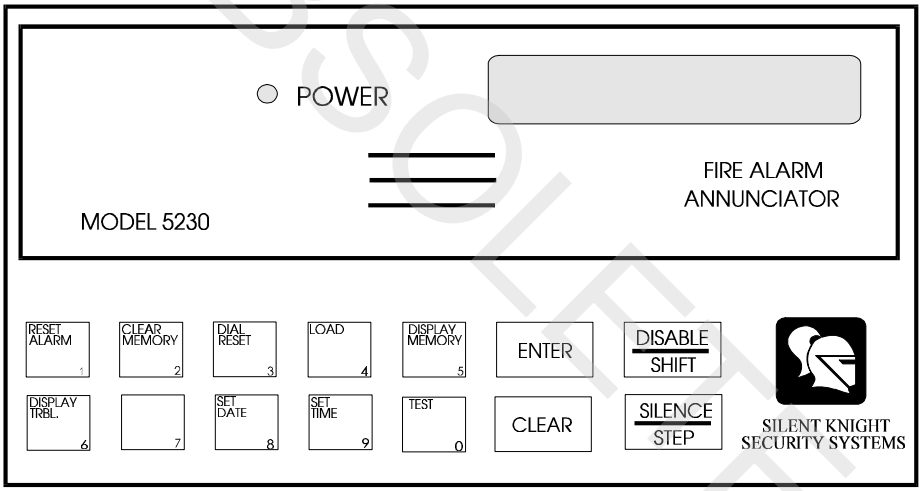

Figure 4-1 Model 10-2257 Remote Annunciator (Front)

4.1.1 Power LED Indicator

When DC power is being supplied, the POWER LED glows steadily. If DC power is not being supplied, the POWER LED is off.

4.1.2 Buzzer

An audio transducer buzzer is built into the 10-2257 annunciator. It produces short beeps to annunciate keystrokes. It also emits a long, high-pitched tone to indicate a trouble condition or when an annunciator function has been entered incorrectly.

4.1.3 10-2257 Key Functions

The 10-2257 annunciator function keys are described below. Keys not described here are used only for entering digits.

Note: The message "TRY AGAIN" appears if you do not press any keys for five seconds while accessing a function or if you attempt to access a function before exiting from another function.

Table 4-1: Key Functions

FUNCTION NAME	EXPLANATION	KEYSTROKES
CLEAR	Corrects mistakes. If you enter a function incorrectly, the 10-2257 will emit a long, high-pitched tone.	CLEAR
SYSTEM TEST	Tests the communicator by sending a test report to the central station.	0 ENTER [Installer's or Operator's Code]
CLEAR ALARM MEMORY	Clears all data from the alarm memory.	2 ENTER [Installer's or Operator's Code]
RESET DIALER	Aborts an in-progress call to the central station.	3 ENTER [Installer's Code]
BEGIN DOWNLOAD	Begin downloading session.	4 ENTER [Installer's Code]
DISPLAY ALARM MEMORY	Displays events currently saved in the alarm memory. (NOTE: It is recommended that you clear the alarm memory after you display it.)	5 ENTER [Installer's or Operator's Code]
DISPLAY TROUBLES	Displays trouble conditions.	6 ENTER [Installer's or Operator's Code]
ENTER PROGRAMMING MODE	Enters programming mode where you change programmable options.	2 7 ENTER [Installer's Code] To exit programming mode, press STEP STEP CLEAR CLEAR
SET TIME	To set the time: 1. Press 9 ENTER 2. Enter Installer's or Operator's Code. The SET MODE LED will turn on.3. Enter the time in 24-hour military format (include leading zeros). EXAMPLE:To enter SET TIME mode and set the time for 3:30 PM, the keystrokes are: 9 ENTER [Code] 1 5 3 0 ENTER .	

4.2 Operating Modes

OPERATING MODE:		ALLOWED DURING ALARM:	CODE REQUIRED:
0	System test	NO	Installer's or Operator's
2	Clear alarm memory	NO	Installer's or Operator's
3	Dialer reset	YES	Installer's
4	Download	NO	Installer's
5	Display alarm memory	NO	Installer's or Operator's
6	Display troubles	NO	Installer's or Operator's
9	Set time	NO	Installer's or Operator's
25	Troubleshooting	NO	Installer's
27	Program	NO	Installer's

Section 5
Programming

The Model 10-2256 provides a wide variety of features that can be selected for use depending on your needs. These features are stored in an EEPROM (Electrically Erasable Programmable Read-Only Memory) chip which has been factory-programmed. Section 5.1 describes how to change programming options using the 10-2257 Remote Annunciator. Section 5.2 explains using the Model 06-151 Downloading Software for programming. All programmable options are described in Section 5.3.

5.1 Programming with the 10-2257 Remote Annunciator

Note: The system will automatically time out of programming mode if no keys are pressed for four minutes. If you press function keys very quickly, you may get ahead of the LCD display. Wait for the appropriate message to be displayed before you press [ENTER] .

To:	Keystrokes:
Enter Programming Mode	[2] [7] [ENTER] [Installer's Code] The first line of the LCD will show the programming option for Step 1, "ZONE ACTIVE." The second line will show the most recently programmed value for that option.
Program An Option	Type in your new data and then press [ENTER].
Skip A Step	Press [ENTER]. The data in the skipped step will not change. The LCD will show the next option.
Go To A Specific Step	Press [STEP]. The first line of the LCD will show "ENTER THE STEP #" and the current step number. Type in the new step number, then press [ENTER]. Line 1 of the LCD will show the option name; line 2 will show the programmed data for the step. (If you try to go to a step that does not exist, the display will go back to the previous step.)
Select Yes Or No	Press any digit to toggle Yes and No.
Select An Option From A Menu	Press the option number. (Option numbers appear next to the option name in Section 5.3.)
Enter Alphabetic Data Or Numbers Larger Than 9	[SHIFT] [1] for A or 10 [SHIFT] [2] for B or 11 [SHIFT] [3] for C or 12 [SHIFT] [4] for D or 13 [SHIFT] [5] for E or 14 Note that only the alphabetic characters appear on the display.
Correct An Error (If you have not pressed the [ENTER] key.)	Press [CLEAR]. Then type in the correct data and press [ENTER].
Leave Programming Mode At Any Time	Press [STEP] [STEP] [CLEAR] [CLEAR].

5.2 Programming with the 06-151 Downloading Software

The Model 06-151 Remote Downloading Software can be used to program the 10-2256 from a remote site. The Model 10-2259 Modem must also be connected to the computer that runs the software.

The downloading software is organized into menus. As you move through the software menus, the screens tell you how to select options. The programming form in Section 5.3 lists the options by step number, that is, in the order they appear if you use the 10-2257 to program. The form also tells you which 06-151 software menu the option appears on. (See Figure 5.3-A for an example.)

Refer to the manuals that accompany the downloading software and modem for information about how to set up and run the software and modem.

5.3 Programming Options

This section of the manual describes the programming options. Figure 5-1 shows how you can use the programming form, which begins on the next page, to keep a record of how you have programmed an installation by checking off or writing in your choices in Column 4 of the chart. The factory-programmed defaults also appear in Column 4. This form is perforated for your convenience.

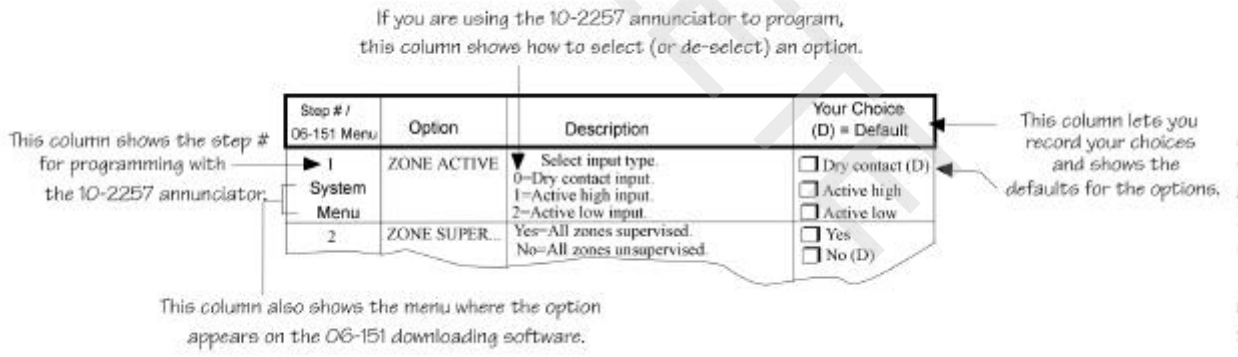

Figure 5-1 Using the Programming Form

Table 5-1: Programming Form

Step # / 06-151 Menu	Option	Description	Your choice (D) = Default
1 System Menu	ZONE ACTIVATION	Select input type: 0 = Dry contact input. 1 = Active high input -(Do Not Use) 2 = Active low input - (Do Not use)	❒ Dry contact (D)
2 System Menu	ZONE SUPERVISED	Yes = All zones supervised No = All zones unsupervised	❒ Yes ❒ No (D)
3 System Menu	LATCH SPRINKLER	Set how the sprinkler zone will operate. Press any numeric-digit to toggle the selection from Yes to No. Yes = When the sprinkler zone shorts for a duration longer than the Zone Response (set in steps 7 through 10), the annunciator remains active until reported or manually silenced. No = When the sprinkler zone shorts for a duration longer than the Zone Response (set in steps 7 through 10), the zone will follow system status and indicate a supervisory on that zone for the duration of the faulted condition.	❒ Yes ❒ No (D)
4 System Menu	CHANNEL #1 TYPE	Alarm input 0 = Fire 1 = Sprinkler	❒ Fire (D) ❒ Sprinkler
5 System Menu	CHANNEL #2 TYPE	Trouble input 0 = Fire 1 = Sprinkler	❒ Fire (D) ❒ Sprinkler
6 System Menu	CHANNEL #3 TYPE	Supervisory input 0 = Fire 1 = Sprinkler	❒ Fire ❒ Sprinkler (D)

Table 5-1: Programming Form

Step # / 06-151 Menu	Option	Description	Your choice (D) = Default
NOTES FOR STEPS 7-10: Channel response time speeds are not intended to be used as a smoke verification feature. Possible choices for channel response times are 0-3 (described below).			
7 System Menu	ZONE RESPONSE #1	0 = 0.3 to 0.4 seconds 1 = 3 to 4 seconds 2 = 15 to 20 seconds 3 = 30 to 40 seconds ***Note:*** If you make a mistake and program a number other than 0-3, the resulting zone speed will be: 4 = 0.3 to 0.4 seconds 5 = 3 to 4 seconds 6 = 15 to 20 seconds 7 = 30 to 40 seconds 8 = 0.3 to 0.4 seconds 9 = 3 to 4 seconds	❒ 0.3 to 0.4 sec (D) ❒ 3 to 4 sec ❒ 15 to 20 sec ❒ 30 to 40 sec
8 System Menu	ZONE RESPONSE #2	Factory programmed as "1" (3 to 4 seconds). Cannot be changed.	No selection.
9 System Menu	ZONE RESPONSE #3	(See step 6.)	❒ 0.3 to 0.4 sec (D) ❒ 3 to 4 sec ❒ 15 to 20 sec ❒ 30 to 40 sec
10 System Menu	ZONE RESPONSE #4	(See step 6.)	❒ 0.3 to 0.4 sec (D) ❒ 3 to 4 sec ❒ 15 to 20 sec ❒ 30 to 40 sec
11 System Menu	RELAY #1	0 = Relay activates on alarm 1 = Relay activates on system trouble	❒ Alarm ❒ Trouble (D)
12 System Menu	INSTALLER'S CODE	Installer's code [4 digits]. For programming and other system control functions. Can also perform all the same operations as the operator's code. (See Section 4.2 for specific information about which functions the code can perform.)	_____ Default = 5128

Table 5-1: Programming Form

Step # / 06-151 Menu	Option	Description	Your choice (D) = Default
13 Dialer Menu	OPERATOR'S CODE	Operator's code [4 digits]. Used for basic operation. (See Section 4.2 for specific information about which functions the code can perform.) This code must be different from the installer's code.	_____ Default = 1111
14 Dialer Menu	DIALER TYPE	0 = USA 1 = 9000 Direct (Do not use this option.) 2 = European (used for Europe and Asia)	❒ USA (D) ❒ European
15 Dialer Menu	COMPUTER ENABLE	Yes = Downloading computer used. No = Downloading computer NOT used.	❒ Yes (D) ❒ No
16 Dialer Menu	TOUCHTONE # 1	Yes = Phone #1 will try both TouchTone and rotary. No = Phone #1 will use rotary dialing only.	❒ Yes ❒ No (D)
17 Dialer Menu	TOUCHTONE # 2	Yes = Phone #2 will try both TouchTone and rotary. No = Phone #2 will use rotary dialing only.	❒ Yes ❒ No (D)
18 Dialer Menu	MUST REPORT #1	Yes = Reports must always be sent to central station phone #1. No = If another phone number is available first, no report to phone #1.	❒ Yes (D) ❒ No
19 Dialer Menu	MUST REPORT #2	Yes = Reports must always be sent to central station phone #2. No = If another phone number is available first, no report to phone #2.	❒ Yes (D) ❒ No
20 Dialer Menu	AC ACTIVATION	0 = Active high (Do Not Use) 1 = Active low (Do Not Use) 2 = Monitor AC	❒ Monitor AC (D)

Table 5-1: Programming Form

Step # / 06-151 Menu	Option	Description	Your choice (D) = Default
21 Dialer Menu	AC LOSS HOURS	Enter the number of hours before AC power loss is reported. Set to 6-12 hours for NFPA 72 Fire Alarm Systems for Central Station Service (Chapter 4-3). Set to 15 hours for NFPA 72 Remote Supervising Station Fire Alarm Systems (Chapter 4-5). Set to 0 if you are using a Cheetah control panel. To program a number larger than 9, use: [SHIFT] [1] for 10 [SHIFT] [2] for 11 [SHIFT] [3] for 12 [SHIFT] [4] for 13 [SHIFT] [5] for 14 [SHIFT] [6] for 15	_____ Default = 6
22 Dialer Menu	# RINGS	Enter the number of rings before 10-2256 answers a downloading call. Options are 2-14, minimum is 2. Enter "0" to disable ring detector.	____ Default = 10
NOTES FOR STEPS 23 THROUGH 27. Steps 23-27 apply only if the 3/1 format is selected. The 3/1 format is an old format that does not make full use of 10-2256 reporting capabilities. The 3/1 format sends only one digit or letter for an event. It does not send the zone number with the event. Use this format only if required by the receiver. If you are using the 3/1 reporting format, use Steps 23-27 to select the digit (0-9) that will be sent for each event. The letters A through E can be used if the receiver can accept them. Use [SHIFT] [1] for A, [SHIFT] [2] for B and so on. Do not duplicate any digits or letters. For example, do not use "0" for both alarm code (in Step 23) and trouble code (in Step 25). Note that the 3/1 format does not distinguish between "0" and "A", so do not use "0" if you're using "A" and vice versa. See Section 6 for more information about the 3/1 format.			
23 Dialer Menu	3/1 ALARM CODE	Select the digit that will be transmitted to the central station for an alarm. (See "NOTES" above if you need more information.)	____ Default = 1
24 Dialer Menu	3/1 SPRKLR CODE (Feature available with revision H or later boards.)	3/1 code for sprinkler supervisory conditions. (See "NOTES" above if you need more information.)	____ Default = 2
25 Dialer Menu	3/1 TROUBLE CODE	3/1 code for trouble conditions. (See "NOTES" above if you need more information.)	____ Default = 8

Table 5-1: Programming Form

Step # / 06-151 Menu	Option	Description	Your choice (D) = Default
26 Dialer Menu	3/1 RESTORE CODE	3/1 code for restorals of alarm or trouble conditions. (See "NOTES" above if you need more information.)	____ Default = 7
27 Dialer Menu	3/1 TEST CODE	3/1 code for reporting tests. (See "NOTES" above if you need more information.)	____ Default = 9
28 Dialer Menu	ALARM #1 1ST	Yes = Report alarms to central station phone #1 first. No = Report alarms to central station phone #2 first.	❒ Yes (D) ❒ No
29 Dialer Menu	TROUBLE #1 1ST	Yes = Report troubles to central station phone #1 first. No = Report troubles to central station phone #2 first.	❒ Yes (D) ❒ No
30 Dialer Menu	TEST #1 1ST	Yes = Report tests to central station phone #1 first. No = Report tests to central station phone #2 first.	❒ Yes (D) ❒ No
31 Dialer Menu	ACCOUNT #1	Account # for central station phone #1 (6 digits; leading zeros if shorter).	_____ Default = 105128
32 Dialer Menu	ATTEMPTS #1	Number of times phone line #1 will try to dial each central station acct. # before "DIALER FAILED" displays on the 10-2257 LCD. Range is 3 to 5.	____ Default = 3
33 Dialer Menu	FORMAT #1	Select reporting format for phone line #1. See Section 6 for descriptions of these formats. 0 = SIA8 1 = FSK81 2 = SK4+2 3 = BFSK14 4 = BFSK23 5 = SIA20 6 = 3/1 14 7 = 3/1 23	❒ SIA8 ❒ FSK81 ❒ SK4+2 ❒ BFSK14 ❒ BFSK23 ❒ SIA20 (D) ❒ 3/1 14 ❒ 3/1 23

Table 5-1: Programming Form

Step # / 06-151 Menu	Option	Description	Your choice (D) = Default
34 Dialer Menu	CIC #1	Carrier Identification Code is the prefix that needs to be dialed before a phone number to access a particular long distance carrier. Use special characters to add pauses, #, *, and "look for second dial tone" characters into the phone number. See Step 35 for special characters. 1 to 8 digits	_____ [blank - no default]
35 Dialer Menu	PHONE #1	Enter the phone number for phone line #1 (up to 16 digits). The following special options and characters can be part of a phone number: pause; look for second dial tone; * (asterisk); and # (number or pound symbol). For "pause", press SHIFT 1. ("A" displays on LCD.) For "*", press SHIFT 2. ("B" displays on the LCD.) For "#", press SHIFT 3. ("C" displays on LCD.) For "look for second dial tone", press SHIFT 4. ("D" displays on LCD.)	_____ [blank - no default]
36 Dialer Menu	ACCOUNT #2	Account number for central station phone #2 (6 digits; leading zeros if shorter).	_____ Default = 205128
37 Dialer Menu	ATTEMPTS #2	Number of times phone line #2 will try to dial each central station acct. # before "DIALER FAILED" displays on the 10-2257 LCD. Range is 3 to 5.	____ Default = 3
38 Dialer Menu	FORMAT #2	Select reporting format for phone line #2. See Section 6 for descriptions of these formats. 0 = SIA8 1 = FSK81 2 = SK4+2 3 = BFSK14 4 = BFSK23 5 = SIA20 6 = 3/1 14 7 = 3/1 23	❒ SIA8 ❒ FSK81 ❒ SK4+2 ❒ BFSK14 ❒ BFSK23 ❒ SIA20 (D) ❒ 3/1 14 ❒ 3/1 23

Table 5-1: Programming Form

Step # / 06-151 Menu	Option	Description	Your choice (D) = Default
39 Dialer Menu	CIC #2	Carrier Identification Code is the prefix that needs to be dialed before a phone number to access a particular long distance carrier. Use special characters to add pauses, #, *, and "look for second dial tone" characters into the phone number. See Step 35 for special characters. 1 to 8 digits	_____ [blank - no default]
40 Dialer Menu	PHONE #2	Enter phone #2 (up to 16 digits). (See Step 33 for more information.)	_____ Default = 2
41 Dialer Menu	COMPUTER ACCOUNT	Enter the account number for the downloading computer (6 digits; leading zeros if shorter).	_____ Default = 005128
42 Dialer Menu	COMPUTER CIC	Carrier Identification Code is the prefix that needs to be dialed before a phone number to access a particular long distance carrier. Use special characters to add pauses, #, *, and "look for second dial tone" characters into the phone number. See Step 35 for special characters. 1 to 8 digits	_____ [blank - no default]
43 Dialer Menu	COMPUTER PHONE	Enter the phone number for the downloading computer (up to 16 digits). (See Step 33 for more information about entering phone numbers.)	_____ Default = 2
44 Dialer Menu	TEST TIME	Enter the test report time using the 24-hour military format (include leading zeros).	_____ Default = 0130
45 Dialer Menu	CURRENT TIME	Set the current time using the 24-hour military format (include leading zeros). (NOTE: It is recommended that you check the system time every few months and reset it if necessary.)	

Section 6
Reporting

The Fike Model 10-2556 can transmit information in several different formats (including two types of BFSK and SIA formats). The type of format you select is determined by the type of receiver used at the central station. Note that the SIA formats are recommended for use with the 10-2556. (All formats listed below are compatible with the Silent Knight model 9000 receiver.)

Note: Some formats do not distinguish between certain types of reports, such as between waterflow and fire alarms or between supervisory and trouble reports. Central station personnel must keep records of how the various zones are programmed at each account, so they can determine what condition is being reported for a particular zone.

Format	Description
SIA8	Security Industry Association standard. Used with the Silent Knight model 9000 Digital Alarm Receiver and model 9004 or model 9004I SIA line card.
SIA20	Security Industry Association standard. Used with the Silent Knight model 9000 receiver, with a 9004I SIA line card and a 9200 CPU card, Revision E.
FSK81	High-speed, single-round format for use with older receivers. Transmits a 4-digit account number and a 2-digit alarm code at 20 pps.
SK4+2	Format used with receivers that can receive 4+2 at 20 pps and can send a 1400 Hz acknowledgment tone. Uses a 4-digit account number.
BFSK14	High speed, single-round format used with receivers that can receive (Radionics) BFSK and can send a 1400-Hz acknowledgment tone. Uses a 3-digit account number.
BFSK23	High speed, single-round format used with receivers that can receive (Radionics) BFSK and can send a 2300-Hz acknowledgment tone. Uses a 3-digit account number.
SK3/1 14	Used with older Silent Knight, Ademco, or Sescoa receivers that can receive at 20 pps and send a 1400-Hz acknowledgment tone.
Sescoa 3/1 23	Used with older Sescoa or other receivers that can receive at 20 pps and send a 2300-Hz acknowledgment tone.

The tables in the subsections that follow show the digits that are transmitted for each event reported by the 10-2556 dialer, and the message that is printed if the central station uses the Silent Knight model 9000 receiver. A separate table is shown for each format.

6.1 SIA Format

In the SIA8 and SIA20 formats, the 10-2556 transmits the English description shown in the first column of Table 6-1. At the central station, the 9000 receiver prints the English message shown in the second column. All zones can be programmed as FIRE, WATERFLOW, UNDEFINED, or SPRINKLER. Note that in Column 2 below "FIRE" is used as an example. The actual word printed will be whatever zone type has been programmed.

Table 6-1: 9000 Printout for SIA Format

10-2256	9000 Printout
ALARM 1-4	FIRE ALARM 1-4
ALARM RESTORE 1-4	FIRE ALARM RESTORE 1-4
TROUBLE 1-4	FIRE TROUBLE 1-4
TROUBLE RESTORE 1-4	FIRE TROUBLE RESTORE 1-4
AC LOST	AC TROUBLE 0
AC RESTORE	AC RESTORE 0
MANUAL TEST	MANUAL TEST 0
AUTOMATIC TEST	AUTO TEST 0
FIRE DRILL	MANUAL TEST 0 or 1
DOWNLOADING SUCCEEDED	PROGRAMMING PASS 0
DOWNLOADING FAILED	PROGRAMMING FAIL 0
PHONE LINE #1 TROUBLE	PHONE LINE TROUBLE 1
PHONE LINE #2 TROUBLE	PHONE LINE TROUBLE 2
DATA LOST	DATA LOST 0
PHONE LINE #1 RESTORE	PHONE LINE RESTORE 1
PHONE LINE #2 RESTORE	PHONE LINE RESTORE 2

6.2 Silent Knight FSK and 4+2 Formats

The Silent Knight FSK and 4+2 formats transmit a 4-digit account number and a 2-digit alarm code. When an event is reported in either of these formats, the dialer transmits the two digits shown in the second column. The 9000 can be programmed to print either the digits or the English message shown in the third column of Table 6-2. If you are using the 9032 line card, FSK2 and BFSK are the only formats that will report in English.

Table 6-2: 9000 Printout for Silent Knight FSK and 4+2 Formats

10-2256	Digits Transmitted	9000 Receiver English Lanuage Printout
ALARM 1-4	*01-04	ALARM 01 - ALARM 04
ALARM RESTORE 1-4	*21-24	RESTORE 01 - RESTORE 04
TROUBLE 1-4	61-64	TROUBLE 01 - TROUBLE 04
TROUBLE RESTORE 1-4	71-74	RESTORE 01 - RESTORE 04
AC LOST	60	AC TROUBLE
AC RESTORE	70	AC RESTORE
MANUAL TEST	30	TEST
AUTOMATIC TEST	30	TEST
FIRE DRILL	30	TEST
DOWNLOADING SUCCEEDED	30	TEST
DOWNLOADING FAILED	30	TEST
PHONE LINE #1 TROUBLE	31	PHONE LINE TROUBLE 01
PHONE LINE #2 TROUBLE	32	PHONE LINE TROUBLE 02
DATA LOST	39	DATA LOST 0
PHONE LINE #1 RESTORE	35	PHONE LINE RESTORE 01
PHONE LINE #2 RESTORE	36	PHONE LINE RESTORE 02

* "02" and "22" will never be reported. Channel/Zone 2 is a trouble indication only that will transmit only "62" and "72."

6.3 Radionics BFSK

In this format, the 10-2556 transmits in English with the event description shown in the first column of Table 6-3. At the central station, the Silent Knight model 9000 receiver prints the English message shown in the third column. In Radionics BFSK format, the 9000 does not print alarm type, just the words "ALARM," "TROUBLE," and so on.

Table 6-3: 9000 Printout for Radionics BFSK Format

10-2256	Digits Transmitted	9000 Receiver Printout
ALARM 1-4	10-40	ALARM 01 - ALARM 04
ALARM RESTORE 1-4	E1-E4	RESTORE 01 - RESTORE 04
TROUBLE 1-4	F1 -F4	TROUBLE 01 - TROUBLE 04
TROUBLE RESTORE 1-4	E1-E4	RESTORE 01 - RESTORE 04
AC LOST	FA	TROUBLE 00
AC RESTORE	EA	RESTORE 00
MANUAL TEST	EE	RESTORE 0E
AUTOMATIC TEST	EE	RESTORE 0F
FIRE DRILL	EE	TROUBLE 0E
DOWNLOADING SUCCEEDED	EF	RESTORE 0F
DOWNLOADING FAILED	FF	RESTORE 0F
PHONE LINE #1 TROUBLE	FB	TROUBLE 0B
PHONE LINE #2 TROUBLE	FC	TROUBLE 0C
DATA LOST	FE	RESTORE 0E
PHONE LINE #1 RESTORE	EB	RESTORE 0B
PHONE LINE #2 RESTORE	EC	RESTORE 0C

6.4 Silent Knight 3/1 and Sescoa 3/1

These formats transmit a 3-digit account number and a single-digit alarm code. These two formats greatly limit the amount of information that can be reported. To avoid confusion at the central station, standard alarm digits should be chosen. During programming, you select which alarm digits will be reported for different events. You can choose not to report restores or not to use zone numbers that might be duplicated by a supervisory transmission. The second column of Table 6-4 indicates that the 9000 prints only the digit (X) that has been programmed for that event-not an English message.

Table 6-4: 9000 Printout for Silent Knight and Sescoa 3/1 Formats

10-2256	9000 Printout
ALARM 1-4	CODE X = ALARM
ALARM RESTORE 1-4	CODE X = RESTORE
TROUBLE 1-4	CODE X = TROUBLE
TROUBLE RESTORE 1-4	CODE X = RESTORE
AC LOST	CODE X = TROUBLE
AC RESTORE	CODE X = RESTORE
MANUAL TEST	CODE X = TEST
AUTOMATIC TEST	CODE X = TEST
FIRE DRILL	CODE X = TEST
DOWNLOADING SUCCEEDED	CODE X = TEST
DOWNLOADING FAILED	CODE X = TEST
PHONE LINE #1 TROUBLE	CODE X = TROUBLE
PHONE LINE #2 TROUBLE	CODE X = TROUBLE
DATA LOST	CODE X = TEST
PHONE LINE #1 RESTORE	CODE X = RESTORE
PHONE LINE #2 RESTORE	CODE X = RESTORE

Section 7
Troubleshooting

Section 7.1 describes zone troubleshooting mode. Section 7.2 contains a list of system trouble messages.

7.1 Accu-Zone(Troubleshooting (Mode 25)

Accu-Zone(troubleshooting mode (Mode 25) allows you to use the 10-2257 annunciator to determine if any input is active. A voltmeter is not necessary. Mode 25 can troubleshoot the four channels (or zones) and the AC monitoring function.

The first line of the display will show the channel (zone) input number. The second line will show a high, low, and present channel (zone) measurement. The high and low values allow you to trip a zone momentarily, then come back to the annunciator and see the result. This procedure is also useful for locating intermittent connections.

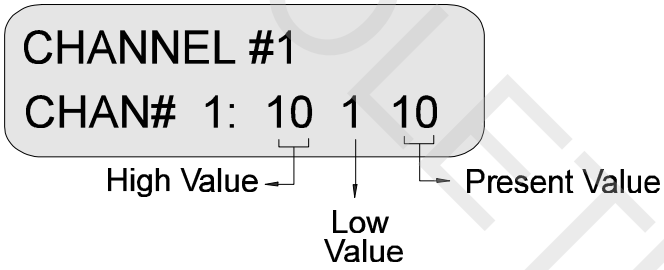

Figure 7-1 Example Mode 25 Display

Table 7-1 explains how to use Mode 25. Note that while you are using Mode 25, all alarms and troubles are disabled to allow you to trip channels (zones), adjust wiring, and so on.

Table 7-1: Using Mode 25

To	Press
Enter Mode 25	2 5 ENTER [Installer's Code]

Select the channel (or zone) you want to troubleshoot	1. ENTER (You must be in Mode 25.)
	2. Channel # ENTER
	1 = Channel 1 (or Zone 1)
	2 = Channel 2 (or Zone 2)
	3 = Channel 3 (or Zone 3)
	4 = Channel 4 (or Zone 4)
	5 = AC monitoring function

Exit Mode 25	STEP STEP CLEAR CLEAR

The readings shown in Table 7.1-2 are typical for normal conditions.

Table 7-2: Typical Mode 25 Values

Supervised Channel (or Zone) Input	Mode 25 Values All Values are Approximate				
	Normal Conditions		Active (Tripped)		Trouble
	Valid Range	Typical Value	Valid Range	Typical Value	
Active High	8 to 11	9	21 to 31	27	0 to 7 or 12 to 20
Active Low	8 to 11 or 21 to 31	9	0 to 7	1	12 to 20
Contact Closure	8 to 11	9	0 to 7	1	12 to 31
Non-Supervised Channel (or Zone) Input					
Active High	0 to 20	16	21 to 31	27	
Active Low	12 to 31	16	0 to 11	1	
Contact Closure	12 to 31	16	0 to 11	1	
Active High AC Monitoring	0 to 20	16	21 to 31	27	
Active Low AC Monitoring	8 to 31	16	0 to 7	1	
Direct AC Monitoring	0 to 11	1	12 to 31	16	

7.2 System Messages

Table 7.2-1 shows the messages that could appear on the LCD of the model 10-2257 annunciator. If you have a problem that is not covered here, contact Technical Support at 816-229-3405 for assistance.

Table 7-3: Explanations of Display Messages

10-2257 Message	Reason for Display
AC LOW	AC power has been lost. Check connection to AC power source.
ALARM ZONE 1-4	An alarm condition exists in the indicated zone.
BAD EEPROM 10-2257 buzzer goes on and off.	Most likely cause is a bad EEPROM chip, which is not an installer-serviceable part. Contact Technical Support if you need to arrange for a warranty exchange.
Line 2: CALLING COMPUTER	System is calling remote computer (for up- or downloading).
Line 2: REPORTING	The system is reporting to the central station.
REPORTING	An event is being reported to the central station.
SYSTEM NORMAL	No trouble, alarm, or other condition exists.
TIME?	The 10-2256 is in Time Set mode.
TROUBLE (line 1) TROUBLE ZONE # (line 2)	Sprinkler supervisory trouble.
TROUBLE (ZONE 1-4)	A trouble condition exists in the indicated zone. If you need help locating the trouble, refer to Section 7.1 for information about zone troubleshooting mode (mode 25).
TROUBLE DIALER	After making the programmed number of attempts, the dialer has not been able to communicate with the central station. (This is a dialer failed condition.)
TROUBLE LINE 1	A trouble condition exists on phone line 1.
TROUBLE LINE 2	A trouble condition exists on phone line 2.
TRY AGAIN	A keystroke error has been made. Press CLEAR and enter the correct keystrokes.

Note: When step programming mode is in use and the 10-2257 annunciator powers up, the LCD displays messages that describe conditions currently in effect.

704 South 10th Street
P.O. Box 610
Blue Springs, Missouri 64013 U.S.A.
(816) 229-3405
Fax: (816) 229-5082
http://www.fike.com