REGENCY

by ITI

REGENCY
Model 2615 Control/Communicator

Installation Manual

Part Number 150863, Rev. A
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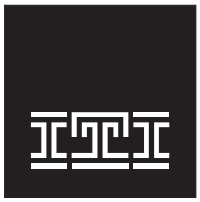

TECHNOLOGIES

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Fire Protection
Access Control

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For reprints, order manual: 150863, Revision A

FCC Notices

FCC Part 15 Information to the User

Changes or modifications not expressly approved by Interactive Technologies, Inc. can void the user's authority to operate the equipment.

FCC Part 15 Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the panel's receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the affected equipment and the panel receiver to separate outlets, on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Part 68

This equipment complies with part 68 of the FCC Rules. Located on this equipment is a label that contains, among other information, the FCC registration number and the ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

The REN is used to determine the maximum number of devices that may be connected to your telephone line. In most areas, the sum of all device RENs should not exceed five (5.0).

If this equipment causes harm to the telephone network, the telephone company may temporarily disconnect your service. If possible, you will be notified in advance. When advance notice is not practical, you will be notified as soon as possible. You will also be advised of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper operation of your equipment. You will be given advance notice in order to maintain uninterrupted service.

If you experience trouble with this equipment, please contact the company that installed the equipment for service and repair information. The telephone company may ask you to disconnect this equipment from the network until the problem has been corrected or you are sure that the equipment is not malfunctioning.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

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Section 1: Introduction

This manual describes installation, operation, programming, and troubleshooting for the 2615 Control/ Communicator. The 2615 is a UL Listed 8-zone control/communicator.

1.1 How to Use This Manual

This manual is intended to be used with Revision B of the 2615 printed circuit board.

The manual uses the following conventions:

- A bolded, all capitalized word indicates a touchpad key: **CLR**
- Information within brackets [ ] indicates a code or variable that you specify: [Maintenance Code]

1.2 How to Contact Interactive Technologies, Inc.

If you have a question or encounter a problem not covered in this manual, contact Interactive Technologies, Inc. (ITI) Technical Support at 800-435-7658. To order parts, contact ITI's Order Entry Department at 1-800-777-4841

1.3 Optional Accessories

See Table 1 for optional accessories that are available from ITI.

Table 1: Compatible Accessories

Model	Description
2608 Ground Start Relay	Required for applications using a ground start telephone network.
4180 Status Display Module	Provides 16 outputs that can be used to annunciate specific types of alarms or as a backup reporting device.
4650 LED Touchpad	Fully-featured touchpad that uses LEDs to annunciate alarm and trouble conditions.

Table 1: Compatible Accessories

Model	Description	
4660 Series LCD Touchpads	Full-featured touchpads using an LCD to annunciate alarm and trouble conditions and other system messages. There are several models in the 4660 touchpad series. The differences among the models are described below.	
	4660R Residential Touchpad	Intended for residential applications. It has a nonfunctional key labelled ***** instead of a **DOOR** key.
	4660B Commercial Touchpad	Intended for commercial applications that do not have access control. **DOOR** key on the touchpad is nonfunctional (no error beeps sound if this key is pressed by mistake).
	4660C Commercial Touchpad	Intended for commercial applications that have access control. If this touchpad is used with the 2615, the **DOOR** key will have the same function as the **CODE 2** key.
6712 12 VDC Rechargeable Battery	Provides backup power to the 2615 during AC power interruptions.	
Part Number 150641 Zone Labels	Package of 100 zones labels that can be placed on the inside of the touchpad door to identify zone locations.	

Section 2: Specifications

2.1 Electrical Specifications

Input Power Requirements

Line voltage:	110-120 VAC, 60 Hz
Current requirements:	2.5A

Output Power Requirements

See Table 2 in Section 4.

2.2 Environmental Specifications

- Temperature range is 0° to 95° F.
- Indoor use only.
- Less than 90% non-condensing humidity.
- A non-corrosive environment.

Section 3: Agency Requirements

3.1 Telephone Requirements

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

Manufacturer:	Interactive Technologies, Inc. (ITI)
Model Number:	2615
FCC Registration #:	AC6USA-21834-AL-E
Type of Jack* ** (to be installed by the telephone company.)*	RJ38X (in Canada, use CA38A jack)
Ringer Equivalence:	0.9B
If using a ground start telephone network:	FIC # = 02Gs-2 SIC # = 9.0F

This device cannot be connected directly to coin telephones or party line services.

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

Interactive Technologies, Inc.
2266 North Second Street
North Saint Paul, MN 55109-2900

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

3.2 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.

3.3 UL Requirements

UL Listed systems must meet the following requirements:

1. The Arm Lock Interior Key option must be enabled.
2. Do not select the following programmable options:
   - Silent Night Trouble option
   - Swinger Bypass option
   - Force Arm option
3. All Fire zones must be wired using the 7628 4.7K ohm end-of-line (EOL) resistor, as shown in Figure 1, and must be programmed as:
   - Normally Open Contacts
   - Supervised
   - 24-Hour Alarm
   - Not Bypassable

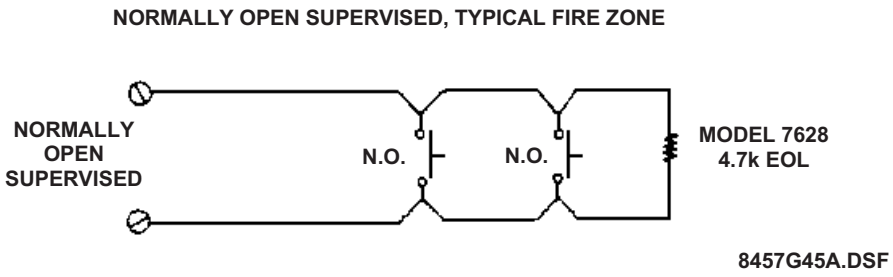

Figure 1: Typical UL Fire Zone

4. For UL approved installations, the Regency Supervised Siren Module must be wired to the 2615. To warn of a fire, the module provides a UL temporal-three siren that uses three distinctive, repeating short beeps. The module converts the panel's non-supervised, steady fire cadence to a supervised, temporal-three fire cadence. This module also provides a distinctive supervised burglary (police) siren. See Figure 2 for details on wiring the module to the 4724. For additional information, see the *Regency Supervised Siren Module Installation Instructions* (P/N 466-1584).

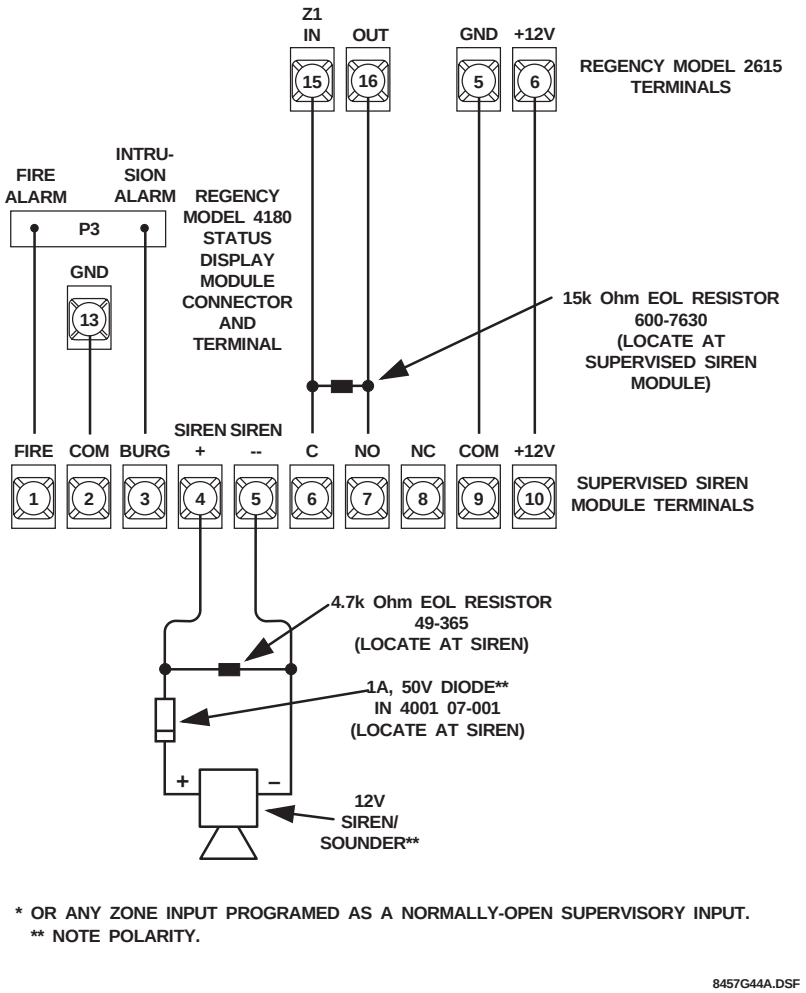

Figure 2: Connecting the Supervised Siren Module to the 2615

5. If a mechanical key is used:
   - It must be installed inside the protected premises.
   - In addition to the mechanical key, a Model 4650 or 4660 Series Touchpad must be used.
6. The programmed entry delay period must not exceed 45 seconds.
7. The programmed exit delay period must not exceed 60 seconds.
8. Minimum bell shutdown time is 4 minutes.

Section 4: Control Panel Description and Installation

WARNING! To avoid the risk of electrical shock, do not apply power to the 2615 until you have carefully read all of these instructions.

This section describes how to install the control panel and accessories, including compatible add-on modules, such as smoke detectors and signaling devices. In all cases, refer to the compatible module's installation manual for complete information.

4.1 Board Layout

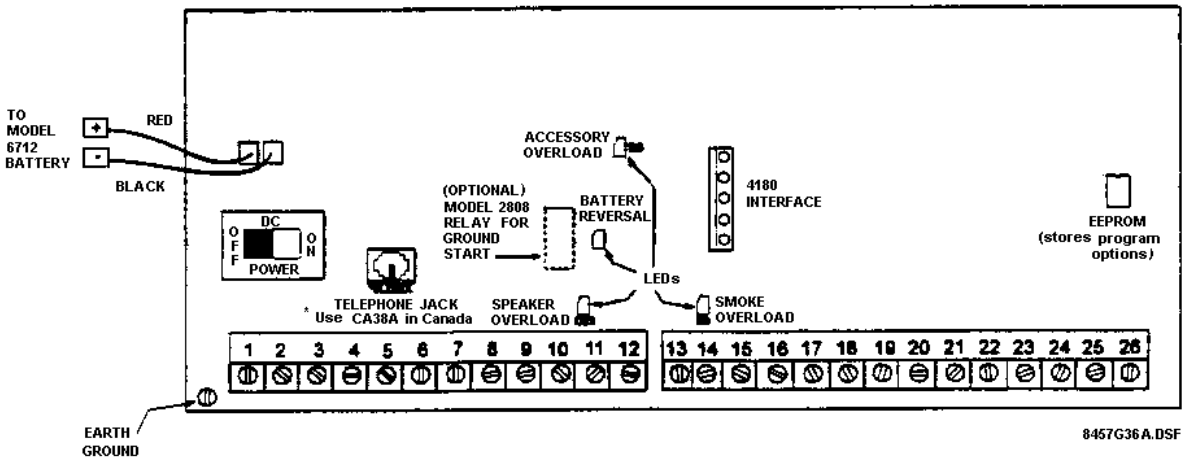

Figure 3: 2615 Printed Circuit Board

Figure 3 shows the 2615 printed circuit board. This board contains the mechanical and electronic components and connectors needed to install, monitor, and protect the system.

4.2 Overcurrent Protection

The 2615 is equipped with three self-restoring overcurrent devices that protect against short circuits and overloading in the field wiring by turning off the power to the output if a fault is detected.

The battery cables are protected from incorrect connection. LED indicator D7 turns on if the connections are reversed. Correct the condition by removing the cables from the battery and reconnecting them in reverse order.

The overcurrent protection devices protect the speaker driver output (LED D23); accessory power (LED D6); and smoke detector outputs (LED D8). Each overcurrent device has an LED that turns on if the current is exceeded.

To correct a fault, remove the wires from the affected device. The fault LED will turn off. Next, correct the overcurrent condition then reconnect the wires. If the fault has been corrected, the LED will remain off.

See Figure 3 for the locations of all overcurrent devices and LEDs.

4.3 AC Power Switch

The 2615 has an AC power switch. Make sure this switch is off when you are installing the system. See Figure 3 for the location of the power switch.

4.4 Mounting the 2615

When selecting a location to mount the 2615, consider the following:

- The acceptable temperature range is 0° to 95° F.
- Panel must be accessible to “main drop” wiring runs.
- Panel must be located well within the secured area, but must be accessible for testing and service.

4.5 Terminal Strip Description

For all wired connections the maximum line resistance is 50 ohms (equivalent to 3,000 feet of 22-gauge wire).

Table 2: Terminal Strip Descriptions

#	Terminal Descriptions	Electrical Ratings
	Earth Ground	N/A
1	AC Input	16.5 VAC, 60 Hz, 40 VA
2	AC Input	
3	Accessory Ground (-)	10.1 to 13.8 VDC, 600 mA maximum combined for Terminals 4 and 6
4	Accessory Power (+)	
5	Touchpad Ground (-)	
6	Touchpad Power (+)	
7	Serial Data Out (to Touchpads)	N/A
8	Serial Data In (from Touchpads)	
9	Speaker Ground	8 ohm, 12 watt minimum rating speaker output
10	Speaker Power (+)	
11	Auxiliary Relay Contacts (Normally Open)	5 A maximum, contacts 12 VDC
12	Auxiliary Relay Contacts (Normally Open)	
13	Smoke Detector Ground (-)	10.0 to 13.8 VDC, 150 mA maximum
14	Smoke Detector Power (+)	

Table 2: Terminal Strip Descriptions

#	Terminal Descriptions	Electrical Ratings
15	Zone 1 Input	For all zone inputs: 14 VDC Maximum, at 2 mA For all outputs: 13.6 VDC
16	Zones 1 and 2 Power Output	
17	Zone 2 Input	
18	Zone 3 Input	
19	Zones 3 and 4 Power Output	
20	Zone 4 Input	
21	Zone 5 Input	
22	Zones 5 and 6 Power Output	
23	Zone 6 Input	
24	Zone 7 Input	
25	Zones 7 and 8 Power Output	
26	Zone 8 Input	

4.6 Current Draw Worksheet

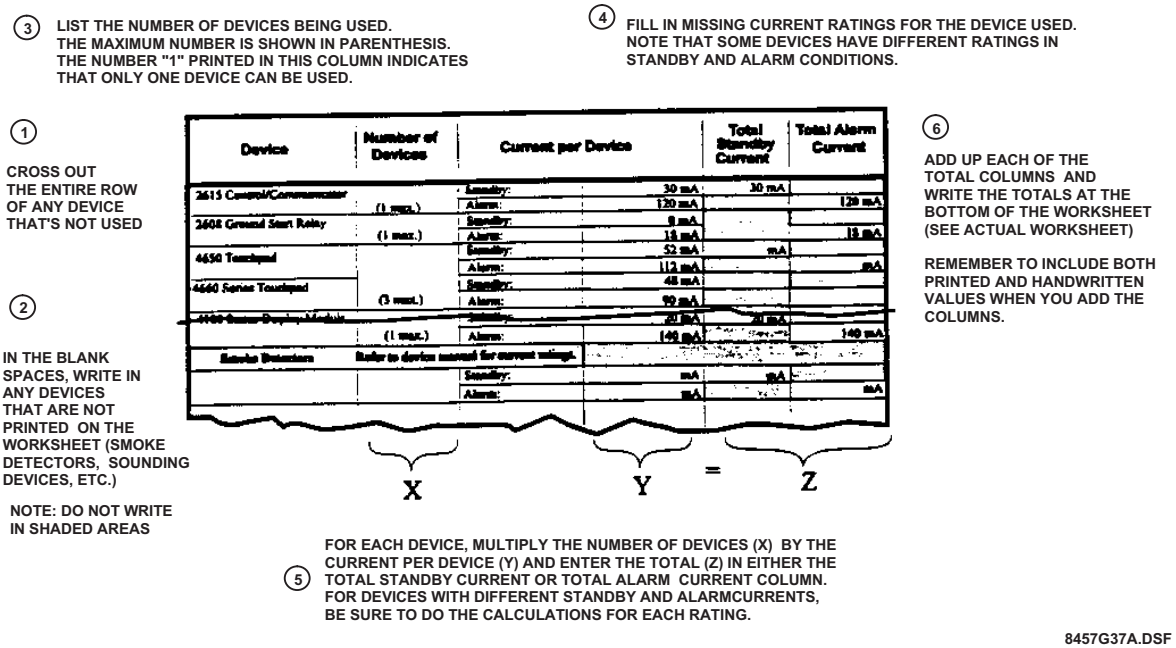

Figure 4: Working with the Current Draw Worksheet (actual worksheet is on the next page)

Table 3: Model 2615 Current Draw Worksheet

Device	Number of Devices	Current per Device		Total Standby Current	Total Alarm Current
2615 Control Communicator	(1 max.)	Standby:	30 mA	30 mA	
		Alarm:	120 mA		120 mA
2608 Ground Start Relay	(1 max.)	Standby:	0 mA		
		Alarm:	18 mA		18 mA
4650 LED Touchpad (3 touchpads max. per system)	(3 max.)	Standby:	52 mA	mA	
		Alarm:	112 mA		mA
4660 Series Touchpad (3 touchpads max. per system)		Standby:	48 mA	mA	
		Alarm:	90 mA		mA
4180 Status Display Module	(1 max.)	Standby:	20 mA	20 mA	
		Alarm:	140 mA		140 mA
Smoke Detectors	**Refer to device manual for current settings**				
		Standby:	mA	mA	
		Alarm:	mA		mA
		Standby:	mA	mA	
		Alarm:	mA		mA
		Standby:	mA	mA	
		Alarm:	mA		mA
		Standby:	mA	mA	
		Alarm:	mA		mA
***signaling Devices**	**Refer to device manual for current settings**				
		Alarm:	mA		mA
		Alarm:	mA		mA
		Alarm:	mA		mA
		Alarm:	mA		mA
Total current ratings of all devices in system				**mA Standby**	**mA Alarm**

NOTE **Standby current for signaling devices is 0 mA.*

4.7 Zone Wiring

All eight zones on the 2615 operate the same way. Further, the same programming options are available for all zones. Figure 5 shows the various ways the 2615 zones can be wired.

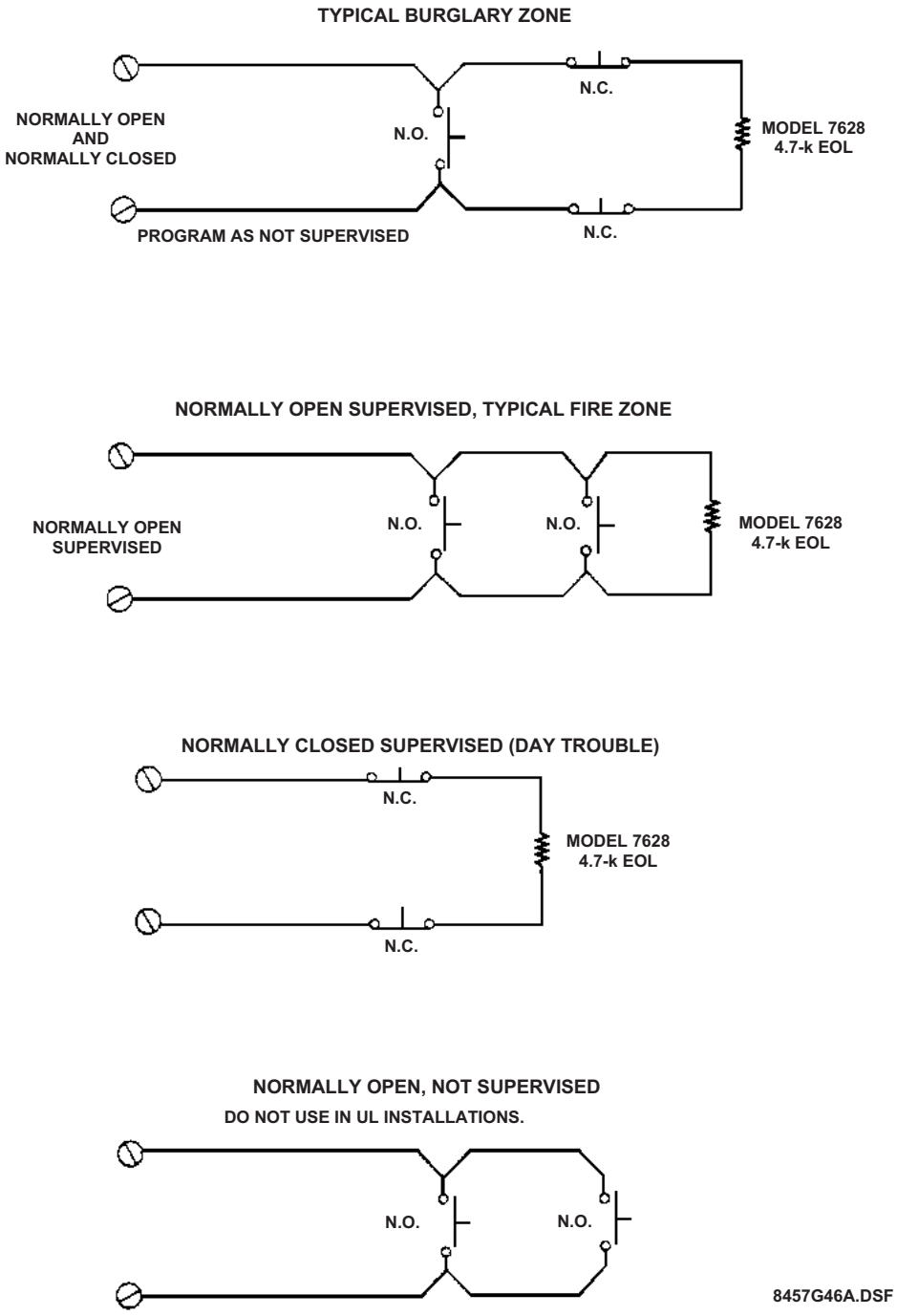

Figure 5: Zone Wiring

4.7.1 Smoke Detector Wiring

Only four-wire smoke detectors can be used with the 2615. Figure 6 shows how to wire a four-wire smoke detector, using ESL Model 499CT as an example.

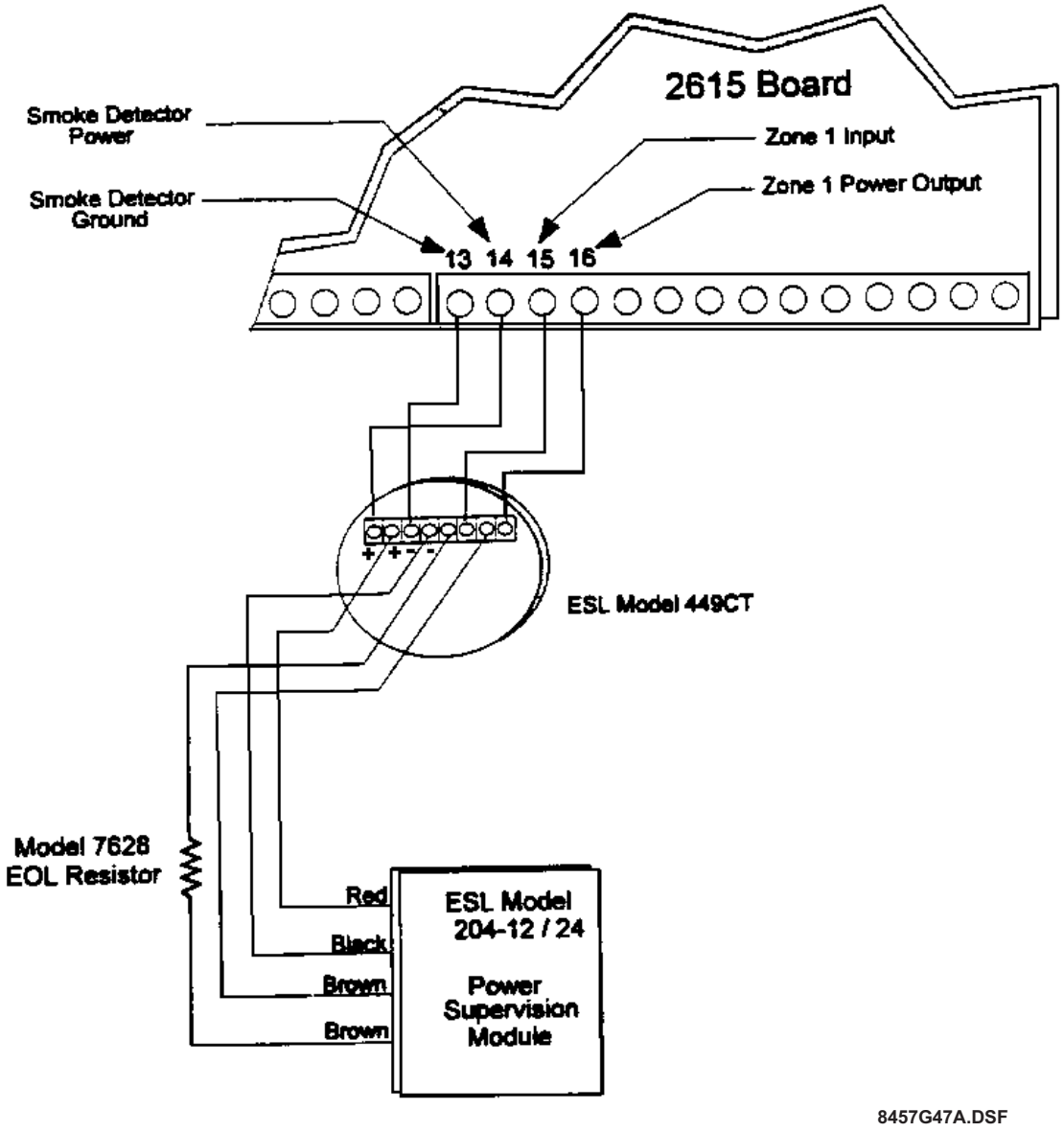

Figure 6: Four-Wire Smoke Detector Connection to 2615

4.8 Signaling Device Wiring

4.8.1 Built-In Speaker Driver

The 2615 includes a built-in speaker driver for powering signaling devices. Connect signaling devices as shown in Figure 7.

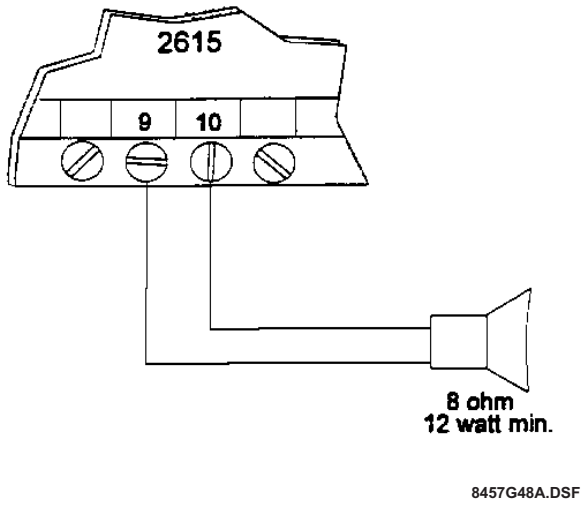

Figure 7: Direct Speaker Wiring

4.8.2 External Siren Driver

With Revision D of the 2615 software, you can attach an external siren driver to the 2615, as shown in Figure 8. Use any 12 VDC siren driver (maximum current 1.3 amps). Program Step 26 for bell and steady (see Section 6.3 for more information).

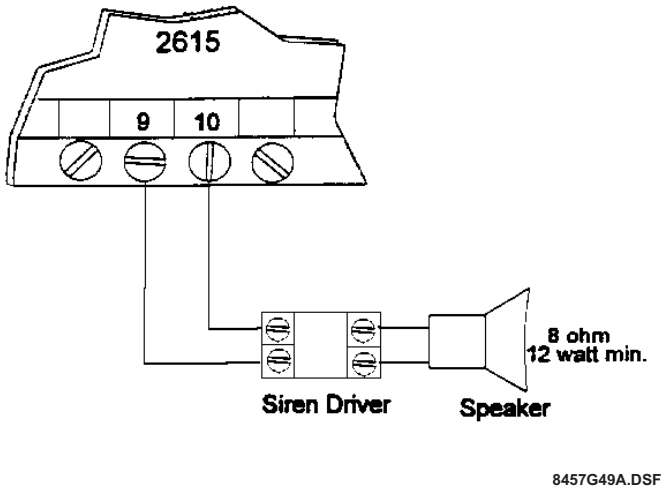

Figure 8: Wiring for Speaker with External Siren Driver

4.8.3 Bell Wiring

A 12 VDC bell can be attached to the system, if desired. Wire as shown in Figure 9. Bell output is programmed in Step 4 (see Section 6.3 for information).

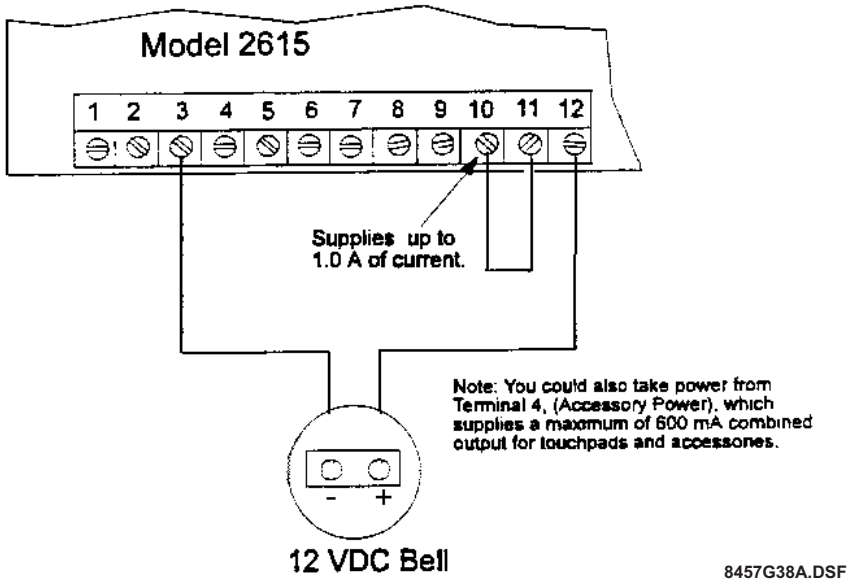

Figure 9: Bell Wiring

4.9 AC Power Transformer

An external transformer, the Model 9220, is included with the 2615. The 9220 supplies 16.5 VAC at 2.4A to power the system and supplies charging current to the backup battery. The transformer plugs directly into a conventional 115 VAC unswitched outlet. The output is wired to Terminals 1 and 2 of the 2615 terminal strip and to the earth ground screw (to the left of the terminal).

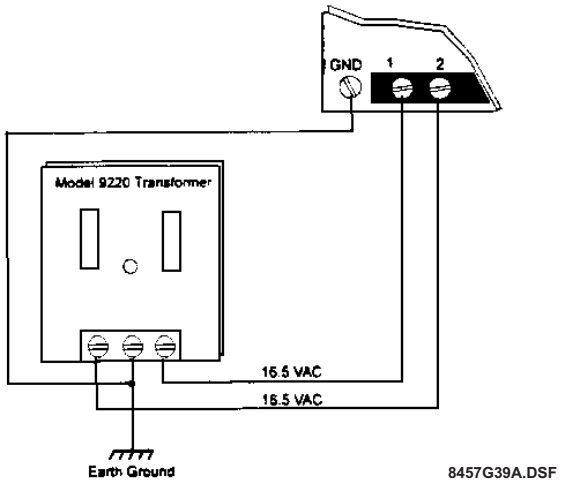

Figure 10: 9220 Connection to the 2615

4.10 Backup Battery Connection (Model 6712)

The Model 6712 12 VDC Rechargeable Battery is available as an accessory for the 2615. The battery provides backup power to the 2615 during AC power interruptions. The red positive (+) and black negative (-) battery cables connect the 6712 to the system.

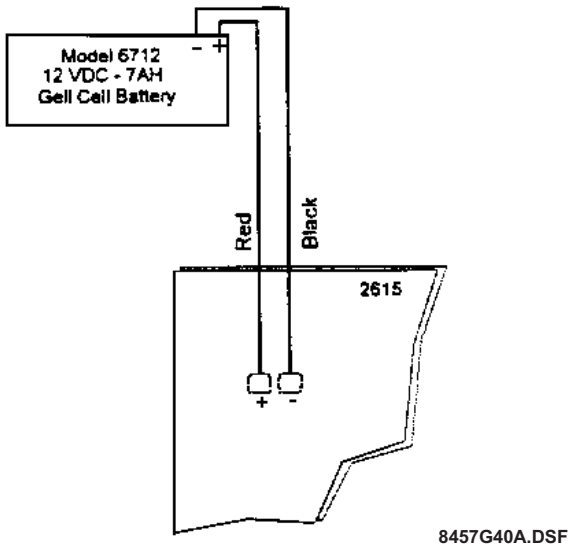

Figure 11: 6712 Battery Connection

4.11 Touchpad Installation

Installation of the 4650 and the 4660B/C/R touchpads is identical.

4.11.1 Mounting the Touchpads

1. Separate the top section from the rear mounting plate. Do this by inserting a small flatblade screwdriver into the slot located on the bottom edge of the frame. Push in, then lift up the top section.
2. Secure the mounting plate to the wall using the proper screw (either #6 or #8) with a thread appropriate for the type of material it is mounting.
3. The mounting plate should be oriented so that the protruding tab and the three posts are toward the bottom. Pull the wires through the hole in the rear mounting plate.
4. Wire the touchpad as described in Section 4.11.3.
5. After all the wires are connected to the touchpad terminal strip, set the top of the touchpad frame over the tabs at the top of the mounting plate, then press on the bottom until you hear it snap into position.

4.11.2 Touchpad Specifications

- Three touchpads maximum per system.
- All touchpads require four wires to operate.
- The four-conductor cable can be up to 1,000 feet long.
- Minimum wire gauge is 22 AWG for runs under 500 feet.
- Minimum wire gauge is 18 AWG for runs between 500 to 1000 feet.
- Active current draw is 120 mA.
- Active allowed voltage drop is 2V.

4.11.3 Wiring the Touchpads

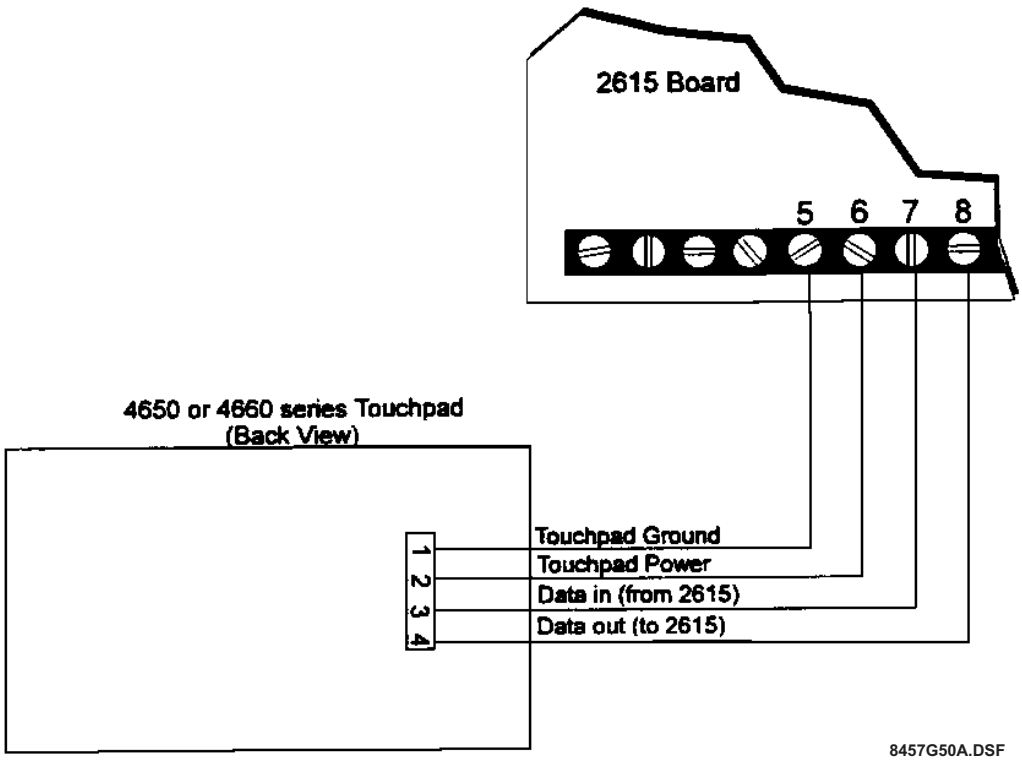

Figure 12: Touchpad Wiring

4.11.3.1 Daisy Chaining Touchpads

Home-run wiring from each touchpad back to the panel is recommended. However, daisy-chaining the touchpad wiring is permitted within the following limitations.

When touchpads are daisy-chained, the wiring leg between the panel and the first station must conduct extra current to supply multiple touchpads. Since the wire has some resistance, there will be a voltage drop at the end of the wire run and this drop must be within the tolerance of the touchpad requirement. To reduce the voltage drop, you should use lower resistance wire; 18 AWG is recom-

mended.

EXAMPLE:
Suppose you want to run a common leg for 300 feet and then branch to two touchpads, the farthest of which will be an additional 200 feet. You plan to use 18 AWG for the common leg and 22 AWG for the two branches. Here is how you would decide if this is acceptable (see Table 4).

Table 4: Example for Calculating Wire Runs

AWG	Ohms Per Foot	Ohms Per 1,000 Feet
22	.0161	16.1
18	.0064	6.4

For the Common Leg:
Maximum current = 120 mA x 2 = 240 (x 2 touchpads)
Resistance = .0064 ohms per foot x 600 feet = 3.85 ohms (18 AWG, 300 feet x 2)
Voltage drop = 240 mA x 3.85 ohm = 0.92 volts

NOTE *The wire length is doubled since the current must flow out and back.*

For the Longest Sub-Branch:
Maximum current = 120 mA
Resistance = .0161 ohms per foot x 400 feet = 6.44 ohms (22 AWG, 200 feet x 2)
Voltage drop = 120 mA x 6.44 = 0.77 V

Total Voltage Drop at the Farthest Touchpad: 0.92 V + 0.77 V = 1.69 V
Therefore, since 1.69 V is less than the 2 V maximum allowed drop, the wiring is acceptable.

4.11.4 Setting Touchpad ID Numbers

Once you have applied power to the touchpads, you can test the basic system and set touchpad numbers using the procedure described below:

1. Apply power to the system.
2. Press **0 0 TEST**.
3. On the LCD touchpad, the display will read “KEY ID=NN, BEEP=1” (NN represents the current ID number, “BEEP=1” indicates that the miniature speakers in the touchpads have been enabled automatically at power-up).
4. Enter the new ID number, 01 to 03, then press **TEST**.
5. Turn 2615 power off. When you turn power back on, the system will read the updated ID number for that touchpad.
6. Apply power again. Test the touchpad, then remove power.
7. If the system has additional touchpads, wire the next one, then start again at Step 1 in this procedure.

4.12 Telephone Line Connection

See Figure 13 for the location of the 2615 telephone line input. Connect the 2615 to the telephone line using a standard RJ38X telephone jack (in Canada use a CA38A telephone jack).

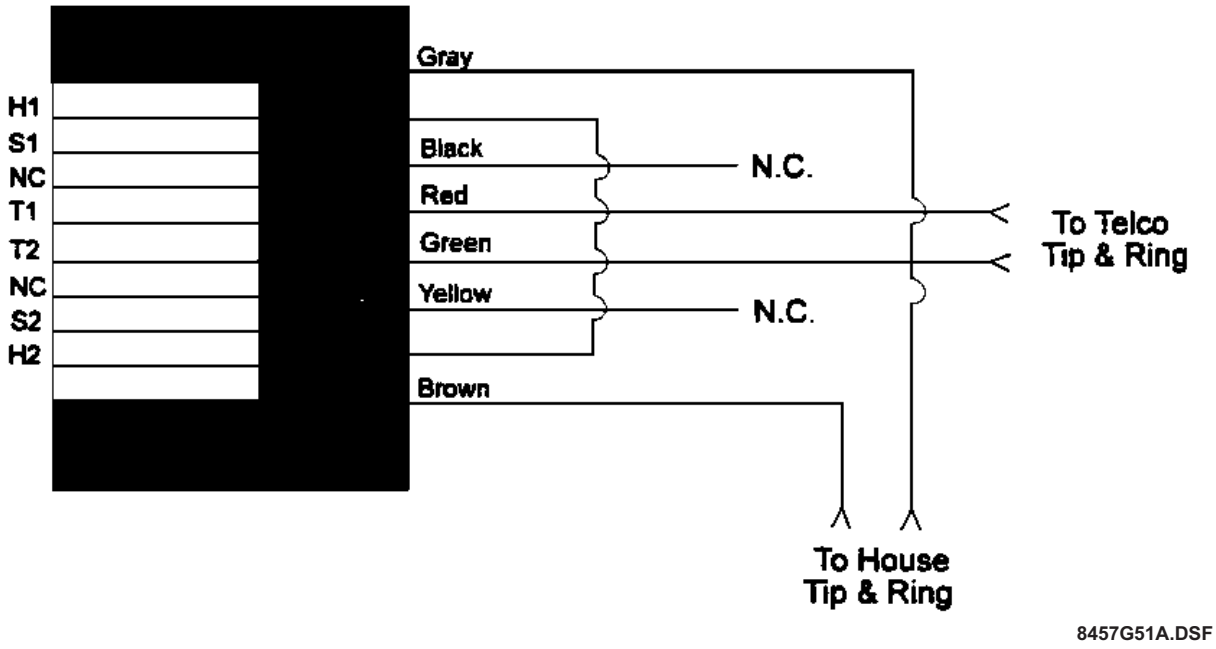

Figure 13: Telephone Line Connection

4.13 Ground Start Relay (Model 2608)

If you are using the ground start telephone network, you must install the Model 2608 Auxiliary Relay. Make sure the relay is oriented properly as shown in Figure 14. Select the ground start option in programming.

NOTE *The ground start option is not UL Listed.*

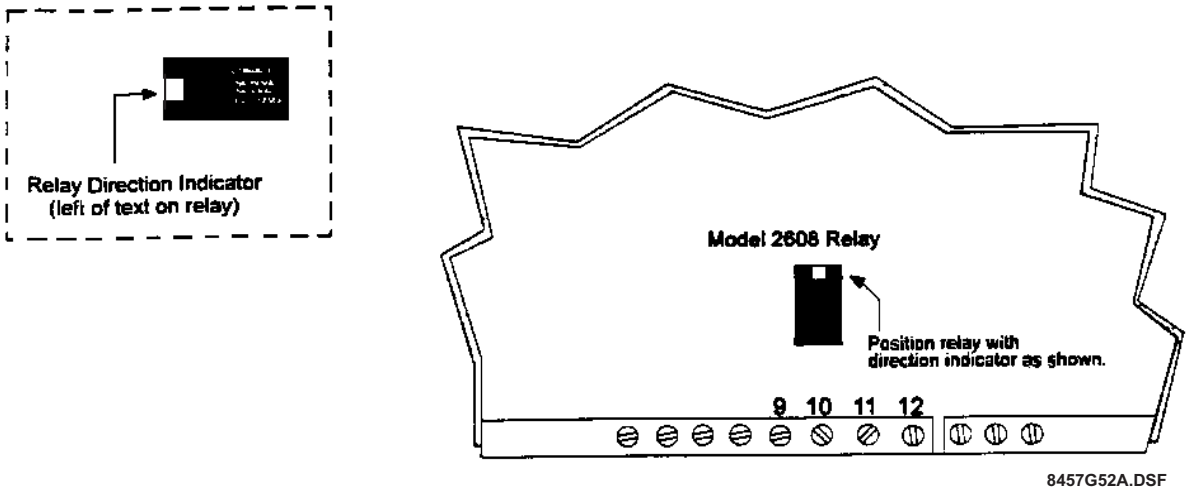

Figure 14: Ground Start Relay (Model 2608) Connection

4.14 4180 Status Display Module Installation

The 4180 is an optional module that can be used to connect the 2615 to a backup reporting device or to annunciate specific types of alarms. The 4180 provides 16 switched outputs, each capable of supplying 12V at 200 mA when on. Four of the outputs can be connected to the relays on the 4180. Additional relays can also be connected. Only one 4180 can be used with the 2615.

IMPORTANT! **If you're using the 4180, Option 3 in Step 2 must be disabled. (This is the "LED Driver" option in the downloading software.)**

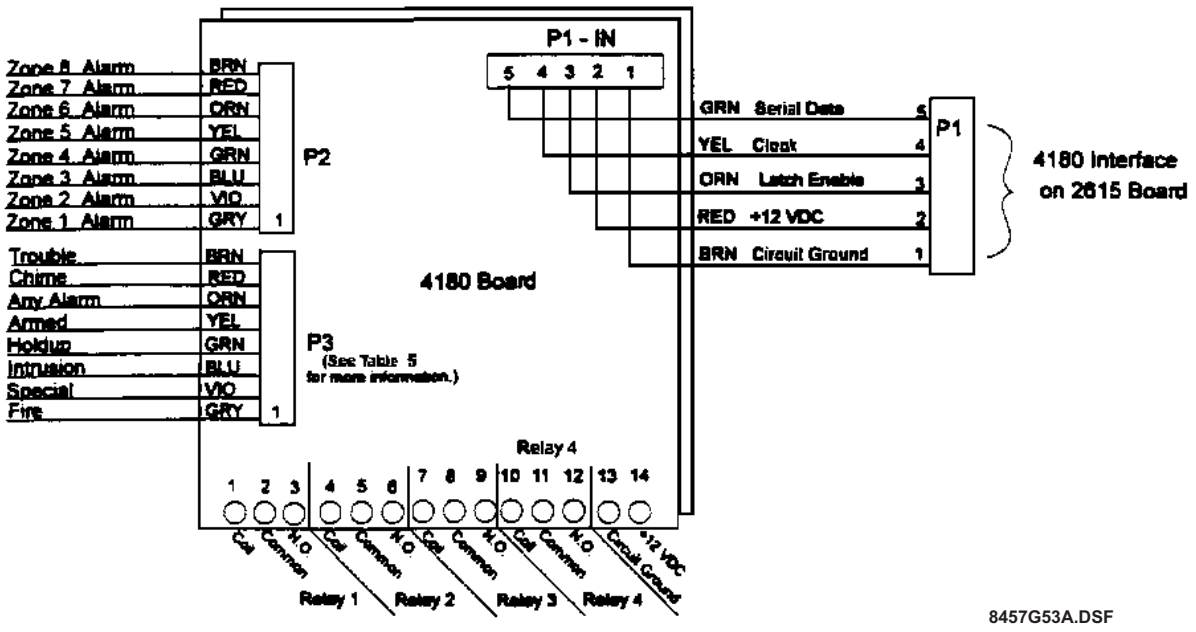

Figure 15: 4810 Board Layout

Table 5: 4180 Connector Descriptions

P3 Pin #	Descriptions
1	Fire alarm: remains on until the user resets it.
2	Special alarm (Panic, Nonmedical emergency, or Auxiliary): remains on until the user resets it.
3	Intrusion alarm (Burglary or Tamper): remains on until the user resets it.
4	Holdup or Duress alarm: remains on only until kiss-off is received from the central station.
5	Armed
6	Any alarm (except Holdup): remains on until the user resets it.
7	Chime (50 ms pulse)
8	Trouble: remains on even if silenced.

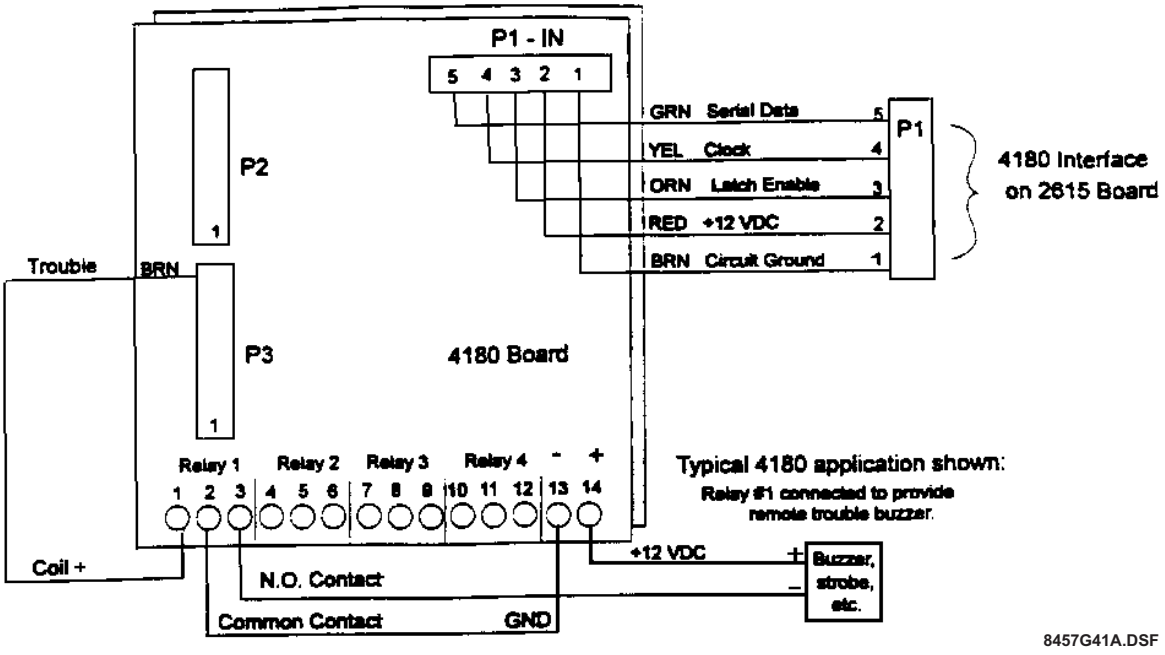

Figure 16: 4180 Typical Application

Section 5: Basic System Operations

5.1 Audible Signals

Table 6: Audible Signals Described

Condition	Touchpad Speaker Sound
Entry warning	Three ascending tones repeated once per second
Exit warning	A high to low two-tone sound repeated once per second
Time-out of program mode warning	A high to low two-tone sound repeated once per second for 60 seconds
Cross Pre-alarm	A constant two-tone alert that sounds only if the Cross Alarm Zones 3 & 4 and Audible Pre-Alarm options were selected in programming. The warning tone will sound for the programmed amount of time in only one of the zones (either Zone 3 or 4) is tripped. If the corresponding zone is tripped during the programmed time period, the tone will switch to an alarm sound. The cross pre-alarm can be reset and silenced by entering a valid user code.
Alarm	A sequence of two alternating tones followed by a pause that repeats every four seconds.
Zone trouble	One beep every four seconds.
Chime zone opened	A low to high two-tone alert that sounds one time when a Chime Zone is opened (if the Chime feature has been enabled).
Chime zone closed	A single high to low two-tone alert that sounds once each time a Chime Zone is closed (if the Chime feature has been enabled).
Door bell	A four-tone sound similar to a door bell.
Touchpad keystroke	Single short beep for a normal (correct) keystroke. A longer beep indicates an incorrect keystroke.
Zone display activated (except silent alarms)	A single beep

Table 6: Audible Signals Described

Alarm Output	Speaker Sound
Fire Alarm This alarm type has the highest priority	High volume, high pitch tone
Emergency or Panic Alarm This alarm type has the second highest priority after fire.	Alternating high/low tone occurs whenever there is an audible (nonmedical) emergency or panic condition.
Intrusion Alarm This alarm type has the third highest priority after fire and emergency.	Rapidly alternating steady high/low pitch sound occurs in a burglary or tampering condition.
Auxiliary or Special Alarm This alarm has the fourth highest priority after fire, emergency, and intrusion.	Alternating high/low rapidly pulsing sound whenever there is an audible emergency (nonmedical), panic, sprinkler, undefined, water, heat, cold, or local auxiliary alarm.
Auxiliary Relay Output	**State of Dry Contact**
Fire Alarm	Steady
Intrusion Alarm	Steady
Any Alarm (except Holdup)	Steady
Any Trouble Condition, Including System Troubles.	Steady, open when trouble is silenced
Entry or Exit Warning, if Audible	Closed during audible tone
Chime	750 ms pulse for violation 500 ms for restore 1 second for doorbell
Holdup or Duress Alarm	Steady until kiss-off is received from central station

5.2 Touchpad Basic Operation

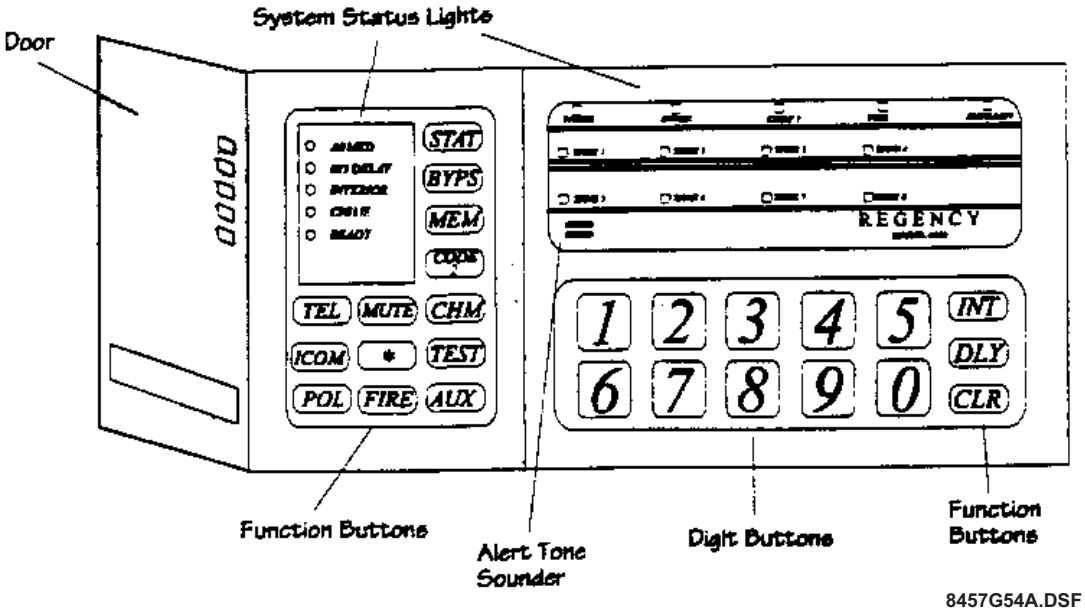

Figure 17: Model 4650 LED Touchpad (Front View)

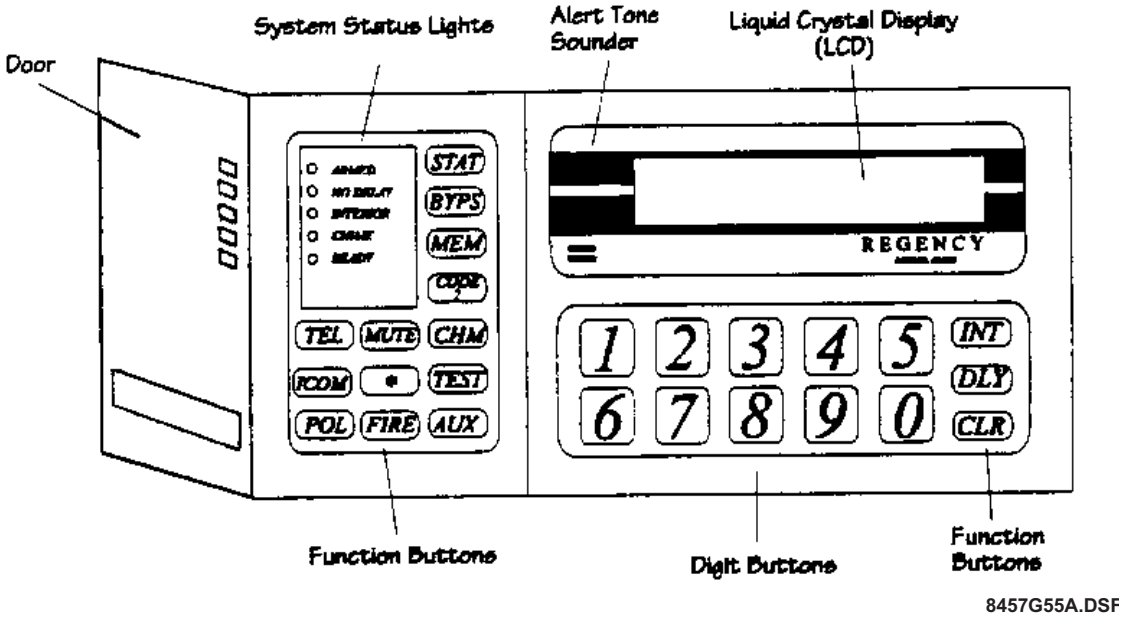

Figure 18: Model 4660R LED Touchpad (Front View)

5.2.1 Touchpad Function Buttons

NOTE *For complete information about end-user functions, refer to the* Model 2615 Owner's Manual *(P/N 150841).*

Table 7: Touchpad Function Buttons

Key	Normal Mode Function
DLY	Toggles zone status between delayed and instant. When the system is armed, if the No Delay LED is on, zones programmed for entry and exit delay will be instant.
INT	Enables/disables Interior feature.
0 - 9	Enter Data; used primarily in Program mode.
STAT	View system status.
BYPS	This key is used to bypass individual zones and to check which zones have been bypassed.
MEM	Displays event memory (system must be disarmed). With a 4660 touchpad, event memory from the previous arming periods display on the LCD. With a 4650 touchpad, the zone LEDs will turn on for any zones that were in alarm during the previous arming period.
CODE 2	Enables/disables the Code 2 feature, allowing secondary access codes (Code 10-19) to disarm the system.
MUTE	Silences audible trouble signals.
CHM	Controls whether or not a chime tone will be generated when someone enters a chime zone while the system is disarmed.
CLR	Erases a mistake made while entering a code or command.
TEST	Conducts a variety of tests (see Section 5.4 for more information).
POL	Police panic key. If enabled through programming, it transmits an alarm to the central station who dispatch the police. This key must be held for one full second.
FIRE	Fire panic key. If enabled through programming, it transmits an alarm to the central station who dispatch the fire department. This key must be held for one full second.
AUX	Auxiliary panic key. If enabled through programming, it transmits an alarm to the central station who dispatch the proper authorities. This key must be held for one full second.

Table 7: Touchpad Function Buttons

Key	Normal Mode Function
TEL **ICOM** **DOOR** *****	These keys are not used by the 2615. In some cases, pressing them causes an error beep.

5.3 Setting Auto Test Time

When the 2615 powers up, you can set the time for the Auto Test. You can also set the time through the System Status feature of the 5540 downloading software.

For Daily Tests:

- You can set the time of the next Auto Test to be from 1-24 hours from the current time.
- You must select the Daily Auto Test option in programming (Step 1). The weekly test option must not be selected.

For Weekly Tests:

- You can set the time of the next Auto Test from 1-99 hours from the current time.
- You must select both the daily and weekly Auto Test options in programming (Step 1).

To Set a Test Time:

1. Press **9 TEST** [Maintenance User's Code].
2. Then the number of hours between now and the time the next Auto Test should occur.
3. Then press **TEST** (see the following examples).

EXAMPLE: Daily Test

Suppose it is currently 2:00 PM and you want to set the Auto Test to occur at 1:00 AM, 11 hours from now.

Press **9 TEST** [the appropriate code] **1 1 TEST**.

EXAMPLE: Weekly Test

Suppose it is currently 2:00 PM on Wednesday and you want the Auto Test to occur at 1:00 AM on Saturday, 59 hours from now.

Press **9 TEST** [the appropriate code] **5 9 TEST**.

5.4 System Testing

ITI recommends weekly testing of the 2615 to ensure complete and proper input and output operation. Make sure your customers are aware of the testing procedures, which are described in the *Model 2615 Owner's Manual* (P/N 150841).

5.4.1 Walk Test

To test sensors and other detection devices, conduct a Walk Test. No alarms will be sent to the dialer when you conduct this test.

1. Make sure the system is disarmed.
2. Press **2 TEST** [Maintenance Code].
3. You are now in Walk Test mode. (If you are using a 4650 LED touchpad, the Bypass LED will begin to flash.) In this mode, tripping any zones will cause a chime tone and an alarm for the tripped zone will display for approximately one second. (On a 4650 LED touchpad the appropriate zone LED will flash.)
4. To exit Walk Test mode, press **MUTE**.

5.4.2 Dialer Test

The steps for conducting a Dialer Test are:

1. Make sure the system is disarmed.
2. Press **0 TEST** [Main User's Code].
3. The dialer will call the central station and report a test code. The Ready LED will flash when the call is in process and stop when the call is complete. An audible alarm signal will be activated for two seconds.

5.4.3 Touchpad/Bell Test

To conduct a test of the touchpads and any signaling devices attached to the system press **1 TEST** [Main User's Code].

5.5 Installer Operations Quick Reference

Table 8 lists the touchpad operations that installers may need to perform.

Table 8: Installer Operations Quick Reference

Function	Press
Dialer Test (also tests touchpads and signaling devices)	**0 TEST** [Maintenance or Main User's Code]
Touchpad/Bell Test (Tests touchpads and signaling devices only.)	**1 TEST** [Main User's Code]
Walk Test	**2 TEST** [Main User's Code]
Rest dialer and smoke detectors	**3 TEST** [Main User's Code]
Reset cross alarm. (You can reset the audible signal that occurs when the first cross alarm goes into alarm.)	Enter a valid code.
Call central station for download	**4 TEST** [Maintenance or Main User's Code]
Enter Program mode, access to all functions.	**6 TEST** [Maintenance Code] OR-- **7 TEST** [Maintenance Code]
Enter Step Program mode, access to secret codes programming only.	**6 TEST** [Main User's Code] OR-- **7 TEST** [Main User's Code]
Set hours until first Auto Test	**9 TEST** [Maintenance or Main User's Code] [# of hours till auto test] **TEST** (See Section 5.3 if you need more information.)

Section 6: Programming

The 2615 can be programmed remotely using the 5540 downloading software (see Section 6.1) or at the customer site using the touchpad (see Section 6.2). All programmable options are described in Section 6.3.

6.1 Downloading

The Model 5540 Downloading Software can be used to program the 2615 from a remote site. Note that Revision 3.8 or later of the 5540 is required.

The downloading software is organized into menus. As you move through the software menus, the screens tell you how to select options.

The 2615 programming options themselves are described in detail in Section 6.3 of this manual. Section 6.3 also tells you on which software menu the options appear. Refer to the *5540 Installation and Operation Manual* (P/N 150639) for complete information about the 5540 software.

6.2 Step Programming

Step programming allows you to program 2615 options directly from the touchpad. The subsections below describe step programming touchpad operations. Section 6.3 describes all programmable options in detail and explains how to make selections.

6.2.1 Touchpad Operation

Some function buttons and LEDs have a different use in Program mode than they do in normal operations.

Keys and Program Mode Use:

STAT	View the step you are currently programming.
MEM	View the sub-step you are currently programming.
BYPS	Use a **SHIFT** key to allow you to, for example, enter numbers larger than 9.
MUTE	Exit Program mode.

LEDs and the Options Being Programmed:

ARMED	Systems options and Code 0.
CODE 2	User access code 1 - 19 (4650 touchpad only).
AUXILIARY	Zone types (including panic keys) (4650 touchpad only).
INTERIOR	Zone input options.
NO DELAY	Timer options (entry/exit delays, etc.).
READY	Dialer options.
ZONE	With a 4650 LED touchpad, Zone LEDs will turn on to indicate that an option has been selected for some sub-steps.

6.2.1.1 Entering Program Mode

When the system is ready (the Ready LED is lit), press **6 TEST** [code]. If you enter Program mode using the Maintenance Code, you will be at Step 1. If you use the main user code, you will be at Step 8 (access code programming).

6.2.1.2 How to Tell Which Step You Are Currently On

Press **STAT** to see what step you are on.
Press **TEST** to return to programming for that step.

Press **MEM** to see what sub-step you are on.
Press **TEST** to return to programming for that sub-step.

6.2.1.3 Moving to a Different Step

Press **TEST** as many times as necessary until you reach the step you want to program. If you are using an LED touchpad where the step number does not display, you can keep track of which step or sub-step you are on by counting the number of times you press **TEST**.

If you are using the Maintenance Code, you can use a shortcut method, if desired. Press **STAT** [the number of the step you want to program] and **TEST**.

EXAMPLE: Jumping to a Step (Maintenance Code Only)

To move to Step 6: Press **STAT 6 TEST**.

6.2.1.4 Moving to a Different Sub-Step

Once you are on the step you want to be on, you can use the **MEM** key to move to a different sub-step. For example, to move to Sub-Step 6, press **MEM 6 TEST**.

6.2.1.5 Entering Data

All programmable data is numeric. (Section 6.3 tells you what are acceptable values for each step). After you enter the new data, press **TEST** to accept the changes.

6.2.1.6 Correcting Errors

If you make a mistake, and have not yet entered the **TEST** key to accept the changes, press **CLR** to erase the data.

If you need to change information that has already been entered, return to the step (as described in Section 6.2.1.3) and enter the correct information.

6.2.1.7 Exiting Program Mode

Press **MUTE** to exit Program mode at any time.

6.3 Programmable Options

Figure 19 shows how this manual describes programmable options. Note that Column 2 shows how to select the option if you are using step programming. If you are using the 5540 software, the program screens tell you to make selections.

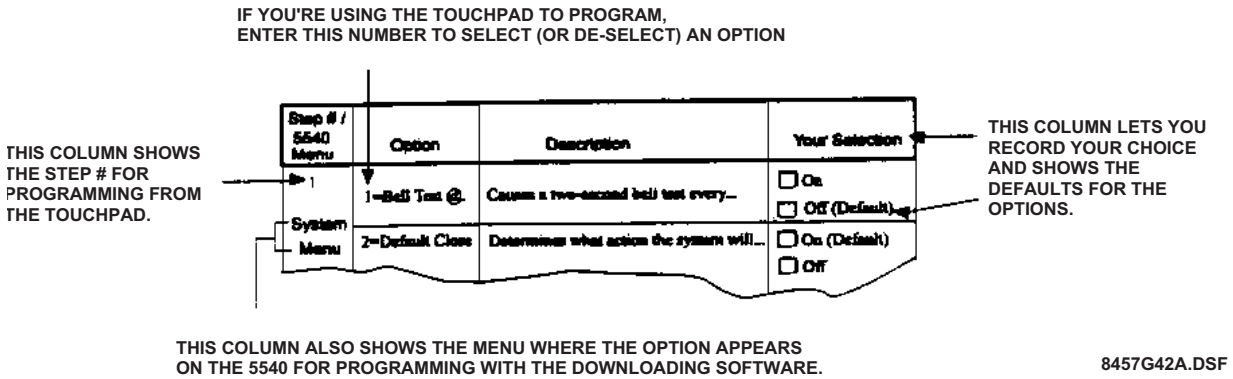

Figure 19: Sample of Making Program Choices (an illustrated explanation of Table 9)

Table 9: Making Programming Choices, Steps 1 through 8

Step # / 5540 Menu	Option	Description	Your Selection
1 System Menu	1= Bell Test @ Reset	Causes a two-second bell test to be generated every time the system is reset.	θ On θ Off (Default)
	2 = Default Close	If this option is selected, system will arm and bypass any not ready zones when timeout occurs.	θ On (Default) θ Off
	3 = Weekly Auto Test	Causes the system to report a weekly test to the central station (test sent every 168 hours). See Section 5.3 for information about how to change the test time at power-up. If this option is used, “4” for Daily Auto Test must also be selected below.	θ On θ Off (Default)
	4 = Daily Auto Test	Causes the system to report a test to the central station every 24 hours. See Section 5.3 for information about how to change the test time at power-up.	θ On θ Off (Default)
	5 = Fast Restores	If this option is selected, the 2615 reports restores as soon as the contact has been set to normal instead of waiting for the end of shutdown time. (If this option is not selected, restores will not be reported until the end of shutdown time.)	θ On θ Off (Default)
	6 = Bell Test @ Arm	Causes a two-second bell test to be generated every time the system is armed.	θ On θ Off (Default)
	7 = Exit Beeps	Enables the warning tone during exit delay.	θ On θ Off (Default)
	8 = Silent Night Trouble	Trouble tones will not be sounded while the panel is armed.	θ On θ Off (Default)

Table 9: Making Programming Choices, Steps 1 through 8

Step # / 5540 Menu	Option	Description	Your Selection
2 System Menu	1 = Auto Interior	When selected, this option will automatically enable the interior zones when the system is armed. The system will not arm unless the interior zones are ready. If the interior zones are subsequently turned off by the user, a Forced Close Report will be generated. (The FORCED CLOSE ID will always be reported as ID # 1, regardless of which ID was previously used to arm.) **Examples:** "CLOSE ID 5" Means User 5 armed with auto-interior. "FORCE CLOSE ID" Means User 5 turned off auto-interior.	θ On θ Off (Default)
	2 = Arm Lock Interior Key	When this option is selected, the **INT** key will be disabled after the system is armed (after the exit delay). This prevents anyone from turning off any interior zones. This option also disables the **DLY** key after the exit delay, making it impossible to change instant zones to delayed zones. If the **DLY** key is accidentally pressed during the exit delay, the exit delay will terminate immediately, all delayed zones will become instant, and the No Delay LED will turn on. To turn off the No Delay LED and return the zones to the delayed condition, it will be necessary to disarm the system, then rearm.	θ On θ Off (Default)
	3 = Reserved for future use	This option is currently not used with the 2615. It must be **disabled** if you are using the 4180 Status Display Module.	Default = off **Do not change**.
	4 = Interior On @ Intrusion Alarm	With this option selected, all interior zones will automatically be enabled when there is an intrusion.	θ On θ Off (Default)

Table 9: Making Programming Choices, Steps 1 through 8

Step # / 5540 Menu	Option	Description	Your Selection
2 (continued) System Menu	5 = Interior Off @ Disarm	If you select this option, the interior zones will be disabled when the system is disarmed.	θ On θ Off (Default)
	6 = Instant if Alarm	This option causes all zones to become instant (that is, not delayed) during the alarm shutdown time, whenever any alarm occurs. The No Delay LED will not turn on, because the zones may revert back to the delayed statues after the bells or sirens shutdown.	θ On θ Off (Default)
	7 = Cross Alarm Zones 3 & 4	When this option is selected Zones 3 & 4 must be in alarm before an alarm report is generated. The Cross Alarm feature is meant to be used only in situations where false alarms are likely to occur. It is not recommended for perimeter use. The Cross Alarm feature would be useful in an application where a PIR (passive infrared) detector is being used in a location that is likely to be activated whenever sunlight falls on it. Cross alarming the PIR zone with a motion detector would be a good way to prevent false alarms in this case. **WARNING! Two windows should never be cross alarmed. If someone broke through one window, there would be no alarm because the second window had not been violated.**	θ On θ Off (Default)
	8 = Audible Pre-Alarm (Cross Alarm)	The Audible Pre-Alarm feature works with the Cross Alarm Zones 3 & 4 feature. If Audible Pre-Alarm and Cross Alarm are both enabled, the touchpad will produce a constant two-tone sound when either Zone 3 or Zone 4 is violated. If both zones are violated, the touchpad generates an alarm tone and reports. You can stop the warning tone by entering a valid user code.	θ On θ Off (Default)

Table 9: Making Programming Choices, Steps 1 through 8

Step # / 5540 Menu	Option	Description	Your Selection
3 System Menu	1 = Swinger Bypass	When this option is selected, the system will automatically bypass any zone that has triggered four alarms within a specified time window. The time window is programmed in Step 11.5.	θ On θ Off (Default)
	2 = Delayed Bypass Report	When this option is selected, the system will not report bypasses to the central monitoring station until the panel is armed. **NOTE** *24-hour zones cannot be delayed.*	θ On θ Off (Default)
	3 = Force Arm	This option causes any Not Ready Zones to be bypassed when the system is armed, it will generate a Forced Close Report.	θ On θ Off (Default)
	4 = Auto Unbypass	When the Auto Bypass feature is enabled, users must enter an access code to bypass or unbypass a zone.	θ On θ Off (Default)
	5 = Bypass Code	When this option is enabled, users must enter an access code to bypass or unbypass a zone.	θ On θ Off (Default)
	6 = All Primary	This option causes all codes to function as primary, including Codes 10 -19, which are normally secondary codes.	θ On θ Off (Default)

Table 9: Making Programming Choices, Steps 1 through 8

Step # / 5540 Menu	Option	Description	Your Selection
4 System Menu	1 = Auxiliary Relay-Fire	Option closes the on-board auxiliary relay to close when a fire alarm occurs.	θ On θ Off (Default)
	2 = Auxiliary Relay-Intru./Tamper	On-board auxiliary relay activates when a zone is violated or when someone tampers with the 2615.	θ On θ Off (Default)
	3 = Auxiliary Relay-Alarm (not holdup)	On-board auxiliary relay activates with any alarm code, except Holdup (Duress).	θ On θ Off (Default)
	4 = Auxiliary Relay-pulse Fire	On-board auxiliary relay output pulses during a fire alarm.	θ On θ Off (Default)
	5 = Auxiliary Relay-Trouble	On-board auxiliary relay activates during a trouble condition; will restore when silenced.	θ On (Default) θ Off
	6 = Auxiliary Relay-Entry/Exit	On-board auxiliary relay activates during an audible entry/exit delay.	θ On θ Off (Default)
	7 = Auxiliary Relay-Chime/Doorbell	On-board auxiliary relay activates during a chime/doorbell.	θ On θ Off (Default)
	8 = Auxiliary relay-Holdup	On-board relay activates during a holdup (or duress) alarm.	θ On θ Off (Default)
5 System Menu	# of Supervised Touchpads	Enter the number of touchpads that should be supervised. Choices are 0 to 3. Selecting 0 means no touchpads will be supervised.	_____ Default = 0
6 System Menu	Duress Trigger Digits	Select the one or two digits that will trigger a duress alarm. In a holdup situation when a user is forced to disarm the system under duress, these two digits can be used to generate a Silent Alarm Report to the central station. If you do not want to use the Duress feature, enter **0 0** or **CLR**.	_____ Default = 00

Table 9: Making Programming Choices, Steps 1 through 8

Step # / 5540 Menu	Option	Description	Your Selection
7 System Menu	Maintenance Code (Code 0)	Assign a secret code to the installer's code (Code 0). The code must be 3- to 6-digits in length.	_____ Default = 123456
8.1 System Menu	Main User's Code (Code 1)	Assign a secret code to the Main User's Code (Code 1). The code must be 3- to 4-digits in length.	_____ Default = blank
8.2 to 8.19 User Access Codes Menu	Codes 2 through 19	Assign a secret code to the users. When assigning secret codes, remember that: 1. Codes cannot begin with the duress trigger digits (if the duress feature is used). 2. A new code must not conflict with an existing one. For example, do not assign a code as "1532" if "153" is already being used. 3. Codes are normally 3- or 4-digits long. 4. 2-digit codes can only arm the system. The digits "01" through "16" cannot be used as codes. 5. A long beep means the new code you attempted to assign was rejected. The most common reason for this is a programming mistake (that is, duplicated code number and so on).	_____ Default =blank

Steps 9.1 to 9.11 are for programming zone options for audible alarm response and zone type. Note that if you are using a 4650 touchpad, the Auxiliary LED will be on while you are programming these options.

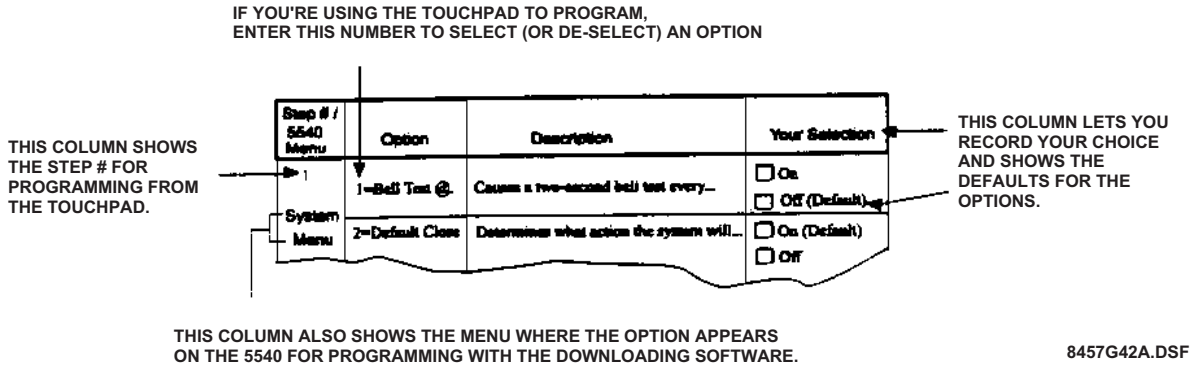

Figure 20: Sample of Making Programming Choices for Step 9 (an Illustrated Explanation of Table 10)

Table 10: Programming Zone Options Described

Digit 1	Audio Response to Alarm
0	Audible alarm with automatic shutdown
1	Silent alarm (no speaker output during alarm)
2	Report delayed. Speaker output is immediate, but the report is delayed.
4	Alarm delayed. No speaker output unless the dialer fails.
8	No alarm shutdown

Table 10: Programming Zone Options Described

Digit 2	Zone Type
0	Holdup: no touchpad display or audible output. This zone type ignores any Digit 1 audio choice.
1	Fire: 24-hour zone; cannot be bypassed. Should not be used with automatic shutdown.
2	Emergency: for nonmedical emergencies.
3	Panic
4	Intrusion
5	Tamper
6	Sprinkler
7	Undefined auxiliary; for special user needs, not defined.
8	Water
9	Heat
Key Combination	**Zone Type**
BYPS 1	Cold
BYPS 2	Local Auxiliary: panel does not dial out.
BYPS 3	No Alarm: used to disable unused panic keys or zones.
BYPS 4	Doorbell: local chime only; not reported.
BYPS 5	Mechanical key input. See Section 3.3 for UL requirements for a mechanical key. A momentary mechanical key zone will arm/disarm as user ID #1. It can also be used at power-up to exit the TEST HRS mode, but if the mechanical key is tripped during a Walk Test or User Code Program mode, it will exit Program mode in the armed state. If this happens, trip the mechanical key again to disarm the system.

Table 11: Making Programming Choices, Step 9

Step # / 5540 menu	Option	Description	Your Selection
9.1 Zones Menu	Zone #1 Options	Digit 1 = Zone #1 Audio Response Digit 2 = Zone #1 Type See Table 10 for choices	___ ___ Default = 81
9.2 Zones Menu	Zone #2 Options	Digit 1 = Zone #2 Audio Response Digit 2 = Zone #2 Type See Table 10 for choices	___ ___ Default = 04
9.3 Zones Menu	Zone #3 Options	Digit 1 = Zone #3 Audio Response Digit 2 = Zone #3 Type See Table 10 for choices	___ ___ Default = 04
9.4 Zones Menu	Zone #4 Options	Digit 1 = Zone #4 Audio Response Digit 2 = Zone #4 Type See Table 10 for choices	___ ___ Default = 04
9.5 Zones Menu	Zone #5 Options	Digit 1 = Zone #5 Audio Response Digit 2 = Zone #5 Type See Table 10 for choices	___ ___ Default = 04
9.6 Zones Menu	Zone #6 Options	Digit 1 = Zone #6 Audio Response Digit 2 = Zone #6 Type See Table 10 for choices	___ ___ Default = 04
9.7 Zones Menu	Zone #7 Options	Digit 1 = Zone #7 Audio Response Digit 2 = Zone #7 Type See Table 10 for choices	___ ___ Default = 04

Table 11: Making Programming Choices, Step 9

Step # / 5540 menu	Option	Description	Your Selection
9.8 Zones Menu	Zone #8 Options	Digit 1 = Zone #8 Audio Response Digit 2 = Zone #8 Type See Table 10 for choices	___ ___ Default = 04
Notes for Panic Key Programming: Steps 9.9 through 9.11 program the three touchpad panic keys. They can be reprogrammed for audio response and zone type according to the options in Table 10. Panic keys are enabled through factory-programming. To disable a panic key, press **BYPS 3**. Panic keys do not report restores.			
9.9 Zones Menu	**FIRE** panic key	Digit 1 = Audio response for touchpad **FIRE** key Digit 2 = Zone type for **FIRE** key (typically this is an emergency zone type) See Table 10 for choices	___ ___ Default = 01
9.10 Zones Menu	**AUX** panic key	Digit 1 = Audio response for touchpad **AUX** key Digit 2 = Zone type for **AUX** key (typically this is an emergency zone type) See Table 10 for choices	___ ___ Default = 02
9.11 Zones Menu	**POL** panic key	Digit 1 = Audio response for touchpad **POL** key Digit 2 = Zone type for **POL** key (typically this is a panic zone type) See Table 10 for choices	___ ___ Default = 03

For Steps 10.1 through 10.11, enter the zone number for each zone that should have the option. The Interior LED will be on when you program zone input options.

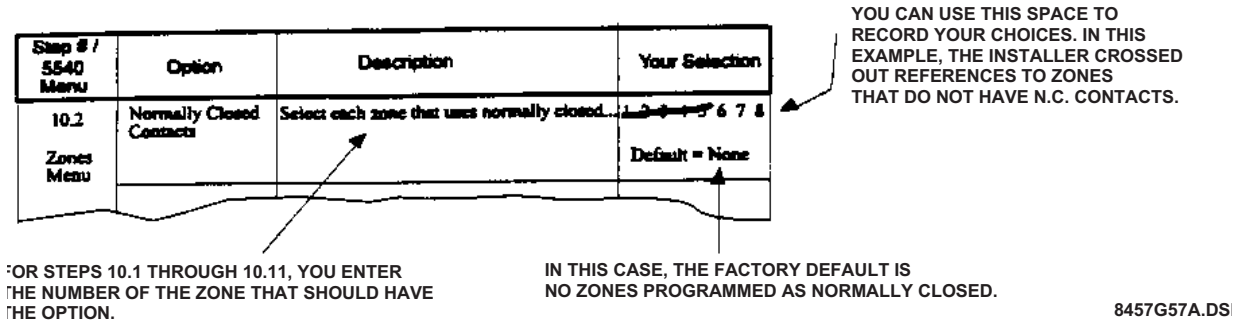

Figure 21: Sample of Making Programming Choices for Steps 10 through 18 (an illustrated explanation of Table 12)

Table 12: Making Programming Choices for Steps 10 through 18

Step # / 5540 menu	Option	Description	Your Selection
10.1 Zones Menu	Normally Open Contacts	Select each zone that uses normally open contacts. **NOTE** *Normally open contacts do not close when a door or window is closed.*	1 2 3 4 5 6 7 8 Default = All zones
10.2 Zones Menu	Normally Closed Contacts	Select each zone that uses normally closed contacts. All N.C. zones require Model 7628 4.7K ohm end-of-line resistor.	1 2 3 4 5 6 7 8 Default = All zones

Table 12: Making Programming Choices for Steps 10 through 18

Step # / 5540 menu	Option	Description	Your Selection
10.3 Zones Menu	Supervised (24-Hour or Day Trouble)	Select zones that will be supervised 24 hours a day. All supervised zones require Model 7628 4.7K EOL resistor. If N.O. zone is supervised, it is a 24-hour trouble zone. The 24-hour loop response is always 2-4 seconds. The trouble condition will be restored when the loop is restored. Normally open fire zones should be supervised. If a N.C. zone is supervised, it is a day trouble zone, Day trouble zones remain latched until the **MUTE** key is pressed. Trouble conditions report immediately. **NOTE** *24-hour trouble zones do not latch or bypass, nor are they inhibited from detecting trouble conditions while reporting to the central station. It is important to repair a trouble condition as soon as possible to prevent it from being reported repeatedly and tying up phone lines.*	1 2 3 4 5 6 7 8 Default = All zones
10.4 Zones Menu	24-Hour Alarm	Select zones that can cause an alarm whether the system is armed or disarmed.	1 2 3 4 5 6 7 8 Default = 1
10.5 Zones Menu	Fast Response	Select zones that should respond in 30 milliseconds. If this option is not selected, zones will respond in 100 milliseconds.	1 2 3 4 5 6 7 8 Default = None
10.6 Zones Menu	Interior	Select any zones that will be used as interior zones. Interior zones can be enabled and disabled using the **INT** key.	1 2 3 4 5 6 7 8 Default = None

Table 12: Making Programming Choices for Steps 10 through 18

Step # / 5540 menu	Option	Description	Your Selection
10.7 Zones Menu	Chime	Select zones that will have a chime sound when the system is disarmed and someone enters the zone. This feature is typically used for exterior doors. To toggle the chime sound on and off, press **CHM**.	1 2 3 4 5 6 7 8 Default = None
10.8 Zones Menu	Exit Delay	Select any zones that will have a delay to allow for persons to exit after arming. Remember to select any interior zones that are in the exit/entry pathway. Interior zones automatically become interior follower zones if programmed for exit delay.	1 2 3 4 5 6 7 8 Default = None
10.9 Zones Menu	Entry Delay 1	An entry delay period allows a person to enter a building long enough to disarm the system without generating an alarm. The 2615 can be programmed for two separate delay periods. Program the zones that will use the first entry delay in this step. The duration of the delay is programmed in Step 11.3.	1 2 3 4 5 6 7 8 Default = None
10.10 Zones Menu	Entry Delay 2	If two separate entry delays will be used, program the second entry in this step. The duration of the delay is programmed in Step 11.4.	1 2 3 4 5 6 7 8 Default = None
10.11 Zones Menu	Bypassable	Select each zone that you want to be able to bypass. Zone programmed as “Fire” should not be bypassable.	1 2 3 4 5 6 7 8 Default = 2-8
11.1 Timers & Dialers Menu	Bell Shutdown	This step programs the number of minutes that high volume audible alarms will be active. Range is 1-42 minutes. Minimum is 4 minutes in UL installations.	___ ___ Default = 15
11.2 Timers & Dialers Menu	Exit Delay	This step programs the duration of the exit delay. Range is 1-255 seconds. (Must not exceed 60 seconds in UL installations.) Exit delay is enabled in Step 10.8.	___ ___ Default = 30

Table 12: Making Programming Choices for Steps 10 through 18

Step # / 5540 menu	Option	Description	Your Selection
11.3 Timers & Dialers Menu	Entry Delay 1	This step programs the duration of Entry Delay 1. Range is 1-255 seconds. (Must not exceed 45 seconds in UL installations.) Entry delay 1 is enabled in Step 10.9.	___ ___ Default = 30
11.4 Timers & Dialers Menu	Entry Delay 2	This step programs the duration of Entry Delay 2. Range is 1-255 seconds. (Must not exceed 45 seconds in UL installations.) Entry delay 2 is enabled in Step 10.10.	___ ___ Default = 60
11.5 Timers & Dialers Menu	Swinger Window	Enter the duration of the time window for the Swinger Bypass option. Range is 1 to 24 hours. If this option is selected, the Swinger Bypass feature must be selected in Step 2.	___ ___ Default = 4
11.6 Timers & Dialers Menu	Alarm Report Delay	Enter the number of seconds that the system should delay before sending an alarm report. Range is 1-255 seconds.	___ ___ Default = 15
11.7 Timers & Dialers Menu	Cross Alarm Delay	Enter the number of seconds for cross alarm. Range is 1-255 seconds. (Cross-alarm is selected in Step 2. See Step 2 if you need more information about this feature.)	___ ___ Default = 30
12 Timers & Dialers Menu	1 = Retry if Fail	If this option is selected, the 2615 will try to report a second time if it fails after its maximum number of attempts. The second attempt will begin is 15 minutes after the first attempt has failed.	θ On θ Off (Default)
Phone Numbers Menu	4 = Ground Start	Select this option is you are using a ground start telephone network. This option requires a Model 2608 Relay. **NOTE** *The ground start option cannot be used in UL installations.*	θ On θ Off (Default)

Table 12: Making Programming Choices for Steps 10 through 18

Step # / 5540 menu	Option	Description	Your Selection
Timers & Dialers Menu	6 = Answer Ring	Select this option is you want the central station computer to call the 2615 and download in the same call. If you do not select this option, the 2615 waits until the phone stops ringing, then dials up the computer.	θ On (Default) θ Off
Timers & Dialers Menu	7 = Store OP/CL	Stores opening and closing reports until the buffer is full or until another event that must be reported (Auto Test, Alarm, Trouble, and so on) comes in. All events sent in one call.	θ On θ Off (Default)
Timers & Dialers Menu	8 = Up/Downloading Used	When the 2615 receives a signal indicating that the central station wishes to download data, the 2615 will dial the computer phone number and use the Computer Acct #. If you are using the touchpad to program, the computer phone number is programmed in Step 19.3 and the computer account number is programmed in Step 20.3.	θ On (Default) θ Off
13 Timers & Dialers Menu	Total Attempts	Enter the total number of times the 2615 will try to dial both central station phone numbers, Choices are 0-10. You must use at least five (5) attempts in a UL installation. **NOTE** *Selecting 0 attempts will make the system local only (no reports), which can be useful for testing.*	___ ___ Default = 5
14 Timers & Dialers Menu	Fail Attempts	Program the number of attempts before a dialer-failed signal occurs. Choices are 1-10.	___ ___ Default = 5

Table 12: Making Programming Choices for Steps 10 through 18

Step # / 5540 menu	Option	Description	Your Selection
15 Timers & Dialers Menu	AC Loss Hours	Enter the number of hours that the AC power must be off before a loss of AC report is generated. Choices are 2-12. UL installations must select a number between 6 and 12.	___ ___ Default = 2
16 Timers & Dialers Menu	# Rings	If the downloading software is used, this option will determine the number of times the phone will ring before the 2615 will answer the call. Choices are 2-10. Choose “0” if downloading is not used or if you do not want the panel to answer.	___ ___ Default = 10
17 Timers & Dialers Menu	1 = Must Report to #1	If this option is selected, reports must go to Central Station Phone #1. This means the system continues to try Phone #1 even of it has successfully reported to Phone #2.	θ On θ Off (Default)
	2 = Must Report to #2	If this option is selected, reports must go to Central Station Phone #2. This means the system continues to try Phone #2 even of it has successfully reported to Phone #1.	θ On θ Off (Default)
	5 = TouchTone Phone Used	If this option is selected, calls will be dialed alternately in TouchTone and rotary, If this option is not selected, all will use rotary dialing.	θ On θ Off (Default)
	7 = Use TouchTone Phone Only	If this option is selected, all calls will be dialed using TouchTone. The dialer will not alternate between TouchTone and rotary. If this option is used, 5 must be selected in this step (see above) to enable TouchTone dialing.	θ On θ Off (Default)

Table 12: Making Programming Choices for Steps 10 through 18

Step # / 5540 menu	Option	Description	Your Selection
18.1 Timers & Dialers Menu	1 = Report Alarm to #1	If this option is selected, alarms will be reported to Central Station Phone #1.	θ On (Default) θ Off
	2 = Report Trouble to #1	If this option is selected, trouble conditions will be reported to Central Station Phone #1.	θ On (Default) θ Off
	3 = Report Bypass to #1	If this option is selected, bypassed zones will be reported to Central Station Phone #1.	θ On θ Off (Default)
	4 = Report Restores to #1	If this option is selected, restored zones will be reported to Central Station Phone #1.	θ On θ Off (Default)
	5 = Report Open-Reset to #1	If this option is selected, reports to Central Station Phone #1 will occur whenever the panel is disarmed from an alarm condition.	θ On (Default) θ Off
	6 = Report Open/ Close to #1	If this option is selected, open and close reports will be reported to Central Station Phone #1. If you select this option, you must also select Report Open Reset (Option 5) in this step.	θ On θ Off (Default)
	7 = Report Tests to #1	If this option is selected, test reports will be sent to Central Station Phone #1.	θ On (Default) θ Off

Table 12: Making Programming Choices for Steps 10 through 18

Step # / 5540 menu	Option	Description	Your Selection
18.2 Timers & Dialers Menu	1 = Report Alarm to #2	If this option is selected, alarms will be reported to Central Station Phone #2.	θ On θ Off (Default)
	2 = Report Trouble to #2	If this option is selected, trouble conditions will be reported to Central Station Phone #2.	θ On θ Off (Default)
	3 = Report Bypass to #2	If this option is selected, bypassed zones will be reported to Central Station Phone #2.	θ On θ Off (Default)
	4 = Report Restores to #2	If this option is selected, restored zones will be reported to Central Station Phone #2.	θ On θ Off (Default)
	5 = Report Open-Reset to #2	If this option is selected, reports to Central Station Phone #2 will occur whenever the panel is disarmed from an alarm condition.	θ On θ Off (Default)
	6 = Report Open/ Close to #2	If this option is selected, open and close reports will be reported to Central Station Phone #2. If you select this option, you must also select Report Open Reset (Option 5) in this step.	θ On θ Off (Default)
	7 = Report Tests to #2	If this option is selected, test reports will be sent to Central Station Phone #2.	θ On θ Off (Default)

Table 13: Making Programming Choices for Steps 19 through 20

Step # / 5540 menu	Option	Description	Your Selection
19.1 Phone Numbers Menu	Phone #1	Enter Central Station Phone #1. Up to 16 digits. See the footnote below for more information.	_____ (Default = blank)
19.2 Phone Numbers Menu	Phone #2	Enter Central Station Phone #2. Up to 16 digits. See the footnote below for more information.	_____ (Default = blank)
19.3 Phone Numbers Menu	Computer Phone #	Enter the number the 2615 will call for downloading. Up to 16 digits. See the foot-note below for more information.	_____ (Default = blank)
20.1 Phone Numbers Menu	Account #1	Program the central station's account #1. Enter 3- to 6-digits, depending on the reporting format used.	_____ (Default = 2615)
20.2 Phone Numbers Menu	Account #2	Program the central station's account #2. Enter 3- to 6-digits, depending on the reporting format used.	_____ (Default = 2615)
20.3 Phone Numbers Menu	Computer Account #	Program a 3- to 6-digit account number for The downloading computer.	_____ (Default = 2615)
Notes for Steps 10 - 20	All telephone numbers can be up to 16 digits long. The following special characters/features can be included in a phone number: *Character/Feature* — *If you're using a touchpad, press....* 2-second pause — **BYPS 1** (on an LCD touchpad, the display shows "A") * (asterisk) — **BYPS 2** (on an LCD touchpad, the display shows "B") # (number or pound symbol) — **BYPS 3** (on an LCD touchpad, the display shows "C") Wait for Second Dial Tone — **BYPS 4** (on an LCD touchpad, the display shows "D")		

Table 14: Making Programming Choices for Steps 21 through 26

Step # / 5540 menu	Option	Description	Your Selection
21.1 Phone Numbers Menu	Attempts/Reporting Format for Phone Number #1	1st digit = Number of dial attempts to Phone #1 before switching to Phone #2. Range is 0-15 attempts. To enter a number larger than 9, use: 10 = **BYPS 1** (on an LCD touchpad, the display shows “A”) 11 = **BYPS 2** (on an LCD touchpad, the display shows “B”) 12 = **BYPS 3** (on an LCD touchpad, the display shows “C”) 13 = **BYPS 4** (on an LCD touchpad, the display shows “D”) 14 = **BYPS 5** (on an LCD touchpad, the display shows “E”) 15 = **BYPS 6** (on an LCD touchpad, the display shows “F”) 2nd digit = Reporting format for Phone #1. Choices are: 0 = SIA 8 1 = FSK 1 2 = Not used. Do not select. 3 = BFSK 1400 Hz 4 = BFSK 2300 Hz 5 = SIA20 6 = SK 4+2 7 = SESCOA 4+2	___ ___ Default = 10

Table 14: Making Programming Choices for Steps 21 through 26

Step # / 5540 menu	Option	Description	Your Selection
21.2 Accounts Menu	Attempts/Reporting Format for Phone Number #2	1st digit = Number of attempts Phone #2 will make before switching to Phone #1. See Step 21.1 for more information. 2nd digit = Reporting format for phone number #2. See Step 21.1 for more information.	___ ___ Default = 15
22 Accounts Menu	Not Used	Step 22 is not used by the 2615	No selection
23.1 Accounts Menu	4 = Direct Line for Account #1	This option causes the panel to ignore a dial tone and dial out. Useful in installations where phone systems do not use a normal dial tone.	θ On θ Off (Default)
23.2 Accounts Menu	4 = Direct Line for Account #2	See Step 23.1	θ On θ Off (Default)
24 Accounts Menu	Smoke Verify	Use this step to select zones that will have a smoke verification delay. If an alarm occurs in a zone selected as a smoke verify, the panel will not automatically go into alarm unless the zone is still tripped after the programmed number of seconds. (Number of seconds for smoke verification is programmed in Step 25.)	1 2 3 4 5 6 7 8 Default = None
25 Timers Menu	Smoke Verify Time	Enter the number of seconds for smoke verification. Range is 1-255 seconds. (Smoke verify feature is enabled at Step 24.) **NOTE** *Do not select zero.*	___ ___ Default = 30

Table 14: Making Programming Choices for Steps 21 through 26

Step # / 5540 menu	Option	Description	Your Selection
26 System Menu **AVAILABLE WITH REV. D (or later) OF 2615 SOFTWARE**	Bell Cadence and Type	Use this step to choose whether the audio will be a speaker or a bell, and whether it will be cadenced or steady. First digit = Enter “1” to select steady audio; “0” to select cadenced audio. Second digit = Enter “1” to select a bell; “0” to select a speaker. **NOTE** *In the 5540 Downloading Software, these options appear in the System Menu and are called “Bell Type” and “Bell Output.”*	___ ___ Default = 00

Section 7: Troubleshooting

7.1 Terminal Voltages

To verify the nominal voltages on the input and output terminals, connect the black (-) lead of the voltameter to ground (Terminal 3). Probe each terminal with the red (+) lead of the meter, taking care not to short-circuit terminals with the meter lead. Compare the voltages (VDC) you read with those listed in Table 2 in Section 4.5.

7.2 Common Errors or Failures

- Touchpad bus trouble if touchpads lines are crossed.
- Missing ring detector.
- Missing end-of-line resistors.
- Attempts to program while the dialer is active.

7.3 Viewing Trouble Conditions

Table 15: How to View Trouble Conditions

Trouble Type	Touchpad Type	Trouble Indicator	Press
Zone Troubles	4650 LED	The zone LED for the in trouble zone turns on. (The Power LED does not flash.)	NA
	4660 LCD	LCD displays “TROUBLE” on the first line, the number of zones in trouble on the second line. If the LCD displays “MUTED,” press **STAT** to view zones in trouble.	

Table 15: How to View Trouble Conditions

Trouble Type	Touchpad Type	Trouble Indicator	Press
System Troubles	4650 LED	Power LED flashes	Press **1 STAT** Zone 3 LED = Data lost Zone 4 LED = Dialer failed Zone 5 LED = Low battery Zone 6 LED = AC trouble Zone 7 LED = Phone line trouble
	4660 LCD	LCD displays "TROUBLE" on the first line, "(more)" on the second line.	Press **1 STAT** Zone 3 LED = Data lost Zone 4 LED = Dialer failed Zone 5 LED = Low battery Zone 6 LED = AC trouble Zone 7 LED = Phone Line trouble
Touchpad Troubles	4650 LED	Power LED flashes	Press **2 STAT** Zone 1 LED = Touchpad 1 trouble Zone 2 LED = Touchpad 2 trouble Zone 3 LED = Touchpad 3 trouble
	4660 LCD	LCD displays "TROUBLE" on the first line, "(more)" on the second line.	Press **2 STAT** The number of the touchpad in trouble displays on the LCD.

Section 8: Reporting

The 2615 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 2615.

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; this helps personnel determine what condition is being reported for a particular zone.*

Table 16: Reporting Formats, Described

Format	Description
SAI8	Security Industry Association standard. Used with Regency Model 9000 Digital Alarm Receiver and Model 9004 or Model 9004I SIA Line Card.
SAI20	Security Industry Association standard. Used with Regency Model 9000 Digital Alarm Receiver, with a Model 9004I SIA Line Card and a 9200 CPU card, Revision E.
FSK81	High-speed, sing-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 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 can send a 2300-Hz acknowledgment tone. Uses a 3-digit account number.

The tables in the subsections that follow show the digits that are transmitted for each event reported by the 2615 Dialer and the message that is printed if the central station uses the Regency Model 9000 receiver. A separate table is shown for each format.

8.1 SIA Formats

Column 2 of Table 17 shows the digits transmitted in the SIA formats. The first character of the code of the ASCII character that represents the event type. The second character represents the event type. Column 3 shows the English language message that prints at the central station. Regency has two SIA formats, SIA8, and SIA20. SIA8 can send eight events per call; SIA20 can send 20 events per call.

Table 17: SIA Format

Event	Digits Transmitted	9000 Printout
Low AC	AT 0	AC TROUBLE
Restore AC	AR 0	AC RESTORE
Forced close by user #	CF 0-19	FORCED CLOSE ID 0-19
Close by user #	CL 0-19	CLOSE ID 0-19
Memory trouble (EEPROM may be corrupted)	ET 7	EXPANSION TROUBLE 7
Control trouble	ET 8	EXPANSION TROUBLE 8
Touchpad trouble 1-3	ET 17-19	EXPANSION TROUBLE 17-19
Touchpad restore 1-3	ER 17-19	EXPANSION RESTORE 17-19
Open by user #	OP 0-19	OPEN ID 0-19
Alarm reset by user #	OR 0-19	OPEN REST ID 0-19
Auto test	RP 0	AUTO TEST
Manual test by user #	RX 0-19	MANUAL TEST ID 0-19
Previous (lost) data failed to report	RT 0	DATA LOST 0
Low battery	YT 0	BATTERY TROUBLE
Restore battery	YR 0	BATTERY RESTORE
Duress alarm	HA 0	HOLDUP ALARM
The **FIRE**, **AUX**, and **POL** keys can be programmed for any type of zone. The default values are shown below:		
FIRE key	FA 81	FIRE ALARM 81
AUX Key	QA 82	EMERGENCY ALARM 82
POL Key	PA 83	PANIC ALARM 83

Table 17: SIA Format

Event	Digits Transmitted	9000 Printout
The first letter that will be transmitted for each zone type is shown below: H = Holdup F = Fire P = Panic B = Burglary T = Tamper S = Sprinkler W = Water K = Heat Z = Cold U = Undefined Q = Emergency **NOTE** *In the zone types shown below, "burglary" is used as an example.*		
Alarm zone #	(B)A 1-8	(BURGLARY) ALARM 1-8 See above note.
Alarm restore zone # (SIA20 only)	(B)H 1-8	(BURGLARY) ALARM RSTR 1-8 See above note.
Trouble zone #	(B)T 1-8	(BURGLARY) TROUBLE 1-8 See above note.
Trouble restore zone #	(B)J 1-8	(BURGLARY) TROUBLE RSTR 1-8 See above note.
Restore (alarm or trouble) (SIA8 only)	(B)R 1-8	(BURGLARY) RESTORE 1-8 See above note.
Bypass zone #	(B)B 1-8	(BURGLARY) SHUNTED 1-8 See above note.
Unbypass zone #	(B)U 1-8	(BURGLARY) SHUNT RESTORE 1-8 See above note.

8.2 FSK and 4+2 Formats

Regency's FKS and 4+2 formats transmit a 4-digit account number and a 2-digit alarm code. In these formats, the dialer transmits two digits. The first digit represents the event type; the second digit represents the least significant digit of the ID number. The Model 9000 can be programmed to print either the two digits of the English message shown in Column 3.

Table 18: FSK and 4+2 Formats

Event	Digits Transmitted/ 9000 Printout Format 6 (9032 Line Card)	9000 Printout Format 0 (9002 Line Card)
Fire alarm zone 1-8	01 - 08	ALARM 01 - ALARM 08
Trouble zone 1-8 (Non-intrusion type)	61 - 68	TROUBLE 01 - TROUBLE 08
Trouble restore zone 1-8 (Non-intrusion type)	71 - 78	RESTORE 01 - RESTORE 08
Trouble zone 1-8 (Intrusion type)	61	TROUBLE 01
Trouble restore zone 1-8 (Intrusion type)	21	ALARM RESTORE 01
Intrusion alarm zone 1-8	11 - 18	ALARM 11 - ALARM 18
Alarm restore zone 1-8	21 - 28	ALARM RESTORE 11 -18
Bypass zone 1-8 (Intrusion type only)	51 - 58	SHUNTED 11 - 18
Unbypass zone 1-8 (Intrusion type only)	21 - 28	ALARM RESTORE 10
Bypass zone 1-8 (Non-intrusion type)	50	SHUNTED 10
Bypass restore zone 1-8 (Non-intrusion type)	20	ALARM RESTORE 11 - 18
Closing by user 0-19	40 - 49	CLOSE ID 00 - CLOSE ID 09
Opening by user 0-19	90 - 99	OPEN ID 00 - OPEN ID 09
Manual test or Auto test	60	TEST
Expansion trouble (any)	63	EXPANSION TROUBLE

Table 18: FSK and 4+2 Formats

Event	Digits Transmitted/ 9000 Printout Format 6 (9032 Line Card)	9000 Printout Format 0 (9002 Line Card)
Expansion restore (any)	37	EXPANSION RESTORE
Low battery	69	LOW BATTERY
Battery restore	79	BATTERY RESTORE
Loss of AC	60	AC TROUBLE
AC restore	60	AC RESTORE
Data lost (previous data failed to report)	69	DATA LOST
Phone line trouble	61	PHONE TROUBLE 01
Phone line restore	65	PHONE RESTORE 01

8.3 Radionics BFSK Format

In the BFSK format, the 2615 transmits the event shown in Column 1 of Table 20, using a 5-digit code in which the digits represent the following:

Table 19: BFSK Codes Described

Digit #	Description
1st	Alarm zone 1-8 or function code B-F
2nd - 4th	3-digit account code
5th	Status flags used to distinguish bypass from trouble
6th	ID 0-F (or blank)
7th	Listen time (used to indicate that the central station can listen in)
8th	Zone flags used to identify fire zones

Table 20: 9000 Printout for Radionics BFSK Format

Event	9000 Printout
Fire alarm zone 1-8	ALARM 01 - ALARM 08
Trouble zone 1-8	TROUBLE 01 - TROUBLE 08
Trouble restore zone 1-8	RESTORE 01 - RESTORE 08
Intrusion alarm zone 1-8	ALARM 01 - ALARM 08
Alarm restore zone 1-8	RESTORE 01 - RESTORE 08
Bypass zone 1-8	TROUBLE 01 - TROUBLE 08 FORCED ARM
Unbypass zone 1-8	RESTORE 01 - RESTORE 08
Closing by user 0-19	CLOSE ID 00 - CLOSE 09
Opening by user 0-19	OPEN ID 00 - OPEN ID 09
Manual test by user 0-19	RESTORE 0E
Expansion trouble (any)	TROUBLE 0D
Expansion restore (any)	RESTORE 0D
Low battery	TROUBLE 09
Loss of AC	TROUBLE 00
AC restore	RESTORE 00
Low battery restore	RESTORE 09
Data lost	RESTORE 09
Phone line trouble	TROUBLE 0B
Phone line restore	RESTORE 0B
Holdup/Duress	ALARM 09

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