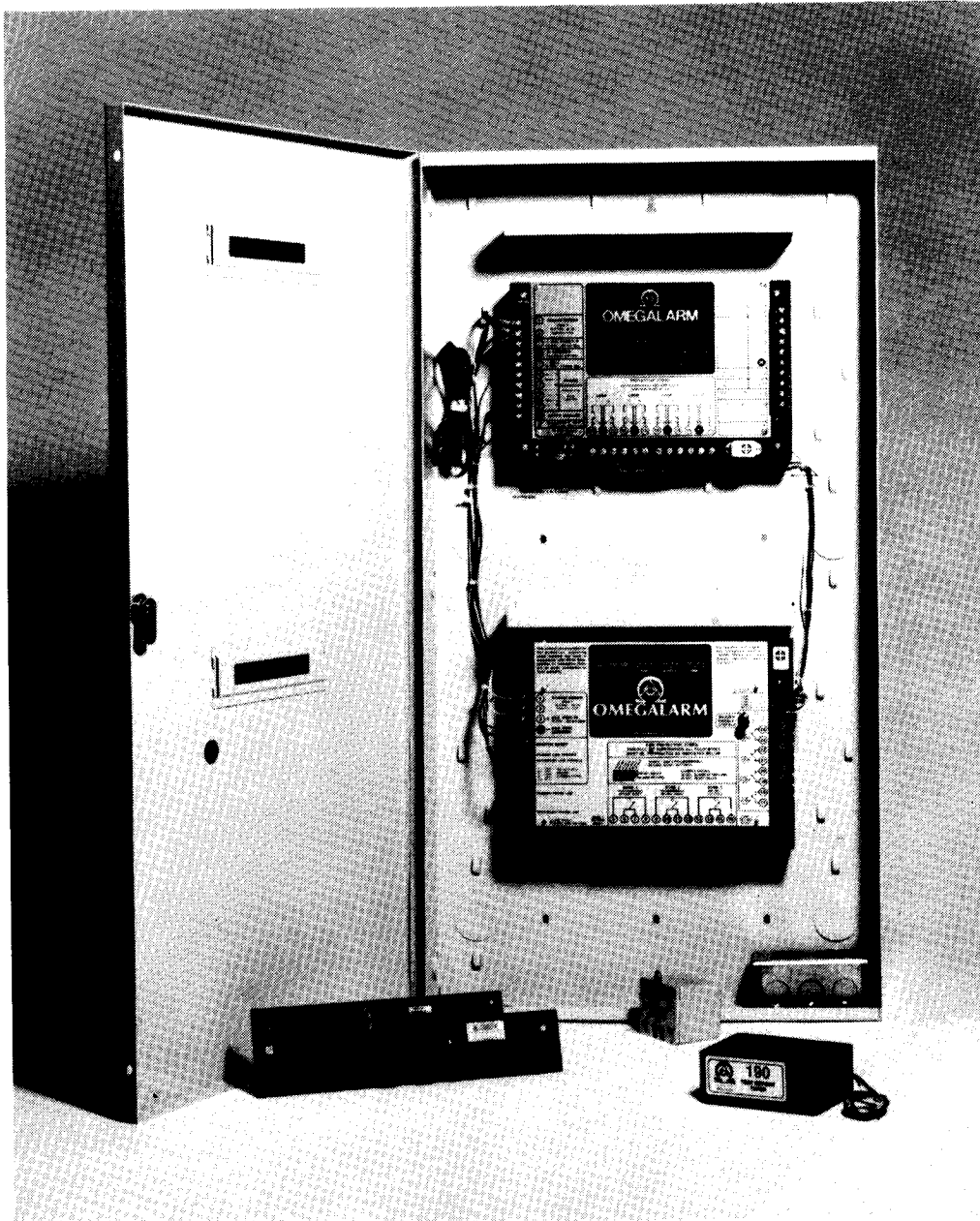




4013/8013 Central Station Signaling Fire Alarm Control (Digital Alarm Communicator Transmitter)



With special instruction for UL Listed installations

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1. GENERAL DESCRIPTION

1.1 EQUIPMENT REQUIRED — The Omegalarm 4013/8013 is a Fire Alarm Control Panel and a Central Station Digital Report Transmitter primarily designed for commercial application. The basic unit includes:

- 1 — Model 1300 Class A Fire Zone Adaptor
- 1 — Model 4012 or 8012 Communicator
- 1 — Model 1200 Expansion Board
- 1 — Model 190 Test Report Timer
- 1 — Model 1620 (16 VAC 20 VA) Class 2 Transformer
- 1 — Electrical outlet with receptical box and coverplate
- 3 — Factory installed wiring harnesses
- 1 — Steel control cabinet with locking door

Additional equipment required for installation but ordered separately:

- 1 — Model 126 (12 VDC 6 AH) Rechargeable Battery
- 2 — Model 161 Fully Modular Phone Cords
- 1 — Model 145 Remote Annunciator or 151/152 Arming Station

Accessory equipment required for special applications:

- 1 — Model 191 Ground Start Module
- 1 — Model 248 Power Supply Module

1.2 4013/8013 INSTALLATION INSTRUCTIONS — This manual covers the operation and installation of the 1300 Fire Zone Adaptor and a brief outline of programming entries for the 4012/8012 Communicator and the 1200 Expansion Board as they apply to a Fire Alarm Reporting System. Complete programming instructions are contained in Manual #74-01665 supplied with the 4012/8012 and Manual #74-01973 supplied with the 1200.

1.3 APPLICABLE STANDARDS PUBLICATIONS — Various accessories, detection and warning devices can be used with the 4013/8013 as the installation requires. All equipment must be installed by skilled professionals in accordance with the National Fire Prevention Association Standard 71 and UL Standard 864. For a copy of these and other related publications contact:

National Fire Protection Association
Batterymarch Park
Quincy, MA 02269

Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062

Factory Mutual
1151 Boston Providence Turnpike
Norwood, MA 02062

1.4 TESTING AND MAINTENANCE — Regular maintenance and frequent testing is essential to insure continuous reliable operation of any alarm system. NFPA 71 requires the installing company or central station to offer the user a maintenance contract, and to instruct the user in the proper use of the system. All testing procedures must be in compliance with NFPA standards and meet the requirements of the authority having jurisdiction.

NOTE: The authority having jurisdiction is defined as the person or agency responsible for acceptance or approval of the fire alarm installation.

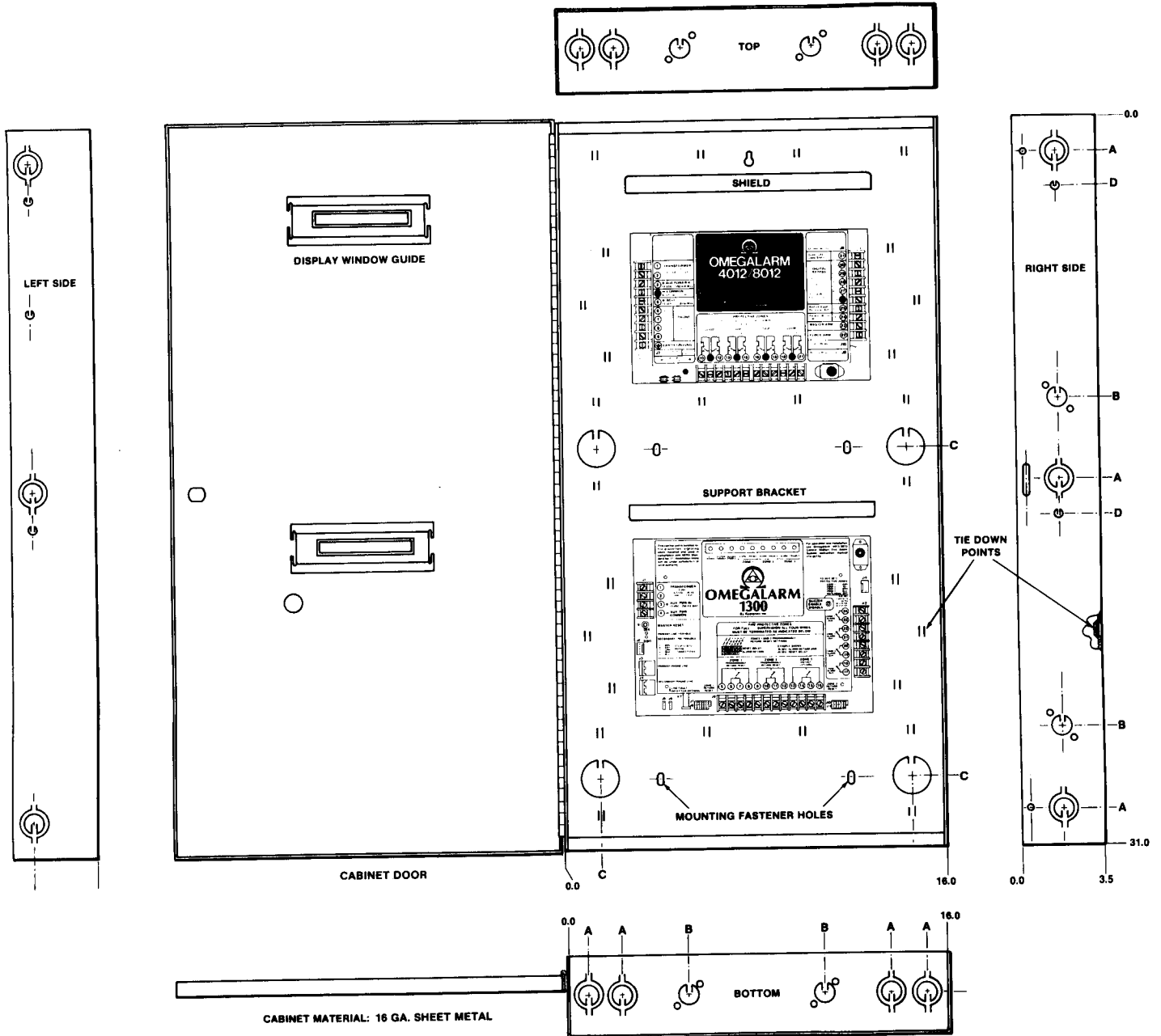
Depending upon application and requirements for the installation, the authority having jurisdiction may be an insurance organization, Underwriters Laboratories, the local fire department, or a state or federal agency. In some instances more than one authority may have jurisdiction.

1.5 GENERAL TESTING PROCEDURE — Specific test intervals and methods are detailed in NFPA Standards 71, 72E, and UL 827.

1. Notify the central station before testing begins.
2. Notify the facility personnel of the planned alarm test.
3. Insure automatic fire extinguishing equipment is not activated unexpectedly during the test.
4. Check 1300 status display before testing. The trouble/alarm and buzzer LEDs must be off. Only the AC power LED should be on.

5. Disconnect the primary phone cord from the 1300 (J3) socket to test the secondary phone system.
6. Activate Fire Zone 1. Check that the corresponding Alarm LED in the 1300 display is lighted.
7. Reset Fire Zone 1 and repeat test for remaining Zones 2 and 3.
8. Reconnect the primary phone cord to the 1300.
9. Insure the status display LEDs have returned to normal.
10. Notify the central station when testing is completed. Verify that all reports were received correctly.

DIAGRAM 1 - CABINET DIMENSIONS



**REFERENCE TABLE
KNOCKOUT DIAMETERS**

A - I.D. 7/8" O.D. 1 1/8" C - 1 5/8" DIA.
 B - 7/8" DIA. D - 9/32" DIA.

2. SPECIFICATIONS

2.1 4013/8013

CABINET SIZE:	Width 16 1/4 in. Length 31 1/4 in. Depth 3 1/2 in.
SHIPPING WEIGHT:	Approximately 35 lbs. (excluding battery)
PRIMARY POWER:	16 Volts AC, 20 VA Class 2 Transformer. Output 600 to 700 mA depending on line voltage.
SECONDARY POWER:	12 Volts DC, 6 Amp Hour rechargeable lead acid battery. Low battery load shed at under 10.8 volts. Applicable standards require 24 hours of standby power.

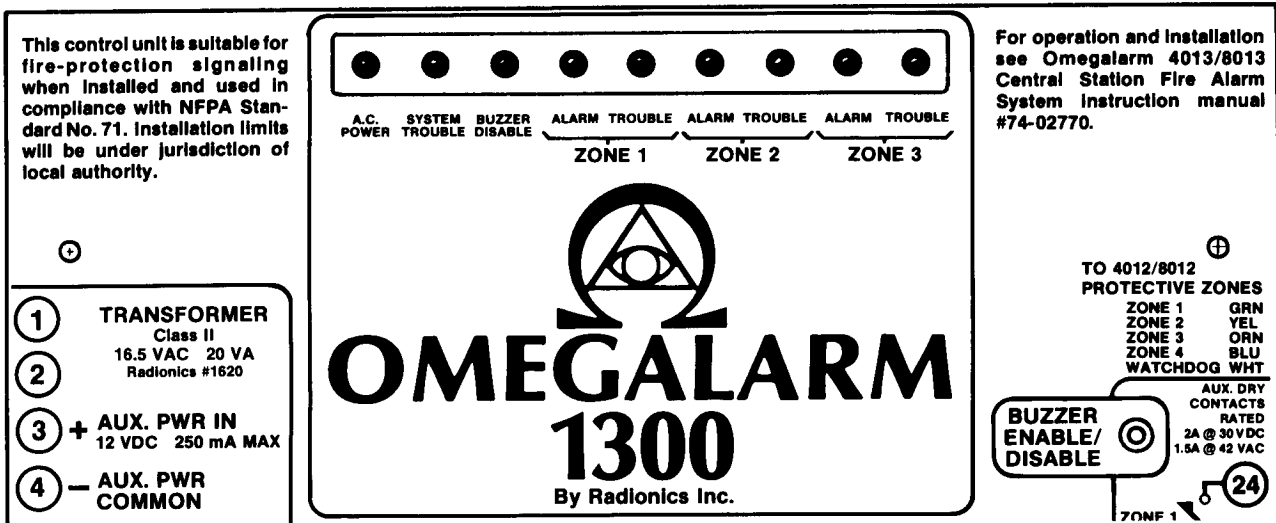
2.2 1300

CURRENT REQUIRED:	Idle — 60 mA. LEDs, buzzers and relays powered 250 mA.
TELCO CONNECTIONS:	Two RJ38X phone jack connection blocks. Two fully modular phone cords (Radionics #161). Primary and secondary lines supervised by 1300.
ZONE TRIGGER:	Three Class A (4 wire) protective zones. Short the loops for alarm. Open or ground either loop for trouble.
LOOP RESISTANCE:	Maximum 50 ohms measured between the ends of a single loop.
STATUS INDICATORS:	LEDs supervise AC power, system trouble, zone alarm and trouble, buzzer disabled and phone line trouble.
AUXILIARY DRY CONTACTS:	Four separate normally open relay contacts: One set dedicated to each fire alarm zone, and one summary set that closes for any fire zone alarm. Maximum voltage ratings — 2 amps at 30 Volts DC or 1.5 amps at 42 Volts AC. Power must be supplied by an independent source.

2.3 4012/8012

CURRENT REQUIRED:	Idle 95 mA. Transmitting 150 mA.
VOLTAGE OUTPUTS:	<p>Bell — 12 VDC at 1.5 amps maximum. Not required unless specified by the authority having jurisdiction. Serves as an auxiliary feature only when installed, and does not comply with applicable standards for evacuation warning.</p> <p>Auxiliary — 12 VDC at 500 mA maximum continuous load. For UL installation the auxiliary power load must be restricted to 50 mA to obtain 24 hours of standby operation from one 6 AH battery</p> <p>NOTE: A Model 248 Power Supply Module is required for powering accessories from this output. If latching smoke detectors are powered from this source, a reset switch must be installed. See Section 5.2 for details.</p>
TELCO CONNECTIONS:	Full line seizure connected to 1300 phone circuit.
ZONE INPUTS:	Four zones required by the 1300 circuit for fire alarm and phone supervision reports. Four additional zones available with Model 8013 for fire alarm supervision or non certified intrusion detection.

DIAGRAM 2 - SYSTEM STATUS LEDS



3. FIRE SYSTEM STATUS DISPLAY

The nine system status LEDs at the top of the 1300 faceplate are visible through the lower cabinet window when the door is shut. They are described from left to right. See Diagram 2.

3.1 AC POWER — GREEN LED

Monitors 16 VAC power supplied by the communicator transformer to terminals 1 and 2 of the 1300.

LED LIGHTED: AC power good.

LED OFF: AC power interrupted, investigate immediately.

3.2 SYSTEM TROUBLE — YELLOW LED

LED LIGHTED: One or more of the following conditions exist:

- A. The primary or secondary phone line is out of service, or one or both phone cords between the 1300 and the RJ38X jacks are disconnected.
- B. AC power to the 1300 is interrupted.
- C. The 4012/8012 CPU fails to execute its program or the WATCHDOG wire (white) is disconnected from the Expansion Board.

LED OFF: The system is operating correctly.

3.3 BUZZER DISABLE — YELLOW LED

Monitors fire system buzzer function. See Section 4.

LED LIGHTED: 1300's buzzer has been disabled by override switch.

LED OFF: Buzzer operation normal. Buzzer sounds for any trouble or fire alarm.

3.4 FIRE ZONE 1 ALARM — RED LED

LED LIGHTED: Alarm condition on Fire Zone 1. LED response follows loop fault except when ALARM RETARD AND RESET DELAY is used. See section 9.3.

LED OFF: No **alarm** condition detected by Fire Zone 1.

3.5 FIRE ZONE 1 TROUBLE — YELLOW LED

LED LIGHTED: Trouble (previous or existing) latched. Problem must be corrected before the zone and LED can be manually reset by pressing the MASTER RESET SWITCH. See Section 5.

LED OFF: No **trouble** condition detected by Fire Zone 1.

3.6 FIRE ZONE 2 ALARM — RED LED

LED LIGHTED: Alarm condition on Fire Zone 2. LED response follows loop fault except when ALARM RETARD AND RESET DELAY is used.

LED OFF: No **alarm** condition detected by Fire Zone 2.

3.7 FIRE ZONE 2 TROUBLE — YELLOW LED

LED LIGHTED: Trouble (previous or existing) latched. Problem must be corrected before the zone and LED can be manually reset by pressing the MASTER RESET SWITCH.

LED OFF: No **trouble** condition detected by Fire Zone 2.

3.8 FIRE ZONE 3 ALARM — RED LED

LED LIGHTED: Alarm condition on Fire Zone 3. Zone and LED latches. Detector must be cleared before the zone is manually reset using MASTER RESET SWITCH.

LED OFF: No **alarm** condition detected by Fire Zone 3.

3.9 FIRE ZONE 3 TROUBLE — YELLOW LED

LED LIGHTED: Trouble (previous or existing) latched. Problem must be corrected before the zone and LED can be manually reset using the MASTER RESET SWITCH.

LED OFF: No **trouble** condition detected by Fire Zone 3.

4. FIRE SYSTEM WARNING BUZZER

The 1300 is equipped with a warning buzzer that operates independently from the 4012/8012 Communicator buzzer. See 4012/8012 Manual #74-01665 for additional information about the communicator buzzer.

4.1 SYSTEM TROUBLE

BUZZER SOUNDS: When the system trouble LED is lighted to indicate:

- A. The 1300's primary or secondary phone line monitor detects less than 25 VDC or 10 mA of current across tip and ring.
- B. One or both of the 161 Phone Cords are unplugged or cut.
- C. AC power to the 1300 is interrupted.
- D. the 4012/8012 CPU fails to operate or the WATCHDOG wire (white) is disconnected from the Expansion Board.

BUZZER OFF: System is normal **or** buzzer has been disabled.

4.2 FIRE ZONE ALARM OR TROUBLE

BUZZER SOUNDS: One or more fire detection zones are in alarm (shorted) or in trouble (open or grounded).

BUZZER OFF: All fire detection zones are normal **or** buzzer has been disabled.

4.3 BUZZER DISABLE — The user has the option of silencing the FIRE SYSTEM'S WARNING BUZZER if it becomes a nuisance during a prolonged alarm or trouble condition. An LED lights in the 1300 display while the buzzer is disabled. See Section 5 for a complete description of this feature.

5. SWITCHES

5.1 BUZZER DISABLE/ENABLE

- A. THE SWITCH extends through the 4013/8013 cabinet door. This switch allows the user to disable and restore the operation of the warning buzzer without opening the cabinet. Pressing the button alternately switches the buzzer from functional to disabled and back again. Silencing the buzzer should only be used temporarily if system trouble persists.
- B. THE DISPLAY LED lights to indicate when the buzzer is disabled and extinguishes when the buzzer is functionally restored. This LED does **not** indicate the buzzer is "on" and silenced. It **does** indicate the buzzer is incapable of sounding should the need arise.

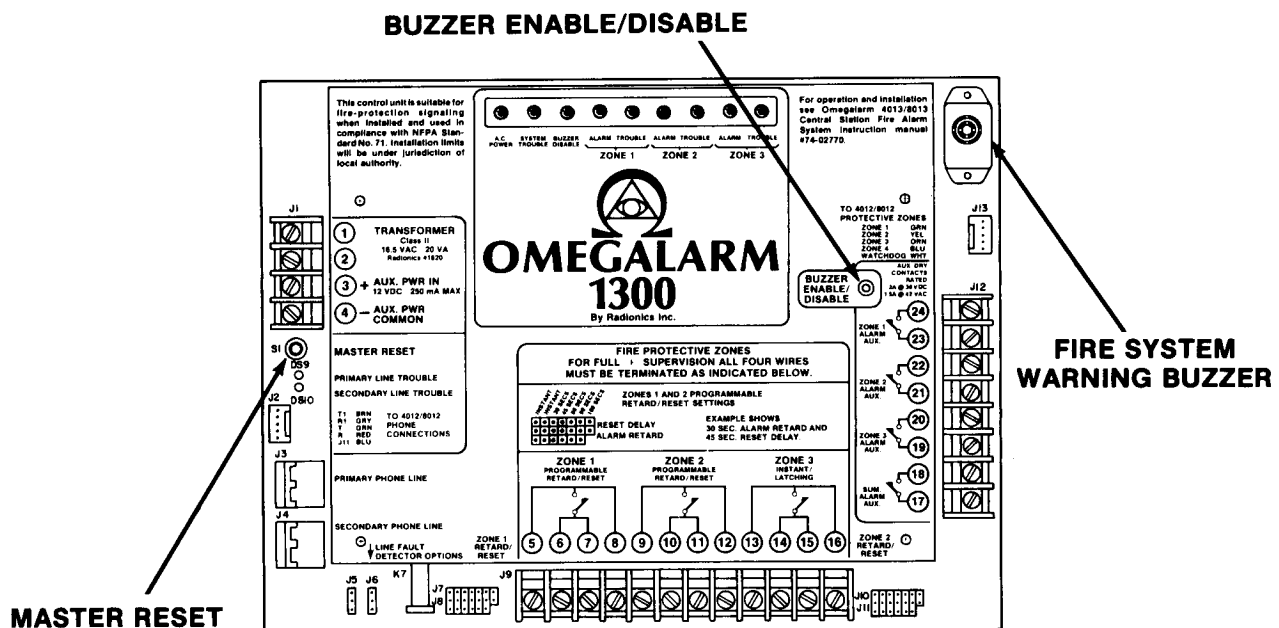
5.2 MASTER RESET — The 1300's LED display visually indicates the status of various detectors, wire and voltage inputs to the control. For some of these inputs (see below) and "off normal" condition latches the circuit causing the corresponding LED to remain lighted even after the input has returned to normal. Once the input has been restored, the latched circuit must also be reset, using MASTER RESET SWITCH located **inside** the cabinet.

Press and release the MASTER RESET SWITCH to clear these latched inputs:

- A. ZONE TROUBLE — A trouble condition on the wiring of Fire Zones 1, 2 or 3 latches the corresponding trouble LED on. The fault must first be removed and the reset button pressed to clear the display before another trouble condition can be detected.
- B. SYSTEM TROUBLE — Only a trouble condition on the communicator's **CPU** latches the system trouble LED on. Other trouble conditions will light this LED but **not** latch it. They are: AC power outage and trouble on the phone lines. By correcting power and phone trouble the LED will automatically return to normal.
- C. FIRE ZONE 3 ALARM — An alarm condition on Fire Zone wires 3 latches the zone. The zone remains latched even after the detector has been reset. Fire Zone 1 and 2 do **not** latch in the alarm condition but reset automatically when the detector returns to normal (and reset delay expires).

NOTE: When an alarm in any of the three zones is caused by a latching smoke detector, the detector must be restored to normal non-alarm status before the zone alarm can be cleared. A normally closed reset switch must be installed to interrupt the smoke detector power supply whether powered by a 248 Power Supply Module or another power supply source. (Section 2.3. VOLTAGE OUTPUTS: Auxiliary. Also see 248 Power Supply Module, Operation and Installation Instructions.)

DIAGRAM 3 - SWITCH LOCATION



6. POWER SUPPLY

6.1 PRIMARY

- A. 16 VOLTS AC 20 VA Class 2 TRANSFORMER (Radionics part #1620) is supplied with each 4013/8013 to power the unit. One transformer powers both the 4012/8012 Communicator and the 1300 Fire Zone Adaptor. Terminals 1 and 2 of the 4012/8012 are connected to terminals 1 and 2 of the 1300 by the factory installed wiring harness. Connect the wire pair (taped inside the cabinet) to the transformer. See Diagram 5.
- B. 120 VAC 60 Hz supplied from a separate single phase branch circuit must be routed through conduit and connected in accordance with NFPA Standard 71 to the outlet socket installed inside the 4013/8013 cabinet. See Diagram 1 for outlet location. **DO NOT** connect 120 volts directly to either the 4012/8012 or the 1300. Plug the 16 VAC transformer into the outlet socket.

6.2 SECONDARY

- A. 12 VOLT DC 6 AMP HOUR lead acid battery (Radionics part #126) supplies stand-by power to operate the 4013/8013 if AC power is interrupted. This battery is plugged onto and kept fully charged (during normal operation) by the 4012/8012. The battery should be replaced every three to five years under normal usage. See 4012/8012 Manual for additional information about supervision of this power supply.
- B. 1300 FIRE ZONE ADAPTOR receives its standby power from the Communicator's Auxiliary Power output. The factory installed wiring harness connects 4012/8012 terminals 3 and 4 to 1300 terminals 3 and 4. Do not connect the 1300 directly to the battery terminals.
- C. ACCESSORY EQUIPMENT **must be powered from a Model 248 Power Supply Module** and not connected directly to the communicator's auxiliary power output. See Diagrams 4 and 6 for wiring. This module insures a constant 12 VDC power supply to the accessories in the event the communicator fuse is blown or the battery disconnected. Equipment load must not exceed **50 mA** of current to obtain a minimum of **24 hours** of standby operation from a single 6 amp hour battery. These ratings can be increased by wiring a second 12 volt battery in parallel.

NOTE: The D190 Test Report Timer is standard equipment, not accessory equipment. Do not include the current draw of the D190 Test Report Timer in the accessory equipment load ratings associated with the Model 248 Power Supply Module.

DIAGRAM 4 - ACCESSORY POWER SUPPLY

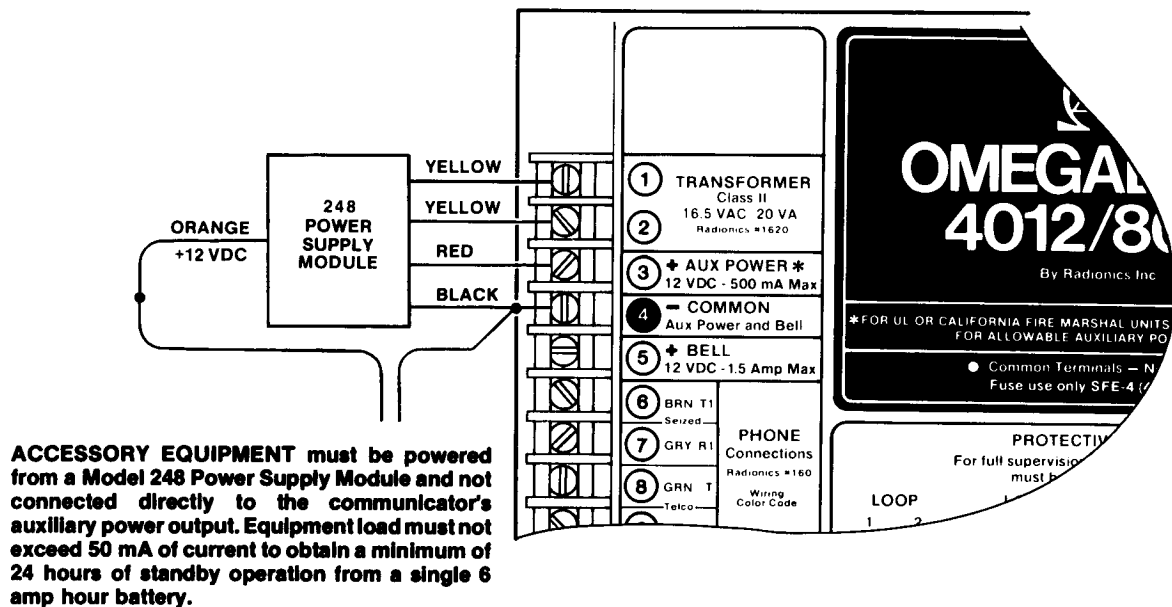
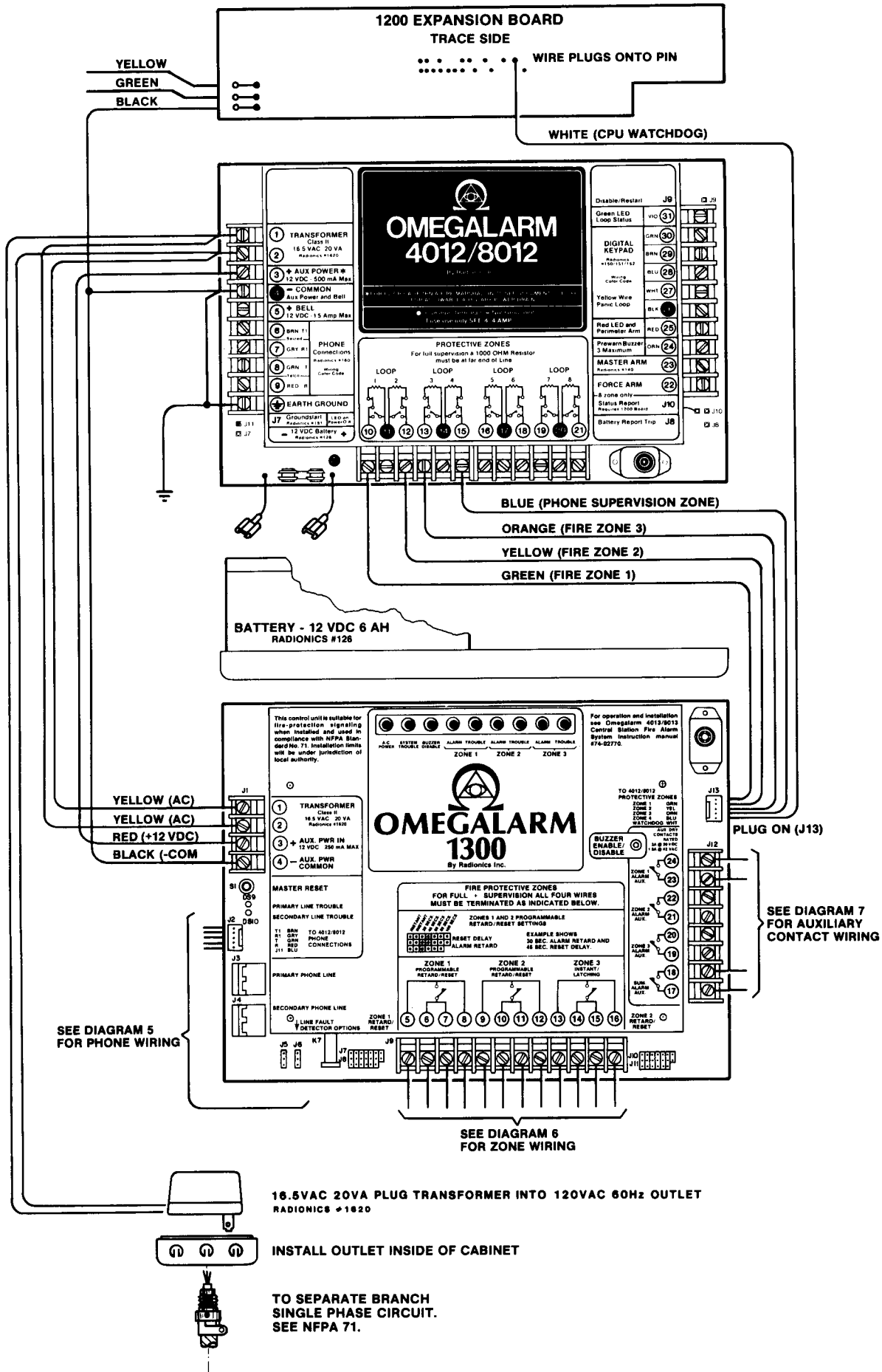


DIAGRAM 5 - POWER AND COMMUNICATOR WIRING



7. TELEPHONE CONNECTIONS

7.1 FCC REGULATION — Installation of the digital alarm communicator transmitter must comply with FCC regulations Part 68. The unit can not be connected to party lines or pay phones. Transmission of fire alarm signals to a central station is permitted only with the specific approval of the local authority having jurisdiction.

Model Number: 4012/8012 Communicator
FCC Registration Number: AJ996H-69254-AL-R
Ringer equivalence: 0.0B

7.2 TELCO WIRING — The 4013/8013 utilizes two separate telco connections. Use of primary and secondary phone lines provides an alternate path for system reports if service is interrupted to one of the lines. The installation must be configured for both Calling Party Disconnect (line seizure) and Called Party Disconnect (anti-jam) so that normal phone service is interrupted while the communicator transmits data. The 1300 is connected to the 4012/8012 by a factory installed wiring harness. See Diagram 6.

7.3 PHONE JACK INSTALLATION — **Do not use** an RJ31X phone jack! The 4013/8013 requires the installation of two RJ38X phone jacks for its telco connections. Each phone jack is connected to the 1300 using a fully modular eight wire cord (plugs at both ends). Using the RJ38X jacks provides an instant trouble response if the phone cord is disconnected.

7.4 GROUND OR LOOP START SYSTEM — Jumper plugs are provided to set the phone line fault detection circuit of the 4013/8013 for either a ground start or loop start system. **Both the primary and secondary phone lines must be set the same.** Do not set one phone line for ground start and one for loop start. A ground start system also requires the installation of an Omegalarm **191 Ground Start Module**. See Diagram 6 for wiring.

8. PHONE LINE SUPERVISION AND BACKUP

8.1 PHONE LINE TROUBLE INDICATORS

LINE TROUBLE — Less than 25 Volts DC or less than 10 mA of current.

- A. System Trouble LED (yellow) lighted.
- B. Primary or secondary line LEDs lighted.
- C. Trouble buzzer sounds (unless silenced).

The system trouble LED, warning buzzer and individual line LEDs are activated while trouble exists and are automatically switched off when the line restores.

8.2 PHONE LINE SUPERVISION REPORTS — The factory installed wiring harness connects the 1300 to the 4012/8012 so that reports initiated from Communicator Zone 4 are used to indicate phone line status. See Diagram 5. The 1300's output (blue wire from J13) **shorts** to common for primary line trouble and **opens** the circuit for secondary line trouble.

IMPORTANT: For UL installations the communicator zone must be programmed to report TROUBLE for **both** the PRIMARY and SECONDARY LINES trouble. Use loop code 415 for that purpose. See Section 11.

8.3 BACKUP OPERATION

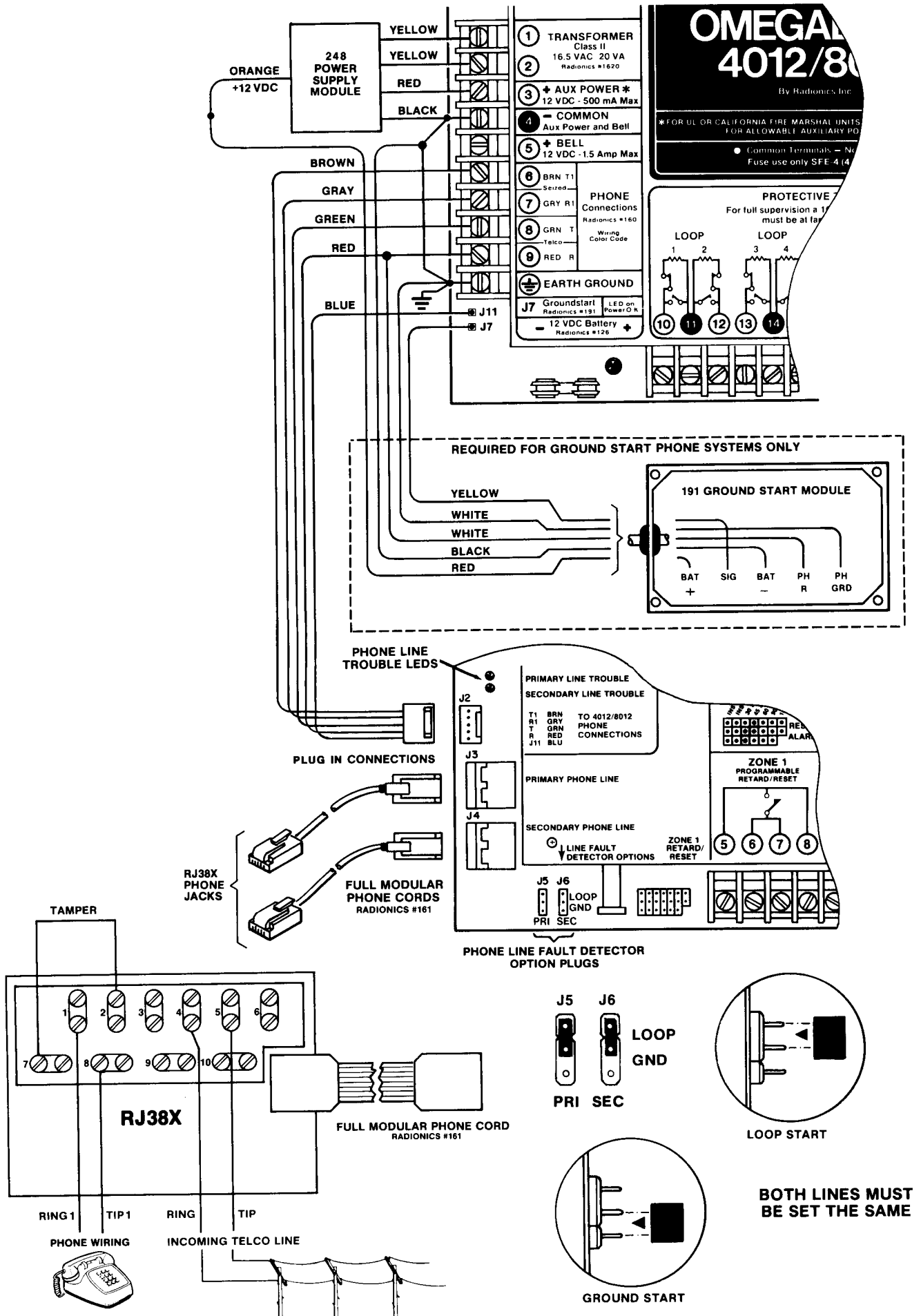
A. PRIMARY PHONE LINE is used for all system reports during normal operation. If phone service is interrupted on the primary line for longer than 8 minutes*, the 1300 automatically switches to the secondary line allowing the communicator to report phone line trouble and any subsequent data to the central station. The secondary line is used only until the primary line is restored, at which time a phone restoral report is transmitted using the primary line.

*If a zone report, such as an alarm, is initiated before eight minutes of line trouble is detected, the communicator will immediately attempt to report using the primary line. If this attempt fails, the communicator will disconnect and automatically switch to the secondary phone line to deliver the message.

B. SECONDARY PHONE LINE is also continually supervised for trouble and restoral. An 8 minute interruption of service on the secondary line will also initiate a trouble report followed by a restoral report when service is reestablished.

NOTE: A trouble report will be initiated immediately if either of the 161 PHONE CORDS that connect the 1300 to the RJ38X jacks is unplugged or cut. The communicator reports using the remaining line.

DIAGRAM 6 - PHONE WIRING



8.4 ALTERNATE PHONE NUMBER — In addition to use of primary and secondary phone lines to help insure communication with the central station, the 4013/8013 must also be able to call a second (different) phone number if the primary central station phone number is busy. This is accomplished by programming a PROM for the 1200 Expansion Board. No wiring change is required. See Section 12 for PROM programming instructions.

8.5 FAILURE TO COMMUNICATE

NOTE — To comply with published standards for Central Station Signaling Fire Alarm Control Units, the 4013/8013 installation must include either a **145 Remote Annunciator** or an Omegalarm 151 or 152 arming station. See Section 13, Diagram 11 for wiring 145.

If the communicator is unable to deliver a report to the central station, it will disconnect and redial, alternating between the main and back up phone numbers. If after eight attempts (four to each number) the report is still not delivered, the communicator drops the report, and causes the "armed status indicator output" at terminal 23 of the 4012/8012 to **pulse**. (Remember the call out limit must be set to 8 in line "b" of the communicator program for this to occur. See Section 11.) By connecting a remote annunciator or arming station to this output, a normal condition will be indicated by either a dimly or brightly lit LED. Only a pulsing LED indicates trouble. The pulsing LED is **reset** by either momentarily connecting terminals 23 and 26 or by activating the arming station. See the 4012/8012 Manual #74-01665 for additional information about this output.

9. FIRE ZONE OPERATION

9.1 ZONE WIRING (1300) — Each Fire Zone of the 1300 uses a "double loop" (4 wire) circuit to provide full supervision. Each has a feed and return for both the positive and negative sides of the loops. For example, terminal 5 connects to terminal 8, and 6 to 7 to form the terminations of Fire Zone 1. See Diagram 7. This type of wiring maintains alarm detection capabilities even with an open or ground fault on one of the loops.

- A. No terminating resistors are used when wiring the fire zones of the 1300.**
- B. Fire Zones that are not used must have their terminals strapped to simulate closed (normal) loops.**
- C. No more than 50 ohms can exist between the ends of a single loop for a zone to appear normal to the 1300.**

9.2 DETECTION DEVICES — Devices must be wired **normally open** between the two separate loops of the same fire zone. To indicate an alarm, the detector must connect (short) these loops to each other. An open or ground on one or both of the loops causes a trouble condition on that zone.

9.3 ALARM RETARD AND RESET DELAY — Fire Zones 1 and 2 can be set as either instant or delayed in their alarm and restoral responses. See Section 9.4 for instructions. **Zones can be delayed only when waterflow switches requiring an alarm delay or "retard" are connected to them.** The retard is a necessity for nearly all wet pipe sprinkler systems to avoid false alarms resulting from surges in water supply pressure which fault the water flow switch for brief intervals.

All other types of sprinkler systems i.e., Dry Pipe, Preaction, Combined Dry Pipe/Preaction, or Deluge are unaffected by pressure surges. They do not require a retard unless connected to the same zone as one or more wet pipe systems.

There are two exceptions for retard requirements in wet pipe sprinkler systems:

1. A system which includes an excess pressure pump to maintain artificially high water pressure, or
2. The use of a waterflow switch designed to detect a **drop** in sprinkler water pressure. **IMPORTANT:** Use only this type of waterflow switch in any wet pipe system employing on-off (self restoring) sprinkler heads; a retard must **not** be used.

When the retard feature is used, **only** waterflow switches (a maximum of five per zone) may be connected.

The type of retard option for fire zones 1 and 2 provides two installation advantages:

1. The appropriate retard time element for all waterflow switches can be set at the 1300 panel. Expensive switches with pneumatic retard assemblies are not necessary.
2. In wet pipe sprinkler systems where alarm check valve "fanning" occurs when a single sprinkler head has operated, the unique reset delay feature of the retard assures alarm response. Under these conditions the waterflow switch alternately faults briefly, then clears briefly.

With a conventional instantly recycling retard (Figure 1.) the entire retard period is immediately restored each time the waterflow switch clears. Unless one of the faulted intervals exceeds the length of the retard period, alarm response cannot occur.

The reset delay feature of the 1300 restores the retard period gradually over a predetermined time interval after the waterflow switch clears. The amount of retard restored depends on the length of time the waterflow switch remains clear before faulting again. Each time the waterflow switch faults under fanning conditions, the remaining retard period becomes shorter and alarm response will eventually occur.

A 30 second retard setting and 45 second reset delay is adequate for most wet pipe sprinkler installations.

SAMPLE SETTINGS:
ALARM RETARD SET AT 30 SECONDS
RESET DELAY SET AT 45 SECONDS

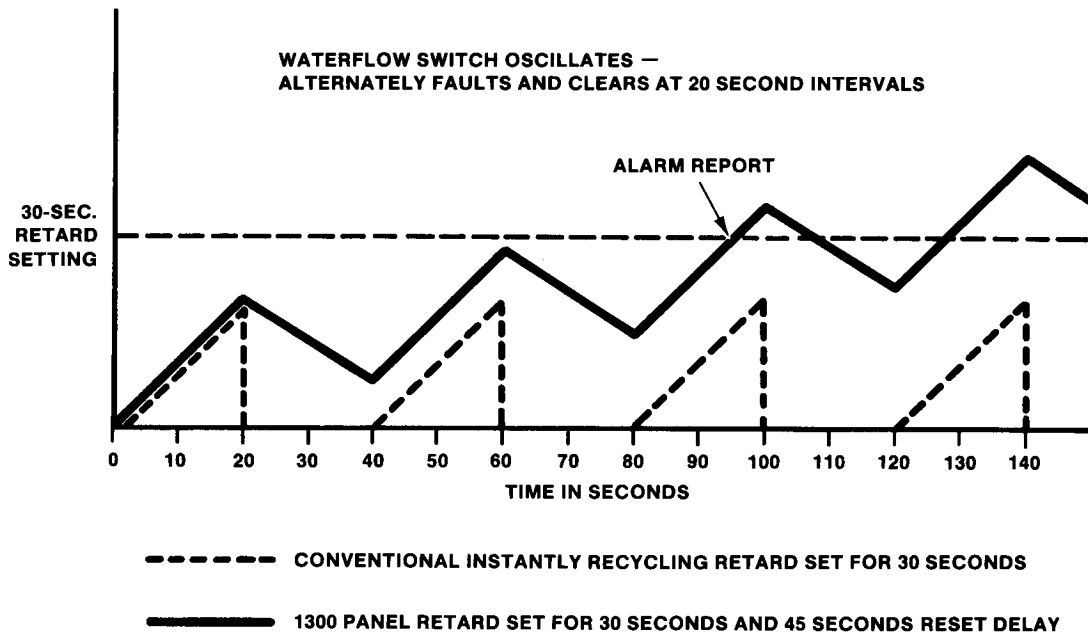


Figure 1. Comparison of Waterflow Retards

9.4 SETTING PROGRAM PINS — Alarm retard and reset delay times are selected by connecting "program" pins using two jumper plugs per zone. Zone 1 program pins are to the left of terminal 5 of the 1300, Zone 2 program pins are to the right of terminal 16. Zone 3 is instant latching and has no pin settings. In both sets the upper two pins are for RESET DELAY times of from 0 to 180 seconds, the lower two are for ALARM RETARD times of from 0 to 90 seconds. (The center pin is shared.) **IMPORTANT: Except when both settings are instant, RESET DELAY TIME MUST BE LONGER THAN RETARD LINE.**

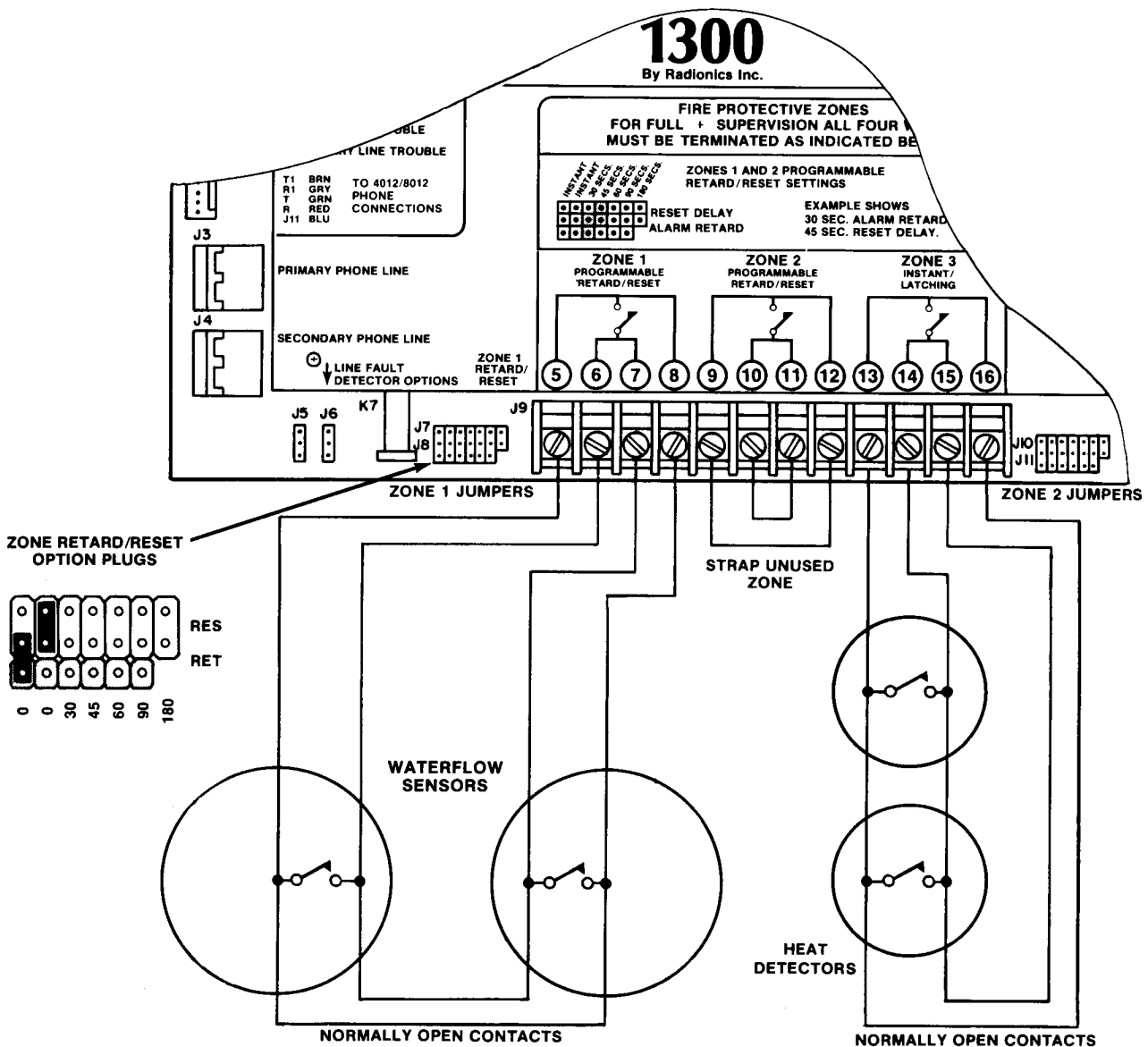
9.5 APPLICATION — Waterflow switches requiring a retard must be connected to Fire Zones 1 or 2. Other types of fire sensors such as heat or smoke detectors may be also be connected to these zones but **not** in combination with waterflow switches and **never** with a retard.

For applications using a latching feature, any type of fire sensor may be connected to Fire Zone 3. Waterflow switches **without** retard requirements may also be connected to Zone 3, but not in combination with other types of fire sensors.

- ZONE 1 — Programmable alarm retard and reset delay (no latch)
Instant trouble that latches
- ZONE 2 — Programmable alarm retard and reset delay (no latch)
Instant trouble that latches
- ZONE 3 — Instant alarm that **latches** (no delay)
Instant trouble that latches

9.6 SUPERVISORY ZONES — The 8013 has four additional zones (5 through 8) not dedicated for use with the 1300 Fire Zone Adaptor. These zones can **not** be used for generating **alarm** signals with U.L. Certified Class A Fire or Burglary systems. They **can** be used for supervisory reports that monitor gate valves, water tank levels, power supplies, and sprinkler systems. Each individual form of sprinkler supervision requires a separate zone for positive signal identification. For example: Zone 5 - Valve supervision, Zone 6 - Water level supervision, Zone 7 - Dry Pipe air pressure supervision. Only with Class B or non-certificated systems can Zones 5 through 8 be used for burglar alarms. In any case the actual use of these zones must be in compliance with the local authority having jurisdiction.

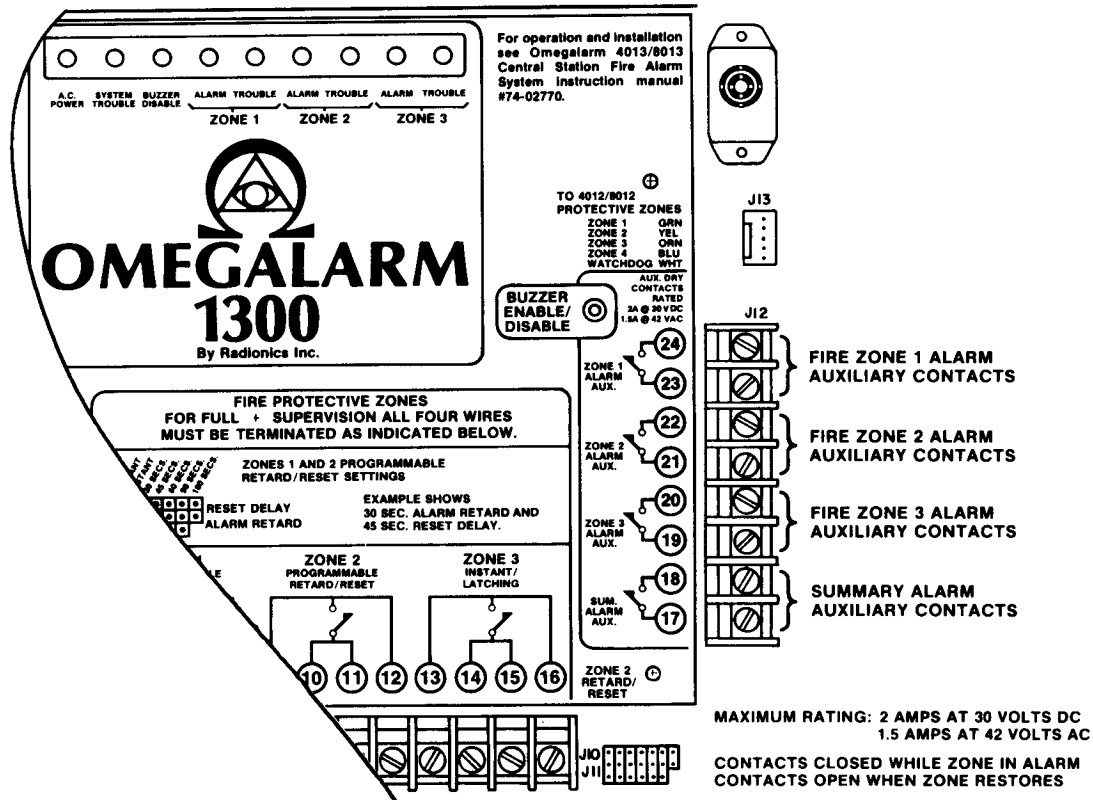
DIAGRAM 7 - FIRE ZONE WIRING



10. AUXILIARY DRY CONTACTS

- 10.1 POWER RATINGS** — The 1300 is equipped with four auxiliary dry contact relay outputs that can be used to connect alarm warning devices (bells and sirens) to an **external** power supply. These contacts are rated for 2 amps at 30 Volts **DC** or 1.5 amps at 42 Volts **AC**. Each output is isolated from the others allowing the use of power supplies of different voltages.
- 10.2 ZONE ALARM** — Each fire zone is provided with separate relay contacts that close only while that zone is held in alarm (red LED on). When the zone is restored following an alarm, the contacts reopen. Alarm on Fire Zone 3 must be reset using the Master Reset Switch before the contacts reopen.
- 10.3 SUMMARY ALARM** — A fourth relay contact is provided that closes when one or more of the three protective zones initiates an alarm and remains closed until **all** three zones have been reset to normal.

DIAGRAM 8 - AUXILIARY CONTACT WIRING



11. FIRE SYSTEM PROGRAMMING

- 11.1 PROGRAMMING MANUALS** — All responses of the Communicator are defined by the data entered into its program memory using the Omegalarm 5000 Programmer. **General instructions** for use of the 5000 are in manual #74-01394 supplied with the programmer. All **program entries** for the 4012/8012 are described in detail in manual #74-01665 supplied with the communicator. Special program information as it applies to the **1300 Fire Zone Interface** is contained in the following section of this manual.

Remember, because correct programming is crucial to the operation of the 4013/8013, instructions should be reviewed **and** a program developed on paper before the data is entered into the communicator's memory.

11.2 PROGRAM ENTRIES — The following is a brief outline of which entries are required for a FIRE ALARM REPORTING SYSTEM. For complete description of all programming entries, including those for a burglar alarm system, see the 4012/8012 Manual #74-01665.

LINE	DISPLAY	FUNCTION
1	CS _ _ _ _ _	Enter CENTRAL STATION RECEIVER TYPE. For OMEGALARM RECEIVER enter: 5 5 or 6.
2	P _ _ _ _ _	Enter PREFIX OF RECEIVER PHONE NUMBER.
3	Ph _ _ _ _ _	Enter BODY OF RECEIVER PHONE NUMBER. (Alternate phone number entered into 1200 Expansion Board program.)
4	ACC _ _ _ _ _	Enter ACCOUNT NUMBER of system. (Three digits.)
5	T _ _ _ _ _ ()	Enter TROUBLE and RESTORAL codes. OMEGALARM RECEIVERS CODES: F E (E). If CS code 6 is used leave last data space (E) BLANK.
6	OP _ _ CL _ _ ()	Fire reporting - No entry necessary. Burglar alarm - Opening and Closing reports.
7	d . _ _ d o _ _	Fire reporting - No entry necessary. Burglar alarm - Entry and Exit delay time.
8	PE _ _ _ _ _	Fire reporting - No entry necessary. Burglar alarm - Prewarning (entry delay) buzzer.
9	bELL _ _ _ _ ()	Fire reporting - No entry, see Section 10. Burglar alarm - Alarm Bell time.
0	LIS _ _ _ _ _	Fire reporting - No entry necessary. Burglar alarm - Listen-in time.
B	A _ _ P _ _ L _ _	Enter 8 after P. Leave A and L BLANK.
C	CE _ _ _ _ _	Fire reporting - No entry necessary. Burglar alarm - Master arming combination.
D	CE _ _ dL _ _	Entry dL restricted to blank or code 4. Entry CE (combination entry time) for BURGLAR ALARM only.

11.3 FIRE ZONE CODE

LOOP1 _ _ _

Enter the following three digit loop code for each fire alarm zone:

- 3 1 5 — Alarm report for short
- Trouble report for open
- Restoral reports for normal
- No bell or buzzer from communicator

11.4 PHONE SUPERVISION CODE

LOOP4 _ _ _

Enter the following three digit loop code for phone supervision Zone 4.

- 4 1 5 — Trouble for open and short (no alarm)
- Instant response
- Restoral reports for normal
- No bell or buzzer from communicator

12. ALTERNATE PHONE NUMBER PROGRAMMING

The 1200 Expansion Board program contains the alternate phone number of the central station. This number is entered in a PROM memory chip using the Omegalarm 5010 Programmer. The PROM is then installed into the THIRD PROM SOCKET of the Expansion Board and the circuit installed on the 4012/8012. See Diagram 9. Consult the 1200 Manual #74-01973 or 5010 Manual #74-01984 for additional Expansion Board features.

12.1 PROCEDURE

- Install a BLANK PROM into the 5010 socket.
- Press the CLEAR and ENTER KEYS simultaneously.
- Press KEY C to display the program for PROM 3.
- Enter program data then review entries.
- Press both PROG KEYS simultaneously.
- Remove PROM and install in Expansion Board socket 3.

12.2 SELECTING FORMAT — PROM 3 LINE 1

ALP h _ _

Enter 5 — The communicator first attempts to call the MAIN PHONE NUMBER to deliver ALARM and/or SUPERVISORY REPORTS. If the MAIN NUMBER is busy the ALTERNATE NUMBER IS called.

12.3 ALTERNATE PHONE NUMBER — PROM 3 LINES 2 and 3

P _ _ _ _ _

NUMBER PREFIX up to 8 digits. Use C for 3 second pause or D for second dial tone wait.

Ph _ _ _ _ _

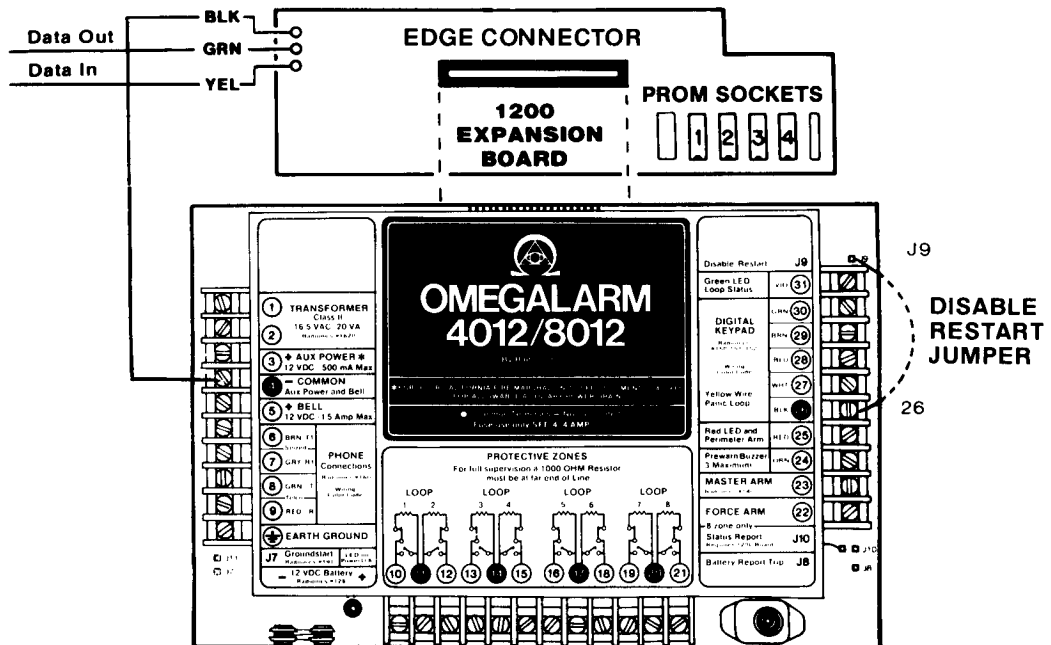
ALTERNATE PHONE NUMBER up to 7 digits.

13. ACCESSORY INSTALLATION

13.1 1200 EXPANSION BOARD

- A. OPERATION — The 1200 is required for the 4013/8013 installation to allow supervision of the communicator's CPU and to provide use of an alternate (back up) phone number. See Section 12 for programming. The primary phone number (programmed in the communicator) is called first. If the primary number is busy, the communicator will disconnect and call the alternate phone number. This cycle will be repeated until the report is delivered or a total of eight attempts (four to each number) is completed.
- B. WIRING — A jumper should be temporarily installed between communicator terminals 26 and J9 whenever the 1200 is installed on or removed from the communicator's edge connector. Connect the black wire from the 1200 to terminal 4 of the 4012/8012. Positive voltage is supplied by the edge connector while the 1200 is installed.

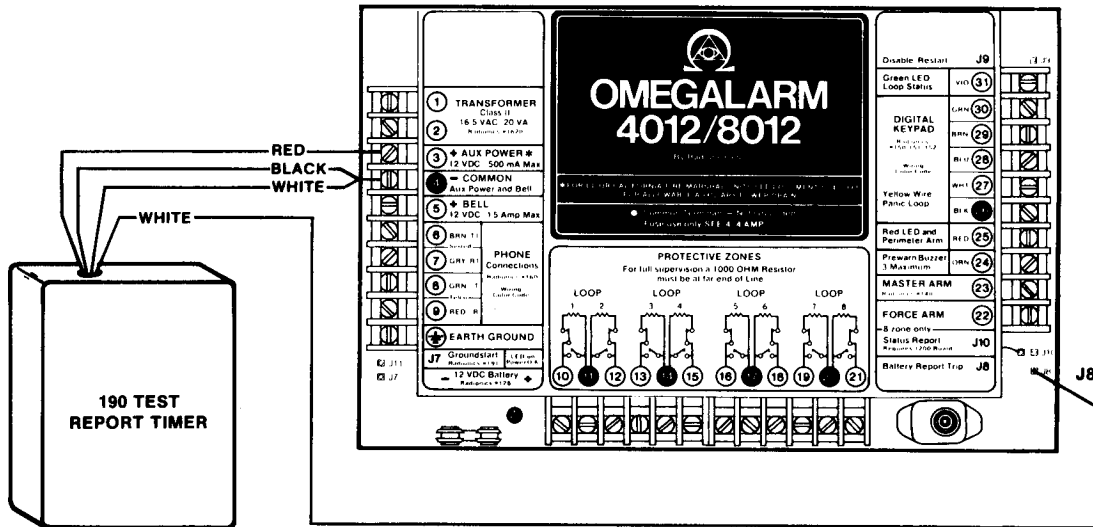
DIAGRAM 9 - 1200 WIRING



13.2 190 TEST REPORT TIMER

- A. OPERATION — A central station fire alarm control must transmit a test call at least once every **24 hours** to supervise the reporting capabilities of the system. Use the 190 Timer Module to initiate a **BATTERY STATUS REPORT**. When tripped a **RESTORAL ZONE 9** is sent if the battery is charged above 13.25 volts. A **TROUBLE ZONE 9** is sent if the battery is below 13.25 volts but above 12.0 volts. **NO REPORT** is sent when the timer trips if a battery trouble has already been reported and the battery has not recharged sufficiently to initiate a restoral report.
- B. WIRING — The 190 is powered from 4012/8012 Auxiliary Power 12 volt output. Connect the red wire to terminal 3 and the black wire to terminal 4. Connect the white wires of the 190 between terminals 26 (Common) and J8 (Battery Report Trip). The 190 is shipped from the factory preset at the 24 hour report interval. See the 190 Installation Instructions for additional information.

DIAGRAM 10 - ACCESSORY WIRING



13.3 145 REMOTE ANNUNCIATOR

See Section 8.5 for operation description.

DIAGRAM 11 - 145 WIRING

