

INSTALLATION/ PROGRAMMING INSTRUCTIONS

**SPARTAN VI
ALARM
SYSTEM**

MODEL SP-6



**acron
corporation**

TABLE OF CONTENTS

SECTION I —	INSTALLATION INSTRUCTIONS	1
1.0	SYSTEM DESCRIPTION	1
1.1	INSTALLATION	1-3
1.2	SPECIFICATIONS	3
1.3	FCC COMPLIANCE	3
1.4	WIRING DIAGRAM (FIGURE 1)	4
	TEST SWITCH INSTALLATION (FIGURE 1A)	4
 SECTION II —	 PROGRAMMING INSTRUCTION — DEFINITIONS	 5-10
2.0	TELEPHONE NUMBER	5
2.1	ACCOUNT NUMBER	5
2.2	DIALING/REPORTING FORMAT	5
2.3	NUMBER OF ATTEMPTS	6
2.4	RESTORE SELECT ZONE	6
2.5	RESTORE	6
2.6	TEST CANCEL SELECT ZONES	6
2.7	TEST CANCEL CODE	6
2.8	REPORTING DELAY SELECT ZONES	6
2.9	REPORTING DELAY TIME	7
2.10	ZONE REPORTING CODES	7
2.11	FAULT POWER LOSS REPORTING	7
2.12	KEYPAD KEY PAIRS	7
2.13	FAULT FIRE TROUBLE	7
2.14	DURESS	7
2.15	OPENING REPORT	7
2.16	CLOSING REPORT	8
2.17	FOLLOWER ZONE SELECT	8
2.18	AUDIBLE PANIC, SELECT ZONES (24 HR)	8
2.19	AUDIBLE FIRE, SELECT ZONES (24 HR)	8
2.20	AUDIBLE BURGLARY, SELECT ZONES	8
2.21	DELAYED BURGLARY, SELECT ZONES	8
2.22	EXIT DELAY TIME	8
2.23	ENTRANCE DELAY TIME	9
2.24	BELL SHUT OFF TIME	9
2.25	FIRE BELL SHUT OFF	9
2.26	ACCESS CODE DIGIT LOCATIONS	9
2.27	KEYPAD AUDIBLE ALARM SELECT (FIRE OR BURGLARY)	9
2.28	SILENT ALARM	9
2.29	PROGRAMMING WORKSHEET (FIGURE 2)	10

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 TO EXPEDITE TROUBLESHOOTING HAVE YOUR PROGRAMMING WORKSHEET ON HAND.

SECTION I - INSTALLATION INSTRUCTIONS

1.0 SYSTEM DESCRIPTION

The Acron Model SP-6 "SPARTAN VI" is a multi-zone control panel/digital communicator alarm system that consists of one SP-6 panel and one model KP-6 Digital Control Station. The SP-6 can be custom tailored for each installation by programming an Electrically Erasable Programmable Read Only Memory (EEPROM) which is included with the system. Programming can be accomplished using the Acron Model P-4000 EEPROM Programmer or an Acron AV-4000 panel. Zones which may be programmed include 6 EOL supervised zones; 5 keypad activated Emergency zones plus Fire Trouble, Opening, Closing, Automatic Low Battery and A.C. Power Failure Reporting Zones. Unit is shipped with factory program to allow out of box testing.

Read and become familiar with the information contained in the Spartan VI Owner's Manual before proceeding with the installation instructions.

1.1 INSTALLATION

CAUTION

CONNECTIONS MUST BE MADE WITH ALL POWER REMOVED.

1. Don't connect battery until installation is complete.
2. Do not apply power until after step 8.

OPTIONAL SMOKE RESET/BATTERY -BELL TEST SWITCH ACRON PART NUMBER AC058

A D.P.D.T. push button switch (order Acron part number AC058) may be installed to reset smoke detectors and/or provide convenient battery/bell test. Wire as shown in Figure 1.

The switch should be mounted on the LEFT side of the cabinet as shown in Figure 1A. To install module, remove P.C. board and enlarge starter hole with a 1/4" drill. Mount switch and reinstall P.C. board and complete wiring. If smoke detectors are not used the violet wire need not be connected. Make sure all splices are soldered and not exposed.

1. Connect a 12 Vdc Bell, Amseco MSB-8B-PV4 or equivalent to terminals 5 and 6. Observe polarity. For U.L. fire installation a Bell must be mounted indoors.
2. Unswitched 12 Vdc is available at terminals 4 thru 7 for auxiliary devices. Connect Auxiliary devices.

NOTE: THE TOTAL AMOUNT OF AVAILABLE CURRENT IS 300 MA (INCLUDING ANY KP-6'S EVEN THOUGH THEY ARE NOT CONNECTED TO TERMINAL 7). TO DETERMINE THE TOTAL CURRENT REQUIREMENT FOR AN INSTALLATION, ADD THE CURRENT CONSUMPTION FOR ALL ITEMS TO BE CONNECTED TO THE AUXILIARY OUTPUT AS WELL AS THE KP-6'S CURRENT REQUIREMENTS. EACH KP-6 REQUIRES 40 MA.

DO NOT EXCEED 300 MA TOTAL.

3. Connect the six (6) input zones to terminals 11-19 using the 2.2k EOL resistors provided.
4. Connect the F.C.C. Approved telephone connection cable to terminals 20, 22, 23 and 24 as shown. Insulate all unused leads. THE CABLE MUST BE PHYSICALLY SEPARATED FROM POWER AND SIGNAL LINES.
5. Connect the KP-6 arming station to the SP-6. Red lead to terminal 8. Blue lead to terminal 9. Black lead to terminal 3. Yellow lead to terminal 10. WIRES CONNECTING KP-6 TO SP-6 MUST BE KEPT AWAY FROM A.C. AND TELCO WIRING TO MINIMIZE TRANSIENT PROBLEMS DUE TO LIGHTNING.
6. Connect Terminal 21 to an EARTH GROUND.

NOTE: 1) SUGGESTED EARTH GROUND AND PROTECTION LEVELS ARE:

- A) PREFERRED PROTECTION ---- SEPARATE METAL GROUNDING ROD
- B) ACCEPTABLE PROTECTION --- METAL COLD WATER PIPE
- 2) USE AT LEAST 16 GAUGE WIRE BETWEEN TERMINAL 21 AND EARTH GROUND.
- 3) KEEP WIRE RUN AS SHORT AS POSSIBLE AND AWAY FROM OTHER PANEL WIRING.
- 4) DO NOT USE AN EXISTING LIGHTNING ROD GROUND, IT CAN PROVIDE A PATH FOR LIGHTNING STRIKES TO PANEL.

7. Check all connections, verifying polarity.
8. Connect the transformer to terminals 1 and 2. Polarity is not important.
9. Plug the transformer to an unswitched 120 Vac receptacle. The indicators on the KP-6 should light.
10. Connect the BLACK FLYING LEAD to the negative (-) terminal of a 12 volt, rechargeable gel type battery. Connect the RED FLYING LEAD to the positive (+) terminal of the battery. If the battery is not fully charged, allow 36 hours for battery to reach full charge.
11. As soon as battery is partially charged, disconnect AC power. VERIFY that AC fault condition exists at keypad.
12. Make sure you have programmed the EEPROM for the desired system configuration and features. Refer to the SP-6 Programming Instructions (Section II) for proper procedures.
13. Plug the telephone connection cable into the RJ31-X jack.

14. The system may now be Disarmed and Armed from the KP-6 using the (Factory Programmed) Access code 1234.

Leave system disarmed.

15. TESTING COMMUNICATION TO THE CENTRAL REPORTING STATION: Arm the panel. The flashing zone annunciator LED's will turn off. Violate a zone. The Bell should turn on, the zone and Arm LED's should flash and the premise telephone should be inoperative (DEAD). After the Central Reporting Station receives a good transmission of this violation, it will send a kiss-off signal back to the panel and disconnect from the telephone line. The panel will restore the telephone line back to the premise telephone.

16. Fill in the appropriate information in the Owner's Manual, and give it to your customer when you explain how the system operates. Provision is made on the back page for your business card.

17. Select a testing method as outlined in the Owner's Manual. If Test/Fire Reset push button (Acron P/N AC058) is not installed, program SP-6 for Bell test from keypad (Memory Location 98).

1.2 SPECIFICATIONS

POWER REQUIREMENTS : 125 Vac, 20 VA, 18 Volts transformer supplied.
12 Volt 4 AH (NP4-12) Yuasa Battery
or 6 AH (NP6-12) or equivalent (not supplied).

AUXILIARY POWER OUTPUT: 12-14 Volts, 300 ma.

BELL POWER OUTPUT: Maximum 1.0A (battery supplied).

OPERATING TEMPERATURE: 35° - 130° F.

TRANSIENT AND LIGHTNING PROTECTION: Lightning and surge protection provided on all input, power, and telephone lines.

ZONE RESPONSE TIME: 300 mSec. During reporting cycle, response time increases to approximately 1 sec.

DIMENSIONS: 8 1/4" H x 11" W x 3" D.

SHIPPING WEIGHT: 6 lbs.

FCC REGISTRATION NUMBER: AB798Z-67793-AL-E.

RINGER EQUIVALENCE: 0.1B

1.3 FCC COMPLIANCE

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications of Subpart J of part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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:

1. Reorient the TV or radio antenna.
2. Relocate or move the alarm control away from the receiver.
3. Plug the transformer for the alarm control into a different outlet so that the receiver and the alarm are on different branch circuits.
4. If necessary, the user should consult the alarm dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, stock #004-000-00345-3.

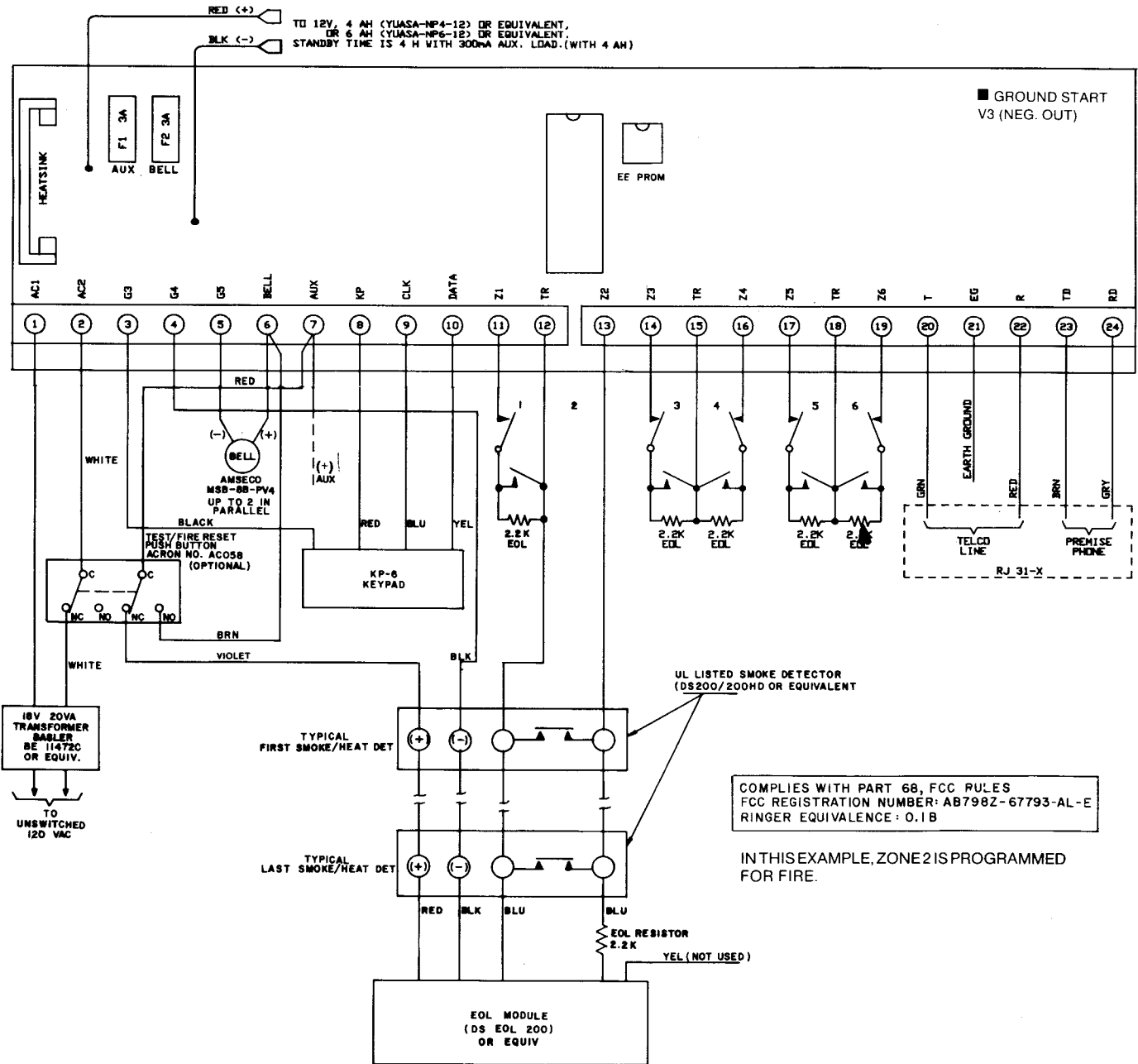
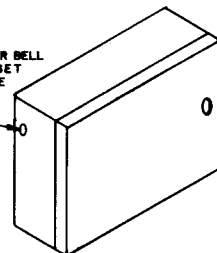


FIG. IA
TEST SWITCH INSTALLATION

STARTER HOLE FOR BELL
TEST/SMOKE RESET
SWITCH. ENLARGE
TO 1/4" DIA.



CONNECTION OF THE FIRE ALARM SIGNAL TO A
FIRE ALARM HEADQUARTERS OR A CENTRAL STATION
SHALL BE PERMITTED ONLY WITH THE APPROVAL OF
THE LOCAL AUTHORITY HAVING JURISDICTION.

BURGLAR ALARM SIGNALS SHALL NOT BE
CONNECTED TO A POLICE EMERGENCY NUMBER.

THE COMMUNICATOR OR THE RECEIVING END
TO WHICH THIS EQUIPMENT TRANSMITS
SIGNALS HAVE NOT BEEN EVALUATED BY UL.

SECTION II - PROGRAMMING

PROGRAMMING INSTRUCTIONS

Programming the EEPROM that is included with the system can be done with an Acron model P-4000 programmer or an AVENGER 4000 system. Entering numbers (programming) in the EEPROM is explained in the manuals of the above products however the Spartan programming worksheet and it's accompanying definitions should be used to identify memory locations and their associated data.

MEMORY LOCATION

DEFINITIONS

1-41

2.0 TELEPHONE NUMBER

Telephone numbers are entered into the appropriate memory locations. The Spartan's memory location may be used to dial a single number of up to 41 digits. If the communicator function is not to be used, memory Location 1 must be cleared.

In addition to telephone dialing digits, three special function numbers may be inserted into the first 41 memory locations. They are second dial tone, dialing pause, and 11 (Delete Call Waiting).

SECOND DIAL TONE

In installations where two dial tones are received (first for internal line and second for outside line). The Spartan may be programmed to detect a second dial tone by entering a "14" between the internal line number and the outside line number.

DIALING PAUSE

In areas where a dialing pause is required a dialing pause may be programmed after any dialing digit by entering a "15". The dialing pause is approximately 5 seconds.

11 - (DELETE CALL WAITING)

The "11" is used to delete call waiting. 11, 7, and 0 is programmed before the dialed phone number. Use first three Memory Locations. Check with your local telephone company to make sure of the exact digit sequence.

43-47

2.1 ACCOUNT NUMBER DIGITS

A three, four or five digit account number may be programmed starting in Memory Location 43. If all five Memory Locations are not used then the remaining Memory Locations must be cleared.

53

2.2 DIALING/REPORTING FORMAT CONTROL

Entering a 1 in this location will program touch tone dialing. Entering a 4 will adjust the make to break ratio from 60/40 to 70/30 (used in most European countries). Entering a 6 will program the reporting format to be extended. Fast or slow transmission speeds are automatically adjusted during analysis of the receiver handshake tone. if this memory location

**MEMORY
LOCATION**

DEFINITIONS

is cleared dialing will be rotary, make to break will be 60/40 and transmission format will be non-extended (standard fast or slow).

54

2.3 NUMBER OF ATTEMPTS

If this location is cleared the Spartan will continue to dial until a shut down signal is received from the receiver (in countries where allowed). If any number 1-15 is entered the unit will shut down after the entered number of attempts. Example: 8 is programmed and the central station is temporarily down. After 8 attempts the Spartan will not attempt to communicate until another alarm occurs or is powered down (AC and DC).

57

2.4 RESTORE SELECT ZONES

Zone numbers entered (1-8) will report restores. More than one number may be entered. Example: enter 1, 2 and 3, zones 1, 2 and 3 will report restores.

Restores report as they occur unless they are combined with reporting delays or assigned to burglary zones. When combined with a reporting delay, a report will not be sent unless the restore occurs after the reporting delay expires. When combined with a burglary zone the report will not occur until the Spartan is disarmed.

58

2.5 RESTORE CODE

Enter desired restore code in this location.

59

2.6 TEST CANCEL SELECT ZONES

Test cancel zones are assigned the same way as restore zones are.

If a selected test cancel zone is tripped, the test cancel code will be sent if the trip was a momentary trip or was restored prior to receiver shut down.

Burglary zones SHOULD NOT be selected to report test cancel.

60

2.7 TEST CANCEL CODE

Enter the desired test cancel code in this location.

61

2.8 REPORTING DELAY SELECT ZONES

Zones may be selected for reporting delays (abort delays) the same way that restore zones are selected. A tripped zone that is selected for a reporting delay will not report (unless it's a burglary

**MEMORY
LOCATION**

DEFINITIONS

zone) unless the trip signal exist for a longer period than the reporting delay time. Burglary zones combined with reporting delays will not report if the Spartan is disarmed before the reporting delay time expires. Reporting delays should not be used with delayed burglary zones or erratic operation will occur.

62

2.9 REPORTING DELAY TIME

Enter the reporting delay time desired in this location. Delay from 10 to 150 seconds may be selected in 10 second increments. Enter a "1" for 10 second and "2" for 20 seconds and a "15" for 150 seconds.

64-79

2.10 ZONE REPORTING CODES

Memory Locations 64-79 are reserved for entering reporting codes. Numbers 0-9 may be entered for all receivers and 0-15 may be entered for receivers that can handle hexadecimal numbers. Zones 9-16 (Memory Location 72-79) will not report if cleared. They must be assigned zone codes to report.

70-71

2.11 FAULT POWER LOSS REPORTING

Memory Location 70 (low battery) zone 7 and 71 (AC power loss) zone 8 are fault reporting zones. These two zones may also be selected for reporting delays and restore reports.

2.12 KEYPADS - KEY PAIRS

72, 74, 75, and 77 are programmed for reporting codes if keypad, keypair reports are desired. These key pair combinations may also be programmed for audible alarms (reporting or non-reporting, see memory location 98). There is no indication at the keypad for keypad activated alarms.

73

2.13 FAULT FIRE TROUBLE

Enter a code if fire trouble reports are desired.

76

2.14 DURESS

Entering a code in 76 will report when the duress function is activated from the keypad. This occurs when a 0 is entered at the keypad immediately after the access code is entered.

78

2.15 OPENING REPORT

Enter reporting code to represent an opening (disarming) report. Opening report is sent when system is disarmed.

**MEMORY
LOCATION**

DEFINITIONS

79

2.16 CLOSING REPORT

Enter reporting code to represent a closing (arming) report.

NOTE: Opening and closing reports are used to notify the central station when the system is disarmed (opening) and armed (closing).

80

2.17 FOLLOWER ZONE SELECT

Selecting follower zones (the same way as restore select zones) deactivates these zones during entrance and exit delay times. This feature allows the system user to walk in front of an intrusion detector when entering or exiting the premise via an entrance exit delay zone. If a follower zone is violated when an exit delay is not in progress (when system is armed) or when an entrance delay is not in progress (entrance to premise was not through a delay zone) then the follower zone will instantly go into alarm.

81

2.18 AUDIBLE PANIC, SELECT ZONES (24 HR.)

Select zones to be programmed for audible panic. The zone LED will flash on alarm whether the panel is armed or disarmed. Zones selected for Audible Panic are always on. Any combination of zones 1-6 may be selected.

83

2.19 AUDIBLE FIRE, SELECT ZONES (24 HR.)

Select zones to be programmed for audible fire. The zone LED will flash on alarm whether the panel is armed or disarmed. Zones selected for Audible Fire are always on. Any combination of zones 1-6 may be selected.

84

2.20 AUDIBLE BURGLARY, SELECT ZONES

Select zones to be programmed for audible burglary. Zones that are selected for Audible Burglary are on when armed and not bypassed. These zones can be armed and disarmed from the keypad. Any combination of zones 1-6 may be selected.

85

2.21 DELAYED BURGLARY, SELECT ZONES

Select zones to be programmed for delayed burglary. These zones must be selected if an Entrance Delay or Exit Delay is desired. Any combination of zones 1-6 may be selected. These zones must also be selected for audible burglary. Reporting delays should not be used with delayed burglary zones or erratic operation will occur.

86

2.22 EXIT DELAY TIME

Delays from 10 to 150 seconds may be selected in 10-second increments. For U.L. installations the maximum exit delay may not exceed 60 seconds. When using a closing report an exit delay time should be entered even though an exit delay zone is not selected. This will prevent nuisance reports caused by user immediately disarming the system after arming.

Enter a "1" for 10 seconds, a "2" for 20 seconds, up to "15" for 150 seconds.

There is a blank space in the owner's manual to enter the Exit Delay time. This delay time should be entered in the provided space.

**MEMORY
LOCATION**

DEFINITIONS

87

2.23 ENTRANCE DELAY TIME

Delays from 10 to 150 seconds may be selected in 10-second increments. For U.L. installations the maximum entrance delay may not exceed 40 seconds. Enter a "1" for 10 seconds, a "2" for 20 seconds, up to a "15" for 150 seconds.

There is a blank space in the owner's manual to enter the Exit Delay time. This delay time should be entered in the provided space.

88

2.24 BELL SHUT OFF TIME (x2 MIN.)

From 2 to 30 minutes may be entered in 2-minute increments. Enter a "1" for 2 minutes, a "2" for 4 minutes, etc., up to a "15" for 30 minutes.

U.L. installations require a bell shut-off time of at least 4 minutes.

89

2.25 FIRE BELL SHUT—OFF

The Fire Bell will time out as determined by Memory Location 89 (Auto Shut-Off). If set to "1", the fire bell will not turn off unless manually reset. This is a requirement in some states (i.e., California). If the manual shut-off mode is to be changed to the auto shut-off mode, the "1" must be cleared.

91-94

2.26 ACCESS CODE DIGIT LOCATIONS

These Memory Locations are reserved for entering a four digit account number. All four digits must be entered. Numbers 0-9 may be used.

98

2.27 KEYPAD AUDIBLE ALARM SELECT (FIRE OR BURGLARY)

Any or all of the four keypad pair combinations may be programmed to sound an audible alarm when a key pair is activated. Each key pair may sound either an audible burglary or fire alarm but not both. The top key pair (row 1) will sound burglary when a "1" is entered and fire when a "5" is entered. Row (2) key pair will sound burglary when a "2" is entered and fire when a "6" is entered. Row (3) key pair will sound burglary when a "3" is entered and fire when a "7" is entered. Row (4) key pair will sound burglary when a "4" is entered and fire when a "8" is entered. Examples: Row (1) is to sound fire and rows 2 and 3 are to sound burglary. Enter a "5", "2" and "3" in location 98.

NOTE:

2.28 SILENT ALARM

Zones not programmed for any panel functions will be silent. The zone LED will flash during a silent alarm (except key pair activated).

If this is undesirable, the copper on the KP-6 leading to the LED may be cut.

PROGRAMMING WORKSHEET

Name _____

Acct. # _____

Address _____

**FIGURE 2
PROGRAMMING WORKSHEET**

MEMORY LOCATION	DESCRIPTION	DATA ENTERED (NEW)																				FACTORY PROGRAMMED	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21
1-41	TELEPHONE NUMBER MEMORY LOCATIONS																						
	TELEPHONE NUMBER DIGITS																						
	TELEPHONE NUMBER MEMORY LOCATIONS	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
	TELEPHONE NUMBER DIGITS																						
43-47	ACCOUNT NUMBER MEMORY LOCATIONS	43				44				45				46				47					
	ACCOUNT NUMBER DIGITS																						
DIALER FUNCTIONS	53	1 = TOUCHTONE DIALING	ENTER NUMBERS								SELECT ZONE(S)								ROTARY				
		4 = EUROPEAN MAKE/BREAK	1	2	3	4	5	6	7	8													
	6 = EXTENDED FORMAT																						
	54	NUMBER OF ATTEMPS CL = CONTINUOUS																					8
	57	RESTORE, SELECT ZONES																					
	58	RESTORE CODE																					
	59	TEST CANCEL, SELECT ZONES																					
	60	TEST CANCEL CODE																					
	61	REPORTING DELAY, SELECT ZONES																					
	62	REPORTING DELAY TIME (x 10 SEC)																					
REPORTING CODES	64	ZONE 1 CODE	DESCRIPTION																		1		
		65	ZONE 2 CODE																			2	
	66	ZONE 3 CODE																			3		
	67	ZONE 4 CODE																			4		
	68	ZONE 5 CODE																			5		
	69	ZONE 6 CODE																			6		
	70	ZONE 7 CODE (LOW BATTERY)																					
	71	ZONE 8 CODE (AC FAIL)																					
	72	ZONE 9 CODE KEYPAD (1 & 3) REPORT CODE																					
	73	ZONE 10 CODE FIRE TROUBLE REPORT CODE																					
	74	ZONE 11 CODE KEYPAD (4 & 6) REPORT CODE																			9		
	75	ZONE 12 CODE KEYPAD (7 & 9) REPORT CODE																					
	76	ZONE 13 CODE DURESS REPORT CODE																					
	77	ZONE 14 CODE KEYPAD (* & #) REPORT CODE																					
	78	ZONE 15 CODE OPENING REPORT CODE																					
	79	ZONE 16 CODE CLOSING REPORT CODE																					
PANEL FUNCTIONS	80	FOLLOWER ZONE SELECT	SELECT ZONE(S)																				
			1	2	3	4	5	6	7	8													
	81	AUDIBLE PANIC, SELECT ZONES (24 HR)																					
	83	AUDIBLE FIRE, SELECT ZONES (24 HR)																					1
	84	AUDIBLE BURGLARY, SELECT ZONES																					23456
	85	DELAYED BURGLARY, SELECT ZONES																					3
	86	EXIT DELAY (x 10 SEC)																					3
	87	ENTRANCE DELAY (x 10 SEC)																					3
	88	BELL SHUT OFF TIME (x 2 MIN)																					2
	89	FIRE BELL TIME CL = AUTO 1 = MANUAL (CALIF.)																					AUTO
91-94	ACCESS CODE MEMORY LOCATIONS	91				92				93				94									
	ACCESS CODE DIGITS																						1234
98	KEYPAD AUDIBLE ALARM SELECT (FIRE OR BURG)																					5	