SF 500 & DSF-500

Hook-up & Installation

An *FBX* Company

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I-2297 REV A. 6/88

SF-500

See back of booklet, page 15 when using Model DSF-500.
The SF-500 is designed to interface directly with the XL1218 and XL1219.
The SF-500 may be used on installations which have an answering machine and rotary or touchtone telephones on site, however only the touchtone telephones can access this SF-500. The rotary phones can only be used to make and receive standard outside phone calls. Incorporating the SF-500 will enable all on and off-premises telephones (assuming they are touchtone) to be used as keypads. XL1218R and XL1219R keypads MAY be used in conjunction with the SF-500 if desired, or the SF-500 can be used by itself. If the SF-500 is used as a standalone, (with no keypads on site) a remote red LED terminal has been provided to indicate arm status. To access the SF-500 specific keys must be depressed in specific order via the telephone pad. The SF-500 will respond clearly with English language messages concerning the system's status. The SF-500 English language messages must be programmed into a FBI model F102 prom chip, as per the programming section of this manual. The SF-500 can also be programmed to allow off-premises access via touchtone telephones. Lastly, there are 3 auxiliary relays which contain Form C Dry Contacts, that can be used to activate on-premises devices. This installation instruction will explain terminal connections of the SF-500 to the XL1218 and XL1219 Control Panels first, then proceed with the prom programming.

NOTE:
THE ACTUAL SF-500 OPERATION WILL BE EXPLAINED IN THE END USER MANUAL
If this product is being used WITHOUT any keypads, two 1000 ohm resistors (included) must be wired on the XL1219 terminals 6 to 8, and 6 to 9. When using the SF-500-50 with the XL1218 or XL1219 the fire end of line resistor must be changed to 22K ohms. A 22K ohm resistor is provided with the SF-500 installation instruction packet.

HOOKUP/WIRING

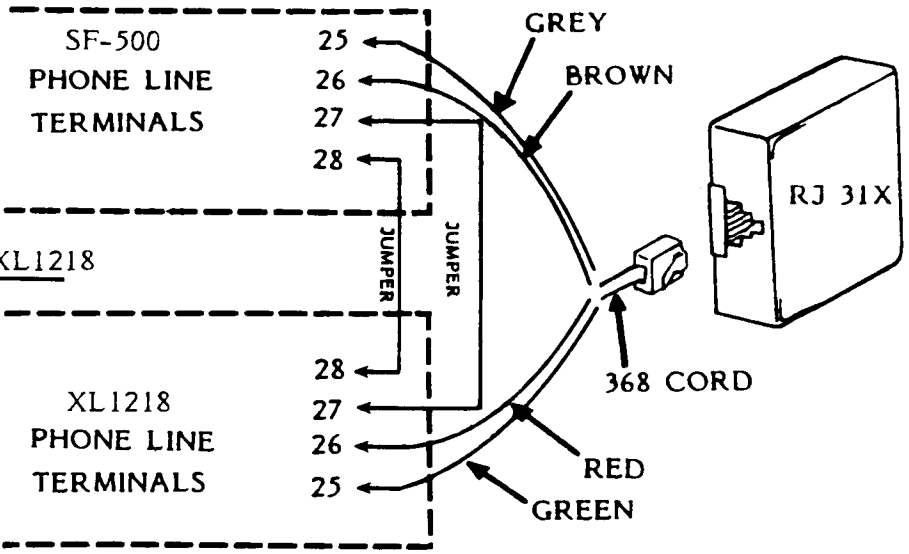
SF-500 Terminals	XL1218 Terminals	XL1219 Terminals	Description
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	Keypad Data Terminals The SF-500 reads loop data and instructs the Control Panel via these terminals
6	*	8	SF-500 detects fire trouble on XL1219 here
7	*	9	SF-500 detects low bat on XL1219 here
8	32	37	SF-500 detects AC loss here
9	*	27	SF-500 detects fire alarm on XL1219 here
10	23	29	SF-500 detects burglary alarm here
11 12 13	Common Normally closed Normally open		Form C dry contacts on relay Number 3. Toggled by #3 at telephone
14 15 16	Common Normally closed Normally open		Form C dry contacts on relay number 2. Toggled by #2 at telephone
17 18 19	Common Normally closed Normally open		Form C dry contacts on relay Number 1. Toggled by #1 at telephone
20(-) 21(+)	A remote red led may be wired to these terminals to display arm status of the system		
23(+) 24(-)	A remote 8-~ 10 watt speaker may be wired here to listen to SF-500 English language messages accessed by phone		
25(grey) 26(brown)	The grey & brown wires from the 368 cord which plugs into the RJ31X must be wired to these terminals. These wires contain the premises phones. (see diagram page 2)		
27 28	27 28	33 34	SF-500 phone line connections to the control panels. See diagram page 2
29(+) 30(-)	20 21	25 26	DC from control panels to power SF-500. The SF-500 draws approximately 122 ma in standby and 297 ma while active.

* = These terminals do not have to be connected when the SF-500 is wired to the XL1218

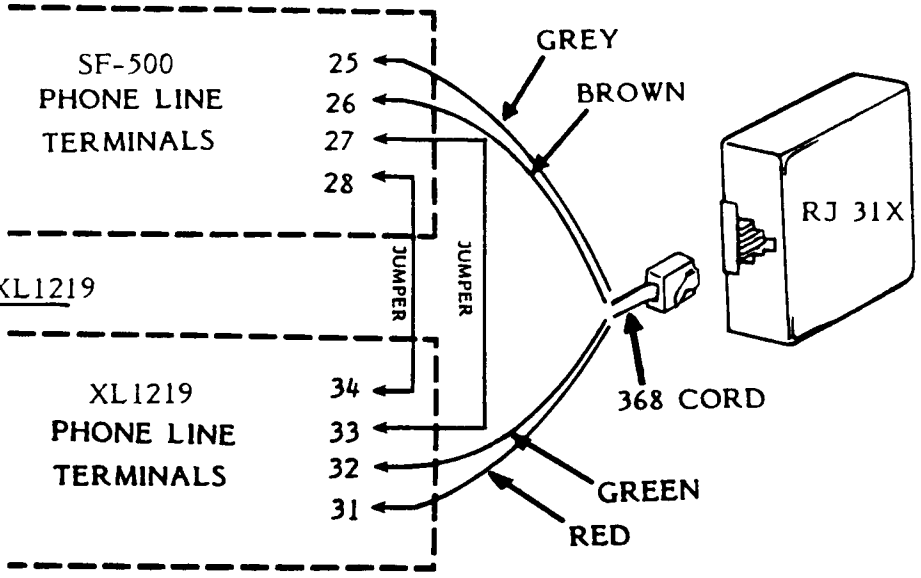
* CONTACTS RATED AT 120 VAC, 60 VDC, 3 AMP

NOTE: When the Convenience Switch on the SF-500 box is depressed, the home phones will be connected directly to the outside lines, which enables the customer to prevent access to SF-500 by on-premises telephones. However, external access can still be accomplished. Furthermore, the Control Panel will seize the home phones if a violation occurs. This switch should normally be in the OUT position.

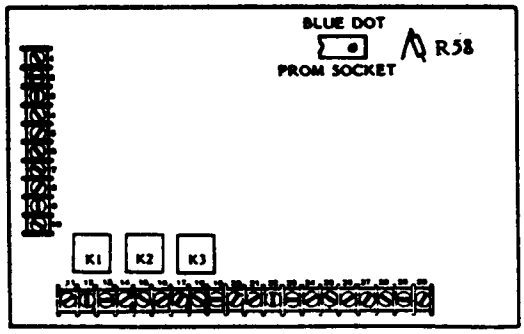
PHONE LINE HOOKUP SF-500 TO XL1218



PHONE LINE HOOKUP SF-500 TO XL1219



SF-500 P.C. Board.



F.C.C. Registration No. AE398E-69554-AL-E for FIRE BURGLARY INSTRUMENTS MODEL SF-200

NOTE: Whenever the SF-500 is disarmed, it will automatically deliver a status message. If status is not reported on disarm, depress [*] [*] twice. If the message "The Central was not called. Press Reset" is generated, depress [#] [0] to reset. Depress [*] [*] AGAIN to OBTAIN Final System Status. At this point any other system functions desired may be performed.

A Prom chip model F102 (DM74S387N, or 63S140N) must be programmed with an FBI 110 or 110C programmer for proper operation of the SF-500. Two quadrants of the Prom must be programmed. Either quadrants one and two or quadrants three and four may be used. The condition of the R58 resistor jumper in the SF-500 will dictate which two quadrants the SF-500 will read. The chart below depicts the R58 jumper setting for the desired quadrants used.

R58 Jumper	Quadrants
Connected	1 & 2
Cut	3 & 4

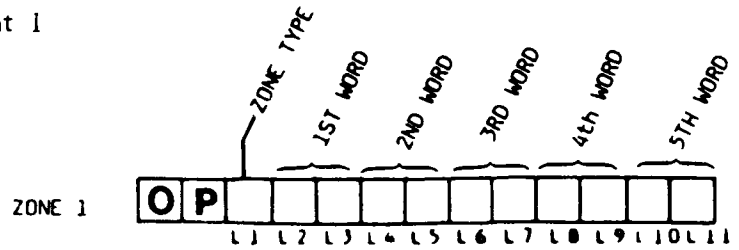
The main body of programming that is required for the SF-500 is the ENGLISH LANGUAGE words that will be reported (said) when any of the zones of the Control Panel are read by the SF-500. In other words, the zones of the Control Panel must be Named.

Example: Zone 1 = Front door
Zone 2 = Kitchen
Zone 3 = Basement

(THIS INSTRUCTION BOOKLET IS DESIGNED TO ACCOMPLISH WRITING OUT THE SF-500 PROGRAM SHEET WHICH IS LOCATED ON PAGE 13)

STEP A

Quadrant 1



THE FIRST LOCATION of the OP Field, Quad 1, marked L1 must contain a digit from the chart below which represents the TYPE of zone that zone 1 has been programmed in the XL1218 or XL1219 Control Panel.
(example: 24 HR Trouble Zone, 24 HR Alarm Zone, Controlled Burglary Zone)
Select an appropriate digit from the chart below.

CHART A

Digit	Zone Type
0	24 Hr Alarm
1	24 Hr Trouble
3	Controlled Delay, Instant, or Interior

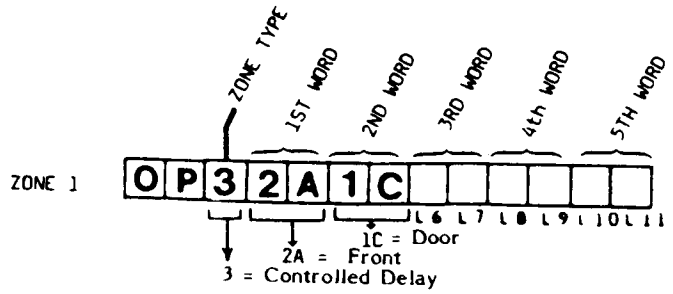
THE SECOND THROUGH ELEVENTH location marked L2-L11 of this field represent the 5 total words that can be programmed to NAME zone 1. Locations L2 and L3 represent the first word, L4 and L5 the second word, etc. Each word desired has a 2 digit Hexadecimal number that corresponds to that word. The two digit numbers and corresponding words can be found in the PROGRAMMABLE LIBRARY, page 11. Write in the appropriate two digit numbers that represent the words desired for zone 1 in this OP field. If zone 1 requires less than five words, leave the corresponding locations for the unused words blank.

NOTE: If zones are programmed as 24 HR. alarm zones, the SF-500 will not report the zone words, therefore locations L2-L11 should be programmed [F].

cont'd. pg. 4

STEP A cont'd.

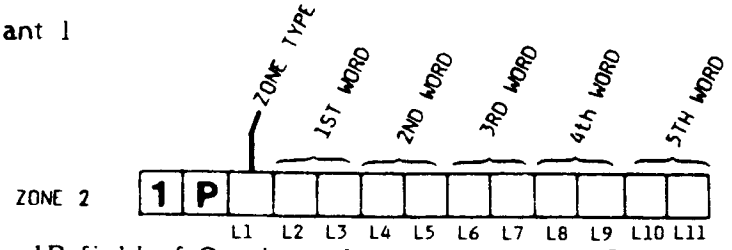
The following is an example of how the OP field should be programmed if zone 1 is a controlled delay, front door.



Since zone 1 is a burglary zone, there are many conditions it could actually be in during many instances of daily operation. (example: Alarm, Bypass, Trouble while the system is disarmed, etc.) When status is requested from the SF-500, the words that were programmed here into the OP field will PRECEDE the PHRASES that apply from the DEDICATED LIBRARY of Terms for the condition of zone 1. (example: Zone 1 is bypassed; then status is requested. The SF-500 will say "FRONT DOOR IS BYPASSED". "FRONT DOOR" is from this OP field, "IS BYPASSED" comes from the Dedicated Library.) Zone 1 has been successfully programmed.

STEP B

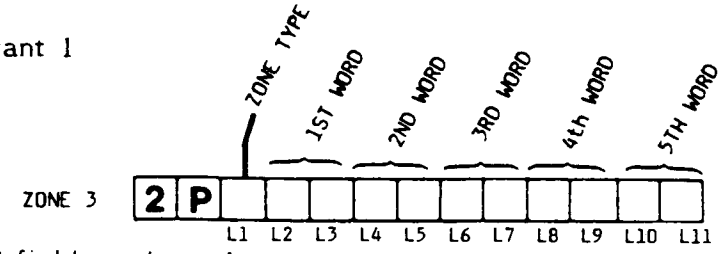
Quadrant 1



The 1P field of Quadrant 1 represents zone 2 on the XL1218 and XL1219. The same procedure must be followed here, as Step A. L1 location represents the zone type. Select an appropriate digit from Chart A in Step A. Location L2-L11 represent the 5 total words to Name zone 2. Select the 2 digit numbers that CORRESPOND TO the words desired from the PROGRAMMABLE LIBRARY.

STEP C

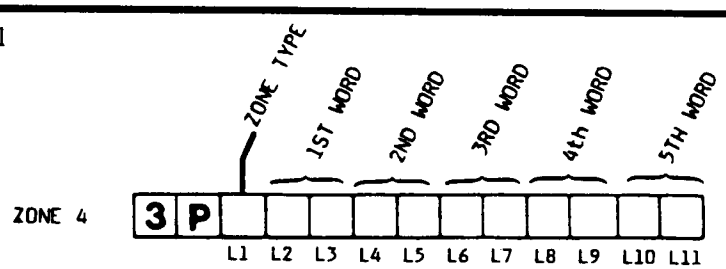
Quadrant 1



The 2P field quadrant 1 represents zone 3 on the XL1218 and XL1219 Follow the same procedure as Step A.

STEP D

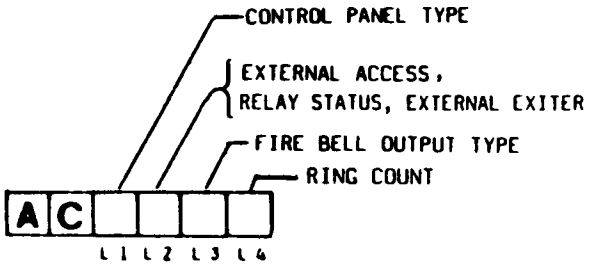
Quadrant 1



The 3P field quadrant 1 represents zone 4 of the XL1218 and XL1219 Follow the same procedure as Step A.

STEP E

Quadrant 1



THE FIRST LOCATION of this AC field marked L1 informs the SF-500 what Control Panel is being used. Select an appropriate digit from the following chart for this L1 location.

Digit	Control Panel Type
0	XL1218
2	XL1219

THE SECOND LOCATION of this AC field marked L2 is used to determine the following three options:

Option One - External Access: If External Access is programmed, system functions can be accomplished from off-premises touch-tone telephones.

Option Two - Automatic Relay Status: If this option is programmed, whenever system status is requested from the SF-500 it will include the status of all auxiliary relays. If "Automatic Relay Status" is not selected, relay status must be initiated manually by depressing [#] then [8].

Option Three - External Exiter: This option has been included in the SF-500 and should be used only if the main control instrument (XL1218 or XL1219) has been programmed to include at least one controlled INTERIOR zone. The purpose of this option is to enable the end user to call from an off-premise telephone and arm his system without excluding the interior zone.
When External Exiter is programmed and the system is armed from an OFF-PREMISES TELEPHONE, auxiliary relay 3 will automatically activate momentarily. Relay 3 closed circuit contacts (SF-500 terminals 11 and 12) MUST be wired in series with the Control Panel DELAY Loop.
The momentary activation of relay 3, after arming will simulate exit through the delay zone causing the control panel to include the interior zone. Relay 3 will not activate momentarily when the system is armed from on-premises telephones.
Lastly, when this option is selected, relay 3 can no longer be utilized as an auxiliary relay circuit.

DIGIT	EXTERNAL ACCESS	AUTOMATIC RELAY STATUS	EXTERNAL EXITER
0	NO	YES	NO
3	YES	YES	NO
7	YES	YES	YES
8	NO	NO	NO
B	YES	NO	NO
F	YES	NO	YES

cont'd. pg. 6

STEP E cont'd.

THE THIRD LOCATION of this AC field marked L3 informs the SF-500 what type of Fire Bell output has been programmed in the XL1218 or XL1219 Control Panels. When the SF-500 is used in conjunction with the XL1218, the XL1218 PANEL MUST be programmed PULSING BURG BELL OUTPUT for the Fire zone. Therefore, this LOCATION L3 in the SF-500 must be programmed with Digit [4] when used with the XL1218. The XL1219 can be programmed for EITHER PULSING BURGLARY BELL OUTPUT FOR THE FIRE ZONE OR STEADY FIRE HORN OUTPUT. Therefore, select a digit from the following chart which informs the SF-500 what type of Fire output is being used on the respective Control Panels.

DIGIT	CONTROL PANEL FIRE OUTPUT
4	Pulsing Burg Bell output for Fire
C	Steady Fire Horn output

Note: If the SF-500 is used with XL1218, this L3 location MUST be programmed Digit [4], AND the XL1218 MUST be programmed PULSING BURG BELL OUTPUT for the Fire zone in Quad 2, 3P field, L1 location on ITS Prom.

THE FOURTH LOCATION OF THIS AC FIELD marked L4 determines the number of rings required before the SF-500 will pick up, when accessed from OFF-premises telephones

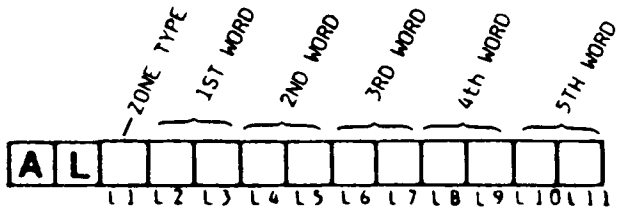
Select the digit desired from the following chart.

NOTE: If external access has not been selected, program this location "F".

DIGIT	NUMBER OF RINGS
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
A	10
B	11
C	12
D	13
E	14
F	No External Access

STEP F

Quadrant 1

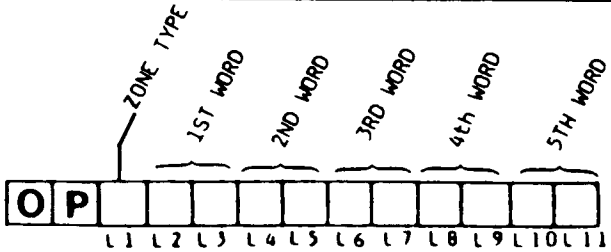


The AL field of quadrant 1 represents zone 5 on the XL1219. The same procedure must be followed here as Step A to Name zone 5 of the XL1219. L1 represents the zone type. Select an appropriate digit from Chart A, in Step A. Select the 2 digit numbers that represent the words desired from the PROGRAMMABLE LIBRARY.

Note: If the SF-500 is being used in conjunction with the XL1218, this AL field MUST be left blank.

STEP G

Quadrant 2

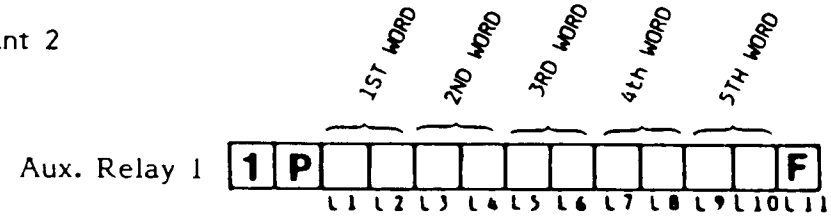


The OP field quadrant 2 represents zone 6 of the XL1219. Follow the same procedure as step F to Name zone 6.

Note: If the SF-500 is being used in conjunction with the XL1218, this field MUST be left blank.

STEP H

Quadrant 2

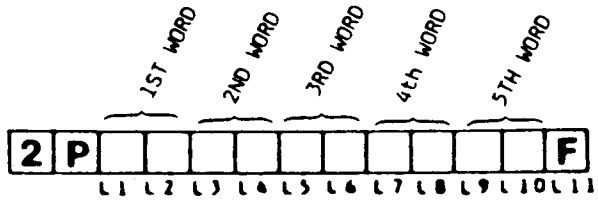


The 1P field quadrant 2 is used to Name auxiliary relay #1. Locations L1-L10 represent the 5 total words. Select the 2 digit numbers that correspond to the words desired from the PROGRAMMABLE LIBRARY. The L11 location must be left blank.

Note: If relay 1 is not used, leave this field blank.

STEP I

Quadrant 2



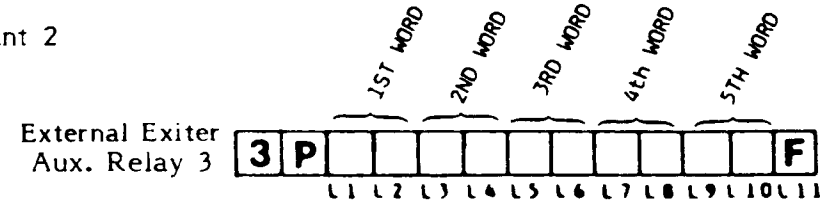
The 2P field quadrant 2 represents auxiliary relay 2. The same procedure must be followed as in Step H to Name relay 2.

Note: If the ANSWERING MACHINE OPTION will be selected in Quad 2, AF field, (see step K below) then all these locations L1-L11 must be programmed "F". Furthermore, relay 2 cannot be used as an auxiliary output.

Note: If relay 2 is not used, leave this field blank.

STEP J

Quadrant 2



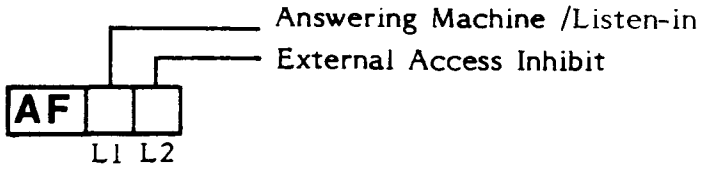
The 3P field quadrant 2 represents auxiliary relay 3. The same procedure must be followed as in Step H to Name relay 3.

Note: If relay 3 is not used, leave this field blank.

NOTE: If External Exiter has been selected in Quad 1, AC Field, L2 Location, then this 3P Field, all locations, MUST be programmed "F".

STEP K

Quadrant 2



The SF-500 may be connected to a telephone line which presently has an answering machine. If this situation exists, auxiliary relay 2 normally closed, and common contacts (terminals 14 & 15) must be wired in series between the Brown wire from the Model 368 cord and SF-500, terminal 26. The theory of operation for calling in from an external telephone is as follows: The SF-500 must be programmed for a ring count greater than the answering machine ring count. When an incoming phone call is picked up by the answering machine, the SF-500 will also be PREPARED to receive commands from the telephone. Depress [*] and the security access code (this code is programmed in Quad 2 AC field) if one exists, BEFORE the answering machine reaches its RECORD mode. Relay 2 contacts will open disconnecting the answering machine and home phones. All SF-500 functions may be continued at this point uninterrupted by the answering device. When the phone call terminates, the SF-500 will hang up and close relay 2 contacts for the next call. If the SF-500 is not accessed after the answering machine pickup on an incoming phone call, the answering machine will continue with its standard procedure.

NOTE: Access to the SF-500 MUST NOT be gained during the answering machine record mode.

The second option in the L1 location is called listen-in. If this option is selected, relay one contacts can be used to incorporate a speaker phone which can be used for listen-in purposes from an outside telephone, or as an intercom system from on-premises telephones.

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STEP K cont'd.

Speaker phone hookup is as follows:

Step A: Mount the speaker phone as desired.
Step B: Mount a standard telephone RJ11X JACK nearby.
Step C: Plug the other end of the gray cord into the RJ11X jack.
Step D: Connect a wire between SF-500 terminal 25 and the RED wire in the RJ11X.
Step E: Connect a wire between SF-500 terminal 17 and the GREEN wire in the RJ11X.
Step F: Connect a jumper between terminals 19 and 26 on the SF-500.
Step G: Depress the ON/OFF button to the ON position.

Installation is complete.

The theory of operation from the on-premises phones is as follows:

Step A: Pick up the telephone and depress (#),(1). (relay 1 contacts close, which puts the speaker phone on the line.)
Step B: Two way communication is now possible between the telephone and the speaker phone.
Step C: When conversation is complete, hang up the telephone. (relay 1 contacts will return to its normal condition, taking the speaker phone off the line.)

NOTE: AS AN ALTERNATIVE TO HANGING UP THE TELEPHONE, DEPRESS (#),(1) TO DISCONNECT THE SPEAKER PHONE, IF OTHER SF-500 FUNCTIONS NEED TO BE ACCOMPLISHED.

The theory of operation from off-premises phones is as follows:

Step A: Call in to the SF-500 and wait for pickup, then enter (*), and the security access code, if one exists.
Step B: Depress (#),(1). Two way communication is now possible for approximately 20 seconds, at which time the SF-500 will terminate the call, and remove the speaker phone from the line.

SELECT A DIGIT FOR THE L1 LOCATION OF THIS AF FIELD FROM THE CHART ON THE FOLLOWING PAGE FOR THE DESIRED OPERATION.

DIGIT	ANSWERING MACHINE	LISTEN-IN
C	YES	YES
D	YES	NO
E	NO	YES
F	NO	NO

STEP K cont'd.

THE SECOND LOCATION of this AF field marked L2 on the Program Sheet is called EXTERNAL ACCESS INHIBIT. A digit must be programmed in this location which decides if TOTAL system operation including arm/disarm will be allowed from external access, or only system status, and auxiliary relay operation will be permitted. Select a digit for the L2 location of the AF field, from the following chart, for the desired operation.

NOTE: If external access has not been selected in Quad 1 AC field, this location may be programmed "F".

Digit	External Access Inhibit
0	System status & Relay Operation Only
1	Total System Functions
F	No External Access

STEP L

QUADRANT 2

* SECURITY ACCESS CODE
* SEE UL REQUIREMENT PAGE 15

This AC Field Quadrant 2 can be used to program a 1 through 4 digit (numbers 1-9) Security access code, beginning in L1 and ending in L4. This code must be utilized when the SF-500 is accessed from OFF-Premises telephones, before any system functions can be accomplished. If all locations in this field are programmed "F", then system functions can be accomplished from OFF-Premises phones without entering this security access code. However, all system functions that require the main control panel code still apply.

Note: If (0) is desired in this code, program letter "A" instead.

Note: All restrictions dictated by external access inhibit apply, whether this code is programmed or not.

Note: This field only applies if external access has been programmed. If external access has not been selected, program L1-L4 "F".

Note: If security access code is programmed, the customer must wait for the SF-500 to pick up after the programmed number of rings, or answering machine pickup, then depress [*] and his 1 through 4 digit security access code. Then proceed with desired functions as explained in the End User Manual. If the correct access code is not entered in 3 tries, the SF-500 will terminate the phone call.

STEP M

The SF-500 Program Sheet has been successfully written out at this point. All other fields not mentioned in quadrant 1 and 2 must be left blank also. (i.e. quad 1 AF, FF and Quad 2 FF, AL fields). Utilize the following information called Proper Prom Programming Procedure to actually program the data written out on the program sheet into the prom chip.

Once the prom chip has been successfully programmed, it must be inserted into the SF-500 socket, BLUE DOT UP.

PROPER PROM PROGRAMMING PROCEDURE

STEP A Power up 110 or 110C. The Prom MUST NOT be in the Programmer at this time. Insertion of the Prom will be the last step prior to depressing the Program Button.

STEP B Select the desired Quadrant to program. The 110 and 110C will program one quadrant (or $\frac{1}{4}$ of the chip) at a time.

STEP C Depress [ENTER] momentarily, then [0] while the programmer socket is empty. Depressing [ENTER and 0] loads the present contents of the socket into memory. In the case of an empty socket, memory is loaded with Blanks or [F's]. A Blank and an [F] are the same thing. The only time the [F] Button must actually be depressed is if one specific location in a Field must be jumped over to get to another location to enter a number. Trailing [F"s] at the end of a field need not be depressed as long as their locations are Blank.

STEP D Punch in desired information for OP field through AL field in this Quadrant. Movement from OP to the next field and so on, can be accomplished by depressing [ENTER], then [9]. At the bottom left corner of the programmer, resides a chart which represents the field names, descriptions and most important, the field numbers. Jumps can be accomplished from one field to another by depressing [ENTER], then the respective field number desired. Example: To jump from OP field to AC field, depress [ENTER] then [7]. This variable jumping will become useful for duplicating master chips.

STEP E After completing data entry into all desired fields, the Prom may be inserted into the programmer socket. The Blue Painted dot must be situated down. The Prom must be pushed all the way in. The programmer does not care what field you are in when you program. Depress the [Program] Button momentarily, [Finish] should be displayed.

STEP F The present quadrant has been successfully programmed. To program additional quadrants, the Prom must be removed, select the desired quadrant and repeat Steps C-F.

Summary:

[F]: The [F] Button does not display anything when depressed, however it jumps from one location to the next. The only time the [F] Button must actually be depressed is when a jump must be made over one location to get to another location where a number must be entered. Trailing [F's] need not be depressed as long as their locations are blank.

[Enter], then [0] with socket empty: Loads [F's] in selected quadrant.
[Enter], then [0] with Prom in socket: Loads memory with present data that resides in the quadrant selected.
[Enter], then [9]: Increments fields from OP to AL back to OP again.
[Enter], then field number: Jumps from one field to another as designated by respective field number.

PROGRAMMABLE LIBRARY

00 A
01 AC
02 AIR CONDITIONER
03 ALARM
04 ALL
05 AND
06 ARE
07 AREA
08 ATTIC

09 BACK
0A BASEMENT
0B BATH
0C BATTERY
0D BE
0E BEDROOM
0F BOILER
10 BURGLAR
11 BYPASSED

12 CALL
13 CENTRAL
14 CHECKED
15 CLOSET
16 COMPUTER

17 DDD
18 DELAYS
19 DEN
1A DETECTOR
1B DINING
1C DOOR
1D DOWN

1E EAST
1F EIGHT
20 ENTRANCE
21 EXIT

22 FACTORY
23 FAN
24 FIRE
25 FIVE
26 FLOOR
27 FLOW
28 FOUR
29 FREEZER
2A FRONT

2B GARAGE
2C GUEST

2D HALL
2E HAVE
2F HIGH

30 IMMEDIATELY
31 IN
32 INSTANT
33 INTERIOR
34 IS

35 KITCHEN

36 LAUNDRY
37 LEAVE
38 LEFT
39 LIGHTS
3A LIVING
3B LOW

3C MASTER
3D MEDICAL
3E MUST

3F NINE
40 NORTH
41 NOT

43 OFF
44 OFFICE
45 ON
46 ONE
47 OUT

48 PANIC
49 PERIMETER
4A POLICE
4B PRESS
4C PRESSURE
4D PROGRAM
4E PROTECTED

4F READY
50 RECEIVING
51 RELAY
52 RESET
53 RIGHT

55 ROOM

56 SAFE
57 SECURITY
58 SERVICE
59 SEVEN

5B SIDE
5C SIX
5D SKYLIGHT
5E SLIDING
5F SMOKE
60 SOUND
61 SOUTH
62 SSSSSS
63 STAIRS
64 STOCK
65 SYSTEM

66 TEMPERATURE
67 THE
68 THREE
69 TROUBLE
6A TWO

6B UP

6C VIOLATED

6D WALL
6E WAS
6F WATER
70 WERE
71 WEST
72 WINDOW

73 YOU

74 ZERO
75 ZONE

NOTE: DDD is to indicate past tense of a word.
SSSS is to pluralize a word.

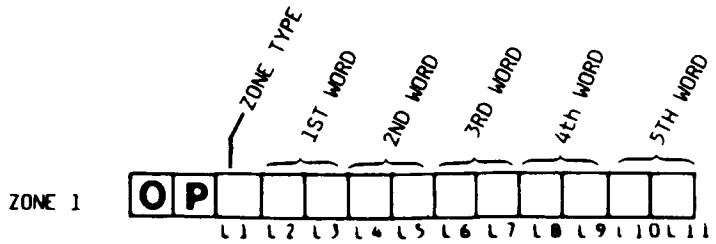
DEDICATED LIBRARY

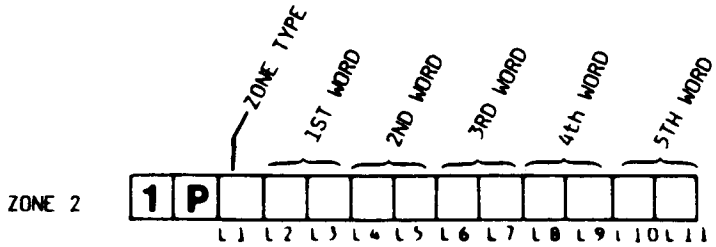
"IS IN ALARM"
"IS IN TROUBLE AND MUST BE CHECKED"
"IS NOT RESET. PRESS RESET"
"IS BYPASSED"
"THE SECURITY COMPUTER IS READY FOR PROGRAM"
"THE SECURITY COMPUTER PROGRAM IS OFF"
"THE SECURITY SYSTEM IS ON"
"THE SECURITY SYSTEM IS OFF"
"THE CENTRAL WAS NOT CALLED. PRESS RESET"
"ALL SYSTEM DELAYS ARE ON"
"ALL SYSTEM DELAYS ARE OFF"
"THE AC IS IN TROUBLE AND MUST BE CHECKED"
"THE BATTERY IS IN TROUBLE. CALL FOR SERVICE"
"THE FIRE ZONE IS IN TROUBLE. CALL FOR SERVICE"
"YOU HAVE PRESSED PANIC"
"THE FIRE SOUND IS ON"
"THE BURGLARY SOUND IS ON"
"IS ON"
"IS OFF" } RELAYS

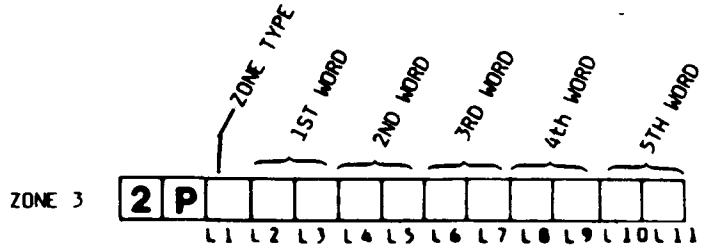
PROGRAMMING SHEET

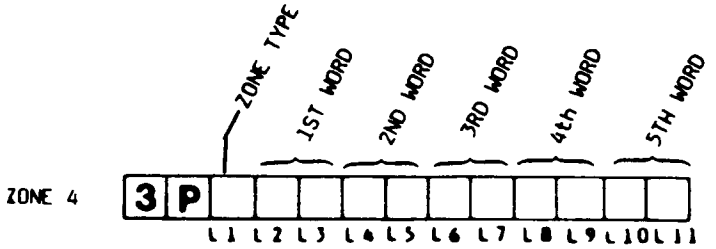
SF-500

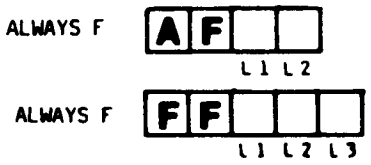
QUADRANT 1

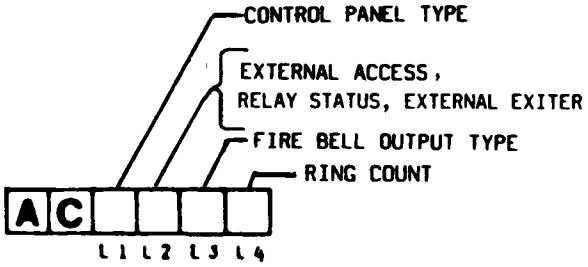


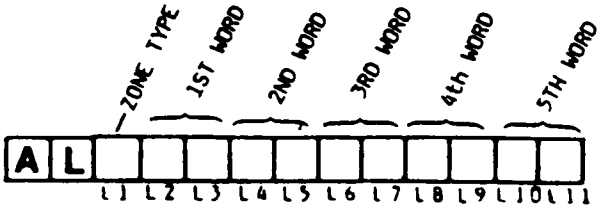












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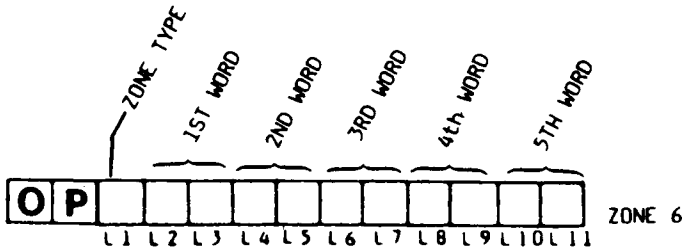

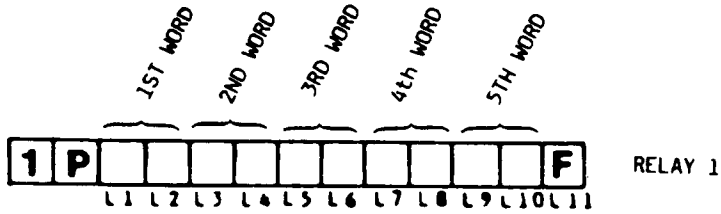

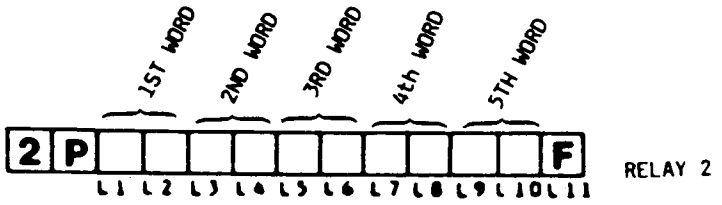

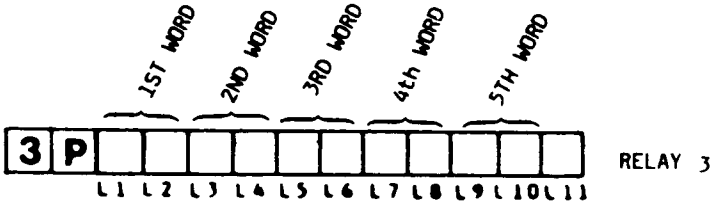

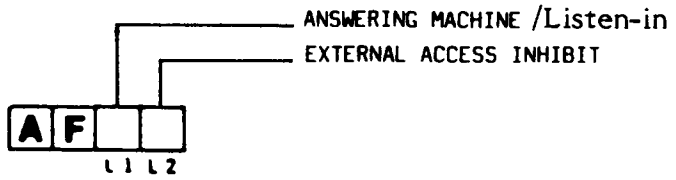

Underwriters Laboratories requirement for installation:

1. The SF500/System 600 replaces the power consumed by one keypad. Therefore, reduce the maximum number of key pads used in all applications by one. Refer to the Control System Installation Instructions I-2146 or I-2154.

2. Installation of this equipment and wiring shall be accomplished in accordance with the National Electrical Code and ANSI/NFPA No. 74.

3. A four digit Security Access Code must be used. See Step "L" in this manual.

4. The Underwriters Laboratories listing for this unit only applies when this unit is used as an accessory with either the OMNI-2000 or XL1219. For complete installation and service information, refer to Installation Manuals I-2297 or I-2298.

This manual covers installation and hook-up of the DSF-500. The DSF-500 is made up of two circuit boards in one enclosure, the XL1219 control unit and a SF-500 accessory unit. Refer to I-2146 for hook-up and installation information on the XL1219. Refer to I-2147 for programming of the XL1219. For user's information refer to I-2325 for the SF-500 and I-2158 for the XL1219. Copies of these manuals may be obtained by contacting the factory