11. STAR-fone PROGRAMMING

This section of the manual describes the programming of the **telephone access and voice response** portions of the STAR-fone, which are programmed through a prom chip model F102 (DM74S387N, or 63S140N). This memory chip can be programmed using an FBII 110 or 110C programmer. Two quadrants of the Prom must be programmed. Either quadrants 1 and 2 or quadrants 3 and 4 may be used. The condition of R52 on the 4675 circuit board determines which of the two quadrants will be read as summarized below:

R52 Jumper	Quadrants
Connected	1 & 2
Cut	3 & 4

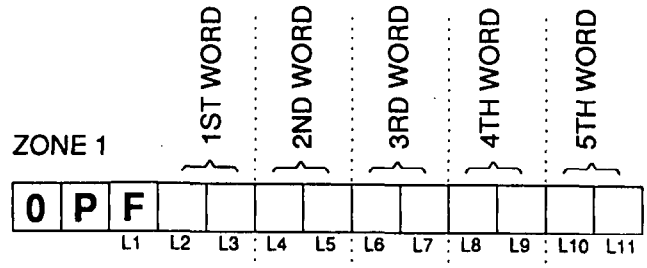
The XL4675 is shipped from the factory with default values within quadrants 1 & 2, and therefore R52 remains connected. If the factory defaults are acceptable then programming is **not** necessary. If different programming options are desired, then cut R52 and program the F102 Prom in quadrants 3 & 4.

NOTE: The factory default for quadrants 1 & 2 are displayed in the STAR-fone system default section.

The following descriptions are provided for the programmable options of the telephone access and voice response portions of the XL4675. This should be used to assist in completing the worksheet. After completion of the worksheet, program the PROM chip using the 110C Programmer.

NOTE: IF USING THE FACTORY DEFAULT VALUES (Quadrants 1 & 2) THEN THIS SECTION CAN BE IGNORED. TO CUSTOM PROGRAM THE VOICE SECTION OF THE XL4675 CUT RESISTOR R52 AND PROGRAM QUADRANTS 3 & 4 AS DEFINED IN THE NEXT SECTION

ZONE 1 0P FIELD QUADRANT 3

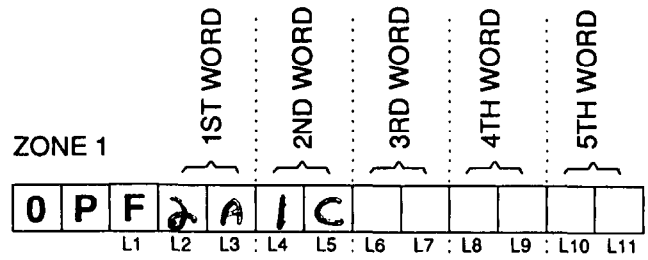


The 0P field of quadrant 3 is used to program the words to be used with zone 1. Location L1 must be programmed with an F.

The second through eleventh locations marked L2 - L11 of this field represent the 5 words total that can be programmed to name zone 1. Locations L2 and L3 represent the first word, L4 and L4 the second word etc. Each word has a two digit hex number which can be found in the PROGRAMMABLE LIBRARY list within this manual. If the zone requires less than five words then leave the corresponding locations for the unused used words blank.

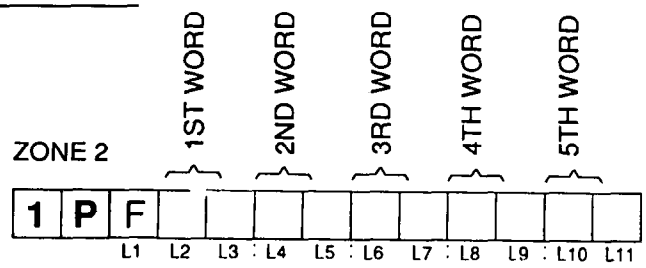
NOTE: If the zone is programmed as a 24 HR. Alarm zone, then the 4675 will not report the zone words, therefore locations L2 - L11 should be programmed [F].

Example,



Suppose zone 1 is the front door. In order to program these words for zone 1, select the appropriate phrases from the library [2A = FRONT 1C = DOOR]. Whenever status is requested, the STAR- fone will precede the zone words with the phrase that applies. For example, if this zone is bypassed, then the STAR-fone will respond "FRONT DOOR IS BYPASSED".

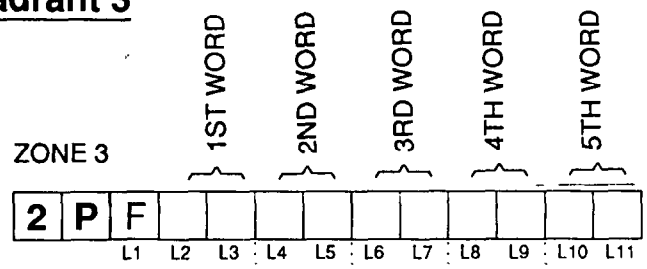
ZONE 2 1P Field Quadrant 3



The 1P field of quadrant 3 represents zone 2 of the XL4675. The field marked L1 must be programmed with an F.

The remaining locations L2 - L11 represent the words to name zone 2. Select the two digit entries that correspond to the desired words from the programmable dictionary.

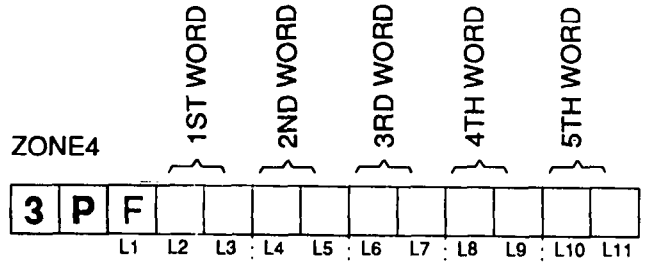
ZONE 3 2P Field Quadrant 3



The 2P field of quadrant 3 represents zone 3 of the XL4675. The field marked L1 must be programmed with an F.

The remaining locations L2 - L11 represent the words to name zone 3. Select the two digit entries that correspond to the desired words from the programmable dictionary.

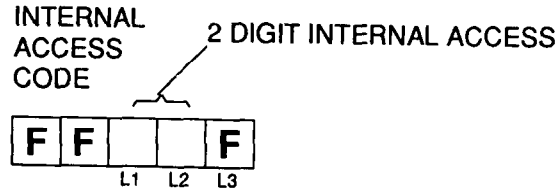
ZONE 4 3P Field Quadrant 3



The 3P field of quadrant 3 represents zone 4 of the XL4675. The field marked L1 must be programmed with an F.

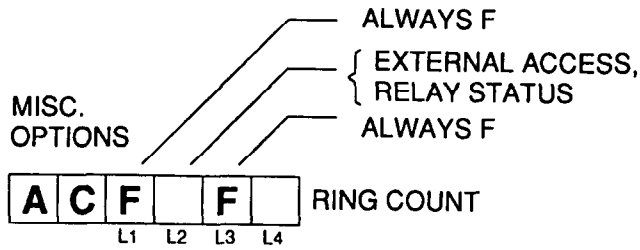
The remaining locations L2 - L11 represent the words to name zone 4. Select the two digit entries that correspond to the desired words from the programmable dictionary.

INTERNAL ACCESS CODE FF Field Quadrant 3



This location defines the two digit access code required to gain access to the 4675 from an internal (ON premises) touch-tone telephone. If a value of FF is entered then no access code is necessary for internal access. The two digits entered must be in the range 0 - 9 corresponding to the digits on the telephone.

MISC OPTIONS AC FIELD Quadrant 3



Location L1 and L3 of this field must always be programmed with F.

The second field **(L2)** of the AC field is used to program the following options:

EXTERNAL ACCESS. If this option is selected then system functions can be accomplished through off premises touch tone telephones. NOTE: The external access code is programmed in the AC field of quadrant 4.

AUTOMATIC RELAY STATUS- If this option is programmed, whenever system status is requested from the XL4675 it will include the status of all auxiliary relays. If Automatic Relay Status is not selected then relay status will only be given by initiating the # 0 command.

Select the desired value for L2 from the table below:

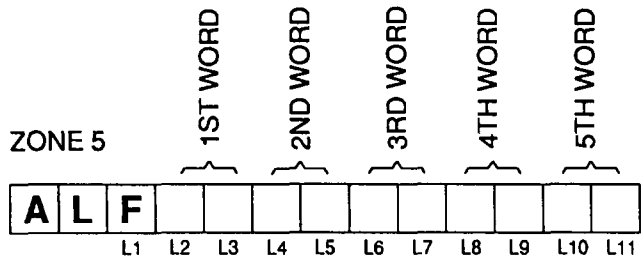
DIGIT	EXTERNAL ACCESS	AUTOMATIC RELAY STATUS
0	NO	YES
3	YES	YES
8	NO	NO
B	Yes	No

The fourth location of the AC field labeled L4 determines the number of rings required before the XL4675 will pick up when accessed from OFF premises telephones.

Enter the desired number of rings from 1 - F. Note: A = 10 rings, B = 11 rings, C = 12 rings, D = 13 rings, E = 14 rings, F = No external access.

If external access has not been selected then program the number of rings to F.

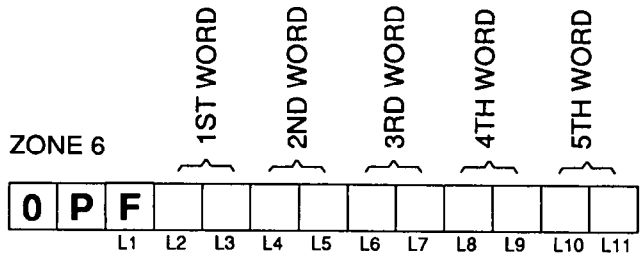
ZONE 5 AL Field Quadrant 3



The AL field of quadrant 3 represents zone 5 of the XL4675. The field marked L1 must be programmed with an F.

The remaining locations L2 - L11 represent the words to name zone 5. Select the two digit entries that correspond to the desired words from the programmable dictionary.

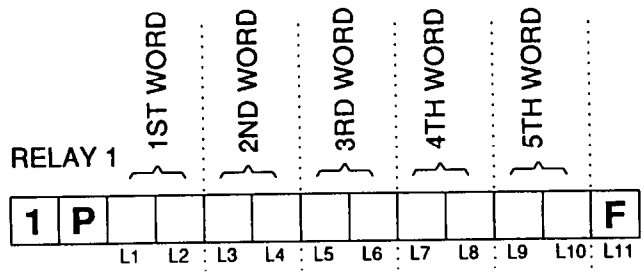
ZONE 6 0P Field Quadrant 4



The 0P field of quadrant 4 represents zone 6 of the XL4675. The field marked L1 must be programmed with an F.

The remaining locations L2 - L11 represent the words to name zone 6. Select the two digit entries that correspond to the desired words from the programmable dictionary.

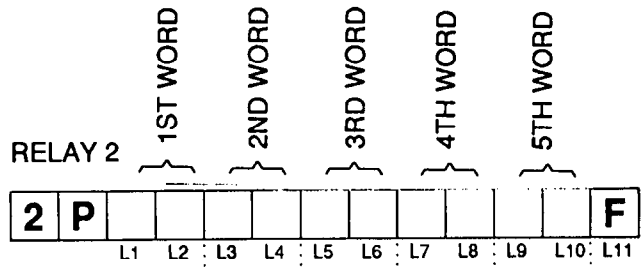
Aux. Relay #1 1P Field Quadrant 4



The 1P field of quadrant 4 is used to name auxiliary relay #2. Locations L1 - L10 represent the five total words. Select the two digit values that correspond to the desired words from the programmable dictionary, The L11 location must be left blank.

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

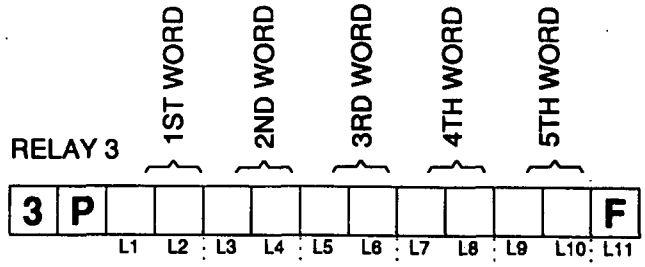
Aux. Relay #2 2P Field Quadrant 4



The 2P field of quadrant 2 is used to name auxiliary relay #2. Locations L1 - L10 represent the five total words. Select the two digit values that correspond to the desired words from the programmable dictionary, The L11 location must be left blank [F].

NOTE: If the *ANSWERING MACHINE* option is selected (see field AF of quadrant 2) then the locations L1 - L 11 must be programmed with "F". Furthermore, relay 2 cannot be used as an auxiliary output if the answering machine option is selected.

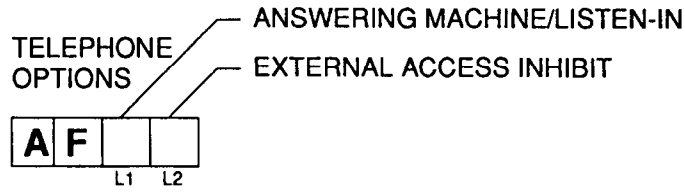
Aux. Relay #3 3P Field Quadrant 4



The 3P field of quadrant 4 is used to name auxiliary relay #3. Locations L1 - L10 represent the five total words. Select the two digit values that correspond to the desired words from the programmable dictionary. The L11 location must be left blank.

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

TELEPHONE OPTIONS AF Field Quadrant 4



L1 ANSWERING MACHINE/LISTEN-IN

Answering Machine

The XL4675 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 8 & 7) must be wired in series between the Brown wire from the Model 368 cord and XL4675, terminal 29. The theory of operation for calling in from an external telephone is as follows:

The XL4675 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 XL4675 will also be PREPARED to receive commands from the telephone.

Depress [*] and the security access code (this code is programmed in Quad 4 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 XL4675 functions may be continued at this point uninterrupted by the answering device.

When the phone call terminates, the XL4675 will hang up and close relay 2 contacts for the next call. If the XL4675 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 XL4675 MUST NOT be gained during the answering machine record mode.

Listen In

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.

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 XL4675 terminal 27 and the RED wire in the RJ11X
Step E: Connect a wire between XL4675 terminal 4 and the GREEN wire in the RJ11X.
Step F: Connect a jumper between terminals 6 and ~~29~~ 28 on the XL4675
Step G: Depress the ON/OFF button (convenience switch) to the ~~ON~~ OFF (OUT) 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 norm condition, taking the speaker off the line)

NOTE:AS AN ALTERNATIVE TO HANGING UP THE TELEPHONE,DEPRESS (#), (1) - TO DISCONNECT THE SPEAKER PHONE IF OTHER XL4675 FUNCTIONS NEED TO BE ACCOMPLISHED

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

Step A: Call in to the XL4675 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 XL4675 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 below for the desired operation:

Digit	Answering Machine	Listen-In
C	Yes	Yes
D	Yes	No
E	No	Yes
F	No	No

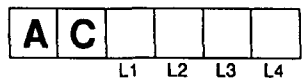
L2 EXTERNAL ACCESS INHIBIT

THE SECOND LOCATION of the 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

EXTERNAL ACCESS CODE AC Field Quadrant 4



SECURITY ACCESS CODE
(Up to 4 digits)

This AC Field Quadrant 4 can be used to program a 1 through 4 digit (numbers 1-9) security access code, beginning in L1 and ending in L4. This optional code must be utilized when the XL4675 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. This access code should not6 be confused with the four digit user code which will still be used for control functions such as arm/disarm which require a user code.

NOTE: All restrictions dictated by external access inhibit apply, whether is 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 XL4675 to pick up after the programmed number of rings, or answering machine pickup, then depress [*] and this 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 XL4675 will terminate the phone call.

After completion of the XL4675 Program Sheet the program chip can be programmed using the 110 or 110C programmer. All other fields not mentioned on the programming worksheet should be left blank. The procedure for prom programming is described in the next section. NOTE: If the default values are sufficient for your STAR-fone installation, then it is not necessary to program quadrants 3 & 4. However, if different values are desired then program quadrants 3 & 4 and cut R52 on the circuit board.

Once the prom chip has been successfully programmed, it must be inserted into the XL4675 socket, **BLUE DOT UP.** DOWN

11.1 PROPER PROGRAMMING PROCEDURE

The following section describes how to program a PROM chip using the Fire Burglary Instruments model 110 or 110C programmer.

NOTE: PROM CHIP PROGRAMMING IS ONLY NECESSARY TO PROGRAM THE TELEPHONE ACCESS AND VOICE RESPONSE PORTIONS OF THE STAR-Fone (XL4675)

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 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. Training [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 loca tions 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.

11.2 STAR-fone DEDICATED LIBRARY

The following dedicated phrases are used within the STAR-fone (XL4675):

"IS IN ALARM"
"IS NOT READY AND MUST BE CHECKED"
"IS NOT RESET. PLEASE RESET"
"IS BYPASSED"
"THE SECURITY SYSTEM 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. PLEASE 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"