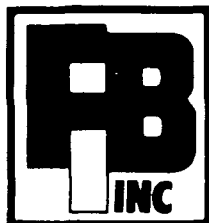


# **WF 12**

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## **Hook-up & Installation**



**Fire Burglary  
Instruments, Inc.**

50 Engineers Road, Hauppauge, New York 11788

NEW YORK (516) 582-6161  OUT OF STATE (800) 645-5430

I-2301

OCT 86'

The WF-12 is a three (3) zone Fire Protection Device. Any or all of the zones can be configured (via jumpers) as either Fire, Waterflow, or Supervision zones. This system is U.L. listed for these purposes and complies with the requirements of NFPA-72A and 71. The WF-12 may utilize U.L. listed N.O. Smoke Detectors or waterflow devices, and U.L. listed N.C. Sprinkler Supervisory device. This system is U.L. listed as a Remote Station Protected Premises unit, for use with the on-board Fire Burglary Instruments Model TS119 transmitter only.

The WF-12 is actually a combination of three P.C. Boards in one box. The Model 140 18v transformer board, Model 3ZB three (3) zone board, and the TS119 Digital Communicator. This instruction manual will explain the WF-12 hookup; then proceed with the TS119 programming.

3ZB TERMINALS	DESCRIPTIONS
<p>1 (+) 2 (-)</p>	<p>3.9K EOL Supervised Zone 1: All three zones of the WF-12 can be configured for either Fire, Waterflow, or Supervisory purposes.</p> <p>Wire normally open Smoke Detectors or normally open Waterflow Devices in parallel on these terminals. Wire normally closed Sprinkler Supervision devices in series. The 3.9K EOL Supervisory Resistor must be wired in parallel at the last normally open device on this loop.</p> <p>When the Zone 1 <u>Alarm/Supervisory Jumper JP1</u> is in the A position, and a closure occurs on these terminals, the Zone 1 <u>RED ALARM LED</u> will turn <u>ON</u> and the TS119 will transmit a Zone 1 Alarm Code (TS119 Channel A) to the Central Office.</p> <p>When Zone 1 is violated the WF-12 Signal Circuit (bell output) will sound an alarm if the Zone 1 <u>BELL ENABLE DIP SWITCH FOUR (4)</u> is set to The <u>ON</u> position. If Dip Switch four (4) is set to the <u>OFF</u> position, <u>NO</u> bell will occur when Zone 1 is violated.</p> <p>When the Zone 1 <u>LATCH ENABLE DIP SWITCH ONE (1)</u> is set to the <u>ON</u> position, the Zone 1 <u>RED ALARM LED</u> and the bell output will lock <u>ON</u> when Zone 1 is violated until the <u>3ZB SYSTEM RESET BUTTON</u> is depressed. If Dip Switch one (1) is set <u>OFF</u> the Red Alarm Led, and bell output will remain on only so long as the violation remains on Zone 1 terminals.</p> <p>If an <u>OPEN</u> should occur on these terminals, the Zone 1 <u>YELLOW TROUBLE LED</u>, the <u>YELLOW SYSTEM TROUBLE LED</u>, and the <u>SONALERT</u> will turn <u>ON</u>. A <u>SYSTEM TROUBLE</u> transmission will be reported by the TS119 Communicator. This Trouble Condition will be present as long as Zone 1 loop senses an <u>OPEN</u>. Operation of the <u>3ZB TROUBLE SILENCE BUTTON</u> will silence the Sonalert until maintenance can be completed.</p> <p>The information above is the appropriate wiring, dip switch and jumper configuration for Zone 1 if it is being used for either Fire or Waterflow.</p> <p>Zone 1 can be configured exclusively for Supervisory purposes as follows:</p> <p>When <u>JP3</u> is set to the B position an <u>OPEN</u>, or a <u>SHORT</u> on the Zone 1 terminals will cause the Zone 1 <u>YELLOW TROUBLE LED</u>, <u>SYSTEM TROUBLE LED</u> and the <u>SONALERT</u> to turn <u>ON</u>. The TS119 will report the <u>SYSTEM TROUBLE CODE</u> and the <u>ZONE 1 ALARM CODE</u> on violation of Zone 1 (open and short sends the same). Zone 1 <u>LATCH ENABLE DIP SWITCH BELL ENABLE DIP SWITCH (4)</u> should both be in the <u>OFF</u> position.</p>

The following charts are a Summary and Configuration Guide of the Zone 1 Jumpers and switches.

3ZB TERMINALS	DESCRIPTION		
1 (+) 2 (-) cont'd.	ZONE 1 JUMPER/SWITCH SUMMARY		
	JUMPERS/ SWITCHES	POSITION	DESCRIPTION
	JP1	B	Short on loop causes alarm - open causes trouble
	Alarm/ Supervisory	A	Short or open on loop causes trouble only
	Dip Switch 1 (Latch Enable)	ON	Zone 1 <u>LOCKS-IN</u> on violation until 3ZB System Reset Button is depressed
		OFF	Zone 1 does <u>NOT</u> Lock-In. It follows the condition of the loop
	Dip Switch 4 (Bell Enable)	ON	Zone 1 trips the bell output when its violated
		OFF	Zone 1 never trips the bell output
	ZONE 1 JUMPER/SWITCH CONFIGURATION		
	INSTALLATION TYPE	JUMPER/SWITCH	CONFIGURATION
	Fire/ Waterflow	JP1	B Position
		Dip Switch 1	ON
		Dip Switch 4	ON
	Supervision Only	JP1	A Position
Dip Switch 1		OFF	
Dip Switch 4		OFF	
3 (+) 4 (-)	3.9K E.O.L. Supervised Zone 2: Follow the same guidelines here as previously explained for Zone 1. The following charts are a Summary and Configuration Guide at the Zone 2 jumpers and switches.		
	ZONE 2 JUMPER/SWITCH SUMMARY		
	JUMPERS/ SWITCHES	POSITION	DESCRIPTION
	JP2	B	Short on loop causes alarm - open causes trouble
	Alarm/ Supervisory	A	Short or open on loop causes trouble only
	Dip Switch 2 (Latch Enable)	ON	Zone 2 <u>LOCKS-IN</u> on violation until 3ZB System Reset Button is depressed.
		OFF	Zone 2 does <u>NOT</u> Lock-In. It follows the condition of its loop
	Dip Switch 5 (Bell Enable)	ON	Zone 2 trips the bell output when its violated
		OFF	Zone 2 never trips the bell output
	ZONE 2 JUMPER/SWITCH CONFIGURATION		
	INSTALLATION TYPE	JUMPER/SWITCH	CONFIGURATION
	Fire/ Waterflow	JP2	B Position
		Dip Switch 2	ON
		Dip Switch 5	ON
Supervision Only	JP2	A Position	
	Dip Switch 2	OFF	
	Dip Switch 5	OFF	

5 (+) 6 (-)	3.9K E.O.L. Supervised Zone 3: Follow the same guidelines here as previously explained for Zone 1. The following charts are a Summary and Configuration Guide of the Zone 1 jumpers and switches.																																						
	<p style="text-align: center;"><b>ZONE 3 JUMPER/SWITCH SUMMARY</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">JUMPERS/ SWITCHES</th> <th style="width: 15%;">POSITION</th> <th style="width: 60%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td rowspan="2">JP3 (Alarm/Supervisory)</td> <td>B</td> <td>Short on loop causes alarm - Open causes trouble</td> </tr> <tr> <td>A</td> <td>Short or open on loop causes trouble only</td> </tr> <tr> <td rowspan="2">Dip Switch 3 Latch Enable</td> <td>ON</td> <td>Zone 3 <u>LOCKS</u> in on violation until 3ZB System Reset Button is depressed</td> </tr> <tr> <td>OFF</td> <td>Zone 3 does <u>NOT</u> lock in. It follows the condition of its loop</td> </tr> <tr> <td rowspan="2">Dip Switch 6 (Bell enable)</td> <td>ON</td> <td>Zone 3 trips the bell output when its violated</td> </tr> <tr> <td>OFF</td> <td>Zone 3 never trips the bell output</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">ZONE 3 JUMPER/SWITCH CONFIGURATION</th> </tr> <tr> <th style="width: 45%;">INSTALLATION TYPE</th> <th style="width: 25%;">JUMPER SWITCH</th> <th style="width: 30%;">CONFIGURATION</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="text-align: center;">Fire/ Waterflow</td> <td style="text-align: center;">JP3</td> <td style="text-align: center;">B Position</td> </tr> <tr> <td style="text-align: center;">Dip Switch 3</td> <td style="text-align: center;">ON</td> </tr> <tr> <td style="text-align: center;">Dip Switch 6</td> <td style="text-align: center;">ON</td> </tr> <tr> <td rowspan="3" style="text-align: center;">Supervision Only</td> <td style="text-align: center;">JP3</td> <td style="text-align: center;">A Position</td> </tr> <tr> <td style="text-align: center;">Dip Switch 3</td> <td style="text-align: center;">OFF</td> </tr> <tr> <td style="text-align: center;">Dip Switch 6</td> <td style="text-align: center;">OFF</td> </tr> </tbody> </table>	JUMPERS/ SWITCHES	POSITION	DESCRIPTION	JP3 (Alarm/Supervisory)	B	Short on loop causes alarm - Open causes trouble	A	Short or open on loop causes trouble only	Dip Switch 3 Latch Enable	ON	Zone 3 <u>LOCKS</u> in on violation until 3ZB System Reset Button is depressed	OFF	Zone 3 does <u>NOT</u> lock in. It follows the condition of its loop	Dip Switch 6 (Bell enable)	ON	Zone 3 trips the bell output when its violated	OFF	Zone 3 never trips the bell output	ZONE 3 JUMPER/SWITCH CONFIGURATION			INSTALLATION TYPE	JUMPER SWITCH	CONFIGURATION	Fire/ Waterflow	JP3	B Position	Dip Switch 3	ON	Dip Switch 6	ON	Supervision Only	JP3	A Position	Dip Switch 3	OFF	Dip Switch 6	OFF
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7/8	<p>Waterflow Common Supervision Circuit: All normally closed waterflow supervising contacts (Gate Valves), must be wired in series on these terminals. When these sense an open, the common supervision Led, system trouble led, and sonalert will come on. The TS119 will report a System Trouble Code, and a Common Supervision Code (Channel D) to the Central Station.</p>																																						
9	<p>This terminal is prewired at the factory to terminal one (1) on the TS119 dialer. When the Zone 1 on the 3ZB senses a violation, the TS119 will report Channel A Alarm Code to the Central Office. The TS119 Channel A receives its trip voltage for Zone 1 via this connection.</p> <p>NOTE: See Description on 3ZB terminals 1 and 2 .</p>																																						
10	<p>This terminal is prewired at the factory to terminal two (2) on the TS119. When Zone 2 on the 3ZB senses a violation, the TS119 will report its Channel B Alarm Code to the Central Office. The TS119 Channel B receives its trip voltage for Zone 2 via the connection.</p> <p>NOTE: See Description on 3ZB terminals 3 and 4.</p>																																						
11	<p>This terminal is prewired at the factory to terminal three (3) on the TS119. When Zone 3 on the 3ZB senses a violation, the TS119 will report its Channel C Alarm Code to the Central Office. The TS119 Channel C receives its trip voltage for Zone 3 via this connection.</p> <p>NOTE: See description on 3ZB terminals 5 and 6 .</p>																																						
12	<p>This terminal is prewired at the factory to terminal four (4) on the TS119. When the 3ZB waterflow common supervision circuit senses a violation, the TS119 will report its Channel D Alarm Code to the Central Office. The TS119 Channel D receives its trip voltage for waterflow common supervision via this connection.</p> <p>NOTE: See Description on 3ZB terminals 7 and 8</p>																																						

13	This terminal is prewired at the factory to terminal six (6) on the TS119. If the 3ZB detects any trouble condition including loss of AC, low battery, signal relay removal, signal circuit trouble, ground fault, or any zone trouble it will trip the TS119 System Trouble Channel via this connection.
14	This terminal is prewired at the factory to terminal nineteen (19) on the TS119. If the TS119 senses a low battery, line fault 1, line fault 2, or a failure to go through it will turn on the System Trouble Led and Sonalert via this connection.
15	This terminal is prewired at the factory to terminal 5 on the TS119 Communicator. This connection supervises the power to the TS119. If the TS119 loses total DC power, the A System Trouble Led and Sonalert will come on.
16 (-) 17 (+)	These terminals are prewired to supply unregulated 12VDC to power the TS119 on terminals 7 (+) and 8 (-). They are unaffected by operation of the 3ZB System Reset Button. These terminals are fused at 1 amp. No other devices may be connected to these terminals.
18	<u>Cold Water Ground:</u> This terminal must be connected to a cold water pipe, using 18 gauge wire at no more than 15 feet from the control panel. If the WF-12 senses a ground fault (example: loop shorts to ground.) The Ground Fault Led, System Trouble Led, and Sonalert will turn on. The TS119 will report a System Trouble code to the Central Office. This trouble condition will remain as long as the ground fault is present. The Sonalert may be silenced with the 3ZB Trouble Silence Switch.
19 20	Terminals 19&20 are prewired from the factory to the 18 VAC Transformer which is mounted in the WF-12 box. The 18VAC transformer has two other terminals for connection of a 120 VAC line cord to power this system. If AC is lost on this system, the AC Led and a system trouble transmission will occur. System trouble Led and Sonalert will come on. Connect transformer to 110VAC, 60hz, 1A non-switched power
21 (-) 22 (+)	These terminals will supply regulated 12 VDC power at 750 ma to power all four (4) wire Smoke Detectors. This circuit is fused at 1 amp, however, only 100 ma may be drawn here to maintain 24 hr standby time utilizing a 6.5 AH battery. When the 3ZB System Reset Button is depressed, power will be removed from these terminals.
23 24	These terminals are called the Signal circuit, and are designed to connect all 12VDC Polarized Bells for activation on violation. This circuit is fused at 1amp, however only 850 ma may be drawn here when the WF-12 is in alarm. The circuit is supervised with a 220 OHM 5 watt resistor which must be wired in parallel within the last signalling device on these terminals. If this circuit is opened or shorted the 3ZB Signal Circuit Led, System Trouble Led and Sonalert will come on, and a System Trouble Transmission will occur from the TS119 communicator.
26 COMMON 27 N.C. 25 N.O.	Terminals 7 common, 8 normally closed and 9 normally open are a set of Form C Dry Contacts which will be activated when the signal circuit relay K1 is energized on violation. The contacts are rated <del>0.5Amp, 26VDC</del> <b>26VDC 5AMP RESISTIVE</b> . NOTE: If the K1 Signal Circuit relay is removed from the 3ZB a System Trouble Led, Sonalert and transmission will occur.

Battery Leads	The Red (+) and Black (-) flying leads must be connected to 6.5 AH Gell Cells to maintain 24 HR Standby on AC power loss. If the 3ZB detects a drop in battery voltage to approximately 10.2VDC, the <u>LOW BATTERY LED</u> , <u>SYSTEM TROUBLE LED</u> and <u>SONALERT</u> will turn on. The TS119 will report a System Trouble Code to the Central Office. The Trouble Condition will remain as long as the Low Battery Condition exists. The Sonalert can be silenced with the 3ZB Trouble Silence Switch.
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NOTE: The 3ZB TROUBLE SILENCE Switch is used to silence the Sonalert whenever a Trouble situation exists. When the Trouble Condition is corrected, the Sonalert will turn on again until the TROUBLE SILENCE SWITCH is moved back to its normal position.

The following information is the TS119 Terminal Connections which have not been prewired from the factory, followed by the TS119 programming.

TS119 DIALER TERMINAL CONNECTIONS

TS119 TERMINALS	DESCRIPTION
11 12 13 14	<u>Phone line 2 terminals:</u> Connect these terminals to a Telephone Co. approved RJ31X modular jack via an F.B.I. Model 368 cord 12-Green, 11-Red, 14-Grey, 13-Brown. Phone line 2 has double pole line seizure.
15 16 17 18	<u>Phone line 1 terminals:</u> Connect these terminals to a Telephone Co. approved RJ31X Modular Jack via an F.B.I. Model 368 cord as follows: Brown-17, Grey-18, Green-16, Red-15. Phone line 1 has double pole line seizure.
7 (+) 21 (-)	A Remote Low Battery + L.E.D. may be wired to these terminals if desired. If the DC voltage on the TS119 drops to approximately 10VDC, the On Board and Remote Low Battery L.E.D.'s will lite, a System Trouble transmission and L.E.D. will occur, and the 3ZB Sonalert will sound.
7 (+) 23 (-)	A remote line fault 1 L.E.D. may be wired to these terminals. If Telco line 1 is cut or removed from its appropriate terminals for approximately 90 seconds, the On Board and Remote Line Fault 1 L.E.D. will lite and a System Trouble transmission will occur. If the TS119 is using phone line 1 at the time it senses Line Fault 1, it will automatically switch to phone line 2 to make its transmission. Otherwise, if Line Fault 1 is sensed while TS119 is using phone line 2, a line switch does not occur. If Line Fault is sensed, the 3ZB System Trouble L.E.D. and Sonalert will turn on.
7(+) 22 (-)	A remote "Line Fault 2" L.E.D. may be wired to these terminals. This circuit operates the same as line fault 1. If line fault is sensed, the 3ZB Trouble L.E.D. Line Fault 2 L.E.D. and Sonalert will turn on.
7 (+) 20 (-)	A remote "Failure to Communicate" L.E.D. may be wired to these terminals. In the event the TS119 activates as a result of a trouble or alarm condition and communication to the Central Office is unsuccessful, after the Prom programmed number of attempts, the On Board and Remote Failure to Communicate L.E.D. and a System Trouble will occur. The TS119 RESET BUTTON must be depressed to extinguish this condition.
10	The TS119 gets its ground connection HERE.

## AC POWER

Connect AC terminals to Dedicated 120VAC line. The green AC L.E.D. will remain on as long as AC power is supplying this system. If AC power is lost, the green L.E.D. will extinguish and the common trouble L.E.D. and sonalert will turn on. Furthermore, a common trouble transmission will occur from the TS119.

### TS119 PROM PROGRAMMING INSTRUCTIONS

The TS119 Digital Dialer will transmit alarm codes and restores by zone if desired, and a separate system trouble code. Programming is done on either the FBI 110 or 110C programmer. The Program must be burned onto a Prom chip model F102. This prom can actually hold 4 separate TS119 programs (in the event of error or changes). Only one quarter of the prom is used at a time for a program. Each quarter of the prom is called a quadrant. They are appropriately called quadrant 1-4. Programming may be done on any one of the four quadrants. The TS119 must be set up to read whichever quadrant the actual program has been burned on. Resistor jumpers R72 and R73 control which quadrant the TS119 will read. The following Truth Table explains jumper connections versus 110 and 110C programmer switch settings.

Quadrant	110C Rotary Switch Setting	TS119 Jumpers		Alternate 110 Programmer Switch Settings	
		R72	R73	S8	S7
1	1	Connected	Connected	South	South
2	2	Cut	Connected	South	North
3	3	Connected	Cut	North	South
4	4	Cut	Cut	North	North

The new TS119 is a digital dialer which uses a program chip (prom). Understanding the programming instructions, which follow, is essential because many outputs are possible with each activation. The dialer will transmit codes for either momentary or maintained inputs and restores. If a maintained input is aborted during transmission a choice of either an abort code, restore code or complete aborting of the transmission is programmable. The dialer is also capable of accessing three different receivers, with each activation, and will shut down after being kissed-off by one or all receivers, depending on programming.

**CAUTION: THERE SHOULD BE NO POWER ON THE TS-119 WHEN THE PROM IS INSERTED. PLUGGING IN THE PROM WITH POWER ON THE PANEL, WILL CAUSE THE DIALER TO TRANSMIT OUT OF PROGRAM.**

Before using the digital dialer, the telephone company shall be requested to install two USOCRJ31X jacks on the telephone line. Give the telephone company the FCC registration (AE398E-69554-AL-E) and the ringer equivalence ((C.O.B.) numbers for the TS119. Connect the TS119 to an approved modular plug (#368) to mate with the RJ31X's as shown in diagram page II.

Should the TS119 cause harm to the telephone network, the telephone company may temporarily discontinue service until the problem is corrected. Notice of such action will be given by the telephone company.

Should the telephone company make any changes to its facility or other requirements that could render the TS119 incompatible, the customer shall be given adequate notice by the telephone company, in writing. Upon receipt of this information from the customer, the manufacturer shall advise the customer as to what actions must be taken to maintain uninterrupted service.

The model TS119 may not be connected to party lines or coin lines. If trouble is experienced, the TS119 shall be disconnected from the phone line, by means of the plug shown to determine if the TS119 is malfunctioning. If the TS119 is malfunctioning, do not reconnect until the problem has been corrected.

The prom used is a Model F103 (74S387) and is programmed on our Model 110 or 110C programmers as follows.

- 1) Plug in the programmer. OP should appear on the LED display.
- 2) Set desired quadrant.
- 3) The first digit of the OP field will determine the dialer transmission of fire zone 1 in the event an attempt is made to abort the alarm code transmission. Aborting the transmission is accomplished by operation of the TS12CS reset button prior to the zone alarm code reaching the Central Office. The following options are available on abort.

This digit will also determine if the dialing type will be rotary or touchtone. Note: If touchtone dialing is desired, the model F103 chip must be inserted in the U6 socket, on the TS119, white dot Left.

FIRE ZONE 1

Digit	Dialer Output	Type of Dialing
0	No Abort	Rotary
1	Stop dialing on abort	Rotary
2	Restore on abort	Rotary
3	Abort code on abort	Rotary
8	No abort	Touchtone
9	Stop dialing on abort	Touchtone
A	Restore code on abort	Touchtone
B	Abort code on abort	Touchtone

If fire zone 1 is not used, but rotary dialing is used, program digit 1.

If fire zone 1 is not used, but touchtone is used, program digit 9.

- 4) The second digit of the OP field will determine the dialer transmission for fire zone 2 in the event of an abort. This digit will also determine if the dialer will transmit an automatic test code. If a test code is desired, it will be sent at 18 hour intervals after the last transmission. The proper digit to program in the second location of the OP field is as follows:

FIRE ZONE 2

Digit	Dialer Output	Self Test *
0	No abort	None
1	Stop dialing on abort	None
2	Restore code on abort	None
3	Abort code on Abort	None
4	No abort	18 Hr
5	Stop dialing on abort	18 Hr
6	Restore code on abort	18 Hr
7	Abort code on abort	18 Hr

\*NOTE: NFPA 71 requires self test option be programmed

Fire Zone 2, cont'd.

If both fire zone 2 and self test ARE NOT USED, program DIGIT 1

If fire zone 2 is NOT USED, but Self Test IS USED, program DIGIT 5

- 5) The third digit will determine the operation of fire zone 3.

FIRE ZONE 3

Digit	Dialer Output
0	No abort
1	Stop dialing on abort
2	Restore on abort
3	Abort code on Abort

All options may have a restore programmed later in the procedure

- 6) The fourth digit will determine the operation of fire zone 4.

FIRE ZONE 4

Digit	Dialer Output
0	No abort
1	Stop dialing on abort
2	Restore on abort
3	Abort code on Abort

All options may have restore programmed later in the procedure.

- 7) Beginning with the fifth digit of the OP field if a common prefix is needed for all receivers, (9, area code, etc.), it may be keyed in here. If a time delay is needed before or between digits, key in "C" where the delay (3 secs.) is needed.
- 8) Press ENTER switch, then 9. 1P should appear on the LED display. Key in the first telephone number. Up to 11 digits may be used.

Information must be entered in this field

- 9) Press ENTER switch, then 9. 2P should appear on the LED display. Key in the second telephone number. Up to 11 digits may be used. If there is no second number, leave this field Blank.
- 10) Press ENTER switch, then 9. 3P should appear on the LED display. Key in the third telephone number. Up to 11 digits may be used. If there is no third number, leave this field Blank.
- 11) Press ENTER then 9. AF should appear on the LED display. The first digit in this field will determine the number of attempts the dialer will make to reach the receiver in the event the receiver is busy.

See Chart below:

No. of Attempts	Use of Digit	No. of Attempts	Use Digit	No. of Attempts	Use Digit
1	1	7*	7	12	C
2	2	8*	8	13	D
3	4	9*	9	14	E
4	4	10*	0	15	A
5	5*	11	B	Unlimited	F

\* NOTE: Number of attempts limited to 5 to 10 per NFPA 71

11), cont'd.

**IMPORTANT:** When F is pressed, the number does not display, but the space is left blank. The second digit in the field will determine the number of receivers the dialer must access before it shuts down. Select as follows: If only one phone number is used, program number A in the second location of AF field.

Any one receiver - A  
All receivers - E

12) Press ENTER, then 9. FF should appear on the LED display. This field will determine receiver format. One digit must be keyed in for each phone number programmed.

NOTE: NFPA requires that units transmit into listed Fire Receivers at listed central stations.

See chart for selecting the proper receiver code:

TESTED & APPROVED UL RECEIVER TYPE	Use Digit
FBI	1
Radionics (2300)	1
Radionics (1400)	3
Ademco with Kiss-off	5

Receiver Type	Use Digit
Franklin, Quickalert	1
DCI	1
Sescoa	1
Adcor CDR 50	3
Ademco without Kiss-off	4
Silent Knight without Kiss-off	6
Silent Knight with Kiss-off	7

Not Tested  
by UL

Information must be entered in this field

13) Press ENTER, then 9. AC should appear on the LED display. Key in a 3 or 4 digit account code. A 4 digit account code can only be used with receiver that is capable of handling it.

Information must be entered in this field.

14) Press ENTER, then 9. AL should appear on the LED display. Key in digits for the following alarms.

(Program an "F", which leaves a blank, for any location NOT BEING USED)

Locations	Description	Code
1	Zone 1 alarm code	0-9 or F *
2	Zone 2 alarm code	0-9 or F *
3	Zone 3 alarm code	0-9 or F *
4	Zone 4 alarm code	0-9 or F *
5	System Trouble Restore Code	0-9 E or F
6	System Trouble alarm code	0-9 A or F *
7	Zone 1 Restore Code	0-9 or F
8	Zone 2 Restore Code	0-9 or F
9	Zone 3 Restore Code	0-9 or F
10	Zone 4 Restore Code	0-9 or F
11	Abort Code/Test Code	0-9 D or F *

System Trouble Alarm Code

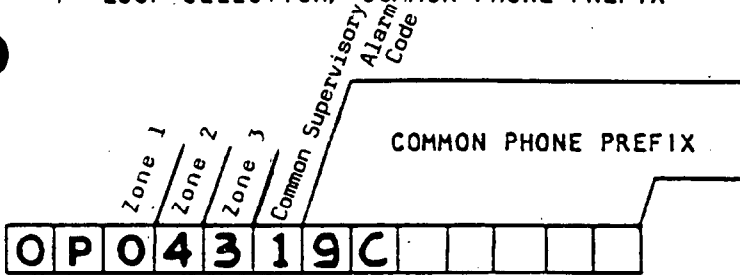
NOTE: For English Language Printout of codes to Radionics and FBI Receiver use	
A	Trouble
D	Abort
E	Restore

\* NFPA-71 requires self test, trouble code and alarm code be programmed. Never use an "F" on these locations.

CIRCLE QUADRANT USED:

1 2 3 or 4

1- LOOP SELECTION/ COMMON PHONE PREFIX



2- FIRST PHONE NUMBER

1 P 8 0 0 6 4 5 5 4 3 0

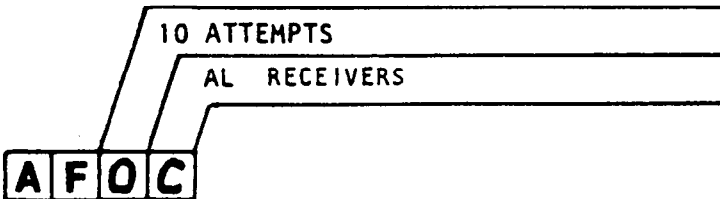
3- SECOND PHONE NUMBER

2 P 8 0 0 6 4 5 5 4 3 1

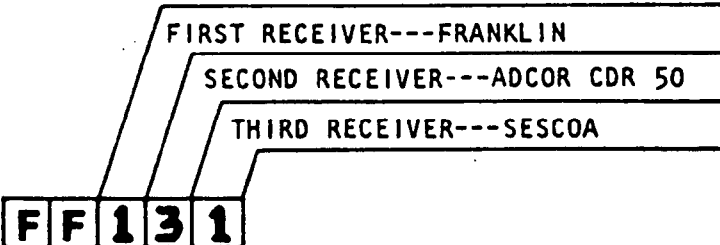
4- THIRD PHONE NUMBER

3 P 5 1 6 5 8 2 6 1 6 1

5- NUMBER OF ATTEMPTS AND ACKNOWLEDGMENTS



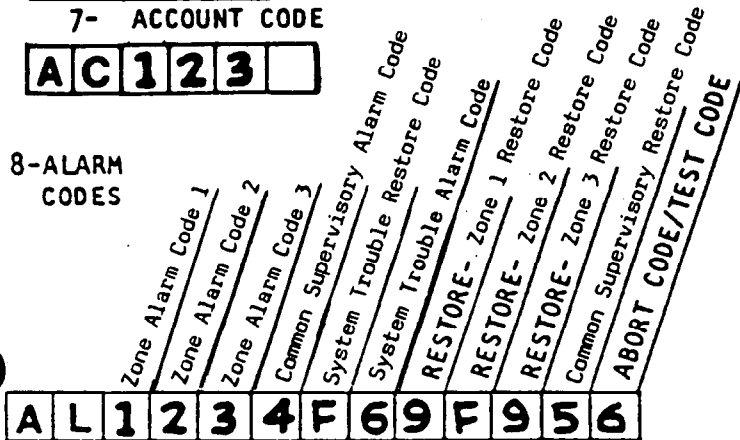
6- RECEIVER TYPE



7- ACCOUNT CODE

A C 1 2 3

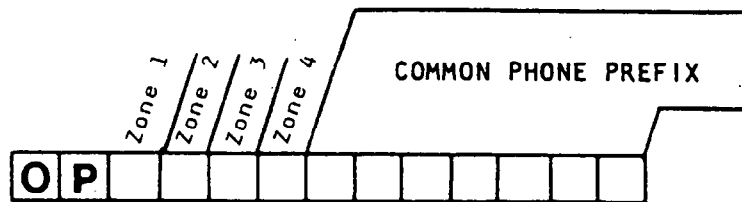
8-ALARM CODES



CIRCLE QUADRANT USED:

1 2 3 or 4

1- LOOP SELECTION/ COMMON PHONE PREFIX



2-FIRST PHONE NUMBER

1 P

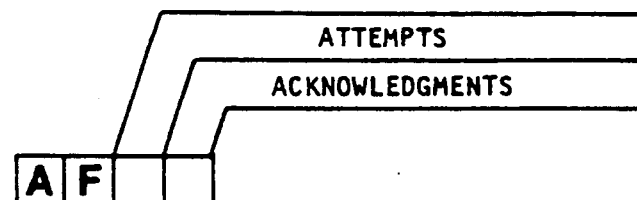
3-SECOND PHONE NUMBER

2 P

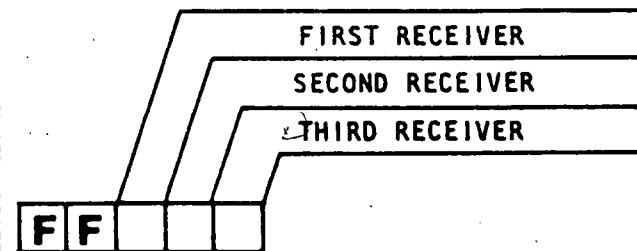
4-THIRD PHONE NUMBER

3 P

5-NUMBER OF ATTEMPTS AND ACKNOWLEDGMENTS



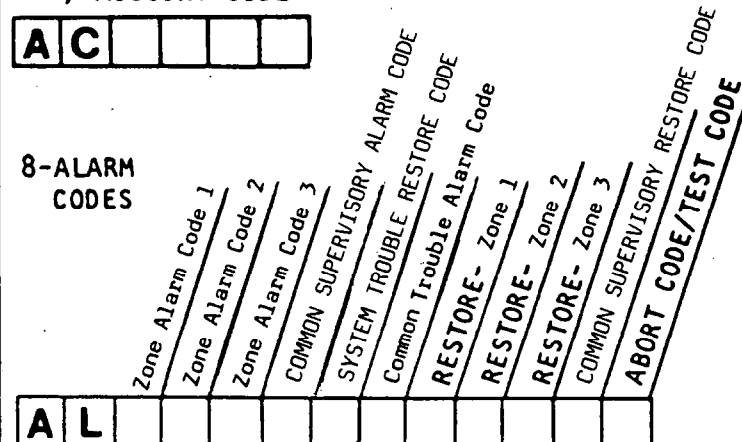
6-RECEIVER TYPE



7-ACCOUNT CODE

A C

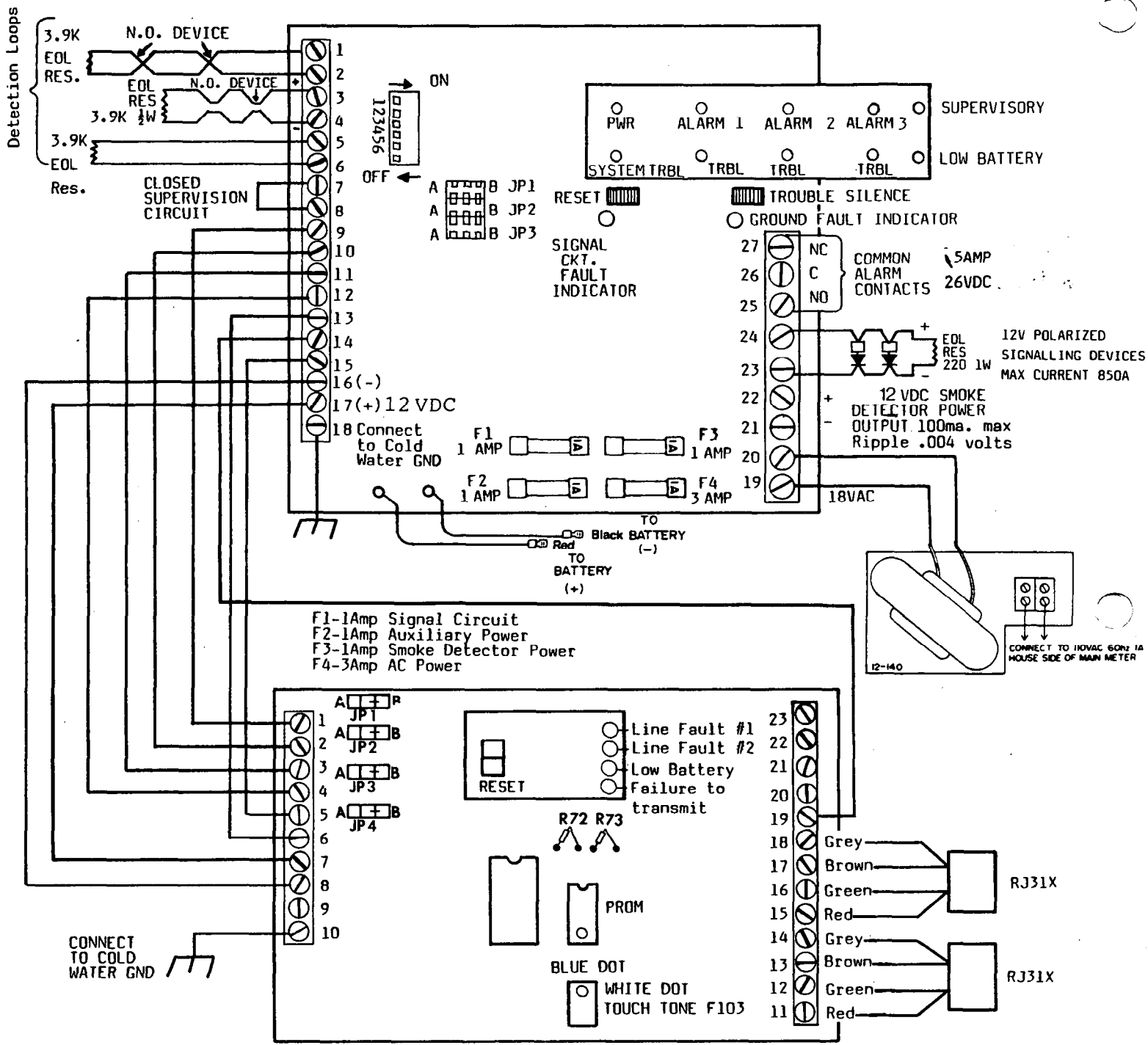
8-ALARM CODES



Detection Loop Specifications  
 Operation: Class B  
 Supervision Current: 3MA  
 Shorted Loop Current: 29MA  
 End of Line Resistor: 3.9K, 10%

Supervision Voltage: 13.7VDC  
 Maximum Loop Resistance: 200 OHM

MANUAL FIRE ALARM CONNECTION  
 AUTOMATIC FIRE ALARM CONNECTION  
 WATERFLOW FIRE ALARM CONNECTION  
 SUPERVISORY FIRE ALARM CONNECTION  
 NON-CODED  
 CLASS B WIRING  
 COMPLIES WITH NFPA-72A, 71



Jumpers JP1-JP4 on 119 must be set "B" when used with WF-12

The WF-12 must be used in conjunction with Model No. 32P-12 Wheelock Warning Horns and ESL 440CT Smoke Detectors.

Refer to WF-12 Installation and Hook-up Instructions I-2301 and Operating Instructions I-2303 for complete information.