AES 7762
Hardware Supervisor

Installation and Operation Manual

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1 7762 Hardware Supervisor Card

1.1   Description

The 7762 Hardware Supervisor is an add-on module for use with AES 7744F or 7788F subscriber and the AES 7794 IntelliPro. The 7762 provides capability for using 7744F or 7788F subscriber to power the AES 7740 Local Trouble Annunciator. Both power and supervision for the trouble annunciator are provided. Additionally, the 7762 monitors the 7794 IntelliPro and provides a trouble indication when there is a fault condition.

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1.2   Power and Subscriber Battery Requirements

Refer to the AES 7744F and 7788F Installation and Operation manuals for details on battery specification and installation instructions.

1.3   Safety Considerations

All equipment must be installed in accordance with National Electric Code, NFPA 70, National Fire Code NFPA 72 and local building codes.

Test this system periodically for proper operation. AES assumes no responsibility for this equipment's failure to operate. AES' sole responsibility is to repair or replace any AES device found to be defective during the warranty period.

Avoid dropping or other physical impact which could damage the card or card components.

1.4   Technical Specifications

- SIZE: 2 1/2 in. x 4 15/16 in. (6.3 cm x 12.5 cm)

- WEIGHT: 0.25 pounds (0.11 kilograms)

- POWER INPUT: Power supplied from AES 7794 IntelliPro Fire module or AES 7744F and 7788F.

- VOLTAGE: 12VDC nominal

- CURRENT: 30 mA

- FUSE: Onboard current limiter. Not serviceable

- OPERATING TEMPERATURE RANGE: 0° to 49° C (32° to 120°F)

- STORAGE TEMPERATURE RANGE: -10° to 60° C (14° to 140°F)

- RELATIVE HUMIDITY RANGE: 0 to 93% RHC, Non Condensing

1.5   7762 with 7794 Installation

This section contains information on the installation and wiring of the AES 7762 Hardware Supervisor with the AES 7794 IntelliPro. This configuration provides power and supervision for the 7740 Local Trouble Annunciator as well as monitoring of the 7794 IntelliPro.

1.5.1 Physical Installation

1. Subscriber unit power (AC and battery) must be disconnected before following these installation steps.

2. This installation assumes that the 7794 IntelliPro has been physically mounted on the 7744F or 7788F RF Subscriber board and configured for operation. If this has not been done, see the AES 7794 IntelliPro Fire – Installation Manual (P/N 40-7794) for these instructions.

3. Thread the four 5/8 in. hex standoffs (P/N 09-2014) on the 4 standoffs that support the 7794 IntelliPro as shown in Figure 1. Do not over-tighten.
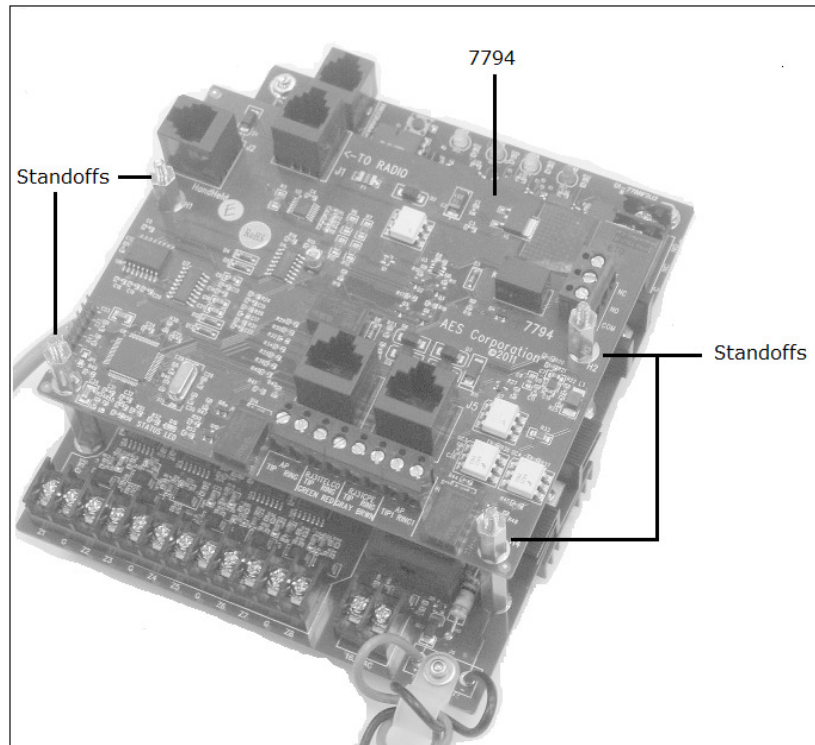
Figure 1.

4. Place the 7762 Hardware Supervisor Card on the 4 installed standoffs. Secure the 7762 with the 4 hex nuts removed. **Important:** Place the green (Earth ground) hex nut on the right center standoff as shown in Figure 2.
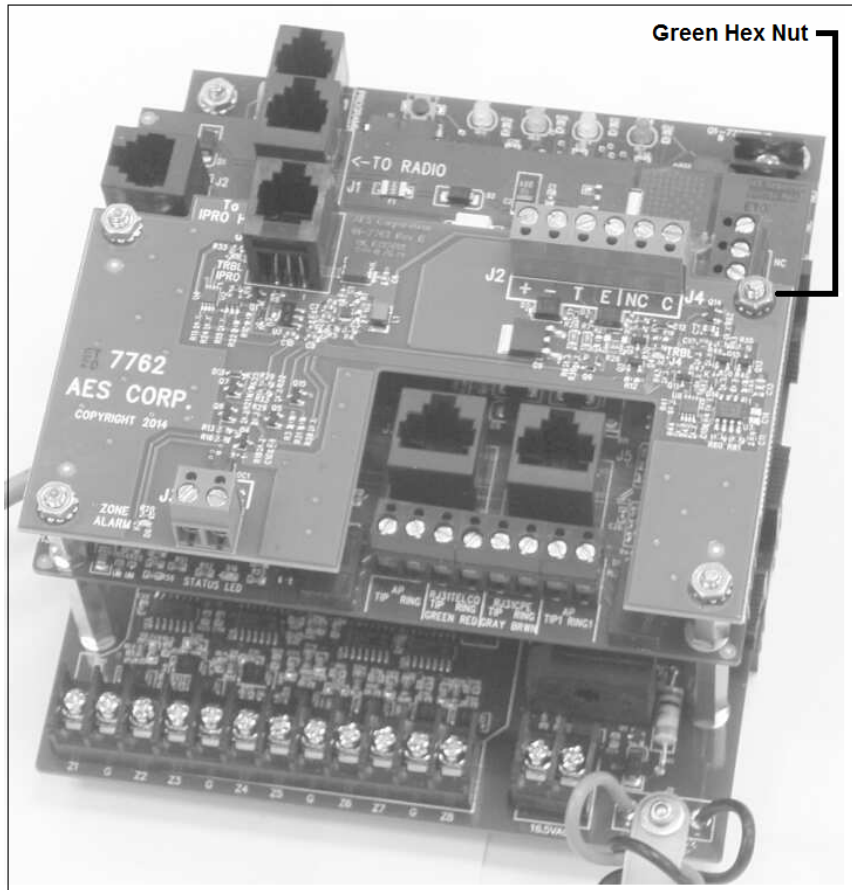
Figure 2.

5. Jumper Configuration – **DSBL IPRO** jumper pins

    NOTE: THIS JUMPER MUST BE REMOVED when the 7762 is used with 7794. Figure 2A. shows the **DSBL IPRO** jumper removed.
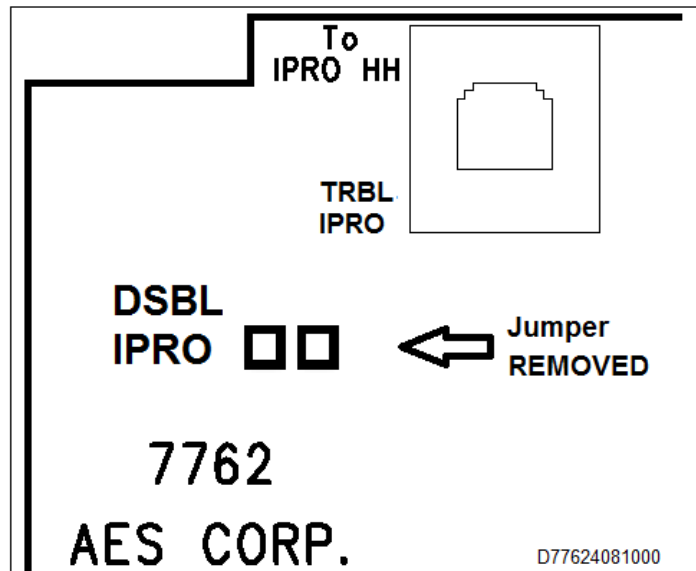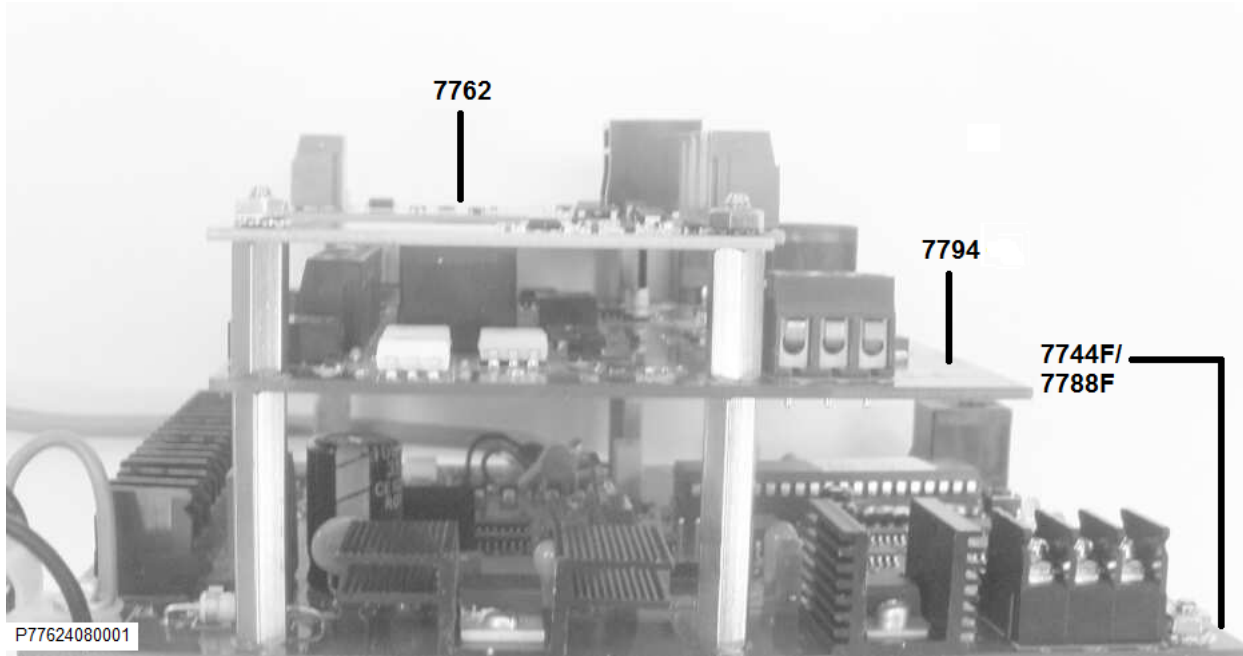

Figure 2A.

6. The correctly installed 7762 will appear as shown in the side view of Figure 3. ready for wiring.

Figure 3.

1.5.1 Wiring - US/UL Installation

Important: Subscriber unit power (AC and battery) must be disconnected before connecting the cable/wire listed.

Note: The IAMAUDK/R (AES 7740) Local Trouble Annunciator must be installed in a constantly-attended location, as it is the primary means of annunciating trouble conditions for the 7744F and 7788F subscribers.

Use the following steps to install the cables and wiring shown in Table 1. and the wiring diagram in Figure 4. below.

Step	Wiring Location	Cable/Wire	From	To
1.	INTERNAL	RJ11(AES P/N 13-0395)	7762 **J1** 'To IPRO Handheld'	7794 **J2** 'Handheld'
2.	INTERNAL	RJ11(AES P/N 13-0395)	7794 **J1** 'To Radio'	7744F/7788F **J1** 'Programmer'
3.	INTERNAL	User Supplied.	7762 **J2** C ——————— N.C ———————	7744F/7788F **J4** Relay C N.C.

Step	Wiring Location	Cable/Wire	From	To
4.	INTERNAL	User Supplied.	7762 **J3** Z ——————— C ——————— No EOL resistor.	7744F/7788F **J2** Z1(typical) G See **Note 2**. below.
5.	INTERNAL/ EXTERNAL	User Supplied.	7762 **J2** + ——————— - ——————— T ——————— E ——————— Note: 'E' must be extended to the Local Trouble Annunciator enclosure.	Local Annunciator + - T(rouble) -

Table 1.
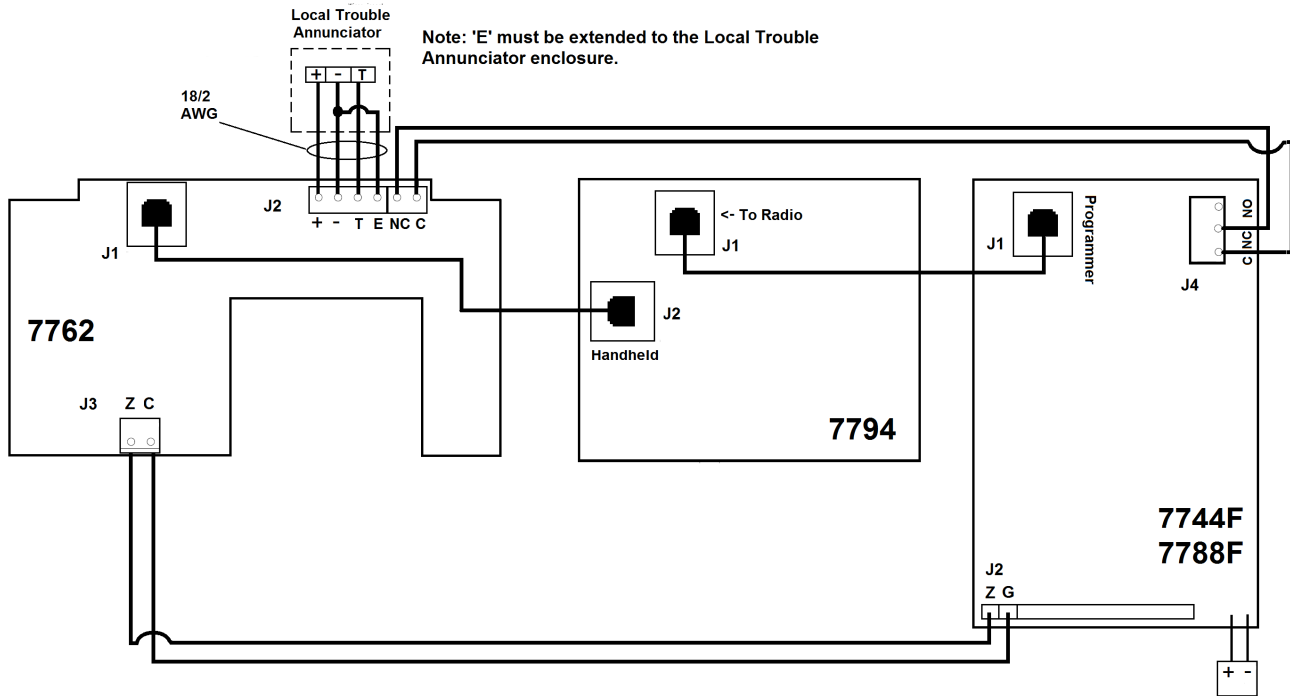
Figure 4. Wire and Cable Location Diagram 7788F/7744F

NOTE:
1) The subscriber zone input connected to the 7762 must be programmed for 'F' (fire). The 7762 will use the 'F' zone input Open condition to deliver a 'Trouble' message. Refer to the 7744F or 7788F Installation and Operation Manual Section 3.5 for zone input programming.
2) DO NOT use an E.O.L resistor on the zone input terminals connected to the 7762. The 7762 will not operate correctly when an E.O.L. resistor connected.
3) DSBL IPRO jumper MUST BE REMOVED if present on the 7762 board.

1.6   7762 Installation

This section contains information on the installation and wiring for AES 7762 Hardware Supervisor only. This configuration provides the capability of locally annunciating trouble from the subscriber J4 Local Trouble relay. The 7762 provides power and supervision for the 7740 Local Trouble Annunciator.

1.6.1   Physical Installation

1. Subscriber unit power (AC and battery) must be disconnected before following these installation steps.
2. Remove the 4 lower hex nuts that hold the subscriber board to the enclosure shown in Figure 6. Save the hex nuts.
3. Thread the four 1 ¼ in. hex standoffs (P/N 09-2015) on the 4 standoffs that support the subscriber board. Do not over tighten.
4. Place the 7762 Hardware Supervisor Card on the 4 installed standoffs. Secure the 7762 with the 4 hex nuts removed. Do not over tighten. **Important:** Place the green (Earth ground) hex nut on the right center standoff in the position shown in Figure 6 .
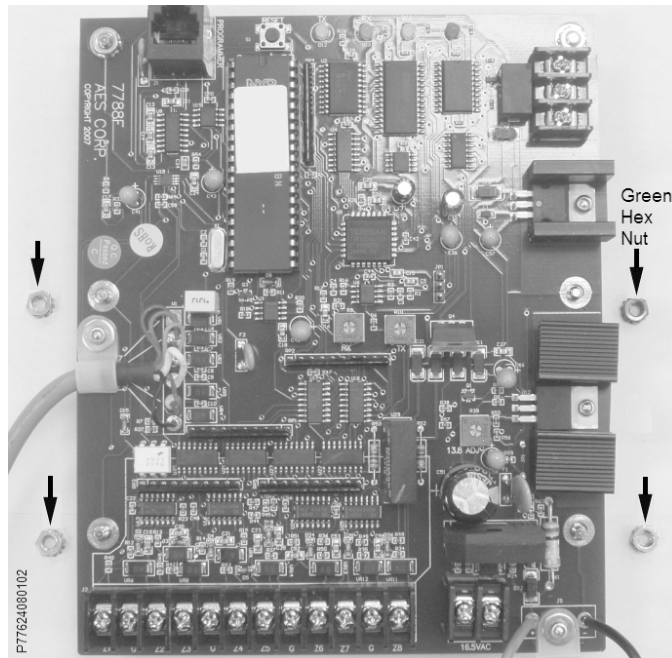

Figure 6.

1.6.2   Wiring – US/UL Installation

Important: Subscriber unit power (AC and battery) must be disconnected before connecting the cable/wire listed.

Note: The IAMAUDK/R (AES 7740) Local Trouble Annunciator must be installed in a constantly-attended location, as it is the primary means of annunciating trouble conditions for the 7744F and 7788F subscribers.

Use the following steps to install the cables and wiring shown in Table 1. and the wiring diagram in Figure 8. below.

NOTE: The DSBL IPRO jumper MUST BE PRESENT as shown in Figure 7. Failing to jumper DSBL IPRO will result in 7762 reporting false trouble condition.

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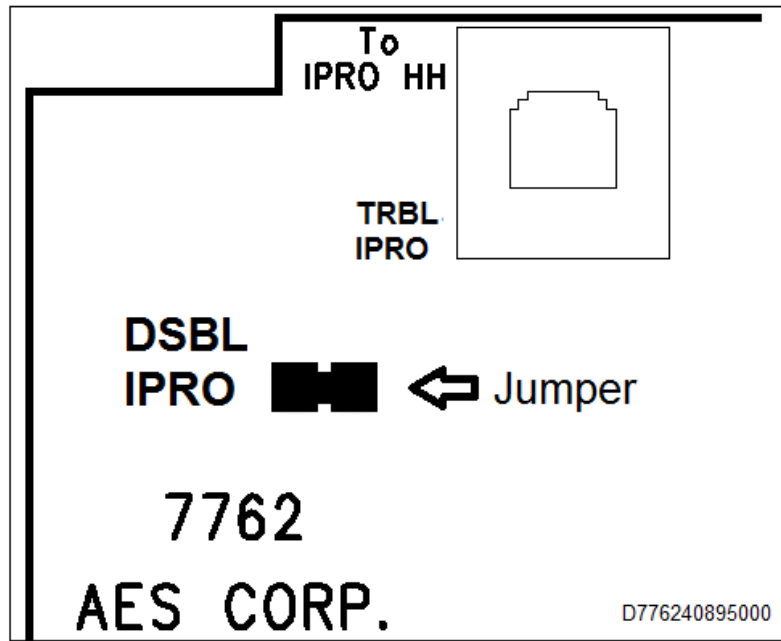
Figure 7.

Step	Wiring Location	Cable/Wire	From	To
1.	INTERNAL	RJ11(AES P/N 13-0395)	**7762** **J1** 'To IPRO Handheld'	7744F/7788F **J1** 'Programmer'
2.	INTERNAL	User Supplied.	7762 **J2** C ——————— N.C ———————	7744F/7788F **J4** Relay C N.C.

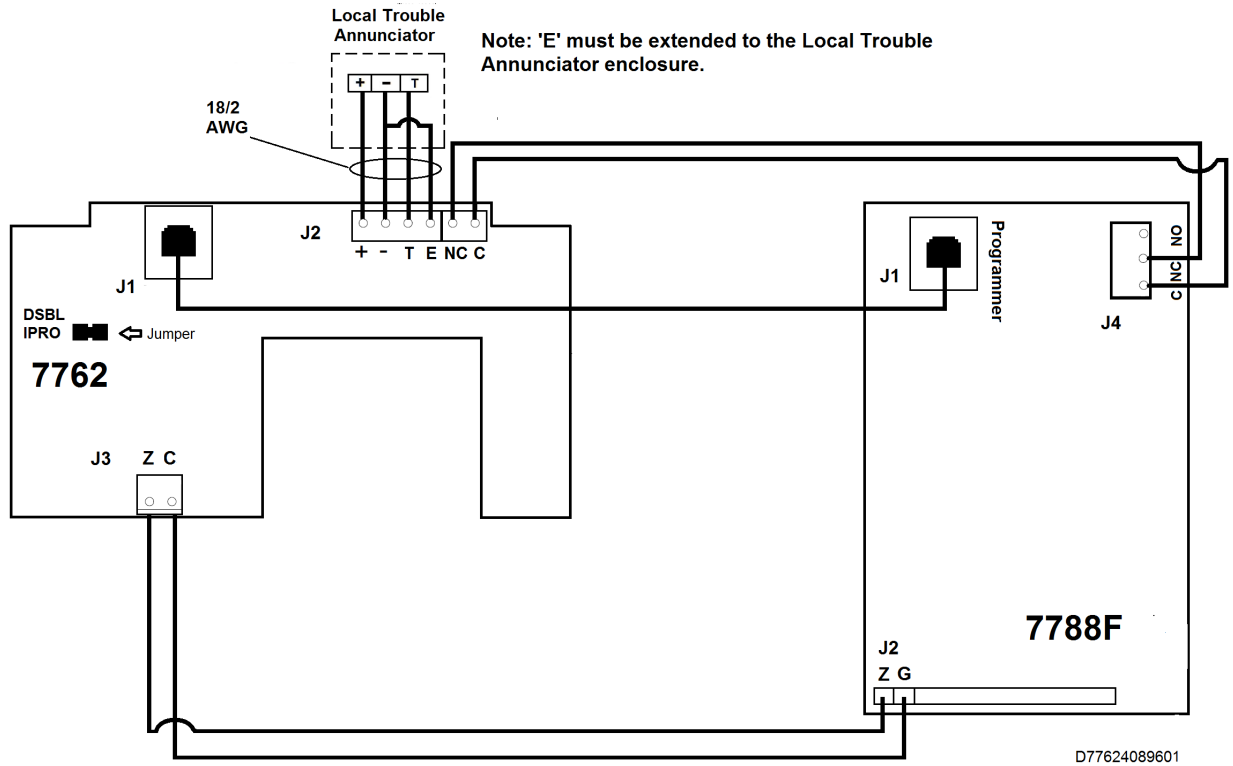| Step	Wiring Location	Cable/Wire	From	To
3.	INTERNAL	User Supplied.	7762 **J3** Z —————— C —————— No EOL resistor.	7744F/7788F **J2** Z1(typical) G See **Note 2** below.
4.	INTERNAL/ EXTERNAL	User Supplied.	7762 **J2** + —————— - —————— T —————— E —————— Note: 'E' must be extended to the Local Trouble Annunciator enclosure.	Local Annunciator + - T(rouble) -

Table 3.

Figure 8. Wire and Cable Location Diagram – 7788F

NOTE:
1) The subscriber zone input connected to the 7762 must be programmed for 'F' (fire). The 7762 will use the 'F' zone input Open condition to deliver a 'Trouble' message. Refer to the 7744F or 7788F Installation and Operation Manual Section 3.5 for zone input programming.
2) DO NOT use an E.O.L resistor on the zone input terminals connected to the 7762. The 7762 will not operate correctly when an E.O.L. resistor connected.

1.7 Status Indicators

The 7762 has 3 LED indicators used to indicate status. The LED indicators are normally off and only turn on to show a trouble condition. Refer to the table and descriptions below for details on trouble conditions and the status LED locations.

Indicator Name	LED Color	Trouble Condition Summary
TRBL J4	Yellow	The 7744F/7788F subscriber has stopped operating normally.
TRBL IPRO	Yellow	The 7794 IntelliPro has stopped operating normally.
ZONE ALARM	Yellow	The local annunciator circuit has a fault.

Status Indicator Trouble Details:

TRBL J4:
A fault that activates the 7744F or 7788F subscriber J4 trouble relay will cause the TRBL J4 LED to turn on as shown in Figure 11.
Faults include a subscriber reset, antenna cut, ACK delay, low battery or battery charger failure. For details on these conditions refer to the 7744F or 7788F Installation and Operation Manual.
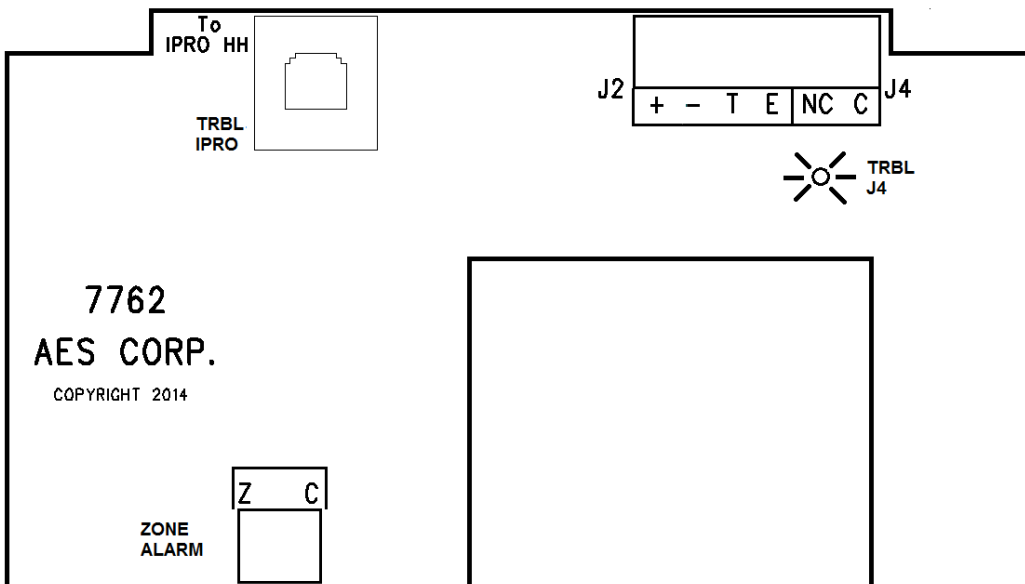

Figure 11. TRBL J4

TRBL IPRO:

A fault with the 7794 IntelliPro will cause the TRBL IPRO LED to turn on as shown in Figure 12. The 7762 monitors operation of the 7794 IntelliPro by checking for a periodic status signal. If the status signal is lost due to power failure or failure of the 7794 microcontroller to operate normally the TRBL IPRO Status Indicator LED turns on.
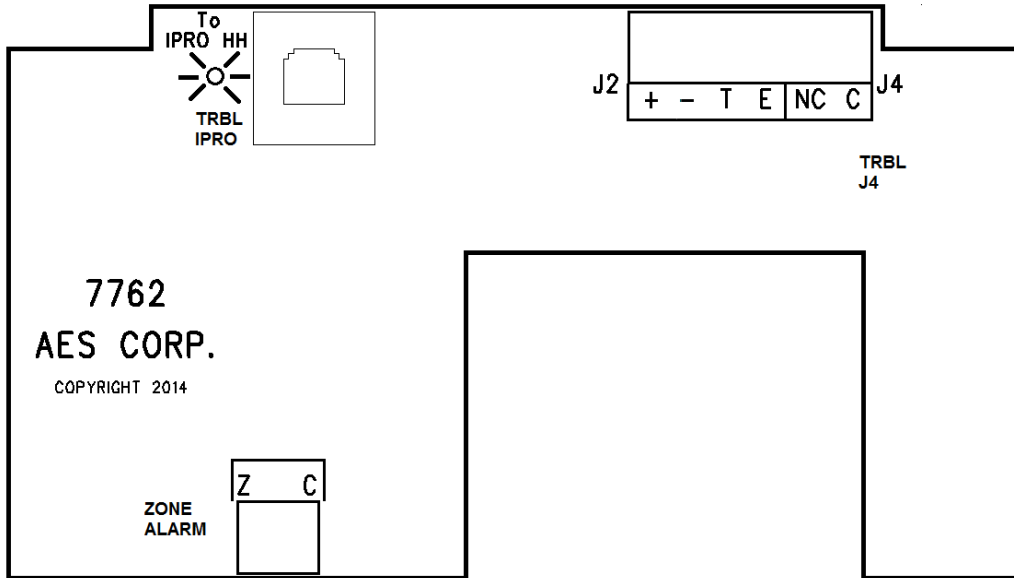

Figure 12. TRBL IPRO

ZONE ALARM:

The **Zone Alarm** LED turns on as shown in Figure 13 when there is trouble and the zone alarm of the subscriber is tripped. The trouble causing the zone alarm trip is failure of the 7794 IntelliPro, a wire cut or power short to the local annunciator.
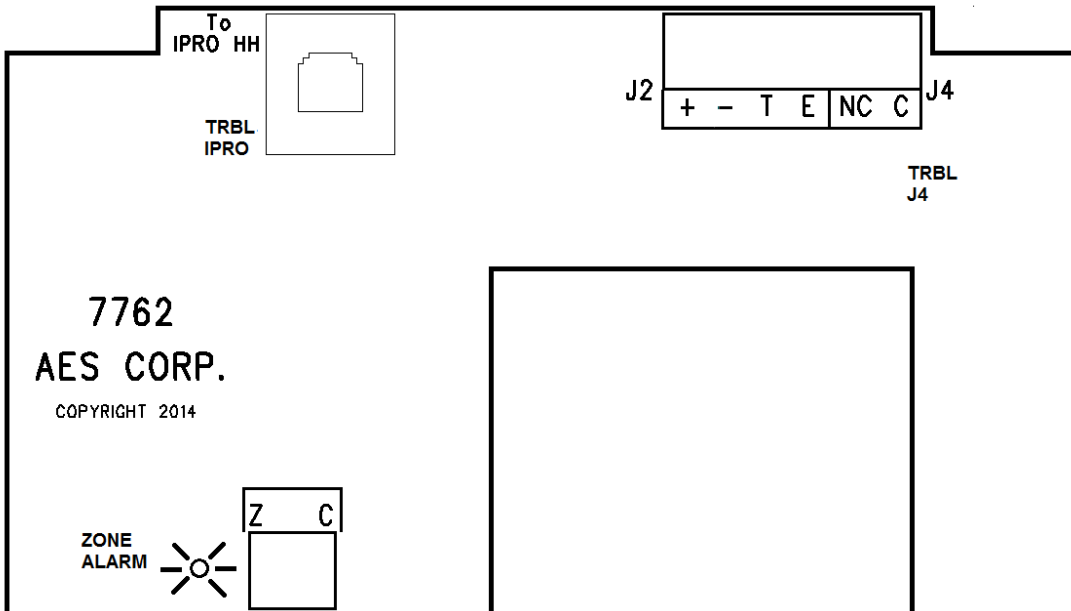

Figure 13. ZONE ALARM

1.7.1 Local Annunciator Operation - Cadence

The 7762 operates the local annunciator using a repeating cadence.

The cadence is:
0.7 seconds – LED and sounder ON followed by –
3 seconds – LED and sounder OFF as shown in Figure 14. below.

The cadence is continuous until the trouble condition is cleared. Pressing the local annunciator 'Silence' switch will turn the sounder off, but the LED will continue to blink on and off following the cadence. Clearing the trouble condition will stop the local annunciator cadence.

Peak current use occurs for the 0.7 second time the LED and sounder are 'ON'.
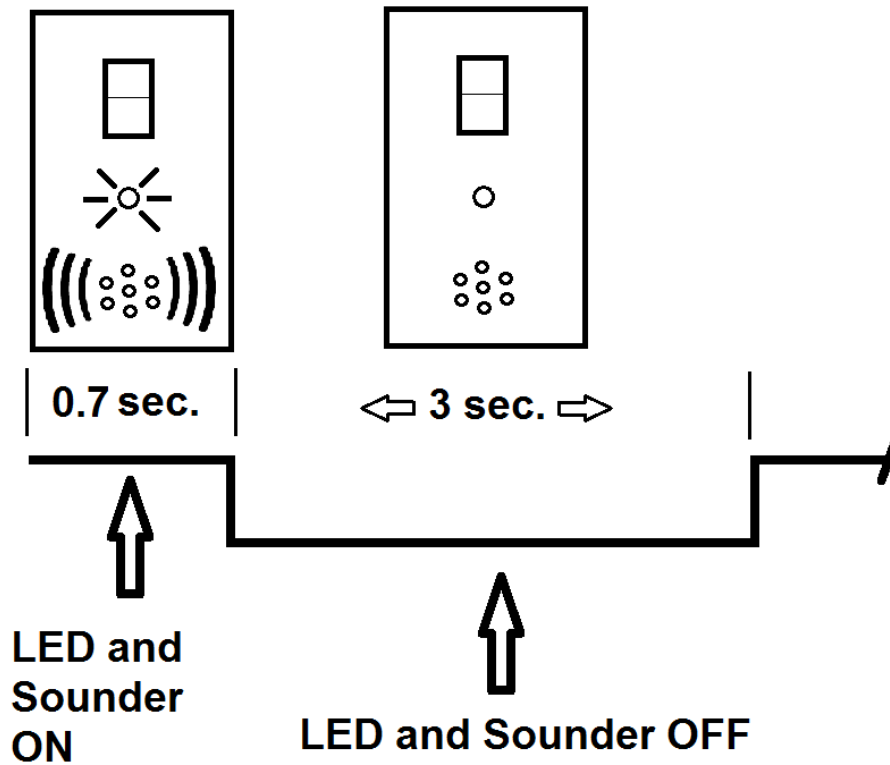
Figure 14. Cadence for Local Annunciator - Trouble Condition

2 Testing

Perform the following tests listed below to confirm the 7762 Hardware Supervisor Card is properly installed and functional.

2.1 Installation Checks

Some of the tests to be performed at the installation site require a response from a Central Station person.

- Trigger alarm conditions and confirm that the proper message is received at the Central Station.

- Cause fault conditions and confirm that the proper message is received at the Central Station.

3 Maintenance, Warranty and Repair

Once installed and normal operation is confirmed, there is typically little maintenance required.

3.1 Troubleshooting

Problems on the circuit board usually require returning the defective unit to AES for service.

3.2 Parts List

- The 7762 Hardware Supervisor Card includes the following items:
    - 7762 Hardware Supervisor Card
    - AES RJ11 cable P/N 13-0395
    - Hex standoffs, (1 1/4 in.) AES P/N 09-2015
    - Hex standoffs, (5/8 in.) AES P/N 09-2014

3.3 Contact Information

AES Corporation
285 Newbury Street
Peabody, Massachusetts 01960 USA
Website: http://www.aes-intellinet.com
AES corporate Phone: (800) 237-6387   (800) AES-NETS
                         USA (978) 535-7310
Fax: USA (978) 535-7313
Email: Check Website for latest email addresses

3.4   Warranty and Service Procedure

OWNER WARRANTY - AES CORPORATION
LIMITED PRODUCT WARRANTY AND TECHNOLOGY LICENSE

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AES Corporation ("AES") warrants to the original purchaser that each AES Subscriber Product will be free from defects in material and workmanship for three (3) years from date of purchase and all other products purchased from AES including central station receivers and accessories will be warranted for one (1) year from the date of purchase. At no cost to the original purchaser for parts or labor, AES will repair or replace any AES Product or any, part or parts thereof which are judged defective under the terms of this Warranty.

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Ship items freight-prepaid to:
   Repair Services, RMA#_____
   AES Corporation,
   285 Newbury Street
   Peabody, MA 01960 USA
(Contact AES for Return Material Authorization number)

June 2007