Out of the Box

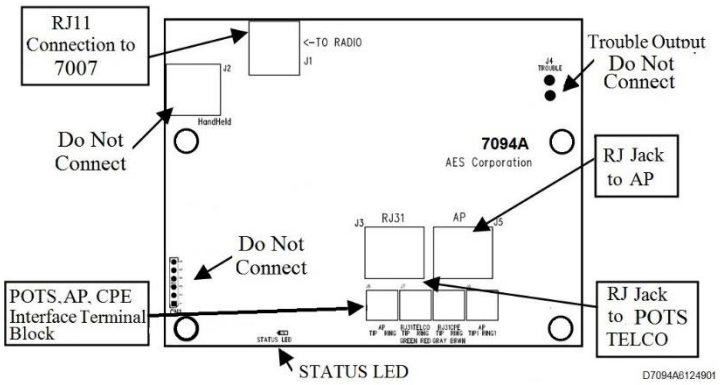
1. IntelliPro Module (1) AES Part# 72-7094A
2. RJ11 Cable (1) AES Part# 13-0395
3. Kepnuts (4) AES Part# 09-1006
4. Insulating washer (2) AES Part# 09-7X94

Overview

The 7094A full data module is an alarm reporting interface for the AES Model 7007 Security Subscriber Unit. The 7094A is UL listed for use in Commercial Security Installations with or without a phone line. This document describes installation of AES Model 7007 subscriber with the interface to an Alarm Panel (AP) via the AP dialer interface. The 7094A decodes a CID, PULSE, Modem II, or a Modem III message received on its AP phone interface and sends the message via the AES subscriber radio. The 7094A also provides a full replacement to a POTS line as well as POTS monitoring when POTS is present.

User Interface

A web browser and network connection to the Model 7007 subscriber is required to program the 7094A. The 7094A has one STATUS LED to indicate operation and heartbeat.



Installation

1. Be sure primary and battery backup power to the subscriber are disconnected.
2. Remove the four (4) lower hex nuts holding the main board inside the 7007 enclosure. Save the nuts.
3. Mount the 7094A board on standoffs, and secure with 4 kepnuts (provided with 7094A).
4. Install insulating washer (provided with 7094A) over H1 (upper left corner) H3 (lower left corner).
5. Secure the 7094A with the 4 nuts removed in Step 1 above.
6. Install the 6 wire modular cord (provided) between 7094A **J1** and 7007 subscriber connector **J7** ARM. Power up the subscriber.

LIMITED PRODUCT WARRANTY: AES warrants to the original purchaser that the AES Subscriber Unit will be free from defects in material and workmanship under normal use and service for three (3) years from the date of original purchaser's purchase. Except as required by law, this Limited Warranty is only made to the original purchaser and may not be transferred to any third party. This Limited Product Warranty is made in lieu of any other warranties, expressed or implied, it being understood that all other warranties, expressed or implied, including of merchantability or fitness for a particular purpose, are hereby expressly excluded. AES assumes no liability for any personal injury, property damage, consequential damages, or any other loss or damage due, among other things, to this product's failure to operate or provide adequate warning. AES's sole responsibility is to repair or replace, at AES's sole option, the AES product that is judged defected by AES during the limited warranty period under the terms of its Limited Warranty.

Firmware Version

The firmware version is displayed in the web browser **Status** page under the **Hardware–Panel Interface**.

7094A Configuration

Select the **Accessories** page. Use controls in the **IntelliPro** panel to set parameters.

Item	Parameter	Default value
1	Phone line	No
2	Intercept Number	555
3	AP Report Format	CID
4	AP input gain	20
5	Intercept on blind dial	No
6	Line Cut Report	Yes
7	POTS Cut Report Delay	45 sec
8	POTS Restoral Delay	60 sec
9	AP ACCT Override	No
10	POTS Input Gain	20
11	Advanced Options Display	No
12	AP Output gain	3
13	Reset to defaults	-
14	Line-cut sensing Enabled	Yes
15	CID 4xx Letter	U
16	M3 EC TEXT to CID	Yes
17	Voltage Pump Enabled	Yes
18	Clock Freq. Shift Enabled	No

CONFIGURATION SETTINGS

- **Phone line:** YES or NO for POTS line presence.
- **Intercept Number:** Enter a phone number such as 555.
- **AP report format:** CID, MODEM and PULSE depending on Alarm Panel.

FOR MODEM SELECTION

AP MODEM format: Set to MODEM2 or MODEM3. If you select MODEM3 format, set **Advanced Options** to YES to set **M3 Text to CID.**

This table shows panel models tested and the MODEM format supported.

Panel Model	Revision Number	Format Tested
D7412GV2	7.08	Modem III
D7412GV3	8.03	Modem III
D8112E1/G1	22	Pulse Only
D8112G2	31.31	Modem II
D6112	4.0	Modem II
D2212B	3.03 (IIe = III)	Modem III
D4412	1.12	Modem III
D9412G	6.6	Modem III

FOR PULSE SELECTION

Parameter	Default value	Available values
Handshake Duration (HSD)	**0.8 sec**	0.8, 0.4
Handshake Frequency (HSF)	**1.4 KHz**	1.4, 2.3
Center Frequency (CF)	**1.8 KHz**	1.8, 1.9
Inter-Digit Time (IDT)	**0.7 sec**	0.7, 0.9, 1.7
Inter-Round Time (IRT)	**3.0 sec**	3.0, 5.0

The following table shows common PULSE formats used by alarm panels and the values of parameters for each pulse format.

	HSD	HSF	CF	IDT	IRT
Pulse Format	sec	kHz	KHz	sec	sec
Ademco LS (10 pps) (4+2)	0.8	1.4	1.9	0.9	3
Ademco LS (10 pps) (3+1)	0.8	1.4	1.9	0.9	5
Ademco LS (10 pps) (4+1)	0.8	1.4	1.9	0.9	5
Ademco LS Double Round (3+1 Expanded)	0.8	2.3	1.9	1.7	5
Ademco HS Double Round (3+1 Expanded)	0.8	2.3	1.9	0.9	5
Ademco Slow Silent Knight Slow, HS 1400 Hz	0.8	1.4	1.8	1.7	5
Ademco Slow Silent Knight Slow, HS 2300 Hz	0.8	2.3	1.8	1.7	5
Radionics Fast (20pps) (4+2)	0.4	2.3	1.8	0.7	3
Radionics Fast (20pps) (4+1)	0.8	2.3	1.8	0.7	3
Radionics Fast (20pps) (3+1)	0.8	2.3	1.8	0.7	3
Radionics (20pps) (4+2)	0.8	2.3	1.9	0.7	3
Silent Knight LS Double Round (3+1 Expanded)	0.8	2.3	1.9	1.7	5
Silent Knight HS Double Round (3+1 Expanded)	0.8	2.3	1.9	0.9	5
Silent Knight Fast	0.8	2.3	1.9	0.9	5
Silent Knight (4 + 2)	0.8	1.4	1.9	1.7	5
Universal High Speed, hand shake 1400Hz	0.8	1.4	1.8	0.7	5
Universal High Speed, hand shake 2300Hz	0.8	2.3	1.8	0.7	5

NOTE: Only applicable settings show on the web GUI while configuring the settings below

AP input gain: Options are either 10 or 20 to set input gain.

Intercept on Blind dial: Options are either YES or NO to enable or disable intercept on blind dial.

Line cut Report: Options are either YES or NO to enable or disable line cut report.

NOTE: This setting is only effective when POTS=YES.

POTS cut report delay: The default value is 45 sec and the maximum is 9999.

POTS restoral delay: The default value is 60 sec and the maximum is 9999.

AP ACCT Override: Options are either YES or NO to enable or disable AP ACCT override.

POTS Input gain: Option to set POTS Input gain are 0, 10 or 20.

Advanced Options Display: Options are either YES or NO to enable or disable the advanced options display respectively.

AP Output gain: Options to set AP Output gain are 0, 3 or 6.

Reset to defaults: Select the **Systems** page tab. Under the **Reset to Default Configuration** panel, set the **IntelliPro Config** to **Yes** and click on **Reset Configuration.**

Line-cut sensing Enabled: Options are either YES or NO to enable or disable line cut sensing.

CID 4xx Letter: Options are either **U** or **C** for reporting open and close reports with "U" or "C"

M3 EC TEXT to CID Enabled: Options are either YES or NO to enable or disable.

Voltage Pump Enabled: : Options are either YES or NO to enable or disable the voltage pump.

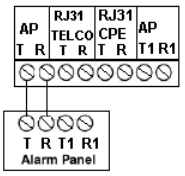
Clock FShift Enabled: Options are either YES or NO to enable or disable the control.

Interpreting the LED Blinking Patterns

The 7094A has one single RED LED that has a slow blinking pattern (1 pulse per second) when all is working properly. If it becomes SOLID, it is a malfunction and the board has to be sent for maintenance. If it blinks at a faster rate (2 pulses per second) it indicates that the 7094A cannot communicate with the subscriber.

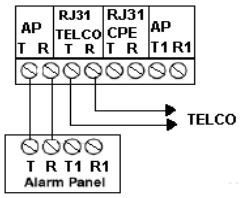
Usage of 7094A without a Phone Line

Program **Phone Line** = NO. The 7094A will generate all the voltages to emulate an actual phone line. Emulation is 100% compatible, issuing the wet voltage, dial-tone, ring back, and full DTMF digits decoding. Figure shows the typical wiring diagram without a phone line. Connect the Tip and Ring of the AP to the terminal block labeled: AP TIP RING on the 7094A.



Usage of 7094A with a Dedicated Phone Line

The 7094A is capable of decoding all the DTMF digits present on a typical PSTN phone connection. Connect the Tip and Ring of the AP to the terminal block labeled: AP TIP RING. Connect the Tip and Ring of the POTS to the terminal block labeled: RJ31TELCO TIP RING. Figure shows the typical wiring diagram with a phone line:



Intercept on specific dial sequence

Set to **Phone Line** = YES, and enter the phone number that the AP dials. This can be the single phone number or you can have dual numbers programmed on the AP, so one of the numbers will engage the 7094A. The default intercept number on 7094A is 555. With default intercept number on 7094A, you can program the AP with 5555(4 digits) if you want 7094A to intercept.

NOTE: When a phone line is present, and it is removed (line cut), the 7094A engages the phone line simulation immediately, so the panel does not notice that there is no phone line, and in this case, 7094A will act on any number dialed.

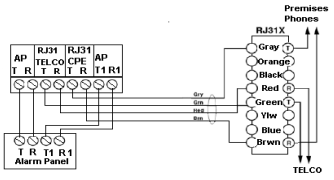
Intercept on any dial sequence

Set to **Phone Line** = YES, and enter the phone number as *** (3 asterisks). This will cause the 7094A to engage on any number dialed, with 3 or more.

Using 7094A with a Shared Line

1. Connect the Tip and Ring of the AP to the terminal block labeled: AP TIP RING. Connect the Tip and Ring of the POTS to terminal block labeled: RJ31 TELCO TIP RING
2. Connect the Tip1 and Ring1 of the AP to terminal block: AP TIP1 RING1
3. Connect the Tip and Ring of the RJ31CPE to term. Block: RJ31CPE TIP RING. Figure below shows the typical wiring diagram with a phone line along with CPE (Customer Premises Equipment).

POTS Line Monitoring and Reporting



When **Phone Line** = YES, the 7094A also monitors the presence of the phone line. In case the line is cut, the 7094A immediately engages the phone line emulation. If Line Cut Reporting is enabled the programmable timer (default is 45 seconds, programmable) starts counting. If the line is restored before the timer expires, no alarm is sent. However, if the timer expires, a line cut alarm is sent (E351 C905).

Reducing Receiver Noise on 419.5375 MHz & 451.5875 MHz

Setting **Clock Freq Shift**=YES under Advanced Options will reduce receiver noise on these two frequencies. No other IntelliPro options are changed when changing this option. The 7094A will save the new configuration and exit the menu immediately.

NOTE: This option must not be used on other radio frequencies.