



AES 7007 Security Subscriber

Installation, Operation and Programming Manual



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1. Safety Considerations

WARNING! Subscriber antenna or other cables that come in contact with electrical power lines may result in **DEATH** or **SERIOUS INJURY**.

WARNING! Do **NOT** install the subscriber unit during a lightning storm.

- Equipment must be installed in accordance with National Electric Code, NFPA 70, local building codes, and any specific requirements of the Authority Having Jurisdiction (AHJ).
- Ground the antenna, the 7007 subscriber enclosure, and any surge protector devices to help dissipate surges away from equipment and personnel. Antenna grounding and surge protectors are for your safety and the safety of your equipment.
- **Periodically test the system for proper operation.** AES assumes no responsibility for the equipment’s failure to operate. AES's sole responsibility is to repair or replace any AES device found to be defective during the warranty period.
- Exposing the Subscriber electronics to water or moisture environments, such as rain, shower, bath, pool, sauna, etc., can cause damage and unexpected operation.
- Avoid dropping or exposing the unit to physical impact that could damage the enclosure or internal components.

2. Technical Specifications

Power Supply

Source	Requirements
External Class 2 AC Transformer and Rechargeable Backup Battery	<ul style="list-style-type: none"> • Transformer Voltage/Frequency: 120 V AC/60 Hz • Input Current: 1.8 A maximum • Input Voltage: 16.5 V AC • 12 V DC – Lead Acid Gel Cell – 7 to 10 Ah – configuration dependent. See Table 1– Battery Size Requirements for details.
24 V DC from External Regulated Power Supply Rechargeable Backup Battery in Subscriber	<ul style="list-style-type: none"> • UL Listed 24 V DC Regulated Power Supply with 12 V DC Rechargeable Backup Battery in Subscriber • Input Voltage: 24 V DC • Input Current: 1.8 A maximum
24 V DC Regulated Power Supply from Security Panel AUX Power Rechargeable Backup Battery in Security Panel	<ul style="list-style-type: none"> • UL Listed Security Panel with Rechargeable Backup Battery • Input Voltage: 24 V DC • Input Current: 1.8 A maximum
12 V DC Regulated Power Supply from Security Panel AUX Power Rechargeable Backup Battery in Security Panel	<ul style="list-style-type: none"> • UL Listed Security Panel with Rechargeable Backup Battery • Input Voltage: 12 V DC • Input Current: 1.8 A maximum

Important! Selecting the 12 V DC power option with the 7085UE5 transceiver results in power output of 50% to 60% of full radio capacity.

Current Consumption

7007 – Standby w/o backup battery: 200 mA max. (1.1 A Transmitting)
 7007 – Standby w/ charged backup battery: 200 mA max. (1.1 A Transmitting)
 7007 – Standby + charging backup battery: 900 mA max. (1.8 A Transmitting – maximum)

Note: The keypad interface circuit on the subscriber draws current when the subscriber is powered off but still wired to an active ECP/DSC keypad interface bus. The LED near J1 flashes during this condition. Remove the keypad interface bus wires to remove all subscriber current draw.

Environmental Specifications

Operating Temperature: 32°F to 120°F (0°C to 49°C)
 Storage Temperature: 14°F to 140°F (–10°C to 60°C)
 Relative Humidity: 0 to 93% RH, non-condensing

Mechanical Specifications

Dimensions: 12 in. H × 8 ¼ in. W × 4 ¾ in. D (29.2 cm H × 18.4 cm W × 12 cm D)
 Weight: 5.8 pounds (1.3 kilograms) without battery
 10 pounds (2.9 kilograms) with 10 Ah battery
 Enclosure Material: Molded UL-recognized polymer
 Finish Color: Gray

Inputs

- Alarm Signal Inputs:
7007 Zone Input – four each EOL resistor type – All inputs supervised with trouble and restore
- Alarm Panel Siren/Bell Input
- Alarm Panel Phone Line Input:
7094A IntelliPro Module
- Alarm Panel 4 Wire Keypad Bus
Industry standard 4 Wire Addressable Keypad Bus (ECP Bus)

Reporting

Low AC Voltage (low AC voltage limit: 85 V AC) and AC Failure
 Low Battery (low battery voltage limit: 11.6 V DC)
 Zone Input Ground Fault (impedance to earth ground is less than 50 kΩ)
 Antenna Cut
 Battery Charger Failure

Transceiver

Output Power: 2 Watts
 Frequency Range: 450–470 MHz standard (Contact AES for other UHF and VHF frequencies.)

Signaling Type

1-Way RF Type 6

Conduit Knockouts

Trade Size:

- 1/2 Two each – located on the side of enclosure
- 3/4 One – located on the side of enclosure

3. Pre-Installation

3.1 Equipment List

The following materials are available out of the box:

- Enclosure with key lock and two keys
- 7007 Subscriber Main Circuit Board Assembly
- 7085UE5 or 7880LC2 2 Watt Transceiver set to authorized frequency
- 7214 Tamper-Resistant Antenna
- Cable Assembly for connecting to 7214 antenna
- 40-7007-QSG 7007 Quick Start Guide
- 02-0029-EOL 2.2k ohm EOL Resistors

3.2 Mounting

Subscriber Location

Important! Verify the subscriber location before deciding on the antenna and mounting the subscriber enclosure. Check the location with the AES Network Connectivity Tool (NCT), which provides a quick means for verifying NetCon or finding a suitable location for subscriber installation.

Important! If 7094A IntelliPro option is used, then all input/output wiring to the 7007 subscriber shall be completed in the same room (30 foot maximum distance).

Antenna Selection and Location

A tamper-resistant “rubber duck” flexible antenna, which mounts on top of the enclosure, is part of the standard package for the 7007 System.

Depending on enclosure mounting, subscriber physical location, and mesh network connectivity, a remote mount antenna may be required.

A separately purchased remote antenna may be used with the 7007 unit in UL installations. See [External Antenna](#) on Pg. 18 for information on antennas available from AES. The frequency range is 450–470 MHz. Contact the factory at (800) 237-6387 or info@aes-corp.com for other frequencies.

3.3 Requirements

Environmental Requirements

Select an installation location that meets the Environmental Specifications described in the [Technical Specifications](#) section.

Exposing the subscriber to temperatures below 32°F (0°C) or above 122°F (49°C) can damage the backup Gel-Cell battery. Exposure to extreme temperatures can cause unexpected operation of the subscriber electronics.

Exposing the subscriber electronics to water or moisture environments (such as a rain, shower, bath, pool, sauna, etc.) can cause damage and unexpected operation.

Electrical Requirements

If an outlet supplies subscriber power, the outlet must be a dedicated branch circuit *not* controlled by a switch. Refer to the [Power Options](#) section on page 10.

Wiring Specifications

The plug-in transformer must be placed in AES's Transformer Enclosure (P/N 1640-ENCL) for UL compliant installations.

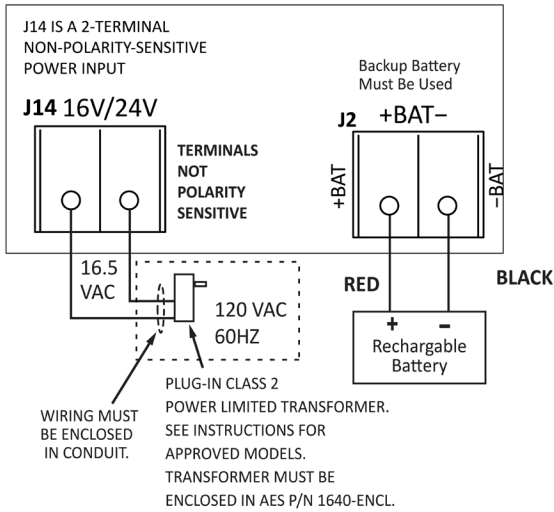
If required for certain installations, the wiring from the low-voltage output of the plug-in transformer to the subscriber enclosure must be enclosed in conduit.

Power Options

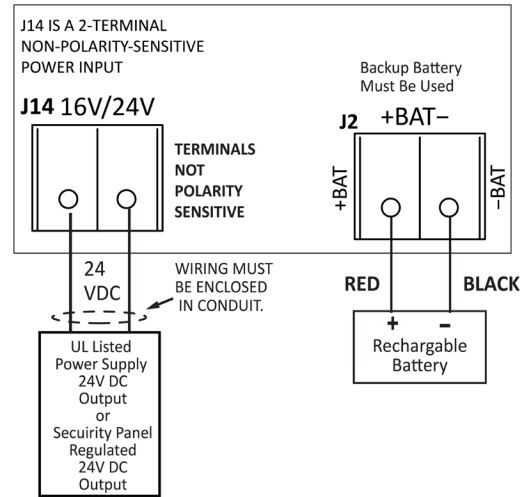
The following diagram shows three options for supplying the subscriber with power. The [Flexible Power Option](#) section on page 41 provides instructions for configuring the subscriber software to match the power option.

Important! Selecting the 12 V DC power option with the 7085UE5 transceiver results in power output of 50 to 60% of full radio capacity.

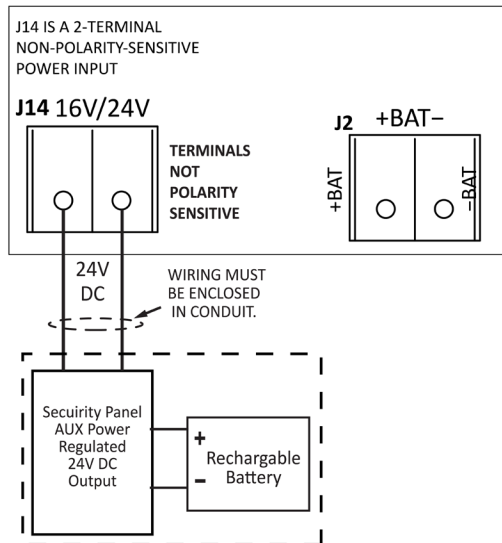
Power Option No. 1



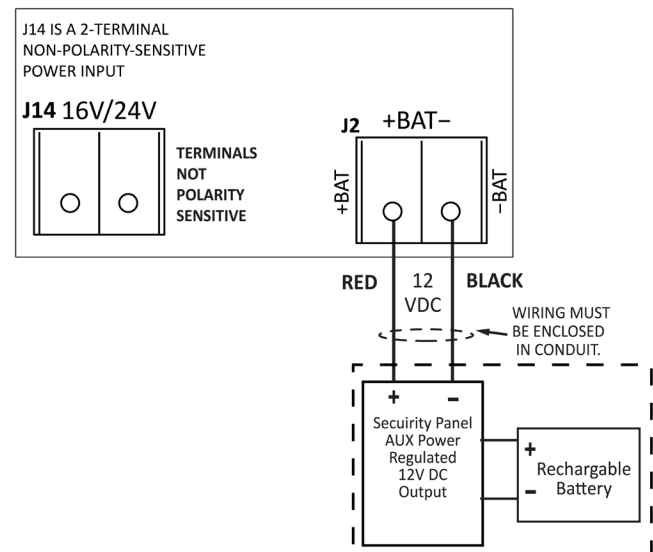
Power Option No. 2



Power Option No. 3



Power Option No. 4



D70077611521

Figure 1. Options for Supplying the Subscriber with Power

Important! Wiring must be enclosed in conduit when used in UL compliant installations.

Table 1. Battery Size Requirements		
System Configuration Description	Current (mA)	Battery Size
7007	See Current Consumption under Technical Specifications on page 8.	7 Ah
7007 7094A IntelliPro	See Current Consumption under Technical Specifications on page 7 and the 7094A Installation and Operation Manual.	10 Ah

4. Installation

WARNING! Do **NOT** install the subscriber unit during a lightning storm.

4.1 7007 Installation

Table 2 lists tasks to perform when installing the AES 7007 subscriber. Use the list to verify that installation tasks have been identified and completed. Tasks do not have to be performed in the order listed unless specifically identified.

Important! Verify AES mesh network connectivity for the subscriber before installing the subscriber enclosure.

Table 2. Installation Tasks	
Pre-Installation	Page Reference
Equipment List	<u>9</u>
Subscriber Location/Network Connectivity	<u>9</u>
Antenna Selection	<u>18</u>
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Environmental Requirements	<u>10</u>
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Field Wire Connections	<u>22</u>
Digital Communicator Wiring	
7094A IntelliPro	<u>19</u>
Configuration	

Table 2. Installation Tasks	
Pre-Installation	Page Reference
Setup Subscriber ID System Cipher Code	26 26
Timers Check-In Time AC Fail Report Delay Communication Timeout	26 41 26
Zone Input Configuration Setting Zones (Bypass/Supervised/Burg) Zone Restoral message	29 30
Suppress AC Fault Report Locally Announce AC Failure Suppress Charger Fault Report Enable Repeating	29
System Operation	
System Messages	33
Display Operation	33
System Status Display and 7007 Version Number	33
Subscriber ID and Serial Number	33
Link Layer and NetCon	33
Route Table	34
Zone Input Programming	29
Network Connectivity Status	35
Battery and AC Power Status	35
Battery Charger Status	35
Testing and Troubleshooting	
Testing	44
Troubleshooting	45

4.2 Enclosure Installation

Water Damage Prevention

Take the following precautions to prevent water damage when mounting the unit:

- Avoid mounting directly on exterior walls, especially masonry walls (condensation).

- Avoid mounting directly on exterior walls below grade (condensation).
- Avoid mounting in areas with humidity-generating equipment (dryers or production machinery).

Important!

- Protect unit from plumbing leaks.
- Protect unit from splash caused by sprinkler system inspection ports.

Important! Route conduit to prevent moisture in the conduit from entering the subscriber.

Mounting the Enclosure

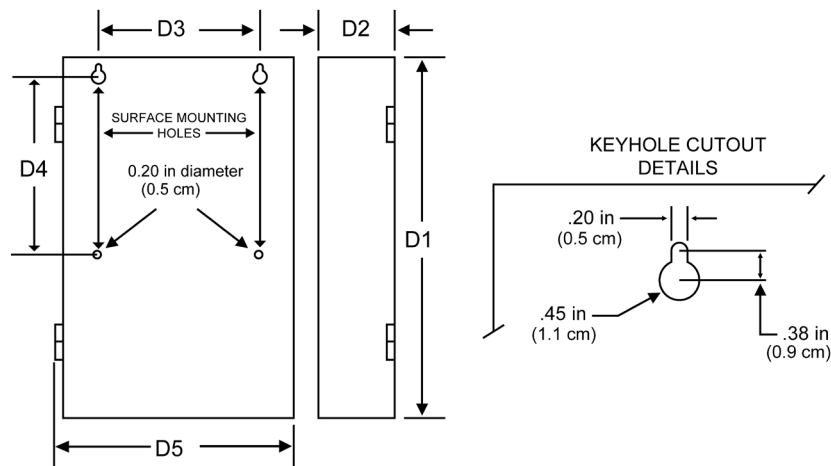
Check the [Environmental Requirements](#) on page 10 before mounting the enclosure.

Important! The subscriber must be mounted in an area that is protected by the alarm system and accessible for service and testing.

Mount in an area that is secure, as well as accessible for service and testing. When mounting on an interior wall, use anchors and fasteners appropriate for the wall material and total weight of subscriber and battery.

When mounting on a concrete wall, the unit must be placed to prevent moisture or water from entering the enclosure. Use standoff material attached to the concrete surface to mount the enclosure. Two keyhole and two circular mounting holes are available. Refer to the diagram below for location and sizes of mounting hole.

ENCLOSURE DIMENSIONS



Dimensions

D1	D2	D3	D4	D5
12 in (29.2 cm)	4.7 in (11.9 cm)	4.5 in (14.4 cm)	6.1 in (15.5 cm)	8.25 in (18.2 cm)

D70076115101

Figure 2. Enclosure Mounting – Hole Location and Sizes

Tamper switches are available for installations that must comply with UL-1610. One switch (factory installed) detects door opening and another switch (on request, available as a kit) extends in the rear of the back box to detect removal from a mounting surface. See [Enclosure Back Box Tamper Switch](#) Installation on page 46 for instructions.

To remove electronic boards mounted in the enclosure, perform the following steps for the boards installed.

Removing the 7094A IntelliPro

1. If the subscriber is supplied with a 7094A IntelliPro, remove the cabling.
2. Remove the fasteners holding the board to the four standoffs.
3. Grasp the card and pull straight upward off the standoffs.
4. Remove the hex standoffs.

Removing the Mainboard

1. With all mounted boards removed from the top of the mainboard, remove the remaining fasteners or standoffs that are holding the mainboard to the enclosure.
2. Grasp the board on each side, and pull straight upward to lift the card off the mainboard support standoffs attached to the enclosure.

5. Wiring

5.1 Primary Power Wiring

Plug-In Transformer

WARNING! Turn off or disconnect all power before attempting to connect the 7007 subscriber. Do **NOT** apply power until all accessories are properly connected.

For UL compliant installation, use only one of the Class 2 Direct Plug-in Transformers listed in the table below:

Manufacturer	Model	Rating
ELK	ELK-TRG1640	16.5 V AC, 45VA
MG Electronic Sales	MGT1640	16.5 V AC, 40VA
AES Corp.	1640	16.5 V AC, 40VA

Important! If required for certain installations, use the AES Model 1640-ENCL transformer enclosure for mechanical protection of the transformer. Wiring from the transformer to the subscriber must be protected in conduit. AES Model 1640-ENCL transformer enclosure is ordered separately.

Refer to the wiring diagram on page 22 for connection details, as well as for routing the battery wires and enclosure mounted antenna. Excess battery wire length should be placed behind the battery. Leave 1/4 in. minimum of space between non-power limited (battery wiring) and power limited wiring. Refer to Figure 3 below.

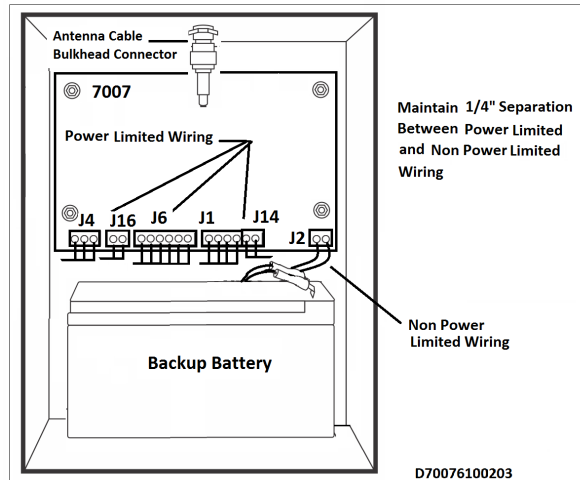


Figure 3. Wire Separation – Non-Power and Power Limited Circuits

Earth Ground Connection

Earth ground is connected to the threaded metal post as shown in the photo below:

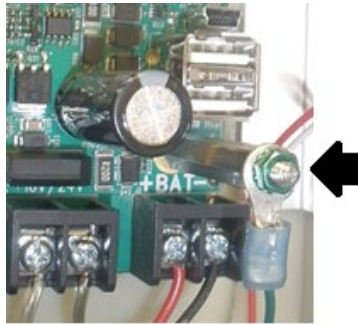


Figure 4. Earth Ground Connection Point

- Earth ground and backup battery (⊖) are not separate connections in the 7007 Subscriber.
- Connect a suitable gauge ground wire as specified in the applicable electrical code to the wire under the green hex nut on the threaded metal post, as shown in the photo above.
- Connect the ground wire to a suitable earth ground, which includes building steel, a buried metal cold water pipe, a driven grounding rod, or other grounding systems. The ground from an electrical panel is not suitable.

5.2 Secondary Power Wiring

Battery Connection

The charge capacity of the subscriber battery is 10 Ah maximum. Determine the correct Ah rating for the application using the [Battery Size](#) information on Pg. 10.

Place the battery in the subscriber enclosure with the battery quick-connect terminals located to the right side of the enclosure (refer to [Wire Separation – Non-Power and Power Limited](#) Circuits on Pg. 16).

To connect the backup battery, refer to the following steps, along with Figure 5.

1. Connect the **BLACK** wire from J2 to the negative (-) side of the battery.
2. Connect the **RED** wire from J2 to the positive (+) side of the battery.

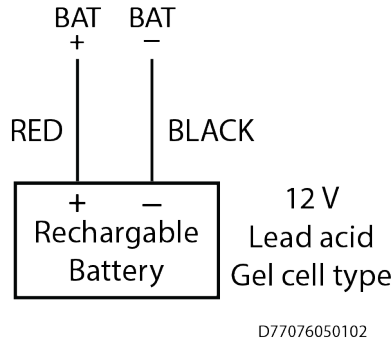


Figure 5. Connecting the Battery Backup

Battery Replacement

The battery should be replaced every 3 years or when testing indicates replacement is required. Replace with the same size and type installed. See [Battery Replacement Instructions](#) on Pg. 45 for details.

Battery Only Restart

The 7007 subscriber without AC power (for test or diagnostic purposes) will power up and self-test with only the battery connected.

Battery Supervision

When AC power is present, the battery is tested at approximately 30-second intervals.

When the battery voltage is 11.2 V DC or less for two consecutive test intervals (approximately 60 seconds total), a low-battery trouble message is transmitted.

When AC power is present and a low battery reaches a charge voltage above 12 V DC, a restoral message is transmitted.

Replacing a low-charge battery with a fully charged battery may result in the subscriber not immediately detecting the fully charged battery. Due to the test cycle time, up to 60 seconds can pass before the fully charged battery is recognized.

Low Battery Voltage Cutoff

To prevent damage from deep discharge, the 7007 subscriber disconnects the battery when voltage is less than 10 V DC.

Discharge/Recharge

The 7007 subscriber float charges the battery using a 40 VA transformer. The battery voltage level conditions are:

- Low Battery (Trouble message): 11.2 V DC or below
- Subscriber Battery Disconnect: Below 10 V DC
- Battery Reconnect (Restoral message): Above 12 V DC

6. External Antenna

6.1 Antenna Selection

A remotely mounted external antenna may be required for optimal performance on the mesh network, depending on installation location requirements or conditions. Contact AES Corporation for additional antennas that may be used with the 7007 Security Subscriber unit.

6.2 Coaxial Cable and Connector Selection

- Use 50-ohm impedance coaxial cable only. RG-8, 9913, LMR-400, and LMR-600 are acceptable coaxial cables.
- RG-58 may be used for installations where cable is not more than 25 ft. in length.
- Always use the shortest coaxial cable possible. Long coaxial cable results in greater transmitted signal loss.
- Always use the most direct route possible in any coaxial cable installation. Unnecessary and tight bends add to transmitted signal loss.
- Use the proper coaxial connectors and crimp tool for the cable selected. Incorrect or poorly installed connectors can cause transmitted signal power loss.

6.3 Antenna Location

Keep the following in mind when selecting an antenna location:

- The supplied tamper resistant and flexible 2.5 dB antenna mounts on top of the enclosure.
- Remotely located antennas should be mounted as high as possible, either on top of or inside the building structure. Rooftops and attic spaces are preferable.
- Antenna height needs to be high enough to overcome nearby obstructions to the RF signal path.
- A remote antenna should be mounted in a location near the transceiver to minimize coaxial cable signal loss. Do not use cable longer than needed to reach the antenna.
- Avoid installing the antenna in close proximity to metal surfaces. Nearby metal may degrade radio communications through signal reflections or antenna detuning.
- Remember that pipes, conduit, wiring, ductwork, and other metal commonly installed within building walls can affect antenna performance.
 - Take into account foil-backed insulation and wallpaper.
 - Metal objects can also be located in adjacent rooms or above ceilings.
 - Metallic framing and supports are commonly used in buildings. Do not mount the antenna directly over, or close to metal studding, beams, or other supports which can interfere with the RF signal.

6.4 Antenna Installation

WARNING! Do NOT install the subscriber unit or antenna during a lightning storm.

The following installation guidelines must be followed when installing the antenna:

- The remotely mounted antenna must be properly grounded to help reduce surge damage from lightning.
- Grounding must be done in accordance with local building codes and in accordance with other requirements from Authority Having Jurisdiction (AHJ).
- Mount the remote antenna vertically.
- Do not coil or bunch coaxial cable.
- Install the remote antenna in accordance with National Electric Code and local electric code.

6.5 Antenna and Surge Suppressor Grounding

A protective surge suppressor (AES Model 7230) must be installed in line with any type of remotely installed outdoor antenna, as shown in the diagram below. The surge suppressor and outdoor antenna must be earth grounded. For U.S. installation, check National Electrical Code (NEC), state or local electrical code requirements.

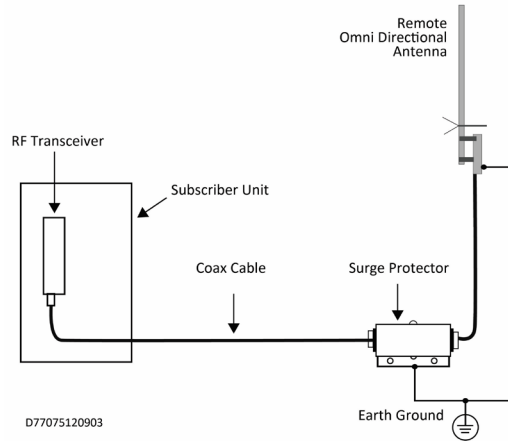


Figure 6. Antenna and Surge Suppressor Grounding

7. System Configuration

7.1 Compatible Device List

Digital Communicator

- A Single Model 7094A IntelliPro

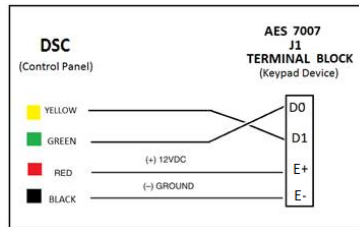
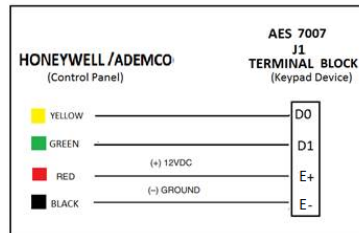
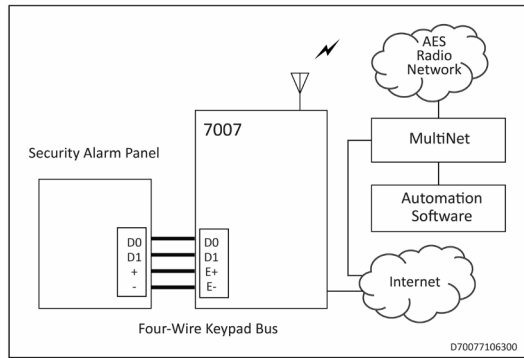
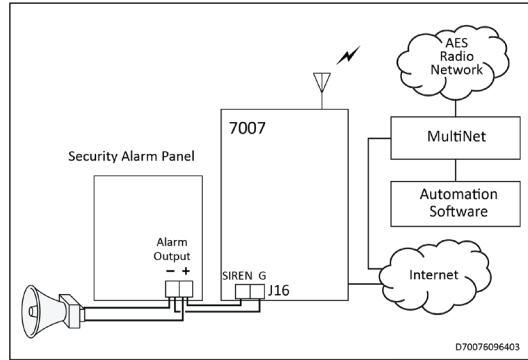
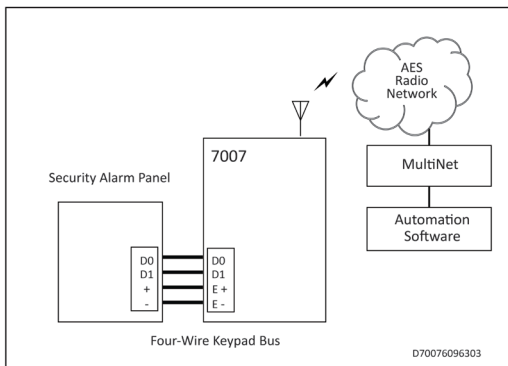
Industry Standard 4 Wire Addressable Keypad Bus

- 4 Wire Addressable Keypad Bus on Security Panel

Compatible Device Installation and Field Wiring Connections

- 7094A IntelliPro: Refer to 7094A Installation Manual, AES Part No. 40-7094A
- ECP (Expanded Console Protocol)/DSC Bus Keypad Interface Bus – Security Industry Standard

Important! The 7094A IntelliPro **cannot** be used when the alarm panel is connected to the subscriber by the Keypad Interface.



Using Keypad Interface with Honeywell Vista Alarm Panels

1. Enable the **LRR** setting.
2. Set the keypad address.

Refer to your alarm panel installation manual for details.

Figure 7. System Configuration Options

7.2 System Communication Configuration

Sole Path (Single Reporting) utilizes either the AES mesh radio network or a TCP/IP broadband connection to deliver messages from the subscriber to the central monitoring station.

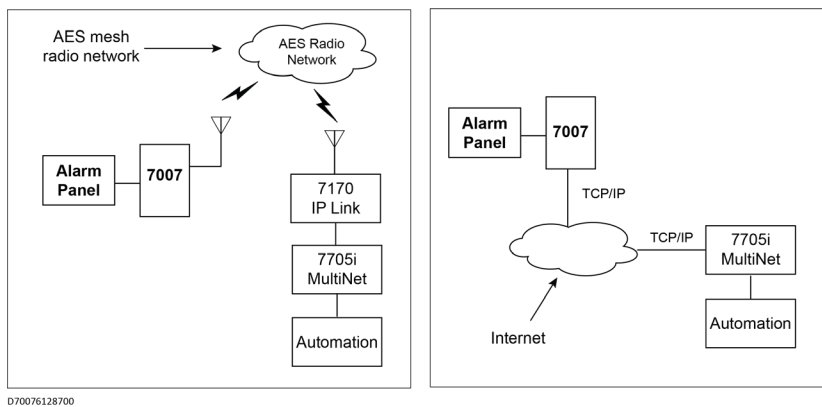


Figure 8. Sole Path (Single Reporting)

Single Reporting with Backup utilizes either the AES mesh radio network, or a TCP/IP broadband connection, to deliver messages from the subscriber to the central monitoring station. The Backup Reporting path works when the Primary Reporting path is down.

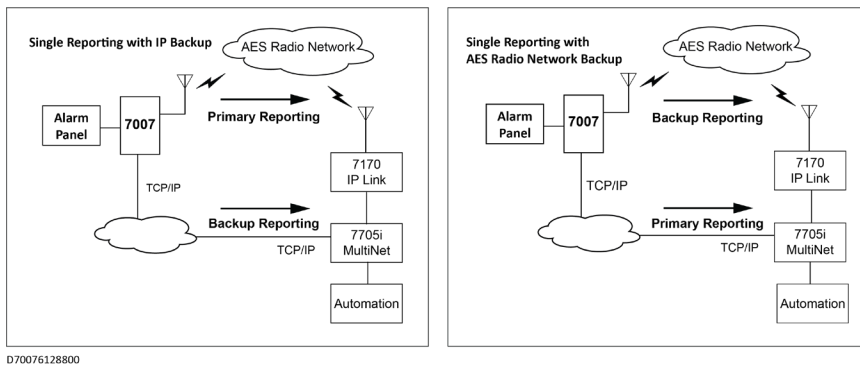


Figure 9. Single Reporting with Backup

Dual Reporting utilizes both the AES mesh radio network and the TCP/IP broadband connection. Messages from the subscriber to the central monitoring station are launched on both paths together.

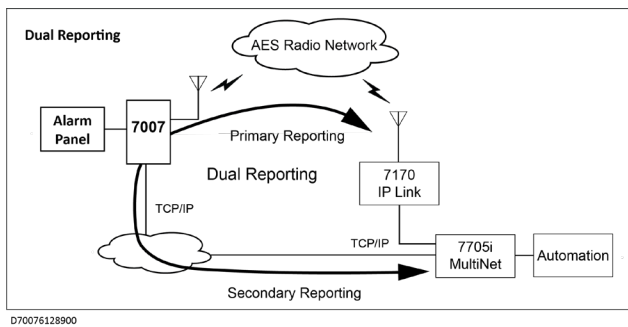


Figure 10. Dual Reporting

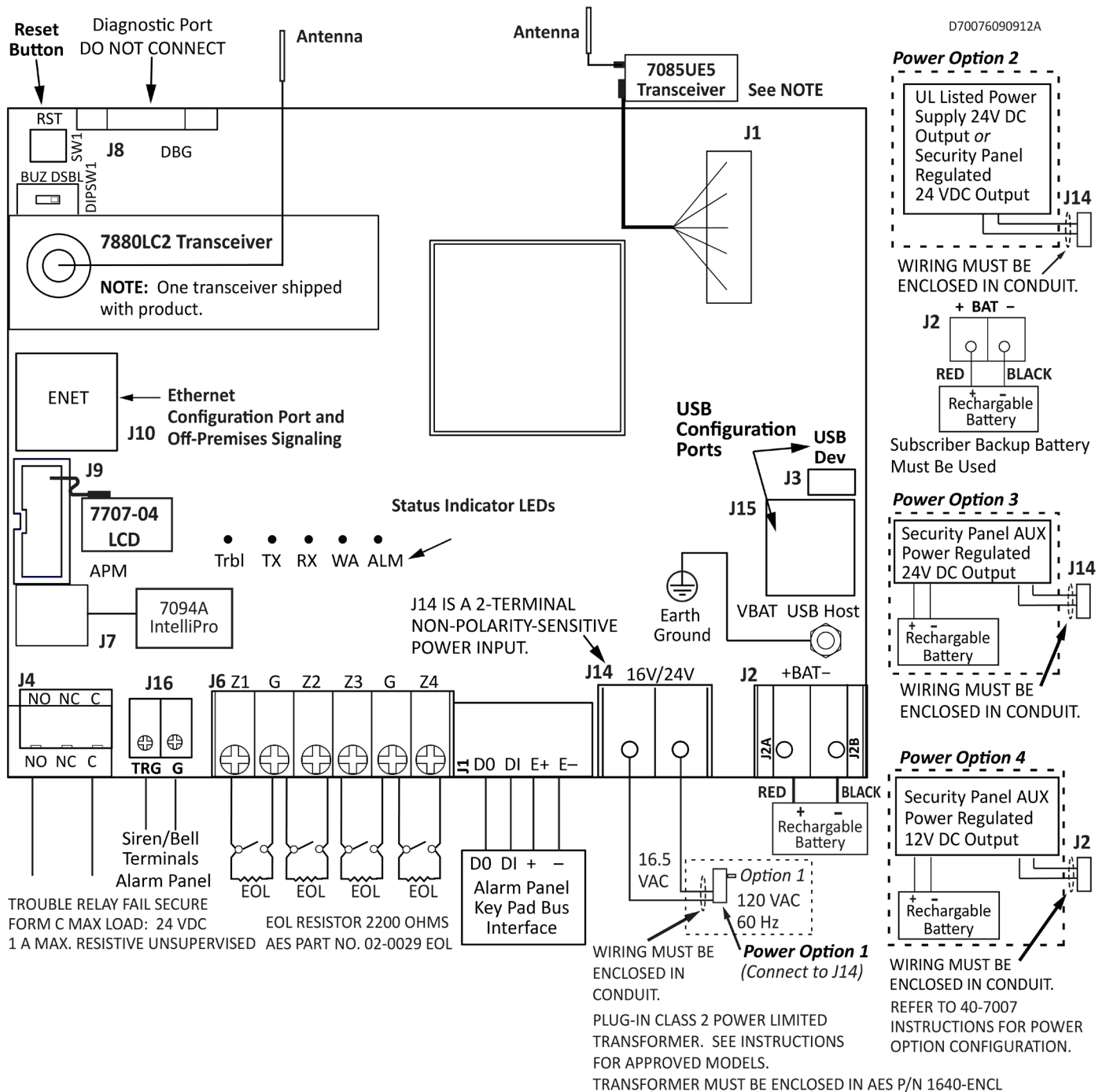


Figure 11. Field Wire Connections

Important! Selecting Power Option No. 4 (12 V DC only) using the 7085UE5 transceiver results in power output of 50 to 60% of full radio capacity.

Important! Wiring must be enclosed in conduit when used in UL compliant installations.

7.3 Trouble Output

- Terminal J4 – Relay Contacts Rating — 24 V DC 1A Maximum Resistive Load. Unsupervised.

8. Programming

8.1 Programming Interface

The Model 7007 is programmed using a graphical interface through a smartphone, a laptop/tablet, or other browser-capable device.

The subscriber is connected to a LAN through the J10 Ethernet connector. The default network protocol is DHCP. The IP address obtained is shown in the app only during subscriber power-up. An example display is shown below. The actual IP address will depend on the network the subscriber connects to.

Note: If DHCP is not available, the IP address is set to 169.254.100.1.

8.2 Logging In

Connecting to the 7007 configuration page requires a login. Enter the IP address of the subscriber into a web browser, then enter your username and password at the login screen. The default username and password are `admin` (lowercase):

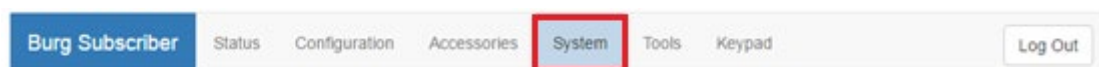


The following screen appears after a successful login:



Change Login Password

1. Click the **System** tab as shown below:

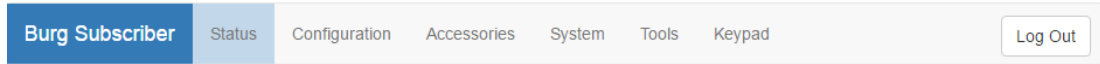


2. Place the cursor in the Current Password text box. Enter the current password.
3. In the **New Password** text box, type the new password. Type the new password again in the **Confirm** box and click **Change Password**.

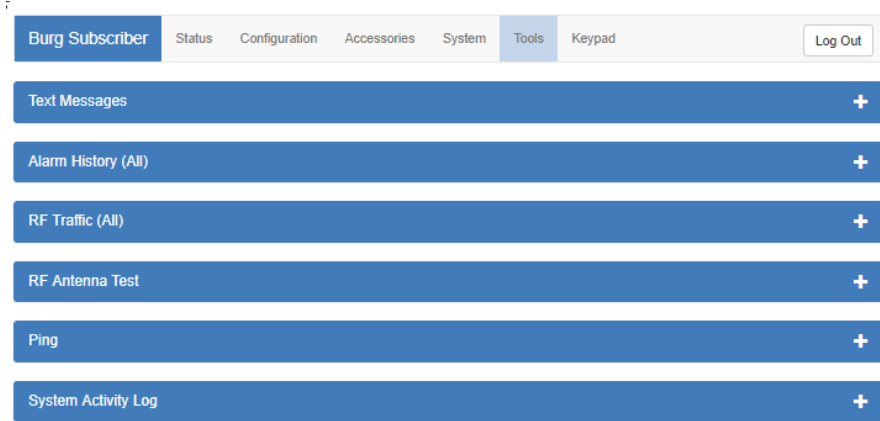
8.3 Security Subscriber Interface

Page Navigation

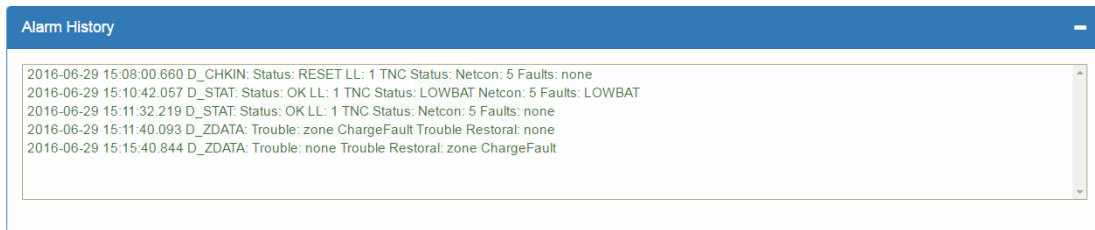
Individual pages are listed in a tab bar. To go to a page, click the associated tab.



For example, the **Tools** page is accessed by clicking **Tools**:



Each page displays a set of controls. Use the **+** control to expand the control window. In this example, expanding **Alarm History** allows you to view messages similar to the example below:



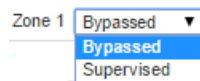
Use the **-** control to collapse the window.

The **Log Out** control ends the configuration session and returns to the **Login** screen.

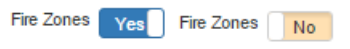
Making Configuration Changes

Configuration settings are made and changed using either the dropdown or slider switch controls in the window.

The dropdown provides a list to select from:



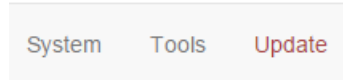
The slider switch provides one of two values to select:



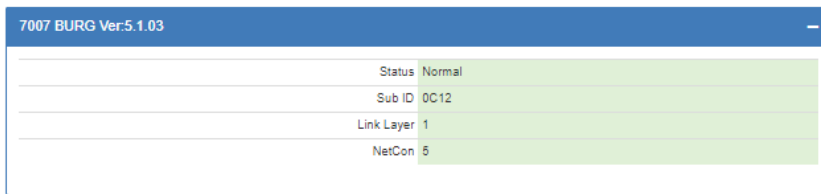
Saving Configuration Changes

Saving configuration changes requires the following steps:

1. When you are finished making changes, select and click **Save Changes**. The **Saved new settings!** acknowledgement appears:
 - Saved new settings! Click "Update" from menu bar to confirm changes.
2. You may finish and save your changes immediately, or you can make additional changes and then save all changes at once afterward.
3. If done making changes, click the **Update** tab shown in the browser (highlighted in red in the figure below):



4. The **Status** window displays changes:



8.4 View 7007 Subscriber Software Version

The 7007 software version is visible in the **System** tab under the **System Firmware Upgrade** panel.

Select the **System** tab, as shown in the following figure:

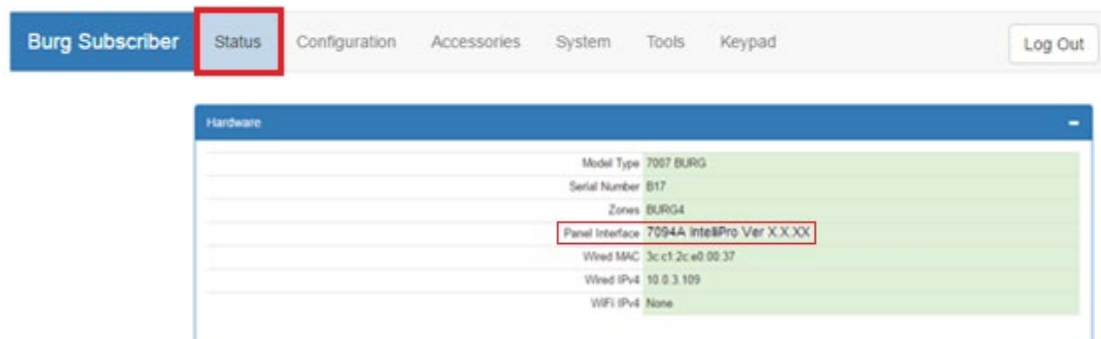


The version number is displayed in the **System Firmware Upgrade** section:



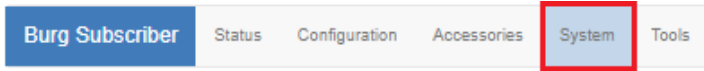
8.5 View 7094A IntelliPro Software Version

The 7094A IntelliPro software version (when installed) is visible from the **Status** tab in the **Hardware** panel under Panel Interface.



8.6 Change Login Password

1. Select the **System** tab as shown highlighted in red below:



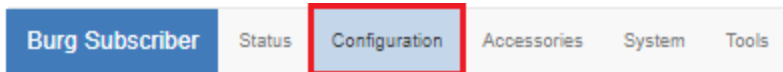
2. Place the cursor in the **Current Password** text box, then type the current password.
3. In the **New Password** text box, type the new password. Type the new password again into the **Confirm** box and click **Change Password**.

8.7 Subscriber Configuration

Subscriber ID

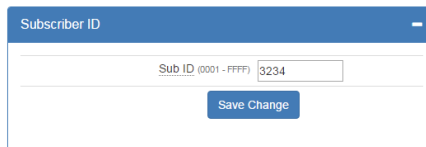
Subscriber ID is set in the **Configuration** tab.

1. From the main menu, select the **Configuration** tab.



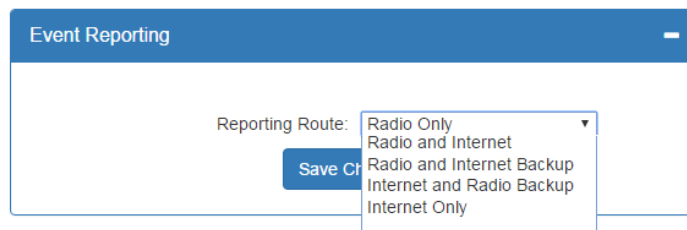
Note: Remote programming of Sub ID and Cipher Code is not possible. Also, the Subscriber ID number must be unique from all other Sub ID numbers in the system.

2. Change the **Sub ID** by entering a four-character hex (0–9 and A–F) identification number. Valid values are **0001** to **FFFF**.



Event Reporting Route

1. From the main menu, click the **Configuration** tab.
2. In the **Event Reporting** panel, click the **Reporting Route** dropdown and select the path for the subscriber to communicate. Refer also to [System Communication Configuration](#) on page 20 to see diagrams showing each Reporting Route selection.



Complete the configuration using the links shown below for the Event Reporting path selected for the subscriber:

- Radio Only: [Radio Configuration](#) (refer also to Sole Path (Single Reporting) diagram on page 20)
- Radio and Internet: [Radio Configuration](#), [Central Receiver Configuration](#) and Subscriber IP Address under [Advanced Configuration](#) (refer also to the Dual Reporting diagram shown on page 21)

- Radio and Internet Backup: [Radio Configuration](#) , [Central Receiver Configuration](#) and Subscriber IP Address under [Advanced Configuration](#) (refer also to the Single Reporting with Backup diagram shown on page 21)
- Internet and Radio Backup: [Radio Configuration](#) , [Central Receiver Configuration](#) and Subscriber IP Address under [Advanced Configuration](#) (refer also to the Single Reporting with Backup diagram shown on page 21)
- Internet Only: [Central Receiver Configuration](#) and Subscriber IP Address under [Advanced Configuration](#) (refer also to Sole Path (Single Reporting) diagram on page 20)

8.8 Radio Configuration

The **Radio Configuration** panel contains subscriber settings.

To set Radio Configuration:

1. Click the **Configuration** tab.
2. Scroll to the **Radio Configuration** panel.
 - **Cipher:** Enter the four-character hex (0-9 and A-F) cipher code (dealer code) assigned by the system administrator. Valid values are **0000** to **FFFF**.

Note: The code must match the AES 7170 IP-Link cipher code for the network that the subscriber is to join. The subscriber will not join the mesh network if the cipher code is incorrect.
 - **Check-In Time:** Enter Check-In interval time in hours and minutes. The default is 23:45 (23 Hr. 45 Min).

Note: Using short Check-In times generates more traffic on the network.
 - **Communication Timeout:** Communication Timeout is the time the subscriber waits for an ACK as a reply to a transmitted packet before going into RF Trouble mode. The range is 1–300 seconds. The default (recommended) time is 120 seconds.
 - **Repeating:** Set **Repeating** to **Enabled/Disabled** by clicking the **Repeating** switch.

8.9 Central Receiver Configuration

The **Central Receiver** panel contains Internet connection settings to the MultiNet receiver.

To set Central Receiver Configuration:

1. Click the **Configuration** tab.
2. Scroll to the **Central Receiver** panel.
 - **IP Group ID:** Enter the assigned IP Group ID found in Business Unit Settings.
 - **Primary Receiver IP:** Enter the Primary receiver IP address.
 - **Primary Receiver Port:** Enter the Primary receiver port number.
 - **Secondary Receiver IP:** Enter the Secondary receiver IP address.
 - **Secondary Receiver Port:** Enter the Secondary receiver port number.
 - **Inet Check-In:** Enter the check-in time interval for the subscriber.
 - **MCT Delay:** Enter the MCT (Multiple Communications Technology) Timeout. The MCT Timeout sets the amount of time the subscriber tries to send messages through one communication technology before giving up and switching to the other technology.

8.10 Advanced Configuration

From the **Advanced Configurations** menu, you can configure Secondary Alarm Delay, TTL (Time to Live) and subscriber IP address settings. To configure these settings:

1. Select the **Configuration** tab.
2. Scroll to the **Advanced Configuration** panel.
 - **Secondary Alarm Delay**
Enter the number of seconds to allow between data transmissions from the subscriber. The range is 1–330 seconds. The default (recommended) time is 10 seconds.

Note: The first message is sent immediately without delay. Messages that follow are delayed.

- **TTL (Time-To-Live) Configuration**
Time-to-Live settings are for managing the performance of the AES mesh network. TTL is the length of time a packet message transmission for a specific setting is retried by a subscriber in the AES mesh network. The subscriber will stop attempting to transmit the packet when the TTL limit has expired.

To set Time-to-Live:

1. Scroll to the **Configuration** tab.
2. Select the **Advanced Configuration** panel and configure the setting:

Message Type	TTL
CHECK-IN	10 minutes
STATUS	10 minutes
ALARM	3:00 hours
TROUBLE	3:00 hours
RESTORAL	3:00 hours
INTELLIPRO	3:00 hours
SPECIAL	10 minutes

- Subscriber IP Address Information

To set the subscriber IP address:

1. Scroll to the **Configuration** tab.
2. Select the **Advanced Configuration** panel and configure the setting:
Subscriber IP Address type: Select **STATIC** or **DHCP**

If **STATIC** address is selected, enter the following information:

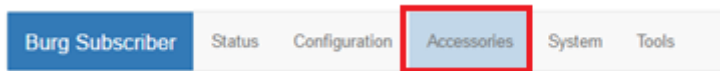
- IP Address – The IP address of the subscriber
- Subnet Mask
- Gateway
- DNS Server 1 (Optional)
- DNS Server 2 (Optional)

8.11 Zone Input Configuration

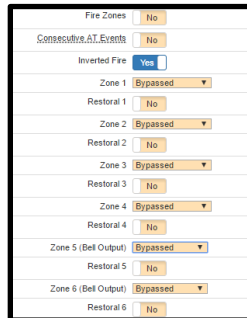
Zone input for the Model 7007 and the 7094A IntelliPro are configured under the **Accessories** tab.

You can verify that a 7094A IntelliPro is installed by selecting the **Status** tab and checking the **Hardware** panel.

To configure zone inputs on the 7007 click the **Accessories** tab shown below:

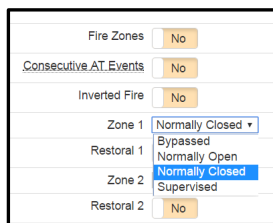


The 7007 has six zone inputs, zones 1 through 6, as shown below:



Zone Input Options for Zones 1 though 4

The following options are the default choices on the drop down menu of Zones 1 through 4:



Bypassed – zone input is ignored

Normally Open

Normally Closed

Supervised

When the **Fire Zones** switch is set to **Yes** and **Inverted Fire** is set to **Yes**, then the **Fire** and **Inverted Fire** options will be listed in the drop down options as shown below:

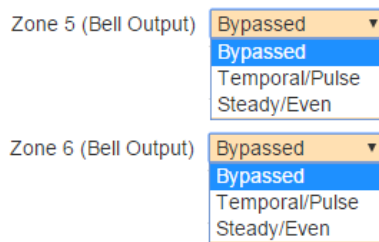


Zone Input Condition	Zone Programming			
	Supervised	Bypass	Fire	Inverted Fire
2.2k ohm EOL resistor circuit	Normal	Input Ignored	Normal	Normal
Open circuit	Alarm	Input Ignored	Trouble	Alarm
Short/closed circuit	Alarm	Input Ignored	Alarm	Trouble

Alarm Panel Siren Input Options for Zones 5 and 6

Inputs for zones 5 and 6 pertain to security alarm panel siren output. The alarm panel condition is detected by the subscriber through the zone input and a message sent to the central monitoring station. The following types of **Siren Alarm** input types can be programmed for zones 5 and 6:

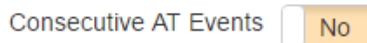
- **Bypassed** – zone input is ignored
- **Temporal/Pulse alarm pattern**
- **Steady/Even alarm pattern**



Connect the Alarm Panel Siren terminals to the 7007 subscriber siren input terminals.

8.12 Consecutive AT Events

Set **Consecutive AT Events** to **Yes** for verbose reporting of alarm and trouble messages. This means that alarms and trouble will be sent continuously alarm-trouble-alarm-trouble. Set to **No** for non-verbose reporting, which means that an alarm can be sent, then a trouble, but if an alarm happens again without a restoral, the alarm will not be sent.



8.13 Inverted Fire

Set **Inverted Fire** to **Yes** for an *open* zone input to report as an *alarm* and a *short* on a zone input report as *trouble*. Otherwise, the default setting of **No** which reports open on a zone input as trouble and a short on a zone input as an alarm (if Fire Zones = Yes).



Note: Set all *unused* zones to **Bypassed**. Do *not* install EOL resistors on **Bypassed** zones.

8.14 Restoral

Restoral messages are sent for the zone when the **Restoral** switch is set to **Yes**.

If done, save the configuration by clicking **Save Changes**.

8.15 7094A IntelliPro Configuration

Note: You will need a copy of the *7094A IntelliPro Installation Manual* (AES P/N 40-7094A) for IntelliPro configuration settings.

The **IntelliPro** panel displays (configuration menu shown below) if a Model 7094A IntelliPro is installed:

Refer to the *7094A Installation Manual* (AES P/N 40-7094A) for instructions on configuring the settings.

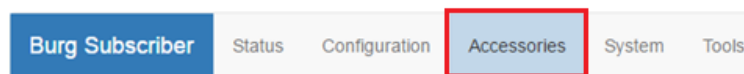
When done with changes, select and click the **Save Changes** button.

Important! Eliminate false alarms by notifying the Central Station operator ahead of time *before* the subscriber is powered on. A false alarm/report and dispatch of services to the *previous* subscriber location may occur if this is not done.

8.16 Keypad Interface

The 7007 subscriber supports the industry standard 4 Wire Addressable Keypad Bus (**ECP [Expanded Console Protocol]/DSC BUS**) found in many security alarm panels. Refer to [System Configuration](#) starting on page 19 for wiring details.

- To configure the keypad interface, select the **Accessories** tab as shown below:



The **ECP Bus Keypad Interface** panel is displayed:

- **Panel Interface:** Displays **ECP Bus** or **DSC Mode** for the keypad interface protocol present.
 - **Panel Account Number:** Enter the panel account number.
 - **Keypad Address:** The keypad address for the 7007 subscriber must be set to 18 for correct operation, and the address must be enabled at the **Alarm** panel for operation.
- When done with changes, click **Save Changes**.

8.17 Status LED Indicators

The four LED indicators on the Model 7007 main circuit board show the system status. The LEDs are located in the lower left corner of the circuit board above the **J6** connector:

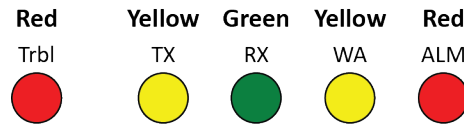


Table 3. System Status LED Indicators		
LED	Color	Function
ALM	Red	Status / troubleshooting indicator, "blink"
WA	Yellow	Steady On = Waiting for acknowledgment of last transmission Steady Blinking = Not on Network; Off = Normal
TX	Yellow	On = radio transmit
RX	Green	On = Radio transceiver receiving RF signal. NOTE: If RX is on steady longer than 20 seconds, then there is an interfering RF signal. Any RF signals on the same frequency as the subscriber and strong enough to break the squelch will also cause the RX light to remain on.
Trbl	Red	Blinking Continuously = Trouble Output Condition

ALM LED Blink Pattern Chart

The chart below shows blink patterns displayed by the **ALM LED** and what each blink pattern means.

Table 4. Blink Patterns		
Blink Type	Pattern	Possible Meaning(s)
Steady blink	■ ■ ■ ...	Normal operation
Short-short blink	■■ ■■ ■■ ...	Low battery
Short-long	■■■■ ■■■■ ■■■■ ...	Zone input in alarm or trouble/off normal
Short-short-long	■■■■■ ■■■■■ ■■■■■■ ...	Low battery and zone in alarm/trouble
Short-short-pause-short	■■■ ■■■ ■■■ ■■■ ...	AC Fault
Short-short-pause-short-short	■■■ ■■■ ■■■ ■■■■ ...	AC Fault and low battery
Steady/no blink	—————	Self-test failure (excluding low battery and AC)

Symbols as follows: "■" = short blink, "■■■■" = long blink

Period between patterns is about 1 second. The chart shows the pattern repeated 3 times.

8.18 System Messages

Display Operation

The 7007 subscriber uses a combination LCD display and a **MENU** pushbutton to navigate through the system message screens.



Note: Pressing and releasing the **MENU** button allows you to advance in a loop through the display screens until returning the System Status display screen.

System Status Display and 7007 Version Number

When the Model 7007 is operating normally, the Normal System Status screen is shown in the LCD. The model number, software version number, and status message are displayed as shown:

```
7007 BURG VER:X.XXX  
STATUS: NORMAL
```

Press the **MENU** button on the front of the enclosure once to advance to the Unit ID and Serial Number status display.

Note: Pressing and releasing the **MENU** button allows you to advance in a loop through the display screens until returning to the System Status screen.

Unit ID and Serial Number

```
ID: B10B  
Serial No: B07
```

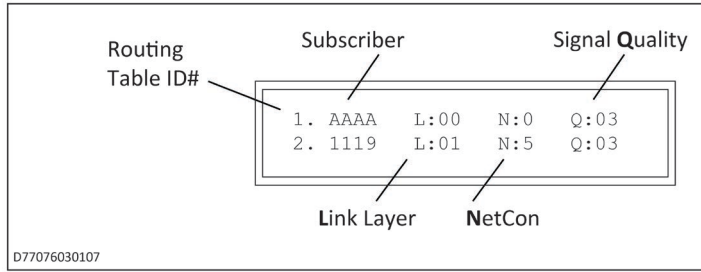
Note: The Subscriber ID can be *viewed*, but it *cannot* be set through the System Messages display. Use the [Radio configuration panel](#) to change the [Subscriber ID](#).

Link Layer and NetCon

Press the **MENU** button once to advance to the Local Status Check screen where the Subscriber Link Layer and NetCon values are displayed:

```
LINK LAYER: 1  
NETCON: 5
```

Press the **MENU** button once to advance to the **Routing Table Display** screen:

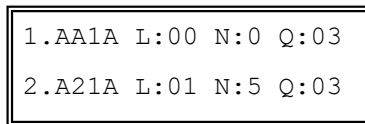


A total of four display screens are available to show the routing table. Up to eight peers, subscribers, or IP Links may be listed in the table. Each screen displays two subscribers. The total number of display screens will vary depending on the total number of peers listed (a number from 1 to 8).

Routing Table ID#: A routing table is a list of up to eight other subscriber ID numbers or IP Links in a table. The purpose of the list is to select a peer for passing off data packets. The table is sorted with the best quality subscriber placed at preference location 1. Quality is a measure of the neighbor subscriber's ability to pass data packets.

- **L:** Link layer as reported by the last transmission from the peer ID number shown. Also, the level number of subscribers with a weak signal to the unit, will be incremented by 1
- **N:** NetCon (NETwork CONnectivity) – An internal rating used in the automatic positioning of this unit in the network.
- **Q:** Signal Quality – The first digit is either an 8 or a 0 (zero). The second digit is a measure of how old the data is. A 3 is assigned to the newest data. A 1 is assigned to older data. Routing preference is given to strong, recently heard subscribers (03) versus weaker subscribers heard a long time ago (81).

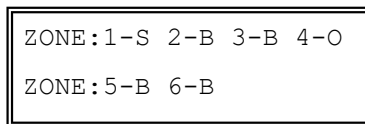
Press the **MENU** button once to advance to the next routing table screen:



Press the **MENU** button to view the next status message. Additional route table screens may appear depending on the number of routes available.

Zone Input Programming

The programming of each zone input for zones 1 through 4 is shown. Values are S for Supervised, F for Fire, I for Inverted, B for Bypass, O for Normally Open and C for Normally Closed. For Zone 5 and Zone 6 status values are: B for Bypass, E for Even, and T for Temporal.



Press the **MENU** button to view the next status message.

Network Connectivity Status

The IP address and IP connection (DHCP or Static Address) are shown:

```
LAN: 10.0.3.111
```

When no IP network is available, the **No LAN IP** message appears as shown:

```
LAN: No LAN IP
```

Press the **MENU** button to view the next status message.

```
IP Connectivity:  
PRIMARY RECEIVER
```

Battery and AC Power Status

Battery voltage and the presence of AC power to the subscriber are shown:

```
BATTERY OK  
AC POWER OK
```

Press the **MENU** button to view the next status message.

Battery Charger Status

Battery charger status is shown:

```
CHARGER OK
```

Press the **MENU** button to view the next status message.

Panel Interface

The interface from the subscriber to the alarm panel is shown. Values are ECP KEYPAD, DSC KEYPAD, or 7094A.

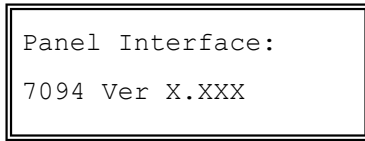
```
Panel Interface:  
KEYPAD
```

NOTE: Only one Panel Interface may be used at a time.

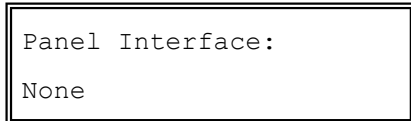
Press the **MENU** button to view the next status message.

7094A IntelliPro Software Version

If a 7094A IntelliPro is installed in the subscriber, the software version displays as shown below, where X.XXX is the version number:



When no 7094A is present, the display shows None as shown below:



Press the **MENU** button to return to the System Status Display screen (home screen).

8.19 Off-Normal Operation

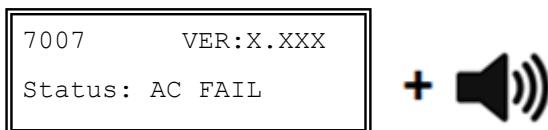
Faults and alarms that cause off-normal operation are shown with fault messages in the LCD display. See the table below for more information.

Table 5. Faults and Alarms with Off-Normal Operation	
Off-Normal Condition Fault Message	Problem
AC POWER FAIL	AC power to subscriber disconnected or below minimum voltage
DC POWER FAIL	DC power to subscriber disconnected or below minimum voltage
CHARGER	Battery charger failure
AP IFACE FAIL	7094A IntelliPro card failure or Keypad Bus failure
RF COMM FAIL	Failure to communicate with another unit on mesh network
BATTERY FAIL	Backup battery voltage below minimum
Alarm/Trouble Messages	
ZONE 2 ALARM	Example of Alarm condition; Zone 2 input
ZONE 3 TRBL	Example of Trouble condition; Zone 3 input

Fault Display

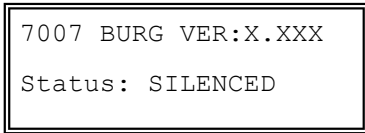
Faults are displayed on the LCD display on the enclosure. The following behavior occurs depending on whether single or multiple fault conditions are present.

- **Single fault** – A single fault condition is shown on the display, and the subscriber buzzer sounds:



When the single fault condition clears, the cleared fault message no longer displays and the buzzer stops sounding.

- **Buzzer Silence** – Press the **MENU** button and *hold down* for at least 5 seconds. The status display shows the following, and the buzzer is silenced.



- **Multiple faults** – Multiple faults are shown in the LCD display, one fault at a time for approximately 2 seconds each. Faults appear in order, one after the other, and the subscriber buzzer sounds.

Disable On Board Buzzer

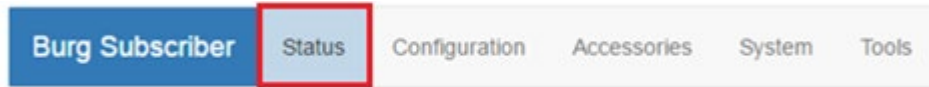
The front panel buzzer can be disabled through the configuration interface. To disable the on board buzzer in the subscriber:

1. Select the **System** tab.
2. Under the **Buzzer** panel, set the **On Board Buzzer** switch from **Enabled** to **Disabled** to silence the buzzer.
3. Click the **Save Change** button.
4. Click **Update**.

8.20 Subscriber Status Check

General

Information about the Model 7007 subscriber is shown from the **Status** tab.



The **Status** page shows any faults, as well as the unit (subscriber) RF ID, Link Layer, and NetCon values:

Status	Normal
Sub ID	CC16
Link Layer	1
NetCon	5

If faults are present, they are displayed.

Routing Table

The subscriber routing table is shown in the **Routes** panel, as shown in the example below. Up to eight routes may be shown:



Hardware

Information about the subscriber type, serial number, alarm panel type, and IP addresses are shown in the **Hardware** panel.



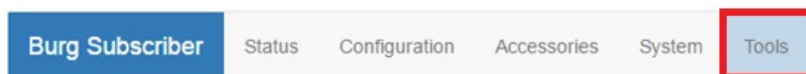
- **Model Type** – The Model 7007, a Security subscriber, displays as type Burg.
- **Serial Number** – A unique serial number is assigned to each Model 7007 subscriber at the factory.
- **Zone Bank**
- **Panel Interface** – The panel interface type detected during configuration is shown.
- **Wired MAC** – The Media Access Control (MAC) address (which is the physical address) is a unique network identifier assigned to the Model 7007 subscriber.
- **Wired IPv4** – The IP address of the subscriber.
- **WiFi IPv4** – The address to an optional plug-in WiFi adapter for wireless communications with the subscriber during configuration.

8.21 Tools

The **Tools** tab provides access to the following:

- Text Messages
- Alarm History
- RF Traffic
- IP Traffic
- RF Antenna Test
- Ping
- System Activity Log

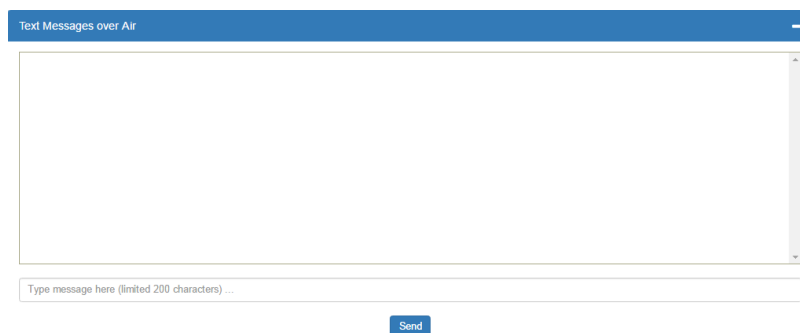
To access these features, select the **Tools** tab as shown in red below:



Text Message

A text message can be sent from the 7007 subscriber to the central monitoring station. Messages from the central station can also be received.

In the **Text Messages over RF** panel, use the message line at the bottom of the panel to enter the message. Messages have a 200-character limit. Click **Send** to transmit the message.



Alarm History

Messages sent from the alarm panel through the Model 7007 subscriber are displayed in the **Alarm History** user interface panel.

RF Traffic

Receive and Transmit traffic to/from the subscriber can be viewed using the **RF Traffic** panel. Traffic from other subscribers can also be viewed.

IP Traffic

Messages that are sent to and from the Subscriber, and which are used for debugging purposes, are displayed in the **IP Traffic** panel

RF Antenna Test

The RF Antenna Test turns the transceiver transmitter on for approximately 5 seconds and allows use of RF test equipment, such as a SWR meter or power meter. This function allows you to check transceiver RF power output, coaxial cable connections, antenna tuning, and other parameters.

Ping

The ping utility checks the network connectivity of the subscriber. Enter a network address on the address line and click **Submit** to verify the connection.

System Activity Log

The System Activity Log shows 7007 subscriber information used for diagnostic purposes.

8.22 IP Configuration

The IP address of the Subscriber is set in the **Configuration** tab under the Advanced Conf. Fixed (static) or automatically assigned (DHCP) addresses may be used. DHCP addressing is the default network address setting.

Select the **IP Configuration** tab.

IP Address – DHCP

Important! DHCP protocol use is the recommended.

The Subscriber is set to Dynamic Host Configuration Protocol (DHCP) by default. An address is automatically obtained when the Subscriber is connected to a network, or if already connected, when the Subscriber is powered on.

IP Address – Static

When **Static** is selected, the form expands to show:

- IP Address
- Subnet Mask
- Gateway
- DNS Server 1 (Optional)
- DNS Server 2 (Optional)

Obtain information for these settings from the network administrator or other individual who manages network services.

9. System Settings

The **System** tab provides access to system setting features.

9.1 Product License

Subscriber product license information is displayed in this panel.

9.2 Change Password

Change Password allows the logged-in user to set another password for the login account. If the user is logged in with a default account password, a warning about changing the password appears in red letters.

The **Login User** line displays the current user logged into the subscriber.

To change the password:

1. Enter the existing password into the “Current Password” field.
2. Enter a new password into the “New Password” field.
3. Re-enter the new password again into the “Confirm” field.

9.3 Add User

Add User allows you to add additional users to the system.

To add a user:

3. Enter the user name into the “Username” field.
4. Enter the password into the “Password” field.
5. Re-enter the password again into the “Confirm” field.
6. When through, click the **Add User** button.

9.4 Buzzer – Onboard Subscriber

The buzzer control enables or silences the onboard subscriber buzzer. The default setting is **Enabled**.

1. To disable, click the **Enable** control so that it changes to **Disabled**.
2. When through, click the **Save Change** button.

9.5 Uploading/Downloading Settings

Download Current Settings

Setting information can be downloaded from the subscriber. Select the **RF Config** or **IntelliPro Config** button and click the **Download** button.

Upload Preconfigured Settings

To upload subscriber settings to the Model 7007, click **Choose File**, select the file, and click **Upload**.

Reset to Default Configuration

Subscriber and **IntelliPro** settings can be set to factory defaults.

1. Set the **Subscriber Config** and/or **IntelliPro Config** switch to **Yes**.
2. Click the **Reset Configuration** button.

Note: Reset with **Subscriber Config** *does not change* the existing Subscriber ID and Cipher code programmed in the unit.

9.6 System Firmware Update

Updating

To update the subscriber software, click **Choose File**, select the upgrade file, and click **Update**.

Download Support Files (from subscriber to PC)

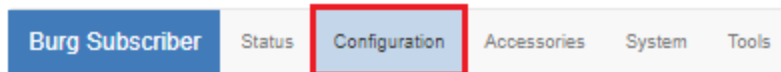
To download system information files, select the file type from the **Select file type** dropdown box, then click **Download**.

Restart System

Clicking the **Restart** button causes the Subscriber to halt communication and any system software that may be running. The system software restarts and the Subscriber resumes communication.

10. Flexible Power Option

Subscriber power can be provided by several different types of power sources. This control configures the type of power source and the features associated with the power source. From the **Configuration** tab, select the **Flexible Power Option** panel.



For power source details, see [Power Options](#) on page 10.

- **Power from 16.5 V AC Adapter and Battery**

 A screenshot of the 'Flexible Power Option' configuration window. The 'Power From' dropdown menu is set to '16.5 VAC Adapter and Battery'. Below it, there is an 'AC Report Delay' field with a value of 'R' and a 'Min.' label. There are four toggle switches: 'Locally Announce AC Fault' (Yes), 'Suppress AC Fault' (No), 'Suppress Battery Fault' (No), and 'Suppress Charger Fault' (No). A 'Save Change' button is at the bottom. A callout box points to the 'Power From' dropdown, showing a list of options: '16.5 VAC Adapter and Battery', '24 VDC and Battery', '24 VDC only', and '12 VDC only'.

Refer to the diagram shown in the [Power Options](#) section on page 10 for supply and connection requirements.

Important! When using this selection, **16.5 V AC** is the **primary** power source and the **battery** is the **secondary** power source.

- **AC Report Delay:** AC Report Delay is active when **Suppress AC Fault** is set to **NO**. The report delay is the time that must pass before the Model 7007 Subscriber will send an AC failure or AC restoral message. This feature helps prevent mesh network congestion in an area where many Subscribers have an AC power outage at the same time. Messages can be set to transmit in a staggered fashion using the **Random** time setting.

The combined AC fail detection time delay of 100 minutes plus the random **AC Report Delay** between 0–60 minutes results in time that does not exceed 160 minutes.

AC power must be lost for 100 minutes in order to be detected as a failure. AC power must be restored for at least 100 minutes in order to be detected as a restore. Once either is detected, a message is created by the subscriber and is sent to the central station.

An AC report delay is selected based on both this parameter and the setting of AC fault report suppression in the setting of **Suppress AC Fault Reporting**.

- **AC Report Delay – Available settings:**
 - **Random Delay:** A random time ranging from 0–60 minutes after 100 minutes of AC power loss. Enter R into the box.
 - **Fixed delay:** A specific time ranging from 1–60 minutes after 100 minutes of AC power loss.
 - **No Delay:** Immediate transmission after 100 minutes of AC power loss. **This is not recommended.**
- **Locally Announce AC Fault:** Set **Locally Announce AC Fault** to **Yes/No** by clicking the **Locally Announce AC Fault** switch.
- **Suppress AC Fault Reporting:** Set **AC Fault Reporting** to **Yes/No** by clicking the **AC Fault Reporting** switch.
- **Suppress Battery Fault Reporting:** Set **Battery Fault Reporting** to **Yes/No** by clicking the **Battery Fault Reporting** switch.
- **Suppress Charger Fault Report:** Set **Suppress Charger Fault Report** to **Yes/No** by clicking the **Suppress Charger Fault Report** switch.

When changes are complete, click **Save Changes**.

- **Power from 24 V DC and Battery**

Refer to [Figure 1](#) on page 10 for supply and connection requirements.

Important! When using this selection, **24 V DC** is the *primary* power source and the **battery** is the *secondary* power source.

- **DC Report Delay:** DC Report Delay is active when **Suppress DC Power Fault** is set to **No**. The report delay is the time that must pass before the Model 7007 subscriber will send a primary power failure or primary restoral message. This feature helps prevent mesh network congestion in an area where many subscribers experience a power outage at the same time. Messages can be set to transmit in a staggered fashion using the **Random** time setting.

The combined DC fail detection time delay of 100 minutes plus the random **DC Report Delay** between 0–60 minutes results in time that does not exceed 160 minutes.

Primary (24 V DC) power must be lost for 100 minutes in order to be reported as a failure.

Primary (24 V DC) power must be restored for at least 100 minutes in order to be reported as a restore. Once either is detected, a message is created by the subscriber to send to the central station. A **DC Report Delay** is selected based on this parameter and the setting of **Suppress DC Fault** reporting.

Available settings:

- **Random Delay:** A random time ranging from 0–60 minutes after 100 minutes of primary (24 V DC) power loss. Enter R into the box to select this option.
- **Fixed delay:** A specific time ranging from 1–60 minutes after 100 minutes of primary (24 V DC) power loss.
- **No Delay:** Immediate transmission after 100 minutes of Primary (24 V DC) power loss.
- **Locally Announce DC Fault:** Set **Locally Announce DC Fault** to **Yes/No** by clicking the **Locally Announce DC Fault** switch.
- **Suppress DC Power Fault:** Set **Suppress DC Power Fault** to **Yes/No** by clicking the **Suppress DC Power Fault** switch.
- **Suppress Battery Fault Reporting:** Set **Battery Fault Reporting** to **Yes/No** by clicking the **Battery Fault Reporting** switch.
- **Suppress Charger Fault Reporting:** Set **Suppress DC Charge Fault** to **Yes/No** by clicking the **Suppress Charger Fault Reporting** switch.

When done with changes, click the **Save Changes** button.

- **Power From: 24 V DC only**

Refer to [Figure 1](#) on page 10 for supply and connection requirements.

Note: The **Suppress Battery Fault** and **Suppress Charger Fault** are grayed out in the interface and cannot be changed when using this setting.

The screenshot shows a configuration window titled "Flexible Power Option". It contains the following settings:

- Power From:** 24 VDC only (selected in a dropdown menu)
- Suppress DC Power Fault:** No (active switch)
- Suppress Battery Fault:** Yes (grayed out)
- Suppress Charger Fault:** Yes (grayed out)
- Save Change:** (button)

- **Suppress DC Power Fault:** Set **Suppress DC Power Fault** to **Yes/No** by clicking the **Suppress DC Power Fault** switch.

When done with changes, click **Save Changes**.

- **Power From: 12 V DC only**

Refer to [Figure 1](#) on page 10 for supply and connection requirements.

Note: The **Suppress Battery Fault** and **Suppress Charger Fault** are grayed out in the interface and cannot be changed when using this setting.

Suppress DC Power Fault: Set **Suppress DC Power Fault** to **Yes/No** by clicking the **Suppress DC Power Fault** switch.

When done with changes, click on the **Save Changes** button.

11. Reporting

11.1 AES Mesh Network

The 7007 Subscriber can eliminate the need for POTS telephone lines by communicating with the 7705i MultiNet using the AES mesh radio network.

11.2 Compatible Receiver

The 7007 Subscriber is compatible with the AES Corp. Model 7705i MultiNet Receiver.

12. Testing

Some of the tests to be performed at the installation site require a response from a person at the central station:

- Trigger alarm conditions: Confirm that the proper message is received at the Central Station.
- Cause fault conditions: Confirm that the proper message is received at the Central Station.
- If any 7094A IntelliPro, or ECP/DSC keypad interface, is installed, then activate the alarm panel connected to the 7094A, or ECP/DSC interface, and confirm that the 7094A or ECP/DSC interface handles alarm panel messages.

13. Maintenance

Important! Test system weekly to ensure proper operation.

Once installed and normal operation is confirmed, minimal maintenance is required. Monitoring the automatic check-in test messages will confirm proper RF operation. Batteries should be periodically tested to be certain they have sufficient capacity to operate the system.

14. Troubleshooting

Observe the RX LED on the main circuit board. If the LED is on steady or is on for most of the time, RF interference may be affecting the transceiver.

The most common causes of an RF failure or trouble are due to:

- Antenna type
- Antenna location
- Coaxial cable
- Coaxial connectors
- Transceiver malfunction

Antennas close to metal or conductive material blocking or reflecting the transmitted signal are the most common problem.

Try different locations for the antenna or use a remotely mounted long-range RF antenna. Try replacing the transmission components, including the coaxial cable, coaxial connectors, and/or antenna.

Note: No user serviceable components are located on the circuit boards. Defective circuit board units must be returned to AES. For information on returning units, see the [Return Material](#) section at the end of the Warranty.

15. Repair Information

Other than the backup battery, the 7007 Subscriber contains no user serviceable parts.

16. Contact Information

AES Corporation

285 Newbury Street

Peabody, Massachusetts 01960 USA

Website: <http://www.aes-corp.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

17. Battery Replacement Instructions

1. Remove the positive battery lead (red) from the battery.
2. Remove the negative battery lead (black) from the battery.
3. Remove the 16.5 V AC plug-in power transformer from the wall receptacle, or disconnect other source of primary power to the subscriber.
4. Verify the POWER LED indicator is **NOT** illuminated.
5. Remove the battery from the enclosure.
6. Discard the battery in accordance with local disposal codes.
7. Install the new battery into the enclosure.

8. Connect 16.5 V AC power transformer from the wall receptacle, or reconnect another source of primary power.

Note: Observe $\frac{1}{4}$ in. minimum separation between non-power limited wiring and power limited wiring.

9. Connect the negative battery lead (black) to the battery.
10. Connect the positive battery lead (red) to the battery.
11. Perform subscriber power-up and self-test procedure.

18. Enclosure Back Box Tamper Switch Installation

The Model 7007 has mounting space for a back box tamper switch which can detect removal of the enclosure mounted to a wall surface.

Required:

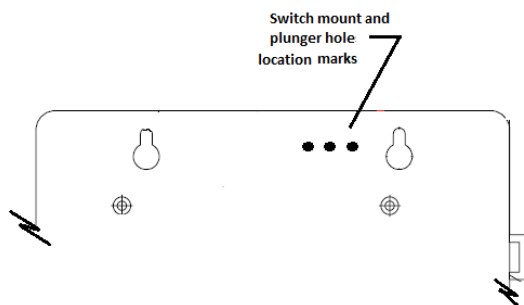
Back Box Tamper Switch Kit AES P/N 70-TSWK

5/32 in. drill for switch mounting holes (not supplied)

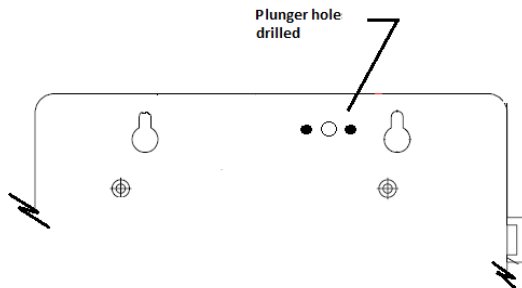
3/8 in. drill for switch plunger hole (not supplied)

Install Steps:

1. Locate the three small dimples at the drill mark location on the rear of the enclosure. See the figure below.

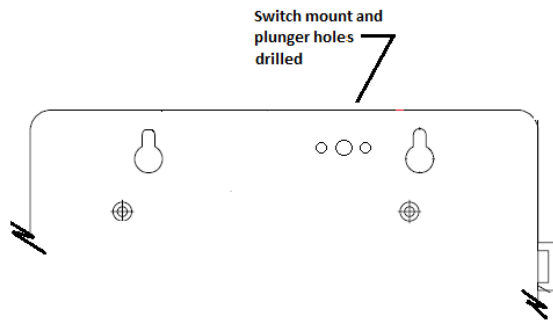


2. Use the 3/8 in. diameter drill for the center (plunger) mark. The drilled hole should appear as shown below.



3. Use the 5/32 in. diameter drill on the mark on each side of the plunger hole.

- Completed holes will appear as shown in the figure below.



- Push switch mounting screws from the rear of the enclosure through each small drilled hole.
- Place the plunger switch on the mounting screws inside the enclosure with the plunger pin extending out of the back of the enclosure. Fasten the switch in place with supplied nuts.
- Adjust the plunger switch length to ensure contact when the enclosure is pressed against the mounting surface.
- Wire the switch to the required zone input on the Model 7007 mainboard.
- When subscriber enclosure is mounted and powered up, configure the enclosure tamper zone input.

19. Warranty

OWNER WARRANTY - AES CORPORATION

LIMITED PRODUCT WARRANTY AND TECHNOLOGY LICENSE

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.

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AES SERVICE PROCEDURE: Contact AES by Phone (978) 535-7310, Fax (978) 535-7313 or Email service@aes-intellinet.com, to receive a Return Material Authorization Number. Have the AES part number and serial number ready. Repack equipment in original or equivalent packaging. Inside the box, please include a contact name, telephone number, address and a brief description of the reason for return.

Ship items freight-prepaid to:

Repair Services, RMA# _____
AES Corporation,
285 Newbury Street
Peabody, MA 01960 USA

(Contact AES for Return Material Authorization number)