ALARMPATH ECHO AP-4700V WIRELESS SUBSCRIBER UNIT INSTALLATION INSTRUCTIONS

IMPORTANT! Failure to Read and Follow These Installation Instructions May Jeopardize Subscriber Security

INTRODUCTION: The AP-4700V is a 2-way, fully supervised Wireless Subscriber Unit for use on the nationwide (50 United States plus Puerto Rico and the US Virgin Islands) AlarmPath Network. The AlarmPath Control Center Processors forward these wireless signals to *ANY* Central Station via standard communicator techniques. The AlarmPath Control Center Processors will generate and report a Communications Failure signal in the event that the network does not receive the expected supervisory test signal from the Wireless Subscriber Unit during the scheduled period.

⚠ WARNING: To ensure user's safety and to satisfy FCC RF exposure requirements, this unit must be installed so that a minimum separation distance of 40 cm or 60 cm is always maintained between the antenna of the transmitting device and nearby persons. Operation closer than this distance is not recommended. Use ONLY the following antenna supplied by AlarmPath to comply with this warning. **Colinear Antenna, PN: HG3DB – 60 cm or ½ Wave Rigid Whip Antenna, PN: G0DB – 40 cm. FOR FIXED OPERATION ONLY.**

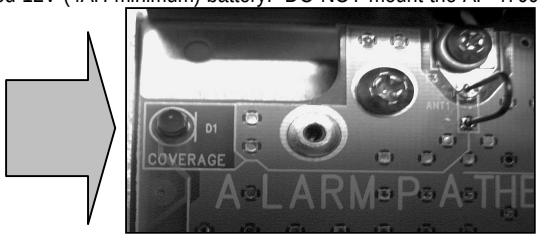
NOTE: *This equipment has been tested and found to comply with the limits for a Class B Unintentional Radiator, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction Manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures: 1. Reorient or relocate the receiving antenna, 2. Increase the separation between the equipment and receiver, 3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, 4. Consult the dealer or an experienced radio/TV technician for help.*

GENERAL INSTALLATION GUIDELINES

- Since the mounting location can **ONLY** be selected based on RF performance, it is **HIGHLY** recommended that the installer follow the STEP 1 below **BEFORE** any wires are run.
- Generally, high locations are best. **DO NOT** mount radio in basement or below grade as unpredictable performance may result.
- Whenever possible, DO NOT mount the AP-4700V in non-climate controlled environments (i.e. attics may become extremely hot in summer, garages may become extremely cold in winter).
- Avoid mounting locations within 3 feet of large metal objects (air conditioners, metal garage doors, etc.), AC power lines, and fluorescent light fixtures.
- A fair amount of care may be required to mount the AP-4700V so as to achieve an optimal RF path. The installer should spend as much time as needed to obtain the highest signal level possible.
- The AP-4700V draws a substantial amount of current - approximately 2 AMPS - during transmit. Therefore, follow the instructions for powering the AP-4700V carefully!

STEP 1 SELECT A MOUNTING LOCATION

- *Temporarily* connect power to the AP-4700V from a fully charged 12V (4AH minimum) battery. DO NOT mount the AP-4700V at this time. Position the unit in the *desired* mounting location.
- Press the test button (S1), bottom right hand corner; the unit will transmit one long blink. After the unit transmits observe Coverage LED and count the number of blinks. Move the unit as required to achieve the best Coverage (signal strength) possible based on the chart below. As needed, re-position the unit, transmit and watch the Coverage LED to indicate change. The unit will not transmit if 15 seconds has not passed. There is a 2 second delay between blink cycles.



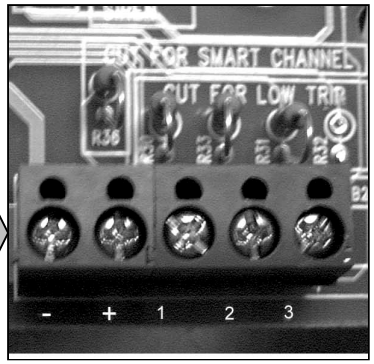
- Once a location has been selected based on Coverage, permanently and securely mount the unit using #6 screws (not supplied) in *at least 2* of the 4 mounting holes.

WARNING: IN THE EVENT OF A LOSS OF NETWORK COVERAGE THE AP-4700V WILL DRAW APPROXIMATELY 80 mA OF CURRENT. THEREFORE SELECTING THE PROPER MOUNTING LOCATION IS IMPORTANT, AS IT WILL IMPACT BATTERY STAND-BY TIME.

# BLINKS	COVERAGE
0 BLINKS	**NO NETWORK**–***DO NOT INSTALL***, Try Re-positioning Unit
1 BLINK	**VERY WEAK COVERAGE**–***DO NOT INSTALL***, Try Re-positioning Unit
2 BLINKS	**MARGINAL COVERAGE**– Try Re-positioning Unit or High-Gain Antenna – *INSTALL with CAUTION*
3 BLINKS	**GOOD COVERAGE SIGNAL-**OK TO INSTALL
4 BLINKS	**VERY GOOD COVERAGE SIGNAL-**OK TO INSTALL
5 BLINKS	**EXCELLENT COVERAGE**-OK TO INSTALL

STEP 2 APPLY POWER

- The AP-4700V requires 12VDC. It draws less than 20mA during standby, and almost 2 AMPS during Transmit (for less than 1 second). It is recommended that the AP-4700V be powered directly from the battery (4AH Minimum) of the alarm control panel, with a 3 AMP fuse in series. As the standby current is very low, the alarm control panel charging circuit will not be affected, and the battery is capable of supplying the 2 AMP current on transmit. **DO NOT** power the AP-4700V from the aux output of the control panel.
- 22-gauge wire can be used up to 50 feet in length, and 18-gauge wire can be used up to 100 feet in length.
- Connect power to **+** & **-** screw terminals. **DO NOT** short wires to metal case.



Phone 866-ALARMPATH Fax 631-696-7943

SEE OTHER SIDE FOR STEP 3

STEP 3 CONNECT INPUTS – CHANNEL TRIGGERING

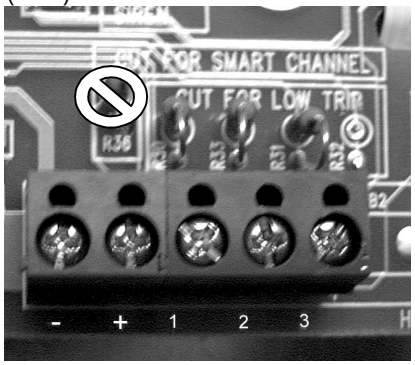
NOTE: Use any *ONE* method to trigger INPUT #1. Use method "P" or "N" for INPUT 2 and/or 3. All channels triggered by "P" or "N" method have a 1 SEC integration delay. "SC" (SmartChannel) will analyze Bell or Siren Driver output to determine if trigger is BURG or FIRE, and has a 7 SEC integration delay.

After triggering channels, use Signal Verification online at *www.alarmpath.com* or call AlarmPath Toll-Free (866) 252-7672 and access Automated Operator System (Touch-Tone option 5)

SC-BP *SmartChannel (INPUT Terminal 1)*
"BELL POSITIVE" TRIGGER

e.g. ADEMCO, NAPCO and others with switched "BELL POSITIVE" terminals

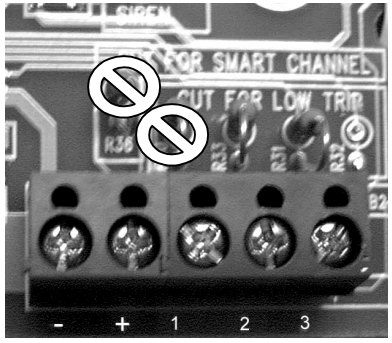
- **CUT** resistor R36 to convert INPUT #1 to SmartChannel (remove power from unit before cutting any jumpers)
- Make sure resistor R30 has **NOT** been cut
- Run wire from AP-4700V INPUT #1 screw terminal to Alarm Control Panel BELL + terminal
- Steady Voltage (+4.5 to +14.5VDC) on INPUT #1 sends code 1D (BURG), pulsating Voltage (~800mS – 8 SEC/cycle) sends code 1C (FIRE)



SC-BN *SmartChannel (INPUT Terminal 1)*
"BELL NEGATIVE" TRIGGER

e.g. DSC and others with switched "BELL NEGATIVE" terminals

- **CUT** resistor R36 to convert INPUT #1 to SmartChannel (remove power from unit before cutting any jumpers)
- **CUT** resistor R30 to convert INPUT #1 to Low/Negative/Pull-to-ground trigger (remove power from unit before cutting any jumpers)
- Run wire from AP-4700V INPUT #1 screw terminal to Alarm Control Panel BELL – terminal
- Constant Ground on INPUT #1 sends code 1D (BURG), pulsating Ground (~800mS – 8 SEC/cycle) sends code 1C (FIRE)



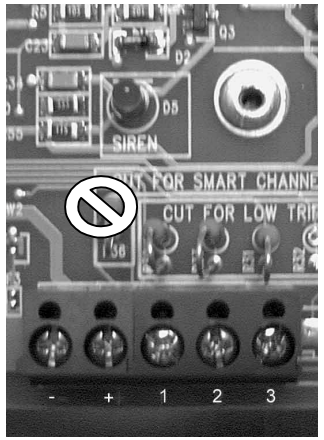
SC-S *SmartChannel (INPUT 1)*
"SIREN DRIVER" TRIGGER

e.g. CADDIX and other Alarm Control Panels with built-in siren drivers

USE THIS METHOD *ONLY* IF METHOD SC-BP OR SC-BN CANNOT BE USED

- **CUT** resistor R36 to convert INPUT #1 to SmartChannel (remove power from unit before cutting any jumpers)
- Run wire from AP-4700V INPUT #1 screw terminal to Alarm Control Panel Built-In Siren Driver terminal. See NOTE below
- Warble Siren Audio Tone (~500hz to 2khz) on INPUT #1 sends code 2D (BURG), Steady Siren Audio Tone (~1khz) sends code 2C (FIRE)

NOTE: Observe LED D2 to determine correct polarity. D2 will light (steady or blinking) when connected to the correct SIREN terminal



P "POSITIVE" TRIGGER (INPUT #1, 2 or 3)

e.g. Any "POSITIVE" voltage (+4.5 to 14.5VDC) trigger

- To use this method for INPUT #1, make sure resistor R36 has **NOT** been cut
- Make sure resistor R30, R33, R31 (INPUT #1, 2, 3 respectively) has **NOT** been cut, as applicable
- Run wire from AP-4700V INPUT #1, 2, 3 screw terminal (as applicable) to Positive trigger (Positive Voltage on alarm)
- INPUT # 1, 2, 3 send codes 1, 2, 3, respectively

N "NEGATIVE" TRIGGER (INPUT #1, 2 or 3)

e.g. Any "NEGATIVE" or "Pull-to-Ground" trigger

- To use this method for INPUT #1, make sure resistor R36 has **NOT** been cut
- **CUT** resistor R30, R33, R31 (INPUT #1, 2, 3 respectively), as applicable (remove power from unit before cutting any jumpers)
- Run wire from AP-4700V INPUT #1, 2, 3 screw terminal (as applicable) to Negative/Pull-to-Ground trigger (Goes Negative / "Pulls-to-Ground" on alarm)
- INPUT # 1, 2, 3 send codes 1, 2, 3, respectively

HSO HIGH-SECURITY OPTION

The AlarmPath HSO-KIT includes detailed instructions for wiring the HSO terminal, which provides an output if the AP-4700V loses coverage.