

# AAPS User Guide

**906-0005**

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This User Guide provides instructions  
on how to use the application

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# Advisor Advanced Accessible Pedestrian Signal

## [UG\_XX\_US\_0000]

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# 1 Introduction

## 1.1 Purpose

The purpose of this document is to define the functionality, operations, and maintenance of the Advisor Advanced Accessible Pedestrian System (AAPS). This document serves as the sole reference for the scope of the system functionality to be delivered by Campbell Company. Any change to the scope of the project or the Functional Specifications will require agreement via the change control process defined in the agreement between Campbell Company and the end user.

## 1.2 Scope

This document will explain the operations, functionality, software, installation, maintenance and safety requirements associated with the AAPS.

## 1.3 System Organization

The Advisor Advanced Pedestrian System (AAPS) is a network based control system that provides flexibility and capacity without requiring additional infrastructure. The AAPS has three major components: the Advanced Pedestrian Controller (APC) that provides an interface in the traffic controller cabinet, the Advanced Pedestrian Button (APB) is at each corner, and communicates with the APC. A web based interface is accessed via Ethernet allowing traffic agency technicians to view system operations and control operating characteristics.

The Advisor Advanced Accessible Pedestrian (AAPS) is identified with an ID#, Version#, and release#

- Advanced Pedestrian Controller - APC
  - Number e.g.: 2011.338
  - APC software Rev 2.0.5
- Advanced Pedestrian Button – APB
  - Software Rev 2.0.5

## 1.4 Web Browser

A readily available web browser (Google Chrome, Firefox or IE) and a secure IP address will establish communication with the APC. The web based application is password protected and records all modifications and pedestrian activity for the previous three months.

## 2 Overview

The Advisor Advanced Pedestrian System utilizes web based management to update and monitor the system remotely over network communication via desk top computer, laptops, or any device that is web browser compatible. Operators can view the AAPS status in real time and control audio and visual components with the capability to upload files directly into individual pedestrian stations or download reports generated by the APC. The Advanced Pedestrian Controller (APC) uses Ethernet over Power (EoP) communications on existing low power pedestrian field wiring.

A locator tone, controlled with ambient gain compensation, tells a pedestrian that the crossing is equipped with APS and where it can be found. An extended press provides specific intersection information and access to additional functions. The audible walk tone or message is accompanied by a vibro-tactile indication during the visual walk display. Optional clearance phase indications may provide additional information to the pedestrian where appropriate

Each Advisor Advanced Pedestrian System is configured at the factory, but customization and set-up are simply updated through a web browser making it extremely easy to customize the needs of complex intersections

Campbell Company cannot guarantee a 2 wire system will work properly in all instances, especially if a single common to the buttons and signal lighting is shared. Each case will have to be tried and proven because it depends on the condition of the wires, splices, etc... In the event there are no field wires, AAPS can be swapped out for a 4 conductor Guide unit as long as there is no damage to the AAPS units.

Please carefully read the contents of this manual in its entirety so you fully understand the many functions and options the system provides.

## 3 Features

### 3.1 Key Features

#### **Standard Features**

##### Two Conductor Advantage

- Uses existing field wiring from traffic control cabinet. No additional wires required
- Significantly reduces installation cost with no excavation costs
- Synchronizes movements, phases, and sound on an intersection
- Quiet signal technology with time of day volume control

##### System Features

- Independent time of day/night mode volume settings for locator tone and audio outputs
- Independent non-locator AGC and locator AGC settings
- Maximum volume dynamic range 0 – 100dB
- Audio output options – Default plus four options
- Synchronicity- Beaconing or group walk
- Button rated at 100 x 10<sup>6</sup> actuations
- Utility for data and audio file transfer
- Report download capability in .csv format
- Ethernet Access
- Remote Communication
- Time of Day functionality
- Night Mode Volume
- Ped Count/Call Data
- Multiple language options available
- Emergency pre-emption
- EP APS, Vib Pulse Call, Recall, Group Walk, Walk time out, Locator Period, EP Time, Vib Intensity



## 3.2 Custom Message and Sound Options

Custom Locator Tone – Plays an audible sound at one second intervals to let pedestrian know that the push button is equipped with APS

Custom Location Message – Provides the name of the street being crossed at a cross street and other vital information. Several languages can be recorded and available for use.

Custom Walk Message – Provides the name of the street the pedestrian is crossing.

Custom Clearance Sounds/ Countdown – Plays an audible tone to let pedestrian know of clearance phase. By request, an audible count down of the pedestrian signal head can be provided.

### Custom Recording Options

Custom recording messages can be created in a .wav format independently. Free web base software (Audacity) and recording grade micro-phone in a quiet location can produce professional grade messaging. Contact Campbell Company technical support to learn more about producing your own custom messages.

## 3.3 Components

Each Advisor Advanced Pedestrian System includes the following:

- 1ea Base Station - APB
  - 2ea. ¼" - 20 X 1 ½ FHP Screws
- 1ea. (5x7) Adapter Plate, Sign, & Hardware
  - 2ea. 8-32 X 1 ¾" FHP Screws
  - 2ea. 8-32 X 1 ¾" PHP Screws
  - 2ea - 8-32 X ¼" PHP Screws APC
- Or 1ea. (5x9) Sign & Hardware (no Adapter Plate)
  - 4ea. 8-32 X 1 ¾" PHP Screws
- Or 1ea. (9x12 or 9x15) Adapter Plate, Sign, & Hardware
  - 4ea. 8-32 X 1 ¾" FHP Screws
  - 4ea - 8-32 X ¼" PHP Screws APC

- 1ea. APC with power cable
- 1ea. APC input cable (25 conductor)
- 1ea. APC output cable (9 conductor)
- 1ea 7ft EoP Cable (2 conductor)
- 1ea. EoP Termination Board
  - 2ea ¼" - 20 x 1" FHP

### 3.4 Safety

The Advance Pedestrian Controller (APC) is protected by a circuit breaker at the front switch and all pedestrian field wiring is fused with resettable fuses. The APC chassis is grounded through an earth ground connection to prevent shock hazard. All general purpose inputs are optically isolated and transient protected against any other equipment interfaced to the APC. The APC is provided with a detachable power cord for quick- disconnect capability.

## 4 System Components

### 4.1 AAPS Component Description

#### Advanced Pedestrian Controller (APC)

The Advanced Pedestrian Controller (APC) interfaces with the traffic control cabinet. Ethernet over Power (EoP) communications are used on existing low power pedestrian field wiring to relay information to the APB.

#### Advanced Pedestrian Button (APB)

The APB is a fully integrated pedestrian station that relays the state of the pedestrian walk signal in audible, vibro-tactile and visual forms.

#### Termination Board

Consolidates field wiring to two conductor to attach to the face of the APC. Also provides for fusing of the field wires.

#### Web Browser

The Web Browser interface is accessed via Ethernet allowing traffic agency technicians to view system operations and control operating characteristics.

### 4.2 System Specification Requirements

#### Power Requirements

- APC Input Voltage - 120 VAC
- APC Power - 1.68W
- APC Current - 270 mA
- APB Input Voltage – 12-18 VAC
- APB Input current - 140mA
- APB Input Power - 2.5 W per station

#### Software Requirements

- Interface – Web Browser
- Audio File update – EoP
- Data Format - .csv
- Firmware Update - Ethernet

## 5 Installation

### 5.1 Installing the system

The Advance Pedestrian Controller resides in the traffic control cabinet at the intersection. A 120V AC outlet is required to power the APC. A DB25 cable connects to the outputs to the pedestrian display from the traffic controller cabinet for the pedestrian phases. A (DB9) cable connects to the pedestrian pushbutton inputs in the traffic controller cabinet (PB2, PB4, PB6, PB8...)

The APC utilizes Ethernet over Power (EoP) to communicate with the APBs continually. A termination board consolidates the control cabinet field wiring into a single two conductor wire that makes connection to the APC. The 24 VAC from the field wires provides power to the APB.

If the control cabinet is on a secured network, the Ethernet port can be utilized for remote connectivity. A laptop or web based device with an Ethernet connection and cable is required to connect to the APC directly to establish communications and access the operating software.

Installation of an AAPS station utilizing a two man crew approximately 45 minutes to 1 hour (assuming no complications)

**SEE INSTALLATION MANUAL FOR DETAILED FOR DETAILED INSTALLATION INSTRUCTIONS.**

### 5.2 System Operational Check Following Installation

1. Once the power cable to the APC is installed, verify that all other cables are securely connected to the front of the APC.
2. Make sure the power switch is in the OFF position before attaching the 120 VAC cord.
3. Turn the power switch to the On position allowing the APC to power up. The red status light should be blinking when the APC begins communicating with the APBs. (May take up to a minute to establish communications)
4. The Station Numbers will display green (OK) or red (ATTN) for each APB on the webpage and on the front panel of the APC. Depress the push button on the APB and verify the red LED turns on with an audible message "Wait". If field wires from the traffic controller are connected to the station, verify that a ped call is transmitted to the traffic controller.
5. When the Walk Signal is On, verify the Walk Phase message or percussive tone is present and the vibro-tactile button vibrates concurrently.

6. Repeat again with 2 second extended press and verify the red LED turns on with an audible location message, "Wait to Cross".
7. After the Walk Phase message, verify an audible locator tone is present at the clearance phase (Flashing Don't Walk).
8. Recheck all units for a full cycle to ensure all options and features operate as desired.
9. Depending on intersection location, factory default settings for volume, AGC, and vibo-tactile settings may require modifications. Proceed to the System Configuration section for details.
10. When you are satisfied that all units are working properly, install signs on each Base Station.

## 6 System Configuration

In order to access the webpage on APC's with serial numbers prior to .360 the IP address must be set such that the computer is on the same network as the APC. For serial numbers greater than .361 the APC will use DHCP.

### 6.1 Setting up an IP address

To set up your IP address manually, go to Control Panel then Network sharing center or Network Connections. Find Local area connection and click view status. In the status window you can click Properties. Highlight Internet Protocol Version 4 (TCP/IP) then click Properties (as shown below.) Next click Use the following IP address and enter 192.168.1.99 Subnet: 255.255.255.0. Click OK

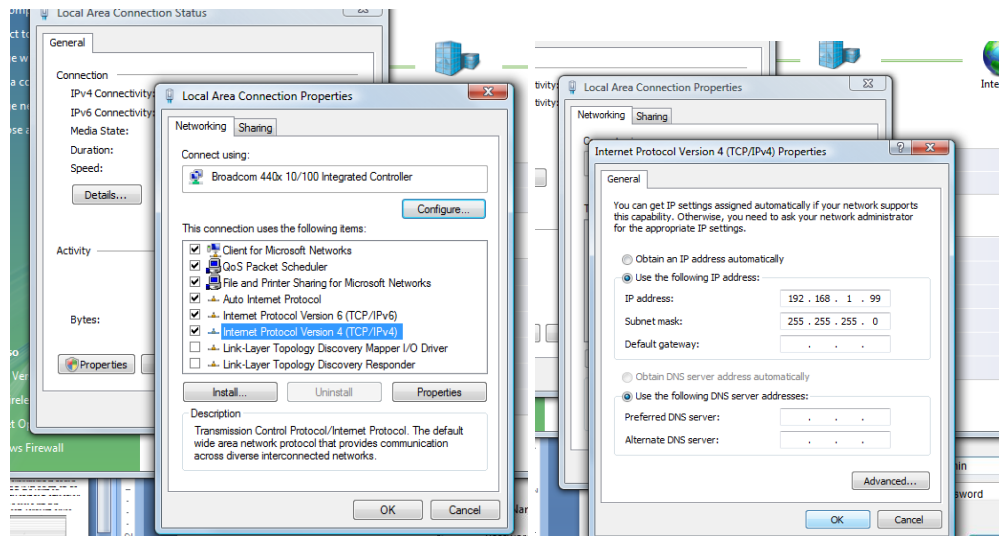


Figure 1 Screen shots of setting IP

To automate setting your IP we have developed a script to make this process simple. Download the Change IP Batch File from <http://www.pedsafety.com/downloads/>. Next right click on the downloaded file and select Run as administrator. See below.

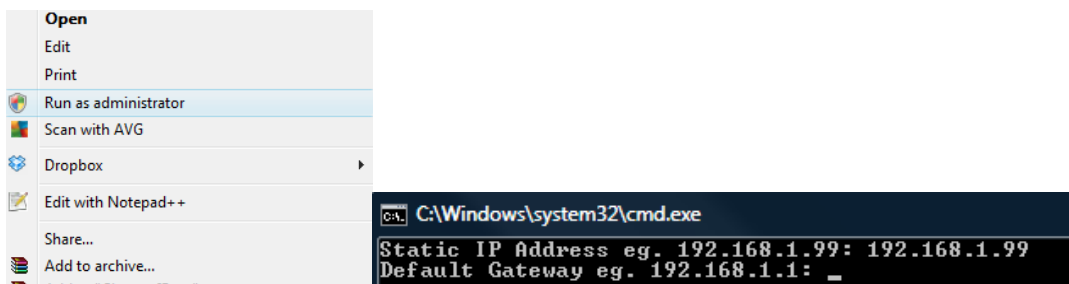


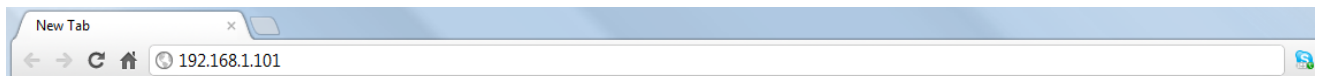
Figure 2 Automated IP setup

Once the black screen comes up it will prompt for IP addresses. Examples are given. Type in the examples and hit enter and it will change the computer's IP.

## 6.2 Accessing the Webpage

To make changes and view the AAPS webpage simply plug an Ethernet cable into the Ethernet port on the front of the APC. Then connect the Ethernet cable into your laptop.

Start up a web browser such as Google Chrome and type in the IP 192.168.1.101 into the address bar. (See Below)



*Figure 3 Webpage Address bar*

You will see the following screen pop up looking for credentials. Default user name: admin  
Password: password.



*Figure 4 Authentication Page*

## 6.3 Main Screen

The first screen is shown below it gives the status of the pedestrian system (figure 5.)

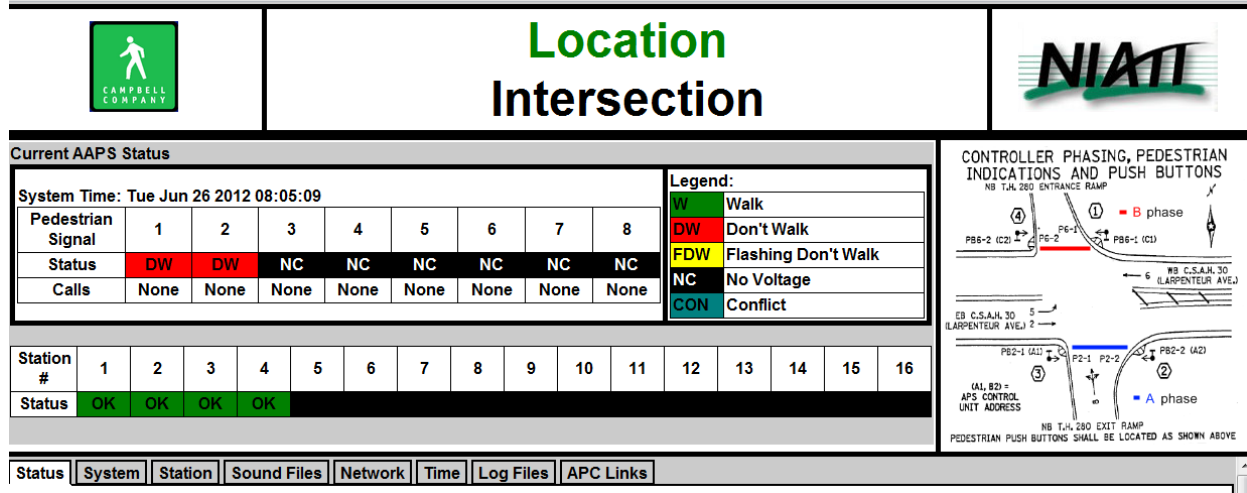


Figure 5 Status Page

The Pedestrian Signal Status shows the state of the Signal (DW, FDW, W) and if a call has been placed. Stations Status bar will show a state of the stations;

**OK (green)** if there is communication and no errors. **ATTN (red)** if there is a loss of communication or a problem.

The *Status* tab gives an overview of the system.

The *System* tab allows for global settings to be adjusted.

The *Station* tab allows for individual station settings to be adjusted.

The *Sound* tab allows for audio files to be changed.

The *Network* tab allows for changes to the APC IP address.

The *Time* tab allows for the time to be adjusted.

The *Log Files* tab is where log files are located.

The *APC Links* tab allows for all APC's IP addresses to be stored.

## 6.4 Making Changes

### 6.4.1 System Changes

System Tab: This tab is where changes are made to the entire system



- a. The check boxes at the beginning signify what stations are active. To add a station, click the checkbox and it will add more stations to the system.
- b. AAPS mode: 4 options; Off, Default, EP APS, and Identify
  - i. Off behaves like a typical button, places calls, no Audio
  - ii. Default is normal APS operation
  - iii. EP APS only actuates APS audio when an extended press is placed
  - iv. Identify will put the APB's into a mode where their LED's will blink the assigned station ID (troubleshooting)
- c. Extra-press mode: places two calls to the traffic controller one for current cycle and one for following cycle
- d. Vib Call Pulse: Allows for vibrotactile feedback when the button is pressed
- e. Auto Recall: When checked constant calls will occur if a button is at ATTN
- f. Audio Countdown: When checked audible countdown will be enabled
- g. Locator AGC: When checked locator AGC will be enabled. If un-checked locator tone will be constant
- h. Beacon mode: 2 options Off (no Beacons) and Target
  - i. Target implements target beacons (only the destination APB will beacon in the clearance phase)
- i. Night mode: Check the box to enable and then set the time for the hours that you would like to adjust the volume
- j. AGC responsiveness: Adjusts how quickly the ambient gain responds. (1-20, 20 least responsive)
- k. Walk message Timeout: Refers to a rest in walk situation, adjusts the time the walk message will timeout without being interrupted by the flashing don't walk.
- l. Extended press time: Adjusts the length time required to place an extended press or APS call.
- m. Repeated Wait: Number of seconds between each repeated acknowledgement message (0 means no repeat)
- n. Location/Intersection: Will change the Title of the AAPS webpage (Status)
- o. Submit button: will submit all changes to APC – must be pressed once all settings are made
- p. Intersection image: choose the file you want to upload and click submit ( may have to refresh page to see change)
- q. Reset counters: Resets the ped counts
- r. Change password: Will reset the password on the AAPS webpage (**Remember what you changed it to! Mark it on Intersection Planning Sheet and store in cabinet Doc Sleeve.**)
- s. Config File: Choose .tgz file and then click Submit to upload all previously configured settings

## 6.4.2 Changing Station Settings

The most common changes will have to do with the Station tab Shown Below.

Status	System	Station	Sound Files	Network	Time	Log Files
Settings for Station 3 Oct 12 2011 16:23:30 5041002						
Pedestrian Signal	1					
APS Group	2					
Recall	None					
Group Call	<input type="checkbox"/>					
Day Mode	Speech Volume	80	<input type="range"/>			
	Locator Volume	30	<input type="range"/>			
Night Mode	Speech Volume	40	<input type="range"/>			
	Locator Volume	70	<input type="range"/>			
<input type="button" value="Submit Settings"/>						

Figure 6 Station Tab

To switch from station to station use the dropdown menu next to **Settings for Station**.

To change the Signal (phase) of the button, change the Pedestrian Signal number.

To change the group of the button, change the APS Group number

To change the volume level, slide the volume bar: left to decrease the volume and right to increase the volume.

In order to make the changes permanent click Submit Settings.

## 6.4.3 Changing Audio files

The Sound File tab allows for audio files to be uploaded to individual stations.

- First add sound files to the file system. Click Choose Files/ select them/ then click upload.
- Next find the station that you will be changing the audio files on.
- Simply click on the dropdown box and select each audio file for each message slot.
- Click submit to save audio configuration.
- Click update APB Files to send all the files to the ped station.

File Name	Preview	Delete
<a href="#">DeeDa.wav</a>		Delete
<a href="#">Location 6th.wav</a>		Delete
<a href="#">Location Deakin.wav</a>		Delete
<a href="#">Walk 6th.wav</a>		Delete

Choose Files No file chosen Upload

Station 1	Locator	Locator	
	Acknowledgement	Acknowledge	
	Location	Location 6th.wav	
	Walk	Walk 6th.wav	
	Destination Beacon	None	
	Initiation Beacon	None	
	Preempt	Preempt	

Submit Update APB Files

Figure 7 Audio File Tab

## 6.4.4 Changing APC IP

In order to remotely communicate with the APC the IP address must be set up.

- Before changing settings consult you IT Department. Also, remember that the IP address is how access is granted to the webpage. If the IP address is changed document it!

<b>Hostname</b>	apc
<b>IP Address</b>	192.168.42.125
<b>Netmask</b>	255.255.255.0
<b>Network</b>	192.168.42.0
<b>Gateway</b>	192.168.42.1
<b>Broadcast</b>	192.168.42.255
<b>DNS</b>	8.8.8.8
<b>Ping Destination</b>	192.168.1.1
<b>Ping on Boot</b>	<input type="checkbox"/>
<b>Ping on Hour</b>	<input type="checkbox"/>

Submit Network Configuration Reboot required to apply new network settings.

Figure 8 Network Tab

## 6.4.5 Setting the Time

The Time tab is used for setting up the Real Time clock

There are two ways of setting the time:

- a. NTP enable or getting the time from the internet. Note: the APC must be able to access to the network and an IP address must be entered in the NTP server box.
- b. The time can be set by clicking use time from the PC or the Day Month and Year can be manually entered.

Once the time options are chosen click Submit Time configuration.

Status	System	Station	Sound Files	Network	Time	Log Files
<a href="#">Current APC Time</a>		Fri Oct 14 2011 15:17:14				
<a href="#">Current PC Time</a>		Fri Oct 14 2011 15:17:33 GMT-0600 (Mountain Daylight Time)				
<a href="#">Network Time Settings</a>		NTP Enabled <input type="checkbox"/>				
		NTP Servers <input type="text"/>				
<a href="#">Change APC Time</a>		Month: 01				
		Day: 01				
		Year: 1969				
		Hour: 00				
		Min: 00				
		Use Time from PC <input type="checkbox"/> <b>Submit must still be pressed.</b>				
<input type="button" value="Submit Time Configuration"/>						

Figure 9 Time Tab

## 6.4.6 Viewing Log Files

There are three sets of logs to be viewed: Pedcall, Events, and System logs.

Pedcall log reports ped call counts by hour by day

Event logging reports any conflicts and/or loss of station communication

System logging reports changes made to the system and temperature

<input type="button" value="Get Pedcall Log"/>	<input type="button" value="Get Event Log"/>	<input type="button" value="Get System Log"/>
Event Log: <a href="#">eventlog.csv</a>		
Timestamp	Sender	Message
2011-10-14 14:50:42	APB 3	Station up
2011-10-14 14:50:40	APB 3	Station Settings Changed
2011-10-14 14:50:07	APB 3	Station up
2011-10-14 14:44:59	APB 3	Station up
2011-10-14 14:44:56	Webpage	System Settings Changed
2011-10-14 14:44:46	APB 3	Station up
2011-10-14 14:44:41	Webpage	System Settings Changed
2011-10-14 14:32:57	APB 3	Station up
2011-10-14 14:32:46	Webpage	System Settings Changed
2011-10-14 14:32:43	APB 3	Station up

Figure 10 Log File tab

By clicking on the CSV file an Excel spread sheet can be made with the data present.

### 6.4.7 Configuring the APC Link Tab

APC links tab will keep track of all the APC's on the network on one APC.

1. Make sure the network APC is viewable on the network.
2. Copy the title or known location of the network APC
3. Paste the title or know location and name the network APC
4. Type in https:// in the **URL** box then the ip address of the network APC
  - a. Example: <https://192.168.1.101>
5. Click **Add**
6. Click the new link to make sure it links to the network APC

# 7 Troubleshooting

The following chapter discusses troubleshooting the AAPS system in three parts: APC, Running Patches and APB.

## 7.1 APC Troubleshooting

### Detailed Instructions

1. Check Status light on front panel of the APC. Should be blinking at a ½ second rate.
  - a. If status light has stopped blinking (solid on/off) Contact Campbell Co. for assistance.

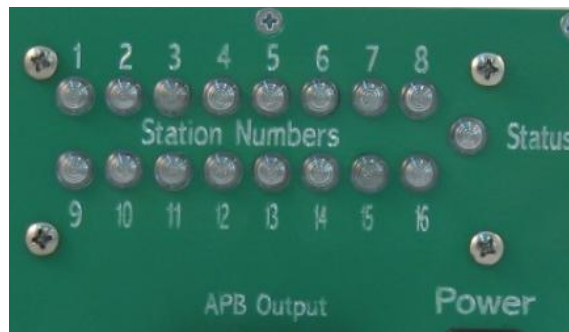


Figure 11 Status LED

2. No Communication to APC
  - a. Check computer's IP address
    - i. Hold Windows key+ R and then type in cmd and hit enter
      1. A prompt will appear (figure 13)
    - ii. Type *ipconfig* and hit Enter

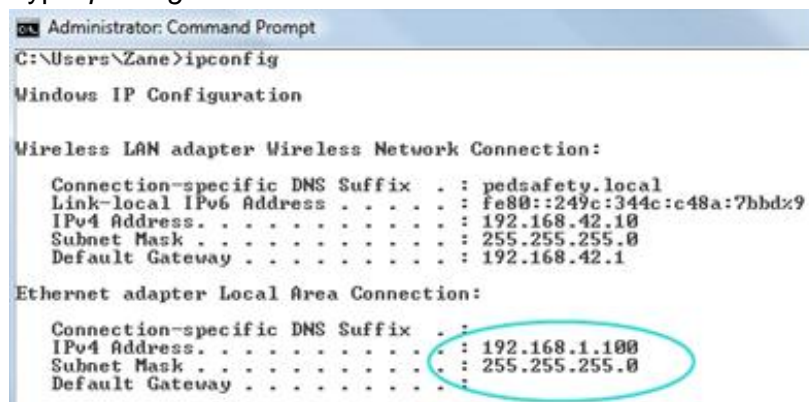


Figure 12 Showing connection and IP address

- iii. Look at local area connection
- iv. Make sure IP has the first same three octets (192.168.1) and the last octet is not the same as the APC's (101) OR that it is not 255 or 1.

- b. Type the APC's address in web browser ie: 192.168.1.101
- c. If no connection check for LED on computer's Ethernet port
  - i. Also can try "pinging" APC
  - ii. Open Command prompt (type cmd in the search bar and hit enter)
  - iii. Type `ping 192.168.1.101` then Enter
  - iv. The APC will reply if the computer IP is configured properly

## 7.2 Running a Patch

- a. Make sure there is communication with the APC (see above)
- b. Download patch folder and unzip (right click and choose the option below)

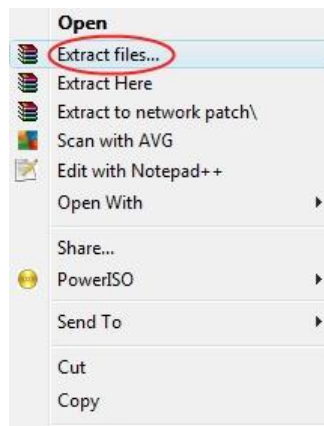


Figure 13 Extracting Patch

- c. Open patch folder (the unzipped one) and open the ips text document
  - v. Add the IP address of the APC unit in the ips text doc and save
- d. Double click on patch (windows batch file)

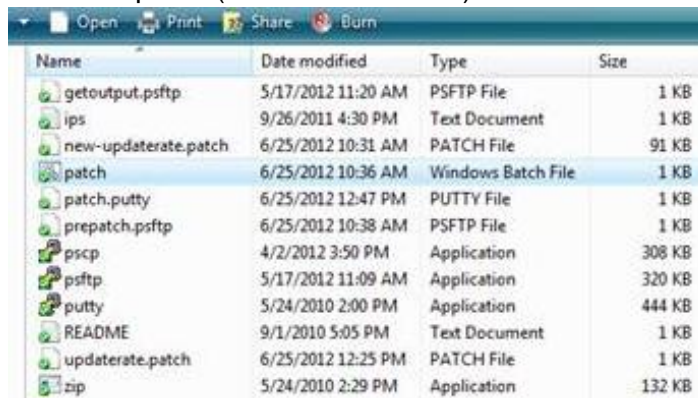


Figure 14 Patch

- e. Click yes to any warnings
- f. Once the patch is done it will say "Press any key to continue"
- g. Email the Output file that the patch generates back to [info@pedsafety.com](mailto:info@pedsafety.com)

## 7.3 APB Troubleshooting

When troubleshooting button problems, first start by bringing up the APC's webpage. Refer to the Station tab (figure 6) above.

### 7.3.1 APB Communication issues

- a. First check voltage on the APB. Should be 16-18 VAC.
  - i. If Voltage is at ~4 VAC the fuse has tripped.
  - ii. Power cycle and check voltage. If fuse trips again disconnect button and power cycle. Voltage correct?
    1. Yes → Replace button
    2. No → Ohm wiring for shorts
- b. If APB is not communicating you will see ATTN and a red light next the station number. Start up the station tab on the APC.
- c. If the station that has lost communication is station 1 then the first step would be to try changing the station number. Set up the Change Station ID to the figure shown below and click change. If the button's ID is zero it will come back up in 15 seconds.

<a href="#">Change Station ID</a>	Old Station ID	New
	New Station ID	1
<input type="button" value="Change"/>		

Figure 15 Change Station ID

- d. If an error "button not found" is displayed go to the System tab and uncheck the station that is not communicating. Then click submit changes.
- e. Wait for approximately 30 seconds
- f. Ctrl-r will refresh the page. Next go back to the system tab and click the station back into the system. Click **Submit System Configuration**.

Status	System	Station	Sound Files	Network	Time	Log Files	APC Links
<a href="#">Active Stations</a>							
<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16

Figure 16 Enable/Disable stations



### 7.3.2 Calls placed on two phases

- a. If one button press places calls on two phases check the grouping (Station Tab). This usually means a grouped button is on an improper phase.
- b. To fix, simply change the grouping to be correct.

Status	System	Station	Sound Files	Network	Tr
Settings for Station	3	Oct 12 2011 16:23:30 5041002			
Pedestrian Signal	1				
APS Group	2				

*Figure 17 Station settings*

- c. Typically all buttons on a phase are grouped together

## 8 Appendix A: Acronyms, Abbreviations & Definitions

Term	Meaning
Accessible Pedestrian Signal	A device that communicates information about pedestrian timing in a non-visual format such as audible tones, verbal messages, and/or vibrating surfaces (MUTCD)
Actuation operation	A type of traffic control signal operation in which some or all signal phases are operated on the basis of actuation (MUTCD)
Actuation	Initiation of a change in or extension of a traffic signal phase through the operation of any type of detector
Actuation indicator	A light, a tone, a voice message, or both audible and visual indicators that indicate to pedestrians that the button press has been accepted by the controller unit.
APS	See <i>Accessible Pedestrian Signal</i>
Audible Beacons	Use of sound source to provide directional orientation and alignment information.
Automatic Gain Control (AGC)	An APS volume control that is automatically responsive to ambient (background) sound.
Base Station	Fully integrated APS station that contains the Micro-controller, push button, speaker, adapter plate
Clearance Interval Indicator	Tones sounding during the pedestrian clearance interval that are differentiated from the WALK interval indicator (tones)
Controller Unit	That part of the controller assembly that is devoted to the selection and timing of the signal indications (MUTCD)
Crosswalk	(a) That part of a roadway at an intersection, that is included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or in the absence of curbs,

	from the edges of the traversable roadway, and in the absence of a sidewalk on one side of the roadway, the part of a roadway included with the extension of the lateral lines of the sidewalk at the right angles to the centerline (b) any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines of other marking on the surface (MUTCD)
DHCP	Dynamic Host Configuration Protocol
EoP	Ethernet over Powerline
Night Mode	Ability to change audio volumes by time of day
Quiet Signal Technology	Campbell Company's audio output consist of three major component's: Forward facing speaker, Rapid Decline AGC, Night mode sound reduction
Phase	Pedestrian Signal Designation
URL	Uniform Resource Locator: A specific character string that constitutes a reference to an Internet resource.

## 9 Appendix B: Related Documentation

#	Document Title	Version	Location
1	MUTCD	2009	<a href="#">MUTCD 2009 Edition</a>
2	Americans with Disabilities Act	1996	<a href="#">ADAAG</a>
3	Transportation of Canada	2008	TAC

### 9.1 Obtaining Documentation

The following sections provide sources for obtaining documentation from Campbell Company.

#### 9.1.1 World Wide Web

You can access the most current AGPS technical documentation on the World Wide Web at the following site: <http://www.pedsafety.com> => Support tab.

#### 9.1.2 Product Documentation

Technical documentation will be sent electronically on the date your product ships. On-line technical documentation is also available at <http://www.pedsafety.com>

#### 9.1.3 Documentation Feedback

If you are reading Campbell Company product documentation on the Internet, you can submit technical comments on the support website.

You can e-mail your comments to [tony@pedsafety.com](mailto:tony@pedsafety.com)

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Attn: Publications Manager  
Campbell Company  
450 West McGregor Drive  
Boise, Idaho 83705

We appreciate your comments.