

# **Wireless Advanced Accessible Pedestrian System (WiAAPS) User's Manual**

**906-0035**

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# PedSafety

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# WiAAPS User's Manual

## 906-0035

Revision History		
Revision	Revised By	Date
A	Brad	10/19/17
B	Brad - Revised to incorporate firmware/webpage changes	1/29/18
C	Travis – Updated to 5.0 WiAPB plus Wave features	2/5/21

Firmware and Software Versions	
Component	Version
APC Firmware	VER:WiAAPS:1.2
APB Firmware	V(Wi) 3.4
APB Bootloader	V (Wi) 3.2

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## 2 Introduction

### 2.1 Purpose of this Document

The purpose of the document is to describe the operation of the Wireless Advanced Accessible Pedestrian System (WiAAPS). This document does not cover the installation of the WiAAPS.

### 2.2 Additional Information

- See the WiAAPS Installation Guide for installation instructions.
- Reference the PedSafety Intersection Planning Sheet for location specific information.
- See the WiAAPS Installation Quick Guide for a brief graphical installation guide.
- See the Guardian/WiAAPS Base Station Mounting Template for an easy to use hole pattern for mounting APBs.
- These documents are available on the PedSafety website [www.pedsafety.com](http://www.pedsafety.com)

### 2.3 Contact Information

The first line of contact should be the distributor that the system was purchased from. If you are unable to contact the distributor, contact PedSafety Tech Support directly at 208-345-7459 option 2.

## 3 Overview

### 3.1 Product Overview

The WiAAPS is an Accessible Pedestrian System (APS) based on network communications. Communication from the traffic controller cabinet to the pedestrian station is done wirelessly. Power for the pedestrian stations can be provided via 2 wires running from the Advanced Pedestrian Coordinator (APC), which resides in the cabinet, or from an alternate source (solar powered or PedSafety's Signal Power Interface (SPI). In many cases, the two conductors for power are already at the intersection from the previous pedestrian detector system.

The WiAAPS uses a web browser-based interface to manage and monitor the system. This web browser can be viewed on any device with a network connection to the APC. Desktop computers, laptops, and even handheld devices can connect and operate the system as long as they share a network connection.

The WiAAPS provides all of the standard features for an APS as defined by the MUTCD as well as additional features based on local specifications. A locator tone tells a pedestrian that the crossing is equipped with APS and where it can be found. An extended press provides specific crossing 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 WiAAPS is pre-configured at the factory based on the documentation provided by the customer. Configuring the WiAAPS can be done entirely through the APC management webpage, so the customer can re-configure the system as needed. In addition, audio files and operating firmware can be updated directly on an APB through a USB connection.

### 3.2 Features

- Capable of using existing pedestrian field wiring to provide power to the push button stations reducing costs in retrofit installations
- Ethernet access for network/remote configuration
  - All configurable settings available over network via web browser including audio message upload
- Time of day functions including nighttime audio volumes
- Pedestrian call count data
- Independent volumes for locator and non-locator audio messages
- Independent station volumes
- Automatic Gain Control (AGC) available for all audio messages
- Accepts audio messages in WAV format

- Audio messages and station configuration backed up on the APC enables quick recovery after a station knock-down
- Clearance interval options including beaconing and audible countdown
- Available with touchless “Wave” active infrared sensor.

## 3.3 Components

There are three primary components to the WiAAPS; the WiAPC, a Termination Board, and one or more Wireless Advanced Pedestrian Buttons (WiAPB).

The WiAPC is the center point of the WiAAPS. It provides both power and pedestrian signal information to all of the WiAPBs. The WiAPC is also the point at which the system is configured. The WiAPC is installed in the traffic controller cabinet. It connects to the 120VAC load switch outputs for the pedestrian signals and the low voltage pedestrian call inputs.

The termination board is installed in the traffic controller cabinet with the WiAPC. It provides a convenient place to land all the power connections to the WiAPBs. The termination board also provides current-limiting protection to each field connection. If alternate power is provided to the WiAPBs, the termination board is not required.

The WiAPB is the point of interaction with the pedestrian.

### 3.3.1 WiAPB “Wave”

The WiAPB “Wave” feature provides pedestrians a secondary, no-contact form of actuation that protects against the spread of germs and viruses. The WiAPB “Wave” uses active infrared to detect the presence of a pedestrian’s hand typically 1 – 6 inches away from the device. This distance can be adjusted to increase the detection range to typically 1 – 9 inches or decrease the detection range to typically 1 – 3 inches from the device. The “Wave” sensor detection sensitivity can be adjusted so the device actuates with slower or faster hand movements.

The “Wave” sensor works independently from the physical piezo driven push button on the APB and can be turned off if requested. The “Wave” sensor can detect various materials and skin tones to provide a non-exclusive form of actuation for all pedestrians. The sensor resides directly below the physical piezo push button.

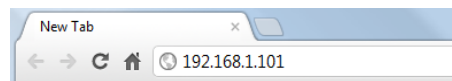
Contact PedSafety Tech Support at 208-345-7459 option 2 if the sensor settings need to be changed.

## 3.4 Audio Messages

The WiAAPS comes fully programmed with audio files from the factory but we give you the option to create your own custom messages in a simple .wav format that can be easily uploaded via the APC network connection. Second languages, gender narrative, and special percussive tones can be easily created, uploaded, and saved via System Configuration.

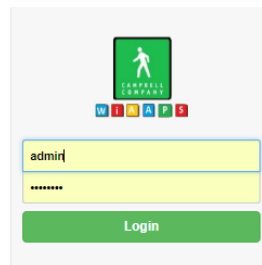
## 3.5 Accessing the Utility

To make changes and view the WiAAPS utility, simply plug an Ethernet cable into the Ethernet port on the front of the APC. Then connect the Ethernet cable into your laptop. Launch a web browser such as Google Chrome and type in the APC IP address into the address bar. (See Below)



*Figure 1 Webpage Address bar*

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



*Figure 2 Authentication Page*

The Webpage has several tabs with different functions. These tabs are:

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

The *APC Settings* tab sets the APC configuration, including intersection information

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

The *Station Setup* tab allows for new APBs to be connected wirelessly to the APC.

The *Audio Files* tab allows for audio files to be added or changed.

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

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

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

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

The *Advanced* tab is where advanced settings can be found.

The *Log out* tab logs you out of the system.

The functions on these tabs are defined on the following pages.



## 3.6 Status Tab

The Pedestrian Signal Status shows the current state of the system configuration and the status of each of the connected APBs.



City, State  
First Street @ Second Avenue

Mon Jan 22 10:47:05 MST 2018(America/Boise)

Phase Status							
Phase	1	2	3	4	5	6	7
Status	DW	DW	DW	DW	DW	DW	DW
Calls	---	---	---	---	---	---	---

Station Status							
ID	1	2	3	4	5	6	7
Status	OK						
ID	9	10	11	12	13	14	15

Click  to show intersection map

StatusAPC SettingsStation SettingsStation SetupAudio FilesTimeNetworkLog FilesAPC LinksAdvancedLog out

System Configuration			
Intersection Interface	Simulator	Status	Clearance Mode
STATION ID	Status	APS Mode	Clearance Mode
1	ON	MULTCD	Nothing
2	OFF		
3	OFF		
4	OFF		
5	OFF		
6	OFF		
7	OFF		
8	OFF		
9	OFF		
10	OFF		
11	OFF		
12	OFF		
13	OFF		
14	OFF		
15	OFF		
16	OFF		

Station Configuration								
Phase	1	2	3	4	5	6	7	8
Sync Call	0	0	0	0	0	0	0	0
Day Locator A	60	60	60	60	60	60	60	60
Day Locator B	80	80	80	80	80	80	80	80
Day Locator MAX	105	105	105	105	105	105	105	105
Day Locator MIN	35	35	35	35	35	35	35	35
Day NO Locator A	65	65	65	65	65	65	65	65
Day NO Locator B	90	90	90	90	90	90	90	90
Day NO Locator MAX	105	105	105	105	105	105	105	105
Day NO Locator MIN	35	35	35	35	35	35	35	35
Night Locator A	40	40	40	40	40	40	40	40
Night Locator B	80	80	80	80	80	80	80	80
Night Locator MAX	105	105	105	105	105	105	105	105
Night Locator MIN	35	35	35	35	35	35	35	35
Night NO Locator A	55	55	55	55	55	55	55	55
Night NO Locator B	80	80	80	80	80	80	80	80
Night NO Locator MAX	105	105	105	105	105	105	105	105
Night NO Locator MIN	35	35	35	35	35	35	35	35
Night Mode	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Start Hour	8	8	8	8	8	8	8	8
Start Minute	0	0	0	0	0	0	0	0
End Hour	23	23	23	23	23	23	23	23
End minute	0	0	0	0	0	0	0	0

maps.bm  
wmap\_V2\_0\_0\_B00000.bm  
906-0034 WiAAPS Quick Guide Rev A.pdf  
Guardian-WAAPS Mounting Template.pdf

Manuals, Guides, And Other Files

Stations | Message Name

Locator

1,2,3,4,5,6,7,8 Walk - Phil.wav

Acknowledgement

1,2,3,4,5,6,7,8 Walk to Cross - Phil.wav

Location

1,2,4,5 Walk to Cross - Phil.wav

3,6,7,8 WTC Adams Wilson.wav

Walk

1,2,4,5 Walk Sign is ON to Cross - Phil.wav

3,6,7,8 Walk Adams.wav

Clearance

1,2,4,5 Canadian Melody 3-Tone.wav

3,6,7,8 Canadian Melody 4-Tone.wav

Phase	Wire Map	Wire Map	Wire Map
1	DB25 Pin 19 Red/White	DB25 Pin 23 Green/White	DB9 Pin 1 Orange/Black
2	DB25 Pin 6 Blue/Red	DB25 Pin 10 Black	DB9 Pin 6 Green/Black
3	DB25 Pin 18 Green	DB25 Pin 22 Blue	DB9 Pin 2 Red
4	DB25 Pin 5 Red/Green	DB25 Pin 9 White	DB9 Pin 7 Red/Black
5	DB25 Pin 17 Blue/Black	DB25 Pin 21 Black/White	DB9 Pin 3 White
6	DB25 Pin 4 Green/Black	DB25 Pin 8 Red/Black	DB9 Pin 8 White/Black
7	DB25 Pin 16 Orange/Black	DB25 Pin 20 Red	DB9 Pin 4 Black
8	DB25 Pin 3 White/Red	DB25 Pin 7 Orange/Red	DB9 Pin 9 Blue

Time Configuration	
NTP Enabled	No
NTP Servers	
Timezone	America/Boise

Network Configuration	
Hostname	apc
DHCP	DHCP Server
IP Address	192.168.1.101
MAC Address	00:0c:c6:81:e7:4d
Netmask	255.255.255.0
Gateway	192.168.1.1
Broadcast	192.168.1.255
DNS Server	192.168.1.1
Ping Destination	192.168.1.1
Ping on Boot	No
Ping on Hour	No

Users	
Username	Default user
Real name	Can manage
Access Level	

WIAAPS: 0.1.0 B-0001. Page loaded in 0.86 seconds.

## 3.7 APC Settings

This tab is where the APC configuration is set, including intersection information

Status   APC Settings   Station Settings   Station Setup   Audio Files   Time   Network   Log Files   APC Links   Advanced   Log out															
Active Stations															
1	2	3	4	5	6	7	8	1-8							
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON							
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF							
9	10	11	12	13	14	15	16	9-16							
Save Active Stations															
Intersection Identification															
Location		City, State													
Intersection		First Street @ Second Avenue													
CC#		XXXXXX													
PO Info		PO# XXXXX													
Intersection Image		Choose File No file chosen If no file is selected, the map will not be changed.													
Save Intersection Identification															
System Configuration															
Intersection Interface		Current		Change To											
		Simulator		Simulator											
Save Intersection Interface															

Active Stations – allows for a station to be set to active (On) or non-active (Off)

### Intersection Identification

The intersection identification can be found here:

- Location:
- Intersection:
- CC#
- PO #

- An Intersection image can be selected here and then click “Submit Intersection Identification” to update APC

The APC can be set to normal operation (120V I/O Mode) or test (Simulator Mode). The simulator mode allows for the APC and APBs to be tested without being connected to the traffic controller.

## 3.8 Station Settings Tab

Setting station IDs and individual station configuration is done on this tab.

Status / APC Settings / <b>Station Settings</b> / Station Setup / Audio Files / Time / Network / Log Files / APC Links / Advanced / Log out									
Station ID	Station MAC Address	Choose New MAC	Update MAC	Station ID	Locate New MAC	Reboot	Bootloader	Reset Radio	
4	0013A20041CB33AE	-- Select One MAC --	UPDATE	IDENTIFY	LOCATE	REBOOT	BOOTLOADER	CAUTION-RESET	
REBOOT ALL SET ALL									
Wireless Signal Strength Received									
From Stations To APC									
From Station To Station/APC (Will Take Several Minutes)									
Diagnostic Information									
Get All Radio Diagnostic Information (Will Take Several Minutes)									
Station ID	Phase	Sync Call	Set Phase	Station Phase And Sync Call		Set Sync Call	Send To Station		
4	5	OFF	5			OFF	SEND>>4		
Send All Stations - Phase And Sync Call									
Station ID	APS Mode	Clearance Mode	Station Mode		Set APS Mode	Set Clearance Mode	Send To Station		
4	Identify	Always On			Identify	Always On	SEND>>4		
MUTCD ALL Nothing ALL									
Send All Stations - Mode									
Station ID	Walk Timeout (s)		Station Walk Timeout		Set Walk Timeout (s)	Send To Station			
4	7				7	SEND>>4			
7 ALL									
Send All Stations - Walk Timeout									
Station ID	Extended Press (s)	Button Debounce (ms)	Station Button Timing		Set Extended Press (s)	Set Button Debounce (ms)	Send To Station		
4	1	100			1	100	SEND>>4		
1 100 ALL ALL									
Send All Stations - Button Timing									

Station Vibration Settings					
Station ID	Vibration Intensity (%)	Vibro-tactile Button Pulse (ms)	Set Vibration Intensity (%)	Set Vibro-tactile Button Pulse (ms)	Send To Station
4	30%	0	30 %	0	SEND>>4
			30 %	0	
			ALL	ALL	
Send All Stations - Vibration Settings					

Station Audio Timing					
Station ID	Locator Interval (s)	Repeated Acknowledgement (s)	Set Locator Interval (s)	Set Repeated Acknowledgement (s)	Send To Station
4	1	0	1	0	SEND>>4
			1	0	
			ALL	ALL	
Send All Stations - Audio Timing					

Station IR Sensor Configuration						
Station ID	Offset	Slope	IR ON (ms)	IR OFF (ms)	Timeout (ms)	Send To Station
4	10	15000	2	4	100	SEND>>4
	10	15000	10	15	100	3"
	ALL	ALL	ALL	ALL	ALL	Range
Send All Stations - IR Sensor Configuration						

Daytime Locator Volume										
Station ID	Low Volume	High Volume	Min Volume	Max Volume	Set Low Volume	Set High Volume	Set Min Volume	Set Max Volume	Send To Station	Graph
4	39	100	39	100	39	100	39	100	SEND>>4	Graph>>4
					65	100	39	100		
					ALL	ALL	ALL	ALL		
Send All Stations - Daytime Locator Volume										

Daytime NON-Locator Volume										
Station ID	Low Volume	High Volume	Min Volume	Max Volume	Set Low Volume	Set High Volume	Set Min Volume	Set Max Volume	Send To Station	Graph
4	50	100	39	100	50	100	39	100	SEND>>4	Graph>>4
					65	100	39	100		
					ALL	ALL	ALL	ALL		
Send All Stations - Daytime NON-Locator Volume										

Get Station Time							
Station ID	Year	Month	Day	Hour	Minute	Second	Get Station Time
4	--	--	--	--	--	--	GET TIME<<4
Get All Stations - Time							

Set Station Time							
Station ID	Year	Month	Day	Hour	Minute	Second	Set Station Time
4	--	--	--	--	--	--	SET TIME>>4
Load APC Time in Table							
Set All Stations - Time							

Station Night Mode						
Station ID	Start Hour	Start Minute	End Hour	End Minute	Night Mode	Send To Station
4	15	0	15	1	ON	SEND>>4
	15	0	15	1	ON	
	8	0	20	0	OFF	
	ALL	ALL	ALL	ALL	ALL	
Send All Stations - Night Mode						

Nighttime Locator Volume										
Station ID	Low Volume	High Volume	Min Volume	Max Volume	Set Low Volume	Set High Volume	Set Min Volume	Set Max Volume	Send To Station	Graph
4	70	35	39	105	70	35	39	105	SEND>>4	Graph>>4
					60	90	39	100		
					ALL	ALL	ALL	ALL		
Send All Stations - Nighttime Locator Volume										

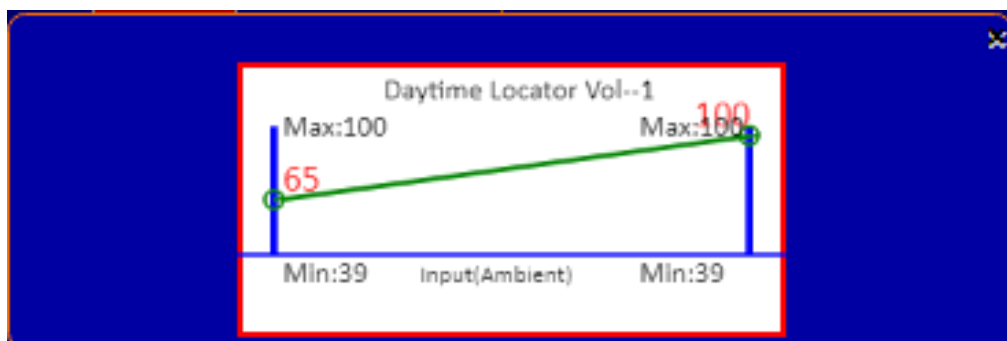
Nighttime NON-Locator Volume										
Station ID	Low Volume	High Volume	Min Volume	Max Volume	Set Low Volume	Set High Volume	Set Min Volume	Set Max Volume	Send To Station	Graph
4	60	90	39	100	60	90	39	100	SEND>>4	Graph>>4
					60	90	39	100		
					ALL	ALL	ALL	ALL		
Send All Stations - Nighttime NON-Locator Volume										

Station ID – allows for the stations to be assigned a specific station ID by using the station's MAC address, or change which station is assigned to a specific station ID. Utilizing the Station Identity function allows for the station to audibly identify its assigned station ID.

Please consult PedSafety Technical Support prior to using the Reboot, Bootloader or Reset Radio functionality.

All active stations will be shown in this tab. The following settings can be changed:

- Phase and Sync Call
- Station Mode
  - MUTCD – allows the Stations to perform the assigned functions in accordance with MUTCD and the configuration created (utilized while in operation at the intersection)
  - SET ID Mode – allows the stations to accept the setting or changing of the station's ID
  - Audio Mode – allows the stations to accept the setting or changing of the stations audio files
- Station Walk Timeout
- Station Button Time
  - Extended Press Time: Time in (ms) the contacts will closed to the traffic controller to signify an extended press was made.
- Button Vibration Time and Intensity
- Station Audio Timing Set
  - Locator Tone Interval: The number of seconds between Locator Tones
  - Repeated Acknowledgement: The number of seconds between repeats of the Acknowledgment message. (0 means the message will not be repeated)
- Station Active Infrared Sensor Configuration
  - Wave settings can be adjusted to detect a pedestrian's hand from a typical distance of 3, 6, or 9 inches.
  - IR on and IR off settings can be used to adjust how long the sensor needs to place a call.
  - Please contact PedSafety Tech Support at 208-345-7459 option 2 before adjusting any IR Sensor settings.
- Station Daytime Locator Tone volume



- Station Daytime all other messages volume (Daytime NON-Locator Volume)
- Station Time of Day. Note: the APC will update the APB time of day clock automatically once per week.
- Station Night Mode Start and End Time

- Station Night Mode Locator Tone volume
- Station Night Mode all other messages volume (Nighttime NON-Locator Volume)

This tab also has certain wireless communication diagnostic information

- Signal strength from stations to APC
- Signal strength from station to station and APC
- Wireless transmission diagnostic data

## 3.9 Station Setup Tab

Adding stations is done on this tab.

The screenshot shows the 'Station Setup' tab in the WiAAPS interface. The top navigation bar includes links for Status, APC Settings, Station Settings, Station Setup (selected), Audio Files, Time, Network, Log Files, APC Links, Advanced, and Log out. The main content area is divided into several sections:

- APC MAC Address:** Displays the MAC address 0013A200415C B673.
- Radio List:** A table with columns for Radio Number, Radio MAC Address, and a Delete button. It shows one radio with number 1 and MAC address 0013A2004157 D607.
- Search For Stations:** A section with a search bar and a 'Search For Stations' button.
- Add Radio MAC Address Manually:** A section with a 'Radio MAC' input field and a note: 'MAC address must be a 16 character hexadecimal number.' Below it is an 'Add Radio' button.
- Update Radio MAC Address Manually:** A section with a 'Radio MAC' input field, a note: 'MAC address must be a 16 character hexadecimal number.', a dropdown menu labeled 'Choose Radio Number To Update', and an 'Update Radio' button.
- Change APC Operational Mode:** A note at the bottom stating '(Stations must be in Bootloader Mode to work)'.
- Caution:** A yellow banner at the bottom reads 'Caution - Go To APB System And Firmware Update Mode'.

The MAC address for the APB can be entered manually or chosen from a search list.

- To search for the APB wirelessly, it must be powered on. Then click on “Search for Stations” button. This list will show all available APB stations. It will note whether or not the APB has been previously connected to that APC. Verify that you have the correct address for the station you want to add before making the selection.
- To enter the MAC address manually, enter the 64-bit address in the “Add Radio MAC” fields. This can be done by typing the address, or pasting it from another file. Click on “Add Radio”.

Station/Firmware update – allows for a firmware update to be applied to the station

## 3.10 Audio Files Tab

The Audio Files tab allows for audio files to be uploaded to individual stations.

Status / APC Settings / Station Settings / Station Setup / **Audio Files** / Time / Network / Log Files / APC Links / Advanced / Log out

Change APC Operational Mode (Stations must be in Audio Mode for Audio File Transfer Mode to work)

**Go To Audio File Transfer Mode**

File Name	Actions	Audio Files	Preview
Canadian Melody 3-Tone FDW.wav	Delete	▶ 0:00	🔊
Canadian Melody 4-Tone Walk.wav	Delete	▶ 0:00	🔊
Chipp - EW.wav	Delete	▶ 0:00	🔊
Cuckoo - NS.wav	Delete	▶ 0:00	🔊
DeeDa.wav	Delete	▶ 0:00	🔊
Destination Beacon 2.wav	Delete	▶ 0:00	🔊
Locator 880Hz: 100ms loud.wav	Delete	▶ 0:00	🔊
Locator 880Hz: 100ms quiet.wav	Delete	▶ 0:00	🔊
Locator 880Hz: 100ms really quiet.wav	Delete	▶ 0:00	🔊
Percussive EW 20.wav	Delete	▶ 0:00	🔊
Percussive NS 20.wav	Delete	▶ 0:00	🔊
Percussive Tone.wav	Delete	▶ 0:00	🔊
Wait look both ways.wav	Delete	▶ 0:00	🔊
Wait to Cross.wav	Delete	▶ 0:00	🔊
Wait.wav	Delete	▶ 0:00	🔊
Walk Exclusive.wav	Delete	▶ 0:00	🔊
Walk Sign is ON to Cross.wav	Delete	▶ 0:00	🔊
Walk Sign is ON.wav	Delete	▶ 0:00	🔊
silence.wav	Delete	▶ 0:00	🔊

Upload File  No file chosen

---

Station ID	Selected File	Locator	PREVIEW
1	Locator 880Hz 100ms quiet.wav	▶ 0:00	🔊
ALL	Locator 880Hz 100ms quiet.wav	▶ 0:00	🔊

**Save All Locator Choices To APC ( Must Still Send To Stations )**

---

Station ID	Selected File	Acknowledgement	PREVIEW
1	Wait.wav	▶ 0:00	🔊
ALL	Wait.wav	▶ 0:00	🔊

**Save All Acknowledgement Choices To APC ( Must Still Send To Stations )**

---

Station ID	Selected File	Location	PREVIEW
1	Wait to Cross.wav	▶ 0:00	🔊
ALL	Wait to Cross.wav	▶ 0:00	🔊

**Save All Location Choices To APC ( Must Still Send To Stations )**

---

Station ID	Selected File	Walk	PREVIEW
1	Walk Sign is ON to Cross.wav	▶ 0:00	🔊
ALL	Walk Sign is ON to Cross.wav	▶ 0:00	🔊

**Save All Walk Choices To APC ( Must Still Send To Stations )**

---

Station ID	Selected File	Clearance	PREVIEW
1	Percussive Tone.wav	▶ 0:00	🔊
ALL	Percussive Tone.wav	▶ 0:00	🔊

**Save All Clearance Choices To APC ( Must Still Send To Stations )**

- The first step is to add sound files to the APC. Choose files from the list, or upload your own files. Click Choose File, select the specific file, then click “Save to APC.”
- On the Station Settings tab, set the APBs to Audio Mode.

- c. On the Audio Files tab, click on “Go to Audio File Transfer Mode”. This will take the APBs out of service during the audio file transfer.

Change APC Operational Mode (Stations must be in Audio Mode for Audio File Transfer Mode to work)		
<b>Go Back To Intersection APC Mode</b>		
<b>Send Files From APC To Stations</b>		
Message \ ID	1	All Stations
Locator	<input type="button" value="Send"/>	<input type="button" value="Send"/>
Acknowledgement	<input type="button" value="Send"/>	<input type="button" value="Send"/>
Location	<input type="button" value="Send"/>	<input type="button" value="Send"/>
Walk	<input type="button" value="Send"/>	<input type="button" value="Send"/>
Clearance	<input type="button" value="Send"/>	<input type="button" value="Send"/>
All Messages	<input type="button" value="Send"/>	<input type="button" value="Send"/>
<b>Play Audio On Stations</b>		
Message \ ID	1	
Locator	<input type="button" value="Play"/>	
Acknowledgement	<input type="button" value="Play"/>	
Location	<input type="button" value="Play"/>	
Walk	<input type="button" value="Play"/>	
Clearance	<input type="button" value="Play"/>	

- d. Files can be sent one at a time to a single station, one file to multiple stations, or multiple files to some or all of the APBs at one time.
- e. The “Play Audio on Stations” function allows review of the messages programmed on the APB if the APC is set to the Audio File Transfer Mode and the APB is set to the Audio Mode (set on the “Station Settings” tab).
- f. On the Stations Settings Tab, change the APBs back to MUTCD Mode.
- g. When finished transferring all the necessary audio files, click on “Go back to Intersection APC Mode” to reboot the stations and return the intersection to normal operation.



## 3.11 Time Tab

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

Time Configuration	
Current	Change To
Time	Fri Jan 21 19:12:57 MST 2000
	January 21 2013 19:12:57 US/Mountain Sync with PC time
NTP Enabled	No
NTP Servers	

Save APC Time

There are three ways of setting the time:

- Manually enter the time.
- NTP enable (to get the current time from the internet). Note: the APC must be able to access the network and an IP address must be entered in the NTP server box.
- Click the "Sync with PC time" option.

Once the time options are chosen click "Save APC Time". This will set the time, but also log you out of the webpage. You will need to log back in to continue.

## 3.12 Network Tab

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.

If the IP address is lost, hold the B1 Button on front of APC and boot (turn on the unit). The IP address will be reset to the default. See [Accessing the Webpage](#) (paragraph 4.1)

Network Configuration		
	Current Value	New Value
Hostname	apc	apc
DHCP	None	None
IP Address	192.168.42.217	192.168.42.217
Netmask	255.255.255.0	255.255.255.0
Gateway	192.168.42.1	192.168.42.1
Broadcast	192.168.42.255	192.168.42.255
DNS Server	192.168.42.254	192.168.42.254
Ping Destination	192.168.1.1	192.168.1.1
Ping on Boot	No	NO
Ping on Hour	No	NO

Save Network Configuration

### 3.12.1 Log Files Tab

There are three sets of logs to be viewed: System log, Event log, and APB log.

- System logging reports changes made to the system.
- Event logging reports any conflicts and/or loss of station communication
- APB log reports ped call counts for each APB. Graphs are available that show history by week, month, and year for each APB.

The screenshot shows the 'Log Files' tab selected in the top navigation bar. Below the navigation bar, there are two sections: 'System Log' and 'Event Log'. Under 'System Log', there are two buttons: 'Stations Last Reboot' and 'Stations Last Wireless Communication Loss', each with a 'Show' button next to it. Below these, there are six orange buttons for showing button presses and serviced calls for different time periods: 'Last 24 Hours', 'Last Week', 'Last Month', 'Last Year', 'For Years', and 'For This Year'.

### 3.12.2 APC Links Tab

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

The screenshot shows the 'APC Links' tab selected in the top navigation bar. Below the navigation bar, there is a table with four columns: 'Link', 'Address', 'Last Checked', and 'Status'. Below the table, there are input fields for 'Name' and 'URL', followed by an 'APC' dropdown menu with 'NO' selected, and an 'Add' button.

1. Make sure the network APC is viewable on the network.
2. Enter a Name or the location of the network APC
3. Type the IP address of the network APC in the URL box
  - a. Example: 192.168.1.101
4. Click APC box
5. Click **Add**

### 3.12.3 Advanced Tab

[Status](#)
[APC Settings](#)
[Station Settings](#)
[Station Setup](#)
[Audio Files](#)
[Time](#)
[Network](#)
[Log Files](#)
[APC Links](#)
[Advanced](#)
[Log out](#)

Reboot APC

Reboot

REBOOT

User Management

Username

Real Name

Access Level

admin

Default user

Can manage

Delete

Edit

Create user

APC Info

View Syslog

View Boot Log

View Broadcast Ping

Advanced Configuration

	Current	Change To
Traffic Controller Short Press Call (ms)	200	200
Traffic Controller Extended Press Call (ms)	500	500
Intersection Status Scan Interval (ms)	100	100 TEST Set to 100ms before testing
Station Update Interval (ms)	150	150
Display Update Interval (ms)	1000	1000
Display Timeout (ms)	60000	60000

Save Advanced Configuration

Phase	Walk Input	Wire Map Don't Walk Input	Call Output
1	DB25 Pin 13 Red/White	DB25 Pin 23 Green/White	DB9 Pin 1 Orange/Black
2	DB25 Pin 6 Blue/Red	DB25 Pin 10 Black	DB9 Pin 6 Green/Black
3	DB25 Pin 18 Green	DB25 Pin 22 Blue	DB9 Pin 2 Red
4	DB25 Pin 5 Red/Green	DB25 Pin 9 White	DB9 Pin 7 Red/Black
5	DB25 Pin 17 Blue/Black	DB25 Pin 21 Black/White	DB9 Pin 3 White
6	DB25 Pin 4 Green/Black	DB25 Pin 8 Red/Black	DB9 Pin 5 White/Black
7	DB25 Pin 16 Orange/Black	DB25 Pin 20 Red	DB9 Pin 4 Black
8	DB25 Pin 3 White/Red	DB25 Pin 7 Orange/Green	DB9 Pin 9 Blue

Save Wiring

Change APC Operational Mode (Stations must be in Bootloader Mode to work)

Go To Wireless Network Set Up Mode

Setup page

The Reboot button will do a software reboot. This must be done to set time and IP address for the APC.

Additional users can be created by clicking on the “Create User” link.

Change password: click on edit user: This will reset the password on the WiAAPS webpage **(Remember what you changed it to! Mark it on Intersection Planning Sheet and store in cabinet Doc Sleeve.)**

**Any changes to the advanced configuration section settings should only be done at the direction of Campbell Company. Please contact Campbell Company Technical Assistance before proceeding.**

1. Intersection Status Scan Interval (ms): How often the I/O is read.
2. Station Update Interval (ms): How often the buttons receive an update.
3. Display Update Interval (ms): How often the Front panel display is updated.
4. Display timeout (ms): Time before the front panel display times out (shuts off)
5. Wire map: The wire mapping can be changed
  - a. Walk input: Able to choose phase assignment of pins by color code.
  - b. Don't walk Input: Able to choose phase assignment of pins by color code.
  - c. Call output: Able to choose what Pin/wire will place a call on a certain phase.

Settings for the wireless radios can be changed to create a unique configuration for each intersection. Click on "Go to Wireless Network Set Up Mode".

Status	APC Settings	Station Settings	Station Setup	Audio Files	Time	Network	Log Files	APC Links	Advanced	Log out
--------	--------------	------------------	---------------	-------------	------	---------	-----------	-----------	----------	---------

Change APC Operational Mode (Stations must be in Bootloader Mode to work)

Go Back To Intersection APC Mode

REBOOT ALL STATIONS

SET UP NETWORK FOR BOTH APC AND STATIONS

Set New Value

Preamble ID	0	Range: 0x0-0x09
Network ID	0AA6	Range: 0x0-0x7FFF

Set Up Network For Both APC And Stations

APC Wireless Network Setup

	Current Value	New Value	
Preamble ID	0	0	Range: 0x0-0x09
Network ID	0AA6	0AA6	Range: 0x0-0x7FFF

Update APC Radio Network

WARNING: The APC and Stations must have the same network settings to operate correctly!!!

Station Wireless Network Setup

ID	MAC Address	Preamble ID (Range: 0x0-0x09)	Network ID (Range: 0x0-0x7FFF)	Load	Action
1	00 13 A2 00 41 57 D6 07	0	0000	GET	Set
ALL		0	0AA6		

Get All Stations - Network Settings

Set All Stations - Network Settings

## 4 Appendix A: Acronyms, Abbreviations & Definitions

Term	Meaning
Accessible Pedestrian Signal (APS)	A device that communicates information about pedestrian timing in a non-visual format such as audible tones, verbal messages, and/or vibrating surfaces (MUTCD)
Actuated operation	A type of traffic control signal operation in which some or all signal phases are operated on the basis of actuation (MUTCD)
Audible Beaconsing	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, sign mounting.
Crosswalk	Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other marking on the surface (MUTCD)
DHCP	Dynamic Host Configuration Protocol
Night Mode	Ability to change audio volumes by time of day
Phase	Cycles assigned to a specified movement