

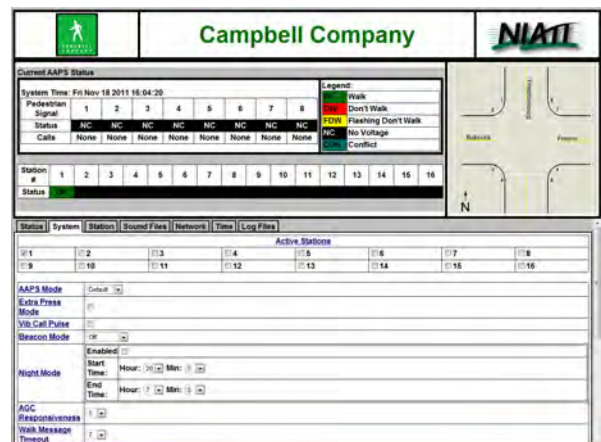
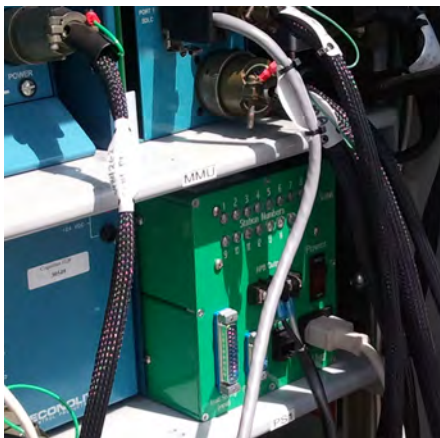
Advanced Accessible Pedestrian System (AAPS)

Overview

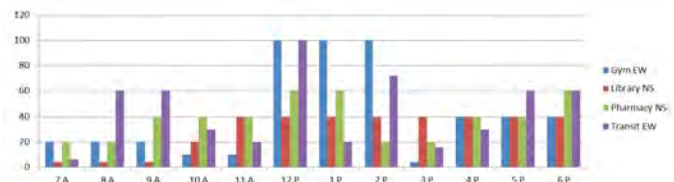
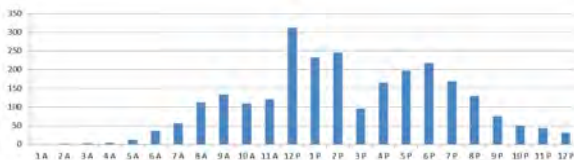
AAPS represents the latest advance in pedestrian signal push button technology. Designed to better assist the visually and cognitively impaired at the pedestrian station with audio, visual and tactile information, the AAPS provides all of the characteristics and indications identified in the guidelines, but is different from conventional pedestrian stations in that the system can be completely managed via a web browser device and network connection.

Continuous communication is exchanged between the Advanced Pedestrian Controller (APC) in the traffic controller cabinet and each individual Advanced Pedestrian Button (APB).

Access via direct Ethernet or remote network connection allows traffic agency technicians to view AAPS system operations and control operating characteristics. This communication provides the capability to upload files directly to individual pedestrian stations or download reports generated by the APC.

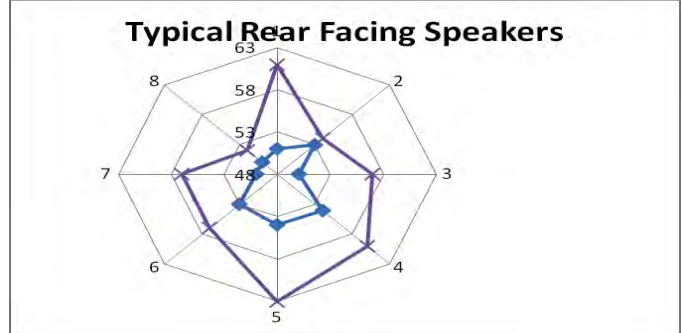
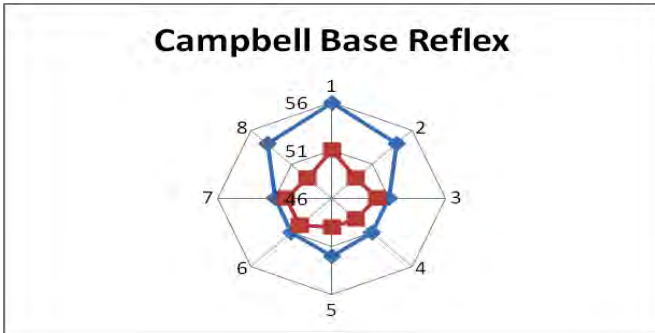


Traffic Engineers and Technicians can access real time pedestrian usage data instantly from their desk. Remote communications provide agencies not only with valuable usage data, but the ability to exercise pedestrian stations from their desk and make any changes desired.



Communications allow the APC to be synchronized with NTP servers for coordinated time stamps when events are recorded.

APB sound quality is crisp and clear. APB's forward facing speaker enables Campbell Company to incorporate Quiet Signals characteristics. Time of Day functions allow volume to be adjusted by time of day.



Position 1 is the desired audio target. These graphics demonstrate the path of sound from the Quiet Signals philosophy and the traditional rear facing philosophy.

Each system is configured at the factory for a true plug and play installation. AAPS can be easily retrofitted in existing intersections; usually utilizing existing pedestrian input conductors. The APB Base Station is sealed and ready; two wires and two bolts.

Benefits

- User-friendly setup with web browser interface
- Time of day functionality
- Full synchronization of groups and phases in pedestrian movements
- Reports downloadable to laptop or network communications
- Remote communication to APC
- Integral fault monitoring
- Real-time feedback
- TS1 and TS2 hardwire compliant
- Ethernet communications
- Pedestrian usage reporting



System and Operating Features

- EoP design provides for true two wire installation at pedestrian stations
- Ambient gain control adjusts audio volume outputs to parallel ambient noise levels
- Audio messages or tones are downloaded directly to APB's
- Night mode option reduces audio volumes at night
- Performance and self-test every 250 ms
- Software updates easily downloadable
- Forward facing speaker for improved sound control and reduced sound pollution

Applicable Specifications / Guidelines

- MUTCD - meets and exceeds all guidelines
- TAC - meets and exceeds all guidelines
- PROWAAC
- NEMA TS 2

Theory of Operation



APC uses EoP (Ethernet over Power) communication on low voltage pedestrian button field wiring. Real time update reporting is provided by continuous communication between APC and APBs. Stations are configurable by phases, groups and movements.

Compatibility

TS1 and TS2 compatible; the APC interfaces with the pedestrian load switches to monitor the walk and don't walk states. Calls are placed from the APC to the cabinet Pedestrian Push Button call input terminals. (SDLC input connections scheduled for AAPSII 2012)

APC

The Advanced Pedestrian Controller (APC) interfaces with the traffic control system and the Advanced Push Buttons (APB). The APC is software driven and offers flexibility in configuration options. Any web browser device can be used to configure the system. Remote access is available to the APC when the cabinet is on a network. Access is password protected. The APC front panel displays status of APB's, and provides for all connections.

APB

The APB is a sealed, fully integrated pedestrian station. Advanced Push Buttons are powered by low voltage EoP communication utilizing the existing pedestrian button field wiring. The APB's mute activates when communication is lost or the APC "failsafe" internal conflict monitoring identifies a conflict.

Termination Board

The termination board neatly consolidates field wiring for the APC. The termination board is the first line of protection for the AAPS. Each field run uses resettable fuses so one short due to knock down will not affect the rest of the system.



Advanced Accessible Pedestrian System (AAPS)



Features and Specifications	
Operating Features	Performance and self test performed every 250 ms Reports downloadable to laptop or network communications Real time clock provides time and date functions (volume) in operations Ambient gain control adjusts audio volume outputs to parallel ambient noise levels Alternate / Passive input capable
Microprocessors	APC utilizes an EA 7370 Linux base controller APB utilizes an NXP LPC 2468 CPU
Outputs	Locator tone Acknowledgment message / tone / visual LED / vibrotactile bounce Location information message with extended press Walk cycle tones / messages and vibrotactile signal Clearance tones / beaconing Emergency pre-emption tones / message
Modes	Default: Firmware driven menus allow operational characteristics EP APS: APS on demand with extended press Identify
Synchronicity	Groups Phases Movements Intersections
Form Factor	APC console geometry 5 X 6 X 6" APB Base Station 12 X 5 X 1 3/4" Displays a 5 X 9 Sign Adapter Plates for 9 X 12", and 9 X 15" Signs

General Specifications		AAPS Specifications	
APC		Security	Password Protected
APC Size	5" X 5.5" X 6"	Interface	Web Browser
APC Weight	6 lbs.	Volume	Night/Day 100 dB
Operating Temp	-40 C to 75 C	Vibrotactile	Yes
Phases	8	Remote Access	Yes
Stations	16	Wireless	Optional
APB		Switch Life	100 X 10 ⁶
APB BS Size	12" X 5" X 1.75"	Alternate Input	Passive Sensors
APB BS Weight	7 lbs.		
Power (W)	1.68 W at rest	Reporting:	Pedestrian Usage
Current (I)	270 mA		Event Logging
Power (W)	3.24 W		System Evaluation
Min Power (W)	~15 W		
Max power (W)	~80 W		
Data Rate	4 Mps		
Communication Rate	250 ms		
LED	~3000 mcd		
Input Voltage APC	120 VAC		
Input Voltage APB	16 VAC		

Manufactured in the USA by Campbell Company - 450 W. McGregor, Boise Idaho 83705
208-345-7549 - www.pedsafety.com