

Accessible Pedestrian Signal Beacon User's Manual

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Campbell Company

450 W. McGregor Drive

Boise, Idaho

83705

USA

Tel: 1-208-345-7459 Fax: 1-208-345-7481

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Beacon User's Manual

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A	Zane Sapp	4/12/16
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Firmware and Software Versions	
Component	Version
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PedConnex™ Utility	2.0.0

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2 Introduction

2.1 Purpose of this Document

The purpose of this document is to describe the operation of the Beacon Accessible Pedestrian Signal (APS).

2.2 Additional Information

- See the Beacon Installation instructions.
- Reference the Campbell Company Intersection Worksheet for location specific information.
- See the Beacon Installation Quick Guide for a brief graphical installation Guide.
- Refer to the PedConnex Utility manual for specific instructions for programming.

2.3 Contact Information

The first line of contact should be your regional distributor that the system was purchased from. If you are unable to contact the distributor, please contact Campbell Company directly.
Campbell Company Tech Support: 1-208-345-7459 ext. 8024

3 Overview

3.1 Product Overview

The Beacon is an Accessible Pedestrian Signal (APS) designed for simple, stand-alone operation. The Beacon will give audible indications to a pedestrian crossing the street so that the direction of the sound is in line with the pedestrian:

The Beacon provides APS features such as:

- The audible walk tone or message indication during the visual walk display.
- Optional clearance phase indications may provide additional information to the pedestrian where appropriate.

Each Beacon APS is configured at the factory based on the specifics provided by the customer on the intersection planning sheet. Campbell's PedConnex Utility provides an easy and straight forward interface for programming and configuration.

Note: If Field Terminals are not connected to the Beacon, it will play the walk indication each time the walk signal is illuminated.

3.2 Features

- Independent operation; no control unit in cabinet
- Time of day function: night time audio volume
- Easy configuration with PedConnex utility and a USB cable
- Clearance interval options including Beaconsing and audible countdown
- Designed to operate with an optional Campbell APS Guardian or AGPS, requires SPIXC
- Ability to synchronize multiple stations for Beaconsing utilizing existing field wiring
- Automatic Gain Control (AGC) available for all audio messages
- Does not require button field wires for fixed time intersections
- Accepts any audio message that is 16-bit signed, 16 k Hz mono in WAV format

3.3 Components

There are two primary components to the Beacon; (1) one or more Beacon stations and (2) a Signal Power Interface (SPI) paired with each station. The SPI converts Walk and Don't Walk signals from the pedestrian signal head to low voltage control signals to operate the Beacon APS.



Figure 1 Beacon front and side views

3.4 Audio Messages

The Beacon comes fully programmed with audio files from the factory. Several free applications such as Audacity give you the option to create your own custom messages or tones in a simple .wav format that can be easily uploaded via USB port. Second languages, gender narrative, and special percussive tones can be easily created and uploaded.

4 System Configuration

The Beacon comes with the user friendly PedConnex utility to configure the station. While the Beacon comes configured from the factory, some installations require modifications to audible messages or functionality to best fit the needs of the cross walk location. This can be accomplished after factory configuration.

PedConnex can be downloaded and launched on any number of computers that will be used in the field. The PedConnex utility includes a detailed electronic version of the PedConnex Utility Manual which will be referred to in this document. This document will direct you to main areas of interest in PedConnex User's Manual. Please refer to the PedConnex Utility manual for more detailed information on programming and configuration.

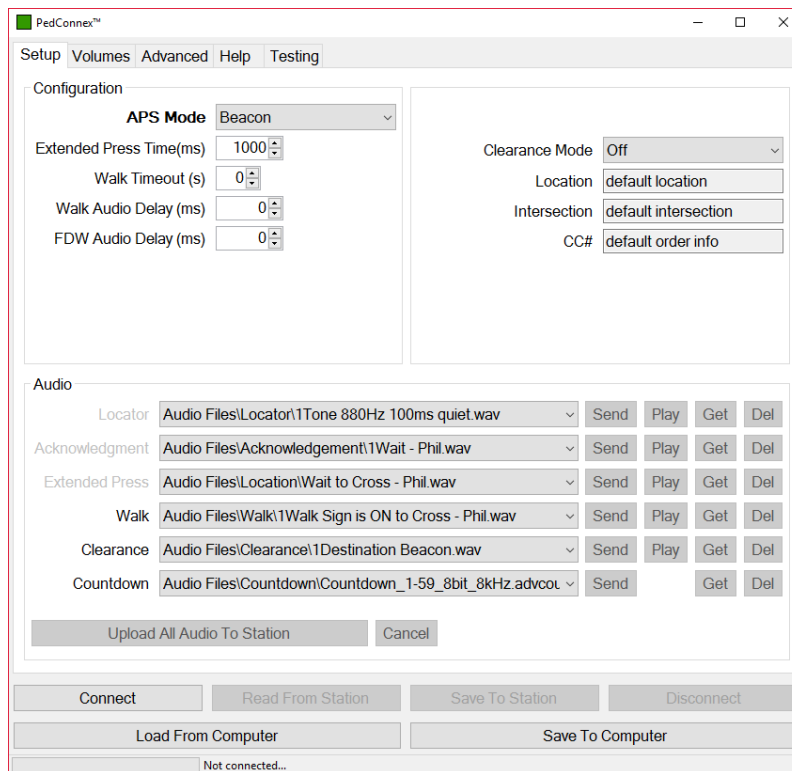


Figure 2 PedConnex

PedConnex also incorporates “roll over” help bubbles that explain the various options and how to set them up.

Obtain PedConnex APS configuration Utility by visiting: www.Pedsafety.com/downloads
Then click Download PedConnex

4.1 Setting and Operational Mode Features in PedConnex

The primary operational settings are located on the “Setup” page

APS Mode: Set to “Beacon”.

Extended Press Time: Time in milliseconds to hold the button to turn on the audible walk and clearance indications. For use with 4EVR buttons set to 100, set to 0 to play every cycle.

Walk Timeout: Maximum time in seconds for walk message to play.

Walk Audio Delay: Time to delay Walk indication from the start of the walk phase.

FDW Audio Delay: Time to delay Clearance indication from the start of the clearance phase.

Clearance Mode: Select from; Off, AlwaysON, DestinationBeacon, and Countdown.

Location: City, State.

Intersection: Cross Street for reference.

CC#: Campbell Company Sales Order Number.

Note: All numbers in PedConnex can be manually edited.

Volume and Sound Controls are located on the “Volumes” page.

Volume: Two settings adjust volume for non-locator indications and locator tone independently

- *Non-Locator Volume* – Adjusts the volume of the audible messages or percussive tones or indications
- *Locator* – The Beacon does not have a Locator tone, so this setting is not applicable

Night Mode: Night Mode changes the volume settings based on the time of day

Ambient Gain Control: Ambient Gain Control (AGC) settings change the rate at which the unit volume output reacts to changes in the ambient noise level

4.2 Audio Files in the Beacon

The Beacon APS comes fully programmed with audio files from the factory. Campbell Company generates custom messages for the intersection from information on the intersection worksheet submitted to at the time of order placement. An electronic copy of the audible files is available to the customer at time of delivery and should be kept for future use.

1. Walk - plays when Walk sign is on.
2. Clearance - plays clearance message in the flashing don't walk if clearance mode is set to “Always on”, or “Destination Beacon”.
3. Countdown - plays countdown messages in the flashing don't walk if clearance mode “CountDown” is selected. Example: if 5 seconds of flashing don't walk 5, 4, 3, 2, 1.

Setting Clearance to “Off” will ensure nothing will play in the clearance phase.

You can easily upload the original files if you need to restore the factory default audio messages. Campbell Company also keeps a copy of the original audio files for record.

5 Appendix A: Acronyms, Abbreviations & Definitions

Term	Meaning
Accessible Pedestrian Signal	A device that communicates information about pedestrian signal in a non-visual format such as audible tones, verbal messages, and/or vibrating surfaces (MUTCD)
Audible Beaconsing	Use of sound to provide directional orientation and alignment information in the clearance phase.
Audio File	A file format for storing digital audio data on a computer system.
Ambient Gain Control (AGC)	An APS volume control that is automatically responsive to ambient (background) sound.
Clearance Interval Indication	Tones sounding during the pedestrian clearance interval that are differentiated from the WALK interval indicator (tones)
Clearance mode	<p><i>Sets what and how audio files are played in Flashing Don't Walk.</i></p> <ul style="list-style-type: none"> • <i>Off</i> – No FDW audio. Goes back to locating. • <i>Always On</i> – Plays Clearance indication every activated cycle. • <i>Destination Beaconsing</i> – Destination station provides target beaconsing (Clearance indication) for pedestrian to locate. The station pressed will not play a message. • <i>Countdown</i> – Audible countdown of the clearance phase. <p>Note: Requires one cycle to calibrate Flashing Don't Walk time.</p>
Extended Press	Holding the pedestrian push button down from 1-3 seconds will activate features, including audible Beaconsing.
Night Mode	An alternate configuration typically used to control audio volume at night time.
Signal Power Interface (SPI)	Power source that interfaces with Pedestrian Signal Head power for Base Station interface.
SPIXC	SPI for use with Beacon plus AGPS/Guardian
USB Port	USB connection on Beacon stations.
.wav file	An audio file format.