[AN048]

ADVANCED NETWORK DEVICES

Onboard Sound Playback

Version 1.4

6/19/2020

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U.S.A

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Static Electric Warning

TROUBLESHOOTING AND ADDITIONAL RESOURCES

Complete Support Site:	https://www.anetd.com/user-support/
SIP Configuration Help:	http://www.ipspeaker.com/support30/help/settings.html#sip
GPIO Configuration Help:	http://www.ipspeaker.com/support30/help/settings.html#gpio
AND Legal Disclaimer:	https://www.anetd.com/legal/

OVERVIEW

Firmware version 1.6 or newer supports onboard sound playback. IPBTN supports this feature with Firmware version ips30.0.0289 or newer. This functionality makes it possible to store audio files directly on the device for playback.

Audio on the device enables more flexibility when integrating applications that can send HTTP triggers, even those without the capability to send sounds. This feature also enables devices such as the IPBTN (Smart IP Button) to send a sound directly to an endpoint via a SIP call. Other benefits include scheduling chimes to play on the device at regular intervals, as well as triggering speaker devices to play onboard sounds without that sound file impacting network traffic, thus freeing up bandwidth for other IP-based alerts and events.

This document describes device specifications, setup, and playback options for this capability.

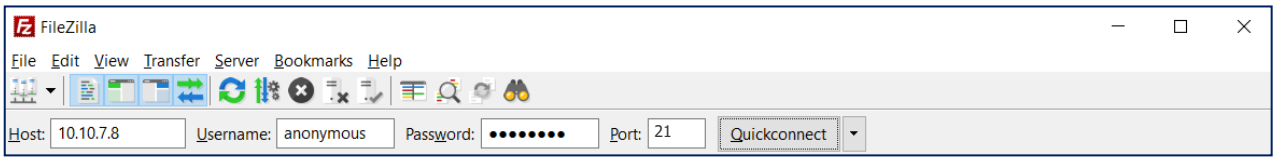
DEVICE SPECIFICATIONS

Device Storage	8MB maximum
Audio Formats	G.711 µ-law and A-law (and other types in certain circumstances) Note: You can use this G.711 conversion tool to format user-provided audio files to the proper format: http://g711.org

DEVICE SETUP

Load audio files onto the device using FTP as follows:

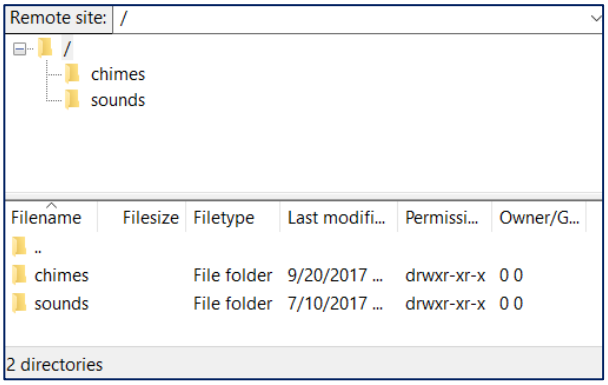
1) Login to the device using an FTP client such as FileZilla with the following credentials:



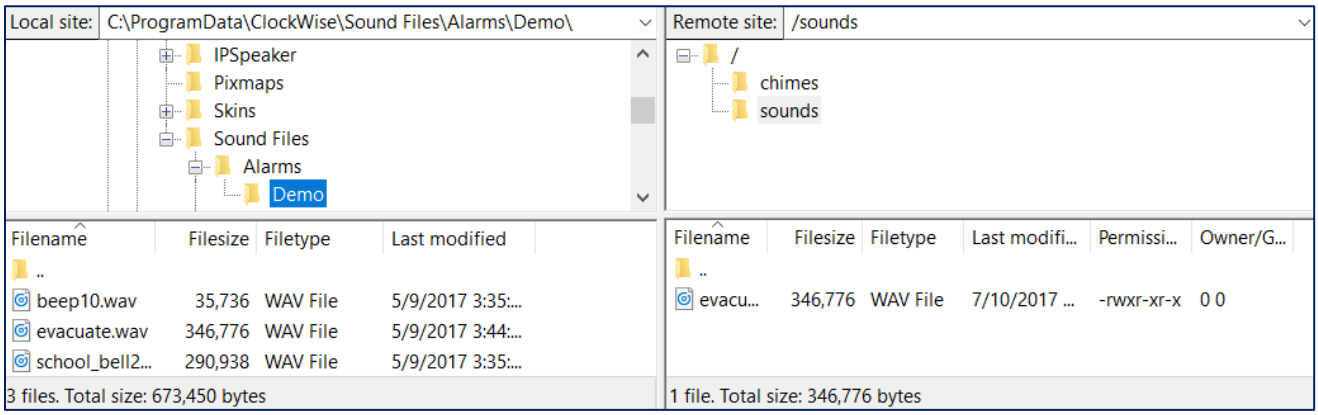
User: anonymous
Password: HTTP Control Password (Device Factory Default Password = SideDoor)
Host IP address: The IP address of the device
Port: 21 (Standard FTP)

2) Right-click over the Remote Site window, and select *Create Directory* to create the following directories on the device (if not already in place) Note the directory names must be in lowercase:

/sounds
/chimes

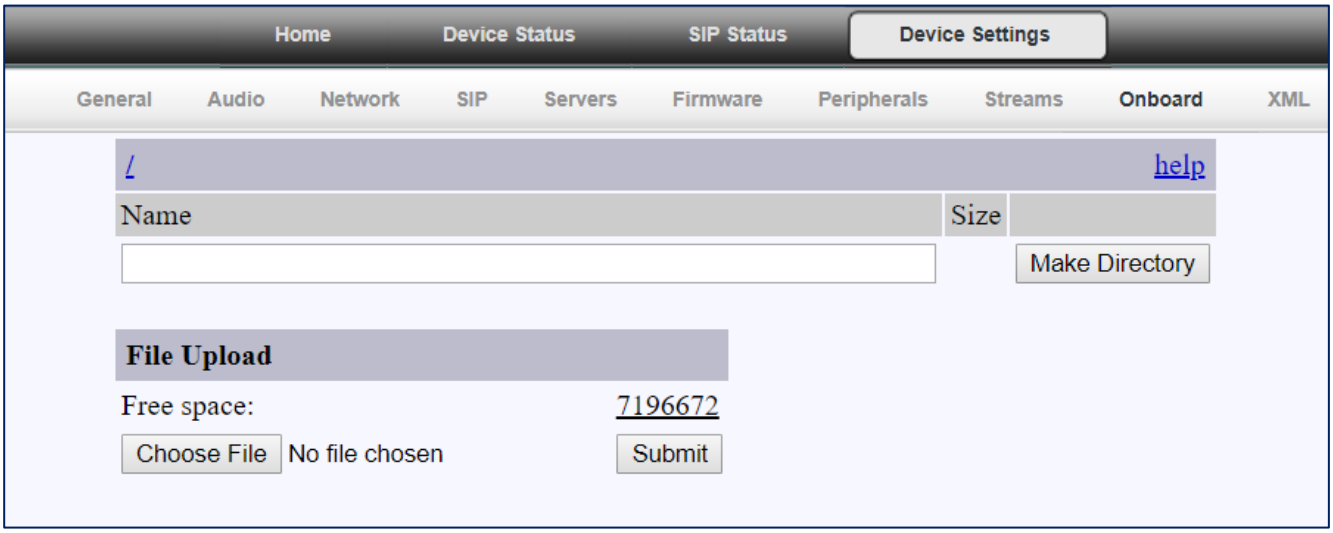


3) Copy sound file(s) to the */sounds* and/or */chimes* subdirectories of the device.

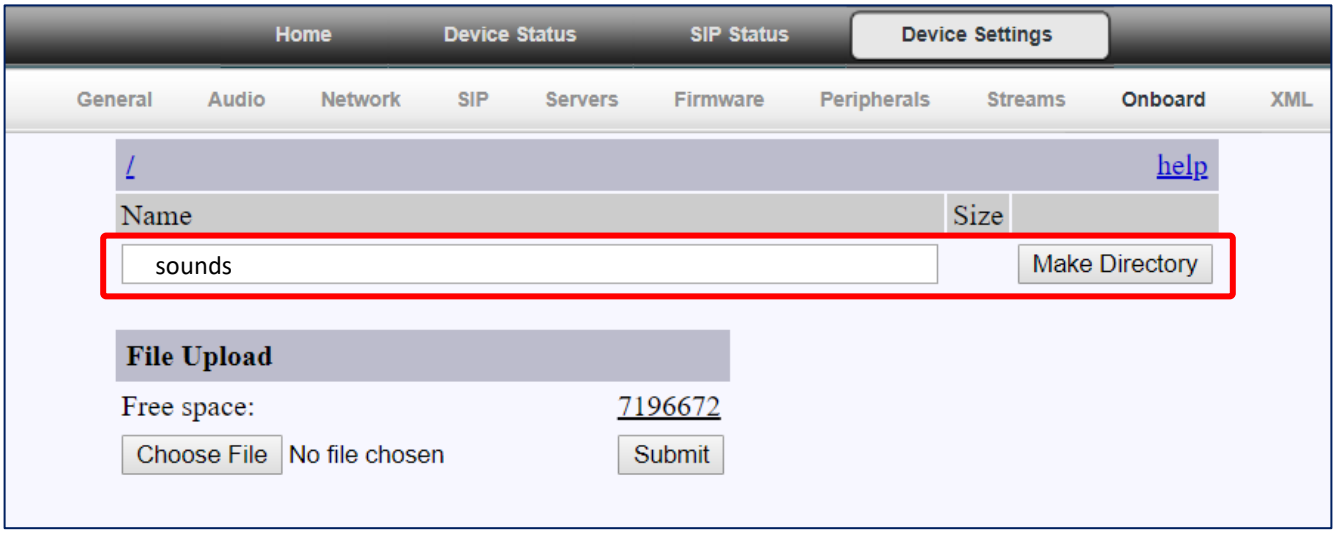


For the Smart IP Button (IPBTN), load audio files as follows:

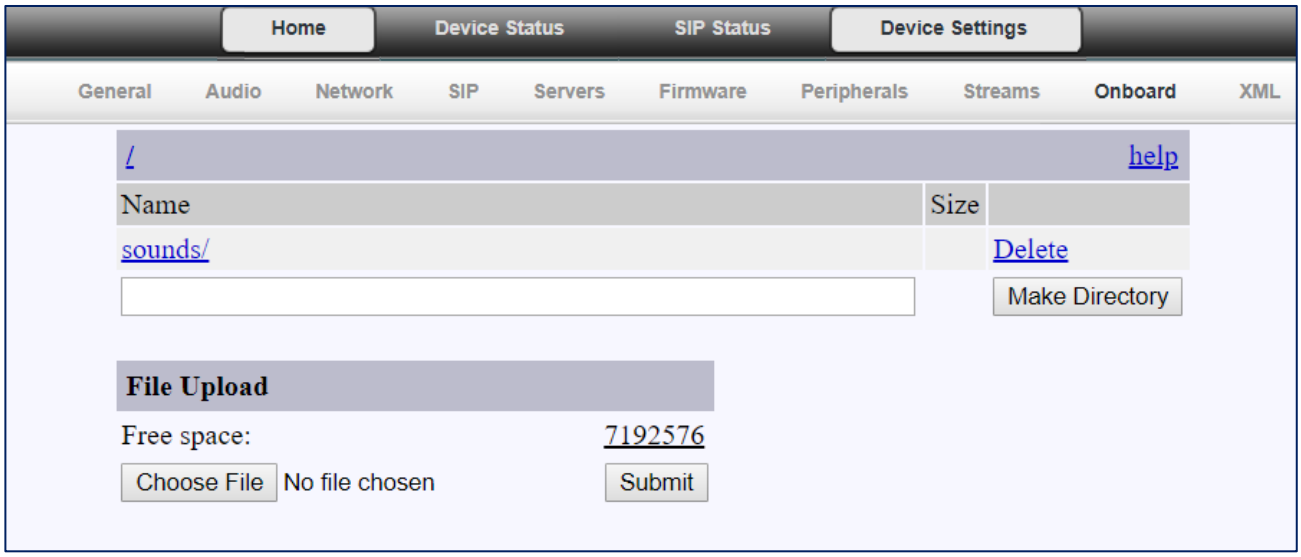
a. From an Internet browser, access the device's web interface by navigating to **Device Settings** → **Onboard** menu in the device's web interface.



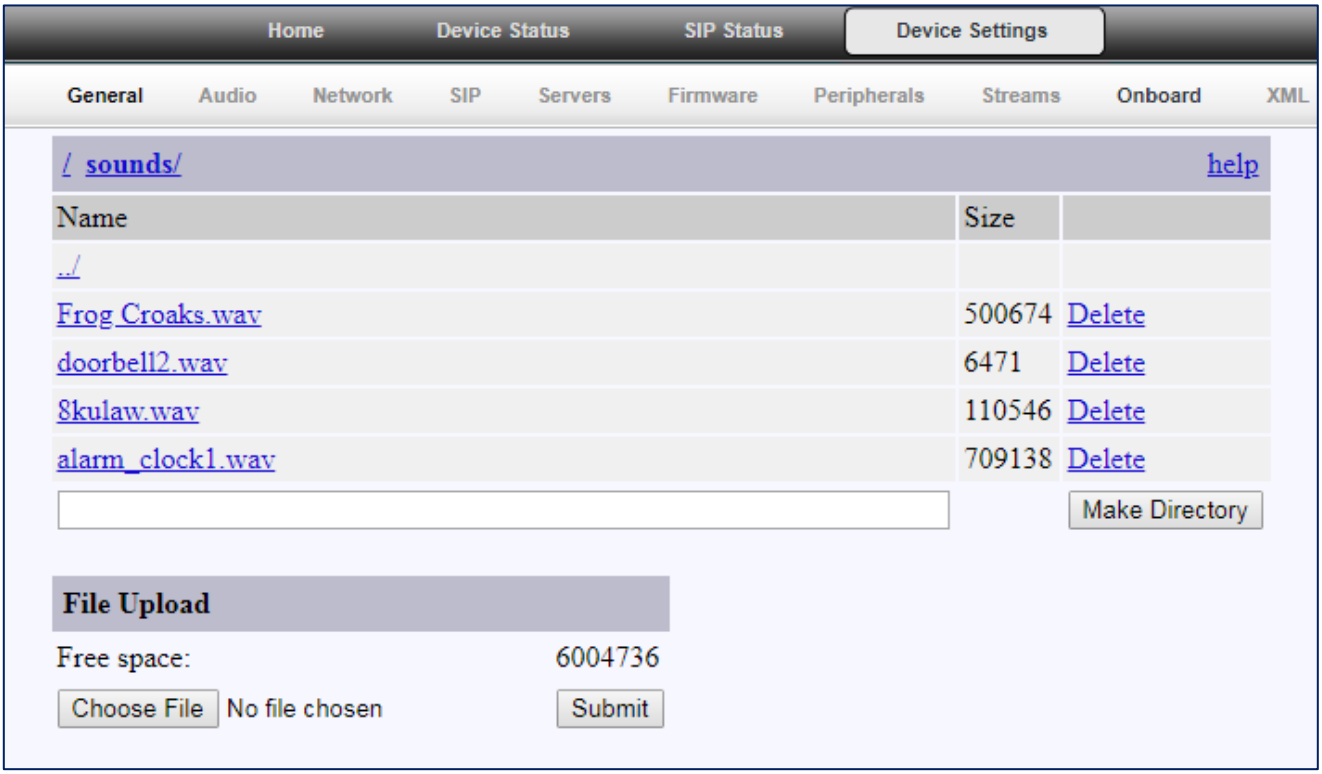
b. If not created, enter "sounds" and click Make Directory.



c. Once created, click the "sounds" directory to navigate into it.



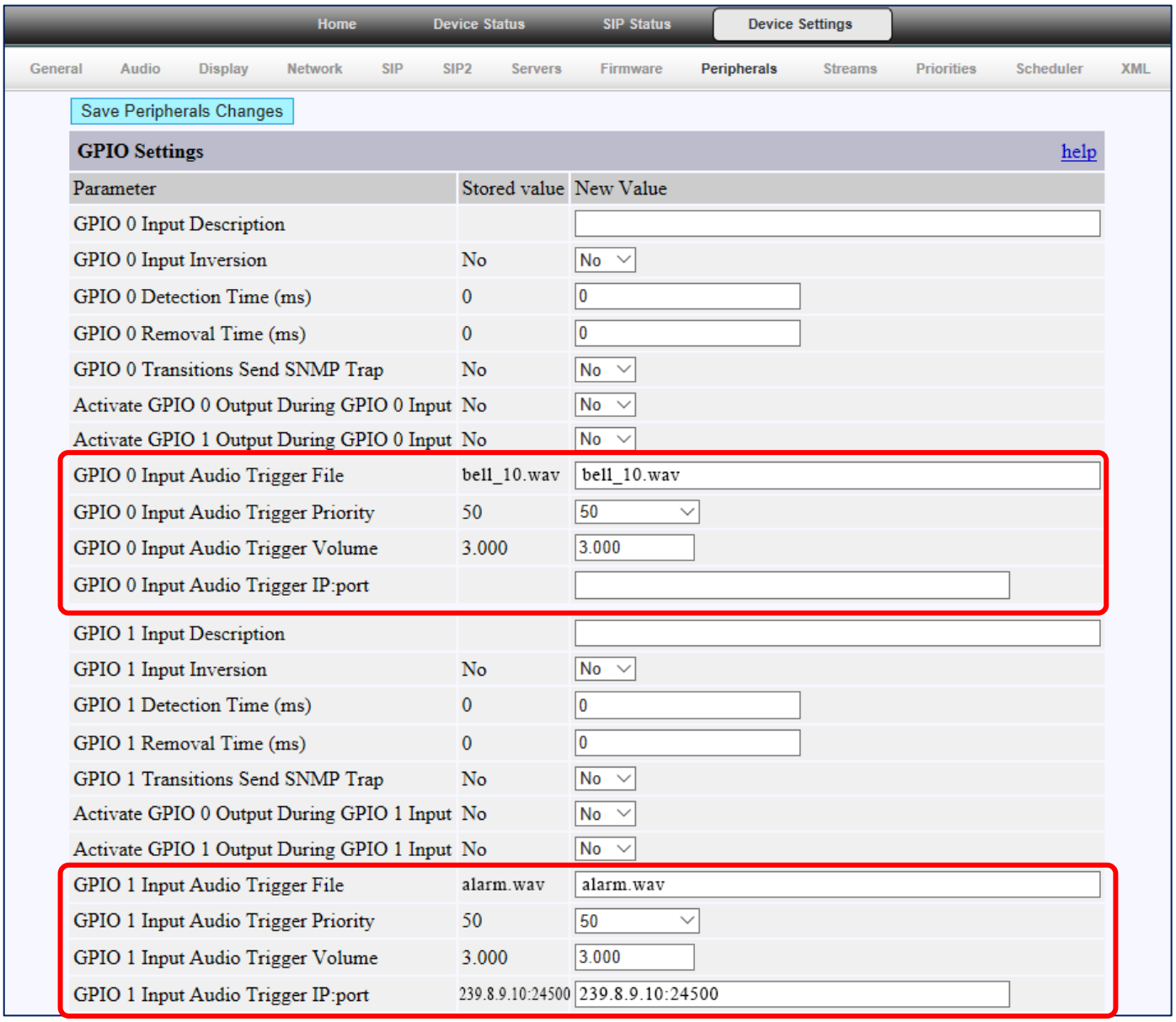
d. Click the *Choose File* button to browse and select the sound file to upload, then click *Submit*.



PLAYBACK OPTIONS

GPIO Functionality

Use GPIO settings to trigger onboard sounds. After uploading the sounds to the device, go to **Device Settings → Peripherals**, and update the ***GPIO x Input Audio Trigger File*** field with the sound file. Also set the ***GPIO x Input Audio Trigger Priority***, ***GPIO x Input Audio Trigger Volume***, and ***GPIO x Input Audio Trigger IP Port*** as needed. Configure these settings for both GPIO 0 and GPIO 1 if appropriate.



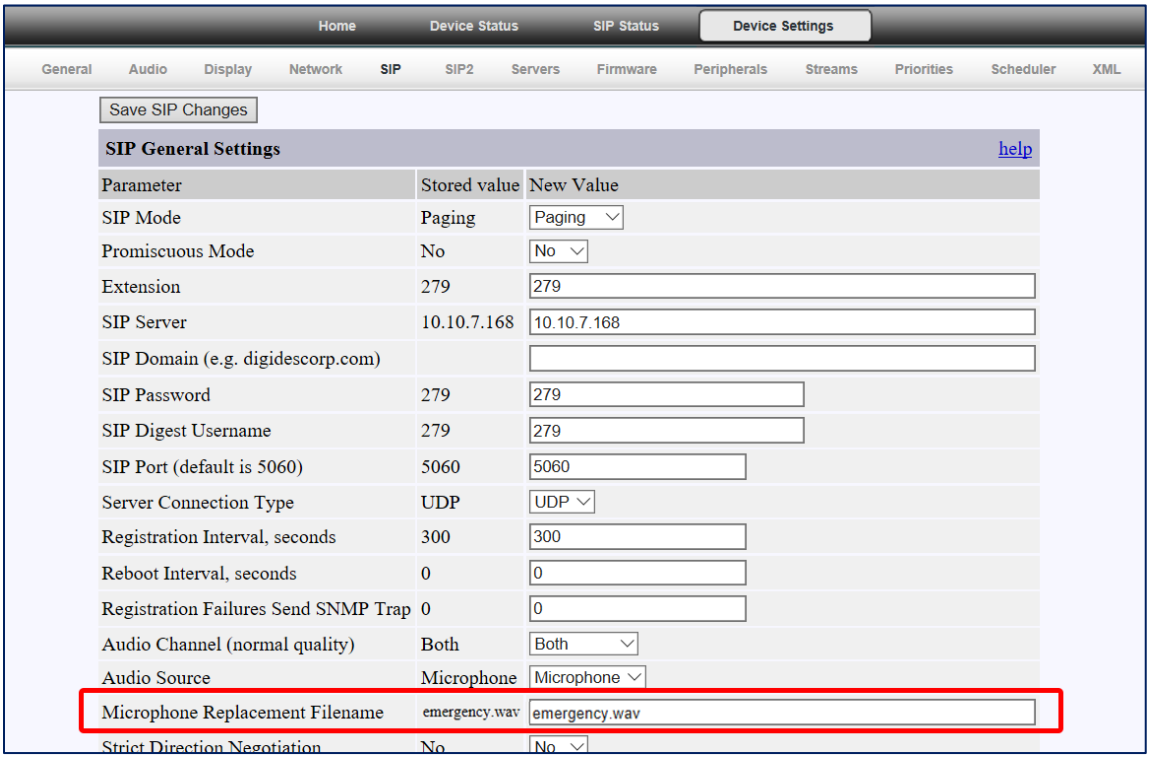
If using a configuration file, include the following parameters in the GPIO tag (values included for example purposes):

```
<GPIO
    audtrig_file_name_gpio0="bell_10.wav"
    audtrig_vol_gpio0="3.000"
    audtrig_priority_gpio0="50"
    audtrig_file_name_gpio1="alarm.wav"
    audtrig_vol_gpio1="3.000"
    audtrig_priority_gpio1="50"
    audtrig_send_port_gpio1="24500"
    audtrig_send_ip_gpio1="239.8.9.10"
    …
    />
```

SIP Functionality

Use SIP settings to setup the device to stream the onboard sound back to the caller when triggered by a SIP call. After uploading the sounds to the device, add the filename under **Device Settings → SIP** in the ***Microphone Replacement Filename*** field. For IPBTN, include the full path and filename, e.g. sounds/emergency.wav.

Note: Audio file playback will repeat until the SIP call is dropped.



If using a configuration file, add the following parameter to the SIPConfig tag (value included for example purposes):

```
<SIPConfig
  mic_replacement_filename="emergency.wav"
  …
/>
```

For the Smart IP Button (IPBTN), add the following (value included for example purposes):

```
<SIPConfig
  mic_replacement_filename="sounds/emergency.wav"
  …
/>
```

Chimes

Use the Scheduler for chimes onboard the device. After creating a subdirectory for a chime library within the */chimes* directory of the device, go to **Device Settings → Scheduler** to configure the following parameters:

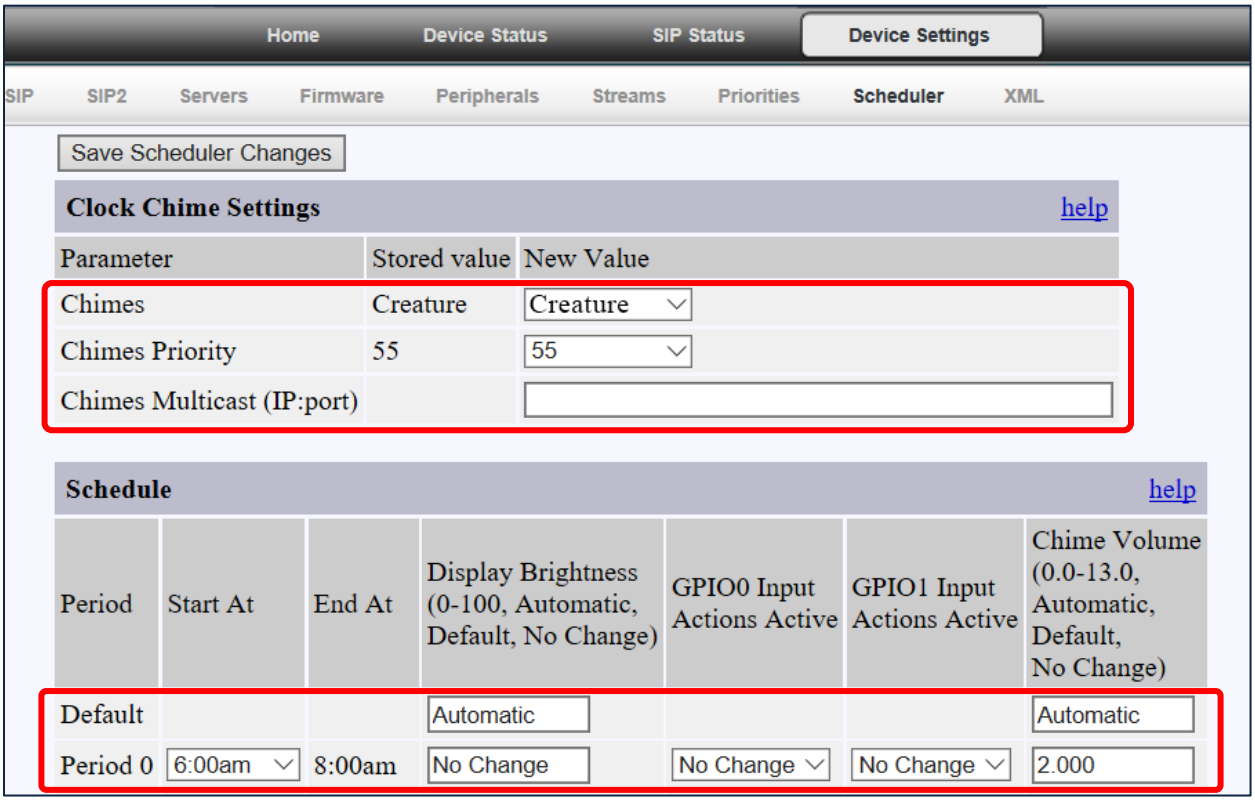
Clock Chime Settings

- *Chimes* Directory name of the chimes library (e.g., "Creature")
- *Chimes Priority* As desired (1=highest / 100=lowest / 55=default)
- *Chimes Multicast (IP:Port)* If specified, the chime audio will stream to this multicast address port, instead of playing back locally on the device loudspeaker (e.g., 239.8.9.10:24500)

Schedule

- *Schedule* Details As desired
- *Volume* (0.0=off / 13.0=loudest)

  Note: The *Chime Volume* column only appears once you have selected a chime library. Choosing "Automatic" allows the chime volume to adjust automatically based on the ambient light level. The lower the ambient light level, the lower the chime volume. "Default" uses the default chime volume setting specified at the top of the schedule table chime volume column.



If using a configuration file, add the following parameter to the Schedule tag (value included for example purposes):

```
<Schedule chime_type="Creature" chime_vol_default="Automatic" >
  <Period start_at="600" chime_vol="2.000" />
</Schedule>
```