Audio File Format for
Digital Acoustics IP Endpoints
January 2013

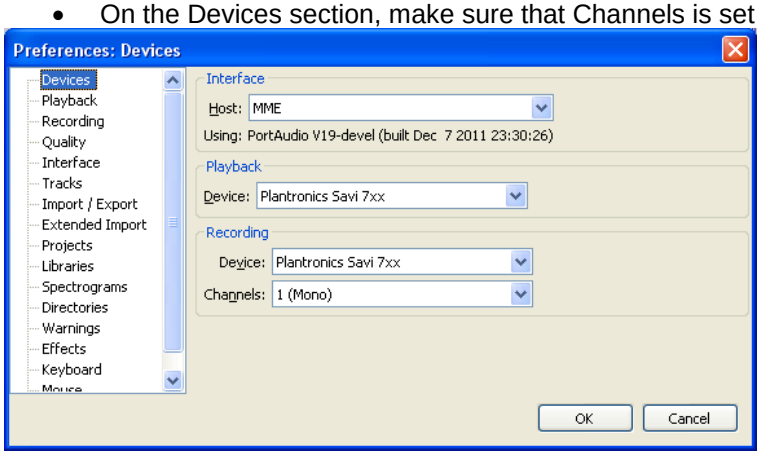
Overview

Digital Acoustics' IP Endpoints play wav files with a format of mono, 16-bit uLaw, with a sample rate of 8000. Any audio editing program that can create or convert audio files to this format can be used. This application note uses Audacity V1.3.14 (Open source - downloadable) to demonstrate how to create a new voice recording and guidelines for converting an existing audio file to the proper format.

Audacity Setup

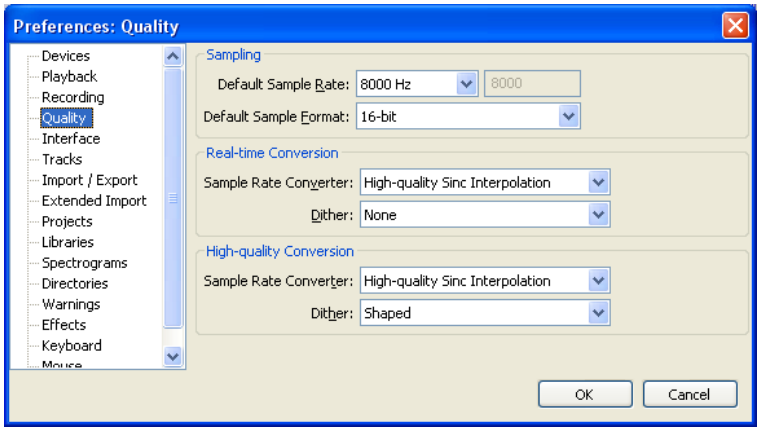
Set the preferences by selecting menu option **Edit - Preferences**

- On the Devices section, make sure that Channels is set to 1 (Mono)



On the **Quality** section,

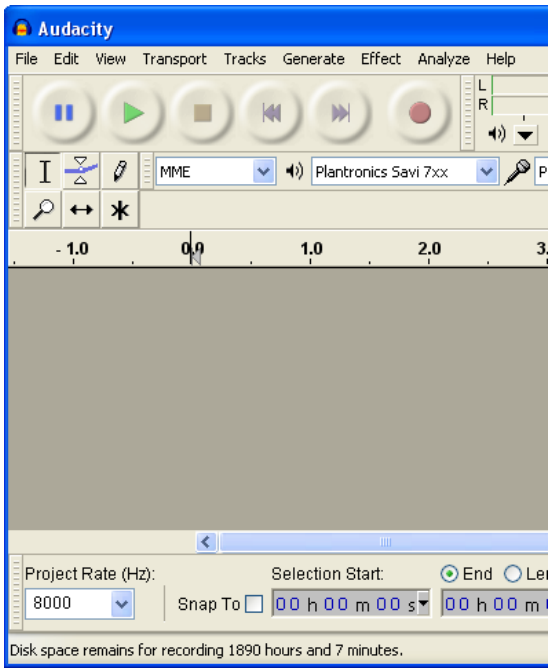
- Set the **Default Sample Rate** to 8000Hz
- Set the **Default Sample Format** to 16-bit
- Click the **OK** button to close the Preferences



Digital Acoustics, LLC
37 Sherwood Terrace • Lake Bluff, IL • 60044 • USA
esupport@digitalacoustics.com

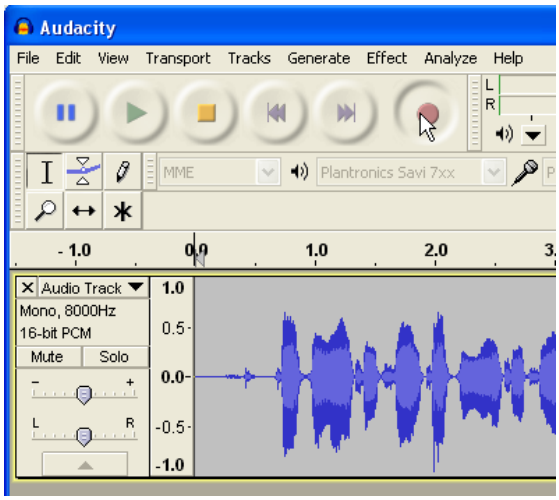
Creating Audio Files

Audacity is now set to record audio.



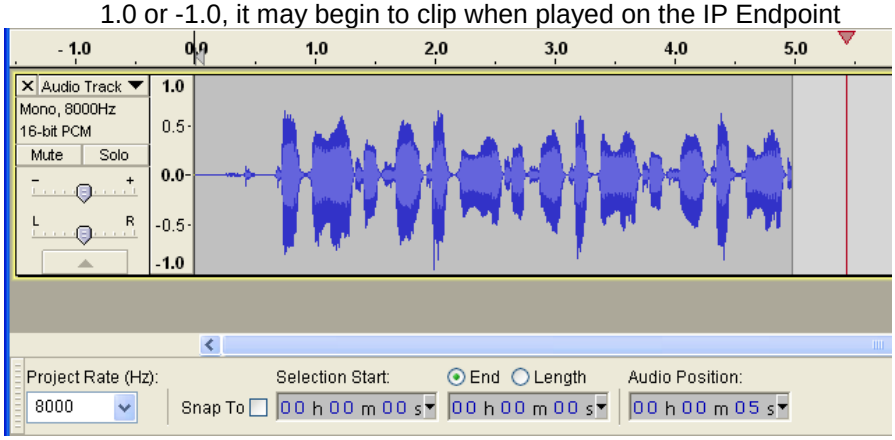
- Make sure the **Project Rate (Hz):** in the lower left hand corner of the screen is set to 8000
- Press the Record button and begin speaking into the microphone on the PC

- The recorded wav file starts appearing on the screen. Press the Stop button when finished recording



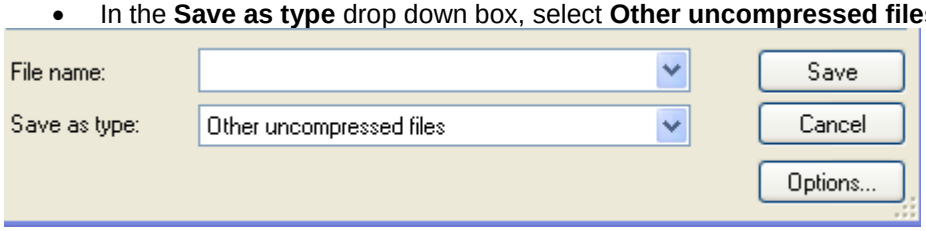
Please note the following:

- Look to the left of the recording to verify the type - Mono, 8000Hz, 16-bit
- The audio should be concentrated between .75 and -.75 on the left hand scale
- It is OK if some peaks go above or below these values, but the closer the audio gets to 1.0 or -1.0, it may begin to clip when played on the IP Endpoint



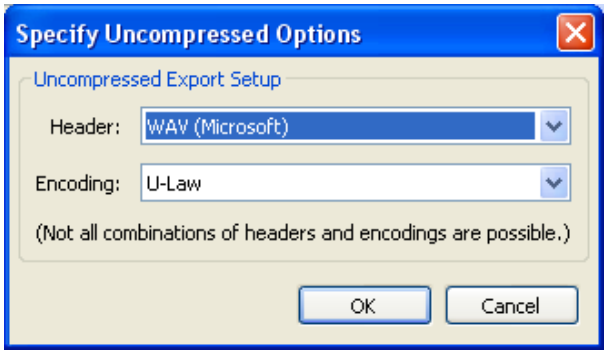
To save the recorded file,

- Select menu option **File → Export…**
- Enter a **File name**
- In the **Save as type** drop down box, select **Other uncompressed files**



Press the **Options** button

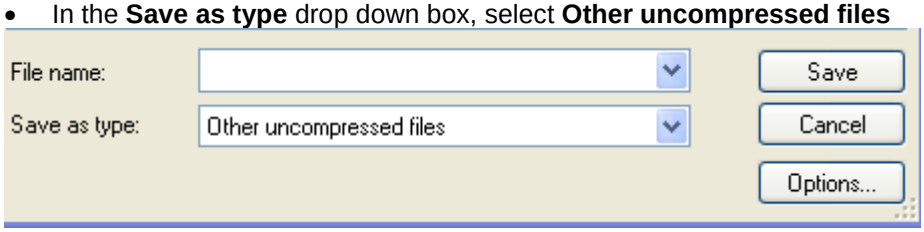
- For the **Header** drop down box, select Wav(Microsoft)
- For the **Encoding** drop down box, select U-law
- Click the **OK** button



Converting Existing Audio Files

If existing files need to be converted into the proper format, keep the following in mind:

- For stereo recordings, use the menu option **Tracks → Stereo Track to Mono**
- For files with a higher sample rate, use the menu option **Tracks → Resample…** and set the **New sample rate (Hz):** to 8000
- To set the audio to the correct volume level, use menu option **Effect → Amplify…** and increase or decrease the volume level by specifying a positive or negative value for **Amplification (dB):**
- If the wave forms have peaks are very close to 1.0 or -1.0, use menu option **Effect → Normalize…** with a value of -1.0 dB to eliminate any clipping
- Make sure the **Project Rate (Hz):** in the lower left hand corner of the screen is set to 8000
- To save the file,
  - Select menu option **File → Export…**
  - Enter a **File name**
  - In the **Save as type** drop down box, select **Other uncompressed files**



Press the **Options** button

- For the **Header** drop down box, select Wav(Microsoft)
- For the **Encoding** drop down box, select U-law
- Click the **OK** button