

Data storage of audio files from SongMeter 2+ (ARU)

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27 March, 2019

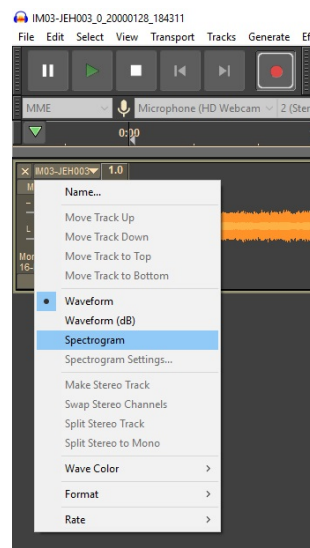
After an ARU/remote broadcast sampling event, transfer raw recordings from the SD cards to duplicate 2+ TB external hard drives for backup and analysis.

The recordings generated by a SongMeter SM2+ include the start time of the recording using the naming convention `PREFIX_C_YYYYMMDD_hhmmss.wav`, where `PREFIX` is the programmed location prefix, and `C` is the channel (0 - left; 1 - right) for stereo recordings. If using the [Black Rail SongMeter 2+ \(ARU\) programming SOP](#), the location prefix follows a <ARU ID>-<survey point ID> naming convention. Additionally, the SongMeter will record continuously but create two recordings, one per channel, every 2 hours.

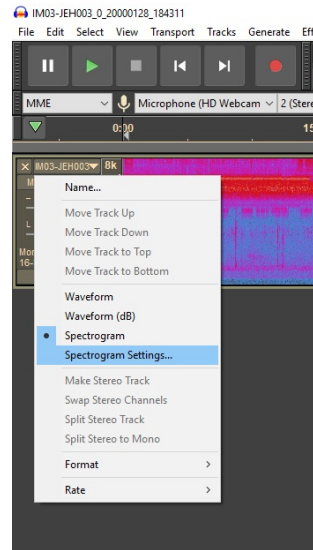
For example, consider the first two audio files generated during an ARU survey at point CDR4H with SongMeter IM06, with the recording session beginning 30 minutes before sunset on 15 April 2019 (7:10 PM; 19:10:00). The programmed location prefix would be IM06-CDR4H. The first 2 hour long files would thus have names similar to `IM06-CDR4H_0_20190415_191000.wav` for the left channel and `IM06-CDR4H_1_20190415_191000.wav` for the right channel. Subsequent files would be named similarly but with different time stamps.

Raw recording transfer, organization, and storage

1. Access the raw audio (`.wav`) recordings on the SD card(s) in the SongMeter. The SongMeter creates files under a directory called `Data`.
2. Record SongMeter SM2+ location prefix, recording end date, and file number information for each channel in the ARU deployment data sheet.
3. Inspect the first and last recordings on each channel for problems
 - a. Open Audacity
 - b. Open the `.wav` file to inspect.
 - c. From the recording dropdown menu, select **Spectrogram**.



- d. From the recording dropdown menu, select **Spectrogram Settings...**



- e. In the open dialog box, check **Grayscale**.
 - f. Inspect the spectrogram for obvious recording issues (e.g., no or excessive background noise).
 - g. Listen for a few seconds at 2 - 3 locations throughout the recording to confirm adequate recording quality.
 - h. Close the recording. If prompted, do not save any changes.
 - i. Repeat for the other recordings.
4. Select the approximately 60 - 100 .wav files in the **Data** directory and move them to the **YYYY_ARU_files** directory on both external hard drives, where **YYYY** is the current year.
 - a. A single 2 hour recording using the [Black Rail SongMeter 2+ \(ARU\) programming SOP](#) settings should be approximately 315 MB. Note that when recording in stereo, there will be two 2-hour files for each time stamp, one for each microphone channel.
 5. After confirming the files were copied successfully to both external hard drives, the contents of the SD card may be deleted. The SD card can now be used for another deployment.