



SONGMETER NOTES

Placement: *What's the best place to get the best results?*

- At least a meter off the ground
- Mount on trees usually- but not too wide where it blocks microphone
- Lock them up to prevent theft or more inconspicuous spot
- Near wetland going to monitor

Song Meter Setup and Deployment

General Protocol

- Download preconfiguration code and load onto slot A SD card ([WildLife Acoustics SM4 configuration](#))
- Schedule: 24 hour schedule- every half hour for 3 minutes
- To turn on, switch external power to internal power when ready
- Import SD card on device
- Export data from SD card when finished

Step-by-Step

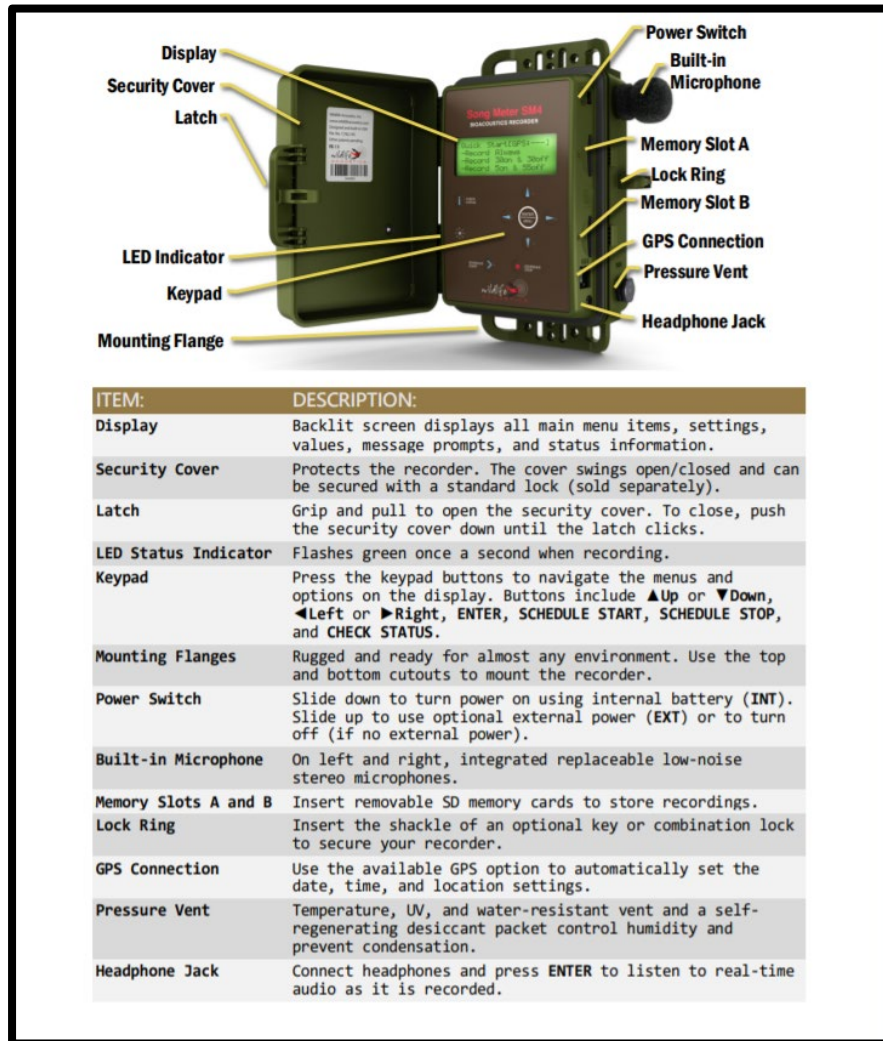
Program Set up:

- Insert SD card
- On Wildlife Acoustics website, under “Song Meter SM4 Product Downloads” download [Song Meter Configurator Software](#)
- Download version pertinent to your device (windows, mac, linux)
- In “Deployment Scenario” select the storage memory for the SD card in Slot A and Slot B
- In “Settings”
 - Set gain to 48dB for left and right
 - Preamp to 26dB (default)
 - High-pass filter to 220Hz for left and right
 - You can set coordinates if applicable by checking the box next to “Position:”
- In “Schedule” set the schedule for song meter to record
 - START select “time” from the drop-down menu
 - Set to midnight or 00:00
 - Duty select “cycle” from drop-down
 - ON set to 3 minutes
 - OFF set to 27 minutes
 - END select “time” from the drop-down menu
 - Set to 23:59 to

**This means device will record for 3 minutes every 30 minutes for 24 hours*

- Save file to SD card

Device Setup:

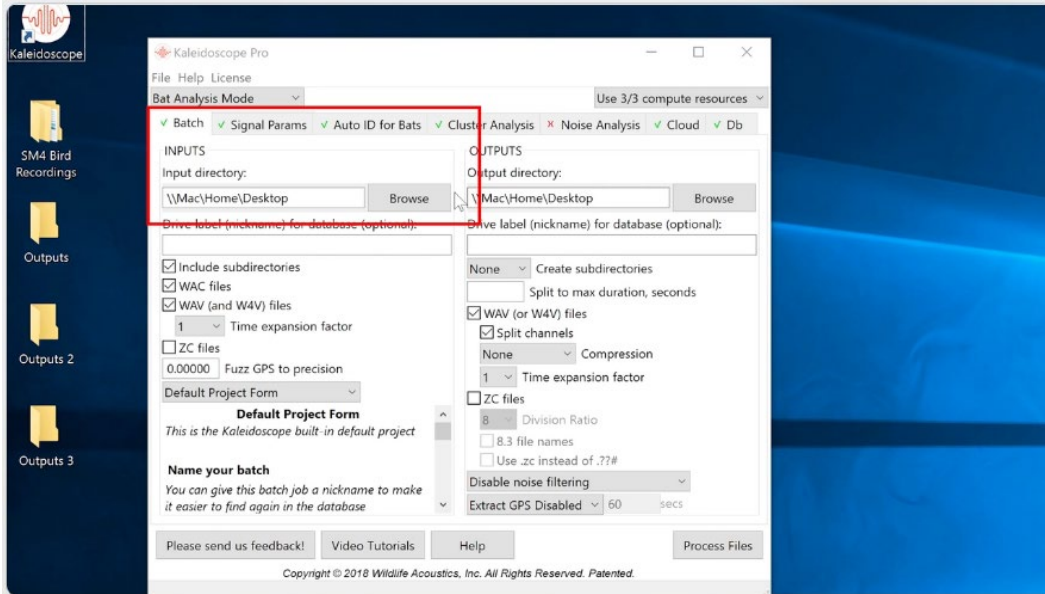


- To turn on song meter, move power switch from “Ext” to “Int”
 - This refers to external power supply and internal power supply
 - When set to internal, the batteries are in use
- Insert SD card with configuration into Slot A
- Main Menu Screen → Schedule → Import Schedule+Settings → Select appropriate file
 - You can always edit the schedule in device by Main Menu → Schedule → Edit Schedule
- When ready to record select “Schedule Start”
- Select “Schedule End” when done
 - Note: Batteries will last about two weeks in field

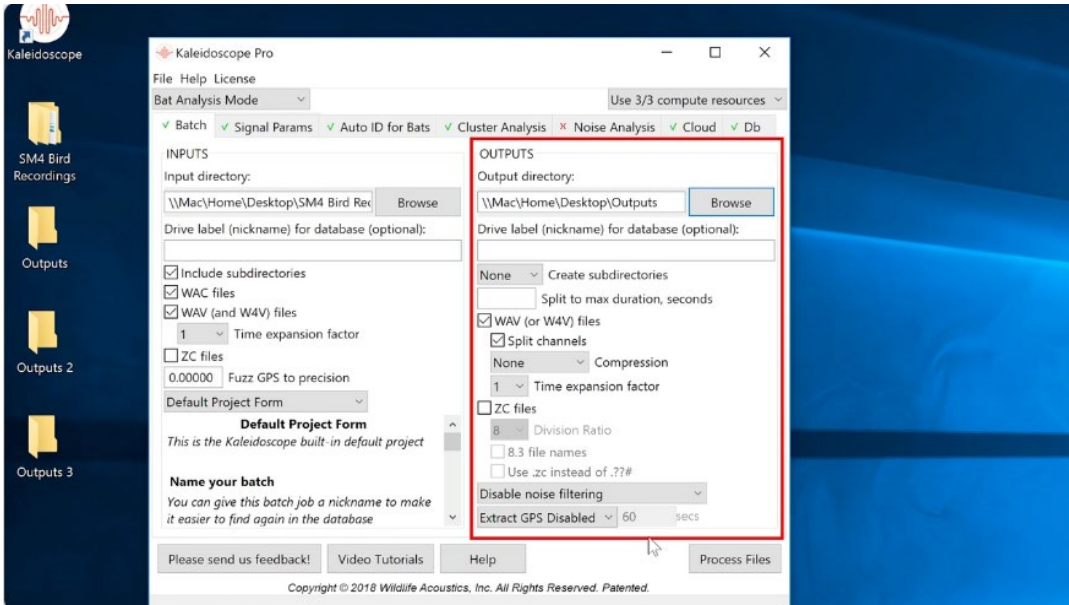
Data Analyzation

- Use Kaleidoscope or Raven software (following is with Kaleidoscope)
- Select folder that contains the desired audio files

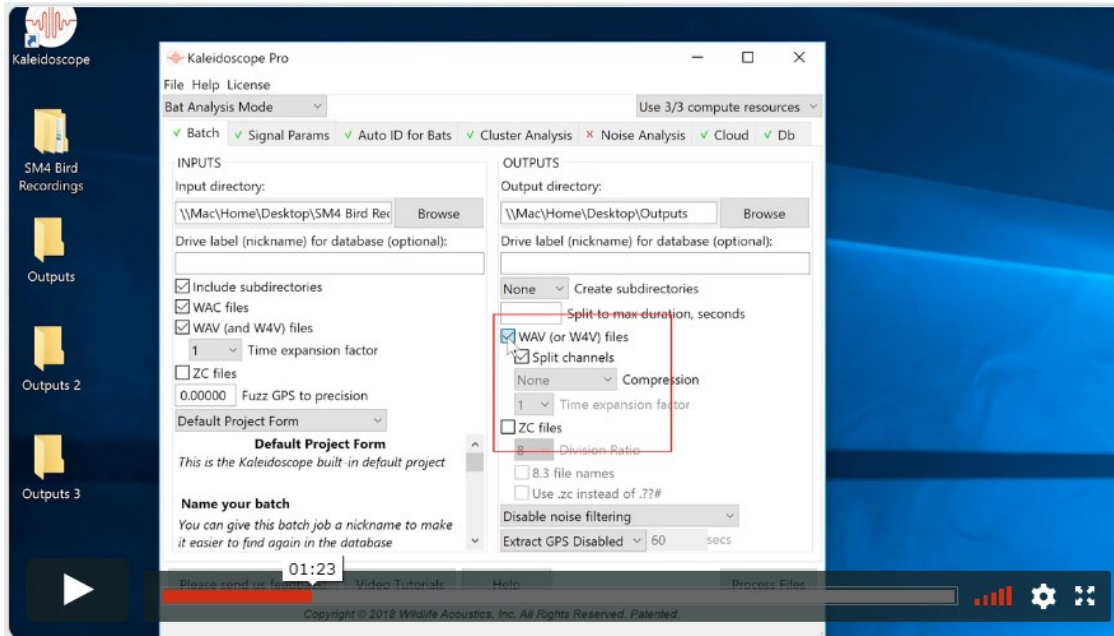
Basic Cluster Analysis:



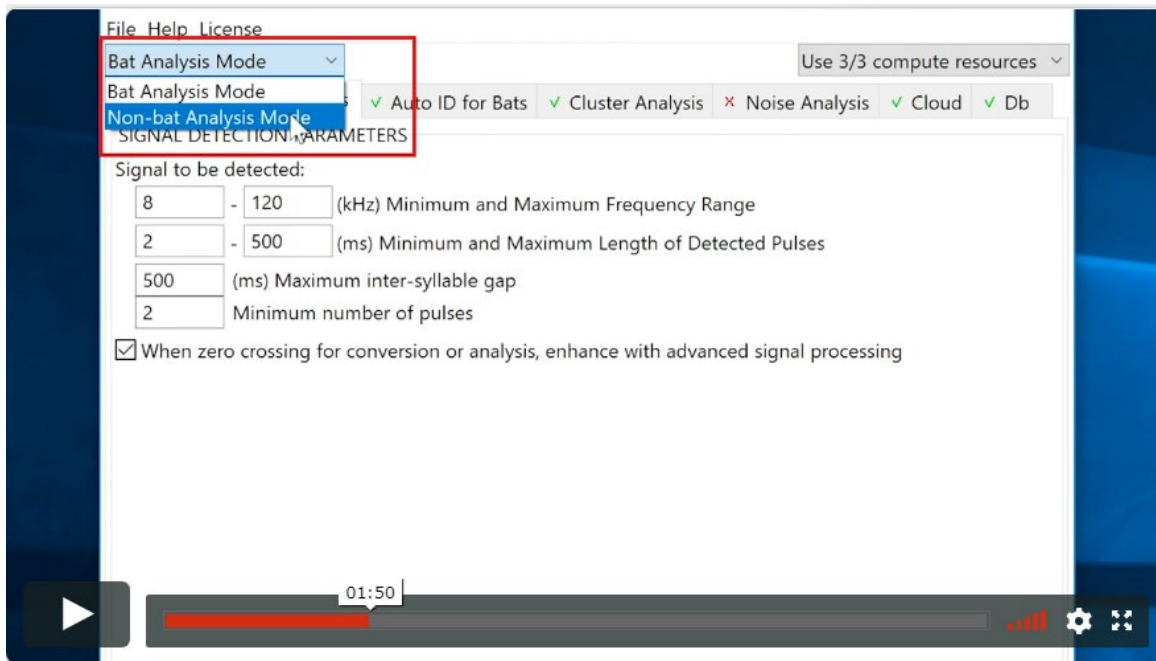
- Select output folder




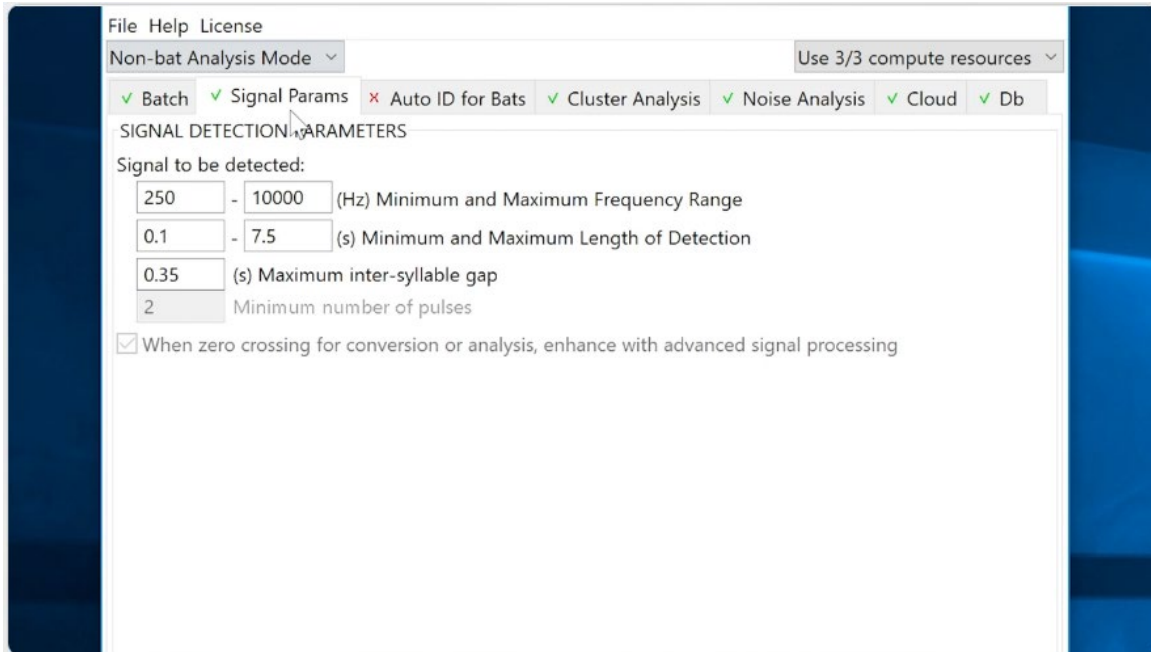
- To save time and disk space uncheck WAV to prevent Kaleidoscope from creating new output files



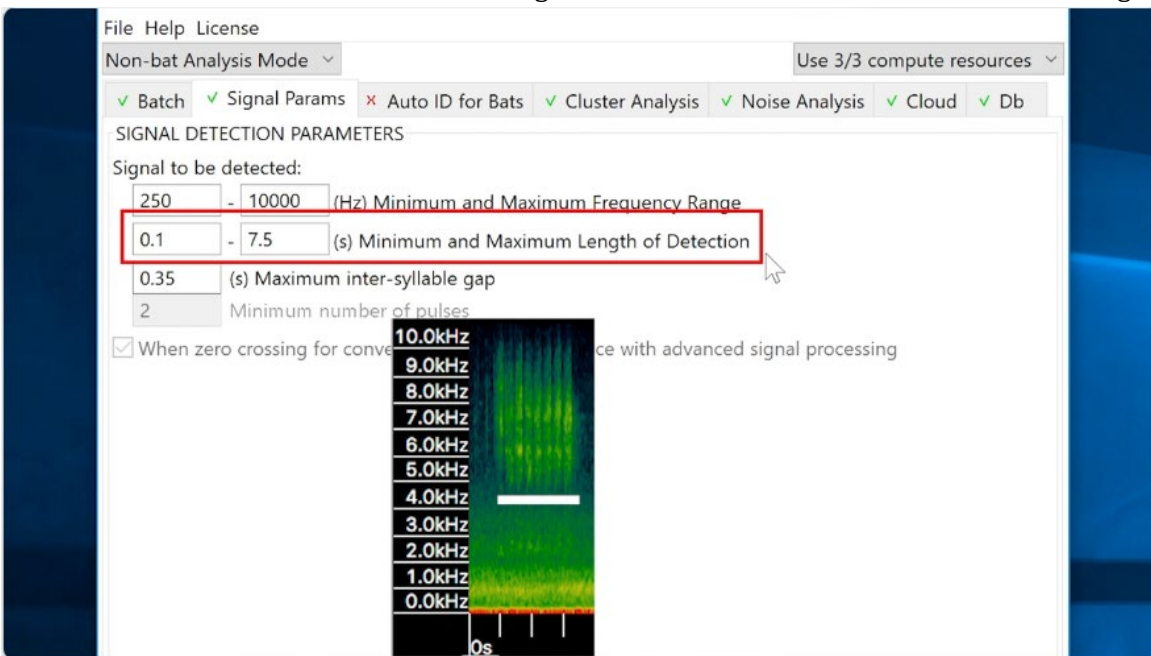
- Under tab labeled “Signal params” make sure “Non-bat Analysis mode” is selected



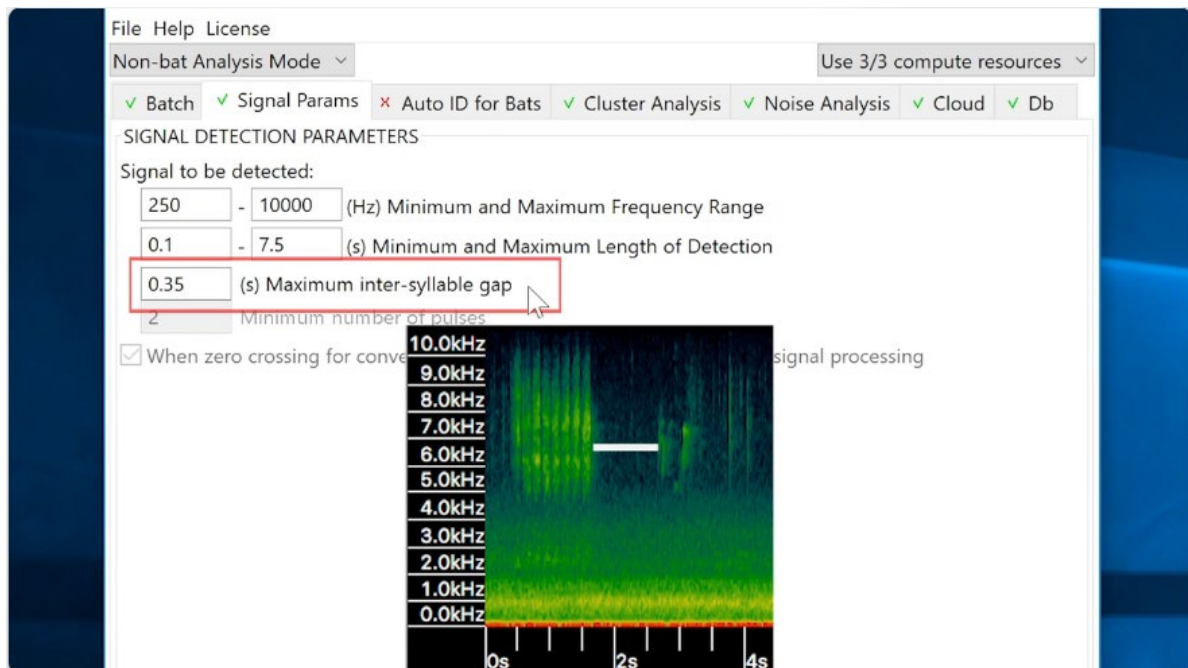
- Default settings  to use for rest of page



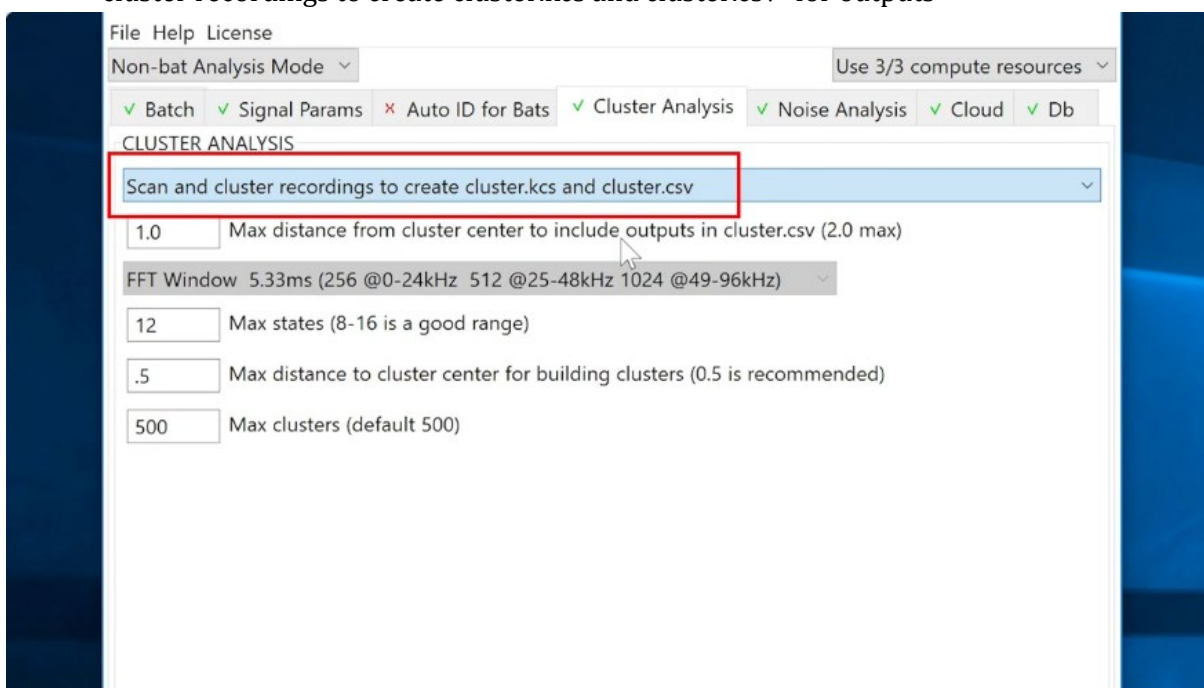
- First line means the analysis tool will search signals within the files that are within that range
- Second line determines the length of time software will look for continuous signals



- Third line determines the intersyllable gap, in other words the amount of silence between signals



- Segments that follow all three parameters will be analyzed as a single detected signal
- Under the “Cluster Analysis” tab, select from the dropdown menu the option “scan and cluster recordings to create cluster.kcs and cluster.csv” for outputs



- Default settings ok
- Program will group similar recordings with each other and form a cluster
- Each cluster is numbered (i.e. 0,1,2...)

- The first recording for each cluster is the recording closest to the cluster center, listen to the first few recordings to identify
- Go through clusters to identify calls and rename cluster to name of species