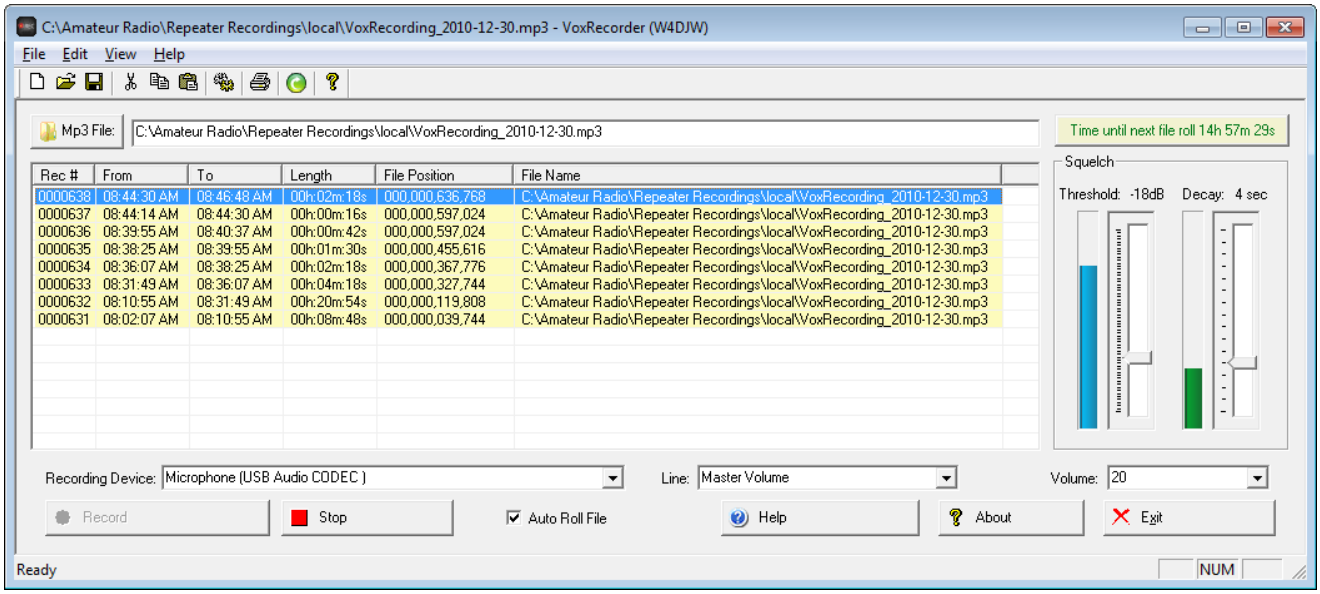
VOX Recorder v1.0

December 30, 2010

DESCRIPTION

- A sound recorder used to monitor audio and only record when audio reaches a user selected level.



FEATURES

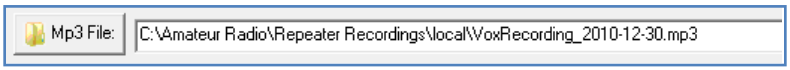
- Automatic sound file rolling from one day to the next
- Stores recorded sound in compressed MP3 format (much smaller than the WAVE format, ~1/4 the size)
- Runs in the background reduced to the icon tray rather than the task bar
- Index and open sound segments of the day based on the log maintained throughout the day
- Allows the user to set the detected audio VOX trigger threshold as well as the decay time in seconds
- User selectable recording device and corresponding input line as well as recorded volume
- Remembers the last executed user selected values and uses those values as defaults for subsequent startup values
- Resizable main window to fit users preference (remembers size and location for subsequent startups)
- This is freeware so you'll need to accept all the risks that go along with freeware. (how's that for a transparent license agreement?)

INSTALL

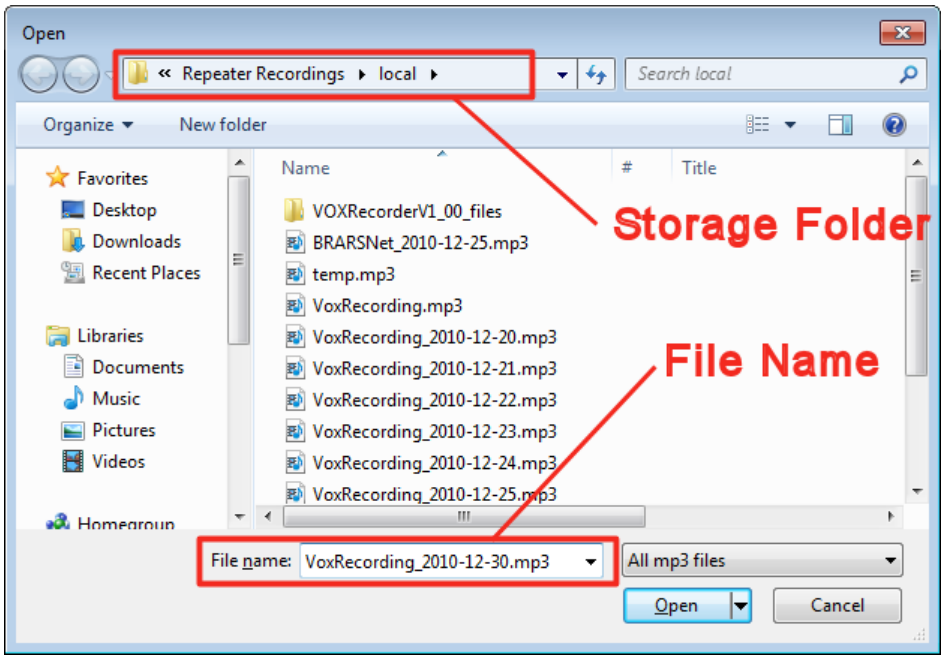
Simply expand the compressed zip file to a folder of your choosing and double click the VoxRecorder.exe icon.

SETUP

Select a folder and file name to store recorded data using the "MP3 File" button:



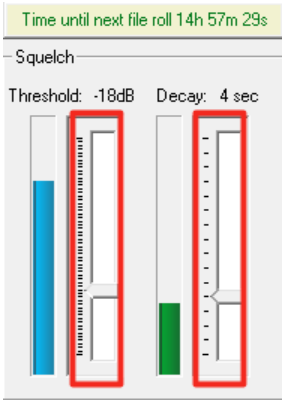
1. This will open a browser dialog allowing selection and/or creation of the file/folder used to store sound data:



2. Select the Audio recording device, line and volume with the audio selection drop downs:

   The best setting for the recording volume level will depend on your system setup. I suggest you record some sound and listen to the recorded audio level produced with the current setting. Make finer adjustments from there.

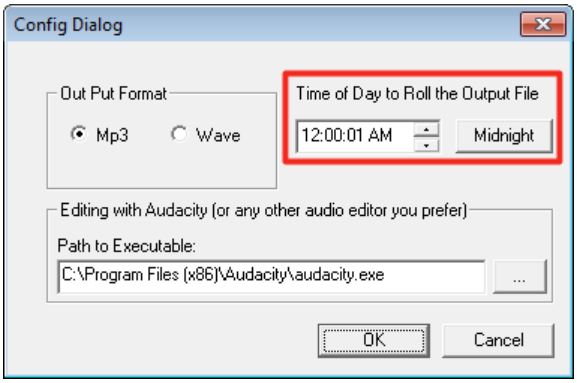
3. Set the recording threshold and decay time on the vertical sliders to the right of the main window:



This should be experimented with for your sound system setup. Some systems will have more variation than others. Trial and error is the best practice for getting these set to meet your needs. The more decay time you add to the recordings the larger your recording files will be.

4. Open the configuration dialog with the config icon on the main toolbar:

5. In the configuration dialog, select the hour of the day you wish to roll the sound file: (*this setting assumes you have a computer that is on and connected to a radio's external speaker 24 hours a day*)



- The "Wave" output is not built into the program at this time so you shouldn't select it.

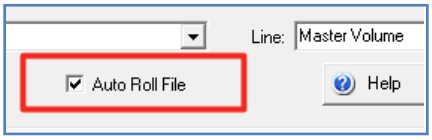
- You may want to go ahead and select your favorite audio editor while you are in this dialog. I prefer Audacity which is free. If you wish to play back segments of the recorded audio, opposed to the entire day, you can Goggle Audacity to find the download and install it on your computer.

- Select OK to close this dialog.

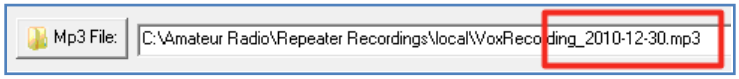
- On a busy repeater you can expect about 100 megabytes of recorded information compressed into 4 to 7 hours of audio.

- If you don't want to record audio 24 hours a day skip to bullet number 7.

6. Turn on automatic audio file rolling, (found on the main panel) if you wish to roll the audio file every day:

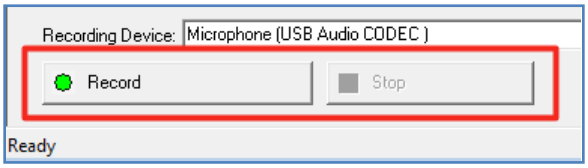


Rolling audio files requires the insertion of the date into the file name of the recorded audio file. To accomplish this, we need to know where the end of the file name is and where the beginning of the file extension is. We locate this position looking for the underscore and the dot found on either side of the date as in this example:

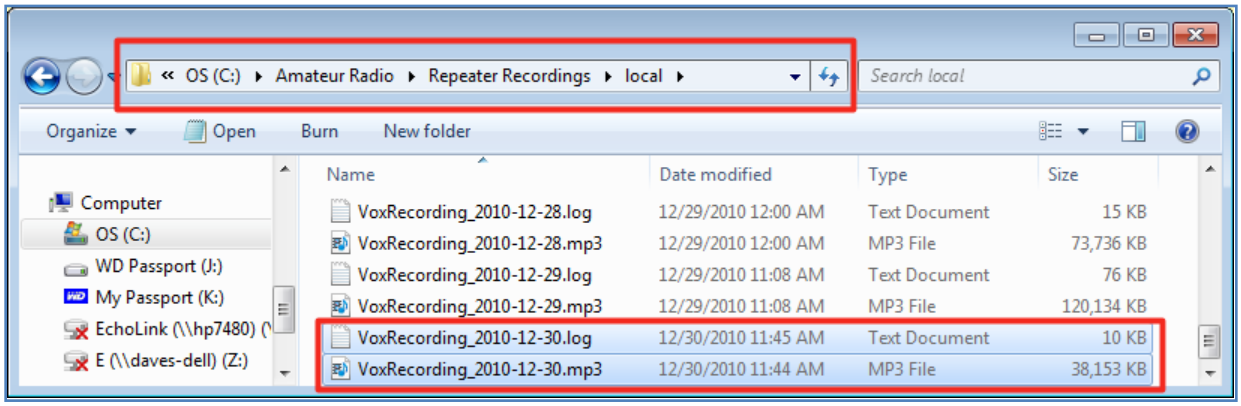


If you choose a different naming convention, make sure you seed your file name with the "_" and the "." wrapped around the day of the year as in the above example and you should be fine.

7. You are now ready to begin recording. Select the Record button in the lower left corner of the window:



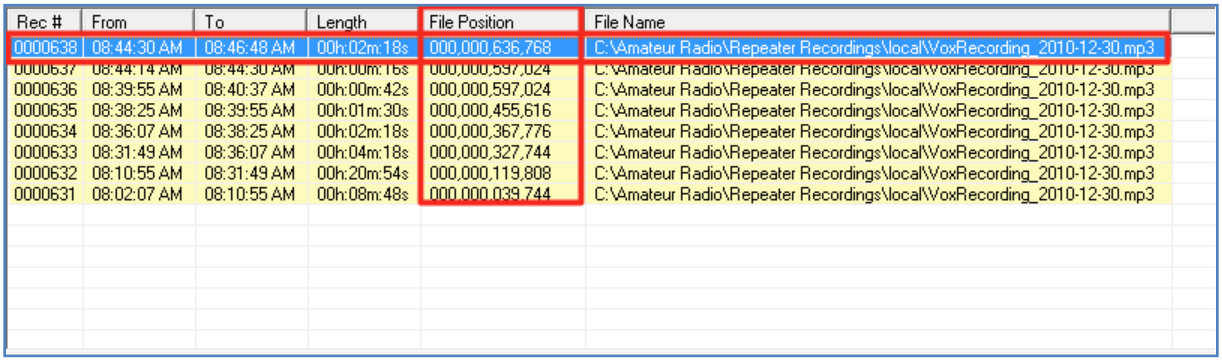
8. When sound is detected, you should see two files being written to the location you picked for sound file storage:



Each day the number of files stored here will grow by two. The sound file is the one ending in .mp3 and the log file is the on ending in .log. The log file contains the index which correlates to the time of the day the record was written to the file. This information is used to quickly open the sound file already indexed to the time of day you would like to listen to.

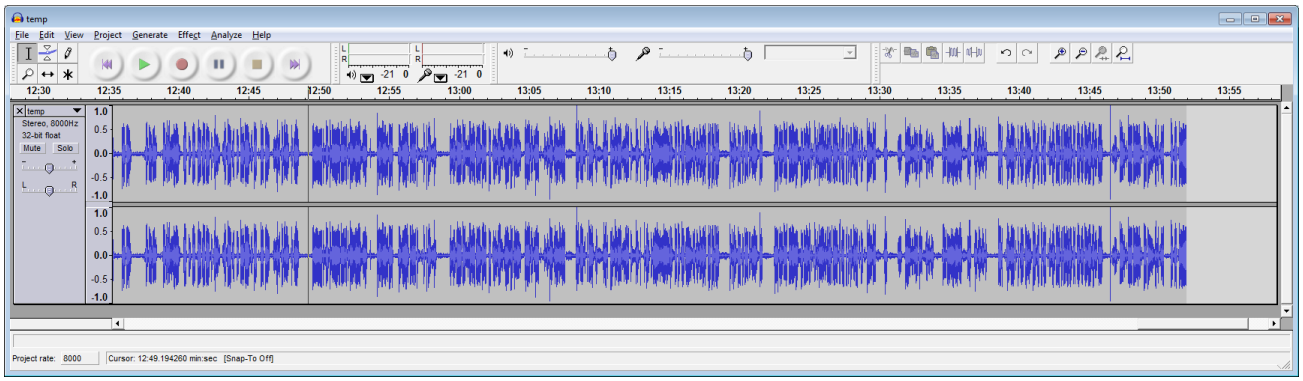
9. At this point you are recording audio from your favorite repeater or low band radio receiver. Now you'll want to be able to hear what you recorded. For this function I choose to use the Audacity sound editor. You should find Audacity on the web and install it on your computer if you have not done so already. You'll also need the lame MP3 encoder / decoder to load mp3 files into and save mp3 files from Audacity. The Audacity web site includes instructions on how to do this. The following steps assume you choose to use Audacity as your sound editor and that you have it installed as well as the lame encoder.

10. Listening to sections of the recorded file is simple. Once you have configured the location of your instance of Audacity for the VoxRecorder with the config dialog as mentioned in step 5 above, you simply double click on any record in the list view of the VoxRecorder:



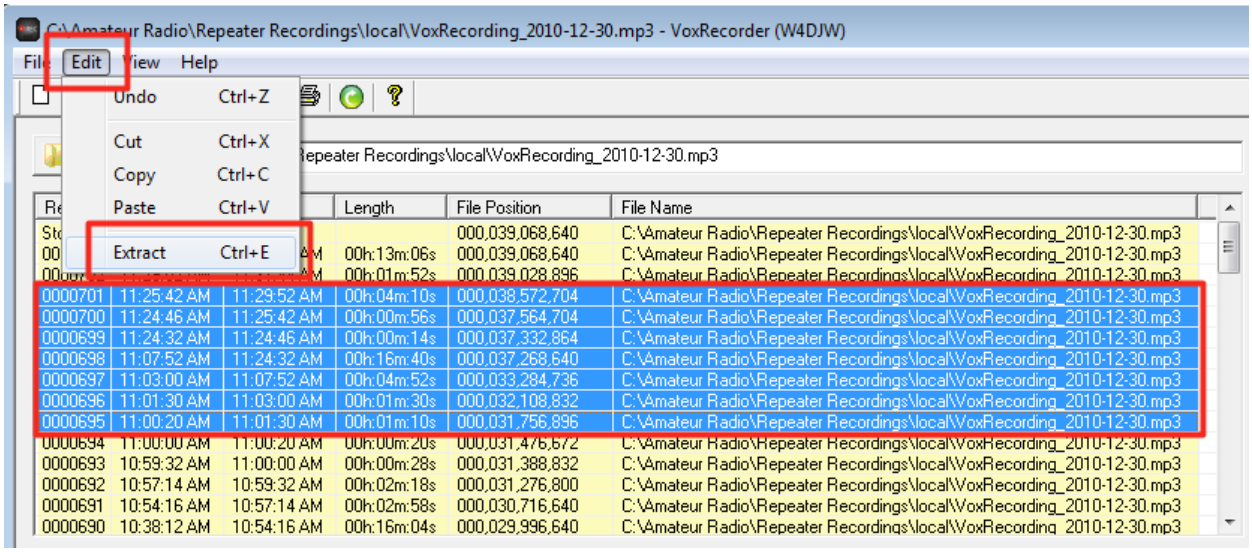
Rec #	From	To	Length	File Position	File Name
0000638	08:44:30 AM	08:46:48 AM	00h:02m:18s	000,000,636,768	C:\Amateur Radio\Repeater Recordings\local\VoxRecording_2010-12-30.mp3
0000637	08:44:14 AM	08:44:30 AM	00h:00m:16s	000,000,597,024	C:\Amateur Radio\Repeater Recordings\local\VoxRecording_2010-12-30.mp3
0000636	08:39:55 AM	08:40:37 AM	00h:00m:42s	000,000,597,024	C:\Amateur Radio\Repeater Recordings\local\VoxRecording_2010-12-30.mp3
0000635	08:38:25 AM	08:39:55 AM	00h:01m:30s	000,000,455,616	C:\Amateur Radio\Repeater Recordings\local\VoxRecording_2010-12-30.mp3
0000634	08:36:07 AM	08:38:25 AM	00h:02m:18s	000,000,367,776	C:\Amateur Radio\Repeater Recordings\local\VoxRecording_2010-12-30.mp3
0000633	08:31:49 AM	08:36:07 AM	00h:04m:18s	000,000,327,744	C:\Amateur Radio\Repeater Recordings\local\VoxRecording_2010-12-30.mp3
0000632	08:10:55 AM	08:31:49 AM	00h:20m:54s	000,000,119,808	C:\Amateur Radio\Repeater Recordings\local\VoxRecording_2010-12-30.mp3
0000631	08:02:07 AM	08:10:55 AM	00h:08m:48s	000,000,039,744	C:\Amateur Radio\Repeater Recordings\local\VoxRecording_2010-12-30.mp3

By double clicking, you'll quickly index to the position in the sound file representing the time of the day you are most interested in. This saves time finding the portion of the sound file you really want to listen to. When you double click you see the editor open and only the portion of the sound file you are most interested in will load.



Sometime a single segment / recording represents a very small portion of the overall timeframe you are interested in such as a repeater identifying in Morse code. To

prevent having to open and close many files, you can multi-select using the shift key and open the entire selection using the menu Edit/Extract or the hot key Ctrl^E.



This action will index to the start of the range selected and extract to the end of that range followed by opening that segment selected.

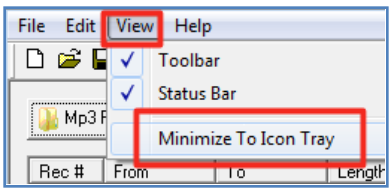
11. Some options you can play with:

Drag and drop is supported which allows you to drag log or mp3 files (created with VoxRecorder) from your explorer window to the VoxRecorder window. The file dropped on the VoxRecorder will open and you can continue recording to that file by selecting the "Record" button or you can listen to segments of that recording by double clicking the listed time segments in the list view of the VoxRecorder.

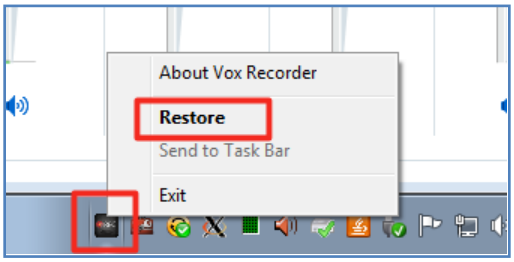
This functionality works across your local network as well. If you record a repeater on one computer and want to listen to those recording on a different computer (a laptop for example), you can drag the sound or log files from the remote computer to the local computer's instance of the VoxRecorder and listen to what is happening anytime anywhere.

The refresh button is for refreshing a file being generated on a different computer as described above.

You can minimize the VoxRecorder to the icon tray to keep your main task bar (typically at the bottom of your desktop) clean while you record throughout the day:



To retrieve from the icon tray, right click on the VoxRecorder icon in the task tray and choose "Restore".



12. Future considerations

    Instant playback without the need to install Audacity is being considered. The reason for this is to provide the possibility of cross band repeating in real-time. In my ham shack, I have a SignaLink connected to an HF rig and a dedicated computer recording the local repeater 24x7x365. It would be possible to tie the two instances of VoxRecorder together such that we setup a cross band repeater with any two radios on any two frequencies.

13. Contact information

    For suggestions / recommendations you can contact me at davewatson@charter.net

73 The End for now... (W4DJW)