

# **RadioCorder**

**Version 2.0**

User Manual  
Version 0.1  
Rev. 1 By Tim K8XS

## **A Small Introduction**

RadioCorder is a software application to simplify recording and controlling radios for amateur radio enthusiast, shortwave listeners or everybody with a need to record audio coming in the PC in an easy and/or automated way while controlling as many radios as possible.

### **1. Audio**

The program will work with any audio card installed on the operating system correctly.

By default it will use the first sound card but the user can select any available through the "Audio Settings Menu".

### **2. Radio**

RadioCorder can be operated with the following protocols for controlling radios connected to the Computer.

Note: There is no default protocol when the program runs for first time. The user must select the appropriate protocol from "Radio Settings Menu"

The user interface provides a convenient way to change Frequency, Mode and TX Status.

#### **a. HRD DDE (HRD)**

Ham Radio Deluxe is an excellent software for controlling radios. It supports external DDE control and this is utilized within RadioCorder.

In order to use RadioCorder with HRD protocol, HRD must be running in the system.

#### **b. HAMLIB (HAMLIB)**

HAMLIB is a set of open source libraries for controlling plenty of radios. When installing RadioCorder all libraries needed are installed in the Application Folder.

#### **c. SpectraVue (SV)**

SpectraVue is a software to control the SDR-IQ, SDR-14 and other Software Defined Radios. RadioCorder will use SpectraVue as its target Radio Controlling software once running in the system.

#### **d. HAMLIB as Master with SpectraVue as Slave (SV+HAMLIB)**

Used to synchronize a conventional radio controlled by Hamlib over the serial port with the SpectraVue Software Defined Radio.

#### **e. HRD DDE as Master with SpectraVue as Slave (SV+HRD)**

Used to synchronize a conventional radio controlled by HRD over the serial port with the SpectraVue Software Defined

## **Features**

### **1. RECORDING**

Recording can start manually or based on the schedule. Schedule is described later in this manual.

### **2. VOX**

The user may select VOX as a voice triggered way to start recordings. Once VOX is Selected then the user can use "Audio Settings" menu to adjust the VOX trigger level.

### **3. QSL**

When pressing QSL a small JPG file with a file-name consisting of the Date,Day, Time, Frequency, Mode will be saved to the path retrieved from the settings file.

This saves time when trying to keep notes in order to print-out a QSL card. The user has also the ability to add a custom JPG to be added / Super imposed on the final JPG with its logo/call-sign.

Note: Logo dimensions are 223\*47, you can set the Logo= to a valid jpg file.

### **4. ANTENNA SELECTION**

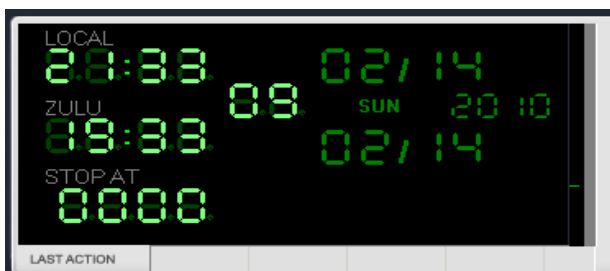
The user can select to control external devices using the Parallel or a Serial Port. An external circuit is needed in any case. When working with the parallel port the Bit 1 or Bit 2 of the port are triggered.

When working with serial port the user can set a string of characters that later can be identified from an external program to perform the switch.

## User Interface Explained



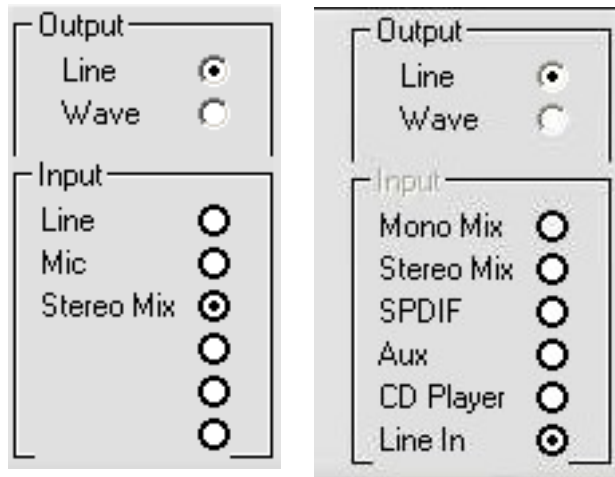
While The GUI is self explanatory I will try to give some more hints about the operation through it.



This is the Time of Day in both Local (retrieved from the Computer settings) and Zulu. The "Stop At" Counter counts down in seconds until the end of the recording. The Recording Duration is set either in the settings file for the manual recording or in the Schedule List per event.

Last Action is the last action related to scheduled events as a log for the user.

The small green - next to the Grey vertical line is the VOX level. Grey is the input volume (AudioMeter).



The Output is user selectable and can be set to Line or Wave in real-time. The input depends on the audio card and can be set at any time except when recording.

I attached two pictures from two different audio cards.

These settings are being saved each time the user clicks on any selection.



This is the status fields. The first two rows are related to the Radio Protocol used. The others are self explained.



This is the Radio Control part of the GUI.

Signal Level (Not supported with SpectraVue Protocol) is on the upper left.

The UP/DOWN are connected to the step selected below.

The frequency can be entered in two fields (dot not needed). If writing into the frequency fields a simple enter press is enough to change the frequency to the radio. (e.g. 145000 and 001, will tune the radio to 145.000.001)

TX will set the rig to TX mode. Another press will set it back to RX mode.



The field below the Record Button is an alphanumeric entry box where the user can input a detail (e.g. Station Name) that will be appended to the filename when the Record button is pressed.

When a recording is initiated another press to the same button will stop the recording.

Pressing any other button will open the appropriate settings menu. (or reread the schedule list)

21:00:00	3150	USB	REC_1	29	8
21:30:00	3150	USB	REC_1	29	8
23:00:00	4270	USB	REC_1	29	8
23:30:00	4880	USB	REC_1	29	1

The list above is the "already" recorded mp3's. Clicking on Open button will reveal the mp3s contained in the folder where the files are being saved. Green colored row is the recorded row. Orange is the Current recording.

Double click on any row and the built in player will start. (Related to Player Auto Start value in the "Audio Settings" menu).

0.5 will play the file in half the realtime speed for better acoustic clarity.

The list on the lower part is the next two hours within the schedule list. The latest column is the day number (1 for Sunday etc, 8 for daily). Double click on the bottom list to tune the radio at once.

Total Events : 197    Parallel    Radio : \_\_    Remote Path    Local Path    C:\Documents

Total Events is the total events present in the Schedule List.

Parallel or Serial is the setting for the peripheral equipment you may need to control.

Remote Path is PATH 1 and Local Path is PATH 2. It can be any path as written in the settings file. Green means Folder exist.

Last is the Path currently used. It blinks when recording.

## Schedule List Explained

The program works with a list which contains the following:

00:00:00,3415,USB,REC\_1,29,8

Time, Frequency, Mode, Event Type, Duration, Day

For convenience the List Editor is provided that simplifies the List management.

Time	Frequency	Mode	Event Type	Duration	Day
00:00:00	3415	USB	REC_1	29	Recurrent
01:00:00	3150	USB	REC_1	29	Friday
01:00:00	3270	USB	REC_1	29	Saturday
01:00:00	3150	USB	REC_1	29	Tuesday
01:00:00	3415	USB	REC_1	29	Thursday
01:00:00	3415	USB	REC_1	29	Sunday
01:00:00	3840	USB	REC_1	29	Monday
01:00:00	3270	USB	REC_1	29	Wednesda
01:30:00	3150	USB	REC_1	29	Recurrent
02:00:00	3415	USB	REC_1	29	Monday
02:00:00	3840	USB	REC_1	29	Tuesday
02:00:00	3415	USB	REC_1	29	Wednesda
02:00:00	3840	USB	REC_1	29	Sunday
02:00:00	3840	USB	REC_1	29	Thursday
02:00:00	3415	USB	REC_1	29	Friday
02:00:00	3840	USB	REC_1	29	Saturday
02:30:00	3415	USB	REC_1	29	Friday
02:30:00	3415	USB	REC_1	29	Tuesday
02:30:00	3150	USB	REC_1	29	Wednesda
02:30:00	3270	USB	REC_1	29	Thursday
02:30:00	3415	USB	REC_1	29	Sunday
02:30:00	3150	USB	REC_1	29	Saturday
02:30:00	3270	USB	REC_1	29	Monday

Set Working File: \List.ini

The event can be any of the following:

REC\_1  
TXON\_1  
MON\_1

and

REC\_2  
TXON\_2  
MON\_2

REC is an Recording Event.  
TXON is a transmitting event.  
MON is just a frequency change event.

The number next to underscore is the bit of the parallel port that will be triggered

Days can be set and sorted for clarity.

Recurrent is an event that happens daily.

Times are always local times.

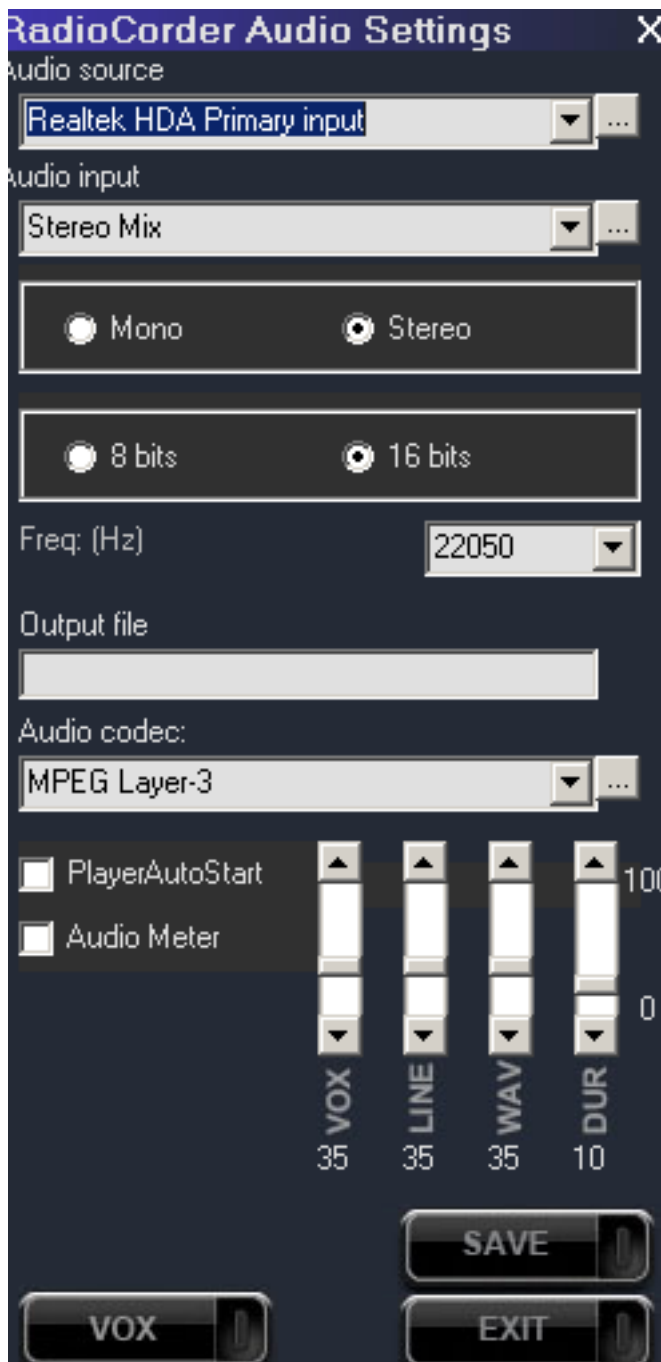
Default List to be used is LIST.INI

Alternative is LIST1.INI

Both should reside in the application folder.

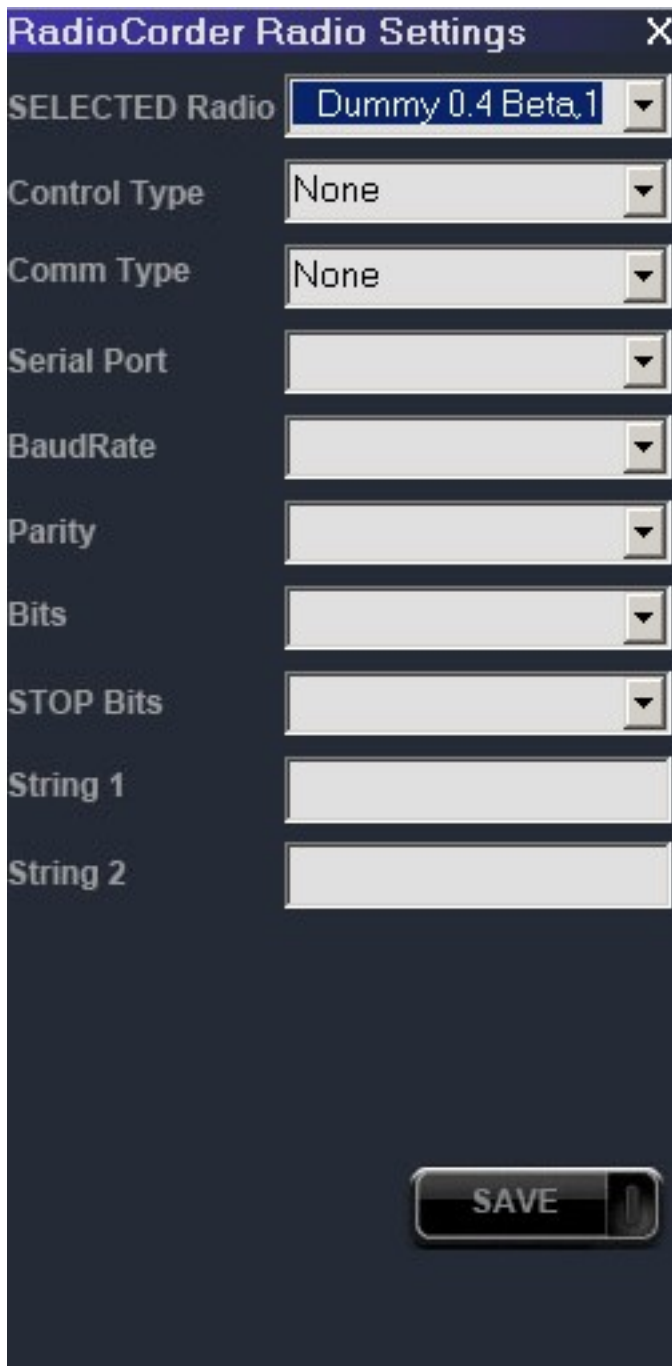
User can set current list through the List Editor. (e.g. Wintertime)

Set the Style= in the settings file to Style=Editor to make the application run only as List Editor.



VOX is the VOX trigger Level  
LINE, WAV is the default level for each input.  
DUR is the manual recording duration.

Audio Codec can be selected among system codecs  
AudioMeter enables/disables Audio Meter



Selected Radio is related to HAMLIB only. For HRD it depends on the HRD settings.

Control Type can be any of the protocols defined in the beginning of this document.

Comm type is the peripheral equipment port type (Parallel or Serial)

String is the string defined in order to drive external switch control via Serial port.

To Be Continued...