



九齊科技股份有限公司  
Nyquest Technology Co., Ltd.

User Manual

# Q-Recorder for NX1 Series

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## Voice Recording for *Cyberon* Voice Recognition (VR) Adaptation

**Version 1.2**

**Nov. 30, 2017**

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## Revision History

<i>Version</i>	<i>Date</i>	<i>Description</i>	<i>Modified Page</i>
1.0	2017/05/25	Formal release.	-
1.1	2017/08/29	Add the description of Loopback function Setting for Microsoft Windows XP.	18
1.2	2017/11/30	<ol style="list-style-type: none"><li>1. Add Waveform View and Spectral View to [View].</li><li>2. Modify the description of Toolbar.</li><li>3. Modify the menu of Project Manager menu.</li><li>4. Add Spectral View.</li><li>5. Modify the description of Vertical Axis.</li><li>6. Modify the description of Recording Toolbar.</li><li>7. Add note to Use Q-Recorder Software for Recording.</li></ol>	10 11 12 13 14 14 16

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## 1. Introduction

*Q-Recorder* is an application development tool provided by Nyquest Technology Corporation Limited (Nyquest) for simple, fast and high quality recording requirements. And it's mainly used with *Cyberon CSpotter Modeling Tool* for voice recognition adjustment.

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### 1.1 What is *Q-Recorder*

*Q-Recorder* is a recording software tool provided by Nyquest Technology Corporation Limited (Nyquest). In order to get a better recognition rate for NX1 voice cognition application, the model can be trained by Cyberon CSpotter Modeling Tool. When the trainer read the recognition commands, record and add the model to Adapt, the recognition rate can be effectively improved. *Q-Recorder* can load the .cvr file with the NX1\_Voice\_Collector hardware tool for recording to produce .wav files for adaptation.

### 1.2 Installing *Q-Recorder*

Please contact Nyquest to acquire the latest version of *Q-Recorder*. To install *Q-Recorder*, please unzip the .zip file to a specific folder and then double-click on the .exe file in the specific folder to start the installation. Follow the instructions of the installation wizard to complete the installation.

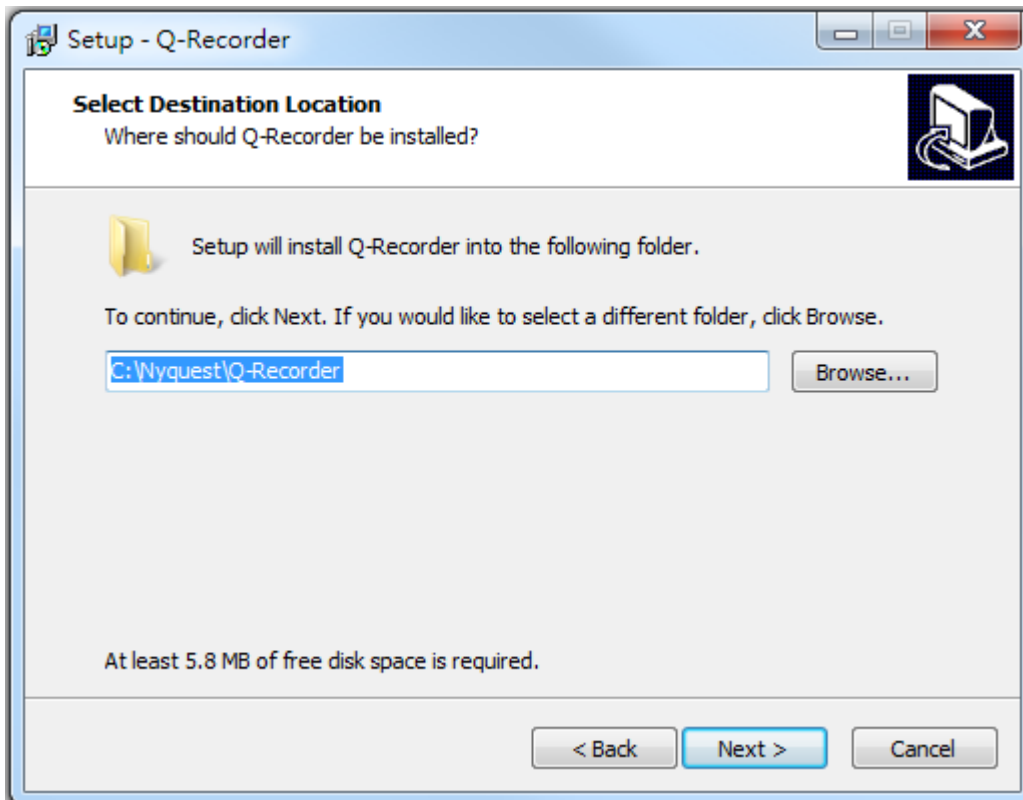
#### System requirement:

- ◆ Pentium 1.3GHz CPU or above, Microsoft Windows operating system (XP, 7, 8, 10).
- ◆ At least 1G of RAM.
- ◆ At least 2G free space on hard disk.
- ◆ A display card and monitor with resolution of 1366x768 or higher.

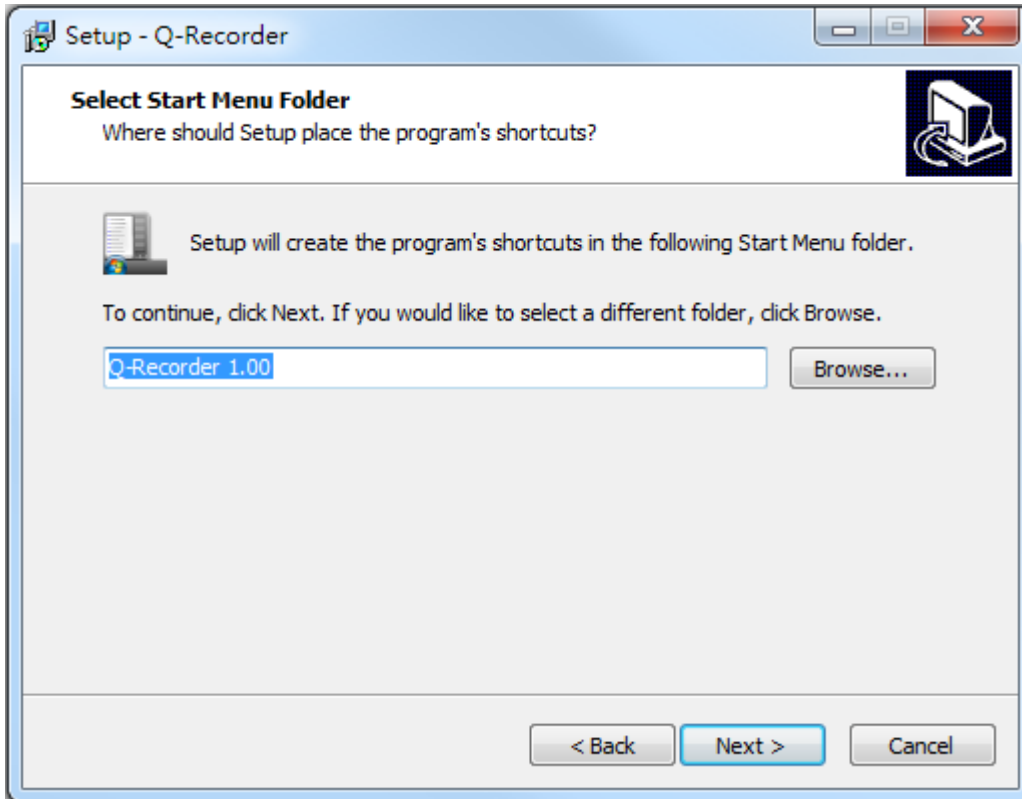
Step 1: Click on Q-Recorder software to start setup.



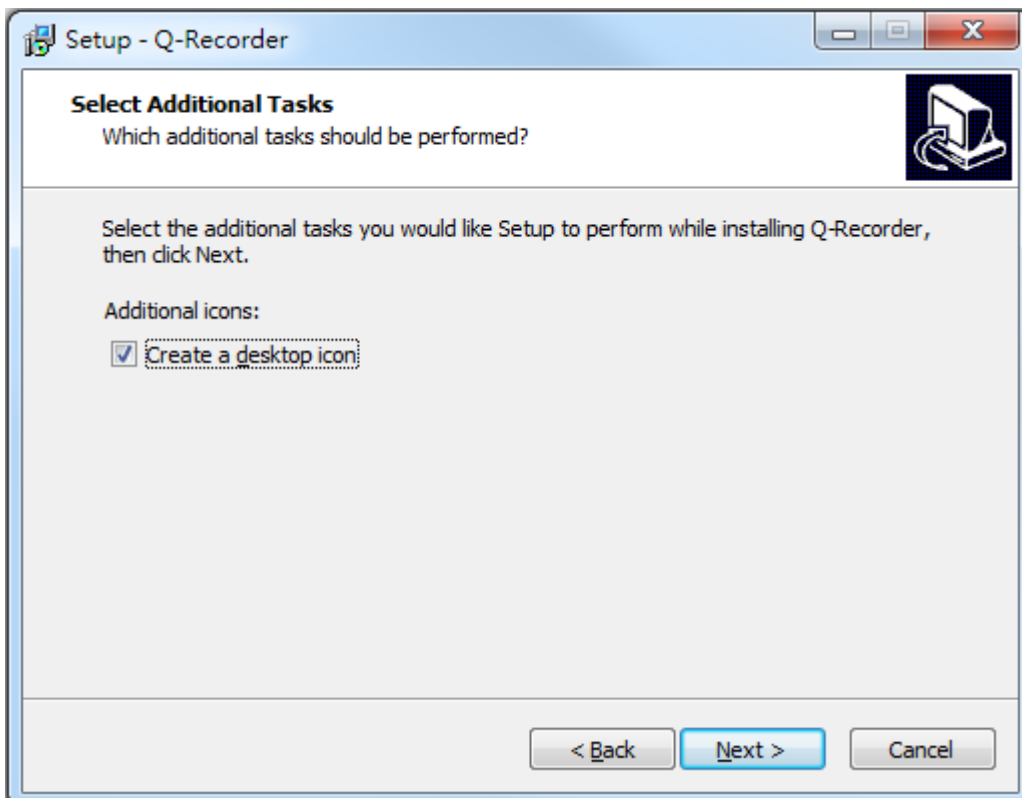
Step 2: Set the default destination folder. If user wants to select a different folder, click Browse. To continue, click Next.



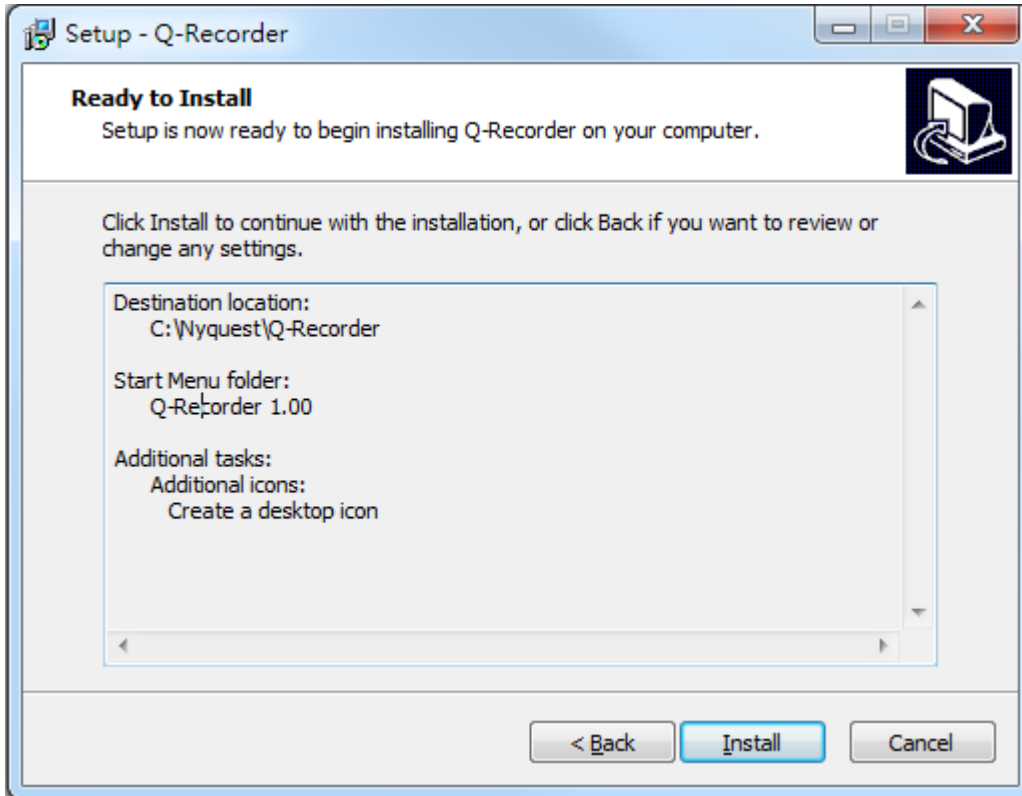
Step 3: Select start menu folder. If user wants to select a different folder, click Browse and then Next.



Step 4: Tick to build an icon on desktop. User can tick off the option to cancel, and then click Next.



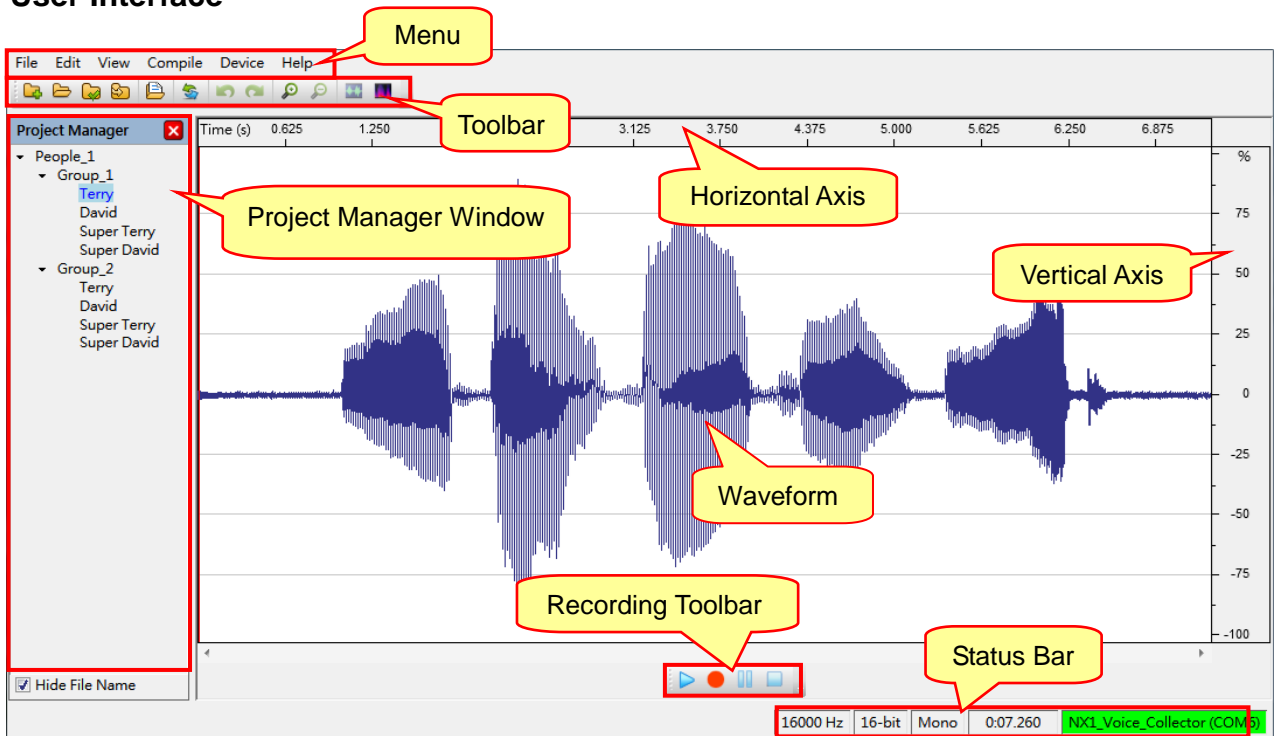
Step 5: The installation will show the destination location and related settings. If the information is correct, click Install to continue.



Step 6: After the installation is completed, a dialog box will show up. Click Finish to exit Setup.



### 1.3 User Interface



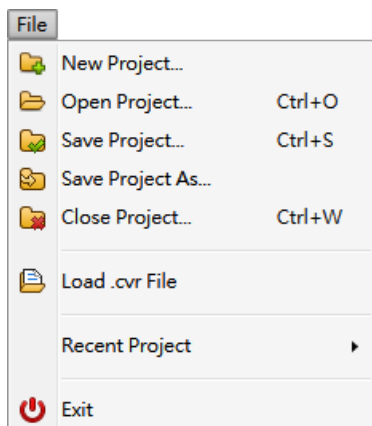
### 1.4 Menu

The function menu contains: File, Edit, View, Compile, Device, and Help.

- [1.4.1 File](#)
- [1.4.2 Edit](#)
- [1.4.3 View](#)
- [1.4.4 Compile](#)
- [1.4.5 Device](#)
- [1.4.6 Help](#)

#### 1.4.1 File

Click [File] on Menu Bar, and the menu is shown below.



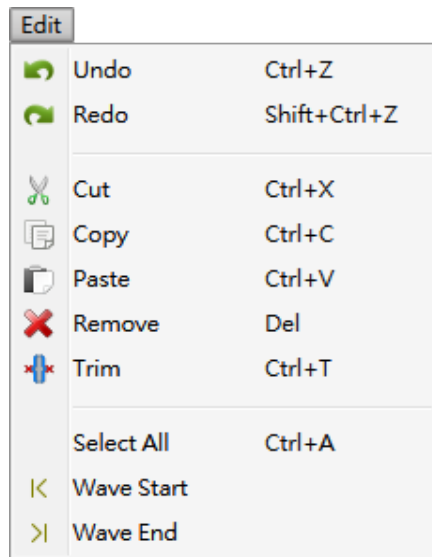


[File] menu description:

Menu	Function
New Project...	Create a new <i>Q-Recorder</i> file.
Open Project...	Open an existing <i>Q-Recorder</i> file.
Save Project...	Save the current <i>Q-Recorder</i> file.
Save Project As...	Save a <i>Q-Recorder</i> file as another filename or to another path.
Close Project...	Close the current <i>Q-Recorder</i> file.
Load .cvr File	Load the .cvr file.
Recent Project	Open the recently edited <i>Q-Recorder</i> file.
Exit	Quit <i>Q-Recorder</i> .

### 1.4.2 Edit

Click [Edit] on Menu Bar, and the menu is shown below.



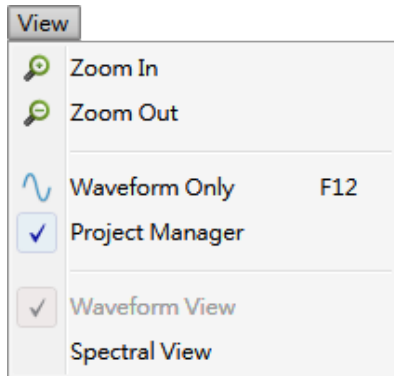
[Edit] menu description:

Menu	Function
Undo	Reverse the last action.
Redo	Redo the last undone action.
Cut	Remove the selected section.
Copy	Copy the selected section.
Paste	Insert the copied or cut section at current position of cursor line.
Remove	Remove the selected section.
Trim	Delete the unselected section and keep the selected sections only.

Menu	Function
Select All	Click the left mouse button to select all operation in the Waveform Display window.
Wave Start	Move the cursor position to the beginning of the waveform.
Wave End	Move the cursor position to the end of the waveform.

### 1.4.3 View

Click [View] on Menu Bar, and the menu is shown below.

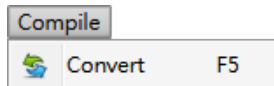


[View] menu description:

Menu	Function
Zoom In	Enlarge the waveform in the horizontal direction.
Zoom Out	Shrink the waveform in the horizontal direction.
Waveform Only	Close all panels and display the waveform window only.
Project Manager	Open or close the Project Manager window.
Waveform View	Waveform Display Window displays wave.
Spectral View	Waveform Display Window displays waveform spectrum.

### 1.4.4 Compile

Click [Compile] on Menu Bar, and the menu is shown below.

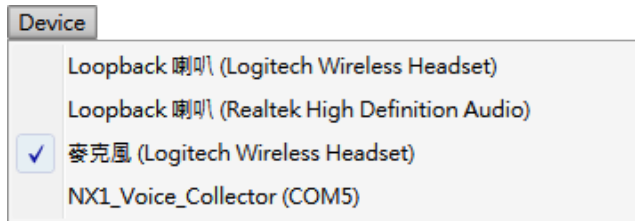


[Compile] menu description:

Menu	Function
Convert	Convert the edited results into a .spt file.

### 1.4.5 Device

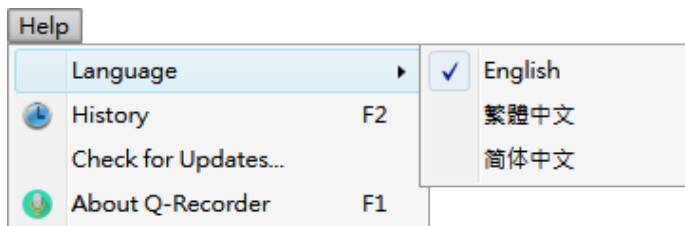
Click [Device] on Menu Bar, the recording device currently available is shown below.



**Note: The Loopback device function does not support Microsoft Windows XP. Please refer to [Appendix](#) for the solution.**

### 1.4.6 Help

Click [Help] on Menu Bar, and the menu is shown below.




[Help] menu description:


Menu	Function
Language	<i>Q-Recorder</i> is available in English, Traditional Chinese or Simplified Chinese three languages.
History	See the revision history of <i>Q-Recorder</i> .
Check for Updates...	Check for the latest version of <i>Q-Recorder</i> . This function will connect to the Internet.
About <i>Q-Recorder</i>	Show current <i>Q-Recorder</i> version and the contact information for technical support.

## 1.5 Toolbar








Toolbar offer quick access of main functions, and they are located under the menu bar. Users could execute main functions directly without accessing the menus.

 **New Project...**: Create a new *Q-Recorder* file.

 **Open Project...**: Open an existing *Q-Recorder* file.

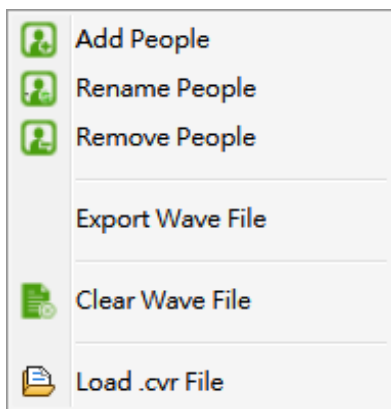
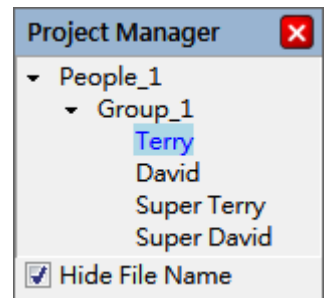
 **Save Project...**: Save the current *Q-Recorder* file.

 **Save Project As...**: Save a *Q-Recorder* file as another filename or to another path.

-  **Convert:** Convert the edited results into a .spt file.
-  **Undo:** Undo the previous action.
-  **Redo:** Redo the last restored action.
-  **Zoom in:** Waveform zoom in horizontally.
-  **Zoom out:** Waveform zoom out horizontally.
-  **Waveform Display:** Waveform Display Window displays waveform.
-  **Spectral View:** Waveform Display Window displays waveform spectrum.

## 1.6 Project Manager Window

Project Manager Window displays current project People, Group of voice command, voice command and corresponding voice files. When the voice command is blue, it indicates that the voice command has a voice file. When the voice command has "\*" that means the voice command has been edited but not stored. Users can move the mouse to the top of the voice command to view the voice file information and full path. You can also select the Hide File Name function under the Project Management Window to display or hide the file name of the voice file. Users can click the right mouse button in the Project Management Window and the following menu will pop-up:



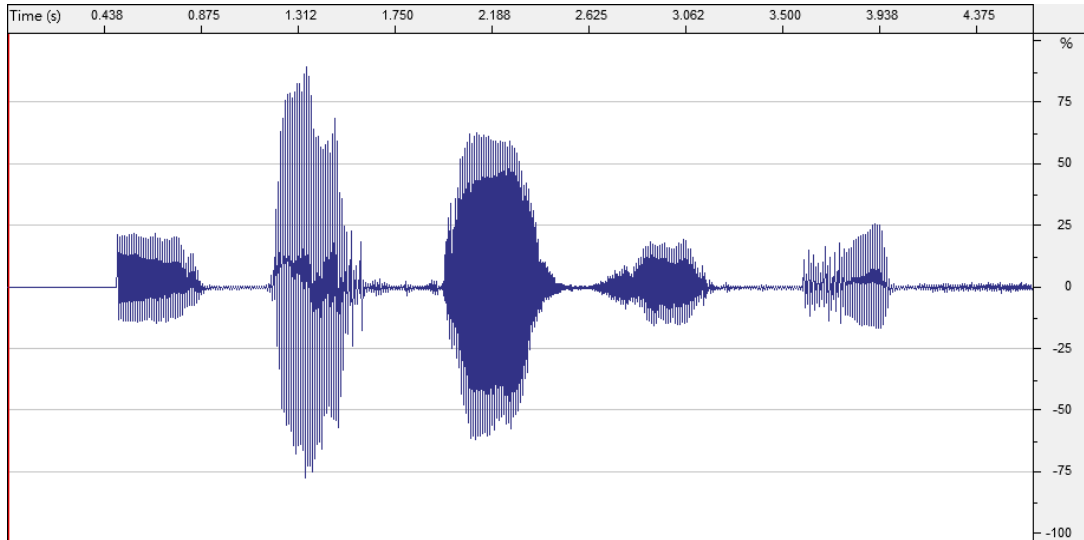
Project Manager menu description:

Menu	Function
Add People	Add a People.
Rename People	Rename the currently selected People.
Remove People	Remove the currently selected People.
Export Wave File	Export the currently selected wave file.
Clear Wave File	Clear the currently selected wave file.
Load .cvr File	Load the .cvr file.

## 1.7 Waveform Window

### 1.7.1 Waveform View

Waveform window displays waveform of wave file.



**Zoom In:** Scroll up the mouse wheel or press the Up Arrow key to zoom in.

**Zoom Out:** Scroll down the mouse wheel or press the Down Arrow key to zoom out.

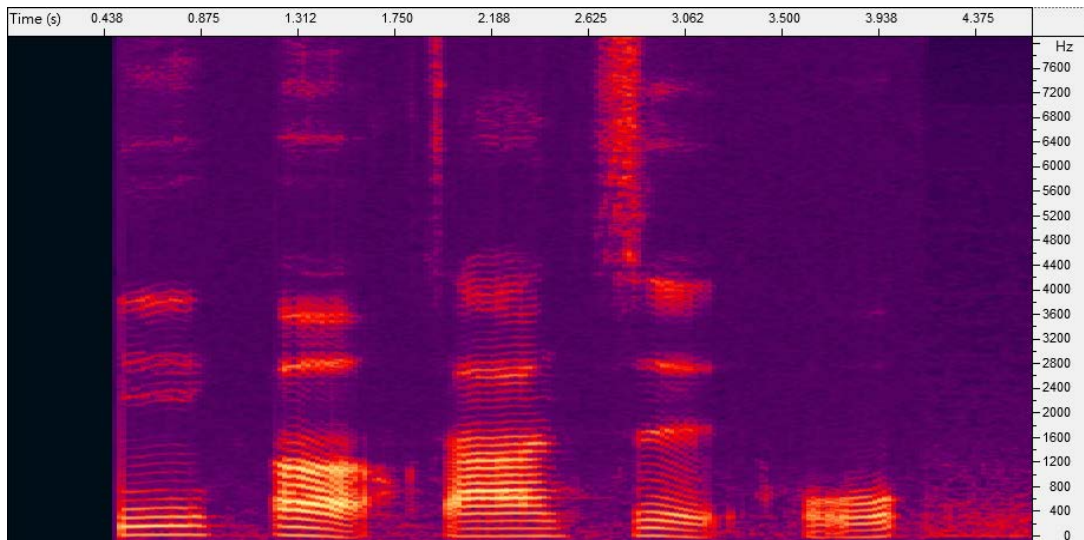
**Move Cursor Line:** Click mouse left button on waveform window to move cursor line.

**Select a Range:** Drag the cursor line after pressing and holding the left mouse button.

**Select Whole Waveform:** Double click mouse left button on waveform.

### 1.7.2 Spectral View

Waveform window displays the waveform spectrum of wave files.

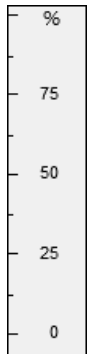


**Zoom In:** Scroll up the mouse wheel or press the Up Arrow key to zoom in.

**Zoom Out:** Scroll down the mouse wheel or press the Down Arrow key to zoom out.

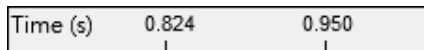
### 1.7.3 Vertical Axis

When the Waveform window displays waveform, vertical axis displays the volume of wave file in unit of dB or Percentage (%). Users can click the left mouse button to switch. When the spectrogram window displays the waveform spectrum, vertical axis displays the frequency in unit of Hz.




### 1.7.4 Horizontal Axis

Horizontal axis displays the time length of wave file in unit of Second or Samples. Users can click the left mouse button to switch.



### 1.7.5 Recording Toolbar

Recording Toolbar is under the Waveform and provides shortcuts for a number of commonly used functions. Users can just click on the button to quickly perform the function.

 **Play:** Play from the position of the baseline. If there is a selected section, the voice in the section will be played.

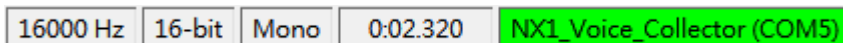
 **Record:** Start recording.

 **Pause or Resume:** Pause or resume playback and move the baseline to the pause position.

 **Stop:** Stop playback.

**Note:** Users can press the keyboard's spacebar to control play and stop.

## 1.8 Status Bar



**Sample Rate:** The sample rate of the wave file. *Q-Recorder* only supports 8000 Hz and 16000 Hz.

**Bits per Sample:** The value for the bits per sample. *Q-Recorder* only supports 16-bit.

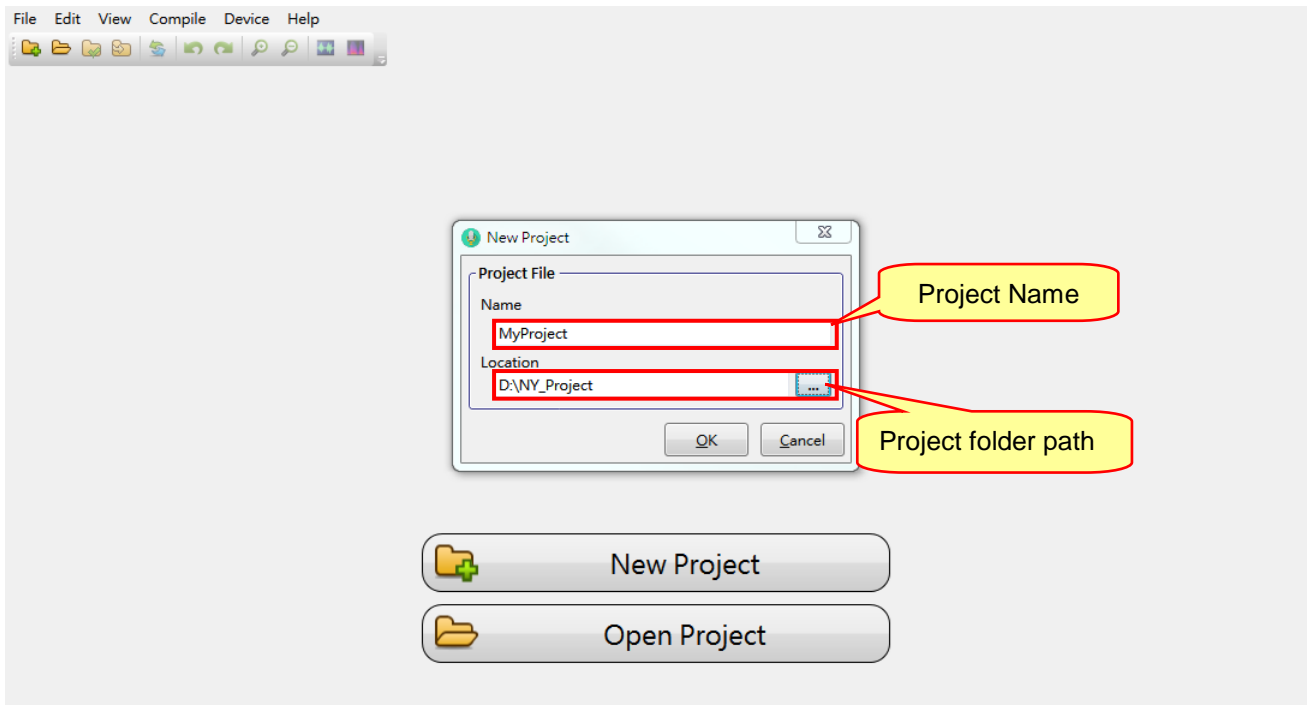
**Channel:** The wave file channel. *Q-Recorder* only supports Mono.

**Total Playback Time:** Total time of the wave file.

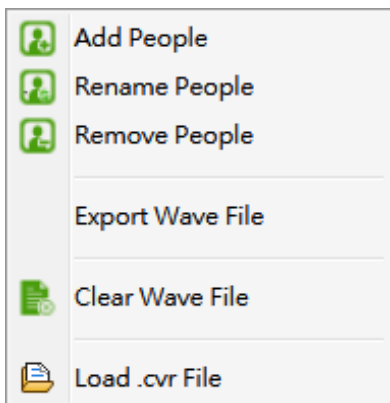
**Driver Status:** Show the status of the current recording device.

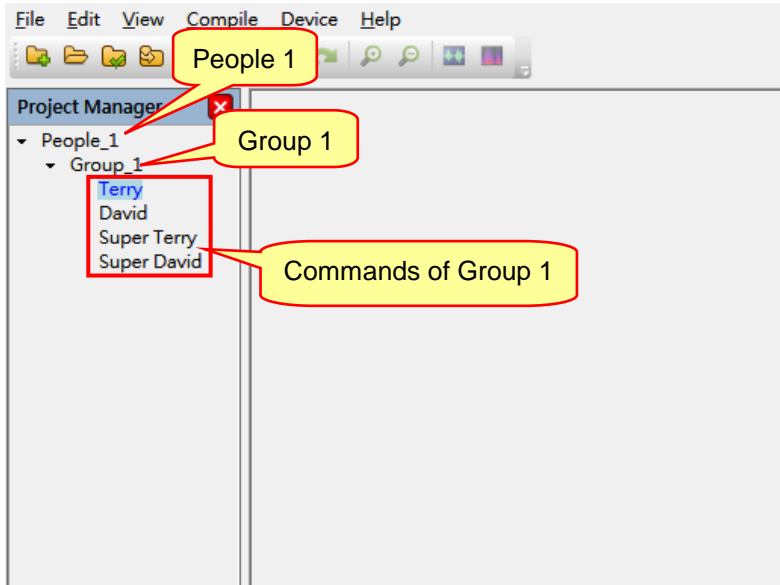
## 2. Use Q-Recorder Software for Recording

After opening Q-Recorder, user can click Open Project or New Project as the following figure. User can also set the Project Name and Project folder path. When clicking OK, a new folder and Q-Recorder project file (.qprj) with the name of the project will be created.

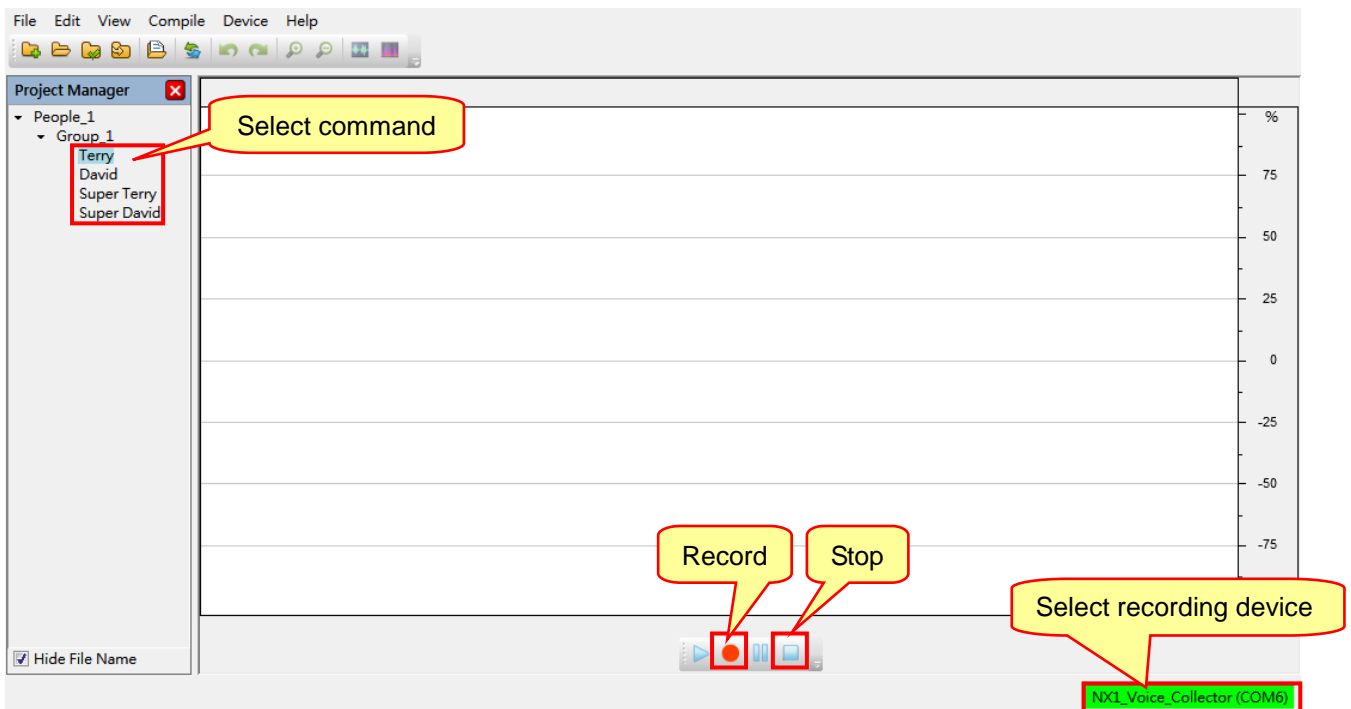


Select File → Load .cvr File and select the model file (.cvr) to load to CSpotter as the following figure. After loading the model file (.cvr), it shows on the left-hand Project Manager that the first layer of the list is the recording people, the second layer is the group, and the third layer is commands of the group. In order to improve the accuracy of voice recognition, Q-Recorder can allow a number of different people to record. Press the right button anywhere in the Project Manager to open the menu to add more People or rename People as the following figure.





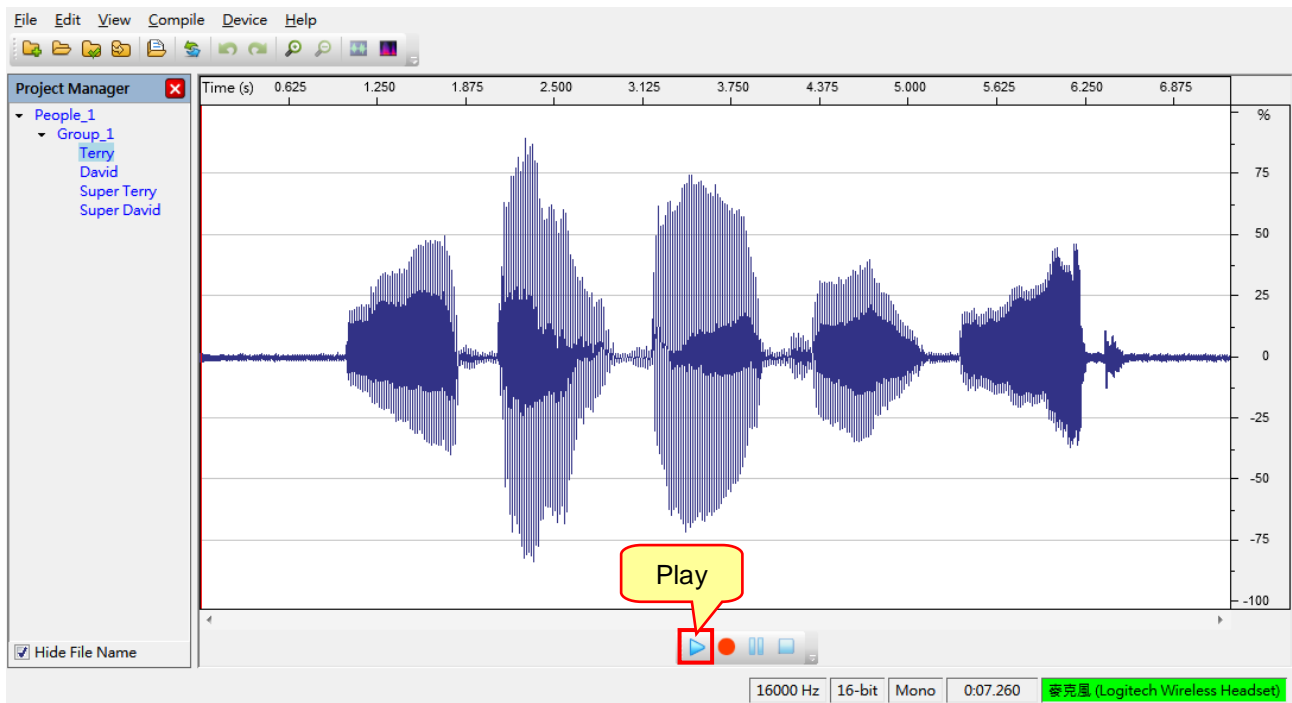
User can select the command to start recording. Click the Record button, recording will begin. And click the Stop to end recording.



After recording, user can click the Play button to confirm the effect. If you are not satisfied with the recording result, just press Record button to re-record, and the new recording will replace the old one.

**Note:** *Cyberon voice recognition adaptation needs to have a background audio for 0.5 seconds before and after the adapted wave file. When the recording begins or ends, the waveform in background will change color to remind user that the background audio is receiving. At this time, please keep quiet and wait for the waveform color changed to start recording.*





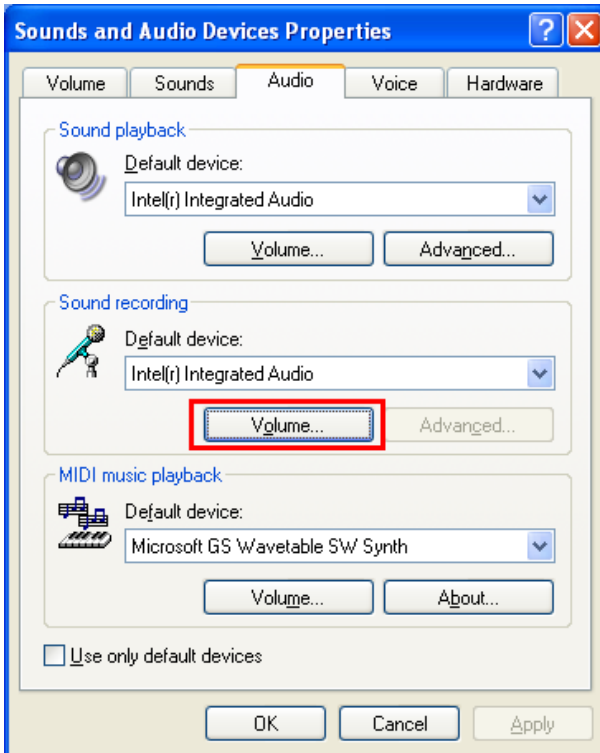
After the commands are recorded completely, users can use [Compile]→[Converter] function to build .spt files, one command group corresponds to one .spt file. Then return to the Cyberon CSpotter Modeling Tool to apply the adaptation function.

### 3. Appendix

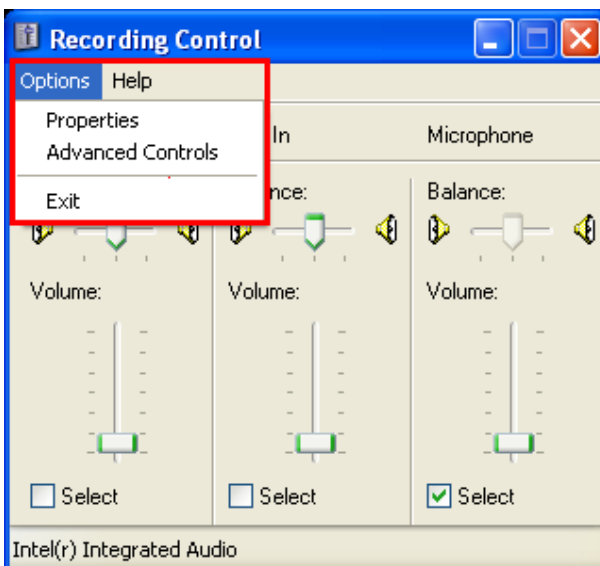
#### 3.1 Loopback Function Setting for Microsoft Windows XP

Although Q-Recorder cannot execute the Loopback function directly on Microsoft Windows XP, user can follow the simple settings below to add the sound recording device (like Microphone) to the Mixer Device to accomplish the Loopback recording function.

Open Sound and Audio Devices Properties from the control panel of Microsoft Windows XP, select the Audio tab then the [Volume...] of the Sound recording column.



After opening the [Volume...] setting, select the [Properties] from Options.



In the Properties box, select the used mixer device and then tick [Stereo Mix]. Press OK to complete setting.

