

FXO Tone Analyzer

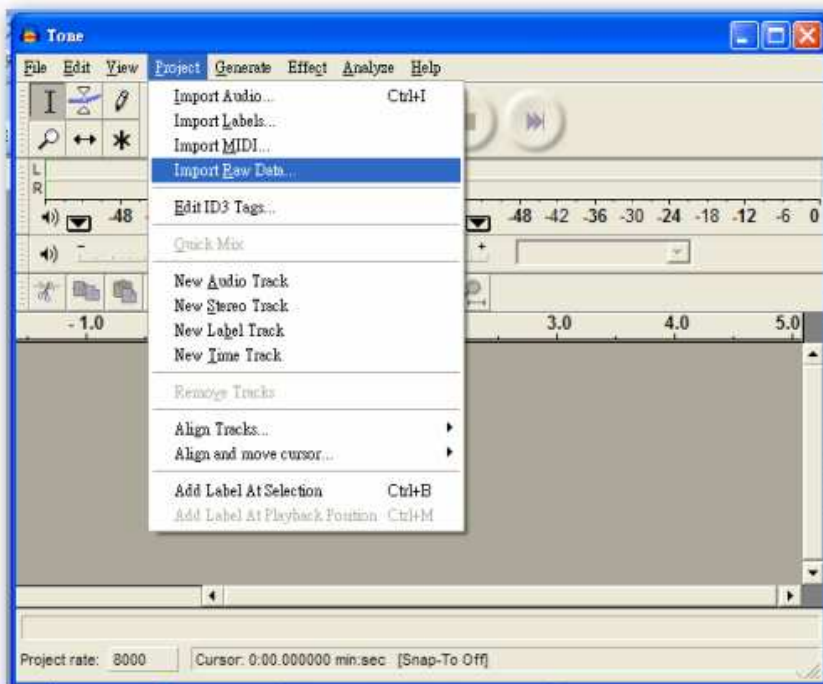
This program can detect disconnection tone, it is suitable for 8 port .

Configuration as below :

1. Please put WAN of Gateway and LAN of PC to same network segment.
2. Please put PSTN Line to FXO's Line1, confirm Line1's light flash.
3. Please confirm PC is silent.
4. Run SipAppCtrl.exe program.
5. Input FXO Gateway IP Address of WAN.
6. Input Line1 number of PSTN Line.



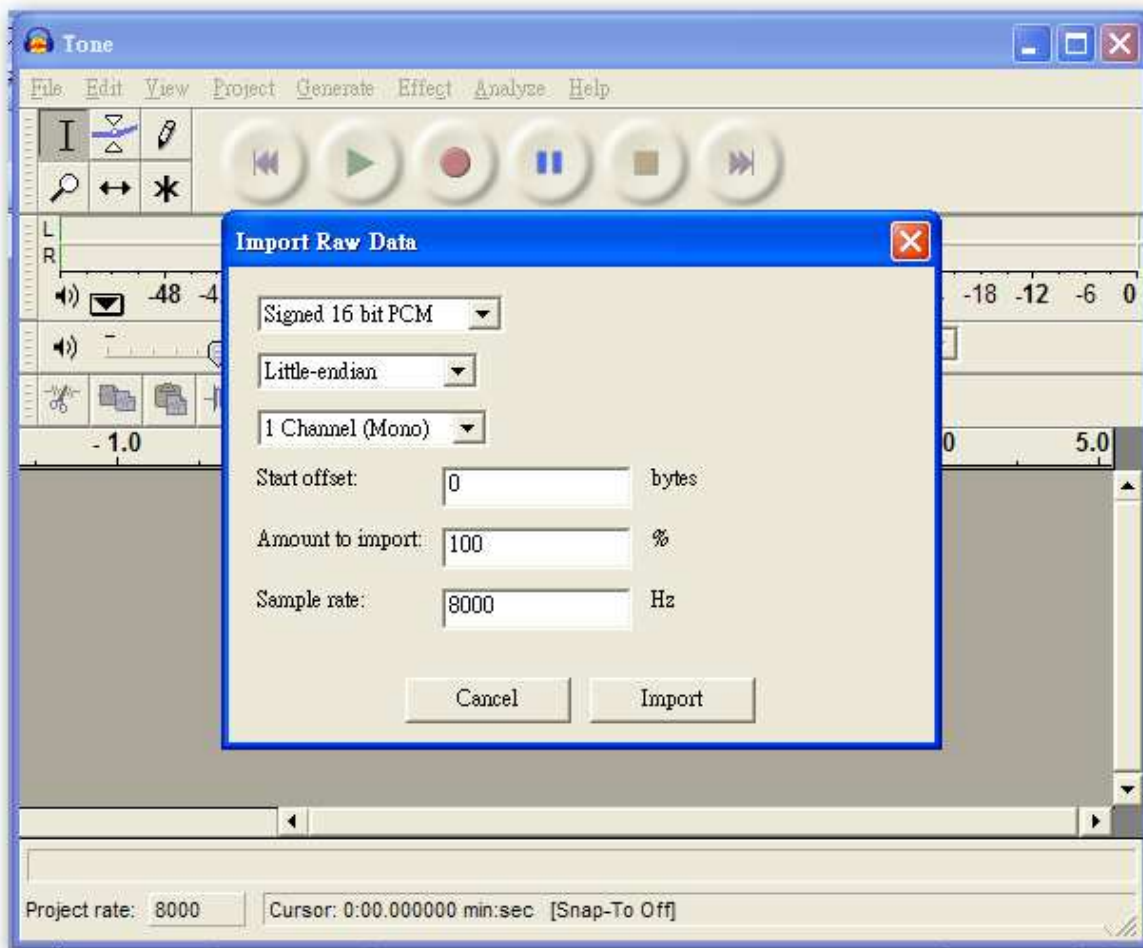
1. Press "start" after input finished.
2. Wait about 5 sec, PC will hear PSTN's busy tone.
3. If you do not hear it, please confirm all steps.
4. press "stop"
5. Run audacity.exe
6. Project > Import RAW Data



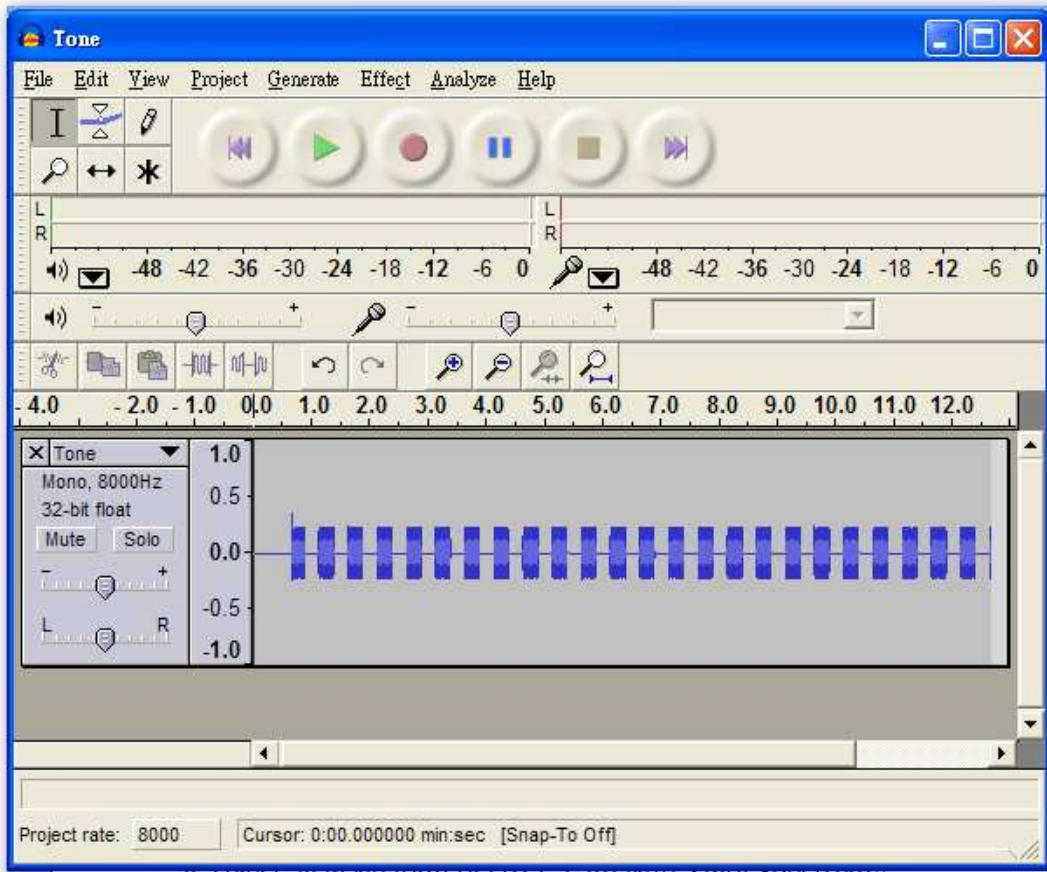
1、 Select Tone.pcm



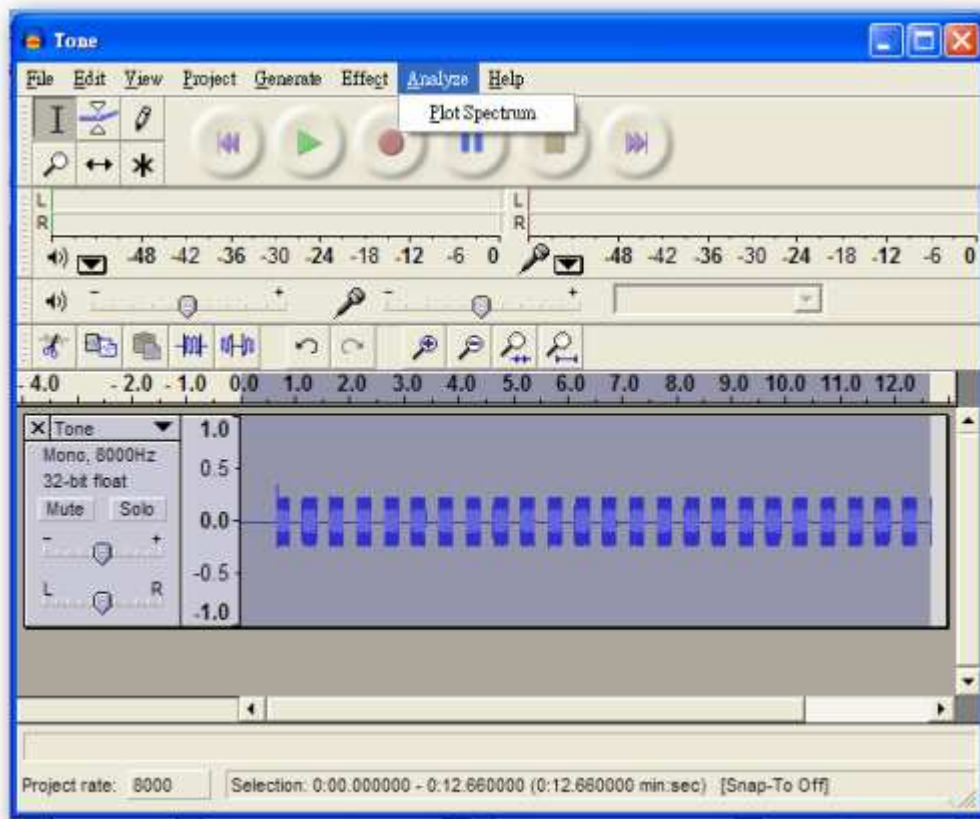
2、 Only change sample rate to 8000 and press import



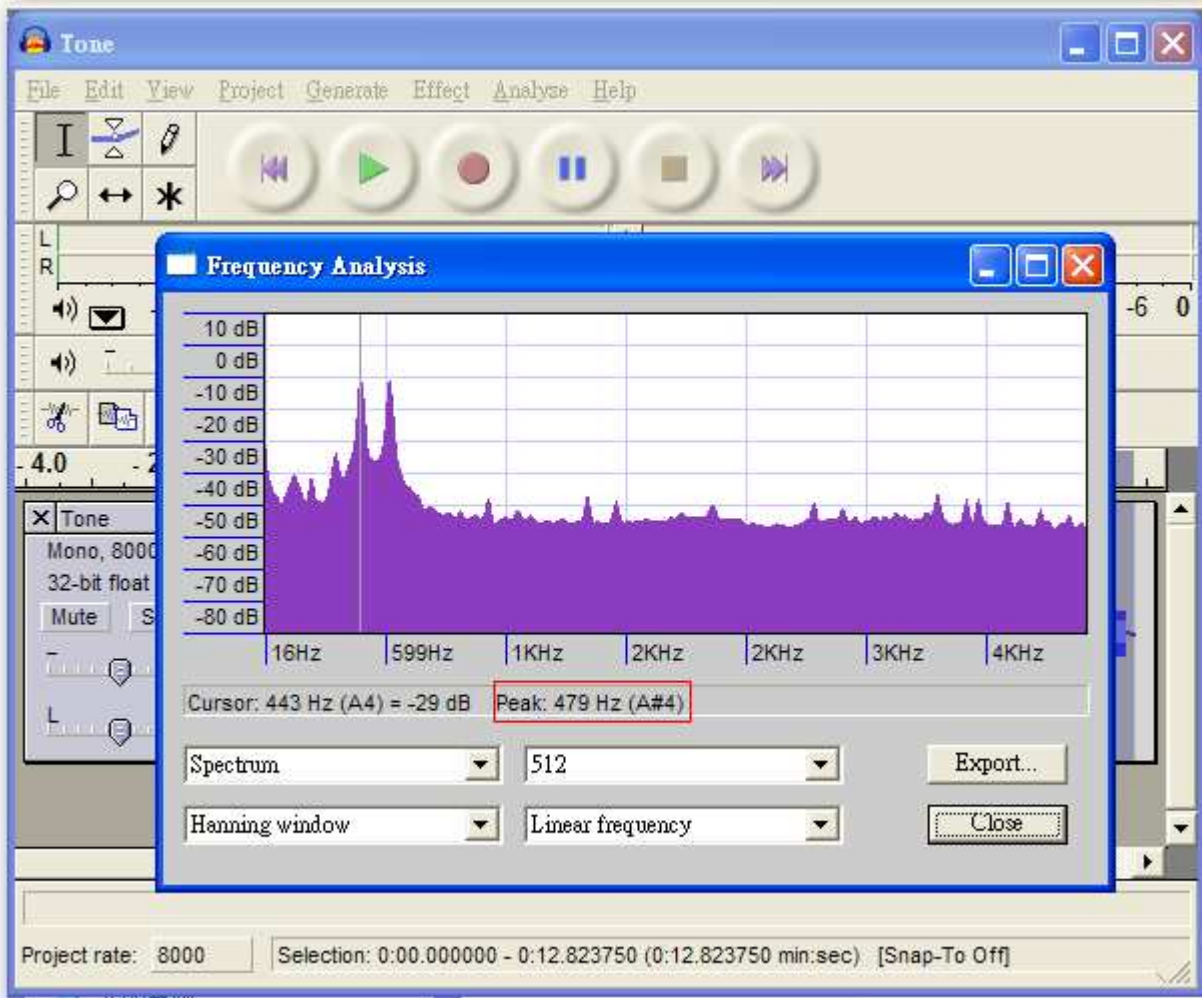
3、 It will show as below after imported.



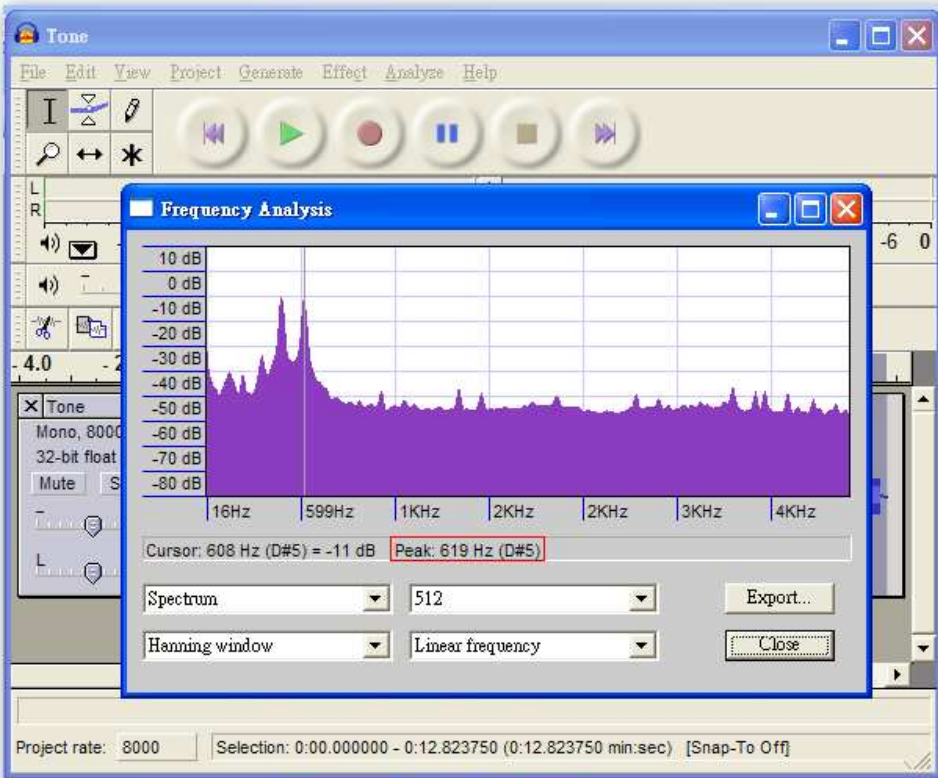
4. select all wave form or ctrl + a, Analyze > Plot Spectrum



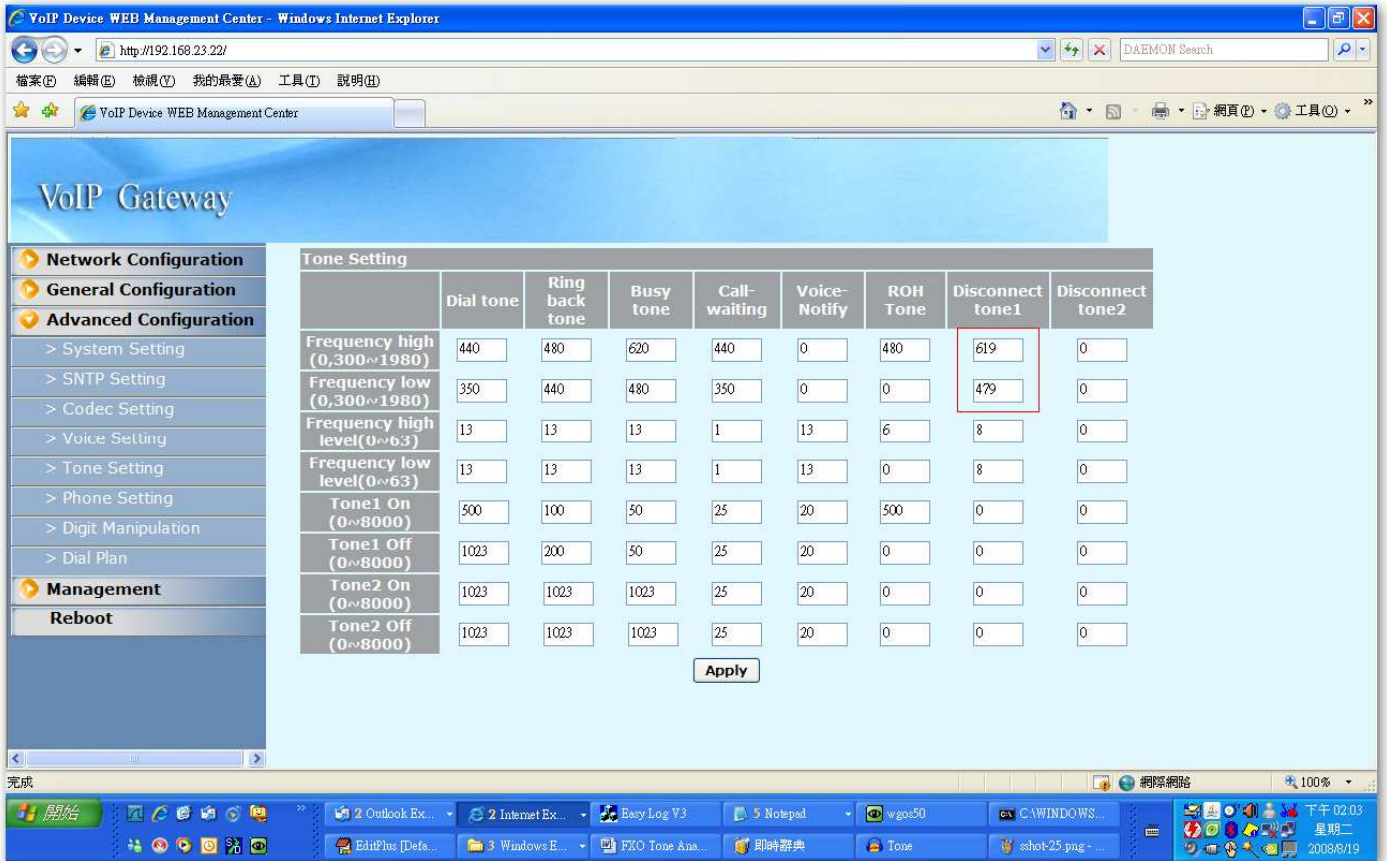
4. move mouse cursor to frequency peak, it will show peak value.



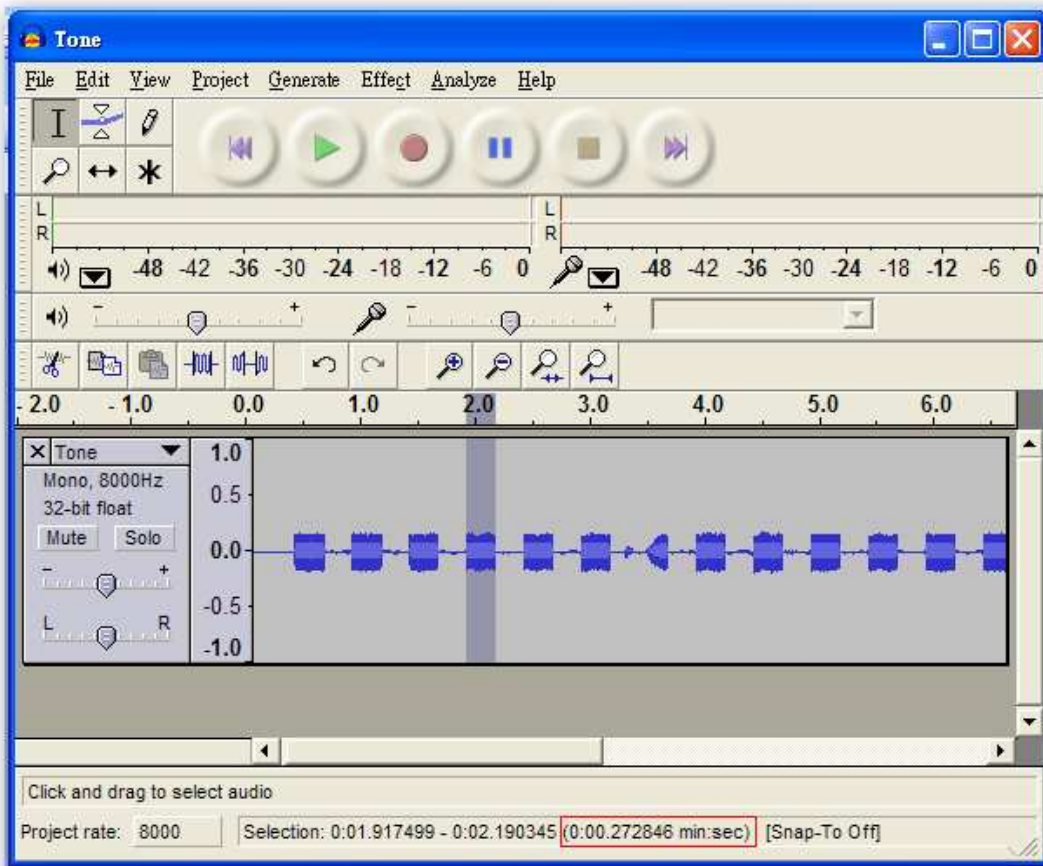
5. If it got second frequency peak, please move mouse cursor to it and it will show again.



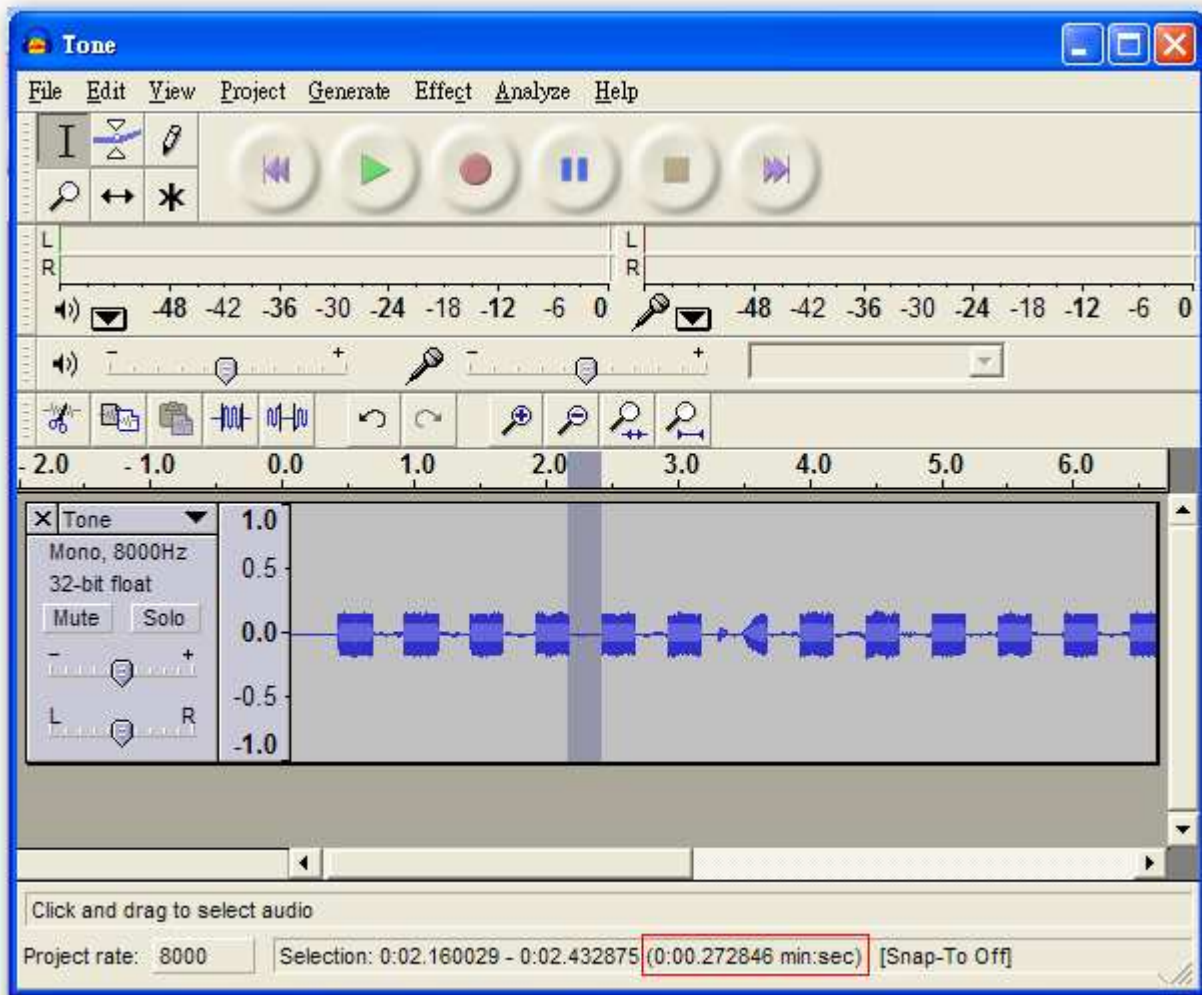
6. Please input both values into Gateway's Tone Setting > Disconnect Tone1



7. Back to audacity.exe main screen, select wave form completely by mouse, it show Tone1 On value, example is 0.27 second.



8. select empty space by mouse, it show Tone1 off value, example is 0.27 second.

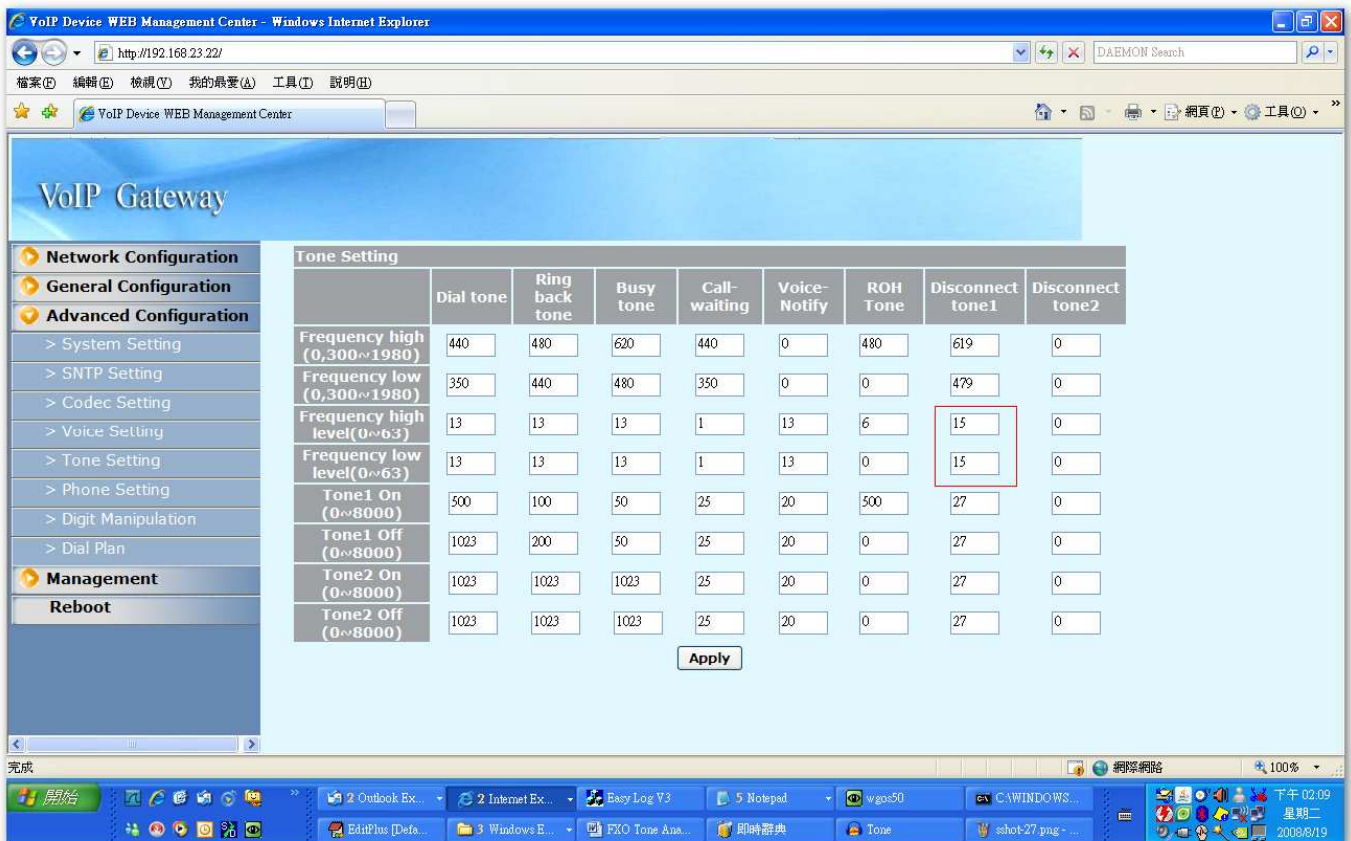
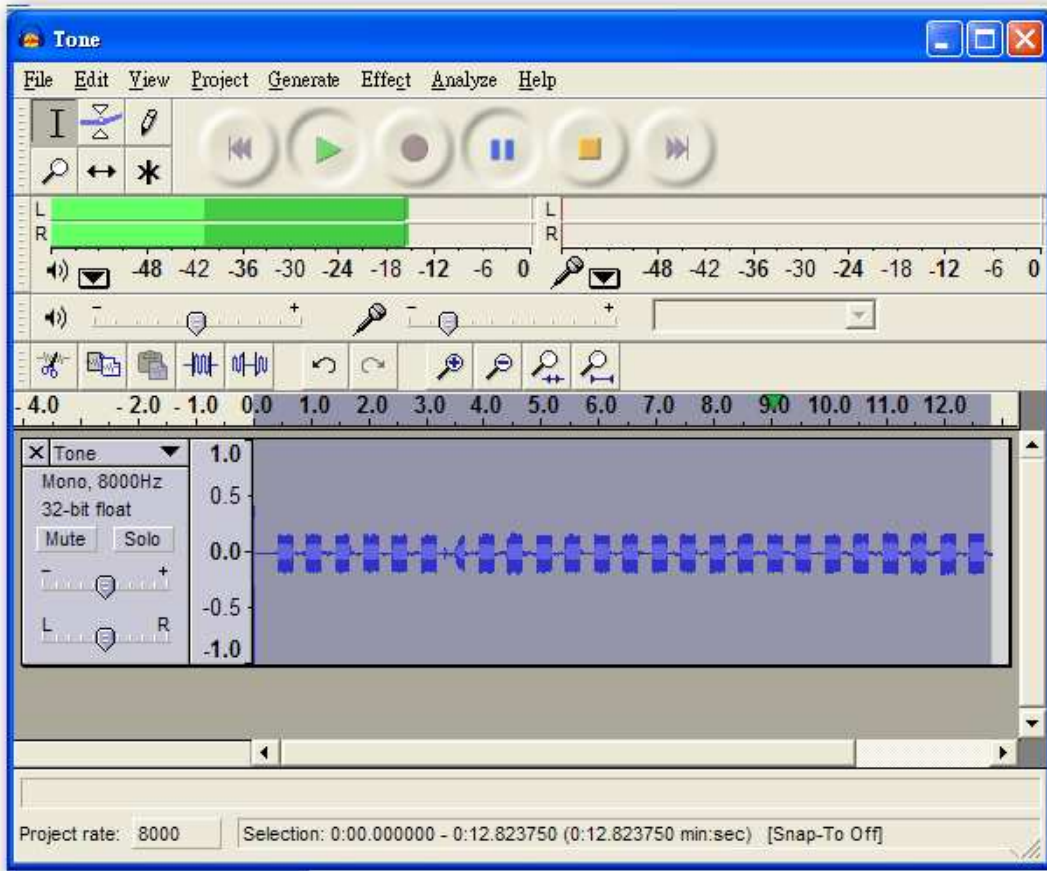


9. Input the value into FXO Gateway's Tone Setting > Disconnect Tone1, Tone on and Tone off, the unit is 0.01 second, so you need input 27.



10. As above, you should be able to detect disconnected tone correctly, if it can not, please input Frequency High Level and Low Level values.

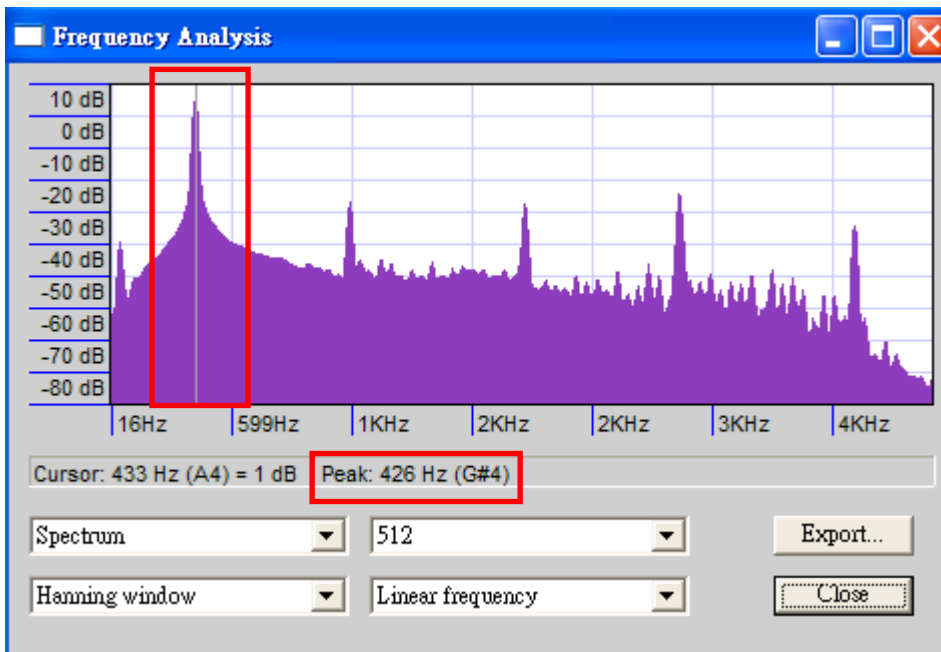
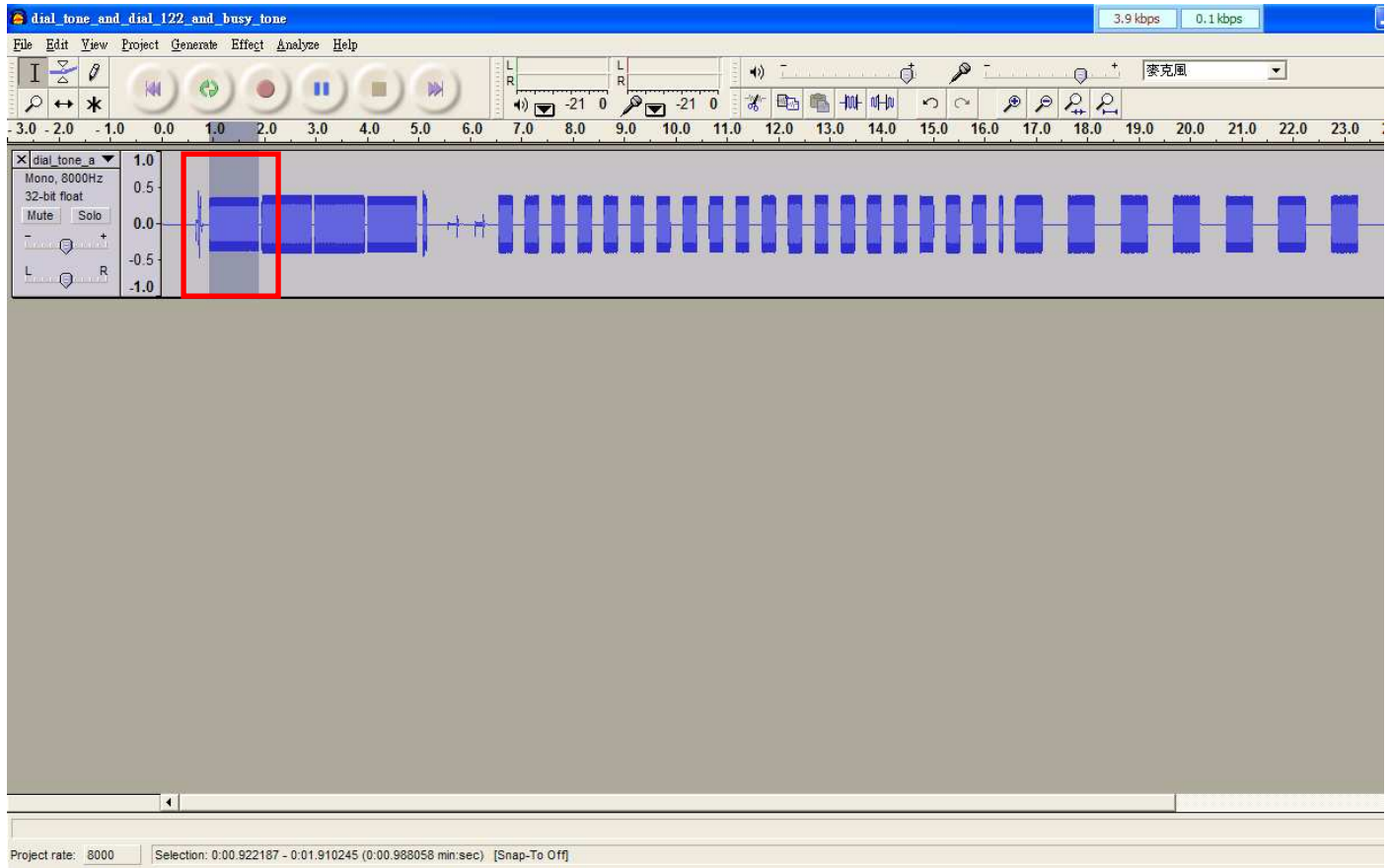
11. Press play button, it will play busy tone and you will see left sound channel's highest value as figure show -15, input Frequency High Level and Low Level to 15.

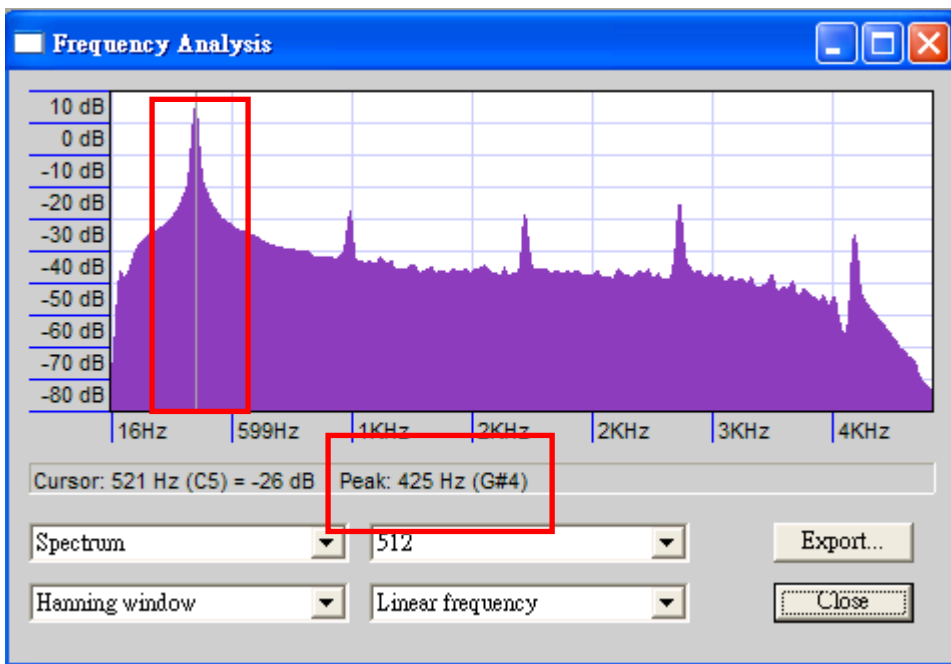
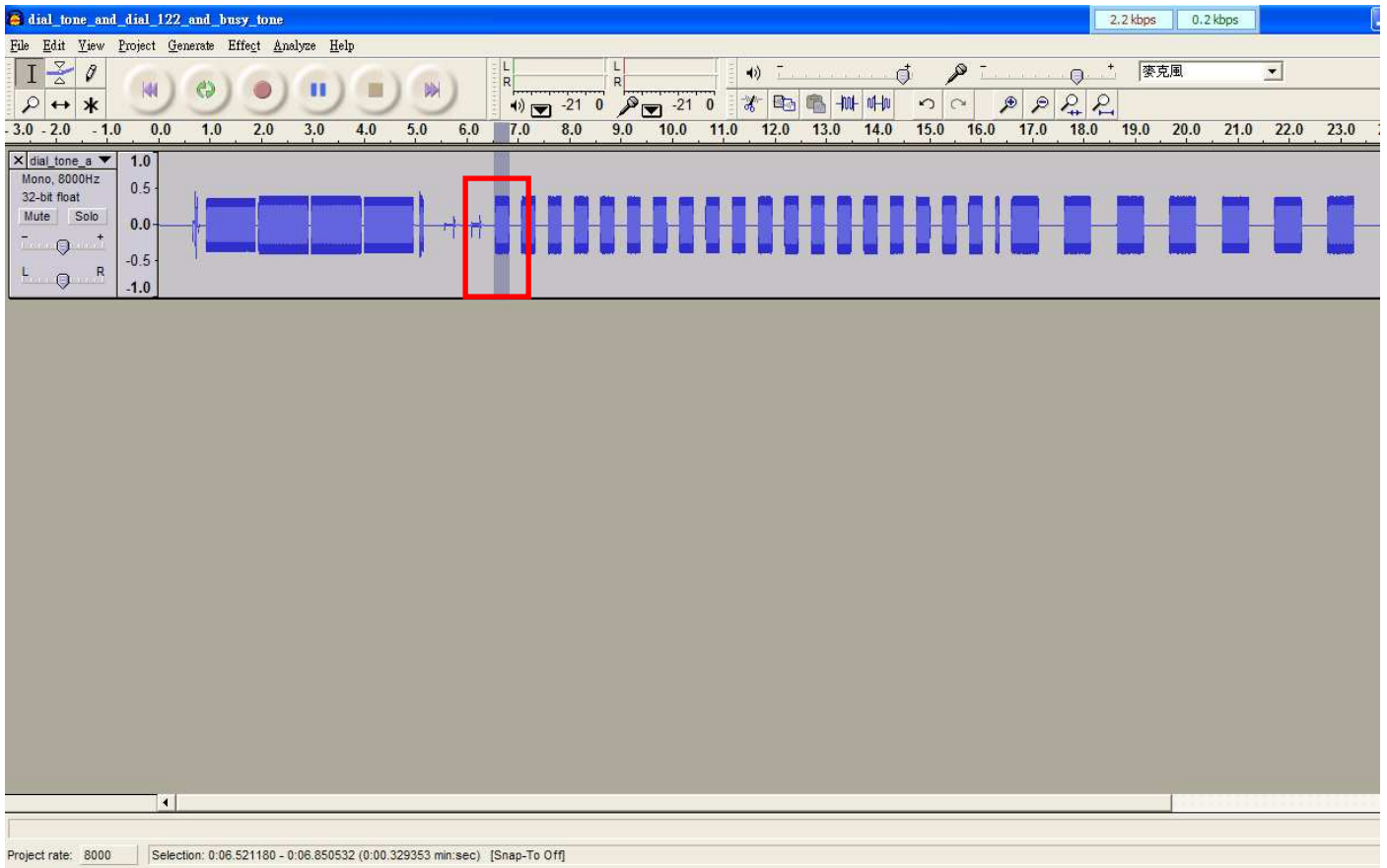


12. The End.

Example 1 for single frequency

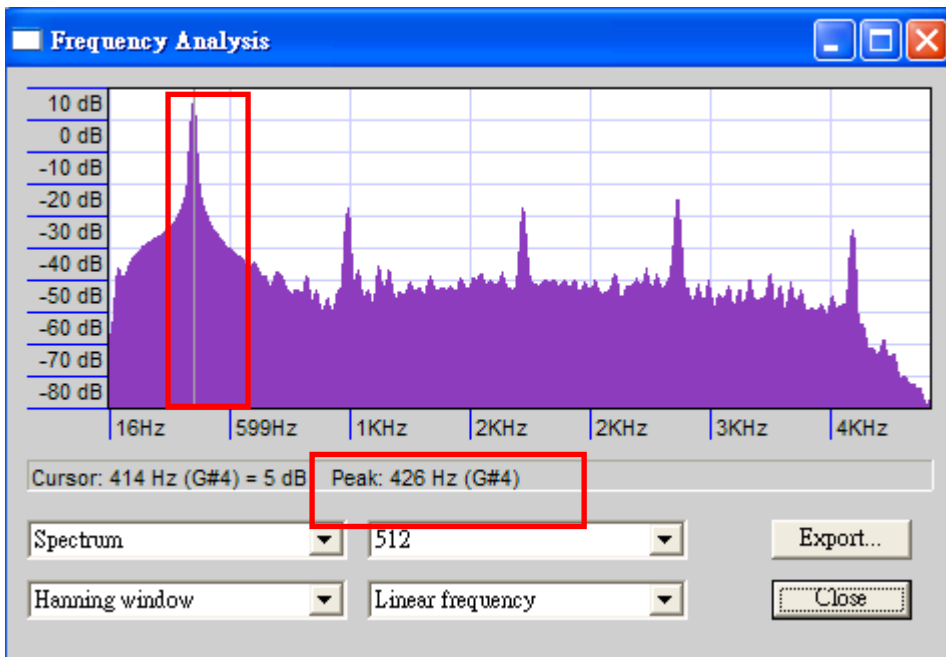
1. Please see the below pictures and analyze result from plot spectrum.
2. Looking the all of red frame could found the frequency was same and closed; the range is 425 to 426.





Project window showing a waveform with a red box highlighting a specific segment. The interface includes a menu bar (File, Edit, View, Project, Generate, Effect, Analyze, Help), a toolbar with various editing tools, and a timeline from 3.0 to 23.0 seconds. The waveform is labeled 'dial_tone_a' and shows a series of pulses. A red box highlights a pulse at approximately 17.0 seconds.

Project rate: 8000 Selection: 0:16.599367 - 0:17.148288 (0:00.548921 min.sec) [Snap-To Off]



3. Please fill in 425 or 426 values to frequency low on the disconnect tone 1 and disconnect tone 2.
Fill in the frequency high to "0" values.

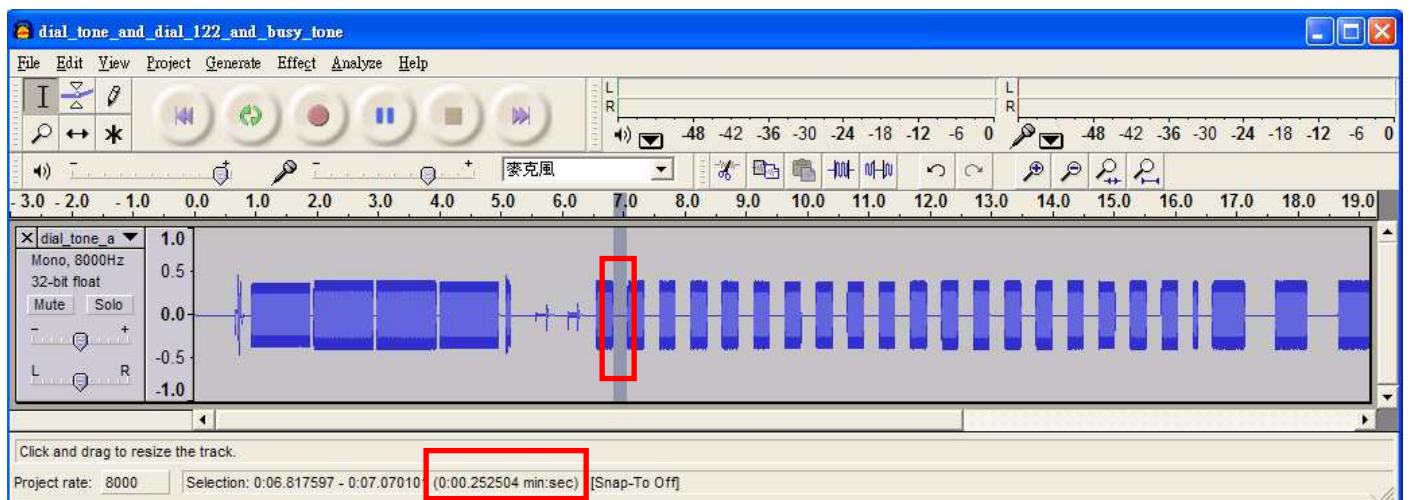
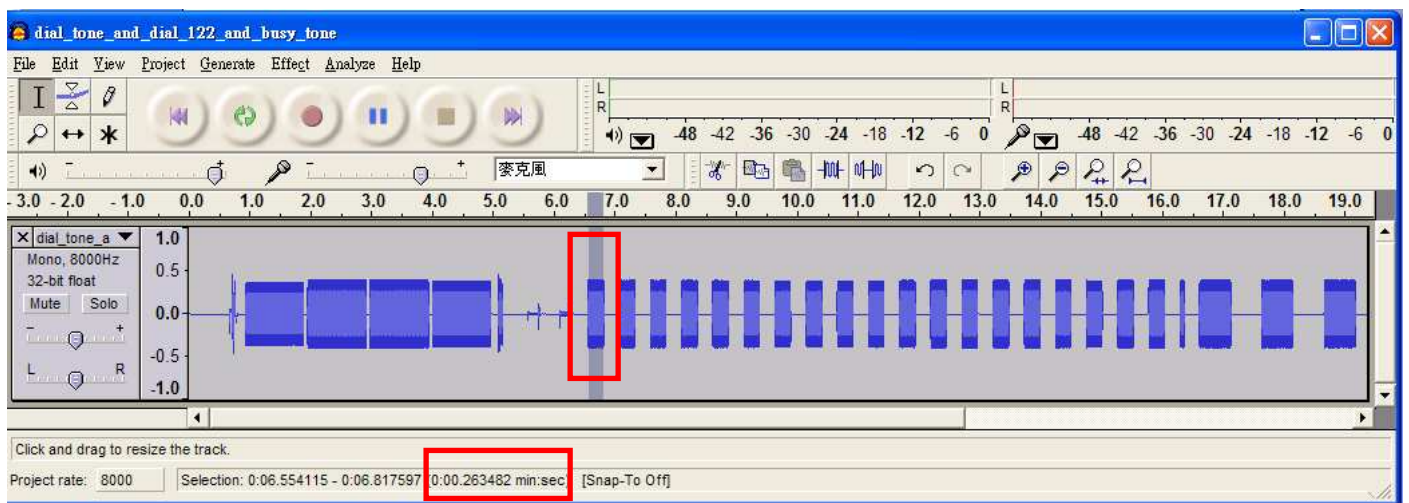
VoIP Gateway

- Network Configuration
- General Configuration
- Advanced Configuration
 - System Setting
 - SNTP Setting
 - Codec Setting
 - Voice Setting
 - Tone Setting
 - Phone Setting
 - Digit Manipulation
 - Dial Plan
 - Call Routing
- Management
 - Reboot

Tone Setting	Dial tone	Ring back tone	Busy tone	Call-waiting	Disconnect tone1	Disconnect tone2
Frequency high (0,300-1980)	440	480	620	440	0	0
Frequency low (0,300-1980)	350	440	480	350	425	426
Frequency high level (0-63)(-db)	13	19	24	24	8	13
Frequency low level (0-63)(-db)	13	19	24	24	8	13
Tone1 On(0-8000) (Unit:10ms)	300	100	50	25	25	25
Tone1 Off(0-8000) (Unit:10ms)	0	200	50	25	25	25
Tone2 On(0-8000) (Unit:10ms)	0	0	0	25	0	0
Tone2 Off(0-8000) (Unit:10ms)	0	0	0	25	0	0

Apply

4. Please using part of middle which analyze for on time / off time. Because it is too closed in head for on time and off time that will to miss detection cause by gateway.



VoIP Gateway

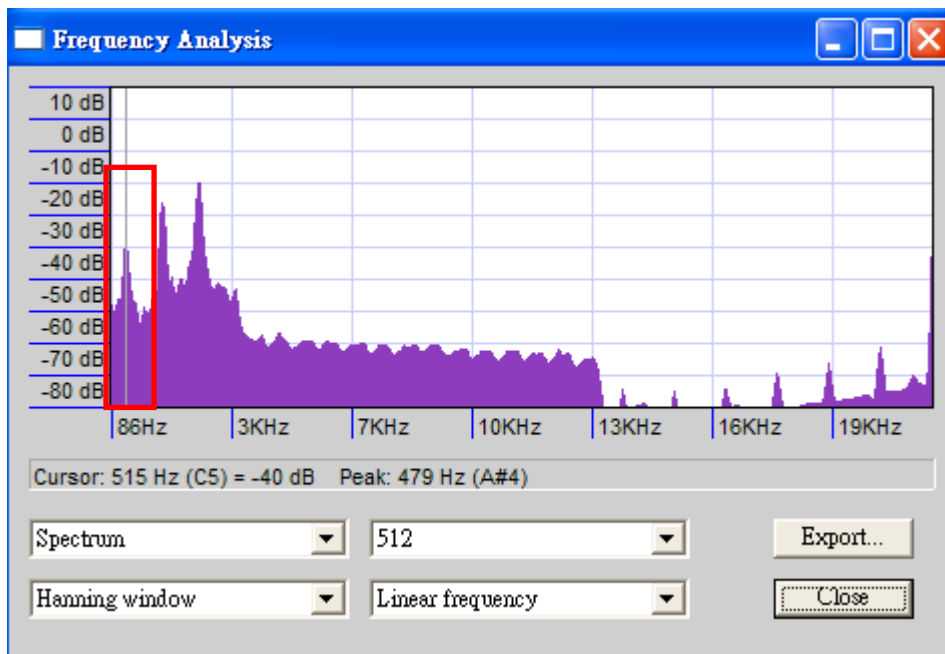
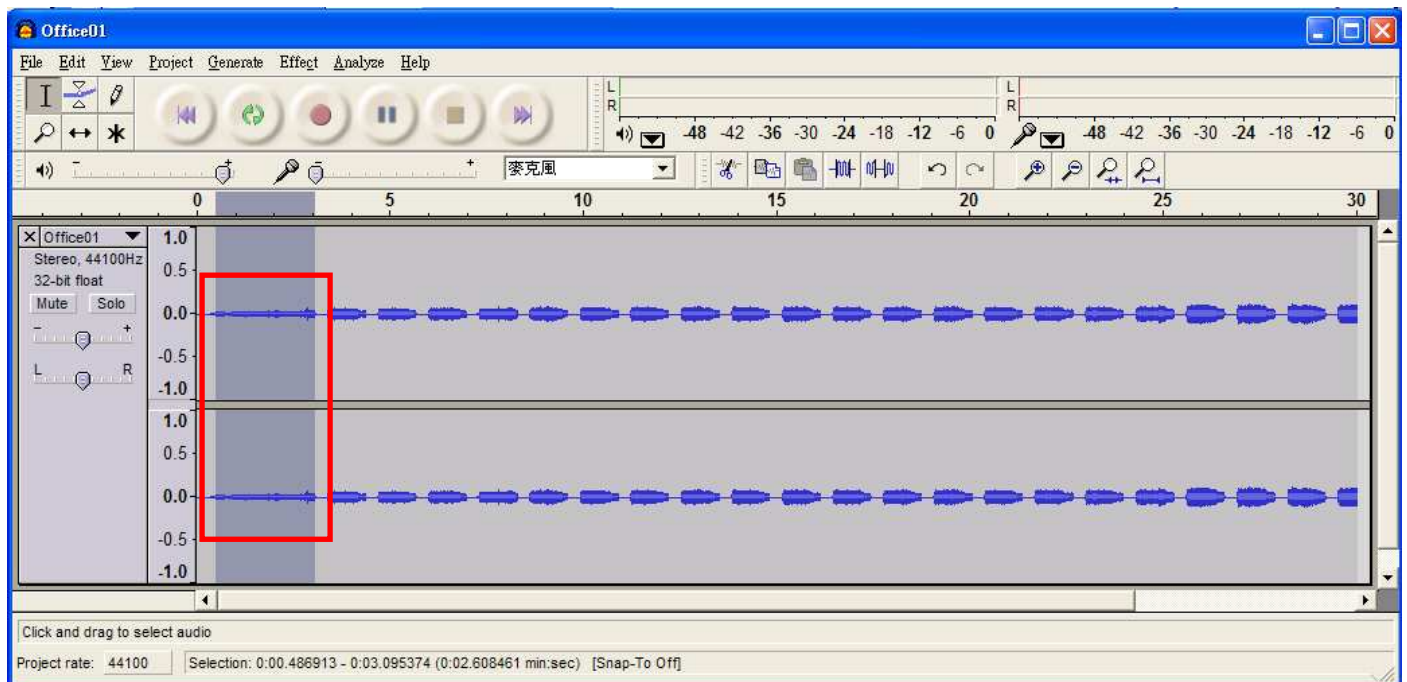
- ▶ Network Configuration
- ▶ General Configuration
- ▶ **Advanced Configuration**
 - ▶ System Setting
 - ▶ SNTP Setting
 - ▶ Codec Setting
 - ▶ Voice Setting
 - ▶ **Tone Setting**
 - ▶ Phone Setting
 - ▶ Digit Manipulation
 - ▶ Dial Plan
 - ▶ Call Routing
- ▶ Management
 - Reboot

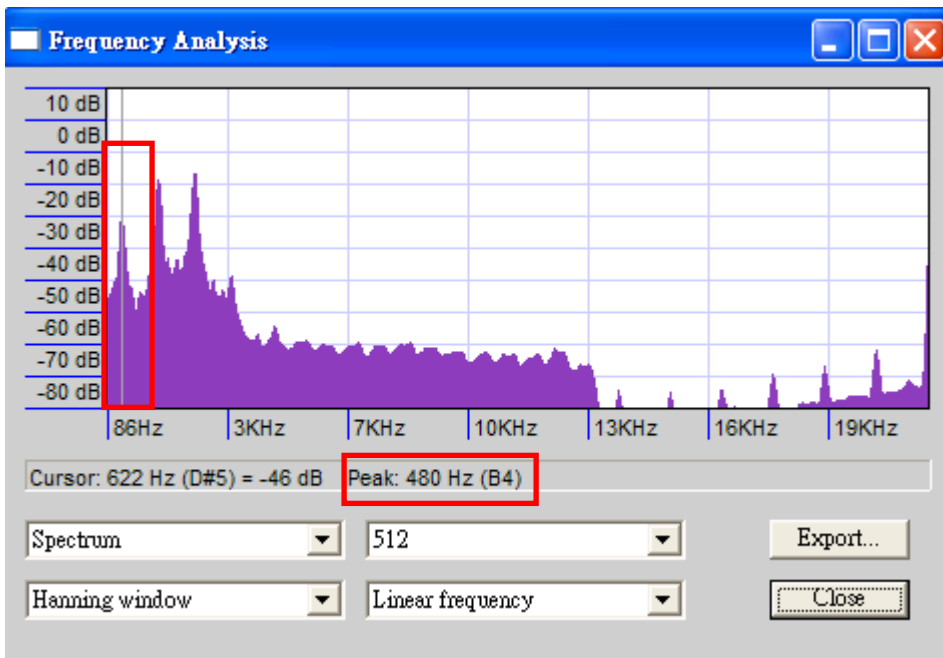
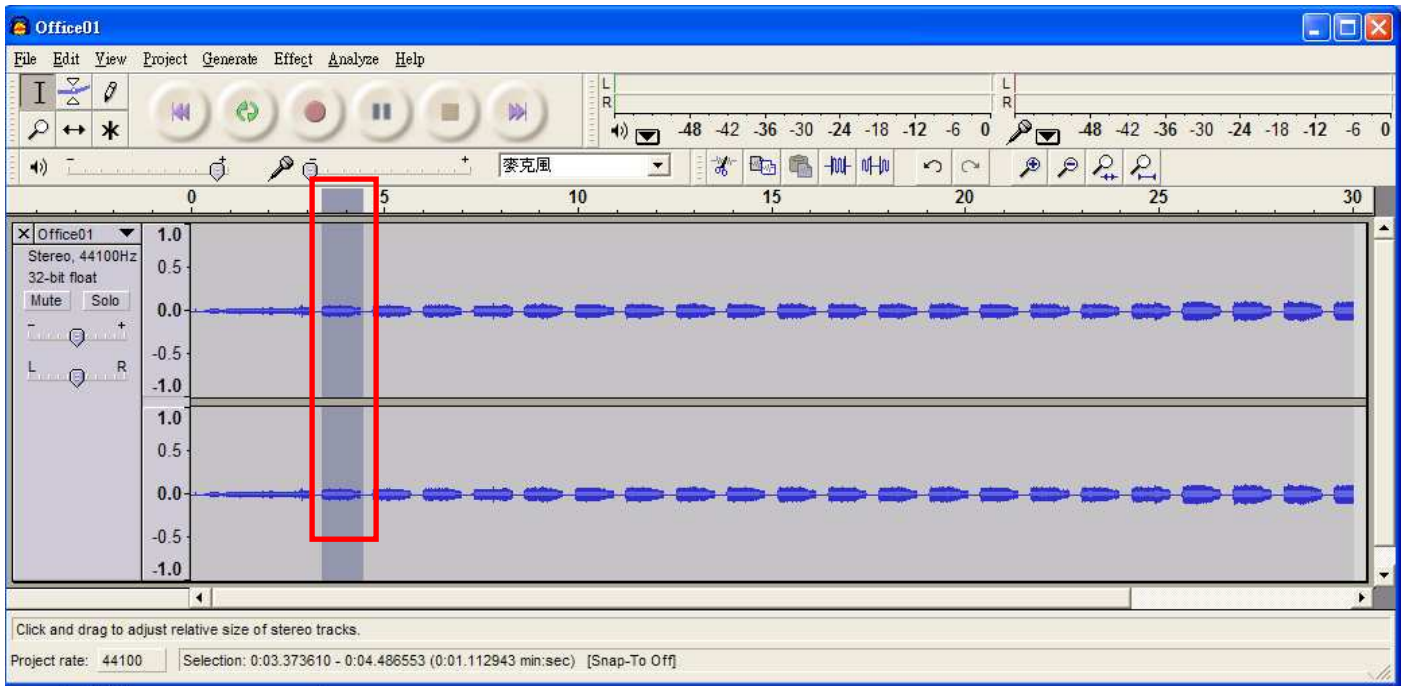
Tone Setting						
	Dial tone	Ring back tone	Busy tone	Call-waiting	Disconnect tone1	Disconnect tone2
Frequency high (0.300-1980)	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="620"/>	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Frequency low (0.300-1980)	<input type="text" value="350"/>	<input type="text" value="400"/>	<input type="text" value="480"/>	<input type="text" value="350"/>	<input type="text" value="425"/>	<input type="text" value="426"/>
Frequency high level (0-63)(-db)	<input type="text" value="13"/>	<input type="text" value="19"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="8"/>	<input type="text" value="13"/>
Frequency low level (0-63)(-db)	<input type="text" value="13"/>	<input type="text" value="19"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="8"/>	<input type="text" value="13"/>
Tone1 On(0-8000) (Unit:10ms)	<input type="text" value="300"/>	<input type="text" value="400"/>	<input type="text" value="50"/>	<input type="text" value="25"/>	<input type="text" value="26"/>	<input type="text" value="26"/>
Tone1 Off(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="50"/>	<input type="text" value="25"/>	<input type="text" value="25"/>	<input type="text" value="25"/>
Tone2 On(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="400"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Tone2 Off(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Apply

Example 2 for single frequency

1. Analyze part of red frame.
2. From the plot spectrum finding frequency (the normally values between 300~1000 m sec).





3. Full in the values are 479 and 480 on frequency low and 0 on frequency high.

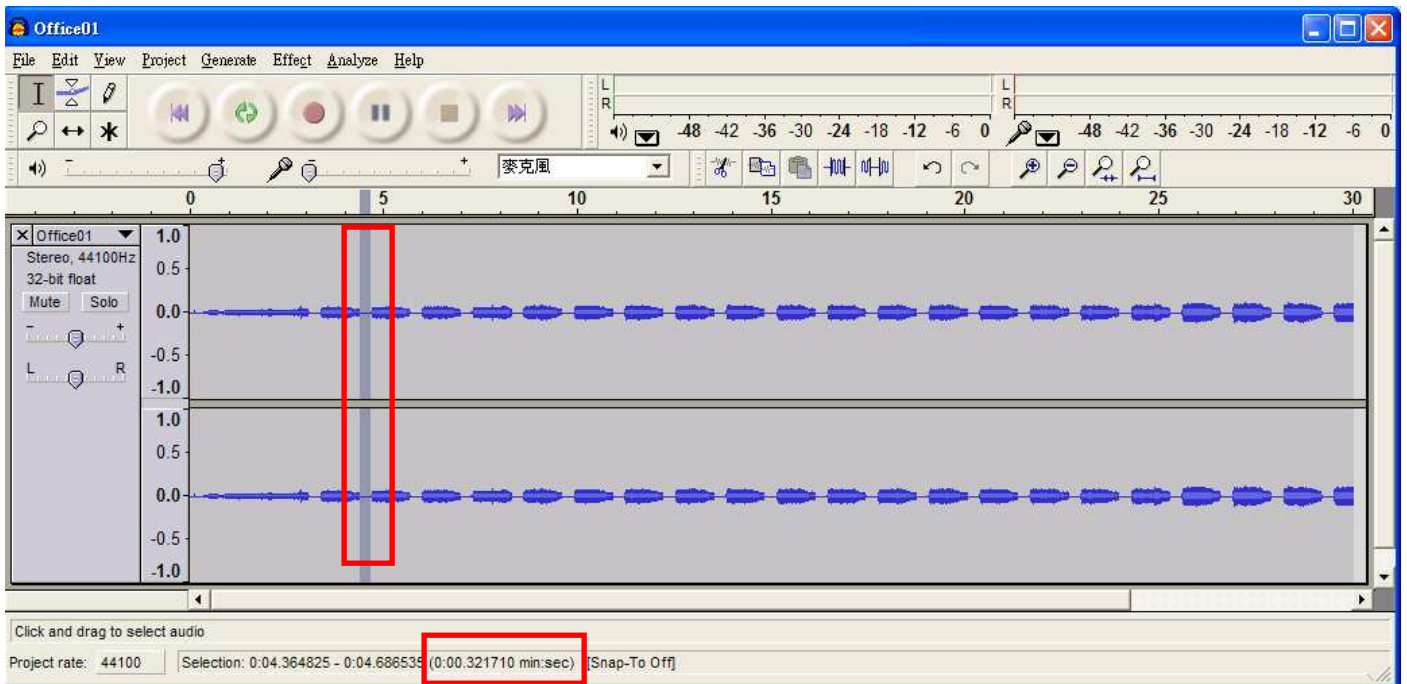
VoIP Gateway

- ▶ Network Configuration
- ▶ General Configuration
- ▶ **Advanced Configuration**
 - ▶ System Setting
 - ▶ SNTP Setting
 - ▶ Codec Setting
 - ▶ Voice Setting
 - ▶ **Tone Setting**
 - ▶ Phone Setting
 - ▶ Digit Manipulation
 - ▶ Dial Plan
 - ▶ Call Routing
- ▶ Management
 - Reboot

Tone Setting						
	Dial tone	Ring back tone	Busy tone	Call-waiting	Disconnect tone1	Disconnect tone2
Frequency high (0.300-1980)	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="620"/>	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Frequency low (0.300-1980)	<input type="text" value="350"/>	<input type="text" value="400"/>	<input type="text" value="480"/>	<input type="text" value="350"/>	<input type="text" value="479"/>	<input type="text" value="480"/>
Frequency high level (0-63)(-db)	<input type="text" value="13"/>	<input type="text" value="19"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="8"/>	<input type="text" value="13"/>
Frequency low level (0-63)(-db)	<input type="text" value="13"/>	<input type="text" value="19"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="8"/>	<input type="text" value="13"/>
Tone1 On(0-8000) (Unit:10ms)	<input type="text" value="300"/>	<input type="text" value="400"/>	<input type="text" value="50"/>	<input type="text" value="25"/>	<input type="text" value="100"/>	<input type="text" value="100"/>
Tone1 Off(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="50"/>	<input type="text" value="25"/>	<input type="text" value="32"/>	<input type="text" value="32"/>
Tone2 On(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="400"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Tone2 Off(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

4. Find out frequency of on time and off time

The screenshot shows the Audacity audio editor interface. The main window displays a stereo waveform with a red selection box highlighting a specific segment. The time display at the bottom indicates the selection range as 0:03.364915 - 0:04.373521, with a duration of 0:01.008605 min:sec. The project rate is set to 44100 Hz.



5. Full in values are 100 and 32 on the tone1 on and tone2 off.

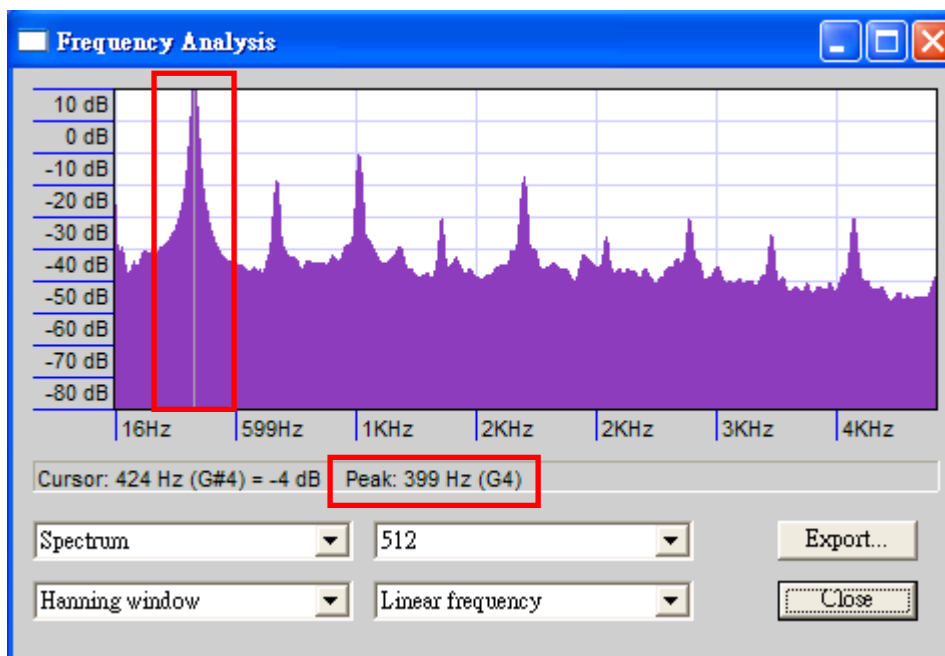
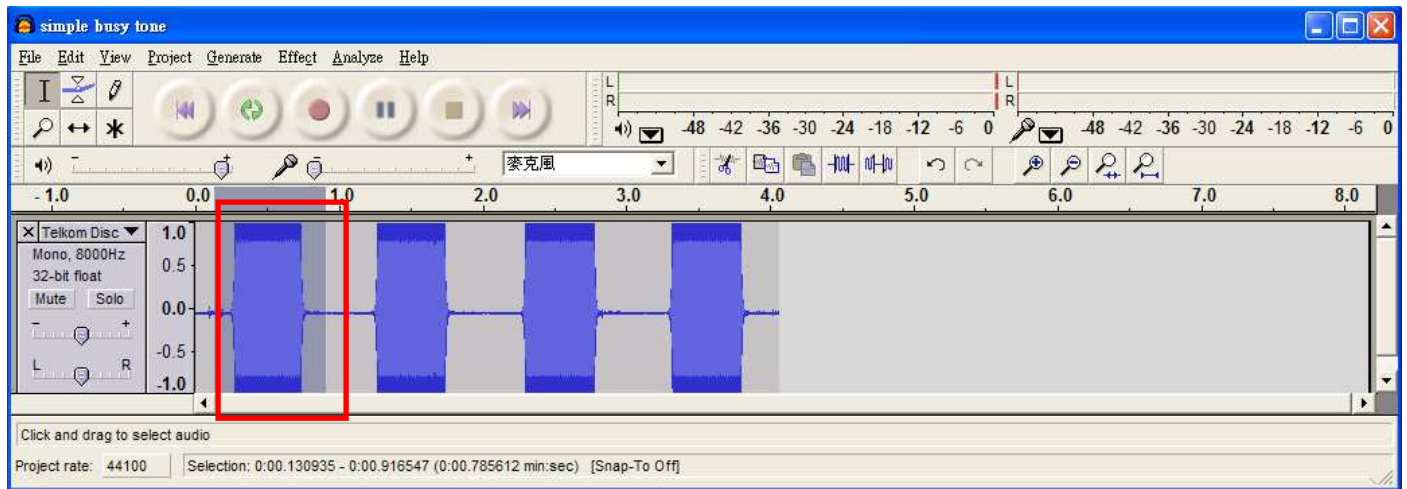
VoIP Gateway

- ▶ Network Configuration
- ▶ General Configuration
- ▶ **Advanced Configuration**
- ▶ System Setting
- ▶ SNTP Setting
- ▶ Codec Setting
- ▶ Voice Setting
- ▶ **Tone Setting**
- ▶ Phone Setting
- ▶ Digit Manipulation
- ▶ Dial Plan
- ▶ Call Routing
- ▶ Management
- Reboot

Tone Setting						
	Dial tone	Ring back tone	Busy tone	Call-waiting	Disconnect tone1	Disconnect tone2
Frequency high (0,300-1980)	440	0	620	440	0	0
Frequency low (0,300-1980)	350	400	480	350	479	480
Frequency high level (0-63)(-db)	13	19	24	24	8	13
Frequency low level (0-63)(-db)	13	19	24	24	8	13
Tone1 On(0-8000) (Unit:10ms)	300	400	50	25	100	100
Tone1 Off(0-8000) (Unit:10ms)	0	200	50	25	32	32
Tone2 On(0-8000) (Unit:10ms)	0	400	0	25	0	0
Tone2 Off(0-8000) (Unit:10ms)	0	200	0	25	0	0

Example 3 for single frequency

1. Analyze port of red frame.
2. From the plot spectrum finding frequency (the normally values between 300~1000 m sec).



3. Full in the values are 399 or 400 on frequency low and 0 on frequency high.

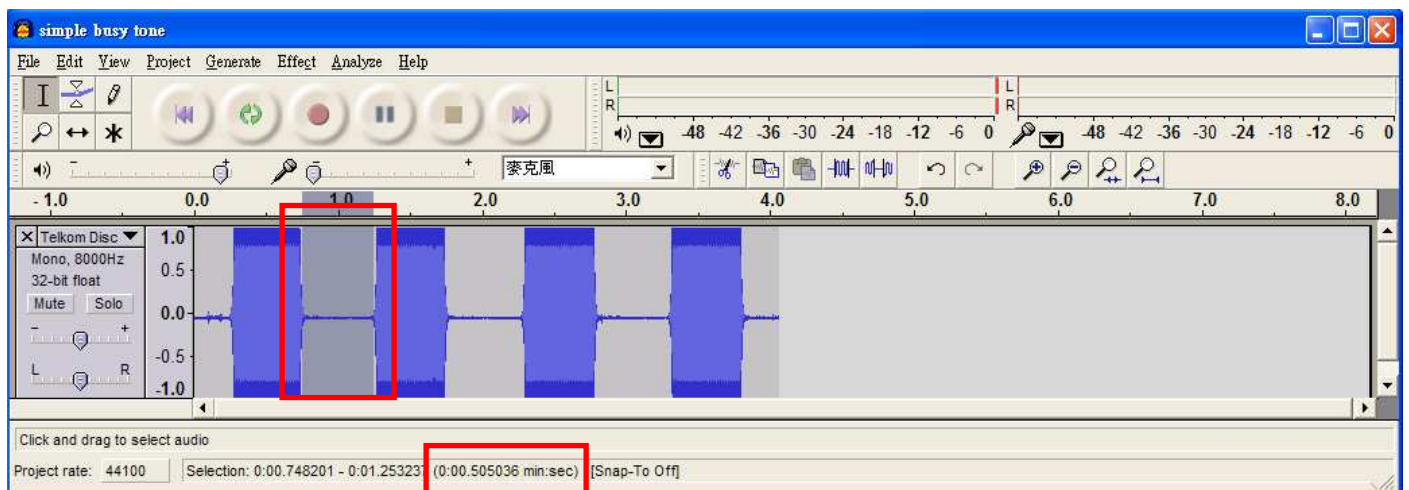
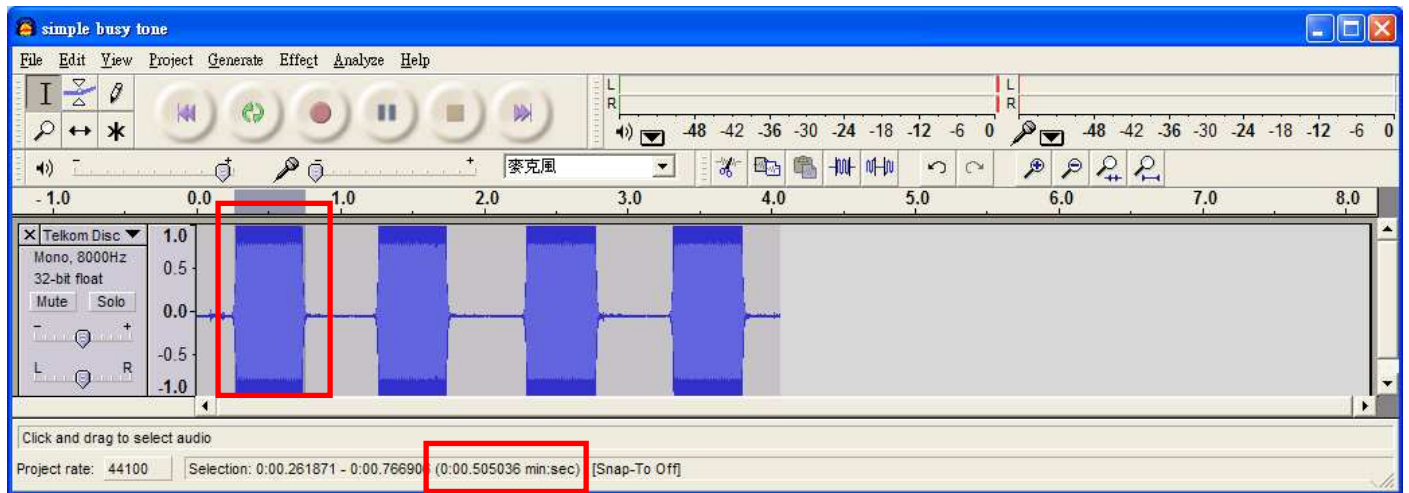
VoIP Gateway

- Network Configuration
- General Configuration
- Advanced Configuration
 - System Setting
 - SNTP Setting
 - Codec Setting
 - Voice Setting
 - Tone Setting**
 - Phone Setting
 - Digit Manipulation
 - Dial Plan
 - Call Routing
- Management
 - Reboot

Tone Setting						
	Dial tone	Ring back tone	Busy tone	Call-waiting	Disconnect tone1	Disconnect tone2
Frequency high (0,300-1980)	440	0	620	440	0	0
Frequency low (0,300-1980)	350	400	480	350	399	400
Frequency high level (0-63)(-db)	13	19	24	24	8	13
Frequency low level (0-63)(-db)	13	19	24	24	8	13
Tone1 On(0-8000) (Unit:10ms)	300	400	50	25	50	50
Tone1 Off(0-8000) (Unit:10ms)	0	200	50	25	50	50
Tone2 On(0-8000) (Unit:10ms)	0	400	0	25	0	0
Tone2 Off(0-8000) (Unit:10ms)	0	200	0	25	0	0

Apply

4. Find out frequency of on time and off time



5. Full in values are 50 and 50 on the tone1 on and tone2 off.

VoIP Gateway

- Network Configuration
- General Configuration
- Advanced Configuration
 - System Setting
 - SNTP Setting
 - Codec Setting
 - Voice Setting
 - Tone Setting**
 - Phone Setting
 - Digit Manipulation
 - Dial Plan
 - Call Routing
- Management
 - Reboot

Tone Setting						
	Dial tone	Ring back tone	Busy tone	Call-waiting	Disconnect tone1	Disconnect tone2
Frequency high (0,300-1980)	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="620"/>	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Frequency low (0,300-1980)	<input type="text" value="350"/>	<input type="text" value="400"/>	<input type="text" value="480"/>	<input type="text" value="350"/>	<input type="text" value="399"/>	<input type="text" value="400"/>
Frequency high level (0-63)(-db)	<input type="text" value="13"/>	<input type="text" value="19"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="8"/>	<input type="text" value="13"/>
Frequency low level (0-63)(-db)	<input type="text" value="13"/>	<input type="text" value="19"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="8"/>	<input type="text" value="13"/>
Tone1 On(0-8000) (Unit:10ms)	<input type="text" value="300"/>	<input type="text" value="400"/>	<input type="text" value="50"/>	<input type="text" value="25"/>	<input type="text" value="50"/>	<input type="text" value="50"/>
Tone1 Off(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="50"/>	<input type="text" value="25"/>	<input type="text" value="50"/>	<input type="text" value="50"/>
Tone2 On(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="400"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Tone2 Off(0-8000) (Unit:10ms)	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="0"/>	<input type="text" value="0"/>