

42. PBX Busy Tone

One Vigor3300 is talking to another Vigor3300 and trucked to the extension on the remote NEC PBX. When any one of the callers hangs up, the FXO ports will not hang up and remain attached as an active channel on the asterisk server. This is because Vigor3300 cannot recognize the busy tone from PBX.

How do we capture and analyze PBX Busy Tone for Vigor 3300 Tone Setting?

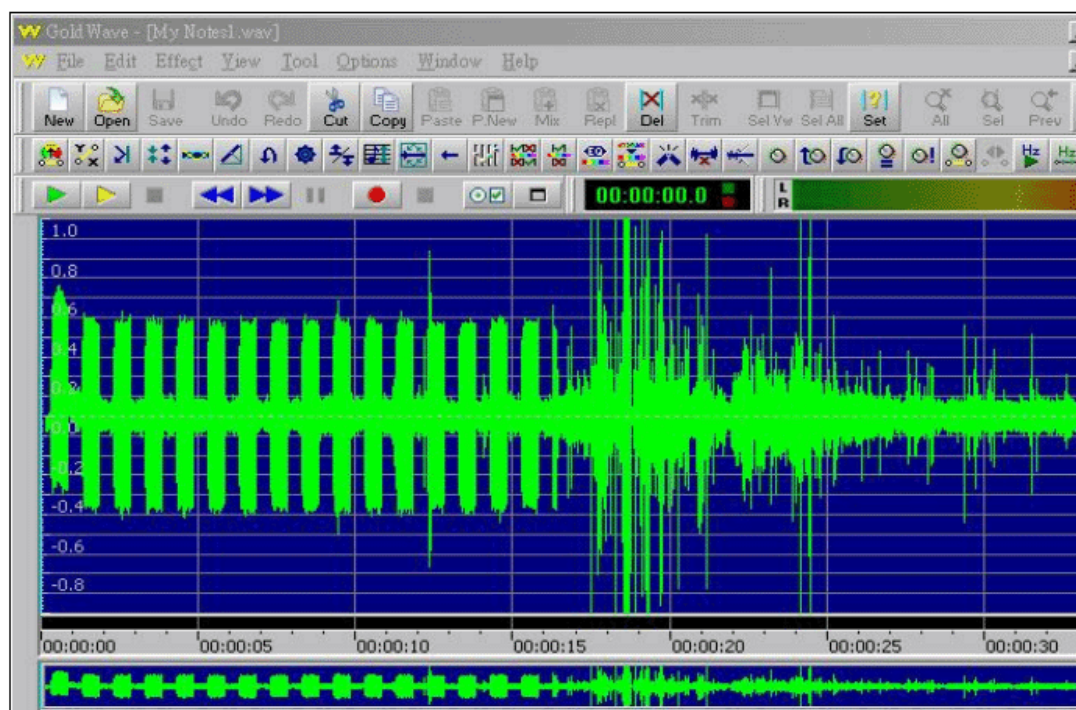
1. First, we need to record the PBX busy tone.
2. Then, analyze the Busy tone frequency and add it to Vigor 3300.

How can we record PBX Busy Tone?

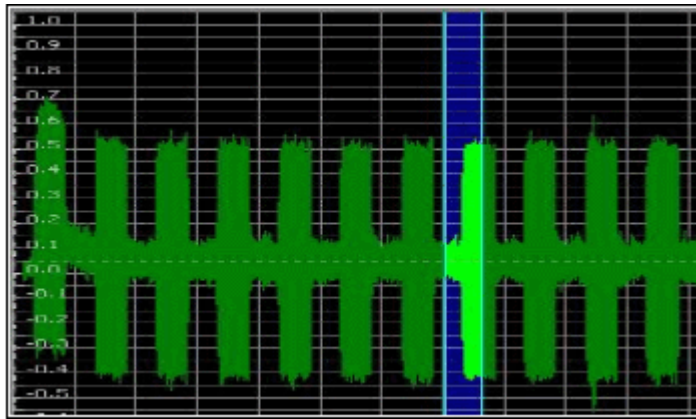
Pick up and hold a phone (A) from PBX, dial Phone (A)'s number from Phone (B). Then phone (B) can listen the busy tone of Phone (A) by PBX. At the moment we use SoundRecorder to capture the Tone.
(Go to **Start-> Accessories-> Entertainment->SoundRecorder**)

Analyze the Busy Tone:

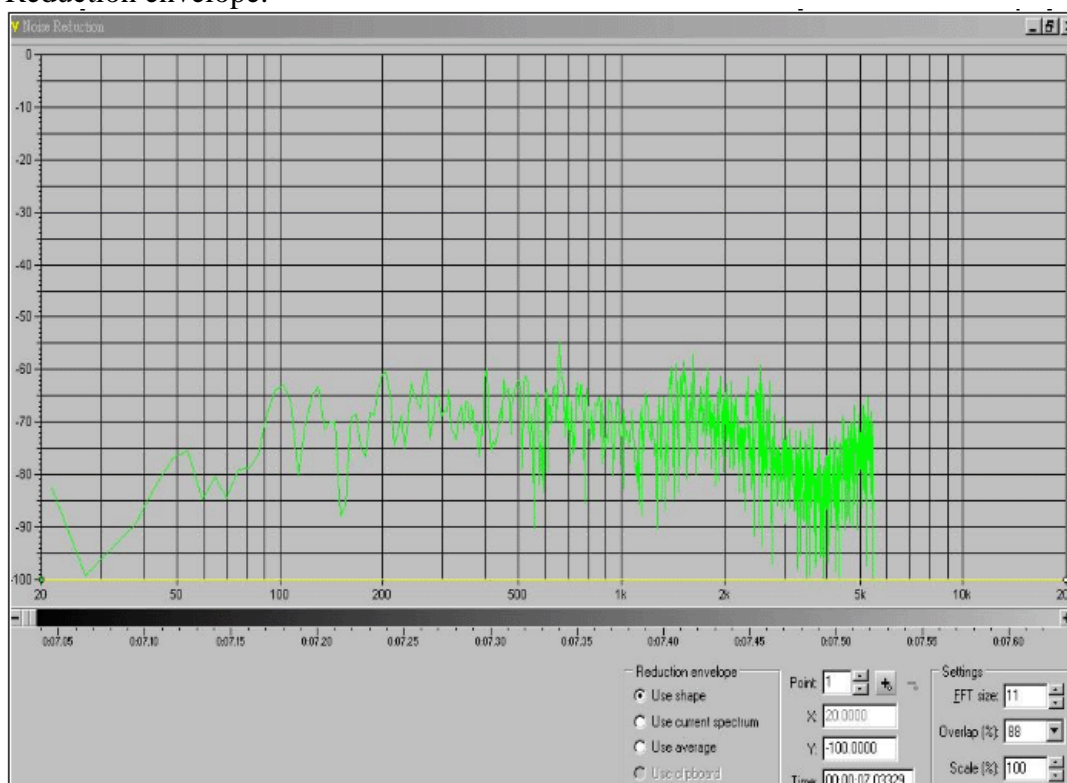
1. Use GoldWave software to open the .wav file.



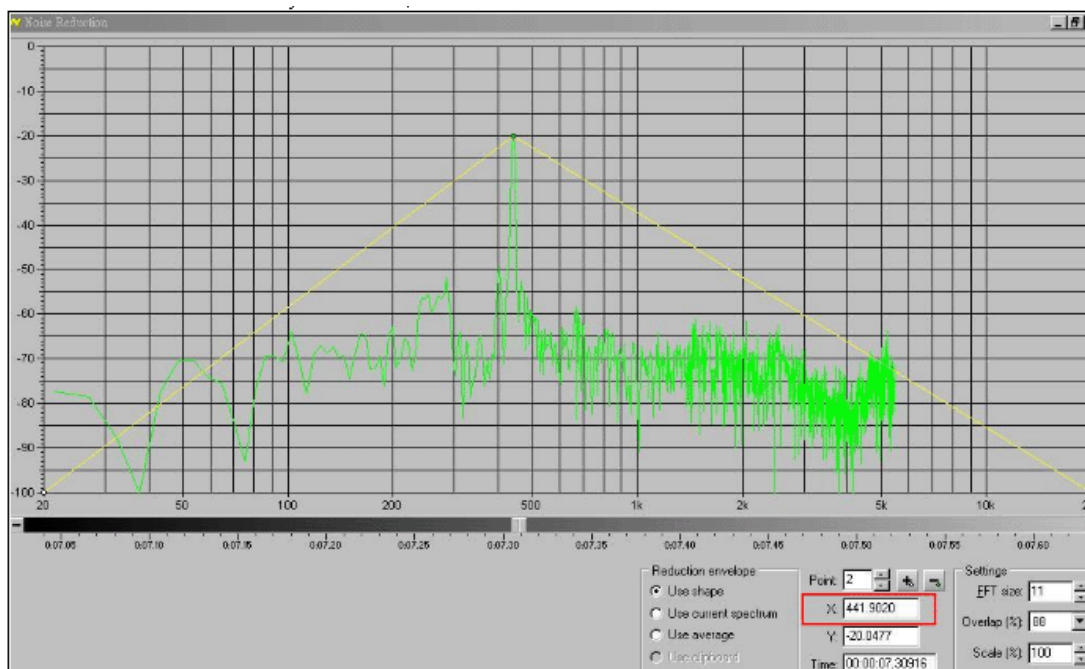
2. Choose the range between Tone on and Tone off.



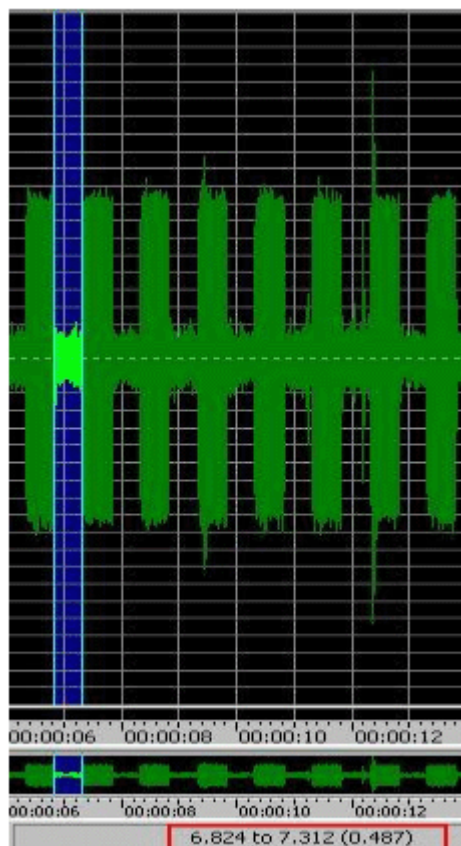
3. From **Option-> Effect -> Filter ->Noise Reduction**, choose the “Use Shape” on Reduction envelope.



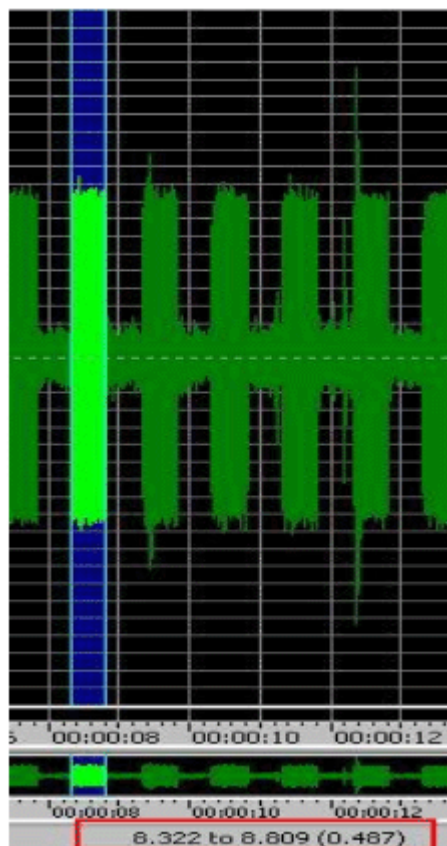
4. Drag the scroll box until the Peak can be observed obviously. In some case, the Peak will appear twice. Click the pinnacle to get the X-axis that is 441 (nearby 440). And this is the Busy Tone of PBX. However, in some cases we try ± 5 Hz, such as 436~446 Hz due to the measure deviation.



5. In Figure 5.1, the interval of Tone on /off is nearly 0.5.



(Figure 5.1)



(Figure 5.2)

- In Vigor 3300 Tone Setting Page, fill in Busy Tone (440 Hz) and Ton/off (50 /10msec).

VoIP - Tone Settings

Region : Caller ID Type :

Tone Classification	Low Frequency (Hz)	High Frequency(Hz)	TON1 (10msec)	TOFF1 (10msec)	TON2 (10msec)	TOFF2 (10msec)
Dial tone	<input type="text" value="350"/>	<input type="text" value="440"/>	<input type="text" value="500"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Ringing tone	<input type="text" value="440"/>	<input type="text" value="480"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="400"/>
Busy tone	<input type="text" value="440"/>	<input type="text" value="620"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="50"/>	<input type="text" value="50"/>
Congestion tone	<input type="text" value="480"/>	<input type="text" value="620"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="25"/>

- If the Busy line still cannot be released after hang up, adjust the frequency by +/- 5 Hz. For example, we can try from 436 to 446Hz. Basically, it only needs one Busy Tone, but in some situation, we will find two. By the way, if the Region default setting is suitable, we also can adduce the profile. (In the case, France Busy tone and interval is fit.)

VoIP - Tone Settings

Region : Caller ID Type :

Tone Classification	Low Frequency (Hz)	High Frequency(Hz)	TON1 (10msec)	TOFF1 (10msec)	TON2 (10msec)	TOFF2 (10msec)
Dial tone	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="500"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Ringing tone	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="150"/>	<input type="text" value="350"/>
Busy tone	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="50"/>	<input type="text" value="50"/>
Congestion tone	<input type="text" value="440"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="25"/>