PCBest Networks VOIP Recorder

V1.196

Software Requirement for PCBest VOIP Recorder

Please install WinPCap first. VOIP Recorder uses WinPCap to sniff network traffic. Download link: It is free.
http://www.winpcap.org/install/default.htm

Network requirement for PCBest VOIP Recorder

You don't need additional hardware if you only want to record calls for the local computer(using VoIPRecorder to record SIP software on the same computer) .

You must have a network switch that supports bidirectional 'port mirroring'(also called 'port mapping' or the existence of a 'span port'). Most business grade switches do have this feature. Or you must have network hub to connect your SIP VOIP devices if you want to record other devices. Why? Because all Ethernet traffic passes through all hub ports, so the PC runs VOIPRecorder can sniff the network and record other devices.
See articles:
http://kbserver.netgear.com/kb_web_files/n101527.asp
http://ask-leo.com/whats_the_difference_between_a_hub_a_switch_and_a_router.html
http://www.duxcw.com/faq/network/hubsw.htm
http://www.cisco.com/en/US/products/hw/switches/ps708/products_tech_note09186a008015c612.shtml#support

If you have any questions or problems about network hardware issues, please feel free to contact us by http://www.pcbest.net/contactus.htm

Typical networks:

Switch — **Remote Spanning enabled** — **Switch** — **SPAN or Mirror port** — **Gateway** — **External Networks**

Soft phones on Computers — **VoIP phones** — **Switch** — **PCBest Networks VoIP Recorder**

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Internet

Router

Hub

Hardware Phone — Softphone — VOIP Recorder — Other Devices

How to use the software

1. Install the msi file which is downloaded from pcbest site.
2. Launch the VoipRecorder from Start\All Programers\PCBest VoIP Recorder

3. Click "Start Recording"

4. In options dialog, set your configuration.
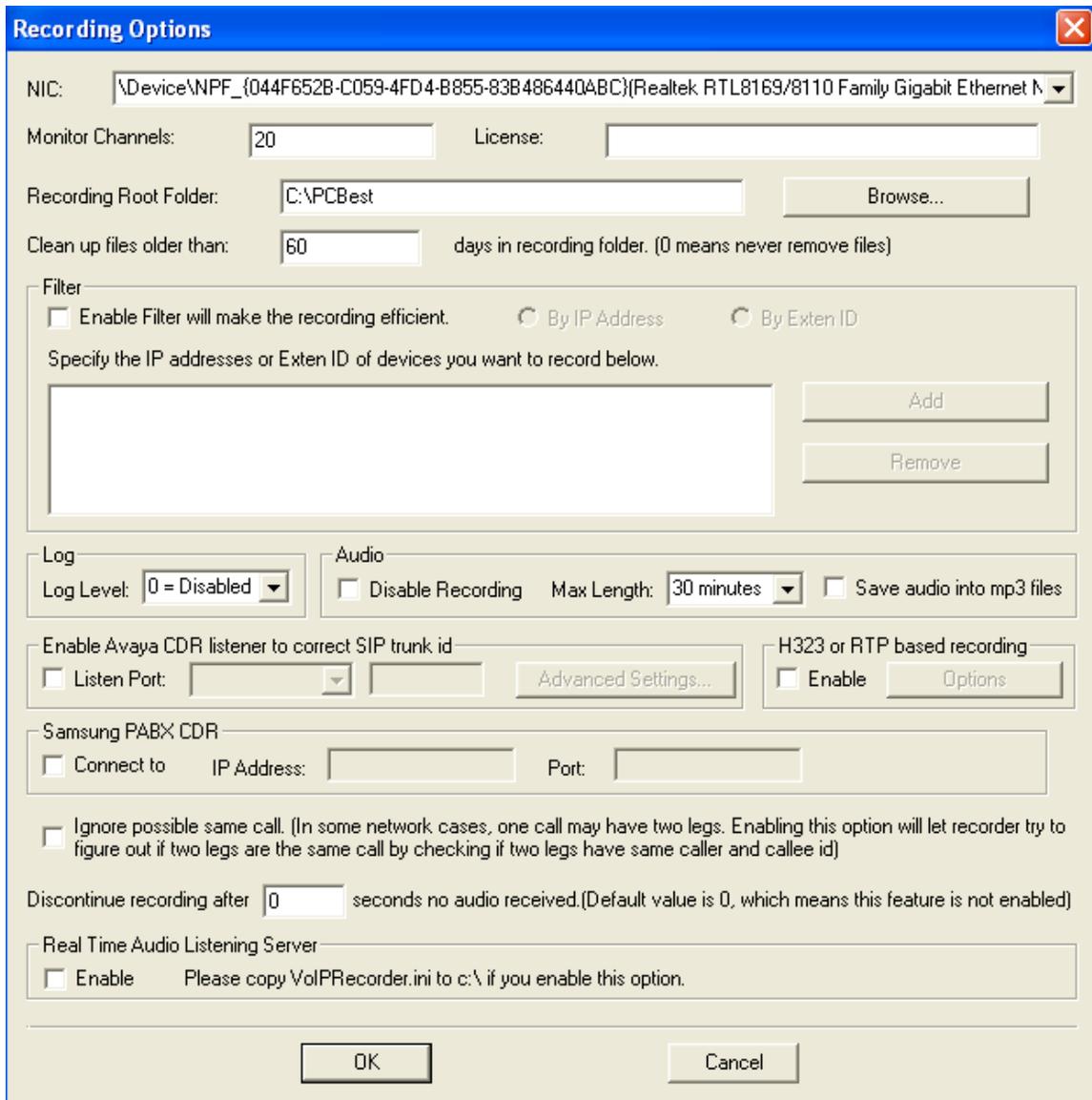
NIC: The network card you want to monitor the traffic. The VOIP recorder **do NOT** support wireless network card now.

Monitor Channels: How many calls you want to monitor simultaneously. You can open as many as channel you want, but your license has to match your channel number.

License: Your license key. You can leave it blank if you don't have a license key, then the software will be running as free version model. ***The free version allows your view the real-time traffic of calls, and record calls for only 30 seconds.***

License Link to: The NIC MAC address you want to choose to link with your license key. If you don't know which one, you can just leave it to blank, and recorder will automatically choose one for you.

Recording root folder: Specify a root folder to save recording wav files. The call info xml file will be saved into this folder, and wav files will be placed at the subfolder of the root folder, with the name of current date.

Clean up files older than: Set how many days you want to keep the recording wav file and folders. If you set it to 0, then the recorder will not do any clean-up jobs.

Filter: Enable filter by specify the IP address of the device, or the extension(sip account username) of the device. This will make the VoIP recorder works more efficient because it can ignore some traffics that are not interested at early stage, or ignore some calls that we don't need.

Log: If enable log. Only if you have problem, you open the log, and make a test, then you send back with log for analyzing. The log file is saved in c:\, named as c:\voiprecorder.txt.

Wav Length: specify the max length of wav you want it to be. Once the wav file reach the max length, sound will be saved into next wav file. For example, the first wav file name is ABC.wav, then the second is ABC-1.wav. Then third will be ABC-2.wav, and so on.

Save audio to mp3: check it if you want to convert the wav file into mp3 file after the call is done.

H323 or RTP Based Recording: Enable this option will let you record other RTP based VOIP calls rather than SIP. You can specify the extensions and IP addresses in options sub-dialog. **Please be noted**: If you enable this option, the VoIP Recorder will **NOT** parse and record SIP calls.

Please give your settings just like the following picture.

Also, in RTP recording model, only G711u, G711a, GSM and G729 calls can be recorded. **Enable Avaya CDR listener to correct SIP trunk ID:** this is a feature for avaya SIP trunk. If you record on avaya SIP trunk, and want to capture avaya H323 phones traffic. This feature will help you replace the SIP trunk id by real caller or callee id. How it does is, it open a TCP or UDP port, to accept avaya CDR data real-time, then compare it with SIP traffic. You can set the CDR format by this dialog:

Avaya CDR Advanced Options

SIP Trunk IDs

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Add

Remove

CDR string format

Time	Start Pos: 1	End Pos: 4	Sample: 1-4	
Condition Code:	Start Pos: 11	End Pos: 11	Sample: 11-11	
Dialed Nnumber:	Start Pos: 21	End Pos: 35	Sample: 21-35	
Calling Number:	Start Pos: 37	End Pos: 41	Sample: 37-41	

Avaya CDR correction is used to correct caller or called ids by receiving CDR data from Avaya PBX. This feature is used for Avaya H323 phones which use SIP trunk to receive or make calls.

You can use this voiprecorder software to monitor on SIP trunk to do call recording, and replace sip trunk id by correct call id.

OK   Cancel

It should match the settings of Avaya PBX cdr format. The CDR format can be set in Avaya PBX. See the following picture:

Ignore possible same call: In some networks, one call may have two legs. For example, extension A call extension B, but the audio paths are actually A to PBX and PBX to B. Recorder can try to ignore the second path by comparing if two calls have same caller and callee id.

Disable Recording: If this option is enabled, the recorder will not record the calls conversation into wav or mp3 files, but they will be still real-time showing on the screen, and the call info will be still saved into xml files.

Samsung CDR: Settings for receiving Samsung PABX CDR.

Ignore possible same call: Only enable this if you found there are two recording for one call. In some network environment, it is possible to get two recordings for one call.

Discontinue recording after xxx seconds no audio: This can be used to clean up the calls which are only established, but not seen BYE messages at the network. By monitoring if there are audio, the recorder can detect if the call is still OK.

Enable Real-time audio listening server: If you want to real-time listen the conversation of the calls showing on the screen, you can enable this feature. VoIP

Recorder will open a SIP IVR server when capturing the calls. Please copy
VoIPRecorder.ini into c:\, so the SIP IVR server will use this ini to initiate.
It is very easy to get the conversation by calling from a SIP softphone or hardware.
For example, the VoIP recorder is working on the 192.168.1.120, and there is a call
recorded on the channel 1. On the SIP phone, you just need to call into 1@192.168.1.120,
and then you will hear the conversation.
Note: This feature need special license to work. Please contact PCBest for prices.

5. Click ok button to start capturing.
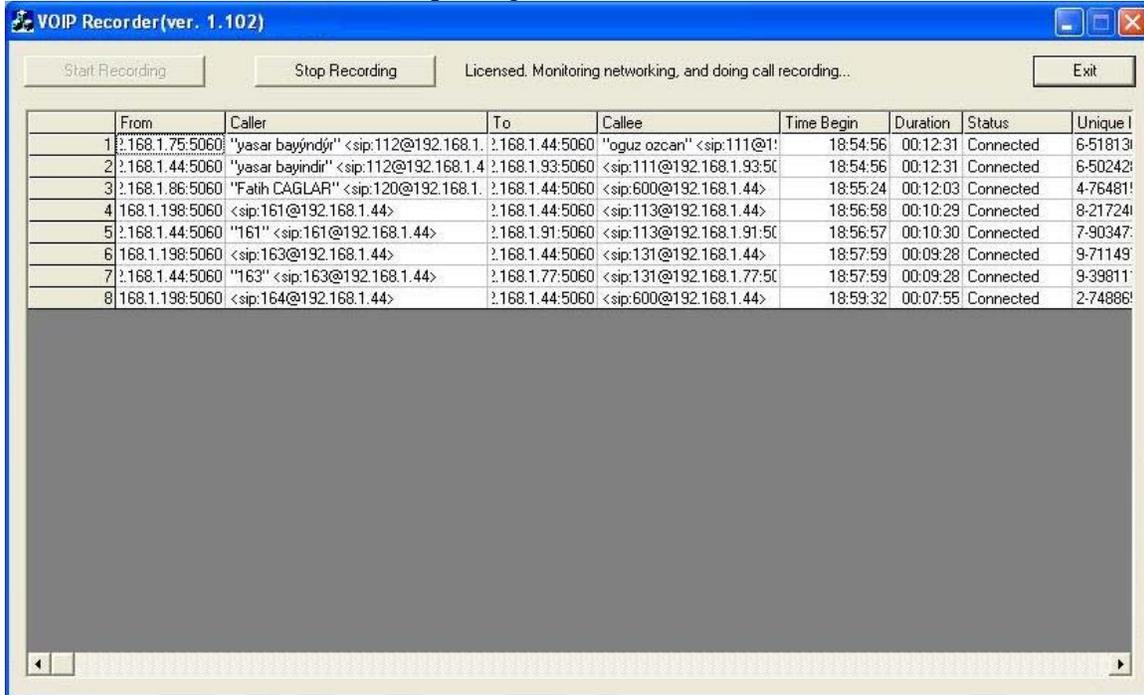
The graphic grid will show you the calls which are happening on the network.

6. Checking the recording files

Please switch to the root folder you set in options dialog of start recording. You will see
the xml file and folder for wav.
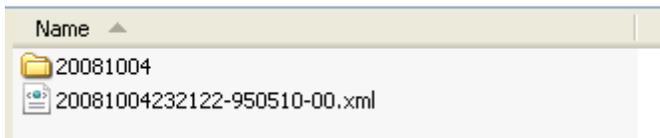
The xml files record the call information. The name of xml files are the unique id which
mark the call. You can find the wav file with the same file name but the extension of file
is wav.

7. XML format(sample)

Here is the content of 20081004232122-950510-00.xml.

```xml
<?xml version="1.0" encoding="ISO-8859-1" ?>
<CALL>
<ID>20081004232122-950510-00</ID>
<SUCCEED>true</SUCCEED>
<CALLER>
<IPADDR>192.168.1.101:5060</IPADDR>
<NAME>"YongeHome" <sip:51680000@pcsip.com></NAME>
</CALLER>
<CALLEE>
<IPADDR>209.222.52.49:5060</IPADDR>
<NAME><sip:8888@pcsip.com></NAME>
</CALLEE>
<TIME>
<INIT>2008-10-04 23:21:22</INIT>
<BEGIN>2008-10-04 23:21:23</BEGIN>
<END>2008-10-04 23:22:07</END>
<DURATION>44</DURATION>
</TIME>
<RECORD>
<ROOT>C:\900q</ROOT>
<PATH>C:\900q\20081004\20081004232122-950510-00.wav</PATH>
</RECORD>
</CALL>
```

ID: Unique id for this call.
SUCCEED: true – the call was established. false – the call couldn't get through.
Caller: caller IP address and name
Callee: callee IP address and name
Time:
       Init: Call start time
       Begin: Call connected(begin) time (if call was not successful, this field is null)
       End: Call end time.
Duration: the call duration in seconds.
Record: recording root path and file.

VoIPRecorder Database Application

This is a guide for PCBest Network VoIPRecord Database Application. This application needs .NET framework 2.0 to run, and uses **FREE** Microsoft SQL Server 2005 express to save data. Basically it will monitor the recording root folder, once there is a new xml file generated, it will read its info, and save the call info into database table, then move the xml file into subfolder with the wav. It also provides basic search options for you to search calls and listen to the wav files. You can also develop your web application to search the call table.

Please download its source code here:
http://www.pcbest.net/recorder/DigilogApp.zip

The following steps is for setting up VoIPRecorder database application, which we call it Digilog database application.

1. Download and install SQL Server 2005 Express
2. When installing SQL Server 2005 Express, the following dialog need to be changed as pictures.
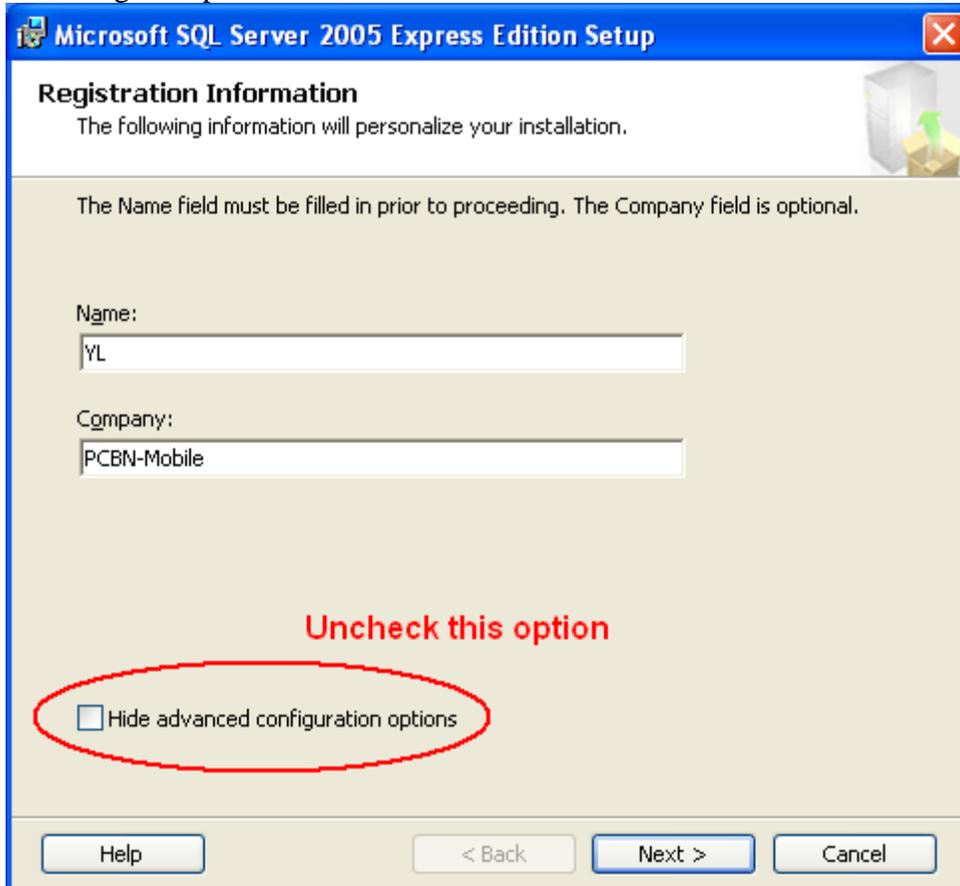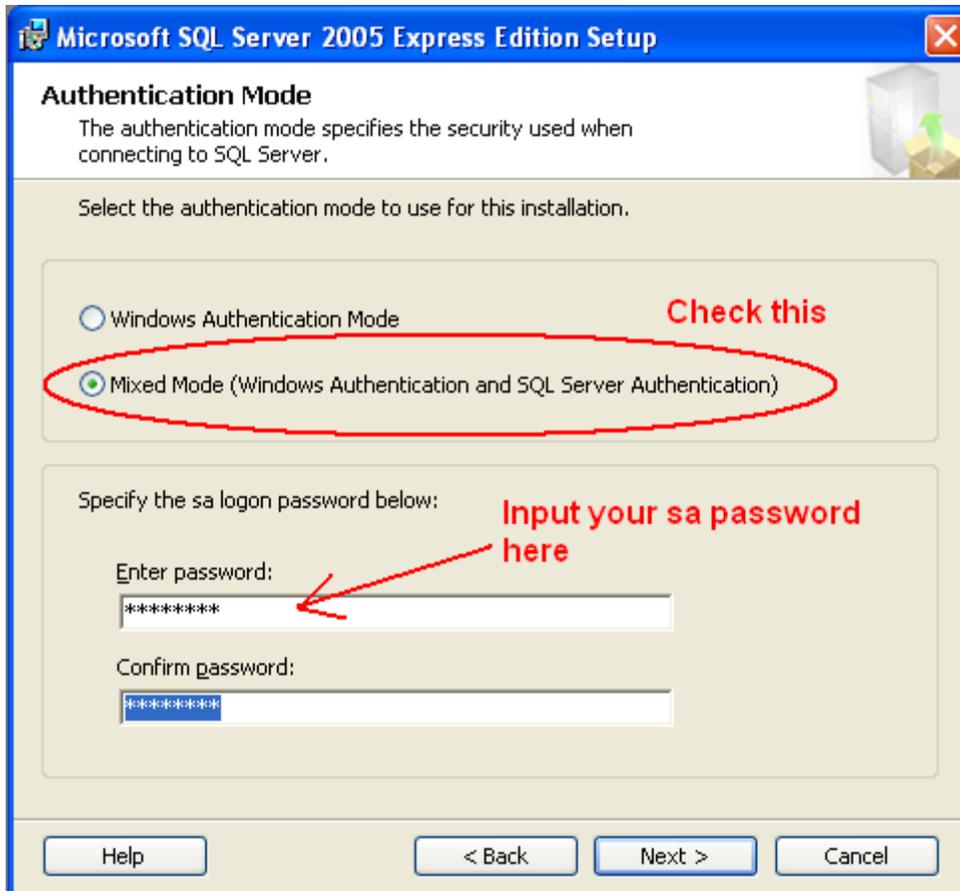
3. Install "SQL Server Management Studio Express"
4. Run "SQL Server Management Studio Express". When asking authorization, please give the password you set when installing SQL server.

5. Right click on the database, and choose new database.
See the picture
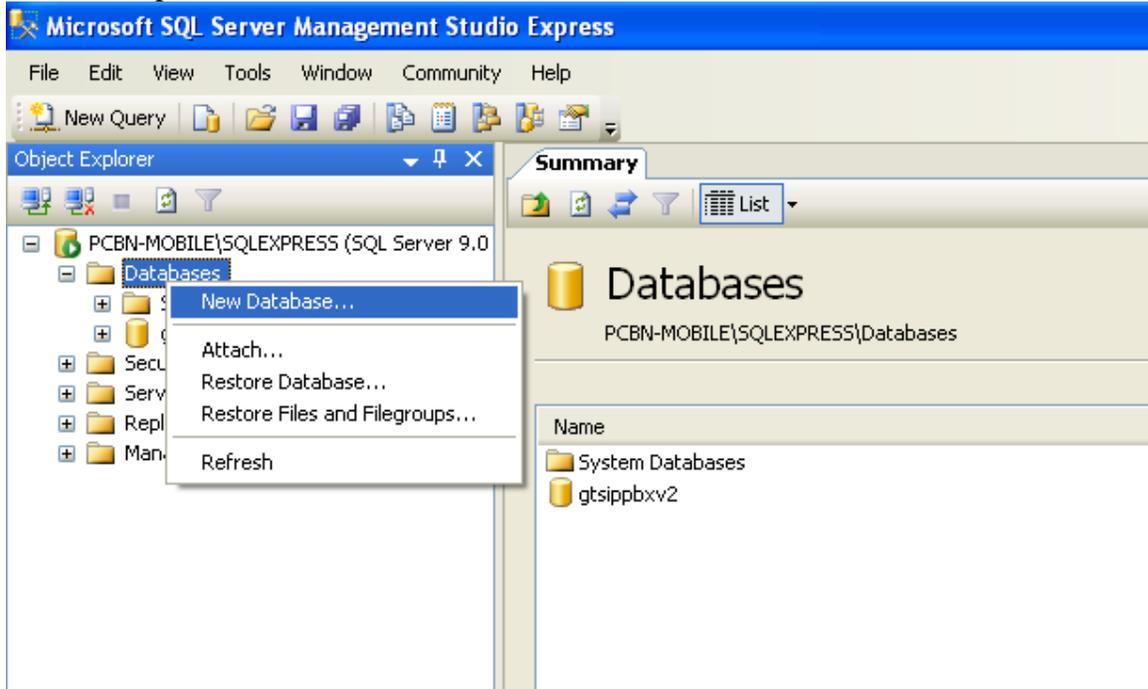
6. Input database name. Here we set it as "digilog":
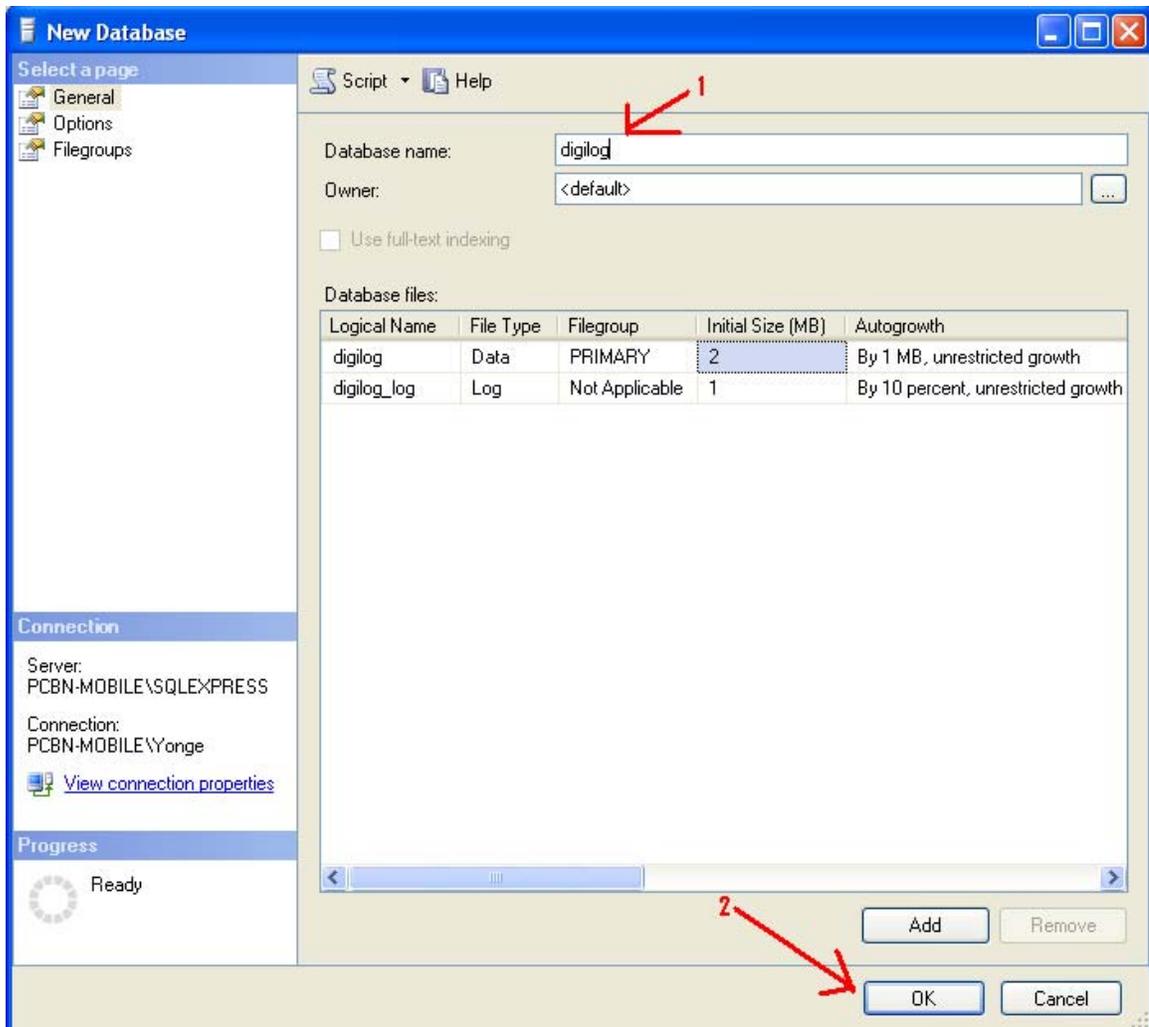
7. Click "ok", you will get:
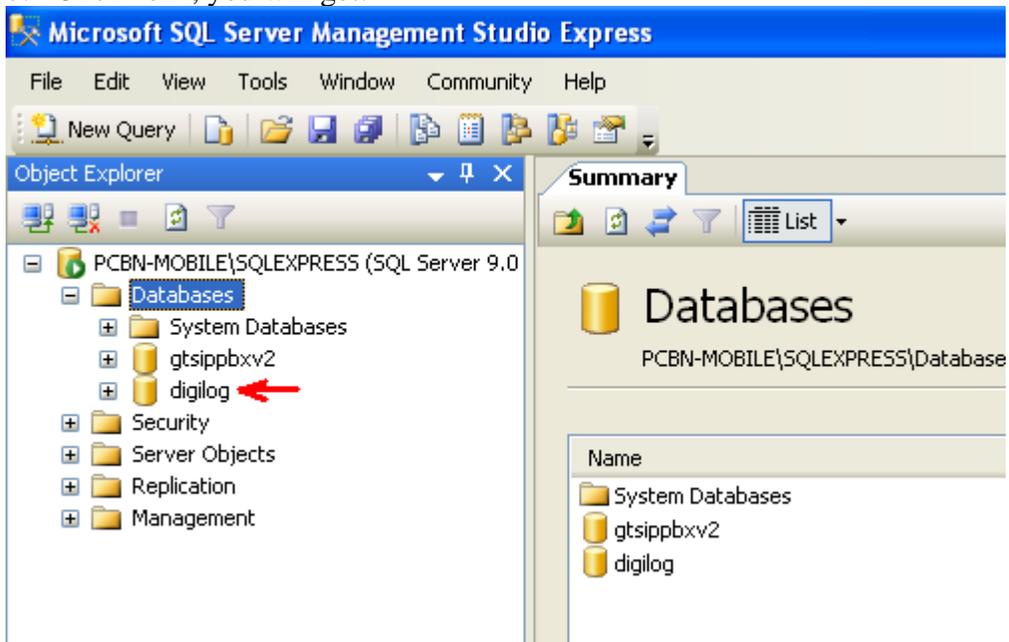
8. Run DigilogApp.exe

Choose Tools/options, and give your db password.
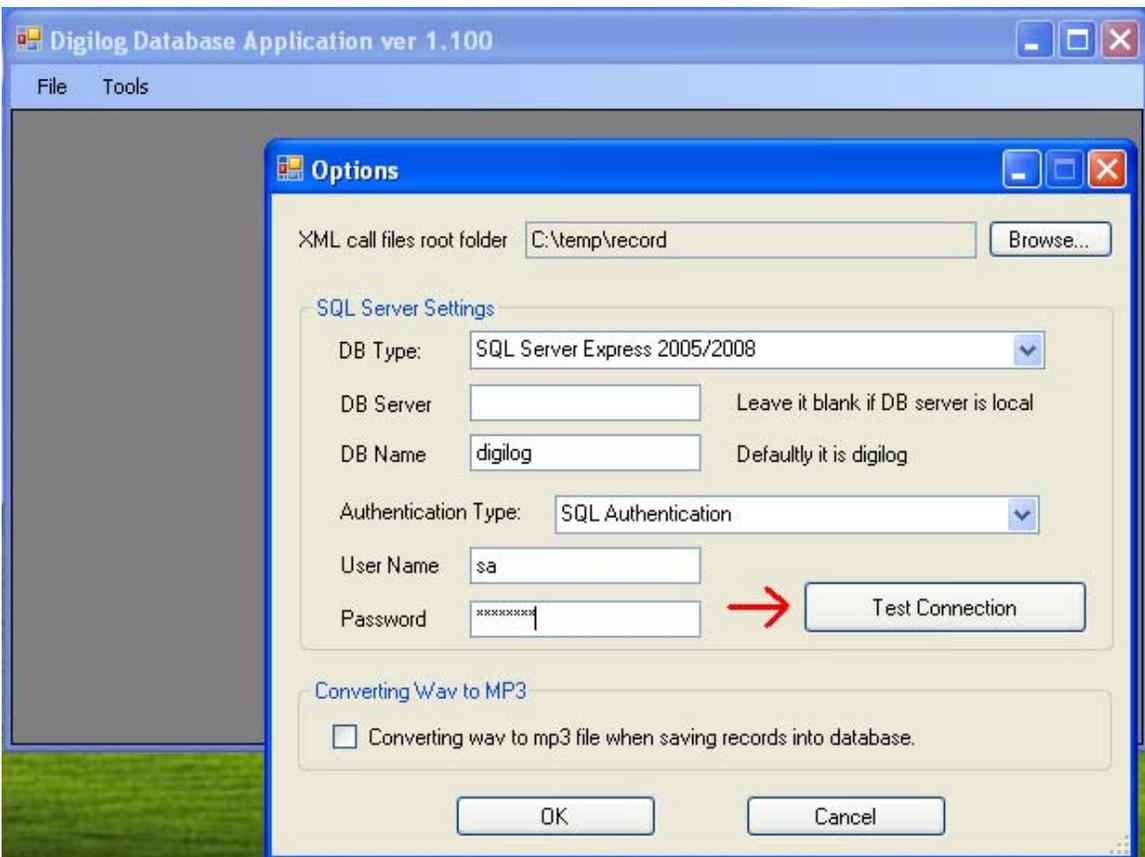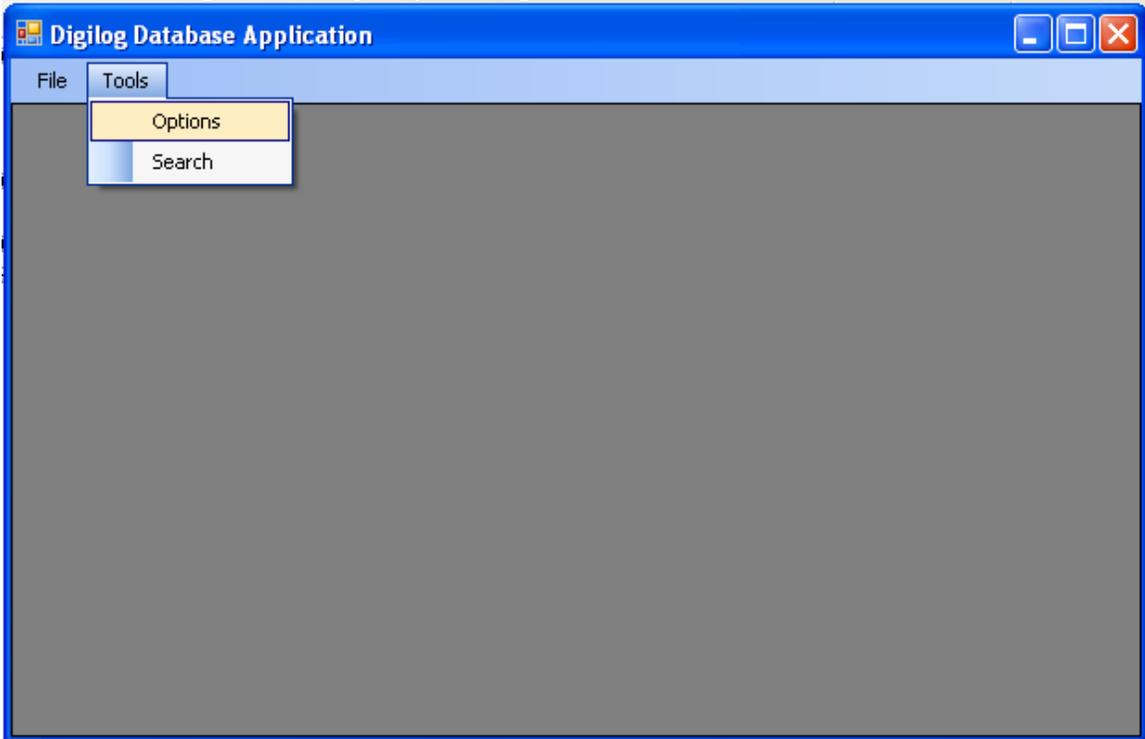
9. Tools\search
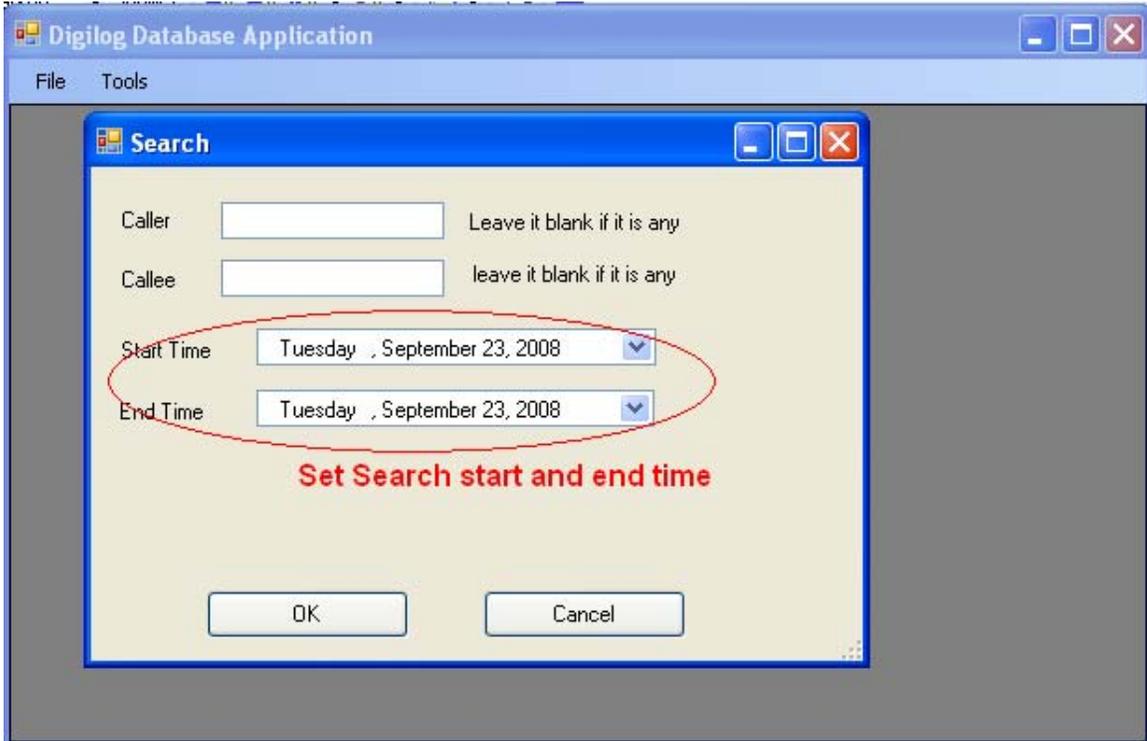
10. Double click one the row. The wav file will be played by Windows Media Player.