

# HOW YOU CAN SILENCE THAT NOISY COMPUTER

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**TuCS** COMPUTER  
**Son**  
SOCIETY

**WINNERS**  
WINdows usERS



An International  
Association of Technology  
& Computer User Groups

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# SUMMARY

There are two ways to silence that noisy computer of yours:

Method 1:

Make it quieter or buy a quieter computer

Method 2:

Move the main computer unit away from your keyboard-monitor-mouse

# TOPICS

- Using Free Software to Measure the Sound Level of a Computer
- Buying silent computers.
- Adding in liquid cooling sometimes helps
- Sound-reducing computer parts sometimes help
- Move your computer away from your monitor-keyboard-mouse. 4

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER

- "dBA at 1 meter" means  
Microphone placed 1 meter away  
from the sound source (your  
computer)  
Software or stand-alone sound level  
meter configured to measure in "root  
mean square" mode
- A-weight equalization curve to  
simulate the frequency response of  
the human ear

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER

(continued)

- You can use the free "Audacity" program to measure the sound level of a computer
- Equipment required:  
Windows..., Linux, or MacOS  
computer  
Microphone or headset with  
microphone

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER (continued)

- Get "Audacity" at <http://www.audacityteam.org/download/>
- Install it into your computer

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER (continued)

- Get "Audacity" at <http://www.audacityteam.org/download/>
- Double-click on the downloaded `audacity-win-2.1.3.exe` file to install it into your computer



# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER (continued)

- Go to <http://wiki.audacityteam.org/wiki/EQCurvesDownload>
- Download the "A-Weighted Curve" called "A-weighting.xml"

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER

(continued)

- Start up the "Audacity" program
- Click on the round red "Record" button
- Click on the square brown "Stop record" button.
- Right click on the top-most meter

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER

(continued)

- A pop-up context menu will be displayed
- Click on "Options"
- Select the "RMS" button
- Leave "Meter Type" as "dB"
- Click on the "OK" button

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER

(continued)

- Click on "Effect" on the top pull-down menu
- Click on "Equalization".
- Click on "Save/Manage Curves"
- Click on "Import"
- Browse to and select the "A-weighting.xml" file

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER

(continued)

- Click "Open"
- Click on "OK" in the "Manage Curves" box
- Click on "OK" in the "Equalization" box

# USING FREE SOFTWARE TO MEASURE THE SOUND LEVEL OF A COMPUTER

(continued)

- Click on "Edit" on the top pull-down menu
- Click on "Preferences"
- Click on "Recording"
- Remove checkmark from "Overdub"
- Click on "OK" of the "Recording" box

# BUYING A SILENT COMPUTER

- See <http://www.silentpcreview.com/section18.html>

# BUYING A SILENT COMPUTER (continued)

- See <https://www.pugetsystems.com/serenity.php>



# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP

- You can reduce the noisy parts in your existing computer with quieter parts.

See

<http://www.silentpcreview.com/section18.html>

# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Sound-reducing fans:

See

<http://noctua.at/en/products/fan>

All of their models of fans  
have measured dBA ratings

# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Water cooling:  
Closed loop  
versus  
Custom loop (open loop)

# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Quiet mouse:

- ✓ <https://www.endpcnoise.com/quiet-computer-mice>
- ✓ <https://www.quietpc.com/keyboard-mouse>

# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Quiet keyboard:

- ✓ <http://www.soundproofingtips.com/best-quiet-keyboards-for-office/>
- ✓ <http://www.quiethomelab.com/best-quiet-keyboards/>

# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Quiet keyboard (continued):
  - ✓ <https://www.quietpc.com/keyboard-mouse>

# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Sound-reducing enclosures:  
Computer enclosures  
and/or  
Placing computer inside a  
sound-reducing enclosure

# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Placing computer inside a sound-reducing enclosure

See

<http://efod.se/writings/quietbox/>



# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Placing computer inside a sound-reducing enclosure (continued)

According to Jeff Strong's "PC Recording Studios for Dummies":

**Put the main CPU unit in an isolation box.** You can create a box (much like the amp isolator box that I describe later in this chapter) to put your computer into. This approach isn't quite as simple as putting an amp in a box because you need to make sure that computer gets cool air to keep it from overheating. This requires insulated ducts and fans that are sized properly for your computer. It can and has been done, so if you don't have the option of putting your CPU in another room, you can use this approach. Just make sure that you don't let your computer overheat — otherwise, you might fry the internal components such as hard drives, motherboard, or CPU board. You can find some links to articles about boxing a computer on my Web site at [www.jeffstrong.com](http://www.jeffstrong.com).

# SOUND-REDUCING COMPUTER PARTS SOMETIMES HELP (continued)

- Reference for the previous slide:

<https://books.google.com/books?id=XocJtVhhtz8C&pg=PA40&lpg=PA40&dq=basics+of+liquid+cooling+a+computer&source=bl&ots=0-T34TeqEn&sig=JTMPzPYYmHJV GhxdNIZ426wXTqo&hl=en&sa=X&ved=0ahUKEwinqZKM1vrTAhVR92MKHZD0Dzg4HhDoAQhdMAk#v=onepage&q=basics%20of%20liquid%20cooling%20a%20computer&f=false>

# MOVING YOUR COMPUTER FARTHER AWAY FROM YOUR KEYBOARD- MONITOR-MOUSE

- Only way to completely remove the noise of a computer
- See [http://aztcs.org/meeting\\_notes/win\\_hardsig/Redmere/redmere-etc.pdf](http://aztcs.org/meeting_notes/win_hardsig/Redmere/redmere-etc.pdf)