

Robocall Deterrence Update

A Learn in 30 presentation
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For PATACS + OPCUG

Prior presentations

- In **June 2020**, I demonstrated how to configure your phone so robocalls would not ring.
- In **July 2020**, I demonstrated how to create and install a custom voicemail greeting to convince robocall systems not to leave voicemail and not to call you again.
- Robocalls still show up in **Missed Calls**.

Understanding Robocaller Systems

- Robocaller systems are designed for time-efficiency
- Calling numbers known to be not in service is a waste of system time
- The systems keep a list of numbers known to be in service, and call those numbers ad nauseam
- The systems recognize any number that answers is a valid number. Answering includes going to voicemail.
- The systems recognize any number that answers with Special Information Tones (SIT) is **disconnected**.

Review those prior presentations

- You can find the slide deck PDFs and videos of the 2020 presentations at:

<https://www.patacs.org/recmtgspat.html>

Use the QR code



Eight months of experience

- In 2018, I was receiving roughly **25 robocall voicemails per week**. Robocall voicemails were filling up my voicemail box.
- In mid-2018, I started using the Verizon Wireless blacklist app to block robocalls. It excluded many but not all. I was still receiving roughly **12 robocalls per week**.
- In July 2019, I installed my custom voicemail greeting with SIT at the beginning of the greeting. After 8 months of experience, my rate of incoming robocalls has fallen to **2 per week**.
- **After 8 months of experience, my rate of robocall voicemails has fallen to ZERO per week.**

Custom Greeting method updates

- During my July 2020 presentation, I described a high-quality way to install and use a custom voicemail greeting including SIT, involving cables and a mixer. I used that method myself.
- That method involved some purchases: a mixer and cables.
- I have continued to research ways to drive down the price.

Custom Greeting method updates

- Use your home Local Area Network (LAN) to connect your computer and phone.
- Eliminates all expenses.
- Audio quality is almost as good as the expensive cable connection method.

Home LAN connection method

- Connects phone and computer so that audio played on computer is echoed to phone.
- Free **SOUNDWIRE** software for personal computer and for **Android smart phone**.
- SoundWire echoes sound from computer to phone. Phone treats incoming sound as a microphone input.
- SoundWire server application is a free download for Windows XP/7/8/10 and for Linux and Raspberry Pi.
- SoundWire app for Android phone is free on the Google Play Store.

SoundWire Server

- Download from:

<http://georgielabs.net>

Use the QR code




Georgielabs.net home page

Official Home of GeorgieLabs


SoundWire Audio Communication System

Turn your Android device into wireless headphones / wireless speaker. Stream any music or audio from your PC to your Android phone, tablet, or other PCs. SoundWire does audio mirroring (audio cast). You can use any music player on your PC or laptop like Spotify, YouTube, or iTunes and stream low-latency live sound over WiFi directly to your Android device. Also works over 3G/4G cell networks or WAN.


- First install the SoundWire Android app from [Google Play Store](#).
- Then install the SoundWire Server on the Windows or Linux computer which is your source of music, web audio streaming, or other sounds. Click on the appropriate version below to download. After downloading run the installer. *You must answer yes ("Allow access") to the Windows Firewall prompt (select both private and public networks).* For the Linux versions right-click on the image and choose "Save Link As", then untar and see the README.txt file for instructions. **SoundWire Server download click below:**




Windows 7/8/10 version
(2.5)




Windows XP version
(2.5)



Linux 64-bit
(3.0 Qt5)



Linux 32-bit
(2.1.2)



Raspberry Pi
(3.0 & 2.1.2)

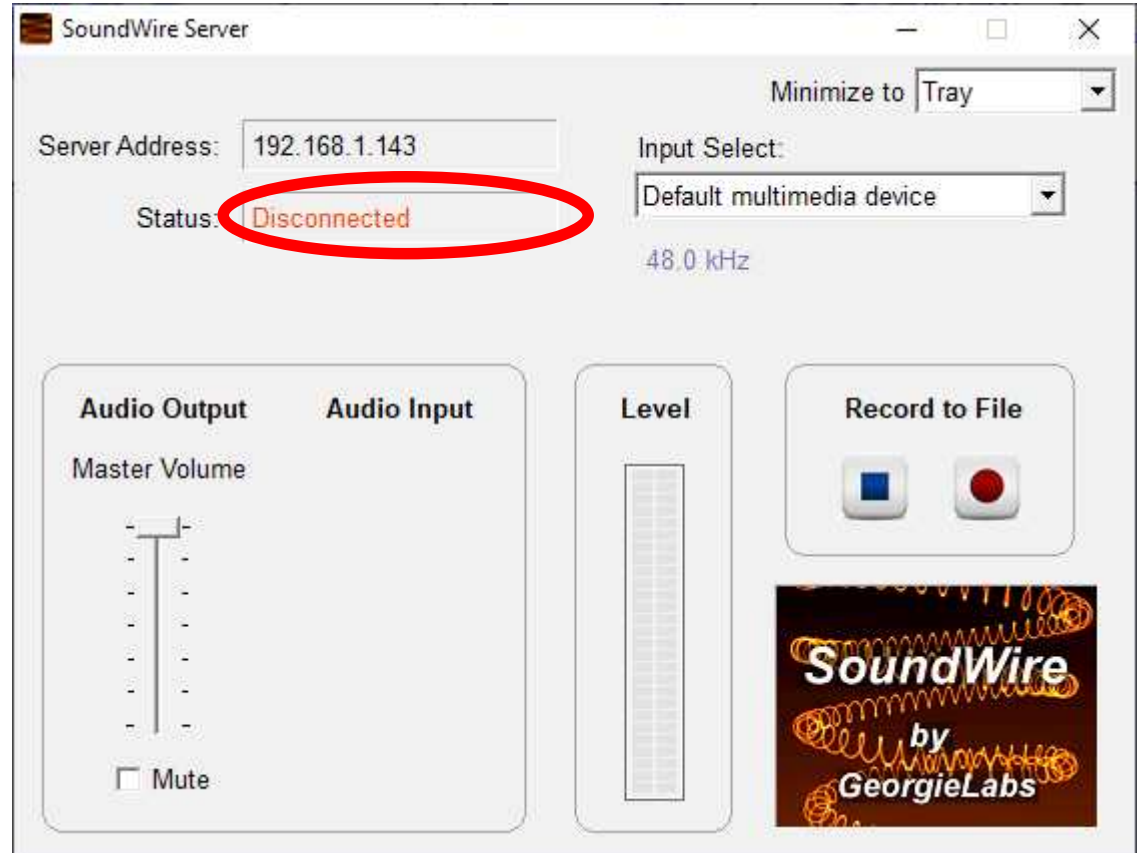
Alternate download site: [Win7/8/10](#) [WinXP](#) [Linux \(all\)](#)

If you have trouble with version 3.0 for 64-bit Linux and Qt5 then try the older version 2.1.2 for 64-bit Linux and Qt4

Choose the correct download for your computer

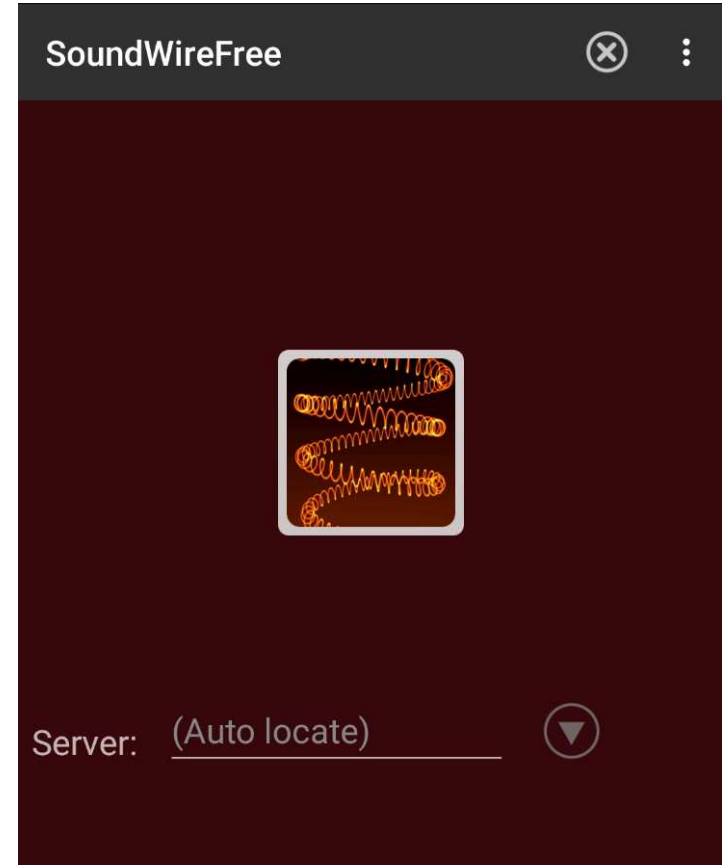
SoundWire server for Windows

- Image captured on Windows 10
- Initial Status **Disconnected** is normal



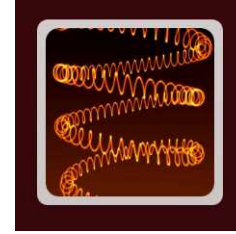
SoundWire App for Android

- Image captured on Samsung Galaxy S10 running Android OS version 10

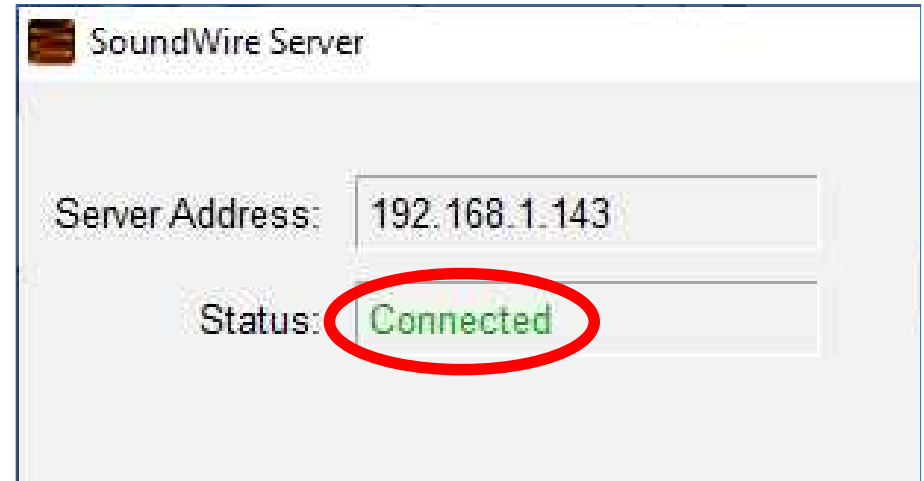


Connect the Soundwire App to Soundwire Server

- Tap and hold the Big Button in the app for roughly 1/3rd second

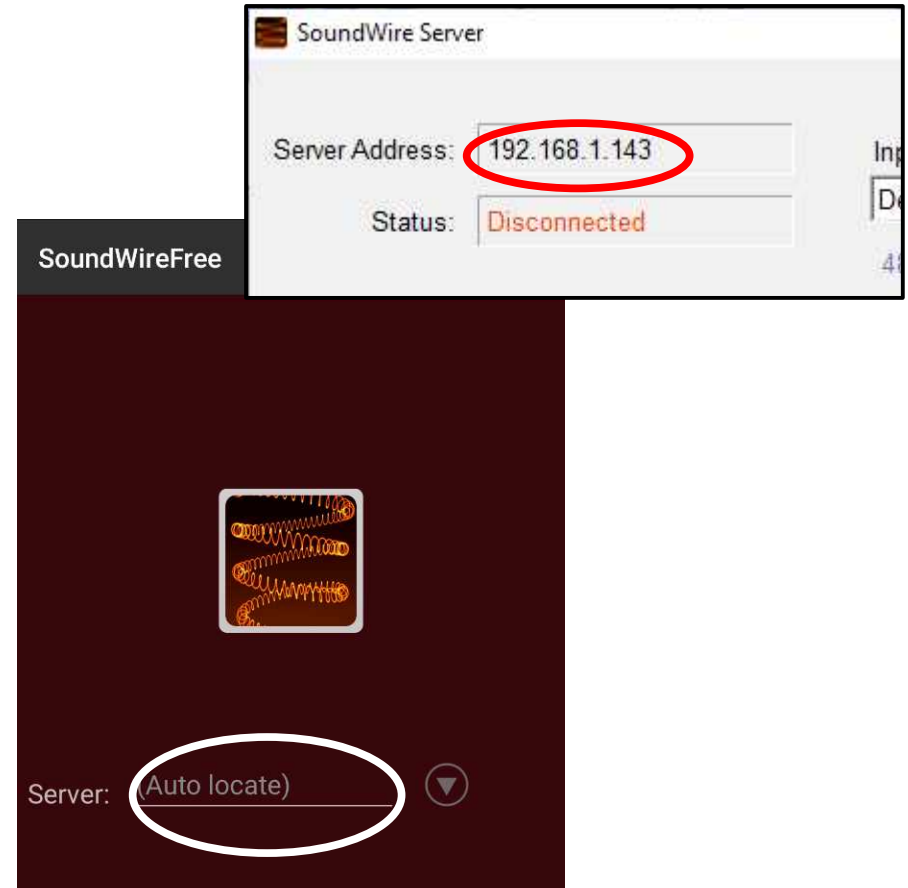


- SoundWire server status changes to **Connected**
- Connection remains intact while both are running



If SoundWire cannot connect

- Try the manual method
- Note **IP address** displayed by SoundWire server
- Type that IP address into SoundWire app
- Re-try 1/3rd second tap on the Big Button in the app



SOUNDWIRE connection and VPN

- If you run a VPN app on your phone: either disconnect from the VPN, or add SoundWire app to the **split VPN list** if that list exists on your VPN app
- If you run a VPN application on your computer: disconnect from the VPN.

Testing SoundWire audio transfer from PC to phone

- Play audio on PC. Any audio app will do: web page video, iTunes, VLC, Audacity, et cetera
- Hear that audio echoed on phone
- During my tests, I found a delay of roughly 1/4th second for reception on phone.
- Do a test recording on the phone with a voice recorder app.

Improving the audio quality

- While using SoundWire, microphone(s) on phone remain live, and pickup not only incoming sound from LAN, but also ambient noise and computer speaker audio.
- **Mute speakers** on computer, or use headphones or earbuds to listen.
- **Block microphones on phone** with masking tape or electrical tape or bandage tape.
- Retry a test recording.

Summary of custom voicemail greeting audio file

- Start with the Special Information Tones (SIT)
- Follow SIT with your voice explaining that your number is not disconnected and the caller can leave a message after the beep.
- SIT convinces robocallers to hang up immediately and to remove your number from their call list.

Summary of custom greeting installation process

- Connect your computer and phone using SoundWire
- Open but do not play your custom greeting audio file on the computer.
- On your phone, prepare to record the custom greeting.

Summary of custom greeting installation process

- On the phone, start the custom greeting recording process
- On the computer, IMMEDIATELY start playback of your custom greeting
- On the phone, end recording when your custom greeting ends

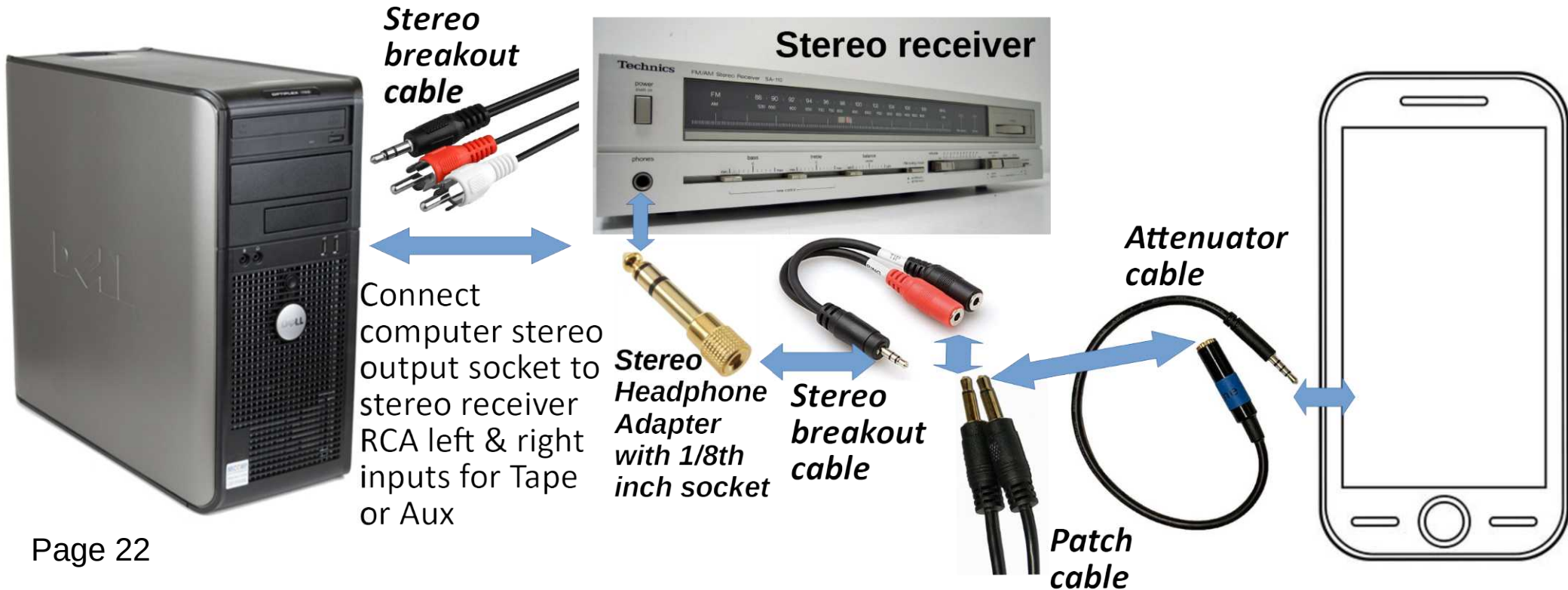
Airfoil app for iOS

- I found a review on this website:
<https://www.iosappweekly.com/stream-any-audio-computer-iphone-ipad-airfoil/>
- **Works very much like SoundWire:** run app on phone, and run application on PC. The company still supports the Mac Airfoil application. The Windows Airfoil application is “retired” but can still be downloaded.
- **My tests proved that Airfoil does NOT send audio to the iOS microphone device.**

Use the QR code



Alternative to mixer for physical audio cable connection method



New source for SIT WAV file

- This is my own enhanced version of SIT.
- I cleaned up the background noise.
- https://drive.google.com/uc?export=download&id=120ORsq9HxnzDDFUyaWJXIZjDDr0Y_XVE

Use the QR code



THE END