Guide: GT7 Shaker for Raspberry Pi

This guide helps you build your own Haptic feedback server for Gran Turismo 7 using a Raspberry Pi. We cover everything from preparing the SD card to network configuration and installation.

1. Hardware Requirements

To get started, you will need the following components.

- **Computer:** Raspberry Pi 4 Model B (4GB recommended) or Raspberry Pi 5.
    - *Consider buying a starter kit or similar to make it easiest. A kit costs between 80 and 120 EUR.*
- **Sound Card:** USB Sound Card.
    - *NB: If you choose a NobSound ns-10g Mini, it can function as a 2-channel sound card when connected to the Raspberry Pi.*
- **Amplifier:** A dedicated amplifier for your shakers (e.g., Nobsound Mini).
    - *The NobSound NS-10G can function as a USB sound card. However, it is strongly recommended to buy a 24V 4-5A power supply along with your Nobsound, as the included one is too weak when the action gets intense. Can be found on Amazon for around 30 EUR.*
- **Bass Shakers:** Transducers for mounting on your rig (e.g., Dayton Audio TT25-8 or BST-1 or Douk Audio BS.1).
    - *Can be found on Amazon for around 44 EUR each.*
- **Micro SD Card:** Min. 16GB (Class 10 recommended).

2. Preparing the SD Card (Flash OS)

We need to install the operating system on the SD card. We use the official tool as it allows us to enable WiFi and SSH (remote control) immediately.

1. Download and install **Raspberry Pi Imager** on your PC/Mac from raspberrypi.com/software.
2. Insert your Micro SD card into your computer.
3. Open Raspberry Pi Imager and select:

- **Raspberry Pi Device:** Choose your model (e.g., Raspberry Pi 4).
- **Operating System:** Choose **Raspberry Pi OS (other)** -> **Raspberry Pi OS Lite (64-bit)**.
  - *Note: The "Lite" version has no graphical user interface, making it faster and more stable as a server.*
- **Storage:** Select your SD card.

IMPORTANT: Enable SSH and WiFi

Before pressing "NEXT", you must press the gear icon (Edit Settings) or press CTRL + SHIFT + X.

1. Under the **General** tab:
   - Set **Hostname** to: gt7shaker
   - Set **Username** and **Password** (Remember these! E.g., user: pi, password: racecar).
   - Configure **Wireless LAN**: Enter your WiFi name and password (if you are not using a cable).
1. Under the **Services** tab:
   - Check **Enable SSH**.
   - Select **Use password authentication**.
1. Press **SAVE** and then **YES** to write to the card.

3. Connect to your Raspberry Pi

When writing is complete, insert the card into your Raspberry Pi and turn on the power. Wait 2-3 minutes for the first boot.

Connect via Terminal (SSH)

Since we enabled SSH in the previous step, you can control the Pi from your own computer without connecting a screen/keyboard to it.

1. Open Terminal (Mac) or PowerShell (Windows).
2. Type the following command (replace pi and gt7shaker with what you chose):
3. ssh pi@gt7shaker.local
4.
5. Type yes to the security question and enter your password.

(If this doesn't work, you need to find the Pi's IP address on your router and use ssh pi@192.168.x.x instead).

4. Setting up Static IP

To ensure that the PlayStation 5 can always find the server, your Pi must have a fixed IP address.

1. When you are logged into the Pi, type:
2. sudo nmtui
3.
4. Select **Edit a connection** and press Enter.
5. Select your connection (Wired or the WiFi name) and select **<Edit>**.
6. Go down to **IPv4 CONFIGURATION**. Change it from <Automatic> to <Manual>.
7. Press **<Show>** to open the menu and fill in:
   - **Addresses:** 192.168.1.50/24 (Choose an available IP. /24 is standard).
   - **Gateway:** 192.168.1.1 (Your router's IP).
   - **DNS servers:** 1.1.1.1 or 8.8.8.8.
1. Go to the bottom, select **<OK>**, press **<Back>** and then **<Quit>**.
2. Restart the network/Pi to activate the new IP:
3. sudo reboot
4.

5. Installation of GT7 Shaker

Now we install the software itself. Since it is a pre-built package (.deb), all necessary drivers and libraries are installed automatically.

Log in to your Pi again (remember to use the new IP, e.g., ssh pi@192.168.1.50).

Step 1: Download the software

Get the latest version directly from GitHub to your Pi:

wget https://github.com/Helskov/GT7-Shaker-for-linux/releases/download/v1.30/gt7-shaker_1.30_all.deb

Step 2: Install

Run this command to install the program:

sudo apt install ./gt7-shaker_1.30_all.deb

Press Y (Yes) if asked for confirmation. The installation takes a moment as it also downloads audio drivers (PortAudio) and Python libraries automatically.

6. Start and Use

The program is now installed.

Start the Engine

To start the program, simply type:

gt-shaker

Web Interface

You can now control all settings from your phone or PC.

- Open a browser and go to: http://192.168.1.50:5000 (Replace with your Pi's IP).

7. Automatic Start (Service)

To make your Raspberry Pi a true "Plug & Play" device, we set up the software to start automatically in the background as soon as the power is turned on.

We create a "Service" for this purpose.

Step 1: Create the service file

Run this command in the terminal to create a configuration file:

Bash

```
sudo nano /etc/systemd/system/gt-shaker.service
```

Step 2: Insert configuration

Copy the text below and paste it into the file. *(Ensure that User=pi matches your username. If you chose a different name during installation, correct it here).*

[Unit]
Description=GT7 Shaker Service
After=network.target sound.target

[Service]
Type=simple
User=pi
Group=audio
 ExecStart=/usr/bin/gt-shaker
Restart=always
RestartSec=5
Environment=PYTHONUNBUFFERED=1

[Install]WantedBy=multi-user.target

Press CTRL+O, Enter, and CTRL+X to save and close.

Step 3: Activate the Service

Now we tell Linux to use this file and start it at every boot.

Bash

1. Reload systemd (so it sees the new file) sudo systemctl daemon-reload # 2. Enable automatic start sudo systemctl enable gt-shaker # 3. Start the service immediately (without reboot) sudo systemctl start gt-shaker

Congratulations! Your GT7 Shaker is now running as a background service.

Useful commands

If you want to see if it's running, or check for errors, you can use these commands:

- **Check status:** sudo systemctl status gt-shaker
- **Stop the service:** sudo systemctl stop gt-shaker
- **Restart the service:** sudo systemctl restart gt-shaker
- **View log files (troubleshooting):** journalctl -u gt-shaker -f
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