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## How To Guide **How to root Google Pixel Watch using Magisk**

by [breaddisease](#) · Jun 4, 2023 · [pixel watch](#) [root](#) [wearos](#)

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**breaddisease**

Member



Jun 4, 2023

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## Google Pixel Watch Root Guide using Magisk



### Readme

Note that this rooting process was performed with a special USB-C cradle provided by the Google Team. I would not recommend flashing the device without a stable connection to the pins under the wrist strap. I might attempt to make a 3D printed enclosure that uses pogo pins. Additionally, this process will wipe the device.

### Rooting Process

1. Enable developer options on the watch by going to Settings > System > About > Versions > Tap Build number until you unlock developer mode
2. While here, note down the Build Number. It will look like RWD9.XXXXXX.XXX.XX.
3. Download the appropriate (LTE or Bluetooth/WIFI) firmware at the link below on a computer, making sure to download the version that matches the build number from Step 2.

<https://developers.google.com/android/images-watch>

4. Verify the checksum of downloaded firmware using

Code:

```
sha256sum name-of-firmware.zip
```

5. Install the latest version of ADB and Fastboot tools on a computer  
<https://developer.android.com/tools/releases/platform-tools>
6. Go into Developer options on the watch and enable ADB debugging
7. Connect watch to computer using USB and allow permanent ADB debugging access on the watch
8. Verify your access works by running

Code:

```
adb devices
```

9. Unzip the downloaded zip, then unzip the image-rXX zip inside the original zip. Then, transfer the boot.img file to the watch using

Code:

```
adb push boot.img /sdcard/Download
```

10. Install a file manager on the watch because it does not include one by default. We will need it to select the boot.img file the Magisk app. I used File Manager TV USB OTG Cloud from the Play Store. I recommend launching the app and granting Files and media permissions all the time like it asks you to do in the popup.
11. Install the latest version of the Magisk APK from the Github link below on the watch by running

Code:

```
adb install name-of-magisk.apk
```

<https://github.com/topjohnwu/Magisk/releases>

12. Launch the Magisk app, click Install, choose Select and Patch a File, then browse to the downloaded boot.img file
13. Click Let's Go and the magisk-patched boot image will be created in the Download folder
14. Transfer the image back to your computer using

Code:

```
adb pull /sdcard/Download/name-of-patched-image
```

15. Run

Code:

```
adb reboot bootloader
```

to reboot the watch into Fastboot

16. Verify the device shows up by using

Code:

```
fastboot devices
```

17. Unlock the bootloader of the watch using

Code:

```
fastboot flashing unlock
```



18. Confirm the message on the watch to unlock and wipe the device

19. Flash and boot the newly created Magisk image using

Code:

```
fastboot flash boot name-of-patched-image.img
```

20. Select Start in Fastboot to start the watch

21. After waiting an extremely long time, the watch will hopefully start and will need to be setup again

22. Reinstall the Magisk app using

Code:

```
adb install name-of-magisk.apk
```

23. Launch the app and it might prompt that it needs to restart the watch

24. To prevent the broken Superuser request popup where the grant button is off the screen, I recommend changing the Automatic Response prompt setting in the Magisk app to Grant. To change the option, swipe up on the Prompt text



25. With the watch started and setup, start an adb shell by running

Code:

```
adb shell
```

26. Then, run su to escalate to root privilege.

Code:

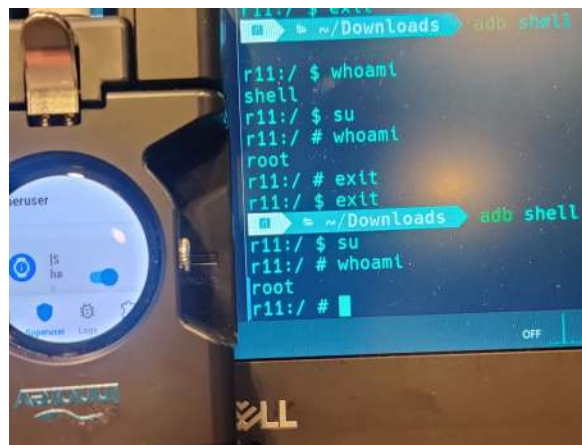
```
su
```

The shell should change symbols from \$ to # and running

Code:

```
whoami
```

should result in root



## Bypassing SafetyNet

1. Download the YASNAC - SafetyNet Checker APK from GitHub:

<https://github.com/RikkaW/YASNAC/releases>

2. Install it on the watch using

Code:

```
adb install name-of-yasnac.apk
```

3. (Optional) Open the app and run the SafetyNet Attestation to verify your device fails
4. Download the SafetyNet Fix Magisk module from GitHub:



[GitHub - Displax/safetynet-fix: SafetyNet & Play Integrity API workar...](#)

SafetyNet & Play Integrity API workarounds for Magisk - GitHub - Displax/safetynet-fix: SafetyNet & Play Integrity API workarounds for Magisk  
github.com

5. Transfer it to watch using

Code:

```
adb push safetynet-fix-v2.4.0.zip /sdcard/Download
```

6. Start an adb shell with the watch using

Code:

```
adb shell
```

7. Elevate to root privileges with

Code:

```
su
```

8. Install the module with

Code:

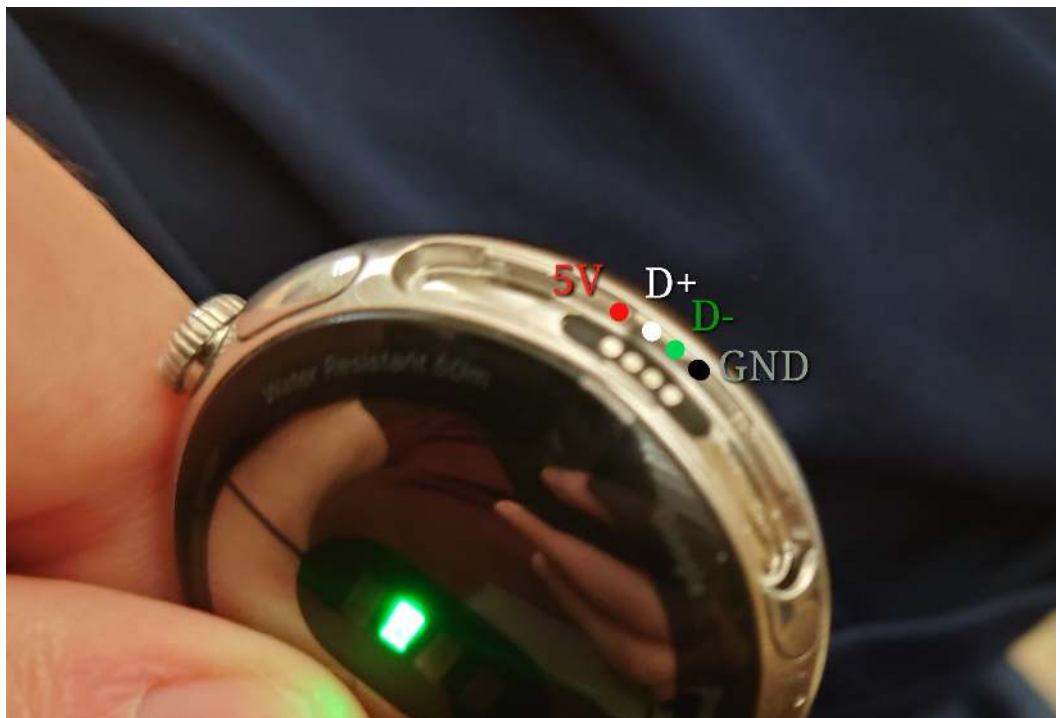
```
magisk --install-module /sdcard/Download/safetynet-fix-v2.4.0.zip
```

9. Once installed, restart your watch

10. Now, run YASNAC SafetyNet Attestation again, and you should pass!

## Interfacing with the USB Pins

The USB pins are under the watch band closest to the secondary button. From left to right, the pins are voltage, data+, data-, and ground. Google's VRP program provides the watch cradles by invitation only. As such, a DIY solution needs to be created to make this process more accessible.



Picture courtesy of [@ShinyQuagsire](#)

The pins have a 1.27mm spacing which you can find headers for online. That in combination with some helping hands and a USB breakout board could give a connection.

### Troubleshooting

- If booting the Magisk image results in a bootloop, you can unbrick the device by flashing the corresponding stock boot.img image using

Code:

```
adb flash boot boot.img
```

- If Magisk doesn't see the file, try doing the following to your file browser app:
  - Settings > Apps & Notifications > App permissions > Files and media > AppName > Allow all the time

### Tips

- You can get into FastBoot mode by tapping on the top left and bottom right of the screen at the same time as the device is booting when the white "G" logo appears.
- Wireless debugging allows you to do almost all of this guide except booting the patched boot.img file in Magisk. To enable wireless debugging, go to Settings > Developer options > Check Debug over Wi-Fi. Then, in developer options still, go to Wireless debugging and turn it on. From here, you can connect to your watch remotely from your PC using



**Jann F**

Senior Member



Jun 5, 2024

Code:



This is awesome!

Now we just need a way to source that cradle or design one.

[Jacob1004](#), [breaddisease](#) and [rodken](#)

### Thanks

Shoutout to the OGs who first obtained root! Thanks to [Tiebe](#) and [ShinyQuagsire](#) for their help! You can find the info in this thread:

**KineSight**

Senior Member

<https://xdaforums.com/t/pixel-watch-successfully-bootloader-unlocked.4508253/>

Jun 6, 2023

#3

Huge thanks to Asmita Jha (Twitter @aj\_0x00) who was there during the first 2 days of the rooting attempts and helped to get the watch rooted through out. Additionally, big thanks to Stack Smashing (Twitter @ghidraninja) for giving us the idea to patch the Magisk file on the watch itself instead of patching the boot image on another device running Magisk. Additionally, thanks to the Google team who gave us access to device and the prototype cradles to interface with the watch reliably. They've now sent me my cradle as well!

### Future Plans

**breaddisease**

Member

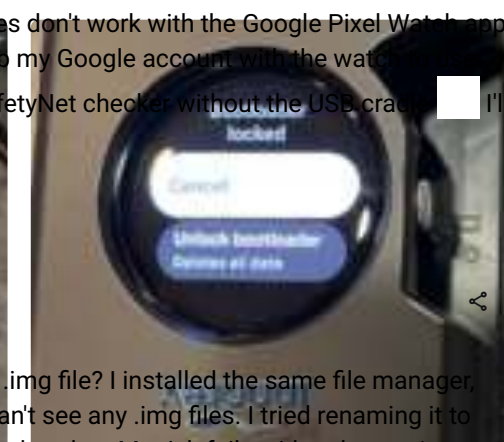
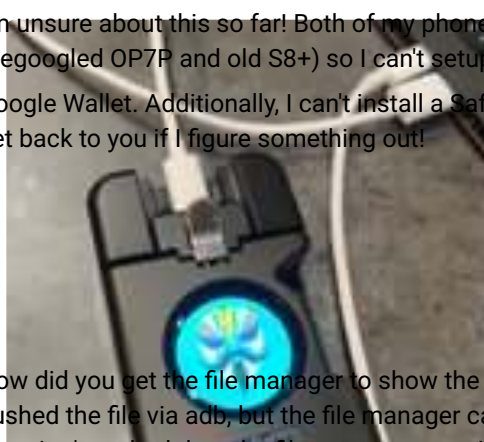


To make the process more accessible, a cheap interfacing solution needs to be created. Please reach out if have any questions, concerns, or information that would make the process easier. You can find me on Twitter [@breaddisease](#)

KineSight said:

Does Rooting it break the Google Pay functionality or SafetyNet (if it has one) ?

I'm unsure about this so far! Both of my phones don't work with the Google Pixel Watch app (degoogled OP7P and old S8+) so I can't setup my Google account with the watch. Google Wallet. Additionally, I can't install a SafetyNet checker without the USB cradle. I'll get back to you if I figure something out!



How did you get the file manager to show the .img file? I installed the same file manager, pushed the file via adb, but the file manager can't see any .img files. I tried renaming it to 'boot.jpg', pushed that, the file manager sees it, but then Magisk fails with unknown/unsupported image type.

**ClarkIV**

New member



Last edited: Aug 17, 2023

**breaddisease**

Member



Jun 8, 2023

#6

ClarkIV said:

How did you get the file manager to show the .img file? I installed the same file manager, pushed the file via adb, but the file manager can't see any .img files. I tried renaming it to 'boot.jpg', pushed that, the file manager sees it, but then Magisk fails with unknown/unsupported image type.

You might need to allow the app Files and media permissions all the time, like this:

Settings > Apps & Notifications > App permissions > Files and media > AnExplorer > Allow all the time

**breaddisease**

Member

Jun 8, 2023

#7

KineSight said:





Does Rooting it break the Google Pay functionality or SafetyNet (if it has one) ?

I fail SafetyNet without the Universal SafetyNet Fix Magisk Module. However, I was able to install the SafetyNet Fix module with the following:

Code:

```
adb push safetynet-fix-v2.4.0.zip /sdcard/Download
adb shell
su
cd /sdcard/Download
magisk --install-module safetynet-fix-v2.4.0.zip
```

With this, I now pass SafetyNet! Still have to try Google Pay



**GiovanYCringe**

Member



Jun 9, 2023

#8

breaddisease said:

## Google Pixel Watch Root Guide using Magisk



[Click to expand...](#)

Cool



**ClarkIV**

New member



Jun 13, 2023

#9

breaddisease said:

You might need to allow the app Files and media permissions all the time, like this:

Settings > Apps & Notifications > App permissions > Files and media > AnExplorer > Allow all the time

Thanks! That was it. Now the computer just refuses to recognize it as a fastboot device. It recognizes it with the watch fully on, so I know my wiring and pins are correct.



Jun 13, 2023

#10

**breaddisease**

Member



ClarkIV said: ↩

Thanks! That was it. Now the computer just refuses to recognize it as a fastboot device. It recognizes it with the watch fully on, so I know my wiring and pins are correct.

Nice, good to hear! What's the output of

Code:

```
sudo fastboot devices
```

Or, if you're on Windows, an elevated terminal with

Code:

```
fastboot devices
```

**T****Tiebe**

Member



Jun 14, 2023

#11

Y'all realize that we already managed to root the watch a long time ago? <https://xdaforums.com/t/pixel-watch-successfully-bootloader-unlocked.4508253/>

A lot of questions are also answered there.

[yyz71 and breaddisease](#)**T****Tiebe**

Member



Jun 14, 2023

#12

Yes, it breaks safetynet. You can install [this magisk module](#) to get it back.

KineSight said: ↩

Does Rooting it break the Google Pay functionality or SafetyNet (if it has one) ?

[breaddisease](#)**breaddisease**

Member



Jun 14, 2023

#13

Tiebe said: ↩

Y'all realize that we already managed to root the watch a long time ago? <https://>



[xdaforums.com/t/pixel-watch-successfully-bootloader-unlocked.4508253/](https://xdaforums.com/t/pixel-watch-successfully-bootloader-unlocked.4508253/)

A lot of questions are also answered there.

I was not aware that it had been done already! Thanks for the info! I thought I was the first 😞

[roirraW "edor" ehT and yyz71](#)



**Tiebe**  
Member



Jun 15, 2023

#14

breaddisease said:

I was not aware that it had been done already! Thanks for the info! I thought I was the first 😞

Sadly, no.

Another small thing: You shouldn't download the OTA zip, but the factory images. The OTA zip doesn't always have full boot image, and only a patch image (boot.img.p), which is used in the updating process for patching the current boot image to the newer version. The factory images always have a full boot image.

Other than that: great guide!

[breaddisease](#)



**breaddisease**  
Member



Jun 15, 2023

#15

Tiebe said:

Sadly, no.

Another small thing: You shouldn't download the OTA zip, but the factory images. The OTA zip doesn't always have full boot image, and only a patch image (boot.img.p), which is used in the updating process for patching the current boot image to the newer version. The factory images always have a full boot image.

Other than that: great guide!

Ok, thanks! I updated step 6 and 8 accordingly.

Would it be an issue if someone flashed an un-updated watch with the latest boot.img? Like should I recommend flashing the appropriate version's boot.img, or updating to the latest version before flashing the latest boot.img? Thanks!



Jun 15, 2023

#16

**Tiebe**

Member



breaddisease said:

Ok, thanks! I updated step 6 and 8 accordingly.

Would it be an issue if someone flashed an un-updated watch with the latest boot.img? Like should I recommend flashing the appropriate version's boot.img, or updating to the latest version before flashing the latest boot.img? Thanks!

Always flash the boot.img of the version that you're currently on. Happy to help!

[breaddisease](#)**T****Tiebe**

Member



Jun 15, 2023

#17

[@breaddisease](#)

I've also noticed that [the safetynet module patched by Displax](#) seems to work better in most cases than the original one by kdrag0n. The one by Displax is just a fork of the one by kdrag0n, with some changes.

**ClarkIV**

New member



Jun 15, 2023

#18

breaddisease said:

Nice, good to hear! What's the output of

Code:

```
sudo fastboot devices
```

[Click to expand...](#)

I'm on Linux and 'sudo fastboot devices' didn't list any device. I can communicate via ADB over USB so I know the cable is working. In fastboot mode, the device doesn't show up under 'lsusb' either. I have tried USB 2 and 3 ports.

**breaddisease**

Member



Jun 15, 2023

#19

ClarkIV said:

I'm on Linux and 'sudo fastboot devices' didn't list any device. I can communicate via ADB over USB so I know the cable is working. In fastboot mode, the device doesn't show up under 'lsusb' either. I have tried USB 2 and 3 ports.

Are you providing it power through the left pin? Maybe its required for fastboot

**ClarkIV**

New member



Jun 16, 2023

#20

breaddisease said:

Are you providing it power through the left pin? Maybe its required for fastboot

Yes, I am powering it. Verified by the watch showing its charging when fully booted. Were you on Linux or Windows for this? If Linux what Distro?

1 2 3

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**breaddisease**

Hey all, good to see some progress being made on this! I haven't had much time to focus on making an enclosure myself. I went through making a custom PCB schematic but got stuck on finding an SMT compatible 1.27mm 1x4 pogo pin header. Cool to hear that using a cutup USB with pogo pins can work; I hadn't thought of that!

Jan 10, 2024

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Crafted by Audentio

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