

Pros

- Get latest Android on old phones
- Save money
- Faster/Less bloatware/Better memory management
- Privacy/Security
- Do more with your phone

Cons

- Have to factory reset your device
- Takes time
- Small chance of bricking device
- Samsung phones are harder than most.

Prepare Phone

Enable developer mode On the phone

1. Go to Settings > About phone,
2. Then tap 'Build number' 7 times or until you get the message 'You're now a developer'

Enable usb debugging On the phone

1. Go back to Settings
2. Choose 'Developer options'.
3. Find the 'USB debugging' option
4. Use this toggle button to enable it.
5. Accept warning by tapping on OK button.

Enable OEM unlock On the phone

1. Go back to Settings
2. Choose 'Developer options'.
3. Find the 'OEM Unlock' option
4. Use this toggle button to enable it

Reboot into download mode

1. adb (phone connected to computer)

```
adb reboot-bootloader
```

NOTE: I find this better as it tests that we can talk to the device from our PC.

2. Hold power + bigsby + voldown

Prepare computer

Install adb

- Worth having for the extra tools
 - Transfer files
 - Flash mobiles other than Samsung
- Install

```
sudo apt-get install android-tools-adb android-tools-fastboot
```

Heimdall

With Samsungs you have to use Heimdall instead of ada fastboot

Use custom version which fixed the PIT file retrieval problem

Download & compile SaburoJiro's version of Heimdall which includes a patch for getting the PIT file. <https://github.com/SaburoJiro/Heimdall>

```
sudo apt-get install libusb-1.0-0-dev qtbase5-dev  
cd ~/code; git clone git@github.com:SaburoJiro/Heimdall.git; cd Heimdall
```

Compile Heimdall

```
cd heimdall  
mkdir build;cd build  
cmake -DCMAKE_BUILD_TYPE=Release ..  
make
```

NOTE: Executable will now be in ../bin

Recovery Manager

- TWRP is one of the recovery managers out there
- Easy to use
- Lots of features
- Mature.

Download TWRP

Install TWRP and Root Galaxy Note 8 (Exynos) using
Magisk - A Complete Guide

1. Find Device on: [TWRP Devices Page](#)
2. Go to device page [Samsung Galaxy Note 8 \(Exynos\)](#)
3. Download [TWRP-3.6.0_g-0-greatlte.img](#)

Flash TWRP with Heimdall

TWRP Installation Tutorial for Linux Mint and Ubuntu users » AndroidGuru.eu How To Transfer or Install Files via TWRP Recovery

1. Wipe cache Boot (Vol Up + Bigsby + power), then
2. Within download/bootloader mode (Hold down \ Bigsby, Power)

```
~/src/Heimdall/build/bin/heimdall flash --RECOVERY twrp-3.6.0_9.
```

3. wait Even once the command finishes you have to wait about 2 minutes for it to finish writing.
4. Test TWRP Boot (Vol Up + Bigsby + power)

Wipe data within TWRP

Make sure you wipe System, Data, Cache, Dalvik & Vendor

NOTE: I had to change the file system to wipe data correctly <https://www.youtube.com/watch?v=OA6kE1MQRqM>

LineageOS ROM

- LineageOS is the most popular ROM.
- Great stable release
- Good community
- Documentation and support

Download Lineage 18.1

1. Download {ROM}{Signature Spoofing/MicroG support} LineageOS 18.1 for S8/S8+/Note8 | XD...
2. Copy to phone through TWRP

Whilst in TWRP mode use adb to push it to the /sdcard

```
adb push lineage-18.1-20211112-UNOFFICIAL-greatlte.zip /sdcard
```

Flash ROM LineageOS 18.1

How to Install LineageOS on Android LineageOS – LineageOS Android Distribution

1. Wipe (Factory reset through TWRP)
2. Install through TWRP
 1. Click install
 2. Select lineage-18.1-20211112-UNOFFICIAL-greatlte.zip
 3. Swipe to install
 4. Wipe cache once done
 5. Reboot system

Google Apps

- Many ways to put GApps on the phone
- GApps, NikGApps & MindTheGApps

Download & Copy GApps

1. Download pico <https://opengapps.org/?api=11.0&variant=pico> Select ARM64, 11.0, pico

NOTE: I couldn't get nano or stock working.

2. Push

```
adb push open_gapps-arm64-11.0-pico-20211202.zip /sdcard
```

Flash GApps (Optional; if you want to use google apps)

Download and install the latest GApps: Open GApps, and more! <https://www.techforus.in/2021/08/install-project-sakura-on-redmi-note-7.html>

1. Install from /sdcard
2. Wipe the Dalvik & Cache
3. Reboot

SU manager

- Puts the su binary on the box to grant access
- Install 'root' apps, permissions to the root file system

Flash Magisk

1. Load TWRP
2. Download Magisk-v23.0.apk <https://github.com/topjohnwu/Magisk/releases/> NOTE: Later releases don't have the zip file for some reason.
3. Rename .zip
4. Transfer

```
adb push Magisk-v21.4.zip /sdcard
```
5. Install Magisk through TWRP

Demo

Maybe not!

References

- [Android Debug Bridge \(adb\)](#)
- [GitHub: Benjamin-Dobell/Heimdall](#).
- [LineageOS Android Distribution](#)
- [TeamWin - TWRP](#)
- [GApps Project](#)
- [Magisk Manager Version 24.0 For Android 2022](#)
- [LineageOS 18.1 Review: Android 11, coming to an old phone near you](#)

Questions

Email map7@fastmail.com

Twitter [@map7](https://twitter.com/map7)

Github [github: map7](https://github.com/map7)
