This guide is intended for those new to the rooting/unlocked bootloader scene. It is written in the cadence of the Essential PH-01. By continuing to read you understand this is simply a helpful internet guide, and proceeding with the instructions are at your own risk. I am not responsible for any damage done to your device(s) or loss of warranty.

Now, let's begin.

PAUSE!
More of a video learner?
Munchy from YouTube has your back with pretty much all of the below. A few details are left out of the videos but feel free to hop back here to find them.
https://www.youtube.com/watch?v=p41VOHAARFU

DOUBLE PAUSE!
Please understand continuing this process will delete everything on your phone.
This serves as a warning that once you unlock your bootloader your phone will erase itself, returning it back to factory settings.

Backup, Save, Brace!

Let's start by backing up your device. I use Google One to back up my apps and messages, but you are free to use any other backup service that you trust your data with. We'll keep it handy

Next, grab a Stock ROM for your Essential phone. As of writing this (02/15/20), the current version is QQ1A.200105.032, released in February 2020.

You can get this directly from Essential here. Grab the Fastboot download inside of Current Builds: https://www.essential.com/developer/current-builds

(Please note and match the checksum of the ROM from the Essential site listed above if you are worried about authenticity. I will not go over checksum matching in this guide.)

I recommend storing your stock rom file somewhere for safe keeping. Maybe even placing it on a usb drive somewhere. This will be your best way back to a working phone in case anything goes wrong.

Next, you'll need to disable your Pin/Pass. This is for a much later step: Installing TWRP/root, and making the process just a bit more stable.

Going the extra mile would be signing out of your Google account, but this is not necessary.

Fastboot and ADB tools

You'll need these to proceed in all the below. These are the tools that will be used to communicate with your Essential phone through this whole process.

Windows? Grab your drivers and tools from Essential themselves here: https://storage.googleapis.com/essential-static/Essential-PH1-WindowsDrivers.exe

Mac or Linux? No drivers needed. But you still need your tools. Here's your guide: https://android.gadgethacks.com/how-to/android-basics-install-adb-fastboot-mac-linux-windows-0164225/

Enable Developer Mode and OEM Unlocking

Let's enable developer mode to get things going. On your phone, head to:

Settings -> System -> About Phone

(or search "Build number" in settings)

Find your Build number, tap on it 7 times (It should prompt for a pin if you have one set up), and now you're a certified level 3 full stack developer for Google INC.

Next, back to the main settings menu and head to *System -> Developer options*, or search for *Developer Options*.

We're looking for two important things here.

Make sure "OEM Unlocking" is toggled on, and make sure "USB Debugging" is toggled on.

Now we're ready to test those tools you downloaded.

*******It has been rumored to proceed in this project WITHOUT using the OEM USB C. If you have another USB C cable you trust with data transfer, plug in your phone using that now. Cables can be the main cause of something not working that absolutely should work.********

You should see a prompt on your phone asking you to approve usb debugging, hit "Allow"

Allow USB debugging?

The computer's RSA key fingerprint is:
3C:F2:E6:EE:59:6B:CC

☑ Always allow from this computer

CANCEL OK

(photo from www.gadgethacks.com)

Hit "always allow from this computer", OK, and let's move on.

Testing Your Tools

Once you've allowed usb debugging on your phone, plugged it into your computer, and see the debugging icon on your status bar or in notifications, you're good to start using your tools.

Open a command prompt or terminal to where your fastboot/adb locations are.

If you installed the windows tools from essential, they should have directed themselves to your C drive and you are able to open Command Prompt by itself.

If you applied the tools with Mac, you will have to navigate to the directory of your tools and open a Terminal in that folder.

With your device plugged in, type in the below and hit enter:

<mark>adb devices</mark>

(Mac or linux? You may have to use "./" to initiate your commands. In this case, you'll type…

<mark>./adb devices</mark>

You should get a feedback string of your device number.

If nothing came up, there's a problem with your fastboot/adb tools, or cable/connection. I would suggest re-installing them, restarting your machine, or making sure your command prompt/terminal is pointed in the correct folder.

If you got your device number, you're ready to roll.

Unlock Your Bootloader

We've arrived. It's time to push your phone past it's boundaries.
With your phone connected, let's go into Bootloader mode.
In command prompt or terminal, enter:

<mark>adb reboot bootloader</mark>

Your phone will now load it's bootloader screen.
Don't worry about too much on this screen for now.

The next line of code will unlock your bootloader.
ONCE AGAIN. THIS WILL ERASE EVERYTHING. BE READY.

Enter:

<mark>fastboot flashing unlock_critical</mark>

On your phone, you'll see a prompt. Use your volume buttons to scroll to "Yes", and your power button to confirm your selection.

Your phone's bootloader is now unlocked.

You'll most likely see a scary screen stating that it is. If you press the power button at this point, you will pause your boot. Hang tight and it will boot. You will see this screen every time you power on your phone. This is just a security measure in Android to let the user know their bootloader is, indeed, unlocked.

Your phone will now also reset, and then reboot back to the initial screen.

Unlock Your Bootloader (Again)

Yep. Repeat the same processes as above.
Because of something called A/B partitions things can get kind of weird. We want to make sure both slots understand your phone's bootloader should be unlocked.

Go through setting up your phone (skip what you can) and enable debugging, OEM unlocking, and making sure your computer can see it by using <mark>adb devices</mark>.
Use <mark>adb reboot bootloader</mark> to get into your bootloader.

This time, we'll use the following code to unlock your bootloader:

<mark>fastboot flashing unlock</mark>

Once the phone finishes this unlock, you may set your device up as normal.

Custom Recoveries and Root

So you're all set up with an unlocked bootloader and ready to tackle the world of roms and mods.

Let's grab a custom recovery and root so you can flash these things.

Because of the delicate nature of recovery and AB partition systems, I'm going to let the pros handle this one.

You'll have to flash root and recovery in one swoop.

Please read these instructions VERY carefully:

https://forum.xda-developers.com/essential-phone/how-to/guide-rooting-essential-ph-1-magisk-t3701976

Your knowledge of how to use fastboot and adb commands so far should get you through it fairly easily.

Flashing Custom Roms

Right on. I'm assuming you succeeded. You may now look into some roms!

For now, I'd only suggest LineageOS, as the community for this particular rom is very large, and you can find support in just about every corner of XDA. There are many other roms, but they also come with many other obstacles and tinkering knowledge.

Download Lineage from here: https://download.lineageos.org/mata

And follow installation instructions here : https://wiki.lineageos.org/devices/mata/install

(Please use the "Installing LineageOS from recovery" steps)

Going Back To Stock

Remember that stock file we grabbed at the beginning?
If you need to return to stock, unzip that file.
Once you do, you'll see a flash-all.bat file.

All you need to do is place your phone into fastboot mode, make sure your device can see your computer, and run the flash-all.bat file. The file will do the rest.

Support

You got this far, so that's great. But everyone runs into hiccups sometimes.
I will always point to the fine people at XDA for any support you may need.

Make yourself very familiar with the forum if you haven't already:
https://forum.xda-developers.com/essential-phone

This will go over a lot of what we already have, but PLEASE also get familiar with the text from this page: https://mata.readthedocs.io/en/latest/
This page also goes over a lot of common issues you may have. Check it before a post!

Us at r/essential have your back as well.

Cheers.
u/doublegloss

Thanks

A list of thanks to those who's information and knowledge helped me form this guide for others.

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