

# BananaPro/Pi:Android

From BananaPro/Pi

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## Android\_For\_Banana\_Pi\_v2.0

### Product details

Available from: [http://www.lemaker.org/resources/9-86/android\\_for\\_bananapi.html](http://www.lemaker.org/resources/9-86/android_for_bananapi.html)

According to its download page, this file was last updated on: 2014-05-25

Unzipped image file size is 455MB (at the time of writing)

### Further info

This image is a LeMaker product and we are actively developing it. Look in our forum

[http://forum.lemaker.org/forum-27-1-android\\_for\\_banana\\_pi.html](http://forum.lemaker.org/forum-27-1-android_for_banana_pi.html)

for more information about it, including hints and tips and loads of advice from those in the know. Modified stock images containing XBMC and other tweaks/less bloatware are also available (from forum user mattrix).

## Setting up, running and tweaking 4.2

### Contributions needed!!!

## Android\_for\_bananapi\_4.4\_beta1

### Product details

Current image at time of writing is 589MB in size (unzipped file).

Version number is "wing\_k70-eng 4.4 KRT16S 20140807 test-keys" according to DragonFace.

Make sure that you also download the accompanying ReadMe.txt file that is in the same folder as the image.

### Important info!!

Please note that this Android\_for\_bananapi\_4.4\_beta1 image is not a LeMaker product and only available from an external website with which we are not affiliated or connected to in any way. We therefore provide no support for this image. However, discussions about it in our forums are freely encouraged.

### Introduction

This section of the Wiki for 4.4 Android has been written by me, a relative newcomer to the B-Pi community and very inexperienced concerning all things Linux. (But a bit more knowledge of Android as I've had a 4.1.1 tablet PC for about a year, and even at one point got heavily into learning how to flash it with custom ROMs.)

It is not meant to be a definitive guide or the final version. Some of the information in it may be useful to some people but maybe not to others. Just get out of it what you can. I hope the moderators and experienced forum users will update it and improve upon it ASAP.

If you all think it's too long, perhaps someone can make a shortened/abridged version and we can then have this full guide as a downloadable PDF file via a link from this page.

### Preparation & what you need

Use only branded Class 10 8GB SD cards. (Caution: there are many fake 'branded' SD cards out there, e.g. SanDisk and a whole host of others. What you see on the label is not necessarily what you get.) For best results, have a variety of different brands on hand. They are readily available and cheap. For example, a well-known and respectable high street computer chain in my area currently has Nikon Class 10 8GB cards for 5 Euros each.

Format your card for the very first time (but only this time) using SD Formatter – see [http://wiki.lemaker.org/SD\\_card\\_installation](http://wiki.lemaker.org/SD_card_installation) for more details. After this, we will only be using PhoenixCard for image-writing operations. (However, some people have reported better and more consistent results when using PhoenixCard if they first use SD

Tip - in general, when formatting and/or burning any image for your Pi, either on your Linux or Windows computer, **only** have your main hard drive running and **only** have your SD card inserted in your card reader. Disconnect **all other** hard drives and SD cards and USB devices. It is very easy to accidentally format or write to the wrong drive and serious hardware damage and/or data loss can occur. **You have been warned!!!**

Download the latest 4.4 image from the external website. Unzip it on your desktop or in a named folder.

## Using PhoenixCard

To burn your image onto the card, some software called PhoenixCard is needed for the SD Card setup for all Android images. (Do not simply copy the .img file itself to the card.) The current version at the time of writing is V310\_20130618.

(This program currently only works in Windows. Versions for other OSs such as Linux are temporarily unavailable - sorry.)

*Note: do not try using SD Formatter & Win32 Disk Imager (or the command dd on a Linux-based computer) on any Android image as you do for LeMaker's Linux images – that method just won't work!*

To get the PhoenixCard software, try any of these links:

<https://drive.google.com/file/d/0B38hUt6ypQXDVTB6cWJXZ3ZGNkE/edit?usp=sharing>

<http://pan.baidu.com/s/1xStaA>

[https://www.dropbox.com/s/ckju6jvlqf3uc6f/PhoenixCard\\_V310\\_20130618.zip](https://www.dropbox.com/s/ckju6jvlqf3uc6f/PhoenixCard_V310_20130618.zip)

Install using 'Run as Administrator'.

Then start the program (also with 'Run as Administrator' using the icon PhoenixCard.exe). Remember to click the 'Update Version' button (in the top right of the window) the very first time you run it, and also as often as possible afterwards, before you do any SD card burning.

Please refer to <http://forum.lemaker.org/viewthread.php?tid=64> for more detailed instructions and screenshots.

But in summary, it goes something like this:

Press 'Update Version'.

Choose the destination drive letter for the SD card. (Check and **double check** this is correct!)

*Tip: In some screenshots that you might have seen for PhoenixCard, the main information window says at this stage "Device OK, the size of the device is XXXXX M". However, depending on your system and if it is an internal/external or single/multi-card reader, you may instead get a message such as "Find 4 device, Please select correct the one" [sic].*

Choose the image file.

In 'Write Mode' click the radio button 'Startup' and click the OK of the pop-up window.

Click 'Format to Normal'. Wait a few seconds. Click the OK of the window.

Click 'Burn' and wait patiently. The process normally takes less than 5 minutes.

DO NOT DISTURB THE CARD OR REMOVE IT OR CLOSE THE PHOENIXCARD WINDOW OR TURN OFF THE COMPUTER DURING THIS PROCEDURE.

You will see in the information pane various sections being written e.g.

[bootloader]

[env]

[system]

[data]

[misc]

[data file]

and then finally [Disk check]

The concluding message is 'Burn End' and the progress bar will then have reached its full extent on the right hand side.

Close the program.

Remember to first soft-eject the card from your card reader using the 'Safely Remove Hardware' icon in the system tray/notifications area (bottom right of the screen, just to the left of the clock), and wait for the confirmation message 'The device can now be safely removed from the computer' BEFORE you PHYSICALLY remove the card. Data corruption and damage can otherwise occur which will either kill it or seriously shorten its lifespan.

## First boot with your Banana Pi

As usual with the Pi, first boots are always longer than subsequent ones.

Insert into your Pi the following:

- your newly burned SD card
- a wired RJ45 Ethernet cable (if you already downloaded the accompanying ReadMe file from the same location you got the image, you will know that this beta build does not support ANY WiFi dongles yet)
- a USB mouse
- a USB keyboard (optional, as you can use the on-screen Android keyboard but unless you have very good mouse skills, you may find this laborious and extremely tedious)
- a 5 Volt/2 Amp power supply (which is plugged into a switched wall socket) into the DC In socket. Do not switch it on yet. If your PS is only 1 Amp or even 1.5 Amp, it may not be sufficient. (You may also need a second PSU – more on this later.)
- an HDMI-HDMI cable into your TV or monitor

A few words about cables for video output. I found that I was able to boot Android 4.2 via the AV video composite (the yellow RCA/phono plug on the B-Pi) into my old analogue TV. In fact, I had no other option in the beginning as that was the only way I could get it to work. But the colours and resolution were unsatisfactory and difficult to work with.

At that time I was using an HDMI-DVI adaptor cable into my Dell PC monitor. It was fine for all Linux images but for some reason 4.2 and 4.4 Androids had a problem with it, and I was unable to find which settings in sysconfig1.lhs using an image editing program called DragonFace would resolve the issue. Also, any new amended & saved images from DF would then cause PhoenixCard to crash during the burning process.

However, since that time I successfully booted up 4.2 using that very same cable but using another monitor (make and model escapes me for now but it was fairly new, unlike the Dell). It's possible that 4.4 would have worked as well if I had been a bit more patient and waited a while. So it's worth experimenting with different combinations of monitors and HDMI-DVI adaptor cables. (Take your Pi and a known-to-be-working Android card to your local friendly computer store and ask to try them out. It may be the first time they have ever heard of or even seen this SBC!!)

So my advice is - if possible - only use an HDMI-HDMI connection. (Make sure the plug is FULLY and FIRMLY pressed into the Pi and at the other end too.) If you are sharing your monitor with your PC as I am (just switching between the sources as needs be), it might be worth (at least for the first few attempts) to shut down the computer and disconnect its video cable (in my case VGA). Otherwise the screen may constantly try reverting back to a working/active source.

Switch on the Power Supply at the wall to start the Pi. If there is no red LED on the Pi, press the Power button for about 2 seconds. If there is a red LED, but only for a short while and it goes faint or flickers or goes off, press the Power button, again for about 2 seconds.

Unlike Linux distros for the Pi, the green LED will NEVER light up to show disk activity as this function seems to have been programmed out. Likewise for 4.2. (Can someone – preferably one of the developers – explain why this is so? It doesn't make any sense to me at all!!)

As it states in the aforementioned ReadMe file, for the very first boot you may need a second power supply plugged into the OTG socket. As soon as it reaches the main screen, you can disconnect this, and it should not be required for any subsequent boots. In my case, I didn't have to use a second PSU.

Now here's the thing. Android 4.2 will immediately give you on booting up the AllWinner A20 logo, then the green Android screen, and then the white-on-black Android boot animation, all within about the first 10 seconds.

Not with 4.4!! There is a definite time lag (about 20-30 secs, maybe longer) until your monitor will even register an incoming HDMI signal. (Is that bad programming or what???) It doesn't happen like that on a real tablet PC.) Then after another delay of maybe 10-20 secs (or more) you will hopefully see the boot animation which is lots of coloured balls circling and orbiting around the centre of the screen. You should also see the blue Ethernet LED coming on and flashing.

Eventually you will get to the first setup screen. Be aware that there is a LOT of processing going on in the background and it may not be all that responsive. In fact there may be a lot of error messages such as 'XXX isn't responding – Wait or Cancel'. Be patient and press 'Wait' and let it do its thing.

Skip the WiFi set up screen. As already stated, it doesn't work in this build, only wired Ethernet does.

You may have a problem with Ethernet not working at first. Go to Settings>>>More>>>Use Ethernet, uncheck the box and then check it again.

To shut down, press the Power button for about 3 seconds (just like you would if it was a tablet PC) and you will see in the centre of the screen the 'Shutting Down' window.

However, a better and more computer-friendly way to do this is to install from Play the Store the free app 'Quick Boot (Reboot)' from Sirius Applications Limited but this requires root access and (like forum user dlanor) I'm still struggling to ascertain if this build really is rooted or not. ES3 File Explorer says it is, so does the free app 'Root Checker' from joeykrim, but SuperSU from Chainfire says not as it will not update itself without going into an endless loop.

After shut down, even after the monitor senses no HDMI signal, the Pi still seems to be 'alive' for quite a while, with the blue Ethernet LED and the red Power LED still on. Don't be in too much of a hurry to turn off the power.

## A few other useful forum threads

First announcement of 4.4 being available: forum link  
([https://web.archive.org/web/20200116144821/http://forum.lemaker.org/2472-1-1-android\\_4\\_4\\_beta\\_1\\_.html](https://web.archive.org/web/20200116144821/http://forum.lemaker.org/2472-1-1-android_4_4_beta_1_.html))

matrix's 4.2 modified stock (Mod-Stock) image: forum link  
([https://web.archive.org/web/20200116144821/http://forum.lemaker.org/1482-1-1-android\\_4\\_2\\_modified\\_stock\\_image\\_clean\\_with\\_xbmc\\_.html](https://web.archive.org/web/20200116144821/http://forum.lemaker.org/1482-1-1-android_4_2_modified_stock_image_clean_with_xbmc_.html))

An excellent fix from dlanor (for 4.2 - not sure if this works in 4.4 as well): forum link  
([https://web.archive.org/web/20200116144821/http://forum.lemaker.org/1287-1-1-how\\_to\\_mount\\_large\\_sd\\_card\\_partition\\_as\\_quot\\_sdcard\\_quot\\_.html](https://web.archive.org/web/20200116144821/http://forum.lemaker.org/1287-1-1-how_to_mount_large_sd_card_partition_as_quot_sdcard_quot_.html))

matrix's squashfs images for BerryBoot (Linux, so therefore unrelated to 4.2 or 4.4, but still extremely useful): forum link  
(<https://web.archive.org/web/20200116144821/http://forum.lemaker.org/viewthread.php?tid=4792&rpid=27157&ordertype=0&page=1#pid27157>)

Please comment on this WIP (work in progress) Wiki page here (forum link)  
([https://web.archive.org/web/20200116144821/http://forum.lemaker.org/6217-1-1-new\\_wiki\\_page\\_added\\_for\\_android.html](https://web.archive.org/web/20200116144821/http://forum.lemaker.org/6217-1-1-new_wiki_page_added_for_android.html))  
-Roses2at (talk) 19:22, 2 October 2014 (CST)

## DragonFace - editing software for Android images

Please contribute to this section of the Wiki if you have extensive experience of using DragonFace.

Software downloadable from external link

(<https://web.archive.org/web/20200116144821/https://mega.co.nz/#!vY5jgQbL!avjXkqAeYlcNTLEkFsdCHgwi8Ar3vszKQ4F-GICGS0>)

The only thing I can add is that apparently only version 2.1.2 (which is what you will get from the link above) seems to work with both of the above-mentioned Android images. Do not allow the software to update itself to a newer version, otherwise any newly saved images may cause PhoenixCard to crash during the burning process.

See this forum thread for further details: forum link

(<https://web.archive.org/web/20200116144821/http://forum.lemaker.org/viewthread.php?tid=1332&rpid=29567&ordertype=0&page=1#pid29567>) (Post #1 from mattrix - how to use DF/Post #6 from dlanor - about the update)

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