

Gert VGA 666 Assembly Tips And Gotchas

In this tutorial we are going to look at some tips and gotchas about the Gert VGA 666.

This is what's covered in this tutorial:

- Board Assembly
- Configure the OS
- FAQ

Kit contents

Inside the box you should have received the following items:

- 1 Gert VGA 666 PCB
- 1 GPIO header connector
- 1 female VGA connector
- 20 through hole resistors (2*120 Ohm, 3*510 Ohm, 3*1k Ohm, 3*2k Ohm, 3*4.3k Ohm, 3*8.2k Ohm, 3*16k Ohm)
- 2 Pi Supply Stickers

[Board Assembly](#)

What do you need to do the soldering:

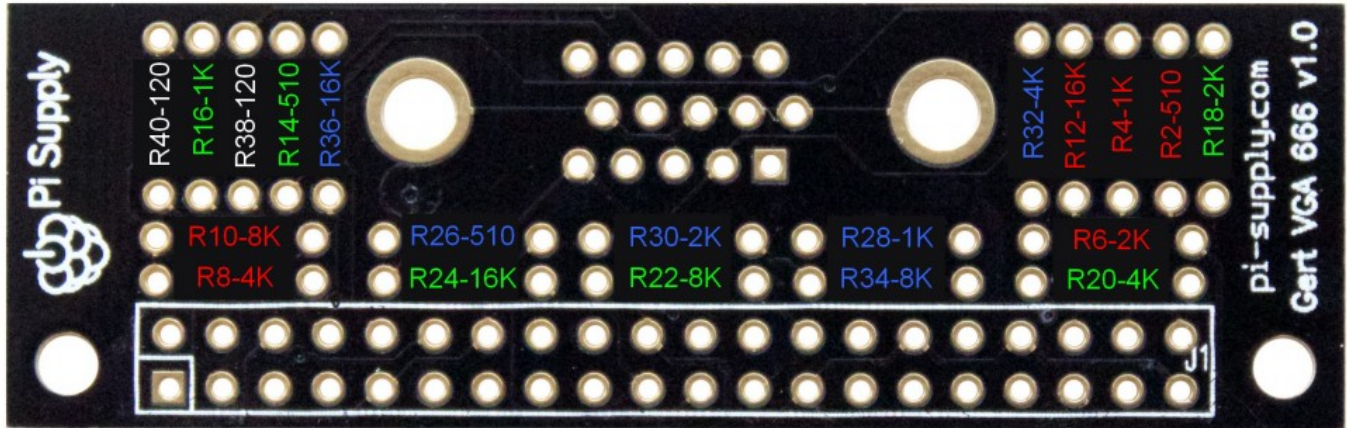
- Soldering iron 15-25W. Keep the temperature at about 300 degrees if you have a regulated one.
- Lead solder which is so much easier to use compared to lead free.
- Some blue tack or a sponge to help you keep the components in place whilst soldering them.

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When you take them out of the bag you will notice that each resistor is clearly labeled. You can refer to the picture below to know where each one goes.



[Click to enlarge](#)

There isn't a particular order in which you need to solder the components on the board and the general rule is to place the lower profile components first. In the case of the Gert VGA 666 we found that the best way to go about this is to solder the header first, then the resistors from the biggest ones (16K Ohm) to the smallest (120 Ohm) and eventually the VGA connector. You can refer to the picture below as to which the sequence should be.

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[Configure the OS](#)

These instructions have been specifically provided for Raspbian but should apply to the majority of OSs.

Remember to prepare the OS so that it is accessible via SSH if you don't have and HDMI screen to connect your Raspberry Pi to before switching to VGA. For Raspbian you need to create an empty file named `ssh` in `/boot` just after you have flashed the image on your SD card.

On the command line use nano to edit `/boot/config.txt`

Then add these lines at the bottom of the file

You also need to specify your screen resolution. After the lines you added above you will also have to then add one of the following configurations:

If the resolution that you are looking for is not among these then you can [check this link](#).

Note that for the Gert VGA 666 to work correctly you will need SPI and I2C to be disabled. Verify that by looking in the config.txt for the following two lines:

```
dtparam=spi=off
```

```
dtparam=i2c_arm=off
```

[FAQ](#)

[Where can I find the full design of the board?](#)

The full design files, schematics and other details are available on [GitHub](#).

[Where can I find additional information?](#)

You can [check this article](#) for a more in depth discussion about the board.

[Why doesn't the kit come pre-assembled?](#)

Although the images in this project show surface mount resistors there was a concern about EMC (electromagnetic compatibility) regulations which could cause a problem if made as a fully assembled board.

This regulation does not however cover home made electronics and so a kit makes more sense.

[Can I use the board with a B or A model?](#)

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No, this add on board uses all but 6 of the GPIO pins on the Model B+ and therefore can only be used with a A+, B+, 2B, 3B, Zero (All versions)

[Which pins are used by the Gert VGA 666?](#)

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