

A) Following on from my latest email and the spreadsheet: '5 – Raspberry Pi with Various Monitors 3.xls', a 50% increase in current drawn from the HDMI port of the Pi when the HDMI to VGA adapter is in use sounds a lot. The original current requirements are put at 300 to 550 mA and the main polyfuse is rated at 1100 mA, with a 'current hold' of 700 mA. (See http://elinux.org/RPi_Hardware#Power_Supply_Problems). If we take the lower value of 300 mA as applying at idle, as for my measurements, then 50% implies an increase of 150 mA. Adding 150 to the upper value of 550 would reach the 'current hold' of 700 mA, but not exceed the rating of 1100 mA, so the polyfuse should not blow. But only proper measurements will tell.

At all events, many people – but not all – have had good experience with HDMI to VGA adapters that are not separately powered. Separately powered units are available, but are bulkier and more costly, requiring (yet) another power supply. (See http://www.amazon.co.uk/HDMI-Audio-Video-Converter-1080P/dp/B007MJKEPS/ref=pd_sim_computers_2). Good experience with an unpowered adapter would be particularly likely if a separately powered USB hub is used for all the USB devices, with only a single USB connection to the Pi. They soon mount up, with keyboard, mouse, USB stick (Flash drive), printer(s) and especially a WiFi adapter, that alone can take more than 150 mA. (See http://elinux.org/RPi_Hardware#Power_Supply_Problems).

All my voltage measurements were made with the Pi booted up and in the desktop but idle. During bootup and when working – e.g. loading a web page – the current draw is understandably higher and hence the voltage at the Pi is lower.

The two monitors (LG and Asus) using direct HDMI or DVI to HDMI cables have different Voltages at the Pi. The reason may be that they draw differing currents from the HDMI port. (Direct measurement of the currents would resolve this). The LG is of more recent construction – and presumably design – which would explain why the Voltage at the Pi is slightly higher and hence the Voltage Drop at (or to) the Pi is slightly lower, implying a current draw from the HDMI port that is slightly lower.

Other points about setups on the day:

B) What inputs does the large wall-mounted display accept? I would guess VGA, in which case – by using the HDMI to VGA adapter – we could display the output of the Pi on this for all to see. If it also accepts HDMI, so much the better.

This would be almost enough to make the point that such an adapter is a valid option - subject to Gert's agreement. However, I would like to have the use of one of the many desktop monitors, which I guess are also VGA, to reinforce the point.

I should also like the use of a desktop monitor with an HDMI input, such as the one we used last time. This would be to enable comparison of the image quality.

C) Would there be an Ethernet socket nearby – to show the Pi accessing the local network and the internet? In my testing, the latter works from both Raspian and RISC OS.

I am trying to install a WiFi adapter to enable wireless networking and internet access from Raspian, but cannot yet be sure that it will work. Others have succeeded, but I am having problems – perhaps due to low voltages at the Pi.

For this and other reasons, to replace the present unregulated chargers, I have ordered two new regulated power supplies. One is for the Pi itself, with 5 V at 1000 mA. (See http://www.amazon.co.uk/P9C—REGULATED-1000mA-POWER-ADAPTER/dp/B0047455FA/ref=sr_1_1?s=electronics&ie=UTF8&qid=1347036223&sr=1-1). The other is for the separately powered USB hub, with 5 V at 2250 mA. (See http://www.amazon.co.uk/Universal-Regulated-2000mA-2250ma-Adapter/dp/B0012Y1Y9E/ref=sr_1_1?s=electronics&ie=UTF8&qid=1347036475&sr=1-1). These should arrive in time for the meeting on the 15th and may well affect several aspects of Pi performance.

D) Would there be an inkjet or laser printer on the network or nearby with a USB connection? I have shown that printing to both types works well from Raspian and - so far for text only – from RISC OS. I will probably bring an Epson Stylus Color 740 – my latest and one-time very popular inkjet printer – which I know works from both.

In my experience, printing is invaluable for documenting an 'audit trail' during setup and configuration changes. Also when programming, it is often useful - if not essential - to be able to check the program listing on paper – e.g. away from the Pi - and to mark up changes for later entry into the Pi.