

Raspberry Pi with Various Monitors, via HDMI, DVI and VGA**Gordon Taylor****2012-09-07**

All results are for monitors 'as found', with no adjustments or use of 'Auto tune' if available. These could improve the results considerably.
Raspian results are for the release 'as found', with no changes to monitor config files. Such changes could improve the results considerably.
RISC OS results are for the 'alpha release', intended only for 1920 x 1080, and shows black bars top and bottom. This will match Raspian in later releases.

HDMI (digital) input was direct, with an HDMI to HDMI cable.

DVI (digital) input was direct, with an HDMI to DVI cable.

VGA (analog) input was via an 'HDMI to VGA + Audio Cable Adapter for PC Laptop Power-Free, MHL support' (Amazon.co.uk, £ 15.79 inc VAT and delivery).

LCD Monitor	Size - inch	Aspect Ratio	Date	Resolution	Input	Raspian	RISC OS alpha	Voltage at Pi
LG IPS235v	23	16:09	2012-04	1920 x 1080	HDMI	Excellent	Very Good	4.55
Asus MM17T	17	04:03	2006-12	1280 x 1024	DVI	Sharper than VGA	Slightly fuzzy	4.50
LG IPS235v	23	16:09	2012-04	1920 x 1080	VGA	No Image	Not tested	4.18
Asus MM17T	17	04:03	2006-12	1280 x 1024	VGA	Very acceptable	Less sharp than Samsung	4.19
Samsung 710v	17	04:03	2005-02	1280 x 1024	VGA	Pretty good	Better than HP	Not measured
HP w19ev	19	16:09	2007-03	1440 x 900	VGA	Acceptable	Somewhat blurred	Not measured

No Image for Raspian with LG monitor via HDMI to VGA adapter is probably due to low voltage at Pi. In any case, all 1920 x 1080 monitors have HDMI inputs.

The TomTom 5 V, 1.0 A (unregulated) charger powering the Pi has an Open Circuit Voltage of 5.19 V

With the direct HDMI to HDMI cable, the Voltage Drop at the Pi is about $5.19 - 4.525 = 0.665$ V.

With the HDMI to VGA adapter, the Voltage Drop at the Pi is about $5.19 - 4.19 = 1.0$ V.

The implied increase in current due to the HDMI to VGA adapter is about $1.0/0.665 = 1.50$ or 50%. This has been tolerated for the limited testing to date.