
Subject: Using the AppleColor display for Raspberry Pi output
Posted by [Anonymous](#) on Sun, 14 Dec 2014 03:31:13 GMT

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Originally posted by: Alistair Ross

Hi,

I have the AppleColor Composite Monitor IIe, Model number A2M6021X which sits atop my //e platinum and works fairly well. Colours are still vibrant enough and I'm happy with it on the whole.

Now, I'm located in New Zealand and I'm aware that NZ uses a variant of PAL to display on their TV sets, but I'm sure that this monitor is just a 'standard' US NTSC monitor. This said, when I plug it into the Raspberry Pi everything is in mono. I thought it must just be a setting in /boot/config.txt so I ensured that the obvious settings like sdtv_mode=0 and sdtv_colourburst=0 are forced. No dice.

I know it's possible to get this (or at least a variant of this) monitor to display the Raspberry Pi composite output in colour because I watched David Schmenk do it in his Apple2Pi demo video.

Does anyone know the secret of getting these monitors in colour when hooking up to a Raspberry Pi or other composite source?

Thanks!

Alistair J. Ross
Sent from an Apple][

Subject: Castle Wolfenstein on ProDOS
Posted by [Anonymous](#) on Sun, 14 Dec 2014 07:06:30 GMT

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Originally posted by: awanderin

I've uploaded a ProDOS-ified version of Castle Wolfenstein to asimov.

Essentially I've removed all the inline <ctrl-d> + DOS3.3 commands and replaced them with MLI calls. The files:

@INIT

@WOLF

^THINGS

were modified and call new code in a ProDOS wedge that resides in a safe place in memory (\$a800). The game is started via a SYS file,

CWOLF.SYSTEM, so there's no more BASIC HELLO program involved.

The game loads faster now too, and actually waits a couple of seconds for you to read the "story" text, although you can press a key to skip it.

Other than that, it should work the same.

An interesting historical note is that there are at least two versions of Castle Wolfenstein floating around out there. The difference I found was only in the writing of the text "WRITING DISK FILE -- DO NOT RESET" or not.

--
--

Jerry awanderin at gmail dot com

Subject: Re: Using the AppleColor display for Raspberry Pi output

Posted by [scott](#) on Mon, 15 Dec 2014 17:26:40 GMT

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In article <alpine.DEB.2.02.1412141616061.4437@pi>, Alistair Ross <ajross@gmail.com> wrote:

> I have the AppleColor Composite Monitor IIe, Model number A2M6021X which
> sits atop my //e platinum and works fairly well. Colours are still
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> Now, I'm located in New Zealand and I'm aware that NZ uses a variant of
> PAL to display on their TV sets, but I'm sure that this monitor is just a
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> David Schmenk do it in his Apple2Pi demo video.

>
> Does anyone know the secret of getting these monitors in colour when
> hooking up to a Raspberry Pi or other composite source?

There's a button on those monitors to switch color on and off so you can make 80-column text somewhat more legible. Are you sure you've switched color on? Also, are you sure that it's an NTSC monitor? If it needs to run on 120V and has an American power plug, that would be a point in favor of it

being an NTSC monitor, but that'd mean you have to run it off of a step-down transformer.

Valid options for sdtv_mode on the Raspberry Pi are as follows:

- 0 NTSC-M
- 1 NTSC-J
- 2 PAL
- 3 PAL-60

Are you getting a stable, but black-and-white image, or is it rolling uncontrollably? If it's stable, try toggling the color switch. If it's rolling, you probably have a PAL monitor and need to switch sdtv_mode to 2. (3 is a 60-Hz variant of PAL, used in Brazil...it won't do what you need. 1 is the slightly different Japanese version of NTSC.)

/
/v\ Scott Alfter (remove the obvious to send mail)
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Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [Anonymous](#) on Tue, 16 Dec 2014 02:15:08 GMT
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Originally posted by: Alistair Ross

Hi Scott,

Yep, I tried all of those modes, including the PAL one to no avail, and yes, I've tried pressing the button. I can see colour in Apple 2 games etc on the monitor, so I'm assuming that the B&W mode is switched in the off position.

The monitor does jump around, but a quick adjustment of the HOLD pot at the back of the monitor makes it nice and steady. The picture looks pretty visible with perhaps just a little bit of flicker, nothing too headache-inducing though!

I'm on 240VAC here in NZ. I seem to remember someone talking a long time ago about the X in the model number of this monitor denoting whether it was NTSC or PAL or something along those lines but I can't remember which.

Alistair J. Ross
Sent from an Apple][

On Mon, 15 Dec 2014, Scott Alfter wrote:

> In article <alpine.DEB.2.02.1412141616061.4437@pi>,

> Alistair Ross <ajross@gmail.com> wrote:
>> I have the AppleColor Composite Monitor IIe, Model number A2M6021X which
>> sits atop my //e platinum and works fairly well. Colours are still
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Subject: Re: Using the AppleColor display for Raspberry Pi output

Posted by [Rob Justice](#) on Tue, 16 Dec 2014 02:59:21 GMT

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Can you share what type of motherboard your //e that works with the color monitor is? ie Pal //e or International NTSC motherboard?

Is it connected directly to the video output RCA on the motherboard when it works in color?

I have one of these monitors and have had some trouble getting color from some of my apple's. Can't remember which ones work, I will try and have a test with it and let you know the result. I think it may be using NTSC but with 50Hz timing video.

/Rob

Subject: Re: Using the AppleColor display for Raspberry Pi output

Posted by [Rob Justice](#) on Tue, 16 Dec 2014 11:15:16 GMT

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I did some testing with my monitor, it is also a A2M6021X.

Apple //e PAL motherboard - no color

Apple //e 'International NTSC' motherboard - this works in color

Apple][plus set to NTSC timing 60hz - no color

Apple //c A2S4100X - this works in color. I had not tried this combo before, nice to know that works.

It seems that the monitor is expecting NTSC color information, but also expecting 50hz/625 lines timing for the video.

Now you need to see if the Pi can be set for that type of output.

/Rob

Subject: Re: Using the AppleColor display for Raspberry Pi output

Posted by [ajross.nz](#) on Tue, 16 Dec 2014 19:21:20 GMT

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On Tuesday, 16 December 2014 15:59:23 UTC+13, Rob Justice wrote:

> Can you share what type of motherboard your //e that works with the color monitor is? ie Pal //e or International NTSC motherboard?

>

> Is it connected directly to the video output RCA on the motherboard when it works in color?

>

> I have one of these monitors and have had some trouble getting color from some of my apple's. Can't remember which ones work, I will try and have a test with it and let you know the result.

> I think it may be using NTSC but with 50Hz timing video.

>
> /Rob

Hi Rob,

Thanks,

As you can see in the photo (http://apple2.aliross.co.uk/photos/2e/IMG_6092.JPG) it's an Apple IIe International NTSC variant.

How to set the Pi to 50hz/625 lines timing is the next challenge! I don't see where you can adjust that sort of thing, certainly it doesn't seem to be in any of the arguments available for /boot/config.txt.

Thanks, Alistair.

Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [scott](#) on Tue, 16 Dec 2014 19:43:59 GMT
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In article <alpine.DEB.2.02.1412161507580.16785@pi>,
Alistair Ross <ajross@gmail.com> wrote:

> Yep, I tried all of those modes, including the PAL one to no avail, and
> yes, I've tried pressing the button. I can see colour in Apple 2 games etc
> on the monitor, so I'm assuming that the B&W mode is switched in the off
> position.

>
> The monitor does jump around, but a quick adjustment of the HOLD pot at the
> back of the monitor makes it nice and steady. The picture looks pretty
> visible with perhaps just a little bit of flicker, nothing too
> headache-inducing though!

If you have to tweak the vertical-hold knob when you switch between the Raspberry Pi and the Apple II's composite output, that would suggest that they're outputting different video standards. A PAL monitor can often display an NTSC signal (or vice versa) if you tweak the vertical hold; in both cases, you aren't going to get color.

Someone suggested NTSC 4.43 (50 Hz field rate, 4.43 MHz colorburst) as a possibility. The Raspberry Pi won't produce that type of signal, so if that's what your monitor is expecting, you're stuck. :-?

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Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [scott](#) on Tue, 16 Dec 2014 19:53:38 GMT

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In article <31b7c5fb-8f98-449c-9f56-bea81d23b906@googlegroups.com>, <ajross.nz@gmail.com> wrote:

> As you can see in the photo
> (http://apple2.aliross.co.uk/photos/2e/IMG_6092.JPG) it's an Apple IIe
> International NTSC variant.
>
> How to set the Pi to 50hz/625 lines timing is the next challenge! I
> don't see where you can adjust that sort of thing, certainly it doesn't
> seem to be in any of the arguments available for /boot/config.txt.

....and it's all clear now.

Hadn't heard of that variant...thought there were just NTSC and PAL motherboards. I tried googling "Apple IIe international NTSC" and found this:

[http://comp.sys.apple2.narkive.com/uyOi7vAj/international-nt sc-apple-ii-e-motherboard](http://comp.sys.apple2.narkive.com/uyOi7vAj/international-nt-sc-apple-ii-e-motherboard)

> This was the final revision Apple IIe board as used in the platinum IIe's
> shipped internationally. Functionally, it's much the same as its
> predecessor international board; has the aux slot inline with slot 3, has
> the charset switch, runs at 50hz refresh instead of 60hz. Platinum boards
> also have the 'shift key mod' installed (so pressing shift triggers PB2)
> and have superfluous circuitry in the game connector, and can lock up if
> you accidentally press a button on an attached joystick and one of the
> apple keys at the same time.

Sounds like your computer produces a 50-Hz variant of NTSC (NTSC 4.43?). The Raspberry Pi can't do that, so you're not going to get color video on your monitor from it.

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/ v \ Scott Alfter (remove the obvious to send mail)
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Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [Anonymous](#) on Tue, 16 Dec 2014 21:17:43 GMT

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Originally posted by: Alistair Ross

Bugger :)

Thanks Scott. I had feared that it might be something along those lines. I guess I'm stuffed then! Mono it is!

Alistair J. Ross
Sent from an Apple][

On Tue, 16 Dec 2014, Scott Alfter wrote:

```
> In article <31b7c5fb-8f98-449c-9f56-bea81d23b906@googlegroups.com>,
> <ajross.nz@gmail.com> wrote:
>> As you can see in the photo
>> (http://apple2.aliross.co.uk/photos/2e/IMG\_6092.JPG) it's an Apple IIe
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Subject: Using the AppleColor display for Raspberry Pi output
Posted by [Michael AppleWin Debu](#) on Thu, 25 Dec 2014 16:22:59 GMT
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Was gifted a RPi B+ :-) Does anyone have a audio composite splitter cable to recommend? TIA.

(Since the composite video has been merged into the audio connector for the B+)

Subject: Using the AppleColor display for Raspberry Pi output
Posted by [Michael AppleWin Debu](#) on Thu, 25 Dec 2014 16:35:08 GMT
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Looks like the RPi B+ uses a nonstandard 4 way TRS connector

<http://www.raspberrypi-spy.co.uk/wp-content/uploads/2014/07/Model-B-Plus-Audio-Video-Jack-Diagram.png>

Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [Michael J. Mahon](#) on Fri, 26 Dec 2014 05:59:54 GMT
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"Michael 'AppleWin Debugger Dev'" <michael.pohoreski@gmail.com> wrote:
> Looks like the RPi B+ uses a nonstandard 4 way TRS connector
>
> <http://www.raspberrypi-spy.co.uk/wp-content/uploads/2014/07/Model-B-Plus-Audio-Video-Jack-Diagram.png>

I'd expect that the same cable is used for many digital cameras.

--
-michael - NadaNet 3.1 and AppleCrate II: <http://home.comcast.net/~mjmahon>

Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [Michael AppleWin Debu](#) on Fri, 26 Dec 2014 20:54:01 GMT
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On Thursday, December 25, 2014 9:59:56 PM UTC-8, Michael J. Mahon wrote:
> I'd expect that the same cable is used for many digital cameras.

Maybe. Now that I know it is a 4-pole TRRS connector it is much easier to find on Amazon.

Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [scott](#) on Mon, 05 Jan 2015 16:32:59 GMT

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In article <c39aeeb7-fce7-4607-b680-ed13f6fb7ce8@googlegroups.com>, Michael 'AppleWin Debugger Dev' <michael.pohoreski@gmail.com> wrote:
> Looks like the RPi B+ uses a nonstandard 4 way TRS connector
>
> <http://www.raspberrypi-spy.co.uk/wp-content/uploads/2014/07/Model-B-Plus-Audio-Video-Jack-Diagram.png>

I had an iPod photo that used something similar for video output. Come to think of it, the link you provided suggests the Raspberry Pi uses the same pinout, so what you want is what's described at this link as an "iPod AV Cable:"

<http://support.apple.com/en-us/HT1454>

There were only a couple of devices (both iPods) that supported video on the headphone jack and they're both rather long in the tooth at this point, so finding the appropriate cable might be a bit tricky. That said, a couple minutes' googling turned up this:

<http://diydevices.com/3-5mm-4-pin-to-composite-av-cable-for-ipod-1-5-meter.html>

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Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [option8](#) on Fri, 09 Jan 2015 04:27:19 GMT
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I use these for my B+ and A+ to composite displays:

<http://www.amazon.com/gp/product/B000I1D0BW>

Subject: Re: Using the AppleColor display for Raspberry Pi output
Posted by [Michael AppleWin Debu](#) on Fri, 09 Jan 2015 04:39:58 GMT
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On Thursday, January 8, 2015 at 8:27:20 PM UTC-8, option8 wrote:
> I use these for my B+ and A+ to composite displays:
>
> <http://www.amazon.com/gp/product/B000I1D0BW>

I ordered this one:

<http://www.amazon.com/gp/product/B000STBSU4/>

Just came today but won't have a chance to try it out until the weekend,
