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Macintosh: How To Get Simultaneous RGB and NTSC Output

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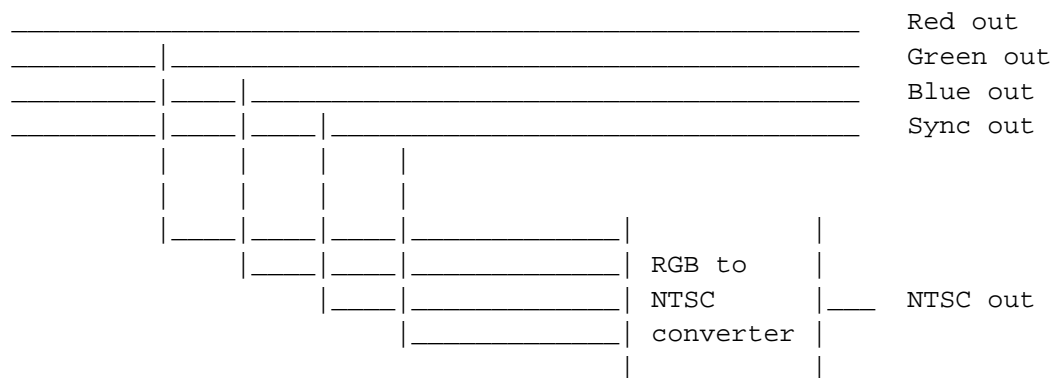
TOPIC -----

I'm trying to setup my Macintosh so it can simultaneously output an NTSC video signal for cable TV and an RGB signal for an Electrohome projector.

I've been able to do this by tapping the RGB signal from the Macintosh and feeding into a scan converter, but this creates a lot of interrupts on the projector.

I've been looking at NTSC boards, like the one from TrueVision, but these boards don't support simultaneous RGB output. What I need is a single board that outputs both signals.

Here's what I've been doing:



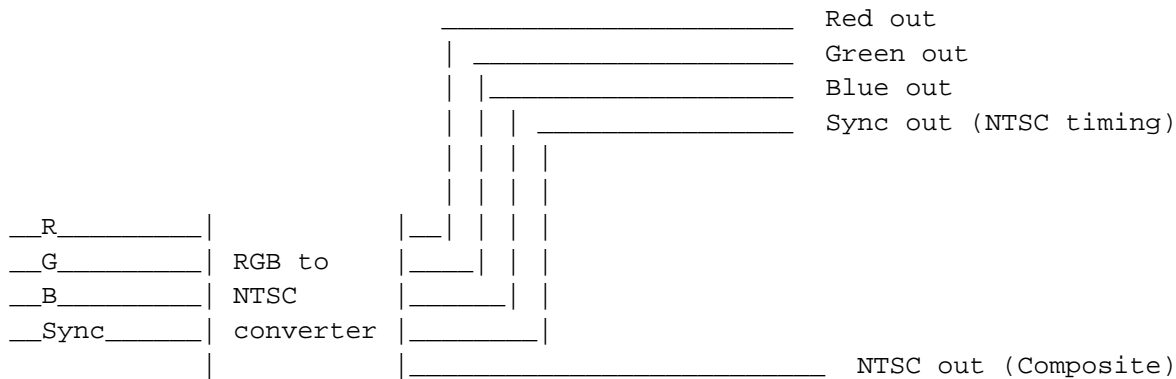
DISCUSSION -----

We doubt there is one video card available that provides simultaneous

Macintosh-style RGB (synchronization rate of around 31K) and NTSC signals (synchronization rate of around 15K).

However, if your Electrohome projector is a multi-sync RGB monitor that has NTSC sync timing, there are several options available. You can use a TrueVision NuVista card and have its RGB signal timed to the NTSC sync signal. Both the RGB signal and the composite signal are timed to the 15K sync of the NTSC specification. If your Electrohome projector has the ability to sync to NTSC timing, the Macintosh video output can go to the Electrohome as RGB and as composite NTSC for TV devices.

Here's the schematic:



The converters discussed below use this approach to drive both a RGB device and a NTSC device with the same video image simultaneously.

There are several cards that will work. The key is that the video card must be able to produce the NTSC sync timing to drive the converter.

- The NuVista+ (newer) or NuVista (older) with VIDI/O Box
- Several RasterOps video cards with their Video Expander Box
- The Macintosh Display Card 4•8, Macintosh Display Card 8•24, and Macintosh Display Card 8•24 GC with either the VIDI/O or Video Expander
- Any cards listed as compatible with VIDI/O or Video Expander

RGB devices used in this situation must be able to sync to the 15K NTSC timing produced by the video cards.

The TrueVision card has a variety of NuVista+ cables for connecting different products, including BNC, S-Video, composite (RCA style), and so on. The NuVista+ video card is like the VIDI/O Box on the Macintosh NuBus card: the card doesn't need a separate converter box.

Cables for the VIDI/O Box and the Video Expander Box use standard RCA style connectors for composite NTSC, standard S-Video connectors for the S-Video NTSC, and individual BNC connectors for the NTSC RGB. Depending on what you need, standard off-the-shelf cables may work, or you may need to create

custom cables.

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