
Subject: Firewire 800?

Posted by [Gantt Kushner](#) on Wed, 21 Jan 2009 15:54:34 GMT

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Would one of these: <http://www.granitedigital.com/firewire800pcihostadapters.aspx> make data streaming faster on my Mac? The last G4's to boot in OS9 have only Firewire 400 ports. Would 800 work better. Mostly I don't have any complaints but high track counts can slow things down sometimes.

Gantt

Subject: Re: Firewire 800?

Posted by [JeffH](#) on Wed, 21 Jan 2009 21:29:07 GMT

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Gantt Kushner wrote:

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> complaints but high track counts can slow things down sometimes.

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> Gantt

Gantt,

Are you talking about streaming to an external drive or something else?

FW800 will pass more data but both the drive and the mac have to be FW800.

Jeff

Subject: Re: Firewire 800?

Posted by [JeffH](#) on Thu, 22 Jan 2009 02:06:10 GMT

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Gantt,

Trying to get my head around your question from a practical standpoint and came up with the following (I may have overanalysed. Someone else may need to correct the logic).

The following table shows space needed for sample/bit rates and track counts

Sample Rate	44100	44100	48000	96000
-------------	-------	-------	-------	-------

Bits	16	24	24	24
------	----	----	----	----

KB/S	88200	132300	144000	288000
------	-------	--------	--------	--------

MB/M	5.292	7.938	8.64	17.28
------	-------	-------	------	-------

Track MB/S

24 2.12 3.18 3.46 6.91

36 3.18 4.76 5.18 10.37

48 4.23 6.35 6.91 13.82

First disclaimer is this is all theoretical. Given that Firewire 400 is 400mb/s or 50MB/sec, 48 tracks at 96K sampling rate and 24 bits would only use about a quarter of the bandwidth to your existing hard drive. Reality is that many things affect the data transfer such as the software, the processor, the pci bus, and the hard drive cache and spin speed, and also your project (that may be reading from and writing to the drive at the same time).

Try a test to find out how the chain minus your DAW software is responding.

-Find a large file on your internal hard drive (preferably at least 500 MB).

-Copy the file to the firewire drive and time the transfer.

-Delete the file on the external drive and repeat three or four times to get an average time.

-Repeat the process going the opposite direction (from the firewire to the internal drive) to check the read times. This won't be entirely accurate but will get you in the ballpark.

-Find the average seconds for writes. Divide the file size (hopefully around 500MB) by the number of seconds to give your approximate write throughput.

-Do the same for reads.

Compare your MB/s numbers you came up with against the track count table. If the number you came up with are dramatically over the ones in the table, going firewire800 may not be the best use of funds. If they are close (double or less), firewire 800 might help.

Probably way more than you were looking for, but hope this helps (and of course hope it's accurate :-)

Jeff

Kushner wrote:

> Hi Jeff,

>

> Yes, I'm talking about an external FW drive. This seems to be a PCI Firewire

> 800 adapter. The question, I guess, is whether, with a Firewire 800 drive,

> my computer would be able to move data faster using this board than it can
> using it's internal Firewire 400.
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Subject: Re: Firewire 800?

Posted by [Gantt Kushner](#) on Thu, 22 Jan 2009 02:11:13 GMT

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Hi Jeff,

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Subject: Re: Firewire 800?

Posted by [Gantt Kushner](#) on Thu, 22 Jan 2009 04:00:54 GMT

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Hey Jeff! Thanks for all your thought and effort! It sounds to me like I have enough bandwidth w/ FW 400 to do most anything I need. I almost always record at 44.1K/24 bit. I suppose if it ain't broke there's no need to fix it!

Thanks!

Gantt

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