

Re: TV Distribution Amp – Termination necessary?

Source: <http://sci.tech–archive.net/Archive/sci.electronics.repair/2007–11/msg00978.html>

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 - *Date:* Wed, 21 Nov 2007 15:19:35 –0800 (PST)
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On Nov 21, 12:36 pm, "Mr. Land" <grafton...@xxxxxxxxxx> wrote:

Hi, I'm looking for opinions on the following, thanks.

We're making the move to OTA DTV for our whole house, having weaned off cable. I have a decent antenna mounted on our roof with a rotator. There's a Channel Master amp mounted at the antenna also. I haven't measured distances so I can't quote specific cable lengths, so I'll just state that our house is a garden–variety, 2–story Colonial. I've been using this antenna w/ our main TV and the results have been very good. My current assignment is to now distribute this signal to other outlets in the house.

I'm using RG–6 for everything.

The antenna cable runs out of the amp on the mast down into the wall behind our plasma. There, I'm splitting it: one half to the plasma, the other continuing down into the basement, then to my electrical panel at the opposite corner of the house.

When the house was built all the bedrooms were wired for cable tv. All of these cables feed in–wall "F" outlets and meet at the panel in the basement. Currently there are 6 of them.

My first assumption was that, since I am splitting behind the plasma, then running an approx –3dB signal down to the panel, I'd be better off with a distribution amplifier there (rather than a splitter), so I picked up an 8–output unit (Channel Master 3045).

The dealer stated that I MUST terminate any unused outputs of the dist. amp., or I would "lose power". I'm not sure I follow this – wouldn't unterminated outputs cause ringing, rather than a loss of output? Or would one cause the other?

If I used a passive splitter at the panel instead, would its unused outputs also need to be terminated?

I did note that the 8–way passive splitter previously installed by our cable company had several unused outlets, none of which they bothered

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to terminate. I wonder if they're ignorant, lazy, cheap, or this termination business is a myth.

Thanks for any advice/insight...

Good practice calls for all non used outputs to be terminated, particularly at an amplifier.

An unterminated output will cause a portion of the signal to be reflected back up the cable towards the source of the signal. Since the unterminated outputs you are considering are right at an amplifier, these reflections will transfer back into the amplifier and cause a loss of signal quality on the other amplified outputs.

The reason that the cable companies can get away with not terminating a splitter is that the reflections are not significantly transferred to the other outputs of the splitter, but back up the cable. The typical isolation between input to output on an 8 way splitter is ~10 db, but the isolation between outputs is typically about 24db significantly reducing the impact of the reflected energy. The reflection is prevented from getting back into the cable coming to the house because each house is isolated from the trunk down the street by a drop tap isolation of between 24 and 48 db.

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