

Re: NEC AccuSync 120 Schematics/parts? Think my Horizontal output is Failing

Source: <http://sci.tech-archive.net/Archive/sci.electronics.repair/2004-10/0666.html>

From: Mark & Mary Ann Weiss (mweissX294_at_earthlink.net)

Date: 10/08/04

Date: Fri, 08 Oct 2004 05:34:27 GMT

"Jerry G." <jerryg@total.net> wrote in message
news:2si9aoF1ksdjfU1@uni-berlin.de...

> *With a horizontal output transistor, it will usually be good or bad. I
> have never seen one go out and come back to life!*

Yeah, come to think of it, I've never seen a power device come back from the dead. Usually it's logic devices and other semis based on low power technology.

> *Without properly investigating the fault it would be difficult to guess
> at what may be going wrong. In TV sets and monitors, the areas that can
> cause your description (you described it well), can be from the high
> voltage multiplier, main power supply, and from a cold solder connection
> in these areas. Many times, I have seen electrolytic capacitors going
> bad in various areas to cause such problems. The most common cause of
> the fault that you are describing is the high voltage multiplier. I
> believe that on your monitor it is part of the flyback assembly.*

I am really hoping it's not IN the flyback transformer. That would be darned difficult to replace. I remember buying an HP 1740A o'scope back in '82 and having it fail one day past the warranty. I had to get a buddy of mine who worked for Penril Corp to order a new one for me, as HP wouldn't sell me the flyback transformer directly. It cost me about \$140 back then, but considering I'd paid \$3800 for the 'scope, it was a good deal.

Electrolytic caps... oof.. just try and get to the solder side of the PCB on this thing! I'd have to disassemble to almost complete to get to that area.

As for dry joints, sometimes they have a mechanical corollary. I once was given a Nanao monitor that had no vertical scan. When turned on, it would display a horizontal line. A good sharp rap on the side of the chassis brought the vertical back. I vaguely recall that out of dozens of joints I reflowed, it was one near a transformer that turned out to be the baddie.

I had a chance to observe the problem again, as it's back today. When it goes out, I hear the bleeder doing its thing. It sounds just like when the monitor goes into power save mode. The snapping sound was an exaggeration of

sci.electronics.repair: Re: NEC AccuSync 120 Schematics/parts? Think my Horizontal output is Failing

my memory of what happened. Turn the power off, turn the power on, hear the degauss coil fire, raster comes back, raster 'zooms', loses focus, and fades to black at the same time, followed by the sound of the bleeder (very slight snapping sound common to monitor being shut off). If I turn it back on, it repeats. If I wait, I can turn it on and use it a while before it recurs.

> *Measuring the outputs of the main power supply, the G2 bias voltage for the CRT, the focus voltage, and also the high voltage for the CRT, would be a good start. For the measurement of the focus voltage, and the high voltage, you will need a high voltage probe for your meter.*

I gotta get a HV probe. I'm in RF electronics and usually rely on front panel meters to read the 10kV plate supply on the transmitter, so have never needed a probe. One problem: without a schematic, it's going to be rather difficult to make some of these measurements. Is there a standard color code for the wires coming out of the flyback? This one has two grid voltage adjustments and one focus adjustment. If memory serves me, there are three wires coming off the top, one of which is the HV to the anode.

> *As for original parts and service, I doubt that NEC will sell any parts or schematics to outside servicers. There are some after-market flyback transformers available for many types of monitors. I have heard conflicting reports about how good or bad they are.*

Yea, damn them. I tried to order a schematic from them years ago after one of the FG series developed a vertical jitter problem during warmup. They were hard-nosed about not allowing me to obtain repair information. I would be very concerned about the quality of an after-market FB and whether it would even fit without substantial modification to the PCB. Image quality is very critical as this is being used in a CAD/3D modeling system. I just can't see wasting this monitor, as it is barely used. I have the power save function set to 5 minutes of non use, so the monitor actually has very few hours on it because it lived 95% of its life on standby. It was bought, I recall, in summer 2001, making it one of the newest pieces of hardware in this office. With the sluggish local economy, many other big drains on my budget, and a cash shortage, I'm not in the market to just go out and buy another CRT.

Whatever happened to Sam's PhotoFacts? I used to be able to get schematics of anything back in the '50s and '60s through them.

--

Take care,
Mark & Mary Ann Weiss
VIDEO PRODUCTION • FILM SCANNING • DVD MASTERING • AUDIO RESTORATION
Hear my Kurzweil Creations at: <http://www.dv-clips.com/theater.htm>
Business sites at:
www.dv-clips.com
www.mwcomms.com
www.adventuresinanimemusic.com

-