

## Re: Sharp 21" starts up and shuts down

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- *From:* "Andy" <[mine\\_only\\_mine2222@xxxxxxxxxx](mailto:mine_only_mine2222@xxxxxxxxxx)>
  - *Date:* 12 Jan 2006 20:37:21 -0800
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I have a theory. The output voltage is too high so the HV protection shuts down the TV. The high voltage on the output means high voltage on the primary side on the flyback transformer. I measured 205V output from the switching power supply being fed to the primary.

I don't have much, but a referenced four Sams Photofacts of TVs and found that none of them had a voltage that high. The largest was from a large screen TV that was 175V.

So I think that's my problem. I now have to check the switching power supply. There are some resistors and a potentiometer in the feedback network which regulates the voltage. I will check them and maybe adjust them. I will also replace the output filter capacitor first before adjusting any resistors.

Andy wrote:

- > I am trying to repair a Sharp 20MH10 21" TV with the following
- > symptoms:
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- > (1) When the power button is pressed, makes a few cracking noises and
- > shuts down after about one second. The cracking noise comes from arcing
- > originating from the HV connector at top of the tube. The arcing occurs
- > inside the tube and reaches a length about twice the diameter of the
- > suction cup. There also is a blue circular spot on the screen which
- > gradually fades.
- >
- > (2) Pressing the power button again results in the relay (that powers
- > the switching supply and horizontal output transistor) being switched
- > on for about one second, but the picture tube does not power on.
- >
- > (3) After unplugging and plugging in the TV again, then the picture
- > tube powers up again for one second with same behaviour as (1).
- >
- > (4) I tried powering the TV with the deflection coils disconnected. The
- > TV remains on without shutting down, but cannot leave it on for long
- > before one of the resistors in the switching power supply section
- > starts to burn. I get smaller arcing in the tube, reaching just beyond
- > the edges of the suction cup.

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- > With my limited equipment (a cheap multimeter), I checked all diodes
- > and transistors. I also tested the SCR and 9V regulator and some
- > suspect resistors. I cannot find a single thing wrong with this
- > circuit.
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- > The only thing that comes to mind now is the flyback transformer or the
- > picture tube.
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- > Anyone have any suggestions?

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• **References:**

- ◆ **Sharp 21" starts up and shuts down**
  - ◇ From: Andy
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