

S.E.R. FAQ **NotTaR of Television Sets** : [Warning about disconnecting CRT neck board](#).

[Home](#) [Copyright](#) © 1994-2007, Samuel M. Goldwasser. All Rights Reserved. Reproduction of this document in whole or in part is permitted if both of the following conditions are satisfied: 1. This notice is included in its entirety at the beginning. 2. There is no charge except to cover the costs of copying. I may be contacted via the [Sci.Electronics.Repair FAQ](#) ([www.repairfaq.org](http://www.repairfaq.org)) [Email Links Page](#).

Download

Feedback

---

[<< Safety guidelines](#) | [Index](#) | [Troubleshooting tips >>](#)

## Warning about disconnecting CRT neck board

Some manufacturers warn against powering a TV or monitor CRT without the CRT neck board connected. Apparently, without something - anything - to drain the charge resulting from the current flow due to residual gas ions inside the CRT, the shortest path may be through the glass neck of the tube to the yoke or from the pins outside the CRT to whatever is nearby. There aren't many ions in a modern CRT but I suppose a few here, a few there, and eventually they add up to enough to cause a major disaster at least on some CRTs.

This is probably not a problem on small CRTs but for large ones with high high voltages and high deflection angles where the glass of the neck is very thin to allow for maximum deflection sensitivity, the potential does exist for arcing through the glass to the yoke to occur, destroying the CRT.

There is really no way to know which models will self destruct but it should be possible to avoid such a disaster by providing a temporary return path to the DAG ground of the CRT (NOT SIGNAL GROUND!!) via the focus or G2 pins preferably through a high value high voltage rated resistor just in case one of these is shorted.

This probably applies mostly to large direct-view TVs since they use high deflection angle CRTs but it won't hurt to take appropriate precautions with video and computer monitors as well.

---