

S.E.R. FAQ NotTaR of Television Sets : Tilted picture

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Tilted picture

You have just noticed that the picture on your fancy (or cheap) TV is not quite horizontal - not aligned with the front bezel. Note that often there is some keystoneing as well where the top and bottom or left and right edges of the picture are not quite parallel - which you may never have noticed until now. Since this may not be correctable, adjusting tilt may represent a compromise at best between top/bottom or left/right alignment of the picture edges. You may never sleep again knowing that your TV picture is not perfect! BTW, I can sympathize with your unhappiness. Nothing is more annoying than a just noticeable imperfection such as this. However, since TVs always overscan, the only time you will really notice a minor tilt without going out of your way to look for it is if there is text or graphics near the edge of the screen.

There are several possible causes for a tilted picture:

1. Set orientation. The horizontal component of the earth's magnetic field affects this slightly. Therefore, if you rotate the TV you may be able to correct the tilt. Of course, it will probably want to face the wall!

Other external magnetic fields can sometimes cause a rotation without any other obvious effects - have you changed the TV's location? Did an MRI scanner move in next door?

2. Need for degaussing. Most of the time, magnetization of the CRT will result in color problems which will be far more obvious than a slight rotation. However, internal or external shields or other metal parts in the set could become magnetized resulting a tilt. More extensive treatment than provided by the built-in degaussing coil may be needed. Even, the normal manual degaussing procedure may not be enough to get close enough to all the affected parts.
3. You just became aware of it but nothing has changed. Don't dismiss this offhand. It is amazing how much we ignore unless it is brought to our attention. Are you a perfectionist?
4. There is an external tilt control which may be misadjusted. Newer Sony monitors have this (don't know about TVs) - a most wonderful addition. Too bad about the stabilizing wires on Trinitron CRTs. A digital control may have lost its memory accidentally. The circuitry could have a problem.
5. There is an internal tilt control that is misadjusted or not functioning. The existence of such a control is becoming more common.

6. The deflection yoke on the CRT has gotten rotated or was not oriented correctly at the time of the set's manufacture. Sometimes, the entire yoke is glued in place in addition to being clamped adding another complication.

If the TV was recently bumped or handled roughly, the yoke may have been knocked out of position. But in most cases, the amount of abuse required to do this with the yoke firmly clamped and/or glued would have totally destroyed the set in the process.

There is a risk (in addition to the risk of frying yourself on the various voltages present inside an operating TV) of messing up the convergence or purity when fiddling with the yoke or anything around it since the yoke position on the neck of the tube and its tilt may affect purity and convergence. Tape any rubber wedges under the yoke securely in place as these will maintain the proper position and tilt of the yoke while you are messing with it. (Don't assume the existing tape will hold - the adhesive is probably dry and brittle).

7. The CRT may have rotated slightly with respect to the front bezel. Irrespective of the cause of the tilt, sometimes it is possible to loosen the 4 (typical) CRT mounting screws and correct the tilt by slightly rotating the CRT. This may be easier than rotating the yoke. Just make sure to take proper safety precautions when reaching inside!

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