

AbstractHIGH VOLTAGE STABILIZATION CIRCUIT FOR
VIDEO DISPLAY APPARATUS

In a television receiver, an ultor accelerating potential or high voltage (U) for a picture tube is derived by rectifying a retrace pulse voltage (VW2) developed in a high voltage winding (W2) of a flyback transformer (T1). The retrace pulse voltage is developed by a horizontal deflection circuit output stage (Q1, 79) that is coupled to the high voltage winding via a primary winding (W1) of the flyback transformer. The horizontal deflection circuit output stage includes a horizontal deflection winding (LH), a retrace capacitor (CR) and a trace switch (Q1, DQ1). The trace switch includes a damper diode (DQ1) and a horizontal output transistor (Q1). An energy storage coil (L1) is coupled in parallel with a third winding (W3) of the flyback transformer during a controllable time interval (t1-t5) beginning during the second half of horizontal trace and ending during retrace. The energy stored in the coil during the trace portion is transferred to the flyback transformer during retrace to enhance high voltage at high beam currents. The amount of energy is controlled or regulated to obtain a stabilized high voltage. The energy storage coil is parallel coupled to a retrace resonant circuit (79) during the energy transfer interval and thus stabilizes also the horizontal retrace time which might have otherwise increased with increasing beam current.

Figure 1

This Sheet Has Been Replaced