

Abstract

A horizontal deflection system (20) comprises a horizontal deflection yoke (Lh) and a resonant retrace circuit (24) coupled to the yoke (Lh) and to a switched energy source (Q2) for generating a horizontal deflection current (Ih) in the yoke (Lh). A diode modulator (12) is coupled to the resonant retrace circuit (24). A control circuit (34) operable in a switched mode supplies a control signal (Is) to the diode modulator (12) for modifying the deflection current (Ih) to correct for side pincushion distortion. A transformer (TR1) has a first winding (W1) coupled to the diode modulator (12) and to the control circuit (34) for recovering energy from the diode modulator (12). The transformer (TR1) has a second winding (W2) for receiving the recovered energy from the first winding (W1). A diode clamp (30) is coupled to the second winding (W2) and to a load (RL) driven by a voltage source at a first voltage level, for transferring the recovered energy between the second winding (W2) and the load (RL). The energy is transferred between the first winding (W1) and the second winding (W2) at a second voltage level across the first winding (W1) determined by the first voltage level and the turns ratio of the transformer (TR1). The second voltage level defines an effective voltage clamping level and is related to the operating range of the diode modulator (12). The second voltage level can be adjusted to levels different from the first voltage level by changing the turns ratio of the transformer (TR1).

Figure 2

