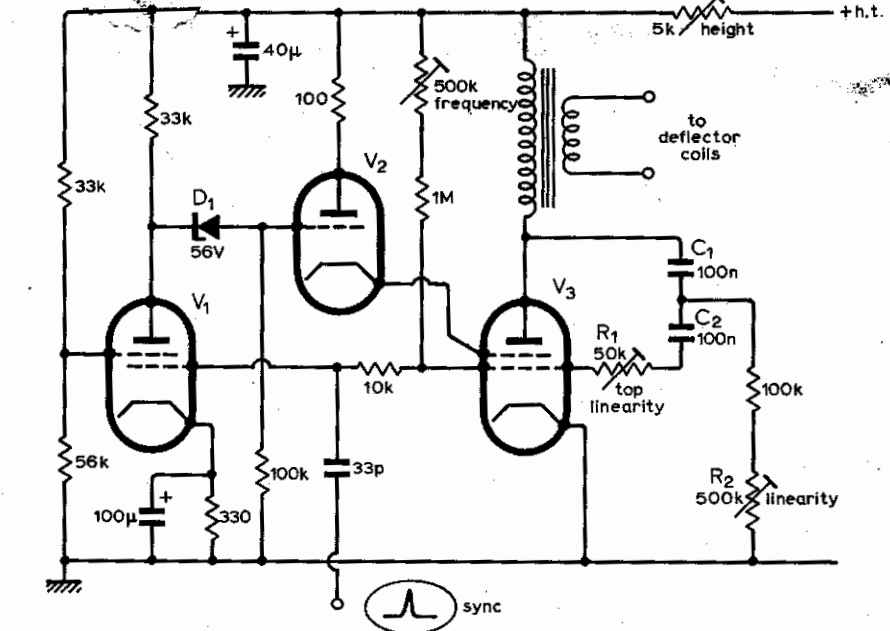


Sanatron current timebase

The circuit is a modification of the well-known Sanatron circuit for use as a current timebase for magnetic deflection. V_3 is the Miller run-down valve, gating being carried out by V_1 and V_2 on the screen grid. To correct for the inadequacies of the output transformer the charging capacitor is split into two halves C_1 and C_2 and two resistors R_1 and R_2 are used in a network to provide an approximately parabolic voltage on the grid of V_3 to correct for the differentiating action of the transformer. The gating pulse from V_1 is applied to the screen grid of V_3 via a cathode follower V_2 to minimize loading and allow the use of valves with high screen current for V_3 . The 56-volt zener diode D_1 ensures that V_2 and V_3 are completely cut off when V_1 conducts. Sync can be applied to the grid of V_1 as shown.

The circuit values are appropriate for use as a television field timebase operating at 50Hz. The output transformer should be so chosen to present a load of about $5k\Omega$ to the anode of V_3 when loaded by the scan coils. Different transformers may need different values of feedback components C_1 , C_2 , R_1 , R_2 . Almost any valves can be used for V_1 , V_2 , V_3 ; a 6U8 triode-pentode has normally been used as V_1 and V_2 . Any small output tetrode or



pentode will do for V_3 , the only proviso being that the grid base of V_3 must be longer than that of V_1 , so that V_1 is cut off when V_3 is normally conducting on the rundown. A negative pulse suitable for flyback blanking is available from V_1 anode. None of the resistors in the circuit is suitable for use as a height control, but as the frequency

is not very dependent on the total h.t. voltage, variation of this provides a suitable means of controlling amplitude, especially as the current consumption of the circuit is very low.

G. Trice,
Halstead,
Essex.