Unijunction Pulse Stretcher — Door Bell Extender

D. Wedlake

The circuit presented is a practical monostable timer which was designed to extend the ringing time of a door bell. It can be useful in cases when the bell push button might not be engaged long enough to attract attention, though it could be used in many other applications.

When the push button is closed the thyristor will switch on delivering power to the unijunction transistor timing circuit and energising the relay, the contacts of which are used to control the bell circuit. At the same time, capacitor C2 quickly charges to the load voltage potential via R3. After a time interval given approximately by 0.8 C1 R1 (about 6 seconds in this case) the unijunction transistor will fire and the corresponding output pulse which is coupled to the cathode of the thyristor via C2 will put the thyristor in reverse bias switching it off. With these values the relay will become energised for at least 6 seconds.