

SONG NUMBER DISPLAY



PRABHASH K.P.

Here's a circuit to display the song number in an audio system for quick reference to songs. It also serves the purpose of an extra visual indicator in modern audio systems.

When the power is switched on, the power-on-reset circuit comprising 3.3k resistor R20 and 1µF, 25V capacitor C6 resets the counters, showing '00' in the display. One can also reset the display to zero at any time by pressing reset switch S1.

When the first song starts playing, the output pins of IC1 (KA2281) go low and capacitor C5 starts charging. This forward biases transistor T1 and hence the input to IC3 at pin 1 goes to high state. As a result, the output of the counter goes to the next state, showing 01 on the display. The counter remains in this state until the song is completed.

During the time gap before the next song starts playing, capacitor C5 discharges. After discharging of capacitor C5, the input to IC3 becomes low again. When the song starts, the process described above is repeated and the display shows 02. You can adjust VR3 to change the time gap setting. This must be set such that the circuit doesn't respond to short gaps, if any, within a song and responds only to long gaps between different songs.

Transistor T2 helps in gap-delay adjustment. The intensity of LED11 diminishes when a song is completed and the counter is ready to accept the next pulse.

Connect the input to the preamp output or equaliser output of the audio system. Adjust VR1 and VR2 to get the correct audio-level indication. If you are already using KA2281 for audio-level indication, just connect diodes D1 and D2 as shown in this circuit.

Note that the counter counts the songs by detecting the gaps. Therefore any long gap within a song may cause false triggering and the display will also be incremented. However, as this is very unlikely to happen, the circuit shows the correct song number almost all the time.

The circuit costs around Rs 100.

