

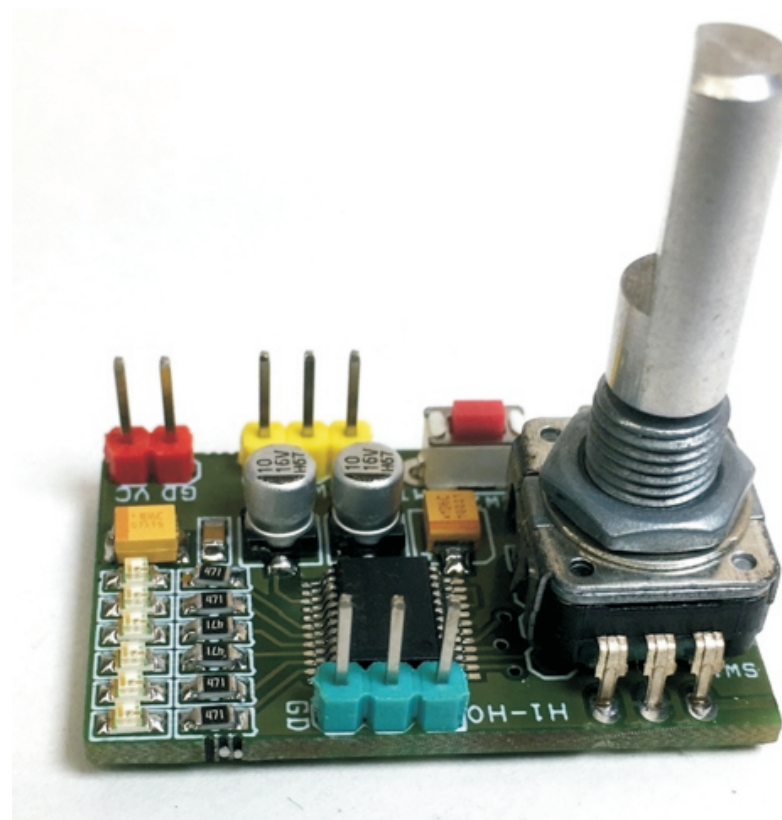
## Stereo Volume and Balance Control with Rotary Encoder

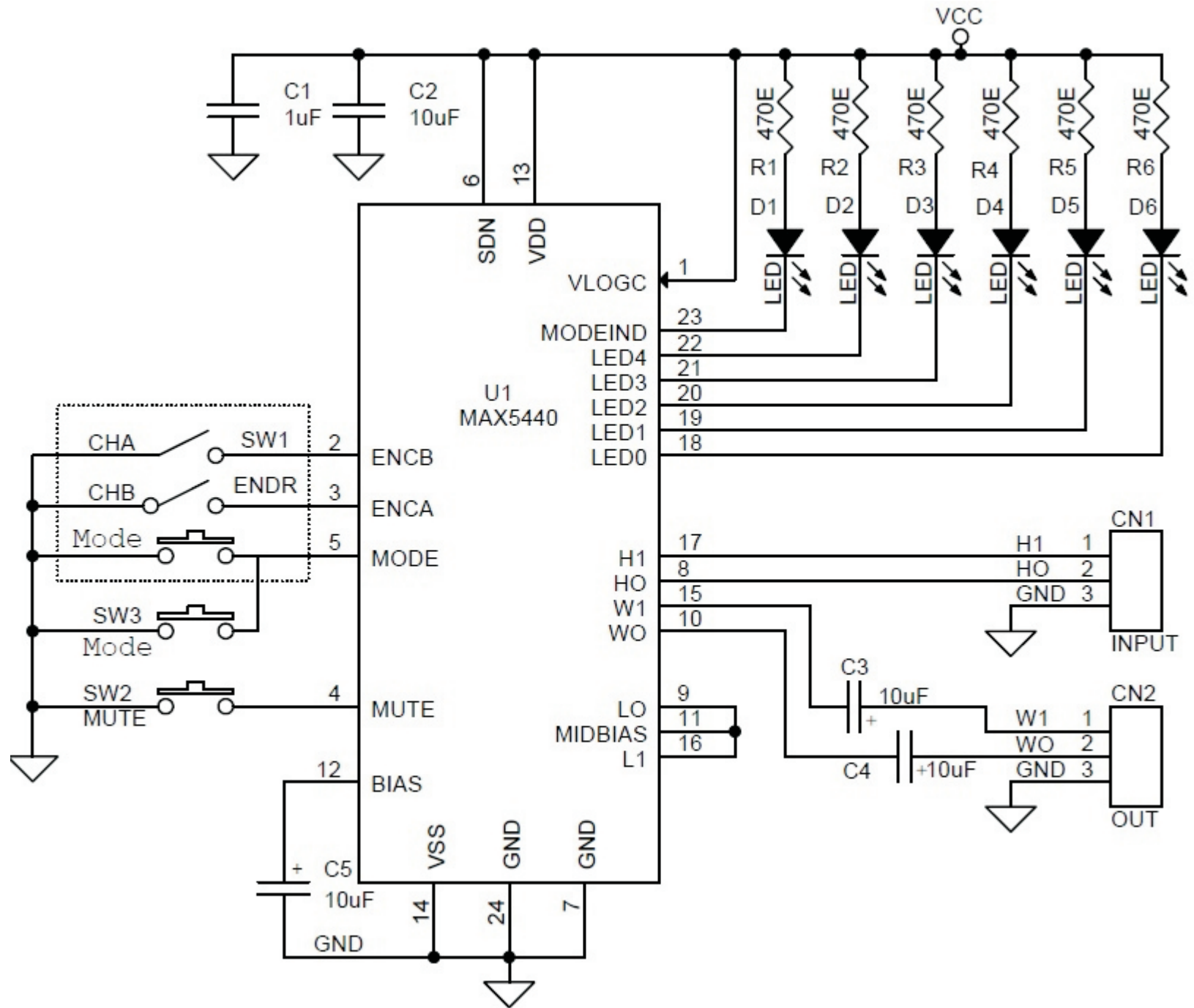
The project described here is a compact stereo volume and balance control with rotary encoder, provides 32 log steps potentiometer with buffered output wiper output. The project replaces mechanical potentiometer. 5 LEDs indicate the volume level or balance settings, depend on the status of the mode indicator D1 LED. The MAX5440 includes debounced pushbutton inputs for mute and mode. The mute input allows a single pushbutton to change between volume control and the -90dB (typ) mute setting. The mode input toggles between volume and balance control. A click-and-pop suppression feature minimizes the audible noise generated by wiper transitions.

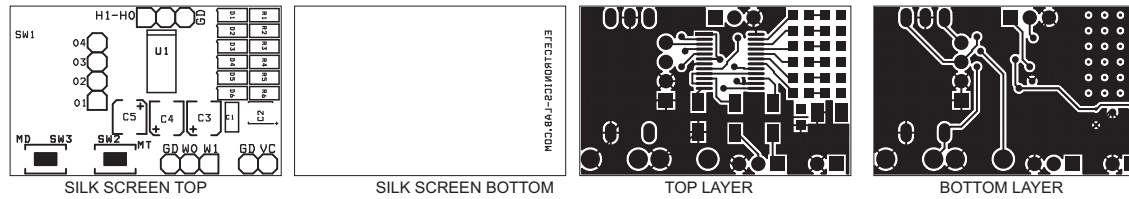
The MAX5440 dual, 40k $\Omega$  logarithmic taper volume control features a debounced up/down interface for use with a simple rotary encoder without using a microcontroller ( $\mu$ C). Each potentiometer has 32 log-spaced tap points with a buffered wiper output and replaces mechanical potentiometers. An integrated bias generator provides the required  $((VDD + VSS) / 2)$  bias voltage, eliminating the need for costly external op-amp circuits in unipolar audio applications. A mode-indicator LED output specifies volume or balance control. Five integrated LED drivers indicate volume level or balance settings, depending on the status of the mode indicator.

### Features

- Logarithmic Taper Volume Control with (31) 2dB Steps
- Low-Power Wiper Buffers Provide 0.003% THD
- Single +2.7V to +5.5V Supply Voltage Operation
- Low 0.5 $\mu$ A Shutdown Supply Current
- Integrated Bias Voltage Generator
- Five-Segment LED Volume/Balance Indicator
- Click less Switching
- 40k $\Omega$  End-to-End Fixed Resistance Value
- Mute Function Toggles to -90dB (typ)
- Power-On Reset to -12dBFS Wiper Position







PCB DIMENSIONS 36.18 X 22.67MM

BOM			
SR.	QNTY.	REF.	DESC.
1	1	CN1	3 PIN HEADER CONNECTOR
2	1	CN2	3 PIN HEADER CONNECTOR
3	1	C1	1uF/10V SMD 0805
4	3	C3,C4,C5	10uF/35V SMD
5	6	D1,D2,D3,D4,D5,D6	LED SMD 0805
6	6	R1,R2,R3,R4,R5,R6	470E SMD 0805
7	1	SW1	ROTARY ENCODER
9	2	SW2,SW3	TACTILE SWITCH
10	1	U1	MAX5440
11	1	C2	10uF/16V SMD 1210

