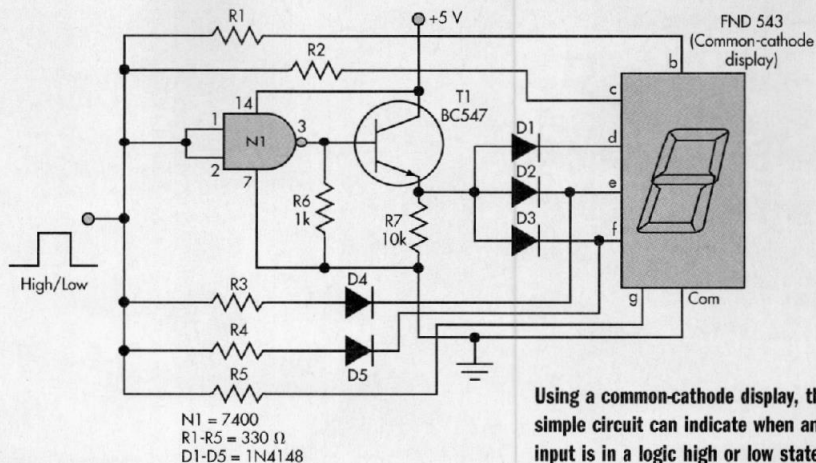# Simple Circuit Indicates Whether A Signal Is Logic High Or Low

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**The circuit presented here provides** users with an indication of a high or low logic state. When the input is a logic 1 (high), the common-cathode display indicates "H." When the input is a logic 0 (low), the display indicates "L."

The circuit uses one gate out of four in IC N—a 7400 quad, two-input NAND gate—to invert the input and apply the output to the d, e, and f segments of the display via an emitter follower (T1). The diodes and the resistors suitably buffer the direct and indirect inputs (via the emitter follower) to segments e and f. The device operates from a regulated +5-V power supply.

**ED ONLINE 15513**



N1 = 7400
R1-R5 = 330 Ω
D1-D5 = 1N4148

**Using a common-cathode display, this simple circuit can indicate when an input is in a logic high or low state.**