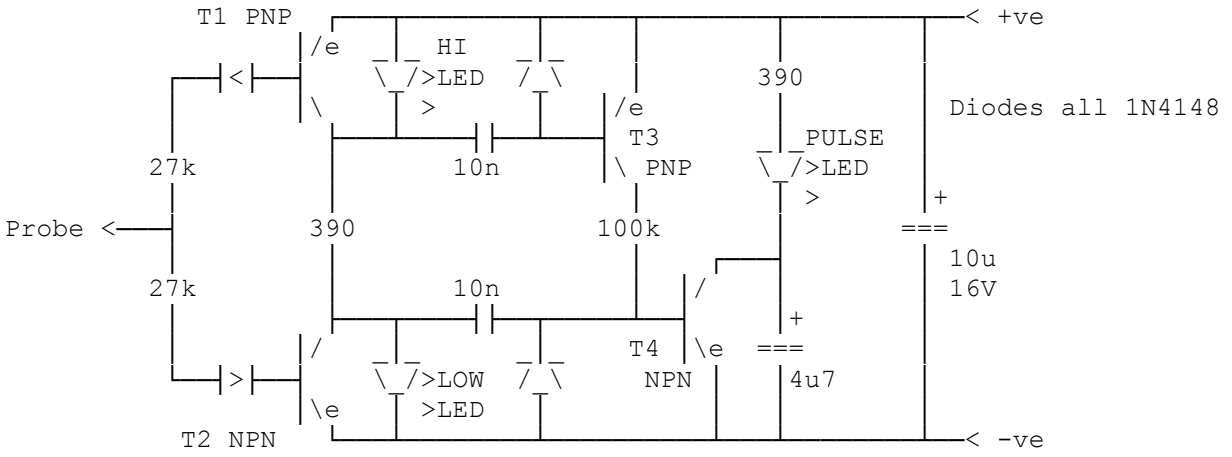
Logic Probe

By G8MNY (Updated Feb 07)

(8 Bit ASCII Graphics use code page 437 or 850)

Although you can buy a commercial probe, here is one I designed to fit a probe case I had.

Specification.
Supply 0V & +5V @ 10mA to 0V & +12V @ 25mA
Input Z > 15k
Logic 0 range 0v to 1V
Logic 1 range Supply to Supply less 1V
Single full level pulse detection > 10MHz.



Circuit Description.
Both power rail transistors T1 & T2 are normally on, shorting out the HI & LOW indicating LED unless the probe is within 1V of ground or the +ve rail. When that occurs the shorting transistor across the LED is tuned off & the appropriate logic 1 or 0 LED lights.

Pulses of Logic 0 from TR2 feed through the 10nF cap to diode detector to turn on T4 with the pulses. TR4 discharges a 4u7 Cap to hold on the pulse indicator LED. Pulses only of logic 1 from TR1 do the same for TR3, which turns on T4 to light the LED as before.

LED STATUS

Condition	Hi LED	Low LED	Pulse LED
HIGH	ON	OFF	OFF
LOW	OFF	OFF	OFF
HI/LOW 1:1	ON	ON	ON
HI/LOW 1:50	DIM	ON	ON
HI/LOW 50:1	ON	DIM	ON

Why Don't U send an interesting bul?

73 de John G8MNY @ GB7CIP