CAT 5 Cable Tester Project.

Part 1:

Schematic of the transceiver portion. Version 1.3
(updated schematic V. 1.31)

Click here to see a larger version of the schematic.

Schematic description:
The project consists of a timing chip (555) and a decade counter (NTE4017B). The 555 runs in astable mode providing a pulse from pin 3 every ¼ second. This pulse triggers incrementation in the decade counter at pin 14 on Q0-Q5 (pins 3,2,4,7,10 and 1). Transistors act as switches for the current. Just about any NPN transistor will work. C2 and R4 reset the counter to 0 when first powered up. Pin 1 (Q5) of the decade counter is looped to the reset pin 15 via diode. This prevents the counter from continuing on to Q9 before returning to Q0. A .01nf ceramic capacitor can be added between pin 5 of the 555 and ground. I usually leave it out.

Part 2:

Schematic of the remote section-