



constant current source

Rr range resistors are 0.1% MFR, if costly, use bourns 10T trimpot or a difficult way use series parallel combination and scratch 10% part of network to increase value. (first remove paint on resistor with a blade then with ohmmeter connected scrape black film to increment value till done)

D1, D12 and R8 are to ensure that the FET can be turned off, as the opamp swings from +/- 3.5V only, with some FET it needs to be tweaked.

let voltage current and resistance sockets be separate and of different color or use a high voltage electrical rotary switch or relays if you want the same sockets switched.

put 104 CD cap for all ICs from positive to negative close to IC, even if omitted in circuit, for opamps on dual supply two caps.
 unused inputs of logic and opamps pull up or down to avoid oscillations and noise. connect supply of all chips if not mentioned.
 "analog ground" and "digital ground" must be linked at power supply only, avoid loops, let grounds radiate from a ground plane.
 use MFR 1% for all Resistors, 33E means 33 ohms, 22K means 22 kilo ohms, 1M is 1 megohm. 10T Trimpot means like 10 turn bourns.
 '474 CD' is 47 with 4 zeros pF, 470000 pF, remove 3 zeros 470 nF, shift decimal 3 places 0.47uF. "pl" is plastic, low leakage multilayer.

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