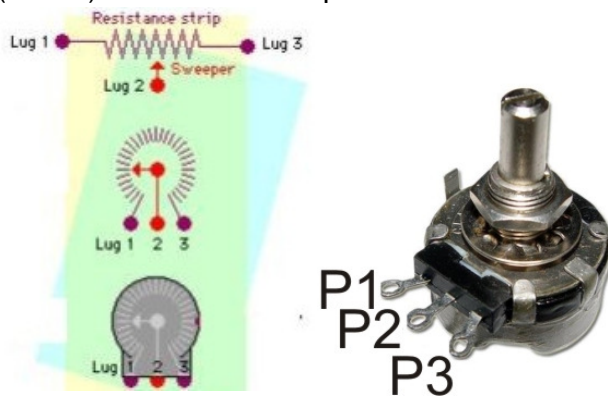


GUIDE FOR SELECTING A PARALLEL RESISTOR FOR THE C18 BOARD FOR REPLACING A CURRENT POT.

Follow this steps and formulas for calculating a parallel resistor for the C18 or estimating desired potentiometer values that you might want o use in parallel with on board pot. This parallel pot could also be wired to the terminals for the parallel resistor.

1. Determine the maximum impedance of the pot you need to replace (PMax). This is the impedance between P1 and P3.



2. Observe the impedance of the resistance provided with the C18 board (RC18). The C18 is provided with a 1 Mohms resistor, but this could be replaced by the user.
3. Calculate the parallel resistor (PR) value to be used by using the following formula:

$$PR = (RC18 * PMax) / (RC18+PMax)$$

SAMPLE CALCULATION:

$$PMax = 500 \text{ kohms}$$

$$RC18 = 1 \text{ Mohms}$$

$$PR = (1 \times 10^6 * 500 \times 10^3) / (500 \times 10^3 + 1 \times 10^6)$$

$$PR = 500 \times 10^3 \rightarrow 333.3 \text{ Kohm}$$

Note:

$$1 \text{ K} = 1 \times 10^3 \text{ (1 Kilo)}$$

$$1 \text{ M} = 1 \times 10^6 \text{ (1 Mega)}$$