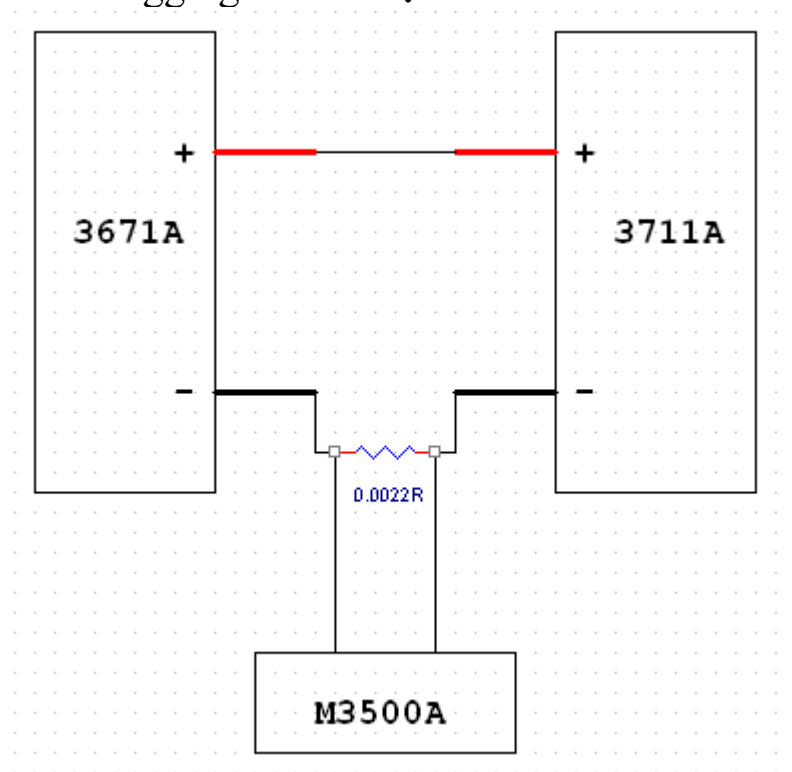# 3710A, 3711A Calibration Instructions

A. Debugging Instruments：

    1、A standard voltmeter M3500 (at least 6½ digit)；
    2、A high current power supply 3671A(20V,40A)；
    3、A high voltage source 3666A(400V,1.25A)；
    4、A standard current sampling resistance (0.0022Ω, 20ppm, 10w)

B. Debugging Methods：

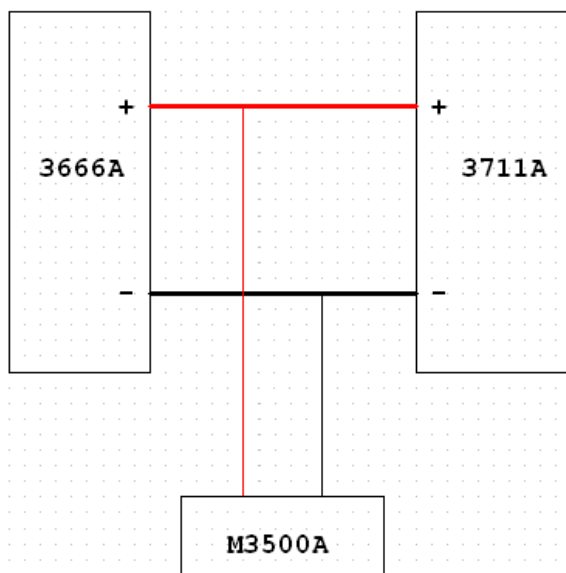Connect the instruments as the above diagram.

1. Zero Adjustment

    a. Connect and power on 3671A, and set the current as 10mA and the voltage as 5V;
    b. Then series connect the sampling resistance of 2.2mΩ and monitor the voltage across the resistor;
    c. Adjust **POT3** to make the voltmeter M3500 is displayed as 0.022mV, namely 10mA;
    d. Then adjust **POT9** to make the value in the LCD be 10mA.

2. Current Adjustment

Series connect the sampling resistance of 2.2mΩ, monitor the voltage across the resistor and get the current value.

a. Input 3711A 30A as the set value, and set the current of 3671A as 29A, and voltmeter M3500 will display 63.9mV. Adjust **POT7** to make the value in LCD be 29A;
b. Input 3711A 2.9A as the set value. Adjust **POT5** and observe the voltmeter and make the value in LCD be 6.38mV;
c. Adjust **POT6** and make the current value in LCD be 2.9A;
d. Input 3711A 25A as the set value. Adjust **POT4** and observe the voltmeter and make the value in LCD be 55mV;

3. **Voltage Adjustment**

Connect the instruments as the above diagram.

Voltage Adjustment:

a. In the no-load case, the voltage value of the reference voltage should be consistent with the value showed in the LCD;
b. 0~3.999V: Set the power voltage of 3666A as 3.5V. Adjust **POT8** to make the value in the LCD be 3.5V, the same as the voltage on the voltmeter M3500;
c. 4~35.99V: Set the power voltage of 3666A as 35V. Adjust **POT1** to make the value in the LCD be 35V, the same as the voltage on the voltmeter M3500;
d. 36~360.0V: Set the power voltage of 3666A as 350V. Adjust **POT2** to make the value in the LCD be 350V, the same as the voltage on the voltmeter M3500;

POT7

POT2 POT1

POT6

POT5

POT9

POT8

POT3

POT4