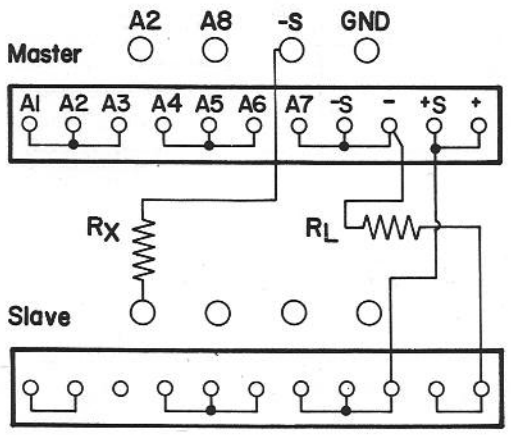

FIG.3-2 AUTO SERIES (2units)

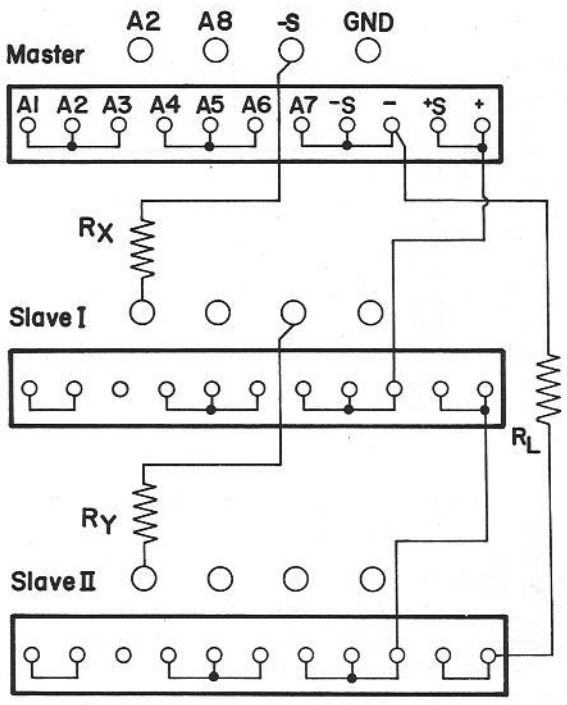

FIG.3-3 AUTO SERIES (3units)

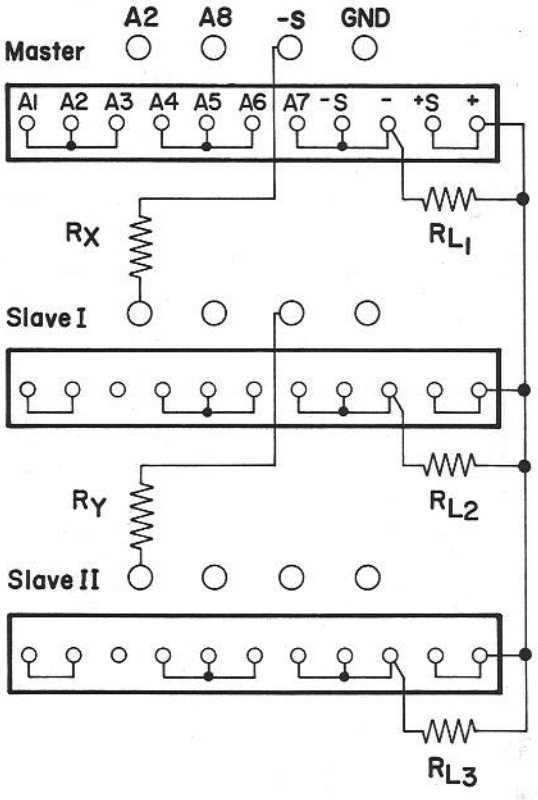

FIG. 3-4 AUTO TRACKING

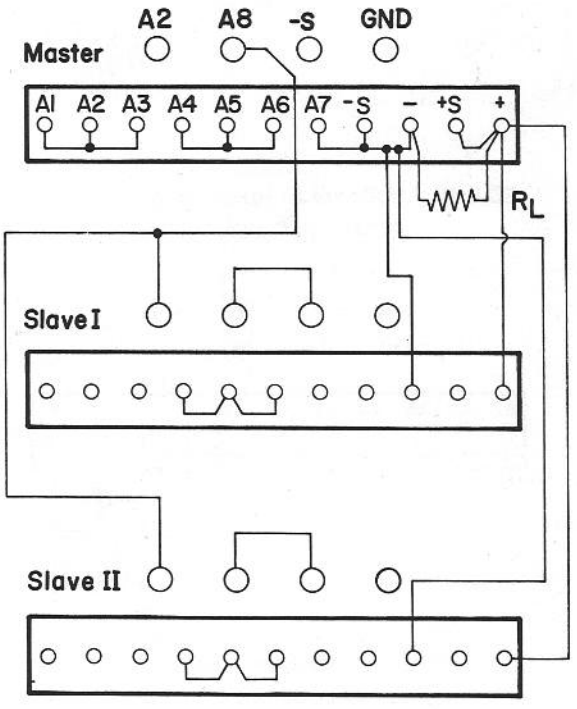

FIG. 3-5 AUTO PARALLEL

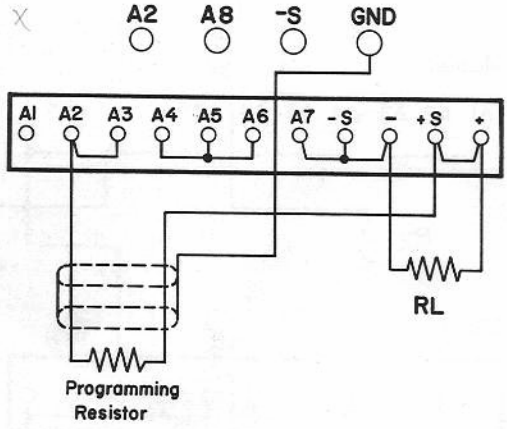

FIG.3-6 Resistance Programming
CONSTANT VOLTAGE

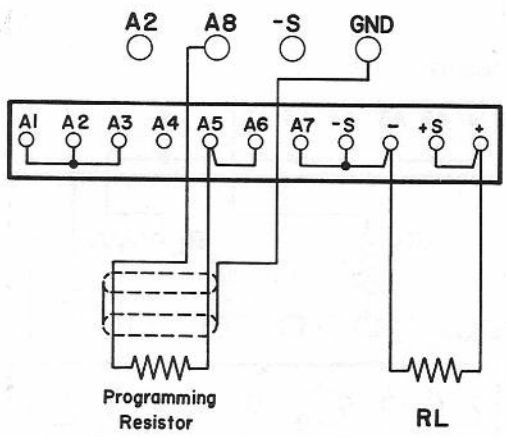

FIG.3-7 Resistance Programming
CONSTANT CURRENT

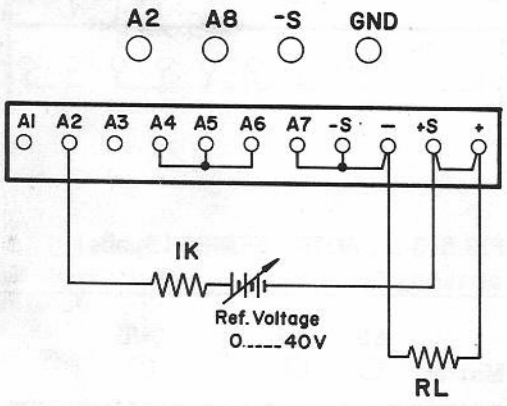

FIG.3-8 Voltage Programming
CONSTANT VOLTAGE

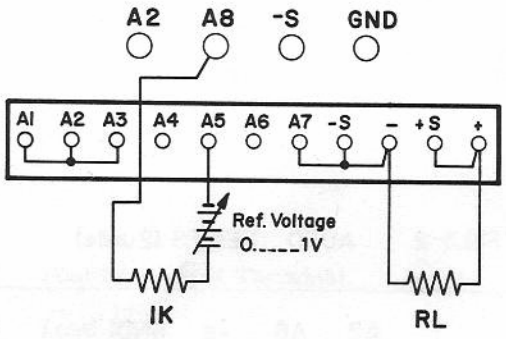

FIG.3-9 Voltage Programming
CONSTANT CURRENT

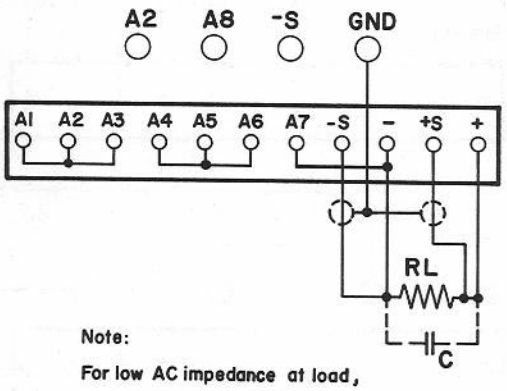

FIG.3-10 Remote Sensing

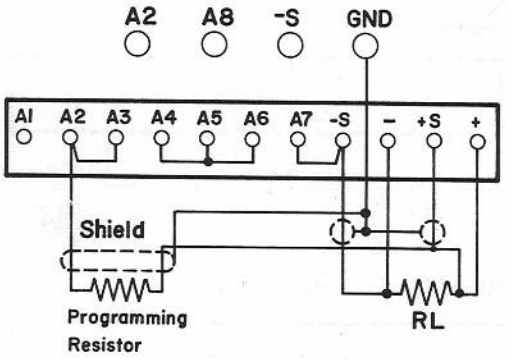

FIG.3-11 Remote Sensing & Remote Programming

3-14. Remote Programming

The output voltage of the Model 6966A may be adjusted by the front panel control or programmed from a remote location by means of an external control. The front panel control pot is disabled when the power supply is connected for one of the following programming modes of operation.

a) Resistance programming (Fig. 3-6 or 3-7)
If connected according to Fig. 3-6, the output voltage will vary linearly with the programming resistor at a rate of 200Ω/V (5V/kΩ)

b) Voltage programming (Fig. 3-8 or 3-9)
In this case the output voltage will vary linearly with a reference voltage which is connected as shown in Fig. 3-8. That means that the output voltage will be equal to the reference voltage. The maximum output current required from the reference supply will be 5 mA independent of the current drawn from the output terminals of the power supply. If connected according to Fig. 3-9, the output current will vary linearly with the reference voltage.

3-15. Remote Sensing (Fig. 3-10)

WARNING

TO AVOID EXTENSIVE DAMAGE, DO NOT OPERATE THE POWER SUPPLY WITH THE SENSING TERMINALS OPEN!

Normally, the sensing voltage is taken from the output terminals at the front panel. There will be a voltage drop along the leads from the output to the load. This means that the regulation is not maintained at the load when any significant current flows. To get around this effect, a separate pair of sensing leads have to be connected between the load and the sensing terminals at the front or rear of the instrument. These leads carry no load current but are inside the regulation loop of the amplifier. Therefore, they do not have to be as heavy as the load leads but must be protected from hum pick up. It is best to use shielded leads or, if not, a twisted pair.

The connection for remote sensing is illustrated in Fig. 3-10.

WARNING

Do not interchange the polarity!
The positive side of the load must be connected to the +S, the negative end of the load to -S. WRONG CONNECTION MAY DAMAGE THE POWER SUPPLY.

3-16. Combination of remote programming and remote sensing: it is possible to use a combination of remote programming and remote sensing. This wiring combination is illustrated in Fig. 3-11.

3-17. A combination of voltage and resistance programming is shown in Fig. 3-12.

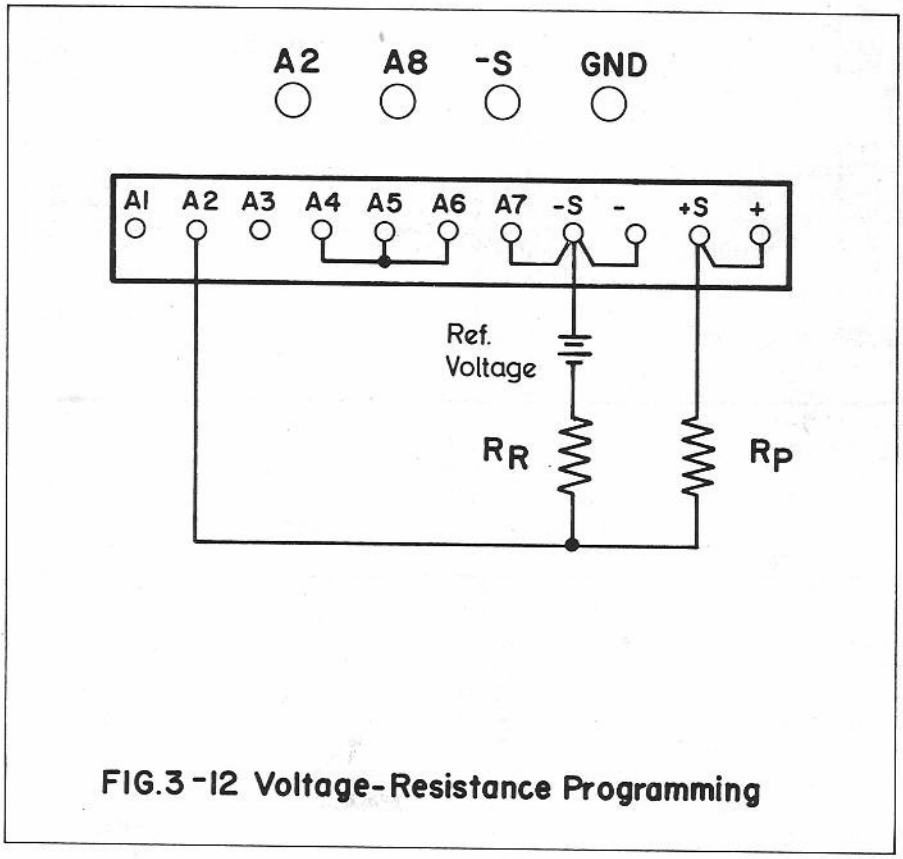

FIG.3-12 Voltage-Resistance Programming