

Multiple 744 Series Step Controllers One Input Signal

IMPORTANT

Regardless of the input method used, the 24VAC power input must be properly polarized if a single supply is shared by all Controls. The same 24VAC secondary lead must feed the VAC “24” input for each Step Controller. The other 24VAC secondary lead must feed the VAC “LO” input of each Step Controller. If separate 24VAC power sources are used for each Control, the “VAC” power input “LO” terminal must be daisy chained between all Controls in order to form a common “circuit ground” between all Controllers.

CAUTION



The VAC “LO” input is the terminal designated for any grounding required to meet UL 1995 requirements. This terminal is also common to circuit ground and the “COM” terminal shared by the “V” and “MA” input terminals.

To drive several 744 Series Step Controllers with one input, either of two methods may be used.

I. Method 1 uses either the “V” or “MA” input, but never both at the same time. No board modification is required.

A. If the “MA” input is used, the constant current source must be capable of driving as many Step Controllers as are feed in series.

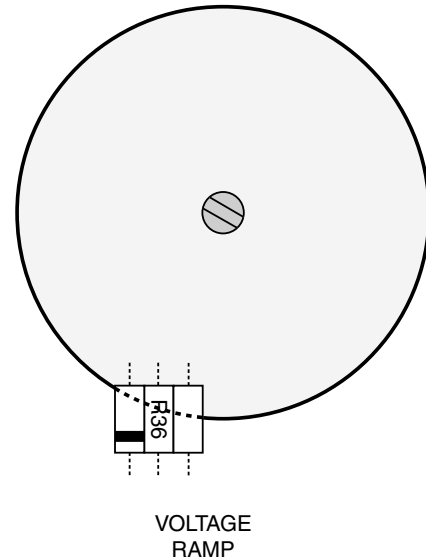
Examples Using 5 Controllers: Each control has a 500 ohm input impedance capable of developing 10V DC at 20mA. The customer’s source must be capable of providing 20mA into each 500 ohm input in series or 20mA into 2500 ohms total.

B. If the “V” input is used, the input impedance of each Control is 60,000 ohms. If 5 Controls are fed in parallel, the source voltage must be capable of maintaining 10V DC across 12,000 ohms.

C. Only the “MA” and “V” inputs may be connected as discussed above.

II. Method 2 allows any **one** of the five available inputs on the 744 Master Step Control to be used to drive the Master and multiple Slave Step Controllers.

A. A modification must be made on **each** Slave Control. Resistor R36 must be removed from each Slave circuit board. R36 is a 2000 ohm resistor.



To locate R36: Resistor R36 is the center resistor of the three component locations shown. It is directly above the “V” in “VOLTAGE RAMP”.

B. Step Controller interconnection.

1. Connect a single input in the normal manner to the “Master” Controller.

2. Important: In all cases, the “Y” terminal of the “30–160” input must be daisy chained from the Master Control “Y” to the “30–160” input’s “Y” terminal of each Slave.

3. Other Master/Slave Step Control interconnections are completed following the “Master & Slave Interconnect Wiring” diagrams available from HCC.