

MPA BALANCE LIGHT INSTRUCTIONS

The S-21 regulator is equipped with a balance light assembly used as an aid in adjusting and troubleshooting the full-wave power amplifier (MPA) cards. The indicating lights are located on the rheostat bracket found at the top of the regulator.

The lights are very good indicators of the performance of the cells, and are connected directly across the SCR cells to provide a visual indication of the voltage across the cell. With the amplifier phased off, the lights should burn relatively bright. As the amplifier output increases, the intensity of the lights decreases until at approximately half output, the lights will go completely out. Also, any unbalanced condition in the firing of the SCR's would show up as a difference in the relative brightness of the separate lights.

These lights should be observed frequently to see if they are of the same relative brilliance. Each regulator is factory adjusted and balanced before it is shipped. A quick check can be made on the performance of the amplifier by varying the input signal over its operating range. If the amplifier is operating properly, both lights should glow with the same intensity at any time, all lights glowing brightly at minimum output and decreasing in intensity as the output is increased. Should either of the lights be glowing with more or less intensity than the other, this would indicate that something is wrong with that particular SCR cell and/or its associated firing circuit. If this occurs, an attempt should be made to adjust the balance pots found on the front of the MPA cards, adjusting both pots alternately until equal relative brightness is observed. If this cannot be accomplished, then proceed to check each card, referring to its instruction book for circuit details.