

StudioComm for Surround

Model 69 Control Console

Application Note

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The performance of the level control on the Model 69 Control Console is a bit different than usual, being fully logarithmic, rather than the more typical modified logarithmic. As may be experienced, a user must turn the level control more fully clockwise than on a typical audio console to get the listening level they want.

There is a simple hardware solution that works well. It requires no special parts from the factory, and the change could be implemented in the field. All that is required is to add one resistor to the Model 69's circuitry. While a competent technician must perform the modification, it is very simple. Here are the required steps:

1. Disconnect the Model 69 Control Console from the cable that links it with the Model 68.
2. Remove the four screws, two on the top and two on the back, that hold the top portion of the Model 69's enclosure onto the bottom portion.
3. Carefully attach and solder a 4.7K (4700 ohm), 1/4W, 5% resistor across the middle (wiper or center) terminal and the clockwise terminal of the potentiometer. One lead of the resistor is attached to the middle terminal; the other resistor lead to the clockwise terminal. This added resistor will be physically attached to the white wire already attached to the middle terminal, and the black wire already attached to the CW terminal; the existing wires remain connected as they are from the factory.

4. Confirm that the new resistor has been correctly soldered in place. Be certain that the resistor leads are not touching any other point. Ensure that the resistor leads won't get in the way of enclosure when the unit is reassembled.

5. Reattach the top portion of the enclosure onto the base. Use the four screws previously removed. Be certain not to "pinch" the flexible jumper cable that links the two internal circuit boards.

6. Reconnect the cable that links the Model 69 with the Model 68.

7. The unit is now ready for operation.

Note that while our tests led us to select a 4.7K (4700) ohm resistor to get revised level control operation, other values can also be used. For example, selecting a 3.9K (3900) ohm resistor, instead of 4.7K, also worked well, allowing the level control to be moved even less in the clockwise direction to reach the same listening level. Selecting 2.2K (2200) ohms resulted in performance typical of many audio level controls, which to our taste is too loud too soon in the "travel" of the level pot. While you are welcome to try other values, our clear favorite was 4.7K.