

2-Wire Loading Issues

Poor loading on the 2-wire ports of Raven 41690-4 2-wire to 4-wire hybrid module, often result in poor isolation. This can cause a number of problems including unwanted busy tones for a console, inconsistent transmitter keying, etc. This is caused almost always by a poor customer load on the 2-wire side of the module. Poor loading can be caused by multiple terminations on the same port or poor line quality in the case of lease lines. Here follow some suggestions if you suspect that you might have multiple terminations on the 2-wire side of the hybrid.

Option #1

Remove all terminations from all remotes. Make them Hi Impedance

Place a 600 ohm resistor across the line at the point where all of the remotes ties to the telco or 2-wire circuit.

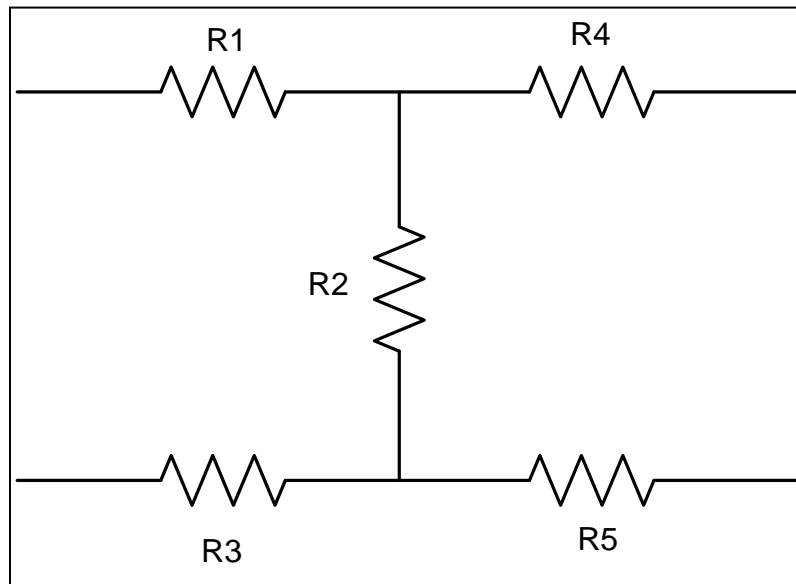
Option #2

Remove all terminations from all but the one remote that has the longest line length from the junction point.

Either one of these options will provide the required 600 ohm termination for the telco or 2-wire circuit.

Adding an H-Pad can also help to achieve better loading and isolation. There is some loss involved but most customers report it is acceptable.

Below is a drawing and values for a 6 dB loss 600 ohm balanced H pad



R1 = 100 ohms
R2 = 820 ohms
R3 = 100 ohms
R4 = 100 ohms
R5 = 100 ohms

