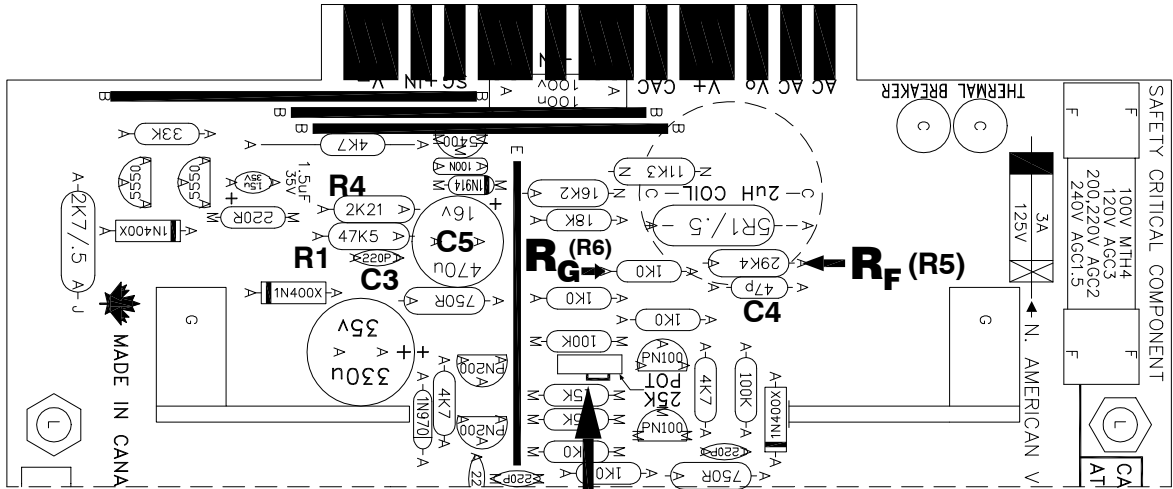
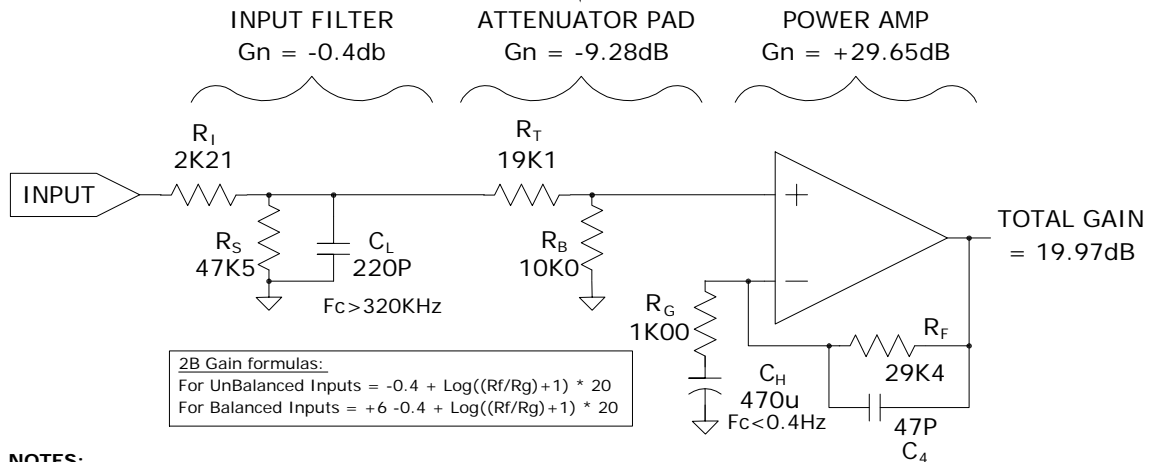
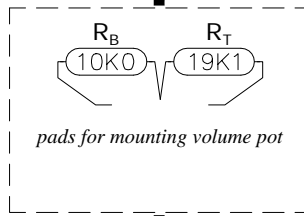


CHANGING THE GAIN IN 2B POWER AMPLIFIERS



Implementing gain structure shown below on 2B main board (2B-MB/4.3) shown above.
Component side view.



NOTES:

Normally, when there is no gain pot installed, a short jumper is installed across the Rt position and Rb is omitted. The default gain of the 2B amplifier is $29.65\text{dB} - 0.4\text{dB} = 29.25\text{dB}$ (attenuator pad is NOT normally installed)

WHEN A GAIN POT IS NOT INSTALLED:

The chart at the right shows several examples of possible gain settings all of which are implemented by changing the feedback resistor (Rf). In most cases the feedback capacitor (C4), which determines the high frequency roll-off, must also be changed to maintain this frequency limit at approximately 100KHz. By doubling the value of C4 this upper frequency limit can be lowered by 50 % and may therefore reduce high frequency noise somewhat. For example, increasing the value C4 from 47pF to 100pF (when Rf=29K4) will reduce the high frequency roll-off point from 115KHz to 54KHz.

GAIN	Rf	Rg	C4	Ch
29.25dB	29K4	1K00	47pF	470uF
28dB	25K5	1K00	62pF	470uF
24dB	15K4	1K00	100pF	470uF
20dB	9K53	1K00	150pF	470uF
15dB	4K87	1K00	330pF	470uF
12dB	3K16	1K00	470pF	470uF
10dB	2K32	1K00	680pF	470uF
6dB	1K07	1K00	1.5nF	470uF

When Balanced Inputs are installed...

...and when they are driven by a balanced or complimentary signal, the gain will be increased by 6dB. When balanced inputs are driven by an unbalanced or single-ended signal, with the unused input connected to ground, the gain is not changed.

See also "2B Input & Feedback Filtering"