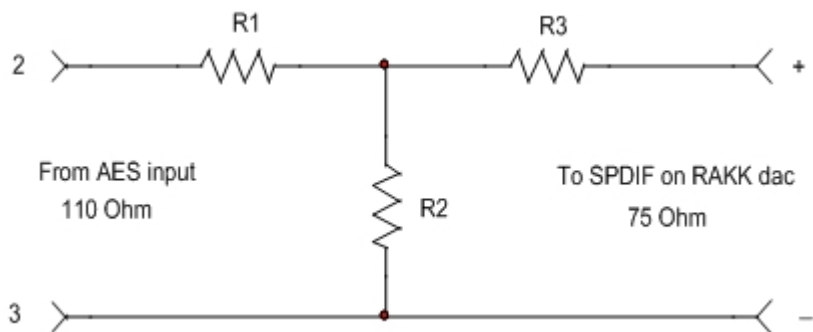


AES/EBU to SPDIF Conversion

The digital inputs on the RAKK dac Mark III have been designed to meet the SPDIF standard. Because the AES/EBU standard is similar to the SPDIF standard, the RAKK dac Mark III will accept AES/EBU signals. We have found that in many cases nothing needs to be done to accommodate the differences between the standards, however we provide this information to use if you have a device producing an AES/EBU signal and want to provide a closer match to the AES/EBU standard.

The resistive T-pad illustrated below addresses two differences between the two interfaces. First, the T-pad converts between the 110Ω impedance of the AES/EBU interface to the 75Ω impedance of the SPDIF interface. Second, the T-pad converts between various input levels to a standard 0.5V p-p level.

The AES/EBU signal will be at a level of from 1V p-p to 7V p-p, with 3V and 5V being popular because of the voltages available in the devices generating the signal. The exact attenuation is not critical, so if you don't know the level of your AES/EBU input, you could choose an intermediate level, say 4V, and go with that.



AES/EBU level (p-p)	Attenuation		R1	R2	R3
	Ratio (to 0.5V)	dB			
7V	14	23	97.6Ω	13.0Ω	63.4Ω
5V	10	20	93.1Ω	18.2Ω	57.6Ω
4V	8	18	90.9Ω	23.2Ω	54.9Ω
3V	6	15.5	84.5Ω	31.6Ω	48.7Ω
2V	4	12	76.8Ω	48.7Ω	36.5Ω
1V	2	6	61.9Ω	121Ω	3.9Ω