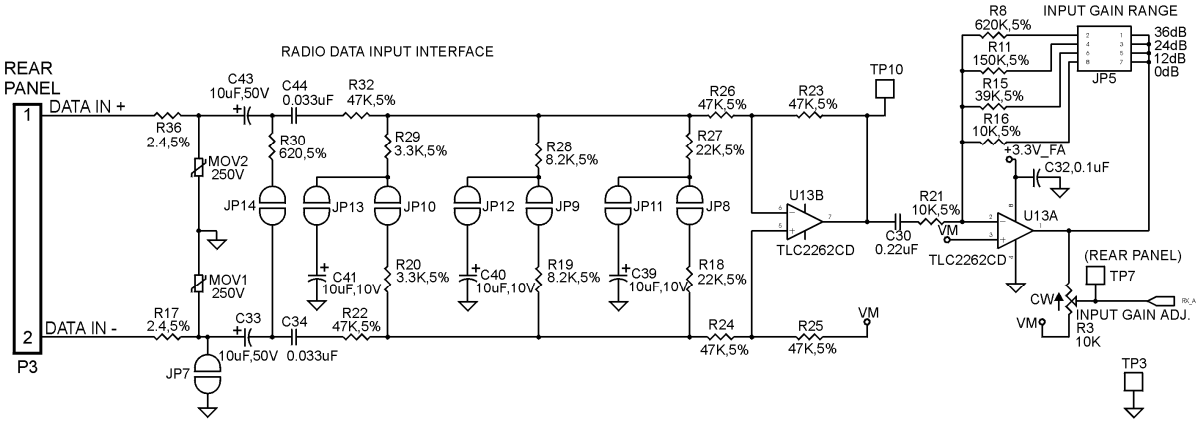
Data Input

Data input is the signal input to the C Plus. Data In + is the high side and Data In - is the low side. Data input is jumper selectable for high impedance single ended, high impedance balanced and 600 ohm balanced. In non-balanced configurations, Data In - is referenced to ground. However, note that it is not directly shorted to ground. In balanced systems, it is signal return. Always attach an independent station ground to the rear panel P3 pin 8 or P2 pin 10.



The input is capacitively coupled for DC blocking and is MOV protected. When interfacing to a radio, connection should be discriminator audio, before deemphasis (flat audio). Data input + should be jumpered for high impedance and data input – should be jumpered to ground.

If connected to a balanced line, remove ground jumper JP-7 and install the 600 ohm jumper (JP-14) to terminate (if this is the only device on the leg) or remove the jumper to offer high impedance (if another device is on the leg and is terminated).

Data input is AGC conditioned so generally, no adjustment is necessary. A test point is provided for O'scope analysis. If the signal is clipped and distorted, a potentiometer and a bank of gain jumpers can reduce gain. Alternately, if the signal is too weak, gain can be increased.

Attenuation jumpers are described below. Use only one jumper at a time.

Input Signal Attenuation	Unbalanced	Balanced
18 dB	JP-13	JP-10
12 dB	JP-12	JP-9
6 dB	JP-11	JP-8

JP5 provides an amplification stage to increase the data input signal. Amplification factors are described below.

Input Signal Amplification	Jumper position	Absolute Max signal at TP10
0 dB	7 to 8	1.6 VPP
12 dB	5 to 6	0.65 VPP
24 dB	3 to 4	0.2 VPP
36 dB	1 to 2	0.05 VPP

If you experience a decode rate of less than 100%, view the ANI signal

waveform at TP-10. Adjust the attenuation jumpers so that the waveform is not clipped. Do not exceed the absolute maximum peak to peak signal level listed in the above table. Then view the waveform at TP-7 and adjust jumper JP-5 and VR3 for a 1VPP ANI signal.