

Auxiliary (Aux)

This connection supports the analog interface to the SLR 5000 series repeater, which includes audio, station control, station indicators, accessory power, and provisions for timing used in various system implementations. [Table 1](#) lists the functional characteristics of the connector's pins.

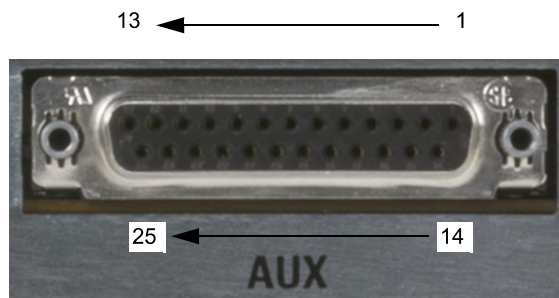


Figure 1 Auxiliary Connector

Table 1 Auxiliary Connector

Location	Pin Assignment	Type	Signal Characteristics
1	Tx Audio 1	Audio	Transmit Audio – Nominal input level is 80 mVrms for 60% deviation with scaling factor set to 100%. 600 Ω input impedance.
2	GPIO 1	Digital	Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC
3	*Rx Audio 2	Audio	Receiver Audio – Nominal output level is 330 mVrms (into a 50 k Ohm load) with a 60% deviation receive signal. 1000 Ω output impedance.
4	GPIO 2	Digital	Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC
5	GPIO 10/ *Analog Input 2	Digital	Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC Analog: 0 – 5 VDC

Table 1 Auxiliary Connector (Continued)

Location	Pin Assignment	Type	Signal Characteristics
6	GPIO 9/ *Analog Input 1	Digital	Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC Analog: 0 – 5 VDC
7	Rx Audio 1	Audio	Receiver Audio – Nominal output level is 330 mVrms (into a 50 k Ohm load) with a 60% deviation receive signal. 1000 Ω output impedance.
8	GPIO 6	Digital	Receiver Audio – Nominal output level is 330 mVrms with a 60% deviation receive signal. 1000 Ω output impedance.
9	Ground		
10	GPIO 7/ *Analog RSSI Out	Digital or Analog	<u>Digital:</u> Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC <u>Analog RSSI:</u> Typically 0.5 VDC for -120 dBm to 2.7 VDC for -60 dBm carrier. Variation with carrier level at approximately 50 mV/dBm.
11	GPIO 11/ *Analog Input 3	Digital or Analog	<u>Digital:</u> Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC Analog: 0 – 5 VDC
12	GPIO 12/ *Analog Input 4	Digital or Analog	<u>Digital:</u> Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC Analog: 0 – 5 VDC
13	Tx Data	Digital or Analog	Transmit Data/ PL/ DPL – Nominal input level is 80 mVrms for 20% deviation with scaling factor set to 100%. 600 Ω input impedance.
14	*1 PPS In/ Out	Digital	Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC
15	GPIO 3	Digital	Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC

Table 1 Auxiliary Connector (Continued)

Location	Pin Assignment	Type	Signal Characteristics
16	Ground		
17			
18			
19			
20	Fused B+	Power	The B+ is 13.6 VDC when repeater is sourced by AC, and can range from 11 – 14.4 VDC when sourced by DC. 1 A (max).
21	GPIO 8/ *Analog Output 2	Digital or Analog	Digital: Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC Analog: 0 – 5 VDC
22	Tx Audio 1	Audio	Transmit Audio – Nominal input level is 80 mVrms for 60% deviation with scaling factor set to 100%. 600 Ω input
23	GPIO 4	Digital	Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC
24	GPIO 5	Digital	Output Logic Low: 0.5 VDC max Output Logic High: Open Collector with 10 k pull-up to 5 V Input Logic Low: 0 – 0.8 VDC Input Logic High: 3.0 – 14 VDC
25	* Tx Audio 2	Audio	Transmit Audio – Nominal input level is 80 mVrms for 60% deviation with scaling factor set to 100%. 600 Ω input

Note (*) Not supported in initial release.