Four Port Audio Combiner

Manual

Issue 1

+44(0) 1697 748777

www.awcsl.com

Introduction

The four port audio combiner combines four ports of audio. It has a total of four 600ohm four wire balanced line inputs which are internally combined to provide a common 600 ohm four wire balanced output; likewise signals into the common port are split across the four other ports.

Levels can be set for line input and output on each port independently allowing the engineer to compensate for individual line losses and to set the system up for balanced levels.

Upon shipment the unit is set for a nominal -10 dBm peak level input and output at each of the four salve ports and also the common master port.

The unit is powered by a 12 volts DC unit which is supplied and plugs into the power connector on the front of the unit. An Led indicator shows that the unit is powered up.

There is also an option for a PTT logic input at the slave ports to be replicated out of the common port when logic keying is deployed. Where standard tone keying is used the in band tone is passed through the unit along with the audio.

Connector Details

Slave Ports - RJ45 Connector

Audio Levels nominally set to -10dBm input and output.

Pin Number	Function
1	Audio Out 1
2	Audio Out 2
3	Audio In 1
4	Not Used
5	Not Used
6	Audio In 2
7	Not used
8	0 Volts for signalling

Main Port - RJ45 Connector

Pin Number	Function
1	Audio In 1
2	Audio In 2
3	Audio Out 1
4	+ 12 Volts supply (if required)
5	Not connected
6	Audio Out 2
7	Not used
8	O Volts

The terms Audio In and Audio Out refer to the audio going either Into or Out of the unit.

Level Settings

Each of the four slave ports and the common port can have its input and output levels set independently by the use of adjustable potentiometers as detailed below:-

Port	input Adjust	Output Adjust
Main	Main In (VR11)	Main Out (VR2)
Port 1	P1-In (VR1)	P1-Out (VR4)
Port 2	P2-In (VR5)	P2-Out (VR6)
Port 3	P3-In (VR7)	P3-Out (VR8)
Port 4	P4-In (VR9)	P4-Out (VR10)

The PCB is labelled accordingly to ease field adjustments.

To ensure that levels passing through the unit are set to optimum, the inputs when set correctly should give the following levels:-

Main port input – set to give a level of 1 volt peak to peak on the link between pins 5 and 6 of LK9

Slave port inputs – set to give a level of 1 volt peak to peak on the link between pins 1 and 2 of LK9

Once these levels are set the output levels can then be set to give the required level to line. Note that all levels are set at Peak system with a test tone of 1000 Hz.