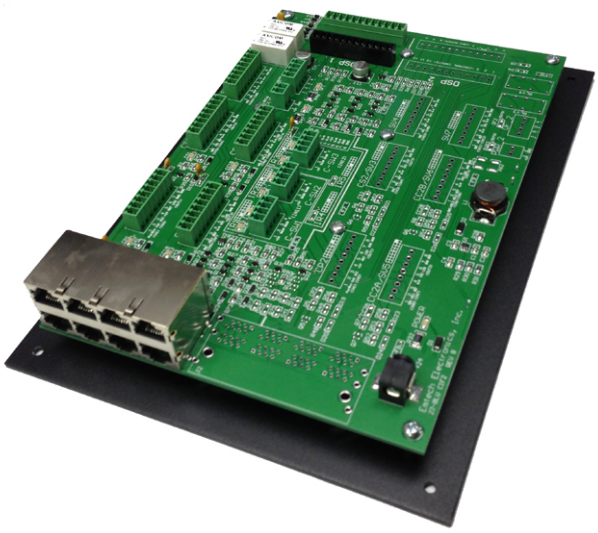
BLU- CIF Interface Board



The BLU-CIF Interface Board simplifies the wiring of all of the BLU products to the ***BSS Audio London Series Digital Signal Processors***. It allows for Cat5e wiring termination, as well as, termination to 3.5mm euro-style blocks. The BLU-CIF accommodates connections for the BLU-CC, BLU-CP, BLU-CS, BLU-IR, BLU-SV, BLU-SV8 or ***Emtech*** MSC-C modules for combining audio in overflow areas. It is designed for mounting on the back door of a 19" rack.

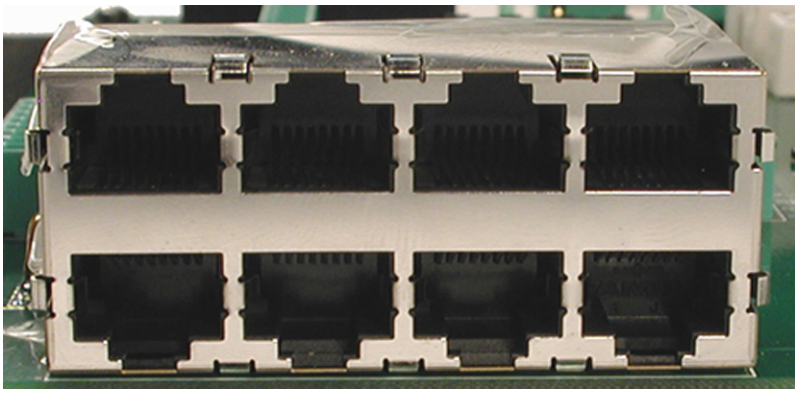
BLU-CIF Cat5e Wiring Instructions

IMPORTANT: IF you are using CAT5e wiring termination with the BLU-CIF, then the RJ-45 connectors need to be crimped to TIA/EIA 568B Standards (see below) on both ends of the cable. **You must crimp and test the wiring with an approved CAT5 568A/B tester before connecting any cable between the BLU Products and the BLU-CIF Interface Board.** Failure to crimp wiring to the correct standard could possibly lead to component damage.

EIA/TIA568B

1. White-Orange
2. Orange
3. White-Green
4. Blue
5. White-Blue
6. Green
7. White-Brown
8. Brown

On the left side of the BLU-CIF Interface Board is a 2 X 4 block of RJ-45 connectors for terminating the BLU products via Cat5e wiring. The BLU products connect in this order (left to right):



CIF RJ-45 CONNECTIONS

TOP ROW	BLU-CP1	BLU-CC1A	BLU-SV2	BLU-IR2
BTTM ROW	BLU-CS/SV1	BLU-CC1B	BLU-IR1	BLU-IR3

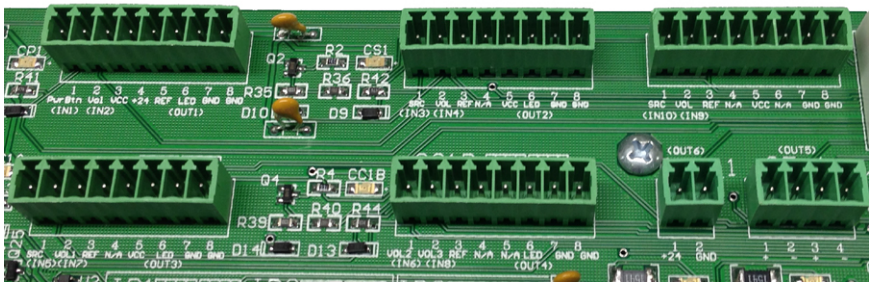
IMPORTANT: If you use the RJ-45 block for connecting the BLU-CC, BLU-CP, BLU-CS, BLU-IR and BLU-SV(8), then do not use any of the 3.5mm euro-style connectors for these accessories. If you are using the BLU-IR Infrared Sensors for combining audio in overflow areas, then you have a choice to use either the RJ-45 connections in this block or the 3.5mm euro-style connectors. Wiring the BLU-IR Infrared Sensors into the 3.5mm connectors will be covered later on in this document.

A legend for the BLU-CIF RJ-45 connections has been silkscreened on the Interface Board next to the corresponding block of connectors.

BLU-CIF 3.5mm Euro-block Wiring Instructions

The 3.5mm euro-block connectors have been provided for easy installation of the BSS Audio equipment into older buildings with existing analog wiring. Connectors for the BLU-CC, BLU-CP, BLU-CS and BLU-SV have 8-pins, and are located behind the RJ-45 block on the top half of the board.

BLU-CP BLU-CS/SV1 BLU-SV2



BLU-CC1A BLU-CC1B

The legends for identifying and wiring these euro-style connectors have all been silkscreened on the CIF Board at the top and bottom side of each connector. The pin-outs for each connector are listed below:

BLU-CP
1. Power Button (IN1)
2. Volume (IN2)
3. VCC
4. +24V
5. Ref
6. LED (OUT1)
7. GND
8. GND

BLU-CS/SV1
1. Power Button (IN3)
2. Volume (IN4)
3. Ref
4. N/A
5. VCC
6. LED (OUT2)
7. GND
8. GND

BLU-CC1A
1. Power Button (IN5)
2. Volume (IN7)
3. Ref
4. N/A
5. VCC
6. LED (OUT3)
7. CHIP GND
8. EARTH GND

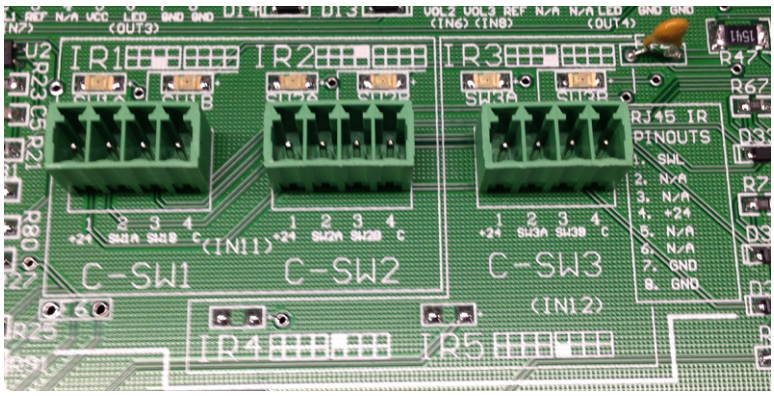
BLU-CC1B
1. Volume (IN6)
2. Volume (IN8)
3. Ref
4. N/A
5. N/A
6. LED (OUT4)
7. GND
8. N/A

BLU-SV2
1. SRC
2. Volume (IN9)
3. Ref
4. N/A
5. VCC
6. N/A
7. GND
8. GND

A remote control can be used for controlling the volume of the various microphone inputs in the cultural hall. When wiring for a remote application wire to IN5 thru IN9, Ref and GND on CC1A, CC1B and SV2.

BLU-CIF / MSC-C Wiring Instructions

Some existing buildings already use ***Emtech*** MSC-C modules to provide chapel audio for the cultural hall and overflow areas. The BLU-CIF is designed to allow these existing modules to interface with the ***BSS Audio DSP.*** Located through the middle section of the CIF Board are three 4-pin euro-style connectors. Each connector has identification and wiring designations silkscreened below it.



There are no switches associated with the C switch connectors on the new version of CIF board. IN11 and IN 12 are bit encoded with 4 bits each. C-SW1 and C-SW2 map to IN11, and C-SW3 maps to IN12. When either a C switch or IR get wired to the CIF board, the device will be automatically detected. The pin-outs on the C switch connectors are:

C-SW1 thru 3

1. **+24V**
2. **SW1**
3. **SW2**
4. **Common**

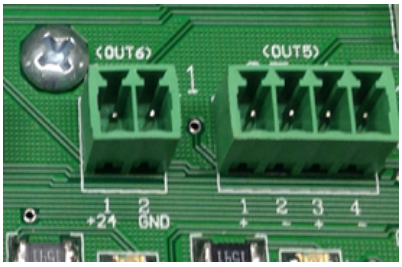
USING the C-SW INPUTS WITH BLU-IR INFRARED SENSORS

The BLU-IR Infrared Sensors can be wired to the 4-pin C-Switch euro-style connectors. Wire each IR sensor to its' corresponding 4-pin connector using this pin-out:

C-SW1 thru 3

1. **Red**
2. **Green**
3. **N/A**
4. **Black**

BLU-CIF PWR RELAY & OF1 RELAY Wiring Instructions



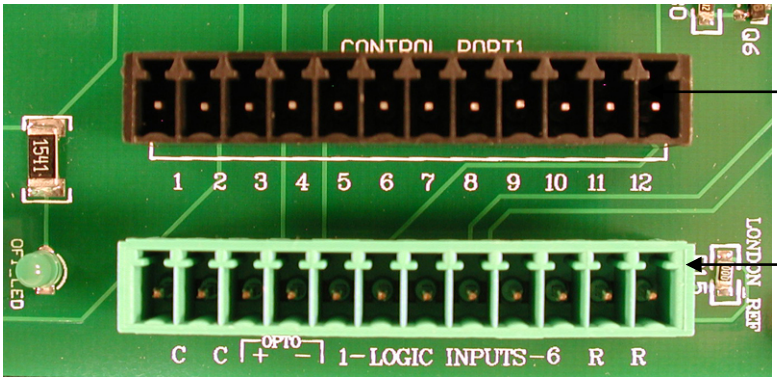
There are two separate relay connectors on the top right side of the CIF board. The 2-pin PWR_1 connection is used to power on external equipment. This connection will supply +24VDC @ 100mA on the "+24" pin when logic output 6 on the DSP is triggered. The voltage from the +24 pin is typically connected to an external power relay coil, which will then switch 120VAC on to the external equipment. The PWR RELAY output is thermo-fuse protected, so it will stop supplying power when the +24 pin exceeds 100mA. The circuit will reset automatically once the load is disconnected.

The 4-pin OF_1 overflow relay connection is a 2-pole "dry contact" that is normally open. These contacts will close connecting the "+" (pin 1) to the

"+" (pin 3), and the "-" (pin 2) to the "-" (pin 4), when output port 5 on the DSP is triggered. This is typically used to switch speaker level signals, so an overflow room can be fed directly from an amplifier without needing its own dedicated amplifier channel.

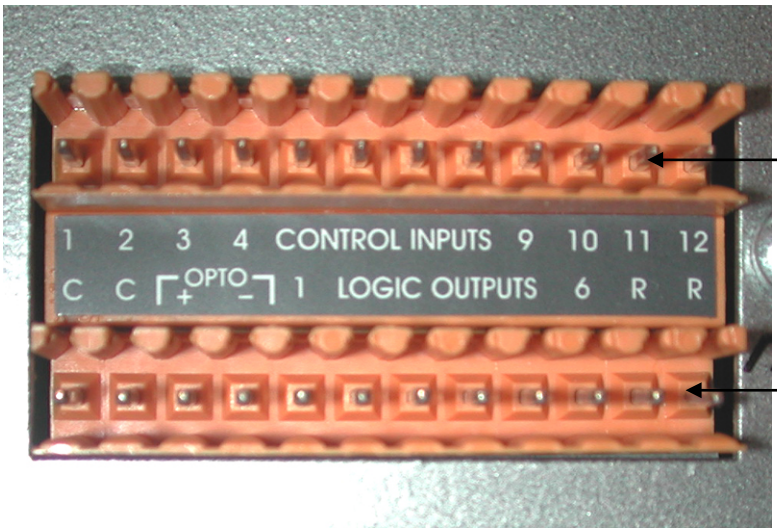
Connecting the BLU-CIF to the BSS Audio London Series DSP

The BLU-CIF ships with two pre-fabricated 12-conductor cables. Each cable has 3.5mm connectors on both ends. On one end, the 3.5mm connectors are color-coded green and black, so they match up with either the Control Port 1 (Black) connector or Logic Inputs (Green) connector on the upper right quadrant of the CIF Board.



Control Inputs Connector

Logic Outputs Connector



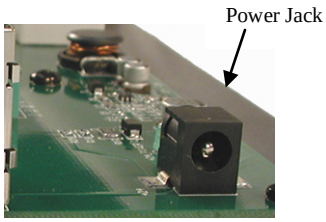
Control Inputs connector mates with the cable with Control_Port1 (Black) connector.

Logic Outputs connector mates with the cable with Logic Inputs (Green) connector.

The 3.5mm connectors on the opposite end of each cable are orange. They match the color of the mating connector on the back of the DSP and are labeled “top” and “bottom”, so make sure that the cables are connected correctly on the DSP side. **Another way to remember : Black on the board goes to the top connection on the DSP, and Green on the board goes to the bottom connection on the DSP.**

BLU-CIF Power

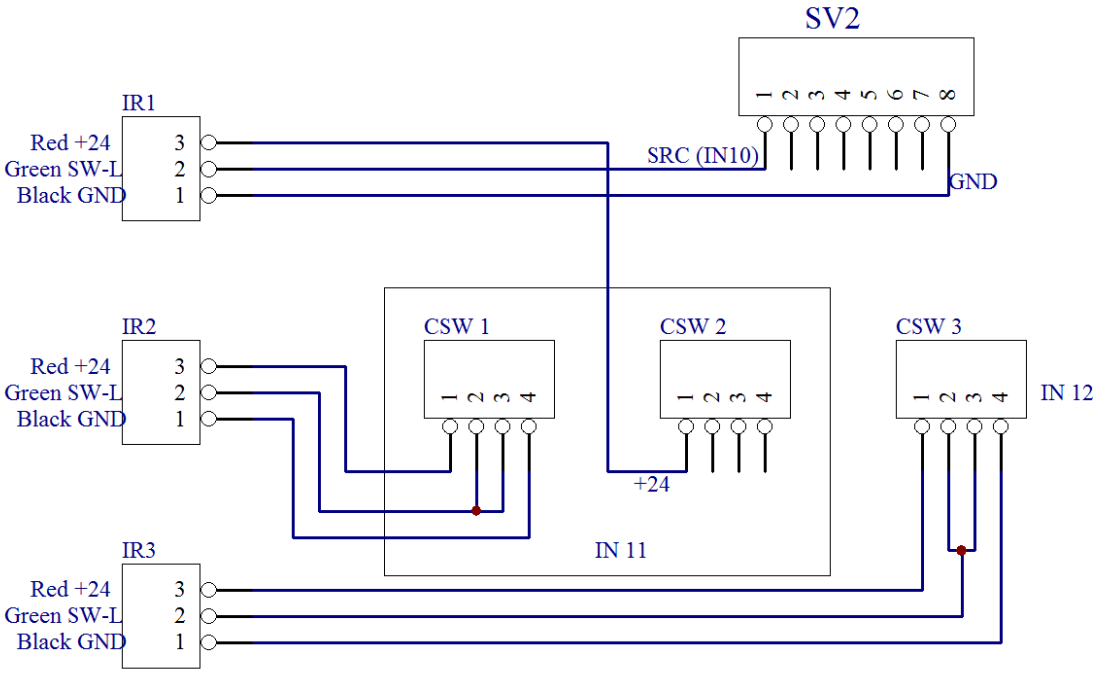
The power jack for the BLU-CIF is located on the bottom left side of the board; below the RJ-45 block. The BLU-CIF is shipped with a universal desktop power supply that plugs into the power jack, and supplies it with 24VDC @ 1.67A. The power cord on the supply plugs into a standard 120VAC outlet.



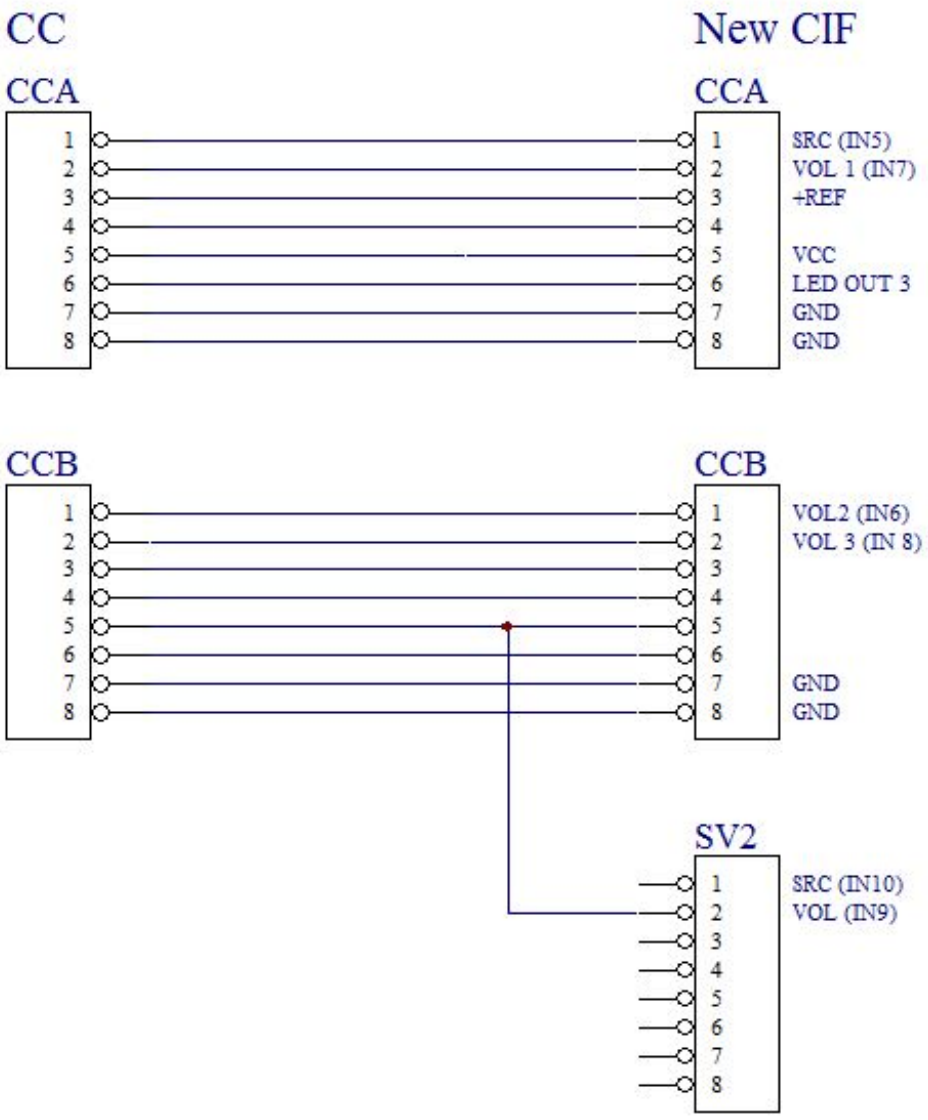
OLDER ACCESSORIES & THE NEW CIF BOARD

When using the new version of the BLU-CIF board with older versions of the BLU-CC, BLU-IR or the MSC-C switches there will be some additional wiring that must be done on the new BLU-CIF board for these to work properly with the old template. No additional wiring needs to be done when using the older versions of the BLU-CP and BLU-CS with the new BLU-CIF board. When using the new BLU-CC2 with the new BLU-CIF board, new templates are required but not additional wiring. Contact BSS Audio for new templates.

BLU-IR with new BLU-CIF using old template:



Old BLU-CC with new BLU-CIF using old template:



MSC-C Switches with new BLU-CIF using old template: