



White Paper

How to Use the InBox and OutBox with a Biamp Audia System

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Revision 001

1 Objective

The objective of this white paper is to explain how to correctly set up a system that includes products from the Biamp Audia range and Attero Tech InBox and OutBox products.

The InBox X2 and InBox R8 can be used to pass CobraNet signals straight to the Audia system for processing. The OutBox X2 and OutBox R8 can be used to receive CobraNet signals sent out by the Audia system. The setup is largely the same for both, the only differences being the type of interface block used on the Audia system.

First, we will discuss the setup required on the Biamp system using the Biamp Audia software. We will then move on to configuring the InBox and OutBox using Attero Tech Control Center application.

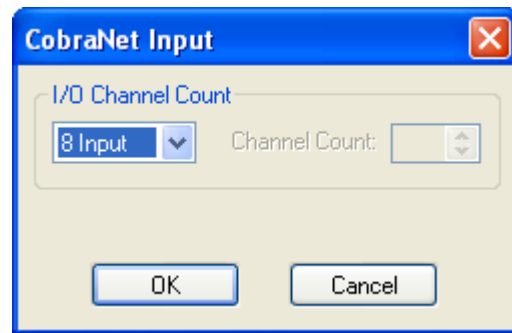
Our example only sets up the systems to send audio in a single bundle to a single source so only unicast bundles are required. Multiple bundles may be used and bundles may be multi-unicast or multicast if multiple recipients are needed.

1.1 Setting up the Audia System

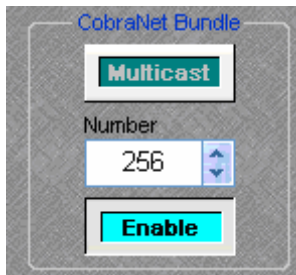
To receive audio from an InBox, set up a CobraNet Input block from the "Input Output" tab. To transmit audio to an OutBox, set up a CobraNet Output block from the "Input Output" tab.

Click and drag the desired block onto the drawing. The default channel count of the block is 8. If the block is for use with an InBox R8 or OutBox R8, this can be left as it is.

If the block is for use with an InBox X2 or OutBox X2, the channel count should be reduced to 2. To do this, right-click on the block. This brings up a menu. From this menu select "Edit Block Parameters". A window appears as shown to the right. Use the drop down box to select the number of desired channels, then click OK.



The block will then update with the correct number of audio channels and will also rename itself to reflect this change.

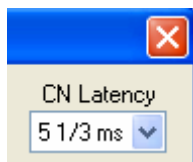


Next, double-click on the block to open its configuration window. A new window will appear. At the bottom, the CorbaNet setup is shown (see left). Use this to configure the bundle number to be used to pass audio.

Ensure the Enable button is highlighted and thus active. If it is not, click on the Enable button once. Enter the bundle number to be used by clicking on the text box and typing a value or by using the up and down arrows.

Note: Other settings exist on the configuration panel. These controls do not directly affect the interface between Audia and the InBox or OutBox so they are outside the scope of this document. These values may also need altering in order to complete the configuration of this block for the application.

The block is now ready to be connected to other blocks in the design within the Audia software.



The Audia system is preset at a sample frequency of 48 kHz. However, there is an option to alter the latency of the transmissions in Tools->Equipment Table. The default for this value is 5 1/3ms. The affects of changing this value are noted in the CobraNet Programmers guide and the Audia Help. The value has to be set before a design is compiled.



1.2 Setting up the InBox / OutBox

Ensure the Attero Tech Control Center Software is running and connected to the CobraNet system.

Not all settings persist when the InBox or OutBox is powered down. In order to retain all settings, Persistence must be enabled. This can be done from the Main Form of Control Center by select the InBox or OutBox to be configured. In the lower half of the screen, there is a check box for Persistence.

1.3 Setting up the InBox Bundle

Select the InBox to be configured and open the Bundle Setup. In the transmit section, set up bundle transmitter TX1 with the bundle number used during set up of the CobraNet Input block on the Audia system previously.

Next, set the Submap and Subcount settings as shown in the table below.

Product	Transmitter Submap Settings	Subcount
InBox X2	1, 2, 0, 0, 0, 0, 0, 0	2
InBox R8	1, 2, 3, 4, 5, 6, 7, 8	8

In either case, ensure the required bit-depth needed for each Submap used is selected. Next, set the Unicast mode to "U" for unicast-only. Finally, ensure the Mode Rate Control is set correctly. It must match the Mode Rate Control set on the Audia system.

Once all setup is complete, click the Apply button to finalize. Audio should now be passing from the InBox to the Audia system.

1.4 Setting up the OutBox Bundle

Select the OutBox to be configured and type in the bundle number used during set up of the CobraNet Output block on the Audia system previously into the edit box for RX1.

Next, set the Submaps as shown in the table below

Product	Receiver Submap Settings
OutBox X2	33, 34, 0, 0, 0, 0, 0, 0
OutBox R8	33, 34, 35, 36, 37, 38, 39, 40

Finally, ensure the Mode Rate Control is set correctly. It must match the Mode Rate Control set on the Audia system.

Once all setup is complete, click the Apply button to finalize. Audio should now be available from the Audia system on the OutBox outputs.