BRIC-Link III
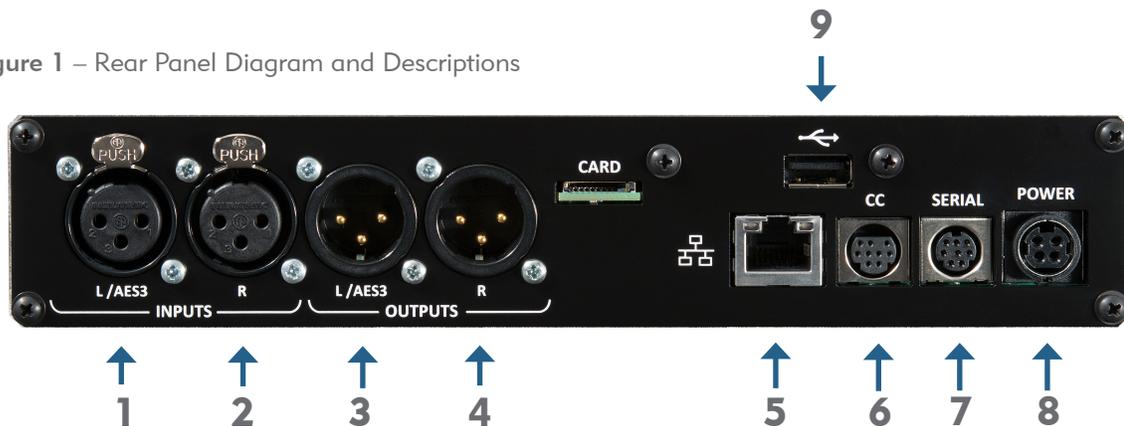
Quickstart Guide

This document describes how to quickly set up and use BRIC-Link III in its most common, point-to-point mode. More detailed instructions are contained in the manual, which may be downloaded from the BRIC-Link III product page of the Comrex website at www.comrex.com

Setting up the Hardware

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Figure 1 – Rear Panel Diagram and Descriptions

1   2   3   4   **5   6   7   8**

1) **Left Audio/AES3 Input**: Accepts professional level, balanced analog audio, or if configured, AES3 stereo digital audio for input.

2) **Right Audio Input**: Accepts professional level, balanced analog audio.

3) **Left Audio/AES3 Output**: Delivers professional level, balanced analog audio, or if configured, AES3 stereo digital audio for output.

4) **Right Audio Output**: Delivers professional level, balanced analog audio.

5) **Ethernet**: 1000Base-T connection for network connections.

6) **Contact Closures**: Four sets of contact closure Inputs and Outputs are available on this port. Inputs can be used to send signals to the far end of the link or trigger connections. Outputs can be used to trigger remote control gear like automation equipment.

7) **Serial**: Connection for asynchronous ancillary data.

8) **Power**: 4 Pin connector for attachment of Comrex approved DC power adapter. Requires 24V DC @ 1A.

9) **USB**: Attach a USB to Ethernet adapter for dual networks via CrossLock, or Comrex Connect Modem for HotSwap.


At a minimum, BRIC-Link III needs a source of power, an audio connection, and a network connection.
Audio connections on the XLR jacks are wired in the following fashion:

    1 Ground
    2 Balanced Audio +
    3 Balanced Audio -

With a nominal input level of 0dBu (+20 dBu full scale).

You may apply AES3 digital audio to the left I/O connectors if dip switch #1 (Input) and #2 (output) are up.

Audio inputs should be applied and levels checked with dip switch #4 down. If the audio indicators are showing red, it indicates the level is approaching or reaching clipping stage. It is OK for audio levels to reach the yellow stage often.
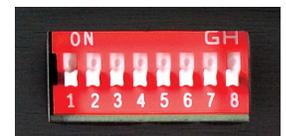
The Ethernet connector is a standard 1000Base-T.

A normal patch cord, such as used for a computer, should be connected here.

IP Configuration - Device Manager

Initial IP configuration is handled using the Comrex **Device Manager** software. This program can be downloaded from the BRIC-Link III product page of the Comrex website.

In order to configure BRIC-Link III, the **Device Manager** must be run on a Windows PC or MAC located on the same physical LAN as the BRIC-Link III hardware.

Once power is applied to BRIC-Link III, you have five minutes to configure the IP settings. After five minutes, the power must be cycled on the BRIC-Link III to make these changes via **Device Manager**.

As shown below, running the **Device Manager** and clicking the **Scan for Devices** button will produce a list of all Comrex IP codecs found on the LAN.

Choosing the codec that appears in the left hand list, followed by pressing the **Network Settings** button, allows you to set the IP parameters of the codec.

Once you know the IP address (or have changed it using **Device Manager**,) the rest of the setup and operation of BRIC-Link III is done through the built-in **Web-based Interface** (explained on the next page).
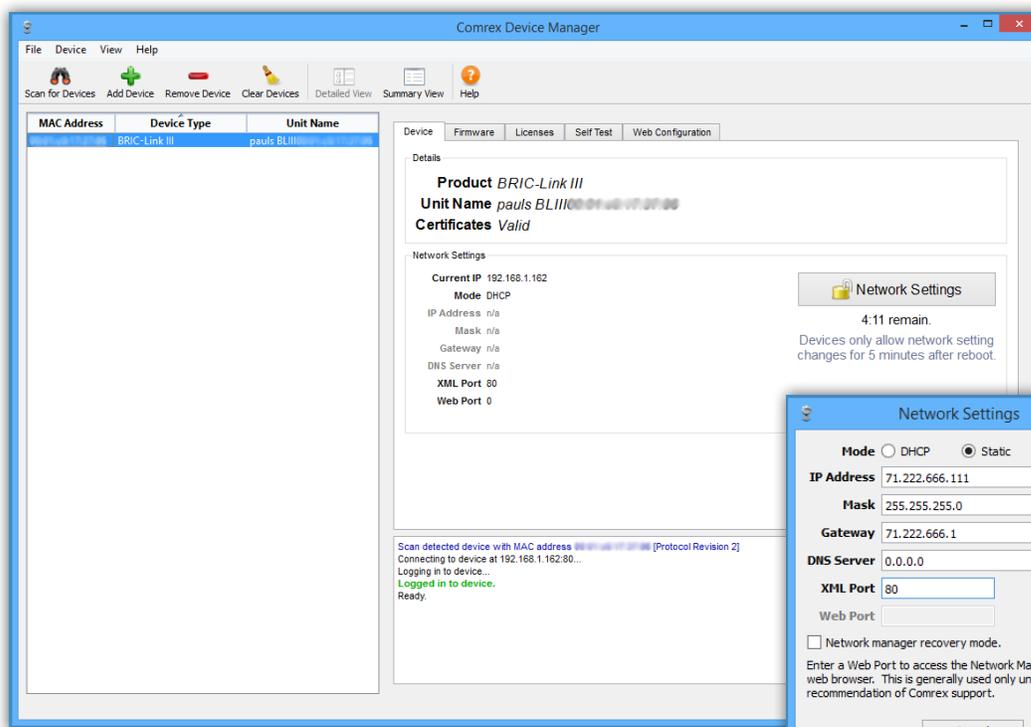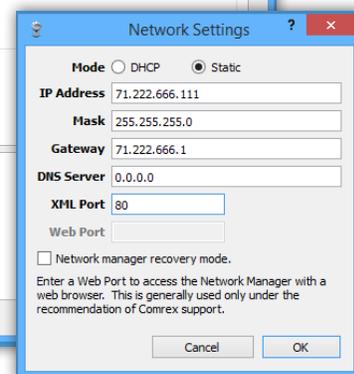

Figure 2 – Device Manager

Figure 3 – IP Configuration

Network Configuration

By default, the BRIC-Link III listens to IP port **UDP 9000** for incoming BRIC Normal audio connections**. TCP port 80** is the default port for the **Web-based Interface**. These ports may be changed through the **Device Manager.**

In order to accept incoming calls, your network must be configured to forward incoming traffic over **UDP 9000** to the BRIC-Link III. This can be accomplished by using port forwarding rules, a DMZ or by putting the

BRIC-Link III directly on a public IP address with a static public IP address (recommended).

If you plan on using CrossLock (described on the last page), you will need to forward incoming traffic over **UDP 9001** to the BRIC-Link III. Comrex highly recommends the use of CrossLock. You can learn more by referring to the product manual, or for a quick configuration, the last page of this Quickstart Guide.

Controlling BRIC-Link III via the Web-based Interface

Once your IP settings are configured and BRIC-Link III has cleanly booted on your LAN, it's time to take a look at the BRIC-Link III **Web-based Interface**. This is done by pointing a web browser on your LAN to the IP address of the BRIC-Link III. To do this, simply type the address into the URL bar of an HTML5-enabled browser.

Once you are connected to BRIC-Link III, a login screen will appear. Key in any username along with the default password, **comrex** (case sensitive).*

The first screen will be the **Connections** tab. This tab acts like a phone book, displaying the names and IP addresses of everyone to whom you connect. To make an outgoing connection, you must first create a new remote in the **Connections** tab. Using the

Web-based Interface, click the **Add New Remote** button (⊞). Enter in a remote name for the connection, the IP Address of the unit you are calling, the audio connection password (default is blank) and choose a factory profile to use.

Once you are finished creating your new remote, click **OK**. To start the connection, select the remote from the list and press the **Connect** button. To disconnect, simply press the **Disconnect** button.

*Note that it is recommended to change to a new remote control password for security purposes. To do this, click on the "**system settings**" tab and click the drop-down arrow for "**security**". Be sure to click "**Apply Changes**" after inputting a new password.
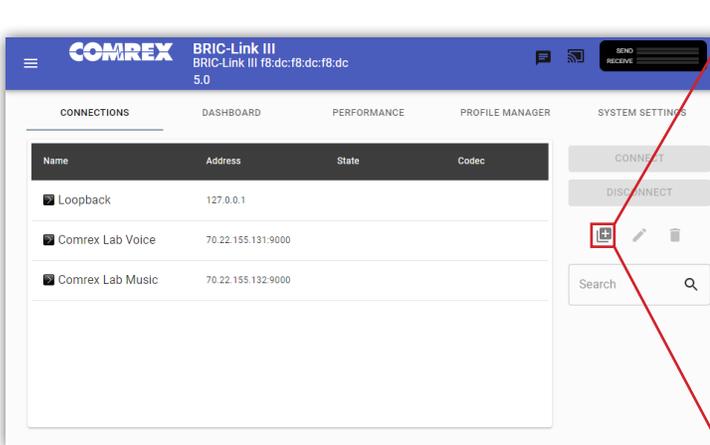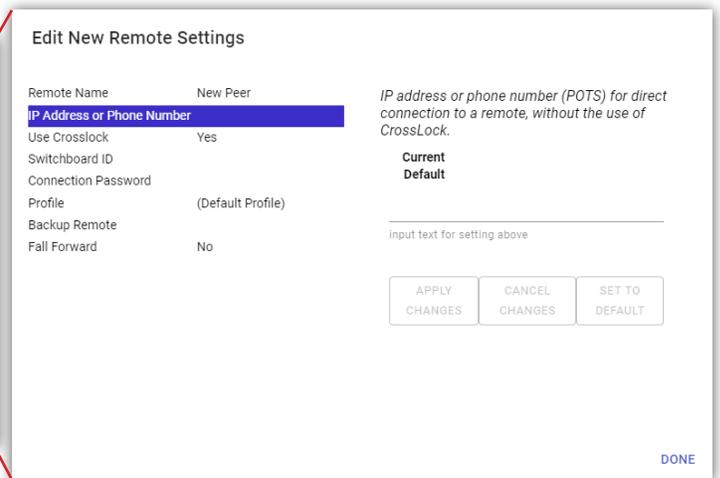

Figure 4 – Connections Tab

Figure 5 – Add New Remote

Making Connections with Switchboard

Switchboard is a feature that allows codecs to "sync" with a cloud-based server managed and hosted by Comrex. Switchboard allows for easy connections to be made between codecs without any knowledge of IP addresses on either ends of the link. It also provides presence and status information and can help make some connections through routers and firewalls that might be difficult otherwise.

Switchboard recognizes devices by their MAC address and provides information to units in the same Switchboard fleet that are also online. Any online units will automatically populate in the Connections tab, bypassing the need to know IP addresses of the units.

Switchboard is optional and will need to be purchased through your Comrex dealer. Once you receive the Switchboard license and apply it to your codec, contact Comrex to set up a Switchboard account.
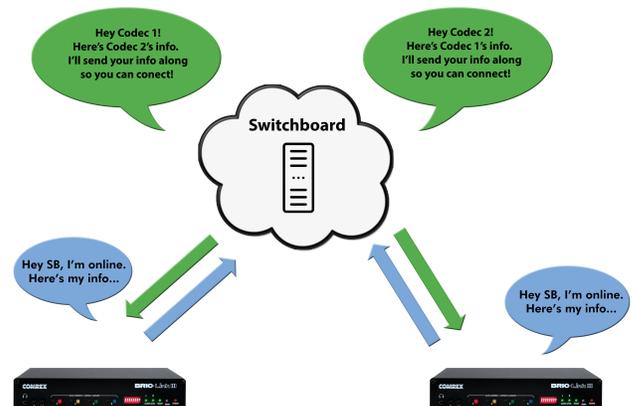
CrossLock™ VPN

What is CrossLock?

CrossLock describes a new reliability layer that gets established between Comrex devices in advance of a connection. This layer takes the form of a Virtual Private network (VPN) between the devices.

In addition to carrying the audio media, CrossLock allows lots of other information to be shared between the endpoints, including information about network quality and far-end delay settings. This provides for much better delay management on either end of the link.
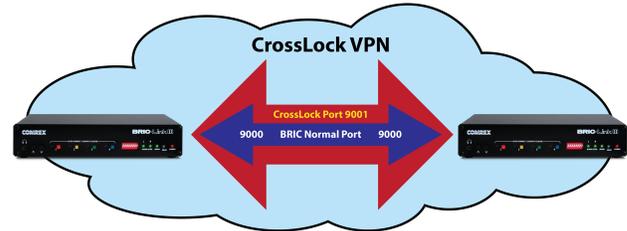
Creating a CrossLock Connection

To set up a CrossLock connection, you must know the MAC addresses of the units on both ends of the link. This is input on the "Edit New Remote Settings" pop-up in the **Switchboard ID** field. You will also need to set **Use CrossLock** to **"Yes"**. Enter in a remote name for the connection, the IP Address of the unit you are calling, the audio connection password (default is blank) and choose a factory profile to use.

In addition, the codec receiving the connection must have a similar entry made, with the MAC Address of the calling unit populated.

NOTE: This is important. The receiving unit must have an outgoing connection programmed into its address book, containing the MAC address of the calling unit, even if that entry is never used for outgoing calls.
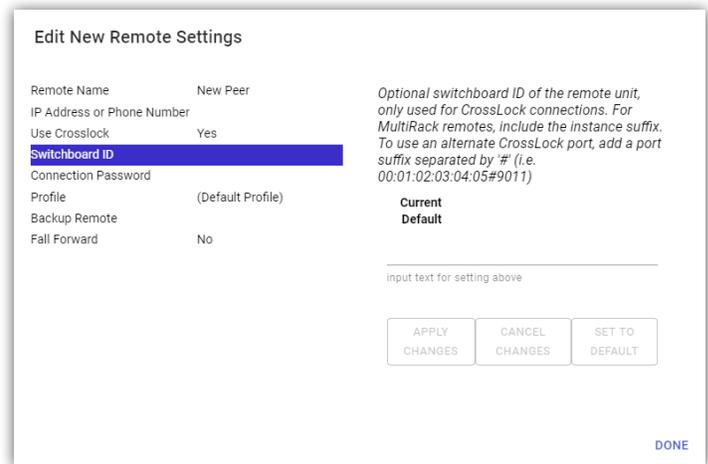

Figure 6 – Manual CrossLock Connection

Viewing CrossLock Performance

When a CrossLock connection becomes active, the CrossLock stats are available to view on the **Performance** tab. This tab is a very powerful tool to diagnose the quality of connections as well as manage the delay settings during the connection.

To learn more about the Performance tab, and CrossLock stats, consult your product manual.
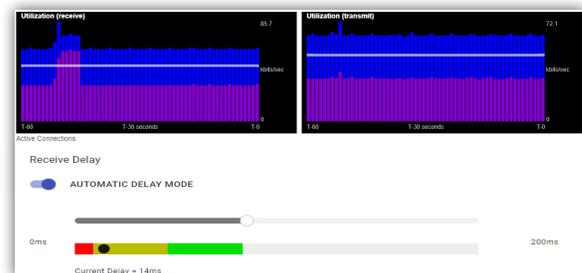

Figure 7 – CrossLock Statistics