COMREX

⟨ACCESS⟩
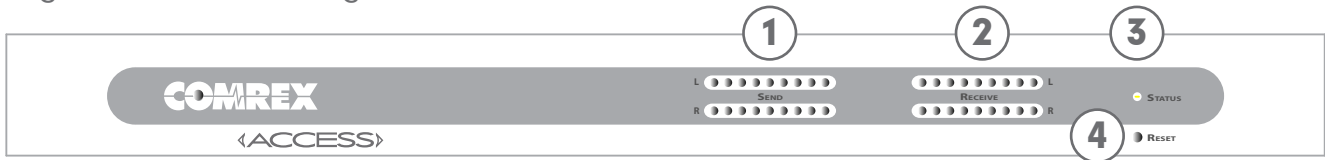# Quick Start Guide
ACCESS Rack Diagrams

Figure 1 – Front Panel Diagram

1) Input audio peak meter - Displays the level of audio being sent locally into the ACCESS, regardless of whether or not a connection is active. Proper level is indicated by peaks driving the Yellow LEDs, while avoiding lighting the Red LEDs (which indicates clipping).

2) Output audio peak meter - Displays the level of audio being sent remotely when a connection is active. Adjustments to this level must be made on the far end of the link.

3) Reset button - Press this button to send ACCESS into hardware reset mode.

4) Ready light - Indicates several states of Ready:

Off = Network ready, not connected to remote
Red = Network unavailable
Green = Connected to remote
Yellow = Connected to remote but no network (i.e. network connectivity lost during connection)
Slow Red Blink = Software update in progress
Fast Red Blink = Displaying unit IP address

Figure 2 – Rear Panel Diagram
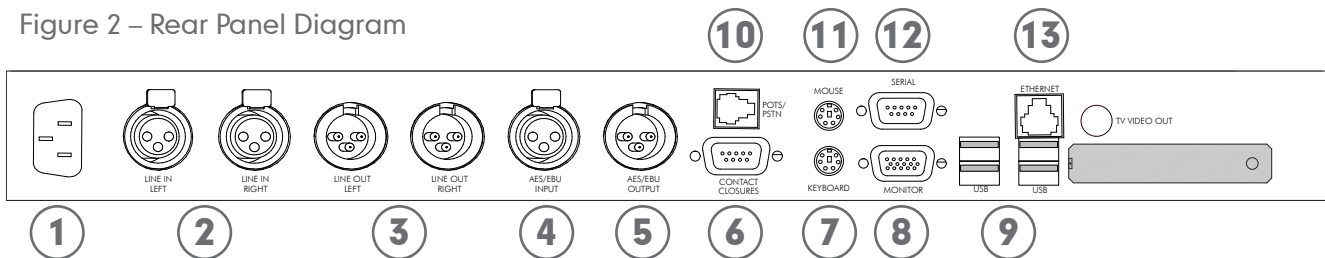
1) IEC power connector - ACCESS works on AC power at 110-240VAC 50-60Hz, auto detecting.

2) Balanced analog audio inputs - 0dBu (0.775VRMS) nominal, full scale input is +20dBu. Left channel is used for mono encoding modes.

3) Balanced analog audio outputs - 0dBu nominal (0.775VRMS), full scale output is +20dBu.

4) AES3 digital audio input - Supports all standard sampling rates. When an AES3 signal is present on this connector, the analog input connectors are disabled.

5) AES3 digital audio output - AES3 output is available simultaneously with analog. When the AES3 Input is active, the AES3 Output will lock to the sampling rate and clock signal of the Input.

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) PS/2 style keyboard jack - For accessing the Console Connection Interface.

8) VGA monitor jack - For accessing the Console Connection Interface.

9) USB jack - For use with keyboards and mice. May also be used with some 3G USB wireless modems.

10) POTS/PSTN jack - Accepts analog telephone lines for POTS codec compatibility.

11) PS/2 style mouse jack - For accessing the Console Connection Interface.

12) Serial port - Connection for asynchronous ancillary data.

13) 10/100BaseT Ethernet port - For connection to your network.

Setting up the Hardware

This document describes how to quickly set up and use ACCESS Rack. More detailed instructions are contained in the manual on the CD shipped with the unit. It may also be downloaded from the Comrex web site at www.comrex.com.

At a minimum, ACCESS needs a source of power, an audio connection and a network or POTS connection.

The analog audio inputs and outputs are balanced XLR connections with a nominal input level of 0dBu (+20 dBu full scale). Mono audio sources should be sent into the Left Audio Input.

The Ethernet connector is a standard 10/100BaseT. A normal Cat5 Ethernet cable, such as used with a computer, should be connected here.

The POTS connection should be used with a dedicated analog telephone line. Do not try to use digital telephone lines, as this may damage the ACCESS Hardware

IP Configuration - Console Connection Interface

To access the Console Connect Interface, connect a computer keyboard, mouse and monitor to the back panel of the ACCESS Rack. Using this interface, you have complete control over all aspects of the device, from configuration to making connections.

As shipped from the factory, ACCESS is configured for DHCP, which means it will automatically attempt to obtain an IP address from your network.

To change the IP Configuration, go to Network > Manage Networks, as shown in Figure 3. Select Ethernet Port and click Configure. In the TCP/IP Tab (Figure 4), use the drop-down box to change the mode to Static and then enter the static IP address, netmask, gateway and DNS.
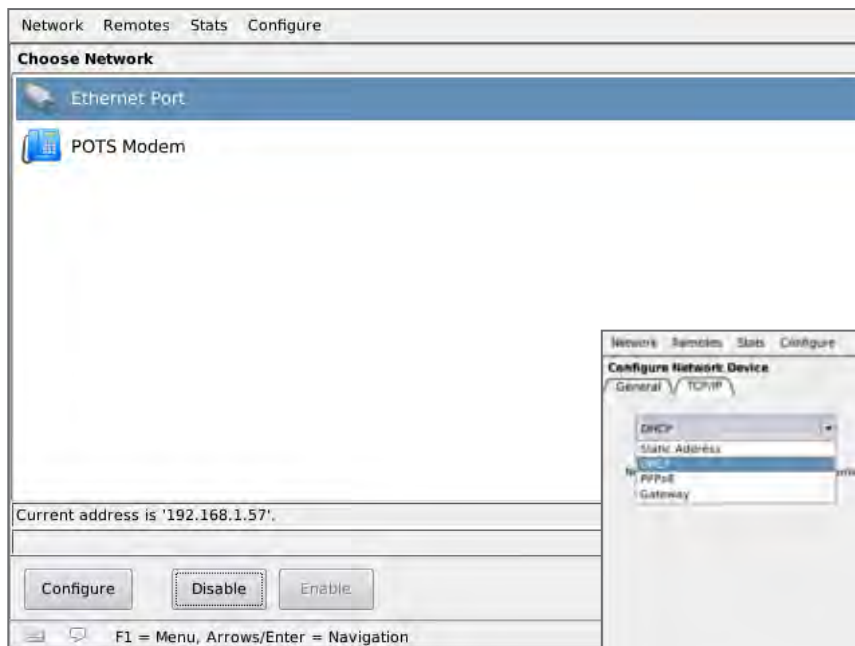

Figure 3 - Manage Networks

Figure 4 - TCP/IP Settings

IP Configuration - Device Manager

Initial IP configuration can also be handled using the Windows-based Device Manager application. This program is provided on the CD included with the ACCESS hardware, and can also be downloaded from the Comrex website.

In order to configure ACCESS, the Device Manager must be run on a Windows PC located on the same physical LAN as the ACCESS hardware.

Once power is applied to ACCESS, you have five minutes to configure the IP settings. After five minutes, the power must be cycled on the ACCESS to be able to make changes.

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 Configure button, allows you to set the IP parameters of the codec.

Once you know the IP address (or have changed it using the Device Manager,) the rest of the setup and operation of ACCESS is done either through the built-in Web-Based Interface or the Console Connection Interface.
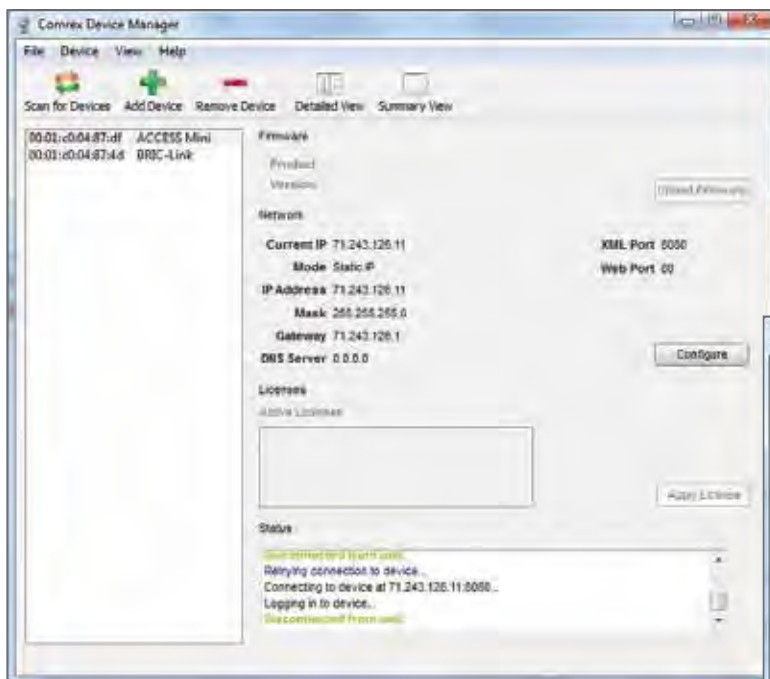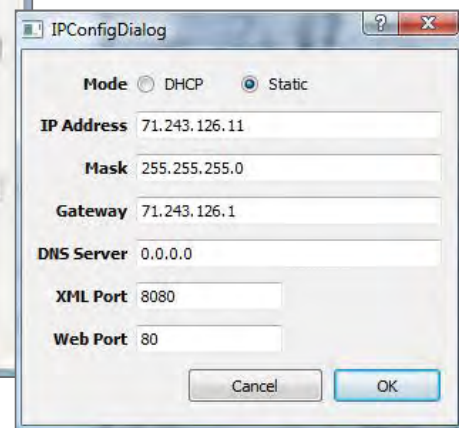

Figure 5 - Device Manager

Figure 6 - IP Configuration

Network Configuration

By default, the ACCESS listens to IP port 9000 UDP for incoming audio connections. Ports 80 and 8080 TCP are the default ports for the Web-based Interface and remote control applications. These ports may be changed through the Console Connect Interface in Configure > System Settings.

In order to accept incoming calls, your network must be configured to pass incoming traffic over UDP 9000 to the ACCESS. This can be accomplished by using port forwarding, a DMZ or by putting the ACCESS

directly on a public IP address. The use of a static public IP address is recommended.

The optional BRIC Traversal Server may also be used in cases where you do not have control over the network in order to make the necessary configuration changes. This optional license allows the use of our dedicated BRIC Traversal Server to make connections regardless of firewall or router settings. See the complete manual for more information on BRIC TS.

Making a Connection

ACCESS Rack can be controlled using the built-in Web-Based Interface. To log into the interface, enter the IP address of the ACCESS into your computer's web browser. You can then enter any username and use the default password, comrex.

To make an outgoing connection, you must first create a new Remote in the Connections Tab. Using the Web-based Interface, click the Store New Remote button. Enter in a Remote Name for the connection, the IP Address or phone number of the unit you are calling, the audio Connection Password (if any is set) and choose a Profile to use.

There are several factory Profiles available to use. The following are the most commonly used:

HQ1 Default – This is the default choice of profiles for new remotes. It provides a low delay, full duplex, 15KHz mono audio channel over a small (28kb/s) data stream.

HQ2 Default – Although this profile adds substantial additional delay, it is extremely robust and performs well over connections that are prone to packet loss. It provides 15KHz two-way mono audio over small (24kb/s) data streams.

ULB Default – This profile is best for challenging IP connections. It uses a very small bandwidth stream (14 kb/s) and delivers two-way 7KHz mono voice audio. Not useful for music.

3G – This mode is optimized for use over 3G wireless networks like UMTS, EVDO, and HSDPA. Because 3G networks are usually asymmetrical (they have higher download speeds), this profile delivers a robust, medium delay mono stream in the upload direction, and two, independent low delay mono streams in the reverse direction. These two streams can be useful as separate program and cueing channels, as an example.

POTS – This profile must be used when dialing a connection to another codec over POTS. Compatible POTS codecs include ACCESS, Matrix, Bluebox and Vector.

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.
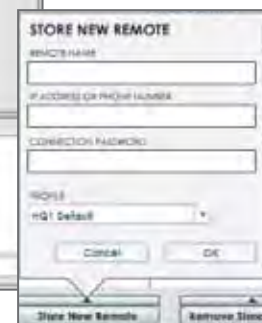

Figure 7 - Connections Tab

Figure 8 - Store New Remote

Put Comrex On The Line.

COMREX

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