

Establishing Ethernet communications with ASHLY products:

Ethernet communications with Ashly NE (network enabled) devices can be made by directly connecting to a PC running Protea^{ne} software, or through an Ethernet router, switch, or hub that is connected to that PC. Directly connecting to a PC is possible without the use of a router, but also limits the application to one NE device. For multiple devices, use a network router.

The Ethernet control connection is made using an RJ-45 terminated eight conductor cable over a standard 10/100M Ethernet network. Maximum cable distance for Ethernet is 100 meters from the nearest router, hub, or switch for copper twisted pair CAT5 cable.

IP Address - Ashly NE devices will “auto detect”, and adapt to either a straight through pin to pin, or crossover Ethernet cable. There is no need to assign IP addresses to Ashly NE products used with a PC or a network router. The router will assign IP addresses to each product automatically.

If the only option is to use an Ethernet switch instead of a router, each NE device must then have a static IP address assigned from within Protea^{ne} software. This is done by selecting “Manual Configuration” in the Network Properties tab of each NE device, where the system/network administrator may then assign each product its’ own unique static IP address, each with the appropriate sub net if applicable.

When a router is not available, most current NE Products have the capability to assign their own IP address based on the Link Local Standard. This allows the device to operate without the need to set up static IP address.

Firewalls - Before launching Protea^{ne} software, the firewall in the host PC should be turned off, as firewalls may block the NE device response to the controlling PC when network communication is attempted. The current PC firewall status is found by clicking on the Windows Start button, then Control Panel, then double clicking on the security shield where the firewall can then be disabled. Once communications with the NE device is established, the firewall can be enabled again, but if there continues to be communications problems then disable the firewall.

Wi-Fi and LAN – For the initial device auto-configuration process, any secondary Wi-Fi connection should also be disabled, and the LAN (Local Area Network) connection must be enabled on the PC. Secondary network connections may confuse the auto device discovery process. Go to the Windows Control Panel, then Network Connections, to disable any secondary network connections. Once communications with the NE device is established, secondary network connections can be enabled again, unless there is an communications problem with NE devices, in which case the secondary network connections should remain disabled.

Connecting NE Device(s) - Connect the Ethernet cable from the PC or network router to the Ashly NE device. If a successful Ethernet connection has been made, there will be a solid green LED (Link) on the NE device Ethernet port. If there is no green LED showing, there is either a problem with the RJ-45 cable or the network source, which must be addressed before proceeding further. All RJ-45 Ethernet ports flash green when

active, so backtrack through any other cables, routers, or switches to the source PC to find the problem. The flashing yellow LED (Data) indicates that data is flowing to or from the device.

Initializing Protea^{ne} software

Once the software has been installed on the computer and Ethernet connections have been made successfully, launch the software. All Ashly NE devices installed on the network will be automatically detected and shown in the active device listing “device tree” on the left side of the Protea^{ne} software startup window. The device tree is an accurate reflection of all Ashly NE devices currently installed, also including any devices which may have been formerly installed but are now off-line.

Device icons can be dragged onto the project canvas from the menu tree, or placed as virtual devices in “Design Mode”. In other words, a device icon on the canvas is not necessarily a live product. It may be a virtual device, or a device that is currently offline. In the device tree, all currently connected and active NE devices are highlighted in green. NE devices which may have been formerly installed but are currently off-line or unavailable show up in red. Individual NE products can be dragged onto the project canvas to simulate physical rack installation groups. Editing each device can be done from either the device tree or from representative icons on the canvas. All changes made in software are executed in real time on the NE device.

The software scans for active NE devices on start-up. The user can manually scan at any time as well with <Scan For Devices> at the bottom of the network NE device tree. All NE devices broadcast their availability to the software when they start up.

In addition to detecting which models are currently online, any factory installed options are also detected. The software control surface for each NE device automatically displays available controls for the options present.

Note: The user can find and verify a single physical device in the system by right clicking over the unit’s name in the drop down menu or picture on the canvas, and then click <Identify>, which will flash the Com LED on that unit’s face panel for two seconds.

The project canvas is used to visually represent and control a fixed physical sound system installation, and can display any of the Ashly NE processors, amplifiers, and remotes used in that system. The user can also place an assortment of isolated control objects such as level faders, single LEDs, meter bars, etc, and map them to specific product functions within that project. Once a control object is placed, right click on it to bring up its properties. Lines, rectangles, text, even image files can be added to create a custom virtual control screen along with the NE products and individual control objects. To see all available canvas tools, right click anywhere over open canvas. Checking <Design Mode> allows placed objects to be moved around, while unchecking <Design Mode> locks all objects in place.