



# Technical Notes

## CXD-Q Series Power Amplifiers

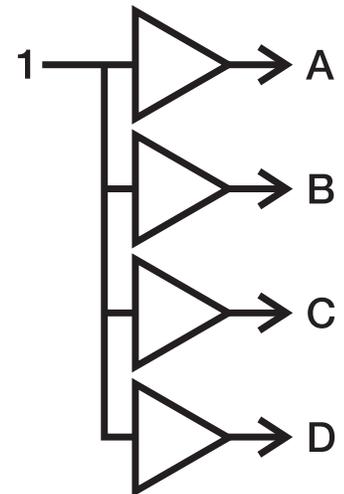
### Setting up a CXD-Q amplifier for standalone operation

Although CXD-Q Series amplifiers are primarily intended to be used on a Q-LAN network together with a Q-SYS core unit, they can be configured for standalone operation, in which the analog mic or line input signals go to the amplifier output channels *without* first transporting to the core unit.

Two examples of standalone operation:

- As a failsafe mode of operation if a Q-SYS core unit fails or if a network failure occurs. The amplifier will automatically switch over to standalone operation if it loses connection to the core unit, and will automatically switch back to normal if the connection resumes.
- As a standalone four-channel power amplifier with no network.

A CXD-Q amplifier can operate in either of two standalone modes: *One-to-all*, which sends the analog signal from Input 1 to all the amplifier channels, A through D; or *one-to-one*, where Input 1's signal routes to Channel A, Input 2 to Channel B, Input 3 to Channel C, and Input 4 to Channel D. *NOTE: In standalone operation, no core processing is available.*



“One-to-all” operation

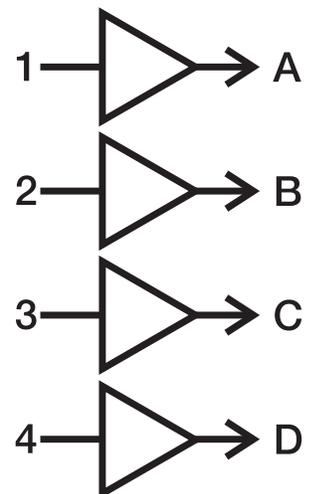
#### Required resources for standalone configuration

The configuration procedure requires these resources along with the amplifier, even if the amplifier is to be used solely as a standalone device:

- A computer running the intended version of Q-SYS Designer.
- A Q-SYS core unit.
- A QSC-qualified Ethernet switch.
- Appropriate network cabling.
- An analog audio signal source.

#### Configuration procedure for standalone operation

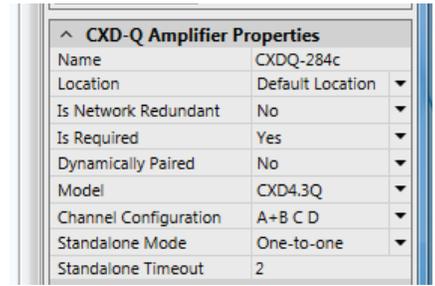
1. Set up the amplifier, core, switch, and computer as a functioning Q-SYS network, if it is not already in one.
2. In Q-SYS Designer, open the design or start a new one.
3. If you are starting a new design, populate the schematic with the Q-SYS core unit and the amplifier to be configured.



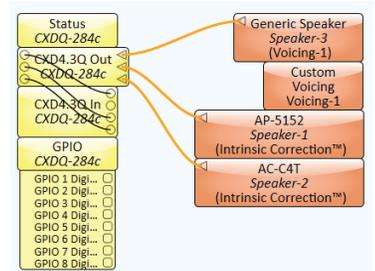
“One-to-one” operation

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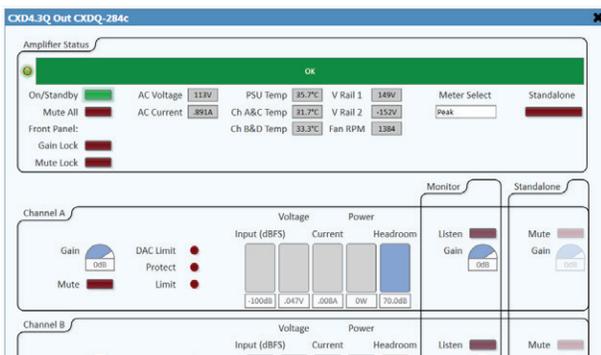
- If the design is active, select **File > Disconnect** or press **F7** to enter configuration mode.
- Select the **Status** block of the amplifier.
- In the right-side pane, go to the **CXD-Q Amplifier Properties** section. Select the desired **Standalone Mode: One-to-all** or **One-to-one**.
- Select the desired **Standalone Timeout** period in seconds. The default value is **2**.
- Perform any other configurations you need, such as **Channel Configuration**.
- Using Q-SYS Configurator, select a loudspeaker profile (and custom voicing, if applicable) for each output that will be used on the amplifier. Place them in the schematic and connect them. This will load the processing parameters into the amplifier, where they will provide correct loudspeaker processing even when the amplifier has no network connection.
- When you are done, select **File > Save to Core & Run** or press **F5** to upload the design into the Q-SYS core unit.
- Connect an audio signal source into amplifier input 1. Adjust the source's signal to the desired mic or line level.
- In the design schematic, open the amplifier's output block.
- Because the amplifier has a standalone mode selected, a Standalone button appears at the right of the **Amplifier Status** block. This is for manually putting the amplifier into standalone operation.
- Select **Standalone** and adjust Channel A's **Standalone Gain** control (or select the **Mute** button, if desired) to the desired output level, as shown on the meter. In many cases you will want the resulting standalone output level to be about the same as the normal output level; deselect and select **Standalone** as needed to compare and make adjustments.
- Repeat this adjustment for Channels B through D. If the amplifier is operating "One-to-one," you will have to move the audio source to the appropriate input as well.
- You are done configuring the amplifier. It will now automatically switch itself to standalone whenever it is operated without the core or network attached.



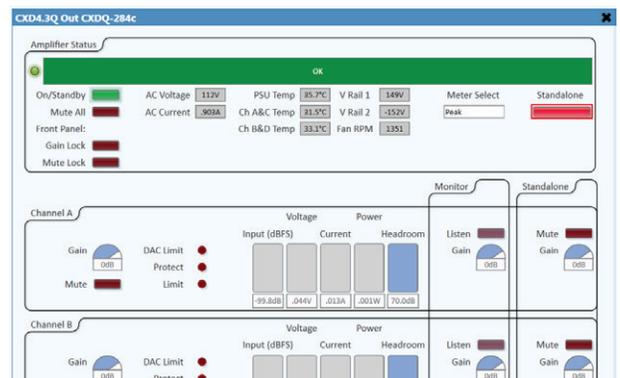
The CXD-Q Amplifier Properties section, where you select the standalone mode and other configurations.



Attaching loudspeaker profiles to the amplifier will load the proper processing into it. The processing will function in standalone or non-standalone operation alike.



With **Standalone** deselected, the Standalone Gain controls and Mute buttons are grayed out.



Select **Standalone** for configuring the Standalone gain and mute settings and for testing and verifying the configuration.