Expansion bus routing and NOM count on XAP/PSR units

Introduction
This document will explain configurations settings used when routing through the expansion bus such as NOM count, mix/minus, gating groups and echo cancellation references on these buses.

Description
The 12 expansion buses are used to pass information and audio between XAP 400s, XAP 800s and PSR1212s. It will only pass control to the XAP TH2s not audio.

NOM Count (Number of Open Microphones)
The number of open microphones (NOM) count is used to adjust the output level based on the number of microphones that are gated on and routed to that output. To use NOM across the expansion bus, you must use buses O–R.

As seen in the graph below, each time you double the number of open microphones, the output level will naturally increase by 3 dB if NOM is not enabled. When NOM is enabled, the units will attenuate the output level by -3 dB to keep the output level consistent.
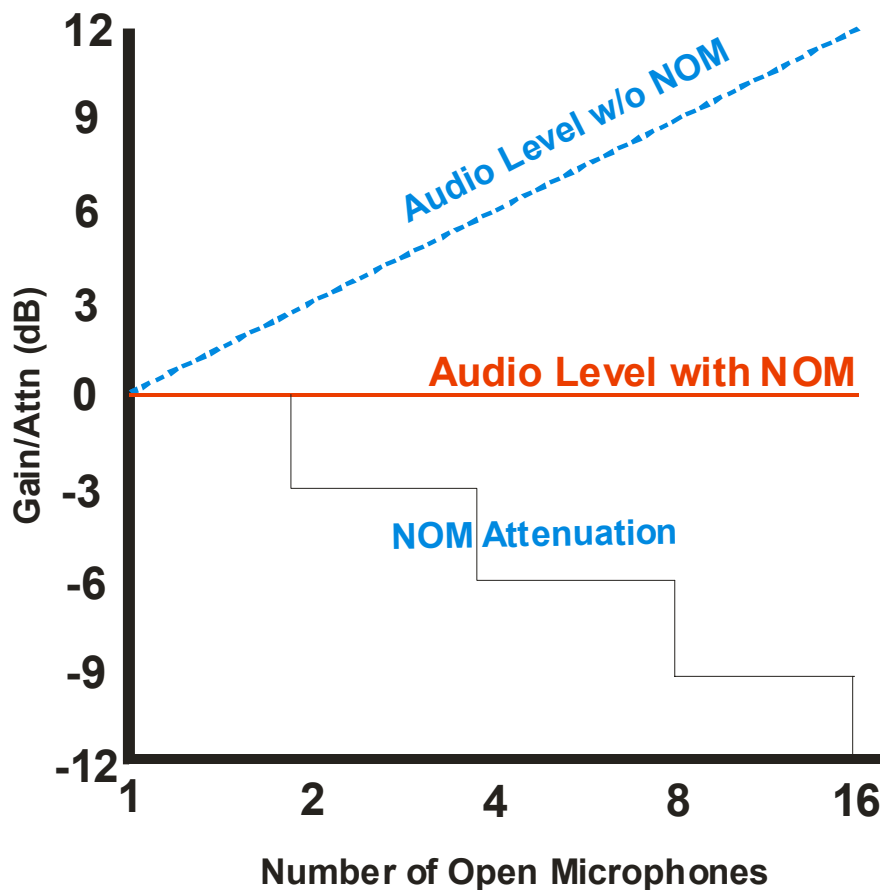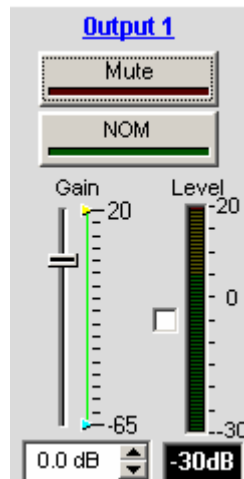
NOM is an on/off option for each output. When NOM is enabled, the attenuation affects only the output level on that output.
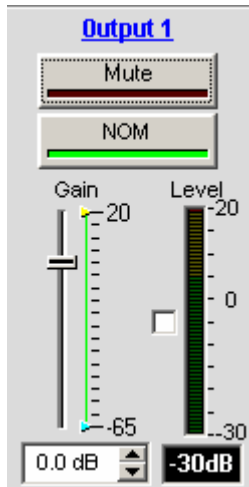
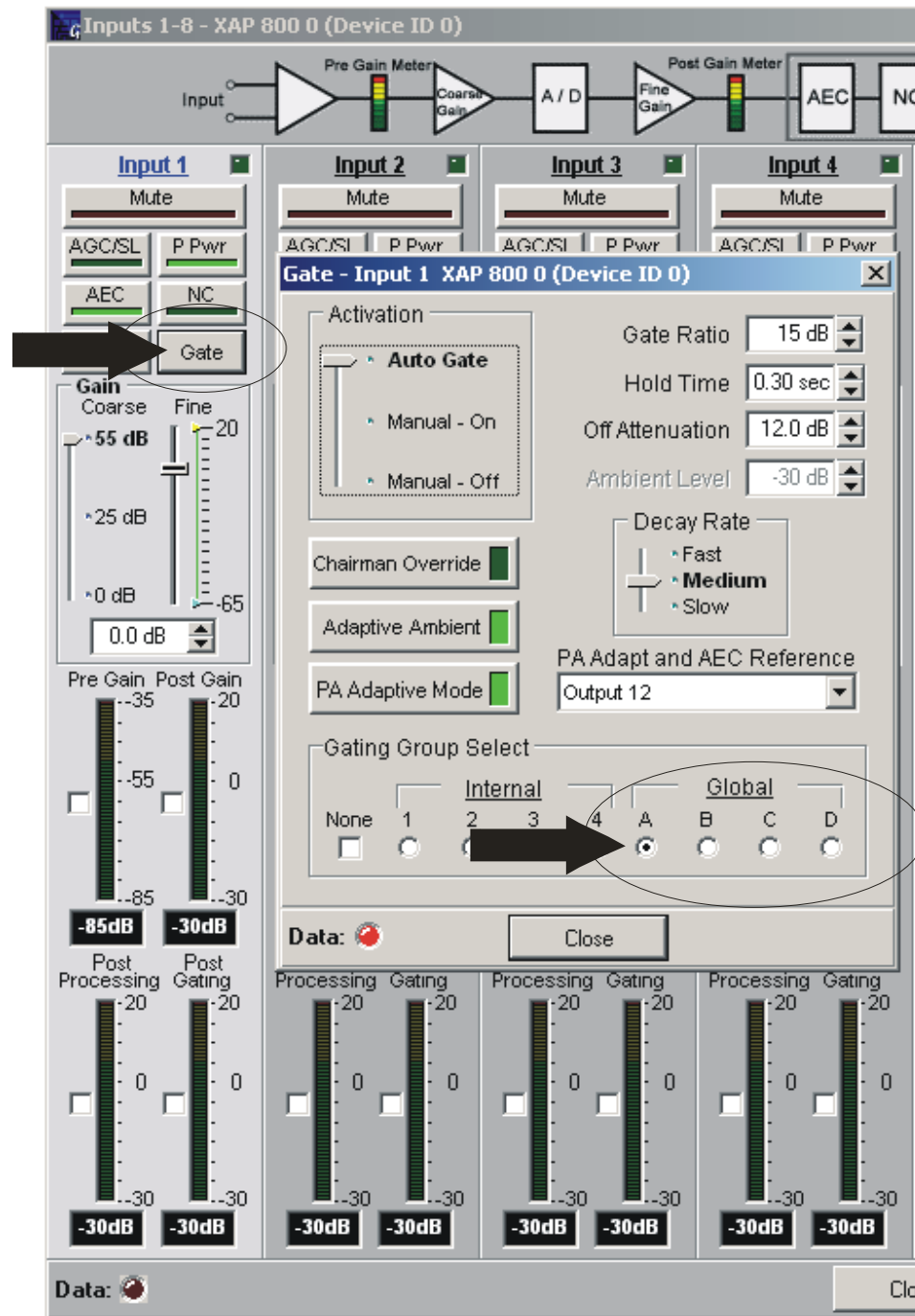ON   OFF

Mix-Minus

Mix-Minus is a mix of all audio on the bus minus the local audio routed to that bus. When G-Linking multiple units and routing audio from unit to unit you will use one of the 12 expansion buses (O-Z).

When using the expansion bus you must remember that it is not an internal loop route. If you want local input audio to go to a local output channel you must route it directly to that output or through a processing channel. The expansion bus will have audio from any other units routed to the expansion bus. See drawing below.
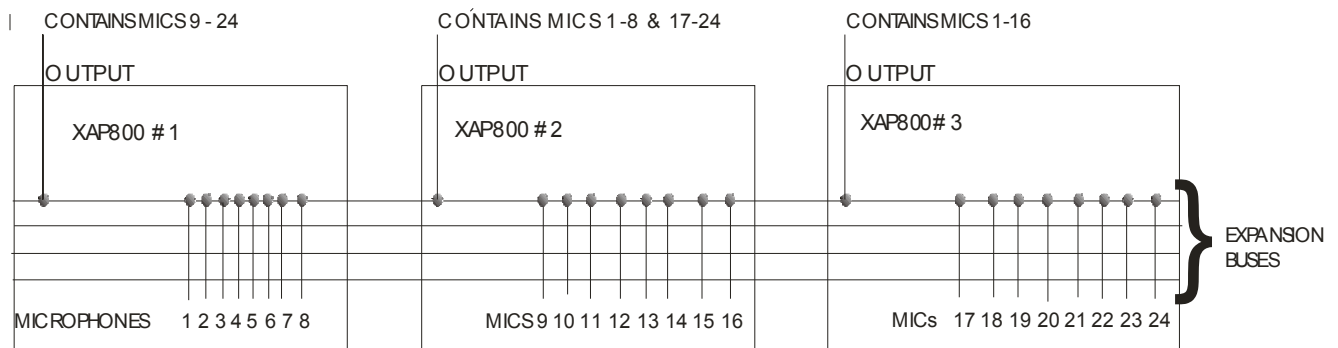
Gating Groups

When using microphones residing on multiple units, that need to share gating information, you must choose from gating groups A, B, C or D. This is done from the gating menu on the inputs screen. See Technical Note (XAP_G-WARE 115) Gating Parameters Explained).

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Echo Cancellation Reference across G-Link

If you have an output or virtual reference residing on a unit across the G-Link bus you can reference it using the AEC Expansion Bus Ref. This is done from the AEC menu of the Inputs screen and choosing Expansion bus Ref 1-4. You then choose which unit and which output of that unit you want to reference.