

## Global Control Protocols for XAP Systems

### Description

Global controls allow for a single command to be sent through a control port, rather than a series of discreet commands, to simplify the control process for mute and gain commands.

### Introduction

This document details how the XAP system will apply a global command that is issued either by an RS-232, RS-485 or GPIO port command for relative or toggle arguments.

### Setup of Global Commands

The XAP products support either discreet or global commands for Inputs, Outputs, and Processing channels. When creating a global serial command for a channel group the channel number is replaced with an asterisk \*.

A typical command format looks like this: **#.. MUTE \* I 2** where **#..** refers to the local device, **MUTE** is the command, **\*** is all channels, **I** is for the Input group, and **2** will toggle a mute on all input channels.

The key point to remember when using global commands is that the system will look to the last channel in the group, set the required state, and apply the same state to all the other channels in the group regardless of their current individual settings.

### Channel groups

The channel groups that are used in serial commands are **I**, **M**, **L**, **O** and **P** and are defined as follows.

- **I** - refers to Inputs 1–12 on a XAP 800 and 1–8 on a XAP 400
- **M** - refers to Mic Inputs 1–8 on a XAP 800 and 1–4 on a XAP 400
- **L** - refers to Line Inputs 9–12 on XAP 800 and 5–8 on a XAP 400
- **O** - refers to Outputs 1–12 on a XAP 800 and 1–9 on a XAP 400
- **P** - refers to Processing channels A–H on a XAP 800 and A–D on a XAP 400

### Examples

The current status for microphones channels 1, 2, 5, 6 and 7 is muted and for channels 3, 4 and 8 is unmuted.



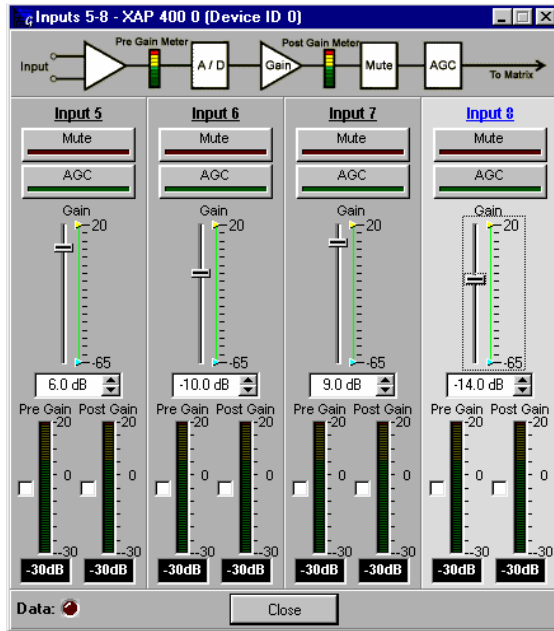
When the command **#50 MUTE \* M 2** is sent, the system sets the required state on the last channel in the group (Input 8 in this example) and applies that same state to the rest of the channels in the group.



The result of this command is that all mics are muted.

The same rule applies to global gain commands.

If the gain on Input 4 is set to  $-14\text{dB}$  and the command **#70 GAIN \* L 3 R** is sent, Input 4 will increase its gain to  $-11\text{dB}$  and that change will then be applied to input channels 5 through 7 in that group.



The command sets all inputs to  $-11\text{dB}$  regardless of their individual settings.

