

### Options for Controlling Pads on Pro64 Remote Mic Preamps

The mic preamps on a Yamaha® console utilize a 73dB gain range (indicated as +10 to -62 on the control, referencing the incoming signal's strength), with no separate pad switch. For optimized fidelity, Aviom's Pro64 preamps feature a 56dB gain range (indicated as 0 to +55) with a separate 24dB pad control, a total of 80dB. To allow Aviom preamps to be controlled from the Yamaha user interface, Aviom's gain and control structure must be mapped to the available Yamaha control. Aviom's m-control™ remote control protocol for Yamaha consoles provides two ways of mapping the Yamaha gain control to Aviom preamps.

#### THE DEFAULT: AUTO PAD

The default behavior of m-control is to automatically switch Aviom pads on and off based on the position of the Yamaha gain control and whether the gain is being adjusted up or down. This approach offers simplicity to the operator and provides access to the full gain range the Aviom mic preamps support. Figure 1 shows the mapping of Yamaha gain settings to Aviom gain and pad settings in Auto Pad mode.

However, because the Aviom preamp utilizes an analog pad for optimum fidelity, audio must be muted very briefly (about 200 milliseconds) to allow the pad switch to settle fully when it is switched on or off. The Auto Pad algorithm minimizes the number of times the pad is switched on and off to minimize these brief mutings.

For most users, Auto Pad provides a good balance of performance and simplicity.

#### MANUAL PAD FOR MORE CONTROL

Operators who prefer separate gain and pad controls should use Manual Pad. In this mode, the 73 gain steps in the Yamaha control protocol are mapped across the 56 gain steps on the Aviom mic preamp, and the Aviom pad state is unaffected by gain changes. Because the Yamaha control protocol does not provide control over a dedicated pad, the pad state on the Aviom preamp must be changed from the front panel of the preamp (if using a 6416m), from an MCS Mic Control Surface, or from the Pro64 Network Manager™.

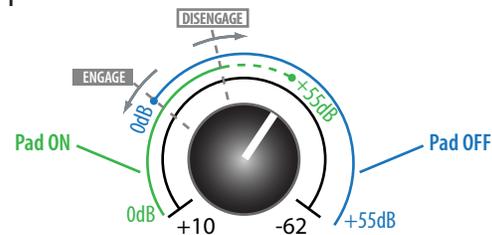
Manual Pad eliminates all mutings during gain adjustments. As an additional advantage, all 56 gain steps in the Aviom preamp are available for both pad on and pad off states.

Note that gain values stored in scenes on the console will produce the desired result only if the pad is correctly set as well.

#### SELECTING PAD MODE

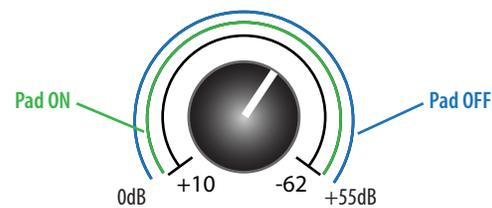
Pad mode is selected on the 6416Y2 A-Net Card that has been configured for m-control communications with the console and can be set using either the card's DIP switches or Pro64 Network Manager. On the card, set switch #6 on block SW3 to UP for Auto Pad and DOWN for Manual Pad. Alternatively, using Pro64 Network Manager, select the Card Configuration window from the 6416Y2 Device Window's Tools menu and set the pad mode with the radio button.

Figure 1



In Auto Pad mode, the two gain ranges in the Aviom preamps overlap. When increasing gain on the console, the Aviom pad is automatically disengaged going from -15 to -16. When decreasing gain, the Aviom pad is engaged going from -7 to -6.

Figure 2



In Manual Pad mode, the two 56dB gain ranges in the Aviom preamp are both mapped across the full range of the Yamaha encoder. Pad changes are made outside the Yamaha remote control interface, using the MCS, Pro64 Network Manager, or 6416m front panel.