# Automatic Mic Mixer (AMM) in SD12 and Quantum 7 - February 2019
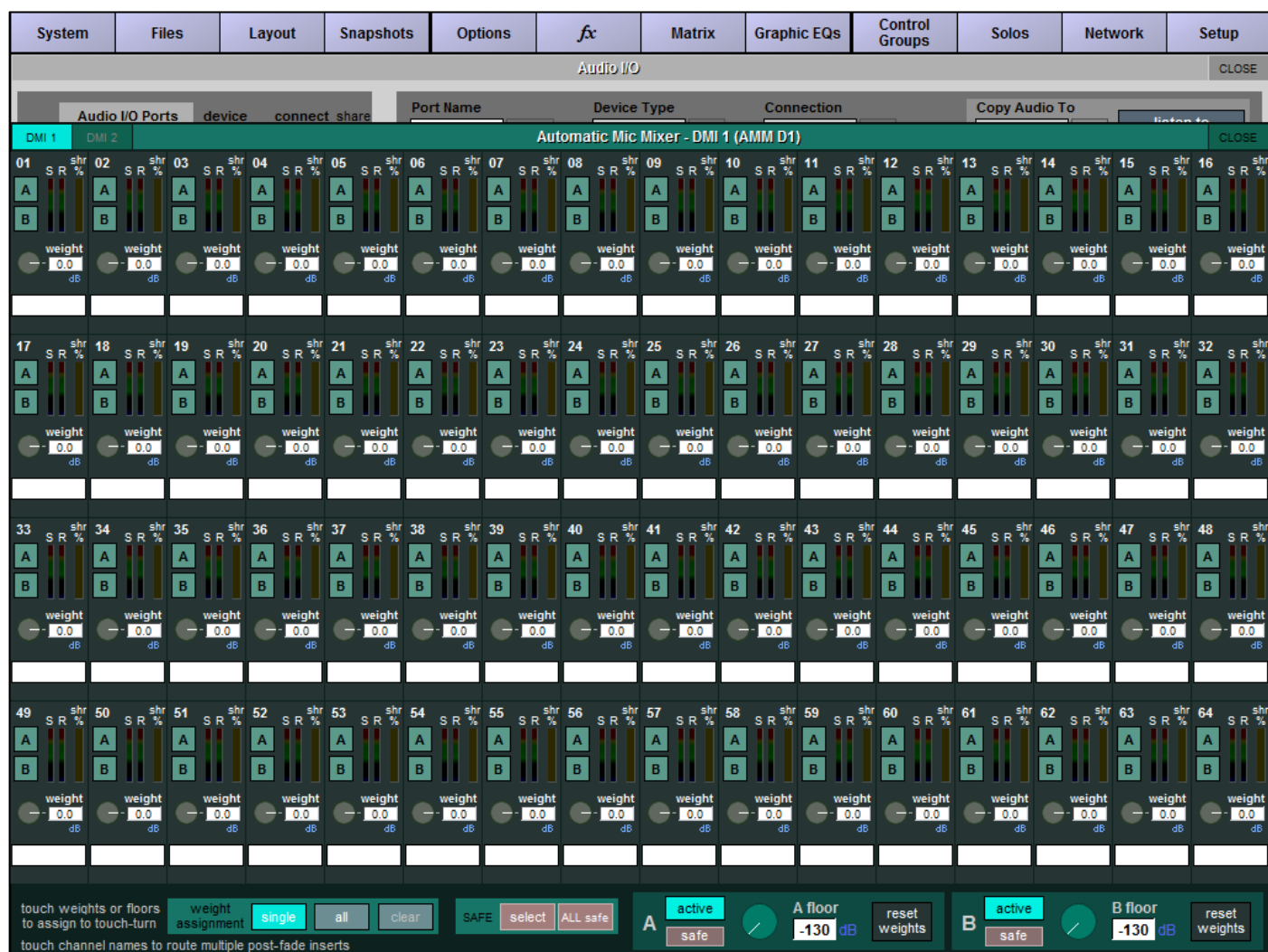


*Figure 1: AMM Control Window*

Quantum 7 and SD12 are now compatible with the DMI-AMM card. The DMI-AMM card automatically manages live microphones in unpredictable dialogue situations. When one person speaks, that microphone's gain level fades up instantly, while the other microphone gains are reduced. All microphone levels will adjust to medium gain to collectively match the level of one microphone at full gain. The resulting effect will be as if all speakers are sharing one microphone. When several people talk at once, the gain is shared.

Access to the AMM Controls **(Figure 1)** can be found in the Audio I/O window after conforming the DMI card **(Figure 2 & 3)** or by using the **Master Screen > Layout > AMM Control** button

The AMM Controls include a weight control and a group assign (Group **A** & Group **B**) for each AMM group for 64 slots within the card. The Floor control imposes a lower limit on the level detector for all microphones in the relevant AMM group to prevent a noisy microphone capturing a disproportionate share of gain. The weight should be left at the default value of 0dB and floors should be left at -130dB for normal operation.
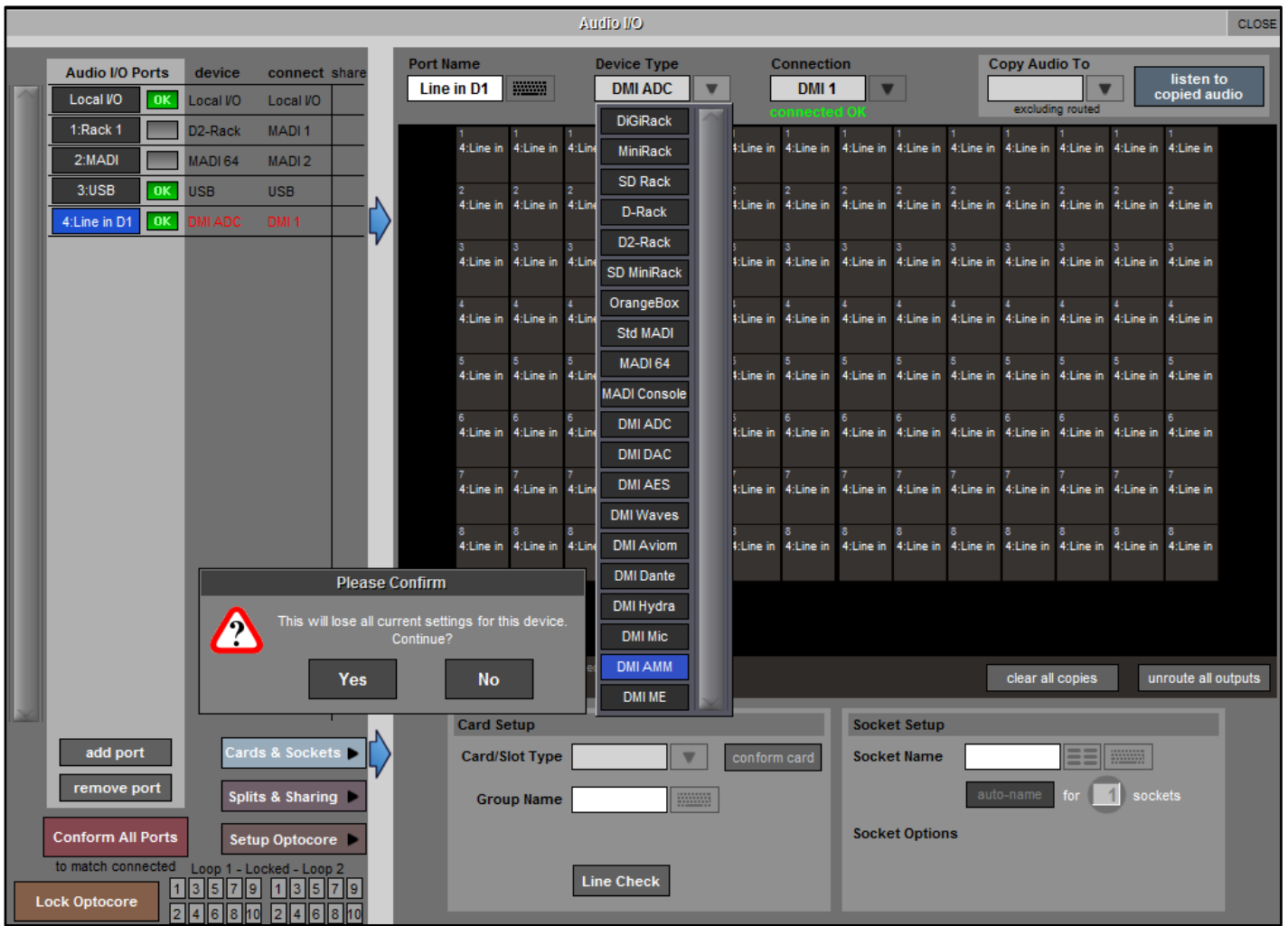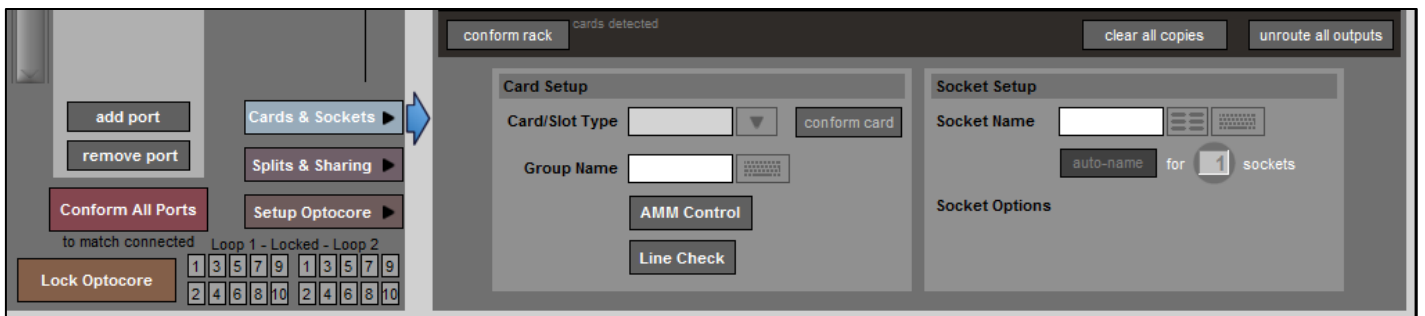
*Figure 2: Conform AMM*



*Figure 3: Open AMM Control*

There are two ways to route channels to/from the AMM. The first is from within the AMM Control window itself. Touch the white box below each of the slots, this will open the AMM Routing window **(Figure 4)**. Here you can ripple route channels to the AMM. The AMM is automatically assigned a Post-Fade Insert B. The AMM routing/assignment can also be ripple cleared and this will also force all insert Bs back to pre-fader mode regardless of its state prior to AMM assignment. It can also be assigned using the Insert B routing window, available by touching the bottom of a channel strip **(Figure 5)**.

**NOTE:** The SD12 only provides a maximum of 32 Post-Fade Inserts but the AMM channels can also be routed via Pre-Fade Insert points if required. The Quantum 7 provides Post-Fade Insert options on all Input Channels.
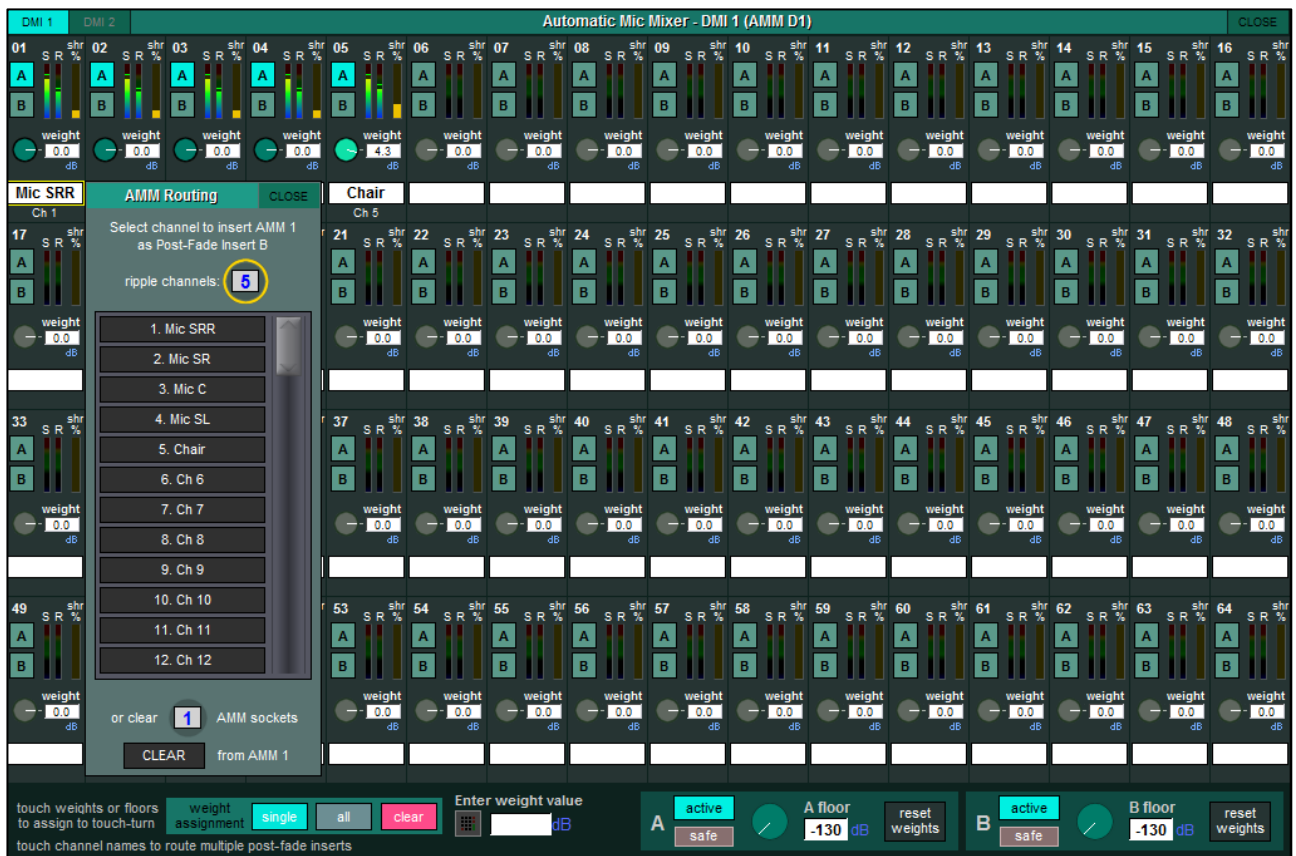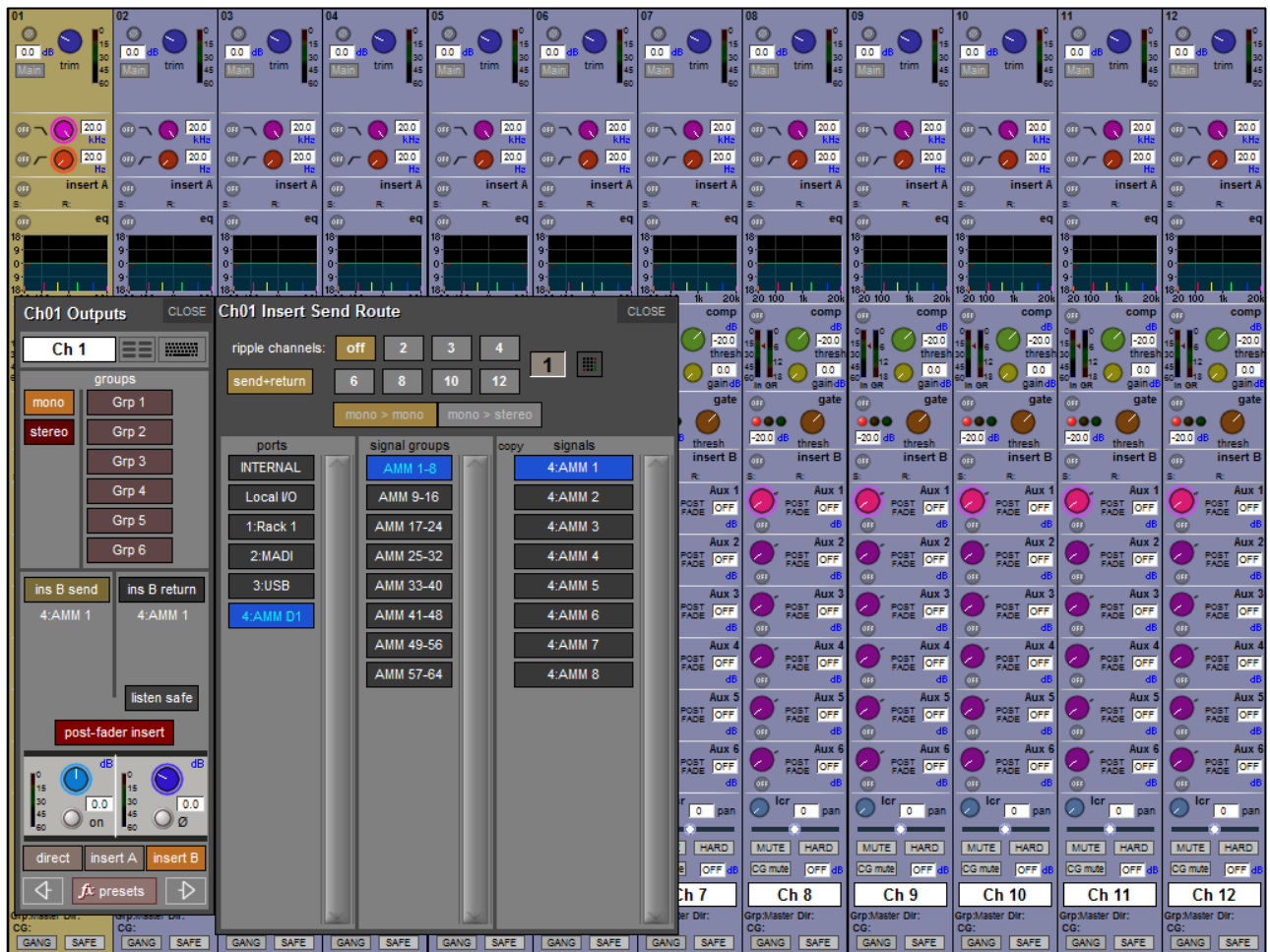
**Figure 4:** *Routing Within AMM Control*



**Figure 5:** *Routing via Insert B Routing Menu*

When channels are routed to the AMM and assigned to AMM group A or B, a **Share %** bar is displayed in yellow on the right side of an AMM slot. This represents the gain Share that the channel is getting when the AMM is active. This meter is shown in terms of percentage, meaning that if 2 speakers are talking at the same time and at the same level then they will both get 50% of the gain share. The Weight control allows adjustment of the relative sensitivity on a per channel basis. When weighting controls are balanced (equal), each microphone has an equal opportunity to "take over" the system. Changing the weight will not have an effect on the overall level of the channel, just how easily it can take a share of the gain. Adding weight to one primary microphone ensures that the particular microphone (e.g. a chairperson) will get more of the share of gain **(Figure 6)**.
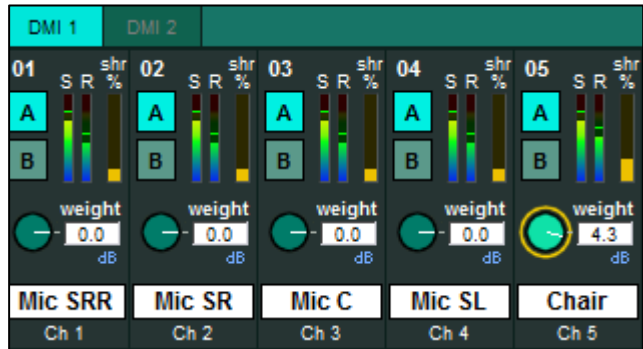


*Figure 6: AMM Share Percentage and Weights*

There are a set of master controls available at the bottom of the AMM Control window. These include a Floor control and a master group enable (active) switch for each AMM group within the card and a safe control. The Floor control imposes a lower limit on the level detector for all microphones in the relevant AMM group to prevent a noisy microphone capturing a disproportionate share of gain during quiet times. The Floor should be left at the default value of -130dB for normal operation. The safe option excludes these floor controls and the master group enables from snapshots.
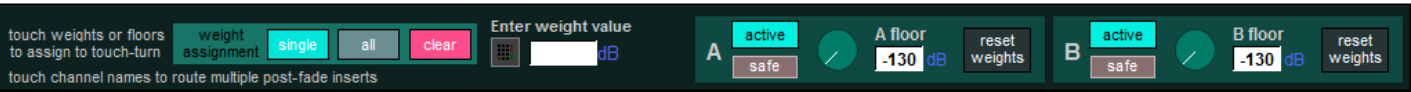


*Figure 7: AMM Master Controls*

All AMM parameters (both master and channel specific) are saved on a per snapshot basis and can be safed or removed from the global and recall scopes. Only input channels can be added to the AMM. It can be safed globally via the Input Devices option in the Global Scope menu on the Snapshots window. This is **NOT** enabled by default.
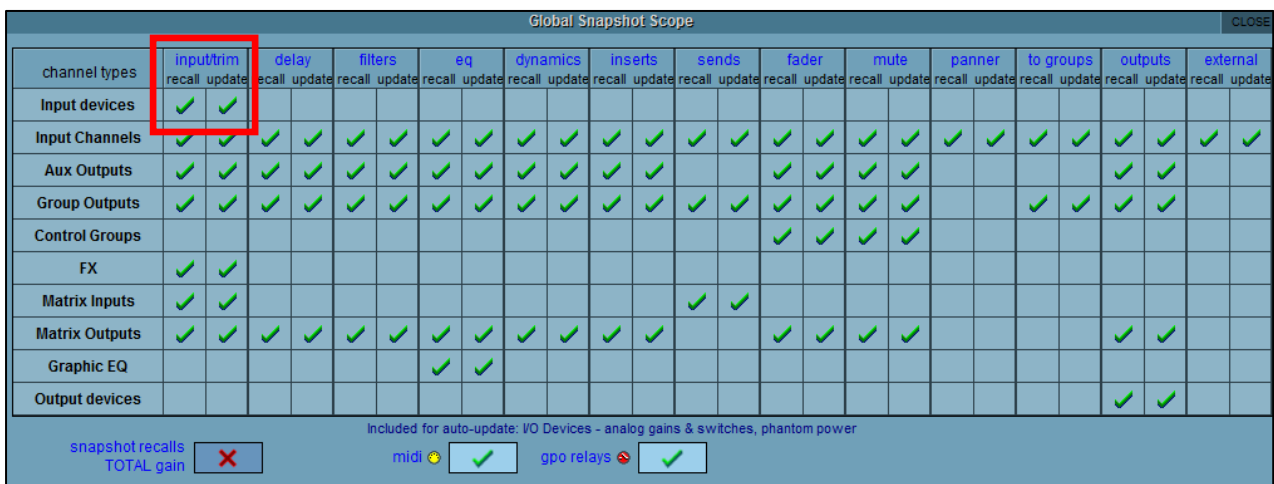


*Figure 8: Global Scope > Input Devices*