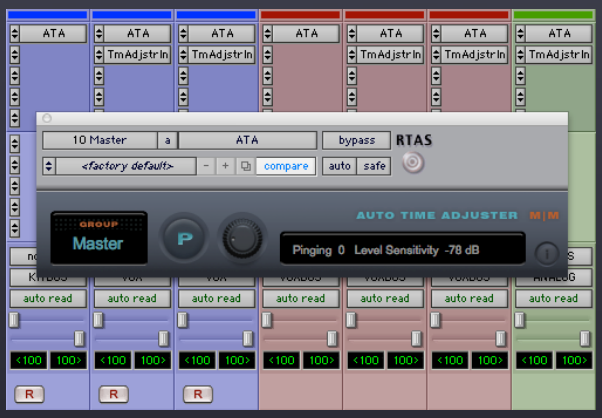
M|M MellowMuse

Auto Time Adjuster v1.2

Plug-In Operation Manual : RTAS



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1. Introduction

Auto Time Adjuster (ATA) is an RTAS audio plug-in designed to ease workflow in Pro Tools LE / M-Powered when using plug-ins that generate insert latency.

Currently to compensate for plugin latency you have to either nudge individual audio tracks backwards or forwards, or use the included “Time Adjuster” plugin to manually adjust the delay of each track in turn. One plug-in change can mean a lot of tweaks in a large project.

ATAs are inserted on each track and send short bursts of audio (pings) through each channel of the Pro Tools mixer to the “master” ATA inserted on your master fader. The master then calculates the necessary delay for each track to compensate for their latency as a whole.

This is done with the click of a button. When you add or remove a plugin on a track all you need to do is click the ping button on the master ATA again to calculate all current plug-in latency again and so synchronize the play back of your tracks, even when using external hardware inserts.

System Requirements

Windows
Windows XP/Vista
Pro Tools LE / M-Powered v7.3 or above.

Mac OS X
OS X 10.4 / 10.5 (Universal Binary)
Pro Tools LE / M-Powered v7.3 or above.

Installing
Place your license file and the MM_ATA.dpm (MM_ATA.dpm.rsr as well if Windows) files in your standard Digidesign plug-ins folder.

Windows: C:/Program Files/Common Files/Digidesign/DAE/Plug-Ins
Mac: /Library/Application Support/Digidesign/Plug-Ins

*The folder names may vary depending, on your OS language.

2. Using ATA

Auto Time Adjuster is inserted in the first insert of mono / stereo audio, aux and master channels. Each instance of ATA that you insert can be set to function as a member of either the **Audio Aux1** to **5** groups. The concept of groups is key to understanding how ATA works and is discussed more in the next section.

One instance only must be set to **Master** and inserted on the master fader, this will control the other instances and does not apply any delay offset of its own.

Virtual Instruments
The audio ping must be able to pass through the insert its measuring unimpeded, it is therefore necessary to place the ATA in the insert slot **after** the instrument, as most instruments do not accept an audio input. It will then compensate for any effects and sends inserted after the instrument.

Note: You can set a negative midi delay in the Real-Time properties for individual midi tracks that play the instrument to allow any delay in the actual instrument to be compensated for manually, this only needs to be set once.

Video tracks
Video tracks can not currently be delay compensated using ATA.

Recording
ATA is intended for mixing use during play back. Since it adds delay to your tracks in order to even out the timing differences it should be completely disabled or removed when recording tracks.

3. Groups & Routing

There are six distinct groups in ATA: **Audio** and **Aux1-5**. Each group can contain as many member tracks as you wish. Don't confuse **Aux1** for example with just one aux it refers to a whole group of aux channels.

We currently call them groups, you can also think of them as layers of latency.
The channel delays in each group are compensated with respect to each member of that group.

There is one basic rule to using ATA and that is **all** outputs and sends must feed from one group into the next in this order:

Audio > Aux1 > Aux2 > Aux3 > Aux4 > Aux5 > Master

Example:

You will usually start with the ATA **Audio** group, your sessions audio tracks, with an ATA set to **Audio** in each tracks insert slot 1. If you want to send an audio track to a reverb you would create a new aux channel and put an ATA set to **Aux1** in its insert slot 1 followed by the reverb you want to use. You must also create at least one more aux channel and bus all audio into it and put an ATA set to **Aux1** in its insert slot 1.

You can of course split the audio over several buses with ATAs set to **Aux1** if you wanted to sub mix sets of audio tracks. This **Aux1** group of tracks would then feed into the Master fader. Often you may only need to use ATA **Audio** and **Aux1** groups.

Audio > Aux1 > Master

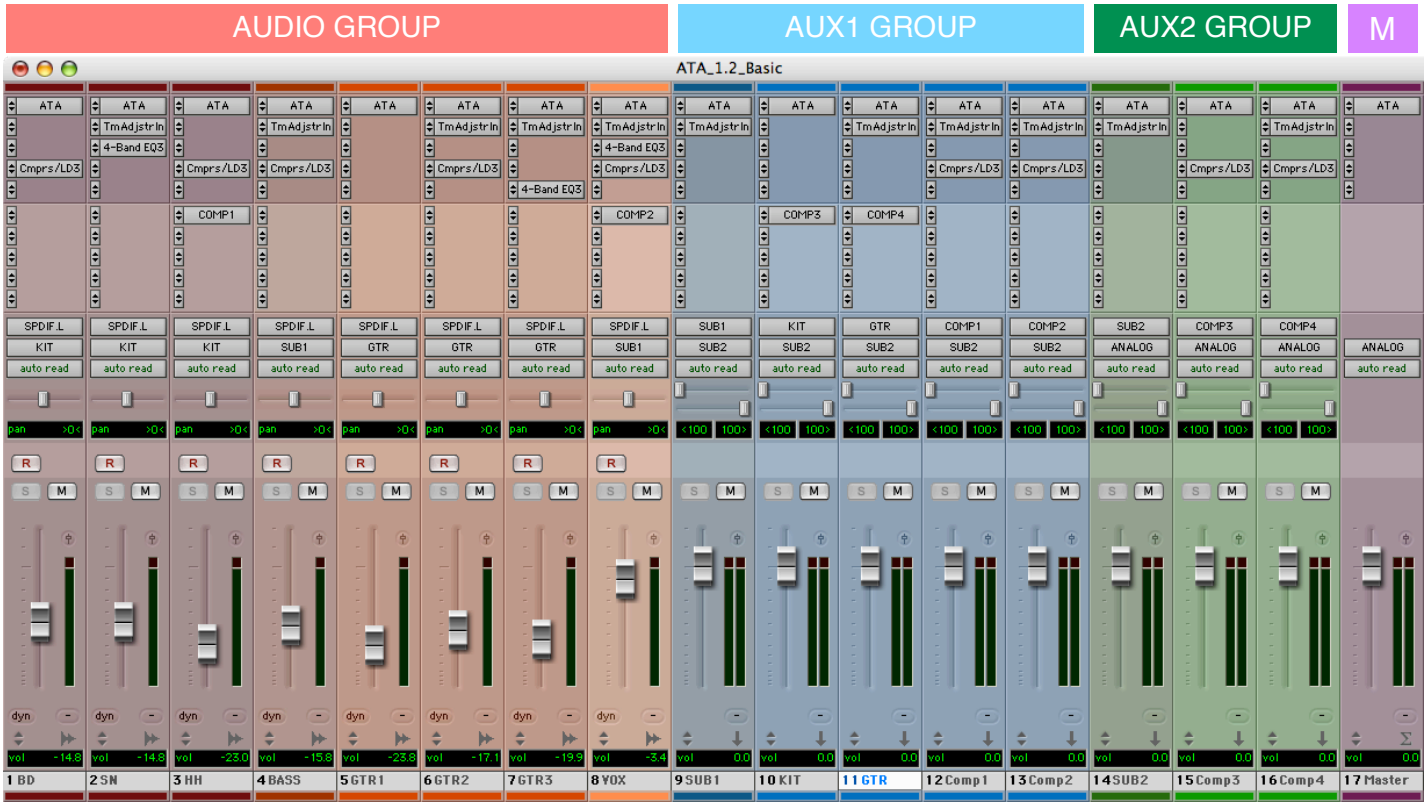
Note: In previous versions the audio buses needed to be free of any latency adding plug-ins, but now this limitation has been removed and you are free to add plugins anywhere in the signal path.

If you now wanted to send tracks in ATA **Aux1** group (the reverb or the audio sub mixes) to another set of aux effects you would repeat the process, create the new effect aux and add at least one audio bus aux and put ATA **Aux2** in their insert slot1 then feed theses **Aux2** buses to the **Master** fader.

Audio > Aux1 > Aux2 > Master

This cascading routing process repeats on up to the **Aux5** group.

4. Basic session



Here we have the “Basic” example from the example sessions you can download from our website.

All tracks have ATAs in the first insert position. The red channels are our audio tracks group, their ATAs are set to **Audio**. The blue channels are set to **Aux1**, the green channels **Aux2** and the master fader **Master**.

Notice that all the outputs on buses KIT, SUB1, and GTR feed into the **Aux1** group. The output bus of **Aux1** is SUB2 it feeds the **Aux2** group and then passes finally to the **Master** fader.

Notice that 3:HH and 8:VOX send to COMP1 and COMP2 in the **Aux1** group and 10:KIT and 11:GTR send to COMP3 and COMP4 in the **Aux2**

5. Troubleshooting

1) Make sure no **solos** or **mutes** are active when pinging, this will stop the audio ping in its tracks.

2) Make sure no track faders are completely at **∞ (minimum position)**, again this will stop the ping signal.

3) Reverb and Delay plugins in-particular, may need to be **bypassed** before pinging as they produce multiple images of the ping signal and so interfere with the process. This may also be true for other types of plugin dependent on settings.

4) External hardware inserts may sometimes need to be **bypassed** by setting their mix control to 100% dry.

5) Your audio interface buffer size should not be set below 256 samples for reliable operation, as ATA is a playback and mixing solution it usual to use larger buffers sizes such as 512 and 1024 to allow more CPU processing time for fx etc.

Support
Please check the Mellowmuse web site at http://www.mellowmuse.com for the latest information and updates.

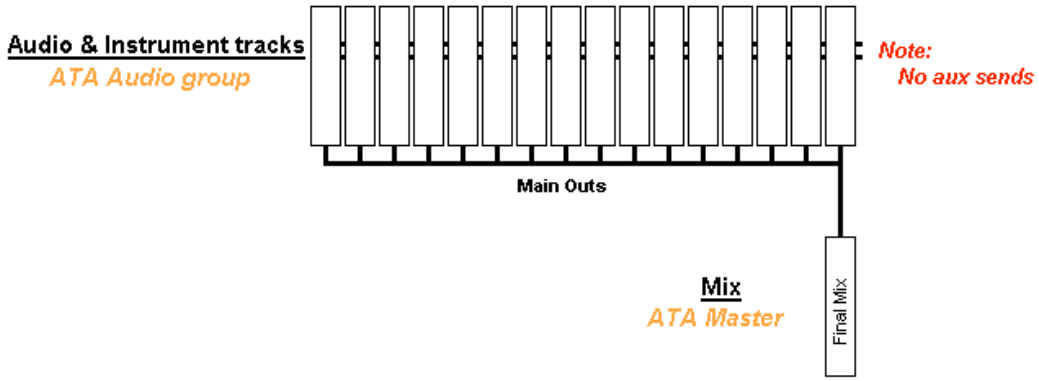
Support queries to mmsupport@mellowmuse.com, please include relevant system and product data, including operating system version, product version and machine specs.

6. Routing Diagrams

*Diagrams courtesy of James Cadwallader

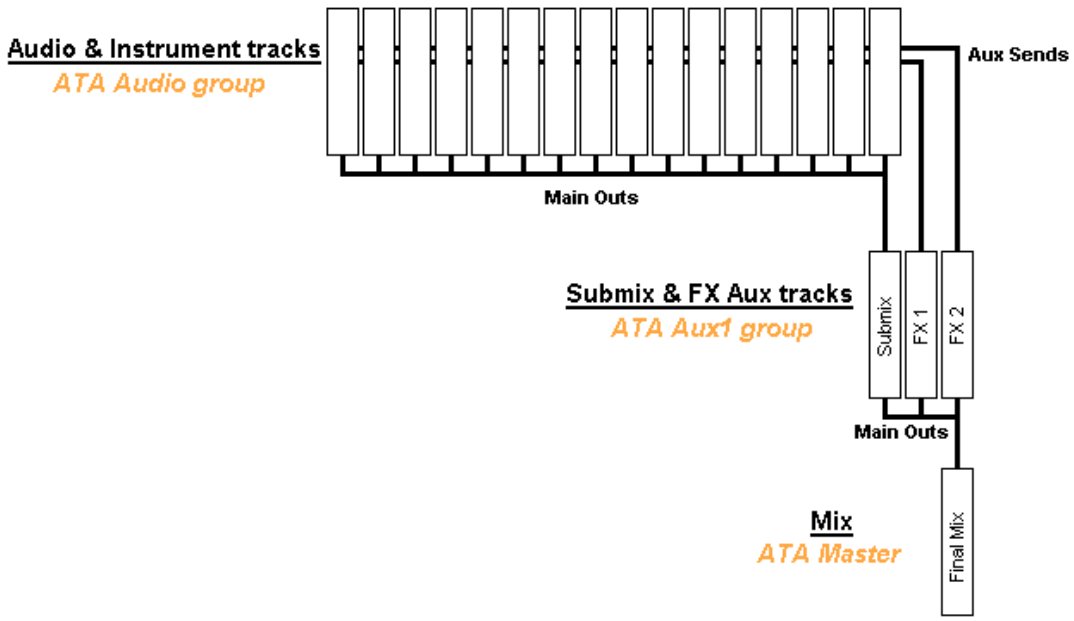
Simple Routing 1

One Compensation Layer



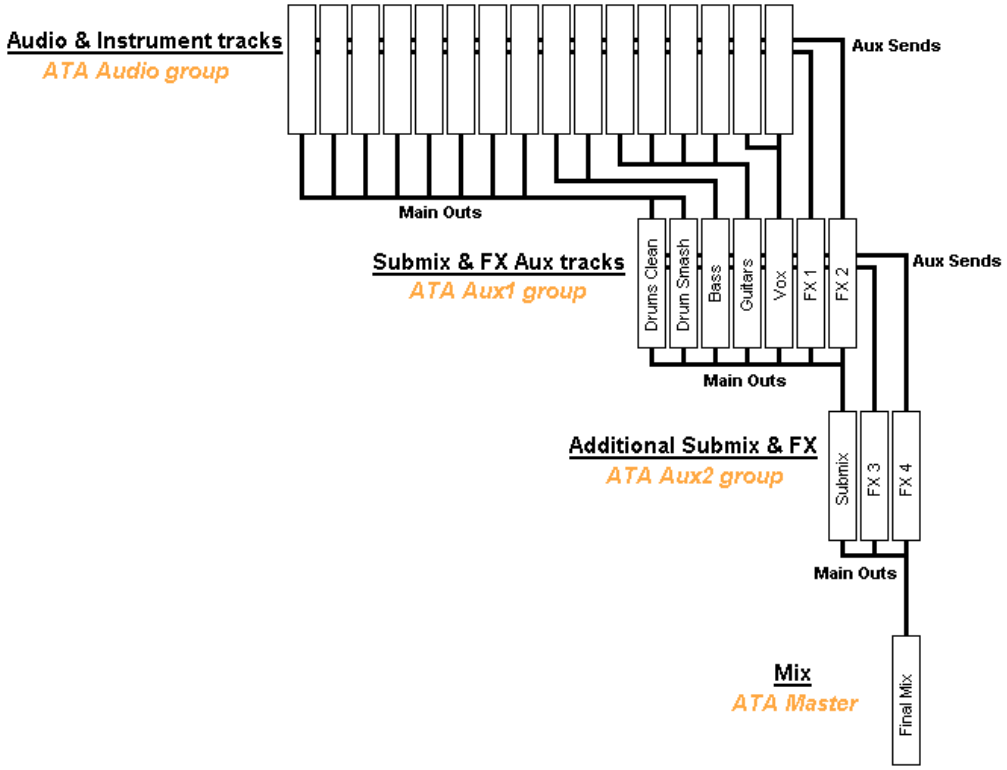
Simple Routing 2

Two Compensation Layers



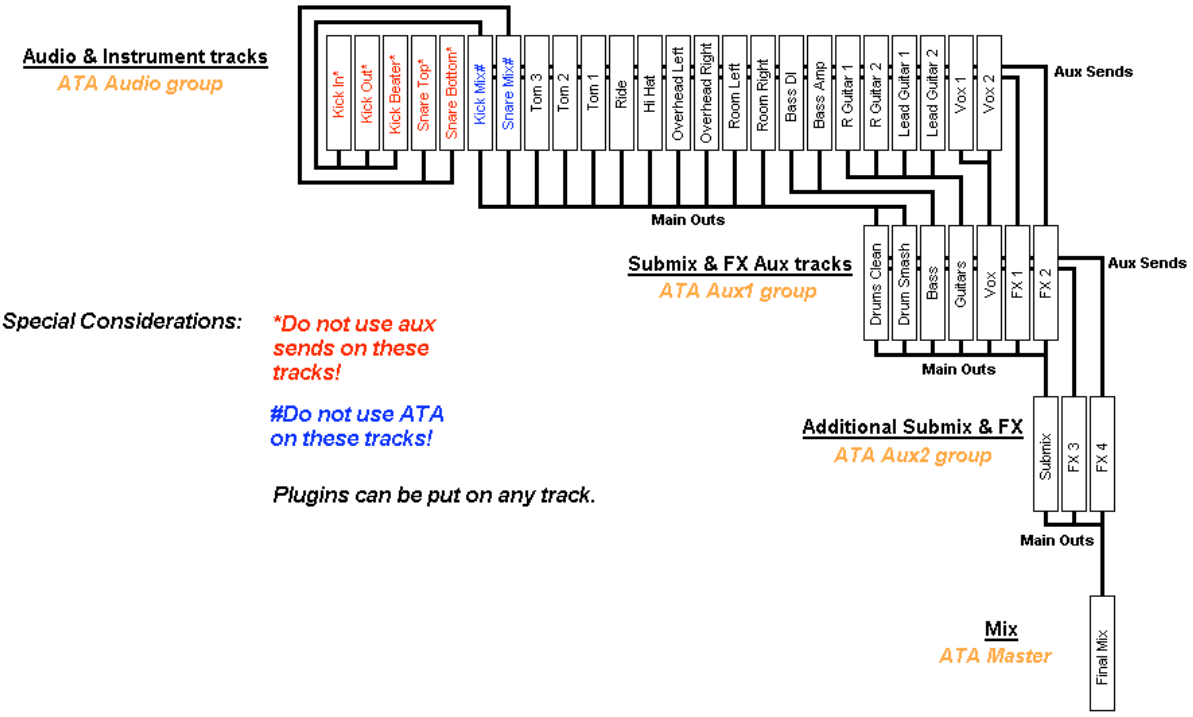
Simple Routing 3

Three Compensation Layers



Advanced Routing

Three Compensation Layers



Special Considerations:

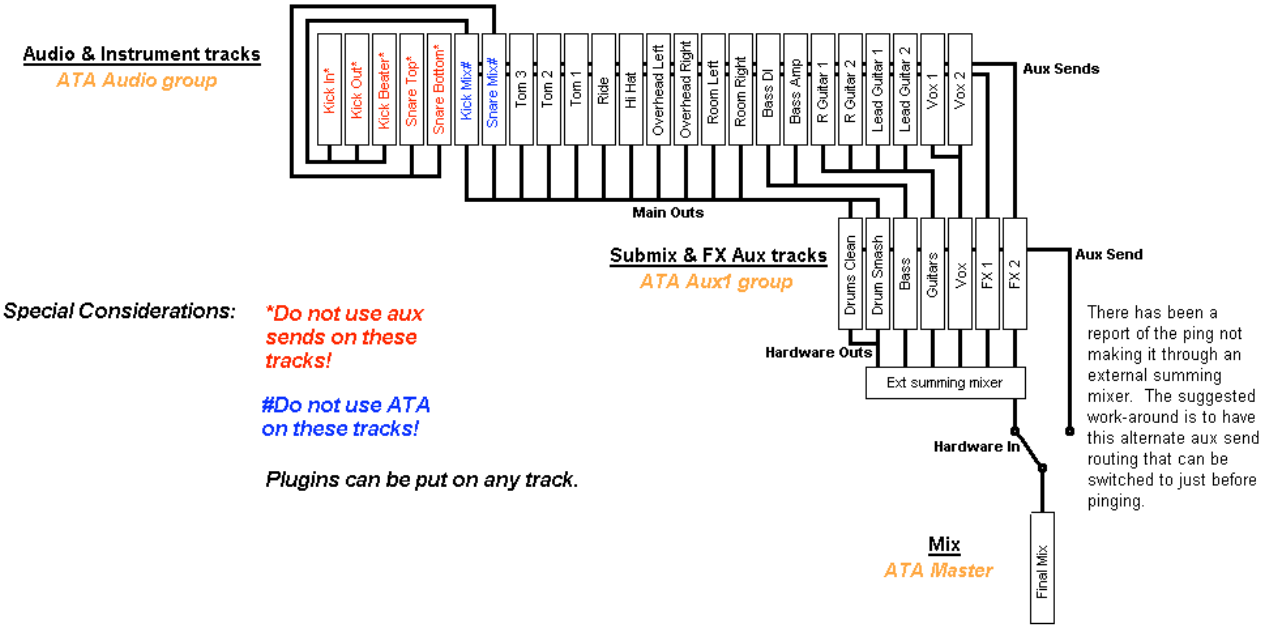
**Do not use aux sends on these tracks!*

#Do not use ATA on these tracks!

Plugins can be put on any track.

Advanced Routing with External Summing Mixer

Two Compensation Layers



Special Considerations:

**Do not use aux sends on these tracks!*

#Do not use ATA on these tracks!

Plugins can be put on any track.

There has been a report of the ping not making it through an external summing mixer. The suggested work-around is to have this alternate aux send routing that can be switched to just before pinging.