

# TUTORIAL: AMP MATCHING WITH THE AXE FX II

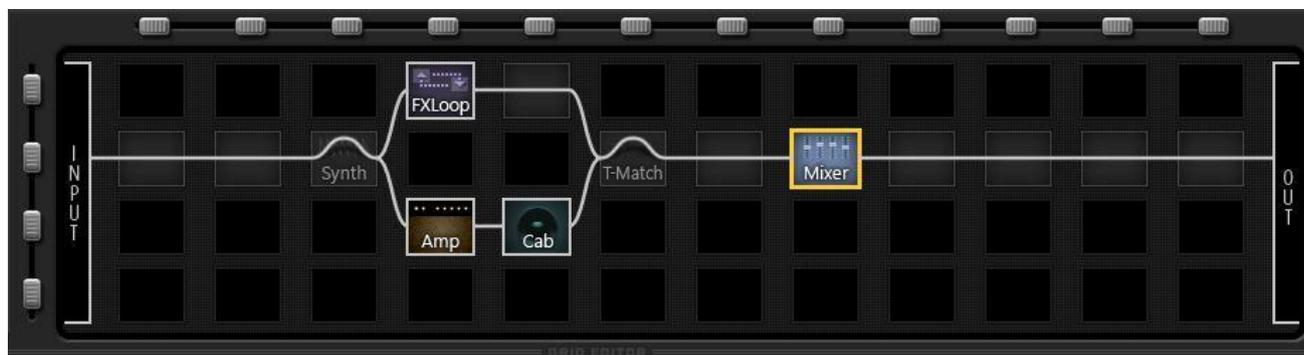
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## 1) OVERVIEW & ROUTING INSIDE THE GRID OF THE AXE FX II:



- The guitar signal connected to INPUT1 LEFT (or INSTR In) is split after the Synth block.
- The first signal path is routed to your physical amplifier (& mic'ed cabinet) by the FX LOOP block in row 1 of the grid.
- The second chain routes the signal to feed the AMP and CAB blocks of the Axe FX II in row 3.
- Both signals are led to the TMA block in row 2.

Optionally, a dedicated Mixer block can be inserted. See 6) for additional information.

In order to separately route both signals as “reference” (physical amplifier & cabinet) and “local” (Axe FX II AMP & CAB) into the TMA block, the first signal (physical amplifier & cabinet) is panned hard to the *left*, while the second signal (Axe FX II AMP & CAB) is panned hard to the *right*.

## a) FX LOOP



- Connect OUTPUT 2 LEFT to the *Guitar Input* of your physical amplifier.
- Connect INPUT 2 LEFT to the *Signal Out* of your physical amplifier.  
The *Signal Out* can be:
  1. The output of a preamp fed by a mic'ed cabinet
  2. a DI signal with/without speaker simulation
  3. a line out from a power soak
  4. The FX Send of your amplifier's effects loop
  5. several other setups are possible
- PAN the FX LOOP's Output hard *left* to route the signal as „reference“ to the TMA block.
- Bypass the FX LOOP block (=MUTE) to hear the Axe FX II AMP & CAB only.

## b) AMP + CAB blocks



- Set *Input Select* to LEFT (your guitar signal) .
- Pan AMP & CAB Output hard *right* to route the signal as „local“ to the TMA block.
- Bypass the AMP block (=MUTE) to hear your physical amplifier (FX LOOP) only.

### c) TMA Block



- On the PROCESS page set REF SOURCE to INPUT2 (or row1) and REF CHAN (the reference channel) to LEFT. This is the signal of your physical amplifier.
- Set LOCAL CHAN to RIGHT. This picks up the signal of the AXE FX II AMP & CAB, as both are balanced right.
- Bypass the TMA Block while playing guitar to tweak the AXE FX II AMP to sound close to your physical amplifier.
- Activate the TMA only when feeding the signals into it (you may even leave it bypassed while doing so). Don't feed the signals yet.

### d) SYNTH Block [Test tone generator for accurate matching]



- Set Voice 3 to SINE and „TRACK“ to OFF.
- Set „FILTER“ to 20KHz

- In the template the frequency is connected to the LFO. This creates a sweeping sine tone from 20 Hz – 20 kHz which allows for precise measuring.
- While playing guitar and tweaking, bypass the Synth block. The signal is only used for matching.
- Check for your levels, you may need to turn down the output of the Synth block and your monitors to prevent clipping!
- Generally check the levels of INPUT 1 & 2 as well as the level of each block (for that, use your monitoring device). It is recommended to have both signal chains feed the TMA block with approximately similar levels.

#### e) MIXER block [optionally]



- Set Mixer Output mode to MONO. This will make sure that both signal chains are routed to both OUTPUTs.
- Set Mixer Output mode to STEREO. This will make sure that both signal chains are routed separately to *left* and *right* OUTPUTs.

>If you are using a mono CAB block after the TMA block (while matching a preamp of a physical amplifier) the Mixer block is not necessary.

## 2) MATCHING PROCESS:

- Check the I/O menu for the following settings:
  1. "Copy OUT1 to OUT2" must be set to "OFF" (otherwise the FX LOOP may not work properly)
  2. Make sure INPUT 2 LEFT (FX LOOP Input) receives a signal (LEDs should blink).

>If not, check if all connections are set up correctly and INPUT 2 GAIN is set high enough
- Bypass the Synth & TMA blocks.
- Play guitar and tweak the sound of the AXE FX II AMP block while alternating between both signal chains (bypassing and activating the before mentioned blocks).
- The CAB may help you to find the best settings in the AMP block!

- When satisfied with the sound, disconnect your guitar & activate the TMA block.
- Verify, whether you need to match the tones with or without the CAB block (this depends on your setup, both is possible) and bypass the CAB block (or don't, depending on your setup).
- Activate the Synth block.
- Press x and y on the Axe FX II front panel in the same time to feed the "reference" AND "local" slots of the TMA block.  
>Now you should see the frequency curves of both signals on the front display responding to the sine sweep of the Synth block.
- Let the sine sweep up and down and "record" it for approximately 5 – 8 seconds.
- Press x and y again to stop the signals.
- Press *Enter* to match.

### 3) POST-MATCHING: A/B TEST!

- Connect your guitar to the AXE FX II.
- To compare the matched Tone to the Reference:
  1. Bypass the AMP and TMA block to listen to your physical amplifier (FX LOOP).
  2. Bypass the FX LOOP and activate the AMP and TMA blocks to listen to the matched signal.
  3. You may export the TMA IR to a User CAB IR and replace the TMA block with it.  
>Compensate for approximately 3 dB of level drop in the CAB block.
- Advanced users may program their MIDI foot controller to switch between both chains with a single hit of an IA switch. This allows for comfortable A/Bing.  
>Set switch "on" to: UNBYPASS AMP / UNBYPASS TMA / BYPASS FX LOOP to listen to your matched signal.  
>Set switch "off" to: BYPASS AMP / BYPASS TMA / UNBYPASS FX LOOP to listen to your physical amplifier.
- You may want to tweak the AMP block again and repeat the matching process for even better results.  
  
>DONT CHANGE TONE SETTINGS (EQ, BRIGHT, MASTER, advanced Parameter) on the Axe FX II AMP after matching to be able to keep AND SHARE the real deal ;)

**I HOPE YOU SHARE AMP MATCHINGS PRESETS FROM YOUR REAL AMPS  
LET THE COMMUNITY PARTICIPATE!**