TANGERINE AUTOMATION INTERFACE FOR FLYING FADERS

STANDALONE SETUP & USER GUIDE

V1.1

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1 INTRODUCTION

THD-Labs creates audio tools empowering you to attain an unprecedented level of creativity. By combining modern digital control with the original 100% analogue signal chain of classic mixing systems, we enable engineers to breathe new life into their vintage consoles and tools. Our devices allow you to retain the original character, tone and uniqueness of your large-format analogue console while adding state-of-the-art session recall and DAW control capability.

Classic analog consoles were sold with some of the first integrated mix automation systems. Though groundbreaking in their time, as technology has evolved over 30+ years, their proprietary automation computers have become obsolete and are now unreliable. Enter the Tangerine Automation Interface: a quick-install interface that communicates with your existing workstation over USB giving you access to mix automation from within your studio computer.

As DAWs are now the default method to record and play back audio sources, the Tangerine Automation Interface (TAI) allows simple and reliable digital DAW control of your classic console using the same built-in automation features you use regularly. Since summing and audio level changes are handled out-of-the-box by your mix board, you retain all the authentic character of your console while guaranteeing reliable and accurate level matches throughout the mixing process.

The THD-Labs Tangerine Automation Interface is the world's most powerful retrofit for the original automation computer from SSL® 4000/6000/8000 series, Martinsound Flying Faders consoles and GML automation. The TAI replaces your existing automation computer and is configurable with up to 96 automation channels. It uses your DAW to manage automation via a plug-in (AAX, VST, AU), a Reaper driver or over HUI.

## 1.1 WHAT DOES THE TANGERINE AUTOMATION INTERFACE DO?

The Tangerine Automation Interface replaces your aging Flying Faders computer with a highly reliable and modern automation system. Our system, replaces the original SECA card with our state-of-the-art TAI SEKA card, allowing USB access to the Flying Faders. Other than functional Flying Faders and their complete Card Cage, no additional hardware is required to complete the system. The aging computer and fibre optic link can be disposed of or remain connected for rapid swapping.

The TAI connects your Flying Faders console to your favourite DAW via our Injektor Plug-In (AAX, AU, VST), using REAPER or over HUI. It allows you to control fader automation from within the same project you're mixing, reducing learning time and simplifying your workflow. It supports all widely used automation modes (OFF, READ, WRITE, TRIM, TOUCH) for both volume and mutes. Groups and links are supported as well as all standalone features.

The standalone features are available even without a computer. The standalone TAI can control Mutes, Solos, Groups and Links. It also has powerful diagnostics modes, enabling you isolate any faulty motor, switch or LED. Console snapshots are available as well, the same kind that would be found on a live digital mixing console. It's particularly useful for multi-day tracking sessions.

1.2   HARDWARE DESCRIPTION

The TAI SEKA card is the only piece of hardware required to actualise FlyingFaders systems.
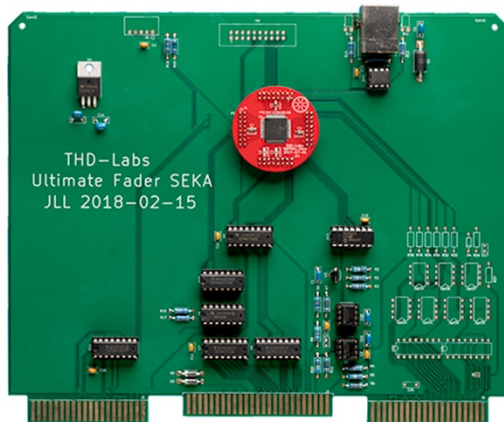
Tangerine SEKA Card

The TAI replaces the original SECA and controls faders directly. It enables mutes, solos, groups, links, snapshots, and diagnostics. When linked to a studio computer with a DAW, it also allows you to record and playback automation in real-time.

1.3   SENT AND RECEIVED CONTROL VALUES

The following Flying Faders control values are transmitted and received.
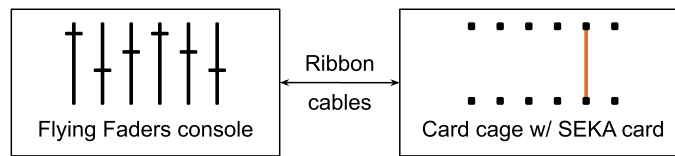
Flying Faders —> TAI

- The FLYING FADERS position
- The MUTE, MUTE RECORD, SOLO, SELECT, FADER RECORD and MATCH buttons
- All GLOBAL MASTER MODULE buttons

TAI—> Flying Faders

- The FLYING FADERS control
- The channel's MUTE
- Channel GROUP assignation
- All channel LEDs and Global Master Module LEDs.
- Groups and link assignments

2 INSTALLATION

The Tangerine Automation Interface is installed directly into your Flying Faders Card Cage in slot 7.

The typical installation process is as follows:

1. Install the TAI SEKA card inside the card cage
2. Test the faders
3. Enjoy!

2.1 INSTALLING THE TAI INSIDE THE CARD CAGE

Installing the TAI takes roughly 15 seconds:

1. Power off the Flying Faders card cage
2. Remove the original SECA card, located in slot no 7
3. Install the TAI SEKA card into slot no 7
4. Power on the card cage

2.2 TESTING THE FADERS

Power on the card cage.

- If no USB is connected, the LEDs on all channels will chase up and down once, then flash once.
- If USB is online, the LEDs on all channels will chase up twice, then flash twice.

The solos and mutes should be active. Feel free to test them if desired.

The TAI has built-in console diagnostics functions. Go to page 7, and run the *Fader Test*, *LED test* and *Switch test*. Follow any relevant troubleshooting steps if necessary.

3   USING STANDALONE FEATURES

3.1   MUTING & SOLOING CHANNELS
Press the mute switch on a channel to mute it. Press the solo switch on a channel to solo it.

3.2   USING FADER GROUPS
Groups allow you to select a master fader and assign any number of slave faders to it. A master fader will offset the relative level and mute slave faders. Moving or muting a slave fader does nothing to the master or other slave faders of a group. If a slave fader is muted, it will always remain muted regardless of master fader mute mute.

Entering and Exiting Group Mode
1.   Press *MASTER GROUP* to enter group mode. The *MASTER GROUP LED* will turn ON.

2.   To exit group mode press *MASTER GROUP*. The *MASTER GROUP LED* will turn OFF.

Creating, Editing and Cascading Groups
1.   From group mode, press *SELECT* on a channel

     o   If it is not assigned to a group, it will become group master of a new group and it's SELECT LED will flash.

     o   If it is member of a group, the SELECT LED of all members will turn ON and the master will flash.

2.   Press *SELECT* on any fader you want to add to the group. It's *SELECT LED* will turn solid. To remove a fader from the group, press *SELECT* on that fader. It's *SELECT LED* will turn OFF.

     o   If a fader is already slave to another group's master, it will be unavailable for grouping. Remove it from the other group before assigning.

     o   If a fader is already master to another group, a cascading group will be created.

3.   Press *MASTER GROUP* to confirm the group assignment and exit.

Deleting groups or selecting a new group master
1.   From group mode, *TOUCH* any member of the group you want to delete or assign a new master. The *SELECT LED* of its master will start flashing.

2.   Press *SELECT* on the group's master. It will stop flashing and be unassigned from the group.

3.   To assign a new master to the group, press *SELECT* on the fader you want to become the new master to the group. It's *SELECT LED* will flash and the slaves will continue to stay solid.

4.   Press *MASTER GROUP* to confirm the new master assignment and exit. If no master is assigned upon exiting, the group will be deleted.

Interrogating Groups
From group mode, *TOUCH* any fader to interrogate group status. If it is member of a group:

- The group master's (and submasters') UP LED will flash

- The group slaves' (and subslaves') DOWN LED will turn solid

3.3   USING FADER LINKS

Links allow you to interconnect multiple faders. They will mute in tandem, and their volume will be locked together at the same level. It is usually used to make a stereo pair from two mono channels.

Touching or muting a fader is the same as touching all other members at the same time. There is no master / slave hierarchy, all faders respond to the touch of any other fader.

Entering and Exiting Link Mode
1. Press *MASTER LINK* to enter <u>link mode</u>. The *MASTER LINK LED* will turn ON.

2. To exit <u>link mode</u> press *MASTER LINK*. The *MASTER LED* will turn OFF.

To create, edit and delete fader links
1. From <u>link mode</u>, press *SELECT* on the fader that you want to be a link member. The *SELECT LED* will flash. If the selected fader is already member of a link, the *SELECT LED* of other members will turn solid, allowing you to edit the existing link.

2. Press *SELECT* on any fader you want to add to the link. It's *SELECT LED* will flash with other faders. To remove a fader from the link, press *SELECT* on it. It's *SELECT LED* will turn off.

3. Press *GLOBAL LINK* to confirm the link assignment and exit. If a fader is left alone when exiting <u>link mode</u>, the faders previous link will be deleted.

<p align="center">Note: a group master cannot also be a link member.</p>

3.4   USING CONSOLE SNAPSHOTS

Snapshots enable scene recall on console faders and mutes. Contrarily to DAW based automation, there is no way to "ramp up" or program a timed fader move, they jump immediately. Snapshots are also console-wide; it is not possible to recall only a specific channel or subset of the console.

Snapshots are created from the Global Master Module (GMM) and are assigned to the select switch of an individual channel. As such, a console is capable of 1 unique console-wide snapshot per console channel (for example: a 32-channel console supports 32 full snapshots of the entire console).

Features common to all modes
In either <u>save snapshot mode</u>, <u>load snapshot mode</u>, or <u>delete snapshot mode</u>:

- The SELECT LEDs on channels with existing snapshots turn on indicating that a snapshot exists on that channel can be overwritten, recalled, or deleted.

- Each mode has its own individual *Hold Option*:

    o If set to *ON*, the TAI will stay in any given mode, allowing you to make multiple saves, recalls or deletes.

    o If set to *OFF*, the TAI will automatically exit the mode after a successful operation.

Saving a snapshot
1. Simultaneously press *MASTER SHIFT* + GLOBAL *RECORD* to enter <u>save snapshot mode</u>.

2. On any fader, press the SELECT button to assign a new snapshot to that channel.

3. If a snapshot already exists, the SELECT LED of the chosen channel will flash. Press SELECT a 2nd time to confirm an overwrite.

4. Press *MASTER SHIFT* to exit or *GLOBAL MATCH* to enter <u>load snapshot mode.</u>

Recalling a snapshot
1. Simultaneously press *MASTER SHIFT* + *GLOBAL MATCH* to enter <u>load snapshot mode</u>.

2. On any fader, press the SELECT button to recall the snapshot saved to that channel.

3. Press *MASTER SHIFT* to exit or *GLOBAL RECORD* to enter <u>save snapshot mode.</u>

Deleting Snapshots
1. From either <u>save snapshot mode</u> or <u>load snapshot mode</u> Simultaneously press *GLOBAL RECORD* + *GLOBAL MATCH* to enter <u>delete snapshot mode</u>.

2. On any fader, press the SELECT button to delete the snapshot saved to that channel.

3. To exit <u>delete snapshot mode</u>, press *M SHIFT* or *G MATCH* or G *RECORD.*

Walking through Snapshots
Using the + and – will walk you through the existing snapshots

Revert to original mix
The *GLOBAL SELECT* allows you to return to the last mix state before entering recall mode.

Toggling between Hold options
<u>Save, Load and Delete snapshot modes</u> each have individual dedicated hold options. When in either mode, press the *MASTER OTHER* button to toggle between *hold on* and *hold off*.
- The *MASTER OTHER LED* flashes if the hold option is ON.

3.5   USING FADER TESTS
The TAI contains a variety of fader tests. Tests are initiated from the Global Master Module (GMM).

The following tests are supported: LED test, Switch / Touch test, and Motor Test.

3.5.1   RUNNING TESTS FROM THE GLOBAL MASTER MODULE (GMM)
To <u>enter / exit</u> the test mode, from the GMM Simultaneously press *SHIFT + RUN*. The console will default to LED Test. To change to a different test mode:

- To start the **LED Test**: press AUTO *MATCH* – to change patterns, press the + or – button

- To start the **Switch / Touch Test**: press *RECORD*

- To start the **Motor Test**: press *SELECT* – to change patterns, press the + or – button

3.5.2   DESCRIPTION OF TESTS

LED Test
When running a LED test, all LEDs should respond to the chosen pattern. To toggle between patterns press the + or – button on the GMM. Available test patterns are:
- All LED Flash
- Up / Down LED chase
- Left to right bank chase
- Left to right console chase

Switch / Touch Test
This mode tests the communication between each individual switch and the TAI. The fader's touch sensor is also tested. When running a Switch / Touch test all channel LEDs will turn on. Pressing any button or touching any fader turns off all LEDs for that channel except for the one assigned to the pressed button.

Motor Test
When running a motor test, all console faders should move up and down at the same time. To toggle between patterns press the + or – button on the GMM. All Motor tests are limited to 1-minute to avoid burning out servo chips and motors. Available test patterns are:
- Top-to-bottom continuous movement
- Accelerating continuous movement
- Linear increment jump
- 5dB increment jump
- Top and Bottom Knock Test
- → If faders are out-of-synch, fader calibration is most likely required.
- → If some faders don't move or get stuck, troubleshoot the faders.

3.6   SETTING FADERS FOR "SOLO SAFE"

Flying Faders set to solo safe won't automatically mute when another fader soloed. This is useful for groups faders or when a Flying Fader is used as a console's master fader.

The solo safe setting is saved to TAI firmware and is persistent across power-cycling and reset. To set faders for solo safe:

1. From the Global Master Module, press *GLOBAL SELECT + GLOBAL SOLO*

2. Press *SOLO* on the channels you want to put in solo safe. Their solo LED will turn solid.

3. Press *GLOBAL SELECT + GLOBAL SOLO* a second time to commit the selection to firmware