



Tangerine Automation Interface

TANGERINE AUTOMATION INTERFACE

FLYING FADERS SETUP & USER GUIDE

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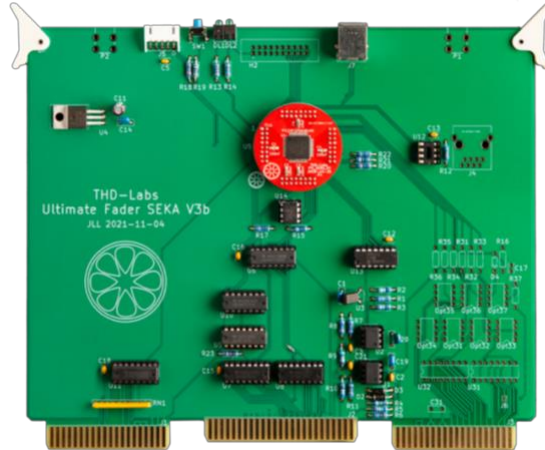
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1 SYSTEM OVERVIEW

The Tangerine Automation Interface for Flying Faders has three constituent parts: the **SEKA Card**, the **INJEKTOR** software, and the **TaiMotherShip** plug-In.

1.1 HARDWARE OVERVIEW

The **TAI SEKA card** is the only piece of hardware required to actualise Flying Faders systems.



The TAI replaces the original SEKA and controls faders directly. It enables mutes, solos, groups, links, snapshots, and diagnostics. When linked to a studio computer with a DAW, it records and plays back automation in real-time. With the optional **Event Controller**, the TAI manages events (EQ In/Out, Compressor In/Out, Cue Mute, etc.) on compatible consoles.

Sent and Received Control Values

Flying Faders → TAI

- The FLYING FADERS position
- The MUTE, MUTE RECORD, SOLO, SELECT, FADER RECORD and MATCH buttons
- All GLOBAL MASTER MODULE buttons
- Console Events (on compatible consoles)

TAI → Flying Faders

- The FLYING FADERS control
- The channel's MUTE
- Channel GROUP assignment
- All channel LEDs and Global Master Module LEDs
- Groups and link assignments
- Console Events (on when equipped with the event controller)

Hardware Variations

The TAI for Flying Faders is available with 3 levels of functionality: **Diagnostics**, **Console Control** and **Automation**.

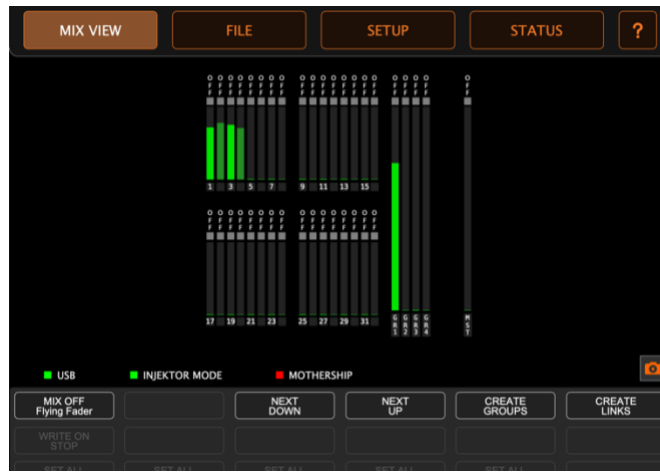
The following table shows all TAI features available for each level of functionality.

**Tangerine Automation Interface for Flying Faders
Feature Comparison Table**

	Diagnostics	Console Ctrl	Automation
Automation Features			
Automate Fader mutes and cuts from the DAW	X	X	✓
Read / Write resolution: 10 bits (+/- 0.1 dB precision)	X	X	✓
Dedicated absolute, TRIM and mute lanes	X	X	✓
Motor OFF support with enhanced Fader Match	X	X	✓
Control automation from Master Control Module	X	X	✓
Set channel automation modes from the faders	X	X	✓
Master fader automation	X	X	✓
Grouped automation	X	X	✓
Linked automation	X	X	✓
Use console faders as a virtual DAW controller	X	X	✓
Console Control Features			
Control console cuts and solos	X	✓	✓
Define and control groups and links	X	✓	✓
Define channels for solo-safe	X	✓	✓
Create and load mix scenes	X	✓	✓
Save and load scenes to host computer	X	X	✓
Number of snapshots available	None	1 per channel	Unlimited
Manage console events	X	✓	✓
Testing & Maintenance Features			
Motor Test - 5 patterns	✓	✓	✓
LED Test - 3 Patterns	✓	✓	✓
Switch Test	✓	✓	✓
Built in auto-shut off protection for motor tests	✓	✓	✓
Software-based toolless automatic fader calibration	✓	✓	✓
Upgrade TAI firmware over USB	✓	✓	✓

1.2 SOFTWARE OVERVIEW

INJEKTOR is the dispatch software that communicates with the console. It has 3 main views, accessible from the top menu bar. It must be always open for automation to function.



The MIX view shows console status. It manages, controls, and monitors console functions. More on [page 14](#).

The FILES view manages mix scene files. It SAVES, LOADS, EXPORTS, IMPORTS and DELETES mix scenes. More on [page 17](#).

The SETUP view configures the interface and the software. Workflow selection, comfort settings, system configuration and firmware updates are available. More on [page 18](#).

1.3 PLUG-IN OVERVIEW

The **TaiMotherShip** Plug-in reads and writes automation directly to the DAW. It communicates with **Injektor**, displays console status, and controls automation modes. More on [page 22](#).



1.4 OVERVIEW OF WORKFLOWS

The Tangerine Automation Interface for Flying Faders supports multiple workflows.

INJEKTOR Workflow

Using the **TaiMotherShip** plug-in, the **INJEKTOR** workflow controls up to 96 channels of automation directly from the DAW — no external synchronization is required. Pro Tools, Cubase/Nuendo and Logic are officially supported, though it should work with any DAW supporting AAX/VST/AU plug-ins.

A video guide to the **INJEKTOR Workflow** is available at: youtu.be/LhZv2SGGNRs

HUI Workflow

Working as multiple HUIs, the TAI turns the console into a 32-channel DAW control surface with no additional software required. The workflow supports multiple versions Pro Tools' HUI implementation. DAW faders drive the console channel's volume controls. All audio tracks exit the DAW pre-fader at 0 dB. They are both scaled and summed by the console.

NOTE: TRIM is not available in the HUI Workflow, as DAW faders default to 0dB in **TRIM** which creates dangerous volume spikes.

2 INTERFACE SETUP

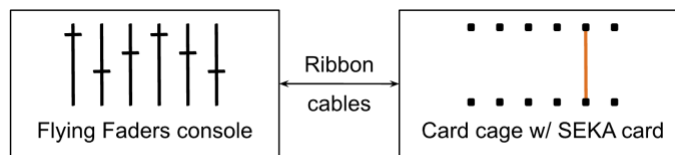
The typical installation process is as follows:

1. Install the TAI SEKA card inside the card cage.
2. Test the faders.
3. Configure output faders.
4. Install the INJEKTOR software suite, connect USB.
5. Configure the interface.

2.1 HARDWARE INSTALLATION

For a video demonstrating the installation process, visit: youtu.be/BtKkkASA95k.

The TAI is installed directly into the Flying Faders Card Cage in slot 7.



To install the SEKA card in the card cage:

1. Power off the Flying Faders card cage, wait 15 seconds.
2. Remove the original SECA card, located in slot no 7.
 - If the card cage is dusty, clean the slot with compressed air before installing.
3. Install the TAI SEKA card into slot no 7.
4. Power ON the card cage.

2.2 INITIAL FADER TESTS

Power on the card cage, while the TAI is booting:

- If USB is not connected, the LEDs on all channels will scan down once, then flash once.
- If USB is online, the LEDs on all channels will scan 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 10**, and run the **Fader Test**, **LED test** and **Switch test**. Follow any relevant troubleshooting steps if necessary.

2.3 OUTPUT FADER CONFIGURATION (SOLO-SAFE CONFIGURATION)

Solo safe prevents faders from muting when another fader is soloed. This is necessary for the master fader and other output faders.

To set specific faders for solo safe:

1. From the Global Master Module, press GLOBAL SELECT + GLOBAL SOLO
2. Press SOLO on the desired channels. Their solo LED will flash.
3. Press GLOBAL SELECT + GLOBAL SOLO a second time to commit the selection to firmware.

Solo safe settings are persistent: they are retained when the system is powered off.

2.4 INJEKTOR SOFTWARE SUITE INSTALLATION

The **INJEKTOR** Software Suite includes the **INJEKTOR** application and the **TaiMotherShip** plugin. Download and install the version compatible with the DAW and OS from thd-labs.com.

Once the software is installed, connect a USB cable between the TAI and the host computer.

2.5 INTERFACE CONFIGURATION

Using the **INJEKTOR** software, navigate to the **Setup** tab, select the desired workflow and calibrate the faders if necessary. Optionally, configure usage preferences. For more information see **Setup View page 18**.

The TAI is now ready for operation!

2.6 RECOMMENDED POWER ON SEQUENCE FOR GENERAL OPERATION

During normal operation, it is recommended to power on the automation system in the following order:

1. Power on the host computer.
2. Power on the Flying Faders Card Cage.
3. Open **INJEKTOR**.
4. Open the DAW mix session.

3 DAW SETUP

DAW settings must be set to ensure seamless integration with the TAI. settings vary by workflow.

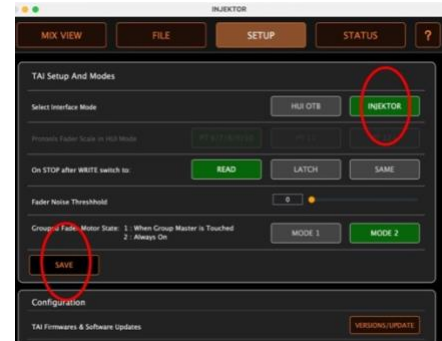
3.1 PRO TOOLS SETUP FOR INJEKTOR WORKFLOWS

Set the interface for INJEKTOR workflow

1. Open Pro Tools preferences.
Open **INJEKTOR** and chose the setup tab.

Set: “Select interface mode” = **INJEKTOR**

Set: save configuration



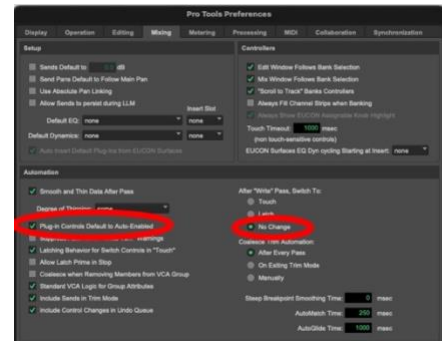
CONFIGURE Pro Tools for use with the INJEKTOR workflow

1. Open Pro Tools preferences.
(Menu—> Pro Tools—> Preferences)

In the **Mixing** tab:

Set: “Plug-in controls Default to Auto-Enabled”= **Checked**

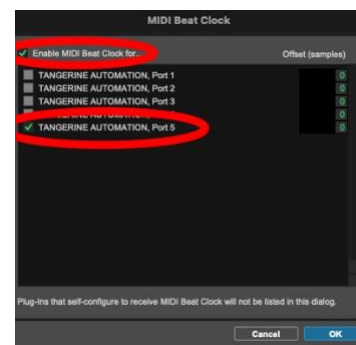
Set: “After Write Pass, Switch to” = **No Changes**



2. Open the Midi Beat clock window
(Menu—> Setup—> MIDI/Midi Beat Clock)

Set: MIDI/MIDI Beat Clock for = **Checked**

Set: Tangerine Automation, Port 5 = **Checked**.



3. Open the automation window
(Menu—> Window—> Automation)

Set: <Write enable> = “PLUG-IN” = ON.



3.2 LOGIC PRO X SETUP FOR INJEKTOR WORKFLOWS

Set the Interface for INJEKTOR workflow

1. Access the TAI setup page.
Open **INJEKTOR** and chose the setup tab.

Set: “Select interface mode” = **INJEKTOR**

Set: save configuration

CONFIGURE Logic Pro X for use with the INJEKTOR workflow

1. Open Logic Pro X preferences.
(*Menu—> Logic Pro—> Preferences*)

In the **Automation** tab:

Set: “Write” mode changes to = **OFF**

Set: Write automation for Plug-In = **Checked**

2. Open the Synchronization Settings
(*Menu—> File—> Project Settings—> Synchronization*)

In the **MIDI** tab:

Set: Destination TANGERINE AUTOMATION Port ; Clock = **Checked**

Set: Clock mode = **Song — SPP at Play Start and Stop/SPP/Continue at Cycle Jump**

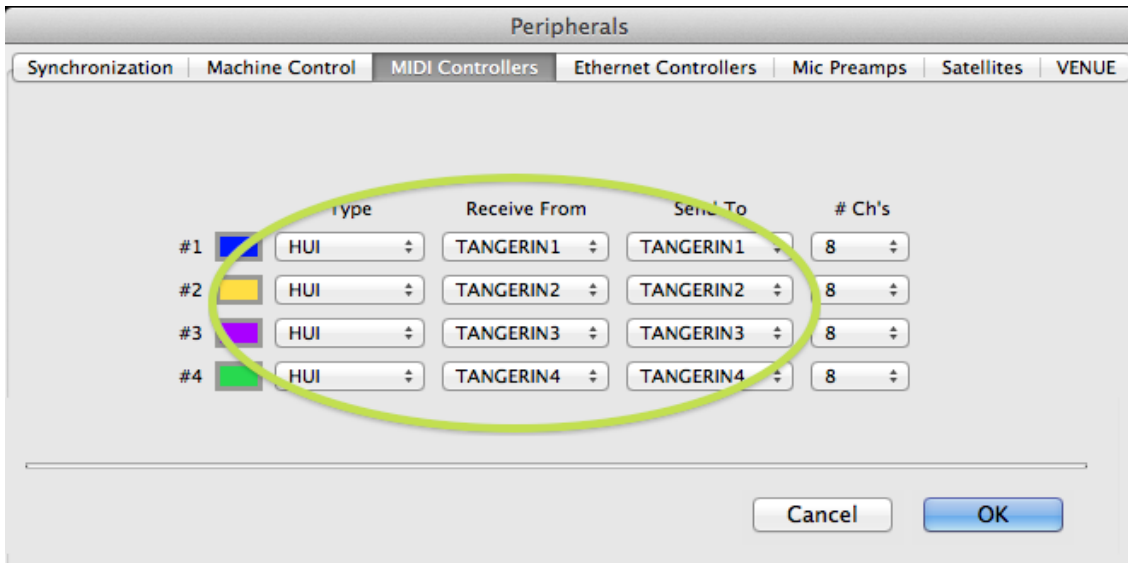
NOTE: In Logic Pro X, the MIDI beat clock is set per project.
Each new project needs to have this setting reapplied.

3.3 PRO TOOLS SETUP FOR HUI WORKFLOWS CONTROL SURFACE CONFIGURATION IN PRO TOOLS

Step 1: In the /Peripherals/MIDI Controllers panel,

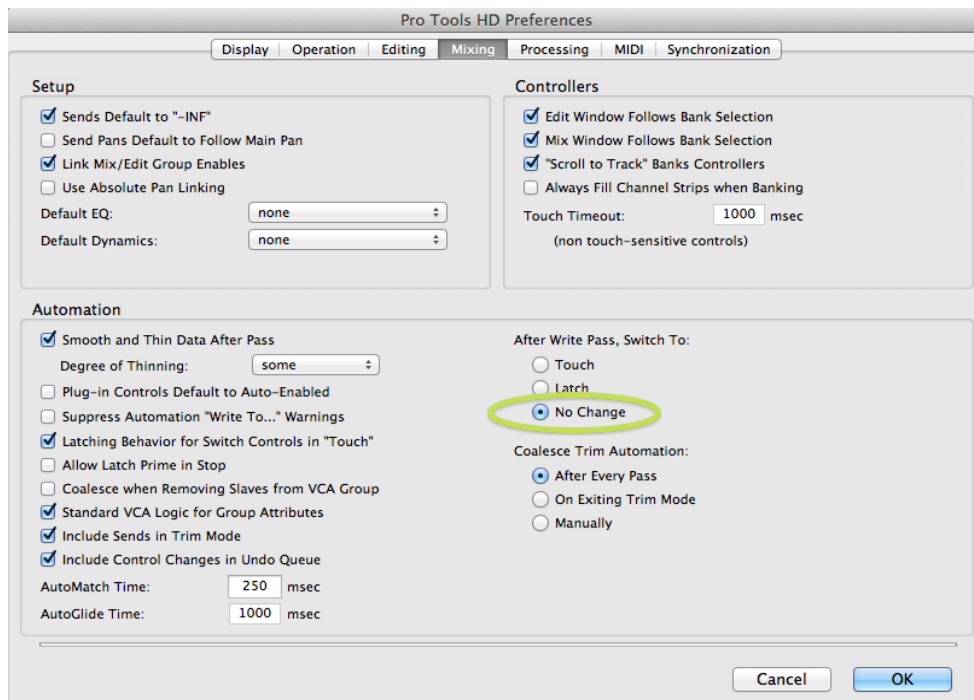
Select Type = 4 x HUI

Set Tangerine Automation Interface Ports 1 to 4 in the “Receive From / Send To” fields.



Step 2: In the “Preferences/Mixing” panel,

Set: “After Write Pass, switch to:” selector to “No Change”



4 FADER TESTS

The TAI supports 3 sets of tests: LED tests, Switch / Touch Test and Motor Test.

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 test validates 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 switch or touching any fader turns off all LEDs for that channel (except for the one assigned to the pressed switch). Touching a fader gives a positional readout on the corresponding LEDs.

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-sync, fader calibration is most likely required.

→ If some faders don't move or get stuck, troubleshoot the faders.

4.1 RUNNING TESTS FROM THE GLOBAL MASTER MODULE

To **enter / exit** the test mode, from the **MASTER MODULE**, 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.

5 CONSOLE CONTROL FEATURES

For a video demonstration of standalone features, visit: youtu.be/Mr28rBuPfeU

5.1 MUTING & SOLOING CHANNELS

Press the mute switch on a channel to mute it. Press the solo switch on a channel to solo it.

5.2 FADER GROUPS

Groups contain a single master fader and any number of slave faders. The master fader controls the level and mutes the slave faders. Slave faders don't affect the master or each other.

5.2.1 ENTERING AND EXITING GROUP MODE

The **MASTER GROUP LED** illuminates to indicate mode state.

From the Flying Faders Master Panel

1. Press **GROUP** to enter or exit **Group Mode**.

From INJEKTOR

1. Select **CREATE GROUP** to enter or exit **Group Mode**.

5.2.2 CREATING AND EDITING GROUPS

Creating Groups

1. Enter **Group Mode**.
2. Press **SELECT** on a fader to define it as Group Master (it's **SELECT LED** will Flash and it will jump to 0 dB).
3. Press **SELECT** on any fader to slave it to the group (it's **SELECT LED** will turn solid).
4. Press + or – on the **Flying Faders Master Panel** to cycle to the next group to create. If no select LEDs are lit or flashing, a new group is being created.
5. Exit **Group Mode** to confirm group assignments.

Editing and Deleting Groups

1. Enter **Group Mode**.
2. Press + or – on the **Flying Faders Master Panel** to select the group to edit.
3. Press **SELECT** on the desired channels to either add them or remove them from the group.
4. Removing the Master from a group deletes the whole group.
5. Exit **Group Mode** to update group assignments.

Interrogating Groups

- **TOUCH** a fader to interrogate its group status. All group members' UP and DOWN LEDs will indicate group membership (UP = Master, Down = Slave). No LED indicates the fader is not grouped.
- From **Group Mode**, press **SELECT** on the **Flying Faders Global Panel** to interrogate console-wide group membership.

5.3 FADER LINKS

Links are groups with every channel as a master. All linked faders control each other's relative volumes, and they mute in tandem. A group master cannot also be a link member.

5.3.1 ENTERING AND EXITING LINK MODE

The **MASTER LINK LED** illuminates to indicate mode state.

From the Flying Faders Master Panel

1. Press **LINK** to enter or exit **Link Mode**.

From INJEKTOR

1. Select **CREATE LINK** to enter or exit **Link Mode**.

5.3.2 CREATING AND EDITING LINKS

Creating Links

1. Enter **Link Mode**.
2. Press **SELECT** on the faders to be linked. Their **SELECT LEDs** will flash.
3. Press + or – on the **Flying Faders Master Panel** to cycle to the next link to create. If no **SELECT LEDs** are lit or flashing, a new link is being created.
4. Exit **Link Mode** to confirm link assignments.

Editing and Deleting Links

1. Enter **Link Mode**
2. Press + or – on the **Flying Faders Master Panel** to select the link to edit.
3. Press **SELECT** on the desired channels to either add them or remove them from the link.
4. If all channels are removed from a link, it is deleted.
5. Exit **Link Mode** to confirm link assignments.

Interrogating Links

- **TOUCH** a fader to interrogate its link membership. Both the **UP LED** and **DOWN LED** will illuminate to indicate link membership. No LED indicates the fader is not linked.
- From **Link Mode**, press **SELECT** on the **Flying Faders Global Panel** to interrogate console-wide link membership.

5.4 TEMPORARY GROUP AND TEMPORARY LINKS

Temporary Groups & Links exist only while the mode is active. They are not saved upon Group/Link mode exit and otherwise function as normal. They are useful for 1-time adjustments. To enter a temporary mode:

From the Master Module, press **Other + Group** or **Other + Link**.

From Injektor, select **Temporary Group** or **Temporary link**.

5.5 MIX SCENES

Mix Scenes set fader positions and mute states across the console to a predefined state.

5.5.1 USING MIX SCENES FROM THE CONSOLE

Mix Scenes are created from the **Flying Faders Global and Master Panels** and are saved to the **SELECT** switch of an individual channel. As such, one **Mix Scene** is available per console channel (a 32-channel console has the potential to save 32 **Mix Scenes**).

Features common to all scene modes:

In either **save scene mode**, **load scene mode**, or **delete scene mode**:

- The **SELECT LED**s on channels with existing presets illuminate, indicating that a snapshot exists on that channel and can be overwritten, recalled, or deleted.
- Each mode has its own individual **Hold Option**, indicated by the **OTHER LED**, located on the **Flying Faders Master Panel**:
 - If set to ON, the TAI remains in any given mode, allowing multiple saves, recalls or deletes.
 - If set to OFF, the TAI automatically exits the mode after a successful operation.

Saving a Mix Scene

1. Simultaneously press **MASTER SHIFT + GLOBAL RECORD** to enter **save scene mode**.
2. On any fader, press **SELECT** to assign the current scene to that channel.
3. Press **MASTER SHIFT** to exit or **GLOBAL MATCH** to enter **load scene mode**.

Loading a Mix Scene

1. Simultaneously press **MASTER SHIFT + GLOBAL MATCH** to enter **load scene mode**.
2. On any fader, press **SELECT** to load the scene saved to that channel.
3. To cycle through available snapshots, press + or – on the **Flying Faders Global Panel**.
4. Press **MASTER SHIFT** to exit or **GLOBAL RECORD** to enter **save scene mode**.

Deleting Mix Scenes

1. From either **save scene mode** or **load scene mode**, simultaneously press: **GLOBAL RECORD + GLOBAL MATCH** to enter **delete scene mode**.
2. On any fader, press **SELECT** to delete the scene saved to that channel.
3. To exit **delete scene mode**, press **MASTER SHIFT** or **GLOBAL MATCH** or **RECORD**.

Reverting to the original mix

GLOBAL SELECT reverts the console to the last mix state before entering a **load scene mode**.

5.5.2 USING MIX SCENES FROM INJEKTOR

INJEKTOR manages an independent unlimited set of mix scenes saved on the host computer. For usage information see page 15.

6 INJEKTOR SOFTWARE

The **INJEKTOR** software controls the TAI and bridges it with **TaiMotherShip** running in the DAW. As such, it must always be open in the background during all mixing operations.

INJEKTOR has 4 windows: **MIX VIEW, FILE, SETUP, STATUS.**

6.1 MIX VIEW

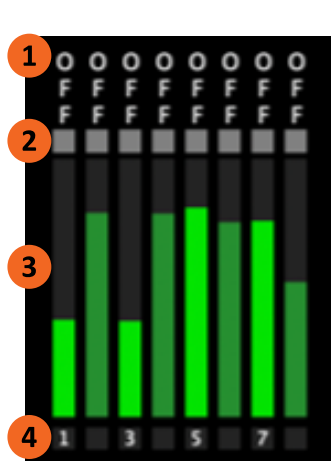
Injektor's Mix View is divided into 5 sections:

- 1 Channel Status
- 2 Mix Scenes
- 3 Protocol Status
- 4 Automation Controls
- 5 Console Controls



6.1.1 CHANNEL STATUS

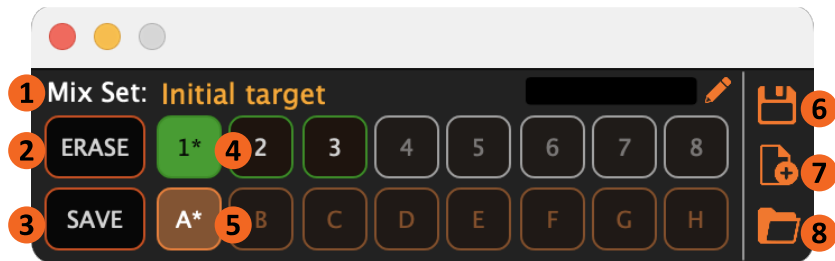
This section displays the current state of all channels on the console.



- 1 **Automation Mode Indicator**
Displays the current automation mode for each channel.
Available modes: OFF, WRITE, READ, Touch, Trim Read, Trim Touch.
- 2 **Mute Indicator**
Displays the current mute status for each channel.
Red = muted; Grey = not muted.
- 3 **Channel Level**
Displays the current level for each channel.
When reading automation, the DAW playback level is shown.
In all other modes, the fader level is shown.
- 4 **Channel Number**
Displays the channel number.

6.1.2 MIX SCENE PANEL

Mix scenes are instantly recallable static mixes. Press the **Mix Scene Button** in the **Mix View** to open the **Mix Scene Panel**.



- 1 Mix Set Indicator**
Displays the current loaded mix set. A mix set is a collection of mix scenes (1-8) stored in banks (A-H).
- 2 Erase Button**
When active, any selected mix scene will be deleted.
- 3 Save Button**
When active, the current console state will be saved to the next selected mix scene button.
- 4 Mix Scene Button**
Recalls the console to the saved mix scene state. Green buttons are available for recall; blank buttons are available for saving.
- 5 Bank Selector**
Shows the currently selected bank. Each bank can hold 8 mix scenes.
- 6 Save Mix Set Button**
Updates the save file for the current mix set.
- 7 Create Mix Set Button**
Creates a new blank mix set. A warning will appear if any unsaved changes exist.
- 8 Load Mix Set Button**
Opens a file browser to load an existing mix set to Injektor.

6.1.3 PROTOCOL STATUS

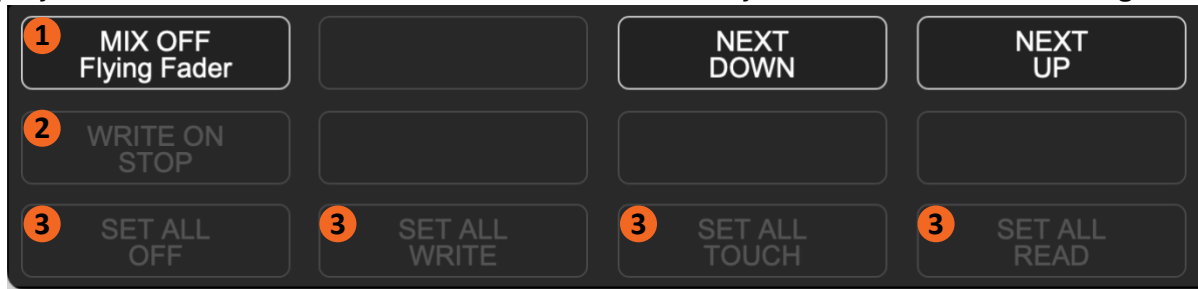
Displays the status of the communication protocols required for automation.



- 1 USB Status indicator**
Displays the state of the USB connexion between the console and the computer.
RED = no connexion.
GREEN = Console hardware detected.
- 2 Workflow Status Indicator**
Displays the currently selected workflow and the communication protocol's status.
HUI RED = Host DAW not available.
HUI GREEN = Host DAW configured + open.
Injektor RED = Communication not active.
Injektor GREEN = available for connexions.
- 3 Mothership Status Indicator**
(Only available when using the Injektor Workflow).
Displays the connexion state to the TaiMotherShip Plug-In.
RED = Plug-In not loaded or comms error.
GREEN = communication established.

6.1.4 AUTOMATION CONTROLS

Displays console automation controls. This section is only available when the mix engine is on.



- 1** Mix Button
(Only available if all protocol status indicators are green.) Turns the mix engine ON or OFF.

In MIXOFF, all automation is ignored, channels can not be put into an automation mode.
In MIXON, faders react according to their individual automation mode.
- 2** Write On Stop Button
Determines how TaiMotherShip will interpret write commands when the DAW is in pause/stop.

Active (green) TaiMotherShip will continue to update channels set to write when the DAW is in pause/stop. This can create automation points even when playback is stopped.
Inactive (Black) TaiMotherShip ignores fader moves until playback is started.
- 3** SET ALL buttons
Sets all console channels to the displayed automation mode (OFF, WRITE, TOUCH, READ).

6.1.5 CONSOLE CONTROLS

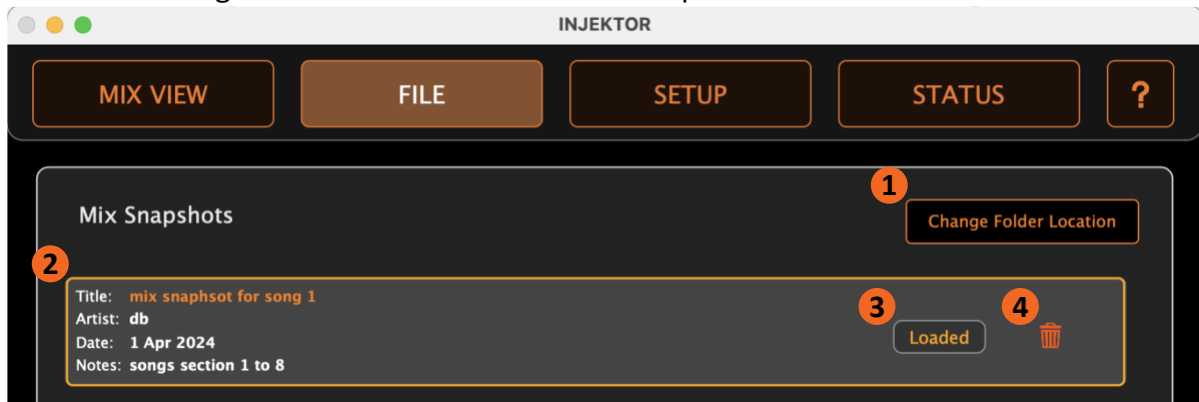
Displays controls for the console's standalone features.



- 1** Create groups
Puts the console into create groups mode.
- 2** Create Links
Puts the console into create links mode.

6.2 FILE VIEW

The File View manages mix scenes stored on the computer.

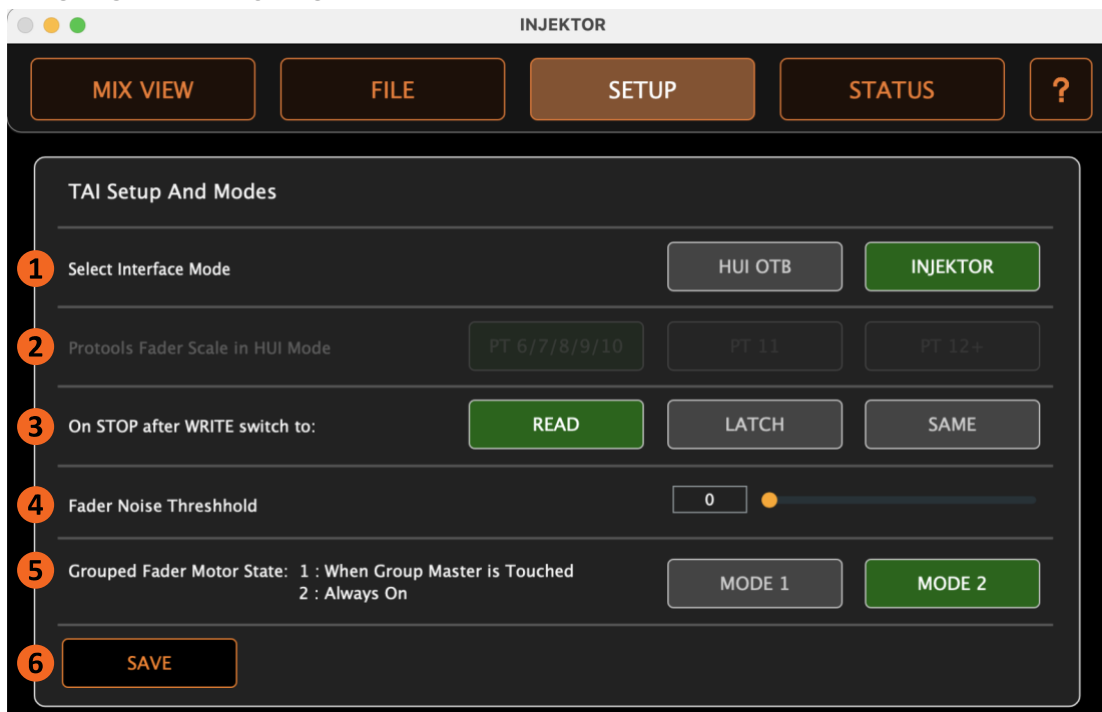


- 1** Folder Location Button
Defines the save folder for mix sets.
- 2** Mix Set Information
Displays information on available mix sets.
- 3** Load Mix Set Button
Loads the desired mix set into Injektor. Mix scenes can be recalled from the Mix View.
- 4** Delete Mix Set Button
Deletes the Mix Set File from the computer.

6.3 SETUP VIEW

The Setup View sets usage preferences, configuration, fader calibration, and updates for the TAI and Injektor.

6.3.1 TAI SETUP AND MODES

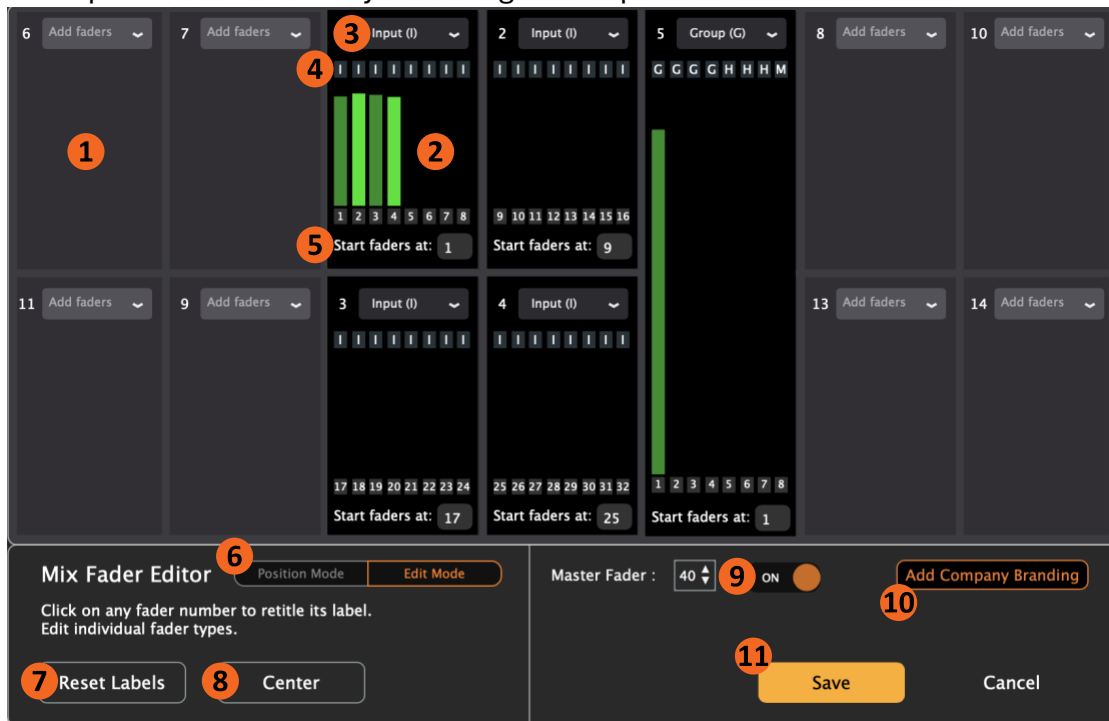


- 1 Select Interface Mode**
Sets the TAI's mixing workflow.
HUI OTB: automation is controlled over HUI.
Injektor: automation is controlled using the TaiMotherShip Plug-In.
- 2 Pro Tools Fader Scale in HUI Mode:**
(only required when using HUI)
Select the version of Pro Tools to ensure fade scale compatibility.
- 3 On STOP, after WRITE switch to:**
Defines which automation mode a channel will toggle to following a write pass.

READ or LATCH: the interface toggles to that mode.
SAME: the interface stays in WRITE mode.
(This can result in accidental overwrites).
- 4 Fader Noise Threshold**
Sets the amount of noise filtering. Less filtering results in more responsive faders.
- 5 Grouped Fader Motor State**
Sets how motors of grouped slave faders act.
Mode 1 : motors are only engaged if a master fader is touched.
Mode 2: motors are always engaged. This may result in a constant jitter of grouped faders.
- 6 Save**
Saves the current setup to the TAI firmware.

6.3.2 MIX VIEW LAYOUT AND CONFIG

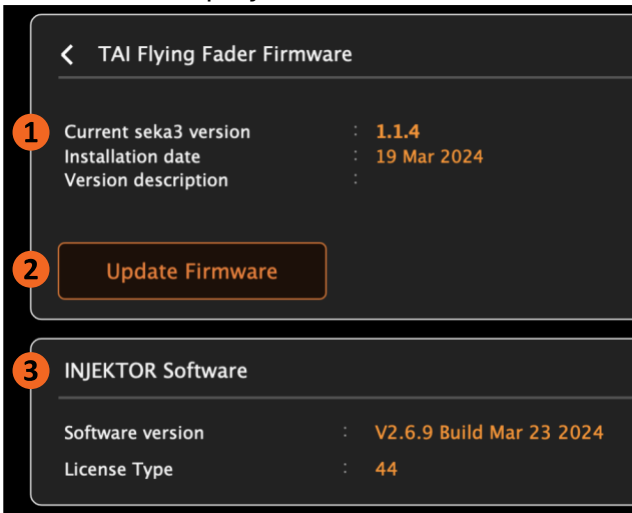
This button opens the mix view layout configuration panel.



- 1 Blank Bucket Space**
Area available to receive a bucket of faders.
- 2 Fader Bucket**
Displays a bucket of faders. Green bars identify levels of individual faders.
- 3 Bucket label selector**
Sets the labels of all channels in a bucket (Input, Group, VCA, PVCA, Master).
- 4 Channel label selector**
Sets the label for individual channels.
- 5 Bucket numbering input**
Sets the bucket's channel numbers to be displayed in the Mix View and used to define plug-in automation lanes. Channel numbers are independent from bucket position. Changing this remaps existing automation lanes to different faders.
- 6 Editor Mode**
Chooses the mode for the editor.
Position: Drag buckets around the interface.
Edit: Change individual channels within.
- 7 Reset Labels**
Resets all channel labels to default.
- 8 Center**
Returns bucket position to default (centred).
- 9 Master Fader Channel Assign**
Defines a specific channel as being the console's master fader. Turn ON to activate.
- 10 Add Company branding**
Add a logo or image to be displayed in the background of the Mix View.
- 11 Save**
Saves the current mix view configuration.

6.3.3 TAI FIRMWARE & SOFTWARE UPDATES

This button displays the firmware information panel.

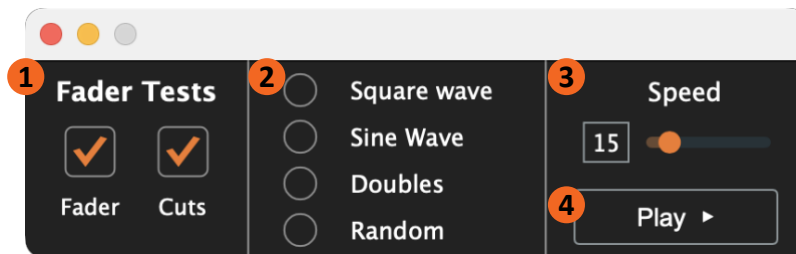


- 1 Firmware Information**
Displays version information for the TAI.
- 2 Update Firmware Button**
Opens the firmware update dialogue. Follow the onscreen instructions to update the TAI's firmware.
- 3 INJEKTOR information**
Displays version information for INJEKTOR.

6.3.4 TEST FADERS AND MUTE PATTERNS

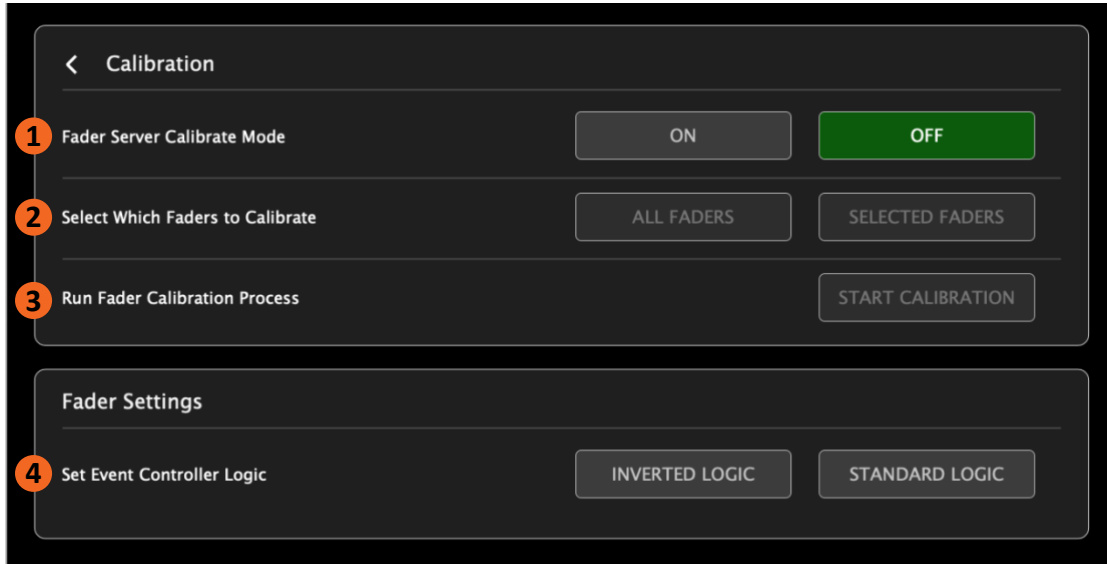
INJEKTOR's built-in tests are used to validate the communication between the software and the TAI.

To test functionality of individual fader components, see **Standalone Fader Tests** on **page 10**.



- 1 Fader Test**
Choose whether to test motors, cuts or both.
- 2 Test Pattern**
Chose a test pattern for the faders to follow. If no pattern is selected, all faders move up and down at the same time. This is a good test to identify faders needing maintenance.
- 3 Speed**
Set the speed for the fader tests.
- 4 Play**
Start / Stop fader tests.

6.3.5 FADER CALIBRATION SETUP & SETTINGS



- 1 Fader Servo Calibrate Mode**
Enters or exits the fader calibration mode. When activated, all other TAI functions are suspended.
- 2 Select Which Faders to Calibrate**
All Faders: sets all faders for calibration.
Selected Faders: use the select switch to set which faders to calibrate.
- 3 Run Fader Calibration Process:**
Starts the fader calibration. Fader LEDs illuminate to indicate calibration progress. The TAI will reboot when completed. **Do Not** interrupt the calibration process. This can take up to 10 minutes on larger consoles. The button will indicate "calibration complete" once finished.
- 4 Set Event Controller Logic**
(Only for systems with event controllers)
Toggle this setting if your console boots with the improper event control logic (ex: all channels muted).

7 TAIMOTHERSHIP PLUG-IN

The **INJEKTOR** workflow is based around the **TAIMothership** plug-in. For a visual guide to using this workflow in Pro Tools, check out our video at <https://youtu.be/LhZv2SGGNRs>

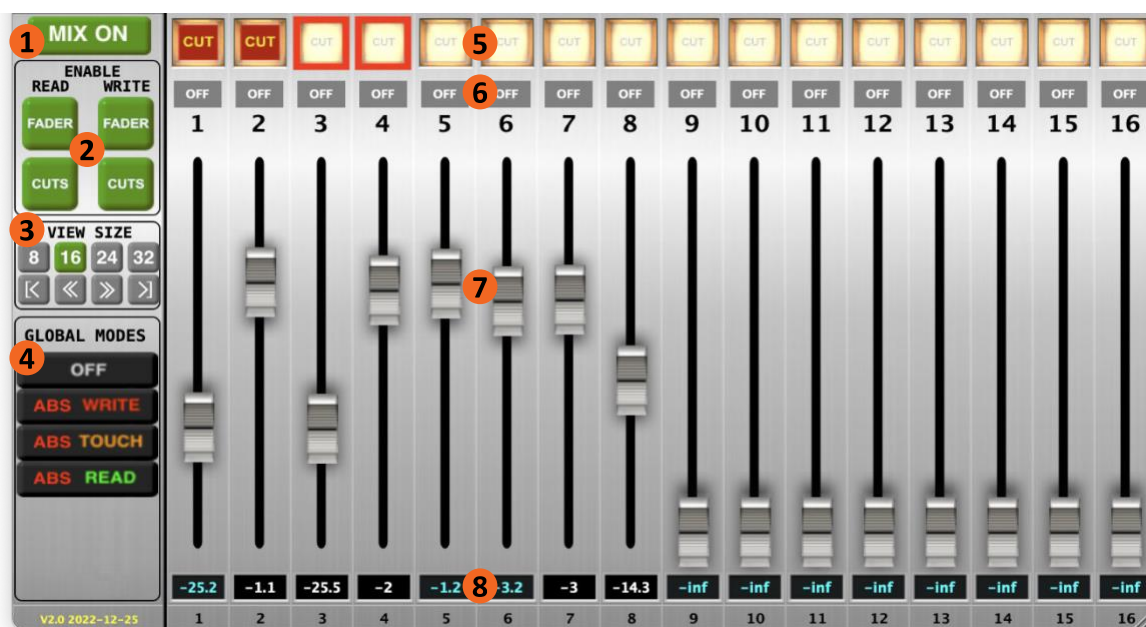
NOTE: The **INJEKTOR** desktop application must be running at all times in order to use the **TAIMothership** plug-in.

7.1 TAIMOTHERSHIP PLUG-IN OVERVIEW

The **TaiMothership** AAX/AU/VST plug-in reads and writes automation to the DAW.

A single plug-in instance controls all automatable parameters from all console channels. Automation lanes are written independently into a single DAW track.

Install only one instance of **TaiMotherShip** per DAW session.



- 1 Mix Button**
MIX OFF: automation engine is deactivated.
MIX ON: faders react to automation.
- 2 Automation Enable Buttons**
Enables/disables automation information to/from the console.
- 3 View Size**
Sets the number of tracks to show simultaneously. Arrows enable banking.
- 4 Global Modes**
Set all channels to an automation mode.
- 5 Mute Indicator**
Solid red = channel is muted.
Red Outline = channel is mute write enabled.
- 6 Automation Mode Controller**
Shows channel's automation mode.
Click to change.
- 7 Fader Position Indicator**
In READ: shows DAW's playback.
All Other Modes: shows physical fader.
- 8 Fader dB indicator**
Displays the current fader level in dB.

7.2 SESSION SET-UP FOR AUTOMATION

With the INJEKTOR Application configured and running:

1. Open a **Pro Tools** Session.
2. Add the **TaiMotherShip** Plug-In to a single audio track insert.
A single instance controls all console fader channels
3. Set the track automation mode to **TOUCH**.
4. In the Plug-In, enable **MIX ON**. (see below)
5. (optional) To see automation lanes as they're written: In the DAW's edit window, use the automation selector pull down menu to view the desired parameter from **TaiMotherShip**.



7.3 TOGGELING THE MIX ENGINE ON AND OFF

Automation is not possible in when the mix engine is deactivated (**MIX OFF**). To enable the mix engine (**MIX ON**), the following conditions must first be met:

1. The TAI must be powered on with a USB cable connected to the host computer.
2. The **INJEKTOR** software must be open and running.
3. The **INJEKTOR** and the TAI need to communicate (the USB indicator is green).
4. The TAI must be in **INJEKTOR** mode (the INJEKTOR indicator is green).
5. The **TaiMotherShip** plug-in must be loaded into an active DAW session.
6. The plug-in and **INJEKTOR** need to communicate (the **TaiMotherShip** indicator is green).

Once met, there are multiple equivalent ways to activate the mix engine (**MIX ON**):

- Using the Global Master Module, press RUN.
- Using **INJEKTOR**, press MIX ON.
- Using the **TaiMotherShip**, press MIX ON.

Note: When turning mix ON, faders will always default to the **OFF** position to avoid unintended fader jumps. Set the faders to an automation mode to resume mixing.

8 AUTOMATION

8.1 AUTOMATION LANES

In the DAW, **TaiMotherShip** creates three automation lanes for each console channel:

- The **Absolute volume lane** records the absolute fader position.
- The **TRIM offset lane** records TRIM offsets. Only the difference between data on the absolute track and the current fader position is written.
- The **Mute Lane** records mute state.

8.2 AUTOMATION MODES

Automation modes dictate a fader's response to automation data written in the DAW, and the DAW's response to fader movement.

8.2.1 SUPPORTED CHANNEL AUTOMATION MODES

The TAI supports 7 automation modes that are assignable individually to any channel on the console.

- In **OFF** mode, there is no automation on the channel. Previously recorded automation is ignored, and no automation is written.
- In **WRITE** mode, fader position is written to the DAW's **absolute volume lane**. Data is written immediately. Previously recorded automation is overwritten. Mute is written to the **mute lane**.
- In **READ** mode, the DAW controls the faders using data written to the **absolute volume lane** and the **mute lane**. If data is written to the **TRIM offset lane**, it is ignored.
- In **TOUCH** mode, the DAW reads back the **absolute volume lane** and the **mute lane** until the fader is touched at which point it overwrites existing data. Once released, the fader returns to reading the existing automation (it does not latch).
- In **TRIM WRITE** mode, the fader position is written as an offset to the **TRIM offset lane**.
- In **TRIM READ** mode, levels are read from both the trim and absolute tracks. Trim offsets compound with levels on the absolute track. For example, if the absolute track is at -7 dB and the trim track is at +2 dB, the audio is played back at -5 dB.
- **TRIM TOUCH** functions in the same way as **TOUCH**, but interacts with the Trim Track.

Note: Mute writes are only available in **WRITE** mode. In **READ**, **TOUCH** and **TRIM**, Mutes are read back from the DAW.

8.2.2 SETTING AUTOMATION MODES

Channel automation modes can be set from any available controller: the fader's hardware controls, **Injektor**'s automation buttons and **TaiMotherShip**'s status indicators.

For a visual illustration of channel features, see the **Flying Faders Quicksheet**.

Setting automation modes from the channel

A channel's buttons set its automation mode independently from all other channels.

Desired automation mode	Channel button to press
OFF	Press the active mode a 2 nd time (ex: if currently in read, press MATCH)
WRITE	RECORD
READ	MATCH
TOUCH	RECORD + MATCH
TRIM WRITE	SELECT + RECORD
TRIM READ	SELECT + MATCH
TRIM TOUCH	SELECT + RECORD + MATCH

Setting automation modes from the global master module

The Global Master Module sets console-wide automation modes.

Desired automation mode	GMM button to press
All Channels OFF	N/A
All Channels WRITE	SELECT + RECORD
All Channels READ	SELECT + MATCH
All Channels TOUCH	SELECT + RECORD + MATCH
All Channels TRIM WRITE	N/A
All Channels TRIM READ	N/A

Setting automation modes from INJEKTOR

INJEKTOR sets console-wide automation modes.

Desired automation mode	INJEKTOR button to click
All Channels OFF	SET ALL OFF
All Channels WRITE	SET ALL WRITE
All Channels READ	SET ALL READ
All Channels TOUCH	SET ALL TOUCH
All Channels TRIM WRITE	N/A
All Channels TRIM READ	N/A

Setting automation modes from TaiMotherShip

TaiMotherShip sets both individual and global automation modes:

- Click the **automation mode controller** on any channel to change it to a different mode.
- Click any of the **global modes** to set all channels to a mode.

8.3 WRITING AND READING AUTOMATION FROM THE CONSOLE

8.3.1 USING AUTOMATION IN THE ABSOLUTE MODE

Writing automation using **WRITE** mode

1. Set any channel to **WRITE**.
2. Set the DAW playhead to the desired write start location.
3. Put the DAW in play, automation will be written to all channels set to **WRITE**. Any existing automation will not be played back and will be overwritten.
4. Stop Playback, all channels will toggle to **READ**.

Reading Automation using **READ** mode

1. Set any channel with automation already written to **READ**.
2. Set the DAW playhead to the desired read location. When the DAW is in stop, fader positions will jump to match the playhead position. In play, faders will follow automation in real-time.
3. If a fader is touched, the motor will disengage and will reengage on release. No automation will be written.
4. To stop reading automation, set the fader to **OFF**

Updating automation using **TOUCH** mode

1. Set any channel with automation already written to **TOUCH**
2. Set the DAW playhead to the desired read location. When the DAW is in stop, fader positions will jump to match the playhead position. When the DAW is in play, faders will follow automation in real-time.
3. Touch a fader to overwrite its existing automation position.
4. To stop reading automation, set the fader to **OFF**.

Note: When reopening any mix session, faders will always default to the **OFF** position to avoid unintended fader jumps. Set all faders to **READ** or **TOUCH** to resume mixing.

8.3.2 USING AUTOMATION IN TRIM MODE

TRIM mode interacts with the TRIM automation lane, which is separate from absolute volume. This lane offsets the absolute volume by a specified number of decibels. When in **READ**, only the absolute lane is played back. Whereas in **TRIM READ**, a composite of the absolute + trim is played back. It is therefore possible to toggle between the original mix and a new trimmed mix on a channel-by-channel basis.

On the Flying Faders platform – since audio goes through the fader – automation is bypassed while the fader is used to write TRIM information.

Writing TRIM using TRIM WRITE

1. Set the DAW playhead to the desired TRIM location.
2. Set any channel with automation already written to **READ**. (This ensures that the start reference level is correct)
3. Set the channel to **TRIM WRITE**. Update the fader position to the desired level.
4. Put the DAW in play. The difference between the written automation and the current fader position will be written to the TRIM track.
5. If a fader is touched, the motor will disengage and will reengage on release. No automation will be written.
6. Stop playback.

Reading TRIM using TRIM READ

1. Set any channel with TRIM already written to **TRIM READ**.
2. Set the DAW playhead to the desired read location. When the DAW is in stop, fader positions will jump to match the playhead position. In play, faders will follow automation in real-time.
3. If a fader is touched, the motor will disengage and will reengage on release. No automation will be written.
4. To stop reading TRIM, set the fader to **OFF** or return to **READ**.

Updating TRIM using TRIM TOUCH

1. Set any channel with automation already written to **TRIM TOUCH**
2. Set the DAW playhead to the desired update location and put it in play.
3. Touch a fader to overwrite its existing TRIM.
4. To stop reading TRIM, set the fader to **OFF** or return to **READ**.

8.3.3 USING MUTE AUTOMATION

Writing Mute Automation

1. Press MUTE RECORD on the desired channel.
 - The channel's MUTE RECORD LED will turn ON.
 - The **TaiMotherShip** will show a mute record enable indicator on the corresponding channel.
1. Put the DAW in play. Write the desired Mute Automation.
2. On stop, the channel will exit Mute Record.

Reading Mute Automation

Mute reads follow the channel's Automation Status Modes. If the channel is in a mode that plays back Automation Data (**READ, TOUCH, TRIM READ, TRIM TOUCH**), mutes will be played back.

8.4 TYPICAL MIX AUTOMATION WORKFLOW

The typical workflow for mixing a project is as follows:

1. Start with all tracks in **OFF**. Use the faders to set the levels as desired.
2. Once satisfied, set some or all tracks to **WRITE**.
3. Put the DAW in play, it will record an initial mix pass on armed tracks. When stopped, recorded tracks will toggle automatically to **READ**.
 - Tip: Pro Tools has a "write automation to the end" button in its automation window.
4. Repeat steps 2 and 3 until a first mix pass is recorded to all tracks.
5. Audition new adjustments before writing them by toggling between **READ** and **OFF**.
6. Set the automation mode to **TOUCH** to adjust the mix.
7. Once the mix is nearly finalized, use **TRIM** to make adjustments such as "Guitars down 2 dB everywhere" without changing existing automation moves.
 - Tip: Toggling between **READ** and **TRIM READ** allows multiple revisions in a same session. For example, if all **TRIM** tracks are set to to +2 dB, punching in only the vocals to **TRIM READ**, while keeping the rest in **READ** will result in a "vocals up mix". The same principle can be used to create "guitars up", "drums up", etc. without requiring additional session versions.

APPENDIX 1: FADER AND GLOBAL MASTER QUICK REFERENCE SHEET

<p>MUTE Mutes channel</p>		<p>SELECT + MUTE RECORD all channel mute record</p>		<p>GROUP Enters group mode</p>
<p>SOLO Solos channel</p>		<p>SELECT + SOLO set solo safe</p>		<p>LINK Enters link mode</p>
<p>SELECT select group member select link member save, recall, delete snapshot</p>		<p>SELECT motor test</p>		<p>OTHER (from snapshot mode) Allows multiple create / load / delete</p>
<p>SELECT + RECORD TRIM WRITE SELECT + MATCH TRIM READ SEL+ REC + MTCH TRIM TOUCH</p>		<p>RECORD Switch Test SEL+ REC all channel WRITE SHIFT + REC Shapshot Create</p>		<p>RUN Enters mix mode Shift + RUN Enters test mode</p>
<p>RECORD WRITE mode</p>		<p>REC + MTCH (from snap mode) Snapshot Delete</p>		<p>+ / - Step forward or backward through snapshots, groups, links, test patterns</p>
<p>RECORD + MATCH TOUCH mode</p>		<p>SELECT + RECORD + MATCH all channel TOUCH Mode</p>		
<p>MATCH READ mode</p>		<p>MATCH LED Test SEL + MATCH all channel READ SHIFT + MATCH Snapshot Load</p>		<p>SHIFT Modifier key</p>