

Tangerine Automation Interface

TANGERINE AUTOMATION INTERFACE DAW CONFIGURATION FOR THE REAPER WORKFLOW

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1. INTRODUCTION

This guide explains configuring your Pro Tools and Reaper for use with the Tangerine Automation Interface's Reaper Workflow. It is compatible with the following series of interfaces:

- Tangerine Automation Interface for SSL 4000 / 6000 / 8000 (VCA and Ultimation)
- Tangerine Automation Interface for Flying Faders
- Tangerine Automation Interface for GML Automation

It assumes that you have already installed and tested the functionality of your interface.

Never before could a single mix session cross multiple automation systems until now. Track your drums on a Flying Faders console in Berlin, finish your vocals on an SSL in London, and then mix on one of the 7 remaining legendary Focusrite console with GML automation; a Reaper session carrying automation data will transition your fader moves and cuts to any compatible studio, on any console.

Because of the increased set-up time required for using the Reaper workflow, THD-Labs recommends using the Injektor software suite when moving sessions between Tangerine-compatible studios.

1.1. WORKFLOW OVERVIEW

Though most users of the Tangerine Automation Interface prefer the flexibility and simplicity of the newer, more modern Injektor workflow, some specialised applications may still call for slaving a 2nd DAW to Pro Tools. Amongst other reasons, the Reaper Workflow is still the preferred workflow when controlling automation from a tape deck directly from the SSL center section without having to manipulate a DAW (Tape support for Flying Faders coming at a later date; contact us if you require this feature on your Flying Faders system).

In this workflow, Reaper directly replaces the existing automation computer and will be "Synched/Slaved" via time code to your audio source.

1.2. REQUIRED SOFTWARE

The following software is required to use this workflow:

- 1. <u>Pro Tools</u> (or your favorite DAW)
- 2. <u>Reaper</u> available at https://www.reaper.fm/
- 3. The TAI Reaper driver and skin package available at http://thd-labs.com/

2. CONFIGURING REAPER AND PRO TOOLS

2.1. DRIVER AND SKIN INSTALLATION

The TAI Control surface driver:

To use the TAI with Reaper, the "Reaper_tai_csurf_driver_VxxX.dylib" driver file – available at thdlabs.com – must be installed in the REAPER/UserPlugins directory. <u>This directory can be accessed</u> from Reaper

- 1. IN REAPER_Select menu->Option/Show REAPER resource path in explorer/finder
- 2. Open the /UserPlugins directory.
- 3. **Drag and drop** the Reaper_tai_csurf_driver.dylib file in the /UserPlugins directory. *IMPORTANT: REAPER NEEDS TO BE RESTARTED AFTER INSTALLING THE DRIVERS*

The TAI SKIN:

We have designed a "Optimized for MIX automation TAI skin" to use in REAPER. To install:

- 1. Create a new project
- 2. Add a few tracks if no track are present in the project(command+n)
- 3. From the finder, drag & drop the skin file in REAPER's TRACK window.



2.2. CONFIGURING REAPER PREFERENCES

At this point make sure that the TAI is powered and the USB connection is OK. Restart REAPER, and once Reaper is restarted, Go to the **REAPER/PREFERENCE** menu, adjust the following parameters:

a) In Preferences/Audio/Device

Set to: Built-in input

0 0	REAPER Preferences	Ŧ
▼ General	Audio device settings	
Paths	Audio Device Built-in Input	
Keyboard/Multitouch	Request sample rate: 48000	
Project Track/Send Defaults	Audio MIDI Setup	
Media Item Defaults	Request block size: 312	
▼ Audio	Ignore running change notifications (may be required for some devices)	
Device	If you need to use multiple devices, open Audio MIDI Setup and create an aggregate device.	
MIDI Devices		
Buffering		
Playback		
Seeking		
Recording		
Loop Recording		
T Appearance		
Media		
Peaks/Waveforms	Allow use of different input and output devices (legacy option, not recommended)	
Fades/Crossfades	Anow use of uncreate input and output devices (regacy option, not recommended)	
Track Control Panels		
▼ Editing Behavior		
Envolono Dicalau		
Find	OK Cancel App	oly

b) In Preferences/Audio/MIDI Devices

Enable MIDI input to: Apple Inc. IAC Driver = Enabled+Control **Enable MIDI output to**: THD-LABS Technology - TANGERINE #5 =Enabled+Clock



c) In Preferences/Appearance/Track Control panels

Set Volume fader range to +10dB

00	REAPER Preferences
Track/Send Defaults	Track control panel settings
Media Item Defaults Audio Device MIDI Devices Buffering Playback	Set track label background to custom track colors Align TCP controls when track icons are used Track grouping indicators: Ribbons Lines on edge None VU meters
Seeking Recording Loop Recording Rendering Appearance Media Peaks /Waveforms	Meter update frequency (Hz): 12 Meter decay (dB/sec): 120 Meter minimum value (dB): -62 Max value (dB): 6 Show track input when rec-armed Make obvious that track input is clickable Show dB scales on track meters Show dB scales on rec-armed track meters Show MIDI velocity on track VU Show MIDI output activity on track VU Sticky clip indicators Reset meter peak indicators on play/seek
Endes/ crossinder Track Control Panels Editing Pabavies Envelope Display Automation Mouse Mouse Modifiers MIDL Editor	Volume/pan faders Volume fader range: -120 to +10 B, shape: Default Pan fader unit display: 100%L100%K \$
Find	OK Cancel Apply

d) In Preferences/Editing Behavior/ Envelope Display Uncheck: Show new envelopes in separate envelope lanes

0 0	REAPER Preferences
маураск	Envelope Display/Editing
Seeking Recording	Volume envelope range: -inf+6dB
Loop Recording Rendering	Per-take pitch envelope range: 3 semitones, snap: Off
▼ Appearance	Project tempo map envelope display min: 40 bpm, max: 280 bpm
Media Peaks/Waveforms	Stow new envelopes in separate envelope lanes When drawn over media, overlap envelopes if each is less than 40 pixels high
Fades/Crossfades Track Control Panels	When adding envelopes, set the focus to the envelope
Envelope Display	Envelope point selection follows time selection for the active envelope First click on unselected envelope can insert a point (depends on mouse modifier settings)
Mouse	Changing envelope in lane: Hides old envelope
Mouse Modifiers MIDI Editor	Add edge points when moving envelope points
▼Media	Add edge points when ripple editing or inserting time
MIDI	Transition time for automatically created envelope edge points: 0.5 ms (minimum 0.1)
Video/REX/Misc	Use relative mouse edits for: 🗹 fader-scaled volume envelopes 🗹 other envelopes
Compatibility VST	Relative mouse edits provide more Y-axis resolution at the expense of envelope points not following the mouse pointer.
Find	OK Cancel Apply

e) In Preferences/Control Surfaces

Add: Control surface mode to: 'Tangerine Automation Interface'' Midi input: = THD-LABS Technology - TANGERINE Port 5 Midi output: = THD-LABS Technology - TANGERINE Port 5

0 0		REAPER I	Preferences	Т
* Appearance	Control surfaces			
Media				
Peaks/Waveforms	Tangerine Automat	ion Interf	ace (dev 5,5)	
Fades/Crossfades				
Track Control Panels				
Editing Behavior				
Envelope Display				
Automation				
Mouse				
Mouse Modifiers				
MIDI Editor				
Media				
MIDI				
VIGEO/REX/MISC				
V Plug-Ins				
VST				(changes will be applied immediately)
ReWire	Add	Edit	Remove	(changes will be applied immediately)
ReaScript	Control surface display	update freq	uency: 15	Hz (default: 15)
Realing	Warn when errors o	pening surfa	ace MIDI devices	
Control Surfaces	Close control surfac	e devices w	hen stopped and r	not active application
External Editors	0			
Find				OK Cancel Apply
Find				Calicel Apply
	Castal and an and	Control S.	arrace Settings	
	Control surface mode	angerine A	atomation interface	
	MIDI inpl	t: THD-LABS Te	chnology TANGERINE A	AUTOMATION
	MIDI outpu	IT: THD-LABS Te	chnology TANGERINE A	AUTOMATION - C
	e e	None THD-LABS Techn THD-LABS Techn	ology TANGERINE AUTON	MATION - Port 1 MATION - Port 2
		THD-LABS Techn THD-LABS Techn THD-LABS Techn	ology TANGERINE AUTON ology TANGERINE AUTON ology TANGERINE AUTON	AATION - Port 3 AATION - Port 4 AATION - Port 5
		Apple Inc IAC D	river - Bus 1	
			ОК	Cancel

Once the basic parameters are setup, APPLY those changes and close the preference window.

To enable mute & Trim automation, in the tracking window, double-click the auomation status, and activate + make visible mute + trim automation.

2.3. SYNCHRONISATION

If you are using the Reaper workflow with an external DAW or tape deck playing back audio, you will need to synchronise REAPER running the automation with the audio source. The principle of synchronizing two or more devices requires setting one system as the MASTER and one or more systems as SLAVE. TIMECODE and transport commands are used to make the system work as a single unit. In the following example Pro Tools is the MASTER multi-track audio source and REAPER runs as the SLAVE Automation software.

Both software need TIMECODE as a sync reference. The TIMECODE acts a speed and positional information signal.

- The MASTER will generate the TIMECODE
- THE SLAVE will listen to the TIMECODE

If correctly set, the SLAVE will follow the MASTER moves and locations, in relation to the received TIMECODE and setup information. This is called "RESOLVING" or "SYNCING" to TIMECODE

You can choose to run REAPER on a <u>separate computer</u> or on the <u>same computer</u> running Pro Tools. Separate computer setup can allow for more screens to display Pro Tools and Reaper at the same time.

For separate computer setup go to page 11.

2.3.1. SAME COMPUTER SYNC SETUP

SETTING UP TIMECODE SIGNAL

Since both software are running on the same computer, the TIMECODE can be sent via Apple's virtual routing service: Apple's "IAC Driver". To use the "IAC Driver", It must be <u>enabled</u> in the "Audio **MIDI setup**" application located in the Application/Utility folder. Rename the default "BUS 1" to "TIMECODE" (or another descriptive name).

IAC Driver F	roperties	MIDI Studio
Iter Device Na Manufactu Mo Mo Image: Construction of the device's port struction on the device, then indicate the number of the device, then indicate the number of TIMECODE + - Add and Remove Ports	me: IAC Driver rer: Apple Inc. rer: Apple Inc. Device is online Less Information ts ture here. First, set the number of ports MIDI in and out connectors for each port. Connectors for: TIMECODE MIDI In: 1 + MIDI Out: 1 + Revert Apply	
(?)	Revert Apply	

SETTING PRO TOOLS TO SEND TIME CODE

The following steps must be taken to enable Pro Tools to send TIMECODE when in PLAY.

1. Assign the "IAC Driver" as the TIMECODE communication channel



2. Set the TIMECODE frame rate and session start time

00		Ses	sion Setup		
Format					
Sample Rate:	48 kHz	Audio Format:	BWF (.WAV)	Session Start:	10:00:00:00
Bit Depth:	24 Bit 💌	Interleaved:		Incoming Time:	()
Clock Source:	See Control Panel			Timecode Rate:	30 💌
System Delay:	-512 samples			Feet+Frames Rate:	24 *
Pan Depth:	-3.0 dB 💌			Timecode 2 Rate:	30 🔻
SVNC Setup &	Timecode Offeste				
Timesode Sett	Innecode Offsets				
Timecode Sett	inga				

NOTE

- Session start time should never set to 00:00:00:00, standard practice uses 01:00:00:00 or 10:00:00:00.
- If no video is involved Timecode Rate can be 30FPS
- 3. Enable TIMECODE generation

	🔄 Edit: ti	mecode							
Cursor	1 1 000 -	Start 1 End 1 Length 0 Image: the second	000 000 000 Nudge	0 1 000 ▼ 0 1 000 ▼	н 4	ерен (Пр. 1997) (Пр.	C MTC		•
33	41	49	57	65	73	81	89	97	
33	41	49	57	65	73	81	89	97	e F az

SETTING REAPER TO RECEIVE AND SYNC TO TIME CODE

The following steps must be taken to configure and enable REAPER to receive and sync to TIMECODE when Pro Tools is in PLAY.

1. Assign the "IAC Driver" as the TIMECODE communication channel

000	REAPER Preferences
▼General Paths	MIDI hardware settings MIDI inputs to make available (selectable as track inputs and/or learnable or action-bindable):
Keyboard/Multitouch Project Track/Send Defaults Media Item Defaults Device MIDI Devices	Device Mode THD-LABS Technology - TANGERINE A <disabled> THD-LABS Technology - TANGERINE A <disabled></disabled></disabled></disabled></disabled></disabled></disabled></disabled></disabled></disabled></disabled></disabled>
Buttering Playback Seeking	MIDI outputs to make available (selectable as track outputs): Add joystick MIDI Device IMode
Recording Loop Recording Rendering	THD-LABS Technology - TANGERINE A <disabled> THD-LABS Technology - TANGERINE A <disabled> THD-LABS Technology - TANGERINE A <disabled></disabled></disabled></disabled>
Appearance Media Peaks/Waveforms Fades/Crossfades	THD-LABS Technology TANGERINE A calcobleds THD-LABS Technology TANGERINE A Enabled+Clock Apple Inc IAC Driver Doo 1 calcobleds
Track Control Panels Editing Behavior Foundance Discolute Find	Reset by: All-notes-off Pitch/sustain Reset on: Image: Constant of the pitch of

000	Configure MIDI Input
Device name:	Apple Inc IAC Driver - Bus 1
Ancs name:	Apple Inc. – IAC Driver – Bus 1
🗹 Er able inpu	t from this device
🗹 Er able inpu	t for control messages
	OK Cancel

2. Set the TIMECODE frame rate and Start Time

File	Edit	View	Insert	ltem	Track	Op	otic
Nev	w proje	ct				ЖN	[u
Op	en proj	ect				жΟ	
Sav	e proje	ct				ЖS	
Sav	e proje	ct as			N	ЖS	
Sav	e new y	version	of proje	ct	てひ	ЖS	
Pro	ject ter	nplates				•	
Rec	ent pro	ojects				►	
Nev	v proje	ct tab			x	жN	
Clo	se proj	ect				₩F4	
Clo	se all p	rojects					
Sav	e all pr	ojects					
Pro	ject set	ttings					
Rer	ıder				7	ЖR	
Op	en rend	ler quei	Je				
Sav	e live o	output to	o disk (b	ounce)	v	жB	
Cor	nsolida	te/Expo	ort tracks				
Exp	port pro	oject Ml	DI				
Cle	an curr	ent pro	ject dire	ctory			
Bat	ch file/	item co	nverter		Û	ЖF	





3. Enable receive and sync to TIMECODE

	• Record mode, normal
	Record mode: time selection auto punch
	New recording that overlaps existing media items
	✓ Auto-crossfade media items when editing ℃X Trim content behind media items when editing
	√ Show all takes in lanes (when room) %L Take lane behavior
	Show overlapping media items in lanes
	Ripple edit per-track
	Ripple edit all tracks ✓ Item grouping enabled
	Snap/grid
	Locking
	Envelope points
	Loop points linked to time selection Solo in front
	Automatically scroll view during playback
	Continuous scrolling
	Smooth seeking (seeks at end of measure) Chase MIDL note-ons in project playback
	External Timecode Synchronization
	Show REAPER resource path in explorer/finder
	Customize menus/toolbars
	Themes
	Preferences
00	External Timecode Synchronization
El able synchroni	ization to timecode I Playback I Recording
	CALL HERE THEORE
Use input MI	C: Apple Inc. – IAC Driver – TIMECODE
LTC framerate (C: Apple Inc IAC Driver - TIMECODE
LTC framerate (C: Apple Inc IAC Driver - TIMECODE leave blank to use project framerate config):
LTC framerate (tart playbac Freewheel or	C: Apple Inc IAC Driver - TIMECODE (leave blank to use project framerate config): ck on valid timecode when stopped n missing time code for up to: 300 ms (0=forever)
LTC framerate (tart playbac Freewheel or S	C: Apple Inc IAC Driver - TIMECODE (leave blank to use project framerate config): ck on valid timecode when stopped n missing time code for up to: 300 ms (0=forever) ynchronize by seeking ahead: 1000 ms (1000=default)
LTC framerate (tart playbac Freewheel or S ² Re	C: Apple Inc IAC Driver - TIMECODE (leave blank to use project framerate config): ck on valid timecode when stopped n missing time code for up to: 300 ms (0=forever) ynchronize by seeking ahead: 1000 ms (1000=default) -synchronize if drift exceeds: 100 ms (0=never)
LTC framerate (tart playbad Freewheel or Si Re Skip	C: Apple Inc IAC Driver - TIMECODE (leave blank to use project framerate config): ck on valid timecode when stopped n missing time code for up to: 300 ms (0=forever) ynchronize by seeking ahead: 1000 ms (1000=default) -synchronize if drift exceeds: 100 ms (0=never) /drop frames if drift exceeds: 40 ms (0=never)
LTC framerate (tart playbad Freewheel or Si Re Skip	C: Apple Inc IAC Driver - TIMECODE (leave blank to use project framerate config): ck on valid timecode when stopped n missing time code for up to: 300 ms (0=forever) ynchronize by seeking ahead: 1000 ms (1000=default) synchronize if drift exceeds: 100 ms (0=never) /drop frames if drift exceeds: 40 ms (0=never) Offset incoming timecode by: 0.00 ms
USE INDUST MIT LTC framerate (Tart playbac Freewheel or Si Re Skip	C: Apple Inc IAC Driver - TIMECODE (leave blank to use project framerate config): ck on valid timecode when stopped n missing time code for up to: 300 ms (0=forever) ynchronize by seeking ahead: 1000 ms (1000=default) synchronize if drift exceeds: 100 ms (0=never) /drop frames if drift exceeds: 40 ms (0=never) Offset incoming timecode by: 0.00 ms
USE INPLET MIT LTC framerate (Tart playbac Freewheel or Si Re Skip	C: Apple Inc IAC Driver - TIMECODE (leave blank to use project framerate config): ck on valid timecode when stopped n missing time code for up to: 300 ms (0=forever) ynchronize by seeking ahead: 1000 ms (1000=default) synchronize if drift exceeds: 100 ms (0=never) //drop frames if drift exceeds: 40 ms (0=never) //drop frames if drift exceeds: 40 ms (0=never) Offset incoming timecode by: 0.00 ms notification window when waiting for sync for recording

SYNCING

At this point, the system can be synched. When Pro Tools is in PLAY mode, REAPER will start and synchronize to Pro Tools in less than 1 second. From now, both software are considered one synched system.

2.3.2. SEPARATE COMPUTER SYNC SETUP

If Pro Tools and Reaper are running on separate computers, the TIMECODE can be sent via Apple's "Network MIDI service". Both computers must be on the same network. For best performance, a wired, direct or "thru a single router", connection should be used.

The following steps must be followed to create the network session between both computers:

On the Pro Tools computer

- 1. In the "Audio Midi Setup" application, open the "Network" icon.
- 2. In the "My session" pane, press the "+" key to create a new session and name it "TC Master".
- 3. Select "anyone" in the "Who may connect to me" pull-down menu.
- 4. Select the "Enabled" button

On the Reaper computer

- 1. In the "Audio Midi Setup" application, open the "Network" icon.
- 2. On the "My session" pane, press the "+" key to create a new session and name it "TC Master".
- 3. Select "anyone" in the "Who may connect to me" pull-down menu.
- 4. Select the "Enabled" button

	000 N	/I Network Setup		
	My dessions #2	Session #4		
	TC_SLAVE	? (Enabled) Port: 5006		
		Local name: TG_SLAVE		
		Bonjour name:		
	+ -	Name Latency adj.		
MIDI Studio	Directory	Participants:		
Loon Size Configuration Add Device Remove Device Show Info Rescan MIDI Test Setup	osx10 (2)	Disconnect		
Bluetooth		Latency: ms. 1,000 500 100 50 10 3 0 -3 -10 -50 Address: 192.168.1.6:5006		
	+ - #3 Connect	192.168.2.105:5006 172.16.201.1:5006		
	Who may connect to me:	Live - 🖸 🕇 🛞		
	Anyone			

At this point, in the "Directory" Pane, the computers should see each other. Press the "Connect" button to enable the network connection. The other computer session name should then appear in the "Participants" pane.

Restart Pro Tools and Reaper on each computer to update the new midi configuration.

SETTING PRO TOOLS TO SEND TIME CODE

The following steps must be taken to enable Pro Tools as a MASTER that will send TIMECODE when in PLAY (see next page)

1. Assign "NETWORK Session" as the TIMCODE communication channel



2. Set the TIMCODE frame rate and session start time

00	Session Setup						
Format							
Sample Rate:	48 kHz	Audio Format:	BWF (.WAV)	Session Start:	10:00:00:00		
Bit Depth:	24 Bit 🔻	Interleaved:	\Box	Incoming Time:	()		
Clock Source:	See Control Panel			Timecode Rate:	30 🔻		
System Delay:	-512 samples			Feet+Frames Rate:	24 👻		
Pan Depth:	-3.0 dB 🔍			Timecode 2 Rate:	30 🔻		
SVNC Satur & Timacada Offeate							
SYNC Setup & Timecode Offsets							
Timecode Sett	ings						

NOTE:

- Session start time should never set to 00:00:00:00, standard practice uses 01:00:00:00 or 10:00:00:00.
- If no video is involved Timecode Rate can be 30FPS
- 3. Enable TIMECODE generation.

	😫 Edit: time	code							
1 1 Cursor	000 - s Ler	Start 1 1 0 End 1 1 0 ngth 0 0 0	000 000 000 000 000 000 000	0 1 000 - 0 1 000 -	K 4	н (WIC		•
						_			
									•
33	41	49	57	65	73	81	89	97	Ŧ
									a z
									**

SETTING REAPER TO RECEIVE AND SYNC TO TIME CODE

The following steps must be taken to configure and enable REAPER as a SLAVE that will sync to TIMECODE with Pro Tools running on a different computer.

1. Assign the "Network Session" as the TIMECODE communication channel



New project 第N Open project 第O Save project 第S Save project as て第S Save new version of project 工分第S Project templates Froject templates 下 Recent projects 下第N Close project tab	tio
Open project 第0 Save project 第5 Save project as て第5 Save new version of project て分第5 Project templates ト Recent projects ト	[ui
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Project templates Recent projects New project tab Close project 第64	
Recent projects New project tab Close project 第54	
New project tab て第N Close project 第64	
Close project #F4	
Close all projects	
Save all projects	
Project settings	
Render \C#R	
Open render queue	
Save live output to disk (bounce) ℃#B	
Consolidate/Export tracks	
Export project MIDI	
Clean current project directory	
Batch file/item converter 企業F	

2. Set the TIMECODE frame rate and Start Time

0	00	Project Settings					
	Project Settings	Media Video Advanced Notes					
	Project sample rate: 4800	0 THZ					
	Force project tempo/time	signature changes to occur on whole samples					
	Project BPM: 85.000	Time signature 4 / 4					
	Timebase for items/envelopes/m	arkers: Time					
	Timebase for tempo/time signati	re envelope: Time					
	Project start time: 10:00‡0	0.000 Set 0:00 to edit cursor					
	Project start measure: 1						
	Playback resample mode: Me	dium (64pt Sinc)					
	Render resample mode: Go	od (192pt Sinc)					
	Default pitch shift mode: éla	stique 3.1.4 Pro					
	Pitch shifter parameter: No	rmal					
	OK Cancel Save as default project settings						
		Save as default project settings					
		Save as default project settings					
0	0.0	Project Settings					
0	Project Sattings	Project Settings Media Video Advanced Notes					
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•	Project Sattings Frame rat 30 V Preferred video size: Video item visibility: Items in Video colorspace: Auto Always resize video sources t Always resize output to prefe V Use high quality filtering whe	Project Settings Project Settings Media Video Advanced Notes x lower numbered tracks replace higher ; o preferred video size rred video size n resizing					
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ОК

Cancel

Save as default project settings

3. Enable receive and sync to TIMECODE

	Options Action	s Extensions	Help	Window	[48kHz 24b	
	✓ Record mode: r	normal			10	
	Record mode: t	ime selection a	uto pun	ch		
	Record mode: a	auto-punch sele	cted ite	ms aadia itamu		
	New recording	that overlaps ex	disting r	neula item		
	✓ Auto-crossfade media items when editing Trim content behind media items when editing				∼x ₂₂	
	✓ Show all takes	in lanes (when r	oom)		₩L	
	Take lane beha Show overlappi	vior ng media items	in lanes	5	•	
	Ripple edit per-	-track				
	Ripple edit all t	racks				
	✓ Item grouping	enabled			νđα	
	Snap/grid					
	Metronome/pr	e-roll				
	Envelope point	5				
	Loop points lin	ked to time sele	ction			
	Solo in front					
	Automatically s	croll view durin	g playb	ack		
	Smooth seeking	olling a (seeks at end	of meas	ure)		
	Chase MIDI not	e-ons in projec	t playba	ck		
	External Timec	ode Synchroniza	ation		►.	
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SYNCING

At this point, the system can be synched. When Pro Tools is in PLAY mode, REAPER will start and synchronize itself in less than 1 second. From now, both softwares are considered one synched system.

2.3.3. SETTING UP THE KEYBOARD DECODER FOR REAPER WORKFLOWS USING A SEPARATE COMPUTER SETUP

- In Pro Tools, open the /Peripherals/MIDI Controllers panel : In bank #1, select: "type" = HUI "Receive from" = Network Session name "Send to" = Network session name
- 2. On the Pro Tools computer, go to the "Audio Midi Setup" application, and open "Network".
- 3. In the "Live routings" lower drop-down menu, select "Network TC_Master".
- 4. On the Reaper computer, go to the "Audio Midi Setup" application, and open "Network".
- 5. In the "Live routings" upper drop-down menu, select "Tangerine Port #1".
- 6. Press the SSL "Tape Enable" switch.

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Synchronization Machine Control MIDI Controllers		Ethernet Controllers Mic Preamps		Satellites	VENUE	Atmos	
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000	MIDI Network Setup	000	MIDI Network Setup
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TC_MASTER	C Enabled Port: 5008 Local name: TO_MASTER Bonjour name:	C.SLAVE	C Enabled Port: 5008 Local name: TC_SLAVE Boniour name:
+ -	Name Latency adj.	+ -	Name Latency adj.
Directory	Participants:	Directory	Participants:
• csx10 (2)	Disconnect Latency: m 1,009 800 100 80 10 3 0 3 -10 -0 Address: 102.106.105000 1923:103.2105.3000	• osx10 (2)	Latency: == 1,000 100 100 10 10 10 10 10 10 10 10 10 1
+-	Connect	Connect	
Who may connect to me: Anyone	routings Network TC_MASTER	Who may connect to me:	routings