# **Controlling Reaper from Titan on the same PC**

(inspired by Oliver Waits, December 2019)

The idea is to control Reaper (see Software List) in a similar way like Winamp, i.e. start, stop, pause etc.

# **Prerequisites**

- 1. Titan PC-Suite, from v13 on (AvoKey required)
- 2. loopMIDI (see Software List, to route the MIDI signal from one program to another
- 3. Reaper (see Software List)
- 4. macros to send MMC commands, see MIDI Machine Control

5. at least one music track to play with

# Make it run

## 1. loopMIDI

This needs to be started (usually: automatically when Windows starts). By default it provides a virtual MIDI port named loopMIDI Port:

IoopMIDI     Konfiguration Erwe     Meine Loopback M			
Name		Gesamtdaten	Durchsatz / Sek.
loopMIDI Port		0	0 Byte
+	Neuer Port-Name: loopN	AIDI Port 1	

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## 2. Titan PC Suite

Launch Titan PC Suite, load the MMC macros and copy the macros you plan to use on buttons as you like:

Macros				
17 MMC Play	18 MMC Pause	19 MMC Stop	20 MMC Goto Start	
8	e	10	11	12

#### 3. Reaper

Launch Reaper and load a track.

In the Options menu select Preferences - this opens the preferences window. Find MIDI devices in the Audio section. This should list loopMIDI Port as MIDI input:

REAPER Preferences	;			<b>₽ ×</b>
Keyboard/Multitouch Project	*	MIDI hardware settings MIDI inputs to make available (selectable as track	inputs and/or learnat	ole or action-bindable):
Track/Send Defaults		Device	Mode	ID
Media Item Defaults Audio Device MIDI Devices Buffering Mute/Solo Playback	ш	loopMIDI Port	Enabled+Control	0
Seeking Recording Loop Recording Rendering		MIDI outputs to make available (selectable as trac	k outputs): Mode	Add joystick MIDI
Appearance		loop MIDI Port	<disabled></disabled>	1
Media Peaks/Waveforms Fades/Crossfades Track Control Panels Editing Behavior Envelope Display		Microsoft GS Wavetable Synth [use cautiously]		0
Automation Mouse		Restrict MIDI hardware output to one thread	Parat any 💷 Di-	Reset all MIDI devices
Mouse Modifiers	Ŧ	Reset by: 💟 All-notes-off 💟 Pitch/sustain	Nesel on: V Play	Cancel Apply

Right-click on loopMIDI Port input and either enable input for control messages from the menu...

S REAPER Preferences	;	푸 💌		
Keyboard/Multitouch Project Track/Send Defaults	•	MIDI hardware settings MIDI inputs to make available (selectable as track inputs and/or learnable or action-bindable):		
Media Item Defaults		Device Mode ID		
Audio		loopMIDI Port Enabled+Control 0		
Device		Configure input		
MIDI Devices				
Buffering		Input ID •		
Mute/Solo Playback	=	Forget device		
Seeking		Enable input		
Recording		Add is stick MIDI		
Loop Recording		V Enable input for control messages is).		
Rendering		Device Mode ID		
Appearance		loopMIDI Port <disabled> 1</disabled>		
Media Peaks/Waveforms		Microsoft GS Wavetable Synth [use cautiously] <disabled> 0</disabled>		
Fades/Crossfades				
Track Control Panels				
Editing Behavior				
Envelope Display				
Automation Mouse		Restrict MIDI hardware output to one thread Reset all MIDI devices		
Mouse Modifiers	-	Reset by: V All-notes-off V Pitch/sustain Reset on: V Play Stop/stopped seek		
Find		MIDI Input devices you wish to use by right-clicking on the Device OK Cancel Apply selecting Enable Input.		

... or select Configure input... and make the settings there:

🕥 REAPER Prefere	nces		a a a a a a a a a a a a a a a a a a a	
Keyboard/Multitouch         MIDI hardware settings           Project         MIDI inputs to make available (selectable as track inputs and/or learnable or action-bindable):				
Track/Send Defa	Lievice	Mode	ID	
Media Item Defau	🕥 Configure MIDI Input 🛛 🛛 🕰	Enabled+Control	0	
Audio		Linabled+Control		
Device	Device name: loopMIDI Port			
MIDI Devices	Alias name: loopMIDI Port			
Buffering Mute/Solo	Allas hame.			
110107 0010	Enable input from this device			
Playback Seeking	Enable input for control messages			
Recording	Advanced MIDI event timestamp options		Add joystick MIDI	
Loop Recording		putputs):	Add Joystick MIDT	
Rendering	<ul> <li>Let REAPER timestamp events (default)</li> </ul>	Mode	ID	
Appearance	High precision system timestamp (QPC)	<disabled></disabled>	1	
Media	Low precision system timestamp (TGT)	<disabled></disabled>	0	
Peaks/Waveform				
Fades/Crossfade device driver. If the driver precision is unknown, let REAPER				
Track Control Par	timestamp MIDI events.			
Editing Behavior				
Envelope Display	OK Cancel			
Automation	Restrict MIDI hardware output to one thread		Reset all MIDI devices	
Mouse	Reset by: V All-notes-off V Pitch/sustain	Reset on: V Play	Stop/stopped seek	
Mouse Modifiers	Althoused by Althoused Prich/sustain	ridget on. Mr Fidy	Jup/stopped seek	
Find	Enable the MIDI Input devices you wish to use by right-clicking on the name and selecting Enable Input.	Device OK	Cancel Apply	

Confirm the settings with OK to close the preferences window.

## 4. Try it out

Essentially this should work straight away: in Titan, fire the macro MMC Play and Reaper should immediately start playing - but see below. This also works together with Reaper sending Timecode back into Titan, like described in Sending Timecode from Reaper to Titan on the same PC

Some caveats I found:

- it looks like Reaper wants to be started internally at first before listening to MMC. Thus, you at first need to hit Play in Reaper and stop this with MMC after this you can play/pause/stop from MMC as you like
- reaper seems to be ignorant to device IDs: when changing the macros to a designated device ID (by defaukt it sends to 7F which is All Devices) Reaper still listens and reacts, even with another ID selected in Reaper

### 5. How to debug

If things do not work as expected then there are some tools which help finding the fault:

#### 5.1 loopMIDI

loopMIDI shows the number of transmitted data. This number increases with every command. If this number does not increase then Titan doesn't send data.

🖲 loopMIDI			<b>×</b>
Konfiguration	Erweitert Über		
Meine Loopb	ack MIDI-Ports		
Name		2.Journalisten	Durchsatz / Sek.
loopMIDI	Port	1874	0 Byte
+ • •	Neuer Port-Name:	loopMIDI Port 1	•

#### 5.2 USB Expert Console

Open the USB Expert Console. This must show loopMIDI Port 1 as connected panel (top-left). Select the MIDI tab top-right, click Watch MIDI, in the MIDI watcher window select MIDI Input an Raw MIDI. Now, as you send a command, it is shown in the MIDI watcher:

🥐 Reset 💥 Suspend	ben Event		Info Service Test Bench	MIDI Timeco	ie .	
onnected Panels	Fiber	Show / Hide	loopMIDI Port 1			
Z 🚱 loop MIDI Port 1	V Fadem		Mid Watcher			
	MIDI Watcher - Io	pMIDI Port 1		8		Watch MIDI
	i MIDI Input	<ul> <li>Raw MIDI</li> </ul>	•		Data 1	Data 2
	F0 7F 7F 06	02 177				
					• 0	÷ 0

#### 5.3 MIDI-OX

Install and launch MIDI-OX (see Software List. From the Options menu select MIDI Devices. Make sure loopMIDI Port is listed as MIDI Input but isn't mapped to any output (yes, you can create a feedback loop, and yes, you do not want to do this...)

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MIDI-OX - [Monitor - Input]	
File View Actions Options Window	Help _ B ×
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TIMESTAMP IN PORT STATUS DATA1 DATA2	CHAN NOTE EVENT
MIDI Devices	X
Presets:	
MIDI Inputs:	Port Mapping:
1) loopMIDI Port	
MIDI Outputs:	Port Map Objects:
1) Microsoft GS Wavetable Synth 2) IoopMIDI Port 3) MIDI Mapper	<ul> <li>Channels</li> <li>System</li> <li>IoopMIDI Port</li> <li>MIDI-0X Events</li> <li>_M0XSYSMAP1.oxm</li> </ul>
Automatically attach Inputs to Outputs durin	ng selection.

From the View menu select Input Monitor.... In this window, all incoming MIDI data are shown. You will see anything when you fire a command in Titan:

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