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 Erweitert Über Meine Loopback MIDI-Ports						
Name	1011010	Gesamtdaten	Durchsatz / Sek.			
loopMIDI Port	:	0	0 Byte			
+••	Neuer Port-Name: loop	MIDI 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		
		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				푸 💌				
Keyboard/Multitouch Project	*	MIDI hardware settings MIDI inputs to make available (selectable as trac	k inputs and/or learnal	ble or action-bindable):				
Track/Send Defaults		Device	Mode	ID				
Media Item Defaults Audio		loop MIDI Port	Enabled+Control	0				
Device								
MIDI Devices								
Buffering								
Mute/Solo	Ξ							
Playback Seeking								
Recording		MIDL state to a subject of the (selected is a tend of state to).						
Loop Recording		MIDI outputs to make available (selectable as tra	ick outputs):	Add Joyadok Mitzhini				
Rendering		Device	Mode	ID				
Appearance		loopMIDI Port	<disabled></disabled>	1				
Media		Microsoft GS Wavetable Synth [use cautiously]] <disabled></disabled>	0				
Peaks/Waveforms Fades/Crossfades								
Track Control Panels								
Editing Behavior								
Envelope Display								
Automation		Restrict MIDI hardware output to one thread		Reset all MIDI devices				
Mouse								
Mouse Modifiers	Ŧ	Reset by: 🔽 All-notes-off 🔽 Pitch/sustain	Reset on: 📝 Play	Stop/stopped seek				
Find			OK	Cancel Apply				

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

REAPER Preferences	;	푸.	x				
Keyboard/Multitouch Project	*	MIDI hardware settings MIDI inputs to make available (selectable as track inputs and/or learnable or action-bindable):					
Track/Send Defaults		Device Mode ID					
Media Item Defaults Audio		loopMIDI Port Enabled+Control 0					
Device MIDI Devices		Configure input					
Buffering		Input ID					
Mute/Solo Playback	Ξ	Forget device					
Seeking		✓ Enable input					
Recording Loop Recording		Enable input for control messages ts):					
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: 🔽 All-notes-off 🔽 Pitch/sustain Reset on: 🔽 Play 🔲 Stop/stopped seek	c				
Find Enable the MIDI Input devices you wish to use by right-clicking on the Device OK Cancel Apply							

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

REAPER Prefere	nces		x ¥
Keyboard/Multitou Project	MIDI hardware settings MIDI inputs to make available (selectable as track in	nputs and/or learnable	or action-bindable):
Track/Send Defa	Levice	Mode	ID
Media Item Defau	🕥 Configure MIDI Input 🛛 🛛 🔫	Enabled+Control	0
Audio Device MIDI Devices Buffering Mute/Solo	Device name: loop MIDI Port Alias name: loop MIDI Port		
Playback	Enable input for control messages		
Seeking Recording Loop Recording Rendering Appearance Media Peaks/Waveform Fades/Crossfade Track Control Par	Advanced MIDI event timestamp options Let REAPER timestamp events (default) High precision system timestamp (QPC) Low precision system timestamp (TGT) Timestamp precision should be set to match this MIDI input device driver. If the driver precision is unknown, let REAPER timestamp MIDI events.	outputs): Mode <disabled> <disabled></disabled></disabled>	Add joystick MIDI ID 1 0
Editing Behavior Envelope Display	OK Cancel		
Automation Mouse Mouse Modifiers	Reset by: All-notes-off Pitch/sustain Enable the MIDI Input devices you wish to use by right-clicking on the	Reset on: V Play	Reset all MIDI devices Stop/stopped seek 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.

Konfiguration Erweitert Über Meine Loopback MIDI-Ports Name loopMIDI Port	Sommenten Durchsatz / Sek. 74 0 Byte
Name	
loopMIDI Port	
+ - Neuer Port-Name: loopMIDI P	Cort 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:

C Reset 💥 Suspend connected Panela		ben Eventa Fiber	Show / Hide	Info Service Test Bench	MIDI Timecoo	le	
ColoopMIDI Port 1		 Leds Faders 	Vectors Time Stamp	Nel Watcher			
		latcher - loopM					Watch MIDI
		Input 17 7 17 06 02	Raw MIDI	•		Data 1	Data 2
	10 7	1 11 06 02				• 0	0
ite:							

5.3 MIDI-OX

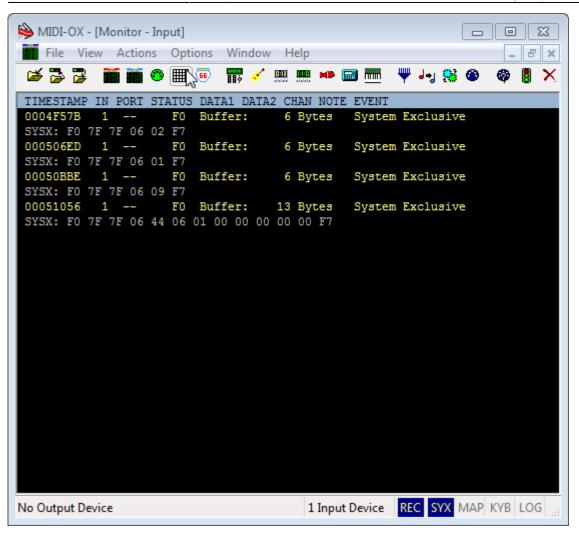
Install and launch MIDI-OX (see Software List. From the Options menu select MIDI Devices. Make sure loopMIDI Port is listed as MIDI Input but isn't mapped to any output (yes, you can create a feedback loop, and yes, you do not want to do this...)

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🖗 MIDI-OX - [Monitor - Input]					
File View Actions Options Window H	lelp - B ×				
🎽 🍃 🕃 🎽 🗃 🔍 🎟 🗉 📅 🗸 📟	💻 🗝 🔤 🎹 👎 🔩 😂 🚳 🕷 🗙				
TIMESTAMP IN PORT STATUS DATA1 DATA2 C	HAN NOTE EVENT				
MIDI Devices	23				
Presets:	Cancel				
MIDI Inputs: Po	ort Mapping:				
1) loopMIDI Port					
MIDI Outputs: P	ort Map Objects:				
	Channels				
3) MIDI Manner	System JoopMIDI Port				
	MIDI-OX Events				
<i>د</i>	U_MOXSYSMAP1.oxm				
Automatically attach Inputs to Outputs during selection.					
No					

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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