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:

Konfigurati					
Nam			Gesamtdaten	Durchsatz / Sek.	
loopN	IDI Port		0	0 Byte	
+-	Neuer Po	rt-Name: loopM	IIDI Port 1		

Last update: 2020/02/13 external:examples:reaper_mmc_on_same_pc https://www.avosupport.de/wiki/external/examples/reaper_mmc_on_same_pc?rev=1581593863 11:37

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				Ŧ×	
Keyboard/Multitouch Project	*	MIDI hardware settings MIDI inputs to make available (selectable as track	inputs and/or learnab	le or action-bindable):	
Track/Send Defaults		Device	Mode	ID	
Media Item Defaults Audio Device <u>MIDI Devices</u> Buffering Mute/Solo Playback	Ш	loopMIDI Port	Enabled+Control	0	
Seeking Recording		MIDLet te te make available (celectable as track et te te). Add joystick MIDL			
Loop Recording		MIDI outputs to make available (selectable as trac	k oulpuis).		
Rendering		Device	Mode	ID	
Appearance		loopMIDI Port	<disabled></disabled>	1	
Media Peaks/Waveforms Fades/Crossfades Track Control Panels Editing Behavior Envelope Display		Microsoft GS Wavetable Synth [use cautiously]	<disabled></disabled>	0	
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	
Find			ОК	Cancel Apply	

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

REAPER Preferences	;		₽ ×	
Keyboard/Multitouch Project	*	MIDI hardware settings MIDI inputs to make available (selectable as track inputs and/or learnable or ac	tion-bindable):	
Track/Send Defaults Media Item Defaults		Device Mode loopMIDI Port Enabled+Control	ID 0	
Audio Device		Configure input		
MIDI Devices Buffering Mute/Solo		Input ID +		
Playback Seeking	Ε	Forget device		
Recording Loop Recording			joystick MIDI	
Rendering		Device Mode	ID	
Appearance Media		loopMIDI Port <disabled> Microsoft GS Wavetable Synth [use cautiously] <disabled></disabled></disabled>	1 0	
Peaks/Waveforms Fades/Crossfades				
Track Control Panels Editing Behavior				
Envelope Display Automation Mouse		Restrict MIDI hardware output to one thread Reset all MIDI devices		
Mouse Modifiers	Ŧ	Reset by: 📝 All-notes-off 📝 Pitch/sustain Reset on: 📝 Play 📃 Sto	p/stopped seek	
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		a a a a a a a a a a a a a a a a a a a		
Keyboard/Multitouch Project MIDI hardware settings 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		Add Joystick MIDT			
Rendering	 Let REAPER timestamp events (default) 	Mode	ID		
Appearance	High precision system timestamp (QPC)	<disabled></disabled>	1		
Media	Low precision system timestamp (TGT)	<disabled></disabled>	0		
Peaks/Waveform					
Fades/Crossfade	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 Device OK Cancel Apply					

Confirm the settings with OK to close the preferences window.

4. Try it out

Essentially this should work staright 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 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			×
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:

File Tools Remote Help Reset 💥 Suspend	ten Event		Info Service Test Benc	h MIDI Timeo	ode	
onnected Panels	filter	Show / Hide	loopMIDI Port 1			
CoopMIDI Port 1	₹ Leds ₹ Faders	Vectors Time Stamp	Mid Watcher			_
	MIDI Watcher - Ioo	pMIDI Port 1				Watch MIDI
	MDIInput		•		Data 1	Data 2
	FO 7F 7F 06	02 17		*		
					- 0	÷ 0 (
tatus Messages						
iter:						
	· · · · · · · · · · · · · · · · · · ·			*		

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					
🛎 🍃 🕃 📷 🗃 🗢 🎟 🖷 💎 !					
TIMESTAMP IN PORT STATUS DATA1 DATA2	CHAN NOTE EVENT				
2					
MIDI Devices					
Presets:	Cancel				
MIDI Inputs:	Port Mapping:				
1) IcopMIDI Port					
MIDI Outputs:	Port Map Objects:				
1) Microsoft GS Wavetable Synth					
2) loopMIDI Port 3) MIDI Mapper	🍠 System				
	IoopMIDI Port MIDI-0X Events				
	June 2007 - 2007				
Automatically attach Inputs to Outputs during selection.					
No	LOG				

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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