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

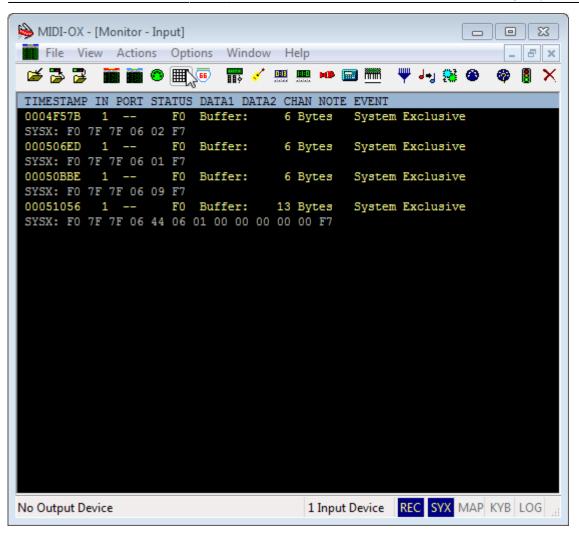
Install and launch MIDI-OX (see Software List. From the Options menu select MIDI Devices. Make sure loopMIDI Port is listed as MIDI Input but isn't mapped to any output (yes, you can create a feedback loop, and yes, you do not want to do this...)

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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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