ROTO-CONTROL SYSEX API

Version 1.0

Disclaimer

The software API is provided "as is" without any warranties or guarantees of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. All parts of this API are subject to change, additions or deletions without notice. The use of the API is at your own risk. The authors or contributors of this API do not offer any technical support, updates, or maintenance, and make no representations regarding the performance, reliability, or suitability of the API for any particular purpose. In no event shall the authors or contributors be liable for any damages arising from the use or inability to use this API, including but not limited to direct, indirect, incidental, special, or consequential damages, even if advised of the possibility of such damages.

1. Introduction

The ROTO-CONTROL SYSEX API allows communication and configuration with an external DAW such as Ableton. The interface used is MIDI via USB.

The interface is bi-directional in that commands can be sent to ROTO-CONTROL and received from ROTO-CONTROL asynchronously.

Note 1: For conciseness ROTO-CONTROL is also referred to as ROTO throughout this document.

Note 2: All values are specified in hexadecimal.

1.2 Command Format

All ROTO-CONTROL SYSEX commands take the following format:

F0 00 22 03 02 <data> F7

Where:

- F0 = Start SYSEX message byte.
- 00 22 03 = Melbourne Instruments SYSEX ID.
- 02 = ROTO-CONTROL v1 device ID.
- <data> = The command payload.
- F7 = End SYSEX message byte.

1.3 Commands Overview

Type	Sub-type	Description	To ROTO	From ROTO
0A: GENERAL	**01: DAW STARTED**	The DAW has started a session with ROTO-CONTROL	Y	N
	02: PING DAW	Ping to check if the DAW is running	N	Y
	03: DAW PING RESPONSE	Ping response from the DAW	Y	N
	04: NUM TRACKS	Number of tracks	Y	N
	05: FIRST TRACK	First track page index	Y	N
	06: SET FIRST TRACK	Set the first track page index	N	Y
	07: TRACK DETAILS	Track details in the current track page	Y	N
	08: TRACK DETAILS END	Finished sending track details	Y	N
	09: ROTO SELECT TRACK	ROTO-Control has selected a track	N	Y
	0A: REQUEST TRANSPORT STATUS	Request the current transport status	N	Y
	0B: TRANSPORT STATUS	The current transport status	Y	N

0B: PLUGIN	01: SET PLUGIN MODE	Set the DAW in PLUGIN mode	Y	N
	02: NUM PLUGINS	Returns the number of PLUGINs on the current track	Y	N
	03: FIRST PLUGIN	First PLUGIN page index	Y	Y
	04: SET FIRST PLUGIN	Set the first PLUGIN page index	N	Y
	05: PLUGIN DETAILS	Details of a PLUGIN	Y	N
	06: PLUGIN DETAILS END	Finished sending PLUGIN details	Y	N
	07: ROTO SELECT PLUGIN	The ROTO-CONTROL has selected a PLUGIN	Y	N
	08: DAW SELECT PLUGIN	The DAW has selected a PLUGIN	Y	N
	09: SET PLUGIN LEARN	Put the DAW in learn mode	Y	N
	0A: LEARN PARAM	A param has been learned	Y	N
	0B: PARAM LEARNED	Learned param details	N	Y
	0C: SET PLUGIN ENABLE	Enable/disable a PLUGIN	N	Y
	0D: SET PLUGIN LOCK	Lock/unlock PLUGINs	N	Y
	0E: UNMAP CONTROL	Un-map a learned control	Y	N
0C: MIX	01: SET MIX ALL TRACKS MODE	Set the MIX into all tracks mode	N	Y
	02: SET MIX TRACK MODE	Set the MIX into single track mode	N	Y
	03: NUM SENDS	The number of available sends	Y	N
	04: DAW SELECT TRACK	The DAW has selected a track	Y	N
	05: SET ALL TRACKS MODE	Set the all tracks mode	N	Y

2. GENERAL Commands: 0A

2.1 DAW STARTED: 01

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0A 01 F7

2.2 PING DAW: 02

TO ROTO: N   FROM ROTO: Y

Command
F0 00 22 03 02 0A 02 F7

2.3 DAW PING RESPONSE: 03

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0A 03 F7

2.4 NUM TRACKS: 04

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0A 04 <NT> F7
NT = Number of tracks

2.5 FIRST TRACK: 05

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0A 05 <FT> F7
FT = First track index in multiples of 8 (00 = Track page 1, 08 = Track page 2, etc.)

2.6 SET FIRST TRACK: 06

TO ROTO: N   FROM ROTO: Y

Command
F0 00 22 03 02 0A 06 <FT> F7
FT = First track index in multiples of 8 (00 = Track page 1, 08 = Track page 2, etc.)

2.7 TRACK DETAILS: 07

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0A 07 <TI TN:0D CS> F7
TI = Track index

```
TN = Track name: 0D-byte NULL terminated ASCII string, padded with 00s if needed
CS = Colour scheme: 00 - 52
```

2.8 TRACK DETAILS END: 08

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0A 08 F7

2.9 ROTO SELECT TRACK: 09

TO ROTO: N   FROM ROTO: Y

Command
F0 00 22 03 02 0A 09 <TI> F7
TI = Index of the track to select

2.10 REQUEST TRANSPORT STATUS: 0A

TO ROTO: N   FROM ROTO: Y

Command
F0 00 22 03 02 0A 0A F7

2.11 TRANSPORT STATUS: 0B

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0A 0B <PS RS SR LS PI PO AS> F7
PS = Play status: Off (00), On (01)
RS = Record status: Off (00), On (01)
SR = Session Record status: Off (00), On (01)
LS = Loop status: Off (00), On (01)
PI = Punch-in status: Off (00), On (01)
PO = Punch-out status: Off (00), On (01)
AS = Re-enable automation status: Off (00), On (01)

3. PLUGIN Commands: 0B

3.1 SET PLUGIN MODE: 01

TO ROTO: N FROM ROTO: Y

Command
F0 00 22 03 02 0B 01 F7

3.2 NUM PLUGINS: 02

TO ROTO: Y FROM ROTO: N

Command
F0 00 22 03 02 0B 02 <NP> F7
NP = Number of PLUGINS on the current track

3.3 FIRST PLUGIN: 03

TO ROTO: Y FROM ROTO: N

Command
F0 00 22 03 02 0B 03 <FP> F7
FP = First PLUGIN index in multiples of 8 (00 = PLUGIN page 1, 08 = PLUGIN page 2, etc.)

3.4 SET FIRST PLUGIN: 04

TO ROTO: N FROM ROTO: Y

Command
F0 00 22 03 02 0B 04 <FP> F7
FP = First PLUGIN index in multiples of 8 (00 = PLUGIN page 1, 08 = PLUGIN page 2, etc.)

3.5 PLUGIN DETAILS: 05

TO ROTO: Y FROM ROTO: N

Command
F0 00 22 03 02 0B 05 <PI PH:8 PE PN:0D> F7
PI = PLUGIN index
PH = PLUGIN hash
PE = PLUGIN enabled status: Disabled (00), Enabled (01)
PN = PLUGIN name: 0D-byte NULL terminated ASCII string, padded with 00s if needed

3.6 PLUGIN DETAILS END: 06

TO ROTO: Y FROM ROTO: N

Command
F0 00 22 03 02 0B 06 F7

3.7 ROTO SELECT PLUGIN: 07

TO ROTO: N FROM ROTO: Y

Command

```
F0 00 22 03 02 0B 07 <PI> F7
PI = Index of the PLUGIN to select
```

3.8 DAW SELECT PLUGIN: 08
TO ROTO: Y   FROM ROTO: N

Command

```
F0 00 22 03 02 0B 08 <PI> F7
PI = Index of the PLUGIN to select
```

3.9 SET DEVICE LEARN: 09
TO ROTO: N   FROM ROTO: Y

Command

```
F0 00 22 03 02 0B 09 <DL> F7
DL = Device learn status: Off (00), On (01)
```

3.10 LEARN PARAM: 0A
TO ROTO: Y   FROM ROTO: N

Command

```
F0 00 22 03 02 0B 0A <PI:2 PH:6 NS:1 PN:0D SN:NS*0D> F7
PI = Param index
PH = Param hash
NS = Number of steps: 00 or 02 – 10
PN = Param name: 0D-byte NULL terminated ASCII string, padded with 00s if needed
SN = An array of NS x 0D-byte NULL terminated ASCII strings, each string padded with 00s if
needed
```

3.11 PARAM LEARNED: 0B
TO ROTO: N   FROM ROTO: Y

Command

```
F0 00 22 03 02 0B 0B <PI:2 PH:6 CT CI> F7
PI = Param index
PH = Param hash
CT = Control type: Switch (00), Knob (01)
CI = Index of the control within the current PLUGIN page
```

3.12 SET PLUGIN ENABLED: 0C
TO ROTO: N   FROM ROTO: Y

Command

```
F0 00 22 03 02 0B 0C <PI ES> F7
PI = PLUGIN index
ES = PLUGIN enabled status: Disabled (00), Enabled (01)
```

3.13 SET PLUGINS LOCK: 0D

TO ROTO: N   FROM ROTO: Y

Command
F0 00 22 03 02 0B 0D <LS> F7
LS = PLUGINS lock status: Unlocked (00), Locked (01)

4. MIX Commands: 0C

4.1 SET MIX ALL TRACKS MODE: 01

TO ROTO: N   FROM ROTO: Y

Command
F0 00 22 03 02 0C 01 <AM KM SM> F7
AM = All tracks mode: Audio (00), Master-Return (01)
KM = Knob mode: Level (00), Pan (01), Send (02)
SM = Switch mode: Mute (00), Solo (01), Arm Recording (02)

4.2 SET MIX TRACK MODE: 02

TO ROTO: N   FROM ROTO: Y

Command
F0 00 22 03 02 0C 02 <CI> F7
CI = Track control page index in multiples of 8 (00 = Track controls page 1, 08 = Track controls page 2, etc.)

4.3 NUM SENDS: 03

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0C 03 <NS> F7
NS = Number of available sends

4.3 DAW SELECT TRACK: 04

TO ROTO: Y   FROM ROTO: N

Command
F0 00 22 03 02 0C 04 <TI TN:0D CS> F7
TI = Track index
TN = Track name: 0D-byte NULL terminated ASCII string, padded with 00s if needed
CI = Colour scheme: 00 - 52

4.4 SET ALL TRACKS MODE: 05

TO ROTO: N   FROM ROTO: Y

Command
F0 00 22 03 02 0C 05 <AM> F7
AM = All tracks mode: Audio (00), Master-Return (01)