ROTO-CONTROL SYSEX API

Version 1.1

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Revision History

Version	Date	Change
1.0	23/02/2025	First release.
1.1	07/04/2025	**This version is NOT backwards compatible with v1.0.** Updates to support MACRO params: • LEARN PARAM • PARAM LEARNED • SET MAPPED CONTROL NAME (new)

Compatibility

Version	Compatibility
1.0	• ROTO-SETUP v1.0.0 • ROTO-SETUP v1.1.1 • ROTO-SETUP v1.1.2
1.1	• ROTO-SETUP v1.1.3

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	N	Y
	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
	0F: SET MAPPED CONTROL NAME	Set the name of a mapped 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 SS RS SR LS PI PO AS> F7
PS = Play status: Off (00), On (01)
SS = Stop status: Off (00), always this value
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 MP NS PP:2 PN:0D SN:NS*0D> F7 PI = Param index PH = Param hash MP = MACRO param: NO (00), YES (01) NS = Number of steps: 00 or 02 – 18 PP = Param position: 0 – 16383, formatted as two 7-bit values PN = Param name: 0D-byte NULL terminated ASCII string, padded with 00s if needed SN = If NS is <= 10: An array of NS x 0D-byte NULL terminated ASCII strings, each string padded with 00s if needed If NS > 10: No data

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 MP> F7 PI = Param index PH = Param hash CT = Control type: Knob (00), Switch (01) CI = Index of the control within the current PLUGIN page MP = MACRO param: NO (00), YES (01)

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)

3.14 UNMAP CONTROL: 0E

TO ROTO: Y FROM ROTO: N

Command
F0 00 22 03 02 0B 0E <CT CI> F7
CT = Control type: Switch (00), Knob (01)
CI = Index of the control within the current PLUGIN page

3.15 SET MAPPED CONTROL NAME: 0F

TO ROTO: Y FROM ROTO: N

Command
F0 00 22 03 02 0B 0F <PI:2 PH:6 PN:0D> F7
PI = Param index
PH = Param hash
PN = Param name: 0D-byte NULL terminated ASCII string, padded with 00s if needed

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 SI> 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)
SI = Send index: The (zero-based) index of the send to control if the Knob mode is Send. Ranges from 0 – Number of available sends

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)