



ortho remote for MMP1 Setup Guide

Version 1.0



Image Courtesy of teenage engineering

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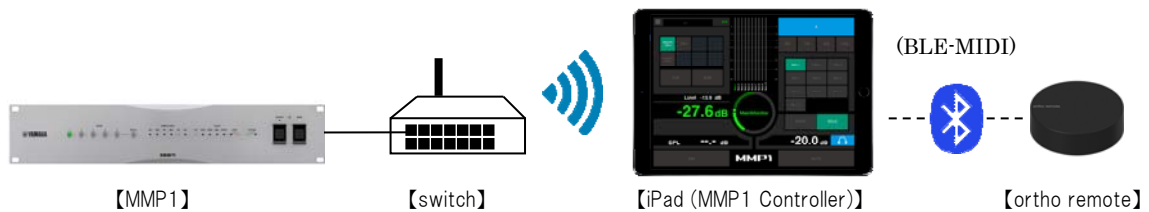
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1. Introduction

This guide describes how to configure ortho remote, the teenage engineering' s Bluetooth remote controller, for controlling MMP1, the Yamaha' s studio monitor management system via iPad.

【Connection diagram】



2. Parameters that can be controlled from ortho remote

Below are the parameters that can be controlled from ortho remote:

- Monitor level (by rotating the volume knob)
- Mute/Dim/Reference level/All Mute mode (by pushing the controller)

The volume knob of ortho remote is only available for controlling the monitor level of MMP1, but for the push button, one of the 4 functions can be assigned. Choose either function described above.

3. Devices and software to be used

Here are the devices and software to be used in this example:

1. ortho remote
2. Mac with OSX 10.13.3 (10.10 or later is fine which is BLE-MIDI compatible) installed
3. SysEx Librarian v1.3.1 (MIDI device communication software)
4. Apple iPad with MMP1 Controller v1.1.0 installed (iOS10 or later)

4. Setup Procedures

Below is the procedures for setting up ortho remote for controlling MMP1:

1. Update MMP1 Controller
2. Download and install SysEx Librarian
3. Download the configuration file
4. Configure ortho remote
5. Pair iPad and ortho remote

4-1. Update MMP1 Controller

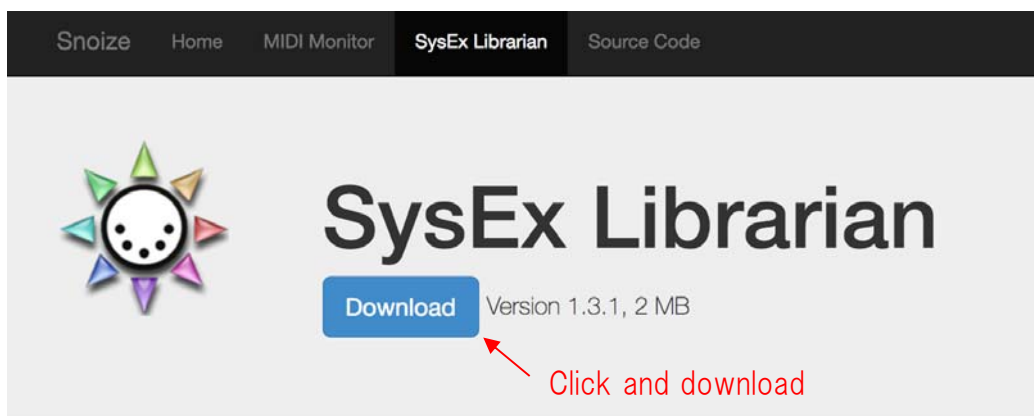
In order to use ortho remote with MMP1, MMP1 Controller needs to be updated to v1.1.1 or later. If older version of MMP1 Controller is used, please download and install the latest version from Apple App Store.

4-2. Download and install SysEx Librarian

This example utilizes a software called SysEx Librarian to send the configuration file for controlling MMP1 Controller, from Mac to ortho remote. SysEx Librarian can be obtained from the following website:

Snoize: SysEx Librarian

<https://www.snoize.com/SysExLibrarian/>



The screenshot shows the website's navigation bar with links for Snoize, Home, MIDI Monitor, SysEx Librarian, and Source Code. The main content area features the SysEx Librarian logo, the title "SysEx Librarian", and a blue "Download" button. To the right of the button, it says "Version 1.3.1, 2 MB". A red arrow points from the text "Click and download" to the "Download" button.

SysEx Librarian is an app to let your Mac communicate with MIDI devices using System Exclusive messages, also known as SysEx, from synthesizers, although there are others (such as sending firmware updates).

It's easy to keep a library of the SysEx files you use most often, and to record new SysEx files.

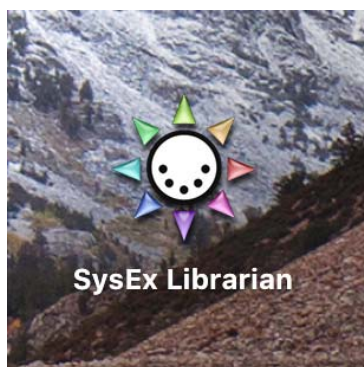
SysEx Librarian is free to download and use. The [source code](#) is available as Open Source, under the BSD license.

System Requirements

- Mac OS X 10.7 or later
- MIDI hardware interface with Mac OS X driver

【Snoize website】

Open the downloaded zip file and an application file will be created.



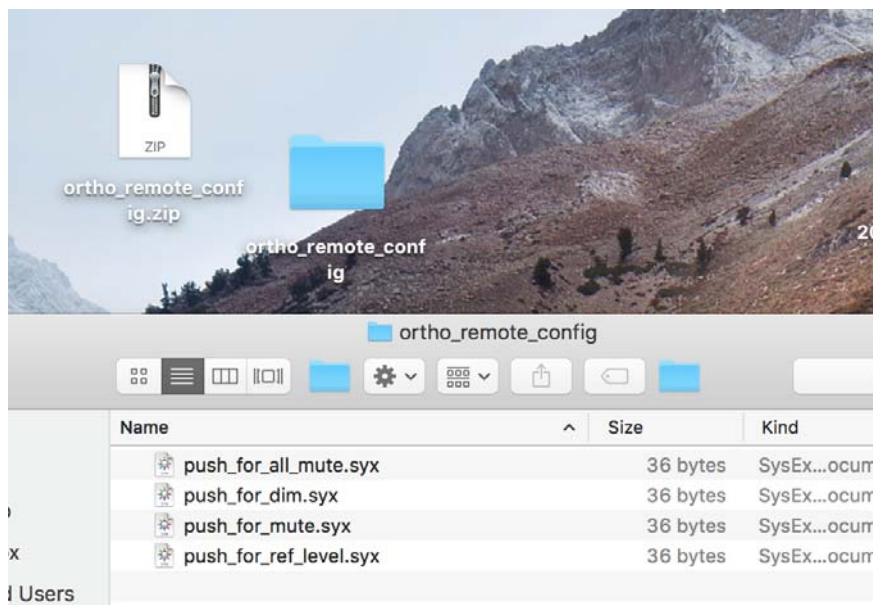
【SysEx Librarian】

4-3. Download ortho remote configuration file

Next, download the configuration file from the following Yamaha website:

Yamaha MMP1 Download Page

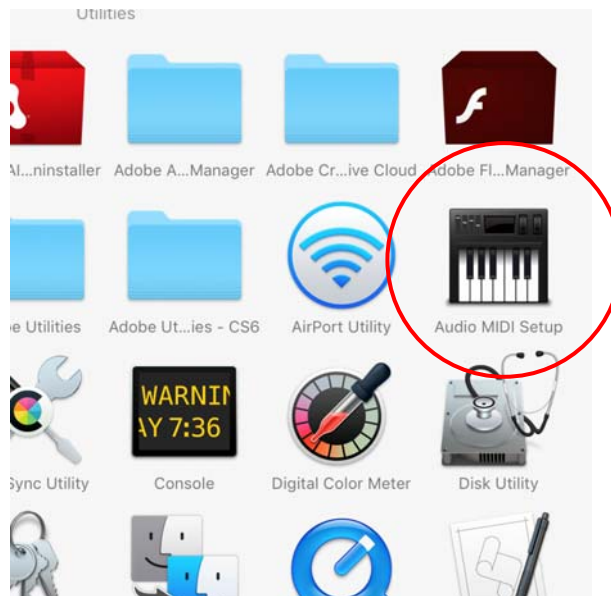
<http://www.yamahaproaudio.com/global/en/products/processors/mmp1/downloads.jsp>



【ortho remote configuration file】

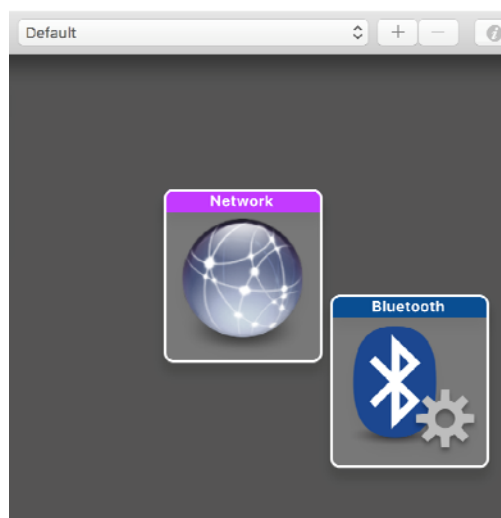
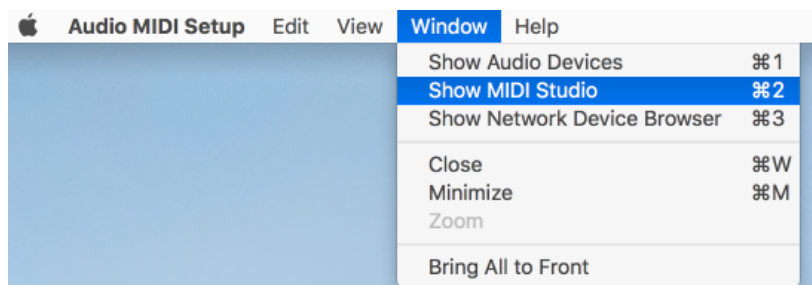
4-4. Configure ortho remote

In order to transfer data from Mac to ortho remote, the both devices need to be paired via Bluetooth. First, open Audio MIDI Setup from Utilities in the Application folder.



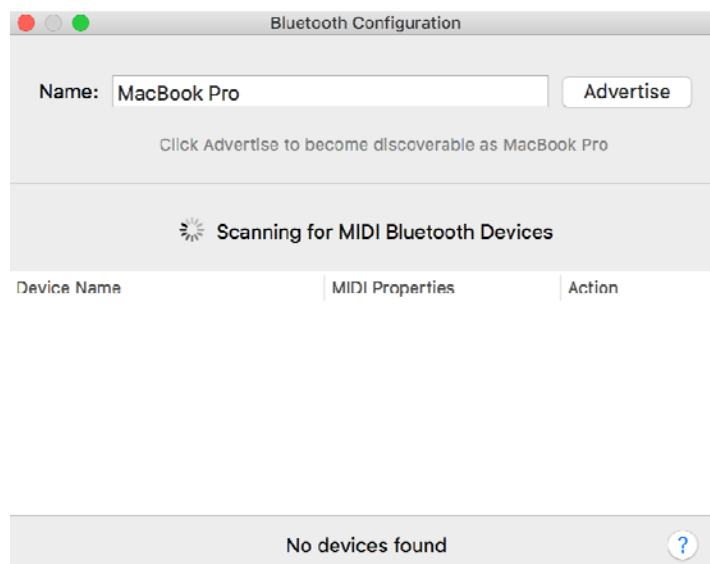
【Mac OS X Audio MIDI Setup】

Choose “Show MIDI Studio” from Window menu and MIDI Studio window will open.



【MIDI Studio】

Double click on the Bluetooth icon and Bluetooth Configuration window appears and Bluetooth devices become discoverable.



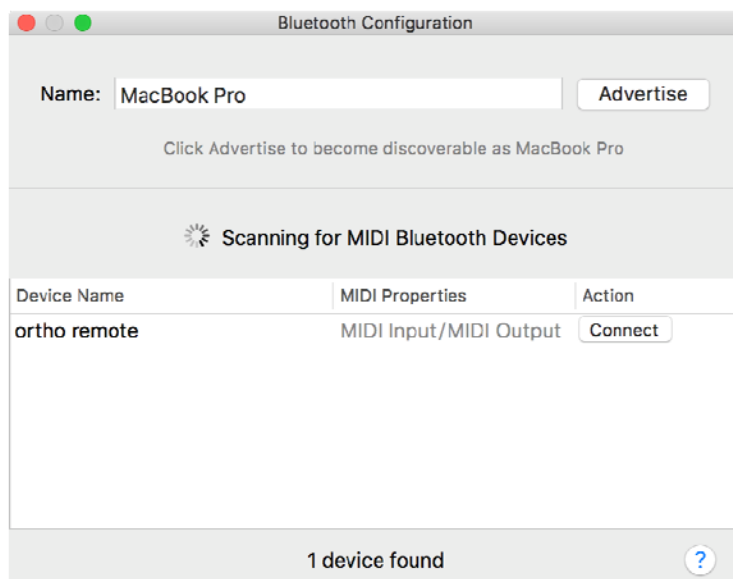
【Bluetooth Configuration】

Here, press and hold the pairing button of ortho remote on the back side of the unit for about 3 seconds, until the blue LED lights.



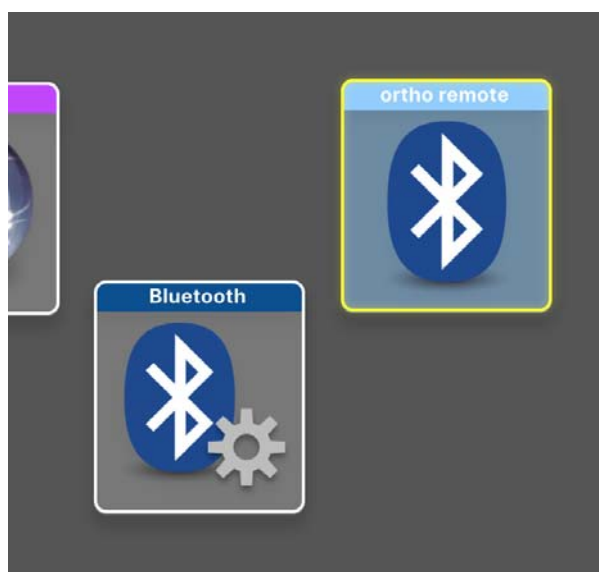
【ortho remote pair button (rear)】

When ortho remote becomes discoverable, the name will appear in the Bluetooth Configuration window, click on “Connect” button to pair Mac and ortho remote.



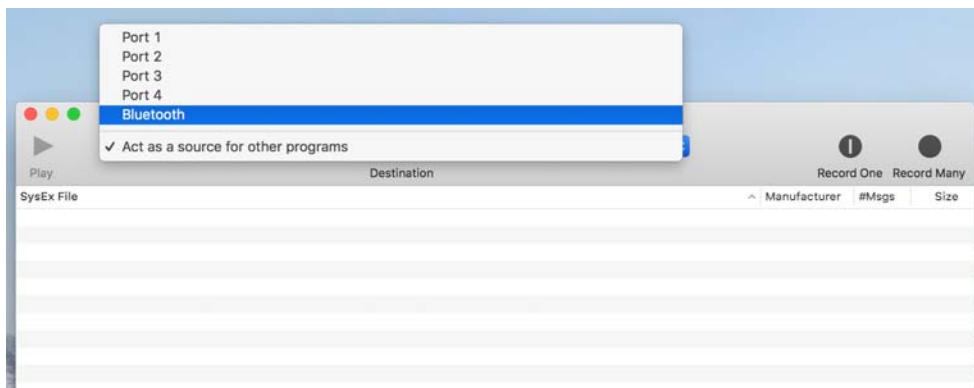
【Bluetooth Configuration】

If both devices are successfully paired, the “ortho remote” device icon will appear in the MIDI Studio window.



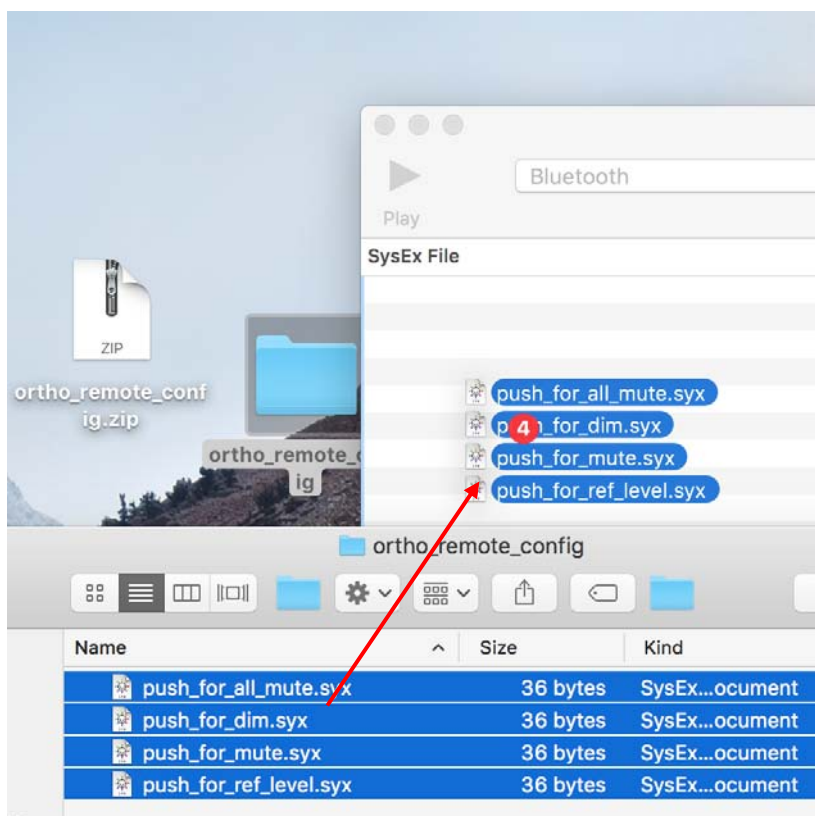
【ortho remote in MIDI Studio window】

Run the previously downloaded SysEx Librarian, click on the Destination and choose “Bluetooth” .



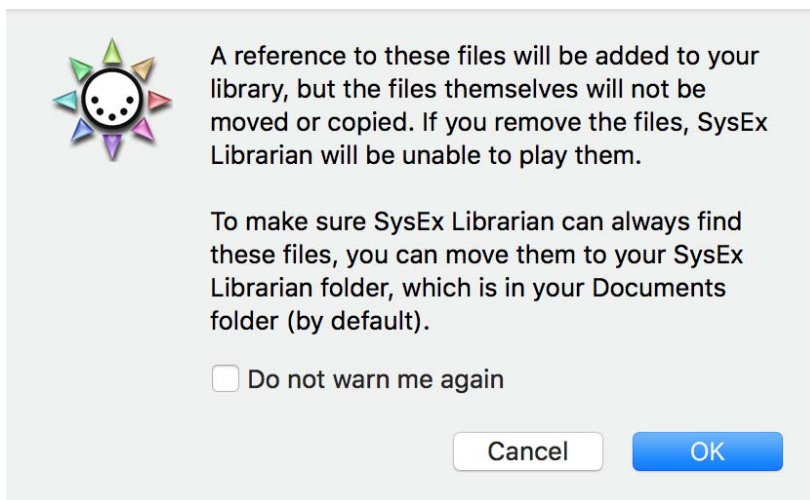
【SysEx Librarian Destination】

Next, load the configuration files on SysEx Librarian. Drag and drop the files onto SysEx Librarian, or choose “Add to Library...” from File menu and specify the files to be loaded.

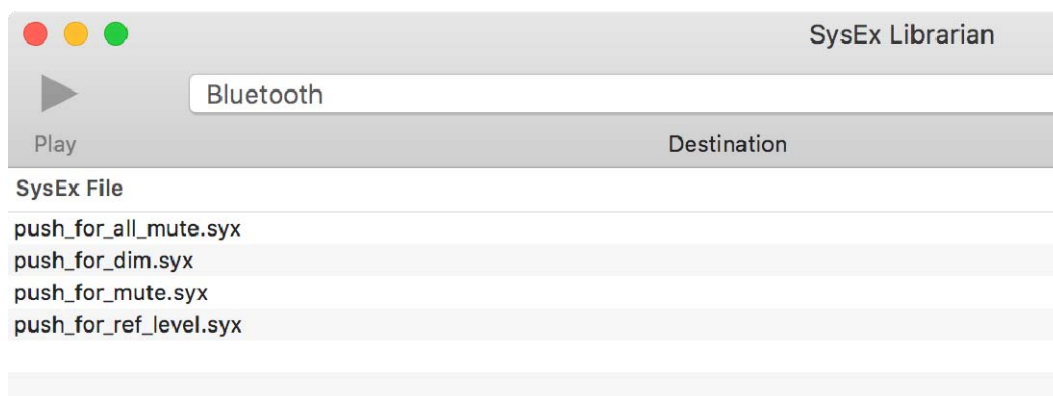


【Loading configuration files】

Simply disregard the following message and click “ok”

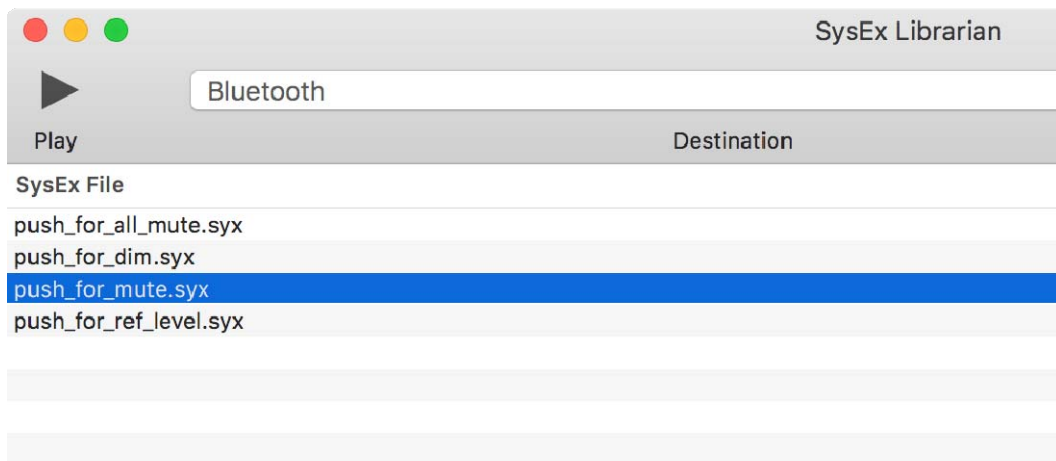


【SysEx Librarian Confirmation Dialog】



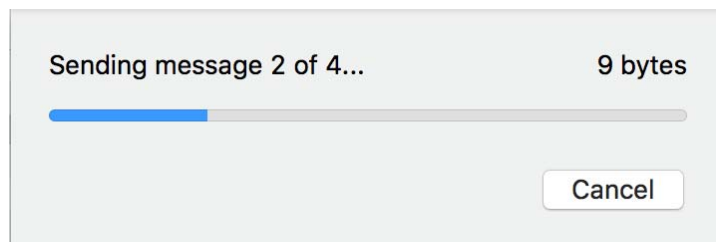
【Configuration files loaded】

Choose either one of the 4 files (push_for_****.syx) by clicking the desired file. Each file contains not only a push command but also other commands for controlling the monitor level.



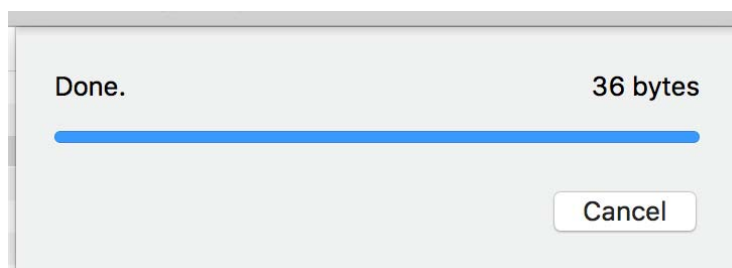
【Select configuration files】

Once the desired file is highlighted, click the Play button and the data transfer will take place.



【Sending message dialog】

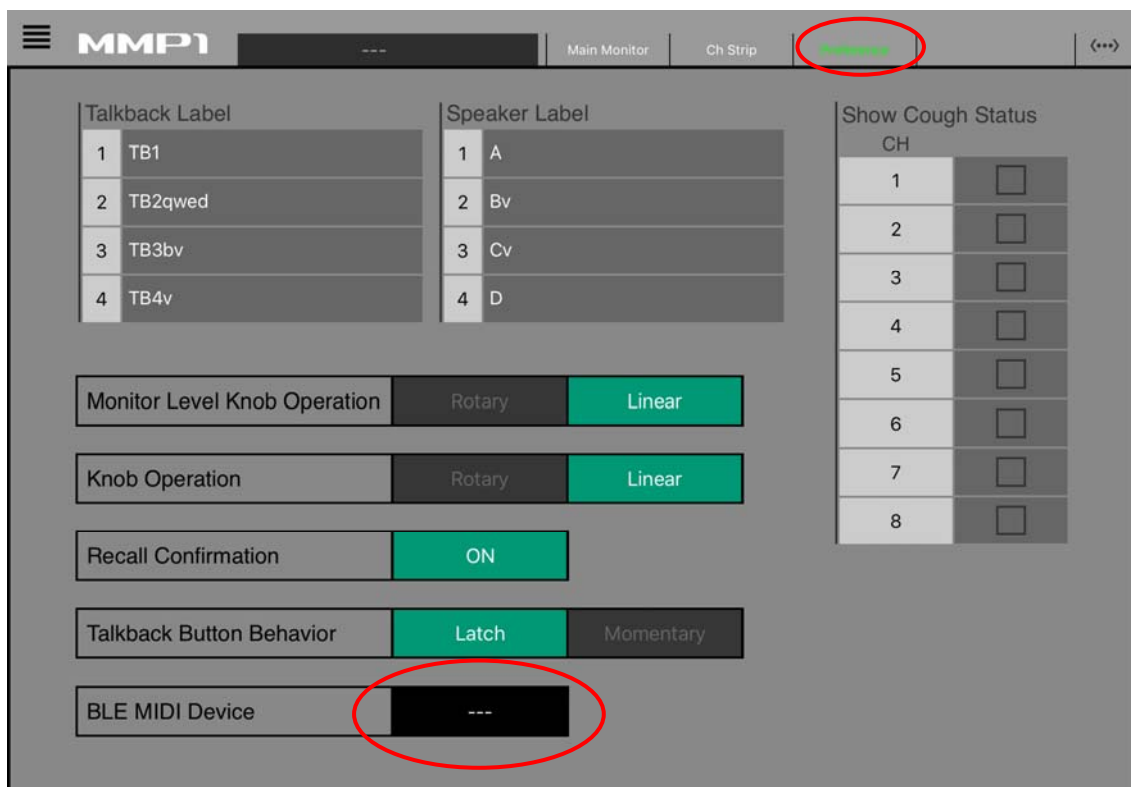
The transfer will complete shortly, and the following message will appear.



【Messages sent】

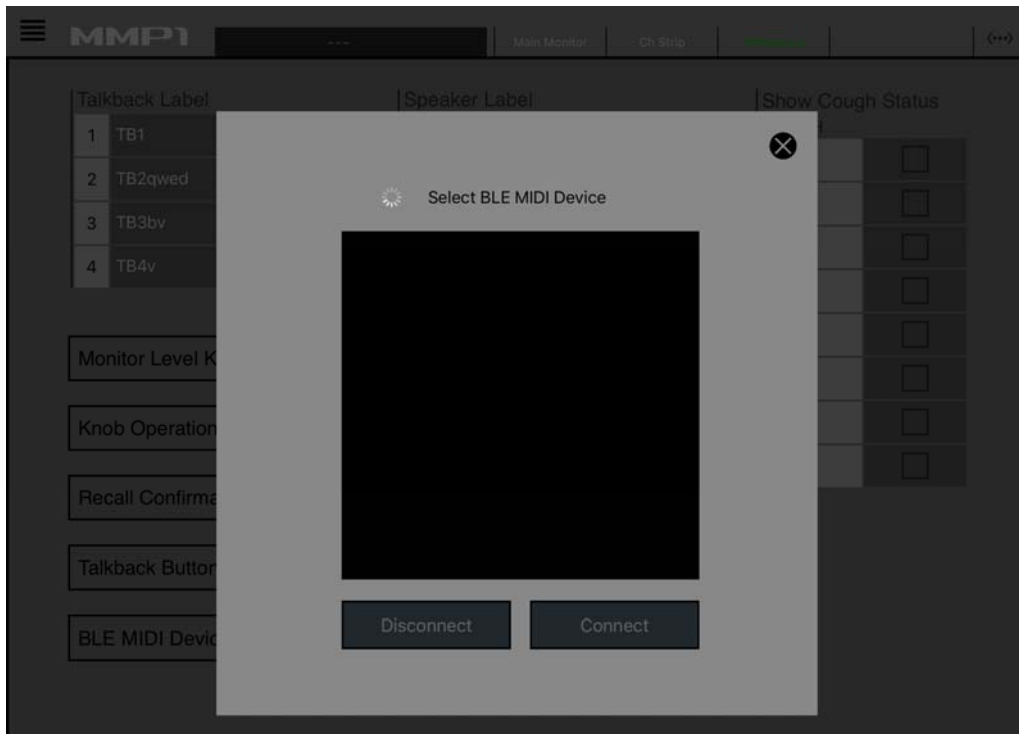
4-5. Pair iPad and ortho remote

Once ortho remote is configured, next is to pair iPad and ortho remote. Start MMP1 Controller and tap on the Preference tab.



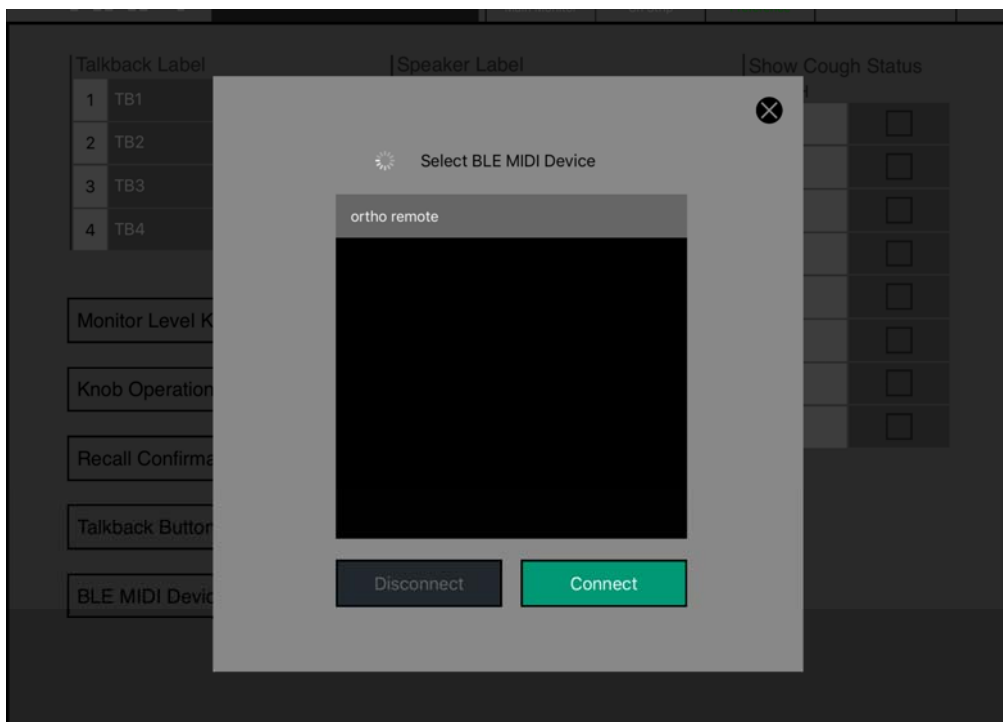
【MMP1 Controller Preference】

Next, tap on the black box next to “BLE MIDI Device” and the following screen will appear:

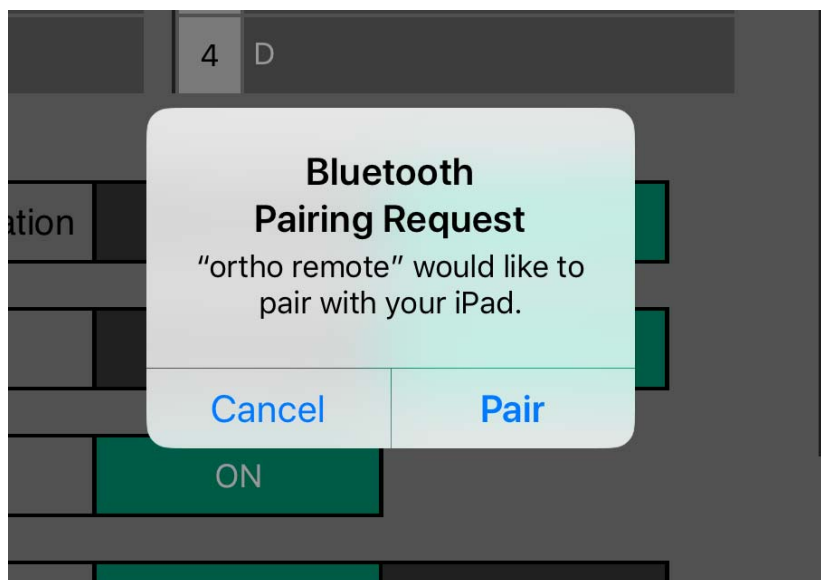


【Select BLE MIDI Device】

Here, again, press and hold the pairing button of ortho remote on the back side of the unit for about 3 seconds, until the blue LED lights. You will see “ortho remote” appear in the screen.



Tap on “ortho remote” and then the “Connect” button to see the following request dialog.
Tap on “Pair” and iPad and ortho remote will become paired.

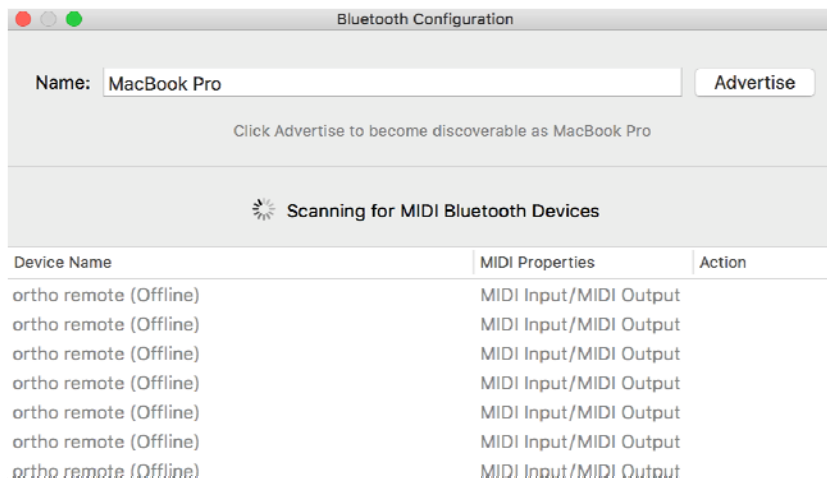


【MMP1 Controller Bluetooth Pairing Request】

Now all the configuration is completed.

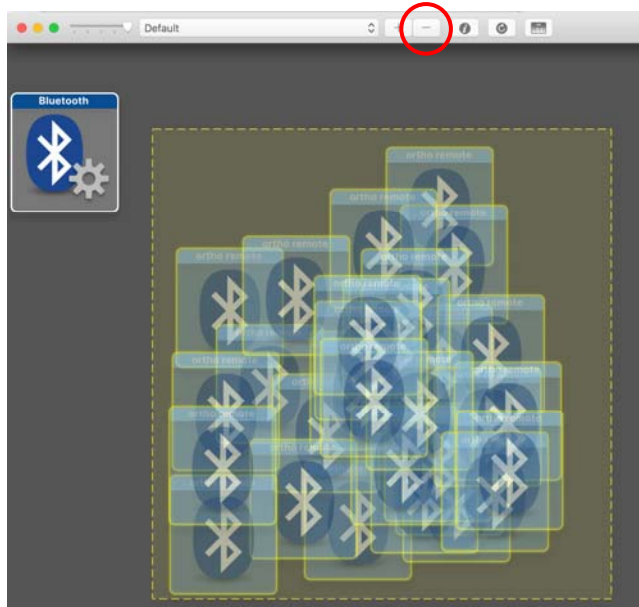
Caution: If you have problem with pairing ortho remote

As you repeat connecting/disconnecting ortho remote and have too many “offline” devices registered on Mac, you won’t be able to add any more device to the list or have it paired with Mac.



【Too many “offline” devices are registered (Audio MIDI Setup – MIDI Studio)】

If that’s the case, remove those offline devices from the host device and try pairing again. In the MIDI Studio, frame the icons for those offline devices by dragging the mouse cursor, and click on the “-” button and those icons will be cleared and the devices will be removed from the list at once.



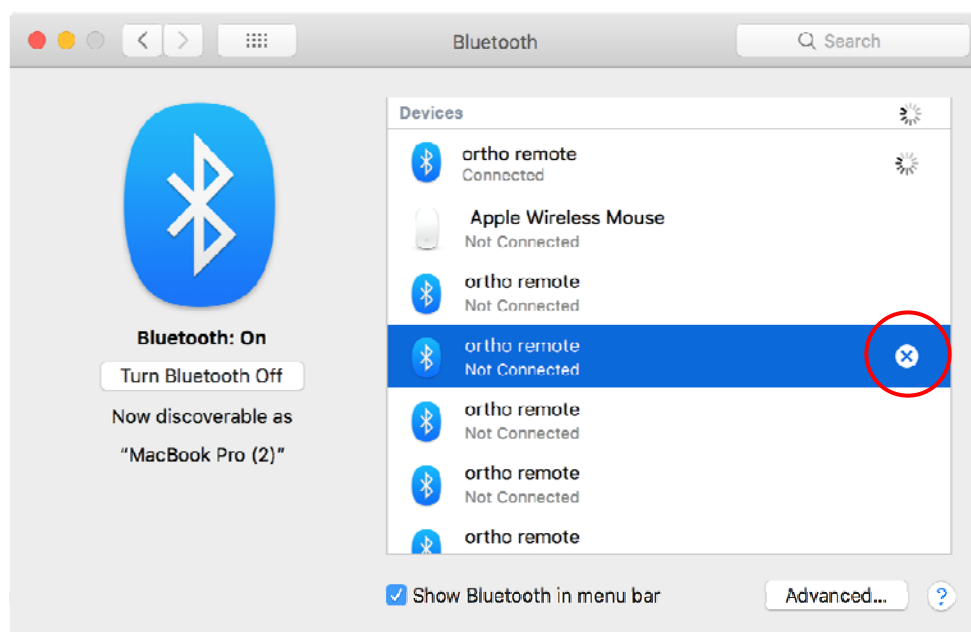
【Removing the offline devices】

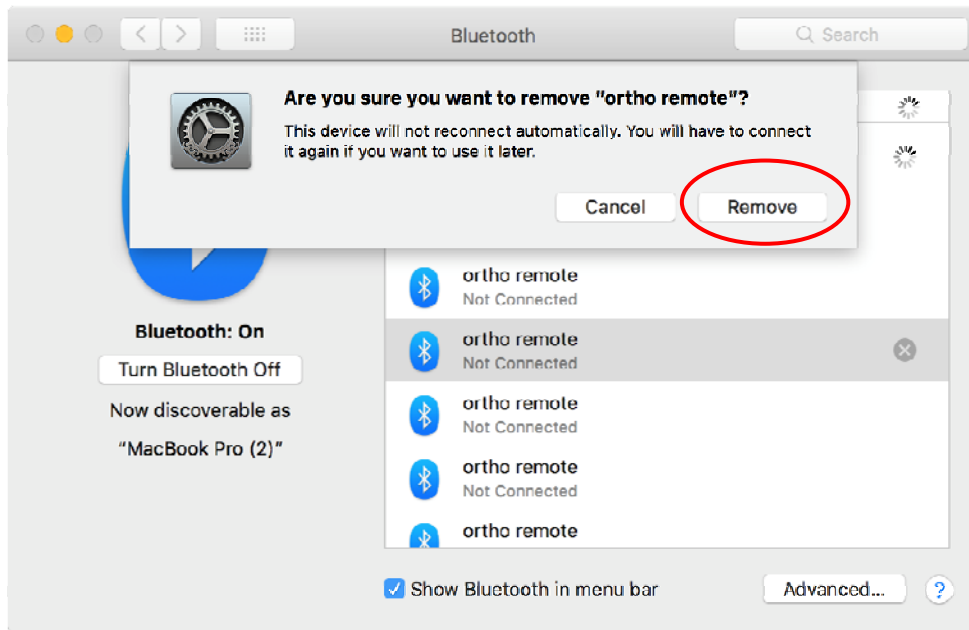
Next, open Bluetooth in System Preference in order to remove those offline devices.



【システム環境設定 - Bluetooth】

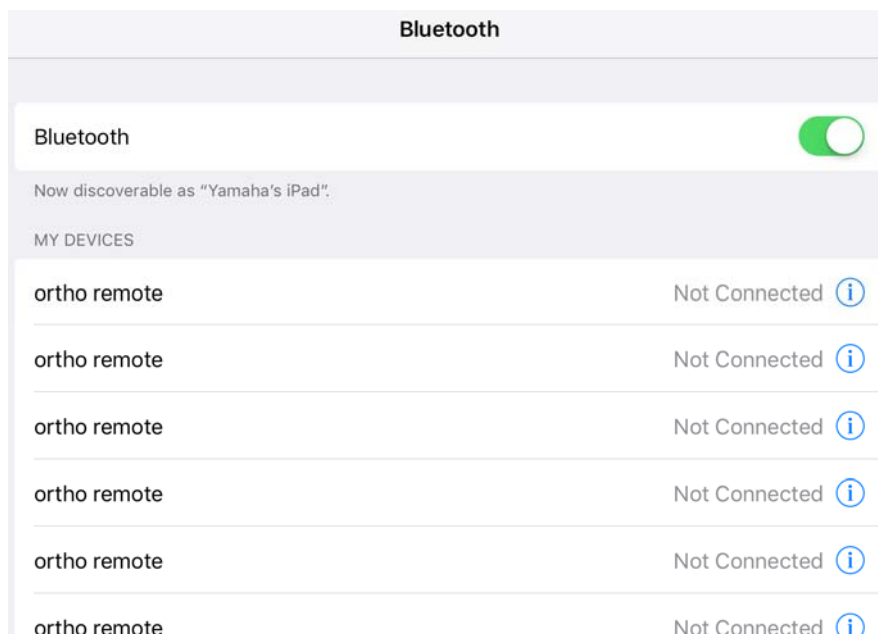
Click on the X button next to each device name, and then click “Remove” on the confirmation dialog.





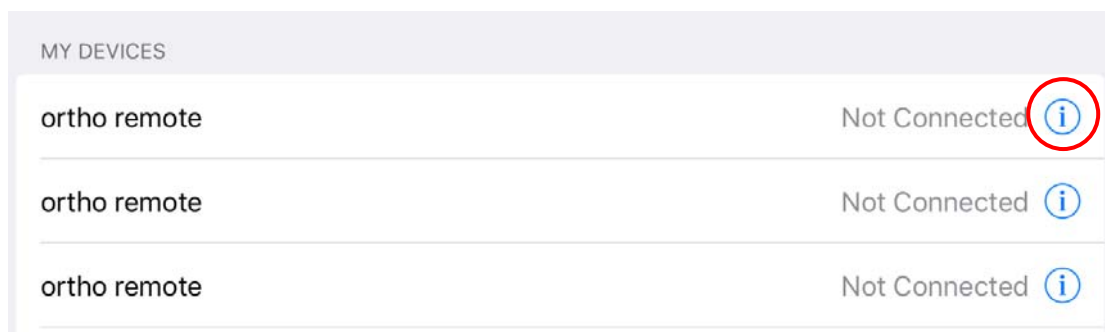
Repeat this process until all the offline devices are removed.

Same limitation goes with iPad and, if too many offline devices are registered, no more device can be added to iPad so you will remove those offline devices to pair the ortho remote.



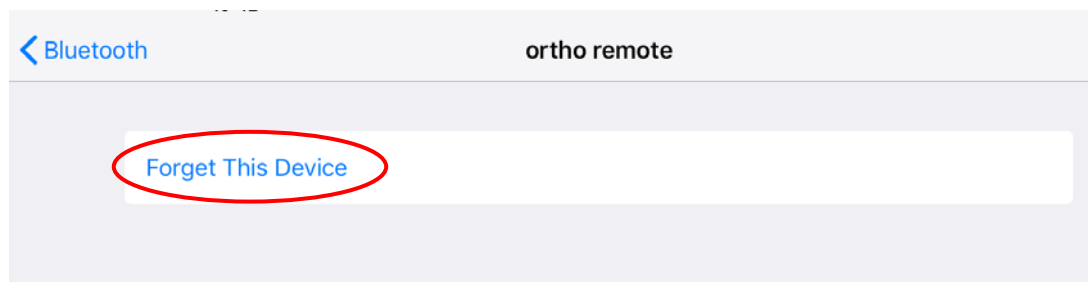
【Too many “offline” devices are registered (Settings – Bluetooth)】

If that's the case, tap on the "i" button.



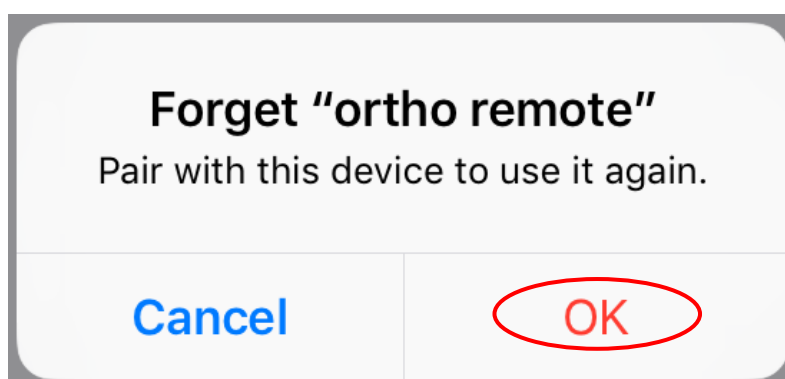
【 "i" button】

And then tap on "Forget This Device" in the next screen.



【Forget This Device button】

The confirmation dialog below will appear and tap on "OK" to remove the device. You may need to remove the devices one by one, until all the unnecessary offline devices are removed.



【Forget "ortho remote" confirmation】

5. Reference: MIDI Command List

For operating the parameters of MMP1 and the functions of ortho remote, use the following MIDI messages:

Channel Voice Message – for reading/writing the parameters of MMP1

- Control Change[B0] – Monitor level operation [10]
- Note On[90] – Mute[00]/DIM[0C]/Reference level[18]/All Mute mode[24]
- xx – any value except 0 (100[64] is used in the following list and the config files
(Values in [] is hex)

MMP1 function	MIDI message			Notes
	#1	#2	#3	
Monitor level up	B0	10	1	General Purpose Controller #1
Monitor level down	B0	10	127	General Purpose Controller #1
Mute	90	00	xx	Note On / Note:0(C-2) Velocity:Any value expect 0
Dim	90	0C	xx	Note On / Note:0C(C-1) Velocity:Any value expect 0
Ref	90	18	xx	Note On / Note:10(C0) Velocity:Any value expect 0
All Mute mode	90	24	xx	Note On / Note:24(C1) Velocity:Any value expect 0

System Exclusive Message – for assigning the functions of ortho remote

For assigning the functions of ortho remote, use System Exclusive messages.

Please make sure that the command 1 and 2 are always transferred, while the command 3–6 are optional depending on desired operation

If the command 3–6 is sent with the velocity set at 0, those commands will not become valid, so please make sure the velocity is set at any value except 0 (in this example, it is set at 100[64]).

1. Make the value changes relative (incremental) while rotating the knob (required)

F0	00	20	76	02	00	02	00	F7
----	----	----	----	----	----	----	----	----

2. Control the monitor level when turning the knob (required)

F0	00	20	76	02	00	01	10	F7
----	----	----	----	----	----	----	----	----

3. Mute when pressed (optional)

F0	00	20	76	02	00	03	00	F7
----	----	----	----	----	----	----	----	----

4. Dim the monitor level when pressed (optional)

F0	00	20	76	02	00	03	0C	F7
----	----	----	----	----	----	----	----	----

5. Set the monitor level to the reference level when pressed (optional)

F0	00	20	76	02	00	03	18	F7
----	----	----	----	----	----	----	----	----

6. Turn into All Mute mode when pressed (optional)

F0	00	20	76	02	00	03	24	F7
----	----	----	----	----	----	----	----	----

7. *Set the velocity at any value but 0 (required)

F0	00	20	76	02	00	04	64	F7
----	----	----	----	----	----	----	----	----

Configuration Files (in ortho_remote_config.zip)

Config file 1. push_for_mute.syx

F0	00	20	76	02	00	02	00	F7
F0	00	20	76	02	00	01	10	F7
F0	00	20	76	02	00	03	00	F7
F0	00	20	76	02	00	04	64	F7

Config file 2. push_for_dim.syx

F0	00	20	76	02	00	02	00	F7
F0	00	20	76	02	00	01	10	F7
F0	00	20	76	02	00	03	0C	F7
F0	00	20	76	02	00	04	64	F7

Config file 3. push_for_ref_level.syx

F0	00	20	76	02	00	02	00	F7
F0	00	20	76	02	00	01	10	F7
F0	00	20	76	02	00	03	18	F7
F0	00	20	76	02	00	04	64	F7

Config file4. push_for_all_mute.syx

F0	00	20	76	02	00	02	00	F7
F0	00	20	76	02	00	01	10	F7
F0	00	20	76	02	00	03	24	F7
F0	00	20	76	02	00	04	64	F7

