B16-BMB5
MOTHERSHIP

BMB5 Rev A, Rom A1
USB 2.0

Quick Start Guide

Section 1: Getting Started
Section 2: BMB5 Quick Start for Mac OSX
Section 3: BMB5 Quick Start for Windows

Revision 1 August 28, 2018

IN THE BOX:

- **B16-BMB5 Mothership Chassis**
- **IEC power cable with 4 Rack Screws**
- **1 Rack Vent**
- **USB Type A to Type B Cable**
- **QuickStart Guide**
- **BMB5 Motherboard pre-installed**

1. GETTING STARTED

1.1 Register

Please register all serial numbers for your B16 MOTHERSHIP chassis and all Daughter Cards. You *must* register to activate your warranty! Please visit: **www.burlaudio.com/register**.

1.2 Install Daughter Cards (if necessary)

If the Daughter Cards have been pre-installed, skip to page 2, step 1.7.

1.3 Remove lid

1. Remove 9 screws on top and 2 on each side (**Image 1**).
2. Push lid up from card slot (**Image 2**).

Image 1: Top view shows location of 4 screws on side before removing the lid.

Image 2: Push lid up.

1.4 Daughter Card Installation:

1. Make sure each card is inserted into the card guides, and the card is properly connected to the backplane.
2. Pull cables through to the front for connection to faceplate.
3. Inputs 1-8 or outputs 9-16 are found in slot 1. Inputs 9-16 or outputs 1-8 are found in slot 2 (**Image 3**).

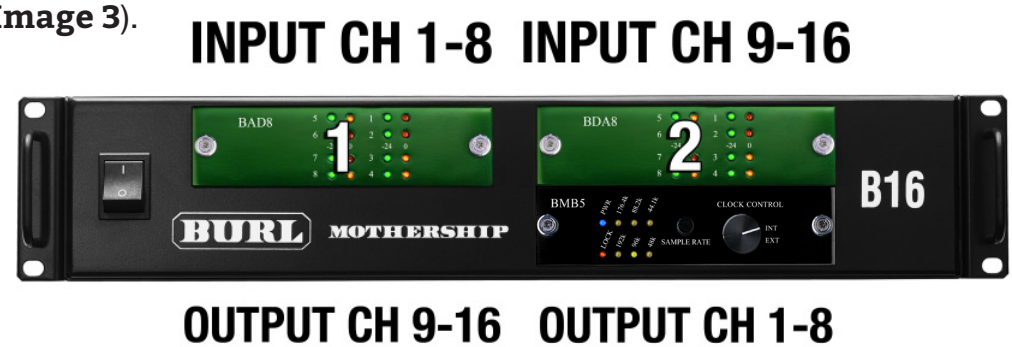


Image 3: Front view with card slot numbers. Configuration for 8 in, 8 out.

Image 4: Rear view, configuration for 8 in, 8 out.

1.5 Attach power cable and ribbon cables to faceplates

1. The red wire should be closest to the orange power connector for BAD4/BDA8 faceplates. (See image 6, below)

Note: BAD8 Daughter Cards have a ribbon cable *only*.

2. Always make sure the orange 2-pin connector is attached properly. (See Image 6, below)

Image 5: Insert the Daughter Card into the card guides. Make sure the metal Daughter Card backplate, not PCB, is inserted into the card guides.

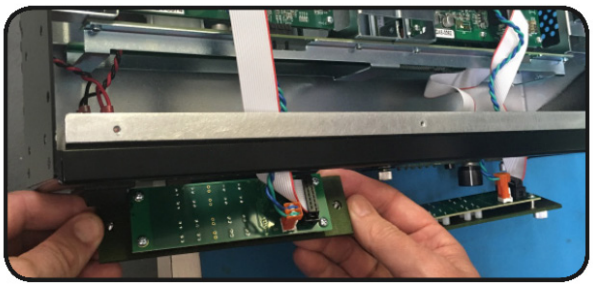


Image 6: Attach the ribbon cable and 2 pin connector for BAD4 and BDA8 to the front panel.

1.6 Attach lid with all screws

1.7 Install vent above B16 Mothership

Image 7: B16 MOTHERSHIP with 1U vent above for proper airflow.

IMPORTANT Installation Notes:

1. Install the 1U vent above the B16 chassis. The MOTHERSHIP *MUST* run with proper ventilation.
2. Failure to properly vent the MOTHERSHIP chassis above may cause failure, and will void the warranty.

2. BMB5 USB QUICK START for Mac OS X

(Core Audio compatible, no drivers needed)

For Windows, see Page 6, Section 3

Note: The BMB5 USB Motherboard utilizes the **"uNet 2500"** module, produced by Archwave. Selecting "uNet 2500" will assign the BMB5 to the host application.

You will need:

- Computer running Mac OS X and a USB port
- B16 Mothership with BMB5 Motherboard
- USB 2.0 Cable

2.1 Connect USB cable to BMB5 Motherboard, and to USB port on host DAW computer, power on

Image 8: BMB5 rear panel with USB 2.0 port.
(Note: Ethernet port is for factory use only)

2.2 Set BMB5 front panel to INT or EXT

- The BMB5 Motherboard supports 44.1kHz, 48kHz, 88.2kHz and 96kHz sample rates.
- When using the B16 on internal clock, set to INT, and **use Sample Rate button** to set desired sample rate.
- If using external word clock, set to EXT. B16 Sample rate should follow external clock.

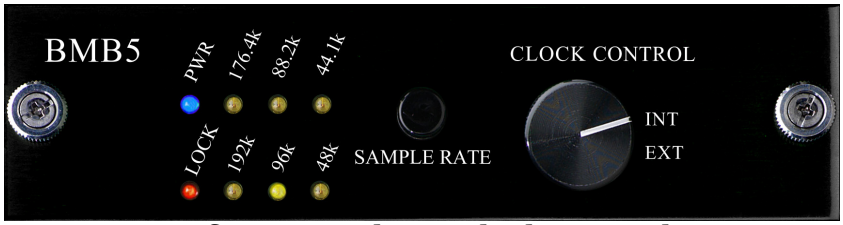


Image 9: BMB5 front panel. Set Clock Control to INT or EXT

2.3 Open Audio MIDI Setup application

(Finder > Applications > Utilities > Audio MIDI Setup)

Audio MIDI Setup

2.4 Select “uNet 2500” from available devices

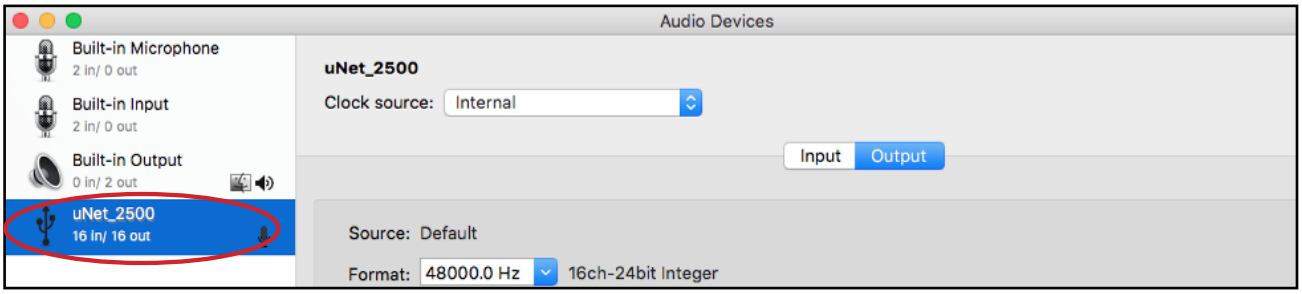


Image 10: Select “uNet_2500” from devices

2.5 Set Clock Source to “Word Clock”

• Setting the uNet_2500 to Word Clock allows the module to clock via the BMB5 Motherboard. The BMB5 does not support the Internal Clock of the uNet_2500 module.

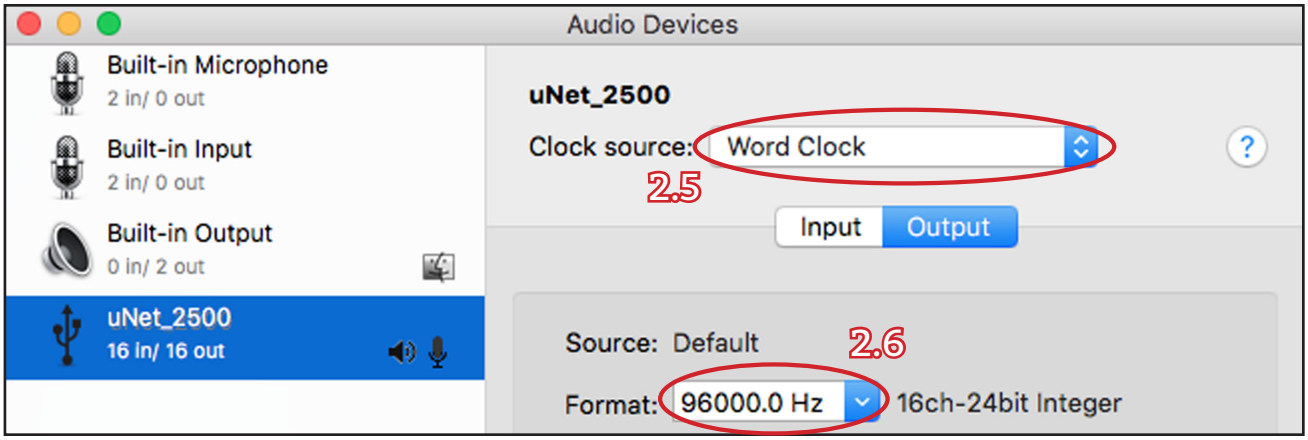


Image 11: Set clock source to Word Clock, set desired sample rate

2.6 Set desired sample rate in Audio MIDI Setup

(See image 11, above.)

2.7 Open your DAW application and select “uNet 2500” as your audio device

The following examples are using Cubase. (For Logic, see page 10) Go to your DAW application settings and do the same there:

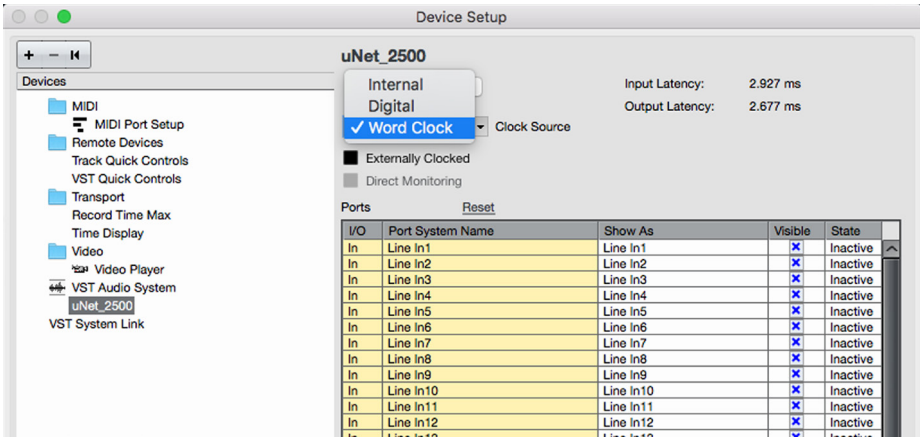


Image 12: In Cubase, for example, select “uNet_2500” under Device Setup.

2.8 Verify settings for “uNet 2500” are correct within DAW application

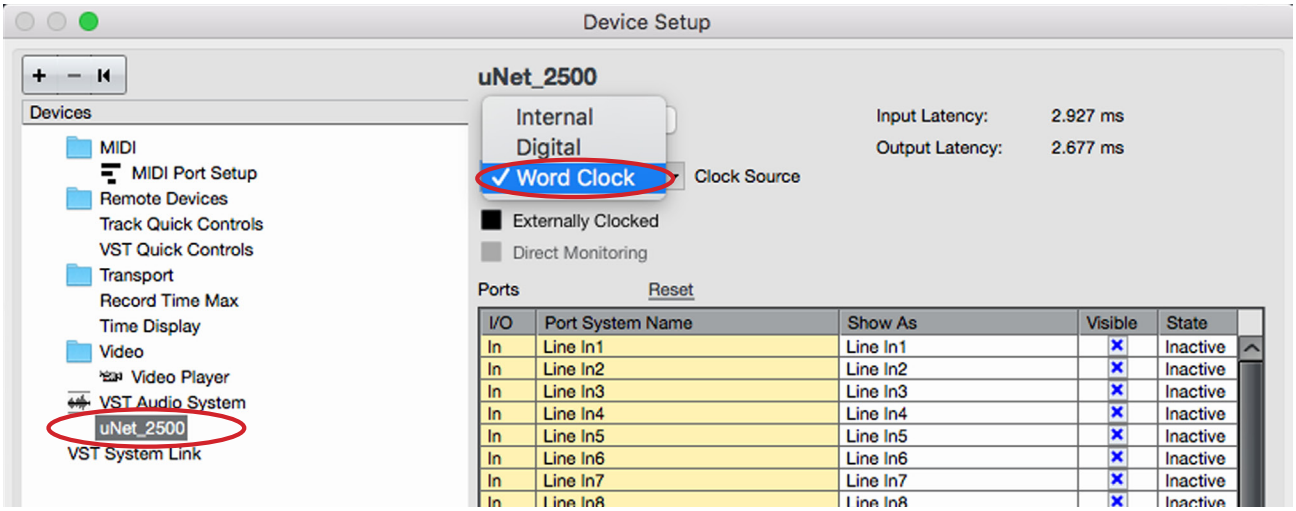


Image 13: Select “uNet_2500” under Devices, make sure Clock Source is set to “Word Clock”

IMPORTANT: Follow these steps every time you change Sample Rate, Buffer Size, or Clock Source:

1. Save and Quit your DAW application
2. Unplug the USB cable from the computer
3. Plug USB cable back in to computer
4. Restart your DAW application

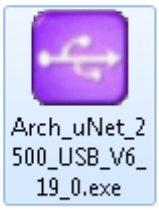
3. BMB5 USB "uNet 2500" QUICK START for Windows

Important: Do not connect the BMB5 to your computer until prompted by driver installer.

3.1 Download driver package from Burl Audio FTP server:

burlaudio.com/burl_public/BMB5_driver.zip

3.2 Start driver setup



3.3 Only when prompted: Power on B16, connect BMB5 Motherboard to computer with USB cable

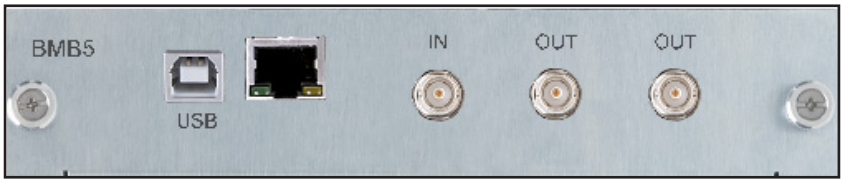


Image 14: BMB5 rear panel (Note: the Ethernet port is for factory use only)

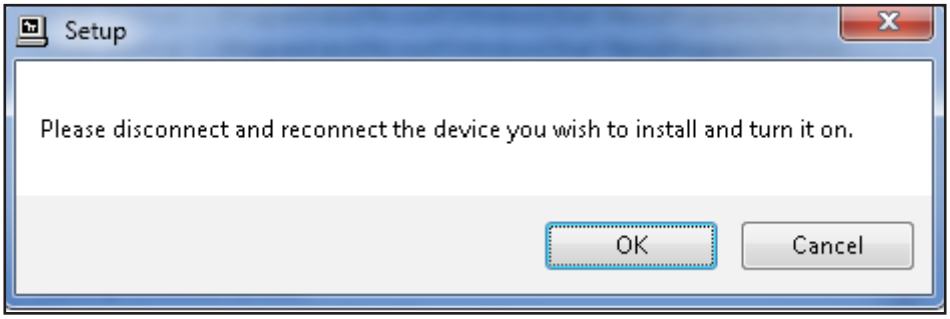


Image 15: Connect BMB5 to CPU with USB cable when you see this message.

3.4 Continue through setup and restart computer once completed

3.5 After restart, find USB Control Panel icon in Taskbar

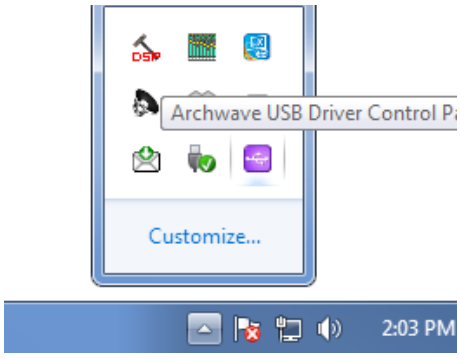


Image 16: ArchWave USB Driver Control Panel

3.6 Open Control Panel to verify the presence of your audio device and channels

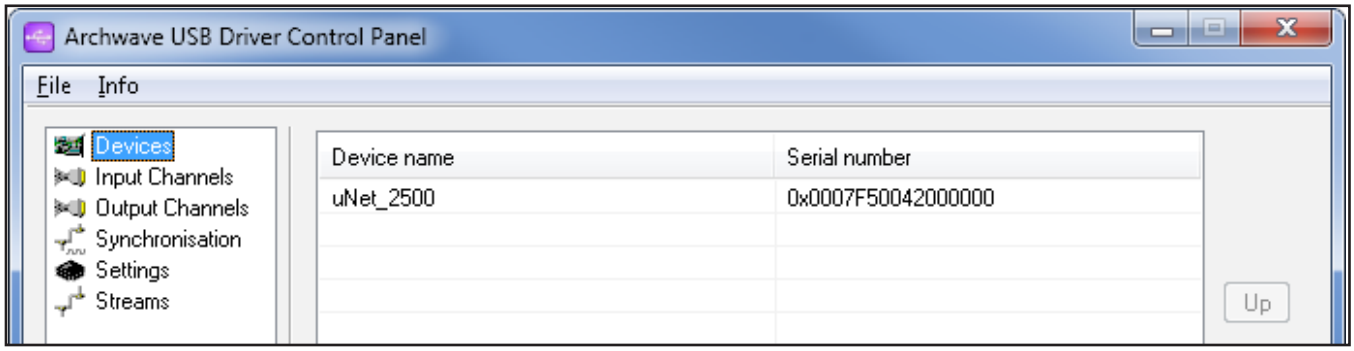


Image 17: BMB5 front panel. Set Clock Control to INT or EXT.

3.7 Set BMB5 front panel to INT or EXT

- The BMB5 Motherboard supports 44.1kHz, 48kHz, 88.2kHz and 96kHz sample rates.
- When using the B16 on internal clock, set to INT, and **use Sample Rate button** to set desired sample rate.
- If using external word clock, set to EXT. B16 Sample rate should follow external clock.

Image 18: BMB5 front panel. Set Clock Control to INT or EXT.

3.8 Open ArchWave USB Driver Control Panel "Synchronisation" settings

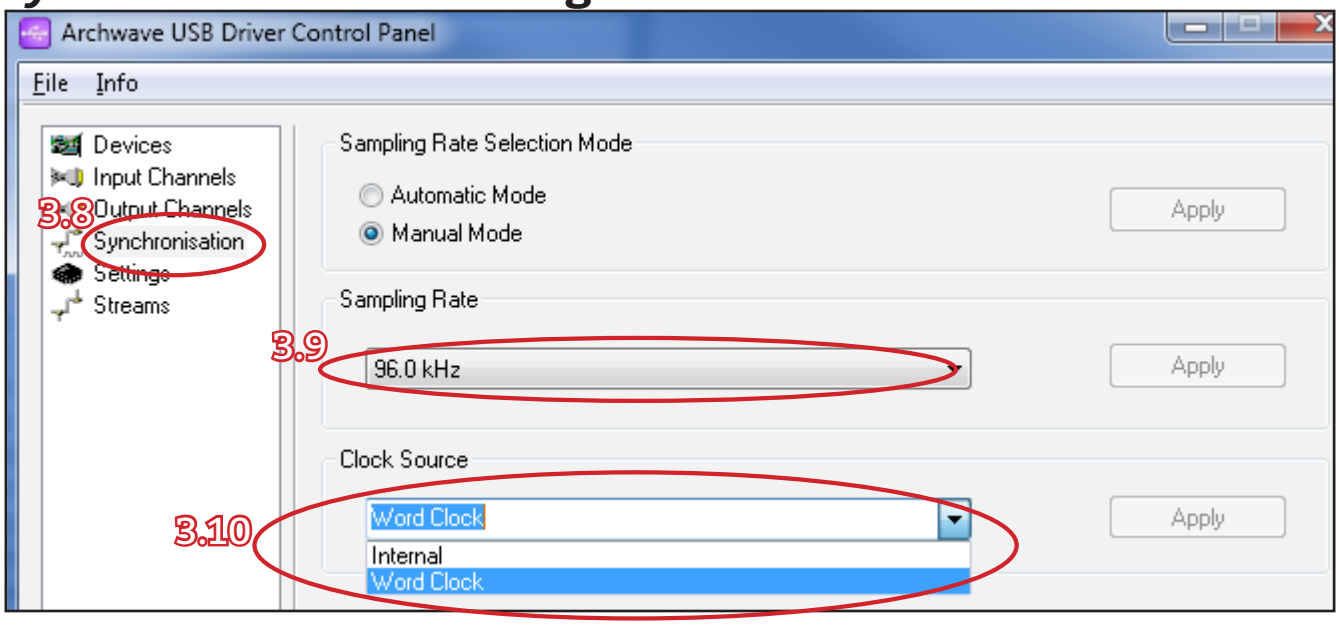


Image 19: ArchWave USB Driver Control Panel. Select "Synchronisation" (3.8), Set Sample Rate (3.9) and Clock Source to Word Clock (3.10)

3.9 Set Clock Source to “Word Clock”

Setting the uNet_2500 to Word Clock allows the module to clock via the BMB5 Motherboard. The BMB5 does not support the Internal clock of the uNet_2500 module. (See Image 19, page 7)

3.10 Set desired sample rate in ArchWave USB Driver Control Panel (See Image 19, page 7)

3.11 In your DAW application, select “uNet 2500” as your audio device

The following examples are using Cubase. Go to your DAW application settings and do the same there:

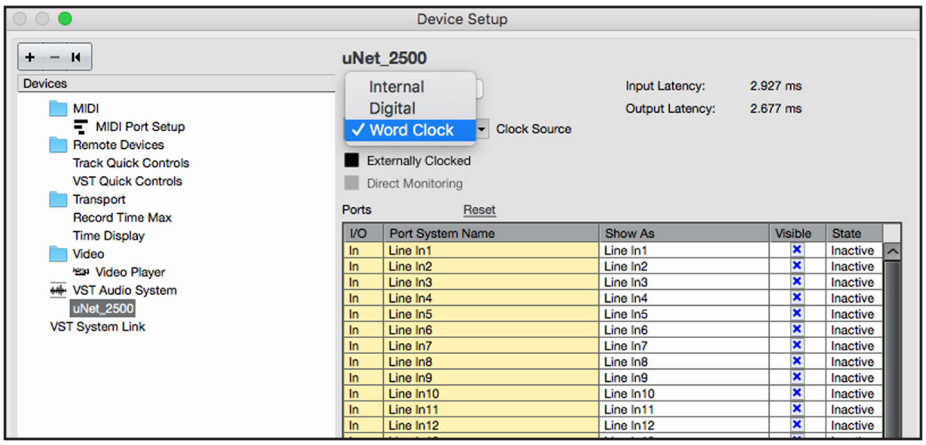


Image 20: In Cubase, for example, select “uNet_2500” under Device Setup.

3.12 Verify settings for “uNet 2500” are correct within DAW application

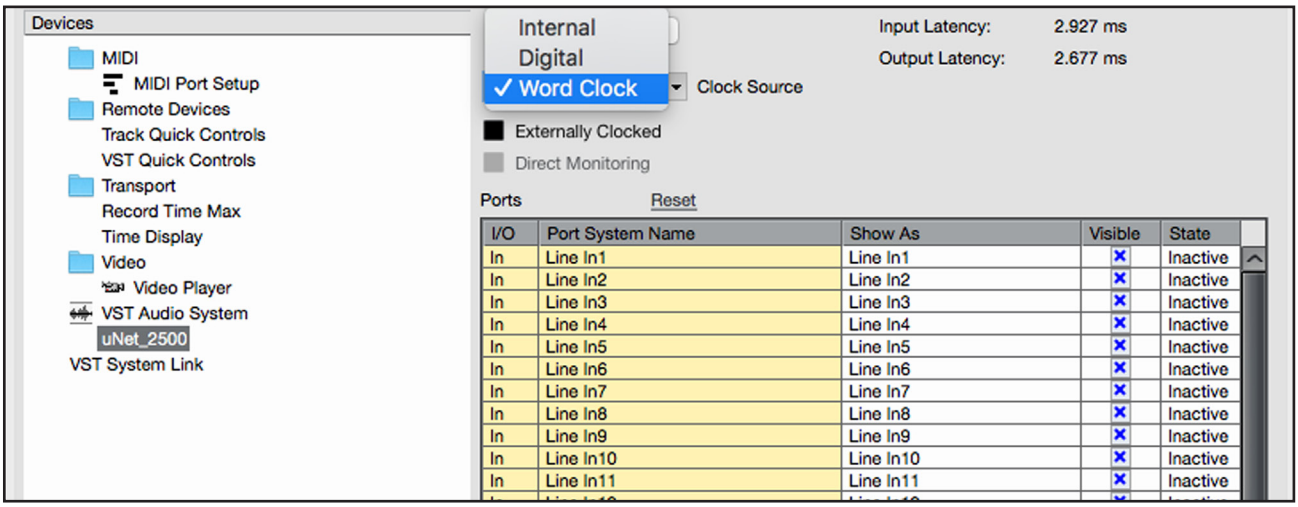


Image 21: Select “uNet_2500” under Devices, make sure Clock Source is set to “Word Clock”

IMPORTANT: Follow these steps every time you change Sample Rate, Buffer Size or Clock Source:

1. Save and Quit your DAW application
2. Unplug the USB cable from the computer
3. Plug USB cable back in to computer
4. Restart your DAW application.

4. Using B16-BMB5 With Logic Pro

4.1 Select “uNet_2500” as your device

1. Open Audio Preferences:
   Logic Pro X > Preferences > Audio
2. Select “uNet_2500” for both Output Device and Input Device

Image 22: Select “uNet_2500” under Output Devices and Input Device

4.2 Set desired sample rate.

Note Audio Midi sample rate should change when Logic sample rate changes:

1. Go to File> Project Settings> Audio
2. Set sample rate to match BMB5 (96k highly recommended)

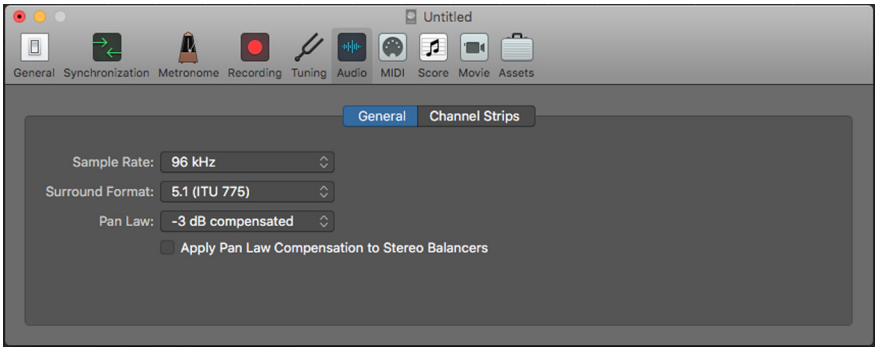


Image 23: Set sample rate in logic.