Contents – NeON

All features and specifications subject to change for without notice. - Dec. 2004

1. Introduction

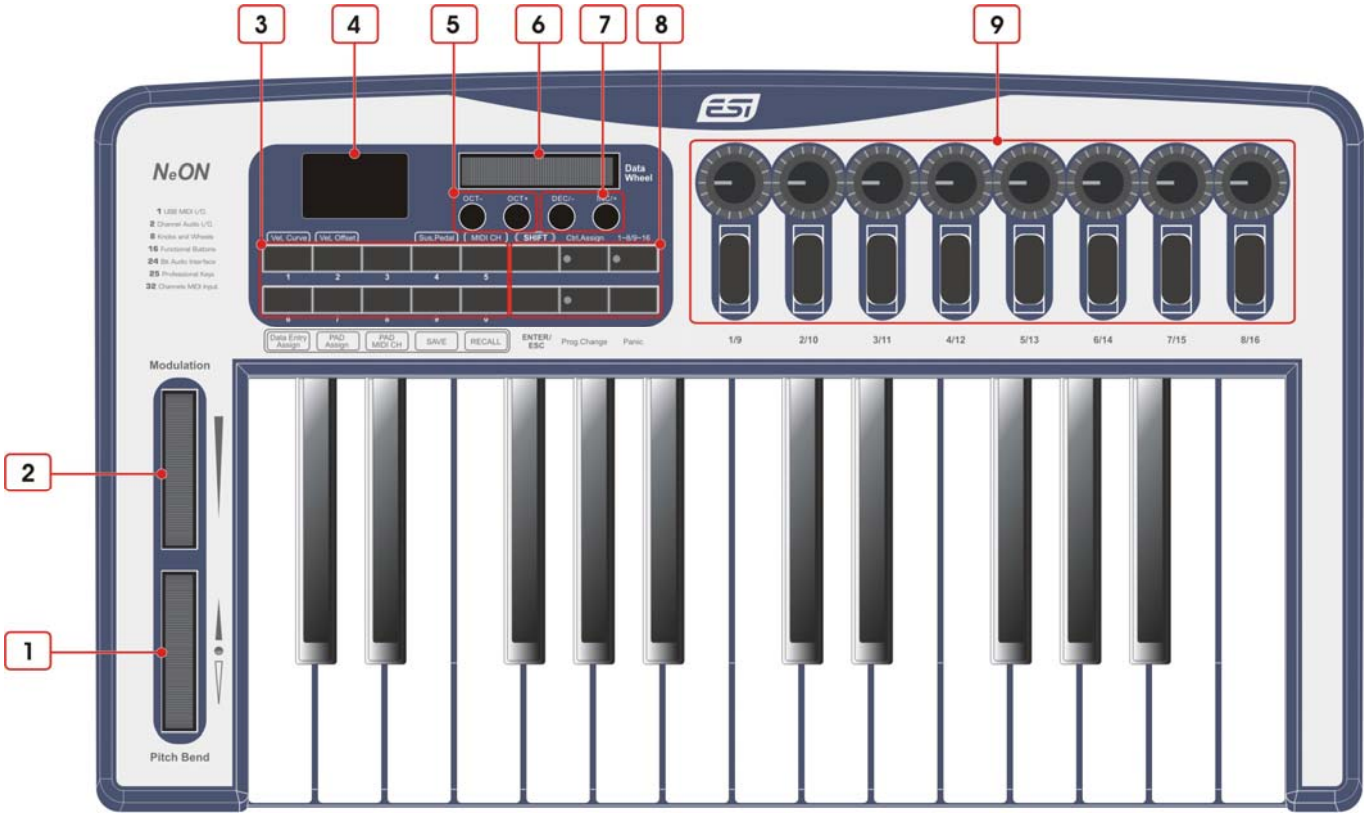
Thank you for choosing NeON. It combines an USB audio interface with fully functional MIDI control features – all in a portable keyboard. NeON has 25 velocity sensitive keys, 4 control buttons that allow you to control the octave range, select the MIDI channel and assign controller numbers to the wheels. It also features USB connection, one MIDI output, one Sustain Pedal input, one Expression Pedal input, a small case that is not wider than 19" and much more.

2. Basic Features

- 25 Note full size velocity-sensitive keyboard.
- Rubberized pitch bend, modulation and data wheels.
- 16 Function buttons and 4 Data Buttons.
- 8 assignable data knobs and 8 assignable encoders for easier data variation.
- 44.1/48 Khz 24 bit simultaneous 2 channel Audio I/O.
- Analog I/O: 2 input channels, 2 output channels.
- USB MIDI In/Out and 1x1 MIDI-Interface.
- 1 Headphone Out with Headphone level control.
- 1 MIC/1 Hi-Z instrument input jack.
- Sustain Pedal jack.
- External DC Power adapter connector.
- Interface to computer: USB Interface.
- Windows XP/Mac OS 10.x compatible.

3. Part Description

1) Front Panel



1. Pitch bend wheel : Push it up and you bend notes up; pull it down and you bend notes down.

2. Modulation wheel : sends Mod Wheel controller data to control vibrato or tremolo

3. Numeric Buttons - This button can be used when you enter numerical value directly. And each button has another function when you hold the **SHIFT** button:

No	Label	Function Descriptions
1	Vel, Curve	You can select the Velocity Curve
2	Vel, Offset	You can select the Velocity Offset
3	None	You can select MIDI Out port (See page 26)
4	Sus, Pedal	You can select sustain pedal type
5	MIDI CH	Select MIDI Channel
6	Data Entry Assign	You can assign Data Wheel to MIDI Controller
7	PAD Assign	Assign button to voice
8	PAD MIDI CH	Set the PAD MIDI Channel for PAD Assign
9	SAVE	Save what you set
0	RECALL	Recall setting you saved

Please refer to chapter 10 for detailed descriptions

4. Display LCD : This shows you the value of what you operate (parameter, MIDI channel etc.)

5. Oct+/- : This buttons can transpose up/down by octaves

6. Ctrl Wheel : You can assign parameter to this wheel for any use, by default

7. Dec/- and Inc/+ : You can increase or decrease a value by 1 when editing a parameter.

8. Function Buttons

SHIFT : To use another function, hold down this key and press button labeled what you want

Ctrl Assign : This button is used for assigning controller to MIDI controller or MIDI channel.

1~8/9~16 : NeON supports 16 knobs and encoders. It swaps all knobs and encoders between 1~8 mode and 9~16 mode.

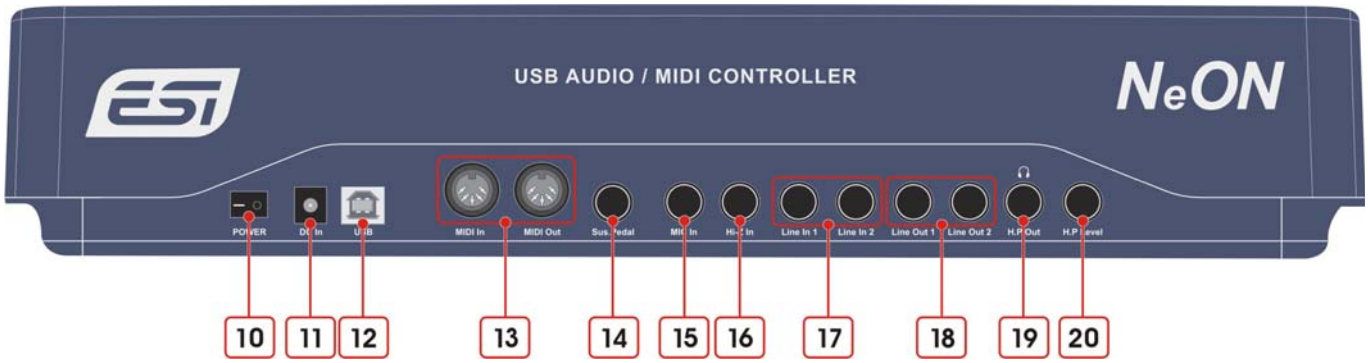
Enter/Esc : Press this key to define the value or to exit from value setting mode.

Prg.Change : This button is used for Program change.

Panic : This button can send all notes off message to all channel, simultaneously.

9. Assignable Knobs, Encoders : You can assign a different MIDI Controller to each knob and encoder. They can also be assigned independent MIDI channels.

2) Rear Panel



10. Power Switch :

Press the "|" to turn on NeON or the "O" to turn it off.

11. DC Power In :

Connect your power adapter here.

12. USB connector :

Use a USB cable to connect the NeON to your computer.

13. MIDI In/Out port :

The MIDI In/Out ports function as a 1x1 MIDI interface.

The MIDI Out port can be used in standalone mode if no USB cable is attached, or as a USB MIDI output if a USB cable is connected. The MIDI In port will not function unless a USB cable is connected.

14. Sus.Pedal : By default, this jack is for a sustain pedal, but you can assign any switch type MIDI controller number.

15. Mic In : This jack is the microphone input.

16. Hi-Z In : This input allows you to directly connect an electric guiar or other high-impedance signal.

17. Line In : You can connect unbalanced connectors (TS 1/4") to these inputs

18. Line Out : You can use unbalanced connectors (TS 1/4") to these inputs,
These jacks are connected to external audio devices (Speaker, Mixer, and so on.)

19. H.P Out : Plug your headphones in here. This jack is used for connecting headphone.

20. H.P Level : Adjusts the volume level of the headphone output.

WARNING: *Please be careful when adjusting the headphone volume so it does not damage your ears!!!*

4. Installation

1) Unpacking your NeON

Your NeON carton should contain the following;

- NeON Keyboard
- Operation Manual
- USB Cable
- Installation CD & Tracktion CD

If any of the above listed items are missing, please contact the retailer you purchased the product from.

You might want to keep the NeON carton and packing materials for easy shipping or transport.

2) Before you connect your NeON Keyboard

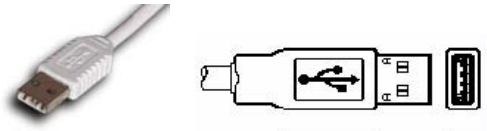
You are probably eager to plug in your keyboard and get started, but before you begin, please read your computer's manual on installing USB devices.

There is no need to shut down the computer to install USB devices.

1. Find the USB port on your computer. USB ports are usually located by the PS/2 or serial ports in the back.

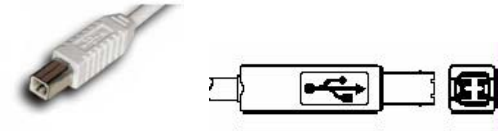
USB port on computer

2. Plug in the appropriate end of a USB cable (called Series A plug) to the USB port of your computer. Notice that USB ports of your computer and NeON's USB port are different.



Series A plug

3. Connect the other end of the USB cable (Series B plug) to the USB port of NeON .



Series B plug

You can verify correct connection when the LED of NeON lights up. Power is supplied through the USB cable.

Series A Plug connectors are used for those devices with a permanently attached external cable, like a Mouse, Keyboard, USB hub etc.

Series B Plug connectors are used for devices that require detachable external cables like Printers, Scanners, Modems, and Standalone Hubs.

3) Using External Power Supply

We recommend a 9V 500mA DC out adaptor. Just plug in the power supply to the socket labeled DC 9V 500mA and switch the power on. Other adaptors with 9V DC out specification can be used if they are rated at greater than 500mA output.

***NOTE** : Do not leave the adapter plugged in for extended periods if the unit is not in use.*

4) System Requirements

NeON does not depend on CPU resources but your computer specifications are important to make full use of NeON's professional digital audio/MIDI features.

***IMPORTANT:** If power is only supplied through the USB cable, it is highly recommended that you use at least a 300W power supply. If you use the NeON with a laptop, we recommend that you use the included external power supply.*

Minimum system requirements (PC)

- Intel Pentium IV 1.7 GHz CPU or equivalent AMD CPU
- 256MB of RAM
- Direct X 8.1 or higher
- Microsoft Windows®XP SP1, SP2
- One available USB port

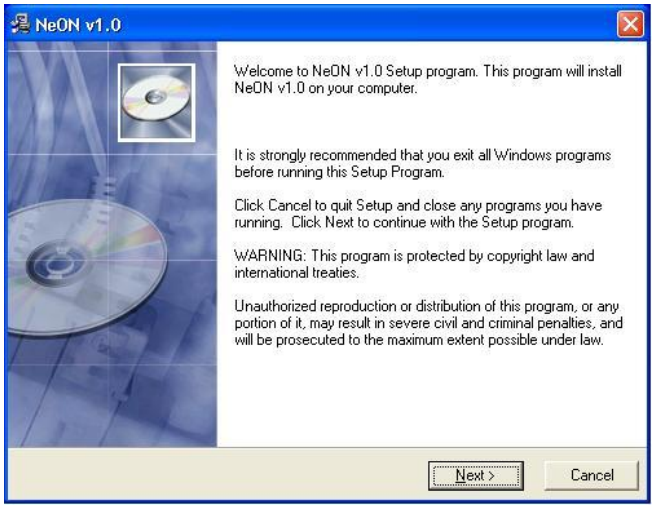
Minimum system requirements (Mac)

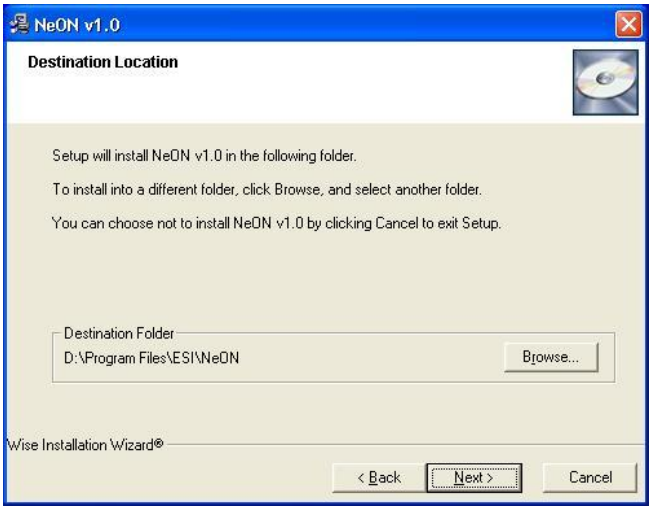
- Macintosh with G4 or better processor
- 256MB of RAM
- Mac OS 10.2 or higher
- One available USB port

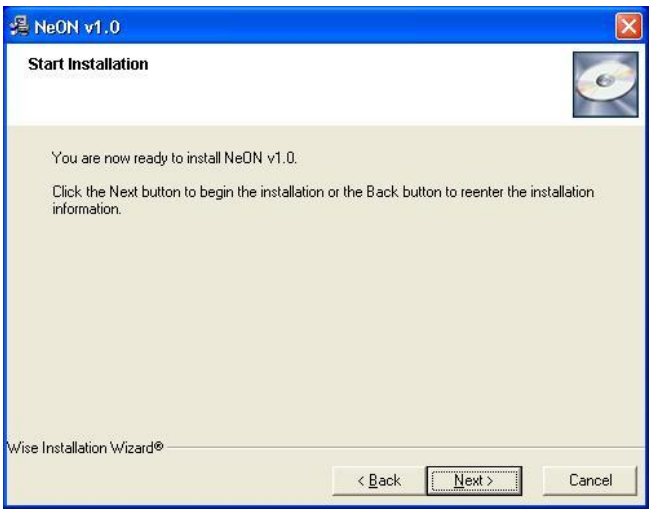
5. PC Installation

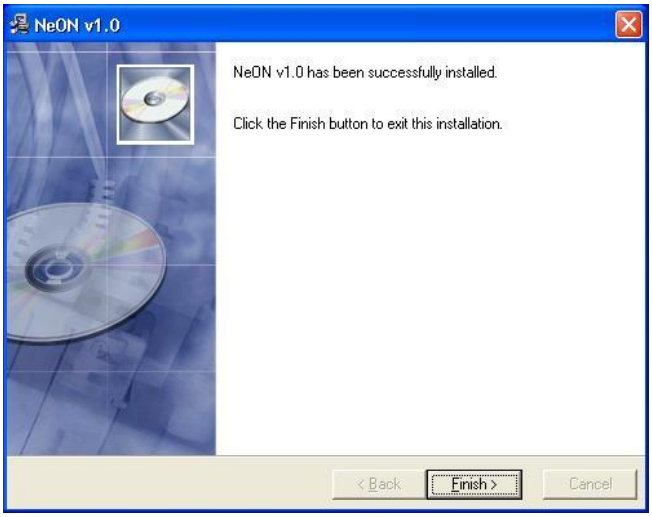
1. Insert the NeON driver CD in the CD-ROM drive. We recommend you to copy the NeON driver folder to your hard drive. Do not move or delete any of these files, not even after the installation. Run “setup.exe” from this folder.

2. Click “Next” and follow the instructions on the screen.

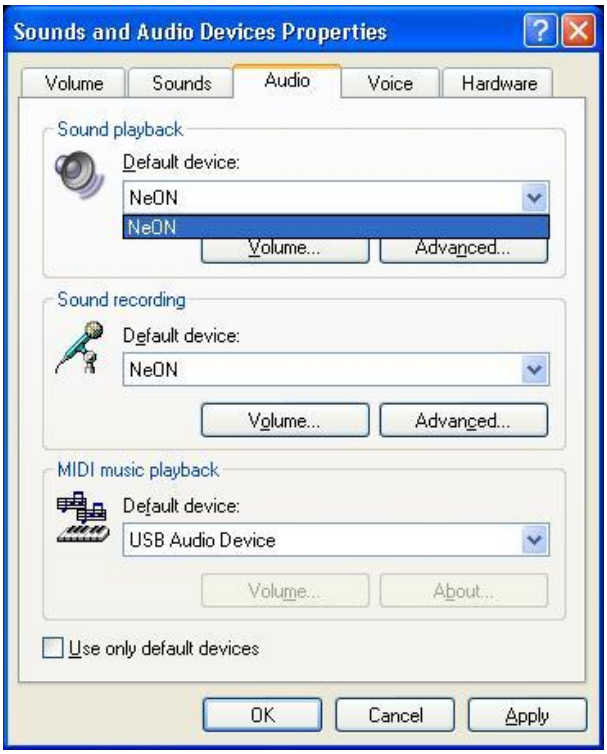








5. Checking your system. Go to: Control Panel > Sounds and Audio Devices > Audio. Please check if your audio devices are installed properly.



6. NeON Panel for PC

The panel allows you to easily configure the settings of NeON to your needs. After successfully installing the NeON drivers you will see the ESI panel icon in the system tray of the task bar.

 Icon

Clicking on this icon will launch the NeON panel.

The default setting for input is "LINE IN". You need to click another SEL button to select MIC/Hi-Z input. This will close the NeON panel window but it will not shut down the panel. You can always relaunch the panel by clicking on the icon.

1) Pull Down Menus

1. File – Factory Default

Return all NeON configuration settings to factory default.

2. File - Always On Top

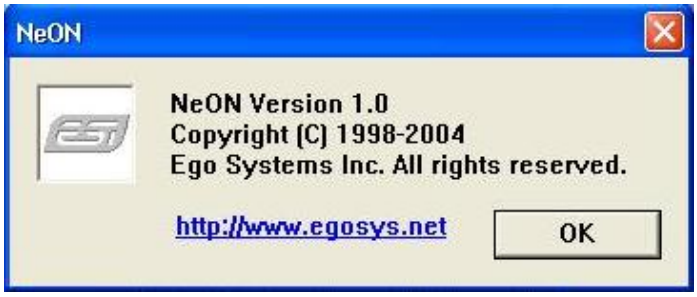
Set the NeON panel to appear always over other windows. If this is not selected, the active windows of other applications will be shown over the NeON panel.

3. File - Exit

Shut down the NeON panel.

4. About

Check current soft and hardware information.



2) Level Faders

You can move both faders at the same time, click the space between faders and move.

1. Input

Adjust input monitoring level of NeON. You can select input type between MIC/HI-Z and LINE IN with SEL button. Active Input shows like this. SEL Set the level using the mouse, mouse wheel, or cursor keys. The number on the bottom indicates the relative level in dB.

2. Output

Adjust output level of NeON. There are two kinds of outputs – WDM OUT and H.P OUT(Headphone Out). WDM OUT is the same that Windows wave out. In case of H.P OUT, the number on the bottom indicates the relative level in dB. That's why it indicates the level in %. Set the level using the mouse, mouse wheel, or cursor keys.

3. (Monitor) Button

If this button is on, you can hear the sound source through "line in" jack in real time.

4. (Mute) Button

Select mute button to mute each source.

5. +20dB Button

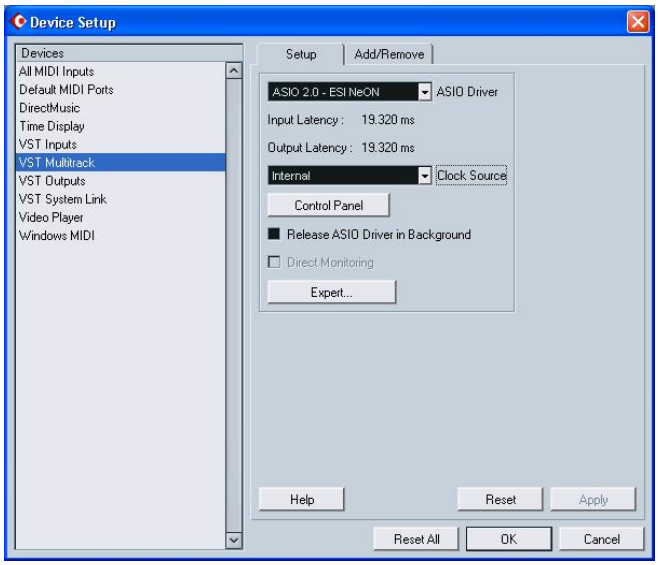
If this button is turned on, you can get +20dB gain for MIC/Hi-Z input.

7. Applications Setup for PC

The NeON supports applications using WDM, MME and ASIO. This section provides quick setup guide for some common recording applications. For more detailed information, please consult the application's user manual.

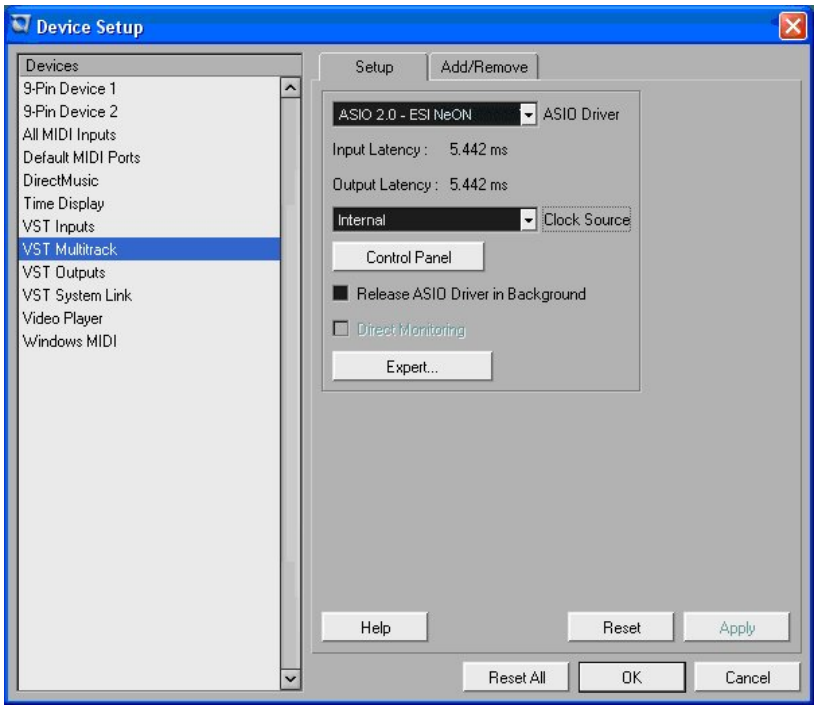
1) Cubase SX

After launching Cubase, go to Device Setup > VST Multitrack. Select 'ASIO 2.0 – ESI NeON' as ASIO driver. Set MIDI input and output as 'ESI – NeON MIDI1(or 2)' as shown below.



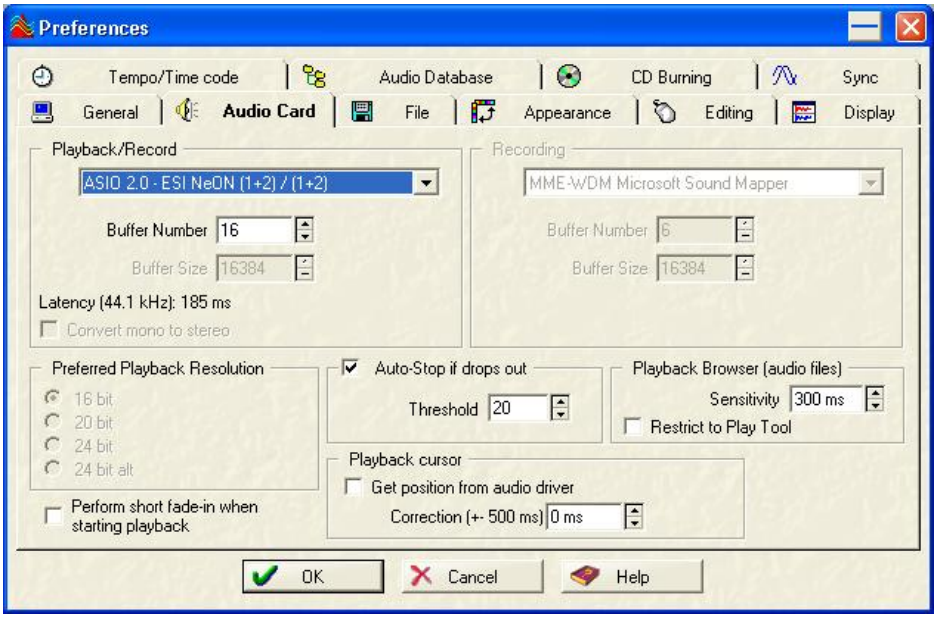
2) Nuendo

After launching Nuendo, go to Device Setup > VST Multitrack. Select 'ASIO 2.0 – ESI NeON' as ASIO driver.



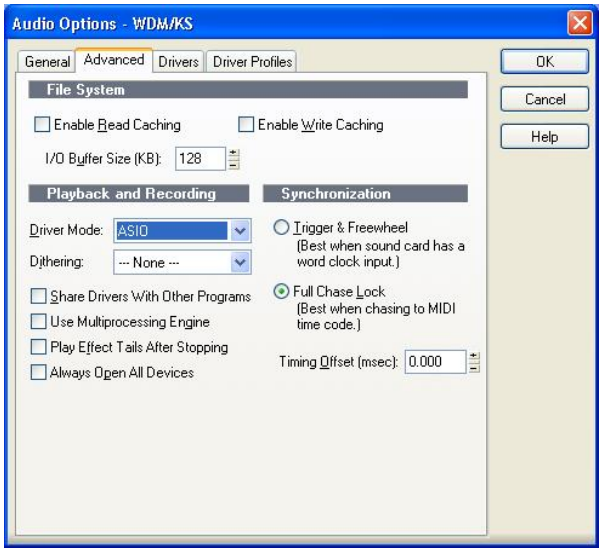
3) Wavelab

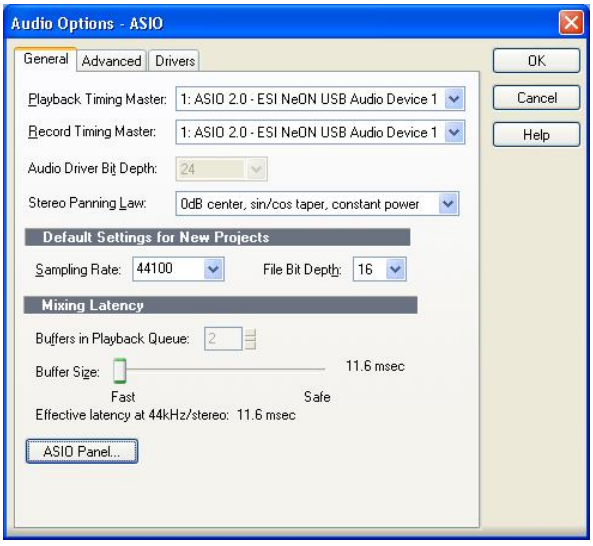
After launching WaveLab, go to Option > Preferences > Audio Card. Choose 'ASIO 2.0 - ESI NeON' as Playback and Record device as shown below.



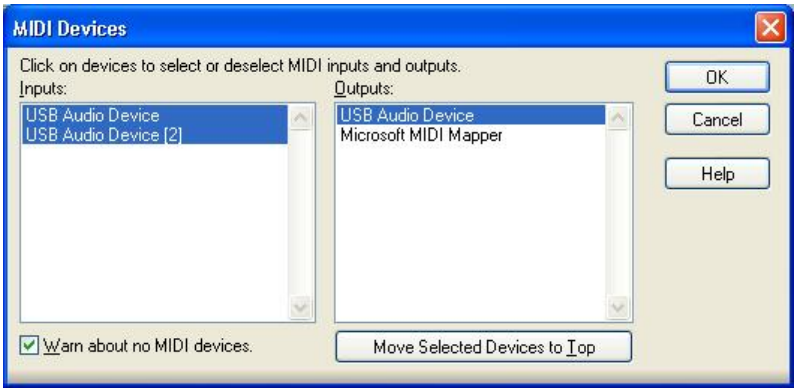
4) Sonar

After launching Sonar, go to Audio Options and select 'ESI – NeON'. Sonar ver. 2.2 and higher can use ASIO drivers. Set audio input and output as shown below.



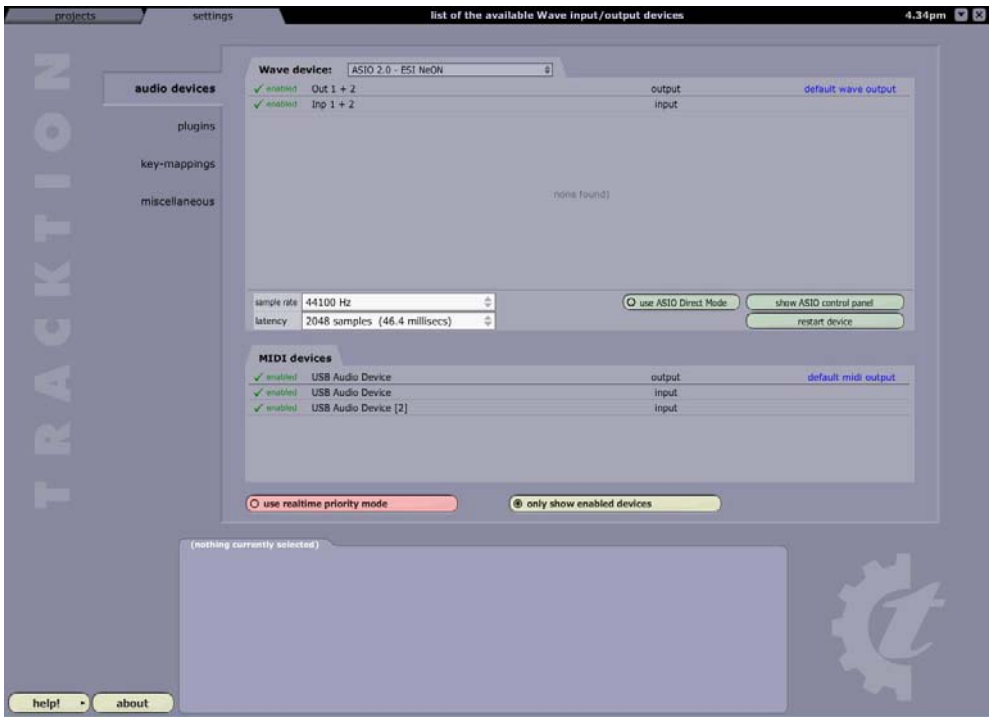


Set MIDI input and output as shown below.



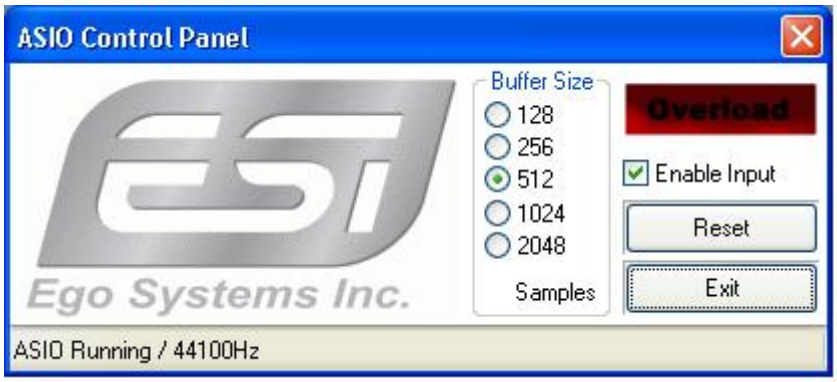
5) Tracktion

NeON comes bundled with the full version of Tracktion - professional recording and MIDI production software by Mackie. After launching Tracktion, select 'Settings' then 'audio devices' tab. Choose NeON as playback and record device as shown below.



Note: *NeON driver CD includes Ultimate Audio Tools (UAT) bundle software. They are located in 'ESI' folder of the driver CD. Only applications listed in the NeON box work with NeON. Other applications are for other ESI products sharing the same universal ESI driver CD.*

6) ASIO Control Panel



If you can click "control panel" button in your ASIO application, you can see the panel above that allows you to select the buffer size / latency. You also determine to use the input or not. On some systems, not using the input can reduce the output latency. A smaller buffer size gives you shorter latency, but that generates more system load on your computer. You must configure the latency to your needs and your system performance.

8. Mac OSX Compatibility and Installation

1) Compatibility

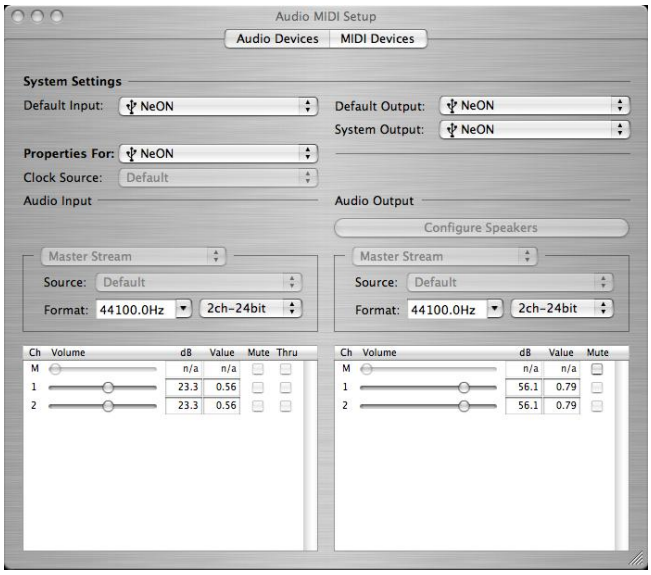
NeON only works with OS 10.2 or later versions of Mac OSX. If you have earlier versions of Mac OS, please upgrade before using the NeON.

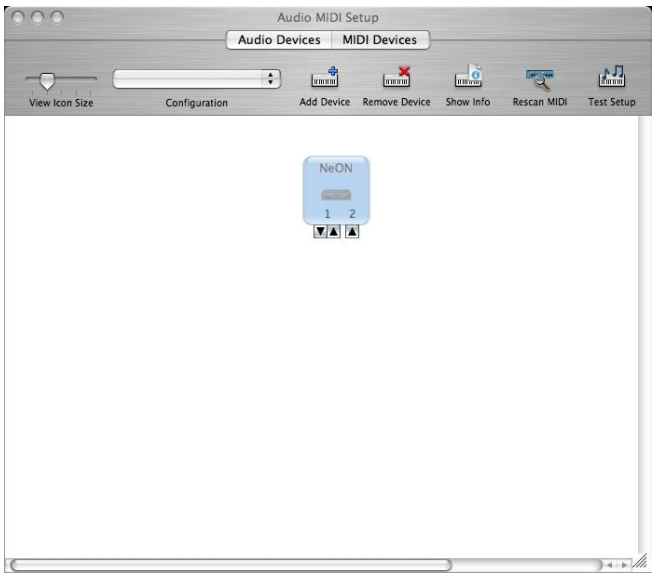
2) Installation

Please connect the NeON to the USB port on your Mac. No driver installation is needed. NeON uses the Mac OS X native USB audio driver.

3) Audio MIDI Setup

Configure NeON as default audio input and output device as shown below. Audio MIDI Setup can be found in Applications\Utilities folder.

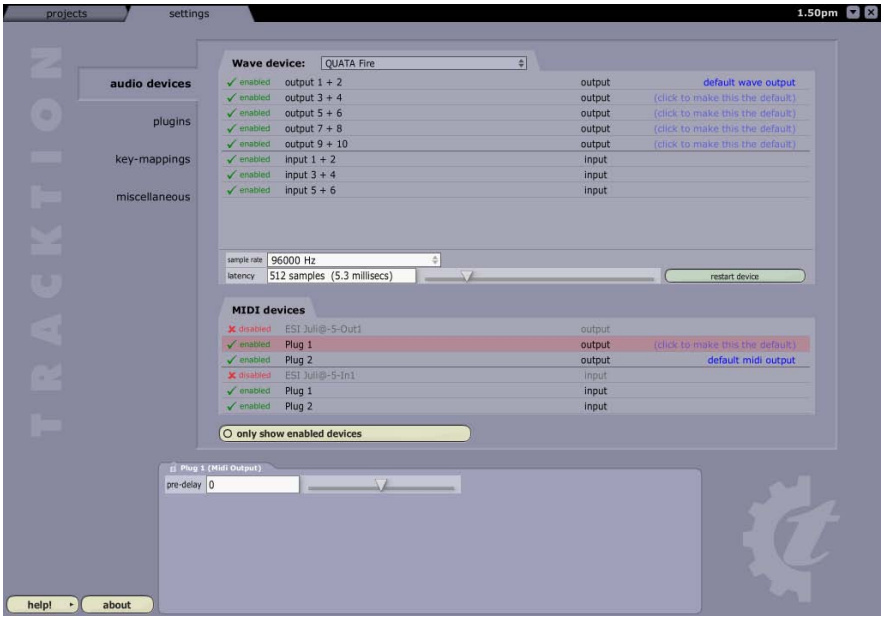




9. Applications Setup for Mac

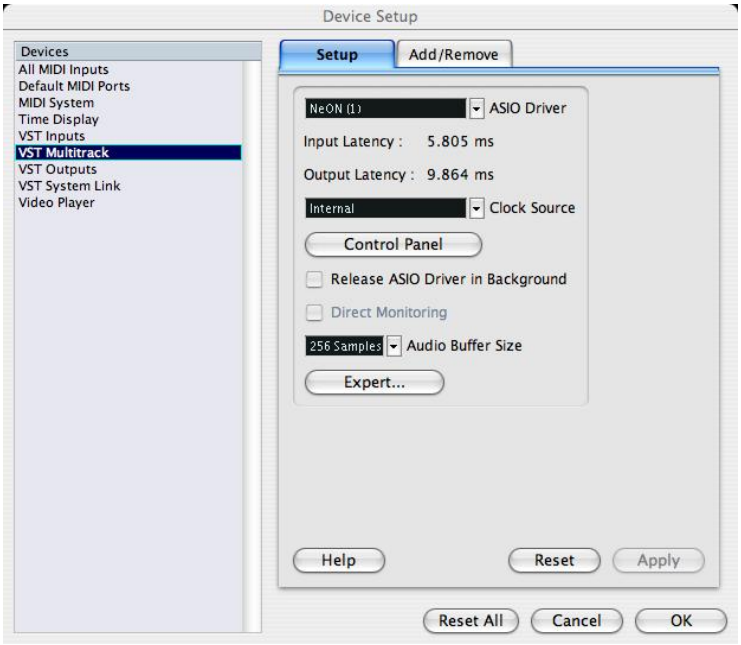
1) Tracktion

NeON comes bundled with the full version of Tracktion - professional recording and MIDI production software by Mackie. After launching Tracktion, select 'Settings' then 'audio devices' tab. Choose NeON as playback and record device as shown below.



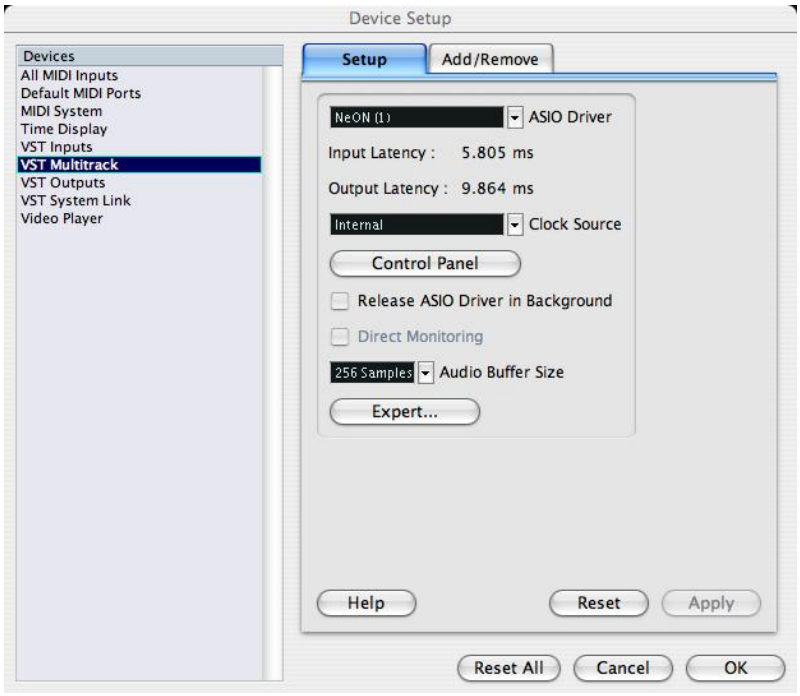
2) Cubase SX

After launching Cubase, go to Device Setup > VST Multitrack. Select 'NeON(1)' as ASIO driver.



3) Nuendo

After launching Nuendo, go to Device Setup > VST Multitrack. Select 'NeON(1)' as ASIO driver.



10. Operation Guide

1) User Interface

The general format for changing a parameter on NeON is

(SHIFT) + FUNCTION -> VALUE -> ENTER

Many functions are accessed using the **SHIFT** key in combination with another button. The **SHIFT** key should be held down while the desired function is selected. Modifying assignable controllers is similar but requires an additional step.

When a value needs to be entered, the number can be typed in using the buttons **0**-**9** on the front panel. Additionally, the **INC**/**DEC** buttons can be used to increment or decrement the current displayed value by 1.

When the buttons **0**-**9** are not used to enter numeric data, the default functions are as programmable MIDI triggers. These can be used as drum pads or to trigger samples, or simply play any MIDI note. Note number and MIDI channel are independently programmable for each pad. Pad velocity is fixed at 127.

If a function has been entered by mistake, the mode can be exited by pressing **ENTER**. No data will be saved and the configuration of NeON will not be changed.

2) Functions:

Program change

1. Press the **PROG CHANGE** button. The LED in the button will light.
2. Type in the program number 0-127
3. Press **ENTER**. The LED will turn off

Advanced Program change

This allows an extended program change function for devices that require it or for accessing programs greater than 127 via bank selection. This is a 4-step process

1. Press **SHIFT** + **PROG CHANGE** buttons. The LED in the button will light.
2. Type in BANK MSB. Press **ENTER**.
3. Next, type in BANK LSB. Press **ENTER**.
4. Finally, type the Program number. Press **ENTER**. The LED will turn off, completing the operation

MIDI channel

1. Press **SHIFT** + **MIDI CHAN**. Display will show current MIDI Channel.
2. Type in the new MIDI channel 1-16. Press **ENTER**.

***Note** : MIDI channel numbers entered greater than 16 are invalid.*
And in that case the MIDI channel will be set to 16.

Velocity Curve

Neon has 4 internal velocity curves. Default at power-up is always 1. To change:

1. Press **SHIFT** + **Vel. Curve**.
2. Type in **1**-**4**. Press **ENTER**

Velocity curve numbers greater than 4 are invalid and will be ignored if entered.

Velocity Offset

A programmable offset can be added to the velocity generated by the keyboard. This value can be in the range -64 to +64. Default at power-up is no offset. To change:

1. Press **SHIFT** + **Vel. Offset**.
2. For positive values, first press the **INC/+** button to indicate a positive value. The LED next to the button will light up. Next, type in the value 0-64. For negative values, first press the **DEC/-** button to indicate a negative value (LED will light up), then type in the number 0-64.
3. Press **ENTER** to complete the operation.

Sustain Pedal

The Sustain Pedal input can be programmed to accept normally-open or normally-closed types of sustain pedals. To switch the mode, Press **SHIFT** + **Sus. Pedal**. If you hear the notes from NeON “hanging”, you may try to switch this to toggle the sustain mode.

Octave +/-

The NeON keyboard can be transposed up or down by pressing the **OCT+** or **OCT-** buttons, respectively.

Controller Assign

This function allows the assignment of any controller number 0-127 to any of the controller knobs, data entry wheel, or faders. Pitch and Modulation are always fixed functions. To initiate an assignment, do the following:

1. Press the **Ctrl Assign** button. The LED will light.
2. Next, move the controller you wish to modify.
   The number of that controller will be displayed on the LED display.
3. Type in the MIDI controller number you wish to assign to the controller.
4. Press **ENTER** to complete the process.

Controller MIDI channel

This function allows the assignment of a MIDI channel to any of the controller knobs, data entry wheel, or faders. To initiate an assignment, do the following:

1. Press the **SHIFT** + **Ctrl Assign** button. The LED will light.
2. Next, move the controller you wish to modify. The number of that controller will be displayed on the LED display.
3. Type in the MIDI channel number you wish to assign to the controller.
4. Press **ENTER** to complete the process.

PAD Assignment

Assignment of a PAD is a 2-step process. This includes assignment of the MIDI note number and also a MIDI channel if desired. Default is channel 1.

1. Press **SHIFT** + **PAD Assign**
2. Type in the MIDI note number 0-127.
3. Press **ENTER**.
4. To change the PAD MIDI channel, do the above procedure except press **SHIFT** + **PAD MIDI CHAN** in the first step.

1-8/9-16 Button

NeON supports 16 control pots and 16 faders, even though only 8 of each are located on the front panel. To switch banks, press the **1-8/9-16** button. When in 1-8 mode, the LED in the button will be off, when in 9-16 mode it will be on.

Data Entry Wheel Assignment

The Data Wheel can be assigned either using the Ctrl Assign procedure as described above or the following:

1. Press the **SHIFT** + **Data Entry Assign** button. The LED will light.
2. Next, move the Data Wheel. The number of the controller will be displayed on the LED display.
3. Type in the MIDI controller number you wish to assign to the controller.
4. Press **ENTER** to complete the process.
5. Assigning a MIDI channel to the Data Wheel is the same as described above.

Program Store and Recall

NeON can save up to 16 configurations in internal memory. All controllers, MIDI channel, and other settings are saved in non-volatile memory. Patch 0 is default and is loaded at power-up. This cannot be changed by the user, but 1-16 are fully programmable. To save a patch:

1. Press **SHIFT** + **Save**
2. Type in the location you with to save the current configuration in (1-16)
3. Press **ENTER**

***REMEMBER**: Saving a patch permanently overwrites the previously stored configuration!!!*

Recalling a patch is the same as Storing, except press **SHIFT** + **RECALL**.

Panic

If a MIDI system is "hung", **Panic** button will send MIDI note-off messages to every note on every channel to restore order to the system.

Audio and MIDI Interfaces

The audio functions of NeON are accessed through control panels on the host PC. There are no front-panel features to control audio or MIDI interface functions.

Audio Outputs

NeON provides stereo line outputs. These output levels are controlled from the host PC. The headphone outputs are independently controlled by the volume output control on the rear panel of NeON.

Audio Inputs

NeON has 4 inputs. 2 are line inputs. One is a Mic input calibrated for low-level, low-impedance microphone inputs. The last input is a Hi-Z (high impedance) input suitable for guitars and other Hi-Z gear.

MIDI

NeON provides MIDI input and output jacks, which are independent of the NeON keyboard. USB is capable of transmitting more than 16 MIDI channels. The USB-MIDI specification specifies MIDI "cables" to identify independent streams of MIDI data. MIDI input is routed on cable 1 on the USB bus (NeON's keyboard uses cable 0). MIDI output should be routed on cable 0.

Swapping MIDI Out port

NeON provides MIDI output from 2 sources, one is USB MIDI Out from the host PC, and the other is internally from the keyboard. You can swap between USB MIDI OUT and Keyboard MIDI Out port on the rear panel by pressing **SHIFT + 3** (Numeric Button). If NeON is powered up without a USB cable attached, it defaults to sending the keyboard data through the MIDI Out port, allowing stand-alone mode. When a USB cable is connected, the MIDI Out port is automatically connected to the USB cable.

***Note** : Two MIDI Out sources can not be used simultaneously. Use SHIFT + 3 to switch between the 2 MIDI Out sources.*

Power

NeON is powered from the USB bus and draws 350mA. An external AC adapter can be used. This adapter should have a 9-12VDC output.

***Note** : AC adapter is not included. We recommend a 9V DC adapter that draws 500mA.*

3) Standard Controller numbers

STANDARD CONTROLLER NUMBERS

No. Controller	35 Controller 35	69 Hold 2	103 Controller 103
00 Bank Select	36 Foot Control LSB	70 Sound Variation	104 Controller 104
01 Modulation	37 Porta Time LSB	71 Resonance	105 Controller 105
02 Breath Control	38 Data Entry LSB	72 Release Time	106 Controller 106
03 Controller 3	39 Channel Volume LSB	73 Attack Time	107 Controller 107
04 Foot Control	40 Balance LSB	74 Cutoff Frequency	108 Controller 108
05 Porta Time	41 Controller 41	75 Controller 75	109 Controller 109
06 Data Entry	42 Pan LSB	76 Controller 76	110 Controller 110
07 Channel Volume	43 Expression LSB	77 Controller 77	111 Controller 111
08 Balance	44 Controller 44	78 Controller 78	112 Controller 112
09 Controller 9	45 Controller 45	79 Controller 79	113 Controller 113
10 Pan	46 Controller 46	80 Gen Purpose 5	114 Controller 114
11 Expression	47 Controller 47	81 Gen Purpose 6	115 Controller 115
12 Effects Controller 1	48 Gen Purpose 1 LSB	82 Gen Purpose 7	116 Controller 116
13 Effects Controller 2	49 Gen Purpose 2 LSB	83 Gen Purpose 8	117 Controller 117
14 Controller 14	50 Gen Purpose 3 LSB	84 Portamento Control	118 Controller 118
15 Controller 15		85 Controller 85	119 Controller 119
16 Gen Purpose 1	No. Controller	86 Controller 86	
17 Gen Purpose 2	51 Gen Purpose 4 LSB	87 Controller 87	Channel Mode Messages
18 Gen Purpose 3	52 Controller 52	88 Controller 88	120 All Sound off
19 Gen Purpose 4	53 Controller 53	89 Controller 89	121 Reset all Controllers
20 Controller 20	54 Controller 54	90 Controller 90	122 Local Control
21 Controller 21	55 Controller 55	91 Reverb Depth	123 All Notes Off
22 Controller 22	56 Controller 56	92 Tremelo Depth	124 Omni Off
23 Controller 23	57 Controller 57	93 Chorus Depth	125 Omni On
24 Controller 24	58 Controller 58	94 Celeste (De-tune)	126 Mono On (Poly Off)
25 Controller 25	59 Controller 59	95 Phaser Depth	127 Poly On (Mono Off)
26 Controller 26	60 Controller 60	96 Data Increment	
27 Controller 27	61 Controller 61	97 Data Decrement	Extra Keyboard Messages Possible
28 Controller 28	62 Controller 62	98 Non-Reg Param LSB	128 Pitchbend sensitivity.
29 Controller 29	63 Controller 63	99 Non-Reg Param MSB	129 Fine Tune
30 Controller 30	64 Sustain Pedal	100 Reg Param LSB	130 Coarse Tune
31 Controller 31	65 Portamento	101 Reg Param MSB	131 Channel Pressure
32 Bank Select LSB	66 Sostenuto		132 Velocity
33 Modulation LSB	67 Soft Pedal	No. Controller	
34 Breath Control LSB	68 Legato Pedal	102 Controller 102	

11. Specifications

<Physical Spec>

25 professional sized keys with semi-weighted spring action

Rubberized Pitch, Mod and Data wheels

<Analog Audio>

1. Analog Inputs
   1) Connector Type : 1/4" female TS-type, unbalanced(ch 1/2)
   2) Attenuation & Gain Control : -34dB to +12dB(1.5dB step size)
2. Analog Outputs
   1) Connector Type : 1/4" female TS-type, unbalanced(ch 1/2)
3. Microphone Preamplifier
   1) Maximum input level: 1Vrms
   2) Maximum input gain : +34dB
4. Headphone Amplifier
   1) Output power: 30mW @ 32 ohms/50mW @ 16 ohms

<MIDI>

1) 1 USB MIDI Port (16 channel)

2) 1 In / 1 Out MIDI Interface (16 channel)

Appendix – Factory Preset List

Preset 0 (Default) – GM

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	74	71	91	93	73	72	11	10
Definition	Cutoff	Resonance	Reverb	Chorus	Attack	Release	Expression	Pan

Encoder	1	2	3	4	5	6	7	8
Channel	1	2	3	4	5	6	7	8
Controller	7	7	7	7	7	7	7	7
Definition	Volume	Volume	Volume	Volume	Volume	Volume	Volume	Volume

Preset 1 – Mixer 1-8

Knob	1	2	3	4	5	6	7	8
Channel	1	2	3	4	5	6	7	8
Controller	10	10	10	10	10	10	10	10
Definition	Pan	Pan	Pan	Pan	Pan	Pan	Pan	Pan

Encoder	1	2	3	4	5	6	7	8
Channel	1	2	3	4	5	6	7	8
Controller	7	7	7	7	7	7	7	7
Definition	Volume	Volume	Volume	Volume	Volume	Volume	Volume	Volume

Mixer 9-16

Knob	9	10	11	12	13	14	15	16
Channel	1	2	3	4	5	6	7	8
Controller	10	10	10	10	10	10	10	10
Definition	Pan	Pan	Pan	Pan	Pan	Pan	Pan	Pan

Encoder	9	10	11	12	13	14	15	16
Channel	1	2	3	4	5	6	7	8
Controller	7	7	7	7	7	7	7	7
Definition	Volume	Volume	Volume	Volume	Volume	Volume	Volume	Volume

Preset 2 – NI Pro 53 Edit

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	70	71	72	7	80	81	82	83
Definition	Cutoff	Resonance	VCF ENV	Volume	VCA Attack	VCA Decay	VCA Sustain	VCA Release

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	40	50	51	5	75	76	77	78
Definition	Osc A Freq	Osc B Freq	Osc B Fine	Glissando	VCF Attack	VCF Decay	VCF Sustain	VCF Release

Preset 3 – NI B4 Drawbars

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	21	22	23	24	25	26	27	28
Definition	UM 16"	5-1/3"	8"	4"	2-2/3"	2"	1-3/5"	1-1/3"

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	12	13	14	15	16	17	18	19
Definition	LM 16"	5-1/3"	8"	4"	2-2/3"	2"	1-3/5"	1-1/3"

Preset 4 – Reason Mixer

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	23	24	25	26	27	28	29	30
Definition	Pan Ch. 1	Pan Ch. 2	Pan Ch. 3	Pan Ch. 4	Pan Ch. 5	Pan Ch. 6	Pan Ch. 7	Pan Ch. 8

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	8	9	10	12	13	14	15	16
Definition	Vol Ch. 1	Vol. Ch. 2	Vol. Ch. 3	Vol. Ch. 4	Vol. Ch. 5	Vol. Ch. 6	Vol. Ch. 7	Vol. Ch. 8

Preset 5 – Reason NN-19 Edit

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	74	71	18	7	73	9	12	72
Definition	Cutoff	Resonance	VCF ENV	Volume	VCA Attack	VCA Decay	VCA Sustain	VCA Release

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	26	27	20	5	14	15	16	17
Definition	LFO Rate	LFO Amount	Smp Start	Portamento	VCF Attack	VCF Decay	VCF Sustain	VCF Release

Preset 6 – Reason Subtractor Edit

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	74	71	18	7	73	9	12	72
Definition	Filt. 1 Freq	Filt. 1 Res	Filter ENV	Volume	VCA Attack	VCA Decay	VCA Sustain	VCA Release

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	26	27	79	78	14	15	16	17
Definition	LFO Rate	LFO Amount	Filt 2 Freq	Filt. 2 Res.	VCF Attack	VCF Decay	VCF Sustain	VCF Release

Preset 7 – Reason Malstroem Edit

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	86	44	79	78	74	71	58	7
Definition	Osc A Shift	Osc B Shift	Filt A Freq	Filt A Res	Filt B Freq	Filt B Res	Shaper amt	Vol

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	26	40	110	118	92	43	91	53
Definition	Mod A Rate	Mod A Shift	Mod B Rate	Mod B Motion	Osc A Motion	Osc B Motion	Osc A Vol	Osc B Vol

Preset 8 – Reason Dr.Rex Edit

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	74	71	18	7	73	9	12	72
Definition	Filter Freq	Filter Res	Filter ENV	Volume	VCA Attack	VCA Decay	VCA Sustain	VCA Release

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	26	27	22	24	14	15	16	17
Definition	LFO Rate	LFO Amount	Transpose	ENV Amount	VCF Attack	VCF Decay	VCF Sustain	VCF Release

Preset 9 – Stylus

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	77	78	79	7	73	75	76	72
Definition	Filter Freq	Filter Res	Filter ENV	Volume	VCA Attack	VCA Decay	VCA Sustain	VCA Release

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	87	88	82	84	10	86	74	71
Definition	LFO1 Rate	LFO2 Rate	Pitch CRS	Pitch ENVt	Pan	Pan Mod.	MST Filt Freq	MST Filt Res

Preset 10 – Trilogy & Atmosphere

Knob	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	77	78	79	7	73	75	76	72
Definition	Filt. 1 Freq	Filt. 1 Res	Filter ENV	Volume	VCA Attack	VCA Decay	VCA Sustain	VCA Release

Encoder	1	2	3	4	5	6	7	8
Channel	1	1	1	1	1	1	1	1
Controller	108	96	74	71	97	98	99	100
Definition	Layer Sel	LFO Rate	Mst Filt Freq	Mst Filt Res	VCF Attack	VCF Decay	VCF Sustain	VCF Release