



# NNB Expanse Bridge



User Manual  
v1.00

Revision History:

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Initial Release

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## 1. Introduction

Thank you for purchasing a Disaster Area Designs NNB Expanse Bridge Controller. The NNB is an innovative device designed to allow for manual or remote MIDI control of the various Expanse Series pedals made by Neunaber Technology. Using the NNB unlocks the true potential of these pedals, adding seven additional preset sounds to the stock effect and allowing you to access them from your master MIDI controller.

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## 2. Controls and Connections



MULTIJACK / EXP PEDAL	User-configurable jack socket, assignable as a footswitch input, expression pedal input, or MIDI output.
EXPANSE OUTPUT	Connects to your Expanse series pedal here using a CAT5E cable for control and power.
MIDI IN / MIDI OUT	Standard 5-pin DIN socket for MIDI communication. Normally functions as a MIDI input, also provides a MIDI output using the Disaster Area MIDI-Y Cable.
USB MIDI:	USB port to functions as a MIDI interface for your compatible PC, Mac, or iPad (using the Apple Camera Connection Kit). Also provides an interface for firmware update of the NNB.
FOOTSWITCH or SIDE BUTTON:	Tap or hold to change parameters, based on the device setup.
LED:	Multi-color LED indicates the status of the controller, based on the device setup.

### 3. Operation and Use

**The NNB is capable of controlling any Neunaber Technology pedal that incorporates the square RJ45 connector on its back panel (hereafter called Expanse Pedals). This connector supplies power to the NNB and receives control signals from it over a standard CAT5E cable. In order to access the full potential of your Expanse pedal, you must connect it to your computer and run the Neunaber Expanse software to load additional effects algorithms. Once the pedal is programmed you may use the NNB by itself to control the Expanse Pedal or in conjunction with a MIDI controller to access the pedal settings remotely.**

#### **To Program your Expanse Pedal**

Connect the NNB to your Expanse Pedal

Attach power and USB to your Expanse Pedal

On the NNB, select the effect you wish to program — these are indicated by the Red / Green / Blue / White LED.

In Expanse Software, the Update button will reflect the effect number to be programmed. You may now select your effect and program it into the pedal.

#### **To Use the NNB as a Standalone Controller**

Connect the NNB to your Expanse Pedal

Connect power and signal cables to your Expanse Pedal

Tap or hold the switch on the NNB to select the desired preset or effect setting — see the section titled “Configuring the NNB” for details on the various options for control.

Connect an expression pedal or footswitch to the MultiJack to unlock additional functions — see the section titled “Configuring the NNB” for details on the options for the MultiJack.

#### **To Use your Expanse Pedal with your MIDI Controller**

Connect your MIDI controller MIDI Output to the NNB MIDI Input

Connect the NNB to your Expanse Pedal

Connect power and signal cables to your Expanse Pedal

Send a program change message from your MIDI controller to the MIDI channel of the NNB, the default channel is 1.

The Expanse Pedal should change itself setting to the program selected.

## 4. CONFIGURING THE NNB

The NNB has three operating modes. Each mode changes how the built-in footswitch or side switch functions. *Regardless of how the operating mode is configured, the NNB responds to MIDI messages in the same way.*

**MODE 1: Tap Preset / Hold Effect** Tap the switch to cycle between the two presets for the current effect, hold to scroll to the next effect.

**MODE 2: Tap Effect / Hold Preset** Tap the switch to cycle between the four available effects, hold to toggle between the two presets for the current effect.

**Mode 3: Tap Scroll All** Tap the switch to scroll through all eight possible settings in order.

The NNB MultiJack also has three available settings:

**Expression Input** MultiJack connects to a standard expression pedal. The external expression pedal controls the Preset Morph function.

**Footswitch Input** MultiJack functions as footswitch input. Connect a normally-open momentary footswitch to control the “alternate” / hold function of the main switch. If the main function of the footswitch is set to Tap Preset / Hold Effect, tapping the MultiJack footswitch will trigger the “hold” function, changing the effect.

**MIDI Output\*** MultiJack functions as a MIDI output. MIDI data that enters the NNB from the main MIDI input will be passed out the MultiJack to a compatible MIDI device. The NNB is compatible with devices from Empress and Meris using a standard patch cable, or with Chase Bliss Audio devices using an **MJ-CBA cable**.

**\* WARNING:** The Expanse Pedal will not provide enough current to power the NNB if MIDI Output is selected. Disaster Area Designs recommends using a standard USB power supply to power the NNB if MIDI Output is desired. If the MultiJack is set to MIDI Output the NNB may not boot completely or run the Setup menu. Plug in a 1/4” cable to the jack temporarily to allow the NNB to enter the Setup menu and select either Expression Pedal (WHITE / BLUE) or Footswitch (WHITE / GREEN)

To change the settings on the NNB, power the controller on using either the CAT5 cable or the USB port and hold the footswitch or side switch once the LED begins flashing. Once the controller self-test completes, the LED will begin flashing two colors.

Configuration Options

LED Color 1	LED Color 2	Value
White	Blue	MultiJack functions as Expression Input
White	Green	MultiJack functions as Footswitch Input
White	Red	MultiJack functions as MIDI output
Yellow	Blue	Footswitch tap to change preset / hold to select effect
Yellow	Green	Footswitch tap to select effect / hold to change preset
Yellow	Red	Footswitch tap to scroll all effects and presets

If the LED is flashing white and a color (red / green / blue) tap the footswitch to select the MultiJack configuration.

If the LED is flashing yellow and a color (red / green / blue) tap the switch to select the operating mode.

Hold the switch to change the controller setting mode. Unplug the NNB to save the setting.

### Setting the MIDI Channel

Power the NNB using the CAT5 or USB cable. Wait until the LED starts flashing, then hold the switch to enter the config mode. Send a MIDI program change message from your controller on the channel you wish to use. The NNB will set itself to that channel and save the setting. Unplug the NNB to restart.

## 5. Advanced MIDI Control

The following commands are supported by the NNB:

### MIDI Implementation

MIDI Program	EFFECT	PRESET
0	No Change	Sets left knob to zero
1	White	Yellow
2	White	Violet
3	Blue	Yellow
4	Blue	Violet
5	Green	Yellow
6	Green	Violet
7	Red	Yellow
8	Red	Violet

Please note that sending MIDI Program 0 (zero) does not change the effect or preset option, but rather sets the left knob (Mix) to its minimum position. This allows for a type of “bypass” even though the Expanse pedals do not support an actual bypass command.

### MIDI CC Messages

MIDI CC	Control	Range
7	Preset Morph	0-127
16	Left Knob	0-127
17	Center Knob	0.127
18	Right Knob	0.127
19	Effect Select	0 = White, 1 = Blue, 2 = Green, 3 = Red

When using MIDI CC to control the Expanse pedal knob settings, note that the maximum setting of the knob is controlled by the position of the physical knob on the pedal itself. If you wish to access the entire range of the knob using MIDI commands, set the knobs on the pedal to their maximum positions.