

# BlueBridge Quick Start Guide





The following is a Quick Start Guide to be used with the Atlas Sound BlueBridge processors. These models are part of the BlueBridge family of processors that are based on an open architecture platform that utilizes a drag and drop method for system designs. The intent for this Quick Start Guide is to give an overview on how to connect a BlueBridge device to a computer and access a DSP Hardware Block with the ability to pass audio through the Atlas processor. When comparing BlueBridge to other DSP software, you will see that it is user friendly. However, these are technical products and may take additional training to understand fully. After finishing this introduction guide, visit [www.AtlasSound.com](http://www.AtlasSound.com) and review our BlueBridge "How To" library of support materials.

This guide focuses on the TSD-BB44 model as the example, although the same process of connectivity and design applies to all BlueBridge models. The TSD-BB44 is configured with 4 (Inputs) x 4 (Outputs). All BlueBridge models share the same software and can be used within the same system design.

## Things To Know Before Starting

- BlueBridge models BB88, BB816, BB168, and BB1616 contain the following in each box, Atlas Sound BlueBridge processor, power cord, USB thumb drive, Quick Start Guide. Each TSD-BB22/44 box contains: TSD-BB22 or TSD-BB44, power supply, USB thumb drive, (2) mounting brackets, Velcro strip, and (2) cable management retainer clips.
- The TSD BlueBridge models are factory preset to allow audio to pass in a unity gain configuration from Input 1 to Output 1, Input 2 to Output 2, etc. This will be useful for system set-up or troubleshooting if needed.
- The included USB thumb drive contains the BlueBridge software which is required to connect to the TSD/BlueBridge device. BlueBridge is continually improving and adding features, ALWAYS check the Atlas Sound web page for the latest software and firmware updates prior to starting a new design. If an update is needed, follow the Reference Guide for BlueBridge Firm Upgrade. This guide is also on the USB drive provided.
- BlueBridge software and firmware versions are forward/backward compatible for basic operation. However, when importing an older system design file onto a new device, Atlas Sound recommends using the latest software and firmware versions to ensure the system design is fully operational and bug free.
- Once the BlueBridge device is connected and communicating with the computer, review the BlueBridge reference guide section titled "How To" in order to familiarize yourself with the unit's functionality. The BlueBridge platform is very powerful and includes a variety of features or shortcuts that are explained in short specific segments.
- These models can be mounted in several ways to meet design requirements. Atlas Sound suggests reviewing the "TSD Installation/Mounting Reference Guide."
- The following are required to work with a BlueBridge device: (1) PC with a processor 1GHz or higher, (2) Windows® 8, 7, Vista, or XP, (3) 500MB of free space, (4) 1GB graphics card, (5) 512MB of RAM, (6) Ethernet Interface.

## BlueBridge Family

The BlueBridge DSP family consists of many components including an 8x8, 8x16, 16x8, and 16x16 unit as well as the TSD-BB22 and TSD-BB44 modules. The 1 RU models have incorporated logic ports and relay contacts. Most of those models are also offered in a DT, Dante version. There are several other supporting accessory items available including wall controllers and touch screens.



BB-1616DT



TSD-BB44



BBWP-TOUCH7B



BBWP-K1



BBWP-S4K1



BBWP-S8



## BlueBridge Glossary of Terms

**BlueBridge Designer** - The Software program used to create a Design Template to load into an Atlas BlueBridge DSP device.

**Blue Panel** - A Software program used to identify DSP hardware devices on a network and navigate custom control pages created for the devices using the BlueBridge designer software.

**Atlas Processor (Hardware Block)** - The actual DSP hardware device to be dragged onto the System Blueprint page to base the system design around.

**System Blueprint Mode** - BlueBridge Designer mode used to create a diagram of the overall audio design of a project.

**Online Mode** - The state when the design file is loaded into the designated hardware and ready for use. At this point the unit is "Live" and all changes can be heard in real time.

**Component Libraries** - This navigation pane within BlueBridge Designer has 2 modes. In the Project Design mode it will show the available System Components that can be used for the project. Once a DSP module has been placed in the design and opened, the Component Libraries change to show the available DSP Modules that can be placed within the DSP Device.

**Component Properties** - This navigation pane within BlueBridge Designer allows the user to make changes to all of the elements in the design. These elements can include Component Name, Position, Appearance, Number of Inputs/Outputs etc. This pane will also track the Component Resource Usage of the DSP Device.

**Design Template** - A pre-configured design that can be used as template to create a new custom design. These files can save the designer a lot of time. Go to [www.AtlasSound.com](http://www.AtlasSound.com) in the BlueBridge section to see additional designs if they are not listed in the software. **Note:** Design Templates are not to be confused with the term APPs that are used in other DSPs. An APP is a fixed designed that cannot be reconfigured.

**Network View** - This Button displays the "Network View" page showing all of the DSP hardware and control devices that have been found on the Network. **Note:** This button is only available in Project View.

**Project View** - This Button displays the "Project View" page showing the current project design layout. **Note:** This button is only available in Network View.

**DSP Module (Processing Block)** - The Icon for the DSP processing module that is used/placed inside the Atlas DSP Device (Hardware) Block. There are many DSP modules to select from such as Meters, Delays, EQs, Filters, and Mixers to name a few.

**Control Page** - A window or several windows with control elements, ie: faders, buttons, meters, etc. used to create a custom user interface experience.

**Control Device** - Hardware devices or Blue Panel software used to control system settings configured with control pages with the BlueBridge Designer software.

**Device Resource** - Indicates the amount of DSP resources used for the selected DSP hardware or individual processing blocks. This can be found in the Component Properties navigation pane. This can be viewed while Online or Offline for Hardware resources, and Offline for the processing blocks. There is a resource button on the top of the window of an open hardware block when in Online Mode.

**System Presets** - Preset values for routings, volumes, EQ etc can be created and stored in the system design for recall when needed i.e. Scenes.

**Dante** - Digital Audio Transport System designed by Audinate to transport uncompressed full bandwidth audio over standard gigabit network hardware.

**Digital Trim** - Fine adjustment of input signal Post (after) the Analog Input stage.

**Analog Trim** - Fine Adjustment of the analog Mic/Line preamplifier Pre (before) the A/D converter.

**Auto-Wire** - The method used to wire Hardware and Processing Blocks without having to navigate a "point to point" wiring system. Wires can be adjusted and labeled if desired after blocks are connected.

**Cable Label** - A way of identifying wiring for an audio system design. Can be done in the Component Properties when selecting a wire that has been brought into a design.

**Refer to Figure A and Figure B on the following Page for glossary term/feature location identification tags.**

## BlueBridge Designer Software Glossary Term/Feature Location Identification Tags

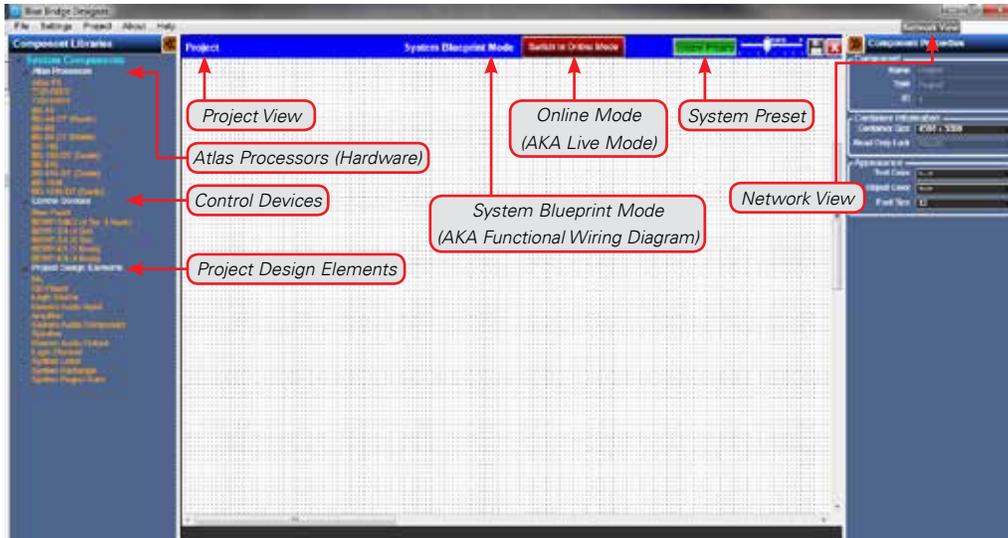


Figure A

Figure A shows the BlueBridge Designer main starting page. This is called System Blueprint Mode.

Figure B shows the BlueBridge Designer Software with the TSD-BB44 DSP processor block opened.

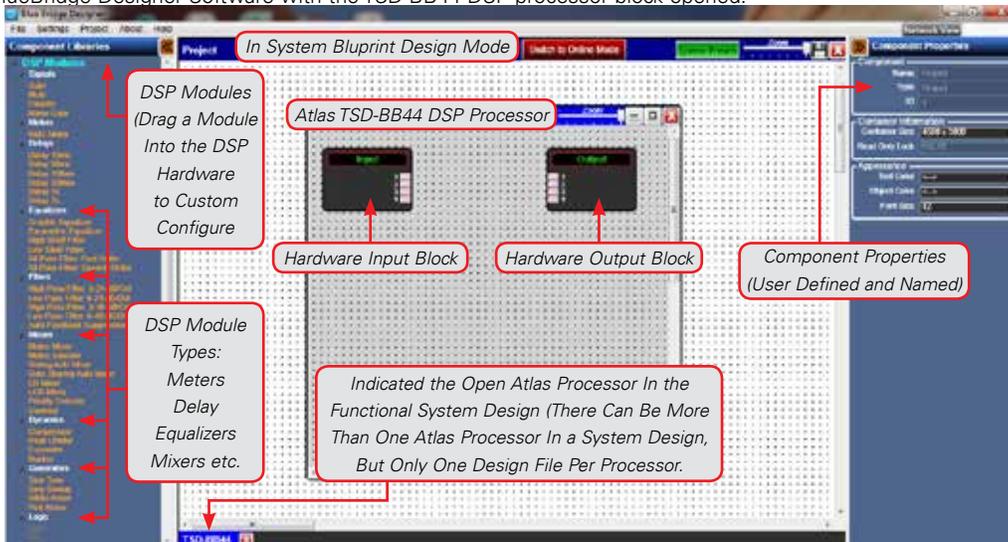


Figure B

## Turning The Unit On



Figure 1



Figure 2

After connecting the power supply, the front panel input LEDs will illuminate red for approximately 60 - 120 seconds as shown in Figure 1. The interior relays will audibly click and then the input LEDs will turn Off. The power and ethernet LEDs will remain illuminated as shown in Figure 2.

The TSD-BB22 and TSD-BB44 are factory pre-loaded with a file that connects Input 1 to Output 1, Input 2 to Output 2, etc. When using balanced input signals, follow the wiring information on the rear panel and for unbalanced input wiring combine the (G) and (-) pins.

## Loading the BlueBridge Software and Test Files

- The included USB drive contains both the BlueBridge Designer and BluePanel software packages.
- Insert the USB drive into an available USB port on your computer. Access the thumb drive through Windows® explorer and find the folders for Designer and BluePanel. Install both of these software applications onto your computer. **Note:** Always check [www.AtlasSound.com](http://www.AtlasSound.com) for the latest release before installing.

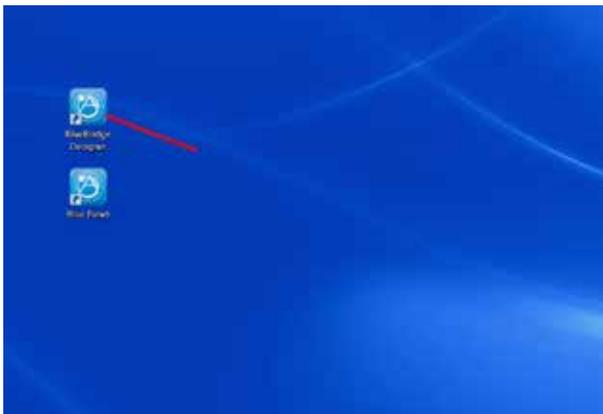


Figure 3

Launch the BlueBridge Designer Application.

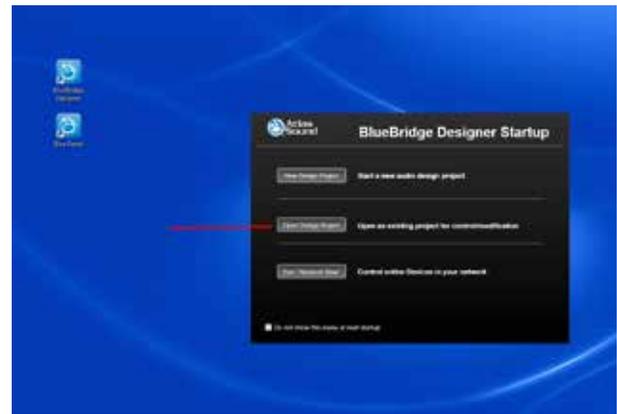


Figure 4

Select the "Open Design Project" Button and a Dialog Box Will Open to Choose a Design File

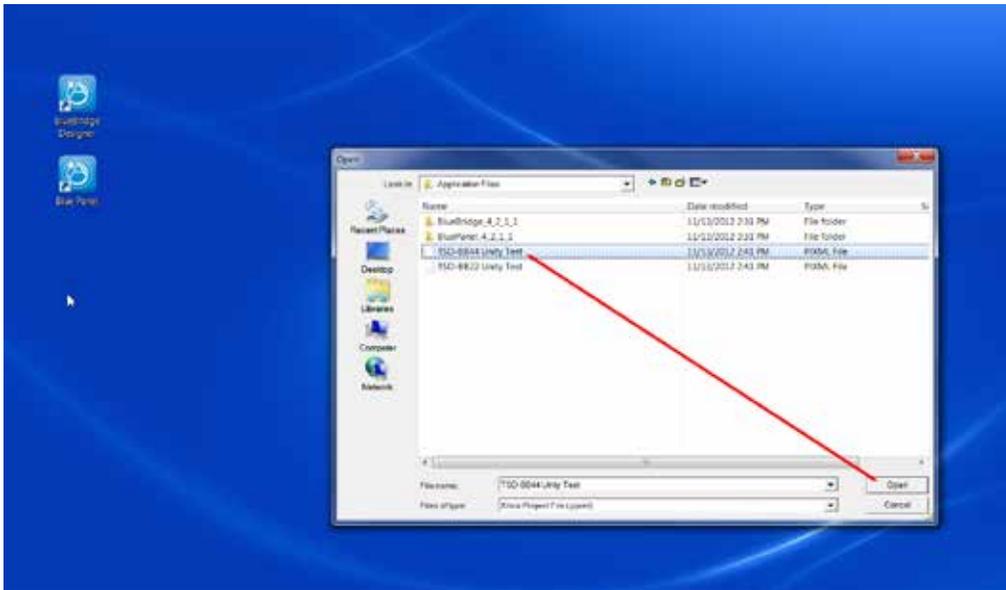


Figure 5  
Open Unity Design Test File for Model Being Installed

Choose the Unity Test file for the unit being installed and select “Open” as shown in Figure 5. This design file will provide basic information for loading a design file onto the device.

The Unity Test file will open in the BlueBridge Designer application as illustrated in Figure 6.

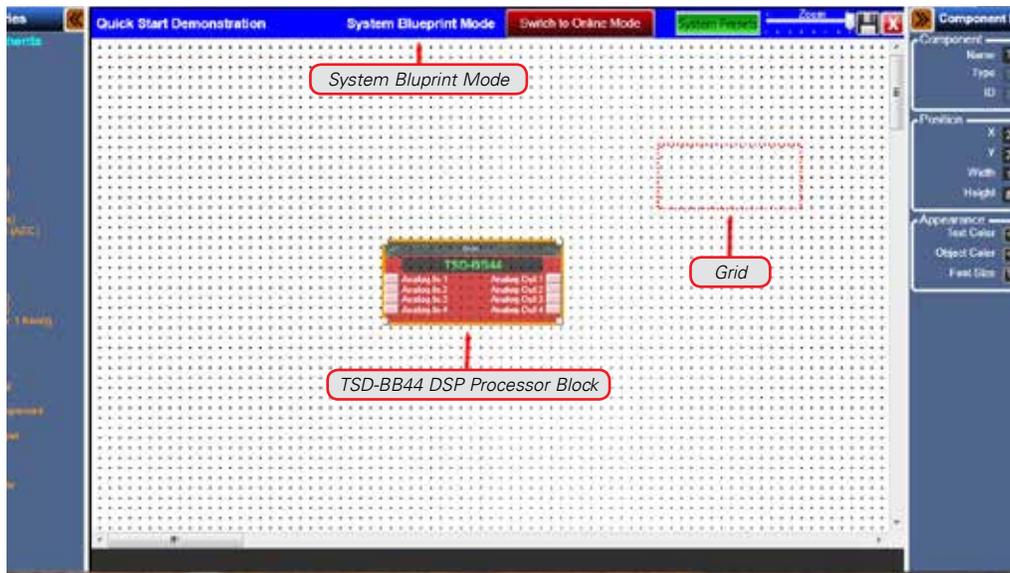


Figure 6  
BlueBridge Designer Application Running Unity Test Design File in System Blueprint Mode

- An Atlas DSP Block representing the device will appear shaded on a grid background as shown in Figure 6.
- The next step will be to map the design file to the hardware found on the Network View.

## Connecting The Device to the Network

- Connect a Windows® computer to the network (wired or wireless).
- Connect the device to the network using a standard Cat5e ethernet cable.
- Ensure that DHCP is enabled in your computer's network settings.
- Access the BlueBridge Designer software and choose "Network View" to locate the hardware connected to the network.

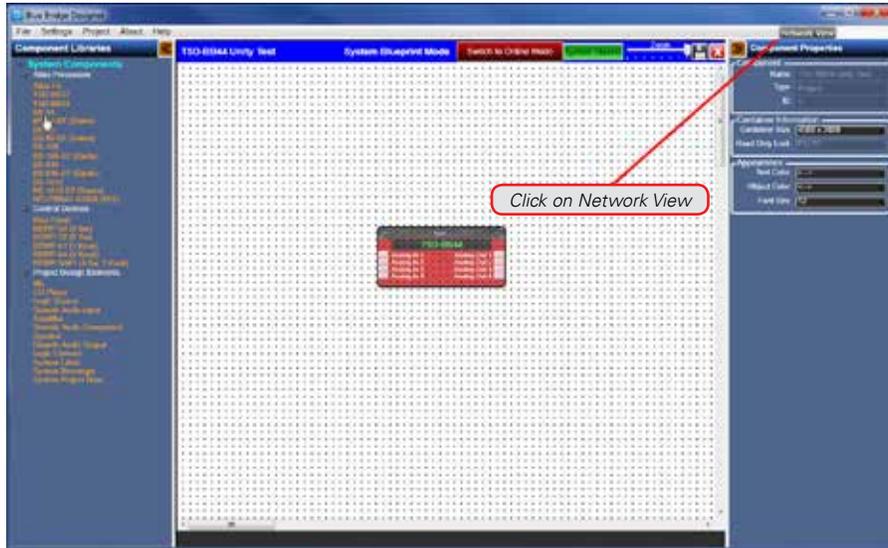


Figure 7

After clicking "Network View," a page will open that shows all BlueBridge hardware units that are connected to the network as shown in Figure 7.



Figure 8

- In the Network View, the device can be identified by IP address, MAC address, model #, or Firmware Version as shown in Figure 8.
- The window will show the status bar and then the device will appear and indicate the upload progress as shown in Figure 8. **Note:** It is possible for it to take few minutes to detect the device. If it does not detect the device, reset (cycle) the power to the device by unplugging the power cable and waiting 30 seconds before plugging it back in. The upload progress is only shown when the device is initially plugged into A/C power.

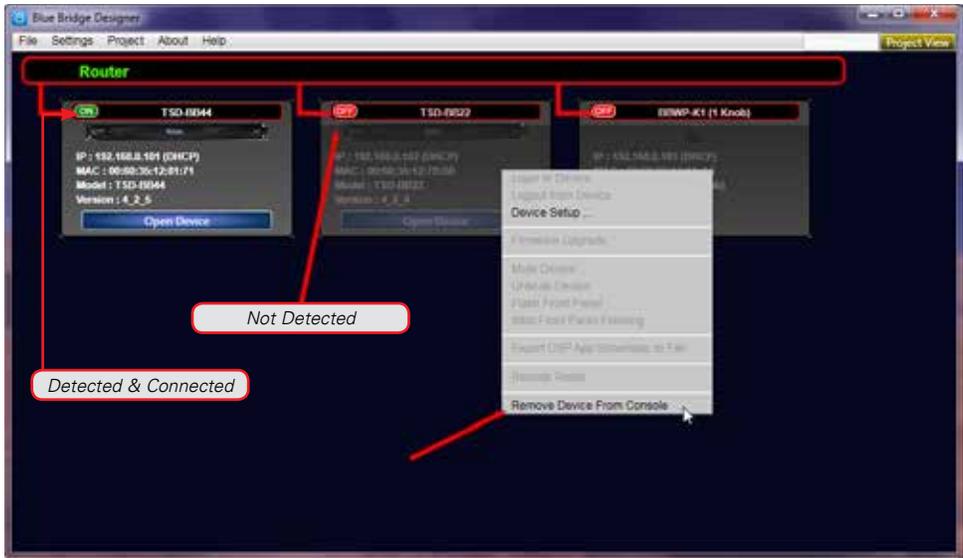


Figure 9

- **Note:** If you have used this software with any Atlas BlueBridge hardware devices that were previously connected, you may still see them appear in the Network view as shown in Figure 9. These can be identified by the model number. The RED dot in the upper left corner of the device window indicates the device is no longer detected.
- You can remove the unused hardware device by right clicking on the device you want to remove and select "Remove Device From Console" as shown in Figure 9.

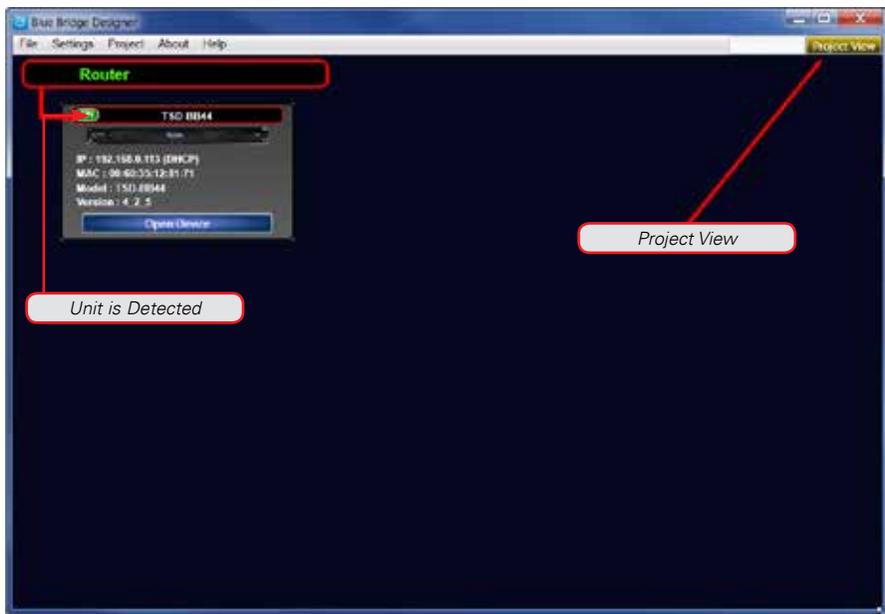


Figure 10

- Once the Atlas BlueBridge hardware device is detected on the network and the status indicator is Green, return to the Project View so the device can be "Mapped" to the design file as shown in Figure 10.

- Click on the "Project View" button as shown in Figure 10. This will take you back to the Blue Print Mode window view. The detected unit will now appear in the main window as shown in Figure 11.

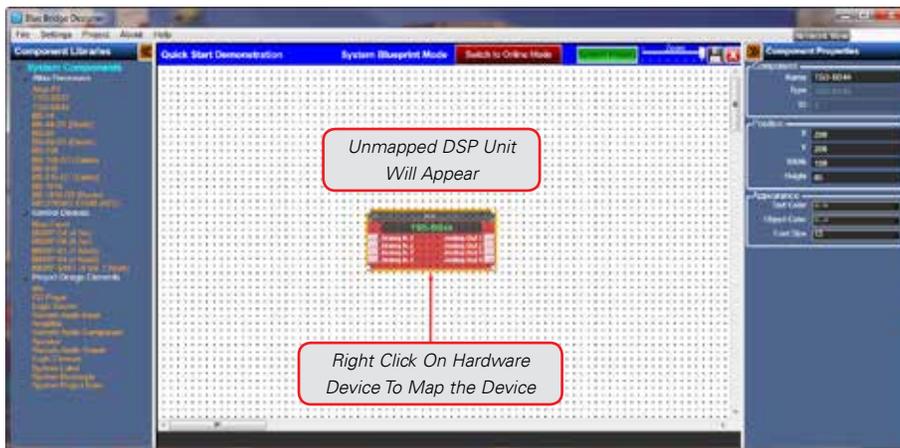


Figure 11

- Right Click the TSD Hardware to "Map Physical Device" and follow the steps shown in Figures 12 and 13 below.

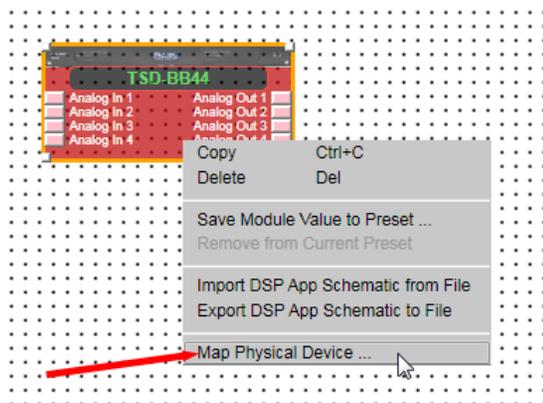


Figure 12

Go to the drop down menu and select "Map Physical Device"

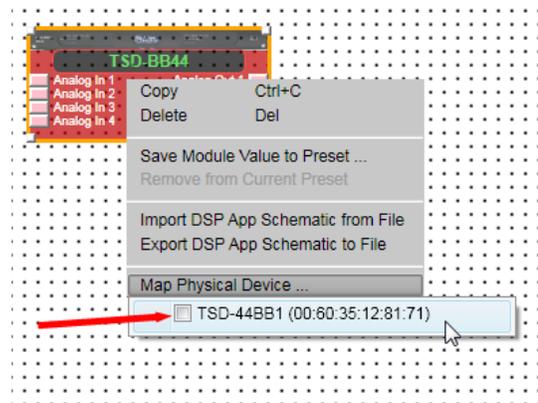


Figure 13

Click the box of the device that will be linked to this design file.

**Note:** There may be more than one unit listed, use the MAC address for identification.



Figure 14  
Unit is Mapped

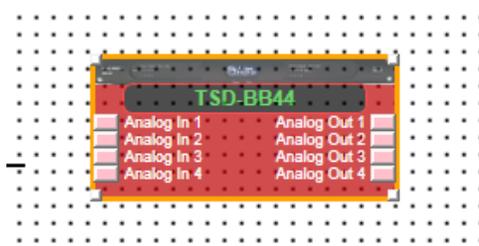


Figure 15  
Unit is NOT Mapped

- Once the unit is "Mapped" the DSP Hardware block for the unit will no longer be shaded as shown in Figure 14.



## Configuring the Unit Online

**Note:** When in Online Mode, the BlueBridge Hardware Device and the Design File are communicating and all adjustments are live and in real time.

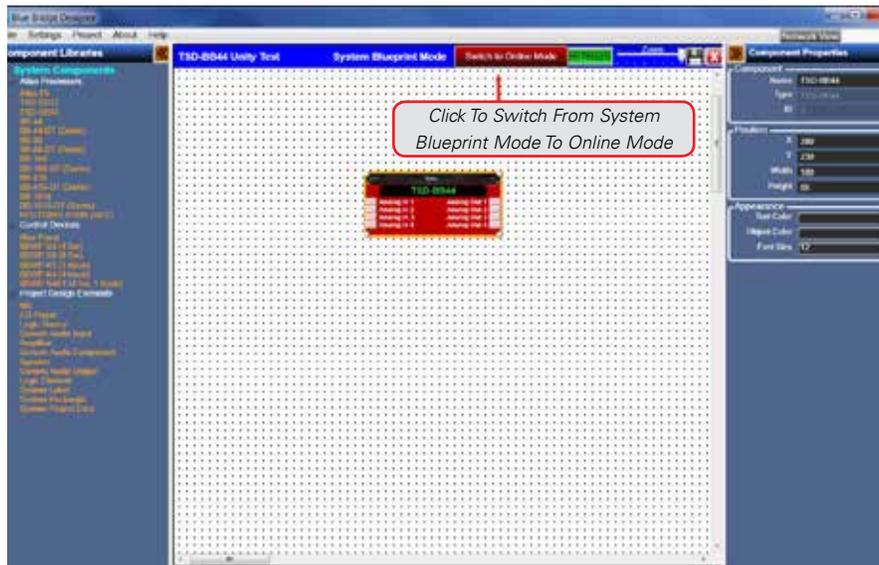


Figure 16

- Click the button “Switch to Online Mode” to go from System Blueprint Mode (Functional Wiring Diagram) to Online (Live) mode, in the menu bar as shown in Figure 16.
- The software will generate new information windows. Click the OK button to proceed as shown in Figures 17 & 18.

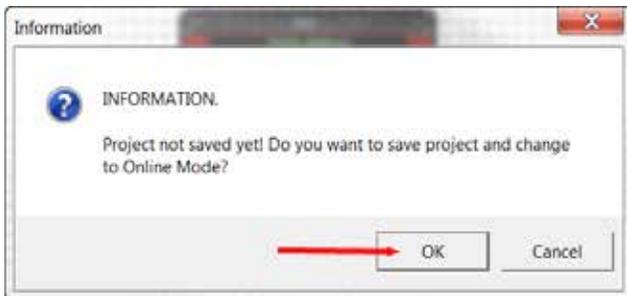


Figure 17

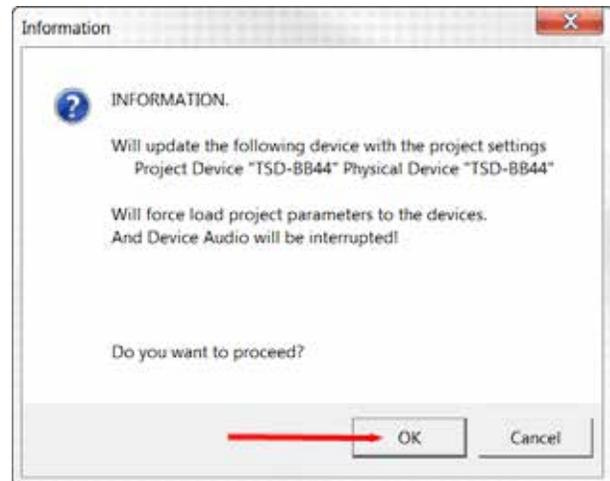


Figure 18



- The Design file will now upload the file into the Processor hardware as shown in Figure 19. The wait time will depend on the size of the design file and can take several minutes to finish.

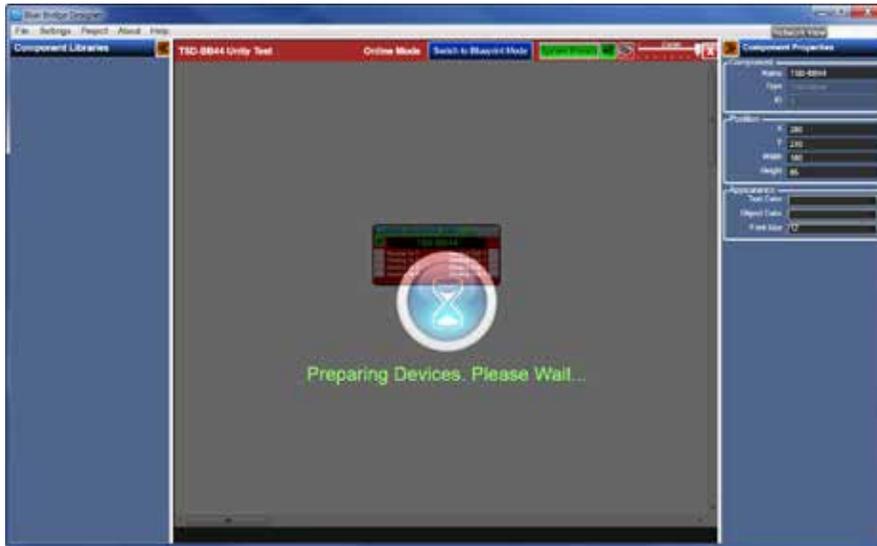


Figure 19

- The TSD Processor is now Online (Live) and ready to be controlled. (Notice the grid is gone and the background is solid as shown in Figure 20. This is a good visual tool to indicate the Processor is Online.)



Figure 20

- To see how the DSP Hardware Device is internally configured, double click on the Processor Hardware device. The internal configuration of the DSP design file will appear as shown in Figure 21.



- Once the DSP Hardware Device is open, the design file can be accessed as shown in Figure 21. The example below shows a TSD-BB44 Unity Design Test file factory pre-loaded where as the input block is wired to the output block. **Note:** Further on, there will examples of designs with DSP Modules applied to the Design file.

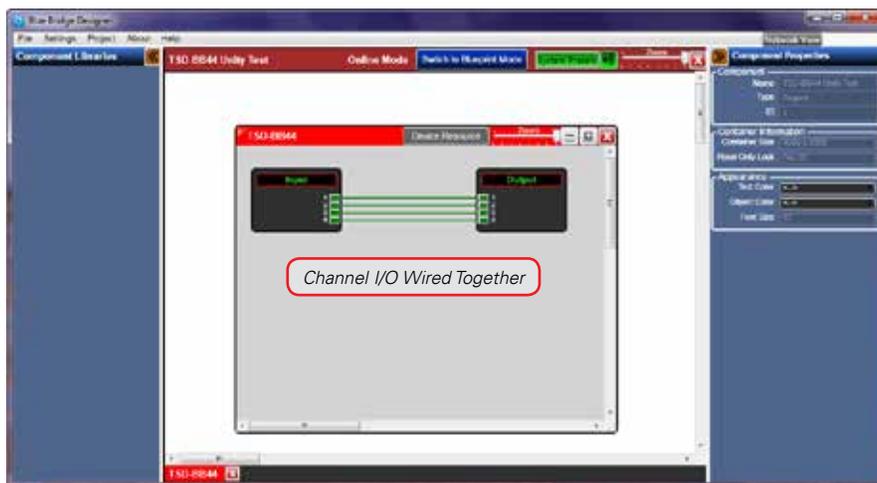


Figure 21

- Double clicking on the DSP Hardware Input Block will launch the first stage of gain control as shown in Figure 22.
- The unit is now **Live** and any input adjustments will be in real time.

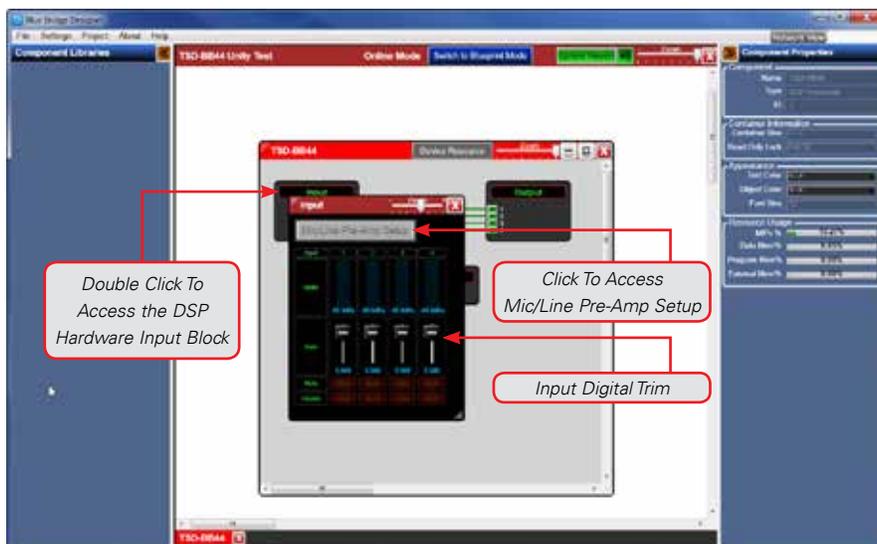


Figure 22

- BlueBridge DSPs are unique in that the first window allows control of the Digital Trim and access to the Analog Mic/Line Pre-Amp setup block as shown in Figure 22. **Note:** It is always important to select and set the gain structure in the Analog domain first. Digital Trim is POST (after) the Analog gain setting.



- Clicking the Mic/Line Pre-Amp Setup will launch a second window as shown in Figure 23.
- In this window you select Mic or Line Level, Phantom Power and fine tune Analog Mic/Line trim level as seen in Figure 23.



Figure 23

- Double clicking the DSP Hardware Output Block opens an Output window as in Figure 24.

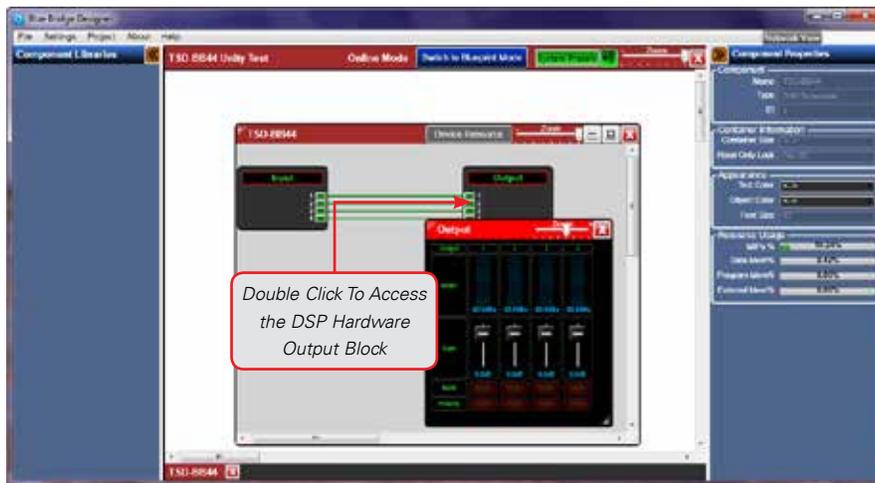


Figure 24

- The DSP Output Block window has Gain Control, Meters, Mute and Polarity.

- After any adjustments are made, the project file should be saved as shown in Figure 25.

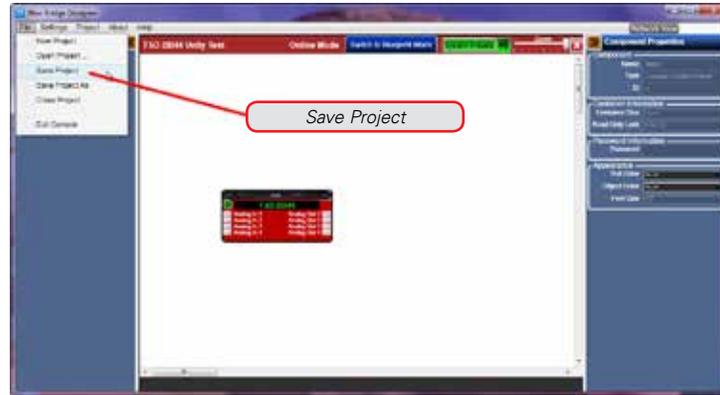


Figure 25

After the device has been connected to the network and mapped to a design file, make sure to save the file. You are now ready to start a new project. When comparing BlueBridge to other DSP software, you will see that it is user friendly. However, these are technical products and may take additional training to become fluent with them. For assistance in setting up a new design please visit [AtlasSound.com](http://AtlasSound.com) and review our BlueBridge “How To” library of support materials.

After finishing this instruction guide we strongly recommend that to check for the latest software and firmware versions. This is very important in order to access the latest BlueBridge features. Figures 26 and 27 show which firmware and software revisions are currently being used. Go to [www.AtlasSound.com](http://www.AtlasSound.com) and visit the BlueBridge DSP section to see if there is new version available. Please review the BlueBridge Firmware Upgrade guide before proceeding.

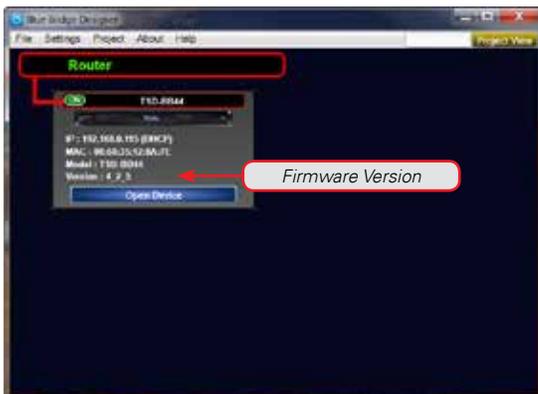


Figure 26

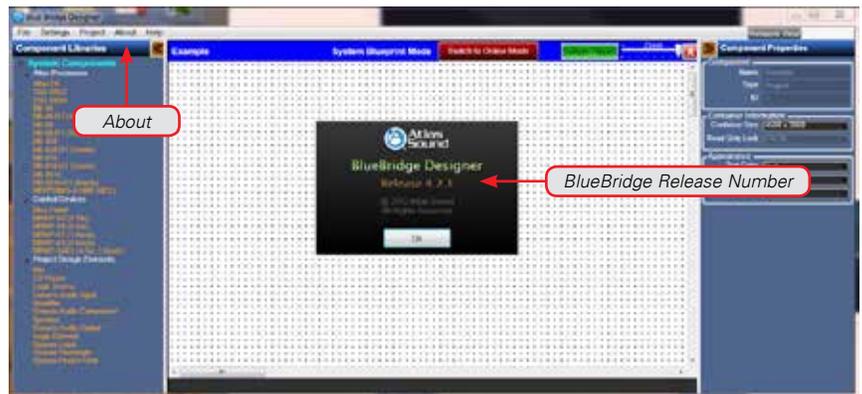


Figure 27

The Network View will show the Atlas DSP Processor connected to the network. The firmware version is displayed in this window as shown in Figure 26. Click on the “About” tab in order to access the release number. A software revision window will appear as shown in Figure 27.

Additional training information can be found at [www.AtlasSound.com](http://www.AtlasSound.com) under the BlueBridge DSP section. Below are a few examples.

- Starting a Project Using a TSD
- Making a BluePanel Control Page
- Autowire Tips
- Working with Wall Controllers
- Firmware Updates
- IP Configuration Requirements and Tips

## Design Example

The design shown in Figure 28 illustrates a DSP based design for a small hotel conference/meeting room set up. It is based on the Atlas TSD-BB44, Atlas TSD-PA122G amplification and Atlas FAP42T speaker systems. There is a Mic Input located in each of the four rooms and the rooms can be opened up to each other to make bigger meeting spaces.

This system will room combine using the presets in the design. Also the Mic Inputs can be selected to be line level in the event of an external mixer being brought into the room for larger events.

There is an Atlas 8-Button wall controller that will function to execute the preset commands, and a Blue Panel control page is set up for Advanced control functions.

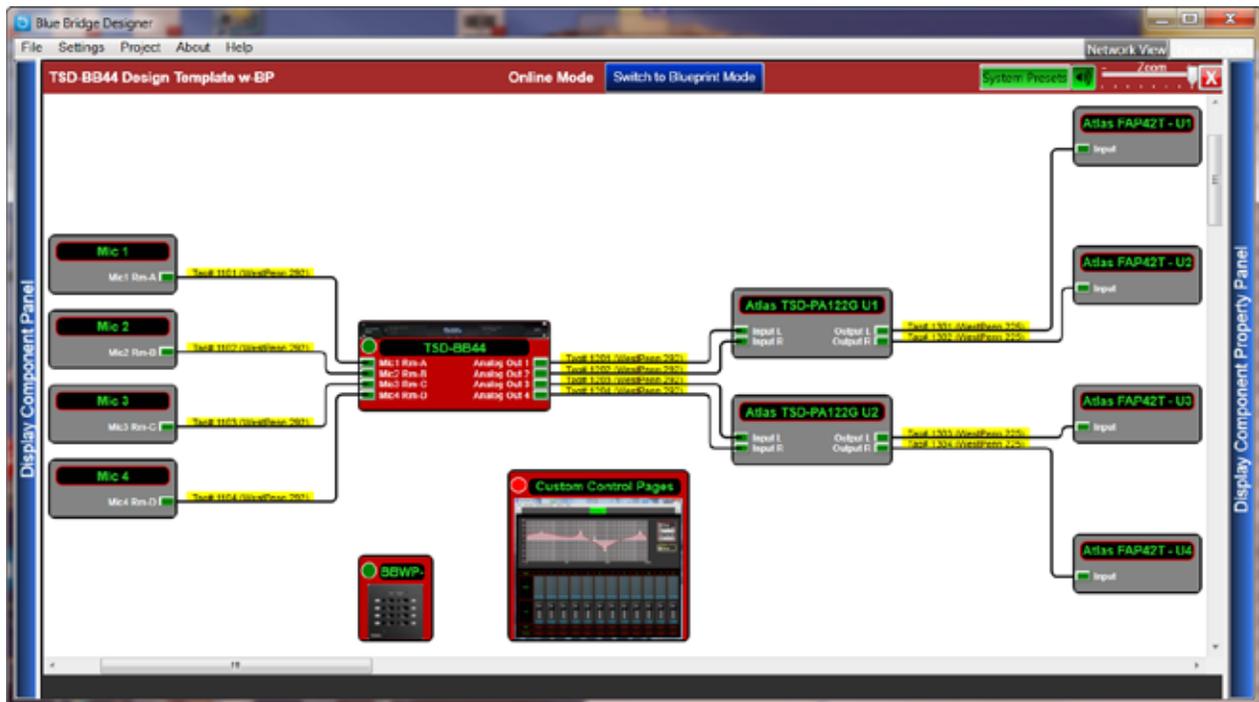


Figure 28

Inside the TSD-BB44 is a powerful set of processing objects that will take this job to a whole other level in performance, flexibility, and ease of use. Figure 29 shows the inside view of the TSD-BB44.

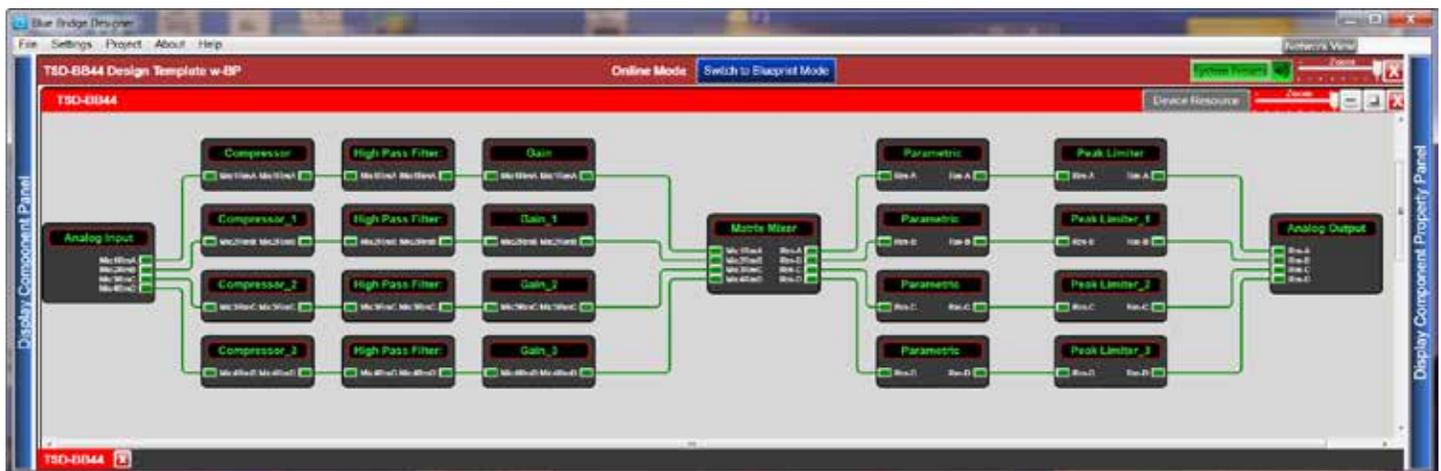


Figure 29

Selecting a processing Block inside the design, and clicking it open, is fast and intuitive when needing to make fine adjustments to the system. Figure 30 and Figure 31 are examples of the Compressor and Parametric Equalizer Processing Blocks opened in this systems design.

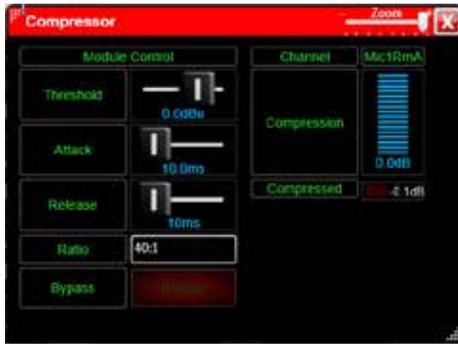


Figure 30

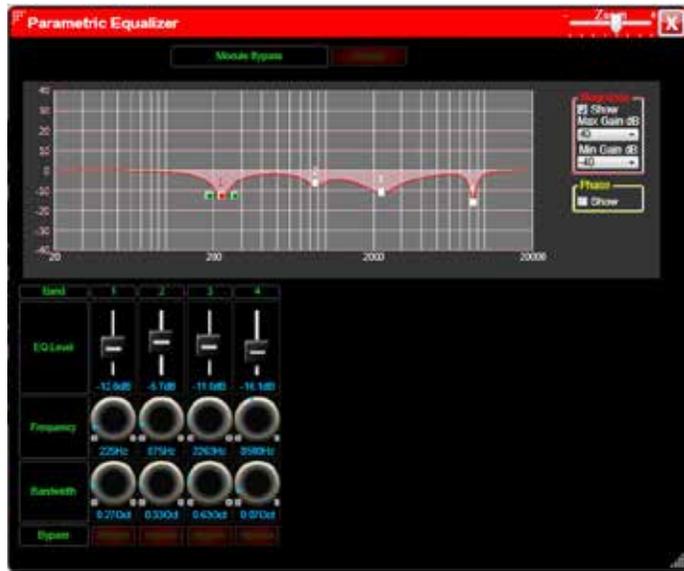


Figure 31

The Blue Panel Control Page can be setup in almost unlimited configurations and with multiple pages. On this system shown in Figure 32, there is a complete set of meters for monitoring. Room configuration preset buttons and input control, including level control, mic/line, phantom power, and room combine buttons.



Figure 32

*Custom Designed Blue Panel Control Page*

Should your BlueBridge Processor require service, please contact the Atlas Sound warranty department at 1-877-689-8055, ext. 277 to obtain an RA number.

Atlas Sound Tech Support can be reached at 1-800-876-3333.

Visit our website at [www.AtlasSound.com](http://www.AtlasSound.com) to see other Atlas products.