Thank you for purchasing the AudioLot MixBay. We believe you have chosen the single highest quality patchbay ever designed and we wish you great success in using it in your studio.

In this manual we are going to discuss the MixBay in detail, as well as try to provide you an overview of the various normalling configurations and grounding schemes.

To start with, and as we’re sure you’re already aware, the MixBay is a 192pt. TT->DSUB patchbay that is 3U in height. The DSUB connections are standard TASCAM wired and the pin configuration is as follows:

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<tr>
<th>JACK #</th>
<th>TIP (+)</th>
<th>RING (-)</th>
<th>SLEEVE (GND)</th>
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All of the ports on the rear of the MixBay feature QuickSwitch technology. This system allows you to simply and easily configure both the normal and ground setup by sliding the switches into place. **DO NOT** try to remove the switches as you will damage your MixBay and you will need to send it in for repair (*this repair WILL NOT be covered under the lifetime warranty and you will be charged for this service*). So, now that we’ve got that out of the way, let’s see how the MixBay’s QuickSwitch technology will allow you to setup your studio.

Below you will see all of the various normal and ground configurations that are possible:

- **FN & IG**
- **HN & IG**
- **NN & IG**
- **FN & GB**
- **HN & GB**
- **NN & GB**
- **FN & GVS**
- **HN & GVS**
- **NN & GVS**

**S** **W** **I** **T** **C** **H** **S** **E** **T** **T** **I** **N** **G** **S**

- **FN = FULL NORMALLED**
- **HN = HALF-NORMALLED**
- **NN = NON-NORMALLED**
- **IG = ISOLATED GROUNDS**
- **GB = GROUNDS BUSSED**
- **GVS = GROUND VERTICALLY STRAPPED**

*switch positions shown from the rear of the mixbay*

As you see, you can choose, on a per-port basis, the exact grounding and normalling scheme you need to accomplish your studio tasks. The idea of a patchbay is to provide easy access to all of the gear in your studio (this includes microphones, converter channels, console mic/line i/o, etc.). However, even though all your gear is going to be hooked up, doesn’t mean that you should expect to use a TT cable (or quite a few TT cables in some instances) every time you wish to create an i/o path. This is where normalling comes in.

The MixBay is shipping with all of the ports set to half-normal/grounds bussed. This is a pretty standard setup and for those of you who want to get right to work, feel free to plug in those DSUB cables, printout the labeling strips and go to work. For those of you requiring a bit more control and/or those of you who are new to the world of patchbays, the following section is going to talk about each of the different possible configurations and why you might want to use them.

Before we get started with that, we’d also like to mention that there are four grounding posts on the rear of the MixBay (these are the green circular knob looking things to the right of each row). Instead of just hoping for the best, these posts provide a way for you to physically ground each row independently. Understand that this is not a requirement and if you ignore these posts, normal use of the MixBay will not be affected (we’ve already taken into account internal grounding so you’re covered). It is for those times where you have a grounding issue and need to provide a physical ground in order to alleviate noise or other problems.
Unlike conventional patchbays, the AudioLot MixBay separates the normals so that row 1 corresponds to row 3 and row 2 corresponds to row 4. A normal means that the two rows correspond and send signal, alleviating the need to use a TT patch cable. All of your outputs and microphones should exist on rows 1&2 and all of your inputs should exist on rows 3&4. So, to make that a bit easier to understand, if you’d like to always send your microphone into your mic-pre without using a TT patch cable, you would plug your microphone into port 1, row 1 and the input of your mic-pre into port 1, row 3. This will always send your microphone into your mic-pre’s input. To take that one step further, let’s say you are setting up your normals so that you can use outboard gear as inserts in ProTools, Nuendo, Cubase, or any other software that supports such things. With the exception of ProTools, the other software generally doesn’t care what ports on your A/D & D/A converters the gear is plugged into. However, in ProTools you are required to connect your outboard gear on the same port number (i.e. if you connect and 1176 mono compressor’s output to port 7 on the A/D side, you must also connect its input to port 7 on the D/A side). In this case, all of your D/A ports (the converter outputs) would be connected to ports residing on rows 1 and/or 2), likewise all of your A/D ports (the converter inputs) would be connected to ports residing on rows 3 and/or 4). We recommend putting the outputs on the left-hand side (starting on row 1) and the inputs on the right hand side (starting on row 4). Let’s assume that we’ve hooked up a 16 channel converter, and starting on row 1, port 1 we have the outputs going across 16 ports. Let’s also assume that for the converter’s Inputs we are starting on row 4 at port 32 and going across 16 ports. To setup the 1176, and we’ll again reference port 7 to keep things consistent, you would plug the input into row 3, port 7 and the output into row 2, port 39. This would coincide with port 7 on both the A/D and D/A side.

Figuring out your normalling scheme takes time. Work with the Excel sheet we’ve provided on the MixBay product page on the AudioLot website (www.audiolot.com) to see how to best setup the MixBay for your environment.
Here are some definitions of the various ground and normal options for your MixBay

Independent Ground \((IG)\)
All jacks are isolated and each independent ground is brought out to rear termination.

Grounds Bussed \((GB)\)
All jacks are bussed together, making a common ground. This common ground is then routed to a binding post at the rear of the panel. This is the default ground configuration across all ports on the MixBay when you receive it.

Grounds Vertically Strapped \((GVS)\)
The grounds of each vertical jack-pair are connected. Horizontally, the grounds of these vertical jack-pairings are still isolated. This allows the user to maintain a solid ground path from source to destination for each vertical pair of jacks.

Full-Normalled \((FN)\)
A “Full-Normalled” signal path occurs when a pair of normalling jacks are wired together at the normals. This normal signal path can be interrupted and redirected by plugging a patch cord into either jack.

Half-Normalled \((HN)\)
A “Half-Normalled” signal path occurs when the Tip(+) and Ring(-) connections of a non-normalling jack (source) are wired respectively to the Tip Normal and Ring Normal connections of a normalling jack (destination). Plugging a patch cord into the source jack (Row 1) allows the user to monitor the source signal without interrupting the normal path. The normal path can be interrupted and redirected only by inserting a plug into the destination jack (Row 2). This is the default normal configuration across all ports on the MixBay when you receive it.

Non-Normalled \((NN)\)
A “Non-Normalled” signal path occurs when both the source and destination jacks are non-normalling jacks. Since there are no normal connections on the jacks, there can be no normal path; the signal moves straight through and cannot be interrupted via the insertion of a patch cord.

You will also notice a metal tray on the rear of your MixBay. This is a stress-relief tray for all those heavy DSUB snakes/cables that will be connected to the DSUB ports. It is there to protect both the MixBay’s DSUB connectors and your expensive cables. There are holes in the tray so that you can use straps (not included because we have no idea what sort of straps you might wish to use) to secure your cables if you choose (note: you do not have to secure your cables in order for the tray to serve its purpose, however, added safety for your MixBay and cabling couldn’t hurt right?).

On the following pages we’ve provided a large image of each possible QuickSwitch configuration (remember that all of these are available per port so it’s up to you to decide how to setup your Mixbay) and its associated setup scheme description. These assume you are looking at the rear of the MixBay facing the QuickSwitch dip-switches.
Full Normal (FN)
Grounds Bussed (GB)

Full Normal (FN)
Grounds Vertically Strapped (GVS)

Full Normal (FN)
Isolated Ground (IG)

Half Normal (HN)
Grounds Bussed (GB)
Half Normal (HN)
Grounds Vertically Strapped (GVS)

Half Normal (HN)
Isolated Ground (IG)

Non Normal (NN)
Grounds Bussed (GB)

Non Normal (NN)
Grounds Vertically Strapped (GVS)
IMPORTANT NOTE:
When connecting microphones to the Mixbay AND normalling those microphones to the inputs of microphone preamplifiers, it is important to set the Quick-Switches so that the corresponding ports are “Full Normal, Grounds Vertically Strapped”. This is the best way to set things up in order to avoid potential damage to your microphones when engaging phantom power.

For Example;
You have 8 microphones connected on Row 1 and 8 mic-pre’s connected on Row 3. They are normalled to one another so that you never have to use a TT patch cable to make the connection between microphone and mic-pre. However, you want to use microphone #3 with mic-pre #1 and thus you use a TT patch cable and connect the two together. The microphone in question requires phantom power and if you were to leave the Mixbay ports in a half-normal configuration, +48v phantom power will be applied to both the corresponding “half-normalled” mic-pre, as well as the mic-pre that you actually want to use and have thus connected to the microphone. Changing the Quick-Switches on the rear of the Mixbay to “Full Normal, Grounds Vertically Strapped” avoids this issue. In Full Normal mode, when you plug that TT cable into the port of the microphone, the normal is broken and therefore has no effect on anything else on the bay.

Thank you again for purchasing the AudioLot MixBay. We hope you’ve found this manual informative and easy to understand. If you have any additional questions, please don’t hesitate to give us a call. You can also visit our website at www.audiolot.com. We carry a number of different high-end recording studio products and would love to assist you in any way we can.