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#### 1. What does a DL Series mixer do? What does the iPad do?

It's simple. The mixer itself does all the heavy lifting. Onyx mic pres amplify the signal. High-end AD converters convert this to digital. The powerful DSP chip processes and mixes this through the low latency mix engine. What's missing? Control. And that's where the iPad comes in. It is the control surface, controlling the DSP and mixer parameters but no audio processing occurs in the iPad at all. All the magic happens in the mixer itself which is powerful and able to produce undeniably professional sound quality.

## 2. Is a DL Series mixer compatible with all versions of the iPad? iPhone? iPod touch?

The DL Series mixers allow wireless control from all iPad models with the Master Fader app: iPad (1st generation), iPad 2, iPad (3td generation), iPad (4th generation) and iPad mini. There are both 30-Pin and Lightning versions of the DL1608 and DL806 available so choose the model that works with your iPad. Our patented tray design is built to accommodate changing form factors via tray inserts and a modular design.

The 30-Pin versions allow docked control from iPad (1st generation), iPad 2 and iPad (3rd generation). The included tray insert fits the iPad (3rd generation) and iPad 2 like a glove and the original iPad fits into the mixer without the tray insert. The Lightning versions allow docked control from iPad (4th generation) with the included tray insert. An optional accessory tray also allows docked operation with an iPad mini. Note the iPad (1st generation) has a slower processor and less RAM than newer iPad models so it has less snappy meters and will be slightly less responsive to dragging and other commands. In addition, because the iOS6/7 is not compatible with iPad (1st generation), there may be some features we choose to add in a future release which will not work on the first generation iPad. So if you are looking to purchase a used iPad, get the iPad 2 or newer to ensure a full featured experience into the future.

## 3. Is a DL Series mixer compatible with all versions of the iPhone and iPod touch?

The My Fader app allows wireless control from iPod touch (4th and 5th generation), iPhone 4, iPhone 4S, iPhone 5, iPhone 5C and iPhone 5S. It's perfect for on-stage performers controlling their own mix or for FOH engineers looking for pocketable wireless control. Note iOS6 is required for My Fader.

## 4. Can I convert my 30-pin DL Series mixer to lightning? Lightning to 30-Pin?

We have a variety of conversion options available, please see the following post for all the information.

#### 5. How does the wireless setup work?

Wireless setup is easy. Simply connect a Wi-Fi router to the Ethernet port on the back of the DL Series mixer. Connect the iPad wirelessly to this network. Almost any off-the-shelf router will work, but we recommend the AirPort Extreme or Airport Express, as these allow easy setup from the iPad and can be

configured in detail using the free AirPort Utility app. We also list some other officially approved and tested access points on the DL Series website.

#### 6. What apps can be used for playback or recording?

iPad applications can play back stereo audio to a DL Series mixer over the dock connector via a dedicated channel labeled "iPad" in the Mackie Master Fader control application. The main L/R signal is also sent from the mixer hardware for recording. While you can use the built-in Music app for playback and the Master Fader app itself for recording, many users utilize other 3rd party applications for these purposes. This works for any application that supports background audio playback/recording which allows the user to switch back to the Master Fader app for mixing. Many popular apps support this including Garage Band, Auria and Multitrack DAW.

#### 7. Are DL Series mixers rack-mountable?

Yes. There is an optional Rackmount Kit accessory available through Mackie dealers. A Phillips screwdriver is all that is required for installation and the finished hardware takes up nine spaces in a standard 19" rack. Plus, leaving extra room for cabling, a racked up DL Series mixer fits perfectly into most of the flip-top racks on the market.

## 8. Can the iPad be removed from the tray while audio is passing and the unit is powered on?

Yes. The audio processing is done entirely on the mixer hardware; the iPad only does control. If the iPad is removed it will switch over to wireless control automatically but audio will continue to pass during the transition which only takes a second or two. If wireless is not configured, the mixer still will continue to pass audio until another iPad comes online to control it. When power cycled, the mixer returns to its previous state. Note that iPad playback and recording can only happen when the iPad is docked and both will gracefully end when the iPad is removed from the tray.

### 9. Can all six aux sends be pre DSP, pre fader or post fader?

Yes indeed! All six auxiliary sends are configurable for pre DSP/ pre fader/post fader operation. This is done on a per aux send basis from the Mackie Master Fader control app.

#### 10. What AD/DA converters are in a DL Series mixer? What sample rate and bit depth are used?

The DL1608 and DL806 use 24-bit Cirrus Logic® AD/DA converters with 114dB dynamic range (A-weighted) operating at 48 kHz. These are the same converters as the Onyx Blackbird and Onyx-i series.

#### 11. Does the Master Fader allow offline editing?

Yes. You can create snapshots, shows and presets offline with the free Mackie Master Fader iPad app. Presets are only stored on the iPad and can be recalled to a channel when desired. Snapshots and Shows (groups of snapshots) are loaded onto the mixer hardware which synchronizes them to all connected iPads. These are then recalled from the hardware from any connected iPad.



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#### 12. How is the mixer software updated?

Updates start at the iOS App Store where the user downloads and installs an update to the Mackie Master Fader app (the application that controls the DL1608 and DL806).

This is just like any other iPad app. The next time they launch the app and connect to a mixer, the app will indicate the mixer is running old firmware, and with a single button press, the app will update the mixer. So be sure to update your mixer after an app update with enough time before a gig.

Note that if a mixer with newer firmware is connected to an older version of the app, it will also indicate this to the user and allow the user to update the Master Fader app from the App store with a single press.

#### 13. Are the outputs line level? Balanced?

All outputs on the mixer are line level balanced outputs. The aux sends are impedance balanced on 1/4 inch TRS. The main LR outputs are on balanced XLR. We recommend always using balanced cables to connect your DL Series to other equipment.

#### 14. What is the power supply?

DL Series mixers use an external lump-in-line universal switching power supply. It connects to the console via a locking barrel connector. To change from one region to another, you must simply supply the correct IEC cable.

#### 15. Do the XLR inputs have 48V phantom power?

Yes. All 16 XLR inputs have +48V phantom power via the global phantom power switch located on the rear panel.

#### 16. How do I zero out/reset an EQ/Comp/Channel quickly?

Every processor has a "Default" factory preset. Simply recall this just as you would any other preset to reset the processor to its default state. There are "Default" presets for each individual processor type as well as for input channels and output channels allowing you to reset the complete channel. Finally, there is also a "Default" snapshot allowing you zero the entire console quickly and easily.

## 17. When using an iPad with 3G or LTE, do I need to disable the 3G or LTE for operation?

No. The 3G and LTE iPads use high performance cellular transmission for their data transfer. These networks both cause no interference with audio signals or electronics in the DL Series mixer and other audio gear. However, if you are using your 3G iPad in an area with poor 3G or LTE coverage, the iPad may fall back to a lower speed older network called GSM. GSM communication uses data bursts to communicate with the network and these bursts can cause interference with audio called TDMA noise. This sounds like low level digital beeps in your audio. This will be present to some degree in virtually all audio equipment if the source of the TDMA interference is close enough and the severity will depend on the mechanical and electrical design of both the source and audio gear itself. We have designed the DL Series to reject this noise quite well. But there are still some situations where the interference can still

occur based on the current conditions. The solution if you do hear this noise in your audio, is indeed to turn off the cellular data functionality in your iPad for the show. Again, in most large metropolitan areas the iPad will get good 3G or LTE signals and this problem should not occur.

#### 18. What is the Wi-Fi Range? What router should I get?

Wi-Fi range depends on the router hardware and the environment. Obviously, each router is different and some will be better than others. We recommend sticking with a brand name you trust. If possible, purchase an 802.11n router that works over 5 GHz, though 802.11g works. In addition to choosing a good router, the Wi-Fi signal can be obstructed and its strength reduced if there are many walls or other obstructions it must pass through. A room full of people each with a variety of wireless devices in their pockets can also negatively affect your performance. This table gives good coverage estimates: (http://en.wikipedia.org/wiki/IEEE\_802.11#Protocols). Wi-Fi repeaters can be added to extend the wireless range for large venues, and many routers, such as the Airport extreme have this feature built in allowing you to simply use multiple routers to extend your coverage.

#### 19. Is there a bag or cover available?

Yes. The DL Series nylon bag features a firm EVA cover to protect the iPad in transport along with a fully padded interior and a section for the external power supply plus a shoulder strap and handle for carrying. The nylon cover protects your mixer from dust and debris when not in use and features a rear section that flips open to allow cable connection.

#### 20. Can I link two DL Series mixers?

While the DL Series was not specifically designed for true linking, creative audio engineers will figure out that you can in fact create a larger mixer with two DL1608s or a DL1608 and a DL806, a few balanced audio cables and some ingenuity. First, the audio outputs from each mixer must be combined. This is done by passing the eight analog outputs of one mixer into the last eight inputs of the second. Combine these output signals from the first mixer with the corresponding signals of the second by configuring the channel routing on the second mixer appropriately. Once you have the audio connected, you need to control both mixers. Each mixer can have its own iPad controlling it via the dock connector. And while a single iPad can't control both mixers at once, one or more iPad devices can control each mixer wirelessly one at a time by changing the Device setting in Master Fader back and forth. Note that even with multiple mixers in use at once, only 10 iPad devices in total can be used with the system.

## 21. Can I use a DL Series mixer while driving my car?

#### I need more! Feed me information!

To learn more about any of these questions and answers, check out the <u>DL Series Podcast</u> and the <u>DL Series Quick Start Guide</u> and Reference Manual.





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