



18 Channel Digital Mixer



Operating Manual

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Important Safety Instructions

Consignes de sécurité à lire attentivement



CAUTION
Risk Of Electric Shock
Do Not Open



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the device.

Le symbole de la foudre dans un triangle équilatéral symbolisant la foudre est prévu pour sensibiliser l'utilisateur à la présence de tension de voltage non isolée à l'intérieur de l'appareil. Elle pourrait constituer un danger de risque de décharge électrique pour les utilisateurs. Le point d'exclamation dans le triangle équilatéral alerte l'utilisateur de la présence de consignes qu'il doit d'abord consulter avant d'utiliser l'appareil.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
6. Do not use this apparatus near water.
7. Clean only with dry cloth.
8. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
9. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus.
10. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
11. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
12. Only use attachments/accessories specified by the manufacturer.
13. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
14. Unplug this apparatus during lightning storms or when unused for long periods of time.
15. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

1. Lisez ces instructions.
2. Conservez ces instructions.
3. Observez les avertissements.
4. Suivez ces instructions.
5. Pour réduire le risque de feu ou la décharge électrique, ne pas exposer cet appareil pour pleuvoir ou l'humidité.
6. Ne pas utiliser l'appareil près de l'eau.
7. Le nettoyer à l'aide d'un tissu sec.
8. Ne pas bloquer les ouvertures de ventilation, installer selon les consignes du fabricant.
9. Eloigner des sources de chaleur tel: radiateurs, fourneaux ou autres appareils qui produisent de la chaleur.
10. Ne pas modifier ou amputer le système de la mise à terre. Une prise avec mise à terre comprend deux lames dont une plus large ainsi qu'une mise à terre: ne pas la couper ou la modifier. Si la prise murale n'accepte pas la fiche, consulter un électricien pour qu'il remplace la prise désuète.
11. Protéger le cordon de secteur contre tous bris ou pincement qui pourraient l'endommager, soit à la fiche murale ou à l'appareil.
12. N'employer que les accessoires recommandés par le fabricant.
13. N'utiliser qu'avec les systèmes de fixation, chariots, trépied ou autres, approuvés par le fabricant ou vendus avec l'appareil.
14. Débrancher l'appareil lors des orages électriques ou si inutilisé pendant une longue période de temps.
15. Un entretien effectué par un centre de service accrédité est exigé si l'appareil a été endommagé de quelque façon: si il a été exposé à la pluie,, l'humidité ou s'il ne fonctionne pas normalement ou qu'il a été échappé.

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Unpacking

As a part of our system of quality control, every Ashly product is carefully inspected before leaving the factory to ensure flawless appearance. After unpacking, please inspect for any physical damage. Save the shipping carton and all packing materials, as they were carefully designed to reduce to a minimum the possibility of transportation damage should the unit again require packing and shipping. In the event that damage has occurred, immediately notify your dealer so that a written claim to cover the damages can be initiated.

The right to any claim against a public carrier can be forfeited if the carrier is not notified promptly and if the shipping carton and packing materials are not available for inspection by the carrier. Save all packing materials until the claim has been settled.

About Ashly

Ashly Audio was founded in 1974 by a group of recording engineers, concert sound professionals, and electronics designers. The first products were elaborate custom consoles for friends and associates, but business quickly spread to new clients and the business grew. The philosophy we established from the very beginning holds true today: to offer only the highest quality audio tools at an affordable cost to the professional user – ensuring reliability and long life. Many years later, Ashly remains committed to these principles.

Ashly’s exclusive Five Year, Worry- Free Warranty (three years on touchscreen and motorized faders) remains one of the most generous policies available on any commercial- grade product. The warranty covers every product with the Ashly brand name and is offered at no extra cost.

Please read this entire manual to fully understand the features and capabilities of this product.

FCC Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference
2. This device must accept any interference received, including interference that may cause undesired operation

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in both a commercial and residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help..

❑ 1 INTRODUCTION

Thank you for purchasing the Ashly digiMIX18 digital and networkable 18 input x 12 bus mixer.

With 16 high performance discrete mic/line preamplifiers, assignable auto-mixer, two line-level inputs, assignable cross-fade mode, DSP processing with parametric and graphic EQ, compressor/limiter, expander/gate, delay, invert polarity, two built in *stereo* effects buses, eight aux buses, six DCA groups, sensitive LED metering, preset control, password security, iPad® remote control via network connection, and much more, the compact and powerful digiMIX18 offers all the right tools to manage your sound job with confidence. The digiMIX18 also comes with racks-ears that allow the mixer to be installed in a standard 19" equipment rack.

In order to thoroughly understand the features of the digiMIX18, please read this entire manual as you explore the controls, touchscreen, and remote control capabilities of your mixer.

Standard Features

- 16 low noise mic/line preamps with Neutrik Combo jacks, dedicated trim controls, +48V phantom power, phase invert
- Rack ears included for mounting to standard 19" equipment rack
- Automixer (gain sharing), individually assignable to input channels 1-16
- Stereo line-level input on 1/4" jacks
- Cross-fade mode for panning between any two assigned channels
- TRS inserts on channels 1-8
- 8 aux sends, assignable pre/post
- 6 DCA for fader or mute groups
- 2 stereo effects buses (FX) with fully editable reverbs, delay with tap tempo, tremolo, flanger, and chorus.
- 7 inch color LCD touch screen for graphical viewing, assign, and setup
- Wired network interface for iPad remote control using Ashly digiMIX18 app, available free on the App Store®
- EZ-Mode for secure, simplified touchscreen or iPad® control
- 100mm precision Alps® motorized fader
- Pan control
- High resolution delay (0.2mS) on every main L/R output, input1-18, aux1-8, or FX1-2
- Expander/noise gate on every input and FX channel
- Compressor/limiter on every input, output, and FX channel
- 4-band parametric/shelving EQ filters plus HPF/LPF on every input, output, and FX channel
- 31-band graphic EQ on main L/R and aux1-8 outputs
- Stereo link available on inputs 1-16 and aux1-8 outputs
- Solo/PFL on every input, main L/R output, aux1-8, or FX1-2
- Stereo main L/R output on XLR and 1/4" phone jacks with dedicated level control
- Headphone and control room outputs with level control
- User presets for Scene Settings, DSP channel settings, FX settings, or GEQ settings, plus channel copy function
- 24-bit A/D and D/A converters, 32-bit DSP processing, 48KHz sampling rate
- Password security
- Utility programs for Windows® and Mac® for preset backup/restore and firmware update
- Internal 100-240VAC universal power supply
- Safety/compliance: cTUVus, CE, FCC, RoHs

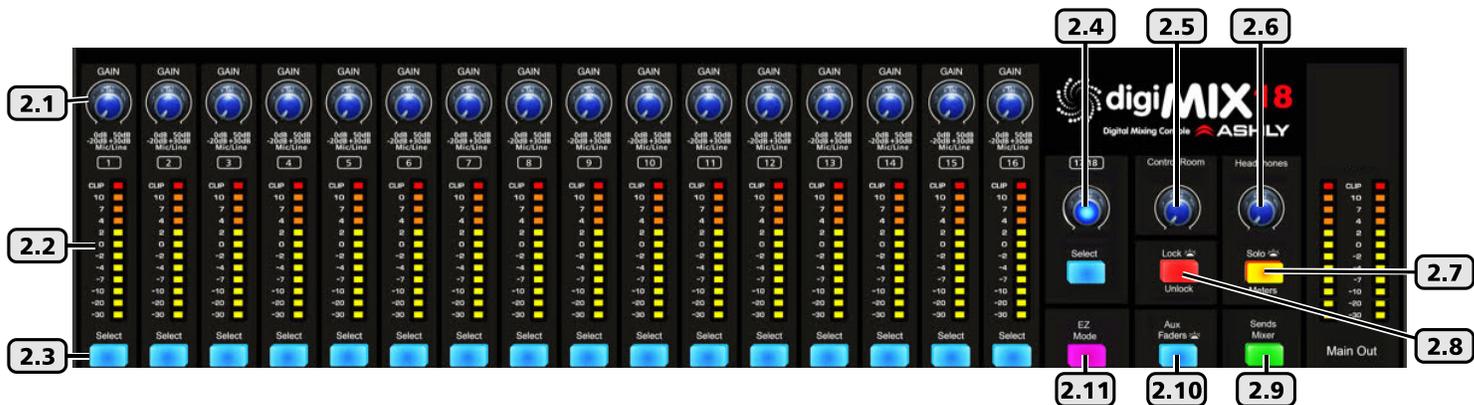
Optional Features

- Dante-3018 network audio interface, field installable
- USB-3018 multi-track audio interface, field installable

10 Tips Before Getting Started:

- ▶ **Channel Selection** - Each input, output, and FX channel has its own select button for quick access. Changing the fader or other settings affects the currently selected channel.
 - ▶ **Channel Assignment** - Input channels must be assigned or sent to main L/R, aux1-8, or FX1-2 mixes using the assign or send buttons. Channel assignments are stored in the working preset, and also saved in a scene preset. ([sec. 2.31](#))
 - ▶ **Working Preset** - The mixer remembers all settings in whatever state they are in when the mixer is powered off. When powered back on, the mixer loads these settings as the working preset.
 - ▶ **Saved Presets** - There are four types of presets that can be saved on the mixer: Scene (all mixer settings), DSP Channel (single channel), FX (effect), and GEQ (graphic EQ - outputs only) ([sec. 2.31](#)). All presets can be backed up and restored between the mixer and a computer using the digiMIX18 Preset Utility software. ([sec. 6.2](#))
 - ▶ **Ethernet/USB Control Jacks (rear panel)** - Use these jacks with the utility programs to update mixer firmware or backup/restore presets with a computer. Ashly recommends using only the USB connection for firmware update. digiMIX18 Firmware Utility and digiMIX18 Preset Utility programs are available for both Windows and MAC. ([sec. 6.1 and 6.2](#))
- For wireless remote control of the mixer, connect the Ethernet jack to a network with Wi-Fi and use an iPad running the Ashly digiMIX app, available free on the App Store. ([sec. 9](#))
- ▶ **EZ-Mode** - EZ-Mode offers a simplified touchscreen control surface on the mixer or iPad app for a non-technical user to operate the mixer with limited access to mixer functions. ([sec. 6.4](#))
 - ▶ **Password Protection** - Access password and security settings by pressing the System button. Passwords are always four character, alpha-numeric, and case sensitive. The password entered on the mixer will always be the same one used by the Ashly digiMIX18 app on a connected iPad. ([sec. 5.4](#))
- With a password, the entire mixer can be fully locked or unlocked. In EZ-Mode, password protection can limit operation of the mixer to EZ-mode only. Also within EZ mode, faders and icons can be locked independently.
- ▶ **iPad Connection** - The mixer does not provide its own Wi-Fi signal, an Ethernet connection to a network with Wi-Fi is required. *Only one iPad at a time can connect to digiMIX18.* If more than one digiMIX18 is discovered, a drop-down list of all available mixer IP addresses is displayed on start-up. The iPad app and mixer touchscreen will both display a solid green box in the upper left corner when successfully connected.
 - ▶ **Using the Touchscreen** - There are two different top-level mixer touchscreen modes, Mixer mode and Long Fader mode. A button on the mixer (or iPad app) toggles between the two modes. Mixer Mode shows all inputs and outputs, also showing a long fader for main L/R output on the right and another long fader on the left for the currently selected channel. Alternately in Long Faders mode, groups of eight channels are displayed, all with long faders.
- In either mode, press the unlabeled "PEQ" box in the touchscreen's upper left corner to edit the selected channel parameters or system functions. ([sec. 2.32](#)) This box always displays the selected channel's PEQ curve.
- ▶ **Naming Channels** - Edit channel names by first selecting a channel, then press the Fader Name button found below the touchscreen.

2 MIXER CONTROLS



2.1 Input Trim

This controls the gain of the analog mic or line input preamplifier. For analog inputs, this is the most important control for setting up proper gain structure in the mixer. Properly set, it helps to avoid clipping and maintains low noise. A good rule is that with typical input signal present on a channel, adjust the trim control to allow 20dB headroom between the expected signal's peak level and when it clips. In other words, normal signal peaks should be around "0" on the meter. Set this control first and then leave it alone unless the input source changes. Do not use the trim control to adjust mix volume later on, use the channel's fader control instead.

2.2 Input/Output LEDs

Input LEDs indicate the signal level of each input in dBu, after the preamplifier stage but pre-fader. Output LEDs indicate signal level at the output. They can alternately indicate every channel's current fader position by pressing the Faders/Meters button ([sec. 2.23](#)).

2.3 Select Button

Every input, main L/R output, aux 1-8, and FX1-2 have a dedicated select button. All routing assignment, DSP, sends functions, and motorized fader activity are applied only to the selected channel. This allows the user to quickly change from one channel to the next from any mixer function.

2.4 Ch17-18 Stereo Line Input

This level control and select button always control ch17-18 stereo line level inputs. Ch17-18 are always stereo linked and can be assigned or sent to main L/R, aux1-8, and FX1-2. Using the left (mono) input sends signal to both channels.

2.5 Control Room Level Control

This adjusts the level of the control room outputs. Control room outputs always use the post-fader signal from the main L/R outputs.

2.6 Headphones Level Control

Plug headphones in the front or back of the mixer for monitoring the main L/R outputs or the selected solo channels. Use the Headphones Level control to adjust volume.

2.7 Solo/Meters Button

Press this button to toggle the main L/R output LED bars between indicating main L/R signal level, or stereo solo level.

2.8 Lock/Unlock Button

Press this button to lock/unlock the mixer with a password. Passwords are up to four characters and are case sensitive. ([sec 5.4](#))

2.9 Sends Mixer

Press this button to open the sends mixer overview screen, where the mixer's main L/R, aux1-8, and FX1-2 channel assignments or send levels can be quickly viewed and changed.

2.10 Aux Faders

Press this button *when any aux1-8 output is selected* to view current aux1-8 fader position. The aux1-8 fader position will be displayed on the ch1-8 input LED bars. The main L/R fader position will also be displayed on the main L/R out LED bars.

2.11 EZ Mode

Press this button to enter the mixer's EZ-Mode. EZ-Mode provides a simple and secure user interface for a non-technical person to adjust basic mixer functions with ease, locking out most other mixer controls. See sec 6.4 for details.

2.12 Aux1-8 Select and Send Buttons

Aux outputs are typically used for secondary mixes such as monitors, video feed, assistive listening devices, subwoofers, etc. Aux outputs can be stereo linked as 1-2, 3-4, 5-6, or 7-8.

Press an aux1-8 *select* button to give that aux output the focus in the mixer.

Press an aux1-8 *send* button to quickly view and adjust the level of all channels currently available for sending to that aux output.

Adjust any channel's level to aux1-8 by first tapping the desired channel in an aux1-8 sends screen to select it, then use the parameter adjust fader on the touchscreen or adjust parameter knob on the mixer to set the level sent to that aux.

Channel sends to aux1-8 can be selected as pre or post-fader, the default is pre-fader.

2.13 FX1-2 Select and Send Button

This mixer has built in stereo effects including reverbs, delay, chorus, flanger, tremolo, and several combinations. Press the FX Editor button below the touchscreen to create and save up to 104 different custom effects, or use the defaults. Only two effects can be used on the mixer at a time. See section 4.8 for more details on effects.

Press the FX1 or FX2 *select* button to give that FX the focus in the mixer.

Press the FX1 or FX2 *send* button to quickly view and adjust the level of all channels currently available for sending to that FX.

Adjust any channel's level to the FX by first tapping the desired channel from within the FX sends window, then use the parameter adjust fader on the touchscreen or adjust parameter knob on the mixer to adjust the level sent to that FX.

Channel sends to FX1-2 can be selected as pre or post-fader, the default is post-fader.

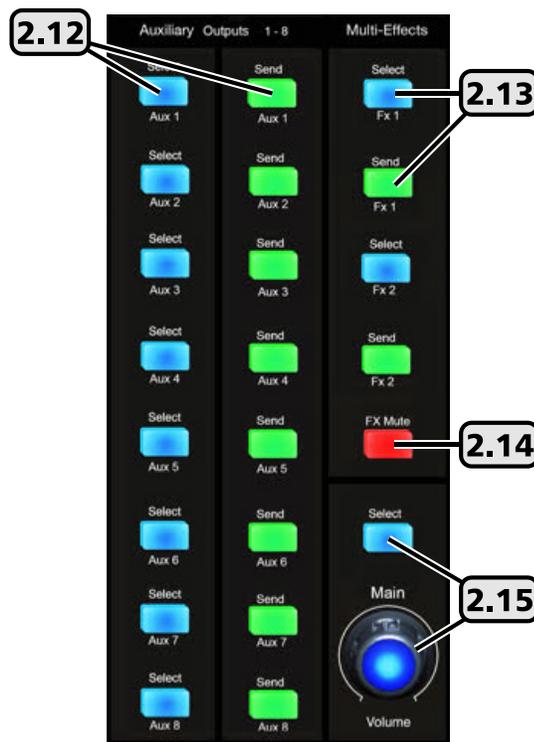
Each FX bus must additionally be routed to the main L/R or aux1-8 outputs as desired. To assign an FX to the main L/R output, select the FX, then press the assign button, then tap the <Main> button on the touchscreen so that it turns blue. To send an FX to an aux1-8 output from the assign window, tap any aux1-8 level control, then use the parameter adjust control to set the aux send level.

2.14 FX Mute

Press this button to mute FX1 and FX2. This is useful for comparing sound with and without effects.

2.15 Main Select and Volume Control

Press the <Main> select button to give the main L/R outputs the focus in the mixer. This level control always adjusts the signal level to the main L/R outputs. When main L/R is selected, the volume control works together with the motorized fader and touchscreen.

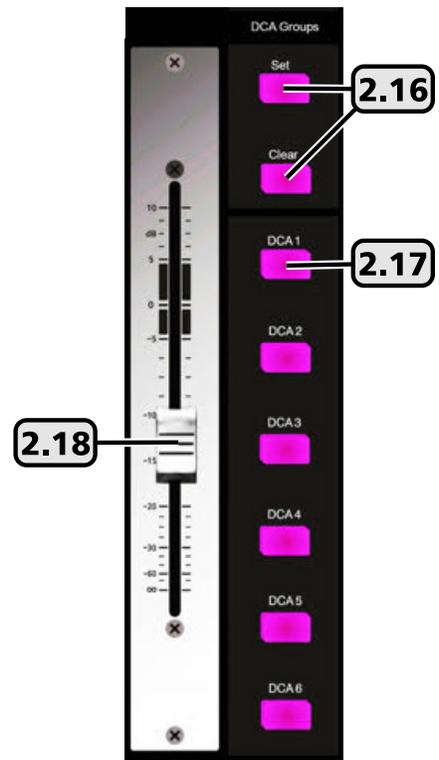


2.16 DCA Set and Clear Button

Digital controlled amplifiers (DCA1-6) are used to combine multiple inputs, aux, or FX outputs into one mix group for unified control of that group. DCA groups allow the relative fader position of each member to be preserved while adjusting their overall combined level as a group. It also allows the group to be instantly muted. This is typically used for grouping vocals, drums, choir or orchestral sections, etc. DCA groups must first be defined before using EZ-Mode ([sec 6.4](#)).

To define a DCA group, first press the DCA Set button so that it flashes, then select one of the six DCA buttons on the mixer or touchscreen, then tap individual channels on the mixer screen to select them for that DCA group. Selected channels turn purple on the screen. When finished, press the DCA Set button once again to save settings. Whenever a DCA button is then selected and lit, the fader will control all channels assigned to that DCA. Channels can be assigned to more than one DCA groups.

To clear a DCA group, first select the DCA, then press the DCA set button so it flashes, then press the DCA clear button, confirm the action by tapping "Yes" on the touchscreen prompt, then finally press DCA set once more.



2.17 DCA1-6 Buttons

These six buttons are used to select a pre-defined DCA group for fader, mute, or solo control. If the DCA group is not yet defined, a touchscreen message prompts for a response before proceeding further.

2.18 Motorized Fader

This is the primary level control for all inputs, main L/R and aux1-8 outputs, effects master, and DCA control. Press the <Select> button on any input, output, or DCA, and the motorized fader will control its level. The fader works together with other level controls used for the same selected signal. Motorized fader speed can be adjusted in the system screen ([sec. 5.2](#)).

2.19 Solo Button

Use the solo button for listening to one or more isolated signals in the headphones. Select an input, output, FX, or DCA group, then press the solo button to include that signal in the solo bus. The default solo setting is post-fader, meaning the solo signal level depends on the solo channel's fader position.

Press the solo clear button to clear all selected solo channels. With no channels selected for solo, the headphone output defaults to the main L/R output, post fader. Solo status can also be viewed and set from the touchscreen display.

The solo feature is in stereo, so that any stereo linked channels or FX are heard in stereo.

2.20 PFL Button

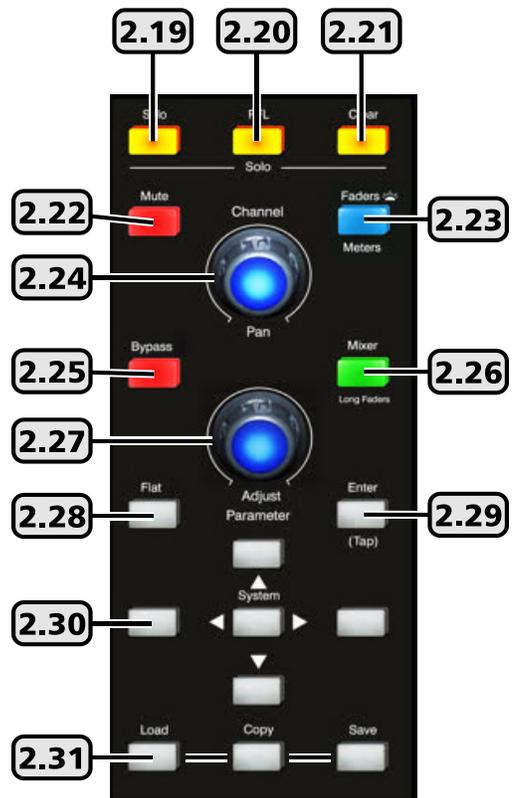
PFL is used to monitor selected solo channels at their *pre-fader level*, meaning the selected solo channel(s) will still be heard even if its fader is turned down.

2.21 Clear Button

Press this button to clear all solo selections and return the headphone output to main L/R.

2.22 Mute Button

The mute button is used to silence the selected input, output, aux, FX, or DCA group. Mute status can also be seen or controlled using the touchscreen display.



2.23 LED Faders/Meters Select Button

This button is used to toggle the input LED bars ([sec. 2.2](#)) to either indicate the current signal levels of all channels, or show the current fader position of all channels. The button is lit when showing the current fader positions.

2.24 Pan Control

The pan control is dedicated to fading signals from left to right in the main L/R mix. It is also used for Crossfade mode ([sec. 6.6](#)) to quickly fade between any two assigned channels. Its stereo position for the selected channel is displayed on the touchscreen.

2.25 Bypass Button

Press the bypass button from within the PEQ, GEQ, Exp/Gate, or Comp/Lim DSP function to disable that function for the currently selected channel. This is useful for comparing signal with and without individual DSP processing elements. Pressing the bypass button from the Channel screen turns only the PEQ function on and off.

2.26 Mixer/Long Faders Select Button

This button toggles between the two mixer displays, one showing every mixer input and output (mixer mode), the other showing groups of eight channels with longer faders (long fader mode). Channel names are shown in long fader mode. To edit a channel name, press the fader name button below the touchscreen, then use the pop-up touchscreen keyboard to enter a name.

If Crossfade mode is active ([sec. 6.6](#)), pressing this button will toggle through both mixer display modes, as well as Crossfade mode.

2.27 Adjust Parameter Control

This control is typically used to adjust the currently active or highlighted DSP parameter within the touchscreen display. It may also work together with other controls depending on the currently active function.

2.28 Flat Button

Press this button to flatten the PEQ, GEQ, Exp/Gate, or Comp/Lim settings on the currently selected channel.

2.29 Enter (Tap) Button

This button has two functions. The first is to offer a "Yes" response any time the touchscreen prompts for yes or no answer. For example, after pressing the flat button when the touchscreen asks "Reset EQ curve to flat?", you can tap "Yes" on the touchscreen or press the Enter button.

The second function is to manually set an FX delay time to match the beat of the music, also referred to as "tap delay". Press the FX1 or FX2 button and select Delay as the effect type. Set the delay time by pressing the TAP button at the start and end of the desired delay time. Maximum tap delay is 1200ms.

2.30 System Buttons

The system button opens the touchscreen display to a variety of utility controls including EZ-mode ([sec. 6.4](#)), cross-fade mode ([sec. 6.6](#)), automix channel assign ([sec. 6.5](#)), LCD brightness, fader speed calibration, password/security functions, restore default settings, and more. The up/down/left/right buttons are used to select and adjust controls shown on the touchscreen, their purpose depends on the currently active function. For example, with the GEQ function active, the two Left/Right system buttons move to select one of the 31 EQ bands, while the Up/Down buttons adjust the selected EQ filter level. The buttons work together with touch controls on the screen, but for smaller touchscreen controls it may be easier to use the system buttons.

2.31 Load, Copy, Save Buttons

There are four different types of user presets that can be saved/loaded on the digiMIX18.

- 1) Scene - Scene presets are the most inclusive, capturing all audio settings in the mixer. Up to 24 scene presets are available.
- 2) DSP Channel - The DSP channel preset is used on input, output, and aux channels. It saves/loads a single channel's assignments, channel settings, gate, comp, and PEQ/GEQ settings. Up to 48 different DSP channel presets can be saved.
- 3) FX - FX presets are used to save/load up to 104 different user defined FX1 and FX2 effects.
- 4) GEQ - The 48 GEQ presets are used to save/load graphic equalizer settings, which are only used on outputs.

SAVE: To save a mixer preset, first press the save button, then use the touchscreen to select one of the four preset types. Next, select a preset number to use, then press the preset name box, type in a preset name, press enter, then press Save on the touchscreen to write to memory. Use UpPage and DownPage to navigate to the next available group of presets.

LOAD: To load a mixer preset, press the load button, then in the touchscreen window select the type of preset to load, then select one of the available presets and press the touchscreen load button.

To delete a mixer preset, press the load button, select a preset to delete, then press the touchscreen delete button.

COPY: To copy current settings from one channel to another, press the Copy button on the mixer or the Copy Channel button from the touchscreen system page. The resulting touchscreen window will display all inputs and outputs, the currently selected channel will be flashing. This is the channel that will be copied *from*, and can be changed by selecting any other channel using the touchscreen or control surface select buttons.

Next, press the <Copy to: Select> button on the touchscreen and select the channel(s) you want settings to be copied to. Next, press the touchscreen <Copy> button to complete the copying process.

► **TIP:** All channel DSP functions are individually listed across the bottom of the touchscreen. Each function can be checked or unchecked to include or exclude from being copied. Only the checked parameters will be copied.

2.32 The Touchscreen Display

Most mixer functions can be adjusted using either the touchscreen or the buttons/knobs. Some functions can only be adjusted using the touchscreen.

Level and fader controls are adjusted by either dragging the control, or by first selecting it then turning the adjust parameter knob (sec. 2.27).

In Mixer Mode, touch any channel fader to select it. The currently selected input channel, FX, or aux1-8 fader will appear along the left side. Parameters include channel name and number, fader level, plus mute, solo, and auto-mixer status. In mixer mode, the main L/R output fader is always shown along the right side.

► **TIP:** The unlabeled touch-box above the solo function shows the current PEQ curve for the selected channel. Touch this box to access all DSP functions for the selected channel.

► **TIP:** Above the PEQ box is a smaller unlabeled box which turns bright green when the mixer is connected to the iPad app or digiMIX utility app on a computer. It turns black when the connection is lost.

► **TIP:** The channel name can be edited by pressing and holding the "Name" text box below any long fader until a keyboard appears on screen. Type in the new name and press enter to complete. To escape out of the keyboard without changing anything, press the keyboard icon in the lower right corner.

2.33 Assign to Main

This button is used to assign the currently selected input channel or FX1-2 to the main L/R mix, and becomes lit when assigned. Assignment status can also be edited using the touchscreen Assign window (sec. 2.39), or the Sends Mixer button (sec. 2.9).

2.34 Fader Name

Press this button to name the currently selected input or output channel using the pop-up touchscreen QWERTY keyboard.



2.35 Stereo Link

The stereo link button is used to link two adjacent input channels or aux outputs together so that all level, DSP, and assignment parameters are equally applied to both channels. Channel pairs can only be linked where the odd numbered channel is first, i.e. 1-2, 3-4, aux1-2, aux3-4, etc. When stereo linking a pair of channels, the mixer automatically routes the odd numbered channel to the left output and the even numbered channel to the right output and they will be heard in stereo. To see the various ways that stereo linking and panning operate when routed to main L/R or when using linked aux outputs, see [section 4.7](#).

2.36 Digital In/Out

The optional Dante-3018 or USB-3018 digital audio module must be installed before using this feature. These buttons open the digital audio assignment screen to enable mixer channels for digital audio use. See [section 7](#) for complete details.

2.37 Automix

Press this button to individually assign inputs 1-16 for automix, and to enable the automixer. See section for complete details.

2.38 48VDC Phantom Power

Press the 48VDC button to assign +48V phantom power to any of input channels 1-16.

2.39 Assign

Press the assign button to view or change where the currently selected input or FX is routed to in the mixer. The selected channel is always shown on the left side of the assign window. Inputs can be assigned or sent to main L/R, aux1-8, and FX1-2.

Assigned outputs appear blue when selected. Signal level sent to aux1-8 and FX1-2 buses must be adjusted individually using the touchscreen parameter adjust fader on the right side of the display, or by using the adjust parameter knob ([sec. 2.27](#)). There are also several quick links to other mixer functions from the assign window.

2.40 Channel

Press the channel button to view and access all DSP settings for the currently selected input, main L/R, FX1-2, or aux1-8 output. The currently selected channel (or linked channels) is always shown on the left side of the touchscreen display.

Every DSP function has a dedicated On/Off button on the touchscreen.

Input channel DSP functions include stereo pan, polarity invert, channel delay up to 300ms, stereo link, expander/gate, PEQ, and compressor/limiter. Main L/R and aux1-8 outputs do not have expander/gate function. Channel DSP settings can be saved or loaded as a DSP channel preset ([sec. 2.31](#)).

2.41 PEQ

Press the PEQ button to engage the 6-band EQ for the currently selected input, main L/R, FX1-2, or aux1-8 output.

The PEQ has four parametric filters with adjustable frequency, bandwidth (Q), and gain. Any of these four can also be set as shelving filters by pressing their <Type> icon on the touchscreen. Two additional filters complete the PEQ section, a tuneable hi-pass (HPF) and low-pass (LPF), each offering 20 different slope types. For tips on using the PEQ see [section 4.2](#).

Press the Bypass button ([sec. 2.25](#)), or the touchscreen ON button to compare signal with and without PEQ. Press the Flat button ([sec. 2.28](#)) or the touchscreen Flat EQ button to return all PEQ filters to their 0dB gain and default starting parameters

2.42 GEQ

The GEQ 31-band graphic equalizer is only available on the main L/R and aux1-8 outputs. It is not available on inputs or FX1-2.

Select and drag individual filter faders up/down on the touchscreen, or use the left-right buttons on the touchscreen, or use the system left/right buttons on the mixer front panel ([sec. 2.30](#)) to select frequency, then use the system up/down buttons to adjust filter level. Up to 48 different GEQ presets can be saved to memory and loaded later for use with specific rooms or loudspeakers.

Press the Bypass button ([sec. 2.25](#)), or the touchscreen ON button to compare signal with and without GEQ. Press the flat button ([sec. 2.28](#)) or the touchscreen flat EQ button to return all GEQ filters to 0dB.

2.43 Exp/Gate

Press this button to engage the noise gate/expander for the selected channel. This function will silence or reduce the level of an input or FX signal when it falls below a user defined threshold. Controls include on/off, threshold, attack time, release time, and ratio. Infinite ratio silences all signal below the threshold (noise gate), while using a lower ratio allows some signal below the threshold to pass (downward expansion). Press the flat button to return the expander/gate parameters to their default settings. See [section 4.4](#) for tips on using an expander/gate.

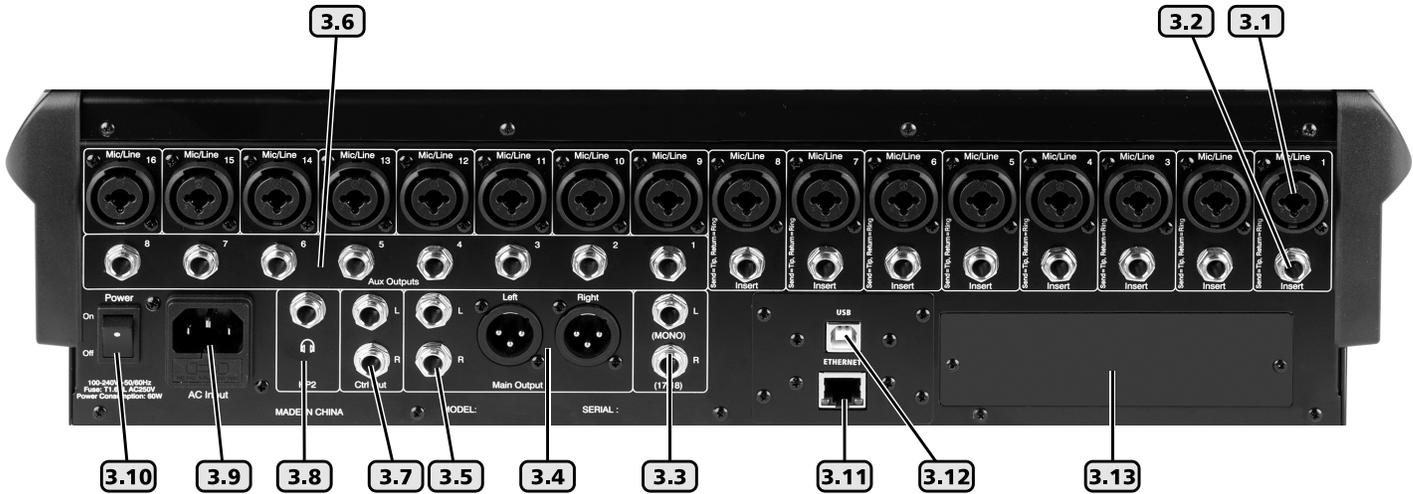
2.44 Comp/Lim

Press the Comp/Lim button to engage the compressor/limiter function on a selected input, main L/R, FX1-2, or aux1-8 output. Use this feature to reduce the dynamic range of a signal (compressor) or to limit how loud a signal can go (limiter). Touchscreen controls include on/off, threshold, attack time, release time, ratio, and post gain. See [section 4.5](#) for tips on using a compressor/limiter.

2.45 FX Editor

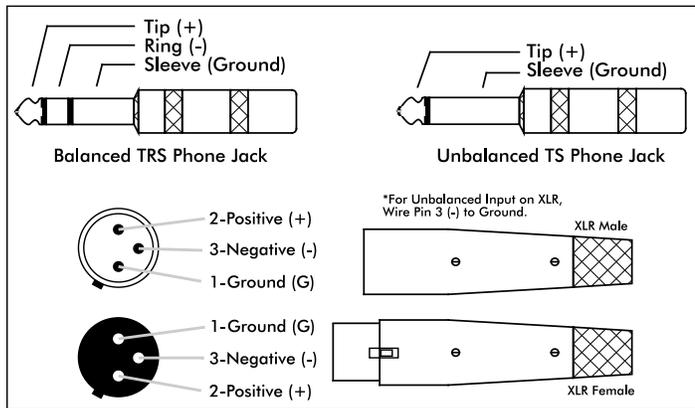
Two digital effect buses are available. Customized effects can be created, saved, and assigned, and include three types of reverb, delay, tremolo, flanger, chorus, or combinations ([sec. 4.8](#)). Up to 104 different user defined effects can be saved to the mixer ([sec. 2.31](#)).

3 REAR PANEL FEATURES



3.1 Combo Jack Inputs, Channel 1-16

There are 16 mic/line channels that use a "XLR-1/4 phone jack" combo connector. The female XLR connector is for a balanced mic input, and the TRS (tip-ring-sleeve) phone jack is for balanced line level input. See the illustration for proper balanced or unbalanced wiring of XLR and phone jacks. The mic preamp circuit is overridden when the phone jack is inserted. Avoid plugging or unplugging connectors when the volume is turned up, as loud transient pops can result which may damage loudspeakers.



3.1 - Balanced and Unbalanced connector wiring

3.2 TRS Insert, Channel 1-8

Channels 1-8 are each equipped with a single TRS jack insert point for use with external processors. Tip=send, and ring=return. The outgoing signal is taken right after the analog trim control, and the return signal goes directly to a D/A converter for routing to the digital bus for DSP processing.

3.3 Channel 17-18 Stereo Line Inputs

These inputs function as a stereo line level input ([sec. 2.4](#)). There is no adjustable preamp on these inputs, so a strong input signal level (0dBu) is recommended. Plugging in only the left input (channel 17) sends a mono signal to both left and right inputs.

3.4 Main L/R XLR Outputs*

The left and right main outputs on balanced XLR male connectors are controlled by the <Main> volume control ([sec. 2.15](#)). They are wired in parallel with the main L/R phone jack outputs.

3.5 Main L/R Phone Jack Outputs*

The main L/R outputs on TRS phone jack connectors are wired in parallel with the main L/R XLR outputs.

3.6 Aux1-8 Outputs*

These eight phone jacks are pseudo-balanced outputs for aux 1-8 ([sec. 2.12](#)). They have single-ended signal with balanced impedance.

*** If plugging a digiMIX18 output into a powered speaker or other mixer input, phantom power must be turned off on that input.**

3.7 Control Room Output

The balanced stereo control room outputs use the same signal as the main L/R outputs, but with a separate volume control.

3.8 Headphone Jack

There is a stereo headphone jack on the front and back of the mixer, controlled by the headphones level control.

3.9 AC Inlet

This is used to connect the mixer to AC mains using the detachable AC cord provided with the unit.

3.10 Power Switch

This switch turns on power to the mixer. Turn-on time is about 15 seconds.

3.11 Ethernet Control Jack

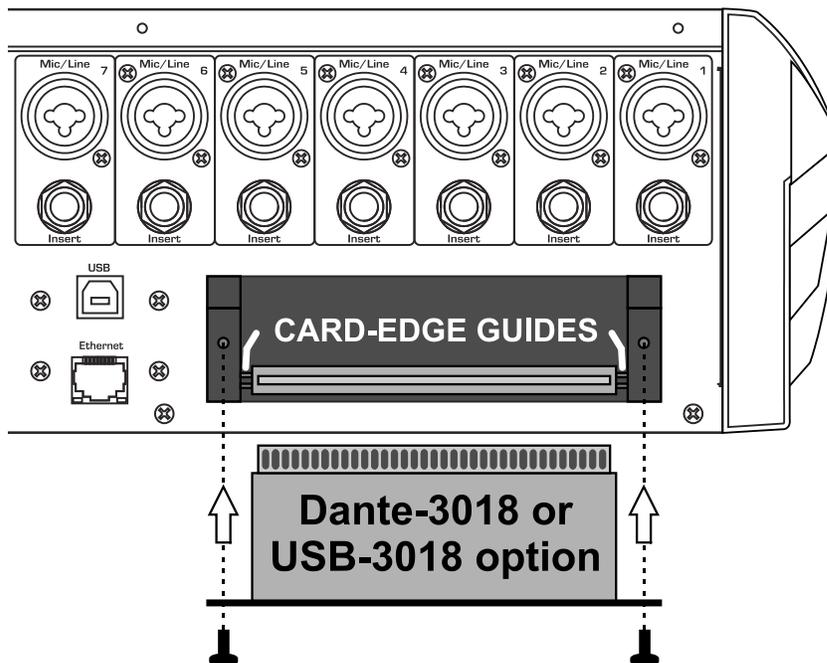
The Ethernet jack is used for connecting the mixer to a network for remote iPad control ([sec. 9](#)), or for using the "digiMIX18 Preset Utility" software ([sec. 6.2](#)). Ashly recommends using the USB control jack for the firmware update software.

3.12 USB Control Jack

The USB Control jack (recommended for firmware update) is an alternative to the Ethernet jack for "digiMIX18 Firmware Utility" and "digiMIX18 Preset Utility" software. A specific USB device driver may need to be installed on your computer first ([sec. 6.1](#)).

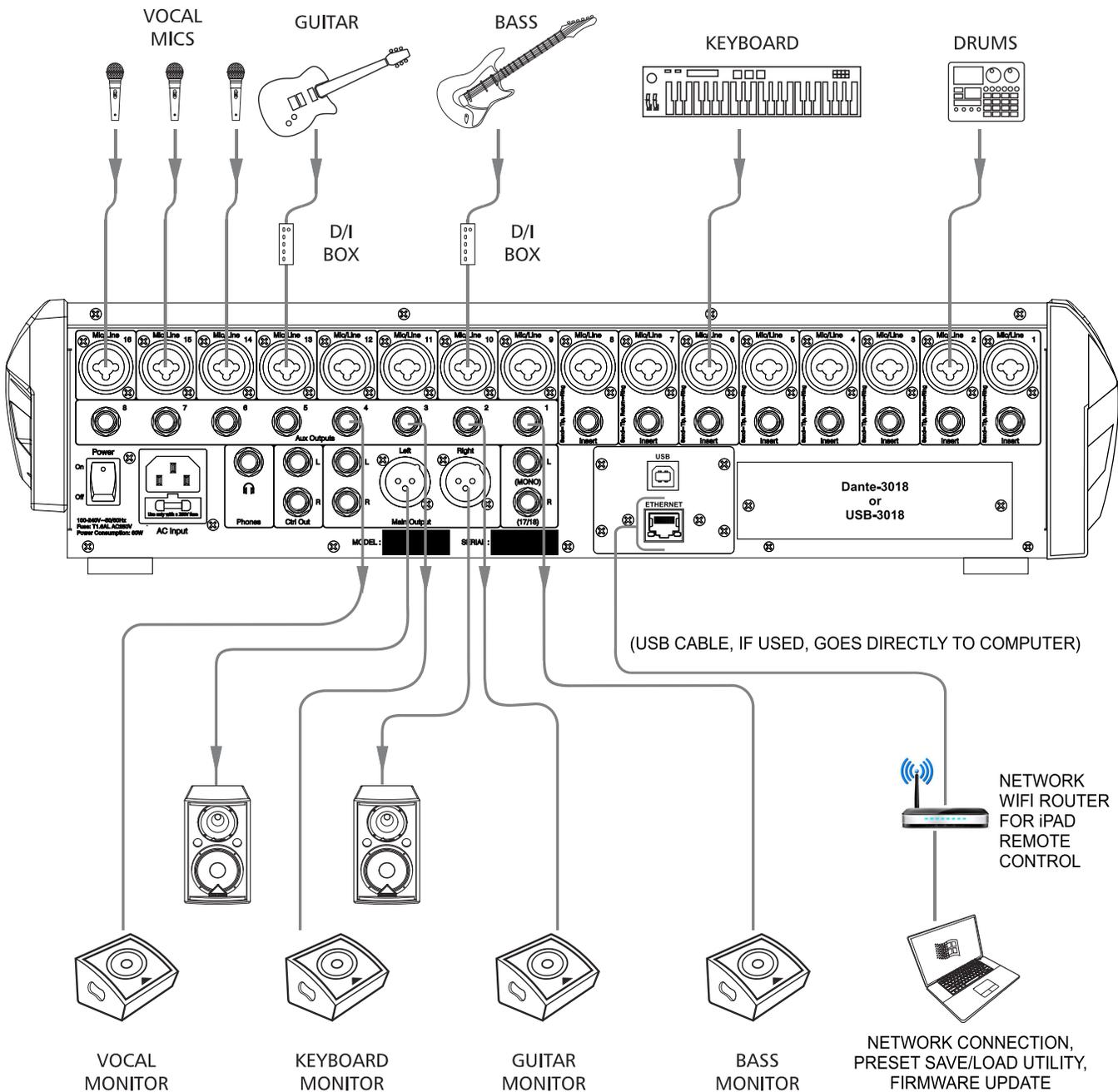
3.13 Digital Audio Module Option

Ashly offers optional field installable Dante-3018 or multi-track USB-3018 audio modules for the digiMIX18 mixer. To install the module, first remove the mixer from power, then remove the two screws holding the blank plate to the back panel option slot, then carefully seat the Dante-3018 or USB-3018 module into the two card-edge guides on either side of the module slot as shown below before finally pressing the module fully into the internal card-edge connector. Re-fasten using the two screws. See [section 7](#) for operating details.



3.15 - Dante-3018 or USB-3018 installation on digiMIX18

4 GETTING STARTED



4.1 Typical Application

The above illustration shows a typical band setup with instrument and vocal inputs, four separate monitor mixes, stereo main L/R speakers, and remote control from a laptop and iPad. Use the following procedure to safely and quickly set up the system.

- 1) Plug in all inputs, outputs, and speaker cables. Leave power amplifiers turned down at first.
- 2) One input at a time, set input trim controls so their loudest signal peaks are around 0dBu on the input meters ([sec. 2.1](#))
- 3) Assign all desired inputs to the main L/R output using the Sends Mixer button ([sec. 2.9](#)), or the Assign button ([sec. 2.39](#)).
- 4) Select the main L/R output and turn its level all the way down ([sec. 2.3](#))
- 5) Turn up power amplifiers, then slowly turn up the <Main> fader or volume control ([sec. 2.15](#)) until reaching a comfortable level.
- 6) Verify that all inputs can be heard in the main speakers or use the solo function ([sec. 2.19](#)). Select an input before adjusting.

- 7) Adjust PEQ ([sec. 2.41](#)), expander/gate ([sec. 2.43](#)), and compressor/limiter ([sec. 2.44](#)) on each input channel as needed. For greater details and examples of how to use these functions, see sections [4.2](#), [4.4](#), and [4.5](#).
- 8) Configure the aux1-8 output(s) for all used input channels, adjusting their level to each monitor mix. ([sec. 2.12](#))
- 9) Apply effects to input channels if desired. See sections [2.13](#), [2.45](#), and [4.8](#) for FX details and examples.
- 10) Adjust GEQ graphic equalizer for main L/R or aux1-8 outputs. ([sec. 2.42](#))
- 11) To create a DCA level or mute group for all vocals or other groups, follow instruction in [section 2.16](#), then select the DCA group before using the fader or mute button.
- 12) Save settings as scene presets, DSP channel presets, FX presets, or GEQ presets. ([sec. 2.31](#))

4.2 PEQ Parametric EQ

Press the PEQ button to engage the parametric EQ for the currently selected input channel, main L/R output, FX1-2, or aux1-8 output. The four filters EQ1-EQ4 can be shelving or parametric, with additional hi-pass and low-pass filters.

Shelving Filters: EQ1-EQ4 can be set as tuneable shelving filters, typically used as the high and low boost/cut controls. Press the filter <Type> image on the touchscreen to toggle between low shelf, high shelf, or parametric peak filter.

Parametric Filters can adjust frequency, bandwidth (Q), and filter gain/cut. Think of one band of parametric EQ as a single graphic equalizer fader where the frequency is variable, and the bandwidth (Q) is also variable. The smaller the bandwidth, the less the audio signal on either side of the frequency center is boost or cut, whereas a wider bandwidth produces a more audible change to the overall tone of a signal. In addition to basic tone controls, parametric filters are ideal for eliminating problem feedback frequencies without greatly affecting the overall sound. They are also useful for adding or removing a characteristic hot spot from microphones or for precisely compensating for room resonance. It is well worth the time becoming proficient with parametric EQ filters, as they offer the best solution to many EQ problems.

HPF/LPF: The hi-pass and low-pass filters are cut only, with adjustable frequency and slope. There are 20 different filter types to choose from including Butterworth, Bessel, and Linkwitz-Riley, with filter slopes ranging from 6dB/oct to 48dB/oct. These filters are typically used to limit bandwidth. A common application is to use an aux output to drive 70V transformer tapped speakers that are not suited for signal below 80Hz. Set the HPF for that aux output to 80Hz, then select the desired filter type.

Tone Control: The four EQ filters can be used as basic tone controls with tuneable frequencies, ie high, high-mid, low-mid, and low. High and low typically use shelving filters. Press the <Flat EQ> button to restore all filters to 0dB gain, medium Q, and default starting frequencies and filter types. A lower Q broadens the filter to have a much greater effect, while a higher Q narrows the bandwidth and makes less of an overall difference when boost or cut.

Notch EQ for Feedback Control: To eliminate a feedback problem on a live mic input, set the PEQ flat and turn up the microphone level until it is on the edge of feedback. Then using the frequency control, sweep a narrower bandwidth (higher Q) filter through a problem feedback area, with just a slight amount of gain on that filter, until finding the exact frequency causing feedback. Once the feedback frequency has been identified, reduce the filter's gain until feedback is gone. Adjust the bandwidth (Q) as narrow as possible while still eliminating feedback. Repeat with additional filters and frequencies as necessary. Finding the problem frequency is relatively easy, but finding the best combination of minimal cut and bandwidth takes a little practice.

Notch EQ for Room Resonance: To reduce excess reverberation or boominess in a room, use the parametric filter on the main L/R or aux1-8 outputs. With music playing through the speakers, engage a PEQ filter on the output, then sweep the filter's frequency with a slight boost and medium Q until you hear a disproportionate increase in the boominess of the music. This frequency is a room resonance, and can be notched to compensate. Adjust the bandwidth and cut only as little as necessary to fix the problem.



Figure 4.2: PEQ Parametric EQ Screen

4.3 GEQ Graphic EQ

The 31-band GEQ graphic equalizer is only available for main L/R and aux1-8 outputs, not on inputs or FX1-2.

Adjust GEQ filters by selecting and dragging them up and down on the touchscreen, or use the up/down/left/right buttons and Adjust Parameter knob. The left/right buttons select frequency, and the up/down buttons or Adjust Parameter knob can be used to adjust filter boost and cut.

The GEQ is engaged when the <On> button on the touchscreen is solid green. To bypass the GEQ, press the <On> touchscreen button again or press the EQ Bypass button found at the right of the screen.

To return all filters to 0dB, press the touchscreen <Flat EQ> button, or press the Flat button to the right of the screen.

Up to 48 different GEQ filter curves can be saved and recalled. Current GEQ filter settings can be copied to main L/R or aux1-8 outputs using the touchscreen or panel <Copy> button.

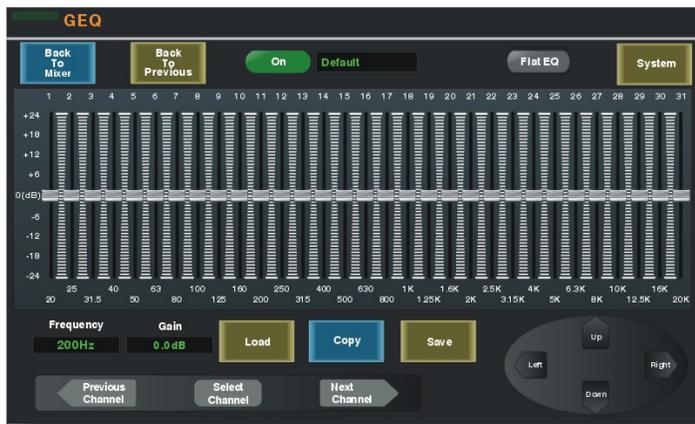


Figure 4.3: GEQ Graphic EQ Screen

4.4 Expander/Gate

A noise gate is typically used to eliminate unwanted, low level noise from an individual input, allowing only the louder signals to pass. An expander is used to increase the dynamic range of a signal by lowering the quietest signals.

Threshold is the input signal level above which the gate opens up and input signal is allowed to pass through unchanged.

Attack sets the amount of time from when the input signal reaches threshold to when the gate actually opens up. A medium attack time helps the gating action sound more natural.

Release sets the time the gate remains open after signal level falls back below threshold.

Ratio determines how much the input signal gets attenuated when the gate is closed. Infinite ratio completely silences the input when its signal is below the threshold, while a lower ratio allow some signal to pass through at all times.

When used as a downward expander, the idea is to extend the signal's dynamic range by taking the quieter signals and lowering their level even further. The lower the ratio control, the more signal below threshold will pass through. The higher the ratio, the greater the dynamic range will be between softest and loudest signals. An infinite ratio silences all signal below the threshold.

4.5 Compressor/Limiter

This compressor/limiter has adjustable gain, threshold, attack time, release time, and ratio. The controls will only work when the ON button is pressed. The green bar above the ON button indicates when gain reduction is occurring. Press the <Flat> button to clear and return all compressor/limiter parameters to their default settings.

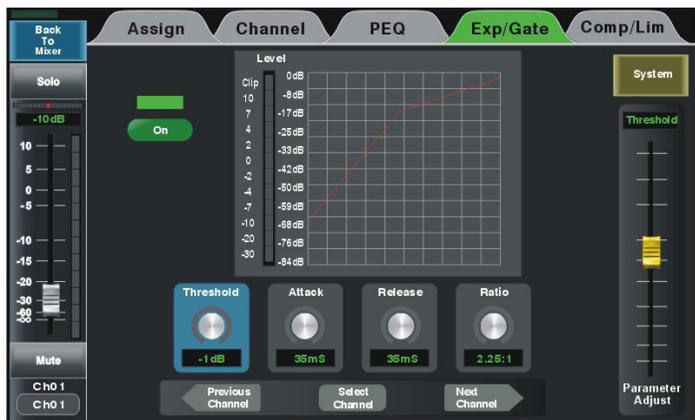


Figure 4.4: Expander/Gate Screen



Figure 4.5: Compressor/Limiter Screen

Threshold - This sets the input level above which gain reduction is used to compress the signal. Threshold range is from -30dB to +20dB.

Attack Time - The rate at which gain reduction occurs to the input signal when it exceeds threshold, from 10ms to 150ms.

Release Time - The rate at which gain reduction ends once the signal falls back down below threshold, from 10ms to 1000ms.

Ratio - This sets the amount of gain reduction applied to the signal above the threshold point. Ratio is from 1:1 to infinite.

Post Gain - The post gain control adjusts the compressor/limiter output level to make up for any loss of overall level due to gain reduction. It is typically used to match the level of compressed output with the original un-compressed input level, allowing an easy way to compare signal with and without compression.

Compression occurs when any signal above threshold has its gain reduced by the ratio settings. For example, a ratio of 4:1 means that as input signal increases above the threshold by 4dB, its output signal only increases by 1dB. The higher the ratio, the more gain reduction occurs. Use a compressor to minimize vocal peaks or instrument transients, or to reduce the dynamic range of a signal.

A limiter is a compressor with infinite ratio. The input signal cannot exceed the threshold at all. A limiter is primarily used on outputs for speaker protection or setting maximum SPL, whereas the compressor is more natural sounding and typically used on microphone inputs.

4.6 Input Channel Stereo Linking

The following examples show how input channel stereo linking and the pan and adjust control work together.

Long Fader Mode: In the first example (figure 4.6a), ch01 and ch02 have been stereo linked and assigned to the main L/R output. The fader controls the level of both channels together to main L/R output.

Because the two channels are stereo linked, they are initially panned full left and full right as shown, but can still have their stereo position adjusted separately using the pan control when either channel is selected. Tap either linked fader on the touchscreen to select it for individual pan control. The currently selected channel in a linked channel pair is indicated by an orange bar appearing below the pan LED bar as shown.

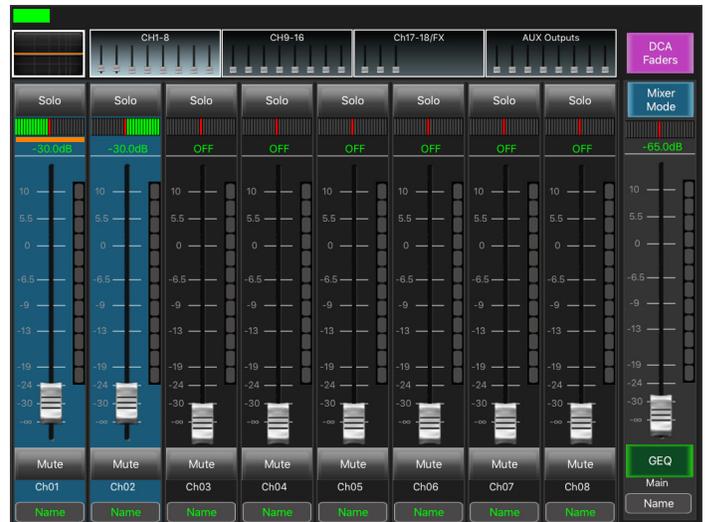


Figure 4.6a: Ch1-2 stereo linked, Long Fader mode

Mixer Mode: Use mixer mode instead of long fader mode for quicker access to all channels. In mixer mode, the currently selected input or output channel fader is always along the left side of this screen. In the mixer mode example (figure 4.6b), ch01 and ch02 are stereo linked, and the fader along the left side of the screen controls both ch01 and ch02 together.

To select one of the stereo linked channels for individual pan, tap the combined channel fader to toggle between them. An orange bar appears below either pan LED bar to indicate the currently selected channel within the linked channel pair.

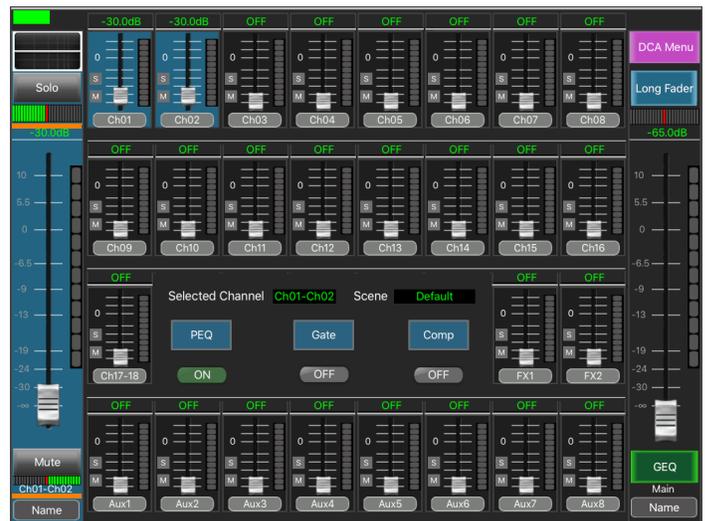


Figure 4.6b: Ch1-2 stereo linked, Mixer mode

4.7 Input Channel Linking, Aux Send Linking, and the Pan Control

The following examples show how input channel and aux stereo linking work together with the Pan control using typical Assign and Aux Send applications.

4.7a - No Linking, Ch01 sent to Aux1

In this example there is no stereo linking. Ch01 is assigned to Aux1 but not to the main L/R mix. The Pan control will only have an effect if Ch01 gets assigned to the main L/R mix.



Figure 4.7a: No Linking, Ch01 sent to Aux1 only

4.7b - Ch1-2 Linked, sent to Aux1 and Main

In this example Ch1-2 are linked and assigned to Aux1 and also to the main mix.

- 1) The channel fader is now named Ch1-2.
- 2) The Pan bars appear for both Ch1-2, initially panned full left and full right.
- 3) The orange bar shows the currently selected channel, either Ch01 or Ch02.
- 4) The pan control adjusts the currently selected Ch01 or Ch02 to the main L/R mix.

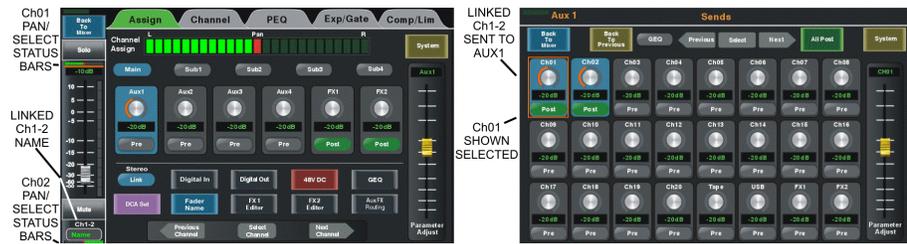


Figure 4.7b: Ch1-2 are linked, sent to Aux1, assigned to Main mix

4.7c - Aux1-2 Linked, Ch01 not linked

In this example, Aux1-2 are linked. Ch01 is sent to Aux1-2 and also assigned to main L/R.

- 1) In either of the Ch01 Assign or Aux1-2 Sends screens, the pan control fades Ch01 between main L/R when Ch01 is selected.

► **TIP:** If in the <Sends Mixer> screen for main L/R (not shown) you enable Aux1-2 to main L/R, you can select and separately pan Aux1 or Aux2 to main L/R.



Figure 4.7c: Aux1-2 are linked, Ch01 sent to Aux1-2 and assigned to Main mix

4.7d - Ch1-2 Linked and Aux1-2 Linked

In this example, Ch1-2 and Aux1-2 are both linked, and can both be enabled or disabled for routing to the main L/R mix, offering greater flexibility.

- 1) In the Ch1-2 Assign screen, the Pan control fades the selected Ch01 or Ch02 input between main L/R (if enabled to main).
- 2) In the Aux1-2 Assign screen, the Pan control fades the selected Ch01 or Ch02 input signal between Aux1 and Aux2.

► **TIP:** If in the <Sends Mixer> screen for main L/R (not shown) you enable Aux1-2 to main L/R, you can select and separately pan Aux1 or Aux2 to main L/R.



Figure 4.7d: Ch1-2 Linked, Aux1-2 also linked, both can be routed to Main mix

4.8 FX (Effects)

This mixer includes 12 different effects and effect combinations. Only two effects can be used at one time. Up to 104 different effects can be created, saved, and loaded as FX presets (sec. 2.31).

Press the FX Editor button to open the editor window, then choose an effect type, edit its parameters, and save.

The next step is to send the desired signal level from each input channel to the FX1 or FX2 bus (sec. 2.13).

Lastly, select and assign FX1 or FX2 to main L/R or aux1-8 outputs as desired (sec. 2.39). Press the FX mute button to silence both FX1 and FX2 effects. All available effects are listed in the table below.

All effects are in stereo, meaning they will synthesize a stereo effect even when driven by a mono signal.



Figure 4.8: FX Editor

FX Presets	Description	Parameters
Reverb - Hall	Simulate the acoustic space of a large hall	Pre-Delay; Decay; Room Size; Brightness; Diffusion; Wet-Dry Out
Reverb - Room	Simulate a studio room with many early reflections	Pre-Delay; Decay; Room Size; Brightness; Diffusion; Wet-Dry Out
Reverb - Plate	Simulate the transducer's sound like classic bright vocal plate	Pre-Delay; Decay; Room Size; Brightness; Diffusion; Wet-Dry Out
Delay	Echo of the input signal	Time; Decay; Brightness; Wet/Dry Out
ST Delay	Stereo Echo	L Time; R Time; L Decay; R Decay; Brightness; Wet/Dry Out
Tremolo	Modulation of signal without any pitch or phase shift	Depth; Mod Freq; Wet-Dry Out
Flanger	Adds a sweeping, swooshing "jet plane" sound using phase shift with delayed feedback	Feedback; Sweep Width; Mod Freq; Wet-Dry Out
Chorus	Creates the illusion of several vocals or instruments from a single input source	Feedback; Sweep Width; Mod Freq; Wet-Dry Out
Delay + Reverb	Delay with room reverb	Pre-Delay; Reverb Decay; Room Size; Brightness; Diffusion; Delay Time; Delay Feedback; Delay Bright; Wet-Dry Out
ST Delay + Reverb	Stereo delay with room reverb	Pre-Delay; Reverb Decay; Room Size; Brightness; Diffusion; Delay L/R Time; Delay L/R Feedback; Delay Bright; Wet-Dry Out
Chorus + Tremolo	Chorus with Tremolo	Feedback; Sweep Width; Mod Freq; Tremolo Depth; Tremolo Freq; Wet-Dry Out
Chorus + Reverb	Chorus with room reverb	Pre-Delay; Reverb Decay; Room Size; Brightness; Diffusion; Chorus Feedback; Sweep Width; Mod Frequency; Wet-Dry Out

5 SYSTEM FUNCTIONS

5.1 LCD Brightness

Drag the LCD brightness control bar to adjust LCD intensity.

5.2 Fader Calibration

Press <Fader Calibration> to adjust automatic fader speed up or down, then press Save/Exit.

5.3 Restore Default Settings

Press this button to return all faders and EQ to zero, and remove all DCA group, input channel, aux 1-8, and FX1-2 assignments. This command will not erase the password or any mixer presets.

5.4 Password Settings

Press the "Password Settings" button to enter a new password, delete the current password, or reset the password. The same password is always used for both system and EZ-Mode, as well as for the "Ashly digiMIX" iPad app when connected to the mixer. Entering a password is only the first step when making security changes, you must still lock or unlock features using that password.

To enter a password for the first time, press System>Password Settings. A keyboard appears with two empty text boxes labeled "New Password" and "Confirm Password". A solid orange bar appears below the active text box. With the "New Password" text box active, type in a one to four character password using upper case (ABC), lower case (abc), or numerals/symbols (?123). **Passwords are case sensitive.** Select and re-enter the password into the "Confirm Password" box and press "Enter" on the touchscreen keyboard. The password is now stored in the mixer for system use as well as for EZ-Mode.

To Delete or Reset an existing password, press System>Password Settings. If a password is already stored in the mixer, the two text boxes say "Delete Password" and "Reset Password".

To delete the password, make sure the "Delete Password" box is active with the orange bar beneath it and press "Enter". The screen prompts for the current password to be entered into both text boxes, press enter, and the password is permanently erased from memory.

To reset the current password, press System>Password, make sure the "Reset Password" text box is active with the orange bar beneath it, and press "Enter". Type the current password in the "Enter Password" box, then select and type the new password into the "New Password" box and press "Enter". A blue screen pops up saying "Password Reset Successfully". Press "ok" to confirm the reset.

► **TIP:** If the password has been forgotten, press and hold the <System + Clear> buttons for three seconds or until the screen blinks. This clears the existing password.

5.5 Lock/Unlock

Press the "Lock/Unlock" button to lock out mixer functions. If there is currently no password saved in the mixer, the screen prompts for a new password in the "New Password" and "Confirm Password" text boxes. After entering the new password, press "Enter", and the mixer becomes locked. Attempting to move any control will prompt the user for the password before allowing changes.

If there is already a password in the mixer when you press "Lock/Unlock", the screen prompts for the current password, type it in and press "Enter" and the mixer will become locked.

The only controls that cannot be locked out are the power switch and the analog input trim controls.

5.6 System Shortcuts

Shortcuts are available in the system screen for specific mixer functions. Most shortcut functions are also available using control buttons, however Crossfade Mode is only accessible from the system screen. See [section 6.4, 6.5, and 6.6](#) for complete EZ-Mode, Automixer, and Crossfade details.

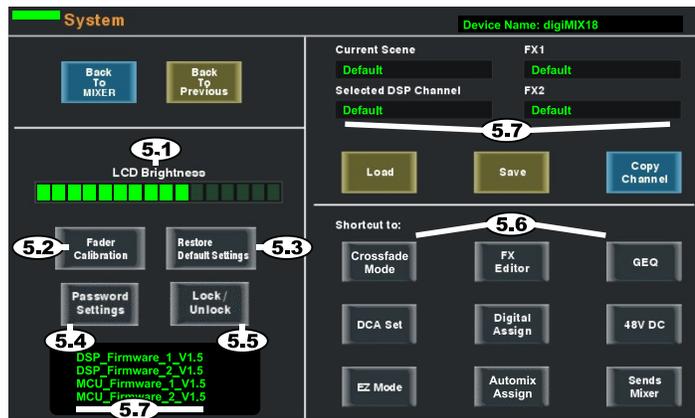


Figure 5: System Screen

5.7 Other System Functions

Device Name - Press and hold the "Device Name" text box in the upper right hand corner of the system screen to bring up the keyboard, then type in the desired name for the mixer and press "Enter". The default name is "digiMIX 18".

Current Scene - This displays the name of the scene currently loaded from memory onto the mixer. If no scene has been loaded, the current scene name is "Default". The current scene is also shown in the mixer mode screen.

Selected Channel - This displays the name of the DSP channel preset loaded from memory onto the currently selected input, FX1-2, aux1-8, or main L/R output channel. If no DSP channel has been loaded, the selected channel name is "Default". The selected channel is also shown in the mixer mode screen.

FX1 & FX2 - This displays the name of the FX channel preset loaded from memory onto FX1 and FX2. If no FX preset has been loaded, the FX1 or FX2 name is "Default".

Firmware versions - The four currently installed mixer DSP and micro-controller firmware versions are shown in the lower left corner of the System touchscreen. These are the internal programs that run the mixer. Newer versions may become available on the Ashly website, and may be required to use the latest features. To update firmware, see [section 6.1](#).

❑ 6 OTHER MIXER FUNCTIONS

6.1 Firmware Update (*Important: Remove Dante or USB module before running firmware update*)

A firmware update may be occasionally released to fix bugs or update features. Press the mixer's System button to view the currently installed firmware (see figure 5), then refer to the ashly website for the latest digiMIX18 firmware version.

Windows: Download and install "digiMIX 18 Firmware Utility" file bundle from the Ashly website Software/digiMIX18 downloads section. Once installed there will be a root folder called "digiMIX 18 Firmware Utility" containing an executable file named "digiMIX 18 Firmware Utility.exe", plus two DLL files and a sub-folder called "Lib" (see figure 6.1a). Click on the executable file to then run the utility.

Name	Date modified	Type	Size
lib	12/19/2017 9:00 AM	File folder	
CommLibrary.dll	12/19/2017 8:59 AM	Application extens...	57 KB
digiMIX 18 Firmware Utility.exe	12/19/2017 8:59 AM	Application	244 KB
Lib.Controls.MyControls.dll	12/19/2017 8:59 AM	Application extens...	421 KB

Figure 6.1a: digiMIX18 Firmware Utility files (Windows)

MAC: Download the file "digiMIX 18 Firmware Utility.dmg" from the Ashly website Software/digiMIX Downloads section, and install.

► **TIP:** To use Ethernet for a firmware update, network communications must be 100% reliable and uninterrupted. If there is any data interruption during the update, the mixer may be rendered inoperable and require factory service. **Because of this, Ashly strongly recommends using the USB data connection instead of Ethernet for firmware update.**

► **TIP:** If using USB for a computer connection to your mixer, you may first need to download and install the appropriate Windows or MAC USB Control Port driver on your computer, located in the Ashly website's Software/digiMIX downloads section.

Firmware Update Procedure:

► **TIP: backup mixer presets first**, see [sec 6.2](#) for digiMIX18 preset utility, or [sec 9.1f](#) for iPad app backup/restore.

1) To update firmware, *first remove the Dante-3018 or USB-3018 option if installed*. Before powering up the mixer or running the software, connect the mixer's USB Control jack to your computer using a USB printer cable.

2) Next, press and hold the mixer's <System> button while powering on the mixer. Blue text should appear on the mixer touchscreen indicating that the mixer is ready to program.

3) Launch the digiMIX18 firmware utility program on your computer. The digiMIX18 serial port will automatically appear when the program discovers the mixer (see figure 6.1b). If the port is not showing, check connections or verify that the USB device driver is properly installed. **Note: There can only be one digiMIX18 connected to your computer during firmware update.**

4) Once the COM port is displayed in the software utility, click the "Connect" button. The status box will turn green to indicate communication is established between the mixer and computer.

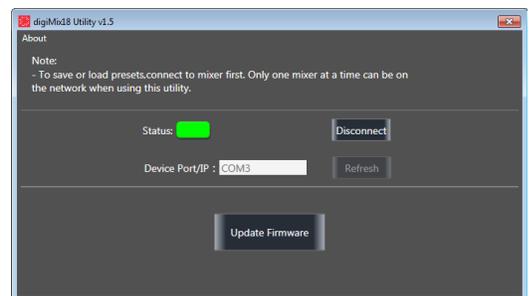


Figure 6.1b: digiMIX 18 Firmware Utility

5) Click the "Update Firmware" button, then on the next screen click "Program" (see figure 6.1c). The status bar will begin to show progress. **Do not turn off the mixer or interrupt the procedure until the entire process is complete.** The entire update takes about five minutes.

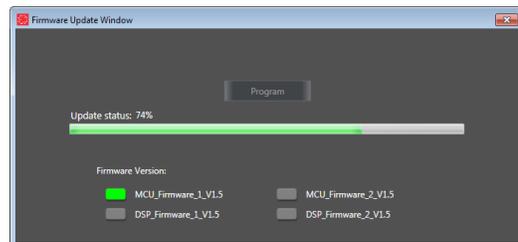


Figure 6.1c: Firmware Update Status

6.2 digiMIX18 Preset Utility

The digiMIX18 uses a stand-alone application to bulk-copy all presets from the mixer to a computer or from computer to mixer. Download the application from the Ashly website for Windows or MAC. *Note: Both USB and Ethernet data connection can be used for preset backup/restore.*

Windows: Download and install "digiMIX 18 Preset Utility" file bundle from the Ashly website Software/digiMIX18 downloads section. Once installed there will be a root folder called "digiMIX 18 Preset Utility" containing an executable file named "digiMIX 18 Preset Utility.exe", plus two DLL files and a sub-folder called "Lib" (see file list example at right). Click on the executable file to run the program. The preset file will be saved as a *.ept file.

Name	Date modified	Type	Size
lib	12/19/2017 9:00 AM	File folder	
CommLibrary.dll	12/19/2017 8:59 AM	Application extens...	57 KB
digiMIX 18 Preset Utility.exe	12/19/2017 8:59 AM	Application	231 KB
Lib.Controls.MyControls.dll	12/19/2017 8:59 AM	Application extens...	421 KB

Figure 6.2a: digiMIX18 Preset Utility files (Windows)

MAC: Download the file "digiMIX 18 Preset Utility.dmg" from the Ashly website Software/digiMIX Downloads section, and install. The preset will be saved on a MAC as a *.mprt file.

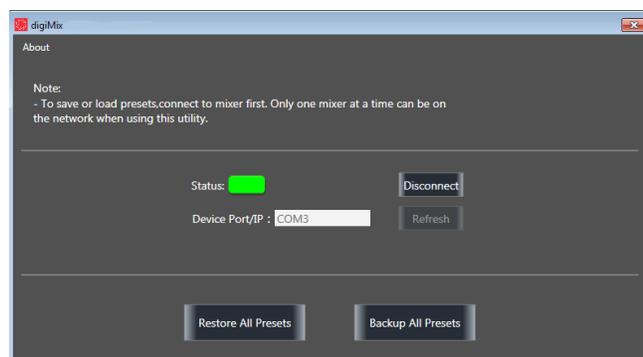


Figure 6.2b: digiMIX18 Preset Utility

Note: When restoring all preset files from computer to mixer, all preset files on the mixer will be overwritten.

When the preset file transfer is complete, exit the software.

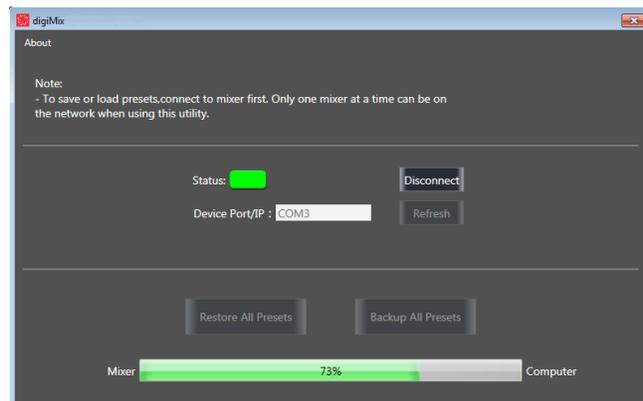


Figure 6.2c: digiMIX 8 Preset Utility status

6.3 Factory Reset

To perform a factory reset, press and hold all three <Load + Save + Enter> buttons during power-up, then press "yes" on the touchscreen when prompted. *Note: This will erase all presets stored on the mixer.* It will also unlock the mixer if locked, but still preserves the previous password in memory.

6.4 EZ-MODE

EZ-Mode provides a simple and secure user interface for a non-technical person to adjust basic mixer functions with ease, locking out most other mixer controls.

► **TIP:** All signal routing, levels, EQ, FX, DCA groups, and aux1-8 sends must be configured ahead of time on the mixer before using EZ-Mode.

► **TIP:** DCA groups and aux1-8 outputs should be named on the mixer first (sec.2.34) for easier identification. You can also add icons to a channel by pressing and holding the button above any EZ-Mode fader.

Press the mixer's EZ Mode button to access EZ-Mode, or press the mixer system button then EZ-Mode button in the touchscreen shortcut section.

There are two pre-defined EZ-Mode mixers as shown below. Select the EZ-Mode mixer you want to use, then press <Go To EZ Mixer>.

EZ-Mode Mixer #1: (see figure 6.4b) EZ-Mixer #1 provides faders for main L/R, DCA groups 1-4, and aux1-4, with on/off switch and icon for each fader. *DCA groups must be defined before using EZ-Mode* (sec. 2.16)

EZ-Mode Mixer #2: (see figure 6.4c) EZ-Mixer #2 provides faders for main L/R, DCA groups 1-6, inputs 17-18, and aux1-8 outputs, with on/off switch and icon for each fader. *Before using EZ-Mixer #2, DCA groups should be defined and named, and aux1-8 outputs should also be named* (sec. 2.34).

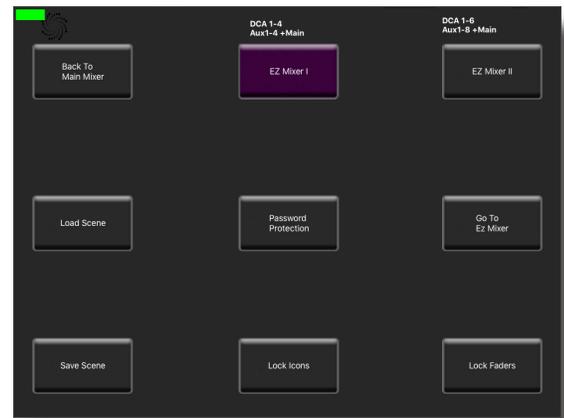


Figure 6.4a: EZ-Mode Main Screen



Figure 6.4b: EZ-Mode Mixer #1



Figure 6.4c: EZ-Mode Mixer #2

EZ-Mode Icon Menu: (see figure 6.4d) In either EZ mixer, an icon can be assigned to any fader to quickly identify its function. Press and hold the grey box above each fader to view and select an icon from the pop-up icon table.

EZ-Mode Password: (see figure 6.4a) A password can be used in EZ-Mode to prevent access to the full mixer while still allowing EZ-Mode control. The EZ-Mode password is always the same as the mixer's password (sec. 5.4).

Additionally, the password can be used to independently lock EZ-Mode faders or fader icons. The <EZ-Mode Password>, <Lock Icons>, and <Lock Faders> buttons turn red when activated.

EZ-Mode is also offered on the Ashly digiMIX app for iPad for remote digiMIX18 control using a local wireless network connection (sec. 9). If a password is to be used on the digiMIX iPad app, it must first be entered into the mixer. *Note that Only one iPad at a time can be used to control the mixer.*

► **TIP:** The iPad app provides the added feature of being able to use a user defined image or picture as an icon. (sec. 9.2).



Figure 6.4d: EZ-Mode Icon Menu

6.5 Automix Assign

The automixer is used to automate the mixing of multiple speech (not music) microphones to follow the dynamic nature of speech dialog and attenuate idle microphones. Press the Automix button below the touchscreen to assign inputs and activate the automixer.

Ashly Auto Mixer Technology

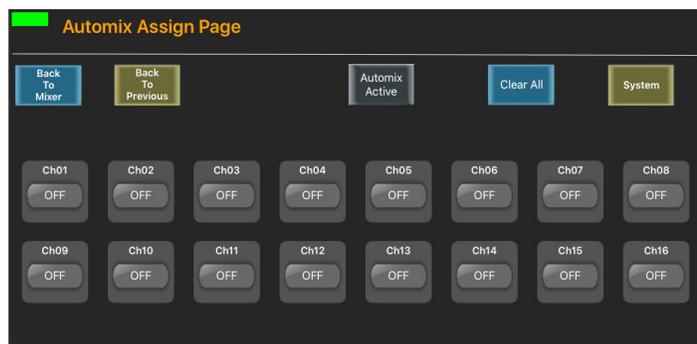
The automixer function is a "gain-sharing" type which automatically makes smooth gain transitions on all assigned automixer input channels to achieve a constant total system gain. This gain-sharing method of automixing has been found to be superior to gating automixers.

Input channels 1-16 can be individually enabled for the automix. Enabled inputs must all be assigned to the main L/R output ([sec. 2.39](#)). Channels which are enabled for automix will contribute to the automatic adjustment of other automix channel gains. Likewise, their channel level will be dynamically affected by the signal level present on other automix channels. Manual mixer channels (those not enabled for automix) can still be mixed in with automix channels, controlled by their fader setting. The fader on automix channels still controls the input level before automatic mixing takes place so that more of the system gain can be applied to one channel versus another.

Automixer Setup

The following procedure is recommended for setting up most multi-microphone speech applications. The live mixing environment must already be set up, with all mics wired to the mixer, assigned in the digiMIX18 to the main L/R outputs, placed where they will be used, mic input gain controls set properly, and amplifiers/speakers all set up.

- 1) Start with all mixer faders off. From the System menu, press the shortcut button for <Automix Assign>.
- 2) Assign the desired input channels to the automixer. Make sure the <Automix Active> button is pressed.
- 3) Select one of the assigned primary speech channels, or one which is centrally located. Slowly increase the fader for this one channel just until feedback starts, then lower the fader 3 dB to stay comfortably below feedback. This sets the total automixer system gain.
- 4) Now select and increase the other assigned input channel faders to the same position as the first channel used in step 3. The system will not feedback because the automixer will slowly attenuate the active channels as more channels are turned-on to maintain a constant total system gain as set in step 3.
- 5) During the speech event, individual channel faders can still be raised or lowered to adjust for the weakness or strength of the respective talkers even while the automixer is active.



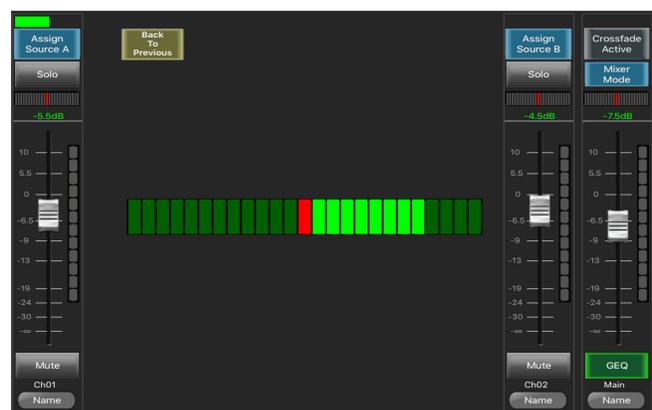
6.5: Automix Assign

6.6 Crossfade Mode

Crossfade Mode allows the operator to easily fade back and forth between two assigned channels (or two stereo linked channel pairs) using either the Pan control or touchscreen crossfader control.

Crossfade Mode setup:

- 1) From the system menu, press the shortcut button for Crossfade Mode.
- 2) Assign <Source A> and <Source B> channels.
- 3) Press the <Crossfade Active> button.
- 4) Crossfade Mode is now operating. The pan/touchscreen control will fade between the two assigned channels.
- 5) To return to mixer mode, press the touchscreen <Mixer Mode> button, or toggle through mixer and crossfade modes using the Mixer/Long Faders button next to the pan control.



6.6: Crossfade Mode

When operating in normal mixer mode, the pan or touchscreen crossfade control always fades the selected channel right or left as expected. When in crossfade mode with crossfade active, the control only fades between the two assigned source signals.

7 DIGITAL AUDIO

There are two optional digital audio modules available for the digiMIX18, Dante-3018 and USB-3018. These options provide digital inputs to channels 1-18, and digital outputs from channels 1-18, main L/R, aux1-8, and solo L/R. *Digital output from Mic inputs 1-16 can be set pre or post DSP.* Digital audio channel mapping is internally fixed in the mixer and cannot be changed.

Digital input and output channels are individually enabled, and signal level is adjustable from +10dB to -70dB. Press a channel's On/Off button to enable/disable digital audio for that channel, and use the parameter adjust knob on the mixer or touchscreen to adjust level on the selected channel.



7a: Digital Input Assign and Mapping



7b: Digital Output Assign and Mapping

Digital inputs 1-18 are always pre-DSP and pre-fader. See the Block Diagram for details.

Digital outputs from Mic channels 1-16 can be group selected as pre or post DSP using the touchscreen. Whether pre or post DSP, digital outputs from Mic channels 1-16 are always pre-fader and pre-mute. *Note: the mixer will not allow digital in and out to be used simultaneously for the same Mic input channel if digital outputs are set post DSP.*

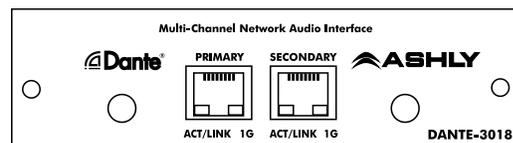
Digital outputs from Line inputs 17-18 are always post-DSP, but pre-fader and pre-mute.

Digital outputs from main L/R, solo L/R, and aux1-8 outputs are always post-DSP and post-fader.

7.1 Dante-3018 Option

Dante, created by [Audinate](http://audinate.com), is an Ethernet based digital AV network technology that uses existing network infrastructure for delivery of high performance, high channel count audio signals.

With the optional Dante-3018 module installed, the digiMIX18 can be integrated into a Dante digital audio network. The Dante-3018 resolution & sampling rate is 24bit / 48KHZ. The Dante-3018 module can be field installed and is sold and shipped separately from the mixer along with installation instructions.



7.1 Dante-3018 Module

7.1a Dante Controller: The Dante-3018 module allows the digiMIX18 to receive and transmit audio with other Dante devices. Configuration of Dante audio streams requires the use of [Dante Controller](#). This free software from Audinate is available for both Windows® and Mac®. Dante Controller uses a simple matrix (shown on next page) to connect Dante audio transmitters with receivers. The Dante-3018 provides access for up to 18 digital audio input channels and 30 digital audio output channels on the digiMIX18.

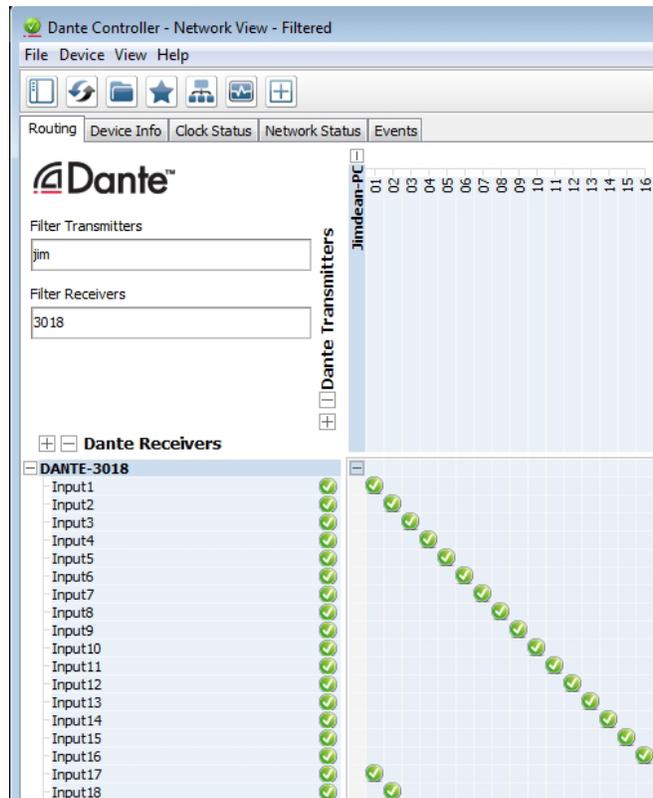
Any Dante transmitter channel can be assigned to one or more Dante-3018 receiver channels, but each Dante receiver channel can have only one transmitter as its input source.

The Dante-3018 resolution & sampling rate is 24bit / 48KHZ.

Dante latency can be observed and configured for individual devices within the Dante Controller Network Status tab. Note that overall system latency will always adopt the slowest latency found on devices linked in a transmitter/receiver stream.

Note that when the Dante-3018 module is installed, it must always be the master clock.

7.1b Dante Virtual Soundcard (not shown): The [Dante Virtual Soundcard](#), purchased separately from Audinate, allows a Windows or Mac computer to act as a Dante audio source. Any sound the computer generates (background music, announcements, VoIP sessions, etc.) can be routed to a Dante receiver via the Dante controller.



7.1a: Dante Controller

NOTE: The Dante Virtual Soundcard audio stream may not automatically start up after digiMIX18 is powered on. If this happens, cycle the mixer power again or restart the Dante audio stream.

7.2 USB-3018 Option

Digital audio workstations (DAW) often use multitrack USB audio streams for I/O. The USB-3018 provides the digiMIX18 with 30 digital outputs and 18 inputs. See section 7 for details on how digital input and output channels are routed within the mixer, or refer to the block diagram in section 13.

The USB-3018 resolution & sampling rate is 24bit / 48KHZ.

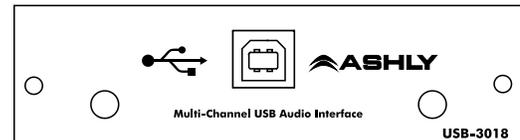
Typical applications include multitrack recording from the mixer to a USB audio device, or playback of pre-recorded music from a USB audio device. One particularly useful application is to record a band live onto a multi-track DAW, then play it back through the mixer later for a "virtual" soundcheck before the musicians arrive. Visit the Ashly website knowledge base to review the Ashly application note digiMIX-AN-2 for virtual soundcheck details.

8.1 USB-3018 Device Driver - Purchase the USB-3018 audio interface module from an Ashly dealer and install in the digiMIX18 mixer as instructed in section 3.15. An ASIO device driver is required for Windows computers but is not required for Mac.

The USB multi-channel ASIO Windows device driver can be downloaded from the Ashly website digiMIX18 product page download section. Install the device driver on the PC *before* connecting it to the digiMIX18. The device driver will appear as an "ASIO" type device in the audio software's device list.

► **TIP:** Detailed USB multichannel device driver installation and virtual soundcheck instructions are found in the Ashly application note <digiMIX AN-2>, available in the Ashly website's digiMIX page App Notes section.

8.2 DAW Hardware Configuration - The digiMIX18 cannot re-configure its internal channel mapping. You must have a working knowledge of your specific DAW hardware and software for proper configuration of channel mapping, recording, and playback properties.



7.2 USB-3018 Module

❑ 8 RACK EAR INSTALLATION

The digiMIX18 comes with rack ears that replace the molded plastic side pieces, allowing the mixer to be mounted to a standard 19" equipment rack. Each plastic side is fastened with four 2.5mm Allen head screws. *Before removing the plastic sides and installing the rack ears, unplug the AC cord from the back of the mixer.*

Step 1: Start with the removal of one plastic side. Unscrew the four 2.5mm Allen head screws shown circled in the image to the right.

①



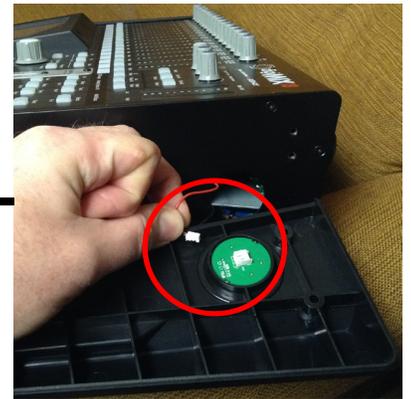
Step 2: The plastic sides have an illuminated Ashly logo embedded in the molded plastic. This must be disconnected before the side can be completely removed.

②



Step 3: Gently disconnect the wire assembly header that powers the illuminated Ashly logo. Pull apart by holding the white plastic header rather than the pulling on the wires. Observe connector polarity when reconnecting later, and note that the connector is indexed and can only be inserted one way.

③



Step 4: Carefully tuck the wire header connector assembly back inside the chassis before attaching the rack ears.

④



Step 5: One rack ear is provided in the original shipping container for each side of the mixer. Use the same screws removed in step #1 to attach the rack ears.

⑤



Step 6: Fasten the rack ear to the chassis using the four screws as shown.

Repeat this procedure for the other side. Store the removed plastic sides in the mixer's original box for re-using later if necessary.

⑥



9 iPad REMOTE CONTROL

A free remote control iPad app called "Ashly digiMIX" is available from the iTunes App Store. This app is used for all Ashly digiMIX products. Most mixer touchscreen controls are duplicated on the app for wireless remote control of the mixer, including EZ-Mode. **Note: The digiMIX18 does not provide its own Wi-Fi signal, so an existing network with Wi-Fi must be available for the iPad. Only one iPad at a time can be used to control the mixer.**

9.1 iPad Setup steps

9.1a - Configure the iPad Wi-Fi to be on the same network subnet as the mixer

9.1b - Download, install and launch the Ashly digiMIX app with the mixer turned on and connected to the network.

9.1c - On startup, the digiMIX app displays a device list of available IP addresses for the mixer(s) on the network. Select an IP address and press <Connect>.

9.1d - In the resulting mixer display, a green rectangle in the upper left corner indicates that the app is connected to a live mixer. It turns grey if the connection is lost. If it is grey, press it to return to the Device List used in step 9.1c. When connected, the iPad always displays the same screen as the mixer. Changes to either device will result in an identical change to the other device. The fader on the left side of this screen always controls the currently selected channel, or channel pair if two channels are stereo linked.

9.1e - To access the Assign, Channel, PEQ, Expander/Gate, or Compressor/Limiter control screens for the currently selected channel, press the "PEQ BOX" as shown in the upper left corner of the mixer screen in the illustration to the right.

► **TIP:** If two channels are stereo linked, tapping the fader on the left side of this screen alternately toggles between the two linked channels, offering the ability to select and pan either channel separately from within the Assign or Channel screens.

9.1f - To backup/restore presets, access EZ Mode, or use other system functions from the iPad app, tap the <System> button while in any of the control screens mentioned above in step 9.1e.

9.2 iPad EZ Mode

EZ Mode offers two configurations for basic remote control of the mixer's main L/R and aux1-8 outputs and DCA groups. *EZ-Mode on the iPad allows the use of pictures as icons.* Select an EZ-Mode fader, press and hold the icon box above the fader, then press the camera icon above the Select button. Select either the camera or Photo library option to load the picture, then press ok. To remove an icon or picture, repeat this process and select a blank icon. Other than this feature, the two EZ Mode mixers function the same on the iPad app as on the digiMIX18. See [section 6.4](#) for complete EZ Mode details. To use EZ Mode on the iPad, go to the system page as described above in step 9.1f and press the EZ Mode button.

9.3 iPad EZ-Mode Password Protection

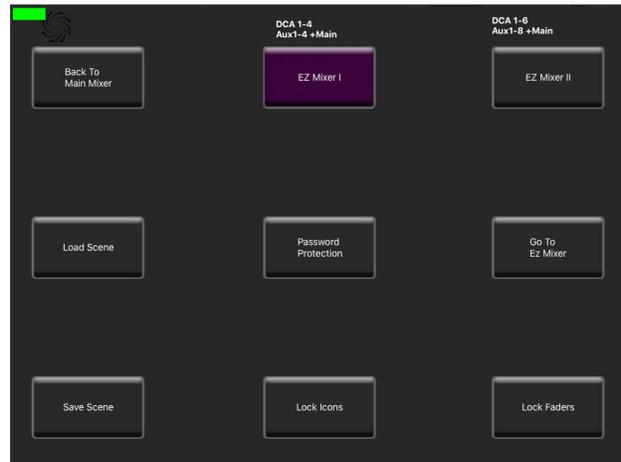
EZ-Mode will always use the same four-character password as the mixer ([sec. 5.4](#)). *The password must initially be entered on the mixer,* then can be used on the iPad to lock EZ-Mode faders or fader icons. Passwords are case sensitive.



9.1c: digiMIX app IP address selection



9.1d & 9.1e: digiMIX app Mixer Mode Display



9.2: digiMIX app EZ-Mode

❑ 10 TROUBLESHOOTING

10.1 No sound

Is the mic/line input cable plugged in and wired properly? If the mic is a condenser mic, is phantom power on? Is there activity on the input LED meter? Is the input muted or its fader turned down? Is the input assigned or sent to the proper output? Is the output level turned down or muted? Are the power amps off or their level controls turned down? Is the input assigned to a DCA which is muted or turned down? Are the HPF or LPF filters properly set in the PEQ section to allow the desired passband? Is the noise gate engaged and its threshold set so high that it always shuts off the signal?

10.2 Distorted sound

Is the input LED Clip light on? If so, turn down the input source or reduce the input trim control until the input LED signal peaks between 0-4 on the input meter bar. If there is still distortion, is the input fader too high? Is the Comp/Limiter engaged and its gain control set too high? Does a PEQ or GEQ filter have too much boost?

10.3 Excessive hiss

Hiss is caused by insufficient gain on the input stages and too much gain in the output stage. Be sure to have a strong input signal, adjusting the input trim control so the signal peaks are between 0 and 4 on the input LED meter bar.

10.4 Control does nothing

Is the desired input, output, or FX selected? If an expander/gate or comp/limiter control does not work, is the function turned ON or ratio set properly? If the PEQ or GEQ controls do nothing, is the function turned on? Is the Bypass button lit up?

10.5 No sound in headphones when using solo button

Are the headphones turned down? If the PFL button is pressed, is there sufficient input signal? PFL means "pre-fader listen", so the position of that channel's fader will not affect solo. If PFL is off, is the channel fader turned down? If the input is assigned to a DCA and that DCA turned down or muted?

10.6 FX not working

Three things are necessary for an FX to work properly.

- 1) FX must be properly defined. Press FX1 or FX2 to define, edit, or load an effect. Make sure the <Wet-Dry> mix control is properly set.
- 2) Inputs must have their signal sent to the FX1 or FX2 bus. Select an input and use the FX Send button to send pre or post-fader signal to the FX1 or FX2 bus.
- 3) FX1-2 must always be assigned or sent to main L/R or aux1-8 outputs. Select FX1 or FX2, then press the Assign button to send it to the main L/R or aux1-8 outputs.

10.7 iPad digiMIX app/network troubleshooting

1) There are no IP addresses in my Device List. Is the mixer turned on and properly connected to the same network that the wifi router is connected to? Is the iPad's wifi turned on? The app may have timed out, so refresh the device list by first pressing "Demo", then press the small grey box in the upper left corner of the resulting mixer screen to return to the startup page. This causes the app to re-discover all online mixers and display their IP address.

2) The app won't control the mixer. Is there more than one mixer on the network? Several mixers can be connected to the same network for remote iPad control, however the digiMIX app can only connect to one mixer at a time. Make sure you are connected to the right mixer. On start-up, the digiMIX app discovers and lists all available mixers by their IP address. Select an IP address from the Device List and press "Connect" to control that mixer. Once connected, the app shows a green box in the upper left corner. A grey box means the connection has been lost. To control a different mixer, the app must be closed and re-launched.

3) Can I use more than one iPad on one mixer? No, only one iPad at a time can be used with a mixer. If a second iPad connects with that mixer, it takes over control. *The last iPad connected always has control.*

4) What are the digiMIX18 Network communication settings? • Default static IP is 192.168.2.1 • Set for automatic DHCP configuration • Uses Port 5000 • Uses both UDP and TCP/IP

11 SPECIFICATIONS

$0\text{dBu} = 0.775\text{V}_{\text{rms}}$

Microphone Input	Class-A discrete balanced, 7.3k Ohm input impedance
Frequency response to main L/R output	20Hz ~ 20kHz +0.0/-0.5dB
Distortion (THD&N) to main L/R output	<0.01% at 0dBu, 20Hz ~ 20kHz
Equivalent input noise	-126dBu, unweighted, 20Hz ~ 20kHz, 150 Ohm source
Gain (trim)	0 dB ~ +50dB
Maximum input level	+20dBu, balanced
Phantom power (individually selectable on channels 1-16)	+48VDC +0/-4V, maximum 14mA per channel

Line input	Balanced, 75k Ohm input impedance
Frequency response to main L/R output	20Hz ~ 20kHz at 0dBu, +0/-1.5dB
Distortion (THD&N) to main L/R output	<0.01% at 0dBu, 20Hz ~ 20kHz
Gain (trim)	-20dB ~ +30dB
Maximum input level	+20dBu

TRS Insert (ch1-8 only)	Unbalanced, tip = send, ring = return
Maximum output level	+20dBu, 120 Ohm source impedance
Maximum input level	+20dBu, 5.0k Ohm input impedance

Stereo Line Inputs 17~18	Balanced stereo pair, 27k Ohm input impedance
Frequency response to main L/R output	20Hz ~ 20kHz, +0/-0.05dB
Distortion (THD&N) unity gain to main L/R output	<0.07% at 0dBu, 20Hz ~ 20kHz
Gain	$-\infty \sim +10\text{dB}$
Maximum input level	+20dBu

Maximum Output levels (240 Ohm source impedance)

Main L/R outputs	Balanced XLR and TRS phone jack, +20dBu
Aux 1~8 outputs	Pseudo-Balanced TRS phone jack, +20dBu
Control room outputs	Pseudo-Balanced TRS phone jack, +20dBu
Residual output noise (one mic input assigned at 0dB)	-88dBu, 20Hz-20kHz, unweighted
Residual output noise (all 16 mic inputs assigned at 0dB)	-78dBu, 20Hz-20kHz, unweighted
Residual output noise (all 18 inputs assigned at 0dB)	-78dBu, 20Hz-20kHz, unweighted

Crosstalk

Adjacent channels (1kHz)	-82dB
Noise (bus noise, adjacent channels 20Hz ~ 20kHz)	-70dB

Channel DSP Functions:

Polarity Invert (Inputs, main L/R, aux1-8, FX1-2)

Per channel, On/Off

Delay Time (Inputs, main L/R, aux1-8, FX1-2)

Per channel, 0-300ms in 0.2 ms increments

Noise Gate/Expander

Inputs, FX1-2

Threshold range

-84dB ~ 0dBFS

Attack time

0.5mS ~ 200mS

Release time

10mS ~ 1,000mS

Ratio

1:1 ~ ∞

Compressor/Limiter

Inputs, main L/R, aux1-8, FX1-2

Threshold range

-50dB ~ 0dBFS

Attack time

10mS ~ 150mS

Release time

10mS ~ 1,000mS

Ratio

1:1 ~ ∞

Gain

0dB ~ +24dB

PEQ (parametric EQ)

Inputs, main L/R, aux1-8, FX1-2

EQ1, EQ2, EQ3, EQ4 filter type

Parametric, low shelf, high shelf

Parametric filters

20.6Hz ~ 20kHz, Q 0.4 ~ 24, boost/cut $\pm 24\text{dB}$

Shelving filters

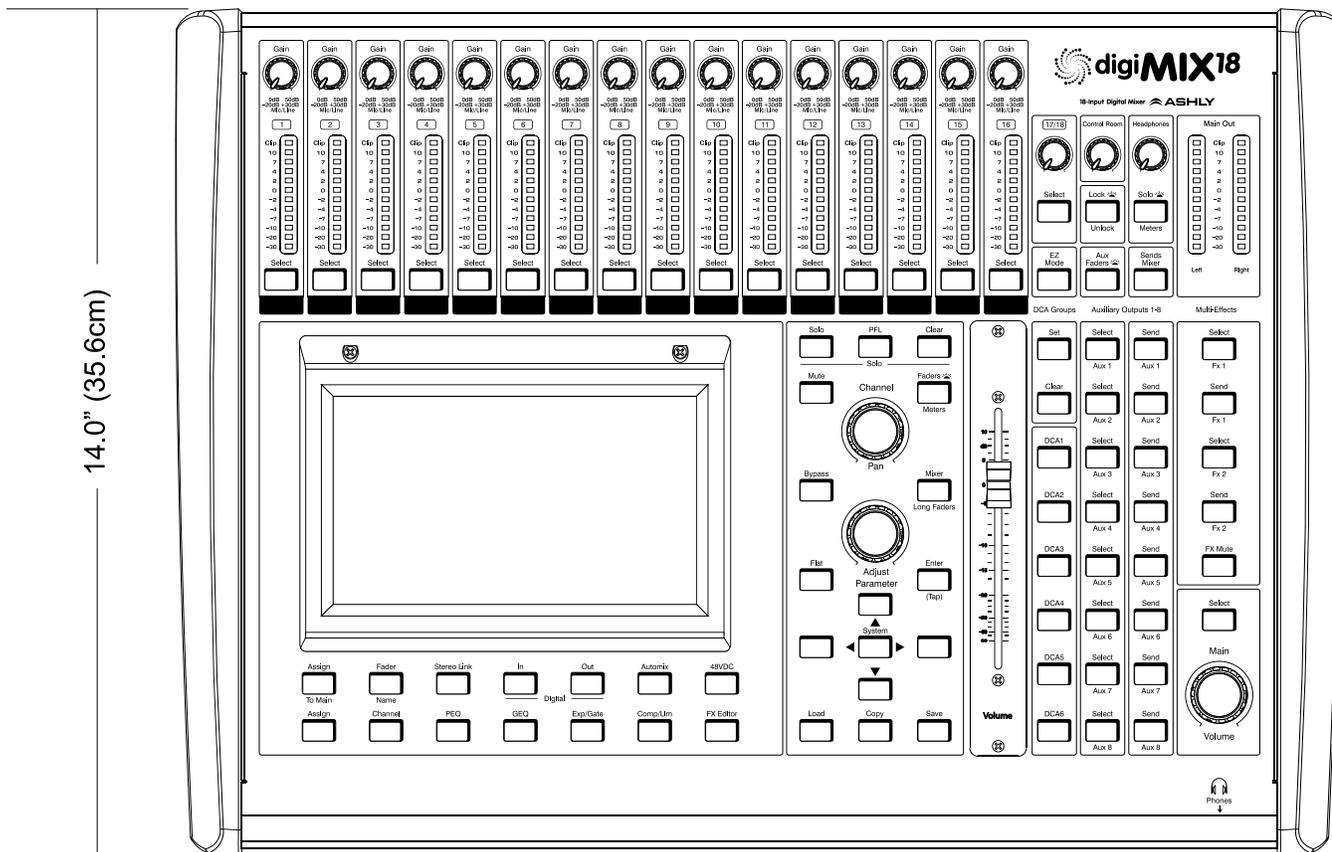
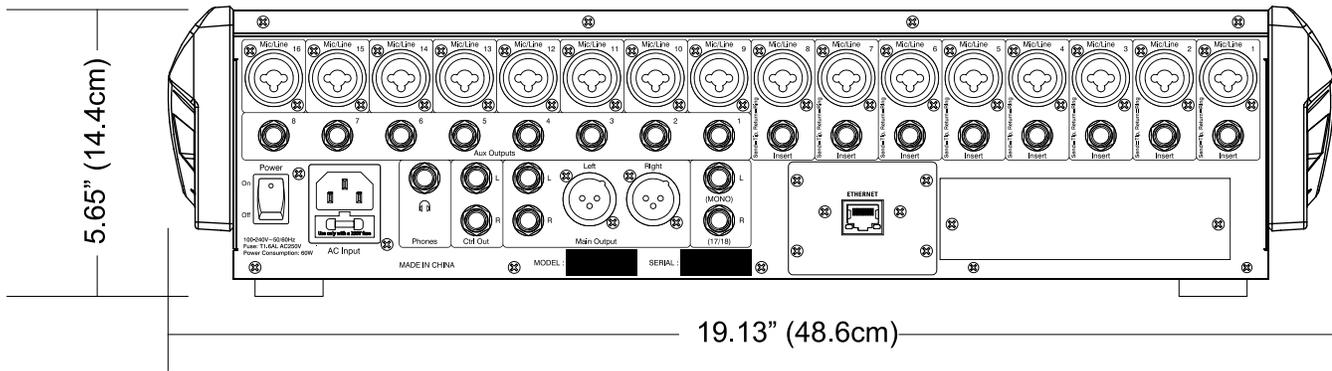
20.6Hz ~ 20kHz, boost/cut $\pm 24\text{dB}$

HPF and LPF

20.6Hz ~ 20kHz, 20 filter types

HPF and LPF filter types	Bypass, Butterworth (BW) 6dB/oct, Bessel (BS) 6dB/oct, BW 12dB/oct, BS 12dB/oct, Linkowitz/Riley (LR) 12dB/oct, BW 18dB/oct, BS 18dB/oct, BW 24dB/oct, BS 24dB/oct, LR 24dB/oct, BW 30dB/oct, BS 30dB/oct, BW 36dB/oct, BS 36dB/oct, LR 36dB/oct, BW 42dB/oct, BS 42dB/oct, BW 48dB/oct, BS 48dB/oct, LR 48dB/oct
GEQ (graphic EQ)	Main L/R, aux1-8 outputs
Filter type	31 band, constant Q, boost/cut ± 24 dB
FX (effects)	FX1-2 input <u>Sends</u> from all 18 inputs, FX1-2 output <u>Assigns</u> to main L/R, aux1-8
Effect types	Reverbs (3), delay (1200ms), tremolo, flange, chorus, combinations See chart in section 4.6 for complete effects details
Automixer (for speech only)	Gain-sharing type, individual assignment of channels 1-16
Crossfade mode (system screen)	Use pan control to fade between any two assigned inputs, outputs, or FX
Stereo link	Inputs 1-16, aux1-8 outputs, paired only as 1-2, 3-4, 5-6 etc.
DCA groups	6 groups, level, mute, solo
Password Security	Mixer lock, unlock, 4-character password, case sensitive
EZ Mode (simplified individual fader adjust, on/off, icon assign)	EZ Mixer #1: Main L/R, DCA1-4, aux1-4, password lock EZ Mixer #2: Main L/R, DCA1-6, aux1-8, ch17-18, password lock
Preset types	Scene (24), DSP channel (48), FX (104), GEQ (48)
A-D converter dynamic range	104dB, unweighted
Internal processor	32-bit floating point
D-A converter dynamic range	105dB, unweighted
ADC/DAC bit depth and sampling rate	24-bit / 48kHz
Latency	5.8mS, 1kHz, analog input to analog output
Optional digital audio modules	Dante-3018, USB-3018 (field installable)
Dante-3018 bit depth, sampling rate	24bit, 48kHz
USB-3018 bit depth, sampling rate	24bit, 48kHz
DigiMIX18 digital in, ch1-18 (pre-DSP)	On/Off, level control +10dB to -70dB, off, fixed channel mapping
DigiMIX18 digital out ch1-16 (selectable as group pre or *post DSP)	On/Off, +10dB to -70dB level, fixed channel mapping
DigiMIX18 digital out ch17-18, main L/R, aux1-8, solo (post DSP only)	On/Off, +10dB to -70dB level, fixed channel mapping
<i>*Note: Digital in and out can not be used simultaneously for the same channel if digital out is set to post DSP.</i>	
Software/Utilities/Drivers	
Remote mixer control app for iPad®	"Ashly digiMIX" app, free from iTunes App Store
Firmware update software for Windows or Mac	"digiMIX18 Firmware Utility" available on Ashly website
Preset backup/restore for Windows or Mac	"digiMIX18 Preset Utility" available on Ashly website
USB COM device driver for connecting digiMIX18 utility (if required)	Available on Ashly website for Windows or Mac
ASIO driver (required if using USB-3018 option with Windows)	Available on Ashly website for Windows, not required for Mac
MAC address	printed on serial number sticker on back of mixer
Ethernet communication defaults	IP 192.168.2.1, auto-DHCP, port 5000, uses both UDP and TCP/IP
AC mains	100-240VAC 50/60Hz, 120W max
Operating free-air temperature range	41°F ~ 113°F (5°C ~ 45°C)
Storage temperature range	-4°F ~ 140°F (-20°C ~ 60°C)
Unit dimensions	19.3"L x 5.65"W x 14.0"H (48.6cm x 14.4cm x 35.6cm)
Shipping dimensions	22.0"L x 8.15"W x 17.1"H (55.9cm x 20.7cm x 43.4cm)
Unit weight	17.0 lbs (7.7kg)
Shipping weight	21.0 lbs (9.5kg)
Dante-3018 shipping weight	0.42 lbs (0.19kg)
Dante-3018 shipping dimensions	6.02"L x 1.85"W x 7.09"H (15.3cm x 4.70cm x 18.0cm)
USB-3018 shipping weight	0.47 lbs (0.21kg)
USB-3018 shipping dimensions	6.02"L x 1.85"W x 7.09"H (15.3cm x 4.70cm x 18.0cm)
Compliance/safety	cTUVus, CE, FCC, RoHs
Limited warranty	5 year (3 year on touchscreen and motorized fader)

12 DIMENSIONS



□ 14 Ashly Audio Inc. LIMITED WARRANTY (USA ONLY)

(For other countries, please contact your respective distributor or dealer from where the unit was first purchased.)

For units purchased in the USA, warranty service for this unit shall be provided by ASHLY AUDIO, INC. in accordance with the following warranty statement.

ASHLY AUDIO, INC. warrants to the owner of this product that it will be free from defects in workmanship and materials for a period of FIVE years from the original-date-of-purchase, with the exception of touch-screen displays and motorized faders which are warranted for THREE years from the original-date-of-purchase.

ASHLY AUDIO INC. will without charge, repair or replace at its discretion, any defective product or component parts upon prepaid delivery of the product to the ASHLY AUDIO, INC. factory service department, accompanied with a proof of original-date-of-purchase in the form of a valid sales receipt. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

EXCLUSIONS: This warranty does not apply in the event of misuse, neglect, or as a result of unauthorized alterations or repairs made to the product. This warranty is void if the serial number is altered, defaced, or removed. ASHLY AUDIO, INC. reserves the right to make changes in design, or make additions to, or improvements upon, this product without any obligation to install the same on products previously manufactured.

Any implied warranties, which may arise under the operation of state law, shall be effective only for FIVE years (THREE years for touch-screen displays and motorized faders) from the original-date-of-purchase of the product. ASHLY AUDIO, INC. shall be obligated to only correct defects in the product itself. ASHLY AUDIO, INC. is not liable for any damage or injury, which may result from, or be incidental to, or a consequence of, such defects. Some states do not allow limitations on how long an implied warranty lasts, or the exclusion, or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

OBTAINING WARRANTY SERVICE:

For warranty service in the United States, please follow this procedure:

1) Please return the product to ASHLY AUDIO, INC. freight prepaid, with a written statement describing the defect and application that the product is used in. ASHLY AUDIO, INC. will examine the product and perform any necessary service, including replacement of defective parts, at no further cost to you.

2) Please ship your product to:

ASHLY AUDIO, INC.

Attention: Service Department

847 Holt Road

Webster, NY 14580-9103

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