

User's Manual

DIGITAL MIXER WITH 48 CHANNELS



Important Safety Instructions



This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions.

Please read.



Alternating current/voltage (for adapter).

ON: Denotes the product is turned on.

OFF: Denotes the product is turned off.

WARNING

Describes precautions that should be observed to prevent the possibility of death or injury to the user.



CAUTION

Describes precautions that should be observed to prevent damage to the product.

Disposing of this product should not be placed in municipal waste but rather in a separate collection.

WARNING

Power Supply

Ensure that the in-source voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user. Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

External Connection

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice from a registered electrician.

Do Not Remove Any Covers

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. Covers should be removed by qualified service personnel only.

No user serviceable parts inside.

Fuse (for adapter).

To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder. Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

Operating Conditions

Always install in accordance with the manufacturer's instructions.

To avoid the risk of electric shock and damage, do not subject this product to any liquid/rain or moisture. Do not use this product when in close proximity to water.

Do not install this product near any direct heat source. Do not block areas of ventilation. Failure to do so could result in fire.

Keep product away from naked flames.

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions

Follow all instructions

Keep these instructions. Do not discard.

Heed all warnings.

Only use attachments / accessories specified by the manufacturer.

Cleaning

When required, either blow off dust from the product or use a dry cloth.

Do not use any solvents such as Benzol or Alcohol.

For safety, keep product clean and free from dust.

Servicing

Refer all servicing to qualified service personnel only.

Do not perform any servicing other than those instructions contained within the User's Manual.

PORTABLE CART WARNING

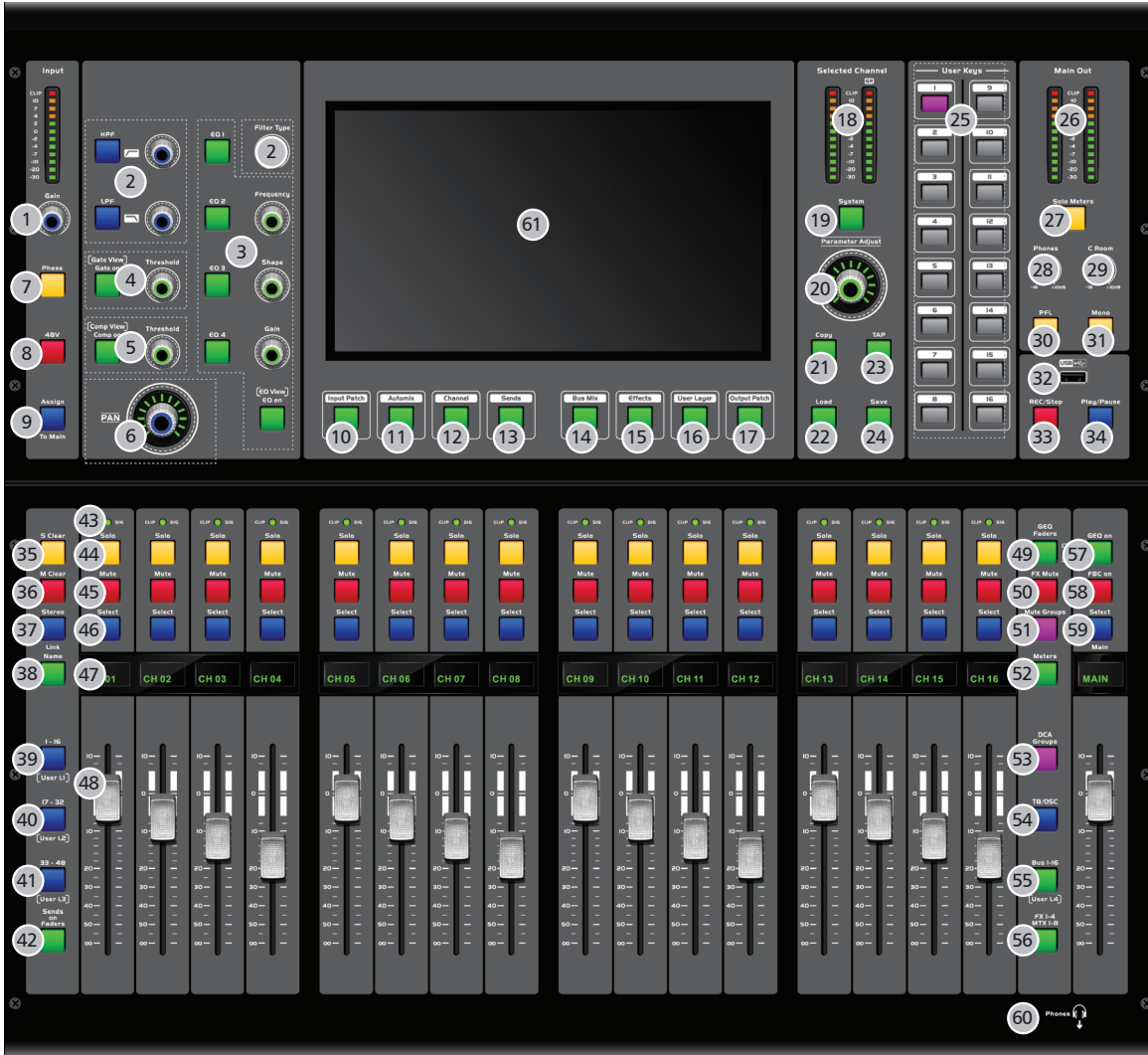


Carts and stands - The component should be used only with a cart or stand that is recommended by the manufacturer.

A component and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the component and cart combination to overturn.

Index

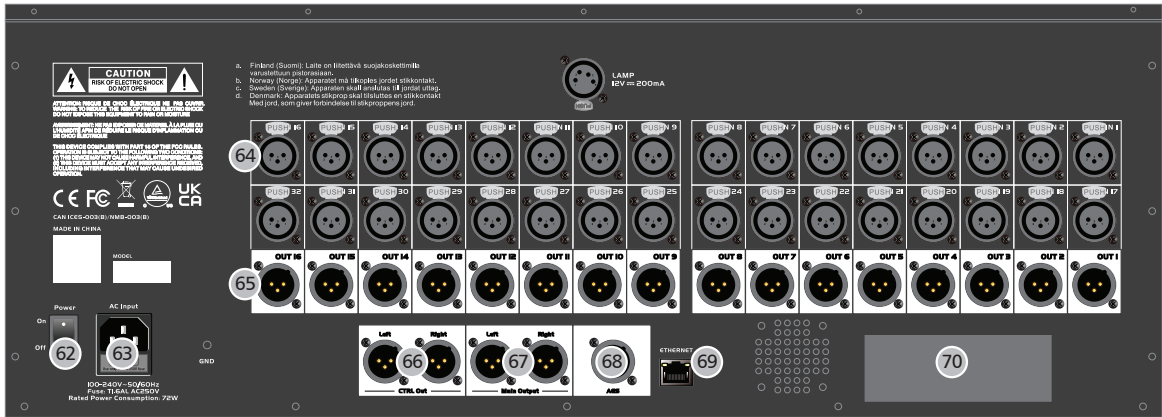
Front Panel



Page 8:	1. Gain	3. PEQ
Page 9:	4. Gate	9. Assign To Main
Page 10:	10. Input Patch	12. Channel
Page 11:	13. Sends	15. User Layer
Page 12:	17. Output Patch	21. Copy
Page 13:	22. Load	25. User Keys
Page 14:	26. LED	39. 1-16/User L1
Page 15:	40. 17-32/User L2	52. Meters
Page 16:	53. DCA Groups	61. LCD

Index

Rear Panel



Page 17: 62. Power ----- 70. Extension Module

Table of contents

1. Introduction	6
2. Summary of features	6
3. Useful data	7
4. Function Description	8
5. DSP control	18
5.1 MIXERS&CHANNEL interface	18
5.2 DCA LAYER interface	21
5.3 USER LAYER interface	21
5.4 PEQ interface	21
5.5 DYNAMIC interface	23
5.6 GEQ interface	24
5.7 BUS MIXER interface	25
5.8 TB/OSC interface	25
5.9 EFFECT interface	25
5.10 AUTO MIX interface	27
5.11 GROUP SET interface	27
5.12 USB KEY USB interface	28
5.13 USER KEYS interface	28
5.14 METERS interface	29
5.15 CTRL ROOM interface	29
5.16 PATCH interface	29
5.17 DANTE SET interface	31
5.18 SYSTEM ENGINEER interface	31
6. Software Update	37
7. Hookup Diagram	38
8. Block Diagram	39
9. Technical Specifications	40

1

Introduction

Thank you for purchasing our Digital Mixer. As one significant feature of your mixer means its function is multiple and powerful. With 32 microphone preamplifiers; Digital 4 band full parametric EQ; Compressor; Gate; Delay; Remote control; 17 electric stepper fader for level control; Large and small LCD display operation in real-time; Program, save, load, and copy functions and so on. That the digital mixer can help you to create a wonderful shows will make you more determined in your choice. Also the unit will bring you an unparalleled sense of superiority since it is powerful and easy to operate.

This is a professional audio product built by our team which has more than 20 years of experience in the industry. With the tireless efforts of our development team, Our products have been endowed with many advantages such as excellent performance, reliable quality and full of innovation so that our products can sell well in different market and always well received by consumers in application of different places and bring customers inexperienced value experience.

We suggest that you use this manual to familiarize yourself with the features and applications before using.

2

Summary of features

- 32 XLR analog inputs with digital gain control
- Equipped with 32 digital inputs
- 16 BUS mix bus and 8 MATRIX mix bus
- Main output L/R channel and monitor L/R channel
- AES stereo digital output
- 48V phantom power
- All input channels can be assigned to monitor output
- Be available to assign all input channels to headphone output
- USB key for stereo recording / playback, Presets save/load and firmware update
- Ethernet port used to configure local area network for APP connection and control
- 4 stereo internal FX processors
- 17 electric stepper faders with 100mm travel
- 32 bit floating point digital signal processing
- 10.1 inch ultra-clear color LCD touch screen with resolution 1024*600
- 17 two-color OLED screen used to display channel information
- 24-bit, 48K / 96K sampling rate
- 48 DSP processing channels
- Program, save, load & copy functions
- Digital noise gate
- Digital compressor/limiter
- 4-band full parametric digital equalizer
- L/R PAN control
- Phase reverse

Summary of features

- Time delay
- 16 DCA for fader / 8 mute group
- Authority management
- Auto mix
- RTA Real-time Spectrum Analysis
- FBC Feedback Howling Suppressor
- User Defined Keys
- Priority microphone input
- 4P XLR socket and lamp port
- Safe calling scenario

- Extension Port

Used to extend DANTE32S network audio-transmission module.

Useful Data

Please write your serial number here for future reference.

Serial Number:

Date of Purchase:

Purchased at:

4

Function Description

About Front Panel (function buttons and knobs)

1. Gain

Touch it to set the input signal gain(0-50dB) for any channel among CH1-32 and can read the gain value from LCD screen.

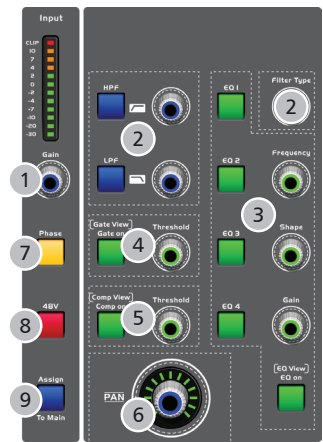
Notes: That adjusting the knob to get the propriate gain value is very important to reduce noise and avoid overload distortion issue.

1.1 LED Sig & Clip LED

- The clip LED will light red when input signal is more than +16dB. It displays optional channel single is overload.
- The signal LED will light yellow when the input signal applied on optional channels reach the peak.
- The signal LED will light green and signal status applied on the optional channel will displayed when the input signal exceeds -48dB.



- Pre AMP -



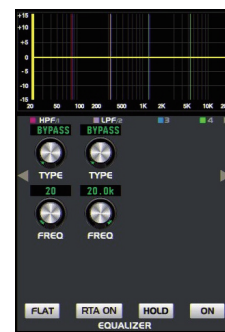
2. HPF/LPF

Press down the HPF/LPF button to enter below interface which LCD screendisplays.

Adjust filter-type knob to change the type of filter. Please refer to the discription of DSP control interface for more operation details.



- HPF/LPF (Thumbnail) -



- HPF/LPF -

3. PEQ

Press down the EQ on/EQ view button to enable PEQ function or return to the PEQ interface as below from any other interface. Once it enters PEQ interface, User can adjust the frequency of audio signal within the range of 20Hz-20KHz, gain value or Q value. Refer to the description of DSP control interface for more operation details.



- PEQ -

Function Description

4. Gate on/Gate View

Press the button to enable the Gate function or return to below Gate interface from any other interface. Then quit current interface by double clicking to enter "Dynamic compressor" interface. The signal can't pass when the Gate value is less than threshold, Or the signal can pass when the Gate value is more than threshold. Refer to the description of DSP control interface for more operation details.



- Gate on -

5. Comp on/Comp View

Press down the button to enable compressor or return to below Comp interface from any other interface. Then quit current interface by double clicking to enter "Dynamic compressor" interface. Under this function, the signal which is more than trigger level will be clipped according to the specified ratio. Also the Comp ratio can be adjusted with related knobs, Refer to the description of DSP control interface for more operation details.



- Comp on -

6. Pan Knob

The encoder controls signal level from left to right for the selected input channel. The LCD display shows the setting in real time. If two channels have been combined as stereo pair, the LCD display will automatically become stereo pan.

7. Phase

Touch this button to reverse the signal of selected channel (reverse the phase by 180°). After touching the button, its background LED illuminates and LCD screen to show real-time reverse setting. Here the polarity control can be used to correct the reversed audio signal and cancel or enhance each other.

8. 48V phantom power button

An independent phantom power is equipped with each microphone input. When user press down the 48V button, warning tips information will appear on the screen and then click the "confirm" on the tips to turn on the phantom power.

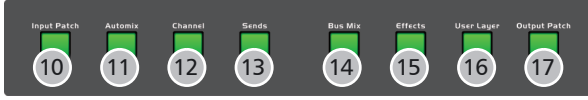
Notes: Only condenser microphone needs phantom power. Don't connect the phantom power to any devices which don't need it. Otherwise the device will be damaged.

9. Assign To Main

Once the button pressed, the "Main Assign" icon on LCD screen will show on. Then signals from the selected channel will be assigned to the main channel.

4

Function Description



10. Input Patch

Press the button to enter the "Auto Mixing" interface. Then select related input channels needed to activate the AutoMix function. Refer to the description of DSP control interface for more operation details.



- Input Patch -

11. Auto Mix

Press the button to enter the "Auto Mixing" interface. Then select input channels needed to activate the AutoMix function. Please refer to the description of DSP control interface for more details.



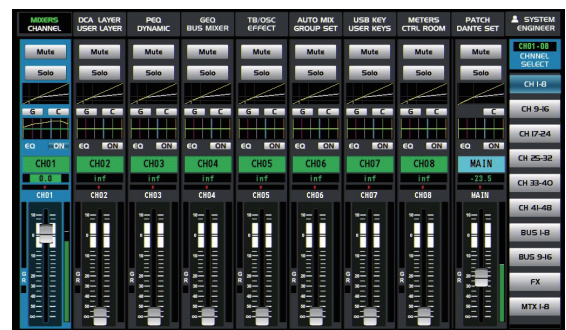
- AutoMix -

12. Channel

Press the button to switch the single channel / Multi channels which shows on LCD screen.



- Channel -



- Mixers -

Function Description

13. Sends

Press the button to enter the interface of auxiliary send to assign the selected channels to Bus1-16, FX1-4, MTX 1-8.

Remark: There is Only FX1 and FX2 effects under the 96K sampling rate mode.



- Sends -

14. Bus Mix

Press the "Bus Mix" button to enter below Bus Mix interface. Please refer to DSP control interface for more operation details.



-Bus Mix-

15. Effects

Press the button to show and edit the setting of internal effects applied on selected channels, Each of the FX owns 12 program effects shown on below interface. Please refer to DSP control interface for more operation details.



- Effects -

16. User layer

Touch User Layer page to enter setting interface to custom channels. Detailed operation refers to the 5.3 USER LAYER of DSP control.

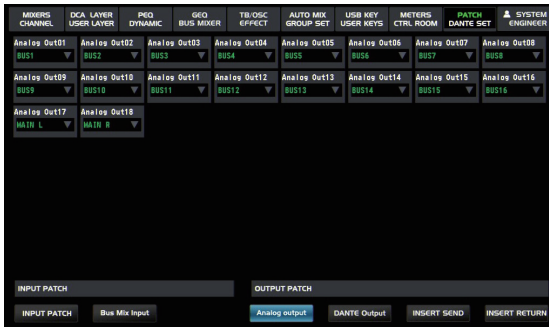
4

Function Description

17. Output Patch

Analog output assignment; DANTE output assignment; Insert assignment; Insert turnback.

All selected channel can be customized by user under each output mode. E.g: BUS01-BUS16, MAIN L/R, SOLO L/R. Detailed operation refers to DSP-control interface.



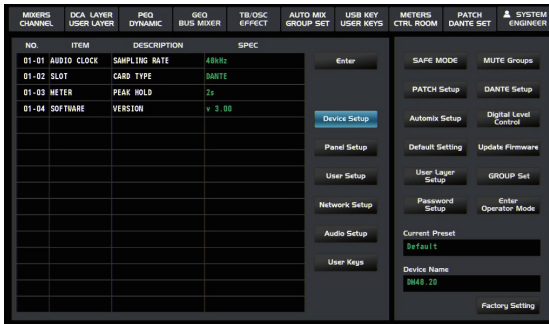
- Output Patch -

18. Selected Channel

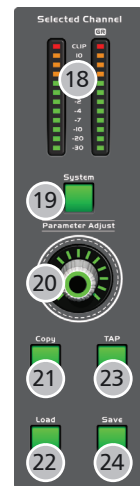
The page can be used to view the size of input signal level.

19. System

Press the button to enter system page. Some parameters can be displayed or adjusted on this page. Details refers to DSP-control interface.



- System -



20. Parameter Adjust

Rotate the knob to adjust the parameter to change selected output channel audio. Detailed parameter can be read on LCD screen. Rotate clockwise to increase and counterclockwise to decrease.

Based on different modules the operation of knob maybe different. Anyway please note related parameters shown on LCD screen during your operation.

21. Copy

Press the button to select some channel or setting parameters need to be copied and then copy them for other channels.

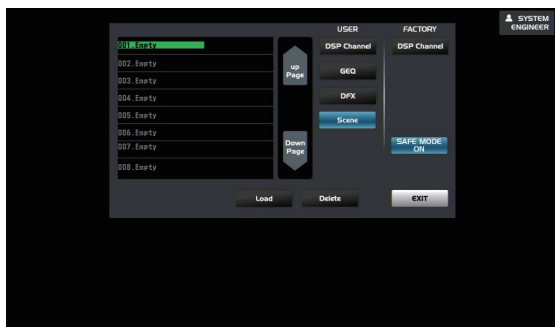


- Copy -

Function Description

22. Load

The page is used to load preset about: DSP Channel, GEQ, DFX, Scene. Details refers to DSP-control interface.



- Load -



23. TAP

The TAP button only can be used to enable the parameter values for DELAY /STDELAY/DELAY REV/STDELAY REV. The flashing speed of TAP will be coincide with the DELAY parameters applied on current effect.

24. Save

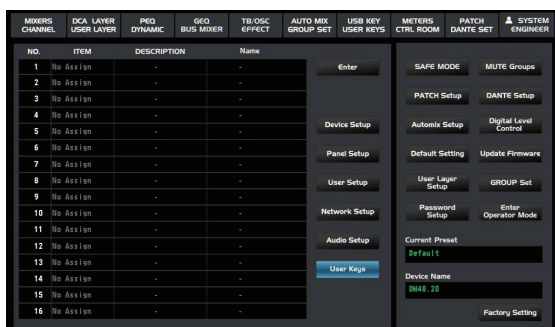
It is used to save the current settings: DSP Channel, GEQ, DFX, Scene.



- Save -

25. User Keys

Availability to set 16 custom shortcut keys for required functionalities via system interface, corresponding key will light red once successful setting. Details refers to DSP-control interface.



- User Key -

4

Function Description

26. LED Level indication

Usually displays the level of the MAIN channel or SOLO channel and indicates the level of MAIN channel by default.

27. Solo Meters

Click the key to switch the indicator from LED level to SOLO level.

28. Phones

It is used to adjust the output level from headphone.

29. C Room

It is used to adjust the level of CTRL OUT.

30. PFL

The default setting for the Solo bus is After-Fader Listen (AFL); by pressing PFL, Pre-Fader Listen is enabled. In either mode, press Solo on any channel or bus to route that channel to the Solo bus and has no effect on the main or on subgroup output mixing.

31. Mono

Press the button to switch the headphone and C Room into Mono playback.

32. USB port

The port can be used to update firmware, GUI picture and MP3 playback/record. CH31/32 work as defaulted playback channel. Please refer to the description of DSP-control interface for more operation details.

33. REC/Stop

34. Play/Pause

35. Solo Clear

Press this button to cancel the solo function for all channels.

36. M Clear

Press this button to clear the mute function for all channels.

37. Stereo Link

Link button Input channels, aux buses, can be linked as a stereo pair. It will illuminate, if the stereo link button has been pressed and enabled. The stereo pairs are predefined and cannot be changed. They are as follows:

Channels 1-2

Channels 3-4

Channels 5-6

etc.....

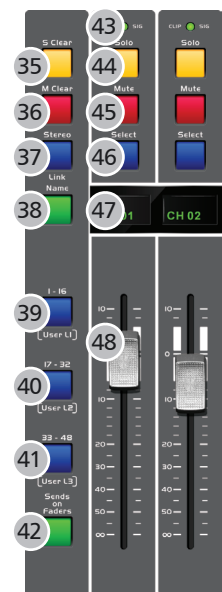
A stereo link can be enabled when either channel in the pair is selected by pressing the Link button. When the Link button is illuminated which indicates the Stereo Link function enabled, all DSP setting, solo status and main assignments are passed to the other channel in the pair.

38. Name

Press down the button to rename the selected channel.

39. 1-16/User L1

Usually the button is used to select channel 01~16, If we press it under user-layer interface, current interface will be switched to User L1.



Function Description

40. 17-32/User L2

Usually the button is used to select channel 7~32, If we press it under user-layer interface, current interface will be switched to User L2.

41. 33-48/User L3

Usually the button is used to select channel 33~48, If we press it under user-layer interface, current interface will be switched to User L3.

42. Send on fader

Press down the button to enter Bus Mix interface.

43. CLIP/SIG

Signal level indicator

44. Solo

Press the "solo" button after monitored channels selected. the corresponding back-light will illuminate and channel signal will be assigned to the C room & headphone outputs.

45. Mute

Press this button will mute selected channel as well as corresponding backlight illuminates.

46. Select button

Press the "select" key corresponding to related channel. All current selected channels will be displayed on LCD screen for DSP adjustment and other settings.

47. LCD Display

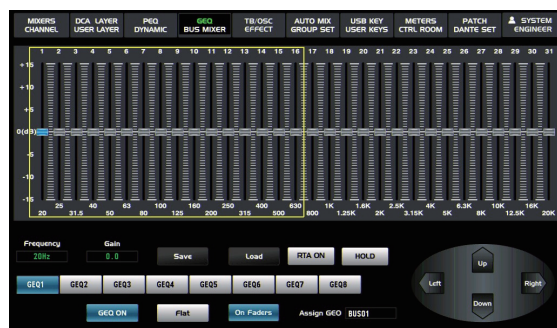
Different interface will be displayed according to different function button operated.

48. Level Faders

There are 16 CH1-16 level faders and 1 main channel fader with total 17 faders which can be used to adjust the level of corresponding channels.

49. GEQ fader

Press this button to activate GEQ function and then the EQ value of each band can be adjusted through 16 faders, Refer to the description of DSP-control interface for more operation details.

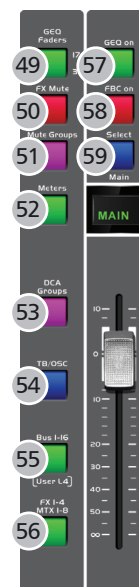
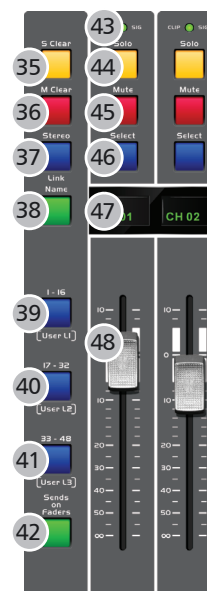


50. FX Mute

This button is for FX function, when press it, effects of FX1-2 will be mute synchronously, which is similar to MUTE button.

51. Mute Groups

Press the button to enter the setting interface of mute group as well as corresponding back-light on. Please refer to the description of DSP-control interface for more operation details.



4

Function Description

52. Meters

Press the button to view the the input /output signal's level activity.

53. DCA Groups

Touch the Fadergroup button to enter the DCA Groups setting interface as well as corresponding backlight lights up. Details refers to the 5.2 DCA LAYER interface of DSP control.

54. TB/OSC

Press the button to enter talkback/signal generator interface.

Please refer to the description of DSP-control interface for more operation details.

55. Bus 1-16/User L4

Press the button to enter Bus interface to assign the signal of CH01-48/FX1-4 to Bus output as well as related control such as Gain adjustment can be proceeded. If we press it under user-layer interface, current interface will be switched into User L4.

56. FX1-4/MTX1-8

Press the button to enter FX1-4/MTX1-8 channel page to proceed related controlsuch as channel assignment or gain adjustment.

57. GEQ on

Press the button to turn on or turn off the GEQ switch

58. FBC on

Press the button to turn on or turn off the FBC switch.

59. Main

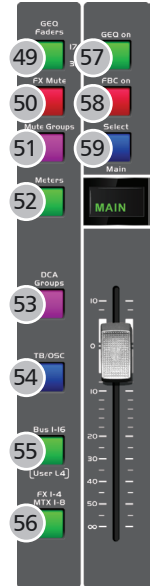
Press the button to enter the main channel page.

60. Headphone output

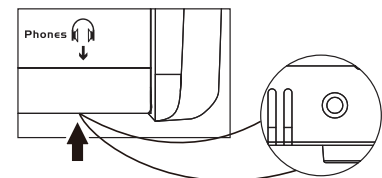
The port is used to connect headphone.

61. LCD display

It is used to diaplsy current information such as channel type, channel name , level value etc.

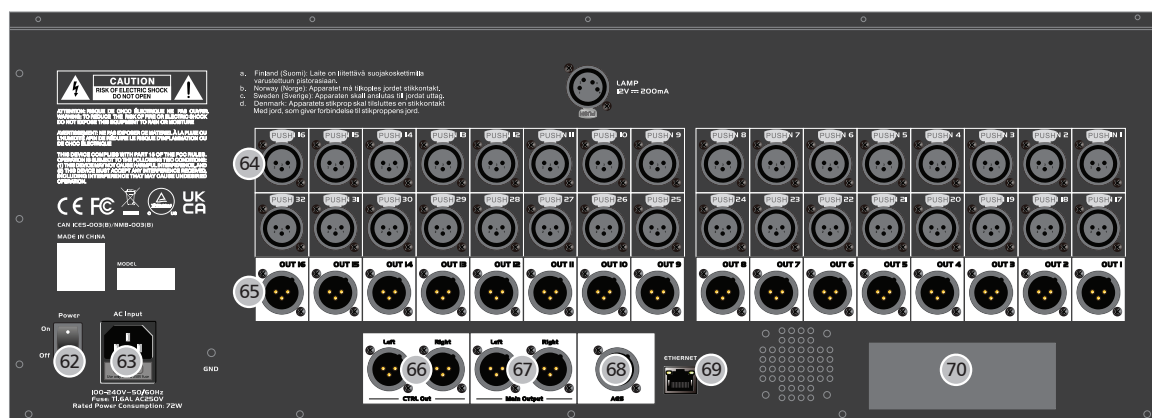


Headphone



Function Description

Rear Panel



62. Power

Turn on the switch to power your mixer.

63. AC power

The provided power cable can be plugged in.

64. MIC Input Jack

This Digital Mixer equips 32 microphone preamplifiers for use with all types of microphones. The preamplifier has a Class A input buffer which followed by a dual-servo gain stage. This arrangement will bring ultra-low noise and wide gain control which help to boost signals without increasing unwanted background noise.

65. OUTPUT 1-16

As a mixing audio output port, It can adjust MATRIX assignment according to DSP settings.

66. CTRL OUT

These are the balanced control-room outputs. The level is controlled by the knob "C-Room" on the front panel.

67. Main output

This Digital Mixer features both XLR and TRS main outputs.

68. AES

AES digital signal can output from the selected channels among BUS1 ~16. Except the function "SIDECHAIN", other parameters have the same function as Bus channel.

69. Ethernet

This port is for Ethernet control which can be proceeded via APP linkage after connected to the router.

70. Extension Module

The extension module used to realize some special function.

Please contact with distributor to get more information about the optional modules.

- Ensure the same sampling ratio applied on all equipments before Digital Audio Expansion System is linkaged.
- After the DANTE32S card inserted, please try to switch current sampling ratio in unit's system menu one time in order to ensure the same sampling ratio.
- It is recommended to use gigabit switches under 96K routing mode.
- When DANTE32S card inserted, it is needed to be set in switch mode.

5

DSP Control

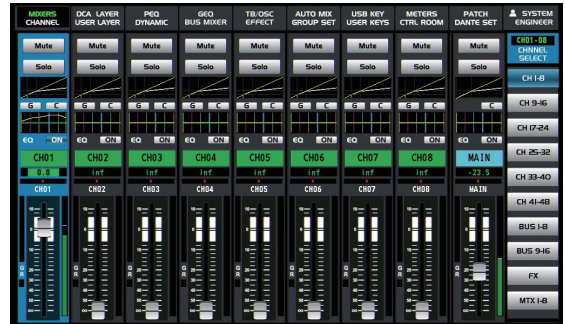
In addition to control directly on the machine, the Digital Mixer can also achieve remote operation via the app, which greatly facilitates the users.

5.1 Mixer Interface

Once you turn on the mixer switch, the Mixer interface will come to your eyes at first if you have preset, now let's see what you can get in this interface.



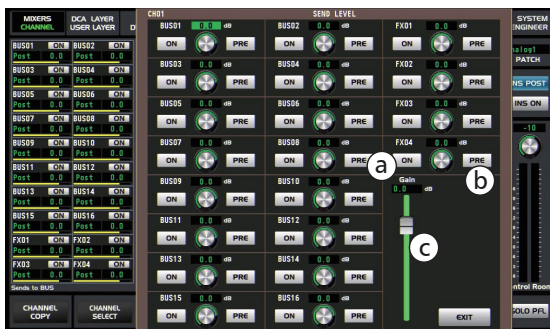
- Channel -



- Mixers -

5.1.1 BUS page

Touch the display box on the left side of the page to jump to the following BUS page. Page shows BUS01-BUS16, FX1-FX4(48K modes). FX1-FX2(96K modes).



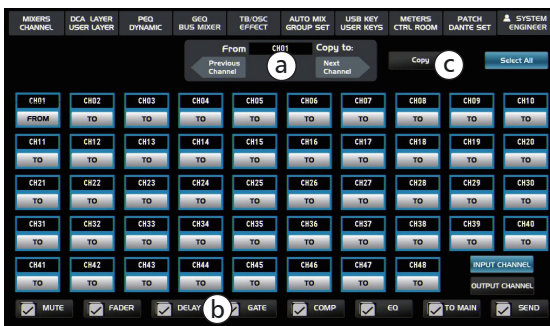
a). Touch ON switch to enable the BUS channel.

b). It is default to select "Post" so that the Gain of BUS channel can be controlled by fader, If "PRE" selected by touching, the Gain of BUS channel will be out of fader's control.

c). The Gain of BUS channel selected can be adjusted by sliding the fader icon or rotating the parameter -adjust knob on the panel.

5.1.2 CHANNEL COPY

Touch the button to enter following channel copy page.



a). Select a channel or bus that you want to copy its settings onto other channels, then press Copy button, you can see the selected channel or bus will flash.

b). Touch the tick in the box to select the parameter you want to copy.

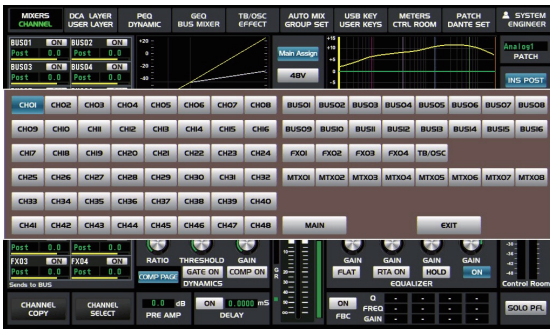
c). Press "copy" button to make channel copy. Please notice the information displayed on LCD screen during your operation.

DSP Control

5.1.3 Channel Select

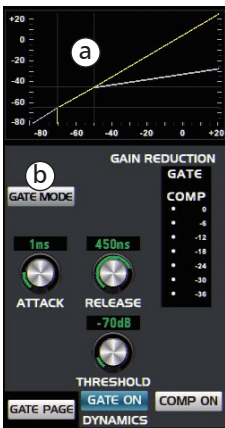
Touch "Channel Select" icon as right to enter the interface as below:

Selecting the channel and click "Enter" and then it will jump to the selected channel for saving and then exit current interface. If none channels selected, please click "Exit" to exit current interface.



5.1.4 Gate Interface

The "Gate" function can be applied on CH1~32 of this unit. The backlight of this control item will be on or off to keep the same step with the status of "Gate" button on the panel and real-time settings can be displayed on LCD screen.



a). Click the Comp curve in "a" area as left image to jump to the interface of dynamic EQ.

b). There are three modes applied on the "gate mode" button such as "gate mode", "Duck mode" and "Duck SRC". When the duck function used, the channel set under "Duck SRC" is prior to the channel set under "Duck". Please refer to piont#5.5 "dynamic EQ interface" for more details.

5.1.5 Comp

All of CH01~32, BUS01~16, MTX01~08 and MAIN channel are equipped with "COMP" function. The backlight of this control item will be on or off to keep the same step with the status of the front panel's COMP button. And real-time settings displayed on LCD screen.



a). PRE-EQ/POST-EQ button

b). The scope of CH01-16/CH17-24/CH25-32 can be selected by the "SIDE CHAIN".

c). Preamp gain module applied on CH01~48.

d). Delay function is available for CH01-32, BUS01-16 and MAIN channel based on 48K sampling ratio, While available delay function applied on CH19-32/BUS01-16 /MAIN channel based on 96K sampling ratio.

Please refer to #5.5 Dynamic EQ interface for other operation details.

5

DSP Control

5.1.6 Faders And Other Interface

a). Main Assign: Click it to assign the selected signal to the main channel, And its backlight will synchronize the button LED on front panel to light on or off simultaneously. And each channel is enabled by default.

b). 48V: Click it to provide the 48V phantom power as well as corresponding backlight illuminate. At the same time a prompt window will pop up "Are you sure to open +48V phantom power of the channel".

Note: Only condenser microphone needs phantom power. Don't connect the phantom power to any devices which don't need it. Otherwise the device will be damaged.

c). Phase: Touch this button to reverse the signal of selected channel (reverse the phase by 180°). After touching the button, Its background LED illuminates and LCD screen to show real-time reverse setting. Here the polarity control can be used to correct the reversed audio signal and cancel or enhance each other.

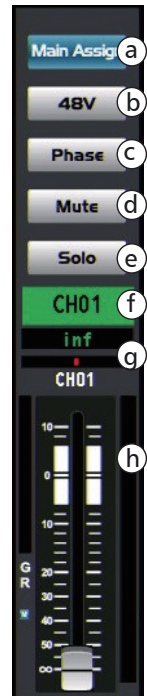
d). Mute: Click this button to mute the selected channel and its backlight will synchronize the Mute button on front panel to light on or off simultaneously.

e). Solo: Click this button to monitor the audio signal of selected channel and its backlight will synchronize the Solo button on front panel to light on or off simultaneously.

f). The icon shows the current channel, Click this box, a virtual keyboard will appear on the screen, and you can customize the name & color applied on the current channel at this time.

g). Pan Icon: It indicates the left and right channel positions of the current audio. And user can adjust it by the Pan knob on the front panel.

h). Fader: Slide it to adjust the audio signal and it synchronize the fader on front panel to control input level and catch the same effect. Also the gain applied on faders will automatically become "0" dB if both "solo" button and "select" button are pressed simultaneously.



5.1.7 EQ Interface



a). Touch the switch to engage or disengage the equalizer for the selected channel. It will illuminate to indicate that the equalizer has been touched and enabled. The LCD display shows the EQ setting in real time. Its parameters can adjust by sliding the curve on the screen directly or using up & left & down & right key to choose the function that you want to modify and use the Parameter Adjust knob to set the value.

b). Touch it, a dialog box saying "Are you sure to flat the EQ? " will prompt to check with you, if you click "yes", all the setting values in this page will restore to default, while choose "no" can keep your settings.

c). FBC switch, The FBC function is available for CH01-08/CH17-24/BUS01-08 channel.

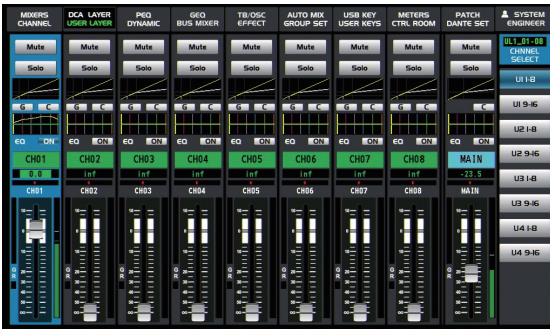
d). Touch the icon to enter PATCH page. Here user can assign the routing to channels.

e). It displays the EQ curve here and click it to jump to PEQ interface.

DSP Control

5.2 DCA LAYER

Click the "DCA LAYER " box on screen or press the "Fader Groups "button on the front panel to enter below interface. And channel grouping can be set according to actual needs and usage habits and quickly call the set grouping method on this page. Details refers to the 5.11 group-set interface.



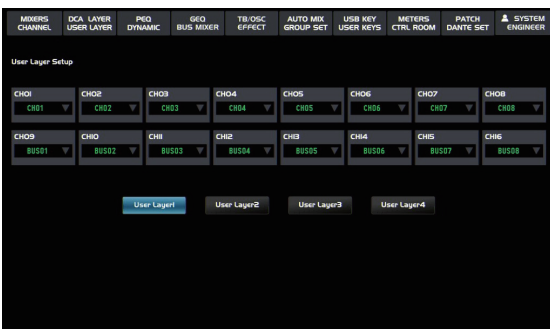
5.3 USER LAYER

Click "user layer" box on screen or press the "User Layer " button on the front panel to enter below interface. There are total 4 pages (U1~U4) which can be selected. 16 PCS of faders can be set on each page and User can switch or review current channel status by clicking the dropdown button of "Channel select" icon on the right side or pressing the front-panel button "1-16/User L1, 17-32/User L2, 33-48/User L3, Bus1-16/User L4" under "User Layer "page.



Setting methods:

Press the "system" button and click "user layer setup" to enter below interface, Here the channel combination and sort orders can be customized by user.



5.4 PEQ Interface

Press down the "PEQ" button to enter PEQ interface. Then the audio signal's frequency/gain/EQ value can be adjusted within 20Hz- 20KHz range.

5

DSP Control



a). Touch "Channel Select " icon to switch current channel.

b). Touch the "Return To Single Page" icon to return to the interface of single channel page.

c). Touch the "Mute" icon to silence selected channel audio signal.

d). Touch the "Solo" icon to monitor selected channel audio signal.

e). Rename the name of channels by clicking it.

f). Slide the fader icon to adjust the audio signal applied on the channel.

g). Touch the icon to copy all relative setting of current channel to other channels.

h). Touch the switch to engage or disengage the equalizer for the selected channel.

i). Touch it, a dialog box saying "Are you sure to flat the EQ? " will prompt to check with you, if you click "yes", all the setting values in this page will restore to default, while choose "no" can keep your settings.

j). The different parametric value corresponding to EQ can be adjusted by moving fader, The function is the same as the "Parameter Adjust" knob on the front panel and both change simultaneously.

k). touch Save to save current selected item's preset.



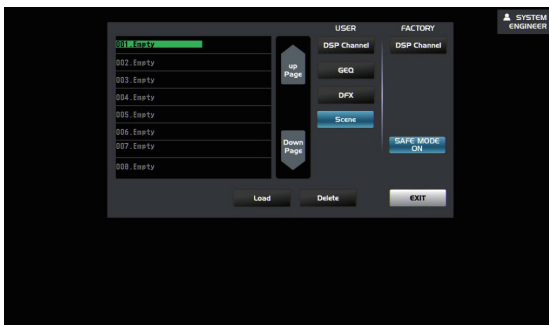
1). Key in the customized name

2). Select saving scene

3). Page up

4). Page down

l). Touch "Load" icon in below image to load current selected item's preset.



1) If clicking the "channel" button under "factory mode", 16 kinds of preset parameters will be listed on the left for calling.

DSP Control

2). If clicking the "channel" button under "factory mode", 16 kinds of preset parameters will be listed on the left for calling.



3). If clicking the "safe calling" button under "factory mode", it will enter below page, here user can cancel or tick some parameters according to own needs and then load them. Please refer to the "system setup interface" of section# 5.18 to get more details about safety calling operation.

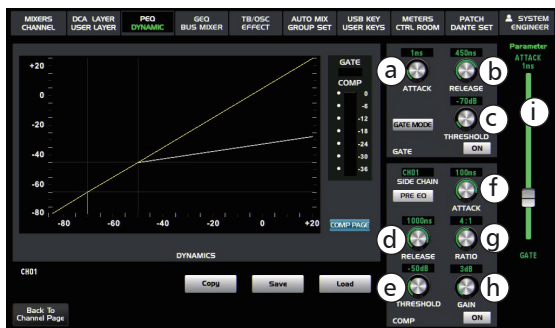


m). Press the "HOLD" icon to keep the MAX value applied on current dynamic audio.

n). Press the "RTA ON" icon and then user can review the activity of 20~20KHz dynamic audio applied on all channels.



5.5 DYNAMIC



a). Touch it to set the time for the gate to change from closed to open and It can be set from 0.5 to 200 ms. The noise issue can be avoided efficiently if ATTACH time set appropriately.

b). Touch it to set the amount of time for the gate to go from open to fully close. It can be set from 0.01 to 1 second. The noise issue can be avoided efficiently if the Gate off- time set appropriately.

c). Touch it to set the trigger level of noise Gate for the selected channel. It can be set from 20 to -84 dB. The trigger level will decide which level at the gate will open. An audio signal which exceeds the trigger level will go through smoothly.

d). The knob used to set the amount of time for the gate to go from open to fully close. It means to set how long it will take for the signal which is lower than trigger level to return to normal after being released. Usually the time is set from 10~1000 milliseconds.

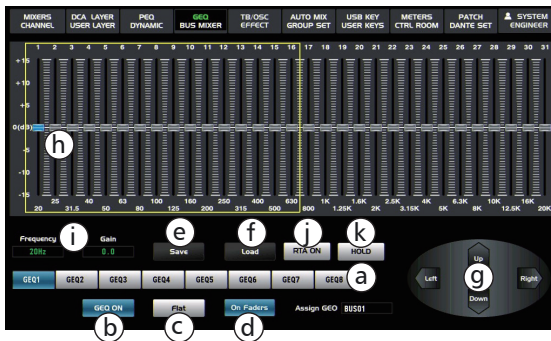
5

DSP Control

- e). Touch it to set the compressor threshold for the selected channel. If the amplitude of an audio signal exceeds a certain threshold, the compressor will reduce the level of this signal. The threshold can be set from -30 to 20 dB.
- f). Touch it to set the compressor's attack setting for the selected channel. You can set the attack from 10 to 150 milliseconds.
- g). Touch it to set the compression ratio for the selected channel. It means the ratio of the output level to the input level based on ratio scope 1:1~inf:1. For example, a ratio of 4:1 means any signal which is higher than trigger level will be compressed by 4:1 ratio.
- h). Touch it to set the compression gain of the selected channel. When it compress the signal, that the gain goes down usually leads to the attenuation of the whole level, At this time the button can be used to recover the lossed level and readjust the previous compression ratio. And the range of gain adjustment is usually 0dB to +24dB.
- i). When some button is selected, user can change its input level or corresponding parameters by moving the fader icon or rotating the "Adjust Parameter" knob.

5.6 GEQ Fader

This unit equipped with a stereo main output and real-time spectrum display, a total of 31 EQ frequency points. 8 GEQ channels based on 48K, and 4 GEQ channels based on 96K. Each channel can select any channel among Bus1-16, MTX1-8 and Main.

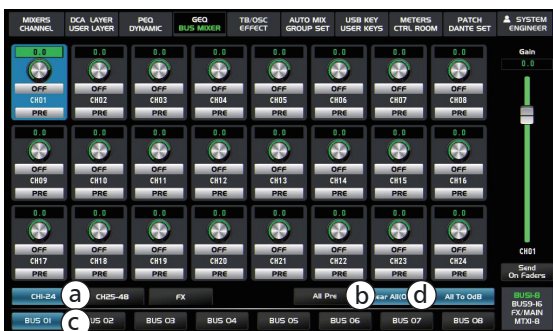


- a). it is used to switch the channel, When the channes set are the same, only the final selected one takes effects.
- b). "GEQ ON": as the switch for GEQ function.
- c). "Flat": it is used to recover the default value of GEQ.
- d). Click the key to enable all faders on the front panel so that them synchronize with the faders on screen.
- e). "Save": Touch it and then the save interface will pop up to save current presets.
- f). "Load": Touch it and then the load interface will pop up to load current presets.
- g). Click the button"upper,down,left or right" to adjust the fader icons of every channel to adjust the frequency.
- h). In this area user can adjust the gain value of each band with the fader icon on LCD screen or "Adjust Parameter" knob.
- i). Related frequency &gain value adjusted will be displayed in this area.
- j). Spectrum Analysis
The switch can be used to review the audio dynamic spectrum from 20Hz to 20KHz.
- k). Hold
Press the key to keep the MAX audio dynamic value applied on current audio.

DSP Control

5.7 BUS MIXER

Press the "Bus Mix" button on the panel to enter below bus mixer interface. The signal inputs into CH01-48/FX1-4 (Only FX1-2 channel available based on 96K sampling ratio), Then output from Bus1-16/FX1-4/MTX1-8/Main channel through the bus mixer. This is linked with the BUS channel page& assignment page on home page and related gain value changes synchronously. When each channel is enabled on this page, the corresponding BUS1 channel will turn on, At this time the gain value of selected channel can be adjusted by sliding the fader on the right.



- a). Click it to enter corresponding page.
- b). All will restore to the default value 0dB once clicking it.
- c). Click it to select which channels will be assigned to the BUS.
- d). Click it to clear all.

5.8 TB /OSC



5.8.1 Talkback

- a). Press the "PATCH" button on the front panel or touch "PATCH" icon on the right up corner of LCD display,. Then touch the "TB/OSC" button from the window pop up to select related channels.
- b). Press the "TB/OSC" button on the front panel to enable it.

c). Enable the "talkback gain adjustment" knob on the monitor-room interface, the output gain of other channels will be attenuated by adjusting the gain value so that the talkback channel will be equipped with priority function.

d). The "Talkback" channels can be assigned to BUS1~16 and Main channel.

5.8.2 Signal generator

The generator can produce automatically multiple noise such as pink noise, 100Hz,1kHz,10kHz and so on. The different noise can be generated by touching different knobs. Those noise can be assigned to BUS1~16/ Main channel. And the dynamic spectrum of this signal can be observed in a parametric or graphic equalizer.

5.9 About EFFECT Interface

The unit supports 12 effects setting. The corresponding effect parameters selected on the screen can be adjusted with parameter-adjust knob. Details of each effects described as below table.



Hall	Room	Plate	Delay
Stereo Delay	Karaoke	Flanger	Chorus
Delay Rev	StDelay Rev	Flanger Rev	Chorus Rev

5

DSP Control

No.	Preset	Description	Parameters
1	Hall	Simulate the sound effect of a large hall	Delay before crossover, attenuation, room size, HF damping, effect output or original sound output.
2	Room	Simulate the effect of a studio with echo	Delay before crossover, attenuation, room size, HF damping, effect output or original sound output.
3	Plate	Simulates the effect of a classic gramophone record	Delay before crossover, attenuation, room size, HF damping, effect output or original sound output.
4	Delay	Make the sound output a little later than the input	Delay time, attenuation, HF damping, effect output or original sound output.
5	Stdelay	Add another input sound to the stereo output at a different time.	L/R channel time, L/R channel attenuation, HF damping, effect output or original sound output.
6	Karaoke	Analogue karaoke sound effects	Mixing output, echo output, original sound output.
7	Flanger	Simulate the effects when different persons play the same instruments at the same time.	Feedback, Depth, modulation, effect output or original sound output.
8	Chorus	The illusion of playing multiple instruments can be created, when playing with a single instrument.	Feedback, Depth, modulation, effect output or original sound output.
9	DelayRev	The delay of Room effect.	Delay before crossover, accelerated attenuation, Room size, Rev Hi, Rev Out, echo time, Echo Hi, Echo F.B, Echo output or original sound output.
10	StDelayRev	The stereo delay of Room effect.	Delay before crossover, accelerated attenuation, Room size, Rev Hi, Rev Out, L/R channel time, Echo output or original sound output.
11	FlangerRev	Stereo Chorus and Hall Reverb.	Delay before crossover, accelerated attenuation, Room size, Rev Hi, Rev Out, Modulation F.B, Modulation depth, Echo output or original sound output. FM, Modulation output or original sound output.
12	ChorusRev	Simulates the sound effects when turning the horn and woofer.	Delay before crossover, accelerated attenuation, Room size, Rev Hi, Rev Out, Modulation F.B, Modulation depth, Echo output or original sound output. FM, Modulation output or original sound output.

DSP Control

5.10 AUTO Mix

Once AUTO MIX activates, the level gain applied on all channels will go down automatically. It can effectively reduce howling, reverberation and other external noise produced when multiple microphones are used simultaneously.



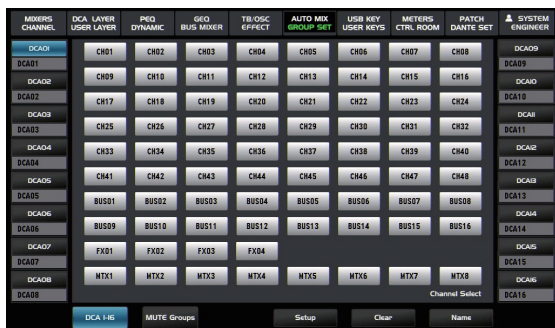
- a). Auto-mix switch: Touch the button to activate the selected channel.
- b). Clear-All button: Touch it to clear all saved datas.
- c). Active time: Means the response time.

5.11 GROUP SET

• DCA Group Set

Touch the "SYSTEM" icon to select "DCA Setup" or touch the "GROUP SET" icon to enter "Group Set" interface as below image:

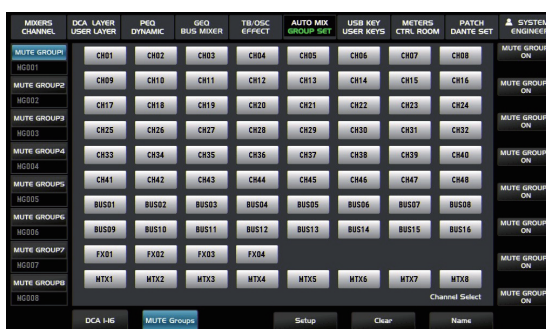
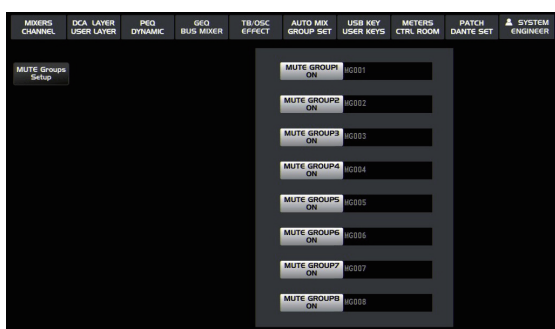
For example: If the DCA 01 group is selected, Then click "Setup" to choose multiple channels which will be grouped together such as CH01, CH02, CH03 and so on, Then click "Name" to custom the name & color mark of the group, Finally click "Setup" to confirm above settings, If the selected channels which output 0dB such as CH1, CH2 or CH3, They can be controlled by DCA1 Fader too.



• Mute Group Set:

Touch the "System" icon to select "Mute Groups" or press the "Mute Groups" button on the front panel to enter "Mute Groups" interface and then click "Mute Groups Setup" to enter the interface as below:

For example: If the "MUTE GROUP1" is selected, Then click "Setup" to select multiple channels which will be grouped together such as CH01, CH02, CH03 and so on. Then click "Name" to custom the name of the group, Finally click "Setup" to confirm above settings, Touch the switch of "MUTE GROUP1" to mute/unmute these channels linked.



5

DSP Control

5.12 USB Key Interface

Touch "USB KEY" icon to enter below interface:



- a). Music files
- b). User Datas
- c). Previous page/ Next Page
- d). Stop/Play/Record
- e). Repeat/Pause/The next

f). Channel Selection: Click it and then current output channel will be switched to CH31/32 automatically.

a). MusMusic File: To show the list of music files.

Music Play: Insert a USB flash drive loading audio files in MP3 format into the device, Then these songs will be read and listed on the interface. Click "Play" icon and turn on USB/XLR, Then the audio signal of these songs will input from CH31/32 and then CH31/32 will be assigned to the BUS or Main, So that user can hear these songs played.

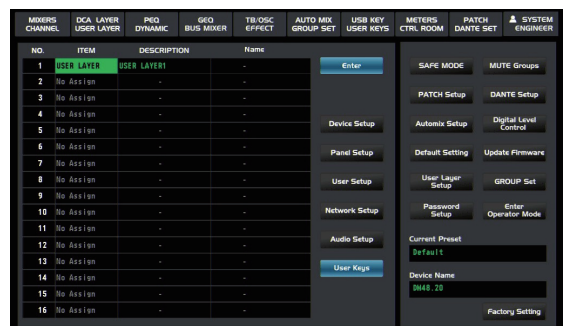
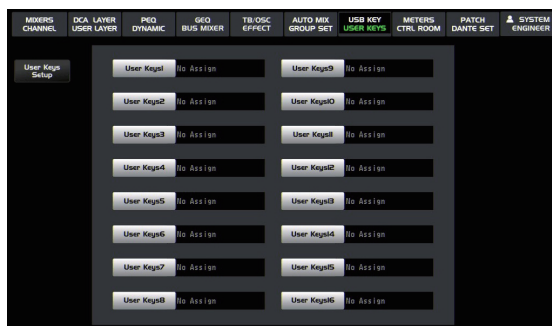
USB Record: The default recording signal inputs from "Bus03/04", Any channel from "Bus01~16, MainL/R" can be selected by following menu "System>>Audio Settings>>REC Input" as recording inputs. Also use the recording input adjustment button to adjust the size of the recording signal. After the recording is completed, the audio files automatically named starting with "REC" will be updated to the audio file list.

b). User Date:

Click the icon to key in passwords "DM48.200" and then enter "user data" page. It is available to load the set parameters by U-disk into your mixer for calling or save the set parameter of your mixer into U-disk for backup.

5.13 USER KEYS

Touch "USER KEYS" box on the LCD screen and then touch "User Key Setup" icon or touch "User Keys" icon under "System" page to enter below interface, There are 16 buttons which can be used as shortcut keys for different functions. Relative functions mainly include USER LAYER, USB FUNCTION, DANTE SETUP, MUTE GROUP, DCA SET UP, FADER GROUP, CH SELECT, USB PLAYER, Preset Recall and MAIN MUTE SOLO. The NO. shown on below interface is corresponding to the button's No on the panel. Firstly user can select any No which you want from NO.1~NO.16 and then rotate the "parameter adjust" button to select the function which you want to set shortcut, Finally touch "user layer" to complete settings. Later if you want to use the function, you will only press the corresponding button on the panel to enter this function's interface. function, you will only press the corresponding button on the panel to enter this function's interface.

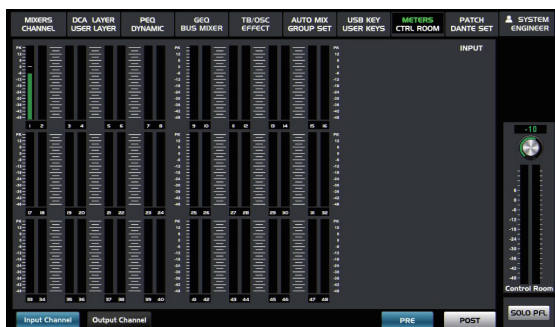


DSP Control

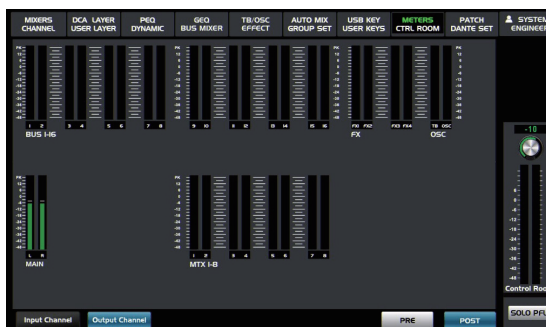
5.14 METERS

Touch "Meters" box to enter below interface:

User can review related audio signal before (PRE) or after (POST) of the input/output channel.



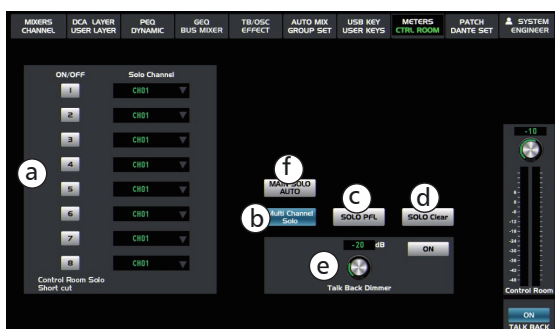
- PRE -



- POST -

5.15 CTRL ROOM

Touch the "Ctrl Room" icon to enter below interface:



a). C-Room setting list. In each group the CH01-48 / BUS1-16 / FX01-04 / MTX1-8 and Main channel can be selected or adjusted with the button on front panel.

b). Use it to solo multiple channels at the same time.

c). Touch it to activate the PFL function as well as the button light illuminates, At this time solo outputs will be out of control by Fade Gain applied on assign channel. While the solo outputs will be under control of fade Gain once the PFL function disables.

d). Touch it to clear all solo settings and restore the default settings.

e). After it activates, it is necessary to choose one channel between TB and OSC for the attenuation of SOLO output gain.

f). Once it is activated, the main channel will automatically monitor.

5.16 PATCH



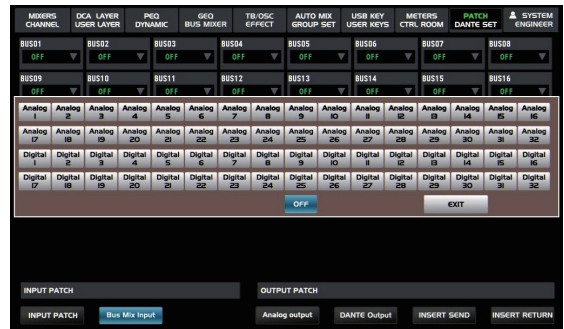
5

DSP Control

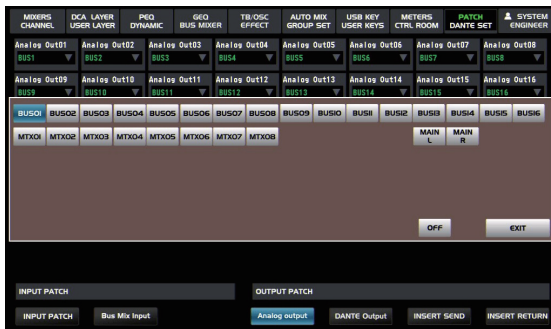
a). Input Patch: Select CH1, click on the screen to select input signal source. Such as analog 1-32, digital 1-32.



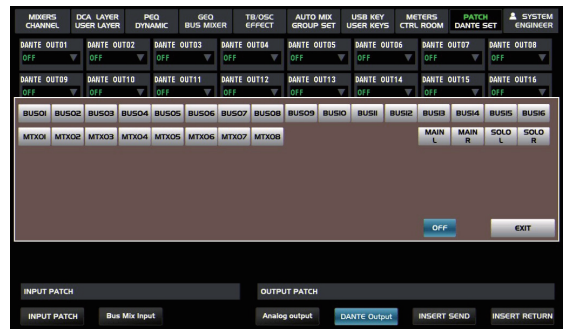
b). Bus Mix Input: It is used to let input signal enter output bus directly without passing through the DSP processing of input signal. Audio can transmit once both input channel and BUS output selected.



c). Analog output: it is used to select which channels input from analog such as Analog1, If Bus01 selected, the signal of Bus01 will input from out1 of analog.



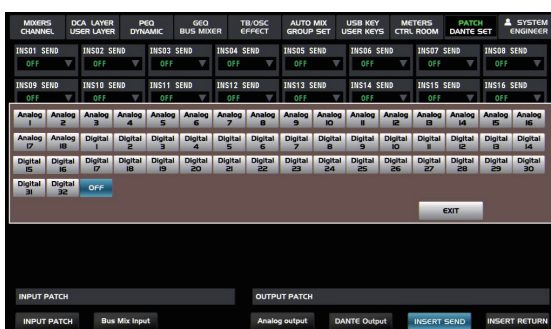
d). Dante 1-32: It is used to select which channels input from Dante. E.g if Bus1 is selected for Dante out1, It means the signal output from Dante Out1 is Bus01.



e). Insert Send

Total 32 inserts(INS01-32 SEND)here and user can select any sound source among "analog 1-18" or "digital 1-32"as audio direct send and then output from corresponding ports by selecting "Analog output setting>>Analog Out01-18 "or" Dante output>>Dante Out01-32".

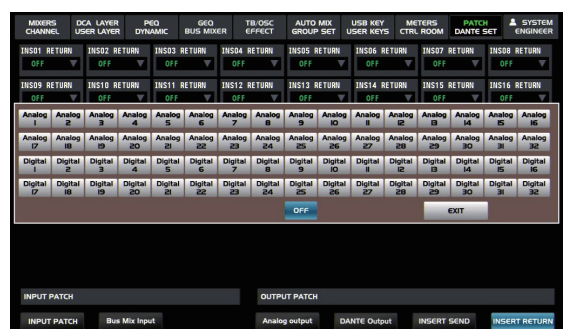
For example: selecting Analog 1 from "INS01 SEND", the CH01 signal will send and output from the port of "Analog output setting>>Analog Out01".



f). Insert Return

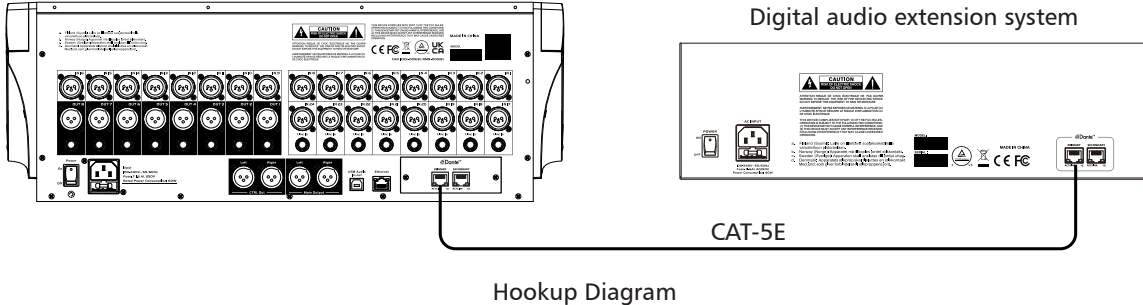
User can select "Analog 1-32" or "Digital 1-32" from "NIS01-32 Return" as sound sources to directly return. Select the INS channel under mono-channel page and click the "INS on" to enable it.

E.g: Select "Analog 1" from "INS02 RETURN", Audio signal will input from CH01 and insert into CH02. Then switched to mono-channel page by pressing the "channel" button on the panel or clicking "mono" icon on LCD screen. Select CH02 and turn on "INS On" button and then audio signal will input from CH02 and output from Bus/Main channel. That whether the signal level can be controlled by corresponding faders will be decided by operating the POST or PRE button.

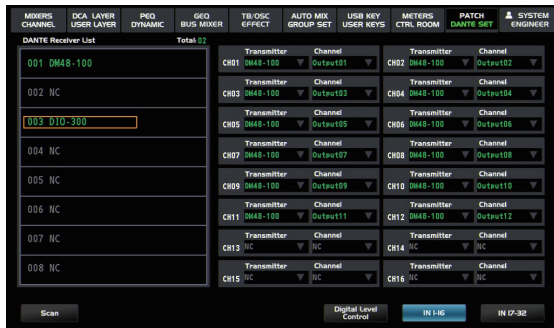


DSP Control

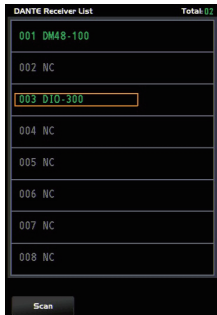
5.17 Dante Setting



Click it to enter Dante setting page, firstly connect "digital audio extension system " to "mixer" with network cable according to above hooking diagram. Then click "Scan" to search, the name of linked devices will be listed.



Select the name of the digital signal receiving device:



In below box user can select the device and channel which will be sent.



5.18 SYSTEM ENGINEER

Touch "System Engineer" icon to enter below interface:



a). "Enter"key: Touch it to reconfirm once some parameters are changed so that current settings can be saved.

5

DSP Control

b). "Device Setup" key: Touch it to enter below interface:

NO.	ITEM	DESCRIPTION	SPEC
01-01	AUDIO CLOCK	SAMPLING RATE	48kHz
01-02	SLOT	CARD TYPE	DANTE
01-03	METER	PEAK HOLD	2s
01-04	SOFTWARE	VERSION	v 3.00

01-01	Sampling Rate	48KHz and 96KHz as optional modes
01-02	Card Type	DANTE and NO CARD as two status, It shows DANTE if DANTE card inserted. And shows NO CARD if none card inserted.
01-03	Meter Peak holding time	inf---permanent . 2s---Holding 2 seconds OFF---None. Above three options
01-04	VERSION	Current firmware version

c). "Panel Setup" key: Touch it to enter below interface:

NO.	ITEM	DESCRIPTION	SPEC
02-01	LCD PAGE	AUTO CHANNEL SELECT	DISABLE
02-02	LCD PAGE	AUTO RETURN	OFF
02-03	LCD PAGE	DEFAULT PAGE	Single Channel
02-04	LCD PAGE	DELAY UNIT	millisecond
02-05	ACC SWITCH	LINK MODE	STEREO LINK
02-06	CHANNEL	REMOTE SYNC	ENABLE
02-07	CHANNEL	LCD BACK LIGHT	3

02-01	AUTO CHANNEL SELECT	Selecting ENABLE to open it and DISABLE to close it. If it opens, click the Mute/Solo button on one channel to be switched to the corresponding channel.
02-02	Auto Return	Three options can be selected such as 3min, 5min and OFF. After relative function set, it will return to default interface upon time it up.
02-03	Default Page	Single Channel and Multi Channel as two options. It will return to the selected page by default after setting.
02-04	Delay Unit	Meter and Millisecond as two options.
02-05	Link Mode	Stereo Link and Fader Link as two options. Both modes can be linked by fader. Difference means stereo link also has the function of channel link.
02-06	REMOTE SYNC	ENABLE selected to turn on and DISABLE selected to turn off. It will synchronize with ipad if it turns on.
02-07	LCD brightness setting	The dimming can be adjusted based on the Lighting grade 1-8.

d). User setup: Click it to enter below interface, There are two options (ENABLE and DISABLE) for each item and user can setup according to actual needs.

NO.	ITEM	DESCRIPTION	SPEC
03-01	OPERATOR	DIGITAL GAIN	ENABLE
03-02	OPERATOR	FADER&MONITOR PANEL	DISABLE
03-03	OPERATOR	CHANNEL MUTE&SOLO	ENABLE
03-04	OPERATOR	CHANNEL DSP FUNCTION	ENABLE
03-05	OPERATOR	CHANNEL FBC	ENABLE
03-06	OPERATOR	CHANNEL SEND	ENABLE
03-07	OPERATOR	CHANNEL COPY	ENABLE
03-08	OPERATOR	GEQ	ENABLE

03-01	Digital Signal Gain	ENABLE
03-02	Fader & Monitor Panel	DISABLE
03-03	Channel Mute/Monitor	ENABLE
03-04	Channel DSP	ENABLE
03-05	Channel FBC	ENABLE
03-06	Channel signal sends	ENABLE
03-07	Channel Copy	ENABLE
03-08	GEQ Adjustment	ENABLE

DSP Control

e). Network setup: Click it to enter below interface:

NO.	ITEM	DESCRIPTION	SPEC
04-01	NETWORK	REMOTE CONTROL	CONTROL
04-02	NETWORK	MAC ADDRESS	0-A1-B0-0-0-1
04-03	NETWORK	IP ADDRESS	192.168.1.10
04-04	NETWORK	IP MODE	STATIC

04-01	Remote control	CONTROL, MONITOR ONLY, DISABLE
04-02	MAC address	Display MAC address
04-03	IP Address	Display IP address
04-04	IP Mode	Two Optionals: Static / Dynamic

f). Audio setup, Click it to enter below interface:

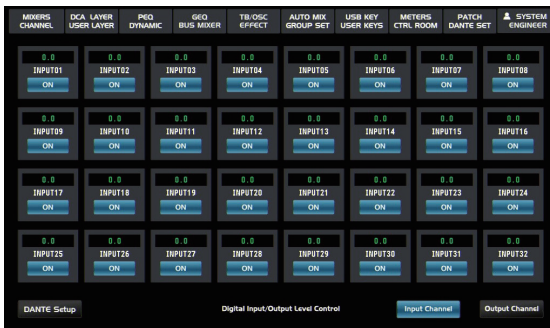
NO.	ITEM	DESCRIPTION	SPEC
05-01	FBC	RESPONSE	FAST
05-02	FBC	SENSE	HIGH
05-03	REC	REC INPUT	BUS3-4
05-04	REC	REC LEVEL	-10dB
05-05	DUCK	DUCK ACTIVE TIME	100mS
05-06	DUCK	DUCK DEPTH	-80dB
05-07	AES	AES OUTPUT	BUS1-2
05-08	GEQ	OUTPUT GEQ1-2	BUS1-2
05-09	GEQ	OUTPUT GEQ3-4	BUS3-4
05-10	GEQ	OUTPUT GEQ5-6	BUS5-6

05-01	FBC speed	FAST and SLOW as response speed can be selected here
05-02	FBC speed	Three optional speed (LOW/MID/HIGH) for FBC sensing speed.
05-03	Recording setting	Available to set BUS01-16 or MAIN LR as recording inputs, BUS3-4 inputs by default.
05-04	Recording level	Total 12 recording levels to be adjusted from -15~+10dB, -10dB level set by default.
05-05	Duck trigger time	Total 12 time slots from 10~600mS, 100ms set by default.
05-06	Duck depth	Total 12 gears from -80~-2dB , -80dB set by default.
05-07	Digital Audio Output	Select output channel from BUS01-16, Except sidechain function, other parameters have the same function as Bus channels'.
05-08	GEQ Output1-2	Click "GEQ1" icon to switch to GEQ interface from BUS01-16/MTX1-8/MainLR. In GEQ2, There corresponding channels which have been setup can be called.
05-09	GEQ output 3-4	Click "GEQ3" icon to switch to GEQ interface from BUS01-16/MTX1-8/MainLR. In GEQ4, There corresponding channels which have been setup can be called.
05-10	GEQ output 5-6	Click "GEQ5" icon to switch to GEQ interface from BUS01-16/MTX1-8/MainLR. In GEQ6, There corresponding channels which have been setup can be called.
05-11	GEQ output 7-8	Click "GEQ7" icon to switch to GEQ interface from BUS01-16/MTX1-8/MainLR. In GEQ8, There corresponding channels which have been setup can be called.

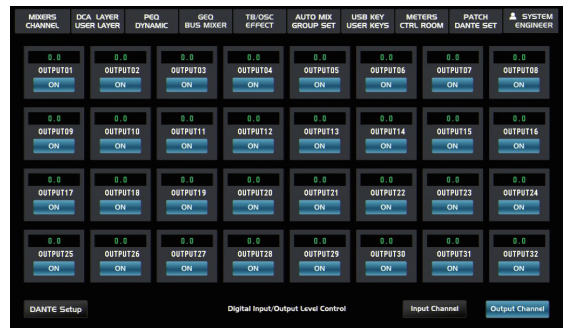
5

DSP Control

- g). User Key: Use it for shortcut settings, Details as 5.13 User Keys Interface.
- h). Mute Group Setup: Refer to the 5.11 GROUP SET interface for more details.
- i). Patch Setup: Refer to 5.16 PATCH interface for more details.
- j). Dante Setup: Refer to 5.17 Dante Set interface.
- k). Automix Setup: Refer to 5.10 AUTO MIX interface.
- l). Digital Level Control: Click it to enter below interface.



INPUT PATCH: Select the needed channel and click "ON" to open the channel and adjust the gain of channel by selecting the numbers on the channel.



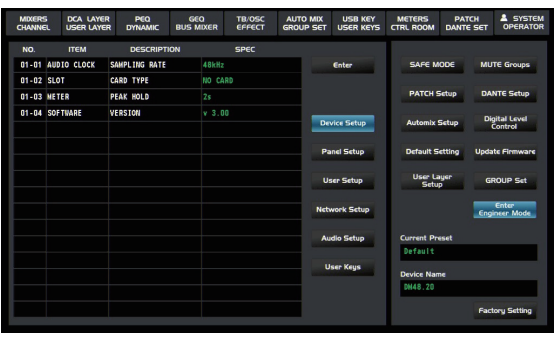
OUTPUT PATCH: Select the needed channel and click "ON" to open the channel and adjust the gain of channel by selecting the numbers on the channel.

- m). Default Setting: Click it and then a prompt message appears, It will restore to default settings after confirmation, It means DSP parameters user setup will be replaced with the default parameters.
- n). Update Firmware: Touch the it or use shortcut "System+1" to update current firmware.
- o). User Layer Setup: Refer to the 5.3 USER LAYER interface for more details.
- P). DCA Setup: Refer to the 5.11 GROUP SET interface for more details.
- q). Password setup: Touch it to enter below interface to setup passwords. Please note the original password of the unit is DM48.200.



DSP Control

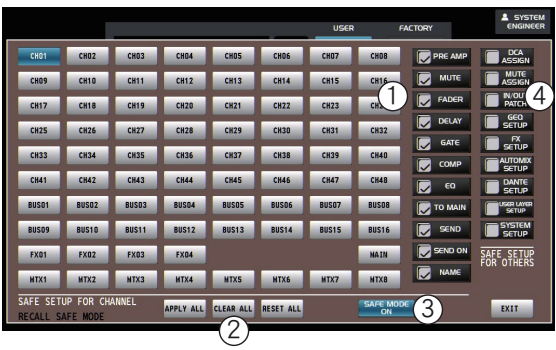
r). Enter Operator Mode: Touch it to switch the mode from engineering mode to operator mode. Also partial functions are limited under operator mode. Touch the icon again and then a password dialogue interface will pop up, Enter the password to return to engineering mode.



s). Factory Setting: Touch it to enter below interface and key in password "DM48.200" and then all set parameters will restore to the factory setting.



t). Safety calling mode.
 Under normal calling mode, all mixing parameters will be setup. In some cases, user can user can save existing settings applied on some channels by safe recall function. That either to setup parameters of safety-calling function applied on each scene or to setup overall parameters of safety-calling function applied on all scenes is available.
 It will enter the interface of safety-calling through each of following two optional ways:
 Press the "system" button on the front panel, then enter "system" interface, Then click "SAFE Setup" to enter the interface of safety calling.
 Press the "Load" or "Save" button on the front panel to enter SAVE/LOAD interface, Then click "SAFE Setup" to enter the interface of safety-calling.



5

DSP Control

Operation instruction of safety-calling function

1. SAFE SETUP FOR CHANNEL

Follows shows the directions for checkbox of channel parameters, Enter below interface to check the checkbox on the right, Then these parameters saved in the scene memory will be recall. These corresponding parameters will be neglected if no check the checkbox.

- PRE AMP.....Enable to recall the gain parameters applied on PRE AMP of channel.
- MUTE.....Enable to recall the parameters applied on mute channels.
- DELAY..... Enable to recall the parameters applied on delay channels.
- FADER.....Enable to recall the parameters applied on channel faders (or level-control buttons).
- GATEEnable to recall the parameters applied on channel gates.
- COMP.....Enable to recall the parameters applied on channel compressions.
- EQ.....Enable to recall the parameters applied on channel EQ.
- TO MAIN.....Enable to recall the parameters applied on the MAIN outputs.
- SEND.....Enable to recall the parameters applied on channel assignment.
- SEND ON.....Turn on the recall function to assign parameters applied on channels.
- NAME.....Enable to recall the channels' name.

2. RECALL SAFE MODE

"APPLY ALL" button: After completing the step#1, Click it to recall all parameters selected to apply on all channels.

"CLEAR ALL" button: After completing the step#1, The all selections of corresponding through step#1 will be cancelled if click the button.

"RESET ALL" button: After completing the step#1, it means to repeat the step#1 to recheck corresponding parameter-boxes if click the button.

3. SAFE MODE ON

Enable or disable the safety-calling mode with this button

4. SAFE SETUP FOR OTHERS

Following shows the directions how to apply safe-setup for other parameter items.

- DAC ASSIGN.....Enable to recall the DAC-ASSIGN parameters.
- MUTE ASSIGN.....Enable to recall the MUTE-ASSIGN parameters.
- IN/OUT PATCH.....Enable to assign the parameters applied on IN/OUT patch.
- GEQ SETUP.....Enable to recall the parameters of GEQ SETUP.
- FX SETUPEnable to recall the parameters of FX SETUP.
- AUTOMIX SETUP.....Enable to recall the parameters of AUTOMIX SETUP.
- DANTE SETUP.....Enable to recall the parameters of DANTE SETUP.
- USER LAYER SETUP.....Enable to recall the parameters of USER LAYER SETUP.
- SYSTEM SETUP.....Enable to recall the parameters of SYSTEM SETUP.

Software Update

We will always update the Digital Mixer software. Since function of the Digital Mixer will also change when you update the software, this manual can help you familiar with the basic function, for the precision, please refer to the real digital mixer.

Note: Before you update the firmware, the sampling rate should be set as 48K. When you update the firmware, all the parameters you had saved in the mixer may be destroyed.

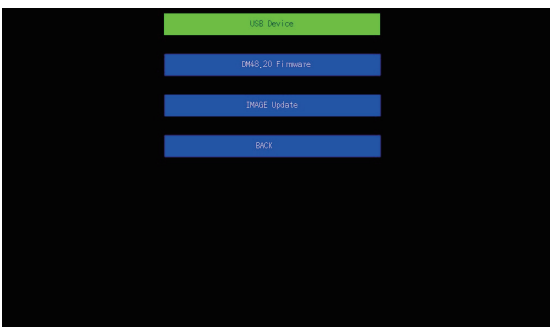
Click the "update firmware" icon or use hotkey "System+1" to see below window:



Key in passwords: DM48.200 and click "confirm" to see below window. Then click "yes" .

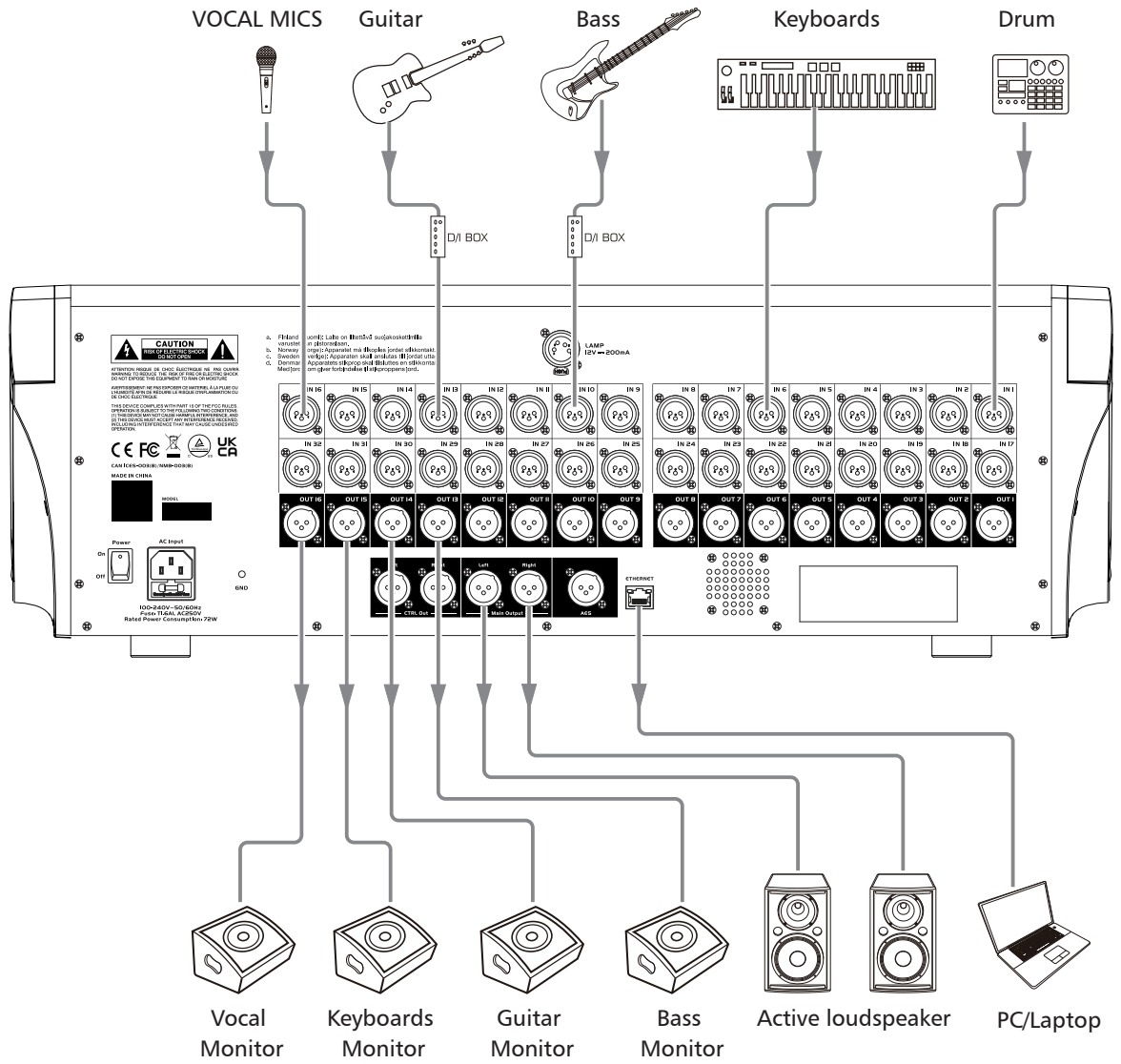


Select the files which needs to be updated, Click "confirm" to complete firmware updates.

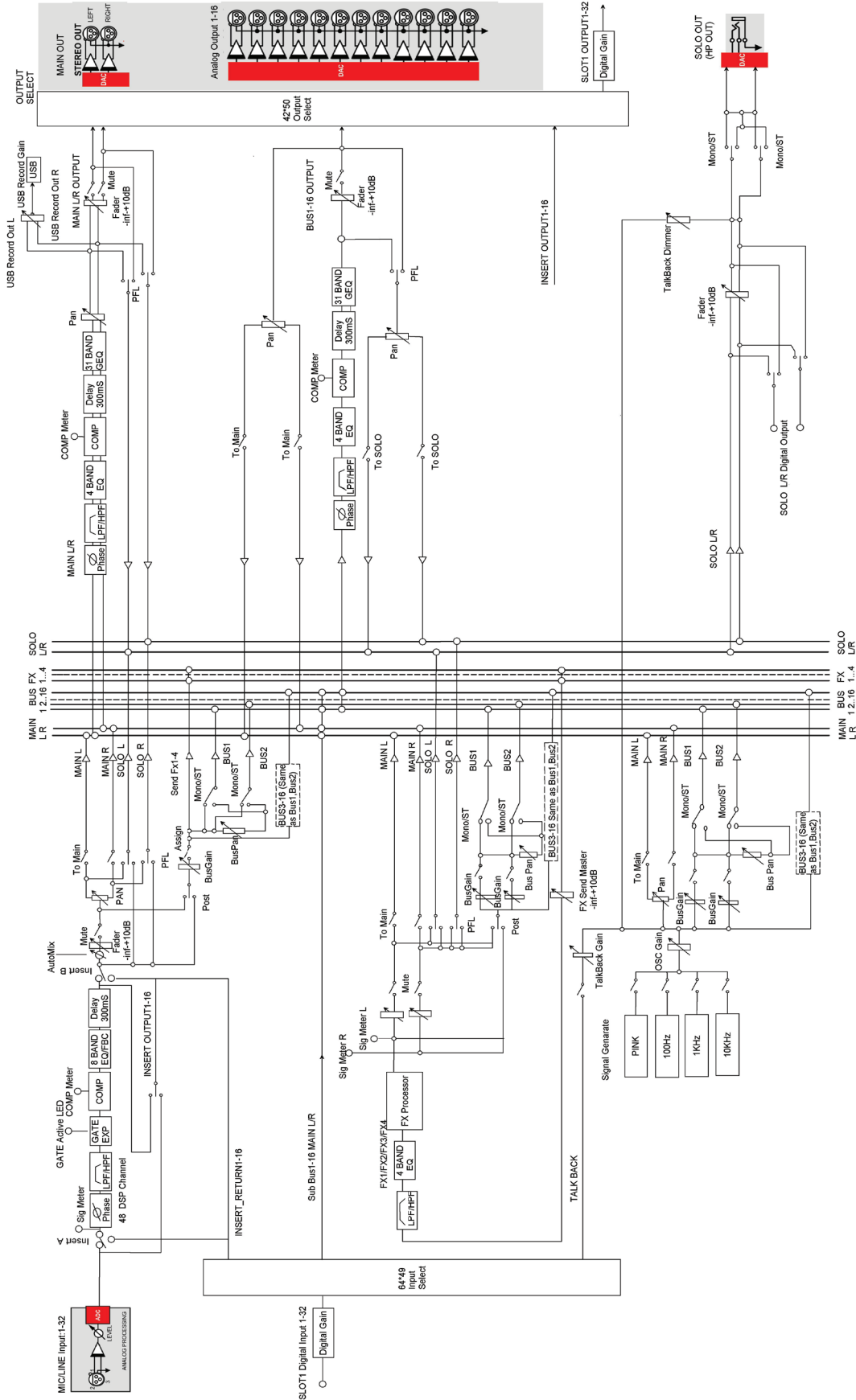


7

Hookup Diagram



Block Diagram



9

Technical Specification

Microphone input	Electronically balanced
Frequency Response to Main Output	22Hz~20KHz at 0dBu \pm 2dBu
Distortion(THD&N) to Main Output	<0.03% at 0dBu 1KHz
Digital Gain	0dBu~50dBu
SNR(Signal to Noise Ratio)	108dB
Maximum Input Level	+20dBu \pm 0.5dBu
Phantom Power	+48VDC
USB stereo inputs	
Frequency Response to Main Output	22Hz~15KHz
Distortion(THD&N) to Main Output	<0.1% at 0dBu 1KHz
Maximum Input Level	10dBu \pm 0.5dBu
Out 1-16	
Maximum Outputs Level	+20dBu \pm 0.5dBu
Main Outputs	
Maximum Outputs Level	+20dBu \pm 0.5dBu
Control Room Outputs	
Maximum Output Level	+20dBu \pm 0.5dBu
HeadPhones Outputs	
Maximum Output Level	+15dBu \pm 0.5dBu
System Crosstalk	
Input to Output(at +0dBu 1KHz)	-88dBu
Adjacent Channels (at +0dBu 1KHz)	-87dBu
Noise(Bus noise)	-90dBu
Noise Gate	
Threshold Range	-84dBu ~ +19dB
Attack time	0mS ~ 250mS
Release time	5mS~2S

Technical Specification

Compressor	
Threshold Range	-83dBu - +20dB
Attack time	0mS ~ 250mS
Release time	5mS ~ 2S
Ratio	1:1 to 40:1,inf:1
Gain	0dBu - +12dB
EQ	
Low (LowPass or LowShelf)	20Hz~20KHz $\pm(15\text{dbu}\pm 2\text{dbu})$
Low Mid	20Hz~20KHz $\pm(15\text{dbu}\pm 2\text{dbu})$
High Mid	20Hz~20KHz $\pm(15\text{dbu}\pm 2\text{dbu})$
High(HighPass or HighShelf)	20Hz~20KHz $\pm(15\text{dbu}\pm 2\text{dbu})$
Digital Audio	
ADC Dynamic Range	113dB
DAC Dynamic Range	113dB
Internal Processor	32-bit , floating point
ADC bit depth	32bit
DAC bit depth	24bit
Main LCD	10.1 inch (1024*600)
Channel LCD	0.96 inch (128*64)
Impedances	
Microphone input	6.8K Ω
All output	120 Ω
operating free-air temperature range	0~40 $^{\circ}\text{C}$
storage temperature range	-20 $^{\circ}\text{C}$ ~45 $^{\circ}\text{C}$



