Studiomaster® PROFESSIONAL

D. Mix 20

20 Input Digital Mixer

digital MIXER

USB ENABLED

Touch screen

CAUTION

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF
ELECTRIC SHOCK, DO NOT REMOVE
COVER (OR BACK). NO USER-SERVICEABLE
PARTS INSIDE. REFER SERVICING TO
QUALIFIED SERVICE PERSONNEL.

Explanation of Graphical Symbols

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 (servicing) instructions in the literature accompanying the product.

IMPORTANT SAFETY INSTRUCTIONS

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

IMPORTANT NOTICE
Connecting the Plug and Cord
WARNING: THIS APPARATUS MUST BE EARTHED
IMPORTANT. The wires in this mains lead are coloured in accordance with the following code:
       GREEN
       BLUE: NEUTRAL
       BROWN: LIVE
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured GREEN must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or colored GREEN.
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

1 Read the instructions carefully.
2 Keep this instructions manual handy for reference.
3 Heed all warnings.
4 Follow all instructions.
5 Do not use this apparatus near water.

6 Clean only with dry cloth.
7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10 Only use attachments/accessories specified by the manufacturer.
11 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.
12 Unplug this apparatus during lightning storms or when unused for long periods of time.
13 Refer all servicing to qualified service personnel. Servicing 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.

PRECAUTIONS FOR SAFE OPERATION
⚠ WARNING

Installation

- Connect this unit's power cord only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Failure to do so is a fire and electrical shock hazard.

- Do not allow water to enter this unit or allow the unit to become wet. Fire or electrical shock may result.

- Do not place a container with liquid or small metal objects on top of this unit. Liquid or metal objects inside this unit are a fire and electrical shock hazard.

- Do not place heavy objects, including this unit, on top of the power cord. A damaged power cord is a fire and electrical shock hazard. In particular, be careful not to place heavy objects on a power cord covered by a carpet.

Operation

- Do not scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard.

- Do not modify the unit. Doing so is a fire and electrical shock hazard.

- Do not remove the unit's cover. You could receive an electrical shock. If you think internal inspection, maintenance, or repair is necessary, contact your dealer.

- If lightning begins to occur, turn off the unit as soon as possible, and unplug the power cable from the electrical outlet.

- If there is a possibility of lightning, do not touch the power cable plug if it is still connected. Doing so may be an electrical shock hazard.

In case an abnormality occurs during operation

- Should this unit be dropped or the cabinet be damaged, turn the power switch off, remove the power plug from the AC outlet, & contact your dealer. If you continue using the unit without heeding this instruction, fire or electrical shock may result.

- If you notice any abnormality, such as smoke, odor, or noise, or if a foreign object or liquid gets inside the unit, turn it off immediately. Remove the power cord from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.

1. Introduction:

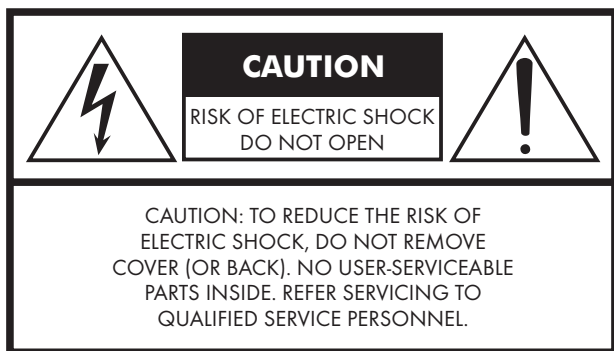Thank you for buying the Studiomaster Professional D.Mix 20, 20 Input Digital Mixer. To ensure maximum performance & safety, please follow this instruction manual carefully. Please retain this manual for future reference. For any complaint, feedback or testimonials please contact our distributor/dealer.

2. Features at a Glance:

- 16 mono Input channels with assignable controls.
- 8 Channels Inserts.
- 2 Stereo input channels.
- 1 USB audio channel.
- Full duplex USB port (allows for simultaneous recording & playback from a PC).
- 2 integrated Dsp's with EQ, Noise Gate, Compressor/Limiter & Delay.
- 4 Aux Send outs & 4 Subgroup outs or 8 Aux outputs.
- 6 DCA groups.
- 100mm motor-driven fader.
- 24 bits/48kHz sampling rate.
- User definable presets.
- +48V Phantom power.
- LCD touch screen for settings, routing and navigation.
- XLR & Jack Main outputs & Stereo Control Room output.

3. Front Panel Description:

1. Input channel selection
There are 18 selection switches to select Mono channel (CH1 - CH16) and Stereo channel (CH17/18 - CH19/20). Pressing this switches will route respective channel signal to add DSP setting & assign its output. It will illuminate as has been pressed or enabled from LCD screen. In DCA window, you can select group channels by this switches or by enabling it from LCD screen.

2. Input signal clip indication
These LEDs beside input channel knobs indicate the input level clipping of Channel 1-20.

3. Input level control
• The knob CH1-16 control the gain level of the respective Mic/Line channel.
Note: It is very important to properly set the level of the input gain to minimize noise & avoid overload distortion.
• The knob CH 17-20 control input level of the respective stereo channel.

4. Main Bargraph
Indicate the output level of Main output.

5. Sub 1-4 or AUX 5-8 Bargraph
Indicate the output level of Sub 1-4 output or Aux 5-8 when assign it as Aux 5-8.

6. Solo/Main Bargraph
Indicate the output level of Solo/Main as par Solo meter switch action.

7. Solo/Meter Selection
When the switch is off Bargraph will indicate output level of Main, when illuminated it indicates solo level.

8. Solo clear Switch
Press this switch to clear the solo function for all of the soloed buses or channels.

9. Output Assign Switches:
These switches are used to assign compressor, EQ & PEQ features to Main output, Sub 1 to 4 or Aux 5-8 output.
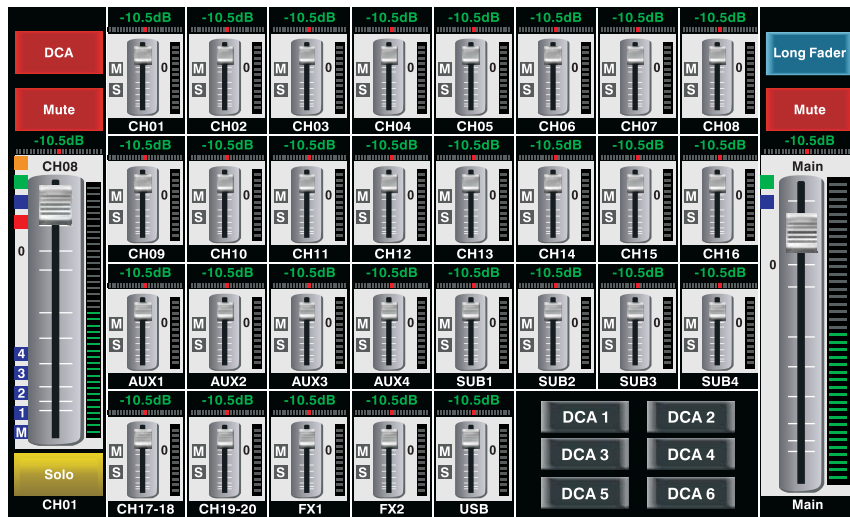
10. Mixer/Long Faders Selection
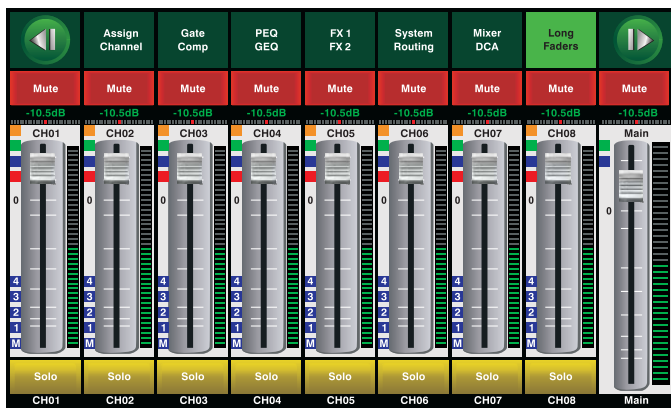Press this switch twice, it will switch between Mixer and Long Faders function.

• **Mixer:** In mixer page, you can control all the input & output channels level, solo & mute, as well as DCA group level control, as shown in mixer page image. For the detail operation, please refer to the DSP Section Point No. 5.1.

• **Long Faders:** Press this switch again, you will see Long Faders page on LCD screen, where you can control all the input & output channel's level, solo, mute, pan and rename the channel. For the detail operation, please refer to the DSP Section Point No. 5.2.
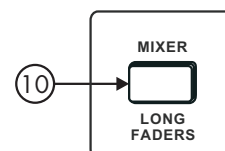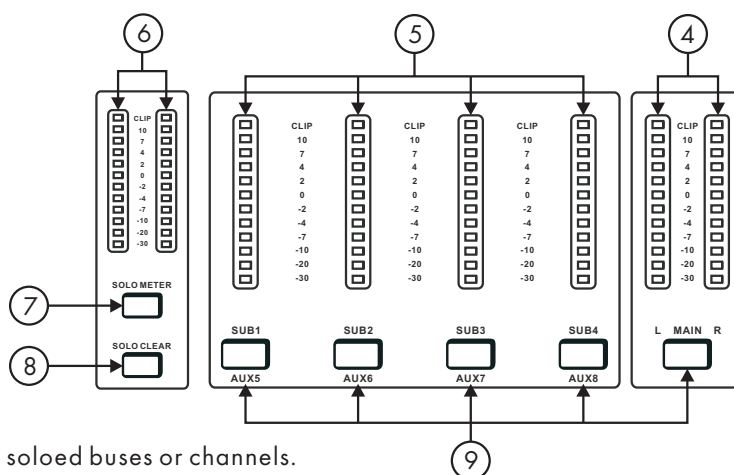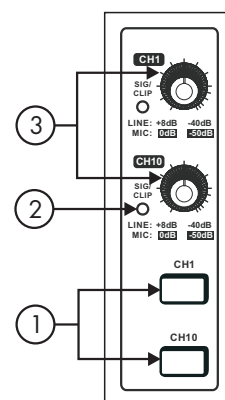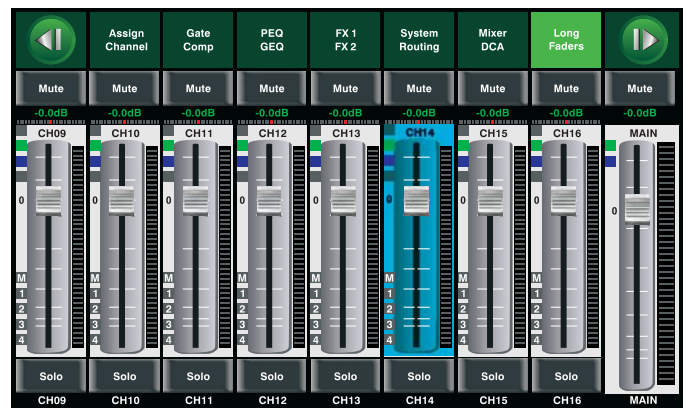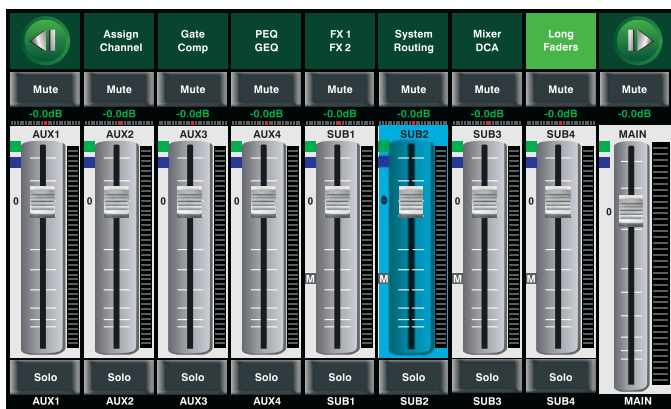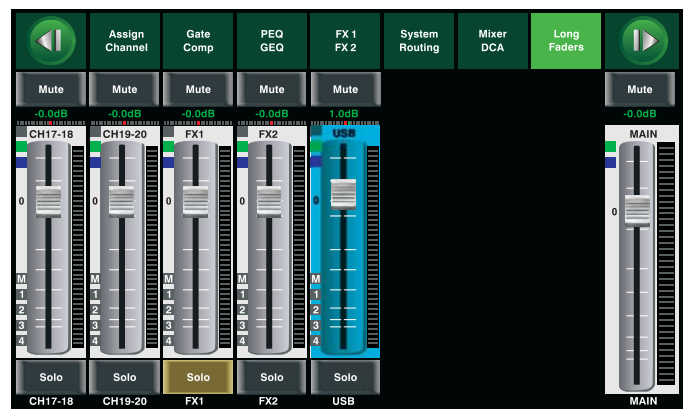
- Mixer Page

- Long Fader Page (Channel 1-8)

- Long Fader Page (Channel 9-16)

- Long Fader Page (Aux 1-4/Sub 1-4)

- Long Fader Page (Channel 17-20/Fx 1-2/USB)
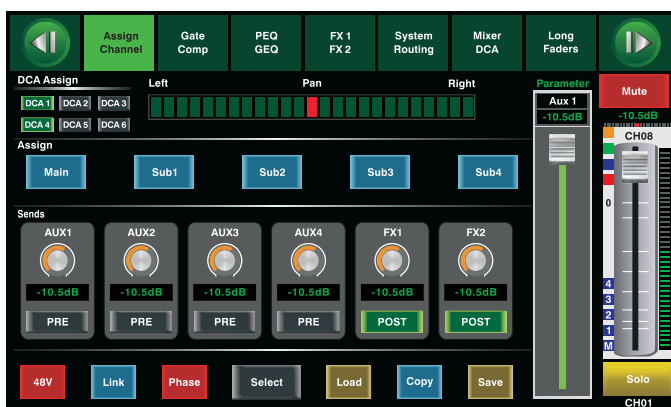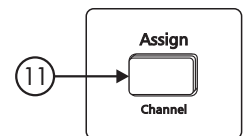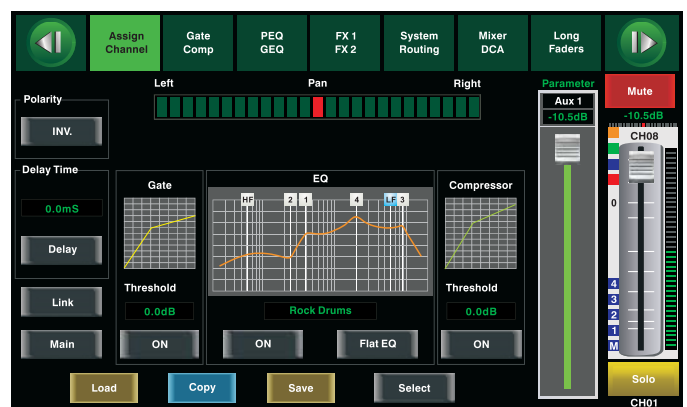
12. Assign/Channel Selection

Press this switch twice, it will switch between Assign and Channel function.

• Press this button to enter assign page, signal from a selected input channel can be assigned to Main, AUX 1-4, Sub 1-4 or AUX 5-8 & FX 1-2 as shown in below figure. For the detail operation, please refer to DSP Section Point No. 5.3.

- Assign Page

- Channel Page

4

• Channel

Press this switch again, you will see Channel page on LCD screen, It gives you a preview of other function such as Polarity, Delay, Link, Assign, Gate, EQ, Compressor etc. You can also adjust corresponding parameters that show on the screen, except EQ & for Gate & compressor you can adjust only Threshold level. For the detail operation, please refer to DSP Section Point No. 5.4.

12. Gate/Comp Selection Switch

Press this switch twice, it will switch between Gate & COMP (Compressor) function.

• Gate

Noise gate attenuates signals below the threshold & allows signals to pass through only when they are above a threshold setting as shown in figure. For the detail operation, please refer to introduction in section 5.5.

• COMP

A compressor reduces the level of an audio signal if its amplitude exceeds a certain threshold. For the detail operation, please refer to DSP Section Point No. 5.6.
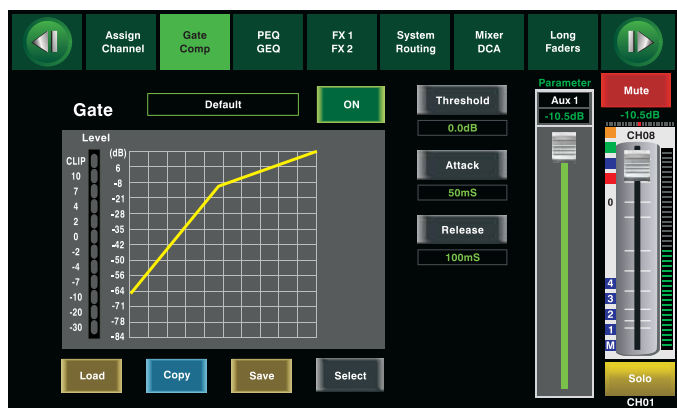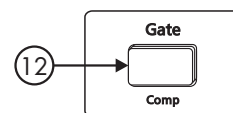
- Gate Page
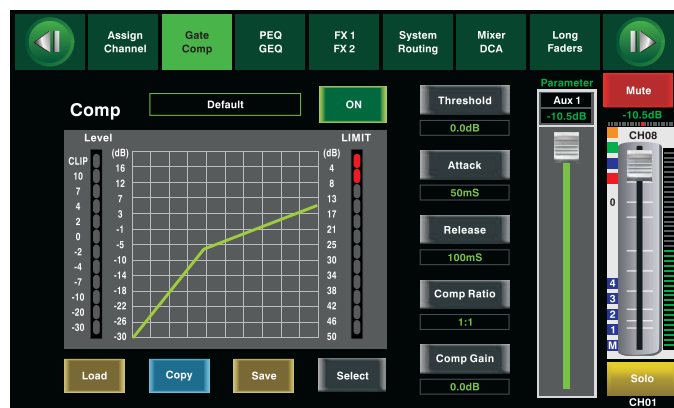
- Compressor Page

13. EQ button

Press this switch twice, it will switch between PEQ & GEQ function.

• **PEQ:** An equalizer is a filter that allows you to adjust the level of frequency in the range of 20Hz-20KHz as shown in figure. For the detail operation, please refer to DSP Section Point No. 5.7.

• **GEQ:** In GEQ page you can set the 31-band EQ as shown in figure. For the detail operation, please refer to DSP section 5.15.
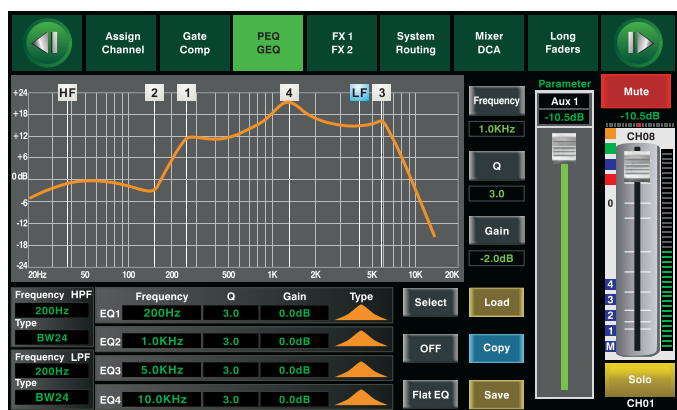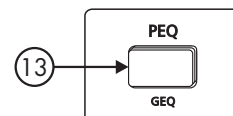
- PEQ Page
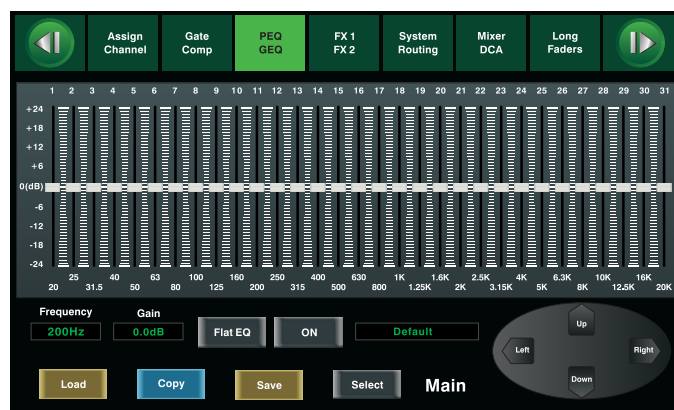
- EQ Page

14. FX1-2 Selection Switch

Press this switch twice, it will switch between Fx1 & Fx2 function. This page can show & edit the setting of internal effects. Each of the FX owns 12 program effects as shown in below figure. For the detail operation, please refer to DSP section Point No. 5.8.

- Fx Selection Page

5
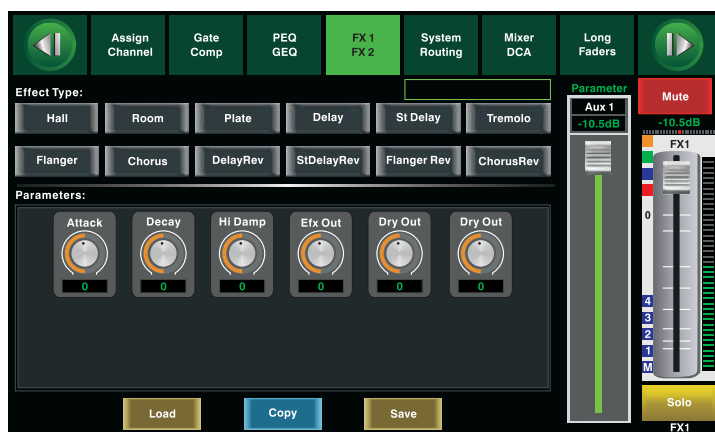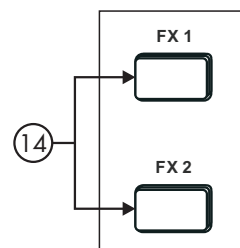
15. Digital In/Out Selection Switch

Press this switch, it will switch between Digital In & Digital Out function. This button engages & disengages the digital channel when you have an optional input/output module inserted.

• Digital In

The button will illuminate to indicate that current channel has been selected as digital input as shown in figure. For the detail operation, please refer to DSP Section Point No. 5.9.

• Digital Out

The switch will illuminate to indicate that current channel has been selected as digital output.
For the detail operation, please refer to DSP Section Point No. 5.10.

- Digital Input Page

- Digital Output Page

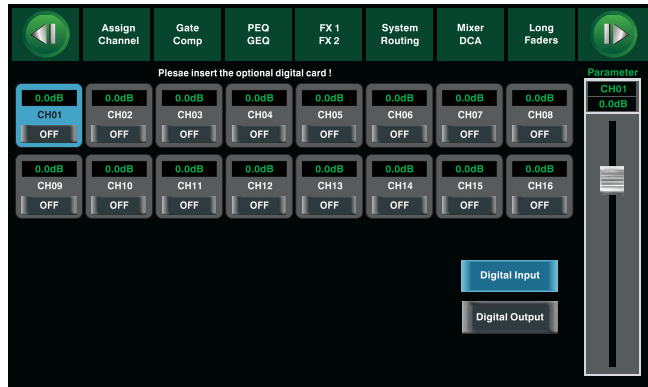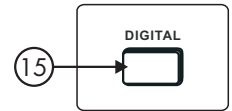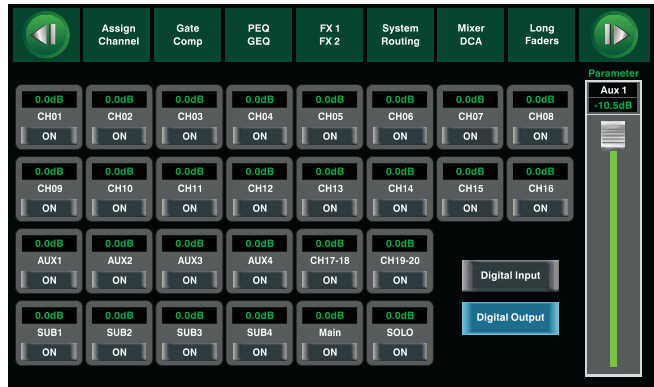**Note:-** When the switch illuminated, please pay attention that which channel is Digital Input and which channel is Digital Output during operation.

16. 48V Phantom Power

Every microphone input equips with an individual phantom power which is controlled by the 48V phantom power switch. When you want to turn on phantom power of some channel, the screen will show warning to ask you & make sure. It will illuminate when phantom power is activated. Please note that only the condenser microphone needs phantom power.

⚠ **Note: Please do not supply phantom power to any device which do not need phantom power otherwise the device may get damaged.**
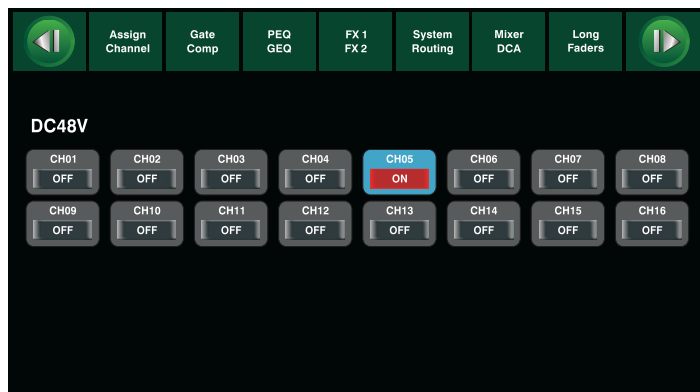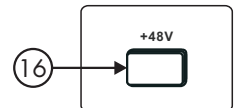
- Phantom Assign Page

17. Link the Channel

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

Channels 1 and 2   Channels 13 and 14
Channels 3 and 4   Channels 15 and 16
Channels 5 and 6   Aux 1 and Aux 2
Channels 7 and 8   Aux 3 and Aux 4
Channels 9 and 10   Subgroups 1 and 2 or Aux 5 and Aux 6
Channels 11 and 12   Subgroups 3 and 4 or Aux 7 and Aux 8

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

• Link & DCA: If the channel is linked with its paired channel then also it can be grouped to any DCA (DCA 1-6) as stereo channel, but in DCA you cannot cancel the link. For example, channel 5 is linked with channel 6, then both channel 5 & 6 can be grouped to DCA. In the contrary, if the channel is grouped to any DCA (DCA 1-6), it can not be link at all but its paired channel can link. For example:- If channel 5 has been grouped to DCA first then it can not link with channel 6, but channel 6 can be link to channel 5.
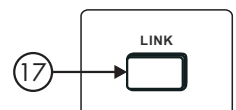
• link & Routing: The two linked channels can route as stereo channel, while routed channels can also link later. Please note that this is a nondestructive passing, the other channel's previous setting will be restored after the Link button is disengaged. For example, when channel 6 has been selected, then press Stereo Link switch, all of Channel 6's setting will be copied onto Channel 5. The Channel 5's own setting will restore after the Link switch has been disengaged.

18. Solo Switch
When Pressed, this switch will send its channels or buses to the control room outputs. It will illuminate as has been pressed and enabled.

19. Mute Switch
When Pressed, this switch will mute its channel and all of its assigned outputs. It will illuminate when the switch has been pressed and enabled.

20. Pan Switch
Press this switch to select the Pan function, then rotate parameter Adjust encoder to control signal level from left to right for the selected input or outputs bus. If you have adjusted a channel pan, please just touch 2 times on the screen & make it back to the center position. The LCD display shows the setting in real time. If two channels have been linked as stereo pair, the LCD display will automatically change to stereo pan.

21. Main selection
The selected channel can be assigned to Main outputs by pressing the Main switch. The main 20 inputs, USB In & FX1-2 can be assigned to any or all of the output Subgroups, Aux Sends and the Main outputs.

22. SUB 1-4 selection
The selected channel can be assigned to SUB group outputs 1-4 by pressing the corresponding switch. But if SUB mode is switched to AUX mode, the SUB 1-4 switch will not active.
Subgroups can only be assigned to the main outs. The 4 Aux sends cannot be assigned to a subgroup or to the Main outputs.

23. SUB 1-4 Output Level Controls
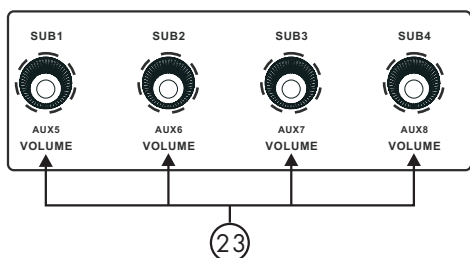
These will control the output level for SUB 1-4 or AUX 5-8.

24. Main Fader
There is only one motor fader to control all digital Channel's level, including 20 Main input channels, 1 USB in, 4 AUX outputs, 4 Sub group outputs, FX 1-2 & 1 Main output channel.
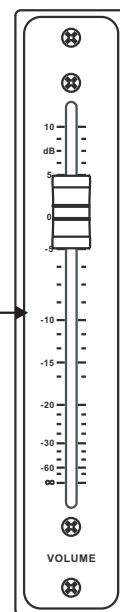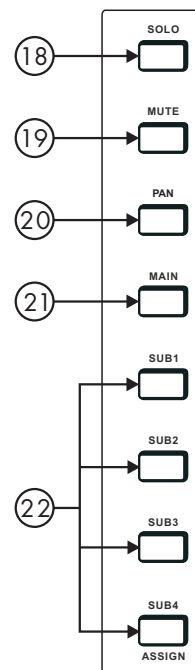
25. DCA Enable Switch
Digital Control Audio (DCA) is used for group assignment. DCA volume control will always leave the same ratio between the channel fader levels, independent of the volume control. Press this switch, it will flash until some channels have been selected, then press it again to save the settings & turn off the switch as shown on below figure. For the detail operation, please refer to DSP Section Point No. 5.11.

- DCA Assignment Page
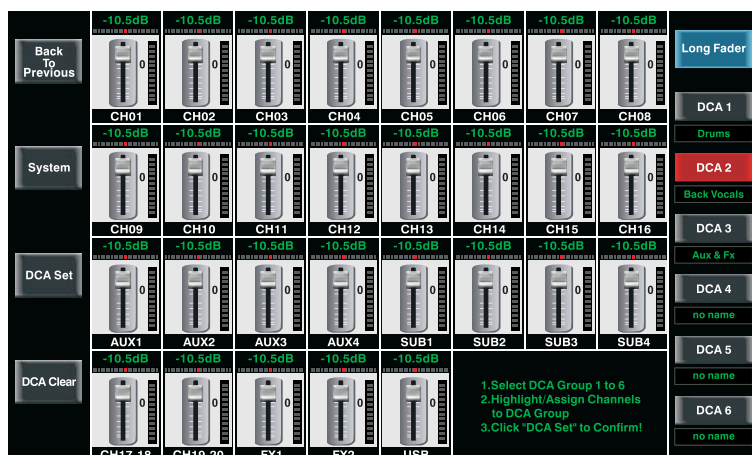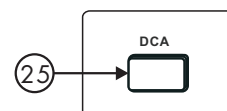
26. DCA 1-6 Assign Switch
Press these switches to select which channels you want to be assigned to the group.

27. AUX 1-4 Selection
This switch function is similar to input channel select buttons. Press this switch will route its channel to add DSP setting and assign its output. It will illuminate as has been pressed and enabled. In DCA window, you can select group channels by this switch.

28. FX 1-2 selection
This switch function is also similar to input channel select buttons & AUX 1-4 select buttons. For the details, please refer to point 22 or 1

29. AUX-FX Mode selection
Press this switch, it will illuminate as has been enabled. Signal from 20 main input channels will be assigned to AUX 1-4 or AUX 5-8 (SUB 1-4) and FX 1-2, you can rotate the Parameter Adjust knob to adjust signal's level. When the button is OFF, it is AUX/FX Out function, which means the AUX 1-8 and FX 1-2 will not enabled in Assign status.

30. FX Bypass Switch
This switch is for function, when pressed (illuminated) all FX1 & FX2 effects will get bypassed.
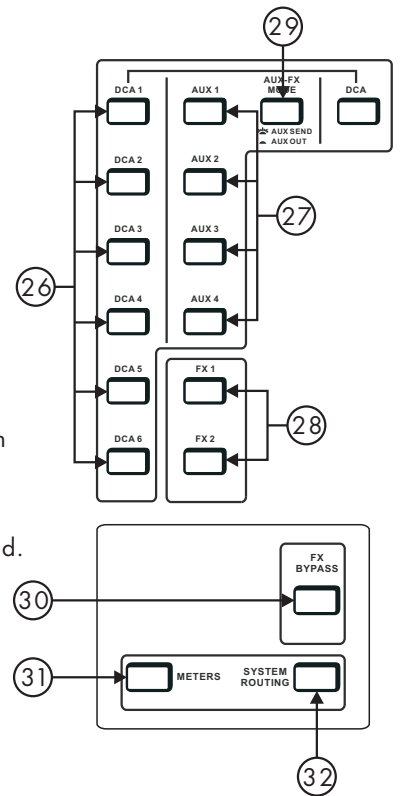
31. Meters Selection Switch
Press this button to enter meters check page as shown in figure. For detail operation please refer DSP Section Point No 5.12.
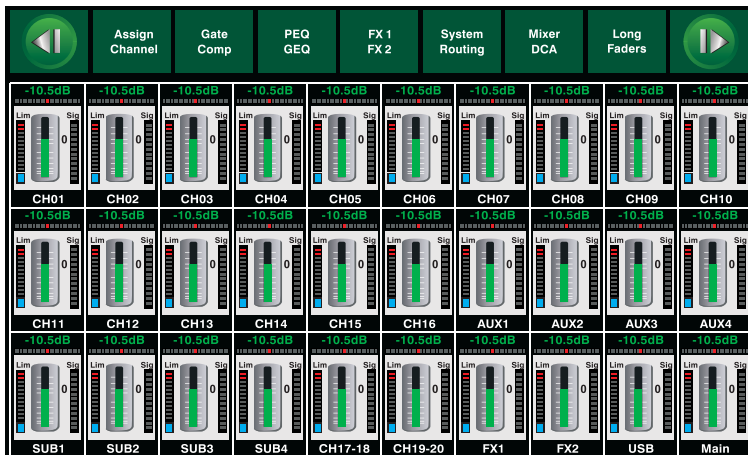
- Meters Page

32. System/Routing Switch
Press this button twice, it will switch between System and Routing function.

• System
Press this button to go System page, as well as show & edit parameters of the system, as shown in below figure. For the detail operation, please refer to DSP Section Point No. 5.14.
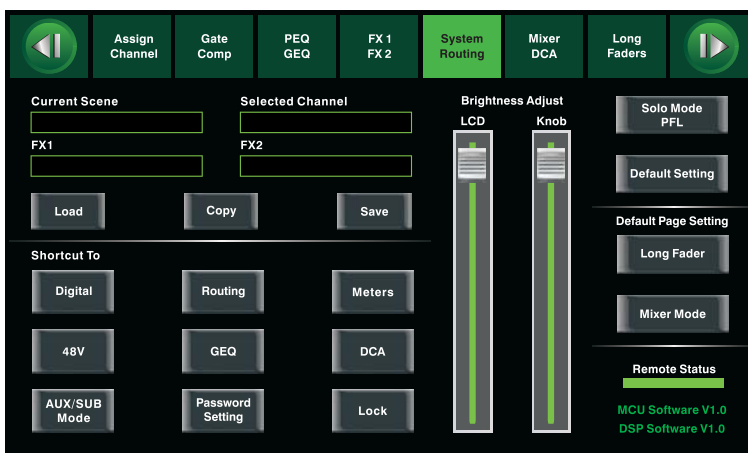
- System Page

• Routing
Press this switch again, user can select one or several channels to assign the signals to corresponding outputs, as shown in below figure. For the detail operation, please refer to DSP Section Point No. 5.13.

- Page of routing input channels to AUX 1
  (the same with AUX 2-4)

- Page of routing input channels to MAIN
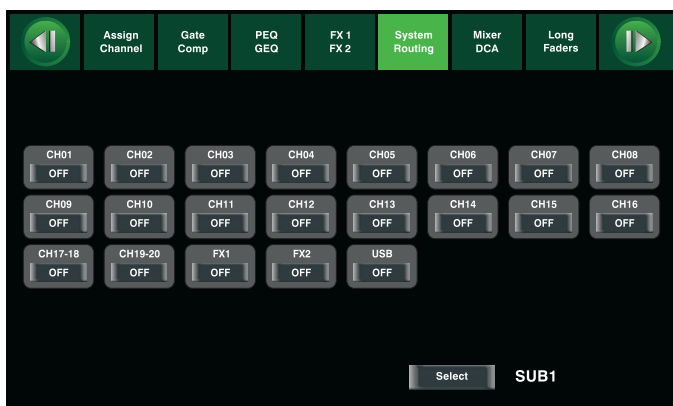
- Page of routing input channels to SUB 1
(the same with SUB 2-3)
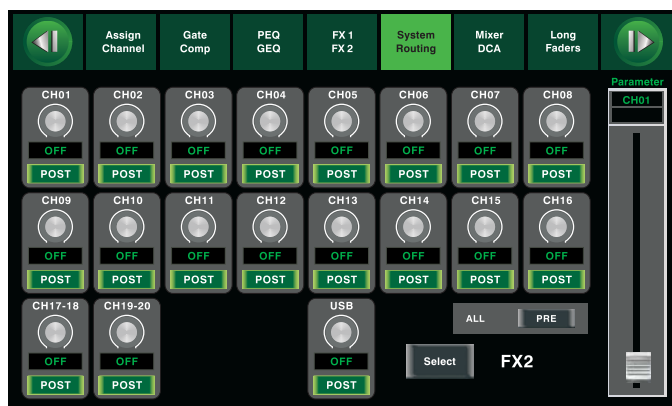
- Page of routing input channels to FX1 (the same with FX2)

33. UP & Left & Down & Right Switches
These switches move the cursor around the display page, or select & delete parameters & options. Sometimes, Up button function is the same as Left switch, while Down button function is the same as Right switch. But in GEQ, Up & Down adjust gain level, while Left & Right adjust frequency. **Note:** As the function of this button will be a little bit different in different function, please notice the notes that are shown on the screen when operating.

34. Parameter Adjust knob
This Encoder adjusts the parameter values of selected control that are shown on the LCD display. Turning it clockwise increases the value & counterclockwise decreases the value. Note: As the function of this knob will be a little bit different in different function, please notice the notes that are shown on the screen when operating.

35. Flat switch
When pressed, you can see warning on the screen, select yes to return all the settings to default. This will function only in the page that you can set some values such as Gate, EQ, Comp & GEQ. **Note:** As the function of this switch will be a little bit different in different function, please notice the notes that are shown on the screen when operating.

36. Enter (TAP) switch
This switch can activate as two types of function.
• **Enter:** Confirm the edited parameter values. When there is a confirmation message jump out on the screen, press **Enter** switch to answer **"Yes"**.
• **TAP:** In the FX1 & FX2 page, it will switch to Tap function, you can use this enter a delay time in tempo with the music being played. As the function of this button will be a little bit different in different function, please notice the notes that are shown on the screen when operating.

37. GEQ
This switch is the same as EQ when you press it twice. For the detail operation please refer DSP Section Point No. 5.15.
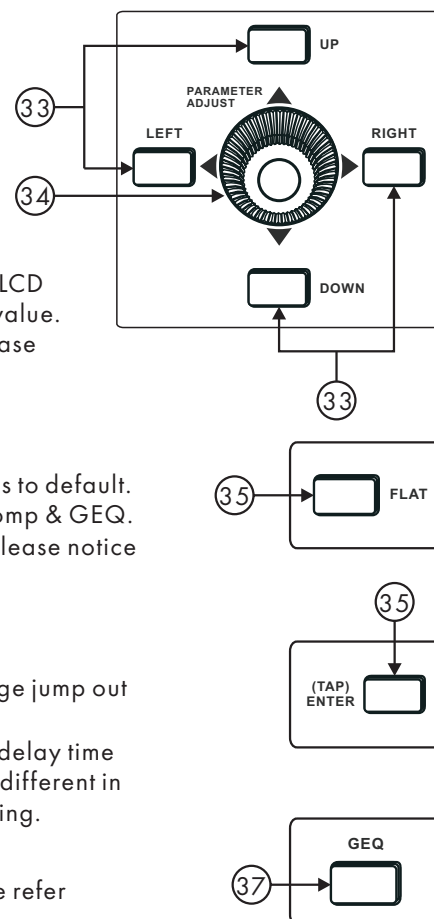
38. Control Room Knob
This knob controls the overall output level for control room.

39. PFL Switch
The default setting for the Solo bus is After-Fader Listen (AFL); by pressing PFL, Pre-Fader Listening is enabled. In either mode, press Solo on any channel or bus to route that channel to the Solo bus & has no effect on the Main or Subgroup mixers.

40. HP 1-2 Controls
These knobs control the overall output level for headphones.

41. Main control
This control the overall output level for Main channel.
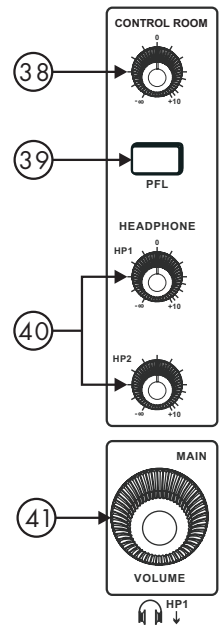
4. Rear Panel Description:
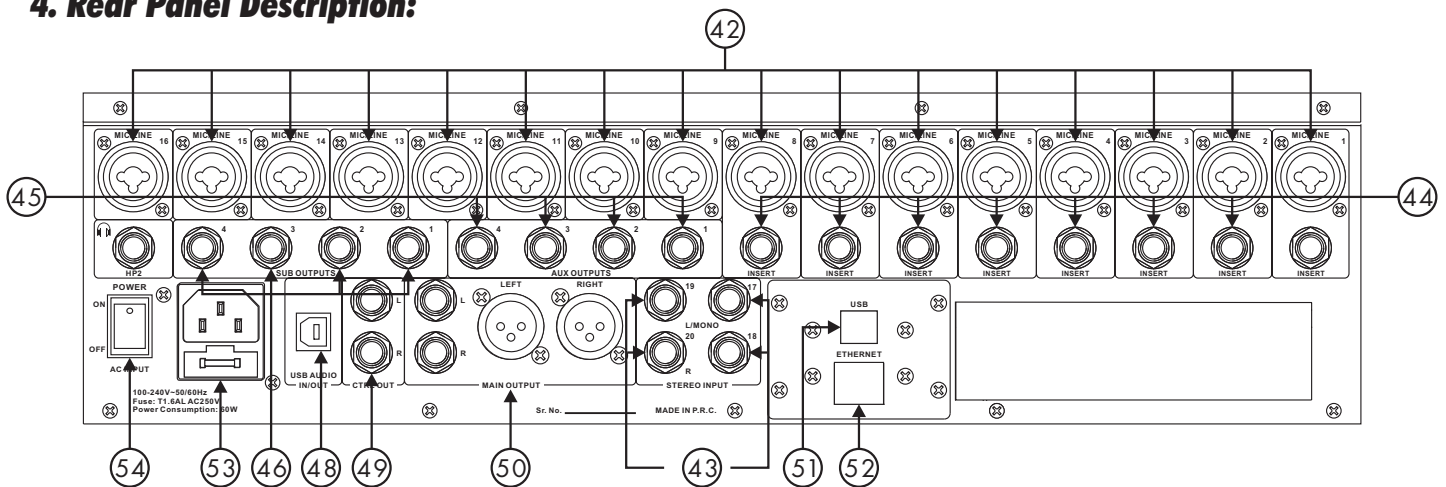
42. Mic/Line Inputs (CH1-CH16)
The Combo Jack integrates Mic and Line in together, insert 1/4" balanced TRS jack to get Line in function, while insert XLR connector to achieve the Mic function.

The D.Mix 20 equips 16 microphone preamplifiers for use with all types of microphones. The Pre amplifier has a Class A input buffer which followed by a dual-servo gain stage. This arrangement will bring ultra-low noise & wide gain control which help to boost signals without increasing unwanted background noise.

The line-level input is a 1/4'' balanced TRS connector. Each channel of the D.Mix 20 has a line-level input. The microphone-preamp circuit will be bypassed if the Line-level Input has been engaged. **Note:** Please notice that there will be a momentary spike in the output when plugging in a microphone or a line-level input device, or turning phantom power on or off. So it should be better to mute or turn down the channel fader before changing connections or turning phantom power on or off.

43. Stereo Input (CH 17 – CH 20)
The CH 17-20 Line Inputs are normally used as effects returns. A line can be used to send several channels to an external effects processor & also can be used to return the processed signal to the mixer. The input is balanced stereo. If a mono signal has to be returned to the mix, connect it to the left input, then the right as well as the left side will get the signal.

44. Insert
Only channel1-8 are equipped with insert function, while others are not. The direct-insert point is an unbalanced 1/4'' connector which can be used to connect external processors. The insert's sending is after the channel's gain control & before the digital bus. But return goes to the digital bus directly. So if a de-esser has been inserted on the vocalist's channel, the de-esser will get an unprocessed, amplified signal. The processed signal will return to the D.Mix 20 digital bus to add DSP setting and sent through Aux and FX buses....

45. Aux Outputs 1-4
These are balanced mono outputs for each auxiliary.

46. Sub Output 1-4
These are balanced mono outputs for each subgroup.

47. Headphones out HP1 & HP2
This is used to monitor Main or Solo on individual channel using headphones. ⚠️ Adjust volume to avoid hearing damage.

48. USB Audio In/Out
This port is for USB audio input and output.

49. CTRL Out
This output let you listen to any PFL, Main, Sub from a group on an external amplifier or speakers. The control room output let you hear the mix i.e. going to the FOH nearby helping you to set mix level.

50. Main Output
The D.Mix 20 features both XLR & TRS Main outputs. These outputs are parallel to each other. This output is used to connect the Main output using balanced XLR or jack connectors. The output level is determined by Main control/Volume fader.

51. USB connect port
This port is for remote control of firmware update. Please contact your dealer.

52. Ethernet connect port
This port is for Ethernet control of firmware update. Please contact your dealer.

53. AC Inlet
Use the supplied AC cord to connect the unit to AC mains. Make sure voltage and frequency stated on the unit matches with your local AC supply. The fuse can be accessed by the small drawer at the AC inlet. To change the fuse, unplug the AC cord first, pull out the fuse drawer & replace the fuse ONLY with a fuse of same voltage and rating. If the fuse blows again after replacement, hand over the unit to qualified service personnel.

54. Power Switch
To switch On/Off the unit.

5. DSP Control Section

The DSP control section is the most important part of D.Mix 20. In this section you can adjust Gate, Compressor, EQ, polarity, panning, delay, link, routing, etc. for the selected channel. The below table give a brief details about the input/output which support the DSP function.

BUS	Gate	Compressor	EQ	Polarity	Pan	Delay	Link	Output Assignment
Inputs (CH1-16)	✓	✓	✓	✓	✓	✓	✓	MAIN, SUB Groups 1-4, Aux Sends 1-4, FX 1-2
Inputs (CH17-20)	✓	✓	✓	✓	✓	✓	✗	MAIN, SUB Groups 1-4, Aux Sends 1-4, FX 1-2
Aux Sends1-4	✓	✓	✓	✓	✗	✓	✓	
FX 1-2	✓	✓	✓	✓	✓	✓	✗	MAIN, SUB Groups 1-4, Aux Sends 1-4
SUB Groups 1-4	✓	✓	✓	✓	✓	✓	✓	MAIN
MAIN Out	✓	✓	✓	✓	✗	✓	✗	

5.1 Mixer Interface
Once you turn on D.Mix 20 switch, you will see the mixer interface window as shown in below figure.

- Mixer Interface Page

11
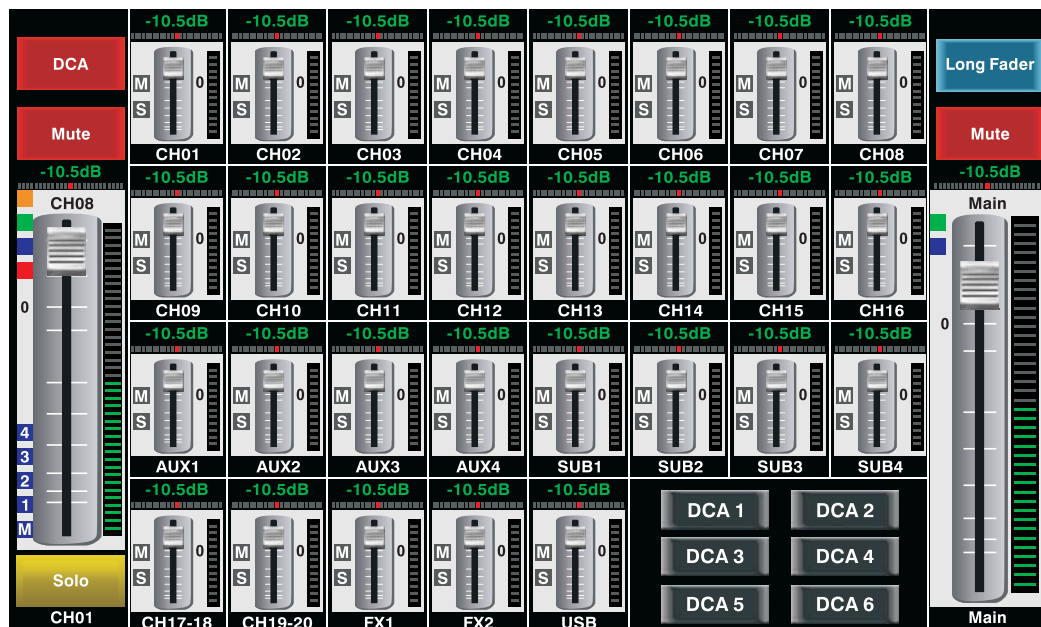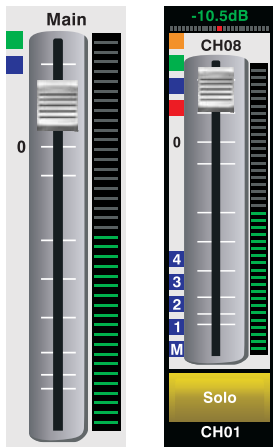
Channel fader: This long fader can control level of all input & output channels in this screen, but one selected channel at one time, all its control will change synchronized with the selected channel.

Main fader: Slide the **fader**, you can increase or decrease corresponding channel's level. Meter beside the fader indicates signal activity.

Touch a channel, for example, CH01, the background and corresponding **CH1** switch will illuminate synchronously, you can control the output signal level by **Parameter Adjust** knob.
M will illuminate synchronized with **Mute** button on the panel.
S will illuminate synchronized with **Solo** button on the panel.
Meter beside the fader indicates the input signal level activity.
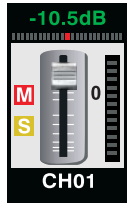
-10.5dB The number indicates current channel level.

The PAN icon shows real pan of selected channel audio signal, press Pan switch on the panel & rotate Parameter Adjust knob to adjust it.

Solo Touch the icon to monitor selected channel audio signal, it will illuminate synchronized with Solo switch on the panel.

Mute Touch the icon to Mute selected channel audio signal, it will illuminate synchronized with Mute switch on the panel.

CH01 This letter shows the real current channel.
You can also rename the channel 1-20/Aux 1-4/Sub 1-4/ FX1-2/DCA 1-6/USB, touch it & hold for a while, a virtual key will come into your vision as shown. Now please tap the keyboard & give a new name to this channel as you like. You can type up to maximum 8 digit.
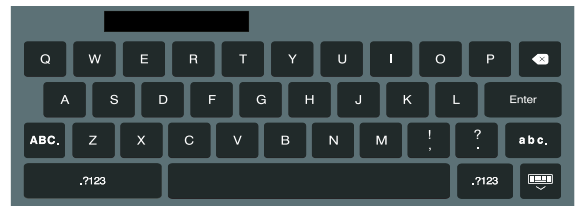
DCA 1 **DCA 2** **DCA 3** **DCA 4** **DCA 5** **DCA 6** This shortcut give you a convenience to operation channels that grouped by DCA1-6. For example, when you touchDCA2, its background will illuminate synchronized with DCA2 button on the panel. All channels you have grouped to DCA2 will also illuminate, now you can adjust motor fader and **Parameter Adjust** knob on panel or long fader on the screen to adjust level.

But if you didn't group DCA2 before, then when you touch DCA2 icon, It will display a message. The DCA group is not defined ! For their detail functions, please refer to the DCA set instruction Point No. 5.11

DCA **Long Fader** You can directly Enter to DCA function or long fader by touching this icon on screen or simply by pressing the switch on panel. Touching Long fader icon you will see channel fader window as shown in below figure.

5.2 Long Faders Interface
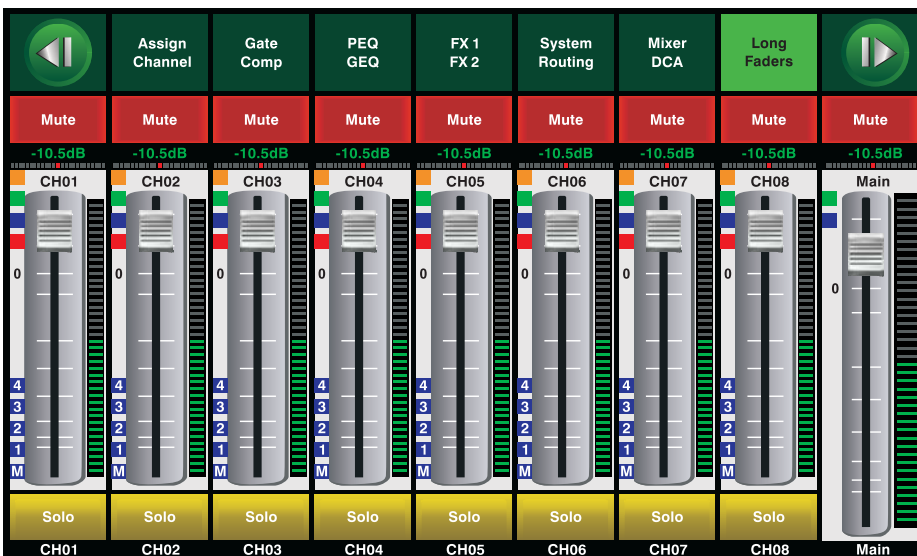
- Long Faders Page

You can switch to all channel fader by touching Left & Right arrow icon as shown in figure.

12
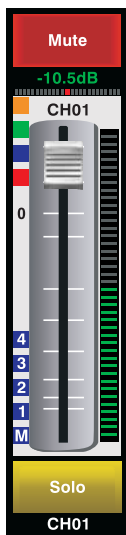
Functions on this icon (like mute, level number, pan, long fader, solo & channel name) are the same like those in **Mixer** interface.

4   When the channel signal is assign to Sub 4 then 4 will illuminate.
3   When the channel signal is assign to Sub 3 then 3 will illuminate.
2   When the channel signal is assign to Sub 2 then 2 will illuminate.
1   When the channel signal is assign to Sub 1 then 1 will illuminate.
M   If the channel signal is assign to Main output them M will illuminate.

   Orange indicates Gate effect is used for this channel.
   Green color indicates compressor function is being used by current channel.
   Blue color indicates PEQ function is being used by current channel.
   Red color indicates phantom power is ON.

5.3 Assign Interface

The 20 main inputs and internal FX returns can be assigned to any or all of the subgroup outputs, Aux sends & main outputs as shown in below figure. Sub 1-4 & AUX 5-8 can switch to each other by touching a switch icon in System page as shown in below figure.
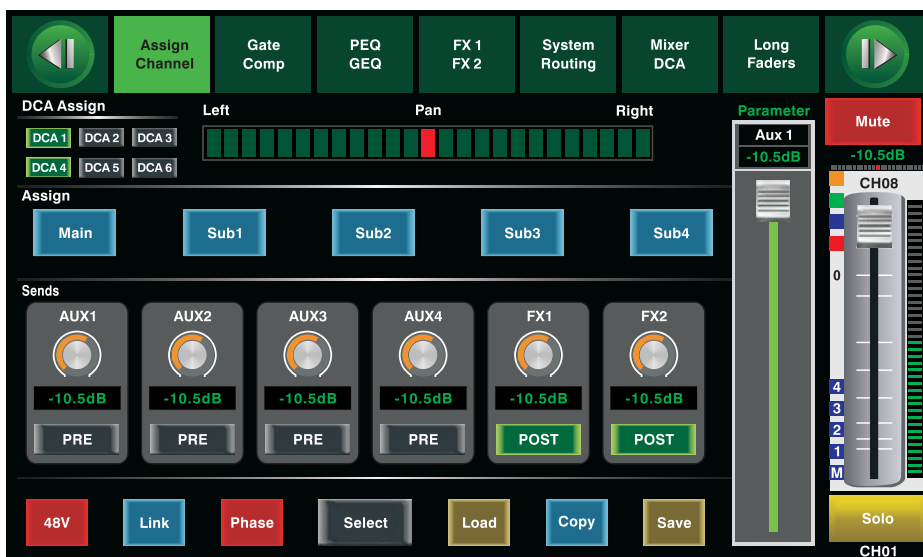
- Assign Interface Page
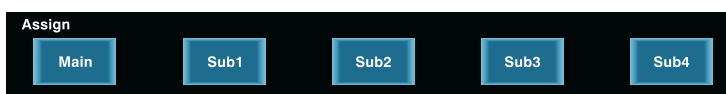
Touch the corresponding icon on the screen to assign input audio to Main or Sub 1-4 group on the same time respective switch on panel will also illuminate. The output level can be adjusted directly by Aux/Fx fader on LCD screen or by parameter control or respective Main or Sub control on panel.
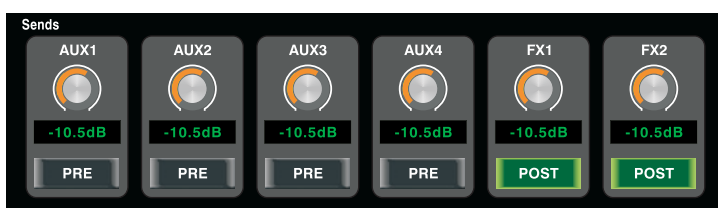
Touch 'AUX1-4' & 'FX1-2' on the LCD screen or press corresponding switch on the panel to assign input channel audio to these channels or buses. The output level can be adjusted by parameter Adjust knob Point No. 34.

Touch PRE on the screen, it will switch to POST, the AUX & FX send will derive its signals from all channels post-fader. By default AUX & FX sends are pre fader.
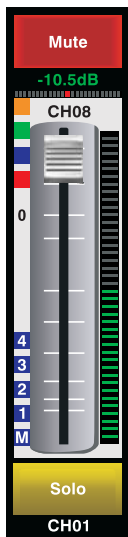
Channel Fader: The fader function is same as **Fader** on the panel, which can control input signal's level, they will change synchronously.

Meter beside it indicates the signal level activity.

Pan above fader indicates value of pan setting.

Solo can monitor selected channel audio.

Mute to mute illuminate selected channel audio.

Long Press **CH01** can rename the selected channel.
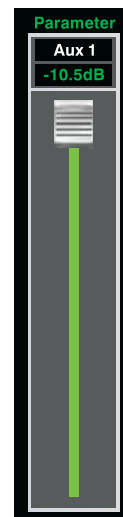
Parameter Fader: Touch and Slide the fader to control AUX/FX signal level. This will also change synchronously by changing Parameter adjust.

Touch pan left or right to change signal's balance effect, it can be adjusted by Parameter Adjust knob on the panel when pan switch is on (illuminated). If you have adjusted a channel pan, please just touch 2 times on the screen & make it back to the center position.

These icons will illuminate if the current channel is grouped in any DCA. For example: If you have selected CH 5 and CH 5 is already group in DCA 3 & DCA 5 then both these DCA icon will illuminate else it will be off (Disable).

Touch anyone of these controls to enter corresponding page.

Touch 'Link' icon the background and Link switch on panel will illuminate synchronously & current channel will link to its pair channel, also the paired, channel switch will illuminate for details operation please see Point No. 18.

Touch 'Select' icon here, all input channels will display to you. Please follow the indication on the LCD screen to operate. For different input channels, the function & output assignments are different, please notice indication on the screen.

If you want to use Sub 1-4 as Aux 5-8 then select AUX/SUB mode from system routing. Now the all 8 channel mode will be active the page will be as shown below.
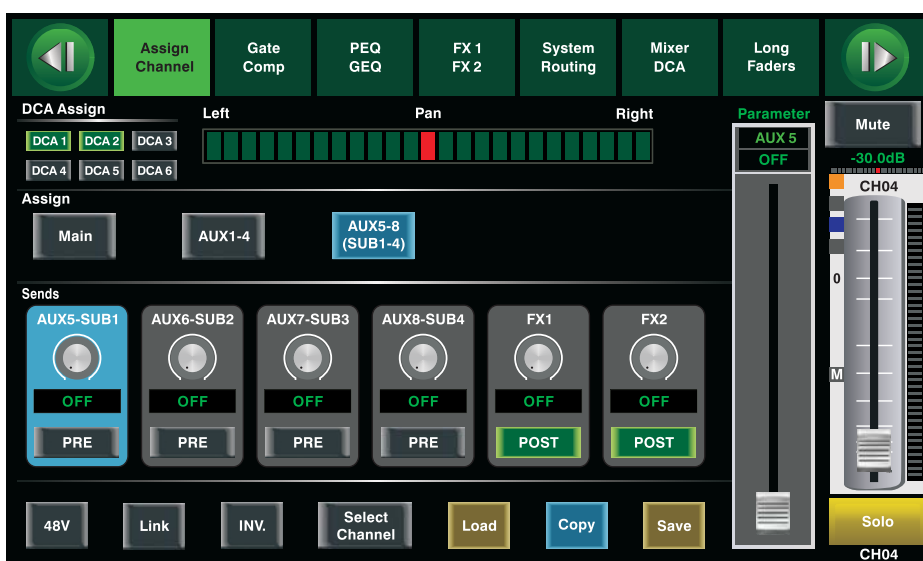
Touch AUX5-8 (SUB1-4) and FX1-2 on the LCD screen to assign input channel audio to these channels or buses. To adjust output level of the channel audio, you can touch & move Aux 5-8 fader on the screen or rotate Parameter Adjust knob on the panel. The other icon functions is same as explained before.

5.4 Channel Interface

Touch Polarity (INV.) icon to invert the phase of the selected channel's signal (to alter the phase by 180~). If the phase reverse is active the button will illuminate. The LCD display show the phase reverse setting in real time. The Polarity control can be used to correct audio signals which are out of phase as well as to cancel/reinforce each other.
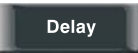
Touch 'Delay' icon to select or deselect Delay for the selected channel. It will illuminate to indicate that the delay has been pressed & enabled. The LCD display shows the delay time in real time. It can be set 300ms at 48KHz. It can be adjusted by parameter on screen or parameter adjust knob on panel.

When Delay icon is engaged, touch it in Delay Time.

Touch 'Link' icon the background and Link switch on panel will illuminate synchronously &current channel will link to its pair channel, also the pair channel switch will illuminate for details operation please see point 18.

Touch this icon, to assign current channel signal to Main output. The icon will illuminate synchronously the Main switch on panel will illuminate.
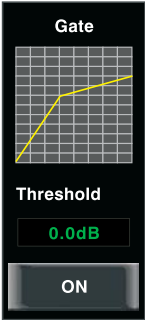
Touch the 'ON' switch to enable Gate function, then rotate Parameter Adjust knob or slide long fader on the right LCD screen to adjust value of Threshold, which will show in the middle box. During adjustment, corresponding figure change will show in the Gate grid. Touch the grid area to enter Gate page.
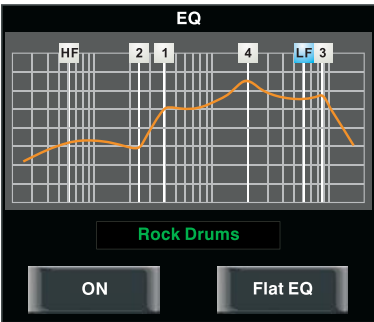
Touch the 'ON' switch to enable EQ function, it will illuminate & synchronize with ON/OFF control in EQ page. Please set values in EQ page because it is not adjustable here. This page can only shows the values. You can also load a preset, please refer to load introduction section for the detail operation, the loaded state will show in the middle box. Touch flat EQ to eliminate EQ settings & restore it to default. In this area, you can touch the grid area to enter EQ page.

Compressor

Threshold

0.0dB

ON
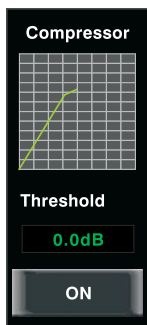
Touch the 'ON' switch to enable Compressor function, then rotate Parameter Adjust knob or slide long fader on the right LCD screen to adjust value of Threshold, which will show in the middle box. During adjustment, corresponding figure chage will show in the Compressor grid. Touch the grid area to enter COMP page.

Load   **Copy**   **Save**   Touch anyone of these controls to enter corresponding page.

Select   Touch 'Select' icon here, all input channels will display to you. Please follow the indication on the LCD screen to operate. For different input channels, the function and output assignments are different, please notice indication on the screen. Note: You can also rename the selected channel by long pressing CHXX.

5.5 Gate Interface
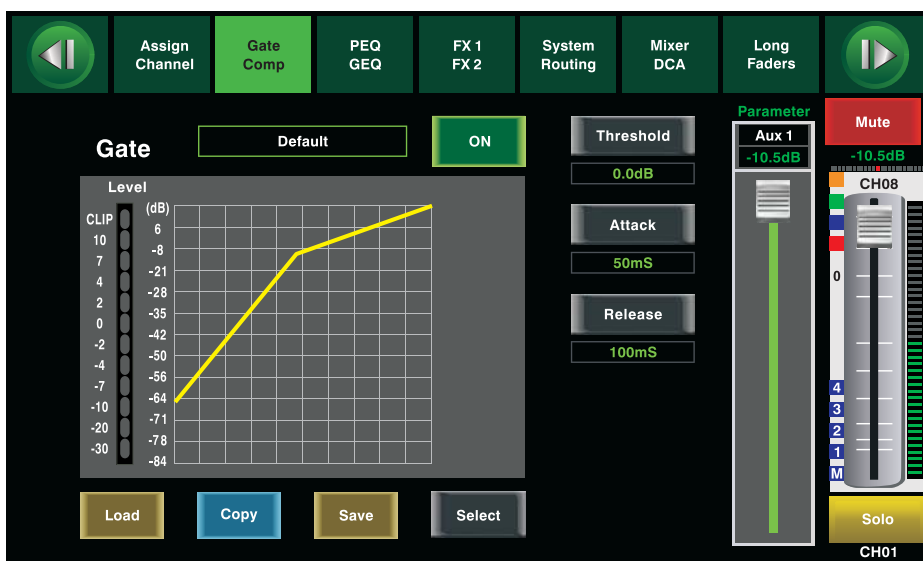
ON   Touch the 'ON' switch to engage and disengage the Gate for the selected channel. It will illuminate to indicate that the Gate has been enabled. The LCD display shows the Gate setting in real time. Its parameters can change by adjusting Threshold, Attack & Release control directly and use the Parameter Adjust knob to set the value.
Note: Always enable Gate to adjust its parameter.

The bar has 3 colors here, which indicate 3 status.

- Grey - the switch is OFF.
- Green - the switch is ON, there is signal input & the value is below threshold level, which means it enables the gate function.
- Red - the switch is ON, but gate fucntion not enable.

Threshold

0.0dB
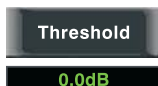
Touch it to set the level at which the gate will open. It can be set from 20 to -84dB.

Attack

50mS

Touch it to set the time for the gate to change from closed to open, much like a fade-in. It can be set from 0.5 to 200ms.

Release

100mS

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. **Note:** A fast release abruptly cuts off the sound once it has fallen below the threshold, A slower release smoothly changes from open to closed, much like a slow fade out. If the release time is too short a click can be heard when the gate re-opens.
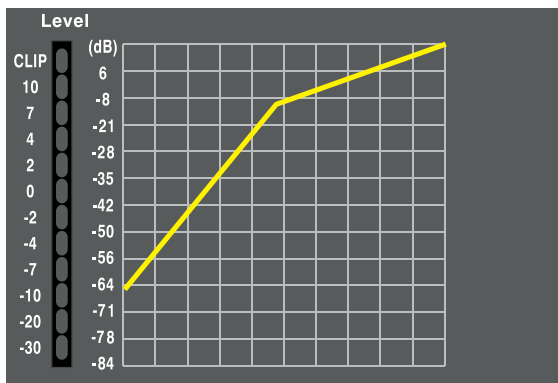
The Gate grid shows level setting of threshold in real time. Meter on the left indicates the input signal's level activity.
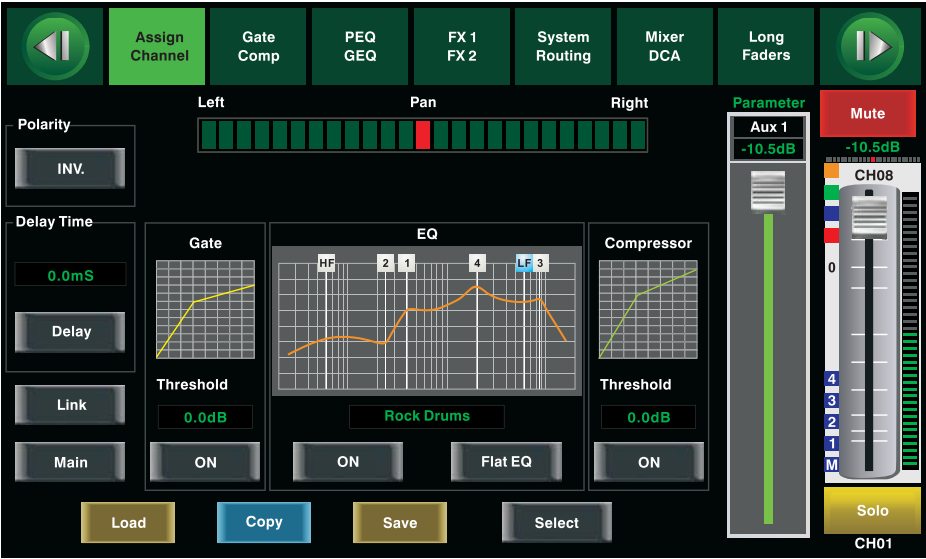
Select

Touch 'Select' icon here, all input channels will display to you. Please follow the indication on the LCD screen to operate. For different input channels, the function and output assignments are different, please notice indication on the screen. **Note:** You can also rename the selected channel by long pressing CHXX. **Note:** You can also rename the selected channel by long pressing CHXX.

Load   **Copy**   **Save**   Touch anyone of these controls to enter corresponding page.

5.6 COMP Interface
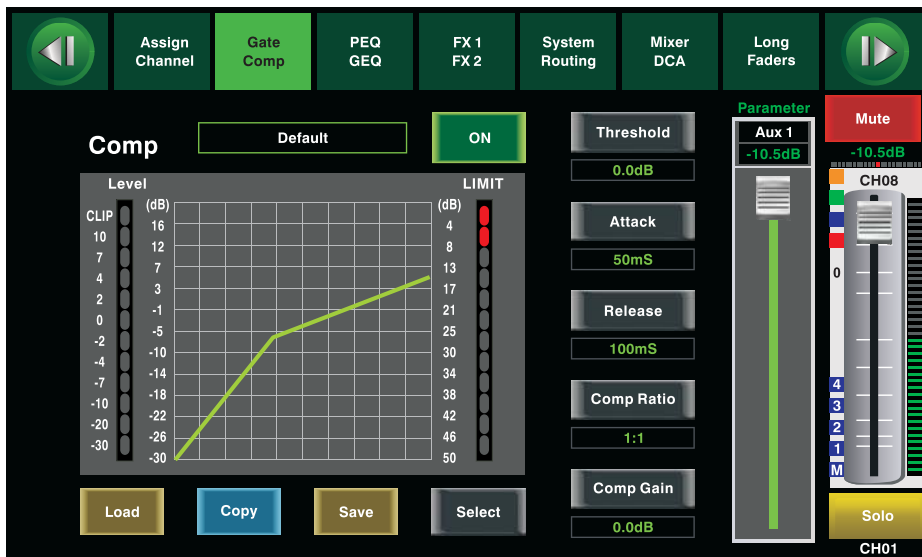
ON

Touch the switch 'ON' engage & disengage the Compressor for the selected channel. It will illuminate to indicate that the compressor has been enabled. The LCD display shows the compressor setting in real time. Its parameters can change by rotating the Parameter Adjust to set the value of Gain, Threshold, Attack, Release 7 Ratio control directly or using up & left & down & right key to choose the function that you want to modify
Note: Always enable compressor switch to adjust its parameter..

The bar has 3 colors here, which indicate 3 status.
- Grey - The switch is OFF.
- Green - The switch is ON, there is signal input and under compressing, which means it enables the compressor function.
- Red - The switch is ON, but compressor function not enable.

Threshold
0.0dB

Touch it to set 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 20dB.

Attack
50mS

Touch it to set the compressor's attack setting for the selected channel. The attack setting is the period when the compressor is decreasing gain to reach the level that is determined by the ratio. You can set the attack from 10 to 150 milliseconds.

Release
100mS

Touch it to set the compressor for the selected channel. Release sets the length of time the compressor takes to return to its normal gain once the signal level drops below the threshold. Release can be set from 10msec to 1sec milliseconds.

Comp Ratio
1:1

Touch it to set the compression ratio for selected channel. The ratio determines the amount of gain reduction. For example, a ratio of 4:1 means that if input level is 4dB over the threshold, the output signal level will be 1 dB over the threshold. The ratio can be set from 1:1 to 10:1 until limit.

Comp Gain

0.0dB

Touch it to set the gain of the compressor for the selected channel or bus. Generally, when compressing signal, the decreasing of gain will cause whole level attenuation. This Gain control can recover the lost level and re-adjust volume that compressed before. The Gain can be set from 0dB (no gain adjusted) to +24dB.
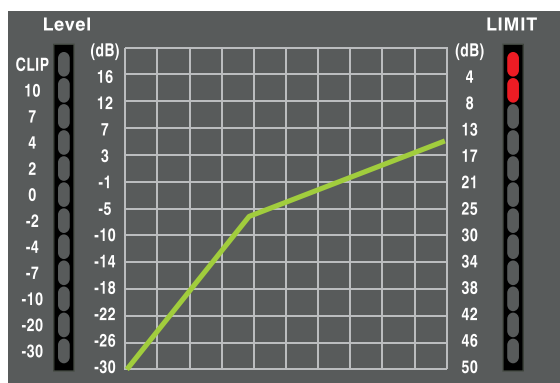
The compressor grid shows level setting of threshold in real time.
Meter on the left indicates the input signal's level activity.
Meter on the right indicates degree of compressor.

**Load**   **Copy**   **Save**   Touch anyone of these controls to enter corresponding page.

Select   Touch 'Select' icon here, all input channels will display to you. Please follow the indication on the LCD screen to operate. For different input channels, the function & output assignments are different, please notice indication on the screen. **Note:** You can also rename the selected channel by long pressing CHXX.

5.7 EQ Interface
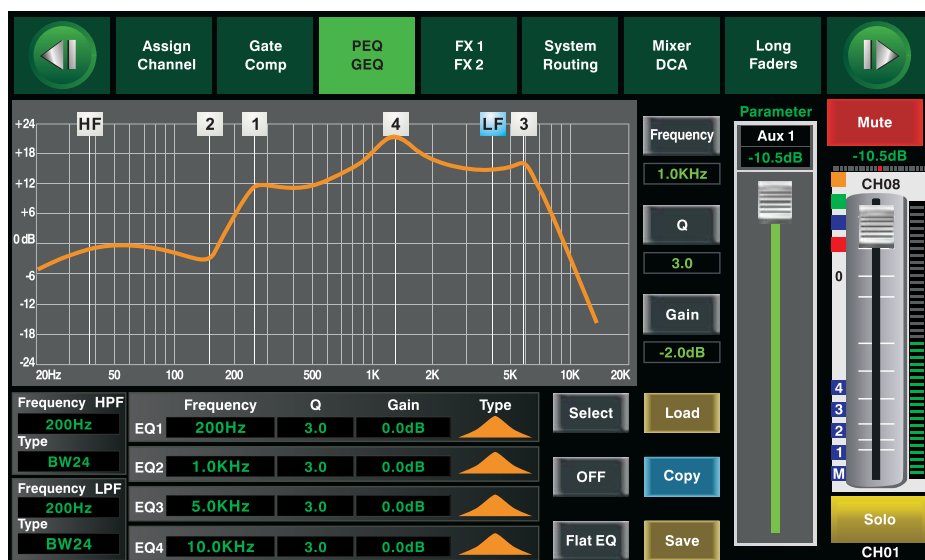
OFF   Touch the switch 'OFF' to engage or disengage the equalizer for the selected channel. It will illuminate to indicate that the equalizer has been enabled. The LCD display shows the EQ setting in real time. Its parameters can adjust by sliding the curve on the screen directly or using up & left down & right key to choose the function that you want to modify or by using the parameter can only be adjusted when EQ is ON. The Parameter Adjust knob to set the value. The equalizer is available for all input & output buses.

Flat EQ   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.

Frequency

1.0KHz

Touch it to set the center frequency of the equalizer's Low/Low-mid/High-mid/High band separately. The center frequency is the middle of the pass-band between the lower and upper cutoff frequencies which define the limits of the band. The center frequency can be set from 20Hz to 20KHz.

Q

3.0

Touch it to set the Q for Low/Low-Mid/High-Mid/High band separately. The Q is the ratio of the center frequency to the bandwidth. If the center frequency is constant, the bandwidth is inversely proportional to the Q, which means that if you raise the Q, the bandwidth will be narrowed. It can be adjusted from 0.4 to 24.

Gain

-2.0dB

Touch it to set the gain cut or boost at the center frequency for the Low/Low-mid/High-Mid/High-band separately. It can be set from -24 to +24dB.

Frequency HPF
200Hz
Type
BW24

This is a high-pass filter. It can pass higher frequencies. When set to its lowest position, the filter is off. **Type** indicates the filter type that you selected, different type means different shape and different filter frequency range.

	Frequency	LPF
	200Hz	
Type		
	BW24	

This is a low-pass filter. It can pass lower frequencies. When set to its highest position, the filter is off.
Type indicates the filter type that you selected, different type means different shape and different filter frequency range.

	Frequency	Q	Gain	Type
EQ1	200Hz	3.0	0.0dB	
EQ2	1.0KHz	3.0	0.0dB	
EQ3	5.0KHz	3.0	0.0dB	
EQ4	10.0KHz	3.0	0.0dB	

Touch EQ1/EQ2/EQ3/EQ4 to set its Frequency, Q and Gain parameters separately, touch Type to change the filter to high-pass, low-pass or band-pass filter. You can see the waveform on the screen.
Note: You can also rename the selected channel by long pressing CHXX.

5.8 FX1-2 Interface

The setting values of FX1-2 can be saved as preset for future use by simply touching the save button & following the instruction that is shown on the LCD display.
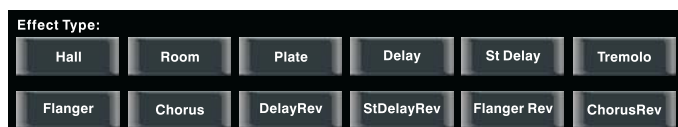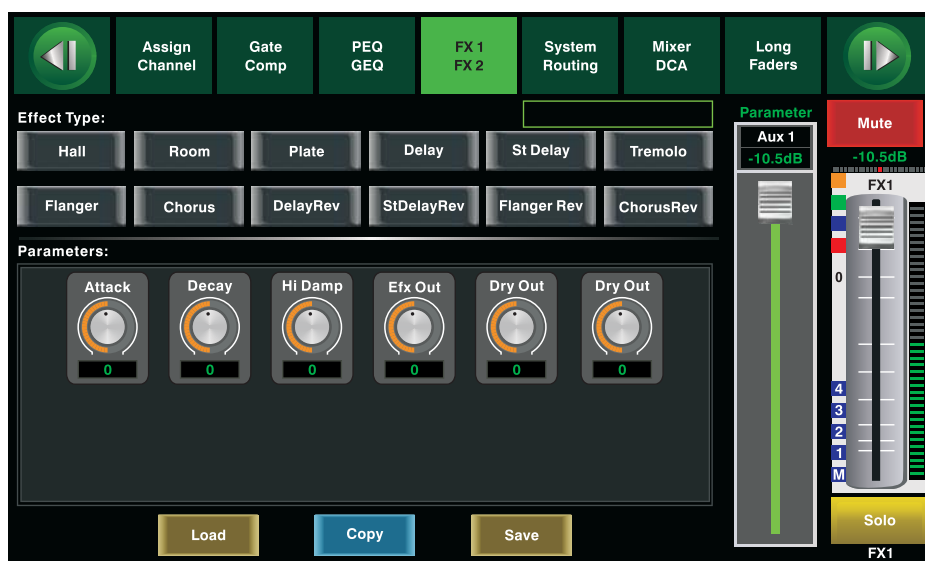
Touch anyone of these controls to adjust parameter of the effects by rotating Parameter Adjust knob or slide fader on the right of LCD screen.

Mute Touch this control to 'mute' current FX effect.

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The D.Mix 20 LIVE includes 12 kinds of adjustable effects which can help to realize the effect that you want to show your audience.

No.	Preset	Description	Parameter
1	Hall	Simulate an acoustic space of the sound	Pre Delay; Decay; Room Size; Hi Damp; Efx Out; Dry out
2	Room	Simulate a studio room with many early reflections	Pre Delay; Decay; Room Size; Hi Damp; Efx Out; Dry out
3	Plate	Simulate the transducer's sound like classic bright vocal plate	Pre Delay; Decay; Room Size; Hi Damp; Efx Out; Dry out
4	Delay	Reproduce the sound input on the output after a lapse of time	Time; Decay; Hi Damp; Efx Out; Dry out
5	Stdelay	Recreate the input sound on the stereo output with different time	L Time; R time, L Decay; R Decay; Hi Damp; Efx Out; Dry Out
6	Tremolo	Simulate the sound effect by repeating the same note or different notes alternately and quickly	Mod Freq; Efx out; Dry Out
7	Flanger	Simulate to play with another person carrying out the same notes on the same instrument	Feed back; Depth; Mod Freq; Efx out; Dry Out
8	Chorus	Recreate the illusion of more than one instrument from a single instrument sound	Feed back; Depth; Mod Freq; Efx out; Dry Out
9	DelayRev	Delay with room effect	Pre Delay; Rev Decay; Room Size; Rev Hi; Rev Out; Echo Time; Echo Hi; Echo F.B; Echo out; Dry Out
10	StDelayRev	Stereo Delay with room effect	Pre Delay; Rev Decay; Room Size; Rev Hi; Rev Out; L Time; R Time; L Decay; R Decay; Echo Hi; Echo Out; Dry Out
11	FlangerRev	Stereo chorus and large room reverb	Pre Delay; Rev Decay; Room Size; Rev Hi; Rev Out; ModF.B; ModDepth; ModFreq; ModOut; Dry Out
12	ChorusRev	Simulate the sound effect achieved by rotating horn speakers and a bass cylinder	Pre Delay; Rev Decay; Room Size; Rev Hi; Rev Out; ModF.B; ModDepth; ModFreq; ModOut; Dry Out

5.9 Digital Input Interface (Optional)

You can select channels input from option module & channels input from analog. The screen will give clues if no digital card inserted in, and the Digital in function can not enable either.

◄�	Assign Channel	Gate Comp	PEQ GEQ	FX 1 FX 2	System Routing	Mixer DCA	Long Faders	▶▶

Plesae insert the optional digital card !

Parameter
CH01
0.0dB

0.0dB CH01 OFF	0.0dB CH02 OFF	0.0dB CH03 OFF	0.0dB CH04 OFF	0.0dB CH05 OFF	0.0dB CH06 OFF	0.0dB CH07 OFF	0.0dB CH08 OFF
0.0dB CH09 OFF	0.0dB CH10 OFF	0.0dB CH11 OFF	0.0dB CH12 OFF	0.0dB CH13 OFF	0.0dB CH14 OFF	0.0dB CH15 OFF	0.0dB CH16 OFF
				0.0dB CH17-18 OFF	0.0dB CH19-20 OFF		

Digital Input

Digital Output

Touch this icon to switch between Digital Input and Digital Output page.

0.0dB
CH01
OFF

This symbol enables you to choose digital input channels, touch the switch OFF, it will turn to ON & illuminate, which means this selected channel can input digital signal.

Parameter
CH01
0.0dB

When you choose a digital assign channel, you can adjust its input level by sliding this long fader on the screen or by rotating Parameter Adjust knob on the panel.

5.10 Digital Output Interface (Optional)

When you select a channel as digital output, OFF will switch to ON, the background of ON will illuminate. The screen will give clues if no digital card inserted in & the Digital Out function can not enable either.

◄◄	Assign Channel	Gate Comp	PEQ GEQ	FX 1 FX 2	System Routing	Mixer DCA	Long Faders	▶▶

Parameter
Aux 1
-10.5dB

0.0dB CH01 ON	0.0dB CH02 ON	0.0dB CH03 ON	0.0dB CH04 ON	0.0dB CH05 ON	0.0dB CH06 ON	0.0dB CH07 ON	0.0dB CH08 ON
0.0dB CH09 ON	0.0dB CH10 ON	0.0dB CH11 ON	0.0dB CH12 ON	0.0dB CH13 ON	0.0dB CH14 ON	0.0dB CH15 ON	0.0dB CH16 ON
0.0dB AUX1 ON	0.0dB AUX2 ON	0.0dB AUX3 ON	0.0dB AUX4 ON	0.0dB CH17-18 ON	0.0dB CH19-20 ON		
0.0dB SUB1 ON	0.0dB SUB2 ON	0.0dB SUB3 ON	0.0dB SUB4 ON	0.0dB Main ON	0.0dB SOLO ON		

Digital Input

Digital Output

5.11 DCA Set Interface

	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	**Long Fader**
Back To Previous	0 CH01	0 CH02	0 CH03	0 CH04	0 CH05	0 CH06	0 CH07	0 CH08	**DCA 1** Drums
	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	
System	0 CH09	0 CH10	0 CH11	0 CH12	0 CH13	0 CH14	0 CH15	0 CH16	**DCA 2** Back Vocals
	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB	**DCA 3** Aux & Fx
DCA Set	0 AUX1	0 AUX2	0 AUX3	0 AUX4	0 SUB1	0 SUB2	0 SUB3	0 SUB4	**DCA 4** no name
	-10.5dB	-10.5dB	-10.5dB	-10.5dB	-10.5dB				**DCA 5** no name
DCA Clear	0 CH17-18	0 CH19-20	0 FX1	0 FX2	0 USB	1.Select DCA Group 1 to 6 2.Highlight/Assign Channels to DCA Group 3.Click "DCA Set" to Confirm!			**DCA 6** no name

DCA 1 / Drums — Press one of DCA1-6 on the panel or touch it on the screen, the button will illuminate, which means now you can select one or several channels to the group as shown in above page.

Group — Text under DCA1-6 controls show the preset of DCA settings, you can load a preset directly by pressing Load button, for the detail operation, please refer to the mixer interface page Point No. 5.1.

-10.5dB	-10.5dB	-10.5dB	-10.5dB
0 CH01	0 CH02	0 CH03	0 CH04
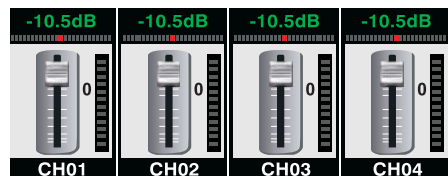
Touch channels that you want to assign to DCA 1-6, for example. The selected channels background will illuminate.

DCA Set — After you selected channels, the DCA Set control will flash, now press it on screen to save the group. Repeat the same way to assign other groups. Each group can repeat selecting any channel. For example, channel 3 can be assigned to DCA1, DCA2, etc. After selecting, the page will return to Mixer mode automatically, in which page you can operate selected group. You can slide fader on the left of screen to increase or decrease the channel fader levels (not volume) in proportion at the same time, or by rotating the corresponding knob to control of the level.

DCA Clear — Press DCA clear, you can see indication on the screen, a warning will come up, then select ''Yes'' to clear channels that assigned to current group.
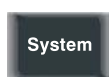
System **Long Fader** **Back To Previous** — Touch these icons to enter corresponding page.

5.12 Meters Interface

Press **Meters** switch (Please see Point No. 31 on Front Panel), you will see Meters Interface page. This page gives you a overall review of all input & output channels & buses meters status,

| ◀	Assign Channel	Gate Comp	PEQ GEQ	FX 1 FX 2	System Routing	Mixer DCA	Long Faders	▶
-10.5dB CH01	-10.5dB CH02	-10.5dB CH03	-10.5dB CH04	-10.5dB CH05	-10.5dB CH06	-10.5dB CH07	-10.5dB CH08	-10.5dB CH09	-10.5dB CH10
-10.5dB CH11	-10.5dB CH12	-10.5dB CH13	-10.5dB CH14	-10.5dB CH15	-10.5dB CH16	-10.5dB AUX1	-10.5dB AUX2	-10.5dB AUX3	-10.5dB AUX4
-10.5dB SUB1	-10.5dB SUB2	-10.5dB SUB3	-10.5dB SUB4	-10.5dB CH17-18	-10.5dB CH19-20	-10.5dB FX1	-10.5dB FX2	-10.5dB USB	-10.5dB Main

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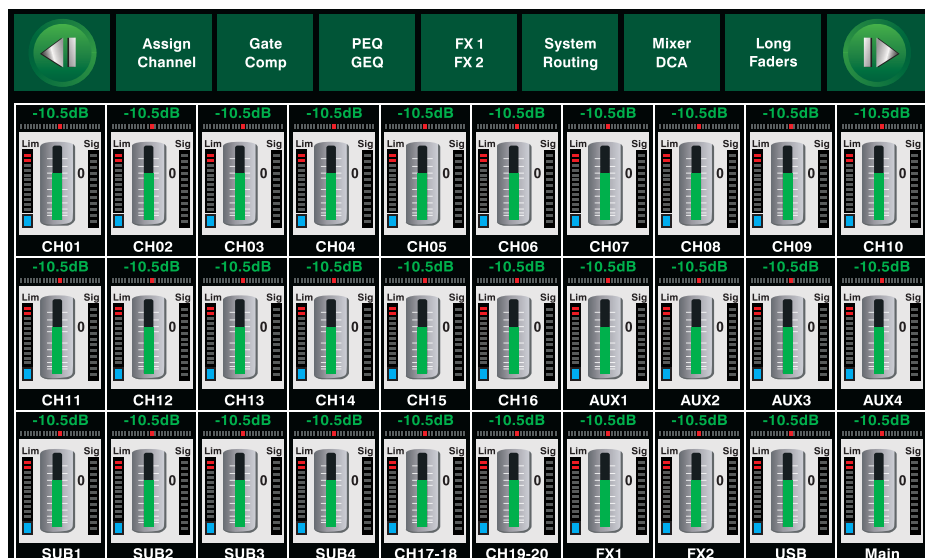
This icon indicates current channel's fader position, in this image it is at ''0'' zero dB position.

-10.5dB The number above it shows level of current channel.

This icon is pan indication.

Lim This icon on the fader left shows LIMITER/COMP meters.

The Grey square below is Gate indicator. When the Gate is activate, it lights Green color. When Gate is activate but the Gate function is disabled then it will show Red.

Sig This icon on the fader right shows the actual input signal level activity.

5.13 Routing Interface

You can select input channels of Main 1-20, FX1-2 and USB in and route them to output channels of Main 1-20, Sub 1-4, Aux 1-4 & FX1-2. For example, below window shows Aux 1 routing function. In this page, you can route input channels in to Aux1 output. In Main routing page, channel level can not be adjusted, but channel level in Sub, Aux and FX pages are adjustable. As the function of this switch will be a little bit different in different control please notice the notes that are shown on the LCD screen when operating.

Touch it to route input channel 1 to output AUX1 as an example. Please rotate Parameter Adjust knob or slide long fader on the screen to change selected channel's audio level.

Touch PRE on the screen, it will switch to POST, & the background will illuminate. The selected channel will derive its signals from all channels post-fader. By default, the selected channel will derive its signal from all channels perspective of channels fader position.
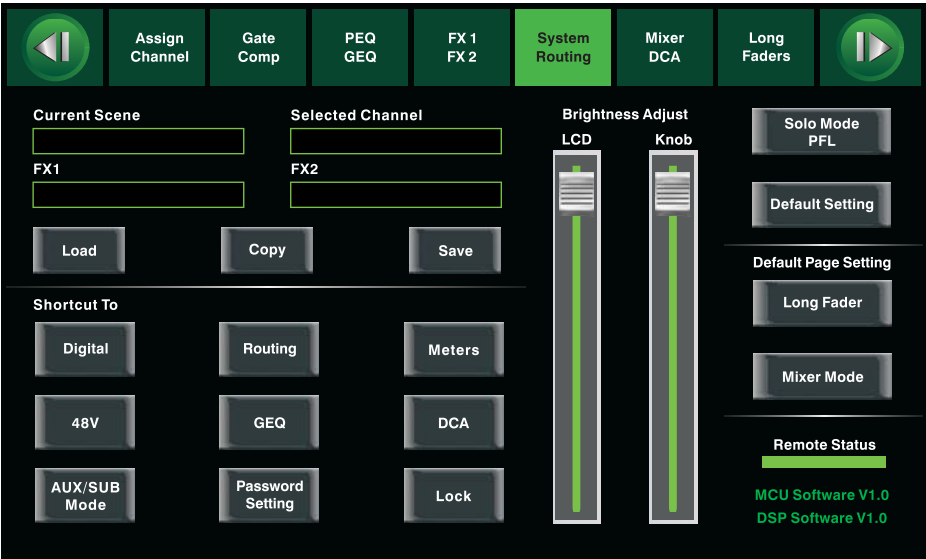
This icon is a switch to change all channels to be POST or PRE. If the selected channel was linked, they will change synchronously in this page when you adjust them.

Slide the fader or rotate Parameter Adjust knob to adjust level of selected input channel.

5.14 System Interface

Press **System Routing** switch (Please see Point No. 32 on Front Panel), you will see System routing page. This page gives you a overall review of all input & output channels & buses meters status.

◀I	Assign Channel	Gate Comp	PEQ GEQ	FX 1 FX 2	System Routing	Mixer DCA	Long Faders	I▶

Current Scene

FX1

Selected Channel

FX2

Brightness Adjust
LCD   Knob

Load	Copy	Save

Shortcut To

Digital	Routing	Meters
48V	GEQ	DCA
AUX/SUB Mode	Password Setting	Lock

Solo Mode PFL

Default Setting

Default Page Setting

Long Fader

Mixer Mode

Remote Status

MCU Software V1.0
DSP Software V1.0

Current Scene

FX1

Selected Channel

FX2

This box indicates the current channel saved preset details.

Load	Copy	Save

Shortcut To

Digital	Routing	Meters
48V	GEQ	DCA

Brightness Adjust
LCD   Knob

Touch these icons to enter corresponding page.

LED brightness and Knob brightness can be adjusted by 'LCD' and 'Knob' long fader. The setting will be saved and updated automatically.
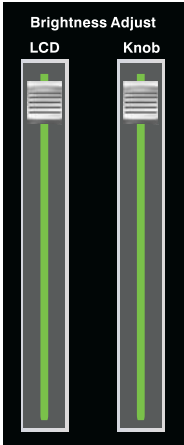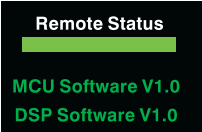
Solo Mode PFL   Touch this icon to switch between PFL and solo mode, it will illuminate synchronously with PFL switch once enabled. For the detail of PFL, please refer to Point No. 39.

Default Setting   Default setting restores all the settings you have made to default.

Default Page Setting

Long Fader
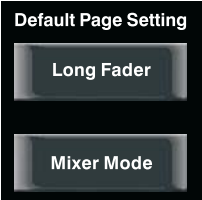
Mixer Mode

This icon determines the page display to you when you turn on the mixer. Touch Long Fader, you will see Long Fader page first, while select Mixer Mode will show you Mixer page first.

Remote Status

MCU Software V1.0
DSP Software V1.0

At the lower right corner, you can see instruction of the DSP firmware.

AUX/SUB Mode   Touch this icon to switch between SUB1-4 mode and AUX 5-8 mode, please note messages on the screen when operation. For the detail function of this button, please refer to Assign interface in section 5.3.

Lock   Touch this icon to lock the system. Once locked, you must input your password to unlock it. Default password is "1111". Master password is "LIVE", which means you can type it to unlock your D.Mix 20 every time you forget your password. Please note messages on the screen when operation.

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Password Setting Touch this icon to change password of the system. Input an old password and a new password. The system will save the new one as current password. Please note messages on the screen when operation.

5.15 GEQ Interface
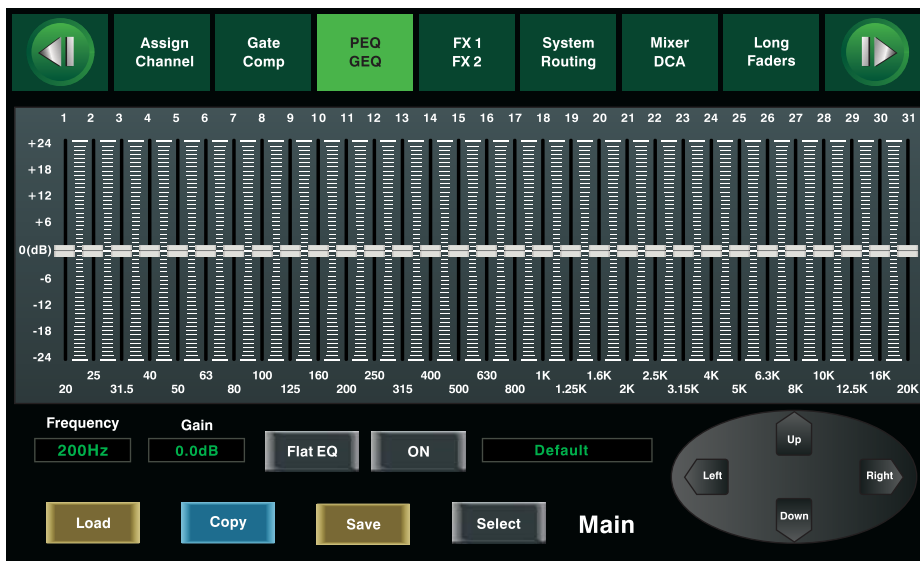
The D.Mix 20 features MAIN Stereo, SUB Mono & AUX Mono, 31-band, 1/3 octave graphic EQs. The 31 bands range from 20Hz to 20 KHz. There is 1 MAIN Stereo GEQ, 4 SUB Mono GEQs and 4 AUX Mono GEQs in 24-bit/48 kHz sample rate.
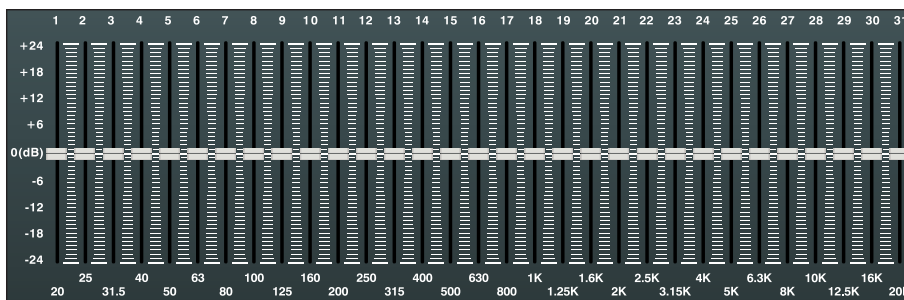

In this screen, you can adjust gain at every specific frequency. The EQ number, Frequency and Gain value which you are adjusting will be shown on the LCD below the graphic curve. Please follow the instruction that is shown on the LCD display to adjust the value.

Flat EQ The Flat EQ icon can help you set the whole 31 bands to be default setting.

Frequency 200Hz Gain 0.0dB The box can show the frequency and gain that you are adjusting.
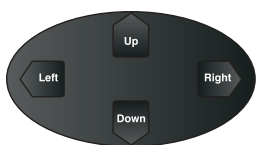
Touch Left or Right to select frequency from 20Hz to 20KHz, while touch Up or Down to fine adjust gain of selected frequency between -24 to +24dB.

Load Copy Save Touch Load, Copy or Save to realize corresponding function.

Select Touch this control in this area to enter page of corresponding channel.
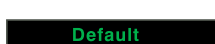
ON Default Touch ON/OFF switch, to enable & adjust the GEQ the icon will illuminate synchronously the GEQ switch on panel will illuminate. Text Default in the box shows preset of GEQ. You can change it by loading another parameter setting.

The GEQ settings can be saved as preset for future use by pressing the Save button & following instruction that is shown on the LCD display. Please notice that the assign state will not be saved when one GEQ setting is saved as preset. The preset can be recalled by pressing the Load button and deleted by pressing the flat EQ button after it has been chosen. Please notice the instruction that is shown on the LCD display.

5.16 Load Interface

In this interface you can load Scene, Effect, GEQ or DSP channel setting too. The chosen preset can be deleted by pressing Delete. Please notice the instruction that is shown on the LCD display.
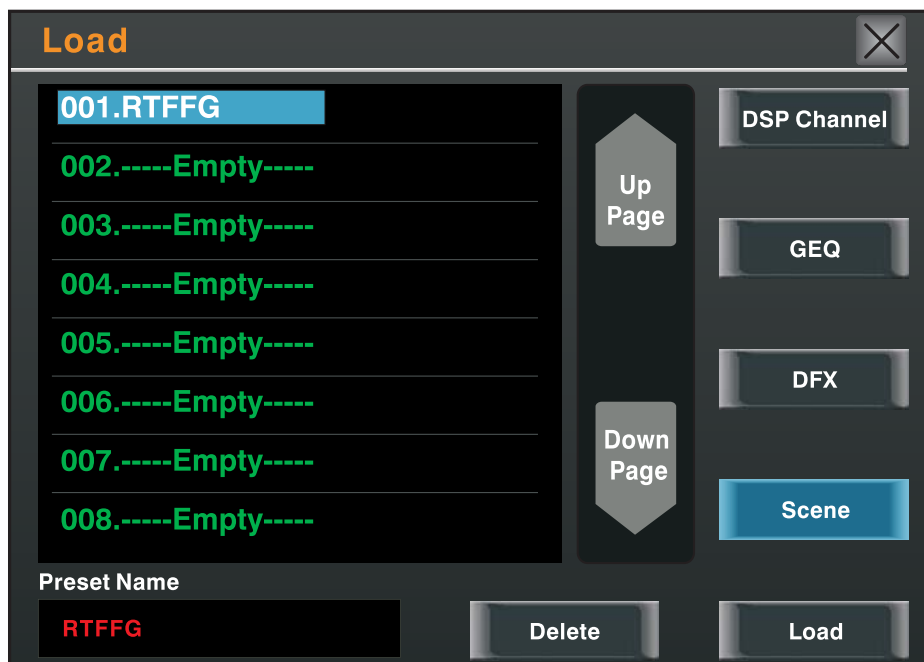
- Load Interface Page

Touch anyone of the above control, the corresponding background will illuminate, you can load preset of selected controls.

Touch Delete to delete current selected item's preset, touch Load to load current selected item's preset.
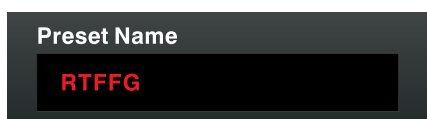
This box indicates the current preset name. It is not editable.

This items show names of preset, when you select a preset, its name will show on the bottom box, then touch Load control on the right corner of the screen to load the selected preset to corresponding controls.
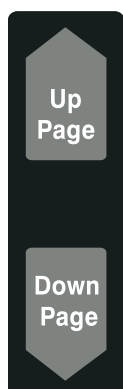
Touch **UP** Page to go to previous item page.
Touch **Down** Page to go to next item page.

The preset can be recalled to the same channel with exactly the same DSP setting & other setting like Solo, Mute, Post..., but with channel's own DSP setting if recall to other channels. For example, if you select Channel 6 and save the setting as scene preset 6. If you select the Channel 6 and press the Load button to load the scene preset 6, then the Channel 6 will be exactly same as the scene preset 6. But if you choose other channel like Channel 7, the DSP setting will be same as the channel 7 and other settings will be same as preset 6.

5.17 Copy Interface

| ◀ | Assign Channel | Gate Comp | PEQ GEQ | FX 1 FX 2 | System Routing | Mixer DCA | Long Faders | ▶ |

From _____ **Copy to:**
◀ Previous Channel   Next Channel ▶

| CH01 | CH02 | CH03 | CH04 | CH05 | CH06 | CH07 | CH08 |
| ON | ON | ON | ON | ON | ON | ON | ON |

| CH09 | CH10 | CH11 | CH12 | CH13 | CH14 | CH15 | CH16 |
| ON | ON | ON | ON | ON | ON | ON | ON |

| AUX1 | AUX2 | AUX3 | AUX4 | SUB1 | SUB2 | SUB3 | SUB4 |
| ON | ON | ON | ON | ON | ON | ON | ON |

| CH17-18 | CH19-20 | FX1 | FX2 | USB | Main | | |
| ON | ON | ON | ON | ON | ON | | Copy |

✓ Polarity ✓ Gain ✓ Delay ✓ Gate ✓ Comp ✓ EQ ✓ Assign ✓ Send

CH01 / **ON**

Select a channel or bus who's setting you want to copy onto other channels, then press Copy icon, you can see the selected channel or bus will flash. Touch OFF of other channel or bus, it will turn to ON and the background will illuminate red, which means you are ready to copy.

From **CH01** **Copy to:**
◀ Previous Channel   Next Channel ▶

This will show current channel that will be copied to other channels or buses. Touch Previous Channel or Next Channel to select.

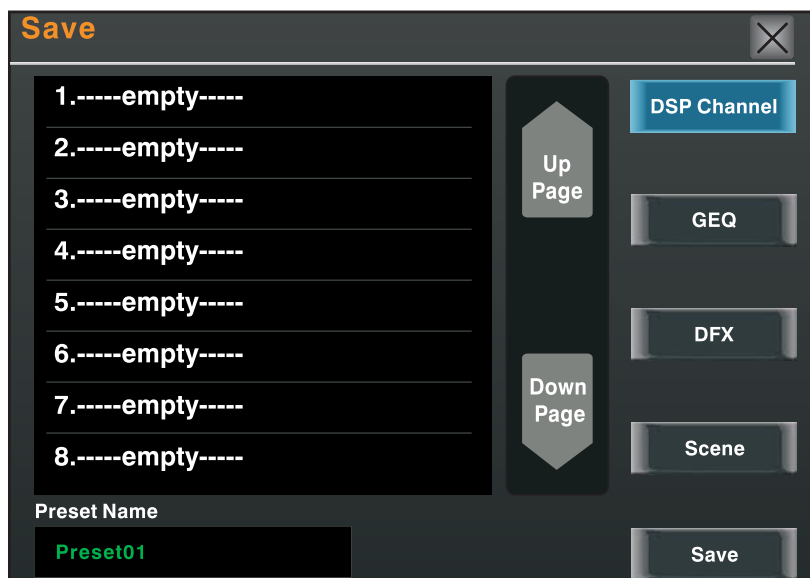✓ Polarity ✓ Gain ✓ Delay ✓ Gate ✓ Comp ✓ EQ ✓ Assign ✓ Send

Touch above controls, the hook will come up, which means you have selected the controls & ready to copy their parameters to other channels or buses. The default setting is select all.

**Copy**

Then touch Copy icon to complete your operation.

Note: In the process of operation, please keep an eye to the LCD screen display.

5.18 Save Interface

Save   ✕

1.-----empty-----		**DSP Channel**
2.-----empty-----		
3.-----empty-----	Up Page	**GEQ**
4.-----empty-----		
5.-----empty-----		**DFX**
6.-----empty-----		
7.-----empty-----	Down Page	**Scene**
8.-----empty-----		

Preset Name
Preset01   **Save**

Save

Press this icon to save the selected channel's & bus's DSP channel setting as DSP presetting for future use.. On the screen you can touch to save preset of DSP channel, GEQ, DFX, Scene. Maximum 224 presets can be saved as given below.
- **DSP Channel:** 48 presets   - **GEQ:** 48 presets,
- **DFX:** 104 presets   - **Scene:** 24 presets
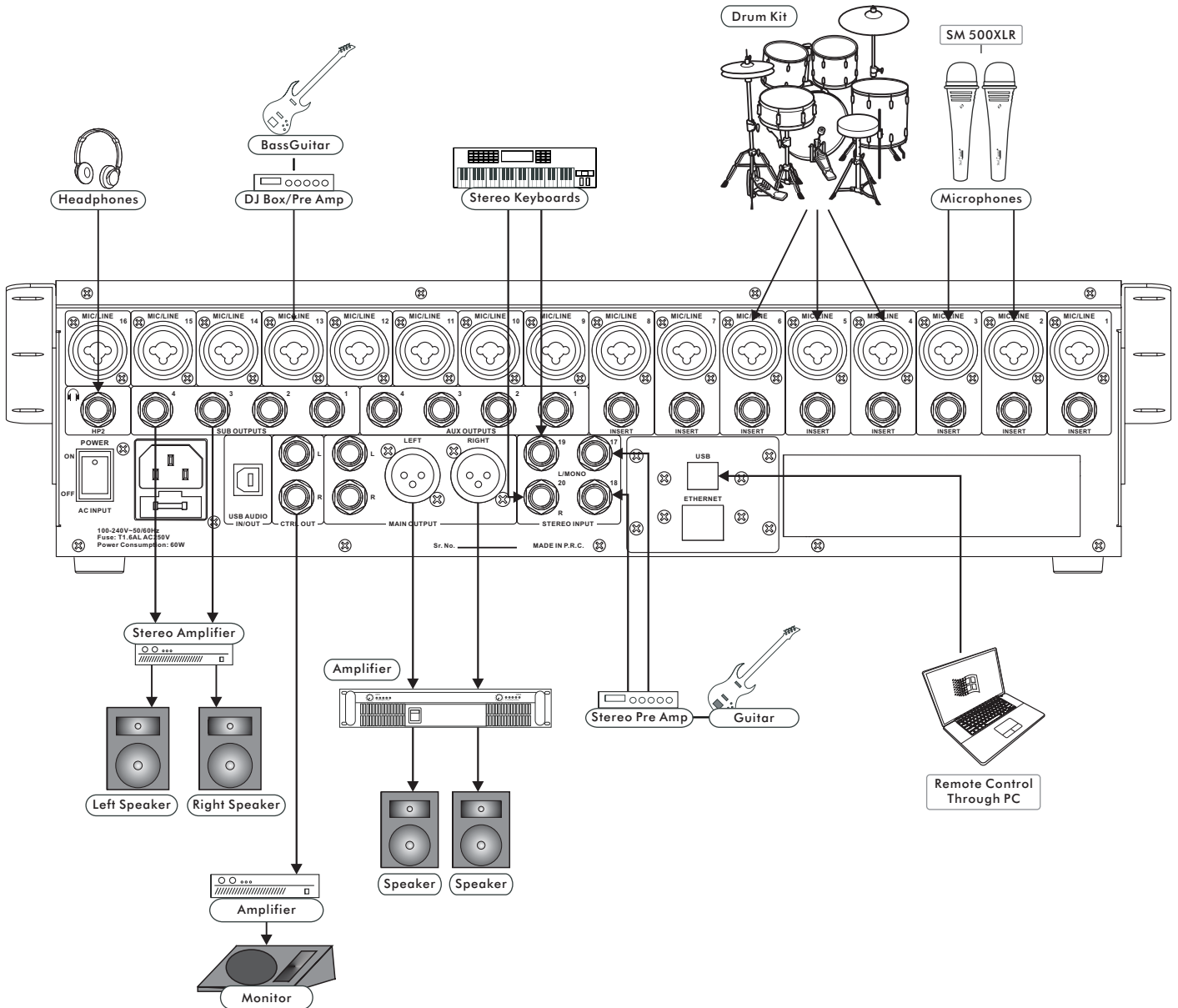
Preset Name
Preset01
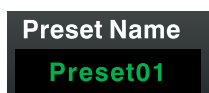
Preset name in the box is editable here. Touch the box, virtual keyboard will come up, then type the name you want to give to this preset, after finish, don't forget to touch Save control and save your settings.

**Note:** Please follow the instruction that is shown on the LCD display.

6. Mixer Set Up:

Set up for live P.A. Operation

7. Technical Specification:

Configuration	16 Mic/Line + 2 Stereo
Nominal Gain (Mic/Line)	50dB, 50dB
Max Gain (Mic/Line)	70dB, 70dB
Input Output Levels	
Input Sensitivity	
Mic (Gain Min/Gain Max)	0dB/-50dB
Line (Gain Min/Gain Max)	+8dB/-40dB
Aux Return	0dBu
Max Input Levels	
Mic	+22dB
Line	+20dB
Aux	+22dB
USB	+22dB
Input Impedance	
Mic Input	5KΩ Balanced
Line Input	20KΩ (Balanced)/10KΩ (Unbalanced)
Aux Return Input	20KΩ Balanced
Output Levels	
Main/Sub	0dBu (0.775V RMS) Nominal/ +20dBu (7.8V RMS) Max
Control Room Output	0dBu (0.775V RMS) Nominal/ +20dBu (7.8V RMS) Max
Aux Send	0dBu (0.775V RMS Nominal/ +20dBu (7.8V RMS) Max
HP1/HP2	+20dBu (7.8V RMS) Max
Output Impedance	
Main/Sub	120Ω
Monitor	120Ω
Aux Send	120Ω
HP1/HP2	120Ω
Frequency Response	20Hz to 20KHz (0dB ± 1.5dB)
Total Harmonic Distortion	<0.005%
Noise Ratio	< -85dB
Equalisation	
Mono MIC (Treble/Mid/Bass)	±24dB (21KHz - 19.2 KHz)
Stereo Line (Treble/Mid/Bass)	±24dB (21KHz - 19.2 KHz)
USB	
Frequency Response to Main Output	20Hz~20KHz at +4dBu ±1.5dB
Distortion (THD & N) to Main Output	<0.05% at 0dBu 1KHZ
Gain	-∞ to +10dBu
Noise Gate	
Threshold Range	-84dBu - 20dB
Attack Time	0.5ms ~ 200mS
Release Time	10ms ~ 1S
Compressor	
Threshold Range	-30dbu -+20dB
Attack Time	10mS~150mS
Release Time	10mS~1S
Ratio	1:1 to 10:1
Gain	0dBu - +24dB
Digital Audio	
ADC/DAC Dynamic Range	114dB
Internal Processor	32-bit, floating point
ADC, DAC bit depth	24bit
Phantom supply	+48V
Power Supply	
Mains Voltage	100V-240V~50/60Hz, 60W max
Fuse Rating	T1.6AL AC 250V
Operating free-air temperature range	0~40° C
Storage Temperature range	-20°C ~ 60°C
Dimensions (W x D x H in mm)	445 x 355 x 140
Net Weight (Kgs.)	7.25 Kg.
Gross Weight (Kgs.)	9.25 Kg.

8. Block Diagram:

9. Notes:
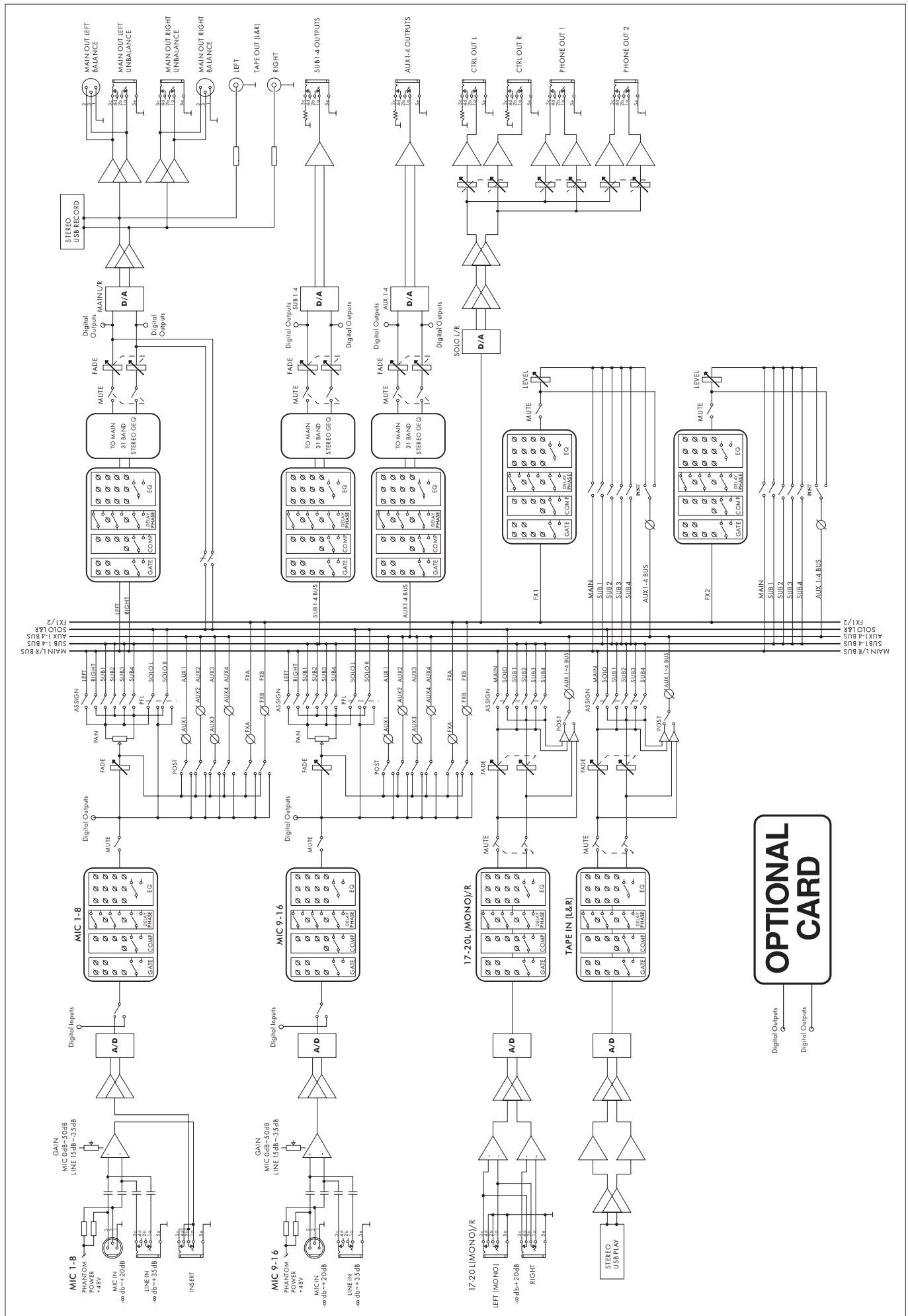
Range of Studiomaster Professional Products.

Wired Microphones

SM 100XLR
TRIO 100
SM 200XLR
TRIO 200
SM 300I
SM 400XLR
SM 450XLR
SM 500XLR
SM 600XLR
SM 650XLR
SM 800C
SM 900C
SBM 10
SBM 20
Flex 2/Flex 2B
Flex 4

Wireless Microphones

BR 28 Series
BR 48 Series
ER 7 Series
ER 11 Series
ER 31 Series
ER 58 Series
KR 12 Series
TR 47 Series
XR 40 Series
XR 100 Series

Conference System

Vāk 10 System
Vāk 10s
Vāk 10d / Vāk 10c
Vāk 20

Crossovers

SX-2
SX-321
SX-521

Processors

SEQ 152
SEQ 302F
SEQ 312
Multi 3
SFX 8
SPS 8
SDX 4
Phantom 11

Mixers

~ Cub Series
CUB 4
CUB 6
CUB 6U

~ Air Series
AiR 2
AiR 4
AiR 6
AiR 8
AiR 12
AiR 16
AiR Pro 24
AiR Pro 28
AiR Pro 36

~ Air Series
AiR X 10
AiR X 14
AiR X 18

~ AQUA Series
Aqua 6
Aqua 8
Aqua 10
Aqua 14

~ Digital Mixer
D. Mix 20

~ Diamond Club Series
Diamond Club 6.2
Diamond Club 8.2
Diamond Club 8.2 EFX
Diamond Club 12.2
Diamond Club 12.2EFX
Diamond Club 12.2USB
Diamond Club 16.2
Diamond Club 16.2EFX

~ Diamond Supreme Series
Diamond Supreme 7
Diamond Supreme 12
Diamond Supreme 12U
Diamond Supreme 16U

~ Club 2000 Series
C 142
C 142EFX
C 182

~ Platinum Series
Platinum 12Fx
Platinum Basic 16
Platinum 16Fx

~ Diamond Pro-3 Series
Pro-3 12.3
Pro-3 16.3

~ DJ Mixers
DJX 300
DJX 325
Playmix 300
DJX 825
DJX 855
DJX 875
DJX 925
DJX 975

CD/USB Media Player
MP 2000

Amplifiers

~ P - Series
PA 1.5
PA 2.0
PA 3.0
PA 4.5
PA 6.0
PA 7.5

~ DPA Series
DPA 2000
DPA 3200
DPA 4500
DPA 5000

~ DJA Series
DJA 100
DJA 500
DJA 800
DJA 1600
DJA 2500
DJA 3200
DJA 4000
DJA 5000

XJA 2600

~ Arena Series
Arena 20
Arena 30

~ Industrial Amplifier
ARC 120A
ARC 240A
ARC 480A

Speaker Component

~ S-Series
SWF 18120
SWF 18100
SWF 1880
SWF 1560
SMB 1565
SMB 1545
SMB 1530
SMB 1250
SMB 1230
SMB 1220
SHF 0104
SHF 0210

~ E-Series
EMB 1225
EMB 1530

~ TITAN Series
TWF 2115
TWF 1815
TWF 1811
TWF 1580
TMB 1555
TMB 1535
THF 0208

Passive Speakers

~ S-Series
S5225
S8018
S8118
S8128
S8028

~ Fire Series
Fire 21 / Fire 51
Fire 51A
Fire 55 /
Fire 57
Fire 82
Fire 84

~ XVP Series
XVP 1225
XVP 1540
XVP 1540M
XVP 1560
XVP 2250
XVP 2550
XVP 2585
XVP 25A2
XVP 25A6
XVP 1808
XVP 1812
XVP 2820

EKS 151

Q 400

Powered Speaker

~ ARIA Series
Aria 8
Aria 12
Aria 15

~ A Series
A 500

H 400

~ B Series
B 200
B 400 (Black & White)
B 400U
B 400UB

~ OP Series
OP 415
OP 515

~ SUB Series
O 12SUB
O 15SUB

Line Array System

FIRE 92
SLA-40 T
SLA-40 Kit
SLA 30
S 9022
S 9022 (FK)

Stabilizers

SVC - S1000
SVC - S2000
SVC - S3000
SVC - S5000
SVC - S8000
SVC - S10000
SVC - S12000

* Design and specification are subject to change without notice.