Soundcraft®

NANO

USER GUIDE

NANO SERIES

MULTI-CHANNEL ANALOG MIXING CONSOLE

M16 / M24



Soundcraft®
by HARMAN

Please read this manual carefully before using your mixer for the first time!

For further information, please contact:

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http://www.soundcraft.com

Safety Instructions

For your own safety and to avoid invalidation of the warranty please read this section carefully.

IMPORTANT SYMBOLS



Caution

Alerts the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



Warning

Alerts 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.



Protect your ears

Alerts the user that the product is capability to produce sound which, when monitored through an amplifier or headphones, can damage hearing over time.

SAFETY INSTRUCTIONS

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Clean the apparatus only with a dry cloth.
- Do not install near any heat sources such as radiators, heat resistors, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
- Do not use this apparatus near water.
- Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When the cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
- No naked flame sources, such as lighted candles or cigarettes etc., should be placed on the apparatus.
- No user serviceable parts. Refer all servicing to a qualified service engineer, through the appropriate Soundcraft dealer.
- The socket-outlet shall be installed near the equipment and shall be easily accessible



THIS UNIT MUST BE EARTHED. Under no circumstances should the mains earth be disconnected from the mains lead.



All maintenance and service on the product should be carried out by Soundcraft or its authorized agents. Soundcraft cannot accept any liability whatsoever for any loss or damage caused by service, maintenance or repair by unauthorized personnel.



WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Do not expose the apparatus to d ripping or splashing and do not place objects filled with liquids, such as vases, on the apparatus. No naked flame sources, such as lighted candles, should be placed on the apparatus.



Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths, curtains etc.

Warranty

1. Soundcraft is a trading division of Harman International Industries Ltd.

   End User means the person who first puts the equipment into regular operation.

   Dealer means the person other than Soundcraft (if any) from whom the End User purchased the Equipment, provided such a person is authorised for this purpose by Soundcraft or its accredited Distributor.

   Equipment means the equipment supplied with this manual.

2. If within the period of twelve months from the date of delivery of the Equipment to the End User it shall prove defective by reason only of faulty materials and/or workmanship to such an extent that the effectiveness and/or usability thereof is materially affected the Equipment or the defective component should be returned to the Dealer or to Soundcraft and subject to the following conditions the Dealer or Soundcraft will repair or replace the defective components. Any components replaced will become the property of Soundcraft.

3. Any Equipment or component returned will be at the risk of the End User whilst in transit (Both to and from the Dealer or Soundcraft) and postage must be prepaid.

4. This warranty shall only be available if:

   a) The Equipment has been properly installed in accordance with instructions contained in Soundcraft's manual; and

   b) The End User has notified Soundcraft or the Dealer within 14 days of the defect appearing; and

   c) No persons other than authorised representatives of Soundcraft or the Dealer have effected any replacement of parts maintenance adjustments or repairs to the Equipment; and

   d) The End User has used the Equipment only for such purposes as Soundcraft recommends, with only such operating supplies as meet Soundcraft's specifications and otherwise in all respects in accordance with Soundcraft's recommendations.

5. Defects arising as a result of the following are not covered by this Warranty: faulty or negligent handling, chemical or electro-chemical or electrical influences, accidental damage, Acts of God, neglect, deficiency in electrical power, air-conditioning or humidity control.

6. The benefit of this Warranty may not be assigned by the End User.

7. End Users who are consumers should note their rights under this Warranty are in addition to and do not affect any other rights to which they may be entitled against the seller of the Equipment.

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Introductions - M16 / M24

NANO Series multi-channel analog mixing console inherits legendary SOUNDCRAFT craftsmanship and is designed to meet various application requirements from live performance, studio recording and fixed installations. NANO Series owns two models in its product portfolio: M16 (16 channels) and M24 (24 channels) and represents a new level of design, quality and performance.

M16 and M24 offer all the functionalities required for live mixing and studio recording: 8/16 mono input channels with ultra-low noise discrete MIC preamp and +48V phantom power; 4 stereo input channels; each mono input channel equipped with 3-band EQ and sweepable MID; each stereo input channel equipped with 4-band EQ; 4 auxiliary controls; 12-segment output level meter; 2-track input routable to main mix, control room / headphones.

M16 and M24 identify themselves for their cutting-edge and eye-catching appearance. The uniquely-designed Atmos Meter showcases SOUNDCRAFT's dedication to engineering innovation and adds extra visual effects to live performance. The built-in USB player supports MP3 playback and recording. 24-bit DSP processor provides up to 100 effect presets. Main mix out comes with a 7-band GEQ and an insert point.

M16 and M24 accommodate all the control and connection elements in a robust steel case and install connectors built from metallic materials of highest industrial standards. Compact and ultra-light build, cutting-edge design, and acclaimed SOUNDCRAFT artisanship make NANO an optimal choice for band gigging, studio recording or fixed installation.

Features

- Ultra-low noise discrete MIC preamp with +48V phantom power.
- 8 / 16 mono input channels and 4 stereo input channels.
- Each input channel accepts balanced XLR MIC input and TRS LINE input.
- Low cut for each MIC input.
- Each mono input channel is equipped with 3-band EQ, sweepable MID and PEAK LED.
- 2 stereo input channels accept mono XLR or TRS input; 2 stereo input channels accepts RCA input.
- Each stereo input channel is equipped with 4-band EQ and PEAK LED.
- 8 compressor controls and 8 channel insert points.
- AUX 1 & AUX 2 send post/pre-fader signal for monitoring or external effects; AUX 3 & FX send post-fader for internal effects or monitoring.
- PFL/MUTE and 60mm fader for each channel.
- GR1/2, GR3/4 and MAIN L-R buss assignment for each channel.
- MAIN MIX installs a pair of balanced XLR and a pair of unbalanced TRS connectors and can be equalized via a 7-band GEQ.
- MAIN MIX supports external effect insert.
- 24-bit DSP processor provides up to 100 effect presets.
- USB player for MP3 playback and recording.
- Switch-mode power supply for 100-240Voltage.
- USB port for MAIN MIX recording or playback through CH 15/16 (M16) or CH 23/24 (M24).
- Cutting-edge and eye-catching design. Uniquely-designed Atmos Meter adds extra visual effects to live performance.

Packing List

- NANO Series Mixing Console x 1
- Power Cord x 1
- User Guide (This document) x 1

Quick Start

WARNING: Read and follow all the SAFETY INSTRUCTIONS when setting up and operating the unit.

WARNING: Disconnect the power before setting up the unit.

WARNING: Under no circumstances should the mains earth be disconnected from the mains lead.

CAUTION: Turn all the input and output controls down before connecting the unit.

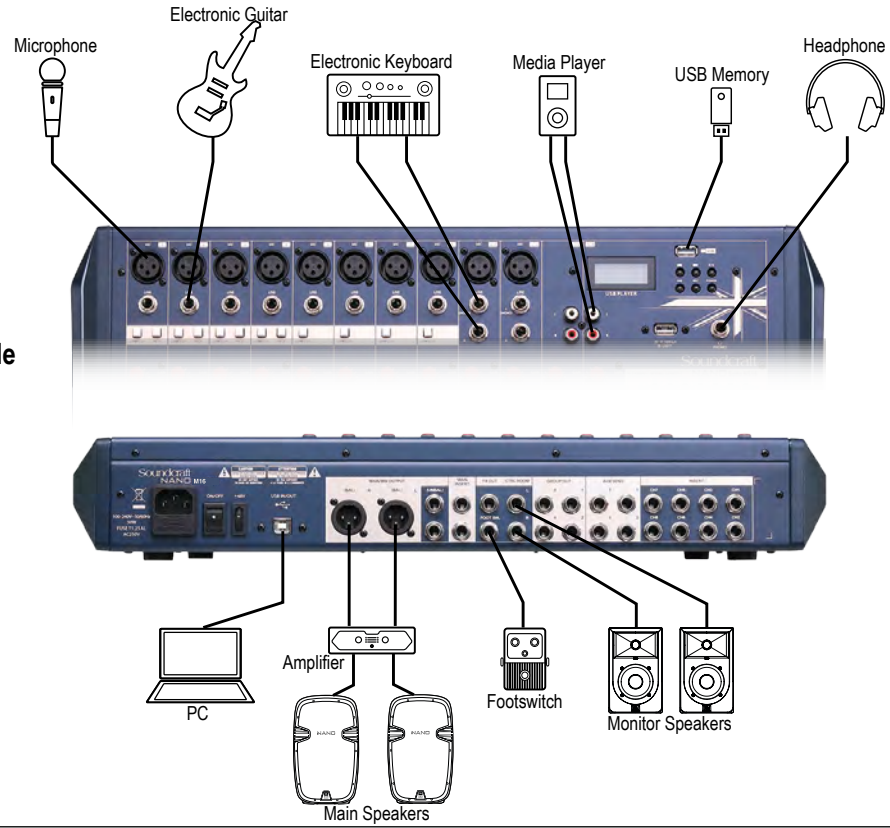
Please refer to the "**Connection Example**" to set up your audio system with NANO Series mixer:

1. Ensure the mixer and external devices to be connected are completely disconnected from power and all the input and output controls of the mixer are turned down.
2. Connect external devices, e.g. micro-phones, amplifiers, speakers, effects, etc.
3. Power on the devices and the mixer.

NOTE: To power on the system, please power on the mixer first, then amplifiers or powered speakers. To power off the system, power off the amplifiers or powered speakers first, then the mixer.

4. Set the output level of your mixer or the connected amplifier to no more than 75%.
5. Set the CONTROL ROOM / PHONE level to no more than 50%.
6. Position HI, MID and LOW EQ controls to the middle.
7. Position PAN / BAL controls to the center.
8. While speaking to the microphone (or playing the instrument), adjust the channel level control so that the CLIP LED blinks occasionally. In this way, you will maintain an ideal headroom and dynamic range.
9. You can shape the tone of each channel by adjusting the EQ controls as desired.
10. Repeat the above steps for each active channel.
11. When the OUTPUT LEVEL meter registers the red segment, slightly lower the output signal level using the MAIN MIX control.

Connection Example



Product Overview

(M24 is shown)

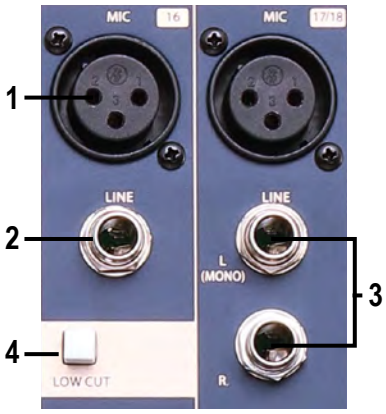




Controls and Features

The following features are applicable to both M16 and M24. In case where different features need to be described for each model, M16 will be described first, followed by M24

1. MIC INPUT JACKS (CH 1 to CH 11/12 for M16, CH 1 to CH 19/20 for M24)



These MIC input uses balanced XLR-type input jacks and are designed to accepts BALANCED or UNBALANCED signals. A +48V phantom power switch (at the rear panel) is provided to power professional condenser mics.

NOTE: ONLY connect condenser microphones with the +48V phantom power switched OFF, and ONLY switch on or off the +48V phantom power with all output faders DOWN (∞), to prevent damage to the mixer or external devices.

2. LINE INPUT JACKS (CH 1 to CH 8 for M16, CH 1 to CH 16 for M24)

These LINE input use balanced TRS jacks and accept either BALANCED or UNBALANCED signals.

NOTE: Unplug anything in the MIC input if you want to use this socket.

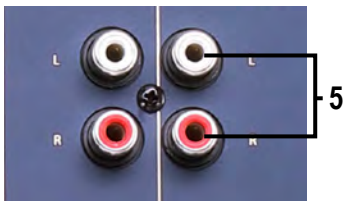
3. STEREO INPUT JACKS (CH 9/10 to CH 11/12 for M16, CH 17/18 to CH 19/20 for M24)

These L-R stereo input are organized in pairs of ¼" phone sockets. To connect a stereo device, plug both the left and right input connectors. To connect a mono input signal, only use the left input, the output signal will appear on both sides.

4. LOW CUT

By pressing this button you will activate a 75Hz low frequency filter with a slope of 18dB per octave which reduces the hum noise infected by the mains power supply or the stage rumble while using the microphone.

5. RCA INPUT JACKS (CH 13/14 to CH 15/16 for M16, CH 21/22 to CH 23/24 for M24)



These RCA input jacks are organized in stereo pairs. To connect a stereo device, plug both the left and right input connectors.

6. HI-Z

Press the HI-Z switch will change the channel input to a high impedance input.



7. GAIN CONTROL

Adjusts the knob to set the input signal level. To achieve the best balance between S/N and dynamic range, adjust the level so that the CLIP LED indicator light occasionally only on the highest input transients. For each channel the MIC input adjustment range of the GAIN is 0-50dB and the sensitivity of line input is +20 to -30dB.

8. COMP CONTROL

Adjusts the amount compression applied to the channel. Turn the knob to the right to increase the compression ratio and the output gain will automatically adjusted. The result is smoother, more even dynamics because louder signals are attenuated which the overall level is boosted.

Controls and Features

9. LINE / USB SWTICH



Press down the button switches to the USB mode, then the USB signal will be sent to this channel. Press up this button will send LINE IN signal to the channel.

10. LINE / USB PLAYER SWITCH

Press down the button will switch to the USB PLAYER mode, then the signal of USB PLAYER module will be sent to the channel.

11. EQ CONTROLS

There are 3-band EQ with sweepable MID on all mono input channels (CH 1-8 for M16; CH 1-16 for M24): HI, MID and LOW band. There are 4-band fixed frequency EQ on the stereo channels (CH 9-16 for M16; CH 17-24 for M24): HI, HI-MID, MID-LOW and LOW band. All bands provide up to 15dB of boost or cut.

HI

If you turn this control up, you will boost all frequencies above 12kHz (shelving filter). You will add transparency to vocals and guitar and also make cymbals crispier. Turn the control down will cut all frequencies above 12kHz. In such way, you can reduce sibilance of human voice or reduce the hiss of a tape player.

MID

This is a peaking filter and boosts or cuts frequencies from 100Hz to 8kHz depending on the position of the MID control. This control will affect especially upper male and lower female vocal ranges and also the harmonics of most musical instruments.

HI-MID

This control gives you up to 15dB boost or cut at 3kHz. It is useful for controlling voice and can accurately polish your performance via adjusting this knob.

MID-LOW

This control gives you up to 15dB boost or cut at 500Hz.

LOW

If you turn this control up, you will boost all frequencies below 80Hz. This will add more punch to bass drum and bass guitar and make the vocalist more “macho”. Turn it down, you will cut all frequencies below 80Hz. This will reduce low frequency vibrations and resonance thus preserving the life of your woofers.

12. EQ ON/ EQ OFF SWITCH

This switch allows user to engage or bypass the EQ section in signal path. It can be used to make A/B comparisons between equalized and non-equalized signals. It also can be used to apply equalized at a certain point of the show, excluding it when it’s not necessary.

Controls and Features

13. AUX SEND CONTROLS

These four controls are used to adjust the level of the respective signal sent to AUX bus and the adjustable range is from -∞ to +10dB.

14. PRE / POST SWITCH

Use the button to switch AUX 1 and AUX 2 to PRE/POST fader. This is helpful when AUX 1 and/or AUX 2 are used for monitoring or effect & sound processor input. AUX 3 and AUX 4 are configured as POST fader.

15. PAN / BAL CONTROL

The PAN control moves a mono signal source from left to right. The BAL control moves the whole stereo image from left to right.

16. MUTE

Each channel is equipped with a MUTE button. When the button is pressed down, it equals to turning the fader down, and can mute the corresponding channel output except for the PRE AUX sends, channel INSERT send and PFL. The MUTE LED will illuminate when the MUTE button is engaged.

17. SIG / CLIP

The SIG LED illuminates when there is signal present in the channel. The CLIP LED will indicate when the signal is about to clip or distort.

18. CHANNEL LEVEL FADER

The 60mm fader allows precise balancing of the various channel signals being mixed to the main output. The adjustable range is from -∞ to +10dB.



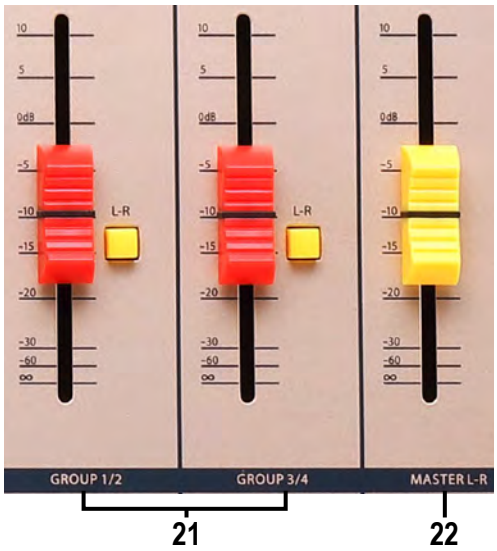
19. GR 1-2 / GR 3-4 / L-R

Each channel provides three push-buttons: GR 1-2, GR 3-4 and L-R, which can be considered as signal assignment switches. For instance, press the GR 1-2 down and the channel signal will be assigned to GROUP 1-2. You can depend on the PAN control to adjust the amount of channel signal sent to the GROUP 1 versus GROUP 2. When the PAN control is turned to completely left, then the signal will be controlled by GROUP 1 only and vice versa. Likewise, pressing the GR 3-4 or L-R will assign the channel signal to GROUP 3-4 or MAIN MIX L-R, and will also be affected by the PAN switch.

20. PFL

Each channel is equipped with a PFL switch. When pressed down, the channel signal will be routed to CTRL ROOM / PHONES outputs and the PFL LED will illuminate.

Controls and Features



21. GROUPS LEVEL FADER

These 60mm faders are used to set the final levels of signals sent to GROUP OUT. The adjustable range is from -∞ to +10dB.

22. MAIN MIX LEVEL FADER

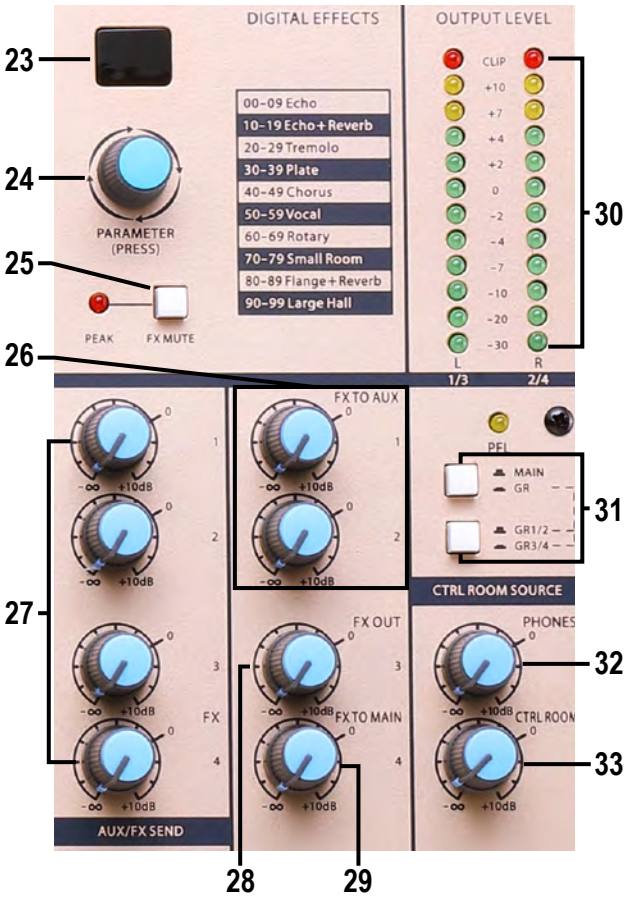
The 60mm fader sets the amount of signal sent to the MAIN MIX OUTPUT. The adjustable range is from -∞ to +10dB.

23. DIGITAL EFFECTS

The LCD screen displays the effect preset selected.

24. PARAMETER (PRESS)

Rotate the knob to select the desired effect from the 100 preset options, which include Echo, Vocal, Plate and versatile dual-effect combinations. When you are satisfied with the selection, push the knob to confirm the selection, then the LCD screen stops flashing.



25. FX / MUTE

Press down the button to disable the internal effect processor. In this case the red PEAK LED will be on permanently.

26. FX TO AUX 1 / 2

The two knobs assign the FX signals to their respective AUX 1 or AUX 2.

27. AUX SEND

These four controls are used to determine the master AUX SEND levels. The adjustable range of each control is from -∞ to +10dB. When external effect units which have no input gain control are connected to the mixer, you will get an extra +10dB gain from these AUX SEND outputs. As for AUX 4, it also provides level adjustment for the internal effect signal.

28. FX OUT

This control is used to determine the internal DSP module levels and FX SEND output. The adjustable range is from -∞ to +10dB.

29. FX TO MAIN

This control is used to assign the signal from FX to MAIN MIX output. The adjustable range is from -∞ to +10dB.

30. OUTPUT LEVEL METER

The 12-segment three-color LED meter are provided to monitor the overall output signal level. Aim to keep the signal within the

Controls and Features

amber segments at peak levels for best performance and avoiding overloading. When any PFL switch is pressed down on any channel, the PFL below the meter will illuminate.

31. MAIN / GR & GR 1/2 / GR 3/4

When the MAIN / GR button is released, the signal from the MAIN MIX output will be monitored. When the MAIN / GR button is pressed down, the signal from the GROUP output will be monitored: release the GR 1/2 / GR 3/4 button to monitor signal from the GR 1 / 2 output, or press the GR 1/2 / GR 3/4 button to monitor signal from the GR 3 / 4 output.

32. PHONES

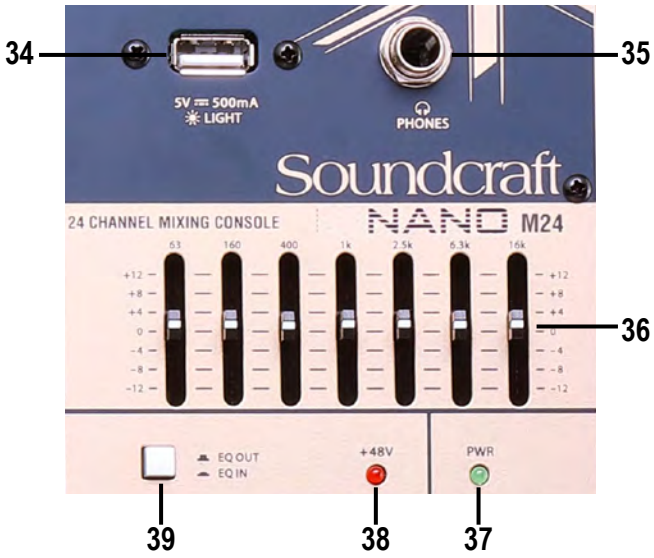
This control is used to adjust the signal present at the PHONEs output. The adjustable range is from -∞ to +10dB.

33. CONTROL ROOM

This control is used to adjust the signal present at the CONTROL ROOM output. The adjustable range is from -∞ to +10dB.

34. POWER LAMP SOCKET

The standard-A USB power socket supplies power of 5.0V 500mA and can be connected to USB-powered/chargeable peripherals like a USB lamp.



35. PHONES

The phone output appears on a ¼" TRS jack connector and is used to send the mix signal to a pair of headphone.

36. STEREO GRAPHIC EQ

The 7-band STEREO GRAPHIC EQ is used to modify the frequency "contour" of the MAIN MIX L-R. Each one of the faders will boost or attenuate (+/- 12dB) the selected frequency at a preset bandwidth. When all the faders are in the center position, the output of the equalizer is flat response.

37. PWR LED

This LED illuminates when the mixer is properly powered on.

38. +48V LED

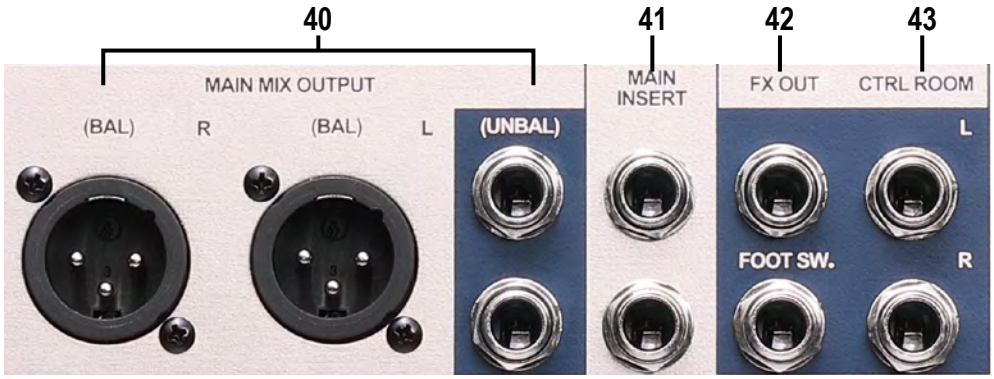
This LED illuminates when the phantom power (at the rear panel) is switched on.

39. EQ OFF / ON

Press down the switch will engage the Stereo Graphic EQ for the MAIN MIX. Release the switch will bypass the Stereo Graphic EQ.

Controls and Features

40. MAIN MIX OUTPUT



These stereo outputs are supplied with a pair of balanced XLR connectors and a pair of unbalanced ¼" phone jacks and are controlled by the MAIN MIX LEVEL fader.

41. MAIN INSERT

The MAIN INSERT installs a pair of ¼" TRS jacks and are used to connect processors such as compressors, equalizers, etc. When an external processor are connected, the Main stereo signal will be taken out after the main bus and returned into the MAIN MIX output before the MAIN MIX fader.

42. FX OUT

The FX OUT installs a pair of ¼" TRS jack and are used to send signal from FX mix buss to external devices.

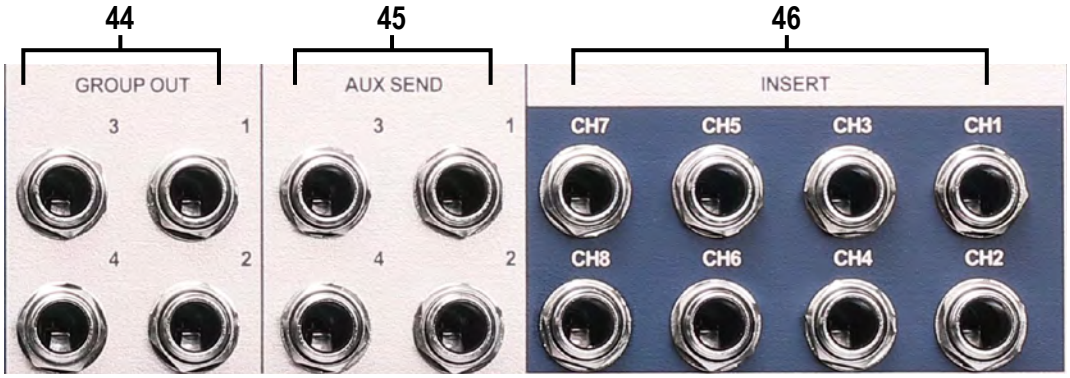
FOOT SW.

This ¼" TRS jack is used to connect an external footswitch, which has the same function as FX MUTE button.

43. CTRL ROOM

These ¼" sockets sends signal to studio monitor speakers or a second set of PA.

44. GROUP OUT



These ¼" TRS jacks are used to send signals from GROUP 1-4 busses to external devices.

45. AUX SEND

These ¼" phone jacks are used to send signal from AUX 1-4 busses to external devices such as effects.

46. INSERT

The channel INSERT point uses a ¼" jack and is a break in the channel signal path just before the EQ section, allowing limiters, compressors, special equalizers or other signal processing units to be added in the signal path.

Controls and Features

47. AC INPUT

Connect the mixer to the main AC with the supplied AC cord. Please check the voltage available in your country and how the voltage for your mixer is configured before attempting to connect your mixer to the main AC.



NOTE: Always replace the mains fuse only with the correct value fuse, as marked on the rear panel.

48. POWER SWITCH

This switch is used to turn on or off the main power of the mixer.

49. +48V PHANTOM POWER SWITCH

When the switch is turned on, +48V phantom power will be available to the XLR MIC inputs, to which professional condenser microphones can be connected.

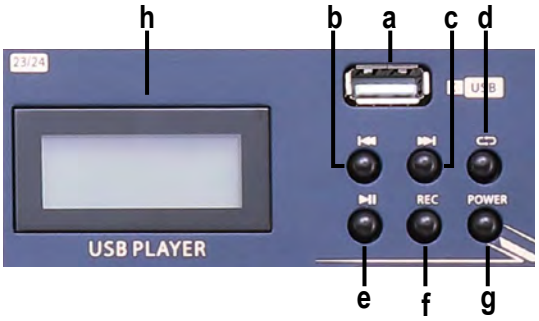
NOTE: ONLY connect condenser microphones with the +48V phantom power switched OFF, and ONLY switch on or off the +48V phantom power with all output faders DOWN, to prevent damage to the mixer or external devices.

50. USB IN/OUT

This USB port is used to connect the mixer to work with a digital audio system or computer-based digital audio workstation for playback or recording. When it is playback mode, it connects to the stereo channel of CH 13/14 of M16 or CH 21/22 of M24.

51. USB PLAYER

The USB PLAYER can be used to playback MP3 soundtracks from or record MAIN MIX in MP3 format to a USB stick connected.



a. USB PORT

This USB port is used to connect a USB memory stick for playback and recoding.

b. ⏮ PRE

When the USB player is in pause state, press this button will return to the previous track and remain the pause state. When the player is in play state, press this button will return to the previous track and remain the play state. When the USB player is in play state, press the button for 2 seconds, the player will switch to soundtracks in the previous media file stored in the USB memory; press the button for more than 2 seconds, the player will switch among media files stored in the USB memory.

c. ⏭ NEXT

When the USB player is in pause state, press this button will go to the next track and remain the pause state. When the player is in play state, press the button will go to the next track and remain the play state. When the USB player is in play state, press the

Controls and Features

button for 2 seconds, the player will switch to soundtracks in the next media file stored in the USB memory; press the button for more than 2 seconds, the player will switch among media files stored in the USB memory.

d. RPT

Press the button to select from the following repeat modes for the player.

- When ALL appears on the LCD screen, all the tracks in the USB memory stick will be repeated.
- When 1 appears on the LCD screen, one track (the current track) will be repeated.
- When **A** appears on the LCD screen, the tracks will be played at random.
- When no symbol appears on the LCD screen, the tracked will be played according to their order.

e. PLAY / PAUSE

Press the button to start playing or pause the player.

f. REC

When the USB player is in use, press the REC button will switch the player to the recording mode. Press the REC button again will start recording.

When the USB player is in recording mode, the rest player functions will not be opera-table until the recording mode is terminated through the POWER button.

In case the “Err” appears on the LCD screen, it means an error happens to recording. In such situation, press POWER button to stop recording.

g. POWER

Press and hold the button for 2-3 seconds will turn on or off the USB player.

h. DISPLAY

The LCD screen displays all the USB player information and status.

Effect Presets

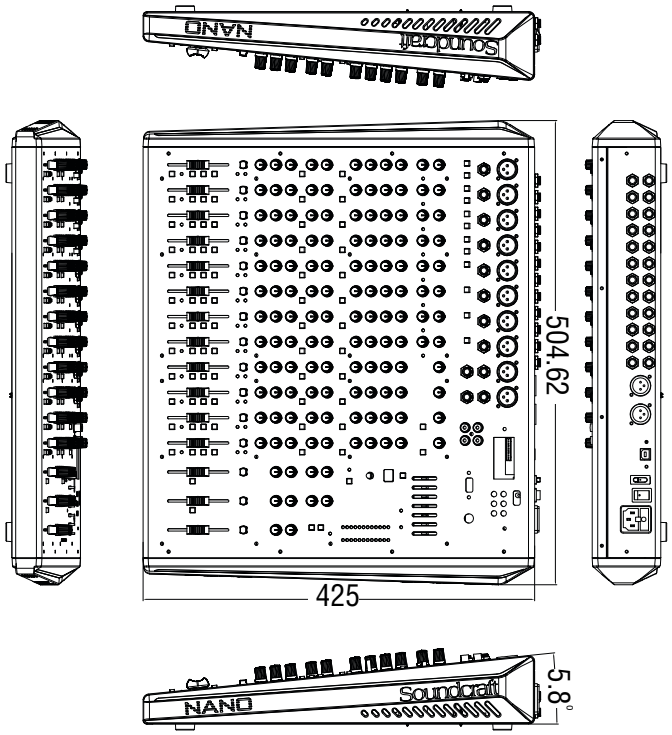
NO.	PRESET	DESCRIPTION	PARAMETER
00~09	Echo	Reproduce the sound in input on the output after a lapse of time or delay.	Delay time: 145~205ms
10~19	Echo+Verb	Echo with room effect.	Delay time: 208~650ms Decay time: 1.7~2.1s
20~29	Tremolo	Amplitude modulation of the signal.	Rate: 0.6 Hz~5 Hz
30~39	Plate	Simulate the transducers sound like classic bright vocal plate.	Decay time: 0.9s~3.6s
40~49	Chorus	Recreate the illusion of more than one instrument from a single instrument sound.	Rate: 0.92Hz~1.72Hz
50~59	Vocal	Simulate a small space with slight decay time.	Rev. decay time: 0.8~0.9s Pre-delay: 0~45ms
60~69	Rotary	Simulate the sound effect achieved by rotating horn speakers and a bass cylinder.	Modulation depth: 20%~80%
70~79	Small Room	Simulate a bright studio room.	Decay time: 0.7~2.1s Pre-delay: 20~45ms
80~89	Flanger+Verb	Simulate to play with another person carrying out the same notes on the same instrument and reverb.	Decay time: 1.5~2.9s Rate: 0.8Hz~2.52Hz
90~99	Large Hall	Simulate a large acoustic space of the sound.	Pre-delay: 23~55ms Decay time: 3.6~5.4s

Specifications

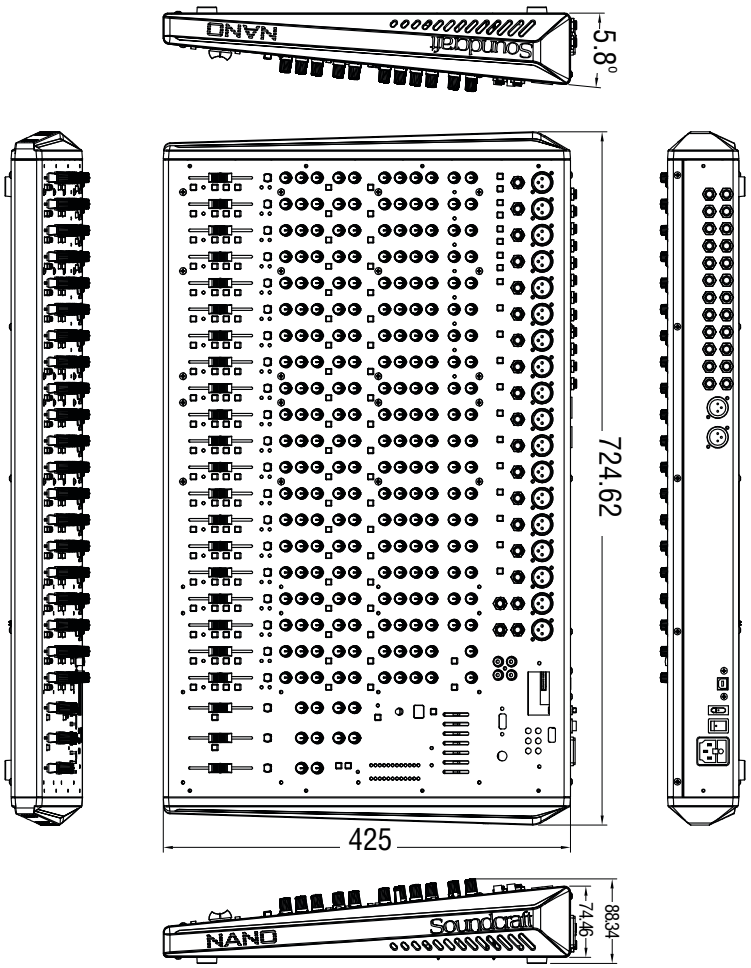
	M16	M24
Noise		
Hum & noise	<-80 dB @ 20 Hz~22 KHz A-weighted, 1 channel & main level: 0 dB, the other: minimum	
Crosstalk		
Crosstalk	<-80 dB @ 0 dB 20 Hz~22 KHz A-weighted, main level: 0 dB, the other: minimum	
Frequency Response		
Mic/Line Input to any output, 20 Hz-20 kHz	<1 dB	<1 dB
THD + N		
Mic sens. -30 dBu, +20 dBu at all outputs @ 1 kHz	<0.006%	<0.006%
CMRR		
Typical @ max gain @ 1 kHz	>80 dB	>80 dB
Typical @ any gain @ 50 Hz	>60 dB	>60 dB
Input & Output Impedance		
Mic Input	1.8 kΩ	1.8 kΩ
Line Input	23.6 kΩ	23.6 kΩ
Stereo Input	20 kΩ	20 kΩ
Mix, Aux and Insert Sends	120 Ω	120 Ω
Input & Output Levels		
Mic Input max. level	+20 dBu	+20 dBu
Line Input max. level	+30 dBu	+30 dBu
Stereo Input max. level	+30 dBu	+30 dBu
Headphones (@ 200 Ω)	150 mW	150 mW
Compressor		
Gain	0 - 9 dB	0 - 9 dB
Threshold	20 dB → ↓ 5 dB	20 dB → ↓ 5 dB
USB 2.0 (Standard B)		
Inputs / Outputs	2-in, 2-out	2-in, 2-out
Bit Depth	16-bit	16-bit
Sampling rate	32 kHz / 44.1 kHz / 48 kHz	32 kHz / 44.1 kHz / 48 kHz
USB Player		
Inputs / Outputs	2-in, 2-out	2-in, 2-out
Record sampling rate	44.1 kHz	44.1 kHz
Power Consumption		
Mains voltage	100 V-240 VAC, 50/60 Hz, universal input	100 V-240 VAC, 50/60 Hz, universal input
Physical		
Net weight	6.59 kg	9.18 kg
Gross weight	8.2 kg	11.2 kg
Dimensions	504.62 x 425.00 x 88.34 mm	724.62 x 425.00 x 88.34 mm

Dimensions

M16

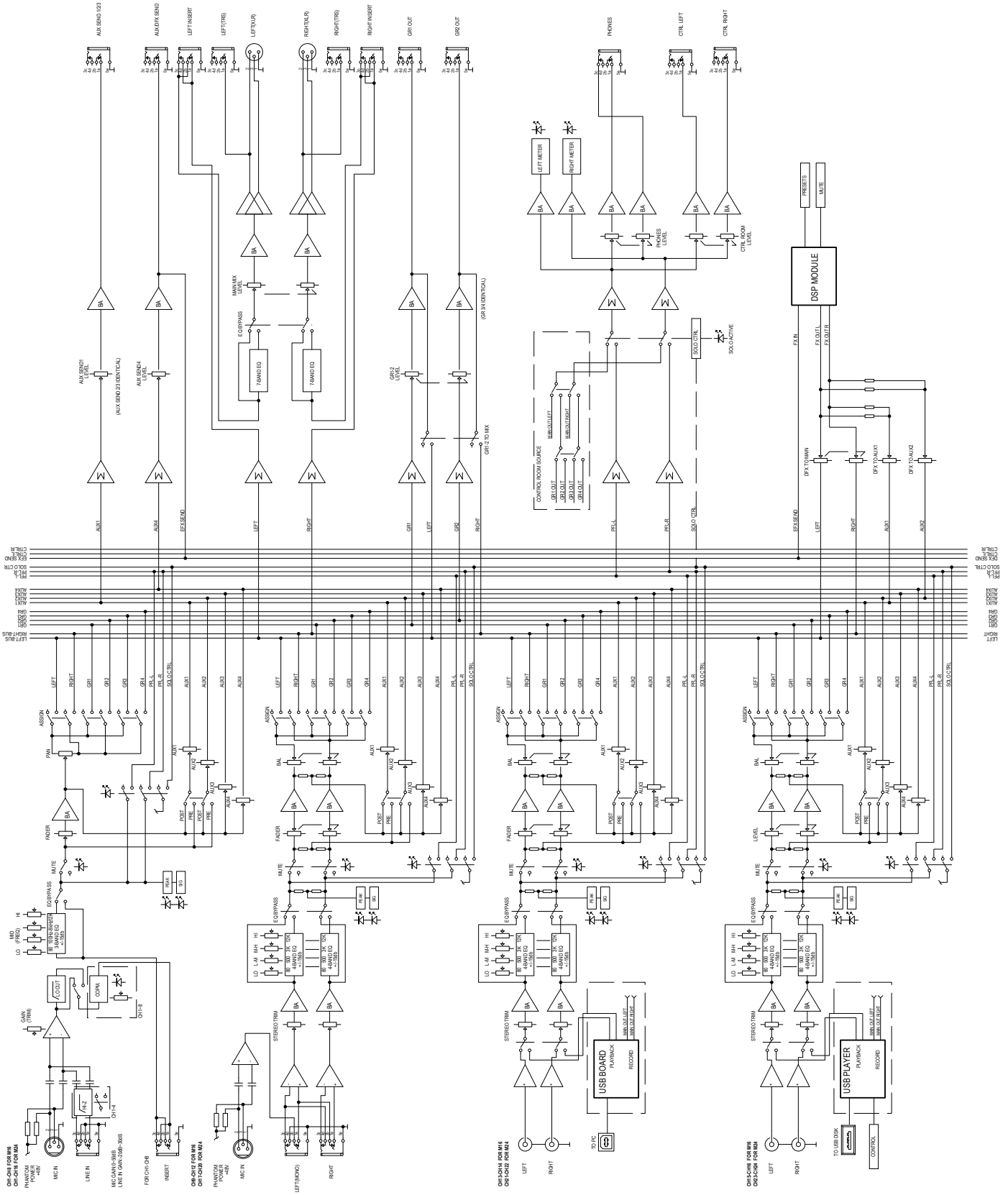


M24

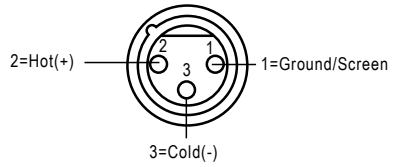


Measured in mm

Block Diagram



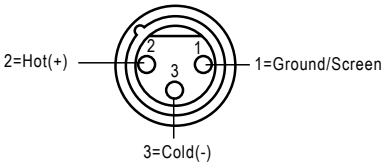
Audio Connectors



Use for Balanced Mic Inputs
(For unbalanced use, connect pin 1 to 3)

3-pin XLR Male Plug

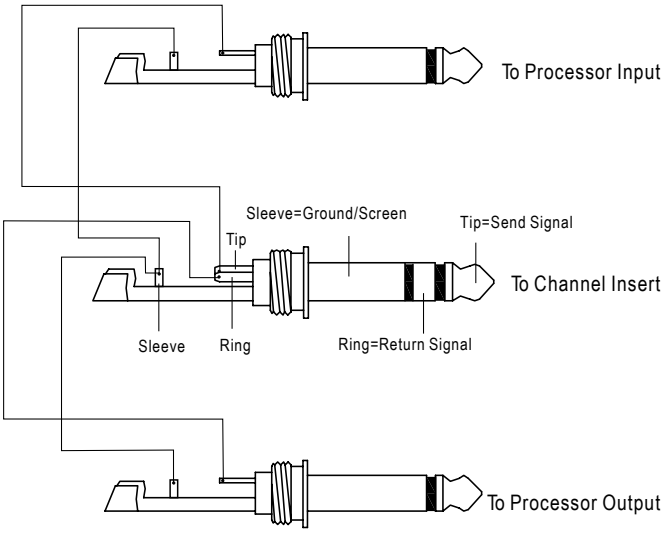
(seen from soldering side)



Use for Main output
(For unbalanced use, leave pin 3 unconnected)

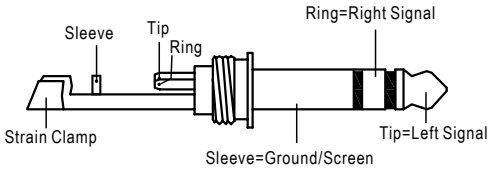
3-pin XLR Line Socket

(seen from soldering side)



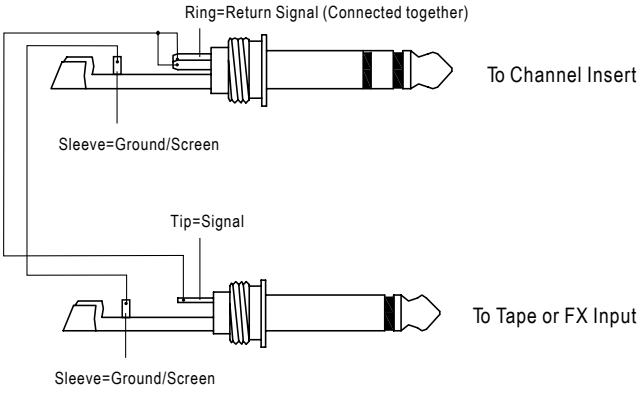
Y-Stereo lead for insert Connection

(To be used when the processor does not employ a single jack connection for the In/Out Connections)



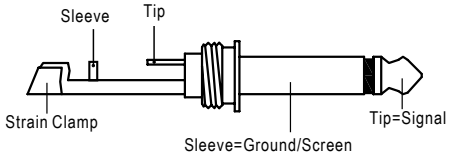
Use for Headphone, Stereo Return

1/4" Stereo (TRS) Jack Plug



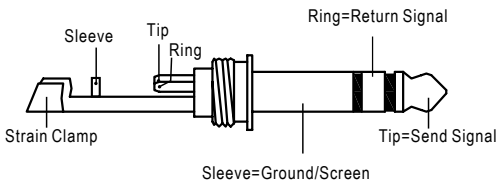
'Tapped' Connection Direct Output Lead

(Enables the Insert to be used as a Direct Output while maintaining the channel signal flow)



Use for Mono Line In, Mono 1/4"Jack Plugs

1/4" Mono (TS) Jack Plug



Use for Pre-Gain Channel Inserts

1/4" Stereo (TRS) Jack Plug

Soundcraft®

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NANO SERIES - M16 / M24

USER GUIDE

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