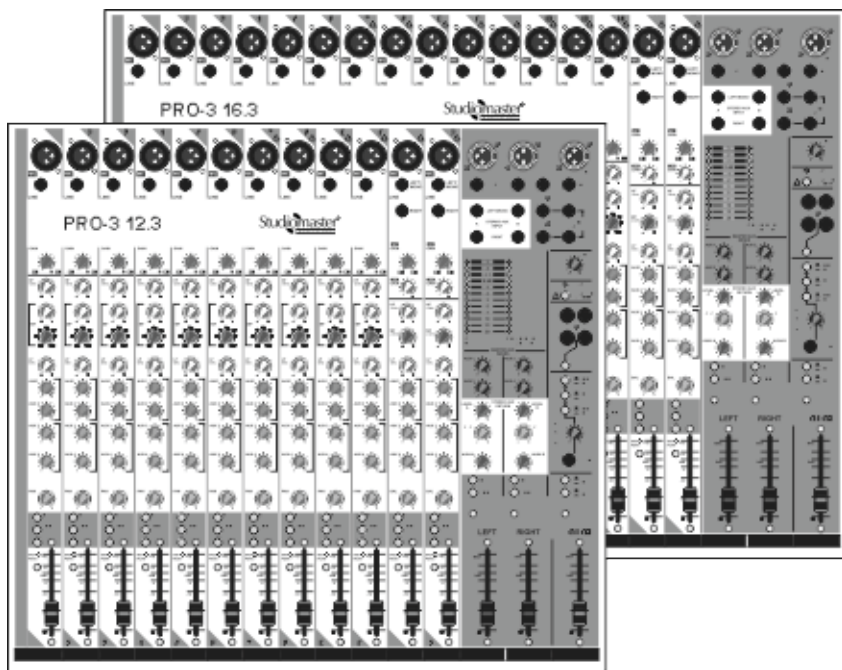




Diamond Pro-3 Series



Index:

1.....	Introduction
2.....	Features at a Glance
3.....	Input Section
4.....	Output Section
5.....	Diagram
6.....	Technical Specifications
7.....	Product Care Instructions

1. Introduction

Thank you for buying the Studiomaster Professional Diamond Pro-3 Series 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.

Retain the cartons for future use should the product require servicing / maintenance.

2. Features at a Glance

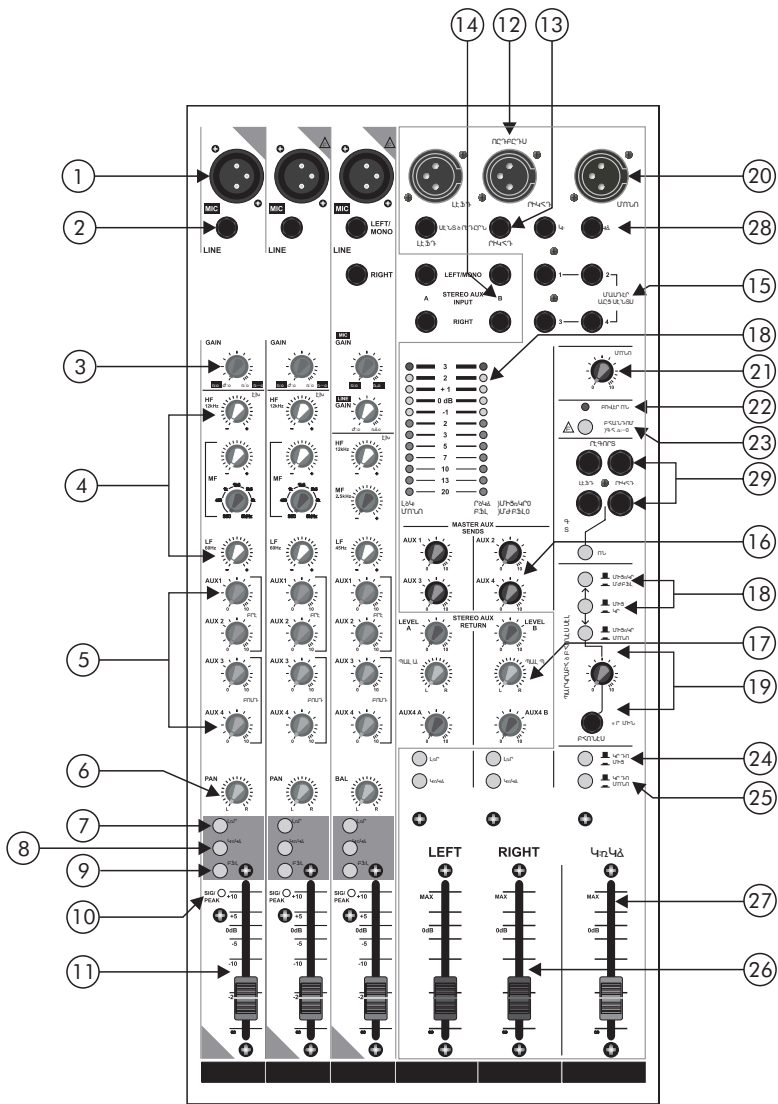
- Balanced Mic/Line inputs.
- Monster (Mono-Stereo) Inputs for full flexibility.
- Gain control with 3 Band EQ & mid-sweep on each channel.
- 4 Aux Send/level AB & Aux 4 AB returns on board.
- L/R Pan/Bal control & Signal/Peak led per channel.
- Master (L-R), Group (G1-G2), PFL Self illuminated switches per channel.
- Aux 1/2 - Pre fader & Aux 3/4 - Post fader.
- Group switchable to Main Mix/Mono or both.
- Headphone & bargraph monitoring by selection of Mix/Group & Mono/PFL.
- Stereo CD In/Record Out & 1/4" Headphone out.
- Balanced XLR Master Output.
- Separate Mono Output with Level Control on Balanced XLR connector.
- +48V Phantom on all channels except first 6 channels.
- 12 Segments LED Meter.
- Operates on wide mains supply variation 150V-240V.

Model Available :


Diamond Pro-3 12.3: 12 Mic/10 Line + 2 Mono/Stereo

Diamond Pro-3 16.3: 16 Mic/14 Line + 2 Mono/Stereo

3. Input Section



The input sections of the Diamond Pro-3 Series mixers have two connectors XLR MIC & 1/4" Jack inputs as well MON:Ter (Mono/Stereo) inputs on some channels. Please do not use both the inputs at the same time. Doing this may permanently damage the mixer. Please ensure the gain levels, the fader levels and the Aux controls are set to minimum while connecting or disconnecting inputs.

- 1. **MIC Inputs:**This electrically balanced XLR input is designed to accept low impedance balanced signals from microphones. Except first 6 channel, rest all can have Phantom supply when condenser Mic is to be used. Channels with phantom are identical by symbol  near XLR connector.

- 2. Line Inputs:** The line input will accept line level balanced or unbalanced signal using ¼" stereo (TRS) Jack. The line input is designed for instruments like Keyboards, Guitars, Drum Machines & other electronic instruments.

Balanced XLR		Balanced TRS		Un-Balanced TRS	
Pin 1	Ground	Tip	+ve Phase	Tip	Signal
Pin 2	Hot (+ve Phase)	Ring	-ve Phase	Sleeve	Ground
Pin 3	Cold (-ve Phase)	Sleeve	Ground		

- 3. Gain Control:** This knob is used to gain both MIC & Line inputs signals. Please do not operate at high gain levels as this distorts the signal & leads to audio clipping.
- 4. EQ Section:** The Diamond Pro-3 series has 3 Band Equalizer with mid-sweep Mono inputs & 3 Band Equalizer on Stereo channels. The EQ is designed to be easy yet effective to use. It can be used to cut or boost certain frequencies to achieve a particular tone, or to eliminate any unpleasant characteristics.
- **HF Control:** The HF control can be used to cut or boost up to +/- 16dB at 12 kHz.
Tip: This frequency band can be used to brighten up high frequencies.
 - **MF Control:** The MF control can be used to cut or boost up to +/- 16dB at 2.5 kHz.
Tip: This frequency band can be used to enhance presence in vocals. Mid frequency variation is from 350Hz to 6KHz.
 - **LF Control:** The LF control can be used to cut or boost up to +/- 16dB at 60Hz (Mono) & 45Hz (Stereo) Input.
Tip: This frequency band can be used to get a punchy bass response.
- 5. AUX Section:** The AUX is provided to be used with external effect processors like reverb and delay units, compressors, gates etc. It can also be used for on stage monitoring or as an input in to a recorder.
- * AUX 1 & 2: This knob is used to control the send level to the AUX 1 & 2 out. AUX 1 & 2 are 'Pre' fader & generally used for monitoring. The level of the channel fader will have no effect on the signal level. (Please note output from external processors connected via the AUX busses will have to be input in to the AUX return section)
- * AUX 3 & 4 : These knobs are used to control the send level to the AUX 3 & 4 out. AUX 3/4 are 'Post' fader & generally used for effect processors. The level of the channel fader will affect the signal level.
- 6. Pan/Bal Control:** This knob can be used to pan/balance the incoming signal between the left and right output channel.
- 7. L-R Switch:** This switch is used to route channel signal to Master (L/R) output.
- 8. G1-G2 Switch:** This switch is used to route channel signal to Group (G1/G2) output.
- 9. PFL:** This button sends signal from input channel to the headphone as well as bargraph. As signal is pre fader it is possible to listen to the signal or view on bargraph with fader fully down before it is included in the main (L/R) mix.
- 10. Signal/Peak LED:** This LED glows when the incoming audio signal is clipping. Please reduce gain levels to reduce clipping.
- 11. Channel Fader:** This fader is used to set the level of the incoming signal to the master/group output. It provides a visible indication of the channel level. Normal operating position is at "0"; however you have an optional headroom of up to +10dB.

4. Output Section (Please refer to the diagram on Pg. 3)

12. **Master (L/R) Output:** This output is used to connect the master output of the mixer to the amplifier or powered speakers. The output level is determined by the master fader (25). Wiring configuration is as follows :

Pin 1 = Ground	Pin 2 = Hot (+ve Phase)	Pin 3 = Cold (-ve Phase)
----------------	-------------------------	--------------------------

Note:- Please check Note 2 on page no. 10.

13. **Left & Right Send/Return Sockets:** This ¼" 3 pole jack socket is an effect send and return, or insert point, which allows the signal on the individual outputs to be treated by an external processor in the same way as an input channel or group.

Sleeve = Ground	Tip = Send (To Effects)	Ring = Return (To Console)
-----------------	-------------------------	----------------------------

14. **Stereo Aux Input Sockets:** The Stereo Aux Input sockets are ¼" 2 pole jack unbalanced line inputs, designed to be used as stereo inputs, to return signals (that have been externally processed) to the console. If a mono signal is sent to the console, connect the left/Mono socket only.

Tip = Signal	Sleeve = Ground
--------------	-----------------

15. **Aux Master Send Sockets:** The Aux Master Sends are the main outputs from Aux Sends 1 to 4 to effects units or monitor systems, they contain the sum of all signals sent from the Aux controls on the input channels. The Aux Master Sends are ¼" 2 pole jacks.

Tip = Signal	Sleeve = Ground
--------------	-----------------

16. **Aux Master Send Controls:** This control is used to adjust the overall level of signals that have been sent to the Aux bus by the controls on the individual input channels. The signals are accessed from the Aux Master Send sockets.

17. **Stereo Aux Input controls:** The two stereo Aux inputs are both well equipped to make the most of any external effects unit, or use as extra stereo or mono line inputs. The level control sets the amount of signal coming into console. The balance control sets the Left & Right balanced of the Aux return, and therefore the position of the sound within the main stereo image. The Aux 4 control allows the Aux return to be routed to Aux 4 (the primary foldback Aux) so effects or other signals can be heard, at the desired level, through the on stage monitor speakers. Aux return can be routed to master by (L-R) or Group by (G1-G2) switch.

18. **Bargraph:** It is equipped with 12 segment, two color LED's. Bargraph can be assigned to Master, Group or Mono-PFL by Mix-GR & Mix-GR/M+PFL Switch.

MIX/GR	MIX-GR/M+PFL	Bargraph Out
 (Release)	 (Release)	Master (L & R)
 (Press)	 (Release)	Group (1 & 2)
X (Don't Care)	 (Press)	Mono & PFL

19. **Headphone Out:** The ¼" Headphone Output socket carry the signal from the Left/Right, Group 1/2 & PFL signal outputs. Please do not use headphones less than 400 impedance however it will safely operates at 8 Ω with lower output level. Wiring configuration is as follows :

PFL	MIX/GR	MIX-GR/MONO	Headphone
 (Release)	 (Release)	 (Release)	Master (L & R)
 (Release)	 (Press)	 (Release)	Group (1 & 2)
 (Release)	X (Don't Care)	 (Press)	Mono
 (Press)	X (Don't Care)	X (Don't Care)	PFL

20. Mono Output: This mono output is used to provide MONO main mix output of the mixer for monitoring purpose or any other requirement. It is servo balance output so you can connect either balance or unbalance cable without affecting output level.

Note:- Please check Note 2 on page no. 10.

21. Mono Level: This control is used to adjust the output level of Mono out.

22. Power LED: This LED indicates the unit is powered ON.

23. +48V PHANTOM Switch: This switch is used to provide +ve 48V supply phantom power for all MIC Inputs, except first 6 channels required when connecting condenser microphones or electret microphones operating at 48V phantom power.

24. GR to Mix Switch: This switch routes group signal to Master (L/R) out.

25. GR to Mono Switch: This switch routes group signal to Mono out.

26. Master Faders: To control Master (L/R) output levels.

27. Group Fader: To control Group (1/2) output level.

28. Group Out: These are 1/4" Stereo jack balance outputs. It is servo balance output so you can connect either balance or unbalance cable without affecting output level.

29. CD/RECORD: The Diamond Pro-3 series mixers have 2 stereo RCA connectors for recording or playback.

- Record: This RCA output is provided to record master mix on to a recording media like tape machine, hard disk recorders and computer based audio interfaces etc. The output level of this determined by the master L/R fader; alternately the input level on the recording medium can be used for the same.
- CD IN (Playback): This RCA input is provided to connect external devices like CD player, iPod's, mp3 players etc.
- ON: To toggle between the two record mode & CD (playback) mode.

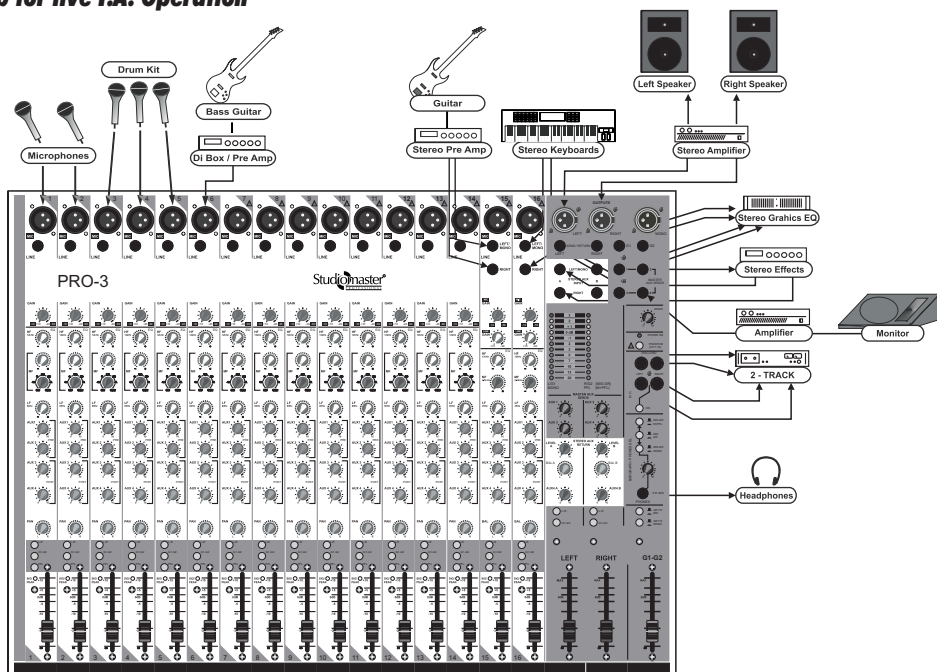
Please Note Do not press the CD(playback) button while recording especially when using the same device for recording and play back, this will send the output signal back to the input and cause oscillations.

ATTENTION !

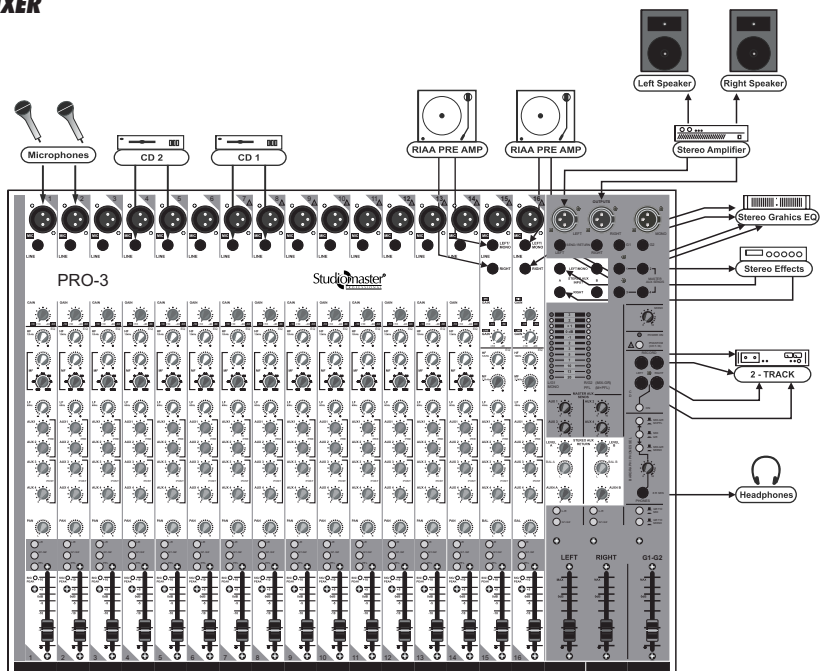
When the phantom power switched ON, no unbalanced microphones must be connected to the microphone inputs as doing this may permanently damage the Microphone.

5. Diagram

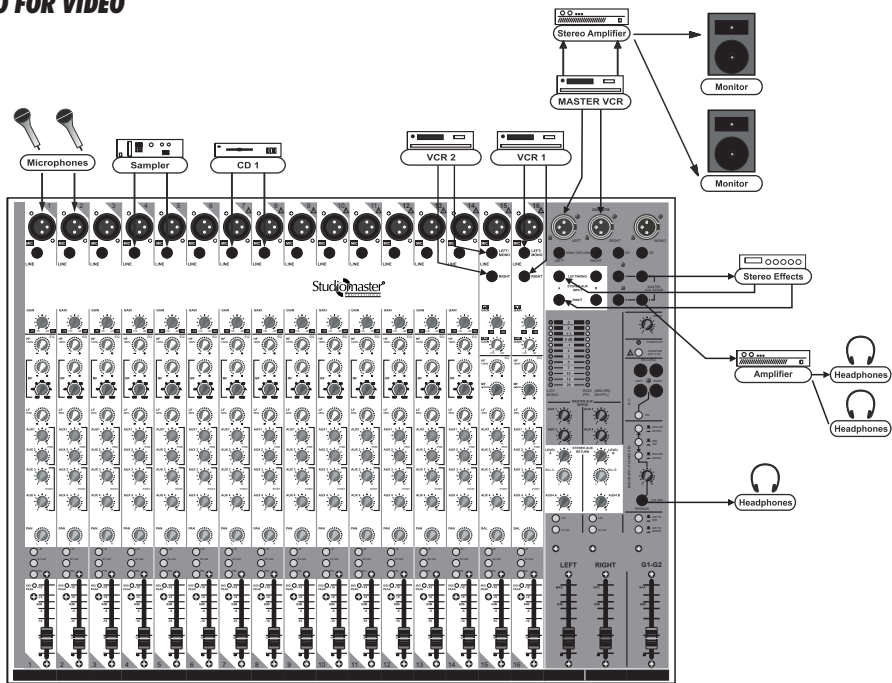
Set up for live P.A. Operation



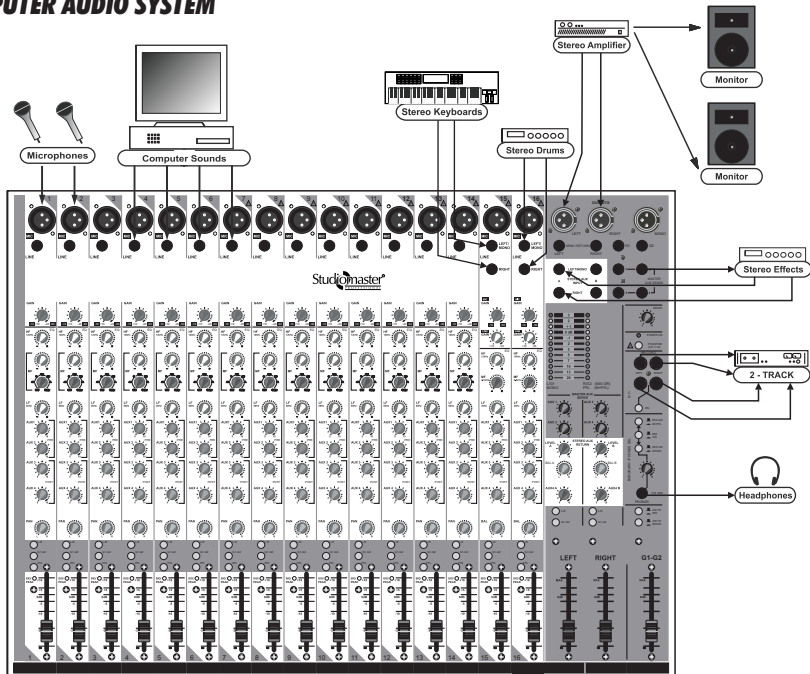
DJ MIXER



AUDIO FOR VIDEO



COMPUTER AUDIO SYSTEM



6. Technical Specifications

Models	Diamond Pro-3 12.3	Diamond Pro-16.3
Nominal Gain (Mic/Line/Stereo Line)	60dB / 40dB / 20dB	
Max Gain (Mic/Line/Stereo Line)	80dB / 60dB / 40dB	
Input Levels Sensitivity		
Mic (Gain Min / Gain Max)	-10dBu / -60dBu	
Line (Gain Min / Gain Max)	-10dBu / -40dBu	
Stereo Line (Gain Min / Gain Max)	-10dBu / -20dBu	
Aux Return	-17dBu	
CD In	-10dBu	
Input Impedance		
Mic Input	Typically 1.7K Ω Balanced	
Line Input	17K Ω (Balanced) / 8K Ω (Unbalanced)	
Aux Return	5K Ω	
Output		
Main out & Group out level (Nominal / Max)	+0dBu (0.775V RMS) / + 22dBu (10V RMS)	
Main Output impedance	< 30 Ω	
Aux Send (Nominal/Max)	0dBu/ + 22dBu	
Record /Out	-10dBu	
Frequency Response	20Hz to 20KHz (+0/-1 dB)	
Total Harmonic Distortion	< 0.1	
Signal to Noise Ratio	-78dB	
Clip Indication	5 dB prior to true clip	
Equalisation		
Mono Mic [Treble/Mid (with sweep)/Bass]	± 16 dB @ 12KHz/350Hz-6KHz/60Hz	
Stereo Mic/Line [Treble/Mid/Bass]	± 16 dB @ 12KHz/2.5KHz/45Hz	
Phantom Supply	+48V (Except first 6 channels)	
Power Supply	150V ~250V AC/50Hz	
Power Consumption	30VA Max	
Dimensions & Weight		
Dimensions (W x D x H)mm	483 x 460 x 128	599 x 460 x 128
Net Weight (Kgs.)	9.2 Kg	10.6 Kg

7. Product Care Instructions

- Do not drop the mixer; this could severely damage the products.
- Please keep this product away from direct sunshine & rain.
- Please keep this product away from heavy magnetic or electromagnetic fields, it could affect the product performance.
- Please disconnect from power supply when the product is not being used for a long time.
- Do not open any of the components yourself, for repairs please get in touch with your Studiomaster dealer.
- It is recommended to place product in flight case while transportation.

Wiring Information

Figure 1

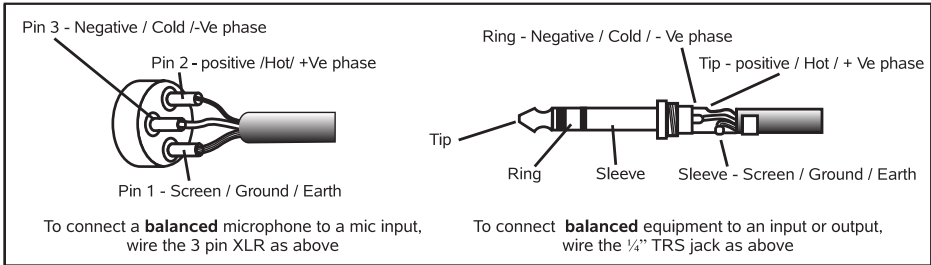


Figure 2

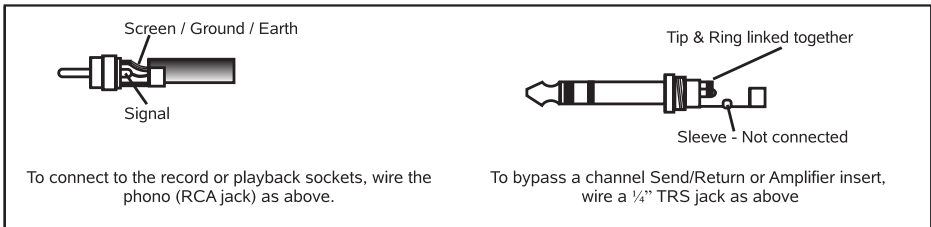
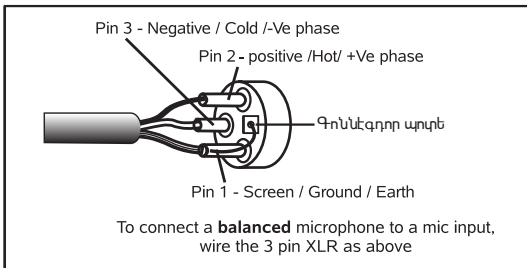


Figure 3



NOTE : -

1. If your Studiomaster Professional Diamond Supreme console develops a serious fault, do not attempt to rectify it yourself. Please take to your nearest dealer for service. Service work should only be carried out by qualified & experienced service engineers.
2. In case of hum problem Pin 1 of output connector can be connected to connector body ground as shown in above (Fig. 3).

WARNING : -

If the power plug supplied with this equipment does not suit the power supply socket in your area, please consult the dealer from whom the equipment has been purchased. Please ensure use of correct plug to support appliance earthing.

Range of Studiomaster Professional Products.

Wired Microphones

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

Wireless Microphones

BR 12 Series
BR 28 Series
BR 48 Series
ER 11 Series
ER 31 Series
ER 58 Series
KR 12 Series
GR 12 Series
MR 12 Series

Crossovers

SX-2
SX-321
SX-421
SX-521
SDX-4

Processors

DD 1000
SEQ 152
Multi 3
SFX 8
SPS 8
Phantom 11

Mixers

~ **Basic Series**
Basic CUB
Basic CUBU
Basic CUBS

~ **DJ Mixers**
DJX 300MKI
Playmix 300
DJX 325
DJX 626
DJX 825
DJX 925
DJX 975
DMX 5

Mixers

~ **Diamond Club Series**
Diamond Club 6.2
Diamond Club 8.2
Diamond Club 8.2EFX
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 182
C 142EFX

~ **Platinum Series**
Platinum Basic MKI
Platinum MKIII

~ **Diamond Pro-3 Series**
Diamond Pro-3 12.3
Diamond Pro-3 16.3
~ **Pro VI Series**
Pro 16.6
Pro 24.6
EP 7

~ **Air Series**
AiR 2
AiR 4
AiR 6
AiR 8
AiR 12
AiR 16
AiR 24
AiR X 10
AiR X 14
AiR X 18
Aura 14

~ **CD/USB Media Player**
MP 4000
MP 2000

Amplifiers

~ **DJA Series**
DJA 100
DJA 550
DJA 1000
DJA 2500
DJA 4000

Amplifiers

~ **PA Series**
PA 1.5
PA 2.0
PA 3.0
PA 4.5
PA 6.0
~ **PAT Series**
PAT 1.5

~ **DPA Series**
DPA 2000
DPA 3200
DPA 4500
DPA 5000
Road 7

~ **Arena Series**
Arena 20
Arena 30

~ **Industrial Amplifier**
ARC 120A

Component Speakers

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

~ **E-Series**
EMB 1225
EMB 1530

~ **Titan Series**
THF 0208
TMB 1535
TMB 1555
TWF 1580

Passive Speakers

~ **S-Series**
S5215
S5225
S8018
S8118
S8028

~ **Fire Series**
Fire 51
Fire 55
Fire 84

~ **DYS Series**
DYS-208
DYS-12M

Passive Speakers

~ **XVP Series**
XVP 1540
XVP 1540M
XVP 1560
XVP 2585
XVP 25A2
XVP 1808

~ **Aria Series**
Aria 8
Aria 12
Aria 15

~ **Line Array System**
SLA-40

Powered Speakers

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

~ **OP Series**
O 215
O 415
O 415U
O 515

~ **SUB Series**
O 12SUB
O 15SUB
O 18SUB

Active Monitors

Sat 5
Sat 10S

Sound Box

SPA 25FX
SPA 80FX

Stabilizers

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

Speaker Stands

SS 10B
SS 20S
WS 10

* Design and specification are subject to change without notice.



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A1/A2, Giraq Industrial Estate, Mahakali Caves Road, Andheri (East), Mumbai - 400 093, India
Tel.: 022-42869043 / 4286 9076 / Fax: 022 - 26871453
E info@audioplus-india.com W www.audioplus-india.com/www.studiomasterprofessional.com