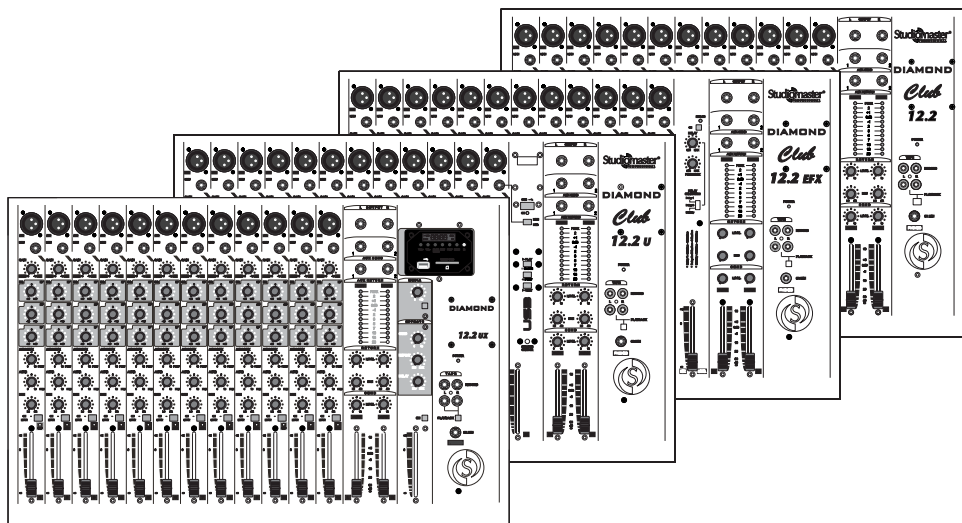


Studiomaster[®]

PROFESSIONAL

Diamond Club Series

**6.2, 8.2, 8.2EFX, 12.2, 12.2EFX,
12.2U, 12.2UX, 16.2, 16.2EFX**



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1. Introduction

Thank you for buying the Studiomaster Professional Diamond Club Series Mixer.

To ensure maximum performance and safety, please follow this instruction manual carefully.

Please retain this manual for future reference.

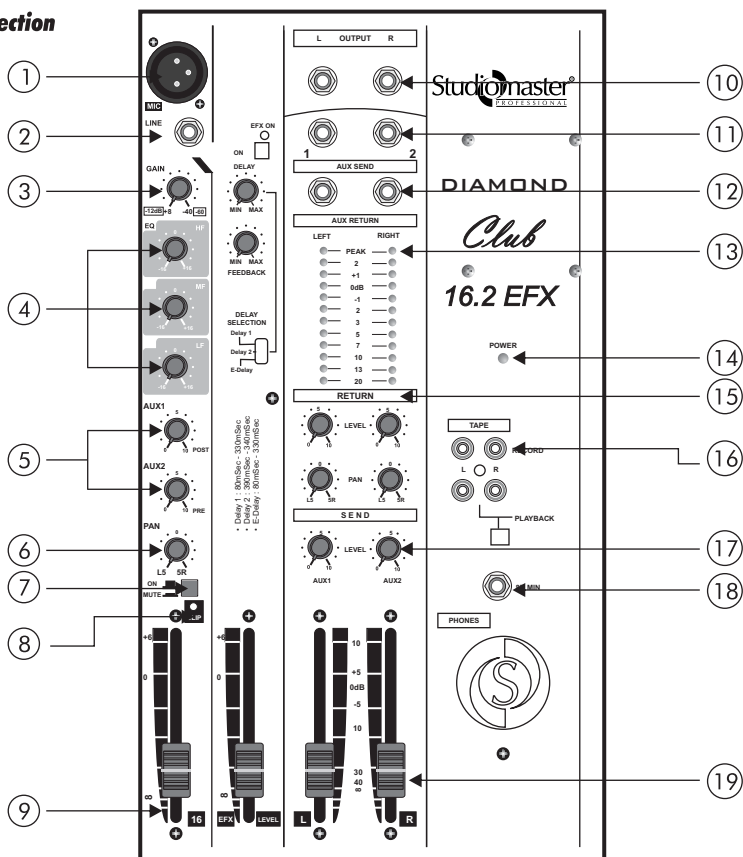
For any complaint, feedback or testimonials please contact our distributor/dealer.

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

2. Features at a Glance

- Gain control with 3 Band EQ per channel.
- 2 Aux Sends/ Returns.
- 1 Pre and 1 Post Aux Sends Rotary Control per Channel.
- L/R Pan Pot, Mute Switch and Clip LED per Channel.
- Stereo Tape in/tape out, Headphone out.
- 12 segments L/R LED meter for Master Level.
- ¼ TRS Balanced L/R Main Output.
- Built-in echo/delay processor with unique E-delay. (Available in 8.2EFX 12.2EF, 12.2UX, 16.2EFX)
- USB MP3 music player. (Available in 12.2U)
- Bluetooth, USB, SD/MMC media player. (Available in 12.2UX)

3. Input Section



The input sections of the Diamond Club Series mixers have two connectors XLR MIC & ¼" Jack inputs.

Please do not use both the inputs at the same time. Doing this may permanently damage the equipment. Please ensure the gain levels, the fader levels & 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.
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 & lead to audio clipping.
4. **EQ Section:** The Diamond Club series has 3 Band Equalizer on all MIC & Line inputs. 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 10 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.
 - **LF Control:** The LF control can be used to cut or boost up to +/- 16dB at 100Hz.
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 & delay units, compressors, gates etc. It can also be used for on stage monitoring or as an input in to a recorder.
 - * **AUX1 / EFX Control:** This knob is used to control the send level to the AUX 1 out or built-in EFX. AUX 1 is 'Post' fader and generally used for effect processors. The level of the channel fader will affect the signal level.
(EFX is only available in 8.2EFX 12.2EFX & 16.2EFX, 12.2UX)
 - * **AUX 2:** This knob is used to control the send level to the AUX 2 out. AUX 2 is 'Pre' fader and generally used for monitoring. The level of the channel fader will have no affect 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)(See Pt. 12 Pg. 4)
6. **Pan Control:** This knob can be used to pan the incoming signal between the left & right output channel.
7. **Mute:** This self illuminated switch is used to mute/stop the channels signal to the master output. The switch lights up to indicate that a channel is muted.
8. **Clip/Peak LED:** This LED glows when the incoming audio signal is clipping. Please reduce gain levels to reduce clipping.
9. **Channel Fader:** This fader is used to set the level of the incoming signal to the master 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 +6dB.

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

10. **Master (L/R) Output::** This output is used to connect the master output to the amplifier or powered speakers using ¼" balanced jack connectors. The output level is determined by the master fader. Wiring configuration is as follows:

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

11. Aux Sends: These ¼" unbalanced jack can be used to send signals to external devices like effects processor or providing monitor mixes. The AUX knob on individual channels can be used to send that input to the AUX bus. Wiring configuration is as follows:

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

12. Aux Return: These ¼" unbalanced jack inputs are used to bring back returns (processed signal) from external effects processors back in to the mixer. Wiring configuration is as follows:

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

13. LED Level Meters: The Diamond club series mixers incorporates 2 x 2 colours, 12 segment LED level meters which display Left & Right output levels. [Calibrated 0VU = +4dBm. (Typical VU ballistics)

14. Power LED: This Blue LED indicates the unit is powered ON.

15. Aux Return Level & Pan Controls: These 4 knobs controls the input levels and pan controls of the processed effect signal.

16. Tape Record/Playback: The Diamond club series mixers have 2 stereo RCA connectors for recording or playback.

- Record: This RCA output out 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.
- Playback: This RCA input is provided to connect external devices like tape decks, iPod's, mp3 players etc.
- Tape Selection: To toggle between the two record mode & playback mode.

17. Aux Send Controls: These knobs are used to control the overall output level for all signals sent via Aux 1 & 2 from the input channels.

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

18. Headphone Out: The ¼" Headphone Output socket carry the signal from the Left/Right outputs and the level is set automatically by the L & R faders. Please do not use headphones less than 8Ω impedance.

Wiring configuration is as follows:

Tip = Left Signal	Ring = Right Signal	Sleeve = Ground
-------------------	---------------------	-----------------

19. Master (L/R) Fader: The Left & Right Faders are the master output level control. They determine the level of all signals sent by the channel faders, Aux returns and Tape playback to the L/R OUTPUT jacks.

5. Effects Section (Available only in 8.2EFX, 12.2EFX, 16.2EFX models)

Some mixers in the Diamond Club series incorporate a built-in high quality digital delay effects processor with simple and intuitive controls.

20. EFX Switch:

This switch is used to switch the effect section ON or OFF. The Red LED indicates the EFX section is ON.

21. Delay Time Knob:

This knob is used to change the delay time. The delay time depends on the delay mode selected (See. Pt 23)

22. Feedback Knob:

This knob is used to control the feedback time of the delayed signal. Be careful while using this knob, as this may cause feedback loops or unpleasant loud howls, which may damage some equipment. If this occurs please minimize the feedback knob.

23. Delay Selection Switch:

This switch is used to toggle between the 3 delay time ranges.

- * Delay 1: Has a delay time ranging from 80ms up to 330ms.
- * Delay 2: Has a delay time ranging from 390ms up to 640ms.

* E-Delay: This unique has a delay time ranging from 390ms up to 640ms with a shadow effect. The delay can be increased from maximum to minimum with the help of the delay time knob (See. Pt.21)

24. EFX Level Fader

This fader controls the output level of EFX signal.

5.1 Effects Section (Available only in 12.2UX model)

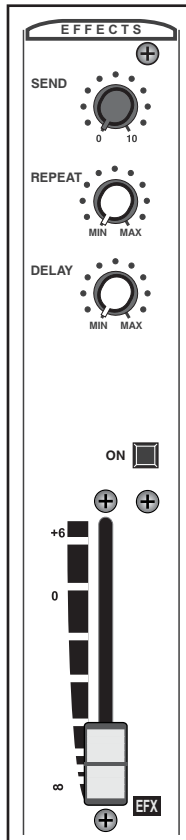
1. **Send Control:** It controls the input level send to EFX section..
2. **Delay Time Control:** This control adjust the delay time
Turning the knob clock wise, will make the delay time longer.
3. **Repeat Control:** This control adjust the feedback amount [the number of repetition for the delay sound (echo)].
Turning the knob clock wise increases the number of repetition .

As you turn up the repeat knob clock wise, oscillations may occur.If this happens turn the knob down until the oscillation stops.

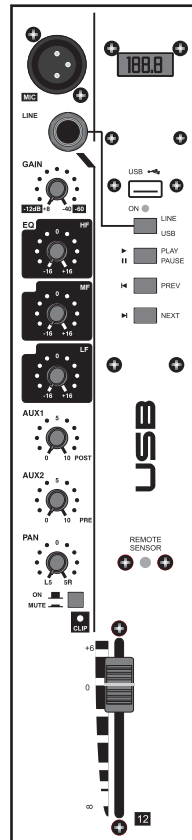
4. **EFX Level Fader:** To Control the output level of Effect signal.
5. **Effect ON/OFF Switch:** To switch ON/OFF the Effects.



Effects Section
(DC 8.2EFX, 12.2EFX,
16.2EFX)



Effects Section (DC 12.2 UX)



USB Media Player
Section (DC 12.2 U)

6. USB Media Player Section (Available only in the D12.2 USB model)

This mixer has the same functionality and ease of operation of the Diamond Deluxe series with the additional provision of a built-in MP3 player (USB plug and play). The last input channel offers an additional input for use with any USB MP3 flash memory (pen-drive). The line can be switched the 6.3mm line input or the USB input.

- LED Display: Displays the track number.
- USB Slot: Insert USB storage devices in to this slot. For a full list of supported formats please refer to the USB models performance section on Page 9.
- Line/USB switch: This switch is used to toggle between the line mode and the USB mode. The red LED indicated USB mode active. Please Note: Only one of the modes can be used at the same time, either the regular channel mode or the USB player mode.
- Transport Controls:

▶ PLAY: Press to play the track. ◀ PREV: Press to go to previous track.

|| PAUSE: Press to pause the track. ▶ NEXT: Press to go to next track.

- Line/USB Level Fader: This fader controls the output level.

6.1 Multi Media Player Section (Available only in the D12.2UX model)

1) **MEDIA LEVEL:** Volume control for USB, Bluetooth and SD/MMC Input.

2) **SD/MMC Card:** To plug in SD/MMC card (For mini SD card use SD adaptor).

3) **USB INPUT:** Use this connector to plug in your pen drive. (USB Mp3 flash memory)

Terms of use : Studiomaster Professional respects intellectual property rights & we request our users to do the same.

Please use Mp3 downloads only for program which you have legally purchased. PLEASE DO NOT USE PIRATED MUSIC OR PROGRAM.

Disclaimer: Your acceptance and use of this product will be treated as your agreement to the following clause:

Studiomaster Professional, Audioplus & all associated companies & sellers are indemnified from liability the end-user may incur by using illegally procured material or immoral content or any other such similar program selection.

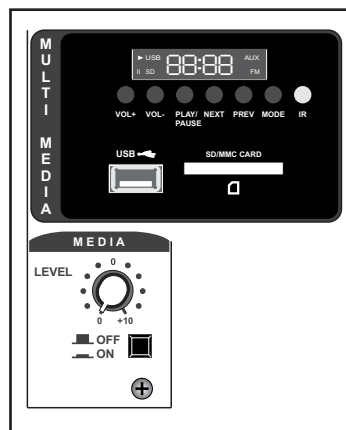
4) **USB/BT function switches:** Use these switches to either play, pause or to go to the previous or next track.

5) **Vol + & - :** Use these switches to decrease or increase music volume from USB, SD/MMC Card or Bluetooth.

6) **USB/BT DISPLAY:** It Indicates track number from USB, Bluetooth, SD MMC card input.

7) **MODE SELECTION:** Mode switch is used to switch between USB, Bluetooth and SD/MMC card operation.

8) **MEDIA ON/OFF :** To ON/OFF USB mode.



Multi Media Player Section

6.2 Blue tooth Operation & Indication

ACTION	INDICATION
1) When Power On	It displays 'BT' and then blue.
2) Bluetooth mode	blue on display.
3) USB mode (Default mode)	----
4) SD/MMC mode	SD 88.88

Setting up your Bluetooth Connection

- Bluetooth is default setting when powering ON the unit.
- From your phone or any of the Bluetooth device turn Bluetooth ON & search for device "SM UB". Pair & connect to it.
- Now any music or audio you play on your device will be played through the music can be controlled (Play, Pause, Volume+ & Volume -, Reverse & Forward) by either your device or controls on the panel.

Reconnecting Your Device

If you move out of range or turn off the Bluetooth feature on your mobile device, the Bluetooth Receiver will get disconnected from your device. To reconnect, click on the device name (SM UB) on your paired device list.

Changing Connected Device

If you want to switch from one device to another, follow these steps:

- 1) End the existing Bluetooth connection from your device by either disconnecting within your "settings" or turning off Bluetooth.
- 2) The "SM UB" Bluetooth can now be connected to a different BT device.
- 3) Follow the directions in "Setting up your Bluetooth Connection".

ATTENTION: 1) Please ensure that there isn't any obstruction between Bluetooth Transmitter (Mobile phones, Laptops, Tablet phones etc.) & Receiver (A Series speaker).

Out of Range or Lost Signal

If the music device (Mobile phones, Laptops, Tablet phones etc.) is out of range (beyond 17 feet) of the Bluetooth Receiver or if there is something blocking the Bluetooth signal, which shall be indicated by loss of audio or audio intermittency. To avoid a lost connection, move the music device back into range (within 17 feet), or reduce obstruction between the receiver and your smart phone. The connection will automatically be reestablished and audio signal will be through. If the connection does not restore you will need to establish it again as mentioned in "Setting up your Bluetooth Connection".

TROUBLESHOOTING BLUETOOTH CONNECTION

PROBLEM	POSSIBLE SOLUTION
Paired Bluetooth device does not connect	Already connected to other BT device. Disconnect from it and pair & connect again.
No or poor audio from Bluetooth connection	Move your BT device away from devices that generate electromagnetic interference, such as microwave ovens, cordless phones, WIFI networks or other Bluetooth device.
	Make sure that the BT module on the A Series speaker panel is not muted and the volume is up.
	Make sure your Bluetooth transmitting device is playing audio & the volume is up.
	Your Bluetooth device may be out of the specified range, try moving it closer to the speaker.
Cannot pair the speaker with your Bluetooth device	Make sure that you work within the Bluetooth range of 17 feet, taking care that there is no metal or human body interference.
	Make sure you select "SM UB" in the pairing list on your device to finalize the connection. (required by some devices)
	Your Bluetooth device may be out of range-try moving it closer to the speaker.
	Already paired to other BT device. Unpair from it and then pair & connect again.

7. Technical Specifications

Maximum Gain	
Mic Input	60dB
Line Input	40dB
Mic to L/R Output	76dB
Line to L/R Output	56dB
Total Harmonic Distortion (T.H.D.)	Better than 0.8%
T.E.I.N.	
Mic Input (150Ω Source)	-128.5dBm (DIN AUDIO)
Line Input (150Ω Source)	-98.5dBm (DIN AUDIO)
Signal/Noise Ratio	
Output Level : 0dBm (0.775V)	76dB
Nominal Output Noise	-80dB
Clip Indication (Mic Input: 2mV/ 150Ω Source: Faders at 0dB)	4dB prior to true clip.
Equalisation	
Treble	±16dB @ 10kHz
Mid	±16dB @ 2.5kHz
Bass	±16dB @ 100Hz
Aux Return	
Gain	30dB
Attenuation	60dB
Aux Sends	
Nominal Level	0dBu
Tape In/Out	
Nominal Record Output Level	-10dBu
Nominal Playback Input Level	-10dBu
Left/Right Outputs	
Nominal Level	0dBm
Maximum Level (1kHz/600Ω Load)	+17dBm (5.5V RMS)
Frequency Response	25Hz to 19kHz (+0/-1 dB)
Impedances	
Mic Input	Typically 5KΩ
Line Input	20KΩ (Balanced) / 10KΩ (Unbalanced)
L/R Outputs	Less than 50Ω
Aux Send Outputs	Less than 50Ω
Aux Returns Inputs	Typically 510KΩ
Tape Record Outputs	Less than 2kΩ
Tape Record Inputs	Greater than 20kΩ
Power Consumption	
Diamond Club 6.2, 8.2, 8.2EFX	15VA Max
Diamond Club 12.2, 12.2EFX, 12.2U, 12.2UX.	25VA Max
Diamond Club 16.2, 16.2EFX	30VA Max

Model	AC Mains	Fuses	Dimensions (L x W x H in mm)	Weight (Gross)
DC 6.2	240V~/50Hz	T 100mA 250V	335 x 376 x 89	5.5 Kg
DC 8.2		T 100mA 250V	395 x 376 x 89	6.5 Kg
DC 8.2EFX		T 100mA 250V	435 x 376 x 89	7.0 Kg
DC 12.2		T 100mA 250V	515 x 376 x 89	8.0 Kg
DC 12.2EFX		T 100mA 250V	555 x 376 x 89	8.5 Kg
DC 12.2U		T 100mA 250V	555 x 376 x 89	8.5 Kg
DC 12.2 UX		T 100mA 250V	555 x 376 x 89	8.5 Kg
DC 16.2		T 160mA 250V	635 x 376 x 89	10.0 Kg
DC 16.2EFX		T 160mA 250V	675 x 376 x 89	10.0 Kg

8. 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 product performance.
- Please disconnect from power supply when the products is not being used for a long time.
- Do not open any of the components yourself, for repairs please get in touch with your retailer.
- Please read the owner manual before using this product.
- Please place product in flight case while transportation.

* Design and specification are subject to change without notice

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Range of Studiomaster Professional Products.

Wired Microphones

SM 100XLR
TRIO 100
TRIO 200
SM 200XLR
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 12 Series
BR 28 Series
BR 48 Series
ER 11 Series
ER 31 Series
ER 58 Series
KR 12 Series
TR 47 Series

Conference System

Vak 10 System
Vak 10s
Vak 10d / Vak 10c
Vak 20

Crossovers

SX-2
SX-321
SX-421
SX-521

Processors

DD 1000
SEQ 152
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 Series

AiR 16
AiR Pro 24
AiR X 10
AiR X 14
AiR X 18

~ 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 12.2UX
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 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

Auto 4

~ DJ Mixers

DJX 325
Playmix 300
DJX 825
DJX 875
DJX 925
DJX 975

~ CD/USB Media Player

MP 4000

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

~ Arena Series

Arena 20
Arena 30

~ Industrial Amplifier

ARC 120A
ARC 240A

Speaker Component

~ S-Series

SWF 18120
SWF 18100
SWF 1880
SWF 1560
SMB 1565
SMB 1545
SMB 1530
SMB 1230
SMB 1220
SHF 0104
SHF 0210

~ E-Series

EMB 1225
EMB 1530

~ Titan Series

TWF 1815
TWF 1811
TWF 1580
TMB 1555
TMB 1535
THF 0208

Passive Speakers

~ S-Series

S5225
S8018
S8118
S8128
S8028

~ Fire Series

Fire 51
FIRE 51A
Fire 55
Fire 57
Fire 84

~ XVP Series

XVP1225
XVP1540
XVP1540M
XVP 1560
XVP 2250
XVP 2550
XVP 2585
XVP 25A2
XVP 25A6
XVP 1808
XVP 1812
XVP 2820

Powered Speaker

~ Aria Series

Aria 8
Aria 12
Aria 15

~ B Series

B 200
B 400
B 400U
B 400UB

~ OP Series

O 215
O 415
O 415U
O 515

~ SUB Series

A 12SUB
A 15SUB

Line Array System

SLA-40 System
SLA-40 T
SLA-40 Kit
S 9022
S 9022 (FK)

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
SVC - S12000

Speaker Stands

SS 10B / SS 20S
WS 10

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