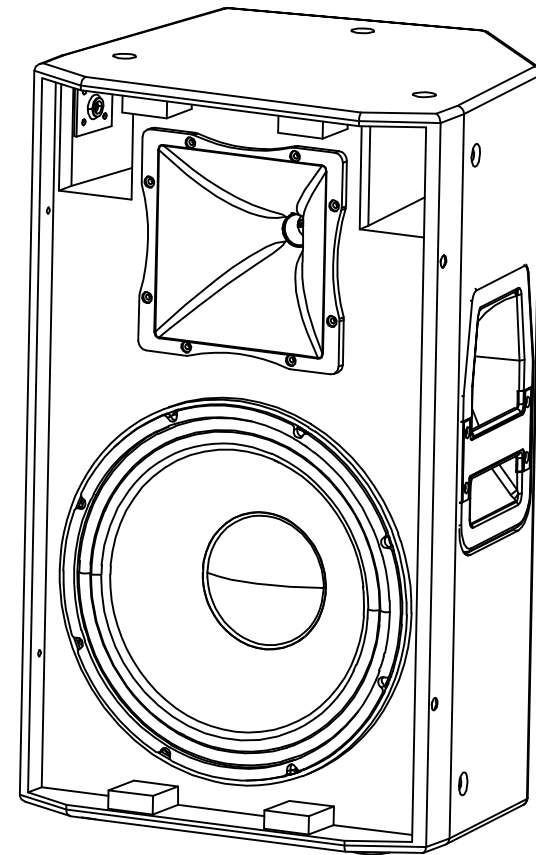


EXPECT THE BEST
EXPECT THE BEST

Studiomaster

VENTURE

MODELS COVERED: 12,12A,15,15A,18S,18SA



**USER
GUIDE**

Studiomaster

**Unit 11,
Torc:MK
Chippenham Drive
Kingston
Milton Keynes
MK10 0BZ
United Kingdom.**

Tel: +44(0)1908 281072 email: enquiries@studiomaster.com

www.studiomaster.com

TECHNICAL SPECIFICATION

Pre-Amp section and	Venture 12A	Venture 15A	Venture 18SA
Input 1 Mic Gain	+14 to +44dB	+14 to +44dB	N/A
Input 1 Line Gain	-16dB to+14dB	-16dB to+14dB	-16dB to+14dB
Input 2 XLR Line Gain	-23dB to +7dB	-23dB to +7dB	N/A
Input 2 RCA phono and 3.5mm Jack	-10dB to +20dB	-10dB to +20dB	N/A
Distortion, any input to master volume	0.03%	0.03%	0.03%
Frequency Response, any input to Master Level	40Hz to 30kHz	40Hz to 30kHz	40Hz to 30kHz
Noise, XLR Line Input	-90dB	-90dB	-90dB
Link Output Signal Level, nominal	-6dBu	-6dBu	-6dBu
Active Model	Venture 12A	Venture 15A	Venture 18SA
Format	12inch two way	15inch two way	18inch subwoofer
Frequency response	60Hz 18kHz (-3dB)	55Hz 18kHz (-3dB)	45Hz 100Hz (-3dB)
Frequency range	55Hz 20kHz (-10dB)	45Hz 20kHz (-10dB)	35Hz 150Hz (-10dB)
Amplifier power, rms	LF 400W HF 200W	LF 400W HF 200W	450W
Peak system power	1200W	1200W	900W
Crossover frequency	1.7kHz	1.5kHz	
Woofer	12"dia, 2.5" voice coil, ferrite magnet	15"dia, 2.5" voice coil, ferrite magnet	18"dia,3" v/c, extended bass, ferrite magnet
Compression driver	1.7" voice coil, ferrite magnet	1.7" voice coil, ferrite magnet	
Coverage: Horizontal x Vertical	80° x 60°	80° x 60°	
Max SPL	132dB	134dB	134dB
Cabinet material	15mm ply wood	15mm ply wood	15mm ply wood
Input connections	2 channel, XLR, Jack, RCA phono mini jack	2 channel, XLR, Jack, RCA phono mini jack	XLR input, Link output, 100Hz filtered output
Power requirements	250W MAX ~ 50/60Hz	250W MAX ~ 50/60Hz	250W MAX ~ 50/60Hz
Dimension W * H * D	365x608x341(mm)	430x704x400(mm)	530x682x610(mm)
Weight net/shipping	18kg / 20Kg	21.5kg / 25.6Kg	34.7Kg/41.7Kg
Fly Points	13 x M10	13 x M10	None
Power Requirement	250W MAX ~ 50/60Hz	250W MAX ~ 50/60Hz	250W MAX ~ 50/60Hz
Voltage Selector	115/230V	115/230V	115/230V
Fuse, 20mmx5mm	T6.3AL 250V	T6.3AL 250V	T6.3AL 250V
Model	Venture 12	Venture 15	Venture 18S
Format	12inch two way	15inch two way	18inch sub
Frequency response	60Hz 18kHz (-3dB)	55Hz 18kHz (-3dB)	45Hz 100Hz (-3dB)
Frequency range	55Hz 20kHz (-10dB)	45Hz 20kHz (-10dB)	35Hz 150Hz (-10dB)
Sensitivity 1W/1m	95 dB	96 dB	96 dB
Impedance	4 Ω	4 Ω	4 Ω
Power: Continuous, Program, Peak	400W, 800W, 1600W	400W, 800W, 1600W	400W, 800W, 1600W
Crossover frequency	1.7kHz	1.5kHz	
Woofer	12"dia, 3" voice coil, neo magnet	15"dia, 3" voice coil, neo magnet	18"dia,4" v/c, extended bass,neo
Compression driver	1.7" voice coil, ferrite magnet	1.7" voice coil, ferrite magnet	magnet
Coverage: Horizontal x Vertical	80° x 60°	80° x 60°	
Max SPL	132dB	134dB	134dB
Cabinet material	15mm ply wood	15mm ply wood	15mm ply wood
Connections	2 x speak on NL4	2 x speak on NL4	2 x speak on NL4
Dimension W * H * D	365x608x341 (mm)	430x704x400 (mm)	530x682x610 (mm)
Weight net/shipping	17kg / 20Kg	21kg / 25Kg	30.7kg / 37.5Kg
Fly Points	13 x M10	13 x M10	None

SERVICE INFORMATION

If you have a problem with your Studiomaster product or think it has developed a fault you should first carefully check the Trouble Shooting section in this guide. If this does not solve the problem or if the product is physically damaged, contact your local dealer or distributor for service details.

Should it be recommended you return the product to your nearest Studiomaster Service Centre you must first contact them.

You will be asked for the product type and serial number. You will then be given a Returns Authorisation (RA) number.

Pack the unit in its original carton to protect it from shipping damage.

You must have the Returns Authorisation number clearly marked on the outside of the carton or we may refuse the delivery.

Studiomaster cannot be held responsible for damage resulting from the equipment being packed incorrectly.

Label the equipment clearly with your name and address and include a clear description of the fault. The more information you supply helps the service engineer, minimising repair cost when out of warranty.

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INTRODUCTION

Thank you for purchasing this Studiomaster product. The Venture loudspeaker range feature low weight, high output passive and active cabinets tailor made for portable live sound and installations.

This guide covers the following versions:

Venture 12 & 15 full range passive

Venture 18S passive subwoofer

Venture 12A & 15A active

Venture 18SA active subwoofer

READ THE USER GUIDE

The Studiomaster design philosophy has always been to provide the controls and features the user needs making operation simple and intuitive. Despite this it is worth taking the time to read this User Guide to familiarise yourself with the controls to get the best out of your Venture loudspeakers. It also contains important safety information as well as practical hints.

UNPACKING

Remove your Studiomaster product from its packaging and check you have the following:

Venture loudspeaker

A.C. power cord / mains lead (active models only)

Warranty Card.

Retain the packing carton in the event the product needs to be returned for service or repair, and please complete and return your warranty card. Returning the completed warranty card does not diminish your statutory rights in anyway.

SAFETY INSTRUCTIONS

READ THIS BEFORE YOU USE YOUR PRODUCT

1. Active models: Before connecting the A.C. power cord make sure the Voltage Selector is set for your local A.C. supply voltage.
For supplies between 220 and 240V ensure it is set to 230V.
For supplies between 110 and 120V ensure it is set to 115V.
2. Active models: Only use the A.C. power cord / mains lead supplied with this product.
Replace if it becomes damaged in any way.
3. Active models: Never operate without, or remove the safety ground (earth) from the A.C. power cord / mains lead.
WARNING: THIS APPARATUS MUST BE EARTHED (GROUNDED)
4. Do not attempt to remove any screws or panels. There are no user serviceable parts inside.
5. Do not operate the unit next to heat sources such as radiators.
6. The unit should not be operated or stored near rain or moisture.
7. This equipment must not be exposed to dripping or splashing and no objects filled with liquids should be placed on top of it.
8. Write the serial number in the box provided in the Warranty section for future reference.
9. If the unit gets damaged, has been dropped or appears to have developed a fault refer to the Service Information section for details.



WEEE Mark

If you want to dispose of this product, do not mix with general household waste. There are separate collection systems for used electronic products in accordance with legislation under the WEEE Directive (Directive 2002/96/EC) and is effective only within the European Union.

ECHO The effect produced when sound is reflected off hard surfaces often reproduced artificially using electronic equipment (see DELAY).

EFFECTS (FX or DSP) SENDS Any outputs from a channel or console that can be connected to external equipment for extra sound processing. Usually effects sends are post fade so any level changes to the main signal also adjust the signal sent for processing.

EQUALISATION (EQ) Tone Controls

FADER Volume control, often a linear or slider type volume control.

FEEDBACK The squealing sound produced when a microphone picks up its own amplified sound from a loudspeaker.

F.O.H. Front of House. The speaker system which is used to project the sound from the stage to the audience. It is also used to describe the position, in front of the stage, where the main mixing console is situated.

GRAPHIC / GRAPHIC EQUALISER / GEQ An equaliser that uses rows of slider controls to adjust the sound. Each of the sliders will adjust one part of the frequency spectrum giving a visual display of which areas have been cut or boosted.

GROUND Earth

HERTZ (Hz) A measurement of frequency. 1Hz = 1 cycle per second.

HIGH (or TOP) The treble or high frequency content of a sound or the speakers (often compression drivers attached to horns or flares) used to reproduce it.

HOT The positive phase of a signal. Usually the red wire in a screened cable.

IMPEDANCE Similar to resistance, except that impedance also reflects the effect of any inductance or capacitance in the circuit.

STAGE MONITOR (FOLDBACK) Sound which is sent from the main mixing position back to the stage so the performers can hear it. Often, with a large sound system an entirely separate monitor (or foldback) system with a dedicated console is located on one side of the stage so the performers can communicate easily with the operator.

Glossary of technical terms

AC or a.c. Alternating current.

AC POWER SUPPLY Local electrical supply

ASSIGN To switch or route a signal to a specific signal path.

ATTENUATE To reduce or make quieter.

BALANCED Balanced 3 connection circuitry is widely used in audio equipment from dynamic microphones to top quality studio devices. The balanced system is used as it cancels outside interference in the connecting cables resulting in a cleaner signal.

BANDWIDTH The bandwidth is the range of frequencies that will pass through a piece of equipment.

BUS A common conductor that carries a signal, or number of signals, through a mixing console.

CLIPPING Distortion caused by a signal exceeding the maximum level that an input can accommodate.

COLD The negative phase of a signal. Usually the black wire in a balanced cable. For an unbalanced signal the SCREEN is used for the COLD connection.

COMPRESSOR An electronic device used to reduce the level of a sound increasing above a set threshold point. Often used on vocals to achieve a more consistent volume level. A compressor can also be used to keep signal levels from overloading the input of a piece of equipment.

CUEING Another word for monitoring, usually when a signal source is prepared to be played at a specific time during a performance. It may be a sound effect for a stage production or an MP3, CD or MD track being available to play so that the music is ready to start immediately.

dBA The most commonly used unit for measuring sound pressure levels. The 'A weighting' takes account of the ear's varying sensitivity to different frequencies, which is most pronounced at low volumes.

dBu A standard reference voltage = 0.775V rms. Derived from the earlier dBm which was used a power ratio in 600ohm circuits.

dBV A standard reference voltage = 1V rms.

DECIBEL (dB) A logarithmic method of measurement for acoustics and electronics. One decibel (1/10th of a Bell) is the smallest change in loudness perceptible by the human ear, although 'trained ears' can detect smaller changes. 0dB (acoustic) is the threshold of human hearing at mid range frequencies.

DELAY A delay is an electronic effects processor which samples a short sound and replays it back a short time later to give an echo effect. Delays are also used in live sound to ensure that the sound from speakers spaced apart from each other arrive at the listeners ears at the same time.

D.I. Direct Injection. Often a small 'D.I. box' is used to send a signal directly from a guitar or bass into the console without first putting it through an amplifier and speaker and capturing the sound with a microphone.

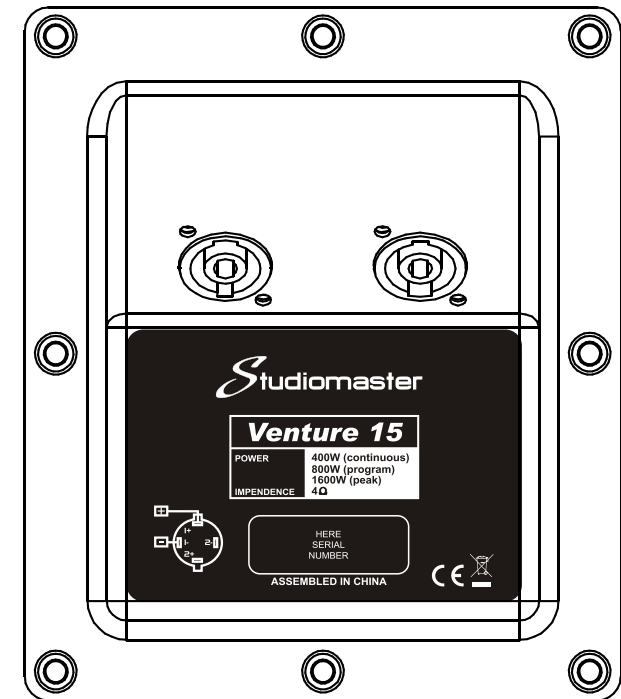
Venture 12, 15 & 18S

SPEAKER CONNECTIONS

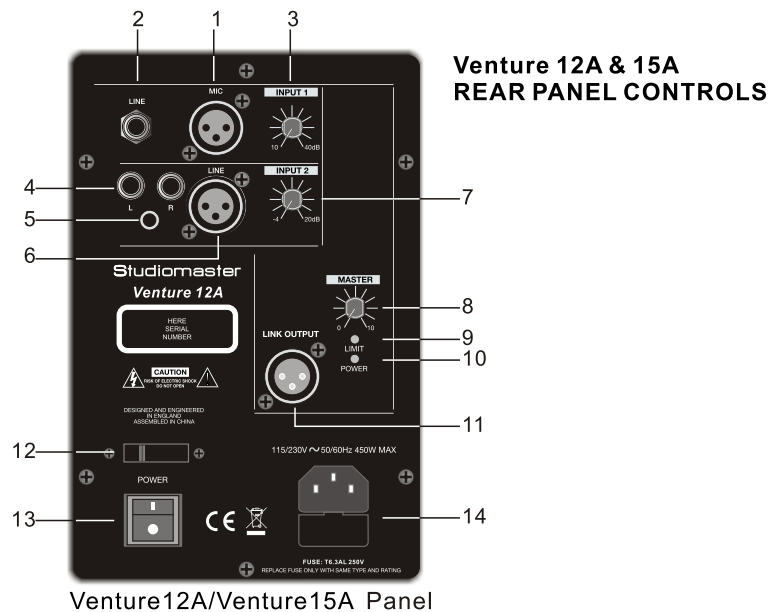
2 x Speaker NL4 connectors wired in parallel

Connections: pin1- out phase signal, pin1+ in phase signal

Pin2- & pin2+ not used.



Venture12/Venture15/Venture18 Panel



**Venture 12A & 15A
REAR PANEL CONTROLS**

INPUT 1

- 1) XLR balanced Mic input: Suitable for use with low impedance dynamic microphones.
- 2) Jack balanced Line Input: Suitable for use with line level signals such as guitar pre-amp/processors, keyboards, computers etc.
- 3) Input 1 Level Control: Adjusts the volume of the incoming signal to match the operating level of the internal amplifier.

INPUT 2

- 4) RCA Phone input: Suitable for use with stereo line level equipment such as CD/mp3 players, computers, keyboards etc.
- 5) 3.5mm (1/8") Stereo mini-jack input: Suitable for use with stereo line level equipment such as smart phones, mp3 players, computers, etc. Note inputs 4 and 5 can be used simultaneously if required but using the volume control on the device to balance the signal level.
- 6) XLR balanced line input: Suitable for use with any professional line level equipment such as the output of a mixing console. Can also connect to the FILTERED OUTPUT on the 18SA active subwoofer. In this configuration all frequencies below 100Hz are filtered emphasising the mid & high frequencies.
- 7) Input 2 Level Control: Adjusts the volume of the incoming signal to match the operating level of the internal amplifier.

Master Section

- 8) MASTER level control: adjusts the signal level to the internal amplifier.
- 9) LIMIT LED: illuminates when the internal amplifier is at maximum power level and the limiter circuit is activating to reduce audible distortion.
- 10) POWER LED: indicate when the Venture is connected to AC power and switched on. Note the LED will take about 2-3 seconds to indicate after switch on before it illuminates. This is normal as the internal circuits perform power up checks.

HINTS AND TIPS

Always place the speakers in front of the performer's microphones to lower the risk of feedback.

The Starlight cabinets have the optimum side angle for the monitor speaker and lights. However, adjusting the cabinets by turning them in or out slightly will give the best performance with minimal sound direction change from the main speakers.

INPUT 1 should only be used with one signal source as using a line and microphone signal together will degrade the signal and could even cause audible distortion. INPUT 2 however, could if required be used with two or three different signals. The limitation of this would be balancing the different signal levels although they could be adjusted from the volume controls of the various devices.

When using any active Venture cabinet at extreme volume levels the LIMIT led should be occasionally checked. It is quite acceptable for the led to flash as the internal limiter will prevent distortion. However, avoid a setting that illuminates the led constantly as this could result in audible distortion and may damage speaker components.

TROUBLE SHOOTING

No power...

Check the main lead/AC power cord is connected and pushed in firmly.

Is there power at the AC wall outlet?

Check the Venture is switched on?

No sound...

Is there an input signal connected to the correct input socket?

Is the input and master level controls turned up?

Intermittent sound...

Check all cables and consider replacing them if they are worn or damaged.

Is the sound source working correctly - try an alternative sound source.

Distorted sound...

Is the level of the incoming signal too high? Try turning down the sound source

Is one of the input level controls turned up too high? Try turning down one or both input level controls and then turn up the master level control to return to the same volume.

Is the LIMIT led continuously illuminated? If it is turn down the master level control.

Microphone causes feed back at low volumes □

Normally this will be the proximity of the mic to the speaker. Try moving the mic to the left or right of the speaker or turning the speaker away from the mic.

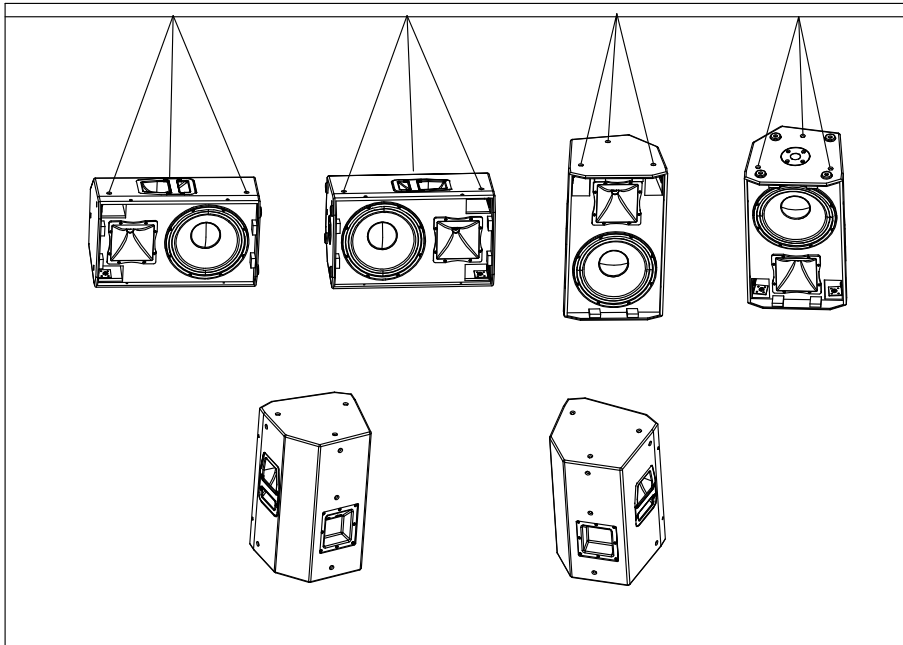
RIGGING the CABINETS

The Venture 12, 12A, 15, 15A are fitted with 13 M10 fly points suitable for fitting eye bolts.

WARNING: Any installation of this type must be carried out by an experienced technician trained in loudspeaker rigging.

The following must be noted and understood:

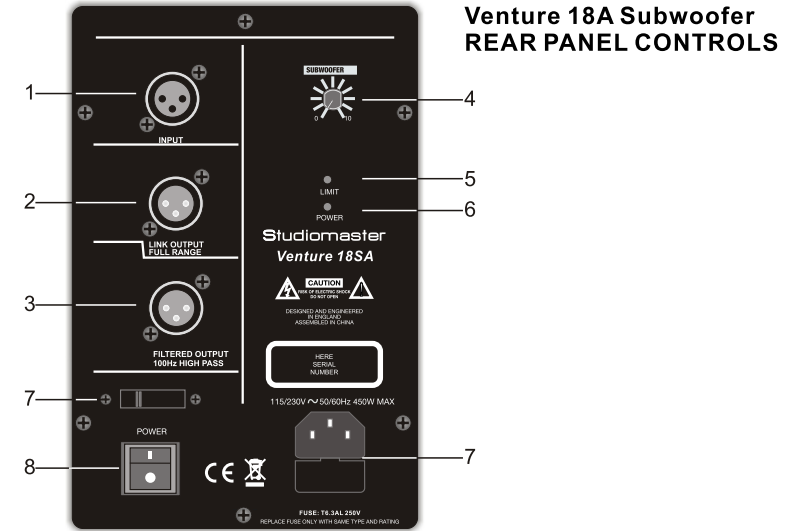
- 1) Use a minimum of 3 rigging points per cabinet.
 - 2) The rigging points are designed to support the weight of its cabinet only. Each cabinet must be supported independently of any other cabinet.
 - 3) Use adequate safety precautions and have the system inspected by a professional rigger.
 - 4) Use only the rigging points and never the carry handle.
- See rigging diagram for example suspending angles.



- 11) **LINK OUTPUT:** XLR balanced compatible signal output to connect additional active speaker cabinets. The signal source for this output is derived from a mix of INPUT1 and INPUT2. The MASTER LEVEL control operates independently to this output so will not vary the signal level.

AC Power Input

- 12) **Voltage Selector:** See Safety Instructions for details.
- 13) **Power switch:** Turns on and off power to the Starlight cabinet.
- 14) **AC power input socket and fuse:** It is important that the correct fuse is fitted for your local electricity supply. See Technical Specification for details.



Venture18SA Panel

- 1) **INPUT:** XLR balanced line input Suitable for use with any professional line level equipment such as the output of a mixing console.
- 2) **LINK OUTPUT:** XLR balanced compatible full range signal output to connect additional active speaker cabinets.
- 3) **FILTERED OUTPUT:** XLR balanced compatible 100Hz hi-pass signal output to connect to mid/high frequency range cabinets such as the Venture 12A or 15A.
- 4) **SUBWOOFER level control:** adjusts the lo-pass filtered signal level to the internal amplifier.
- 5) **LIMIT LED:** illuminates when the internal amplifier is at maximum power level and the limiter circuit is activating to reduce audible distortion.
- 6) **POWER LED:** indicate when the Venture is connected to AC power and switched on. Note the LED will take about 2-3 seconds to indicate after switch on before it illuminates. This is normal as the internal circuits perform power up checks.
- 7) **Voltage Selector:** See Safety Instructions for details.
- 8) **Power switch:** Turns on and off power to the Venture cabinet.
- 9) **AC power input socket and fuse:** It is important that the correct fuse is fitted for your local electricity supply. See Technical Specification for details.

GETTING SOUND, Venture 12, 15 & 18S. See the SET UP diagrams for additional information

Connect each speaker to the amplifier being used. If the amplifier has a high pass filter (30Hz - 45Hz) this should be switched on.

When using a Venture 18S with a Venture 12 or 15 you will require a suitable active crossover to filter the signals to the cabinets. The crossover frequency should be set at 100Hz so that only frequencies below this are received by the 18S and only frequencies above this are received by the 12 or 15. The Studiomaster AX2 series of amplifiers have a built in active crossover ideal for this use saving expense and complexity.

GETTING SOUND, Venture 12A and 15A. See the SET UP diagrams for additional information

Before starting check all volume controls (3, 7, 8) are fully anti-clockwise to prevent any loud volume surprises! Switch on the AC power using the power switch (13). Decide on the signal source to be used - for this example we will use an mp3 player connected to the RCA phone socket (4). Set the mp3 device to play and turn its volume to almost maximum. Turn the input level control (7) to approximately the 1 O'clock position. Slowly turn the master level control (8) clockwise until the required level is reached. For high volume levels this control will normally be between the 3-5 O'clock position. If this is not the case then turn the input level control (7) either clockwise or anti-clockwise until the required volume is achieved within the 3-5 O'clock position.

A second signal source, if required, can now be added. For example a microphone connected to the XLR input (1) and using input level control (3). This time you may want to make the microphone volume slightly higher than the mp3 so balance the two input level controls (1) and (7) to achieve this.

If a mixing console is to be used then connect it's main line output to either the 1/4" jack input (2) or the XLR input (6) depending on the cables available. Set up your mixing console in the normal way until a good output signal is indicated on its output meters. Turn the chosen input level control, either (3) or (7), to the 1 O'clock position and then the master level control to the required volume level. Once this is achieved make all further adjustments only at the mixing console.

ADDING A SUBWOOFER, Venture 18SA

As before first check all volume controls are fully anticlockwise. Connect your signal source (probably the output of your mixing console) to the INPUT (1) XLR of the 18SA. Use a link cable to connect the FILTERED OUTPUT (3) to the LINE input (6) of a Venture 12A or 15A or any other powered mid/top cabinet. Switch on the AC power of the Subwoofer (9) and the 12A or 15A (13).

Turn on the signal source to the mixing console and turn up its output until a good signal level appears on its meters. Now slowly turn up the Venture 12A or 15A until the required volume level is achieved. At this point slowly turn up the SUBWOOFER level control until the bass volume matches the mid/top cabinets.

Now the system is matched and you should control the volume level only from the mixing console.

POLE or STAND MOUNTING

The underside of Venture 12, 15, 12A, 15A cabinets have a single 35mm (1-3/8") socket for stand or pole mounting. Ensure the stand used is capable of safely supporting the weight of the cabinet used and that the stand legs are set to the most stable position. Position the stand so that performers and audience will not trip over stand legs or cables.

The 18S and 18SA have a single 35mm socket fitted on top of the cabinet. This will support a Venture 12, 15, 12A, 15A cabinets so a stand is not required.