

# ***Ashton***<sup>®</sup>

Designed in Australia



# **PMX RANGE**

## **POWERED MIXERS**

### **USER MANUAL**



# CONTENTS:

INTRODUCTION .....	1
INTRODUCTION TO MIXERS .....	1
FEATURES .....	2
DESCRIPTIONS:	
FRONT PANEL INPUTS .....	3
FRONT PANEL OUTPUTS .....	4
EQUALISATION .....	5
DIGITAL FX .....	6
MAIN SECTION .....	7
MONITOR SECTION .....	8
PHANTOM POWER .....	9
EXAMPLE FRONT PANEL CONNECTIONS .....	9
REAR PANEL .....	10-11
FLUORO PAINT: HOW DOES IT WORK? .....	12
EXAMPLE SETUP: CONFERENCE .....	13
EXAMPLE SETUP: BAND .....	14
SAFETY INFORMATION .....	15

# INTRODUCTION:

Ashton is designed in Australia by a team of industry experts that have years of experience in the development, design and production of musical instruments and equipment. Ashton's range of products are a result of years of development and careful testing. Every Ashton product is designed with value in mind and features the highest quality materials available.

We highly recommend that you read and understand the information in this manual before beginning use.

Enjoy,  


The Ashton Team

# INTRODUCTION TO MIXERS:

A mixer allows inputted signals to be manipulated through various stages until the signal is transmitted out. The stages are as follows:

## Signal Processing

- Level adjustment of the inputted signal
- Equalization of the signal to either cut or boost frequencies
- Adding of effects (such as reverb, chorus etc) to the signal

## Mixing

- Adjusting the levels (via the fader) of the individual channel
- Positioning the signal in the stereo field (L or R) by using the pan function
- Assigning of tracks to outputs

## Outputs

- This is where devices such as recorders and speakers can be plugged in.
- The level that is heard/inputted into these devices can be controlled by the main/ALT or control room level controls.

**NOTE:** Always make sure that all level settings are set to zero when powering on and connecting devices to the powered mixer- this will avoid damage to speakers and units. We recommend taking note of your settings so that it is easy to reset them every time you power on the unit.

# FEATURES:

## **PMX720DFX:**

- 7 channels
- 7 x XLR inputs
- 48V phantom power
- Output limiter
- 200W RMS @ 4 ohms
- 2 Band EQ
- 7 band equaliser for main
- 3 digital reverbs with footswitchable control
- Auxiliary/effects send
- Monitoring output options
- RCA input/output
- LED metering

## **PMX1024ST:**

- 10 channels
- 8 x XLR inputs
- 48V phantom power
- Output limiter
- Stereo channel, 2 with ¼" jacks
- 2 x 200W RMS @ 4 ohms
- 3 Band EQ
- 7 band equaliser for main and monitor
- 16 internal footswitchable DSP effects
- Auxiliary/effects send
- Output and controls on monitoring and main
- Main stereo or bridge modes and monitoring output options
- RCA input/output
- LED metering

## **PMX10600:**

- 10 channels
- 8 x XLR inputs
- 8 x combo inputs
- 48V phantom power
- Output limiter
- Stereo channel, 1 with ¼" jacks
- 2 x 300W RMS @ 4 ohms
- 3 Band EQ
- 7 band equaliser for main and monitor
- 16 internal footswitchable DSP effects
- Auxiliary/effects send
- Output and controls on monitoring and main
- Main stereo or bridge modes and monitoring output options
- RCA input/output
- LED metering

## **PMX10900:**

- 10 channels
- 8 x XLR inputs
- 8 x combo inputs
- 48V phantom power
- Output limiter
- Stereo channel, 1 with ¼" jacks
- 2 x 450W RMS @ 4 ohms
- 3 Band EQ
- 7 band equaliser for main and monitor
- 16 internal footswitchable DSP effects
- Auxiliary/effects send
- Output and controls on monitoring and main
- Main stereo or bridge modes and monitoring output options
- RCA input/output
- LED metering



# FRONT PANEL OUTPUTS:

## AUX OUT/FOOTSWITCH OUTPUTS:



**AUX OUT:** The AUX OUT jack allows you to send the PMX signals to an external device for recording and further processing etc. The AUX OUT output is a 1/4" jack output.

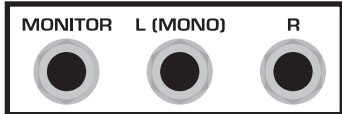
**FOOTSWITCH:** You can navigate the FX processors on all PMX models via a footswitch. This is optional and the FX are still able to be changed and tweaked using the controls located on the front panel.

## TAPE OUT:



These outputs allow the signals that are being processed by the PMX to be outputted for recording to an external device such as a CD recorder or computer. You will need an RCA cable to connect.

## MONITOR/MAIN OUT:



**MONITOR:** This enables an additional **powered** monitor speaker to be setup. This is a 1/4" jack.

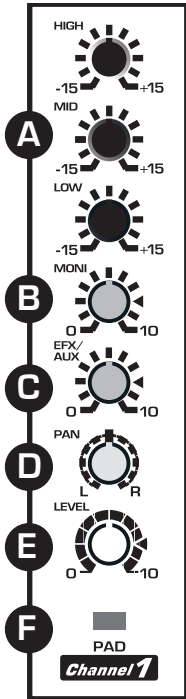
**MAIN OUT:** These enable STEREO output and can be used to connect the PMX to external equipment for high quality sound recording, or to a sound desk in a live situation.

### Note:

There are some small 1/8" jack AUX OUT sockets located on some models. These will be explained in their relevant sections.

The outputs located on the rear panel will be explained in the rear panel section.

# EQUALISATION:



**A. HIGH/MID/LOW:** On each channel of each PMX model there is either a 3 band or 2 band EQ. These EQ racks allow you to adjust the frequency output settings of the instrument/microphone/device that is inputted into the corresponding input. When the controls are turned to the right, they increase the indicated EQ level, left will decrease them. A 2 band EQ will not feature middle frequency adjustment.

**HIGH:** This will increase or decrease the high frequency signal levels.

**MID:** This will increase or decrease the middle frequency signal levels.

**LOW:** This will increase or decrease the low frequency signal levels.

**B. MONITOR Control (MONI):** Each channel has a monitor control, this controls the level of the signals going to the monitors.

**C. EFFECTS/AUX Control:** Each channel has an EFFECTS/AUX control, this controls the amount of signal, per channel, that is sent to the internal FX/AUX OUT.

**D. PAN Control:** PAN is a stereo control, this will affect the level of overall sound in each left or right speaker, turning the knob towards (L) and (R) will adjust this.

**E. LEVEL Controls:** The level (volume) of each channel can be controlled by the level control on each channel.

**F. PAD Switch:** Each channel is equipped with a pad switch which is used to attenuate (reduce) the input signal. Use this when the input level is too high or the signal is distorted.



# DIGITAL FX:

- ① HALL 1: DECAY TIME
- ② HALL 2: DECAY TIME
- ③ PLATE 1: DECAY TIME
- ④ PLATE 2: DECAY TIME
- ⑤ ROOM 1: DECAY TIME
- ⑥ ROOM 2: DECAY TIME
- ⑦ SPR. REV: DECAY TIME
- ⑧ GAT. REV: DECAY TIME



## SELECT

- ⑨ CHORUS: RATE
- ⑩ FLANGER: RATE
- ⑪ PHASER: RATE
- ⑫ DELAY1: DELAY TIME
- ⑬ DELAY2: DELAY TIME
- ⑭ TREMOLO: RATE
- ⑮ CHO/DEL: DELAY TIME
- ⑯ CHO/REV: DELAY TIME

## DIGITAL SIGNAL PROCESSOR



PARAMETER

ON  
OFF



AUX OUT

# DSP

**A. SELECT:** Select your desired effect with the select knob, the knob will snap to each numbered effect, the numbered effects are listed above and below the knob.

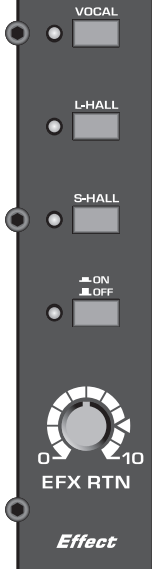
**B. PARAMETER:** The PARAMETER knob will allow you to adjust the parameter setting of each individual effect.

**C. ON/OFF:** The ON/OFF switch will engage/disengage the DSP rack. Alternatively, set the EFX/AUX level on desired channel to zero.

**D. AUX OUT:** This controls the signal level sent to an external effects device. Please note that it does not control the level of internal digital effects.

## DIGITAL EFX

### PMX720DFX DIGITAL EFFECTS:



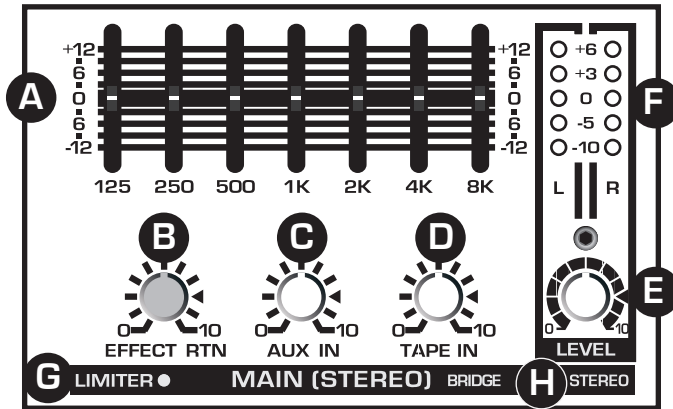
1. Press ON/OFF switch down to engage EFX channel.

2. Choose your desired effect, or combination of effects from the 3 choices and engage the desired effect by pressing the switch down. Vocal (Reverb), L-Hall (Large Hall Simulated Reverb), S-Hall (Small Hall Simulated Reverb)

3. Adjust the effect level in desired channel by turning the EFX knob clockwise to increase effect presence on the channel.

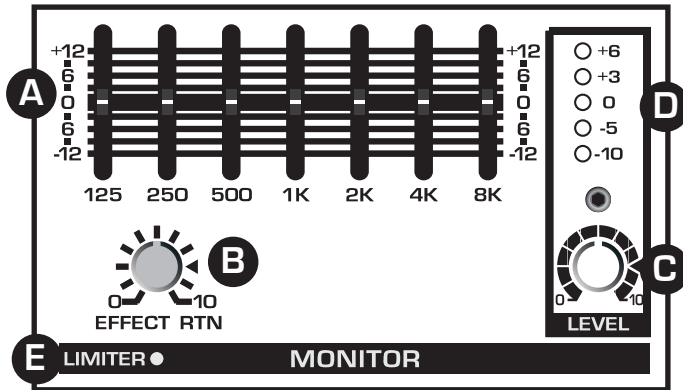
**EFX RETURN:** This controls the level of effects coming back into the unit from an external effects device. Please note that it does not control the level of internal digital effects.

# MAIN SECTION:



- A. Graphic Equaliser:** The PMX models are equipped with a 7 band EQ to control the signal sent to the speakers (front of house). This allows the user to cut or boost each frequency by 12db. This is useful for reducing feedback in various frequency ranges- you can isolate the frequency and adjust its setting for a clearer sound. The sliders rest on zero and to increase/decrease the frequency in decibel value, push the slider up/down respectively.
- B. EFFECT RTN (Return):** This controls the amount of effects applied to the main section.
- C. AUX IN Control:** This controls the AUX IN level that is sent to the speakers.
- D. TAPE IN Control:** This controls the TAPE IN level that is sent to the speakers.
- E. LEVEL:** This will adjust the level of signal sent to the main speakers (volume).
- F. Peak Level Indicator:** This indicates the level of signal being sent to the main speakers. To avoid distortion and speaker damage- always try and maintain the signal near zero setting.
- G. LIMITER LED:** When the maximum amount of signal is reached, the limiter is activated and will light up. It is normal for the light to come on occasionally when there is a surge of signal, as the limiter will clip the sound so that it does not damage the speakers. If the limiter is on constantly, you are pushing too much signal through the amplifier and will risk damage to the speakers.
- H. BRIDGE/STEREO Switch:** This will select either mono (bridge) or stereo speaker output modes. Note: the PMX1042ST has a 3 mode switch panel with 3 indicated speaker mode settings.

# MONITOR SECTION:



**Note:** The PMX720DFX does not have a monitor section.

- A. Graphic Equaliser:** The PMX models are equipped with a 7 band EQ to control the signal sent to the monitors. This allows the user to cut or boost each frequency by 12db. This is useful for reducing feedback in various frequency ranges- you can isolate the frequency and adjust its setting for a clearer sound. The sliders rest on zero and to increase/decrease the frequency in decibel value, push the slider up/down respectively.
- B. EFFECT RTN (Return):** This will control the overall level of the effects signal in monitor speakers- you can also adjust this individually in each channel.
- C. Peak Level Indicator:** This indicates the level of signal being sent to the monitors. To avoid distortion and speaker damage- always try and maintain the signal near zero setting.
- D. LEVEL:** This will adjust the level of signal sent to the monitors (volume). This applies to the monitor out jacks on both the front and the rear of the unit.
- E. LIMITER LED:** When the maximum amount of signal is reached, the limiter is activated and will light up. It is normal for the light to come on occasionally when there is a surge of signals, as the limiter will clip the sound so that it does not damage the speakers. If the limiter is on constantly, you are pushing too much signal through the amplifier and will risk damage to the speakers.

# PHANTOM POWER:

POWER

+48V  
PHANTOM  
POWER

ON  
OFF

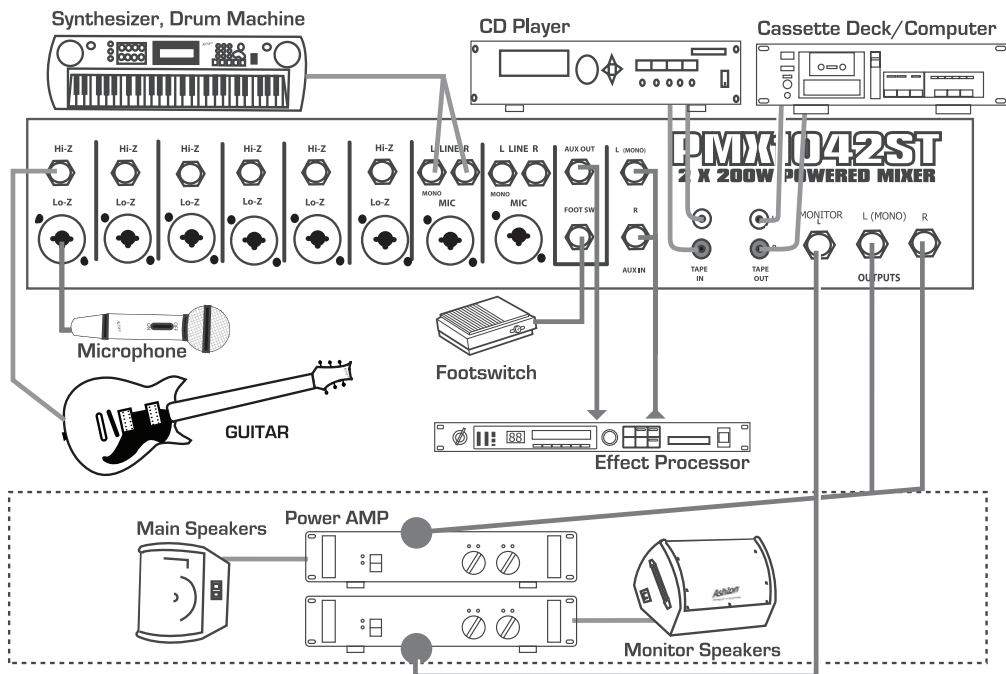
PHANTOM

Phantom power is useful when connecting condenser microphones to a PMX model; the phantom power switch/LED comes in two different configurations (illustrated left and below). Both configurations work exactly the same but are set out differently; simply press the ON/OFF switch to engage/disengage the phantom power of your unit. When phantom power is engaged, the LED will light.

Also located on these panels is a power LED that indicates that the power has been switched on to the unit via the rear panel.



## EXAMPLE FRONT PANEL CONNECTIONS:

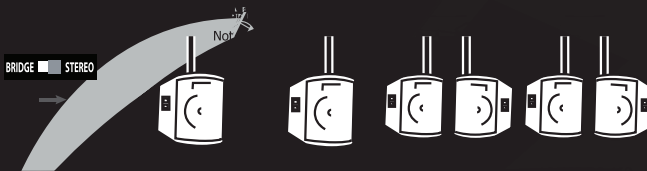


## SPEAKER OUTPUTS:

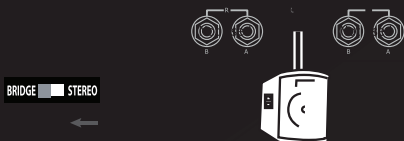
**A. Parallel Monitor:** These are the monitor outputs. To connect a monitor/s, simply run a speaker cable from these 1/4" jack outputs to the input on the speaker.

Before connecting, determine the output setting on STEREO/BRIDGE switch (main section).

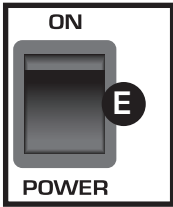
**B. Parallel (R) / D. Parallel (L):** Connect the left speaker/s to the (L) 1/4" jack outputs, and the right speaker/s to the (R) 1/4" jack outputs. These connections provide the maximum output. Connect either one pair of speakers (4-8Ω) or two pairs of speakers (8-16Ω). Do not connect anything to **C** when connecting to **B & D** outputs.



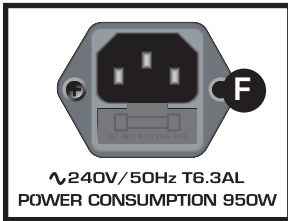
**C. L + R Bridge:** This output is merged and is a mono output, connect one speaker (8-16Ω). This connection provides the maximum output. Do not connect anything to **B & D** when connecting to **C** output.



# REAR PANEL:



**E. Power Switch:** This switch turns the main power of the PMX model you have purchased on and off. Refer to the power LED light located with the phantom power switch to confirm that the unit is on. Always ensure all volume knobs to speakers are turned to zero to avoid speaker damage when power is turned on.



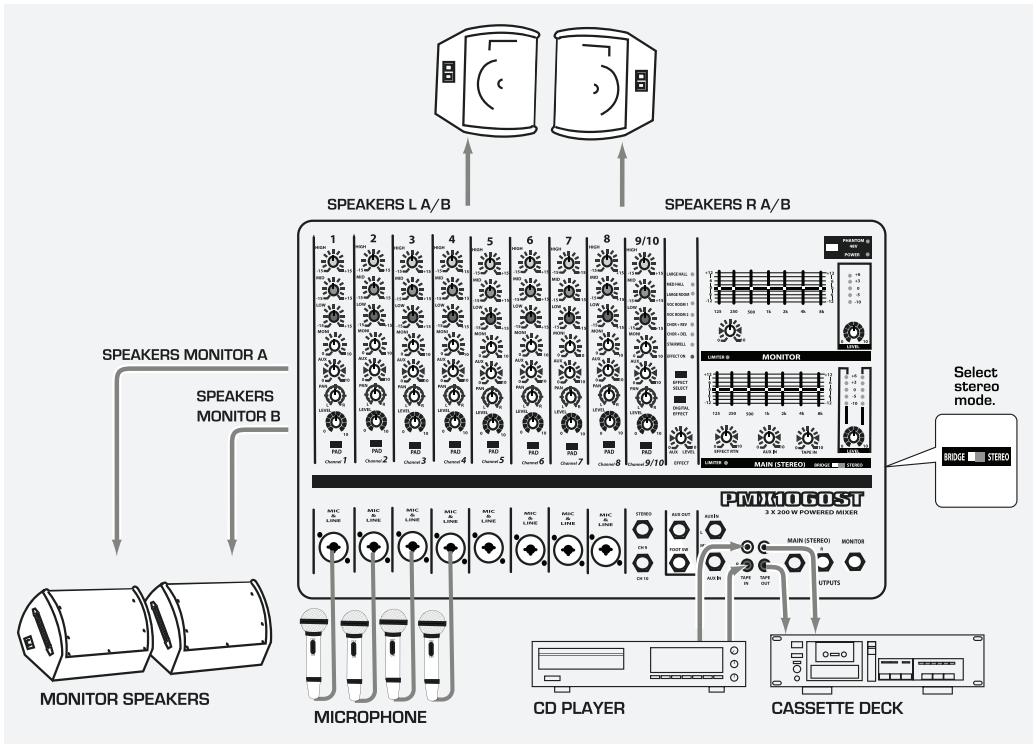
**F. AC Power Input:** This is the socket and cable that supplies the amplifier with AC power. The supplied cable plugs into an AC power outlet. If the power cable is damaged in any way do not use it, the cable must be replaced before operation. Please refer to the specifications written below the plug input on the rear panel and make sure all cables and power sources are in accordance.

# FLUORO PAINT- HOW DOES IT WORK?

Each PMX model in the PMX range features new, updated fluoro panel paint on the control panel so that you can see what you are doing when it is dark on stage.

## HOW DOES THE PAINT WORK?

The PMX features fluorescent paint. Fluorescent paint is a paint that will glow when interacted with black light (a common stage light). This feature makes it easy to adjust the settings of your PMX model in a dark set-up or at a live gig.



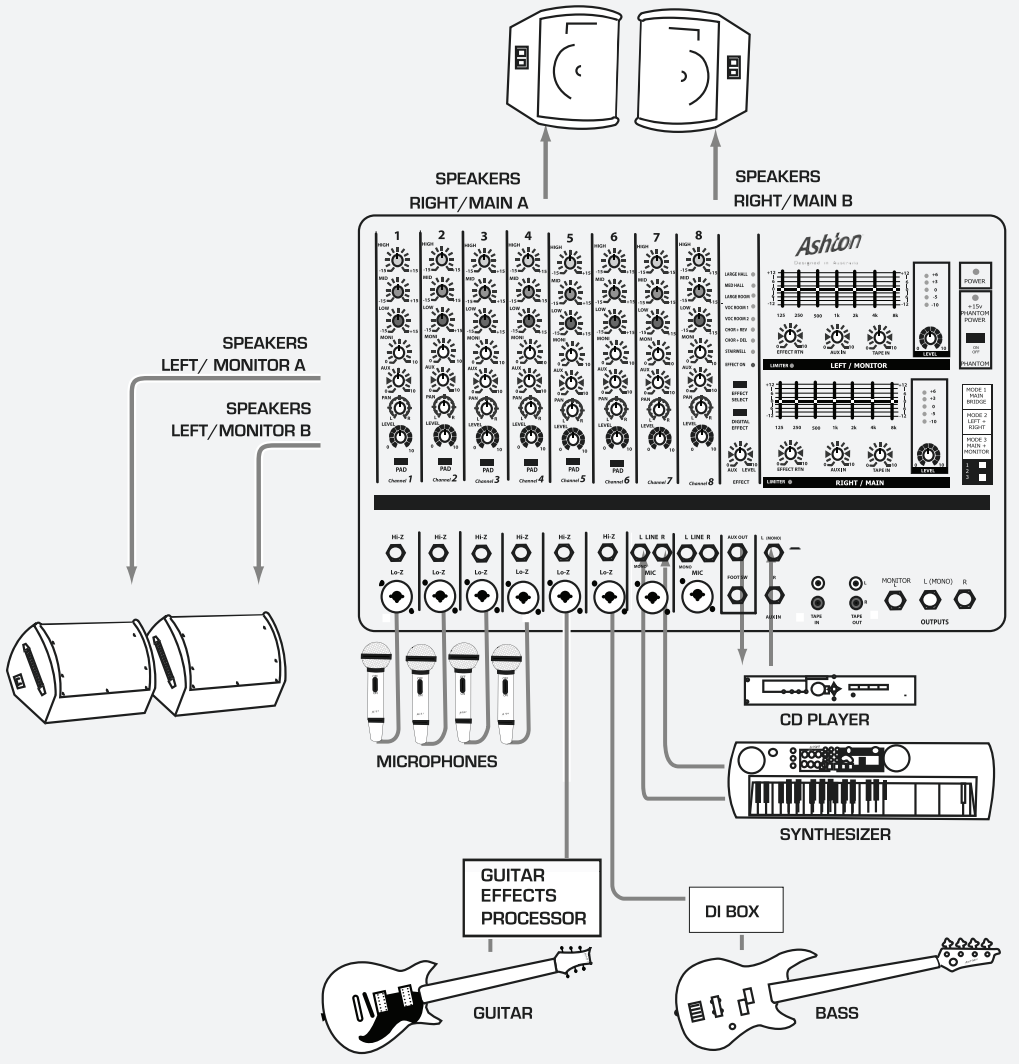
This setup is perfect for a conference or simple sound system setup. To setup, simply follow the diagram above with the relevant instruments/devices/speakers. You will be able to control all the devices within the PMX model by each individual relevant channel, for example, the microphone plugged into the channel 1 input will be adjustable via the channel 1 equaliser panel. The overall sound will be adjustable via the monitor (excluding PMX720ST) and the main control panels explained in earlier sections.

**Please note:** PMX models may differ slightly, please refer to the previous sections if you are confused with this setup.



# EXAMPLE SETUP:

BAND



This setup is perfect for a band rehearsal or live setup. To setup, simply follow the diagram above with the relevant instruments/devices/speakers.

**Please note:** PMX models may differ slightly, please refer to the previous sections if you are confused by this setup.







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