	ECHNICAL GROU	UP LIMITED
河	TOPP PRO	
料	NF03555	
3 20	說明書-RS-英文	
規格	MX.12FX TOPP PRO_	V1.0
公司機種(客户機種)成品料號	MX.12FX	
重量/基數	0.032KG	
村	NH00149 1:1	
紙張展開性質	⊠A3 □A4 □A5 □	其它 纸張展開數量 4PCS
<b>蒸</b>	審 核	稿 製 稿 MAR.15.2011 曹四芳
產品文件編號: P 陽片數量: 8 張	HFAA102-20110300021	21
依NPD-TO	TO-201012003 出 圖	
<b> </b>		





#### **USER'S MANUAL**





#### SAFETY RELATED SYMBOLS





This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions.

Please read.



ON:

OFF:

Protective Ground Terminal



AC mains (Alternating Current)

AC mains (Alternating Current)

Denotes the product is turned on.

Denotes the product is turned off.

#### WARNING

Describes precautions that should be observed to prevent the possibility of death or injury to the user.



#### CAUTION

Describes precautions that should be observed to prevent damage to the product.

Disposing of this product should not be placed in municipal waste but rather in a separate collection.

#### WARNING

#### **Power Supply**

Ensure that them a inssource voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user. Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

#### **External Connection**

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice from a registered electrician.

#### **Do Not Remove Any Covers**

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. Covers should be removed by qualified service personnel only.

No user serviceable parts inside.

#### Fuse

To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder. Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

#### **Protective Ground**

Before turning the unit ON, make sure that it is connected to Ground. This is to prevent the risk of electric shock.

Never cut internal or external Ground wires. Like wise, never remove Ground wiring from the Protective Ground Terminal.

#### **Operating Conditions**

Always install in accordance with the manufacturer's instructions.

To avoid the risk of electric shock and damage, do not subject this product to any liquid/rain or moisture. Do not use this product when in close proximity to water.

Do not install this product near any direct heat source. Do not block areas of ventilation. Failure to do so could result in fire.

Keep product away from naked flames.

#### IMPORTANT SAFETY INSTRUCTIONS

Read these instructions

Follow all instructions

Keep these instructions. Do not discard.

Heed all warnings.

Only use attachments / accessories specified by the manufacturer.

#### **Power Cord and Plug**

Do not tamper with the power cord or plug. These are designed for your safety.

Do not remove Ground connections!

If the plug does not fit your AC out let seek advice from a qualified electrician.

Protect the power cord and plug from any physical stress to avoid risk of electric shock.

Do not place heavy objects on the power cord. This could cause electric shock or fire.

#### Cleaning

When required, either blow off dust from the product or use a dry cloth.

Do not use any solvents such as Benzol or Alcohol. For safety, keep product clean and free from dust.

#### Servicing

Refer all servicing to qualified service personnel only. Do not perform any servicing other than those instructions contained within the User's Manual.

#### PORTABLE CART WARNING



Carts and stands - The component should be used only with a cart or stand that is recommended by the manufacturer. A component and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the component and cart combination to overturn.

#### **GUARANTEE**

**Topp Pro** guarantees the normal operation of the product against any defect of manufacture and / or vice of material, by the term of (12) months, counted as of the date of purchase on the part of the user, committing itself to repair or to change, to its election, without position some, any piece or component that will fail in normal conditions of use within the mentioned period.

This guarantee is valid if the original buyer will have to present/display this certificate properly sealed and signed by the selling house, accompanied by the corresponding invoice of purchase where it consisted the model and serial number of the acquired equipment.

The guarantee does not cover:

- Damages caused by the illegal use of the product, repair and/or nonauthorized modification conducted by people by **Topp Pro**.
- Damages caused by the connection of the equipment to other equipment different from the specified ones in the manual of use, or by bad connection to these last ones.
- Damages caused by electrical storms, blows and/or incorrect transport.
- Damages caused by excesses or falls of tension in the network or by connection to networks with a tension different from the required one by the unit.
- Damages caused by the presence of sand, acid of batteries, water, or any strange element inside the equipment.
- Deteriorations produced by the course of the time, use and/or normal wear of the unit.
- Alteration or absence of the serial number of factory of the equipment.

The repairs could only be carried out the authorized technical service by **Topp Pro**, that will inform about the term and other details into the repairs to take place according to this guarantee.

**Topp Pro**, will repair this unit in counted a term nongreater to 30 days as of the date of entrance of the unit to the Technical Service. In those cases in that due to the particularitity of the spare part, outside necessary their import, the repair time and the viability of the same one will be subject to the effective norms for the import of parts, in which case one will inquire to the user about the term and possibility into repair.

With the object of its correct operation, and of the validity of this one guarantee, this product will have to be installed and to be used according to the instructions that are detailed in the manual associate or the package of the product.

This unit will be able to appear for its repair, next to the invoice of purchase (or any other proof where the date of purchase consists), to its authorized distributer Topp Pro or an authorized technical center on watch by **Topp Pro**.

#### **Exclusion of damages:**

THE RESPONSABILITY OF **TOPP PRO** BY ANY DEFECTIVE PRODUCT IS LIMITED THE REPAIR OR THE REPLACEMENT OF HE HIMSELF, TO TOPP OPTION PRO. IF WE CHOSE TO REPLACE THE PRODUCT, THE REPLACEMENT CAN BE A RECONDITIONATED UNIT. TOPP PRO WILL NOT BE RESPONSIBLE BY THE DAMAGES BASED ON THE LOST, INCONVENIENCE, LOSS OF USE, BENEFITS, LOST SAVINGS, BY THE DAMAGE TO OTHER EQUIPMENT OR OTHER ARTICLES IN THE USE SITE, OR BY ANY OTHER DAMAGE IF HE IS FORTUITOUS, CONSEQUENT OR OF ANOTHER TYPE, ALTHOUGH TOPP PRO HAS BEEN NOTICED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow to the exclusion or the limitation to the fortuitous or consequent damages, so the aforesaid limitation can not be applied to you.

This guarantee gives specific legal rights him, you can also have other right that varies of state to state.

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#### **TECHNICAL SPECIFICATION**

Internal Digital Effect	Presets	100
	Controls	100-Position PRESET Selector and Mute Switch
	Display	Two 7-egment display and Mute/Peak LED Indicator
	Type of effects	VOCAL,SMALL ROOM,LARGE HALL,ECHO,ECHO+VERB, FLANGE+VERB,PLATE, CHORUS+GTR,ROTARY+GTR, TREMOLO+GTR
PEAK Indicator	Channel1-12	+17dBu
	Digital Effect(AUX send)	+11dBu
	VU Meters	+20dBu
VU Meters	Main Left and Right (4-segment)	Clip (+20), +6, 0, -20 (0 LED=0 dBu)
Impedance	Microphone Input	2.6k Ohms
	Line Input	10k Ohms
	CD/Tape Input	22k Ohms
	Main Outputs	120 Ohms
	Ctrl Room,Aux Sends	120 Ohms
	Tape Output	1K Ohms
	Phones Outputs	25 Ohms
Phantom power	Mic Pin2/Pin3 And Pin1(XLR-3-31 type balanced 1=GND,2=HOT,3=COLD)	+48V
Power supply	Adaptor	AC18V, 1000mA
Power Consumption	18W	
Playeigal	Dimension (L*W*H)	271*259*54.3mm
Physical	Weightt	Net:1.9kg



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#### **INTRODUCTION**

Thank you for purchasing the MX.12FX mixing console. There is 3-band EQ on mono channels. These mixers are really ideal for small club gigs.

Please read this manual carefully so you can take advantages of all the features of the MX12FX.

Thank you again for making the right choice in purchasing the TOPP PRO MUSIC GEAR.

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#### **FEATURES**

- 4 mono inputs with gold plated XLR and Balanced TRS jack
- 4 stereo inputs with Balanced TRS jack
- GAIN control and +48V phantom power for mono inputs
- 3-band EQ (plus 75Hz low cut filter) on all mono channels
- 1 POST-fader AUX send for effect sends
- Peak LED in each channel
- 2-Track IN/OUT with discrete switches for routing to Control Room and to Main Mix
- 24-bit internal DSP with 100 effects

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#### **USEFUL DATA**

Please write your serial number here for future reference.

**Serial Number:** 

**Data of Purchase:** 

Purchased at:

#### **TECHNICAL SPECIFICATION**

Frequency Response	Mic Input to any Output (Gain @ 0 dB, Rated output level)	20 Hz to 50 kHz(0, -1dB) 20 Hz to 130 kHz(0, -3dB)
Distortion(THD&N)	Mic Input to MAIN Output(Gain @ 0 dB, Rated output level @ 20 Hz-20 kHz bandwidth)	0.003%(A-weighted)
MIC EIN (Equivalent Input Noise)	Input: Channel INPUT MIC(Rs = 150 $\Omega$ , Gain @ Max.,20 Hz-20 kHz bandwidth)	– 119dBu(A-weighted)
CMRR(Common Mode Rejection Ratio)	Mic in to Insert Send out (Gain @ Max.,@ 1 kHz)	60dB
Input Gain Conrol Range	Mono Channel	MIC:0 to 48dB, LINE:-33 to +15dB
(20 Hz-20 kHz bandwidth)	Stereo Channel	LINE:-8 to +6dB
Attenuation (Crosstalk)	Line in, 1/4" TRS Main Out,1 kHz relative to 0 dBu, 22 Hz – 22 kHz Filter, Gain @ unity.	
(20 Hz-20 kHz bandwidth)	Main Mix knob/fader @ -∞	-87dBu(A-weighted)
	Channel Level knob/fader @ -∞	-85dBu(A-weighted)
Rated Output Level	Main, Aux, Control Room output (all knob/fader @ 0 dBu,1 kHz)	0dBu
Maximum Output Level	Main, Aux, Control Room output(all knob/fader @ 0 dBu,1 kHz, 22 Hz – 22 kHz Filter,THD @ 1%)	+20dBu
Maximum Voltage Gain (EQ and PAN/BAL knob @ 0 dB, Other all knob or fader @ max,DFX mute, 1 kHz, Rs=600 Ω)	Mono Channel MIC INPUT→ MAIN OUT(1/4" TRS Unbalanced)	74dBu
	Mono Channel MIC INPUT→ PHONES(1/4" TRS Stereo)	84dBu
	Mono Channel MIC INPUT→ AUX SEND(1/4" TRS Unbalanced)	79dBu
	Mono Channel MIC INPUT→ TAPE OUT(RCA)	74dBu
	Mono Channel LINE INPUT→ MAIN OUT(1/4" TRS Unbalanced)	59dBu
	Stereo Channel LINE INPUT→ MAIN OUT(1/4" TRS Unbalanced)	33dBu
	TAPE INPUT→ MAIN OUT(1/4" TRS Unbalanced)	10dBu
	MAIN OUT(all knob/fader @ 0 dBu, 22 Hz - 22 kHz Filter, Gain @ unity)	
Main mix Noise	Main Mix knob/fader @ -∞, Channel Level knob/fader @ -∞	-106dBu(A-weighted)
(20 Hz-20 kHz bandwidth)	Main Mix knob/fader @ 0dB, Channel Level knob/fader @ -∞	-95dBu(A-weighted)
	Main Mix knob/fader @ 0dB, Channel Level knob/fader @ 0dB	-93dBu(A-weighted)
Input HPF	Channel1-4	75Hz, 18 dB/oct
	High	±15 dB @12 kHz
Equalization (Mono channels)	Mid	±12 dB @2.5 kHz
	Low	±15 dB @80 Hz
		_

**MX.12FX MX.12FX** 

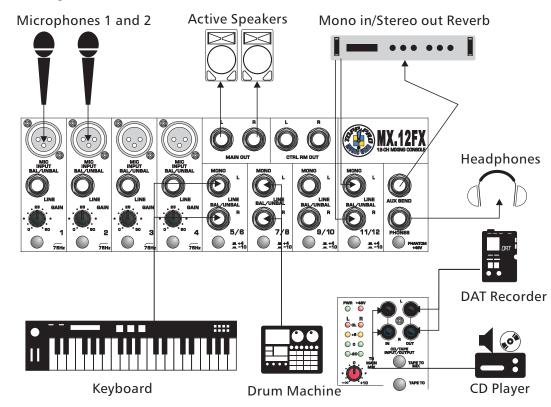


#### **PRESET LIST**

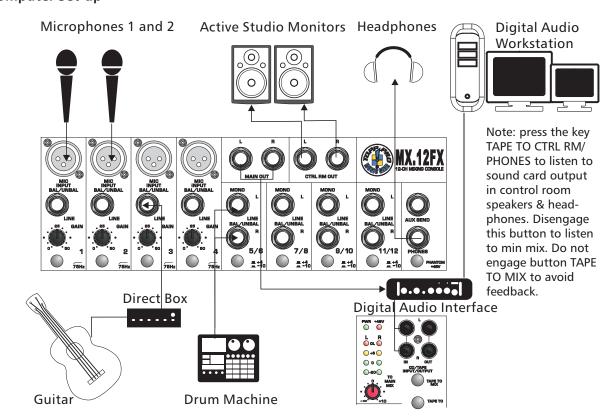
No.	Preset	Description	Parameter
00~09	Vocal	Simulate a small space with slight	Rev.delay time: 0.8~0.9s Pre-delay: 10~45ms
10~19	Small Room	Simulate a bright studio room	Decay time: 0.7~2.1s Pre-delay: 20~45ms
20~29	Large Hall	Simulate a large acoustic space	Decay time: 3.6~5.4s Pre-delay: 23~55ms
30~39	Echo	Echo/Delay effect	Delay time: 145~205ms
40~49	Echo+Verb	Echo & Reverb combination	Delay time: 208~650ms Decay time: 1.7~2.7s
50~59	Flanger+Verb	Flanger effect & Reverb combination	Decay time: 1.5~2.9ms Rate: 0.8Hz~2.52Hz
60~69	Plate	Simulate classic bright vocal plate	Decay time: 0.9s~3.6s
70~79	Chorus + GTR	Guitar Effect: Chorus	Rate:0.92Hz~1.72Hz
80~89	Rotary+GTR	Guitar Effect: Rotary	Modulation depth: 20%~80%
90~99	Tremolo+GTR	Guitar Effect: Tremolo	Rate: 0.6Hz~5Hz

#### **HOOKUP DIAGRAM**

#### **Small Club Gig**



#### **Computer Set-up**



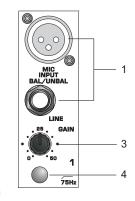
MX.12FX
MX.12FX



#### **CONTROL ELEMENTS**

#### 1- Mono MIC Input

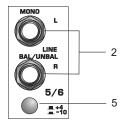
The MX series is equipped with one or more low-noise microphone preamplifiers with optional phantom power providing up to 50dB of amplification. You can connect almostany type of microphone. Dynamic microphones do not need phantom power. Use phantom power only with condenser microphones but make sure that phantom power switch is disengaged before connecting the microphone. Phantom power will not damage your dynamic microphones but it may damage tube or ribbon microphones so make sure to read the microphone instructions manual before engaging phantom power switch. There are also equipped with 1/4" TRS balanced and TS unbalanced LINE IN plug, you can connect with line-level instruments, such as synthesizers, keyboards, drum machines or effect devices.



**NOTE**: Never try to connect a line-level signal to the XLR MIC input when the phantom power is engaged, doing this you may seriously damage your equipment.

#### 2- LINE INPUTS

They are organized in stereo pair and provided with 1/4" TRS sockets. It is used to connect the stereo device, plug both the left input and the right input. Using the left input if connect a mono input signal to the STEREO INPUT, the signal will appear on both sides.



#### 3- GAIN CONTROL

This GAIN control is used to control the input sensitivity of the MIC and LINE inputs. The adjustable range goes from 0 dB to 50dB.

#### 4- LOW CUT BUTTON

By pressing this button, you will activate a 75Hz low frequency filter that cuts the bass frequency below 75Hz. You can use this facility to reduce the hum noise infected by the mains power supply or the stage rumble while using a microphone.

#### 5- +4/-10 SWITCH

+4/-10 switches are used to select the input sensitivity of the line inputs on the stereo channels. +4 dBu is suitable for professional audio devices and -10 dBv is suitable for general devices. If not sure to use which setting, try +4 dBu first, then change it to -10 dBv if the volume is too small to be satisfied.

#### **EQUALIZATION**

The MX.12FX has 3-band EQ on all mono channels. And all bands provide up to 15 dB boost or cut.

#### 6- HIGH

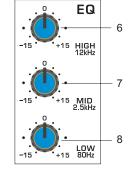
This is the treble control. You can use it to get rid of high frequency of human voice. The gain range goes from -15 dB to +15 dB with a centre frequency of 12 kHz.

#### 7- MID

This control provides 15 dB boost or cut at 2.5 kHz. It can affect most fundamental frequencies of all musical instruments and human voice.

#### 8- LOW

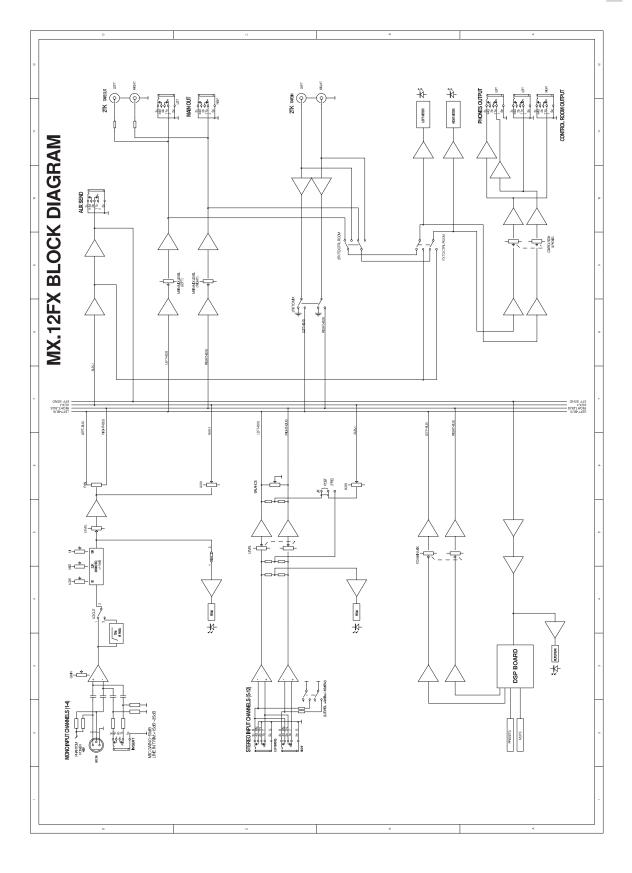
This is the bass control. It is used to boost male voice, kick-drum or bass guitar. Your system will sound much bigger than what it is. The gain range goes from  $-15 \, dB$  to  $+15 \, dB$  and the center frequency is 80 Hz.



#### 9- AUX Send

This control is used to feed the mono input of parallel effects devices or input of a stage monitor amplifier via the AUX SEND output jack. All the channel controls (except PAN or BAL) will affect the AUX signal. The signal is tapped off after the LEVEL control. The output from an external processor can come back via stereo channel and be added to the main mix.

#### **BLOCK DIAGRAM**



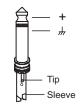
#### MX.12FX

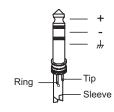
## 6

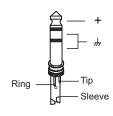
#### WIRE CONNECTIONS

Either the 1/4" TRS phone jack or XLR connector can be wired in balanced and unbalanced modes, which will be determined by the actual application status, please wire your system as the following wiring examples:

• For 1/4" Phone jack





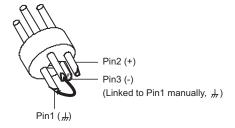


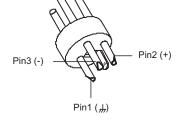
TS Type Unbalanced

TRS Type Balanced

TRS Type Unbalanced

• For XLR Connector





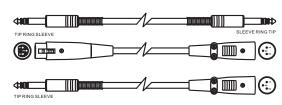
XLR Type Unbalanced

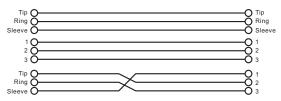
XLR Type Balanced

#### **In-line Connection**

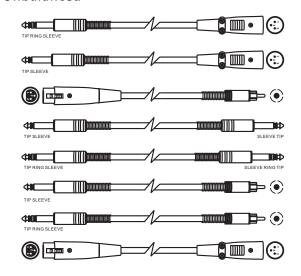
For these applications the unit provides 1/4" TRS and XLR connectors to easily interface with most professional audio devices. Follow the configuration examples below for your particular connection.

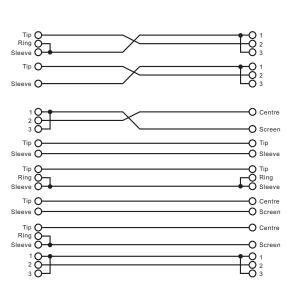
Balanced





#### Unbalanced





#### **CONTROL ELEMENTS**

### 4

#### 10- PAN/BAL

Abbreviation of PANORAMA control for mono channels, for stereo channels, always says, BALANCE control. You can adjust the stereo image of the signal via this control. For mono MIC/LINE channels, keep PAN control in centre position and your signal will be positioned in the middle of stage that is to say the mono signal appears equally in both sides. Turn this control fully counterclockwise and the signal will be present only on the left speaker and vice-versa. For stereo channels, by rotating the BAL control, you can attenuate the signal of left or right. It means if turn the control to left, the right channel will be attenuated; if turned to right, the left channel will be attenuated.

# AUX SEND 9 PAN 10 11 LEVEL CH1 CH1

#### 11- PEAK LED

When this LED blinks, it warns you that you are reaching signal saturation and possible distortion. From this LED you can adjust the correct level, not too strong to cause distortion and not too weak to be lost in noise.

#### 12- LEVEL

This control will adjust the overall level of this channel. If you set the LEVEL control in max, it's usually a sign that your GAIN is set too low. If set the LEVEL control in min, your GAIN may be too high.

#### 13- CD/TAPE INPUTS

Use the Tape Input if you wish to listen to your mixer from a Taper Recorder or DAT. When the TAPE TO MIX switch is pushed in, the signal coming from Taper Recorder will assign to main mix; when the CD/TAPE switch which on the front panel is engaged in the signal can also be assigned to the CONTROL ROOM/PHONES outputs. If you connect a mono device, you will need a "Y-splitter" RCA adapter.

#### 14- TAPE OUTPUTS

These RCA jacks will assign the main out signal to a tape recorder or DAT. The TAPE OUT level is affected by MAIN MIX control.

#### 15- TAPE TO MIX Switch

Connect a CD or Tape Deck to the CD/TAPE inputs, and push down this switch to add the CD/TAPE signal to the main mix. The volume level is controlled by MAIN MIX control.

#### 16- TAPE TO CTRL RM/PHONES Switch

Switch is used to select the signal source for the CONTROL ROOM outputs, PHONES, and METERS. Release this switch, they all receive the main mix signal tapped after the MAIN MIX control. Engage this switch, they all receive the CD/TAPE Input signal. Turn down the CTRL ROOM/PHONES control before engaging.

#### 17- FX TO CTRL ROOM Switch

Engage this switch to monitor the aux send signal in the Control Room/ Phones outputs.

#### 18- CTRL ROOM/PHONES Control

This control is used to adjust the signal level going to the CONTROL ROOM/PHONES outputs. And it won't affect the Main Mix output.

#### 19- MAIN MIX

This control sets the level of main mix signals sent to the Main Outputs, Tape Outputs, CONTROL ROOM, PHONES, and LED Display.

**Note:** When connecting a speaker to the speaker output jacks, please pay more attention to the level setting for avoiding damaging the speaker. Generally speaking, the faders will be positioned between 0 dB and the +5 dB.

# TAPE TO CTRL ROOM TAPE TO CTRL ROOM TAPE TO CTRL ROOM 13 14 15 TAPE TO CTRL ROOM 17 TAPE TO CTRL ROOM 17 TAPE TO CTRL ROOM 17 TAPE TO CTRL ROOM 17

MAIN MIX



#### CONTROL ELEMENTS

#### 20-POWER LED

This LED lights up when the power switch is turned on.

#### 21- PHANTOM 48V LED

This LED will light up when the phantom power is switched on.

**NOTE**: Turn down all output levels before operating this switch to avoid the possibility of "pop" in your speakers. Do not use phantom power with tube or ribbon microphones, as this may cause damage.

#### 22- METERS

This stereo LED meter will indicate the level of the overall output signal.

#### 23- TO MAIN MIX CONTROL

This control is used to adjust the volume of effect signal sent to MAIN MIX bus, which can be varied from  $-\infty$  to +10 dB.

#### 24- MAIN OUT

These 1/4" TRS jacks represent the end of the mixer chain, where your fully mixed stereo signal enters the real world. Connect these outputs to the inputs of your amplifiers, powered speakers, or serial effects processor (graphic equalizer, for example).



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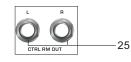
+6

0

\_\_20 \_

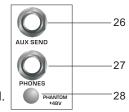
#### 25- CTRL ROOM OUT

These 1/4" TRS are used to assign the control room signal to the studio monitor speakers. They can also be used to provide another main mix output, or to monitor the CD/TAPE Inputs (when engage the TAPE TO CTRL RM/PHONES switch), or to monitor aux send signal (FX TO CTRL ROOM switch is engaged)



#### **26- AUX SEND OUT**

These 1/4" TRS are used to send out the signal from the AUX bus to external device such as effects equipment. Each channel has an AUX SEND control knob that adjusts how much of that channel's signal appear at each of the output. This output is affected by the channel LEVEL, but not MAIN MIX control.



#### **27- PHONES OUTPUT**

This jack is used to send out the mix signal to a pair of headphones, and the signal is the same as the CTRL RM OUTS outputs. The level is controlled by the CTRL ROOM/PHONES knob. You can listen to the Main Mix, the CD/TAPE, or the AUX SEND depending upon the position of the TAPE TO CTRL RM/PHONES switch and FX TO CTRL ROOM switch.

#### 28- +48V PHANTOM SWITCH

This +48VDC phantom power switch only apply to the XLR microphone input. Never connect microphones when the phantom power is on already.

#### **DSP SECTION**

There is a powerful 24-bit/100 presets digital multi-effects built in your MX.12FX mixer, the effects include ECHO, FLANGER+VERB, PLATE and combinations of the above.

#### 29- DISPLAY

It displays the selected preset.

#### **30- PRESET SELECTOR**

Adjust this knob to select the right effect you wish to perform. There are totally 100 options for you: ECHO, VOCAL, PLATE andversatile two-effect combination. When you are satisfied with the right preset, push this knob to store this preset you want.

#### **CONTROL ELEMENTS**

#### 31- PEAK/MUTE LED

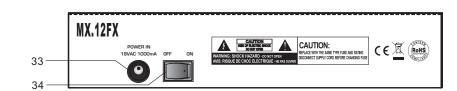
This LED lights up when the input signal is too strong or in case of the digital effect module being muted.

#### 32- MUTE SWITCH

This switch is used to activate/deactivate the effect facility.

## DSP 24 Bit digital effects 10-19 Small Room 20-29 Large Hall 30-39 Echo 40-49 Echo + Verb 50-59 Flange + Verb 60-69 Plate 70-79 Chorus + GTR 80-89 Rotary + GTR 90-99 Tremolo + GTR

#### **REAR PANEL**



#### 33- POWER IN

This connection is where you connect the supplied external AC power supply to provide AC power to the mixer. Connect the external power supply to your mixer first, then plug the power supply into a suitable and properly rated AC outlet.

NOTE: make sure you use the correct external power supply cable of providing 18V at milliamps.

#### 34- POWER SWITCH

Turn on & off the mixer. Turn on the mixer after all input have been connected and before you turn on the amplifier. Turn off the amplifier before you turn off the mixer.

#### **INSTALLATION TIPS**

- 1- Speakers should be placed in a position that allows for unobstructe sound projection. In many instances is beneficial for speakers to be elevated on tripod stands to achieve maximum dispersion and reach.
- 2- Use professional advice or service when hanging and installing speakers. Please take precautions to secure them to prevent them from falling and hurting someone. Care should be taken as to not damage the cabinet or its components. Please comply with all pertinent Regulations.
- 3- Use quality cables. Using quality cables will ensure the best possible sound.
- 4- For best results match the speakers to a good amplifier that matches the wattage and impedance of your speakers. Proper amplification power results in good quality audio and longer component life. Check out the power requirement for your cabinet.
- 5- Avoid pointing a microphone directly at an amplified speaker doing so, could cause feedback possibly damaging speaker components and your hearing.

**Enjoy the sound!**