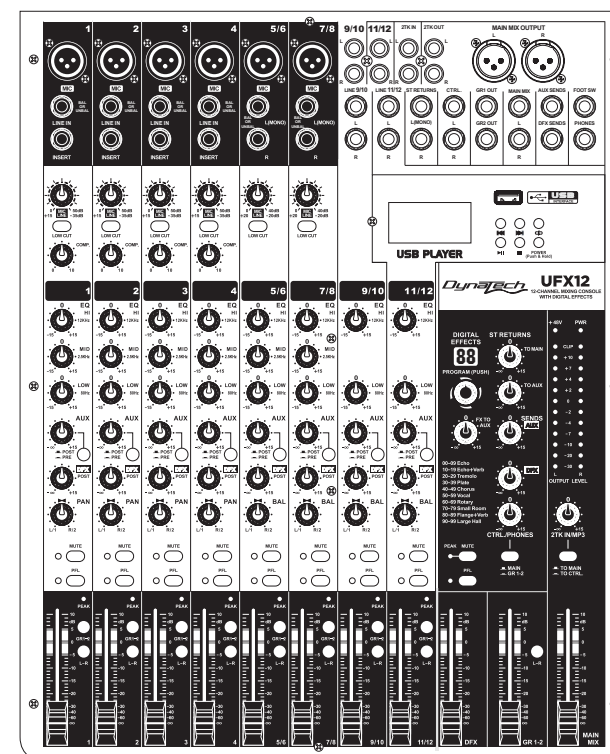


Dynatech

UFX12

MIXING CONSOLE

User's Manual



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SAFETY RELATED SYMBOLS



The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions.



The symbol is used in the service documentation to indicate that specific component shall be only replaced by the component specified in that Documentation for safety reasons.



Protective grounding terminal.



Alternating current /voltage.



Hazardous live terminal .

ON: Denotes the apparatus turns on.

OFF: Denotes the apparatus turns off, because of using the single pole switch, be sure to unplug the AC power to prevent any electric shock before you proceed your service.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the user.



Disposing of this product should not be placed in municipal waste and should be separate collection.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

WARNING

• Power Supply

Ensure the source voltage matches the voltage of the power supply before turning ON the apparatus.

Unplug this apparatus during lightning storms or when unused for long periods of time.

• External Connection

The external wiring connected to the output hazardous live terminals requires installation by an instructed person, or the use of ready-made leads or cords.

• Do not Remove any Cover

There are maybe some areas with high voltages inside, to reduce the risk of electric shock, do not remove any cover if the power supply is connected.

The cover should be removed by the qualified personnel only.

No user serviceable parts inside.

• Fuse

To prevent a fire, make sure to use fuses with specified standard (current, voltage, type). Do not use a different fuse or short circuit the fuse holder.

Before replacing the fuse, turn OFF the apparatus and disconnected the power source.

• Protective Grounding

Make sure to connect the protective grounding to prevent any electric shock before turning ON the apparatus.

Never cut off the internal or external protective grounding wire or disconnect the wiring of protective grounding terminal.

• Operating Conditions

This apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on this apparatus.

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Do not use this apparatus near water. Install in accordance with the manufacture-r's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not block any ventilation openings.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Follow all instructions.
- Keep these instructions.
- Heed all warnings.
- Only use attachments/accessories specified by the manufacturer.

• Power Cord and Plug

Do not defeat the safety purpose of the polarized or grounding type plug.

A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

• Cleaning

When the apparatus needs a cleaning, you can blow off dust from the apparatus with

a blower or clean with rag etc.

Don't use solvents such as benzol, alcohol, or other fluids with very strong volatility and flammability for cleaning the apparatus body. Clean only with dry cloth.

• Servicing

Refer all servicing to qualified personnel. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so .

Servicing is required when the apparatus has been damaged in any way ,such as power supply cord or plug is damaged , liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture , does not operate normally, or has been dropped.

The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.

AUX RETURNS		
Input	1/4' TRS with un-balanced	
Frequency response	10Hz to 55KHz, +/-3dB	
Distortion(THD+N)	<0.03% at +0dB ,22Hz~22KHz A-weighted	
GAIN range	OFF TO +15dB	
SNR	<-100dBr A-weighted	
Impedances		
Microphone input	1.8KΩ	
All other input	10KΩ or greater	
Tape out	1KΩ	
All other out	120Ω	
DSP section		
A/D and D/A converters	24bit	
Type of effects	Echo ,Echo+Verb , Tremolo , Plate , Chorus ,Vocal Rotary , Small Room , Flange + Verb , Large Hall	
Controls	100 position preset selector(10 preseter * 10 variation)	
	Mute switch & Foot-switching with LED indicator	
FOOT-SW	TIP:FX	SLEEV:GND
Main mix section		
Max. MAIN MIX output	+22dBu XLR balanced (+16dBu un-balanced)	
AUX range	OFF to +15dB	
Fader range	OFF to +10dB	
PHONES/CONTROL-ROOM range	OFF to +15dB	
Hum & Noise	<-80dB @ 20Hz~22KHz A-weighted、1 channel & MAIN level:0dB,the other :minimum	
Crosstalk	<-80dB @0dB 20Hz~22KHz A-weighted、MAIN level:0dB the other :minimum,	
Power supply		
Main voltage	100-240V~ 50/60Hz	
Fuse	T1.6A AC250V	
Rated power consumption	40W	

TECHNICAL SPECIFICATIONS

MODEL :	UFX12 mixing console	
Mono channels		
Microphone input	XLR with balanced	
Frequency response	10Hz to 55KHz, +/-3dB	
Distortion(THD+N)	<0.03% at +0dB ,22Hz~22KHz A-weighted	
Gain range	0dB to 50dB	
Max. Input	+15 dB	
LOW CUT	75Hz	
SNR	<-100dB A-weighted	
Phantom power	+48V with switch control	
Line input	1/4' TRS with balanced	
Frequency response	10Hz to 55KHz, +/-3dB	
Distortion(THD+N)	<0.03% at +0dB ,22Hz~22KHz A-weighted	
Sensitivity range	+15dB~ -35dB	
COMPRESSOR	GAIN:0~9dB	
	THRESHOLD:20dB---> ↓ 5dB	
Stereo input channels		
Mic input	XLR with balanced	
LOW CUT	75Hz	
Line input	1/4' TRS or TRS/RCA with un-balanced	
Frequency response	10Hz to 55KHz, +/-3dB	
Distortion(THD+N)	<0.03% at +0dB ,22Hz~22KHz A-weighted	
Sensitivity range	-20dBu~ +20dBu	
SNR	<-100dB A-weighted	
Channels EQ		
	mono channel	stereo channel
High	+/-15dB @12KHz	+/-15dB @12KHz
Mid	+/-15dB @2.5KHz	+/-15dB @2.5KHz
Low	+/-15dB @80Hz	+/-15dB @80Hz
2-TACK IN		
TAPE IN	RCA jack	
Frequency response	10Hz to 55KHz, +/-3dB	
Distortion(THD+N)	<0.03% at +0dB ,22Hz~22KHz A-weighted	
Gain range	OFF to 15dB	

INTRODUCTION

Thank you choosing for purchasing UFX12 Mixing Console. This is a professional compact mixer to give you great quality and better reliability than ever before You will get the smooth, accurate more natural and open sound from this apparatus. and it is really ideal for gigs, recording and fixed PA installations.

The UFX12 Mixing Console is packed with features that can not be found in other consoles of its size: 4mono (provided with ultra low noise microphone pre amplifiers and Phantom Power at +48 Volt) and 4 stereo input channels and each of them is provided with a 3-band equalizer for HI, MID and LOW controls, as well as 2 auxiliary control; highly accurate 12-segment bar graph meters and 2-track inputs assignable to main mix, control room/phones Outputs etc..

This unit is very easy to operate but we advise you to go through each section of this manual carefully. In this way you will get the best out of your UFX12 Mixing Console.

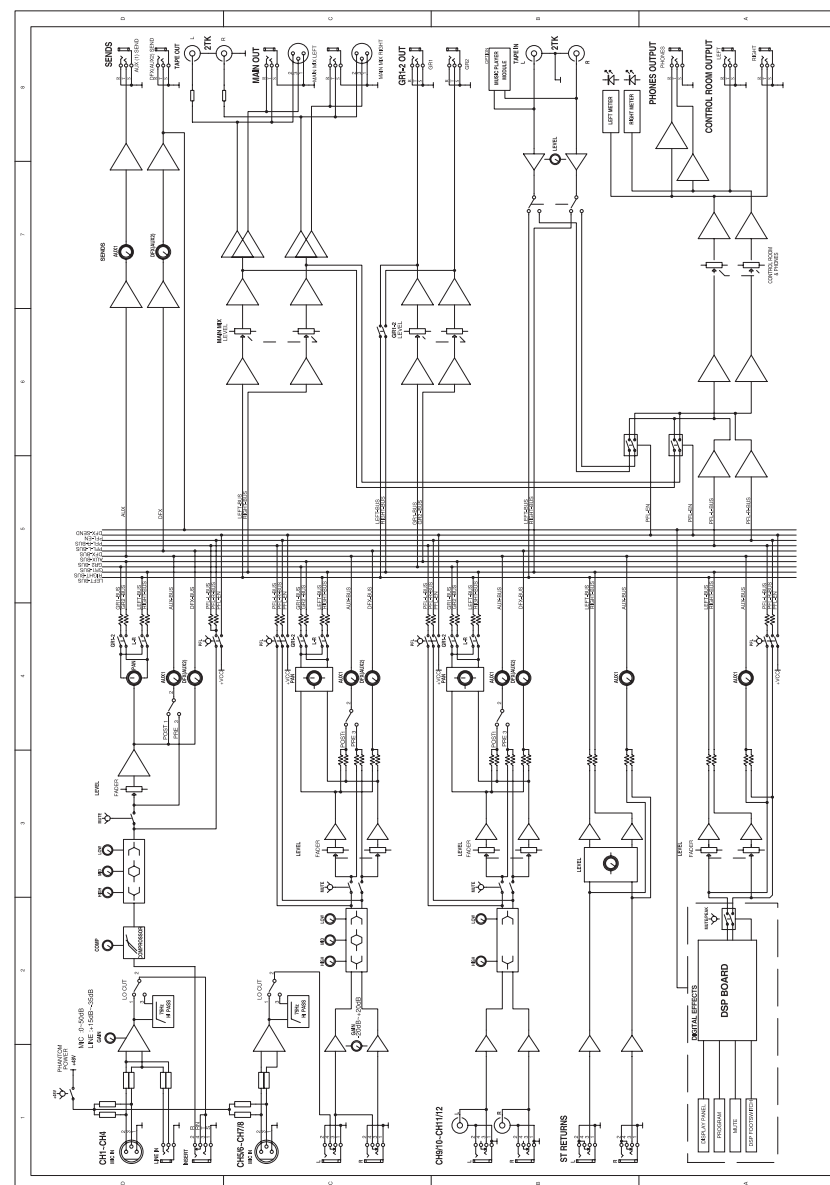
READY TO START

- 1) Please check the AC voltage available in your country before connecting your mixer to the AC socket.
- 2) Be sure that the main power switch is turned off before connecting the mixer to the AC socket. Also, you should make sure that all input and output controls are turned down. This will avoid damage to your speakers and avoid excessive noise.
- 3) Always turn on the mixer before the power amplifier; turn off the mixer after the power amplifier.
- 4) Before connecting and disconnecting the unit from the power source always turn off the unit.
- 5) Do not use solvents to clean your mixer. A dry and clean cloth will be OK.

FEATURES

- Ultra-low noise discrete MIC Preamps with +48V Phantom Power.
- 4 MIC Input Channels with XLRs and balanced Line Inputs and Insert I / O and Compressors control.
- Low Cut for each MIC Input.
- 2 Stereo Input Channels with mono XLRs Input and TRS Jacks; 2 Stereo Input Channels with RCA Jacks and TRS Jacks.
- 3-band EQ and Peak LEDs on each MIC channels. 2-band EQ and Peak LEDs on Stereo channels.
- 1 AUX Sends POST/PRE per channel for monitoring or external effects. 1 DFX Sends POST Fader for internal effects or monitoring.
- Mute and PFL function for each channels, 60mm Fader for level control.
- GR1 / 2 and Main L / R bus assign for each channel.
- 2-Track Input assignable to Main Mix or Control Room / Headphone Outputs.
- Balanced XLR & TRS outputs for Main Mix.
- Built in 24-bit DSP effect with 100 presets.
- Assembled MP3 player.
- Internal switch-mode power supply for maximum flexibility 100-240V.

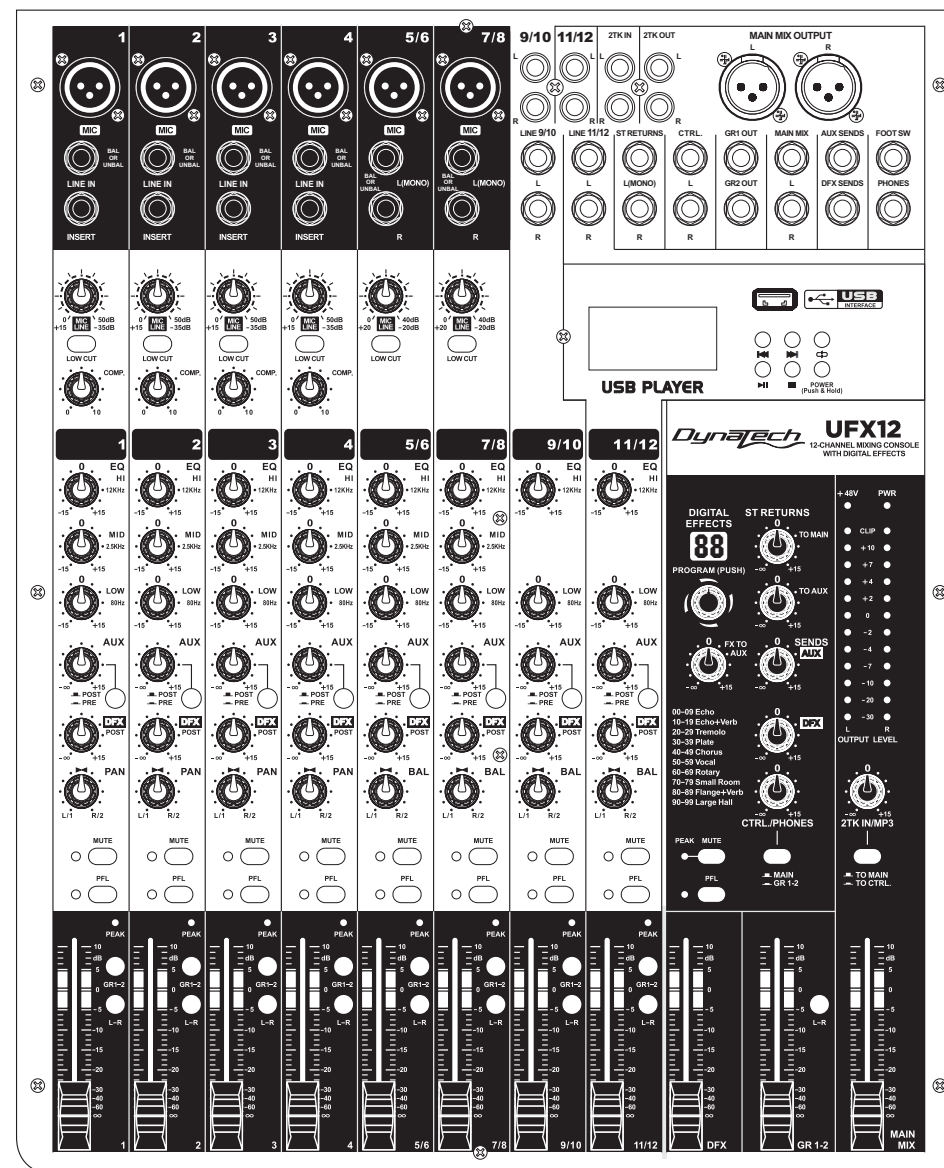
BLOCK DIAGRAM



PRESET LIST

No.	Preset	Description	Parameter
00~09	Echo	Reproduce the sound in input on the output after a lapse of time or delay.	Delay Time : 145~205ms
10~19	Echo+Verb	Echo with Room effect.	Delay Time : 208~650ms Decay time : 1.7~2.1s
20~29	Tremolo	Amplitude modulation of the signal.	Rate : 0.6 Hz~5 Hz
30~39	Plate	Simulate the transducers sound like classic bright vocal plate.	Decay time:0.9s~3.6s
40~49	Chorus	Recreate the illusion of more than one instrument from a single instrument sound.	Rate : 0.92Hz ~1.72Hz
50~59	Vocal	Simulate a small space with slight decay time.	Rev. decay time: 0.8~0.9s Pre-delay: 0~45ms
60~69	Rotary	Simulate the sound effect achieved by rotating horn speakers and a bass cylinder.	Modulation depth : 20%~80%
70~79	Small Room	Simulate a bright studio room.	Decay time : 0.7~2.1s Pre-delay : 20~45ms
80~89	Flanger+Verb	Simulate to play with another person carrying out same the notes on the same instrument and reverb.	Decay time : 1.5~2.9s Rate : 0.8Hz ~2.52Hz
90~99	Large Hall	Simulate a large acoustic space of the sound.	Decay time : 3.6~5.4s Pre-delay : 23~55ms

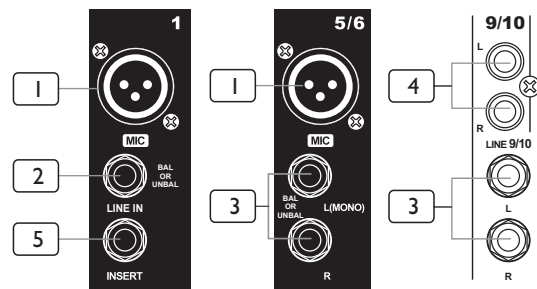
CONTROL ELEMENTS



The following features will be applied to UFX12.

1. MIC INPUT JACKS (CHs 1 to 7/8)

These are balanced XLR-type microphone input jacks



3. LINE INPUT JACKS (CHs 5/6 to 11/12)

These are unbalanced phone-jack stereo line inputs.

4. LINE INPUT JACKS (CH 9/10 to 11/12)

These are unbalanced stereo RCA pin jacks.

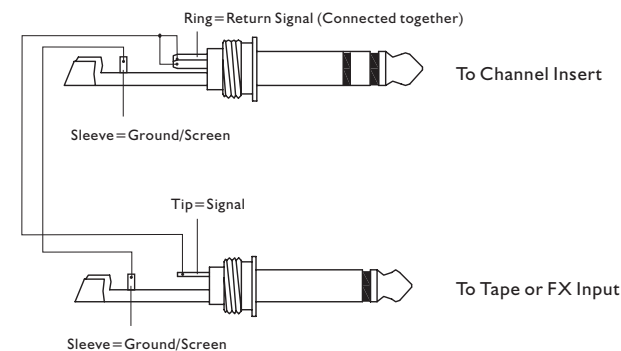
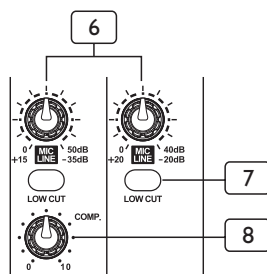
NOTE: Where an input channel provides both a MIC input jack and a LINE input jack, or a LINE input jack and an RCA pin jack, you can use either jack but not both at the same time. Please connect to only one jack on each channel.

5. INSERT JACKS

Each of these jacks provides an insert point between the equalizer and level control of the corresponding input channel. The INSERT jacks can be used to independently connect devices such as graphic equalizers, compressors, or noise filters into the corresponding channels. These are TRS phone jacks that carry both the send and return signal.

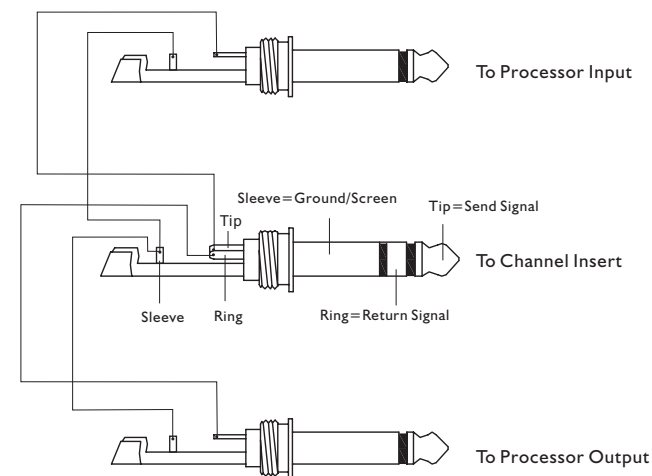
6. GAIN CONTROL

Adjusts the input signal level. To achieve the best balance between S / N and dynamic range, adjust the level so that the peak LED indicator lights occasionally only on the highest input transients. For mono channel the MIC input adjustment range of the Gain is 0 to 50dB and the sensitivity of line input is +15 to -35dB; For stereo channel the MIC adjustment range of the Gain is 0 to 40dB and the sensitivity of line input is +20 to -20dB.



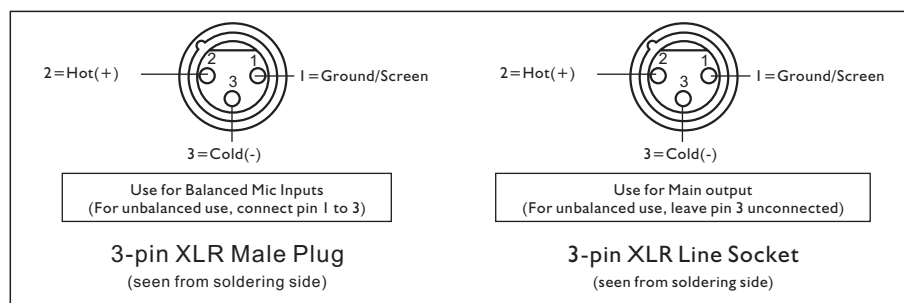
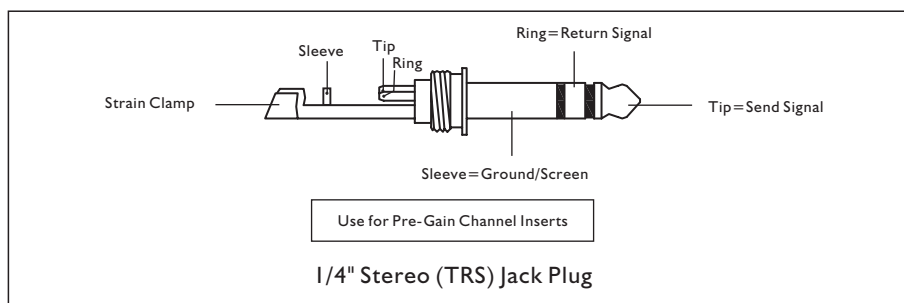
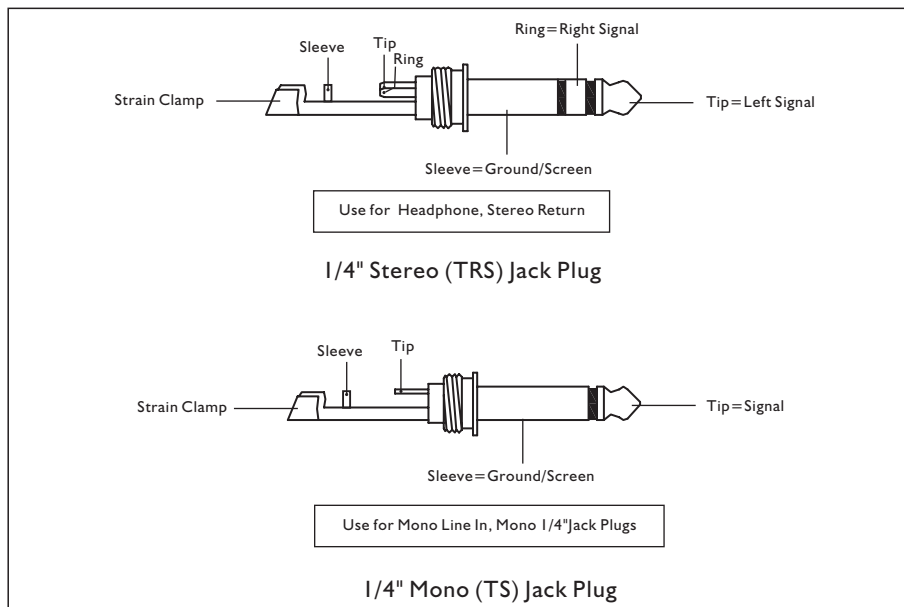
'Tapped' Connection Direct Output Lead

(Enables the Insert to be used as a Direct Output while maintaining the channel signal flow)



Y-Stereo lead for insert Connection

(To be used when the processor does not employ a single jack connection for the In/Out Connections)



7. LOW CUT

By pressing this button you will activate a 75Hz low frequency filter with a slope of 18dB per octave. You can use this facility to reduce the hum noise infected by the mains power supply. Or the stage rumble while using a microphone.

8. COMP CONTROL

Adjust the amount of compression applied to the channel. Turn the knob to the right to increase the compression ration and the output gain will automatically adjusted. The result is smoother, more even dynamics because louder signals are attenuated which the overall level is boosted.

9. EQUALIZER

Hi

This is the treble control. You can use it to get rid of high frequency noises or to boost the sound of cymbals or the high harmonics of the human voice. The gain range goes from -15dB to +15dB with a center frequency of 12kHz.

MID

This is the mid range control. It can affect most fundamental frequencies of all musical instruments and human voice. An attentive use of this control will give you a very wide panorama of sound effects. The range goes from -15dB to +15dB and the center frequency of 2.5kHz.

Low

This is bass control. It is used to boost male voice, kick drum or bass guitar. The gain range goes from -15dB to +15dB with a center frequency of 80Hz.

10. AUX

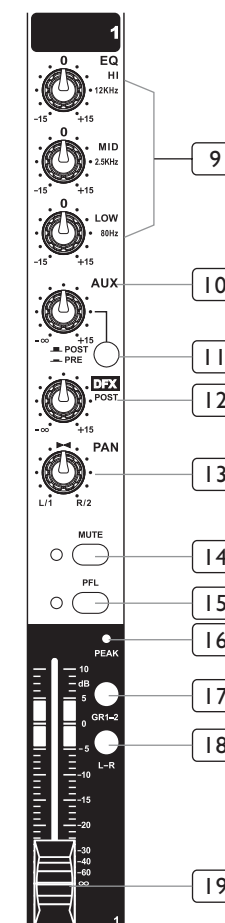
These controls are used to adjust the level of the signal sent to AUX buses, and their adjustable range is from -∞ to +15dB.

11. PRE/POST

Each channel is equipped with the PRE/POST button, pressing this button the signal can be assigned to PRE / POST-FADER.

12. DFX / POST

These controls are used to adjust the level of the POST FADER signal sent to DFX SENDS output, which can be used for monitor application and effects & sound processors input.



13. PAN / BAL CONTROL.

The PAN control determines the stereo positioning of the channel signal on the stereo L and R buses.

The BAL control knob sets the balance between left and right channels. Signal input through the stereo L/R bus.

14. MUTE

Each channel is equipped with the MUTE button, pressing this button is equal to turning the fader down, which can mute the corresponding channel output except for the PRE AUX sends, channel INSERT send and SOLO (in PFL mode), and the MUTE LED will illuminate.

15. PFL

Each channel is equipped with the PFL button, pressing this button which the corresponding AUX send will be routed to CTRL ROOM/PHONES outputs and METER display.

16. PEAK LED

The peak level of the post-EQ signal is detected, and the PEAK indicator lights red when the level reaches 3dB below clipping. For XLR-equipped stereo input channels, both the post-EQ and post-mic-amp peak levels are detected, and the indicator lights red if either of these levels reaches 3 dB below clipping.

17. GRI-2

Each channel is equipped with the GRI -2 button, pressing this button which can send the signal to GRI -2 mix bus.

18. L-R

Each channel is equipped with the L-R button, pressing this button which can send the signal to MAIN MIX bus.

19. LEVEL

This fader will adjust the overall level of this channel and set the amount of signal sent to the main output.

20. MAIN MIX LEVEL

This fader is used to set the amount of signal sent to the main mix output and tape out.

21. GRI-2 LEVEL

This fader is used to set the amount of signal sent to the GRI -2

48. AC INLET WITH FUSE HOLDER

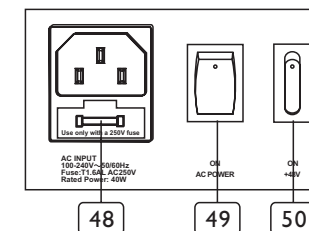
Use it to connect your mixer to the main AC with the supplied AC cord.

49. POWER ON / OFF

This button is used to turn the Main Power on and off.

50. PHANTOM ON / OFF

This switch will apply +48V phantom power only to the 6XLR inputs sockets. When these XLR sockets are connected with devices that do not require phantom power, please make sure the phantom power is turned off. Otherwise, this may damage the device and mixer.



INSTALLATION AND CONNECTION

Ok, you have got to this point and you are now in the position to successfully operate your UFX12 Mixing Console. However, we advise you to read carefully the following section to be the real master of your own mixer. Not paying enough attention to the input signal level, to the routing of the signal and the assignment of the signal will result in unwanted distortion, a corrupted signal or no sound at all. So you should follow these procedures for every single channel:

- Before connecting mics or instruments, make sure that the power of all your systems components including the mixer is turned off. Also, make sure that all input and output controls of your mixer are turned down. This will avoid damage to your speakers and avoid excessive noise.
- Properly connect all external devices such as mics, power amplifiers, speakers, effect processor etc.
- Now, turn on the power of any peripheral devices, then power up the mixer.
Note: the power amplifier or powered monitors shall be turned on after the mixer and turned off before the mixer.
- Set the output level of your mixer or the connected power amplifier at no more than 75%.
- Set the CONTROL ROOM/PHONE level at no more than 50%.
- Position HI, MID and LOW EQ controls on middle position.
- Position panoramic (PAN/BAL) control on center position.
- While speaking into the mic (or playing the instrument), adjust the channel Level control so that the PEAK LED will blink occasionally, in this way you will maintain good headroom and idea dynamic range.
- You can shape the tone of each channel by adjusting the equalizer controls as desired.
- Now repeat the same sequence for all input channels. The main LED could move up into the red section, in this case yo can adjust the overall output level through the MAIN MIX control.

Some Final Tips on Wiring Configuration

You can connect unbalanced equipment to balanced inputs and outputs. Simply follow these schematics.

47. USB PLAYER

The signal for module playback can be assigned to Main Mix by 2TK Routing.

1- USB PORT

For connecting with USB memory.

2- ⏮ PRE

In pause state, press this key, it will go to previous track and keep in pause state. In play state, press this key, it will go to the previous track & start playing.

3- ⏭ NEXT

In pause state, press this key, it will go to next track and keep in pause state. In play state, press this key, it will go to the next track and start playing.

4- ⏮ RPT

Press this key, the player will change between the following four modes:

REP ALL means to repeat all tracks in the memory, mark on the screen is

REP1 means to repeat one track, the mark on the screen is

Play in order means to play the tracks according to the order, the mark on the screen is blank.

Random play means to play the tracks at random, the mark on the screen is A.

5- ⏮ PLAY/PAUSE

In play state, press PLAY/PAUSE key to pause the player. In pause state, press PLAY/PAUSE key to start playing.

6- ■ STOP

In play state, press this key to stop playing and all the songs in USB memory will appear on the display; In stop state, press STOP/⏮ PRE/⏭ NEXT keys again to go to first song and the player will keep in pause state, then press PLAY/PAUSE key to play the song.

7- POWER(Push & Hold)

When the unit is off, press this key and hold for about 2 or 3 seconds to turn on the power supply of player. Repeat the above operation, you can turn off the power supply of the player.

8- DISPLAY:

All MP3 player information are monitored via this sexy & magic display.

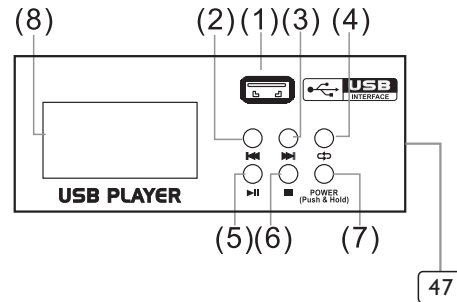
NOTE: basic interface instruction

When the player isn't connected to a USB memory equipment, the interface is as follows:

When the player is searching for USB tracks, the interface is as follows:

When the player is in pause state, the interface is as follows:

When the player is in use, the interface is as follows:



22. DFX LEVEL

This fader is used to set the amount of signal sent to the internal digital effect return to MAIN MIX bus.

23.2-TRACK SIGNAL PATH

If you push down the 2 TRACK SIGNAL PATH knob, the 2 TRACK IN signal will be routed into the CONTROL ROOM output. Then push the knob again, the 2TRACK IN signal will be routed into the MAIN MIX output..

24. 2-TK IN/MP3

This control is used to adjust the volume from $-\infty$ to +10dB.

25. MAIN MIX/GR1-2

If you push down the MAIN MIX/GR1-2 button, the signal from GR1-2 will be routed into the CONTROL ROOM output. Then push the knob again, the signal from MAIN MIX will be routed into the CONTROL ROOM output (Note, once the PFL button was pressed, the signal on CONTROL ROOM will not be affected by pressing the MAIN MIX/GR1-2 button)

26. PHONES/CONTROL ROOM

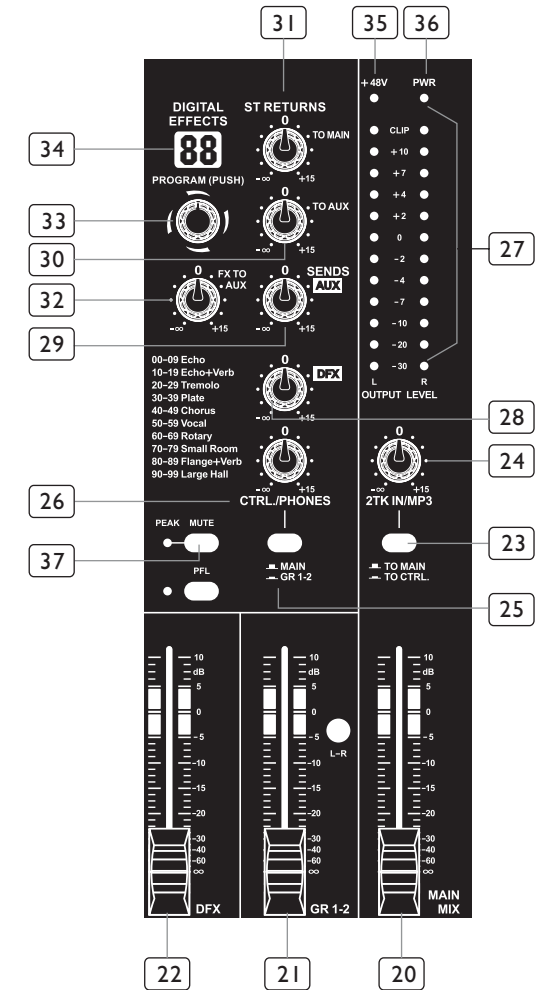
This control is used to adjust the signal present at the Phones / control room output, which can be varied from $-\infty$ to +15 dB.

27. OUTPUT LEVEL

This stereo 12 segments LED meter will indicate the level of overall output signal.

28. DFX

These control is used to determine the internal DSP module levels and DFX sends output, which can be varied from $-\infty$ to +15 dB.



29. AUX SENDS

This control is used to determine the master AUX SEND levels, which can be varied from $-\infty$ to +15 dB.

30. ST RETURNS TO AUX

This control assign the ST RETURN signals to their respective AUX SEND outputs. Which can be varied from $-\infty$ to +15 dB.

31. ST RETURNS TO MAIN

This control assign the ST RETURN signals to their respective MAIN MIX outputs. Which can be varied from $-\infty$ to +15 dB.

32. FX TO AUX

This control is used to assign the signal from FX to AUX SEND output.

33. PROGRAM(PUSH)

Adjust this knob to select the right effect you wish to perform. There are totally 100 options for you: Echo, Vocal, Plate and versatile two-effect combination. When you are satisfied the right preset, please push this knob to store this preset you want.

34. DIGITAL EFFECTS

It displays the selected preset.

35. PHANTOM LED

This LED indicates when the phantom power is switched on.

36. PWR LED

This LED indicates when the power is on in your mixer.

37.DFX/MUTE

Disables the internal effects processor; in this case the red"PEAK" LED will be lit permanently.

38. 2TK IN / OUT

TAPE IN

Use the Tape input if you wish to listen to your Mix from a Taper Recorder or DAT. You can assign the signal coming from the Tape Recorder either to a pair of studio monitor using the control room assignment on the front panel or you can also send the signal directly to the Main Mix.

TAPE OUT

These RCA jacks will route the main mix into a tape recorder.

39. MAIN MIX OUTPUT

The stereo output is supplied both XLR and 1/4" TRS sockets, which are used to send the audio to an amplifier. Through the main mix level control, you can adjust the output level from $-\infty$ to +10dB.

40. ST RETURNS

Use these stereo 1/4" sockets to return the sound of an effect unit to the main mix. You can also use them as extra auxiliary inputs, but they are primarily used to connect the output of external effect processors.

41. CTRL-ROOM

These 1/4" phone sockets will be used to send the signal to studio monitor speakers or to a second set of PA.

42. FOOT SWITCH

This socket is used to connect external foot switch for your convenient operation, it has the same function as DFX MUTE button.

43. AUX SENDS

These 1/4" phone sockets are used to send out the signal from the AUX bus to external devices such as effects.

44. GR1/2 OUT

These 1/4" TRS jack are used to send out the signal from the GR 1 / 2 mix bus to external devices.

45. PHONES

This socket will be used to send out the mix signal to a pair of headphones.

46. DFX SENDS

These 1/4" sockets are used to send the signal from DFX mix buses to external devices .

