Acoustic AUDIO

by Goldwood™

MX502 & MX802

Mixing Consoles

User's Manual

Important!

Before operating or connecting anything to the mixing console, please read the instruction manual carefully for correct operating precautions and wiring procedures.

Connector Panel & Main Section

Send/ Return Effects Path

STEREO AUX RETURN

802 only. The STEREO AUX RETURN connectors are used to bring the output of the external effects device (whose input is derived from the aux sends) back into the console. You can instead use these connectors as additional inputs, but any effects device will then have to be brought back into the console via a normal stereo channel. This does, however, give you the ability to use the channel EQ on the effects return signal if you wish. When using a stereo channel as effects return path, the FX control of the relevant channel should generally be turned fully down to avoid undesirable feedback. If only the left connector is used, the AUX RETURN automatically operates in mono. Use the AUX RETURN control to determine how much of the effects signal is sent to the main mix.

FX SEND

The FX SEND output (802) should be connected to the input of an external effects unit. The post-fader FX signal you created using the input channel FX controls is sent to the effects unit via the FX SEND output.

Monitor & Main Mix

PHONE/ CONTROL ROOM

The stereo PHONES jack is where you connect headphones. The unbalanced CTRL ROOM OUT jacks carry the summed effects and main mix signals, as well as soloed channel signals. The PHONES/ CTRL ROOM control adjusts the level of both headphones and main monitor outputs. The 502 is not equipped with control room outputs.

MAIN MIX

The MAIN OUT connectors are unbalanced mono jacks. The main mix signal appears here at a level of 0 dBu. The MAIN MIX fader adjusts the volume of these outputs. The 802 and 502 mixing consoles feature a rotary control for this purpose.

2 Track Connectors

2 Track INPUT

The 2 Track INPUTS are used to bring an external signal source (CD player/ tape deck) into the console. They can also be used as a standard stereo line input.

Alternatively, the line or tape output of a hi-fi amplifier with source selection switch could also be hooked up here, allowing you to easily listen to additional sources.

2 Track OUTPUT

These connectors are wired in parallel with the MAIN OUT and carry the main mix signal (unbalanced). Connect the 2 Track Output to the inputs of your recording device. The Output level is adjusted via the high precision MAIN MIX fader or rotary control (802).

Signal Assignment

2 Track to MIX

When the 2 Track to Mix switch is depressed, the 2 Track input for tape machines, MIDI Instruments or other signal sources that do not require any processing

2 Track to CTRL ROOM

Press the 2 Track to CTRL ROOM switch if you want to monitor the 2 Track input via the CTRL ROOM OUT. This provides

Introduction

Thank you for your recent purchase of a brand new Acoustic Audio by Goldwood Mixer! Please read the full instruction manual and adhere to all safety precautions before attempting to power on or connect anything to this product. Thank you!

Before You Get Started

Shipment

Your mixing console was carefully packed in the factory to guarantee safe transport. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage, which may have occurred during transit.
Note: If the unit is damaged, please do not return it to Acoustic Audio by Goldwood. Notify the dealer and/or shipping company immediately, otherwise claims for damage or replacement may not be granted.

Initial Operation:

Be sure that there is enough space around the unit for cooling purposes and to avoid over-heating please do not place your mixing console on high temperature devices such as radiators or power amps. The console is connected to the power outlet via the supplied cable.
The console meets the required safety standards. Blown fuses must only be replaced by fuses of the same type and rating.

- Never connect the mixer to the power supply unit when the latter is connected to the mains! First connect the power supply unit to the console, then connect the power supply unit to the mains.

- All units must be properly grounded. For your own safety, you should never remove any ground connectors from electrical devices or power cables, or render them inoperative.

- Please ensure that only qualified people install and operate the mixing console. During installation and operation, the user must have sufficient electrical contact to earth, otherwise electrostatic discharges might affect the operation of the unit.

General Mixing Console Functions

A mixing console fulfills three main functions:
- Signal Processing: Preamplification, level adjustment, mixing of effects, frequency equalization

- Signal Distribution: Summing of signals to the aux sends for effects processing and monitor mix, distribution to one or several recording tracks, power amps, control room and 2 track outputs.

- Mix: Setting the volume level, frequency distribution and positioning of the individual signals in the stereo field, level control of the total mix to match the recording devices/ crossover/ power amplifiers. All other mixer functions can be included in this main function.

Features:

The Microphone channels feature high end mic preamps that are comparable to costly outboard preamps in terms of sound quality and dynamics and boast the following features:

- 130 dB dynamic range for an incredible amount of headroom

- a bandwidth ranging from below 10 Hz to over 200 kHz for crystal-clear reproduction of even the finest nuances

- the extremely low noise and distortion free circuitry guarantees absolutely natural and transparent signal reproduction.

- they are perfectly matched to every conceivable microphone with up to 60 dB gain and +48 v phantom power supply.

- they enable you to use the greatly extended dynamic range of your 24-bus/ 192 kHz HD recorder to the full, thereby maintaining optimal audio quality.

Control Elements & Connectors

This chapter describes the various control elements of your mixing console. All controls, switches and connectors will be discussed in detail.

Mono Channels

Microphone and Line Inputs

MIC

Each mono input channel offers a balanced microphone input via the XLR connector and also features switchable +48V phantom power supply for condenser microphones. The preamps provide undistorted and noise free gain as is typically known only from costly outward preamps.

Note: **Please mute your playback system before you activate the phantom power supply to prevent switch-on thumps being directed to your loudspeakers.**

LINE IN

Each mono input also features a balanced line input on a 1/4” connector. Unbalanced devices (mono jacks) can also be connected to these inputs.

Note: **Please remember that you can only use either the microphone or the line input of a channel at any one time. You can never use both simultaneously.**

GAIN

Use the GAIN control to adjust the input gain. This control should always be turned counter clockwise whenever you disconnect or connect a signal source to one of the inputs.

EQUALIZER

All mono input channels include a 3-band equalizer, except for the 502, which is equipped with a 2-band EQ. All bands provide boost or cut of up to 15 dB. In the central position, the equalizer is inactive.

The circuitry of the EQ’s is based on the technology used in the best known top-of-the-line consoles and providing a warm sound with any unwanted side effects. The result are extremely musical equalizers which, unlike simple equalizers, cause no side effects such as phase shifting or bandwidth limitation, even with extreme gain settings of +/- 15dB.

EQ

The upper (HI) and the lower band (LO) are shelving filters that increase or decrease all frequencies above or below their cut-off frequency. The cut-off frequencies of the upper and lower band are 12kHz and 80Hz respectively. The mid band (802) is configured as a peak filter with a center frequency of 2.5 kHz.

LOW CUT

In addition, the mono channels are equipped with a steep LOW CUT filter designed to eliminate unwanted low frequency signal components.

FX Sends, Panorama and Level Adjustment

FX (802 Only)

FX sends (or AUX sends) enable you to feed signals via a variable control from one or more channels and sum these signals to a bus. The bus appears at the console’s FX send output and can be fed from there to an external effects device. The return from the effects unit is then brought back into the console on the aux return connectors or normal channel inputs. Each FX send is mono and features up to +15 dB gain.

As the name suggests, the FX sends of these console’s are intended to drive effects devices (reverb, delay, etc) and are therefore configured post-fader. This means that the mix between dry signal and effect remains at the level determined by the channel’s aux send, irrespective of the channel fader setting. If this were not the case, the effects signal of the channel would remain audible even when the fader is lowered to zero.

PAN

The PAN control determines the position of the channel signal within the stereo image. The control features a constant power characteristic, which means the signal is always maintained at a constant level, irrespective of position in the stereo panorama.

LEVEL

The LEVEL control determines the level of the channel signal in the main mix.

CLIP

The CLIP LED’s of the mono channels illuminate when the input signal is driven too high, which could cause distortion. If this happens, use the GAIN control to reduce the preamp level until the LED does not light anymore.

Stereo Channels

Stereo Line Inputs

LINE IN

Each stereo channel has two balanced line level inputs on 1/4” jacks for left and right channels. If only the jack marked “L” (left) is used, the channel operates in mono. The stereo channels are designed to handle typical line level signals. Both inputs will also accept unbalanced jacks.

Equalizer Stereo Channels (802)

The 802 features a stereo 3-band EQ in each stereo channel. The filter characteristics and cut-off frequencies are the same as those in the mono channels. A stereo EQ is highly preferable to two mono equalizers. When working on a stereo signal, as two separate EQ’s will usually produce an unwanted discrepancy between the left and right channels.

FX Sends, Balance and Level Adjustment

FX

The FX sends of the stereo channels function similar ti those the mono channels. However, since the FX send buses are both mono, a mono sum is first taken from the stereo input before it is sent to the FX bus. The 502 is not equipped with FX sends.

BAL

The BALANCE control determines the levels of the left and right input signals relative to teach other before both signals are then routed to the main stereo mix bus. If a channel is operated in mono via the left line input, this control has the same function as the PAN control used in the mono channels.

LEVEL

The LEVEL control determines the volume of the channel being sent to the main mix.

Important Safety Instructions:

Terminals marked with this symbol carry electrical currents significant enough to constitute risk of electric shock. Use only high quality commercially available speaker cables with 1/4" TS plugs previously installed. Any other installation of modification should be performed only by qualified personnel.

Whenever this symbol appears, it is to alert you the presence of uninsulated dangerous voltage inside the enclosure.

CAUTION!:

Extreme volumes may damage your hearing and/or headphones or loudspeakers. Turn the MAIN MIX control and PHONES control in the main section fully counter clockwise before you switch on the unit. Always set appropriate volume levels.

CAUTION!:

To reduce the risk of electric shock,do not remove the top cover or the rear sections. No user serviceable parts inside. Refer servicing to qualified personnel.

CAUTION!:

To reduce the risk of fire or electric shock, do not expose this product to rain or moisture. Water should not be splashed on or placed near the product.

CAUTION!:

These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operation instructions. Repairs must be performed by qualified personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings
4. Follow all instructions
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heaters, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not modify the power plug in any way. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade and third grounding prong are provided for your safety. If the included plug does not work, consult an electrician to replace the obsolete outlet.
10. Protect the power plug from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachments or accessories protected by the manufacturer.
12. Only use with cart, stand, tripod, bracket or table specified by the manufacturer. Use caution when moving the apparatus as to not drop it.
13. Unplug this apparatus during lightning storms or when not being used for a long period of time.
14. All servicing when broken should be referred to a service professional.
15. Connect this product to a grounded wall socket.

Do not dispose of this product in the trash. Please bring to your neighborhood recycling center to properly dispose of this product.

an easy way to monitor signals coming back from tape to ensure that they are recording correctly.

Note: If you are recording a signal via the 2 Track Output and wish to listen to this simultaneously via the 2 Track Input, do not use the 2TR to MIX button. Doing this would create a feedback loop, since the signal would be routed, via the main mix, back to tape via the 2 TR Output. To monitor the 2 Track Input, use the 2 TR to CTRL ROOM button to assign the signal to monitor(s) or headphones. This will avoid the signal being routed to the 2 Track Output.

Phantom Power & LED Displays

+48V

The red +48V LED lights up when phantom power is on. The Phantom switch activates the phantom power supply on the XLR connectors of all mono channels.

Power

The blue Power LED indicates that the console is powered on.

Level Indicator

The high precision 4 segment display accurately displays the relevant signal level.

Level Settings

To correctly set the gains of the channels, first set the level controls in the input channels to their center positions (0 dB). Then use the GAIN controls to increase the input amplifications until signal peaks show 0 dB on the level meter.
When recording to digital recorders, the recorder's peak meter should not go into overload. While analog recorders can be overlooked to some extent, creating only a certain amount of distortion (which is common and often desirable), digital recorders distort quickly when overloaded. In addition, digital distortion is not only undesirable, but also renders your recording completely useless.
Note: The peak meters of your mixer display the level virtually independent of frequency. A recording level of 0 dB is recommended for all signal types.

Installation

Mains Connection

AC POWER IN

Connect the power supply to the 3-pin mains connector on the rear of the console. Use the AC adapter supplied to connect the console to the power outlet. The adapter complies with all applicable safety standards.
-Please use only the power supply unit provided with the console.
- Never connect the mixer to the power supply unit while the latter is connected to the mains! First connect the console to the power supply unit, then connect the power supply unit to the power outlet.
- Please note that both the power supply unit and the mixing console heat up considerably during operation. This is completely normal.

Audio Connections

You will need a large number of cables for different application. The illustrations below show how the connectors should be wired. Be sure to use only high grade cables. Please use commercial RCA cables to connect the 2 Track Inputs and Outputs. You can also connect unbalanced devices to the balanced inouts.outputs. To do this, use either mono plugs or stereo plugs with the ring and sleeve bridged.
CAUTION: Never use unbalanced XLR connectors on the MIC input connectors when using the phatom power supply.