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# Introduction

The MicroMixer 18 is an expansion of MIDIMAN's MiniMixer and FineLine concept of "mixing at the source." This new concept offers many advantages over the traditional mixing console such as smaller size, lower cost, greater headroom and less noise.

If you have any questions, comments, or suggestions about the MicroMixer 18 or any MIDIMAN product we invite you to contact us directly at:

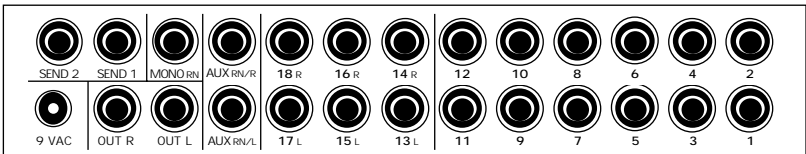
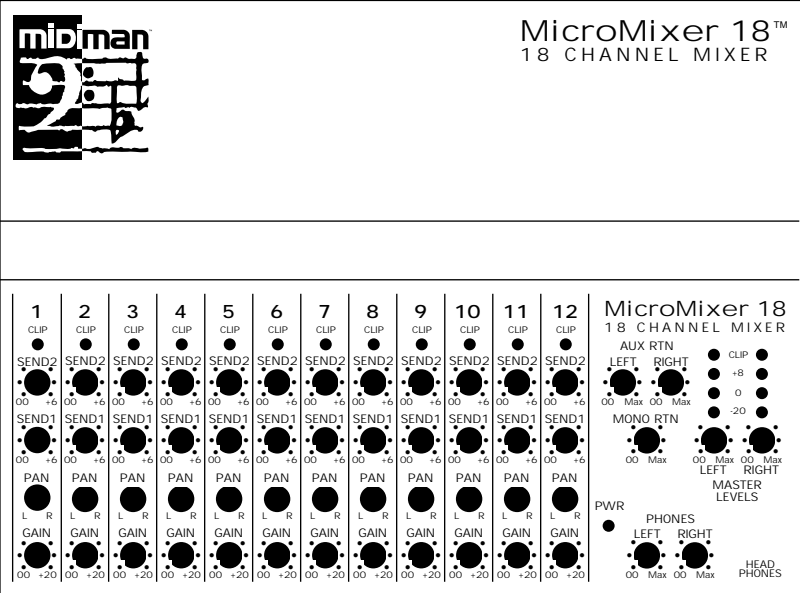
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# Front & Rear Panels - Fig. 1



# Mechanical Assembly

In the small plastic bag in the MicroMixer box, you will find four rubber feet, two threaded knurled knobs, two 1/4" 8/32 machine screws and two 1/2" 4/40 machine screws.

The MicroMixer can be configured as either a tabletop or rack mount mixer. For tabletop use, simply attach the rubber feet to the bottom corners of the unit.

For rack mount use, replace the two outside screws on the very front of the unit with the two 4/40 knurled knobs and use the 1/4" 8/32 screws to attach the unit to a standard rack tray (if you can't find one, contact MIDIMAN). You can then use the knobs to slide the mixer in and out of the rack when you need to change settings. **WARNING!!! USING A LONGER SCREW WILL CRACK THE CIRCUIT BOARD AND VOID YOUR WARRANTY!**

If you are rack mounting the unit and need to lock the MicroMixer securely in place (preventing it from sliding forward) you can use the 4/40 machine screws provided to screw through the back of the rack pan and into the MicroMixer itself.

## Overview

While reading the following description of how the MicroMixer works, it may be helpful to refer to the Front & Rear Panels - Figure 1 on the preceding page, or the Block Diagram - Figure 3 located in the back of this manual.

## Inputs

The MicroMixer has 12 inputs with gain control, pan control, two sends per channel and an LED clipping indicator. These inputs provide up to 20dB of gain. The remaining six channels (numbered 13 through 18) are configured as three unity gain stereo pairs with inputs 14, 16 and 18 going to the

right output and inputs 13, 15 and 17 going to the left output.

## **Sends and Returns**

Both send 1 and send 2 provide up to 6 dB of post-fader gain over Channels 1 to 12.

There are also two returns; one mono return and one stereo pair. Return levels are controlled by the MONO RTN and AUX RTN Left and Right pots. If you are not using the returns, they can be used as additional unity gain inputs.

Turning a send pot all the way down will prevent any of that signal from appearing at the send output, while turning it all the way up will send it to the send output with 6 dB of gain.

## **Headphone Output and Phones Level**

The left and right output signals are also routed to a stereo headphone amplifier which has its own left and right volume pots for convenient monitoring.

## **Master Level and LED Meters**

The Master Level controls provide up to 20 dB of additional gain. Since clipping doesn't occur until approximately +20 dB and the noise floor is at -95 dB, this gives MicroMixer a Signal-to-Noise (S/N) ratio of well over 100 dB. Because of this, you can run the outputs at the +8 on the Master Levels indicators (or slightly above) and still have digital quality signal.

## **Power Indicator**

The MicroMixer runs on 9 to 12 volts AC. Whenever MicroMixer is plugged in, the Power LED should remain lit. If the Power LED goes off, check to make sure your wall supply is properly plugged in.

# Applications and Hints

## Gain Settings

The gain provided from turning up the Left and Right Level pots can help drive a power amplifier or boost a signal from -10 to +4 dB signal levels. For unity gain these pots should be set to about 9 o'clock.

For greatest S/N ratio, Master Levels should be run as close to clipping as possible. When mixing a number of keyboards or modules, the level of the instrument with the lowest output should be set first by adjusting its gain to just below clipping. Gain controls for the other channels can then be adjusted to achieve the desired mix.

Don't be afraid of the yellow Master Level LEDs (+8 dB). For the best results, the yellow LEDs should be lit most of the time.

## Using the Sends and Returns for the Addition of Effects

Inputs 1 through 12 of the MicroMixer each have two effects sends. These sends can be used for several things, the most common of which is to add effects such as reverb or delay to an instrument that has no built-in effects.

The MicroMixer also has two effects returns; Mono and Aux. The auxiliary return enables you to incorporate stereo effects in your mix. The mono return is generally used to add an effect to a single source, e.g. a snare sample. If you need more than one stereo return, use two of the regular channel inputs. This technique also enables you to adjust the placement of the effect in the stereo field by adjusting the pan pots on the channels to which you have routed the effects unit.

For the best S/N ratio, set the send level on the MicroMixer

so that the effects unit is getting the “hottest” possible signal without overloading. Set the effects unit to output wet (processed) signal only and use the MicroMixer’s return level to control the mix of processed and non-processed signal.

When performing live, you can use one of the sends for an on-stage monitor mix.

## **Processing Microphone Signals**

Since the MicroMixer has no balanced inputs and is designed to accommodate line level signals, you will need an impedance matching transformer and some sort of mica pre-amp if you want to plug a Low Z microphone into one of the MicroMixer’s inputs. If you want to record or process guitars we also suggest that you use a pre-amp rather than run direct.

# Setting Up

## Plugging in Line Level Instruments

When first setting up, you should decide which instruments you want to be panable and which should run into the unity gain inputs. We recommend that you refer to the "Typical Set-Up - Fig. 2" diagram.

For the instruments that are connected to inputs 1 through 12, make sure that they are set to their maximum volume, and control the mix level from the channel gain pots. If you see an individual channel's Clipping LED turn on, turn that instrument down slightly. Levels of instruments connected to the unity gain stereo pairs (13 through 18) will have to be controlled from the individual instruments. If you have MIDI volume controllable instruments, much of this level adjustment can be done with your sequencer or MIDI mixing controller.

You will also need to decide how to assign effects and sends. If you are using MicroMixer for live performance, you will probably want to use one of the sends as a monitor mix. If you are using MicroMixer in a studio, you will probably want both sends available for effects.

## Setting Up the Outputs

If you are using the MicroMixer in live performance, you will probably want to connect the Left and Right Outs to the input(s) of a power amplifier and use one of the sends as an on-stage monitor mix. If you are using MicroMixer in a studio application, you will probably plug one output (for mono) or both outputs (for stereo) into one input (for mono) or two inputs (for stereo) on your mixing board.

The output levels of MicroMixer are controlled by the front panel Left and Right Master Level pots. When set to 9 o'clock, MicroMixer has unity gain. This is the best setting for

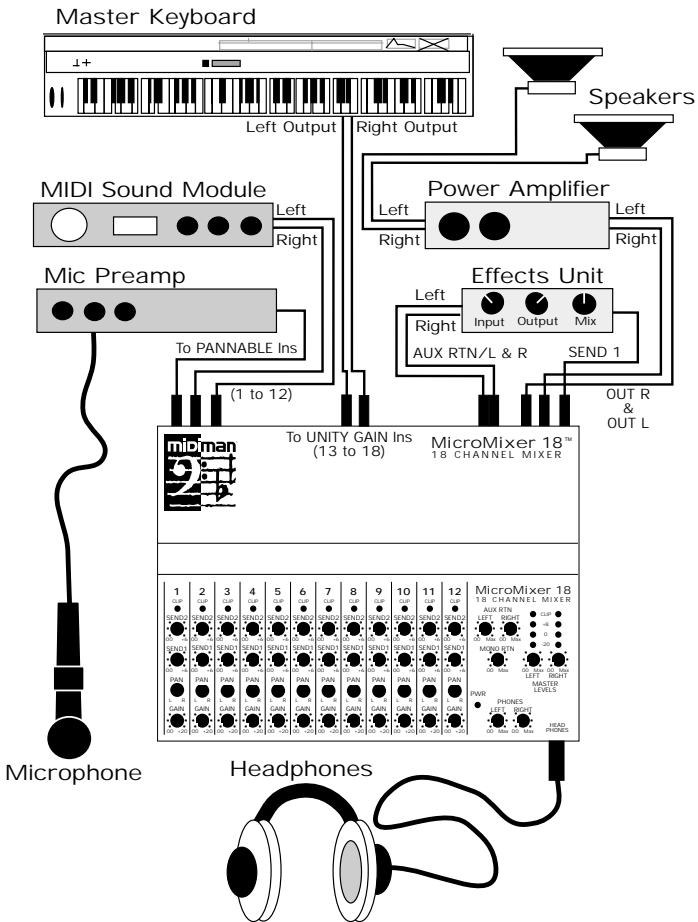


going into a mixing board. If you are going into a power amplifier, these pots will act as convenient volume controls.

## Headphones

A headphone amplifier has been built into the MicroMixer to provide easy monitoring and to allow you to use it quietly at night (without waking your loved ones or the landlord!). The headphone jack accurately reflects the signal coming from the Master Outs. The headphone volume can be adjusted from the front panel Left and Right Phone pots.

Typical Set-Up - Fig. 2



# Typical Applications

## Live Band, Duos and Trios

MicroMixer takes up just one half rack space. Plus with the addition of mic preamp(s), it can mix all instruments along with several microphones and can drive a power amplifier in mono or stereo.

## Home Studios

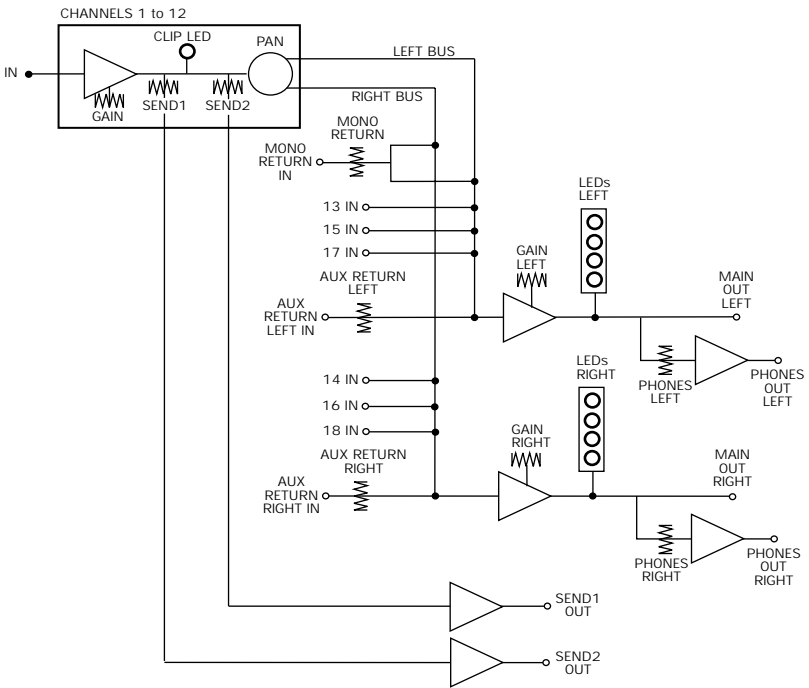
MicroMixer can mix all the modules in a typical electronic instrument set-up, and it provides stereo mixing of acoustic instruments and vocals.

The MicroMixer is ideal if you are using MIDI "virtual tracking" with a multi-track recorder. MIDI is being used more and more to perform mixing "at the source," and the MicroMixer - a noiseless, multiple input mixer - is perfect for this application.

## Submixer for Larger Consoles

When many keyboards and modules need to be mixed and expensive studio console inputs are at a premium, MicroMixer is the answer for combining several of the instruments into a single stereo mix which is then patched into the main mixing board.

# Block Diagram - Fig. 3



# Limited Warranty

MIDIMAN warrants that this product is free of defects in materials and workmanship under normal use so long as the product is owned by the original purchaser and that purchaser has registered his/her ownership of the product by sending in the completed warranty card.

In the event that MIDIMAN receives written notice of defects in materials or workmanship from such an original purchaser, MIDIMAN will either replace the product, repair the product, or refund the purchase price at its option. In the event any repair is required, shipment to and from MIDIMAN and a nominal handling charge shall be born by the purchaser. In the event that repair is required, a Return Authorization number must be obtained from MIDIMAN. After this number is obtained, the unit should be shipped back to MIDIMAN in a protective package with a description of the problem and the Return Authorization clearly written on the package.

In the event that MIDIMAN determines that the product requires repair because of user misuse, it will assess a fair repair or replacement fee. The customer will have the option to pay this fee and have the unit repaired and returned, or not pay this fee and have the unit returned unrepaired.

The remedy for breach of this limited warranty shall not include any other damages. MIDIMAN will not be liable for consequential, special, indirect, or similar damages or claims including loss of profit or any other commercial damage, even if its agents have been advised of the possibility of such damages, and in no event will MIDIMAN's liability for any damages to the purchaser or any other person exceed the price paid for the product, regardless of any form of the claim.

MIDIMAN specifically disclaims all other warranties, expressed or implied. Specifically, MIDIMAN makes no warranty that the product is fit for any particular purpose.

This warranty shall be construed, interpreted, and governed by the laws of the state of California. If any provision of this warranty is found void, invalid or unenforceable, it will not affect the validity of the balance of the warranty, which shall remain valid and enforceable according to its terms. In the event any remedy hereunder is determined to have failed of its essential purpose, all limitations of liability and exclusion of damages set forth herein shall remain in full force and effect.