

Alesis
MICROVERB III

Users Manual

MICROVERB III

Before Unpacking Your Unit...

Introduction

Born from the original Alesis **MICROVERB** and **MICROVERB II**, the units that launched the revolution in low cost professional digital reverberation, the **MICROVERB III** carries on this same tradition of world class performance at a phenomenal price. Using 16 bit linear PCM processing like its predecessors, MICROVERB III has 256 programs. These include 144 reverb programs, 96 delay programs, and 16 special effects programs as well as High and Low Frequency Equalization, **MICROVERB III** delivers awesome power to the recording efforts of every engineer, from 4 track home studios to world class recording facilities. And, of course, **MICROVERB III** is full stereo, full 15KHz bandwidth, and absolutely musical.

As with the original **MICROVERBs**, the **MICROVERB III** utilizes proprietary Alesis R.I.S.C. (Reduced Instruction Set Computer) architecture which provides clean, quiet, professional digital reverberation, delay, and effects with unprecedented ease of use. The entire digital processing system is contained on a single chip, developed by the Alesis design team specifically for the **MICROVERB III**. Using high speed complementary-metal-oxide-semiconductor (CMOS) silicon processing, the **MICROVERB III** chip replaces several circuit cards of components while providing a powerful level of sonic flexibility that will expand and polish the sound of any recording.

The 256 programs in **MICROVERB III** are the distillation of years of exhaustive research by Alesis into the phenomenon of reverberation. With input from the world's top recording engineers and producers, the reverb programs were carefully developed on our interactive room simulation and development system. These programs cover every major category of reverb: plates, chambers, halls, and rooms, each with a wide range of sizes and qualities. Included also are a number of special effect programs such as gated and reverse reverbs, as well as a wide variety of ever-useful delay programs. From small, intimate room settings to large unobstructed spaces to useful gated reverb effects to dramatic special effects, **MICROVERB III** offers them all quickly and easily.

FEATURES

- Extremely easy to set up and use
- True 16 bit linear PCM
- 85 dB dynamic range
- Full 15kHz bandwidth
- Stereo input and output on 1/4" jacks
- Defeat jack on rear panel
- +4 dBV capable
- 256 programs
- 19" rack mountable

CONTROLS

INPUT STATUS INDICATOR

The **INPUT STATUS INDICATOR** is actually a 3 colored LED that shows several input conditions. When the indicator glows yellow, the input signal to the **MICROVERB III** is too low and the **INPUT** level should be increased. When the indicator glows green, the signal presently being fed to the **MICROVERB III** is a usable level. When the indicator glows red, the **MICROVERB III** is being overloaded because the incoming signal is too hot and the **INPUT** control should be decreased.

INPUT CONTROL

The **INPUT** control sets the level of signal that is applied to the **MICROVERB III** and should be set so the **INPUT STATUS INDICATOR** reads in the red only on occasional transients.

MIX CONTROL

The **MIX** control determines the amount of *Wet* signal (reverb) or *dry* signal is sent to the output. If the **MIX** control is set all the way to the right, then only reverb will be heard. If the **MIX** control is set all the way to the left, then only dry (unaffected) signal will be heard. The 12 o'clock position will result in a 50/50 mixture of dry to reverb signal.

OUTPUT CONTROL

The **OUTPUT** control sets the output level of both channels of **MICROVERB III**. This should be set so that the unit being fed by **MICROVERB III** is not overloaded.

LOW EQ CONTROL

The **LOW EQ** control provides ± 10 dB of attenuation at 100 Hz. This is usually used to control excessive boominess sometimes caused by low frequency instruments such as drums. The **LOW EQ** control is located prior to the digital section of the **MicroVerb III** and works on the input signal only.

HIGH EQ CONTROL

The **HIGH EQ** control provides ± 10 dB of attenuation at 4kHz. High EQ is used to help simulate the natural high frequency rolloff of reverb or delay. The **HIGH EQ** control is located prior to the digital section of the **MicroVerb III** and works on the input signal only.

PROGRAM TYPE SWITCH

The **PROGRAM TYPE** switch selects the category of program. These are Gated Reverbs, Plates, Chambers, Large and Medium Halls, Small, Medium and Large Rooms, Reverse Reverbs, Short, Medium and Long Delays, Regenerated Medium and Long Delays, Multitapped Delays, and Special Effects.

PROGRAM VARIATION SWITCH

The **PROGRAM VARIATION** switch selects one of 16 possible program variations for each previously selected program type.

DEFEAT JACK

The **DEFEAT JACK**, located on the rear panel, bypasses the reverb signal and allows only the dry signal at the outputs. Any SPST type footswitch (such as the reverb footswitch that sometimes comes with amplifiers) will work for this function.

INSTALLATION

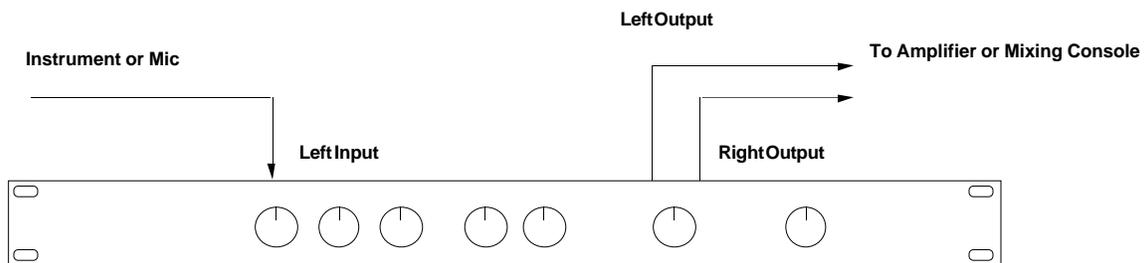
Before unpacking your new **Alesis MICROVERB III** unit, take a moment to look through this instruction manual. We've made it brief and informative and it will answer any questions that you might have. Some helpful setup thoughts are included along with some useful application hints.

CONNECTING TO INSTRUMENTS, MICROPHONES

The **Alesis MICROVERB III** has high impedance inputs that are ideally suited for use either with instrument pickups or line level signals. Although microphones can be connected directly into the **MICROVERB III**, it is recommended that they be connected to a mixing console first and then connected to the **MICROVERB III** as described in Figures 3 or 4 for quietest operation.

The **MICROVERB III** is a stereo unit, meaning there are both left and right inputs and outputs. However, it can be used with just a mono input (into the left input) with the result being a stereo output. This will probably be how the unit will be used the majority of the time. It should be noted that if only the right input of the **MICROVERB III** is used, the input signal will appear as mono (present in both channels) at the dry side of the mix control. **See figure 1**

FIGURE 1
MONO CONNECTION OF MICROVERB III

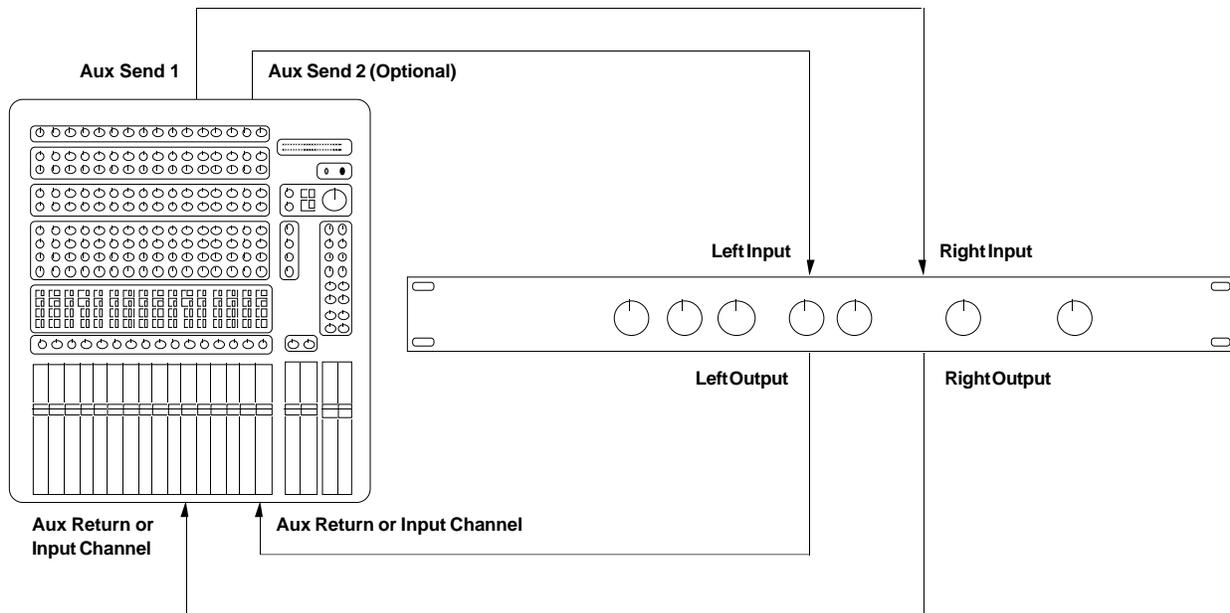


CONNECTING TO A MIXING CONSOLE

The **MICROVERB III** handles mono or stereo sends at all system levels. The input circuitry of the **MICROVERB III** can easily handle +4dBv levels (+20dBv peaks), while having enough input or output gain to interface with the extremely low signal levels of budget recording systems.

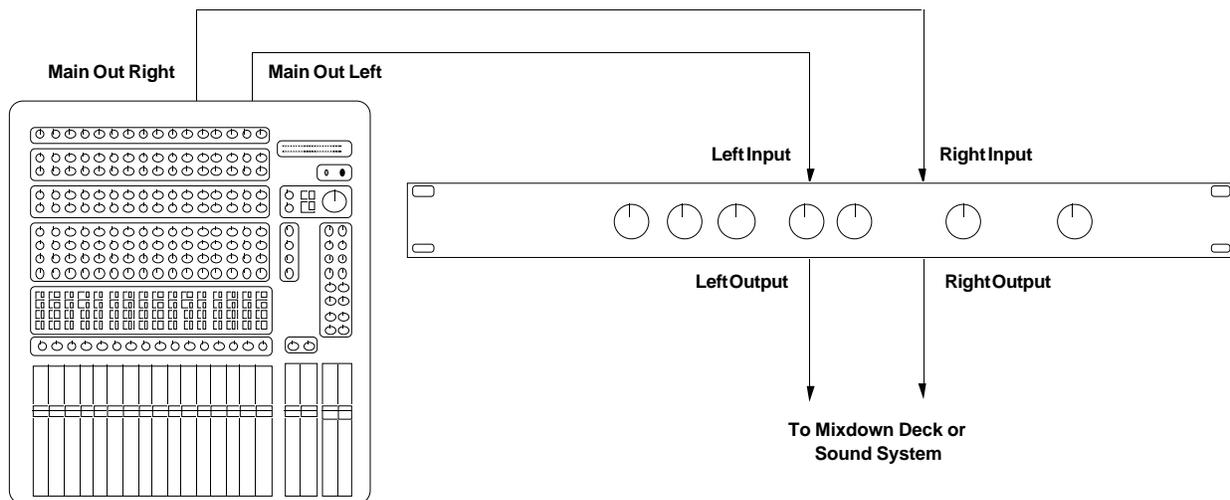
The **MICROVERB III** may be connected to the mixing console in several ways. If several instruments or vocals must be effected at the same time, then the **MICROVERB III** should be connected to the auxiliary send and return controls of the console. Simply connect an aux send of the mixing console to either of the inputs of the **MICROVERB III** (or 2 aux sends connected to both left and right of the **MICROVERB III** for stereo) and then connect the output of the **MICROVERB III** back to either the aux returns or input channels. Remember, in this situation, the mix control should always be set fully to the right (clockwise) for maximum effect. Also, a mono input to **MICROVERB III** results in a stereo output. **See figure 2**

FIGURE 2
STEREO CONNECTION TO MIXING CONSOLE VIA AUX SENDS AND RETURNS



Another way of interfacing the **MICROVERB III** unit to a mixer or recording console would be in-line across the output of your mixing console. See **figure 3**. This method should only be used if you needed to effect the entire mix, since the same effect would be on all of the instruments or vocals.

FIGURE 3
STEREO CONNECTION TO THE MICROVERB III USING THE MAIN OUTPUTS



POWER

The **MICROVERB III** is powered by a remote supply providing 9 volts AC through a 3.5mm barrel plug. This power supply approach keeps stray magnetic fields from interfering with low level signals, allowing easy conversion to alternate power sources (220V).

OPERATION

MICROVERB III is easy to use in almost any application. Simply do the following:

1. Apply a signal to either the right input jack for mono (used with a single instrument), or both left and right jacks for stereo.
2. Increase the **INPUT** control until the **INPUT STATUS INDICATOR** briefly lights red on occasional program peaks. The LED should remain “green” most of the time. This indicates that there is sufficient level to maintain a good signal to noise ratio.
3. Increase the **OUTPUT** control until there is sufficient output level.
4. Adjust the **MIX** control until the desired ratio of dry to wet signal is achieved.

REMEMBER: *In cases where the **MICROVERB III** is used with the aux sends of a recording console, the **MIX** control should remain all the way to the right (all wet signal).*

5. Select the program type desired by switching the **PROGRAM TYPE** selector switch.
6. Select the program variation desired by switching the **PROGRAM VARIATION** switch.
7. Increase or decrease the High and Low EQ as desired.

As a good rule of thumb for selecting programs, rhythmic instruments such as drums or instruments with ostinato (quickly repeating) type patterns usually work best with shorter reverb programs and delays. Long melodic lines and pads generally sound better with longer reverbs. *This is only a place to start, however. Use your ears and select the one that sounds best to you!*

APPLICATIONS

About Reverb...

Reverb can be thought of as a great number of distinct echoes (called reflections) that occur so fast and in such large number that our ear hears them and interprets them as one sound - the distinct sound we know as reverb. Different size spaces give distinctly different sounding reverbs, depending on the size and shape of the space, and the texture of the surfaces that the reflections bounce off of. MICROVERB III has six different general reverb types, all of which simulate a different space or produce a different effect. They are:

ROOMS

The room programs (Small, Medium, and Large) not only simulate rooms of various sizes, but rooms with different surface material as well. A room with soft surfaces such as carpet will produce a reverberant sound with much less high end (warm) than a room with hard surfaces (bright). See your program chart for details about specific programs. Rooms can be used for drums, backing vocals, or just about anything that you wish to give a feeling of space in your mix.

HALLS

Much larger than rooms, halls are characterized by their high ceilings, irregular shapes, and general density of reflections. Due to their size and density, they work well for long, sustaining sounds like keyboard string pads, vocals, horns, etc.

PLATES

The plate programs simulate an artificial reverb device known as a plate reverb. Large and heavy, a plate was a 6 foot by 4 foot piece of steel plate (hence the name) with a small speaker strategically placed on one end and either 1 or 2 transducers placed on the other end to pick up the sounds reverberating through the steel. Because it is an electro-mechanical device, a plate must be isolated from outside vibration and noise and constantly tuned to maintain the integrity of the reverb sound. In the early days of recording, plates were extremely popular because they were one of the only ways to add any sort of artificial ambience to a recording. Plates have become quite popular over the years, especially on vocals and snare drums.

CHAMBERS

The chamber programs simulate another way that studios produce artificial reverberation, utilizing a device known as an acoustic chamber. The chamber is a sealed, tiled room with a speaker at one end and a microphone at the other. Chambers are not seen much these days since they are difficult to build and take up a great deal of expensive real estate. Chambers are useful on all sorts of instruments, from drums to guitars to vocals to horns.

GATES

Gated reverb is a very popular effect on drums first found on English records in the early 1980's. The MICROVERB III's gate programs simulate applying a noise gate (a device that automatically decreases or cuts off the volume once a signal falls below a certain level) across the output of the reverb causing the initial attack of the reverb to sound very big, but the tail of the reverb to be cut off very quickly. This effect works great for modern drums, percussion, and any quickly repeating, transient instrument.

REVERSE

The reverse programs are inverted reverbs in which the volume envelope has been reversed. This means that the signal begins softly but grows louder until it is cut off, rather than loud to soft as in the gate programs. Reverse reverbs are used on many different kinds of instruments as a special effect.

DELAY

The MICROVERB III's variety of digital delay programs can be used on all types of instruments to enhance sound in a variety of ways. Very short delays (20-95ms) can be used to thicken or double vocals or lead instruments. Medium, long, and regenerated delays can be used to enhance an instrument or even create a whole new type of musical sound. Since the delay programs on the MICROVERB III's program chart have been timed out in note values at specific tempos, shown in Beats Per Minute, (for example, 110ms = 1/16 note @ 136 BPM) drums or guitars can be made to repeat in time with the beat of your song. (One example of this is U2's The Edge, who has made rhythmically delayed guitar a trademark sound).

MULTITAP DELAY

Multitap delays can be best defined as a number of single delay lines with independent panning and regeneration designed to work with one another to create a composite, spacious effect. This is ideal for getting "space" into horn stabs or background vocals without the decay tail of a reverb. Other creative examples of multitap delays can be found on Def Leppard's "Hysteria" LP.

SPECIFICATIONS

ELECTRICAL CHARACTERISTICS

| | |
|---------------------|---|
| FREQUENCY RESPONSE | 20Hz - 15KHz (Effect), 20KHz (Direct), ± 2 dB |
| DYNAMIC RANGE | 85dB |
| HARMONIC DISTORTION | .15% @ 1KHz @ 0 dBV |

INPUT

| | |
|--------------------|--|
| NUMBER OF CHANNELS | 2 |
| NOMINAL LEVEL | +4dBV |
| MAXIMUM LEVEL | +20dBV |
| IMPEDANCE | 50K Ω per channel in stereo 25K Ω per channel in mono |

A/D - D/A CONVERSIONS

| | |
|--------------------|-----------------------------------|
| CONVERSION SCHEME | 16 bit Linear PCM |
| PROCESSOR SPEED | 2 Million Instructions per Second |
| PROCESSOR MEMORY | 16K x 16 bit |
| SAMPLING FREQUENCY | 31.25KHz |

OUTPUT

| | |
|--------------------|----------------------------------|
| NUMBER OF CHANNELS | 2 |
| FORMAT | Matrixed Stereo |
| MAXIMUM LEVEL | +14dBV (Effect), +20dBV (Direct) |
| IMPEDANCE | 470 Ω |

FRONT PANEL

| | | |
|------------|---------------------------------|-------------------|
| CONTROLS | Input Level | Program Variation |
| | Mix Level | High EQ |
| | Output Level | Low EQ |
| | Program Selection | |
| INDICATORS | Tri-colored LED Level Indicator | |

REAR PANEL

| | |
|-------|---|
| JACKS | Input Left and Right - 1/4" Output Left and Right - 1/4" Defeat - 1/4" Power - 5.5mm Barrel Jack |
|-------|---|

POWER REQUIREMENTS 9 Volts AC, 5 Volt Amps external Transformer, UL approved and made in USA

DIMENSIONS (W x H x D) 19"x1.75"x4"

WEIGHT 2 lbs. 10 oz.