

MU-TRON III OPERATING INSTRUCTIONS

INTRODUCTION:

Congratulations on your purchase of the Mu-tron III by Musitronics Corporation. The Mu-tron has been designed and manufactured to provide years of dependable service.

While simple to operate once all its functions are understood, the Mu-tron III is capable of producing a number of unique musical effects. Before you can use your Mu-tron as a tool of musical expression, a few minutes will have to be spent in familiarization with the function of its various controls and switches.

CONTROLS:

- | | |
|-----------------------------------|--|
| <u>POWER Switch</u>
Off - On | - Turns unit off and on from batteries or PS-1 |
| <u>DRIVE Switch</u>
Down - Up | - Makes the Mu-tron's automatic filter sweep either up or down in pitch as indicated |
| <u>RANGE Switch</u>
Low - High | - Emphasizes vowel-like sounds in the Low position and the overtones in the High position |
| <u>GAIN</u>
0-10 | - Functions as both a volume control and the sensitivity control for the Mu-tron's effect |
| <u>PEAK</u>
0-10 | - This control determines the strength of the Mu-tron effect--effect becomes stronger as the control is turned clockwise |
| <u>MODE</u>
LP, BP, HP | - Emphasizes low or bass range in LP (Low Pass) position, mid range in BP (Band Pass) position, and treble or high frequency portion of the sound in the HP (High Pass) position |
| <u>FOOT Switch</u> | - Switches the Mu-tron effect in or out as desired |

An additional control over the resulting effect of the Mu-tron is your playing style with regard to strength and sharpness of attack.

SET-UP AND OPERATION:

Make sure the POWER switch is in its OFF position. Either connect the Mu-tron to the PS-1 Battery Eliminator, or remove the battery access door on the bottom of the Mu-tron by turning the fastener $\frac{1}{2}$ turn counter-clockwise and sliding the door away from the unit. Insert two 9 volt batteries in their holders and replace the door.

Connect your instrument to the appropriate jack on the rear of the Mu-tron, and connect the Mu-tron to your amplifier using shielded cables.

Set the controls on your amplifier in a normal manner, and set the Mu-tron as follows:

POWER switch - ON
DRIVE switch - UP
RANGE switch - LOW
MODE switch - BP
PEAK control - 10
GAIN control - See Below

Play a few notes on your instrument in a strong and percussive (with sharp attack) manner while varying the GAIN control on the Mu-tron from 0 through 5. If no effect other than a change in loudness is observed, operate the foot switch, which may be in the position which by-passes the other effects of the device. A setting of the GAIN control should be found which approximates the sound of a conventional "Wah" pedal.

Note that the GAIN control also functions as a sensitivity control for the effect, and that the effect is controlled by the manner in which the instrument is played (stronger playing or sharper attack, more pronounced effect) as well.

Once a satisfactory basic setting for the GAIN control has been found, experiment with the settings of all of the controls and note the various sounds produced. Note that the two basic sounds of the Mu-tron are controlled by the position of the DRIVE switch. The GAIN control may have to be re-set for best results in the DOWN position of this switch.

Note that any time the effects of the Mu-tron are not desired, merely depress the foot switch and the Mu-tron serves as a flat pre-amplifier whose gain can be controlled by the setting of the GAIN control. If desired, higher settings of the GAIN control may be used to produce distortion by overdriving the amplifier.

Through careful experiment, you will discover many useful effects on your own; we are listing a few here to help you get started.

WINDS AND BRASSES: Most instruments in these families are effective with the Mu-tron III. Use a standard mounted pick-up or "bug". Try different Mu-tron settings to get desired effects, but remember that the final sound is controlled by the sharpness of attack.

An octave divider device used between the instrument and the Mu-tron is very effective.

DRUMS: You may mike your drums or use the Barcus-Berry pick-up with the Mu-tron III for startling effects.

GUITAR: For guitar, try the following:

MODE	PEAK	GAIN	RANGE	DRIVE	
HP	10	1-4	LOW	UP	Lead
HP	4-7	3-6	HIGH	DOWN	Lead
BP	9	1-4	LOW	UP	Funky Rhythm
HP	10	10	HIGH	DOWN	Distortion

Exact settings will depend upon the specific instrument used and the effect desired. Try varying your picking strokes from strong to soft and from short to sustained. Use other normal techniques such as bending, etc.

GUITAR BEAT PHENOMENON: Use any desired Mu-tron settings. Play the same note simultaneously on two different strings, and bend one slightly out of tune. The beat produced by the difference in pitch between the two tones will trigger the Mu-tron effect on each beat.

USING THE MU-TRON TOGETHER WITH OTHER DEVICES: A variety of additional effects may be produced by using other sound modifiers in conjunction with your Mu-tron. Experiment to determine whether better results are obtained with the other device connected between the instrument and the Mu-tron or between the Mu-tron and the amplifier, since the effect will not be the same. Devices which produce a sub octave are particularly good, and should be connected between the instrument and the Mu-tron.

USING TWO MU-TRONS:

An outstanding effect is produced by using two Mu-trons and two amplifiers with a stereo instrument. Set one with its DRIVE switch in the UP position and the other with its DRIVE switch in the DOWN position. It will sound as though you are playing two different instruments at the same time.

Many unusual effects can be produced by cascading two Mu-trons (Connect the instrument to the first Mu-tron, connect the AMPLIFIER jack of the first Mu-tron to the INSTRUMENT input of the second Mu-tron and connect the output of the second Mu-tron to your amplifier.) Try one Mu-tron with its DRIVE switch in the UP position and the other with its DRIVE switch in the DOWN position.

IMPORTANT NOTE CONCERNING BATTERIES:

The first indication of battery failure will be a reduction or loss of the "Wah" effect, which may or may not be accompanied by a high frequency oscillation. Always try new batteries before assuming that your Mu-tron is defective, keeping in mind the following:

Due to unequal current drain during operation, the useful life of the battery in the holder with the red lead is considerably shorter than that of the battery in the holder with the black lead.

You should be able to replace only the battery in the holder with the red lead at least two or three times before both batteries require replacement.

Remember, however, that if the Mu-tron is accidentally left with the POWER switch in its ON position, particularly if the DRIVE switch is in the DOWN position, battery life will be short.

We recommend the use of alkaline type batteries in this product, especially in the holder with the red lead.

In order to avoid noisy or intermittent connections between the battery terminals and battery holder contacts, remove weak batteries by lifting straight up from the rear of the battery without any side to side rocking motion which might spread the "+" or female contact of the holder. Should these contacts ever become loose or noisy, close them together slightly with a pliers.

USE WITH MODEL PS-1 BATTERY ELIMINATOR

A 3-pin socket located on the rear of your Mu-tron will accept the output of the MODEL PS-1. When using the PS-1, it is best to remove the batteries from the Mu-tron. Batteries left in the holder will be charged by the PS-1 whenever it is connected to the power line and the Mu-tron. Should the batteries already be fully charged, there is some danger of leakage or even damage to the battery cases taking place.

TECHNICAL SPECIFICATIONS:

GAIN: Variable from 0.1 to 40, when driven from low impedance source.

INPUT IMPEDANCE: 1 Megohm at lowest setting of GAIN control, variable to 3.3K ohms at maximum gain setting.

MINIMUM INPUT SIGNAL FOR FULL MU-TRON EFFECT: 1.5mV from 600 ohm source.

OUTPUT IMPEDANCE: 600 ohms

MAXIMUM UNDISTORTED OUTPUT SIGNAL: 3.6 volts RMS

POWER SUPPLY: \pm 9 Volts from 2 NEDA 1604 batteries or Musitronics Model PS-1 Battery Eliminator.

