Thank you for purchasing the operative field technologies:

SHADOW HILLS MASTERING COMPRESSOR

The following is an overview of its functions and a guide for use.

Developed by Shadow Hills Industries
At The Shadow Hills Austin Research Facility.
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UNDERSTANDING YOUR SHADOW HILLS MASTERING COMPRESSOR

You have been issued our unique technology developed by the engineers at the Shadow Hills Austin Research Facility. This is the most advanced system for decelerating audio transmissions. By balancing temporal and transient proportions, the most ardent program material can be brought into compliance, for the proper use by our field operatives.

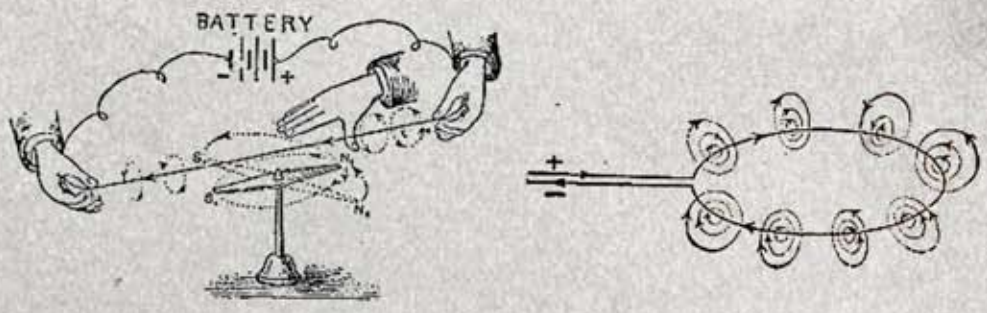
COMPRESSION SECTIONS

OPTICAL SECTION

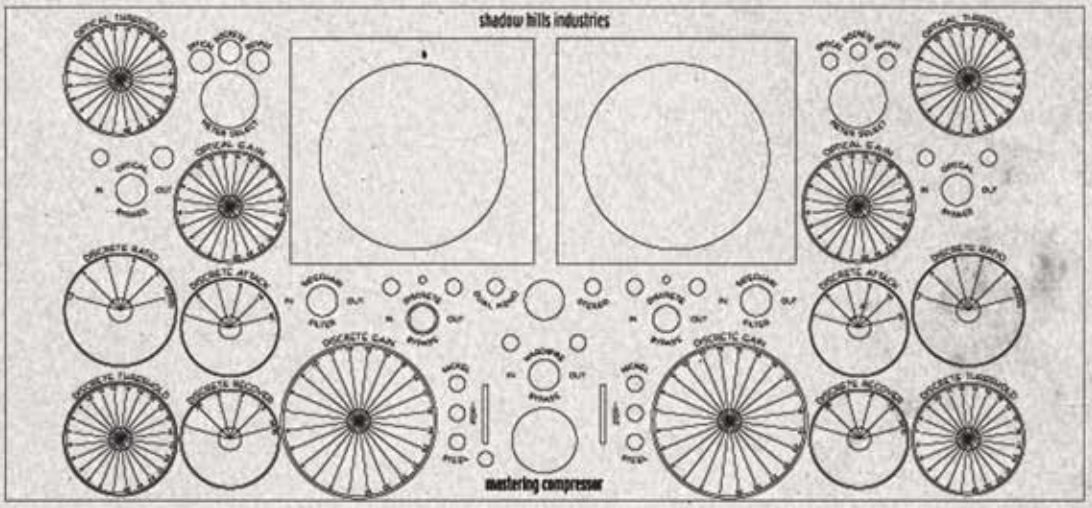
The first section is the Optical Section. This section utilizes our Electroluminescent Optical Attenuator and is the primary program level adjustment applied to the source material being processed. This type of processing is highly effective for reducing input material dynamics by means of a two-stage release time. Eighty percent is recovered quickly, while the last twenty-percent takes over a second, depending on the amount of attenuation applied. The controls for the Electroluminescent Optical Attenuator are Optical Threshold and Optical Gain. These controls are rotary stepped attenuators, custom designed for precision and tactile response. They determine the amount of attenuation and the amount of makeup gain, thus reducing the program material's dynamic range to the desired level and restoring the material to desired amplitude.

DISCRETE SECTION

The second section utilized is the Discrete Section. This section utilizes our discrete Voltage Controlled Amplifier. By the versatility of its features and the precision of its controls, the Discrete Section capably finishes the job that the Optical Section started. In Discrete Mode, similar controls to the optical section are utilized. In this case they are labeled Discrete Threshold and Discrete Gain. Three new controls are added to round out this section. They are: Discrete Ratio, Discrete Attack, and Discrete Recover. Similar to the Optical controls, the Discrete Threshold determines the level of compression, the Discrete Gain, the level of the makeup gain. The Discrete Ratio Switch has six positions that determine the ratio of the compressed signal. The first position, 1.2:1 is the slightest ratio, so at one point two decibels above the compression threshold, one additional decibel above the threshold is produced. Position Two, 2:1. Two decibels above produces one decibel of compressed output. Position Three, 3:1. Three decibels over produces one out. Position Four, 4:1. Four decibels over produces one out. Position Five, 6:1. Six decibels over produces one out. Position Six, Flood. Twenty decibels over produces one decibel of output.



The control labeled Discrete Attack varies how fast or slow the compression engages once the compression threshold had been reached. A slow attack time, a clockwise setting on the stepped control, is useful for retaining signal transients relative to compression. Thus initial attack is realized before the onset of compression. Fast attack times have the effect of equalizing initial transients relative to the level of compression. The Discrete Recover control determines how long it takes the signal to return to the uncompressed level, once the signal falls below the threshold of compression.



SIDECHAIN FILTER

The Sidechain Filter switch engages a filter in the Sidechain of both the Optical and the Discrete sections, whereby no frequency below ninety hertz in the program material triggers the onset of compression.

OUTPUT TRANSFORMER SWITCHING TECHNOLOGY

The Final processing stage of the Shadow Hills Mastering Compressor is our Transformer switching. By means of these controls, it is possible to change the output transformer, with the flick of a switch, thus changing the frequency response and distortion characteristics. The positions are: Nickel, Iron, and Steel.

TOP POSITION- NICKEL

This setting has low distortion characteristics and flat low frequency response. The upper bandwidth has a ten kilohertz boost of one decibel.

MIDDLE POSITION- IRON

This setting is more colored and has a one decibel boost at one hundred hertz.

BOTTOM POSITION- STEEL

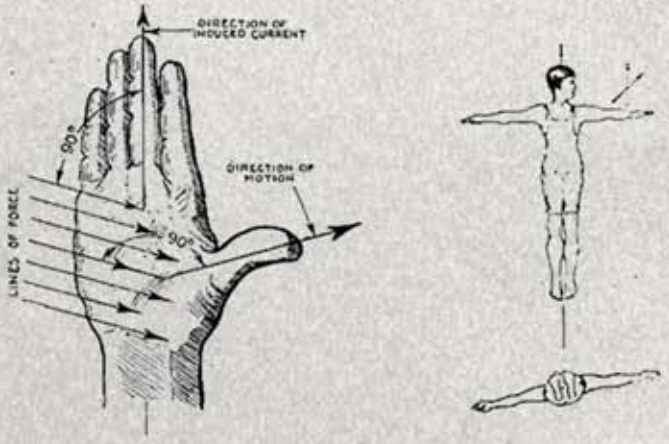
This setting is the most colored and has a one decibel boost at forty hertz, with a tight cue. Different program material will reveal greater differences, depending on how close the fundamentals are to those frequencies.

INDICATION METERING

The Mastering Compressor indicates output level, amount of optical gain reduction, and amount of discrete reduction, by means of two medium sized VU Meters and Magic Eye Indicator Tube. On each channel, the Meter Select Switch determines whether the meters are displaying Optical Gain Reduction, Discrete Gain reduction, or Output Level. The Magic Eye Tube indicates mono level.

STEREO OPERATION

The Shadow Hills Mastering Compressor can operate in Dual Mono or Stereo. While in Dual Mono, each side has independent operation and all of the controls on both sides are active. In Stereo, the left hand controls operate all of the Mastering compressors features. The only exception is the Meter Select Switch, which remains independent on both channels. This facilitates viewing a combination of gain reduction and output, or the two different stages of compression simultaneously while in Stereo.



EVADING ENEMY CAPTURE

Should the probability of it's capture be greater than not, it is the duty of the operative so issued to destroy the SHMC to keep the technologies contained their in, from falling into the wrong hands and thus our advantage forfeited to the enemy. The following instructions are offered for the proper destruction and disposal of the Shadow Hills Mastering Compressor, should it become your duty.

First use a hex key to remove the nine 6/32 screws from the top cover. Inside along the bottom of the unit are the two main audio boards. On each of the audio boards are the Shadow Hills Operational amplifiers. There are six total. These "Op-amps" attach to the audio boards by six pins. Pull each "Op-amp" out vertically. They are friction locked only. No de-soldering is required. Once removed, break off each of the six pins and crush the "Op-amp" circuit board with the heel of your boot. If time permits, incinerate all pieces after crushing, then burry or scatter the inundated remains. Remove both audio boards from chassis. Cut all wires several times, in a random fashion, so that the former lengths can not be determined. The Transformers connected to the audio boards and chassis must be shot through their cores, and the windings unraveled, their lamination separated, bent and scattered some distance away. The audio boards should be crushed under heel. Then folded or ripped, then incinerated according to the previously described method. The 8/32 screws that attach the front panel to the chassis should be removed. The tube and meter glass should be smashed and meter pointers broken off. The panel should bent or folded then placed inside the chassis and either buried at least six feet deep or exploded by a grenade or other means.

Your cooperation is greatly appreciated.
