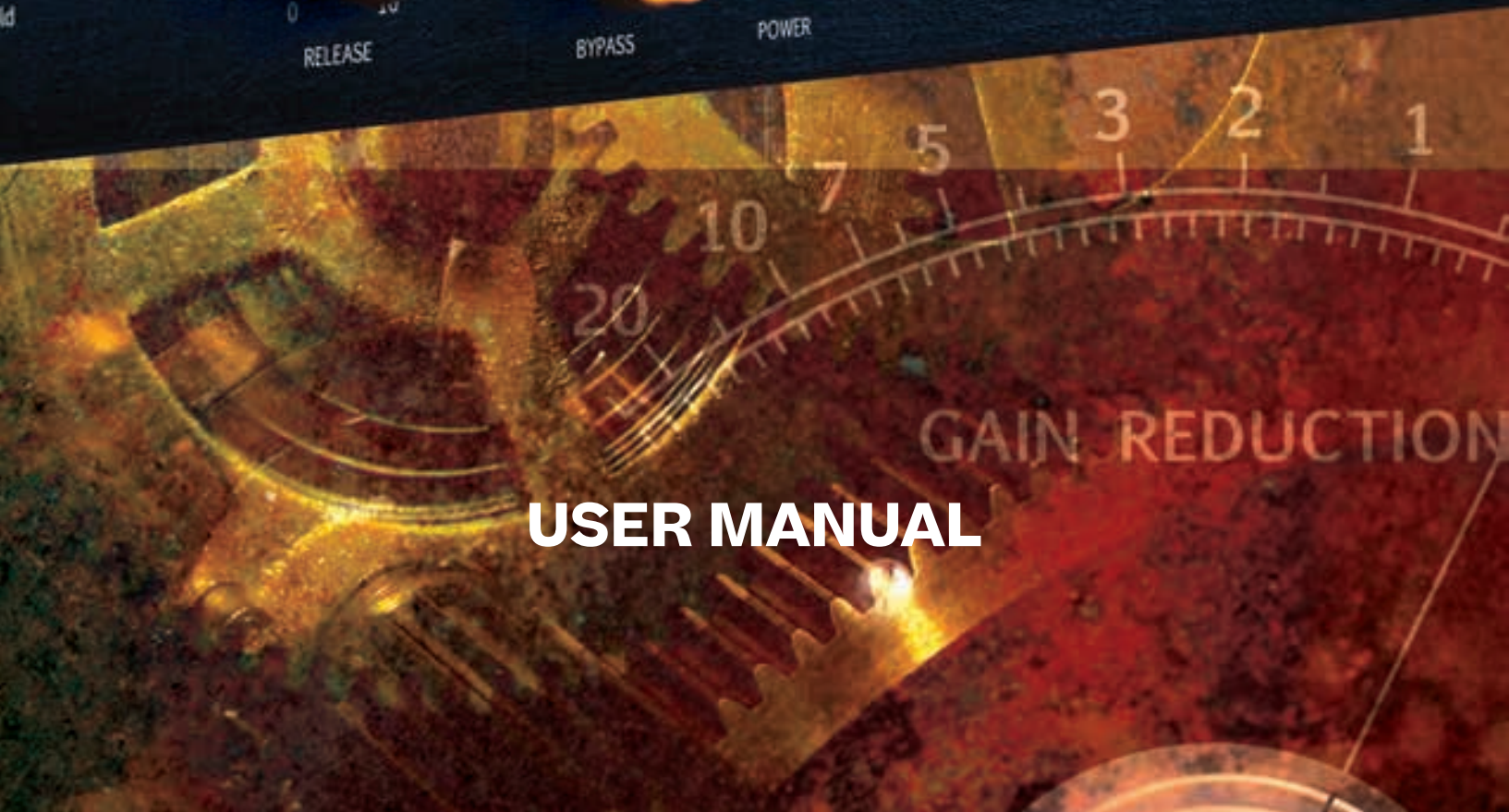
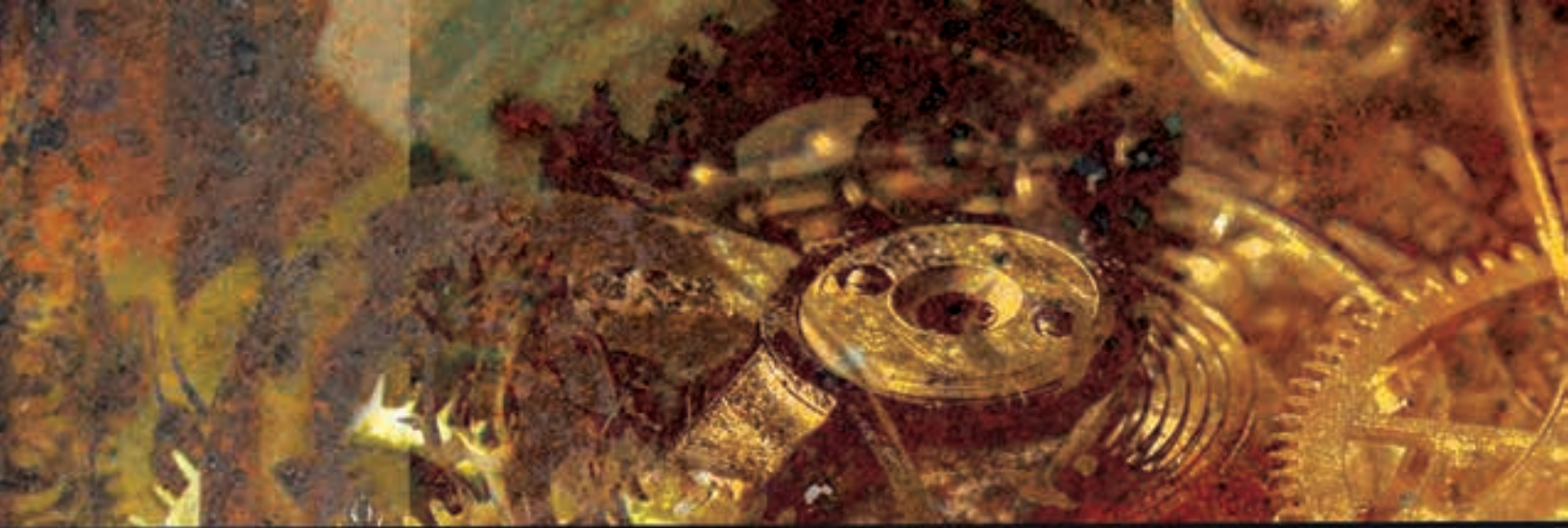




USER MANUAL



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SAFETY PRECAUTIONS AND INSTRUCTIONS FOR USE

READ CAREFULLY BEFORE USING THE DEVICE

- Only use the device in permitted and functional outlets.
- Protect the device and the power plug against humidity, dripping or splash water to avoid the risk of electric shock. For example, do not place any liquids in containers or similar close to the device.
- Never place the device in extremely warm or cold environments and absolutely never in direct sunlight. This could create a fire risk.
The recommended operational temperature is between 15°C and 35°C. Condensation may occur if the device is brought from a cold to a warm environment. In this case, the device should be switched off for several hours.
- Never place the device in an extremely humid or dusty environment. This can create a fire risk or risk of electric shock.
- Do not cover the ventilation slots.
- Please remove the power cord to completely disconnect the device from the power supply. To avoid damaging the cord, pull the plug and not the cord; this could otherwise create a fire risk or risk of electric shock.
- Use only the supplied power cord or an identical to the one provided, with a CE mark and the suitable mark of conformity.
- Do not put heavy objects on the power cord. A damaged power cord can create a fire risk or risk of electric shock.
- Avoid allowing foreign objects or liquids to penetrate the device.
- If the power cord is damaged (if it has cracks, tears, or an exposed wire), ask your supplier for a replacement. Never continue to use a damaged power cord.
- The high voltages inside the device can be dangerous to life and limb. These can remain for some time after the device has been switched off. The device should only be opened by an experienced service technician.
- Any changes made to the device will invalidate the warranty.
- You should switch off the device as soon as possible and unplug the power cord in the event of a thunderstorm. If there is a risk of lightning, you should not touch the power cord until it is disconnected from the outlet as there is a risk of electric shock.
- If you notice anything abnormal – e.g. smoke, a strong smell, or noise – switch the device off immediately and unplug the power cord. Contact your retailer to find out whether a supplier is necessary. Do not continue to use the device.
- If replacing the fuse, use one of the same specifications. If the fuse fails again after replacement, contact your supplier to see if a repair is necessary. Do not continue to use the device.
- Do not clean the unit with solvent-based cleaning agents – just use a damp cloth. Unplug the unit before cleaning and wait until it is completely dry.

- 
- The background of the page is a detailed, artistic illustration of mechanical components. It features several interlocking gears of different sizes, some with a metallic, aged appearance. In the lower right, there is a circular gauge or dial with numerical markings (1, 2, 3, 5, 10, 20) and the text "GAIN REDUCTION" partially visible. The overall color palette is warm, with shades of gold, brown, and red, giving it a vintage or industrial feel.
- If your device is equipped with audio transformers, place it away from other equipment which may generate potentially disruptive magnetic fields. These may cause humming sounds and other noise interference. If this occurs, place the device elsewhere.
 - The packing material is not a toy. Children should not play with plastic bags. There is a risk of suffocation.
 - This product is not intended to be used by individuals (including children) with limited physical, sensory or mental abilities or with limited experience and/or knowledge, unless these people are supervised by a person who will ensure their safety, or they have been properly instructed on how to use the device by such a person.
 - Children should be supervised to ensure that they do not play with the device.
 - Make sure that children do not insert foreign objects into the ventilation slots or holes in the back wall. There is a risk of electric shock.



CONNECTIONS



INPUT L/R, OUTPUT L/R

You can connect the *Schwerkraftmaschine* to any line-level audio device (equalizers, compressors, converters).

Inputs and outputs are transformer-balanced. To avoid ground loops you can disconnect pin 1 of the XLR connectors.

ETHERNET

Connect your *Schwerkraftmaschine* to your local network to control it remotely from your computer. The *Schwerkraftmaschine* is able to communicate across 1 Gbit networks, although 1 Mbit/s is more than sufficient.

MAINS JACK AND FUSE

The device receives electricity through this socket.

Read the safety precautions and instructions for use before connecting the power cord.

Please see the technical data for information on the fuse.



SOFTWARE



There are three ways to control your Schwerkraftmaschine: With the front panel controls, via the Schwerkraftmaschine's internal web server or by using the DAW plug-in.

WEB SERVER

Just open the IP address of your Schwerkraftmaschine in your browser. Javascript must be enabled. Turn the MODE switch to position 12 to display the Schwerkraftmaschine's IP address.

Check included quickstart guide for more details about network connections.

DAW PLUG-IN

Download the latest version from our website

<https://www.tegeler-audio-manufaktur.de/Schwerkraftmaschine>

and follow the setup instructions.

Also make sure to read the FAQ section.

CONTROLS



INPUT

Determines the level of the signal entering the device. Input level together with the THRESHOLD will result in a certain amount of compression.

THRESHOLD

The threshold control sets the signal level at which the compressor starts working. Signal levels above the threshold are being reduced by the compressor. Signal levels under the threshold are not influenced by the compressor.

ATTACK, RELEASE

Sets the speed the compressor responds to signals.

The actual speed also depends on the chosen MODE.

BYPASS

This switch causes a hard-wire bypass function of all signal processed by the Schwerkraftmaschine. The input signal is routed directly to the output.

This is a relay-controlled hard bypass with an auto-bypass function during power failure (failsafe relay).

MODE

The Schwerkraftmaschine can emulate different compression behaviours. Every mode will have its own timing, ratio and side-chain filter settings. Listen to the different modes to get used to its behaviour and choose the one the suits your music.

See the MODE list on the next page for details.

SC LOWCUT

Left to the center, this control acts as a high-pass filter in the side chain. Use it to ensure that, when required, even heavy bass sounds don't lead to pumping.

Right to the center, this control acts as a tilt equalizer. You can make the compressor to react more on the high or low frequency range of the signal.

Watch the video on our website for an audio example.

OUTPUT

Determines the output level of signal leaving the device. Once the amount of compression is set, adjust the output control to achieve the desired output level.

MIX

Mixes the uncompressed signal with the compressed signal. This will actually lower the ratio of the compressor. Use this to reduce the compression effect.

DISPLAY

The meter shows the gain reduction. You can change the meter style in the plugin.

The display also shows the name of the chosen MODE. Switch the MODE switch to the 12 position to show the IP address of the Schwerkraftmaschine.

A red indicator will be shown right to the MODE names if the signal reaches 2 % THD level. But don't worry, this is still below the internal clipping level (clipping means clipping, not gentle overdrive). Make sure to reduce the input and output level so the red indicator will show up only at signal peaks.

A yellow indicator will be shown if the level reaches -6 dB below the red indicator.

MODES

The *Schwerkraftmaschine* can emulate the compression behaviour of many different compressors.

In the *Schwerkraftmaschine*, the signal passes through a total of three transformers and four triodes per channel. That's why the *Schwerkraftmaschine* will always sound like a tube compressor.

Keep in mind: The different modes are there to provide a broad spectrum of compression behaviours, not to put any other compressor out of business.

MULTI-BAND COMPLEX

The side-chain signal is split into several frequency ranges and analyzed. The compressor reacts with different time characteristics to the individual frequency ranges.

With the tilt EQ, you can adjust the weighting to individual frequency ranges.

DIODE PRESSOR

Equipped with hard-knee and soft-knee compression, this MODE is used to limit higher signal peaks. It's ideal for drum loops, but it also helps give rock mixes more shape.

BREAKTHROUGH

This MODE compresses up to a certain threshold, beyond which the signal peaks continue uncompressed.

STEREO TRANSFORMER

The signal to be analyzed is deconstructed into its M- and S-components. The M-part provides compression, the S-part reduces it again. Listen to what this MODE can do for the stereo image of a mix.

VARI TUBE COMPRESSOR

This MODE adjusts the control behavior of the *Schwerkraftmaschine* to mimic its predecessor, the Vari Tube Compressor. Since the analog part of the *Schwerkraftmaschine* corresponds to that of the VTC, you can keep using your previous settings.

VOCAL LEVELER

This control behaves in the same way as the one in the acclaimed VTRC channel-strip. An automatic circuit with different time constants ensures a balanced level, without affecting the micro-dynamics of the signal. This MODE also works nicely on other solo instruments.

OPTICAL COMPRESSOR

This emulates the behavior of a photoconductive cell that is illuminated by a luminescent film. It's exciting to experience the typical memory effect of the photo cell with its program-adaptive behavior. Set ATTACK and RELEASE to 5 to achieve a timing like the classic role models.

DRUM SMASHER

This is where the compressor really makes an impact. Ideal for overhead microphones, when you want the sound very aggressive and compressed.

CLASSICAL VARIMU

Designed like old VariMu compressors, this rather soft and comfortable compression ensures a gentle density in the mix.

CHART ANALYSIS

The model for this MODE was the rather linear and exact compression behavior of modern VCA compressors. With its precise a hard knee compression, it comes closest to the ideal compressor.

This does not affect the musicality, however, as bus compressors installed in large consoles have proven countless times.

DEESSER

With the Deesser you can filter annoying S-sounds from the signal. The SC LOWCUT control is used for frequency selection. From left to right, it covers a range of 500 Hz to 10 kHz.

For a detailed description of each mode visit

<https://www.tegeler-audio-manufaktur.de/Schwerkraftmaschine#modi>

TECHNICAL DATA

Frequency response	20 Hz – 24 kHz
Max. input level	+20 dBu
Impedance line input	$\geq 2.4\text{ k}\Omega$
Output impedance	$< 600\text{ }\Omega$
Max. output level	+24 dBu
Dynamic	$\geq 101\text{ dB}$
Voltage	110 V~/60 HZ or 230 V~/50 HZ
Fuse	2 A slow-blow
Max. power consumption	$< 25\text{ W}$
Dimensions	3 U, H:132 MM, W:483 mm, D:250 MM

ADDITIONAL INFORMATION

In order to always ensure the highest audio quality, devices manufactured the Tegeler Audio Manufaktur are always adapted to match the current state of the art. Changes in design, circuits, and controls are made without prior notice. For this reason, it is possible that the specifications and appearance of the device may differ slightly from those described in this document.

All brands, trademarks and registered trademarks mentioned in this document are the property of their respective owners and are used exclusively for information purposes, even when used without express identification as a registered trademark. All information is intended for personal use – commercial use of descriptions, graphics, photos, or the structure is not permitted. The published texts are protected by copyright.

CONFORMITY

CE DECLARATION OF CONFORMITY

We, Tegeler Audio Manufaktur GmbH, of Weststr. 1, 13405 Berlin, Germany, under the management of CEO Michael Krusch, certify and declare under our sole responsibility that the following product

Description: Audio Compressor
Manufacturer: Tegeler Audio Manufaktur
Model: Schwerkraftmaschine

conforms with the essential requirements of the following directives and standards:

- 2006/95/EEC Low Voltage
- 2004/108/EEC Electromagnetic Compatibility
- DIN EN 60065 Safety of audio equipment
- DIN EN 55103-1/2 Electromagnetic compatibility of audio equipment

This declaration is deemed invalid in the event the device is altered without our prior written agreement.



Berlin, 01.11.2016 Michael Krusch, CEO

This product was manufactured in conformity with 2011/65/EU.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1. This device may not cause harmful interference and 2. this device must accept any interference received, including interference that may cause undesired operation.

CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS

This apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.



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