BEFORE PROCEEDING WITH COMPLETE UNPACKING AND SETUP
CONSULT UNPACKING AND INSPECTION INSTRUCTIONS ON PAGE

comp.two

tube compressor



rockruepel

MasteringWorks GmbH

Raderbergerstr.175 50968 Köln GERMANY
Tel +49 2236 393731 Fax +49 2236393732

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2 – Safety Review

WARNING: High Voltage – Risk of electric shock

Do not open chassis.
Ensure that the correct voltage (115V/230V) is selected before connecting the *comp.two* to the main power supply.
If the device is damaged or does not work as expected, refer to qualified service staff only.
Never use damaged power chords.
Replace fuse with the same type and value : T 1 A (115V); T 500 mA (230V)
Ensure that the *comp.two* is connected via a grounded connection.
Keep away from moisture and other liquids.
Do not use the *comp.two* close to water or in wet surroundings.

CAUTION: Temperature – Chassis may become hot during operation

Do not install any heat sources (for instance radiators or stoves) close to the device.
Avoid direct solar irradiation.
Do not block the circulation vents. Warm air must exhaust.
Leave enough free rack-spaces around the compressor to avoid overheating.
Do not install power amps near the device.

WARNING: Incorrect installation – Connection may cause damage

Do not connect power amp-outputs to the *comp.two*.
Install the device only on flat surfaces or mount it properly into an adequate rack.

WARNING: Condensed water (liquid) may cause damage

Condensation inside the device may occur, when you move the device from a cold place to a warm room. To avoid damaging the *comp.two*, always wait until the device has reached room temperature before switching it on.

WARNING: High sound volume may harm the sense of hearing

This device produces a maximum amplification of 32 dB. Set input and output controls on zero position before monitoring the sound via headphones or loudspeakers.
Gradually increase the volume levels for input and output.

HINT: Delayed operation

The *comp.two* uses vacuum tubes, therefore the device will be on standby for several seconds after switching it on.

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3 - Preface

Congratulations on your *rockruepel comp.two*!

You now own a versatile vari-µ-compressor. The *comp.two* is designed for mastering, mixing and recording and offers a pristine and highly transparent sound due to its exclusive audiophile approach.

After years of development and searching for optimal sound and design, I have developed the *comp.two* resulting in one of the best sounding modern vari-µ-compressor. This stereo/dual-mono-compressor is optimized for daily professional use. The *rockruepel comp. two* would not be what it is today, without feedback and advice from colleagues and friends.

The function of the *comp.two* is based upon the optimized vari-µ-design and never compromising on high-end components and a minimalistic approach. The deciding factor in design were always my ears.

The *comp.two* is built on fully-balanced tube-circuitry. The main audio path consists of SOWTER input- and output transformers (SOWTER), two high-end coupling capacitors, input- and output-tubes (NOS 6N3 and 6CG7).
The „true“ dual mono-design has separate power supplies for every channel. The potentiometers are encapsulated, quality products from ALPS. Every rotary control comes from the Swiss premium manufacturer ELMA. The Hoyt-VU-meters can be calibrated with a trim-pot hidden behind small holes in the rugged front plate. All switches use relays or directly determine control voltage. The two bypass-switches separate circuitry, so that only input directly connects with the output (true bypass). An IC is used to regulate the VU-Meter. Apart from that circuitry, the *comp.two* consist of discrete components and is hand wired in Germany.

The Best – that's it!

- **audiophile, full-balanced circuitry design**
- **aluminum chassis with rugged front plate (6 mm)**
- **SOWTER-transformers**
- **ALPS-potentiometers**
- **ELMA-rotary controls**
- **Hoyt-VU-meter**
- **output-tube: 6CG7**
- **input-tube: NOS 6N3**
- **high-end coupling capacitors**
- **amp-only-mode**
- **true hard bypass**
- **true dual mono with separate power supply**
- **side chain-control (54, 74, 110 Hz)**
- **THD+N: -68 dB**
- **attack-time: 600 µs - 70 ms**
- **release-time: 0,2 ms - 4 s**

In addition to the essential controls such as input, output, threshold, attack and release, the *comp.two* provides a side chain with an integrated three-stage filter. (Flat, 50, 74 and 110 Hz). This filter takes out high-energy bass frequency that could otherwise affect the compressor's behavior. The special "amp-only" -mode uses only the in- and output-stages and not the compression.

Some may say: "Tube-compressors sound good but they are too slow. I prefer VCA-compressors because of their speed". The *comp.two* accomplishes both, with an attack up to 600 µs it is extremely fast but it also has a soft and really musical knee compression for your sound processing.

Thanks for buying the *rockruepel comp.two*.
Oliver Gregor

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4 – Included in box

- rockruepel *comp.two*
- IEC power plug
- owner's manual

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5 - Content

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6 – About this manual

Of course it is recommended to read this owner's manual from scratch to finish, to experience what is possible and important with your new gadget. If you are searching for some special information you will find hints about „handling & controls" on page 6 and some notes about the circuit points, "Input and outputs" on page 8. Perhaps you are only interested in the technical specs on page 10 or the attack- and release-time table also on page 10. Surely you will get some useful information, a quick overview and you will avoid operating errors and other trouble with the *rockruepel comp.two* if you take the time, reading these few pages.

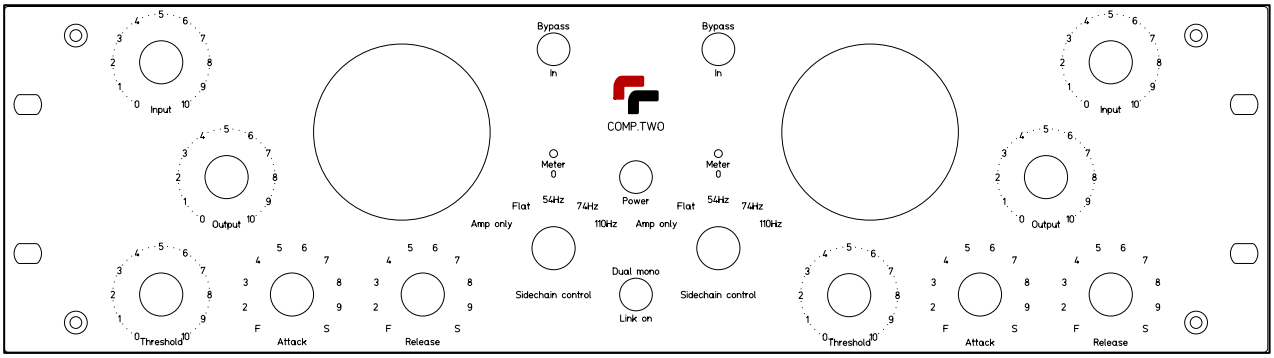
If you are an experienced engineer or compressor-specialist and tired of reading the next boring owner's manual, try the fast way. The „ruepel"-boxes in every chapter deliver the most important information, special features or parameters in compact buzz phrases. So you get an ultra-fast overview and can start working with your *comp.two* within a few minutes after checking the facts.

The fast way

- **„*ruepel*-boxes" for ultra-fast overview**
- **„Handling & controls" (page 6)**
- **„In and outputs" (page 8)**
- **„Tech specs (page 10)**

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7 – Handling & controls



1. **Input**:
   The input stage offers amplification between non stepped values of 0 (-∞ dB) and 10 (+16 dB). The more input gain you choose, the more harmonic distortion is added to the signal. From this point the tube stage provides numerous nuances from a pure clean to distorted and saturated sound.

2. **Output**:
   Every compression process causes a loss of volume. The output-stage helps to compensate the gain reduction with 32 dB of gain reserve. Further more the interaction of input and output stage augments the possibilities of varying the sound depending on whether how much the input or output tube is driven to saturation or even distortion (input stage).
   In amp-only-mode the compressor-section is skipped completely but the signal still passes through the whole rest of the circuitry. Now you can design your sound by using the input and output controls. The spectrum of coloration without compressing the signal ranges from-natural clean to aggressive distorted.

3. **Threshold**:
   If the input level exceeds the adjusted threshold, the compression process will start immediately. The threshold control offers non stepped values between 0 and 10.

4. **Attack:**
   The rotary control determines in ten steps the attack-time of the compressor section. Position 1 is marked with the character ‚F' for *fast* transient response, position 10 uses the character ‚S' for *slow* operation. The steps in between offer values as results of practical knowledge and hearing.

5. **Release:**
   Rotary switch and fragmentation in ten steps are identical to the attack control. The values are just as practical defined and range between ‚F'(ast) and ‚S'(low).

6. **Sidechain Control/Amp Only**
   At first the side chain control defines the entry frequency of a high pass filter, which affects the control signal only. Thus high-energy bass frequencies are excluded from the side chain signal and do not affect the compressors operation. There are three frequencies: 54, 74 and 110 Hz and the flat-position, which switches the filter off.

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The additional amp only-mode, as mentioned, excludes the whole type of control. Though the signal passes still through the audio path (transformer, tubes, capacitors) but skips the compressor section.

7. **Meter 0:**
   The Hoyt-VU-meters are furnished with trim pots, reachable through small holes in the front plate. Use a suitable screwdriver to set the zero point for calibration.

8. **Bypass:**
   The *comp.two* has one "real bypass" switch per channel. If activated, the complete circuitry including tubes, transformers and capacitors are excluded and the input is directly connected to the output. In bypass-mode you hear the unprocessed original signal as optimal basis for A/B-comparison.

9. **Dual Mono/Link On:**
   Using the *comp.two* for mastering, on subgroups or stereo-sums, the link-on-mode is helpful. In case of activating this mode the channel with higher level determines the compression for both channels. For perfect tonal balance it is important that threshold- attack- and release-values are identical. To adjust volume differences between the channels, use input and output controls.
   The dual mono-mode offers two precise separated channels with particular power supply ("real" dual mono). Thus the *comp.two* has the ability to process two mono-signal separately.

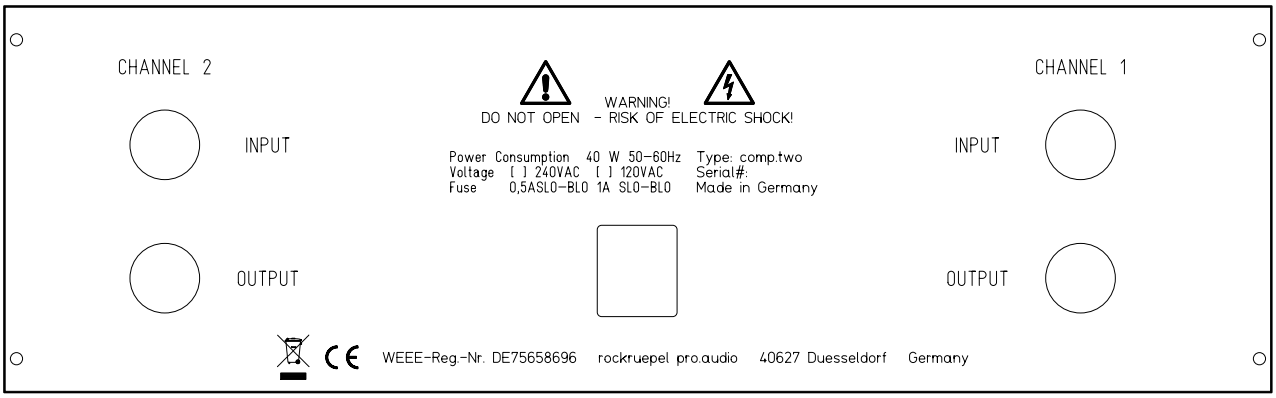
10. **VU-Meter**
    The backlit VU-meters from measuring instrument specialist Hoyt displays the gain reduction. The logarithmic scale between 0 and -20 dB is suited to get realistic information about the control process. 1-dB-steps are marked up to a gain reduction of 4 dB. This critical range captures midway of the whole scale thus the gain reduction is displayed in depth (zoom-in-effect).

ultra fast, musical and precise

- Side chain-filter (54, 74, 110 Hertz)
- 32 dB of amplification without compression
- high-speed-control-process (0,6 ms), Release (200,ms)
- hardwire-bypass
- "real" dual mono with separate power supply
- link-on-mode (channel with higher level dictates compressions process)
- for perfect channel balance, threshold-, attack- and release-values have to be equal
- trim pots for calibration the VU-meters
- logarithmic scale with zoom-in-effect up to 4 dB

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9 – In and Outputs (connections)



2. **Output 1 & 2:**
   The line level-outputs are transformer-balanced (SOWTER). Remember, that the *comp.two* has an amplification reserve of +32 dB to avoid overloading for connected devices.

3. **Main plug and fuse :**
   The *comp.two* uses a standard mains plug (included) for power supply. In case of blown fuse, replace it through identical components. Pay attention for correct specifications. Open the fuse compartment by using a small screwdriver and replace the fuse carefully.

   @ 115V: time lag/slow-blow, 1 A
   @ 230V: time lag/slow-blow, 500 mA

exquisite connection

- **high-end SOWTER-transformers for in- and outputs**
- **professional XLR-connectors with locking mechanism**

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10 - Tech Specs

Frequency Response			
40Hz – 15 kHz			± 0,70 dB
20Hz – 20 kHz			± 1,25 dB
Amplification			32dB
Max Output Level (40Hz k_{ges} -40dB)			+24dBu
Supply Voltage			115/230V AC
Power Consumption			40W
Dimensions B/H/T	483 mm (19“)	132,5 mm (3HE)	295mm
Weight			8,7 kg

Input Data:

Input	balanced, floating
Impedance over frequency range	≧ 19kOhm
Common-Mode Rejection Ration (CMMR) @ 15kHz	≧ 40dB

Output Data:

Output	balanced, floating
Impedance over frequency range	≧ 600Ohm
Common-Mode Rejection Ration (CMMR) @ 15kHz	≧ 35dB

THD k_{ges} (+4 dBu):

40Hz	**1kHz**	**6,3 kHz**
-43dB	-68dB	-69dB

Signal-to-noise ratio

(working level: + 4dBu, input and output conrol: 5)

p_{Ger} ≧ -82 dBqs (CCIR 486)

p_{Fr} ≧ -86 dBq (Bandwidth 10Hz – 30 kHz)

Position	**Attack** (Release 5)	**Release** (Attack 5)
F	3,5 mS	200 mS
2	4 mS	220 mS
3	5,5 mS	240 mS
4	8 mS	300 mS
5	11,5 mS	400 mS
6	17 mS	600 mS
7	25 mS	850 mS
8	30 mS	1,4 S
9	55 mS	2,5 S
S	70 mS	4 S

*** Fastest Attacktime 600 uS (Attack F Release F)***

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11 - Warranty

2 year warranty for registered units:

http://www.masteringworks.de/en/contact.html

Service and contact information

MasteringWorks GmbH
Raderbergerstr.175
50968 Köln
Germany

Email : info @masteringworks.com

Telefon : + 49 2236 393731

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