

# 517

## 500 Series Mic Preamp, DI and Compressor



# Operations Manual

# Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases or beer glasses, shall be placed on the apparatus.
16. Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
17. This apparatus has been designed with Class-I construction and must be connected to a mains socket outlet with a protective earthing connection (the third grounding prong).
18. This apparatus has been equipped with a rocker-style AC mains power switch. This switch is located on the rear panel and should remain readily accessible to the user.
19. The MAINS plug or an appliance coupler is used as the disconnect device, so the disconnect device shall remain readily operable.



	<b>CAUTION AVIS</b>	
RISK OF ELECTRIC SHOCK. DO NOT OPEN. RISQUE DE CHOC ELECTRIQUE. NE PAS OUVRIR		
<small>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL</small>		
<small>ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE.</small>		
<small>AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE</small>		

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.

*Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.*

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

*Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.*

This symbol indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

**20. NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Changes or modifications to this device not expressly approved by Rupert Neve Designs LLC, could void the user's authority to operate the equipment under FCC rules.

**21.** This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

**ATTENTION** — *Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.*

**22.** Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart. According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration, per day in hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Typical music via head phones
1.5	102	
1	105	Siren at 10 m distance
0.5	110	
0.25 or less	115	Loudest parts at a rock concert

**WARNING** — To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

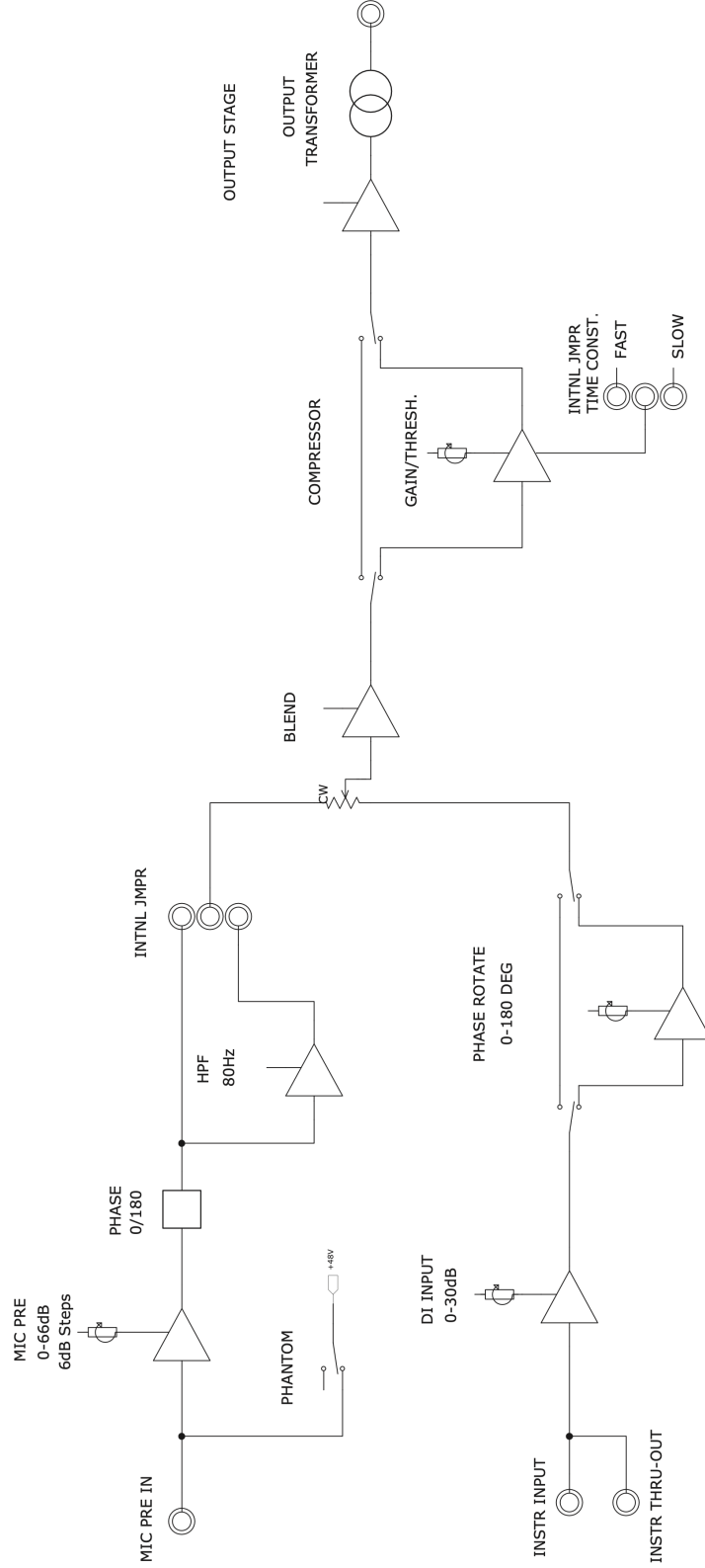
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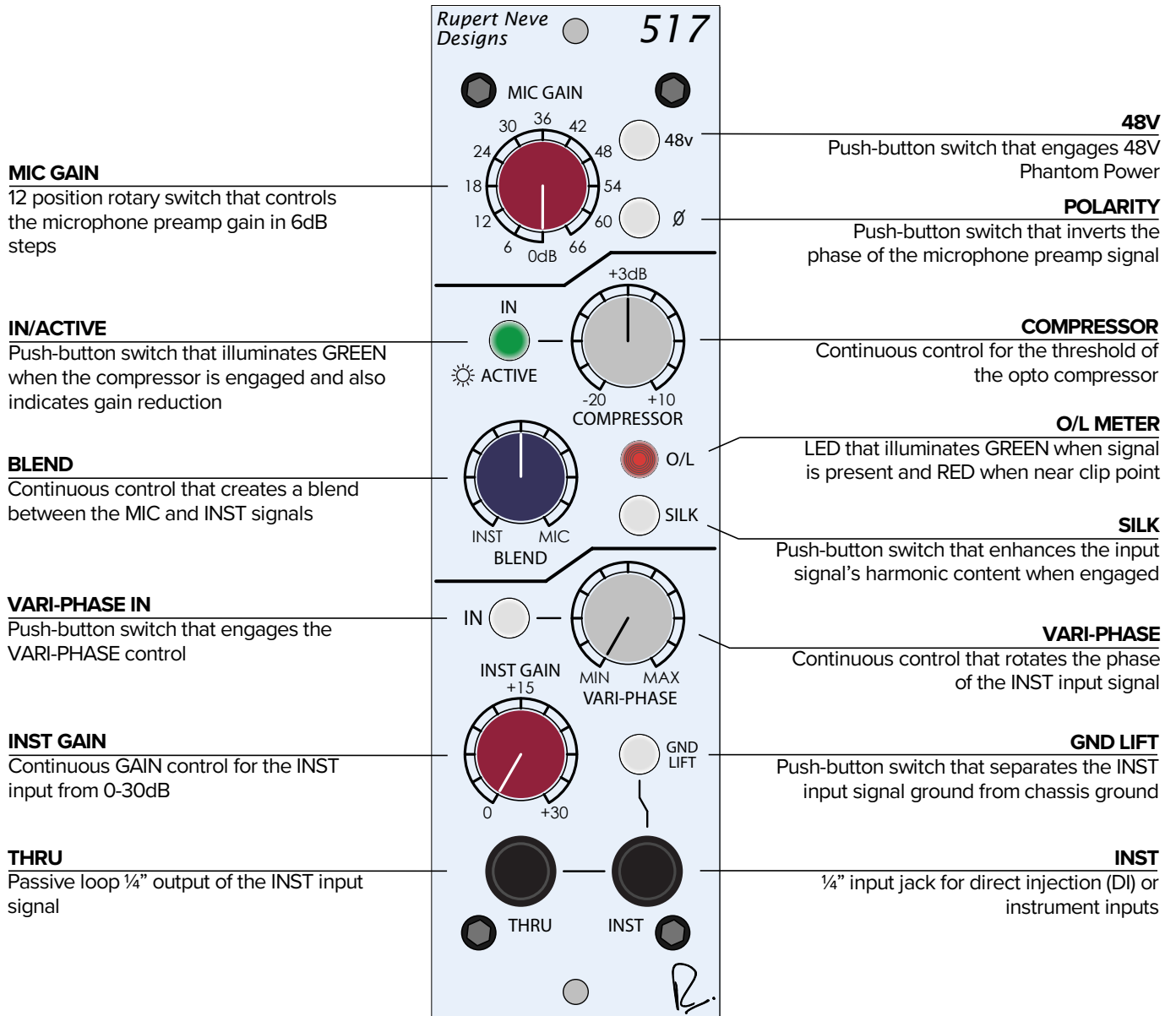
# 517 Block Diagram

## Rupert Neve Designs 517: Mic Pre, DI & Compressor

Thank you for purchasing the Rupert Neve Designs 517 Mic Preamp, DI & Compressor. We hope you enjoy using this product as much as we have enjoyed designing and building it. The 517 is designed to provide unparalleled sonic performance in an accessible single-slot 500 series format. The 517 combines a world-class mic preamp with a one-knob opto compressor, instrument/DI input with Vari-phase control, SILK saturation and a MIC/INST blend control.



# 517 Front Panel



# 517 Front Panel Features

## **GAIN**

12-position rotary switch that controls the microphone preamp gain in 6dB steps. This input can also accept line level sources when the GAIN control is set to 0dB.

## **48V**

Push-button switch that engages 48V phantom power supplied by the 500 series rack.

*\*\* LINE LEVEL INPUTS: Please confirm the 48V phantom power button is disengaged before connecting a line level input. 48V should never be engaged when a line level input is connected. \*\**

## **POLARITY**

Push-button switch that inverts the phase of the microphone preamp signal.

## **COMPRESSOR**

Continuous control of the threshold of the opto compressor when engaged. Compression at a 2:1 ratio is applied when the input signal exceeds the set threshold level. Auto make-up gain is applied after gain reduction occurs.

## **IN/ACTIVE**

Push-button switch that illuminates GREEN when the compressor is engaged. This GREEN LED also indicates when gain reduction is occurring once the input signal exceeds the set threshold level.

## **BLEND**

Continuous control that creates a blend between the MIC and INST input signals to achieved the desired tonal balance.

## **O/L METER**

LED that illuminates GREEN when signal is present and RED when near clip point.

## **SILK**

Push-button switch that enhances the input signal's harmonic content when engaged.

## **VARI-PHASE IN**

Push-button switch that engages the VARI-PHASE control to phase align the Mic and INST input signals.

## **VARI-PHASE**

Continuous control that rotates the phase of the INST input signal.

## **INST GAIN**

Continuous GAIN control for the INST input from 0-30dB.

## 517 Front Panel Features (continued)

### **GND LIFT**

Push-button switch that separates the INST input signal ground from chassis ground.

### **INST**

¼" input jack for direct injection (DI) or instrument inputs.

### **THRU**

Passive loop ¼" output of the INST input signal.

# 517 Specifications

**Maximum Output Level** +23 dBu

## **Total Harmonic Distortion and Noise (NO SILK)**

**1 kHz, +20 dBu Output Level, no load** Better than 0.001%

**20 Hz, +20 dBu Output Level, no load** Better than 0.002%

**With SILK engaged** Better than 0.2% (2nd order harmonics)

## **Noise (Measured at main output, Un-weighted, 22 Hz - 22 kHz, 150 ohm balanced source)**

**Unity Gain** Better than -100 dBu

**Gain @ +66 dB** Better than -60.5 dBu

**Equivalent Input Noise** -125 dB

**INST Input @ Unity Gain** Better than -100 dBu

**INST Input Gain @ +66 dB** Better than -75 dBu

## **Frequency Response**

### **(Mic Pre Main Output, no load)**

**10 Hz** +/- 0.1 dB

**120 kHz** -1 dB

### **(INST Main Output, no load)**

**10 Hz** +/- 0.1 dB

**120 kHz** -1 dB

**Microphone Input Impedance** 10,000 Ohms

**Instrument Input Impedance** 1.6 Mega Ohms, 3.3 Mega Ohms (balanced)

**Variphase**  
@ 100 Hz: 2.9° to 57.4°  
@ 1 kHz: 33.5° to 156°  
@ 10 kHz: 149° to -175°

**Compressor Attack & Release Values** 5 mS/50 mS

**Power Consumption (+/-16 VDC)** 100 mA

**Shipping Dimensions** 7.75" (19.7 cm) x 10" (25.4 cm) x 3" (7.62 cm)

**Shipping Weight** 3 lbs, 1.4 kg



## **PRODUCT WARRANTY**

Rupert Neve Designs warrants this product to be free from defects in materials and workmanship for a period of three (3) years from date of purchase, and agrees to remedy any defect identified within such three year period by, at our option, repairing or replacing the product.

## **LIMITATIONS AND EXCLUSIONS**

This warranty, and any other express or implied warranty, does not apply to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, damaged by any dry cell battery, or which has been altered or modified in any way. This warranty is extended to the original end user purchaser only. A purchase receipt or other satisfactory proof of date of original purchase is required before any warranty service will be performed. THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, TO THE EXTENT ALLOWED UNDER APPLICABLE STATE LAW. IN NO EVENT SHALL RUPERT NEVE DESIGNS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of consequential damages or limitations on how long an implied warranty lasts, so this exclusion may not apply to you.

## **WARRANTY SERVICE**

If you suspect a defect in this product, please contact our support staff for troubleshooting by phone (512-847-3013) or email ([service@rupertneve.com](mailto:service@rupertneve.com)). If it is determined that the device is malfunctioning, we will issue a Return Material Authorization and provide instructions for shipping the device to our service department.



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