



# **roger schult**

## **german audio lab**

**Microphone preamplifier**  
**V2359j amp4ribbon**

**Operating Manual**  
**Quick Guide**

V2359j amp4ribbon Operating Manual for api ® 500 system Version 10.2021  
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**Dear customer, we sincerely thank you for purchasing our product.**

Our V2359j amp4ribbon module for the api®500 system was built to ensure and exceed the highest manufacturing standards possible. We are adhering to all European and national guidelines currently in effect. The EMV compatibility has been certified and the appropriate records are available in our office. Every unit which leaves our factory is in a perfect working condition and meets all designed factory specifications.

We have written this operating manual as a reference for you. It contains important notes for the correct operation and the handling of your new product. In order to maintain the factory specs and guarantee a safe operation in the future, we advise that you read the included operating manual as well as any further safety documents. (see below)

If you are passing the unit over to third parties, please make them aware of these documents. Any use outside of the applications described in this manual may cause damage to the product. The product must not be altered or modified. Any improper usage may cause multiple hazards such as electrical shorts, fire, electric shocks, and other hazards.

The enclosed safety and hazard notices refer to the installation and operation in an api®500 system. There may be relevant guidelines and regulations that affect the operation, even if they do not apply to our product directly. The installation and operation should therefore be carried out by trained personnel only.

Operation of the unit in adverse environmental conditions - such as moisture and / or excessive humidity, dust, gases, vapors or solvents - is not permitted.

Please contact our technical support team if you have any technical questions about this product. You can find the contact details in the section 8 of this manual

## Function, functional components and their effect

The V2359j amp4ribbon microphone preamplifier enables the connection of all passive transducers, such as ribbon, moving coil, carbon, piezo and crystal microphones. With a continuously adjustable preamplification in the range of 26 dB to 59 dB (optionally up to 76 dB, see bulletin no. 005 on our homepage at <https://www.rogerschult.com/downloads.php>) the microphone signal is raised to the required line level.

A gain reduction of -15 dB (optionally -20dB) can be activated by a switch (pad -15 dB).

This is followed by the adaptation of the load impedance by the impedance controller (Z) in order to determine the frequency response and thus the character of the sound transducer. This unique continuous impedance matching in the range from 150 ohms to 22 kOhms is a powerful tool for determination of the transfer function. Whether linearly optimized or to create a sound full of character, this controller can be used in versatile ways.

The V2359j amp4ribbon has three different filters to change the frequency. To eliminate low-frequency interference or to reduce the bass, a high pass (LF, fader below right) is activated with a reduction of up to -17 dB at 20 Hz. A Baxandall filter (HF, fader top right) with +/- 12 dB at 9 kHz for high frequencies and a semi-parametric filter for the mid frequencies. With this mids filter (MF), the frequency can be continuously adjusted between 150 Hz to 3.5 kHz and the level range from +/- 10 dB. The choice of the filter quality (Q) can be preselected by means of a three position toggle switch with left stop 0.4 (wide), center position 0.7 (narrow) and right stop variable by means of a trim potentiometer (trim Q, preset to 3 at factory) between 2.4 and 4. The entire filter unit can be deactivated using the (bypass filter) switch.

(+48 V) phantom power supply is an extension for the use of active microphones. When the phantom power pressure switch is activated, the impedance is fixed to a value of 2 kOhm to protect the microphone electronics.

## Functional components

**V** (gain) rotary control gain adjustment from 26 dB to 59 dB

**Pad** (attenuation) switch, gain reduction of -15 dB (optional -20 dB)

**Z** (impedance) rotary control, adjustment of load impedance from 150 ohms to 22 kOhms

**LF** (high pass) fader, low frequency filter down to -17 dB at 20 Hz

**HF** (Baxandall filter) fader, high frequency filter, range +/- 12 dB at 9 kHz

**MF** (PEQ) 2 rotary controls + switch + trimmer for the mids as a semi-parametric EQ  
Potentiometers for frequencies from 150 Hz to 3.5 kHz and level with +/- 10 dB  
Toggle switch for quality (Q factor) 0.4 and 0.7 and  
Trimmer for fine adjustment of the quality in the range from 2.4 to 4

**+ 48V** (phantom power) pressure switch to activate the +48 V

Note: all pressure switches are illuminated when activated

## **Options to expand some functions of the V2359j amp4ribbon**

**LED brightness** - the illumination of the pushbutton switches can be adjusted

**V** - the maximum gain can be increased

**LF** - the bypass filter function can be blocked for the LF

**HP2** - another high pass can be activated, with a slope of -6 dB at 20 Hz

**Chassis to GND** - can be interrupted when high frequency interference is caused by strong transmitter systems

(Detailed information on these functions can be found on our homepage under downloads at <https://www.rogerschult.com/downloads.php>).

## **Installation in an api ® 500 system**

### **Instructions for installing the V2359j amp4ribbon filter module**

Please note that electric potential differences and electrostatic discharges (ESD) can destroy your api ® 500 system and the V2359j amp4ribbon module. Please make sure to discharge any potential electrostatic charges by touching a plumbing pipe, heating pipe or any other piece of metal connected to earth before installing the V2359j module. Neutral electric potential is a prerequisite to any installation or reconfiguration of electronics modules and their interconnections.

Turn off your api ® 500 rack or console and all connected devices. Remove any blank panels that might cover the slot you have chosen for installation of the module.

Center the module between the two threaded mounting holes and evenly insert the module into the free slot without applying brute force. Secure the V2359j module with both screws. The module is ready for operation once the appropriate connections in the rear of the api ® box have been taken care of.

# Specifications

## Tentative spec sheet 09 / 2021

Basic gain (V), rotary control	26 dB - 59 dB
Pre-damping (pad), pressure switch	-15 dB with impedance fixed to 2 kHz (optionally -20 dB)
Impedance matching, rotary control	150 Ohms to 22 kOhms
Low frequency (LF) equalization/high pass, fader	0 to -17dB @ 20 Hz
Mid frequency (MF) / semi-parametric EQ MF range	155 Hz - 3.5 kHz +/- 10 dB
Quality (Q) Q-factor control of mid band filter	0.4/0.7 fixed and 2.4 - 4 adjustable
High frequency equalization (HF)	+/- 12 dB @ 9 kHz
Phantom power (+48 V), pressure switch	+ 48 V (with impedance fixed to 22 kHz)
Disable all filter effects (bypass filter)	white illuminated pressure switch

### Input - electronically balanced

Reference input level	+6 dBu
Maximum input level	+20 dBu

### Output - electronically balanced

Reference output level	+6 dBu
Maximum output level	+26 dBu (0.008% THD+N)
Output impedance	40 Ohm

Gain at linear setting	0 dB (+0.1 / -0.2 dB)
Harmonic distortion THD+N / 0 dBu	0.007% / 83 dB
Frequency range	20 Hz - 40 kHz (+/- 0.1 dB)

Power supply	+/- 16V / max.120 mA
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Module dimensions	115 mm x 172 mm (HxT)
Faceplate dimensions	19" / 3 RU, 1.5" x 5.25" (BxH)

Faceplate finish	Aluminium, black anodized (optionally silver anodized)
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Weight	0.343 kg
Optionally in housing	0.577 kg

## Box contents and compatibility

### Box contents

- V2359j amp4ribbon module in api ® 500 system
- Quick start guide in German
- Quick start guide in English

### Compatibility

The compatibility certification records for this product are available upon request from the manufacturer.

As all Roger Schult products, the V2359j is hand-crafted and precision-engineered in Germany.

### Recycling

Please stay eco-friendly and dispose of all defective and obsolete devices at a certified collection facility according to local laws and regulations.



The crossed out wheeled bin label that can be found on your product indicates that this product should not be disposed of via the normal household waste stream. To prevent possible harm to the environment or human health please separate this product from other waste streams to ensure that it can be recycled in an environmentally sound manner. For more details on available collection facilities please contact your local movement Office or the retailer where you purchased this product.

# Manufacturer

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