



# roger schult

## german audio lab

M/S-Master junior W2389j (f)

### Operating Manual Quick Guide

W2389j (f) M/S-Master junior Operating Manual for api ® 500 System  
Version 01.2021 roger schult D 50374 Erftstadt Peter-May-Str. 104

Table of Contents

Page

2      Table of Contents

3      Introduction and important safety notices

4      Product Details  
         Controls and operation  
         Application examples for the W2389j (f) M/S-Master junior

5      Installation  
         Installing the W2389f module in an api ® 500 system\*  
         Recycling

6      Specifications

7      Box contents and compatibility

8      Manufacturer contact and support

\*api ® is a registered trademark of AUTOMATED PROCESSES INC., NEW YORK, USA

## **Thank you for purchasing our product!**

Our W2389f M/S Master junior 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, controls and their effect

**M/S technology** - The term M/S technology means that a stereo signal is divided into its mid and side signal components. The mid signal (M) contains all signals that are identical on the left and right side. The side signal (S) contains the non-identical signal components. After the mid (M) and side (S) signals have been processed separately (usually with equalizer, compressor, limiter, reverb, delay or filter), the signals are then precisely merged again to form a stereo signal.

**Function** - The W2389j module in the api®500 format represents a compact and precise M/S encoder and M/S decoder in an api®500 double cassette format.

Stereo in-and outputs are provided on the backside of the connected lunchbox.

The in-and outputs on the frontside of the W2389j are used to connect the M and S signals with any external processing device.

### Controls

**mode** The illuminated M/S push button enables a quick and visible change between the M/S and the stereo signal processing. This allows a quick and reliable effect assessment of the inserted signal processors.

**bypass L/M** This illuminated push button is used to check the mid signals (in M/S mode) or the components of the left channel (in stereo mode).

**bypass R/S** This illuminated push button is used to check the side signals (in M/S mode) or the components of the right channel (in stereo mode).

### W2389j (f) M/S-Master junior application examples

- Microphone recording using M/S microphone setup  
(in this application the two microphones are connected to the lower XLR sockets on the front panel)
- Conversion of stereo signals into mid and side signals
- Conversion of the mid and side signals back into a stereo signal
- Converting into M/S signals, to modify the stereo base width by changing the side component level. It is sufficient to plug to the XLR in- and outputs of the side signal (R/S) and then press the bypass L/M switch (e.g. with a symmetrical voltage divider or a symmetrical potentiometer)
- Post correction of the stereo width from mono to overbase width (super-wide stereo). To reduce the stereo base, the side signal components must be reduced and to enlarge the stereo base, they need to be increased. Suitable accessories can be supplied on request.
- Separate editing of mid and side components for further processing by external signal processors
- Reweighting of reverb and soloist parts in existing stereo recordings
- Insert of vintage and/or mono devices in M or S. Suitable adapters from balanced to unbalanced signal routing can be delivered on request.

## Installation of the W2389j (f) M/S-Master junior in an api ® 500 system

Electric potential differences and electrostatic discharges (ESD) can destroy your api ® 500 system and the W2389j module.

Please ensure 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 W2389j module. Achieving a neutral electric potential is always required for any installation, reconfiguration or handling 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. Make sure the module is tightly attached. Secure the W2389j module with both screws. The W2389j M/S-Master junior module is ready for operation once the appropriate connections on the rear of your api ® box have been made.

## 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 in your regular household waste.

To prevent possible harm to our environment and human health please dispose this product only at the appropriate waste stations to assure that this product can be recycled in an environmentally protective manner.

For more details on available collection facilities please contact your local waste management office or the retailer where you purchased this product.

## Technical Data

Tentative spec sheet, 01/2021

### Input (electronically balanced)

|                       |         |
|-----------------------|---------|
| Reference input level | +6 dBu  |
| Maximum input level   | +14 dBu |
| Input impedance       | 10 kOhm |

### Output (electronically balanced)

|                                  |   |
|----------------------------------|---|
| Reference output level           | +6 dBu  |
| Maximum output level             | +14 dBu / (0.05% THD+N)                                       |
| Output impedance                 | 55 Ohm  |
| Gain at linear setting           | 0 dB at 1 kHz (-0.03 dB)                                      |
| Signal-to-noise ratio            | < 100 dB  |
| Noise level (WTD)                | < 97 dBq  |
| Harmonic distortion              | THD+N / 0 dBu 0.003%  |
| Frequency range                  | 20 Hz - 40 kHz (- 0.003 dB)                                   |
| Delay time of hard bypass relais | max. 3 ms   |
| Power supply                     | +/- 16 V via api ® - system +<br>max.170 mA / -16V max. 90 mA |
| Module dimensions                | 115 mm x 172 mm (HxD)   |
| Faceplate dimensions             | 19" / 3 RU, 3" x 5,25" (WxH)                                  |
| Faceplate finish                 | Aluminium, chromated  |
| Weight                           | 0.820 kg  |

## **Box contents and compatibility**

### **Box contents**

- W2389j M/S-Master junior 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 W2389j is hand-crafted and precision-engineered in Germany.

**roger schult**  
german audio lab

D 50374 Erftstadt  
Peter-May-Strasse 104

[www.rogerschult.com](http://www.rogerschult.com)  
[info@rogerschult.com](mailto:info@rogerschult.com)

## Manufacturer

**roger schult**

german audio lab

Peter-May-Str.104  
D 50374 Erftstadt

[www.rogerschult.com](http://www.rogerschult.com)

[info@rogerschult.com](mailto:info@rogerschult.com)



W2389j (f) M/S-Master  
junior