



roger schult

german audio lab

**Universalfilter W2377
for api ® 500 system**

**Operating Manual
Quick Guide**

W2377 Operating Manual for api ® 500 system Version 02.2015
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api ® is a registered trademark of AUTOMATED PROCESSES INC., NEW YORK, USA

Dear customer, we sincerely thank you for purchasing our product

The W2377 module for the api ® 500 system that you have purchased was manufactured according to highest manufacturing standards adhering to all European and national guidelines currently in effect. EMV compatibility has been certified and the appropriate records are available at the manufacturer. Upon shipment, the product left the manufacturer in perfect working condition according to factory specifications.

In order to maintain the factory specs and guarantee safe operation in the future, we advise that you read the included operating manual as well as further safety documents (see below) - they contain important notes for operating and handling your product. When passing the unit on to third parties, please also make them aware of these documents.

Any use outside of the applications described in this manual may cause damage to the product and may further imply to hazards such as electrical shorts, fire, electric shocks, etc. The product must not be altered or modified. The enclosed safety and hazard notices about this product refer to the installation and operation in an api ® 500 system. Consequentially, there may be relevant guidelines and regulations that affect operation, even if they don't apply to our product directly. Installation and operation should therefor be carried out by trained personell only.

If you should have technical questions to this product, please contact our technical support team. You will find the contact details in the appendix of this manual.

Universalfilter for the api ® 500 system

The Universalfilter - Series W2377 for the api ® 500 system comprises three different modules designed for the low-band frequency ranges (LB), mid-band (MB), and high band (HB). This division provides the flexibility to use modules independently, or when connected via XLR cables, in series.

Controls and Operation

Gain (rotary control)

Each module has a level controller with a center detent, and covers a range of -10 dB to +10 dB.

Frequency (rotary control)

The frequency control is used to adjust the filter frequency, which differs in each module: The LB module covers a range from 20 Hz to 730 Hz, the MB module ranges from 155 Hz to 3.5 kHz, and the HB, from 1.03 kHz to 23.2 kHz.

Q-factor (rotary control)

An 11 - position rotary switch adjusts the filter quality in a range of $Q = 0.3$ to $Q = 10$. Turned to either the left - stop or right-stop position, a frequency - adjustable Hi - pass or Low - pass filter is engaged. This function can be very useful when cascading multiple modules.

„off“-switch

The „off“ switch engages a hard bypass by means of relays.

„solo“-switch

The solo function isolates a selected module by engaging the bypass in connected modules via a signal bus on the front panels.

„focus“-switch

Another feature of the W2377 is the „focus“ function for fast and reliable identification of the processed frequency range by inverting the position of the level control. If for example, the level control is set to -4 dB, engaging the „focus“ button will flip the signal level to +4 dB. A peculiarity of our hearing is that it's easier to isolate amplified frequencies than attenuated frequencies. A practical example of this function would be isolating and removing a 50 Hz hum. This can be done by first setting the level control to approximately -4 dB and the quality control to 1.5. Next, engage the „focus“ button and adjust the frequency control until the noise is at its loudest. Disengage the „focus“ button and the noise will be greatly attenuated. Now, by finetuning of the quality and level controls, the effectiveness of the W2377 is realized.

Installation in an api ® 500 system

Instructions for installing the W2377 filter module

Please note that electric potential differences and electrostatic discharges (ESD) can destroy your api ® 500 system and the W2377 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 W2377 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 with the shield of the module frame facing to the left and evenly insert the module into the free slot without applying brute force. Secure the W2377 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.

Recycling

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



English

The crossed out wheels 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 waste management office or the retailer where you purchased this product.

Deutsch

Der Aufkleber mit durchgekreuzter Mülltonne an diesem Produkt weist darauf hin, dass dieses Produkt nicht im normalen Hausmüll entsorgt werden darf. Zur Vermeidung einer möglichen Beeinträchtigung der Umwelt oder der menschlichen Gesundheit und um zu gewährleisten, dass es in einer umweltverträglichen Weise recycelt wird, darf dieses Produkt nicht in den Hausmüll gegeben werden. Informationen zu Entsorgungseinrichtungen erhalten Sie bei der zuständigen Behörde oder dem Geschäft, in dem Sie dieses Produkt erworben haben.

Specifications

Technical Data

02 / 2015

LB - „low band filter“	20 Hz to 730 Hz
MB - „mid band filter“	155 Hz to 3.5 kHz
HB - „high band filter“	1.03 kHz to 23.2 kHz
Gain, rotary control from center Q (quality), 11-position switch	+/- 10 dB control range 0.3 / 0.5 / 0.7 / 1.0 / 1.5 / 2.5 / 4 / 6 / 10 as well as LP and HP
„focus“, backlit pushbutton „solo“, backlit switch „off“, backlit switch	frequency alignment solo (only in combination) filter off function hard-bypass

Input (electronically balanced)

Reference input level	+6 dBu
Max input level	+23 dBu
Input impedance	10 kOhm

Output (electronically balanced)

Reference output level	+6 dBu
Max output level	+26 dBu / (0.05% THD+N)
Output impedance	55 Ohm
Gain at linear settings	0 dB (+0.1 / -0.2 dB)
Noise level (UWTD / WTD)	< 80 dBq / < 75 dBq
Harmonic distortion	THD+N / 0 dBu 0.009%
Frequency range	20 Hz - 40 kHz (+ 0.1 / - 0.2 dB)
Delay time of hard bypass relais	max. 5 ms
Power supply	+/- 16 V on api ® system + max.130 mA / -16V max. 70 mA
Module dimensions	115 mm x 172 mm ((height x depth)
Faceplate dimensions	19" / 3 RU, 1.5" x 5.25" (width x height)
Faceplate finish	Aluminium, chromated or black anodized
Weight	0.35 kg

Box contents and compatibility

Box contents

- W2377 - module for api ® 500 system
- Jumper for the solo function
- Spare jumper

Compatibility

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

As all Roger Schult products, the W2377 filter module is hand-crafted and precision-engineered in Germany.

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Manufacturer

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W2377 Trio (low / mid / high band)



Layout: Aluminium, black anodized



Layout: Aluminium, chromated