elysia

museq

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RoHS compliant 2002/95/EC

This product is manufactured according to the 2002/95/EC directive. The purpose of this directive of the European Union is the Restriction of Hazardous Substances (RoHS) in electronic equipment in order to protect health and nature.

WARNING: High Voltage

- Risk of electric shock.
- Do not open chassis.
- Refer service to qualified service staff only.
- Before connecting the device to the main power supply, check if the right voltage is selected.
- Replace fuse with the same type and value only.
- This device must be connected to ground.
- Do not use a damaged power cord.
- Never place containers with liquid, e.g. beverages or a vase, on the unit.
- Do not expose this device to rain or moisture.
- Do not use this device near water, e.g. swimming pool, bathtub or wet basement.

CAUTION: Temperature

- Surfaces of the device may become hot during operation.
- Do not install this device near any heat source such as radiators, stoves or other heat sources.
- Always allow enough ventilation space around the unit for air circulation.
- Do not cover circulation vents.

CAUTION: Connecting & Mounting

- Never connect the output of a power amplifier to this device.
- Place the unit on a rigid board or place it in an appropriate rack.
- Use the device according to this manual only.

CAUTION: Humidity

- If this device is moved from a cold place to a warm room, condensation can occur inside the device. To avoid damaging the unit, please allow it to reach room temperature before switching it on.

CE

CE Conformity

elysia GmbH, Am Panneschopp 18, 41334 Nettetal, Germany, declares with sole responsibility that this product complies with the following norms and directives:

- 2006/95/EG Low Voltage Directive (formerly 73/23/EWG or 93/68/EWG)
- 89/336/EWG EMC (Electromagnetic Compatibility) Directive
- DIN EN 55103-1 EMC of audio equipment - Emission
- DIN EN 55103-2 EMC of audio equipment - Immunity

This declaration becomes invalid by any unapproved modification of the device.

Nettetal, 01.07.2009 - Ruben Tilgner & Dominik Klaßen

Dear friend of audio culture,

Only a dream?

A truly musical equalizer which enhances any sound by providing a new dimension of depth, width, brilliance and openness? Which replaces the tedious search for an adequate change with finding the right setting intuitively in no time at all? And which offers a truly universal concept, covering recording, mixing, mastering and creative tasks without cutting back?

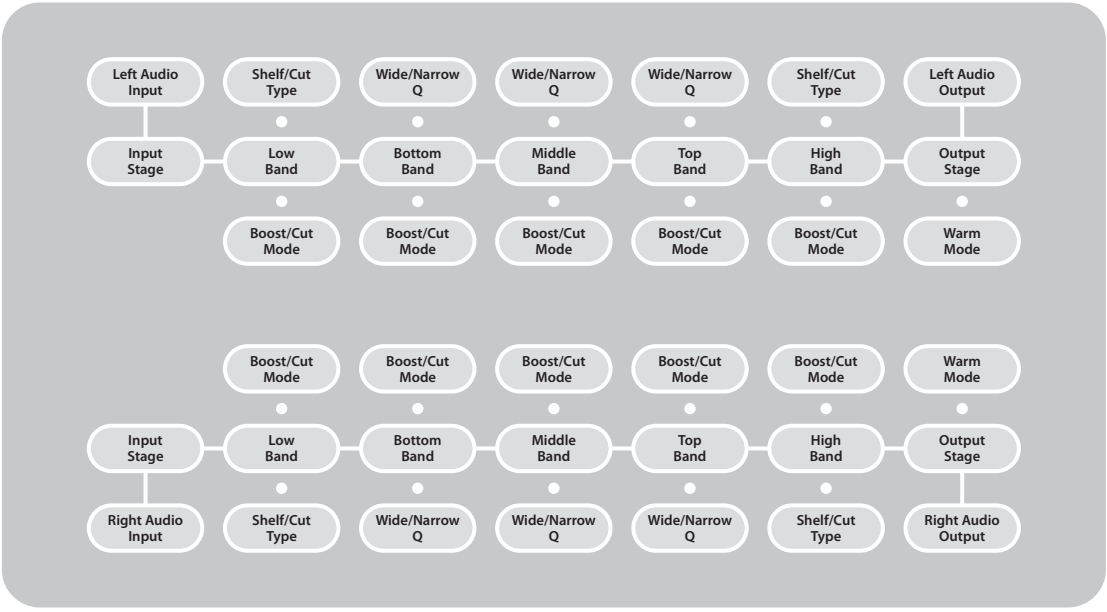
You have just woken up. The museq has been designed with exactly these requirements in mind. You can compliment yourself on your new EQ! A similar combination of flexibility and high grade audio paths without the slightest compromise is rare to find, and – as far as our experience goes – the special elysia features like high and low pass filters with additional resonance peak as well as the integrated warm circuit are unique in the market.

Please take a little time to read this manual thoroughly, as it will help you to entirely understand the enormous potentials and to really push the envelope. We have paid great attention to practical experience and fast comprehension, which is also the reason for reserving the explanation of the technological excesses of the museq to our website.

Finally, we would like to thank you sincerely for your confidence in our products. If you have further questions or comments, please do not hesitate to contact us – we enjoy being of your service. But for now, it's time to wish you lots of fun and musical experiences with your museq.

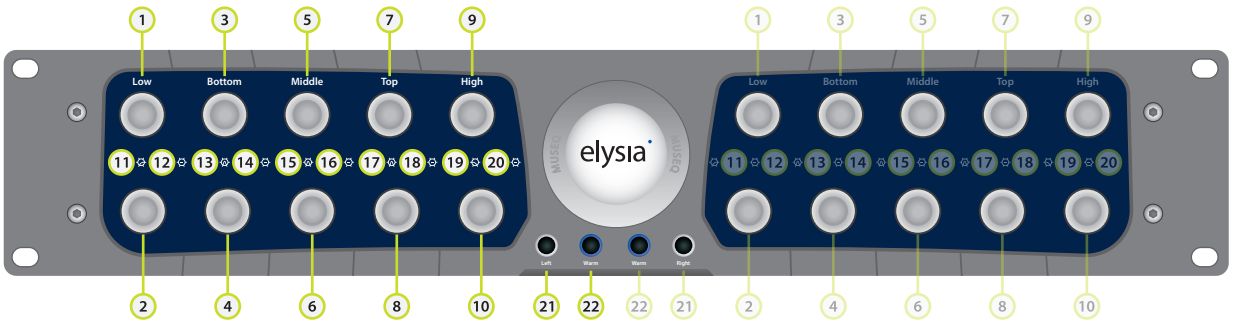
Use the Force…

the elysians



Controls

Both channels of the museq are absolutely identical regarding their electronic design. Therefore both sides of the front panel have exactly the same controls and switches. Every potentiometer offers 23 steps for a comfortable recall with an ample choice of values.



1. **Gain (Low Band):** boosts frequencies in the Low Band up to 15 dB or – if the Cut Gain switch is activated – cuts them up to 15 dB. In Low Cut mode: sets the amount of resonance. (p. 10)

2. **Frequency (Low Band):** determines the frequency of the Low Shelf/Low Cut filter. The frequency range of this band lies between 9 and 200 Hz. (p. 10)

3. **Gain (Bottom Band):** boosts frequencies in the Bottom Band up to 15 dB or – if the Cut Gain switch is activated – cuts them up to 15 dB. (p. 11)

4. **Frequency (Bottom Band):** determines the frequency of this parametric peak filter. The frequency range of this band lies between 18 and 400 Hz. (p. 11)

5. **Gain (Middle Band):** boosts frequencies in the Middle Band up to 15 dB or – if the Cut Gain switch is activated – cuts them up to 15 dB. (p. 12)

6. **Frequency (Middle Band):** determines the frequency of this parametric peak filter. The frequency range of this band lies between 150 and 3.5 kHz. (p. 12)

7. **Gain (Top Band):** boosts frequencies in the Top Band up to 15 dB or – if the Cut Gain switch is activated – cuts them up to 15 dB. (p. 12)

8. **Frequency (Top Band):** determines the frequency of this parametric peak filter. The frequency range of this band lies between 700 and 16 kHz. (p. 12)

9. **Gain (High Band):** boosts frequencies in the High Band up to 15 dB or – if the Cut Gain switch is activated – cuts them up to 15 dB. In High Cut mode: sets the amount of resonance. (p. 10)

10. **Frequency (High Band):** determines the frequency of the High Shelf/High Cut filter. The frequency range of this band lies between 1.8 and 35 kHz. (p. 10)

⑪ **Low Cut (Low Band):** switches the filter characteristics from Low Shelf to Low Cut with additional resonance peak (p. 11)

⑫ **Cut Gain (Low Band):** switches the corresponding gain controller from boost to cut mode. This is only relevant for Low Shelf, but not for Low Cut mode. (p. 10)

⑬ **Narrow Q (Bottom Band):** switches the quality factor (Q) of the corresponding frequency band from low (wide curve) to high (narrow curve). (p. 11)

⑭ **Cut Gain (Bottom Band):** switches the corresponding gain controller from boost to cut mode. (p. 11)

⑮ **Narrow Q (Middle Band):** switches the quality factor (Q) of the corresponding frequency band from low (wide curve) to high (narrow curve). (p. 12)

⑯ **Cut Gain (Middle Band):** switches the corresponding gain controller from boost to cut mode. (p. 12)

⑰ **Narrow Q (Top Band):** switches the quality factor (Q) of the corresponding frequency band from low (wide curve) to high (narrow curve). (p. 12)

⑱ **Cut Gain (Top Band):** switches the corresponding gain controller from boost to cut mode. (p. 12)

⑲ **High Cut (High Band):** switches the filter characteristics from High Shelf to High Cut with additional resonance peak (p. 11)

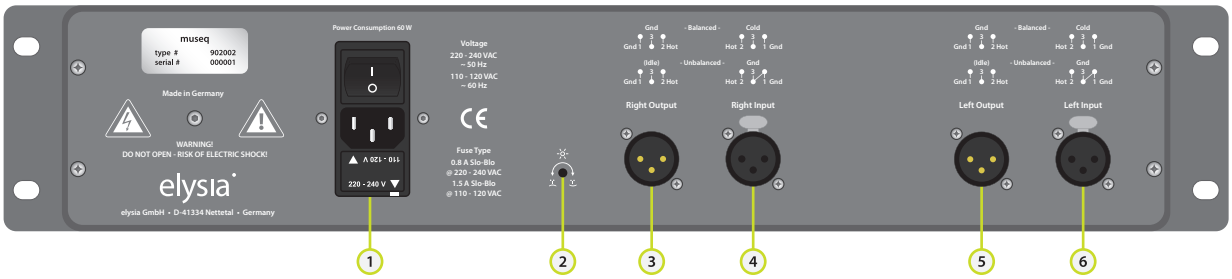
⑳ **Cut Gain (High Band):** switches the corresponding gain controller from boost to cut mode. This is only relevant for High Shelf, but not for High Cut mode. (p. 10)

㉑ **Left/Right:** activates the respective channel of the equalizer. In deactivated state, the input is directly routed to the output by a hardwire bypass.

㉒ **Warm:** reduces the slew rate of the output amplifier stages. Adds harmonics and produces a vintage-like warm sound. (p. 13)

Connectors

Please pay attention to operate the museq with the correct voltage setting for your country and the proper pin assignments on the XLR connectors.



① **Mains module**
This module combines the line cord connector, the on/off switch, the fuse holder with integrated 230/115 VAC voltage selector and a line filter for providing the transformer with clean current.

WARNING: High voltage
Make sure to disconnect the line cord before replacing eventually blown fuses or changing the operating voltage of the unit! In order to change the operating voltage, the fuse holder has to be taken out and re-inserted so that the desired voltage can be read correctly (and is not standing upside down). *Note*: Some export versions have a fixed voltage of e.g. 100 or 115 VAC and cannot operate at 230 VAC.

WARNING: Fuses
Always make sure to use the correct fuses for the chosen voltage: **230 VAC 0.8 A Slo-Blo** or **115 VAC 1.6 A Slo-Blo**. Incorrect or missing fuses are dangerous safety hazards for both the unit and yourself!

② **Brightness trimmer**
You can use a small screwdriver to adjust the light intensity of the front panel logo disc.

③ ⑤ **Audio outputs (+4 dBu)**

Pin assignment balanced:	1 ground	2 hot (+)	3 ground
Pin assignment unbalanced:	1 ground	2 hot (+)	3 idle

④ ⑥ **Audio inputs (+4 dBu)**

Pin assignment balanced:	1 ground	2 hot (+)	3 cold (-)
Pin assignment unbalanced:	1 ground	2 hot (+)	3 ground

Note: If a device that is placed in the signal chain before the museq has an unbalanced output stage, a complete mute can eventually occur when the equalizer is activated. If this happens, please follow the advice on the next page.

Level Issues

Low Level

This problem can eventually be caused by balanced wiring. If the level becomes low when the museq is activated, a pin of the XLR connector at the input is probably not connected. To ensure proper operation, make sure to have both pins connected.

The classic example for this problem is a balanced XLR cable that is connected to an unbalanced output which only uses ground and pin 2 – connecting pin 3 to ground should solve the trouble.

Level Jump

In some audio processors the output stage is designed in a way that the level will always stay the same – no matter if it is connected with a balanced or an unbalanced cable. If pin 3 is connected to ground, for example, the level at pin 2 will automatically become twice as loud as before. This kind of output stage is usually unproblematic.

But there are also stages which cannot compensate that. Then the level at pin 2 stays as it is, even if pin 3 is connected to ground. If the museq is placed between a device with this kind of output stage and a device with unbalanced inputs with pin 3 connected to ground, it is possible that the level will jump up by 6 dB when the equalizer is activated.

As a general rule, balanced input stages are always the best choice. In case they are not available, the first attempt to solve this problem should be to disconnect pin 3 at the XLR inputs of the museq and then connect it to ground. This generates an unbalanced signal that should not shift levels anymore.

Symbols

In order to maintain a clearly arranged front panel, the museq uses the following symbols:

Low Cut
LED on: filter is in Low Cut mode | LED off: filter is in Low Shelf mode

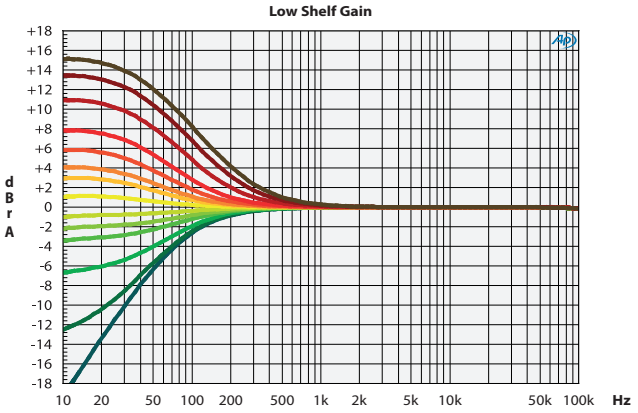
High Cut
LED on: filter is in High Cut mode | LED off: filter is in High Shelf mode

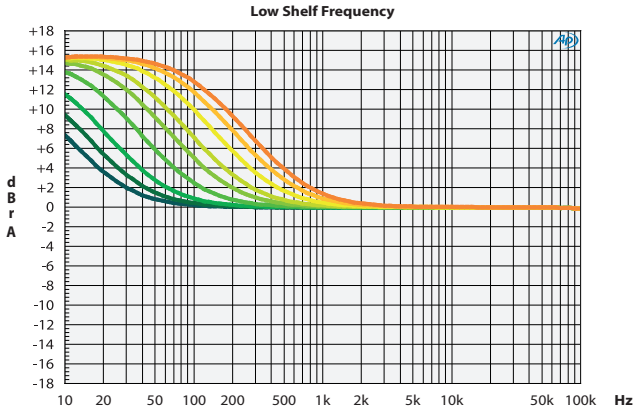
Cut Gain
LED on: frequency band is attenuated | LED off: frequency band is boosted

Narrow Q
LED on: high quality factor (Q) | LED off: low quality factor (Q)

Low Shelf

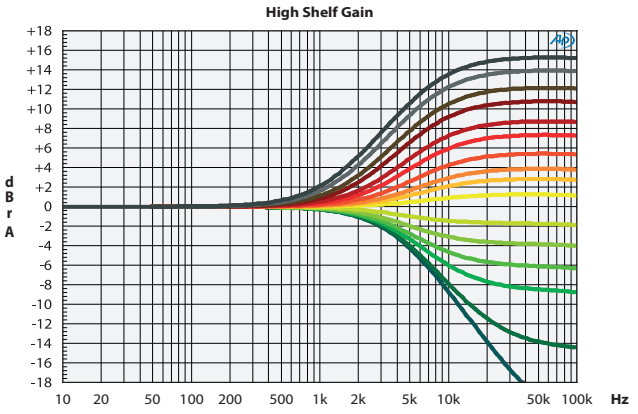
Left: miscellaneous settings of the gain controller in boost (red) and cut mode (green)
Right: miscellaneous settings of the frequency controller in boost mode

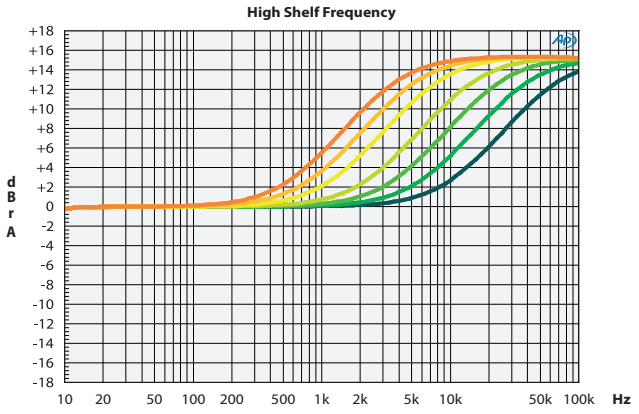




High Shelf

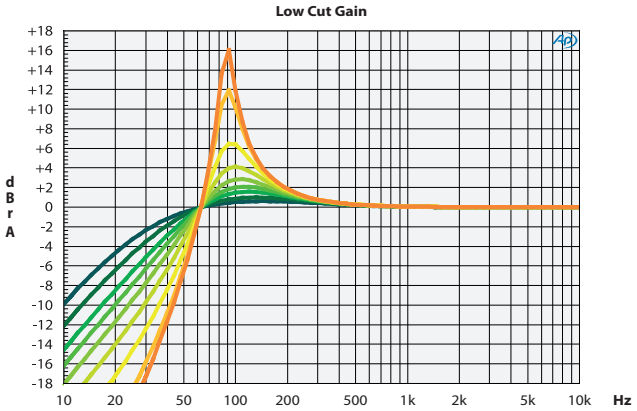
Left: miscellaneous settings of the gain controller in boost (red) and cut mode (green)
Right: miscellaneous settings of the frequency controller in boost mode

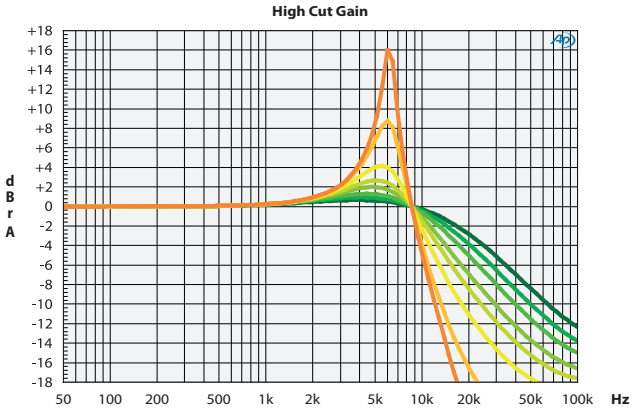




Low Cut/High Cut

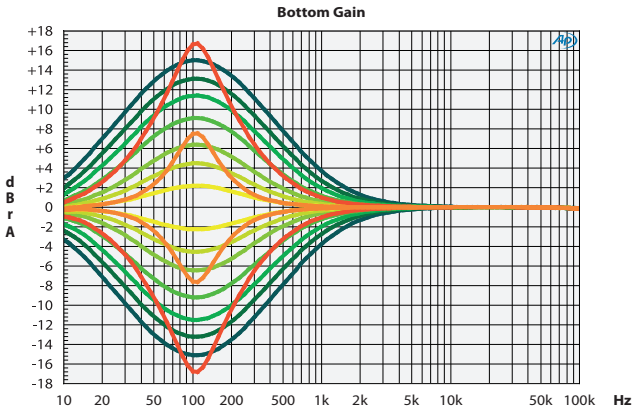
Left: miscellaneous settings of the gain controller at the same frequency in low cut mode
Right: miscellaneous settings of the gain controller at the same frequency in high cut mode

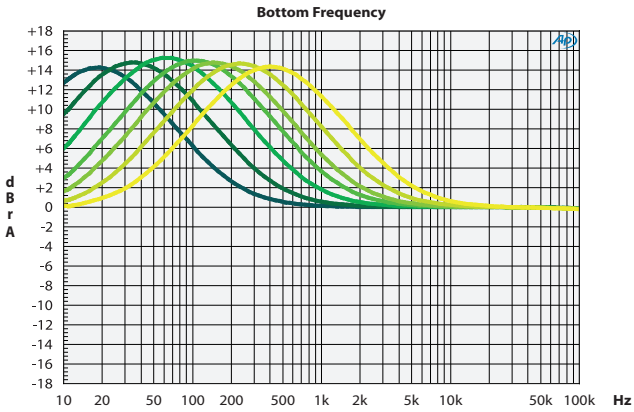




Bottom

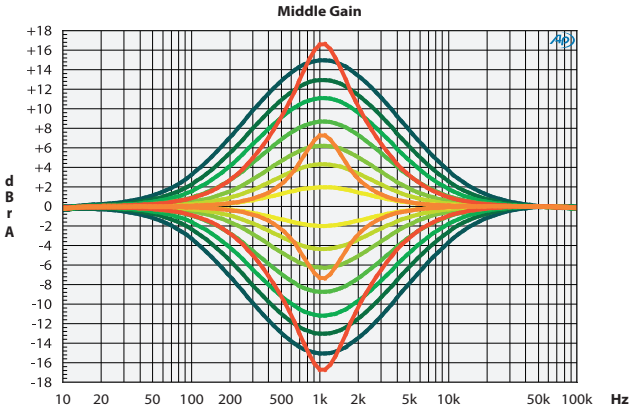
Left: miscellaneous settings of the gain controller with wide (green) and narrow Q (red)
Right: miscellaneous settings of the frequency controller in boost mode with wide Q

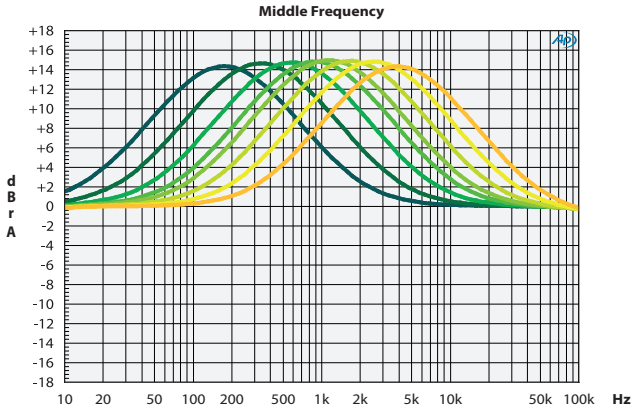




Middle

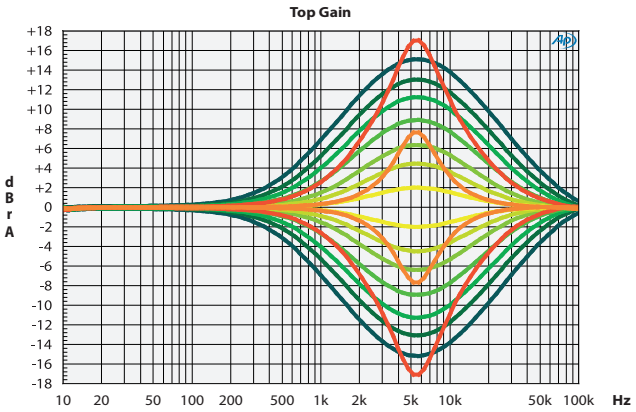
Left: miscellaneous settings of the gain controller with wide (green) and narrow Q (red)
Right: miscellaneous settings of the frequency controller in boost mode with wide Q

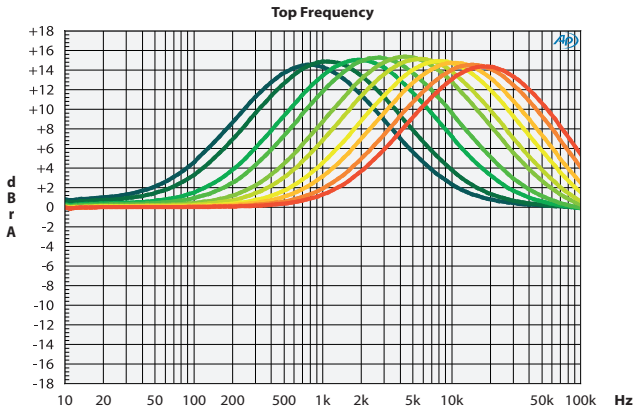




Top

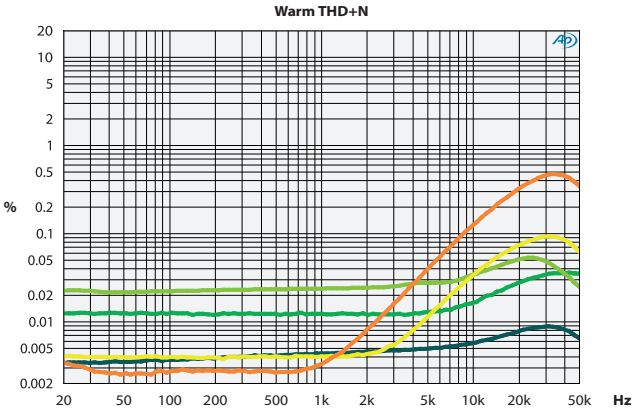
Left: miscellaneous settings of the gain controller with wide (green) and narrow Q (red)
Right: miscellaneous settings of the frequency controller in boost mode with wide Q

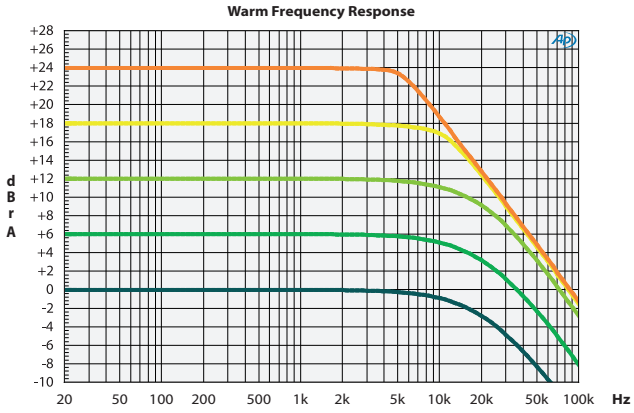




Warm

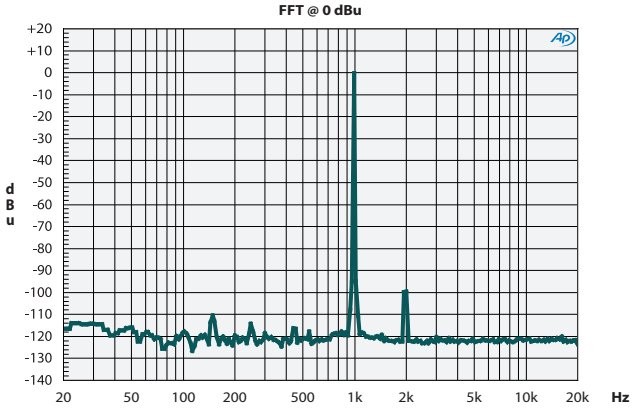
Left: distortion rate in % at different input levels in Warm mode
Right: frequency response at different input levels in Warm mode

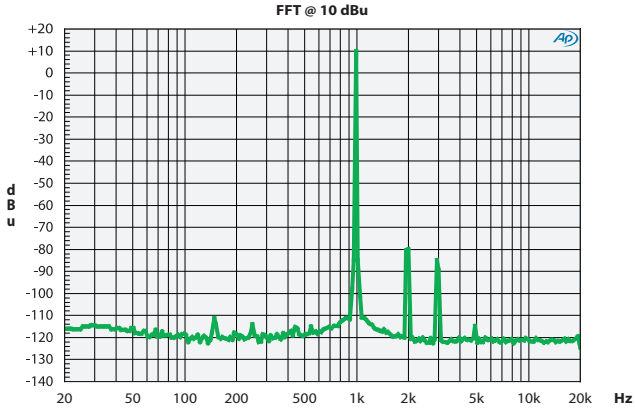




Harmonics

Left: harmonic spectrum on 0 dBu @ 1 kHz
Right: harmonic spectrum on 10 dBu @ 1 kHz





Technical Data

Frequency response:	<10 Hz - >200 kHz (-0.2 dB)
Low Band (Shelf Filter):	9 - 200 Hz (+/-15 dB)
Low Band (Cut Filter):	9 - 200 Hz
Bottom Band (Peak Filter):	18 - 400 Hz (+/-15 dB)
Quality factor (Q):	1.3 (wide) and 0.5 (narrow)
Middle Band (Peak Filter):	150 Hz - 3.5 kHz (+/-15 dB)
Quality factor (Q):	1.3 (wide) and 0.5 (narrow)
Top Band (Peak Filter):	700 Hz - 16 kHz (+/-15 dB)
Quality factor (Q):	1.3 (wide) and 0.5 (narrow)
High Band (Shelf Filter):	1.8 - 35 kHz (+/-15 dB)
High Band (Cut Filter):	1.8 - 35 kHz
THD+N @ 0 dBu, 20 Hz - 22 kHz:	0.0037 %
THD+N @ +10 dBu, 20 Hz - 22 kHz:	0.0038 %
Noise floor, 20 Hz - 20 kHz (A-weighted):	-91.6 dBu
Dynamic range, 20 Hz - 22 kHz:	119 dB
Maximum input level:	+27 dBu
Maximum output level:	+27 dBu
Input impedance:	10 kOhm
Output impedance:	68 Ohm
Input pin assignment:	1. Ground 2. Positive 3. Negative
Output pin assignment:	1. Ground 2. Positive 3. With 68 Ohm to Ground
Power consumption:	60 W max
Fuse type:	230 VAC 0.8 A Slo-Blo 115 VAC 1.6 A Slo-Blo
Dimensions (W x H x D):	483 mm x 89 mm x 377 mm 19“ x 3.5“ (2 U) x 14.8“
Weight:	8 kg / 18 lb

Warranty

Conditions and limitations

The museq is covered by a limited warranty for a period of 24 month against defects in parts and labor from the date of purchase. Natural wear is not covered by this warranty. elysia will remedy problems caused by material or workmanship either by repair or replacement to restore the product to full performance without charge for parts and labor. Repairs or replacements will not extend the warranty period.

The warranty is given to the original purchaser only and is not transferable. elysia will only give warranty on products purchased through authorized elysia dealers. The warranty will only be valid in the country of the original purchase unless otherwise pre-authorized by elysia.

All warranties become void when the product has been damaged by misuse, accident, neglect, modification, tampering or unauthorized alteration by anyone other than elysia authorized service personnel.

The warrantor assumes no liability for property damage or any other incidental or consequential damage whatsoever which may result from failure of this product. Any and all warrantees of merchantability and fitness implied by law are limited to the duration of the expressed warranty.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Some of the above limitations may not apply to you.

Return and packaging

In case you notice any defect, please contact elysia directly for technical support. You can find the correspondent contact data at the end of this warranty statement. You will receive a return authorization which enables you to send your product to the elysia factory where it will be repaired and then sent back to you.

All returns to the factory must be in the original packaging, accompanied by the return authorization, and must be shipped via insured freight at the customer's own expense. A new original packaging can be ordered from elysia. The customer may be charged for new factory original packaging if he fails to ship the product in the original factory packaging.

In case that a product must be returned to the factory from a country outside Germany, the customer shall adhere to specific shipping, customs, and commercial invoicing instructions given with the return authorization as elysia will not be responsible for transportation costs or customs fees related to any importation or re-exportation charges whatsoever.

After repair, the product will be returned to the customer via prepaid, insured freight, method and carrier to be determined by elysia. elysia will not pay for express or overnight freight service or pay for shipments to locations outside Germany. All damages caused by transport are not covered by this warranty.

Contact data

For technical support please contact:

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