

# **Back to The Nature of Sound**

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Relay-Based All Discrete Insert Matrix



U M Unhindered Maker's MS MASTERING SERIES

# User Manual

Carefully handcrafted in Poland

Be a true Unhindered Maker...

#### **Back to The Nature of Sound**



Relay-Based All Discrete Insert Matrix

#### **OWNER'S MANUAL**

v1.0 - 09/2025

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#### Dear Customer,

Thank you for the confidence you have shown towards HUM Audio Devices by purchasing the N-Matrix. You have chosen a unique high-end tool which will help you to get excellent sonic results. The N-Matrix, like all other HUM Audio Devices designs, is built with the utmost attention to sound quality, reliability, speed of work, and user comfort. It fits fully into the HUM philosophy, as do all our devices, including the famous LAAL Look Ahead Analog Limiter and the N-Trophy All Discrete Analog Console.

We believe you will have as much fun using your N-Matrix as we did designing and building it for you. Be the true Unhindered Maker! Draw on true Inspiration and create your next masterpiece joyfully and without compromise, with a vital and full-of-life sound. This is the idea that guides us. Your hard work deserves that.

We wish you every success with your new N-Matrix insert processor!

Your HUM Audio Devices - Team

Krzysztof Tonn

Krzysztof Rudnicki

Follow us on Youtube, Vimeo, Facebook and our site:

www.hum-audio.com www.facebook.com/HumAudioDevices/

HUM Audio Devices N-Matrix was designed, developed and precisely handcrafted in Poland.



#### **Back to The Nature of Sound**

N-Matrix is a fully discrete all-analog insert matrix, with enormous capabilities and great simplicity of use. It is in fact, much more than insert matrix. It is absolutely unique and allows for real freedom of work. You won't be overwhelmed by increasingly complex technology, but quite the opposite: N-Matrix is very intuitive. It allows you to work fast and simply. You will focus on the creative process itself, while ultimately solving all advanced 'insert' tasks you may encounter every day as a mastering or mixing engineer.

N-Matrix will not alter your perfectly worked-out master in any way, so you can always use it with the utmost confidence. This is the way it should be.

A beautiful and inspiring classic look is accompanied by a friendly and innovative approach to working with an insert matrix processor. It helps to bring back the pleasant feeling of communing with what is close to every human being by nature: the beauty of analogue sound.

Congratulations on your purchase, and we wish you joyful work!





#### Operation Safety.

N-Matrix is prepared to handle all voltages you may encounter in different countries. No special customisation is required. Should you have any doubts, however, please contact your local dealer. The included power cable is compatible with the connectors used in your country of purchase. If required, you can order a cable adapted to a different mains socket from HUMAudio Devices.

Disconnect the N-Matrix from the electric power grid if you will not use it for a long period of time. Unplug the power cord from the mains to cut the power supply to the unit.



Do not use N-Matrix anywhere near water (for example, in a bathroom, a damp cellar, near swimming pools, or similar environments). Otherwise, you are dealing with an extremely high risk of electrical shocks! N-Matrix should also not be installed near equipment producing strong magnetic fields or extreme heat. Ventilation holes in the top cover should also not be covered.

Never allow any fluids to be spilled or sprayed on the N-Matrix. Such actions can lead to dangerous electrical shocks or fire!

If, during operation, the sound is interrupted or LEDs no longer illuminate, if abnormal odour or smoke is detected, or if liquids are spilled on the unit, immediately disconnect the power cord plug and contact your dealer.



#### Power Supply.

A very high-quality PSU is built into the N-Matrix housing. It is designed with the maximum care of the perfect, transparent sound during N-Matrix operation. You also have a soft start and protection during the power cycle, so no thumps and other sound artefacts are present on your monitors. Although it is safe to turn on/off the N-Matrix on working monitors, it is good to get into the habit of muting the monitor's output before making any substantial changes in any of your audio connections.

We strongly recommend using a good quality, custom, shielded AC cable included in the N-Matrix set to power the unit.



The unit is prepared to use with the 100-240V AC. Always connect your N-Matrix to the AC outlet with that voltage, otherwise you may damage the device!

Be sure also to use the correct fuse adequate to the operating voltage!







#### How did we do it? The idea behind the N-Matrix.

The N-Matrix is an expanded concept of the passive insert matrix used in the N-Trophy All Discrete Mastering Console (i.e., the centre section of the N-Trophy All Discrete Analog Console).

We were encouraged to build it by the mastering engineers and producers, following the well-received launch of our mastering console at AES NY 2024. Talking to sound engineers, we all felt there was a serious shortage in the market for truly analog equipment for advanced work with inserts. We felt a real need to design a completely new insert matrix. One that would be all-discrete, analog, lossless, passive, and at the same time offer much more than other available insert switchers, enabling fast and intuitive operation. One that would be user-friendly and fully satisfy the ideas and needs of sound engineers.

This is how the N-Matrix was born.

To build the N-Matrix, we used almost 300 top-class relay switches with gold-plated contacts. We carefully selected the highest quality components, designed audiophile quality discrete analog circuits, and conducted many hours of listening tests and measurements in our studio and lab, to get the perfectly transparent sound. The 25 years of sound engineering experience were invaluable here.

The entire unit is hand-built in our lab to the highest standards. We have taken care of every detail. The signal path is also as short as it can be, despite plenty of the N-Matrix creative features. Working on the N-Matrix gives you a lot of fun and creative freedom.

Let's go then to the detailed description how you can make use full of the N-Matrix features.



#### Installation and Connections.



N-Matrix is a 2U device with balanced, discrete XLR analog inputs and outputs on the back panel. The entire signal path of the N-Matrix is fully balanced, from inputs to outputs. We decided not to use the DB25 connectors because of their poor reliability in comparison with XLR sockets. XLR connections also give you much more flexibility, especially when the N-Matrix is not used in fixed studio environments.

All six insert slots have their own stereo XLR input and output pairs. They are labelled as INSERT 1......INSERT 6. Independent stereo inputs and outputs are also available for N-Matrix's chains [A] and [B]. They are labelled with letters [A] and [B], respectively.





#### <u>Wiring scheme (example of input and output on the back panel):</u>



All audio inputs and outputs use balanced XLR sockets.

Pin1: GND (ground shield)

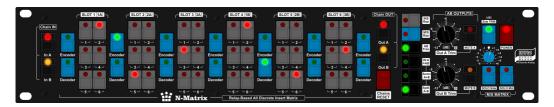
**Pin2:** + (hot) **Pin3:** - (cold)

So this is a standard XLR pin configuration.

On the left side of the back, panel you will find also an AC socket for a standard IEC power cable. We strongly recommend you to use a good quality, shielded AC cable included with the N-Matrix. This cable also has a connector lock to prevent accidental disconnection of the plug from the socket.

#### ii N-Matrix

#### Overview. Creative tools you will find in the N-Matrix.



N-Matrix offers maximum quality possible in the analog domain that you can expect from a mastering insert processor. The signal path is fully balanced from inputs to outputs. All switching and routing is passive, relay-switched, and as short as it can be. The only active discrete circuits are those responsible for M/S encoding, decoding, Side trimming, stems summing and output level trimming - when you switch them on, of course. In each mode, the N-Matrix is fully transparent in sound and has huge headroom, allowing you to manipulate the sound of your connected devices in any way you like.

N-Matrix is very easy and pleasant to use. What you see is what you get. Everything is on the surface. There are no hidden functions, and the internal structure of the insert matrix is so elaborate that it does not restrict you in any way from freely selecting the order of your devices.

Not only does the N-Matrix allow you to program any order of your six devices in the insert chain, but it also allows you to split the main six-slot chain into two three-slot sub-chains [A] and [B]. N-Matrix's different working modes enable parallel processing, serial processing, cascading, stereo stems summing, M/S encoding and decoding at any point in the chains, soloing, output level trimming, and even stereo width expansion between chosen slots. All these features are easily controlled on the comfortable-to-use front panel with an inspiring classic design.

The possibilities are immense. This is indeed an engineer's dream come true for an all-analog top-of-the-range insert matrix processor.





#### How does it work? Basic principles of the N-Matrix operation.

# Basics of the audio signal flow.

In general, in **Standard** (one chain) mode, the audio signal flows from left to right (looking at the front panel), passing all six insert slots. It can be changed in **Split A-B** mode, which divides the one six-slot chain into two three-slot sub-chains **[A]** and **[B]** (detailed description af all modes later on). There is of course, no need to use all slots to have signal flow through the N-Matrix. Not used slots are hard bypassed. If you want to skip a slot, simply deactivate (switch off) all its six inserts.

Depending on the mode selected, the stereo audio signal enters the N-Matrix via XLR inputs (A) or (and) (B), and exits via XLR outputs (A) or (and) (B). At the very beginning and at the end of the inserts chain (or sub-chains), you have dedicated buttons for the (A) and (B) inputs and outputs selection. Whether they are active depends on the operating mode the N-Matrix is in.

Encoder and Decoder buttons are placed between all six slots of the inserts chain, as well as at its beginning and at its end. They allow you to freely choose at which point in the chain the M/S signal encoding or (and) decoding process takes place. At the end of the chain, before XLR outputs, you have the ability to precisely trim the audio signal from -12dB to 0dB (in 41 steps), independently for the A and B outputs. You can also trim the Side signal from -6dB to +6dB, in 1dB steps.



#### Using the Insert Slots.



- Six stereo insert slots are arranged in groups of six numbered buttons, one for each physical N-Matrix insert. You can activate one insert per slot. Of course, each insert number can be active in one slot at the same time. An active insert in any of the slots is always indicated by the lighting of the LED in its corresponding button. Inactive inserts have their buttons' LEDs off.
- If you press <u>one of the active</u> buttons in the slot of your choice, it will deactivate (turn off) the insert with the pressed button's number. If you press <u>the same button more than once</u>, you will cycle the insert on and off. Switching off the insert is effectively the equivalent of a hard bypass. A hard bypassed external device connected to this insert remains unassigned to any slot until the button labeled with its insert number is pressed in any of the slots.
- If you press <u>one of the inactive</u> buttons in the slot of your choice: 1) If there is any active insert with the same number <u>in another slot</u> it will be deactivated there and activated in the slot of your choice. (That other slot will become empty, so hard bypassed). 2) If there is any active insert <u>in the slot of your choice</u> it will be deactivated and replaced with the newly selected insert. The external device connected to the deactivated insert becomes unassigned to any slot as long as the key with its insert number is pressed in any of the slots.
- <u>Very importantly</u>, we have here a **protection against short-circuiting** the audio signal when switching inserts in slots: when you press the insert button, first, the device connected to the insert you are deactivating is disconnected, and its LED goes out. Only when you release the insert button is a new device connected, and the LED in the newly selected insert button lights up.





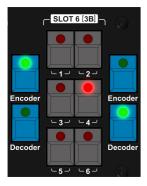


• Pressing the INS Byp button bypasses all the inserts in all slots. During bypass, all buttons' LEDs in all insert slots are off. Bypassing the inserts does not change the chain assignments or A and B input and output selection.



## <u>Using the M/S Encoder and Decoder.</u>

 N-Matrix M/S processing circuits are of the same top quality and use a similar concept to that used in our famous LAAL Look Ahead Analog Limiter. These circuits work differently and in a more musical way compared to similar processors.



- Encoder and Decoder buttons are placed between the six slots of the insert chain, and also at the beginning and the end of it. This allows you to freely select one encoding point and one decoding point for the M/S signal, in any of N-Matrix operating modes. Activating Encoder or Decoder lits their corresponding buttons' LEDs and turns off previously selected ones.
- Encoder and Decoder circuits can be used in any order you wish, when you activate them separately, between different slots. This is a very powerful feature. For example: You can have a certain part of your chain working in M/S mode, while the other part remains in Stereo mode. You can start with the Stereo, then change to M/S for some inserts, and finally return back to Stereo, or vice versa.



● You can trim the output level of the Side channel in the range of -6dB to +6dB, in 1dB steps. A dedicated Side TRIM button activates the trimming rotary switch. Side TRIM circuit is localised just before the Decoder circuit in the N-Matrix signal patch.



- Using the **Encoder** and the **Decoder** together between the same slots (one over another, like shown on the left), has an effect of stereo width processing in this point of the insert chain. The only exception to this is the position between **Slot 3** and **Slot 4**, where you cannot do stereo width manipulation, because the order of the **Encoder** and **Decoder** processing in the audio signal flow is reversed. The reason for this is very important, and will become clear when we describe the N-Matrix's operation in **Split A-B** mode. All inserts remain in stereo mode. Widening gives you a nice increase in the spaciousness in your track, but you won't lose low-end energy in the center of the stereo image, and it's also fully mono compatible.
- In the Split A-B mode, the Encoder and the Decoder circuits are still active, but are divided into two groups ([A] and [B]). The chain [A] ends with the Decoder after Slot 3 [3A], and the chain [B] starts with the Encoder before the Slot 4 [1B] (see page 10). You can also freely activate one Encoder and one Decoder at any point of the [A] or [B] chains.





There is of course, no obligation to use both the **Encoder** and **Decoder** at the same time. You can choose not to use the M/S feature at all if you wish, or enter the N-Matrix with an encoded signal and exit with a decoded one, or the opposite. It is a particularly useful feature when cascading more than one N-Matrix processor for even more creative work, with more <u>advanced stems summing</u> or parallel processing. The possibilities are truly amazing!



Pressing the M/S Byp button bypasses the Encoder and the Decoder. During the M/S bypass, their button's LEDs are all off. Bypassing the Encoder and the Decoder does not change their chain assignments.



● SOLO Side and SOLO Mid switches give you the possibility of soloing the Side and Mid signals. All active insert slots, (A) and (B) input and output selection, and N-Matrix working mode remain unchanged during this soloing.



● Pressing the Chains RESET button deactivates all slots. It clears their insert selections, as well as puts all physical N-Matrix inserts into hard bypass mode. It also deactivates the Encoder and Decoder. All LEDs in all insert slots, as well as the Encoder and Decoder LEDs are turned off after reset. Resetting does not affect the A and B inputs and outputs selection. It will also not change the N-Matrix operating mode.

# The AB OUTPUTS section.



- Here, you can precisely trim signal levels on both stereo outputs A and B, in the range from -12dB to 0dB. Each trimming pot is stepped and has 41 positions. Whether you can use only **Out A Trim** or both **Out A Trim** and **Out B Trim** pots depends on the operating mode the N-Matrix is in.
- MUTE A and MUTE B buttons mute A and B output signals.



AB Trim button activates AB OUTPUTS trimming section.



#### N-Matrix OPERATING MODES.



• Pressing buttons in this group changes the N-Matrix operating modes. There are 5 modes, allowing you to take full advantage of the rich capabilities of the N-Matrix. They differ in the way the signal is routed through the insert chain, through the Encoder/Decoder, the choice of XLR Inputs/Outputs, and give the ability to split a single insert chain into two [A] and [B] sub-chains, with (or without) summing at the end.

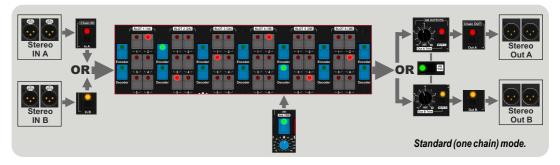




#### 1) Standard mode (one chain).



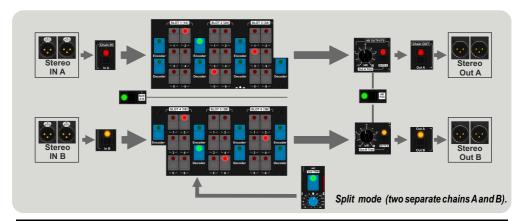
In the Standard mode, you have one six-slot chain. You can select stereo input A or B and stereo output A or B from the N-Matrix front panel. Signal is taken from the stereo A or B XLR inputs and goes to the stereo A or B XLR outputs through all active insert slots, Encoder, Decoder, and Side Trim (if it's active). You can make use of Out A Trim or Out B Trim pots if you wish, depending on which output you selected.



#### 2) Simple Split mode (two fully separate sub-chains: [A] and [B]).



- In the Simple Split A-B mode, the signal is split into two independent three-slot sub-chains: [A], with slots 1-3 (labelled [1A], [2A], [3A]) and [B], with slots 4-6 (labelled [1B], [2B], [3B]). Stereo XLR inputs and outputs [A] and [B] are automatically and permanently assigned to their sub-chains [A] and [B]. This is indicated by the illuminated LEDs in the buttons: In A, Out A, In B, Out B. You can make use of the Out A Trim and Out B Trim pots and MUTE A and MUTE B buttons on both stereo [A] and [B] outputs.
- The Encoder and the **Decoder** circuits are also divided into two groups ([A] and [B]). The chain [A] ends with the **Decoder** after the **Slot 3** [3A], and the chain [B] starts with the **Encoder** before the **Slot 4** [1B]. This arrangement is the most versatile and logical. You can also freely activate one **Encoder** and one **Decoder** at any point of the [A] or [B] sub-chains, or both on the same sub-chain. You can use **Side Trim** feature as well.



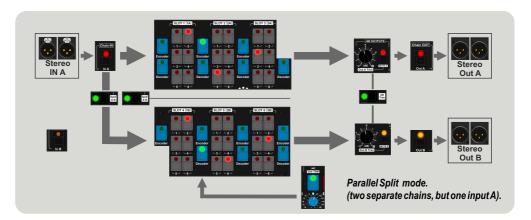




#### 3) Parallel Split mode (two separate sub-chain outputs, from input A).



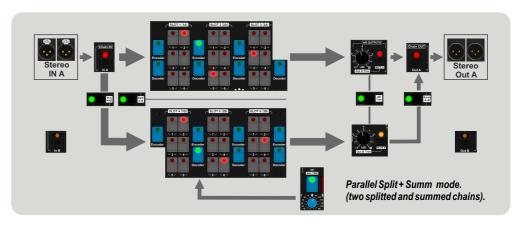
When the Split A-B and IN A → AB buttons are active, the audio signal is split into two independent three-slot sub-chains [A] and [B], like in the Simple Split mode described in point (2). Everything works in the same way as in the Simple Split mode, except that in the Parallel Split mode, the audio signals for sub-chains [A] and [B] are taken from stereo XLR inputs (A). The stereo (B) inputs and the In B switch are inactive in this mode. Sub-chains [A] and [B] are routed to stereo (A) and (B) XLR outputs).



#### 4) Parallel Split + Summ mode (two split and summed sub-chains).



When all three mode buttons: Split A-B, IN A→AB, and Summ A+B are active, the audio signal is split into two independent three-slot sub-chains [A] and [B], like in the Parallel Split mode described in point (3). The only difference is that both sub-chains [A] and [B] are summed. Their summed stereo signal is routed to the stereo outputs A. Inputs B. and outputs A. swell as buttons. In B and Out B, are inactive in this mode.



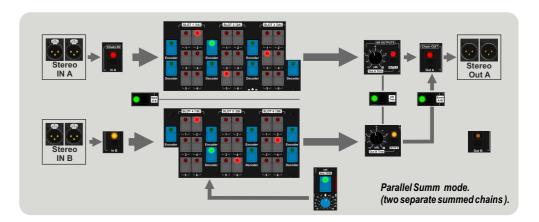




#### 5) Parallel Summ mode (two separate sub-chains summed to output A).



● When the Split A-B and Summ A+B buttons are active, the audio signal is split into two independent three-slot sub-chains [A] and [B], like in the Simple Split mode described in point (2). Everything works in the same way as in the Simple Split mode, except that in the Parallel Summ mode, the audio signals from sub-chains [A] and [B] are summed at the end. The summed stereo signal is routed to the stereo XLR outputs A. The stereo outputs B and the Out B button are inactive in this mode.







Please remember: to use any of the **Split** or **Summing** modes (2,3,4,5) you have to activate the **Split A-B** button first!

#### POWER switch.



Pressing the POWER button switches on/off the N-Matrix. Turning off the N-Matrix does not change any settings. All selected options for Inserts, Inputs and Outputs, Encoder, Decoder, Trimming, and operating mode remain the same as the last time N-Matrix was switched on.







#### Feature summary.

N-Matrix is designed with the highest sound quality, ease of use and unique features in mind. It complements the line of HUM Audio Devices mastering equipment, together with the LAAL Look Ahead Analogue Limiter. Like all other devices, N-Matrix is carefully hand-built in our lab in Poland.

- Mastering Patchbay/Switcher/Insert Processor.
- Fully analog, all-discrete audio signal path.
- Very high headroom, wide band, and very low noise (+/-24V int. powering).
- Fully balanced signal flow, from inputs to outputs.
- All-passive, lossless signal switching, based on top-quality relays with gold-plated contacts.
- Perfectly transparent sound, no matter what settings or operating mode you use.
- Two independent stereo inputs and outputs A and B.
- Six-slot stereo main inserts chain.
- Possibility to split the main chain into two three-slot sub-chains [A] and [B].
- Five modes of operation, with linear or parallel processing, splitting and stems summing.
- Possibility to sum two stereo input stems flowing through two parallel chains.
- Summing is based on discrete op-amps we designed for our famous LAAL limiter.
- Cascading two or more N-Matrixes opens up even more incredible possibilities for multi-stem summing and processing.
- All-discrete M/S Matrix with lots of features.
- M/S **Encoder** and **Decoder** effectively serve as two additional inserts and can be used at any point in the inserts chain.
- Output section with Out A, Out B, and Side signal trimming, muting, and soloing.
- Rotary stepped control for outputs and for **Side** signals trimming.
- All inputs/outputs use balanced XLR sockets.
- 2U chassis, classic design with top-quality buttons and solid machined aluminium knobs.
- Custom-made shielded AC cord.







#### Service and Repairs.

Unplug the N-Matrix from power and signal connections and contact your local dealer when you think repair is needed - or when moisture may accidentally have reached inside the N-Matrix box housing, or in cases when the N-Matrix may have fallen and you see any signs of damage. This also applies to any situation in which the unit has not been subjected to any of these unusual circumstances but still is not functioning normally, or its performance is substantially altered. In cases of damage to the power supply and cord, first turn off the main circuit breaker before unplugging the power cord.

All repairs are done at HUM Audio Devices lab or, in some cases, at an authorized dealer's site.



Do not open the N-Matrix box ourselves - - there are no user serviceable parts inside!





#### Replacement parts.

Be sure that any authorised service technician uses original replacement parts or those with identical specifications as the originals. Incorrectly substituted parts can lead to fire, electrical shock, or other dangers, including further equipment damage. HUM Audio Devices can only guarantee the quality of performance if the correct replacement parts are used.

Always be sure to ask a service technician to conduct a thorough safety check and ensure that the state of the repaired device is in all respects up to factory standards.



#### Cleaning.

Do not use any solvents, as these can damage the chassis, switches, panel, or enclosure finish. Use a clean, dry cloth (if necessary, with an acid-free cleaning liquid). Great for cleaning N-Matrix' front panel and housing is a dry micro fibre cloth.

Disconnect the device from the power source before cleaning.





#### **Declaration of CE Conformity**

The construction of these units complies with the standards and regulations of the European Union.





## Specifications.

Measured with the Prism D-Scope III Audio Analyzer.

Audio voltage rail: +/- 24V
Self Noise A-weighted: -105 dBV

**THD+N:** 0.005% (1kHz / 1dBV)

Frequency Response: 20Hz - 30kHz (+/- 0.16dB)

-0.3dB @ 50kHz | -1.2dB @ 100kHz | -3.8dB @ 200kHz

-0.07dB @ 10Hz | -0.3dB @ 5Hz |

Phase L/R Matching: max 0.8 deg (10Hz - 30kHz)

CMRR: -65dB

Max Input Level: +22dBV
Max Output Level: +28dBV

Input XLR (LINE, TAPE, INS SEND) balanced, impedance 10k Ohm

Output XLR (DIR OUT, INS RET) balanced, impedance 75 Ohm

Mic Input balanced, impedance 3.5k Ohm

AC Powering (atomatically switchable 100V-240V) 50/60Hz

Power Consumption: max. 35 Watt

Weight: N-Matrix 9.8kg (12kg shipping)

**Dimensions:** N-Matrix (2U) Width: 484mm

Height: 88.9mm

Depth: 314mm (housing with sockets & knobs)

Shipping Width: 620mm box Height: 170mm

Depth: 420mm

Package contains: - N-MAtrix processor

- Custom-made, shielded AC cord.







#### Warranty.

- We provide full three (3) year Warranty for HUM Audio Devices N-Matrix against defects in material and workmanship. This Warranty relates to each original Customer of HUM Audio Devices product and is not transferable to other persons.
- 2) The period of this Warranty commences at the official receipt date of product purchase from authorized HUM Audio Devices Distributor or Dealer in given country, or directly from HUM Audio Devices for other countries. Within a period of Warranty, HUM Audio Devices will remove defects in materials and manufacturing faults adversely affecting warranted product performance, by repairing or replacing parts or replacing the product as we deem appropriate, free of charge.
- 3) This Warranty does not apply to any defect, failure, or damage due to any cause other than defects in materials or workmanship of the product. Slight variations in finish and anodized coating are normal in the manufacturing process and are not a defect.
- 4) HUM Audio Devices will not be responsible for damage to, or failure of, or need for repair or correction of any product, which occurs as a result of user abuse or misuse, including but not limited to the operation with wrong power supply or excessive voltage, or other wrong application or storage including unreasonable exposure to heat, cold, wind, water, or other elements, negligence or accident, and to material fatigue or degradation through very intensive normal usage.
- 5) Serial number removing or altering, actual or attempted correction, repair, service, modification or alteration of any HUM Audio Devices product by persons not authorized to do it automatically expires this Warranty.
- 6) Customer must contact his local HUM Audio Devices Distributor or Dealer, or in countries without Distribution - directly with HUM Audio Devices, to receive Product Return Authorization Number that will be used to track and identify the returned product.
- 7) After receiving Product Return Authorisation Number please deliver the complete product in the original packing or in such packing that is adequate to prevent damage to the product during the normal course of transport to your local HUM Audio Devices Dealer, or in case of direct purchase to HUM Audio Devices. Transportation and insurance is the Customer's responsibility and is not covered by this Warranty.
- 8) In the interests of product development, the specifications, construction and appearance of all above products are subject to change without prior notice and without obligation to install these improvements in any product previously manufactured.





9) All remedies and the measure of damages are limited to the above services. It is possible that economic loss or injury to person or property may result from the failure of the product; however, even if HUM Audio Devices has been advised of this possibility, this limited warranty does not cover any such consequential or incidental damages. Some states or countries do not allow the limitations or exclusion of incidental or consequential damages, so the above limitation may not apply to you.



#### <u>Limitations of Liability.</u>

In no event will HUM Audio Devices be liable for any damage, including loss of data, lost profits, cost of cover or other special, incidental, consequential or indirect damages arising from the use of the unit, however caused and on any theory of liability. This limitation will apply even if HUM Audio Devices or an authorised dealer has been advised of the possibility of such damage.



#### Contact.

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