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# MATRIX

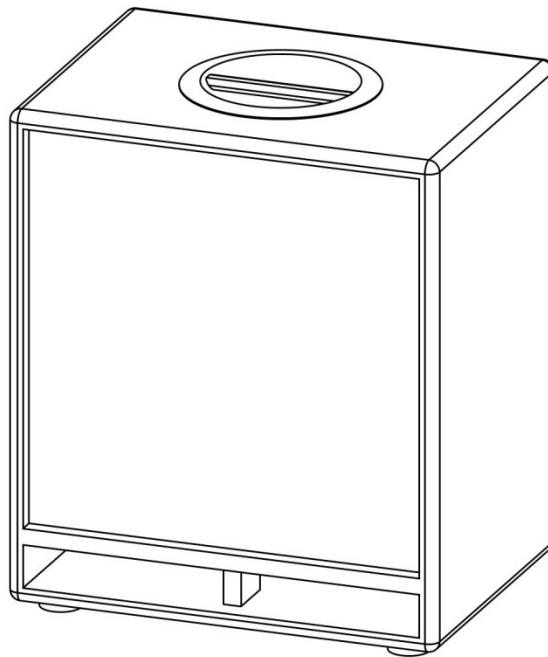
## AMPLIFICATION

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# NL SERIES

# GUITAR SPEAKER

## USER MANUAL



**MODELS COVERED:**

**NL 12**

**NEOLIGHT™ CABINET**

**DESIGNED AND MANUFACTURED  
IN THE UK BY MATRIX.**



# MATRIX AMPLIFICATION

## Thank You

Congratulations on the purchase of your new Matrix loudspeaker. Matrix products are the result of a collaboration between Designers, Engineers and Musicians with many decades of experience in the design and practical in field application of exceptionally robust, reliable and ergonomic audio equipment.

This manual will help you to get the most from your loudspeaker. For maximum benefit, it is recommended that all instructions and warnings are carefully read. Where unsure about anything, please consult a qualified technician.

For warranty service, please retain your receipt and all packaging that comes with the loudspeaker, as it has been specifically designed to transport the cabinet safely.

## Unpacking

Please unpack and inspect your new loudspeaker for any damage that may have occurred during transit. If damage is found, notify the carrier immediately.

*PLEASE RETAIN ALL FACTORY PACKAGING FOR ANY FUTURE POSTAL TRANSIT.*

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## CAUTION:



*OBSERVE ALL SAFETY AND USAGE INSTRUCTIONS TO AVOID POSSIBLE DAMAGE TO EQUIPMENT AND EXPOSURE TO HAZARDS (THIS SYMBOL UNIVERSALLY FLAGS CAUTION NOTICES)*



*LETHAL VOLTAGES PRESENT AT SPEAKER, CABLE AND AMPLIFIER TERMINALS; ENSURE ALL WIRING IS SAFE AND CORRECT BEFORE USE.*

*(THIS SYMBOL ALSO UNIVERSALLY FLAGS ELECTRICAL HAZARDS)*

*DO NOT OPEN LOUDSPEAKER; LEAVE ALL INTERNAL SERVICE OPERATIONS TO A QUALIFIED TECHNICIAN.*



*THIS PRODUCT IS CAPABLE OF PRODUCING SOUND PRESSURE LEVELS WHICH MAY DAMAGE HEARING. THE USER IS RESPONSIBLE FOR EXPOSURE LEVELS AND USE OF HEARING PROTECTION.*

## 1. Features and Specifications:

The Matrix Neolight NL12 is a 12", lightweight loudspeaker cabinet intended for use with electric guitars and other instruments with similar timbral characteristics. It is a passive, *un-amplified* cabinet - leaving the user free to choose an amplifier which meets their requirements.

The design was conceived with considerable consultation with customers and we welcome any comments and suggestions you may have in our continual quest to bring you the products you want to use.

### Loudspeaker features and usage:

- **Economical Single Driver Cabinet Optimised for Guitar Sound Reproduction.**

The NL12 is also suitable for use with other instruments with similar timbral characteristics and non-critical monitoring applications.

It is however not recommended for use with bass guitar, drums and other instruments which depend upon reproduction of the lower bass octaves (frequencies below 55 Hz as a rough rule of thumb in this instance). Output levels are likely to be low, distorted and driver damage may result.

The sound dispersion pattern for the cabinet is typical of others in its class. It is essentially conical with a central sweet spot and softer sounding regions to the off axis extremities, this is useful for allowing greater control of sound clarity by ensuring upper treble is not transmitted and reflected significantly off surrounding surfaces, potentially muddying the sound as heard by the listener under certain situations.

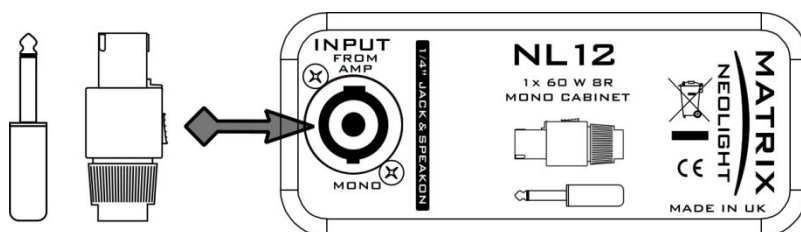
- **Neolight™ Lightweight Technology**

Through numerous engineering innovations design aspects of the loudspeaker and cabinet have been optimised to ensure the complete package is no heavier than it needs to be in order to perform optimally for its intended application.

We refer to these numerous optimisations collectively as Neolight Technology; You will find this design philosophy applied in many of our other products.

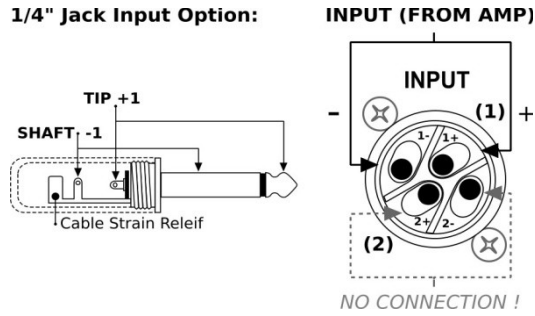
- **Cabinet Connectors support the use of 1/4" Jack and Speakon Connections.**

To maintain compatibility with system configurations many musicians are familiar with, the ability to connect to the loudspeaker using 1/4" Jacks is also provided via combination dual format Speakon connectors.



We would like to recommend however that Speakon connectors are used where possible for connecting loudspeaker cabinets, as this decreases the chance of damaging equipment or electrocution through accidental exposure to the live end of an amplifier output lead, shorting, or connection to line level inputs.

## Loudspeaker Terminal Connections:



For reference only, consult a qualified engineer if cable wiring modifications are required.

## Loudspeaker Specifications:

NL 12

<b>Number of Audio Channels:</b>	<b>1</b>
<b>Power - Watts/RMS Continuous :</b>	<b>60 W</b>
<b>Power – Watts/Peak Headroom :</b>	120 W
<b>Cabinet Impedance :</b>	<b>16 Ω</b>
<b>Frequency Bandwidth, Useable :</b>	<b>75-6,000 Hz</b>
<b>Sound Dispersion Pattern Nominal :</b>	<b>Conical, Frequency Dependent.</b>
<b>Cabinet Nominal Weight :</b>	<b>7.7 kg / 16.9 lbs</b>
<b>Cabinet Dimensions Inches :</b>	<b>17.9H x 15.75W x 11.8D</b>
<b>Cabinet Dimensions Millimetres :</b>	<b>455H x 400W x 300D</b>



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## 2. Recommended Amplification:

This cabinet is primarily intended for valve amplifiers within the 15-60w power range; however it may be used with a wide range of small solid state amplifiers.

The Matrix GT and GM series amplifiers may also be used at the user’s discretion to power this cabinet but a degree of caution must be applied with regards to power the amp is capable of producing. Note that driving the cabinet too hard on a large amplifier is likely to damage the loudspeaker/amplifier. We recommend checking the signal level lights on our amps to ensure the cabinet operates within its limits.

With regards to connecting multiple cabinets to the same amplifier, please consult the amplifier user manual.

<b>Amplifier Type:</b>	<b>Recommended min. power:</b>	<b>Recommended max. power:</b>
<b>Solid State</b>	<b>50 W @ 16Ω amp rating</b>	<b>120 W @ 16Ω amp rating</b>
<b>Valve</b>	<b>15 W @ 16Ω amp rating</b>	<b>60 W @ 8Ω amp rating</b>

*Recommendations serve as a guide, if you are unsure about any of the above then consult a qualified technician.*

# Full Two Year Warranty

## Summary of Warranty

Matrix Amplification Limited, warrant to you, the ORIGINAL PURCHASER of each Matrix Loudspeaker, for a period of 2 (two) years from the date of purchase, that the Loudspeaker is free from defects in materials and workmanship and we further warrant the new Matrix Loudspeaker, regardless of the reason of failure except as excluded in this warranty.

## Items Subject to Exclusion from this Warranty

This Matrix Loudspeaker Warranty is in effect only for failure of a new Matrix Loudspeaker which occurred during the warranty period. It does not cover any product that has been damaged because of any misuse be it intentional or otherwise, accident, negligence, or loss which is covered under any insurance.

## What the Warranter Will Do

We will remedy any defect, regardless of the reason for failure (except as excluded above), by repair or replacement. Warranty work can only be performed at our authorised distributors or at Matrix Amplification Limited. We will remedy the defect and ship the product from the service centre or our own factory within a reasonable time after receipt of the defective product. All expenses in remedying the defect, including freight costs from ourselves to you (within mainland UK) will be borne by us. You must bear the costs of shipping the product to our authorised service centre or factory.

## How to Obtain Warranty Service

You must notify us of your need for warranty service not later than the expiry of your warranty. The Loudspeaker must be shipped in a factory pack, which if required can be obtained from us at a modest charge. The Loudspeaker must be sent to us carriage paid and insured.

Corrective action will be taken within a reasonable time from the date of receipt of the defective product by us or our authorised service centre. If repairs made by us or our authorised service centre are not satisfactory, contact us immediately.

## Warranty Alterations

No person has the authority to enlarge, amend or modify this warranty. The warranty is not extended by the length of time which you are deprived of the use of the loudspeaker. Repairs and replacement parts will only carry the unexpired portion of this warranty.

## Design Changes

Matrix Amplification Limited has a policy of continuous improvement to designs without notice and with no obligation to make corresponding changes in products previously manufactured.

Your Statutory Rights are Unaffected by this Warranty

# Declaration of CE Conformity

**Issuers Name and Address:** Andrew Hunt,  
MATRIX AMPLIFICATION LIMITED,  
Unit 1b,  
Techways,  
Wonastow Road Industrial Estate,  
Monmouth,  
Wales,  
NP25 5JA.

**Products:** NL12  
**Equipment Type:** Commercial Audio Loudspeakers.

**Safety Standard:**

**EN 60065 :2002+A12 : 2011** Safety requirements: Audio, video and similar electronic apparatus.

**EN 55103-2 : 2009/IS1: 2012** Electromagnetic compatibility: Audio-visual apparatus for professional use - Part 2: Immunity

**Declaration:**

I certify that the product identified above conforms to the above standards.

**Signatories:**  
Andrew Hunt,  
Managing Director.



**Date of Issue:**  
9 July 2013.

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