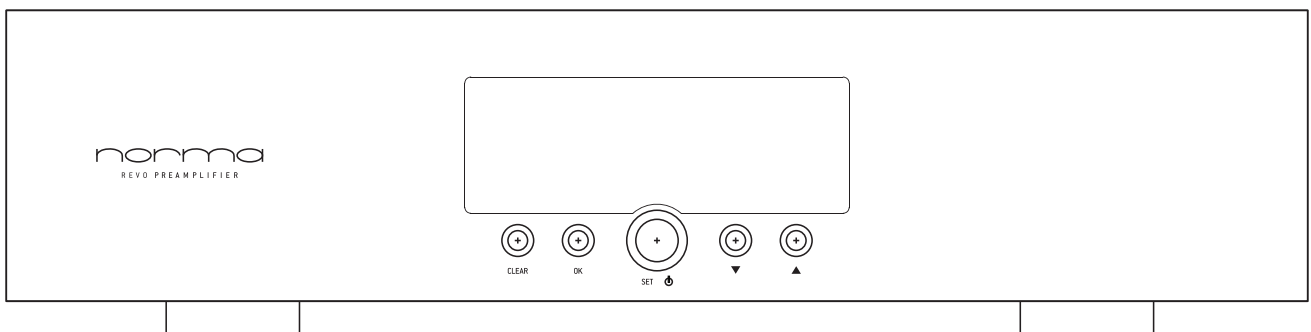


norma
AUDIO ELECTRONICS

REVO SC-2

Stereo Preamplifier

Manual



Safety manual

REVO SC-2

Contact informations

Make sure you register your purchase.

Visit: <http://www.normaudio.com/normaudio/>

Documentation Conventions

This document contains general safety and operation instructions for your Norma product. It is important to read this document before attempting to use this device. Please pay particular attention to safety instructions.

The information that the manual contains is subject to change without notice. NORMA assumes no responsibility for errors that may appear within this document and is restricted for use by NORMA Audio.



Copyright and Acknowledgements

Copyright © 2020 Norma Audio. First edition March 2020.

Opal Electronics - Via Persico, 26 - Loc. Bettenesco

Persico Dosimo (Cremona)

Italy

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Printed in Italy.

NORMA has the right to make changes to this document without notice.


I • Introduction

Thank you for purchasing a NORMA Audio product.


Please read this manual thoroughly before making connections and plugging in the unit to the mains power supply.

Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new NORMA unit.


Please retain this manual for future reference.




CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

 The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

 The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

II • Unpacking

Follow these steps to safely unpack the NORMA unit:

- Open the shipping box and remove the top layer of foam. Be careful not to damage the inside of the package with the knife.

The packaging must contain the following items:

- 1 NORMA;**
- 1 Remote control unit;**
- 1 AC power cord (in some countries);**
- 1 User manual;**
- 1 Warranty police and registration card.**

- Grab the underside of the NORMA unit and lift it straight out of the packing box;

- Place the NORMA unit in a safe location and remove the protective plastic wrapping.

Note:

If any accessories are missing, or if the unit is damaged or fails to operate, notify your dealer immediately. If the unit was shipped to you directly, notify your shipper immediately. NORMA recommends that you retain the original carton and packing materials in case you need to move or ship the unit in the future. Neither NORMA or the shipper can be held responsible for damages incurred during transit if the original factory packing is not used. All factory returns require that a previous return authorization number be issued by NORMA prior to shipment.

Keep this manual handy for future reference.

Register your NORMA unit online at www.normaudio.com within 15 days of purchase. Retain the original, dated sales receipt as proof of warranty coverage.

▲ Caution:
Keep the carton box, the foam protection and the PET sheet out of the reach of children, choking hazard.

REVO SC-2 / Safety manual

I / II • Introduction / Unpacking ◀ |

III • Before use

⚠ IMPORTANT SAFETY INSTRUCTIONS ⚠

Read this section carefully to ensure safe operation

▶ **III.I General**

III.I.I • Read these instructions

All the safety and operating instructions should be read before the product is operated.

III.I.II • Keep these instructions

The safety and operating instructions should be retained for future reference.

III.I.III • Heed all warnings

All warnings on the product and in the operating instructions should be adhered to.

III.I.IV • Follow all instructions

All operating and use instructions should be followed.

III.I.V • Preventing hearing loss

Caution, excessive sound pressure from earphones and headphones can cause hearing loss.

III.I.VI • The labels containing information about safety must be always visible and in good conditions

▶ **III.II Positioning**

III.II.I • Environment and space requirements

Operating environment temperature and humidity: +5 °C to +35 °C (+41 °F to +95 °F); less than 80% RH (cooling vents not blocked). Do not install this unit in a poorly ventilated area, or in locations exposed to excessive humidity or direct sunlight (or strong artificial light).



Due to stray magnetic fields, turntables, amplifiers and CD players should not be located nearby due to possible interference.



Do not use this product in an explosive atmosphere.



Keep electrical device out of the reach of children. Injuries and shock hazard.



Avoid locations subject to vibration and excessive dust. The dust could accumulate and cause overheating.



III.II.II • Stands

The important weight of our products require that they are placed only on an adequate mechanical structure. We are not responsible for injuries or damages due to a wrong positioning. Do not put NORMA devices on high places, to avoid injury from tip-over or falling. This product cannot be mounted to a wall or ceiling.



III.II.III • Object and Liquid Entry

Do not use this apparatus near water

This product shall not be exposed to dripping and splashing, for example near a bath tub, wash bowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool and the like. Do not place an object containing liquid, such as a flower vase, on the appliance even if it is switched off.

Never spill liquid of any kind on the product.

Internal condense can be formed if the amplifier is carried from an extremely cold environment to an extremely hot one. Please wait at least for an hour before operating it again. Never push objects of any kind into the apparatus through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.

Never use this product with wet hands, shock and injury hazard.



III.II.IV • Flame

Do not place a flaming object, such as a candle or lantern, or near the product. Do not use free flames or flammable substances near this appliance.



III.II.V • Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. Do not block any ventilation openings. Install in accordance with the manufacturers instructions. Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths, curtains and so on. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturers instructions have been adhered to. Ensure that there is adequate ventilation. Leave 20 cm (8") of free space at the top and sides and 10 cm (4") at the rear. The rear edge of the shelf or board above the apparatus shall be set 10 cm (4") away from the rear panel or wall, creating a flue-like gap for warm air to escape.



III.II.VI • Heat

Do not install near any heat sources such as radiators, heat registers stoves, or other apparatus (including amplifiers) that produce heat.



III.II.VII • Batteries

The remote control batteries cannot be exposed to excessive heat such as sunshine, any improper use may result in fire or personal injuries.

▶ III.III Power

III.III.I • AC fuse

The AC fuse inside the unit is not user-serviceable. If you cannot turn on the unit, contact your NORMA dealer.

III.III.II • Power sources

This product should be operated only from the type of power source indicated on the product. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

▲ AC outlet voltages vary from country to country. Make sure that the voltage in your area meets the voltage requirements printed on the unit's rear panel (e.g. AC 230 V, 50 Hz or AC 120 V, 60 Hz). The power cord plug is used to disconnect this unit from the AC power source. Make sure that the plug is readily operable (easily accessible) at all times.

The unit is of class 1 construction and must be connected to a mains socket outlet with a protective earthing connection.

III.III.III • Mains cord

The mains cord is intended to be safely disconnected to the device for this apparatus and shall remain readily operable at all times.

Be sure to insert each power cord securely. To prevent hum and noise, do not bundle the interconnect leads with the power cord or speaker leads.

To completely disconnect this product from the mains, disconnect the plug from the wall socket outlet. The mains plug is used to completely interrupt the power supply to the unit and must be within easy access by the user.

III.III.IV • Power plug / Wall outlet

- If the AC plug of this unit does not match the AC outlet you want to use, the plug must be removed and appropriate one fitted.

- Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.



Contact your NORMA dealer for more information.

- If connected to an AC outlet, the cut-off plug can cause severe electrical shock. Make sure it is properly disposed of after removal.

▲ To avoid fire hazard or other problems, the equipment should be disconnected by removing the mains plug from the wall socket when left unused for a long period of time (for example, when on vacation).

- This product must be terminated with a three-conductor AC mains power cord that includes an earth ground connection. To prevent shock hazard, all three connections must ALWAYS be used.

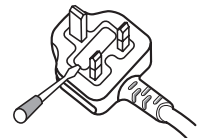
III.III.IV.I • UK plug-fitting instructions (UK only)

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 13 amp fuse is fitted in this plug. Should the fuse need to be replaced, please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be obtained from your local dealer. If the fitted moulded plug is unsuitable for your socket outlet, in any case cut the cord for replace the plug. There is a danger of severe electrical shock if the cut off plug is inserted into any socket. Please contact your local dealer for the appropriate power cord with appropriate plug.

Q How to replace the fuse

Open the fuse compartment with a screwdriver and replace the fuse.



III.III.V • Mains switch

When the switch is in the OFF position, the equipment is not completely switched off from mains.

▲ The STANDBY mode on this unit will not completely shut off all power from the AC outlet. Since the power cord serves as the main disconnect device for the unit, you will need to unplug it from the AC outlet to shut down all power. Therefore, make sure the unit has been installed so that the power cord can be easily unplugged from the AC outlet in case of an accident.

III.III.VI • Power supply

If an external power supply is required, the equipment shall be installed near the power supply so that the power supply is easily accessible.

III.III.VII • Power cord protection

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Do not handle the mains cord with wet hands.

III.III.VIII • Overload protection and prevention

Do not overload wall outlets, extension cords, or integra convenience receptacles as this can result in a risk of fire or electric shock.

Be sure that the used wall outlet and the circuitry above it can provide the correct amount of current without significant voltage drop. It can result in a risk of fire or electric shock.

III.III.IX • Lightning protection

Always unplug this apparatus during lightning storms.
For additional security, remove all connections from the unit when unused for long periods of time.

▶ III.IV Servicing

III.IV.I • Do not try to repair this product

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

For technical assistance, please contact a qualified technician or a NORMA dealer.

III.IV.II • Damage requiring service

- Refer all servicing to qualified service personnel.

- Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

III.IV.III • Service warning

Unplug the apparatus from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged;
- If liquid has been spilled, or objects have fallen into the apparatus;
- If the apparatus has been exposed to rain or water;
- If the apparatus does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the apparatus to its normal operation;
- If the apparatus has been dropped or damaged in any way;
- When the apparatus exhibits a distinct change in performance this indicates a need for service.

III.IV.IV • Replacement parts and accessories

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Use only accessories and optional boards specified by the manufacturer. Clone or non-original accessories may result in fire, electric shock or other hazards.

III.IV.V • Safety check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

III.IV.VI • Never disassemble or modify the unit

Do not use this product with any covers removed, shock hazard. Do not bypass any fuse, it may cause damages and fire.

▶ III.V Care & maintenance

III.V.I • Cleaning

▲ Unplug this product from the wall outlet before cleaning.

- Do not use liquid cleaners or aerosol cleaners;
- Use a damp cloth for cleaning;
- Do not let insecticides, benzene, and thinner come in contact with the unit, absolutely do not use these substances to clean the unit.

IV • Operating

▶ IV.I Connections

▲ Warning:

When making connections to this or any other component, make sure all components are off. Turn off all systems power before connecting the NORMA unit to any other component. For additional security, remove the power cord before making the connections.

Make sure all cable terminations are of the highest quality, free from frayed ends, short circuits, or cold solder joints.

- Before making any connections, make sure all power is turned off and only use suitable interconnects. For additional security, remove the power cord before making the connections;
- Before attempting any system interconnection, please familiarize yourself with the front and rear panel controls of the NORMA unit;
- Do not connect the NORMA unit speakers output terminals to any device other than a loudspeaker. Do not short-circuit the amplifier's output terminals. Never connect the output terminals of one amplifier to the output terminals of another amplifier.

▶ IV.II Warming up

This unit's top, bottom and lateral heatsinks may get hot after prolonged use. This is normal but avoid touching them.

▶ IV.III Running in time

Electronic audio components have a running in time of around a 200 - 300 hours. This will allow the new components to settle down and the sonic properties will improve over this time.

▶ IV.IV Long time do not use

If you do not use this unit for a long time, it may not work properly the next time you turn it on, so be sure to use it occasionally.

If you intend not to use the remote controller for a long time, remove the batteries to prevent damage from leakage or corrosion. Remove expired batteries as soon as possible to prevent damage from leakage or corrosion. Do not leave rubber or plastic items on this unit for a long time, because they may leave marks on the case.

▶ IV.V Application fields

This product is for general household purposes. Any failure due to use for other than household purposes (such as long-term use for business purposes in a restaurant or use in a car or ship) and which requires repair will be charged for even during the warranty period.

V • Recycling & waste

🔍 V.I Notes about recycling



This products packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with the local recycling regulations. When discarding the unit, comply with local rules or regulations.

Batteries should never be thrown away or incinerated but disposed of in accordance with the local regulations concerning battery disposal. This product and the supplied accessories, excluding the batteries, constitute the applicable product according to the WEEE directive. Products and batteries with the symbol (crossed-out wheeled bin) cannot be disposed as household waste. Old electrical and electronic equipment and batteries should be recycled at a facility capable of handling these items and their waste byproducts. Contact your local authority for details in locating a recycle facility nearest to you.

▶ V.II Information on disposal for users (private households)

V.II.I • In the European Union

▲ Attention:

If you want to dispose of this equipment, please do not use the ordinary dust bin. Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.

Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge. In some countries your local retailer may also take back your old product free of charge if you purchase a similar new one.

If your used electrical or electronic equipment has batteries or accumulator, please dispose of these separately before and according to local requirements.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

V.II.II • In other countries outside th EU

If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.

For Switzerland:

Used electrical or electronic equipment can be returned free of charge to the dealer, even if you don't purchase a new product. Further collection facilities are listed on the home page of www.swisco.ch or www.sens.ch.

▶ V.III Information on disposal for business user

V.III.I • In the European Union

If this product is used for business purposes and you want to discard it:

Please contact your NORMA dealer who will inform you about the take-back and recycling. Small products (and small amounts) might be taken back by your local collection facilities.

For Spain:

Please contact the established collection system or your local authority for take-back of your used products.

V.III.II • In other Countries outside the EU

If you wish to discard of this product, please contact your local authorities and ask for the current method of disposal.



▲ Attention:

Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a collection system for these products.

User manual

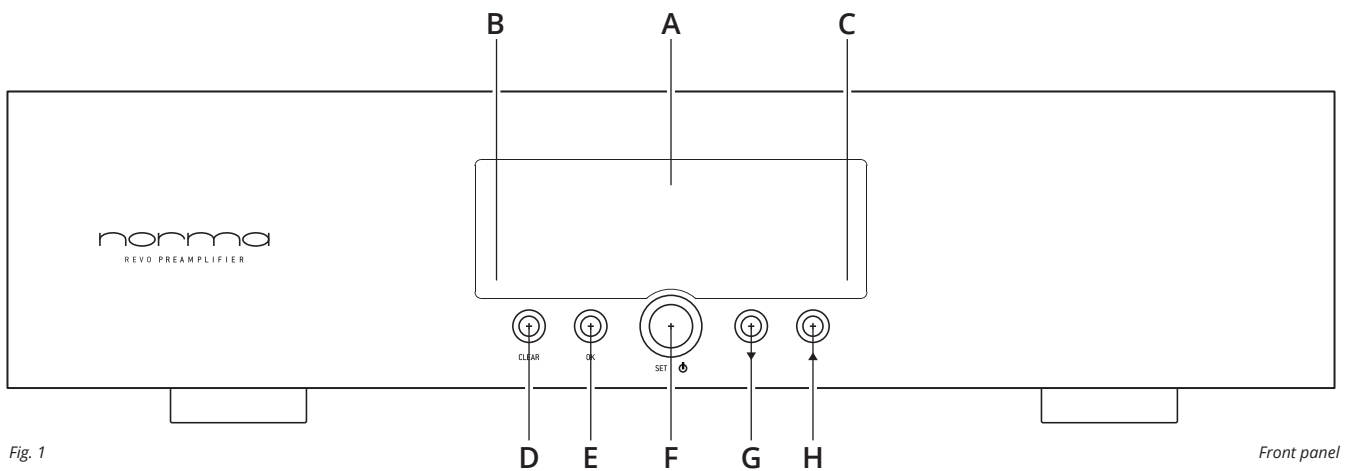
REVO SC-2



CONGRATULATIONS

First of all, we would like to thank you for the trust you have placed in NORMA. The product you purchased is the result of a long research and development process in which we have put our technical experience, and our passion for music. This products will offer you the best that technology has expressed for high quality sound reproduction. In front of the choice of what to offer as the possibility of customizing the product functions, there are two ways: the first is a simply and immediate user menu, but inevitably with limited possibilities. The second one is wider and able to adapt its functioning (and the sound performance) to the user's desire. Our decision was to offer you the possibility of customization as much as possible the functions that influence the final result. We are sure that you can appreciate this way. In virtue of this, the menus are wide. You will find interesting to read and to study how to use it in detail, in order to better adapt it to your desire. We hope that this manual is clear and that it will answer to each your questions; however we will be pleased to answer to any questions or doubt that you will have. We are confident that you will find great satisfaction from the use of our products, which, if treated with care, will give you lasting reliability. Before use, it is essential to read and learn the entire contents of this document.

1 • Controls and connections



▶ 1.1 List of commands and front indications list

A • Multi-function display

The display shows the controls and functional states.

B • Indicator POWER STAND-BY

In the STAND-BY state the indicator is illuminated.
In the POWER ON state indicator is off.

C • Infrared receiver for remote control [IR]

Optical receiving position for the infrared sensor of the remote control.

D • CLEAR Command [MUTE]

Deletes the data or selection.
Toggles the MUTE feature.

E • OK button

Confirms the data or the function active at that moment.

F • SET button [POWER]

Enables and disables access to the setup functions of the operating parameters.
Turns on and off the device [POWER].

G • ▼ button [SEL -] [VOL -]

BACK selection button [-].
button to decrease volume [VOL -].

H • ▲ button [SEL +] [VOL +]

NEXT selection button [+].
button to increase the volume [VOL +].

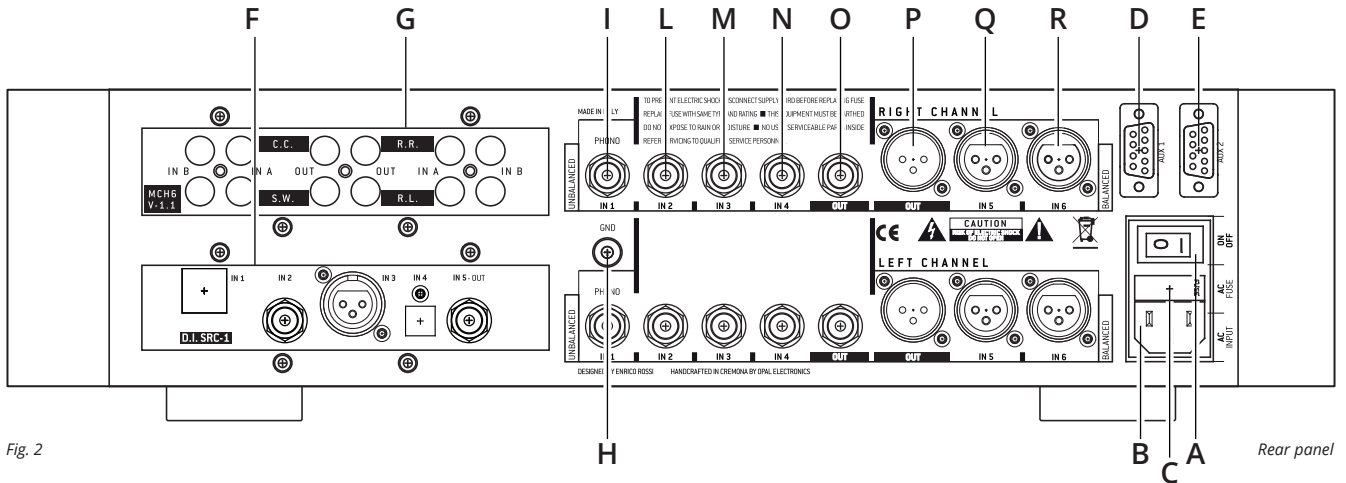


Fig. 2

▶ 1.2 Controls and rear connections

A • ON / OFF switch

B • Power connector

AC power inlet. Housing for mains cable connection according to IEC / CEE 22 (VDE C13 connector). Check that the mains voltage corresponds to that indicated on the label on the rear panel.

C • Fuse

The AC power fuse. Verify that the voltage coincides with that indicated on the rear panel.

▲ Attention:

If for any reason the user have to replace the fuse, this is a task reserved for qualified personnel in the service centres.

D • AUX1: AUXILIARY 1, DB9 male socket

Reserved connector for future use.

E • AUX2: AUXILIARY 2, DB9 female socket

Reserved connector for future use.

F • SLOT1: Space expansion 1

Optional DAC board rear panel.

G • SLOT2: Space expansion 2

Optional 5.1 multichannel board rear panel.

H • GND: GND Phono Screw

Ground socket for turntable in the case of use of internal phono stage [optional].

I • IN 1: RCA connection sockets

Input socket for signal IN 1 [PHONO] channel right / left.

🔍 Note:

The input IN 1 can be configured as an input for pick-up [PHONO] MM / MC entering the appropriate form of the signal to preamplification of the signal. When this input isn't used keep it shorted with the supplied RCA shorting plugs.

L • IN 2: RCA connection sockets

Input socket for signal IN 2 channel right / left.

M • IN 3: RCA connection sockets

Input socket for signal IN 3 channel right / left.

N • IN 4: RCA connection sockets

Input socket for signal IN 4 channel right / left.

O • OUT Unbal. : RCA connection sockets

Output socket for UNBALANCED signal right / left.

P • OUT Bal. : Balanced XLR sockets connection

Output socket for BALANCED signal right / left.

Q • IN 5: Balanced XLR sockets connection

Input socket for balanced signal IN 5 channel right / left.

🔍 Note:

The XLR balanced input (IN 5) uses an integrated circuit to convert the balanced signal to unbalanced signal.

R • IN 6: Balanced XLR sockets connection

Input jack for balanced signal IN 6 channel right / left.

🔍 Note:

The XLR balanced input (IN 6) uses an integrated circuit to convert the balanced signal to unbalanced signal.

🔍 1.3 Technical notes

1.3.1 • Technical notes about inputs

The REVO SC-2 preamplifier has 6 inputs, 4 of which are unbalanced and 2 balanced.

The input IN 1, as well as normal line input can be configured as an input for pick-up [PHONO] MM / MC entering the appropriate form of the signal to pre-amplificate.

The input IN 5 and IN 6 are balanced inputs. Since the preamplifier REVO SC-2 presents an internal topology, balanced and unbalanced, to the inputs IN 5 / 6 is present a circuitry for the conversion from unbalanced to balanced based on the operational INA-134 Burr-Brown (Texas). It follows that the performance (and instrumental sound) of the preamplifier can be influenced by the presence of this additional component. We recommend, where possible, to do some listening tests between the RCA & XLR in order to establish, in the particular configuration of the user, what type of connection is better.

In carrying out comparative tests must be taken of a number of important factors of influence, including:

- The sources to be connected, in the majority of cases, have different circuit configurations in their outputs RCA or XLR. It is not always true that the XLR output is the best ever, and often the topology of the source is unbalanced, then the XLR is obtained using a Additional circuitry, however sometimes is also true the exact opposite). In this case, the use of XLR connection source / REVO SC-2 involves unfavorable presence of 2 additional stages in the signal path;

- XLR interconnect cables are often of a different quality from the RCA cable. This factor must be taken into account in the analysis of its ratings.

1.3.2 • Technical notes about connections

The device must be able to make the most of their features. Nothing in the listening chain should be overlooked, starting with the interconnect cables, which must be of excellent quality, very transparent and neutral. NORMA products are of extremely high quality and will benefit greatly with the use of appropriate cables.

Nothing in the listening chain should be underestimated, from the quality of the cables to the position of the speakers. For example, if used cables are of a low quality, the resulting sound will be much less than the potential of the device.

1.3.3 • Technical notes about active / passive

The preamplifier REVO SC-2, can operate in either active or passive mode.

In active mode, after the volume control, the audio signal is amplified by the line stage. RCA and XLR are then driven by the active stage.

In passive mode, after the volume control, the audio signal is sent directly to the output. RCA and XLR are then controlled by the control stage volume, without active stages. The preamp works only in attenuation.

Using the ACTIVE GAIN function it is possible to insert the gain value of the active stage, so that during the switching between the two modes the listening volume remains equal.

This value should theoretically coincide with the the stage line gain , equal to + 17.5 dB.

🔍 Note:

In the passive mode, the output impedance is higher value (up to a few Kohm) with respect to the active mode and not constant with attenuation set. From this it follows that, in relation to the load impedance due to the amplifier connected, the actual value of attenuation can not coincide with the value indicated by the display. The deviation, usually in attenuation, may come to be of the order of a few dB. It is also not guaranteed monotonicity of behavior.

However, beyond the limits of these operating characteristics, the passive mode has the great advantage of reducing to a minimum the stages in the signal path. It is therefore advisable to experience this mode of operation, taking care to maintain the interconnection cables as short as possible.

▶ 1.4 Warm up and run in

The warm up is a fundamental factor. For the best sound performance we recommend an initial run of about 200 to 300 hours of operation with speakers connected and music played at a normal listening level. After a long period of inactivity, the unit will require at least 3 to 4 hours operation to reach the optimum performance levels.

▶ 1.5 The problem of hum

Frequently the connection of multiple devices can cause a certain amount of hum, even when the individual devices are entirely silent. Connecting equipment together can create ground loops which can introduce in the audio signal path a certain amount of network harmonics. This problem, which also affects professional installations, is long-standing and not easy to solve. Its influence is particularly evident in the case of high gain amplifiers and in the presence of signals of very low amplitude. The situation may sometimes be particularly noticeable with phono stages, turntables and pick-ups.

We point out some possible remedies:

- Reduce the connection cables length;
- Change signal cables and power cables position;
- Increase the distance between units, or arrange them in a different way;
- Avoid using devices that can induce electromagnetic fields or interference, such as electric motors, fluorescent lights or halogen lamp low voltage transformers;
- It may be useful to increase the signal connection shielding from one side of the termination. If a device proves to be involved in hum problems and / or ground loops contact the manufacturer to try to solve the problem;
- The electrical safety is due to its connection to safety ground. Before connecting and using the device, make sure that the grounding system is efficient. NORMA is not responsible for any damage caused resulting from wrong system grounding, or failure to follow safety procedures and regulations or a disconnection made in any way to the ground security equipment;
- Check that the mains power cable has a ground connection and do not remove it, for any reason;
- LED TV's or PLASMA TV's emit large amounts of infrared rays that can interfere with the IR remote control signal.

2 • Start to use

▶ 2.1 NORMA IR remote description

The IR remote can access all operating functions.

→ See Remote controls manual at page 22.

▶ 2.2 Turn ON / OFF

The REVO series preamplifiers are equipped with a sophisticated power on system, integrated with the system remote control and electronic protections. This system consists of three phases: POWER OFF, STAND-BY, POWER ON [OPERATE].

2.2.1 • Power OFF

In this phase, the rear control switch is in the OFF position and the preamplifier is off.

2.2.2 • Power OFF to standby

Placing the rear control switch in the ON position, the preamplifier is active in STAND-BY POWER indicator on the front panel will be on with a low intensity. This condition can be maintained indefinitely, the amplification stages are not powered, but the preamplifier is ready to receive the command switch.

2.2.3 • Power ON [operate]

The power is on to all intents and purposes, this can be determined by the prolonged action on the front SEL button or IR remote POWER button. In both cases, initially the indicator flashes for a period of time equal to approximately 10 seconds.

Subsequently, the light indicator turns solid, indicating the complete operation of the preamplifier and the connection to the amplifier/s.

2.2.4 • Power ON to standby

To put the preamp in STANDBY mode, press the SEL button [or the POWER button on the remote control], the indicator will switch to low-intensity lighting.

2.2.5 • Standby to power OFF:

To POWER OFF the preamplifier, press the POWER button, on either the remote control or the front panel of the amp, and then put the rear control switch into the OFF position. Never work directly on the rear control without first placing the preamplifier into STANDBY.

▶ 2.3 Functional settings, set command

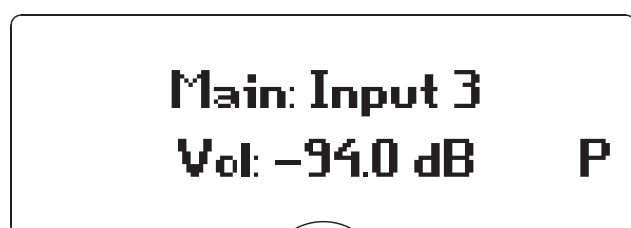


Fig. 3

Multifunctional display example

When the device is in normal operating mode the display shows:

- On the first row:

Main: Input 3

Indicates the currently connected input, when you turn on the device if the resume function is not enabled, by default it doesn't connect any input so it shows :

Main: OFF

- On the second row:

Vol: - 94.0 dB P

Indicates the currently volume value and setting, in this case the attenuation level is set to - 94.0 dB and the mode is passive.

- When you turn on the device if the resume function is not enabled, by default it shows:

Vol: - 127.5 dB ▼

- In the bottom-right corner you can see:

P Preamplifier in passive mode
Preamplifier in active mode (in this case the display doesn't show anything).

▼ Maximum attenuation value reached - 127.5 dB;

▲ Minimum attenuation value reached - 0.0 dB;

▶ The preamplifier is right-balanced;

◀ The preamplifier is left-balanced.

With the SET button you can set various functional parameters, as described in the following paragraphs. In conjunction with the SEL +, SEL -, OK.

It's possible to access many "nested" settings within the SET function. Once you press SET you can access the following configuration menus using the SEL + / SEL - buttons.

• **Input Selection;**

• **DAC Configuration**

(if fitted, see the section at the end of the manual);

• **Balance Attenuation;**

• **AV Selection** (only if "Audio Video" is enabled in the "Configuration Setting" section);

• **Configuration Setting;**

• **Sleep Function;**

• **Gain Active Passive.**

2.3.1 • Input selection

Using the INPUT SELECTION is possible to select the desired input. If the resume function is not active (storing the state before the previous shutdown), during the power up, the preamp will be in the following conditions:

- Main: OFF (no input selected);
- Volume: - 55.0 dB.

With the remote control, it may be possible to directly access the function.

➔ See the appropriate section of the manual.

2.3.1.1 • Input selection by front panel commands

- Press SET and use SEL + / SEL - until the display shows this message:

**Input Selection
Setting**

Press OK to confirm and enter the submenu.

- Use SEL + / SEL - to select the desired input:

**Main: Input 3
Connection**

Press OK to confirm, this will take you back to the main menu.

2.3.1.2 • Input selection by remote control commands

- Press IN on the remote control, the display will show this message:

**Main: Input 3
Connection**

Use SEL + / SEL - or the numeric keypad to select the desired input, then press OK, this will take you back to the main menu.

2.3.2 • DAC Configuration

See the appropriate section at the end of this manual (if DAC board is fitted).

2.3.3 • Balance Attenuation

Using the balance attenuation function, you can set for each channel (left or right) the relative level of attenuation compared to the other channel.

2.3.3.1 • Balance setting by front panel commands and remote control commands

- Press SET and use SEL + / SEL - until the display shows this message:

**Balance Attenuation
Setting**

Press OK to confirm and enter the submenu.

- Use SEL+ to right-balance and SEL - to left-balance:

**L Balance R
+0 dB +0**

Press OK to confirm, this will take you back to the main menu.

The presence of the unbalanced condition is indicated by the display using an arrow pointing towards the channel. With the remote control, it may be possible to directly access the function the absolute range of assistance may not exceed the limits of - 127.5 dB and 0.0 dB.

2.3.4 • AV Selection

Through the AV SELECTION function, you can enable the use of SC-2 in an Audio-Video plant. To activate it you need to enable the function in the configuration setting menu. In the other hand to disable this function, press the CLR key. The controls SEL + / SEL - switches the display screen. It must previously have been enabled by the configuration menu, AUDIO-VIDEO, ENABLE.

▲ Attention:

During operation in AUDIO-VIDEO mode, the preamplifier is locked, insensitive to any other command that is not the CLR key.

2.3.5 • Configuration Setting

In the "Configuration Setting" menu we can find the less frequently used settings for general configuration of the preamplifier.

➔ For a complete description see section 2.4 .

2.3.6 • Sleep Function

Using this function you can set the sleep time, after which the system automatically turns off, as if it is an action on the POWER button. This feature can be useful if you want to listen to music before going to sleep, without the risk of leaving the machine ON for an indefinite time. It's possible to set the sleep time in 30-minute intervals, up to maximum of 120 minutes.

2.3.7 • Gain Active Passive function

Using the Gain Active Passive function mode you can switch between Active and Passive mode. During the changeover, the system will automatically compensate the gain difference by the value set in the Configuration Setting menu, Active Gain.

2.3.7.1 • Active/Passive switch by front panel commands

Press SET and use SEL + / SEL - until the display shows this message:

**Gain Active/Passive
Setting**

Press OK to switch between the two modes. On the display you can notice that the words: "Active" and "Passive" have been inverted:

**Gain Passive/Active
Setting**

Press CLR to exit, this will take you back to the main menu.

When the passive mode is enabled you can see a **P** on the bottom-right of the display.

2.3.7.2 • Active / Passive switch by remote control

Press A / P on the remote control to switch between the two modes, when you are in Passive mode you can see a **P** on the bottom-right of the display.

Of course, the absolute range of intervention can not exceed the limits of - 127.5 dB and 0.0 dB.

► 2.4 Functional configuration

In the menu "Configuration Setting" we can find the less frequently used settings for general configuration of the preamplifier.

The settings are accessible in a circular way using the controls SEL + and / or SEL -, once it reaches the desired one confirm with OK.

In this section the values of the parameters can be set using the SEL + and SEL -.

Reached the desired value, confirm with the OK button. To exit the SETUP press CLEAR, or press again the SET command.

There is a table to sum up the main configuration settings, the settings with a nested menu have a note which refer to the dedicated paragraph.

Message	Function	Possible choice
Display Light Setting	Display intensity	100 / 87,5 / 75 / 62,5 / 50 / 37,5 / 25 [%]
Type Volume Setting	Quiet volume change	QUIET / NORMAL
Resume Setting	Resume	OFF / ON
Screen Saver Setting	Screen saver mode	TYPE / TIME / IMMEDIATE <i>*See more on 2.4.4 section</i>
Reference Volume Setting	Reference volume value	ATTENUATION / GAIN <i>*See more on 2.4.5 section</i>
Input Name Setting	Input name value	1 / 2 / 3 / 4 / 5 / 6 / DAC / RESET <i>*See more on 2.4.6 section</i>
Mute Level Setting	Mute level	From - 0.5 dB to - 30.0 dB
Audio - Video Setting	Direct AV in setting	FUNCTION / INPUT / VOLUME <i>*See more on 2.4.8 section</i>
Multichannel Setting	5.1 surround board setting	Input A/ Input B (only if MCH6 board is fitted)

Tab. 1

Functional configuration

2.4.1 • Display light

Using the function DISPLAY LIGHT is possible to vary the display brightness to better suit the environment light conditions or to the tastes of the user.

The adjustment is possible between 7 decreasing values: 100%, 87.5%, 75%, 62.5%, 50%, 37.5%, 25%.

2.4.2 • Type volume

Due to the particular configuration of the volume management implemented in the SC-2 preamplifier, whenever you acts on the volume control, a number of relay have to operate. This involves a little noise, which

does not in any way affect their durability and allows an easy verification of the reached level. However, if you want, a QUIET operation is possible, using the function TYPE VOLUME, to switch to silent mode. In this way the operation becomes silent, placing the appliance at maximum attenuation during the volume adjustment. The normal listening condition is automatically restored to the desired value reached and showed the display, 0.5 seconds after you release the command SEL + or SEL -.

2.4.3 • Resume

Using the resume function can be maintained the state was saved before the previous shutdown, even with the power off and detached from the power supply.

So it will be restored exactly the same status with respect to previous MAIN inputs, listening VOLUME, configuration PARAMETERS etc.. etc..

▲ Caution:

This function, although very convenient, can become dangerous if the device is used also by other users. NORMA is in any way responsible for any accidents or damages of any kind that may result from the use of this function.

2.4.4 • Screen saver

Screen saver function can protect the display by long periods viewing conditions with the same message. In fact, as all devices that are based on the light emission of phosphorus elements, also adopted in the display SC-2 preamplifier, could over time have a non-uniform optical behavior if for long periods (more than 5 hours) displays static messages at high intensity. For this purpose there is a screen saver function, adjustable both as a type that as the time of intervention. The display returns normal if it receives any command, which means that under screen saver, the first key is functionally ignored, it has the only function to restore the initial state. In the RESUME function you can set the following parameters:

Type • Selects between 4 possibilities;

Disable • Function inactive;

Light display • At the end of the selected interval, the intensity begins to decrease automatically;

Circular • At the end of the selected interval, a message is displayed with the effect of circular rotation;

Black display • At the end of the selected interval, the light intensity is automatically cancelled and the display appears to be turned off;

Time • The time is adjustable in a range from 1 minute to 200 minutes;

Immediately • Time of action is immediate.

Note:

If you choose the option black display or immediately is possible for those who wish, keep the display off almost constantly during playback.

2.4.5 • Reference level

Using the function REFERENCE LEVEL, you can set for each source a relative level (both in attenuation and in gain) so that for each variation of the listening source, the volume level is automatically balanced.

Of course, the absolute range of assistance may not exceed the limits of - 127.5 dB and 0.0 dB.

2.4.6 • Input name

Using the input name function, you can assign an alphanumeric name to each input. So when you have to select one of them you can see the assigned name instead of the default name.

This operation can be carried out only with the IR remote control.

If you want to keep the assigned name also after turning off the preamplifier enable the resume function.

→ For a complete description see section 2.4 .

To change the input name, enter the configuration setting menu then select the input setting menu, after that select the input of which you want to change the name (1÷6, DAC).

For example if you want to name "Ext-DAC" the third input follow this guide.

Input Name
Input 3

Pressing OK you can enter the name editor.

A÷Z Input Name
Input 3 Input 3

Note that the possible characters are divided in four subcategories:

- A÷Z** • Uppercase characters
- a÷z** • Lowercase characters
- 0÷9** • Numbers
- #÷_** • Special characters

When a character is blinking you can switch between these categories using the MUTE button on the IR remote control.

Here you can edit each character selecting first the category and then the desired character using SEL + /SEL -.

In this case the first, the second and the third character of the desired name (Ext-DAC) are part of the same category of the default name so using SEL + / SEL - select the character "E" in the first place then press OK, repeat this operation for the second and the third.

a÷z Input Name
Input 3 Extp 3

Here we have to replace the lowercase p "p" with a dash "-", so press the MUTE button until you see "#÷_". Using SEL + / SEL -, search the "-".

When you reach the dash symbol "-" press OK, repeat this thing also for the fifth, the sixth and the seventh character because you have to replace the lowercase u "u" with the uppercase D "D"; the lowercase t "t" with the uppercase A "A" and the blank space " " with the uppercase C "C".

A÷Z Input Name
Input 3 Ext-DAC 3

Press OK to confirm.

Then we don't need anymore the number "3" so we have to replace it with a blank space, that we find in special characters section.

#÷_ Input Name
Input 3 Ext-DAC

Press OK until you return to the previous menu. Press SET to return to the main page. To confirm that the name has been updated try selecting the renamed input and see if it kept the name.

Main: Ext-DAC
Connection

Press OK and you will see on the main page the name:

Main: Ext-DAC
Vol: - 94.0 dB P

2.4.7 • Mute level

The MUTE button is designed to immediately reduce the volume level with the action on the MUTE button (CLEAR on the front panel).

Using this function you can set the MUTING attenuation within the range of - 5.0 dB and - 30.0 dB.

2.4.8 • Audio video

In AUDIO-VIDEO applications, the unit SC-2 has the ability to operate in "LOCKED" mode, in this case the volume control is excluded and managed directly by the processor and / or from the external decoder.

You can set the following parameters:

FUNCTION (Enable / Disable);
VOLUME (0.0÷127.5);
INPUT (1÷6).

3 • Maintenance

2.4.9 • Multichannel setting

You can find this menu only if the MCH6 board is fitted and if the selected input is expanded by multichannel board.

➔ See the appropriate section at page 18 of the manual.

▶ 2.5 Volume control

The preamplifier REVO SC-2 has a sophisticated volume control with 256 0.5 dB steps. The display shows the attenuation set, between 0 dB and - 127.5 dB. For convenience of use, speed of adjustment is automatically incremented between 3 different values as long as it continues to act uninterrupted on the SEL + / SEL - commands.

With the remote control, it may be possible to directly access the function, see the appropriate section.

▶ 3.1 Cleaning

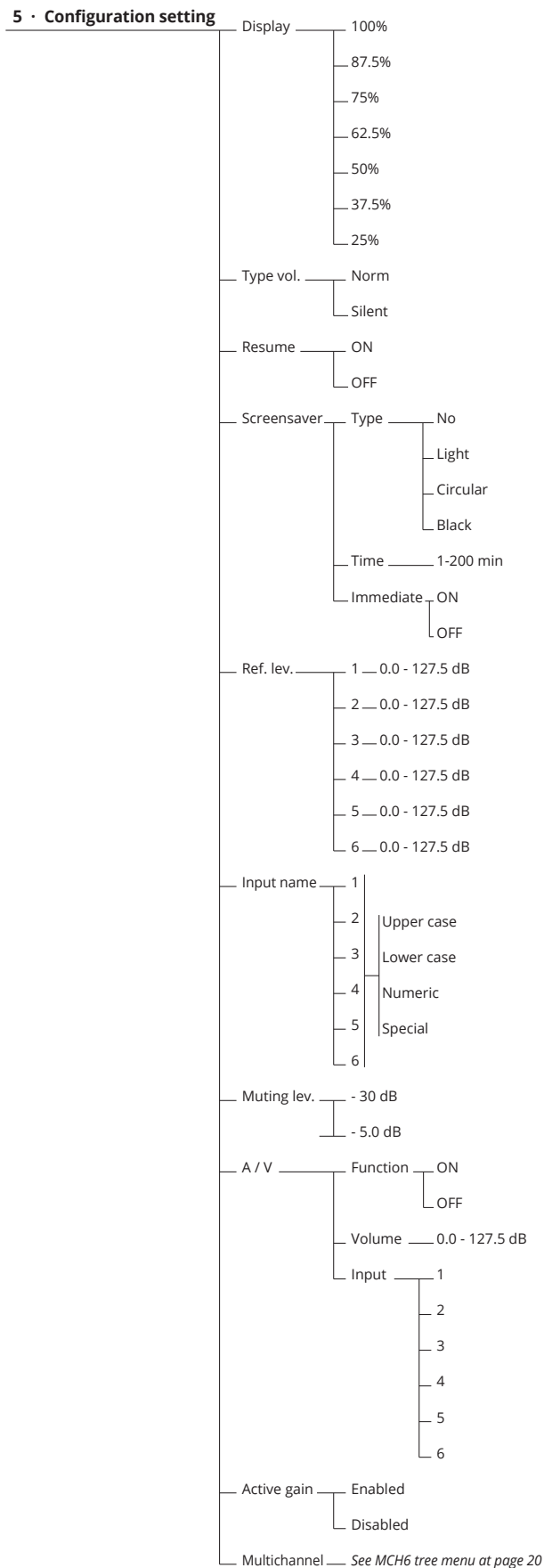
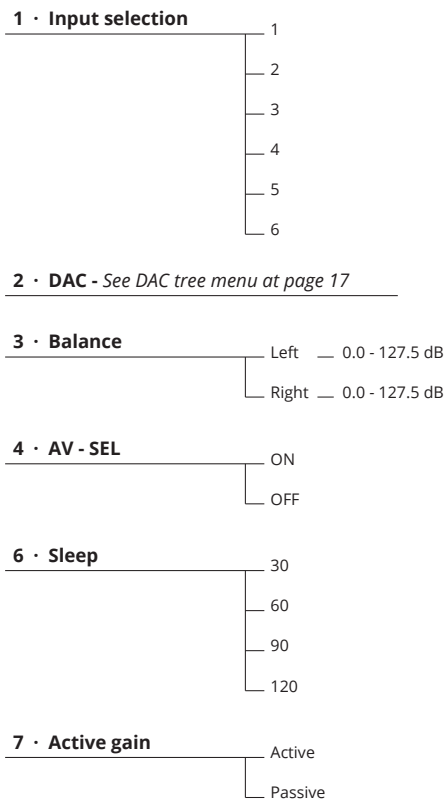
Before cleaning the unit, turn it off and unplug it from the electricity supply and wait at least 10 minutes. Your device has been designed with the best technical solutions combined with an aesthetic finish of the highest quality, but for it to remain unchanged over time, it is essential to observe the following procedures:

- Do not dry-clean surfaces and in particular the front panel;
- Lightly dampen a cloth with a small amount of warm water (40 - 50 degrees);
- Make circular movements and do not press hard on the panel;
- Dry off gently, always with cotton or a soft cloth, using a very delicate circular motion;
- Be very careful to avoid that no water penetrates into the unit, the cloth should be moist but not wet;
- Do not reconnect the unit until it is completely dry;
- Under no circumstances use alcohol, solvents, petrol or any type of chemical product;
- Please note that the finish and aesthetic components are in no way covered by the warranty.

▶ 3.2 Repairs

For any issues please refer to the safety manual. NORMA products are the result of precision engineering with sophisticated circuitry and extremely high-quality components. In the unlikely event of failure, make sure to refer to a highly qualified assistant that has genuine original spare parts. NORMA is contactable for any customers who have an issue which needs to be resolved. NORMA is not responsible for any errors, omissions or incompleteness of this manual, and is not responsible for accidents or damage of any kind that may result from non-compliance, even partial, of the information provided in this manual. Despite the effort to identify all possible situations, NORMA is not responsible for any damage that may be caused to people or from improper use.

4 • Tree menu



PH3 phono

Optional

5 • Phono stage - PH3 phono

► 5.1 Setting and user notes

The NORMA PH3 phono allows for a series of fine settings and options, in order to achieve the best connection with turntables.

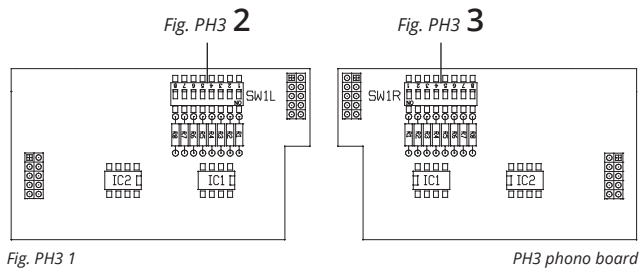


Fig. PH3 1

PH3 phono board

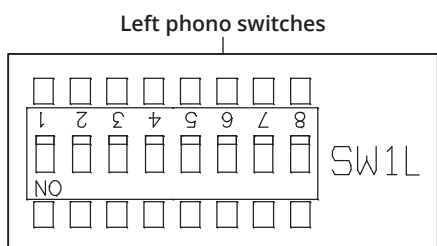


Fig. PH3 2

Left phono switches

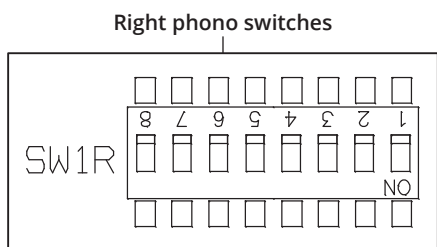


Fig. PH3 3

Right phono switches

5.1.1 • Input impedance

Settings are obtained via micro-switches 1 - 4 on the PCBs SW1R and SW1L, respectively for the right and left channels, as shown in Fig. PH3 2 and Fig. PH3 3 at page 20. To activate the desired impedance value, put the corresponding micro-switch in the ON position, leaving all the other switches (1 - 4) in the OFF position. If no switches are turned on, the default settings are used, 47 Kohm e + 34 dB.

🔍 Notes:

- The default impedance value is 47 Kohm, with no switch turned on.

- The SPARE position is meant for customization. If you need a specific resistance value, please contact NORMA.

SW 1L • SW 1R - Input impedance		
Position	Value	Unit
1	Spare	//
2	1.000	Ohm
3	510	Ohm
4	100	Ohm

Tab. PH3 1

Input impedance value

5.1.2 • Gain

Settings are obtained via micro-switches 5 - 8 on the PCBs SW1R and SW1L, respectively for the right and left channels, as shown in Fig. PH3 2 and Fig. PH3 3 at page 20. To activate the desired gain value, put the corresponding micro-switches in the ON position, as shown in the table. If no switches are turned on, the default settings are used, 47 Kohm e + 34 dB.

🔍 Notes:

- The default gain value is + 34 dB, with no switch turned on.

- The SPARE position is meant for customization. If you need a specific gain value, please contact NORMA.

SW 1L • SW 1R - Gain		
Position	Value	Unit
5	Spare	dB
8+7+6	+52	dB
6	+50	dB
8+7	+46	dB
7	+42	dB
8	+38	dB
All OFF	+34	dB

Tab. PH3 2

Gain value

🔍 5.2 Notes

1 • To achieve a custom value for impedance and gain, a custom resistance has to be inserted in SPARE positions (1 and 5). To know what resistance value needs to be used, please contact NORMA;

2 • In case you use a MC pickup with a low output and low load impedance, it could be useful, to obtain better performances in terms of noise, to exchange one of the 2 Integrated Circuits (ICs) used for both channels. The default setting (which is ready to work with MM pickups) uses an OPA604 for both the first gain stage and the second gain stage. Since those ICs are mounted on a base, they can be easily swapped. To set the board for MC operation, you can remove the first gain stage OPA604 (the one closer to the micro-switches) and install an LT1115 (as provided in the spare fuses packages in the user manual). Please note that polarity must be respected. For any further information, please contact NORMA;

3 • To connect the turntable to ground there is an M3 screw is on the back of the amplifier.

DAC board

Optional

6 • Introduction

This manual describes the functions of the digital input option provided as an accessory of this unit.

▶ 6.1 Inputs

This option adds 5 digital inputs (named from 1 to 5).

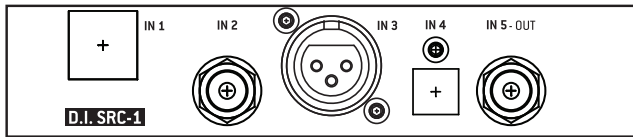


Fig. DAC 1

DAC board

- Input 1** • USB Input
- Input 2** • SPDIF RCA Input
- Input 3** • AES-EBU balanced XLR input
- Input 4** • SPDIF TOSLINK optical input
- Input 5** • SPDIF RCA input

▶ 6.2 USB & driver

This USB input must be connected to a personal computer which sees the USB interface as an audio output device. You can not connect it directly to USB memory devices, such as Hard Disks or memory sticks.

The USB input is based on AMANAERO technology. For further information about installation, in order to obtain the appropriate driver for your computer, or for computer configuration, you could visit the AMANERO official website: <http://www.amanero.com>.

▲ Warning:

Never connect or disconnect cables when the unit is turned ON.

This may cause dangerous interference to the speakers or other audio components.

Never disconnect the USB cable without having properly disabled the USB device.

7 • Operations

This unit can be controlled both by the front panel and via IR remote control. Some commands, on the IR remote, are dedicated specifically for this purpose, so it is convenient to use the IR remote control whenever possible. However, even using the buttons on the front panel you can control all functions.

▶ 7.1 Entering DAC mode

7.1.1 • Front panel commands

How to enter and exit DAC mode by front panel commands:

Press SET button, then use SEL + / SEL - until the display shows the following message:

**Input Selection
Setting**

And press OK to enter the submenu, use SEL + / SEL - until the display shows the following message:

**Main Input: DAC
Connection**

And press OK to confirm.

7.1.2 • Remote control commands

How to enter and exit DAC mode by remote control:

Press DAC button on the remote control for more than one second.

The display will show this message:

**DAC
Input**

And press OK to confirm.

▶ 7.2 DAC input selection

7.2.1 • Front panel commands

How to select Dac input by front panel commands:

Press SET button, then use SEL + / SEL - until the display shows the following message:

**DAC
Setting**

And press OK to enter the submenu then use SEL + / SEL - until the display shows the following message:

**Input
DAC**

Press OK to enter the submenu, then use SEL + / SEL - to select the desired input number.

The display will show this message, the number corresponds to the selected input (for example if you want to select IN 3):

**3
DAC Input**

Then press OK to confirm.

This will bring you back to the main menu. The desired input is now selected and the device is ready to receive the signal input.

7.2.2 • Remote control commands

How to select DAC input by Remote Control commands:

In DAC mode Press DAC button on the remote control, then press the IN button, select the desired input using the SEL + / SEL - keys or dialing it using the numeric keypad. The display will show this message (for example if i want to select IN 3):

**Input Selection
Setting**

And press OK to confirm.

This will bring you back to the main menu. The desired input is now selected and the device is ready to receive the signal input.

▶ 7.3 DAC input configuration

🔍 *Note:*

In order to make this device more flexible, each input can be configured separately and, if the resume function is active, this configuration will be maintained.

7.3.1 • Front panel commands

How to change DAC configuration by front panel commands:

Press SET button, then use SEL + / SEL - until the display shows the following message:

**DAC
Setting**

And press OK to enter the submenu then use SEL + / SEL - until the display shows the following message:

**DAC
Configuration**

Press OK to enter the submenu then use SEL + / SEL - to select the input of which you want to change the configuration.

Press OK to confirm.

Now you can cycle through the following configurations using SEL + / SEL - buttons.

7.3.2 • Remote control commands

How to change Dac configuration by remote control commands:

In DAC mode press DAC button on the remote control, then press the SET button, select the input of which you want to change the configuration using the SEL + / SEL - keys or dialing it using the numeric keypad.

Press OK to confirm.

Now you can cycle through the following configurations using SEL + / SEL - buttons.

8 • Configurations

▶ 8.1 DAC Input Configuration: Parameters summary table

Message	Function	Possible choice
Upsampling Frequency Setting	UpSampler	OFF / 44.1 / 88.2 / 176.4 / 48.0 / 96.0 / 192.0 KHz. / AUTO
Clock Source Setting	Clock source	IN / LOCAL
Direct Down SRC Setting	Direct down	OFF / ON
Digital Filter Setting	Digital filter	SLOW / SHARP
Analog Filter Setting	Analog filter	0 / 1
DeEmphasis Control Setting	De-Emphasis control	OFF / ON / AUTO
DAC Polarity Setting	DAC polarity	0 / 180
Default Lead Setting	Default parameters	NO / ON

Tab. DAC 1

DAC input configuration

▶ 8.2 Upsampling Frequency Setting

If you want to select the UpSampling frequency value follow the instruction below:

- In SPDIF input, with Clock Source in IN (Input) mode, will be possible to use only the x1, x2, x4 value of input frequency. If you select different values, the system automatically sets the closest frequency value.

If you want to select other value, you can use Clock Source in LOCAL mode.

- In AUTO mode, the system automatically sets the frequency value to 176.4 KHz for 44.1 / 88.2 / 176.4 KHz input values or 192.0 KHz for 48.0 / 96.0 / 192.0 KHz input values.

▶ 8.3 Clock source setting

When UpSampler mode is active, you can select the D / A conversion clock source.

In IN (Input) mode, the DAC uses the clock from the input signal.

In LOCAL mode, the DAC uses the clock generated by the local oscillator.

We recommend to do some listening tests to determine what is the best solution.

The clock unit is generated by high quality oscillators. But the input signal clock quality may be better than the local one, and may improve the audio performance.

▶ 8.4 Direct down SRC setting

When Upsampler mode is active, you can select the Direct Down mode.

Refer to page 69 of SRC4392 data sheet:

“ ... Decimation Filter / Direct Down-Sampling Function

This bit selects the mode of the decimation function, either true decimation filter or direct down-sampling without filtering. Direct down-sampling should only be used when the output sampling rate is higher than the input sampling rate. When the output sampling rate is equal to or lower than the input sampling rate, the Decimation Filter must be used in order to avoid aliasing... ”

Note:

Remember, if you select the Direct Down mode and the output sampling rate is equal to or lower than the input sampling rate, the system automatically switches in Direct Down = OFF.

➔ See the next page for “Digital filter setting”.

► 8.5 Digital filter setting

You can select the digital filter in the two modes, SLOW or SHARP:

- In SLOW mode, the response of the filter provides the best performance and linearity for time response;
- In SHARP mode, the response of the filter provides the best performance and linearity for frequency response.

➔ For more information, please refer to the DF1706 data sheet, p.4 .

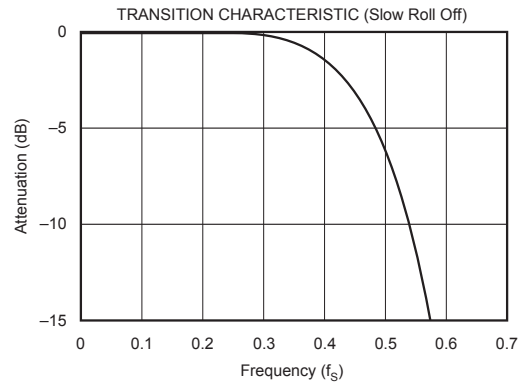


Fig. DAC 5 Transition characteristic slow roll off

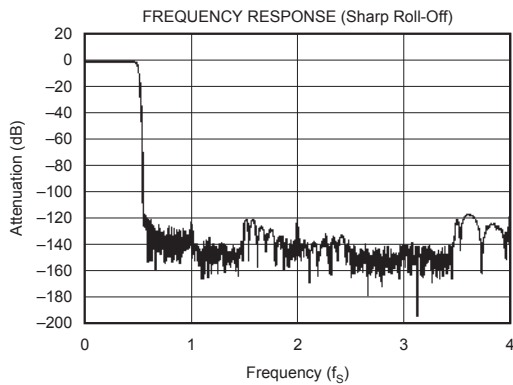


Fig. DAC 2 Frequency response sharp roll-off

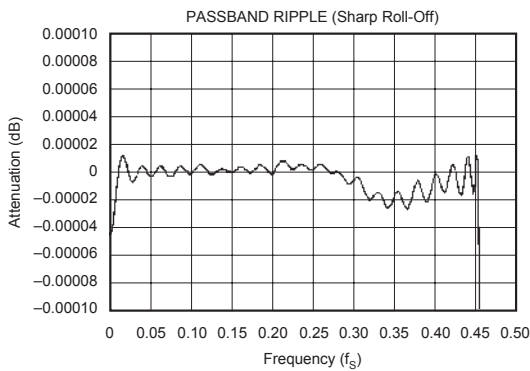


Fig. DAC 3 Passband ripple sharp roll-off

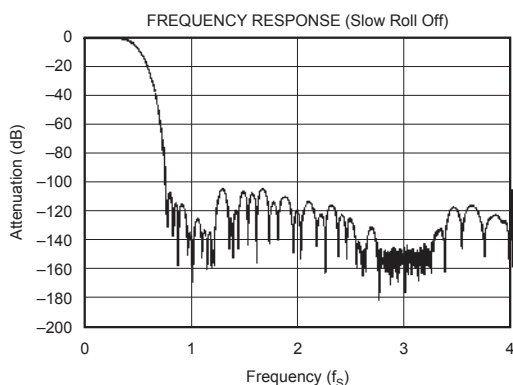


Fig. DAC 4 Frequency response slow roll off

► 8.6 Analog filter setting

This parameter is not applicable in this unit.

► 8.7 De-emphasis control setting

This parameter is used to set the operation of de-emphasis.

In OFF mode the de-emphasis is always OFF.

In ON mode to de-emphasis is always ON if the input frequency is 44.1 KHz or 48.0 KHz.

In AUTO mode, the de-emphasis is enabled automatically by the system when it detects the presence on the SPDIF signal.

The de-emphasis is indicated by a **E** FLAG in the display. When it flashes, the de-emphasis is detected in the input signal but NOT activated. When lit, the de-emphasis is active.

🔍 Note:

The procedure for emphasis / de-emphasis is not very common and has been used mainly in CD's made in the 80's. However, we must consider that many burns software, and many PC recording drives does not manage de-emphasis information.

If a digital audio track sounds a bit too rich in high frequencies, maybe because the emphasis flag was lost during the copy of the track, you can manually enable de-emphasis.

► 8.8 DAC Polarity setting

This parameter is used to set the values of the output polarity.

9 • DAC tree menu

▶ 8.9 Default load setting

The default settings could be restored for each input. Enabling this function thr configuration setting for that input will be deleted and the parameter setting will be the default one.

Default parameters setting:

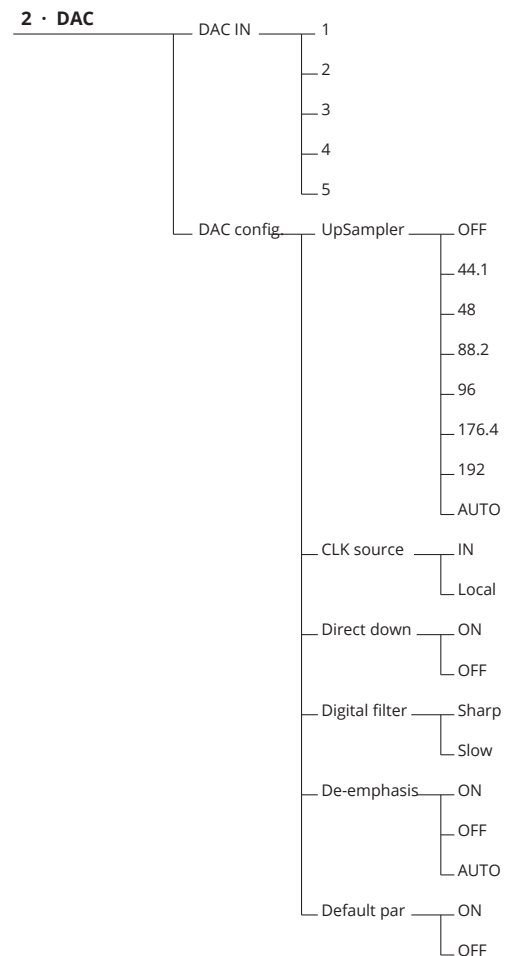
**Upsampling Frequency
Setting = OFF**

**Clock Source
Setting = In**

**Direct Down
Setting = OFF**

**Digital Filter
Setting = Slow**

**Deemphasis
Setting = OFF**



MCH6 5.1 surround

Optional

10 • Introduction

This manual describes the functions of the multichannel surround board. This board allows you to use the SC-2 preamplifier with a 5.1 surround source such as a DVD player or a PC with a 5.1 audio output.

► 10.1 Inputs / outputs

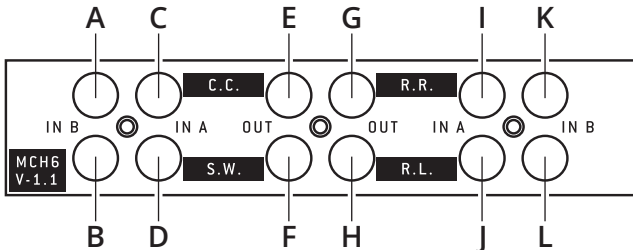


Fig. SURR 1

MCH6 board

- A • Center channel input B
- B • SubWoofer input B
- C • Center channel input A
- D • SubWoofer input A
- E • Center channel output
- F • SubWoofer output
- G • Rear right output
- H • Rear left output
- I • Rear right input A
- J • Rear left input A
- K • Rear right input B
- L • Rear left input B

▲ Warning:

Never connect or disconnect cables when the unit is turned ON.

This may cause dangerous interference to the speakers or other audio components.

► 10.2 Functioning

This board is provided as an accessory for the SC2 preamplifier. This makes two of the six stereo inputs two multi-channel 5.1 inputs.

When an expanded input is selected appears a six dotted figure on the right top of the display.

🔍 Note:

By default stereo input 2 is expanded by input A on multichannel board and input 3 by input B. To change this feature contact NORMA or your local dealer. It is a task reserved for authorised personnel.

11 • 5.1 configuration

For both Input A and Input B and for each input you can set a different listening level. You can do that both by front panel commands and by IR remote control. Each input can be configured separately and, if the resume function is active, this configuration will be maintained.

Enter the submenu configuration setting, then use SEL + / SEL - until the display shows the following message:

Multichannel Setting

And press OK to enter the submenu then use SEL + / SEL - to select the desired input set (input A or Input B).

For example if you want to configure the Input A:

Multichannel Channel A

Press OK to enter the submenu then use SEL + / SEL - to select the input of which you want to change the configuration. The possible choices are:

🔍 Note:

X means A or B.

Message	Function	Possible choice
Multi Channel X Front Left	Changes the front left reference value	- 39.5 / + 39.5
Multi Channel X Front Right	Changes the front right reference value	- 39.5 / + 39.5
Multi Channel X Rear Left	Changes the rear left reference value	- 39.5 / + 39.5
Multi Channel X Rear Right	Changes the rear right reference value	- 39.5 / + 39.5
Multi Channel X Subwoofer	Changes the subwoofer reference value	- 39.5 / + 39.5
Multi Channel X Center Channel	Changes the center channel reference value	- 39.5 / + 39.5
Reset	Resets all reference values	ON / OFF
Copy A > B or Copy B < A	Copies the A input settings on B input settings	ON / OFF

Tab. SURR 1

Multichannel input configuration

Press OK to confirm.

Now you can change the reference volume value using SEL + / SEL - :

Input A

Rear Right: - 10 dB

Press OK to confirm.

🔍 Note:

The reference value can be different between the main stereo inputs and the multichannel inputs. So the reference value could not be the same as default (- 127.5 dB / + 17.5 dB). With the value "0" set to all the multichannel inputs the volume range will be - 95.5 dB / 0.0 dB in passive mode and - 95.5 dB / + 11.5 dB in active mode.

12 • MCH6 tree menu


5 • Multichannel

Channel A	Front Left	- 39,5 / + 39,5
	Front Right	- 39,5 / + 39,5
	Rear Left	- 39,5 / + 39,5
	Rear Right	- 39,5 / + 39,5
	Subwoofer	- 39,5 / + 39,5
	Center Channel	- 39,5 / + 39,5
	Reset	ON / OFF
	Copy A > B	ON / OFF
Channel B	Front Left	- 39,5 / + 39,5
	Front Right	- 39,5 / + 39,5
	Rear Left	- 39,5 / + 39,5
	Rear Right	- 39,5 / + 39,5
	Subwoofer	- 39,5 / + 39,5
	Center Channel	- 39,5 / + 39,5
	Reset	ON / OFF
	Copy B > A	ON / OFF

13 • Specifications

REVO SC-2

Description	Stereo Preamplifier;
Input Connections	Main stereo: 4 RCA, 1 XLR, Optional 5.1 multichannel board; IN 1 Phono;
Input Optional Configuration	10 k Ω ;
Input Impedance RCA (selected input)	47 k Ω ;
Input Impedance RCA (non selected input)	47 k Ω ;
Input Impedance XLR (selected input)	47 k Ω ;
Input Impedance XLR (non selected input)	47 k Ω ;
Input Selection Type	Electromechanical, by gold contact cross bar relay;
Output Connections	1 RCA, 1 XLR;
Output Signal Impedance	200 Ω ;
Max Output Voltage RCA	7.5 V RMS (0 dB);
Max Output Voltage XLR	15 V RMS (0 dB);
Frequency Response	0 - 2 MHz (- 3 dB non filtered);
Active Gain	+ 17.5 dB;
Passive Gain	+ 0.0 dB;
Internal Circuitation	Solid State;
Volume Control	Electromechanical, by gold contact cross bar relay. 256 steps, 0.5 dB each;
Possible Optionals for this unit	DAC Board, Phono Board, Multichannel 5.1 board;
Phono stage Load	100 - 510 - 1k - 47 k Ω , + custom value, selectable by dip switches;
Phono Stage Gain	+ 34 ÷ + 52 dB + custom value;
Supported Pick-up Types	MM-MC;
USB Receiver Interface	USB 2.0 HI-Speed;
USB Firmware	Amanero;
Audio format	PCM: Max 192 kHz;
DAC Board Connections	2 S-PDIF RCA 75 Ω , 1 AES-EBU XLR 110 Ω , 1 S-PDIF TOSLINK, 1 B-Type USB;
S-PDIF Output	No;
Digital Filter	BB DF1706;
Oversampling Filter	1x, 2x, 4x;
Oversampling	BB SRC4392;
Supported Sampling Frequencies	PCM: 44,1 / 88,2 / 176,4 kHz, PCM: 48 / 96 / 192 kHz;
UpSampler Frequencies	44,1 / 88,2 / 176,4 kHz, 48 / 96 / 192 kHz, AUTO;
Clock performances	\pm 2ppm typ at 25°C, \pm 10ppm typ at 60°C;
De-emphasis	44,1 / 48 kHz;
DAC Device (IC)	2x BB PCM1704;
Multichannel Input Connections	2 RCA (each channel): Rear left, Rear right, Center Channel, SubWoofer;
Multichannel Output Connections	1 RCA;
Multichannel Max Out Voltage	10.7V RMS;
Multichannel Attenuation	- 95.5 dB;
Multichannel Gain	+ 31 dB;
Multichannel Selection Type	Electromechanical, by gold contact cross bar relay;
Multichannel Volume Control	Solid state;
Power Supply Voltage	230 V (115 V in some countries);
Power Supply Frequency	50 Hz (60 Hz in some countries);
Power Supply Fuse Rating	1.6 AT;
Electric transformer/s	1 toroidal transformer for audio applications, 110 VA;
Dimensions (HxWxD) [mm]	110x430x365;
Carton Box Size (HxWxD) [mm]	250x530x560;
Weight [Kg]	9Kg.

 In order to improve its products, NORMA reserves the right to change technical specifications and appearance without notice.

Remote controls

REVO SC-2

14 • Aluminium remote RC-43 / 31

🔍 Note:

For further information regarding the use and the maintenance of this remote, please visit our website at www.normaudio.com

▶ 14.1 Inserting the batteries

- Our IR remotes are provided with included batteries but not fitted in to prevent the discharging due to an eventual stocking time or if a button were pushed during the transport. This remote works only with a set of three CD2032 batteries, as provided in the packaging. Do not use any other type of battery, as this could result in damage for the unit;

- First of all, to access the battery compartment, you will have to remove the back panel. In order to do so, pick the screwdriver provided in the packaging, unscrew the screws, and then remove the back panel;

- Be careful not to scratch the panel with the screwdriver;

- The positive battery pole must be in the upper side and the negative one is on the lower side;

▲ Caution:

- Please respect the polarity;

- The fork spring on the side is designed to hold down the battery, so don't push that down, the remote control won't work;

- Pay attention because that spring is very delicate and it's easy to push that under the battery;

- To insert the battery put the positive pole under the fork and then push the battery in the holder.

DO NOT force the batteries when inserting.

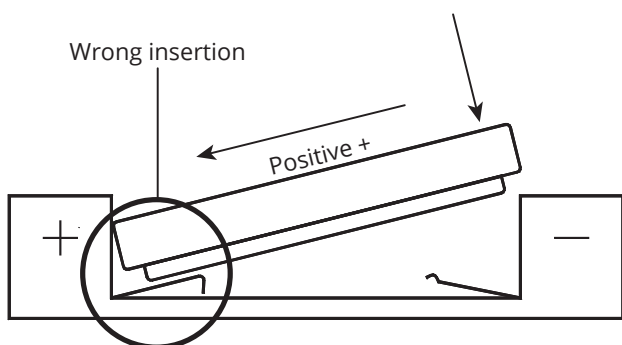
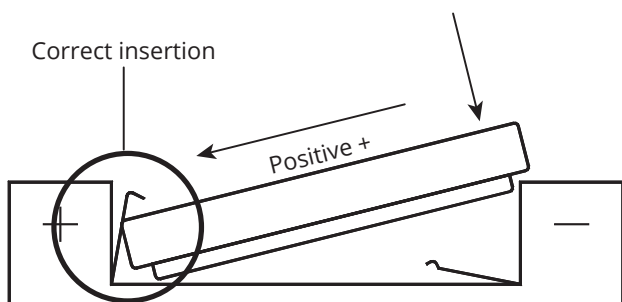


Fig. IR 1

Inserting the batteries

▶ 14.2 Removing the batteries

- If the unit is left unused for long periods of time, it is better to remove the batteries, to avoid their discharge and possible damages to the unit;

- To remove the batteries, access the battery compartment as explained in the previous paragraph. Then, pick the appropriate tool from the packaging, as shown in FIG. IR 2, and gently insert it on one side of the battery holder. Then, apply a slight pressure, in order to allow the battery to come out. Repeat this operation for all batteries, then screw the back panel on again;

- Do not try to extract the battery with hands, this could cause serious damage to the battery holder and to the unit. Use the provided thumbtack as shown on the FIG. IR 2.

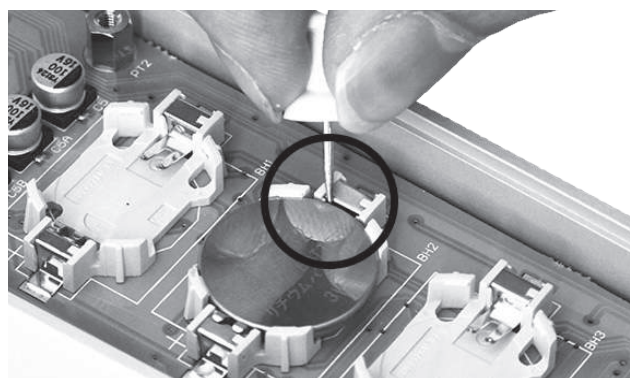


Fig. IR 2

Removing batteries detail

▶ 14.3 Troubleshooting

If the remote control doesn't work, often it's an apparent fault and it could be due to:

- Wrong battery insertion. (positive and negative poles swapped) check it carefully;

- Positive terminal pushed down: if the battery has been inserted badly the positive fork spring could have been pushed down so the battery doesn't make the contact and the remote control doesn't work;

- Mode not selected (ex. DIG-AMP-CD). Press the corresponding button to select the desired mode and then try to send a command to the device.

🔍 Note:

An abnormal functioning of your NORMA device could be due to an IR interference, coming from Plasma TVs, PC monitors or different remote controls.





▶ 14.4 Battery recycling



If you have to replace a discharged battery absolutely do not waste it into the rubbish bin. It's a special waste and it must be given to a recycling center. Batteries and electric components are dangerous for the environment so don't throw them away or with the normal waste.

15 • Remote controls description

▶ 15.1 IR-31 AMP remote control: commands list, general description

<i>Symbol</i>	<i>Command</i>	<i>Description</i>
AMP	MODE	Sets remote control on AMP MODE (for REVO IPA-70B / REVO IPA-140 / REVO SC-2 / HS-IPA1)
DIG	MODE	Sets remote control on DIG MODE (for DACs / HS-DA1 & REVO-DAC1)
	POWER ON-OFF	Turns the unit ON and OFF
MENU	MENU	Enters the menu setup configuration
OK	OK	Confirms the selection in MENU
CLEAR	CLEAR	Moves back to upper level in MENU
▶	NEXT	Moves forwards in MENU (direct Input selection on REVO IPA-70B / REVO IPA-140)
◀	BACK	Moves backwards in MENU (direct Input selection on REVO IPA-70B / REVO IPA-140)
	VOL. UP FAST	FAST volume UP (direct volume UP control on REVO IPA-70B / REVO IPA-140 / REVO SC-2 / HS-IPA1)
	VOL. DOWN FAST	FAST volume DOWN (direct volume DOWN control on REVO IPA-70B / REVO IPA-140 / REVO SC-2 / HS-IPA1)
VOL +	VOL. UP FINE	FINE volume UP
VOL -	VOL. DOWN FINE	FINE volume DOWN
	MUTE	MUTE / UNMUTE the output audio signal
IN	IN	Enters the INPUT SELECTION menu (on REVO SC-2 / HS-IPA1 / HS-DA1)
DAC	DAC	Enters the DAC menu (on REVO SC2+DAC / HS-IPA1+DAC)
1 – 8	NUMBERS (1-8)	Selects a NUMBER (quick inputs selections on REVO IPA-70B / REVO IPA-140)
F1	F1	Generic function, customized for the various devices (phase on DACs)
F2	F2	Generic function, customized for the various devices
A/P	A/P	Toggles active or passive mode (preamplifier REVO SC-2 only)
DY	DY	Changes the display light (customized for various devices) (light 30-100 % ON / OFF)
▶	PLAY	Starts the CD playback (this command is always sent to the REVO CDP+DS-1 in any MODE)
■	STOP	STOP CD playback (this command is always sent to the REVO CDP+DS-1 in any MODE)
▶▶	NEXT	Skips to NEXT track (this command is always sent to the REVO CDP+DS-1 in any MODE)
◀◀	PREVIOUS	Skips to PREVIOUS track (this command is always sent to the REVO CDP+DS-1 in any MODE)

Tab. IR 1





IR-31 AMP general description

🔍 Note:

For a complete description of the meaning and use of the various commands, refer to the user manual of the single model.

This model can be used with two types of products, amplifiers and DACs. To use it with amplifiers, press the **AMP** button before using the remote control to send commands. The remote control remembers this selection until the batteries are full; therefore it is not necessary to press each time. If the **DIG** key is inadvertently pressed, the commands are routed to the DACs. In this case, simply press the **AMP** command again. Similarly, to control the DACs (eg HS-DA1 or REVO-DAC1), press the **DIG** key first.

► 15.2 IR-31 AMP remote control: commands list for REVO SC-2

<i>Symbol</i>	<i>Command</i>	<i>Description</i>
AMP	MODE	Sets remote control on AMP MODE (for REVO IPA-70B / REVO IPA-140 / REVO SC-2 / HS-IPA1)
DIG	MODE	Sets remote control on DIG MODE (for REVO-DAC / HS-DA1)
	POWER ON-OFF	Turns the unit ON and OFF
MENU	MENU	Enters the menu setup configuration
OK	OK	Confirms the selection in MENU
CLEAR	CLEAR	Moves back to upper level in MENU
►	NEXT	Moves forwards in MENU
◄	BACK	Moves backwards in MENU
	VOL. UP FAST	FAST volume UP
	VOL. DOWN FAST	FAST volume DOWN
VOL +	VOL. UP FINE	FINE volume UP
VOL -	VOL. DOWN FINE	FINE volume DOWN
	MUTE	MUTE / UNMUTE the output audio signal
IN	IN	Enters the INPUT SELECTION menu
DAC	DAC	Enters the DAC menu (DAC option)
1 – 8	NUMBERS (1-8)	Selects a NUMBER
F1	F1	This command change the phase on the digital audio signal, 0 –180° with DAC options
F2	F2	Generic function, customized for the various devices
A/P	A/P	Selects between ACTIVE and PASSIVE mode
DY	DY	Go to menu for changes the display light
►	PLAY	Starts the CD playback (this command is always sent to the REVO CDP+DS-1 in any MODE)
■	STOP	STOP CD playback (this command is always sent to the REVO CDP+DS-1 in any MODE)
►►	NEXT	Skips to NEXT track (this command is always sent to the REVO CDP+DS-1 in any MODE)
◄◄	PREVIOUS	Skips to PREVIOUS track (this command is always sent to the REVO CDP+DS-1 in any MODE)

Tab. IR 2

IR-31 AMP for REVO SC-2

Note:

For a complete description of the meaning and use of the various commands, refer to the user manual of the single model. Remember to press **AMP** before use.

Shortcut for Input selection mode:

The input selection is possible in two ways, one sequential **(1)** and one direct **(2)**. Remember to press **OK**:

1 • Press **IN**, ► or ◄, **OK**;

2 • Press **IN**, **1 – 6** , **OK**.


Input DAC selection mode (only with DACs option):

1 • Press **DAC**, **OK**, ► or ◄, **OK**;

2 • Press **DAC**, **OK**, **1 – 5** , **OK**.

► 15.3 IR-43 system remote control: commands list, general description

If you have 2 or more NORMA products and you want to control them with a single remote control, you can request IR-43 remote control from NORMA.

<i>Symbol</i>	<i>Command</i>	<i>Description</i>
AMP	MODE	Sets remote control on AMP MODE (for REVO IPA-70B / REVO IPA-140 / REVO SC-2 / HS-IPA1)
CD	MODE	Sets remote control on CD MODE (for REVO CDP+DS-1)
DIG	MODE	Sets remote control on DIG MODE (for REVO-DAC1 / HS-DA1)
AUX	MODE	Sets remote control on AUX MODE (spare)
	POWER ON-OFF	Turns the unit ON and OFF
MENU	MENU	Enters the menu setup configuration
OK	OK	Confirms the selection in MENU
CLEAR	CLEAR	Moves back to upper level in MENU
►	NEXT	Moves forwards in MENU (direct input selection on REVO IPA-70B / REVO IPA-140)
◄	BACK	Moves backwards in MENU (direct input selection on REVO IPA-70B / REVO IPA-140)
	VOL. UP FAST	FAST volume UP (direct volume UP control on REVO IPA-70B / REVO IPA-140 / REVO SC-2 / HS-IPA1)
	VOL. DOWN FAST	FAST volume DOWN (direct volume DOWN control on REVO IPA-70B / REVO IPA-140 / REVO SC-2 / HS-IPA1)
VOL +	VOL. UP FINE	FINE volume UP
VOL -	VOL. DOWN FINE	FINE volume DOWN
	MUTE	MUTE / UNMUTE the output audio signal
IN	IN	Enters the INPUT SELECTION menu (on REVO SC-2 / HS-IPA1 / HS-DA1)
DAC	DAC	Enters the DAC menu (on REVO CDP+DS-1 / REVO SC-2+DAC / HS-DA1 / HS-IPA1+DAC)
0 – 9	NUMBERS (0-9)	Selects a NUMBER (quick inputs selections on REVO IPA-70B / REVO IPA-140) or (track on REVO CDP+DS-1)
F1	F1	Generic function, customized for the various devices (digital phase on REVO CDP+DS-1 & DACs)
F2	F2	Generic function, customized for the various devices
F3	F3	Generic function, customized for the various devices
A/P	A/P	Toggles active or passive mode (preamplifier REVO SC-2 only)
DY	DY	Changes the display light (customized for the various devices) (light 30-100 % ON / OFF)
DV	DV	DIGITAL VOLUME setting, only in REVO CDP+DS-1 in DAC mode with SRC enabled
▶	PLAY	Starts the CD playback (this command is always sent to the REVO CDP+DS-1 in any MODE)
⏸	PAUSE	PAUSE CD playback (this command is always sent to the REVO CDP+DS-1 in any MODE)
■	STOP	STOP CD playback (this command is always sent to the REVO CDP+DS-1 in any MODE)
⏭	NEXT	Skips to NEXT track (this command is always sent to the REVO CDP+DS-1 in any MODE)
⏮	PREVIOUS	Skips to PREVIOUS track (this command is always sent to the REVO CDP+DS-1 in any MODE)
⏩	FAST FORWARD	Fast forwards track (this command is always sent to the REVO CDP+DS-1 in any MODE)
⏪	REWIND	Rewinds track (this command is always sent to the REVO CDP+DS-1 in any MODE)
▲	OPEN / CLOSE	Opens / closes the CD tray (this command is always sent to the REVO CDP+DS-1 in any MODE)
REPEAT	REPEAT	Activates automatic repeat (this command is always sent to the REVO CDP+DS-1 in any MODE)
TIME	TIME	Changes the time indication shown on CD display (elapsed – remaining)

Tab. IR 3

IR-43 general description

🔍 Note:

For a complete description of the meaning and use of the various commands, refer to the user manual of the single model, refer also at IR-31 model. Remember to press correct **MODE** before use.

Warranty

REVO SC-2

16 • Warranty conditions

We hereby acknowledge to the NORMA product specified below the warranty lasts 2 (two) calendar years from the sale date of this product. The terms which regulates the warranty are written below and they are integral part of this certificate.

▶ 16.1 Object of warranty

The warranty only covers the product shown on the registration module (also downloadable from NORMA website) which forms an integral part of this document, as well as the accessories related to it, provided that they are purchased at the same time.

▶ 16.2 Warranty content

- NORMA will, at its option, repair or replace the product covered by this warranty if it becomes defective, malfunctions or otherwise fails to conform with this warranty under normal use and service during the term of this warranty. Without charge for labor or materials. Repairs may be performed using new or refurbished parts that meet or exceed NORMA specifications for new parts;

- Damages and injuries (direct or indirect) of any nature and title, deriving from faults and malfunctioning won't be covered from this warranty. The warranty will cover only the NORMA product repair.

▶ 16.3 Limited warranty range

- The warranty period starts from the time of purchase. In the event of a deferred payment, the application of the warranty will be guaranteed unless the payment is successfully completed.

In the event that the agreed payment is not respected (amounts and / or expirations), NORMA reserves itself the right to modify, suspend or delete the warranty. In case of deferred payment the warranty expiration could precede the payment expiration;

- The warranty will be valid only after the product registration within the maximum term of 30 calendar days from the purchase date, using the registration module that is an integral part of this document (also downloadable from NORMA website). That module must be compiled in each part and followed by the sales document. The sales document must have fiscal validity (fiscal ticket, invoice or receipt) proving date, place of sale, amount and retailer name. The retailer must stamp at the bottom the registration module. In any case the warranty won't be applied to appliances whose owners have not fulfilled the above formalities;

- NORMA products are very sophisticated, these products must be used and installed only by subjects with adequate knowledge and experience related to the installing and using procedures;

- Warranty void if the user doesn't observe all the indications reported in the relative safety and user manual;

- Warranty will be provided only in NORMA venue. The shipping costs are charged to the customer both outward and return, so as the shipping risks. The eventual insured shipping doesn't constrain NORMA to any type of responsibility related to the shipping risks;

- NORMA products are designed only for personal entertainment, then the warranty covers only the defects due to a private household use and it doesn't cover:

- ▶ *Any unit which has been altered or on which the serial number has been defaced, modified or removed;*

- ▶ *Normal wear, battery or battery replacement and any periodic maintenance;*

- ▶ *Deterioration due to corrosive atmosphere or other external causes such as extremes in temperature or humidity;*

- ▶ *Damages attributable to power line surge or related electrical abnormalities, lightning damage or abnormal atmospheric acts as well as phenomena of transmutation of the atom or radiation caused by the artificial acceleration of atomic particles;*

- ▶ *RFI / EMI (Interference / noise) caused by improper grounding or the improper use of either certified or uncertified equipment, if applicable;*

- ▶ *Interference arising from the use of wireless communication devices (e.g. 2.4 GHz cordless telephones), or other radio frequency emitting products such as microwave ovens, whether such interference impairs the operation of the product or vice-versa. Consult the owner's manual for guidance on set-up procedures for minimizing the risks of interference. Any evidence of alteration, erasing or forgery of proof of purchase documents will cause this warranty to be void. This warranty covers only the original owner and is not transferable.*

Any fault, malfunctioning, direct or indirect damage or partial functioning are not covered by warranty. This product is not designed for particular use. Its application field is limited to play music exclusively at home. The continuous functioning, free from faults and malfunctioning is not guaranteed.

- If during the warranty period NORMA receives the notice of a defect, covered by the NORMA warranty, NORMA will fix or replace the product at its discretion. Any replacement product can be a new or semi-new product, provided that it has at least equivalent functionality to the product that will be replaced. The warranty period will be equal to the warranty period remaining on the original product;

- During the warranty period NORMA will at its sole option and expense, repair or replace any product found

to be defective. In the event that the product is no longer available and cannot be repaired effectively, NORMA at its sole option may replace it with a reasonable equivalent, or refund the original purchase price paid. NORMA won't cover the return shipping cost;

- This limited warranty is applicable only in the country where the product was purchased;
- The warranty is valid also only and exclusively for the first subsequent owner, provided that exists a clear and incontrovertible act which proves the change of ownership and that him registers his own product within 30 days from the purchase date. The warranty cannot be extended to the new owner if the previous one did not fulfill the formalities indicated in point 2 of C section;
- The lasting of the warranty period cannot be interrupted for any reason. The non-use of this product does not interrupt or extend the warranty period.

▶ 16.4 Warranty exclusion

- The warranty does not cover the damages due to whichever wrong transport or wrong handling;
- Wires, connectors, selectors, mechanical commands, potentiometers, fuses and other any part subject to wear are not covered by the warranty;
- External connectors, printed circuits and internal components are not guaranteed against, colour alteration and corrosion;
- In any case the external and internal finish are not covered by warranty;
- For the following countries: U.S.A. (United States of America), Canada and Mexico is absolutely prohibite to commercialize, to direct or indirect import and to use for any reason, even temporarily and occasional. OPAL ELECTRONICS and NORMA cannot be held responsible for any unauthorised use of own products.
The only entity authorized to import and sell the products is the official distributor. The official NORMA local dealer becomes subject to liability for the warranty and all legal aspects that it entails, as well as for the sale and use of the product;
- Do not return your product for repair without prior authorization from NORMA. The repair during the limited warranty period by a person not explicitly authorized by NORMA will void the warranty and will be carried out at your risk.

▶ 16.5 Warranty limits

- Any eventual implied warranties, including warranties of merchantability and fitness for a particular purpose shall be limited in duration to the applicable period of time set forth above. NORMA's liability for any defective product is limited to repair or replacement of the product;
- Until the law-concessed point the remedies provided in this warranty are only remedies for the customer;
- It is excluded each refund as well as any contractual or extra contractual liability for direct or indirect damages to persons or things.

▶ 16.6 Responsibility limits

- NORMA does not guarantee that the use of any its product is continuous or free from any error or free from any type of fault;
- Under no circumstances and in no case will NORMA be liable for any accidents, consequential damages, liability, arising from the owner or user due to the failure or inappropriate use of the product;
- In no case and under no circumstances will NORMA be liable for any accident and / or consequential damage to other equipment due to failure or imperfect operation of the NORMA products or the accompanying documentation;
- With the exception of the obligations specifically included in this warranty statement, norma shall not be responsible for incidental or consequential damages or for damages based upon inconvenience, loss of use, damage to any other equipment or other items at the site of use or interruption of performances or any consequences;
- NORMA reserves the right to modify technical characteristics, functional characteristics, prices and anything else it deems useful without any obligation to anyone.

We sincerely thank you for your expression of confidence in NORMA. We wish you many years of listening pleasure.

Table of contents

REVO SC-2

Safety manual	<ul style="list-style-type: none">I • IntroductionII • UnpackingIII • Before useIV • OperatingV • Recycling & waste
User manual	<ul style="list-style-type: none">1 • Controls and connections2 • Start to use3 • Maintenance4 • Tree menu
PH3 phono Optional	<ul style="list-style-type: none">5 • Phono stage
DAC board Optional	<ul style="list-style-type: none">6 • Introduction7 • Operations8 • Configurations9 • DAC tree menu
MCH6 5.1 surround Optional	<ul style="list-style-type: none">10 • Introduction11 • 5.1 configurations12 • MCH6 tree menu
Specifications	<ul style="list-style-type: none">13 • Specifications
Remote controls	<ul style="list-style-type: none">14 • Aluminium remote RC-43 / 3115 • Remote controls description
Warranty	<ul style="list-style-type: none">16 • Warranty conditions



www.normaudio.com - info@normaudio.com - Tel. +39 (0)372 493113

Via Persico, 26 - Loc. Bettenesco - 26043, Persico Dosimo (CR) - Italy