SRS RIGGING

NLP-G2

INSTRUCTION MANUAL

THIS DOCUMENT APPLIES TO ALL

2nd GENERATION NLP PROCESSORS

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IMPORTANT NOTE

The user is required to read and understand this manual before installing, operating, or servicing the device. Failure to follow the specified procedures and safety guidelines may result in equipment malfunction, personal injury, or hazardous situations. The manufacturer assumes no responsibility for damage or injury caused by negligence, improper handling, or failure to comply with the instructions provided. Under such circumstances, all associated risks and liabilities fall to the operator.

REPAIR & SERVICE

In the event of equipment malfunction, please contact our Technical Support Department at rma@srs-group.com, or reach out to the authorised distributor from whom the equipment was purchased. To ensure optimal performance and extend the service life of the device, only use replacement parts supplied or approved by the manufacturer.

For inquiries related to the functionality, operation, or applications of this equipment, please contact your local distributor or email us at sales@srs-group.com.

IMPORTANT NOTE

When contacting the manufacturer or local distributor, please provide information found on the sticker on the rear panel. This will ensure swift processing of your request. Thank you!



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TABLE OF CONTENTS

1. SAFETY INFORMATION 4

2. PRODUCT DESCRIPTION 5

2.1. TECHNICAL SPECIFICATIONS 5

3. PRODUCT OVERVIEW 6

3.1. FRONT PANEL OVERVIEW (exemplified by 968053) 6

3.2. REAR PANEL OVERVIEW (exemplified by 968053) 7

3.3. E-STOP AND LINKING CONNECTORS 9

4. OPERATION AND CONTROL 11

4.1. THE STARTUP PROCEDURE 11

4.2. THE RESET PROCEDURE 11

4.3. MENU NAVIGATION 11

4.4. MENU PASSWORDS 15

5. WARRANTY 16

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1. SAFETY INFORMATION

The following general safety precautions have to be observed during all phases of operation, service, and repair of this equipment. Failure to comply with these precautions or with specific warnings in this manual violates safety standards of design, manufacture, and the intended use of this equipment.

DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE!

Do not operate this equipment in the presence of flammable gases or fumes. Operation of any electrical instrument in such an environment constitutes a definite safety hazard.

WATER, MOISTURE, HEAT AND HUMIDITY

Do not operate this equipment near water or in areas with wet floors, also not in high humidity atmosphere where condensation forms on the equipment. It should never be placed near or over a heat register or other source of heated air and it should not be installed or operated without proper ventilation.

MAINTENANCE WORK PRECAUTIONS

Always ensure that the power to the equipment is disconnected before opening the equipment or commencing any maintenance work.

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2. PRODUCT DESCRIPTION

NLP-G2 was designed to process numeric values from analogue load cells and convert them into real-time load measurements. It is used to set up and monitor system limits and stop all movement when a limit is exceeded.

The device will not function if:

- **!** The power supply does not match that specified in the manual and on the rear panel

All electrical components carry their own individual cSA/UL, CE and comply with European Directives. The components are housed in robust steel 19" rack casing with powder coating. Complete unit complies with the CE according to the Certification of conformity attached to this manual.

2.1. TECHNICAL SPECIFICATIONS

MAINS CONNECTION

- Mains input: AC 110-240V, 50/60Hz
- Mains plug: powerCON TRUE1 NAC3MPX-TOP

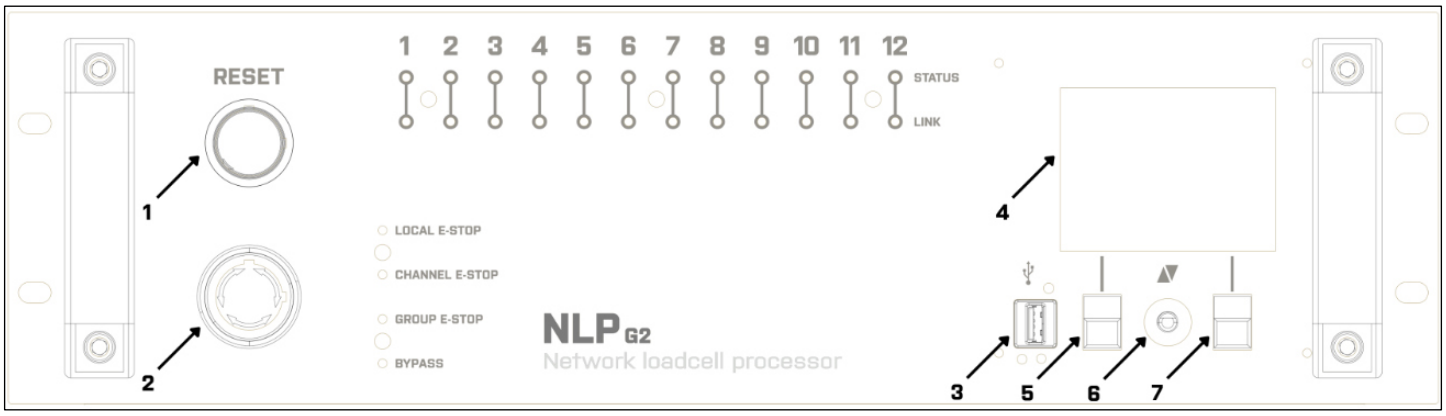
METAL HOUSING

- 3mm steel front panel
- 1.5mm steel housing with powder coating

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3. PRODUCT OVERVIEW

3.1. **FRONT PANEL OVERVIEW** (exemplified by 968053)



1. RESET BUTTON
2. E-STOP BUTTON
3. USB PORT
4. DISPLAY
5. BACK BUTTON
6. ROTATING ENCODER
7. ENTER BUTTON

RESET BUTTON (1)

Used to reset the E-STOP relay after each emergency stop.

E-STOP BUTTON (2)

When pressed, the button locks into active (engaged) position and must be rotated clockwise and released to disengage.

USB PORT (3)

Used to perform software updates.

DISPLAY (4)

Used to display the system setup and to access the NLP menu.

BACK BUTTON (5)

Used to navigate the menu by pressing the BACK button to move one step back in the settings.

ROTATING ENCODER (6)

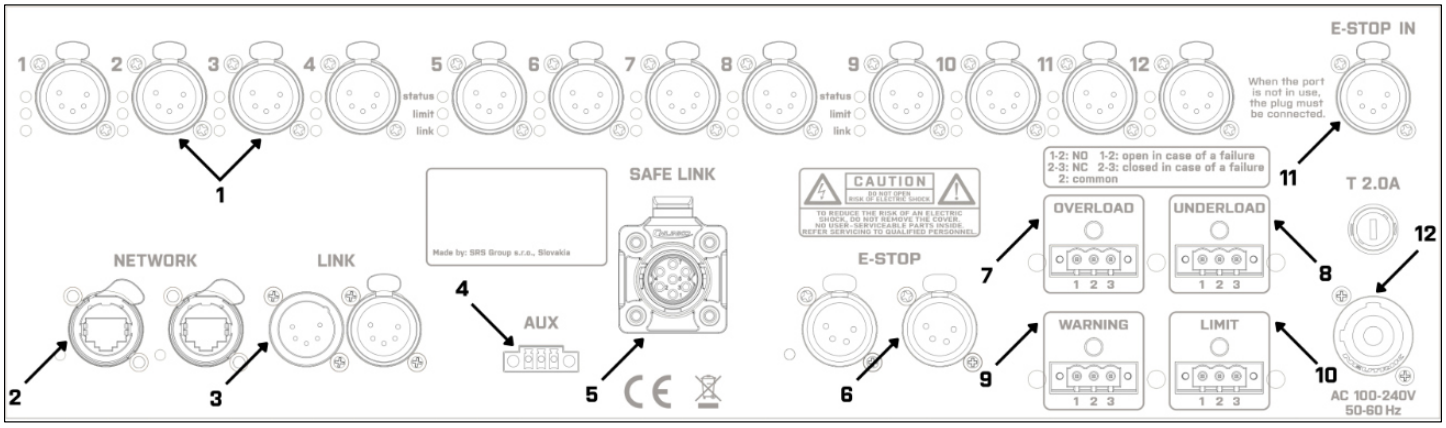
Used to navigate the menu by rotating the encoder to move either forwards or backwards.

ENTER BUTTON (7)

Used to navigate the menu by pressing the ENTER button to confirm your choice.

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3.2. REAR PANEL OVERVIEW (exemplified by 968053)



1. MAIN OUTPUTS
2. NETWORK INPUT/OUTPUT
3. LINK INPUT/OUTPUT
4. AUXILIARY OUTPUT
5. SAFE LINK OUTPUT
6. E-STOP OUTPUT
7. OVERLOAD SIGNALLING OUTPUT
8. WARNING SIGNALLING OUTPUT
9. UNDERLOAD SIGNALLING OUTPUT
10. LIMIT SIGNALLING OUTPUT
11. E-STOP INPUT
12. MAINS INPUT

LOAD CELL INPUTS (1)

Used to connect load cells via a 5-pin XLR cable.

NETWORK INPUT/OUTPUT (2)

Used to link NLP units for two-way communication or connect a PC to run the NLP app.

LINK INPUT/OUTPUT (3)

Used to connect motor controllers via a 5-pin XLR cable for data communication on AHD link.

AUXILIARY OUTPUT (4)

Intended for future proofing the unit for upcoming portfolio developments.

SAFE LINK INPUT (5)

Intended for future proofing the unit for upcoming portfolio developments.

E-STOP OUTPUT (6)

Used to connect motor controllers via a 4-pin XLR cable for E-STOP and protective stop data transferring. The contacts are NO (normally open), i.e., when a limit is exceeded, the contacts open.

OVERLOAD SIGNALLING OUTPUT (7)

Dry contact relay used to connect an external device for overload signalling.

UNDERLOAD SIGNALLING OUTPUT (8)

Dry contact relay used to connect an external device for underload signalling.

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WARNING SIGNALLING OUTPUT (9)

Dry contact relay used to connect an external device for warning signalling.

LIMIT SIGNALLING OUTPUT (10)

Dry contact relay used to connect an external device for limit signalling.

E-STOP INPUT (11)

Used to connect an external E-STOP device.

MAINS INPUT (12)

Used to power the device.

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3.3. E-STOP AND LINKING CONNECTORS

(1) REAR – LOAD CELL INPUTS – Neutrik NC5FAH

Used to connect load cells via a 5-pin XLR cable.



PIN	FUNCTION	NOTE
1	DC GND	Power supply output -
2	DC PWR	Power supply output +24V
3	Input	4mA - 20mA
4	-	Not connected
5	-	Not connected

(3) REAR – LINK INPUT/OUTPUT – Neutrik NC5MAH/FAH

Used to link AHD and/or NLP units via a 5-pin XLR data cable.



PIN	FUNCTION	NOTE
1	Data CMN	Data common
2	Data -	Data minus
3	Data +	Data plus
4	-	Not connected
5	-	Not connected

(5) REAR – SAFE LINK INPUT – CNLINKO BD-20-J14SX-03-401A

Used to connect the device to a SAFE BOX meant to create a SIL3-compliant safe link between all the connected devices.



PIN	FUNCTION	NOTE
1	Data CMN	Data common
2	E1	Safety line 1 OUT
3	E1R	Safety line 1 IN
4	E2	Safety line 2 OUT
5	E2R	Safety line 2 IN
6	PE	Shield
7	NO1	Dry contact 1
8	NO1	Dry contact 1
9	NO2	Dry contact 2
10	NO2	Dry contact 2
11	Data -	Data minus
12	Data +	Data plus
13	-	Not connected
14	-	Not connected

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(6) REAR – E-STOP OUTPUT – Neutrik NC4FAH

Used to connect an external E-STOP. Both safety lines are separate and NO (normally open).



PIN	FUNCTION	NOTE
1	NO1	Dry contact 1
2	NO1	Dry contact 1
3	NO2	Dry contact 2
4	NO2	Dry contact 2

(7-10) REAR – OVERLOAD, UNDERLOAD, WARNING and LIMIT SIGNALLING OUTPUTS

Used to connect an external device for signalling various safety-related conditions.



PIN	FUNCTION	NOTE
1-2	NO	Open in case of a failure
2	CMN	Common
2-3	NC	Closed in case of a failure

(11) REAR – E-STOP INPUT – Neutrik NC4FAH

Used to connect an external E-STOP. Both safety lines are separate and NO (normally open).



PIN	FUNCTION	NOTE
1	E1	Safety line 1 OUT
2	E1R	Safety line 1 IN
3	E2	Safety line 2 OUT
4	E2R	Safety line 2 IN

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4. OPERATION AND CONTROL

The load cells connected to the NLP-G2 unit can be monitored either separately and in groups. For each individual load cell and/or group, a warning value and a limit value can be set up by the operator.

4.1. THE STARTUP PROCEDURE

1. Connect the NLP-G2 to an AHD2 controller or a SafeBox using a 14-pin cable, or connect it to an AHD1 using a combination of 4-pin and 5-pin cables.
2. If any additional devices are used (e.g., an external E-STOP), connect them to the NLP-G2 unit in accordance with the descriptions provided on p.6-8).
3. Connect the power plug to an AC 110-240V power supply.
4. Perform the RESET procedure on the connected motor controller (if present).
5. Connect the load cells to the main outputs of NLP-G2 via 5-pin XLR cables.
6. Any configuration of the NLP-G2 system can be performed via the device menu or the PC app.

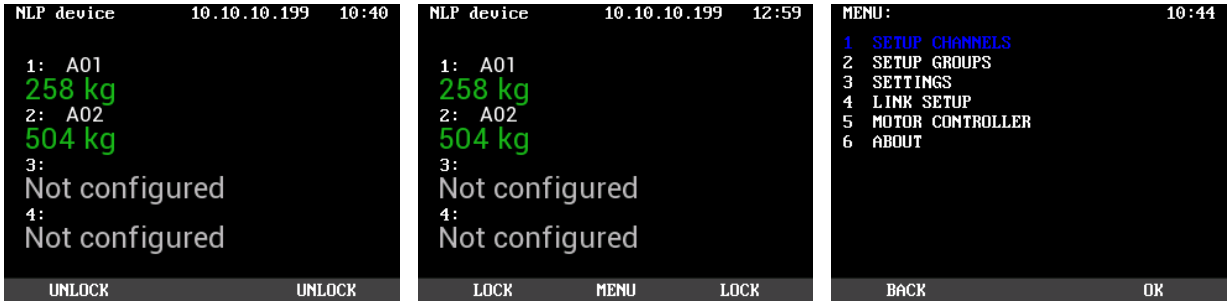
4.2. THE RESET PROCEDURE

1. Press the E-STOP button, turn it clockwise to release, then press the RESET button.
2. The GO button should start blinking. This indicates that the controller is ready to go.

IMPORTANT NOTE

The RESET procedure has to be performed only when turning the NLP device on. When a limit is exceeded and protective stop is activated, the operator needs to determine the cause of the stop, remove the issue and press the RESET button on any of the linked devices.

4.3. MENU NAVIGATION



THE MAIN SCREEN

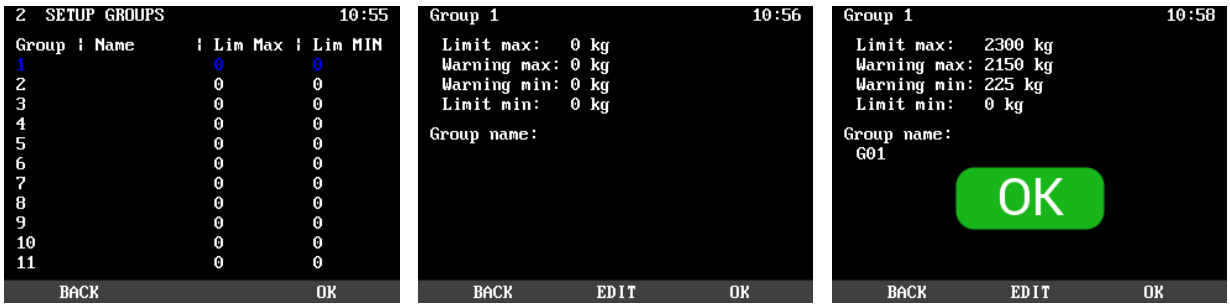
To unlock the main screen and access the menu, simultaneously press both buttons marked as UNLOCK. The Keyboard Password is set to 0000 by default. Press the encoder to open the menu.



CHANNELS SETUP

Enter the SETUP CHANNELS menu by pressing the ENTER button. Move to the desired channel by rotating the encoder, then press ENTER to open its settings. Press the encoder to start editing the setup and move between the lines by pressing BACK and ENTER. When the setup is complete, press the encoder once again to stop editing, then press ENTER to save your settings.

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GROUPS SETUP

Enter the SETUP GROUPS menu from the main menu of NLP-G2, move to the desired channel by rotating the encoder, then press ENTER to open its settings. Press the encoder to start editing the setup and move between the lines by pressing BACK and ENTER. When the setup is complete, press the encoder once again to stop editing, then press ENTER to save your settings.



LCD BACKLIGHT

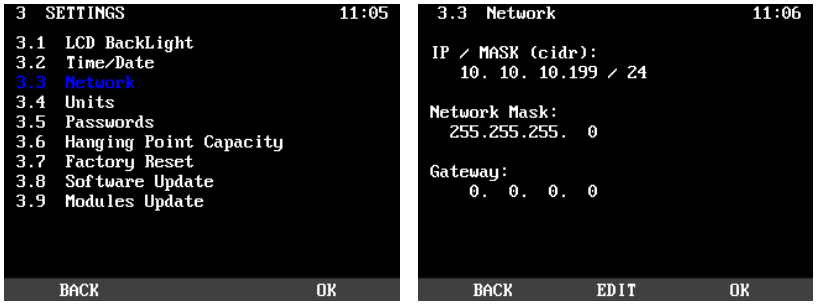
The SETTINGS menu, which can be accessed from the main menu, contains several tabs.

To enter the LCD BACKLIGHT tab, open the SETTINGS menu, move the selection to 3.1 and press ENTER. Press the encoder to start editing the setup and move between the lines by pressing BACK and ENTER. *Intensity* regulates screen brightness, *Off time* defines how long the display stays on before entering sleep mode (dimming), and *LED mute* defines whether the LED lights stay on in sleep mode. When the setup is complete, press the encoder once again to stop editing, then press ENTER to save your settings.



TIME / DATE

Open the SETTINGS menu, move the selection to 3.2 and press ENTER. Changing system settings requires Admin-level admission. The Admin Password is set to 1111 by default. Press the encoder to start editing the setup and move between the lines by pressing BACK and ENTER. When the setup is complete, press the encoder once again to stop editing, then press ENTER to save your settings.

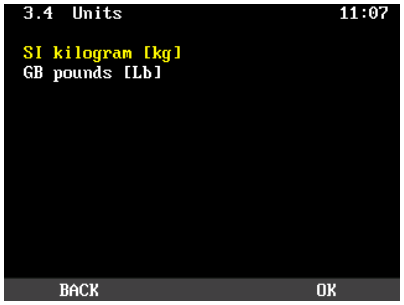


NETWORK

Open the SETTINGS menu, move the selection to 3.3 and press ENTER. Press the encoder to start editing the setup and move between the lines by pressing BACK and ENTER. When the setup is complete, press the encoder once again to stop editing, then press ENTER to save your settings.

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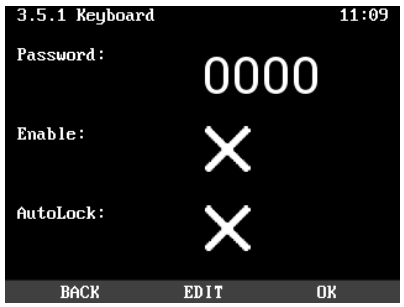


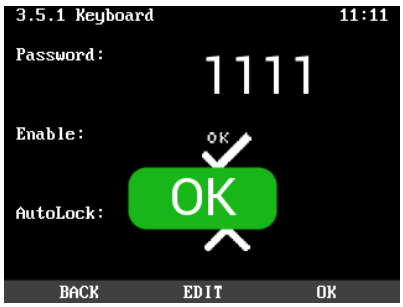


UNITS

Open the SETTINGS menu, move the selection to 3.4 and press ENTER. Change the selection by rotating the encoder, then press ENTER to save your settings.







PASSWORDS

Open the SETTINGS menu, move the selection to 3.5 and press ENTER. Choose the password you need to change, press ENTER to open its menu, then press the encoder to start editing the setup and move between the lines by pressing BACK and ENTER. When the setup is complete, press the encoder once again to stop editing, then press ENTER to save your settings.







HANGING POINT CAPACITY

Open the SETTINGS menu, move the selection to 3.6 and press ENTER. Performing a factory reset requires Admin-level admission. Move to the desired channel by rotating the encoder, then press ENTER to open its settings. Press the encoder to start editing the setup and move between the lines by pressing BACK and ENTER. When the setup is complete, press the encoder once again to stop editing, then press ENTER to save your settings.

IMPORTANT NOTE

Please pay extra attention when configuring channel max limit and hanging point capacity. Clashing of these two values will create an error in the system.







FACTORY RESET

Open the SETTINGS menu, move the selection to 3.7 and press ENTER. Performing a factory reset requires Admin-level admission. You will see a list of settings that will be reset. Press ENTER to reboot the device and reset the system.

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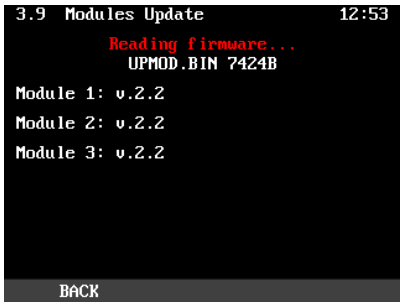




SOFTWARE UPDATE

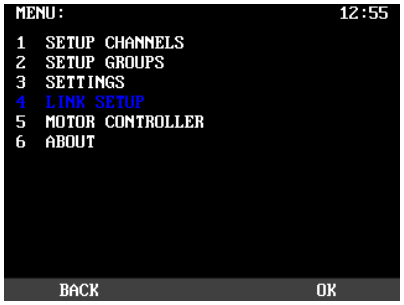
Open the SETTINGS menu, move the selection to 3.8, press ENTER and follow the instructions on the display. Please insert a USB with the software update file before initialising the procedure.





MODULES UPDATE

Open the SETTINGS menu, move the selection to 3.9, press ENTER and wait for the firmware update file to be received by the NLP-G2. Then, move the selection by rotating the encoder and update all three modules one by one. Please insert a USB with the software update file before initialising the procedure.





LINK SETUP

The LINK SETUP menu, which can be accessed from the main menu, contains several tabs.

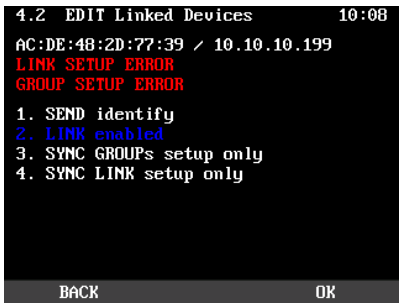
4.1 IDENTIFY Linked Devices - the display will change to a different colour on all linked devices for easy identification.

4.2 EDIT Linked Devices - open a small menu to allow the operator to create & edit linked devices.

4.3 SEND GROUP Setup - sends all channel group configurations to the linked NLP and synchronises the two.

4.4 RESET GROUP link - resets linking for all channel groups.





EDIT LINKED DEVICES

SEND identify - the display will change to a different colour on the chosen device.

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LINK disabled - means that the devices are not linked. Press ENTER to change the status to enabled.

SYNC GROUPS setup only - synchronises channel groups settings between the devices.

SYNC LINK setup only - synchronises link status between the devices (enabled or disabled).

IMPORTANT NOTE

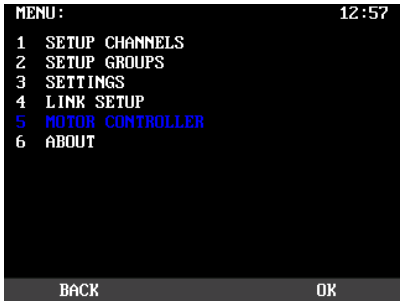
The status needs to be set to *enabled* on BOTH devices in order to create a link. If this condition is not fulfilled, you will see a red LINK SETUP ERROR warning on the display. To link both devices,

a) Manually choose *Link enabled* on Device A and Device B, or

b) Choose *Link enabled* on Device A, then move the selection to *SYNC LINK setup only* and press ENTER. This will synchronise link status on both devices.

IMPORTANT NOTE

For all SYNC commands, synchronisation is always done based on the settings of the device from which the command is sent.





MOTOR CONTROLLERS

Enter the SETUP GROUPS menu from the main menu of NLP-G2 to see a list of all connected motor controllers.

4.4. MENU PASSWORDS

For Keyboard and User password requests (see images below), if the operator is unable to provide the required password, the Admin password may be used to bypass it. To enter the Admin password instead, rotate the encoder to switch between input fields.

User password is required for: Setup Channel, Setup Groups, Settings → 3.3. Network

Admin password is required for: Settings → 3.2. Time/Date, Settings → 3.6. Hanging Point Capacity, Settings → 3.7. Factory Reset





By default, the passwords are set to the following:

Keyboard: 0000

User: 1234

Admin: 1111

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5. WARRANTY

This unit is covered by a two-year manufacturer's warranty. For information regarding extended warranty terms, please contact the manufacturer at sales@srs-group.com.

The warranty applies exclusively to original factory-installed components and ensures their correct operation under normal usage conditions.

The warranty shall be void under the following circumstances:

- ! Any original component has been tampered with or modified without authorisation;
- ! The equipment is operated outside of its intended or specified usage conditions;
- ! The electrical power supply does not meet required specifications;
- ! Mechanical damage is present, including damage caused by overload or improper use.

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DECLARATION OF CONFORMITY

According to the specification of Machinery Directive 2006/42/EC, Annex II A:

Name of manufacturer:	SRS Group s.r.o.
Registered seat:	Pri majeri 4 831 07 Bratislava Slovakia

Declares that the product

Type: 2nd Generation NLP Processor

Name: 968xxx / NLPxx-G2

Year of construction: 2025

Corresponds to the following harmonised standards:

Safety:	EN 60065:2014 EN 60204-1:2018 EN 13850:2015 EN 12100:2010
EMC:	EN 55103-2:2010

And in compliance with the following requirements:

Machine directive:	2006/42/EC
Low Voltage directive:	2014/35/EU
Electromagnetic compatibility directive:	2014/30/EU

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Bratislava, 19. 02. 2026

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