

NP2 / NP5 QUICK GUIDE V. 2.0

Warranty

NP2/NP5 has a 24 month warranty on the electronic parts, running from the date of purchase. The warranty will not be valid in case of tampering with the device or in case personnel not authorised by the manufacturer or by the authorised dealer should carry out work on it.

N.B. responsibility of the purchaser: in case of operation under warranty, the device must be packaged so as to prevent damage during transport and shipped to the manufacturer together with all the accessories.

Warranty rules

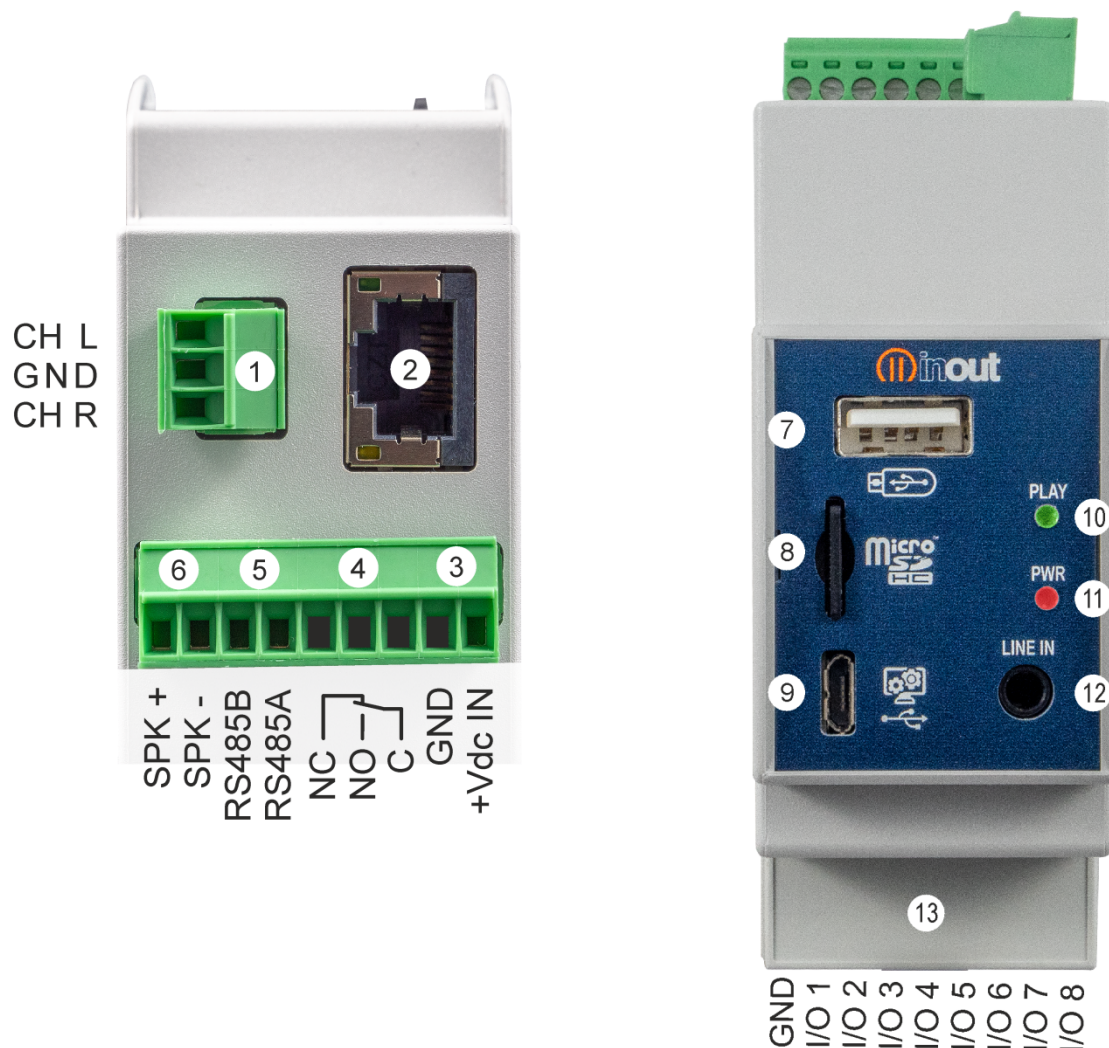
1. In order to exercise his warranty rights, the purchaser must enclose with the device a copy of evidence of purchase duly stamped by the dealer (bill/invoice).
2. The warranty lasts for 24 months for the electronic parts. The warranty is granted at the point of sale or else directly requested from the manufacturer.
3. The warranty only covers damage to the product which makes it work badly.
4. Work under warranty will only mean repairing or replacing, free of charge, any parts acknowledged to be defective during manufacture or in their material, including labour costs.
5. The warranty does not apply to damage caused by negligence or failure to comply with the instructions, or damage caused by unauthorised people, with a special reference to the outside parts.
6. Also, the warranty does not apply to damage caused to the device by connection to unsuitable power sources.
7. The warranty does not cover parts subject to wear after use, or the container if the material is not defective.
8. The warranty does not include transport costs, which will be paid for by the purchaser in relation to the manner and time of transport.
9. The warranty will run out after 24 months have elapsed. In this case, service will be provided charging for the parts replaced, labour costs and transport according to the current rates.
10. Any dispute will be settled exclusively before the Court of Law of Venice.

Obsolete devices disposal :



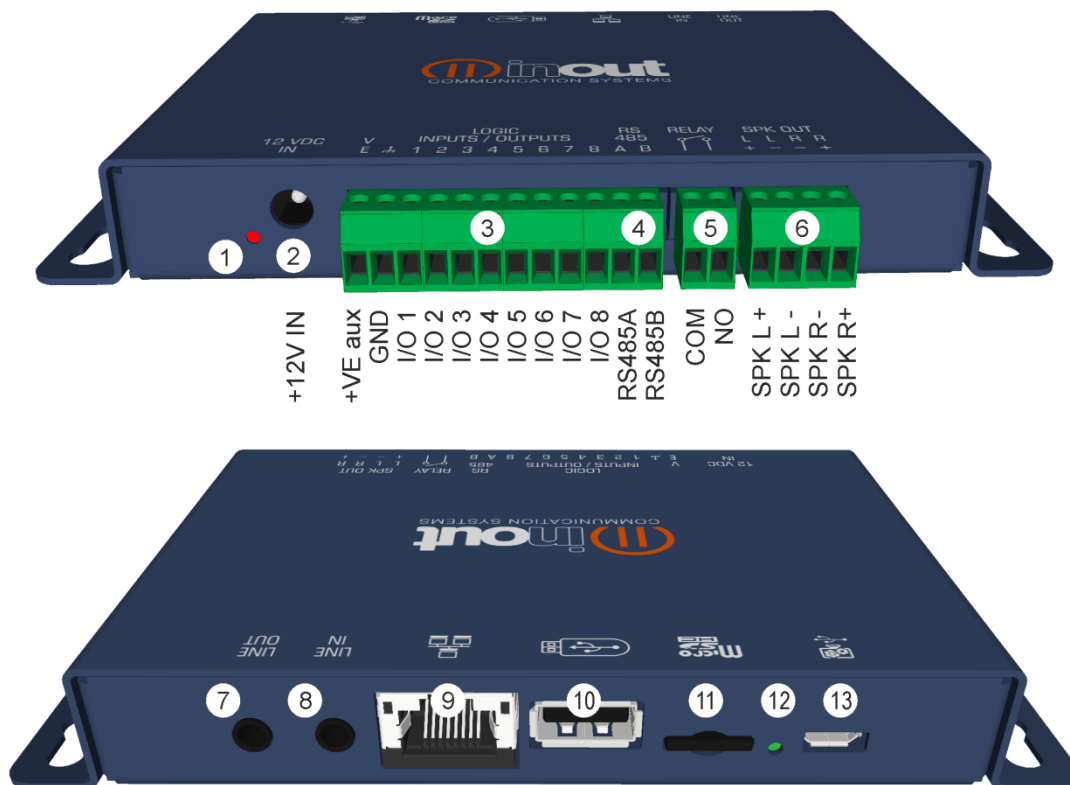
- When you find this picture on a device, it means that the device is compliant with European Directive 2012/19/EU.
- All electronic and electric devices should be disposed separately from normal garbage.
 - The proper disposal of old devices, accessories, and of the batteries in particular, it contributes to prevent possible negative consequences for human health and for the environment.
 - For more detailed information on the disposal of obsolete devices, contact the municipality, the garbage disposal service or the shop in which the product has been acquired.

NP2 installation and connection description



- | | |
|--|--|
| ① Pre-amplified audio output L/R channels | ⑦ USB port for pen drive |
| ② LAN 10/100 Ethernet port | ⑧ microSD Card slot connector |
| ③ Input feed 12Vdc / GND | ⑨ Service microUSB connector (Reserved) |
| ④ Relay contact output COM/NO/NC with configurable status (schedule, play, etc.) | ⑩ Play led lit = audio file playing
blinking = pause / system check / error |
| ⑤ RS485 serial communication port | ⑪ Power led lit = device is live |
| ⑥ Amplified 15W audio output for speaker | ⑫ Stereo audio input for outside music source with mixer function |
| | ⑬ 8 logic on/off ports individually configurable as input or output
GND auxiliary for input activation using outside contacts |

NP5 installation and connection description



- | | |
|--|--|
| ① Power led lit = device is live | ⑦ Stereo audio output. |
| ② Input feed 12Vdc / GND | ⑧ Stereo audio input for outside music source with mixer function |
| ③ Ve Aux +12V / 200mA max., available for output activation or outside feed sensors
GND for input activation
8 logic on/off ports individually configurable as input or output | ⑨ LAN 10/100 Ethernet port |
| ④ RS485 serial communication port | ⑩ USB port for pen drive |
| ⑤ Relay contact output with configurable status (schedule, play, etc.) | ⑪ microSD Card slot connector |
| ⑥ Amplified 15+15W audio output for speaker | ⑫ Play led lit = audio file playing;
blinking = pause / system check / error |
| | ⑬ Service microUSB connector (Reserved) |



IMPORTANT NOTICES.

- NP2/NP5 has been designed and made to work only with the following mains power supply: 12VDC.
- The device must be serviced only by qualified staff.
- Do not put objects inside the device through the openings, in order to prevent the risk of fire or shock.
- Disconnect the device from the power socket before cleaning. Clean the device using a soft, dry cloth. Do not use liquids or spray which can contain flammable substances.

Content of the kit NP2

- n. 1 NP2 device
- n. 1 quick guide
- n. 1 DIN rail AC/DC adaptor 12Vdc/15W
- n. 1 uSD flash memory
- n. 1 uSD adapter

Content of the kit NP5

- n. 1 NP5 device
- n. 1 quick guide
- n. 1 wall mount AC/DC adapter 12Vdc/30W
- n. 1 interchangeable AC plug Euro type
- n. 1 interchangeable AC plug U.K. type
- n. 1 uSD flash memory
- n. 1 uSD adapter

How to start?

- Try out demo examples contained in the supplied microSD.
- At power-up, NP2/NP5 performs a system check signaling by flashing the green led, wait for the LED to turn off.
- To create folders into microSD, insert blank flash card into the player and power up NP2/NP5.

Folders	What they need
 config	Folder for memory configurations
 music	Folder for music files
 playlist	Folder for playlists files
 scheduler	Folder to save time schedule
 spot	Folder for spot files
 system	System Folder and Help Messages



IMPORTANT:

If the microSD is not inserted, NP2/NP5 does not work and the green LED remains blinking



IMPORTANT:

NP2/NP5 is compatible with the following browsers.

- Chrome 7+
- MozillaFirefox 4+
- Internet Explorer 10+ / Windows 10 Edge
- Safari 6+ for MAC

Please connect the NP2/NP5 to your router before executing the following steps.

- open your Web browser on your PC (such as CHROME)
- on the Address field, type the following address `http://192.168.1.1` or IP address of the router.
- you will get a window asking for the username and password of the router.
- enter the username and the password to log on to the router administrative page.
- Check the router's DHCP clients table by checking the attached device list.

Press Login menù, select User Admin.

Default value:	User	Password
Guest	guest	guest
Administrator	admin	admin



IMPORTANT: timeout login 10min.

The screenshot shows the 'inout' web interface. The top header is teal with the 'inout' logo on the left and 'guest' on the right. A left sidebar contains a menu with items: Device info, Player, Playlist, Playlist details, Scheduler, and Login. The main content area is titled 'Login' and contains a 'User' dropdown menu with 'guest' and 'admin' options, a 'Password' input field with masked characters, and two buttons: 'Login' and 'Logout'. The bottom left corner shows the IP address '192.168.1.2/#'.

If you change login, insert password and confirm with Set password button.

The screenshot shows the 'inout' web interface. The top header is teal with the 'inout' logo on the left and 'admin' on the right. A left sidebar contains a menu with items: Device info, Device Configuration, Uploader, Copy from USB, Player, Playlist, Playlist Creator, Scheduler, Audio settings, I/O settings, Relay settings, Date&Time settings, LAN settings, and RS485 settings. The main content area is titled 'Login' and contains a 'User' dropdown menu with 'guest' selected, a 'Password' input field, a 'Repeat Password' input field, and two buttons: 'Set password' and 'Logout'.

Device Info

Web page displaying all the parameters set in the NP2/NP5 device.

To change settings, select the menu on the left side of the web page

The screenshot displays the 'minout' web interface for an NP2/NP5 device. The left sidebar lists various configuration categories. The main content area, titled 'Device info', is divided into three sections:

- General Info:**
 - Serial number: 00000000
 - Brand ID: NP2
 - Software version: 3.3.06
 - Hardware version: 1.0
 - Bootloader version: B.4
 - DHCP enabled: ☒
 - IP address: 192.168.1.3
 - Netmask: 255.255.255.0
 - Gateway: 192.168.1.1
 - Hostname: NP2
 - MAC address: 00:00:00:e1:80:00
 - DNS1: 192.168.1.1
 - DNS2: 0.0.0.0
- Device Configuration:**
 - Standard Player
 - Device I/O:**
 - I/O Mode: Free
 - I/O Config: 1 2 3 4 5 6 7 8 (all green)
 - Relay Mode: Play status
 - Scheduler suspension: ☐
 - Play modes:**
 - Power On Auto Play: ☐
 - SD:**
 - Present: ☒
 - SD size: 15549
 - Free memory: 15512
 - USB:**
 - Present: ☐
- Audio:**
 - Audio Line In MIX: ☐
 - Volume (db): -0.5



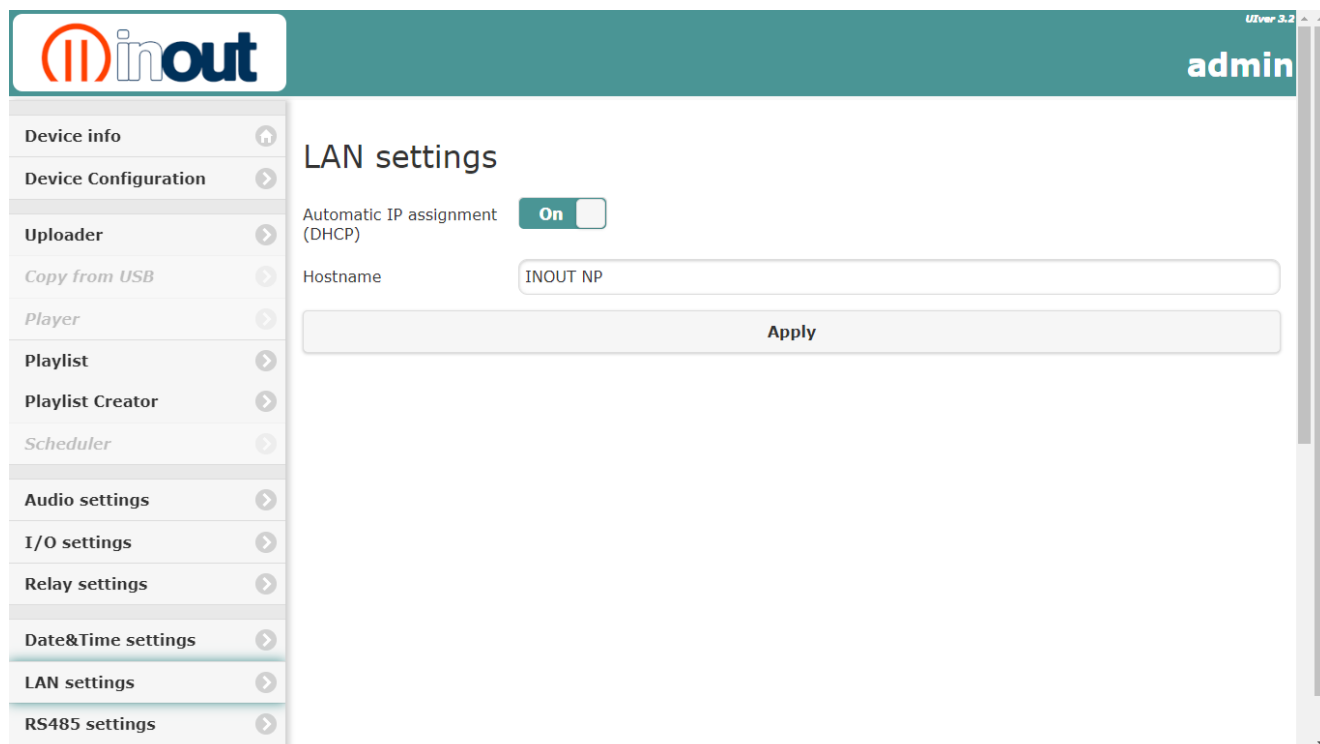
IMPORTANT:

always save the settings with the save/apply button

LAN settings

DHCP Automatic IP assignment

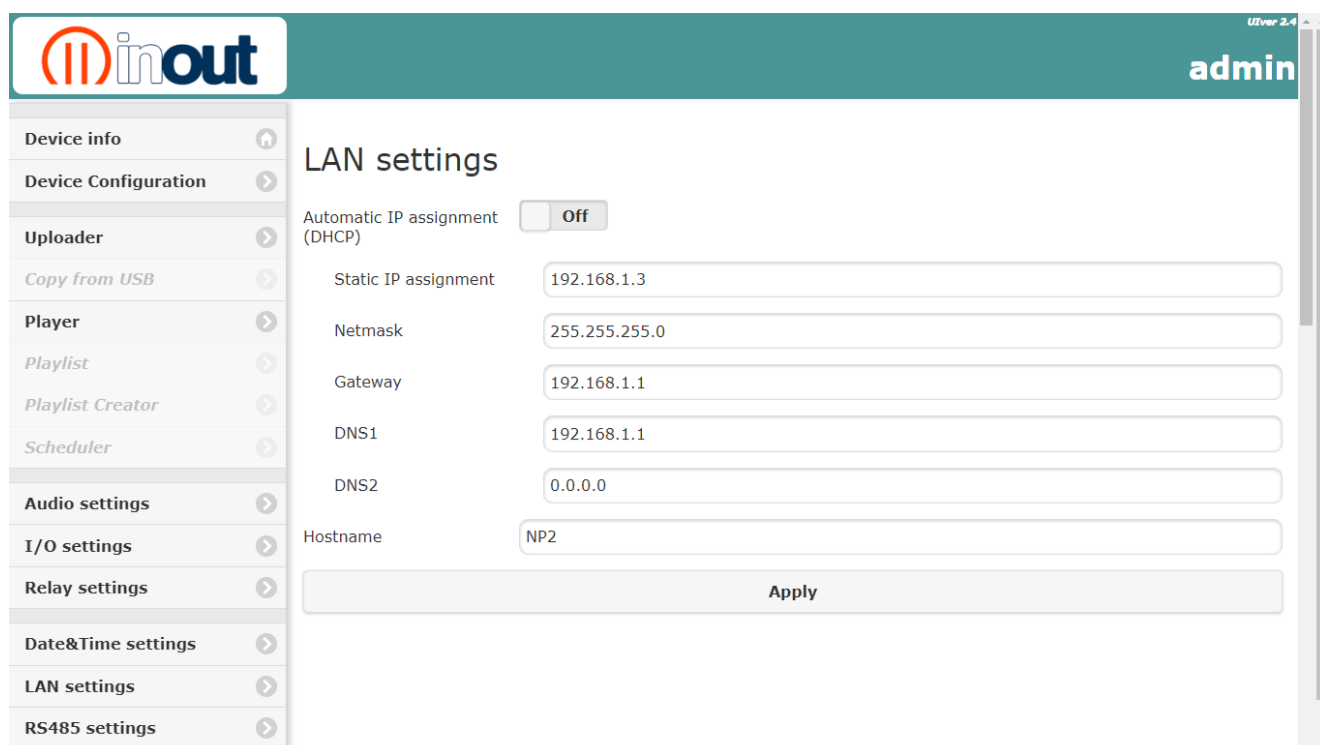
Set DHCP ON, enter your prefer Hostname and save with Apply.



The screenshot shows the INOUT web interface. The top header has the INOUT logo on the left and 'admin' on the right. A left sidebar contains a menu with items: Device info, Device Configuration, Uploader, Copy from USB, Player, Playlist, Playlist Creator, Scheduler, Audio settings, I/O settings, Relay settings, Date&Time settings, LAN settings (highlighted), and RS485 settings. The main content area is titled 'LAN settings'. It features a toggle for 'Automatic IP assignment (DHCP)' set to 'On'. Below this is a text field for 'Hostname' containing 'INOUT NP'. At the bottom of the settings area is an 'Apply' button.

Static IP assignment

Set DHCP OFF, enter the IP address, Subnet Mask, Default Gateway and DNS server. Enter your prefer Hostname and save with Apply.



The screenshot shows the INOUT web interface with the same sidebar as the previous image. The 'LAN settings' section now shows the 'Automatic IP assignment (DHCP)' toggle set to 'Off'. Below this, there are five text input fields: 'Static IP assignment' (192.168.1.3), 'Netmask' (255.255.255.0), 'Gateway' (192.168.1.1), 'DNS1' (192.168.1.1), and 'DNS2' (0.0.0.0). At the bottom, the 'Hostname' field contains 'NP2'. An 'Apply' button is located at the bottom of the settings area.

Audio settings

The screenshot shows the 'Audio settings' page in the Minout web interface. The sidebar on the left lists various configuration options, with 'Audio settings' currently selected. The main panel contains the following settings:

- Volume OUT (dB):** A slider set to -16 dB.
- Fade In (msec):** A slider set to 300 ms.
- Fade Out (msec):** A slider set to 300 ms.
- Cross Fade In (msec):** A slider set to 300 ms.
- Cross Fade Out (msec):** A slider set to 300 ms.
- Audio Line In MIX:** A toggle switch set to 'Off'.
- Line IN Level (dB):** A slider set to -31 dB.
- Line IN Level MIX (dB):** A slider set to -31 dB.
- Line Out Mode:** A dropdown menu set to 'Stereo'.
- Out Mode:** A dropdown menu set to 'Normal'.
- Bass Level (dB):** A slider set to 5 dB.
- Bass Freq (Hz):** A slider set to 100 Hz.
- Treble Level (dB):** A slider set to 3 dB.

Volume out: level preamplified and amplified audio output

Fade In: setting the initial fading time of playing the audio file

Fade Out: setting the finally fading time of playing the audio file

Cross Fade In: setting the fading time of the Line In before playing the audio file.

Cross Fade Out: setting the fading time of the Line In after playing audio file

Audio line in mix: switch on/off audio Line In

Line In Level: setting level Line In when player in stand by

Line In Level Mix: setting level Line In of the background during the playing of the audio file.

Line Out Mode: setting Line Out mode Stereo / Mono

Bass Level: setting Low tone level control

Bass Freq: setting Lower limit frequency

Treble Level: setting High tone level control

Treble Freq: setting High limit frequency

I/O settings

Input	Value	Inversion	Time(1/10 sec)	Pulse Mode	OUT Mode	I/O Config
IO1	OFF	☒ ON				☐ IN
IO2	OFF	☐ OFF		☐ OFF	Free	☒ OUT
IO3	OFF	☐ OFF	6000	☒ ON	Play	☒ OUT
IO4	OFF	☐ OFF		☐ OFF	Play	☒ OUT
IO5	OFF	☐ OFF			Play + Blink in Pause	☒ OUT
IO6	OFF	☐ OFF			Blink in Play	☒ OUT
IO7	OFF	☐ OFF			Blink in Stop	☒ OUT
IO8	☐ OFF	☐ OFF			Pulse NoActiveInputs	☒ OUT

Reload

Save

I/O Config: Setting logic port input or output

Out Mode: Output logic port setting:

Free: remote enabled output with serial or TCP / IP command

Play: active output only during playback (no from sensor)

Play+Blink in pause: output active during playback and blink when paused

Blink in Play: output in blink during playback

Blink in Stop: output in blink when stopped

Pulse No Active Inputs: It allows the continuous reproduction of tracks with the play contact. When you disable the play contact, an output pulse commands the stop.

NB. Only for Standard Player and Playlist Sequence Configuration.

Pulse Mode: Setting the output logic port in pulse mode, set the pulse duration time in tenths of a second.

IMPORTANT: at the end of the track/file the output is deactivated

Inversion: Setting the mode of input/output active high or active low.

OFF: active-low input mode; the functioning of the input is connected to the ground/GND of the device.

ON : active-high input mode; the functioning of the input is applied with a positive voltage between 5 and 12Vdc.

Value: Test function Output logic port

IMPORTANT: save the settings with the button apply/save

Relay settings

The screenshot displays the 'Relay settings' page in the inout web interface. The sidebar on the left lists various configuration options, with 'Relay settings' currently selected. The main panel shows the 'Relay Test' toggle set to 'Off'. Below it, the 'Relay Mode' dropdown is set to 'Free', and the 'Logics' dropdown is set to 'Normal'. A 'Reload' button is positioned at the bottom of the settings section. The top of the interface features the inout logo and the user 'admin'.

Relay Test: Only for Test function relay on/off.

Relay Mode: - Free to remote control or scheduler function
- Play status, the relay is activated when the device is playing

Logics: setting normal or inverted

Date&Time settings

Select date and time and press “Change Date and Time with above values” button.

Option set: Fast setting “ Sync clock using your PC date and time” button.

The screenshot shows the Minout admin interface. On the left is a sidebar menu with options: Device Info, Device Configuration, Uploader, Copy from USB, Player, Playlist, Playlist Creator, Scheduler, Audio settings, I/O settings, Relay settings, Date&Time settings (highlighted), LAN settings, RS485 settings, Login, and Firmware update. The main content area is titled 'Date&Time settings'. It displays 'Board Date Tuesday 25/06/2019' with dropdowns for Tuesday, 25, 06, and 2019. Below that, 'Board Time 18:27:21' is shown with dropdowns for 18, 26, and 37. Two buttons are present: 'Change Date and Time with above values' and 'Sync clock using your PC date and time'. The 'Daylight Saving Time' section has an 'Auto adjust' toggle set to 'On' and a 'Local Time Zone' dropdown set to '(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna'. A 'Save DST Setup' button is at the bottom. The 'NTP service' section has a 'Synchronize Date&Time' toggle set to 'Off'.

Daylight Saving Time

This is a close-up of the 'Daylight Saving Time' settings section. It includes an 'Auto adjust' toggle set to 'On', a 'Local Time Zone' dropdown menu showing '(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna', and a 'Save DST Setup' button.

Daylight Saving Time (DST) is the practice of setting the clocks forward 1 hour from standard time during the summer months, and back again in the fall, in order to make better use of natural daylight.

Local Time Zone

The system clock must be on time. Select your country to get the correct time and date



IMPORTANT: save the settings with the button Save DST Setup.

NTP service

NTP service

Synchronize Date&Time
☒ On

Primary NTP Server

ntp1.inrim.it

ntp1.inrim.it

Secondary NTP Server

ntp2.inrim.it

ntp2.inrim.it

Sync through NTP Server every

7 day

at time

12

00

Next NTP sync date: 00-00-2000

Save NTP setup

Last sync results

UTC: ; Local Time:

Clear

Check NTP server

Sync now

A NTP service (Network Time Protocol) can be used to synchronize the time on devices across a network. A NTP time server is used to obtain the correct time from a time source and adjust the local time in each connecting device.

INRIM provides a synchronization service for informatics system connected to the Internet, based on two primary NTP (Network Time Protocol) servers installed at the Time and Frequency Laboratory.

The INRIM NTP servers can be reached by means of the following addresses:

ntp1.inrim.it (193.204.114.232)

ntp2.inrim.it (193.204.114.233)



IMPORTANT: save the settings with the button Save NTP Setup.

Clock adj service

NTP service

Synchronize Date&Time
☐ Off

Clock adj service

Fine adjustment clock
☒ On

Clock adj

+

6

sec. every

4 day

Save fine adjustment clock

If the NP2/5 is not connected to the Internet and you need to synchronize the time, you can set a precise time adjustment.

RS485 settings

The screenshot shows the 'RS485 settings' page in a web interface. The left sidebar contains the following menu items: Device info, Device Configuration, Uploader, Copy from USB, Player, Playlist, Playlist Creator, Scheduler, Audio settings, I/O settings, Relay settings, Date&Time settings, LAN settings, and RS485 settings (which is currently selected). The main content area is titled 'RS485 settings' and includes the following configuration options:

- Device ID:** A slider control set to the value 1.
- Baud rate:** A dropdown menu set to 19200.
- Data bits:** A dropdown menu set to 8.
- Stop bits:** A dropdown menu set to 1.
- Parity bit:** A dropdown menu set to None.
- Chksum:** A dropdown menu set to Enabled.
- Response delay (ms):** A slider control set to the value 2.

An 'Apply' button is located at the bottom of the settings area.

Device ID : Address NP2/NP5 in the 485 bus. This address **MUST** be univocal, two devices with the same address can not co-exist on the same bus.

Response delay: Minimum delay between end of reception of the pack and delivery of the reply.

NP2/NP5 can be connected to an RS485 communication bus through a serial port, which is controlled from a master system or by a computer.

Due to interference from outside the serial line, one may find anomalous behaviour from part of the master system which could cause possible damage to NP2/NP5. To avoid this mishap one must take the following precautions:

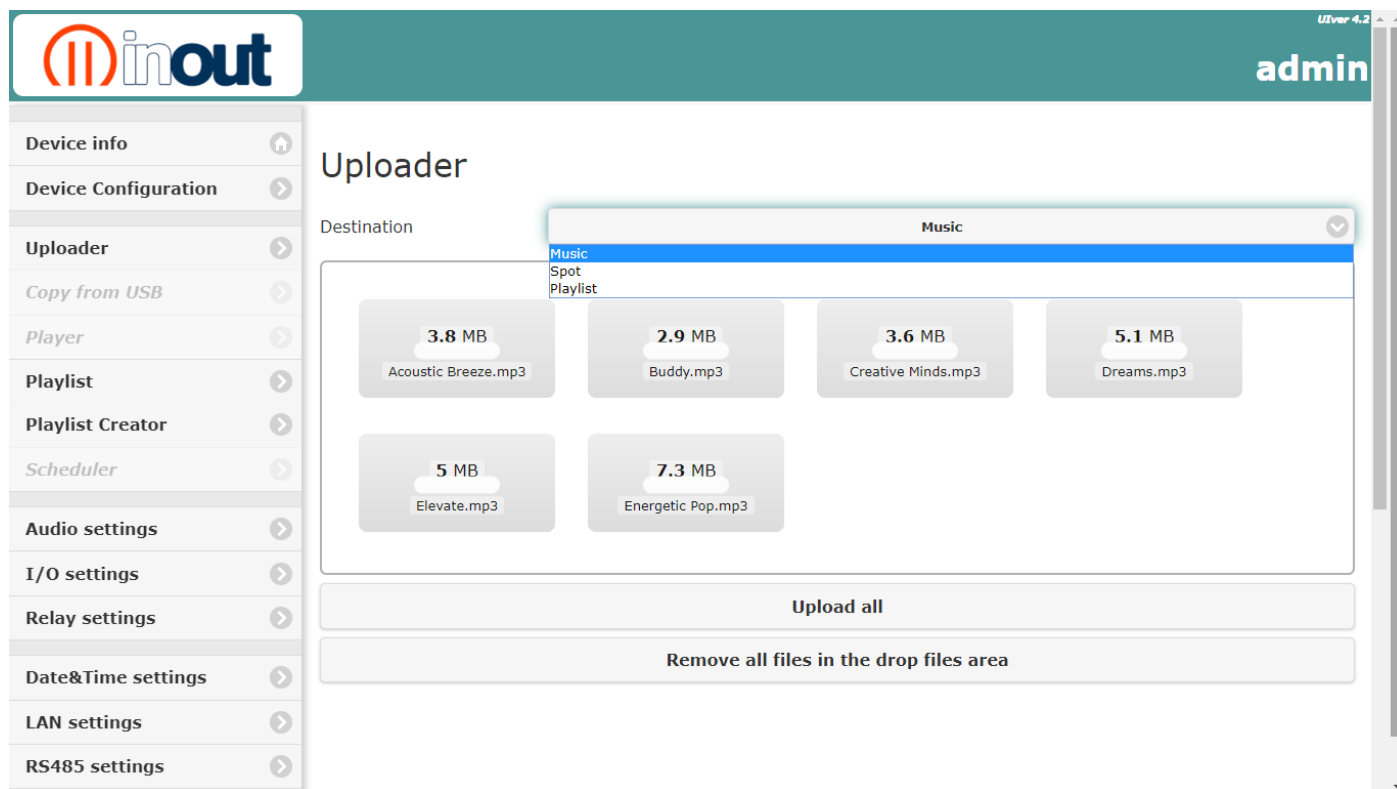
1. Do not let the serial cables transit in the same conduits as power cables or cables with elevated voltage. Maintain a safety distance of at least 10 cm. between these cables.
2. Connect serial cable screen to the ground the on one of the two sides (do not connect the screen from both sides); in addition, the ground connection of the screen must not be made in the same point in which piloted circuits of elevated tension are connected.
3. Cut the voltage of the entire system before beginning the wiring of the serial lines: even dispersed or parasite currents could damage the modules.



IMPORTANT:

- The internal electronics of NP2/NP5 are not galvanically insulated from the RS485 line; in case of short circuit or discharge to ground, it is possible to damage not only the NP2/NP5, but even the master system to which it is connected!
- For the RS485 connection, one must remember to ignore the transmission echo from the master that is returning through the serial line.

Uploader



To upload files into NP2/NP5, select the audio files on your computer/device, select dir/folder destination and press Upload all to copy into microSD storage.

Press Reset to abort Upload.

IMPORTANT:

- Before you start Upload, close all other web pages. During the Upload function, do not navigate to other NP2/NP5 features and do not open other browser web pages.
- Do not start Upload while running a scheduler
- We recommend uploading when the NP2/NP5 is in standby mode.

Copy from USB

Device info

Device Configuration

Uploader

Copy from USB

Player

Playlist

Playlist Creator

Scheduler

Audio settings

I/O settings

Relay settings

Date&Time settings

LAN settings

RS485 settings

Copy from USB

Destination: Music

Show Title-Author-Genre: On

All genres

Find by title or author...

Select all Deselect all

1. ARKANOID - Music - Music - Other

2. ATMOSPHERE - Music - Music - Other

3. ANALIZE - Music - Music - Other

Copy

To copy files into NP2/NP5, insert USB pen drive, select the audio files, select dir/folder destination and press Copy to transfer files into microSD storage.

If the Copy from USB menu does not appear, refresh the web page.



IMPORTANT:

- The files to be transferred must be in the root directory of the USB pen drive
- Do not start Copy while running a scheduler
- We recommend Copy from USB when the NP2/NP5 is in standby mode

How to update the Bootloader (BL) or Application (App) Firmware?

If you have an NP2/NP5 device with the BL firmware version equal or less to the version "A.3", and the App with version equal or less to the version "3.0.2", it is necessary to follow the below instructions.

To update the newest firmware versions is it possible to use this web page for both: Bootloader and Application.

Minout admin

Firmware Update

This web page gives the possibility to upload the application firmware in the SD memory and execute their updating.

1. Select the update file, using the text box below.
2. Press the Upload button to upload it to the SD memory.
3. When the file will be uploaded, the application will execute the updating process.

Do not interrupt this process as it might cause corruption, which will make your NP10 device unstable.

Your device reboots after the firmware is uploaded. It will take not more than 4 minutes.

If the updating process will conclude successfully, the update file in the SD memory will be deleted.

This process manages one file at a time.

Application Firmware

The process uploads the file in the SD card memory, inside the directory "updates", check the file integrity using the CRC info and then decrypt the data and write them in the Flash area. Instead, in the App, after the integrity check will recall a sw reset, in order to execute the bootloader that will find the file in the "updates" directory. For both process, at the end, in case of success, the update file will be deleted.

IMPORTANT:

To update firmware wait 4 minutes, after it is recommended to switch off and on NP2/NP5 device.

USB Firmware Update (optional)

1. Update the App firmware using the well know USB method, saving in the USB Flash root the file "dASys_F4_v3.x.xx.bin".
2. Plug the USB Flash memory to the NP2/NP5 device.
3. Power on the NP2/NP5 device and wait 4 minute. The original BL update the App firmware version using the file "dASys_F4_v3.x.xx.bin".

Service

The screenshot shows the Minout web interface. The top header has the Minout logo and the word 'admin'. The left sidebar contains a list of menu items: Device info, Device Configuration, Uploader, Copy from USB, Player, Playlist, Playlist Creator, Scheduler, Audio settings, I/O settings, Relay settings, Date&Time settings, LAN settings, and RS485 settings. The main content area is titled 'Service' and contains a form with the following elements:

- A dropdown menu labeled 'Parameters file saved in:' with 'SD' selected and 'USB' as an option.
- A 'Backup' button.
- A 'Restore' button.
- A 'System Reboot' button.
- A 'System Reboot and Scan SD content' button.
- A 'Factory default' button.

Backup : Save your player configuration into uSD or USB Key.

Restore : Restore your player configuration saved in the uSD or USB Key

System Reboot: remotely reboot the player

System Reboot: restart the player remotely and scan the files contained in the SD memory
and scan uSD

Factory default: restore the factory parameters

Standard Player configuration

NP2/NP5 works just like a standard player in this mode and does not require any specific programming or playlist file. The tracks will be played in the sequence in which they are memorised in the flash memory; if a block of data is transferred then the written sequence in the flash memory will depend on the operating system used.

Digital I/O Mode > Free

Logic ports are freely configurable as I/O settings webpage.

Input	Value	Inversion	Time(1/10 sec)	Pulse Mode	OUT Mode	I/O Config
I01	OFF	☐ OFF				☐ IN
I02	OFF	☐ OFF		☐ OFF	Play	☐ OUT
I03	OFF	☐ OFF	4500	☒ ON	Play	☐ OUT
I04	OFF	☒ ON		☐ OFF	Play	☐ OUT
I05	OFF	☐ OFF	2800	☒ ON	Play	☐ OUT
I06	OFF	☒ ON			Blink in Play	☐ OUT
I07	OFF	☐ OFF	5600	☒ ON	Play	☐ OUT
I08	OFF	☐ OFF		☐ OFF	Blink in Stop	☐ OUT

Digital I/O Mode > Player

The logical inputs can be used for player control (see example application at the end of guide).

IO1		previous file
IO2		Stop file reproduction.
IO3		Play/Pause file
IO4		next file
IO5		reduce output volume
IO6		increase output volume
IO7		free - logic ports are freely configurable as I/O settings webpage.
IO8		free - logic ports are freely configurable as I/O settings webpage.

Time Persistence: set the persistence time of the input command (time to wait before NP2/NP5 is able to interpret the input command)

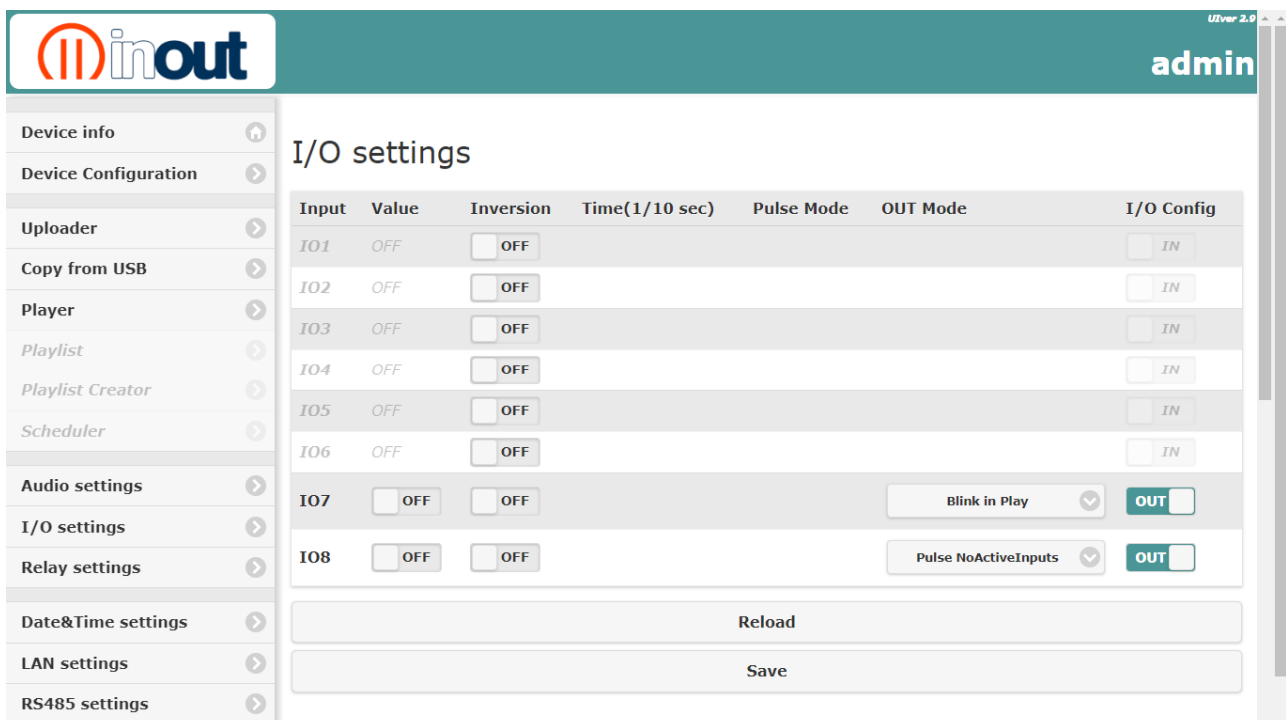
Power On Auto Play: In this mode, NP2/NP5 will automatically start to play the audio file when the device is power on.

Random play: ON = Random play is a music folder playback mode in which songs are played in a random order that is decided for all tracks at once.
After playing the last song, a new random sequence is generated
OFF = execution of all songs in the order in which they are stored

Restart Track Stopped: ON = If the track is interrupted, the next playback restarts from the beginning of the track.
OFF = playback restarts from the next track



IMPORTANT: save the settings with the button apply/save



The screenshot shows the 'inout' admin interface. On the left is a sidebar menu with options: Device info, Device Configuration, Uploader, Copy from USB, Player, Playlist, Playlist Creator, Scheduler, Audio settings, I/O settings (selected), Relay settings, Date&Time settings, LAN settings, and RS485 settings. The main area is titled 'I/O settings' and contains a table with columns: Input, Value, Inversion, Time(1/10 sec), Pulse Mode, OUT Mode, and I/O Config. The table lists inputs IO1 through IO8. IO1-IO6 have 'OFF' values and 'OFF' inversion. IO7 and IO8 have 'OFF' values and 'OFF' inversion, but IO7 has a 'Blink in Play' dropdown and IO8 has a 'Pulse NoActiveInputs' dropdown. Both IO7 and IO8 have 'OUT' buttons. Below the table are 'Reload' and 'Save' buttons.

Input	Value	Inversion	Time(1/10 sec)	Pulse Mode	OUT Mode	I/O Config
IO1	OFF	OFF				IN
IO2	OFF	OFF				IN
IO3	OFF	OFF				IN
IO4	OFF	OFF				IN
IO5	OFF	OFF				IN
IO6	OFF	OFF				IN
IO7	OFF	OFF		Blink in Play	OUT	OUT
IO8	OFF	OFF		Pulse NoActiveInputs	OUT	OUT

Pulse No Active Inputs: It allows the continuous reproduction of tracks with the play contact. When you disable the play contact, an output pulse commands the stop.
NB. Only for Standard Player and Playlist Sequence Configuration.

Playlist Sequence Configuration

This sequentially performs all the playlists memorised, starting first playlist.

inout admin

Device info

Device Configuration

Uploader

Copy from USB

Player

Playlist

Playlist Creator

Scheduler

Audio settings

I/O settings

Relay settings

Date&Time settings

LAN settings

RS485 settings

Device Configuration

Device Configuration Playlist Sequence

Digital I/O Mode Player

Play Delay (msec) 0

Digital Inputs

Time Persistence (msec) 100

Power On Auto Play Off

Random Play Off

Restart track stopped Off

Save

Digital I/O Mode > Free

Logic ports are freely configurable as I/O settings webpage.

inout admin

Device info

Device Configuration

Uploader

Copy from USB

Player

Playlist

Playlist Creator

Scheduler

Audio settings

I/O settings

Relay settings

Date&Time settings

LAN settings

RS485 settings

I/O settings

Input	Value	Inversion	Time(1/10 sec)	Pulse Mode	OUT Mode	I/O Config
I01	OFF	OFF				IN
I02	OFF	OFF		OFF	Play	OUT
I03	OFF	OFF	4500	ON	Play	OUT
I04	OFF	ON		OFF	Play	OUT
I05	OFF	OFF	2800	ON	Play	OUT
I06	OFF	ON			Blink in Play	OUT
I07	OFF	OFF	5600	ON	Play	OUT
I08	OFF	OFF		OFF	Blink in Stop	OUT

Reload

Digital I/O Mode > Player

The logical inputs can be used for player control (see example application at the end of guide).

IO1		previous file
IO2		Stop file reproduction.
IO3		Play/Pause file
IO4		next file
IO5		reduce output volume
IO6		increase output volume
IO7		free - logic ports are freely configurable as I/O settings webpage.
IO8		free - logic ports are freely configurable as I/O settings webpage.

Time Persistence: set the persistence time of the input command (time to wait before NP2/NP5 is able to interpret the input command)

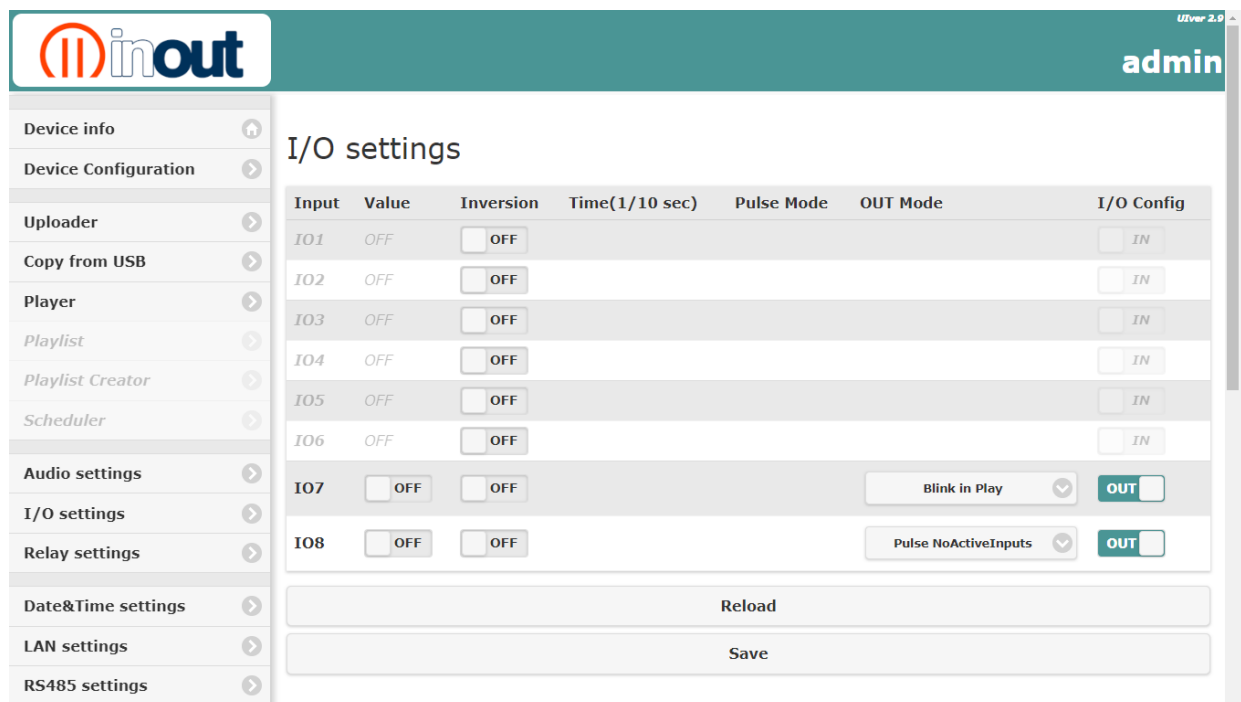
Power On Auto Play: In this mode, NP2/NP5 will automatically start to play the audio file when the device is power on.

Random play: ON = random play of individual playlists.
After playing the last playlist, a new random sequence is generated
OFF = sequence playlist as displayed on the web page.

Restart Track Stopped: ON = If the track is interrupted, the next playback restarts from the beginning of the track.
OFF = playback restarts from the next track



IMPORTANT: - save the settings with the button apply/save
- set continuous play ON for playlist loop



Input	Value	Inversion	Time(1/10 sec)	Pulse Mode	OUT Mode	I/O Config
IO1	OFF	OFF				IN
IO2	OFF	OFF				IN
IO3	OFF	OFF				IN
IO4	OFF	OFF				IN
IO5	OFF	OFF				IN
IO6	OFF	OFF				IN
IO7	OFF	OFF		Blink in Play		OUT
IO8	OFF	OFF		Pulse NoActiveInputs		OUT

Reload

Save

Pulse No Active Inputs: It allows the continuous reproduction of tracks with the play contact. When you disable the play contact, an output pulse commands the stop.
NB. Only for Standard Player and Playlist Sequence Configuration.

Select a playlist from the “Playlist” web page.

Minout admin UI ver 4.2

Playlist

No audio track in play.

Media control

Volume OUT (dB) -8,5

Bass Level (dB) 5

Treble Level (dB) 3

☐ ☐ Filter

☐	1. Enya A Day Without Rain.m3u	37:34	▶
☐	2. Enya And Winter Came.m3u	45:05	▶
☐	3. Luca Carboni I Grandi Successi.m3u	74:10	▶
☐	4. Michael Jackson This Is It.m3u	92:27	▶
☐	5. Mika Song Book 1.m3u	52:04	▶
☐	6. Simply Red Stars.m3u	41:19	▶
☐	7. The Verve Urban Hymns.m3u	60:43	▶
☐	8. U2 All That You.m3u	49:24	▶

Click on the selected playlist to start the Playlist Control pop-up

Minout admin UI ver 4.2

Playlist

No audio track in play.

Media control

Volume OUT (dB) -8,5

Bass Level (dB) 5

Treble Level (dB) 3

☐ ☐ Filter

Playlist control

☐	1. Enya A Day Without Rain.m3u	37:34	▶
☐	2. Enya And Winter Came.m3u	45:05	▶
☐	3. Luca Carboni I Grandi Successi.m3u	74:10	▶
☒	4. Michael Jackson This Is It.m3u	92:27	▶
☐	5. Mika Song Book 1.m3u	52:04	▶
☐	6. Simply Red Stars.m3u	41:19	▶
☐	7. The Verve Urban Hymns.m3u	60:43	▶
☐	8. U2 All That You.m3u	49:24	▶

Advanced Player Configuration

Digital I/O Mode > Binary Code

Activating the inputs in binary combination, one can launch the playing of a maximum of 255 file, naming the audio files es. 1.mp3, 2.mp3, 3.mp3.....255.mp3

Digital I/O Mode > Keypad (12-key telephone keypad)

Dedicated operation for telephone keypad connection 12 keys. All I/O ports are dedicated to this function (see example application at the end of guide).

Naming the audio files es. 1.mp3, 2.mp3, 3.mp3.....999.mp3

Digital I/O Mode > Museum Mode

Activating the inputs in binary combination, one can launch the playing of a maximum of 63 file, naming the audio files es. 1.mp3, 2.mp3, 3.mp3.....63.mp3.

I/O7 and I/O8 reserved:

IO7  reduce output volume

IO8  increase output volume



IMPORTANT: save the settings with the button apply/save

Digital Inputs Set

Digital Inputs Dedicated inputs for Playlist Direct or Binary Code, the remaining ones can
bits for be configured as outputs

Time Persistence: Set the persistence time of the input command (time to wait before NP2/NP5 is able to interpret the input command).

Continuos Play: - OFF: Having terminated the playing of the codified file, requested from the input code, NP2/NP5 goes in standby.
- ON: The requested codified file is continuously played until the relevant input code is inserted.

Interrupt: - OFF: Repeated activations or deactivations of the same input or of other inputs does not influence the playing of the file.
- ON: The activation of a different code can block the playing underway and activate the playing of the new requested file

Restart Play: In the moment in which an input code is enabled the playing of the of the
(if Interrupt is ON) relevant file from its beginning takes place, even if it is already in play.



IMPORTANT: save the settings with the button apply/save

Advanced Playlist Configuration

Digital I/O Mode > Playlist Direct

The 8 available playlists, activated by the logical inputs IN1-IN8, can be played with different modes, depending upon the varying needs.

Digital I/O Mode > Binary Code

Activating the inputs in binary combination, one can launch the playing of a maximum of 255 playlists.

To combine playlists with their inputs, rename playlist names as follows (use clone button with playlist creator web page):

Playlist Direct

Input	Name playlist
IN1	1_nameplaylist.m3u
IN2	2_nameplaylist.m3u
IN3	3_nameplaylist.m3u
IN4	4_nameplaylist.m3u
IN5	5_nameplaylist.m3u
IN6	6_nameplaylist.m3u
IN7	7_nameplaylist.m3u
IN8	8_nameplaylist.m3u

Binary Code Playlist

Input	Name playlist
IN1+IN2	3_nameplaylist.m3u
IN1+IN4	9_nameplaylist.m3u
IN5	16_nameplaylist.m3u
IN2+IN4+IN5	26_nameplaylist.m3u
IN6	32_nameplaylist.m3u
IN2+IN5+IN6	50_nameplaylist.m3u
IN1+IN4+IN5+IN6	57_nameplaylist.m3u
IN3+IN4+IN5+IN6	60_nameplaylist.m3u

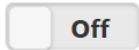
Digital Inputs Set

Digital Inputs
bits for:

Dedicated inputs for Playlist Direct or Binary Code, the remaining ones can be configured as outputs

Time Persistence:

Set the persistence time of the input command (time to wait before NP2/NP5 is able to interpret the input command).

Continuos Play:

- Activated the input, the relative item in the Playlist is played: at the end of it, NP2/NP5 goes in standby, awaiting a further activation.

- The position of the last item played is stored in memory, in order to start out again always by the next one in case of restart.

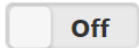
Continuos Play:

- Activated the input, the relative item in the Playlist is played: at the end of it, NP2/NP5 goes in standby, awaiting a further activation.

Activating the input once again or if the activation remains, the successive file is played.

- The playlist is activated in loop, as long as the activation of the relative logical input remains activated.

- The position of the last item played is stored in memory, in order to start out again always by the next one in case of restart.

Interrupt:

Repeated activations or deactivations of the same input or of other inputs does not influence the playing of the file.

Interrupt:

Repeated activations or deactivations of the same logical input does not influence the playing of the file; only the activation of a different input blocks the playing underway and activates the relative playlist.

Restart Play:

From the moment that the same logical input is reactivated, the restart of the file is commanded, even if it is playing. The activation of a different input blocks the playing underway and activates the relative playlist.



IMPORTANT: save the settings with the button apply/save

Scheduler Configuration

inout admin

Device info

Device Configuration

Uploader

Copy from USB

Player

Playlist

Playlist Creator

Scheduler

Audio settings

I/O settings

Relay settings

Date&Time settings

LAN settings

RS485 settings

Device Configuration

Device Configuration Scheduler

Digital I/O Mode Free

Save

Free

Priority message

Digital I/O Mode > Free

Logic ports are freely configurable as I/O settings webpage.

inout admin

Device info

Device Configuration

Uploader

Copy from USB

Player

Playlist

Playlist Creator

Scheduler

I/O settings

Audio settings

I/O settings

Relay settings

Date&Time settings

LAN settings

RS485 settings

Input	Value	Inversion	Time(1/10 sec)	Pulse Mode	OUT Mode	I/O Config
IO1	OFF	OFF				IN
IO2	OFF	OFF		OFF	Play	OUT
IO3	OFF	OFF	4500	ON	Play	OUT
IO4	OFF	ON		OFF	Play	OUT
IO5	OFF	OFF	2800	ON	Play	OUT
IO6	OFF	ON			Blink in Play	OUT
IO7	OFF	OFF	5600	ON	Play	OUT
IO8	OFF	OFF		OFF	Blink in Stop	OUT

Reload

The screenshot shows the 'inout' admin interface. The top bar has the 'inout' logo and 'admin' text. The left sidebar lists various configuration options. The main content area is titled 'Device Configuration' and contains several settings: 'Device Configuration' set to 'Scheduler', 'Digital I/O Mode' set to 'Priority message', 'Play Delay (msec)' set to 0, and 'Digital Inputs' with '# In for Priority message (1-6)' set to 4. A 'Save' button is located at the bottom of the settings area.

Digital I/O Mode > Priority message

Activating the inputs in binary combination, one can launch the playing of a maximum of 63 priority message, naming the audio files es. 1.mp3, 2.mp3, 3.mp3.....63.mp3

The remaining logic ports can be configured as outputs

I/O7 and I/O8 reserved:

I/O7: If active input, the line in is enabled and mixes in the background during the playback program's audio file.

When disabled, the audio line in is turned off.

I/O8: If enable, suspends the program scheduler and playback of audio files.

When disabled, resumes the audio playback of the scheduler from the point established of the time line program

Play Delay: Setting the delay time of the playback audio file from the activation of the inputs



IMPORTANT: save the settings with the button apply/save

- Scheduler files:** Name of the selected scheduler program
- Enable:** If active, enable the scheduler. / If switched off, the program is suspended.
- Create new:** to create a new scheduler and save name
- Delete:** to clear the scheduler program
- Save:** to save the scheduler program
- Undo:** undoes the last action performed
- Add Playlist:** Press to insert playlist of songs
- Add BGM music:** Press to insert Random Background Music.
Press to insert a title, value issued if ON / OFF, and the intervention time. ON = green ball
OFF= red ball
- Add Spot:** Press to insert a single commercial spot or an auto-repeat for n times and a range between them.
- Add Event:** Press to insert a timed event: Relay, logic output and audio line-in.
Press to insert a title, choose output type, value output if ON / OFF, and the intervention time. ON = green ball
OFF= red ball



IMPORTANT: to display output ID, configure logic ports as outputs in I/O settings page

The screenshot displays the NP2/NP5 scheduler interface. On the left is a sidebar menu with options: Scheduler, Audio settings, I/O settings, Relay settings, Date&Time settings, LAN settings, RS485 settings, Login, Firmware update, and Service. The main area shows a timeline for Tuesday 09/06/2020 at 12:00:23. The timeline includes the following events:

Time	Event	Status
12:00:00	Relay 12:00:00 ON Relay	ON (Green dot)
12:00:01	DemoPlaylist1.m3u - 00h03m43s	Music playlist
12:00:44	Spot 01-15sec.mp3 - 00h00m15s	Commercial spot 1
12:03:00	Spot 02-25sec.mp3 - 00h00m26s	Commercial spot 2
12:04:29	OUT6 12:04:29 ON OUTPUT 6	ON (Green dot)
12:04:30	Chime1.mp3 - 00h00m06s	Intro Spot
12:04:41	Bgm 12:04:41 ON BGM Music	ON (Green dot)
13:00:00	Spot 02-25sec.mp3 - 00h00m26s	Commercial spot
13:30:00	OUT6 13:30:00 OFF OUTPUT 6	OFF (Red dot)
14:00:00	Relay 14:00:00 OFF Relay	OFF (Red dot)
14:00:01	Bgm 14:00:01 OFF BGM Music	OFF (Red dot)



IMPORTANT.

Pay attention to following advice:

We recommend you to create a new scheduler instead of editing and deleting a scheduler file in memory.

In case of incorrect webpage views, refresh the page by clicking on the InOut logo

Be careful about programming, overlapping schedules can generate errors.

Player - listening to audio files

The screenshot shows the minout Player interface. The top bar includes the minout logo and the word 'admin'. A left sidebar contains navigation links: Device info, Device Configuration, Uploader, Copy from USB, Player, Playlist, Playlist Creator, Scheduler, Audio settings, I/O settings, Relay settings, Date&Time settings, LAN settings, and RS485 settings. The main area is titled 'Player' and displays 'No audio track in play.' Below this is the 'Media control' section with sliders for Volume OUT (dB) at -8,5, Bass Level (dB) at 5, and Treble Level (dB) at 3. A tabbed interface shows 'Music' and 'Spot' folders. The 'Music' folder is active, showing a list of files with checkboxes, file names, and durations. The list is currently empty.

File Name	Duration
1. A Che Ora E' La Fine Del Mondo.mp3	04:23
2. A Day Without Rain.mp3	02:38
3. Amen.mp3	04:01
4. AndWinterCame.mp3	03:16
5. Bacco perbacco.mp3	03:45
6. Baila (Sexy Thing).mp3	04:07

To listen to the stored files in the uSD, select the Music and Spot folders, click on the file name to view pop up with the commands.

Press the media control button, further commands and level adjustments are available.

The screenshot shows the minout Player interface with a file 'Blue.mp3' selected. A pop-up window titled 'Blue.mp3' is displayed over the file list, showing the file's tags ('Blue / Zucchero / All the Best of Zucchero / Pop') and playback controls: Pause, Play, Stop, and Close. The file list shows '18. Blue.mp3' with a duration of 04:31, highlighted in blue. The 'Media control' button is visible above the file list.

File Name	Duration
12. Beautiful Da	04:08
13. Big Girl.mp3	04:07
14. Billie Jean [Single Version].mp3	04:55
15. Bitter Sweet Symphony.mp3	05:58
16. Black Or White.mp3	04:17
17. Blame It On The Girls.mp3	03:34
18. Blue.mp3	04:31
19. Breathe.mp3	05:00
20. Buonanotte All'Italia.mp3	05:25

View and search file/song

minout Uiver 4.2 admin

Device info ⌂

Device Configuration ➤

Uploader ➤

Copy from USB ➤

Player ➤

Playlist ➤

Playlist Creator ➤

Scheduler ➤

Audio settings ➤

I/O settings ➤

Relay settings ➤

Date&Time settings ➤

LAN settings ➤

RS485 settings ➤

Player

Status: play Title: Blue

Media control

Music Spot

Show TAGS - by Title ▼ All genres ▼ Find by title, author or album...

Show files names

Show TAGS - by Title

Show TAGS - by Artist

Show TAGS - by Album

Show TAGS - by Genre

12.	Beautiful Day - U2 - All that You Can't Leave Behin - Rock	04:08	➤
13.	Big Girl (You Are Beautiful) - MIKA - Song Book Vol.1 - Pop	04:07	➤
14.	Billie Jean [Single Version] - Michael Jackson - Michael Jackson's This Is - Pop	04:55	➤
15.	Bitter Sweet Symphony - The Verve - Urban Hymns - Rock	05:58	➤
16.	Black Or White - Michael Jackson - Michael Jackson's This Is It - Pop	04:17	➤
17.	Blame It On The Girls - MIKA - Song Book Vol.1 - Pop	03:34	➤
18.	Blue - Zucchero - All the Best of Zucchero - Pop	04:31	➤
19.	Breathe - U2 - NO LINE ON THE HORIZON - Rock	05:00	➤
20.	Buonanotte All'Italia - Ligabue - Primo Tempo - Rock	05:25	➤

Press Show files name button to see ID3 TAG of audio file:

- Show files name
- Show TAGS by Title
- Show TAGS by Artist
- Show TAGS by Album
- Show TAGS by Genre

You can view tracks for genre music by pressing the appropriate button

In the box, you can search song by title, author and album

Delete file/song

With this flag/checkbox the first 20 files/track are selected, press Delete files selected button to remove the files from the uSD.

The screenshot shows the minout admin interface. On the left is a sidebar with navigation links: Device info, Device Configuration, Uploader, Copy from USB, Player, Playlist, Playlist Creator, Scheduler, Audio settings, I/O settings, Relay settings, Date&Time settings, LAN settings, and RS485 settings. The main area is titled 'Player' and shows 'Status: play' and 'Title: Breathe'. Below this is a 'Media control' section with tabs for 'Music' and 'Spot'. The 'Music' tab is active, showing a list of songs. At the top of the song list, there are buttons for 'Show TAGS - by Title', 'All genres', and a search bar. Below these are checkboxes for 'Filter' (unchecked) and 'Delete files selected' (checked). The song list contains 9 items, each with a checked checkbox, the song title, artist, genre, and duration.

Checkbox	Song Title	Artist	Genre	Duration
☒	1. A Che Ora E' La Fine Del Mondo	Ligabue	Primo Tempo - Rock	04:23
☒	2. A Day Without Rain	Enya	A Day Without Rain - Electronic	02:38
☒	3. Amen	Zucchero	All the Best of Zucchero - Pop	04:01
☒	4. AndWinterCame	Enya	And Winter Came - Electronic	03:16
☒	5. Bacco perbacco	Zucchero	All the Best of Zucchero - Pop	03:45
☒	6. Baila (Sexy Thing)	Zucchero	All the Best of Zucchero - Pop	04:07
☒	7. Balliamo Sul Mondo	Ligabue	Primo Tempo - Rock	04:16
☒	8. Bambolina E Barracuda	Ligabue	Primo Tempo - Rock	05:16
☒	9. Bar Mario	Ligabue	Primo Tempo - Rock	03:55

If you enable the filter flag, you can act on the bar to delete a group of songs.

The screenshot shows the minout admin interface with the 'Filter' checkbox enabled. A range bar is visible above the song list, with '4' selected on the left and '10' on the right. The song list now shows 11 items, with the first 4 items (1-4) having their checkboxes unchecked and the remaining 7 items (5-11) having their checkboxes checked.

Checkbox	Song Title	Artist	Genre	Duration
☐	3. Amen	Zucchero	All the Best of Zucchero - Pop	04:01
☒	4. AndWinterCame	Enya	And Winter Came - Electronic	03:16
☒	5. Bacco perbacco	Zucchero	All the Best of Zucchero - Pop	03:45
☒	6. Baila (Sexy Thing)	Zucchero	All the Best of Zucchero - Pop	04:07
☒	7. Balliamo Sul Mondo	Ligabue	Primo Tempo - Rock	04:16
☒	8. Bambolina E Barracuda	Ligabue	Primo Tempo - Rock	05:16
☒	9. Bar Mario	Ligabue	Primo Tempo - Rock	03:55
☒	10. Beat It [Demo]	Michael Jackson	Michael Jackson's This Is It - Pop	02:05
☐	11. Beat It [Single Version]	Michael Jackson	Michael Jackson's This Is It - Pop	04:18

Listening playlist

Minout admin

Playlist

No audio track in play.

Media control

Volume OUT (dB)

Bass Level (dB)

Treble Level (dB)

☐ ☐ Filter

☐	1. Enya A Day Without Rain.m3u	37:34	▶
☐	2. Enya And Winter Came.m3u	45:05	▶
☐	3. Luca Carboni I Grandi Successi.m3u	74:10	▶
☐	4. Michael Jackson This Is It.m3u	92:27	▶
☐	5. Mika Song Book 1.m3u	52:04	▶
☐	6. Simply Red Stars.m3u	41:19	▶
☐	7. The Verve Urban Hymns.m3u	60:43	▶
☐	8. U2 All That You.m3u	49:24	▶

To listen to the stored playlists, click on the playlist name to display the pop-up with the commands.

Press the media control button, further commands and level adjustments are available.



IMPORTANT: set continuous play ON for playlist loop

Minout admin

Playlist

No audio track in play.

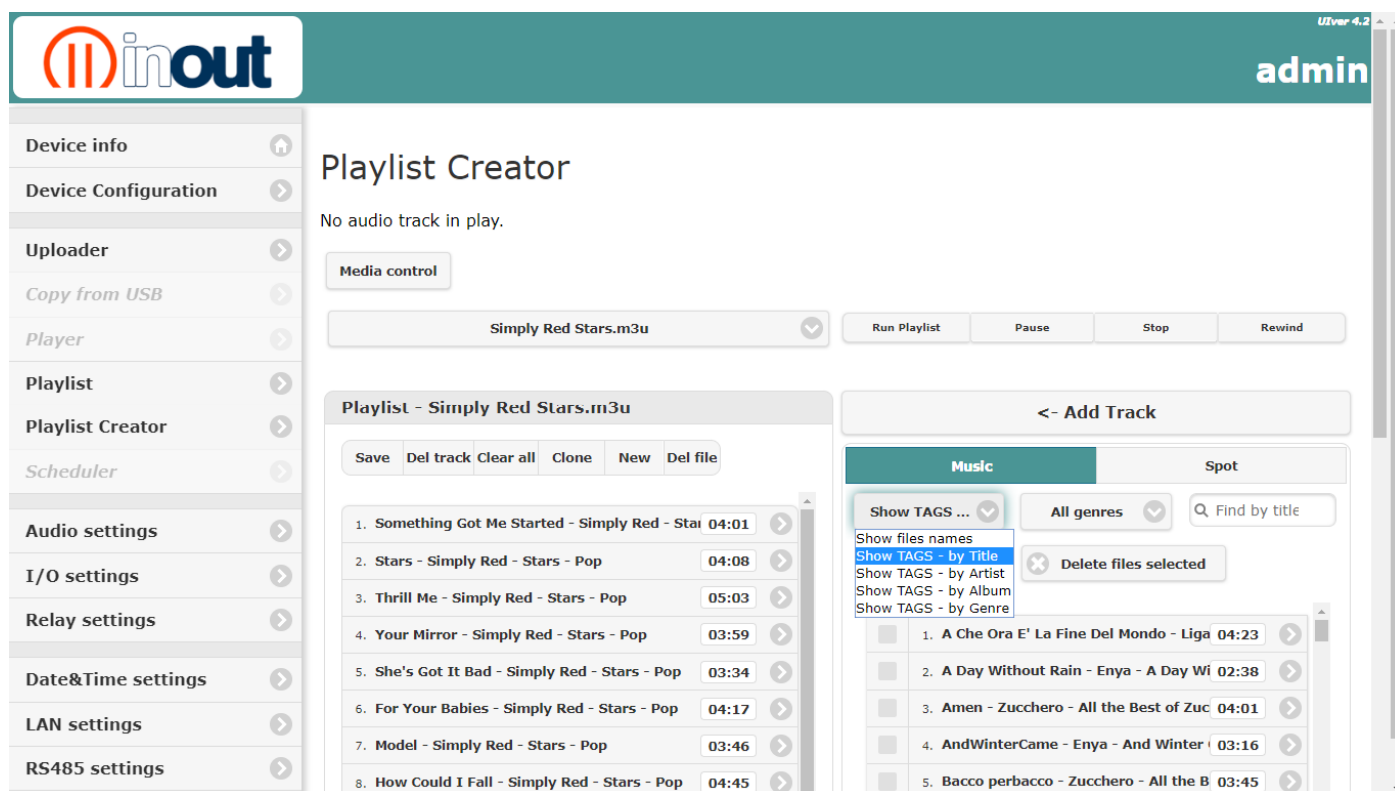
Media control

☐ ☐ Filter

Playlist control

☐	1. Enya A Day Without Rain.m3u	37:34	▶
☐	2. Enya And Winter Came.m3u	45:05	▶
☐	3. Luca Carboni I Grandi Successi.m3u	74:10	▶
☐	4. Michael Jackson This Is It.m3u	92:27	▶
☐	5. Mika Song Book 1.m3u	52:04	▶
☐	6. Simply Red Stars.m3u	41:19	▶
☐	7. The Verve Urban Hymns.m3u	60:43	▶
☐	8. U2 All That You.m3u	49:24	▶
☐	9. U2 No Line On The Horizon.m3u	53:47	▶

Playlist Creator (to create a new playlist)



Right list is the files stored in the uSD in Music and Spot folders.

New: To create a new playlist, enter a name and press save

<-Add Track: To insert audio files into the playlist, press Add Track
To change the order of the files, drag the file to the desired location.

Del track: To delete the audio file from the playlist, select and press del track

Clear all: To delete all files into playlist

Del file: To delete the playlist

Clone: To copy the same playlist and give it a different name

Save: When the playlist is complete, press the Save button

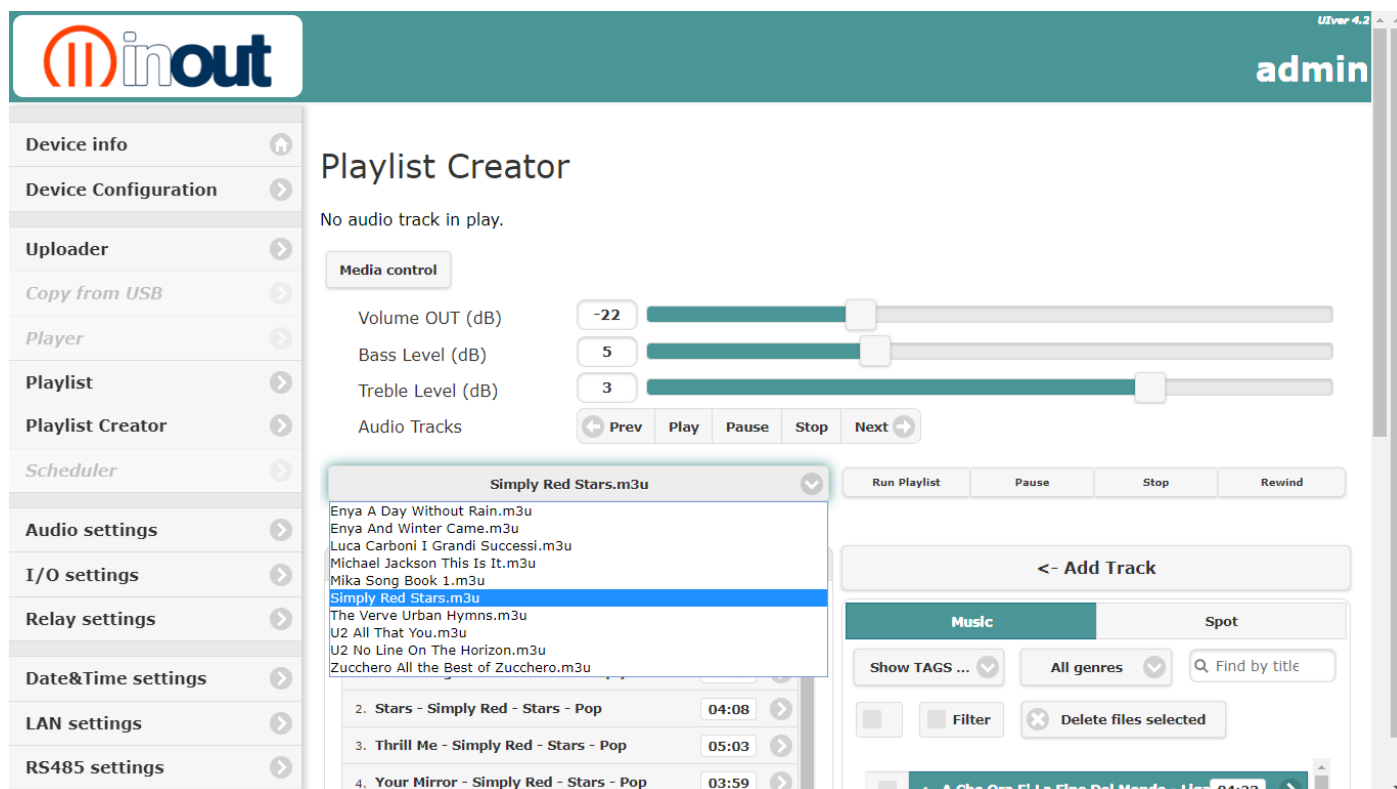
Press Show files name button to see ID3 TAG of audio file:

- Show files name
- Show TAGS by Title
- Show TAGS by Artist
- Show TAGS by Album
- Show TAGS by Genre

You can view tracks for genre music by pressing the appropriate button

In the box, you can search song by title, author and album

To listen a new playlist:



Run Playlist: to listen a playlists in memory, select playlist name and press Run playlist button.

Rewind: to listen the playlist from the beginning, press Rewind button.

Pause/Stop: Pause / Stop playlist

Media control To scroll through the tracks quickly, additional commands are available by pressing the media control button

Prev previous file

Play Play file

Pause Pause file

Stop Stop file reproduction.

Next next file

NP2 Technical features

Power supply..... : 12VDC / 15W
 Consumption in standby : 0,5 W
 Protection : inside fuse, 4A delayed.
 Capacity of extractable memory : microSD from 4GB to 32GB (FAT/FAT32).
 Input absorption..... : 5 mA
 Relay contact Max.voltage..... : 1 A 30Vdc
 Formats accepted : MPEG1 layer 3 (file MP3 from 64 to 360 Kbps)
 Response in frequency : 20 ~ 20.000 Hz (± 3 dB)
 Signal/noise ratio : > 90dB.
 Harmonic distortion : < 0,1%
 Output power..... : 15W (8 Ω) THD+N= 5%
 Classification..... : IP 30 on the basis of liquid and dust penetration.
 Size/weight : 90x62x36 mm. / 90gr. DIN Rail (EN 60715) mounting,
 2 modules according to DIN 43880.
 Packing (size and weight)..... : 230x180x80mm. / 415gr.
 Operating temperature..... : 0 to +60°C.
 Storage temperature..... : -20 to +60°C.

NP5 Technical features

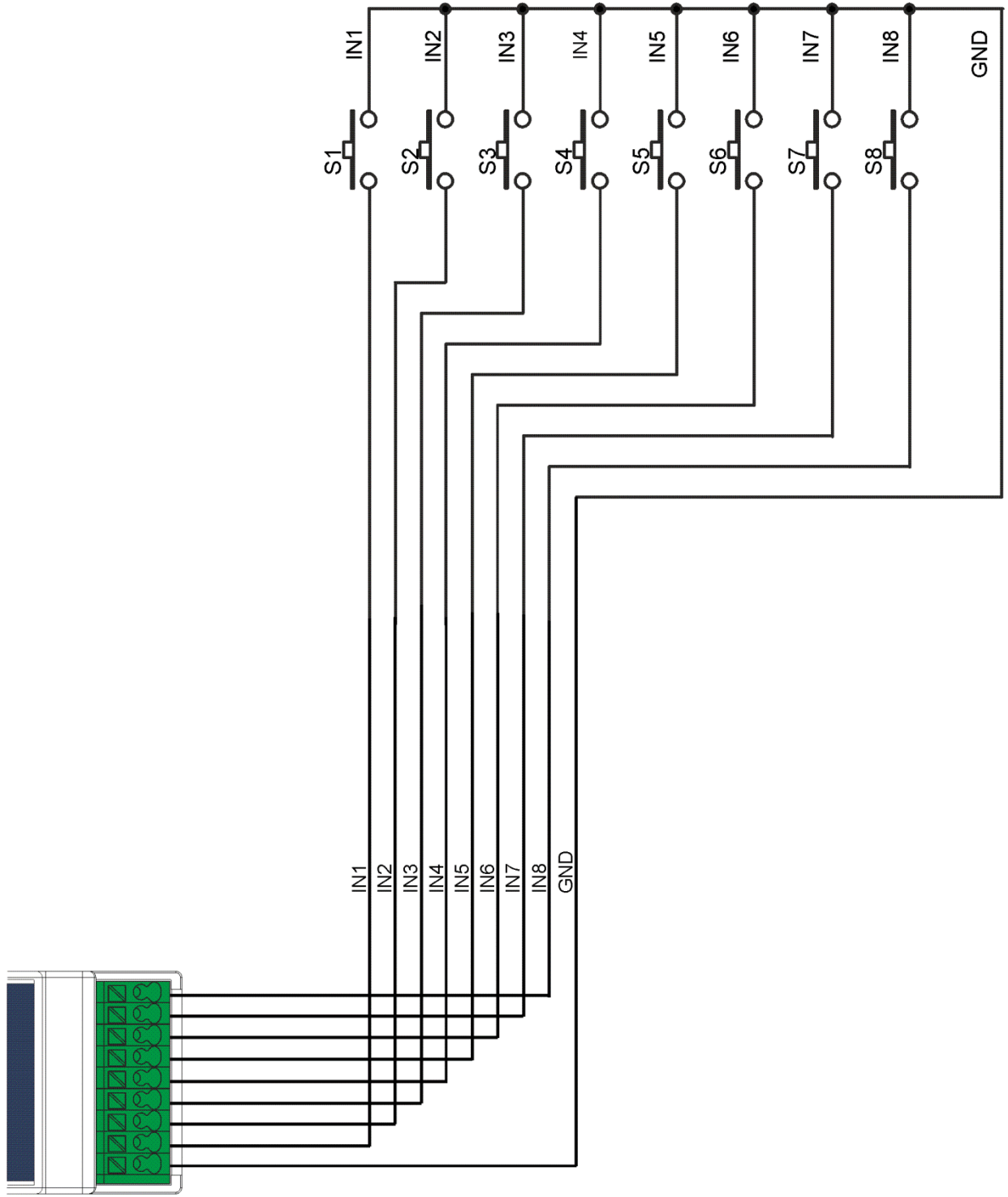
Power supply..... : 12VDC / 30W
 Consumption in standby : 0,5 W
 Protection : inside fuse, 4A delayed.
 Capacity of extractable memory : microSD from 4GB to 32GB (FAT/FAT32).
 Input absorption..... : 5 mA
 Relay contact Max.voltage..... : 1 A 30Vdc
 Formats accepted : MPEG1 layer 3 (file MP3 from 64 to 360 Kbps)
 Response in frequency : 20 ~ 20.000 Hz (± 3 dB)
 Signal/noise ratio : > 90dB.
 Harmonic distortion : < 0,1%
 Output power..... : 15+15W (8 Ω) THD+N= 5%
 Classification..... : IP 30 on the basis of liquid and dust penetration.
 Size/weight..... : 147x84x19mm. / 280gr.
 Packing (size and weight)..... : 230x180x80mm. / 750gr.
 Operating temperature..... : 0 to +60°C.
 Storage temperature..... : -20 to +60°C.

Manufactured by:  Noventa di Piave (VE) - ITALY



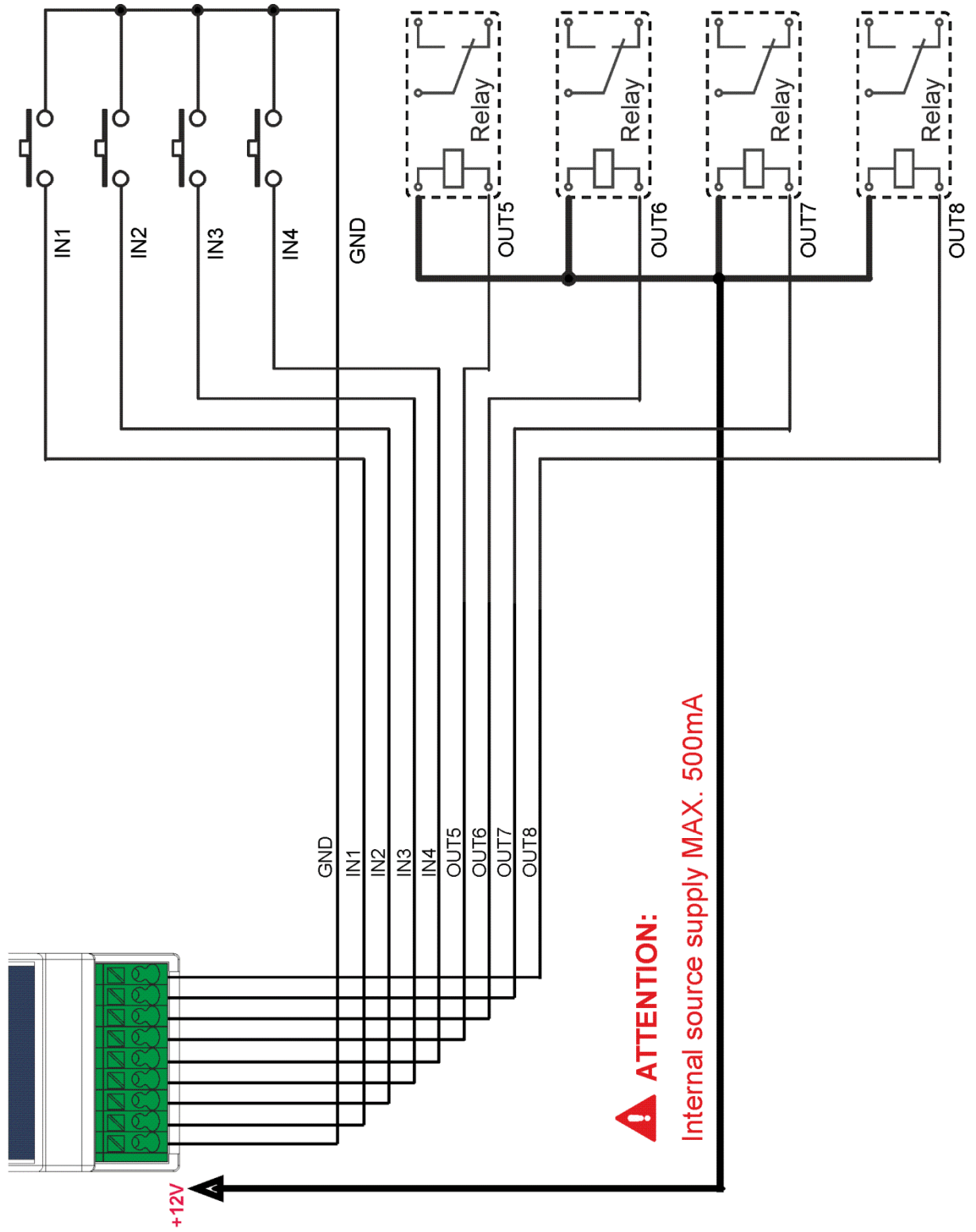
Product compliant with the safeguard regulations CE about safety and electromagnetic compatibility.

NP2 application example: Advance Player with 8 input Binary code



NP2 application example:

Advance Player with 4 input and 4 output external Relay 12Vdc



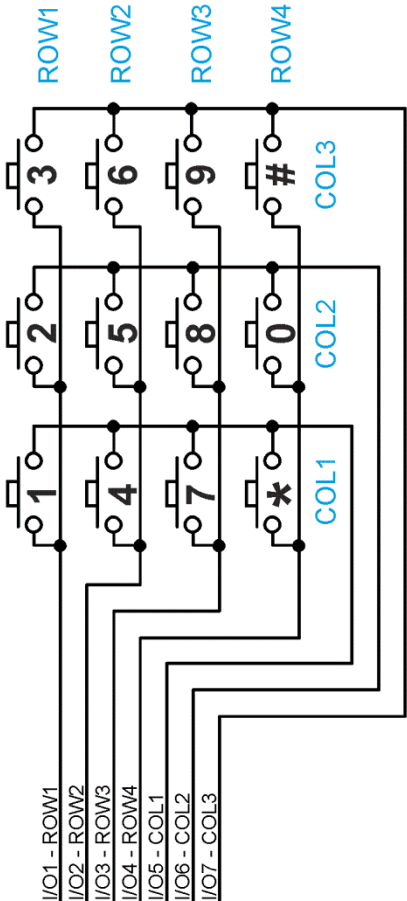
NP2 application example:

Telephone keypad connection 12 keys



1	2	3	ROW1
4	5	6	ROW2
7	8	9	ROW3
*	0	#	ROW4

COL1 COL2 COL3



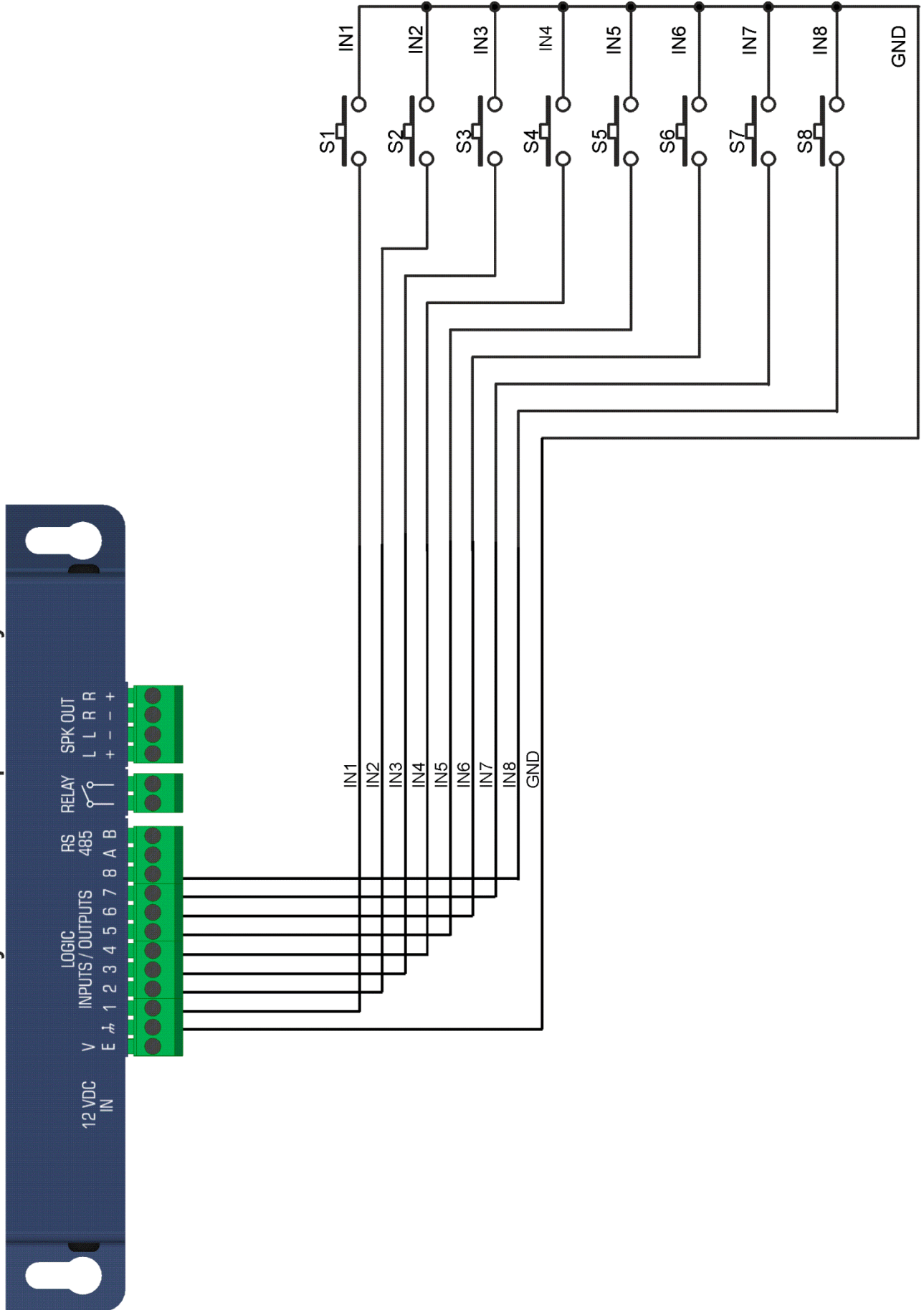
Enter the number and
press # to play audio file

Press # to stop audio file

If you've pressed a wrong number,
press * to reset

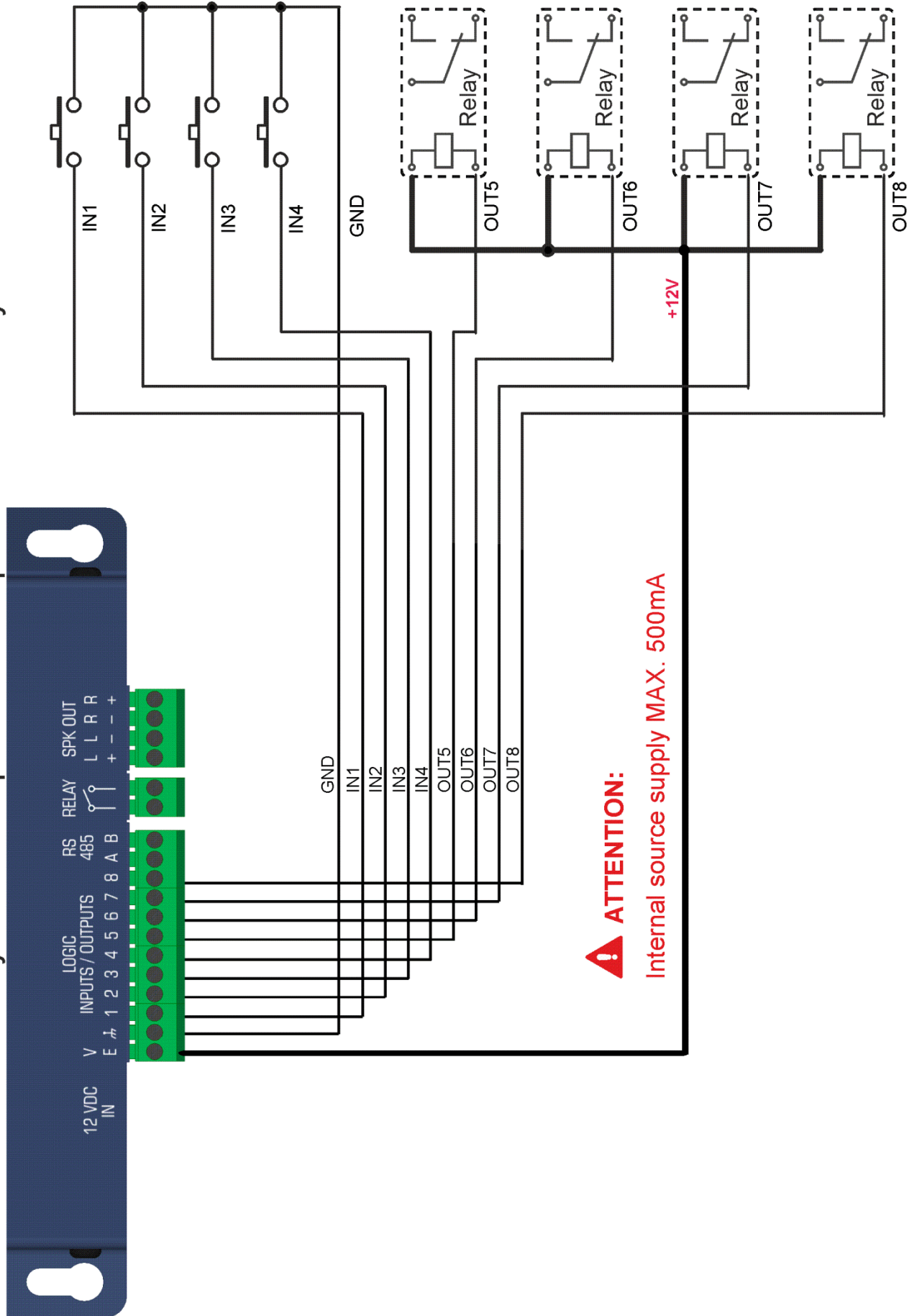
NP5 application example:

Advance Player with 8 input Binary code



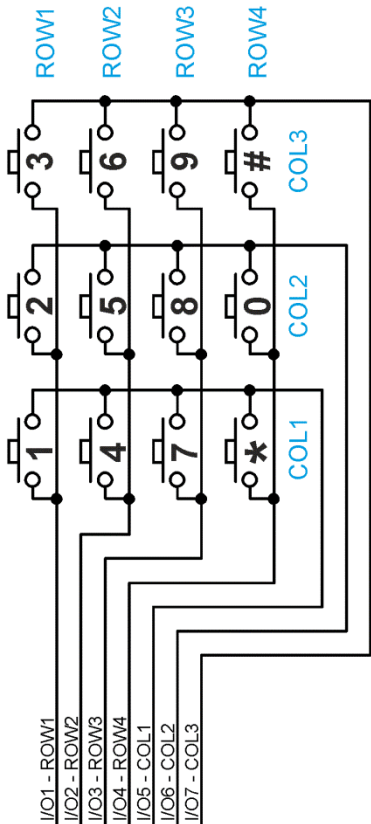
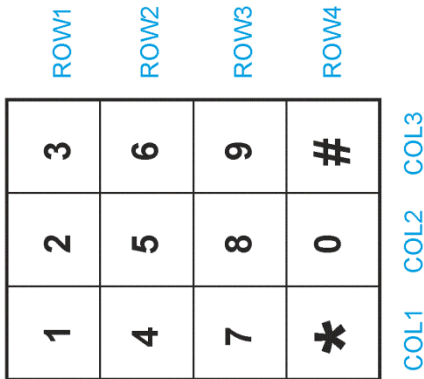
NP5 application example:

Advance Player with 4 input and 4 output external Relay 12Vdc



NP5 application example:

Telephone keypad connection 12 keys



Enter the number and
press # to play audio file

Press # to stop audio file

If you've pressed a wrong number,
press * to reset