OWNER'S MANUAL

NControl

Remote control unit for N-Line monitors

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1   About this manual

This manual has been prepared with great care and should be used to setup and use the NControl remote unit. The firmware of the NControl is updated with new features on regular basis, so please check for updates of the firmware and manual. If you have any questions or comments please feel free to contact us or a representative office.
To make the manual more easy to read, sometimes the term "unit" is used for NControl.

Revision history
Before installation or using the unit make sure you have the latest version of this owner's manual.

Version	FW NControl	Date	Remark
0420M02V1.0	1.00		Initial manual
0520M02V1.1	1.00		Regulatory info modified Minor corrections
V1.2	1.03		Display parameters added (current and new) Setting unit numbers for N-COM revised
V2.0	2.00	23-11-2020	Resolution: 800x480 Preset edit enabled
V2.1	2.00	21-06-2021	Page numbering
V2.2	2.02	29-06-2021	Added: Activating presets by external RS-485 commands
V2.3	2.10	06-08-2021	Bridge mode added
V2.4	2.38	17-05-2022	S-COM functionality added
V2.5	2.38	01-07-2024	Appendix 1 added; Setting up N-Line monitors for the NControl

2   Disclaimer

Nottrot BV makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties, merchantability or fitness for any particular purpose. Further, Nottrot BV reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation of Nottrot BV to notify any person of such revisions or changes. Please follow these safety instructions for the best performance and longevity of your unit.

3   Box contents

Please check the box contents right after receiving the equipment. The contents depend on the options ordered.

Image	Description	Remark
	NControl	
	Mounting brackets with M5x50 screws	2 pieces
	External power adapter (230VAC<>12VDC)	
	Mains cord (Euro style)	
	Screw type terminal block, pluggable	Metz RP01502VBLF, 2-pin
	Network cable 3mtr	

4   Description

The NControl is designed as an optional remote control unit for N-Line monitors. It has a 4.3 Inch TFT with a PCAP touch screen. With the NControl you can select an input source and adjust brightness remotely by means of pressing buttons or making presets. This product is meant to be used indoors only, unless otherwise specified. With the right installation, proper operation and sufficient maintenance you will enjoy the unit for years to come. Please read this manual carefully before installation and usage.

5 Specifications:

5.1 Display

Parameter	Description current	Description NEW
Diagonal	4.3"	4.3"
Resolution	480x272	800x480
Brightness	830 cd/m2	720 cd/m2
Backlight	White LED	White LED
Panel	Wide temperature	IPS, Wide temperature
Touch	Capacitive touch	Capacitive touch
Colors	24-bit	24-bit True Color
Viewing angle	6 O'clock best	180/180

5.2 Electrical and environmental

In this manual all basic specifications are summarized. If you need more detailed info please contact us.

Item	Item	Min	Max	Unit
Power				
DC Input	12VDC -plug	12.0V	36.0	VDC
	Ext. DC Power	12.0V	36.0	VDC
Data RS-485 2-wire	Baud rate N-COM		115200	BPS
	Baud rate S-COM		9600	BPS
IP-rating				
	Front (with proper mounting in desk		IP65	
	Rear		IP22	
Storage temperature		-20	60	°C
Operating temperature		5	50	°C

6 Product identification

On the sticker on the backside of the unit you will find information for product identification.

7 Safety precautions

- Remove power if the unit is not used for a longer period. This will also result in a longer lifetime of the backlight LEDs.
- The cover glass or touch sensor is made of chemically toughened glass. This can be scratched or even broken into pieces by hitting it.
- Remove power before servicing the unit.
- In case of trouble contact your supplier. Service should only be done by qualified personnel.
- Never open the chassis. There are no user-serviceable parts inside.
- Never place the unit or power supply near warm objects like heaters.
- Never place the unit or power supply in direct sunlight.
- Make sure there is enough space for airflow at the backside of the unit. Keep the ventilation gaps free from obstacles which can obstruct airflow.
- Keep the unit and power supply dry to avoid short circuits. Make sure no fluids can enter the unit through the ventilation gaps.
- Wait for at least 6 seconds after switching power off before removing the cables.
- Make sure the temperature does not exceed max values when storing or using the unit.
- Never expose the unit to strong vibrations during transport and use.

8   Hardware installation

The NControl can be placed on a tabletop. The rubber bumpons on the rear side will prevent it from sliding. The unit can also be flush mounted in a desk cutout.

Before installation check that the power source is compatible with the power input of your unit.

8.1   Position

When installing the NControl first make sure to determine the right place. Take at least the following variables into consideration: sunlight, heat, condensation, viewing angle, mechanical risk to front glass and control knob.
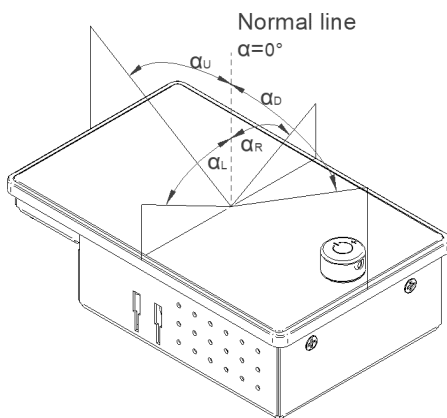
Viewing angle is a theoretical value measured with standard colors and contrast. In real life some colors appear different in certain viewing angles. The NControl should be installed with an angle: 60 < α < 0.
The N-Control is used in portrait orientation.

8.1.1   Panel mount

There should be sufficient airflow at the back of the unit and avoid direct sunlight. This might heat-up the unit too much.
The unit is supplied with 2 mounting brackets. Do not use excessive force on the screws. The screws should only be used to hold the unit in position and not to make a watertight connection of the bezel with the desk.
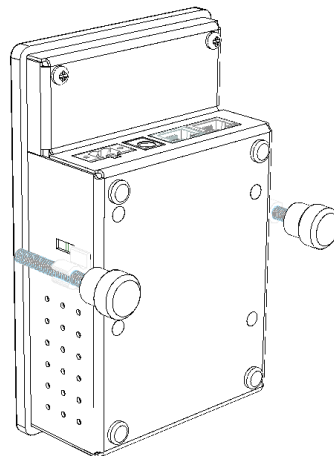
8.2   Preparing the units to be controlled

The monitors that will be controlled by the NControl need to be configured correctly. For Nottrot monitors this can be done by using the N-COM-Application software. For S-COM models you can set the unit number with the OSD-function.
N-COM and S-COM cannot be used simultaneously/mixed. The unit can be used in combination with VariCap illuminated Capswitch system from Nottrot, both running on N-COM.

8.2.1   Setting units numbers for N-COM

The 'Monitor control' page (see 9) has 12 dedicated buttons for monitors. Each button can be seen as a dimming source. These source numbers are set in the N-COM app and correspond with the buttons shown in the picture below:

21, 22 and 23 are virtual Unit numbers
1-2-3-4 are virtual Sources. In the App the selected monitor will be controlled by button [5]
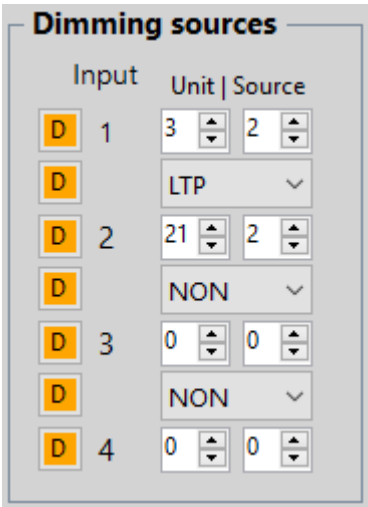
Dimming control and non-dimming functions (power, source, etc.) are based on the unit ID with reference to the corresponding Monitor control button. The easiest way is setting the Unit ID the same as the monitor number in the chain.
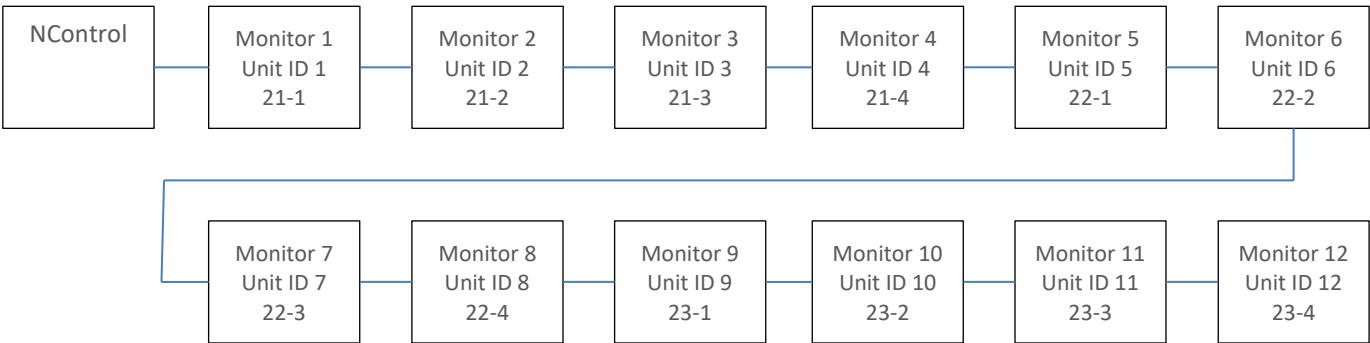
8.3 Setting the unit numbers for S-COM

When connecting S-COM units, the button numbers correspond with the address-numbers of the monitors. These can be set using the OSD control. First enable the Full Menu: Advanced > Enter Key Code "362", press Menu again.
Then go to Management > Communication > 2-wire RS-485 and Address RS with the corresponding number (ID 1-12).

8.4 Connecting the unit

Before switching on power make sure all connections have been made correctly. Finally power all units in the system.

N-COM-OUT   : N-COM/S-COM output to monitors
N-COM-IN   : RS-485 Input from PC or PLC
12VDC   : 12DC plug 2.5mm
9~36VDC   : 9~36VDC (5W)
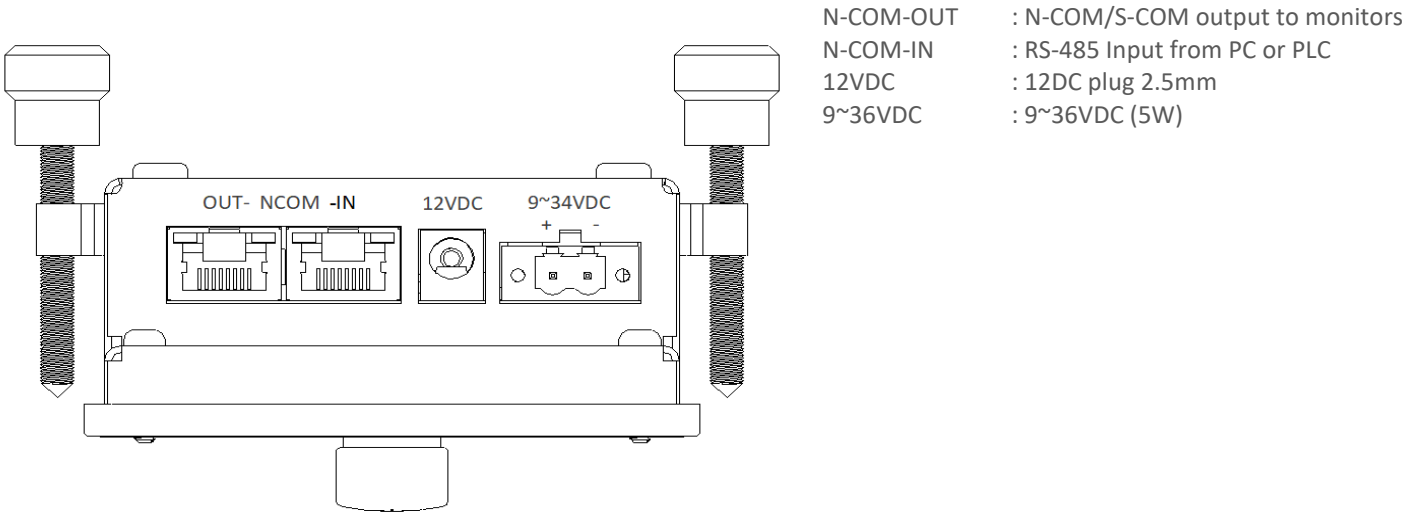
8.5 Front control knob

OSD MENU Description	OSD MENU Description
Dim knob	Dimming knob 1. Encoder knob for backlight brightness: rotate CW to increase and CCW to decrease. Brightness of NControl screen can be set in the Settings page. 2. Calibration: Press & hold the knob, release upon flash of backlit. Then push shortly again. 3 points are shown to touch. 3. To change parameters in *Preset edit*

8.6   Screen layouts

The NControl has pages you can scroll through. Reserved pages will be skipped when scrolling. All [Home] will always take you to page 0, the home-page.

Page 0.   Home
Page 1.   Monitor control
Page 2.   Preset 0
Page 3.   Preset 1
Page 4.   Preset 2
Page 5.   Preset 3
Page 6.   Preset 4

Page 7.   Preset 5
Page 8.   (reserved)
Page 9.   Preset edit
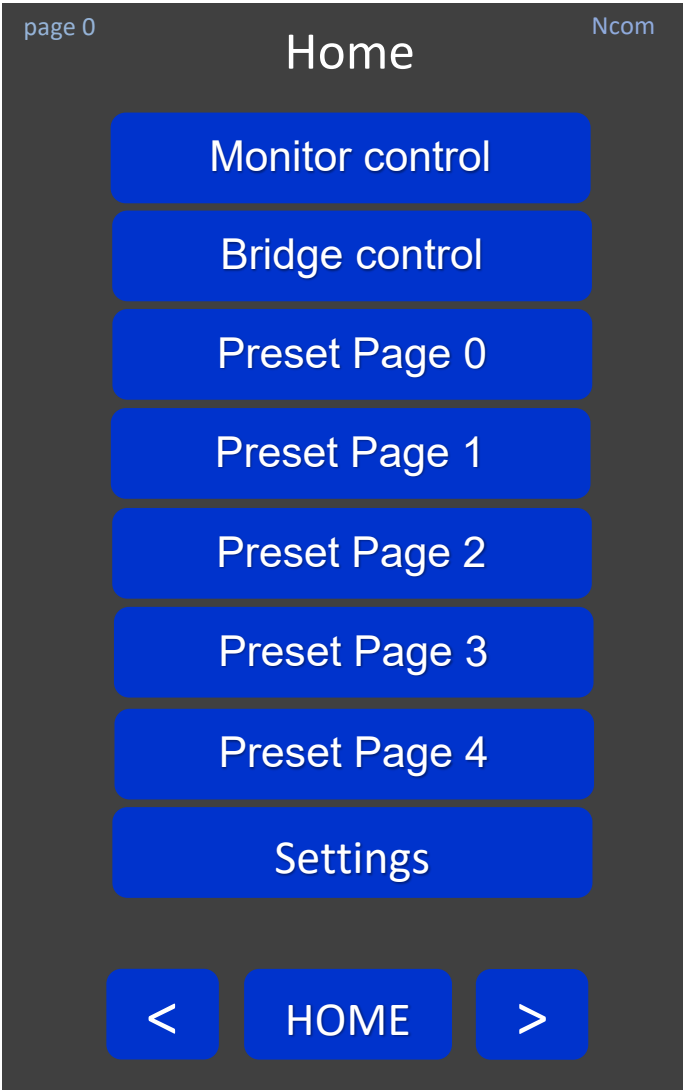Page 10. Settings
Page 11. (reserved)
Page 12. (reserved)
Page 13. Edit name (for 'Preset Page' and 'Preset')

8.7   Home, main page

After powering up the unit 'Page 0' will appear. On this page you can select another page to enter.

➔   Press & hold the dimming knob to activate touch screen calibration.

page 0	Ncom
Home	
Monitor control	
Bridge control	
Preset Page 0	
Preset Page 1	
Preset Page 2	
Preset Page 3	
Preset Page 4	
Settings	
<	HOME	>

Status
Page x   : Current page
Ncom   : Active protocol

Go to monitor control page

Go to Bridge control page. Select *Bridge mode* in *Settings*
➔If bridge mode is enabled in settings, but the button is not shown, go to *Settings*- program mode- Home and enable [Bridge control]

Go to Preset x page

Go to Settings page

Navigation
<   : Previous page
>   : Next page
Home   : Return to main screen

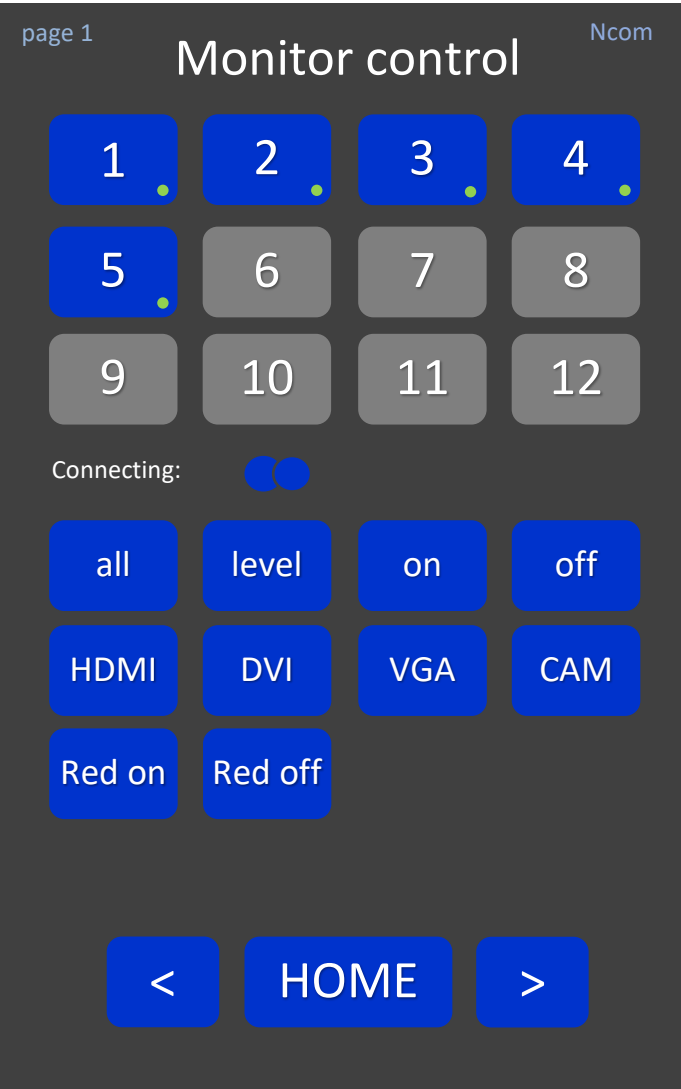## 9   Bridge control (VariCAP)

-Not available in S-COM mode-
From the home page you can select *Bridge control*. Here you can set the backlit brightness for the zones, control the covers of the keyboard cassettes and disable the cap-switches when cleaning the glass surface. If the button is not shown, enable *Bridge mode* in *Settings*.
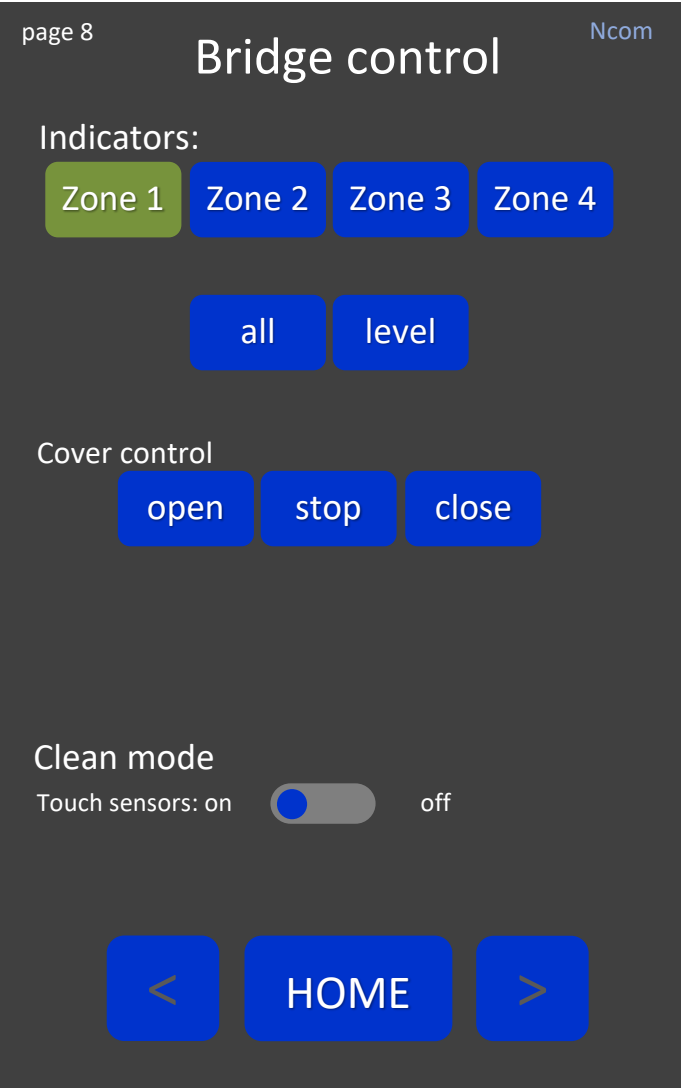
page 8 **Bridge control** Ncom	**Status** Page x : Current page Ncom : Active protocol
Indicators: Zone 1 Zone 2 Zone 3 Zone 4	The VariCAP backlit can be assigned to 4 zones. Brightness of each zone can be set independent. Green is selected.
all level	De-select all and select level to set brightness of the activated zones with the dimming knob
Cover control open stop close	Use this function to control cassette covers, if any installed. This will open or close all covers simultaneously.
Clean mode Touch sensors: on ⬤▬ off	Clean mode will disable all VariCAP switches: On = disabled. All keys are lit purple color Off = normal mode.
< HOME >	Navigation < : Previous page > : Next page Home : Return to main screen

10 Monitor control page

On this page you can choose a function to be activated on the selected monitor.
Select a monitor number (or [all]) and press one of the functions. When selecting [level] the button will stay active (green) so you will be able to rotate the dimming knob. Press [level] again to de-activate.

page 1	Monitor control		Ncom
1	2	3	4
5	6	7	8
9	10	11	12

Connecting: ⬤⬤

all	level	on	off
HDMI	DVI	VGA	CAM
Red on	Red off		

<	HOME	>

Status
Page x   : Current page
Ncom   : Active protocol

Monitor selection
Gray   : Monitor not connected
Blue   : Available monitor (max 12 units)
Green   : Selected monitor
Red   : Monitor type not supported
DOT   : Green=ON, Red=OFF and Amber=Sleep

Indicator trying to connect to any N-COM monitor.

Monitor functions
Blue   : Function
Green   : Activated function

Navigation
<   : Previous page
>   : Next page
Home   : Return to main screen

10.1 Monitor functions layout in S-COM-mode

ALL	ON	OFF	SLEEP
DIG1	DIG2	CMP1	CMP2
DP1	LEVEL	-	-

Monitor functions
Blue   : Function
Green   : Activated function

Note   : When level is selected the dimming buttons on the monitor do not function

12 Settings

From the home page you can select *Settings*.

page 10 **Settings** Ncom	**Status** Page x : Current page Ncom : Active protocol
Calibrate touch screen [Calibrate]	Calibrate touch screen. Alternatively use push & hold function of the control knob, press button until backlit flashes, then release and press again shortly.
Set backlight [Active]	Activates dimming knob to Adjust backlight of NControl
Communication protocol Ncom ⬤━━ Scom	Set communication to - N-COM (Nottrot) - S-COM (Hatteland) > Restart Ncontrol
Bridge mode Normal ⬤━━ Bridge	Enable/disable Bridge mode Bridge mode is not available in S-COM mode
Set to defaults [Defaults]	This will delete alle presets settings and names
Ncontrol Mode Normal ⬤━━ Program	Preset set-programming: Normal mode Program mode
Version 2.10	FW version
[<] [HOME] [>]	Navigation < : Previous page > : Next page Home : Return to main screen

12.1 Startup settings S-COM

When [Communication protocol] is switched to S-COM, there will be an initial startup string been sent to the monitors:

- MCC Broadcast power ON
- BRI = 0x00 (set min brightness at 00)
- BRM = 0xFF (Set max brightness to FF)
- BRT = 0xFF (Set max brightness to FF)
- Monitor type verification GEN2 HDxxT22. All other types are not supported and will not be shown in the 'Monitor control' page. GEN-1 monitors can be shown as a RED button, but they cannot be controlled.

13 Preset control

16 presets can be stored in 6 pages, max 4 presets per page. If bridge control is enabled there are 5 pages. A preset contains data for 12 monitors max.

Main features:
- Define your own names for Preset Page and Preset
- Get and store monitor settings with only one button click
- Choose which parameter to activate in each preset
- Hide unused presets in Preset Page and Presets

13.1 Programming presets - home

First enable program mode in: Home > Settings > Ncontrol mode: set to Program
Click Home and the Preset Page will be shown. Select the page you need to program/edit
☞ Presets will not be stored in Eeprom until return to normal mode. Unplugging power while in program mode will delete all presets made from the moment when entering Program mode.

page 0 Program mode **Ncom** **Home**	**Status: program mode** Page x : Current page Ncom : Active protocol
[ON] Monitor control	Show/hide Monitor control page On Home page and when scrolling prev./next
[ON] Preset Page 0 [ON] Preset Page 1 [Off] Preset Page 2 [Off] Preset Page 3 [Off] Preset Page 4 [Off] Preset Page 5	→ Button Bridge control will appear when Bridge control is enabled. Do not select Off. Show/hide preset page on Home page Go to Preset x page to enter preset page for editing
[Settings]	Go to settings page
[<] [HOME] [>]	Navigation < : Previous page > : Next page Home : Return to main screen

13.2 Programming presets – Preset Page x

page 3 **Program mode** Ncom	**Status: program mode**
Preset Page 1	Page x : Current page
	Ncom : Active protocol

ON   **Empty Preset**

Page: 2 – button: 1

ON   **Empty Preset**
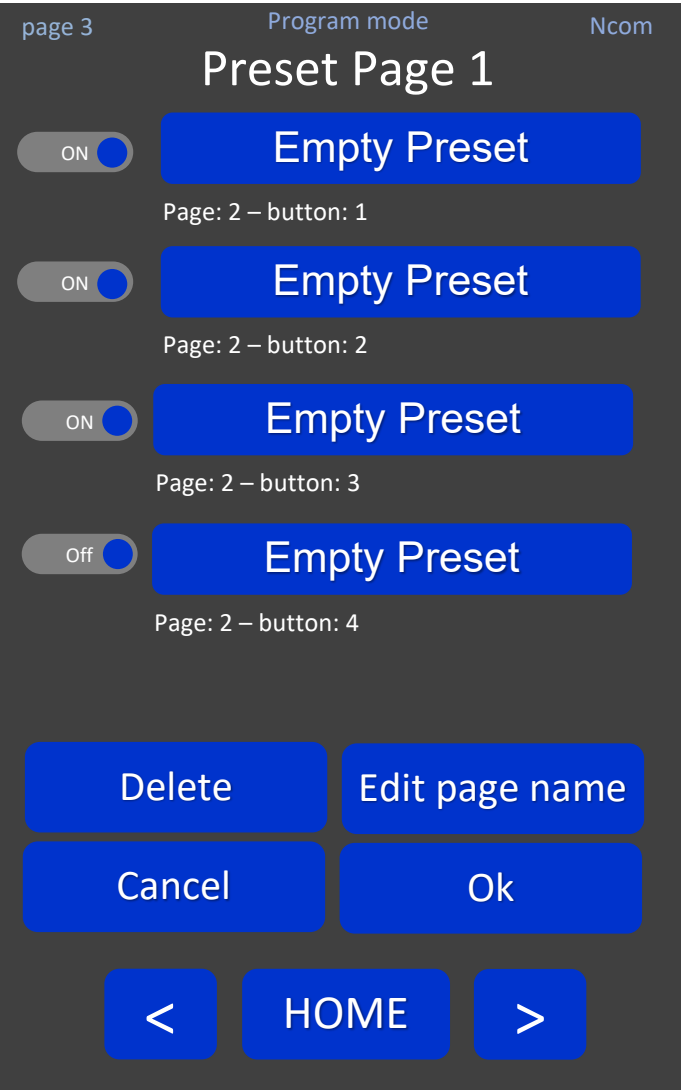
Page: 2 – button: 2

Show/hide preset in Preset page
When showing only 1 or 2 presets the buttons will
be larger in normal mode. This makes it easier to select.
Select Preset to edit
The indication "Page: 2 – button: 1" refers to the
Available RS-485 command, -> see chapter 14.3

ON   **Empty Preset**

Page: 2 – button: 3

Off   **Empty Preset**

Page: 2 – button: 4

Delete   **Edit page name**

Cancel   **Ok**

Delete and click a preset to clear content and name
Edit current Preset Page name
Cancel and go back to previous page (Home)
Ok to accept settings

<   **HOME**   **>**

Navigation
<   : Previous page
>   : Next page
Home   : Return to main screen

13.3 Programming presets - Preset edit

	page 9	Program mode		Ncom

Preset edit: Preset x

Unit	Level	Source	Mode	Power	Para3
1	127	--	Red	--	3-1
2	--	--	--	--	--
3	--	--	--	--	--
4	--	--	--	--	--
5	--	--	--	--	--
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--

Undo	Get	Cancel	Ok	Edit name

Status: Program mode
Page x   : Current page
Ncom   : Active protocol

Parameter fields
Blue   : Unselected parameter
Green   : Selected parameter. Use encoder to modify data
- -   : Parameter not activated within preset
Unit   : Unit number 1-12
Para3-6 : Reserved

Use grey buttons for column selection
Use sliders to scroll

Undo   : Cancel last change
Get   : Upload parameters from display
                 S-COM units should be switched ON first
Cancel   : Cancel changes and return to prev. screen
Ok   : Accept and return to prev. screen
Edit   : Edit current preset name

13.4 Preset edit in S-COM mode
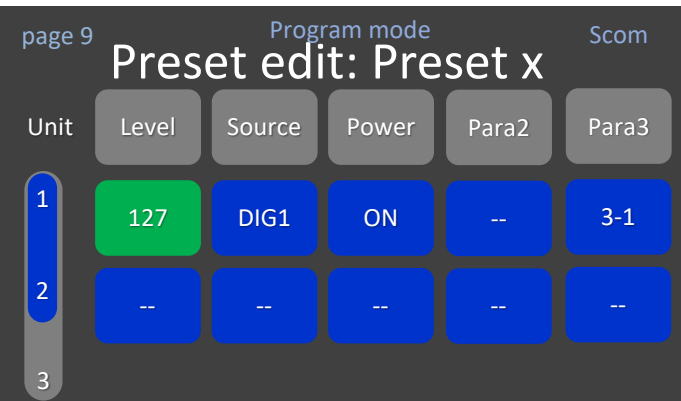
	page 9	Program mode		Scom

Preset edit: Preset x

Unit	Level	Source	Power	Para2	Para3
1	127	DIG1	ON	--	3-1
2	--	--	--	--	--
3					

Status: Program mode
Page x   : Current page
Ncom   : Active protocol

Parameter fields
Blue   : Unselected parameter
Green   : Selected parameter. Use encoder to modify data
- -   : Parameter not activated within preset
Unit   : Unit number 1-12
Para2-3 : Reserved

Use grey buttons for column selection
Use sliders to scroll

14 Preset selection – Preset

When all presets have been programmed, first enter Normal mode: Home > Settings > NControl mode, switch to Normal. The Home page will look like image below.

page 0	Ncom	**Status**
Home		Page x : Current page
		Ncom : Active protocol
Monitor control		Go to monitor control page
Preset Page 0		
Preset Page 1		
Preset Page 2		Go to Preset x page
Preset Page 3		
Preset Page 4		
Preset Page 5		
Settings		Go to settings page
< HOME >		**Navigation**
		< : Previous page
		> : Next page
		Home : Return to main screen

To activate a preset just select the corresponding button to enter the Preset Page.

14.1 Preset Page x

After selecting a Preset Page x you will enter the page with 4 presets. Click on a preset to activate.

page 2 Preset Page 0 **Ncom**	**Status**
	Page x : Current page
	Ncom : Active protocol
Empty Preset (green)	
Empty Preset	
Empty Preset	Blue : Available preset
Empty Preset	Green : Active preset
< HOME >	**Navigation**
	< : Previous page
	> : Next page
	Home : Return to main screen

☞ To hide Preset pages or Presets, enter program mode in settings, go to the Preset Page and switch the selection box to OFF.

14.2 Edit name (keyboard)

When selecting Edit name or Edit page name the 'Edit name' screen appears:

page 13   Ncom

Edit name

New name:

Preset 1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

| q | w | e | r | t | y | u | i | o | p |

| a | s | d | f | g | h | j | k | l |

| z | x | c | v | b | n | m | del |

| shift | | clr |

| Cancel | Ok |
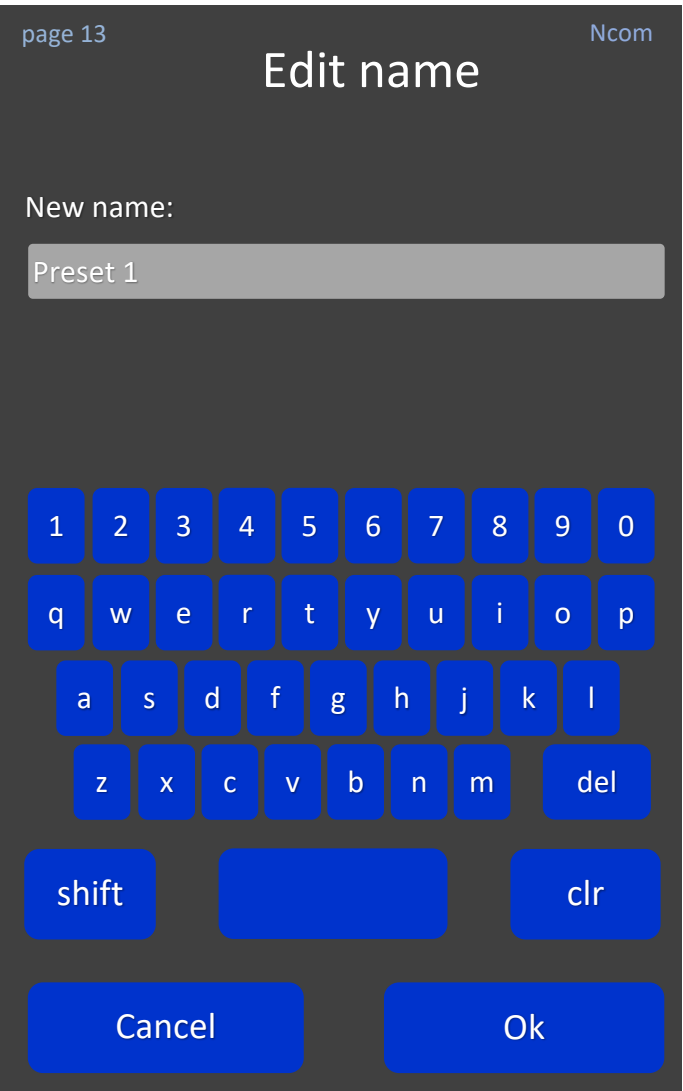
Status: Program mode
Page x   : Current page
Ncom   : Active protocol

Name field

Qwerty keyboard
Clr   : Clear all text
Del   : Delete one character to the left
Ok   : Apply name and return to prev. page

14.3 Activating presets by external RS485 commands

Command: SetPresetNcontrol 0xA8
Description: Activate preset in Ncontrol. Returns Ack or Nack

from :	to:		type:	network:	rate:
PC	master/slave/last-slave		peer-to-peer	RS485	once

line nr	byte nr	bytes	description	unit	type	Value	comment
1	0	1	STX	byte	char	0x02	
2	1	1	Address number	char	0x01		logic address of Ncontrol
3	2	1	Command	number	char	0xA8	
4	3	1	Data length	index	char	2	
5	4	1	Data[0] char	char	n		preset page
6	5	1	Data[1] char	char	n		preset button
7	6	1	checksum		char	checksum	y
8	7	1	ETX	byte	char	0x03	
		total:	8	bytes			

Return is ACK / NACK

Example: activate *Preset 3* on *Preset page 1*.

STX	Address Always 01	Command	Data length	Preset page	Preset	Checksum	ETX
0x02	0x01	0xA8	0x02	0x01	0x03	0x4E	0x03

Checksum: sum all data in hex: 02+01+A8+02+01+03 and inverse the byte, take lsb.

This function can also be tested in the NCOM-APP with the 'Ncontrol presets' buttons

15 Maintenance

There are no user serviceable parts inside the unit. When the unit is used in its intended environment there is not much maintenance needed. Please follow these directions:

- Turn off the product and disconnect from the power source before cleaning or maintenance.
- To reduce the risk of electric shock, follow all safety notices and never open the unit's case.
- Avoid dust and water to enter the unit and never open the unit for cleaning. This might damage the components inside.
- Clean the chassis and glass with a soft, slightly moistened cloth. Do not use any abrasive or volatile cleaners.
- Always thoroughly dry off any moisture on the unit and glass before storing.
- Check all mounting screws if these are still sufficient secured.
- Never use compressed air to clean the unit.

16 Trouble shooting

16.1 Power

Symptom	Problem	Action
No image is shown	• No power to the NControl	• Check proper pinning of power connections • Check proper fitting of the wires in the screw connector • Check proper fitting of the power connector in the socket • Measure voltage on power connector. Should be 9~34VDC
Low brightness of image	• Brightness not at 100%	• Set higher brightness in Settings

16.2 Touch screen

Symptom	Problem	Action
• When you touch the screen no touch is detected	• Touch screen is not calibrated	• Push & hold the control knob until backlit flashes, then release and press again shortly. Touch the points accordingly
• A false touch is generated	• There is a flow of water on the surface of the glass	• Place the touch screen in a different edge • Avoid excessive water to flow over the front surface

17 Specifications

17.1 Dimensions
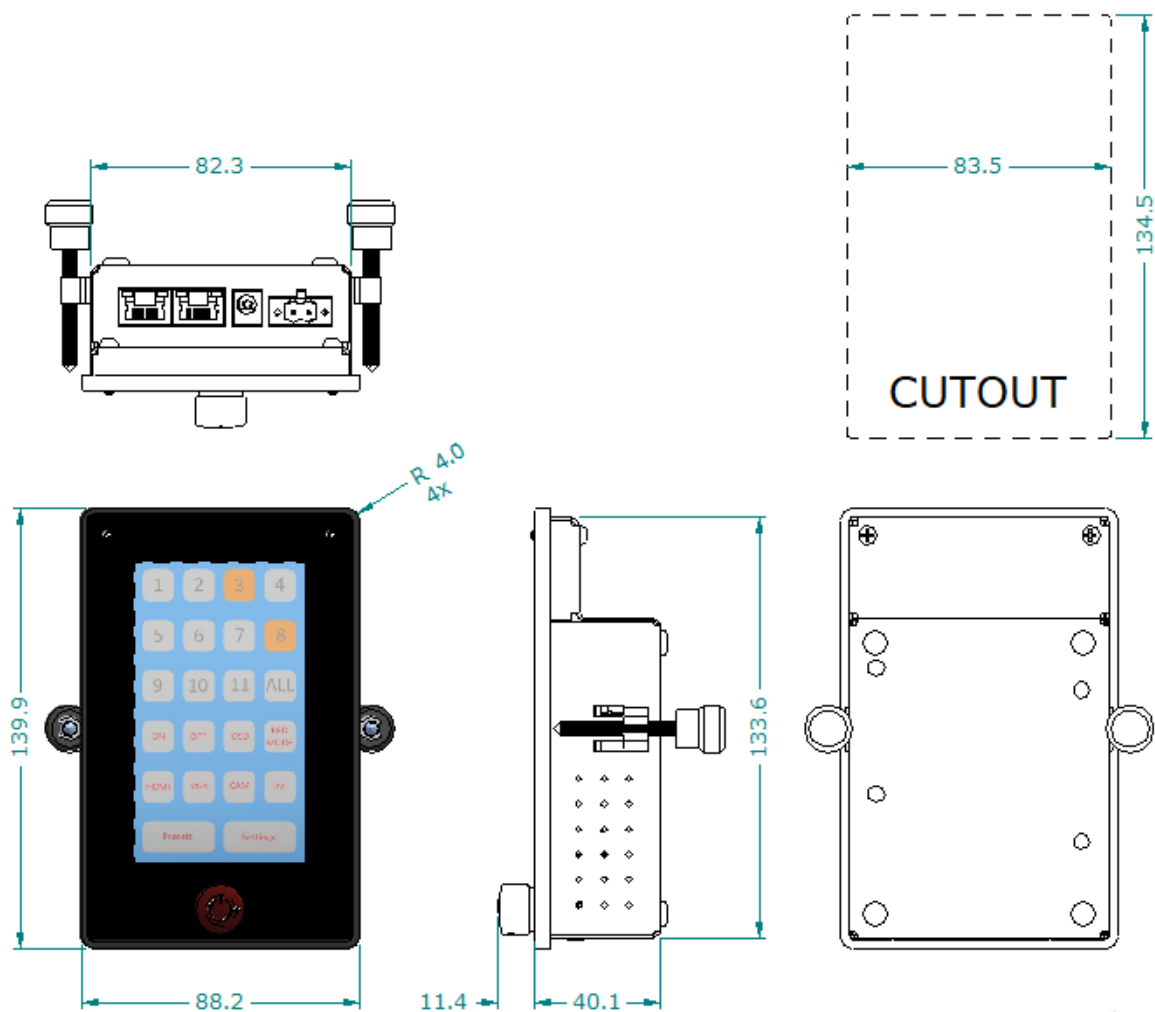
17.2 Pin assignments

N-COM - IN connector (RJ45 8p,8c)

 (L -R)
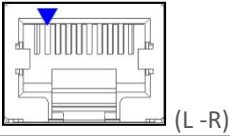
Pin	Function	Pin	Function	Pin	Function	Pin	Function	Pin	Function
1	12V	2	-	3	-	4	RS485 D+	5	RS485 D-
6	-	8	GND						

N-COM – OUT connector (RJ45 8p,8c)

 (L -R)
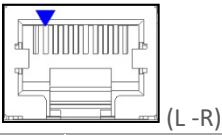
Pin	Function	Pin	Function	Pin	Function	Pin	Function	Pin	Function
1	-	2	-	3	-	4	RS485 D+	5	RS485 D-
6	-	8	GND						

12 VDC input plug

Pin	Function	Pin	Function	Pin	Function	Pin	Function	Pin	Function
1	+12~36VDC	2	Detect	3	GND				

9~36 VDC input connector, max wire 2,5mm2 (N84 – N121 models)
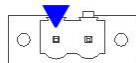
Pin	Function	Pin	Function	Pin	Function	Pin	Function	Pin	Function
1	+12~36VDC	2	GND						

17.2.1 Pin assignment S-COM connection at monitor side

Phoenix MC 1,5/ 5-STF-3,81

Pin	Function	Pin	Function	Pin	Function	Pin	Function	Pin	Function
1		3		5	Data +	7	Data -	9	GND 100Ω
2		4		6		8		10	

18 Regulatory information

We, the manufacturer, NOTTROT BV

herewith declares that the product: **NControl remote dimming and control unit**

Product identification (brand and catalogue number/part number): **NCxxxKGE**
Where xxx corresponds with the display-diagonal

are in conformity with the provisions of the following EC Directive(s) when installed in accordance with the installation instructions contained in the product documentation:

Low Voltage Directive 2014/35/EG
EMC Directive 2014/30/EU
ROHS 2011/65/EU

and that the standards and/or technical specifications referenced below have been applied:

EN 55032: 2015, Electromagnetic compatibility of multimedia equipment - Emission Requirements Class B:
EN 55035: 2017, Electromagnetic compatibility of multimedia equipment - Immunity requirements

Year of CE Marking 2020

NOTTROT BV

Signature
Name: R. Nottrot
Position: Technical director
Date: 01-may-2020

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19 Warranty

→ Warranty notification: Due to the extraordinary conditions for 'outdoor' use sunlight readable models (included options LED, Transflective and Optical bonding) have limited warranty of 1 year (12 months).

19.1 Coverage of the Warranty

Nottrot warrants any Nottrot unit first sold to an end-user to be free from defects in components and workmanship under normal use for the duration of the warranty period which is two (2) years (Warranty Period).
The warranty period commences on the date of purchase. Your original purchase invoice (sales receipt), showing the date of purchase, model number and serial number of the unit, is your proof of the date of purchase.
This Warranty represents a Carry-In warranty to Nottrot or any representative in the country where the unit has been purchased. The defective unit should be returned to the original Point of sales (POS)/reseller for repair.
This Warranty covers the costs of service parts and labor required to restore your unit to full working order. Nottrot will, at its option, repair or replace any defective units or parts thereof covered by this Warranty with new or factory-refurbished
parts or units that are equal to new products in performance. A unit or part that is repaired or replaced under this Warranty shall be covered for the remainder of the original warranty period applying to the unit or part. For batteries the warranty period is limited to one (1) year due to the nature of item. This Warranty does not affect your statutory rights.

19.2 Warranty Exclusions and Disclaimer

The Warranty with respect to your unit is subject to the following exclusions and limitations:

a) Exclusions
This Warranty does not extend to:
1. any unit not manufactured by or for Nottrot, or sold to an end-user in a country not covered under this Warranty.
2. any unit that has been damaged or rendered defective (a) as a result of use of the unit other than for its normal intended use, failure to use the unit in accordance with the User's Manual that accompanies the unit, or other misuse, abuse or negligence to the unit;
(b) by the use of parts not manufactured or sold by Nottrot;
(c) by modification of the unit;
(d) as a result of service by anyone other than Nottrot;
(e) by improper transportation or packing when returning the unit to the Point of Sales (POS)/reseller; or
(f) by improper installation of third party products (e.g. objectives).
3. any unit or parts thereof from which labels or serial numbers have been modified or made illegible.
4. loss of any, or damage to data. You are responsible for saving (backing up) any data or removable storage media. Nottrot may opt to replace the unit submitted for warranty services with a manufactured unit of equal quality, and, thus, any data stored by you on your original unit may become permanently inaccessible to you.
5. fair wear and tear of consumable parts, i.e., parts that require periodic replacement during the normal course of the units usage, including without limitations, batteries, AC Adapters, AC/USB/AV cable, remote control or appearance parts.
6. cosmetic damages such as scratches and dents, scratched, faded or discolored covers and plastics. Nottrot is not liable for any transport/delivery/ insurance costs, import duties, taxes, licensing fees and any charges from telephone/fax communication as consequence of the failure of the unit.
7. Nottrot supplies no warranty, either expressed or implied, for any bundled software, its quality, performance, merchantability, or fitness for a particular purpose. Nor does Nottrot warrant that the functions contained in the software will meet your requirements or that the operation of the software will be uninterrupted or error-free. As a result, unless otherwise stated in writing, the software is sold "as is".

b) Disclaimer of Warranty
Except for the express warranty provided and to the extent permitted by applicable law, Nottrot, its Authorized Resellers or Authorized Service Providers do not issue any warranty or guarantee for your unit. Nottrot expressly excludes any other liability, whether express or implied, to the fullest extent allowed by the law. In particular, but without limit to the generality of the exclusion, any implied terms as to merchantability, satisfactory quality, fitness for a particular purpose and/or non-infringement of third party rights are excluded whether in contract or tort. Any implied warranties that may be imposed by law are limited in duration to the term of the express warranty given by Nottrot to the extent permitted by applicable law. To the maximum extent permitted by applicable law, in no event shall Nottrot or its supplier be liable for (1) damage to, or loss or corruption of data or

removable storage media, or (2) any damages whatsoever (including direct or indirect damages, loss of business profits, lost savings or other special, incidental, exemplary or consequential damages whether for breach of warranty, contract, strict liability, tort or otherwise) arising out of or resulting from the use of or inability to use the products and/or the enclosed written materials, even if Nottrot, its supplier, an authorized Nottrot representative, service provider or dealer have been advised of the possibility of such damages or of any claim by any third party. Any liability of Nottrot or its supplier which is not excluded shall be limited to the purchase price of the unit.

19.3 Obtaining Warranty Service

Your Nottrot Warranty includes a Carry-In warranty service. The warranty service will be subject to the following terms and conditions:

1. Consult the User's Manual accompanying your unit for important tips on how to operate and troubleshoot your unit;
- Note down unit name, model number, serial number and a description of the problem (e.g. error messages that appear on the screen);
2. Under the terms of Carry-in warranty service, you will be required to deliver your Nottrot unit including battery, power cord and AC adapter to the Point of sales (POS)/reseller. For further information on the Nottrot range of options and accessories contact your reseller or visit the Nottrot website www.nottrot.nl

20 Appendix 1: Setting up N-Line monitors for the NControl

When the NControl is ordered together with N-Line monitors, the monitors are already set up in the NControl and you can start to work with the NControl right away. When the NControl is ordered separately, the N-Line monitors need to be assigned utilizing the N-COM app. Below is a step by step guide on how to properly set up N-Line monitors for use with the NControl.

Step 1: Linking the monitors and connecting them to the NControl

Connect all the monitors with CAT5 UTP cables. Place the NControl first in the chain. Ensure the N-COM out port of each monitor is connected to the N-COM in port of the next monitor. The monitors don't need to be connected in the order that they will be numbered in the N-COM app.
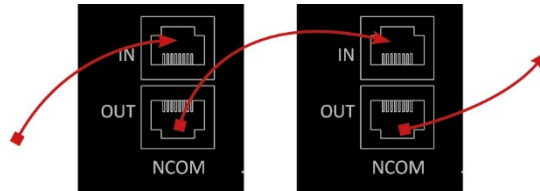
The N-COM out port gets connected to the N-COM in port of the next monitor

Step 2: Download the N-COM app

Download the and install the N-COM app from the N-COM support files:
https://www.nottrot.com/en/downloads/other-downloads#other-downloads

NCOM_SUPPORT-FILES
11-05-2023

NCOM_2_80_Installer

Step 3: Connecting the NControl to a laptop or PC

Connect the N-COM in port of the NControl to a laptop or PC using the USB to RS-485 converter cable. Power up the NControl and all the monitors.


USB to RS-485 converter cable

Step 4: Open the app and connect the app to the converter

When the NControl and all the monitors are powered up, open up the app. By default, the app is "offline". Connect the app to the converter by clicking on the "open port" button.
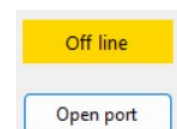
## Step 5: Listing the NControl and all the monitors in the N-COM app

Clicking on the "Lookup" button will list the NControl along with all the monitors in the table below. The first row will represent the NControl. The second row will represent the first monitor in the chain. The third row will be the second monitor in the chain, and so on.
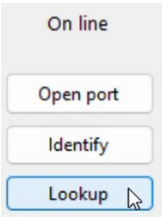
	Net ID	Unit	Serial	Identify	State
On line	1	2	330	-	App.
Open port	2	0	1955	-	App.
Identify	3	0	1234	-	App.
	4	0	1799	-	App.
Lookup	5	0	1970	-	App.

Step 6: Select the first monitor

Click on the monitor you would like to program as monitor number 1 in the NControl. This can be any monitor in the chain and doesn't necessarily need to be the first monitor in the chain. If it is unclear which monitor is which, selecting a monitor and clicking on the "Identify" button will make the display of the selected monitor "flash".

Identify
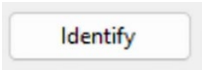
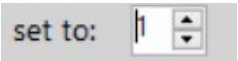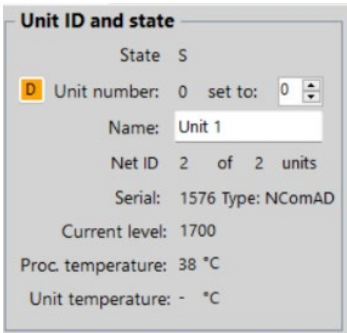## Step 7: Upload the monitor's current configuration in the app

After monitor number "1" has been selected, this row will be highlighted in blue in the app. Clicking on the "Read stored values from DC" button will upload the monitor's current configuration in the app.

Read stored values from DC
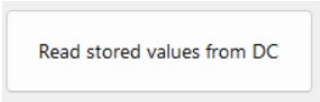
PS. We strongly advise against changing other parameters than the ones necessary for this setup. If you feel anything has been changed in the app unintentionally, disconnect the power from all the monitors and restart this setup.

Step 8: Adjusting unit ID and state

After the monitor's current configuration has been uploaded in the app, the first section that needs to be adjusted is the "Unit ID and state" section. Set the number in the "set to" section to the number you would like to have the monitor programmed in the NControl.

Unit ID and state
State S
D Unit number: 0 set to: 0
Name: Unit 1
Net ID 2 of 2 units
Serial: 1576 Type: NComAD
Current level: 1700
Proc. temperature: 38 °C
Unit temperature: - °C

set to: 1

Step 9: Assigning "Dimming source"

The next section that needs to be assigned is the "Dimming sources" section. The "Dimming sources" section consists of 4 inputs. The unit number of input "1" needs to correspond with the number previously set in the "set to" section in the "Unit ID and state" section. The unit and source number of input 2 need to be assigned in accordance to the ID number reserved for the NControl. In case of the first monitor, the ID number is: unit 21, source 1.
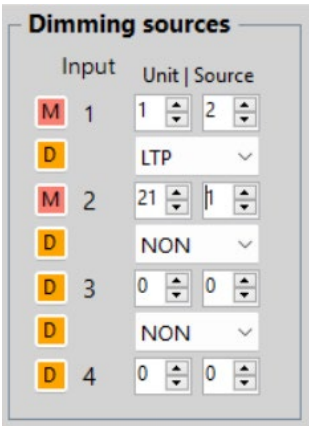
Step 10: ID numbers for the other monitors

Source ID 21, 22, and 23 are reserved for dimming and other functions in the NControl. Below is an image showing how input 2 of the "Dimming sources" section should be assigned for the other monitors in the chain.

Dimming control and non-dimming functions (power, source, etc.) are based on the unit ID with reference to the corresponding Monitor control button. The easiest way is setting the Unit ID the same as the monitor number in the chain.

Step 11: Change "NON" to "LTP"

Change the drop down menu of input 2 from "NON" to "LTP".

The "unit" and "source" of input 3 of the "Dimming sources" section may both be changed to "1". This will prepare the monitor for use with an additional external dimming potentiometer.
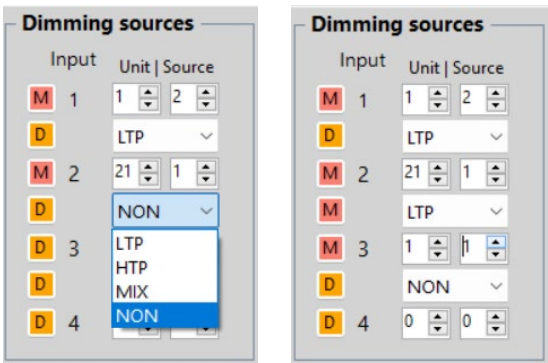
Step 12: Saving the changes made

The changes made in the app will be effective immediately, but will only be saved in the monitor after the "Write and store values to DC" button has been clicked on.

The app will show green boxes with "v" in them when the changes are successfully stored.
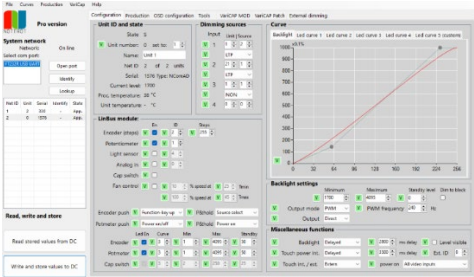
Step 13: Assign the other monitors in the chain

Repeat steps 6 through 14 for the other monitors in the chain. Make sure that the correct ID number, unit, and source number are used when assigning the other monitors in the chain (see Step 10).

Step 14: Restart the NControl

Restart the NControl by unplugging the power cable. The NControl will now recognize the monitor and you can start to enjoy the fantastic features.

Step 15: Testing the NControl and monitors

After the NControl has restarted, press the "Home" button and select "Monitor Control". All the monitors in the chain will be in blue. The greyed-out numbers are the numbers not in use. Select a monitor and select the "level" button. Both buttons will be highlighted in green. Rotating the knob of the NControl will now increase or decrease the monitor's brightness. To test all the other monitors, select the "all" button in addition to the "level" button. The brightness of all the monitors in the chain can now be adjusted simultaneously.