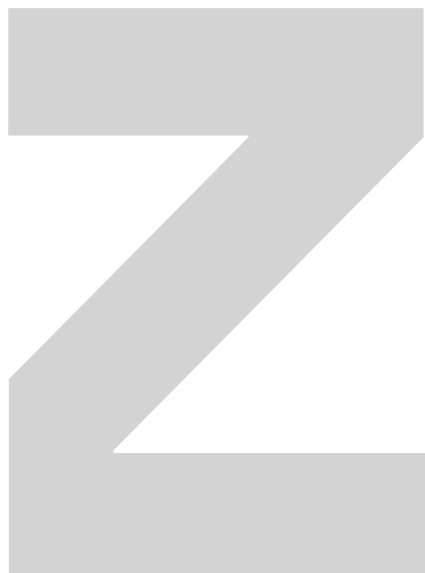
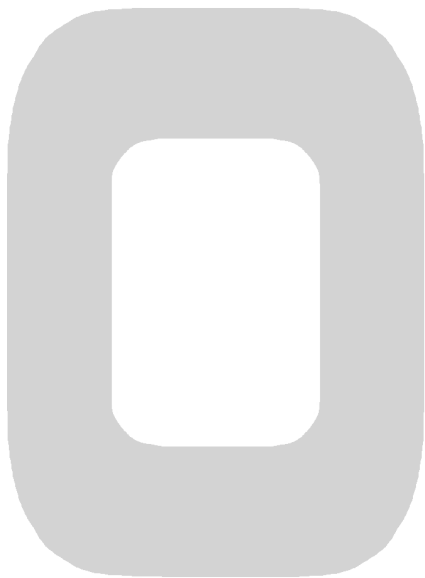


NOX System, Instructions for operation V3.1 en



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TO THIS MANUAL

This user manual has been prepared in accordance with EN-82079-1:2013 (preparation of instructions for use) and is shall provide a structured and complete overview of the product.

1. PRODUCT IDENTIFICATION

1.1 PRODUCT BRAND AND TYPE DESIGNATION

This manual is valid for the following NOX products:

- All models of control units (NOX XL, NOX SYS, NOX Lite and NOXone)
- Keypad NOX KPD
- All NOX control panels with display

1.2 VERSIONEN

This manual is valdi for all versions off he above mentioned products.

Version	Date	Change
3.0	8.Mai 2017	Complete rework
3.1	13.Nov 2017	Small corrections

1.3 COMPANY ADDRESSES

Manufacturer: NOX Systems AG
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www.noxsystems.com

Importer/country representative:

Installer:



2. PRODUCT DESCRIPTION

2.1 DESIGN, GENERAL FUNCTION INTENDED USE

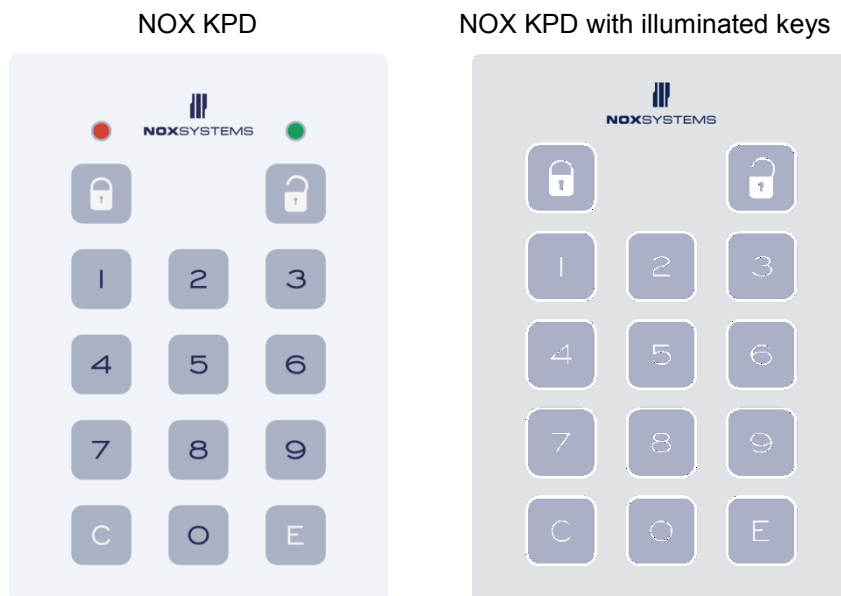
The NOX System, together with the corresponding modules and detectors is a closed system for the detection of intrusion, breakout and for access control.

Scope of application

- The NOX System is intended for use in industrial, commercial and residential buildings
- All components of the system including the control panels are designed for indoor use only.

2.2 USER CONTROLS AND THEIR FUNCTION

2.2.1 NOX KPD KEYPAD

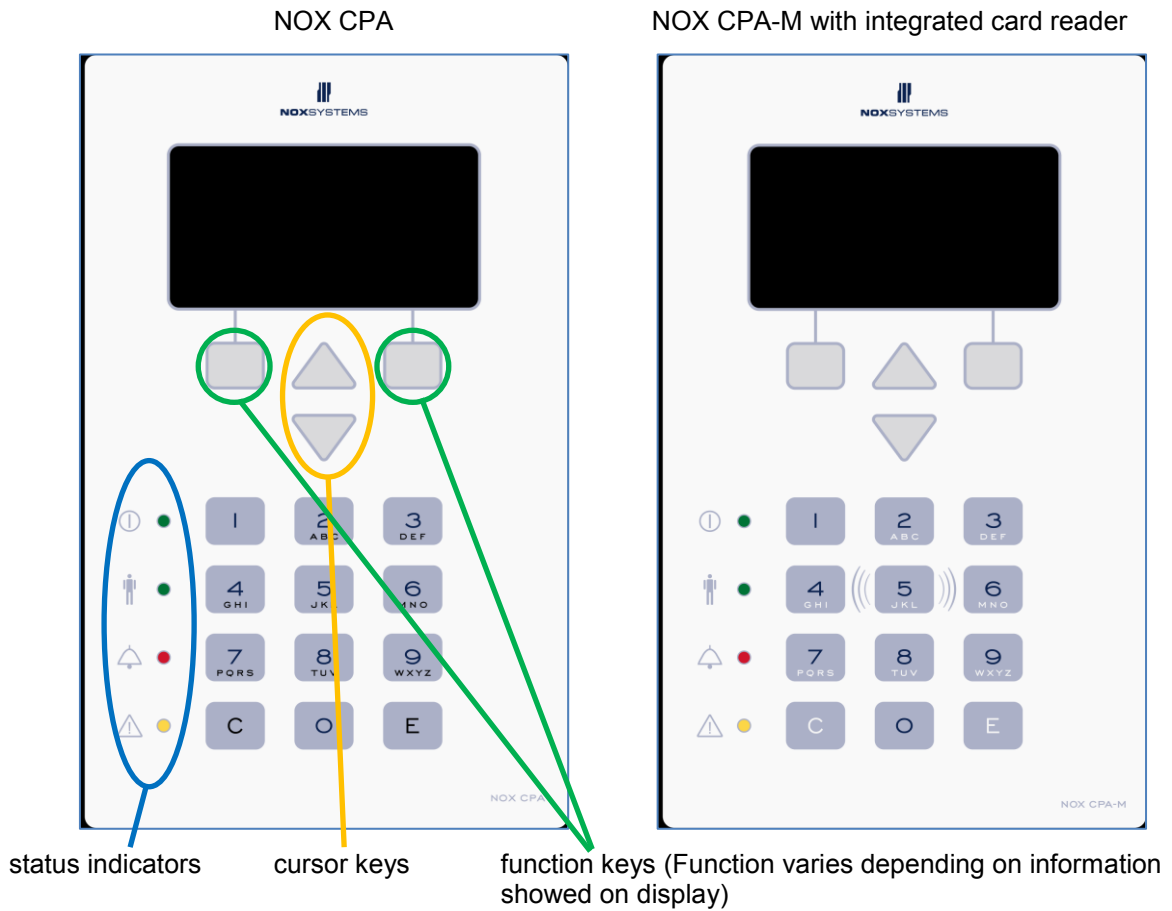


The keypad is used to enter the numeric user code.

Key	Function	Key	Function
	clear (delete) deletes the last entry		disarm area green = area is disarmed
	input (enter) completes the input of the user codes		arm area red = area is armed
Indicator	Description	Indicator	Description
	green is illuminated = area is disarmed		red is illuminated = area is armed



2.2.2 NOX CPA USER PANEL WITH DISPLAY



Status indicator	Description	Key	Function
	green is illuminated = system running		clear (delete) deletes the last entry
	green is illuminated = user logged in , area is disarmed		input (enter) completes the input of the user codes
	red is illuminated = alarm active		
	yellow is illuminated = warning active		



2.3 POWER SUPPLY

All NOX control units are connected to mains.

Type of control unit	Technical data	Physical unit	Value
NOXone	Supply voltage	VAC	100..240
	Energy consumption	VA	100
	1x 12V, VRLA Akku	Ah	17
NOX Lite	Supply voltage	VAC	100..240
	Energy consumption	VA	140
	2x 12V, VRLA Akku	Ah	7.2
NOX SYS	Supply voltage	VAC	100..120 / 210..240
	Energy consumption	VA	280
	2x 12V, VRLA Akku	Ah	17
NOX XL	Supply voltage	VAC	100..120 / 210..240
	Energy consumption	VA	280
	2x 12V, VRLA Akku	Ah	40
All bus components	Supply voltage	VDC	8..16
All components	Operating temperature	°C	0..40

For the sufficient power supply during a power failure, lead gel batteries (VRLA type) must be installed in the control unit. The batteries must comply with IEC/EN 61056 and must be tested by VdS.

All bus components, including user interfaces, are supplied directly from the NOX control unit.

Due to the limited life span of the batteries, they have to be replaced after a few years.



3. BASIC SAFETY INSTRUCTIONS

3.1 TARGET GROUP AND USER TRAINING

This manual is intended for the end user of the system.

The installer of the system must inform the end user about the system.

End-user training is an integral part of this instruction manual, as each NOX System is adapted to the requirements, wishes and local conditions and the present instruction manual only documents general valid operating instructions.

That includes:

- The splitting and naming of areas
- Positioning and naming of detectors and sensors
- Granted rights for user profiles
- Functions of locks and door locking elements
- Instruction on arming and disarming the entire system or parts of it
- Restrictions on admission (limited access)
- Explanation about forwarding of warnings and alarms
- Service and maintenance of the system

3.2 INTENDED USE

For the safe use of the NOX system, the end user must observe the following points:

- Do not open the control unit housing - there is a dangerous voltage inside the housing (110... 230VAC)
- The built-in batteries contain highly corrosive acids, so any damage to the battery housing must be prevented
- The connection to the AC mains supply must be carried out in accordance with the country-specific regulations by professionally skilled personnel
- Batteries may only be replaced by the installer. Only VRLA type of batteries (lead gel) which comply with the IEC/EN 61056 standard and are VdS tested may be used.

3.3 FORSEEABLE MISUSE

Type of misuse	Source of risk	Impact on violation
Outdoor installation	Humidity extreme temperatures sunlight	Malfunction Loss of product warranty
Protective earth not connected	When a wire of the mains cable is disconnected, the housing may be under deadly voltage	Electric shock, death
No separate circuit breaker for the system in the mains distribution cabinet	In the event of overload or short circuit, there is no protective element that interrupts the circuit.	Fire
Insufficient mounting of the control unit to the wall	The fixation does not withstand the weight of the control unit with the batteries.	Injuries Malfunction



Use of tools (scissors, ballpoint pen or similar) for operation	The membrane keypad is exposed to excessive mechanical stress	Malfunction Loss of product warranty
Connection of third party parts (not NOX products) to the NOX BUS	Incompatible products are connected	Sabotage alarms and total system breakdown
NOX BUS wiring across multiple buildings	Lightning strike Static discharge of the atmosphere	Destruction of the system, Fire
Modification of the NOX control unit or connected devices	Modification of electronic modules and/or fuse element bypassing	Malfunction, alarms and total system breakdown, Loss of product warranty



3.4 CLEANING AND MAINTENANCE

The control housing and the user interfaces can be cleaned with a mild soap solution and a soft cloth.

Maintenance by the end user is not intended. In order to ensure that the system functions properly, however, annual maintenance and functional testing by the installer is necessary.

4. OPERATION OF THE SYSTEM

4.1 NOTES FOR SAFE OPERATION

All user codes are strictly private and may not be shared with other people. If the user code is written down somewhere, this note must be kept safe so that it does not fall into the hands of other persons.

The contact data (name, phone no.) of the alarm receiving centre must always be kept at hand so that in the event of a false alarm (e. g. by entering into an armed area) it can be informed in good time before interventions are initiated.

4.2 USE OF THE KEYPAD

A user can be logged on to the system with his user code using the keypad ("E" completes the code input) to:

1. get access to an area (e. g. activation of a door opener)
2. arm the area (to which the keyboard is assigned to) or the whole system (press the "lock closed" key)
3. disarm the area (to which the keyboard is assigned to) or the entire system (press the "lock open" key)



4.3 USE OF THE CONTROL PANEL

If no user is logged on, the standard display is visible (possibly with the logo of the customer or installer).



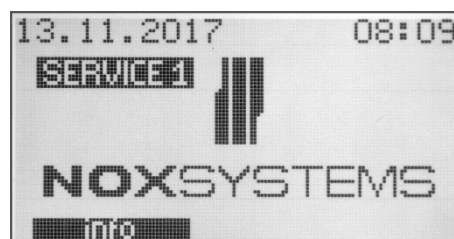
In case of an alarm, the buzzer sounds in the control panel. The display shows the detailed alarm information after user registration. The buzzer can be switched off by pressing the function key "Tone off" or by displaying the alarm.

Standard display with function key for sound off.



If there are more than one screen page with information (e. g. log or area selection) you can jump directly to a page by entering the number of pages and confirming with Enter (E).

If maintenance is carried out on the system, this is visible on the standard display. The maintenance level (SERVICE 1.. 3) is also displayed.





4.4 MAIN MENU

Access to the main menu of the control panel is only possible by an authorized user. A valid user code and/or card are required. In addition, the user must have access authorization rights (no locking period, etc.).



After 5 incorrect code entries within 15 minutes, the control panel is locked for 15 minutes. The lockout duration increases up to 12 hours after 36 incorrect code entries.

As long as the control panel is locked, it is not possible to log in (also not by a valid user code).

It is mandatory to wait until the blocking time of the operation has elapsed or the lockout is ended with the occurrence of an alarm.

If the definitions of the false codes and the blocking periods have been changed by the installer/installer, these can be entered here:

Number of incorrect user codes	Blocking time of the control panel

To log in, enter the individual numerical user code (at least 4 and up to 9 digits) and confirm the entry with the "E" key.

Hints: The structure of the main menu can be different depending on the user and user rights, that means not all menu pages are always visible. Especially for alarms and warnings! These are only visible if an alarm or a warning is pending in the system.

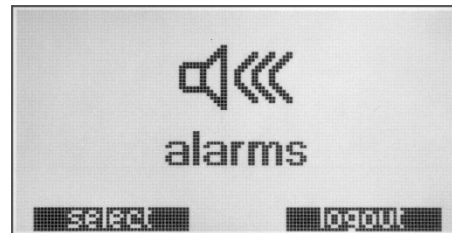
The cursor keys may be used to scroll up and down.

The functionality of the control panel only represents those functions that are needed in daily use.

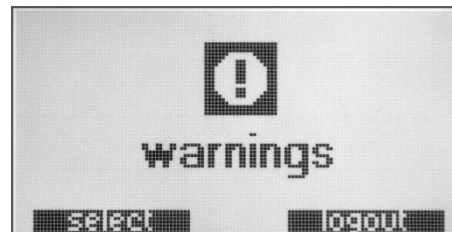
Usually, the installer adapts the configuration of the software to the individual needs of the customer/user.



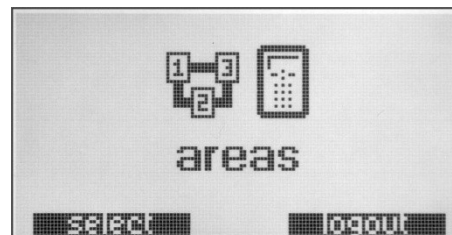
Here the alarms are displayed and can be acknowledged.
 This menu page is only showed if an active alarm is pending in the system.



Display of warnings and other system information (e. g. power failure) as well as deactivated detectors (if any).
 This menu item is only displayed if an active warning is pending in the system.



The area states can be seen here and the areas state can be switched (from one state to another).



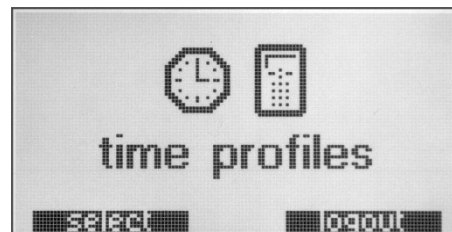
The stored events that happen in the past may be viewed here. Logs are divided into alarm, user and maintenance logs to help to find the searched events quicker.



Here users can be added, changed and deleted. Additionally a user code or card code can be changed as well (if a desired code already exists, an error message is displayed).
 This menu page is only showed if the user has the appropriate user rights.



Administration of time profiles and special days (open and closed days)



Maintenance functions for the installer.
 This menu page is only showed if the user has the appropriate user rights.



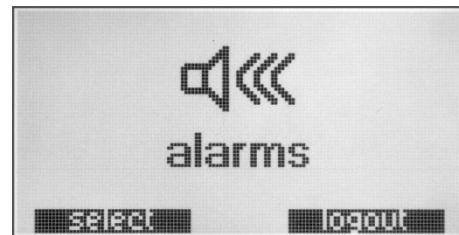
With the softkey "select" the user gets to the respective submenu and with "log off" the user is logged off from the system.



4.4.1 MENU ALARM

Here the alarms are displayed and can be acknowledged.

This menu page is only showed if an active alarm is pending in the system.

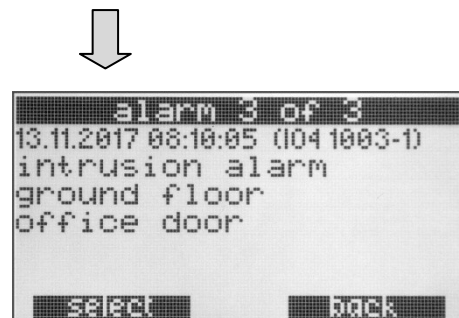


With the softkey "select" detailed information is displayed.

The number of alarm not yet acknowledged (= active alarms) is showed in the title bar.

For each alarm the time, type, area and detector name is showed.

For the installer, the exact detector address in the system (here IO4 3003-2) is also shown in brackets.



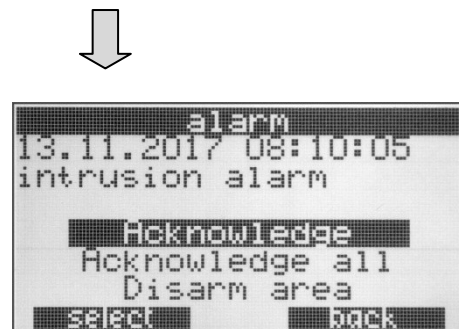
ALARM ACKNOWLEDGE

An active alarm can be acknowledged in the detailed information page.

Use the softkey "select" to switch to the submenu for alarm acknowledgement

Only the displayed alarm or all alarms for which the user has the appropriate user rights can be acknowledged here.

In addition, the affected area where the alarm occurred can be disarmed directly (to avoid further subsequent alarms). This is only possible if the user has the authorization to do so and this area is still armed.



Possible problems when acknowledging an alarm:

- **The acknowledgement of an alarm is not possible**
 - (Cause: User has no user rights to acknowledge this
 - Solution: A user with higher user rights must log on to the control panel and acknowledge this alarm
 - Cause: Area is still armed
 - Solution: Disarm the area in which the alarm is occurred
 - Cause: Detector is still active
 - Solution: Make sure (if possible) that the detector is no longer active
 - Cause: Blocking time active for the area/system
 - Solution: Wait until the blocking period has expired

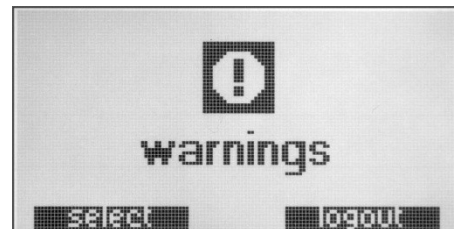


- **After selecting of “Acknowledge all”, alarms are still active**
 (Cause: User does not have the appropriate user rights to acknowledge certain alarm types
 Solution: A user with higher user rights must log on to the control panel and acknowledge this alarm

4.4.2 MENU WARNINGS

The system displays all unusual conditions as warnings. A warning cannot be acknowledged manually, but is automatically acknowledged by the system after it has been resolved.

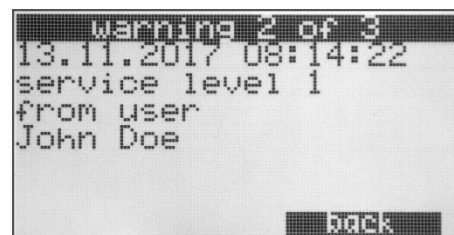
Warnings and other system information (e. g. power failure) and the deactivated detectors (if present) are shown.
 This menu item is only visible if an active warning exists in the system.



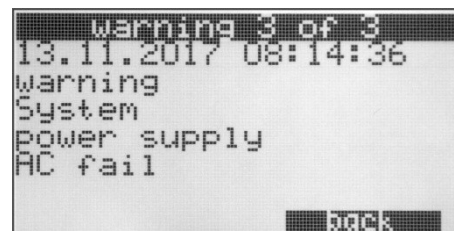
With the softkey "select" detailed information is presented.



Example: The service function is activated by the installer



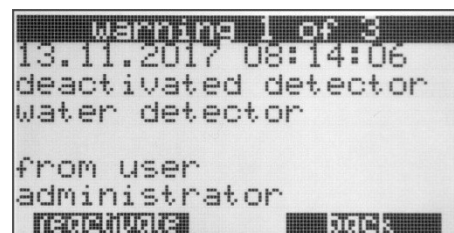
Example: AC fail (mains failure)



Example: Deactivated detector with reference to:

- the name of the detector
- the area
- if available, by whom (user).

It is also possible to reactivate this detector directly.
 (disarm of the area will automatically reactivate this detector and acknowledge the warning).





4.4.3 MENU AREAS

In this menu, all available areas can be individually selected. In addition, there is the area "System", which refers to the control panel and communication with the bus modules.

The area states are shown here as well as the areas can be switched (from one state to another).



With the softkey "select" detailed information is displayed.



The area name is shown and the area can be armed or disarmed.



Within the areas submenu, an area can also be selected directly by entering the number of the area and pressing the "E" key.

With the softkey "select" the available options are displayed.



This area can now be disarmed.



Use the softkey "select" to deactivate the displayed area.



The new state of the area is disarmed.



With the softkey "select" the available options are displayed.



The "Test" function checks whether this area could be armed or not. That means that there are no alarms or open detectors (e. g. all windows and doors are closed).

With "Deactivate" a detector can be selected and deactivated from a list of available detectors in the area. A deactivated detector can no longer activate an alarm. The deactivation will be cleared with the next disarming.

The function "test" is executed with the softkey "select".



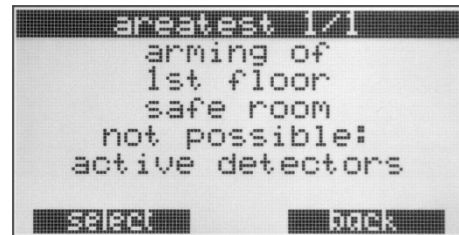


The result of the area test is presented. Either the arming can be carried out or not. If not, the screen shows what prevents the arming (see also arming error).



ARMING ERROR

Arming error: If it is not possible to toggle from disarmed to armed, the reason for the error is displayed (see also area test).



Error message	Cause	Solution
active detectors	There are still active detectors in the area (e. g. window open)	Check active detectors (e. g. close windows and doors). If there is a problem, the detector can be deactivated (see deactivating a detector in case of arming error)
active alarms	There are pending alarms in this area	Acknowledge alarms (see also alarm acknowledgement)
no rights	The logged on user does not have sufficient rights for this operation	A user with a higher level of user rights must log on to the control panel and perform the operation.
in blocking time	The area is within the blocking period	Wait until the blocking time is over

Once all the above-mentioned possible errors have been corrected, arming is possible.

DEACTIVATE DETECTOR

There are 2 different ways to deactivate detectors:

1. While trying to arm an area and active detectors in this area prevent arming (e. g. an open window). The particular detector can then be deactivated directly in this menu (see submenu areas)
2. Detectors can be deactivated even before a switching operation is carried out, if the affected area is disarmed. This can be used to prevent a later arming error (e. g. if it is known that a door is defective and cannot be closed in the evening).



Deactivated detectors are automatically reactivated if the relevant area is disarmed. This prevents a detector from being "forgotten"..

All deactivated detectors are listed in the "Warnings" menu (with the timestamp and user who deactivated them) and can be reactivated there.



DEACTIVATE A DETECTOR WHEN AN ARMING ERROR OCCURS

In the event of an arming error, the reason is displayed.

Example: Active detectors exist in the area



The active detectors are listed with the softkey "select".

Detailed information of an active detector that prevents arming.

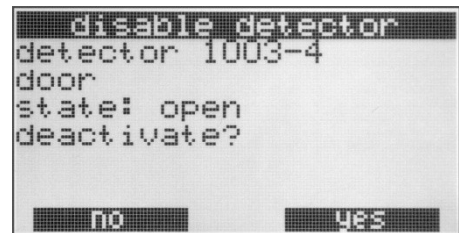
Example: Safe door still open



The detector is deactivated with the softkey "deact".

The safety prompt confirms or cancels the deactivation.

A deactivated detector can no longer generate an alarm. The deactivation is removed with the next disarming.



If there are no more active detectors, this is also shown as confirmation.



DEACTIVATE A DETECTOR WITHOUT ARMING ERROR

Select area to which the detector to be deactivated is assigned.



With the softkey "select" all detectors in the area are listed one by one.



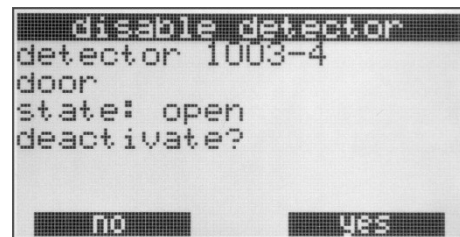
A detector can be selected and the detector details are shown.



The detector is deactivated with the softkey "deact".



The safety prompt confirms or cancels the deactivation.
A deactivated detector can no longer generate an alarm. The deactivation is removed with the next disarming.



4.4.4 MENU LOGS

There are 3 different logs in the system: alarm log, user log, service log and a summary of all three above. This means that an event that is being searched for can be found quickly.

Log name	Storage capacity [Number of entries]	Stored information
Alarm log	2000	Alarms and acknowledgments
User log	6000	All user actions (e.g. arming and disarming operations)
Service log	2000	Information on maintenance by the installer
All logs	n/a	Chronological summary of all above logs
Archive log	100'000	Contains all no longer visible events from the other logs

If a logbook is full, the oldest entry is copied to the archive log and deleted in the full log (ring buffer).

However, the archive log cannot be viewed with the control panel. For this purpose, the PC user interface or a management system is required.

The past events stored in the system can be viewed here. The logs are divided into alarm, user and maintenance logs, so that the searched events can be found faster.



With the softkey "select" detailed information is displayed.



A logbook can be selected.





With the softkey "select" the chosen logbook is displayed.

The selected logbook, the selected event and the total number of entries are displayed in the header (e. g. 11/65).

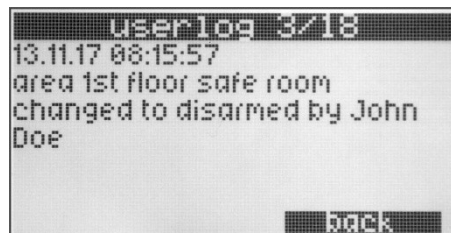
All entries are sorted chronologically (i.e. by date and time stamp). The newest entry has the no. 1.

Per page one entry with detailed information is presented. Use the cursor keys (arrow keys) to search through the entire log.



Similar to the alarm log (see above) it applies to the user log.

Within the different logbooks an entry can be selected directly by entering the number of the entry and pressing the "E" key.



4.4.5 MENU USERS

The user administration can be found under this menu item.

Users can be added, changed and deleted. A user code or card code can also be changed. For multilingual systems, the language per user can also be defined.

This menu page is only showed if the user has the appropriate user rights.

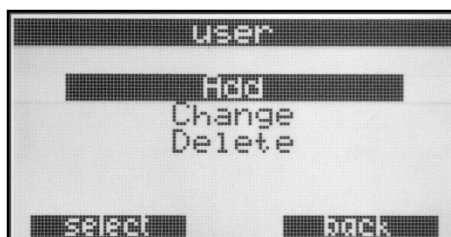


With the softkey "select" detailed information is displayed.



Add user:

Here a user can be created, changed or removed from the system.



In order to create a new user, the menu item "add" must be selected.





Enter the name of the new user.

Each digit key (except for 1) has 3-4 upper and lower case letters assigned to it.

The desired character can be selected by pressing the same key several times. If another key is pressed or after a short delay, the cursor moves automatically to the next character. The "C" (Clear) key can be used to delete the last character.

The length of the name is limited to 20 characters.

With "proceed" the creation of a new user is continued.

Enter the preferred user code (4 to 9 digits are required by default).

If this code (and the associated threat code +1) already exists in the system, an error message is displayed after selecting "next".

Depending on the system configuration, an additional page with the card code is inserted. The card code can be entered directly, if known, or the next card code is used directly, which can be read by any reader in the system.

With "proceed" the creation of a new user is continued.

The user profile defines the user rights that are assigned to the new user (here the profile "user"). The user profile can be selected from a list.

Select "proceed" to complete all entries.

Finally, the overview of the new user is displayed. An error can be corrected with the "back" softkey on the corresponding page, otherwise the user is added to the system with "yes" and is immediately active.



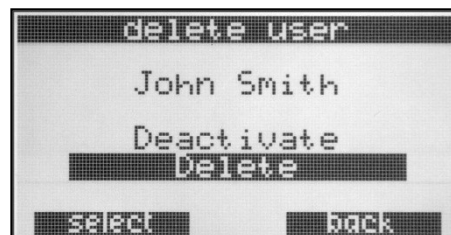
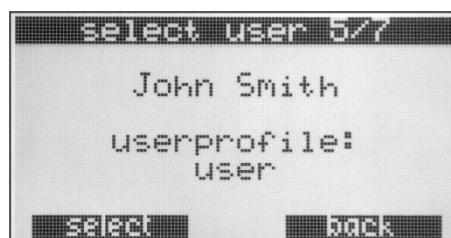


Delete user

To perform this action, the type of action must first be selected, i.e. "change" or "delete" and then the right user must be selected.

Press "select" to confirm the selection and the page with the confirmation prompt is then displayed.

In case of an incorrect selection, the deletion of the user can be aborted with "back" or confirmed with "select".



Change user

When selecting "change", the dialog is identical to the add user dialog, but the displayed fields are already filled in with the user's existing data. If necessary, the corresponding entries can be changed.

User profile

The user rights can be fine-tuned within a user profile (area access rights, warning/alarm acknowledgement rights, deactivation of detectors, control panel menus, visibility of areas and time profiles in the user interfaces).

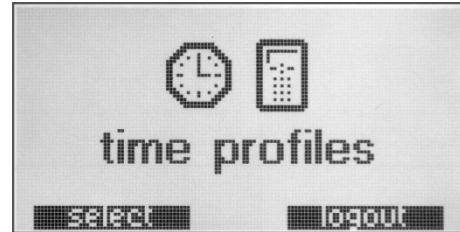
The user profiles cannot be changed via the control panel and are managed by the installer.



4.4.6 MENU TIME PROFILES

This menu allows you to change the existing time profiles (release times for areas or users) or to add, change or delete new special days (exception days of the normal calendar such as public holidays).

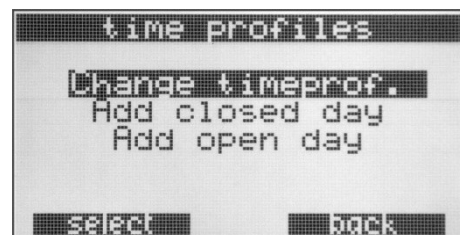
Administration of time profiles and special days
(open and closed days)



With the softkey "select" detailed information is displayed.



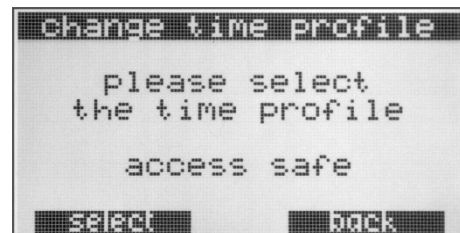
Depending on the user's rights, not all options are displayed.



Use the "select" button to move to the next page.



Here it is possible to select the time profile which should be changed.



Example for a time profile:

Name of time profile	Day of the week	Release times (=access granted)
Access main entrance	Monday	Release time 1 (08:00 – 12:00)
	Tuesday	Release time 1 (08:00 – 12:00)
		Release time 2 (13:00 – 14:00)
		Release time 3 (15:00 – 18:30)
	Wednesday	Release time 1 (08:00 – 10:00)
	Thursday	Release time 1 (07:30 – 11:30)
		Release time 2 (15:30 – 18:00)
	Friday	Release time 1 (07:30 – 12:00)
Saturday	No release time (system is in blocking time)	
Sunday	No release time (system is in blocking time)	

Each time profile can have one or more time intervals in which access is allowed (=release time). The beginning and end of an interval can be defined with a 1 minute resolution.



Change time profile

Here the day of the week can be selected with the arrow keys

With the softkey "select" the 1st time interval is displayed..

Either an existing release interval can be changed or a new one can be created.

With the softkey "select" the selection is confirmed.

The existing time can be deleted with the Clear "C" key and a new time can be entered directly with the numeric keys.

The selection is confirmed with the function key "next".

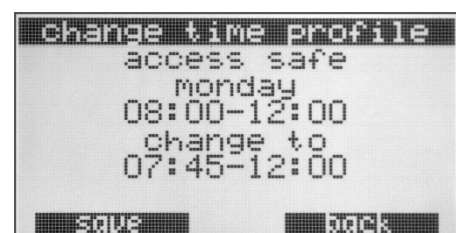
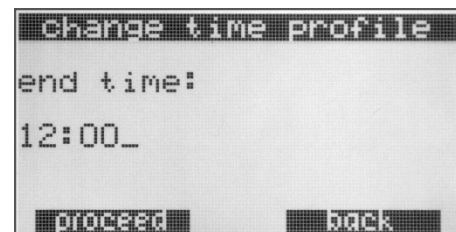
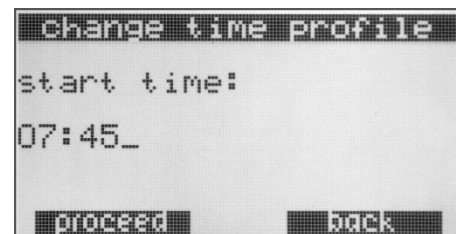
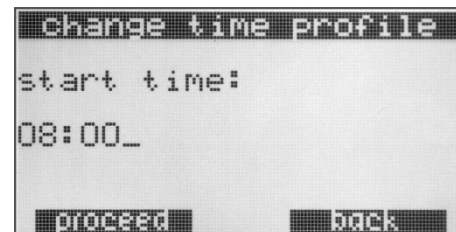
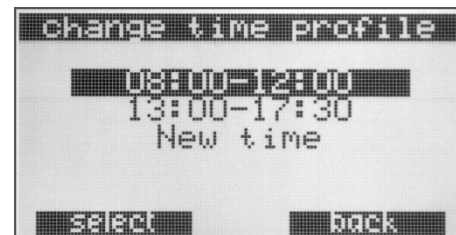
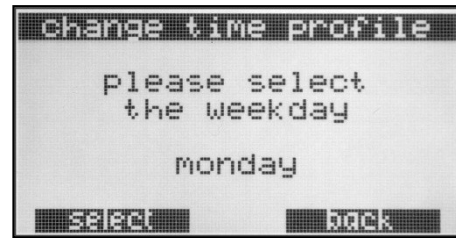
The new start time is shown.

The function key "proceed" shows the end time of the interval..

The end time is changed in the same way as for the start time.
The time intervals must not overlap, otherwise an error message is displayed.

The function key "proceed" displays the changes in a summary.

Summary of changes and confirmation prompt.
To accept the changes "save" must be selected and "back" must be selected for the correction.





Add special day (closed or open tag)

Single special days can easily be added to an existing time profile. Special days can be entered with the control panel for the next day at the earliest. Overlapping closed and open days are not possible.

Special day „Closed“

During the defined time interval, the time profile is in blocking time and users with this time profile then have no access to the system.

Special day „Open“

During the defined time interval, the time profile is not in blocking time and users with this time profile then have access to the system.

Delete special day

If at least one special tag exists in the system, the menu item "delete" is displayed. The desired day can then be selected and deleted after a confirmation prompt.

Error/Problem	Cause	Solution
A time profile cannot be selected	A time profile can also be defined as not changeable	This change must be carried out by the installer

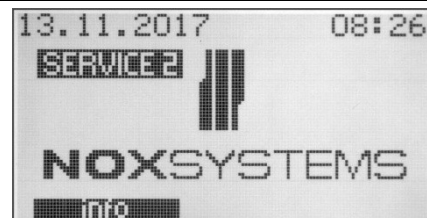
4.4.7 MENU SERVICE (MAINTENANCE)

The maintenance menu is used by the installer's service personnel to get various information from the system..

3 different maintenance levels are possible:

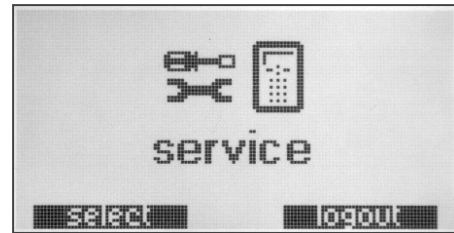
Service level	Indication	Description	Inactive functions
OFF	None	Normal	None
1	Service1	Without local alarm	Siren and buzzer of the control panel are switched off
2	Service2	Same as level 1, additionally without alarm transmission	Warnings and alarms are disabled (threat and hold-up alarming is still active)
3	Service3	Same as level 2, but without any transmission	Complete transmission to the alarm reception centre is switched off!

If the system is switched to a maintenance level, this is visible on the display of all operating elements (here: Service level 2)





Maintenance functions for the installer.
 This menu page is only shown if the appropriate user rights have been granted.
 Maintenance mode is still off in this display.

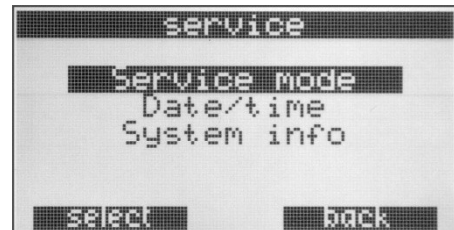


With the softkey "select" detailed information is displayed.



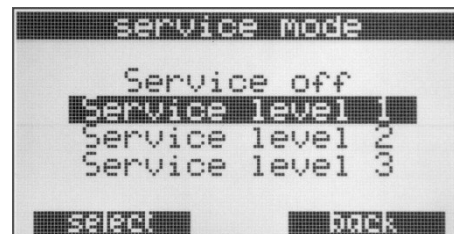
Maintenance level Off

In this menu, a service level can be selected, the system time can be changed or system information can be read out.
 The "date/time" menu item is only visible if the system is not in a blocking period.



Use the "select" softkey to change to the maintenance menu.

The suitable maintenance level can be selected here.



After selecting "Service level 1", maintenance is activated..



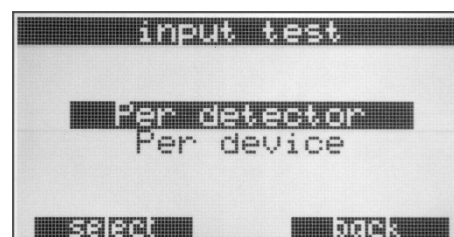
Service level 1

The maintenance functions that are available in this level can be selected.



Maintenance function (single) input test

The input test can be used to directly display the status of individual inputs of a detector or bus device.



With "select" the 1st input is displayed.



Execute input test

As long as this input/detector is displayed, the last 5 status changes at this input are displayed. The list is not saved, that means that the list is always empty after an input change.

This test can be used to check the correct function of an input/detector.

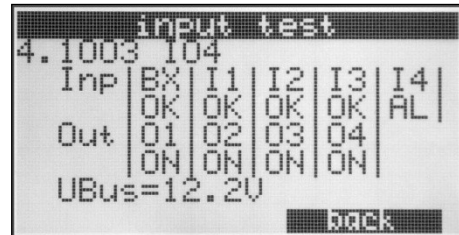




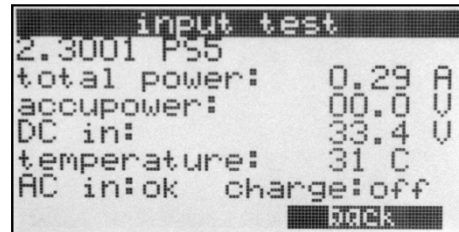
Maintenance function device test

This function allows a complete overview of individual bus devices. The displayed information varies depending on the type of device.

Example 1: IO4 Bus module with 4 inputs and 4 outputs
 Device no. 4, ID no 1003, type: IO4 module
 Inputs: BX = Sabotage, I1..I4: Status
 Outputs: O1..O4: Status
 UBus = actual supply voltage

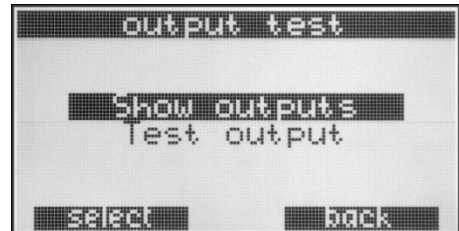


Example 2: PS5 Power Supply
 Device no. 2, ID no. 3001, type: power supply
 Several measurement values and status information



Maintenance function output test

The output test "show outputs" can be used to check the current status of an individual output. The "test output" function can be used to manually override (set) the status of an output.



Maintenance function replace bus device

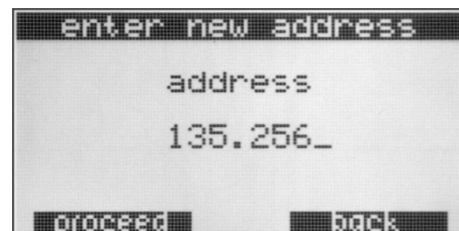
If a device is defective, it can be replaced without PC and configuration software. First the old bus address of the defective device must be identified (here: 135.594)



Choosing "select" initiates the exchange.



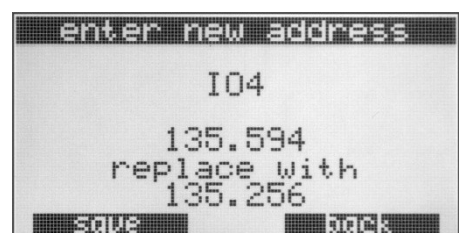
Then the bus address of the new device must be entered.



This entry is confirmed with "proceed".



Finally, both bus addresses are displayed again and the replacement must be confirmed with "save".



**Maintenance function change date/time**

This menu allows the change of date and / or time.

Enter the date in the format dd.mm.yyyy

d:day

m:month

y:year

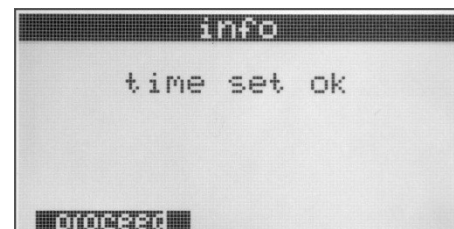
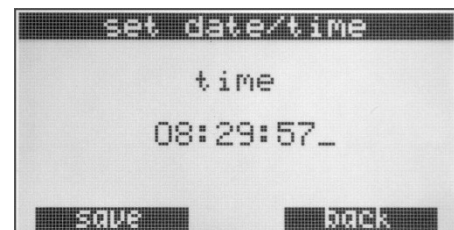
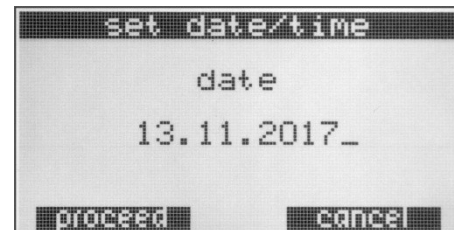
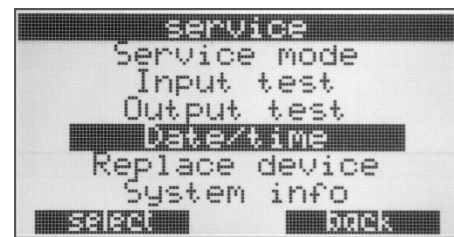
Enter the time in the format hh:mm:ss

h:hours

m:minutes

s:seconds

With "save" the clock starts to run from the selected time.





5. APPENDIX

5.1 GLOSSARY

Actor	Signalling of an event, e. g. optical signalling on a display, with flashing light, acoustic alarm or electronic transmission of the event to an alarm receiving centre.
Alarm	A signaling of the system that an event has occurred that is being reported and eventually an intervention is required.
Area	The combination of several inputs to a group is called an area. An area represents a logical arrangement of detectors and typically represents structural characteristics (building, house, warehouse, office, vault, archive, server room, apartment, cellar etc.).
Area state	Areas can have different states (e. g. disarmed, armed or on, off, etc.). The particular area state defines the behaviour when a detector is triggered (e. g. when the status "armed" is activated, an alarm is raised).
Armed/arming	After arming the intrusion detection system, an alarm is generated in the event of any activated detectors to request intervention. Arming the intrusion detection system is only possible if it is ready for arming, i. e. if all detectors are in idle state (e. g. all windows must be closed and the outside doors locked, the motion detectors must not detect any movement)..
Backup time	Time during a power failure while the system is running on battery power.
Blocking time	Time in which an area cannot be disarmed.
Code	Numerical entry of an identification number (mental identification feature). The use of a code to enable system access is necessary for functions that may only be performed by authorized persons (users). Each user has his own personal code (4 to 10 digits, adjustable), which he can change at any time.
Control panel	Control unit with display for system operation
Detector	Detector or sensor that "reports" the presence of a person in a room or the state of a closing element. This can be done, for example, by detecting radiated body heat by means of infrared, ultrasound, radar, window contact or other types of detectors. A detector converts physical conditions (radiation, temperature, humidity, open or closed state) into an electrical signal.
Device (bus device)	Intelligent module which combines several electrical signals from detectors and reports them to the control panel or transmits the signals from the control panel to actuators.
EN 50131	European standard for alarm systems, divided into 3 levels according to the requirements and for the relevant risk of danger.
Input	Each detector is connected to an input of the NOX system and is assigned to a name (e. g. bathroom window). The connection is always made via an addressing element.
Intrusion detection system	Equipment for recording, evaluating, displaying and forwarding messages and information (e. g. hold-up, intrusion, sabotage, malfunction, etc.).
Keypad	User interface device without display for entering the user code
Output	A relay, open collector output, LED, flash, alarm buzzer, siren etc. is generally referred to as an output.



Power supply	The power supply of a intrusion alarm system always consists of two independent energy sources. One of them is a power supply unit, the other is a rechargeable battery which is constantly kept at maximum charge by the power supply unit..
Special days	Exception times for time profiles (for example public holidays)
Switching device	Control device for arming/disarming of intrusion alarm systems. E. g.: mechanical switching device (e. g. lock), mental switching device (by PIN), biometric switching device (e. g. fingerprint), time-controlled switching device.
Threat code	When entering the threat code (user code +1) a "silent alarm" is generated. The attacker does not notice the activation of the alarm All functions and permissions are identical to the normal user code
Time profile	A time profile defines the possible access times for users.
User	Each user in the NOX system has his own user account, to which a numerical code and/or one or more card codes are assigned.
User code	Numerical code used by a user to log on to the system (e. g. to get access) if the user is authorized to do so (→ user profile, time profile)
User profile	A user profile defines the time-based and area-based access authorization of a user to the system.
VdS	Association of German property insurers, publisher of standards and system certifier (is widely used in Germany)