

Owner's manual Chipbox Multireader Operating modes

Version 1.00



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1 Introduction

1.1 Function of CHIPBOX-Furniture-Lock

The Transponder Furniture lock is a compact, wireless lock for cabinets and drawers. Opening and Closing is happen with an electric motor. As key finds the RFID Technique use. Through wireless identification with a valid User medium, the system will wake up. The Furniture-Lock is easy to install and there are no drillings necessary.

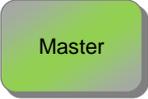
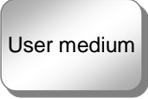
Delivery status: After delivery the lock is in start-up function of the operating mode 0 Standard, a change to another operating mode is possible with a Master- and a Mode card or the NMT.

1.2 Definition of used terms and symbols

In the following chapters are used some terms and symbols which are here defined.

Lock:	The short name of a CHIPBOX-Furniture-Lock or a VOXIO-B
Latch:	A latch is the part move in and out above the electric motor for opening and closing
User:	A user of the lock.
User medium:	Identification card of the User.
MasterCard:	Is a special coded LEGIC-ID for the operating modes 0 and 1
Group MasterCard:	Is a special coded LEGIC-ID for the operating modes 0 and 1
Service card:	Is a special coded LEGIC-ID for the service mode
Mode card:	You can select the required mode with a mode card
NMT:	NMT is the shortcut of NFC-Mobile-Tool and is the hardware interface between a lock and the Access-Manager Software.
Access-Manager:	The Access-Manager Software is for a comfortable management of all locks and users.

Type of cards:

	MasterCard
	Group MasterCard
	User medium
	Service card
	Mode card
	Audible signal
	NMT = NFC-Mobile-Tool

1.3 Description of different card types

Master, Group Master, Mode and Service cards are special coded LEGIC-ID's, which cannot be used as User mediums. These cards are not included in delivery and have to be ordered separately depending on configuration request.

1.3.1 MasterCard (for operating mode 0 and 1)

A master card is the most important card. With these card you do all learn, delete and parameterization processes. It is possible to adjust the operating mode with a Master and a Mode card.

After teaching in the MasterCard at the lock, you are able to teach in more Group MasterCards.

1.3.2 Group MasterCard (for operating mode 0 and 1)

The function of the Group MasterCard depends on the operating mode. It's necessary to teach in a Group MasterCard in operating mode 0 Standard, because only with this card it's possible to teach in User mediums. However in operating mode 1 Freelocker it's optional and not necessary to teach in a Group MasterCard.

1.3.3 Service card (for operating mode 0 and 1)

With a Service card, the lock can be parameterized. There are Service cards for sound on/off, different cycle times and some others.

1.3.4 User medium

User mediums can be any LEGIC Prime, LEGIC advant, ISO14443A und ISO15693 Transponders. There is no data access, only the respective CSN (Chip Serial Number) is saved as a key into the lock.

1.3.5 Mode card

With using a Mode card you can switch the operating mode, for example is a switch from operating mode 2 to operating mode 1 possible.

1.4 Operating Mode subdivision

A lock can operate in three different modes:

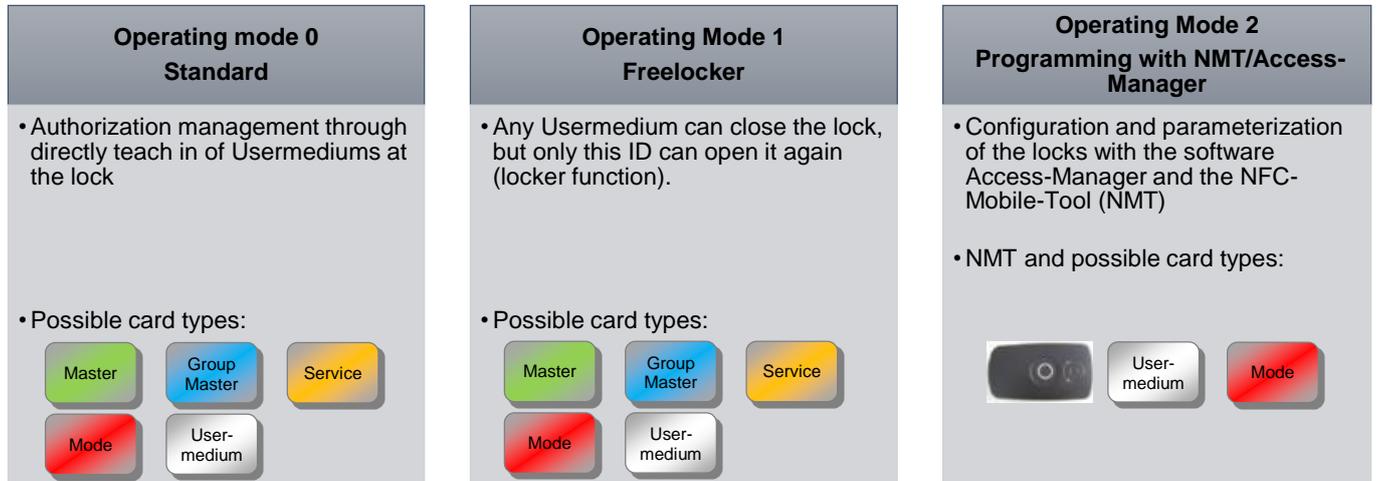


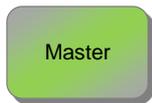
Figure 1: Operating modes subdivision

1.4.1 Choose operating mode

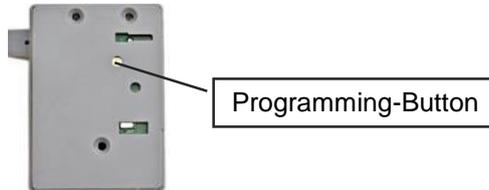
After delivery, the lock is in start-up function of the operating mode 0 Standard, a change to another operating mode could be done with the following steps.

Switch to operating mode 1 Freelocker:

1. Present the Master 1x and bring it back from the reading field. Alternatively, the Programming-Button can be pressed for 3 seconds.



Or



 7 seconds ticking

→ The lock is now in the learning mode.

2. Present the Mode card 1 for Freelocker 1x and bring it back from the reading field.



 Signal sequence „Good Sound“

→ The lock has switched to operating mode 1 Freelocker and is now in the start-up function, all settings in the memory have been erased.

Switch to operating mode 2 with the NMT:

Is the lock in delivery status, it can be programmed directly with the NMT.

1. Present the NMT 1x in the reading field of the lock



 Learning signal (fast and high signal sequence)

→ The lock was taught successfully from the NMT. It is now in the operating mode 2 und could be managed with the Access-Manager Software.

2 Operating mode 0 Standard

2.1 Description

Only programmed User mediums are allowed to open the lock, not all User mediums are authorized. It is possible to program different User mediums into the lock. The Master and Group MasterCard handle all permission management.

The operating mode 0 Standard has following characteristics:

- The lock is in the ground state always closed, except the lock is in Office Function
- Only with a Master- and Group MasterCard it's possible to program User mediums into the lock
- Emergency Opening by Master- and Group MasterCard is practicable
- Different Service cards for parameterization

The following figure (Figure 2) should help for better understanding.

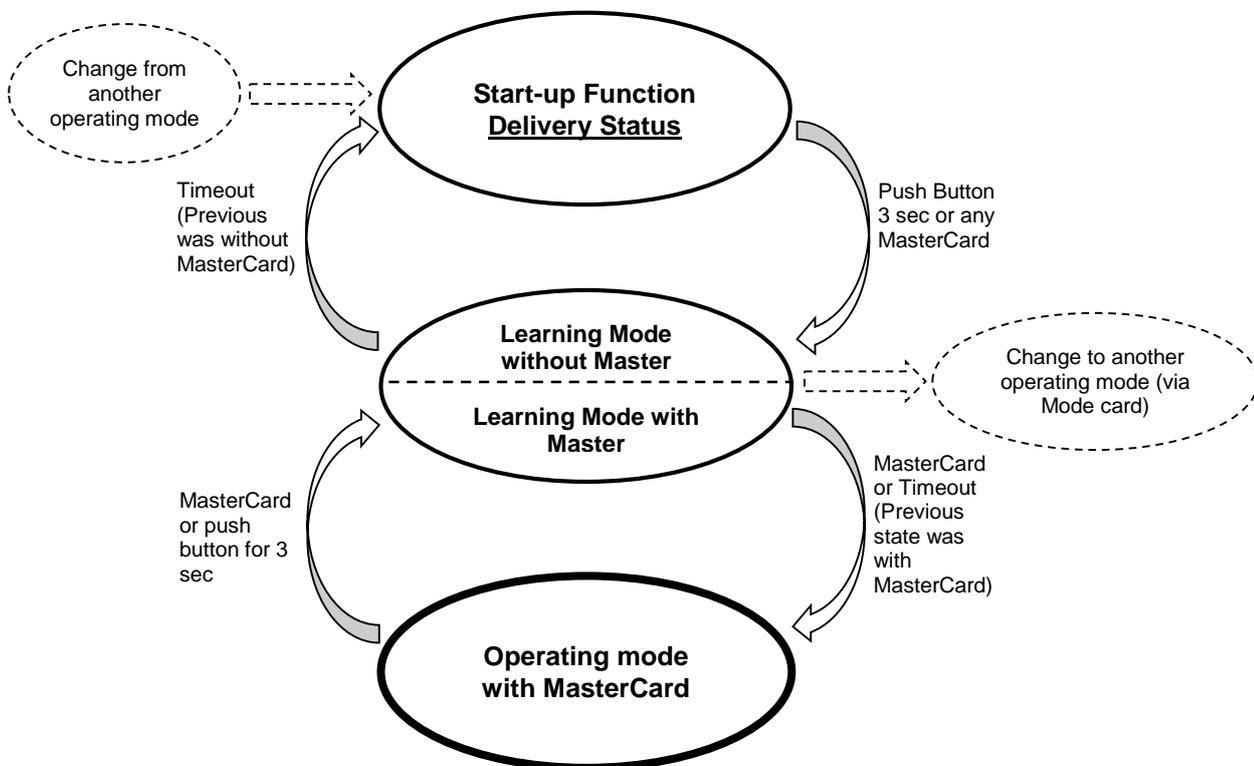


Figure 2: State-Diagram operating mode 0 Standard

Figure 2 shows the different states. In delivery status, the lock is in the start-up function of operating mode 0 Standard. This functions serves for mounting, the latch is open and will move out and back, if you present any User medium. So it can be checked the right mounting.

If the programming button is pressed for 3 seconds, the lock will go in learning mode, in which the MasterCard can be programmed into the lock (see 2.4 Programming Master).

After programming the MasterCard, the lock is in the operating mode with MasterCard and it is possible to program Group MasterCard and User mediums.

Through presenting the MasterCard or pushing the programming button for 3 seconds, the lock returns to the learning mode. A change to another operating mode or a parameterization through a Service card is here possible.

2.2 Configuration concept

In the following graph (Figure 3) is the configuration after the Master shown.

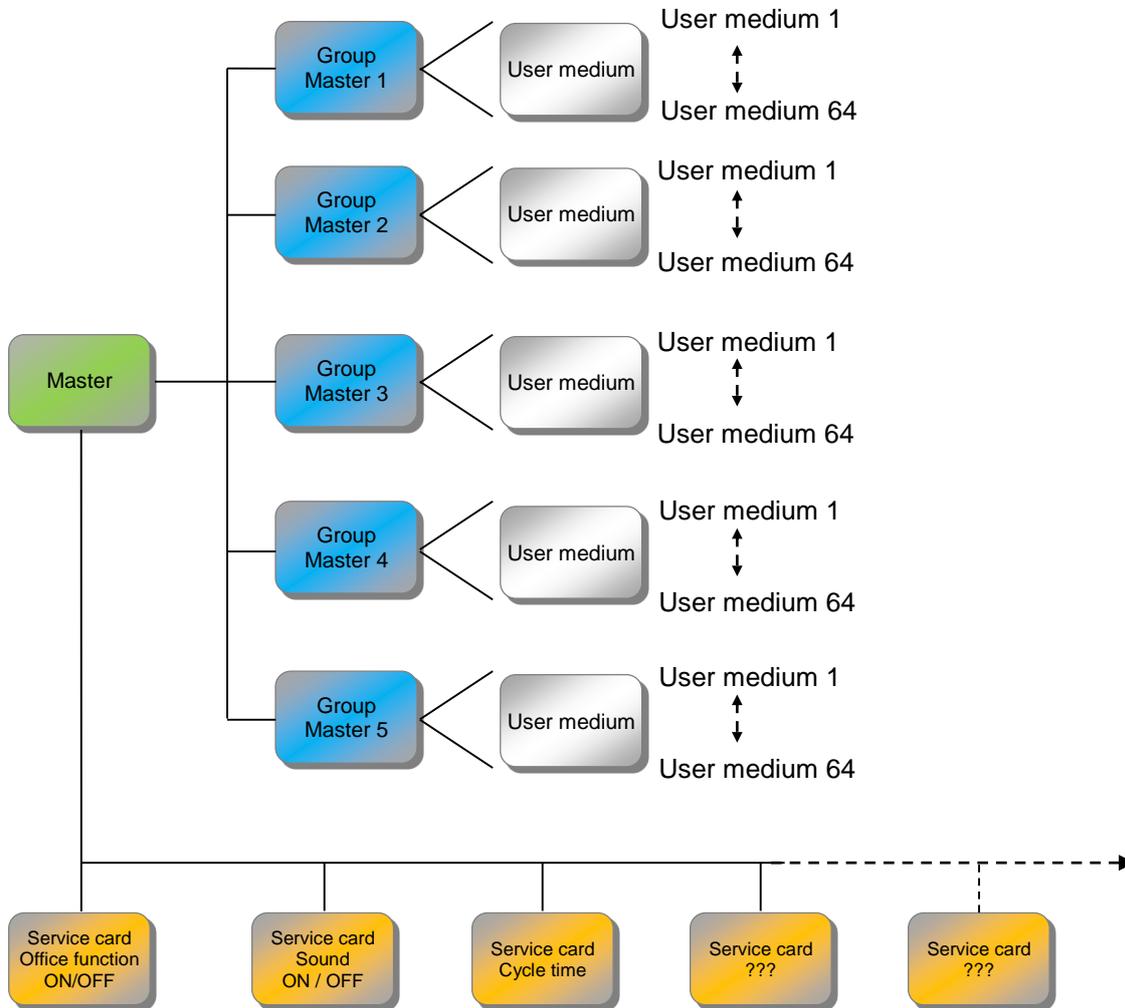


Figure 3: Configuration concept Operating mode 0 Standard

The practicable configuration of Operating mode 0 Standard is shown in Figure 3. One lock is assigned to one Master and it can exist up to 5 Group Masters. 1 to 64 User mediums can assign to a Group Master. Furthermore, the parameterization can be changed through a Service card.

2.3 Quick start

In this section is shown, how the configuration of a lock in the operating mode 0 Standard happen and Master, Group Master as well as User mediums are programmed.



Attention!

With programming a MasterCard into the lock you will lost the start-up function and all settings (Erasing of the memory).

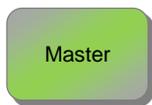
Preparation:

- The power of the lock is on and is in the operating mode 0 Standard. Furthermore the latch is open and will move out and back, if a User medium is presented → Start-up function
- Master-, Group MasterCard and a User medium exists

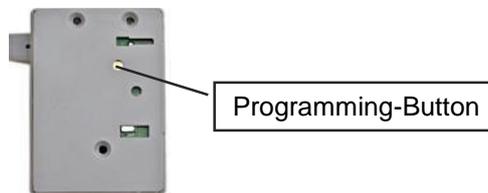
Procedure:

1. Programming Master (see 2.4 Programming Master):

Present the Master 1x and bring it back from the reading field. Alternatively, the Programming-Button can be pressed for 3 seconds.



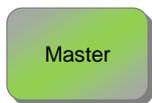
Or



 7 seconds ticking

→ The lock is now in the learning mode.

2. Present the Master 1x again and bring it back from the reading field (In the time of the ticking sound)



 Signal „Good-Sound“

→ The Master is now programmed.

If no Master has been presented, the learning mode will end after 7 seconds automatically. Other cards like Service, Group MasterCard and User mediums are not allowed.

3. Programming Group Master (see 2.5 Programming Group Master):

Present the Master 1x and bring it back from the reading field



 7 seconds ticking

→ The lock is now in the learning mode and accept Group Master, Service and Mode cards.

4. Present the Group Master 1x and bring it back from the reading field (In the time of the ticking sound)



🎵 Acknowledgement signal, 7 seconds ticking

→ The Group Master is now programmed, it's possible to program direct more Group Masters or to leave the learning mode through 7 seconds waiting.

5. Programming User medium (see 2.6 Programming User medium):
Present the Group Master 1x and bring it back from the reading field (In the time of the ticking sound)



🎵 7 seconds ticking

→ The lock is now in the learning mode.

6. Present the User medium 1x and bring it back from the reading field (In the time of the ticking sound)



🎵 Signal „Good-Sound“, 7 seconds ticking

→ The User medium is now programmed, it's possible to program direct more User mediums or to leave the learning mode through 7 seconds waiting.

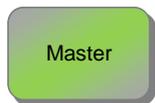
7. The Quick start is now finished and the lock accept the programmed User mediums. More User mediums can programmed each time, the necessary steps are written in the following chapters.

2.4 Programming Master

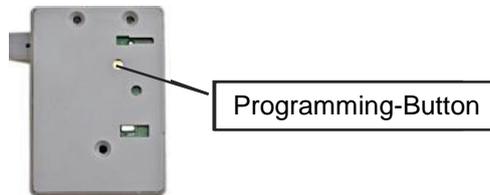
First, the MasterCard have to be programmed into the memory of the lock.

Without it, there are not all functions possible and the lock is furthermore in the start-up function.

1. Present the Master 1x and bring it back from the reading field. Alternatively, the Programming-Button can be pressed for 3 seconds.



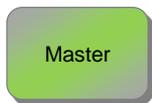
Or



 7 seconds ticking

→ The lock is now in the learning mode.

2. Present the Master 1x again and bring it back from the reading field (In the time of the ticking sound)



 Signal „Good-Sound“

→ The Master is now programmed.

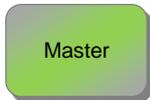
If no Master was presented, the learning mode will end after 7 seconds automatically. Other cards like Service, Group MasterCard and User mediums are not allowed.

2.5 Programming Group Master

User mediums can be assigned to a Group Master.

A Group Master card can be also used for an emergency opening.

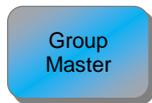
1. Present the Master 1x and bring it back from the reading field.



 7 seconds ticking

→ The lock is now in the learning mode and accept Group Master, Service and Mode cards

2. Present the Group Master 1x and bring it back from the reading field (In the time of the ticking sound)



 Acknowledgement signal, 7 seconds ticking

→ The Group Master is now programmed, it's possible to program direct more Group Masters or to leave the learning mode through 7 seconds waiting.



Attention! The maximum number of Group Masters is 5, more are not allowed.

2.6 Programming User medium

The programming of one or more User mediums into the lock happen through the Group Master, because a User medium have to assign to a Group.

1. Choose Group Master

Present the Group Master 1x and bring it back from the reading field



 7 seconds ticking

→ The lock is in the learning mode

3. Present the User medium 1x and bring it back from the reading field (In the time of the ticking sound)



 Signal „Good-Sound“, 7 seconds ticking

→ The User medium is now programmed, it's possible to program direct more User mediums or to leave the learning mode through 7 seconds waiting.



Attention! A Group Master can maximum contain 64 User mediums.

2.7 Erase User medium

One User medium can be erased from the lock and after that, the User medium isn't authorized.

1. Use the Group Master, in which the User medium is programmed.
Present the Group Master 1x and bring it back from the reading field



🎵 7 seconds ticking

→ The lock is now in the learning mode

2. Present the Group Master a second time and bring it back from the reading field (In the time of the ticking sound)



🎵 7 seconds faster ticking

→ The lock is now in the erasing mode

3. Present the User medium 1x and bring it back from the reading field (In the time of the ticking sound)



🎵 Acknowledgement sound, 7 seconds faster ticking

→ The User medium is erased out of the memory of the lock and it's possible to erase some more or to leave the erasing mode through 7 seconds waiting.

2.8 Erase one Group Master

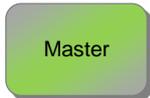
With erasing of one Group Master all the User mediums of this Group will be erased out of the memory of the lock. Master and other Group Masters with their User mediums are preserved and won't be erased out of the memory of the lock.



Attention!

Erasing of one Group Master will cause the erasing of all User mediums, which contains in this Group.

1. Present the Master 1x and bring it back from the reading field



 7 seconds ticking

→ The lock is now in the learning mode

2. Present the Master 1x again and bring it back from the reading field (In the time of the ticking sound)



 7 seconds faster ticking

→ The lock is now in the erasing mode

3. Present the Group Master 1x and bring it back from the reading field (In the time of the ticking sound)



 Acknowledgement signal

→ The Group Master and all his User mediums is erased out of the memory of the lock.

2.9 Erase all User mediums of one Group Master

If you want to erase all User mediums of one Group Master, but the Group Master should be still programmed, there is a method to do this by the Group Master. After that, no booking from one of these User mediums is valid. The Master, the Group Master and other Group Masters with their User mediums are preserved and won't be erased out of the memory of the lock.



Attention! All User mediums (without the Group Master) of the Group will be erased out of the memory of the lock.



1. Present the Group Master 1x and bring it back from the reading field.
 7 seconds ticking
→ The lock is now in the learning mode
2. Present the Group Master 2.x and bring it back from the reading field (In the time of the ticking sound).
 7 seconds faster ticking
3. Present the Group Master 3.x and bring it back from the reading field (In the time of the ticking sound).
 7 seconds faster ticking
4. Present the Group Master 4.x and bring it back from the reading field (In the time of the ticking sound).
 7 seconds faster ticking
→ Emergency opening, latch open
5. Present the Group Master 5.x and bring it back from the reading field (In the time of the ticking sound).
 Acknowledgement sound
→ All User mediums of the Group are erased out of the memory of the lock after the fifth time of presenting the Group Master, lock goes back to the ground state.

2.10 Erase all Group Master

All Group Masters and their User mediums can be erased out of the memory of the lock, after that is no booking valid. Only the Master with his emergency opening are preserved.



Attention!

All Group Masters with their User mediums will be erased out of the memory of the lock.



1. Present the Master 1x and bring it back from the reading field

7 seconds ticking

2. Present the Master 2.x and bring it back from the reading field (In the time of the ticking sound)

7 seconds faster ticking

3. Present the Master 3.x and bring it back from the reading field (In the time of the ticking sound)

7 seconds faster ticking

4. Present the Master 4.x and bring it back from the reading field (In the time of the ticking sound)

7 seconds faster ticking

→ Emergency opening, latch open

5. Present the Master 5.x and bring it back from the reading field (In the time of the ticking sound)

Acknowledgement sound

→ All User mediums and Group Masters are erased out of the memory of the lock after the fifth time of presenting the Master; the lock goes back to the ground state.

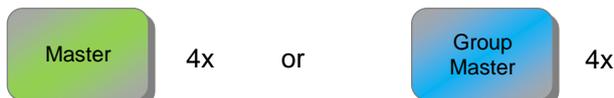
2.11 Emergency opening with Master or Group Master

If no User medium is available to open the lock, there is the possibility to open the lock by the Master- or the Group MasterCard.



Attention!

After the fourth presenting of the Master- or Group MasterCard occurs the emergency opening. Please do not present a fifth time; otherwise, you delete User mediums from a group or all Group Masters.



1. Present the Master or Group Master 4x, every time hold it into and bring it back from the reading field.

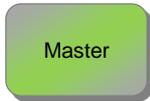
7 seconds ticking (faster ticking after each booking)

→ After presenting 4x occurs the emergency opening, the latch open. The lock goes back in the ground state after 7 seconds.

2.12 Parameterization through Service cards

The lock can be parameterized with different Service cards.

1. Present the Master 1x and bring it back from the reading field



🎵 7 seconds ticking

→ The lock is now in the learning mode

Examples for different Service cards:

2. Present the Service card 1x and bring it back from the reading field (In the time of the ticking sound)

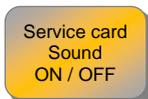
1. Service card Office function



🎵 „Good Sound“ if ON

🎵 „Bad Sound“ if OFF

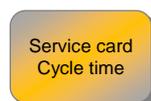
2. Service card Sound ON/OFF



🎵 „Good Sound“ if ON

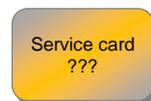
🎵 „Bad Sound“ if OFF

3. Service card cycle time



🎵 „Good Sound“

4. Further Service cards



🎵 „Good Sound“

→ Parameterization by Service card, lock goes back to the ground state.

2.13 Change to another operating mode

If another operating mode is wished (for example operating mode 1 Freelocker), it can be switched with a MasterCard and a Mode card.

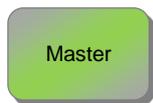


Attention!

All data in the memory of the lock will be erased after a change from one to another mode.

Exchange to operating mode 1 Freelocker:

1. Present the Master 1x and bring it back from the reading field. Alternatively, the Programming-Button can be pressed for 3 seconds.



Or



Programming-Button

🎵 7 seconds ticking

→ The lock is now in the learning mode.

2. Present the Mode card 1 Freelocker 1x and bring it back of the reading field.



🎵 Signal sequence „Good Sound“

→ The lock has switched to operating mode 1 Freelocker and is in the start-up function now; all settings in the memory have been erased.

To switch to operating mode 2 NMT/Access-Manager please see chapter 4.2.1 Learning a lock with NMT.

3 Operating mode 1 Freelocker

3.1 Description

In the operating mode 1 Freelocker, any User medium can close the lock and only this ID can open it again. No other User medium is allowed to open the lock in the closing time (locker function). In comparison to operating mode 0 Standard the lock can't save several User mediums in its memory. Furthermore it is possible, to use the lock only with a Master and without a Group Master.

The operating mode 1 Freelocker has following characteristics:

- The lock is in the ground state always open, latch is open
- Emergency Opening by Master and Group MasterCard is practicable
- Different Service cards for parameterization

The following figure (Figure 4) should help for better understanding:

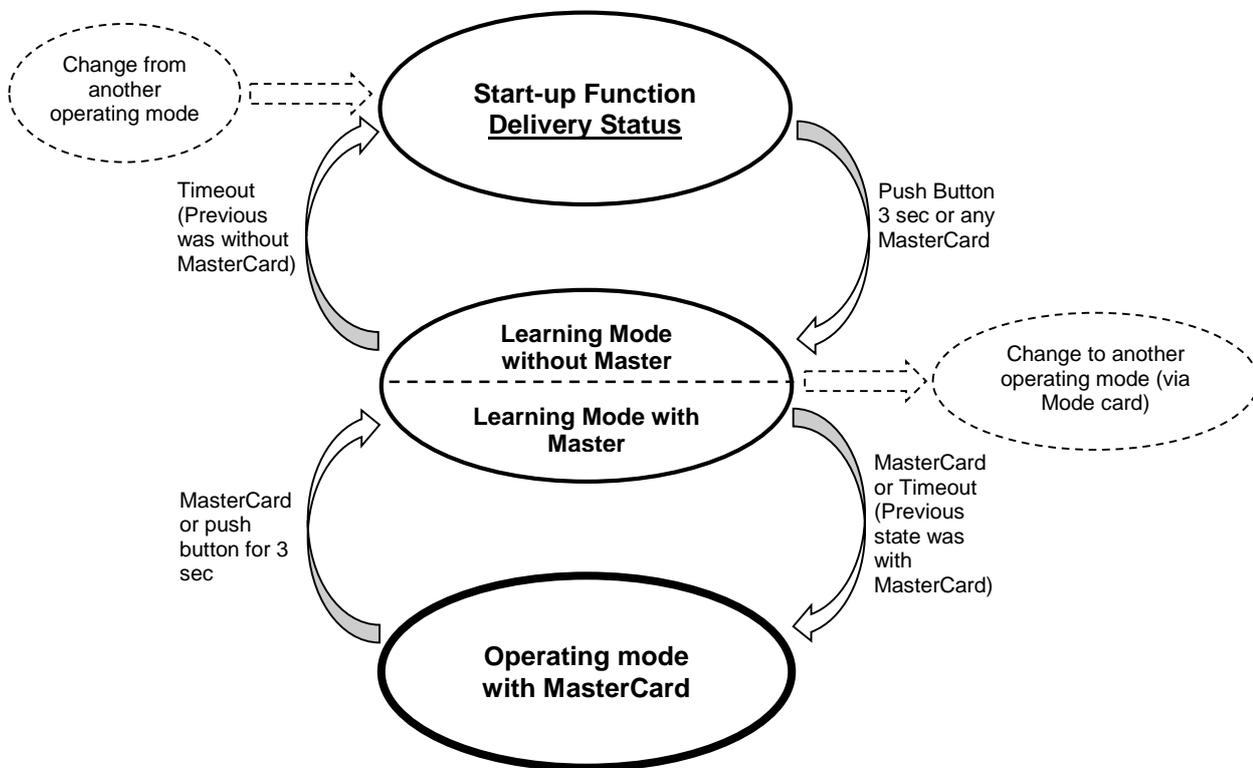


Figure 4: State-Diagram operating mode 1 Freelocker

Figure 4 shows the different states. After a change from one operating mode to operating mode 1 Freelocker, the lock is in the start-up function. This function serves for the mounting; the latch is open and will move out and back, if you present any User medium. So it can be checked the right mounting.

If the programming button is pressed for 3 seconds, the lock will go in learning mode, in which the MasterCard can be programmed into the lock (see 3.4 Programming Master).

After programming the MasterCard, the lock is in the operating mode with MasterCard and it is possible to program Group MasterCards.

Through presenting the MasterCard or pushing the programming button for 3 seconds, the lock returns to the learning mode. An exchange to another operating mode or a parameterization through a Service card is here possible.

3.2 Configuration concept

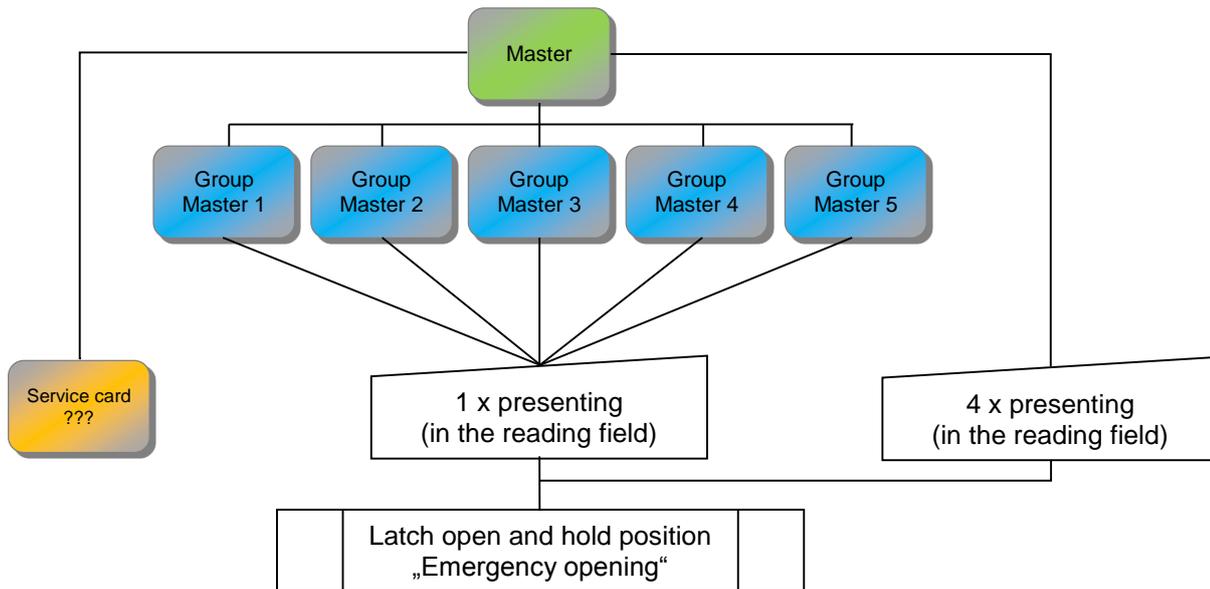


Figure 5: Configuration concept operating mode 1 Freelocker

The practicable configuration of operating mode 1 Freelocker is shown in Figure 5. Further Group Masters can be programmed through the before programmed Master. With presenting of a programmed Group Master one time, the lock open (Emergency opening). If a Master is presented four times, the lock will also open (Emergency opening). Furthermore it's possible to do a parameterization with a Master- and a Service card, for example sound on/off.

3.3 Quick start

In this section is shown, how the configuration of a lock in the operating mode 1 Freelocker happen and Master and Group Master are programmed.



Attention!

With programming a MasterCard into the lock you will lost the start-up function and all settings (Erasing of the memory).

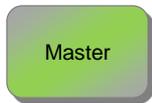
Preparation:

- The power of the lock is on and it is in the operating mode 1 Freelocker. Furthermore the latch is open and will move out and back, if a User medium is presented → Start-up function
- Master- and Group MasterCard (optional) exists

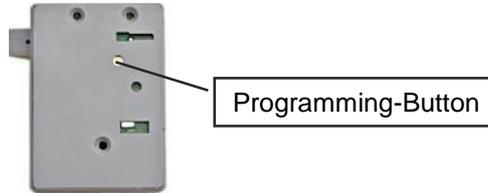
Owner's manual Chipbox Multireader Operating modes

Procedure:

1. Programming Master (see 3.4 Programming Master):
Present the Master 1x and bring it back from the reading field. Alternatively, the Programming-Button can be pressed for 3 seconds.



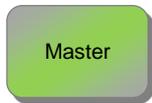
Or



 7 seconds ticking

→ The lock is now in the learning mode.

2. Present the Master 1x again and bring it back from the reading field (In the time of the ticking sound)



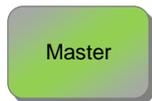
 Signal „Good-Sound“

→ The Master is now programmed.

If no Master was presented, the learning mode will end after 7 seconds automatically. Other cards like Service-, Group MasterCards and User mediums are not allowed.

The programming of Group Master is optional, but if there is an available Group Master, it is recommended to program the Group Master into the lock.

3. Programming Group Master (see 3.5 Programming Group Master):
Present the Master 1x and bring it back from the reading field



 7 seconds ticking

→ The lock is now in the learning mode and accept Group Master-, Service- and Mode cards.

4. Present the Group Master 1x and bring it back from the reading field (In the time of the ticking sound)



 Acknowledgement signal, 7 seconds ticking

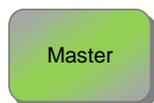
→ The Group Master is now programmed, it's possible to program direct more Group Masters or to leave the learning mode through 7 seconds waiting.

5. The Quick start is now finished and the lock can be used in its operating mode 1 Freelocker.

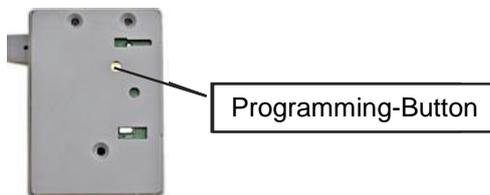
3.4 Programming Master

First, the MasterCard have to be programmed into the memory of the lock, without it, there are not all functions possible and the lock is furthermore in the start-up function.

1. Present the Master 1x and bring it back from the reading field. Alternatively, the Programming-Button can be pressed for 3 seconds.



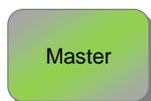
Or



 7 seconds ticking

→ The lock is now in the learning mode.

2. Present the Master 1x again and bring it back from the reading field (In the time of the ticking sound)



 Signal „Good-Sound“

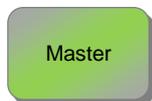
→ The Master is now programmed.

If no Master was presented, the learning mode will end after 7 seconds automatically. Other cards like Service-, Group MasterCards and User mediums are not allowed.

3.5 Programming Group Master

With a Group Master is an emergency opening possible, but first the card have to be programmed into the memory of the lock.

1. Present the Master 1x and bring it back from the reading field.



 7 seconds ticking

→ The lock is now in the learning mode and accept Group Master-, Service- and Mode cards.

2. Present the Group Master 1x and bring it back from the reading field (In the time of the ticking sound)



 Acknowledgement signal, 7 seconds ticking

→ The Group Master is now programmed, it's possible to program direct more Group Masters or to leave the learning mode through 7 seconds waiting.



Attention!

The maximum number of Group Masters is 5, more are not allowed.

3.6 Erase one Group Master

With erasing of one Group Master it will be erased out of the memory and it can't be used any more for an emergency opening. The Master and other Group Masters are preserved.

1. Present the Master 1x and bring it back from the reading field.



 7 seconds ticking

→ The lock is now in the learning mode and accept Group Master-, Service- and Mode cards.

2. Present the Master 1x again and bring it back from the reading field (In the time of the ticking sound)



 7 seconds faster ticking

→ The lock is now in the erasing mode.

3. Present the Group Master 1x and bring it back from the reading field (In the time of the ticking sound)



 Acknowledgement signal

→ The Group Master is erased out of the memory of the lock.

3.7 Emergency opening with a Group Master

A lock can be opened by a programmed Group Master, if the User medium isn't available. The lock stays open after opening; the previous saved User medium is erased out of the memory of the lock. It is now back in the ground state and can be closed with a User medium again.



Attention! Only programmed Group Masters can open the lock.

1. Present the Group Master 1x and bring it back from the reading field.



 Signal „Good Sound“

→ The latch of the lock open and it is now back in the ground state.

3.8 Emergency opening with a Master

A lock can be opened by a programmed Master, if the User medium isn't available. After opening the lock stays open, the previous saved User medium is erased out of the memory of the lock. It is now back in the ground state and can be closed with a User medium again.

1. Present the Master 4x, every time hold it into and bring it back from the reading field.



 7 seconds ticking (faster ticking after each booking)

→ After presenting 4x occurs the emergency opening, the latch open and the lock goes back in the ground state.

3.9 Parameterization through Service cards

It's possible to parameterize the lock by Service cards. An example for a Service card is Sound on/off, which activate or deactivate the sound after booking.

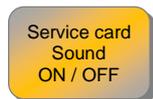
1. Present the Master 1x and bring it back from the reading field.



 7 seconds ticking

→ The lock is now in the learning mode.

2. Example:
Present the Service card Sound ON/OFF 1x and bring it back from the reading field (In the time of the ticking sound).



 „Good Sound“ if ON

 „Bad Sound“ if OFF

→ The sound is now activated or deactivated.

3.10 Change to another operating mode

If another operating mode is wished (for example operating mode 0 Standard), it can be switched with a MasterCard and a Mode card.

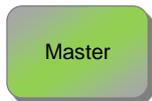


Attention!

All data in the memory of the lock will be erased after an exchange from one to another mode.

Exchange to operating mode 0 Standard:

1. Present the Master 1x and bring it back from the reading field. Alternatively, the Programming-Button can be pressed for 3 seconds.



Or



Programming-Button

🎵 7 seconds ticking

→ The lock is now in the learning mode.

2. Present the Mode card 0 Standard 1x and bring it back of the reading field.



🎵 Signal sequence „Good Sound“

→ The lock has switched to operating mode 0 Standard and is now in the start-up function, all settings in the memory have been erased.

To switch to operating mode 2 NMT/Access-Manager please see chapter 4.2.1 Learning a lock with NMT.

4 Operating mode 2 Access-Manager

4.1 Description

In operating mode 2 NMT/Access-Manager the lock and permission management is done with the Computer Software Access-Manager.

The software Access-Manager is a Windows based surface and is a tool to administrate the permissions of CHIPBOX-Locks or VOXIO-B Readers. In the following chapters is only spoken of locks. The software can manage locks as well as different users. The communication between software and a lock is realized with the **NFC-Mobile-Tool**, short NMT. Figure 6 shows the concept.

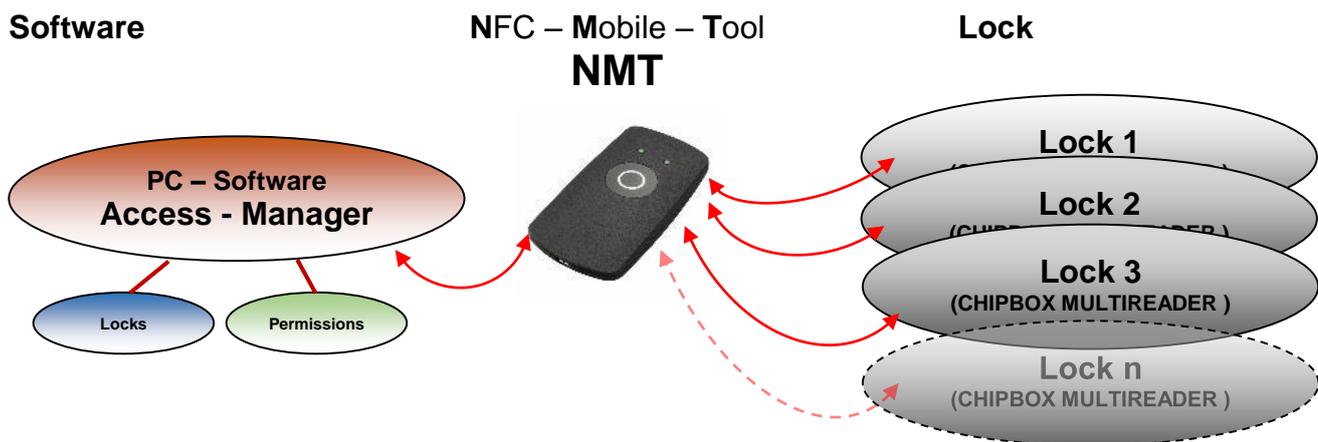


Figure 6: Operating mode 2 NMT/Access-Manager

Software (Access-Manager)

- Administration of locks and permissions
- Function setting of the locks
- Assignment permissions (1..n) to the locks (1..n)

NMT (NFC – Mobile – Tool)

- Mobile device for communication to the locks
- Detection of new locks (contactless via NFC)
- Transfer the data via USB to the software
- Data media for all master data on internal SD-Card (all locks and users)
- Contactless parameterization of the locks
- Contactless Upload of bookings

Lock

- Lock based on LEGIC 4200 Chipset for drawers, cabinets, locker, showcases, ...
- Cable less mounting because of battery power
- Contactless identification by NMT
- Communication through easy holding of the NMT in the reading field of the lock

Functional Properties:

- **Safety Concept:**
 - The Software Access-Manager is protected by an admin password
 - The NMT register itself at the respective Software installation
 - Every lock will switch to operating mode 2 through the NMT and is saved (Pairing)
A parameterization through another NMT is after pairing with the first NMT not possible.
 - One NMT can learn several locks.
- **Right-System**
 - **Administrator-Mode**
Full access to all functions
 - **Normal-User-Mode**
A Normal-User can't create/edit/delete locks and isn't allowed opening the settings.
- **Automatic Backup**
 - After every actuation of the button "Save All" (see 4.6.1 Menubar) the software will do an automatic backup in the folder „%ALLUSERSPROFILE%\phg\Access Manager\Backups“.
From every installation, the last 20 backups are saved. Older backups will be deleted.
- **Multitasking execute**
 - There is no multitasking execute supporting. If you try it nevertheless, while the program is running, you'll get an error message.



Attention!

The Logbook should be checked if there are any unwanted Wakeups, after installation and parameterization of a lock (see 4.9.3.1 Wakeup).

4.1.1 Administrator- and Normal-User-Mode

A login to the Access-Manager Administration-Mode is only with a password possible. In this way, all functions are available.

Only one administrator is possible, several are not allowed. The administrator has access to all installations (databases in the Access-Manager) and can manage them.

Alternatively, the login with a password can be skipped and the Normal-User-Mode will be executed.

The Normal-User have following functional properties:

- A Normal-User can't create/edit/delete locks
- Can't open the settings
- All other functions are available; it is allowed to admin the permissions of the locks.
- Transferring data from and to the NMT is possible.

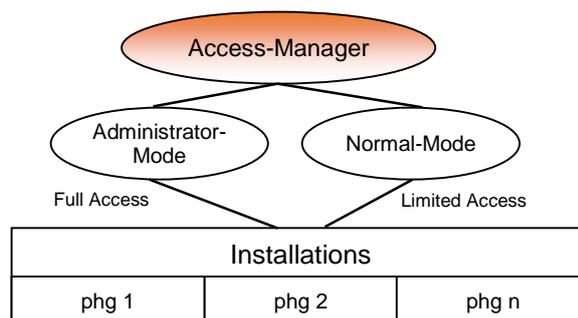


Figure 7: Administrator- and Normal-User-Mode

4.2 Handling NFC-Mobile-Tool „NMT“

The NMT is a NFC based RFID-Communication-Device (Figure 8). It works independently because of the integrated battery, which can be loaded over a USB-Interface. After a download from the Access-Manager, all locks and permissions are saved in the SD-Card of the NMT.



Figure 8: NMT

Function properties:

- Automatic Standby if not used
- Long pushing on the button, switches the NMT off
- Reactivation through pushing on the button
- Automatically charging over USB-Interface
- Communication to the lock by RFID / NFC
- Signalling of NMT:
 - Battery state while charging (LED)
 - LED green while downloading data to a lock
 - LED orange while uploading logs from a lock
 - Audible signal after learning/download of locks or prematurely ending (Error)



Attention!

For using locks with the Access-Manager, all locks have to be learned in from the NMT (see 4.2.1 Learning a lock with NMT).

The following subchapters anticipate knowledge from higher chapters.

4.2.1 Learning a lock with NMT

Each lock can be learned in by the NMT. The learning process is only allowed, if the lock isn't in any close state of operating mode 0 or 1.

If the lock is in the operating mode 0 Standard or 1 Freelocker, it have to be set in the learning mode.

Depending on the state of the lock is Option a) or b) to do:

- a) The lock is in delivery state and is not configured (is in the start-up function of operating mode 0 Standard)

- Behaviour of the lock: Accept every ID and works inversely (close and open again)

Present the NMT 1x into the reading field of the lock



Status-LEDs are turned off while the learning process is running.

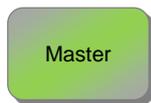
🎵 Learning Signal (high and fast signal)

→ The lock was successfully learned in by the NMT. It is now in the operating mode 2 and can be administrated by the Access-Manager Software.

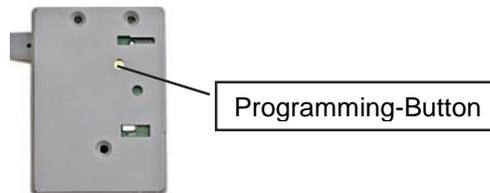
- b) The lock is already configured and is in the operating mode 0 Standard or 1 Freelocker with a MasterCard.

- Behaviour of the lock: Responds according to the configured operating mode.

1. Present the Master 1x and bring it back from the reading field. Alternatively, the Programming-Button can be pressed for 3 seconds.



Or



🎵 7 seconds ticking

→ The lock is now in the learning mode.

2. Present the NMT 1x into the reading field of the lock



Status-LEDs are turned off while the learning process is running.

🎵 Learning Signal (high and fast signal)

→ The lock was successfully learned in by the NMT. It is now in the operating mode 2 and can be administrated by the Access-Manager Software (after an import).

4.2.2 Communication between NMT, Access-Manager and lock

To communication between lock and Access-Manager, the NMT have to be connected with the computer. New locks can be transferred to the database of the Access-Manager through the Upload-/Import-Function (see 4.10 Upload from NMT and lock import).

New created Software or refreshed locks in the Access-Manager will be transferred by a download to the NMT (see 4.11 Download to NMT).

Update Process between Access-Manager and lock:

1. Download the selected locks to the NMT (see 4.11 Download to NMT)
2. Present the NMT in reading field of the lock, which should be updated.



- NMT signals a download to the lock with green blinking, the configuration which was made in the Access-Manager Software will be transferred (Transfer-Time 2-3 seconds).
- If there are new Logs from the lock, the NMT is blinking orange (Checkbox Logs must be activated).
- ✓ Successfully transfer
 - 🎵 Positive Transfer-Signal (a little bit slower signal)
- ✗ When the transfer was unsuccessfully, the NMT is shining green and orange shortly.
 - 🎵 Negative Transfer-Signal (Lock and NMT beep 3x)

The Transfer from the NMT to the lock can be repeated any time.

4.2.3 ID-Read Function

If the NMT is connected with the Computer, the ID-Number/UID of a User medium will be read directly. Is there any User medium in the reading field of the NMT, it will write the UID such as a keyboard (independently of the Software Access-Manager). This function is useful to enrol a new permission and get the UID of the User medium.



Figure 9: ID-Read Function

4.2.4 Connect NMT and Access-Manager

In order to make an Upload or Download between NMT and Access-Manager the computer must find the NMT.

1. Connect NMT with Computer.
2. Search for the NMT with the button „Scan Devices“ (🔍 Scan Devices) from the menubar (see 4.6.1 Menubar).
3. If the NMT and the connection work correctly, the COM-Port of the NMT will be displayed next to button “Scan Devices” COM7 🔍 Scan Devices

If no NMT was founded, you have to check the cabling and the Driver installation.

Checking the Driver installation in the Device Manager:

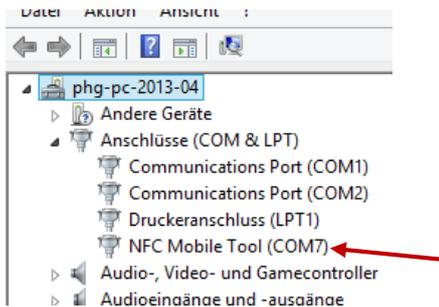


Figure 10: Device Manager

If the NMT is shown as in Figure 10, then the driver installation is correctly (Number of the COM-Port doesn't matter).

When there is a question mark next to the NFC Mobile Tool, the driver installation isn't correct.

If the driver installation and the cabling is correctly and the connection to the NMT doesn't work, there must be a failure with the NMT.

4.2.5 Formatting NMT

All data from the locks and permissions are saved on the SD-Card of the NMT. It's possible to format the SD-Card in the case of a failure and incorrectly function.

Therefor is the function "Format SD-Card" in the settings.

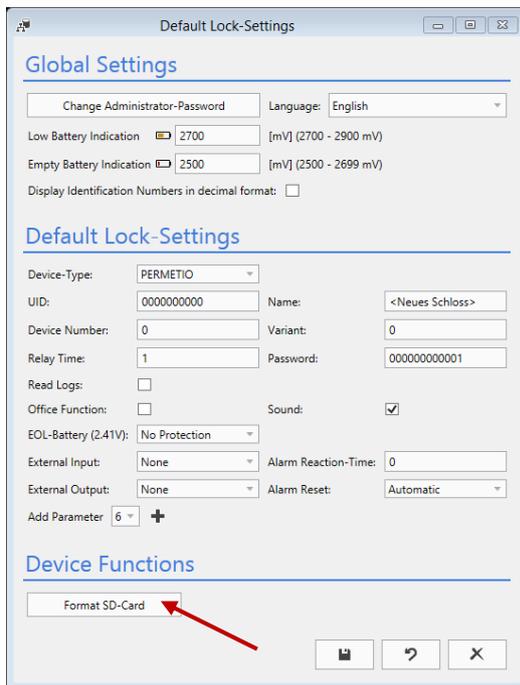


Attention!

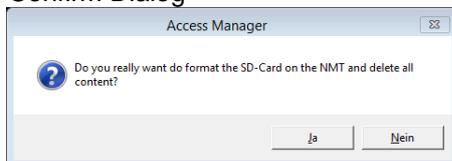
All Data will be erased from the SD-Card with a formatting. After that, the NMT doesn't know any locks. With a download of locks from the Access-Manager Software can be transferred new or the same data. After a download, the NMT know the locks, which were downloaded.

Format the SD-Card:

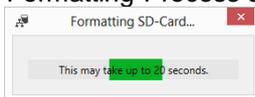
1. Choose in the window settings "Format SD-Card":



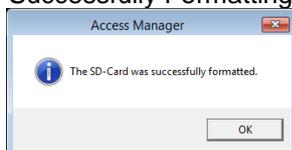
2. Confirm Dialog



3. Formatting-Process starting:

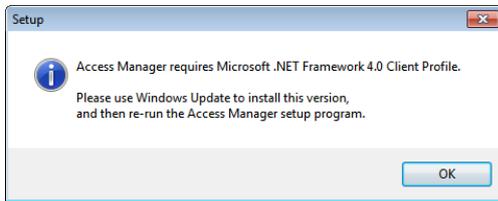


4. Successfully Formatting-Process:

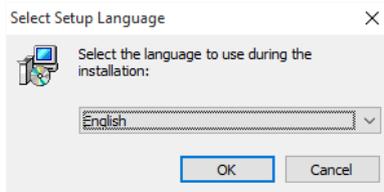


4.3 Access-Manager Installation

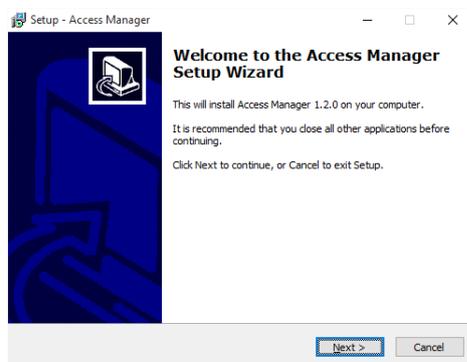
The installation assistant can easily do the Software Installation. It can be started with the "setup.exe" (for example: Setup-V1.2.0.exe).



The software is based on Windows 64Bit-Systems. The Framework 4.0 or higher package is for installation necessary. If no Framework is installed, the system will display a failure window and you have to install the Framework package.

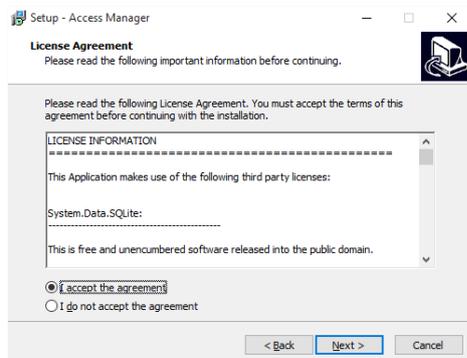


Select language for installation.

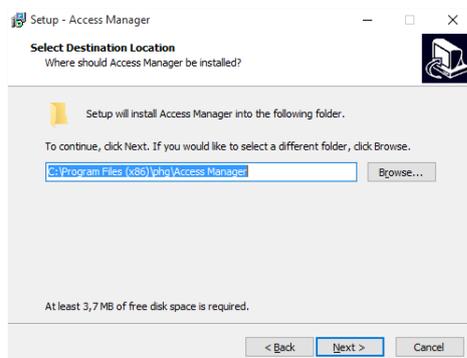


Start-Window of the installation assistant:

Start installation with "Next"



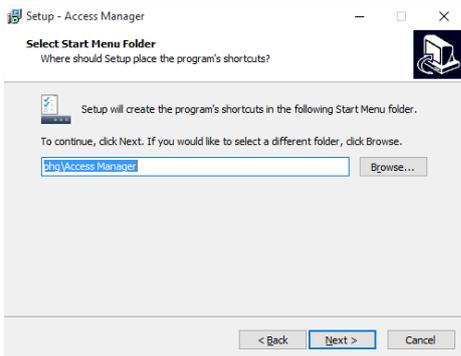
Accept License Agreement



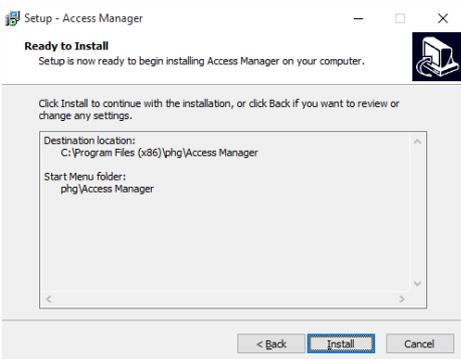
Select a destination location of the installation.

Confirm with "Next"

Owner's manual Chipbox Multireader Operating modes



Select a Start Menu Folder

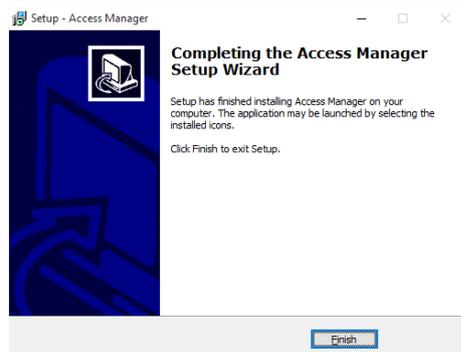


Start installation by clicking "Install"



Driver Installation for NMT:

Activate "Always trust ..." and click "Install"



Installation finished:

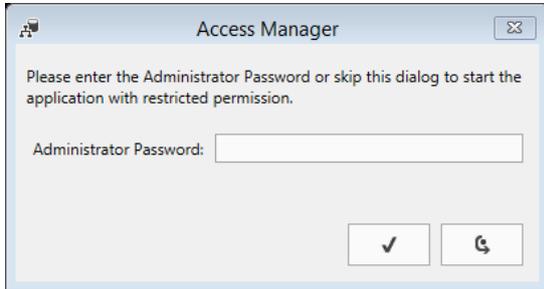
Confirm button "Finish"



The software is installed now.

4.4 Quick start

1. After the first start of the Access-Manager is the language English and it appears a dialog for the administrator password. The standard password, which is required is:



Standard password: Chipbox-NMT

Attention: In order to protect the software, please edit the password.

Figure 11: Login-Window

The Software-Surface (Main-Window):

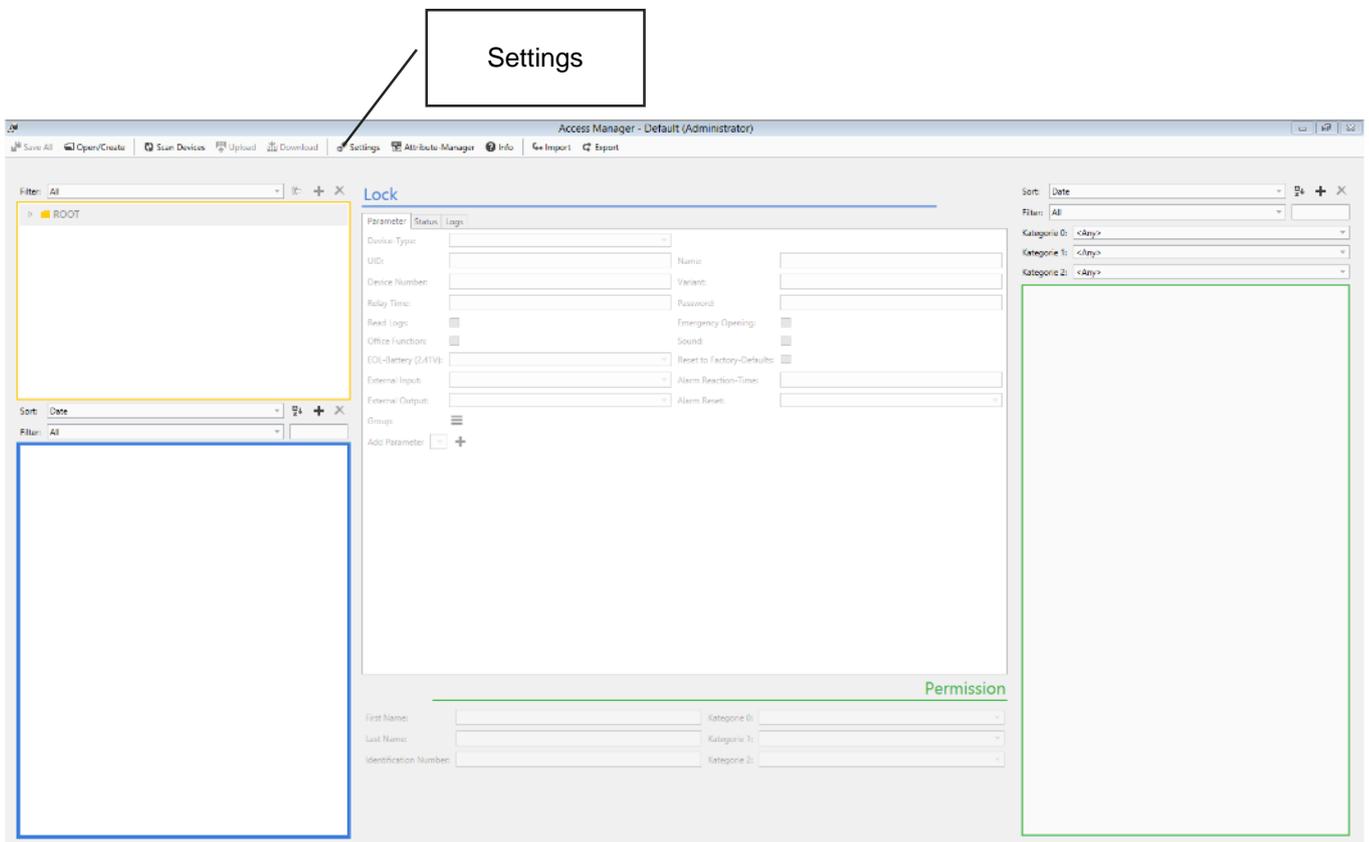
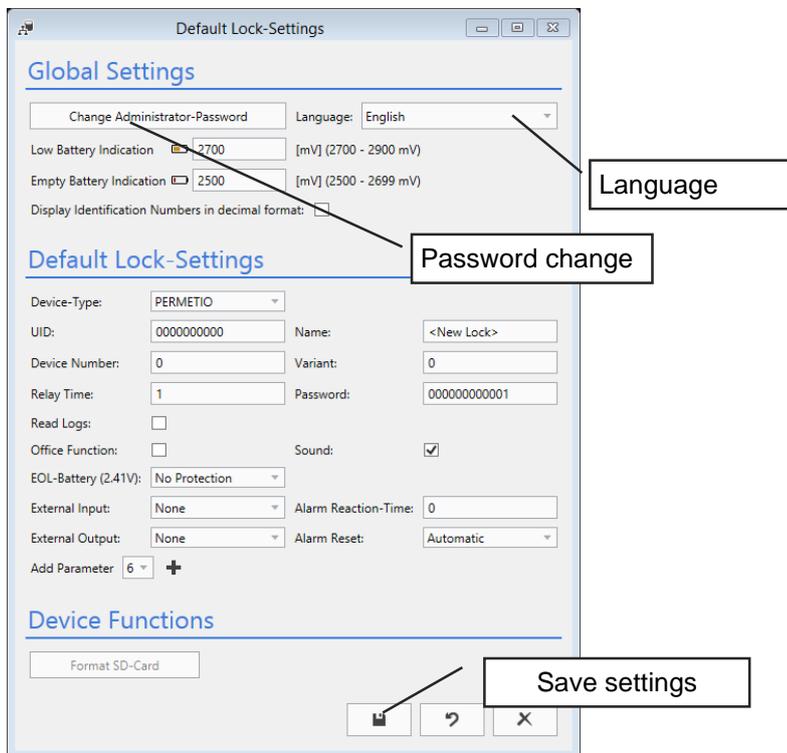


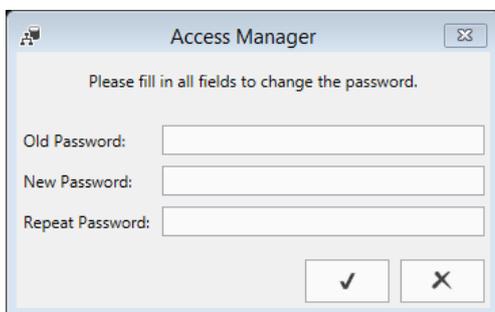
Figure 12: Standard surface

Owner's manual Chipbox Multireader Operating modes

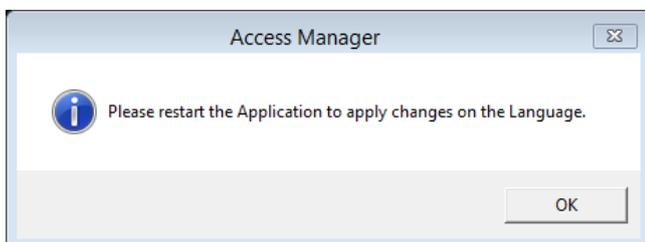
2. The Setting-Window is called by the Setting-Button in the menubar. The language and the password can be changed here.



3. The Password can be changed through the button „Change Administrator-Password“.



4. Language changes requires a new start of the application.



All functions are detailed declared in the following chapters.

4.5 Boot process Access-Manager

4.5.1 Login-Window

The Administrator-Login-Window appears after every start of the Access-Manager (see Figure 11). Either choose the user login with the administrator password for full function or skip the window for the Normal-User-Mode with limited function.

The standard administrator password is "**Chipbox-NMT**" (without quotation marks). It can be changed in the settings (see 4.13 Program Settings).

4.5.2 Installation-Selection

If there is more than one installation (database), the Installation-Selection-Dialog will be shown (Figure 13). It can be opened an existing installation or it can be created a new one.

All installations (databases) will be saved in this directory and can be deleted there:
„%ALLUSERSPROFILE%\phg\Access Manager“

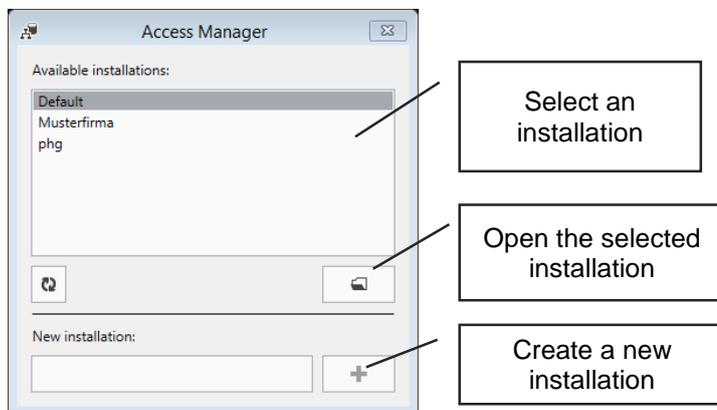


Figure 13: Installation-Selection

4.5.3 Splash-Screen

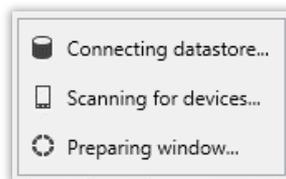


Figure 14: Splash-Screen

The Splash-Screen is coming up while the application is starting. In this time it searches for connected devices, the connection to the database is made and the Main-Window is preparing. The Splash-Screen is fading out, as soon as the application is ready.

4.5.4 Note of outstanding reconfigurations

If the selected installation has any outstanding locks, which reconfiguration is still pending or not yet acknowledged by an upload from the NMT, it will display a hint to do this (Figure 15). It should be a reminder for the user, that possibly not all locks have the newest state. With the Modified-Symbol next to the name of a lock it can be shown, which locks are affected (see 4.6.2 Locks).

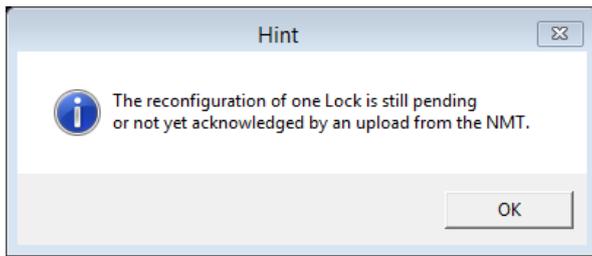


Figure 15: Reconfiguration Locks

4.6 Main-Window

The Main-Window is shown automatically as soon as the Splash-Screen is fading out. Locks and permissions can be edited here and be transferred to a connected NMT.

Generally, the Main-Window looks like the following figure:

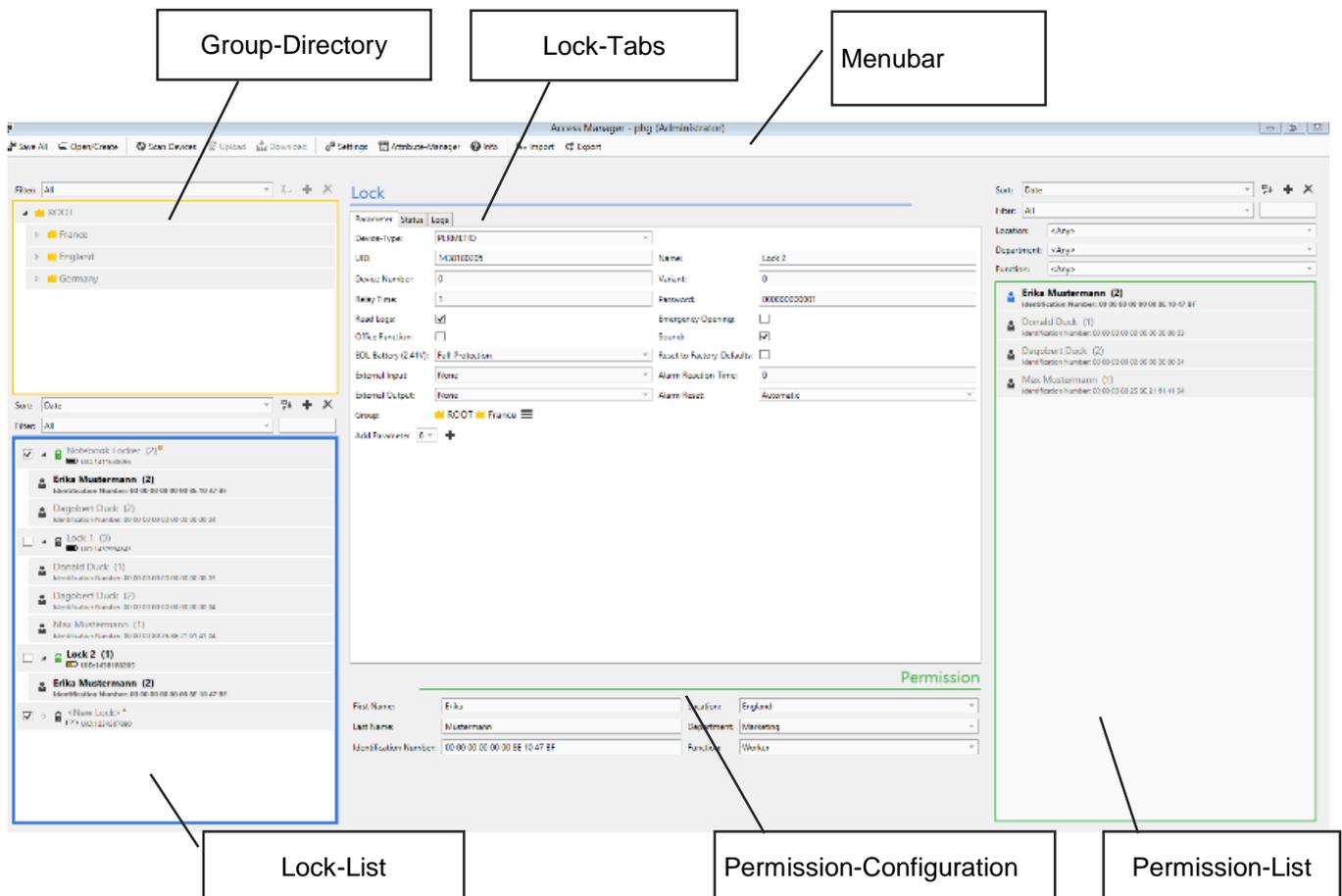
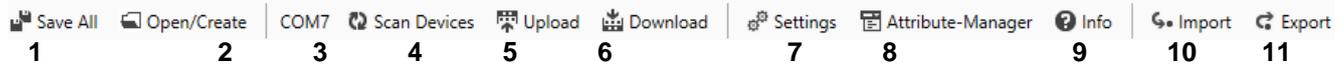


Figure 16: Main-Window

4.6.1 Menubar



- 1) Saves the configuration of the selected lock as well as the selected permission and creates a backup of the installation (see 4.1 Description).
- 2) Open Dialog to change to another installation or to create a new one.
- 3) Signalize a connected NMT as well as the number of the COM-Port.
If the mouse is pointing on the number of the COM-Port, there will appear a Tooltip with more information about the NMT (Figure 17).
- 4) Searches for a NMT. If a NMT has been found, the number of the COM-Port will be shown next to the button (see 4.2.4 Connect NMT and Access-Manager).
- 5) Transfers all logs and states as well as new learned in locks from the NMT to the PC. The transferred data will be saved in the database of the current installation (see 4.10 Upload from NMT and lock import).
- 6) Transfers the selected locks with their permissions to the connected NMT (see 4.11 Download to NMT).
- 7) Show the settings (see 4.13 Program Settings).
- 8) Display the Attribute-Manager dialog (see 4.12 Attribute-Manager)
- 9) Information about program components.
- 10) Import permissions from a CSV-File. New permissions are created, existing are updated (see 4.16 CSV-Export and –Import).
- 11) Export all permissions in a CSV-File (see 4.16 CSV-Export and –Import).

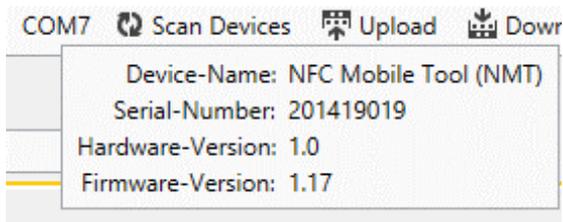


Figure 17: Tooltip with information about connected NMT

4.6.2 Locks

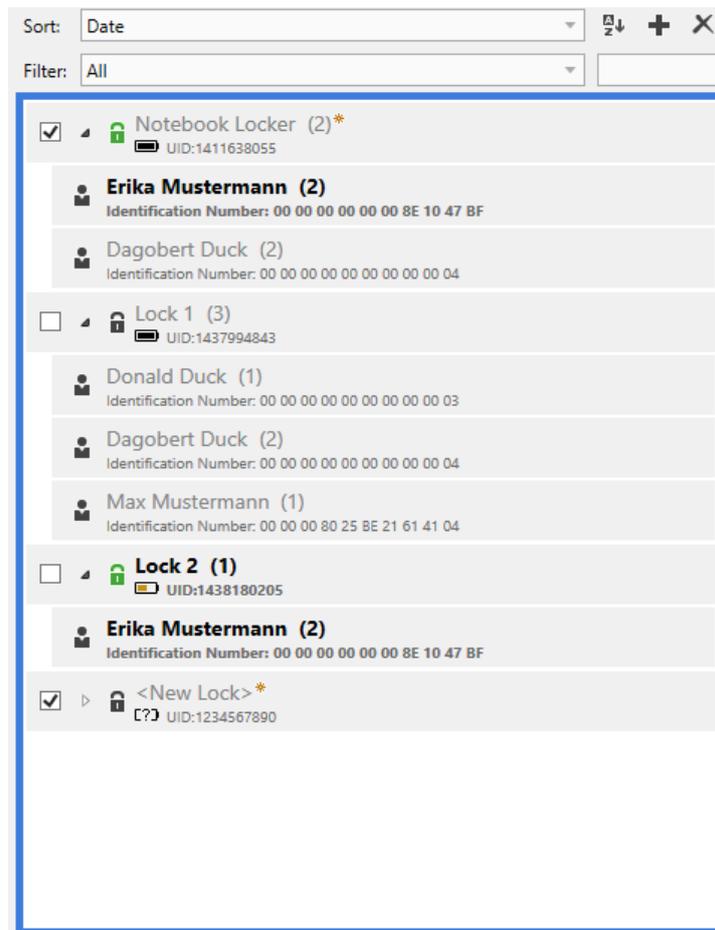


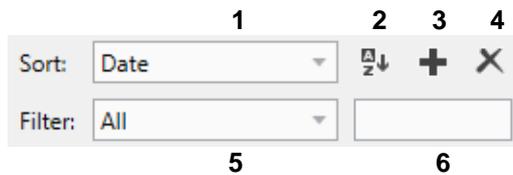
Figure 18: Lock-List

Figure 18 displays the Lock-List:

- All locks are displayed within the blue frame.
- Under each lock is a list with the belonging permissions.
- The selected lock or permission is marked by a thick font.
- A permission is deleted from a lock through a Double-Click on it.
- If the Checkbox next to the lock is activated, the selected lock will be transferred to the NMT with a Download.
- The list of belonging permissions to a lock can be set visible or invisible with the buttons (▸ / ◀).
- The Lock-Icon () signals through green colour (), that the selected permission is belonging to the lock, although the Permission-List is invisible.
- A lock with a Lock-Plus-Icon ( / ) shows, that this was imported with the last Upload from the NMT.
- The Battery-Icons ( /  /  / ) signals the Battery-State of a lock (full / half full / empty / state unknown).
- The Modified-Icon () next to the lock name symbolize, that the Lock-Configuration was changed and the configuration hasn't been transferred yet
- The number in the bracket next to the lock name display the number of belonging permissions.

Owner's manual Chipbox Multireader Operating modes

The buttons in the upper section of the Lock-List realizes following actions:



- 1) Sort the locks after Date, UID or name.
- 2) Establish the Sorting-Direction ($\text{A}\downarrow\text{Z}$ = ascending / $\text{Z}\downarrow\text{A}$ = descending).
- 3) Create a new lock with default settings. Attention with the UID, twice the same isn't possible.
- 4) Delete the selected lock (need the administrator password).
- 5) Filter to sort after All, Imported, Modified, Battery low and Battery empty.
- 6) Realizes a filtering according to any text.

Following window is shown through a Right-Click on the Lock-List:

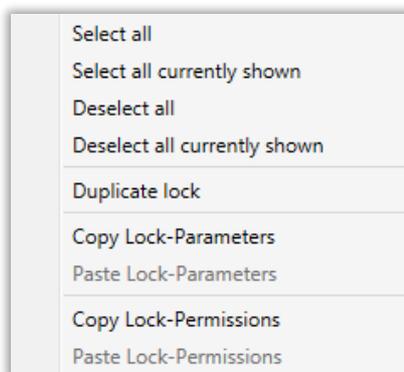


Figure 19: Right-Click-Menu Lock-List

- **Select all**
Set the Download-Checkmark for all displayed locks, as well as for all not displayed logs.
- **Select all currently shown**
Set the Download-Checkmark for all displayed locks.
- **Deselect all**
Disable the Download-Checkmark for all displayed locks, as well as for all not displayed logs.
- **Deselect all currently shown**
Disable the Download-Checkmark for all displayed locks.
- **Duplicate lock**
Duplicated the selected lock with permissions. The UID of the new lock is random and should be adjusted.
- **Copy Lock-Parameters**
Copy all Lock-Parameters of the selected lock (without the UID).
- **Past Lock-Parameters**
Overwrite all Lock-Parameters with the before copied.
- **Copy Lock-Permissions**
Copy all belonging permissions of the selected lock.
- **Paste Lock-Permissions**
Add all before copied permissions to the selected lock.

4.6.3 Permissions

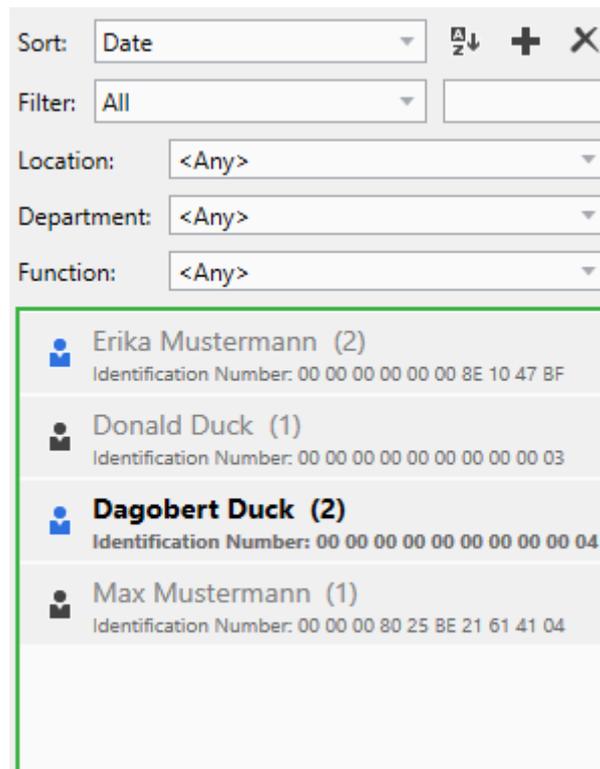


Figure 20: Permission-List

Figure 20 shows the Permission-List:

- All permissions are displayed within the green frame.
- The selected lock or permission is marked by a thick font.
- The selected permission will be added to a lock by a Double-Click on it.
- The Permission-Icon (👤) signalize through blue colour (👤), that the permission belonging to the selected lock.
- A Permission-Plus-Icon (👤 / 👤) shows, that the permission was imported by the last Upload from the NMT.
- The number in the bracket next to the permission name displays the number of belonging locks.

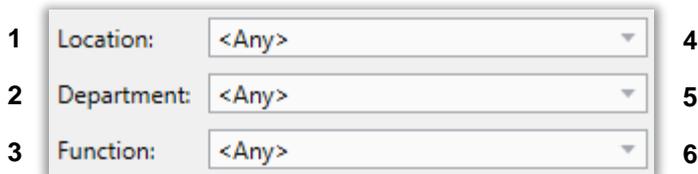
Owner's manual Chipbox Multireader Operating modes

The buttons in the upper section of the Permission-List realizes following actions:



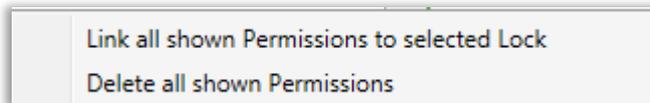
- 1) Sort the permissions after Date, Identification Number (UID), First Name or Last Name.
- 2) Establish the Sorting-Direction ($\frac{A}{Z}\downarrow$ = ascending / $\frac{Z}{A}\downarrow$ = descending).
- 3) Create a new permission with the UID „00 00 00 00 00 00 00 00 00“. Attention with the UID, twice the same isn't possible.
- 4) Delete the selected permission.
- 5) Filter to sort after Imported or Assigned permission
- 6) Realizes a filtering according to any text.

Furthermore, a filtering through attributes is implemented (see 4.12 Attribute-Manager):



- 1) Name of the category 1.
- 2) Name of the category 2.
- 3) Name of the category 3.
- 4) Realizes the filtering of the displayed permissions according to an attribute of category 1.
- 5) Realizes the filtering of the displayed permissions according to an attribute of category 2.
- 6) Realizes the filtering of the displayed permissions according to an attribute of category 3.

Following window is shown through a Right-Click on the Permission-List:



- **Link all shown Permissions to selected Lock**
Link all shown permissions to the selected lock, insofar as they not already assigned. Existing assignments are preserved.
- **Delete all shown Permissions**
Delete all shown permissions of the Permission-List. Not displayed permissions are preserved.

4.7 Grouping

The locks can be assigned to groups for a better overview. The groups are displayed in Folder-Structure. General exists the ROOT-Directory, which can be added subfolders. A lock can be assigned to a Group (Folder) in the Lock-Tab Parameter. Is a group selected and marked by the thick font, only the locks of this group are displayed in the Lock-List. When the ROOT-Folder is selected, all locks will be displayed in the Lock-List.

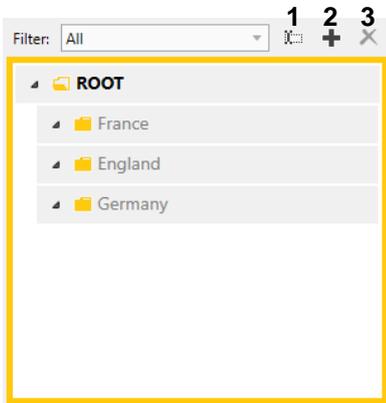


Figure 21: Group-Structure

- 1. Rename the selected group:** Possibility to rename an existing group
- 2. Add a new group:** Add a new subgroup in the selected group
- 3. Delete the selected group:** Delete the selected group. All locks of the deleted group are preserved and they will be assigned to the Upper-Group.

With the buttons (▶ / ◀) can subgroups set visible or invisible.

Assignment of a lock to a group:

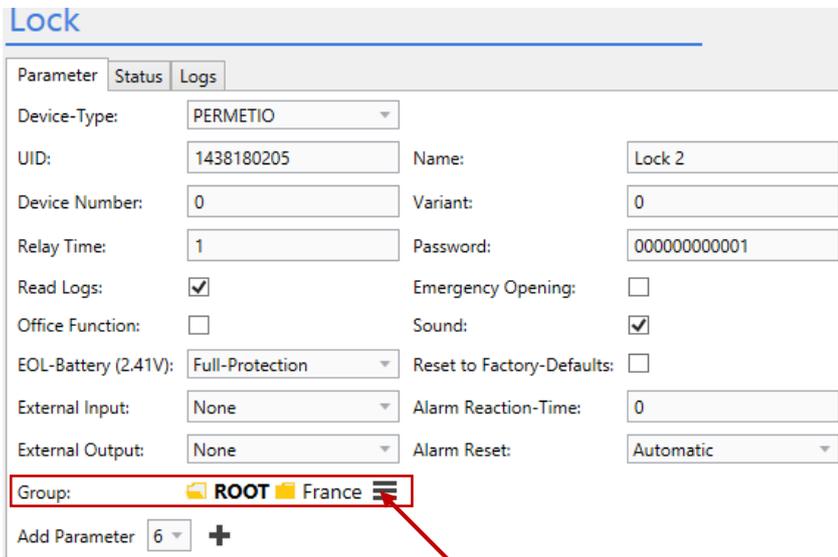


Figure 22: Assignment of a lock to a group

A selected lock can be assigned in the Lock-Tab Parameter to a group. It will open a dialog for choosing a group by a click on the button with the three lines.

4.8 Input mask permission parameter

		Permission			
1	First Name:	<input type="text" value="Max"/>	Location:	<input type="text" value="Germany"/>	4
2	Last Name:	<input type="text" value="Mustermann"/>	Department:	<input type="text" value="Logistic"/>	5
3	Identification Number:	<input type="text" value="00 00 00 80 25 BE 21 61 41 04"/>	Function:	<input type="text" value="Worker"/>	6

Figure 23: Input mask Permission-Configuration

Settings of the selected permission can be done in the Input mask of Permission-Configuration (Figure 23). The changes will be effective after saving. If another permission is selected before saving, the user will get a dialog.

1 and 2) Input of the name

3) Input of a UID: The field UID is written either in decimal or in hexadecimal, according to the settings. Each permission have an own UID, twice the same UID isn't allowed.

Reading UID:

The UID can be read with the NMT. Therefore the cursor have to be in the UID field and the NMT must connected to the computer. If a User medium is presented in the reading field of the NMT, then the UID will be written in the text field (see 4.2.3 ID-Read Function).

4, 5 and 6) Permissions can assigned to category and attributes (see 4.12 Attribute-Manager)

4.9 Lock-Tabs

4.9.1 Lock-Parameter

Figure 24: Lock-Tab Parameter

Settings of the selected lock can be done in the Lock-Tab Parameter (Figure 24). The changes will be effective after saving. If another lock is selected before saving, the user will get a dialog.

- 1) Device-Type: Selection between CHIPBOX und VOXIO-B
- 2) UID: Every lock has a Unified-Identification-Number (UID) – twice the same UID isn't allowed.
- 3) Device Number: Award of an internal Device-Number is possible
- 4) Relay Time: Time the lock/latch is open (time in seconds)
- 5) Read Logs: Reads the activity of the lock and import them in the opened database
- 6) Office Function: The lock opens with one booking (latch move in) and remains in this position. Only by a second booking closes the lock (latch move out).
- 7) Name: Award of a personal name
- 8) Variant: Not used at that time, Standard 0
- 9) Password: Not used at that time
- 10) Emergency opening: If this checkmark was set and a download was made, the lock will open through holding the NMT in the reading field of the lock (see 4.14 Emergency opening with NMT).
- 11) Sound: Confirmed a booking with a sound.
- 12) Reset to Factory-Defaults: With this checkmark and a download to the NMT, the lock can be set to Factory-Defaults (see 4.15 Reset to Factory-Defaults).
- 13) Group: Assignment of a lock to a group for a better overview.
- 14) Parameter: Parameters are scheduled for special User-Adjustments, for example to allow only certain User mediums. For normal use they aren't important.
- 15) Create Parameter: Create Parameters from 6 to 10



Attention!

If one of the fields either "Emergency Opening" or "Reset to Factory-Defaults" was activated, it should be deactivated again after a download to the NMT.

Owner's manual Chipbox Multireader Operating modes

Further Lock-Parameters (16-20):

Parameter	Behaviour	Selection	Description
16) EOL-Battery (2,41V)	Behaviour of the lock with low/empty battery-voltage	No Protection	None automatically opening, none audible signalisation at reaching Low-Bat. The lock don't open automatically. Perhaps the lock don't open, if the battery-power is low.
		Signal only	None automatically opening, audible signalisation at reaching Low-Bat. The lock don't open automatically. With reaching of the low battery state, the lock gives cyclical a signal (higher power consume at Low-Bat.)
		Half-Protection	None locking after reaching Low-Bat., audible signalisation at reaching Low-Bat. Check the battery power after every booking. If the battery power is low, no further locking will be allowed. Lock gives a Low-Bat. signal after opening.
		Full-Protection	Lock opens automatically at reaching Low-Bat. with entry in the logbook "Lowbat"
17) External Input	Behaviour of the external input from the CHIPBOX	None	Input inactive.
		Open	Input causes opening
		Alarm	Alarm, if there was no valid opening with a User medium before. The Input is ignored while the Alarm Reaction-Time after a valid booking
18) External Output	Behaviour of the external output from the CHIPBOX	None	Output inactive
		Open	Output is activated for 1 second
		Alarm	Output is activated
		Low Battery	Output would be activated with reaching of Low-Battery.
19) Alarm Reaction-Time	Time of Door-Opening time; After that time the alarm occurs	No time (00)	No monitoring of the external Input after a valid booking.
		Number of seconds of the open door after a allowed booking (01..99)	Parameter only effective, if external Input = Alarm
20) Alarm Reset	Reset of the Alarm	Automatic	Automatically alarm reset after 1 minute
		NMT	Alarm reset only with the NMT, which is registered in the lock.
		NMT or User	Alarm reset with the registered NMT or with an authorized User medium.

4.9.2 Status

In the Lock-Tab Status (Figure 25) are displayed the last state values of the selected lock. These values are updated in the database after each Upload by the NMT.

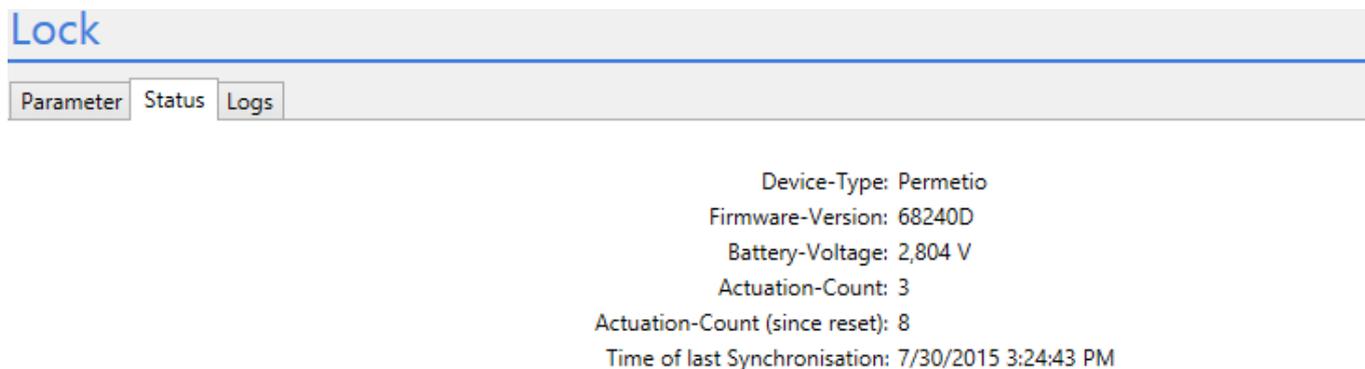


Figure 25: Lock-Tab Status

4.9.3 Logs

In the Lock-Tab Logs (Figure 26) are displayed the newest 1000 logs of the selected lock. After each Upload by a NMT, there will be logs added to the database, if there are some new available.

Lock

Parameter Status Logs

Date ▲	Record-Index	Action	Identification Number	Permission Name
7/17/2015 2:14:17 PM	1	Actuation	000008025BE21614104	Max Mustermann
7/17/2015 2:14:22 PM	2	Actuation	000008025BE21614104	Max Mustermann
7/17/2015 2:14:31 PM	3	Actuation	000008025BE21614104	Max Mustermann
7/17/2015 2:14:36 PM	4	Actuation	000008025BE21614104	Max Mustermann
7/17/2015 2:27:00 PM	5	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 9:58:10 AM	6	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 10:00:55 AM	7	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 10:01:00 AM	8	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 10:01:19 AM	9	Wakeup		
7/22/2015 10:01:21 AM	10	Wakeup		
7/22/2015 10:01:23 AM	11	Wakeup		
7/22/2015 10:01:29 AM	12	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 10:03:41 AM	13	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 10:03:53 AM	14	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 10:05:29 AM	15	Wakeup		
7/22/2015 10:05:30 AM	16	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 1:42:42 PM	17	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 1:45:34 PM	18	Wakeup		
7/22/2015 1:52:29 PM	19	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 3:23:45 PM	20	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 3:24:50 PM	21	Wakeup		
7/22/2015 3:24:53 PM	22	Wakeup		
7/22/2015 3:24:55 PM	23	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 3:24:57 PM	24	Lowbat O		
7/22/2015 3:25:33 PM	25	Actuation	000008025BE21614104	Max Mustermann
7/22/2015 3:25:35 PM	26	EOL of ba	000000000000000095C	
7/22/2015 3:35:07 PM	1	Actuation	000008025BE21614104	Max Mustermann

Delete Logs Export Logs

Figure 26: Logs

The table will be sorted ascending or descending through clicking on the column name. A triangle symbol next to the column name displays, after which column name is sorted.

All Logs can be deleted out of the database by the button "Delete Logs". The administrator password is necessary for that action.

There is also the possibility to export all Logs of a selected lock to a CSV-File. All Logs (not only the last 1000), which were made, will be exported (see 4.16.2 Export Logs from a lock).

Owner's manual Chipbox Multireader Operating modes

All Log-Entries, which are possible, are enumerated in the following table:

Log-Entry	Meaning
Actuation	Booking with an authorized User medium.
Closing	Closing through an authorized User medium in the Office Function (latch moves out).
Opening	Opening through an authorized User medium in the Office Function (latch moves in).
Wakeup	In order to save battery power, the lock is in a sleeping mode and the reading field is turned off. If a change in the reading field is registered, the lock will wake up and turn on the reading field. (see 4.9.3.1 Wakeup)
EOL of battery occurred	The battery voltage fell below 2,41V and there are different reactions of the lock according to the settings (No protection/Half-Protection/Full-Protection). For example if Full-Protection was selected, there will be an entry "Lowbat Opening" in Logs.
Lowbat Opening	Opening through low battery voltage level (below 2,41V), before that happened, there was an entry "End-of-live" (EOL) in Logs.
Emergency Opening	Emergency Opening by NMT (checkmark "Emergency opening" have to set before)
Actuation by input	Actuation of the lock through the external input (setting in Lock-Parameter)
Opening by input	Opening of the lock through the external input in the office function (setting in Lock-Parameter).
Closing by input	Closing of the lock through the external input in the office function (setting in Lock-Parameter).
Alarm	The alarm has occurred.
Battery Voltage	Automatic battery measurement through the lock and saving the voltage value in Logs. (Hexadecimal value, conversion in decimal is the voltage value in mV)

4.9.3.1 Wakeup

If the lock wake up out of the sleeping mode, a "Wakeup" entry will be added to Logs. This happen by an external influence in the distance of the reading field. Every time, when a Wakeup was written to Logs, the reading field will be turned on. Turning on the reading field reduces the lifetime of the battery. It is obvious that many Wakeups reduces the lifetime of the battery, so a Wakeup should be an exception in Logs.



Attention!

The correct installation of a lock should be checked through a look in Logs. If there were many Wakeups one behind the other, the battery power would be reduced drastically.

Possible reasons for a Wakeup:

- Installation of two locks is too close (non-compliance minimum distance), mutually influencing of the reading fields.
- Moved items in the reading field of the lock.

To extend the lifetime of the battery, the reason for a Wakeup has to be removed, possibly the lock must be mounted in another position.

4.10 Upload from NMT and lock import

New locks can be created in the Access-Manager or can be collected by the NMT and be imported with the Upload Function to the Access-Manager.

An Upload of the data from the NMT to the database of the Access-Manager can be made with the button "Upload" ( Upload) from the menubar.

This action could only be made, if the NMT is connected to the PC and by clicking the button "Scan Devices" ( Scan Devices). When the NMT was found, the COM-Port of the NMT is written next to the button (COM7  Scan Devices).

The included data of an Upload could be new locks and data like lock state and Logs of existing locks.



Attention! If a lock already exists, it will not be changed by a normal import.

1. Start Upload-Process through "Upload" button

ate | COM7  Scan Devices  Upload  Download |  Settings  Attribute-Ma

2. If the software recognized new locks while a Upload-Process, it will display the Lock Import Dialog (Figure 27 left picture):

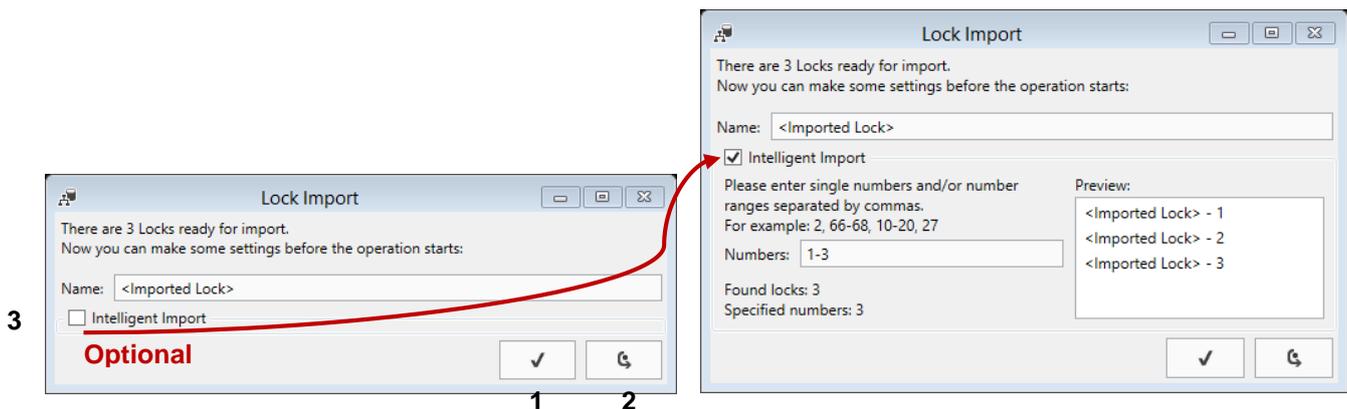


Figure 27: Lock Import

The text in the upper part of the window shows, how many locks are ready for an import. Among them, the name of the imported locks can be changed, which is be used for all imported locks.

There are 3 different possibilities for a Lock Import:

1. Option Perform lock import:
The lock import will be started with clicking this button and new locks were added to the database or existing locks possibly refreshed.
2. Option Skip lock import
No locks will be imported by clicking this button; the information about new collected locks is saved in the NMT. Through that, the import dialog will be displayed the next time.
3. Option Intelligent Import

The lock import window expands with activation of the intelligent import checkbox (Figure 27 right picture).

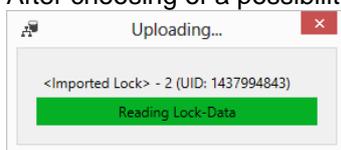
All collected locks are numbered in this mode. At each imported lock, the respective number is attached to the lock name and is registered in "Device Number".

The numbers, which possibly be awarded, are entered through the input field at the left side. The list on the right-hand side gives a preview about the possible outcome.

Following points should be watched:

- The quantity of the specified numbers must match with the number of the collected locks.
- The specified numbers will be sorted independently from the input order.
- The collected locks will be sorted based about the collecting-time.
- If a lock already exists, the parameters "Name" and "Device Number" will be accordingly overwritten.

3. After choosing of a possibility, the Upload-Process is shown:



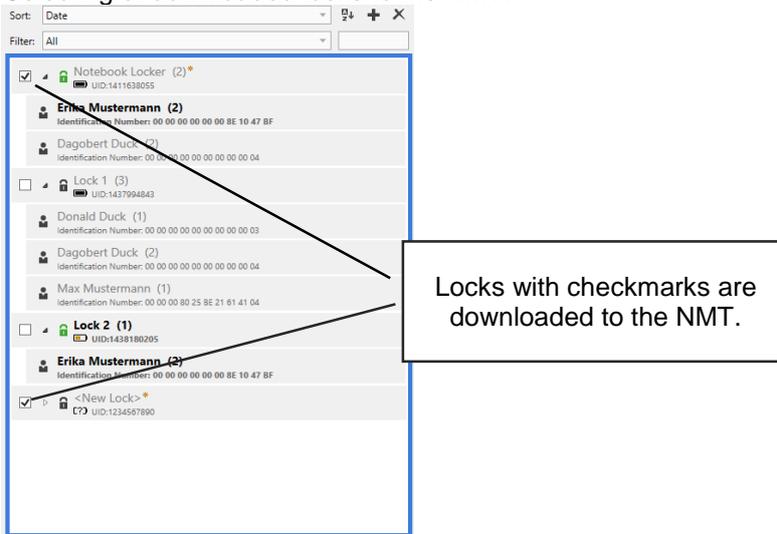
The window closes and the Upload-Process is complete.

4.11 Download to NMT

A Download could only be made, if the NMT is connected to the PC and by clicking the button "Scan Devices" ( Scan Devices). When the NMT was found, the COM-Port of the NMT is written next to the button (COM7  Scan Devices).

Only the locks with a checkmark are downloaded to the NMT through clicking the button "Download" ( Download) from the menubar, not all other locks are transmitted to the NMT. The checkmark is set automatically after a saving; manual can be selected more or less.

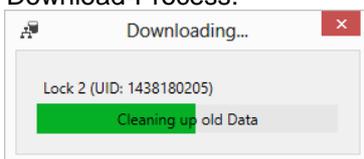
1. Selecting of downloaded locks to the NMT:



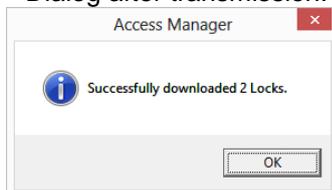
2. Start Download-Process through "Download" button:



3. Download-Process:



4. Dialog after transmission:



4.12 Attribute-Manager

With the Attribute-Manager can be created or be edited categories and attributes to manage a bigger number of permissions (Figure 28). A button of the Attribute-Manager is in the menubar and open the dialog.

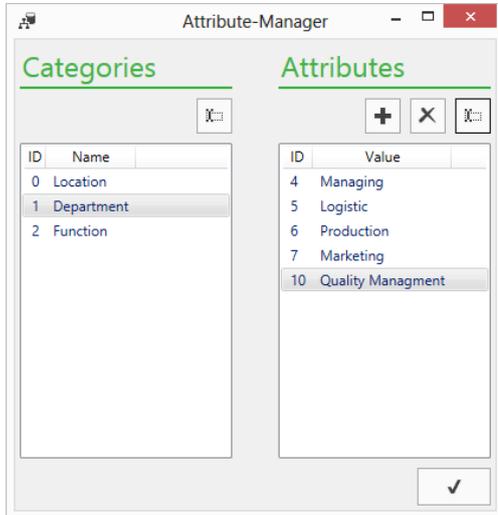


Figure 28: Attribute-Management

On the left-hand side, the categories are listed. The number of the categories are fixed to 3. For editing of one category is the following button:



1. Renaming of the selected category
(Also possible through double-click on the selected category.)

Each category could have any number of attributes. The belonging attributes are shown after selecting of a category. There are the following buttons for editing of an attribute:



1. Add a new attribute.
2. Delete the selected attribute.
(Delete key on keyboard works also.)
3. Rename selected attribute
(Double-click on attribute works also.)

4.13 Program Settings

The button "Settings" from the menubar open the settings dialog (Figure 29).

Division in 3 parts:

- The part "Global Settings" is for changing the software-language and the administrator-password, as well as to set the thresholds of the Lock-Battery-Symbols. Furthermore, a checkmark can be set for displaying the Identification numbers in decimal format instead of hexadecimal format.

- With the "Default Lock-Settings" the default values are set, which are taken after a creation or adding of a new lock.

- In the part "Device Functions" the SD-Card of a connected NMT can be formatted and all data on the NMT will be deleted (see 4.2.5 Formatting NMT).

Figure 29: Settings

The following buttons are available to handle the selected settings:



- 1) Saves all changes and close the window.
- 2) Set all settings (except administrator-password) to the default values.
- 3) Discard settings and close window.

4.14 Emergency opening with NMT

If there is no User medium to open the lock, the lock can be open with the NMT. Therefore a checkmark must be set in the checkbox "Emergency Opening" in the Lock-Tab Parameter (Figure 30).

1. Selection of the lock and open the Lock-Tab Parameter
2. Set checkmark next to Emergency Opening.
3. Make a download
4. If the NMT is holding in the reading field of the lock now, the lock will open und stay open.
5. Disable checkbox of Emergency Opening.

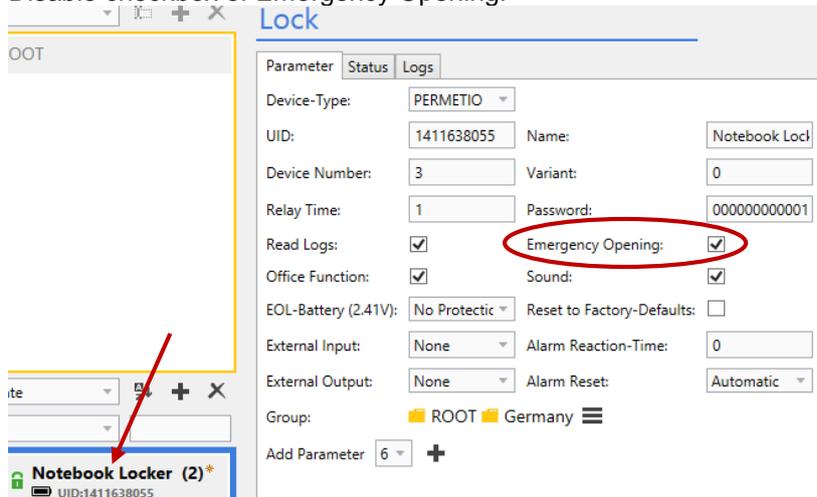


Figure 30: Emergency Opening

4.15 Reset to Factory-Defaults

The lock can be reset to Factory-Defaults. All data from the lock will be deleted, only the permission allocation remains preserved (Figure 31).

1. Selection of the lock and open the Lock-Tab Parameter
2. Set checkmark next to Reset to Factory-Defaults
3. Make a download
4. If the NMT is holding in the reading field of the lock now, the lock will set to Factory-Defaults.
5. Disable checkbox next to Reset to Factory-Defaults.

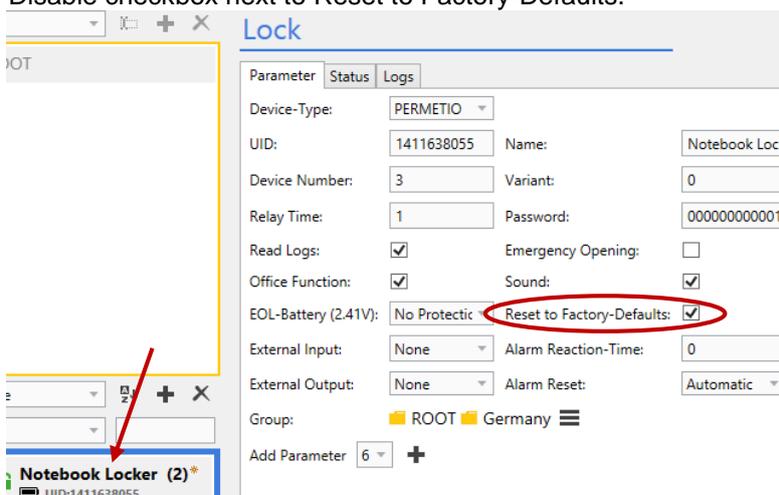


Figure 31: Reset to Factory-Defaults

4.16 CSV-Export and –Import

4.16.1 Export/Import of permissions

All permissions with their parameters can be exported to a CSV-File by the export button from the menubar. To import permissions with their parameters from a CSV-File there is also an import button in the menubar. If a permission already exists, it will be updated; otherwise, a new one will be created.

The first line of the CSV-File contain the header, all other lines contain the parameters of a permission. As column-delimiter is a semicolon used.

A Permission-CSV-File includes following columns:

1. **Identification Number (UID)**
Format is depending on the settings, either Hexadecimal- or Decimal-Format (marked with prefix ,d') (see 4.13 Program Settings).
The Access-Manager determines automatically the format when an import is made.
2. **Last Name**
3. **First Name**
4. **Category 1**
In the first line of this column is the name of the category; in the following lines are the selected attributes of a permission.
The name of a category is adopted automatically and an attribute will be created if it don't exist. For details of categories and attributes, see chapter 4.12 Attribute-Manager.
5. **Category 2**
Same as category 1
6. **Category 3**
Same as category 1

Exemplary content of a Permission-CSV-File with Identification Numbers in Hexadecimal-Format:

```
Identification Number;Last Name;First Name;Location;Department;Function
0000008025BE21614104;Mustermann;Max;France;Logistic;Worker
00000000000008E1047BF;Mustermann;Erika;England;Marketing;Worker
00000000000000000003;Duck;Donald;Germany;Production;Worker
00000000000000000004;Duck;Dagobert;Germany;Managing;Chef
```

Exemplary content of a Permission-CSV-File with Identification Numbers in Decimal-Format:

```
Identification Number;Last Name;First Name;Location;Department;Function
d3607029552999684;Mustermann;Max;France;Logistic;Worker
d2383431615;Mustermann;Erika;England;Marketing;Worker
d3;Duck;Donald;Germany;Production;Worker
d4;Duck;Dagobert;Germany;Managing;Chef
```

4.16.2 Export Logs from a lock

All Log-Data (not only the last 1000) of a lock can be exported to a CSV-File. An export can be done by the button "Export Logs" in the Lock-Tab Logs.

The first line of the CSV-File contain the header, all other lines contain the parameters of a permission. As column-delimiter is a semicolon used.

A Lock-CSV-File includes following columns:

1. **Record-Index**
2. **Date**
In a sortable format „yyyy.MM.dd HH:mm:ss“.
3. **Action**
4. **Identification Number**
Format is depending on the settings, either Hexadecimal- or Decimal-Format (marked with prefix ,d') (see 4.13).
5. **Permission Name**

Exemplary content of a Lock-CSV-File with Identification Numbers in Hexadecimal-Format:

```
Record-Index;Date;Action;Identification Number;Permission Name
5;2015.07.22 15:55:40;Actuation;0000008025BE21614104;Max Mustermann
4;2015.07.22 15:54:28;Wakeup;;
3;2015.07.22 15:54:20;Wakeup;;
2;2015.07.22 15:54:17;Wakeup;;
1;2015.07.22 15:35:07;Actuation;0000008025BE21614104;Max Mustermann
26;2015.07.22 15:25:35;EOL of battery occurred;000000000000000000095C;
```

Exemplary content of a Lock-CSV-File with Identification Numbers in Decimal-Format:

```
Record-Index;Date;Action;Identification Number;Permission Name
5;2015.07.22 15:55:40;Actuation;d36070295552999684;Max Mustermann
4;2015.07.22 15:54:28;Wakeup;;
3;2015.07.22 15:54:20;Wakeup;;
2;2015.07.22 15:54:17;Wakeup;;
1;2015.07.22 15:35:07;Actuation;d36070295552999684;Max Mustermann
26;2015.07.22 15:25:35;EOL of battery occurred;d2396;
```

4.17 Change to another operating mode

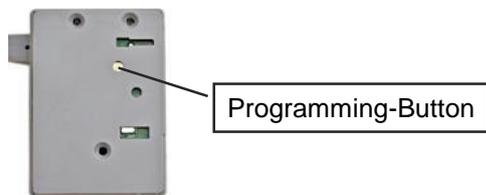
If another operating mode is wished (for example operating mode 0 Standard), it can be switched with a Mode card.



Attention!

All data in the memory of the lock will be erased after a change from one to another mode.

1. Push programming button for 3 seconds



 7 seconds ticking

→ The lock is now in the learning mode.

2. Present a Mode card 1x and bring it back of the reading field.



 Signal sequence „Good Sound“

→ The lock has switched to the other operating mode and is now in the start-up function, all settings in the memory have been erased.