

LOCKBASE 14.02 [398]

Manual



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Glossary

LOCKBASE was developed by Körtner & Muth GmbH. In many companies it stands the test of every day usage. However, in no event the Körtner & Muth GmbH or its suppliers shall be liable for any damages whatsoever arising out of the use of or the inability to use this product.

This manual was written carefully, but the correctness in every detail can not be warranted.

I. Introduction

LOCKBASE is a modern software for administration and calculation of even most complex master key systems. Work that hitherto has often cost a considerable effort of organisation and competence will be simplified by LOCKBASE (and a PC). Besides the program is also for computer beginners easy to operate because of the Windows graphical user interface.

LOCKBASE is subdivided in several parts which should satisfy the various tasks handling master key systems. Corresponding to the different requirements, LOCKBASE is available in a series of program versions. These could be added to or could be combined as required.

LOCKBASE Manager / Manager Lite

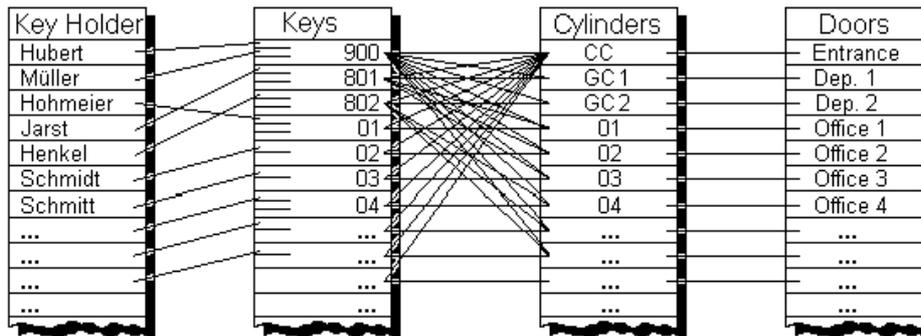


Fig. 1: Four data stocks and their relations

Usually customers of master key systems are interested in the administration of four data bases: Persons or key holders, keys, cylinders and doors. One say also four data stocks. Even more important are the direct or indirect relations existing between these four data bases.

- What person has what key and is able to open what door?
- What cylinder can be operated by a certain key?
- What keys operate on a certain cylinder?
- What cylinder is installed in what door?

All these questions can be answered by the LOCKBASE *Manager* versions efficiently and reliably. Developed for end user clients of master key systems, these versions are besides other points able to administer e.g. the issue and the return of keys or print key and cylinder orders.

LOCKBASE Administrator

In addition to the basic database operations the program version LOCKBASE *Administrator* offers the possibility of setting up tabulated system matrices. With their aid the key functionality can be designated and displayed very easily. This version of LOCKBASE is suitable especially for locksmiths, because the technical data e.g. combinations can be entered and altered.

LOCKBASE Calculator

The program version LOCKBASE *Calculator* serves to calculate master key systems. Most European cylinder brands are supported by LOCKBASE. Furthermore the data bases keys and cylinders can be administered as well as system matrices can be created. Manufacturers of master key systems reduce the expenditure of time considerably to calculate master key systems with the LOCKBASE *Calculator*. Of course, wrong fits are not possible anymore because there could not be any calculation faults.

LOCKBASE Professional

This version of LOCKBASE serves everything that is desired by manufacturers of master key systems for the planning, calculation and administration of master key systems. It contains the four *Data Lists* data bases, the *System Matrix*, the

Calculator with Code Group Administration and the System Designer. With the aid of the *System Designer* hierarchical master key systems can be structured and entered in an easy way. Subgroups of a master key system can be calculated separately so that the size and the partition of the key bitting array could be improved easily.

1. About this manual

This manual is subdivided in several parts:

- The introduction contains general remarks on LOCKBASE, on the requirements (hardware, software, installation) and on the handling of the graphic user interface Windows.
- The 'First Steps into LOCKBASE' serves as a tutorial to the basic LOCKBASE features.
- The descriptions to operate LOCKBASE which are arranged in relation to the parts of the program parts: The *Main Window*, the Main dialogue Boxes, the *Data Lists*, the *System Matrix*, the *Calculator* and the *System Designer* as well as the Print Outs will be explained in own chapters.
- Appended is a glossary where the most important terms not only concerning LOCKBASE, but also concerning PC-operating in general will be explained.

This manual uses the following document conventions:

Commands: **bold**, e.g. **File - Open**. The first word indicates the name of the menu and the second (and possibly more) indicates the name of the option.

Buttons, entry fields, lists and other controls: underlined, e.g. OK, Filename.

Windows- and dialogue box names: *italic*, e.g. *Data Lists*.

Key designations: SMALL CAPS, e.g. ENTER. A '+' (plus) in-between two key names means that the first key has to be pressed and hold until the second is entered, e.g. SHIFT+ENTER. A '-' (hyphen) in-between two key names indicates whereas that the keys should be pressed after each other, e.g. ALT-D-F.

Text, that is logically to replace: [in square brackets], e.g. ALT+[hotkey].

2. Installation

Using LOCKBASE, you need:

- an IBM- or 100% compatible PC with an INTEL 80386 processor (or higher), at least 4 MB RAM and a VGA compatible video card (or higher) with corresponding monitor,
- at least 20 MB free hard disk space (recommended); LOCKBASE needs only a part of it. The real requirement depends on the number and size of saved master key systems,
- the PC operating system Microsoft Windows 2000/XP/Win7/Win8. Microsoft Windows has to be installed already on your computer.
- a mouse and a printer (recommended).

To be able to exchange data via internet (B2B, LOCKBASE-Update Service) you need

- internet access and a Microsoft Internet Explorer 4.0 (or higher). The Internet Explorer has to be installed already on your computer.

Installing the Program Files

Before starting your work with LOCKBASE, you have to install the program. You will find an installation program 'Setup.exe' on the LOCKBASE installation CD.

After the installation, when LOCKBASE is running for the first time, it has to be unlocked for the use on your computer (via a phone call, fax or email).

Besides LOCKBASE itself the installation CD contains an installation program. Proceed the following steps to start the installation program:

1. Switch on your PC and let Windows start up (if not already done).
2. Put the LOCKBASE data carrier into the respective drive. If you install from CD, now the setup program should be started automatically. If this happens, you can skip the following steps. If you install a download, simply run the downloaded file itself (e.g. 'Lockbae.exe') and skip the following steps.
3. If the setup program does not start automatically select the command **Run** from the Windows **Start** menu. If you don't have a start menu (e.g. Windows 8), you will find a resp. input field at the bottom bar of the desktop.
4. Enter in the field Open the designation of your CD drive (e.g. D:) and then "setup.exe". E.g.: "d:setup.exe". (Capital- and small letters could be used, quotation marks and blanks should not be used.)
5. Press ENTER to start the setup program.

At first, the setup program checks if there already is a LOCKBASE installation. If so, you could update it. Otherwise you will be requested to enter program and data folder as targets for the LOCKBASE installation. In case you do not accept the suggestion, you have the possibility to select different installation targets. Please note, that all designated LOCKBASE users must have read and write access to the data folder.

The setup program copies the LOCKBASE files to your hard disk, creates a folder 'Lockbase' in the **Programs** section of the Windows **Start** menu and inserts the LOCKBASE icon.



Lockbase

Fig. 2: The LOCKBASE Icon:

To create a LOCKBASE network installation, choose shared folders on a file server as installation targets. In this case it is not required to install LOCKBASE on every user's workstation again. Simply create a desktop link to the executable file 'Lbw.exe' for each LOCKBASE user.

The data folder requested during setup will contain user defined data, which are not included in the LOCKBASE distribution and therefore, in case of an emergency, cannot be recreated by re-installing LOCKBASE. For this reason it is important to include the contents of the LOCKBASE data folder in your daily data backup.

Starting LOCKBASE

To start LOCKBASE proceed the following steps:

1. Turn on your PC and let Windows start up (if not already done).
2. Click on 'Start' on the bottom left border of the screen. The Windows **Start** menu opens.
3. Move the mouse cursor to the entry **Programs**, then to **Lockbase** and click onto **LOCKBASE** inside the folder.

If the LOCKBASE user administration is active, first the login dialogue appears (see Chap. 1-2, 'Log on to LOCKBASE'). Enter your password and click OK. After a short moment the LOCKBASE *Main Window* appears on the screen and LOCKBASE is ready to go.

Unlocking LOCKBASE

The program has to be unlocked during its first start up. In that case at first a licence dialogue appears instead of the *main window*.

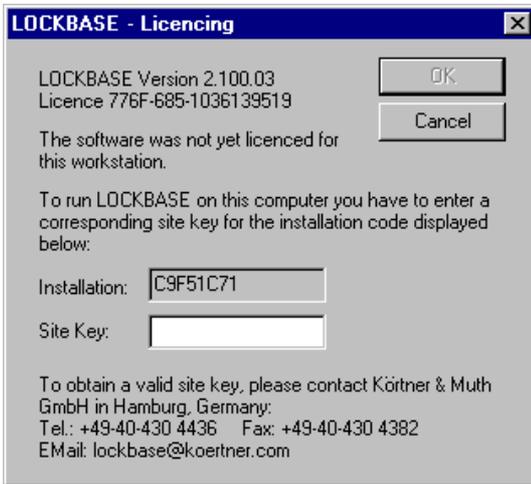


Fig. 3: The LOCKBASE licencing dialogue

To unlock LOCKBASE, you have to enter an unlock code matching the displayed licence code. This unlock code can be retrieved from Körtner & Muth GmbH in Hamburg via phone, fax or email after LOCKBASE has been installed.

The licence code depends on the user running the program. Because of this, a user can run LOCKBASE from any computer in the network as long as his/her Windows user identity is the same and was licenced for the resp. installation.

Note:

- If you need to unlock LOCKBASE for several users, you can make work easier by collecting all needed licence keys and send them to your LOCKBASE service partner by email in one pass. To do so you have to start LOCKBASE once for each user, note the licence key and then abort the licence dialogue. After you have received the unlock keys you can licence all users in a second pass.
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Log on to LOCKBASE

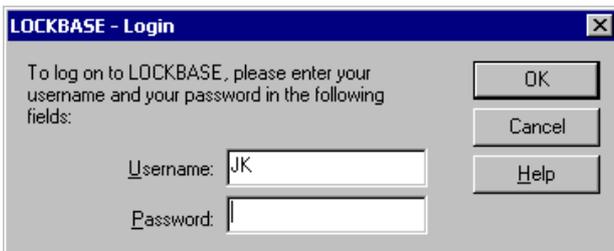


Fig. 4: Log on to LOCKBASE

If the user administration is active, first you have to log on to LOCKBASE. The login dialogue with the following entry fields appears:

Username: Enter your username here. By default the Windows username will be displayed, therefore it is recommended to use your Windows user name also as LOCKBASE user name.

Password: Enter your LOCKBASE password here.

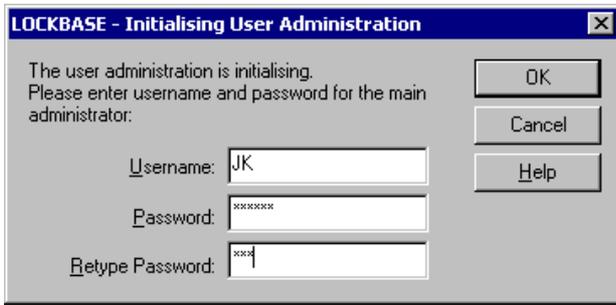


Fig. 5: The login dialogue for the main administrator

When LOCKBASE is started for the first time, a password for the main administrator has to be entered. The first user starting LOCKBASE automatically will become the main administrator. This user is allowed to access the user administration and create the other users (refer to Chap. III-2, 'User Administration'). Later you can revoke administrator privileges from the main administrator, however, there always must be at least one user with administrator privileges.

The login dialogue for the main administrator has an additional field for password confirmation:

Retype Password: Repeat the password for the main administrator here. This field serves to recheck the entry in field **Password**. By this typing errors during the entry can be avoided.

3. The Windows User Interface

PC users who are familiar with the handling of Windows and symbols under Windows can miss out this passage.

The first you see after Windows has started up is the Windows *Desktop*. At the bottom left corner of the screen is a button with the title 'Start' and the Windows icon.



By this button you can open the Windows **Start** menu. It essentially serves to start the programs which are installed on your PC. Every available program corresponds to an entry in the **Start** menu or one of its sub menus. The most application programs are located in the sub menu **Programs**.

To start LOCKBASE move the mouse cursor to the entry **Programs**, then to **LOCKBASE** and click onto **LOCKBASE** inside this folder. After a short time the LOCKBASE *main window* appears on the screen.

Window Operating

Data belonging together (programs and documents) will be displayed in rectangular screen sectors, so called windows, under the graphic user interface Windows. It is possible to show on the screen several windows at the same time. Nevertheless only one window can be active and be in the foreground, because you can work in only one window at any time. The other windows are inactive and "non focused".



Fig. 4: Scroll Bars

If the window is too small to display all the data that is contained e.g. in a list, then at the bottom and at the right side appear so called scroll bars. With their aid you can shift by mouse the window section. Keyboard users therefore take the keys PAGE DOWN, PAGE UP or the ARROW KEYS.

A window could be enlarged to a full screen picture so that it covers the whole computer screen or it could be diminished to an icon, whereby place for other windows will be free. The icons of already started programs will be displayed at the bottom of the Windows *Desktop* on the so called Task Bar.

With the aid of the buttons at the top right of every window corner, you can enlarge the window to a full screen picture, reduce it to an icon or re-create it in its original position.

 Button Full Picture. The window will fill the entire screen.

 Button Icon. The window will appear as an icon on the bottom edge of the screen.

 Button Recreate. The window will be recreated on its original position.

 Button Close, the window will be closed.

By dragging the window frame you can alter the window size. By dragging the title bar you can shift the window on the screen.

Keyboard users achieve the same possibilities with the aid of the program **system menu**, which is to be opened with the key combination ALT+SPACE resp. ALT+- (hyphen) or a mouse click on the system menu field in the top left of every window corner.

The LOCKBASE windows *System Matrix*, *Data Lists*, *System Designer* and *Calculator* also have a field like this, which can be opened with ALT+- (Hyphen).

Menus, Commands and dialogue Boxes

Each program which was designed for the graphic user interface Windows works in a similar way - so does LOCKBASE.

All commands to control LOCKBASE, you find in the main menu at the upper edge of the window. The commands are arranged in groups, for instance all commands that concern a file as a whole (**Save**, **Print**,...), could be found in the menu **File**, whereas in the menu **Edit** you find commands that concern the file contents (**Delete**, **Add**, ...). All LOCKBASE commands will be explained in this manual.

Everytime LOCKBASE needs additional information before executing a command, a so called dialogue box appears on the screen to ask for the missing information. The command **File - Open** e.g. invokes the dialogue box *File open*, in that you have to type in the name of the master key system file that is to open.

You can reach the menus, commands, options and entry fields of the dialogue boxes in several ways:

- by a mouse click on it,
- by a mouse click on the corresponding button in the toolbar (if existing),
- by keyboard,
- with the aid of a hotkey combination (if existing).

One letter is underlined in all command names and designations of the entry fields that is together with the ALT-key usable as a hotkey. E.g. with ALT+F you open the menu **File**.

Some of the often required commands you also could execute with a combination of keys, that is displayed - if existing - in the menu. E.g. you execute the command **File - Open** with the key combination CTRL+F12 (function key F12). In case you use a key combination the menu must not be open.

Which method you use selecting a command does not matter. Therefore in the following of this manual the formulation "selecting a command" is used. So it is up to you if you use the keyboard, the mouse or a hotkey. Using the keyboard you are able to work faster but you have to learn a little bit more.

All dialogue boxes contain the button OK and Cancel, many also the button Help. With the keyboard you reach them like it is explained in the following:

- OK: ENTER, when the button has a bold frame. (Otherwise move the marking with the TAB-key to the OK-button and then press ENTER.) The command will be executed with the current adjustments in the dialogue box.
- Cancel: ESC. The command will not be executed, the dialogue box will be closed.
- Help: F1. With this function key you can start whenever you want the LOCKBASE Help program that serves you information and explanations for the current state of your work. To get out of the help program back to LOCKBASE, you could minimize it to an icon or press ALT+TAB.

For more information about the handling of Windows please refer to your Windows user manual.

II. First Steps

System Matrix

The LOCKBASE *System Matrix* supports the entry and specification of master key systems. This means that the cylinders and keys of a master key system can be entered, added to, deleted or altered. Furthermore, connections can be determined.

Calculator

The LOCKBASE *Calculator* calculates master key systems entered with the *Data Lists*, the *System Matrix* or the *System Designer* in accordance with your pre-settings.

Data Lists

The LOCKBASE *Data Lists* contain lists for the key holders, keys, cylinders and doors. Here data can also be entered, added to, deleted or altered. The *Data Lists* window is suitable for the administration of master key systems.

System Designer

The LOCKBASE *System Designer* is of great help recording a master key system. Furthermore, it supports the planning of large hierarchical master key systems.

Print Manager

The LOCKBASE *Print Manager* can lay out the documents to print in accordance with your wishes. You can print out all necessary data for the setting up, assembling and administration of master key systems.

The LOCKBASE Help

LOCKBASE has a very comfortable help program. You have several possibilities to get "online" information and cues during your work with LOCKBASE. For more information refer to Chap. III-4, 'The LOCKBASE Online-Help'.

1. Setting up a new Master Key System

The master key system which you should have set up and calculated at the end of this introduction should look as follows:

- It has a top master key TMK (locks all cylinders in the master key system) as well as two subgroups.
- Group 1 has a master key MK 1 (locks all cylinders in group 1), 3 cylinders (C1 to C3) as well as 3 interchange keys K1 to K3 (keys which lock more than one cylinder, but not all the cylinders of this group).
- Group 2 has 3 cylinders (C4 to C6) with individual change keys.

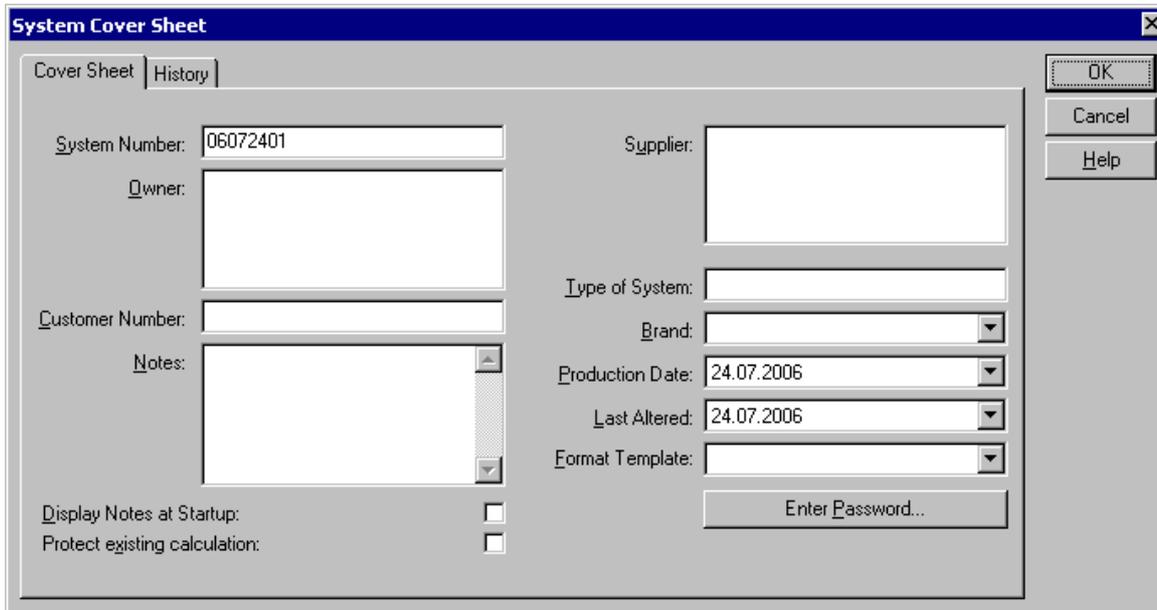


Fig. 1: dialogue box *System Cover Sheet*

To set up a new master key system

- click the menu item **New** in the **File** menu.

The dialogue box *System Cover Sheet* opens. Here you can enter information that pertains to the master key system in general. The field System Number already contains a default consisting of the current year, month and day and a consecutive number.

Confirm the entries by clicking OK.

Subsequently all available data views of your LOCKBASE version are opened.

Guide:

- Should you wish to enter the data sets with the *System Matrix*, then move to the section 'Entering Data Sets in the System Matrix'.
 - Should you wish to enter the data sets with the *Data Lists*, then move to the section 'Entering Data Sets in the Data Lists'.
 - Should you wish to enter the data sets with the *System Designer*, then move to the section 'Entering Data Sets in the System Designer'.
-

Entering Data Sets in the System Matrix

Change to the *System Matrix* window

- by selecting the menu item **Open System Matrix** in the **Window** menu.

To compile the data sets follow the instructions below.

Set up the key function TMK:

1. Select from the **Edit** menu the menu item **Add (Columns)**. The dialogue box *Key Function* opens.
2. Enter "TMK" in the entry field Function.
3. Leave the dialogue box by clicking on OK.

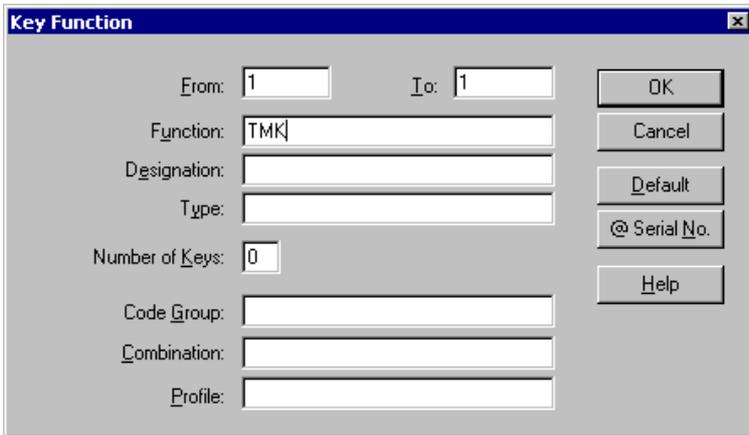


Fig. 2: dialogue box *Key Function*

Set up the key function MK1:

1. Click on the list entry "" in the key list to insert the key MK1 after the TMK.
2. Select from the **Edit** menu the menu item **Add (Columns)**. The dialogue box *Key Function* opens.
3. Enter "MK1" in the entry field Function.
4. Leave the dialogue box by clicking on OK.

Set up the key functions K1 to K3:

1. Click on the list entry "" in the key list.
2. Select from the **Edit** menu the item **Add (Columns)**. The dialogue box *Key Function* appears.
3. Use the TAB key to change into the field To and enter "3" there.
4. Change into the field Function and enter "K".
5. Click on the button @ Serial No.. In the field Function your entry "K" now becomes "K@".
6. Leave the dialogue box by clicking on OK.
7. Confirm the subsequent query by clicking on Yes.

LOCKBASE now produces 3 data sets and replaces the sign "@" in the entry field Function by the numbers 1 to 3.

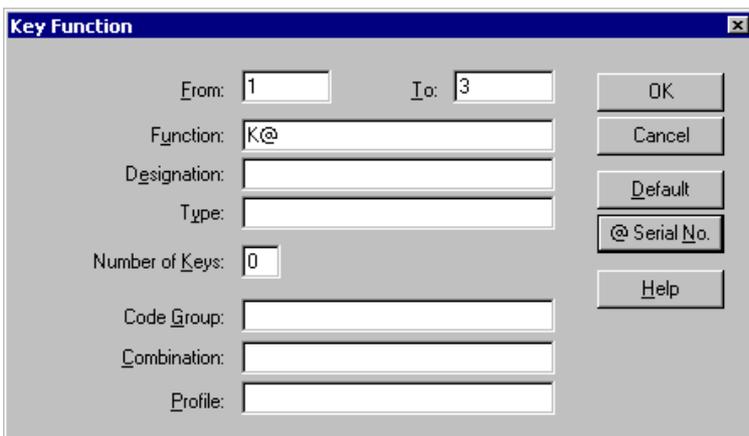


Fig. 3: dialogue box *Key Function*

Set up the cylinders C1 to C6:

1. Select from the **Edit** menu the menu item **Add (Lines)**. The dialogue box *Cylinder* appears.
2. Use the TAB key to change into field To and type "6".
3. Change into the field Number and enter "C".
4. Click on the button @ Serial No.. In the field Number your entry "C" now becomes "C@".
5. Leave the dialogue box by clicking on OK.
6. Confirm the subsequent query by clicking on Yes.

Fig. 4: dialogue box *Cylinder*

After the data sets for the group 1 have been put on, you can enter the connections (resp. lockings).

Guide:

- Now turn to the section 'Entering Connections in Data Lists or System Matrix'.
-

Entering Data Sets in the Data Lists

Change to the window in which the lists are presented

- by selecting the menu item **Open Data Lists** in the **Window** menu.

Persons, keys, cylinders and doors can only be edited, if the corresponding list is activated. You can activate the list by

- clicking on the button above the list (faces, keys, cylinders or doors).

You can recognise the active list by its button being "sunk" and the colour changing from grey to turquoise.

Set up the top master key TMK:

1. Click on the button (with three keys) above the key functions list.
2. Select the menu item **Add** from the **Edit** menu. The dialogue box *Key Function* opens.
3. Change to the field Key Function and type in "TMK".
4. Leave the dialogue box by clicking on OK.

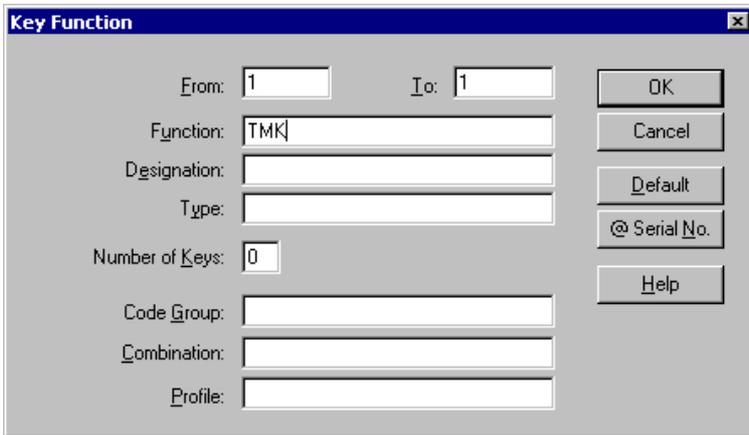


Fig. 5: dialog box *Key Function*

Set up the master key MK1:

1. Double-click on the entry "" in the Key Functions list. The dialogue box *Key Function* opens.
2. Enter "MK1" in the entry field Function.
3. Leave the dialogue box by clicking on OK.

Set up the interchange keys K1 to K3:

1. Click on the list entry "" in the Key Function List.
2. Select the command **Add** from the **Edit** menu. The dialogue box *Key Function* opens.
3. Change into the field To and enter "3".
4. Use the TAB key to change into the field Function and type in "K".
5. Click on @ Serial No.. In the field Function your entry "K" now becomes "K@".
6. Leave the dialogue box by clicking on OK.
7. Confirm the subsequent query by clicking on Yes.



Fig. 6: Security query

LOCKBASE now creates 3 data sets and substitutes the sign "@" in the entry field Function by the numbers "1" to "3". (The change keys C4 to C6 will be set up later on when entering the connections between keys and cylinders.)

Set up the cylinders C1 to C6:

1. Click on the button (with a cylinder) above the Cylinders' List.
2. Select the command **Add** from the **Edit** menu. The dialogue box *Cylinder* appears.
3. Use the TAB key to move into the field To and enter "6".
4. Move via TAB key into the field Number and enter a "C".
5. Click on the button @ Serial No.. In the field Number your entry "C" now becomes "C@".
6. Leave the dialogue box by clicking on OK.
7. Confirm the subsequent query by clicking on Yes.



Fig. 7: Security query

After the data sets have been put on you can set up the connections between key functions and cylinders.

Guide:

- Now turn to the section 'Entering Connections in Data Lists or System Matrix'.
-

Entering Connections in Data Lists or System Matrix

You can enter the connections either in the *System Matrix* or in the *Data Lists*.

Connect the top master key (TMK) to the cylinders:

1. Click on the data set "TMK" in the Key Function List. It appears raised. In the *Data Lists* the button (with the three keys) above the key list must be clicked.
2. Call up the menu item **Connect** in the **Edit** menu. The dialogue box *Connect Key(s) to Cylinder(s)* appears. In the *System Matrix* click "Cylinder(s)" in the field Connect to.
3. Mark all cylinders in the list Not Connected by clicking on the first cylinder and keeping the SHIFT key pressed while clicking on the last cylinder data set. All cylinders of this list are selected now.
4. Click on the button with << on it. The data sets then appear in the list Connected. Should there be any data sets left in the list Not Connected, repeat the previous step and this one.
5. Leave the dialogue box by clicking on OK.

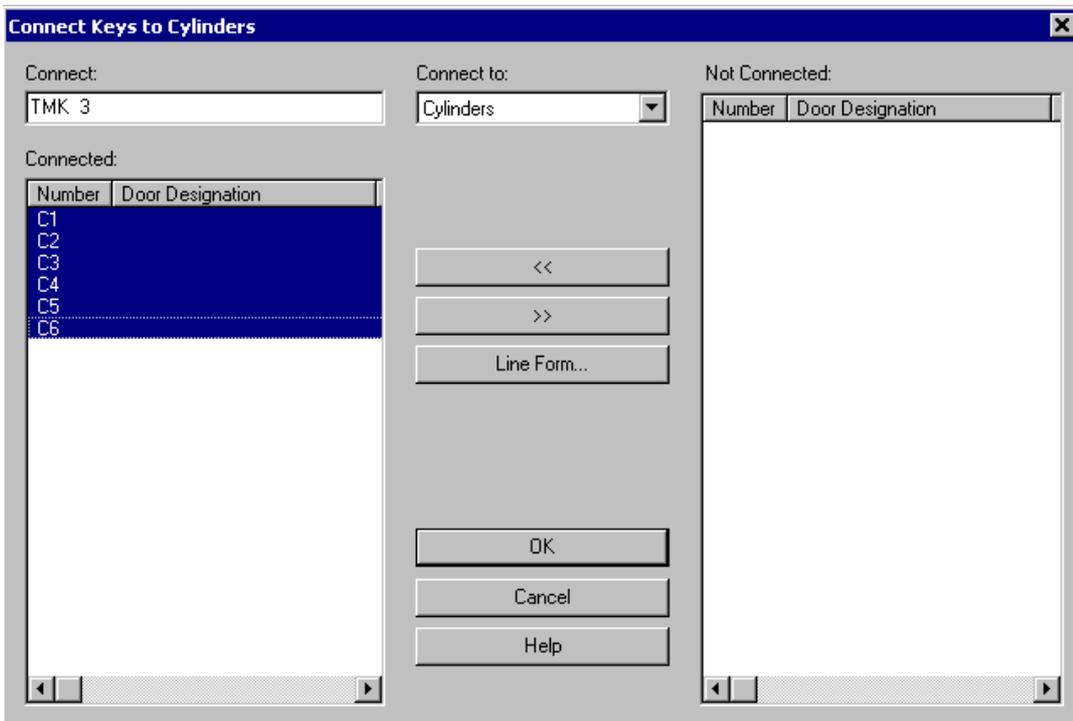


Fig. 8: dialogue box *Connect Key(s) to Cylinder(s)* in the module *System Matrix*

In the *System Matrix* the connections are represented by a red dot anyway. In the *Data Lists* you can have the connections shown by

- selecting the command **Show Connections** in the **Window** menu.

The data sets in the cylinder list then all appear replete with a red dot because they are all connected to the key TMK. The red dots appear in each list, in which a list entry is connected to the marked entry of the active list.

Connect the master key of group 1 (MK1) to the cylinders:

1. Click on the data set "MK1" in the Key Function List. It appears highlighted.
2. Call up the menu item **Connect** in the **Edit** menu. The dialogue box *Connect Key(s) to Cylinder(s)* appears. In the *System Matrix* click "Cylinder(s)" in the field Connect to.
3. Mark the first three cylinders in the list Not Connected by clicking on the first cylinder and keeping the SHIFT key pressed while clicking on cylinder C3. The cylinders C1-C3 are selected now.
4. Click on the button with << on it. The data sets C1-C3 then appear in the list Connected. In the list Not Connected the data sets C4-C6 are displayed.
5. Leave the dialogue box by clicking on OK.

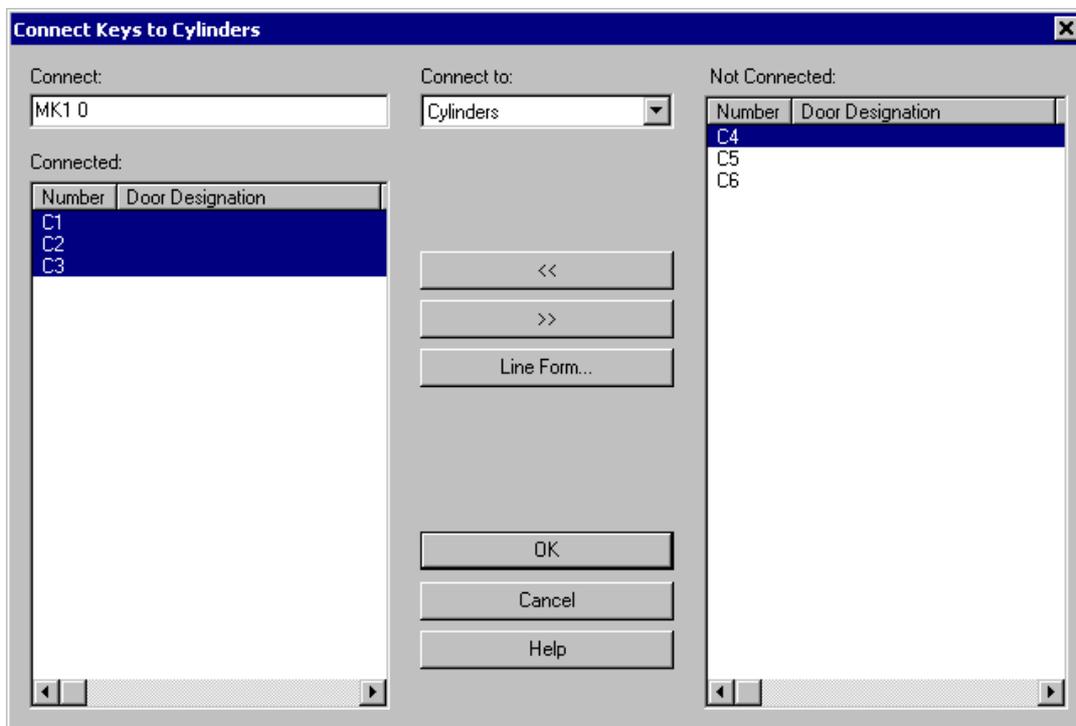


Fig. 9: dialogue box *Connect Key(s) to Cylinder(s)* in the module *Data Lists*

You can also use the *Connect* dialogue box to set up the connections of the interchange keys K1 to K3.

1. Click on the data set "K1" in the Key Function List. It should appear highlighted.
2. Call up the menu item **Connect** in the **Edit** menu. The dialogue box *Connect Key(s) to Cylinder(s)* appears.
3. Mark the cylinders "C1" and "C2" in the list Not Connected by clicking on the cylinder "C1" and keeping the CTRL key pressed subsequently clicking on "C2". Let go of the CTRL key when the data sets have been selected.
4. Click on the button that has << on it. The data sets now appear in the list Connected.
5. Leave the dialogue box by clicking on OK.

Connect in the same manner

- key "K2" to cylinders "C2" and "C3",
- key "K3" to cylinders "C1" and "C3"

by repeating the last steps.

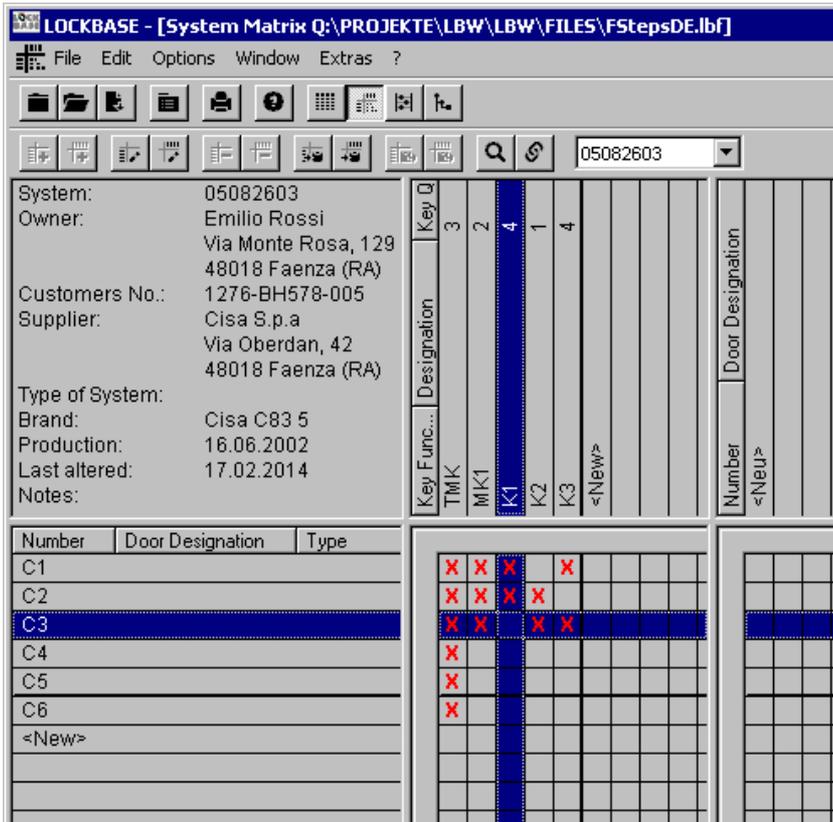


Fig. 10: Connections in the *System Matrix*

To create the change keys belonging to the cylinders C4 to C6 and their connections:

1. Mark the cylinders "C4" to "C6", by clicking on cylinder "C4" in the cylinders list, keeping the SHIFT button pressed and subsequently click on cylinder "C6".
2. Choose the menu item **Edit (Lines)** in the menu **Edit**. The dialogue box *Cylinder* opens.
3. Click the checkbox Change Key.
4. Confirm the subsequent query by clicking on Yes.
5. Leave the dialogue box *Cylinder* by clicking on OK.
6. Confirm once again the query by clicking on Yes.

LOCKBASE now creates 3 change keys C4 to C6 automatically connected to the corresponding cylinders C4 to C6.

In the *System Matrix* you can also set resp. remove connections by a double-click (or by pressing the SPACE BAR) on the intersection of cylinders and keys.

Guide:

- Now turn to the section 'Setting up Keys'.
-

Entering Data Sets and Connections in the System Designer

In the *System Designer* you can enter data sets and connections in one single step.

To change to the *System Designer*,

- select the menu item **Open System Designer** in the **Window** menu.

Your master key system is symbolised by a box with the system number top left in the *System Designer* window.

Now set up the top master key TMK:

1. Click on the word Master Key in the entry area Group Data. A dialogue box *Master Key* appears.
2. In the entry field Function type in "TMK".
3. Leave the dialogue box by clicking on OK.

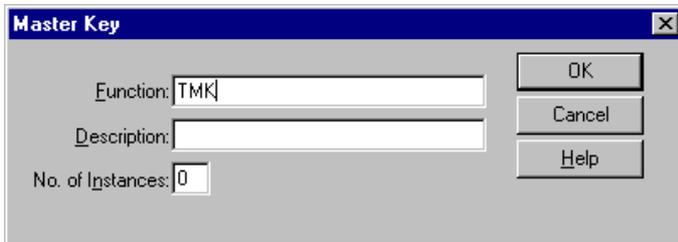


Fig. 11: dialogue box *Master Key*

Set up the data of group 1 now (cylinder C1 to C3 and interchange keys K1 to K3):

1. Click on the button Append in the area Subgroups. A dialogue box *Append Group* appears.
2. In the area Cylinder click in the entry field To, delete the "0" and enter a "3" instead.
3. Click on the button Edit (4) on the right next to the entry field To. The dialogue box *Pattern Cylinder* appears.
4. Enter "C" in the entry field Number.
5. Click on the button @ Serial No.. Your entry "C" changes to "C@" in the field Number.
6. Leave the dialogue box *Pattern Cylinder* by clicking on OK.
7. In the area Interchange Keys of the dialogue box *Append Group* click in the entry field To. Delete the "0" and enter a "3" instead.
8. On the right next to this click on the button Edit (3) to open the dialogue box *Pattern Interchange Key*.
9. Enter "K" in the entry field Function.
10. Click on the button @ Serial No. and your entry "K" now becomes "K@" in the field Number.
11. Leave the dialogue box *Pattern Interchange Key* with OK.
12. Leave the dialogue box *Append Group* by clicking on OK.

A rectangle "1" now appears on the left below the oval with the system number in *System Designer*. The interchange keys appear in the list Interchange Keys in the entry area Group Data below right in the *System Designer*.

Now connect the interchange keys with the cylinders as follows:

1. Click on the data set "K1" in the Interchange Keys list. It appears marked.
2. Click on the button Connect below the list Interchange Keys. The dialogue box *Connect Key(s) to Cylinder(s)* appears.
3. Mark the cylinders "C1" and "C2" in the list Not Connected by clicking on the cylinder "C1" and keeping the CTRL key pressed subsequently clicking on "C2". Let go of the CTRL key when the data sets have been selected.
4. Click on the button <<. The data sets now appear in the list Connected.
5. Leave the dialogue box by clicking on OK.

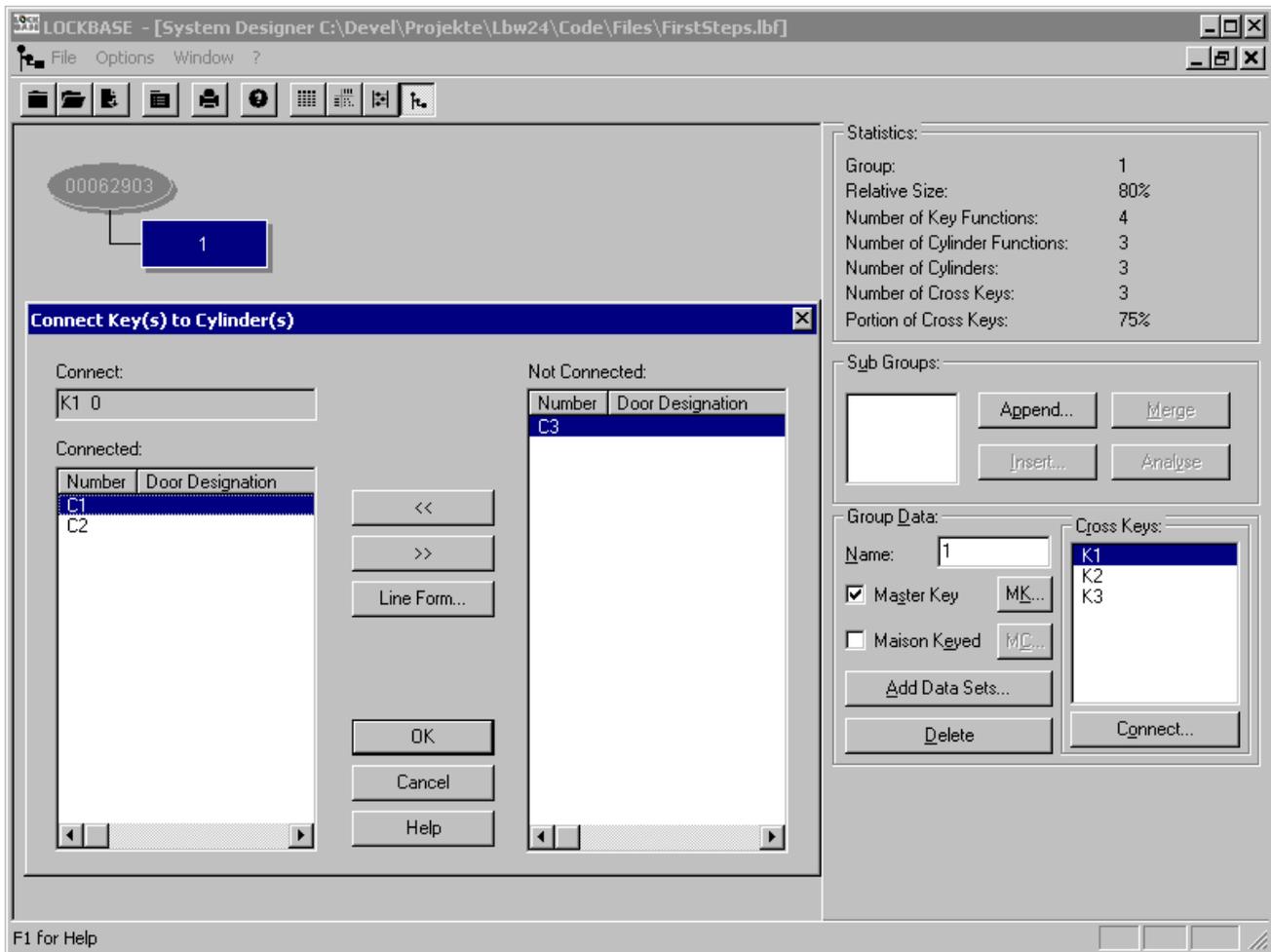


Fig. 12: dialog box *Connect Key(s) to Cylinder(s)* in the *System Designer*

Connect in the same manner

- key "K2" to cylinders "C2" and "C3",
- key "K3" to cylinders "C1" and "C3"

by repeating the last steps.

Now set up the group 2 (cylinders C4 to C6 and keys K4 to K 6) and create their connections. First

- click on the oval with the system number to set the input focus to the root.

Then group 2 will be set up on the same hierarchical level as group 1. Set up group 2:

1. Click on the button **Append** in the area **Subgroups**. The dialogue box *Append Group* appears.
2. Change to the entry field **From** in the area **Cylinder**, delete the "1" and type in "4" instead.
3. In the area **Cylinder** change to the field **To**, delete the "0" and enter a "6".
4. Click on the button **Edit (4)** right hand of the field **To**. The dialogue box *Pattern Cylinder* appears.
5. Enter "C" in the entry field **Number** and
6. click on the button **@ Serial No.**. Your entry "C" becomes "C@" in the field **Number**.
7. Leave the dialogue box *Pattern Cylinder* by clicking on **OK**.
8. In the area **Cylinder** of the dialogue box *Append Group* click on the word **Change Key** and it appears checked.
9. Click on the button **Edit (5)** next to it to call up the dialogue box *Pattern Change Key*.
10. Enter "C" in the entry field **Function** and
11. click on the button **@ Serial No.**. Your entry "C" now becomes "C@" in the field **Function**.
12. Leave the dialogue box *Pattern Change Key* by clicking on **OK**.
13. Leave the dialogue box *Append Group* by clicking on **OK**.

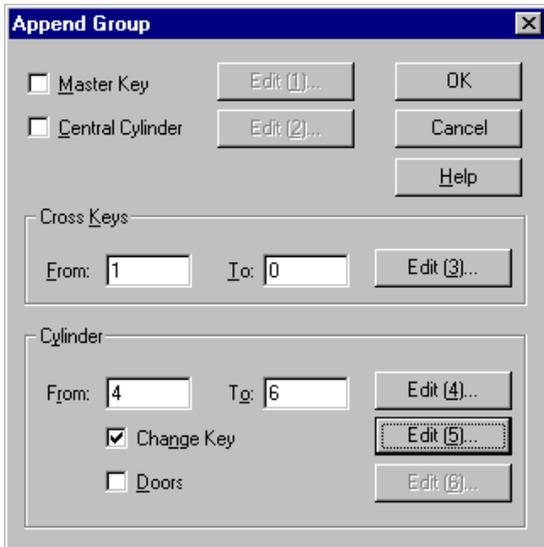


Fig. 13: dialogue Box *Append Group*

LOCKBASE now sets up group 2 and all its data in one step. Look to our system's hierarchy on the top left in the *System Designer*. The node (oval) stands for TMK, the two rectangles for the data of group 1 and 2.

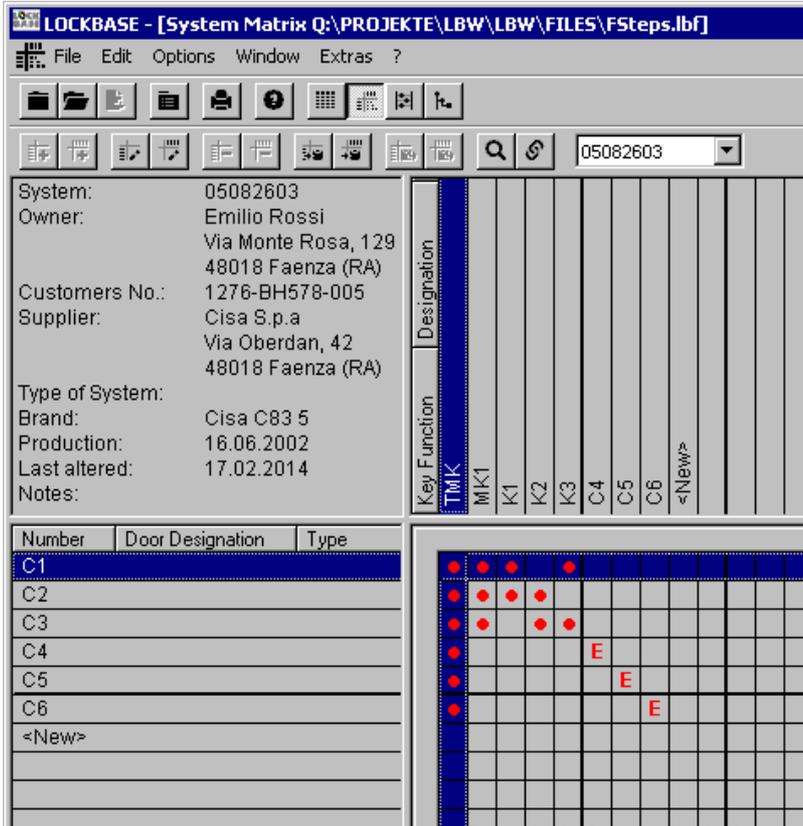
Now set up MK1, the master key of group 1 by

1. clicking the rectangle 1 in the *System Designer* to switch to group 1.
2. Click right hand in the entry area Group Data on Master Key. The dialogue box *Master Key* appears.
3. Enter "MK1" in the entry field Function.
4. Leave the dialogue box by clicking on OK.

You can now review the connections of the entire system in the *System Matrix* by double-clicking the oval.

To display the *System Matrix* in the standard view,

- check out the entry **Euro Matrix** in the **Options** menu.



Standard view of the *System Matrix* without Euro Matrix

General Information on the System Designer

In the *System Matrix* or *Data Lists* you can add, delete and edit or connect data only in subgroups (rectangles) i.e. at the lowest hierarchical level. Otherwise you might destroy the hierarchy of the master key system.

In order to see or edit a certain group in the *System Designer*,

- double-click in the *System Designer* on the rectangle or oval of the group you want to change to.

Afterwards you can see the lockings in the *System Matrix*.

You can move through the hierarchy of the master key system also in the *System Matrix* and the *Data Lists*:

1. Click on the toolbar in the entry field that has the system or group number on it. A list opens up with the next hierarchy level. If you are not on the highest hierarchical level, the "<-" in the list symbolises the next level up.
2. Click on the entry you wish to change to. The entry in the toolbar now indicates the selected position in the master key systems' hierarchy. In the *System Matrix* you now get to see the data and connections belonging to the selected hierarchical level.

In this manner you can get to any point desired in your master key system.

If you wish to change data connections in superordinated hierarchy nodes/levels, you first have to merge the subgroups, which contain the data sets to connect.

To merge subgroups in the *System Designer* follow the instructions below:

1. Set the focus to the corresponding node. The subgroups are now listed in the list Subgroups on the right in the *System Designer*.
2. Mark the subgroups you want to merge (at least two) and press the button Merge to dissolve the subgroup structure.

Guide:

- Now turn to the section 'Setting up Keys'.

Setting up Keys

LOCKBASE differentiates between key functions and key copies. Key functions are lockings, for which - strictly speaking - a real key does not necessarily have to exist.

Key copies are individual keys which belong to a certain key function, in other words samples of a key function.

If you make a further copy of a key, you have to inform LOCKBASE about this to administer the key. You can do this both in the *System Matrix* and the *Data Lists*.

1. Double-click on the key function "K2". The dialogue box *Key Function* opens.
2. Click on the button New Key. A key copy is produced that receives the name "K2-1". The number following the "-" is a consecutive number to identify a single key.
3. Leave the dialogue box by clicking on OK.

(!) Key	Key Holder	Issue	Return	Production
K2-1				17.06.2005

Fig. 15: Setting up key copies in the dialogue box *Key Function*

Note:

- If you want to set up a key in the *Data Lists*, the Key Function List has to be active.

Guide:

- If you use LOCKBASE for key administration purpose, turn to the section 'Key Control with LOCKBASE'.
- If you use LOCKBASE for calculation, proceed with the section 'Calculate the Master Key System'.

2. Calculate the master key system

Now change to the *Calculator*

- selecting the command **Open Calculator** in the **Window** menu.

The following is a brief overview over the sequence of steps which are necessary to calculate a master key system with LOCKBASE.

1. Select a brand module.
2. Determine a code group.
3. Establish key biting array and master key combination for the entire system and for all subgroups.
4. Calculate the system.
5. Transfer the results to the system's database.

Note:

- If a *Code Group Administration* belongs to your LOCKBASE package you don't have to enter brand and code group specification manually. Instead you can easily pick the required code group from the list of available code groups. The brand will be inserted automatically by LOCKBASE.
-

Select Brand and Code Group

Steps to select a brand manually:

1. Click on the entry field Brand in the *Calculator* module. A list of available brands opens up.
2. Select the entry "GeGe P1-18 5" from the list.

Steps to determine a code group manually:

1. Click into the entry field Code Group.
2. Type in "AABB6 G1" (notice capitalisation and blanks).

Note:

- Code group means the way how cutting positions vary. This differs according to the cylinder brands. E.g. GeGe distinguishes between even and odd cutting positions. An 'A' stands for the cutting depths 2, 4, 6, 8, 0, a 'B' for 1, 3, 5, 7, 9. A GeGe code group consist of the letters 'A' and 'B'; should the situation arise side pins etc. and a keyway group can also belong to a code group.
 - If the brand "GeGe P1-18 5" is not part of your LOCKBASE package choose another brand. You do this by clicking the button with an arrow and question mark on it (context sensitive help). Afterwards click in the field Code Group. Select one of your cylinder brands out of the list. Enter the brand designation and code group in the LOCKBASE *Calculator* according to the corresponding example.
-

To select a code group from the *Code Group Administration* proceed as follows:

1. Click on  in the toolbar of the *Calculator* or from the menu choose **Edit - Code Group Administration**. The dialogue box *Code Group Administration* appears.
2. Select "GeGe P1-18 5" from the list and press ENTER.
3. To subdivide the code group double-click the entry "AABBA P1-18" and split up by profiles i.e. keyways.
4. Double-click "AABBA G1" and split up by Constant Pins. Accept these defaults with OK.
5. Choose the code group "AABB6 G1" and click on the button Occupy.
6. Leave *Code Group Administration* with button Close.

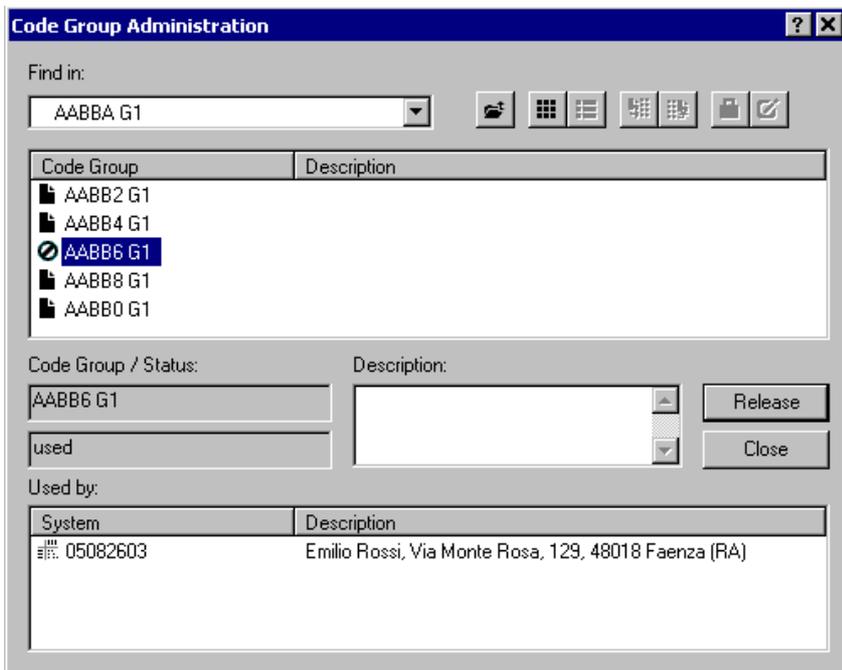


Fig. 16: dialogue box *Code Group Administration*

Establish Keyway, Key Bitting Array and Master Key Codes

To establish the key bitting array for the entire system, the master key's combination and keyway as well as possibly further keyway(s),

- select item **Edit Key Bitting Array** in the **Edit** menu.

The dialogue box *Edit Key Bitting Array* appears.

Select a Keyway

To select a keyway proceed the following steps:

1. Click on the keyway "P3" in the list Keyways Keys. Thus it will be used for the calculation.
2. Click on the button Master Key. Now the keyway will also be used for the master key. The "+" sign marks it as a master key keyway.
3. Click on the keyway "P3" in the list Keyways Plugs.

Note:

- If you have to calculate a small master key system with only one keyway, you could restrict the keyway range already by selecting a smaller code group. To do so choose code group "AABB6 P3" instead of "AABB6 G1" (for more information about dividing up of code groups refer to Chap. VII-2, 'Code Group Administration').
-

Establishing the Combination of the Master Key

In the entry field Key Bitting Array a code group according to each brand appears with all possible cutting depths. The left hand column of figures corresponds to the first pin chamber which is operated by the first cut position of the key (bow stop), the last column of figures corresponds to the last pin chamber of the cylinder which is operated by the last cut of the key (tip). The pins displayed marked designate the master key combination. The "2" in the first pin chamber is already established. We want to leave it as master key position.

To establish the master key combination:

- Click on the "4" in the second column and press the button Master Key. Repeat this for "5" in the fourth column. You now have established the combination for the top master key (24156).

In addition to this we set the "2" in the first column exclusively for "TMK", meaning it is reserved for the top master key and will not be used in any other key combination of this system.

- For that click on the "2" in the first column and press the button Exclusive. The "2" now appears reserved in red.

Editing the Key Bitting Array

Now we want to further restrict the key bitting array.

1. Click on the "8" in the first column and press the DEL key twice. The depths "8" and "0" disappear and will not be used in the calculation. Should you have deleted a wrong depth, re-enter the inadvertently deleted number using the corresponding key on the keyboard.
2. Leave the dialogue box by clicking on OK.

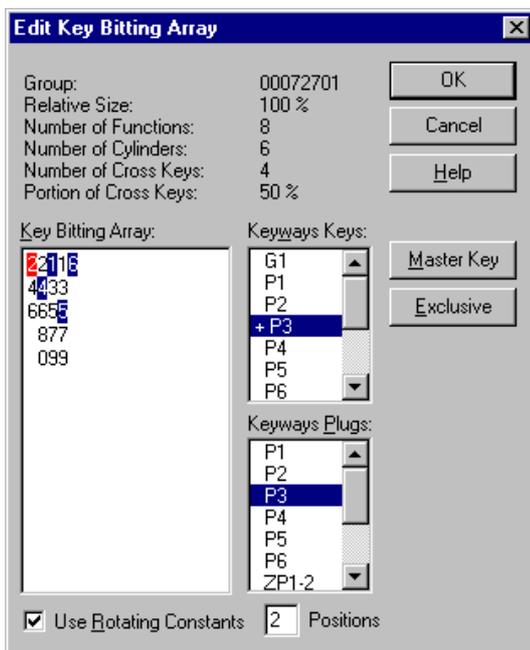


Fig. 17: dialogue box *Edit Key Bitting Array*

Guide:

- If you work without the LOCKBASE *System Designer*, you can step over the rest of this section.
-

To calculate a master key system with subgroups it must be analysed for a hidden group structure:

1. Change to the *System Designer*.
2. Press the button Analyse in the area Subgroups. Two subgroups appear.
3. Change to the *Calculator* again.

We are going to distinguish the key codes of group 1 from those of group 2 by using the position "4" in the 1st pin chamber exclusively for group 1. It is the group sign indicator of group 1.

Set up the key bitting array of group 1 as well as combination and keyway for "MK1":

1. Double-click group 1 that is the rectangle named "1". The dialogue box *Edit Key Bitting Array* appears. Depth "2" in the first column of the key bitting array is not longer visible because it was set exclusively for "TMK".
2. Delete the "6" as shown above from the first column.
3. Leave the dialogue box by clicking on OK.

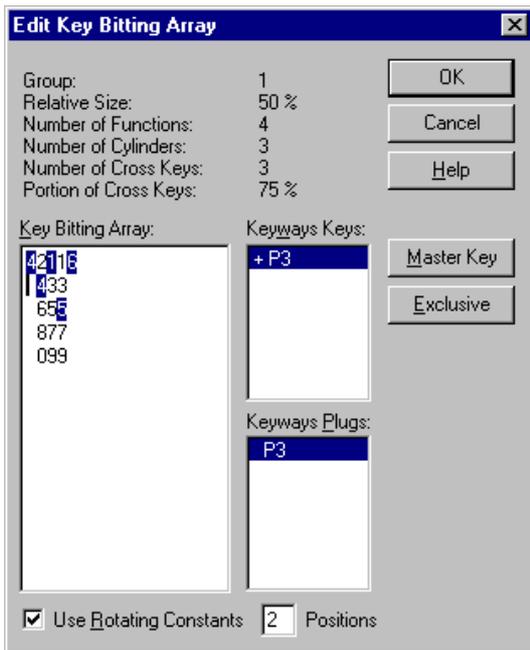


Fig. 18: dialogue box *Edit Key Bitting Array*, group 1

Set up the key bitting array of group 2:

1. Double-click on the rectangle named "2" that is group 2. The dialogue box *Edit Key Bitting Array* appears.
2. Delete the "4" as shown above from the first column (the "4" is the group sign indicator of group 1).
3. Leave the dialogue box by clicking on OK.
4. Before calculation change to the system's top level, click on the oval with the system number on it.

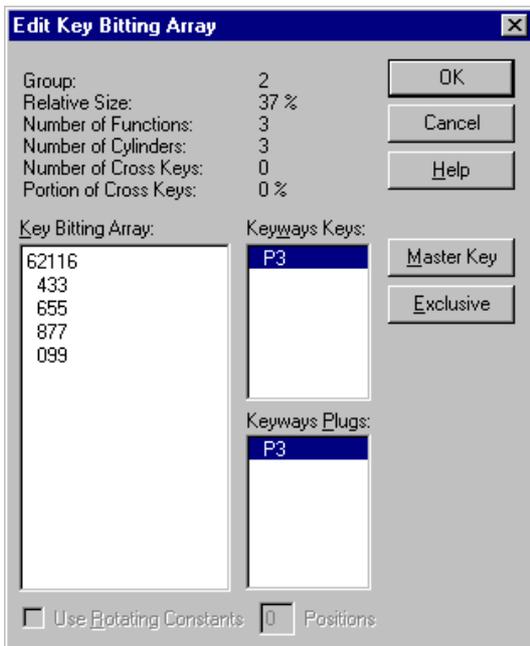


Fig. 19: dialogue box *Edit Key Bitting Array*, group 2

Start Calculation

LOCKBASE now is ready to calculate the master key system.

Select command **Calculate** from the menu **Edit**.

LOCKBASE notifies you whether it has carried out the calculation. The result of the calculation can be reviewed in the Key Functions List right in the *Calculator*.

Transfer Calculation

You can now transfer the calculated bittings, keyways and cylinder pinnings to the key function and cylinder data sets.

1. Select the menu item **Transfer** in the menu **Edit**. The dialogue box *Transfer Calculation* appears.
2. Click on the button **Export**.
3. Click on the button **OK**. LOCKBASE reports in the display window that the transfer is completed.
4. Click on **OK** again in order to leave the dialogue box.

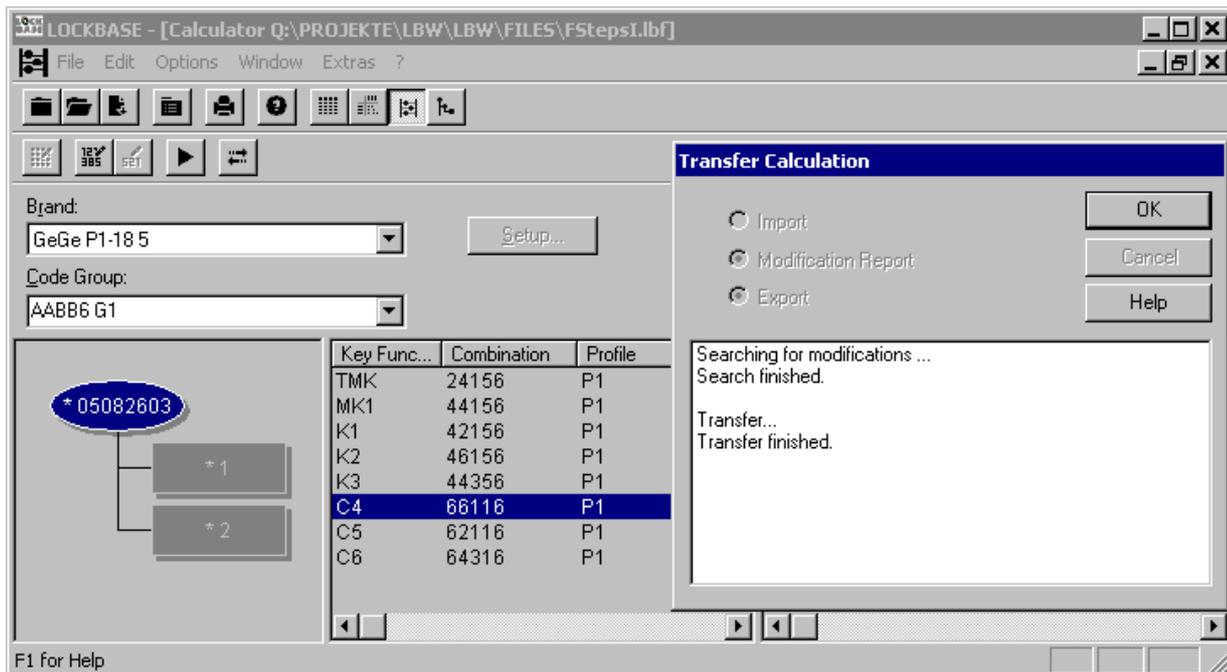


Fig. 20: *Calculator* module, transfer process, dialogue box *Transfer Calculation*

General Information on Calculating with and without a Group Structure

Once calculated master key systems usually have to be extended after some time. LOCKBASE takes care that the old key combinations are retained as far as possible.

You also could calculate a system after having dissolved the system's group structure (see above, section *System Designer*) or if no group structure is existing at all. In this case you merely have to establish the combination for the top master key, and save yourself establishing the combination for the group's master keys (if existing). Thus you leave it to LOCKBASE how to separate the hidden groups.

However, calculating without group structure takes more effort and is more complicated than calculating with a group structure.

Printouts for Assembly

LOCKBASE supports the assembly of master key systems with several printouts.

We will demonstrate the print out with the example of the Key Bitting List:

1. Choose in the menu **File** the entry **Print**. The dialogue box *What shall be printed out?* appears.
2. Click in the list **Forms** on the word *Key Bitting List*.
3. Control the print-out clicking on the button **Preview**.

4. Quit the preview with Close.
5. Print the list, clicking on the button Print.
6. Close the *print selection dialogue* by clicking on the button Close.

In all LOCKBASE printouts you can adjust font, formats of data, styles and sizes, page margins and more to customise the printouts (see Chap. IX-3, 'The Print Formatting Dialogue').

3. Key Control with LOCKBASE

File Persons

You can only file a person if you have LOCKBASE *Data Lists* at your disposal. Change into the *Data Lists* by

1. selecting the menu item **O**pen **D**ata **L**ists in the **W**indow menu.
2. Click on the button above the key holders list on the left (there are four faces on it).
3. Select the menu item **A**dd in the **E**dit menu. The dialogue box *Key Holder* opens.
4. Type "Smith" in the entry field Surname.
5. Leave the dialogue box by clicking on OK.

Fig. 21: dialogue box *Key Holder*

Issue and Return of Keys

Now give out the key "K2-1" to Mrs. "Smith":

1. Select the menu item **C**onnect in the menu **E**dit. A dialogue box *Connect Key Holder(s) to Key(s)* appears.
2. The key "K2-1" is already selected in the list Not Connected.
3. Click on the button << so that the key appears in the list Connected.
4. Activate the check box Print receipt directly. This enables LOCKBASE to print a key return receipt.
5. Leave the dialogue box by clicking on OK. The dialogue box *Key* appears.
6. Enter the return date for the key here, if applicable.
7. Leave the dialogue box by clicking on OK.

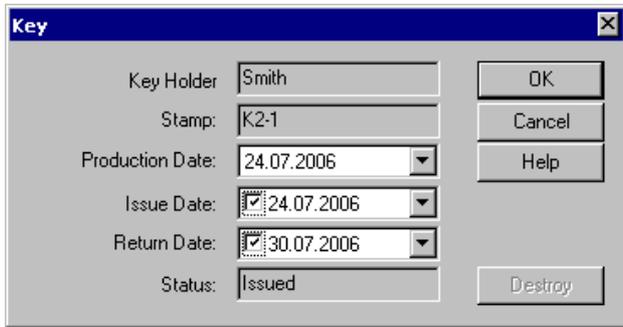


Fig. 22: dialogue box Key

For key return you go the reverse way: With the button \geq shift a key from the list Connected into the list Not Connected.

III. The LOCKBASE Main Window

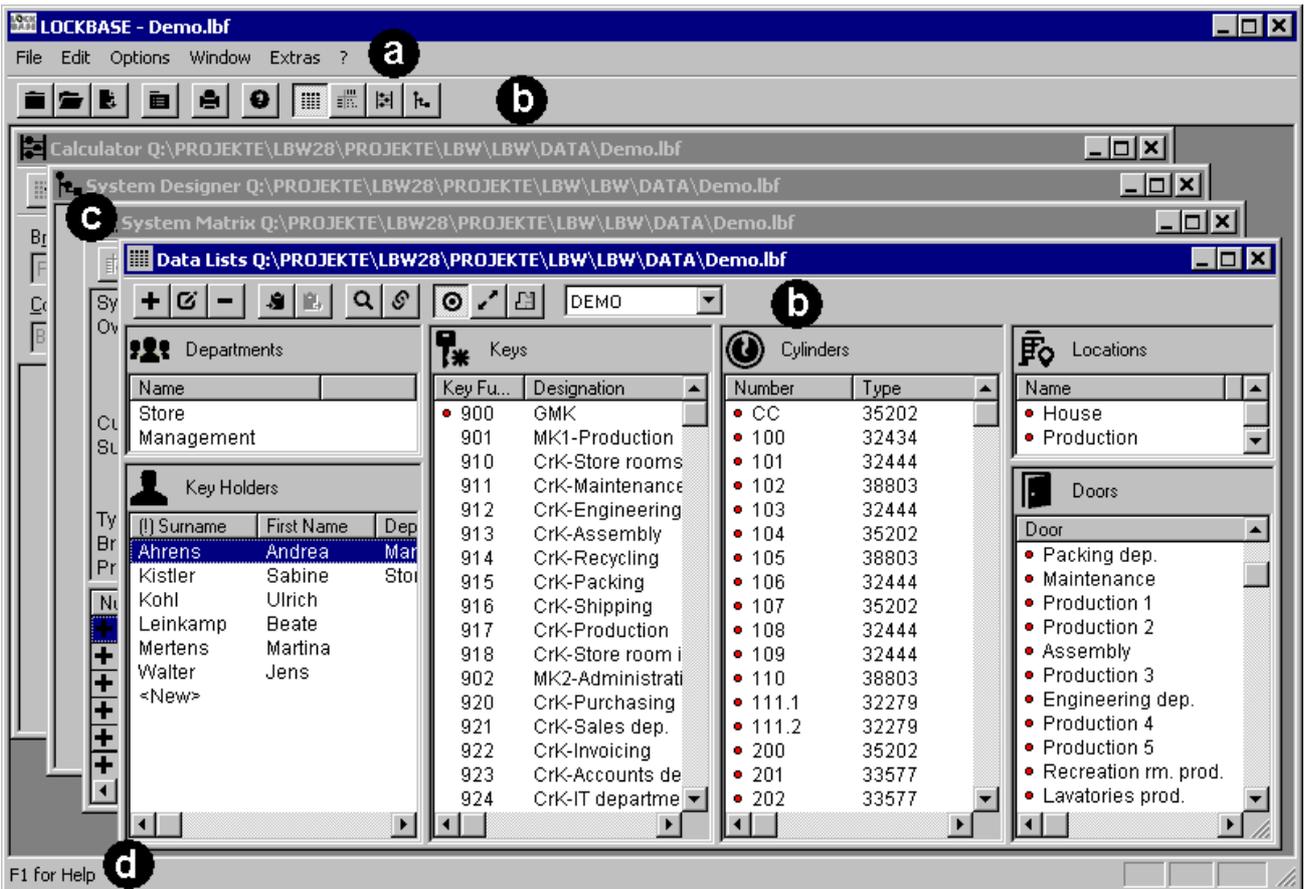


Fig. 1: The LOCKBASE Main Window: a) main menu, b) toolbars of the Main Window (above) and Data Lists (bottom), c) the four document windows of LOCKBASE Professional, d) Status bar.

The program window and the general LOCKBASE commands will be explained in the following.

The picture shows the LOCKBASE version *Professional* with an opened master key system file. Active is the recent one in the foreground of the four document windows *System Designer*, *System Matrix*, *Calculator* and *Data Lists* (c), that display the master key system. All entries and commands currently refer to this window.

Because the four windows offer different possibilities for operating a master key system, the contents of some menus change if another window is activated. You get some more information on it, when all the windows will be explained.

The status bar (d) at the bottom edge of the window shows helpful information about all commands and the buttons of the toolbars.

1. Handling of Master Key System Files

All commands that refer to a master key system file as a whole can be found in the menu **File**. This menu is independent of the circumstance which window is displayed in the foreground.

Creating a new Master Key System

The command **File - New** lets you create a new master key system (not in LOCKBASE version *Manager lite*).

- Click on  in the toolbar or
- select command **File - New** or
- press key F11.

First, the dialogue box *System Cover Sheet* appears. Next as default LOCKBASE opens the windows *Data Lists*, *System Matrix*, *System Designer* and *Calculator* (only in the LOCKBASE Professional and Calculator versions) for data entry.

If you have laid down something else with the aid of the command Options - Open Windows on Start, then only that or respectively the desired window(s) will be opened. The windows are empty and ready for data entry.

Opening an existing Master Key System File

With this command you open an already existing LOCKBASE file (not in LOCKBASE version *Manager lite*). Proceed as follows:

- Click on  in the toolbar or
- select the command **File - Open** or
- press the key combination CTRL+F12.

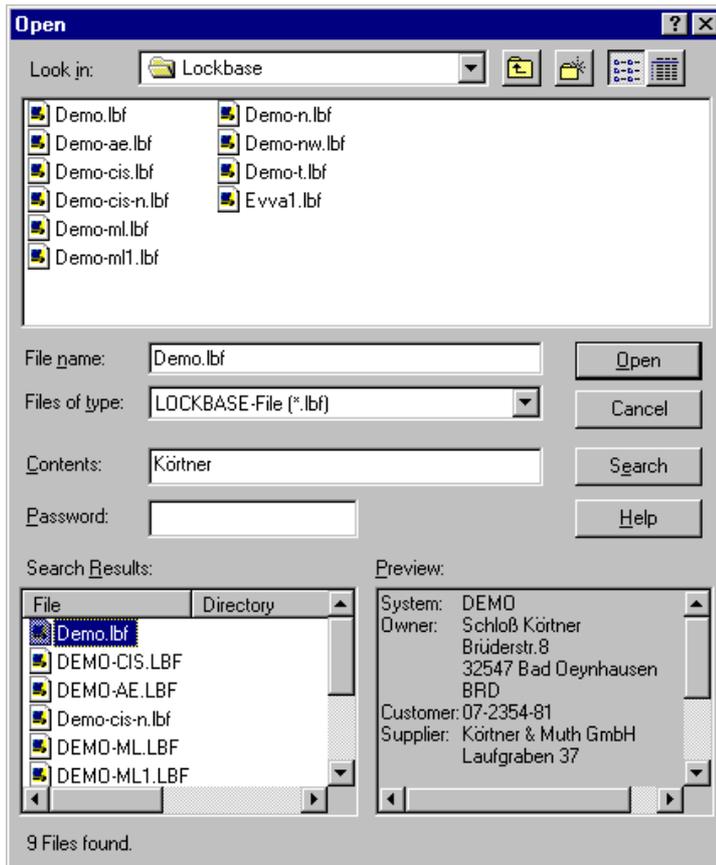


Fig. 2: The dialogue box *File Open*

The dialogue box *File Open* appears. It contains the following entry fields:

Look in: Select the drive and the directory from this list, where the master key system file was stored.

File Name: Enter the complete name of the file (with the extension .LBF) you would like to edit; or choose one out of the list below. (The lists you attain by mouse-click or with the TAB key.)

List Files of Type: If the master key system was entered with LOCKBASE the suitable format is "LOCKBASE file (*.lbf)". If you want to import a master key system generated by a third party program, select the corresponding file type from this list (refer to Chap. III-1, 'Data import from CSV files').

Open: Click this button to open the selected file.

Contents: You can enter text here, which should be searched for in the files of the given directory. This can be useful if you are not sure, under which name you had stored a certain file. All files containing the given text phrase will be found.

The case of the letters will be ignored. Entering more than one word will limit the search to those files, which contain all of the words entered.

Search: Click this button to start the search. All LOCKBASE files in the current directory and all its sub directories will be searched for the text entered in Contents. The files found will be displayed in the list Search Results.

Password: Even password protected files can be viewed in the preview window, if you enter the correct password here.

Search Results: Here you will find the files listed, which contain the search text entered in Contents. The first column shows the name of the file, the second the sub directory containing the file.

Preview: This window displays a preview of the cover sheet of the selected file (refer to Chap. III-1, 'System Cover Sheet').

Notes:

- You do have the possibility to search for LOCKBASE files in directories and drives. Simply mark another directory or drive in the corresponding entry fields. After a moment the dialogue box displays a list of the .LBF files which are stored there.
- If a password was entered in the *System Cover Sheet* to protect a master key system file from an unauthorised access, the dialogue box *Password Check* opens, as soon as you select OK. After you have typed in the right password or if no password is entered, LOCKBASE loads the stated master key system and opens all the windows which were laid down by the command Options - Open Window on Start.
- It is possible to open various master key system files at the same time. Which file is displayed in a certain window is shown in the title bar at the upper edge of the window.

Windows tip:

- In case you work with the Windows *Explorer* you can double-click on a .LBF-file (or ENTER if it is marked) to start LOCKBASE (if not already started) and to open the selected file.

Data import from CSV files

The CSV import filter allows data import from software, which is able to export its data in CSV format ('comma separated values'). These are mainly database systems and spread sheet programs. But also other data stocks, which are available as ASCII files, often can be converted easily to the CSV format.

The CSV format is a universal data format to represent tables of any kind. However, if such a table contains master key system data, additionally it has to be defined, which column resp. row contains which kind of data. This information is stored in the CSV format specifications, which can be selected and created using the format selection dialogue.

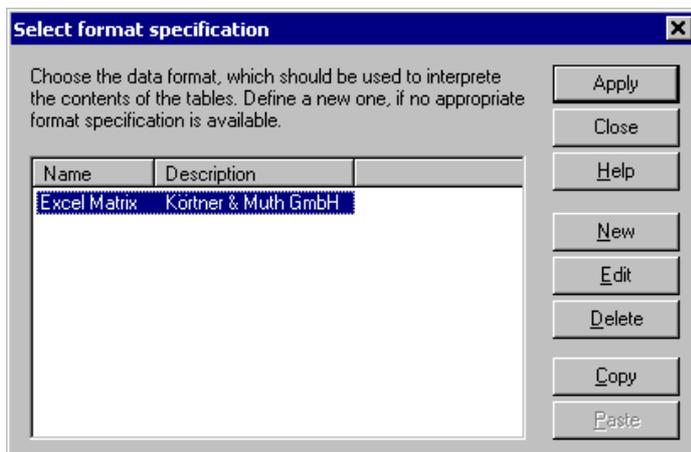


Fig. 3: The dialogue box *Select format specification*

The dialogue *Select format specification* opens automatically, if the import filter 'CSV (*.csv)' was selected in the dialogue *Open* (see Chap. III-1, 'Opening an existing Master Key System File').

The dialogue shows a selection list of the available format specifications and offers the following commands:

Apply: Press this button to use the selected format specification for the interpretation of the file to open. The command is only available, if only a single format specification was selected.

Close: Press this button to leave the dialogue without applying a format specification. The file will not be opened, however, new format specifications or changes to existing ones will be saved.

Add: Press this button to create a new format specification. The dialogue *Edit format specification* opens (s.b.).

Edit: Press this button to modify the selected format specification. The dialogue *Edit format specification* opens (s.b.).

Delete: Press this button to remove the selected format specifications. A confirmation request prevents from unintended deletion.

Copy: This command allows to copy the selected format specifications to the clipboard. Thus in a simple way variants of available format specifications can be created. Moreover, it is possible to make available your own format specifications for other LOCKBASE users by exporting them via clipboard.

Paste: Press this button to paste LOCKBASE format specifications available in the clipboard to the selection list.

CSV files are ASCII text files, where each text line represents the row of a table. The single data fields of line are separated by a special character (the so called field separator, usually the comma). If a field should contain the field separator (or even a line feed), the contents of the field can be enclosed in quotation marks.

Thus tables of any contents can be represented in text form and the individual cells of the table can be addressed using the notation well known from spread sheet software: A combination of capital letters stands for the column and a following decimal number for the row of a cell (e.g. 'A12' or 'AB7').

To represent more than one table it is usual to create a file for each table and a new sub directory for the complete file set. The name of the file represents the name of the table, e.g. 'Cylinders.csv', 'Keys.csv', 'Doors.csv', etc.

LOCKBASE supports this common format, but additionally offers a possibility to represent multiple tables in a single file. To do so, the name of the table, enclosed in square brackets and in a dedicated line, will be put in front of the related table. This way the change to a new table will be marked by an empty line, directly followed by a line containing only the name of the new table, enclosed in square brackets.

A data import from the tables is possible by defining a source area in the table (a column or row) for each LOCKBASE data field to import (e.g. cylinder number: cell 'A5' to 'A100', key function: cell 'F2' to 'Z2', etc.).

Connections between data stocks can be represented in two different ways: As matrix or as lists of values.

The matrix representation is well known from the European lock charts (System Matrix). The connections will be taken from the intersection area of an already defined column and row, e.g. the intersection fields of cylinder numbers, listed in a column, and key functions, listed in a row.

Lists of values define connections of records from different data stocks by a list of related pairs of values. It says for example: Connect the cylinder with the number found in cell 'B4' to the key function found in cell 'F4', etc.

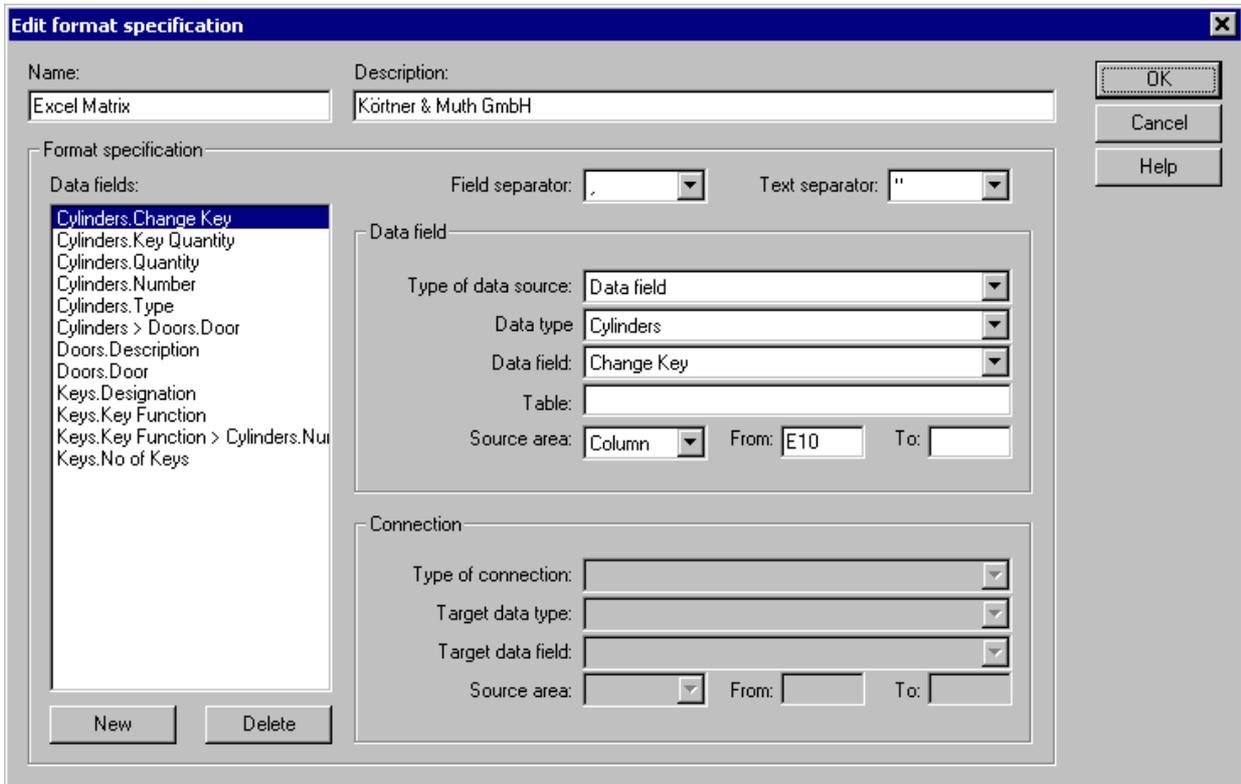


Fig. 4: The dialogue box *Edit format specification*

The dialoue *Edit format specification* allows to specify such an CSV import format. The dialogue can be reached by pressing the buttons Edit or New in the dialogue *Select format specification* (s.a.). The dialogue offers the following entry fields and commands:

Name: Enter a name for the new format specification here. The name appears in the list of the format selection dialogue.

Description: This field can be used for additional explanations concerning the usage of the new format specification. This description appears in the list of the format selection dialogue.

Data fields: This is the list of data field and link specifications already defined. Select the respective entry in the list to edit the definition of a data field. The data field specification will be displayed in the entry fields on the right and can be modified.

New: Use this button to create a new data field or link specification.

Delete: Press this button to remove a data field specification. A confirmation request prevents from unintended deletion.

Type of data source: Choose here, whether you want to create a definition for a data field or a connection.

Data type: Select the LOCKBASE data stock here, for which you would like to define a data or link import source.

Data field: Select the LOCKBASE data field here, for which you would like to define a data or link import source.

Table: Enter the name of the table here, where the data can be found. In the 'classical' representation the table name is the file name (without extension), in the LOCKBASE specific representation the table name can be found, enclosed in square brackets, in a dedicated line directly followed by the related data. If you import just from a single table, leave this field empty.

Source area, From, To: Enter the table area to read data from here. Choose, whether it is a column or row, then enter the first and last cell of the area, e.g. 'Column A5 to A100' oder 'Row F3 to Z3'. Please regard, that in a column area the character combination of first and last cell have to be the same, while in a row area the decimal values have to be the same. If you don't know the last cell of the area, but you always want to read until the end of the table, leave the field Toempty.

Type of connection: If you have selected 'Connection' in the field Type of data source, you have to define the type of connection here: 'Matrix' or 'Lists of values' (s.a.). If you choose 'Matrix' you don't have to define data source areas. The source area of the connection (the matrix) will be derived from the two data fields the connection refers to. These data fields are to enter in the fields Data type, Data field, Target data type and Target data field. For both data fields source areas already have to be defined. If you choose 'List of values' you have to define at least a source area for the target data field. A source area for the basic data field of the connection is not required, if you chose '[Position]' in the entry field Data field. In this case the basic record will not be identified by a field value, but by its position (e.g.: Connect the first, second, third cylinder to the door found in cell 'F4,5,6', etc.). If you choose '[Position]' for the target data field also, it will be assumed, that the source area of the target contains position data of the target data type (e.g. '1-10,15' means 'First to tenth and fifteenth').

Target data type: Select the LOCKBASE data stock of the target of the connection here.

Target data field: Select the LOCKBASE data field of the target of the connection here.

Source area, From, To: Enter the source area of the target of the connection here (s.a.).

Closing a File

When you have finished your work with a master key system, you could close the currently open document windows (*Data Lists*, *System Matrix*, *System Designer*, *Calculator*) with the command **File - Close** belonging to the currently active master key system. Other master key systems possibly opened and the LOCKBASE program window remains opened however.

If the system was newly set up or edited and not yet stored, a security query appears to save you from data loss.

Saving a Master Key System File

The command **File - Save** serves to permanently store alterations in the currently opened file. The new, edited version will be written over the old, unedited file on the disk.

- Click on  in the toolbar or
- select the command **File - Save** or
- press the key combination SHIFT+F12.

In case of a newly set up master key system which has not yet a file name, the command **File - Save as** is executed.

Saving a Master Key System File under a new Name

The command **File - Save as** (not in LOCKBASE version *Manager lite*) serves to

- name a newly created master key system on the first storing or to
- store an edited master key system under a new file name, so that the old, unedited version will not be written over.

To save a system file under a new name proceed as follows:

- Select the command **File - Save as** or
- press the key F12.

The dialogue box *File Save as* appears. It offers the following entry fields:

Save in: Select the drive and directory from this list, where the master key system file should be stored.

File Name: Here you name the master key system file. The system number from the *System Cover Sheet* dialogue box is proposed as file name. If you accept this number, the master key system files will be sorted automatically in chronological order. But you can also enter a file name yourself plus the name extension .LBF. Please, assign the name extension .LBF, otherwise LOCKBASE does not recognise that it is a LOCKBASE file when opening it! If an existing name from the list is chosen, the master key system stored hitherto under this name is written over!

List Files of Type: Usually here you choose "LOCKBASE file (*.lbf)". This is the fitting file type for LOCKBASE master key system files. However if you want to save the file as format template, select the file type "LOCKBASE template (*.lbt)" here. Be sure to save the template in the LOCKBASE directory, so that it can be recognized by LOCKBASE and can be offered in the *System Cover Sheet* (see Chap. III-1, 'System Cover Sheet').

As soon as you select Save, LOCKBASE stores the master key system and names the file in the way it is entered in the field File Name.

Send/Receive Files

This command opens a sub menu, which allows access to the functions of the LOCKBASE B2B module.

LOCKBASE B2B (for 'business to business') is a module for comfortable and secure interchange of master key system files via internet. The B2B module takes care for addressing, compression, encryption and transmission of the data to transfer. By using the 'public key' encryption method 'RSA' the currently highest possible security standard of data encryption is guaranteed.

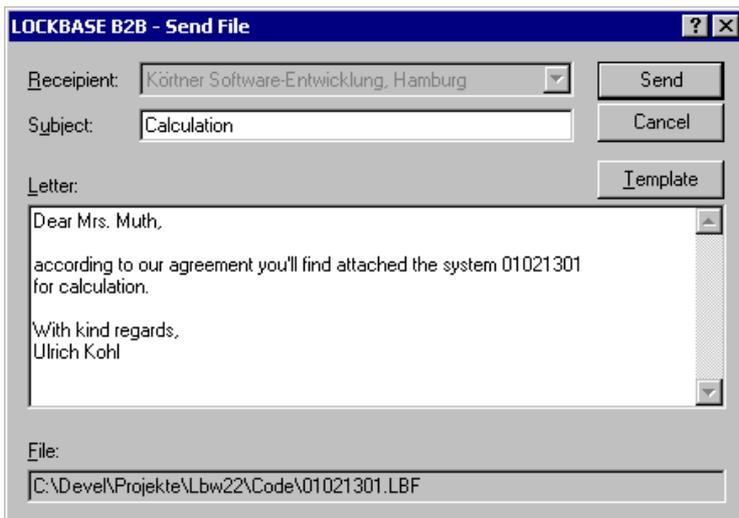


Fig. 5: The dialogue box to send a file

To send the current open file by the B2B module

- select the command **Send current File....**

The dialogue box *LOCKBASE B2B - Send File* appears. The dialogue offers the following entry fields and control elements:

Recipient: Select the recipient of the file to send from this list. If only one recipient is possible the list is deactivated and the correct recipient is already selected.

Subject: Enter the subject of your transmission here. You can enter any text.

Letter: You can enter a covering letter for the transmission here. You can enter any text. The line doesn't break automatically. To enter a line feed, press the ENTER key.

Template: Press this key, if you want to save the text entered in Letter as a template. Then, from now on the text will be the default letter when opening the dialogue box, which has only to be adapted to the respective concern.

File: This field shows the path of the file to send. The field can only be read, but not modified.

Send: Press this button to prepare the file together with the covering sheet for transmission and to end the dialogue. The file will not be sent immediately, unless the option **Automatic Data Exchange** is active (refer to Chap. III-2, 'Send/Receive Files').



Fig. 6: Sending and receipt of files are displayed in the toolbar of the *Main Window*

To send prepared and receive incoming files

- select the command **Data Exchange with the Internet....**

This command starts the B2B data exchange with the LOCKBASE web server. The progress of data exchange is displayed in the toolbar of the *Main Window*. If an error occurs you receive a respective notification.

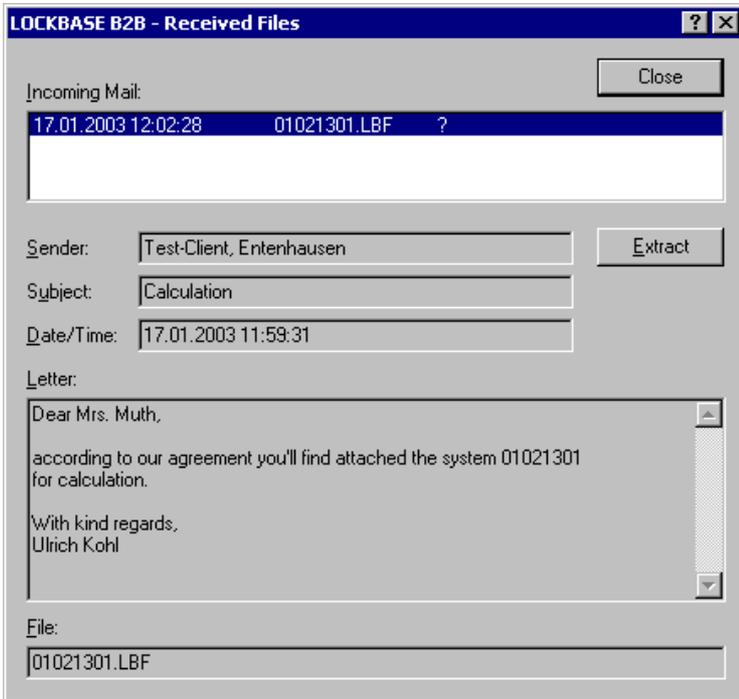


Fig. 7: The dialogue box to receive files

To view and extract incoming mail

- select the command **Received Mail....**

The dialogue box *LOCKBASE B2B - Receive Files* appears. The dialogue offers the following entry fields and control elements:

Incoming Mail: Here the received mail with date and time of receipt and the name of the file attached is listed. More information on the selected file is displayed in the lower fields (see below).

Sender: The short name of the sender.

Subject: The subject of the transmission.

Date/Time: Date and time of sending.

Letter: The covering letter of the sender.

File: The original name of the file transmitted.

Extract: By this button you unpack the selected transmission, i.e. you extract the file attached and store it on your computer. Without unpacking the transmission this way, you can't open the received file. A dialogue box to save the file opens, unless it is the send back of an own file. In this case your copy of the file will be replaced again by the original without any further confirmation.

Fig. 8: The dialogue box to create a visit card

When you start the B2B module for the first time, you have to create your 'B2B visit card'. This way you receive an address, which is unique in the B2B network, and a cryptographic key is created for you.

Fill in the fields, then press the button Next. Now you have to help to generate a sequence of 'real' random numbers, which is necessary to create the cryptographic key. After you pressed Next again, LOCKBASE is ready to create your visit card.

Notes:

- If you have no file open, the command **Send current File...** is not available.
- If you send a file as order a write protected copy of this file is kept on your computer. You can still read the file, however, the write protection saves you from modifying the file, while it is edited by the recipient at the same time.
- If you get back the original file, it will be saved under the old name automatically, as a result of which your copy will be replaced by the original again. That's why you don't have to enter a file name during extraction of the file.
- Your B2B visit card is stored in the file 'LbwB2B.vc' in the LOCKBASE program folder. You have to take care for this file, because you cannot open any mail addressed to you without it. If you ever need to reinstall LOCKBASE on another computer, you have to make sure to move this file to the new computer.

Security note:

- It is important that no unauthorized person gains access to the file 'LbwB2B' in your LOCKBASE folder. This file contains the private part of your cryptographic key. If an unauthorized person gains access to this file, he/she is possibly able to read and modify B2B transmissions addressed to you.

System Cover Sheet

The *System Cover Sheet* serves to administer the data referring to a master key system as a whole. This also includes the system number, details about property, supplier, brand etc. as well as carried out extensions or a password protection for the current master key system. The dialogue box *System Cover Sheet* opens automatically after setting up a new system with the **File - New** command (see also Chap. III-1, 'Creating a New Master Key System'). You can also edit the *System Cover Sheet* later.

To open the dialogue box *System Cover Sheet*,

- click on  in the toolbar or
- select the command **File - System Cover Sheet**.

In the *System Matrix* you can also

- double-click on the system information up left in the *System Matrix*.

The *System Cover Sheet* consists of two areas. The area 'Cover Sheet' contains the general, usually unchanging details of a master key system; while the area 'History' documents the data of already realised extensions.

To display an area

- click on the corresponding tab control  or
- focuss on the active tab control per TAB-key and then use the ARROW KEY LEFT or RIGHT, to display the other area.

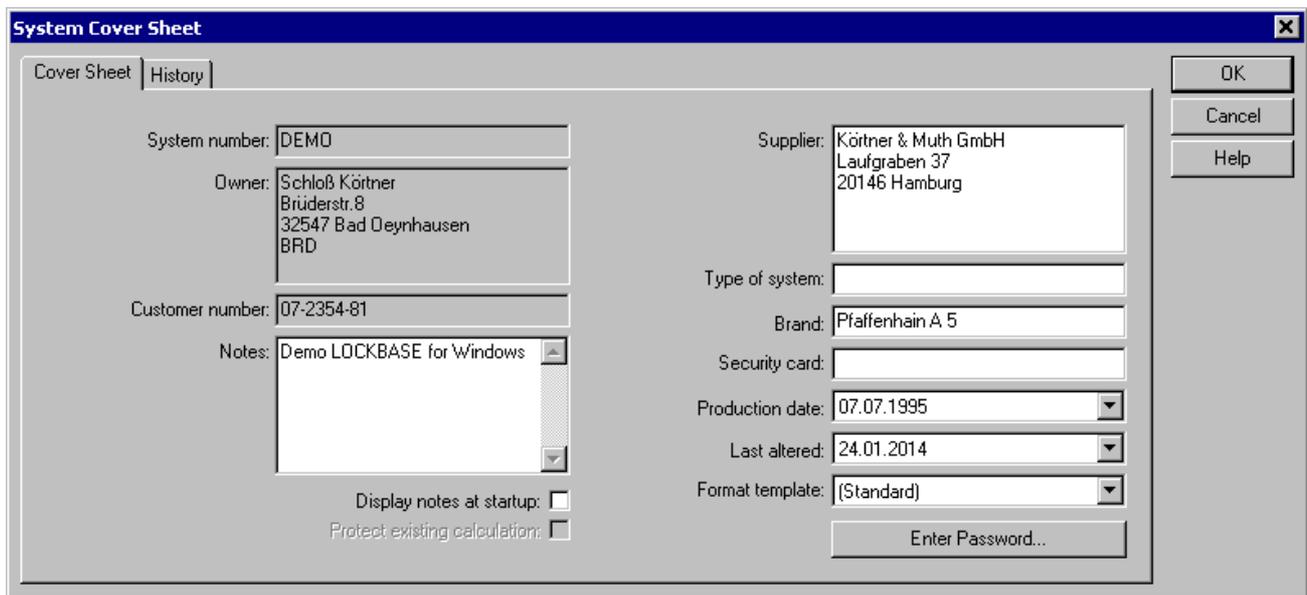


Fig. 9: The area 'Cover Sheet' in the dialogue box *System Cover Sheet*

The area 'Cover Sheet' takes in the following data:

System Number: On creating, the system's number is produced from the current date (year, month, day and serial number respectively two digit). You can also type in a number or name of your own. This field must contain something since LOCKBASE cannot administer any system without a number or name. (This entry field cannot be edited in the *LOCKBASE Manager lite*).

Owner, Customer Number: Enter the customer's data here. (These entry fields cannot be edited in the *LOCKBASE Manager lite*). ENTER starts a new line.

Supplier: This field takes in the address of the master key system supplier. ENTER starts a new line. To leave this field you can click on another field with the mouse or use the TAB key or a combination of ALT+[HOTKEY].

Type of System: Here, the kind of a system can be entered, e.g. Master key system, Central lock system, etc.

Brand: Enter the master key system's brand here.

Security card: This field contains information about a security card issued with the master key system.

Notes: Here you can enter text at will. You leave this field too with the TAB key or a combination of ALT+[HOTKEY].

Display Notes at Startup: Check this box to let LOCKBASE show you the contents of the Notes field as a message when opening a LOCKBASE file. By this you can draw the users attention to important information.

Protect existing calculation: Activate this checkbox to protect an already calculated master key system from modification by other LOCKBASE installations. If this checkbox is activated, only the creator of the calculation is able to make changes, which could affect the calculation. No modifications of numbering or locking functionality of keys or cylinders can be made and keys and cylinders cannot be deleted. However, it is possible to create extensions, i.e. new cylinders and keys can be created and can be connected even to already existing cylinders resp. keys. This feature supports data exchange with other companies.

Production Date, Last altered: These fields are filled respectively with the current date. They can however be altered and edited.

Enter Password / Change Password: This button opens the dialogue box *Enter Password*, where you can define a password for this master key system to protect the file. After a password was entered, the button changes its title to *Change Password* (refer to Chap. III-1, 'Password').

Format Template: With this selection list you choose a format template for a master key system. All format templates found in the LOCKBASE directory will be offered. All existing formattings, fonts and line formats of data views and dialogues as well as the adjustments of all print forms (see Chap. IX-4, 'The LOCKBASE Documents') will be replaced by the format template's adjustments. If not already filled out, the contents of the fields Supplier, Type of System and Brand will be copied from the template.

Note:

- To set up a format template, simply save a file with the ending 'lbt', that was formatted according to your needs, in the LOCKBASE directory (see Chap. III-1, 'Save a Master Key System File under a new Name').
-

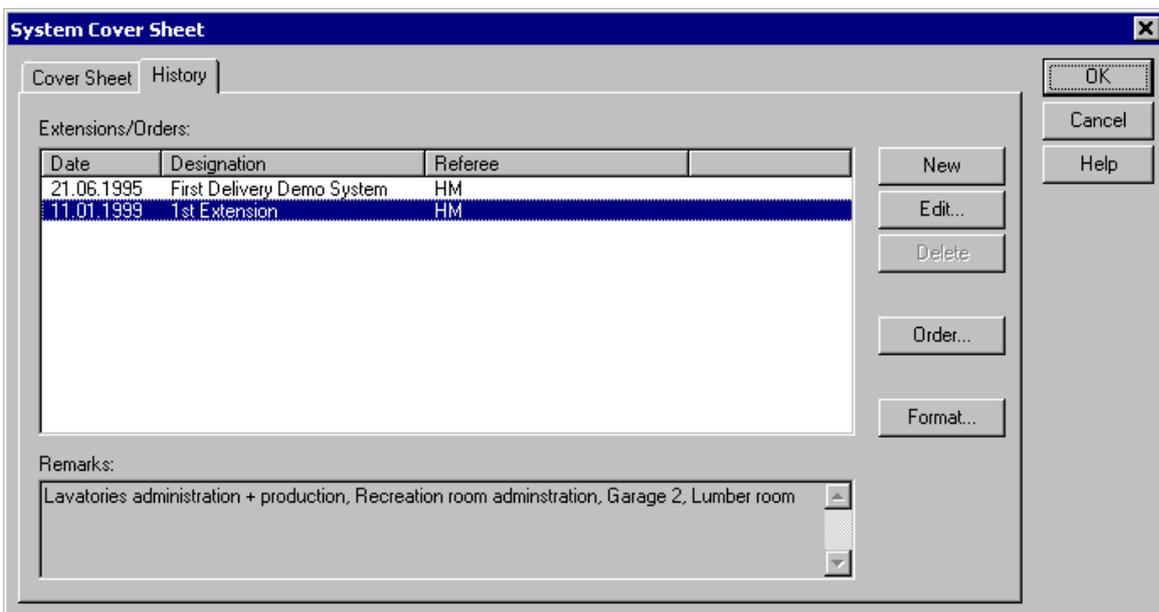


Fig. 10: The area 'History' of the dialogue box *System Cover Sheet*

The area 'History' contains the following data fields and controls:

Extensions/Orders: All extensions to the master key system will be listed here. If no extensions were added up to now, only the entry will be available. The contents of the list can be modified by the buttons New, Edit..., Delete and Format... (s.b.).

New: By pressing this button you will create a new extensions record. The dialogue box *Edit Extensions/Order* will open (s.b.). In its field Designation the text '' will appear and the date fields will be set to the date of the day. Replace these defaults by your own entries. If you leave the dialogue by OK the new entry will be displayed in the list.

Edit...: This button will open the dialogue box *Edit Extensions/Order* (refer to Chap. III-1, 'Order Management'), which can be used to edit the entries in the list Extensions/Orders.

Delete: By pressing this button entries can be removed from the list Extensions/Orders. The button is not available unless the order to delete is empty, i.e. if no cylinders or keys are assortet to the order (refer to Chap. III-1, 'Order Management'). A confirmation request will save you from unintended removes.

Order...: This button will open the dialogue box *Order Administration* (refer to Chap. III-1, 'Order Management'), which allows to assort cylinders and keys to the selected order.

Format...: This button opens the dialogue box *Line Form* to modify the appearance of the list Extensions/Orders (see Chap. IV-2, 'Line Formatting and Sorting'). The sequence of the fields determines the appearance of the output ranges for cylinders and key copies in the print selection dialogue (refer to Chap. IX-1, 'The Print Selection Dialogue') and in the machine interface (refer to Chap. III-1, 'Machine Interface'), because there the contents of the first field appearing in the list will be offered for output range selection.

Remarks: Here the comments added to the order will be displayed (refer to Chap. III-1, 'Order Management'). This field cannot be modified.

Order Management

The purpose of the order management is to document all processed modifications and extentions of a master key system. For each extension a record can be created, which holds all relevant order data and can be connected to the belonging cylinders and keys. In addition in the print module and in the machine interface cylinder and key records can be selected by the order they belong to.

The order management is a part of the System Cover Sheet and can also be reached through the area 'History' of the dialogue box *System Cover Sheet* (refer to Chap. III-1, 'System Cover Sheet').

The following commands are available in the menu **Order management**:

File - Order Management - Open new order: This command creates a new order and opens the dialogue box *Edit Extensions/Order* (s.b.). This command is not available unless all existing orders are closed.

File - Order Management - View orders: This command opens the area 'History' of the dialogue box *System Cover Sheet*, containing the list with all documented extensions/orders.

File - Order Management - Close current order: This command closes the last recently created order by writing the current date to the field Ended of the order record (s.b.). The command is only available if the last recently created order is not yet closed.

Fig. 11: The dialogue box *Edit Extensions/Order*

The dialogue box *Edit Extensions/Order* lets you create and edit order records. You can reach the dialogue box

- by the command **File - Order Management - Open new order**, or
- by the the button New or Edit... in the area 'History' of the dialogue box *System Cover Sheet*.

The dialogue box *Edit Extensions/Order* offers the following controls and data fields:

Designation: Enter a designation for the extension here.

Registration No.: If desired enter a registration number for the extension here.

Referee: You can give a referee for the extension here. When a new extension is created, LOCKBASE by default enters the Windows user name of the person currently logged on.

Customer Number: Enter the customer number of the customer here. In the selection list you will find all customer known to the system up to now, whose number matches you input. In case the customer to find is available, you can fill the contents of the fields Customer, Contact and Customer Stamp by simply selecting the list entry.

Customer: Here enter the customer's address.

Contact: Enter name and contact information of a contact person at the customer here.

Customer Stamp: Here you can enter information about a possible customer stamp.

Started: Select the day the extension was started.

Ended: Select the day the extension was finished. Selecting a date in this field closes the order. Now the assorted cylinders and keys cannot be moved to other orders anymore (s.b., *Order Administration*). To open again a closed order you have to deactivate this field.

Date of Order: You can give the extensions date of order here.

Date of Delivery: You can give the date of delivery here.

Shipping: If desired you can enter the type of shipment here.

Remarks: You can leave additional remarks concerning the extension event here.

Windows Note:

- To set your PC's automatic calendar, open the Windows **Start** menu and select **Settings - Control Panel - Date/Time**.
-

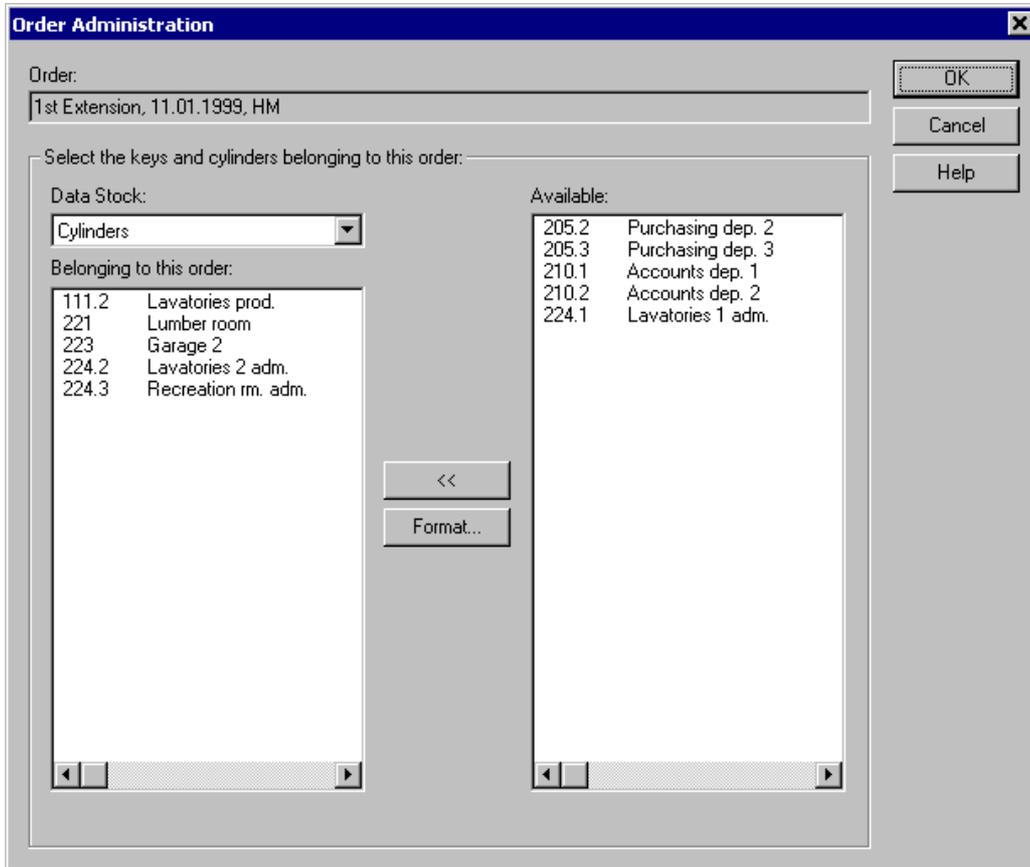


Fig. 12: The dialogue box *Order Administration*

Using the dialogue box *Order Administration* you can assort cylinders and keys to orders. By default new cylinders and keys will be assorted to the last recently created, not closed order. If all existing orders are closed, a new order record will be created for the new data.

Using the dialogue *Order Management* you can manually assort cylinders and keys to orders. You open the dialogue box by

- pressing the button Order... in the area 'History' of the dialogue box *System Cover Sheet*.

The dialogue box *Order Management* offers the following controls and data fields:

Order: Here the order to assort the data to will be displayed. This field cannot be modified.

Data Stock: Select the type of data (cylinders or keys) you want to administrate here.

Belonging to this order: Here the cylinders resp. keys will be displayed, which are currently assorted to the order.

Available: Here the cylinders resp. keys will be displayed, which do not belong to the order, but can be assorted to it. In this list all records can be found, which are currently assorted to another, but not closed order.

>>: The button allows to move the selected records in the list Available to the list Belonging to this order, which will assort them to this order.

Format...: This button opens the dialogue box *Line Form* to modify the appearance of the two lists (see Chap. IV-2, 'Line Formatting and Sorting').

Note:

- To move cylinders or keys from one order to another the old order must not be closed. To open again a closed order you have to deactivate for this order the field **Ended** in the dialogue *Edit Extensions/Order*.

Password

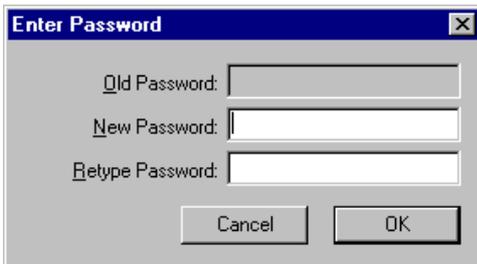


Fig. 13: The dialogue box *Enter Password*

With the dialogue box *Enter Password* you can define a password that is requested to open the file. You can also alter an existing password.

The dialogue box offers the following entry fields:

Old Password: This field is not available at the first password entry. If a password is already entered, you have to enter the password before you can set a new one.

New Password: Enter the new password here. If you do not enter a password the system file is unprotected.

Retype Password: If you have entered a new password, you have to repeat it here. If both entries are not identical you get an error message.

Security Note:

- For security reasons the password's characters appear as little asterisks (*) on the screen. Be sure that nobody can follow your strokes on the keyboard.
-

Machine Interface

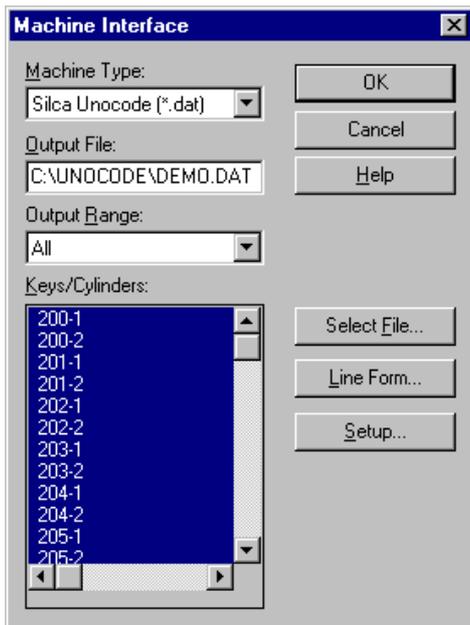


Fig. 14: The dialogue box *Machine Interface*

If you selected the command **File - Machine-Interface** the dialogue box *Machine Interface* opens. Here you can create a file containing key biting or cylinder pinning information of a certain master key system for transfer to a computer controlled key cutting or automatic pinning machine.

The dialogue box contains the following entry fields:

Machine Type: Select the type of machine to use.

Output File: The data will be written to the entered file.

Output Range: Here you specify a selection of data sets to be displayed in the Keys/Cylinders list. You can select keys set up at a certain date or all keys/cylinders of the master key system.

Keys/Cylinders: This list contains all keys or cylinders of the output range. You can select some or all of the keys to be cut.

Select File: This button opens the dialogue box *Export Data to*. Data will be exported to the file you specify here.

Line Form: This button opens the dialogue box *Edit Line Form Key Copies*. You can alter the layout of the list Keys/Cylinders.

Setup: This button is available if the key cutter needs additional information. It opens the dialogue box *Key Cutter Setup*. If - e.g. - the output should be directed to the SILCA Unocode, you have to assign a certain card number to every brand that you use.

Note:

- In the setup dialogue of the machine 'Silca SSI (*.dat)' (Silca Software Interface) besides the card number you can optionally define the related 'cuts included' line (line 4 in the header of the SSI file). This may be necessary if the chosen SILCA card does not support all biting axes of the brand or expects them in a different order. To do so add a semicolon after the card number, directly followed by the assorted 'cuts included' line, e.g. '575;#Y,X,0,1,2,3,4,5,6,7,8,9' or in general '[Card number];[cuts included]'. To find out the correct 'cuts included' line for a given card number you have to contact SILCA.
-

Create Manager lite

Is this input valid ?

System Number: 00070402

Owner: Schloß Körtner
Brüderstr.8
32547 Bad Oeynhausen
BRD

Customers No.: 07-2354-81

Licence:

Serial Number: 721D7FDF

Licence Number:

Enter Drive/Path of Manager lite disk:
A:\

Fig. 15: The dialogue box *Create LOCKBASE Manager lite*

This dialogue box enables suppliers of master key systems to create a *LOCKBASE Manager lite* or a *LOCKBASE Matrix Viewer*. The *Manager lite* is a small program to administer a single master key system. The customer usually gains it together with a master key system from his supplier. The *Matrix Viewer* is a program to review a lock chart. It usually supports the communication between suppliers of master key systems and their clients during the ordering phase of a master key system.

With the *LOCKBASE Manager lite* and *Matrix Viewer* no changes to technical data is possible. E.g. no key functions and cylinders can be added. Technical information (cylinder pinnings, key combinations, etc.) is not visible. Those changes can only be done with the supplier's *LOCKBASE* version.

The *LOCKBASE Manager lite* includes only the *Data Lists*, the *LOCKBASE Matrix Viewer* only the *System Matrix*. Everything can be printed out except the technical print documents (e.g. key cutting list). Both programs work only with the single system file they were created for.

The *LOCKBASE Manager lite* is no "public domain" software. The supplier can acquire a licence from his *LOCKBASE* supplier. As a licence he gets a licence code which enables him to create a *LOCKBASE Manager lite* installation file. However, without a licence code a *Manager lite* demo can be created. The demo allows the customer to view and print the master key systems data.

To create a *Manager lite* installation file proceed as follows:

- Select command **File - Create Manager lite**.

The dialogue box *Create LOCKBASE Manager lite* opens. It offers the following entry fields:

System Number, Owner, Customers No.: These entry fields correspond to the dialogue box *System Cover Sheet*.

Program Type: Choose the program type here, either 'Manager lite' or 'Matrix Viewer'.

Serial Number: This entry field contains the unique serial number of the *LOCKBASE Manager lite* version. It cannot be edited.

Licence Number: Enter your licence code here (see below). If no licence code was entered, *LOCKBASE* creates a *Manager lite* demo diskette. The field is disabled if the system is already licensed.

Follow the steps below to successfully create a *LOCKBASE Manager lite* installation file:

1. Create a *LOCKBASE* system file and complete the data entry, specification and calculation of the system. Take care that in the *System Cover Sheet* all customer entry fields contain valid data. It cannot be altered later on.

2. With your customer's file open call the dialogue box *Create LOCKBASE Manager lite* by the command **File - Create Manager lite**.
3. If you don't want to create a demo or Matrix Viewer only, call your LOCKBASE supplier for the licence code. Your LOCKBASE supplier will ask you for the contents of the field Serial Number (see above). Enter the licence code into the entry field Licence Number.
4. Press the button OK. If all entries are correct, LOCKBASE creates the *LOCKBASE Manager lite* installation file on your desktop. Otherwise you get corresponding messages.

Notes:

- Take care that in the *System Cover Sheet* all customer entry fields contain valid data. It cannot be altered later on.
- You can easily create a free demonstration file for your customers. To do so proceed the steps to create a *Manager lite* file but leave the field Licence Number empty.
- A master key system has to be unlocked only once for the *Manager lite*. Afterwards changes and expansions of the system can be carried out and transferred to the customer without any more licensing.

Export Ordering Software (C2B)

LOCKBASE C2B is an ordering system for master key systems, which was designed to make data exchange between customer and locksmith resp. lock factory easier and more secure. It consists of three components:

1. A tiny ordering program, the LOCKBASE Create Assistant (LbwC2B), which will be used by the customer and allows him to create a master key system in a quick and easy way without having to know much about master key systems;
2. an internet service (C2B-Web-Service), which processes and secures data exchange between customer and locksmith/factory;
3. a reception module (C2B module) as part of the LOCKBASE installation of the locksmith/factory, which allows LOCKBASE to receive master key systems ordered via C2B.

LOCKBASE C2B uses high secure 'public key' encryption (RSA) to secure the data transfer as well as a transparent addressing method ('B2B visit cards') to make data exchange easier and to increase reliability.

To create the first component, the ordering software for the customer,

- choose the command **File - Export Ordering Software (C2B)**

The dialogue box *Save As* opens, which allows to select a storage location for the ordering program 'LbwC2B.exe'.

The file 'LbwC2B.exe' contains all necessary components and can be directly executed by the customer without previous installation. The file can be sent by email to the customer or can be offered for download on the locksmith's/factory's web site.

During export the program 'LbwC2B.exe' will be customized for your LOCKBASE installation. It contains your B2B visit card (see Chap. III-1, 'Send/Receive Files') and optionally a format template (see Chap. III-1, 'System Cover Sheet') adjusted by yourself, which should be stored under the name 'LbwC2B.lbt' in your LOCKBASE directory. For this reason you should create a new 'LbwC2B.exe' whenever you modified the format template, installed a LOCKBASE update or created a new B2B visit card for yourself.

Last recently used Files

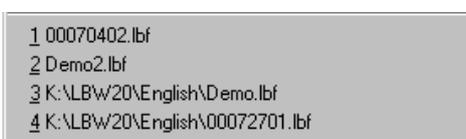


Fig. 16: The list of the last recently used files

In the lower half the menu **File** contains, numbered, the names of the most recently used files. If you wish to continue working on one of these systems, you merely have to choose one of the file names to open. The underlined cipher is a hotkey.

Ending LOCKBASE

With this command you end a LOCKBASE session:

- Double-click on the system menu field  in the top left corner or
- select the command **File - Exit LOCKBASE** or
- press ALT+F4.

The *Main Window* and the currently opened master key systems will be closed. If one of them was newly set up or altered since the last saving, you will receive a security query which protects you against data loss.

Security Note:

- Never switch off your PC before all programs have ended, otherwise serious data damage on your hard disk could result.
-

2. Adjustments of the LOCKBASE screen

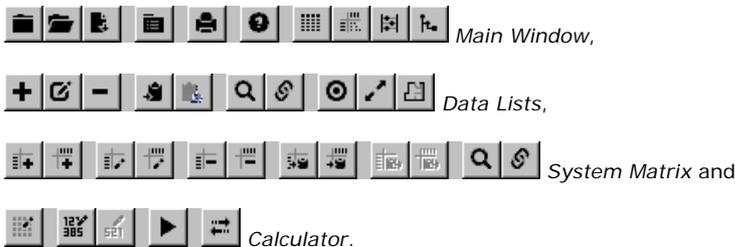
With the aid of the commands from the menu **Options** you can adjust the LOCKBASE screen and the LOCKBASE work surrounding. The options which can be toggled, are marked in the menu with a hook ✓ if they are switched on.

Switching Toolbars on and off

Select the command **Options - Toolbar** to switch the LOCKBASE toolbars on and off.

Toolbars allow easier access by mouse to many commands.

The toolbars of:



The little buttons serve mouse users to have commands carried out faster. If you wish to know which command is behind a certain symbol, point to it with the mouse. After some seconds an explanation appears.

Switching the Status Bar on and off

Select the command **Options - Status Bar** to switch on the status line at the bottom edge of the window and off.

The status bar at the bottom of the LOCKBASE window shows useful information and short explanations when you mark a command in the menu.



Fig. 17: Status bar

The meaning of the toolbar buttons will also be displayed in the status bar if you point to it with the mouse cursor.

During creation of data sets and other time consuming operations information about the status of the operation is displayed there.

At the right side of the status bar is displayed if the NUMLOCK, SCROLL and/or CAP key is pressed.

Open Recently Used File

The command **Options - Open Last Recently Used File** (not in version LOCKBASE *Manager lite*) tells LOCKBASE to automatically open the system you last edited on startup.

Automatically Opening of LOCKBASE Windows

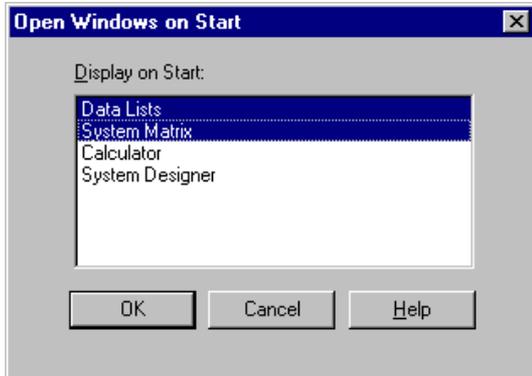


Fig. 18: The dialogue box *Open Windows on Start*

With the command **Options - Open Window on Start** (not in version LOCKBASE *Manager lite*) you decide which of the four windows (*Data Lists*, *System Matrix*, *System Designer*, and *Calculator* - *Calculator* only in the LOCKBASE *Professional* and *Calculator* versions) LOCKBASE should display on starting a new master key system or opening an existing one.

- Mark the window you want to open automatically with a mouse-click or with the SPACEBAR. Deselect them in the same way.

Note:

- This adjustment is stored automatically.
-

User Administration

The user administration allows the registration of an unlimited number of LOCKBASE users with different access and modification rights to the data of a master key system. By this the number of error sources can be minimized in the workflow of companies, where multiple persons with different tasks need access to a master key system.

To open the user administration,

- choose the command **Options - User Administration**.



Fig. 19: The dialogue to change the password

The user administration can only be opened by an administrator (s.b.). If a normal user selects this command, a dialogue appears, which can be used by a regular user to change his/her login password.

This dialogue contains the following entry fields:

Username: The username of the current user. The contents of this field cannot be modified.

Old Password: Enter your old LOCKBASE password here.

New Password, Retype Password: Enter your new LOCKBASE password in these two fields. The second field serves to recheck the entry in the first field. By this typing errors during the entry of the password can be avoided.

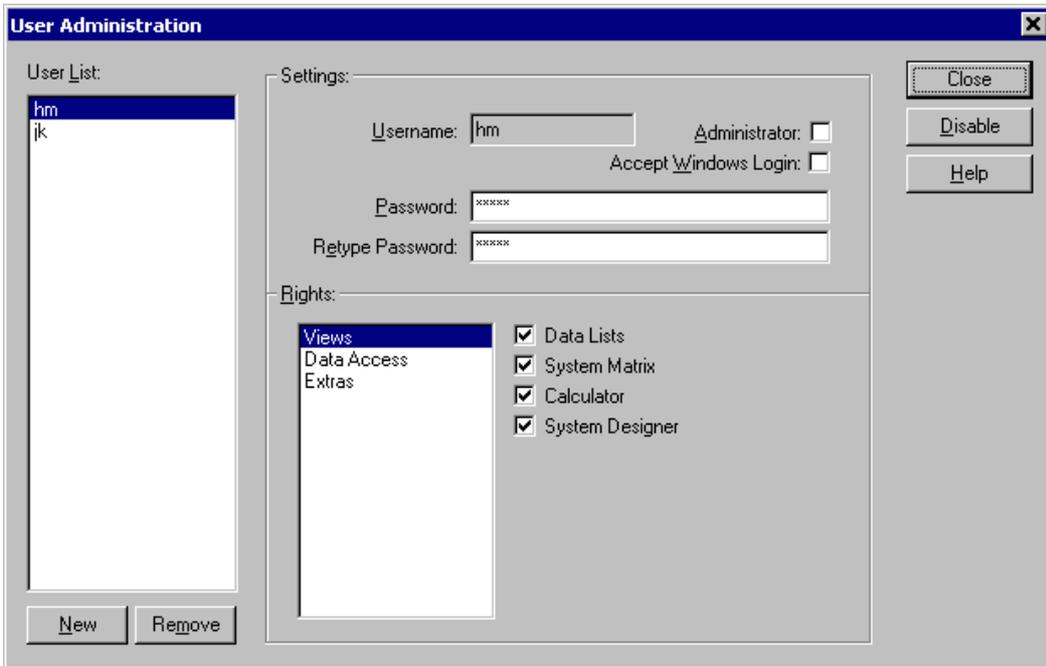


Fig. 20: The LOCKBASE user administration

The administration of the user rights is reserved for the administrators. Only they have access to the user administration. This is the reason, why always at least one administrator has to exist. Therefore LOCKBASE automatically creates an administrator during the first initialisation of the user administration (refer to Chap. 1-2, 'Log on to LOCKBASE').

When an administrator selects the command **Options - User Administration** the complete user administration appears. The dialogue offers the following entry fields and control elements:

User List: The list of all users registered for the use of LOCKBASE, displaying the username. Select the user here, whose properties should be modified.

New: Use this button to create a new user. The command saves the changes of the current user and afterwards creates a new user with empty property fields. Enter the new username, password and rights in the respective fields.

Remove: This button removes the currently selected user. You can remove all users, except yourself.

Username: The username of the user, like appearing during the login (refer to Chap. 1-2, 'Log on to LOCKBASE') and in the list User List. The username is obligatory, must not contain blank characters and must be unique, i.e. every username can only be used once. It is recommended to use the Windows username also for LOCKBASE, because it is the default suggestion for the username during login.

Password, Retype Password: Enter the password of the user in both fields. The second field serves to recheck the entry in the first field. This avoids typing errors when entering the password.

Administrator: Activate this check box if the current user should have administrator privileges. An administrator always has all available rights and additionally is allowed to register new users and to modify or remove existing ones. Therefore

you should be careful granting the administrator privilege. However, there must be at least one administrator. Therefore LOCKBASE automatically creates an administrator during the first initialisation of the user administration (refer to Chap. I-2, 'Log on to LOCKBASE').

Accept Windows Login: Activate this checkbox if an explicit login should not take place, but the user should be logged on to LOCKBASE automatically by his/her Windows username. The registered password will be ignored in this case. Users which should be logged on automatically, have to be registered in the LOCKBASE users administration with their Windows username. Otherwise a regular login will be run (refer to Chap. I-2, 'Log on to LOCKBASE').

Rights: The user rights are separated into different sections, which are displayed in this list. Activate one of these sections to display the respective rights right beside the list. For a detailed description of the available rights and their meaning, see below.

Close: This button ends the user administration. The changes are saved and the dialogue window will be closed.

Disable: This button deactivates the user administration. If the user administration is deactivated, every person with access to the computer can use LOCKBASE without any limitations. This can be useful, if LOCKBASE is used only by one person and access to the program is not possible for unauthorized persons. Already registered users are kept and can be reactivated anytime by running again the command **Options - User Administration**.

To allow easier access and better overview, the LOCKBASE user rights are separated into several different sections. However, it depends on your LOCKBASE configuration, whether a certain right is available or not. For example, if your LOCKBASE has no *Calculation Module*, the right Calculator will not appear. The following is a detailed description of every user right and its meaning.

Section Views contains the access rights to the different LOCKBASE views:

Data Lists: The user is allowed to use the *Data Lists* (refer to Chap. V, 'The Data Lists').

System Matrix: The user is allowed to use the *System Matrix* (refer to Chap. VI, 'The System Matrix').

Calculator: The user is allowed to use the *Calculator* (refer to Chap. VII, 'The Calculator').

System Designer: The user is allowed to use the *System Designer* (refer to Chap. VIII, 'The System Designer').

Section Data Access contains data access limitation rights:

Technical Data: The user is allowed to view and modify technical data, like key bittings, cylinder pinnings, or profiles.

Modify calculated systems: If this right is granted, the user is allowed to modify and delete data sets in the existing part of a system (already calculated) as well as to add new data sets and connections. If the right is revoked, the user can only make extensions to existing systems. He/she is allowed to work in the new part of the system (not calculated), but is not allowed to modify old cylinders, key functions nor connections among them. However, he/she is allowed to create and remove connections between old and new data sets.

Section Extras covers rights concerning additional features or access to add-on modules:

Machine Interface: The user is allowed to operate the *Machine Interface* (refer to Chap. III-1, 'Machine Interface').

Internet Data Exchange (B2B): The user is allowed to exchange data via internet.

Load and install updates: The user is allowed to load and install LOCKBASE updates from the internet (refer to chap III-4, 'Information on LOCKBASE').

Notes:

- If the selected user is an administrator, the control elements in the area Rights are disabled. If you want to modify the rights of a user, first you have to revoke the administrator right by deactivating the check box Administrator.

- If you receive error messages while changing the current user or closing or deactivating the user administration, the data entered for the current selected user is incomplete or incorrect. Enter the missing values and correct the mistakes, then try again. If you have created a new user by mistake, which should not be taken over into the user administration, simply delete him/her using the button Remove.
- If the user administration was disabled, it can be reactivated by running again the command **Options - User Administration**. Afterwards you have to end and restart LOCKBASE to let the change take effect.

Send/Receive Files

The command **Options - Send/Receive Files** opens a sub menu for the settings of the LOCKBASE B2B module (refer to Chap. III-1, 'Send/Receive Files').

To switch on or off automatic data exchange via internet

- select the command **Automatic Data Exchange**.

A little hook ✓ beside the menu entry shows, whether the setting is active or not.

To administrate your B2B visit cards

- choose the command **Administratate B2B Visit Cards**.

The dialogue box *LOCKBASE B2B - Administrate Visit Cards* opens.

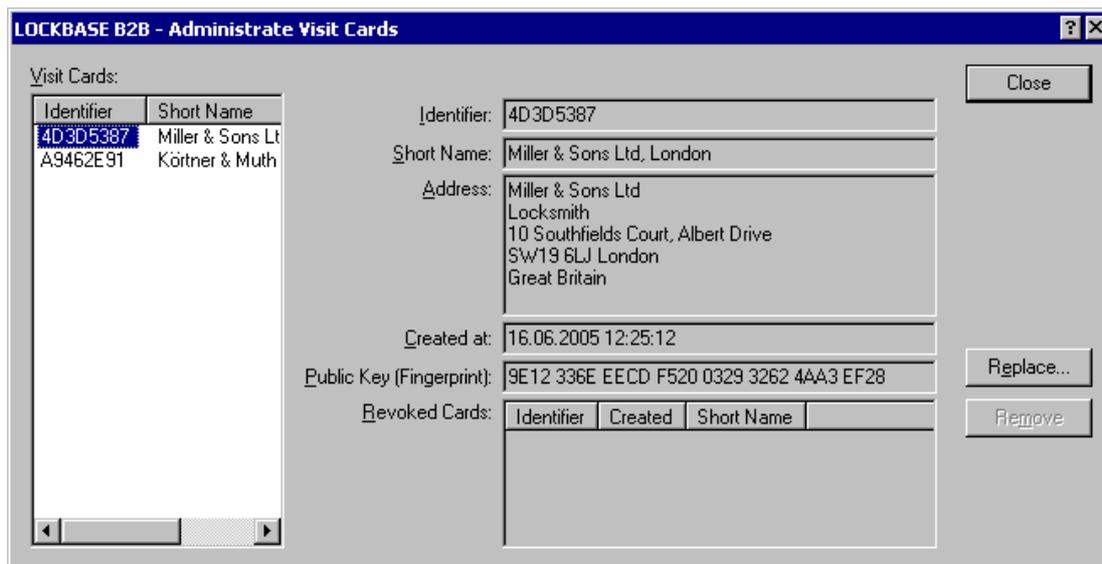


Fig. 21: The dialogue box *LOCKBASE B2B - Administrate Visit Cards*

The dialogue box *LOCKBASE B2B - Administrate Visit Cards* offers the following data fields and commands:

Visit Cards: This list shows all visit cards stored in your adress book. The first entry shows your own card. Select the card you want to administrate.

Identifier: This field displays the identification number of the selected card, which is unique for each card.

Short Name: Here the short name of the card holder will be displayed.

Address: Here you will find the complete adress of the card holder.

Created at: This field shows the creation date and time of the card.

Public Key (Fingerprint): This field shows a checksum of the public key of the card, the so called fingerprint. The fingerprint allows to verify the identity of the cryptographic key, for example by comparing it to the fingerprint of the card holder on telephone.

Revoked Cards: This is a list of revoked keys of your card. You can create a new cryptographic key for your own card, which locks your old key for sending files. However, it can still be used to receive files. If you want to delete the key finally, select it in this list and press the button **Remove** (s.b.).

Replace...: This command allows to create a new cryptographic key for your card. This can be necessary, if you fear, an unauthorised person might have gained access to your private key. An assistant leads you through the creation process. Please notice that an authenticated key replacement by the B2B environment is not free of charge!

Remove: This command allows to delete the visit card of a receipt or a revoked key. If you remove a receipt's card, you will not be able to send files to this address anymore. If you remove a revoked key, you will not be able to receive any files, which possibly still have been encrypted by this key.

Print

The command **Options - Print** opens a sub menu to adjust global settings of the LOCKBASE print module (refer to Chap. IX, 'Printing Documents').

To keep the *Print Selection Dialogue* open after print (e.g. in case you are not able to print all required documents in one pass)

- select the command **Keep print selection open after print**.

A little hook ✓ beside the menu entry shows, whether the setting is active or not.

Format Template...

To open the dialogue *Settings Format Template*

- select the command **Format Template...**

The dialogue box *Settings Format Template* will open.

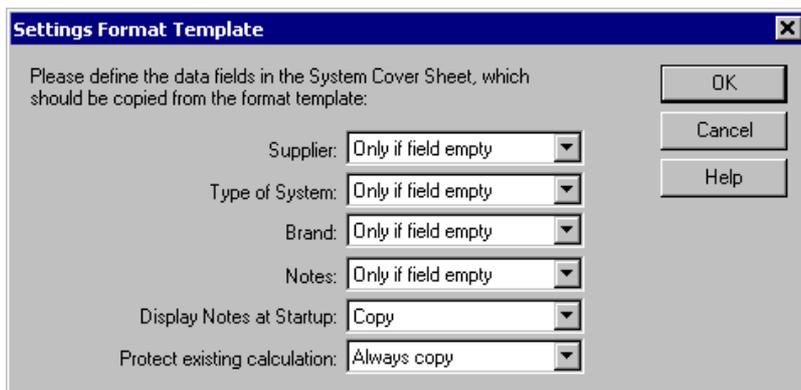


Fig. 22: The dialogue *Settings Format Template*

The dialogue allows to administrate how the data of the *System Cover Sheet* initialized from a format template (.lbt file). For each data field in the *System Cover Sheet* you can select, whether at all and under which conditions its contents will be copied from the selected format template.

The dialogue contains the following entry fields:

Supplier, Type of system, Brand, Notes, Display notes at startup, Protect existing calculation: Each field represents the data field in the *System Cover Sheet* with the same name. Select the copy policies for the respective field here.

Choose one of the following copy policies:

Don't copy: Don't copy the field at all from the format template, keep the target field as it is, regardless of its current contents, even if its empty.

Only if field empty: Copy the contents of the field from the format template only if the target field in the *System Cover Sheet* is empty. This setting protects user input from being overwritten by applying a format template.

Always copy / Copy: Always copy the contents of the field from the format template, regardless of the target field's current contents. Always overwrite the target field, even if the field in the format template is empty.

Note:

- The settings in this dialogue apply to all format templates.
 - For the field Display notes at startup only the choices 'Don't copy' and 'Copy' are available.
-

Language

The command **Options - Language** opens a sub menu to select the language of the Lockbase user interface.

The sub menu contains all languages currently installed for Lockbase. To select a language simply

- activate the respective sub menu entry.

A little hook ✓ beside the menu entry marks the current selected language.

Note:

- In the dialogue *Edit Line Form* and in the *Print Format* dialogue you can enter individual field names, document names and titles for each language. This allows to create multi language documents and format templates (refer to chap. IV-2, 'Line Formatting and Sorting' and chap. IX-3, 'Form').
-

3. Window operation

Working with a master key system file it is often required to open various windows or switch between the windows. E.g. the key holders' data stock could be edited only in the *Data Lists*, the key functionality can best be seen in the *System Matrix* and the calculation of a system is only possible in the *Calculator*.

Arrange, Open and Change Windows

The **Window** menu contains a series of options with which LOCKBASE windows can be opened, changed or arranged as icons. It first appears when a master key system is opened or newly set up and contains various commands depending on which window is in the foreground.

Besides window changing the menu **Window** serves further commands with which the order of the LOCKBASE windows can be changed:

Window - Cascade: This command arranges all opened windows overlapping in the LOCKBASE program window so that none of them is completely covered in the background. Mouse users could simply change the windows per mouse-click.

Window - Tile: This command arranges all opened windows below and next to each other in the LOCKBASE program window, so that a section of the same size can be seen of each window.

Window - Arrange Icons: To arrange the windows diminished to icons evenly.

Open Data Lists, Open System Matrix, Open Calculator, Open Designer: These commands open one of the stated windows if not already opened on start or closed in the meanwhile.

In the lower part of the menu **Window** the names of the LOCKBASE windows are numbered consecutively so that even without the aid of the mouse you can change to possibly hidden or reduced windows.

LOCKBASE offers various possibilities of changing between the windows *Data Lists*, *System Matrix*, *System Designer* and *Calculator*.

To open the *Data Lists*

- click on  in the toolbar or
- select the command **Window - Open Data Lists** or
- choose the hotkey CTRL+L.

To open the *System Matrix*

- click on  in the toolbar or
- select command **Window - Open System Matrix** or
- choose the hotkey CTRL+S.

To open the *Calculator* proceed as follows:

- Click on  in the toolbar or
- select the command **Window - Open Calculator** or
- choose the hotkey CTRL+R.

To open the *System Designer*

- click on  in the toolbar or
- select the command **Window - Open Designer** or
- choose the hotkey CTRL+D.

With each of the three methods you place the desired window into the foreground, even when it is not yet opened or diminished to an icon.

To change through all the windows opened and reduced to an icon in order, press CTRL+F6 (or CTRL+TAB).

The menu **Window** offers at the bottom end a list of all windows currently opened. With their aid you quickly change to a certain window. The underlined number works as a hotkey.

Closing Windows

When you have finished your work with a master key system, you could close the opened windows (*System Designer*, *System Matrix*, *Calculator* and *Data Lists*) with the command **File - Close** belonging to the currently active master key system. Other master key systems possibly opened and the LOCKBASE program window remains opened however.

If the master key system was newly set up or edited and not yet stored, a security query appears to save you from data loss.

4. Online Help

LOCKBASE offers a very comfortable *Help* program. You have various possibilities to get "online" information and cues during your work with LOCKBASE.

There are three ways to get start the *Help* program.

- click on  on the toolbar or

- press F1 to call help relevant to context or
- select ? - **Contents** to see the contents of the *Help*.

Context Sensitive Help

For obtaining assistance on a theme you are on at the moment (for example you are just working with the *Data Lists*), you can call up help on the theme directly by mouse and keyboard.

With a click on  on the toolbar, the mouse cursor transforms itself from the normal arrow into a mouse help cursor . Click on a bitmap in a toolbar, a command word in a menu or any other object. The LOCKBASE *Help* starts and displays the help text for the object in question.

If you start the LOCKBASE *Help* with the key F1, you receive the explanations regarding the window or dialogue box that is in the foreground at the time, i.e. on the current state of your work. This is called "context sensitive help". F1 in a dialogue box has the same effect as the button [Help](#).

Contents of the LOCKBASE Help

The command ? - **Contents** in LOCKBASE starts the *Help* program and shows the first page of the LOCKBASE *Help*, the index. You can page in the *Help* program and search or go from topic to topic by cross references by clicking on the coloured words (= topics).

Moving in the LOCKBASE Help

You can page in the *Help* by the  buttons. This way you get from one theme to the next regarding contents. This is especially recommended for the *Help* theme "First Steps".

At the end of each topic you find a line "Choose one of the following topics" and a list of themes with similar contents.

If you do not find the topic to which you require help in the text, follow the instructions below:

1. Click on the button [Contents](#).
2. Use the search function of your browser to locate a topic (e.g. press CTRL+F). Let us assume you would like to know how to set up connections between sets of data, then search for "Conn". Matches will be highlighted.
3. Click on one of the highlighted expressions. Subsequently you receive a help text displayed.

The LOCKBASE *Help* will be displayed in your web browser, which is superimposed on the LOCKBASE window.

To return to LOCKBASE, you can

- end the browser (**File - Exit** or ALT+F4) or
- minimise the browser window to an icon or
- press ALT+TAB or ALT+ESC. Don't let go ALT until the LOCKBASE window has been named, respectively displayed.

Notes:

- You can print the manual using the button [Print Version](#) at the top of each page, which will display a version of the help optimized for printing. Use the print function of your browser to output this version to a printer.
 - You can also get help on using the *Help* by selecting the menu ? - **How to Use Help**.
-

Information on LOCKBASE

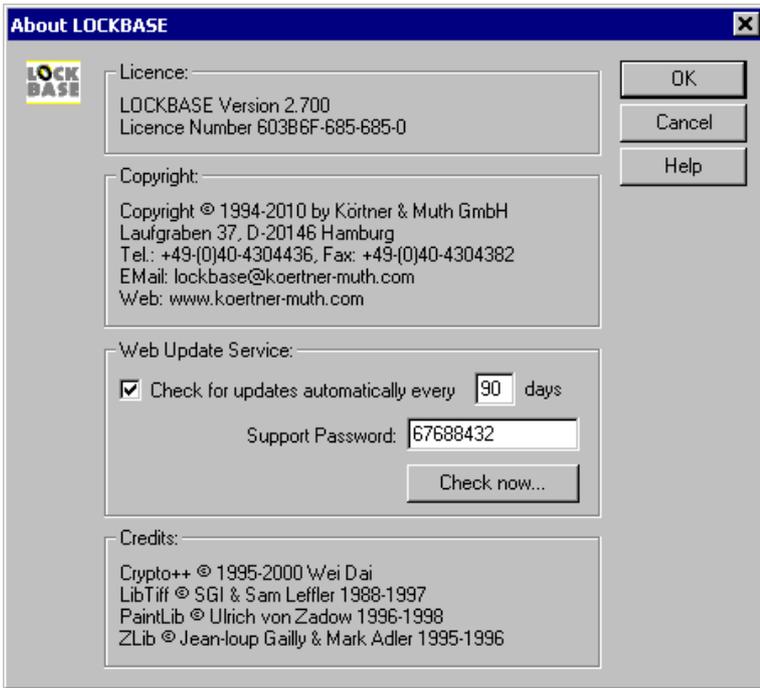


Fig. 23: The dialogue box *About LOCKBASE*

In the **Help** menu you will get further important information on LOCKBASE.

- Select the command ? - **About LOCKBASE**.

This dialogue box informs you about revision state and serial number of your LOCKBASE licence and displays copyright and acknowledgement information. Moreover you can check, whether meanwhile an update of your LOCKBASE licence has become available on the LOCKBASE web server.

Updates are provided to correct smaller program errors, which had not been discovered during the tests preceding the revisions initial shipment. Therefore it is recommended always to install the latest update. If you have a LOCKBASE service contract, you also receive your revision updates this way.

To protect the LOCKBASE web server against unauthorized access, every customer receives his/her individual support password, which has to be entered when downloading an update. The support password comes with your licence documents or can be obtained from your LOCKBASE service partner. You should keep this password secret and not mention it during communication acts via internet (e.g. email).

The dialogue offers the following control elements:

Check for updates automatically every ...: Activate this check box if you want LOCKBASE automatically proceed regular checks for new updates.

... days: Enter the time period in days here for the regular check for new updates. This field is only available if you have activated the automatic check function (see above).

Support Password: Enter your support password here. The password comes with your licence documents or can be obtained from your LOCKBASE service partner.

Check now: Click this button to immediately check for a new update. The dialogue box *LOCKBASE Update Service* appears, an assistant, which leads you through the download and installation process.

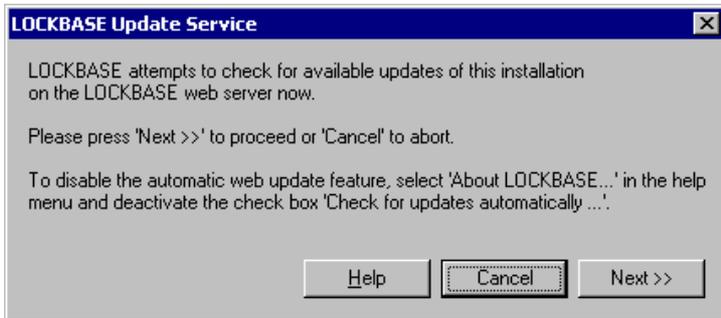


Fig. 24: The LOCKBASE update assistant

The LOCKBASE update assistant checks, whether there is a new update on the LOCKBASE web server. If there is an update you have the possibility to download and install the update.

Note:

- In case your computer has no internet access, you should deactivate the regular automatic search for new updates.
-

IV. Common LOCKBASE Functions

This chapter describes the components to use LOCKBASE, valid for all LOCKBASE main modules. These are the general dialogue boxes of the data stocks, the data lists in the dialogue boxes as well as the control element to navigate in the *Group Structure*.

1. Data Stocks and Connections

This section contains a description of the four data stocks, their dialogue boxes and entry fields, how to enter data and how to create or remove connections between them. All described dialogue boxes are used in various LOCKBASE modules.

Department Data Sets

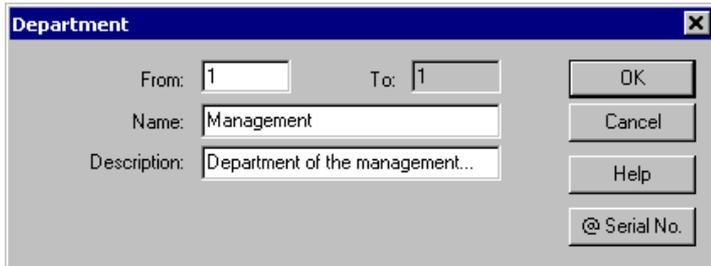


Fig. 1: Dialogue box *Department*

A department contains a group of key holders (see Chap. IV-1, 'Key Holder Data Sets'). The department data set serves to group large lists of key holders to provide easier access and a better overview for the administration of key holders.

The dialogue box *Department* allows to create and edit one or more department data sets. You open it in the *Data Lists* when the department data stock is active. The following entry fields are available:

From, To: These two entry fields contain the range of the consecutive numbering when editing or setting up various data sets. By inserting the character '@' this consecutive number can be used in data fields.

Name: Enter the name of the department here. The name of the department must be unique among the departments. Use a serial numbering with the name when creating several departments at a time.

Description: Enter an additional description for the department here.

@ Serial No.: This button inserts the character '@' (consecutive number) in the text of the focussed entry field.

Key Holder Data Sets



Fig. 2: Dialogue box *Key Holder*

When you want to add or edit key holder data sets the dialogue box *Key Holder* opens. It offers the following entry fields:

Surname, First name, Function, Street, City, State, Phone (Office), Phone (priv.), Personnel ID, Department: In these fields you can enter text at your will.

Default: This button takes on the present content of the dialogue box as a default. (see Chap. V-1, 'Create Data Sets by Setting Defaults').

Key Function Data Sets

(I) Stamp	Key Holder	Issue	Return	Production
900-1				03.07.1995
900-2	Ahrens, Andrea	02.09.1995		03.07.1995

Key Usage: In Order: 0, Available: 1, Issued: 1, Missing: 0, Destroyed: 0

Fig. 3: Dialogue box *Key Function*

A "key function" is a key operating one or more cylinders (e.g. a general master key named "900"). When a master key system is planned it is not important to know how many samples have to be cut later on. The single samples, which are cut when the system is designed, are called "key copies" ("900-1", "900-2",...). LOCKBASE administers key copies together with the key function they belong to.

With the dialogue box *Key Function* you can set up or edit key function data sets. You open it in the *Data Lists* when the key function data stock is active or in the *System Matrix*.

When setting up a key function or editing various data sets the dialogue box *Key Function* has the following entry fields:

From, To: These two entry fields contain the range of the consecutive numbering editing or setting up various data sets. By inserting the character '@' this consecutive number can be used in data fields.

Function: Enter a short name for the key function here which can be embossed on the key heads. (For example a number). You could use the character '@' (serial number). This field must contain something.

Designation: You can describe the key function with a text at will here.

Type: Here you can enter the type of a key function, e.g. 'TMK'.

Number of Keys: Enter a number here if you also want to set up key copies when starting a key function. This is however not necessary for calculating a master key system. When editing key functions the signs '+' and '-' can be used to increase or reduce the number of key copies by a given amount. If you use no sign at all, the number of key copies will be increased or reduced to the absolute value given.

Code Group, Combination, Profile (not in the versions *LOCKBASE Manager/Manager lite*): These fields contain profile, code group and combination (the cuts) of the key. In the *LOCKBASE* versions *Calculator* and *Professional* these fields are filled in by the *Calculator* module if you select the command *Edit - Transfer....*

Default: This button takes on the present content of the dialogue box as a default (refer to Chap. V-1, 'Create Data Sets by Setting Defaults') for further entries.

@ Serial No.: This button inserts the character '@' (consecutive number) in the text of the focussed entry field.

When editing a key function this dialogue box *Key Function* has in addition to the above mentioned entry fields:

Line Form: This button opens the dialogue box *Edit Line Form Key Copies* to adjust order or widths of the keys data fields (refer to Chap. IV-2, 'Line Format and Sorting').

New Key: With this button you add a new key copy.

Edit Key: With this you open the dialogue box *Key* in which you can edit the keys issue and return date.

Delete Key: This button deletes the key in the list. This is only possible when a key is not issued (connected to a key holder).

Keys: This list contains all keys that exist at present. If the key was issued (connected to a person), the name of the owner as well as the date of issue is displayed.

Key Usage: This line gives an overview over the current usage of the key copies (refer to. Chap. IV-1, 'Key Copies').

Notes:

- Key Copies are numbered sequentially.
 - If a key was issued to a key holder, the related data set cannot be deleted.
-

Key Copies



Fig. 4: Dialogue box *Key*

Keys in this case are defined as copies of a key function. The data sets of the key copies are administered together with the key functions.

The dialogue box *Key* opens,

- when you edit a key clicking on the button Edit Key in the dialogue box *Key*,
- when you issue a key to a key holder (creating a key holder - key connection).

The entry fields of the dialogue box *Key*:

Key Holder: This field cannot be edited because here LOCKBASE enters the owner of the key if you create a connection to a person.

Stamp: Here you can see the number of the key copy. It is composed of the key function's designation and a serial number. "900-1" e.g. is the copy 1 of the key function "900".

Electronic ID: Here an electronic identifier of the key copy can be displayed or entered, e.g. a transponder code or a chip id. Whether this field is available at all, the meaning of its contents and whether it can be modified or only reviewed, depends on the type and properties of the electronic or mechatronic access control system in use

Production Date, Issue Date, Return Date: These three data fields will be filled in each case with the current date creating a key, connecting a key with a person (key issue) and cancelling a connection. The entry **Production Date** you can edit when creating a key, **Issue Date** and **Return Date** when connecting a person with a key.

Status: Here you can define the status of the key. Possible values are 'In order', 'Available', 'Issued', 'Missing' or 'Destroyed'. Not every status can be selected at any time. A key for example, which had been issued, cannot be destroyed, but has to be returned first (refer to Chap. IV-1, 'Connections'). Choices, which are currently not available, will be displayed in brackets in the selection list.

Notes: This field is of free usage. Here you can deposit additional information for the key copy.

Cylinder Data Sets

The screenshot shows a dialog box titled "Cylinder" with the following fields and values:

- From: 1, To: 1
- Code Group: B4B4B acab A21
- Profile: A21
- Plug: 12301 acab, 5 543, 7 76, 8
- Shell: 72783 acab
- Cylinder Number: 106
- Item code: (empty)
- Type: V310 Double cyl., 5 pins System V14
- Special equipment: BS.BS01
- Length Outside: 26, Inside: 26
- Finish: Ni, Quantity: 1
- Electronic ID: (empty)
- Function Keyed like: 106, Central cylinder:
- Change Key: 3 Copies
- Room/Building Door Designation: Assembling, Building: Production

Buttons at the bottom: @ Serial No., Default, Help, Cancel, OK.

Fig. 5: Dialogue box *Cylinder*

With the dialogue box *Cylinder* you can set up or edit cylinder data sets. You open it in the *Data Lists* when the cylinder data stock is active or in the *System Matrix*.

The dialogue box *Cylinder* has the following entry fields:

From, To: These two entry fields contain the range of the consecutive numbering editing or setting up various data sets. By inserting the character '@' this consecutive number can be used in data fields.

Number: Enter a number for the cylinder. You can use the character '@' (serial number). This field must contain something.

Item code, Type, Special equipment, Length Outside, Length Inside, Finish: Enter the technical attributes of the cylinder here. It depends on the technical details of the cylinder brand in use what can be entered or selected in these entry fields.

Electronic ID: Here an electronic identifier of the cylinder can be displayed or entered, e.g. a transponder code or a chip id. Whether this field is available at all, the meaning of its contents and whether it can be modified or only reviewed, depends on the type and properties of the electronic or mechatronic access control system in use.

Quantity: If you want to administer multiple identical cylinders in one record you can enter the needed quantity here. Please notice that these cylinders must not differ in length, colour or any other characteristic.

Keyed like: Enter the locking of the cylinder here. If you enter the number of another, already existing cylinder here, this cylinder will be keyed like the one entered. You can create keyed alike cylinders this way. If the field is empty (the default), the cylinder will have its individual locking.

Central cylinder: Check this field with a hook if the cylinder has a central lock function, i.e. if it shall be locked by other cylinders' change keys.

Change Key, Copies, Edit: If a cylinder has got or shall get a change key, the field **Change Key** is checked and field **Copies** displays the number of change keys. The button **Edit** opens the dialogue box *Key Function*>DLG_DATA_FUNC for the change key.

Door Designation: In this field enter the name of the door the cylinder should be built into. If the cylinder was not yet connected to a door, automatically a new door record will be created. Otherwise the name of the door in the door record can be modified by this field. When connecting a cylinder to a door the contents of this field will be updated automatically (refer to Chap. IV-1, 'Doors').

Building: Here enter the name of the building where the door is located. When connecting a cylinder to a door the contents of this field will be updated automatically.

Default: This button takes on the present content of the dialogue box as a default (refer to Chap. V-1, 'Create Data Sets by Setting Defaults') for further entries.

@ Serial No.: This button inserts the character '@' (consecutive number) in the text of the focussed entry field.

Code Group, Keyway, Plug, Shell (not in versions *LOCKBASE Manager/Manager lite*): Enter the technical cylinder data here. In the *LOCKBASE* versions *Calculator* and *Professional* these boxes are filled in by the *Calculator* module if you select the command Edit - Transfer....

Notes:

- Cylinders ('slaves') belonging to a 'master' i.e. cylinders keyed alike appear in the *System Matrix* in italic style. Their connections to superordinated keys and central cylinders are displayed in dark grey. The connections of 'slave' cylinders cannot be edited directly but are changeable via their 'master' cylinder, only. With the command **Options - Hide cylinders keyed alike** the display of cylinders connected to the same keys ('slaves') can be suppressed. In case this adjustment is chosen, only the differently keyed cylinders ('masters') are shown.
 - Only cylinders without change keys can be added to a 'master' as cylinders keyed alike. If you want to assign a cylinder with change key to a 'master', delete the change key first.
 - In the data field **Plug** for example a column of "2 4 6 8" means, that at this position a number two plug pin and three number two master wafers should be installed.
 - In the field **Shell** is displayed the aimed length of pins. Not all cylinder brands have a corresponding range available.
-

Door Data Sets

Fig. 6: Dialogue box *Door*

Creating and editing door data sets can be done in the dialogue box *Door*. You can open it in the *Data Lists* with the door list set active.

The entry fields are:

From, To: These two entry fields contain the range of the consecutive numbering editing or setting up various data sets. By inserting the character '@' this consecutive number can be used in data fields.

Building/Department: Here you can enter e.g. an address.

Door Name: This field takes a designation by which a door can be identified. This field has to contain something.

Designation: This box is intended for additional descriptions, for example "emergency exit".

Cylinder Length: Enter the necessary installation length of the cylinder here.

Designation, Type, Dimensions: The dialogue box *Door* furthermore contains groups for two locks which respectively provide these entry fields.

Default: This button takes on the present content of the dialogue box as a default (see Chap. V-1, 'Create Data Sets by Setting Defaults').

@ Serial No.: This button inserts the character '@' (consecutive number) in the text of the focussed entry field.

Location Data Sets

Fig. 7: Dialogue box *Location*

A location contains a set of doors (see Chap. IV-1, 'Door Data Sets'). The location data set serves to group large lists of doors to provide easier access and a better overview for the administration of doors. Moreover, it contains the file name of the floor plan assorted to a certain set of doors (see Chap. V-4, 'The Floor Plan Module').

The dialogue box *Location* allows to create and edit one or more location data sets. You open it in the *Data Lists* when the location data stock is active. The following entry fields are available:

From, To: These two entry fields contain the range of the consecutive numbering when editing or setting up various data sets. By inserting the character '@' this consecutive number can be used in data fields.

Name: Enter the name of the location here. The name of the location must be unique among the locations. Use a serial numbering with the name when creating several locations at a time.

Description: Enter an additional description for the location here.

Grafics File, File...: Click the button *File...* to open a file dialogue, which helps you to select the grafics file for the floor plan. The file name will be displayed in the field *Grafics File*. You can also enter directory and name of the grafics file by hand. The file types BMP, JPG/JPEG, PNG, TIF/TIFF, TGA, PCT, WMF and EMF are supported. Absolute as well as relative path names are possible.

@ Serial No.: This button inserts the character '@' (consecutive number) in the text of the focussed entry field.

Notes:

- To obtain floor plan files for your building we recommend to contact the responsible architect. All common CAD programs are able to export floor plan drawings in one of the supported file types. The following grafics file formats are supported: BMP, JPG/JPEG, PNG, TIF/TIFF, TGA, PCT, WMF and EMF.
- The selected grafics files are not embedded into, but only linked to the master key system's file. Therefore, if you archive or send LOCKBASE files containing floor plans you have to add the belonging grafics files. Otherwise the floor plan cannot be viewed by the receiver.

Connections

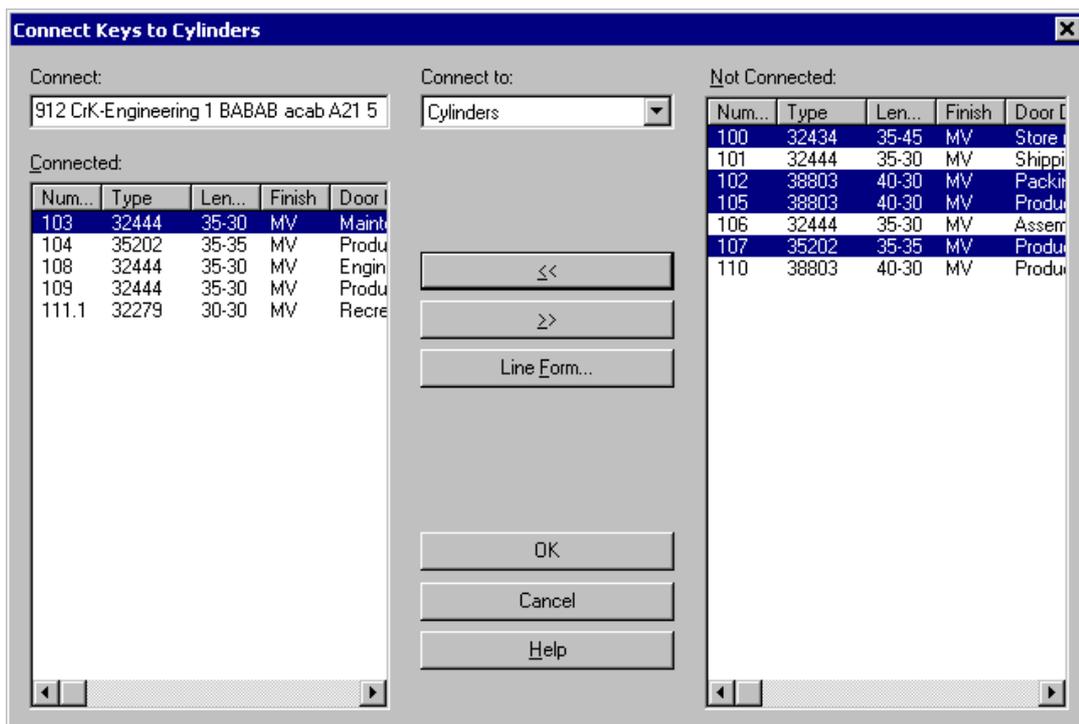


Fig. 8: dialogue box *Connect*, here connecting a Key Function to Cylinders

Not only the data sets of the four data stocks belong to a master key system, but also the connections between the individual data sets.

To edit (create or delete) connections, the dialogue box *Connect* can be used. It allows to connect data sets to the currently selected data set in the *Data Lists* and the *System Matrix*.

In the *System Matrix* multiple keys or cylinders can be selected and commonly connected to data sets of the respective other data stock (see Chap. VI-3, 'Connecting Data Sets').

To open the dialogue box:

- Click on  in the toolbar or
- select **Edit - Connect** or
- press F9.

The entry fields:

Connect: In this field the marked data set name of the active data stock is displayed. If you marked various key functions or cylinders not keyed alike, the entry "" appears in this field.

Connected: This list field contains all data sets of the neighbouring data stock which are already connected to the selected data set.

Not Connected: This list box contains all data sets of the neighbouring data stock which are available to be connected to the selected data set.

Connect to: In this list box in the *System Matrix* you choose whether cylinders or keys should be the data stock to be connected. All data sets of the selected data stock appear in the lists of the dialogue window according to whether they are connected to the marked data set of the respective other data stock.

Line Form: This button opens the dialogue box *Edit Line Form Keys* to adjust order or widths of the individual data fields (see Chap. IV-2, 'Line Formatting and Sorting').

Set up connections : Mark one or several data sets in the list Not Connected and select this button. The marked data sets are thus shifted to the other side and connections will be produced.

Remove connections : Mark one or several data sets in the list Connected and select this button. The marked data sets are thus shifted into the other list and the existing connections will be removed.

Print receipt directly: This check box only appears when using the *Connect* dialogue box for key issue or key return in the *Data Lists* (see Chap. V, 'Overview Data Lists'). Check this box if you want to perform a direct print of receipts with the settings made in the print module (see Chap. IX-4, 'Key Issue Receipt / Key Return Receipt').

You can create or remove connections of several data sets successively, you also can expand the marking on several data sets. If the data sets are displayed joined together in the list, then press and hold SHIFT while you move the marking by mouse-click or per arrow key UP or DOWN.

If the data sets are not displayed standing together in a block, then press CTRL while you click on the individual entries. With the keyboard you expand the marking to entries not joined together, pressing first SHIFT+F8. Then move the gleaming frame with the arrow keys UP or DOWN successively on the desired entries and press the SPACEBAR, to mark the entry.

Notes:

- If a master key system was analysed or set up with the *System Designer*, you can merely connect key functions and cylinder data sets if a single subgroup is displayed (refer to Chap. VIII, 'System Designer'). If you have selected a node, the dialogue box only displays the current connections, connecting is not possible.

- If you work with the *Data Lists* and want to connect a key to a person but the lists in the dialogue box are empty, then no key copies are created yet or all keys have been issued.
- You can only administer the connections between persons and keys from the persons data stock. With pressing OK the dialogue box *Key* appears.
- In the *System Matrix* multiple keys or cylinders can be selected and commonly connected to data sets of the respective other data stock (see Chap. VI-3, 'Connecting Data Sets').

2. Operating the Data Display Lists

Every data set contains several data fields. For example the key holder data set contains the entry fields Surname, First Name, Street, etc. In the *Data Lists*, in the *System Matrix*, the *Print Manager* and in several dialogue boxes LOCKBASE displays the data fields belonging to a data set in one single line.

This section describes, how to

- determine the order of sequence of the data fields,
- adjust the display width each data field,
- determine the sort order of the data sets and
- set up font style and size of the display.

Besides this you learn, how to

- select data sets and
- move data sets in the lists.

Note:

- To adjust the data display in the *Data Lists*, first you have to activate the respective data stock.

Line Formatting and Sorting

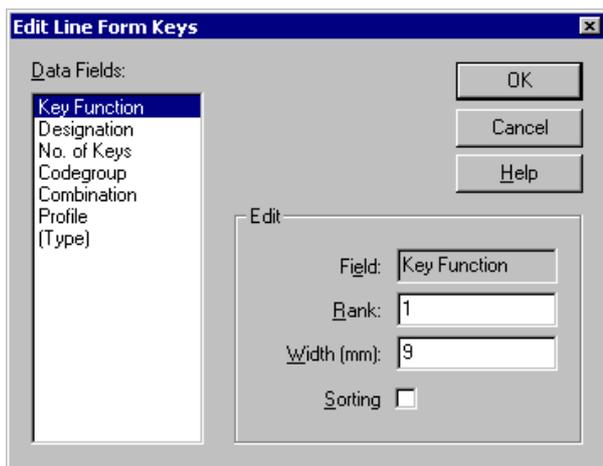


Fig. 9: Dialogue box *Edit Line Form*, here formatting a key function data set.

The dialogue box *Edit Line Form* is made to adjust display width and order of sequence of the individual data fields of a data set as well as the sort order of the data sets themselves.

Every data display or printout is preformatted. The name of the line form is displayed above in the dialogue box. Which line form is active, depends on the data stock resp. print option the dialogue box currently refers to.

The dialogue box contains the following entry fields:

Data Fields: This list contains the data fields of the belonging data stock in the same order as they will be displayed or printed out. To format a data field, select the name and it appears on the right in **Field**.

Field: This field contains the title of the data field like appearing e.g. in the description headers of the prints. If formatting a print document you can modify this title according to your needs. Otherwise the field is write protected.

Rank: Enter a number for the place where the data field has to be shown or printed out. For example, enter "2", if you want the field to appear on the second position.

Width (mm): Here you define the length (in millimetres) of a data field. If you enter "0" (zero), the field will not be displayed or printed and will be put at the end of the data fields' list. In the list **Data Fields** it appears in brackets.

Sorting: Activate this check box if you want LOCKBASE to sort the data sets alphanumerically for the contents of the current marked field. The concerning field is displayed with a (!) in the list **Data Fields**. If this option is not activated for any field, the data is shown or printed unsorted according to the sequence they were entered.

Notes:

- The list headers offer an easy and direct way to format the data lists (see. Chap. IV-2, 'Direct formatting using the list headers'. However, they don't allow adding or removing data fields.
 - Changes of a line form will be stored automatically with the document and will therefore be available in the next LOCKBASE session with this master key system.
 - You can also establish format templates for LOCKBASE files. Format an existing master key system according to your needs and save it with the file ending '.lbt' in the LOCKBASE directory (see Chap. III-1, 'Save a Master Key System File under a new Name'). Then in the *System Cover Sheet* you can select and assign the new template to an existing master key system file (see Chap. III-1, 'System Cover Sheet').
-

Font Selection

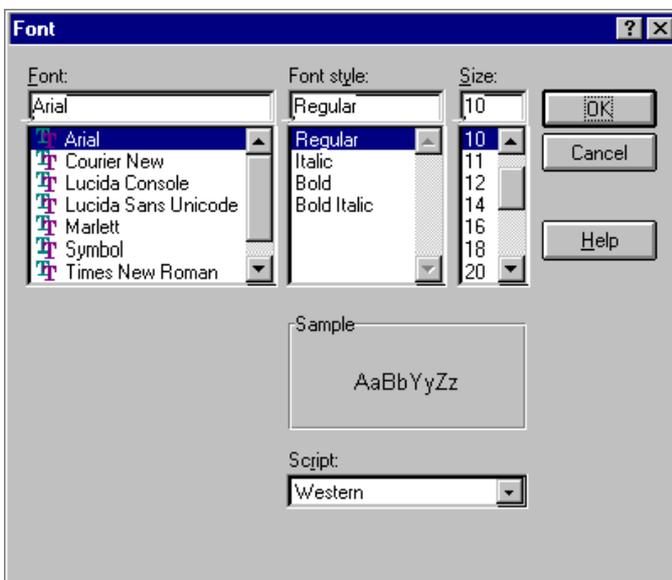


Fig. 10: Dialogue box *Font*

You find the command **Options - Font Data** in the LOCKBASE views *System Matrix* and *Data Lists*. A font can also be selected in all *Print* windows (Font buttons).

With these commands the dialogue box *Font* opens to adjust the font, style and / or size. The data's adjustments could be displayed or printed.

The dialogue box contains the following entry fields:

Font: Select the type from the list, e.g. Times, Courier or Arial, that you wish to see on your screen.

Font Style: Select the type style here, e.g. *italics*, **bold**, or standard.

Size: Adjust the size of type here.

Sample: In the box, you get an example of your adjustment displayed.

Notes:

- Only Windows TrueType fonts are available, because these can be used both for display and for print out.
 - You can create a document template for new LOCKBASE files. Do format an existing master key system file according to you wishes and save it in the LOCKBASE directory under the name 'STANDARD.LBT'. Setting up a new system, LOCKBASE controls if this file is existing and should the situation arise, assigns all formatting adjustments to the new system.
-

Direct formatting using the list headers

Door Designation	Number	Type	Length	Finish
Main entrance	CC	35202	35-35	MV
Store rooms 1 + 2	100	32434	35-45	MV

Fig. 11: The list headers

The list headers offer an easy and quick way to format the data lists. They allow to modify sorting, display width and order of sequence of the data fields. However, they don't allow to add or remove data fields. For this purpose you have to use the dialogue box *Edit Line Form* (see. Chap. IV-2, 'Line Formatting and Sorting').

To directly change the sorting of a data field proceed as follows:

- Click on the header of the respective column.

If the column is sortable, an exclamation mark in brackets (!) appears in front of the title. If it is not sortable, nothing happens. If the column already was sorted the action removes the sorting and returns the list to unsorted mode. The exclamation mark in front of the column title signals, that a column is displayed in sorted mode.

To directly modify the display width of a data field proceed as follows:

1. Click on the right border of the column's header you want to format and keep the mouse button pressed. The mouse cursor changes its appearance (↕ resp. ↔).
2. Drag the right border of the header to the desired width.
3. Let go the mouse key. The appearance of the data list adapts to the desired display width of the data field.

To directly modify the order of sequence of the data fields proceed as follows:

1. Click on the header of the data field you wish to reposition and keep the mouse button pressed.
2. Drag the mouse to the position of the list headers where the data field should be inserted. A transparent picture of the header follows the mouse cursor.
3. Let go the mouse cursor. The header will be moved to the desired position and the appearance of the data list adapts to the new order of the data fields.

In the *Data Lists*, the *System Matrix* and the *Calculator* it is possible to directly open the dialogue *Line Formatting and Sorting* by a double click on the list header. To do so proceed as follows:

- Double click on the empty space right beside the header of the last data field.

The dialogue box *Line Formatting and Sorting* opens (see Chap. IV-2, 'Line Formatting and Sorting').

Selecting Data Sets

In the *Data Lists*, the *System Matrix* you can select multiple data sets to edit, move, delete or connect them in several ways.

Selecting by mouse data sets, displayed joined together:

1. Click on the first data set you want to select.
2. Press and hold key SHIFT.
3. Click on the last data set you want to select.

Selecting by mouse data sets, displayed not joined together:

1. Click on the first data set you want to select.
2. Press and hold key CTRL.
3. Click on further the data sets you want to select.

Selecting by keyboard data sets, displayed joined together:

1. Mark with the ARROW keys the first data set you want to select.
2. Press and hold key SHIFT.
3. Mark the last data set with the ARROW keys you want to select.

Selecting by keyboard data sets, displayed not joined together:

1. Press key combination SHIFT+F8 to select cylinders, CTRL+SHIFT+F8 to select keys.
2. With the ARROWkeys move to the data set you want to select and press the SPACEBAR.
3. If you have selected the data sets, press again SHIFT+F8 to finish selection in the cylinder list, CTRL+SHIFT+F8 to finish selection in the key list.

Moving Data Sets

If you insert a new data set into a LOCKBASE data list, it will always be inserted above (resp. in vertical display left of) the data set which was selected before.

However, you can move the position of one or several data sets. To move a selection of data sets follow the instructions below:

1. Mark the one or the set of records you want to move.
2. Click with the mouse onto the selection and keep the mouse button pressed.
3. Drag the mouse to the position in the list, where the selected data sets should be inserted. The mouse cursor changes its appearance (↓ resp. ↔).
4. Let the mouse key go. A security request appears. Confirm the movement of the selected data sets or cancel the operation.

Notes:

- It is necessary to have a mouse installed to move data sets in the LOCKBASE lists. It is not possible to move data sets only using the keyboard.
 - Moving data sets is only possible in the unsorted order of sequence. Choose the command **Options - Line Form** in the *Data Lists* or **Options - Format Lines** resp. **Options - Format Columns** in the *System Matrix* to be sure, that no data field determines the sort order of the items in the list.
-

Sorting the unsorted display mode

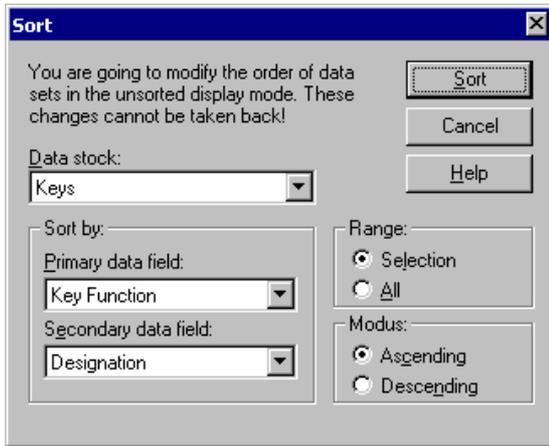


Fig. 12: The dialogue box *Sort*

Besides sorting by settings in the dialogue *Edit Line Form* (see. Chap. IV-2, 'Line Formatting and Sorting') it is also possible to sort the unsorted display mode. However, in difference to the sorting by data field, this sorting cannot be undone, but modifies the unsorted order permanently. You can sort all records of a data stock or limit the sorting to a selection of data sets.

To open the dialogue box, change to the *Lists View* or the *System Matrix* and

- choose **Edit - Sort** from the menu.

The dialogue box contains the following entry fields:

Data stock: If sorting of more than one data stock is possible, this field allows the selection of the data stock to sort.

Primary data field: Choose here the data field to sort by.

Secondary data field: Here optionally you can select a second data field. This data field determines the sort order for data sets, which have the same contents in the primary data field.

Range: Here you can select, to which data sets the sorting should be applied. This entry field is only available, if several records had been selected before. In this case you can decide, whether only the selected or all data sets of the respective data stock should be sorted.

Modus: Here you can determine, whether the sorting should be ascending (smaller value first) or descending (bigger value first).

Sort: Press this button to start the sorting.

Note:

- The command **Edit - Sort** is only available, if one of the data lists is in unsorted display mode. You can set up unsorted display mode using the dialogue 'Edit Line Form' (see. Chap. IV-2, 'Line Formatting and Sorting').
-

Searching for Data Sets

To quickly find a specific record within a large amount of data sets, the data lists offer a positioning search function.

To begin a search, just type in the first letter of the search term. The dialogue box *Search* opens and the given letter appears in the field Search for.

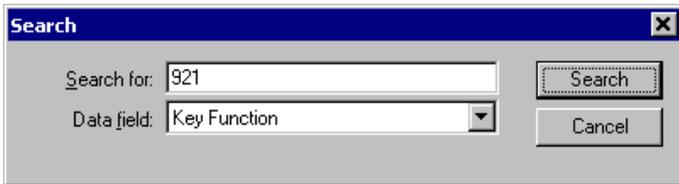


Fig. 13: Positioning Search

The dialogue offers the following entry fields:

Search for: Enter the text phrases here you want to search for. Multiple search terms will be combined by a logical AND, i.e. only those records will be found, which contain all the given search terms. Multiple search terms have to be separated by whitespace.

Data field: Here you can select the data field to search in. All the data fields being displayed in the list are available. The available set of data fields can be defined by the line format of the list (see Chap. IV-2, 'Lineform and Sorting'). If you want to search all data fields, choose 'All' here.

Complete your input in the field Search for and click Search resp. press the RETURN key. The dialogue box will close and the matching records will be selected in the list. If the list allows only single record selection, the list will focus the first matching record. If no record matches the search criteria, the dialogue box will keep open and a respective message will be given.

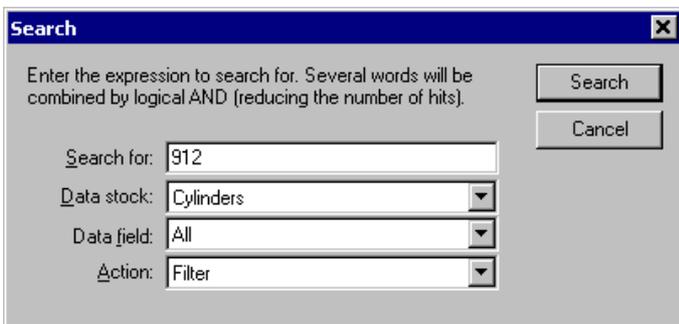


Fig. 14: Extended Search

In the *Lists View* and in the *System Matrix* an extended search function is available, which can be reached as follows:

- Click on  in the toolbar, or
- select **Edit - Search** from the menu.

The dialogue box of the extended search offers the control elements of the positioning search and additionally the following entry fields:

Data stock: In the *System Matrix* here you choose the data stock to search. In the *Lists View* this is not necessary, always the active data stock will be searched.

Action: Here you define how to proceed with the search result. If you choose 'Select' the matching records will be selected in the list. This corresponds to the behaviour of the positioning search. If you choose 'Filter' the search criteria will be used as filter, i.e. only the records matching the search criteria will be displayed in the list. In order to indicate, that only a selection of the available records is visible, the button 'Search' in the toolbar remains pressed resp. the menu entry appears checked. By clicking again the toolbar button resp. reselecting the menu entry the filter can be deactivated. In addition in the *Lists View* the filter will be deactivated automatically by changing the active list.

Using the clipboard to copy and paste records

In the *Lists View* and in the *System Matrix* it is possible to copy and paste records using the clipboard. This way you can copy records within a file, but also from one file to another. Using the clipboard it is also possible to import data from an external text file or table sheet to LOCKBASE.

To copy records to the clipboard, first you have to mark the records to copy. In the *Lists View* you have to activate the resp. list to do so (refer to Chap. V, *The Lists View*). Then

- click to  resp.  in the toolbar, or
- select the command **Edit - Copy** resp. **Edit - Copy (Columns)** or **Edit - Copy (Lines)**.

The selected records will be copied to the clipboard. Subsequently the commands to paste records will become available. To paste records from the clipboard, first you have to position the list cursor to the insert position. Then

- click to  resp.  in the toolbar, or
- select **Edit - Paste** resp. **Edit - Paste (Columns)** or **Edit - Paste (Lines)**.

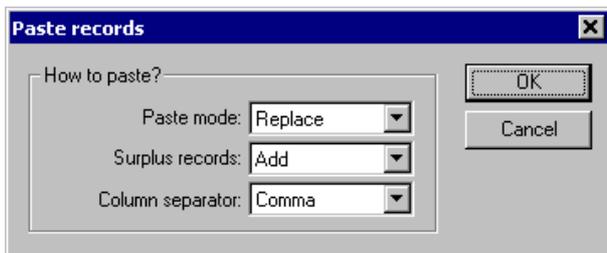


Fig. 15: The dialogue box *Paste records*

To define how to paste records from the clipboard, the dialogue *Paste records* opens. The dialogue box offers the following control elements:

Paste mode: Here you can define, whether the records from the clipboard should be added or the selected records should be overwritten with the data from the clipboard. This choice is only available, if records were selected before running the paste command.

Surplus records: In case the selected records should be overwritten with the data from the clipboard, here you can define how to proceed, if the clipboard contains more records than the selection in the list. Choose 'Add' to insert surplus records after the selection or 'Ignore' to modify only the selected records. This choice is only available if in replace mode the clipboard contains too many records.

Column separator: In case data should be inserted from an external file, here you have to define, which character was used to separate the columns. When inserting external data by default each line will be regarded to represent one record. But how the single columns, which represent the LOCKBASE data fields, should be distinguished, has to be defined explicitly by choosing a column separator sign. You can choose between comma, semicolon and white space (space characters or tabs). If the separator symbol was used in the contents of one of the columns, the resp. column must be surrounded by double quotation marks ("). This choice is only available when pasting data from an external data source.

Note:

- Using the clipboard records can be copied, but it is not possible to copy connections. If you want to copy or insert a complete master key system, you have to copy each data stock separately, one by one, and afterwards create the connections manually. To import complete master key systems from external files, the import interface for CSV files is a better choice (refer to Chap. III-1, 'Data import from CSV files').
-

3. Moving in the Group Structure

If your LOCKBASE package includes the *System Designer* you can set up hierarchical structured master key systems or analyse already existing systems on their hidden group structure.

If a master key system is built up of hierarchical structured groups (refer to Chap. VIII-1, 'Analysing Master Key Systems'), the name of the active group appears in the toolbars of *Data Lists* and *System Matrix*. If you want to add or delete a key function or cylinder data set or if you want to add or remove connections between key functions and cylinders, the active group has to be a subgroup which has no further subgroups itself (the leaf of a tree).

To change into a certain subgroup,

- click on the group list in the toolbar and mark a group or
- select the command **Edit - Select Group** or
- press key CTRL+G.

After you have selected a subgroup, only the data sets belonging to the this group are displayed.

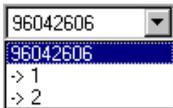


Fig. 16: The group list in the toolbar

Note:

- In an analysed, hierarchical master key system only data sets of a subgroup can be added, because otherwise the group structure might be destroyed. Before you can add, delete or connect data sets you have to select a bottom level subgroup.
-

V. The Data Lists

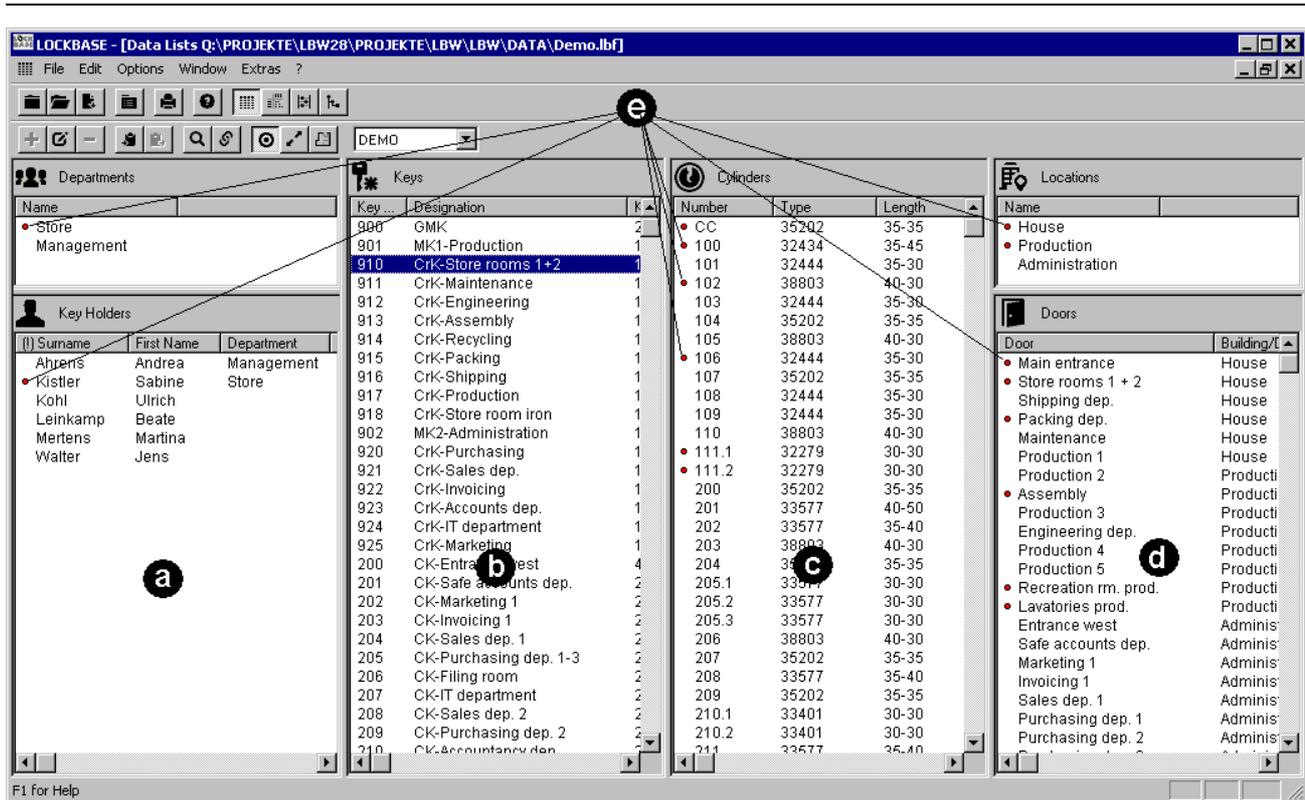


Fig. 1: The window *Data Lists* with Department and Key Holder List (a), Key Function List (b), Cylinder List (c), Location and Door List (d). The dots (e) show the connections of the selected record of the active data stock with other records.

To open the *Data Lists*

- click on  in the toolbar or
- select the command **Window - Open Data Lists** or
- choose the hotkey CTRL+L.

The window *Data Lists* is the presentation form of a master key system, in which the six data stocks departments, key holders, key functions, cylinders, doors and locations, are to be seen simultaneously next to each other on the screen. In the *Data Lists* you can edit all data stocks.

The *Floor Plan* Module enables you to read in floor plans of buildings or departments and to display door data sets in the plan, which have been set up before. Thus the access of persons, the locking function of keys or the location of cylinders is open to clear, spatial administration (see Chap. V-4, 'The Floor Plan Module').

Operating the Data Lists Windows

Only one of the six data stocks can be active. The active data stock can be recognised by the white window background, while the background of the inactive data stocks appear in a light gray. Before you can add, edit, connect or delete a data set, the respective data stock must be activated.

To activate a data stock

- click by mouse into the resp. list or
- select command **Window - Activate next Data Stock** resp. **Window - Activate previous Data Stock** or
- press the TAB key (to right) resp. SHIFT+TAB (to left).

To operate in another data stock in order to page in it, for example to have connections displayed, keep the CTRL key pressed. As long as the CTRL key keeps pressed, the active list will not change.

You can alter the width of the individual lists

- by shifting the border lines with the mouse. Move the mouse cursor to the border line. If it changes its shape, drag the border line to a position at will. Let go of the mouse key or
- by selecting the command **Window - Active List full Size**.

To alter order or widths of the data fields use the command Options - Line Form.

The command **Window - Show Floor Plan** switches between list and *Floor Plan* view of the door data stock. A little hook appears in front the menu item if the *Floor Plan* view is active. The button  in the toolbar serves the same purpose.

1. Enter and Edit Data Sets

The *Data Lists* and the *System Matrix* offer three methods to enter data sets. You can create in one step

- single data sets with individual information or
- multiple identical data sets with a numbering or
- multiple data sets with repeating information.

Add Data Sets

First activate the data stock that you would like to add a data set to, then

- click on  in the toolbar or
- select the command **Edit - Add** or
- press the key INS or
- select "" at the end of the list (via click or mark and ENTER) to append a new data set.

A dialogue box corresponding to the active data stock opens to take in the data of a new set (refer to Chap. IV-1, 'Data Stocks and Connections', *Departments*, *Key Holders*, *Key Functions*, *Cylinders*, *Doors*) or *Locations*.

LOCKBASE provides the convenient possibility of creating multiple data sets in which a numbering occurs (e.g. change keys 800 to 825) in one step.

Use the following entry fields to do so:

From, To: Enter the start/end value of the numbering.

@ Serial No.: With this button you can insert the @ sign to an entry field at your will. LOCKBASE replaces this sign with the numbering when it creates the data sets. You can insert the numbering in multiple entry fields.

In the other entry fields you can enter data which shall be identical for all the data sets. In the list the new data set will appear above the one focussed.

Notes:

- In an analysed, hierarchical master key system only data sets of a subgroup can be added (refer to Chap. VIII-1, 'Analysing Master Key Systems').
 - The new data set appears above the selected one.
 - You can insert the @-sign directly via the keyboard. Generally it is the third character on a key. In this case press ALT+CTRL+@.
 - If the number in field To is smaller than in field From no data sets will be set up.
 - In version LOCKBASE *Manager lite* you cannot add key functions and cylinders. Changes of the master key system's technical data can only be entered by the supplier of the master key system.
-

Create Data Sets by Setting Defaults

LOCKBASE provides you a convenient possibility of simplifying and accelerating the compilation of data sets.

Assuming for example that you are compiling person data sets for the tenants of an apartment house. In all these data sets the address will be the same. So that in every data set the address boxes do not have to be filled in again, LOCKBASE provides the possibility of determining identical details as a default. Proceed as follows:

1. When starting the first data set put only the identical details into the dialogue box.
2. Select the button . The dialogue box will afterwards already be occupied with these details when you start a new data set.
3. Set up your data sets as usual.

Notes:

- The defaults apply until you change them again, and only as long as the master key system remains opened. You can change the defaults as often as you wish, but they are not stored in the master key system file.
 - If you want to delete the defaults then you delete the data in the entry fields and press the button Default again.
-

Edit Data Sets

In the *Data Lists* key holders', key function, cylinder and door data sets can be edited. First activate the corresponding data stock and mark one or multiple data sets, then

- click on  or
- select command **Edit - Edit** or
- press key ENTER or
- double-click directly on the data set in the list.

According to the activated data set a dialogue box opens, the entry fields of which are occupied by the selected data set.



Fig. 2: Editing the cylinder length using the asterisk-placeholder

If multiple data sets were selected, only the data which are identical in all selected data sets appear in the dialogue box. In the other data fields you will find an asterisk (*). The asterisk represents the current contents of the data field. It can be used as a placeholder for the respective contents of the data field in each data set, like in Figure 2 (see above). If you delete the asterisk, the current contents of the data field will be lost.

Delete Data Sets

In the *Data Lists* data sets from all four data stocks can be deleted. First activate the data stock in which you wish to delete one or more data sets and mark it or them, then

- click on  or
- select the command **Edit - Delete** or
- press key DEL.

A security query protects you against accidental deletion.

Notes:

- In an analysed, hierarchical master key system key functions and cylinder data sets can only be deleted when a single subgroup is displayed (refer to Chap. VIII-1, 'Analysing Master Key Systems').
 - In version LOCKBASE *Manager lite* you cannot delete key functions and cylinders. Changes of the master key system's technical data can only be entered by the supplier of the master key system.
-

Overdue Key Returns

If you enter a date of return when issuing keys (refer to Chap. IV-1, 'Key Copies'), you can let display which keys have reached or exceeded the return date.

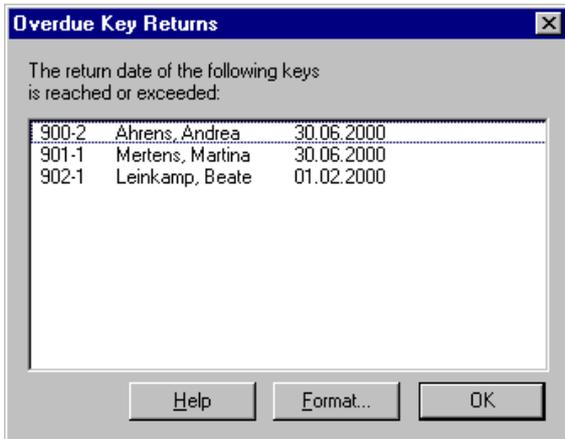


Fig. 3: The dialogue box *Overdue Key Returns*

To display overdue key returns

- select the command **Edit - Overdue Key Returns**.

The dialogue box *Overdue Key Returns* appears.

In a list field all keys are displayed which return date is reached or exceeded. Clicking the button Format... the appearance of the list can be changed (refer to Chap. IV-2, 'Line Format and Sorting').

If desired LOCKBASE shows the key returns overdue automatically when opening the *Data Lists*.

To display the overdue key returns automatically

- select the command **Options - Display Key Returns automatically**.

The menu entry gets a hook if the function is switched on.

Note:

- So that LOCKBASE interprets the date of key return correctly, it must be entered in short date format (e.g. '1.9.1999', '5/31/00', '18.03.2000', etc.). Details referring to the weekday or time cannot be processed.
-

Consistency Check

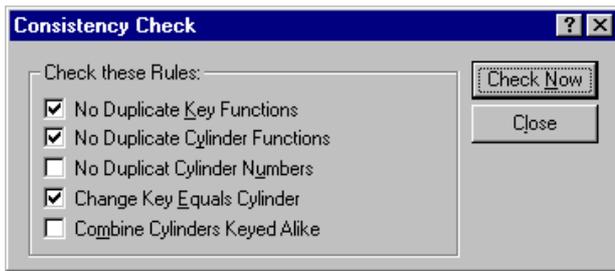


Fig. 4: The dialogue box *Consistency Check*

After having completed the data entry you can perform a check of the inner consistency of the master key system. LOCKBASE will test whether the system follows the rules marked by checked boxes. If differences are found the corresponding data will be presented for modification.

To open the dialogue box *Consistency Check*

- select the command **Edit - Consistency Check...**

For a more detailed description of the command please refer to Chap. VI-2, 'Consistency Check'.

2. Connections between Data Sets

Not only the data sets of the four data stocks belong to a master key system, but also the connections between the individual data sets.

Connections or links symbolise a certain relationship between the data sets of the different data stocks.

LOCKBASE manages the following three kinds of connections:

- Key Holder - Key: The key holder is the owner of the connected keys.
- Cylinder - Key Function: The cylinder is operated by the connected key function(s).
- Door - Cylinder: The cylinder is installed in the connected door. Refer to one of the following topics:

Set and Remove Connections between Data Sets

In the *Data Lists* connections between all four data stocks can be produced or removed.

Proceed as follows: Activate the desired data stock and mark the data set, then

- click on  or
- select command **Edit - Connect** or
- press key F9.

The dialogue box *Connect* opens.

For more information about how to operate the dialogue box *Connect* refer to Chap. IV-1, 'Connections'.

Notes:

- If you activated the data stock key holders and the list of not connected data sets is empty, then no key copies were created or all copies were already issued.
- Connections between key holders and keys can only be administrated if the key holder list is active.
- In an analysed, hierarchical master key system connections between key function and cylinder data sets can only be edited when a subgroup is displayed.

- In version the LOCKBASE *Manager lite* you cannot connect key functions and cylinders. Changes of the master key system's technical data can only be entered by the supplier of the master key system.
-

Display connected Data Sets

To check which data sets are connected to the marked data set of the active list, you can switch on the connection display. In the *Data Lists* and *System Matrix*, data sets connected to each other are indicated by a red dot.

- Click on  or
- select command **Window - Show Connections**.

To get a better overall view with large master key systems you can fade out the not connected items.

- Select the command **Window - Show connected only**.

Notes:

- If you selected multiple data sets, LOCKBASE marks those data sets with a red dot which are connected with all highlighted data sets. This way you can proceed useful research functions. Would you like to know e.g. what keys do open a certain selection of doors, simply mark the corresponding doors. LOCKBASE now displays only those as connected key functions, that open all selected doors.
 - The connection display is switched off by default.
 - With the SHIFT+[ARROW KEY RIGHT or LEFT], a mouse-click or two corresponding commands from the menu **Window** you can jump into another data stock in order to page in it.
-

3. The Floor Plan Module

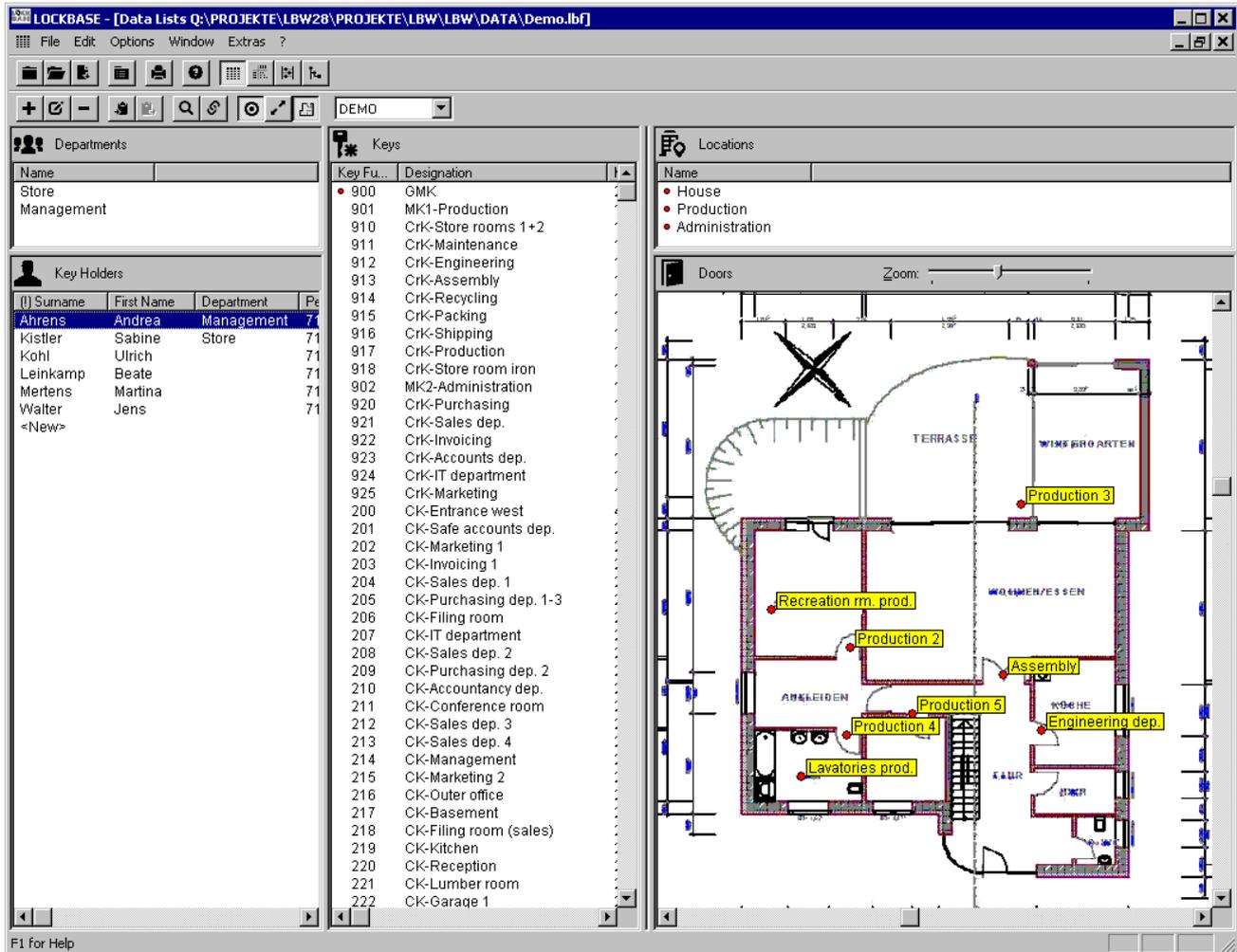


Fig. 5: The window *Data Lists* showing a floor plan

With the *Floor Plan* module floor plans of the building can be read in, where the master key system is installed. You can insert and position previously created doors data sets and let display the access of key holders, the locking function of keys or the location of cylinders in spatial representation.

To toggle between list and *Floor Plan* representation of the doors

- click onto  in the toolbar or
- select the command **Window - Show Floor Plan**.

Above the plan in the control area of the doors list a slider control to adjust the zoom factor of the *Floor Plan* representation can be found.



Fig. 6: The slider control in the *Floor Plan* view

You can operate the *Floor Plan* view by mouse or keyboard. For the operation by keyboard use the following key combinations:

- TAB and SHIFT+TAB move the focus between the control elements of the *Floor Plan* module.
- CTRL+ARROW UP or CTRL+ARROW DOWN scroll the picture for one pixel line vertically.
- CTRL+ARROW LEFT or CTRL+ARROW RIGHT scroll the picture for one pixel column horizontally.
- CTRL+PGUP or CTRL+PGDN scroll the picture for one page height vertically.
- CTRL+BEGIN or CTRL+END scroll the picture for one page width horizontally.

Focusing, marking and selection of door data sets in the *Floor Plan* works like in the other lists (refer to Chap. IV-2, 'Selecting Data Sets').

Because the floor plans are included in the location data sets (see Chap. IV-1, 'Location Data Sets'), you can add, edit and remove floor plans by adding, modifying and removing location data sets. Doors can be added to or removed from a floor plan by connecting them to resp. disconnecting them from the location data set of the floor plan (see Chap. IV-1, 'Connections').

In a new floor plan the assorted doors appear cascaded in the top left corner of the *Floor Plan*, from where they can be moved to the desired position.

To move a door data set in the *Floor Plan* by mouse

mark the data sets to move (see Chap. IV-2, 'Selecting Data Sets'), then

drag the data sets to the desired position.

To move data sets in the *Floor Plan* by keyboard

mark the data sets to move (see Chap. IV-2, 'Selecting Data Sets'), then

press SHIFT+CTRL+[ARROW KEYS] until the desired position is reached.

VI. The System Matrix

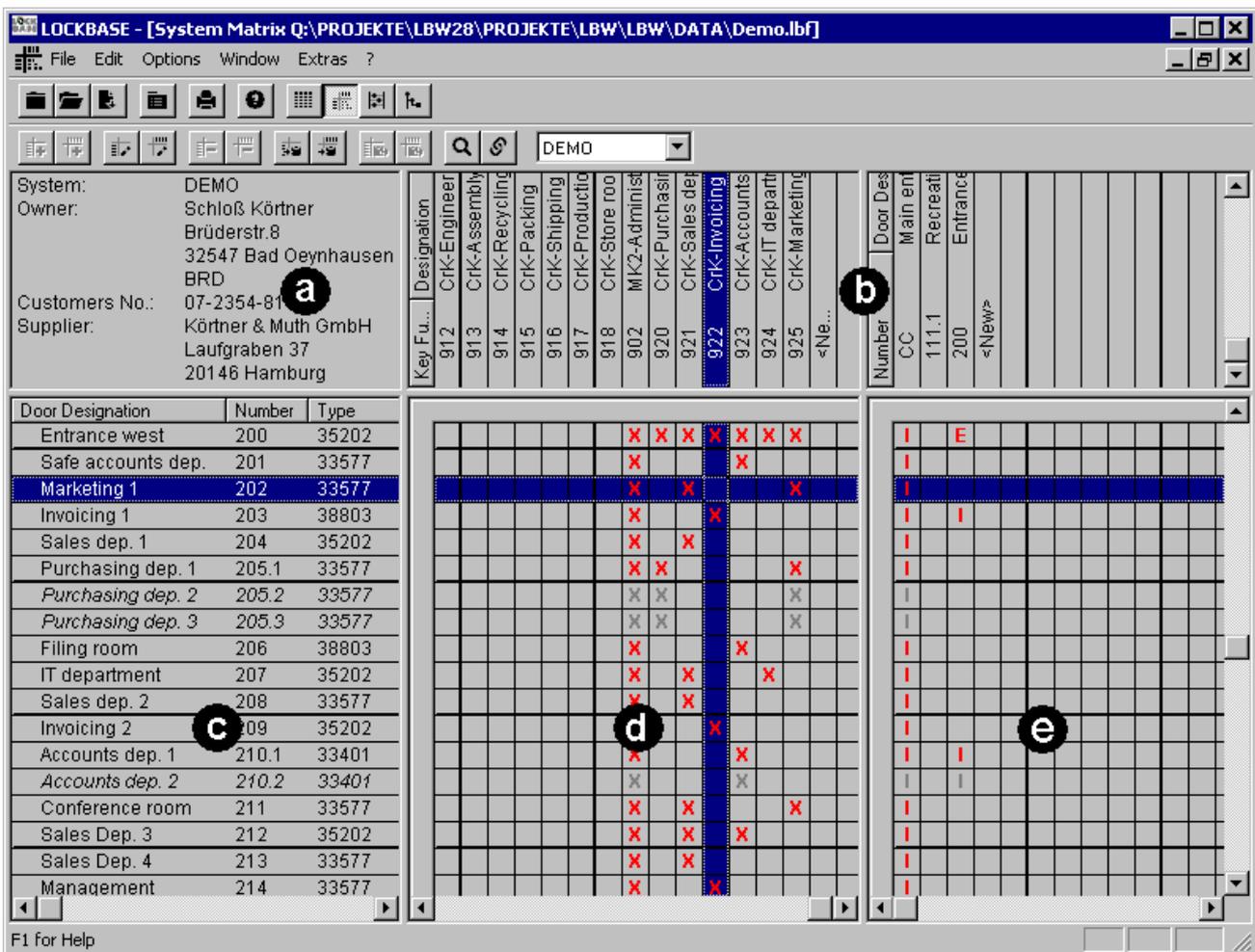


Fig. 1: The *System Matrix* in Euro format displaying system cover sheet information (a), columns list (b), line list (c), matrix with connections of superior keys (d) and of central cylinders (e).

To open the *System Matrix*

- click on  in the toolbar or
- select the command **Window - Open System Matrix** or
- choose the hotkey CTRL+S.

The window *System Matrix* is the tabular presentation form of a master key system in which the data stocks key functions and cylinders as well as their connections are to be seen on the screen. You can edit both data stocks and their connections.

The *System Matrix* contains 4 views in the standard format respectively 6 views in the Euro format:

1. Up left the *System Cover Sheet's* data is displayed. If you double-click on the view, the *System Cover Sheet* opens.
2. Up right the column list containing data sets are displayed. The Euro format shows one column list for the superior keys (left) and one for the central cylinders (right). The standard view displays only one column list that contains all key functions. You can edit a data set on double-clicking it.
3. Down left a line list with data sets is displayed. It is standard that the cylinders are listed in lines on the left edge of the window. You can edit a data set on double-clicking it.
4. Down right the matrices with connections are displayed. The Euro format shows one matrix for the superior key connections (left, displayed as 'X') and one for the central cylinder connections (right, displayed as 'I'). The standard view consists of one matrix only that contains all connections displayed as a red dot. An 'E' symbolises a change key function i.e. a connection between a cylinder and its change key.

1. Handling the System Matrix Window

In the standard format (not Euro Matrix) the cylinders are listed in lines on the left edge of the window, while the key functions are listed in columns along the top edge. The arrangement of the data stocks can be swapped by the command **Options - Layout....**

In the *System Matrix* two data sets are marked as a standard: A cylinder and a key function. With the aid of the Arrow keys LEFT and RIGHT you can mark another column, with UP and DOWN you can mark another line. Furthermore, with a mouse click on an intersection of line and column you can shift both marks at once. Pressing the SPACEBAR or double-clicking on an intersection switches the connection on and off.

You can change the partitioning of the *System Matrix* window by dragging the border lines with the mouse. For the adjustment of the width display of the data fields serve the commands **Options - Format Lines** and **Options - Format Columns** (see also Chap. IV-2, 'Line Formatting and Sorting').

The lines' height and columns' width depends on the display font. You can determine this font with the command **Options - Font Data** (see also Chap. IV-2, 'Font Selection').

With the command **Options - Hide Cylinders keyed alike** you can control the display of cylinders keyed alike (see Chap. IV-1, 'Cylinder Data Sets'). Activate this adjustment to let disappear cylinders keyed alike and display cylinders with different pinnings, only.

The command **Options - System Matrix Setup...** opens the dialogue *System Matrix Setup*, which allows to modify some settings of the System Matrix.

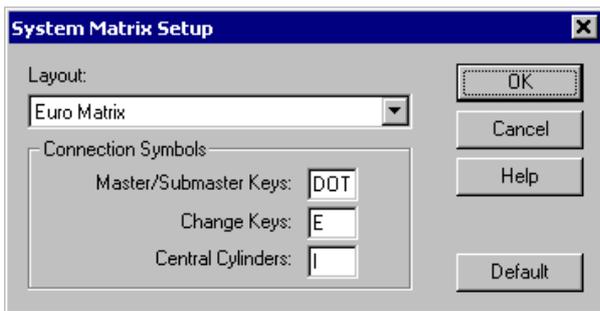


Fig. 2: The dialogue box *System Matrix Setup*

The dialogue offers the following entry fields:

Layout: Select the layout here, whose settings you would like to modify.

Default: This button allows to reset the contents of the entry fields to their default values.

In the area Connection Symbols the connection symbols for the different layouts can be adjusted.

Master/Submaster Keys: Enter the connection symbol for master and submaster keys here.

Change Keys: Enter the connection symbol for change key connections here.

Central Cylinders: Enter the connection symbol for central locks here.

Note:

- You can enter the character sequence 'DOT' to use the red dot as the connection symbol.
-

Euro Matrix

The Euro Matrix format consists of two matrices in one view. On the left hand side you find a matrix of the superior keys (top master key and master keys) listed vertically against the cylinders horizontally. On the right there is a second matrix of central cylinders listed vertically against cylinders' change keys horizontally.

The connections between cylinders and their change keys are not shown in form of a matrix. If a cylinder owns a change key its name and number is displayed in the line of the corresponding cylinder dataset as a datafield.

The Euro format makes the *System Matrix* considerably more compact and gives a better overview; especially for big master key systems containing a lot of change keys the Euro Matrix is very helpful.

The handling of the Euro Matrix is generally the same like in the standard view of the *System Matrix* (see also Chap. VI-1, 'Handling the System Matrix Window'). However, swapping lines and columns is not possible in the Euro format.

Notes:

- To let appear cylinders in the list of central cylinders on the right hand side of the Euro Matrix, they must be marked as central cylinder in the *Cylinder's* dialogue box (see also Chap. IV-1, 'Cylinder Data Sets').
 - A connection to a central cylinder is only possible if a change key was set up for the corresponding locking (refer to Chap. IV-1, 'Cylinder Data Sets').
-

Moving in the System Matrix

The following keys serve to move the cursor and to quickly browse the display:

- k{Arrow keys}: One line or column to the corresponding direction
- PGUP, k{PgDn}: One screen page up, down
- CTRL+PGUP, CTRL+PGDN: One screen page left, right
- HOME, END: To the first/last horizontal data set
- CTRL+HOME, CTRL+END: To the first/last vertical data set
- CTRL+ARROW UP, CTRL+ARROW DOWN: Scrolling one line in the column list
- CTRL+ARROW LEFT, CTRL+ARROW RIGHT: Scrolling one line in the line list.

2. Enter and edit data sets

The *System Matrix* offers three methods to enter data sets. You can create in one step

- single data sets with individual information or
- several identical data sets with a numbering or
- several data sets with repeating information.

Add Data Sets

To add one or multiple data sets to the focused column list:

- Click on  in the toolbar or
- choose the command **Edit - Add (Columns)...** or
- press the button CTRL+INS or
- double-click on the entry in the corresponding columns list.

To add one or multiple data sets to the focused line list:

- Click on  in the toolbar or

- choose the command **Edit - Add (Lines)** or
- press the button **INS** or
- double-click the entry in the line list.

According to the list's content the corresponding dialogue box opens: Either the dialogue box *Key Function* or the dialogue box *Cylinder*.

LOCKBASE provides the convenient possibility of creating several data sets in which a numbering occurs (e.g. keys 800 to 825) in one step.

Use the following entry fields to do so:

From, To: Enter the start/end value of the numbering.

@ Serial No.: With this button you insert the @-sign to an entry field at your will. LOCKBASE replaces this sign with the numbering when it creates the data sets. It is possible to insert the numbering in several data fields.

In the other entry fields you enter data which should be identical in all new data sets.

Notes:

- The new data set appears in the list above, resp. left next to the one last marked.
 - In an analysed, hierarchical master key system, data sets can only be added to a subgroup.
 - You can insert the @-sign directly via the keyboard. Often a key is used by @ as the third character so that you have to press ALT+CTRL+@.
 - If the value in the entry field To is smaller than the value in the entry field From, no data sets are created.
-

Create Data Sets by Setting Defaults

LOCKBASE provides you a convenient possibility of simplifying and accelerating the compilation of data sets. Assuming for example that you are compiling person data sets for the tenants of an apartment house. In all these data sets the address will be the same.

To create data sets by setting default values, proceed as follows:

1. When starting the first data set put only the identical details into the dialogue box.
2. Select the button . The dialogue box will afterwards already be occupied with these details when you start a new data set.
3. Set up your data sets as usual.

Notes:

- The defaults apply until you change them again, and only as long as the master key system remains open.
 - If you want to delete the defaults, then delete the data in the entry fields and press the button Default again.
-

Edit Data Sets

To edit one or multiple key function or cylinder data sets, first you have to mark the desired data set(s).

To edit data sets in the focused columns list,

- click on  in the toolbar or

- select the command **Edit - Edit (Columns)**, or
- press the keys CTRL+ENTER or
- double-click directly on the data set.

To edit data sets in the focused line list,

- click on  in the toolbar or
- select the command **Edit - Edit (Lines)** or
- press the keys ENTER or
- double-click directly on the data set in the list.

According to the list's content the corresponding dialogue box opens: Either the dialogue box *Key Function* or the dialogue box *Cylinder*. Your entry fields are occupied by the data of the selected data sets.



Fig. 3: Editing the cylinder length using the asterisk-placeholder

If multiple data sets were selected, only the data which are identical in all selected sets appear in the dialogue box. In the other data fields you will find an asterisk (*). The asterisk represents the current contents of the data field. It can be used as a placeholder for the respective contents of the data field in each data set, like in Figure 2 (see above). If you delete the asterisk, the current contents of the data field will be lost.

Note:

- To edit multiple data sets you can also use the automatic numbering by entering the data fields From and To as well as using the '@' character.
-

Delete Data Sets

In the *System Matrix* you can delete key function and cylinder data sets. Before, you have to mark the data set(s) to delete. Then proceed as follows.

To delete one or multiple data sets in a column list,

- click on  in the toolbar or
- select the command **Edit - Delete (Columns)** or
- press key CTRL+DEL.

To delete one or multiple data sets in the line list

- click on  in the toolbar or
- select the command **Edit - Delete (Lines)** or
- press key DEL.

A security query protects you against accidental deletion.

Note:

- In an analysed, hierarchical master key system, data sets can only be deleted if a subgroup is displayed.
-

Consistency Check

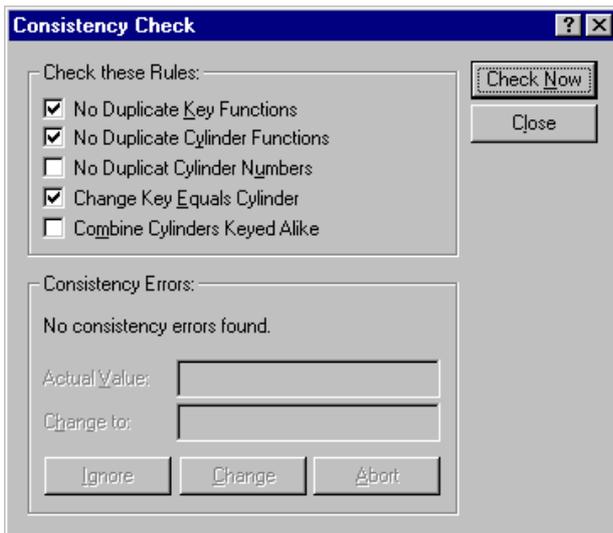


Fig. 3: The dialog box *Consistency Check*

After having completed the data entry, you can perform a check of the inner consistency of the master key system. LOCKBASE will test whether the system follows the rules marked by checked boxes. If differences are found, the corresponding data will be presented for modification.

To open the dialog box *Consistency Check*

- select the command **Edit - Consistency Check...**

The dialog box contains the following entry fields and control elements:

No Duplicate Key Functions: If this box is checked, LOCKBASE looks for duplicate key function names (field Function in the key function data set, see Chap. IV-1, 'Key Function Data Sets').

No Duplicate Cylinder Functions: If this box is checked, LOCKBASE looks for duplicate names of cylinder functions (field Number in the cylinder data set, see Chap. IV-1, 'Cylinder Data Sets'). Cylinder functions are the 'master' cylinders of keyed alike groups; which means this rule checks only, that cylinders keyed differently also have different names, while cylinders keyed alike can have the same name.

No Duplicate Cylinder Numbers: If this box is checked, LOCKBASE looks for duplicate cylinder numbers (field Number in the cylinder data set, see Chap. IV-1, 'Cylinder Data Sets'). In contrast to the rule No Duplicate Cylinder Function, here all cylinders will be checked.

Change Key Equals Cylinder: If this box is checked, LOCKBASE tests whether all change keys got the same name as the cylinder they belong to, i.e. whether the contents of the field Number of the cylinder data set equals the contents of the field Function of the belonging change key (see also Chap. IV-1, 'Cylinder Data Sets' and Chap. IV-1, 'Key Function Data Sets').

Combine Cylinders Keyed Alike: If this box is checked, all cylinders keyed alike will be combined to a cylinder function. The first cylinder in unsorted order of each cylinder function, will be the 'master' (see Chap. IV-1, 'Cylinder Data Sets').

Check Now: By pressing this button, you start the consistency check. The master key system will be searched for breaks of the rules defined above. Detected errors will be displayed in the field Consistency Errors and can be corrected there (s.b.).

Close: This button closes the dialog box without performing a consistency check.

Actual Value: This field shows the current value of the data field that causes the error, as a rule a key function or a cylinder number.

Change to: This field contains a suggestion, how to modify the value to pass the check. However, you can change the contents of this field according to your needs.

Ignore: Press this button to continue the search without correcting the error.

Change: Press this button to change the current value into the one displayed in the field Change to.

Abort: Press this button to abort the searching process.

3. Connecting Data Sets

To set and remove connections between key functions and cylinders in the *System Matrix*,

- double-click on the intersection of column and line or
- mark two data sets you want to connect and press the SPACEBAR.

In this way you can switch connections between the selected items on and off.

If you want to connect several data sets in one pass, select one or multiple data sets,

- click on  in the toolbar or
- select command **Edit - Connect**.

The dialogue box *Connect* opens (refer to Chap. IV-1, 'Connections').

In the standard view of the *System Matrix*, data sets connected to each other are indicated by a red dot. The Euro Format (see also Chap. VI-1, 'Euro Matrix') displays connections between superordinated keys and cylinders by a red 'X'. Connections between central cylinders and change keys are shown by a red 'I'. Connections between cylinders and their change keys are indicated by a red 'E'.

VII. The Calculator

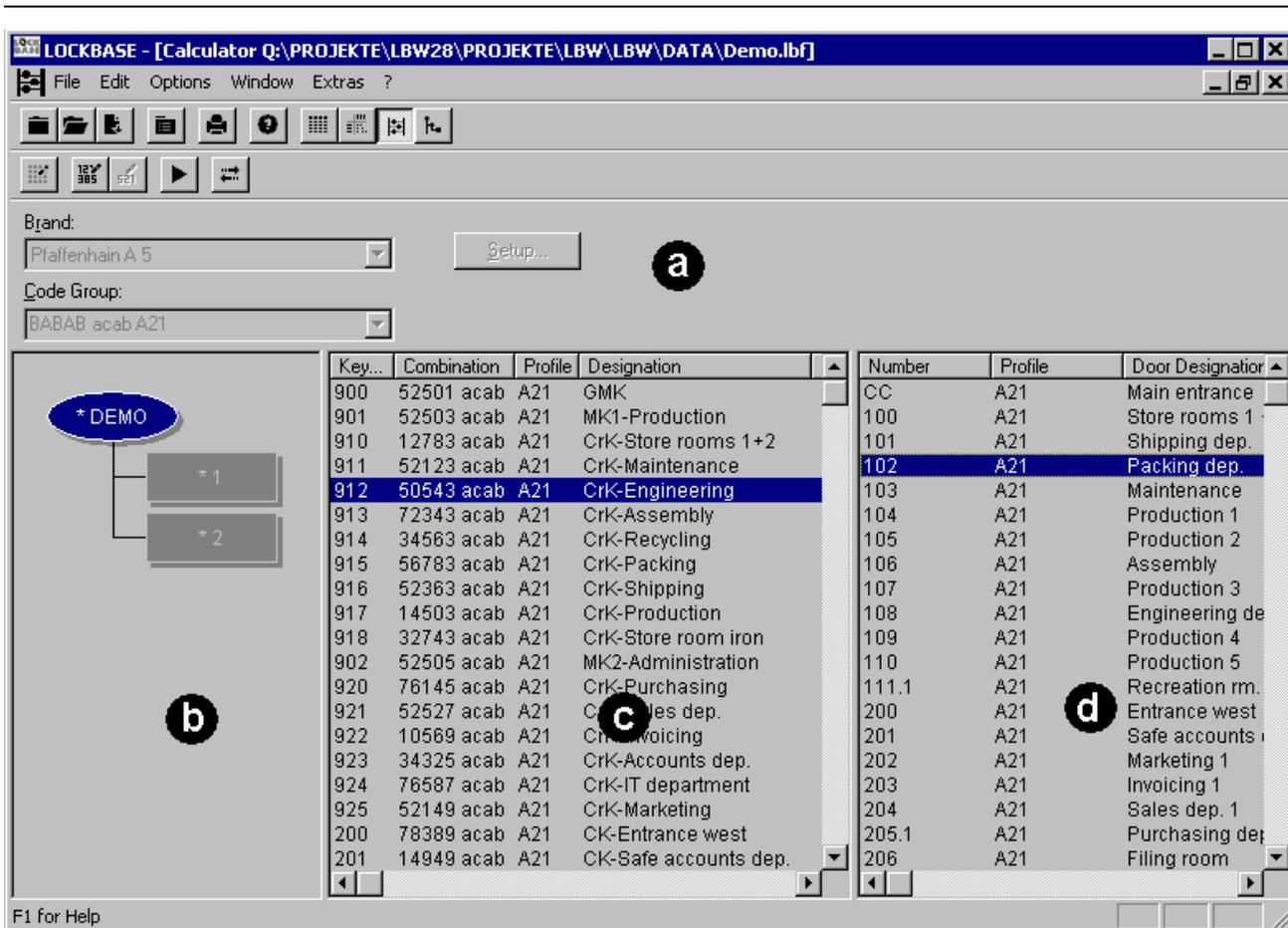


Fig. 1: The window *Calculator* with the entry fields (a), the *Group Structure* display (b), the key functions' list (c) and the list of cylinders (d). In the *Group Structure* view superordinated groups (= nodes, they contain subgroups) are displayed oval, whereas subgroups are displayed rectangularly.

To open the *Calculator* proceed as follows:

- Click on  in the toolbar or
- select the command **Window - Open Calculator** or
- choose the hotkey CTRL+R.

The *Calculator* window is the LOCKBASE calculation program for tracing the key bittings and cylinder pinings of a master key system. It is presumed that key and cylinder data sets have been established and that the data sets are connected according to the required functionality (refer to Chap. V, 'The Data Lists' and Chap. VI, 'The System Matrix'). The *Calculator* is included in the LOCKBASE versions *Calculator* and *Professional*.

The *Calculator* consists of four areas:

1. The entry field for the brand and the code group are located upside (see below).
2. Down left the group structure of the system is shown if it was analysed and has got a hierarchical structure (refer to Chap. VIII-1, 'Analysing Master Key Systems').
3. In the lower middle window area a list of key functions with their combinations is shown, in case the system is already calculated. Before the calculation starts the list contains only the combinations of the master keys which have been set for nodes and subgroups in the dialogue box *Edit Key Bitting Array*, presuming a master key exists. During the calculation the combinations for the other key functions are subsequently added.
4. You find a list of cylinders in the lower right window area. This cylinders' list allows to define pre-settings for the calculation of multiple cylinders and displays their result after calculation.

Before the group names, symbols are displayed which indicate the editing state of the system:

- the "-" symbol appears if a node's key biting array has been edited, but not yet all of its subgroups.
- the "+" symbol appears if a subgroup's key biting array has been edited. When all the subgroups of a node have been edited, the "-" symbol of the node changes to a "+" symbol.
- the "*" symbol appears if all combinations of a group have been calculated.

You can alter the layout of the *Calculator* window by dragging the splitter bars with your mouse between the group structure display, the key functions' list and the cylinders' list.

You can move between the four areas by mouse-click or by pressing the TAB key. TAB also moves the mark through the entry fields of the control panel.

The following entry fields are available:

Brand: Select the cylinder brand from the list **Brand**, the master key system should be built with. In the brands' list appear those brand modules which you bought together with your LOCKBASE version. In case the *Code Group Administration* is part of your package, choose a brand by selecting the command **Edit - Code Group Administration** (refer to Chap. VII-2, 'Code Group Administration').

Code Group: Enter a valid code group for the chosen brand. From left to right the designators correspond to the cuts from bow to tip of the key. Like the brand, the code group applies for the entire master key system. The patterns you can use differ from brand to brand (refer to Chap. VII-7, 'Cylinder Brands and Code Groups'). In case the *Code Group Administration* is part of your package, choose the code group by selecting the command **Edit - Code Group Administration** (refer to Chap. VII-2, 'Code Group Administration').

Setup: This button is available if you use brands, where some settings for the calculation can be modified. In that case a brand specific dialogue box opens.

1. Steps to calculate a Master Key System

To calculate a master key system you have to proceed as follows:

1. First enter all key functions, cylinders and their connections in the *Data Lists*, the *System Matrix* or the *System Designer*.
2. Select the brand from the **Brand** list in the *Calculator*. If the *Code Group Administration* is part of your LOCKBASE program package, you set the brand during selecting a code group (refer to Chap. VII-2, 'Code Group Administration').
3. In the entry field **Code Group** enter a valid code group for the chosen brand. Like the brand, the code group applies for the entire master key system. The patterns you can use differ from brand to brand (refer to Chap. VII-7, 'Cylinder Brands and Code Groups'). If the *Code Group Administration* is part of your LOCKBASE program package, you select a code group in the *Code Group Administration* (refer to Chap. VII-2, 'Code Group Administration').
4. Mark subsequently all the groups in the *Group Structure* view. Call the dialogue box *Edit Key Bitting Array*. Set or confirm the key biting array and the keyways (refer to Chap. VII-3, 'Edit the Key Bitting Array').
5. Click on  or select the command **Edit - Calculate**. A 'thinking bubble' appears and indicates that the system is currently being calculated. When LOCKBASE has finished or cancelled the calculation, a message appears.
6. After the master key system has been calculated, you have to transfer the calculation results (key codes and cylinder pinnings) to the database. Click on  in the toolbar or select the command **Edit - Transfer** in the menu (refer to Chap. VII-6, 'Transfer').

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If you only see a single rectangle with a system number, the following reasons may apply:

- You did not analyse the group structure or
- the master key system has no group structure or
- you are working with a LOCKBASE version without *System Designer* or
- you have merged the group structure.

In each of these cases you can edit the key biting array only for the entire master key system.

If the calculation fails because of too much complexity, you have the following options:

- enlarge the key bitting array of the master key system or
- calculate with more keyways (refer to Chap. VII-3, 'Edit the Key Bitting Array').

Security Note:

- If the *Code Group Administration* is not part of your LOCKBASE package, it is necessary to administer the used code groups to avoid an overlap of the combination ranges of different master key systems.

Notes:

- In an analysed, hierarchical system you have to set the key bitting array for each node and subgroup beginning at top level. The key bitting array of an upper element has to include the key bitting array of its subgroups, whereas their key bitting arrays have to differ in at least one position. Then the command **Calculate** is available.
- In *Key Functions* and *Cylinders* list only keys resp. cylinders that belong to the element marked in the *Group Structure* display are boldly presented. All other key functions appear pale.
- Analysing a master key system for its group structure is advantageous so that the key bitting array can be divided up according to the respective group size. Faults resp. too generously or tightly dimensioned key bitting arrays become more quickly apparent.
- The LOCKBASE *Calculator* automatically excludes certain combinations from use. To these belong for example more than two equally deep adjacent cuts or more than three equally deep cuts at all (with five pin brands), cut sequences rising or falling like stairs as well as combinations that cannot be cut due to overlapping.

2. Code Group Administration

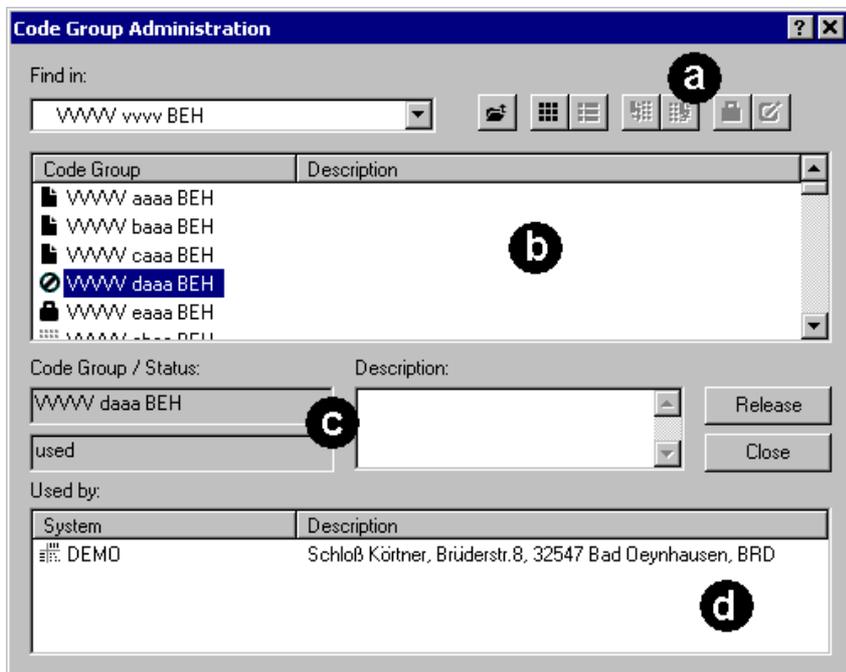


Fig. 2: The *Code Group Administration* with toolbar (a), list of code groups (b), status fields and list of usage (d)

The *Code Group Administration* supports a systematic administration of code groups used for calculation to avoid an unrecognised overlapping of the combination ranges of different master key systems.

To start the *Code Group Administration*,

- click on  in the toolbar or
- select the command **Edit - Code Group Administration...** or
- press the key F3.

The *Code Group Administration* is not available before at least one key function and one cylinder is present.

The Entry Fields of the Code Group Administration

The *Code Group Administration* window divides into four areas.

At the top the toolbar is located. It serves to navigate through the tree of code groups and contains the following elements:

Find in: This field displays the superordinated code group the current visible code groups in the main window were derived from. The field Find in serves to quickly navigate upwards in the tree of code groups.



Move one level upwards: Use this command to move one level upwards in relation to the code groups displayed in the main window.



Overview display: Use this command to display the code groups in a way which allows a better overview. The code groups will be displayed in multiple columns which leads to a better overview but without their respective descriptions.



Detailed display: Use this command to display the code groups in a more detailed way. They will be displayed only in one column but with their description beside.



Split the selected code group: Use this command to split the selected code group in the main window into smaller units. If there are different ways to split up a code group the dialogue box *Split a Code Group* appears (see Chap. VII-2, 'How to split up Code Groups'). This command is only available if a code group could be split up and if it hasn't been used, yet.



Merge a formerly split code group: Use this command to redissolve a previously executed split operation. A split code group can only be merged if none of its descendents are in use, locked or split up themselves.



Lock/Unlock a code group: Use this command to mark a code group as locked or to unlock a previously locked one. A locked code group cannot be occupied and a code group page which contains locked elements, cannot be merged. Use the field Description to note a reason for the locking.



Add/Edit a keyway name: For some brand modules by this command it is possible to add single user defined keyways. They can be recognised by the entry **+ <New>** in the main window.

Below the toolbar in the upper part of the *Code Group Administration*, the main window with the list of code groups is located.

All code groups on the current level are listed here. At the left margin the status of each code group is displayed as an icon:



Available: This code group is free and can be used for a master key system or split into smaller units.



Split: This code group has been split into smaller units. It can be merged again if none the new code groups have been used or split up themselves, yet.



Used: This code group was used for one or several master key systems. The systems which use this code group will be listed in the list Used by in the lower part of the window.



Locked: This code group has been locked. The reason for the locking should be typed into the field Description.



New: This code group can be edited to establish a new, user defined profile.



Net lock: This code group is just in use by another user in the network. It cannot be occupied or merged.

Below the main window in the lower part of the dialogue box the status fields are located. The contents of these fields always refers to the selected element in the main window.

Codegroup / Status: Name and status of the selected code group are displayed here.

Description: Additional information about the selected code group's usage. Type in the text here which should be displayed beside the code group in detailed display modus.

Occupy / Release: Press this key to occupy the selected code group for usage by the current master key system or to revoke an existing usage.

Close: Press this key to leave the *Code Group Administration* and to return to the *LOCKBASE Calculator*.

Used by: In this list the master key systems are displayed which currently use the selected code group. Usually every code group is used by only one system. However, if it is unavoidable in a certain case to use twice a code group, with this list for example a geographical separation can be achieved.

Notes:

- You can also reuse a code group that is using a code group which was already used for another master key system. However, it is strongly recommended not to do so, because by this an unintended locking of keys from other systems can become possible.
 - If you ever have to reuse a code group for some reason, at least a different master key combination should be used for the second system. By this at least you may decrease the probability of unintended lockings.
 - You should never reuse code groups of a central lock system (a universal central cylinder).
-

How to split up Code Groups

The aim of the *Code Group Administration* is not only to avoid unintended lockings among different systems, but also to help to portion the range of combinations of a cylinder system in a way, that for each of the different sized master key systems an appropriate amount of combinations can be made available.

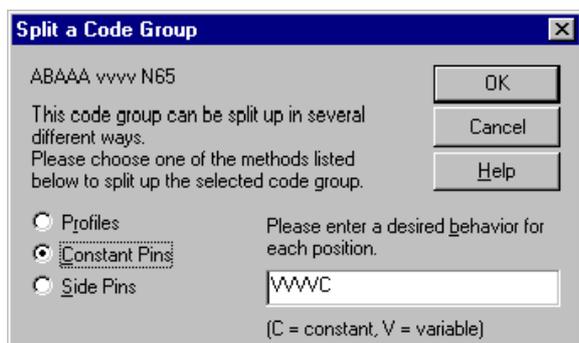


Fig. 3: The dialogue box *Split a Code Group*

For this the dialogue box *Split a Code Group* serves. If more than one methods exist, it offers all currently possible methods of splitting up the selected code group. Which methods do exist depend on the selected brand and code group.

In Fig. 3 three options are available: Splitting through profiles, constant pins and side pins. If splitting through profiles it is changed to the respective next level in the profile tree. If splitting through pins (constant pins and side pins), additionally number and position of the constants have to be defined. These pins will be the constant pins in the resulting code groups (e.g. "VVVC" 'VVV1', 'VVV3', 'VVV5', 'VVV7').

Notes:

- To get to know the *Code Group Administration*, you should experiment with it a little. As long as you have not used a code group for a master key system, you always can undo any disadvantageous structure.
- Before you start to occupy code groups for your master key systems you should design a system of splitting code groups for yourself, which contains smaller as well as larger code groups.
- It is always better to try a calculation with a smaller code group first. LOCKBASE calculates faster with smaller code groups and you don't waste combinations which later may be needed for another master key system.

3. Edit the Key Bitting Array

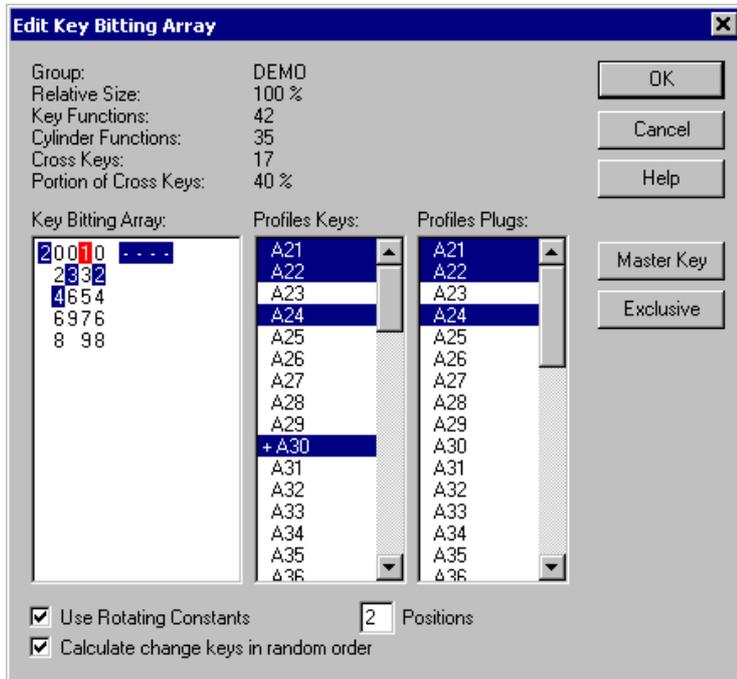


Fig. 4: The dialogue box *Edit Key Bitting Array*

The keyway(s), the key bitting array and the master key combination is to be set in the dialogue box *Edit Key Bitting Array*. The *Key Bitting Array* is a table with columns representing the possible cut positions and lines representing the possible cut depths of a cylinder brand. After you selected the brand and code group (see Chap. VII-7, 'Cylinder Brands and Code Groups'), you have to edit the *Key Bitting Array*:

- Double-click on an element in the *Group Structure* display or
- mark an element in the *Group Structure* display and select **Edit - Edit Key Bitting Array** or
- mark an element in the *Group Structure* display and click on  or
- mark an element in the *Group Structure* display and press the key F4.

The dialogue box cannot be opened, before the fields Brand and Code Group contain valid data. In the upper area of the dialogue box the active group and its size related to the master key system is displayed to ease the splitting of the key bitting array between the groups.

The dialogue box offers the following entry fields:

Key Bitting Array: The bit depths possible according to brand and code group are accessible in this box (from left to right = from bow to tip). In order to limit the bitting array (reserves), delete the bit depths that you do not wish to use for this system, resp. for the marked node or subgroup (press DEL). If on calculation this bitting array turns out to be too small, place the cursor in this box, type in additional bitting depths and restart the calculation. LOCKBASE only accepts characters which fit the selected code group.

Profiles Keys: This list contains all profiles the chosen code group offers for keys. Select the profile(s) here that should be used in the master key system (either per mouse click or arrow keys UP and DOWN and the SPACEBAR). To find a certain profile in the list you can type its name, the focus will move to the respective line if the profile was found.

Profiles Plugs: This list contains all profiles the chosen code group offers for cylinders. Select the profile(s) here that should be used in the master key system (either per mouse click or arrow keys UP and DOWN and the SPACEBAR). To find a certain profile in the list you can type its name, the focus will move to the respective line if the profile was found.

Master Key: This button enables you to select bitting and profile for the master key of a system. The button is only available if the master key system, resp. the node or subgroup has a master key. In this case for the master key you have to determine a profile as well as a bitting depth on each position. The master key combination is marked in colour. The master key profile receives a "+" (plus character).

Exclusive: With this you reserve a bitting depth or a profile exclusively for the master key. It then no longer occurs in any change key or interchange key and will not be offered in the subordinate key bitting arrays. An exclusive bit is marked in colour, an exclusive profile is indicated by an asterisk (*).

Use Rotating Constants: Check this box if you want to calculate with rotating constants. This method uses a certain number of master key bittings for calculation of key functions by changing (rotating) their positions systematically. Generally this method leads to better calculation results. That is the reason why this box is checked by default. Though there also might be worse results for certain systems or brands. In the field Positions you can enter how many master key positions should be rotated.

In the Statistics area the following information is displayed:

Group: Name of the group that is currently edited.

Relative Size: Number of key functions compared to the total number of key functions in the entire system (in percent). It makes it easier to rate the amount of variation range needed to calculate the group.

Number of Functions: The total number of key functions in this group.

Number of Cylinders: The total number of cylinders in this group.

Number of Interchange Keys: The number of interchange keys in this group.

Portion of Interchange Keys: The portion of interchange keys in relation to the total number of key functions in this group (in per cent). It lets you easier rate the complexity of the group.

To move in the field Key Bitting Array,

- click on a certain column / line or
- use the arrow keys LEFT, RIGHT, UP, DOWN to move the cursor.

The effect of the button Master Key depends on which entry field is currently active:

- If the Profiles Keys list is active, you can set up a profile for the master key. Mark a profile and click on the button Master Key.
- If the Key Bitting Array is active, you can determine the master key bitting. Move the cursor to the position you want to be a master key bit and click on the button Master Key.

Example

The following is an example, how to divide up a certain key bitting array among two subgroups. The system has a top master key, as well as 2 groups, each with a (sub) master key.

key biting arrays:

whole system:

22141
443
665
88
00

group 1:

22341
44
66
88
00

group 2:

22541
44
66
88
00

For calculating this master key system a code group with the constants '41' at the tip of the key was selected, i.e. in column 4 and 5 there are no variations at all. All other variations in these two positions can be selected for other master key systems without having wrong fits (see also Chap. VII-2, 'Code Group Administration').

In column 3 only 3 depths are varied. One of these (1) is an exclusive master key depth. Since the system is structured we can use the other depths for the 2 group key codes. The top master key has the combination "24141", the (sub) master key 1 "24341", the (sub) master key 2 "24541". In column 3 the position "5" has been deleted from the key biting array of group 1 and the position "3" has been deleted from the key biting array of group 2. Therefore no interference between the groups is possible.

To divide up the key biting array for several groups of one level, take care that at least in one column or in the profiles the key biting arrays do not overlap. Therefore you have to consider that also the bittings of all superordinated master keys will be built into the cylinders of the subgroups. Because of this the cuts of all superordinated master keys always should be set exclusive in the columns used to separate subgroups, if the groups are not separated by profiles.

To divide by profiles select a code group with several profiles for the entire master key system and then use - for example - one of them for every subgroup.

Security Notes:

- An exclusive master key biting enhances the security of a master key system. The shallowest biting of the master key is most suitable as exclusive biting because then no master key can be produced by filing down another key.
 - If the *Code Group Administration* is not included in your LOCKBASE package, it is necessary to administer the used code groups to avoid wrong fits between different master key systems.
-

Notes:

- In an analysed, hierarchical system you have to set the key biting array for each node and subgroup beginning at top level. The key biting array of an upper element has to include the key biting array of its subgroups, whereas their key biting arrays have to differ in at least one position. Then the command **Edit - Calculate** is available (refer to Chap. VII-4, 'Start/Stop Calculation').
 - When dividing the key biting array among the groups of a hierarchical master key system, the Statistics area at the top of this box helps. It designates the statistical share of the group of the total master key system. Furthermore, you can look up the master key codes already allocated in the window of the *Calculator* on the right, next to this dialogue box.
 - Make sure you keep key biting arrays as small as possible. LOCKBASE calculates faster and you save resources for future master key systems.
 - In the Key Functions List only that keys are displayed bold which belong to the currently selected subgroup in the *Group Structure* display. All other entries appear pale.
 - A "-" character appears in the *Group Structure* display if the key biting array was set up for a node or parent group, but not yet for all of its subgroups.
 - A "+" character appears in the *Group Structure* display, if the key biting array of the group and all of its subgroups was completely set up.
-

4. Start/Stop Calculation

To start the calculation

- click on  in the toolbar or
- select the command **Edit - Calculate**.

You can recognise that LOCKBASE is just calculating a master key system by

- the "think bubble"  beside the entry field Code Group,
- the Calculate button in the toolbar is pushed,
- the newly calculated combinations are subsequently filled into the Key Function list down right in the *Calculator* window.

To stop the calculation

- click on the toolbar button  again or
- repeat selecting **Edit - Calculate**.

LOCKBASE always calculates the combinations for the currently selected group in the *Group Structure* display. If a subgroup is selected, it calculates the combination for this group and all its descendent subgroups, but not for its parent. If you want to calculate a system in whole, be sure to select the root of the tree of groups before starting the calculation.

When the calculation is finished or fails, a message appears.

The command to start the calculation is disabled if you did not yet enter all necessary input (refer to Chap. VII-3, 'Edit the Key Bitting Array').

Notes:

- The LOCKBASE *Calculator* automatically excludes certain combinations from use. To these belong for example more than two equally deep adjacent cuts or four equally deep cuts at all (with five pin brands), cut sequences rising or falling like stairs as well as combinations that cannot be cut due to overlapping.
- Because the calculation process is performed in the background, you can continue working in LOCKBASE or another Windows program during the calculation.
- An asterisk (*) in the *Group Structure* display appears when all key functions of the corresponding group have been calculated.
- LOCKBASE aborts calculation as soon as it is unable to calculate a combination for a certain key. Because change keys are calculated in a random order of sequence it can happen that LOCKBASE is able to calculate other keys during a consecutive trial, because these keys have a different position in the random sequence now.

5. Edit Combinations

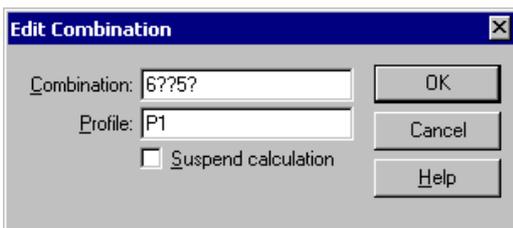


Fig. 5: The dialogue box *Edit Combination*

To prepare a calculation, you can enter additional pre-settings for the key functions' combinations or cylinders' profiles. Proceed as follows:

- double-click on a single key function or a single cylinder or
- mark one or multiple key functions or cylinders and press ENTER or
- mark one or multiple key functions or cylinders and choose the command **Edit - Edit Combination...** or
- select one or multiple key functions or cylinders and click on  in the toolbar or
- mark one or multiple key functions or cylinders and press the key F5.

The dialogue box *Edit Combination* opens.

Here you can pre-set or overwrite combination/s and/or profile/s for the selected datasets.

The following data fields are available:

Combination: Enter the desired combination here. Use the question mark ('?') for positions, which should be calculated by LOCKBASE.

Profile: Enter the desired profile here or use the question mark ('?').

Suspend calculation: Activate this checkbox in order to exclude this key or cylinder temporarily from calculation.

You can use the question mark for any cutting position and profile. You can also use it for only some positions or for no position at all. For cylinders only profiles can be pre-set. The *Calculator* accepts your settings and tries to calculate the missing data.

If you want to edit several records you can use the asterisk ('*') to keep existing cut positions or the profile unchanged. To do so mark the key functions you would like to edit, open the dialogue box *Edit Combination* and enter the asterisk for each position to keep unchanged. Enter the question mark at those positions, which should be calculated by LOCKBASE. You can also combine explicit pre-settings at certain positions with the asterisk at other positions.

Notes:

- Complicated systems can be calculated more efficient and much faster by partly pre-setting combinations the way described above. However, detailed technical knowledge of the used cylinder brand and about calculation methods is required. If wrong or senseless settings were made, LOCKBASE will not be able to calculate the system.
 - Only those combinations can be edited that belong to the active group. These combinations can be recognized by being displayed bold in the key functions resp. cylinders list.
 - As long as keys or cylinders have been excluded from calculation, the calculation cannot be finished completely. E.g. to proceed a transfer of the calculation (see Chap. VII-6, 'Transfer') first all suspended lockings have to be released and calculated.
-

6. Transferring calculated Data between Calculator and Data Base

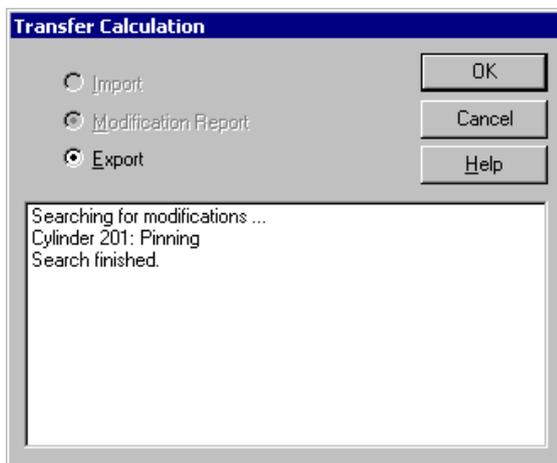


Fig. 6: The dialogue Box *Transfer Calculation*

The **Transfer** command enables you to transfer calculation results from and to the *Calculator*:

- You can either transfer data from the technical data fields of the key function and cylinder data sets to the *Calculator* or
- from the *Calculator* to the technical data fields of the key function and cylinder data sets.

To transfer data

- click on  in the toolbar or
- select the command **Edit - Transfer....**

The dialogue box *Transfer Calculation* opens. It contains the following option buttons:

Import: Select Import and press **OK**. All technical data of the of the key function and cylinder data sets are transferred to the *Calculator*. The import function enables you e.g. to let LOCKBASE calculate the expansion of a manually calculated system.

Modification Report: Click on this button and then **OK** to get a modification report of keys and cylinders changed by a new calculation before data transfer. Each key and cylinder to be altered will be listed, and it will be displayed, whether key combinations resp. cylinder pinnings or profiles are to be changed. From this report you can decide, whether you accept the calculation or you rather wish to change it again.

Export: Select Export and press **OK**. Then the calculation results are transferred from the *Calculator* to the technical data fields of the key function and cylinder data sets.

The window below shows messages about the transfer state. If it is finished you can close the dialogue box with **OK**.

Steps to Import manually calculated Systems

The following describes, how to import a manually or otherwise calculated system to the LOCKBASE *Calculator*.

1. The connections between key functions and cylinders as well as the combinations and keyways of the key function data sets should already be established with the *System Matrix* or the *Data Lists*.
2. Change to the *Calculator* and enter brand and code group in the corresponding fields. If the *Code Group Administration* is included in your LOCKBASE package select a code group here (refer to Chap. VII-2, 'Code Group Administration').
3. Select the command **Edit - Transfer...** and import the technical data to the *Calculator*. LOCKBASE reconstructs the key biting array of the system from the imported key combinations. If you have the *System Designer*, you can let it detect a possibly existing group structure (refer to Chap. VIII-1, 'Analysing Master Key Systems').
4. Recalculate the system (see Chap. VII-1, 'Steps to calculate a Master Key System'). LOCKBASE checks the current calculation and detects and reports eventually existing wrong fits.

7. Cylinder Brands and Code Groups

The following is a description of the cylinder brands LOCKBASE currently supports and the according code group formats.

Abus C42-C91

- Brand: Abus C42-C91
- Syntax: [5 x Pin] [Keyway]
- Pin: 'V' = variable, '1'-'9' = constant
- Keyway: single user defined keyway
- Example: 'VVV34 xyz'

Assa 700/07

- Brand: Assa 700/07
- Syntax: [7 x Pin] [Keyway]

- Pin: 'V' = variable, '7'-'1' = constant
- Keyway: single user defined keyway
- Example: 'VVVV434 27-13'

Assa Twin 6000

- Brand: Assa Twin 6000
- Syntax: [6 x Pin] [Keyway]
- Pin: 'V' = variable, '9'-'1' = constant
- Keyway: single user defined keyway
- Example: 'VVVV34 27-13'

BAB

- Brand: BAB
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = 4-step on '1', 'B' = 4-step on '2', 'C' = 4-step on '3', 'D' = 4-step on '4', '1'-'j' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '3ABDC 2'

BAB P6

- Brand: BAB P6
- Syntax: [6 x Pin] [Keyway]
- Pin: 'A' = 4-step on '1', 'B' = 4-step on '2', 'C' = 4-step on '3', 'D' = 4-step on '4', '1'-'g' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '3ABDC6 2'

BKS

- Brand: BKS 5, BKS 6
- Syntax: [5 resp. 6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'9' = constant
- Keyway: user defined keyway
- Example: 'ABA34 xyz', 'ABAA34 xyz'

Börkey 1101/1-1 5

- Brand: Börkey 1101/1-1 5
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '9'-'1' = constant
- Keyway: Tree of 3 levels on 4 basic keyways according to the manufacturer's specification
- Example: 'ABA96 AB', 'ABAA34 D'

Börkey 1101/2-1 5

- Brand: Börkey 1101/2-1 5
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '8'-'1' = constant
- Keyway: Tree of 3 levels on 4 basic keyways according to the manufacturer's specification
- Example: 'ABA86 AB', 'ABAA34 D'

CES Softline

- Brand: CES Softline 5/6

- Syntax: [5 resp. 6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'0' = constant
- Keyway: Single user defined keyway or tree of keyways according to the manufacturer's specification
- Example: '2ABAA BCD12'

City 5G

- Brand: City 5G
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'8' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '2ABAA F'

Corbin

- Brand: Corbin
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'8' = constant
- Keyway: single user defined keyway or tree of keyways according to specification of manufacturer
- Example: '2ABAA B1'

Dom DAS

- Brand: Dom DAS
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'7' = constant
- Keyway: user defined single keyway
- Example: 'ABA34 1239B'

Dom RS

- Brand: Dom RS 5, Dom RS 6
- Syntax: [5 resp. 6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'9' = constant
- Keyway: user defined keyway
- Example: 'ABA34 xyz', 'ABAA34 xyz'

Dom ix5

- Brand: Dom ix5
- Syntax: [5 x Pin] [10 x Side Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'5' = constant
- Side Pin: 'v' = variable, '0', '1' = constant
- Keyway: single user defined keyway
- Example: 'BAA34 vvvvv01011 xyz'

Evva 3KS

- Brand: Evva 3KS
- Syntax: [6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'9' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '2AABBB F'
- Notes: In case of central locks in the field 'Profile' not the name of the central plug will be displayed, but the name of the base module, which has to be used to assembly the cylinder. The exclamation mark '(!)' behind the module name

signals, that parts of the basic module have to be replaced. The remaining parts can be recognize by having been put in brackets in the pinning list.

Evva DPS

- Brand: Evva DPS, Evva DPS II
- Syntax: [5/6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'9' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '2AABB VC'

Evva Dual

- Brand: Evva Dual
- Syntax: [6 x Pin] [Keyway]
- Pin: 'V' = variable, '1'-'5' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '1VVVVV 1EA'

FAB 5

- Brand: FAB 5
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'8' = constant
- Keyway: User defined keyways
- Example: 'BAA14 X11'

FCV 300

- Brand: FCV 300 5, FCV 300 6
- Syntax: [5 resp. 6 x Pin] [Keyways]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'9' = constant
- Keyways: according to specification of manufacturer
- Example: 'BAA34 19/0', 'BAAB34 3/5'

GeGe 5/6

- Brand: GeGe 5, GeGe 6
- Syntax: [5 resp. 6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'0' = constant
- Keyway: User defined single keyways
- Example: 'BAA34 P1', 'BAAB34 P32'

GeGe P1-18

- Brand: GeGe P1-18 5, GeGe P1-18 6
- Syntax: [5 resp. 6 x Pin] [Keyways]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'0' = constant
- Keyways: Keyway set on four levels based on 18 single change keyways according to specification of manufacturer
- Example: 'BAA34 G1', 'BAAB34 G3'

GeGe P1-6

- Brand: GeGe P1-6 5, GeGe P1-6 6
- Syntax: [5 resp. 6 x Pin] [Keyways]

- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'0' = constant
- Keyways: Keyway set on four levels based on 6 single change keyways according to specification of manufacturer
- Example: 'BAA34 G1-3', 'BAAB34 G4-6'

GeGe 7

- Brand: GeGe 7
- Syntax: [7 x Pin] [Keyways]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'0' = constant
- Keyways: user defined keyways
- Example: 'BAABB34 P1', 'BAAABB P1-6'

GeGe AP2-SP 5/6

- Brand: GeGe AP2-SP 5, GeGe AP2-SP 6
- Syntax: [5/6 x Pin] [4/5 x Side Pin] [Keyways]
- Pin: 'A' = even cuts, 'B' = odd cuts, 'Z'-'0' = constant
- Side Pin: 'v' = variable, '0','1' = constant
- Keyways: Keyway set on four levels based on 6 single change keyways according to specification of manufacturer
- Example: 'BAA34 101v G1', 'BAAB34 101vv P4'

GeGe AP3000 6

- Brand: GeGe AP3000 6
- Syntax: [6 x Pin] [5 x Side Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'8' = constant
- Side Pin: 'v' = variable, '0','1' = constant
- Keyway: User defined single keyways
- Example: 'BAAB34 101vv PX', 'BAABAA vvvvv PY'

Gera

- Brand: Gera 2000/7000, Gera 7200
- Syntax: [6 x Pin] [Keyway]
- Pin: 'V' = variable, '1'-'9' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '3VVVV6 T34'

Gera WS plus

- Brand: Gera WS plus 6
- Syntax: [6 x Pin] [5 x Side Pin] [Keyway]
- Pin: 'V' = variable, '1'-'6' = constant
- Side Pin: 'v' = variable, '0','1' = constant
- Keyways: Tree of keyways according to specification of manufacturer
- Example: 'VVVVV4 10101 C'

GTV

- Brand: GTV 5, GTV 6
- Syntax: [5/6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'9' = constant
- Keyway: user defined keyway
- Example: '3ABA6 MT', '4BBAAB xyz'

GTV APS 5/6

- Brand: GTV APS 5/6
- Syntax: [5/6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'9' = constant
- Keyway: Tree of keyways according to specification of manufacturer, single user defined keyway
- Example: 'BABA6 50-81', 'BBAAB xyz'

Ikon

- Brand: Ikon ZA 5
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = 5-step to '1', 'B' = 5-step to '2', 'C' = 5-step to '3', 'D' = 5-step to '4', 'E' = 5-step to '5', '1'-'j' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '3ABDC ZA2'

KAFLI 400

- Brand: KAFLI 400 5 (Z), KAFLI 400 6 (Z), KAFLI 400 5 (GHS), KAFLI 400 6 (GHS)
- Syntax: [5 resp. 6 x Pin] [Keyways]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'9' = constant
- Keyways: according to specification of manufacturer
- Example: 'BAA34 2,4,5', 'BAAB34 6'

KAFLI 500

- Brand: KAFLI 500 5
- Syntax: [5 resp. 6 x Pin] [Keyways]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'9' = constant
- Keyways: 3 level tree based on 6 single change keyways according to the manufacturer's specification
- Example: 'BAA34 ABC2', 'BAAB34 ABC31'

LOB

- Brand: LOB D5, LOB D6, LOB M4, LOB M5
- Syntax: [4/5/6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'9' = constant
- Keyway: user defined keyways
- Example: '2ABA 504', 'ABBAAA 708', '4AAA1 707'

Medeco Biaxial

- Brand: Medeco Biaxial 5, Medeco Biaxial 6
- Syntax: [10/12 x Pin] [10/12 x Angle] [Keyway]
- Pin: 'V' = variable, '_' = not used, '1'-'6' = constant
- Angle: 'K', 'Q', 'B' = Forecuts (left, right, center), 'M', 'S', 'D' = Aftcuts (left, right, center), '_' = not used
- Keyway: single keyways 'L', 'E', 'Y', 'C', 'K', 'H', 'W'
- Example: '3_VV_VV_V_ K_QM_DK_B_ L', '3_VV_VV_V__2 K_QM_DK_B__S L'

Medeco Standard

- Brand: Medeco Standard 5, Medeco Standard 6
- Syntax: [5/6 x Pin] [5/6 x Angle] [Keyway]
- Pin: 'V' = variable, '1'-'6' = constant
- Angle: 'L', 'R', 'C' = left, right, center

- Keyway: single keyways '01', '08', '20', keyway set '14' according to specification of manufacturer
- Example: '3VVVV LRCCR 20', '3VVVV LRCCRL 20'

Multi

- Brand: Multi
- Syntax: [5 x Pin] [Keyway]
- Pin: 'V' = variable, '1'-'9' = constant
- Keyway: single user defined keyway
- Example: '3VVVV xyz'

Pfaffenhain

- Brand: Pfaffenhain 5, Pfaffenhain 6, Pfaffenhain A 5, Pfaffenhain A 6, Pfaffenhain C 5, Pfaffenhain C 6
- Syntax: [5/6 x Pin] [4/5 x Side Pin] [Keyway]
- Pin: 'A' = 2-step to '0', 'B' = 2-step to '1', 'C' = 3-step to '0', 'D' = 3-step to '1', 'E' = 3-step to '2', 'V' = variable, '0'-'9' = constant
- Side Pin: 'v' = variable, 'a'-'e' = constant
- Keyway: Tree of keyways according to specification of manufacturer (series A and C) or single user defined keyway
- Example: '3ABAD vvvv A21', '3ABADC vacbe S4711'

Pfaffenhain V14

- Brand: Pfaffenhain V14-E 5, Pfaffenhain V14-E 6
- Syntax: [5/6 x Pin] [4/5 x Side Pin] [Keyway]
- Pin: 'A' = 2-step to 'Y', 'B' = 2-step to 'X', 'C' = 3-step to 'Y', 'D' = 3-step to 'X', 'E' = 3-step to '0', 'V' = variable, 'Y'-'9' = constant
- Side Pin: 'v' = variable, 'u'-'c' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '3ABAD vvvv 01CF', '3XBADC vacbu 400FF'

Pfaffenhain W14

- Brand: Pfaffenhain W14 5, Pfaffenhain W14 6
- Syntax: [5/6 x Pin] [4/5 x Side Pin] [Keyway]
- Pin: 'A' = 2-step to 'Z', 'B' = 2-step to 'Y', 'C' = 3-step to 'Z', 'D' = 3-step to 'Y', 'E' = 3-step to 'X', 'V' = variable, 'Z'-'3' = constant
- Side Pin: 'v' = variable, 'w'-'c' = constant
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '3ABAZ vvvv 01CF', '3XBADC vacbu 400FF'

Pfaffenhain Integral

- Brand: Pfaffenhain UE 5, Pfaffenhain UE 6
- Syntax: [5/6 x Pin] [8/10 x Side Pin] [Keyway]
- Pin: 'V' = variable, 'Z'-'3' = constant, '-' = not used (empty)
- Side Pin: 'v' = variable, 'u'-'c' = constant, '-' = not used (empty)
- Keyway: Tree of keyways according to specification of manufacturer
- Example: '3Z01Y vvvvvvvv UE036'

SiB

- Brand: SiB
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'7' = constant

- Keyway: single user defined keyway
- Example: '3ABAA xyz'

Wilka

- Brand: Wilka 6
- Syntax: [6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'0' = constant
- Keyway: single user defined keyway
- Example: '3ABAA2 xyz'

Wilka Carat

- Brand: Wilka Carat 6
- Syntax: [6 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'9' = constant
- Keyway: single user defined keyway
- Example: '3ABAA2 xyz'

Winkhaus

- Brand: Winkhaus AZ/VS
- Syntax: [5 x Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '0'-'8' = constant
- Keyway: single user defined keyway
- Example: '2AABB xyz'

Yale

- Brand: Yale 6
- Syntax: [6 x Pin] [10 x Side Pin] [Keyway]
- Pin: 'A' = even cuts, 'B' = odd cuts, '1'-'0' = constant
- Side Pin: 'v' = variable, '0', '1' = constant
- Keyway: single user defined keyway
- Example: '2AABBA vvvvv01011 xyz'

VIII. The System Designer

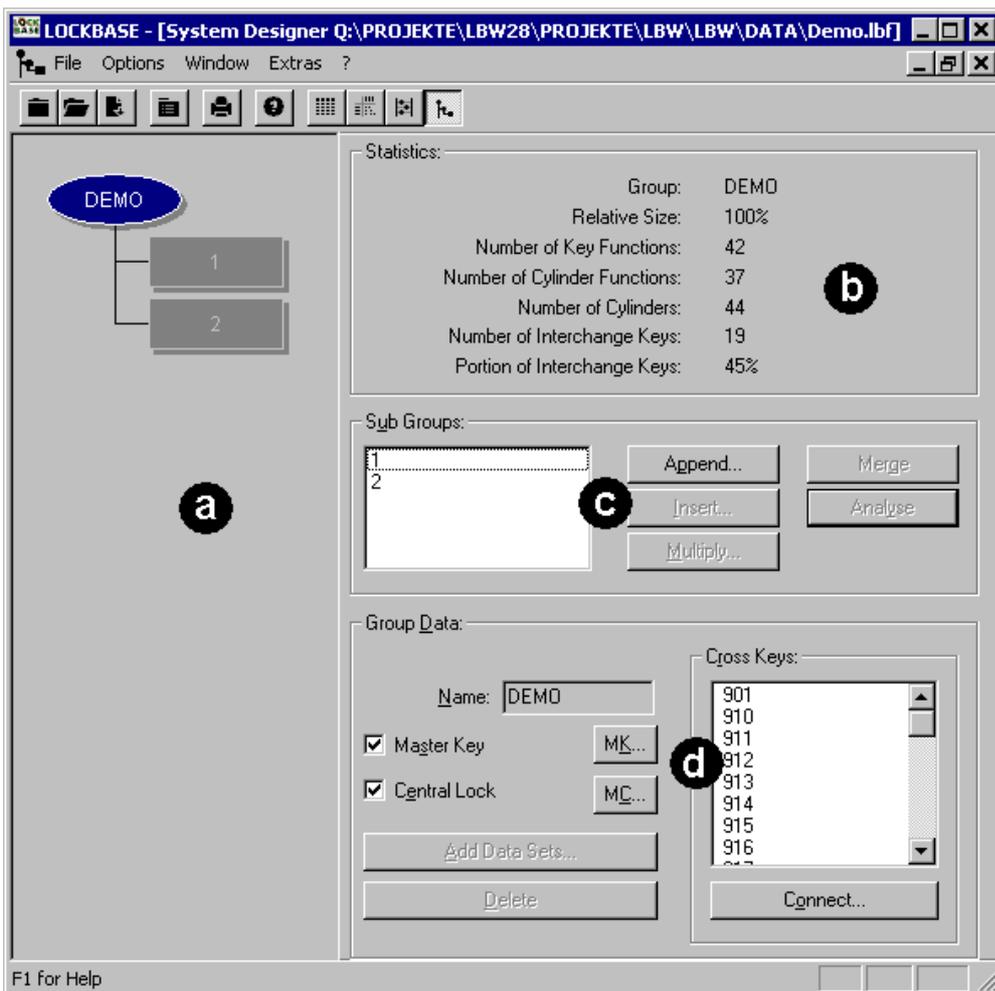


Fig. 1: The window *System Designer*: *Group Structure* view (a), *Statistics* area (b), *Subgroups* area (c), *Group Data* area (d)

To open the *System Designer*,

- click on  in the toolbar or
- select the command **Window - Open System Designer** or
- choose the hotkey CTRL+D.

The *System Designer* is a tool which serves you for

- planning master key systems with a hierarchical group structure,
- analyse master key systems already entered for their group structure and
- rationally enter key, cylinder and door data sets together with their corresponding connections.

Hierarchically structured master key systems are more secure and lower on wear than unstructured ones since as a rule less material has to be built into the cylinders.

Handling the System Designer

The *System Designer* window contains 4 areas:

1. At the left side the *Group Structure* view displays the structure of the master key system. It is provided that the system was analysed and has got a hidden hierarchical structure.
2. Up right the area *Statistics* is displayed. It shows statistical data to the group which is marked in the *Group Structure* view. The area *Statistics* contains no entry fields.

3. In the middle of the right side the area Subgroups is located. It contains a subgroups' list and buttons to edit the *Group Structure*. In the list Subgroups all groups are listed, which are below the marked group in the window *Group Structure*.
4. Down right the area Group Data is located. Here the data of the selected group in the window *Group Structure* can be edited.

Inside of the *System Designer* window a mouse-click or the TAB key moves from one entry area to the next. You can use the hotkeys of the entry fields as well.

Notes:

- Editing data sets, except master key and central cylinder, is only possible if not a node but a subgroup was selected.
 - Analysing or merging of subgroups does not create or delete connections between key functions and cylinders.
-

1. Analysing Master Key Systems

To analyse the master key system,

- press button Analyse in the Subgroups area of the *System Designer*.

In the case of large master key systems the analysis can take a while. If existing, LOCKBASE detects the hierarchical structure of the system: What key functions and cylinders build groups regarding to their connections, what contain further subgroups?

If the master key system was already analysed, the button Analyse is disabled. It is of advantage but not necessary to analyse a master key system for calculation. An analysis can be reversed via Merge.

Group Structure View

Via analyses LOCKBASE checks for groups and group hierarchy in a master key system:

- What key functions and cylinders build groups regarding to their connections, what contain further subgroups?
- Which groups contain a master key?
- Which groups contain a central cylinder?
- How many and what keys are interchange keys in a group?

After an analysis has been processed or when the system was created by the *System Designer*, the structure of the system is displayed in the window *Group Structure* of the *System Designer* and also in the *Calculator*. Then the button Analyse is disabled as long as no data sets are added or deleted and no connections are changed.

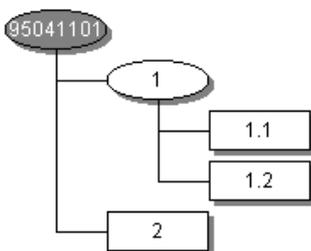


Fig. 2: A master key systems group structure

Superordinated groups, also called 'nodes', are displayed oval in the *Group Structure* view. They contain master keys as well as central cylinders. Subgroups are represented rectangularly. They contain possible master-, interchange- and change keys as well as cylinders. The master key of a subgroup is displayed as a interchange key in the Group Data area's list Interchange Keys of the superordinated group.

Groups are separated if no key of a group operates a cylinder of the any other group. Looking at the data shown below, LOCKBASE analyses 2 groups: Neither cylinder "C05" is operated by key "K01", "K02", "K03", "K04", nor key "K05" operates cylinder "C02", "C03" or "C04".

					
C2	•	•			
C3	•		•		
C4	•			•	
C5					•

Fig. 3: Analysing this matrix would result in two subgroups

Depending on what element is marked in the *Group Structure* view, the contents of Statistics-, Subgroups- and Group Data area change.

Statistics Area

In the Statistics area a set of status information about the currently selected group is displayed which can serve to predict eventually occurring problems for later calculation.

Group: Name of the group that is currently edited.

Relative Size: Number of the groups' key functions compared to the systems' total number of key functions (in percent). It makes it easier to rate the amount of variation range needed to calculate the group.

Number of Key Functions: The number of key functions in this group.

Number of Cylinder Functions: The number of cylinder functions in this group.

Number of Cylinders: The number of cylinders in this group.

Number of Interchange Keys: The number of interchange keys in this group.

Portion of Interchange Keys: The portion of interchange keys in relation to the total number of key functions in this group. It lets you easier rate the complexity of the group.

Subgroups Area

All groups of the marked element in the window *Group Structure* are listed in the Subgroups list.

Append...: With this you add a subgroup to the selected element. If the marked element is a node, it gets a further subgroup, if it is a subgroup itself a further subgroup is added to it (whereby the marked subgroup becomes a node). The dialogue box *Append Group* appears where you can entry the subgroup's data (refer to Chap. VIII-2, 'Establishing Groups').

Insert...: This button is only available if in the *Group Structure* a node is marked and if in the Subgroups list a group is marked. The button adds a subgroup to the marked node and inserts it in the list Subgroups. The marked subgroup and all following ones are renumbered.

Multiply...: This button is only available if in the *Group Structure* a node is marked and if in the Subgroups list a group is marked. The button allows to multiply the selected sub group on the same level, i.e. to create any number of copies of this group and its sub groups (see Chap. VIII-2, 'Multiply groups').

Redissolve an Analysis

With the *System Designer* you can also redissolve a master key system's group structure.

Select in the Subgroups area

- the button Merge.

This button is available if

- the system was analysed and a hierarchical structure was found and (see Chap. VIII-2)
- a node is marked in the window *Group Structure* and
- more than one entry in the list Subgroups is selected.

If all subgroups of a node are merged, the node itself will become a subgroup of the superordinated node. Furthermore the button Analyse becomes available again.

Note:

- Analysing and merging a group structure does not set or remove connections between key functions and cylinders.
-

2. Set up Master Key Systems using the System Designer

Besides analysing existing master key systems you can use the *System Designer* to create new hierarchical structured systems.

After executing the command **File - New** the *Group Structure* view contains only the system root, the rectangle with the system number. Consult with your customer what structure the master key system should have. During establishing a new system using the *System Designer* you are not bound to a special order of sequence.

Establishing Groups

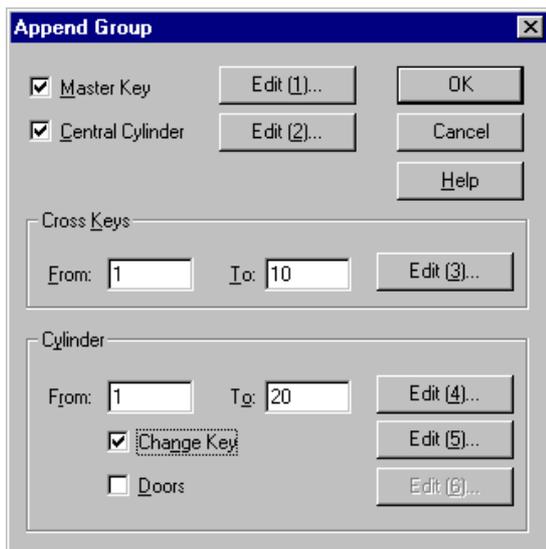


Fig. 4: dialogue box *Append Group*

With the button Append in the Subgroups area of the *System Designer* you add a subgroup at the marked group in the *Group Structure* view. With Insert you insert a group before the marked subgroup in the *Group Structure* view. With Add Data Sets you add data to the marked group in the *Group Structure*.

The dialogue boxes *Append Group* resp. *Insert Group* resp. *Add Data Sets* opens. They have identical entry fields:

Master Key: With this you set up a master key that is automatically connected to all cylinders of the group, and actually also to those which you are later going to add to the group with the *System Designer*.

Central Cylinder: With this you set up a central cylinder which is automatically connected to all keys of the group, and actually also to those you are later going to add to the group with the *System Designer*.

Interchange Keys: In this area you add interchange keys to the group if an automatic numbering has been determined using the entry fields From and To. Press the corresponding Edit (3) button to open the dialogue box *Pattern Interchange*

Key and define a create pattern for the interchange keys. Interchange key functions are solely connected to possibly already existent central cylinders.

Cylinders: In this area you add cylinder data sets to the group if an automatic numbering has been determined using the entry fields From and To. Press the Edit (4) button to open the dialogue box *Pattern Cylinder* and define a create pattern for the cylinders. Cylinders are automatically connected to possibly already existing master key functions.

Change Keys: If you have set up cylinders, with this check box you can establish change keys for the cylinders. Press the Edit (5) button to open the dialogue box *Pattern Change Key* and define a create pattern for the change keys. LOCKBASE automatically produces as many change key functions as cylinders that have been set up and connects each key function to one cylinder as well as to possibly existing central cylinders.

Doors: With this check box you can set up door data sets if you have set up cylinders. Press the Edit (6) button to open the dialogue box *Pattern Door* and define a create pattern for the doors. LOCKBASE automatically produces as many doors as cylinders have been produced and connects each cylinder to one door.

Edit: These buttons are made to define create patterns for the new data sets. They are only available if a valid start and end value was entered or the corresponding check box is activated. The Edit buttons open one of the dialogue boxes *Master Key*, *Central Cylinder* or one of the *Pattern...* dialogue boxes. In the dialogue box *Pattern...* you can also select one or more data fields, where LOCKBASE inserts the serial number compiled from the fields start value and end value.

Notes:

- If the value in entry field To is smaller than the value in entry field From, no data sets will be created.
 - For calculation of a master key system no key copies are necessary.
 - It is unlikely that all cylinders of a group have got the same type, length and colour.
 - Instead of the button @ Serial No. you could also use the key @ on your keyboard. Usually a key has got @ as the third character on it. To enter it, press ALTGR+@.
-

Multiplying groups

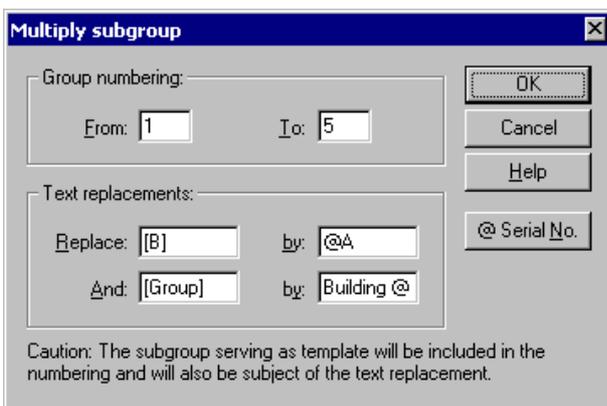


Fig. 5: The dialogue box *Multiply subgroup*

Using the function 'Multiply' you can create any number of copies of an existing group. Variables can be used, which allows an individual numbering of the new groups.

The button Multiply... area opens the dialogue box *Multiply subgroup*. The dialogue offers the following entry fields:

Group numbering: Write the start value of the group numbering into the field From and the end value into the field To. By these settings you also define the number of groups to create. The group serving as copy template will be taken into account when numbering, i.e. if the end value is equal to the start value, no new groups will be created at all.

Text replacements: In this area up to two text replacements can be defined, which should be processed on the template group. Enter the text to replace in the fields Replace resp. And. In the assorted fields by enter the respective new text. Here you can also use the placeholder for the group number '@' (see above, fields From and To). This way a group specific numberig of keys and cylinders is possible. If you enter a letter directly behind the placeholder (e.g. '@A'), this letter acts as the start value for the group numbering instead of the value in From (i.e. for example 'A', 'B', 'C' instead of '1', '2', '3', etc.). The text replacements will be applied to the fields Function and Designation of the key function record, Number and Door Designation of the cylinder record and all data fields of the door record.

Example

You may have to create a master key system for an object with three buildings with five floors each. Each floor has 10 flats, for which a cylinder with three keys is needed in each case. Each floor and each building has a central entry, which should be opened only by the assorted flats. Keys and cylinders should be numbered according the pattern [building][floor][flat] = [1-3][A-E][1-10].

Proceed as follows to create the system:

1. Create a new, empty master key system and change to the *System Designer*.
2. In the area Sub Groups press the button Append... and create a sub group, which has only a central lock (see Chap. VIII-2, 'Establishing Groups'). This group will represent a building. For the central lock (vgl. Chap. VIII-2, 'Central Cylinder') in the field Number enter '[B]Z'.
3. Select the new group '1' and for this group again create another sub group (button Append... in the area Sub Groups). This new group represents a floor and should have a central cylinder and 10 cylinders with change keys (Cylinder, From=1, To = 10). In the field Number of the central cylinder enter '[B][F]Z' and in the fields Number of the cylinder and Function of the change key enter '[B][F]@'. In the field Description of the change key type 'Flat [B][F]@' and in the field No. of Keys type '3'.
4. Now you should have a system with a group '1' at level 1 and a subgroup '1.1' at level 2. Now select group '1' in the *Group Structure* window and subsequently mark entry '1.1' in the list of Sub Groups. The button Multiply... should be available now.
5. In the next step you multiply the floors. Press the button Multiply... and in the dialogue *Multiply subgroup* enter the following: From=1, To=5, Replace='[F]' and by='@A'. The fields in the second line in the area Text replacements should be left empty. Press OK to proceed the multiplication. Afterwards you should find five subgroups '1.1' to '1.5' under group '1'.
6. The last step is to multiply the buildings. In the *Group Structure* window select the root of the tree (contains the system number). This lets appear group '1' in the list of Sub Groups. Mark the entry '1' here, press again the button Multiply... and enter the following in the dialogue *Multiply subgroups*: From=1, To=3, Replace='[B]' and by='@'. The other fields again should be left empty. Press OK to proceed the multiplication of the buildings. Now the system should be created completely and all the variables used should be resolved.

Notes:

- Also groups can be multiplied, which have not been created and specified by the *System Designer*, but by the *System Matrix* or the *Lists View*. This way also more complex patterns can be created and multiplied.
 - The multiplication function can also be used to create smaller, repetitive patterns within a group. To do so first create a subgroup representing the pattern, then multiply it and finally merge back the created subgroups into the original group (see Chap. VIII-1, 'Redissolve an Analysis').
-

Editing Group Data

This area of the *System Designer* window displays the data of the current selected element in the *Group Structure* window. You can add and edit data or delete the entire group.

Name: This entry field allows to change the group's name. When adding a new subgroup, LOCKBASE automatically creates a name for it which designates the new group's position in the hierarchy.

Master Key: This check box displays if a master key for the marked element already exists. If not, you can activate the check box to create a master key. The dialogue box *Master Key* opens to take in the data. The new master key is automatically connected to all cylinders of the marked element (subgroup, node or the entire system), even to those you set up later. If the box is already activated, you can deactivate it to delete the master key.

MK: This button is only available if the check box Master Key is activated. It is used to edit the master key's data. The dialogue box for editing a *Key Function* appears (see Chap. IV-1, Key Function Data Sets).

Central Cylinder: This check box displays if a central cylinder for the marked element already exists. If not, you can activate the check box to create a central cylinder. The dialogue box *Central Cylinder* opens to take in the data. A central cylinder is automatically connected to all keys of the marked element (group, node or entire system), even to those you set up later. If the box is already activated, you can deactivate it to delete the central cylinder.

CC: This button is only available if the check box Central Cylinder is activated. It is used to edit the central cylinder's data. The dialogue box for editing a *Cylinder* appears.

Add Data Sets: With this button you add key functions, cylinders, interchange keys and doors to a master key system's subgroup. In an analysed, hierarchical master key system, this button is only available if a subgroup, not a node, is marked. The dialogue box *Add Data Sets* opens. Keys, cylinders and interchange keys are automatically connected to central cylinders, respectively master keys, if existent.

Delete: With this button you delete all key function, cylinder and door data sets which belong to the element marked in the group display. If you delete a node, only the possibly existing central cylinder or master key will be deleted, not the subgroups' data. Unlike the *System Matrix* or the *Data Lists* you don't have to disconnect the data sets. You cannot delete the system root.

Connect...: This button is to connect a interchange key to cylinders of its group. It is only available if there is a selected entry in the list Interchange Keys and a subgroup is marked in the *Group Structure* window. The dialogue box *Connect* appears.

Master Key

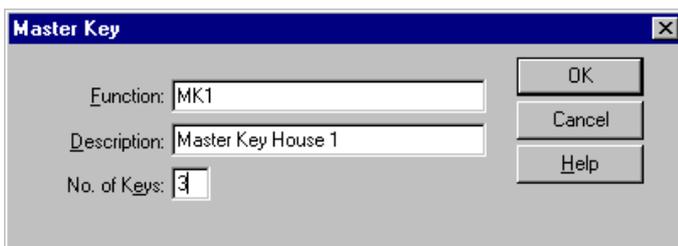


Fig. 6: dialogue box *Master Key*

The dialogue box *Master key* appears when you establish a master key with the *System Designer* or while creating a subgroup.

The entry fields are:

Function, Description, No. of Keys: Enter the required data. If you enter nothing in the field Function, LOCKBASE produces a number according to the pattern "MK[group number]".

Note:

- It is not necessary for calculating a master key system to create key copies of a key function.
-

Central Cylinder

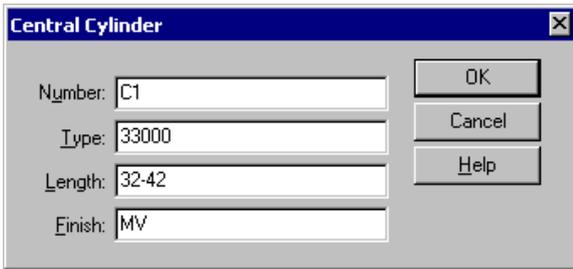


Fig. 7: dialogue box *Central Cylinder*

The dialogue box *Central Cylinder* appears when you establish or edit a central cylinder with the *System Designer* while creating a subgroup.

This dialogue box offers the following entry fields:

Number, Type, Length, Colour: Enter the required data. If you enter nothing in the field Number, LOCKBASE produces a cylinder number according to the pattern 'CC[group number]'.

The Pattern dialogue Boxes

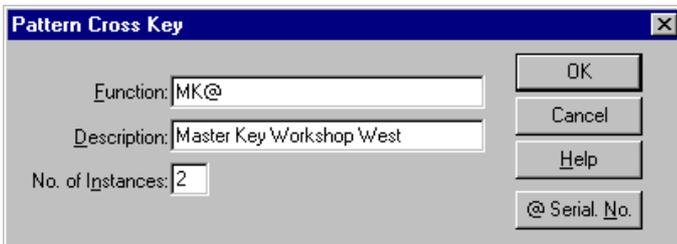


Fig. 8: dialogue box *Pattern Interchange Key*

The dialogue boxes *Pattern...* appears when you set up or edit interchange keys, cylinders, change keys or doors when appending or inserting a group to a node or adding data into a subgroup with the *System Designer*.

These dialogue boxes accept the data which should appear in every data set to be produced. If the data sets of the group should contain different details in each box, you have to leave the *Pattern...* dialogue boxes empty and edit the data sets later with the *System Matrix* or the *Data Lists*.

The dialogue Boxes *Pattern Change Key* and *Pattern Interchange Key*

The dialogue boxes *Pattern Change Key* and *Pattern Interchange Key* contain the following entry fields:

Function, Description, No. of Keys: For interchange keys and change keys here you can enter a name and a description respectively the number of keys to be set up.

@ Serial No.: With this button you insert the @ character at the cursor into one of the entry fields. On the production of the number of data sets stated under From - To, LOCKBASE enters the serial numbering instead of this character.

The dialogue Box *Pattern Cylinders*

The data box *Pattern Cylinders* contains the following entry fields:

Number, Type, Length, Colour: Enter the necessary data here when setting up cylinders.

@ Serial No.: With this button you insert the @ character at the cursor into one of the entry fields. On the production of the number of data sets stated under From - To, LOCKBASE enters the serial numbering instead of this character.

The dialogue Box Pattern Doors

The dialogue box *Pattern Doors* contains the same entry fields like the dialogue box *Door* and instead of the button Default the button @ Serial No.:

@ Serial No.: With this button you insert the @ character at the cursor into one of the entry fields. On the production of the number of data sets stated under From - To, LOCKBASE enters the serial numbering instead of this character.

Note

- You can also enter the number symbol @ directly via keyboard. Usually a key on your keyboard has got @ as the third character on it. To enter it, press ALTGR+@.
-

IX. Printing Documents

With the LOCKBASE Print module you can print out a wealth of various documents (see Chap. IX-4, 'The LOCKBASE Documents'. You can change the documents' layout as well as create new documents. Additionally all documents can be displayed in the print preview before printing (see Chap. IX-2, 'Print Preview and Printing').

The *Print Selection Dialogue* shows all documents available and allows the selection of a single or multiple documents for printing. You can choose different printers for various documents and create new documents.

The *Print Formatting Dialogue* helps to format a document. You can adapt title, subtitle, footer, font and line format, page margins etc. according to your wishes.

1. The Print Selection Dialogue

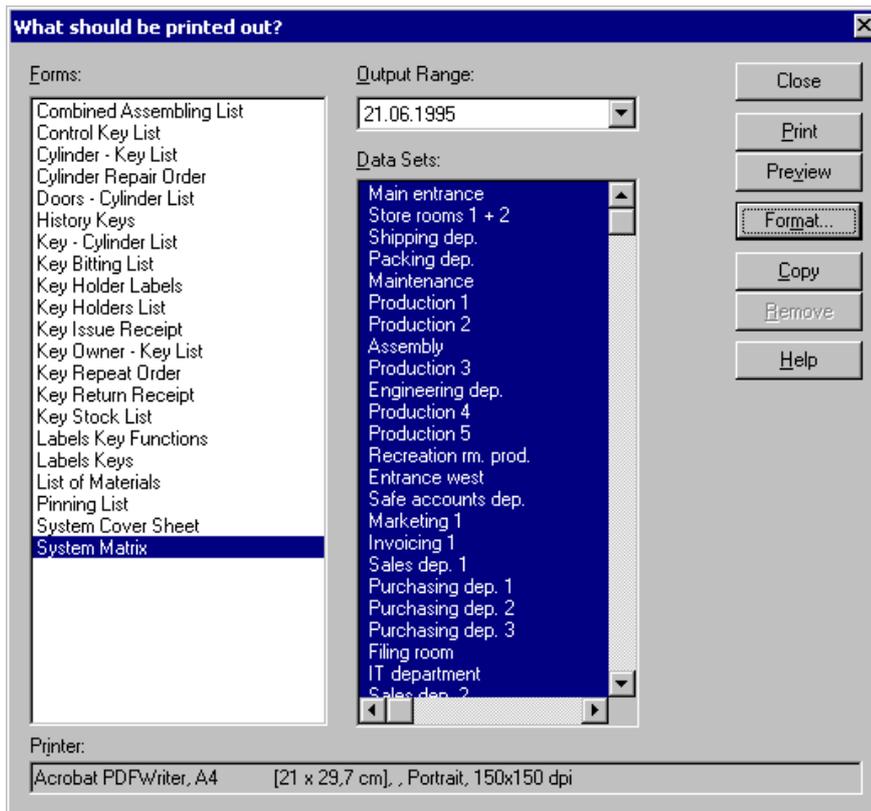


Fig. 1: The dialogue box *What shall be printed out?*

You start the LOCKBASE Print module with

- a click on  in the toolbar or
- the command **File - Print** or
- the key combination SHIFT+CTRL+F12.

The dialogue box *What shall be printed out?* appears, where you can choose from among the documents to be printed. In this dialogue you can print documents, watch them in the preview or format them. You can create and adjust new document forms.

The *Print Selection Dialogue* contains the following entry fields and control elements:

Forms: Here you find a sorted list of all forms available. You can choose one or multiple forms for the printing or the formatting, for copying or deletion (for the usage of the list see Chap. IV-2, 'Mark Data Sets'). If you like to format, copy or delete a document, you have to select a single form. Also if you wish to print labels, you have to choose a single form.

Printer: This field shows the printer to use for the selected documents. If different printer settings were assigned to the documents, no printer will be displayed and you will not be able to print or preview. In this case you have to print in

several steps or modify the printer settings in the *Print Formatting Dialogue* (see Chap. IX-2, 'The Print Formatting Dialogue').

Output Range: If you like to print out a part of the data sets only, you can set a pre-selection here (according to the production date or the date of alteration). The offered data is depending on the documents selected in the list Forms. The list Data Sets will be filled only with those data sets that correspond to the pre-selection. If you don't want a limiting pre-selection or if you would like to undo an existing pre-selection, choose 'All'.

Data Sets: This list contains all data sets of the corresponding data stock that correspond to the pre-selection (see Output Range). The data sets that shall be printed, have to be marked. You can enlarge or change the selection manually (see Chap. IV-2, 'Mark Dats Sets').

Close: This button closes the *Print Selection dialogue*. The selected documents will not be printed, but formatting alterations will be saved.

Print: The chosen documents will be printed (see Chap. IX-3, 'Start Printing'). Afterwards the *Print Selection dialogue* will be closed. This button will only be available, if a valid printer has been selected (see Printer).

Preview: The selected documents will be displayed in the print preview (see Chap. IX-3, 'Print Preview'). This button will only be available, if a valid printer has been selected (see Printer).

Format...: This button opens the *Print Formatting dialogue* (see Chap. IX-2, 'The Print Formatting Dialogue'). There you can change the formatting of a selected document, e.g. font and line format, title, subtitle, footer etc. This button will only be available, if a single form has been chosen.

Copy: The selected document will be copied. Before, a security query appears. Through that copy function you can set up a variant of an existing document or a completely new document. LOCKBASE crates a new form, inserts a new entry in the list Forms, directly below the pattern, and selects it. At first it will be an identical copy of the pattern. Afterwards you should format the new form (button Format..., see Chap. IX-2, 'The Print Formatting Dialogue').

Delete: The selected document will be deleted. Before, a security query appears. Not all documents can be deleted. LOCKBASE takes care that always at least one copy of each document type will be kept.

Start Label Print, Line, Column: These fields will only be visible if a label form has been selected. They help to enter resp. correct the starting position of the label print. In the fields Line and Column you enter at what label position the printing shall start. If you wish to start with the first label at the top left position, the starting position will be line 1, column 1. If labels on the corresponding page have already been printed, enter line and column of the next unused label.

Notes:

- Please check if a valid printer has been chosen. Otherwise you cannot activate the printing or the print preview. Use the selection list Printer to choose a printer.
 - The buttons Format..., Copy and Delete will not be available at the selection of multiple forms. Please check that only a single form was selected, if you want to enable this function.
 - Label forms can be printed only one by one because of the usually different form settings and start positions.
-

2. Print Preview and Printing

With the button Print you can start the printing of one or multiple documents from the *Print Selection Dialogue* at any time. First the dialogue box *Print* starts, where you can enter last settings (see Chap. IX-2, 'Start Printing').

Not to waste paper, however you should choose the button Print not before you entered the correct settings and when you checked your formatings in the *Print Preview*.

Therefore you find in the *Print Selection Dialogue* a button Preview with that you get into the *Print Preview*. With this you open the window *Print Preview*, where you can see what effects cause your font selection, page margin or line format settings. However you cannot edit the adjustments in the window *Print Preview*.

Print Preview

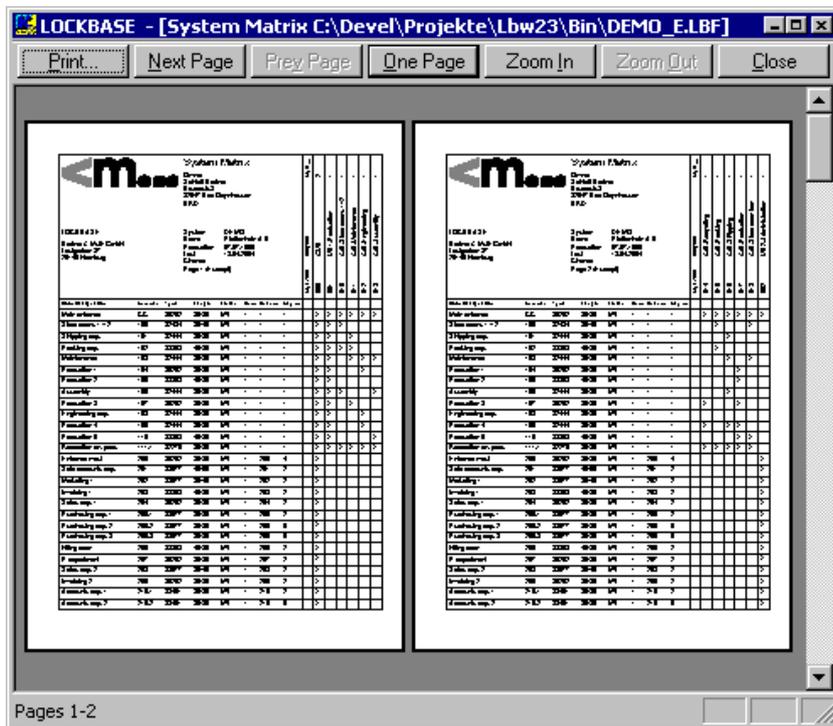


Fig. 2: The window *Print Preview*

To the buttons in the toolbar of the window *Print Preview* you get to by mouse or simply with the key of the underlined letter, the hotkey of the corresponding button.

Print: This button lets you start the printing. The dialogue box *Print* appears.

Next Page, Prev. Page: In a multipage document, with these buttons you browse the pages displayed. If you get to the end of a document, the corresponding button will be pale.

One Page / Two Pages: Herewith you choose if the window *Print Preview* shall display one or two pages side by side. The button's title changes accordingly.

Zoom In: With this button you can enlarge the *Print Preview* within two steps, to view a certain part of it. Clicking with the mouse cursor, that appears in the *Print Preview* as a magnifying glass , to a specific position, has the same effect.

Zoom Out: This button undoes a magnification. A mouse click into the enlarged sector only diminishes if the second magnification level has been turned on.

Close: This button closes the window *Print Preview*. You return to the *Printing Selection Dialogue*.

Start Printing

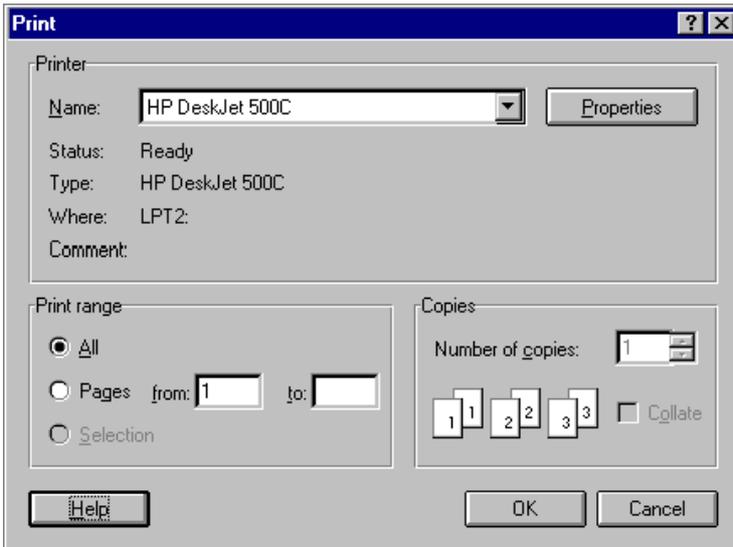


Fig. 3: The dialogue box *Print*

With the button Print you open the dialogue box *Print*, where you can enter final adjustments, before the LOCKBASE document will be sent to the printer.

The dialogue box contains the following entry fields:

Printer: Select one of the printers installed on your computer to print the LOCKBASE document. The button Properties opens the dialogue box *Properties* of your printer's driver. You can make several adjustments here, as e.g. paper source, size and orientation, format template, graphic resolution etc.

Print Range: Choose the print range of the data to print, here. If you select Pages, you have to enter what pages shall be printed into the fields From and To. If you want to print only one page of a multipage document, you are supposed to enter the same page number into both fields.

Copies: Enter the number of copies and the sorting of the copies here.

OK: With OK you start the printing process. LOCKBASE sends the data to the printer, what could take some time.

3. The Print Formatting Dialogue

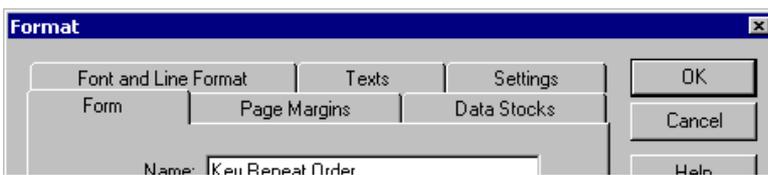


Fig. 4: The tab pages of the dialogue box *Format*

The *Format* dialogue helps to adjust the format properties of a print form. You open the *Format* dialogue via the button Format... of the *Print Selection Dialogue*.

The control elements of the *Print Formatting Dialogue* are sorted according to topics and divided into several tab pages. What tab pages are available, is depending on the selected form. You can display a tab page by clicking the assorted tab or using the TAB key to move to it and the ARROW KEYS to select a certain page.

Form

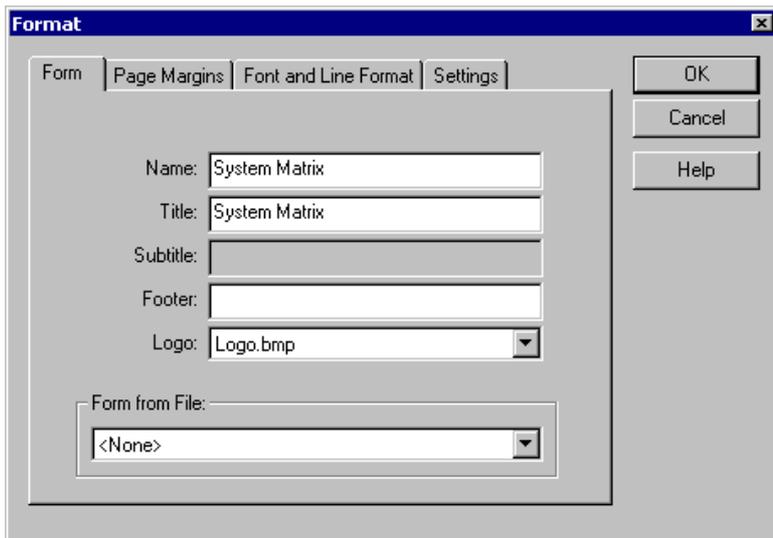


Fig. 5: The tab page *Form*

The tab page *Form* contains general adjustments of the form. This tab page is available for all forms and offers the following data fields and control elements:

Name: This field contains the name of the form as it appears in the list Forms of the *Print Selection Dialogue*. You can change this name at your will. Though the field must not be empty.

Title, Subtitle, Footer: Title, subtitle and footer of a document as they appear in the print-out. You can enter text at your will. Not all data fields are available in each form.

Logo: You can choose a logo for the document, here. The selection list offers all graphic files that are beeing contained in the LOCKBASE directory. If you don't want to print a logo at all, choose the entry .

Form from File: This selection list lets you load the adjustments from an external file for this form. All form files found in the LOCKBASE directory will be displayed. If you don't want to use an external form, choose the entry . This field is not available in each form.

Notes:

- To embed your own logos in the LOCKBASE documents, simply copy the corresponding graphic files into the LOCKBASE installation directory. LOCKBASE supports the graphic fomats BMP, JPG, PNG, TIF, EPS, TGA, PCT, WMF and EMF.
-

Adjust Page Margins

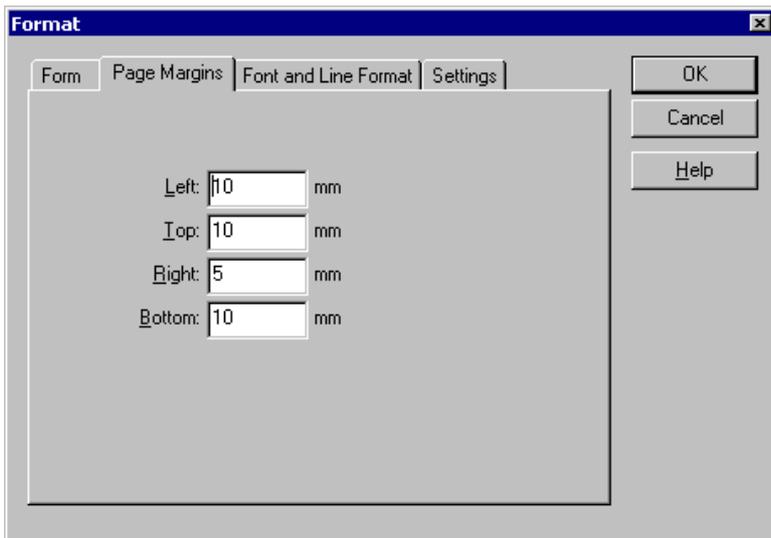


Fig. 6: The tab page *Page Margin*

Here you adjust the page margins of the form. The following entry fields are available:

Left: Enter the width of the left page margin.

Top: Enter the distance to the upper page margin.

Right: Enter the width of the right page margin.

Bottom: Enter the height of the lower page margin.

The distances are to be entered in millimetres. Through the entry of digits after the decimal point you can adjust the page margins to a tenth of a millimetre precision.

Printer Setup

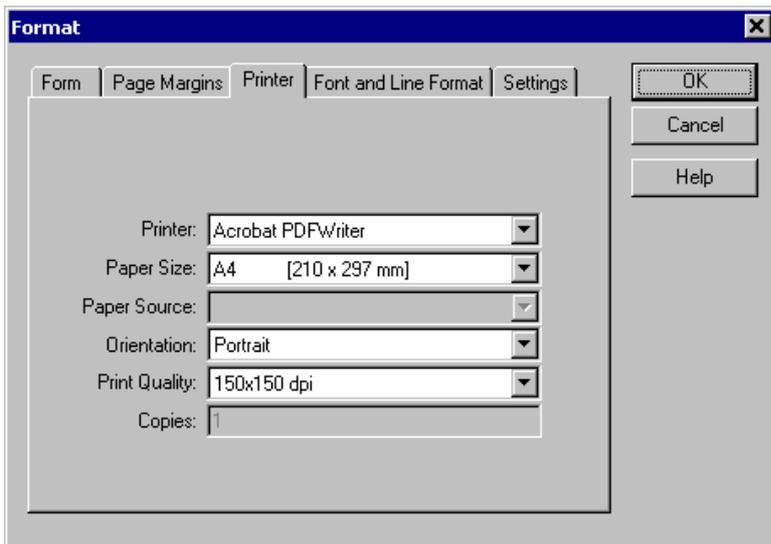


Fig. 7: The tab page *Printer*

Here the printer settings for the selected form can be modified. The following entry fields are available:

Printer: Select the printer from the list, which should be used to print the form.

Paper Size: Select the desired paper size here.

Paper Source: Select the paper tray of the printer, which should be used for printing.

Orientation: Select the desired print orientation (portrait or landscape) here.

Print Quality: Select the desired print resolution.

Copies: Please enter the number of copies to print here.

Not every printer supports all the options. It depends on the selected printer, whether an option is available. Printer options, which are not offered here, have to be set up in the system printer panel.

Select Data Stocks

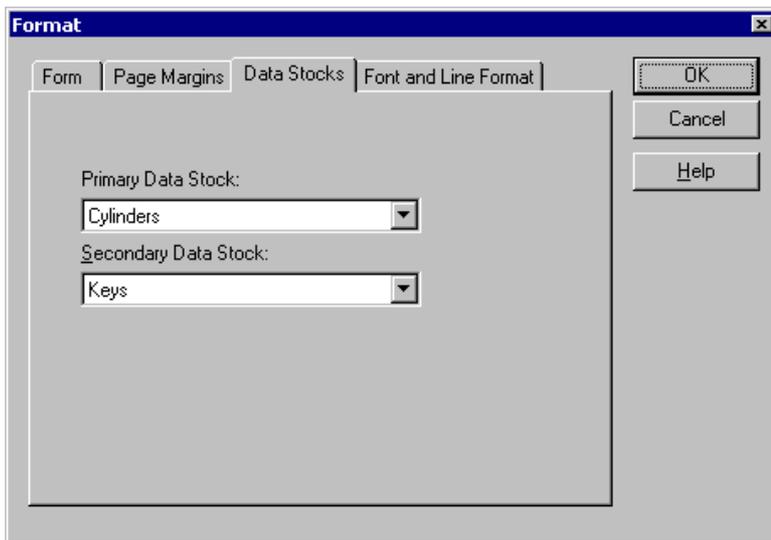


Fig. 8: The tab page *Data Stocks*

On this tab page you can select data stocks' data that shall be printed in the corresponding document. You can create e.g. a key holders-doors-list, by copying a double-list form and choose 'key holders' as first data stock and 'doors' as second data stock.

The following control elements are available:

Primary Data Stock: Select the first data stock, here, which data shall be shown or printed. With the primary data stock you also define the data type, which data sets will be displayed in the *Print Selection Dialogue* and according to those you can make a selection. In most of the documents you can choose for the primary data stock only.

Secondary Data Stock: In a double-list form you can also pre-set the second data stock. It is the target of the connections to display e.g. the doors in a key holders-doors-list.

Adjust Font and Line Format

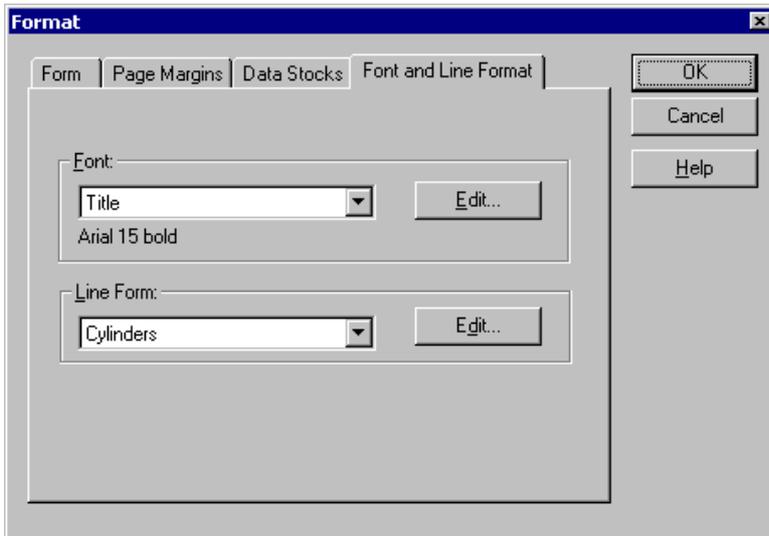


Fig. 9: The tab page *Font and Line Format*

The tab page *Font and Line Format* lets you set fonts, sizes and styles of the forms as well as titles, layout and sorting of the data lines. The following control elements are available:

Font: Choose from this list the element, which font you would like to change and press the affiliated button **Edit**. The dialogue box *Font* opens (for a detailed description of the dialogue box *Font* see Chap. IV-2, 'Font').

Line Format: Choose from the list the element, which line format or sorting you want to change and press the affiliated button **Edit**. The dialogue box *Line Format* opens (for a detailed description of the dialogue box *Line Format* see Chap. IV-2, 'Line Format and Sorting').

Edit: Each of these buttons are affiliated to the selection lists **Font** and **Line Format**. Press the button to get to the corresponding format dialogue.

Note:

- The sorting of the most forms you can alter in the line format of the primary data stock (see Chap. IV-2, 'Line Format and Sorting').
-

Altering Texts of Documents

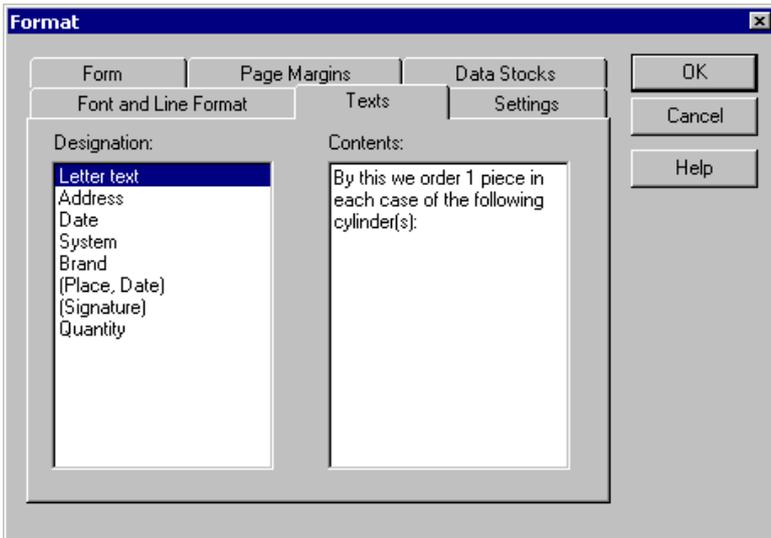


Fig. 10: The tab page *Texts*

The tab page *Texts* allows to edit some form specific headlines or text passages. Here you can alter e.g. the letter text of receipts or the designation of certain items in the List of Materials. The following entry fields and control elements are available:

Designation: This list contains the designation of all form texts that can be edited. To alter a text, click on its designation in this list. The current text contents will then be displayed in the neighbouring field Contents.

Contents: In this field you can edit the contents of the marked text in the list Designation. According to the selected text, it appears a one-line or multi-line text field. In a multi-line text field you can insert line feeds with the ENTER key. They will be adopted to the print-outs. If you don't use this function, the wordwrap will be done automatically.

Note:

- The titles of the data fields can be modified by editing the Line Format in the tab page *Font and Line Format* (see Chap. IX-3, 'Adjust Font and Line Format' and Chap. IV-2, 'Line Format and Sorting').
-

Settings

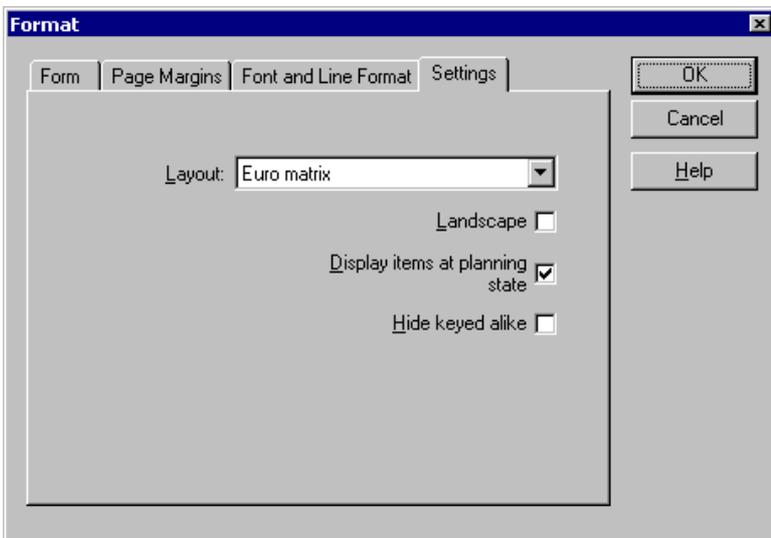


Fig. 11: The tab page *Settings*

With the tab page *Settings* you can define various form specific pre-settings or variants. What fields and control elements are available depends on the respective form.

The following forms offer a tab page *Settings*. A documentation on the possible adjustments, you find in the stated paragraphs.

- System Matrix (see Chap. IX-4, 'System Matrix')
- Key Bitting List (see Chap. IX-4, 'Key Bitting List')
- Cylinder Pinning List (see Chap. IX-4, 'Cylinder Pinning List')
- Combined Assembling List (see Chap. IX-4, 'Combined Assembling List')
- List of Materials (see Chap. IX-4, 'List of Materials')
- Key Stock List (see Chap. IX-4, 'Key Stock List')
- Key Issue Receipt / Key Return Receipt (see Chap. IX-4, 'Key Issue Receipt / Key Return Receipt')
- Order (see Chap. IX-4, 'Order')

Layout

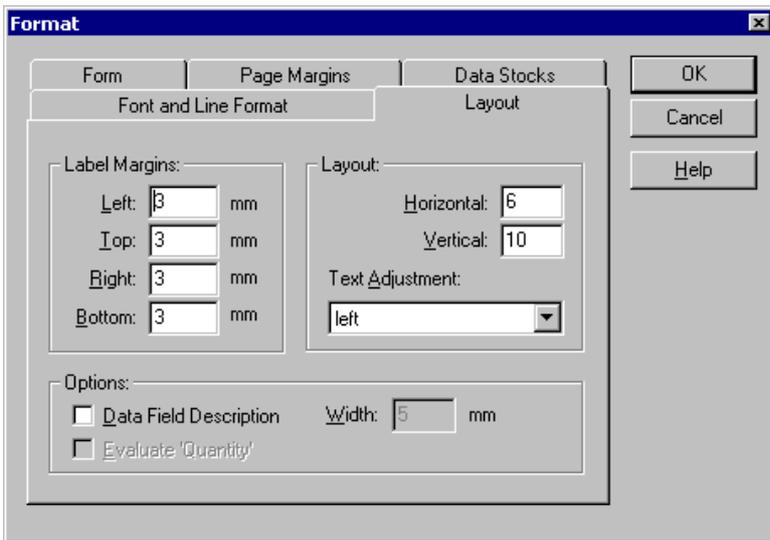


Fig. 12: The tab page *Layout*

The tab page *Layout* helps to format the label print-outs. Because of this fact it is only available to format the label forms.

To set up a label form, you must inform LOCKBASE about the label page layout (number of labels side by side and underneath the other). At what position the first label starts at the upper left side resp. the last label ends at the right side below, you can define via the page margins (see IX-2, 'Format Page Margins'). The distances between the labels on the page you can adjust through the page margins.

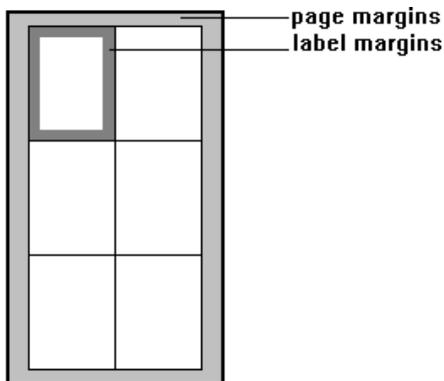


Fig. 13: Label page with 2 labels side by side and 2 labels underneath the other

The tab page *Layout* contains the following entry fields and control elements:

Label Margins: Enter the left, top, right and bottom distance between the label margin and the text in this data field.

Layout: Enter in the fields Horizontal and Vertical how many labels shall be arranged side by side and underneath the other on one page. In the selection list Text Adjustment you can define whether the data sets shall be printed ranged left, centered or right on the labels.

Options: Check the box Data Field Description if you want to print the data field description on the labels, too. (e.g. "Number 100" instead of "100"). Provided that the option Data Field Description has been activated, you can enter in the field Width how much space (in millimetres) should be used on the label for the data field description. The field Evaluate Quantity will only be available, if you have selected the data stock cylinder. If you check this box, as many labels will be printed for each cylinder data set as in the cylinder data set's field Number are displayed (see Chap. IV-1, 'Cylinder Data Sets'). Otherwise only one label will be printed for each data set.

4. The LOCKBASE Documents

LOCKBASE provides you with a stock of form types to fit the various requirements of different users. On basis of this stock you can generate your own forms and form variants by copying an existing form and adapt its formatting to the wished purpose (see Chap. IX-1, 'The Printing Selection Dialogue' and Chap. IX-3, 'The Print Formatting Dialogue').

The forms will be saved together with the master key system's data. That means you could create an own set of forms for each master key system. However usually you will save your forms in the format templates that you can assign to existing or new master key system files (working with format templates see Chap. III-1, 'System Cover Sheet').

In the following you find a documentation of various form types including possibly existing adjustment options that go beyond the general formatting options.

System Cover Sheet

The *System Cover Sheet* contains general information on the master key system. Additionally you can print a list of the extensions that were already carried out.

Note:

- If you choose the setting 'All' in the field Output Range of the *Print Formatting Dialogue* and several extensions have already been entered in the *System Cover Sheet*, you get a list view of the system's history in the lower part of the print-out. Otherwise the data of the selected extension will be displayed in record mode (see Chap. III-1, 'System Cover Sheet').
-

System Matrix

The System Matrix is a form of representation, very common in Europe, of a master key system's locking functionality. By a matrix all doors resp. cylinders and keys will be shown opposite of one another. The locking functionality will be generally displayed by crosses or dots in the points of intersection of the data lines and columns.

The form *System Matrix* allows the following additional adjustments:

Layout: With this selection list you decide if the cylinder or the key function data sets will be printed at the top i.e. in columns or if the system matrix shall be printed as Euro Matrix. In the Euro Format the cylinders' change keys won't be displayed and printed in the keys' list, but appear as columns in the cylinders' list (referring to the Euro Matrix see Chap. VI-1, 'Euro Matrix').

Scaling factor (%): You can enter a scaling factor in percent for the print here. The scaling will apply to the selected font sizes, which in consequence will increase or decrease also line heights and columns widths accordingly. The default value is 100%, which means no scaling at all. The scaling factor is useful to quickly adjust the layout of the matrix, e.g. in case some values exceed their field widths.

Landscape: Activate this check box to print the system matrix in horizontal orientation.

Display Items at Planning State: Here you decide if planned keys and cylinders shall be shown and printed. Key functions in planning state have no key copies implemented (dialogue box *Key Function*, Number of Keys = 0, see Chap. IV-1, 'Key Function Data Sets'). Cylinders in planning state are data sets with a quantity of zero (dialogue box *Cylinder*, Quantity = 0, see Chap. IV-1, 'Cylinder Data Sets').

Hide keyed alike: Select this check box if you don't want the cylinders keyed alike to be displayed or printed (see Chap. IV-1, 'Cylinder Data Sets'). In this case only cylinders keyed differently will be shown or printed.

List

The *List* offers the possibility, to print all or a selection of a single data stock e.g. a list of keys produced at a certain date or a list of all key holders of a master key system.

Link List

The *Link List* allows the representation of data sets of one data type including the connected records of another data type.

Examples for *Link Lists* are:

- Key Holders-Doors-List: A list of all persons and doors, that can be opened by these persons
- Cylinders-Keys-List: A list of all cylinders together with those keys that operate
- Doors-Cylinders-List: A list of all doors together with those cylinders that have been built in or will be built in

History

The *History* lists the data sets of a data type with events which those have 'experienced'. Accordingly e.g. the *History Keys* lists all key issues and returns of a key or a key holder's history, all keys that a person has experienced so far.

Key Bitting List

The *Key Bitting List* lists the key combinations and the number of the selected keys. It will be used for the production of a master key system.

The form *Key Bitting List* offers the following additional adjustment options:

Display Items at Planning State: Here you decide if planned keys shall be shown and printed. Key functions in planning state have no key copies implemented (dialogue box *Key Function*, Number of Keys = 0, see Chap. IV-1, 'Key Function Data Sets').

Always display serial numbers of key copies: Activate this checkbox to print the serial numbers of the key copies also when printing a complete bitting list. Otherwise they will be printed only when a selection was made.

Cylinder Pinning List

The *Cylinder Pinning List* lists the pinning, that has to be filled into each cylinder, so that it operates correctly. The *Cylinder Pinning List* will be used for the production of a master key system.

The form *Cylinder Pinning List* offers the following additional adjustment options:

Cylinders per Line: Enter here, how many cylinder data sets shall be printed side by side. Depending on the paper width, you can define, how much space will be available for the printing of a single cylinder pinning.

Pinning accumulative: Check this option field, to display and print the bottom pins accumulative (i.e. the summarized heights of the bottom pins resp. the bitting depths of the fitting keys will be shown). If it is not checked, in the first line the values of the bottom pins and in the following lines the master wafers to be filled, will be displayed.

Combine keyed alike: Whether this box is checked, cylinders keyed alike will be summarized in the Cylinder Pinning List. Differences in cylinder types or lengths won't be however visible anymore. If it is not checked, each single cylinder will be displayed and printed.

Display Items at Planning State: Here you decide if planned cylinders shall be shown and printed. Cylinders at planning state are data sets with a quantity of zero (dialogue box *Cylinder*, Quantity = 0, see Chap. IV-1, 'Cylinder Data Sets').

Combined Assembling List

The *Combined Assembling List* is a combination of *Pinning List* and *Bitting List*. With each cylinder it lists the assorted keys and their bitting information.

The form *Combined Assembling List* offers the following additional adjustment options:

Pinning accumulative: Check this option field, to display and print the bottom pins accumulative (i.e. the summarized heights of the bottom pins resp. the bitting depths of the fitting keys will be shown). If it is not checked, in the first line the values of the bottom pins and in the following lines the master wafers to be filled, will be displayed.

Display Items at Planning State: Here you decide if planned cylinders shall be shown and printed. Cylinders at planning state are data sets with a quantity of zero (dialogue box *Cylinder*, Quantity = 0, see Chap. IV-1, 'Cylinder Data Sets').

Combine keyed alike: Whether this box is checked, cylinders keyed alike will be summarized in the Combined Assembling List. If it is not checked, each single cylinder will be displayed and printed with complete pinning information and assorted keys.

List of Materials

The *List of Materials* displays the quantities of items required for the production of a master key system. It will be used for the production of a master key system.

In the List of Materials can be printed the following:

- The quantity of cylinder plug and shell pins as well as master wafers that will be required for the entire master key system
- The keys' number of the entire master key system, sorted by its status and its profile
- The quantity of the cylinder shells required for a master key system, sorted by type, length and optional profile (pre-assembled)
- The quantity of the plugs, required for a master key system, sorted by lengths and profiles

The form *List of Materials* offers the following additional adjustment options:

Pinning Material, Key Count, Cylinder Lengths and Types: Activate the respective option field, for printing the corresponding information or deactivate it to suppress it.

Print Plugs seperately: Activate this option, if you want to set up an own list for the plugs Otherwise a list of cylinder shells will be additionally differentiated according to plug profiles (pre-assembled).

Note:

- For the printing of the pinning material, LOCKBASE has to find out if the cylinders are single-sided or double-sided. Therefore LOCKBASE analyzes your entries in the data field Length of the dialogue box *Cylinder*. Is there no entry to be found, the cylinder will be analyzed as single-sided cylinder. If there are two pairs of digits (e.g. "32-32", "32 47", "47/57", but also "2x32"), the cylinder will be interpreted as double-sided. If LOCKBASE cannot analyze your entries, a query will appear.
-

Key Stock List

The *Key Stock List* shows the key stock of a master key system according to various criteria and for different purposes. For instance a list of the key stock with signature fields can be set up, wherein key holders can sign at key issues resp. returns.

The key stock can be selected by production date and the keys' status (see Chap. IV-1, 'key copies'). The following states are defined:

- Current: The whole key stock of a master key system, except for the destroyed keys.
- Available: All keys that are not destroyed and currently not issued.
- Issued: All keys that are currently issued to a person.
- Destroyed: All keys destroyed.

The form *Key Stock List* offers the following additional adjustment options:

Key Stock: Use this list to select the key stock according to the status (see above). If you don't want to differ by key status, choose 'All' here.

Print Signature Field: Activate this check box, to print right beside of every key a signature field. This way a key holder can confirm the receipt of a key directly on the key stock list.

Key Issue Receipt / Key Return Receipt

These forms are letter forms that can be set up and used as a receipt of a key issue or return.

The forms offers the following additional adjustment options:

Address at (mm): Here you enter the distance between the first line of the address field and the top page margin in millimetres.

Title at (mm): Here you enter the distance between the headline and the top page margin in millimetres.

Field for Quantity: Whether this checkbox is activated, an additional column in the list of the data sets will be displayed. The title of the column you can alter in the tab page *Texts* of the *Print Formatting Dialogue* (see Chap. IX-3, 'Altering Texts of Documents').

In the letter text of these forms the placeholder sign '@' can be used to display information of the person the key was issued to or will be returned from (see Chap. IX-3, 'Altering Texts of Documents'). The character '@' will be followed by an expression of text and variables enclosed in curly braces ('\...\'). The following variables can be used:

@SURNAME: The key holder's surname

@FIRSTNAME: The key holder's first name

@TITLE: The key holder's title or function

@STREET: The street of the key holder's address

@CITY: The city of the key holder's address

@STATE: The state of the key holder's address

@PHONE: The key holder's phone number

@PHONEHOME: The key holder's home phone number

@PERSID: The key holder's personnel identification number

@DEP: The department the key holder belongs to

Example: The expression '@\@FIRSTNAME @SURNAME (@PERSID), @CITY\'' may expand to 'Andrea Ahrens (718-01), 24439 Hamburg'.

Note:

- For compatibility with older versions of LOCKBASE a placeholder sign '@' without a following expression in curly braces will expand to '@SURNAME, @FIRSTNAME'.
-

Order

The *Order* is a letter form that can be set up and used for a key or a cylinder order.

The form *Letter* offers the following additional adjustment options:

Address at (mm): Here you enter the distance between the first line of the address field and the top page margin in millimetres.

Title at (mm): Here you enter the distance between the headline and the top page margin in millimetres.

Field for Quantity: Whether this checkbox is activated, an additional column in the list of the data sets will be displayed. This column could be used e.g. for the handwritten entry of an order quantity. The title of the column you can alter in the tab page *Texts* of the *Print Formatting Dialogue* (see Chap. IX-3, 'Altering Texts of Documents').

Note:

- If the text 'Address' in der tab page *Text* is empty, the contents of the fields Supplier in the *System Cover Sheet* will be used as address (see Chap. III-1, 'System Cover Sheet').
-

Labels

The form *Labels* allows the printing of labels for data sets of the different data stocks.

For setting up a label form serves the tab page *Layout* of the *Print Formatting Dialogue* (see Chap. IX-3, 'Layout').

Printing the labels in the *Print Selection Dialogue*, an entry option for the start position of the print-out on paper appears. This allows the usage of already partly printed label sheets. Label forms always have to be printed one by one.

Glossary

Active

So that your entries to LOCKBASE can be correctly processed, the program must be able to recognize what an entry should refer to. Therefore one position (e.g. an item in a list, a menu option, an entry field in a dialogue box) is always active, all others are inactive. The active position, the "focus of action" is represented by a coloured, sometimes flashing marking.

Central Cylinder

A central cylinder can be operated by several resp. all key functions of a group resp. the entire master key system. It can be locked by superordinated keys, but also by change keys belonging to other cylinders. In the U.S. it is called 'maison keyed'.

See also: Change Key, Interchange Key, Master Key

Change Key

The change key designates the key function, that belongs to a certain cylinder (a cylinder's change key). The change key operates its cylinder only and if existing also central cylinders.

See also: Interchange Key, Master Key

Click

An action with the mouse. Move the mouse cursor  to the object you wish to mark and press the mouse key once (the index finger key, the left for right handed and vice versa for left handed).

See also: Double Click, Drag

Code Group

A letter or symbol group necessary for some cylinder brands which designates the type or variation of the cutting positions (not the depth of the cuts), i.e. even or odd cutting depths.

From left to right the designators correspond to the cuts from bow to tip of the key.

Examples:

- Parity patterns (odd or even biting depths like in GEGE: ABBAB)
- Angle codes (bittings with an angle to the left resp. right or rectangular like in MEDECO Standard: LRCLC).

See also: 'Cylinder Brands and Code Groups'

Command

A command is an instruction to the program to do a certain action, e.g. to open a file. The names of the commands LOCKBASE understands, are clearly laid out in groups that belong together in the main menu.

By describing a command, first the menu is named in which it can be found and then after a hyphen follows the command name. Additionally, menu and command names are stated in **bold**. Example: **File - Open**.

Connection

Connections describe the relationship between data sets belonging to different data stocks.

LOCKBASE administers three types of connections:

1. Key holders / Keys: What person owns what key. I.e. a copy of which key function.
2. Key functions / Cylinders: What keys operate a certain cylinder? What cylinders are opened by a certain key function?
Connections are also named "lockings" in this context.
3. Cylinders / Doors: What cylinder is installed in what door?

Data Stock

The data inventory of one kind. LOCKBASE can administer four data stocks: key holders, key functions, cylinders and doors. Furthermore, LOCKBASE performs the administration of the connections of the data stocks to each other.

Default

Via the command  you can preset some or all entry fields of a data set with certain contents. Thus these entry fields don't have to be entered again with the same contents the next time.

See also: Chap. V-1, 'Create Data Sets by Setting Defaults'

Dialogue Box

LOCKBASE opens a dialogue box whenever before the execution of a command additional information or adjustments are necessary. In a dialogue box several entry fields are collated that take this information.

You reach an entry field in a dialogue box either

- by a mouse click on it, e.g. on a button or list field,
- with a key combination of ALT and the underlined letter of the name from the entry field, e.g. ALT+N moves you into File name.
- in order with the TAB key (in reverse order with SHIFT+TAB).

The buttons OK, Cancel and Help are contained in almost all dialogue boxes.

- A mouse click on OK (or ENTER if the button has a bold frame) executes the command with the selected options.
- A mouse click on Cancel (or Esc) interrupts the command and closes the dialogue box.
- A mouse click on Help (or F1) shows the help text for the respective dialogue box.

Directory

A directory is a group of files that belong together and which are administered by the operating system under one name. LOCKBASE finds the master key files on the drive by the directory name.

Directories are symbolized by file covers (📁), opened: (📂).

See also: Path

Double Click

A mouse action: Point with the mouse cursor  to the object you wish to select and press the mouse key (the index finger key, the left for right handed and vice versa) twice quickly in succession without moving the mouse.

See also: Click, Drag

Drag

A mouse action: Point with the mouse cursor  to the object you wish to move to another place and press the mouse key (the index finger key, the left for right handed and vice versa), keep it pressed moving the mouse cursor to the place where the object shall be located. There you let go the mouse key.

See also: Click, Double Click

Drive

Drives are hardware components on which in contrast to the RAM data can be permanently stored. Floppy disk and hard disk drives are most frequent. Additionally there are CD-ROM drives for large volumes of data, streamers for backing up data and others.

File Format

The manner in which data has been stored and ordered within a file. LOCKBASE files have their own format which cannot be processed by any other program.

File Name

Data is stored in groups belonging together, so called files. Each file has an explicit name and place of storage (drive and directory, called path), so it can be identified by the computer's operating system.

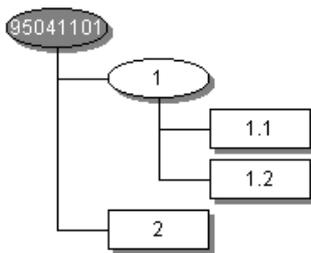
File names consist of eight characters, a . (stop) and three further characters, the file name extension. Special symbols (e.g. ? and *) are not admissible. LOCKBASE recognizes the master key system files from the name extension .LBF. Since the name extension is automatically allocated while storing a file for the first time, you do not need to enter it.

Format Template

A format template is a file that will be used by data views, dialogues and print documents as pattern for font and line formatting, etc. LOCKBASE format templates got the file ending '.lbt' and must be saved in the LOCKBASE directory. You can simply create a format template by saving a LOCKBASE file with the ending '.lbt' formatted according to your needs in the LOCKBASE directory.

See also: Chap. III-1, 'Save master key system file under a new name' and 'System Cover Sheet'

Group Structure



A hierarchically structured master key system consisting of several groups (nodes and subgroups) of keys, e.g. right. Nodes are represented oval, sub groups are represented rectangularly. A subgroup is always at the lowest level of the hierarchy, nodes at the levels above.

Groups are distinguished from each other either by their interchange keys or by having their own master key and/or central cylinder. There can be interchange keys within a group, but not between various groups.

When a master key system has been analyzed for its group structure, only the rectangularly represented subgroups - the leaves on the tree so to speak - can be edited in the *System Matrix* and in the *Data Lists*.

Hotkey

A "hotkey" serves to reach a menu, option, command or entry field in a dialogue box faster than this is possible with the mouse.

There are two types of hotkeys:

- Underlined letters in connection with the ALT key (in a menu without ALT). Example: The key combination ALT+F opens the menu **File**.
- Acceleration keys. They are stated in the menu, but only work if the menu is not opened. Example: The key F12 carries out the command **File - Save As**.

Icon

A presentation form in Windows. To make space on the screen, windows can be reduced to icons. You can recreate the window as soon as you need it again.

The icons for the four LOCKBASE windows:



Interchange Key

A interchange key is a key function that operates two or more differently locking cylinders, but not all of a group or a master key system. Interchange keys determine among other things the group structure of a master key system.

See also Change Key

Key Bitting Array

The key bitting array is a rectangular table with columns showing the pins and in its lines the possible cutting depths of a cylinder brand. Here applies: (number of cut depths) to the power (number of pins) = (number of theoretical changes). From left to right the designators correspond to the cuts from bow to tip of the key. The key bitting array defines the cuts and profiles available for calculating a master key system.

See also: Chap. VII-3 'Edit the Key Bitting Array'

Key Copy

Key copy means the individual, identical keys belonging to a key function; the samples of a key.

This differentiation is necessary because it can well be that a key function "MK" (master key) is envisaged in a master key system and installed in the cylinders, but whether copies (that means real keys, "MK-1", "MK-2" etc.) have been cut and how many actually been issued is not thus decided. LOCKBASE thus administers key copies subordinate to key functions (refer to Chap. IV-1, 'Key Copies').

Mark

By marking - also called selecting - you determine what the next action should refer to. E.g. the deletion or editing of a piece of data. You can shift the mark with the mouse or the arrow keys. If you wish to mark several elements, for example in order to delete several pieces of data at one time, you can extend the marking by dragging the mouse or by a combination of SHIFT+ [ARROW KEYS].

See also: Chap. IV, 'Selecting Data Sets'

Master Key

A master key is a key function that operates all cylinders of a group. If a master key system has got several groups and a key function locks all cylinders of the entire system, it is called a General or Top Master Key.

Menu

A group of commands. The main menu on the top edge of the window contains for example all subordinate menus as options. In the menu **File** are all commands which concern the files as a whole (**Open, Save, Print,...**) whilst in the menu **Edit** are the commands by which the file contents are edited.

Mouse Key

In the LOCKBASE online help as well as in the LOCKBASE manual the term "mouse key" means the forefinger key. This is the left mouse key for right-handers.

Windows tip:

- Left-handers can use the Windows *Control Panel* (in the **Start** menu see **Settings - Control Panel - Mouse - Buttons**) to swap left and right mouse key, so that the right key is the forefinger key.
-

Netdrive

Not a drive in physical sense, but a directory on another computer's drive which is connected to a network, usually a server computer. On the client computer the server directory appears as a drive.

Node

Overriding groups in an analyzed master key system are so-called nodes. They can contain master keys, central cylinders and further subgroups. In the *Group Structure* display in the windows *System Designer* and *Calculator*, nodes are displayed as oval whereas subgroups appear as rectangular.

Option

The term 'option' has got two different meanings:

- a selection option in a menu or dialogue box or
- an adjustment option which determines the appearance of LOCKBASE in the window.

Path

The path (another concept: Directory path) designates the logical place where a file is stored (on what drive, in what directory, in what sub-directory?). Example: C:\WINDOWS\LOCKBASE\LBDATA is a path.

RAM

The RAM (random access memory) is the part of the computer hardware which records data and programs whilst working with the PC. Data is moveable in the RAM but cannot be permanently stored as on a hard disk drive.

Scroll Bars



Whenever a window or a list is too small to display all the data contained in it, so called scroll bars automatically appear on the bottom and right edges. Mouse users can shift the displayed section.

- With a click on the scroll arrows, the screen content moves one line/column into the corresponding direction.
- You can drag the scroll box between the scroll arrows. If you let go the mouse key, the screen content moves corresponding to the position between the arrows.
- With a click between the scroll arrows and the scroll box the screen content moves one page to the corresponding direction.

Select

Starts an action, e.g. a command from a menu or marking and ENTER or by clicking on.

Entries in a list are also selected by marking and ENTER or by double clicking with the mouse.

See also: Mark, Drag

Statusbar



The Statusbar at the bottom edge of the screen displays useful information e.g. on effects of a command if the mouse cursor is located on the corresponding menu entry (refer to Chap. III, 'Statusbar').

Toolbars

The toolbars of:



Main Window,



Data Lists,



System Matrix and



Calculator.

The little buttons serve mouse users to have commands carried out faster. If you wish to know which command is behind a certain symbol, point to it with the mouse and hold the mouse key. An explanation appears in the status line at the bottom of the program window. If you do not wish to carry out the command, drag the mouse down from the symbol before releasing the key.

Unsorted

Data Sets belonging to certain data stocks can be displayed in different sorting order in the LOCKBASE data lists (refer to Chap. IV-2, 'Line Format and Sorting'). If no sorting order has been selected, the data will be shown or printed unsorted according to the sequence they were entered.

See also: Chap. IV-2, 'Move Data Sets'

Window

In the graphic user interface Windows, "window" means any rectangular screen area in which data belonging together (a program or file) is displayed.

See also: Scroll Bars

Wrong Fit

A wrong fit occurs if by a calculation or pinning fault a key locks a cylinder which - according to the *System Matrix* - should not. The LOCKBASE *Calculator* rules out wrong fits.