

# MÄTMAN *check*

## Manual

Document no.: EH-0321-00

# Index

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<b>OVERVIEW .....</b>	<b>3</b>
<b>INSTALLATION .....</b>	<b>4</b>
SYSTEM REQUIREMENTS FOR THE COMPUTER .....	4
INSTALLATION OF THE SOFTWARE .....	4
IRDA COMMUNICATION.....	4
BEFORE USE .....	4
<b>HAND DEVICE .....</b>	<b>5</b>
BATTERY .....	5
START / STOP .....	5
BUTTON FUNCTIONS.....	5
MENU NAVIGATION.....	6
MAIN MENU .....	6
<b>NORMAL USE.....</b>	<b>7</b>
TO MEASURE AND REGISTER TEMPERATURE .....	7
SYNCHRONISE HAND DEVICE .....	8
VIEW AND PRINT THE MEASURING RESULT.....	9
<b>SOFTWARE.....</b>	<b>11</b>
FUNCTIONS IN THE MAIN MENU.....	11
REGISTER CORRECTIVE ACTION .....	12
ADMINISTER OBJECTS .....	13
ADMINISTER CRITERIA .....	14
ADMINISTER ACTIONS.....	16
ADMINISTER USERS.....	17
LOGGING OF MEASURING VALUES.....	19
<b>UNDERHÅLL .....</b>	<b>21</b>
SECURITY BACKUP OF THE DATABASE .....	21
RESTORE DATABASE FROM SECURITY BACKUP .....	21
MOVING THE SYSTEM TO ANOTHER COMPUTER .....	22
<b>APPENDIX A: WINDOWS XP .....</b>	<b>23</b>
WINDOWS XP – ACTION AT THE FIRST SYNCHRONISATION.....	23
<b>APPENDIX B: GLOSSARY .....</b>	<b>24</b>

## Overview

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**Mätman Check** is a system for registration of temperature measurements and actions to be taken according to own-check procedures at food handling.

**Mätman Check** consists of:

- Hand device for measuring and registration
- Software (PC) for handling of objects and report printing

By means of the hand device the user can perform control measurements according to the routines for the own control of the restaurant/store. These routines include temperature supervision and inspection\*) of:

- goods arrival
- food handling (heating, keeping warm, cooling)
- equipment (cold storing, dish washing)
- hygiene (cleaning, hygiene control)

When measuring you select measuring criterion and object from the menu on the hand device. These data will be imported from the PC, when the hand device is synchronised. If the measuring result does not meet the measuring criterion, or if the inspection fails, a corrective action can be selected from the menu. This way as well result as possible action will be registered in the hand device.

The measurements, registered in the memory of the hand device, will be transferred to the computer at the synchronisation. This is carried out remotely by means of infrared communication (IrDA). The user places the hand device in front of the IrDA device of the computer, and selects a function from the menu on the hand device. No computer command is necessary, which makes the synchronisation very easy to perform.

With the PC software you can easily display and print reports on the performed measurements.

\*) Registration of visual inspections is only handled by the hand device **Mätman Check Plus** (art.nr 12121)

## Installation

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### System requirements for the computer

#### Hardware

	<i>Minimum</i>	<i>Recommended</i>
<b>Processor</b>	Intel Pentium eller kompatibel. Minimum 300 MHz clock frequency.	Minimum 500 MHz clock frequency.
<b>Memory</b>	Minimum 128 MB RAM	Minimum 256 MB RAM
<b>Hard disk</b>	Minimum 100 MB free space.	
<b>Device</b>	CD-ROM- or DVD device	
<b>Screen</b>	Screen and graphics card with SVGA (800 × 600) or better resolution.	

#### Operating system

- Windows XP Professional
- Windows XP Home Edition
- Windows 2000 Professional

### Installation of the software

1. Enter the CD-ROM with “Mätman Check PC software” and wait for the installation menu to display.
2. Select “Install Mätman Check” and follow the instructions.

### IrDA communication

The hand device communicates remotely with the computer through the standardised IrDA protocol.

#### Computer with built-in IrDA

Laptops often have a built-in IrDA device. You can check if the IrDA device is activated in the Control Panel under “Remote Control”.

#### Connection of IrDA device

Stationary computers rarely have a built-in IrDA device. You have to connect a separate IrDA device and activate it according to the instructions for that device.

Eltex supplies an IrDA device as an accessory (part no. 18892).

### Before use

Before you use Mätman ckeck for the first time, do the following:

1. Enter users (See the manual under "Software – User administration").
2. Enter data about objects, measuring criteria and actions with the software "Mätman Check" (See the manual under "Software").
3. Synchronise the Mätman Check device (See the manual under "Normal use – Synchronize Mätman Check").

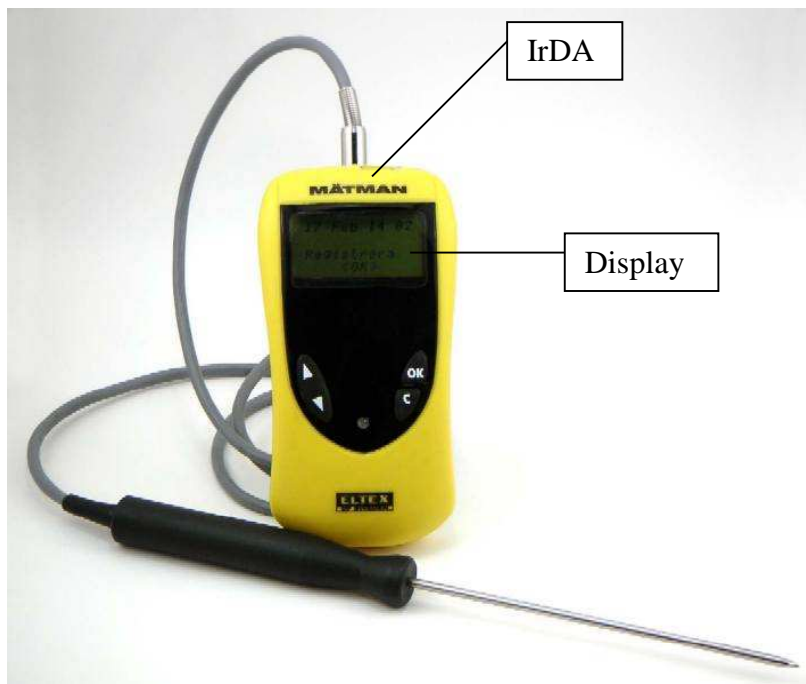
#### First login

After installation there is one user created, who has got access to all functions.

Login with user “**adm**” and password “**password**” (NOTE! lower case).

We recommend that this user will be given another username and password (See the chapter “Software – User Administration”). This will prevent anybody, with access to this manual, to login with full access.

## Hand device

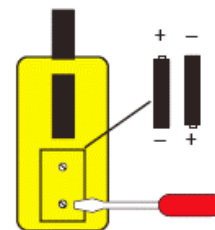


### Battery

1. Open the battery box with the two screws on the backside of the device.
2. Put in two Alkaline batteries size AAA / LR3, Ø10 x 44 mm.

2 x **Alkaline, AAA / LR3**

**NOTE! Turn the batteries correct, otherwise the instrument can be damaged!**



### Start / stop

Start the the hand device by pressing the button **OK**  
Select user from the list and press OK – the main menu will display.  
The device can be turned off by pressing the button **C** for 3 seconds.  
The display will turn off automatically after about 1 minute of inactivity.

### Button functions

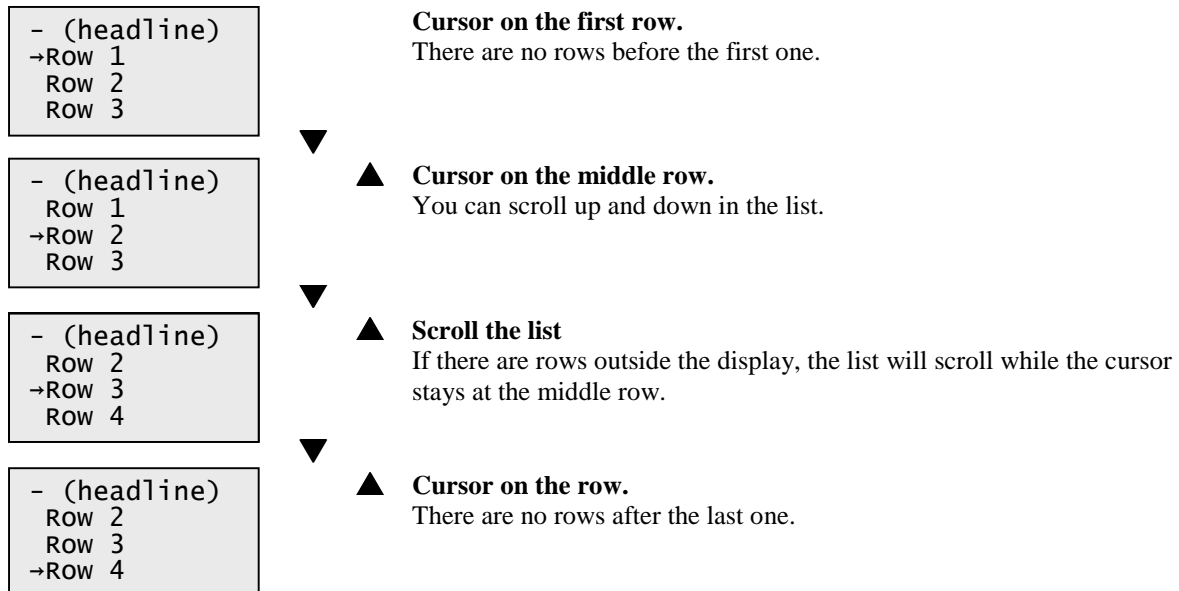
- OK**
  - Start.
  - Select indicated function or object from the menu.
  - Activate the display.
- C**
  - Abort function or back to previous menu.
  - Turn off – press for 3 sec.
- ▲**
  - Move the cursor up in the menu/list.
- ▼**
  - Move the cursor down in the menu/list.

## Menu navigation

The display shows 3 rows from the present menu or list. To see the rest of the list, scroll with the up/down buttons.

The cursor →, to the left of the text row, indicates the function/object that will be selected by pressing **OK**.

This example shows how to browse a list containing of 4 rows.



You can always back to the previous menu by pressing **C**

## Main menu

```
12 Jan 09:15
Show temp
→Register
Sync PC
```

In the highest menu level, *main menu*, the clock is always displayed on the upper row.

There are 4 functions in the main menu:

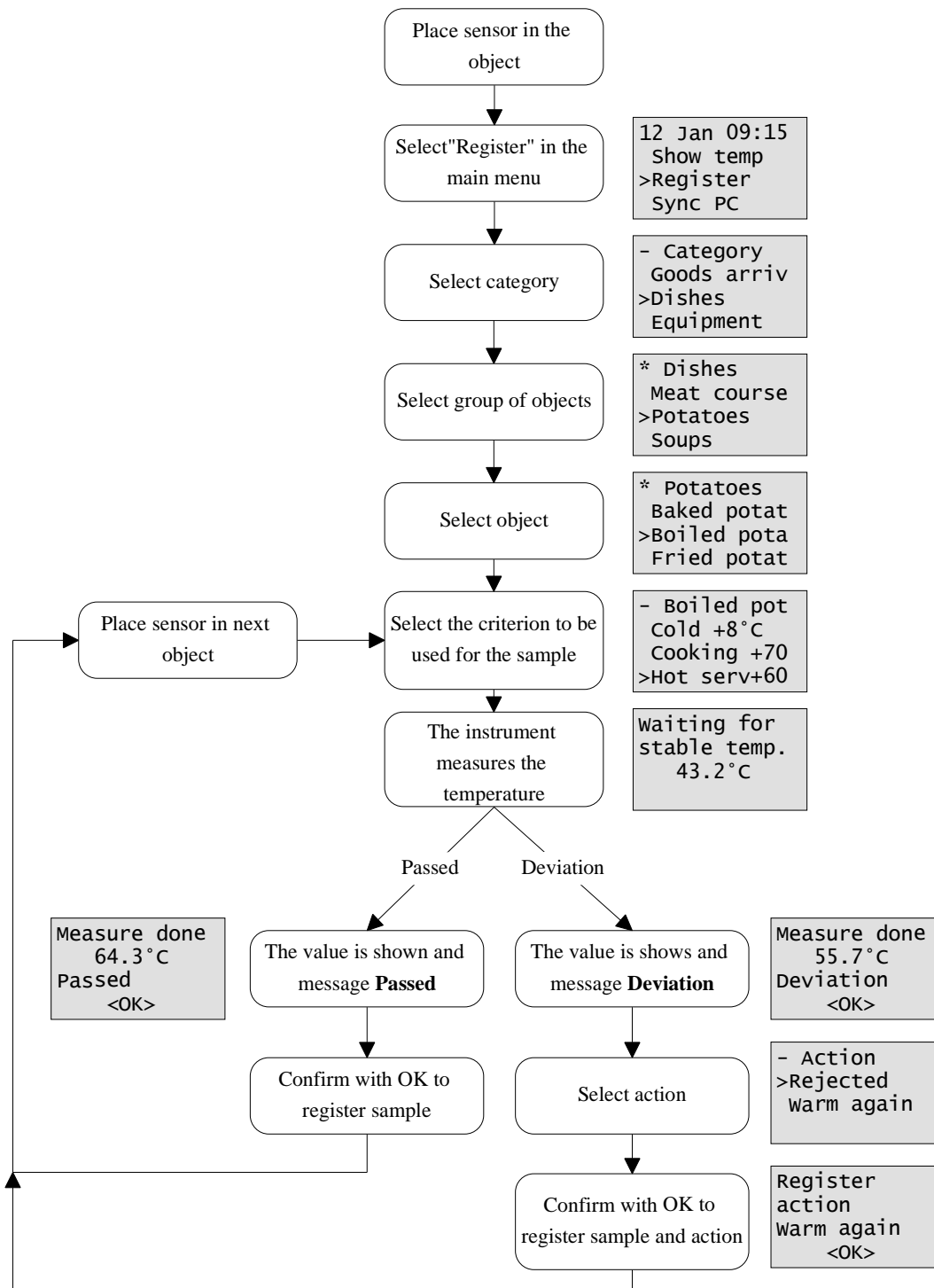
- Show temp**      Displays present temperature as a usual thermometer (no registration).
- Register**        For measuring and registering of temperatures and possible actions.  
Measured value will be compared to the selected measuring criterion, that is the condition that applies to an approved measurement.
- Sync PC**         Activates the IrDA communication of the hand device, in order to synchronise settings and registered values with the computer.
- Info**             Shows information about memory used, registered user and software revision.


## Normal use

### To measure and register temperature

The flow chart shows the normal way to measure and register with the hand device.

NOTE! The menu images for criterions, groups, objects and actions is examples.



In all of the steps you can back or abort with the button 

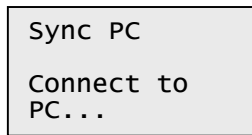
## Synchronise hand device

The synchronisation transfers registered measurements from the hand device to the computer, and settings from the computer to the hand device.

Only the computer with the software "Mätman Check" installed can be used for synchronisation.

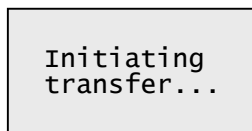
The synchronisation is activated from the menu on the hand device.

1. Place the hand device so that its IrDA eye has clear view to the IrDA eye of the computer and so that the distance between the devices is less than 30 cm.
2. Select "Sync PC" from the main menu – the display shows:

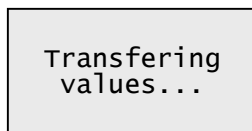


Sync PC  
Connect to  
PC...

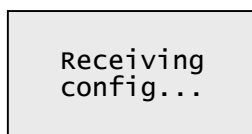
3. After a few seconds the synchronisation will start, and these texts will display during the synchronisation:



Initiating  
transfer...

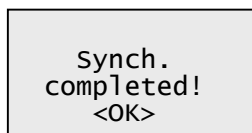


Transferring  
values...



Receiving  
config...

4. After completed synchronisation this message will appear. Press OK to return to the main menu.



Synch.  
completed!  
<OK>

The synchronisation will normally take 10-30 sec.

If there are many registrations stored in the hand device, it can take more than 1 minute.

### Errors at synchronisation

If an error occurs during synchronisation, this message will appear. Press OK to return to the main menu and try again.



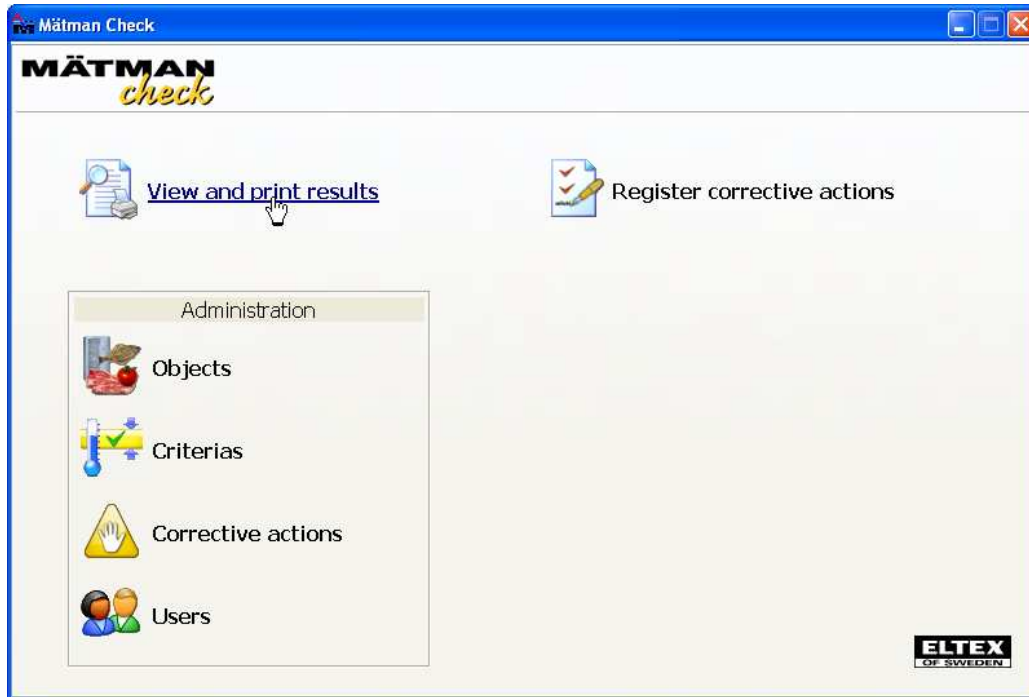
Failed  
sync!  
<OK>

It is important that the synchronisation succeeds, so that the menus of the hand device will work correctly.

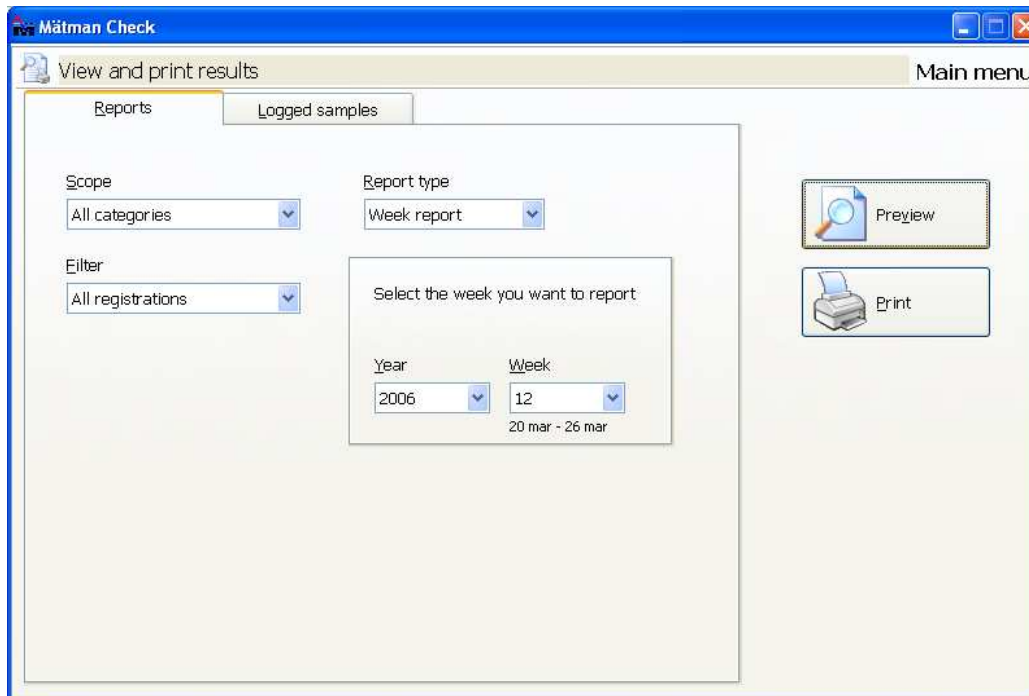
**NOTE!** At the first synchronisation with a computer with Windows XP you have to take special actions. Read more in "Appendix A: Windows XP"

## View and print the measuring result

1. Start the program **Mätman Check** in the computer.



2. Click on the link **View and print the result**  
(The tab "Logged samples" is described under "Software – Logging of measured values")



3. Select the scope: **All categories, Goods arrival, Dishes, Equipment or Hygiene.**
4. Select filter: **All registrations, Only deviations.**
5. Select Report type: **Day report, Week report or Month report.**
6. Select the desired period to present.
7. Select **Preview** to see the report on the screen, or **Print** for a printout.

## Mätman Check – Normal use

This is a preview example.

You can print and save the report as a PDF document with the buttons at the top of the screen.

Preview report

Page 1 of 1

Week report for week 6, 2006

The Restaurant All registrations

**Goods arrival**

Time	Group	Object	Criterion	Value	Result/Action	Performed by
10 Feb 09:47	Scan	Pork fillet	0 - 4°C	6,3°C	Returned goods	Paul Johnson
12 Feb 09:33	Arla Foods	Milk	0 - 8°C	5,4°C	OK	Paul Johnson
12 Feb 09:38	Arla Foods	Cream	0 - 8°C	4,9°C	OK	Paul Johnson

Registration count: 3

**Dishes**

Time	Group	Object	Criterion	Value	Result/Action	Performed by
10 Feb 11:43	Potatoes	Pommes frites	above 60°C	57,6°C	MISSING ACTION!	Alf Karlsson
10 Feb 12:12	Potatoes	Fried potatoes	above 60°C	68,4°C	OK	Alf Karlsson
11 Feb 14:46	Pasta	Spaghetti	above 60°C	65,2°C	OK	Alf Karlsson
11 Feb 14:55	Potatoes	Mashed potatoes	60 - 8°C (4.00)	(4.01)10,4°C	Rejected	Alf Karlsson
11 Feb 15:01	Potatoes	Boiled potatoes	above 60°C	67,2°C	OK	Alf Karlsson
12 Feb 14:12	Meat courses	Beef steak	above 60°C	57,1°C	Rejected	Alf Karlsson
12 Feb 14:48	Potatoes	Boiled potatoes	60 - 8°C (4.00)	(1.27)7,9°C	OK	Rasema Dzajic

Registration count: 7

**Equipment**

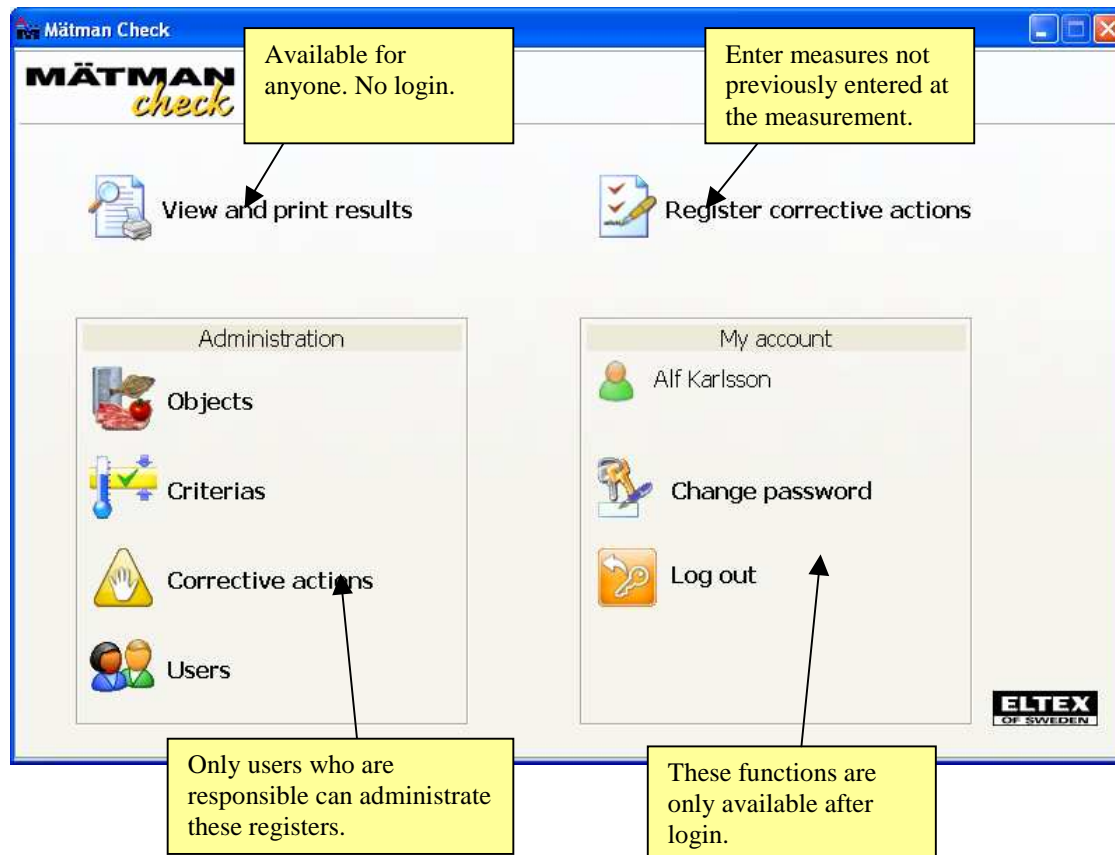
Time	Group	Object	Criterion	Value	Result/Action	Performed by
11 Feb 10:12	Freezers	Freezer C	below -18°C	-20,7°C	OK	Rasema Dzajic
11 Feb 10:16	Freezers	Freezer A	below -18°C	-19,9°C	OK	Rasema Dzajic

Registration count: 2

Printed: 2006-09-06 09:31 Mätman Check Copyright © - Eltex of Sweden AB Page 1 (1)

## Software

### Functions in the main menu



<b>View and print result</b>	Examine and print reports of the measurements. Possibilities to select different time periods and and other selections.
<b>Register corrective action</b>	Deviating measurements, without a corrective action, can be completed with a corrective action afterwards.
<b>Administration: Objects</b>	Register of objects, which will be measured and registrated by the hand device.
<b>Administration: Measuring criteria</b>	Register of measuring criteria, which will be displayed in the hand device. They define the conditions that must be fulfilled for the measurements to be approved.
<b>Administration: Corrective actions</b>	Register of corrective actions, which will be displayed in the hand device. If a measurement is not approved, according to the criterion used, one of these corrective actions is to be selected (and performed).
<b>Administer: Users</b>	Register of the users, who will be identified in the system.
<b>My account: Change password</b>	A logged in user can change his/her password.
<b>My account: Log out</b>	A logged in user can log out. <b>NOTE! The user will be logged out automatically after 10 minutes of inactivity on the computer.</b>

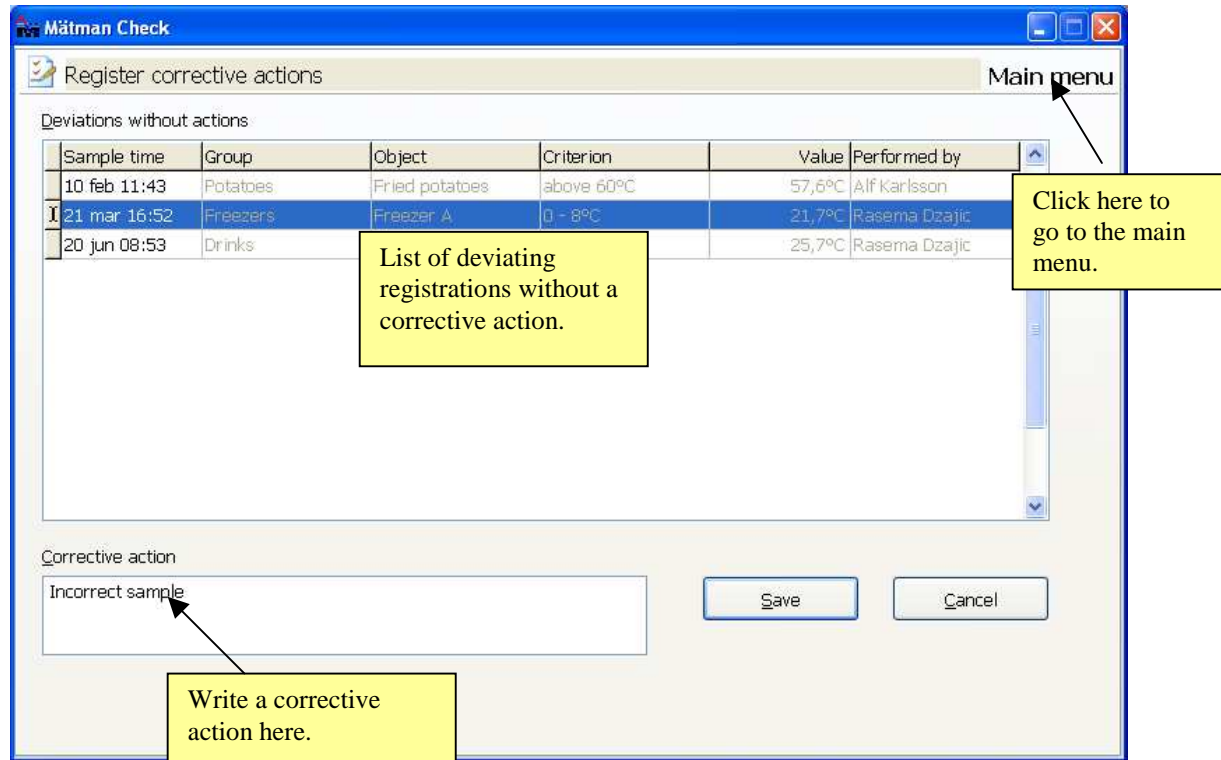
## Register corrective action

This page is activated by clicking on the link “**Register corrective action**” in the main menu of the program.

The function is used to register corrective actions afterwards for registrations with missing action, that is, the user has chosen to abort the registration of corrective action in the hand device.

### NOTE!

We recommend that you, if possible, register corrective action in conjunction with the measurement direct in the hand device, since it is always hard to remember afterwards what was wrong and what should have been done. This function is intended mainly as a complement, in order to note an alternative action in those cases when none of the preset actions fitted.



All registrations with deviations from the set criteria, and without corrective actions, will be listed chronological order.

Select a deviating measurement and write a corrective action. Make the text short, since there is limited space on the printed report.

## Administer objects

This page is activated by clicking on the link “**Objects**” in the main menu of the program.

This register contains all objects to be measured and registered by the hand device. For better overview, especially in the menus of the hand device, the objects should be separated into groups. Separate lists of groups and objects are found under each category, selected on the tabs at the top.

In order to make the handling of these lists easier in the hand device, we recommend that you limit the number of groups to 15-20 within each category. By the same reason you should limit the number of objects within each group to 15-20. The database has no limits for the number of groups or objects.

A draft of division into groups and objects within each category can look like this:

Category	Group	Object
<b>Goods arrival</b>	Supplier	Articles from this supplier
<b>Dishes</b>	Type of dish (e.g. meat dishes, soups)	Dishes of this type
<b>Equipment</b>	Type of equipment (e.g. refrigerators, freezers)	Measuring points in this type of equipment
<b>Hygiene</b>	Premises, places (e.g. kitchen)	Objects where the hygiene is to be checked

**NOTE!** Items in the category *Hygiene* will be handled only by **Mätman Check Plus** (art. no. 12121)

When you name a group or object, the program will create an abbreviation in the column ”Display”. This is the text that will appear in the display of the hand device. It is possible to change this text, if you want to abbreviate it otherwise.

Select category with the tabs

Define objects

Main menu

Goods arrival Dishes Equipment Hygiene

Groups

Name	Display
Drinks	Drinks
Fish courses	Fish course
Meat courses	Meat course
Potatoes	Potatoes
Soups	Soups
Vegetables	Vegetables

Objects

Name	Display
Baked potatoes	Baked potat
Boiled potatoes	Boiled pota
Fried potatoes	Fried potat
Mashed potatoes	Mashed pota
Pommes frites	Pommes frite
Potatoe gratin	Potatoe gra

Click here to go to the main menu.

Groups under this category

Objects under this category and group.

Add group Delete group Change group

Add object Delete object Change object

## Administer criteria

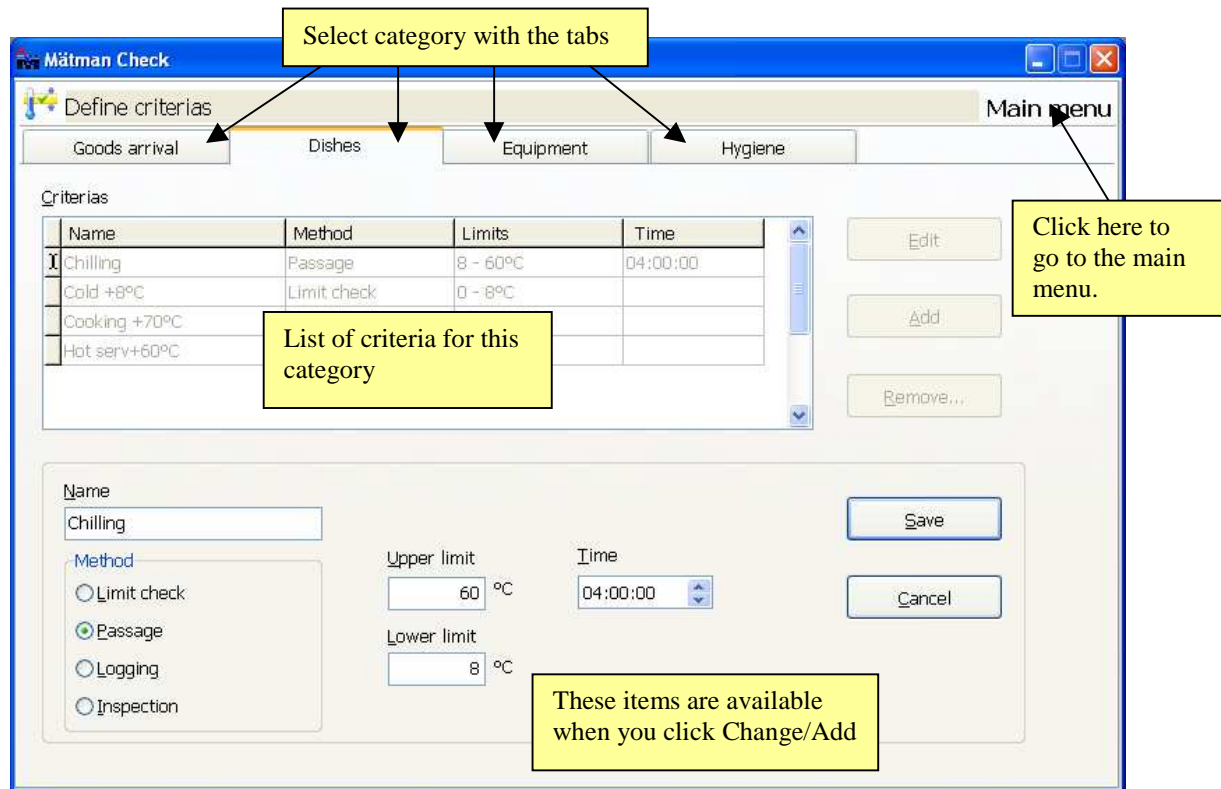
This page is activated by clicking on the link “**Measuring Criteria**” in the main menu of the program.

The register contains the criteria for the hand device.

They define the conditions that must be fulfilled for the measurements to be approved.

Separate lists of criteria will be found under each category, selected with the tabs at the top.

**NOTE!** Items in the category *Hygiene* will be handled only by **Mätman Check Plus** (art. no. 12121)



These data will be entered for a criterion:

### Name

The name that will be displayed in the hand device. If possible shorter than 12 characters.

### Method

- Limit check** Normally used at random sample check. The temperature has to be between the set limits to be approved.
- Passage** Is used, for instance, for cooling of food.  
The temperature must be outside the set limits at the start of the measurement. When passing a limit, next limit must be passed within set time for the measurement to be approved.
- Logging** Is used to measure temperature values over a longer period.  
At “Log interval” will be entered how often a new value shall be registered, for instance every 5 minutes.  
The measurement will proceed until manually stopped.  
(More information under the chapter “Logging of measuring values ”)
- Inspection** Is used to register results of visual inspections. No temperature measurement is done, the user will state if the criterion is fulfilled or not.  
(NOTE! Can only be handled by **Mätman Check Plus**)

### **Upper limit**

The upper limit for the criterion.

This variable is hidden when the method is *Logging* or *Inspection*.

### **Lower limit**

The lower limit for the criterion.

This variable is hidden when the method is *Logging* or *Inspection*.

### **Time / Log interval**

Sets the maximum time for a passage, respective the time interval for logging.

This variable is hidden when the method is *Limit check* or *Inspection*.

## Administer actions

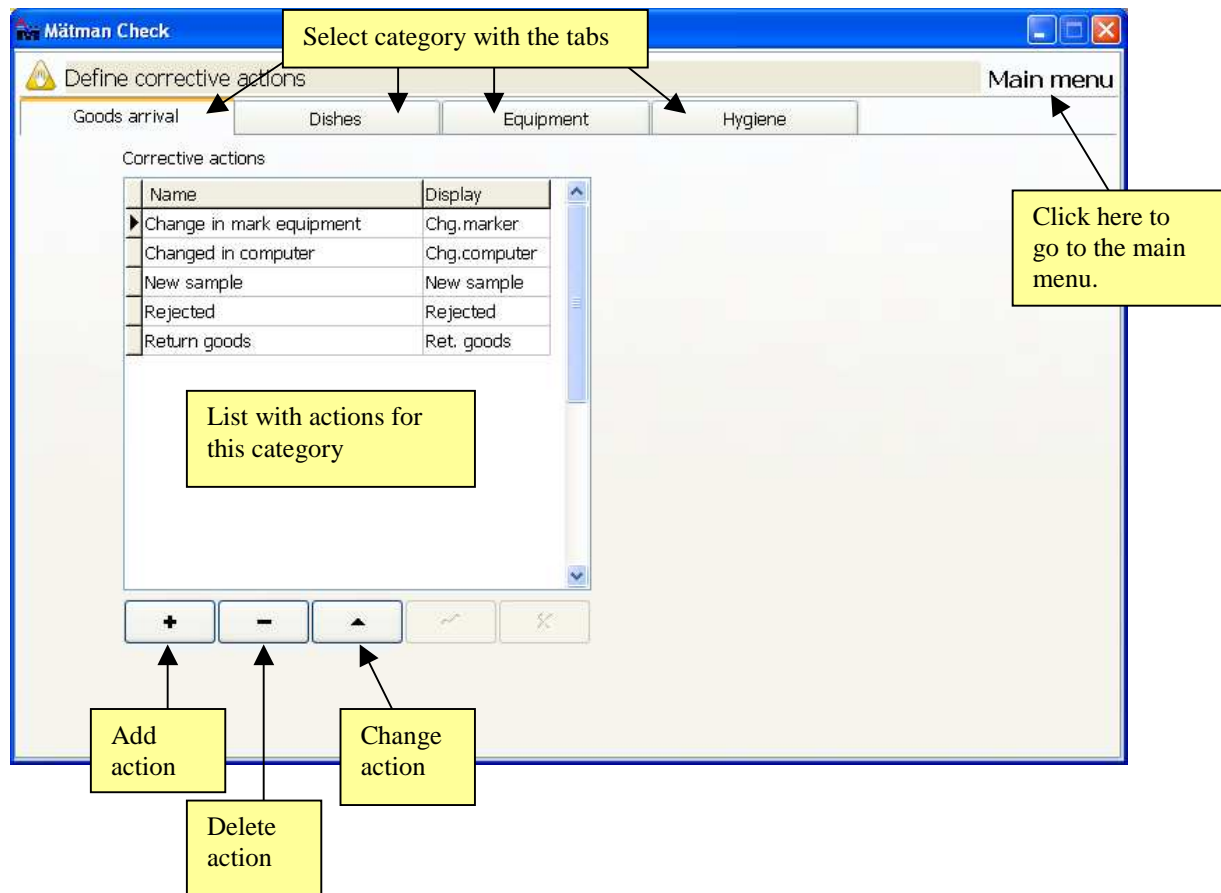
This page is activated by clicking on the link “**Actions**” in the main menu of the program.

The register contains the corrective actions to appear in the hand device. If a measurement is not approved according to the criterion used, one of these actions is to be taken.

There are separate lists of actions under each category, which are selected with the tabs at the top.

When you name a group or object, the program will create an abbreviation in the column ”Display”. This is the text that will appear in the display of the hand device. It is possible to change this text, if you want to abbreviate it otherwise.

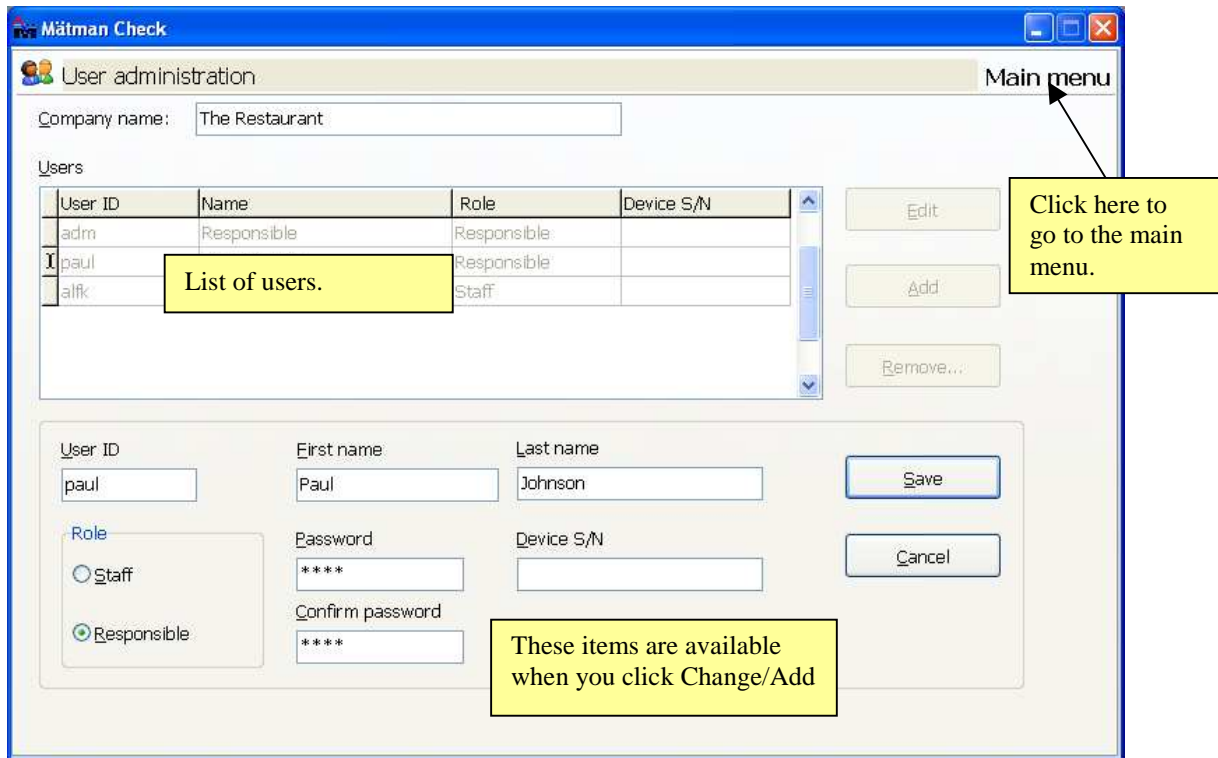
**NOTE!** Items in the category Hygiene will be handled only by **Mätman Check Plus** (art. no. 12121)



## Administer users

This page is activated by clicking on the link “Users” in the main menu of the program.

The register contains the users, who are going to use the system. This list will be transferred to the hand device, so that the user can select his/her identity, when the hand device is started.



### Company name

Name of the company or establishment. This name will be on the top of all printed reports. The name will be saved automatically when you return to the main menu.

Enter these data for each user:

### User ID

The name used by system login.

### First name, Family name

The real first name and family name of the user. Will show on printed reports and in the hand device.

### Role

#### Staff

For users who are going to be identified in the system. These users can login to the system, but only for the function “Register corrective actions”. Of course these users can use the hand device for measurements. Users with this role have no access to any database register.

#### Responsible

Users with this role have access to all functions and registers, including the user register. Normally, only one person should be responsible.

## Password, Confirm password

Enter a password for the user and confirm the same password.  
The password must be 4-14 characters.

## Device S/N

Only for the first version (program version 1.0, delivered before 1 juli 2006) of the hand device **Mätman Check**.  
On new hand devices, the user selects his/her identity from the list of users, and this information is unnecessary.

Enter the serial number of the hand device, which the user will be attached to. The user name will be listed in the hand device after synchronisation. Measurements, done with this hand device, will be marked as performed by this user.

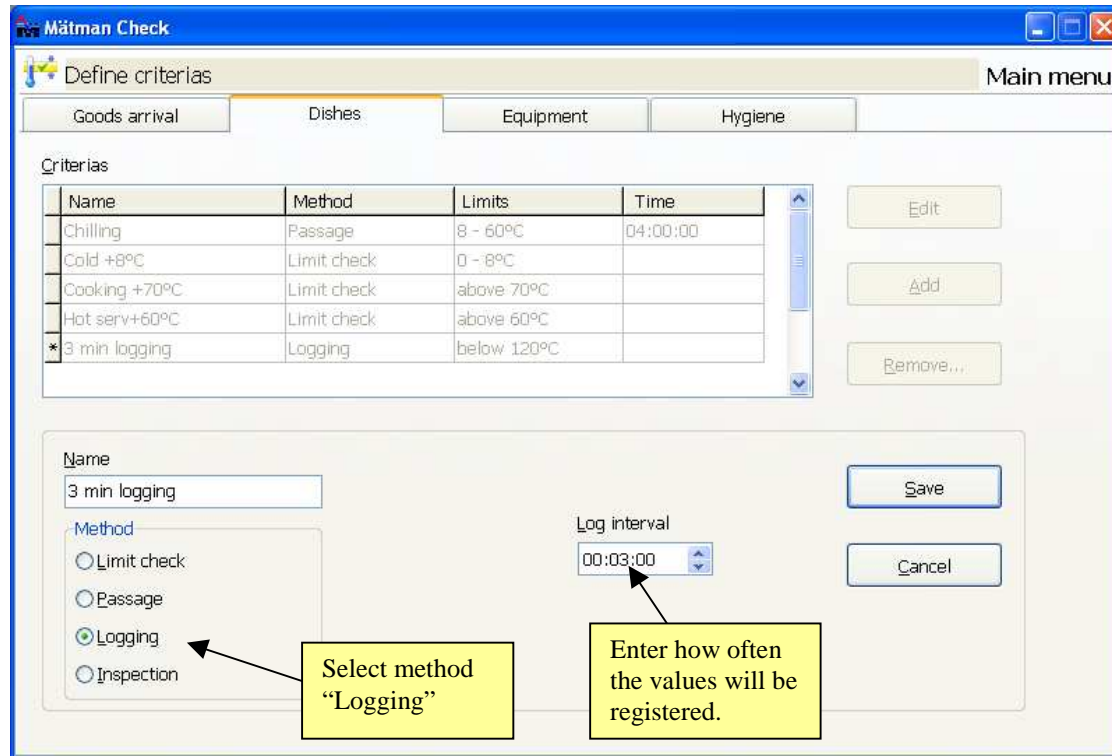
## Logging of measuring values

It is possible to record measuring values with the hand device. The recorded values can be presented as a diagram.

### Criterion for logging

Enter a criterion with the method “Logging”. At “Log interval” enter how often the values will be registered. You can enter several criteria with different log interval. Name them so that the log interval is seen in the name, e.g. “3 min logging”.

(Remember that special lists with criteria are available in each category).



Synchronise the hand device again, and the new criterion will be found in the menus (under Register).

If you choose to measure with a criterion for logging, the hand device will continually measure and record values until the measurement is stopped manually by pressing the **C** button and confirm with **OK**.

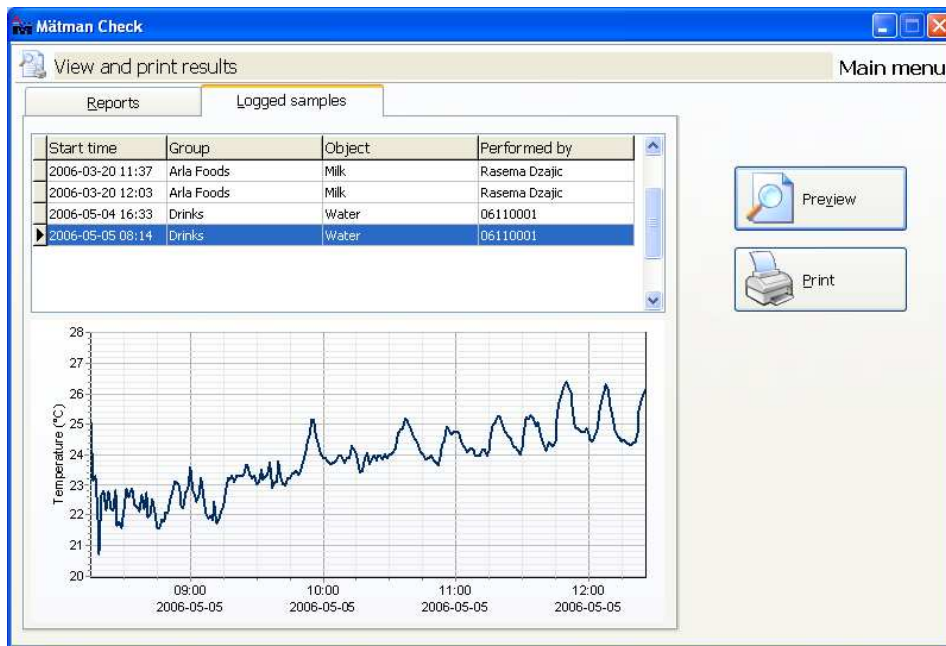
It is possible to make several loggings without synchronising and transfer them to the computer. The only condition is available memory (amount of memory used is shown under the menu “Info” in the hand device). To be sure to have enough memory for a long logging, you should synchronise the hand device first, so all memory will be available. If the memory should be full during a logging, the measurement will stop automatically.

## Mätman Check – Software

When the hand device has been synchronised after executed loggings, these can be studied on the tab “Loggings” under “View and print results”.

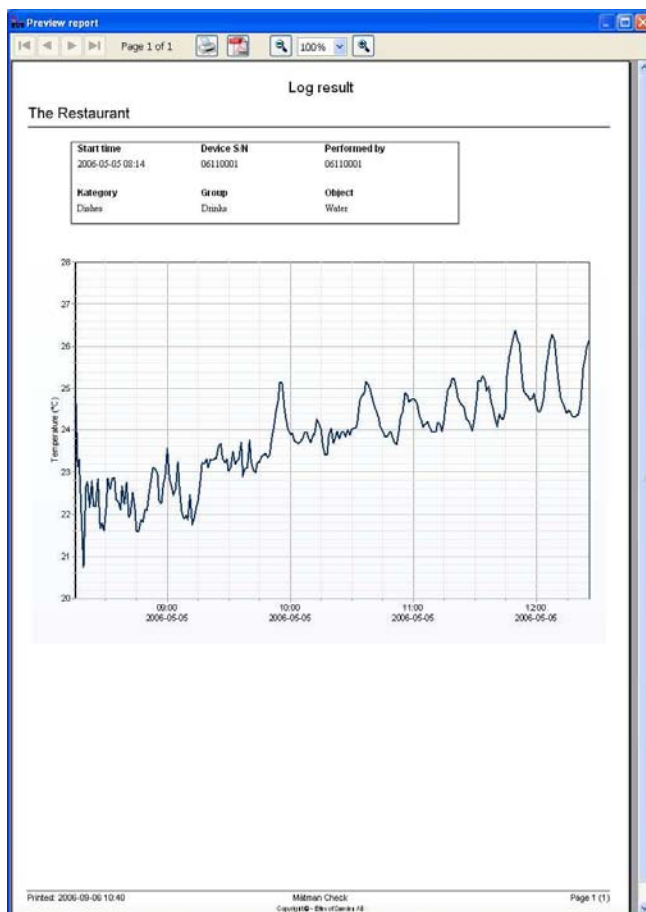
All loggings are listed, the latest logging is listed last and will be marked automatically.

By clicking on a logging in the list, the diagram will be updated with the curve for that logging.



With the button “Preview” you can see printout on the screen and have the possibility to save it as a PDF document. With the button “Print” you will have a printout on a printer.


This is a report example for a logging:



## Underhåll

---

### *Security backup of the database*

The system will automatically copy the database, to be sure that no data will be lost. The program “Mätman Check Sync” will do the copying. That is the same program that handles the synchronisation (Displayed as the icon  in the Windows System Tray).

The backup copying will be done at one any of these occasions:

- 10 minutes after synchronisation of a hand device.
- When last backup copy is older than 24 hours.
- When an Eltex USB backup memory is connected to the computer (see below).

The copy of the database is in the file **M\_Check.bak** in the map **DB\_BACKUP**, Which is found in the program map of the application (normally C:\Program Files\Eltex\MmChk).

This file should be copied to other devices or media to secure it against a possible computer crash. The easiest way is to use “**USB memory for Mätman Check Backup**”, which is described in the following chapter.

### **Security backup with “USB memory for Mätman Check Backup”**

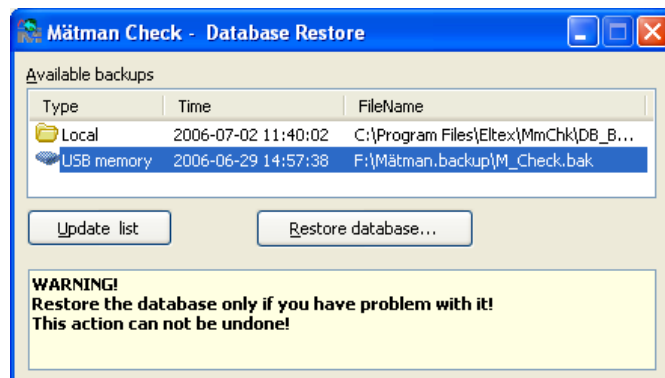
This is an accessory (Eltex art. no. 12090), which simplifies the safety backup considerably.

The handling is very simple:

1. Connect the USB memory to the computer.
2. Wait until the system has detected the memory.
3. The safety backup will be performed within a few minutes. When it is completed, this will be indicated as a message at the icon for “Mätman Check Sync”.
4. Disconnect the USB memory and keep it in a safe place.

### *Restore database from security backup*

1. Shut down both Mätman Check and Mätman Check Sync
2. Start the program "**Database restore**" from Start menu / All programs / Mätman Check
3. Available copies will be listed



4. If you want to restore from an Eltex USB memory, connect this memory to the computer and click “Update list”, and this copy will appear in the list.
5. Select the copy you want to restore.
6. Click on "Restore database..." and confirm by clicking "Yes".
7. After a while the message "Database was successfully restored!" will appear.
8. Close the program "Mätman Check - Database restore"
9. Start Mätman Check Sync (from Start Menu / All Programs / Startup) and Mätman Check as usual, or restart Windows.

### *Moving the system to another computer*

There are occasions when you need to move the existing Mätman Check system to another computer, for instance when you change to a new computer. Of course, the new computer has to fulfil the system requirements stated under “Installation” in the beginning of this manual.

Follow this schedule:

1. Take a safety backup of the database in the old computer to a portable medium, for instance USB memory (see the chapter “Security backup of the database” above).
2. Install/activate the IrDA device with the new computer.
3. Put in the latest version of the CD-ROM “Mätman Check” and install the program in the new computer.
4. Follow the routine “Restore database from security backup” described in the previous chapter. (If you do not use “USB memory for Mätman Check Backup”, the file **M\_Check.bak** must be copied manually to the map **DB\_BACKUP** from the moveable medium used in point 1).
5. The database from the old computer is now moved to the new computer. Check that all data seem OK, and then the system is ready to use.

## Appendix A: Windows XP

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### *Windows XP – action at the first synchronisation*

This information concerns only Windows XP!

At the first synchronisation of the hand device, Windows XP will start the installation guide “Guide New Hardware”.

Windows believes (incorrectly) that a mobile phone is connected, wants to install a driver for a modem!!! If you answer NO or abort the guide, it will turn up at every synchronisation. Do the following in order to avoid this problem in the future:

1. Select the alternative “Yes, only this time” and continue the guide with the suggested settings.
2. Windows will install “Standard modem via IR link”.
3. After this installation a message will appear in the Activity Field about the new hardware that is ready to use. Ignore this message.

NOTE that the synchronisation between computer and hand device will work, regardless if the driver for modem is installed or not!

## Appendix B: Glossary

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### Application program

The software used to handle data, present values and communicate with one or more hand devices. Will normally be installed with a computer in the restaurant/store.

### Database

Contains all information handled in the system. The database is normally in the same computer as the application program, but in larger systems a network server can handle it.

### Hand device

A thermometer equipped with memory and digital display, with which the user can measure and register temperature values. This device can exchange information with the database in the PC.

### IrDA

A remote communication standard, in this system used for the exchange of information between the hand device and the PC. Shortening for “Infrared Data Association”.

### Category

Division of measuring objects to be measured/checked in a similar way. In this system there are four categories:

- **Goods arrival**
- **Dishes**
- **Equipment**
- **Hygiene**

### Criterion

Defines what is required for a measurement to be approved. Contains measuring method, limits, and possible time limit. A criterion is only valid within one category, but the same category can have several criteria.

### Method

States how the measurement is to be carried out. It is a part of the criterion. This system has the following methods:

- **Limit check** (measured value shall be within limits)
- **Passage** (the value shall pass from one limit to the other limit within a specified time)
- **Logging** (values are recorded with a set time interval)
- **Inspection** (visual inspection without temperature measurement)

### Object

A product, dish or a point to be measured.

### Object group

Objects within the same category will be separated into groups, in order to make relocation of a specific object easier.

### Role

All users of the system are assigned a role, which controls which functions they have access to. In this system there are two roles:

- **Staff** (user who can measure and register corrective actions)
- **Responsible** (user who can administrate the data in the database)



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