

Operating Instructions

CONVOTHERM PC-Control

CONVOTHERM PC-HACCP

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1. INTRODUCTION

1.1 General Information for CONVOTHERM PC-HACCP and CONVOTHERM PC-CONTROL

CONVOTHERM PC-HACCP and CONVOTHERM PC-CONTROL

- The PC uses the PC-HACCP software to communicate with the Combi or Combis.
- The PC-HACCP software must be started on the PC before the PC-Control software can work.

CONVOTHERM PC-HACCP

- The Convotherm PC-HACCP software automatically records all processes run on Convotherm Combis and stores them for HACCP monitoring.
- After cooking, the HACCP data is stored and can be graphed for review.

CONVOTHERM PC-CONTROL

- The Convotherm PC-Control software can store up to 250 recipes. The recipes can be transferred to all your networked Combis in seconds.
- Recipes can be deleted, copied, or changed as needed.
- Stored recipes and functions including Cook & Hold, Delta-T Cooking, reduced fan speed, reduced power, Crisp 'n' Tasty, and security can be programmed with HACCP criteria and monitored with the Convotherm PC-HACCP software.

1.2 System Requirements

Hardware

Convotherm oven single installation:

All Combi models require ST 5000 V2.20 software.

Convotherm oven network installation:

All Combi models require ST 5000 V2.20 software.

All Combi models require a Communication Module Kit.

Computer Hardware:

- IBM compatible PC with a 486 MHz or faster processor.
- RS232/V24 serial port.
- Windows 95 or higher.
- CD-ROM drive.
- 10 MB free storage on the hard drive.

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2.1 Installing, Setting Up and Starting the Software

- 1. Install the CONVOTHERM PC-HACCP software and set it up to suit your hardware.
- 2. This software can manage two "networks" of one Combi each as a stand-alone system or up to 31 Combis each as a network installation.
- 3. For each of the networks used, the interface (COM) port must be selected.
- 4. In the selected (see below) network, each Combi used for recording HACCP data or for transferring Programs must be logged in.

2.1.1 Installing CONVOTHERM HACCP Software on a PC

- 1. Start Windows 95 or Windows NT on the PC.
- 2. End all other programs before installing the Convotherm software.
- 3. Insert the installation CD-ROM into the CD-ROM drive.
- 4. Use Windows Explorer to navigate to the CD-ROM drive.
- Open the SETUP.EXE installation program.
- 6. Follow the instructions in the installation program.
 - The required directories are created automatically.
- 7. When installation is complete, start the program in Explorer by clicking on CONVOTHERM-HACCP.EXE in the selected directory.
 - If there is an error beep when the program starts, correct the network interface, and see 2.1.2.

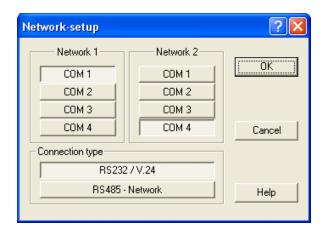


- 8. In the window *Responsible chef*, in the field *new*, enter the name of the person responsible for the HACCP documentation.
- 9. Click add.
- 10. Click **OK** to save or Cancel to quit without saving.

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2.1.2 Setting Up the CONVOTHERM PC-HACCP Software Network Settings

- 1. Start the CONVOTHERM PC-HACCP software.
- 2. In the Setup menu, go to Options.
- 3. In Network 1, choose a COM port.
 - Most computers use COM1 for RS232.
 - The USB network COM selection will depend on the software included with the USB/Network adapter.
- 4. In *Network 2*, choose a second COM port even if the second network will not be used.
- 5. Click the connection type:
 - RS232/V24 for a stand-alone system.
 - RS485-Network for a network system.



- 6. Click **OK** to save or Cancel to quit without saving.
- 7. Close the program and restart it.

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Select Temperature in °C or °F

- 1. In the CONVOTHERM-HACCP window, click Options.
- 2. Click Measurement unit.
- 3. Click °C or °F.
- 4. Click **OK** to confirm or **Cancel** to guit without making changes.



2.1.3 Setting the Network Address on the Combi Ovens

- · Address 1 is factory set on all Combis.
- To connect more Combis to the PC, the Addresses must be changed to 2, 3, 4, etc.
- No change is needed to work with only one Combi.

On the Combi Control Panel:

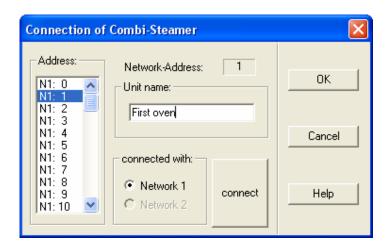
- 1. Press the **Smart Key**.
- 2. Scroll to the Setup icon (it looks like an oven).
- 3. Press the **Smart Key** for **YES**.
- 4. Scroll to the **Network Address** icon (it looks like three computers tied together).
- 5. Enter the address of the Combi.
 - The first Combi is 1, the second Combi is 2, etc.
- 6. Press the **Stop** key to end the program.
- 7. Switch the Combi OFF and then back ON.

2.1.4 Log On and Off Combis in CONVOTHERM PC-HACCP

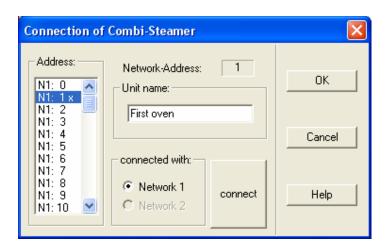
- All Combis connected to the PC must be logged on to the CONVOTHERM PC-HACCP software.
- Each Combi needs an individual network address (number) and a name.
- When the Combis are logged on, they are displayed on the screen with a symbol and a name and change to a light color.
- The network address assigned during log on must match the address set on the Combi. (Continued on next page.)

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- 1. Click on the *Options* menu.
- 2. Click on Combi Steamer.
- 3. Click on Connect.



- 4. Select the Network Address (N1:, N2:, etc.) of the Combi in the Address scroll window.
- 5. Enter a *Unit name:*, ("First oven" shown).
- 6. In connected with:, click Network 1, or Network 2.
- 7. Click the *connect* button. An "x" appears next to the Address of the Combi.



8. Click **OK** to confirm or **Cancel** to quit without making any changes. (Continued on next page.)

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- 9. The Combi icon is displayed with its unit name. ("First o..." shown.)
- 10. When a Combi is connected with the software, its icon changes from dark grey to a light color to confirm the connection.

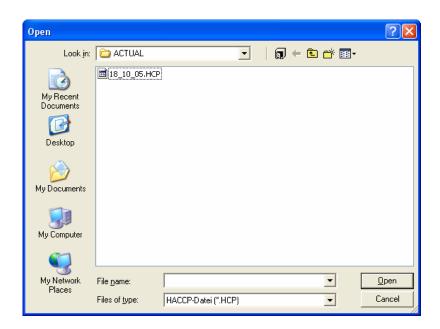
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2.2 Automatic Storage of the Combi's HACCP Data

2.2.1 Starting Automatic HACCP Documentation

Automatic HACCP Documentation:

- 1. Start the CONVOTHERM PC-HACCP software.
- 2. Name the Responsible Chef.
- 3. Every cooking process is recorded for each Combi logged on, and stored in a Daily File titled (day_month_year.HCP). ("18_10_05.HCP" shown.)
- 4. As soon as a Program is finished, it is automatically stored.
 - Brief cooking periods can be excluded from storage by using a Time Filter.



Time Filter:

Note: Any cooking processes that are shorter than the value entered in the Time Filter is not stored. This information is lost!

- 1. Click on Options.
- 2. Click on Time filter.
- 3. Enter a value or change the value with the arrow keys.
 - Enter 0 min to record every cooking process.
- 4. Choose **OK** to confirm or **Cancel** to quit without making any changes.

2.2.2 Backing Up HACCP Data

Make a backup of your HACCP data.

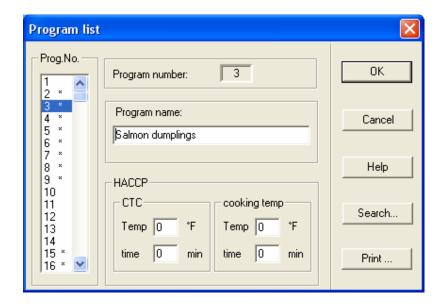
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2.3 Assigning HACCP Criteria to Programs (Recipes)

- Each Combi can store up to 250 Programs (recipes).
- CONVOTHERM PC-HACCP software can manage <u>only</u> 250 Programs with up to 9 steps in each.
- The same recipes must match the same number in all the networked Combis. (For example, "grill chicken" is Program number 5 in all the networked Combis).
- Different Programs can be stored in networked Combis.
- Do not use the same number for different Programs. Instead, use the same number for the same Program in ALL the networked Combis for a maximum of 250 Program numbers.
- In the CONVOTHERM PC-HACCP software, HACCP criteria can be allocated using these Program numbers.
- These criteria are used to check every Program when it is started on a Combi.
- 1. Start the CONVOTHERM PC-HACCP software.
- 2. Click Program.
- 3. Click **Program list**.

NOTE: Steps 4 and 5 are not necessary if the Program was created using PC-Control and a name is already allocated. If so, go to Step 6.

- 4. Select the Program number (*Prog. No.*) in the list on the left.
- 5. Enter the *Program name*.
- 6. Enter the HACCP criteria:
 - CTC → Temp and time
 - cooking temp → Temp and time
- 7. Click **OK** to save or **Cancel** to quit without saving.



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NOTE ON PRINT BUTTON

- 1. Click Program.
- 2. Click Program list.
- 3. Click *Print* to print a list of Program numbers with their Program names.

NOTE ON SEARCH BUTTON

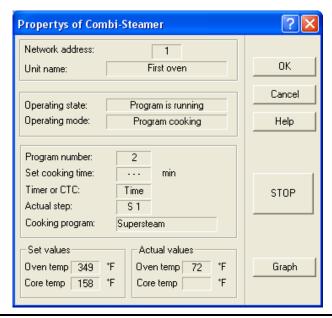
- 1. Click Search.
- 2. The **Searching for programs** window opens.
- 3. Enter search criteria.
- 4. Click **OK** to start the search.

2.4 Making Sure HACCP Criteria Is Fulfilled

- As long as the CONVOTHERM PC-HACCP software is running, information can be viewed for any Combi at any time, providing the ability to check every cooking process.
- As soon as a cooking process has finished, it is automatically stored in the Daily File.
- The Daily File can be viewed later to examine a particular cooking process, check the cooking process, and check if the HACCP criteria were fulfilled.

2.4.1 Online Check

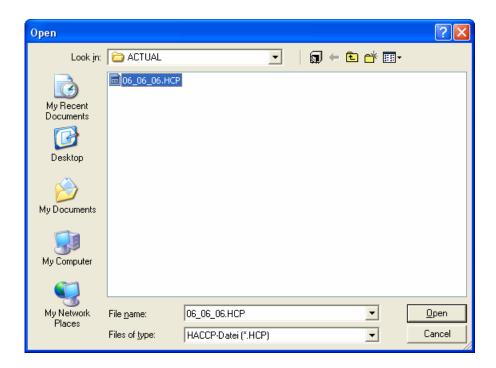
- Click a Combi icon to open the Propertys of Combi-Steamer window.
- Information on the Combi selected is displayed, including operating mode, which Program is running, and set and actual Temperature, Time and CTC.
- Click the *Graph* button to display the temperature in the Combi.
- To stop any process in a Combi, press the STOP button.



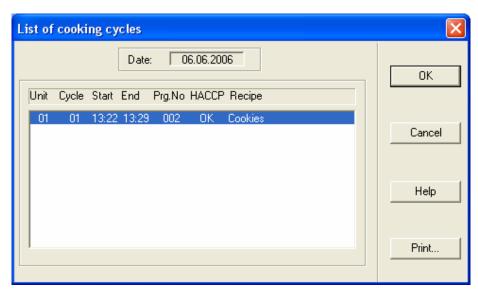
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2.4.2 Checking HACCP Criteria

- 1. Click *File* while the CONVOTHERM PC-HACCP program is running.
- 2. Click Open.
- 3. Click the directory named ACTUAL.



4. Click the desired Daily File.



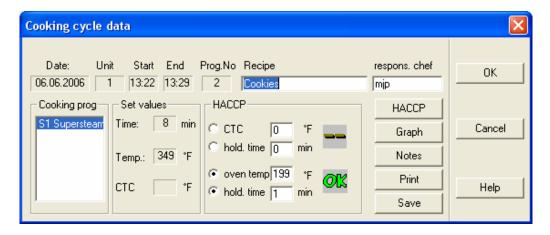
The

cooking cycles window shows cooking process information.

List of

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5. Click the desired cooking cycle to view Cooking cycle data.



HACCP

Click the *HACCP* button to perform a HACCP check after entering the HACCP criteria. The following symbols indicate the HACCP status:

- "--" = No HACCP check required (checked with 0 values).
- "OK" = HACCP criteria were fulfilled.
- "xx" = HACCP criteria were not fulfilled.
- "??" = Manual Program was used (no stored Program).

Date 12.7.1998						
Unit	Cycle	Start	End	PrgNo.	HACCP	Recipe
1	01	9:55	10:05	202		Bread roll
2	02	10:01	10:14	200	OK	Croissant
3	03	10:10	10:22		??	Vegetables
2	04	10:16	10:32	203	xx	Baguette

Graph

- Click *Graph* to examine the temperature changes in detail with a temperature curve for oven temperature and core temperature.
- Use the Zoom functions for detailed examinations of sections of the curve.
- This graph can be printed.

Notes

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- 1. Click *Notes* to open the Notes window.
- 2. Add notes to cooking cycle data.
- 3. Click add.
- 4. Click **OK** to save or **Cancel** to quit without saving.

Print

Click Print.

The contents of the current window are printed.

The contents of the *Notes* window are also printed.

Save Button

Click the Save button to save modifications to Recipe, respons. chef, or HACCP.

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3.1 Software Installation, Setup, and Startup

- Running the CONVOTHERM PC-Control software requires a dongle.
- For viewing Programs, the software can be run without a dongle.
- Without a dongle, some functions, including saving Programs and sending Programs to the Combis cannot be used.

Installation of the Convotherm PC-Control Software

- 1. Insert the dongle in the parallel printer interface (LPT).
- 2. Install the PC-Control software using the same procedure as the PC-HACCP software.
- 3. For easier Program startup, place a shortcut to the *PC-CONTROL.EXE* on the desktop or in the Autostart directory.

3.2 Create a Cookbook on the PC

- After starting this program, a list containing all the Program numbers is displayed.
- Free and assigned Program numbers are displayed differently in this list. See below.





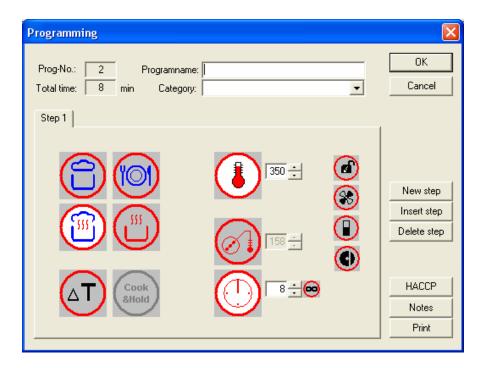
= assigned Program number

- The *Programming* window is opened by double clicking on a Program number.
- The buttons used in this window are the same as the Keypad icons on the Combi control panel.

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3.2.1 Multi-Step Programming

- 1. Open the *Programming* window:
 - By double clicking on a free Program number in the Program List.
 - OR
 - 1) Selecting a free Program number.
 - 2) Left clicking the *Edit* dropdown menu.
 - 3) Left clicking Create on the Edit menu.
 - OR by right clicking the Program number.
 - → A dropdown menu with the command *Create* opens.



- 2. Select an operating mode by left clicking an icon.
 - The Cook & Hold mode cannot be selected in the first step and is grey.
- 3. After selecting the desired operating mode, the default values appear in the entry fields for temperature, time, and CTC (Core Probe Temperature).
 - Delta-T cooking requires the use of Core Temperature.
- 4. Accept the default temperature, adjust it with the arrow keys, or input the desired value in the entry field.
- 5. Click the Time or CTC icon to select shutoff time or temperature.
 - Accept the default values.
 - OR change the values with the arrow keys.
 - OR input values in the entry fields.

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- 6. Enter the next step:
 - Press the **New step** button.
 - Fill out the blank cardfile card.
- 7. Repeat Steps 2-6 as needed for up to 9 Steps per Program.
- 8. In the *Programming* window.
 - 1) Enter *Programname* (up to 49 characters) in the entry field.
 - 2) Enter *Category* (up to 49 characters) to assign the Program to a product group.
 - 3) Use the down key to view a list containing existing Categories.
 - 4) Click on a Category to select it, or type a new category.
- 9. Press **OK** to save the Program, or press **Cancel** to quit the Program without saving. Changes to the Program are lost.

Notes:

- A new step can only be entered when the current step is completed.
- After complete input of a step, the other steps can be viewed, by clicking on the cardfile card tab with the step number.
- A maximum of 9 steps can be entered.
- The total time of a Program is displayed under the Program number.

3.2.2 Modify an Existing Program

To modify an existing Program, open the *Programming* window by:

- Double clicking on an existing Program Number in the Program List.
- OR
 - 1) Selecting a free Program number.
 - 2) Left clicking the *Edit* dropdown menu.
 - 3) Left clicking *Change* on the *Edit* menu.
- OR by right clicking the Program number.
 - → A dropdown menu with the command *Modify* opens.

Add a New Step

Click **New Step**.

An empty cardfile card is added at the end of the Program.

Insert a Step

- 1. Click on the cardfile card tab <u>before</u> the new step.
- 2. Click *Insert step*.
- 3. An empty cardfile card is inserted and all the steps after the new one are moved back one place.

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Delete a Step

- 1. Click the cardfile tab of the step to be deleted.
- 2. Click **Delete Step**.
- 3. The steps are automatically moved forward and renumbered.

3.2.3 Additional Functions

These functions can be used in programming:

HACCP-Criteria The HACCP criteria can be entered in this window.

<u>Notes</u> Comments about the Program can be entered here, e.g. recipe details, product amounts or other tips.

Print Click to print a Program.

To Program HACCP CRITERIA

1. Click on the *HACCP* button in the *Programming* window.



- 2. Click on CT (core temperature) and / or Oven.
- 3. If required, change the default values with the arrow keys, or type new values in the entry fields.
- 4. Click on *Time* if desired (=Hold time for the core or cooking compartment temperature).
- 5. Click **OK** to save or **Cancel** to quit without saving.

To enter Notes

- 1. Click on the **Notes** button in the **Programming** window.
- 2. Enter text or insert from the clipboard.
- 3. Click **OK** or **Cancel** to quit without saving.

To Print

- 1. Click on the *Print* button in the *Programming* window.
- 2. Enter the printer information.
- 3. Click **OK** or **Cancel** to quit without saving.

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3.2.4 Delta-T Cooking, Cook&Hold

Delta-T and Cook&Hold are programmable with the CONVOTHERM PC-Control software.

Delta-T Cooking

- Delta-T cooking with hot air requires use of Core Temperature since the cooking compartment temperature rises depending on the measured actual core temperature.
- The cooking compartment temperature should always be higher than the core temperature by the Delta temperature.
- The Timer cannot be used in Delta-T mode.
- 1. In the *Programming* window, select the Delta-T Cooking operating mode by clicking the Delta-T icon.
- 2. Adjust the Delta-Temperature with the arrow keys or input the desired value in the field.
- 3. Adjust the desired core temperature with the arrow keys or input the desired value in the field.

Cook&Hold

- Cook&Hold Programs automatically switch from the Cook phase to the Hold phase when the set Time or Core Temperature is reached.
- Select Hold Temperature so the cooking compartment temperature and the actual core temperature meet at the desired Hold Temperature (Hold Temperature = Core Temperature) to prevent over cooking.
- During the Hold phase, the Combi fan cycles with hot air and the time is automatically set to continuous.
- 1. Select the operating mode of the first step in the *Programming* window.
- 2. Set the temperature (preferably between 120°C and 150°C).
- 3. Select the Time or Core Temperature for the switchover from Cook to Hold (Hold Temperature = Core Temperature).
- 4. Press the **New Step** button for Hold phase entry.
- 5. Select Cook&Hold mode.
- 6. Accept the suggested hold temperature or if required, change the default values with the arrow keys or enter new values in the fields.
- Click **OK**.

Note:

The Cook&Hold mode can only be used as the last step in a multi-step Program.

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3.3 Managing Recipes

To help organize recipes this software can store various versions of Cookbooks, call up and print lists, and delete, copy, and move Programs to other locations.

3.3.1 Saving the Cookbook

- 1. Click File.
- 2. Click Save.
- The Programs are saved in the automatically created file PrgData.prg No file name needs to be entered.

3.3.2 Saving the Cookbook Under a Different Name

In order to create various versions of a Cookbook (e.g. for winter and summer seasons), the Program file (PrgData.prg) can be saved under another name.

- 1. Click File.
- 2. Click Save as...
- 3. Select the directory for the new Cookbook.
- 4. Enter the file name.
- 5. Click **Save** or use **Cancel** to quit without saving.

Note:

- When starting the CONVOTHERM PC-Control software, the original Program file PrgData.prg is always loaded automatically.
- To edit a different file, use File/Open in the menu bar to open it.

Tips + Tricks

- If Programs in two different Program files are used, the CONVOTHERM PC-Control software can be opened twice.
- In one version, the source Program file is opened, in the other version the target Program file.
- Individual Program numbers can then be copied and pasted using the clipboard.

3.3.3 Displaying Different Program Lists

Various Program lists can be displayed by clicking on desired icon in the Toolbar

= All Program places

= Occupied Program places

= Free Program places

OR Click View in the Toolbar to display the lists.

Tips + Tricks:

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- Small rectangles are located above or right of the outside scroll bar.
- The cursor changes here into a double arrow.
- The window can be divided by holding down the left-hand mouse button and drawing the cursor down or to the right.
- For a better overview, up to four differently sorted lists can be displayed simultaneously.

3.3.4 Print Lists

- 1. Click *File/Print* or click the printer icon in the toolbar.
- 2. Give the information for the print procedure.
- 3. Start printing with **OK** or use **Cancel** to quit without printing.

3.3.5 Sort Lists

The lists can be sorted in ascending or descending order by clicking the list headings. Sorting can be done by:

- Program number.
- · Program name.
- Cooking Mode in Step 1.
- Category.

Note: Sorting by the number of steps is not possible.

3.3.6 Copy, Cut, Paste, or Delete a Program

- 1. Click to mark the desired Program number.
- 2. Use Copy and Cut as desired.
- 3. Click Paste.

Note:

Cut, Copy, Paste, and Delete can be found:

- In the *Edit* dropdown menu.
- **OR** by clicking on the Program number with the right-hand mouse button.

3.4 Using the Cookbook

To use Programs, they must be sent to the Combis.

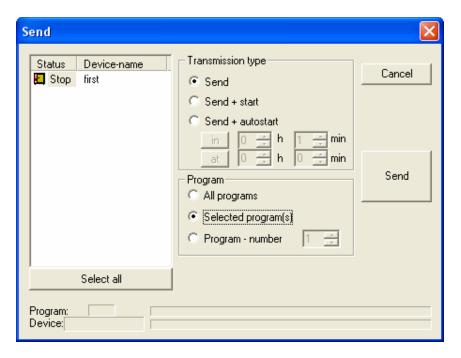
The CONVOTHERM PC-HACCP and PC-Control software must be started in the computer before the Cookbook will operate.

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3.4 Using the Cookbook

3.4.1 Sending Programs to a Combi

- Click Send.
- All the Combis registered in the CONVOTHERM PC-HACCP software are listed and marked in the left-hand area of the window.
- A Program can be sent to a Combi by clicking on the Status icon.



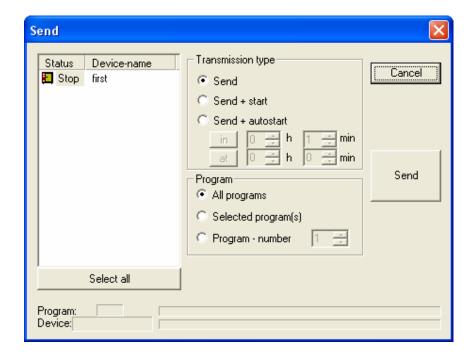
- 1. Select transmission type:
 - Send.
 - Send + Start.
 - Send + Autostart.
 - When using **Send + Autostart**, set the time information **in h.min** or **at h.min**.
- 2. Select the Program to be sent:
 - All programs.
 - Marked program(s) (see Tips+Tricks).
 - **Program number** (specify number).
- 3. Start the transmission to the desired Combi by clicking **Send**.
- 4. After the transmission click *Cancel* to quit the window.

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Tips + Tricks:

Several Programs in the Program List can be marked before opening the **Send** window by clicking on them with the left-hand mouse button, as follows:

- From Program number X to Program number Y by pressing the Shift key.
- Single non-consecutive Program numbers by pressing the Ctrl key.
- If Programs are to be sent to all the registered Combis, these can be marked with the Select all button.)



Notes:

- If no Combi is marked as a transmission target, none of the Programs selected are sent
- Only single Programs can be used with **Send+Start** or **Send+Autostart** and the items **All programs** and **Selected program(s)** can no longer be selected.
- With **Send + Autostart** the time button on the Combi must not be disabled.

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3.5 Other Functions

3.5.1 Changing the Pre-programmed Values in the PC-Control Program

- 1. Click Options.
- 2. Click Pre-programmed values.
- 3. Scroll through the values and change with the arrow keys, or enter new values as needed.
- 4. Click **OK** or **Cancel** to guit without saving.

Notes:

- By pressing the **Standard** button, all the **Pre-programmed values** are reset to their factory default values without warning.
- The Auto/Memo values in the individual Combis do not change and the **Pre-programmed** values do not affect the Auto/Memo values in the Combis.

3.5.2 Enable or Disable Controls on a Combi

Disable:

- 1. Click **Options**.
- 2. Click Locking out control panel.
- 3. Click the controls to be disabled. The disabled controls turn grey with grey symbols and a yellow key.
- 4. Select the Combis to be locked out in the **Status / Device-name** field.
- 5. Click *Lock* to confirm or click *Cancel* to guit without saving.

Enable:

The controls can be enabled again by clicking *Unlock*.

3.5.3 Send a Cookbook by e-Mail

If your PC has a modem and an Internet connection, you can use the *e-Mail* function to send your Cookbook to other people or to receive one from them.

- 1. Click File.
- 2. Click e-Mail.
- 3. Refer to your e-mail program to insert and send *PrgData.prg*.
- 4. To send the **Notes** by e-mail, insert the file **PrgData.menu** into the e-mail.
- 5. Follow the program directions to send the files.