

# **C**omputer**I**ntegrated**D**ocumentation**-PRO**



## **CID V2.01**



***Manual for the full version***



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## **2 System specifications:**

To run **CID-PRO** the following minimum requirements are needed:

- Win95, Win98, WinXP, WinMe, WinNt 4.0 or Windows 2000
- PC with Pentium processor 90MHz (350MHz recommended) or higher
- 3.5" floppy disk drive
- one free serial interface
- one parallel interface for hardware key
- mouse
- VGA video adapter(256 colours, 640 x 480 pixel)
- a minimum of 64MB of memory
- 100 MB free fixed-disk storage

### **3 Installation instructions:**

Place the 1<sup>st</sup> disk of the installation set into the 3.5" floppy drive. It is highly recommended to exit all window programs before starting the installation.

From the Programme Manager, choose file Run.

Type a:setup and click OK.

Confirm the interrogations regarding the installation directories with a mouse click on the 'finish' button.

**CID-PRO** itself is in the directory /CTS\_SOFT.

**CID-PRO** installs the Runtime Engine in the directory /CVIRTE as a subdirectory of the installation directory.

*Never* change the directories as **CID-PRO** would not run correctly.

UPDATE:

IF a version of CID is already installed on your system. Follow the instructions above and choose the actual cid directory as the installation directory. During installation all program parts are replaced. Measurement files, program cycles, reports as well as configurations are preserved and are compatible with the new version.

It is strongly recommended to make a backup before.

Once the installation has been correctly performed, a new window in the WINDOWS Programme manager will appear under:

**CID-PRO**



CID-PRO: Main programme

cid\_help.hlp: On-line help

convert.exe: conversion programme CID-->EXCEL

Uninstall..: Uninstallation programme. The programme deletes the group CID-PRO in the Programme Manager. Also all the programme files, but the files they are created during the work with **CID-PRO** such as report files and measurements, also ini-files are preserved.  
If you really never need any more files you can delete all of the files in the installation directory of **CID-PRO**.

### 3.1 Programme start:

Before you start **CID-PRO** for the first time you must install the driver software for the hardware key. Plug the hardware key directly onto the LPT1 (printer port) connection on your computer. Your printer cable can now be plugged in directly onto the hardware key.


The Driver Software is supplied on a separate disk named „Sentinel Driver WinNT & Win95“. Insert disk into the drive and start the installation program. Depending on your operating system you have to choose the according installation file.

Operating system	Installation file to use
Windows 95 / Windows 98	A:\WIN_9x\SENTW9X.EXE
Windows NT	A:\WIN_NT\install.bat

In the Installation choose out the function „Install Sentinel Driver“. Confirm the displayed pathname with OK. After installation is finished you have to restart your system.

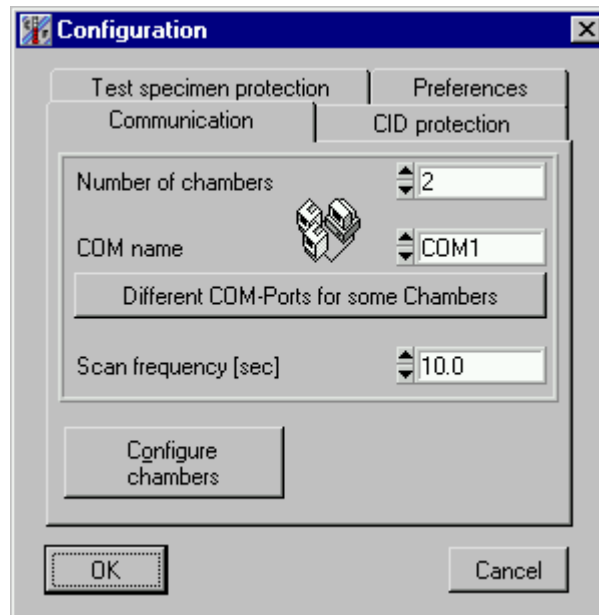
Using WinNT OR Win2000 you need administration rights to install the driver.

If you can start **CID-PRO** afterwards without a message like „hardware key not found“ the Installation was successful..

Start **CID-PRO** with a click on the icon .


When you start the programme for the first time, the *configuration mask will appear*. (s. chapter 4.7)





Enter here the amount of chambers you have, the port that they have been connected to and the intervals at which the chambers must be scanned.

Switch on your chamber(s) and proceed with the configuration using

this button . This procedure can take several minutes (2-3 min. per chamber).

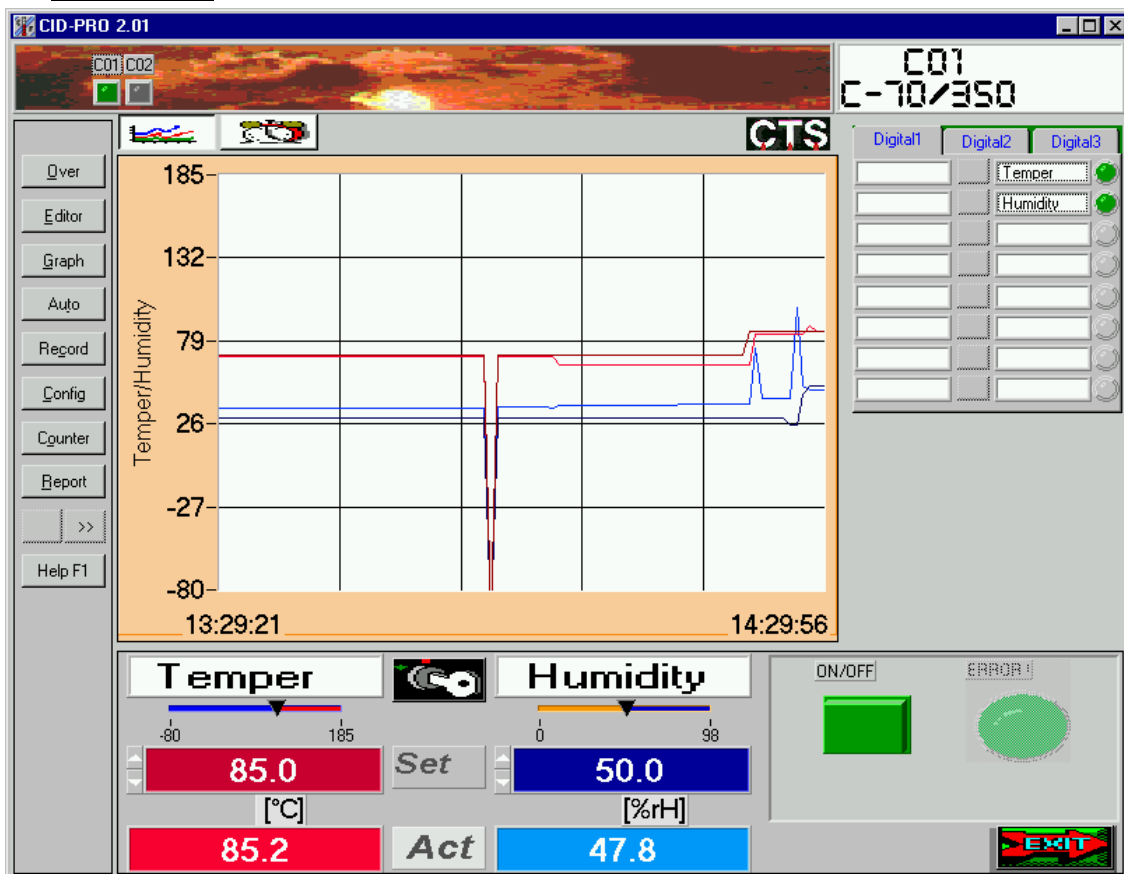
*Don't you get any connection to the chamber(s), please control the communication protocol. To do this: type 'E' 'P' 'P': now you had to see in the upper LCD 'CID', when not: toggle to 'CID' with the + / - keys..*

*The number in the lower LCD is the address which is used in the **CID-PRO**. Maybe you have to adjust the address with the lower + / - keys. Pressing the 'S' - key saves the settings.*

Following starts of the programme: **CID-PRO** searches automatically for available chambers. The chambers which are switched on will be recognised by the programme and their effective parameters are captured. The programme automatically recognises and reads the Chambers configuration. You are now in the *status mask* (see following pages).

## 4 The different masks of CID-PRO:

### 4.1 Status:




Status of the active chamber can be seen on the status mask. The chamber number and designation are shown in the upper right-hand corner: e.g.

C03  
C-70/350

*Chamber: 3 is active  
Designation: C-70/350*

The status window is sizeable. Using the maximize button in the upper right-hand corner of the title bar the window expands to size of screen. The menus are optimised for resolutions for 640x480 to 1024x768 pixels. Enlargement may result in little distortion of the screen.

You can reach other parts of the program by pressing the buttons in the menu section of the status screen. See following capture for more details.

	<p><b>Over</b> overview for 4 chambers (see. cap. 4.2)</p> <p><b>Editor</b> create or edit temperature and humidity cycles. (see cap.4.3)</p> <p><b>Graph</b> display of saved data for evaluation of measurement (see cap.4.4)</p> <p><b>Auto</b> start testcycles / profiles (see cap.4.5 )</p> <p><b>Record</b> start / stop Recording of measure data by hand (see cap. 4.6)</p> <p><b>Config</b> to set system parameters (see cap.4.7)</p> <p><b>Cycle</b> shows operating hours and switching cycles (see cap 4.8)</p> <p><b>Report</b> shows a configurable list of all events and changes done by software (see cap.4.9)</p> <p>Menu &lt;&lt; &gt;&gt; serves to turn over the visible analogue channels (see cap. 4.1)</p> <p><b>Help</b> starts online help with guidelines for all parts of the programme</p>
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In order to change the active chamber, click with the mouse once on one of the LED's at the upper mask border. Any LED can actuated, however if it is grey, the has no effect as this chamber does not exist or is not configured.

The LED's give you a short overview offer the status of the connected chambers. See list below for a description of the colours.

Colour	Description
Lightgray	chamber not configured / not present
White	chamber not responding / main switch off or no connection
Darkgray	connection to chamber but switched off
Green	chamber is running
Red	error at the chamber



*selection C01 to C03 available*

With a click on a LED, the status mask changes and shows the present values of the desired chamber.

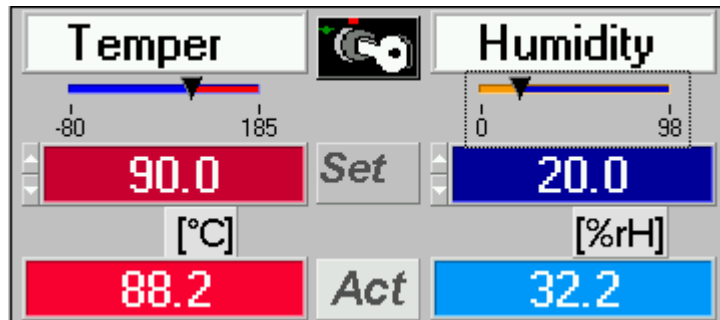
Using the switch on the left of the LED for the chambers the range of LED's can be changed, and if there are more than 16 chambers a different range can be used by this switch. Number '1' mode represents chambers 1-16 and



number 17 shows chambers 17-32.



The status mask is also used to manually change the index values.



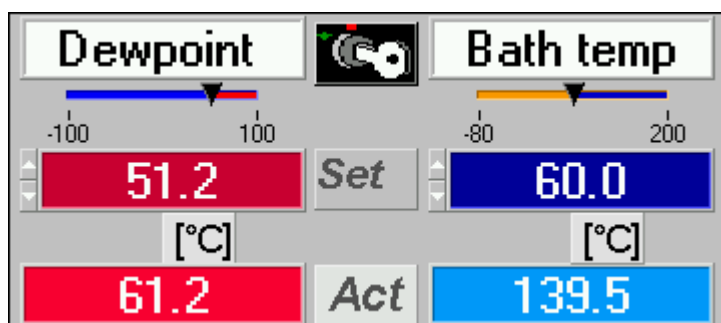
The analogue channels of the active chamber can be modified in two ways. You can move the arrow symbol directly below the channel name with the mouse as well as putting in the new index value in the box underneath the slides to set a new index value. To enter the value by keyboard you must activate the box by clicking into it with the mouse (colour changes).

The new values are assigned to the chamber after confirmation by pressing 'ENTER'. If the chamber is running in automatic-mode a message box appears to confirm the changes.

Should CID-PRO not recognise the chamber, check the connection and make sure that the chamber is switched on.



The analogue channels can be changed by clicking onto the button. If the index values are modified, the figures under the slides as well as their limits and their units change in the corresponding analogue channels.



On the right-hand side of the status mask you find the buttons for the digital channels. If your chamber supports digital channels, you can activate/deactivate them here. You see three folders one behind the other. There you can find more digital channels if available. For the purpose to activate/deactivate click once with the mouse on the elevated button in the middle of both text fields.



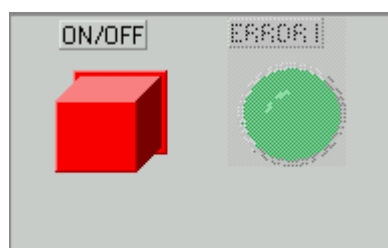
If the active chamber was able to confirm the new status, the colour of the digital button changes.



On the right of this part of the screen you can see digital inputs and states of the chamber. Their actual state is displayed.

Under the digital channels, you can see the switch for starting the chamber as well as a LED which show the error if a failure occurs:

If the ON/OFF – button is red the chamber is stopped. Clicking on it with the mouse turns it into green and starts the chamber.



The status mask shows also in which chamber the failure occurred. The details of the failure can now be seen here in a window. Click OK to close the window.

By clicking on the error button the error will be removed if it is no longer present. If so the button changes its colour back to green and the chamber runs error free.


**Attention !: If an error occurs, always check the chamber for its possible reasons.**

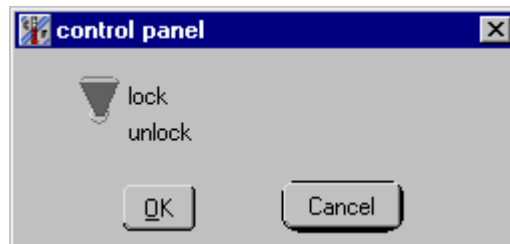


*Example of an error message*

The LED remains red until the failure has been eliminated.



Pressing the keybutton:  opens a window. Here you can see whether the chambers handset is locked or not.



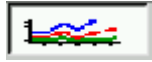
Display when control panel is locked

A mouse click on one position of the switch changes the position. With the OK - button this setting is transferred to the chamber. When the handset is locked all keyboard hits are ignored.

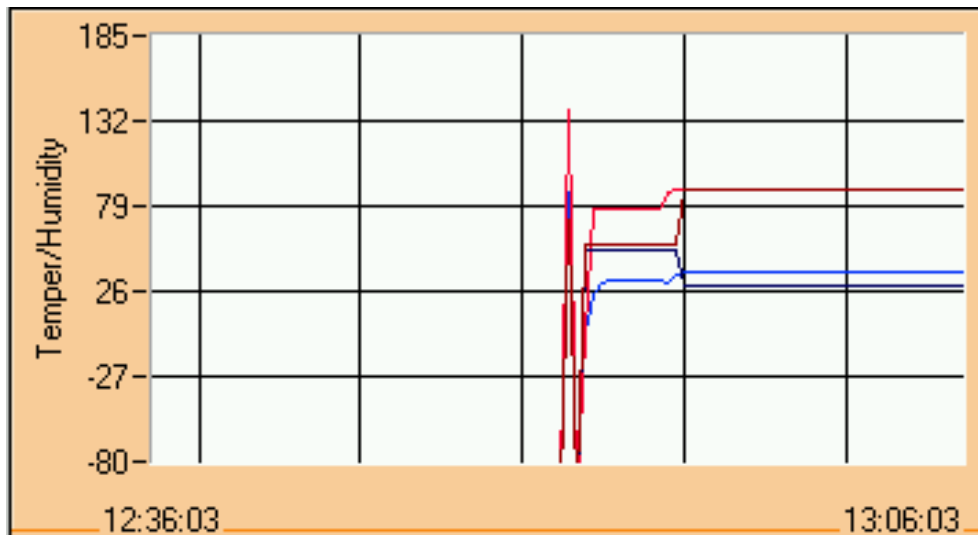
A power down or switching the mainswitch of the chamber off and on, removes the suspension of the keyboard.

(If the chambers software version has not implemented keyboard suspension, the key-button is invisible.)

A symbol bar in the centre of the status screen enables you to switch between different ways showing the state of the chamber. It is possible that not all symbols are present. This depends on the kind of the chamber and the running mode.



If this symbol is activated a trendgraph is displayed. This graph always shows the temperature curve (and humidity if present) .



the trendgraph always shows a timeaxis with a fixed length up to actual time. (See capture 9 for a detailed description for configuration of the timeaxis) The scaling fits for both channels. Colours of the graphs have following meanings:

light-red:	actual temperature
dark-red:	setvalue temperature
light-blue:	actual humidity
dark-blue:	setvalue humidity

The measure values of the trendgraph are only saved temporary. It could not replace a recording!

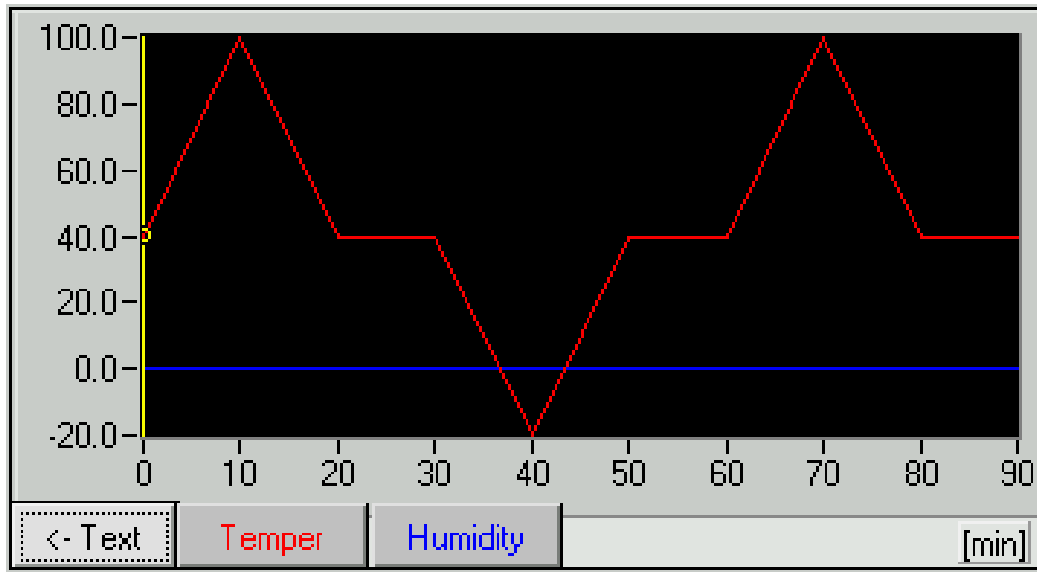


selecting the automatic symbol or when running a testcycle in the chamber the automatic screen is displayed. The automatic screen gives you detailed information about the actual running testcycle. They are shown as a graph and in text form.

If you could not see the graph a definite relation between the running programme and the corresponding file saved on harddisk is not possible. In this case you can see a file select button beneath the programme name. Here you can select the corresponding file by hand. The relation is not definite when CID-PRO was closed, if different subdirectories are used to save the testcycles or if the filenames are not unique within the first 15 characters.





The actual testcycle as a graph:



The yellow bar shows the actual position in the cycle. It moves through the program following the temperature index value. If there are loops in the programme they are symbolised as vertical lines. Reaching the end of a loop the yellow bar jumps back to the beginning. The push buttons for temper and humidity change the scaling to the range of the selected channel.

Pushbutton *text* changes the screen into the following:

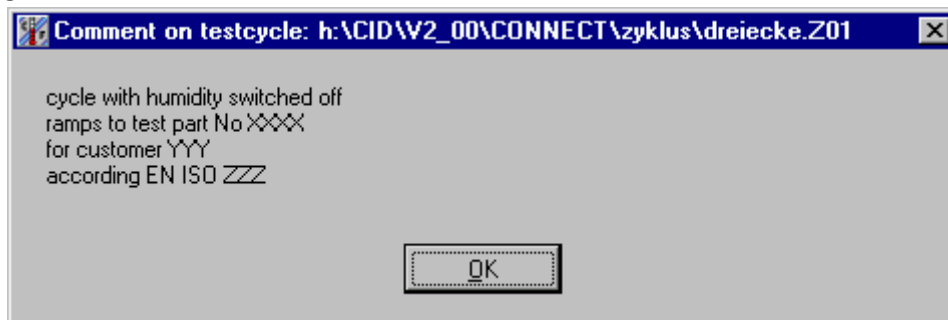
Program: no.	1		
Program: name 	dreiecke.Z01		
Line: no.	1		
Line: time left	2		[min]
Program: elapsed time	7		[min]
probable end of program	24.04.2001 14:59h		
remaining loops / level	no loops aktiv		
Temper set	83.0		
Humidity set	0.0		
Analog3 set			
Analog4 set			
interrupt			Graphic ->

Here all the data is displayed. If the cycle has been generated with **CID-PRO** you can see its name under 'Program: name'. the time for the „probable end of program“ is calculated with no regard to used wait-functions.

The rotating disc on the upper right hand corner indicates that the automatic mode is running. Changing the disc's colour to grey and stopping rotation indicates an interrupt of the programme. Pressing the button „continue“ makes the interrupted programme going on. On a programme interrupt the elapsed time of the programme is saved so that the programme continues at the same point it was interrupted.

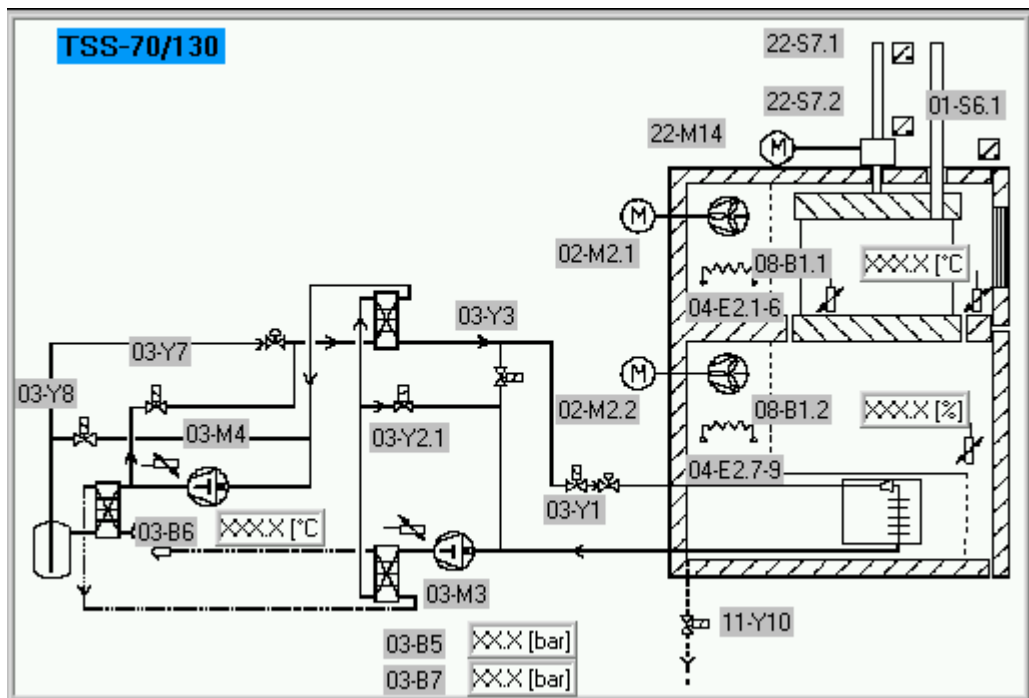
The book symbol beneath the programme name only appears when a comment about the programme is available.

example:





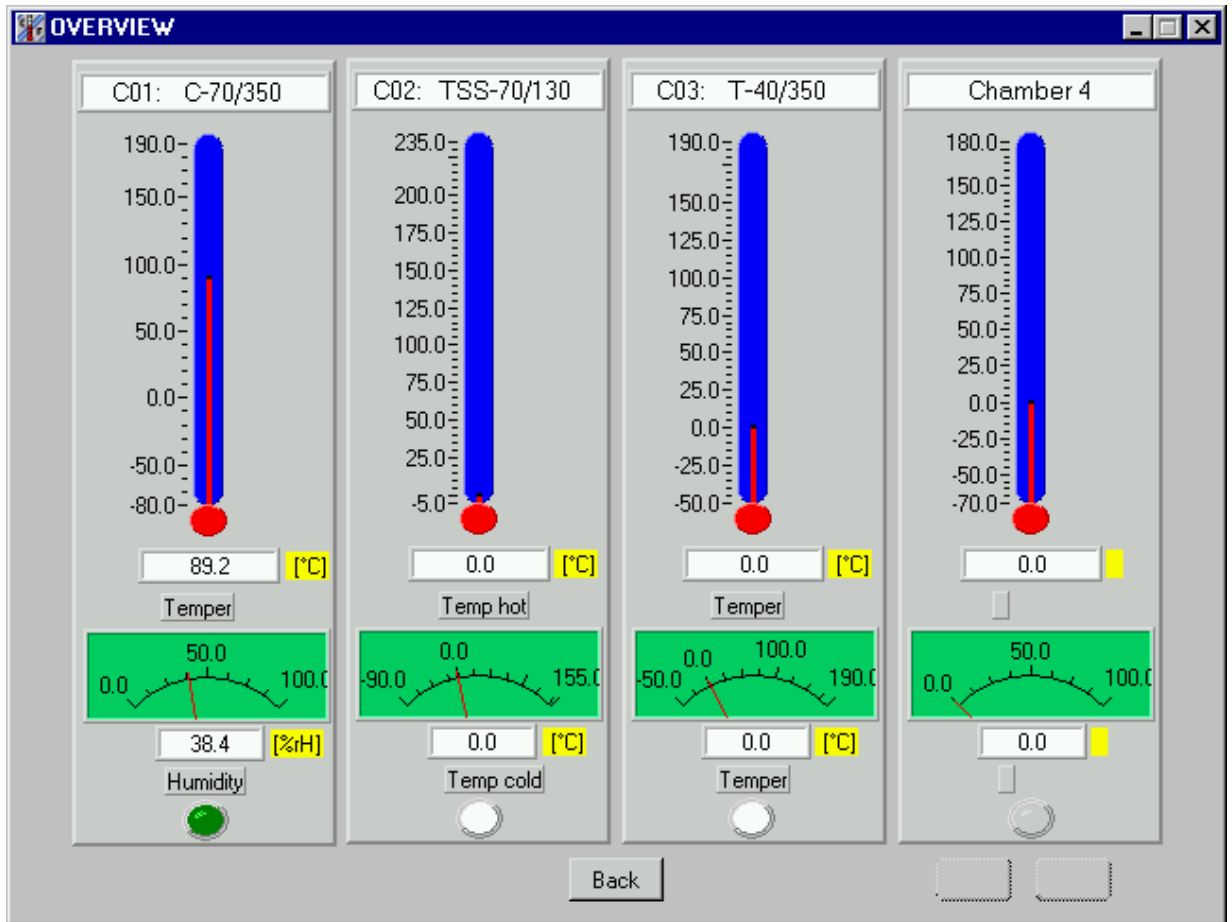
For some kind of chambers the service symbol is available. Selecting this you get detailed information about internals of the chamber.



In this sketchy piping diagram all important consumers and sensors of the chamber are shown. The colour of the parts is showing their state when the chamber is switched on.

This screen is useful for our technician or interested users to control working of the chamber and to localise errors.

## 4.2 Overview



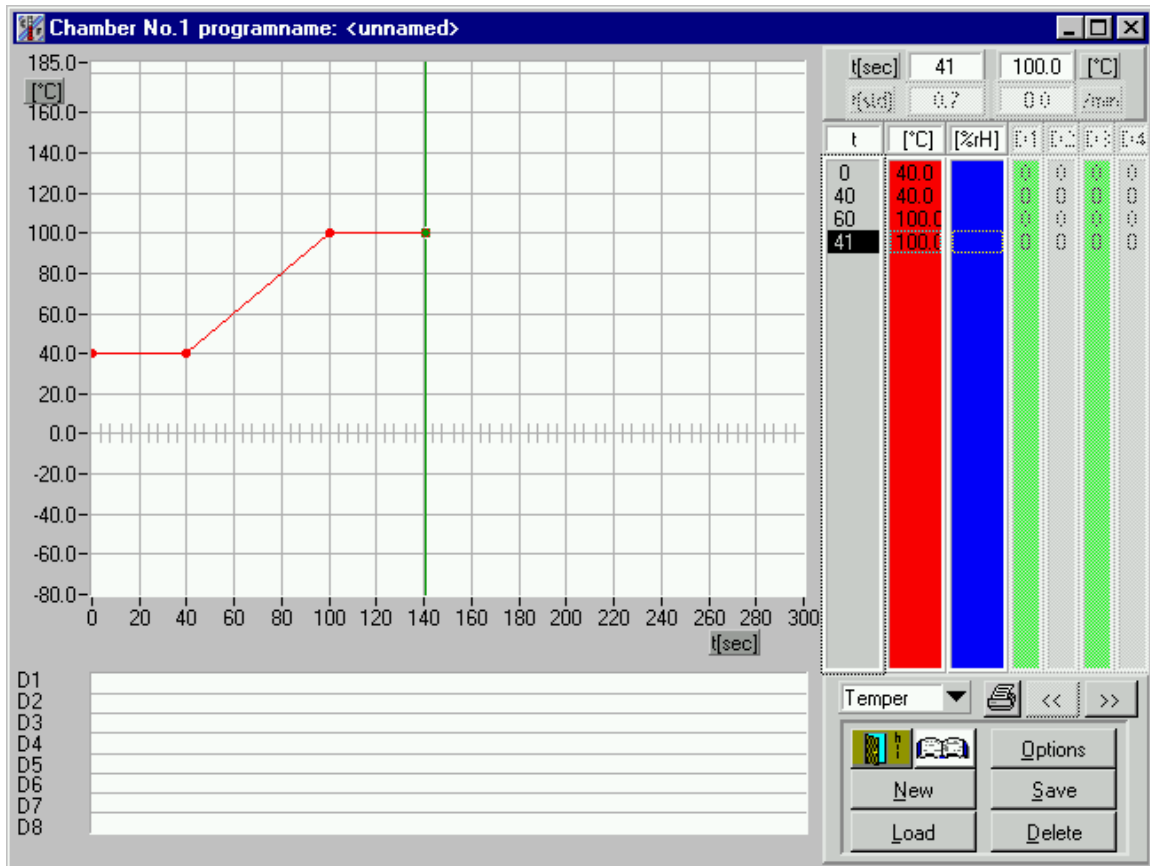
Here information on status of chambers are obtained. The display here indicates the present values (effective values), whether the chamber is switched on and/or whether there is a failure. The status is shown by the LED:

- GREEN: runs in manual or automatic mode
- WHITE: does not response
- RED: error
- DARKGRAY: chamber is stopped
- GREY: not available

With the keys: << >> you can display four further chambers, if they exist.

With the *return* button you go back to the status mask.

## 4.3 Editor

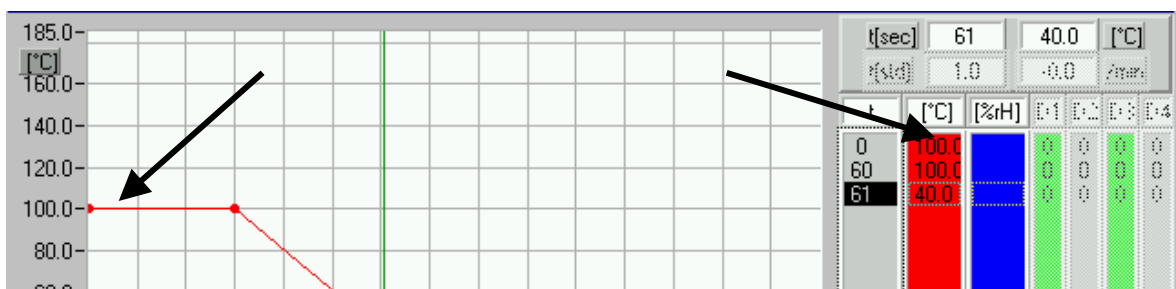


The editor allows you to create and to modify test cycles. To set the points you can place the desired point with the mouse or directly enter the values into the list using the keyboard.

### 4.3.1 Create cycles

#### 4.3.1.1 Input with the mouse

For that purpose click with the left-hand mouse button on the graphics and maintain the pressure. Then move the cursor to the value which shall be the beginning of your test cycle. Release the mouse button: a point marking this value appears in the graphics. Simultaneously, this value is entered into the list.



All points necessary for the test cycle can be marked in the same way. In order to reach the points more easily, the cursor is always 'captured' on defined points, this means that a grid related to the time axis is above the graphics for the orientation of the cursor.

*For a better understanding:* move the cursor slowly to and from the graphics and observe the displays for the cursor position in the



upper right-hand corner:

The cursor moves on a grid which you can define by yourself for each analogue channel under the button Options. The time is shown here simultaneously in hours and in minutes.

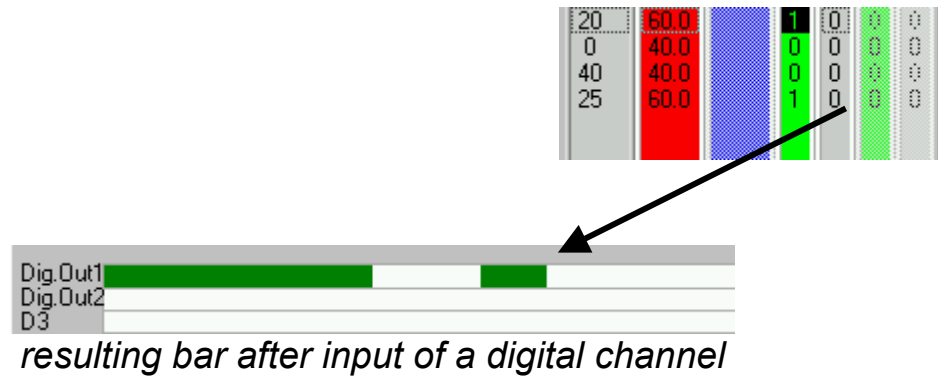
Also is shown the gradient of the actual analogue channel in units per minute. To change the analogue channel, click in the bottom right-hand corner in the display which shows the present analogue channel.



A new channel can be selected from the list which is now open. In order to prevent the chamber from exceeding its admissible range: if you try to move the cursor out of the admissible range, it will stay on the maximum acceptable value.

For the input of the digital channels, double click the mouse on the list of the channels 1-4 or 5-8 to be modified and change the values in the list of the digital channels from 0 to 1 or inversely. To change the display 1-4 or 5-8, click onto one of the buttons '<</'>>'.

Simultaneously, a bar representing the status of the channel, is shown in the graphics on the bottom. This bar disappears if you modify the values from 1 to 0: the channel is switched off for the period given in this line.



#### 4.3.1.2 Input with the keyboard

The **'Insert'** key allows you to insert a new line in the list. This line comprises the values of the previous line, except for the time which is '0.0' after this insertion. With 'ENTER' or with a double click with the left-hand mouse button, you can modify it. For this purpose, the black bar must be in the time list and underline the time to be modified. If these conditions are met, a window with the old value appears: you can now modify it or enter a new value. Take over this value with OK and the graphics as well as the list are up-dated. With 'Cancel', this modification has no effect and the window is closed again.

If you press the **'Del'** key, the presently active line in the list is deleted.

As a security measure, you are asked to confirm this action.

When you proceed to an input via the keyboard, the time scale in the graphics is automatically adjusted to the maximum value in the list.

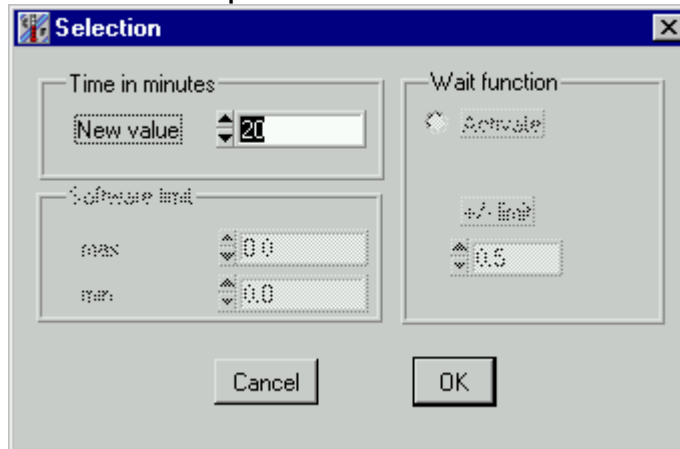
#### 4.3.1.3 Modify parameters

You can modify any parameter in the columns: click the left-hand mouse button or move the bar with the arrow keys to the parameter to underline it with black thus activating the parameter to be modified.

t	[°C]	D1	D2	D3	D4
0	80.0	0	0	0	0
30	80.0	1	0	0	0
20	20.0	1	0	0	0
10	20.0	0	0	0	0
10	60.0	1	0	0	0

To change the active column by keyboard use the '**Tab**' key an the '**Shift + Tab**' combination.

A double click or ENTER opens a window:



You can now enter the new parameter (in this case a new time in minutes). Confirm your modification with OK. The new parameter is taken over in the list, the graph is updated if necessary.

#### 4.3.1.4 Wait function:

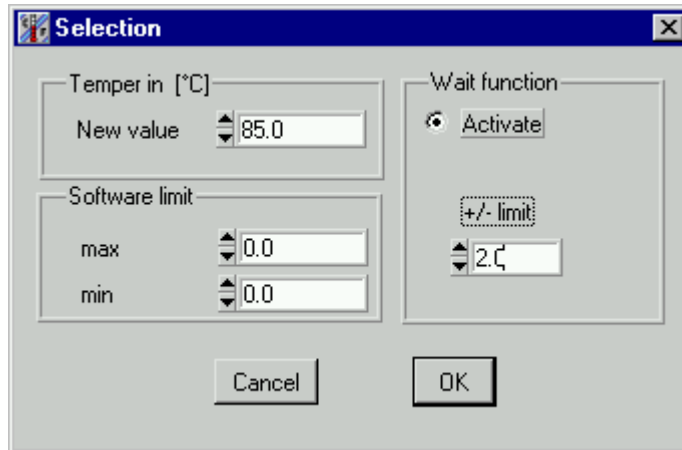
If you want to assign a wait function to an analogue channel for a defined value, proceed as if you wanted to change this value: double click with the mouse on the value in the column of the analogue channel or press ENTER on the desired line.

The already known window opens: '*Selection*'

Here the wait function can be activated by setting the point for it. Setting the wait function, you can also give the range of tolerance allowed for this value so that the programme continues to run. The wait function lets the control wait once the line has been processed, until the effective value reaches the tolerance of the analogue channel. Then only, the next line will be processed. This means a tolerance of 0.0 blocks the programme because this difference could not be smaller.

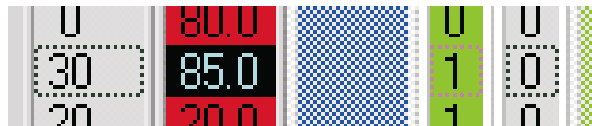
For temperature channel a tolerance of about 1°C and for the humidity from 3 to 5 % r.H. is suitable in most cases.





*Wait function with a tolerance of 2.0 units*

The new value is taken over after confirmation with OK. If the wait function is activated, the colour of this value changes for light blue:



***A wait function can be assigned to an analogue channel for each line.***

If you double click on one of the text windows comprising the unit of the list or the designation 'D1' or a similar topic, a window opens for a short time to indicate the selected channel. You can thus always check which values are currently displayed.

#### 4.3.1.5 Software limits

In the window: 'Selection' you can put in the range for the parameter. If the actual value of this parameter is running out of range an error occurs and the programme stops. You can put in the limits of a channel in any line you want. These software limits are transferred to the controller when starting the programme and are valid during the programme. When the programme is finished those limits are replaced by the limits which were valid before the programme has started. (See section cap. 4.7.3 *test specimen protection* for more information)

In programmes created with earlier versions of CID-PRO the minimum and maximum limits are set to 0.0 . In this case the range of the channel is the same as the input range.

#### 4.3.2 Switch off a channel

You can switch off an analogue channel by setting the point on the lower limit or to 5 units above.

During the construction of the cycle this line is already visible. But if the display refreshes all lines under this limit will be invisible

#### 4.3.3 The buttons of the editor



*Display of the analogue channels:*

A list with the available analogue channels which can be programmed is opened. If one channel is selected then the inputs made from this selection are valid for this channel. The list shows a maximum of four analogue channels. If you change to a channel

which is not displayed in the upper list, the data are listed again in a new representation and this list comprises the current values of the selected channel.

#### 4.3.3.1 Back:

Ends the editor and goes back to the status mask.

#### 4.3.3.2 Comment:

An input box appears where you can put in a comment about the actual testcycle. The inputs in the textbox can be saved with OK – button or closed without changes with Cancel - button.

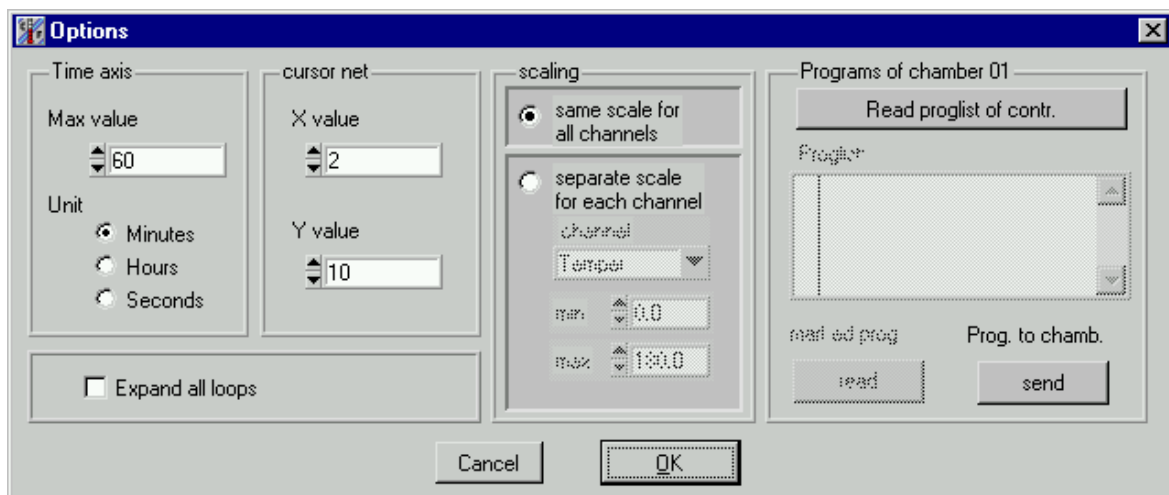
The comment about the testcycle can be displayed in the text-view of automatic mode in status screen. And this comment is printed in the programme list.

#### 4.3.3.3 Options:

You can adjust here manually the time scale and unit. The grid for the cursor when using graphical input. This makes it easier to match desired points with the mouse.

And now with this version it is possible to read back programmes already saved in the chamber or to send some programmes to special numbers in the controller. This option is only available with controllers having software version 1-62 or higher.

In addition you can choose two different ways of scaling the axis.



Enter here the new time axis and its unit. If you modify the unit compared to your previous setting, **CID-PRO** tries to convert the old times into the new unit, so far, i.e. from minutes into hours, full hours (each 60 minutes) have been entered. If a conversion is possible you can carry it out after the security interrogation; the same is valid

for the conversion from hours into minutes: in this case, a conversion is always possible.

When using time base 'seconds' lines with values below 5 seconds should not be used, because the controller could not run faster programmes correctly

The precision of the grid can be defined here, each one independent from the other. ***These values are valid for the analogue channel which is currently active.***

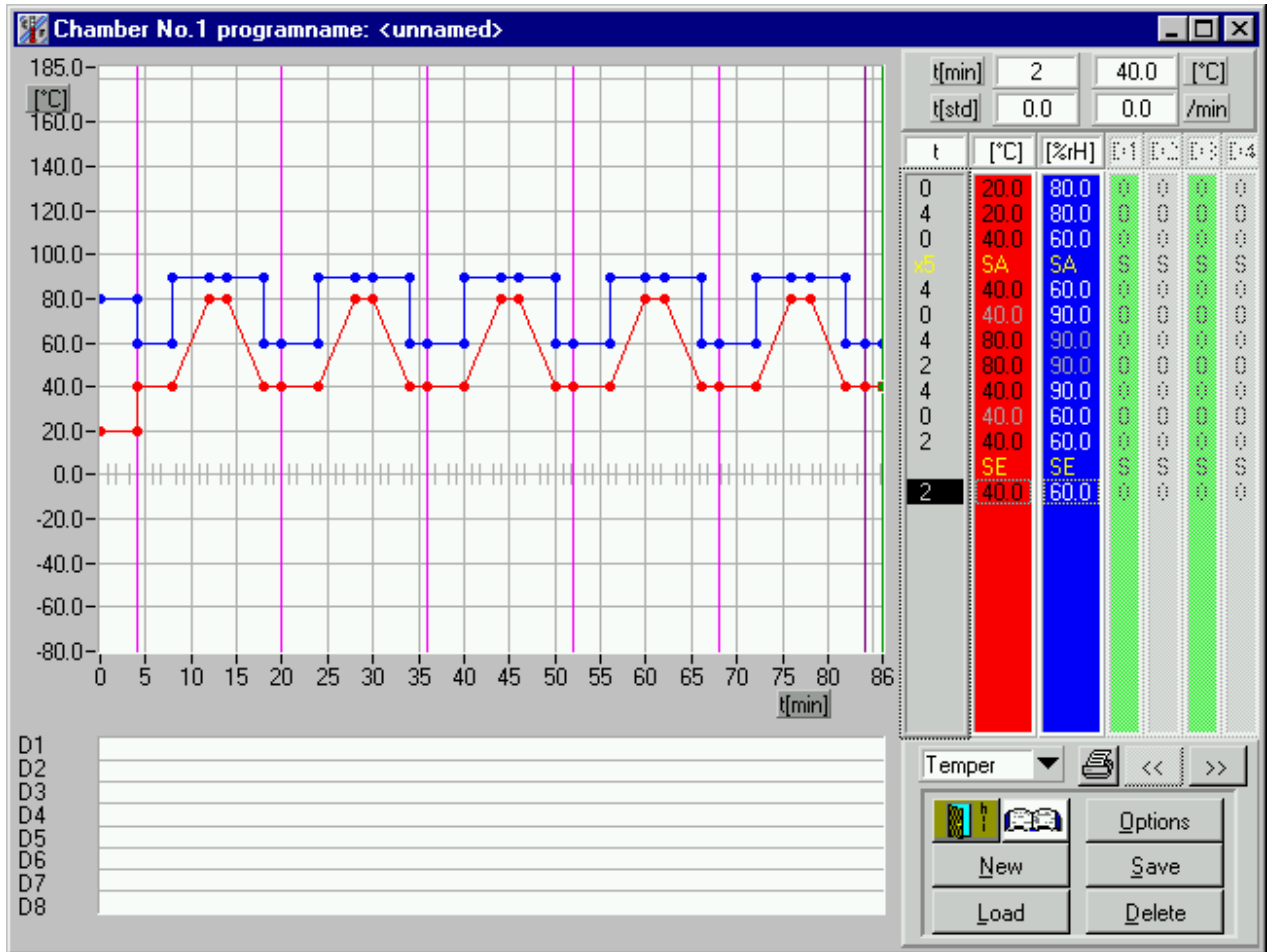
If the option same scale for each channel is selected, every channel is drawn in one scale with a range from the lowest to the highest values over all channels.

The second way of scaling the axis is to choose a separate range for each channel. If you change the active the scale of the axis switches to the range of the chosen channel. With this option it is possible to get the maximum resolution for a channel.

Option expand all loops:

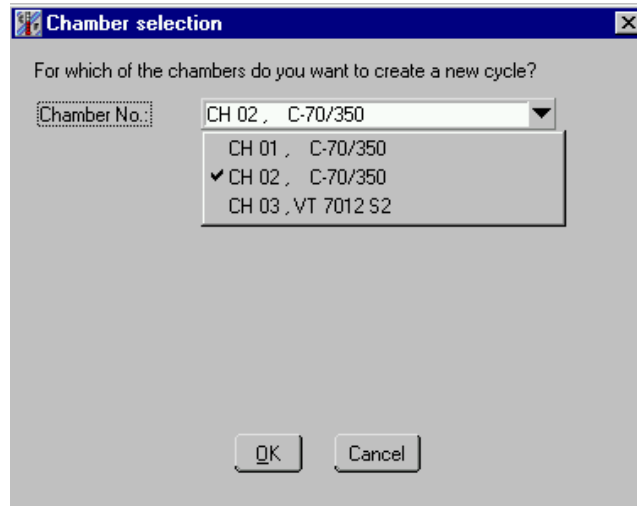
 Expand all loops

If loops are used in a programme they are all displayed. By doing this the programme could be controlled especially in the area of the jump to the start of loop and after the loop. With this option switched off, only one cycle of a loop is displayed.



#### 4.3.3.4 New:

Here you can select the chamber to create a new programme for. All entered data will be lost after a security interrogation. The graphics and the list are deleted. The channel names match the selected chamber, a new data input can be made.



#### 4.3.3.5 Save:

A created programme can be saved here. A programme can be copied and thus made accessible for new chambers, it can be saved several times under new names and/or new suffixes. The standard folder for cycles is 'Cycle'. The directory can be changed.

#### **Remark:**

**Programmes created for one chamber can be saved with an other suffix (e.g. .z02) and then be used for other chambers. Because the order of digital channels and the ranges of analogue channel may differ, a message appears describing the changes.**

#### 4.3.3.6 Load:

Already created cycles can be loaded here. Select for that purpose the file containing the desired test cycle from the list and click onto 'LOAD'. In order to load a file from another chamber, change in the bottom part on the left side the suffix of the file names; Z01 => chamber 1, Z02 => chamber 2, etc. Once the cycle is loaded it can be edited, and saved again with the new parameters.

#### 4.3.3.7 Delete:

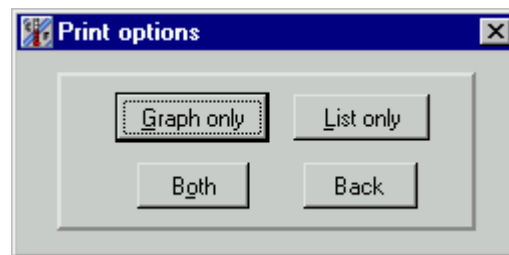
To remove cycles which are no longer needed you can select here several files at the same time. Confirm your selection with OK. They

will be definitely erased after confirming the *security interrogation* with OK !!

**BE CAREFUL WITH THE DELETE FUNCTION !!**  
**DELETED FILES ARE IRREVOCABLY LOST !!**

#### 4.3.3.8 Printer:

You can print here the created cycle and can proceed to a selection with the following option mask:



#### *Graphics only:*

Only the graphics of the analogue channels and of the digital channels will be printed here.

#### *List only:*

In a preview you can adapt the print of the cycle. The cycle is printed in text format.

#### *Both:*

The complete mask is printed.

#### *Back:*

Closes the window with the print options.


' << ' / ' >> ':

Press one of the buttons to change the display of the digital channels; as a standard setting, the channels 1 - 4 are active, after pressing this button, the list changes to the channels 5-8. If digital channels are available, they can be modified.

#### 4.3.4 Loop programming

To programme a loop, activate with the left-hand mouse button the line in which the loop shall start; this line will be the first line in the loop:

5	40.0	50.9	0
5	0.0	37.3	0
10	0.0	10.0	0
10	39.0	24.6	0

Actuate now the key  on your keyboard to insert the *beginning of the loop* in the line above:

5	40.0	50.9	0
x1	SA	SA	S
5	0.0	37.3	0
10	0.0	10.0	0
10	39.0	24.6	0

The 'x1' in the time column indicates that the loop will run once. In the graphics you can see as a checking measure a vertical line marking the beginning of the loop and in the same way after entering the end of the loop.

Set the *end of the loop* as follows:

activate with a click on the left mouse button the first line behind the loop; this line will not be repeated in the loop.

Actuate now the key  on your keyboard to set the end of the loop:

5	40.0	50.9	0
x1	SA	SA	S
5	0.0	37.3	0
10	0.0	10.0	0
10	39.0	24.6	0
15	40.0	46.6	0
x1	SE	SE	S
15	0.0	70.0	0

Remark: The beginning and end of a loop is always inserted in front of the active line. This means to programme an end of a loop at the end of the programme an additional line is needed to insert the end of the loop in front of it.

The loop has now been entirely entered. In order to change the number of loops, double click in the time column on the line marking the **beginning of the loop**. The new number of loops will be represented after the new input in the time column.

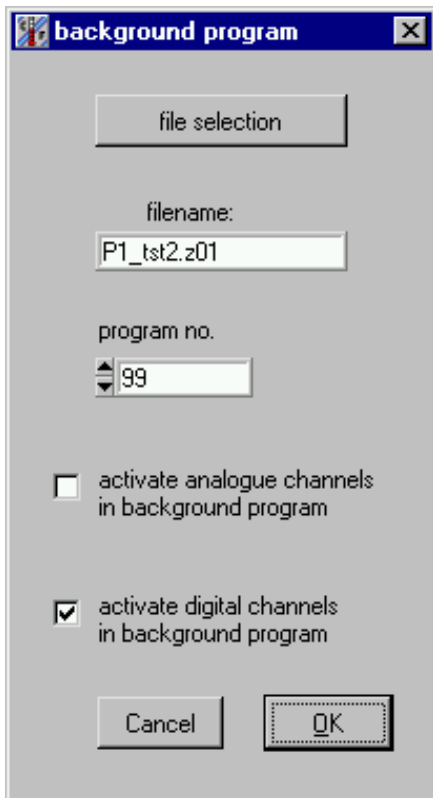
To cancel a loop, remove the beginning and the end of the loop with the 'Remove' key.

Maximum number of different loops: 20 !



#### 4.3.5 Background programmes

When using background programmes, the background programme must exist before the main programme can be created. To insert a call to a background programme activate the line in front of which the programme should be called. When pressing the 'F4' key now a special menu appears.



*menu for background programmes*

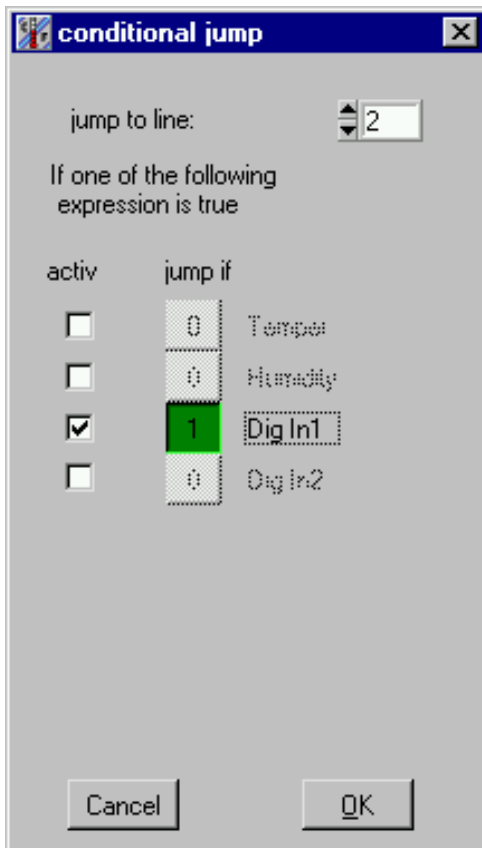
An Example for the use of background programmes is switching digital channels with high frequency ( e.g. 10sek) in a in a quiet long cycle (e.g. days).

select the name of the background programme and put in the number to store in the controller. Each the main and the background programme must get a different program number. If you send the main programme to the controller all used background programmes are sent, too. it is not possible to run overlapping background programmes. At the end off the main programme background programmes also stop. The status display in automatic mode always use the values of the main programme.

### 4.3.6 Conditional jump

with conditional jumps you can branch off a programme because off digital input signals.

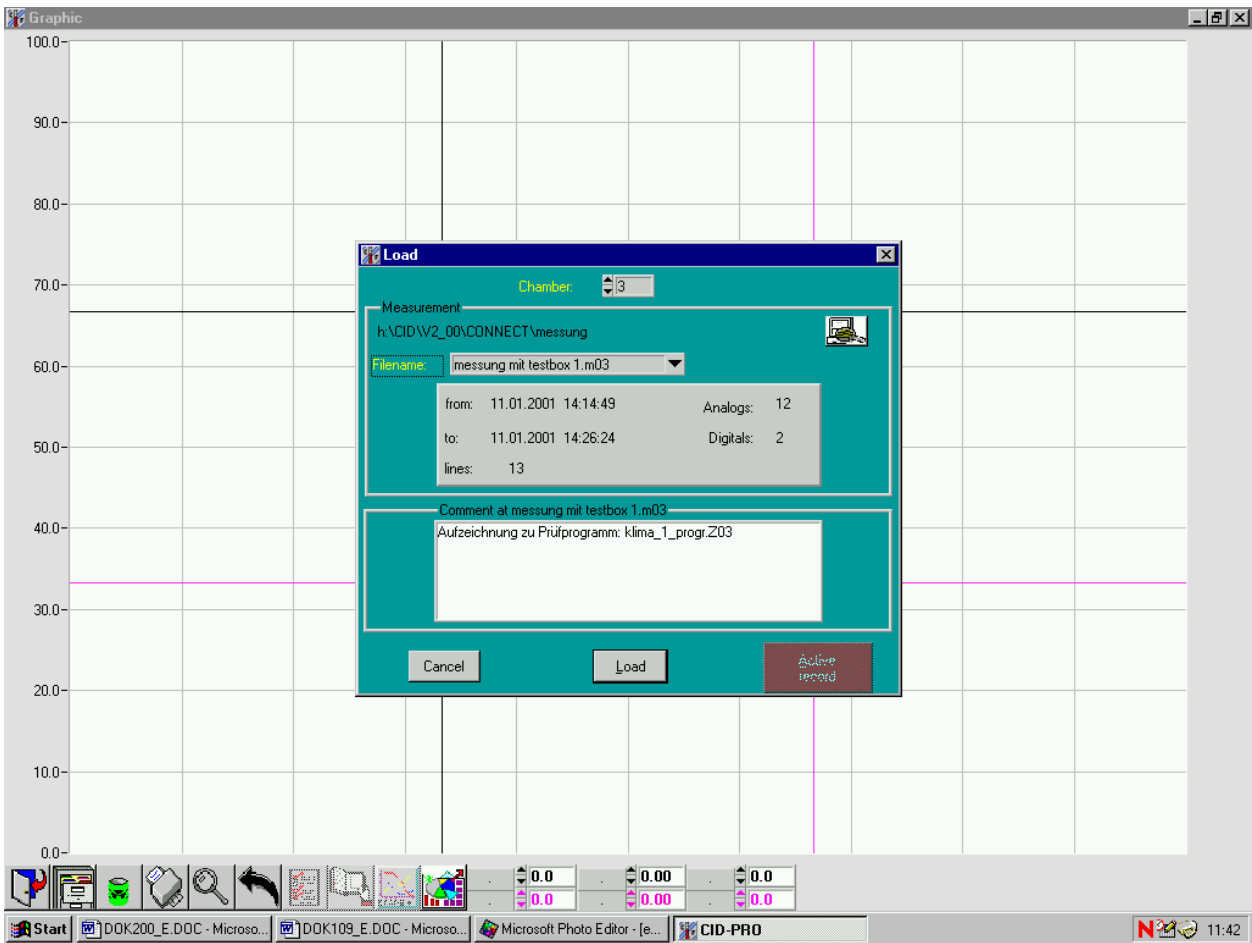
To insert a conditional jump activate the line in front of which the jump should take place. When pressing the 'F5' key now a special menu appears.



menu for conditional jump

when you change the target line that line is highlighted in the list. You can activate more than one condition to jump. If so they are connected via a logical OR. Furthermore you can select if the condition is true when the channel is '1' or '0'. Press the OK button to leave the window. It is important to now that the jump function is active during the whole time of the line after the jump line. It is not only a single branch but something like a Interrupt function. Please note that if the jump function is used in a loop the displayed loop count and loop level is not correct any more.

## 4.4 Graphics



With the graphic view you can represent graphically and analyse performed measurements. When you start the graphics, a pop-up window opens to load a graph.

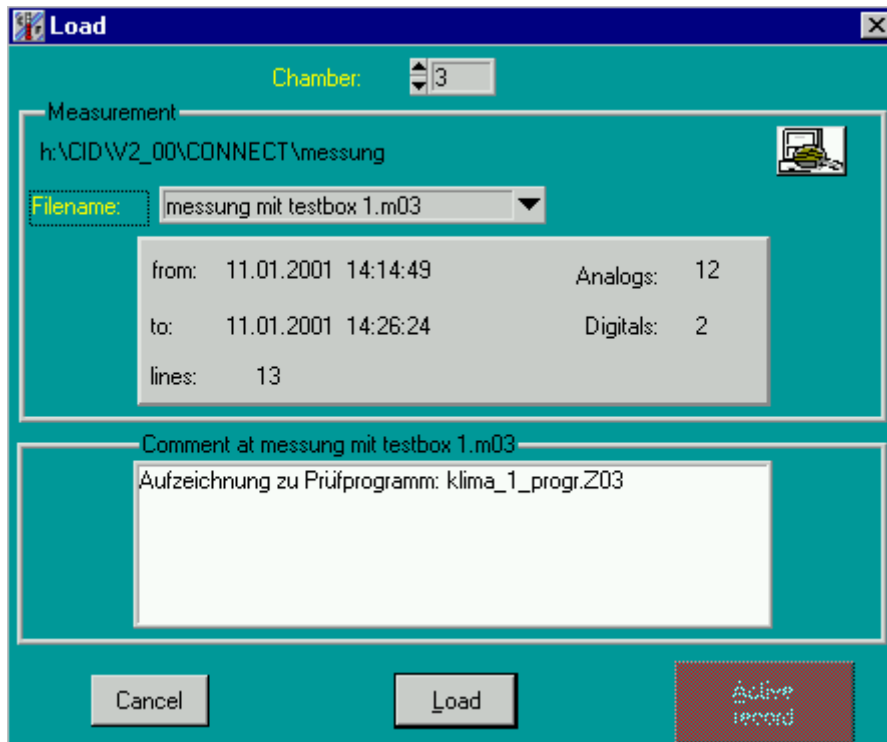
### 4.4.1 The buttons of the graphics



Ends the graphics. Goes back to the status mask.



Opens a window where all measurements can be loaded



You can see here data describing the measurements more in detail:

- Start/Stop time
- Number of analogue/digital channels
- Number of lines, meaning checking points
- Comment about the file

### *filename*

List of all files recorded with the chamber. If the file is selected with the cursor keys: 'up' / 'down' the comment describing the measurement more in detail appears at once. If the menu is clicked with the mouse, this opens a list in which the desired file can be selected.



Above the filename the actual folder for measurement is displayed. The folder can be changed using the button for directory selection. The standard folder is saved in the ini-file (see cap. 4.7.5 special configurations). The standard folder after a default installation is C:\cts\_soft\messung. When selecting a subdirectory all files in this directory are shown, this is only to find files easier. In this window only selection of the directory is possible.

## Chamber

If you change the number of the chamber, the list of the measurements changes. It then comprises all measurements for the selected chamber.

## Load

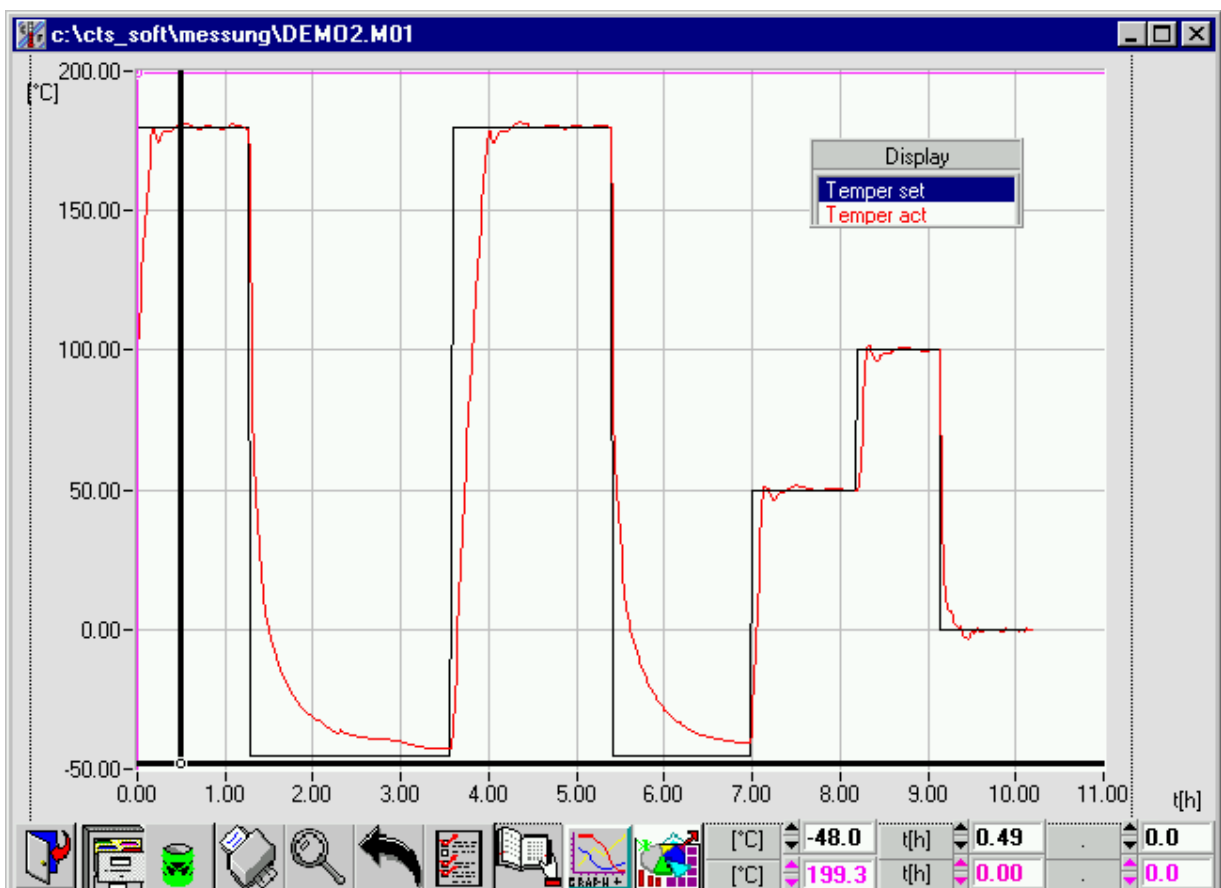
Now the file can be read-out with the 'LOAD' button. Once it has been completely read out (depending upon the size and the data, it can vary in time) the measurement with the *selected channels* is represented in the graphics.

## active record

If recording is active at this moment, it can be directly displayed. The button is visible and can be actuated.



The difference compared to the normal 'Load' function lies in the fact that this display with the measured data will be *updated*



*Example after loading a file.*

Upon the first start of the graphics you had to define a standard for the active chamber, you are immediately in the options menu; select there

the curves to be displayed ! Save your selection with '*as standard*' so that your setting can be used for further displays.

If you could not see a diagram after loading a graphic this can have one of the following reasons:

- The selected file is empty or new (there are no lines in it yet)
- If there are no channel names in the display pop-up then probably no channels are selected in the configuration of the graph or the configuration was not saved as default so that the settings are lost after starting the graphic again.



Measurements which are no longer needed can be erased here.

If you select one or several measurements and confirm the security interrogation, the selected files will be ***irrevocably*** erased.



The presently displayed measurement will be printed on the connected printer. Your written comment will appear at the bottom of the hard copy.

Before printing you can still define options:

In the upper part of the window you can select the printer. All printers installed on the PC are available.

Some specific settings are possible:

*Paper width and height:*

Modification of the present setting for the utilised paper format in mm

*X/Y offset:*

Indicates the distance of the graphics in mm from the left side/bottom side.

*Force black & white:*

*To send a measurement by fax this setting is useful, because grayscale does not work well.*

**Bitmap printing:**

*Use this if you have problems with printing some printer drivers make the system crash especially with PCs having little resources*



Zoom in on the zone between both cursors. The zone can be either directly addressed with the cursor or entered via keyboard at the bottom of the screen. Both left-hand figure fields are related to the left-side scale and both right-ones to the right-side scale. The colours correspond to the zones of the two cursors.



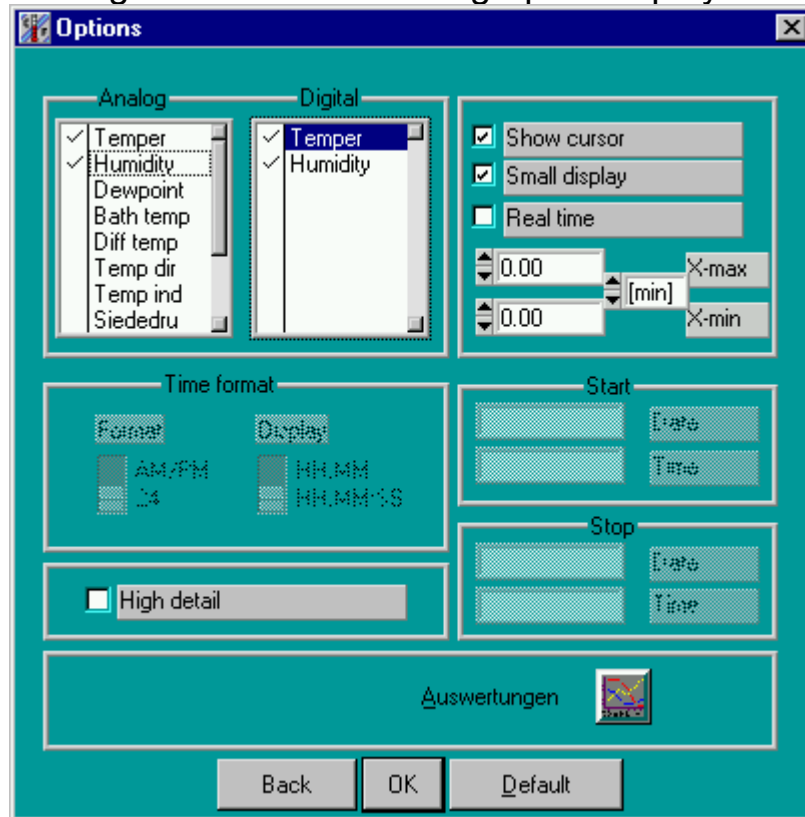
If the time axis displayed in real time, the position of the cursor couldn't set in time range, because in this case the time is displayed without the date. So you had to set the cursor by moving the mouse on the screen.



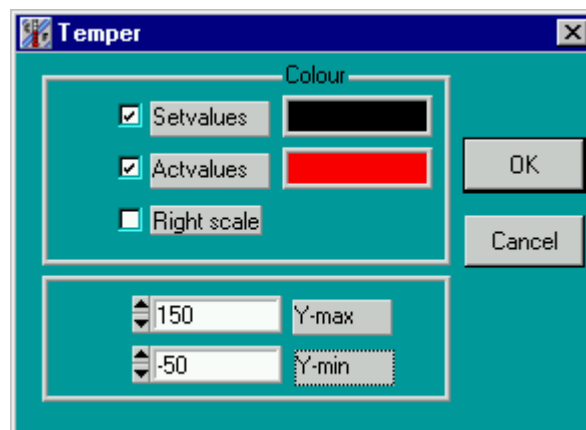
Undo the zoom function. The graph is completely visible again.



Open the configuration mask for the graphic display .



Click to select the analogue/digital channels which you want to see in the graphics. Clicking opens further possibilities of selection in the individual mask:

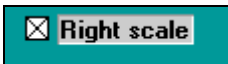


*Menu after selection of a analogue channel*

If you select the index/effective values, they are then displayed with the colour on the right-hand side window. If you maintain the pressure on the left-hand side mouse button, you can open a selection for all available colours (depending upon the setting of the Windows system). To select your desired colour move the mouse

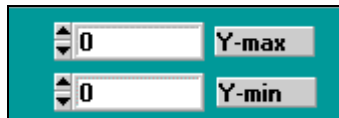


onto the colour fields. When you release the mouse button, the present colour will take effect.



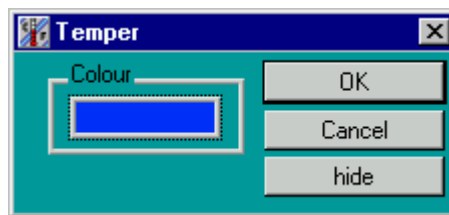
If you activate **Right scale** the scale will be represented on the right side of the graphics (left side is standard). The advantage is that with several curves, you can find at a glance the correct scale on the right or left-hand side. It is very useful when printing test cycles.

If you want to consider a precise zone of your curve you can enter this zone here.



The maximum value must be higher than the minimum one (!). If this is not the case, the input is ignored and the zone is automatically adapted on the curve.

If you click on a digital channel, when available, the window design changes:

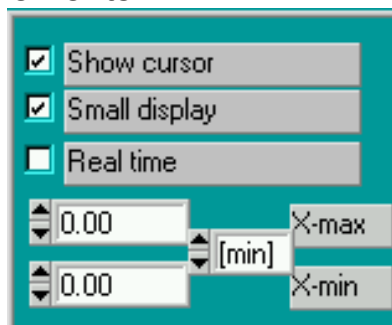


*View after clicking a digital channel*

Only one colour can be selected here, whether the channel is displayed (OK) or not (hide).

Colour selection: ditto.

In the option window there are further possibilities to adapt the graphics to your requirements:

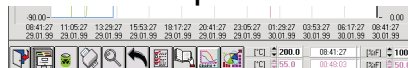


You can here switch off the cursor; this is recommended if you print graphics with several curves, you can switch off the small display and if you want to define the time scale in a fixed way, set the parameters for X-max. and X-min. The present values are displayed

here; if the graphics are to be always automatically updated, take care, when you leave the option mask with OK or with "as standard" that the same values or 0 are in both fields !

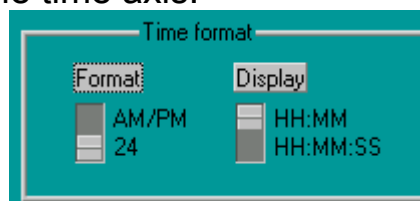


Do you check the real time box, you can see the time axis with the real start time and date to the stop time and date.



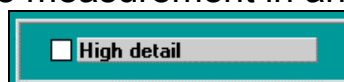
Enter here the time and date for the zone in which you want to see the adjustment. Take attention of the format the time/date you enter. If it is not in the format the display shows **CID-PRO** ignores the input.

To change the format of the display change the switches in the case you want to see on the time axis:



When you change the value of the switches you can immediately see the changes in the time axis.

You can display the measurement in an high detail display: to do so



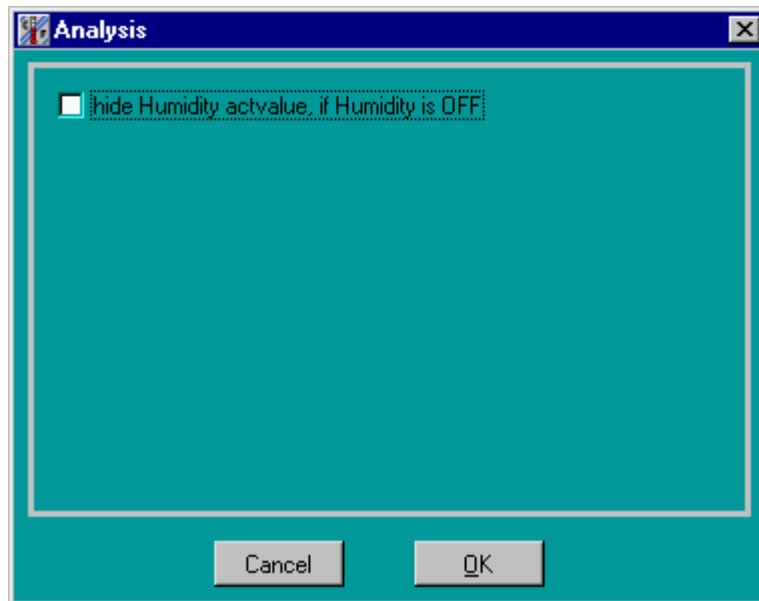
set the cross here:

Confirm the changes with 'OK' or 'Default' and you can see the measurement in an detail with 0.1 units per channel.

The evaluation symbol



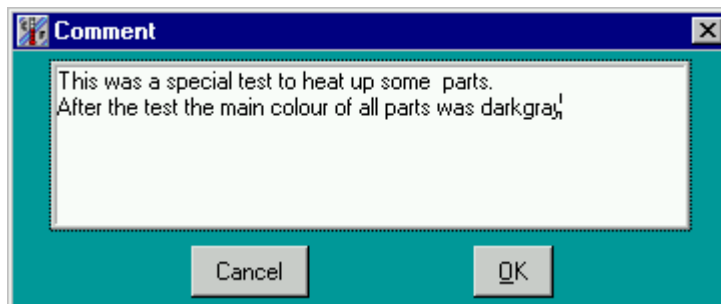
opens a screen with special functions:



In the moment only one checkbox is available.  
This is to make the curve of the actual humidity invisible when humidity is switched off.



Open the comment belonging to the graphics to modify it.



*Example of a comment*

You can modify here the comment as you want. All functions of a text editor are available here.

Maximum comment length: 255 characters !

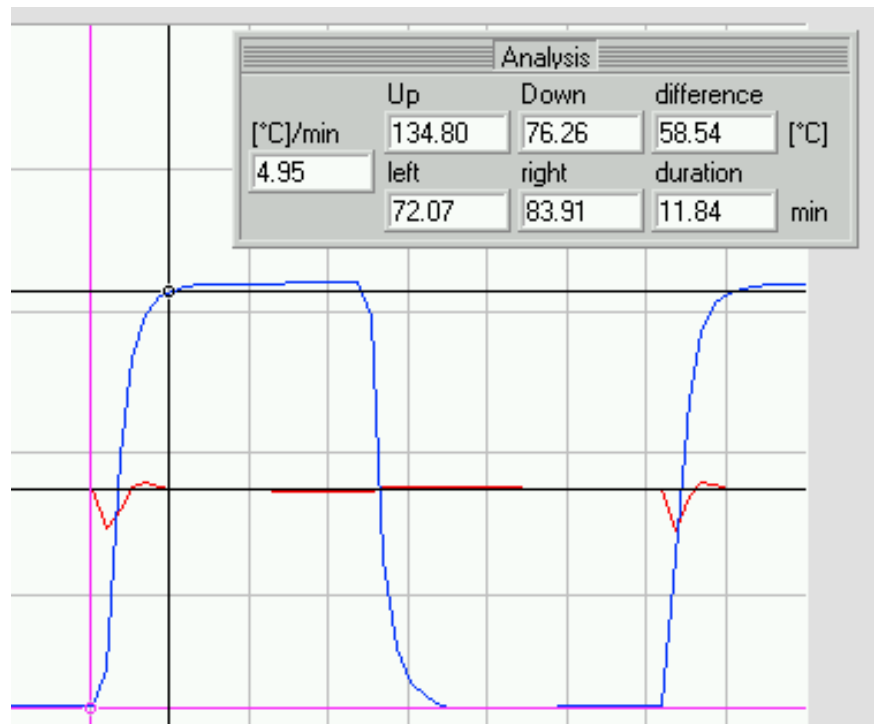
In the small display on the screen you can see the presently represented curves with their assigned colours. If you double click on one of the analogue channels the scale on the right/left side of the graphics changes (depending upon the setting under options) for the assigned colour and unit as well as for the zone which you have defined or for the automatic one.



*Example of a selection of the effective values for the temperature*



Open a small window ANALYSIS



The values 'up' and 'down' always refer to the left-hand scale starting from both cursors. In the left text field you can see the calculated slope of the curve given in the left-side scale. The display of difference and duration helps you to measure the curves. To close the window, click another time on the button.



Move the cursor on the icon and hold the left-hand mouse button. In the opened menu you can select either the 'Convert-to-Excel program' or 'Copy to clipboard'. By select the item the 'Convert-to-Excel program' starts (see Interface to EXCEL). The other item copies the actual window in the clipboard. (see Interface to WINWORD).

## 4.5 Auto

The screenshot shows a software window titled 'Automatic'. It contains several input fields and buttons. On the left side, there are fields for 'Prog no.' (set to 1), 'Prog name' (set to 'schock\_p.Z01'), 'Starting time' (set to 15:54), 'Starting date' (set to 27.04.2001), 'line No.' (set to 0), and 'offset' (set to 0). On the right side, there are buttons for 'Send', 'Recorder', and 'Start'. At the bottom, there is a 'Chamber' dropdown menu set to 1 and a 'Back' button.

The created cycles can be transmitted here to the selected chamber. With the select button you can select a cycle in a file select menu and in the field 'Prog. No.' the number under which the cycle will be saved for this chamber. The data is transmitted with 'SEND'. If this operation has been successful, it is possible to put in a starting time and a cycle offset.

*Enter starting time:*

This close-up shows two input fields. The first is labeled 'Starting time:' and contains the value '15:54'. The second is labeled 'Starting date:' and contains the value '27.04.2001'.

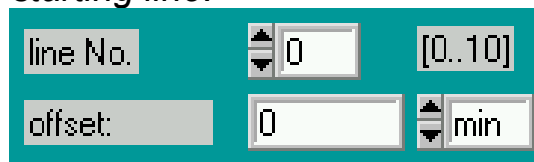
*Example of an entry for starting time/date*

Use the keyboard for entering the time/date: you can enter here any acceptable date within a year.

**Observe here precisely the present time of your system !**

Give the starting time in this format: **hh:minmin** If you do not keep this format, the input is ignored. If you enter here a time lying before the present time, meaning a past time, the present time appears (change therefore the date first!) For entering the date you need only the format **DD.MM !!** **CID-PRO** completes then automatically the entry. If you have entered here a past date, the year is increased by '1' ! in this case the date becomes '27-04-2002'.

*Input of cycle offset or starting line:*



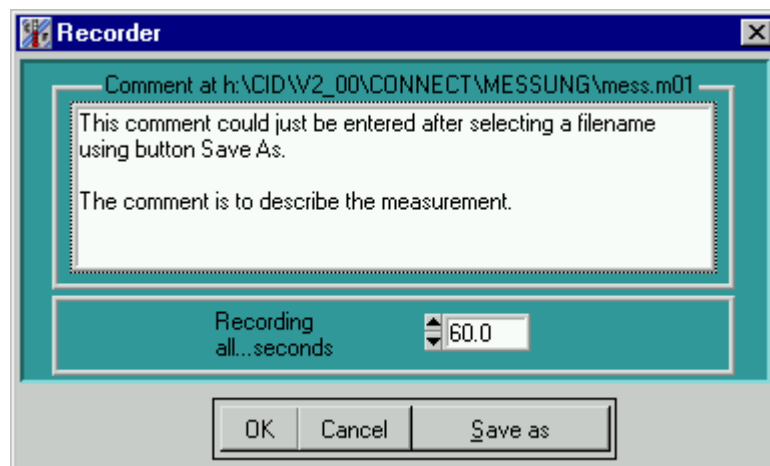
The image shows a software interface with two input fields. The first field is labeled 'line No.' and contains the value '0'. To its right, a range '[0..10]' is displayed. The second field is labeled 'offset:' and contains the value '0'. To its right, a unit 'min' is displayed. Both fields have small up/down arrows next to them, indicating they are spinners.

Example of a starting line

The input field starting line makes it possible to skip some line at the beginning of a cycle. The valid range of the input is shown behind the field and depends on the cycle length. When entering a starting time the offset value also changes. This is the calculated time which is skipped. Loops and wait function are not considered in this calculation. If you want to skip parts of a loop then you must put in the offset time directly. In the field starting time a „-1“ is shown, because there is no reference to a line.

Without any input the actual time and date is displayed by default.

You can start the automatic work with the 'START' button. The chamber starts the cycle at the given time ! As an option you can start a recording process with the recorder: click on the 'RECORDER' button to open a comment window.



The image shows a dialog box titled 'Recorder'. At the top, it says 'Comment at h:\CID\V2\_00\CONNECT\MESSUNG\mess.m01'. Below this is a text area containing the text: 'This comment could just be entered after selecting a filename using button Save As.' and 'The comment is to describe the measurement.' At the bottom of the dialog, there is a field labeled 'Recording all...seconds' with a value of '60.0'. Below this field are three buttons: 'OK', 'Cancel', and 'Save as'.

With 'save under' select the name of the file under which this measurement is to be saved. Enter here a comment describing the measurement more in details so that you can later find this measurement more easily.

The recording cycle you put in here is responsible for the amount of data you get in your measurefile. A programme running one week a recording every 5 minutes is enough usually. In this case put in 300 as the recording cycle (Unit is always seconds!).

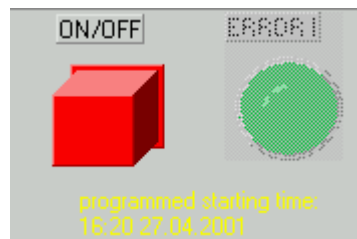
### *Append measurement at existing file:*

To append at an existing file you had to select the file and to confirm that you want to overwrite the file. Now you can select if **CID-PRO** had to append or to create a new file.

After the confirmation of the comment window with 'OK' and 'OK' for the automatic window, the background in the status bar in the status mask changes to purple. This shows that a recording runs for this chamber.



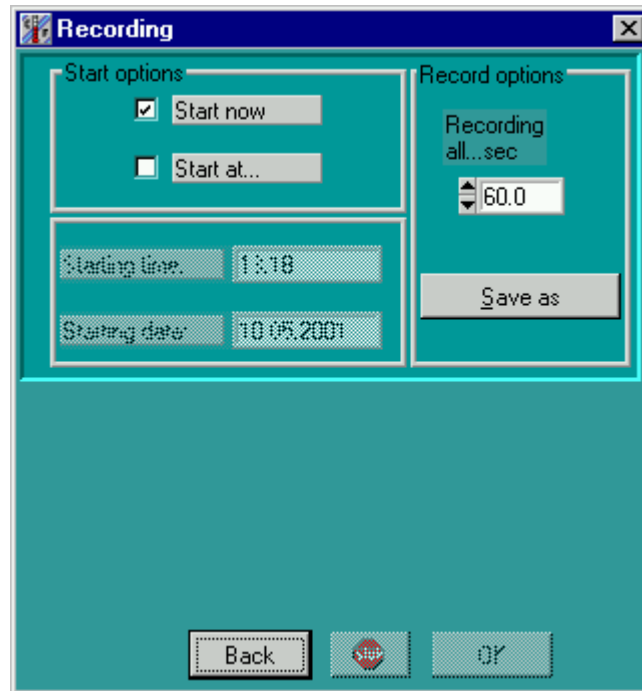
The given starting time is shown in the status mask near the ON/OFF button.



The recording of the automatic mode switches off automatically at the end of the cycle. On the contrary: the *manual recording*, see below.



## 4.6 Recording



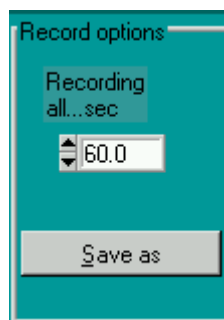
*Window for starting a recording*

The menu recording is to activate the continuous writing of measurement into a file.

First select the interval of the recording and afterwards a filename:

### *Record spacing:*

In order to set the spaces between the check points, you can give under the *Record options*:



the time in seconds which must be at least between the check points. The selection of the record spacing directly affects the amount of data in the measure file. The choice of a suitable recording interval depends on expected curves and on the planned duration of the measurement. For long but almost constant tests a recording interval from 3 to 5 minutes (180-300 sec.) is sufficient. Short tests with many changes require recording intervals of 30 – 120 sec. Each recording produce about 80 bytes of data.

The minimum value depends upon the interrogation cycle in the configuration.

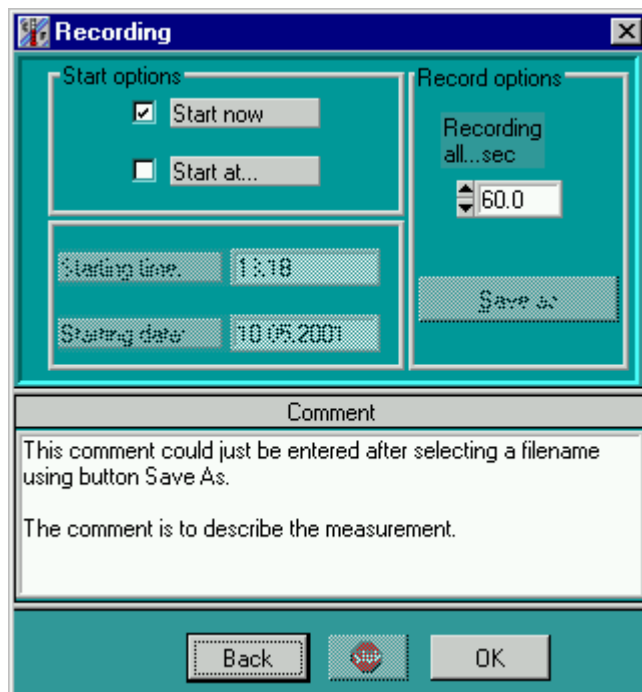
This space is valid only for this chamber. If you start a further recording for another chamber, you can give there an other record spacing value.

**Filename:**

To start the recording you must select a file using the „Save as“ button. A fileselect window appears to select a file or to enter a new filename. It is also possible to change the directory.

To append a recording to an existing one select the existing one and confirm to delete the file. Then another popup appears. Now select to attach measuring to the file.

After selecting an existing or a new file you can see a comment box. Here you can put in a detailed description of the recording.



To accept this settings and start the recording press OK button.

An active recording for a chamber is displayed in the status bar of status screen. The yellow background of the chamber symbol signs a active recording started in manual mode.



*active recording for C01 und C04*

This recording continues as long as it is stopped by the user. It is mainly used running the chamber in manual mode or when it is not possible to use the recorder in the automatic menu.

*Stop the recording:*

Contrary to the automatic recorder, this recording does not Stop automatically. It ends using the „STOP“ button in the recording mask. (also automatic recordings can be stopped in this way)



*Enter starting time:*

*Example of an entry for starting time/date*

You can programme a delayed start of the recording. Use the keyboard for entering the time/date: you can enter here any acceptable date within a year.

**Observe here the present time of your system**

Give the starting time in this format: hh:minmin

If you do not keep this format, the input is ignored.

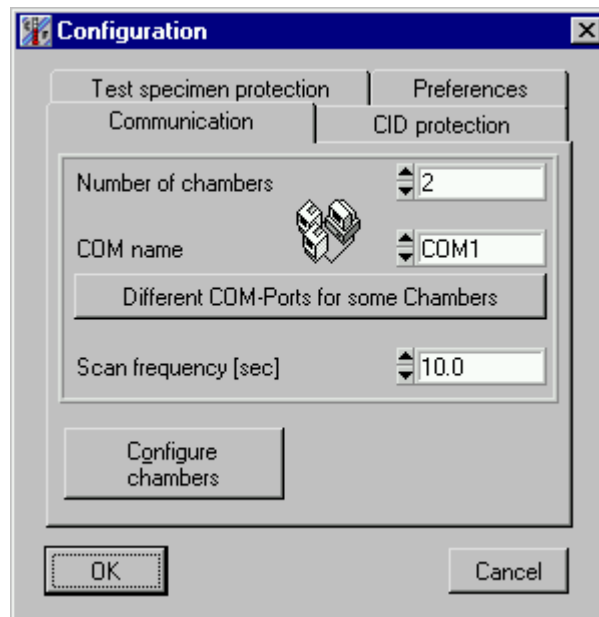
If you enter a time lying in the past, the present time appears (therefore change the date first!)

For entering the date you need only the format DD.MM !! If you have entered a past date, the year is increased by ,1'!

In this case the date becomes ,10.05.2002'.

## 4.7 Config

In the configuration mask the four folders are used to configure general functions of the programme.



### 4.7.1 Communication

In order to communicate with your chambers you need a 9 pin serial cable which is connected in the standard configuration to COM2. If this connection is already assigned, you must enter this field in 'COM address'. The configuration for the communication is defined as follows:

- Baud rate: 19200
- Data bits: 8
- Stop bits: 1
- Parity: odd

With the software a cable for communication over RS232 is delivered. Please see the documentation of the chamber to get the pinning of the cable.

#### *Number of chambers:*

Set here the number of chambers to be managed by **CID-PRO**. If you do not want give your chambers consecutive numbers, you must enter the number of the highest chamber present.

**COM name:**

The chambers are connected to this PC port. Modify it if necessary in accordance to your connection.

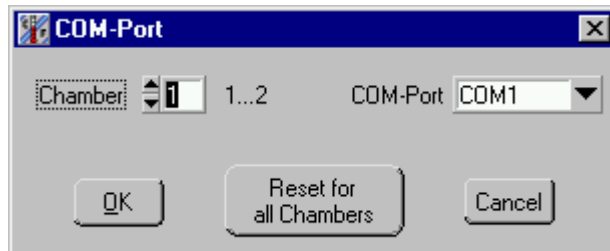
**Different COM-Ports for some Chambers:**

Different COM-Port can be used to connect chambers to the PC. So you can connect two chambers using only RS-232 connections.

Example: Chamber 1 is connected to COM 1, Chamber2 is connected to COM2

In this case you configure the ports with this button.

For the example above select COM1 as COM-Name in the configuration menu. Switch the COM-port to COM2 for chamber 2 and confirm your input with the OK-Button.



You can step through the chambers to control the selected COM-ports. To annul wrong settings use button "Reset for all Chambers". All COM-Ports are set to the one in the configuration menu in this case.

Remember the maximum cable length for a RS232 connection is 15m.

### *Sampling frequency:*

This frequency indicates how often or in which time spaces the current values/status of a single chamber is interrogated. The minimum frequency is 1.5 seconds/chamber.

### *Example:*

*If you have connected 3 chambers, you can give at least  
 $3 * 1.5 \text{ seconds} = 4.5 \text{ seconds}$  for the frequency.*


This parameter is automatically monitored and if necessary limited by **CID-PRO**. The sampling frequency is the minimum recording frequency for measurements. Recording always happens in a multiple of the sampling frequency.

### **RECOMMENDATION:**

If the sampling frequency is close to the limit of 1.5 sec./chamber, your system may slow down!

A sampling frequency of 10sec. Is a good choice in most cases.

#### 4.7.1.1 *Configure chambers*

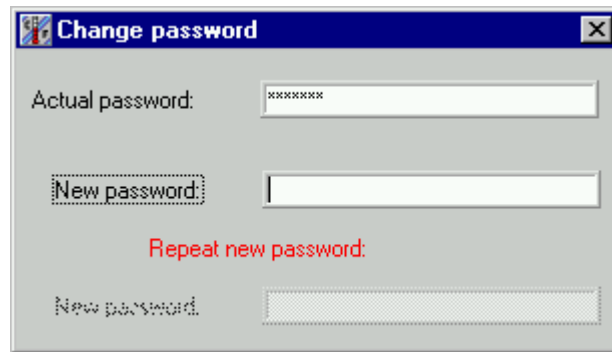
With the button  you can read in a new chamber configuration. This is necessary if you have assigned a new address to a chamber, if you have received a new chamber or if you have replaced a chamber. After a security interrogation, you can ask for the new configurations of the chambers.

***For this purposes, all chambers must be switched on !***

*Reading in the new configuration takes about one minute per chamber !*

### 4.7.2 CID Protection

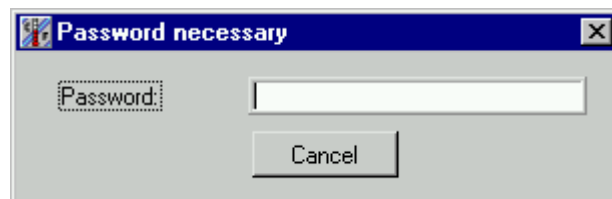
Here you can protect **CID-PRO** against unauthorised access: your password for the first programme start is: 'cid-pro'. Take great care of the spelling (capital/small letters). You can change it in the configuration to your own password: click on the button: change password and enter the actual password in the text field 'Actual password'.



If this password is correct, you can enter a new password: when you enter your password you see no letters ! To be sure that you did not make any typing errors you need to enter your password twice. The new password is only taken over if both entries are identical.

Click in the small box near 'Password protection' to activate the password protection:  Activate password security:

To prevent unauthorised access to this function, you must enter your password here:



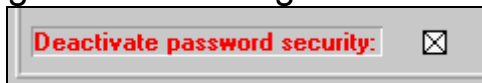
If the password is correct, it prevents any writing access from the user to any chamber or any file of **CID-PRO**.

Following actions are no longer possible:

- Setting index values for the analogue channels
- Modify the digital channels
- Access to the automatic mask
- Access to the recording mask
- End of recording
- Save created cycles in the editor
- Modify the comments about measurements
- Configuration of chambers
- Quit **CID-PRO**

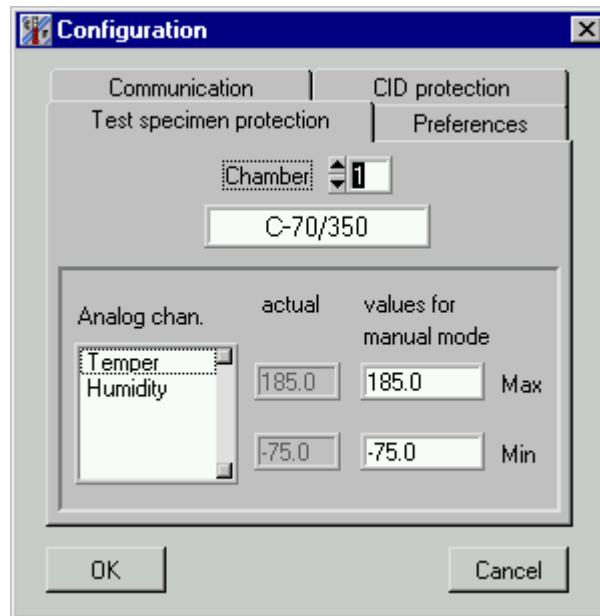
To deactivate the password protection, proceed the same way as for activating it but the design of the configuration mask however differs as

follows:



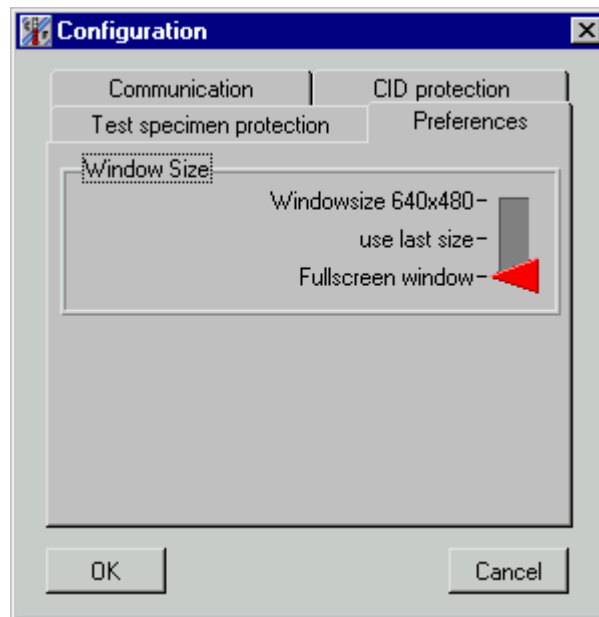


### 4.7.3 Software limiter



Here you can see the values saved in the configuration. For each channel two value pairs are displayed. Default values are the minimum and maximum input values of the channel. If the actual value of a channel is below the minimum or above the maximum an error is reported and the chamber switch off. You can set the value pair for manual mode. They are valid if the chamber is running in manual mode. In actual values the values which are valid in the moment are displayed. They could be different if an automatic programme is running. If you change the values for manual mode when a programme is running they are valid just when the programme stop. The values for automatic mode are put in the editor with the programme.

#### 4.7.4 Preferences



Selecting „Preferences“ in the moment it is only possible to change the window size the programme uses.

All masks are designed with the standard size of 640 x 480 pixels. Some screens can vary their size. Making these masks bigger not only zooms the contents but partially changes the arrangement of the window contents to arrange the information as clear as possible.

Change the setting by positioning the red arrow. This setting is used for the whole programme and remains after restart.

**Windowsize (640 x 480):** When changing the masks they are displayed in their standard size. This is the smallest size where all Information is completely displayed.

**Use last size:** The screens of the menus: Status, graphic and editor can vary their size using the mouse on the border of the windows. Opening the windows the next time, the last size and position is used.

**Fullscreen window:** The screens of the menus: status, graphic and editor are always maximised to the whole screen when opened.

### 4.7.5 Special configuration

In addition to the settings possible within the CID programme other options are configurable. Often these are customer specific settings. Using these settings requires some experience in the use of the operating system.

The settings are saved in the file cid\_pro.ini. This file is stored in the installation directory of the programme.

This file uses the window format for ini-files with [...] for sections and *variable=value* for assignments.

The file can be opened with any text editor (e.g. notepad). To make changes first exit the CID programme, make the changes, save the ini-file and afterwards start CID-pro again.

Further entries not described here can be modified within CID and you must not change them here.

entry in Ini-file	Description
[Ch01]	Section for settings for particular chambers. (Ch02 means chamber 2 and so on.)
TrendTime = 30.0	Length of time axis in the trend graph of status screen in minutes
[Path]	Section for standard folders. They can be changed to paths on a network to get a backup of your measurement or to make the data accessible from other computers
Messung = "c:\\CTS_SOFT\\messung"	Path for measure files
Report = "c:\\CTS_SOFT\\report"	Path for report files
Zyklus = "c:\\CTS_SOFT\\zyklus"	Path for testcycles
[Option]	Section for customer specific options
Eftk = 1	Switching on the possibility to program curves of the setvalues in shape of exp – functions in editor
Lock = 1	Activates the button to lock the handset of the chamber in the status screen of CID
WindowSize = 2	Used window size; setable by programme
Language = 0	Language of the texts stored in the chamber controller. 0=german 1= english
Filescan = 1	Switching on the function to create a message file with errors. This file might be used to send information about the chamber by an external mail programme
FilescanName = c:\\cts_soft\\filescan\\cid_err.txt	Name of the message file. Path must be reachable. The file is not deleted by CID.

## 4.8 Cycles

Runtime	Actual	Unit	Limit	Comment
h.counter	0.24	h	0.00	
compr. c	0.00	h	0.00	
compr.pc	0.00	h	0.00	
pump wat.	0.00	h	0.00	

Events	Actual	Unit	Limit	Comment
sv cool.	0	h	0	
bypass lc	0		0	
sv clim.c	0		0	
sv suct.	0		0	
bypass1pc	0		0	
bypass2pc	0		0	
sv dehum.	0		0	
pump rep.	0		0	

Back

You can see two different lists in the counter mask: on one side the upper list with the time counter, as represented here the elapsed time indicator, on the other side the bottom list with the round counter. All have the current value (effective value) of their unit as well as the maximum value admissible for the counter. If **CID-PRO** receives a warning from the active chamber, the corresponding line in the list will be shown in red and a remark is added.

If you are authorised to proceed with a modification for represented counters, you can double click or use ENTER on the active line to open this window:

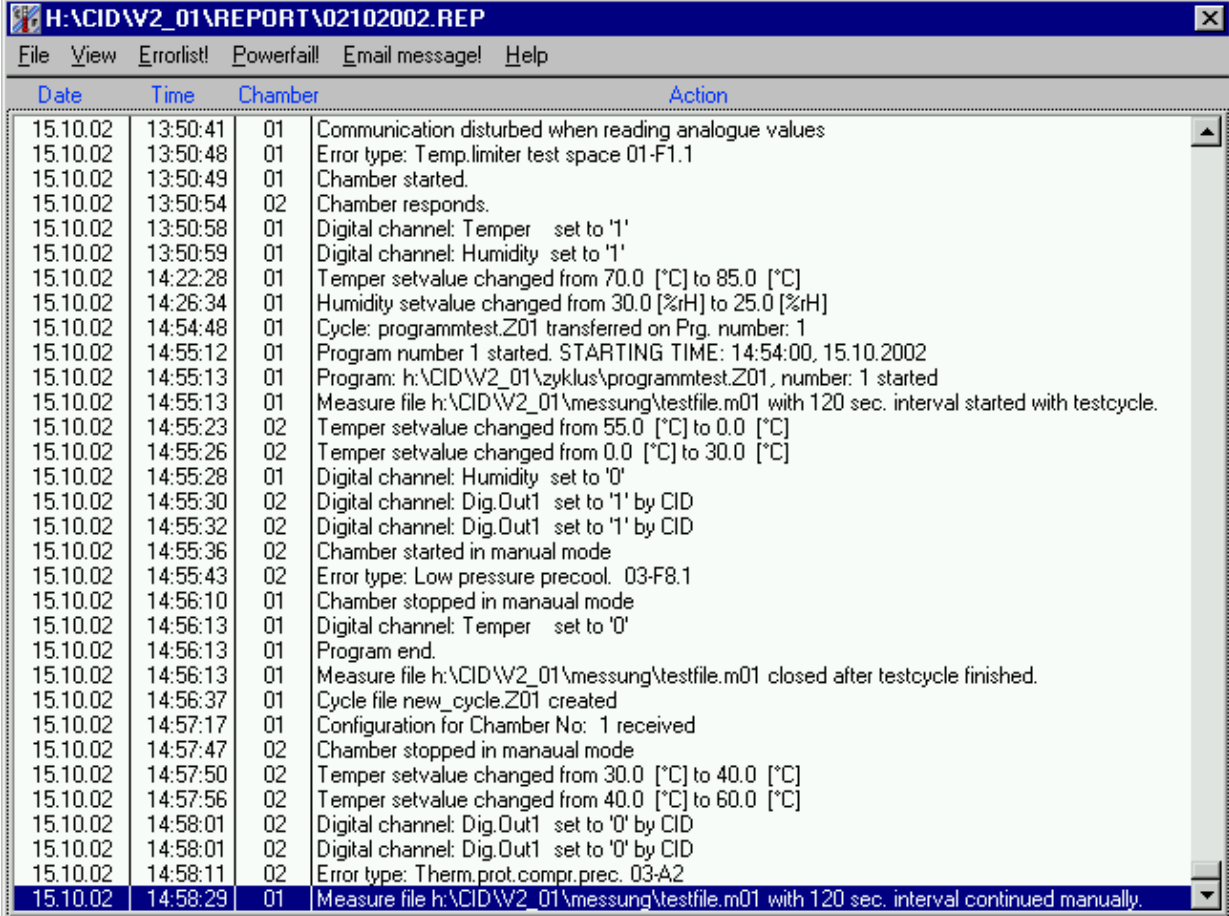
Change counter/limit

Limit: 1000.00 h Actual: 0.00

OK Cancel

Depending upon which value you want to change, the threshold values and/or the effective value appear. Confirm the modification with the OK button and send the values to the active chamber. With 'Cancel' you close the window without any modification.

## 4.9 Report



The screenshot shows a window titled "H:\CID\W2\_01\REPORT\02102002.REP" with a menu bar containing "File", "View", "Errorlist!", "Powerfail!", "Email message!", and "Help". Below the menu bar is a table with four columns: "Date", "Time", "Chamber", and "Action". The table contains 25 rows of log entries, each starting with a date and time, followed by a chamber number and a description of an action.

Date	Time	Chamber	Action
15.10.02	13:50:41	01	Communication disturbed when reading analogue values
15.10.02	13:50:48	01	Error type: Temp.limiter test space 01-F1.1
15.10.02	13:50:49	01	Chamber started.
15.10.02	13:50:54	02	Chamber responds.
15.10.02	13:50:58	01	Digital channel: Temper set to '1'
15.10.02	13:50:59	01	Digital channel: Humidity set to '1'
15.10.02	14:22:28	01	Temper setvalue changed from 70.0 [°C] to 85.0 [°C]
15.10.02	14:26:34	01	Humidity setvalue changed from 30.0 [%rH] to 25.0 [%rH]
15.10.02	14:54:48	01	Cycle: programmtest.Z01 transferred on Prg. number: 1
15.10.02	14:55:12	01	Program number 1 started. STARTING TIME: 14:54:00, 15.10.2002
15.10.02	14:55:13	01	Program: h:\CID\W2_01\zyklus\programmtest.Z01, number: 1 started
15.10.02	14:55:13	01	Measure file h:\CID\W2_01\messung\testfile.m01 with 120 sec. interval started with testcycle.
15.10.02	14:55:23	02	Temper setvalue changed from 55.0 [°C] to 0.0 [°C]
15.10.02	14:55:26	02	Temper setvalue changed from 0.0 [°C] to 30.0 [°C]
15.10.02	14:55:28	01	Digital channel: Humidity set to '0'
15.10.02	14:55:30	02	Digital channel: Dig.Out1 set to '1' by CID
15.10.02	14:55:32	02	Digital channel: Dig.Out1 set to '1' by CID
15.10.02	14:55:36	02	Chamber started in manual mode
15.10.02	14:55:43	02	Error type: Low pressure precool. 03-F8.1
15.10.02	14:56:10	01	Chamber stopped in manual mode
15.10.02	14:56:13	01	Digital channel: Temper set to '0'
15.10.02	14:56:13	01	Program end.
15.10.02	14:56:13	01	Measure file h:\CID\W2_01\messung\testfile.m01 closed after testcycle finished.
15.10.02	14:56:37	01	Cycle file new_cycle.Z01 created
15.10.02	14:57:17	01	Configuration for Chamber No: 1 received
15.10.02	14:57:47	02	Chamber stopped in manual mode
15.10.02	14:57:50	02	Temper setvalue changed from 30.0 [°C] to 40.0 [°C]
15.10.02	14:57:56	02	Temper setvalue changed from 40.0 [°C] to 60.0 [°C]
15.10.02	14:58:01	02	Digital channel: Dig.Out1 set to '0' by CID
15.10.02	14:58:01	02	Digital channel: Dig.Out1 set to '0' by CID
15.10.02	14:58:11	02	Error type: Therm.prot.compr.prec. 03-A2
15.10.02	14:58:29	01	Measure file h:\CID\W2_01\messung\testfile.m01 with 120 sec. interval continued manually.

The report function permanently runs in the background of **CID-PRO** and it records different actions of the user or of the chambers. They are deposited in a file which is re-created every month. The file name indicates when the file has been created.

In above example: on 10-02-2002.

When you open the report mask, the current report file is automatically opened: You can see all actions which have been recorded with the settings you have selected in menu 'view'.

#### 4.9.1 **View**

The menu 'View' allows you to modify the list of the report file: for that purpose you can define the following in the submenu

##### 4.9.1.1 *Options:*

Select precisely the ones which you want to see: open here a selection mask:

The screenshot shows a dialog box titled "Options" with a close button (X) in the top right corner. The dialog is divided into several sections, each with a title and a list of options, all of which are checked:

- Channels:** Analog, Digital, Programmes
- PC-Actions:** Configuration, Files, CID-PRO
- Communication:** Interface, Chamber messages
- CID protection:** mechanism of security
- Service:** Service
- Counter:** Counter actions
- Chamber:** A dropdown menu with a list icon and a checkmark, and an "All" option below it.

At the bottom of the dialog, there are four text input fields for time and date ranges:

- Starting date: 02.10.02
- Starting time: 10:18
- Ending date: 15.10.02
- Ending time: 14:58

At the very bottom, there are two buttons: "OK" and "Cancel".

*all actions are selected*

activate or deactivate the actions and confirm with OK. All selected actions will appear in the list. Furthermore the submenu allows you the following:

Select in which time zone you want to see the actions. If one of the ending time text field remains empty, the report shows all entries from the starting time / date till present.

## **4.9.2 File**

You can run here the usual actions with the report files:

### **4.9.2.1 *Load:***

Loads a report file from the subdirectory \REPORT and displays it with the restrictions defined in the submenu View ->Options.

### **4.9.2.2 *Delete:***

Here files which are no longer needed can be deleted – after confirmation of the security interrogation -report.

### **4.9.2.3 *Print:***

You have here two alternatives:

1. The momentary current list
2. All entries in the report file

The list is then printed in text format on the default printer of MS Windows.

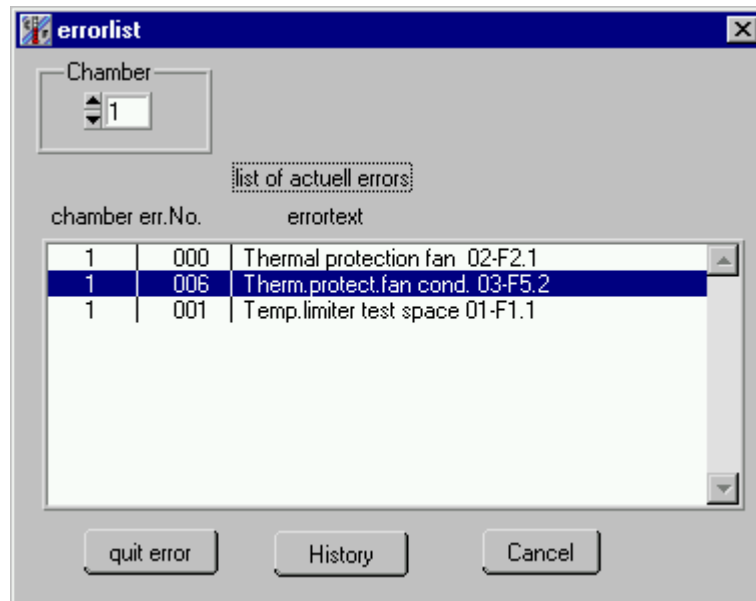
### **4.9.2.4 *New:***

Here a new report file can be created. The file name is defined by **CID-PRO**. The present date is used as a file name. If a file already exists, you can select it as an active file: all actions will be added or you can create the file again: in this case all previous inputs are lost.

### **4.9.2.5 *End:***

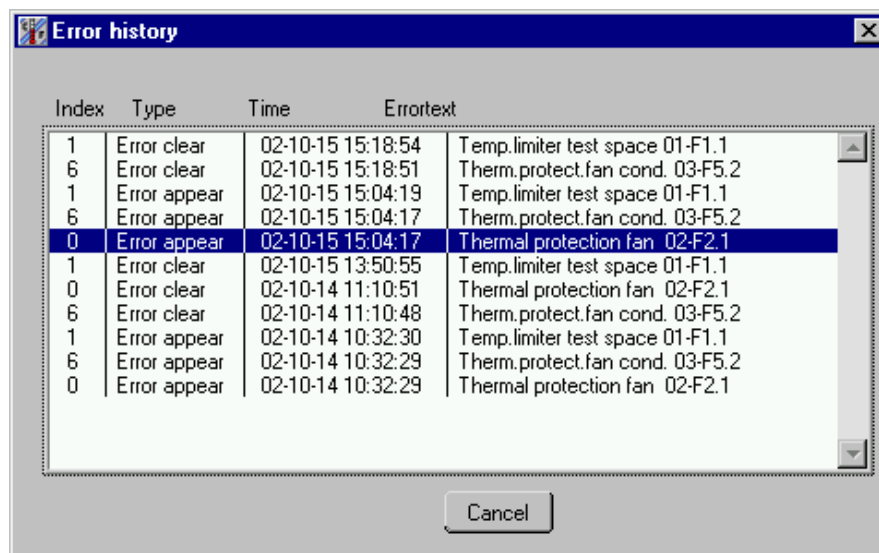
The report mask is closed and returns to the status mask.

### 4.9.3 Errorlist!



The submenu errorlist shows a list of all currently reported errors of the selected chamber. You can select the entries and quit the selected error. In this case, when the source of the error is no longer present in the chamber, the error disappears in the list. The function in the chamber related with this error is released. This list is helpful to get an overview of the pending errors in the controller and this list is necessary to work with the chamber although not all errors can be removed. (This is only possible for some error types.)

The button “History” activates an upload of previous reported errors and displays their appearance and disappearance with exact date and hour.

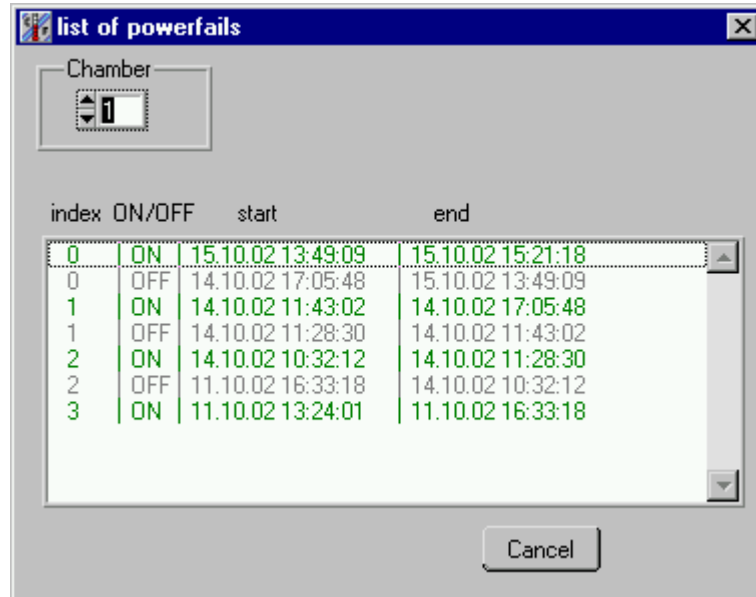


If you get the message “No reply from this chamber !” this function is not yet implemented in the controller of the chamber.



#### 4.9.4 Powerfail!

This menu item shows a list of power failure which where reported in the chamber.



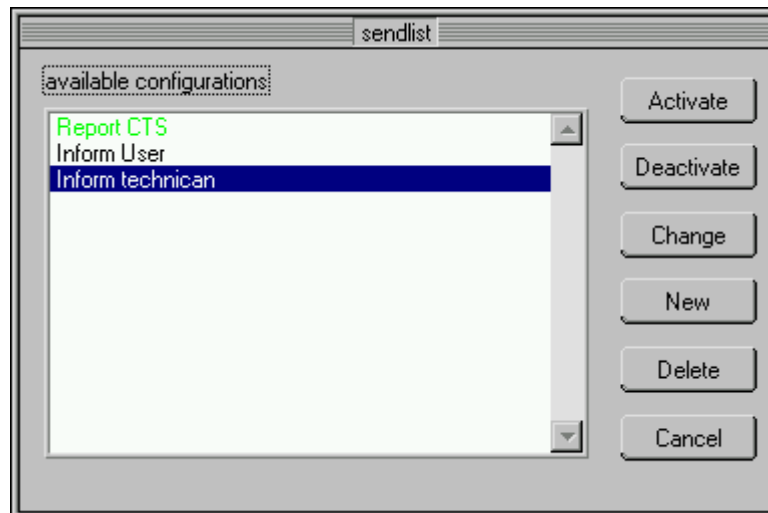
This list is uploaded separate for each chamber. A maximum of 10 entries with duration of ON and OFF time is displayed. The controller report switching the main switch also as and power failure.

If you get the message "No reply from this chamber !" this function is not yet implemented in the controller of the chamber.

#### 4.9.5 Email message!

The submenu Email message allows to configure and active messages that can be sent via email from CID-Programme. To use this function you need access to the internet or a local area network and a SMTP server that is used to transfer the messages.

Facilities of sending emails depends on your network. To get the name of your SMTP server you probably need support from your IT people.



The window shows a list of all previous created configurations. All configurations are displayed but only the green ones are activated and send emails when the selected event happens.

Use button *New* to create an configuration. A window appears to put in the required information and to select to events that trigger a email.

*Name* is a free text to describe the configuration.

*Receiver address* is the target address of the message.

*SMTP-Servername* is the mail server of your network.

It is possible to report messages from all connected chambers or you can select one specific chamber. The events that trigger an email are combined in groups. A time-oriented control is also possible. For example you can get a daily status of the chambers and as an option the actual recording file can be appended.

With *Ok* button you save the configuration. To activate email processing for this configuration push *activate* button.

Several configurations can be active. Remark that depending on the configurations a lot of emails can occur so that they could be a burden to the recipients.

Example of a email sent by CID in case of chamber error:

```

An:      karlheinz.epfel@gmx.de
Von:    @CID-Chamber-01
Kopie:
Betreff: CID-Eventmessage
Datum:  Wed, 16 Oct 2002 16:51:11 +0200  ..

<-- 1 von 44 -->

Date: 2002-10-16  Time: 16:43
ChamberNo.: 01 Type:      C-70/350  SerialNo.: C703505
Message: Error type: Therm.protect.fan cond. 03-F5.2

<-- 1 von 44 -->

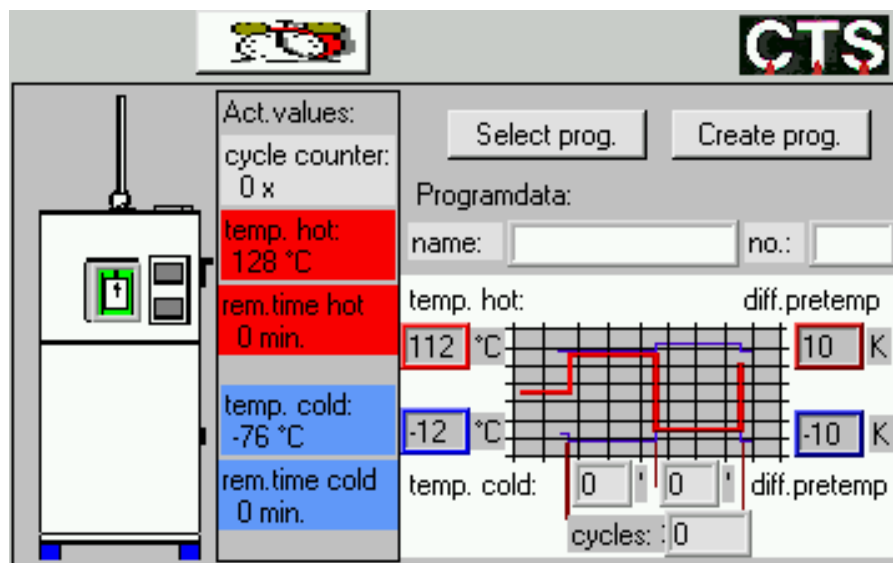
```

## 4.10 Special menus for certain types of chambers

### 4.10.1 Thermal shock chamber

The thermalshock chamber is a special type of chamber able to produce high temperature changing rates by moving the test specimen from one temperature zone to the other. There is a menu for this special function to create cycles for these chambers in an easy way.

#### 4.10.1.1 *Appearance of thermal shock chambers in status menu:*



On the left hand side you can see a symbol of the chamber. The green icon shows the position of the cage. In the next column the actual values of the chamber are displayed.

You can see the actual no. of cycles in this test, below in the red boxes the actual temperature in the hot zone as well as the time the cage remains in this zone. In the blue boxes below you see temperature and time remaining in the cold zone.

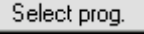
On the right hand side you can see the data of the programme running. This is the name and the number of the programme and a graphic view of the cycle with the parameters used.

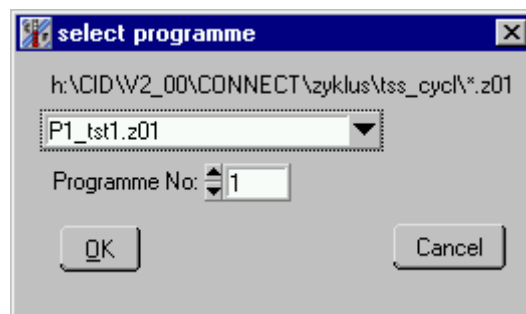
Parameters of a shocktest cycle:

- temp.hot: Index value for temperature hot zone  
temp.cold: Index value for temperature cold zone  
diff.pretemp: (shown above with red frame)  
the value is added to the index value of the hot zone.  
The result is the index value for hot zone when the cage is not in this zone  
diff.pretemp: (shown below with blue frame)  
the value is added to the index value of the cold zone.  
The result is the index value for cold zone when the cage is not in this zone. (pay attention to sign!)  
time hot chamber:  
time the cage remains in hot zone in minutes  
time cold chamber:  
time the cage remains in the cold zone in minutes  
cycles: number of hot – cold transmissions

The two buttons „Select prog.“ and „Create prog.“ Open further windows:

#### 4.10.1.2 Starting a programme for thermal shock chambers

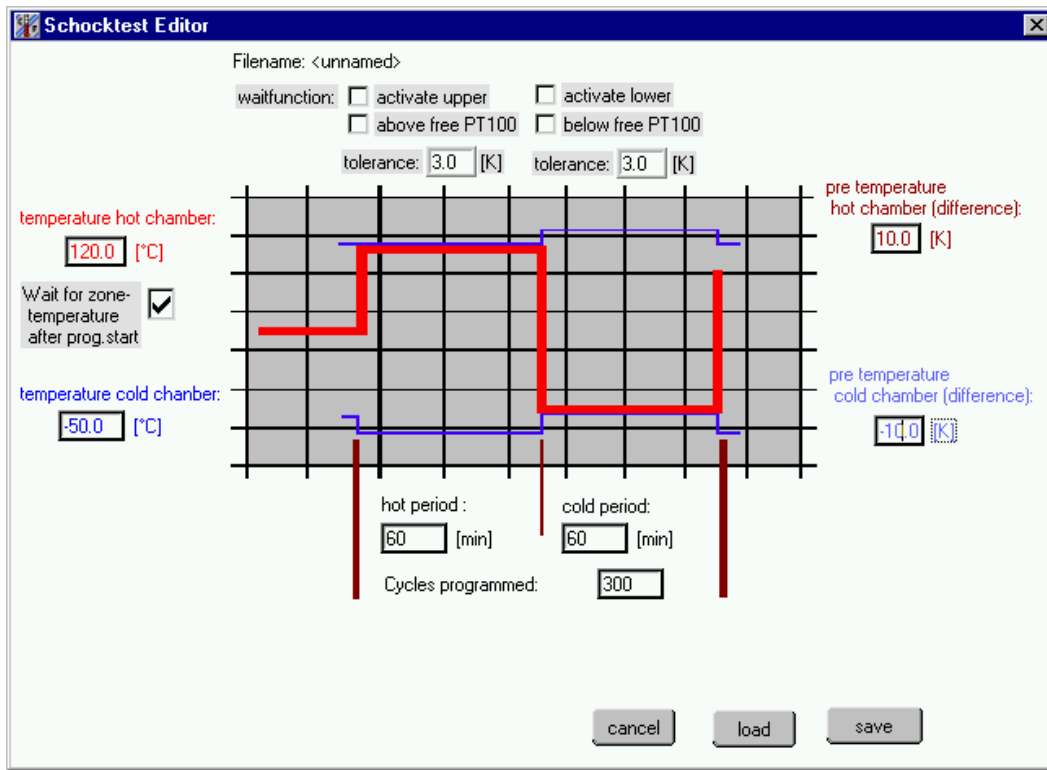
Pressing the  - button opens a window where program name and number can be selected.



The Program number is the number in the storage number in the controller. The controller has storage for program numbers from 1 to 97. Only programmes in the fixed subdirectory ,tss\_cycl' are selectable. With ,OK' the programme is sent to the storage of the controller and started there afterwards. (If already a programme is stored in this place it is overwritten)

### 4.10.1.3 Creating programmes for thermal shock chambers

With **Create prog.** - button a window for easy input and saving of cycles for thermal shocktest chambers appears.



The shocktest editor shows a picture similar to the status of the running shockprogramm. Using this way of putting in a programme a ,normal' programme in created in background. For special requirement (e.g. switching digital channels) this programme can be loaded with editor described in cap. 4.3.

This is not necessary normally because this screens gives you a fast clearly arranged way of creating cycles for schocktest.

- Inputs for temperatures, times and number of cycles are the index values of these parameters.
- Checking the button '*wait for zone temperature after prog. Start*' a wait-function is inserted in the programme. In front of the first cycle the programme is waiting until the hot zone has reached it's setvalue with a tolerance of 3K.
- Checking the button '*waitfunction activate upper*' a waitfunction at each cold/hot transmission is inserted. The time in the hot zone does not start to count down unless the tolerance is reached. Temperature most approach from a smaller value to the setvalue.

- Checking the button '*waitfunction activate lower*' a waitfunction at each hot/cold transmission is inserted. The time in the cold zone does not start to count down unless the tolerance is reached. Temperature must approach from a higher value to the setvalue.

Duration of the test increases when using wait functions. The waiting period depends on the tolerance used and the amount of test specimen in the chamber.

Without wait functions the duration of the program is fixed and all times starts running independent from the actual values in the chamber.

You can give a name to the cycle and save it with the ,save' button.

Using the ,load' – button an existing cycle can be loaded and modified. Afterwards it can be saved.

## **5 CID-PRO help**

Everywhere in **CID-PRO** you can get help on some functions: click with the *right-hand* mouse key on the button for which you need help.

Furthermore you can see the button *Help F1* in the status mask. Click onto this button to open the on-line help which you can also see in the **CID-PRO** window in the WINDOWS programme manager. You can get here some information to help you with the handling of **CID-PRO**. If you press the 'F1' key in any mask, you get information from the on-line help about the momentary active mask.

Should you however get any handling problem call

**CTS GmbH: Tel. +49 7471 98 50 -0 or -15**  
**Fax: +49 7471 98 50 -23**



## **6 Interface to Microsoft WINWORD**

You can insert without any problem all masks from **CID-PRO** into WINWORD and adapt them to your requirements. For this purpose open the mask (i.e. a graphics or a cycle in the editor), adapt the mask in the way you want to take it over in WINWORD. Now press the 'Alt' key together with the 'Print' key, then go to your WINWORD document, place the cursor at the position where you want to insert your graphics and open the menu 'Edit' -> "Insert'. You can now see your mask as you have adapted it in **CID-PRO**.


If you wish to remove part of the presentation that you do not want, these can now be cut off from the graphics. Click once onto the graphics in order to provide it with a thin frame. You can now see small squares in each corner and exactly in the middle of the sides. If you move the mouse above these squares, the mouse pointer changes its shape. If you additionally press the 'SHIFT' key, the mouse pointer takes another shape: you can now draw the mouse to modify the graphics. If you move the mouse without pressing the 'SHIFT' key, you change the size of the graphics. In order to place freely the graphics into your document, you have to place a positioning frame around the graphics: activate your graphics as described above, go to the menu 'Insert' -> 'Positioning frame'; now the frame in your graphics changes. Maintain the mouse key down on the graphics to be able to move the complete graphics, the mouse pointer must have the shape of an 'arrow-cross'.

## 7 Interface to Microsoft EXCEL

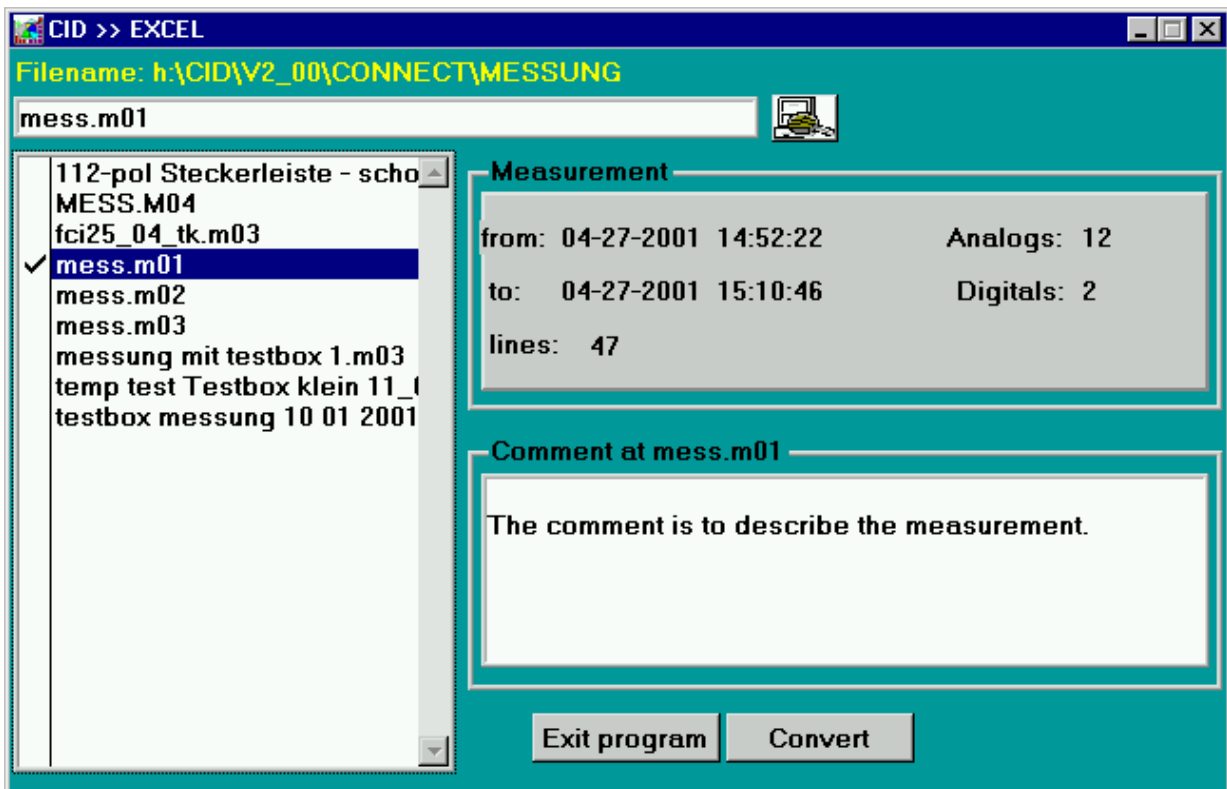
You can convert measurements to an format which can read from EXCEL with the new conversion programme CID-->EXCEL.

You have two possibilities to start this programme.

1. Start it in the programme manager in Windows by double-clicking on the icon 'convert.exe'
2. or by selecting the menu item 'convert-to-EXCEL program'. you can

select it by holding the left-hand mouse button on the icon: 

After one of the two actions the programme starts and you see the following mask:



On the left-hand side you see a list with all available measurements.

To select one or more files to convert select it with the space-key or with one mouse click on the filename.

To search one file enter the complete filename in the textbox above the list and confirm it by press the 'ENTER' -key.

You can change directory using the button beneath the textbox including the actual selected file.

The bigger part of the mask is similar to the mask 'Load graphic'. Start the convert of one or more files by clicking on the 'Convert' button.

Now you had to enter the new names for the new files. It is not necessary to enter the file extension. The programme appends independent the extension 'XLS'.

All available channels in the files will be converted. You can find the new 'XLS' files in the directory

CID\_PRO\MESSUNG\  
(respectively the selected directory)

Now you can open the file in Microsoft EXCEL or a different programme that could read tables in text format.

The import of files in text format is described in the EXCEL online help.

Notice: The text file created by the conversion software use a format of decimal numbers (e.g. 123.4) that must match with the format of Excel. In Excel you can choose the format of decimal numbers in the menu *extra - options - general*.

The cells in the table are separated by semicolons (;).

## **8 Further software interfaces**

### **8.1 TCP/IP-module for networking and monitoring over LAN-network**

With CID-software it is possible to network chambers in a local area network. You can watch the chambers function on several PCs. The PC where the chambers are connected dispatch this information over the network.

Basic requirement is a LAN with working TCP/IP protocol.

TCP/IP-communication in CID bases on a fixed IP-address. Dies might cause problems when using dynamic IP-addressing (DHCP).

Communication in general follows the Client/Server model.

The full version of CID is installed on the PC where on or more chambers are connected via RS-232 or RS-485 interface. The full version is protected with a Dongle plugged in the parallel port. This PC can be configured as a data server for data exchange. In addition it can be client for chambers connected to a second server.

On a second PC the Demo-version of CID-software is installed. The demo version is available in the download area of CTS homepage ([www.cts-umweltsimulation.de](http://www.cts-umweltsimulation.de)). On this PC you can see the status of the chamber. It appears as if the chamber connected directly. You can watch the actual values and you have reduced function to control the unit. The demo version can only work as a client. There can be more that one client for the same chamber.

## **8.2 Installation and configuration**

In the first step you Install CID-Software. Follow the instructions in capture 3 and call setup.exe from the first disk of the installation package. When installation has completed and the driver for the Dongle is installed, start CID-Programme.

### **8.2.1 Procedure at server PC**

- Start Programme
- Configure system in menu config – communication. Select COM-Port, number of chambers (The number of chambers is the highest chamber number that should be handled by the software, including possible client chambers) and the scanning rate (10 seconds fits in most cases).
- Quit CID-programme after confirmation
- Open file cid\_pro.ini in installation directory of CID-programme (C:\CTS\_SOFT by default) using an editor (e.g. notepad)
- Put in the configuration as described below and save the file
- Start CID-programme
- Read chamber configuration using button “*config chamber*”. If configuration is not uploaded now (number counting up from 1 to 100) check interface settings at the chamber and wiring and repeat this step.
- Configuration is finished

### **8.2.2 Entries in cid\_pro.ini when configuring a data server**

Content of file:	Description
[Path]	Section where directories for several groups of files are defined (This section already exists.)
Konfig = "H:\CTS_DATEN\KONFIG"	Directory on a network drive where configuration files are exchanged. The directory must exist.
[Remote01]	Section including all entries for remote control of chamber 1
Server = 1	This chamber is to be a data server.
Port = 2001	IP-Port to process communication. This port must not be used by any other process. It can be a number between 1 and 65000. Port numbers from 1 to 2000 are reserved for internal processes. The range from 2001 up to 2100 are unused in most cases. For data exchange for more than one chamber each remote section must have a unique port number.
ExternSet = 0	Changing values from a connected client is blocked. When ExternalSet is activated you can switch chamber on/off, change set values and confirm errors from a client-PC.

### **8.2.3 Procedure at client PC**

- Start Programme
- Configure system in menu config – communication. Select number of chambers (The number of chambers is the highest chamber number that should be handled by the software) and the scanning rate (20 seconds fits in most cases). The COM-port is insignificant.
- Quit CID-programme.
- Open file cid\_pro.ini in installation directory of CID-programme (C:\CTS\_SOFT by default) using an editor (e.g. notepad)
- Put in the configuration as described below and save the file
- Start CID-programme. Configuration is finished

### 8.2.4 Entries in cid\_pro.ini when configuring a data client

Content of file:	Description:
[Path]	Section where directories for several groups of files are defined (This section already exists.)
Konfig = "H:\\CTS_DATEN\\KONFIG"	Directory on a network drive where configuration files are exchanged. The directory must exist.
[Remote01]	Section including all entries for remote control of chamber 1
Client = 1	This chamber is to be a data client.
Port = 2001	IP-Port to handle the communication. The port number must be the same as given in the server configuration. This port must not be used from any other process of the PC. It can be a number between 1 and 65000. Port numbers from 1 to 2000 are reserved for internal processes. The range from 2001 up to 2100 are unused in most cases. For data exchange for more than one chamber each remote section must have a unique port number.
IP = "192.168.1.100"	IP-address of server PC. You can find the IP-address of your PC in the network environment and settings of TCP/IP-protocol. In the moment it is only possible to work with fixed IP-addresses. When using DHCP-server this causes problems. Please contact your network administration to get a fixed IP-address in this case.

To get the maximum out of your networking it is often useful to adapt the paths where the different files are stored. We suggest to use directories on a file server that are reachable from all involved PCs

Measure files: e.g. ...CID\_NET\measure  
 Testcycles: e.g. ...CID\_NET\cycles

After creating this directories in the network the paths in the cid\_pro.ini of all PCs must be changed.

Procedure:

- Open file cid\_pro.ini in installation directory of CID-programme (C:\CTS\_SOFT by default) using an editor (e.g. notepad)
- Put in the configuration as described below and save the file

Entries in cid\_pro.ini to configure storage of data on a network:

Content of file:	Description:
[Path]	Section where directories for several groups of files are defined (This section already exists.)
Messung = "H:\\CID_NET\\measure"	Path for measure files. ( remark double \\ !)
Zyklus = "H:\\CID_NET\\cycles"	Path for test cycles. ( remark double \\ !)

Now the clients have access to completed measurement-files. Test cycles can be created on both PCs and you get a graphical preview of the testcycle on the client side when running.

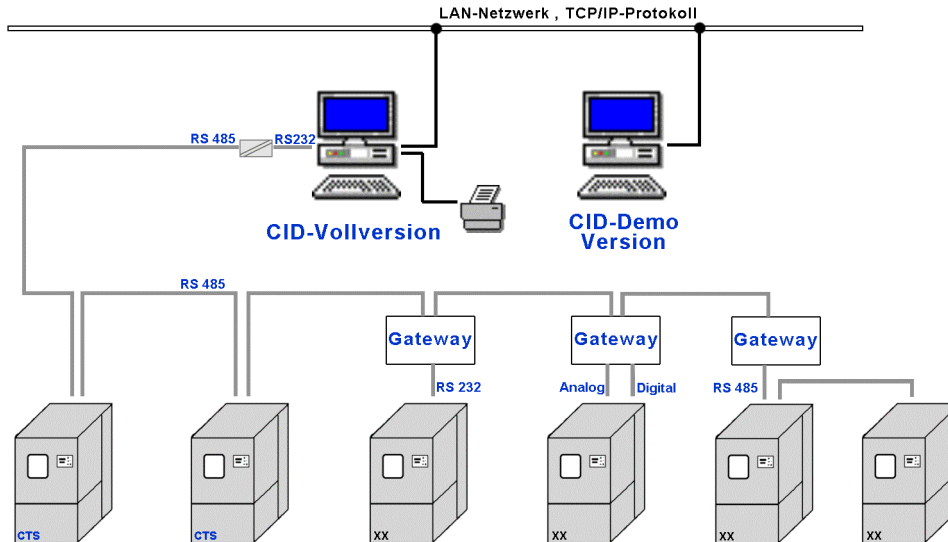


### **8.3 Interfacing other applications**

CID software offers functions to exchange data to other applications over TCP/IP.

Collecting data from other devices and remote control of CID is possible. For further information contact CTS or your local distributor.

## 9 Possibilities of networking



The picture shows a possible constellation of networking and monitoring several chambers.

The chambers are connected to a PC running the full version of CID. A local printer is connected. Because of the distances and the resulting cable length as well as reliability of transmission, interface type RS-485 is used. For this purpose an interface converter is placed at the PC. Two CTS-chambers and four chambers from other manufacturers are connected. The non-CTS chambers need a protocol converter (Gateway) to decouple the different interfaces.

A second PC in the local area network is running the CID-Demo version. The actual status of all six chambers are displayed. You have the same desktop as used from CID.

## 10 General

If **CID-PRO** ends due to a power cut or to an unexpected programme abortion, when you start the next time, it will try to restore the old status, this means that i.e. during recording you don't lose the already existing data. It is thus possible to integrate **CID-PRO** i.e. in the autostart group of Windows without any problem. Each unexpected programme abortion or the recovery of the old status can be consulted at anytime in the report file.

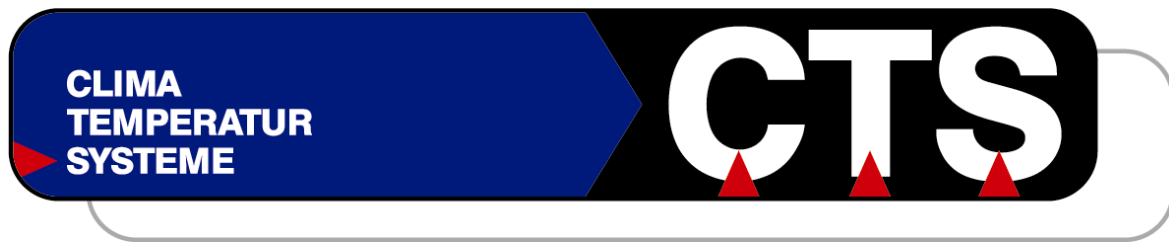
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