

Product Documentation

U10 RT-Win4 User Manual

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1. Abstract

1.1. Purpose of this Document

The purpose of this document is to describe all essential information for the user step-by-step to make full use of Air Tube System functions, capabilities, and procedures with the RT-Win4 software.

1.2. History

Date	Version	Revision Author(s)	Revision Notes
04.11.2019	0.01	Gh	
16.03.2020	1.01	Gh	FCC-Display + Event-Display
20.04.2020	1.02	Gh	PMA + ALM + Arrive-/Departure Screen + F&G + LIMS
10.07.2020	1.03	Gh	History Age-Alert
09.10.2020	1.04	Gh	History new colours
21.10.2020	1.05	Gh	History: Data-Export
22.01.2021	1.06	Gh	"Scan In" and "Scan Out" App
05.03.2021	1.07	Gh	Statistics in History
19.03.2021	1.08	Gh	Licensing
22.04.2021	1.09	Gh	System Graphic Editor
21.05.2021	1.10	Gh	Scheduler App
08.07.2021	1.11	Gh	Alarm-Popup-Screen + Some small changes
16.02.2022	1.12	Gh	Additional User Details + Tube System Access Groups
10.02.2023	1.13	Gh	Version App
15.06.2023	1.14	Gh	Additional Statistics
07.07.2023	1.15	Gh	Unlock button for type 231 in device status
05.12.2023	1.16	Gh	Windows-Login as Default-Login
18.04.2024	1.17	Gh	UHF-RFID App
23.12.2025	1.18	Gh	MQTT App + Brinks-Counter
10.06.2026	1.19	Gh	RT-Win4 Users – DCS-Users and -Roles
23.06.2026	1.20	Gh	Scan-App – LIS-/HIS-Mode
27.07.2026	1.21	Gh	Demo-Mode for Scan-App

1.3. Document References

Ref.	Document Name	Version	
[1]	Hörtig-E40 „Programmer“		
[2]	Hörtig-I18 „RT-Win4 Installation“	1.05	

1.4. Abbreviation

CC	Central Control Unit
FCC	H61F Central Control Unit
MTBF	Mean Time Between Failures
DCS	Distributed Control System
Thekla	RT-Win4 Host
CID	Carrier-ID
UID	User-ID
MQTT	Message Queue Telemetry Transport
IoT	Internet of Things
LIS	Laboratory Information System
HIS	Hospital Information System

2. Before you start

Thank you for choosing RT-Win4 for Windows. We are constantly expanding and improving this software.

RT-Win4 is designed to monitor HÖRTIG rohrpost systems "H61F".

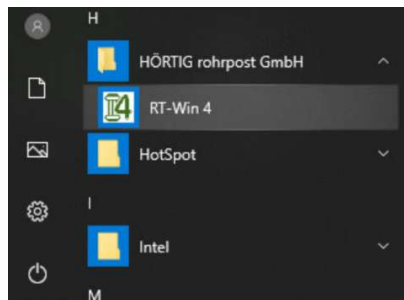
3. Getting started with RT-Win4, Starting the RT-Win4 software

3.1. Starting RT-Win4 Host

The Host-Process of RT-Win4 is usually started by a service which runs permanently on the host PC. This RT-Win4-service checks periodically if the RT-Win4 Host is running. If RT-Win4 Host has terminated by any reason it will be restarted automatically.

3.2. Starting RT-Win4 Client

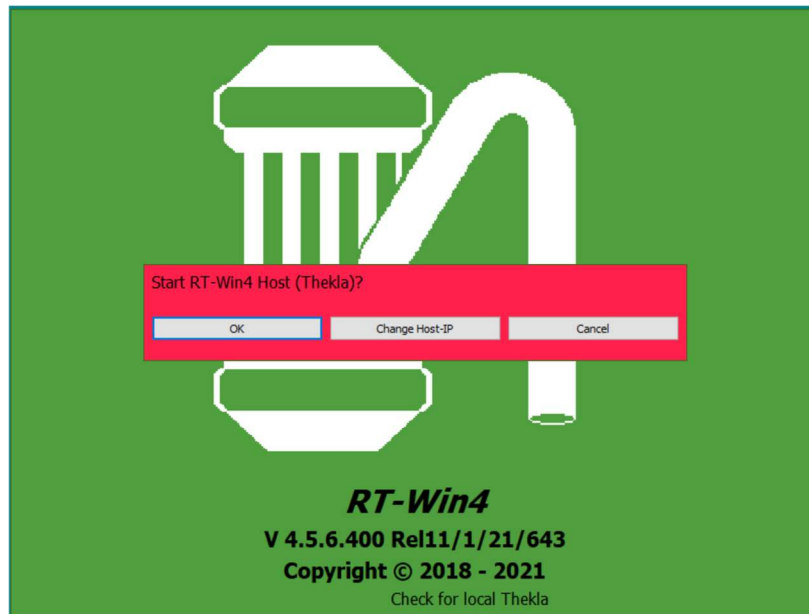
Start RT-Win4 Client by double-click on the RT-Win4 Icon or via the Start-Menu.



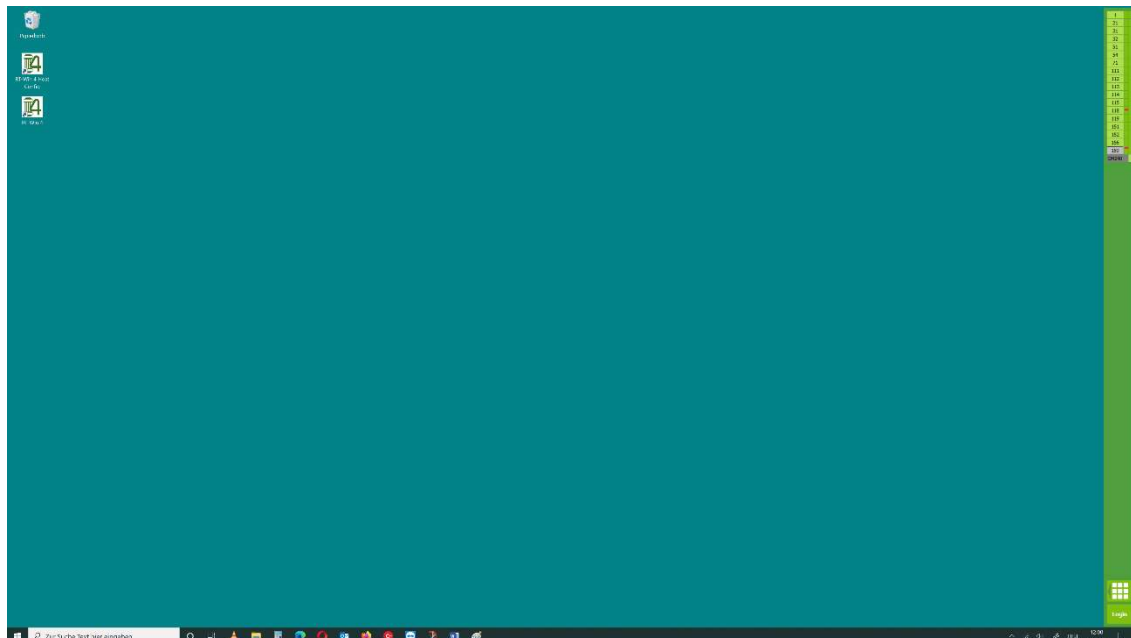
RT-Win4-Client-application will start and show its splash-screen:



When starting RT-Win4-Client it will try to connect to a RT-Win4-Host. If the connection could not be established RT-Win4 and a local host (IP 127.0.0.1) is found in the settings (local host = default) a dialogue will pop up who asks if the host should be started now. If there is no host on this PC there is an option to change Host-IP.



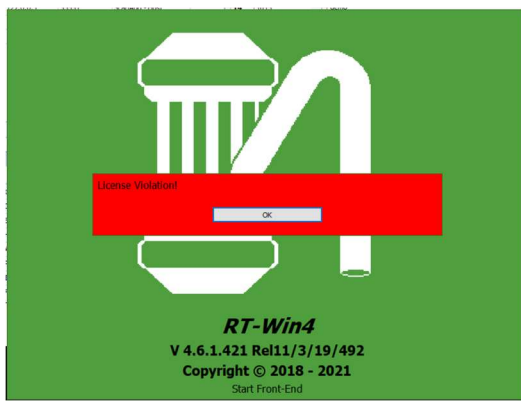
See I18 4.4.3 [2] for further details.
After connection to host is established the sidebar appears.



3.3. Licensing

In RT-Win4, licensing is done centralized in the RT-Win4 host. A license key is stored there that defines the maximum number of possible connections to the pneumatic tube system and the maximum number of active RT-Win4 clients. (see [2] 4.3.4)
The license is bound to the hardware of the particular host PC. Replacing the host hardware requires a new license key.

If the maximum number of active RT-Win4 clients is exceeded, a license violation is displayed and no apps can be opened on this workstation.

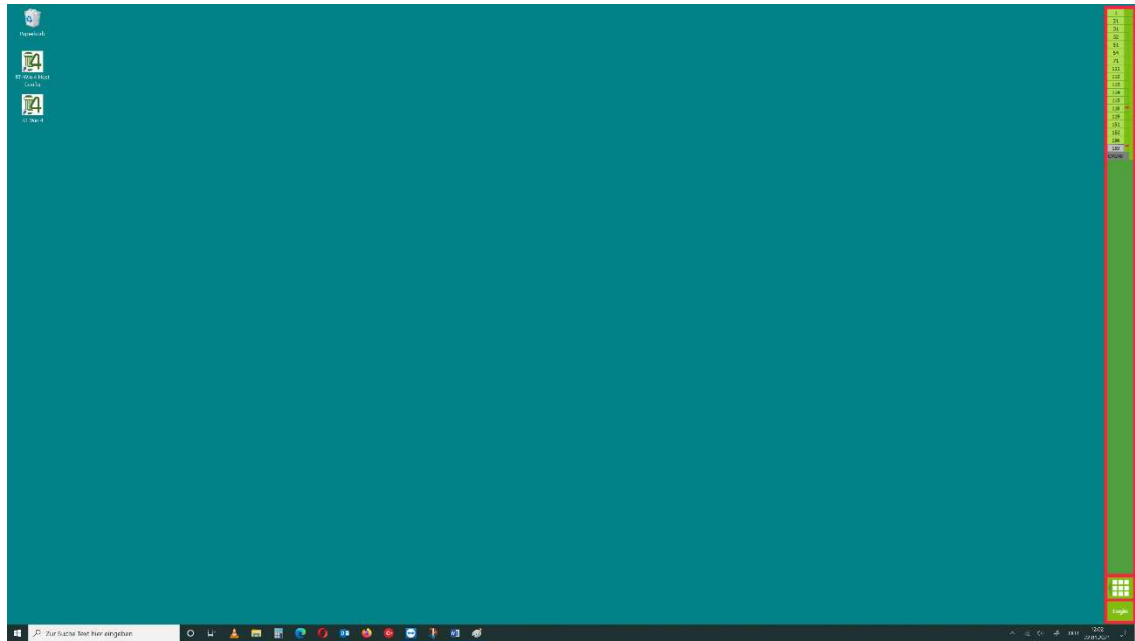


3.4. RT-Win4 Client – Sidebar

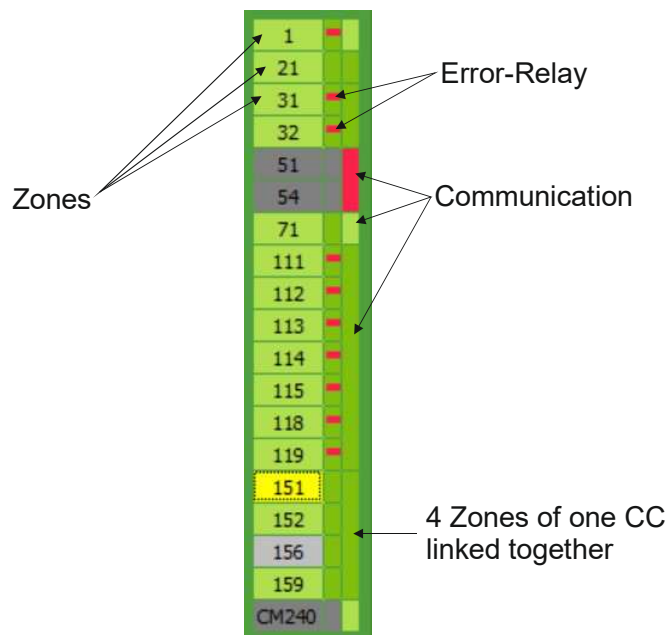
The RT-Win4 sidebar provides several functions:

3.4.1. The background of the sidebar

The background is green if the connection to the host is available. If the connection gets lost it turns red.



3.4.2. System-State



The system-status has three columns:

1. Zones:
All connected Zones are listed here. The colour of the zone represents its status:

light green	-	Standby
dark green	-	Run
light gray	-	Stop
aqua	-	Freeze
yellow	-	Boot / Solver
orange	-	Alarm
red	-	STOP on Error
dark gray	-	unknown / wait for first status-message
2. Error-Relay:
Each zone has 4 error-relays. If the relays are active the according section of the sidebar turns red.
3. Communication:
If the RT-Win4-Host has connected to a CC the according section of the third column turns from red to green. If there is no traffic between CC and RT-Win4 it stays light green. If there are messages received from the CC it turns to dark green.
A single CC could manage up to 9 zones. The communication-display links together all zones of this CC (e.g.: Zone 151, 152, 156 and 159 belong to one CC).

Clicking on the rectangle of a zone will open a window with detailed information about this zone.

System-State [X]

Zone: 115 [Event-Display] [FCC-Display]

Zone State: msg/s (Ma.)
Standby 0

Error Nr.: Error:
28 Network: Neighbor Error

Alarm Nr.: Alarm:
0 OK

Error-Relays:

- Relay 1: Zone off ✓
- Relay 2: Device-Error ⚠
- Relay 3: Transport-Time too long ✓
- Relay 4: not used ✓

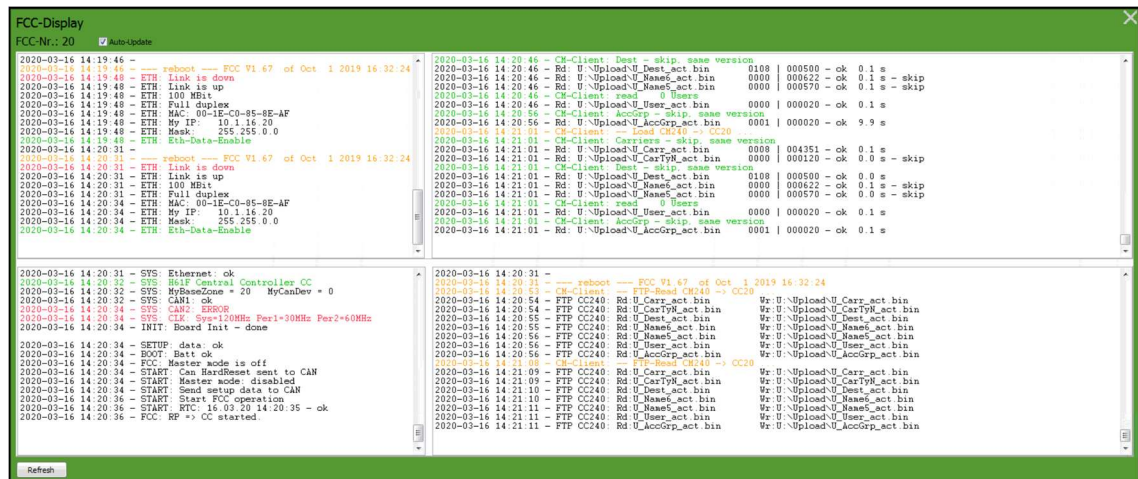
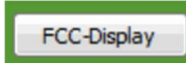
[STOP after Job] [STOP NOW!] [Start]

Zone list on the right: 1, 21, 31, 32, 51, 54, 71, 111, 112, 113, 114, 115, 118, 119, 151, 152, 156, 159, CM240

This window provides start-stop-options for the selected zone. These options are disabled if the user has not enough rights to start or stop a zone (see user-rights).
"STOP after job" will stop the zone after all carriers have left the zone.
"STOP NOW!" will stop the zone immediately. The transport will not be continued later! So the user has to take care about left over carriers in the system.
"Start" will switch the zone back to standby.

3.4.3. FCC-Display

Each FCC sends display data to RT-Win4. This data is displayed in the FCC-Display window. Click the "FCC Display" button in the System-State-Window to open the window.

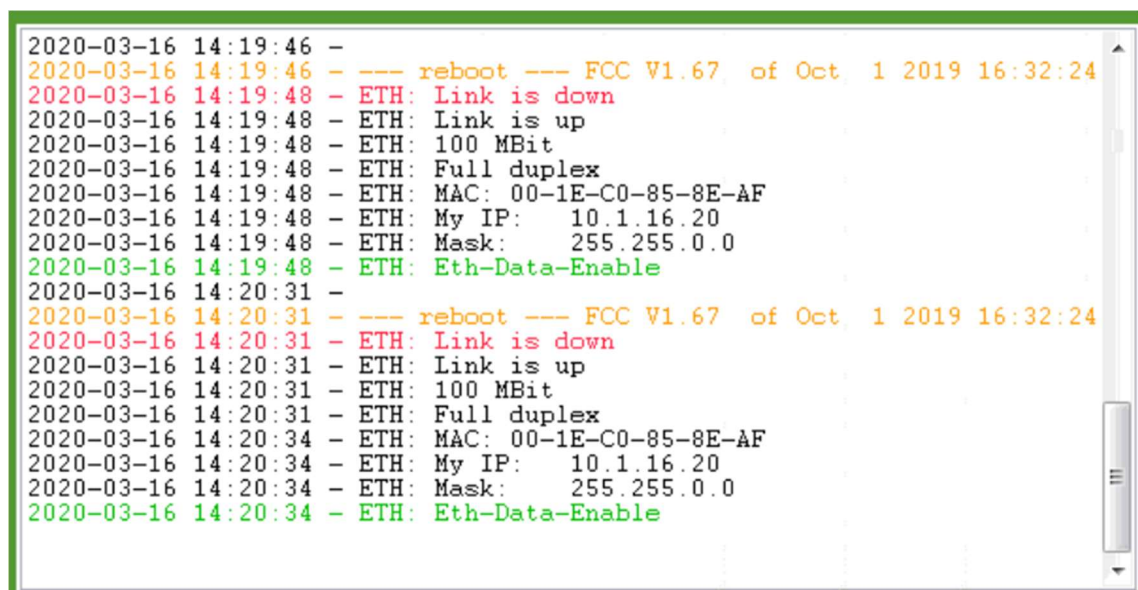


RT-Win4 will select the FCC that controls the zone selected in "System-State":



The FCC-Display is split up into four screens:

The upper-left Screen shows information regarding the Ethernet-Connection.



The bottom-left Screen shows general information regarding system, CAN-Bus, USB-Stick,...

```
2020-03-16 14:20:31 - SYS: Ethernet: ok
2020-03-16 14:20:32 - SYS: H61F Central Controller CC
2020-03-16 14:20:32 - SYS: MyBaseZone = 20 MyCanDev = 0
2020-03-16 14:20:32 - SYS: CAN1: ok
2020-03-16 14:20:34 - SYS: CAN2: ERROR
2020-03-16 14:20:34 - SYS: CLK: Sys=120MHz Per1=30MHz Per2=60MHz
2020-03-16 14:20:34 - INIT: Board Init - done

2020-03-16 14:20:34 - SETUP: data: ok
2020-03-16 14:20:34 - BOOT: Batt ok
2020-03-16 14:20:34 - FCC: Master mode is off
2020-03-16 14:20:34 - START: Can HardReset sent to CAN
2020-03-16 14:20:34 - START: Master mode: disabled
2020-03-16 14:20:34 - START: Send setup data to CAN
2020-03-16 14:20:36 - START: Start FCC operation
2020-03-16 14:20:36 - START: RTC: 16.03.20 14:20:35 - ok
2020-03-16 14:20:36 - FCC: RP => CC started.
```

The upper-right Screen shows information regarding read-processes of the FCC.

```
2020-03-16 14:20:46 - CM-Client: Dest - skip, same version
2020-03-16 14:20:46 - Rd: U:\Upload\U_Name5_act.bin 0108 000500 - ok 0.1 s
2020-03-16 14:20:46 - Rd: U:\Upload\U_Name6_act.bin 0000 000622 - ok 0.1 s - skip
2020-03-16 14:20:46 - Rd: U:\Upload\U_Name5_act.bin 0000 000570 - ok 0.1 s - skip
2020-03-16 14:20:46 - CM-Client: read 0 Users
2020-03-16 14:20:46 - Rd: U:\Upload\U_User_act.bin 0000 000020 - ok 0.1 s
2020-03-16 14:20:56 - CM-Client: AccGrp - skip, same version
2020-03-16 14:20:56 - Rd: U:\Upload\U_AccGrp_act.bin 0001 000020 - ok 9.9 s
2020-03-16 14:21:01 - CM-Client: Load CH240 -> CC20
2020-03-16 14:21:01 - CM-Client: Carriers - skip, same version
2020-03-16 14:21:01 - Rd: U:\Upload\U_Carr_act.bin 0008 004351 - ok 0.1 s
2020-03-16 14:21:01 - Rd: U:\Upload\U_CarTyM_act.bin 0000 000120 - ok 0.0 s - skip
2020-03-16 14:21:01 - CM-Client: Dest - skip, same version
2020-03-16 14:21:01 - Rd: U:\Upload\U_Name5_act.bin 0108 000500 - ok 0.0 s
2020-03-16 14:21:01 - Rd: U:\Upload\U_Name6_act.bin 0000 000622 - ok 0.1 s - skip
2020-03-16 14:21:01 - Rd: U:\Upload\U_Name5_act.bin 0000 000570 - ok 0.0 s - skip
2020-03-16 14:21:01 - CM-Client: read 0 Users
2020-03-16 14:21:01 - Rd: U:\Upload\U_User_act.bin 0000 000020 - ok 0.1 s
2020-03-16 14:21:01 - CM-Client: AccGrp - skip, same version
2020-03-16 14:21:01 - Rd: U:\Upload\U_AccGrp_act.bin 0001 000020 - ok 0.1 s
```

The bottom-right Screen shows information about write-processes of the FCC.

```
2020-03-16 14:20:56 - FTP CC240: Rd: U_Name5_act.bin Wr: U:\Upload\U_Name5_act.bin
2020-03-16 14:20:56 - FTP CC240: Rd: U_User_act.bin Wr: U:\Upload\U_User_act.bin
2020-03-16 14:20:56 - FTP CC240: Rd: U_AccGrp_act.bin Wr: U:\Upload\U_AccGrp_act.bin
2020-03-16 14:21:08 - CM-Client: Load CH240 -> CC20
2020-03-16 14:21:09 - FTP CC240: Rd: U_Carr_act.bin Wr: U:\Upload\U_Carr_act.bin
2020-03-16 14:21:09 - FTP CC240: Rd: U_CarTyM_act.bin Wr: U:\Upload\U_CarTyM_act.bin
2020-03-16 14:21:10 - FTP CC240: Rd: U_Name5_act.bin Wr: U:\Upload\U_Name5_act.bin
2020-03-16 14:21:10 - FTP CC240: Rd: U_Name6_act.bin Wr: U:\Upload\U_Name6_act.bin
2020-03-16 14:21:11 - FTP CC240: Rd: U_Name5_act.bin Wr: U:\Upload\U_Name5_act.bin
2020-03-16 14:21:11 - FTP CC240: Rd: U_User_act.bin Wr: U:\Upload\U_User_act.bin
2020-03-16 14:21:11 - FTP CC240: Rd: U_AccGrp_act.bin Wr: U:\Upload\U_AccGrp_act.bin
2020-03-16 14:28:04 - Menu -> Save Setup start
2020-03-16 14:28:04 - Save: Sort destin ..
2020-03-16 14:28:05 - Save: Chk data ..
2020-03-16 14:28:05 - Save: Save USB ..
2020-03-16 14:28:12 - Wr: U:\Setup\Setup.bin | Old=0142 asm no-hd dt-diff -> new=0143 131072 B 0.4 s
2020-03-16 14:28:12 - Save: Save USB done
```

Each of the four screens stores up to 1000 lines. When "Auto-Update" is enabled the screens will scroll to the bottom-line if a new line is received even if the user has scrolled up. A click on one of the screens or on "Auto-Update" disables the "Auto-Update"-feature.

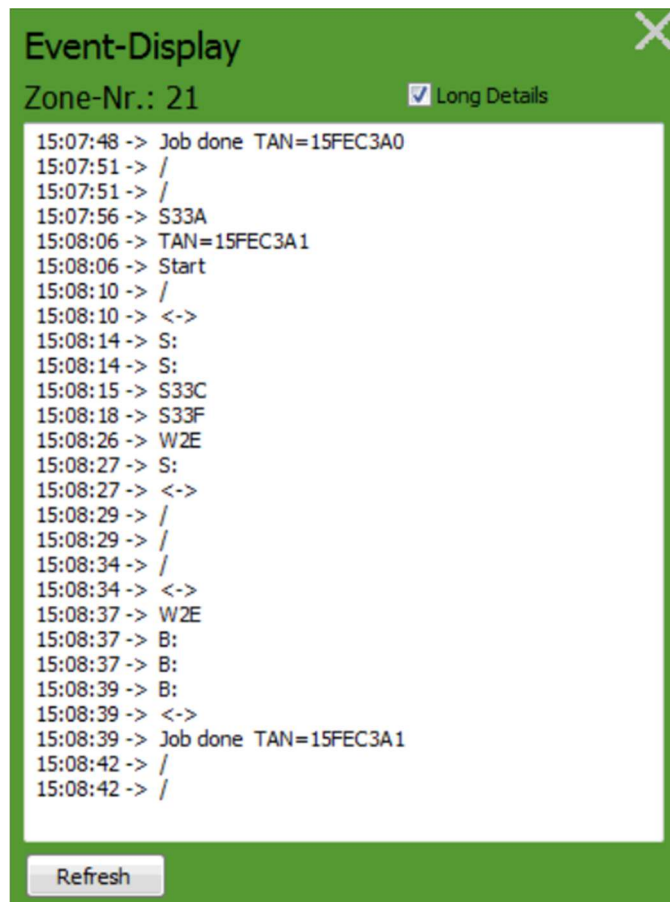
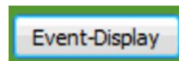
To reactivate "Auto-Update" click on "Refresh" or "Auto-Update".



3.4.4. Event-Display

The Event-Display shows the last events of a zone. To open the Event-Display, click on the "Event-Display" button. The selected zone corresponds to the zone in the system status.

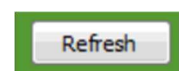
The events displayed are described in 4.1.5. Only events from the last hour are displayed.



To show or hide the time at the beginning of a line, enable or disable "Long Details".



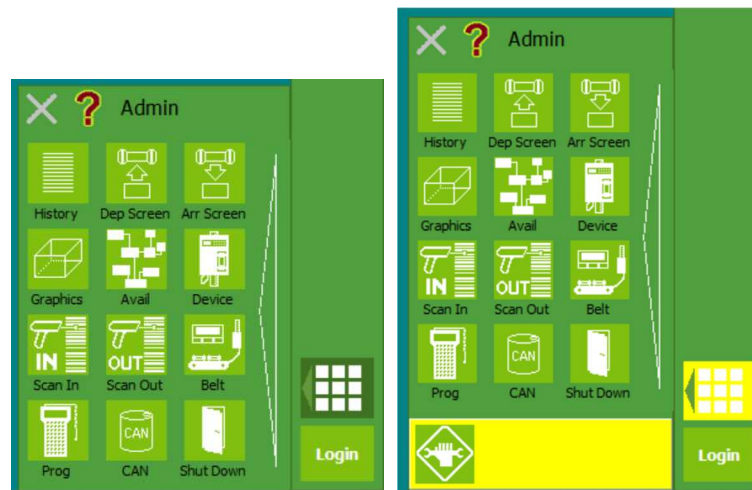
The "Refresh"-Button forces an update of the Event-Display.



3.4.5. Start Applications



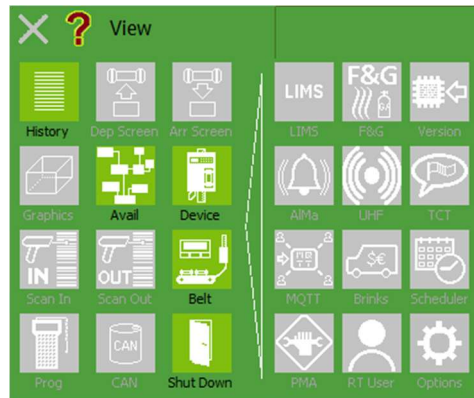
Click on the Applications-Icon to open App-Selection. The app icon is green by default. If there are messages in the PMA, for example, the icon turns yellow. If a message from an app is present, an additional button is displayed in the bottom area with the app concerned.



The icons of the basic apps are displayed first. By clicking on the arrow icon, all available apps are displayed.



To open an app click on the according button. If the actual user has only limited access only available apps are green. Not available apps are gray.



In the upper left corner of the actual username is displayed (e.g. "View").

Click on "?" to open the version-info of RT-Win4-Client.



Use "Shut Down" to close RT-Win4-Client and its apps.



Before closing RT-Win4 there will be a request. Click "OK" to close RT-Win4-Client. All opened Apps will be closed, too.

3.4.6. Login



To change the actual user click on "Login". Use the dialogs to enter new username (Login) and password.

If the new login is not valid the default login from "Options" will be used. After changing the login the user rights will be updated. Features of apps which depend on user rights will be enabled or disabled. If the user has no user rights to use an already opened app this app will be closed.

To administrate users and their rights use the "RT-Win4 User" App (see 4.5). From version V4.16.0.xx, the Windows login can also be used as the default login. A corresponding user must be created in the "RT-Win4 User" app.

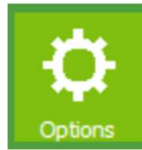
Note:

The password "admin" is created for the user "Admin" during a new installation.

If the number of allowed RT-Win4 clients has been exceeded, a license violation is displayed after login and opening apps is no longer possible.



3.4.7. Options



Use “Options” to change the default settings of RT-Win4-Client.

Host-Name:

If the IP-address of RT-Win4-Host has changed, enter new host-address here.

Port:

If the Port of RT-Win4-Host has changed, enter new port here.

RT-Win4 Client ID:

Indicates the RT-Win4 Client ID. This ID uniquely identifies the client to RT-Win4 Host when using dynamic IP addresses.

Language / Alt. Language:

Select your language here. If the texts are not available in the chosen language the alternative language will be used. If both languages are not found the text will be displayed in English.

History Age-Alert:

The history can add a warning note for transports with a too long transport duration. Here you set the threshold value for the duration of the transport in minutes from which the note is to be displayed.

The default value is 15 minutes. The value 0 turns the function off.

Use Windows login as default login:

If this function is activated, the current Windows login name is used as the default login. To do this, the Windows login name must be defined with the corresponding settings in the RT-Win4 user administration. The input fields for the default login and password are deactivated and greyed out.

Default Login:

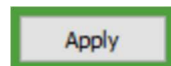
Enter a user-name here which should be used after program-(re)start, using an invalid login or wrong password or if the user has timed out.

Password (Default Login):

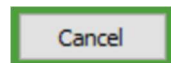
Enter password for default login here.

App Auto-Start:

Select apps to be started automatically after starting RT-Win4-Client. The auto-start will not be triggered when changing login.



Click on "Apply" to confirm changes and close "options". New default settings will be used when starting RT-Win4-Client next time.



Click on "Cancel" to discard changes and close "Options".

4. Applications

Due to its modular concept there are several basic, additional and customer-specific apps available.

Basic Apps:

- History
- Programmer
- Device State
- Graphics

Additional Apps:

- RT-Win4 Users
- TCT (Text-Customization-Tool)
- Desk-App
- SLC (Shift-Lead-Console)
- PMA (Prophylactic Maintenance App)
- ALM (Alarm Manager)
- Arrive Screen
- Departure Screen
- Scan In
- Scan Out
- Scheduler
- UHF-RFID
- MQTT
- Brinks

Customer-Specific Apps:

- F&G (Fire & Gas Alarms)
- LIMS (Laboratory Information and Management System)

Each App connects via the RT-Win4 Host (Thekla) to its specific host. If the connection to Thekla is not available the background color of the App will change to red otherwise it will be green. If the specific host is not available the communication indicator is then "off".

Thekla is available (green background) and specific host is connected (indicator = "on"):

 Host-Connection

Thekla and specific host are not available (red and indicator = "off"):

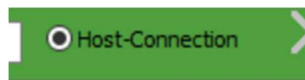
 Host-Connection

4.1. History

The history application shows all recorded jobs and events that occurred during a transport. The two main elements are the transport list (1) and the “Details” (2).

[illegible]

Size of Grid and Event-Display could be changed by dragging with mouse.
The background of this App will turn from red to green when a connection to RT-Win4-Host (Thekla) is established. If the History-Host is available to send data “Host-Connection” will be active:



4.1.1. General Use

The History shows all recorded transports – actual ones (still in system) and completed ones. If a carrier is transported across several zones each job in a zone will create a new line. Prior lines who belong to this transport are minimized. The status of each job is displayed in “Message”-Column. Colors will change according to the comments in this column.

	OK! Transport complete
Y	!Y! - Stop by User! Job done Recording of Job not complete!
D	!D! - Sender-Error! Transport complete
	OK! Transport complete
	OK! Transport complete

Examples:

Comment:	Colour:	Explanation:
Send-Request	white	a Send-Request was registered in Central Control
Send-Request Canceled!	white	Send-Request was canceled before departure. (Carrier was removed from Station)
OK!	Light blue	No error-message during this job.
Transport complete	green	Carrier has left the system.
Job done	light green	Part of transport finished in this zone. Carrier is still in system, waiting for next step. (Waiting in Transfer.)
CID >>> new TAN		Transport is not complete but the Carrier was seen in another transport in the meantime and continues with new TAN.
Processed		The content of this Transport has been marked as “processed” by the “Scan Out” App or in the Arrive Screen.

Error-Messages are coloured according to their significance from yellow to red.

If a transport creates a new line in the list (a new job has started) prior lines of this transport are minimized. It is possible to extract all transports or only one transport.

Meaning of columns:

Jobnr.	Sequential Job-counter
Zone	Zone of this job.
TAN	TransActionNumber of this transport and number of jobs Done during this transport
Sender	Destination-Code of sender
Name	Name of a Sender- / Destination-Code
CID 0 / 1	ID of the transported carrier
UID 0 / 1	User number of user who sent or received carrier If an alias is stored in the user list, it is displayed instead of the user number.
Dialed receiver	This Destination was dialed by user
Mapped Dest.	CC has mapped dialed destination to this destination
Destination	Destination of this transport
Redirection	System delivered carrier here
Local Device	Device-Number of sender / receiver in local zone.
Global Device	Zone- and Device-Number of origin and final destination
Request Time	At this time user inserted carrier in sending-station
Start Time	At this time system started to handle this job
End Time	Time when job / Transport is done.
Error	Error-Code in this or one of the prior jobs
Carrier-Type	Shows the number of the Carrier-Type of this Transport
Content	Shows how many pieces of content have been checked In and out with the Scan-Apps. When using disposable transport bags with UHF transponder identification, the number of Bag-RFIDs read on departure and arrival is displayed here.



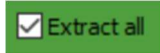
Column	Width	Show
Job-Nr.	60	☒
TAN	70	☒
Count	50	☒
Zone	40	☒
	20	☒
Origin	60	☒
Name	110	☒
local Device	55	☒
global Device	55	☒
CID0	55	☒
UID0	55	☐
	25	☒
Dialed Dest.	60	☒
Name	130	☒
Mapped Dest.	60	☒
Name	130	☐
Destination	60	☐
Name	130	☐
Redirection	60	☐
Name	130	☐
local Device	55	☒
global Device	55	☒
CID1	55	☒
UID1	55	☐
	10	☒
Request-Time	115	☒
Record Start	115	☒
Record End	115	☒
Error	30	☒
Message	245	☒
Err-Dev	70	☐
Send-Back-reason	60	☐
Prio	60	☒
Speed	60	☒
Slot	30	☒
Run-State	35	☐
Station-State	35	☐
Job-Type	80	☒
Carrier-Type	50	☒
Content	50	☒

Cancel OK

Columns of transport-list can be resized or switched on and off in column-settings-menu.

4.1.2. Extract all transports:

To extract all transports select „Extract all “.



Extract a single Transport:

A single Transport is extracted by a right click on the list.

All rows who belong to the transport are marked yellow. The final job (carrier left system) is marked orange. Only rows with same TAN as selected row (magenta) are marked.

[illegible]

4.1.3. Navigation



Page up / down. (Hotkey: PgUp / PgDown)



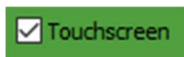
Line up / down. (Hotkey: CsrUp / CsrDown)



go to top of transport-list / go to last transport. (Hotkey: Pos1 / End)



☒ Auto-Update select "Auto-Update" to update continuously the transport-grid.
(Hotkex: shift+End)



Touchscreen mode enlarges navigation icons for easier operation.

4.1.4. Filter:



Use filters to reduce the number of displayed transports or to find a dedicated transport. It is possible to combine several filters. The check-box enables or disables the filters.

Click on the filter-icon to open the filter menu.

The Filter-Menu provides various methods to reduce transport-data in order to find specific transports. The individual filters are AND-/OR-linked depending on the setting in the "Combination" selection.

Click on "OK" to confirm and activate filter. To (de-) activate an existing filter use the checkbox beside the filter-icon.



Available Filters:

Zone:

There are three zone-selectors: “Send”, “Passthrough” and “Receive”. Select one or more zones in each of them. The selected zones of each column are always “OR-linked”. Activate the columns by the check-box on top.

When “Send” is activated only transports which have started in the selected zones will be displayed. In a multi-zone-system some transports could pass through zones that are not the send- or receive-zone. When activating “Pass Through” the filter will search for those zones. The “Receive”-column works analogously to the “Send”-column but with the send-zone.

Devices:

The “Device”-filter works analogously to the “Zone”-filter. But in this filter devices are selected instead of zones. It is recommended to activate transfer-devices only in the “Passthrough”-selection. In each selector up to 32 devices could be activated. The devices of each selector are OR-linked.

Destinations:

Dest.-N	Origin	Dialed	Mappe	Dest.	Redir.
FFFFFF	☐	☐	☐	☐	☐
FFFFFF	☐	☐	☐	☐	☐
FFFFFF	☐	☐	☐	☐	☐
FFFFFF	☐	☐	☐	☐	☐
FFFFFF	☐	☐	☐	☐	☐
FFFFFF	☐	☐	☐	☐	☐
FFFFFF	☐	☐	☐	☐	☐
FFFFFF	☐	☐	☐	☐	☐

The “Destination”-filter is used to filter on up to 32 destinations. Activate the filter on the corresponding columns of the transport-list. The filters are combined according to the setting in “Combination”. To (de-) activate the complete filter without changing the individual settings of each entry use “Filter On”.

Time:

This filter is used to select a certain time-range. Use the radio-buttons to select the time setting the filter should use.

Others:

Use this filter to search for transports with Errors or certain CIDs, UIDs, Priorities or TANs. The filters are combined according to the selection in “Combination”. To (de-) activate the filters use the checkboxes.

When using the CID- or UID-filter all digits must be entered (e.g. 0015).

4.1.5. Details

4.1.5.1. Detailed Display of the Transport

The Details- Display shows the most important details of this transport and all events like blower-status and tube-switches of a selected job.

Cursor:

The selected row is marked in 4th column by a magenta rectangle:

128279	HOFFC58	2	2156	76	霍夫心磁粉	576	2156.576	0115	→	77	422 right 2156	77	422 right 2156	77	422 right 2156	577	2156.577	FFFFFFFF	05.09.2019 10:35:53	05.09.2019 10:36:25	80	Transport complete
128281	HOFFC58	2	2156	76	霍夫心磁粉	576	2156.576	0124	→	77	422 right 2156	77	422 right 2156	77	422 right 2156	577	2156.577	FFFFFFFF	05.09.2019 10:46:46	05.09.2019 10:46:52	80	Transport complete
128283	HOFFC58	2	2156	76	霍夫心磁粉	576	2156.576	0124	→	77	422 right 2156	77	422 right 2156	77	422 right 2156	577	2156.577	FFFFFFFF	05.09.2019 11:05:20	05.09.2019 11:06:03	80	Transport complete

By clicking in the corresponding line, the cursor jumps to the respective line and the associated data is displayed.

Details:

Zone 156
Job-Nr.: 147245 TAN: 76FFC7AF
Origin: 118097 Destination: 76

Request-Time: 16.02.2022 14:34:04
Record Start: 16.02.2022 14:37:48
Record End: 16.02.2022 14:38:58
Transportation Time: 00:04:53

Inner Carrier ID: 5203
Inner Carrier Lid ID: 5102

14:37:48->Start
14:37:51-><->
14:37:54->S: 14:37:57->S73B 14:37:59->W72E
14:37:59-><-> 14:38:02->/ 14:38:03->S71C
14:38:08-><-> 14:38:11->S71C
14:38:11->B: 14:38:14->W72E 14:38:14->W72B 14:38:46
->W74E 14:38:50->S77C
14:38:50-><-> 14:38:53->/
14:38:58->Station received carrier
14:38:58->Transport complete TAN=76FFC7AF
14:38:58->Job done TAN=76FFC7AF

In the first lines, basic data of the transport is displayed for reference to the transport list. If a UHF reading system for inner carriers is in operation, the corresponding data is also displayed here.

The display is updated periodically. To force an update click on “refresh”:



The option „long Details“ will add a time-stamp to each event on details-display.

↺
☒ Long Details

Zone 32
Job-Nr.: 128471 TAN: 76FFC572
Origin: 95 Destination: 3

Request-Time: 02.10.2019 15:20:17
Record Start: 02.10.2019 15:22:55
Record End: 02.10.2019 15:23:18
Transportation Time: 00:03:01

15:22:55->Start
15:22:57->S20D 15:22:57->S22F 15:22:58->S20E 15:22:58->S22F 15:22:58->/
15:22:58->B: 15:22:59->S20C
15:23:01->Transport complete TAN=76FFC571
15:23:01->Job done TAN=76FFC571
15:23:05->S20A 15:23:13->S22G 15:23:17->W11E 15:23:17->W21E 15:23:18->S24B
15:23:18->Station received carrier
15:23:18->/
15:23:18->Job done TAN=76FFC572

The following shortcuts are used in details-display:

B: blow
S: suck
/ blower stop
<-> Air-Diverter moves
S54C Tube-switch C of Station S54
W52E Tube-switch E of diverter W52

If a tube-switch is passed several times a “#” and the pass-count are attached to the tube-switch-symbol.

e.g.: W52E#2

4.1.5.2. Details of the Tube System User

Clicking on a cell in the columns "UID0" or "UID1" opens an additional window with information on the tube system user.

UID0

F.N. -

UID1

User Details

User-Nr.:

User-Name (Login):

26

FloN

Full Name:

Alias:

Florence Nightingale

F.N.

Phone-Number:

47110815

Department:

ICU

Email:

f.nightingale@hospital.org

Comment:

Lady with the Lamp

If the user is not listed in the user list, "---" is displayed in the UID column. When clicking on a cell with an unknown user, a window appears with a corresponding message.

Unknown User

OK

If the user has no rights to view the user details, a window appears with the message "Access denied".

Access denied

OK

4.1.6. Destination Names Editor



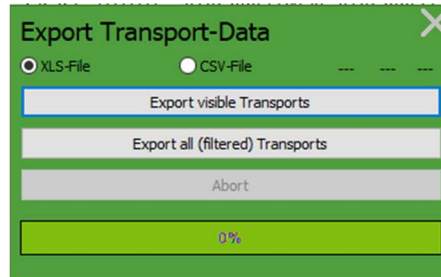
Destination-Names-Editor		
Index	Destination Nr.	Destination Name
1	0	Leer-TBH-Lesung
2	3	Lab 3 Group 中国
3	5	Lab 3 Send 中山
4	6	Purple Station CAL3
5	22	CAL3 Belt Right
6	23	CAL3 Belt Middle
7	24	CAL3 Belt Left
8	71	472 of Z156
9	76	富站心库科
10	77	422 right Z156
11	78	455 Tripple-Send left
12	79	455 Tripple-Send right
13	95	Test CN: 富站心库科
14	96	组织学实验室
15	156	OB11 Group
16	1013	Servicestation Z1
17	1031	SRS LAB 1
Cancel OK		

This feature is available for users with edit-rights, only. (e.g. Admin)
Use the Destination-Names-Editor to enter, modify or delete destination-name. The names in this list are displayed in the name-columns of the Transport Viewer.
To enter a new destination use the empty bottom line of the grid which is marked with "*" in the Index-Column.

41	44054	Receive Belt LAB 4
*		

If a destination number is entered double only the first one is used and will be saved.
Therefore it is recommended to choose unique destination numbers. Destination Names may be used double in case of need.
Changes in the destination list affect all RT-Win4 Clients.

4.1.7. Export Transport Data



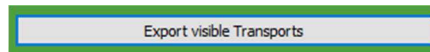
With this function the data displayed in the transport list can be exported. Two file formats are available:

- XLS (EXCEL)
- CSV (Comma Separated Values)

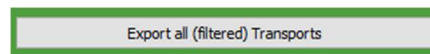
The desired file format is selected by the selector switches at the top of the window:



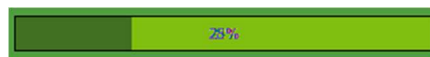
By clicking the "Export visible Transports" button, only the transports currently visible in the window are exported.



If the button "Export all (filtered) Transports" is clicked, all transports corresponding to the current filter are exported in the selected file format. Depending on the amount of data to be exported, this can take several minutes. The data is first transferred to the local app.



The progress is shown in the bar at the bottom of the window.



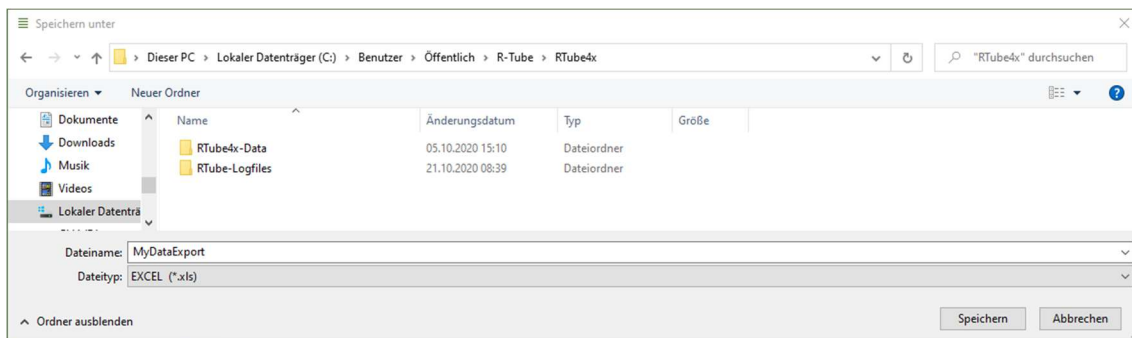
If the transfer process takes too long, it can be stopped with the " Abort " button.



A security question appears asking if you really want to abort the data export.



When the data transfer is finished, a dialog for selecting the storage location and the file name appears.



After confirming the selection with "Save", the data is written to the selected file. This process may take several minutes again. During this time it may happen that the app does not react. There is no display in the progress bar.

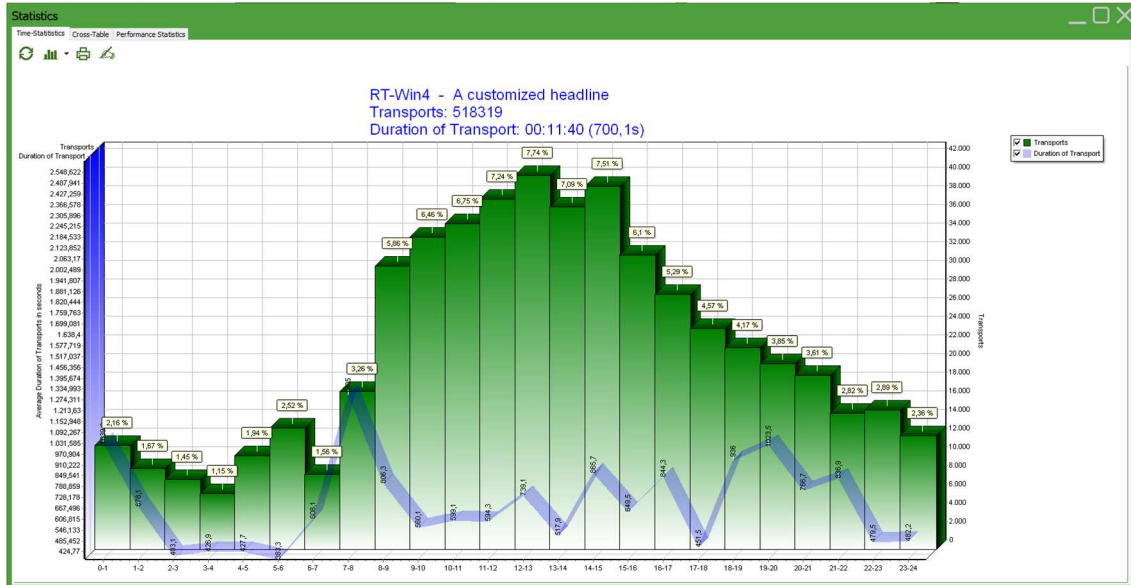
Notes:

- The RT-Win4 Host (Thekla) can hold more than 4 million data records with single trips (two or more single trips form a transport). Accordingly, the export can take several minutes.
- The XLS export can only create files with a maximum of 65535 lines. If the size of the data to be exported is larger, you will be asked whether the export should be performed in CSV format.



- The saving process in XLS format takes significantly more time than the same process in CSV format. For large quantities of data, the CSV format is therefore preferable.
- Only the content of the transport list as it is currently displayed is exported. The details in the detail view are not exported.

4.1.8. Statistics Functions



4.1.8.1. General

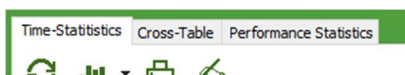
The statistics functions are opened by clicking on the Statistics button.



RT-Win4 provides three types of statistics:

- Time-Statistics
- Cross-Table
- Performance Statistics

The individual statistics types are selected via the tabs in the statistics window.



In the upper left corner of each tab there are buttons for additional functions:



Starts a recalculation of the current statistics.



Select the display mode or display additional statistics (in performance statistics).



Opens a printer dialog for printing the current statistic.



Opens a dialog to change the customized headline.



Opens a dialog for saving the displayed tables in Excel or CSV format.

4.1.8.2. Time-Statistics

The time statistics generates a bar chart of the number of transports in a given time period. In addition, a diagram of the transport duration in this time period is displayed. All transports currently displayed in the history are used for the time statistics (set filters are taken into account).

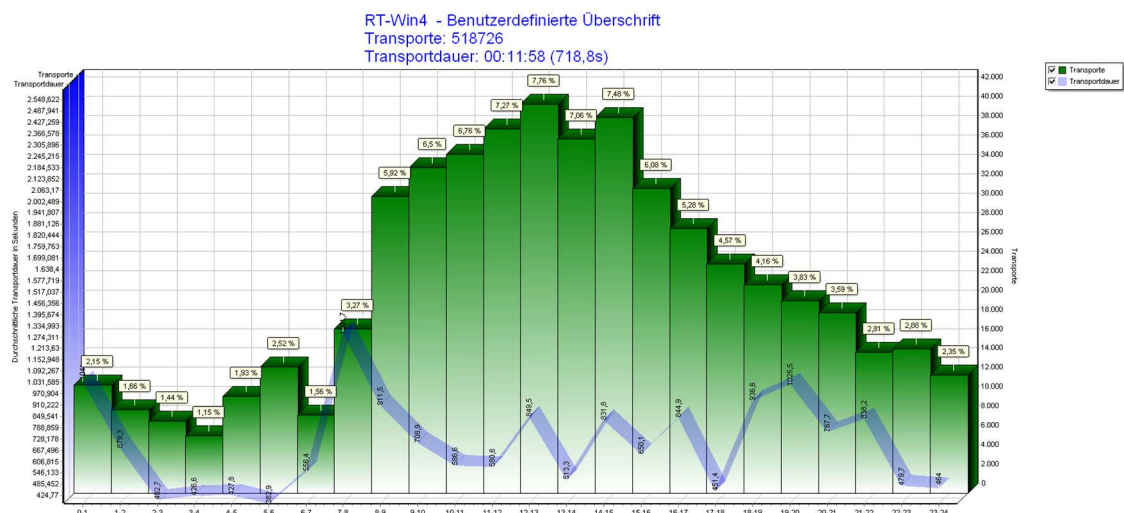
The following values are available for selection for the time axis:

- 24h
- Week-Day
- Per Week
- Per Month
- Per Day of Year

Note: For the settings "Per week", "Per month" and "Per day of year" only the last 365 days are taken into account.

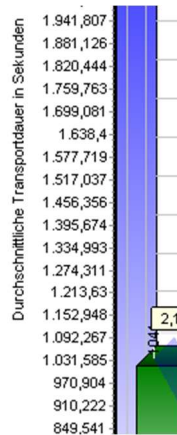


Starts a recalculation of the time statistics.

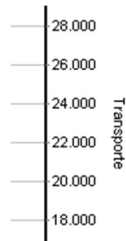


A customized headline can be displayed above the diagram. In addition, the total number of underlying transports and their average transport duration are displayed.

On the left Y-axis, the transport duration is indicated in seconds.



On the right Y-axis, the number of transports is indicated.



In the legend on the right side the charts can be shown and hidden.



4.1.8.3. Cross-Table

The cross table shows the number of transports from the origin to the destination. As in the time statistics, all transports currently displayed in the history are used. Active filters are taken into account. Column and row headers display destination number or device number and total transports. Columns show the sender. Rows represent the recipient. A user-defined heading can be inserted in the top row.

RT-Win4 - A customized headline																										
Empf./Abs.	518726	21	30	32	34	36	38	42	44	46	55	57	61	62	64	71	72	74	76	77	79	82	89	91	92	95
Gesamt	518726	68604	6020	4603	3428	4998	4013	88109	13017	14213	57034	18074	0	6678	5768	193423	5539	5018	5977	1	6257	261	0	193	0	1
0	5437	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	1
21	145	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	-><-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-><-	0
36	0	0	0	0	0	-><-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	-><-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	9	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	11	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	4	0	1	0	0	0	0	1	0	0	0	1	-><-	0	0	1	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	-><-	0	0	0	0	0	0	0	0	0	0	0	0
64	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
71	435	0	0	0	0	0	0	0	0	0	0	0	0	0	0	435	0	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-><-	0	0	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-><-	-><-	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-><-	0	0	0	0	0	0	0
77	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-><-	0	0	0	0	0	0
79	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0
82	116	17	3	0	0	0	0	0	3	34	48	0	0	0	0	0	0	0	0	0	2	5	0	3	0	0
89	16	0	0	0	0	0	0	0	0	0	14	0	0	0	0	1	0	0	0	0	1	0	-><-	0	0	0
91	49	2	0	0	0	0	0	2	1	3	2	0	0	0	0	0	0	0	0	0	5	20	0	1	0	0
92	19	10	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4	0	1	-><-	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-><-	0
300	68943	407	1388	337	348	1030	322	5700	1219	2795	11242	11239	0	1727	791	26404	563	682	1068	0	298	9	0	23	0	0
301	37	7	12	0	0	0	0	0	0	3	0	1	0	1	2	2	0	0	0	0	4	0	0	0	0	0
330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
332	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	35872	3322	102	4	15	28	25	73	217	223	93	686	0	25	23	36555	28	18	20	0	252	33	0	17	0	0
Σ	68604	6020	4603	3428	4998	4013	88109	13017	14213	57034	18074	0	6678	5768	193423	5539	5018	5977	1	6257	261	0	193	0	1	0

4.1.8.4. Performance Statistics

The performance statistics gives an overview on all connected zones. It is usually built on the data of one month (a different period can be selected by changing Start-Date and End-Date). It is possible to have an extra list of values for the peak-time of the system (adjustable by changing Peak-Time-Start and Peak-Time-End). The filters from the History are not used in this statistics.

Time-Statistics - Cross-Table - Performance Statistics

RT-Win4 - A customized headline

Start Date: 01.01.2021 End Date: 31.01.2021 Total Time [days]: 31 Peak-Time Start: 10:00:00 Peak-Time End: 15:00:00 Display: ☒ Total ☐ Peak

Zone	Transporte (gesamt)	%	Durchschnitt IL Transport	Durchschnitt IL Wartezeit	Transporte (okal)	%	Durchschnitt IL Transport	Durchschnitt IL Wartezeit	Transporte (-> Nachbar)	%	Durchschnitt IL Transport	Durchschnitt IL Wartezeit	Transporte (Umschlag ->)	%	Durchschnitt IL Transport	Durchschnitt IL Wartezeit	Jobs	%	Benutzerfehler	%	Zeit Benutzerfehler	Transportdauer	Wartezeit	Auslastung
Gesamt	2052 (*)	100,00%	00:05:42	00:00:52	0	100,00%			2052	100,00%	00:05:42	00:00:52	2052	100,00%	00:05:42	00:00:52	15693	100,00%	7	0,33%	03:40:56	19:03:11	30:37:18	8,10%
11																	3857	11,83%	0	0,00%	00:00:00			7,09%
12	284	6,79%	00:07:06	00:01:10	0	6,79%			284	100,00%	00:07:06	00:01:10	0	0,00%			286	1,84%	0	0,00%	01:01:56	33:40:24	05:33:24	5,75%
13																	304	1,94%			00:00:00			1,76%
14	303	7,24%	00:05:24	00:00:27	0	7,24%			0	0,00%			303	100,00%	00:05:24	00:00:27	597	3,80%	0	0,00%	00:25:35	27:18:04	02:20:47	6,36%
15	232	5,54%	00:03:51	00:00:33	0	5,54%			0	0,00%			232	100,00%	00:03:51	00:00:33	462	2,94%	0	0,00%	00:00:00	14:56:36	02:08:00	5,87%
18	4	0,10%	00:12:46	00:01:18	0	0,10%			4	100,00%	00:12:46	00:01:18	0	0,00%			4	0,03%	0	0,00%	00:00:00	00:51:05	00:05:12	0,01%
19	259	6,19%	00:06:28	00:00:59	0	6,19%			259	100,00%	00:06:28	00:00:59	0	0,00%			256	1,63%	2	0,77%	00:00:00	27:58:56	04:17:11	2,66%
21	2	0,05%	00:05:25	00:00:52	0	0,05%			2	100,00%	00:05:25	00:00:52	0	0,00%			3705	23,61%	0	0,00%	00:00:00	00:10:50	00:01:44	15,29%
22																	390	2,49%			00:00:00			13,63%
23																	400	2,55%			00:02:01			14,17%
24	16	0,38%	00:03:41	00:00:45	0	0,38%			16	100,00%	00:03:41	00:00:45	0	0,00%			16	0,10%	0	0,00%	00:36:04	00:59:02	00:12:15	0,45%
25																	20	0,04%			00:00:00			0,19%
26	10	0,24%	00:04:07	00:01:06	0	0,24%			0	0,00%			10	100,00%	00:04:07	00:01:06	20	0,13%	0	0,00%	00:00:00	00:41:16	00:11:01	0,55%
27	733	17,52%	00:05:17	00:00:41	0	17,52%			733	100,00%	00:05:17	00:00:41	0	0,00%			731	4,66%	2	0,27%	00:00:00	64:43:28	08:22:34	32,98%
28	766	18,31%	00:06:01	00:01:04	0	18,31%			0	0,00%			766	100,00%	00:06:01	00:01:04	1490	9,49%	0	0,00%	00:00:00	76:56:36	13:44:23	41,69%
29	513	12,26%	00:05:25	00:00:58	0	12,26%			261	50,88%	00:04:58	00:00:57	252	49,12%	00:05:53	00:00:59	761	4,85%	0	0,00%	00:00:00	46:26:58	08:21:10	19,52%
31	2	0,05%	00:04:03	00:01:06	0	0,05%			2	100,00%	00:04:03	00:01:06	0	0,00%			1343	12,38%	0	0,00%	00:00:00	00:08:06	00:02:12	8,01%
32																	450	2,87%			00:00:00			6,94%
33																	453	2,89%			00:00:00			6,21%
34	73	1,74%	00:05:33	00:00:47	0	1,74%			73	100,00%	00:05:33	00:00:47	0	0,00%			74	0,47%	0	0,00%	00:00:00	06:40:24	00:57:28	1,79%
35	145	3,47%	00:06:24	00:00:56	0	3,47%			71	48,97%	00:07:50	00:00:56	74	51,03%	00:05:01	00:00:56	207	1,32%	0	0,00%	00:00:00	15:28:42	02:19:42	4,00%
36	281	6,72%	00:05:51	00:00:58	0	6,72%			142	50,53%	00:05:20	00:00:55	139	49,47%	00:06:22	00:01:01	418	2,66%	1	0,36%	00:00:00	27:24:20	04:13:47	4,43%
37	173	4,13%	00:04:53	00:00:47	0	4,13%			84	48,55%	00:05:46	00:00:56	89	51,45%	00:04:02	00:00:38	299	1,85%	0	0,00%	00:00:00	14:04:53	02:15:32	4,56%
38	85	2,03%	00:04:25	00:00:45	0	2,03%			42	49,41%	00:04:18	00:00:33	43	50,59%	00:04:32	00:00:57	124	0,79%	2	2,35%	00:06:33	06:15:49	01:04:43	3,30%
39	61	1,46%	00:05:33	00:00:25	0	1,46%			0	0,00%			61	100,00%	00:05:33	00:00:25	117	0,75%	0	0,00%	00:00:00	05:39:00	00:25:45	2,45%
131	119	2,84%	00:04:34	00:00:57	0	2,84%			119	100,00%	00:04:34	00:00:57	0	0,00%			117	0,75%	0	0,00%	01:48:44	09:04:50	01:54:50	3,64%
132	123	2,94%	00:09:01	00:01:11	0	2,94%			0	0,00%			123	100,00%	00:09:01	00:01:11	240	1,53%	0	0,00%	00:00:00	18:30:55	02:26:48	5,43%

Since very extensive data may be evaluated, the creation of these statistics can take several minutes. A progress bar is displayed during the calculation. Printing and other functions are not available during the calculation.

Performance Statistics

RT-Win4 - A customized headline

Start Date

01.01.2021

End Date

31.01.2021

Total Time [days]

31

Peak-Time Start

10:00:00

Peak-Time End

15:00:00

Display

Total

Peak

Wartezeit

Transport

Wartezeit

Nachbar

Transport

Wartezeit

->

Transport

Wartezeit

Ben

ler

The calculation can be canceled with . A confirmation prompt is displayed.

Berechnung abbrechen

OK Cancel

In systems with more than one zone usually a carrier passes several zones during its transport. Therefore a transport will be counted in several zones. There are four categories of transports counted:

1. All transports who start and/or end in this zone (total)
2. Transports who start and end in this zone (local)
3. Transports who start in this zone and end in another zone (-> neighbor)
4. Transports who start in another zone and end in this zone (neighbor ->)

Transports who pass through and do not start or end in this zone are not counted.

If a zone is designed for pass through only, it could happen that this zone has no transports but a lot of jobs.

Displayed columns and their meaning

Zone:

Shows the zone-number.

Possible Values:

Total: Shows the value for the whole system

1..254: Zones

Transports (total):

Transports found in the selected period which have started or arrived in this zone (category 1).

Note (*):

If a Transport starts in a zone and ends in another zone this transport is counted in both zones. The total-count of all zones ignores double-counts.

Note:

The following three columns relate to this column.

[Transports (total)] %:

Percentage of all transports in this zone based on all transports in system.

Note:

In the "Total"-row percentage of local transports and "neighbor" transports will be more than 100% because transports which leave a zone are counted double. (Percentage of local transports + Percentage of transports to neighbor = 100%)

[Transports (total)] Average Duration of Transport:

Average Transport time from 1st send-request to delivery. (HEH: ID12e)

This value is calculated over all transports of category 1.

[Transports (total)] Average Wait-Time:

Average time of transports (category 1) waiting for departure in send-station or transfer.

Transports (local):

Transports found in the selected period which have started and arrived in this zone (category 2).

Note:

The following three columns relate to this column.

[Transports (local)] %:

Percentage of local transports (category 2) based on all transports of this zone (category 1).

[Transports (local)] Average Duration of Transport:

Average Transport time from 1st send-request to delivery. (HEH: ID12e)

This value is calculated over all transports of category 2.

[Transports (local)] Average Wait-Time:

Average time of local transports (category 2) waiting for departure in send-station.

Transports (-> neighbor):

Transports found in the selected period which have started in this zone and arrived in another zone (category 3).

Note:

The following three columns relate to this column.

[Transports (-> neighbor)] %:

Percentage of transports to another zone (category 3) based on all transports of this zone (category 1).

[Transports (-> neighbor)] Average Duration of Transport:

Average Transport time from 1st send-request to delivery. (HEH: ID12e)

This value is calculated over all transports of category 3.

[Transports (-> neighbor)] Average Wait-Time:

Average time of transports to another zone (category 3) waiting for departure in send-station and transfer.

Transports (neighbor ->):

Transports found in the selected period which have started in another zone and arrived in this zone (category 4).

Note:

The following three columns relate to this column.

[Transports (neighbor ->)] %:

Percentage of transports from another zone (category 4) based on all transports of this zone (category 1).

[Transports (neighbor ->)] Average Duration of Transport:

Average Transport time from 1st send-request to delivery. (HEH: ID12e)

This value is calculated over all transports of category 4.

[Transports (neighbor ->)] Average Wait-Time:

Average time of transports from another zone (category 4) waiting for departure in send-station and transfer.

Jobs:

Jobs done in this zone.

Jobs %:

Percentage of jobs done in this zone based on all jobs in system.

User-Errors:

Number of Sender-errors or Timeouts found in this zone.

(When using plastic-bags for transport this value shows how many bags were not in good shape. -> HEH: ID11b)

User-Errors %:

Percentage of User-errors.

User-Error-Time:

Time lost while system was processing a user-error (HEH: ID11b)

Duration of Transport:

Total time of all transports from this zone.

Wait-Time:

Total time of carriers waiting for departure. (HEH: ID11f)

Busy-Rate:

Percentage of time zone was in use in relation to total time of period.
(HEH: ID12h)

Time in Service:

Time zone was in Service-Mode.

Availability:

Percentage of time system was ready to be used in relation to total time of period.

Stop after Error:

Number of stops after an error.

1st value: total number of stops.

2nd value: Stops after an user-error.

MTBF all Error-Stops:

Mean Time Between Failure calculated on all error-stops in the selected period.
(HEH: ID12a)

MTBF User Errors:

MTBF calculated on error-stops caused by an user-error. (HEH: ID12a)

MTBF other Errors:

MTBF calculated on error-stops not caused by an user-error. (HEH: ID12a)

Average Repair-Time:

Average time from zone on error-stop back to standby. (HEH: ID12c)

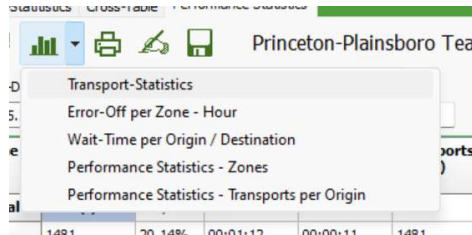
Blower ON-Time:

Time blower of this zone was running during the selected period. (HEH: ID11c)

Air-Diverter total Time:

Total time the air-diverter was moving during the selected period. (HEH: ID11c)

Transport Statistics:



This Menu will open an additional statistics showing each pair of sender-receiver that occurred in the selected period and how many carriers arrived during each hour of the day. (HEH: ID11a + ID11c)

Transport-Statistics per Origin - Destination - Hour

RT-Win4 - A customized headline	Key:	Total	/User-Errors	Total	0h	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h
Index	Origin	Destination	Total																									
1	21	91	0/0																									
2	21	300	0/0																									
3	21	301	0/0																									
4	21	400	12/0																									
5	21	401	2/0																									
6	21	402	8/0																									
7	21	403	0/0																									
8	21	404	15/0																									
9	21	410	2/0																									
10	21	500	11/0																									
11	21	501	0/0																									
12	21	508	6/0																									
13	21	509	10/0																									
14	21	510	4/0																									
15	21	531	2/0																									
16	21	600	46/0																									
17	21	601	8/0																									
18	21	610	2/0																									
19	21	710	2/0																									
20	21	713	2/0																									
21	21	714	18/0																									
22	21	715	8/0																									
23	21	721	0/0																									
24	21	722	2/0																									
25	21	731	0/0																									
26	21	732	2/0																									
27	21	733	2/0																									
28	21	734	1/0																									
29	21	743	6/0																									
30	21	744	0/0																									

- Column #1: Index of rows
- Column #2: Destination-Number of sender (Origin)
- Column #3: Destination-Number of receiver (Destination)
- Column #4: Number of transports between this origin-destination-pair during the selected period.
- Column #5 - 28: Number of transports split up per hour of day

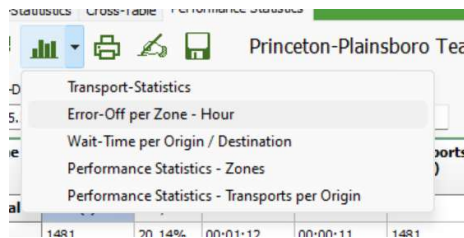
Values:

262 / 2

Number of transports / Number of transports with user-error

If there were no transports between origin and destination no value will be shown in the according cell.

Error-Stop per Zone / Hour:



This menu will open a statistics-window regarding stops after error and hour of day. (EH: ID11e)

Error-Off per Zone - Hour

RT-Win4 - A customized headline

Zone	Total	0h	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h
Total	14/4						1/1				1/0	2/0	2/1	1/0	1/0	4/1	2/1								
Z11	0/0																								
Z12	0/0																								
Z13	0/0																								
Z14	3/3												1/1			1/1	1/1								
Z15	0/0																								
Z18	0/0																								
Z19	1/0																1/0								
Z21	3/0															3/0									
Z22	0/0																								
Z23	0/0																								
Z24	0/0																								
Z25	0/0																								
Z26	0/0																								
Z27	5/0											2/0	1/0	1/0	1/0										
Z28	0/0																								
Z29	0/0																								
Z31	1/0										1/0														
Z32	0/0																								
Z33	0/0																								
Z34	0/0																								
Z35	0/0																								
Z36	0/0																								
Z37	0/0																								
Z38	1/1						1/1																		
Z39	0/0																								
Z131	0/0																								
Z132	0/0																								

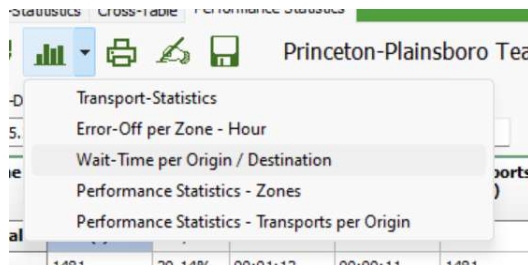
Column #1: Number of Zone
Column #2: Number of stops after error during selected period
Column #3 - 26: Number of stops split up per hour of day

Values:

2/1

Number of stops after all errors / number of stops after user-errors
If there were no errors in this zone no value will be shown in the according cell.

Wait-Time per Origin/Destination:



This menu will open the wait-time statistics.

Columns refer to origin.

Rows refer to Destination.

Column/Row #3 shows average wait-time regarding this column/row.

Wait-Time per Origin / Destination

RT-Win4 - A customized headline

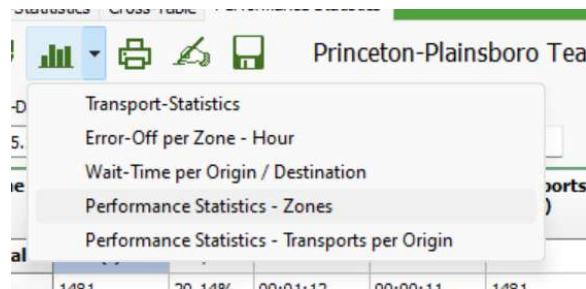
Origin	21	30	32	34	36	38	42	44	46	55	57	64	71	72	74	76	79	82	330	332	EFE0
Destinato																					
	00:00:02	00:00:02	00:00:10	00:00:07	00:00:07	00:00:09	00:00:10	00:00:09	00:00:06	00:00:02	00:00:05	00:00:07	00:00:04	00:00:08	00:00:10	00:00:11	00:00:02	00:00:00	00:00:06	00:00:07	00:00:04
91	00:00:00																	00:00:00			
300	00:00:05	00:00:00	00:00:07			00:00:07	00:00:04	00:00:13	00:00:09	00:00:06	00:00:02	00:00:05	00:00:07	00:00:03	00:00:10	00:00:08	00:00:04		00:00:09		
301	00:00:31												00:00:23						00:00:39		
400	00:00:04	00:00:04							00:00:08			00:00:08							00:00:04		
401	00:00:02	00:00:00	00:00:00				00:00:09			00:00:00			00:00:04								
402	00:00:00	00:00:00								00:00:03											
403	00:00:03									00:00:03											
404	00:00:00	00:00:00								00:00:00			00:00:00						00:00:04		
410	00:00:04	00:00:00											00:00:04		00:00:08						
500	00:00:02	00:00:00											00:00:03				00:00:00		00:00:03		
501	00:00:00																00:00:00				
508	00:00:00	00:00:00																			
509	00:00:00	00:00:00																			
510	00:00:00	00:00:00																			
531	00:00:02	00:00:00										00:00:08		00:00:00							
600	00:00:07	00:00:01	00:00:00	00:00:10	00:00:07	00:00:06	00:00:10	00:00:10	00:00:08	00:00:06	00:00:02	00:00:08	00:00:08	00:00:08	00:00:12	00:00:12			00:00:05	00:00:07	
601	00:00:04	00:00:03															00:00:08				
610	00:00:05	00:00:00	00:00:07				00:00:09	00:00:05	00:00:20			00:00:05	00:00:06	00:00:02	00:00:08	00:00:07		00:00:08			
710	00:00:00	00:00:00																			
713	00:00:02	00:00:00								00:00:08							00:00:00				
714	00:00:00	00:00:00								00:00:01											
715	00:00:04	00:00:05								00:00:05			00:00:04				00:00:00				
721	00:00:00																00:00:00				
722	00:00:00	00:00:00															00:00:00				
731	00:00:00																00:00:00				
732	00:00:00	00:00:00																			
733	00:00:00	00:00:00																			
734	00:00:00	00:00:00															00:00:00				
743	00:00:00	00:00:00								00:00:00											
744	00:00:00																00:00:00				
751	00:00:05	00:00:00									00:00:00		00:00:05				00:00:11				
752	00:00:00												00:00:00								
754	00:00:16	00:00:57											00:00:10				00:00:06				
761	00:00:04	00:00:00	00:00:16							00:00:03			00:00:03								
762	00:00:01	00:00:01											00:00:02				00:00:00				
763	00:00:04	00:00:00											00:00:04				00:00:00		00:00:09		
764	00:00:02	00:00:00											00:00:04				00:00:10				
773	00:00:08	00:00:02								00:00:00			00:00:09								
774	00:00:05	00:00:00											00:00:07				00:00:00				
811	00:00:00	00:00:00															00:00:00				
816	00:00:03	00:00:02							00:00:08	00:00:05	00:00:06		00:00:04				00:00:00		00:00:04		
818	00:00:05	00:00:11											00:00:04				00:00:04				
EFE0	00:00:04																				00:00:04

Values have the following format: hh:mm:ss

If there were no transports between origin and destination no value will be shown in the according cell.

Use Mirror-Button  to mirror the table (Columns=Destination, Rows=Origin)

Performance Statistics - Zones



This menu opens statistics of the zones based on the data from the performance statistics. The zone statistics shows selected columns from the performance statistics (overview), an hourly split of the performed jobs and a bar chart of the hourly split.

Notice:

The data is considered only with respect to zones and not with respect to cross-zone transports. This may result in deviations from the main statistics

Performance Statistics - Zones

Overview Hour Split Hour Split - Bar Chart

Princeton-Plainsboro Teaching Hospital

Zone	Job Count	%	Fix 1	Fix 2	Fix 3	Fix 4	Wait Time / job	Av. Time / job	Send-Errors	% Send-Err	Off-Time aft. Send-Err	Zone-Off aft. Error	Aut. solved Errors	Off-Time aft. Error	Off-Time Service	Availability
10	1495	20,09%	1477	16	0	0	00:00:12	00:01:01	70	4,68%	02:32:43	4	98	00:00:00	00:08:04	99,98%
20	1096	14,19%	1047	7	0	0	00:00:04	00:00:49	55	5,21%	02:00:49	2	80	00:00:00	00:00:00	100,00%
30	444	5,97%	391	52	0	0	00:00:06	00:01:05	25	5,63%	02:00:51	4	24	00:01:36	00:06:16	99,97%
40	1645	22,10%	1566	79	0	0	00:00:06	00:00:56	122	7,42%	03:27:24	8	137	00:00:00	00:04:49	99,99%
50	1031	13,85%	1012	19	0	0	00:00:04	00:00:48	25	2,42%	00:01:52	0	75	00:00:00	00:12:14	99,97%
60	431	5,79%	0	0	0	0	00:00:19	00:01:51	32	7,42%	09:38:40	13	49	00:00:00	00:40:47	99,91%
70	379	5,09%	251	39	86	3	00:00:03	00:01:35	26	6,86%	00:14:25	1	31	00:00:00	00:00:00	100,00%
80	544	7,31%	532	5	7	0	00:00:06	00:01:41	14	2,57%	00:00:00	1	17	03:56:31	00:02:36	99,46%
90	418	5,62%	400	14	4	0	00:00:09	00:01:28	23	5,50%	00:47:19	2	24	00:00:00	00:00:00	100,00%
Total	7443	100,00%	6676	231	97	3	00:00:07	00:01:06	392	5,27%	20:49:08	35	515	04:04:07	01:14:48	99,93%

Overview:

The "Overview" tab contains the following columns:

Zone	Zone number
Job Count	Number of jobs processed in this zone.
%	Percentage of jobs of overall job volume.
Fix 1 - 4	Sendings to the fixed destinations 1 - 4, which were operated in the corresponding zone.
Waiting time/trip	Average waiting time per job when departing in this zone.
Average trip time	Average time of a job in this zone.
Send-Errors	Number of send-errors that occurred.
% Send-Err.	Percentage of send-errors of overall trip volume in this zone.

Off-Time aft.

Send-Err

Cumulative time in which the zone was switched off after a send error.

Zone-Off

aft. Error

Number of zone shutdowns after an error.

Aut. solved Errors

Number of automatically solved errors, which did not lead to a shutdown of the zone.

Off-Time aft. Error

Accumulated time in which the zone was switched off after an error.

Off-Time Service
AvailabilityCumulative time the zone was in service mode.
Percentage of availability of this zone.**Hour Split:**

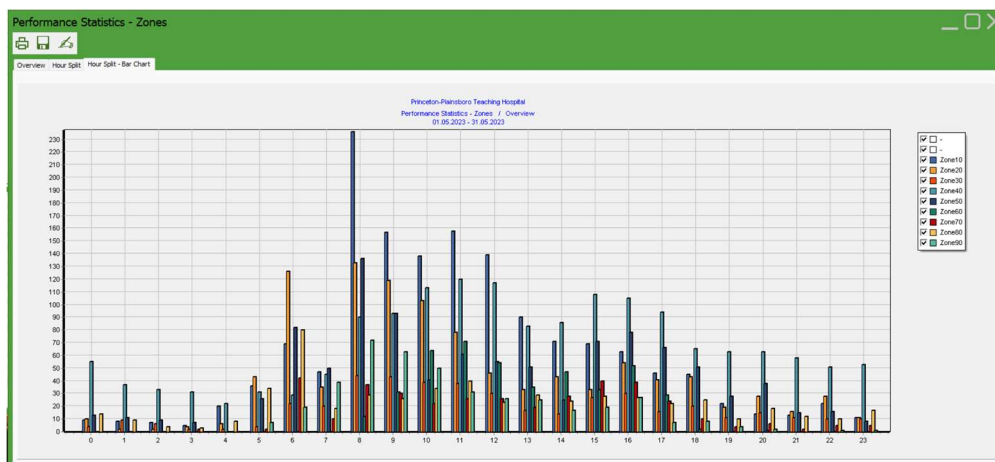
Performance Statistics - Zones

Overview | Hour Split | Hour Split - Bar Chart

Princeton-Plainsboro Teaching Hospital

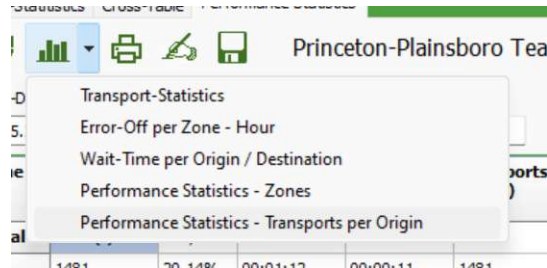
Zone	00-01h	01-02h	02-03h	03-04h	04-05h	05-06h	06-07h	07-08h	08-09h	09-10h	10-11h	11-12h	12-13h	13-14h	14-15h	15-16h	16-17h	17-18h	18-19h	19-20h	20-21h	21-22h	22-23h	23-24h
10	9	8	7	5	20	36	69	47	236	157	138	158	139	90	71	69	63	46	45	22	14	13	22	11
20	10	2	2	4	6	43	126	35	133	119	103	78	46	33	43	33	54	41	43	19	28	16	28	11
30	4	9	6	2	2	4	22	20	44	43	39	38	30	17	14	27	30	18	20	11	15	11	10	10
40	55	37	33	31	22	31	29	45	90	93	113	120	117	83	86	108	105	94	65	63	63	58	51	53
50	13	11	9	7	0	26	82	50	136	93	41	61	55	51	25	71	78	66	51	28	38	15	16	8
60	0	0	0	0	0	0	0	0	12	31	64	71	54	35	47	33	52	29	2	0	1	0	0	0
70	0	0	0	2	0	2	42	10	37	30	22	26	26	19	28	40	39	24	10	4	6	2	5	5
80	14	9	4	3	8	34	80	18	29	26	34	40	23	29	24	28	27	22	25	10	18	12	10	17
90	0	0	0	0	0	7	19	29	72	63	50	31	26	25	17	19	27	7	8	4	2	0	1	1
Total	105	76	61	54	58	183	469	264	789	655	604	623	516	382	355	428	475	345	269	161	185	127	143	116

The "Hour split" tab shows the number of jobs in the zones by hour.

Hour Split – Bar Chart

The "Hour Split - Bar Chart" tab displays the data from the "Hour Split" tab as a bar chart.

Performance Statistics – Transports per Origin



This menu opens statistics about transports per sender and spread of shipments over 24 hours.

Overview:

Performance Statistics - Transports per Origin

Overview Hour Split

Princeton-Plainsboro Teaching Hospital

Origin	Job Count	%	Fix 1	Fix 2	Fix 3	Fix 4	Wait Time / job	Send-Errors	% Send-Err
614	277	3,77%	0	0	0	0	00:00:16	21	0,29%
615	6	0,08%	0	0	0	0	00:00:47	0	0,00%
616	8	0,11%	0	0	0	0	00:00:31	0	0,00%
711	1	0,01%	1	0	0	0	00:00:00	0	0,00%
713	84	1,14%	46	0	38	0	00:00:03	10	0,14%
714	91	1,24%	68	0	23	0	00:00:03	4	0,05%
715	16	0,22%	9	0	7	0	00:00:12	0	0,00%
717	8	0,11%	8	0	0	0	00:00:00	1	0,01%
718	14	0,19%	9	0	3	2	00:00:00	2	0,03%
719	51	0,69%	12	39	0	0	00:00:06	2	0,03%
720	41	0,56%	38	0	2	1	00:00:00	2	0,03%
721	59	0,80%	49	0	10	0	00:00:03	5	0,07%
722	8	0,11%	8	0	0	0	00:00:03	0	0,00%
811	21	0,29%	20	1	0	0	00:00:05	1	0,01%
812	36	0,49%	36	0	0	0	00:00:04	0	0,00%
814	166	2,26%	160	0	6	0	00:00:09	7	0,10%
815	21	0,29%	21	0	0	0	00:00:11	0	0,00%
817	76	1,03%	75	1	0	0	00:00:04	3	0,04%
818	13	0,18%	13	0	0	0	00:00:00	0	0,00%
820	205	2,79%	202	2	1	0	00:00:04	3	0,04%
911	92	1,25%	89	3	0	0	00:00:10	5	0,07%
913	68	0,92%	62	6	0	0	00:00:05	3	0,04%
914	86	1,17%	86	0	0	0	00:00:07	5	0,07%
915	75	1,02%	72	3	0	0	00:00:13	7	0,10%
916	54	0,73%	53	1	0	0	00:00:15	0	0,00%
917	15	0,20%	14	1	0	0	00:00:04	1	0,01%
919	15	0,20%	15	0	0	0	00:00:01	2	0,03%
920	4	0,05%	4	0	0	0	00:00:00	0	0,00%
921	7	0,10%	3	0	4	0	00:00:00	0	0,00%
EF00	15	0,20%	0	0	0	0	00:00:01	0	0,00%
Total	7354	100%	6614	224	94	3	00:00:07	392	5,33%

The "Overview" tab displays a list of all senders as well as the number of the corresponding sendings and other data.

The columns and their meaning:

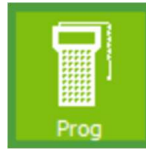
Origin	Sender address of the station
Job Count	Number of jobs started from this sender.
%	Percentage of overall job volume.
Fix 1-4	Number of jobs to the fixed destinations 1-4.
Wait Time / Job	Average waiting time at this sender per sending.
Send-Errors	Number of send errors that occurred at this sender.
% Send-Err	Percentage of send errors of this sender in the overall volume of jobs.

Hour Split:

Performance Statistics - Transports per Origin																								
Princeton-Plainsboro Teaching Hospital																								
Origin	00 - 01h	01 - 02h	02 - 03h	03 - 04h	04 - 05h	05 - 06h	06 - 07h	07 - 08h	08 - 09h	09 - 10h	10 - 11h	11 - 12h	12 - 13h	13 - 14h	14 - 15h	15 - 16h	16 - 17h	17 - 18h	18 - 19h	19 - 20h	20 - 21h	21 - 22h	22 - 23h	23 - 24h
111	0	5	6	4	3	19	32	11	27	8	21	16	12	6	8	7	6	10	9	5	5	5	5	5
112	0	0	0	0	0	0	0	0	29	26	17	36	21	14	12	15	5	0	0	0	0	0	0	0
113	2	0	1	0	8	7	12	2	9	8	12	10	10	4	2	0	1	6	5	3	1	0	0	4
114	0	2	0	1	0	3	5	1	21	7	11	9	16	11	8	11	9	5	7	2	0	3	5	0
115	0	0	0	0	0	1	1	6	18	8	7	10	16	3	9	2	15	2	3	5	0	2	1	1
116	0	0	0	0	0	0	0	0	0	2	2	1	1	0	1	0	0	0	0	0	0	0	0	0
117	2	0	0	0	2	0	0	7	29	17	10	13	13	9	5	3	3	2	3	1	2	0	1	0
118	0	0	0	0	0	0	0	2	3	15	7	8	9	3	9	7	5	1	0	0	0	0	0	0
119	3	0	0	0	0	2	2	9	13	10	6	7	3	3	0	2	2	0	1	0	1	0	2	0
120	1	1	0	0	6	4	9	0	22	12	11	6	7	18	2	3	1	8	5	4	5	3	5	1
121	0	0	0	0	0	0	0	0	38	23	18	20	17	8	7	7	6	1	0	0	0	0	0	0
122	1	0	0	0	0	0	8	6	14	14	14	19	13	11	7	11	10	11	11	2	0	0	2	0
123	0	0	0	0	0	0	0	2	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
211	3	1	0	0	3	5	28	7	3	12	4	10	5	4	7	4	5	8	16	3	7	5	10	1
212	1	0	0	2	1	0	26	0	0	2	4	3	5	6	4	2	3	5	2	3	4	1	4	1
213	0	0	0	0	0	0	8	2	26	5	4	8	1	2	0	2	5	3	2	1	0	0	0	0
214	0	0	0	1	0	0	3	13	5	3	8	3	4	0	4	3	6	2	3	0	3	0	0	0
215	0	0	0	0	0	1	0	2	20	6	10	6	4	0	2	2	5	3	4	4	3	1	0	0
216	0	0	0	0	0	0	0	0	19	8	5	1	0	1	1	2	0	0	1	0	0	0	0	0
217	1	0	0	0	1	7	11	1	12	20	9	10	2	3	1	3	5	4	2	0	1	1	0	1
218	0	0	0	0	0	0	0	1	9	16	10	10	4	4	6	1	0	0	0	0	0	0	0	0
219	0	0	0	0	0	0	0	5	21	35	29	8	9	7	6	3	5	4	1	0	0	0	0	0
220	5	1	2	1	1	30	50	2	4	2	9	11	5	5	9	8	16	12	12	8	10	8	11	8
221	0	0	0	0	0	0	0	2	6	10	8	8	7	1	3	3	4	0	0	0	0	0	0	0
312	0	0	0	1	0	0	0	1	5	1	2	0	0	0	0	1	0	0	1	4	2	0	0	0
313	0	1	1	0	0	0	2	2	1	5	5	6	1	2	0	3	0	0	3	1	2	0	0	0
314	0	0	0	0	0	0	0	1	3	3	1	2	1	0	0	2	1	0	3	2	0	0	0	0
315	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
316	1	4	2	1	1	2	10	6	17	8	2	3	4	1	2	5	4	6	3	2	6	6	7	1
317	2	1	1	0	1	2	9	10	11	7	10	4	4	2	1	5	4	6	7	0	5	4	1	4
318	0	0	0	0	0	0	0	0	2	7	3	8	5	5	8	5	7	2	0	0	0	0	0	0
319	1	3	2	0	0	0	0	0	5	12	16	14	15	6	3	6	14	2	3	2	0	1	2	5

In the "Hour Split" tab, the number of sendings of each sender is displayed by the hour.

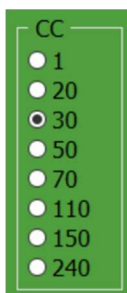
4.2. Programmer



This application is an emulation of the HÖRTIG rohrpost handheld programmer (1.1062.0.95). It is used to communicate with the CC. The handheld programmer is directly connected to a single CC by accessing the CAN-Bus. It communicates with this CC only.

The RT-Win4 Programmer can access all CCs. It can be started several times and access different CCs.

Use the CC-selection to select a specific CC.



You can use the PC keyboard or the App keyboard to operate the programmer. The programmer works as a terminal. It sends all pressed keys to the selected CC.

A	B	C	D	E
F	G	H	I	J
K	L	M	N	O
P	Q	R	S	T
U	V	W	X	Y
Z	7 Home	8 ↑	9 PgUp	: .
- +	4 ←	5	6 →	Start
/ *	1 End	2 ↓	3 PgDn	Shift
\ ESC	' DEL	0	SPACE	ENT

All information and texts displayed are sent from CC. Menus and texts depend on Version of CC.



The RT-Win4 Programmer provides a vertical (default) and a horizontal layout (e.g. when using a Tablet-PC). Use the horizontal- / vertical- button to select the layout:

-  switch to horizontal layout
-  switch to vertical layout



Refer to "Hörtig-E40 Programmer" [1] for more details of programmer usage.

4.3. Device State



R-Tube Device-State V 4.4.2.121 Rel9/10/15/816

Refresh ☐ Host-Connection ☐ Show all known devices

Device	State	Value	SubState	Value	Additional	Value	Send-Req	Hot0	Hot1	Hot2
Z21 GB1	Suck	01		00	Speed:slow	0%		00	00	00
Z21 S33	OK	00		00			1	00	02	02
Z32 S23	OK	00		00	Carrier on belt	10	0	00	00	00
Z51 S13	Receiving / busy	22		00			0	81	02	00
Z54 GB4	Suck	01		00	Speed:fast	0%		00	00	00
Z71 S1	busy	20					0	80	00	00
Z111 S10	Receiving / Carrier in	42		00			0	02	00	00
Z111 S15	busy / Carrier in	60		00			0	02	00	02
Z113 S40	busy / Carrier in	60		00			0	00	82	00
Z114 GB4	Stop	00	AirDiverter	20	Speed:slow	0%		00	00	00
Z115 S60	Reception full	01		00			0	00	00	00
Z151 S16	busy	20		00			0	00	02	00
Z152 GB2	Suck	01		00	Speed:slow	0%		00	00	00
Z156 GB6	AirDiverter moving	80	Blower 2	28	Speed:slow	0%		81	00	00
Z156 S76	Carrier in Send-Slot	40		00			1	02	01	00
Z156 S78	busy / Carrier in	60		00			1	04	00	00

4.3.1. General Use

The Device State App shows a list of all devices containing their status and motor-positions. This list is shortened by filtering out all devices that are in idle state and have no faults. To display the complete unfiltered list activate “show all known devices”.

☒ Show all known devices

RT-Win4 - Device-State V 4.5.6.166 Rel11/1/25/451

Refresh ☐ Host-Connection ☒ Show all known devices

Device	State	Value	SubState	Value	Additional	Value	Send-Req	Hot0	Hot1	Hot2
Z1 GB1	Stop	00		00	Speed:slow	0%		01	00	00
Z1 S33	OK	00		00			0	00	00	00
Z1 W2	OK	00		00			0	00	00	00
Z21 S1	OK	00		00			0	00	00	00
Z21 S33	OK	00		00			0	00	00	00
Z21 W2	OK	00		00			0	00	00	00
Z31 GB1	Stop	00		00	Speed:slow	0%		00	00	00
Z32 GB2	Stop	00		00	Speed:slow	0%		00	00	00
Z32 S20	OK	00		00			0	00	00	00
Z32 S22	OK	00		00			0	00	00	00
Z32 S23	OK	00		00			0	00	00	00
Z32 S24	OK	00		00			0	00	00	00
Z32 S31	OK	00		00			0	00	00	00
Z32 W11	OK	00		00			0	02	00	00
Z32 W21	OK	00		00			0	00	00	00
Z51 S1	OK	00		00			0	03	00	00
Z51 S11	OK	00		00			0	00	00	02
Z51 S13	OK	00		00			0	00	02	00
Z51 S15	OK	00		00			0	00	00	00
Z54 S4	OK	00		00			0	00	00	00
Z54 S52	OK	00		00			0	00	00	00
Z54 W51	OK	00		00			0	00	00	00
Z71 S1	OK	00		00			0	04	00	00
Z71 S10	OK	00		00			0	00	00	00

The device-state will update automatically. To force an update click on "Refresh".

Refresh

4.3.2. Device State Details

To get more detailed information about a device, click on the corresponding line of this device.

Device-State Details V 4.6.0.178 Rel11/3/5/415

Z32 S24
 Gerätename:
 Telefon:
 Email:

State:	Sub-State:	Additional:
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	

Drives Sensors Outputs Slot-Info:

Drive:	Pos:	State:	Dir:	ErrPos:
Mot0	00	00	02	00
Mot1	00	00	02	00
Mot2	02	00	01	00

Gerätestatus Details V 4.6.0.87 Rel11/3/5/415

Z32 S24
 Gerätename:
 Telefon:
 Email:

Status:	Sub-Status:	Zusätzlich:
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	

Antriebe Sensoren Ausgänge Slot-Info:

Antri	Pos:	Status:	Richtung:	ErrPos:
Mot0	00	00	02	00
Mot1	00	00	02	00
Mot2	02	00	01	00

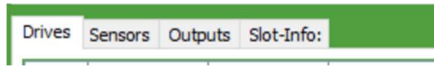
4.3.2.1. Detailed Device State

The state of the device with plain text messages is listed in the upper table.

State:	Sub-State:	Additional:
OK	OK	
OK	OK	
OK	OK	
OK	OK	
OK	OK	Carrier on belt
OK	OK	
OK	OK	
OK	OK	

4.3.2.2. Extended Details

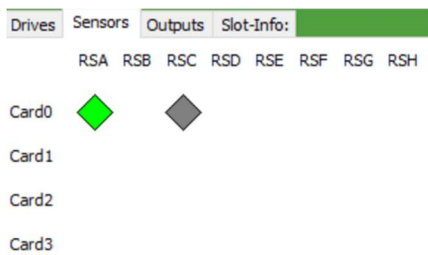
The Tab-Sheet shows the actual state of the motors (drives), sensors, arrival-signals (outputs) and the slot-info (send-requests).



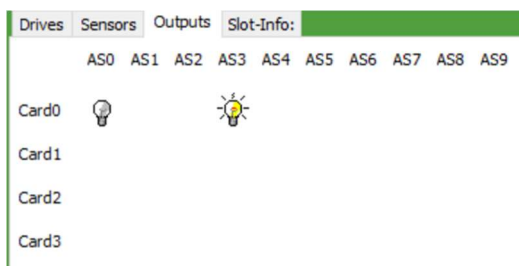
The Drives-Tab shows a list of all known motors of the device, their actual position, error-state, moving-direction and the error-position reported from the device.

Drive:	Pos:	State:	Dir:	ErrPos:
Mot0	02	00	02	00
Mot1	01	00	01	00

The Sensors-Tab shows all known sensors of this station and their condition (green = on; gray = off).



The Outputs-Tab shows the actual state of arrival-signal-outputs.



 = Signal Off

 = Signal on

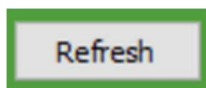
The Slot-Info reports the send-slots with the last destination dialed per slot and the request-time.

Drives	Sensors	Outputs	Slot-Info:
Slotnr.		Dest.	Time
0		(000003)	25.11.2019 13:44:35
1		(000003)	25.11.2019 13:44:43
2		(000003)	25.11.2019 13:44:27

If a Carrier has not yet departed, it can be cancelled by clicking on the "X" button.

Lecteurs	Capteurs	Sorties	Slot-Info:
Slotnr.		Dest.	Time
0	X	000076	09.02.2023 13:28:11

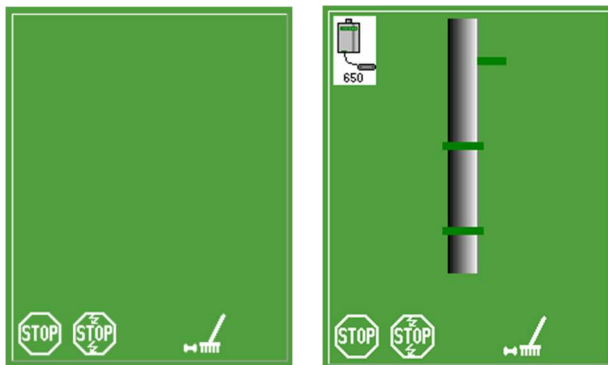
The device status is updated automatically. To force an update, click on "Refresh" in the main window of the device status.



4.3.2.3. Drive Display and Service Functions

The graphic display of the device drives and the buttons for the service functions are located in the lower right corner.

The drives can only be displayed if the corresponding data is stored in the System Graphic Display (see 4.4). Without graphic data, the drive display remains empty.



The service functions are shown or hidden depending on the availability and rights of the user.



Stops the zone of the selected device after the current job is completed.



Stops the zone of the selected device immediately. Before the zone is stopped, a safety query is made.

ATTENTION: carriers in this zone that are in transit may remain in the tube!



Starts the zone of the selected device.



Starts an automatic purge job from this device.



Executes a self-test on the selected device.

Note: This function is only available when the zone is stopped.

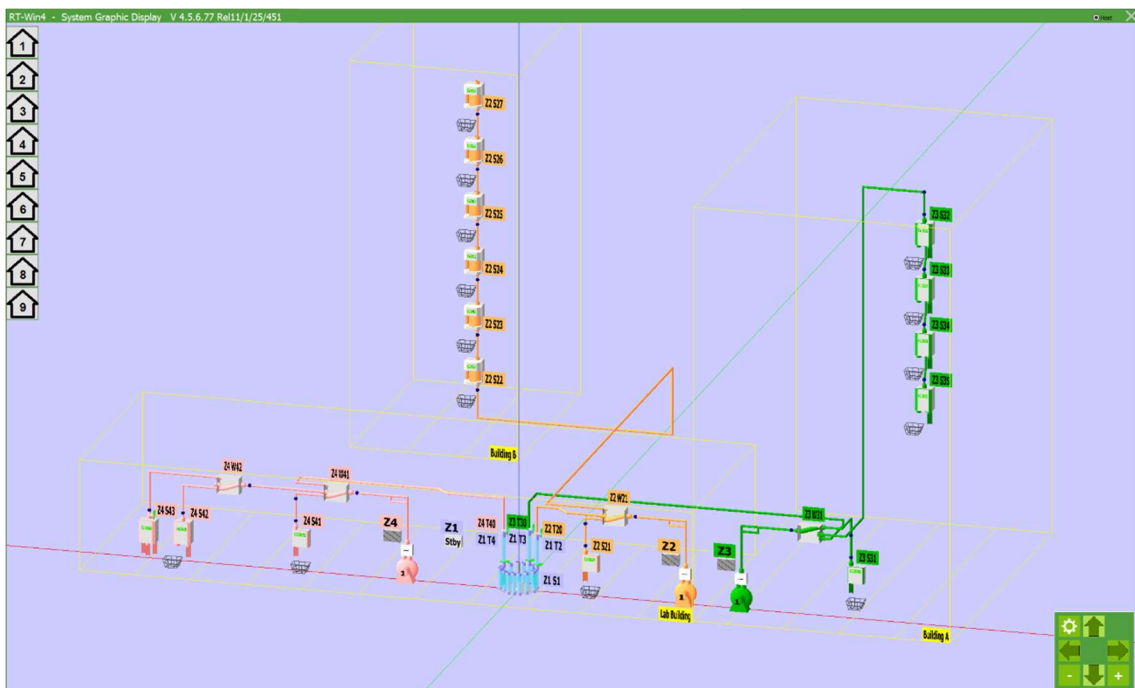
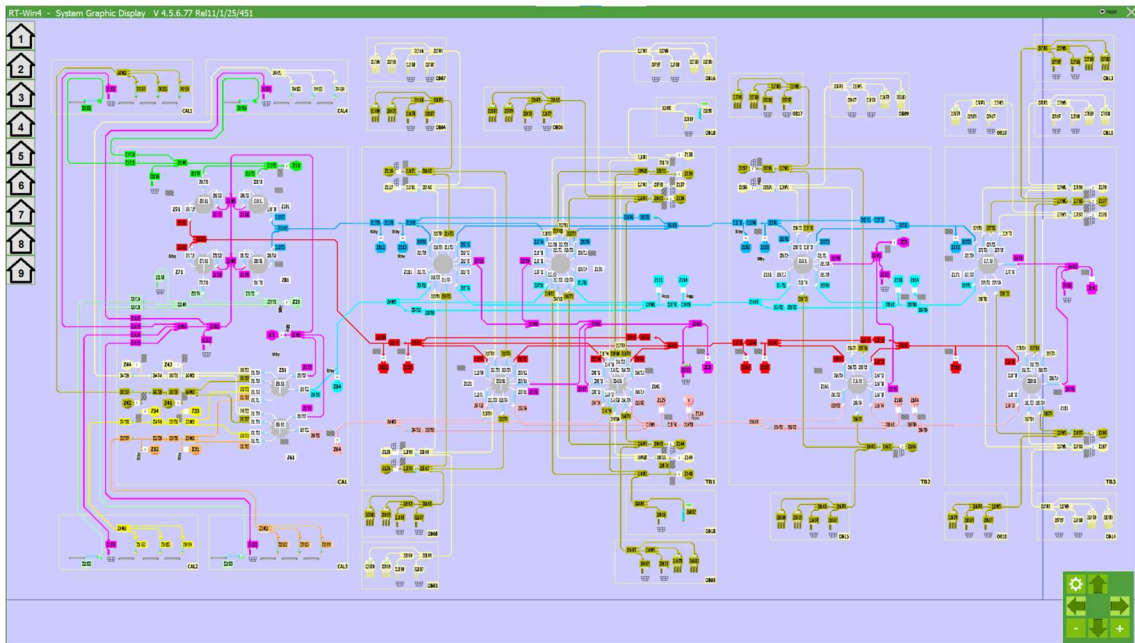


For type 231 stations (type 118 with flap 131 in the setup), an additional icon for unlocking the flap appears.

Note: Unlocking also deletes the send request.

4.4. System Graphic Display

The Graphics application provides a view to the actual state of all connected zones in a 3D-schematic drawing. 2D-schematics are possible, too, as using a flat design and adjusting the viewing-angle to a front-view.

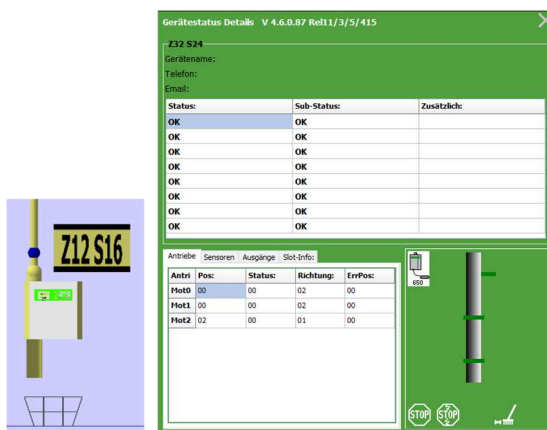


4.4.1. Basic Functions

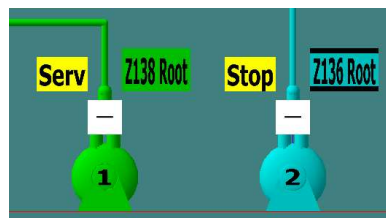
As being designed as a 3D-Graphics navigation through the graphics is implemented as a movement of a camera. The camera can be moved along the x- and z-axis. Will say: left-right und up-down. Furthermore you can zoom in and out. Use the control panel in the bottom right corner to navigate through the graphics.

A double-click on a graphics-object will move this object to center of the screen and zoom in.

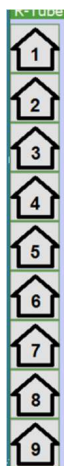
A click on the Device-Tag will open the Device-State-Details of this device. (see 0)



In case of using redundant blowers the number of the blower in use (#1 or #2) will be displayed on the symbol.



4.4.2. Default View Buttons



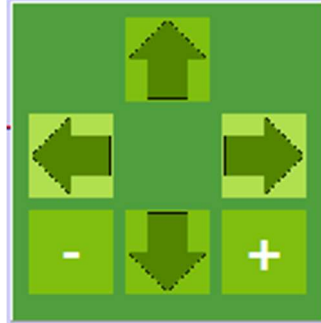
On the left side of the graphics window you find nine buttons to set various home-positions. This could be for example a total view of the system and several details.

Each default-view can be adjusted by a right-hand-click on the according button. The actual view will be saved after a confirmation prompt. Each View can be recalled by a left-click on the according button. Use keys 1-9 as hot-keys to set the default views.



4.4.3. Functions of Graphics-Control-Panel:

To navigate through the 3D-graphics use the buttons of graphics-control-panel.



Zoom in /out



Camera moves to the left and right.



Camera moves up / down.

Hotkeys are “+”, “-“ and the cursor-keys.

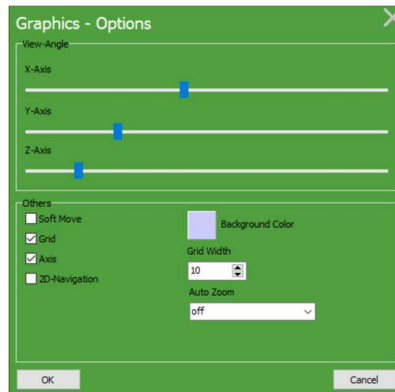
Wheel-function:

The mouse wheel will activate the last camera-movement the mouse-pointer was located on (left/right or up/down). The corresponding buttons are highlighted in light green. This will work even if the mouse pointer is no longer located above GCP.

4.4.4. Graphics Options:

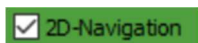


Click on the options-button to change local graphics-settings such as view-angle and background color.



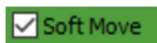
View-Angle and 2D-Navigation:

Use the 3 View-Angle-Sliders to adjust the view-angle on the 3D-Graphics. When using a 2D-design activate the 2D-Navigation. This will adjust the view-angle to a front-view.



Soft Move:

If a graphics-object is moved to center by a double-click this will be done animated if „Soft Move“ is active. Otherwise the display will change immediately to its new position. (It is recommended to disable Soft Move on slow computers.)

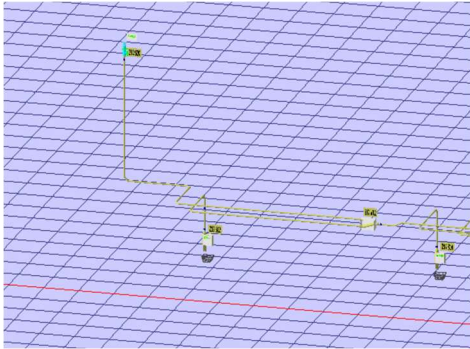


Grid:

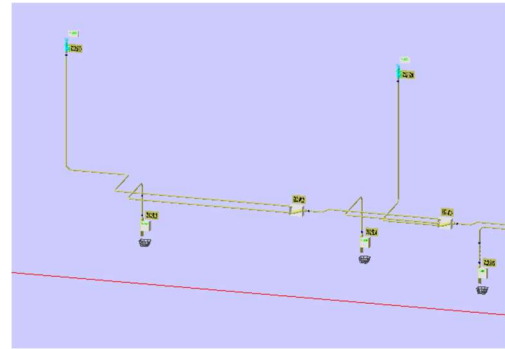
Use this option to enable or disable the grid on the ground-plane of the 3D-graphics.



With Grid:

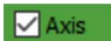


Without Grid:

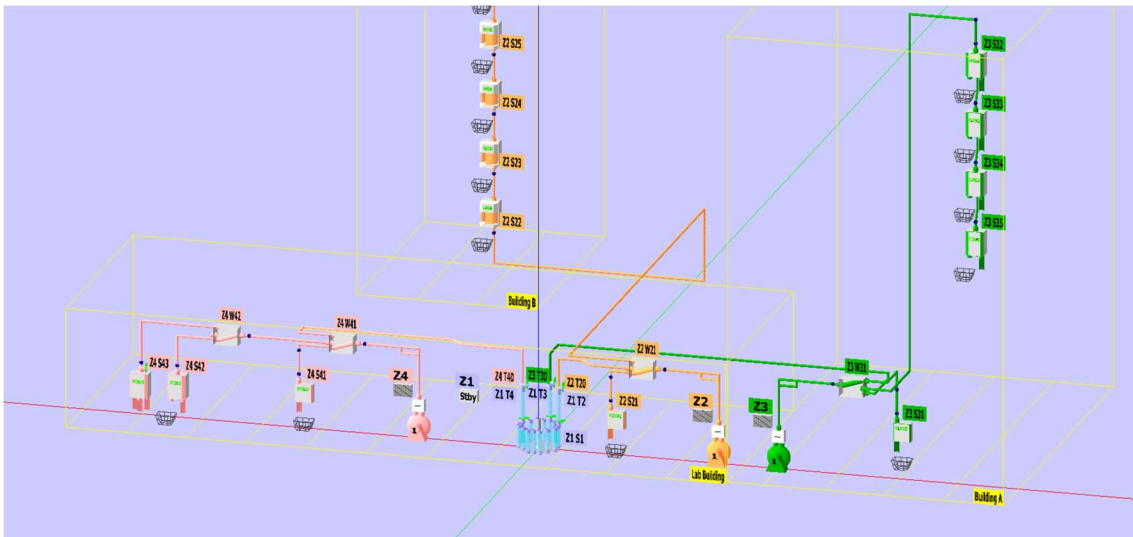


Axis:

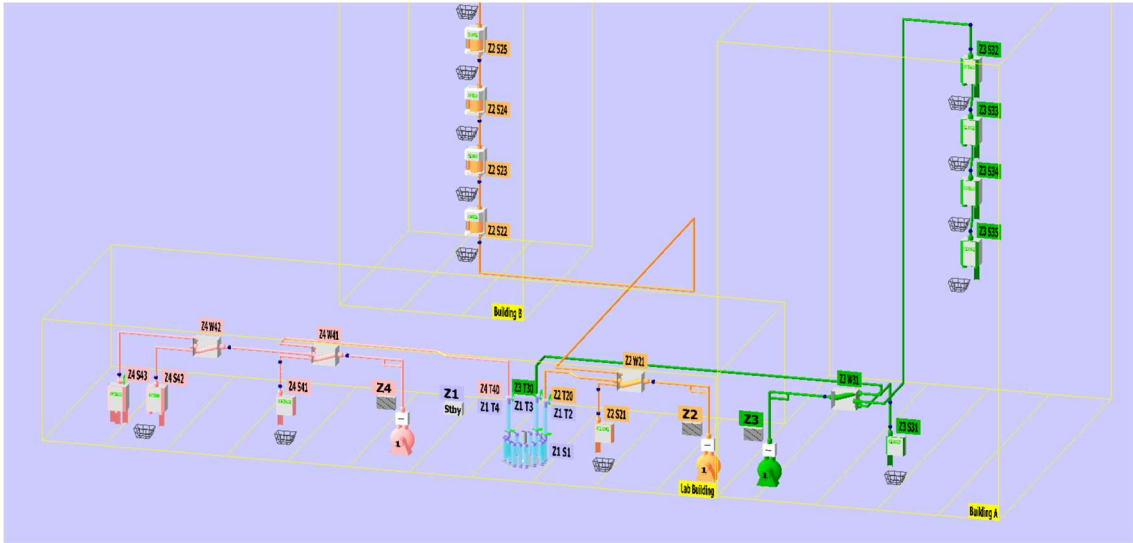
Use this option to enable or disable the X-, Y-, Z-Axis of the 3D-graphics.



With Axis:



Without Axis:



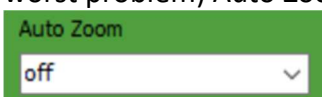
Background Color:

A Color-Dialogue will pop up. Select color of background and click ok. Selected color will be used as background color.



Auto Zoom:

This function will zoom automatically on a device which reports a warning or an error. There are several levels of sensitivity. According to the level of sensitivity (from off to worst problem) Auto Zoom will be activated.



Off
Zone ERROR off
Device Error
Motor Error
Full Basket

Note:

To display the 3D-Graphics RT-Win4 will use OpenGL. Some onboard graphic cards have problems to display everything correctly. In case of using the graphics feature we strongly recommend to use a dedicated graphics card.

4.4.5. Graphics Editor

4.4.5.1. General

From version V4.7.0.99, the system graphic has an editor function. This function is only available if the logged-in user has the required rights.

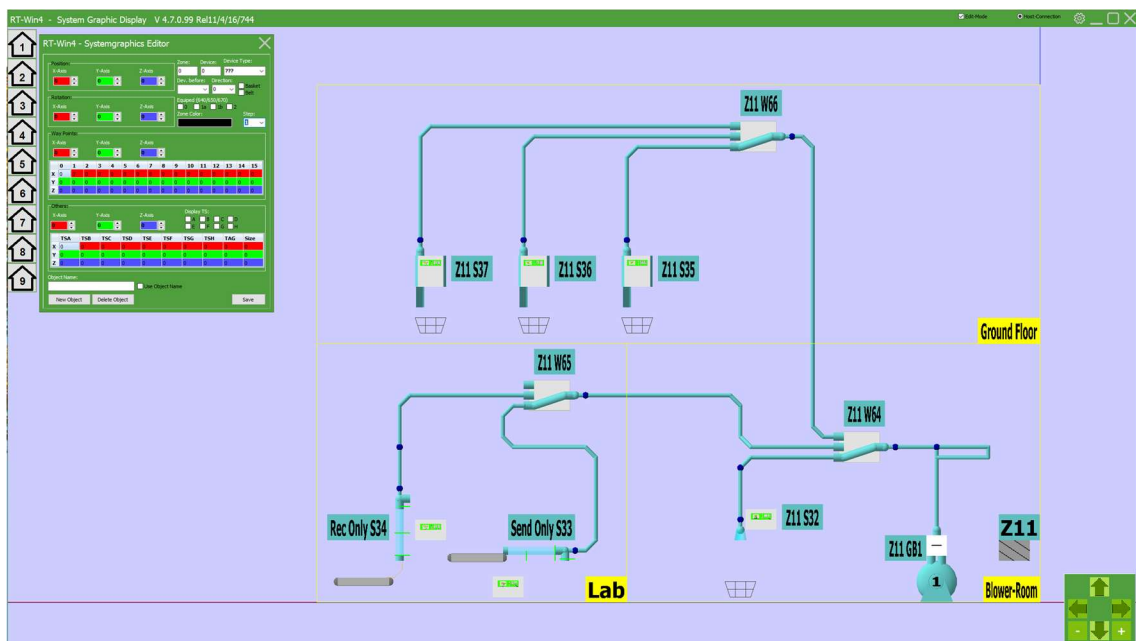
The system graphics editor is used to create or adjust the system graphics.

Hint:

RT-Win4 is able to import existing graphic data from the previous versions RT-Win2 and RT-Win3. To do this, the existing graphics file "RT2XSystemSetup.rtw" must be copied into the data directory of RT-Win4. For further information and support please contact the support (see 6. Support).

The system graphic is built up from so-called objects. Each object represents a pneumatic tube device (station, diverter, blower or central/zone) or a building. For pneumatic tube devices, this visualisation also includes the tube, sensors (tube switches) and other parts such as the basket or conveyor belt. The graphic coordinates are all in a grid that corresponds to a pipe diameter. Different pipe diameters as used in the real construction of a pneumatic tube system are not shown.

To open the editor click on "Edit-Mode":



If the system graphic is in editor mode, the editor window is displayed. To leave the editor mode, click on the "Close" button or click again on "Editor mode".

☒ Edit-Mode

RT-Win4 - Systemgraphics Editor

Position:

X-Axis

Y-Axis

Z-Axis

Rotation:

X-Axis

Y-Axis

Z-Axis

Way Points:

X-Axis

Y-Axis

Z-Axis

Others:

X-Axis

Y-Axis

Z-Axis

Zone: Device: Device Type:

Dev. before: Direction: ☐ Basket ☐ Belt

Equiped (640/650/670)
☐ 0 ☐ 1a ☐ 1b ☐ 2

Zone Color: Step:

Display TS:
☐ A ☐ B ☐ C ☐ D
☐ E ☐ F ☐ G ☐ H

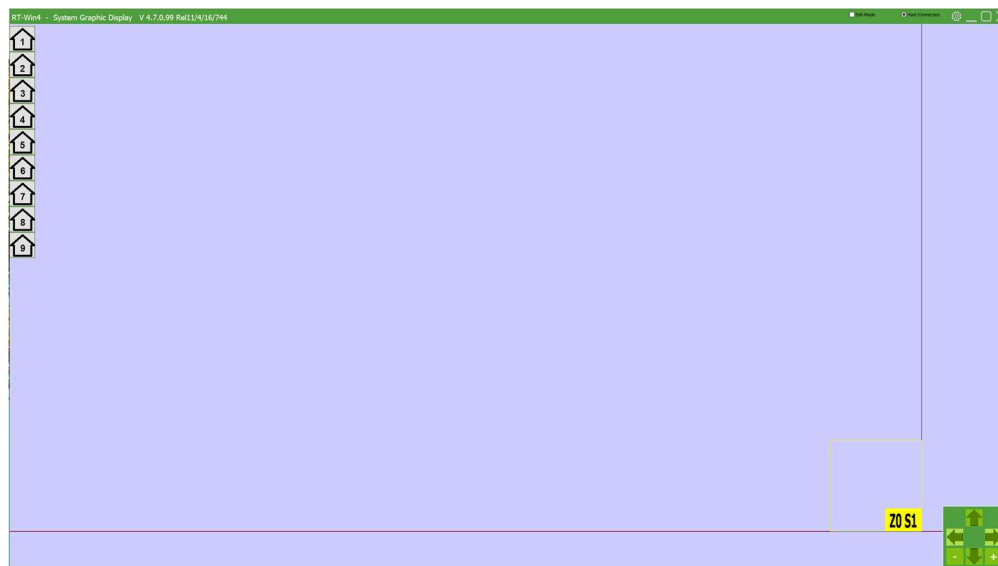
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	TSA	TSB	TSC	TSD	TSE	TSF	TSG	TSH	TAG	Size
X	0	0	0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0
Z	0	0	0	0	0	0	0	0	0	0

Object Name: ☐ Use Object Name

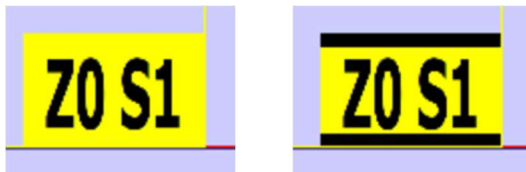
New Object
Delete Object
Save

If no graphic data is available after the initial installation, RT-Win4 creates an empty graphic with a building object.



Each graphic object has a so-called tag. The zone and the device number are written on this tag by default. Building objects may only be created in zone 0. Zone 0 is intended exclusively for building objects.

To edit a graphic object, it must be selected by clicking on the tag. The selected device is indicated by black bars on the tag. The current parameters of the object are displayed in the editor window.



RT-Win4 - Systemgraphics Editor

Position:

X-Axis: 0 Y-Axis: 0 Z-Axis: 0

Zone: 0 Device: 1 Device Type: Bldg

Dev. before: Direction: 0

Equipped (640/650/670): 0 1a 1b 2

Zone Color: dYellow Step: 1

Rotation:

X-Axis: 0 Y-Axis: 0 Z-Axis: 0

Way Points:

X-Axis: 0 Y-Axis: 0 Z-Axis: 0

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Others:

X-Axis: 0 Y-Axis: 0 Z-Axis: 0

Display TS:

A B C D E F G H

	TSA	TSB	TSC	TSD	TSE	TSF	TSG	TSH	TAG	Size
X	0	0	0	0	0	0	0	0	0	10
Y	0	0	0	0	0	0	0	0	0	10
Z	0	0	0	0	0	0	0	0	0	10

Object Name:

☐ Use Object Name

New Object Delete Object Save

4.4.5.2. Adding new graphic objects

To add a new graphic object to the graphic, click on the "New object" button. An input window opens in which basic parameters can be set.

New Object

RT-Win4 - Create new Graphics Object

Zone:
0

Device:
Bldg 2

☐ Station / Rev / Air ☒ Building
☐ Diverter ☐ Zone

Create

To create a new object, the zone and device number must be selected. The graphic objects in RT-Win4 are divided into four main categories, which have an effect on the selection of the possible zones and unit numbers:

1. stations, revolvers and air (blower).
2. diverters
3. zones
4. buildings

Devices in the first category (stations, revolvers or air) are allowed in zones 1-254. Device #1 can be either a blower (Air) or a revolver and has the prefix "A/R" . Devices #2-9 are reserved for blowers and have the prefix "A". Stations are numbered 10 to 127 and have the prefix "S". Diverters have the number range 1-126 and the prefix "W". The "zone" device shows the current status of the respective zone in the graphic and has the device number 0 or the identifier "zone".

If a zone or a unit number is selected, the corresponding category is highlighted in the right-hand window area. By clicking on a category, a device with the lowest number in this category is set in the two selection boxes.

Zone:
1

Device:
W 1

☐ Station / Rev / Air ☐ Building
☒ Diverter ☐ Zone

If you have selected a zone and device number, clicking on the "Create" button creates a graphic object corresponding to the category with the selected number.

Zone:
10 ▾

Device:
Zone ▾

Station / Rev / Air
Diverter
Zone

Create

The new object is automatically set as the current device and the object parameters are displayed in the editor window.

RT-Win4 - Systemgraphics Editor

Position: X-Axis: 0 Y-Axis: 0 Z-Axis: 0

Rotation: X-Axis: 0 Y-Axis: 0 Z-Axis: 0

Way Points: X-Axis: 0 Y-Axis: 0 Z-Axis: 0

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Others: X-Axis: 70 Y-Axis: 10 Z-Axis: 30

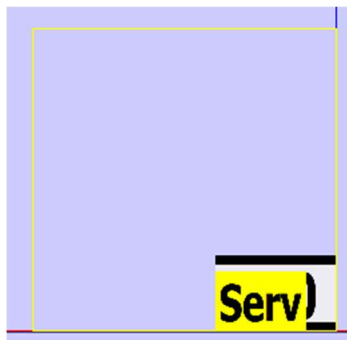
Display TS: A B C D E F G H

	TSA	TSB	TSC	TSD	TSE	TSF	TSG	TSH	TAG	Size
X	0	0	0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0
Z	0	0	0	0	0	0	0	0	0	0

Object Name: Use Object Name

New Object Delete Object Save

The new object appears in the graphic at the coordinate origin. Since all parameters are set to zero by default, there may be overlaps in the graphic.



After the new object has been created, it can be positioned and adjusted in the graphic by setting the parameters in the editor window.

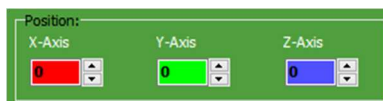
Note:

It is recommended to create the zone object first and then create all other objects of this zone. Furthermore, it is recommended to create the objects starting from the blower (Air). If a new object is created, the next higher unit number to the currently selected object is defaulted in the input window.

4.4.5.3. Setting the object parameters

The colours of the coordinate fields in the editor correspond to the colours of the axis cross in the graphic. If the graphic is not created in 3D but only two-dimensionally, the values for the Y-axis usually remain at 0. To better represent pipe crossings, the Y-value can be varied. The diverters and station objects were designed three-dimensionally. Therefore it may be necessary to adjust the Y-value to get a better 2D view.

Position



Changing the position of the graphic object can be done by directly entering the values via the keyboard (0) or by clicking on the corresponding arrow buttons (↑/↓) or by moving the mouse wheel when the mouse pointer is over the corresponding input field.

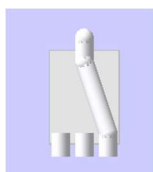
Rotation



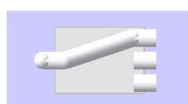
With this parameter set, the object can be rotated around the respective axis in 90° steps. This is mainly used for diverters.

Example of a rotation around the Y-axis:

0°



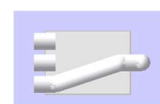
90°



180°



270°



"Zone" and "Device"

Zone:	Device:
10	1

The values "Zone" and "Device" indicate the zone and device number of the graphic object. These values cannot be changed. If a device number changes, the existing object must be deleted and a new one created.

Device Type

Device Type:
3X

The type of the graphic object (within its device category) can be changed here. A change outside the category of the current object is ignored.

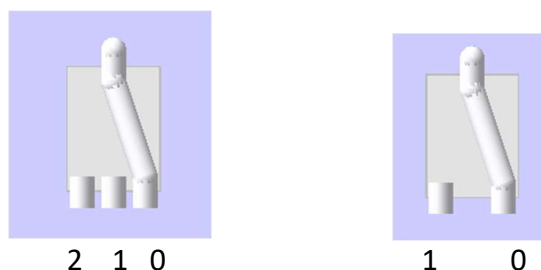
Device Type:
3X
Bldg
Zone
Air/Blower
T-Root
Motor-Valve
Val S
Val B
Y-Div
2X
3X
201
421
422

"Device before" and "Direction"

Dev. before:	Direction:
GB1	0

This setting is required to determine which pipe is pressurised. In the case of "Device before", the device next in the pipe network in the direction of the blower is always entered. Only devices that have already been created in the specific zone are displayed in the selection list. The blower has the value "CC" as the device before. If the device before is a diverter, the "direction", which is the number of the diverter branch, must also be specified. For all other devices, the default value "0" can be retained. For building-objects it is not necessary to set these values.

The numbering of the diverter branches follows the positions of the real diverter:

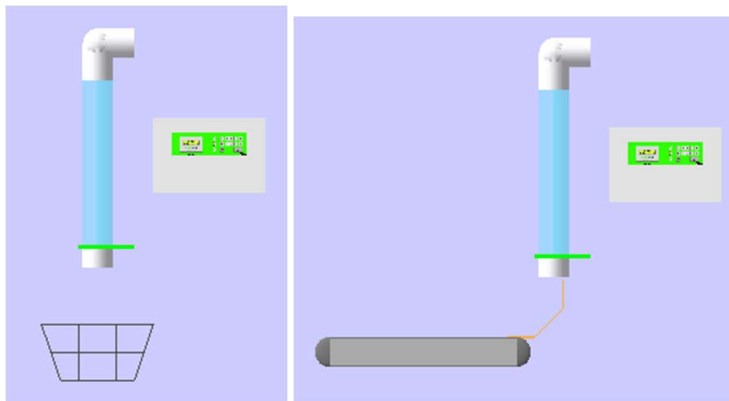


"Basket" and "Belt"

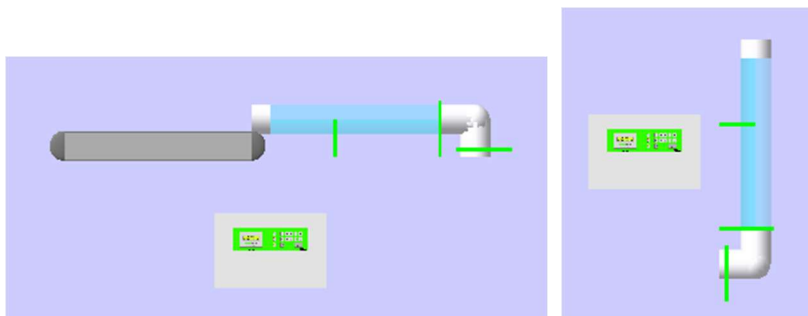


This setting affects the appearance of station types 650 and 670. Type 650 (receiving station) can be equipped with a receiving basket or a conveyor belt, depending on the real installation situation. Depending on the requirements, one of the two options can be selected. With type 670 (sending station), a visualisation without a conveyor belt or with a conveyor belt is possible.

650:



670:

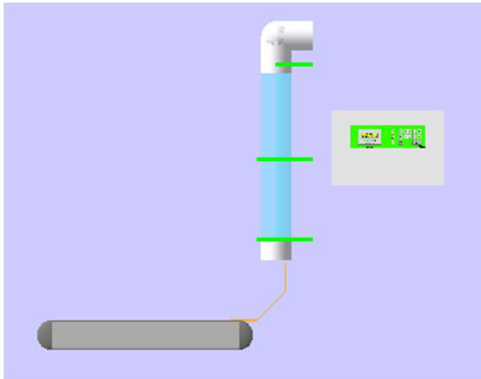


Equiped (640/650/670)

Equiped (640/650/670)
☒ 0 ☐ 1a ☒ 1b ☒ 2

Various configurations of the drives are possible for the type 640, 650 and 670 stations. This setting is made analogously to the setting in the setup of the FCC.

0, 1a, 2:



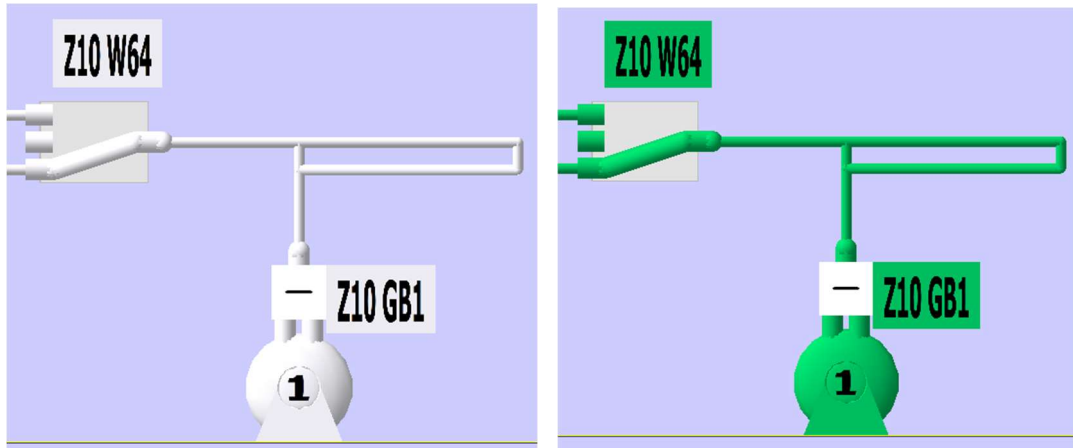
Zone Color

Zone Color:
dMedGray

This parameter sets the tube colour of the zone. By default, a medium grey is set. Clicking in the colour field opens a dialogue box for selecting the colour.



If the colour selection is confirmed with "OK", the dialogue is closed and the conveyor tube and the blower are coloured in the selected colour.



Step

Step:

This parameter represents the incremental value by which the position values are increased or decreased when using the mouse wheel or the arrow buttons.

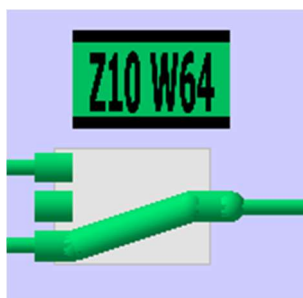
Object Name

Object Name:
 ☐ Use Object Name

Das zu jedem Grafikobjekt gehörende Schild (TAG) ist als Standard mit der Zonen- und Gerätenummer beschriftet. Soll auf dem Schild ein kundenspezifischer Text angezeigt werden, so kann dieser hier hinterlegt werden. Die Größe des Schildes wird automatisch an den Text angepasst. Die Checkbox gibt an, ob der Kundentext oder der Standardtext angezeigt wird.

Object Name:
 ☐ Use Object Name

Object Name:
 ☒ Use Object Name



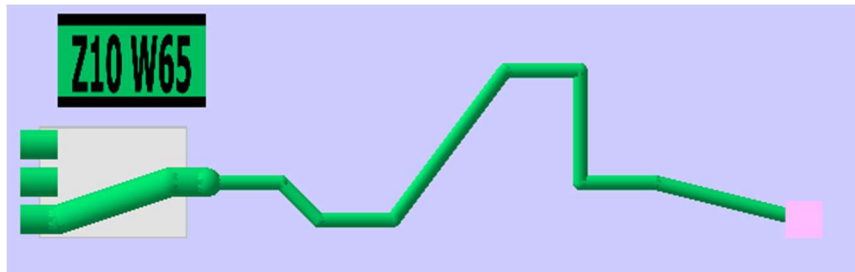
Way Points

Way Points:

X-Axis: Y-Axis: Z-Axis:

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X	-2	-1	-2	-3	-2	0	-2	-4	0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Z	0	-1	0	4	0	-3	0	-1	0	0	0	0	0	0	0	0

Each station and each diverter can be provided with a pipe section to the device before. This pipe connection can consist of up to 16 straight sections in a row. The sections start and end at the so-called waypoints. The starting point of the first section is the pipe connection of the station or diverter pointing to the blower. The coordinates are always given relative to the previous waypoint.

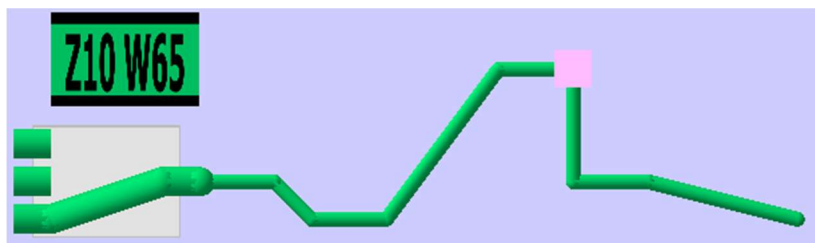


The coordinate to be changed is clicked in the table. The corresponding waypoint is marked in the graphic with a coloured cube as a cursor.

Way Points:

X-Axis: Y-Axis: Z-Axis:

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X	-2	-1	-2	-3	-2	0	-2	-4	0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Z	0	-1	0	4	0	-3	0	-1	0	0	0	0	0	0	0	0

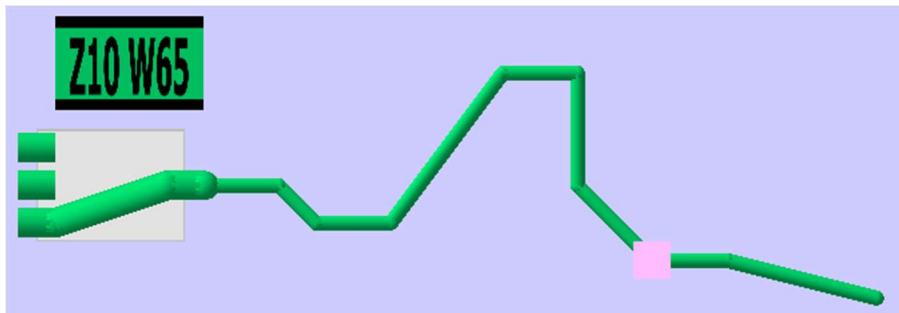


The columns of the table can be moved by drag and drop. This changes the order of the waypoints. Typically, unused waypoints are moved to the front to insert a new section.

3	4	5	6	11	8	9
-3	-2	0	0	0	0	0
0	0	0	0	0	0	0
4	0	-3	0	0	0	0

3	4	5	6	7	8
-3	-2	0	0	-2	-4
0	0	0	0	0	0
4	0	-3	0	0	-1

5	6	7	8
0	-2	-2	-4
0	0	0	0
-3	-2	0	-1



Others

Others:

X-Axis: Y-Axis: Z-Axis:

Display TS:

☐ A ☐ B ☐ C ☐ D
☐ E ☐ F ☐ G ☐ H

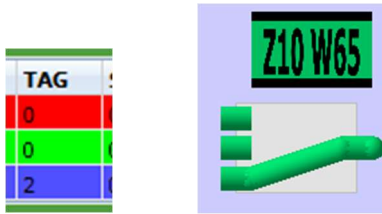
	TSA	TSB	TSC	TSD	TSE	TSF	TSG	TSH	TAG	Size
X	0	0	0	0	-1	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0
Z	0	0	0	0	0	0	0	0	2	0

In this parameter field, the positions of the pipe switches A - H, the position of the object tag and, if it is a building object, the size of the building object are set. In addition, which of the eight pipe switches is to be displayed is selected. The tube switches are only displayed if they are activated under "Display TS".

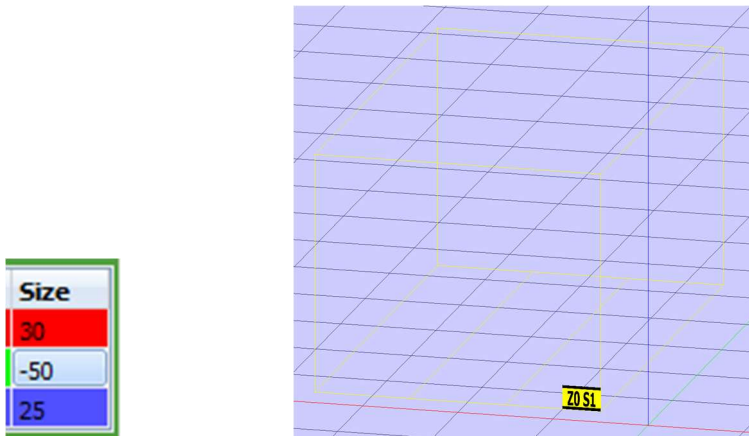


The coordinates of the tube switches or the tag are given relative to the zero point of the graphic object, similar to the waypoints. The tube switches are located within the tube connector and are therefore initially not visible at the position (0,0,0). Visible pipe switches should therefore always be moved.

The position of the tag, like the position of the pipe switches, is entered relative to the zero point of the graphic object.

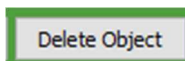


If the current object is a building, the size of the building cuboid can be set via the parameters in the "Size" column.



4.4.5.4. Delete Graphic Objects

If an object is to be removed from the graphic, it must first be selected by clicking on the tag. By clicking on the "Delete Object" button, the object is removed from the graphic.

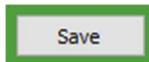


Note:

The deletion process is carried out without a confirmation prompt. However, the parameters remain in the memory for the time being, so that one can restore the deleted object by creating a new object with the same zone and device number. If the system graphic is closed, the data of the deleted objects are lost.

4.4.5.5. Save Graphics

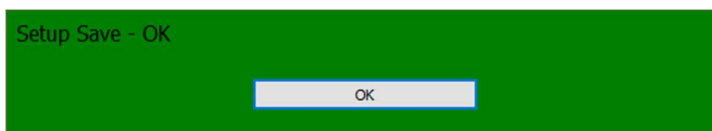
The graphic editor executes all changes to the system graphics initially only on the local client PC. To save the changed graphic and make it available to all RT-Win4 clients, click on the "Save" button.



A confirmation prompt appears. If this is answered with "OK", the graphic data is transferred to the RT-Win4 host.



After all data has been transferred and successfully saved on the host, the message "Save setup - OK" appears.



Confirm this message with "OK" to continue working.

Note:

The changes to the graphic will only take effect on other RT-Win4 clients after the system graphic has been closed and reopened.

Since changes are only made locally at first and the data is only transferred to the host or other clients after saving, the graphic should not be edited simultaneously from two or more programme instances.

4.5. RT-Win4 Users



RT-Win4 - Users & Roles V 4.21.0.552 Rel16/6/10/528

Host-Connection Database

Nr.	UID	Active	Username	Password	Role #1	Role #2	Role #3	Role #4	Role #5	Role #6	Role #7
1	2	☐	Admin	285109280	Admin	---	---	---	---	---	---
2	3	☒	Service	273199632	Service	---	---	---	---	---	---
3	4	☒	Expert	61525986	Expert	---	---	---	---	---	---
4	5	☒	Standard	135877914	Standard	---	---	---	---	---	---
5	6	☒	View	2614138	View Only	---	---	---	---	---	---
6	25	☒	UKDAWT	25467538	Admin	---	---	---	---	---	---
7	26	☒	Apotheke	284259431	Apotheke	---	---	---	---	---	---
8	27	☒	gh	187954	gh-test	---	---	---	---	---	---
9	28	☒	New #4	284164516	---	---	---	---	---	---	---
10	29	☐	test5.1	0	---	---	---	---	---	---	---
11	30	☒	Hans K.	156278680	gh-test	---	---	---	---	---	---
12	31	☒	test7	42	New #3	---	---	---	---	---	---

Additional User Details

User-Nr.: 30 User-Name (Login): Hans K.

Full Name: Johann Kasper

Alias: HKp

Phone-Number: 47110815

Department: Development

Comment: test

Email: test@hmpfgmpf.ups

RFID-Card: 0011451972

DCS-Role: HK

New User Delete User

Old Values Apply

RT-Win4 - Users & Roles V 4.21.0.552 Rel16/6/10/528

Host-Connection Database

Nr.	Idx	Active	Role Name	Auto-Log off	Access Rights	Administr ator	All Apps	Shut Down	Options	License	Users & Roles	Host Configu
1	1	☐	RT-Master	5	☐	---	---	all	all	all	all	all
2	2	☒	Admin	5	☒	---	---	all	all	all	all	all
3	3	☒	Service	10	☐	all	all	all	all	all	all	all
4	4	☒	Expert	10	☐	Basic; Start Zone; Stop Zone; Purge; Service1; Service2; Maintenance;	Basic; Start Zone; Stop Zone; Purge; Service1; Service2; Maintenance;	Basic; Start Zone; Stop Zone; Purge; Service1; Service2; Maintenance;	Basic; Start Zone; Stop Zone; Purge; Service1; Service2; Maintenance;	Basic; Start Zone; Stop Zone; Purge; Service1; Service2; Maintenance;	Basic; Start Zone; Stop Zone; Purge; Service1; Service2; Maintenance;	
5	5	☒	Standard	15	☐	---	---	Basic;	---	---	---	---
6	6	☒	View Only	0	☐	---	---	Basic;	---	---	---	---
7	25	☒	Apotheke	0	☐	---	---	---	---	---	---	---
8	26	☒	gh-test	2	☐	---	---	all	all	all	all	all
9	27	☒	New #3	0	☐	---	---	---	---	all	all	all
10	28	☒	DCS-User	0	☐	---	---	---	---	---	---	---

New Role Delete Role

Old Values Apply

4.5.1. General use

The RT-Win4 Users App manages the users of RT-Win4 and their rights and roles. In addition, the app manages the tube system users and their rights as well as their hierarchy of access rights.

A user entered in the user administration has rights to use RT-Win4 and/or rights to use the tube system depending on the configuration.

The user name and the set password are used for authentication in RT-Win4. The rights for RT-Win4 are assigned via the "Roles". Rights for using the tube system are assigned via the "Additional User Details" and the "DCS-Roles".

Furthermore, users can be created via a CSV file if they have permissions for the pneumatic tube system only (DCS users).

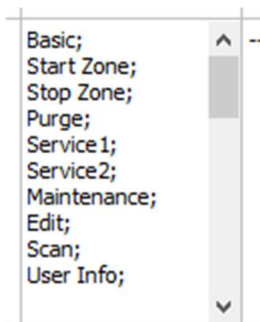
4.5.2. RT-Win4 Users

Each RT-Win4 user can have up to 8 roles. The rights of the roles are OR-linked. A role describes the rights that the role owner has. These rights can be given for all Apps or only for dedicated Apps. Depending on the rights some features of an App may be blocked depending on the users' role.

The following rights are available:

- All
User has full rights on this App
- Basic
The App could be opened but the user cannot change anything just look.
- Start Zone
User is allowed to start a Zone of the DCS
- Stop Zone
User is allowed to stop a Zone of the DCS
- Purge
User is allowed to trigger an automatic purge
- Service1
User can use some Service-functions (This does not limit the functions of the programmer)
- Service2
User can use all Service-functions

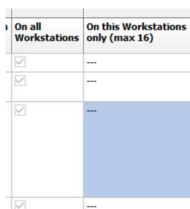
- Maintenance
User can change and reset maintenance-values
- Editing
User is allowed to edit e.g. shift-lead display or 3D-Graphics.
- Scan
User is allowed to scan in/out carrier contents.
- User Info
The user may view detailed data of the tube system user in the history, arrival or departure screen.



Beside the user-rights a role contains an auto-logoff-time. The user will be logged off after the entered time (value = time in minutes; value = 0 no auto logoff).



The role allows to limit the access of the user to certain RT-Win4 workstations.



Note: This feature is not yet available.

Several users can have the same role e.g. user "John Doe" and "Jack Smith" have the role "Expert". Then both have the rights described in the role "Expert".

RT-Win4 creates automatically some default users and according roles. These defaults cannot be modified or deleted. Except "Admin" all users and roles could be disabled. User-defined entries (users or roles) can be modified, enabled, disabled or deleted. After first start the following default users are available:

- Admin
- Service
- Expert
- Standard
- View

Note:

The default passwords are same as the username but written in lower case e.g. "admin", "service",...

We strongly recommend to change the passwords in order to prevent unauthorised use of RT-Win4!

The default roles are:

- Admin
- Service
- Expert
- Standard
- View only

To (de-)activate users use the checkboxes in the "Active"-column.

Active
☒
☒
☐
☒

4.5.3. Tube-system Users

In addition to the RT-Win4 users, RT-Win4 also manages the data and rights of the users of the tube-system. In order to be able to identify a user of the tube-system, the user identification must be activated in the FCC and the RFID must be stored in the additional user details. The assignment of a password and roles is only necessary if the user of the tube-system is also to be given rights to operate RT-Win4. The rights of the users of the tube-system are controlled via the access groups.

Under "Additional user details", information is stored for later display in the history or the arrival or departure screen.

Additional User Details

User-Nr.:	User-Name (Login):
26	FloN

Full Name:

Alias:

Phone-Number:

Department:

Comment:

Email:

RFID-Card:

Access Groups:

- ☒ Staff #0
- ☐ Technicians #1
- ☐ Admin #10

The user number is automatically assigned as a sequential number. The user name (login) is entered directly in the corresponding column of the user list. Make sure that no duplicate user names are assigned. In the "additional user details", the user number and name are displayed again for checking purposes.

The following additional user details can be entered:

- Full name
- Alias
This text is displayed instead of the user number in the UID0 and UID1 columns of the history or arrival/departure screen.
- Telephone Number
- Department
- Comment
A freely selectable text can be entered here for the corresponding user.
- Email address
The email address of the user can be entered here.
- RFID Card
The serial number of an RFID card can be entered here in order to identify the pneumatic tube user in the system.
- Access Groups
A user of the tube system can belong to up to 6 access groups. If the FCC requests an RFID code from RT-Win4, the group memberships are transmitted to the FCC in addition to the user number. The FCC checks the corresponding user rights via the groups.

4.5.4. Add and delete User

Add User

To add a new user click on "New User". A new line will be added to the grid.

New User

13	32	☒	New #8	0	---	---	---	---	---	---	---	---
----	----	-------------------------------------	--------	---	-----	-----	-----	-----	-----	-----	-----	-----

Enter new username.

John Doe

Enter new password.

Select one or more roles.

- Admin
- Service
- Expert
- Standard
- View Only
- CAL216 defi
- CAL216 user

13	32	☒	John Doe	60898186	Expert	---
----	----	-------------------------------------	----------	----------	--------	-----

Then enter the additional user details.

Zusätzlicher Benutzerdetails

Benutzernr.: 26 Benutzername (Login): FloN

Vollerständiger Name: Florence Nightingale

Alias: F.N.

Telefonnummer: 47110815

Abteilung: ICU

Bemerkung: Lady with the Lamp

Email: f.nightingale@hospital.org

RFID-Karte: 2191933700

Zugangsgruppen:

☒ Staff #0
☐ Technicians #1
☐ Admin #10

The value for the RFID card can optionally be recorded via a USB reader (Hörtig art.no.: 1.0625.0.00).



Confirm changes with “Apply” or undo changes with “Old Values”.

Old Values

Apply

Delete User

To delete a user click in the line of the user (grid-cell will be highlighted).

13	32	☒	John Doe	60898186	Expert	---	---
----	----	-------------------------------------	----------	----------	--------	-----	-----

Click on “Delete User”. Line of marked user will disappear.

Delete User

Confirm changes with “Apply” or undo changes with “Old Values”.

Old Values

Apply

4.5.5. Add and delete Role

Add Role

To add a new role click on “New Role”. A new line will be added to the grid.

13	32	☒	New #8	0	☐	---	---	---
----	----	-------------------------------------	--------	---	--------------------------	-----	-----	-----

Enter the settings for the new role.

13	32	☒	John's Role	0	☐	---
----	----	-------------------------------------	-------------	---	--------------------------	-----

Select if Auto-Logoff should be used. If Auto-Logoff should be enabled enter a time in minutes. If it should be disabled enter 0.

Auto-Log off
5
10

To activate admin-rights for the new role use the checkbox in the “Administrator”-column. This will give full rights to every App.

Administrator
☒
☐

To give dedicated rights to one or more Apps click on the cell of the role and app. A selector for the available rights will pop up. Select the required access rights and confirm with ok.

Access Rights	
All Rights	☐
Basic/View	☒
Start Zone	☒
Stop Zone	☒
Purge	☒
Service Level 1	☒
Service Level 2	☒
Maintenance	☒
Editing	☒
Content Scan	☒
Show User Information	☒
Reserved #1	☐
Reserved #2	☐

OK Clear Cancel

Delete Role

To delete a role click in the line of the role (grid-cell will be highlighted).

13	32	☒	John Doe	0	☐	Basic;	---
----	----	-------------------------------------	----------	---	--------------------------	--------	-----

Click on "Delete Role". Line of marked role will disappear

Delete Role

Confirm changes with "Apply" or undo changes with "Old Values".

Old Values

Apply

4.5.6. Tube-System Access Groups

The " Tube-System Access Groups" function is no longer available from FCC V1.78 onwards.

4.5.7. DCS-Roles

RT-Win4 - Users & Roles V 4.21.0.552 Rel16/6/10/528

Host-Connection
Database

Users Roles DCS-Roles DCS-Users

DCS-Roles

Role-Nr	Active	DCS	DCS-Right	Flags	Role Name
0	☒	0xFFFF	0xFFFF	0x01	DCS-Master
1	☒	0x0015	0x002A	0x01	Gh
2	☒	0x0000	0x0048	0x00	test3
3	☒	0x0000	0x0000	0x00	DCS-Role #3
4	☒	0x0000	0x0000	0x00	DCS-Role #4
5	☒	0x0005	0x1C7F	0x01	HK
6	☐	0x0101	0x0440	0x00	DCS-Role #6
7	☒	0x0000	0x0000	0x00	DCS-Role #7

DCS-Rights

Grant	Rights
☒	Send 1
☒	Send 2
☒	Send 3
☒	Send 4
☒	Open
☒	Receive
☒	Secure Receive
☒	Programmer 1
☒	Programmer 2
☒	Programmer 3
☒	Purge
☒	Prio
☒	Subito
☒	---
☒	---
☒	---

New DCS-Role
Delete DCS-Role

DCS List-Groups

Group Nr	Selected	Group Name
0	☒	Laboratories
1	☒	Pharmacy
2	☒	Wards
3	☒	Administration
4	☒	ICU
5	☒	Operation Theatre
6	☒	Housekeeping
7	☒	Technics

Old Values
Apply

4.5.7.1. General use

DCS-Roles

Role-Nr	Active	DCS	DCS-Right	Flags	Role Name
0	☒	0xFFFF	0xFFFF	0x01	DCS-Master
1	☒	0x0015	0x002A	0x01	Gh
2	☒	0x0000	0x0048	0x00	test3
3	☒	0x0000	0x0000	0x00	DCS-Role #3
4	☒	0x0000	0x0000	0x00	DCS-Role #4
5	☒	0x0005	0x1C7F	0x01	HK
6	☐	0x0101	0x0440	0x00	DCS-Role #6
7	☒	0x0000	0x0000	0x00	DCS-Role #7
8	☒	0x0000	0x0000	0x00	DCS-Role #8

Various roles can be created for using the pneumatic tube system. The rights to use the pneumatic tube system are stored in the corresponding role. In addition, up to 16 DCS list groups can be defined in order to assign one or more destination lists to the respective role.

By default, the 'DCS Master' role is created, which contains all rights and destination lists. The DCS Master role cannot be deactivated or deleted.

4.5.7.2. Create new DCS-Role

New DCS-Role

Clicking the “New DCS Role” button creates a new entry in the “DCS Roles” list. A role name is automatically generated for the new role. This role name can be changed at any time.



The tick box in the ‘Active’ column can be used to enable or disable the role. This allows roles to be disabled, whilst still remaining available for future use.

4.5.7.3. Delete DCS-Role

Delete DCS-Role

The “Delete DCS role” button allows you to delete the currently selected DCS role.

Note: No confirmation prompt will appear before deletion.

4.5.7.4. DCS-Rights

DCS-Rights	
Grant	Rights
☐	Send 1
☐	Send 2
☐	Send 3
☐	Send 4
☐	Open
☐	Receive
☐	Secure Receive
☐	Programmer 1
☐	Programmer 2
☐	Programmer 3
☐	Purge
☐	Prio
☐	Subito
☐	---
☐	---
☐	---

In the “DCS-Rights” list, the relevant permissions for operating the pneumatic tube system can be set.

4.5.7.5. DCS List Groups

DCS List-Groups		
Group Nr	Selected	Group Name
0	☐	Laboratories
1	☐	Pharmacy
2	☐	Wards
3	☐	Administration
4	☐	ICU
5	☐	Operation Theatre
6	☐	Housekeeping
7	☐	Technics

The pneumatic tube system can manage up to 16 list groups. These list groups are used to control the display of destination number directories on the station display. This allows a user-specific destination directory to be displayed at the stations.

4.5.8. DCS-Users

RT-Win4 - Users & Roles V 4.21.0.552 Rel16/6/10/528

Host-Connection
Database

Users Roles DCS-Roles DCS-Users

DCS-User File
C:\FERNwartung\RT4x-Test\Entwicklung_\yon-DCS-User\TIL_GHR_F4_20250331.TXT

Reload DCS-User File

DCS-User File exists

Name Position: 3 Given Name Position: 4 RFID Position: 2 Personal ID Position: 1 DCS-Role: HK

Index	User-ID	PID	User Name	User Given Name	RFID Hash
1	1000	1A5E0	Family name #008001	Given name #008001	D54772CC9A57C9252B86CFID70C0A27B5212B2C2CE19042221860954CC25C8FC1
2	1001	1A1F8	Family name #007001	Given name #007001	A9A3EF8B20845128029713C608FB42A38F58A2340623E883C9AC6D038D025A51
3	1002	1A1F9	Family name #007002	Given name #007002	A7646DD8A6D0988A3009A2B7585E251855C79E75CE9656138DAD33A4F010C5CD
4	1003	1A5E1	Family name #008002	Given name #008002	97C75F501EB5CA4C75A6C3F12C9796D3573FF7FE07214331AFF217981928CE11
5	1004	1A5E2	Family name #008003	Given name #008003	04E8ACE4D23F307325439D5532AEEB2E7FC49AF89EFA99B0CC49AC09104FB8B6
6	1005	1A5E3	Family name #008004	Given name #008004	DE148BC31EB0687F9BCC99F331BED4A3D6661DFB3F808EB9025890B3F87A5FE4
7	1006	186A2	Family name #000003	Given name #000003	D6259ED3F72A8F9CE7B1FC98D8F3AF20C04321F06D5F58616F09FD445282C3F0
8	1007	2BF20	Family name #080001	Given name #080001	CA2164B5C742F2811B5AC511B97E4A08725AF22750980CAE6CCF8C755C31C13
9	1008	2BF21	Family name #080002	Given name #080002	5AE88C9561E4CE7A78EF41013146FD8558272849FD213B714B051ECA8881E442
10	1009	E1699	ROLLET	SYLVIE	90566E09A81B678C778C968B6895A97013E626D0A64CC7036788FC63BA9A96D4
11	1010	B8792	MAUGAIN	DELPHINE	210FE12F9D63C6345AD685FAF84D329F77FC3F960E424D03948080CB20E97367
12	1011	959052	BENITAH	LAURENCE	7E671EAA74368536C0F21CE47B91E7B485E88B153489F1B86485E0998D25C
13	1012	910437	POUYAU	ROBIN	A2D1AC58C0F760B1E6AEB8601A7EBAC91A2F247081B910911B624616026C2D9D
14	1013	933891	MICHEL-ROSE	VIRGINIE	85425CE15C76197481792E1BA5005B68AC07A269D88FBCDD8AA9CAE000656AD
15	1014	780808	LE LOCH	JEAN-BAPTISTE	B78817E28BE4371D7DA09F0404CEC44B3A14D4B7DF27B87C710F306E74232A2F
16	1015	756300	BREVET	VERONIQUE	3FE9D53A663F473063CE838FCF8D57C5B2492D6C8CE5D6070833F2295342D48
17	1016	935329	LACHAT	SONIA	F35C9A308D5AB8814A8A903F0514FB8413F27AFBA0D8C67AE14377206AF4414
18	1017	4711	Griedhammer	Stefan	C0977B25D4726D2CF1867A6A867CD25CECF1029A1296C7196FDC56C6B4E615E4
19	1018	4711	Griedhammer	Stefan	D67C5B463C821859193A6F5300B38768039C0A21F554C313C0C1CE366264D56A

Old Values
Apply

4.5.8.1. General

Access to a pneumatic tube station can be restricted using an RFID system. To enable the use of RFID cards already in use by the operator of the pneumatic tube system, a list of currently authorised users can be provided in the DCS user management system. This is done in the form of a file in CSV format. The file contains the serial number of the RFID card, the user's surname and first name, and additional information (e.g. personnel number).

The DCS user file is read by RT-Win4. If a transport is authorised for a user from the file, a record is created in the user database (if it does not already exist). The user is assigned a unique user number, which can be used to identify them in the history. The serial number of the RFID card is encrypted using SHA256.

All users from the DCS user file are assigned one of the DCS roles.

4.5.8.2. Configuring the Userfile



Click the 'Open' button to select the DCS user file.

DCS-User File

C:\FERNwartung\RT4x-Test\Entwicklung_\yon-DCS-User\TIL_GHR_F4_20250331.TXT

Name Position	Given Name Position	RFID Position	Personal ID Position
3	4	2	1

To handle different data layouts in the DCS user file, the column positions of the four required user data fields are set.

Note: The first column is at position 0!

DCS-Role

The "DCS Role" drop-down menu is used to select the role for DCS users.

Clicking the 'Reload DCS user file' button reloads the user file.

To continue using the current settings and discard the changes, click the 'Old values' button.

To apply the new values, click the 'Apply' button.

4.6. RT-Win4 CAN-Bus Viewer (Soft ICE)



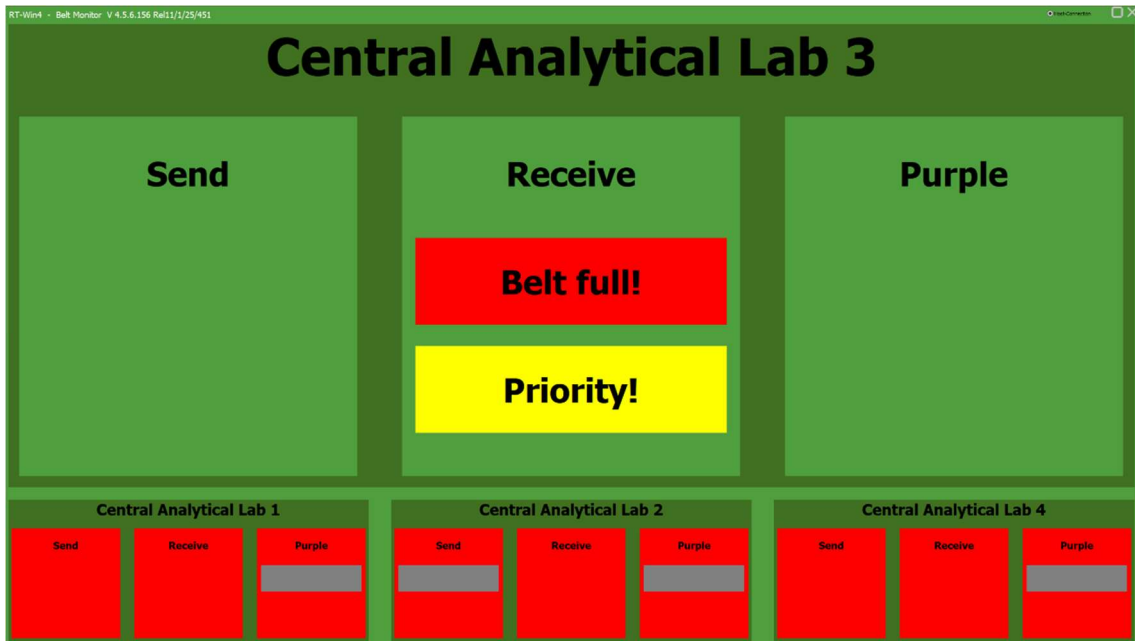
RT-Win 4 - CAN-Bus Viewer V 4.5.6.85 Rel11/1/25/45 -46 47 --- Offline Edit Message Send Msg 15.12.2020 09:42:26 Go to Host

Zon	Send	Zon	Rec.	FI	SI	MSG	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	FT	P	ct	Time	IFTime	Count	DCI	CNr	CC
31	CC	->	31	S1	--	CC Status Request	60	00									01	5	1	15.12.2020 09:42:25	10:29:30	83230	Loc	2	30
31	S1	->	31	CC	--	Status Answer	00	00	00	00							01	5	1	15.12.2020 09:42:26	10:29:32	83231	CAN	1	30
156	CC	->	0	PC	--	TR Ant - Close req	80	00	9C	32							22	5	1	15.12.2020 09:42:26	13:25:33	83232	Loc	2	150
151	CC	->	152	CC	--	TR Buffer	98	1E	00	00	00						02	5	1	15.12.2020 09:42:26	13:25:40	83233	Loc	2	150
151	CC	->	114	CC	--	TR Buffer	72	33	00	00	00						02	5	1	15.12.2020 09:42:26	13:25:40	83234	Loc	2	150
151	CC	->	156	CC	--	TR Buffer - Booked	9C	49	04	01	00						02	5	1	15.12.2020 09:42:26	13:25:40	83235	Loc	2	150
152	CC	->	113	CC	--	TR Buffer	71	28	00	00	00						02	5	1	15.12.2020 09:42:26	13:25:40	83236	Loc	2	150
151	Ether	->	114	CC	--	TR Buffer	72	33	00	00	00						02	5	1	15.12.2020 09:42:26	09:36:35	83237	CCU	150	110
152	Ether	->	113	CC	--	TR Buffer	71	28	00	00	00						02	5	1	15.12.2020 09:42:26	09:36:35	83238	CCU	150	110
152	CC	->	152	S32	--	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	13:25:44	83239	Loc	2	150
111	CC	->	110	all	--	SystemStatus STB	01	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:40	83240	Loc	2	110
111	CC	->	118	S1	--	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:36:40	83241	Loc	2	110
118	CC	->	118	S95	--	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:36:43	83242	Loc	2	110
111	S1	->	111	CC	--	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:43	83243	CAN	0	110
152	S32	->	152	CC	--	CC Status Request	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	13:25:49	83244	Net	2	150
156	CC	->	156	CC	15 81	NeiCom Rec Run1	9C	49	B4	51							02	5	1	15.12.2020 09:42:26	13:25:50	83245	Loc	2	150
152	CC	->	152	W31	--	CC Status Request	80	00									01	5	1	15.12.2020 09:42:26	13:25:51	83246	Loc	2	150
118	S95	->	118	CC	--	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:48	83247	Net	8	110
118	CC	->	118	S96	--	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:36:48	83248	Loc	2	110
152	W31	->	152	CC	--	Status Answer	00	00									01	5	1	15.12.2020 09:42:26	13:25:54	83249	Net	2	150
111	CC	->	111	S10	0	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:36:50	83250	Loc	2	110
111	CC	->	111	S11	1	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:36:50	83251	Loc	2	110
152	CC	->	150	all	--	SystemStatus STB	01	00	00	00	00						01	5	1	15.12.2020 09:42:26	13:25:55	83252	Loc	2	150
111	S10	->	111	CC	0	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:53	83253	CAN	0	110
118	S96	->	118	CC	--	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:53	83254	Net	8	110
111	S11	->	111	CC	1	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:54	83255	CAN	0	110
118	CC	->	118	W92	--	CC Status Request	80	00									01	5	1	15.12.2020 09:42:26	09:36:54	83256	Loc	2	110
118	W92	->	118	CC	--	Status Answer	00	00									01	5	1	15.12.2020 09:42:26	09:36:58	83257	CAN	1	110
111	CC	->	111	S14	4	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:36:60	83258	Loc	2	110
111	CC	->	111	S15	5	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:36:60	83259	Loc	2	110
111	S14	->	111	CC	4	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:63	83260	CAN	0	110
111	S15	->	111	CC	5	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:64	83261	CAN	0	110
111	CC	->	111	S17	7	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:36:80	83262	Loc	2	110
111	S17	->	111	CC	7	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:36:82	83263	CAN	0	110
111	CC	->	111	S24	14	CC Status Request	00	00									01	5	1	15.12.2020 09:42:26	09:37:00	83264	Loc	2	110
111	S24	->	111	CC	14	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:26	09:37:02	83265	CAN	0	110
1	CC	->	1	S1	--	CC Status Request	60	00									01	5	1	15.12.2020 09:42:26	38:23:30	83266	Loc	2	1
1	S1	->	1	CC	--	Status Answer	00	00	00	00							01	5	1	15.12.2020 09:42:27	38:23:32	83267	CAN	1	1
112	CC	->	112	S2	--	CC Status Request	60	00									01	5	1	15.12.2020 09:42:27	09:37:20	83268	Loc	2	110
112	S2	->	112	CC	--	Status Answer	00	00	00	00							01	5	1	15.12.2020 09:42:27	09:37:22	83269	CAN	0	110
31	CC	->	30	all	--	SystemStatus STB	01	00	00	00	00						01	5	1	15.12.2020 09:42:27	10:30:53	83270	Loc	2	30
71	CC	->	71	S10	0	CC Status Request	00	00									01	5	1	15.12.2020 09:42:27	09:56:40	83271	Loc	2	70
71	CC	->	71	S12	2	CC Status Request	00	00									01	5	1	15.12.2020 09:42:27	09:56:40	83272	Loc	2	70
71	CC	->	71	S19	9	CC Status Request	00	00									01	5	1	15.12.2020 09:42:27	09:56:40	83273	Loc	2	70
71	S10	->	71	CC	0	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:27	09:56:44	83274	CAN	1	70
71	S12	->	71	CC	2	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:27	09:56:45	83275	CAN	1	70
71	S19	->	71	CC	9	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:27	09:56:46	83276	CAN	1	70
119	CC	->	110	all	--	SystemStatus STB	01	00	00	00	00						01	5	1	15.12.2020 09:42:27	09:37:74	83277	Loc	2	110
1	CC	->	1	S33	--	CC Status Request	00	00									01	5	1	15.12.2020 09:42:27	38:23:92	83278	Loc	2	1
1	S33	->	1	CC	--	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:27	38:23:95	83279	Net	1	1
1	CC	->	1	W2	--	CC Status Request	80	00									01	5	1	15.12.2020 09:42:27	38:23:95	83280	Loc	2	1
1	W2	->	1	CC	--	Status Answer	00	00									01	5	1	15.12.2020 09:42:27	38:23:97	83281	CAN	1	1
1	CC	->	1	all	--	SystemStatus STB	01	00	00	00	00						01	5	1	15.12.2020 09:42:27	38:23:97	83282	Loc	2	1
70	CC	->	70	all	--	ErrRel Status NET	FF	00									01	5	1	15.12.2020 09:42:27	09:57:00	83283	Loc	2	70
71	CC	->	70	all	--	SystemStatus STB	01	00	00	00	00						01	5	1	15.12.2020 09:42:27	09:57:00	83284	Loc	2	70
71	CC	->	71	S1	--	CC Status Request	00	00									01	5	1	15.12.2020 09:42:27	09:57:00	83285	Loc	2	70
71	S1	->	71	CC	--	Status Answer	00	00	00	00	00						01	5	1	15.12.2020 09:42:27	09:57:03	83286	CAN	1	70
32	CC	->	32	S2	--	CC Status Request	60	00									01	5	1	15.12.2020 09:42:27	10:31:30	83287	Loc	2	30

This app displays the CAN bus communication and is intended for data analysis by Hörtig support technicians.

Warning: We recommend that only trained personnel use this app.

4.7. Belt Monitor

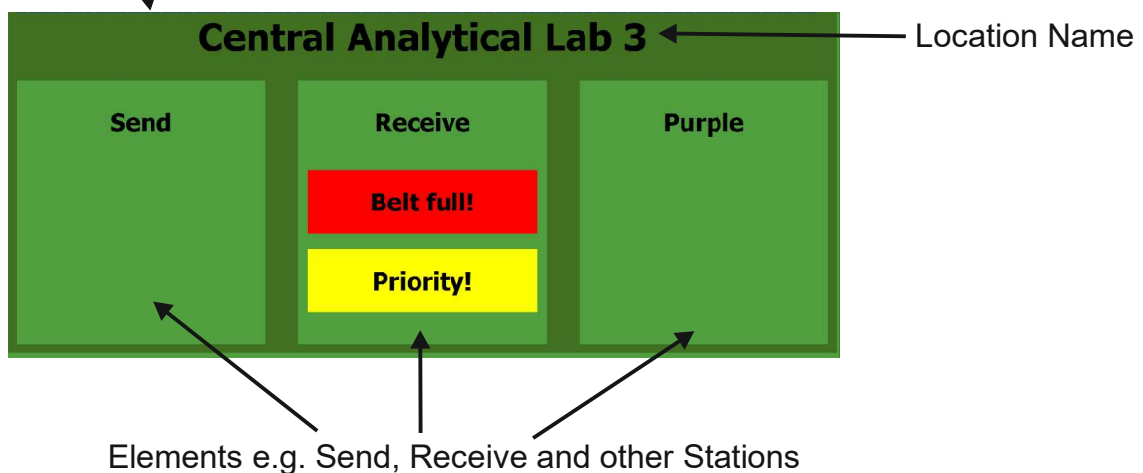


This app displays the current status and availability of the DCS at a specific location, e.g. a laboratory. It is possible to combine several locations. One location is displayed large at the top, the others small at the bottom.

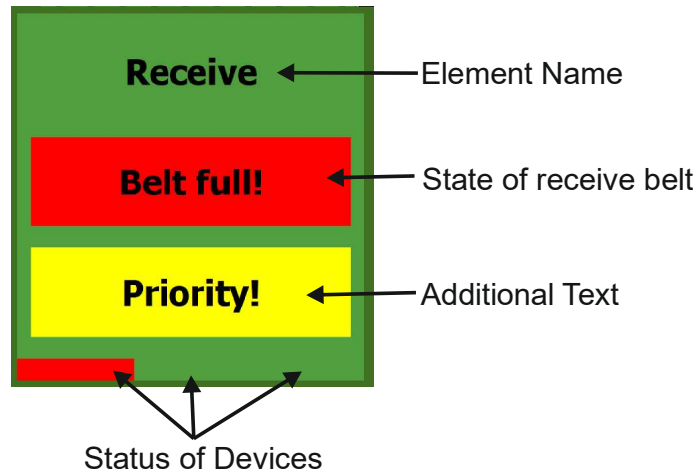
Several display elements can be defined for the respective location, which display the status of the zones and devices: e.g. the send, receive and reserve stations.

To enlarge a location display, click on the corresponding field in the bottom area.

Location Display



Example for an element with 3 Stations:



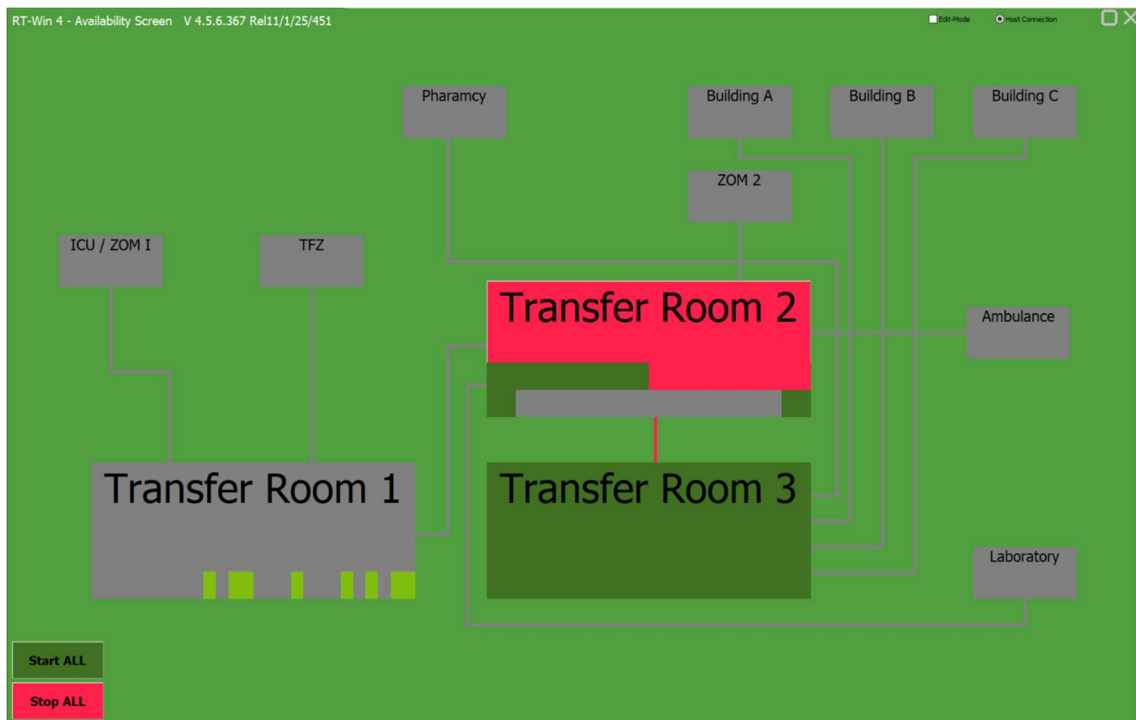
This element contains 3 devices. At the top is the element name. The status of the reception is displayed in the middle. In addition, a freely selectable text can be displayed depending on the status of a device or a device input. The bottom area is split up in three sections that represent the status of the stations. If a station is on error the section turns red. If all stations are on error or the zone is off the complete element turns red.



If there is no actual information available the “unknown” areas turn gray.



4.8. Availability Screen



The Shift-Lead app displays the availability of the complete DCS as a block diagram.

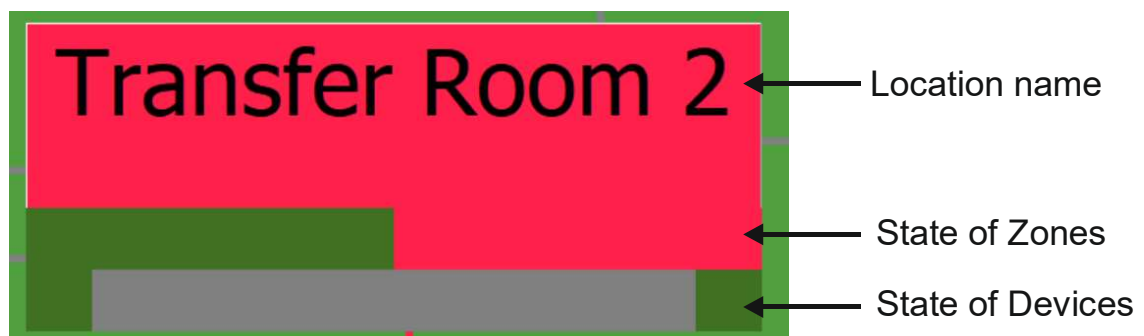
4.8.1. Overview

Parts of the DCS or building sections are displayed as blocks or locations. The block represents the state of the zones and devices located in this area. In the upper half of the block the overall state of this location is displayed. The lower half shows the state of the zones and devices. The meaning of the colors is as follows:

Green = ok

Red = Error

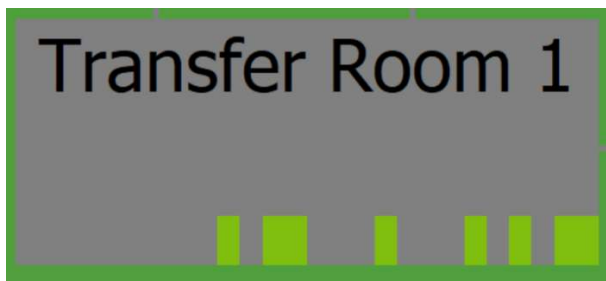
Gray = unknown



If there is no Error the Block is completely green.



If there is no actual information about the zones and devices the block is gray.
Since virtual devices cannot have any malfunctions, they are always displayed in light green.

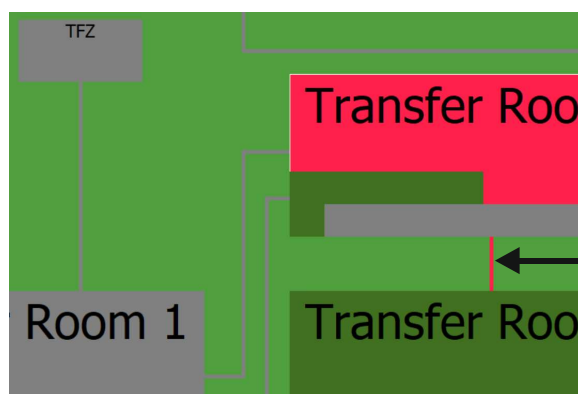


There are so-called links between the locations. These links show the state of one or more zones. The meaning of the colors is as follows:

Green = ok

Red = Error

Gray = unknown



Link between locations

Depending on the user rights, two buttons are active in the lower left corner: "Start ALL" and "Stop ALL".

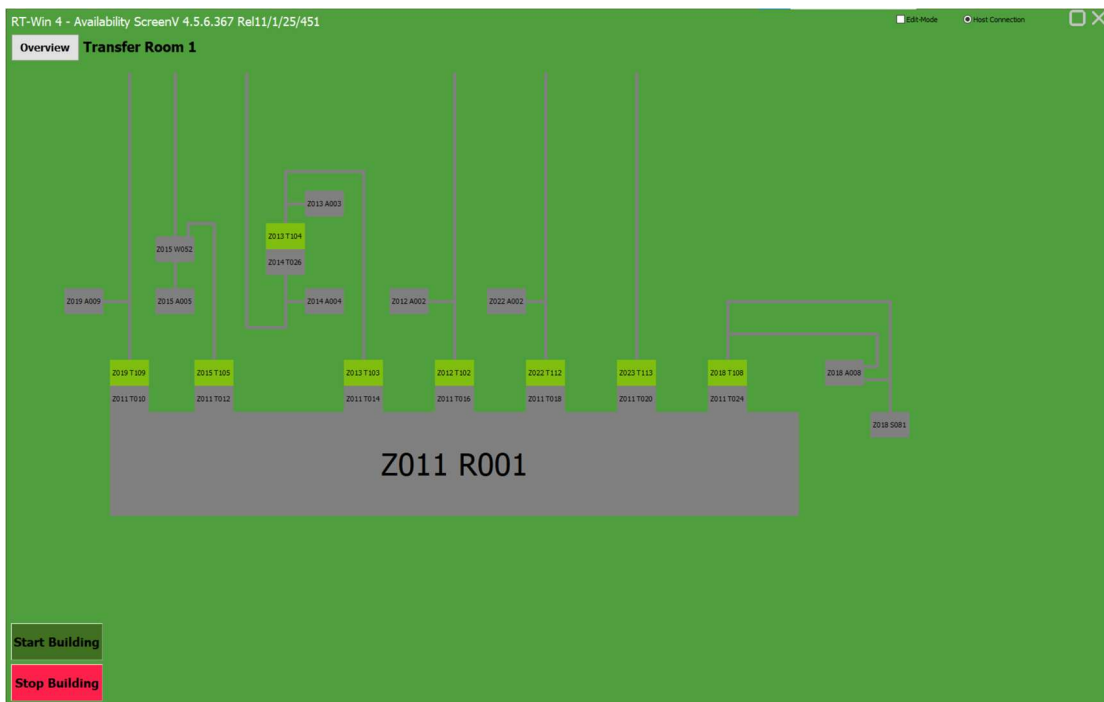


By clicking on these buttons,
all zones of the DCS are set to Standby or Stop.
Before the start or stop of all zones a security dialogue appears.



4.8.2. Detailed View

With a click on a location you can open a detailed view of it.



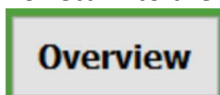
The detailed view shows the devices and zones of the selected location. The colors of the individual elements show the status like in the overview. The meaning of the colors is as follows:

Green = ok

Red = Error

Gray = unknown

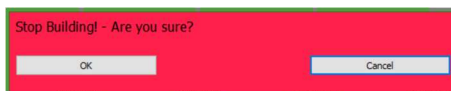
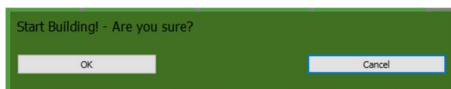
To return to the Overview click on the "Overview"-Button.



Depending on the user rights, two buttons are active in the lower left corner: "Start Building" and "Stop Building".

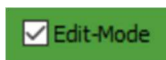


By clicking on these buttons, the zones displayed in the actual detailed view are set to Standby or Stop. Before the execution, a security prompt is displayed.



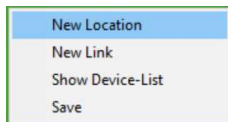
4.8.3. Edit-Mode

To edit the SLC please activate the edit mode. The editing mode is only available with the necessary user rights.



Locations

To add a new Location to the "Overview"-Screen do a right-hand click on the window and select "New Location".

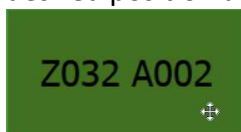


Then Enter Name of new Location.

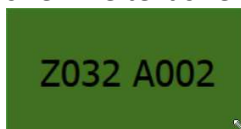


If the new location is not displayed immediately, switch to the detail view and back again.

To move a block click on it and keep the mouse button pressed. Move the block to the desired position and release the mouse button.



To change the size of a block click in the lower right corner and drag it to the desired size. The text size in the block will be adjusted automatically.

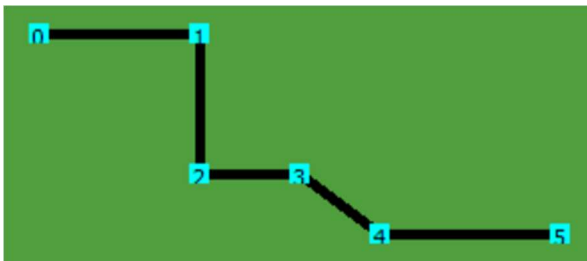


To remove a location do right-hand click on it and select "Delete". A security prompt will pop up to avoid unwanted deletion. Select "Rename" to change the name of the location.

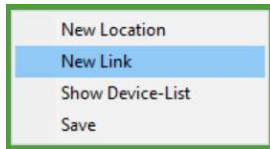


Links

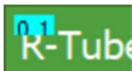
A link is a connection between two locations. It can contain one or more zones.



To add a new link do a right-hand click on the SLC-window and select "New Link".

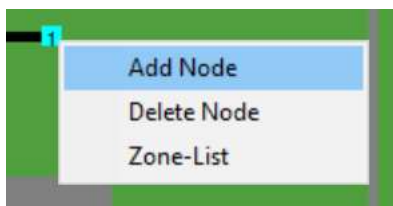


A new link with two nodes appears in the top left corner of the window.



Drag the nodes to the desired positions. If additional nodes are needed do a right-hand click on a node of the link and select "Add Node". Use "Delete Node" to remove nodes from a link.

Hint: A link must have at least two nodes! If only two nodes are left and a further node will be deleted then the link will be deleted.

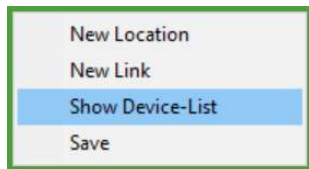


Select "Zone-List" to assign zones to the link.

Zone-List		
Index	Zone	
1	11	☐
2	12	☐
3	13	☒
4	14	☐
5	15	☐
6	18	☒
7	19	☐
8	21	☒
9	22	☐
10	23	☐
11	24	☐
12	28	☐
13	29	☐
14	31	☐
15	32	☐
16	35	☐

Devices

To add devices to the detailed view do a right-hand click on the SLC-window and select "Show Device-List".



Device-List					
Index	Zone	Device-Nr	Typ	Vir	Location
26	018	108	T	☒	Transfer Room 1
27	019	009	A	☐	Transfer Room 1
28	019	055	S	☐	ICU / ZOM I
29	019	057	S	☐	ICU / ZOM I
30	019	109	T	☒	Transfer Room 1
31	019	095	W	☐	ICU / ZOM I
32	021	001	R	☐	Transfer Room 2
33	021	011	T	☐	Transfer Room 2
34	021	013	T	☐	Transfer Room 2
35	021	015	T	☐	Transfer Room 2
36	021	017	T	☐	Transfer Room 2
37	021	018	T	☐	Transfer Room 2
38	021	019	T	☐	Transfer Room 2
39	021	020	T	☐	Transfer Room 2
40	021	021	T	☐	Transfer Room 2
41	021	024	T	☐	Transfer Room 2
42	022	002	A	☐	Transfer Room 1
43	022	112	T	☒	Transfer Room 1
44	023	113	T	☒	Transfer Room 1
45	024	030	S	☐	ZOM 2
46	028	008	A	☐	Laboratory
47	029	042	S	☐	Ambulance
48	031	001	R	☐	Transfer Room 3
49	032	002	A	☐	Transfer Room 2
50	035	032	S	☐	Building A
51	036	072	S	☐	Building C
52	037	062	S	☐	Building B
53	039	009	A	☐	Pharmacy
				☐	Transfer Room 1

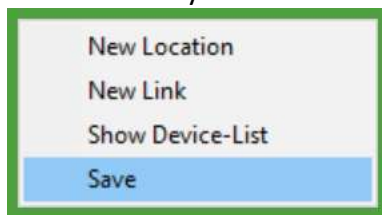
Enter zone and device number in the last line of the grid. Choose a letter for the device-type (e.g. S = Station, T = Transfer,...). Mark the checkbox if it is a virtual device. Finally select the location of the device.

54	36	73	S	☐	Building C
----	----	----	---	--------------------------	------------

After closing the device-list the SLC-data will be reloaded and the new devices are available in the detailed view.

Save

To save the layout to disk do a right-hand click on the SLC-window and select "Save".



4.9. Predictive Maintenance App (PMA)



RT-Win4 - Predictive Maintenance App V 4.8.0.179 Rel11/5/17/419

Carrier Maintenance

Tube Surveillance

Drive Surveillance

Carrier Race Tracks

No.	RTSP-Dev / Slot	RS-Dev1	RS1	RS-Dev2	RS2	RS2-Dev3	RS3	RS3-Dev4	RS4	
1	211531 / beilebig	211531	C	211W5	E	0				
2	221532 / beilebig	221532	C	221W5	E	0				
3	221533 / beilebig	221533	C	221W2	E	0				
4	211534 / beilebig	211534	C	211W5	E	0				
5	20 CC / beilebig	20 CC		20 CC		0				
6	20 CC / beilebig	20 CC		20 CC		0				
7	20 CC / beilebig	20 CC		20 CC		0				
8	20 CC / beilebig	20 CC		20 CC		0				
9	20 CC / beilebig	20 CC		20 CC		0				
10	20 CC / beilebig	20 CC		20 CC		0				
11	20 CC / beilebig	20 CC		20 CC		0				
12	20 CC / beilebig	20 CC		20 CC		0				
13	20 CC / beilebig	20 CC		20 CC		0				
14	20 CC / beilebig	20 CC		20 CC		0				
15	20 CC / beilebig	20 CC		20 CC		0				
16	20 CC / beilebig	20 CC		20 CC		0				
17	20 CC / beilebig	20 CC		20 CC		0				
18	20 CC / beilebig	20 CC		20 CC		0				
19	20 CC / beilebig	20 CC		20 CC		0				
20	20 CC / beilebig	20 CC		20 CC		0				
21	20 CC / beilebig	20 CC		20 CC		0				
22	20 CC / beilebig	20 CC		20 CC		0				
23	20 CC / beilebig	20 CC		20 CC		0				
24	20 CC / beilebig	20 CC		20 CC		0				
25	20 CC / beilebig	20 CC		20 CC		0				
26	20 CC / beilebig	20 CC		20 CC		0				
27	20 CC / beilebig	20 CC		20 CC		0				
28	20 CC / beilebig	20 CC		20 CC		0				
29	20 CC / beilebig	20 CC		20 CC		0				
30	20 CC / beilebig	20 CC		20 CC		0				
31	20 CC / beilebig	20 CC		20 CC		0				

Carrier List:

No.	CID	ArtTime	Reference Time	Race/rack	%	Count Total	TravelTime e Total	Distance	Reset Time Maintenance	Plant Count	Count e Reset	TravelTime e e Reset	Distance e Reset	Last Washing	Washing Count	Count e Washing	TravelTime e e Washing	Distance e Washing	Reset Rangung	
1	0	0	0	0	---	Trend	14	00:06:45	553	---	0	14	00:06:45	553	---	0	14	00:06:45	553	Reset Rangung
2	2001	12,23	12,23	3	0	Trend	426	03:10:05	2760	---	0	426	03:10:05	2760	---	0	426	03:10:05	2760	Reset Rangung
3	2002	12,01	0	---	Trend	2502	27:40:55	7792	16.07.2020 14:30:09	0	139	00:59:52	0	139	00:59:52	0	139	00:59:52	0	Reset Rangung
4	2004	12,44	12,44	3	0	Trend	799	04:06:59	5713	---	0	799	04:06:59	5713	---	0	799	04:06:59	5713	Reset Rangung
5	2005	12,66	12,66	3	0	Trend	463	03:34:27	10395	---	0	463	03:34:27	10395	---	0	463	03:34:27	10395	Reset Rangung
6	2007	12,97	0	---	Trend	502	04:30:04	126179	16.07.2020 14:30:14	0	39	00:26:42	0	39	00:26:42	0	39	00:26:42	0	Reset Rangung
7	2008	13,07	0	---	Trend	8725	67:07:16	32529	16.07.2020 14:30:16	0	28	00:08:15	0	28	00:08:15	0	28	00:08:15	0	Reset Rangung
8	2009	0	0	---	Trend	106	00:41:27	1032	---	0	106	00:41:27	1032	---	0	106	00:41:27	1032	Reset Rangung	
9	2010	13,02	13,02	3	0	Trend	507	06:35:19	2498	---	0	507	06:35:19	2498	---	0	507	06:35:19	2498	Reset Rangung
10	2014	12,45	0	---	Trend	692	05:27:44	20297	16.07.2020 14:30:18	0	38	00:15:51	0	38	00:15:51	0	38	00:15:51	0	Reset Rangung
11	2015	12,74	0	---	Trend	493	03:25:34	36183	16.07.2020 14:30:19	0	0	00:00:00	0	0	00:00:00	0	0	00:00:00	0	Reset Rangung
12	2016	12,48	0	---	Trend	513	04:25:51	30125	16.07.2020 14:30:19	0	0	00:00:00	0	0	00:00:00	0	0	00:00:00	0	Reset Rangung
13	2017	12,32	12,32	3	0	Trend	548	04:07:31	7136	---	0	548	04:07:31	7136	---	0	548	04:07:31	7136	Reset Rangung
14	2019	12,36	12,36	3	0	Trend	543	04:05:49	3291	---	0	543	04:05:49	3291	---	0	543	04:05:49	3291	Reset Rangung
15	2020	12,85	0	---	Trend	3811	28:35:47	12663	16.07.2020 14:30:22	0	39	00:12:00	0	39	00:12:00	0	39	00:12:00	0	Reset Rangung
16	2024	12,59	12,59	3	0	Trend	710	05:02:31	12947	---	0	710	05:02:31	12947	---	0	710	05:02:31	12947	Reset Rangung
17	2025	12,18	0	---	Trend	611	06:17:55	58220	16.07.2020 14:30:23	0	35	00:15:51	0	35	00:15:51	0	35	00:15:51	0	Reset Rangung
18	2026	12,57	0	---	Trend	1217	09:29:28	63676	16.07.2020 14:30:24	0	21	00:05:10	0	21	00:05:10	0	21	00:05:10	0	Reset Rangung
19	2027	12,5	12,5	3	0	Trend	424	03:02:03	5785	---	0	424	03:02:03	5785	---	0	424	03:02:03	5785	Reset Rangung
20	2028	12,41	12,41	3	0	Trend	471	04:02:47	8048	---	0	471	04:02:47	8048	---	0	471	04:02:47	8048	Reset Rangung
21	2029	12,52	0	---	Trend	8614	66:38:21	4021	16.07.2020 14:30:27	0	95	00:31:13	0	95	00:31:13	0	95	00:31:13	0	Reset Rangung
22	2030	12,57	12,57	3	0	Trend	301	03:53:00	7244	---	0	301	03:53:00	7244	---	0	301	03:53:00	7244	Reset Rangung
23	2031	12,38	12,38	3	0	Trend	357	02:37:23	2600	---	0	357	02:37:23	2600	---	0	357	02:37:23	2600	Reset Rangung
24	2032	12,13	12,13	3	0	Trend	353	02:49:35	2105	---	0	353	02:49:35	2105	---	0	353	02:49:35	2105	Reset Rangung
25	2033	12,2	12,2	3	0	Trend	307	03:06:31	3005	---	0	307	03:06:31	3005	---	0	307	03:06:31	3005	Reset Rangung
26	2034	13	13	3	0	Trend	305	02:08:54	2390	---	0	305	02:08:54	2390	---	0	305	02:08:54	2390	Reset Rangung
27	2035	12,61	0	---	Trend	483	03:48:54	30921	16.07.2020 14:30:32	0	0	00:00:00	0	0	00:00:00	0	0	00:00:00	0	Reset Rangung
28	2036	15,07	15,07	3	0	Trend	228	04:39:35	1833	---	0	228	04:39:35	1833	---	0	228	04:39:35	1833	Reset Rangung
29	2037	12,21	12,21	3	0	Trend	367	03:56:22	3320	---	0	367	03:56:22	3320	---	0	367	03:56:22	3320	Reset Rangung
30	2038	13,35	13,35	3	0	Trend	351	03:34:43	12723	---	0	351	03:34:43	12723	---	0	351	03:34:43	12723	Reset Rangung

Max. Distance: 2000m Max. Travel Time: 150m Max. Transport Count: 1500 Max. Tol. in Race/Track: 100000 Distribution: #1

Washing: 10000m 5h 1000 100000 never

The Prophylactic Maintenance App (PMA) is used to predict possible sources of malfunctions. For this purpose, it collects various statistical data about the carriers, the travel time in certain pipe sections and about the device drives. If one of the values is outside the specified range, the background color changes to yellow to display a warning.

RT-Win4 - Predictive Maintenance App V 4.8.0.179 Rel11/5/17/419

Carrier Maintenance Tube Surveillance Drive Surveillance

Carrier Race Tracks

No.	RTSP-Dev / Slot	RS-Dev1	RS1	RS-Dev2	RS2	RS2-Dev3	RS3	RS3-Dev4	RS4
1	211531 / beilebig	211531	C	211W5	E	0			
2	221532 / beilebig	221532	C	221W5	E	0			
3	221533 / beilebig	221533	C	221W2	E	0			
4	211534 / beilebig	211534	C	211W5	E	0			
5	20 CC / beilebig	20 CC		20 CC		0			
6	20 CC / beilebig	20 CC		20 CC		0			
7	20 CC / beilebig	20 CC		20 CC		0			
8	20 CC / beilebig	20 CC		20 CC		0			
9	20 CC / beilebig	20 CC		20 CC		0			
10	20 CC / beilebig	20 CC		20 CC		0			
11	20 CC / beilebig	20 CC		20 CC		0			
12	20 CC / beilebig	20 CC		20 CC		0			
13	20 CC / beilebig	20 CC		20 CC		0			
14	20 CC / beilebig	20 CC		20 CC		0			
15	20 CC / beilebig	20 CC		20 CC		0			
16	20 CC / beilebig	20 CC		20 CC		0			
17	20 CC / beilebig	20 CC		20 CC		0			
18	20 CC / beilebig	20 CC		20 CC		0			
19	20 CC / beilebig	20 CC		20 CC		0			
20	20 CC / beilebig	20 CC		20 CC		0			
21	20 CC / beilebig	20 CC		20 CC		0			
22	20 CC / beilebig	20 CC		20 CC		0			
23	20 CC / beilebig	20 CC		20 CC		0			
24	20 CC / beilebig	20 CC		20 CC		0			
25	20 CC / beilebig	20 CC		20 CC		0			
26	20 CC / beilebig	20 CC		20 CC		0			
27	20 CC / beilebig	20 CC		20 CC		0			
28	20 CC / beilebig	20 CC		20 CC		0			
29	20 CC / beilebig	20 CC		20 CC		0			
30	20 CC / beilebig	20 CC		20 CC		0			
31	20 CC / beilebig	20 CC		20 CC		0			

Carrier List:

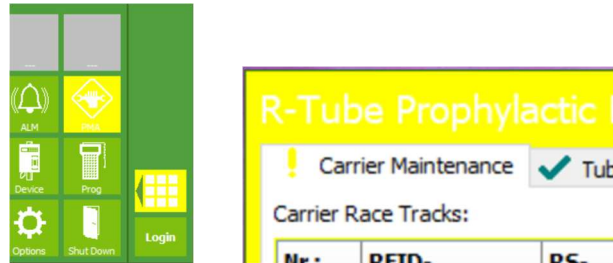
No.	CID	ArtTime	Reference Time	Race/rack	%	Count Total	TravelTime e Total	Distance	Reset Time Maintenance	Plant Count	Count e Reset	TravelTime e e Reset	Distance e Reset	Last Washing	Washing Count	Count e Washing	TravelTime e e Washing	Distance e Washing	Reset Rangung	
1	0	0	0	0	---	Trend	14	00:06:45	553	---	0	14	00:06:45	553	---	0	14	00:06:45	553	Reset Rangung
2	2001	12,23	12,23	3	0	Trend	426	03:10:05	2760	---	0	426	03:10:05	2760	---	0	426	03:10:05	2760	Reset Rangung
3	2002	12,01	0	---	Trend	2502	27:40:55	7792	16.07.2020 14:30:09	0	139	00:59:52	0	139	00:59:52	0	139	00:59:52	0	Reset Rangung
4	2004	12,44	12,44	3	0	Trend	799	04:06:59	5713	---	0	799	04:06:59	5713	---	0	799	04:06:59	5713	Reset Rangung
5	2005	12,66	12,66	3	0	Trend	463	03:34:27	10395	---	0	463	03:34:27	10395	---	0	463	03:34:27	10395	Reset Rangung
6	2007	12,97	0	---	Trend	502	04:30:04	126179	16.07.2020 14:30:14	0	39	00:26:42	0	39	00:26:42	0	39	00:26:42	0	Reset Rangung
7	2008	13,07	0	---	Trend	8725	67:07:16	32529	16.07.2020 14:30:16	0	28	00:08:15	0	28	00:08:15	0	28	00:08:15	0	Reset Rangung
8	2009	0	0	---	Trend	106	00:41:27	1032	---	0	106	00:41:27	1032	---	0	106	00:41:27	1032	Reset Rangung	
9	2010	13,02	13,02	3	0	Trend	507	06:35:19	2498	---	0	507	06:35:19	2498	---	0	507	06:35:19	2498	Reset Rangung
10	2014	12,45	0	---	Trend	692	05:27:	2027	16.07.2020 14:30:18	0	38	00:15:11	0	38	00:15:11	0	38	00:15:11	0	Reset Rangung
11	2015	12,74	0	---	Trend	693	05:29:24	3610	16.07.2020 14:30:19	0	38	00:08:00	0	38	00:08:00	0	38	00:08:00	0	Reset Rangung
12	2016	12,48	0	---	Trend	513	04:35:55	1035	16.07.2020 14:30:19	0	0	00:00:00	0	0	00:00:00	0	0	00:00:00	0	Reset Rangung
13	2017	12,32	12,32	3	0	Trend	548	04:07:31	7126	---	0	548	04:07:31	7126	---	0	548	04:07:31	7126	Reset Rangung
14	2019	12,36	12,36	3	0	Trend	543	04:05:49	3291	---	0	543	04:05:49	3291	---	0	543	04:05:49	3291	Reset Rangung
15	2020	12,85	0	---	Trend	220	02:20:47	10666	16.07.2020 14:30:22	0	19	00:00:00	0	19	00:00:00	0	19	00:00:00	0	Reset Rangung
16	2024	12,39	12,39	3	0	Trend	710	05:03:21	11047	---	0	710	05:03:21	11047	---	0	710	05:03:21	11047	Reset Rangung
17	2025	12,18	0	---	Trend	611	06:17:55	6820	16.07.2020 14:30:23	0	30	00:15:11	0	30	00:15:11	0	30	00:15:11	0	Reset Rangung
18	2026	12,87	0	---	Trend	1217	09:29:26	58276	16.07.2020 14:30:24	0	21	00:06:30	0	21	00:06:30	0	21	00:06:30	0	Reset Rangung
19	2027	12,53	12,53	3	0	Trend	424	03:20:23	5783	---	0	424	03:20:23	5783	---	0	424	03:20:23	5783	Reset Rangung
20	2028	12,87	0	---	Trend	471	04:22:47	8946	---	0	91	04:02:07	8946	---	0	91	04:02:07	8946	Reset Rangung	
21	2029	12,82	0	---	Trend	8614	66:38:21	40321	16.07.2020 14:30:27	0	91	00:11:13	0	91	00:11:13	0	91	00:11:13	0	Reset Rangung
22	2030	12,87	12,87	3	0	Trend	301	01:53:50	7244	---	0	301	01:53:50	7244	---	0	301	01:53:50	7244	Reset Rangung
23	2001	12,58	12,58	3	0	Trend	337	01:07:20	2600	---	0	337	01:07:20	2600	---	0	337	01:07:20	2600	Reset Rangung
24	2032	12,13	0	---	Trend	113	02:46:15	2155	---	0	113	02:46:15	2155	---	0	113	02:46:15	2155	Reset Rangung	
25	2033	12,2	12,2	3	0	Trend	307	03:06:31	3005	---	0	307	03:06:31	3005	---	0	307	03:06:31	3005	Reset Rangung
26	2004	13	13	3	0	Trend	305	02:08:54	2390	---	0	305	02:08:54	2390	---	0	305	02:08:54	2390	Reset Rangung
27	2005	12,61	0	---	Trend	463	03:34:54	10921	16.07.2020 14:30:32	0	0	00:00:00	0	0	00:00:00	0	0	00:00:00	0	Reset Rangung
28	2006	15,07	15,07	3	0	Trend	226	04:39:16	3803	---	0	226	04:39:16	3803	---	0	226	04:39:16	3803	Reset Rangung
29	2007	12,21	0	---	Trend	387	03:36:23	10321	---	0	387	03:36:23	10321	---	0	387	03:36:23	10321	Reset Rangung	
30	2008	13,11	13,11	3	0	Trend	31	03:51:43	1994	---	0	31	03:51:43	1994	---	0	31	03:51:43	1994	Reset Rangung

Max. Distance: Max. Travel Time: Max. Transport Count: Max. Tot. in Race/Rack: Destruction: Schedule: e1

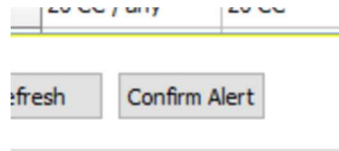
Refresh Confirm Alert

Hardening: 000000 0h 0000 000075 newer

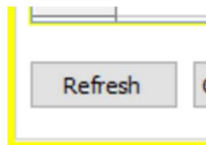
The icon in the main application also turns yellow. The tab sheet in which the value was found is marked, too.



If a value has been reset, the warning remains in effect until the "Confirm Alert" button is clicked.



The display data is updated using the push procedure. If a manual update is requested, use the "Refresh" button.



4.9.1.1. Race Tracks

A racetrack is defined by a start (RS1) and end (RS2) point. In addition, an RFID reader is required to identify the carrier.

Carrier Race Tracks:

Nr.:	RFID-Dev / Slot	RS-Dev1	RS1	RS-Dev2	RS2	CID
1	Z11 S31 / any	Z11 S31	C	Z11 W5	E	0
2	Z21 S32 / any	Z21 S32	C	Z21 W5	E	0
3	Z21 S33 / any	Z21 S33	C	Z21 W2	E	1026
4	Z11 S34 / any	Z11 S34	C	Z11 W5	E	0
5	Z0 CC / any	Z0 CC		Z0 CC		0

If a carrier is identified by the RFID reader the time between start and end point is measured. Due to the wear of the rings, the carriers become slower over time and take longer through the race track. This difference is calculated. If the tolerance is exceeded, the carrier is marked in the list accordingly. Suitable race tracks are tracks that are only driven through by a single carrier. The carriers should always have the same weight to avoid measurement deviations. Up to 32 tracks can be created. The PMA automatically decides which track is the most suitable for a carrier. To create or edit a race track click on the row in the track list. The Carrier-Race-track Editor will open.

Carrier-Race-Track Edit

RFID-Device

Zone: Z11

Device: S31

Slot-Nr.: Any

Start:

Zone: Z11

Device: S31

Sensor: C

End:

Zone: Z11

Device: W5

Sensor: E

Apply

In order to calculate reasonable statistical values, 100 individual measurements are grouped together. The average time of the first 100 measurements is used as the reference time. Pressing the "Reset" button resets the reference time and it must be redetermined with another 100 measurements.

Pressing the "Trend" button opens the trend window, which shows the percentage deviation of the measurements from the reference time.

If a carrier is read by the RFID-device the race track is highlighted light green.

✓ Carrier Maintenance ✓ Tube-Surveillance ✓ Drive-Surveillance						
Carrier Race Tracks:						
Nr.:	RFID-Dev / Slot	RS-Dev1	RS1	RS-Dev2	RS2	CID
1	Z11 S31 / any	Z11 S31	C	Z11 W5	E	0
2	Z21 S32 / any	Z21 S32	C	Z21 W5	E	0
3	Z21 S33 / any	Z21 S33	C	Z21 W2	E	1026
4	Z11 S34 / any	Z11 S34	C	Z11 W5	E	0

If a carrier is passing through a race track this race track is highlighted green after passing tube switch RS1.

Carrier Race Tracks:						
Nr.:	RFID-Dev / Slot	RS-Dev1	RS1	RS-Dev2	RS2	CID
1	Z11 S31 / any	Z11 S31	C	Z11 W5	E	0
2	Z21 S32 / any	Z21 S32	C	Z21 W5	E	0
3	Z21 S33 / any	Z21 S33	C	Z21 W2	E	1030
4	Z11 S34 / any	Z11 S34	C	Z11 W5	E	0
5	Z0 CC / any	Z0 CC		Z0 CC		0

4.9.1.2. Carrier List

Carrier List:																					
Nr.	CID	AvTime	Reference Time	Race/Track	%		Count	TravelTime Total	Distance	Reset Time Maintenance	Maint. Count	Count s. Reset	TravelTime s. Reset	Distance s. Reset		Last Washing	Washing Count	Count s. Washing	TravelTime s. Washing	Distance s. Washing	
1	0	0	0	---	---	Trend	14	00:06:45	553	---	0	14	00:06:45	553	Reset Wartung	---	0	14	00:06:45	553	Reset Reinigung
2	1001	12,23	12,23	3	0	Trend	426	03:10:05	3760	---	0	426	03:10:05	3760	Reset Wartung	---	0	426	03:10:05	3760	Reset Reinigung
3	1002	13,01	0	---	---	Trend	3592	27:43:55	7792	16.07.2020 14:30:09	0	119	00:59:52	0	Reset Wartung	16.07.2020 14:30:09	0	119	00:59:52	0	Reset Reinigung
4	1004	12,44	12,44	3	0	Trend	799	04:06:59	5713	---	0	799	04:06:59	5713	Reset Wartung	---	0	799	04:06:59	5713	Reset Reinigung
5	1005	12,66	12,66	3	0	Trend	463	03:34:27	10395	---	0	463	03:34:27	10395	Reset Wartung	---	0	463	03:34:27	10395	Reset Reinigung
6	1007	12,97	0	---	---	Trend	502	04:16:04	136175	16.07.2020 14:30:14	0	39	00:26:42	0	Reset Wartung	16.07.2020 14:30:14	0	39	00:26:42	0	Reset Reinigung
7	1008	13,07	0	---	---	Trend	8725	67:07:16	32529	16.07.2020 14:30:16	0	28	00:08:15	0	Reset Wartung	16.07.2020 14:30:16	0	28	00:08:15	0	Reset Reinigung
8	1009	0	0	---	---	Trend	106	00:41:37	1032	---	0	106	00:41:37	1032	Reset Wartung	---	0	106	00:41:37	1032	Reset Reinigung
9	1010	13,02	13,02	3	0	Trend	507	06:35:19	2458	---	0	507	06:35:19	2458	Reset Wartung	---	0	507	06:35:19	2458	Reset Reinigung
10	1014	12,45	0	---	---	Trend	692	05:37:44	20297	16.07.2020 14:30:18	0	38	00:15:51	0	Reset Wartung	16.07.2020 14:30:18	0	38	00:15:51	0	Reset Reinigung
11	1015	12,74	0	---	---	Trend	493	03:35:34	36183	20.05.2021 10:31:27	1	0	00:00:00	0	Reset Wartung	16.07.2020 14:30:19	0	0	00:00:00	0	Reset Reinigung
12	1016	12,48	0	---	---	Trend	513	04:25:55	30125	16.07.2020 14:30:19	0	0	00:00:00	0	Reset Wartung	16.07.2020 14:30:19	0	0	00:00:00	0	Reset Reinigung
13	1017	12,32	12,32	3	0	Trend	548	04:07:31	7136	---	0	548	04:07:31	7136	Reset Wartung	---	0	548	04:07:31	7136	Reset Reinigung
14	1019	12,36	12,36	3	0	Trend	543	04:05:49	3291	---	0	543	04:05:49	3291	Reset Wartung	---	0	543	04:05:49	3291	Reset Reinigung
15	1020	12,85	0	---	---	Trend	3811	28:35:47	12665	16.07.2020 14:30:22	0	39	00:12:00	0	Reset Wartung	16.07.2020 14:30:22	0	39	00:12:00	0	Reset Reinigung
16	1024	12,59	12,59	3	0	Trend	710	05:02:31	11047	---	0	710	05:02:31	11047	Reset Wartung	---	0	710	05:02:31	11047	Reset Reinigung
17	1025	12,18	0	---	---	Trend	611	06:17:55	58220	16.07.2020 14:30:23	0	35	00:15:51	0	Reset Wartung	16.07.2020 14:30:23	0	35	00:15:51	0	Reset Reinigung
18	1026	12,57	0	---	---	Trend	1217	09:29:29	65676	16.07.2020 14:30:24	0	21	00:05:10	0	Reset Wartung	16.07.2020 14:30:24	0	21	00:05:10	0	Reset Reinigung
19	1027	12,5	12,5	3	0	Trend	424	03:02:03	5785	---	0	424	03:02:03	5785	Reset Wartung	---	0	424	03:02:03	5785	Reset Reinigung
20	1028	12,41	12,41	3	0	Trend	471	04:02:47	8048	---	0	471	04:02:47	8048	Reset Wartung	---	0	471	04:02:47	8048	Reset Reinigung
21	1029	12,52	0	---	---	Trend	8614	66:38:21	4021	16.07.2020 14:30:27	0	95	00:31:53	0	Reset Wartung	16.07.2020 14:30:27	0	95	00:31:53	0	Reset Reinigung
22	1030	12,57	12,57	3	0	Trend	501	03:53:00	7244	---	0	501	03:53:00	7244	Reset Wartung	---	0	501	03:53:00	7244	Reset Reinigung
23	2001	12,38	12,38	3	0	Trend	357	02:37:23	2650	---	0	357	02:37:23	2650	Reset Wartung	---	0	357	02:37:23	2650	Reset Reinigung
24	2002	12,13	12,13	3	0	Trend	353	02:49:35	2105	---	0	353	02:49:35	2105	Reset Wartung	---	0	353	02:49:35	2105	Reset Reinigung
25	2003	12,2	12,2	3	0	Trend	397	03:06:31	3005	---	0	397	03:06:31	3005	Reset Wartung	---	0	397	03:06:31	3005	Reset Reinigung
26	2004	13	13	3	0	Trend	305	02:08:54	2390	---	0	305	02:08:54	2390	Reset Wartung	---	0	305	02:08:54	2390	Reset Reinigung
27	2005	12,61	0	---	---	Trend	483	03:48:54	30921	16.07.2020 14:30:32	0	0	00:00:00	0	Reset Wartung	16.07.2020 14:30:32	0	0	00:00:00	0	Reset Reinigung
28	2006	15,07	15,07	3	0	Trend	226	04:39:35	1833	---	0	226	04:39:35	1833	Reset Wartung	---	0	226	04:39:35	1833	Reset Reinigung
29	2007	12,21	12,21	3	0	Trend	367	03:56:22	3320	---	0	367	03:56:22	3320	Reset Wartung	---	0	367	03:56:22	3320	Reset Reinigung
30	2008	13,33	13,33	3	0	Trend	331	03:33:43	3333	---	0	331	03:33:43	3333	Reset Wartung	---	0	331	03:33:43	3333	Reset Reinigung

The carrier list displays the collected data of the individual carriers. The monitored values are highlighted in color. Values within the permitted value range are highlighted in green.

23	2001	12,38	12,38	3	0	Trend	357	02:37:23	2650	---	0	357	02:37:23	2650	Reset Wartung	---	0	357	02:37:23	2650	Reset Reinigung
24	2002	12,13	12,13	3	0	Trend	353	02:49:35	2105	---	0	353	02:49:35	2105	Reset Wartung	---	0	353	02:49:35	2105	Reset Reinigung

Values with too large deviations are highlighted in orange.

4	1004	12,44	12,44	3	0	Trend	799	04:06:59	5713	---	0	799	04:06:59	5713	Reset Wartung	---	0	799	04:06:59	5713	Reset Reinigung
5	1005	12,66	12,66	3	0	Trend	463	03:34:27	10395	---	0	463	03:34:27	10395	Reset Wartung	---	0	463	03:34:27	10395	Reset Reinigung

Values for which there is not yet sufficient data material are not highlighted and stay white.

---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

The columns and their meaning:

Nr.:

The first column contains the sequential numbering of the carriers.

CID:

The second column contains the four-digit carrier ID. The carrier list is sorted by the CID.

AvTime:

"AvTime" is the average travel time of the last 100 measurements in the racetrack.

RefTime:

This is the reference time. It is the average time from the first 100 measurements after resetting the container values.

RaceTrack:

Shows the race track selected by the PMA host for this carrier (see 4.9.1.1).

%:

Indicates the deviation of the current average time from reference time in percent. If the deviation is greater than the specified tolerance, the field is highlighted in orange. If there is not yet a sufficient number of measured values, "---" is displayed and highlighted in white.

Trend:

The "Trend" button opens a window with a diagram of the last race track measurements. The diagram shows the percentage deviation from the reference time. (See 4.9.1.3)

Count Total:

Specifies the total number of transports that this carrier has completed.

TravelTime total:

Specifies the total travel time (operating hours) of this carrier.

Distance:

Indicates the total distance travelled by the carrier. The respective distances are calculated by the FCC from the setup data. The value is given in meters.

Reset Time Maintenance:

Indicates the date and time of the last reset of maintenance counters for the carriers.

Maintenance Count:

Indicates how often the maintenance data has been reset.

Count s. Reset:

Specifies the number of shipments this carrier has completed since the last reset.

TravelTime s. Reset:

Specifies the travel time (operating hours) of the carrier since the last reset.

Distance s. Reset:

Specifies the distance traveled by the carrier since the last reset. The respective distances are calculated by the FCC from the setup data. The value is given in meters.

Reset Maintenance:

The "Reset Maintenance" buttons reset the reference time and the other counters of the respective carrier.

Last Washing:

Indicates the date and time of resetting the cleaning data.

Washing Count:

Indicates how often the data for the carrier cleaning has been reset.

Count s. Washing:

Indicates the number of transports with this carrier since the last cleaning.

TravelTime s. Washing:

Indicates the travel time of the TBH since the last cleaning (operating hours).

Distance s. Washing:

Indicates the distance the TBH has travelled since the last cleaning. The respective distances are calculated by the FCC from the setup data. The information is given in metres.

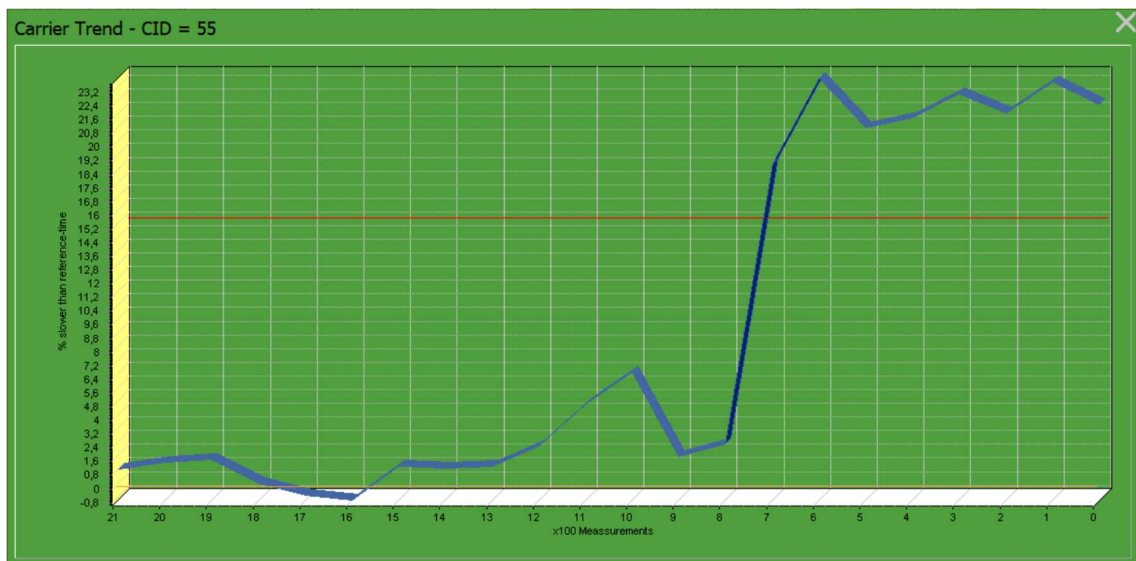
Reset Washing:

These buttons reset the counters for the TBH cleaning.

Note:

If a carrier was successfully diverted, the corresponding counters are automatically reset and the maintenance or cleaning counter is increased.

4.9.1.3. Carrier Trend



The "Carrier Trend" shows the difference between the average driving time in the race track and the reference value. The difference is given in %.
The red line shows the threshold value.

4.9.1.4. Global Carrier-Parameters

	Max. Distance:	Max. Travel Time:	Max. Transport-Count:	Max. Tol. in RaceTrack:	Destination:	Schedule:
Maintenance:	20000m	100h	700	15%	000006	#1
Washing:	10000m	5h	1000		000076	never

The carrier parameters specify the threshold values when exceeded, a carrier is marked in the carrier list. There are two sets of parameters to perform carrier maintenance and cleaning independently of each other. If a carrier marked in this way makes an empty run (e.g. when returning from the laboratory), it is diverted to the respective destination number. The rerouting only takes place if the time schedule specified in Schedule is active (e.g. opening hours of the cleaning department). The schedules can be set in the Schedule app (See 4.16). If no diversion is to be performed, the setting "never" must be selected under Schedule. If the diversion is to take place independently of a schedule, the setting "always" must be selected.

A click on the parameter fields opens the editor window.

Global Carrier-Parameter Editor ✕

Maintenance Redirection

Max. Distance:	Max. Travel Time:	Max. Transport-Count:	Max. Tol. in RaceTrack:
20000	100	700	15

Destination:	Schedule:
000006	#1

Washing Redirection

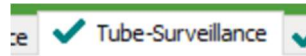
Max. Distance:	Max. Travel Time:	Max. Transport-Count:
10000	5	1000

Destination:	Schedule:
000076	never

Apply

In the "Global Carrier Parameter Editor", the threshold values can be adapted to the local requirements. To confirm the changed values, click on the "Apply" button.

4.9.2. Tube Surveillance



Carrier Maintenance

Tube Surveillance

Drive-Surveillance

Tube Race Tracks:

Tube Conditions:

Nr.	RS-Dev1	RS1	RS-Dev2	RS2	Zone	Blow-Dev	Blower-Direction	Tolerance [%]	Track-Length	min Pressure	max Pressure	^	RaceTrack	AvTime	Reference Time	%			Reset Time	Count Total	Count	Speed [m/s]							
1	Z12 553	C	Z11 516	B	12	2	suck	10	50	-100	100		1	26,57	0	---		Trend	Stuck Carrier	01.04.2020	23686	0	0					Reset	
2	Z14 514	B	Z14 541	C	14	4	blow	10	50	-100	100																		
3	20 CC		20 CC		0	0	---	10	0	-100	100																		
4	20 CC		20 CC		0	0	---	10	0	-100	100																		
5	20 CC		20 CC		0	0	---	10	0	-100	100																		
6	20 CC		20 CC		0	0	---	10	0	-100	100																		
7	20 CC		20 CC		0	0	---	10	0	-100	100																		
8	20 CC		20 CC		0	0	---	10	0	-100	100																		
9	20 CC		20 CC		0	0	---	10	0	-100	100																		
10	20 CC		20 CC		0	0	---	10	0	-100	100																		
11	20 CC		20 CC		0	0	---	10	0	-100	100																		
12	20 CC		20 CC		0	0	---	10	0	-100	100																		
13	20 CC		20 CC		0	0	---	10	0	-100	100																		
14	20 CC		20 CC		0	0	---	10	0	-100	100																		
15	20 CC		20 CC		0	0	---	10	0	-100	100																		
16	20 CC		20 CC		0	0	---	10	0	-100	100																		
17	20 CC		20 CC		0	0	---	10	0	-100	100																		
18	20 CC		20 CC		0	0	---	10	0	-100	100																		
19	20 CC		20 CC		0	0	---	10	0	-100	100																		
20	20 CC		20 CC		0	0	---	10	0	-100	100																		
21	20 CC		20 CC		0	0	---	10	0	-100	100																		
22	20 CC		20 CC		0	0	---	10	0	-100	100																		
23	20 CC		20 CC		0	0	---	10	0	-100	100																		
24	20 CC		20 CC		0	0	---	10	0	-100	100																		
25	20 CC		20 CC		0	0	---	10	0	-100	100																		
26	20 CC		20 CC		0	0	---	10	0	-100	100																		
27	20 CC		20 CC		0	0	---	10	0	-100	100																		
28	20 CC		20 CC		0	0	---	10	0	-100	100																		
29	20 CC		20 CC		0	0	---	10	0	-100	100																		
30	20 CC		20 CC		0	0	---	10	0	-100	100																		

Refresh

Confirm Alert

The Tube surveillance is used to detect leaks in the tube network and to locate blocked Carriers in long tube sections.

In the course of time, leaks can occur at the tube sleeves due to mechanical stress, material aging or thermal expansion. These lead to an increase in travel time. By defining race tracks, certain tube sections can be monitored for changes in the average travel time.

If the pressure measurement at the blower is activated, sudden pressure rises can be detected during a transport, as they occur when a carrier gets stuck in the tube. From the length of the race track, the average travel time and the current travel time, an approximate position of the carrier can be calculated when the pressure rises.

4.9.2.1. Tube Race Tracks

Tube Race Tracks:

Nr.:	RS-Dev1	RS1	RS-Dev2	RS2	Zone	Blow-Dev	Blower-Direction	Tolerance [%]	Track-Length	min Pressure	max Pressure
1	Z12 S53	C	Z11 S16	B	12	2	suck	10	50	-100	100
2	Z14 S14	B	Z14 S41	C	14	4	blow	10	50	-100	100
3	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
4	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
5	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
6	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
7	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
8	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
9	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
10	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
11	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
12	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
13	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
14	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
15	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
16	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
17	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
18	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
19	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
20	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
21	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
22	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
23	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
24	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
25	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
26	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
27	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
28	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
29	Z0 CC		Z0 CC		0	0	---	10	0	-100	100
30	Z0 CC		Z0 CC		0	0	---	10	0	-100	100

Up to 256 tube race tracks can be defined. A tube race track is defined by a series of parameters. If a carrier is passing through a race track this track is highlighted green.

Nr.:	RS-Dev1	RS1	RS-Dev2	RS2	Zone	Blow-Dev	Blower-Direction	Tolerance [%]	Track-Length	min Pressure	max Pressure
1	Z12 S53	C	Z11 S16	B	12	2	suck	10	50	-100	100
2	Z156 W72	E	Z156 W74	E	156	6	blow	10	84	-100	100
3	Z21 S33	C	Z21 W2	E	21	1	suck	10	42	-100	100
4	Z0 CC		Z0 CC		0	0	---	10	0	-100	100

The Parameters:

RS-Dev1

Defines the device of the tube switch at the beginning of the race track.

RS1

Tube switch (A-H) at the beginning of the race track.

RS-Dev2

Defines the device of the tube switch at the end of the race track.

RS2

Tube switch (A-H) at the end of the race track.

Zone

Zone of the blower in this race track.

Blow-Dev

Device number of the zone blower.

Blower-Direction

The race track is only active in sucking or blowing mode. Choose the correct blower-direction according to the order of RS1 and RS2.

Tolerance [%]

This value defines the tolerance in %, how far the current average speed may deviate from the reference.

Track-Length

Distance in meters between the tube switches at the beginning and the end of the race track.

Minimum Pressure

Lower pressure threshold for detection of a blocked carrier.

Maximum Pressure

Upper pressure threshold for detection of a blocked carrier.

Note:

The two tube switches as well as the blower need not be in the same zone or FCC. But they must be physical tube switches (no virtual devices!).

Changing Parameters

To change the parameters of a race track click on the line of the track list. The Tube-Race-Track Editor will open then.

Adjust the parameters according to the local requirements and click on “Apply”.

4.9.2.2. Tube Condition

Tube Condition:										
RaceTrack	AvTime	Reference Time	%			Reset Time	Count Total	Count	Speed [m/s]	
1	24,02	17,54	36,91	Trend	Stuck Carrier	19.07.2019 08:08:21	17682	1094	2,08	Reset
2	21,3	21,3	0	Trend	Stuck Carrier	---	2	2	3,94	Reset
3	11,92	11,92	0	Trend	Stuck Carrier	---	7	7	3,52	Reset

The Tube-Condition shows the actual state of the race tracks. Only race tracks which have been passed by at least one carrier are shown in the list.

Columns:

RaceTrack

Shows the number of the track from the track list.

AvTime

Shows the average run time of the last 100 measurements.

Reference Time

Shows the reference time of this race track. If there are less than 100 measurements since the last reset the field is not highlighted. In case of more measurements it is highlighted green.

% (Percentage)

Shows by what percentage the current average run time is above the reference time. If the value exceeds the entered threshold value, the field is highlighted in orange. Otherwise, it is highlighted in green.

Trend

Opens "Tube Surveillance Trend"-window. (see 4.9.2.3)

Stuck Carrier

Opens "Carrier Stuck Alerts" window. (see 4.9.2.4)

Reset Time

Shows Date and time of last reset of this track.

Count Total

Shows the number of carriers that have passed through the race track since its creation.

Count

Shows the number of carriers that have passed through the race track since the last reset.

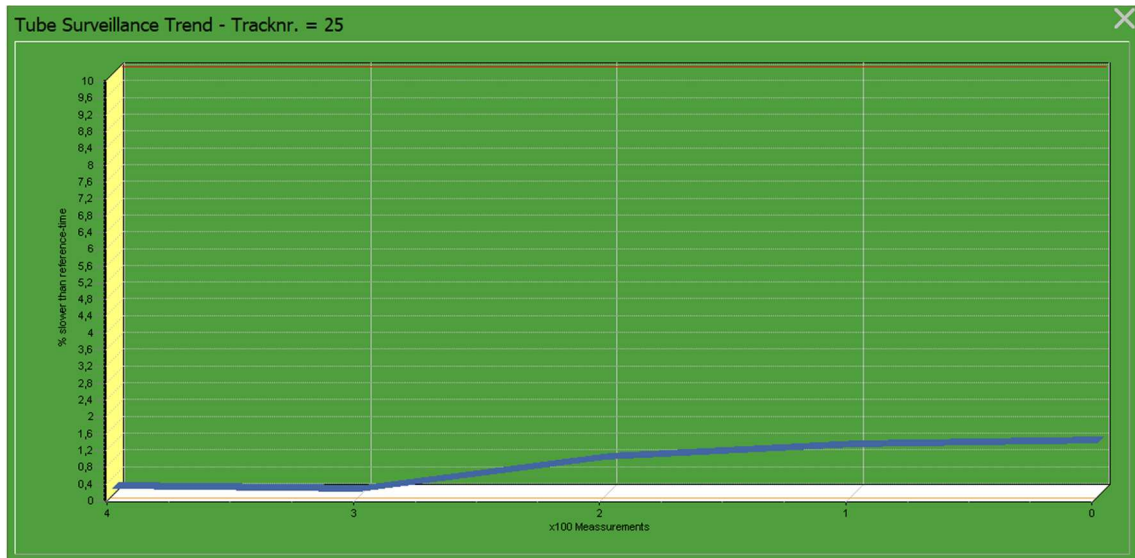
Speed [m/s]

Shows the average speed, calculated from the track length and AvTime.

Reset

This button resets the reference time and the counter.

4.9.2.3. Tube Surveillance Trend



The "Tube Surveillance Trend" shows the difference between the average driving time in the race track and the reference value. The difference is given in %. The red line shows the threshold value.

4.9.2.4. Carrier Stuck Alerts

Carrier Stuck Alerts - Race-Track: 25										
Timestamp	Alert #1	Alert #2	Alert #3	Alert #4	Alert #5	Alert #6	Alert #7	Alert #8	Alert #9	Alert #10
Carrier #1										
Carrier #2										
Carrier #3										
Carrier #4										
Carrier #5										
Carrier #6										
Carrier #7										
Carrier #8										
Carrier #9										
Carrier #10										
Carrier #11										
Carrier #12										
Carrier #13										
Carrier #14										
Carrier #15										
Carrier #16										

This window shows the positions of the carriers in the tube and the time of pressure exceedance in the race track. In case of a multi-carry transport the positions of up to 16 carriers are calculated. The last 10 pressure exceedances of this race track are displayed.

4.9.3. Drive Surveillance

Drive-List:

Drive	Device-Number	Drive-Number	AvTime	Reference Time	%		Reset Time	Count Total	Count	Error-Count total	Error-Count s. Reset	On-Time	On-Time s. Reset		
1	20 PC	1	0	0	---	Trend	---	5	5	1	1	00:00:43	00:00:43	Reset	Replaced
2	21 S1	0	2,663	2,615	1,83556405	Trend	---	1355	1355	0	0	00:59:25	00:59:25	Reset	Replaced
3	21 S6	0	0,314	0	---	Trend	---	124	124	0	0	00:00:53	00:00:53	Reset	Replaced
4	21 S6	1	0,804	0	---	Trend	---	198	198	0	0	00:02:16	00:02:16	Reset	Replaced
5	21 S33	0	0,307	0,309	-0,6472491	Trend	---	485	485	0	0	00:03:09	00:03:09	Reset	Replaced
6	21 S33	1	0,802	0,802	0	Trend	---	708	708	0	0	00:08:03	00:08:03	Reset	Replaced
7	21 S33	50	0	0	---	Trend	---	0	0	0	0	00:00:00	00:00:00	Reset	Replaced
8	21 W2	0	3,824	3,838	-0,3647733	Trend	---	707	707	0	0	00:44:44	00:44:44	Reset	Replaced
9	220 S1	0	2,648	2,655	-0,2636534	Trend	---	926	926	0	0	00:40:45	00:40:45	Reset	Replaced
10	220 S5	0	0,755	0,753	0,26560424	Trend	---	924	924	0	0	00:10:00	00:10:00	Reset	Replaced
11	220 S5	1	0,789	0,778	1,41388174	Trend	---	924	924	0	0	00:10:26	00:10:26	Reset	Replaced
12	220 S5	2	1,471	1,478	-0,4736129	Trend	---	462	462	0	0	00:11:33	00:11:33	Reset	Replaced
13	220 W2	0	3,906	0	---	Trend	---	464	464	0	0	00:30:03	00:30:03	Reset	Replaced
14	221 S1	0	2,673	2,658	0,56433408	Trend	---	5732	5732	0	0	04:10:45	04:10:45	Reset	Replaced
15	221 S33	0	0,757	0,755	0,26490066	Trend	---	5648	5648	0	0	01:00:56	01:00:56	Reset	Replaced
16	221 S33	1	0,784	0,776	1,03092783	Trend	11.04.2019 12:19:17	5632	3360	10	9	01:03:23	00:37:53	Reset	Replaced
17	221 S33	2	1,513	1,478	2,36806495	Trend	---	2825	2825	5	5	01:10:54	01:10:54	Reset	Replaced
18	221 S33	50	0	0	---	Trend	---	0	0	0	0	00:00:00	00:00:00	Reset	Replaced
19	221 W2	0	3,911	0	---	Trend	---	2869	2869	0	0	03:02:47	03:02:47	Reset	Replaced
20	231 S1	0	0	0	---	Trend	---	0	0	3	3	00:00:00	00:00:00	Reset	Replaced
21	231 S1	50	0	0	---	Trend	---	0	0	0	0	00:00:00	00:00:00	Reset	Replaced
22	232 S11	0	3,532	0	---	Trend	---	50	50	0	0	00:02:23	00:02:23	Reset	Replaced
23	232 S20	0	0,781	0,786	-0,6361323	Trend	09.05.2019 11:07:53	2152	2152	0	0	00:24:55	00:24:55	Reset	Replaced
24	232 S20	1	0,619	0,62	-0,1612903	Trend	---	6392	6392	0	0	00:58:31	00:58:31	Reset	Replaced
25	232 S21	0	3,739	3,696	1,16341991	Trend	---	2294	2294	0	0	02:21:04	02:21:04	Reset	Replaced
26	232 S22	0	0,793	0,804	-1,3601592	Trend	---	3624	3624	0	0	00:42:08	00:42:08	Reset	Replaced
27	232 S23	0	0,798	0	---	Trend	---	380	380	0	0	00:04:26	00:04:26	Reset	Replaced
28	232 S24	0	0,839	0,83	1,09433714	Trend	---	2385	2385	0	0	00:28:35	00:28:35	Reset	Replaced
29	232 S24	1	0,654	0,649	0,77041602	Trend	---	2383	2383	0	0	00:22:11	00:22:11	Reset	Replaced

Refresh Confirm Alert

Max. Count: 100000 Max. Error-Count: 25 Max. neg. Tolerance: -10% Max. pos. Tolerance: 5% Max. On-Time: 500h

In the drive surveillance, all drives that send data in the system appear automatically. The number of positions approached and the operating time is recorded. In addition, the average time between position 0 and the next higher position is determined (only when approaching position 0).

4.9.3.1. Drive List

Drive-List:

Drive	Device-Number	Drive-Number	AvTime	Reference Time	%		Reset Time	Count Total	Count	Error-Count total	Error-Count s. Reset	On-Time	On-Time s. Reset		
66	221 S1	0	2,679	1,162	130,530774	Trend	19.07.2019 08:11:51	2416981	121692	17	1	220:49:58	11:28:11	Reset	Replaced
67	221 S11	0	0,784	0,79	-0,7594936	Trend	24.07.2019 13:48:07	902957	39780	64	0	170:37:36	07:26:38	Reset	Replaced
68	221 S11	1	0,242	0,241	0,41493775	Trend	02.05.2019 11:28:43	452210	72941	4	0	31:47:22	05:02:16	Reset	Replaced
69	221 S11	2	0,547	0,542	0,92230922	Trend	02.05.2019 11:28:44	225624	36329	6	1	35:38:47	05:40:50	Reset	Replaced
70	221 S13	0	0,771	0,774	-0,3875968	Trend	02.05.2019 11:28:46	529401	71300	23	2	97:19:34	12:55:44	Reset	Replaced
71	221 S13	1	0,748	0,751	-0,3994673	Trend	02.05.2019 11:29:06	529401	71302	106	10	100:09:14	13:28:57	Reset	Replaced
72	221 S13	2	0,781	0	---	Trend	02.05.2019 11:29:10	264696	35646	6	2	41:46:12	05:30:27	Reset	Replaced
73	221 S15	0	0,696	0,695	0,14388489	Trend	02.05.2019 11:29:19	534558	72307	11	1	93:28:00	12:24:27	Reset	Replaced

The Drive List contains the following values and functions:

Drive

Sequential number of the drive.

Device Number

Shows the device number of the board to which the drive is connected.

Drive Number

Shows the number of the drive on the board to which it is connected.

AvTime

Shows the average time between position 0 and the next higher position.

Reference Time

Shows the reference time calculated from the first 100 measurements after a reset.

% (Percentage)

Shows the difference between the average runtime and the reference time in percent.

Trend

Opens the “Drive Surveillance Trend” window. (see 4.9.3.2)

Reset Time

Shows Date and time of last reset of this drive.

Count Total

Shows the number of positions ever reached.

Count

Shows the number of positions reached since last reset.

Error-Count total

Shows the total number of motor errors.

Error-Count since Reset

Shows the number of motor errors since last reset.

On-Time

Shows the total operating hours of the drive.

On-Time since Reset

Shows the operating hours of the drive since last reset.

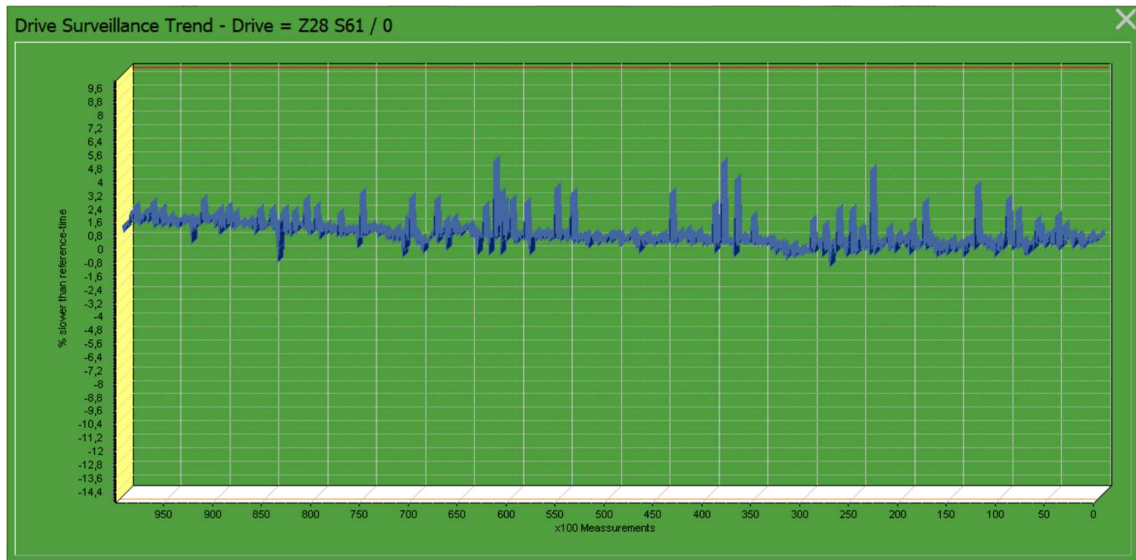
Reset

Resets the reference time, the position counter, the error counter and the operating hours of this drive.

Replaced

Resets all values for this drive.

4.9.3.2. Drive Surveillance Trend



The Drive Surveillance Trend shows the percentage difference between the average runtime and the reference time in percent.

4.9.3.3. Global Drive Parameters

Max. Count:	Max. Error-Count:	Max. neg. Tolerance:	Max. pos. Tolerance:	Max. On-Time:
100000	25	-15%	10%	500h

The Global Drive Parameters define the threshold values for the corresponding measured values. To adjust the parameters to local conditions, open the Global Drive Parameter Editor by clicking on one of the parameter fields.

Global Drive-Parameter Edit

Max. Count:

Max. Error-Count:

Max. On-Time: [h]

100000

25

500

Max. neg. Tolerance: [%]

Max. pos. Tolerance: [%]

-15

10

Apply

4.10. Alarm Manager (ALMS)

RT-Win4 - Alarm Manager V 4.5.6.115 Rel11/1/25/451 Host-Connection X

Nr.:	Active	Alarm Name	Alarm Trigger Type	Trigger State	Reset CC-Alarm
0	☒	Temperature CAL 216	On Card-Input	Trigger Inactive	Reset
1	☐	Temperature TB1	On Card-Input	Trigger Inactive	Reset
2	☐	Temperature TB2	On Card-Input	Trigger Inactive	Reset
3	☐	Temperature TB3	On Card-Input	Trigger Inactive	Reset
4	☐	HVAC OB3	On Card-Input	Trigger Inactive	Reset
5	☐	HVAC OB4	On Card-Input	Trigger Inactive	Reset
6	☐	HVAC OB5	On Card-Input	Trigger Inactive	Reset
7	☐	HVAC OB6	On Card-Input	Trigger Inactive	Reset
8	☐	HVAC OB7	On Card-Input	Trigger Inactive	Reset
9	☐	HVAC OB8	On Card-Input	Trigger Inactive	Reset
10	☒	HVAC OB9	On Card-Input	Trigger Active	Reset
11	☐	HVAC OB10	On Card-Input	Trigger Inactive	Reset
12	☐	HVAC OB11	On Card-Input	Trigger Inactive	Reset
13	☐	HVAC OB13	On Card-Input	Trigger Inactive	Reset
14	☐	HVAC OB14	On Card-Input	Trigger Inactive	Reset
15	☐	HVAC OB15	On Card-Input	Trigger Inactive	Reset
16	☐	HVAC OB16	On Card-Input	Trigger Inactive	Reset
17	☐	HVAC OB17	On Card-Input	Trigger Inactive	Reset
18	☐	HVAC OB18	On Card-Input	Trigger Inactive	Reset
19	☐	Sand-Filter TB1	On Card-Input	Trigger Inactive	Reset
20	☐	Sand-Filter TB2	On Card-Input	Trigger Inactive	Reset
21	☐	Sand-Filter TB3	On Card-Input	Trigger Inactive	Reset
22	☐	Sand-Filter OB3	On Card-Input	Trigger Inactive	Reset
23	☐	Sand-Filter OB4	On Card-Input	Trigger Inactive	Reset
24	☐	Sand-Filter OB5	On Card-Input	Trigger Inactive	Reset
25	☐	Sand-Filter OB6	On Card-Input	Trigger Inactive	Reset
26	☐	Sand-Filter OB7	On Card-Input	Trigger Inactive	Reset
27	☐	Sand-Filter OB8	On Card-Input	Trigger Inactive	Reset
28	☐	Sand-Filter OB9	On Card-Input	Trigger Inactive	Reset
29	☐	Sand-Filter OB10	On Card-Input	Trigger Inactive	Reset
30	☐	Sand-Filter OB11	On Card-Input	Trigger Inactive	Reset
31	☐	Sand-Filter OB13	On Card-Input	Trigger Inactive	Reset
32	☐	Sand-Filter OB14	On Card-Input	Trigger Inactive	Reset
33	☐	Sand-Filter OB15	On Card-Input	Trigger Inactive	Reset
34	☐	Sand-Filter OB16	On Card-Input	Trigger Inactive	Reset
35	☐	Sand-Filter OB17	On Card-Input	Trigger Inactive	Reset
36	☐	Sand-Filter OB18	On Card-Input	Trigger Inactive	Reset
37	☒	Fire & Gas CAL 216	On CC-Alarm	Trigger Inactive	
38	☒	Fire & Gas TB1	On CC-Alarm	Trigger Inactive	
39	☒	Fire & Gas TB2	On CC-Alarm	Trigger Inactive	
40	☒	Fire & Gas TB3	On CC-Alarm	Trigger Inactive	

New Delete

The alarm manager (ALM) is used to monitor alarm inputs and system statuses. The incoming information can be processed in various ways, such as switching off zones, setting signal outputs or sending emails. Common applications are the shutdown of system parts in the event of a malfunction or alarm, or the forwarding of failures by e-mail to service personnel.

4.10.1. The Alarm List

Nr.:	Active	Alarm Name	Alarm Trigger Type	Trigger State	Reset CC-Alarm
0	☐	Temperature CAL 216	On Card-Input	Trigger Inactive	Reset
1	☐	Temperature TB1	On Card-Input	Trigger Inactive	Reset
2	☐	Temperature TB2	On Card-Input	Trigger Inactive	Reset
3	☐	Temperature TB3	On Card-Input	Trigger Inactive	Reset
4	☐	HVAC OB3	On Card-Input	Trigger Inactive	Reset
5	☐	HVAC OB4	On Card-Input	Trigger Inactive	Reset
6	☐	HVAC OB5	On Card-Input	Trigger Inactive	Reset
7	☐	HVAC OB6	On Card-Input	Trigger Inactive	Reset
8	☐	HVAC OB7	On Card-Input	Trigger Inactive	Reset
9	☐	HVAC OB8	On Card-Input	Trigger Inactive	Reset
10	☒	HVAC OB9	On Card-Input	Trigger Active	Reset
11	☐	HVAC OB10	On Card-Input	Trigger Inactive	Reset
12	☐	HVAC OB11	On Card-Input	Trigger Inactive	Reset
13	☐	HVAC OB13	On Card-Input	Trigger Inactive	Reset
14	☐	HVAC OB14	On Card-Input	Trigger Inactive	Reset
15	☐	HVAC OB15	On Card-Input	Trigger Inactive	Reset
16	☐	HVAC OB16	On Card-Input	Trigger Inactive	Reset
17	☐	HVAC OB17	On Card-Input	Trigger Inactive	Reset
18	☐	HVAC OB18	On Card-Input	Trigger Inactive	Reset
19	☐	Sand-Filter TB1	On Card-Input	Trigger Inactive	Reset
20	☐	Sand-Filter TB2	On Card-Input	Trigger Inactive	Reset
21	☐	Sand-Filter TB3	On Card-Input	Trigger Inactive	Reset
22	☐	Sand-Filter OB3	On Card-Input	Trigger Inactive	Reset
23	☐	Sand-Filter OB4	On Card-Input	Trigger Inactive	Reset
24	☐	Sand-Filter OB5	On Card-Input	Trigger Inactive	Reset
25	☐	Sand-Filter OB6	On Card-Input	Trigger Inactive	Reset
26	☐	Sand-Filter OB7	On Card-Input	Trigger Inactive	Reset
27	☐	Sand-Filter OB8	On Card-Input	Trigger Inactive	Reset
28	☐	Sand-Filter OB9	On Card-Input	Trigger Inactive	Reset
29	☐	Sand-Filter OB10	On Card-Input	Trigger Inactive	Reset
30	☐	Sand-Filter OB11	On Card-Input	Trigger Inactive	Reset
31	☐	Sand-Filter OB13	On Card-Input	Trigger Inactive	Reset
32	☐	Sand-Filter OB14	On Card-Input	Trigger Inactive	Reset
33	☐	Sand-Filter OB15	On Card-Input	Trigger Inactive	Reset
34	☐	Sand-Filter OB16	On Card-Input	Trigger Inactive	Reset
35	☐	Sand-Filter OB17	On Card-Input	Trigger Inactive	Reset
36	☐	Sand-Filter OB18	On Card-Input	Trigger Inactive	Reset
37	☒	Fire & Gas CAL 216	On CC-Alarm	Trigger Inactive	
38	☒	Fire & Gas TB1	On CC-Alarm	Trigger Inactive	
39	☒	Fire & Gas TB2	On CC-Alarm	Trigger Inactive	
40	☒	Fire & Gas TB3	On CC-Alarm	Trigger Inactive	

The alarm list shows the set alarms. RT-Win4 can handle up to 1000 alarms.

Columns

Nr.:

Sequential alarm number.

Active

Shows whether RT-Win4 should react to the alarm or not.

Alarm Name

Displays a freely selectable name for this alarm.

Alarm Trigger Type

Shows the general trigger type of the alarm.

Trigger State

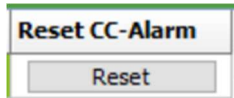
Shows whether the trigger is currently active. If the alarm is not active, the field is highlighted in green. If an alarm is active, the field is red.

Reset CC-Alarm

The reset button appears when a manual reset of the alarm is required.

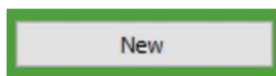
4.10.2. Reset an Alarm

If an alarm is set in a way that it must be reset manually, use the "Reset" button for this purpose.



4.10.3. New Alarm

To create a new alarm click on the "New"-Button.



A new line is created in the alarm list.

57	☐	New #57	None	Alarm Off
----	--------------------------	---------	------	-----------

Click on the new alarm in the list to open the Editor (see 4.10.5).

Note:

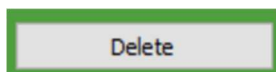
If a new alarm is not confirmed in the editor, it will be removed when the ALM app is closed.

4.10.4. Delete Alarm

To delete an alarm select the alarm to be deleted.

57	☐	Alarm Name	On CC-Alarm	Alarm Off
----	--------------------------	------------	-------------	-----------

Then click on the "Delete"-Button.



Note:

The alarm will be deleted without further notice!

4.10.5. Alarm Editor

Alarm Editor

General Settings

Nr.: 0 ☒ Active

Alarm Name
Malfunction BMS

Interval [Minutes]
10

Trigger-Settings

Alarm Trigger Type
On Zone-State/Error-Relay

Alarm Trigger
Relay-1

Device-Number
--- CC

Active-State

Zone-List

☐ Z1	☐ Z20	☐ Z39	☐ Z58	☐ Z77	☐ Z96	☐ Z115	☐ Z134
☐ Z2	☐ Z21	☐ Z40	☐ Z59	☐ Z78	☐ Z97	☐ Z116	☐ Z135
☐ Z3	☐ Z22	☐ Z41	☐ Z60	☐ Z79	☐ Z98	☐ Z117	☐ Z136
☐ Z4	☐ Z23	☐ Z42	☐ Z61	☐ Z80	☐ Z99	☐ Z118	☐ Z137
☐ Z5	☐ Z24	☐ Z43	☐ Z62	☐ Z81	☐ Z100	☐ Z119	☐ Z138
☐ Z6	☐ Z25	☐ Z44	☐ Z63	☐ Z82	☐ Z101	☐ Z120	☐ Z139
☐ Z7	☐ Z26	☐ Z45	☐ Z64	☐ Z83	☐ Z102	☐ Z121	☐ Z140
☐ Z8	☐ Z27	☐ Z46	☐ Z65	☐ Z84	☐ Z103	☐ Z122	☐ Z141
☐ Z9	☐ Z28	☐ Z47	☐ Z66	☐ Z85	☐ Z104	☐ Z123	☐ Z142
☐ Z10	☐ Z29	☐ Z48	☐ Z67	☐ Z86	☐ Z105	☐ Z124	☐ Z143
☐ Z11	☐ Z30	☐ Z49	☐ Z68	☐ Z87	☐ Z106	☐ Z125	☐ Z144
☐ Z12	☐ Z31	☒ Z50	☐ Z69	☐ Z88	☐ Z107	☐ Z126	☐ Z145
☐ Z13	☐ Z32	☒ Z51	☐ Z70	☐ Z89	☐ Z108	☐ Z127	☐ Z146
☐ Z14	☐ Z33	☐ Z52	☐ Z71	☐ Z90	☐ Z109	☐ Z128	☐ Z147
☐ Z15	☐ Z34	☐ Z53	☐ Z72	☐ Z91	☐ Z110	☐ Z129	☐ Z148
☐ Z16	☐ Z35	☐ Z54	☐ Z73	☐ Z92	☐ Z111	☐ Z130	☐ Z149
☐ Z17	☐ Z36	☐ Z55	☐ Z74	☐ Z93	☐ Z112	☐ Z131	☐ Z150
☐ Z18	☐ Z37	☐ Z56	☐ Z75	☐ Z94	☐ Z113	☐ Z132	☐ Z151
☐ Z19	☐ Z38	☐ Z57	☐ Z76	☐ Z95	☐ Z114	☐ Z133	☐ Z152

Actions

Card-Output
Device-Number

CC

Output-Nr.
M-0

☐ Hi-Active

Zone-Alarm

Alarm-Type

Stop-Mode

Start-Mode
Manual

EM@il

Email-Address

Subject

Text

Popup-Window

Popup Text
Malfunction BMS Zone 50

Background Font-Color **Color-Example**

1/3 Popup Window Size ☒ Auto-Confirm

Client List

Active	Client-ID	IP-Address
☒	248F7A92340FAEA7	127.0.0.1
☐	DA659CB2A008E4E7	
☒	331CFFFEAB6CADA7	

Cancel

Apply

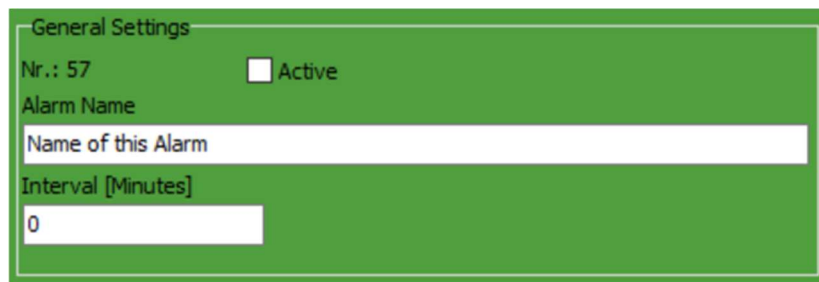
All parameters of an alarm are set in the alarm editor. There are several parameter groups:

- General Settings
- Trigger settings
- Zone list
- Actions

Sophian-Kolb-Straße 4
95448 Bayreuth - Germany

(0921) 78949-0
(0921) 78949-99

4.10.5.1. General Settings



Nr.

Shows the sequential number of the alarm.

Active

This control-box decides whether RT-Win4 will react on the trigger-event or not.

Alarm Name

Enter the name of the alarm here. This name appears in the alarm list.

Interval [Minutes]

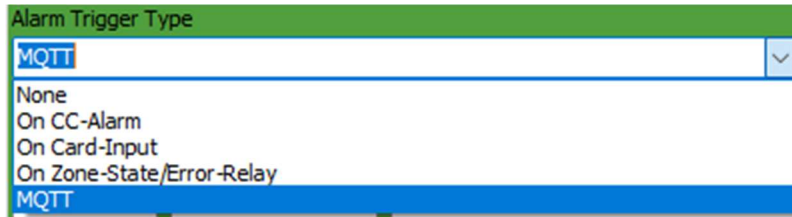
Defines the time in minutes after which the alarm should be repeated. If the value is 0, the alarm will not be repeated.

4.10.5.2. Trigger-Settings



The trigger settings specify the conditions under which an alarm is triggered or forwarded.

Alarm Trigger Type



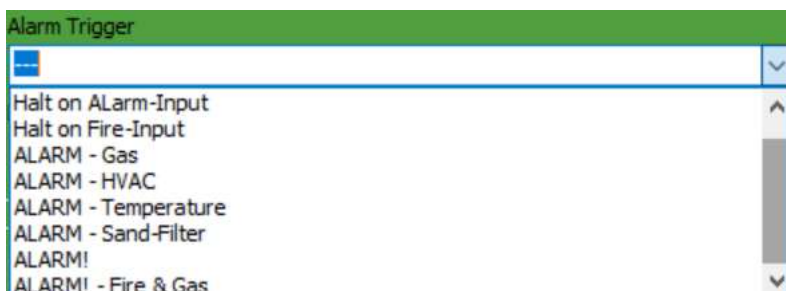
There are four types of triggering:

1. "On CC-Alarm" triggers an alarm when a zone of the DCS reports an internal alarm. This type of triggering is used to send emails based on the status of the DCS. It can also be used to transfer the alarm to another FCC.
2. "On Card-Input" triggers an alarm when the specified input of a device is activated.
3. "On Zone-State/Error-Relay" triggers an alarm when a zone changes to a certain system-state or sets an error relay. For example, an email can be sent when a zone is stopped or switched off due to an error.
4. "MQTT" triggers an alarm whenever an alarm is received from the MQTT broker listed in the alarm list of the MQTT app (see 4.19.3).

Alarm Trigger

The contents of the "Alarm Trigger" depend on the selected trigger type.

If "On CC-Alarm" is selected in the trigger type, the desired alarm can be selected here.



If "On Card Input" was selected, the according input is set here.



If "On Zone-State/Error-Relay" was selected, the requested zone status or error relay can be adjusted here.

Note:

If the connection to an FCC is lost, this will be treated as error relay 1.



If "MQTT" has been selected, the alarm number of the alarm set in the MQTT app can be selected here. (Device number and active state do not need to be defined.)



Device Number



The device number must only be set if the trigger type "On Card Input" is used. Select the zone and device number of the required device.

If another trigger type is selected, this value is ignored.

Active State



Active-State
Lo-Active

The active state again depends on the selected trigger type.

If the type "On CC-Alarm" has been selected, the corresponding alarm status that causes the alarm to be triggered can be selected here.



Active-State
Alarm On

Alarm Off
Alarm Booked
Alarm On
Alarm Overwrite

If the trigger type "On Card Input " is selected, it can be set here whether the signal must be present at the device input (Hi-Active) or not (Lo-Active) to trigger the alarm.



Active-State
Lo-Active
Lo-Active
Hi-Active

For the type "On Zone-State/Error-Relay" only one value is available and need not be set.



Active-State
Alarm On

4.10.5.3. Zone List

Zone-List

☒ Z1	☐ Z9	☐ Z17	☐ Z25	☐ Z33	☐ Z41	☐ Z49	☐ Z57
☐ Z2	☐ Z10	☐ Z18	☐ Z26	☐ Z34	☐ Z42	☐ Z50	☐ Z58
☐ Z3	☐ Z11	☐ Z19	☐ Z27	☐ Z35	☐ Z43	☐ Z51	☐ Z59
☐ Z4	☐ Z12	☐ Z20	☐ Z28	☐ Z36	☐ Z44	☐ Z52	☐ Z60
☐ Z5	☐ Z13	☒ Z21	☐ Z29	☐ Z37	☐ Z45	☐ Z53	☐ Z61
☐ Z6	☐ Z14	☐ Z22	☐ Z30	☐ Z38	☐ Z46	☐ Z54	☐ Z62
☐ Z7	☐ Z15	☐ Z23	☒ Z31	☐ Z39	☐ Z47	☐ Z55	☐ Z63
☐ Z8	☐ Z16	☐ Z24	☒ Z32	☐ Z40	☐ Z48	☐ Z56	☐ Z64

< >

The zone list has two functions:

1. it is used to select the zones to which the two trigger types "On CC Alarm" and "On Zone-State/Error-Relay" should react.
2. it is used to select the zones that are to be stopped in case of an alarm.

4.10.5.4. Actions

Actions

Card-Output

Device-Number

Z1 D6

Output-Nr.

M-0 ☒ Hi-Active

Zone-Alarm

Alarm-Type

ALARM - Temperature

Stop-Mode

Stop after this job

Start-Mode

Manual

EM@il

Email-Address

Technical-Service@Princeton-Plainsboro-Teaching-Hospital.org

Subject

STS - Alarm Temperature

Text

Temperature Alarm in CAL 216

In the "Actions" panel you can select which actions are to be executed in case of an alarm.

Card-Output

Card-Output

Device-Number

Z1 D6

Output-Nr.

M-0 ☒ Hi-Active

If a device output is to be activated in the event of an alarm, e.g. for switching a warning light or relay, the zone and device number as well as the output are set here. The output can be set to be Hi- or Lo-Active.
Soll kein Ausgang geschaltet werden, wird folgendes eingetragen:

Card-Output

Device-Number

--- ---

Output-Nr.

--- ☒ Hi-Active

Zone-Alarm

Zone-Alarm

Alarm-Type

ALARM - Temperature

Stop-Mode

Stop after this job

Start-Mode

Manual

The FCC internal alarm inputs always set an alarm status for all zones of this FCC. If an alarm status is only to be set for certain zones (possibly spread over several FCCs), the required settings can be made here. The effected zones are selected in the zone list.

The alarm to be set is selected in the "Alarm Type" field.

Alarm-Type

ALARM - Temperature

Halt on ALarm-Input

Halt on Fire-Input

ALARM - Gas

ALARM - HVAC

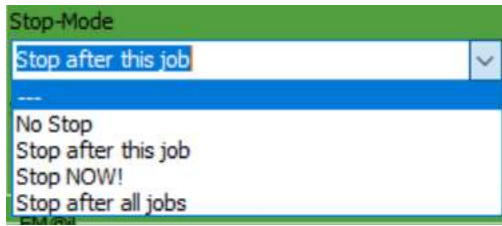
ALARM - Temperature

ALARM - Sand-Filter

ALARM!

ALARM! - Fire & Gas

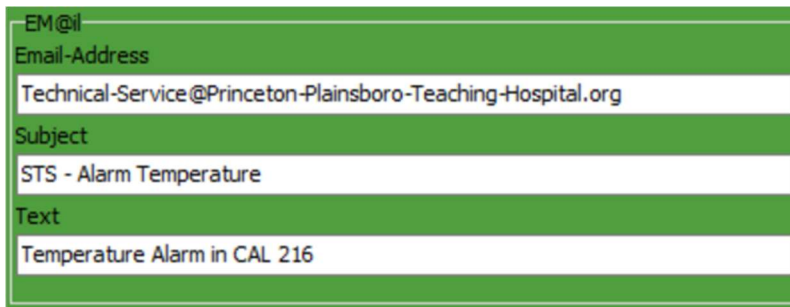
The "stop mode" specifies if and when the zones are stopped.



The "Start Mode" determines whether the zones continue their operation automatically as soon as the trigger moment is no longer present or whether the alarm must be reset manually.



EM@il

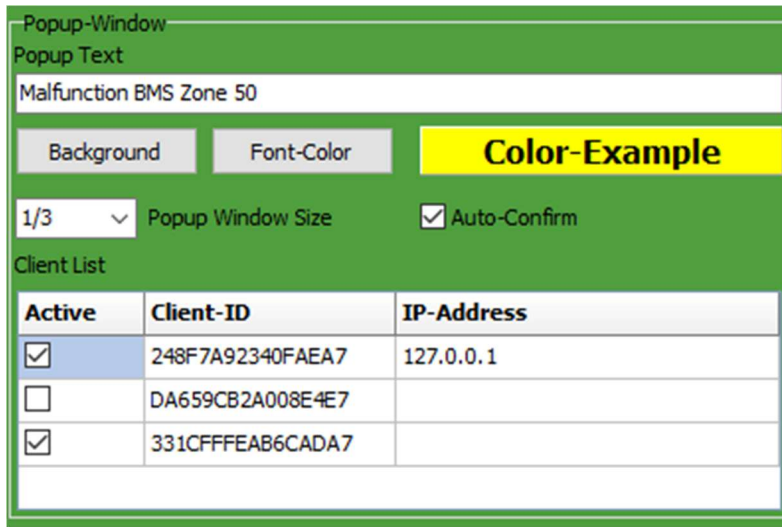


If an email is to be sent in the case of an alarm, the corresponding settings must be made here. If the message is to be sent to several addresses, these must be separated by ";".

Note:

To use the email function, an SMTP server must be set in the RT-Win4 host. (see [2] I18 RT-Win4 Installation Manual 4.3.3.)

Popup-Window



Active	Client-ID	IP-Address
☒	248F7A92340FAEA7	127.0.0.1
☐	DA659CB2A008E4E7	
☒	331CFFFEAB6CADA7	

If a pop-up window should appear on one or more RT-Win4 clients in the event of an alarm, the text, colors and size of the window can be set here.
The text to be displayed is set in Popup text:



The "Background" and "Font color" buttons are used to specify the background and font color of the warning message. A corresponding color example is displayed in the field to the right of the buttons.



The popup window appears in the center of the monitor where the sidebar is located. With the setting "Popup window size" the size of the window can be adjusted. The specified value indicates the proportion of the size of the monitor. If the value is set to "off", no popup window is displayed.



Note:

RT-Win4 can only display one popup window on one client at the same time. If several windows are to be displayed, the largest window is displayed. If there are several popup windows of the same size, the window with the lowest alarm number (4.4.5.1) is displayed.

The "Automatic confirmation" option can be used to specify whether the pop-up window closes automatically as soon as the triggering reason for this alarm is no longer given. If this function is deactivated, the window remains open until the "Confirm" button in the window is clicked.

☒ Auto-Confirm

The client list shows all RT-Win4 clients known to the RT-Win4 host. If the corresponding client is online, its IP address is displayed in addition to its client ID (3.4.7).

The selection fields in the "Active" column are used to specify on which RT-Win4 client the popup window should appear in the case of an alarm.

Client List		
Active	Client-ID	IP-Address
☒	248F7A92340FAEA7	127.0.0.1
☐	DA659CB2A008E4E7	
☒	331CFFFEAB6CADA7	

In the case of an alarm, the popup window is opened. It can be closed by clicking the "Confirm" button. If an interval is specified in the general settings of the alarm (4.10.5.1), the window is displayed again after the configured time, under the condition that the trigger reason is still active.

Malfunction BMS Zone 50

Confirm

4.10.5.5. Apply / Cancel



Use the apply button to use the settings. If you want to discard the settings click on "Cancel" or close the Alarm Editor.

4.11. Arrival Screen

Arrival Laboratory							15:57	Host-Connect
Arrival from:	CID0	Prio	Request	Start	Arrival	Status		
422 Semi-Multi Z118	2012	1	15:49	15:49	15:52	Arrived		
422 Semi-Multi Z118	2018	1	15:49	15:49	15:52	Arrived		
422 left Z156	1017	1	15:42	15:43	15:52	Arrived		
422 Semi-Multi Z118	2019	1	15:50	15:50	15:53	Arrived		
422 Semi-Multi Z118	2003	1	15:50	15:50	15:53	Arrived		
422 Semi-Multi Z118	2013	1	15:50	15:50	15:54	Arrived		
455 Tripple-Send left	1030	1	15:43	15:44	15:54	Arrived		
422 Semi-Multi Z118	2004	1	15:50	15:50	15:54	Arrived		
422 Semi-Multi Z118	2009	1	15:51	15:51	15:55	Arrived		
422 Semi-Multi Z118	2005	1	15:51	15:51	15:55	Arrived		
455 Tripple-Send left	1020	1	15:43	15:47	15:56	Arrived		
422 Semi-Multi Z118	2007	1	15:53	15:53	15:56	Arrived		
422 Semi-Multi Z118	2008	1	15:53	15:53	15:56	Arrived		
422 right Z156	1001	1	15:49	15:49		Late		
422 left Z156	1029	1	15:50	15:50		In Transport		
455 Tripple-Send left	1002	1	15:50	15:50		In Transport		
455 Tripple-Send left	1019	1	15:50	15:50		In Transport		
422 right Z156	1007	1	15:50	15:50		In Transport		
422 left Z156	1024	1	15:51	15:51		In Transport		
455 Tripple-Send right	1010	1	15:52	15:52		In Transport		
455 Tripple-Send right	1025	1	15:52			Waiting		
422 Semi-Multi Z118	1016	1	15:53	15:53		In Transport		
422 Semi-Multi Z118	2011	1	15:53	15:53		In Transport		
422 right Z156	1008	1	15:55			Waiting		

4.11.1. General

The arrival screen displays all transports to a list of destinations. Transports that are still waiting for departure at their origin are highlighted in light grey and have the status "Waiting". If a carrier is on its way, the transport is highlighted in blue and has the status "In Transport". If a carrier has exceeded the time limit, it is given the status "Late" and the status field is highlighted in orange.

If the carrier has arrived, the shipment is highlighted green and then has the status "Arrived".

The carriers that are waiting and in transport are displayed in the lower area of the app. The arrived carriers in the upper area.

All local and individual settings are defined via the options window (0). A click on a transport opens the transport details.

4.11.2. Columns

Different columns can be displayed as required. The selection of the columns corresponds approximately to the ones of the history app (see 4.1.1). Whether columns are displayed or not and their width can be set in the Options window (0). The following columns can be selected:

- | | |
|--------------------------------|---|
| • Job-Nr. | Sequential number of the job |
| • TAN | TransActionNumber of this transport |
| • Zone | actual zone of this transport |
| • Origin | Destination-Code of sender |
| • Name (of origin) | |
| • Local Device (of sender) | Device-Number of send-device in local zone. |
| • Global Device (of sender) | Zone- and Device-Number of origin |
| • Dialed Dest. | This Destination was dialed by user |
| • Name (of dialed destination) | |
| • Mapped Dest. | CC has mapped dialed destination to this destination |
| • Name (of mapped destination) | |
| • Destination | Destination of this transport |
| • Name (of destination) | |
| • Redirection | System delivered carrier here |
| • Name (of redirection) | |
| • Local Device (of receiver) | Device-Number of receive-device in local zone |
| • Global Device (of receiver) | Zone- and Device-Number final destination |
| • CID0 | ID of the transported carrier at start |
| • CID1 | ID of the transported carrier at arrival |
| • UID0 | ID of user who sent carrier, or its alias |
| • UID1 | ID of user who received carrier, or its alias |
| • Prio | Priority of this transport |
| • Speed | Speed-level of this transport |
| • Request | At this time user inserted carrier in sending-station |
| • Start | At this time system started to handle this job |
| • Arrival | Time when carrier has arrived |

- Error
- Status
-  (call back button)
- Send-Back-Reason
- LIS (Laboratory Information System)
- Carrier-Type

Actual status of this transport

Button to return a carrier which is waiting for a secured reception

Reason why the system returns the carrier to the sender

Information about carrier content
The first number indicates the number of the checked out items and the second number indicates the number of the checked in items.

If there are more than 99 items, "99+" or the percentage of the items checked out is indicated.

Type and color of carrier.

If a transport is performed with a priority higher than 1, the according field is highlighted in orange.

422 left Z156	1029	13	10:34	10:34	In Transport
---------------	------	----	-------	-------	--------------

When using the Scan Apps, the number of checked-in and checked-out contents is displayed in the "LIS" column. The first number indicates the number of checked-out items and the second number indicates the number of checked-in items.

If there are more than 99 pieces, "99+" or the percentage of the content checked out is indicated.

When all contents are checked out, the status changes from "Arrived" to "Processed".

val	Status	LIS
54	Processed	12 / 12
02	Processed	12 / 12
11	Processed	13 / 13
58	Processed	5 / 5
13	Arrived	4 / 5
27	Arrived	5 / 11
33	Arrived	0 / 3

Note:

When using one-way transport bags with UHF transponder recognition, the number of read bag RFIDs at departure and arrival is displayed here.

4.11.3. Options

The options are opened by clicking on . If the user does not have the required rights, the options icon is not displayed.

Destinations

Destinations
600
601
32031

max. Display Time

wait / in Transport

12 [h]

Processed (Arrived)

300 [min]

Split-Ratio (Tran:Arr)

☐ 4:0
☐ 3:1
☒ 2:2
☐ 1:3
☐ 0:4

Others

Title

Arrivals

☐ Check Processed-Flag

Transport-Duration-Alert

20 [min]

Column Settings

Column	Width	Show
Job-Nr.	85	☐
TAN	148	☒
Zone	55	☐
Origin	60	☐
Name	162	☒
local	55	☒
global	55	☐
Dialed	73	☒
Name	200	☐
Mapped	60	☐
Name	200	☐
Destinatio	60	☐
Name	200	☐
Redirectio	60	☐
Name	200	☐
local	55	☐
global	55	☐

Carrier-Type

Typ#	Color	Type-Name
1	Green	Green
2	Red	Red
3	Blue	Blue
4	Pink!	Pink!
5		Typ #5
6		Typ #6
7		Typ #7
8		Typ #8
9		Typ #9
10		Typ #10
11		Typ #11
12		Typ #12
13		Typ #13
14		Typ #14
15		Typ #15
16		Typ #16
17		Typ #17

OK

All local settings for the arrival screen are made in the options. Click on "OK" to apply the settings. If you do not want to use the settings just close the window

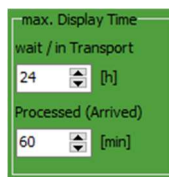
4.11.3.1. Destinations



The screenshot shows a window titled "Destinations" with a list box containing the following entries: 3, 6, 22, 23, 24, and several empty rows. The list box has a scrollbar on the right side.

The arrival screen displays all transports whose destination number is in this list. It does not matter in which of the four possible destination entries the destination number appears. Up to 256 destinations can be entered in the list.

4.11.3.2. Max. Display Time



The screenshot shows a window titled "max. Display Time" with two settings: "wait / in Transport" set to 24 [h] and "Processed (Arrived)" set to 60 [min]. Each setting has a spin button.

This panel is used to set the maximum time for displaying transports on the arrival screen. A distinction is made between arriving shipments and those still in transit. The parameter "wait / in Transport" sets the time after which an incomplete transport is no longer shown in the display. The value "Processed (Arrived)" specifies the time after which a processed or arrived carrier no longer appears in the display.

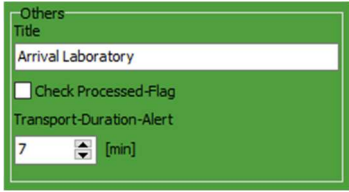
4.11.3.3. Split-Ratio



The screenshot shows a window titled "Split-Ratio (Tran:Arr)" with six radio button options: 4:0, 3:1, 2:2 (selected), 1:3, and 0:4.

If the window size is not big enough to display all transports, you can set the splitting of the display area here. The splitting is done in the ratio of the shipments that are still on their way to the shipments that have already arrived. The default is a 2:2 split.

4.11.3.4. Others



Further display settings can be made in this panel.

Title

Enter the text to be displayed at the top of the arrival screen.

Arrival Laboratory							08:2
Arrival from:	CID0	Prio	Request	Start	Arrival		Status

Check Processed-Flag

☒ Check Processed-Flag

The arrival screen offers the option of taking into account not only the arrival of the carrier but also the processing of the content (e.g. within a Laboratory Information System (LIS)). If the field "Check Processed-Flag" is activated, a transport is only considered completed when the transport has been marked as processed by LIS or in the transport details (see 4.11.3.1). Arrived transports are highlighted in light green. Processed shipments are highlighted in dark green.

422 right Z156	1030	1	09:17	09:17	09:34	Processed
422 Semi-Multi Z118	2004	1	09:16	09:16	09:19	Arrived

Notice: ***When using disposable transport bags with UHF transponder recognition, the "Processed" flag is automatically set by the reception reading.***

Transport Duration Alert



Here you set the time after which a transport is marked as "late". The time is entered in minutes.

422 Z118	2004	1	15:33	15:33	15:38	Arrived
156	1001	1	15:49	15:49		Late

4.11.3.5. Column Settings

Column	Width	Show
Job-Nr.	85	☐
TAN	110	☐
Zone	50	☐
Origin	55	☐
Name	247	☒
local Device	321	☐
global Device	55	☐
Dialed Dest.	55	☐
Name	373	☐
Mapped Dest.	60	☐
Name	98	☐
Destination	60	☐
Name	130	☐
Redirection	60	☐
Name	130	☐
local Device	55	☐
global Device	55	☐
CID0	81	☒
CID1	55	☐
UID0	60	☐

Under the section "Column settings" you can set which columns are to be displayed in the main window of the arrival screen and the corresponding column width. After the initial installation, the most common columns are preset with their width. Set the column widths by entering the number of pixels in the respective field. Which columns are to be displayed in this panel is defined in the "Display" column. Due to the usually limited window size, only the most important columns should be displayed, e.g:

- Name (of origin)
- CID0
- Request (time)
- Start (time)
- Arrival (time)
- Status

4.11.3.1. TBH-Typ

Carrier-Type		
Typ#	Color	Type-Name
1	Green	Green
2	Red	Red
3	Blue	Blue
4	Pink!	Pink!
5		Typ #5
6		Typ #6
7		Typ #7
8		Typ #8
9		Typ #9
10		Typ #10
11		Typ #11
12		Typ #12
13		Typ #13
14		Typ #14
15		Typ #15
16		Typ #16
17		Typ #17

In the H61F/G pneumatic tube system, a carrier type can be assigned to the individual carriers in the Carrier Manager. The display parameters of the carrier types are defined in the "Carrier-Type" field.

The "Color" value defines the background color of the field in the "Carrier-Type" column in the main window. Clicking on the color field opens a dialog box for color input. Select the desired color and confirm the selection with "OK".



Under "Type-Name" the display text of the corresponding TBH type can be adjusted.

4.11.4. Transport Details

Detailed information on the individual transports can be called up by clicking on the transport using the transport details.

Click on a transport to open the transport details.

Transport-Details

TAN

9CFFC68A

Count

141081

Origin

76

CID0

1017

glob. Send-Device

Z156 S76

Error

OK!

Dialed Dest.

3

CID1

loc. Send-Device

Z151 T25

Job-Type

Revolver Load

Mapped Dest.

3

UID0

loc. Receive-Device

Z151 R1

Prio

S: 1 R: 1

Destination

3

UID1

glob. Receive-Device

Z32 S22

Speed

S: 1 R: 1

Redirection

3

Err-Dev

Slot

0

Request-Time

17.04.2020 09:16:15

Start of Transport

Z156 S76

Start of last Job

17.04.2020 09:17:10

End of Recording

17.04.2020 09:17:11

☒ Job done
 ☐ Recording of Job
 ☐ Transport complete
 ☐ Cancelled
 ☐ Man. Confirmed

☐ Processed
 ☐ Line Stop

Man. Confirmed

Processed

All available data of the transport is displayed in the transport details. The data can only be read, but not changed.

Manual Confirmed

Man. Confirmed

With the button "Man. Confirmed" a transport can be manually marked as completed. This is necessary, for example, if a carrier was manually removed from the system due to a malfunction.

455 Tripple-Send right	1014	1	09:17	09:18	09:22	Man. Confirmed
------------------------	------	---	-------	-------	-------	----------------

Processed

Processed

With the "Processed" button a transport can be marked as processed.

422 right Z156	1030	1	09:17	09:17	09:34	Processed
422 Semi-Multi Z118	2004	1	09:16	09:16	09:19	Arrived

4.11.5. User Details

Clicking on a cell in the columns "UID0" or "UID1" opens a window with the details of this user.

UID0	UID1
------	------

✕

User Details

User-Nr.:

26

User-Name (Login):

FloN

Full Name:

Florence Nightingale

Alias:

F.N.

Phone-Number:

47110815

Department:

ICU

Email:

f.nightingale@hospital.org

Comment:

Lady with the Lamp

If the user is not listed in the user list, "---" is displayed in the UID column. When clicking on a cell with an unknown user, a window appears with a corresponding message.

Unknown User

OK

If the user has no rights to view the user details, a window appears with the message "Access denied".

Access denied

OK

4.12. Departure Screen

Departure Laboratory							13:47	Host-Connect
Departure to:	CID0	Prio	Request	Start	Arrival	Status		
156 OB11 Group	1029	1	13:32	13:32	13:36	Arrived		
95 422 Semi-Multi Z118	2999	1	13:33	13:33	13:36	Arrived		
156 OB11 Group	1001	1	13:35	13:35	13:39	Arrived		
95 422 Semi-Multi Z118	3401	1	13:35	13:35	13:38	Arrived		
95 422 Semi-Multi Z118	2011	1	13:36	13:37	13:40	Arrived		
156 OB11 Group	1014	1	13:36	13:36	13:40	Arrived		
95 422 Semi-Multi Z118	3402	1	13:37	13:37	13:41	Arrived		
95 422 Semi-Multi Z118	2004	1	13:38	13:38	13:42	Arrived		
95 422 Semi-Multi Z118	2018	1	13:38	13:39	13:43	Arrived		
156 OB11 Group	1017	1	13:40	13:40	13:44	Arrived		
95 422 Semi-Multi Z118	3403	1	13:39	13:39	13:44	Arrived		
156 OB11 Group	1028	1	13:41	13:41	13:46	Arrived		
95 422 Semi-Multi Z118	2008	1	13:40	13:41	13:46	Arrived		
95 422 Semi-Multi Z118	2005	1	13:42	13:42		Late		
95 422 Semi-Multi Z118	2001	1	13:43	13:43		In Transport		
76 422 left Z156	1010	1	13:44	13:44		In Transport		
95 422 Semi-Multi Z118	2010	1	13:45	13:45		In Transport		
156 OB11 Group	1019	1	13:46	13:46		In Transport		
95 422 Semi-Multi Z118	FFFFFFF	1	13:46			Waiting		

The departure screen works in principle in the same way as the arrival screen but only for departures. The basic operation is identical. However, the function of the "Processed" button is removed. Instead there is the "Return to Sender" function.

4.12.1. Return to Sender

Certain stations provide a so-called secured reception. In case of such a secured reception the carrier waits in the station until the user has authorized himself. The carrier will be released then. If no authorization is done and the maximum waiting time has expired or the sender initiates a "return to sender" then the carrier returns to its origin. The time until the automatic return is displayed in the status column.

A "Return to sender" button  appears in the corresponding column.

1076	ICU Secured Receive	1016	1	11:19	11:19	Ret. in: 210 s	
------	---------------------	------	---	-------	-------	----------------	---

It is also possible to start the return from the detail window.

Transport-Details

TAN

15FEC3F1

Count

141926

Origin

5

CID0

1004

glob. Send-Device

Z21 S33

Error

OK!

Dialed Dest.

156

CID1

loc. Send-Device

Z156 T73

Job-Type

Revolver unload

Mapped Dest.

156

UID0

loc. Receive-Device

Z156 S76

Prio

S: 1 R: 0

Destination

156

UID1

glob. Receive-Device

Z156 S76

Speed

S: 0 R: 1

Redirection

156

Err-Dev

Slot

11

Request-Time

20.04.2020 13:58:58

Start of Transport

Z21 S33

Start of last Job

20.04.2020 14:09:49

End of Recording

20.04.2020 14:11:02

☒ Job done

☒ Recording of Job

☒ Transport complete

☐ Cancelled

☐ Man. Confirmed

☐ Processed

☐ Tone Stop

Man. Confirmed

Return To Sender

4.12.2. Options

Because of the partially changed functionality there are also changes in the options.

Options

Destinations

Destinations
32
71

max. Display Time

wait / in Transport: 24 [h]

Processed (Arrived): 60 [min]

Split-Ratio (Tran:Arr)

☐ 4:0
☐ 3:1
☒ 2:2
☐ 1:3
☐ 0:4

Others

Title: Departures

☐ Check Processed-Flag ☒ Return-Button

Transport-Duration-Alert: 15 [min]

Column Settings

Column	Width	Show
Job-Nr.	85	☐
TAN	110	☒
Zone	55	☐
Origin	60	☐
Name	200	☐
local	55	☐
global	55	☐
Dialed	60	☐
Name	200	☐
Mapped	60	☐
Name	200	☐
Destination	60	☐
Name	200	☐
Redirectio	60	☐
Name	204	☒
local	55	☐
global	55	☐

Carrier-Type

Typ#	Color	Type-Name
1	Green	Green
2	Red	Red
3	Blue	Blue
4	Pink!	Pink!
5		Typ #5
6		Typ #6
7		Typ #7
8		Typ #8
9		Typ #9
10		Typ #10
11		Typ #11
12		Typ #12
13		Typ #13
14		Typ #14
15		Typ #15
16		Typ #16
17		Typ #17

OK

In the panel "Others" you can now set whether a return button  is displayed or not.

Note:

The column for the return button must also be activated, otherwise the button will not be displayed.

Status	331	☒
	54	☒
Send-Back-reason	70	☐

4.13. F&G (Fire & Gas)

Fire & Gas Remote V 4.4.0.129 Re10/3/2025/20

Host: 10.1.16.2006:102

DDC = Master

Sibling = Slave

Database processing

Max. Ping: 250

Average Ping: 104

Host: 10.1.16.201:6102

DDC = Slave

Sibling = Master

Database processing

Max. Ping:

Average Ping:

R-Tube Connection

Host0 Data: grd lcoik0061520050E080
Host0 Data: grd lcoik0061530050E080grd lcoik0061570050E080
grd lcoik0061600050E080
Host0 Data: grd lcoik006152003E9F50
Host0 Data: grd lcoik006153003E9F50grd lcoik006157003E9F50
grd lcoik006160003E9F50
Host0 Data: grd lcoik00622003E9F50
Host1 Data: grd lcoik006330050E080
Host1 Data: grd lcoik006320050E080
Host1 Data: grd lcoik00672003E9F50
Host0 Data: grd lcoik006550050E080
Host0 Data: grd lcoik006330050E080
Host0 Data: grd lcoik00655003E9F50
Host1 Data: grd lcoik006720050E080
Host0 Data: grd lcoik006220050E080
Host0 Data: grd lcoik006320050E080
Host1 Data: grd lcoik0061140050E080
Host1 Data: grd lcoik0061150050E080grd lcoik0061160050E080
grd lcoik0061190050E080grd lcoik0061200050E080
Host0 Data: grd lcoik00622003E9F50
Host0 Data: grd lcoik00623003E9F50grd lcoik00633003E9F50
grd lcoik00672003E9F50grd lcoik0061130050E080grd lcoik0061140050E080
grd lcoik0061150050E080grd lcoik0061160050E080grd lcoik0061190050E080
grd lcoik0061200050E080
Host1 Data: grd lcoik006114003E9F50
Host1 Data: grd lcoik006115003E9F50grd lcoik006116003E9F50
grd lcoik006119003E9F50grd lcoik006120003E9F50maxp264avrp159
Host0 Data: grd lcoik006720050E080
Host0 Data: grd lcoik006113003E9F50grd lcoik006114003E9F50
grd lcoik006115003E9F50grd lcoik006116003E9F50grd lcoik006119003E9F50
grd lcoik006120003E9F50maxp250avrp104
Host0 Data: grd lcoik00632003E9F50
Host1 Data: grd lcoik00633003E9F50grd lcoik006550050E080

Tr.	Bldg. ID	Bldg. Name	Alarm Input	Bldg. State	Test Alarm	Over Write	Start Bldg	Zone	State	ErrRel	Error	Alarm Set	Alarm State	Com	Cor
0	L4101-216	CAL216			Test		Start	1	Standby		Err...OK Alarm:OK				
1	L4101-149	CAL1			Test		Start	21	Standby		Err...OK Alarm:OK				
2	L4101-167	CAL2			Test		Start	31	Standby		Err...OK Alarm:OK				
3	L4101-183	CAL3			Test		Start	32	Standby		Err...OK Alarm:OK				
4	L4101-231	CAL4			Test		Start	51	Standby		Err...OK Alarm:OK				
5	L3504	TB01			Test		Start	54	Standby		Err...OK Alarm:OK				
6	L2362	TB02			Test		Start	71	Standby		Err...OK Alarm:OK				
7	L1306	TB03			Test		Start	111	Standby		Err...OK Alarm:OK				
8	U4301	OB3			Test		Start	112	Standby		Err...OK Alarm:OK				
9	V2506	OB4			Test		Start	113	Standby		Err...OK Alarm:OK				
10	P2601	OB5			Test		Start	114	Standby		Err...OK Alarm:OK				
11	P2603	OB6			Test		Start	115	Standby		Err...OK Alarm:OK				
12	P2604	OB7			Test		Start	118	Standby		Err...OK Alarm:OK				
13	L3103	OB8			Test		Start	119	Standby		Err...OK Alarm:OK				
14	L2133	OB9				Over	Start	151	Standby		Err...OK Alarm:OK				
15	L1305	OB10			Test		Start	152	Standby		Err...OK Alarm:OK				
16	L0501	OB11			Test		Start	156	ALARM	Soft	Err...Device on Error Alarm:F&G				
17	G1122	OB13			Test		Start	159	Unknown		Err...Unknown ERROR				
18	D1102	OB14			Test		Start								
19	L2100	OB15			Test		Start								
20	A2130	OB16			Test		Start								
21	A2110	OB17			Test		Start								
22	A2720	OB18			Test		Start								

F&G is a customer-specific module for the connection of a SQL-based fire and gas detection system. The F&G app is the front end of a pair of dedicated servers that monitor each other to ensure full redundancy. One of the two servers is the master, the other is the slave. At configurable intervals the failure of the master is simulated to test the redundancy.

The pair of servers is connected to the DCS in order to stop the pneumatic tube system completely or partially in case of an alarm. On the other hand it is connected to the alarm system via an SQL database.

4.14. LIMS (Laboratory Information and Management System)

DDC - LIMS Viewer V 4.4.0.118 Rel10/3/26/829 Host: 10.1.16.203:6102

Database processing				Host Connection							
Zone	State	ErrRel	Error	CID	TAN	Destination	Priority	LIMS-Timestamp	SQL-Timestamp	STS-Send-Time	Status
1	Standby		Err.:OK								
21	Standby		Err.:OK								
31	Standby		Err.:OK								
32	Standby		Err.:OK								
51	Standby		Err.:OK								
54	Standby		Err.:OK								
71	Standby		Err.:OK								
111	Standby		Err.:OK								
112	Standby		Err.:OK								
113	Standby		Err.:OK								
114	Standby		Err.:OK								
115	Standby		Err.:OK								
118	Standby		Err.:OK								
119	Standby		Err.:OK								
151	Standby		Err.:OK								
152	Standby		Err.:OK								
156	Standby	Err	Err.:Device								
159	Unknown		Err.:Unkno								

The LIMS app is the front end of a customer-specific connection to a SQL-based laboratory management software. The LIMS is able to redirect carriers to the correct laboratory according to the desired analyses.

4.15. Scan App

The scan apps are used to record and track the items loaded in the carrier by using barcodes. It is possible to assign the load not only to a carrier but also to other packaging units in the carrier (e.g. bottles, screw jars, bags). Using and scanning packaging units is an option and not mandatory.

The system records the location, operator and scanning times of the sender and receiver as well as CID, TAN and departure and arrival time of the transport.

The 'Scan In App' has two modes: LIS (Laboratory Information System) and HIS (Hospital Information System).

The LIS is designed for recording the transport of samples to a laboratory. The samples are checked in using the 'Scan In App' and checked out using the 'Scan Out App' upon arrival at the laboratory.

The HIS is a system designed to automate the dispatch of payloads (e.g. medicines from the pharmacy). Information on the contents and destination of the payload is transferred to the pneumatic tube system via a QR code.

An SQL database on the RT-Win4 host is used for data storage. When the app is started, a connection to the database is automatically established. If the connection is established successfully, a checkmark appears in the top right corner of the "Database-Connection" checkbox.



If there is no connection to the database, the app will not work.

4.15.1. Scan In App



RT-Win4 - Scan In App V 4.5.6.116 Rel11/1/25/451

Location: Emergency Room
Operator: Mrs. Smith

Change Operator

Checkin Content-Data

Scan-Order: 1:Scan Carrier 2:(Option) Scan Sub-Carrier / Bag 3:Scan Content

Carrier-ID: 1004 Sub-Carrier / Bag: BAG0081542003

Contents:

#	Scan-Time	Sub-Carrier / Bag	Scan-Code
1	26.01.2021 12:14:53	BAG0081542003	0042 4711 0829
2	26.01.2021 12:14:54	BAG0081542003	0042 4711 0827
3	26.01.2021 12:14:55	BAG0081542003	0042 4711 0825
4	26.01.2021 12:14:56	BAG0081542003	0042 4711 0816
5	26.01.2021 12:14:57	BAG0081542003	0042 4711 0818
6	26.01.2021 12:14:59	BAG0081542003	0042 4711 0820
7	26.01.2021 12:15:01	BAG0081542003	0042 4711 0823

Checkin!

Cancel All

Cancel last Scan

Enter

26.01.2021 12:15:19

RT-Win4 - Scan App V 4.21.0.542 Rel16/6/10/528

Location: Pharmacy
Operator: Mr. Hyde

Change Operator

Checkin!

MS

MS Data

Scan-Order: 1: Scan Carrier 2: Scan Content 3: Checkin

Carrier-ID: 2981 Destination: 033 Priority: 1

Scan-Data: 1-033-6340673-08217-4479954-46

#	Priority	Destination	AB	LN	HR	VR
0	033		7954444	15836	8222609	52
1	0	033	4786741	59777		
2	1	033	8247740	13187	9753400	80
3	1	033	6340673	06217	4479954	46

Cancel all

Cancel last

Checkin

22.06.2026 11:15:25

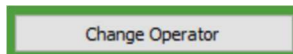
4.15.1.1. General Information / Start

The Scan In app is used to check in the content of the carrier into the system before the carrier is sent. When the app is started, the name of the current operator is queried. The name of the last operator is suggested.



After confirming the previous name or entering a new name, the app is ready for use. The operator name is displayed in the upper left corner.

To change the operator name at a later time, click on "Change Operator".

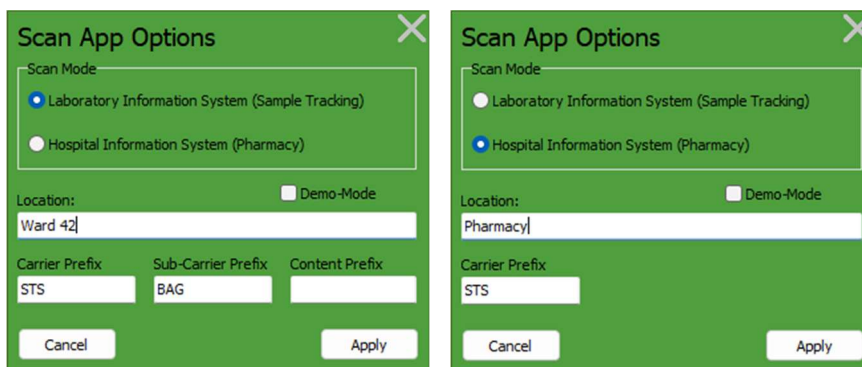


4.15.1.2. Options

To change the basic settings of the app click on the settings icon on the top right.



Note: The icon is visible only if the user has sufficient user rights.



Scan Mode:

Select the scan mode in which the app should operate.

The 'Laboratory Information System' (LIS) mode is designed for tracking laboratory samples.

The 'Hospital Information System' (HIS) mode is used to automate transport operations, e.g. from the pharmacy. The details of the cargo and the destination of the transport are scanned using a QR code.

Depending on the scan mode, further options will be displayed.

Location:

Specifies the location where the app is used (e.g., emergency room).

Prefix:

In order to be able to assign the individual barcodes to their function (carrier, packaging unit in carrier, content), a so-called prefix is necessary at the beginning of the barcode. The subsequent characters are then used for the respective identification.

Carrier Prefix:

By default, carriers from Hörtig Rohrpost are delivered with the prefix "STS". If another prefix is to be used, it can be changed here.

Note: It is mandatory that a carrier prefix is set to separate the carrier scan from the other scans!

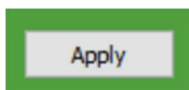
Sub-carrier prefix:

If packaging units in the TBH (e.g. bottles, screw jars, bags) are to be tracked, these also require a unique prefix to separate the respective scans. The corresponding prefix can be set here.

Content Prefix:

To exclude unwanted scans, a prefix can also be defined for the content. If the field remains empty, all scans that cannot be assigned to a carrier or sub-carrier prefix will be interpreted as a content scan.

To save the settings click Apply.



The "Location" is displayed above the operator name.

Location: Emergency Room

Notice:

The "Location" setting applies only locally, whereas the prefix settings apply system-wide.

Demo-Mode:

☐ Demo-Mode

If demo mode is enabled, additional buttons appear on the 'Content-Data' tab and the 'HIS Data' tab to simulate the progress of a transport.

RT-Win4 - Scan App V 4.21.1.559 beta16/7/24/675

Location: Ward 42
Operator: John Casper

Change Operator

Checkin Content-Data

All Not processed Timeout Refresh ☒ Auto-Update --- Demo - Next Step

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bao	TAN	Checki
---	-----------	-------	---------------	-----	-------------------	-----	--------

RT-Win4 - Scan App V 4.21.1.559 beta16/7/24/675

Location: Pharmacy
Operator: Dr. Jekyll

Change Operator

HIS HIS Data

All Checkin In Transport Arrived Timeout ☒ Auto Update --- Demo - Next Step

Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Oriain	Oriain Name	Destinatio	De
-------	--------	-----	----	----	----	----	------	-----------	--------	-------------	------------	----

For information on using demo mode, see the section 4.15.3.

Note:

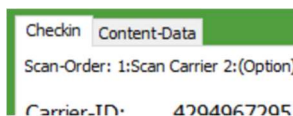
Demo mode is disabled every time the app is launched and must be re-enabled in the Scan App settings if required.

4.15.1.3. Laboratory Information System - LIS

In LIS mode, the content is identified by a barcode and assigned to a transport carrier and, where applicable, an inner container before dispatch. Once the content reaches its destination (e.g. a laboratory), it is checked out of the system by scanning the barcode again. The transport data and all timestamps can be viewed in both the Check-In App and the Check-Out App.

Checkin in LIS-Mode

For scanning the Tab "Checkin" must be visible.



In order to clearly assign the scanned contents, the following sequence must be followed:

1. Scan Carrier
2. Scan packaging units (if used)
3. Scan contents
4. If another packaging unit is used continue at step 2.
5. Click on "Enter"-Button to complete the checkin or scan the "Checkin!"-Barcode on top of the window or from anywhere else.
6. Send Carrier

Once the TBH scan has been successfully completed, the carrier ID is displayed above the content list.

Carrier-ID: 1004 Sub-

When a packaging unit is scanned, the ID appears next to the carrier ID.

Carrier-ID: 1004 Sub-Carrier / Bag: BAG0081542003

If content is scanned, the individual scans appear in the content list. The ID of the packaging unit is also listed in each case.

Contents:

#	Scan-Time	Sub-Carrier / Bag	Scan-Code
1	26.01.2021 16:17:19	BAG0081542003	0042 4711 0822
2	26.01.2021 16:17:19	BAG0081542003	0042 4711 0824
3	26.01.2021 16:17:21	BAG0081542003	0042 4711 0827
4	26.01.2021 16:17:23	BAG0081542003	0042 4711 0815
5	26.01.2021 16:17:25	BAG0081542003	0042 4711 0818
6	26.01.2021 16:17:31	BAG0081542003	0042 4711 0821
7	26.01.2021 16:18:32	BAG0081542005	0042 4711 0816
8	26.01.2021 16:18:33	BAG0081542005	0042 4711 0826
9	26.01.2021 16:18:43	BAG0081542005	0042 4711 0820
10	26.01.2021 16:19:24	BAG0081542005	0042 4711 0829
11	26.01.2021 16:19:32	BAG0081542005	0042 4711 0828

To complete the check-in process, either click the "Enter" button or scan the "Checkin!" barcode. (See also appendix 5.1)
The "Checkin!" barcode is only displayed when the "Checkin" tab is active.
The width of the "Checkin!" barcode can be adjusted to fit the scanner using the arrow buttons in the bottom right corner.



After successful checkin, the displays in the app are reset.

Carrier-ID: --- Sub-Carrier / Bag: ---

Contents:

#	Scan-Time	Sub-Carrier / Bag	Scan-Code

Cancel Scans

Cancel All:

Cancel All

This button resets all scans since the last checkin. The checkin must be started from the beginning.

Carrier-ID: --- Sub-Carrier / Bag: ---

Contents:

#	Scan-Time	Sub-Carrier / Bag	Scan-Code

Cancel last Scan:

Cancel last Scan

This button deletes only the last content scan. The carrier scan, the packaging unit scan and the previous content scans are not deleted.

Carrier-ID: 1002 Sub-Carrier / Bag: BAG0081542002

Contents:

#	Scan-Time	Sub-Carrier / Bag	Scan-Code
1	26.01.2021 16:49:19	BAG0081542002	0042 4711 0822
2	26.01.2021 16:49:20	BAG0081542002	0042 4711 0823

Hint:

Once a checkin has been completed by pressing the "Enter" button or scanning the "Checkin!" code, it can no longer be deleted. The entries in the database must be confirmed manually in the Scan Out app.

Content-Data

Content-Data														
Checkin														
All														
Not processed														
Timeout														
Refresh														
#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier Departure	Carrier Arrival	Checkout-Location	Checkout-Operator
47	0042 4711 0818	TAN; Scan-Out; Archived		1004	BAG0081542003	439FC4E	Emergency Room	Mrs. Smith	27.01.2021 09:09:51	27.01.2021 09:10:00	27.01.2021 09:11:41	27.01.2021 09:13:08	Central Laboratory	MTA L.B. Johnson
48	0042 4711 0819	TAN; Scan-Out; Archived		1004	BAG0081542003	439FC4E	Emergency Room	Mrs. Smith	27.01.2021 09:09:51	27.01.2021 09:10:00	27.01.2021 09:11:41	27.01.2021 09:13:08	Central Laboratory	MTA L.B. Johnson
49	0042 4711 0820	TAN; Scan-Out	Checkout	1004	BAG0081542001	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:07	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
50	0042 4711 0820	TAN; Scan-Out	Checkout	1004	BAG0081542001	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:09	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
51	0042 4711 0828	TAN	Checkout	1004	BAG0081542001	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:12	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
52	0042 4711 0821	TAN; Scan-Out	Checkout	1004	BAG0081542005	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:31	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
53	0042 4711 0827	TAN	Checkout	1004	BAG0081542005	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:44	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
54	0042 4711 0822	TAN	Checkout	1004	BAG0081542005	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:49	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
55	0042 4711 0823	TAN	Checkout	1004	BAG0081542002	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:24:56	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
56	0042 4711 0825	TAN; Scan-Out	Checkout	1004	BAG0081542002	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:25:20	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
57	0042 4711 0824	TAN	Checkout	1004	BAG0081542002	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:25:02	27.01.2021 09:25:21	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
58	0042 4711 0818	TAN; Scan-Out	Checkout	1004	BAG0081542002	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:25:06	27.01.2021 09:25:21	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
59	0042 4711 0818	TAN	Checkout	1004	BAG0081542002	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:25:07	27.01.2021 09:25:21	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
60	0042 4711 0815	TAN	Checkout	1004	BAG0081542003	439FC50	Emergency Room	Mrs. Smith	27.01.2021 09:31:39	27.01.2021 09:31:57	27.01.2021 09:32:18			
61	0042 4711 0817	TAN	Checkout	1004	BAG0081542003	439FC50	Emergency Room	Mrs. Smith	27.01.2021 09:31:48	27.01.2021 09:31:58	27.01.2021 09:32:18			
62	0042 4711 0819	TAN	Checkout	1004	BAG0081542003	439FC50	Emergency Room	Mrs. Smith	27.01.2021 09:31:53	27.01.2021 09:31:58	27.01.2021 09:32:18			
63	0042 4711 0824	Scan-In	Checkout	1006	BAG0081542004	00000000	Emergency Room	Mrs. Smith	27.01.2021 09:33:05	27.01.2021 09:33:10				
64	0042 4711 0824	Scan-In	Checkout	1006	BAG0081542004	00000000	Emergency Room	Mrs. Smith	27.01.2021 09:33:06	27.01.2021 09:33:10				
65	0042 4711 0826	Scan-In	Checkout	1006	BAG0081542004	00000000	Emergency Room	Mrs. Smith	27.01.2021 09:33:08	27.01.2021 09:33:10				

General

In the "Content-Data" tab, a list of all checked-in TBH contents is displayed. The entries show the progress of the transport from check-in to complete check-out of all contents from a carrier.

The content is checked in but the carrier has not yet departed (TAN is still unknown and therefore "00000000").

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier Departure	Carrier Arrival	Checkout-Location	Checkout-Operator
63	0042 4711 0824	Scan-In	Checkout	1006	BAG0081542004	00000000	Emergency Room	Mrs. Smith	27.01.2021 09:33:05	27.01.2021 09:33:10				
64	0042 4711 0824	Scan-In	Checkout	1006	BAG0081542004	00000000	Emergency Room	Mrs. Smith	27.01.2021 09:33:06	27.01.2021 09:33:10				
65	0042 4711 0826	Scan-In	Checkout	1006	BAG0081542004	00000000	Emergency Room	Mrs. Smith	27.01.2021 09:33:08	27.01.2021 09:33:10				

The carrier is on its way, TAN was detected.

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier Departure	Carrier Arrival	Checkout-Location	Checkout-Operator
60	0042 4711 0815	TAN	Checkout	1004	BAG0081542003	439FC50	Emergency Room	Mrs. Smith	27.01.2021 09:31:39	27.01.2021 09:31:57	27.01.2021 09:32:18			
61	0042 4711 0817	TAN	Checkout	1004	BAG0081542003	439FC50	Emergency Room	Mrs. Smith	27.01.2021 09:31:48	27.01.2021 09:31:58	27.01.2021 09:32:18			
62	0042 4711 0819	TAN	Checkout	1004	BAG0081542003	439FC50	Emergency Room	Mrs. Smith	27.01.2021 09:31:53	27.01.2021 09:31:58	27.01.2021 09:32:18			

The carrier has arrived, but the content has not yet been scanned..

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier Departure	Carrier Arrival	Checkout-Location	Checkout-Operator
53	0042 4711 0827	TAN	Checkout	1004	BAG0081542005	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:44	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48		
54	0042 4711 0822	TAN	Checkout	1004	BAG0081542005	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:49	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48		
55	0042 4711 0823	TAN	Checkout	1004	BAG0081542002	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:24:56	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48		

The content was scanned upon arrival.

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier Departure	Carrier Arrival	Checkout-Location	Checkout-Operator
49	0042 4711 0820	TAN; Scan-Out	Checkout	1004	BAG0081542001	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:07	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson
50	0042 4711 0820	TAN; Scan-Out	Checkout	1004	BAG0081542001	439FC4F	Emergency Room	Mrs. Smith	27.01.2021 09:23:09	27.01.2021 09:25:20	27.01.2021 09:26:30	27.01.2021 09:27:48	Central Laboratory	MTA L.B. Johnson

The complete content of the carrier was scanned or manually checked out.

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier Departure	Carrier Arrival	Checkout-Location	Checkout-Operator
47	0042 4711 0818	TAN; Scan-Out; Archived		1004	BAG0081542003	439FC4E	Emergency Room	Mrs. Smith	27.01.2021 09:09:51	27.01.2021 09:10:00	27.01.2021 09:11:41	27.01.2021 09:13:08	Central Laboratory	MTA L.B. Johnson
48	0042 4711 0819	TAN; Scan-Out; Archived		1004	BAG0081542003	439FC4E	Emergency Room	Mrs. Smith	27.01.2021 09:09:51	27.01.2021 09:10:00	27.01.2021 09:11:41	27.01.2021 09:13:08	Central Laboratory	MTA L.B. Johnson
61	0042 4711 0817	TAN; Man. Checkout		1004	BAG0081542003	439FC50	Emergency Room	Mrs. Smith	27.01.2021 09:31:48	27.01.2021 09:31:58	27.01.2021 09:32:18	27.01.2021 09:32:48	Central Laboratory	MTA L.B. Johnson

Three buttons are available for filtering the data:

All

Not processed

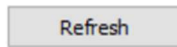
Timeout

Displays all entries in the list.

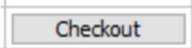
Displays all entries that have not yet been checked out.

Displays all entries that have not been checked out and are older than 24 hours.

The "Refresh" button updates the list. (The list is not automatically refreshed when changes are made).



The "Checkout" button is displayed for all entries in the list whose checkout is not yet complete. Clicking the button marks this content as manually checked out, e.g. if the content cannot be scanned.



Status of the content

The content can have different statuses depending on the progress of the process.

Scan In	The content has been scanned and checked in for this TBH.
TAN	The TBH has departed. The TAN of the transport has been registered.
Scan Out	The content has been scanned at the recipient.
Man. Checkout	The content was not scanned, but checked out manually via the button.
Archived	The content of the TBH was completely checked out.
Timeout	The content was checked in but not checked out again within 24 hours.

Column meaning:

#	Consecutive number of the entry
Scan code	ID of the content
State	Status of the content
Man. Checkout	If the content cannot be scanned at checkout, it can be checked out manually here. If all contents of this TBH are checked out, the button is removed.
CID	Carrier ID
Sub-carrier / bag	ID of the packaging unit in the carrier
TAN	Transport ID of the pneumatic tube system.
Checkin-Location	Location where the content was checked in.
Checkin operator	Name of the operator at the checkin.
Scan-In-Time	Time at which the content was scanned during check-in.
Checkin-Complete	Time at which the checkin process was completed.
Carrier Departure	Departure time of the carrier.
Carrier Arrival	Arrival time of the carrier.
Checkout-Location	Place where the content was checked out.
Checkout Operator	Name of the operator during checkout.
Scan-Out-Time	Time at which the content was scanned during checkout.
Checkout complete	Time at which all contents from this TBH were scanned during checkout.

Notice:

Entries older than 2 years will be deleted automatically.

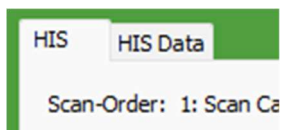
4.15.1.4. Hospital Information System – HIS

The HIS is used to automate the dispatch process at stations with high volumes of shipments. The data is generated by an external system and transmitted to the DCS via a QR code. (For the data format, see Appendix 5.2.)

When the transport container is then placed in the dispatch station, the destination address is forwarded to the DCS and the transport is initiated.

Checkin in HIS-Mode

To scan the QR code, the 'HIS' (Hospital Information System) tab must be active.



In order to be able to clearly identify the scanned content, the following order must be followed:

1. Scan the carrier
2. Scan the QR code on the prescription
3. If necessary, scan any further QR codes for the same destination address (QR codes with a different destination address will be ignored and a warning will be displayed)
4. The check-in process is completed by clicking the 'Check-in' button or by scanning the 'Check-in!' barcode (at the top center of the app window)
5. Place the TBH in the dispatch station

Once the TBH has been successfully scanned, the carrier ID is displayed above the content list.

Carrier-ID: 2981

When a QR code is scanned, the destination address, the priority of the shipment and the scan data are displayed next to or below the container ID.

Carrier-ID:	2981	Destination:	033	Priority:	1
Scan-Data:	1-033-0396910-13008-1892933-21				
#	Priority	Destination	AM	IM	

The data also appears in the scan data list.

Scan-Data: 1-033-9272085-43709-4051018-76							
#	Priority:	Destination:	AN	LN	HN	VN	
0	1	033	0396910	13008	1892933	21	2026-06-23 12:19:29
1	1	033	9272085	43709	4051018	76	2026-06-23 12:20:25

To complete the check-in process, either click on the 'Check-in' button or scan the 'Check-in!' barcode. (See also Appendix 5.1)
The 'Check-in!' barcode is only displayed when the 'Check-in' tab is active.
The width of the 'Check-in!' barcode can be adjusted using the arrow buttons in the bottom right-hand corner to match the scanner.



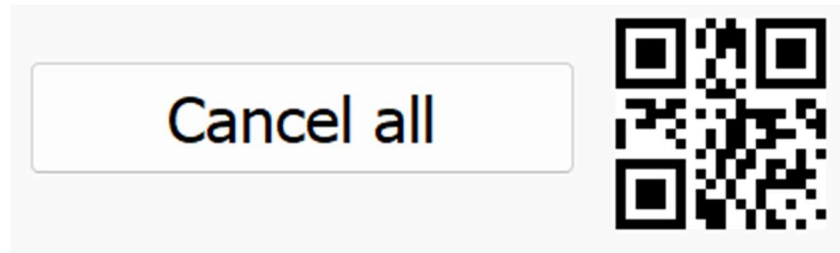
Once you have checked in successfully, the display in the app will be reset.

Carrier-ID: --- Destination: --- Priority: ---

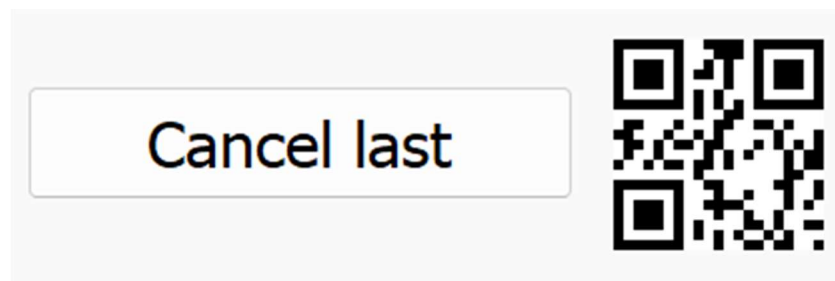
Scan-Data: ---

#	Priority:	Destination:	AN	LN	HN	VN	

Cancel Scanns



Clicking the 'Cancel All' button or scanning the QR code displayed next to the button will reset all scans since the last check-in. The check-in process must be restarted from the beginning.



Clicking the 'Cancel Last' button or scanning the QR code displayed next to the button deletes the last QR code scan. The container ID scan is preserved.

Note:

Once a check-in has been completed using the 'Check-in' button or by scanning the 'Check-in!' code, it cannot be deleted. Entries for which the transport has not been fully completed can be confirmed manually in 'HIS-Data'.

Content Data – HIS Data

RT-Win4 - Scan App V 4.21.1.546 beta16/6/29/421

Location: Pharmacy

Operator: Mr. Hyde

Change Operator

HIS HIS Data

All Checkin In Transport Arrived Timeout

Auto Update

Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Origin	Origin Name	Destination	Dest. Name	Scan Time	Checkin Time	Carrier in STS	Departure Time	Arrival Time	Transport Time	TAN
19	Arrived	2981	2554323	15687			1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 11:29:38	2026-06-26 11:30:07	2026-06-26 11:30:07	2026-06-26 11:30:38	00:00:31	09PC01D0	
20	Arrived; Error	2981	8555657	54027	2579022		1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 11:30:54	2026-06-26 11:30:55	2026-06-26 11:31:24	2026-06-26 11:32:04	00:00:40	09PC01D2	
21	Transport; Man. Confirmed	2981	2526142	56560	7939785	60	0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 11:34:19	2026-06-26 11:34:46	2026-06-26 11:35:58	2026-06-26 11:35:58	00:19:39	09PC01D9	
22	Transport; Man. Confirmed	2981	6765749	32843	0986646	93	0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 11:34:20	2026-06-26 11:34:46	2026-06-26 11:35:58	2026-06-26 11:35:58	00:19:31	09PC01D9	
23	Transport; Man. Confirmed	2981	2438728	15025	0145392		0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 11:34:22	2026-06-26 11:34:46	2026-06-26 11:35:58	2026-06-26 11:35:58	00:19:32	09PC01D9	
24	Arrived	2981	5746228	68256			0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:11:41	2026-06-26 12:11:43	2026-06-26 12:12:02	2026-06-26 12:12:02	00:00:17	09PC01E0	
25	Arrived	2981	9702409	82236	5253102	40	0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:11:41	2026-06-26 12:11:43	2026-06-26 12:12:02	2026-06-26 12:12:02	00:00:17	09PC01E0	
26	Arrived	2981	4638994	91600			1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:11:42	2026-06-26 12:11:43	2026-06-26 12:12:02	2026-06-26 12:12:02	00:00:17	09PC01E0	
27	Man. Confirmed; archived	4711	2695482	17093	6822599		1	033					2026-06-26 12:12:49	2026-06-26 12:12:53	---:---:---	2026-06-26 12:12:58	00:00:05		
28	Man. Confirmed; archived	4711	3128210	61598	7462021	92	0	033					2026-06-26 12:12:49	2026-06-26 12:12:53	---:---:---	2026-06-26 12:13:00	00:00:07		
29	Arrived; Error	2981	4786741	59777			0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:13:38	2026-06-26 12:13:45	2026-06-26 12:14:04	2026-06-26 12:14:48	00:00:44	09PC01E1	
30	Arrived; Error	2981	6247942	12187	9753400	80	1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:13:39	2026-06-26 12:13:45	2026-06-26 12:14:04	2026-06-26 12:14:48	00:00:44	09PC01E1	
31	Arrived; Error	2981	6346673	06217	4479954	46	1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:13:40	2026-06-26 12:13:45	2026-06-26 12:14:04	2026-06-26 12:14:48	00:00:44	09PC01E1	
32	Arrived; Error	2981	2778294	55358	2164008		1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:13:41	2026-06-26 12:13:45	2026-06-26 12:14:04	2026-06-26 12:14:48	00:00:44	09PC01E1	
33	Arrived; Error	2981	7720704	91130	0232957		0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:13:42	2026-06-26 12:13:45	2026-06-26 12:14:04	2026-06-26 12:14:48	00:00:44	09PC01E1	
34	Arrived; Error	2981	9838001	03956			0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:15:12	2026-06-26 12:15:15	2026-06-26 12:15:27	2026-06-26 12:16:05	00:00:38	09PC01E2	
35	Job-Brd; Man. Confirmed	2981	3708483	08338	7414030	12	0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:16:19	2026-06-26 12:16:25	2026-06-26 12:16:40	2026-06-26 12:18:29	00:01:49	09PC01E3	
36	Job-Brd; Man. Confirmed	2981	7784679	67253	9628654	30	1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:16:20	2026-06-26 12:16:25	2026-06-26 12:16:40	2026-06-26 12:18:34	00:01:54	09PC01E3	
37	Job-Brd; Man. Confirmed	2981	1557857	89157	6396143		1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:16:21	2026-06-26 12:16:25	2026-06-26 12:16:40	2026-06-26 12:18:35	00:01:55	09PC01E3	
38	Arrived; Man. Confirmed	2981	3602338	04019	0476687	82	1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:24:28	2026-06-26 12:24:36	2026-06-26 12:24:52	2026-06-26 12:25:15	00:00:23	09PC01E4	
39	Arrived	2981	6223660	88844	5324699	29	1	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:24:29	2026-06-26 12:24:36	2026-06-26 12:24:52	2026-06-26 12:25:15	00:00:23	09PC01E4	
40	Arrived	2981	6125561	27000	8262514	78	0	033	000032	Pharmacy	000033	Ward 33	2026-06-26 12:24:30	2026-06-26 12:24:36	2026-06-26 12:24:52	2026-06-26 12:25:15	00:00:23	09PC01E4	
41	archived; Timeout	2981	4346049	22362	6379024		0	033					2026-06-26 12:25:40	2026-06-26 12:25:45	---:---:---	2026-06-26 12:25:45	00:00:00		
42	archived; Timeout	2981	8893064	37882	1774987	51	0	033					2026-06-26 12:25:42	2026-06-26 12:25:45	---:---:---	2026-06-26 12:25:45	00:00:00		
43	archived; Timeout	2981	2552557	39953	0479408		0	033					2026-06-26 12:25:42	2026-06-26 12:25:45	---:---:---	2026-06-26 12:25:45	00:00:00		

29.06.2026 10:01:49

General

The “HIS Data” tab displays a list of all carrier contents that have been checked in. The entries show the progress of the transport from check-in to the arrival of the carrier.

The contents have been checked in, but the carrier hasn’t departed yet.

Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Origin	Origin Name	Destination	Dest. Name	Scan Time	Checkin Time	Carrier in STS	Departure Time	Arrival Time	Transport Time	TAN
98	Checking	Confirm	2981	8247740	13187	9753400	80	1	033				23.06.2026 09:03:06	23.06.2026 09:03:20	---:---:---	---:---:---	---:---:---	00:00:00	
99	Checking	Confirm	2981	2778294	55358	2164008		1	033				23.06.2026 09:03:16	23.06.2026 09:03:20	---:---:---	---:---:---	---:---:---	00:00:00	

The carrier is on its way; the TAN has been registered.

Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Origin	Origin Name	Destination	Dest. Name	Scan Time	Checkin Time	Carrier in STS	Departure Time	Arrival Time	Transport Time	TAN
98	Transport	Confirm	2981	8247740	13187	9753400	80	1	033	000032	Pharmacy	000033	Ward 33	23.06.2026 09:03:06	23.06.2026 09:03:20	23.06.2026 09:05:01	23.06.2026 09:05:01	00:00:00	09PC01E5
99	Transport	Confirm	2981	2778294	55358	2164008		1	033	000032	Pharmacy	000033	Ward 33	23.06.2026 09:03:16	23.06.2026 09:03:20	23.06.2026 09:05:01	23.06.2026 09:05:01	00:00:00	09PC01E5

The carrier has arrived.

Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Origin	Origin Name	Destination	Dest. Name	Scan Time	Checkin Time	Carrier in STS	Departure Time	Arrival Time	Transport Time	TAN
98	Arrived		2981	8247740	13187	9753400	80	1	033	000032	Pharmacy	000033	Ward 33	23.06.2026 09:03:06	23.06.2026 09:03:20	23.06.2026 09:05:01	23.06.2026 09:05:19	00:00:18	09PC01E5
99	Arrived		2981	2778294	55358	2164008		1	033	000032	Pharmacy	000033	Ward 33	23.06.2026 09:03:16	23.06.2026 09:03:20	23.06.2026 09:05:01	23.06.2026 09:05:19	00:00:18	09PC01E5

There are five buttons available for filtering the data:

	Displays all entries in the list (no filter).
	Displays all entries that have been checked in but are not yet in transit.
	Displays all entries that have not yet arrived.
	Displays all entries with completed transport.
	Displays all entries that have been checked in but have not been dispatched within 24 hours.

If 'Auto Update' is enabled, the list is updated automatically.

☒ Auto Update

The 'Confirm' button is displayed for all entries in the list where the transportation has not yet been completed. Clicking the button marks this payload as 'manually confirmed', e.g. if the shipment has not been sent.



State of Content

Depending on the progress of the process, the load may assume various statuses.

Checkin	The load has been scanned and checked in for this TBH.
Transport	The carrier has been departed. The transport's TAN has been registered..
Arrived	The transport has been completed.
Man. Confirmed	The transport has not been completed, but has been manually confirmed by clicking the 'Confirm' button.
Archived	The transport is more than 24 hours old.
Timeout	The load was checked in but was not sent within 24 hours.

Column Meanings:

Index	Sequential number of the entry
Status	Status of the Load
(Confirm)	Column for the Confirm button.
CID	Carrier-ID
AN	AN number from QR code
LN	LN number from QR code
HN	HN number from QR code
VN	VN number from QR code
Prio	0 = no priority; 1 = priority on
Scan-Ziel	Destination address from QR code
Origin	Address number of the sending station
Origin Name	Name of the sending station
Destination	Address of the destination station
Destination Name	Name of the destination station
Scan-Time	The time at which the QR code was scanned
Checkin-Time	The time at which the load was checked in
Carrier in System	The time at which the carrier was placed in the sending station
Departure Time	The time at which the carrier departed from the sending station
Arrival Time	Time of arrival of the carrier
Transport Time	Duration of transport
TAN	Transport ID of the pneumatic tube system.

Note:

Entries older than 2 years are automatically deleted.

4.15.2. Scan Out App



RT-Win4 - Scan Out App V 4.5.6.116 Rel11/1/25/451

Location: Central Laboratory
Operator: MTA L.B. Johnson

Change Operator

Checkout Content-Data

Contents: 13

#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1004	BAG0081542001	0042 4711 0815	27.01.2021 12:08:35	27.01.2021 12:12:58		TAN; Scan-Out;	47FFC651
2	1004	BAG0081542001	0042 4711 0816	27.01.2021 12:08:37	27.01.2021 12:13:00		TAN; Scan-Out;	47FFC651
3	1004	BAG0081542001	0042 4711 0817	27.01.2021 12:08:39	27.01.2021 12:13:03		TAN; Scan-Out;	47FFC651
4	1004	BAG0081542005	0042 4711 0819	27.01.2021 12:08:51	---	Checkout	TAN;	47FFC651
5	1004	BAG0081542005	0042 4711 0818	27.01.2021 12:08:52	27.01.2021 12:13:08		TAN; Scan-Out;	47FFC651
6	1004	BAG0081542003	0042 4711 0820	27.01.2021 12:09:06	---	Checkout	TAN;	47FFC651
7	1004	BAG0081542003	0042 4711 0829	27.01.2021 12:09:07	---	Checkout	TAN;	47FFC651
8	1004	BAG0081542003	0042 4711 0821	27.01.2021 12:09:09	27.01.2021 12:13:23		TAN; Scan-Out;	47FFC651
9	1004	BAG0081542003	0042 4711 0828	27.01.2021 12:09:10	---	Checkout	TAN;	47FFC651
10	1004	BAG0081542004	0042 4711 0822	27.01.2021 12:09:29	---	Checkout	TAN;	47FFC651
11	1004	BAG0081542004	0042 4711 0827	27.01.2021 12:09:30	---	Checkout	TAN;	47FFC651
12	1004	BAG0081542004	0042 4711 0823	27.01.2021 12:09:32	---	Checkout	TAN;	47FFC651
13	1004	BAG0081542004	0042 4711 0826	27.01.2021 12:09:33	---	Checkout	TAN;	47FFC651

Checkout all

27.01.2021 12:13:31

4.15.2.1. General Information / Start

The "Scan Out" app is the counterpart to the "Scan In" app. It is used to check out the content of a TBH after arrival.

The app is started in the same way as the "Scan In" app. (See **Fehler! Verweisquelle konnte nicht gefunden werden.**)

4.15.2.2. Options

The settings in the app are made in the same way as in the "Scan In" app. (See **Fehler! Verweisquelle konnte nicht gefunden werden.**)

4.15.2.3. Checkout Procedure

To scan a carrier, a packaging unit or the content of a carrier, the "Checkout" tab must be active.

Checkout **Content-Data**

Contents: 13

#	CID	Sub-Carrier / t
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When checking out the content, no fixed scan sequence is required.

If a carrier is scanned, all contents checked in for this carrier are displayed. The number of contents in the carrier is displayed.

If an ID of the load is scanned, the complete content of this carrier is also listed.

Contents: 13

#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1004	BAG0081542001	0042 4711 0815	27.01.2021 12:08:35	27.01.2021 12:12:58		TAN; Scan-Out;	47FFC651
2	1004	BAG0081542001	0042 4711 0816	27.01.2021 12:08:37	27.01.2021 12:13:00		TAN; Scan-Out;	47FFC651
3	1004	BAG0081542001	0042 4711 0817	27.01.2021 12:08:39	27.01.2021 12:13:03		TAN; Scan-Out;	47FFC651
4	1004	BAG0081542005	0042 4711 0819	27.01.2021 12:08:51	---	Checkout	TAN;	47FFC651
5	1004	BAG0081542005	0042 4711 0818	27.01.2021 12:08:52	27.01.2021 12:13:08		TAN; Scan-Out;	47FFC651
6	1004	BAG0081542003	0042 4711 0820	27.01.2021 12:09:06	---	Checkout	TAN;	47FFC651
7	1004	BAG0081542003	0042 4711 0829	27.01.2021 12:09:07	---	Checkout	TAN;	47FFC651
8	1004	BAG0081542003	0042 4711 0821	27.01.2021 12:09:09	27.01.2021 12:13:23		TAN; Scan-Out;	47FFC651
9	1004	BAG0081542003	0042 4711 0828	27.01.2021 12:09:10	---	Checkout	TAN;	47FFC651
10	1004	BAG0081542004	0042 4711 0822	27.01.2021 12:09:29	---	Checkout	TAN;	47FFC651
11	1004	BAG0081542004	0042 4711 0827	27.01.2021 12:09:30	---	Checkout	TAN;	47FFC651
12	1004	BAG0081542004	0042 4711 0823	27.01.2021 12:09:32	---	Checkout	TAN;	47FFC651
13	1004	BAG0081542004	0042 4711 0826	27.01.2021 12:09:33	---	Checkout	TAN;	47FFC651

If a piece of content has been scanned, the scan-out time is entered and the "Checkout" button disappears. The "Scan-Out" entry is added to the status.

#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1004	BAG0081542001	0042 4711 0815	27.01.2021 12:08:35	27.01.2021 12:12:58		TAN; Scan-Out;	47FFC651
2	1004	BAG0081542001	0042 4711 0816	27.01.2021 12:08:37	27.01.2021 12:13:00		TAN; Scan-Out;	47FFC651
3	1004	BAG0081542001	0042 4711 0817	27.01.2021 12:08:39	27.01.2021 12:13:03		TAN; Scan-Out;	47FFC651
4	1004	BAG0081542005	0042 4711 0819	27.01.2021 12:08:51	---	Checkout	TAN;	47FFC651

The "Checkout" button can be used to check out single entries (e.g. if the barcode cannot be scanned).

The status then receives the entry "Man. Checkout"

11	1004	BAG0081542004	0042 4711 0827	27.01.2021 12:09:30	27.01.2021 12:41:18		TAN; Man. Checkout;	47FFC651
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If the ID of a packaging unit is scanned, only the content of this packaging unit is listed.

Contents: 4

#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1004	BAG0081542003	0042 4711 0820	27.01.2021 12:09:06	---	Checkout	TAN;	47FFC651
2	1004	BAG0081542003	0042 4711 0829	27.01.2021 12:09:07	---	Checkout	TAN;	47FFC651
3	1004	BAG0081542003	0042 4711 0821	27.01.2021 12:09:09	27.01.2021 12:13:23		TAN; Scan-Out;	47FFC651
4	1004	BAG0081542003	0042 4711 0828	27.01.2021 12:09:10	---	Checkout	TAN;	47FFC651

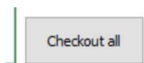
If the complete contents of the carrier have been scanned, the message "Checkout complete!" appears.

Contents: Checkout complete!

#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1004	BAG0081542001	0042 4711 0815	27.01.2021 12:08:35	27.01.2021 12:51:13		TAN; Scan-Out;	47FFC651
2	1004	BAG0081542001	0042 4711 0816	27.01.2021 12:08:37	27.01.2021 12:51:14		TAN; Scan-Out;	47FFC651
3	1004	BAG0081542001	0042 4711 0817	27.01.2021 12:08:39	27.01.2021 12:51:15		TAN; Scan-Out;	47FFC651
4	1004	BAG0081542005	0042 4711 0819	27.01.2021 12:08:51	27.01.2021 12:51:16		TAN; Scan-Out;	47FFC651
5	1004	BAG0081542005	0042 4711 0818	27.01.2021 12:08:52	27.01.2021 12:51:16		TAN; Scan-Out;	47FFC651
6	1004	BAG0081542003	0042 4711 0820	27.01.2021 12:09:06	27.01.2021 12:51:18		TAN; Scan-Out;	47FFC651
7	1004	BAG0081542003	0042 4711 0829	27.01.2021 12:09:07	27.01.2021 12:51:36		TAN; Scan-Out;	47FFC651
8	1004	BAG0081542003	0042 4711 0821	27.01.2021 12:09:09	27.01.2021 12:51:18		TAN; Scan-Out;	47FFC651
9	1004	BAG0081542003	0042 4711 0828	27.01.2021 12:09:10	27.01.2021 12:51:33		TAN; Scan-Out;	47FFC651
10	1004	BAG0081542004	0042 4711 0822	27.01.2021 12:09:29	27.01.2021 12:51:19		TAN; Scan-Out;	47FFC651
11	1004	BAG0081542004	0042 4711 0827	27.01.2021 12:09:30	27.01.2021 12:51:28		TAN; Scan-Out; Man.	47FFC651
12	1004	BAG0081542004	0042 4711 0823	27.01.2021 12:09:32	27.01.2021 12:51:21		TAN; Scan-Out;	47FFC651
13	1004	BAG0081542004	0042 4711 0826	27.01.2021 12:09:33	27.01.2021 12:51:26		TAN; Scan-Out;	47FFC651

The display remains until the next scan.

The "Checkout all" button can be used to manually check out all content currently displayed in the list. All entries receive the status "Man. Checkout".



Contents: Checkout complete!

#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1004	BAG0081542003	0042 4711 0815	27.01.2021 12:56:10	27.01.2021 12:59:23		TAN; Man. Checkout;	47FFC652
2	1004	BAG0081542003	0042 4711 0826	27.01.2021 12:56:11	27.01.2021 12:59:23		TAN; Man. Checkout;	47FFC652
3	1004	BAG0081542003	0042 4711 0817	27.01.2021 12:56:14	27.01.2021 12:59:23		TAN; Man. Checkout;	47FFC652
4	1004	BAG0081542003	0042 4711 0828	27.01.2021 12:56:16	27.01.2021 12:59:23		TAN; Man. Checkout;	47FFC652
5	1004	BAG0081542003	0042 4711 0819	27.01.2021 12:56:18	27.01.2021 12:59:23		TAN; Man. Checkout;	47FFC652

Checkout all

4.15.2.4. Content Data

RT-Win4 - Scan Out App V 4.5.6.116 Rel11/1/25/451

Location: Central Laboratory
Operator: MTA L.B. Johnson

Change Operator

Checkout Content Data

All Not processed Timeout Refresh

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier-Departure	Carrier-Arrival	Checkout-Location	Checkout-Operator	Scan-Out-Time	Checkout-complete
69	[0402 4711 0818]	TAN; Scan-Out; Archived)		1004	BAG0081542005	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:08:51	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:16	27.01.2021 12:51:37
70	[0402 4711 0818]	TAN; Scan-Out; Archived)		1004	BAG0081542005	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:08:52	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:16	27.01.2021 12:51:36
71	[0402 4711 0820]	TAN; Scan-Out; Archived)		1004	BAG0081542003	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:09:06	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:18	27.01.2021 12:51:37
72	[0402 4711 0820]	TAN; Scan-Out; Archived)		1004	BAG0081542003	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:09:07	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:16	27.01.2021 12:51:36
73	[0402 4711 0821]	TAN; Scan-Out; Archived)		1004	BAG0081542003	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:09:09	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:18	27.01.2021 12:51:37
74	[0402 4711 0828]	TAN; Scan-Out; Archived)		1004	BAG0081542003	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:09:10	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:33	27.01.2021 12:51:36
75	[0402 4711 0822]	TAN; Scan-Out; Archived)		1004	BAG0081542004	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:09:20	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:19	27.01.2021 12:51:37
76	[0402 4711 0827]	TAN; Scan-Out; Man. Checkout; Archived)		1004	BAG0081542004	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:09:30	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:28	27.01.2021 12:51:36
77	[0402 4711 0823]	TAN; Scan-Out; Archived)		1004	BAG0081542004	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:09:32	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:21	27.01.2021 12:51:37
78	[0402 4711 0826]	TAN; Scan-Out; Archived)		1004	BAG0081542004	49FFC051	Emergency Room	Mrs. Smith	27.01.2021 12:09:33	27.01.2021 12:09:37	27.01.2021 12:10:03	27.01.2021 12:11:31	Central Laboratory	MTA L.B. Johnson	27.01.2021 12:51:26	27.01.2021 12:51:36
79	[0402 4711 0815]	TAN; Man. Checkout; Archived)		1004	BAG0081542003	49FFC052	Emergency Room	Mrs. Smith	27.01.2021 12:56:10	27.01.2021 12:56:21	27.01.2021 12:56:49	27.01.2021 12:58:16	MTA L.B. Johnson	27.01.2021 12:59:23	27.01.2021 12:59:23	
80	[0402 4711 0826]	TAN; Man. Checkout; Archived)		1004	BAG0081542003	49FFC052	Emergency Room	Mrs. Smith	27.01.2021 12:56:11	27.01.2021 12:56:21	27.01.2021 12:56:49	27.01.2021 12:58:16	MTA L.B. Johnson	27.01.2021 12:59:23	27.01.2021 12:59:24	
81	[0402 4711 0817]	TAN; Man. Checkout; Archived)		1004	BAG0081542003	49FFC052	Emergency Room	Mrs. Smith	27.01.2021 12:56:14	27.01.2021 12:56:21	27.01.2021 12:56:49	27.01.2021 12:58:16	MTA L.B. Johnson	27.01.2021 12:59:23	27.01.2021 12:59:23	
82	[0402 4711 0828]	TAN; Man. Checkout; Archived)		1004	BAG0081542003	49FFC052	Emergency Room	Mrs. Smith	27.01.2021 12:56:16	27.01.2021 12:56:21	27.01.2021 12:56:49	27.01.2021 12:58:16	MTA L.B. Johnson	27.01.2021 12:59:23	27.01.2021 12:59:24	
83	[0402 4711 0819]	TAN; Man. Checkout; Archived)		1004	BAG0081542003	49FFC052	Emergency Room	Mrs. Smith	27.01.2021 12:56:18	27.01.2021 12:56:21	27.01.2021 12:56:49	27.01.2021 12:58:16	MTA L.B. Johnson	27.01.2021 12:59:23	27.01.2021 12:59:23	

27.01.2021 13:05:56

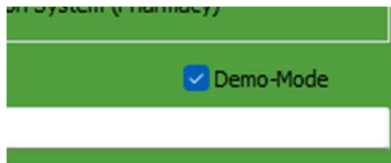
The "Content-Data" tab works analogously to the same function in the "Scan In" app.
(See 0)

4.15.3. Demo-Mode

In demo mode, the sequence of a sending process can be simulated using the ScanIn or ScanOut app.

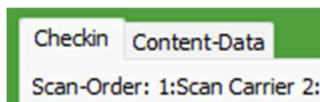
Note: In demo mode, no transport is created in the RT-Win4 history.

First, you need to enable demo mode in the settings.



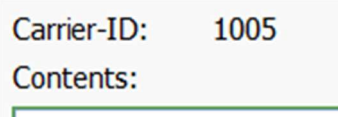
4.15.3.1. Demo in LIS-Mode

To be able to register a TBH and its contents, the 'Checkin' tab in the Scan In app must be active.



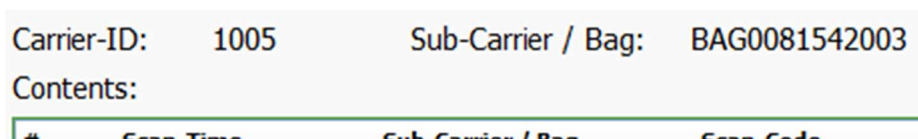
You can then start the demo scan. (See Appendix 5.2 for sample code)

1. Scan the Carrier.
Scan the barcode on the carrier. The Carrier ID is displayed above the contents list..



The next step can only be taken once the carrier has been successfully scanned.

2. Scan Sub Carrier / Bags (Option)
If the loaded goods are to be assigned to one or more sub carriers (insert or bag), these must be scanned once before the loaded goods are scanned. The details of the current sub carrier are displayed alongside the Carrier ID.



The loaded goods are now assigned to this inner container until another inner container is scanned or the scanning process is completed.

3. Scan the payload

Once the carrier ID and, where needed, the inner container have been scanned, the payload is then recorded. The scanned barcodes appear in the contents list.

Contents:

#	Scan-Time	Sub-Carrier / Bag	Scan-Code
1	2026-07-28 09:08:27	BAG0081542003	0042 4711 0815
2	2026-07-28 09:08:33	BAG0081542003	0042 4711 0816
3	2026-07-28 09:08:37	BAG0081542003	0042 4711 0817
4	2026-07-28 09:08:40	BAG0081542003	0042 4711 0818
5	2026-07-28 09:08:47	BAG0081542003	0042 4711 0819
6	2026-07-28 09:09:01	BAG0081542001	0042 4711 0829
7	2026-07-28 09:09:03	BAG0081542001	0042 4711 0828
8	2026-07-28 09:09:09	BAG0081542001	0042 4711 0826
9	2026-07-28 09:09:15	BAG0081542001	0042 4711 0827

4. Complete the check-in of the cargo by clicking the 'Enter' button or by scanning the 'Checkin!' barcode.



The 'Check-in' tab is then reset.

5. To simulate the remaining stages of the transport, switch to the 'Content-Data' tab. The registered content-data is displayed at the bottom of the content-data list.

#	Scan-Code	Status	Main Check-out	CBD	Sub-Carrier / Bag	TAH	Check-in Location	Check-in Operator	Scan In Time	Check-in Complete	Carrier Departure	Carrier Arrival	Check-out Location	Check-out Operator	Scan Out Time	Check-out Complete
122	0042 4711 0827	TAH: Non-Check-out: Arrived		0005	BAG0081542001	017C7E28	Ward 42	F. Hörtig	2026-07-28 09:09:15	2026-07-28 09:10:22	2026-07-28 09:12:15	2026-07-28 09:13:05	Laboratory	Dr. Jell	2026-07-28 09:17:49	2026-07-28 09:17:52
123	0042 4711 0815	Scan-In	Check-out	0005	BAG0081542003	00000000	Ward 42	F. Hörtig	2026-07-28 09:19:39	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28
124	0042 4711 0816	Scan-In	Check-out	0005	BAG0081542003	00000000	Ward 42	F. Hörtig	2026-07-28 09:19:41	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28
125	0042 4711 0817	Scan-In	Check-out	0005	BAG0081542003	00000000	Ward 42	F. Hörtig	2026-07-28 09:19:42	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28
126	0042 4711 0818	Scan-In	Check-out	0005	BAG0081542003	00000000	Ward 42	F. Hörtig	2026-07-28 09:19:44	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28
127	0042 4711 0819	Scan-In	Check-out	0005	BAG0081542003	00000000	Ward 42	F. Hörtig	2026-07-28 09:19:46	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28
128	0042 4711 0828	Scan-In	Check-out	0005	BAG0081542001	00000000	Ward 42	F. Hörtig	2026-07-28 09:19:58	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28
129	0042 4711 0829	Scan-In	Check-out	0005	BAG0081542001	00000000	Ward 42	F. Hörtig	2026-07-28 09:19:59	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28
130	0042 4711 0826	Scan-In	Check-out	0005	BAG0081542001	00000000	Ward 42	F. Hörtig	2026-07-28 09:20:01	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28
131	0042 4711 0827	Scan-In	Check-out	0005	BAG0081542001	00000000	Ward 42	F. Hörtig	2026-07-28 09:20:04	2026-07-28 09:20:28	2026-07-28 09:20:28	2026-07-28 09:20:28			2026-07-28 09:20:28	2026-07-28 09:20:28

6. Clicking the 'Demo – Next Step' button enters the departure time for each piece of payload..

Demo - Next Step

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier-Departure	Carrier-Arrival	Checkout-Location	Checkout-Operator	Scan-Out-Time	Checkout-Complete
123	0042 4711 0827	TAN; Man. Checkout: Activated	☐	1005	BAG0081542001	617C7E28	Ward 42	F. Haptingale	2026-07-28 09:09:15	2026-07-28 09:10:22	2026-07-28 09:12:15	2026-07-28 09:13:05	Laboratory	Dr. Jekyll	2026-07-28 09:17:49	2026-07-28 09:17:52
124	0042 4711 0815	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:39	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
125	0042 4711 0816	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:41	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
126	0042 4711 0817	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:42	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
127	0042 4711 0818	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:44	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
128	0042 4711 0819	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:46	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
129	0042 4711 0829	TAN;	☐	1005	BAG0081542001	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:58	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
130	0042 4711 0828	TAN;	☐	1005	BAG0081542001	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:59	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
131	0042 4711 0826	TAN;	☐	1005	BAG0081542001	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:20:01	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
131	0042 4711 0827	TAN;	☐	1005	BAG0081542001	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:20:04	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10

7. Clicking the 'Demo – Next Step' button again will enter the arrival time for each loaded item.

Demo - Next Step

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier-Departure	Carrier-Arrival	Checkout-Location	Checkout-Operator	Scan-Out-Time	Checkout-Complete
122	0042 4711 0827	TAN; Man. Checkout: Activated	☐	1005	BAG0081542001	617C7E28	Ward 42	F. Haptingale	2026-07-28 09:09:15	2026-07-28 09:10:22	2026-07-28 09:12:15	2026-07-28 09:13:05	Laboratory	Dr. Jekyll	2026-07-28 09:17:49	2026-07-28 09:17:52
123	0042 4711 0815	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:39	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
124	0042 4711 0816	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:41	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
125	0042 4711 0817	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:42	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
126	0042 4711 0818	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:44	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
127	0042 4711 0819	TAN;	☐	1005	BAG0081542003	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:46	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
128	0042 4711 0829	TAN;	☐	1005	BAG0081542001	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:58	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
129	0042 4711 0828	TAN;	☐	1005	BAG0081542001	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:19:59	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
130	0042 4711 0826	TAN;	☐	1005	BAG0081542001	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:20:01	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10
131	0042 4711 0827	TAN;	☐	1005	BAG0081542001	6CDD67F6	Ward 42	F. Haptingale	2026-07-28 09:20:04	2026-07-28 09:20:18	2026-07-28 09:21:06	2026-07-28 09:22:10			2026-07-28 09:22:10	2026-07-28 09:22:10

8. The cargo is checked out using the Scan Out app. The 'Checkout' tab must be active.

Checkout Content-Data

Contents: ---

#	CID	Sub
---	-----	-----

9. Scanning the carrier displays the content recorded in the system.

Contents: 9

#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1005	BAG0081542003	0042 4711 0815	2026-07-28 09:19:39	---	☐	TAN;	6CDD67F6
2	1005	BAG0081542003	0042 4711 0816	2026-07-28 09:19:41	---	☐	TAN;	6CDD67F6
3	1005	BAG0081542003	0042 4711 0817	2026-07-28 09:19:42	---	☐	TAN;	6CDD67F6
4	1005	BAG0081542003	0042 4711 0818	2026-07-28 09:19:44	---	☐	TAN;	6CDD67F6
5	1005	BAG0081542003	0042 4711 0819	2026-07-28 09:19:46	---	☐	TAN;	6CDD67F6
6	1005	BAG0081542001	0042 4711 0829	2026-07-28 09:19:58	---	☐	TAN;	6CDD67F6
7	1005	BAG0081542001	0042 4711 0828	2026-07-28 09:19:59	---	☐	TAN;	6CDD67F6
8	1005	BAG0081542001	0042 4711 0826	2026-07-28 09:20:01	---	☐	TAN;	6CDD67F6
9	1005	BAG0081542001	0042 4711 0827	2026-07-28 09:20:04	---	☐	TAN;	6CDD67F6

If the sub-carrier (bag) is scanned, only the contents of that particular sub-carrier are displayed.

Contents: 4

#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1005	BAG0081542001	0042 4711 0829	2026-07-28 09:19:58	---	☐	TAN;	6CDD67F6
2	1005	BAG0081542001	0042 4711 0828	2026-07-28 09:19:59	---	☐	TAN;	6CDD67F6
3	1005	BAG0081542001	0042 4711 0826	2026-07-28 09:20:01	---	☐	TAN;	6CDD67F6
4	1005	BAG0081542001	0042 4711 0827	2026-07-28 09:20:04	---	☐	TAN;	6CDD67F6

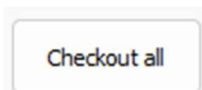
10. By scanning the loaded goods, the individual items are checked out.

Contents:		9						
#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1005	BAG0081542003	0042 4711 0815	2026-07-28 09:19:39	2026-07-28 09:27:33		TAN; Scan-Out;	6CDD67F6
2	1005	BAG0081542003	0042 4711 0816	2026-07-28 09:19:41	---	Checkout	TAN;	6CDD67F6
3	1005	BAG0081542003	0042 4711 0817	2026-07-28 09:19:42	2026-07-28 09:29:00		TAN; Scan-Out;	6CDD67F6
4	1005	BAG0081542003	0042 4711 0818	2026-07-28 09:19:44	---	Checkout	TAN;	6CDD67F6
5	1005	BAG0081542003	0042 4711 0819	2026-07-28 09:19:46	---	Checkout	TAN;	6CDD67F6
6	1005	BAG0081542001	0042 4711 0829	2026-07-28 09:19:58	---	Checkout	TAN;	6CDD67F6
7	1005	BAG0081542001	0042 4711 0828	2026-07-28 09:19:59	---	Checkout	TAN;	6CDD67F6
8	1005	BAG0081542001	0042 4711 0826	2026-07-28 09:20:01	---	Checkout	TAN;	6CDD67F6
9	1005	BAG0081542001	0042 4711 0827	2026-07-28 09:20:04	2026-07-28 09:29:06		TAN; Scan-Out;	6CDD67F6

11. The 'Checkout' button can be used to manually check out individual items of the loaded goods. A corresponding message appears in the status.



The 'Checkout All' button is used to manually check out all items in the payload. A corresponding message appears in the status.



12. Once all items in the load have been checked out, the message 'Check-out complete' is displayed.

Contents:		Checkout complete!						
#	CID	Sub-Carrier / Bag	Scan-Code	Scan-In-Time	Scan-Out-Time	Man. Checkout	State	TAN
1	1005	BAG0081542003	0042 4711 0815	2026-07-28 09:19:39	2026-07-28 09:34:19		TAN; Scan-Out;	6CDD67F6
2	1005	BAG0081542003	0042 4711 0816	2026-07-28 09:19:41	2026-07-28 09:34:19		TAN; Scan-Out;	6CDD67F6
3	1005	BAG0081542003	0042 4711 0817	2026-07-28 09:19:42	2026-07-28 09:34:19		TAN; Scan-Out;	6CDD67F6
4	1005	BAG0081542003	0042 4711 0818	2026-07-28 09:19:44	2026-07-28 09:34:19		TAN; Man. Checkout;	6CDD67F6
5	1005	BAG0081542003	0042 4711 0819	2026-07-28 09:19:46	2026-07-28 09:34:19		TAN; Man. Checkout;	6CDD67F6
6	1005	BAG0081542001	0042 4711 0829	2026-07-28 09:19:58	2026-07-28 09:34:19		TAN; Man. Checkout;	6CDD67F6
7	1005	BAG0081542001	0042 4711 0828	2026-07-28 09:19:59	2026-07-28 09:34:19		TAN; Man. Checkout;	6CDD67F6
8	1005	BAG0081542001	0042 4711 0826	2026-07-28 09:20:01	2026-07-28 09:34:19		TAN; Scan-Out;	6CDD67F6
9	1005	BAG0081542001	0042 4711 0827	2026-07-28 09:20:04	2026-07-28 09:34:19		TAN; Scan-Out;	6CDD67F6

13. End of the demo. All entries in the load list are now completed. Another demo can now be started..

#	Scan-Code	State	Man. Checkout	CID	Sub-Carrier / Bag	TAN	Checkin-Location	Checkin-Operator	Scan-In-Time	Checkin-Complete	Carrier Departure	Carrier Arrival	Checkout-Location	Checkout-Operator	Scan-Out-Time	Checkout-Complete
122	0042 4711 0827	TAN; Man. Checkout; Archived		1005	BAG0081542001	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:20:04	2026-07-28 09:20:04	2026-07-28 09:20:04	2026-07-28 09:20:04	Laboratory	Dr. Jekyll	2026-07-28 09:20:04	2026-07-28 09:20:04
123	0042 4711 0826	TAN; Scan-Out; Archived		1005	BAG0081542001	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:20:04	2026-07-28 09:20:04	2026-07-28 09:20:04	2026-07-28 09:20:04	Laboratory	Dr. Jekyll	2026-07-28 09:20:04	2026-07-28 09:20:04
124	0042 4711 0815	TAN; Scan-Out; Archived		1005	BAG0081542003	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:19:39	2026-07-28 09:19:39	2026-07-28 09:19:39	2026-07-28 09:19:39	Laboratory	Dr. Jekyll	2026-07-28 09:19:39	2026-07-28 09:19:39
125	0042 4711 0817	TAN; Scan-Out; Archived		1005	BAG0081542003	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:19:42	2026-07-28 09:19:42	2026-07-28 09:19:42	2026-07-28 09:19:42	Laboratory	Dr. Jekyll	2026-07-28 09:19:42	2026-07-28 09:19:42
126	0042 4711 0818	TAN; Man. Checkout; Archived		1005	BAG0081542003	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:19:44	2026-07-28 09:19:44	2026-07-28 09:19:44	2026-07-28 09:19:44	Laboratory	Dr. Jekyll	2026-07-28 09:19:44	2026-07-28 09:19:44
127	0042 4711 0819	TAN; Man. Checkout; Archived		1005	BAG0081542003	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:19:46	2026-07-28 09:19:46	2026-07-28 09:19:46	2026-07-28 09:19:46	Laboratory	Dr. Jekyll	2026-07-28 09:19:46	2026-07-28 09:19:46
128	0042 4711 0829	TAN; Man. Checkout; Archived		1005	BAG0081542001	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:19:58	2026-07-28 09:19:58	2026-07-28 09:19:58	2026-07-28 09:19:58	Laboratory	Dr. Jekyll	2026-07-28 09:19:58	2026-07-28 09:19:58
129	0042 4711 0828	TAN; Man. Checkout; Archived		1005	BAG0081542001	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:19:59	2026-07-28 09:19:59	2026-07-28 09:19:59	2026-07-28 09:19:59	Laboratory	Dr. Jekyll	2026-07-28 09:19:59	2026-07-28 09:19:59
130	0042 4711 0826	TAN; Scan-Out; Archived		1005	BAG0081542001	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:20:01	2026-07-28 09:20:01	2026-07-28 09:20:01	2026-07-28 09:20:01	Laboratory	Dr. Jekyll	2026-07-28 09:20:01	2026-07-28 09:20:01
131	0042 4711 0827	TAN; Scan-Out; Archived		1005	BAG0081542001	6CDD67F6	Ward 42	F. Highten	2026-07-28 09:20:04	2026-07-28 09:20:04	2026-07-28 09:20:04	2026-07-28 09:20:04	Laboratory	Dr. Jekyll	2026-07-28 09:20:04	2026-07-28 09:20:04

4.15.3.2. Demo in HIS-Mode

To be able to register a TBH and its load, the 'KHIS' tab must be active in the Scan In app. (See Appendix 5.4 for demo QR codes)

1. Scan carrier

Scan the barcode on the carrier. The carrier ID is displayed above the load list.

Carrier-ID: 1004

Scan-Data:

The next step can only be taken once the carrier has been successfully scanned.

2. Scan the QR code on the prescription.

Once the Carrier-IDs have been scanned, the contents of the carrier are recorded. The scanned QR-codes appear in the list.

Carrier-ID: 1004 Destination: 200 Priority: 0

Scan-Data: 0-200-6765749-32843-0996646-93

#	Priority:	Destination:	AN	LN	HN	VN	
0	0	200	6765749	32843	0996646	93	2026-07-28 09:48:49

3. If necessary, scan any further QR codes for sending with the same destination.
The scan data will be displayed in the list.

Carrier-ID: 1004 Destination: 200 Priority: 0

Scan-Data: 0-200-2438728-15025-0145392

#	Priority:	Destination:	AN	LN	HN	VN	
0	0	200	6765749	32843	0996646	93	2026-07-28 09:48:49
1	0	200	5740228	68356			2026-07-28 09:50:18
2	0	200	2438728	15025	0145392		2026-07-28 09:50:19

4. Complete the check-in of the loaded goods by clicking the 'Checkin' button or by scanning the 'Checkin!' barcode.

Checkin



The 'Check-in' tab is then reset.

5. To simulate the next transport steps, switch to the 'HIS Data' tab. The booked load is displayed at the bottom of the load list.

HIS HIS Data																				
All																				
All		Checkin	In-Transport	Arrived	Timeout	Auto Update		Demo - Next Step												
Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Origin	Origin Name	Destination	Dest. Name	Scan Time	Checkin Time	Carrier in STS	Departure Time	Arrival Time	Transport Time	TAN	
85	Arrived;	2961	201278	10512		0	200	000100	Scan-Demo Send	000200	#123		2026-07-24 11:18:14	2026-07-24 11:18:18	2026-07-24 11:18:34	2026-07-24 11:18:48	2026-07-24 11:19:05	00:00:17	2055AD4	
86	Man. Confirmed; archived;	2961	1234567	12345	1234567	12	1	123	000100	Scan-Demo Send	000123	#123	2026-07-24 11:19:45	2026-07-24 11:19:47	2026-07-24 11:20:01	2026-07-24 11:20:07	2026-07-24 11:21:55	00:00:07	2055AD4	
87	Arrived;	2961	5001782	14783	2225123	02	1	107	000100	Scan-Demo Send	000107	#107	2026-07-24 11:22:08	2026-07-24 11:22:10	2026-07-24 11:22:19	2026-07-24 11:22:36	2026-07-24 11:23:02	00:00:06	4060A384	
89	Arrived;	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive		2026-07-24 13:45:43	2026-07-24 13:46:07	2026-07-24 13:46:15	2026-07-24 13:46:17	2026-07-24 13:46:17	00:00:05	017C7E28	
90	Arrived;	1004	6765749	32843	0996646	93	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-27 13:35:43	2026-07-27 13:36:05	2026-07-27 13:36:05	2026-07-27 13:36:07	2026-07-27 13:36:06	00:00:02	017C7E28	
91	Arrived;	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive		2026-07-27 13:35:43	2026-07-27 13:36:07	2026-07-27 13:36:05	2026-07-27 13:36:07	2026-07-27 13:36:06	00:00:02	017C7E28	
92	Checkin;	Confirm	1004	6765749	32843	0996646	93	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:50:18	2026-07-28 09:52:39	2026-07-28 09:52:39	2026-07-28 09:52:39	2026-07-28 09:52:39	00:00:00	2105E3E8
93	Checkin;	Confirm	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:50:18	2026-07-28 09:52:39	2026-07-28 09:52:39	2026-07-28 09:52:39	2026-07-28 09:52:39	00:00:00	2105E3E8	
94	Checkin;	Confirm	1004	2438728	15025	0145392	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:50:18	2026-07-28 09:52:39	2026-07-28 09:52:39	2026-07-28 09:52:39	2026-07-28 09:52:39	00:00:00	2105E3E8	

6. Clicking the 'Demo – Next Step' button enters the time at which the carrier is inserted into the station. The status of the load changes from 'Checkin' to 'Wait' and the transport's TAN is displayed.

Demo - Next Step

Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Origin	Origin Name	Destination	Dest. Name	Scan Time	Checkin Time	Carrier in STS	Departure Time	Arrival Time	Transport Time	TAN	
90	Arrived	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive		2026-07-27 13:35:43	2026-07-27 13:46:05	2026-07-27 13:46:07	2026-07-27 13:46:04	2026-07-27 13:46:04	00:00:05	017C7E28	
91	Wait	Confirm	1004	6765749	32843	0996646	93	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:48:40	2026-07-28 09:52:39	2026-07-28 09:56:14	<-<-<-	<-<-<-	00:00:00	2105E3E8
92	Wait	Confirm	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:50:18	2026-07-28 09:52:39	2026-07-28 09:56:14	<-<-<-	<-<-<-	00:00:00	2105E3E8	
93	Wait	Confirm	1004	2438728	15025	0145392	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:50:19	2026-07-28 09:52:39	2026-07-28 09:56:14	<-<-<-	<-<-<-	00:00:00	2105E3E8	

7. Clicking the 'Demo – Next Step' button again saves the carriers departure time in the database. The status of the load is changed from 'Wait' to 'Transport'..

Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Origin	Origin Name	Destination	Dest. Name	Scan Time	Checkin Time	Carrier in STS	Departure Time	Arrival Time	Transport Time	TAN	
90	Arrived;	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive		2026-07-27 13:35:43	2026-07-27 13:38:05	2026-07-27 13:44:07	2026-07-27 13:45:04	2026-07-27 13:45:56	00:00:52	017C7E28	
91	Transport;	Confirm	1004	6765749	32843	0996646	93	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:48:49	2026-07-28 09:52:39	2026-07-28 09:56:14	2026-07-28 09:58:25	<--<	00:00:00	2105E3E8
92	Transport;	Confirm	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:50:18	2026-07-28 09:52:39	2026-07-28 09:56:14	2026-07-28 09:58:25	<--<	00:00:00	2105E3E8	
93	Transport;	Confirm	1004	2438728	15025	0145392	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:50:19	2026-07-28 09:52:39	2026-07-28 09:56:14	2026-07-28 09:58:25	<--<	00:00:00	2105E3E8	

8. Clicking the 'Demo – Next Step' button again changes the status of the payload from 'Transport' to 'Job End'. In a real pneumatic tube system, this means that the carrier has arrived or is in a transfer station. However, the carrier has not yet left the system.

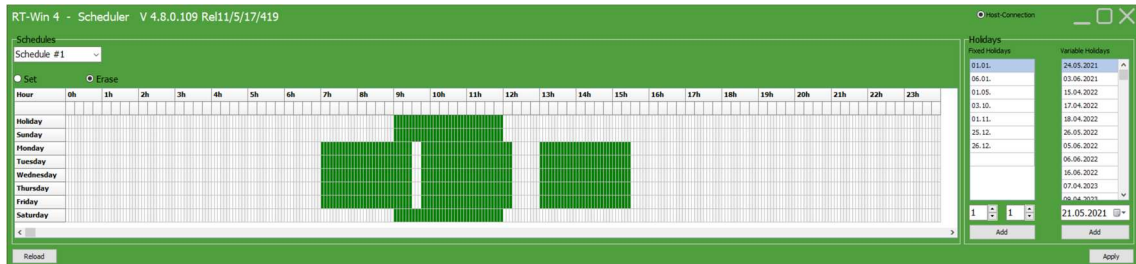
Index	Status	C
90	Arrived;	II
91	Job End;	II
92	Job End;	II
93	Job End;	II

9. Clicking the 'Demo – Next Step' button again changes the status of the loaded goods from 'Job End' to 'Arrived'. The TBH has left the system. The arrival time and transport duration are recorded in the database.

Index	Status	CID	AN	LN	HN	VN	Prio	Scan-Dest	Origin	Origin Name	Destination	Dest. Name	Scan Time	Checkin Time	Carrier in STS	Departure Time	Arrival Time	Transport Time	TAN
90	Arrived;	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive		2026-07-27 13:35:43	2026-07-27 13:46:07	2026-07-27 13:46:17	2026-07-27 13:46:17	2026-07-27 13:46:17	00:00:05	017C7E28
91	Arrived;	1004	6765749	32843	0996646	93	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive	2026-07-28 09:50:18	2026-07-28 09:52:39	2026-07-28 09:56:14	2026-07-28 09:56:14	2026-07-28 09:56:14	00:00:00	2105E3E8
92	Arrived;	1004	5740228	68356		0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive		2026-07-28 09:50:18	2026-07-28 09:52:39	2026-07-28 09:56:14	2026-07-28 09:56:14	2026-07-28 09:56:14	00:00:00	2105E3E8
93	Arrived;	1004	2438728	15025	0145392	0	200	000100	Scan-Demo Send	000200	Scan-Demo Receive		2026-07-28 09:50:18	2026-07-28 09:52:39	2026-07-28 09:56:14	2026-07-28 09:56:14	2026-07-28 09:56:14	00:00:00	2105E3E8

10. The transport is complete. Another demo can now be started.

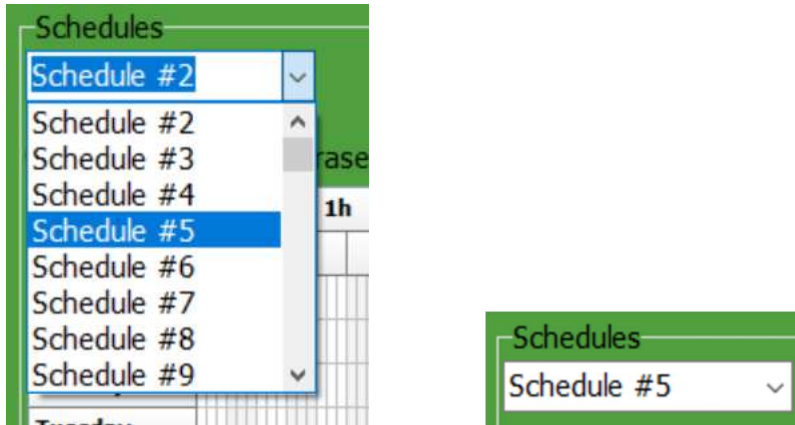
4.16. Scheduler App



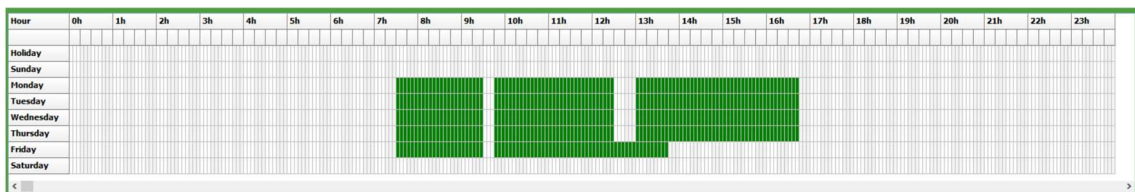
The Scheduler App is used to create schedules in which certain actions of RT-Win4 may be carried out (e.g. redirection of carriers for maintenance or cleaning). Up to 512 schedules can be created. Each schedule can be activated or deactivated in a 5-minute grid for each day of the week and for holidays. Annually recurring as well as variable holidays can be set.

4.16.1. Select a Schedule

Wählen sie im Zeitplanfeld den gewünschten Zeitplan aus.



The selection can be made using the drop-down menu or the cursor keys.
After selecting the schedule, it is displayed in the schedule editor.



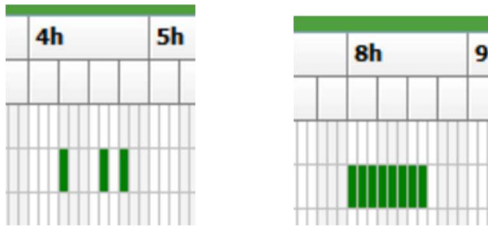
The schedule has a division in a 5-minute grid. Active times are shown in green.
Inactive times are white (or light grey).

4.16.2. Edit Schedule

To mark new areas as active in the chosen schedule, select the "Set" option:



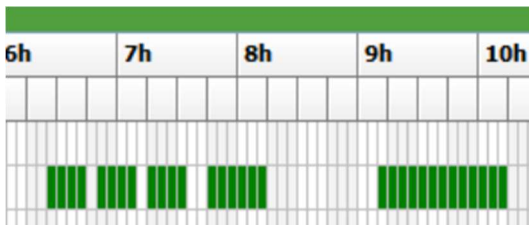
Click on the desired time sections in the respective weekday or public holiday or click on a time section and drag across the grid with the mouse button held down to mark further sections.



To deactivate one or more time periods, select the option "Erase".



Deactivating the sections is done in the same way as setting them.



4.16.3. Holidays

Each schedule has a setting for public holidays in addition to the setting for the seven days of the week. This setting is used if the current day is a day specified under "Holidays".

Fixed Holidays	Variable Holidays
01.01.	24.05.2021
06.01.	03.06.2021
01.05.	15.04.2022
03.10.	17.04.2022
01.11.	18.04.2022
25.12.	26.05.2022
26.12.	05.06.2022
	06.06.2022
	16.06.2022
	07.04.2023
	09.04.2023

1 1 21.05.2021

Add Add

There are two types of public holidays:

1. annually recurring (fixed) holidays with a fixed date, such as 1 May.
2. variable holidays without a fixed date, which depend, for example, on religious festivals such as Easter, Ramadan 1 or Passover.

Fixed Holidays:

Since these holidays are celebrated on the same date every year, it is not necessary to enter the year.

Below the list of annual holidays, select the day in the left input field and the month in the right field. Then click on the "Add" button below the input fields.

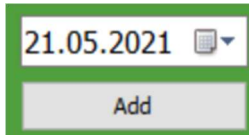
1 5

Add

Public holidays that have already been entered are ignored. To delete a holiday, click on the holiday to be removed in the list and press the "Delete" key on your keyboard.

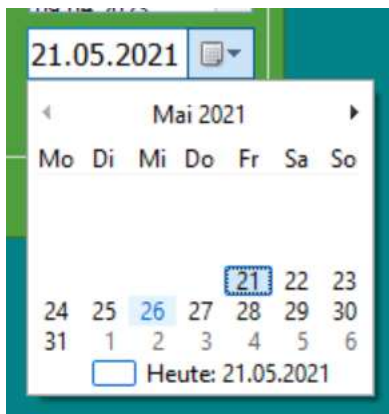
Variable Holidays:

As these floating holidays practically never take place on the same date, it is necessary to enter the complete date. Select the desired date in the selection field below the list for variable public holidays. Then click on the "Add" button below the selection field. It is recommended to update the list of floating holidays at regular intervals.



A screenshot of a date selection field showing '21.05.2021' with a calendar icon to its right. Below the field is a button labeled 'Add'.

Only date values starting from the current date can be selected.



A screenshot of a calendar for May 2021. The date '21' is highlighted with a blue border. Below the calendar, there is a text box that says 'Heute: 21.05.2021'.

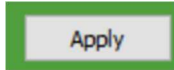
Public holidays that have already been entered are ignored. To delete a holiday, click on the holiday to be removed in the list and press the "Delete" key on your keyboard.

Note:

Every time you open the Scheduler App, public holidays that have already been entered in the past are automatically removed.

4.16.4. Save Data

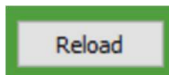
RT-Win4 only accepts the changes made to schedules and public holidays after clicking on the "Apply" button. If the app is closed without clicking the "Apply" button, all changes are lost.



A progress bar appears while the data is being transferred to the RT-Win4 host.



If changes that have not yet been saved are to be undone, click on the "Reload" button. The currently loaded data will then be replaced by the saved data from the RT-Win4 host.



4.17. Version App



RT-Win 4 - Version Display and Update App V 4.13.0.124 Rel13/2/2/413

Version Table FCC-Update

Device-Nr.	Card-Type	Software	Hardware	Boot-Loader	Sub-Dev	Software "E"	Art.Nr.	Serial Nr.	QS-Date
Z110 D0	Main	SV 1.7%	G-CC A2.00	BootV 11.1.3.20	SHV 0.0.0.0	EV F-1.7%	1.1063.0.62	21P02487	2021-07-30
Z111 D1	Main	SV 7.42a	F-STF A3.00	BootV 20.7.42.61	SHV 0.0.0.0	EV F-7.42a	1.1463.0.93	20P00589	2020-10-30
Z111 D1	X1/2 #0	SV 1.12a	F-? A1.10	BootV 0.0.0.0	SHV 0.0.0.0	EV -0.0			
Z111 D1	X1/2 #1	SV 1.12a	F-? A1.10	BootV 0.0.0.0	SHV 0.0.0.0	EV -0.0			
Z111 D1	X1/2 #2	SV 1.12a	F-? A1.10	BootV 0.0.0.0	SHV 0.0.0.0	EV -0.0			
Z111 D1	X1/2 #3	SV 1.12a	F-? A1.10	BootV 0.0.0.0	SHV 0.0.0.0	EV -0.0			
Z111 D11	Main	SV 7.41d	F-STF A3.00	BootV 0.0.0.0	SHV 0.0.0.0	EV F-7.41d	1.1463.0.93	20P00585	2020-10-29
Z111 D14	Main	SV 7.41d	F-STF A3.00	BootV 0.0.0.0	SHV 0.0.0.0	EV F-7.41d	1.1463.0.93	20P00586	2020-10-29
Z111 D15	Main	SV 7.41d	F-STF A3.00	BootV 0.0.0.0	SHV 0.0.0.0	EV F-7.41d	1.1463.0.93	20P00588	2020-10-29
Z111 D17	Main	SV 7.41d	F-STF A3.00	BootV 0.0.0.0	SHV 0.0.0.0	EV F-7.41d	1.1463.0.93	20P00587	2020-10-29
Z112 D2	Main	SV 7.42a	G-AIR A2.00	BootV 20.7.42.61	SHV 0.0.0.0	EV F-7.42a	1.1163.0.72	21P00669	2021-03-10

Refresh Clear Export

The Version app collects all available version information of the pneumatic tube system. If supported by the corresponding firmware, firmware updates can also be performed with the Version app.

4.17.1. Version Table

All processor-controlled system components are listed in the Version table tab. The following information can be determined by RT-Win4 and displayed in the corresponding columns.

4.17.1.1. Column names of the Version Table

Version Table FCC-Update

Device-Nr.	Card-Type	Software	Hardware	Boot-Loader	Sub-Dev	Software "E"	Art.Nr.	Serial Nr.	QS-Date
------------	-----------	----------	----------	-------------	---------	--------------	---------	------------	---------

Device-Nr.:

Zone and device number of the component. The table is sorted according to this column.

Card-Type:

Type of hardware component whose version is displayed.

Main: Main board of the device.

Slave: Version in the 2nd processor of an AW.

X1/2 #0 ... #3: X1 or X2 board connected to the main board via RS485.

LCM #0: Display module connected to the main board via RS485.

Software:

Software version of the component.

Hardware:

Version of the hardware.

Boot-Loader:

Version of the boot loader on the board.

Sub-Dev:

Software version of a subdevice.

Software „E“:

It is possible to operate components of the H61F and H61E systems simultaneously in one system. The software version of the older H61E components is displayed in this column. Since H61F motherboards also respond to the version query for H61E components, the software version may appear again.

Art.Nr.:

At the board type Main the corresponding article number can be read out and displayed.

Serial Nr.:

At the board type Main the corresponding serial number can be read out and displayed.

QC-Date:

At the board type Main the corresponding QC date can be read out and displayed.

4.17.1.2. Buttons

Refresh:

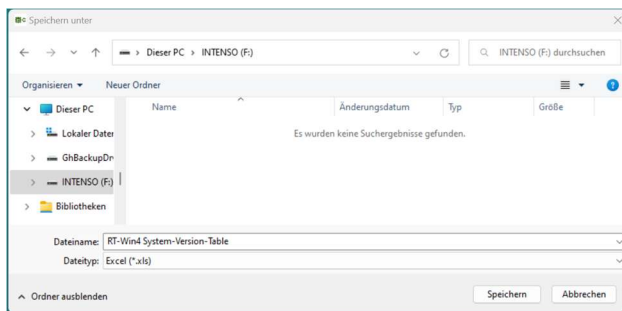
Clicking this button loads a current version from the host and then displays it.

Clear:

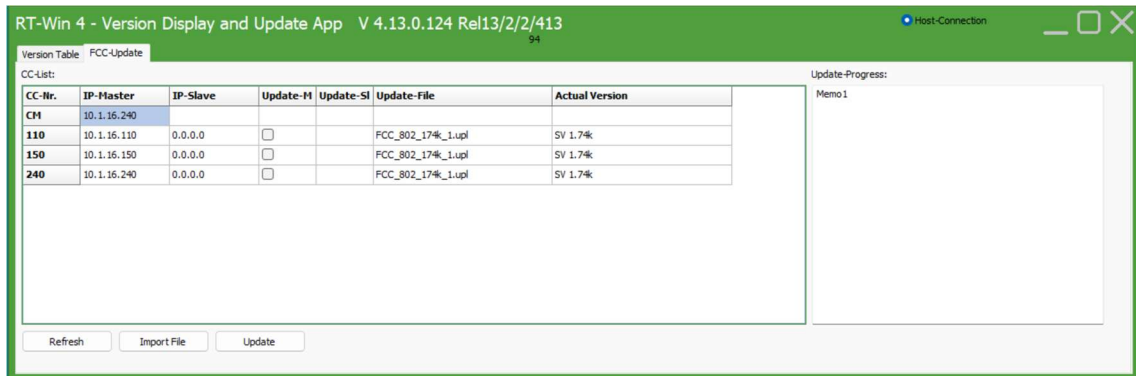
This button clears the table and re-identifies the versions of the currently available components.

Export:

This button opens a dialog for saving the version table in Excel format.



4.17.2. FCC-Update



Notice:

When performing firmware updates, the pneumatic tube system should be stopped beforehand.

From the FCC update tab, the updates of the central control units are managed. To update an FCC, a firmware version FCC V1.70 or higher is required.

4.17.2.1. CC-List:

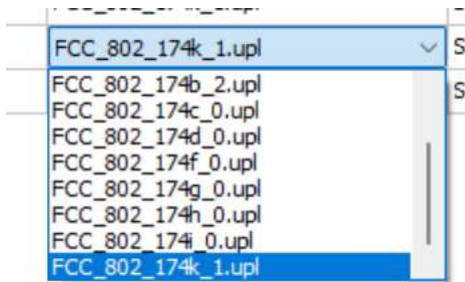
In the "CC list" all known FCCs are listed. For each FCC, the IP address, the selected update file and the current version are displayed.

If the IP address "0.0.0.0" is displayed, this FCC is currently not connected to RT-Win4.

The FCCs for the update can be selected in the "Update-M" and "Update-SI" columns. The checkbox for activating the update only appears if the FCC is connected and a compatible bootloader is present.



In the "Update-File" column, the desired update file for each FCC can be selected from a drop-down list.



The Actual Version column displays the current software version of this FCC.

4.17.2.2. Buttons:

Refresh

The Refresh button requests an updated CC list from the host.

Import File

The "Import File" button opens a dialog for importing an upload file. The selected file is transferred from the local PC to the RT-Win4 host and is then available in the drop-down list in the CC list.

Update

The "Update" button starts the update process. The corresponding update files are transferred to the selected control panels and then the boot loaders are activated for the actual update process.

Notice:

The "Update" and "Import File" buttons are only available to RT-Win4 users with sufficient access rights.

4.17.2.3. Update-Progress:

Update-Progress:

```
2023-02-09 15:55:32 Update request FCC-Master: FCC-150
2023-02-09 15:55:32 Update-Command sent...
2023-02-09 15:55:32 - FCC-Upd: Init...
2023-02-09 15:55:32 - FCC-Upd: Copy Files...
2023-02-09 15:55:32 - FCC-Upd: Copy Files to 10.1.16.150
2023-02-09 15:55:41 - FCC-Upd: Upload done...
2023-02-09 15:55:41 - FCC-Upd: Set Update-Mode...
2023-02-09 15:55:42 - FCC-Upd: Set Update-Mode...ok
2023-02-09 15:55:42 - FCC-Upd: Send FCC-Boot-Message...
2023-02-09 15:55:42 - FCC-Upd: End at 09.02.2023 15:55:42
2023-02-09 15:55:42 - FCC-Upd: Elapsed time: 00:00:10
2023-02-09 15:55:42 - FCC-Upd: ...End
```

The current progress of the update process is displayed in the "Update-Progress" area.

4.18. UHF-RFID App



RT4 - UHF RFID App V 4.17.0.111 Rel14/4/18/832 Host-Connection

List of BLUEBOX IP-Addresses:

Reader #	IP-Address	Port	Connection
1	10.1.16.250	3000	ok
2	192.168.4.200	3000	ok

Apply Cancel

Data from BLUEBOX:

```

Connection to UHF-Reader-Nr. 1 - IP = 10.1.16.250:3000 - OK
Connection to UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000 - OK
Disconnected from UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000
UHF-Reader #1: E280689400004007CC1238CE
UHF-Reader #1: E280689400004007CC121CCE
UHF-Reader #1: E280689400004007CC1294CE
UHF-Reader #1: E280689400004007CC12A4CE
UHF-Reader #1: E280689400004007CC128CCE
Connection to UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000 - connect-error:[10053]
Software caused connection abort
Connection to UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000 - connect-error:[10053]
Software caused connection abort
Connection to UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000 - OK
UHF-Reader #2: E280689400004007CC122CCE
UHF-Reader #2: E2005157871602591100A4C9
UHF-Reader #2: E280689400005007CC12B4CE
UHF-Reader #2: E280689400005007CC1228CE
UHF-Reader #2: E280689400005007CC1230CE
UHF-Reader #2: E280689400005007CC1228CE
UHF-Reader #2: E280689400005007CC12ACCE

```

Get Last Data

The UHF RFID app controls the communication between one or more UHF BLUEBOX reader modules, the RT-Win 4 and the DCS. The readers are used to record UHF RFID tags when receiving disposable transport bags in a collection tray (mainly in French hospitals). Only BLUEBOX modules with an Ethernet interface are currently supported. The connection data (IP address and port) of the BLUEBOX modules can be set in the app. In addition, the incoming messages from the individual readers and the connection status to the module are displayed.

4.18.1. IP-Addresses BLUEBOX

List of BLUEBOX IP-Addresses:			
Reader #	IP-Address	Port	Connection
1	10.1.16.250	3000	ok
2	192.168.4.200	3000	offline

If the RT-Win4 user has sufficient access rights, connection data of BLUEBOX modules can be added or deleted in the displayed list. Click on "Apply" to update the data on the RT-Win4 host. The UHF RFID host on the RT-Win4 host then terminates deleted connections and/or establishes new connections to the readers.

By clicking on "Cancel", the changes made since last "apply" are discarded and the previous values are restored in the list.

The status of the connection is displayed in the "Connection" column. If the reader is connected, "OK" is displayed. If there is no connection, "offline" is displayed.

4.18.2. Data from BLUEBOX

```
Data from BLUEBOX:
22
Memo1
Connection to UHF-Reader-Nr. 1 - IP = 10.1.16.250:3000 - OK
Connection to UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000 - OK
Disconnected from UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000
UHF-Reader #1: E280689400004007CC1238CE
UHF-Reader #1: E280689400004007CC121CCE
UHF-Reader #1: E280689400004007CC1294CE
UHF-Reader #1: E280689400004007CC12A4CE
UHF-Reader #1: E280689400004007CC128CCE
Connection to UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000 - connect-error:[10053]
Software caused connection abort
Connection to UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000 - connect-error:[10053]
Software caused connection abort
Connection to UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000 - OK
UHF-Reader #2: E280689400004007CC122CCE
UHF-Reader #2: E2005157871602591100A4C9
UHF-Reader #2: E280689400005007CC12B4CE
UHF-Reader #2: E280689400005007CC1228CE
UHF-Reader #2: E280689400005007CC1230CE
UHF-Reader #2: E280689400005007CC1228CE
UHF-Reader #2: E280689400005007CC12ACCE
Disconnected from UHF-Reader-Nr. 2 - IP = 192.168.4.200:3000
```

Messages and read results from the BLUEBOX modules are displayed in this area. This area is empty when the app is started. If previous messages and entries are to be displayed, the last 200 lines from the UHF RFID host can be transferred. The transfer is started by clicking on the "Load last data" button.

4.19. MQTT



Index	Dev-Nr.	Dev-String	Alias
1	0x0B00	Z011D000	UserDefinedAlias
2	0x0C00	Z012D000	DID_Z012D000
3	0x0D00	Z013D000	DID_Z013D000
4	0x0E00	Z014D000	DID_Z014D000
5	0x0F00	Z015D000	DID_Z015D000
6	0x1000	Z016D000	DID_Z016D000
7	0x1100	Z017D000	DID_Z017D000

Alarm-Nr.	Alarm-String
1	Alarm Building A
2	Alarm Building B
3	Alarm Building C
4	Alarm Building D

Mit der MQTT-App wird eine Verbindung zu einem MQTT-Broker konfiguriert um Zustandsdaten des Rohrpostsystems für andere Empfänger (GLT) bereitzustellen.

4.19.1. Brokereinstellungen

This section is where you configure the connection settings for the MQTT broker.

Broker:

Specifies the URL or IP address of the broker.

Port:

Specifies the port for connecting to the broker.

QoS:

Sets the required quality of service. (Permitted values: 0-2)

use SSL:

Enables SSL encryption (if required by the broker).

MQTT Benutzername:

Specifies the user name for logging in to the broker.

MQTT Passwort:

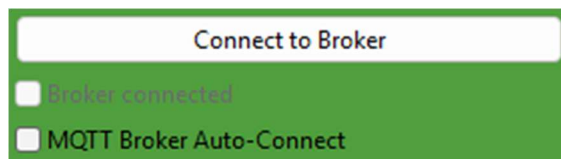
Provides the password for logging in to the broker.

Basic Topic:

Specifies the first part of the topic of the MQTT message. The topic is extended by the alias (see 4.19.2) and other values.

Alarm Topic:

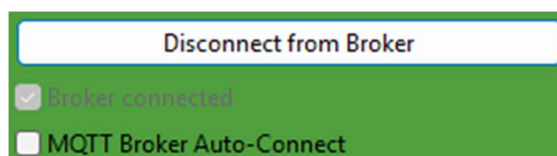
Specifies the topic with which R-Tube subscribes to alarm messages from the broker. (Note: don't forget the # at the end!) To trigger an alarm, a message must be sent from the broker whose topic has been extended by one of the alarm strings (see 4.19.3) and which contains the value 'on'. If a message with the same topic but a different value is received, the alarm is reset.



The 'Connect to broker' button starts the connection to the MQTT broker.

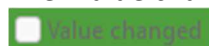
If the 'MQTT broker Auto-Connect' checkbox is selected, the connection is established automatically using the specified connection data.

Once the connection has been successfully established, a check mark will appear in the 'Broker connected' check box. The connection button will now display 'Disconnect from broker'.



Once a connection to the broker has been established, the connection data cannot be changed until the connection to the broker is terminated.

The 'Value changed' check box indicates whether values have been changed.



The "Apply" button applies the currently displayed values. "Cancel" discards the changes.



Note: Before connecting to the broker, you must click on "Apply", otherwise the connection will be established using the old values..

4.19.2. List of Devices

Index	Dev-Nr.	Dev-String	Alias
1	0x0B00	Z011D000	UserDefinedAlias
2	0x0B01	Z011D001	DID_Z011D001
3	0x0B0D	Z011D013	DID_Z011D013
4	0x0B0F	Z011D015	DID_Z011D015
5	0x0B10	Z011D016	DID_Z011D016
6	0x0B16	Z011D022	DID_Z011D022
7	0x0B18	Z011D024	DID_Z011D024
8	0x0B19	Z011D025	DID_Z011D025
9	0x0C00	Z012D000	DID_Z012D000
10	0x0C02	Z012D002	DID_Z012D002
11	0x0C1E	Z012D030	DID_Z012D030
12	0x0D00	Z013D000	DID_Z013D000
13	0x0D03	Z013D003	DID_Z013D003
14	0x0D1F	Z013D031	DID_Z013D031
15	0x0E00	Z014D000	DID_Z014D000
16	0x0E04	Z014D004	DID_Z014D004
17	0x0E20	Z014D032	DID_Z014D032
18	0x0E21	Z014D033	DID_Z014D033

Refresh List

The device list is automatically generated from the data received from the system. Initially, an automatic alias text is generated. This can be customised to suit individual requirements, e.g. to correspond to the identification numbers of the building management system.

The 'Update list' button loads an updated list from the host.

4.19.3. List of Alarms

List of Alarms	
Alarm-Nr.	Alarm-String
1	Alarm Building A
2	Alarm Building B
3	Alarm Building C
4	Alarm Building D
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

RT-Win4 subscribes to messages from the MQTT broker that match the alarm topic. The topic of these messages is extended by one of the alarm texts defined in the alarm list. If the value of the message is 'on', the alarm number is forwarded to the RT-Win4 alarm manager. Corresponding actions can then be triggered there.

4.19.4. Messages

```
Messages
Memo1
Remote host disconnected.
OK
Disconnected from MQTT server.
OK
MQTT... connecting
Remote host connection complete.
OK
Connected to MQTT server.
OK
Message from <hortig/HospitalName/Alarm/Alarm Building D> (QoS 0):
  on
Alarm sent: MQTtAlarm=3
Message from <hortig/HospitalName/Alarm/Alarm Building D> (QoS 0):
  off
Alarm sent: MQTtAlarm=3
```

The message area displays messages from the MQTT broker and the RT-Win4 MQTT host. These messages are used, for example, to analyse connection problems with the broker.

4.20. Brinkszähler



Brinks-Counter V 4.20.0.514 Rel15/12/23/890			Host-Connection  	
Counter	Arrived	Since		
0	33	2025-12-23 14:55:02		
1	69	2025-12-23 14:55:02		
2	24	2025-12-23 14:55:02		
3	18	2025-12-23 14:55:02		
			2025-12-23 14:55:00 -> Staff in Tresor-Room: Yes 2025-12-23 14:55:02 -> Reset Counter No.: 0 Arrived: 18 2025-12-23 14:55:02 -> Reset Counter No.: 1 Arrived: 33 2025-12-23 14:55:02 -> Reset Counter No.: 2 Arrived: 22 2025-12-23 14:55:02 -> Reset Counter No.: 3 Arrived: 7 2025-12-23 14:55:07 -> Staff in Tresor-Room: No	
			English  Change Log-Language Clear Log-File Save Log-File	

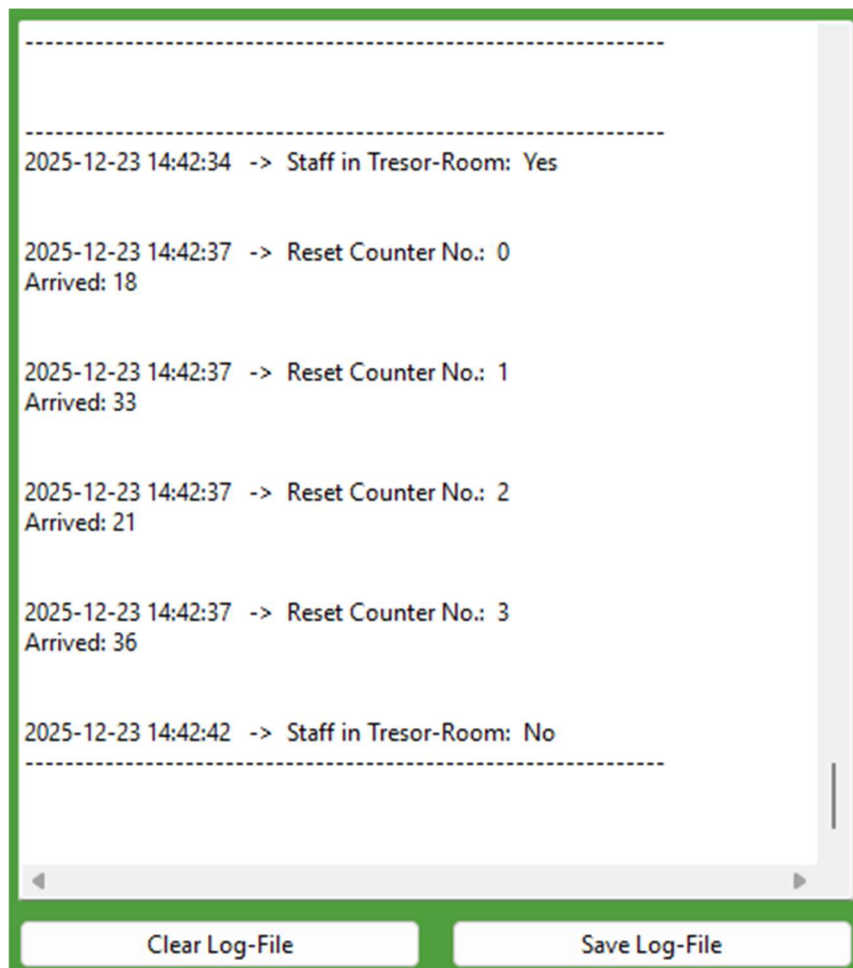
The Brinks counter is an app used to monitor cash transport systems in supermarkets. The concept foresees cash being sent from the cash registers in the store to a vault. This can be done using several pneumatic tube systems, each of them having its own counter. The corresponding counter values are listed in the counter list. The app records when someone (an employee of a cash transport company) enters or leaves the vault. The counter values are also recorded when they are reset in the vault.

4.20.1. List of Counters

Counter	Arrived	Since
0	33	2025-12-23 14:55:02
1	69	2025-12-23 14:55:02
2	24	2025-12-23 14:55:02
3	18	2025-12-23 14:55:02

The counter list shows the current counter values. It also shows the date and time when the corresponding counter was the last time reset.

4.20.2. Log-File



2025-12-23 14:42:34 -> Staff in Tresor-Room: Yes

2025-12-23 14:42:37 -> Reset Counter No.: 0
Arrived: 18

2025-12-23 14:42:37 -> Reset Counter No.: 1
Arrived: 33

2025-12-23 14:42:37 -> Reset Counter No.: 2
Arrived: 21

2025-12-23 14:42:37 -> Reset Counter No.: 3
Arrived: 36

2025-12-23 14:42:42 -> Staff in Tresor-Room: No

Clear Log-File Save Log-File

The log file records when the vault was entered or left. It also records when and at what counter value a counter was reset.

The 'Clear log file' button clears the current log file.

The 'Save log file' button opens a dialogue box for saving the log file.

Note: It is recommended that you back up the log file at regular intervals.

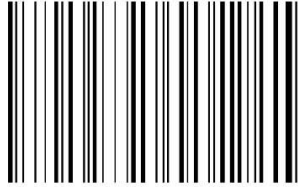
The log file is generated centrally on the RT-Win4 host. The language of the log file can be customised using the language selection and the 'Change log file language' button.



English Change Log-Language

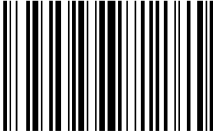
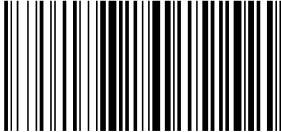
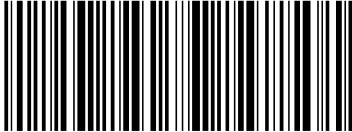
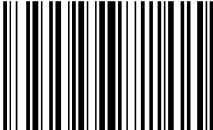
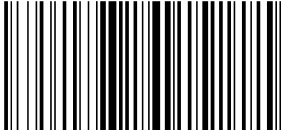
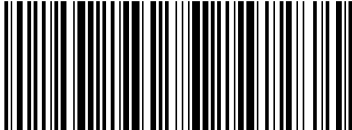
5. Appendix

5.1. Checkin Barcode



C h e c k i n !

5.2. LIS-Demo-Barcodes

 STS1001	 BAG0081542001	 0042 4711 0820
 STS1002	 BAG0081542002	 0042 4711 0821
 STS1003	 BAG0081542003	 0042 4711 0822
 STS1004	 BAG0081542004	 0042 4711 0823
 STS1005	 BAG0081542005	 0042 4711 0824
 STS1006	 0042 4711 0815	 0042 4711 0825
 STS1007	 0042 4711 0816	 0042 4711 0826
 STS1008	 0042 4711 0817	 0042 4711 0827
 STS1009	 0042 4711 0818	 0042 4711 0828
 STS1010	 0042 4711 0819	 0042 4711 0829

5.3. Scan In App – Data format for HIS mode

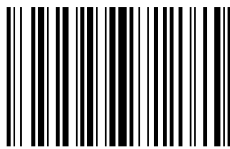
The data format complies with a customer specification.

QR-Code:

A-BBB-CCCCCCC-DDDDD-EEEEEEE-FF

Meaning	Number of digits	Description
A	1	Priority 0 = Normal Send 1 = Fast Send
B	3 - 6	Destination address in the DCS
C	7	AN
D	5	LN
E	7	HN * If this information is not available, these fields should be left blank.
F	2	VN * If this information is not available, these fields should be left blank.

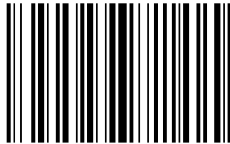
5.4. HIS-Demo-QR-Codes



STS1001



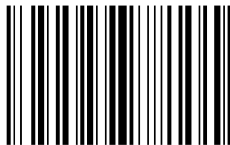
0-032-2526143-56560-7939765-60



STS1002



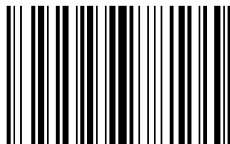
0-032-2526143-56560-7939765-60



STS1003



1-032-8505067-54427-2579922



STS1004



0-033-0333860-86976-8433990-01



STS1005



0-033-2438728-15025-0145392



STS1006



0-033-6765749-32843-0996646-93



STS1007



1-033-8505067-54427-2579922



STS1008



0-200-2438728-15025-0145392



STS1009



0-200-5740228-68356



STS1010



0-200-6765749-32843-0996646-93

6. Support Info

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