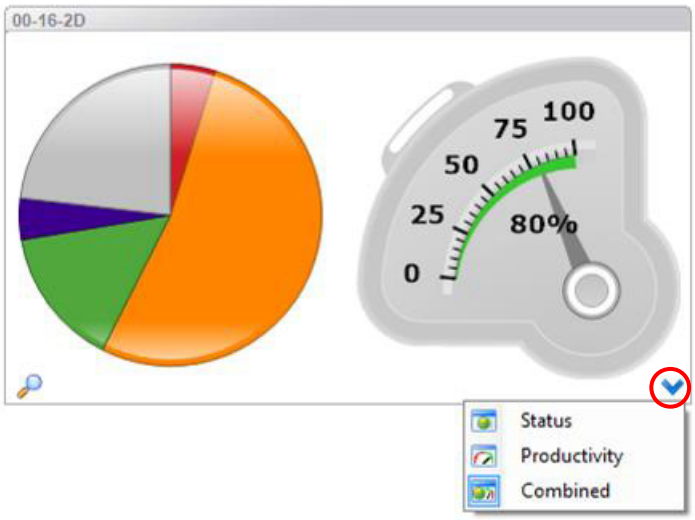
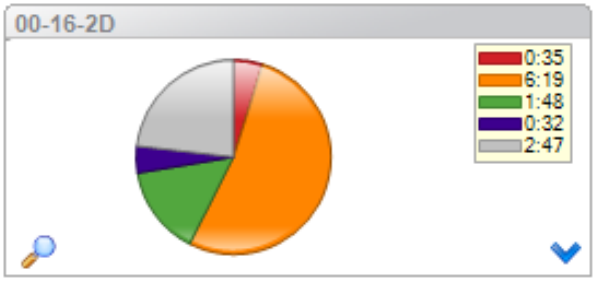
**Note:** If more than one tier has been simultaneously active, a yellow triangle will appear.

Click on the "blue arrow" to select your preferred display option.

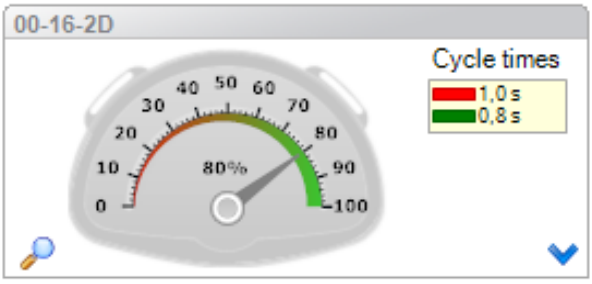



The options are as follows:

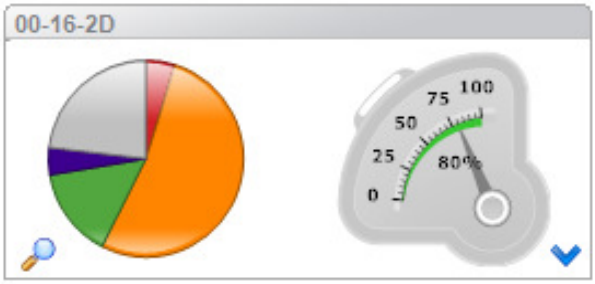
- Status




- Productivity



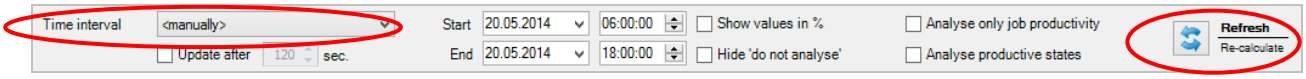

- Combined



### 7.2.2 Productivity options

#### 7.2.2.1 Setting time interval

The time interval for the displayed values can be individually adjusted. You may select one of the pre-set time intervals or define a different interval using the "Start" and "End" boxes.

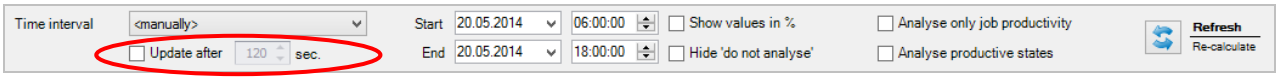



After changing the time intervals, the view must be updated by clicking "Refresh".

**Note:** If you have defined specific time periods within Settings, you can select them from the drop down menu. See chapter 9.7. If, for example, you want to look at the early shift for last week select first of all "last week" and then the defined shift.

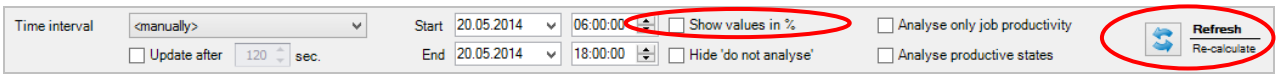
#### 7.2.2.2 Setting the automatic update

By selecting the "Update after ..." box, the pie charts are automatically updated after the selected time.




#### 7.2.2.3 Display in hours or per cent

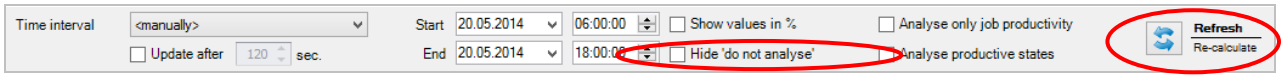
By selecting the "Show runtime in %" box, the runtime display is changed from hours to percentage.




When this box is selected, the view must be updated by clicking "Refresh".

#### 7.2.2.4 Hide; do not analyze

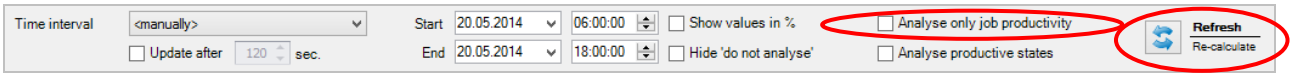
By selecting the "Hide; do not analyze" box, all states which are defined as "do not analyze" will be ignored and the pie chart displays all other states.




When this box is selected, the view must be updated by clicking "Refresh".

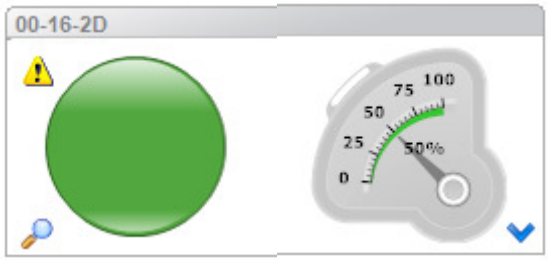
#### 7.2.2.5 Analyze only job productivity

By selecting "Analyze only job productivity" box, the productivity and the time with no running job is ignored. Accordingly, the speedometer chart is adapted.

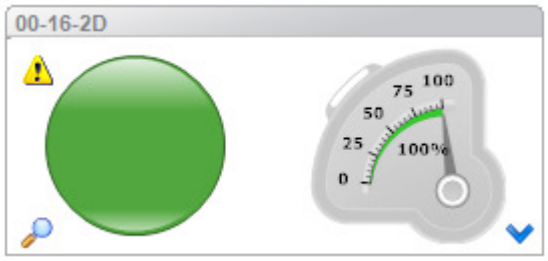



**Example:** In the cases below, the calculated productivity is based on one hour during which a job has run for 30 minutes with a job productivity of 100%:

- Productivity:
  The overall productivity is **50%,** because the rest of the time is evaluated (without job) with a productivity of 0%.

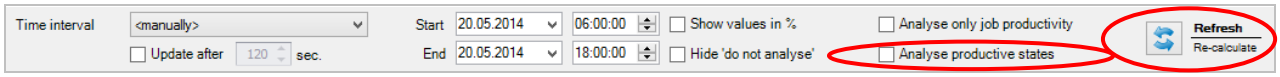



- Only job productivity:
  The job productivity is **100%**, because the rest of the time (without job) is ignored.



### 7.2.2.6 Analyze productive states

By selecting the "Analyze productive states" box, all states which are defined as "Productive" or "Non productive" will be shown in the pie chart display.

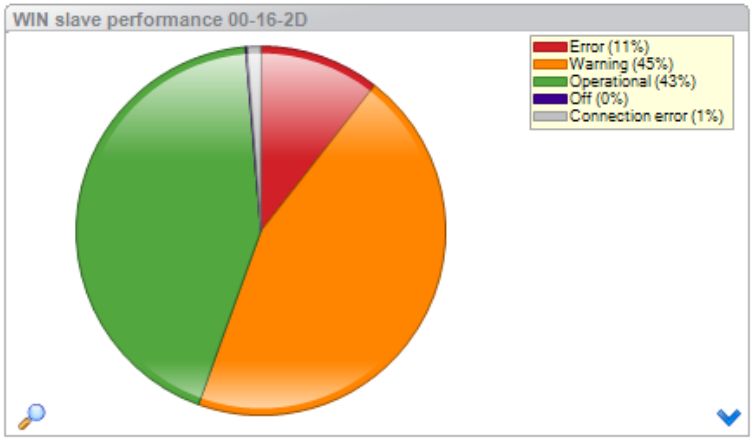



When this box is selected, the view must be updated by clicking "Refresh".

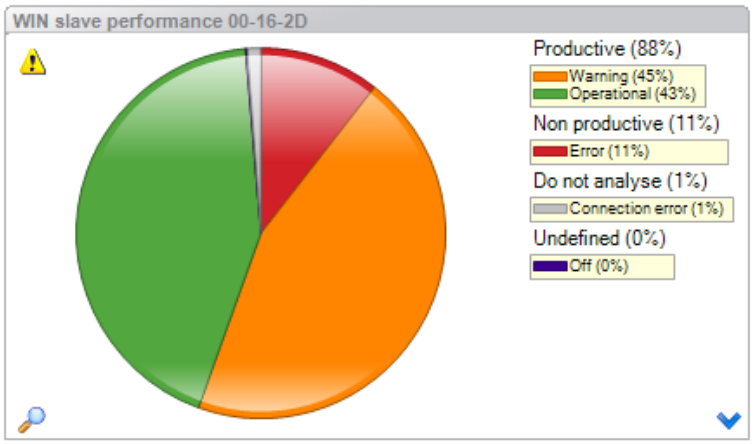
**Example:**

The calculated productivity is based on one hour:

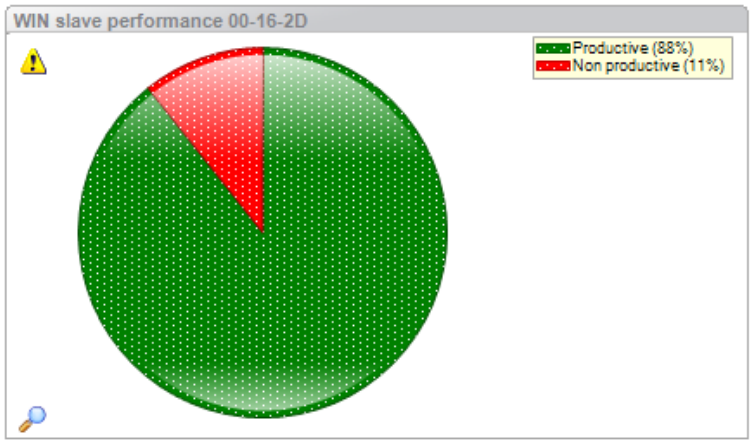
- Analysis of productivity without defined productive states. Each state is listed and shown separately in the pie chart.




- Analysis of productivity with defined productive states and without selecting the "Analyze productive states" box. The states are sorted according to the categories of "Productive", "Non productive" and "Do not analyze". The pie chart shows each state separately.



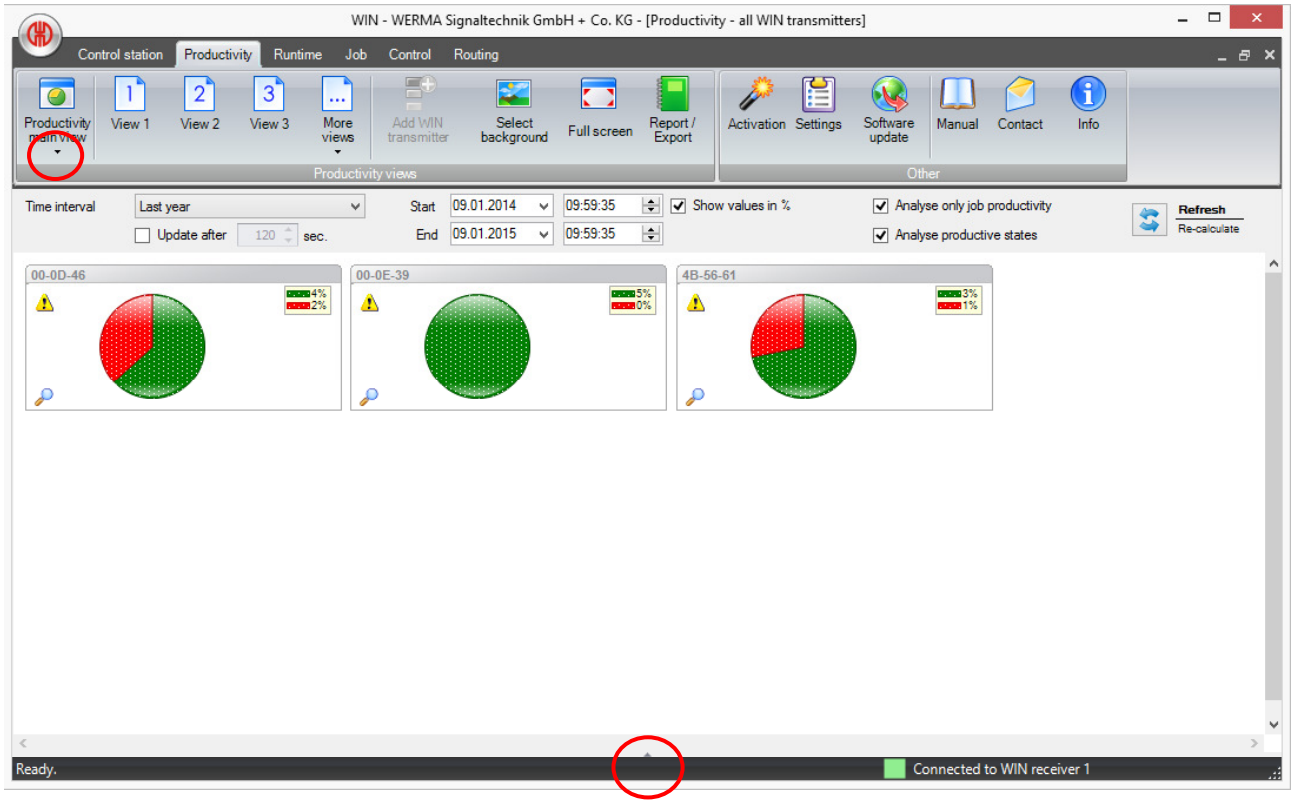
- Analysis of productivity with defined productive states and with selecting the "Analyze productive states" box. The states are assigned to the categories of "Productive" and "Non productive". These categories are displayed in the pie chart.



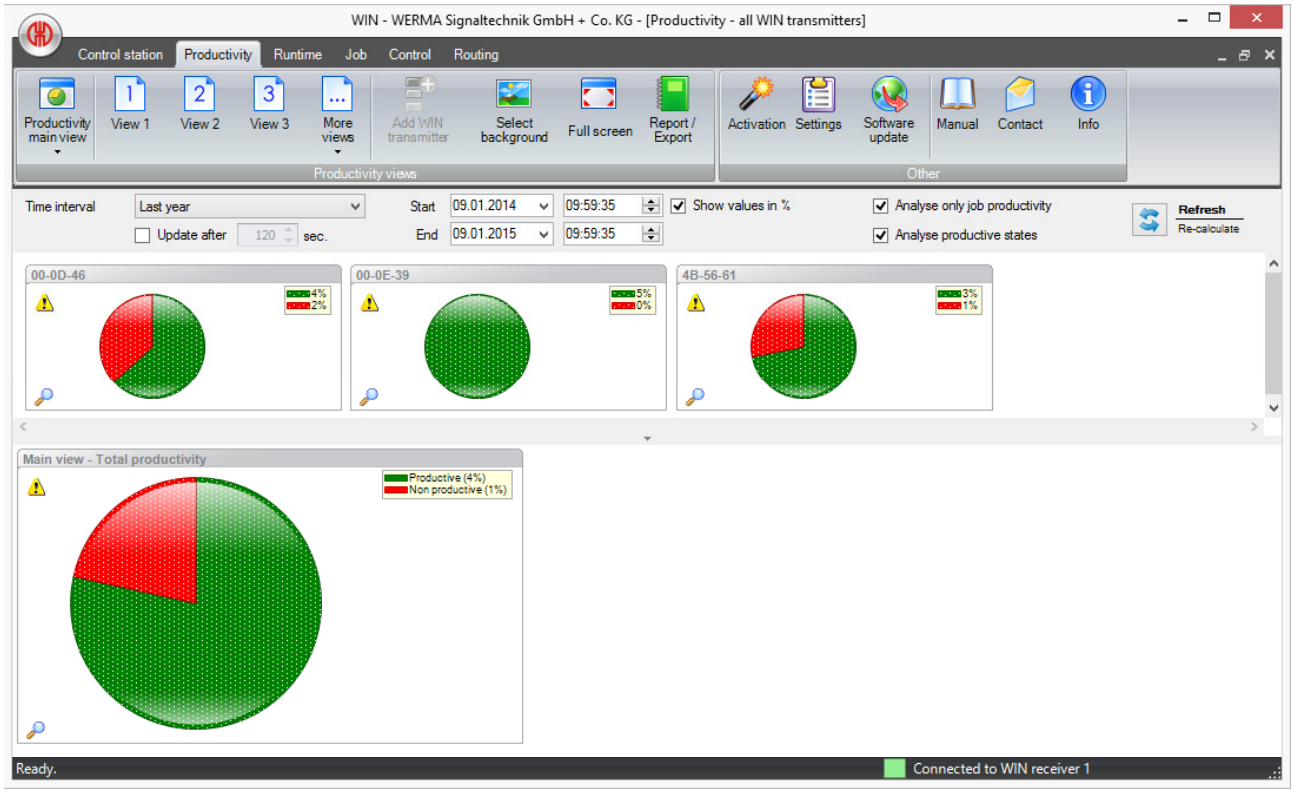

### 7.2.3 Total productivity per view

In each view, you can see total productivity for that view, either for all defined states or for a combination of productive / non productive states.

Click on the small arrow at the bottom-center or click on the arrow under "Productivity main view".



The total productivity per view is then displayed in an additional pie chart.



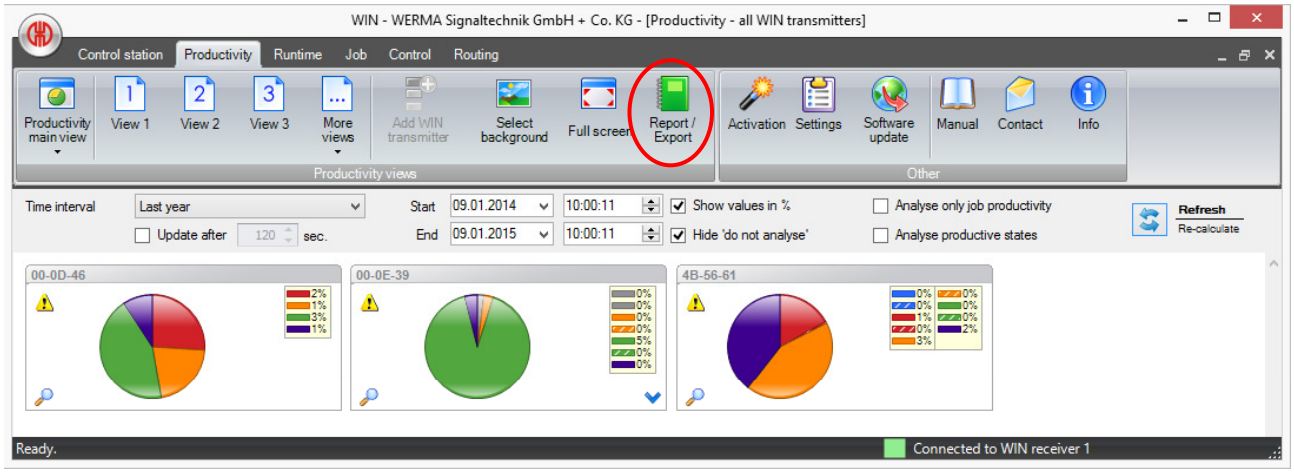
### 7.2.4 Report

**Note:** A report can only be generated from the currently selected view. By selecting the Main View, all WIN transmitters can be included. Select or create a different view to select particular WIN transmitters.

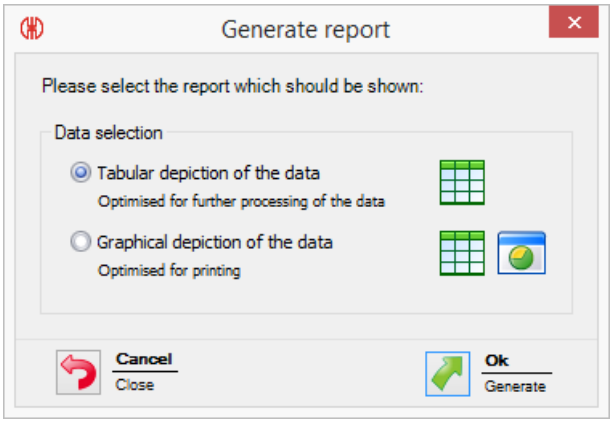
**Note:** A report can only be generated for the selected time period and the chosen analysis method (check box). Selecting "Analyze productive states" check box, will create a report based on that data.

To generate a report, proceed as follows:

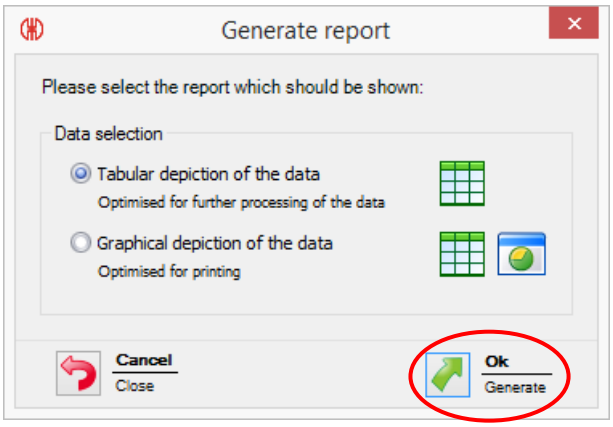
1. Click on "Report/Export".




2. Now select which report you want to generate. Choose between:
   - Tabular depiction of the data
   - Graphical depiction of the data



3. Confirm your selection with “OK”.




4. You can now see a preview of your selected report. Additional functions are described in section 7.7, “Report and Export Functions”.

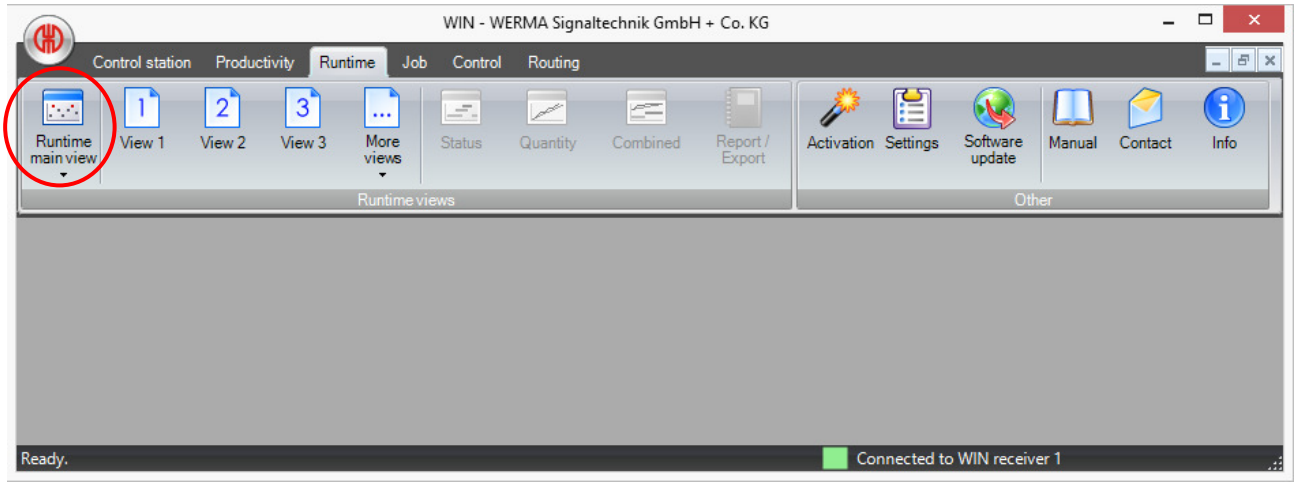
## 7.3 Runtime Module

The Runtime Module allows you to check the operation and downtimes of your machines. Using the module, you will quickly establish if there are patterns of downtime or fault conditions, giving you a better transparency of production. This forms the basis for improving the efficiency of your production processes.

### 7.3.1 Runtime Views

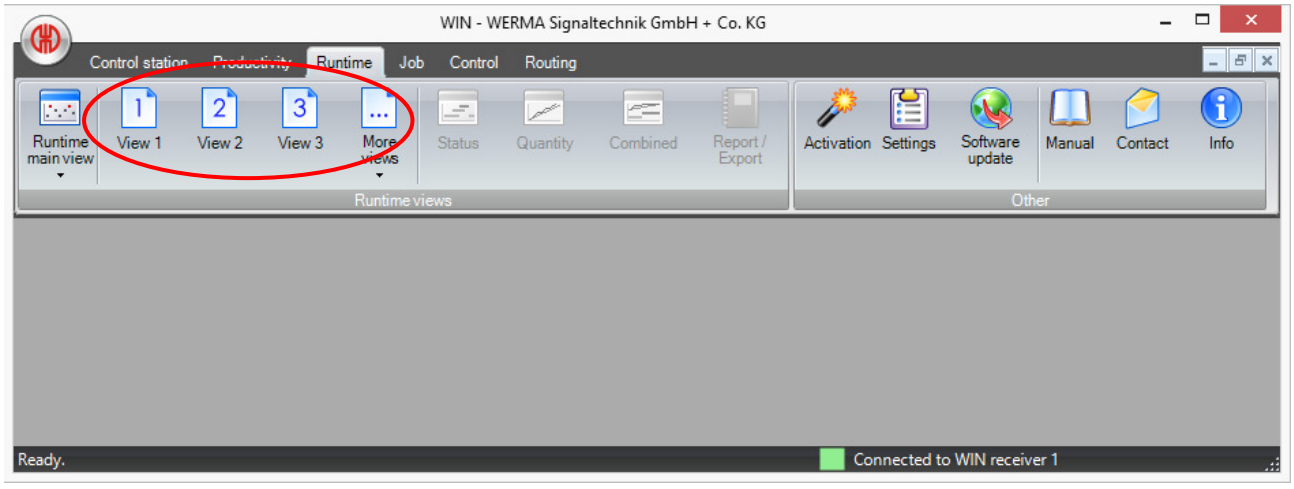
#### 7.3.1.1 Main View

The Runtime main view gives you an overview of all the WIN transmitters which are registered on your network. Clicking on a WIN transmitter will display the runtime history of that WIN transmitter. See chapter 7.3.2.



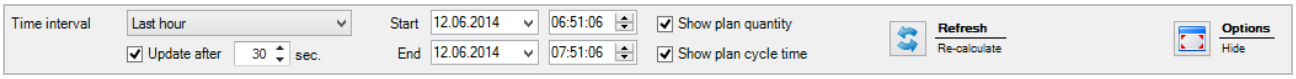

#### 7.3.1.2 Additional Views

By selecting one of the additional views, the WIN transmitters associated with that view are displayed (see chapter 7.1.2.3 for further details). The runtime depiction of several WIN transmitters will then be used, see chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**.



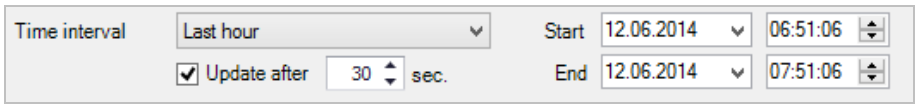
### 7.3.1.3 Runtime Module Options

In Options, you can select the time interval and the display selection criteria.

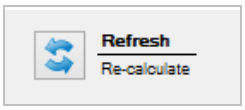



### 7.3.1.4 Setting time interval

The displayed time interval can be individually adjusted. You may select one of the pre-set time intervals or one of the finished customized time periods. Alternative choose a custom interval using the "Start" and "End" boxes.




To activate your selection, you must click "Refresh".



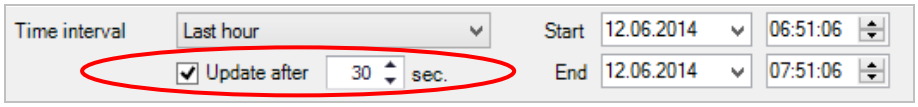

### 7.3.1.5 Navigation Buttons

Using the navigation buttons in the lower window section, you can change the time interval for the observation of the machine states.

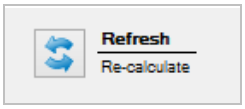

You can select an earlier or later time interval by using the "Next" or "Back" buttons.
The "Zoom in" and "Zoom out" buttons can be used to display a smaller or larger time interval.

#### 7.3.1.6 Automatic update option

By selecting the "Update after …" box, the pie charts are automatically updated after the selected time.

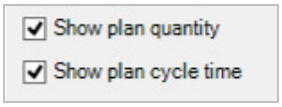



To activate you choice, you must click "Refresh".

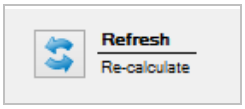



#### 7.3.1.7 Target specification

For WIN transmitter performance, you can also display the job's target quantity and target cycle time. Activate this by ticking the corresponding check box.

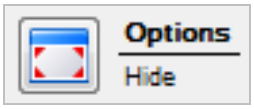



To activate you choice, you must click "Refresh".

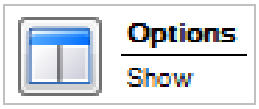



#### 7.3.1.8 Show/Hide options

The button "Hide Options" can be used to hide the settings for the time interval and the column listing the WIN transmitters. This increases the size of the diagrams.

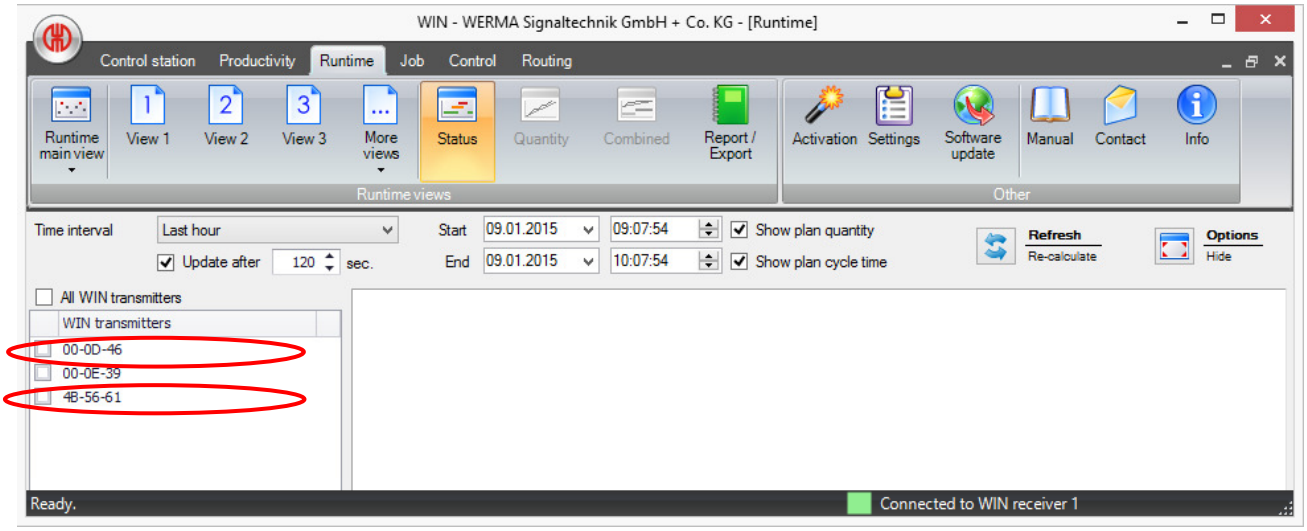



The button "Show Options" can be used to re-activate the standard view with all the options.



### 7.3.2 Runtime depiction

Any of the WIN transmitters can be displayed in a separate chart by clicking on a WIN transmitter in the left-hand window section.

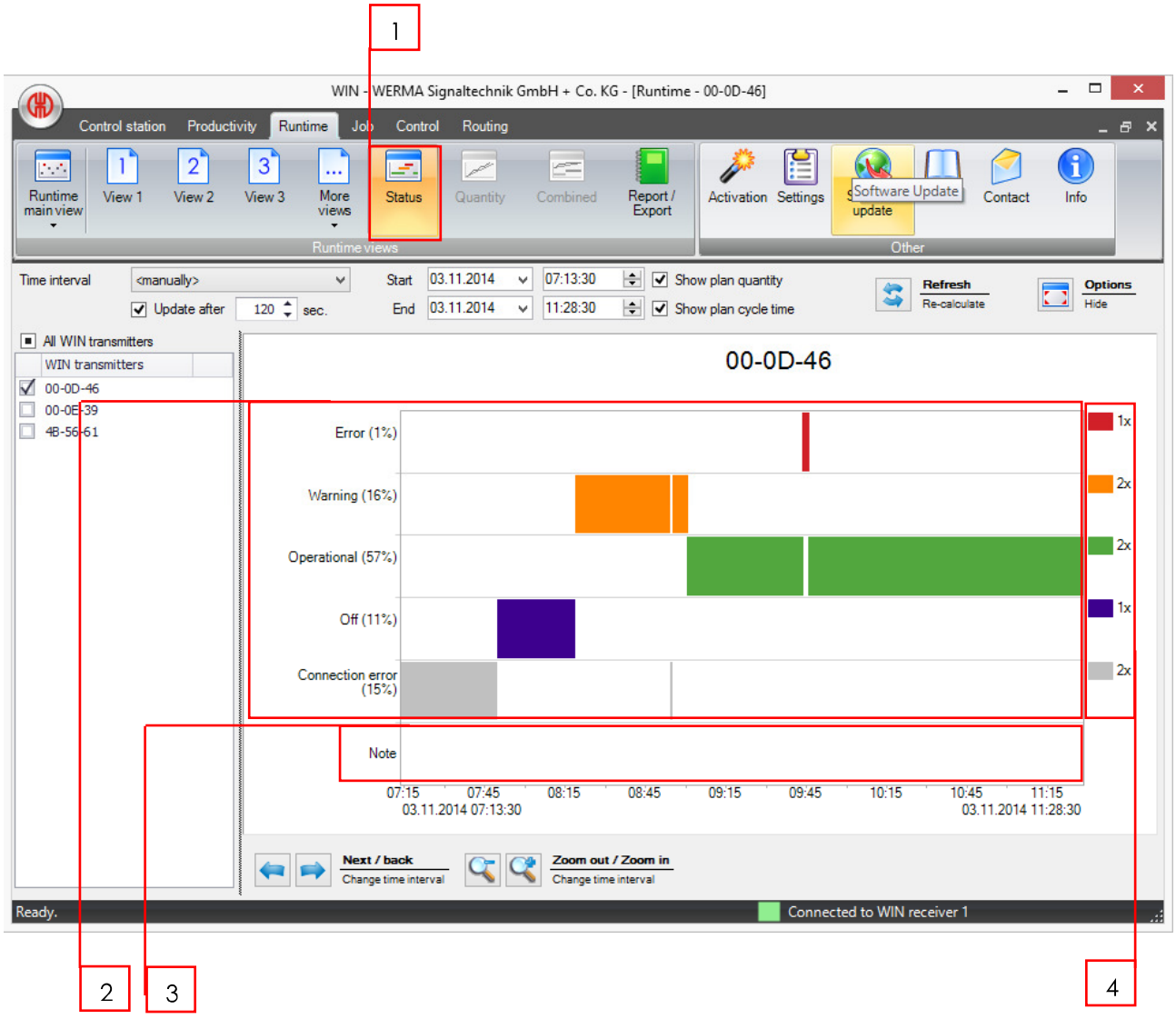



Press the button "F11" and you will automatically be taken from each module in the Runtime module. It will open the first machine in the list of WIN transmitter with the time interval "last eight hours". With a second press on "F11" the second machine with the time interval "last eight hours" will open and so on down the list.

### 7.3.2.1 WIN transmitter / WIN transmitter control

The runtime depiction of a WIN transmitter / WIN transmitter control contains the following information and analysis:

1. Status display
2. Depiction of the statuses in the selected time interval
3. Note field
4. Number of occurrences in the selected time interval

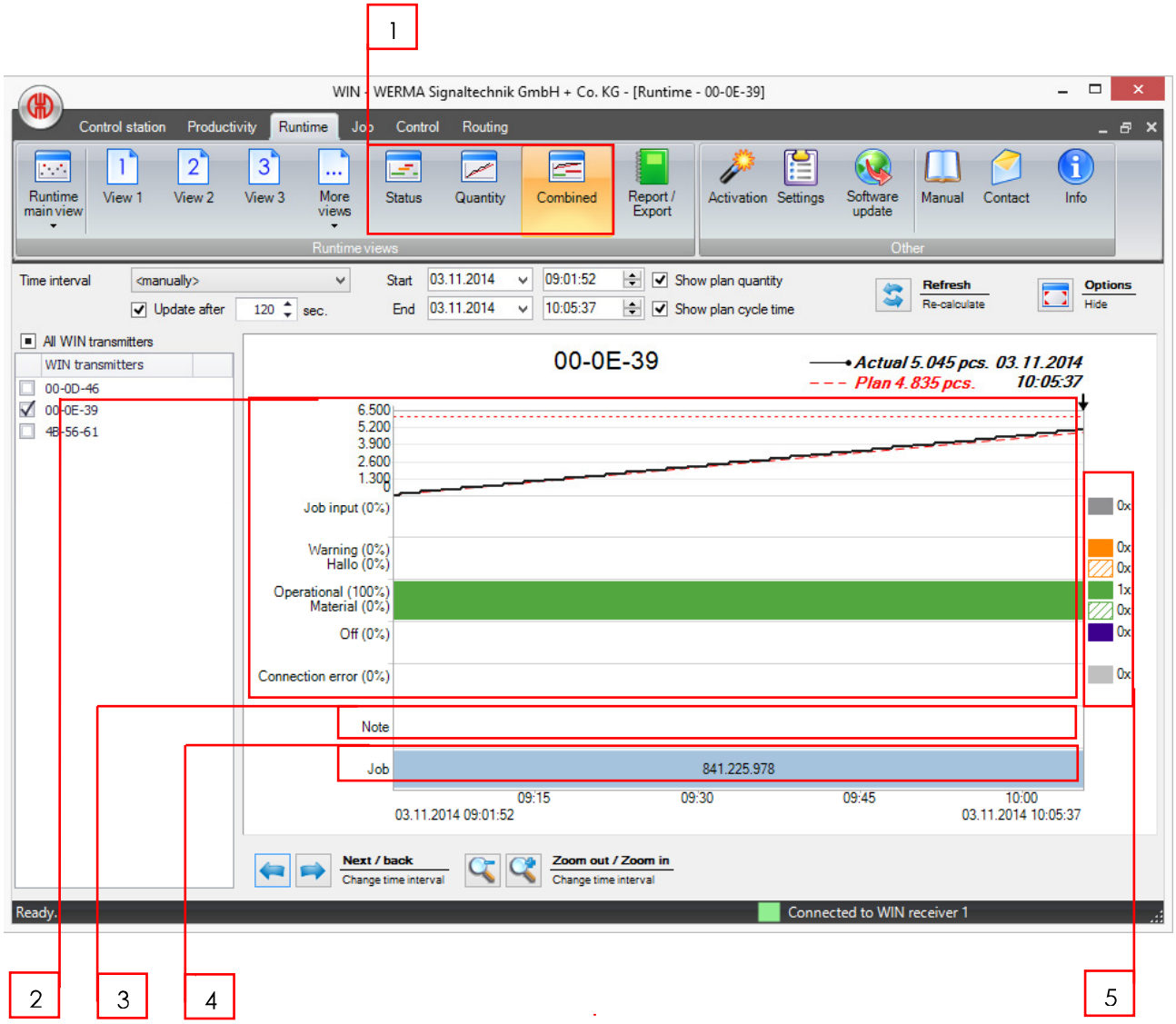



**Note:** The blink recognition signal is displayed as a shaded area in the colour of the respective tier.

### 7.3.2.2 WIN transmitter performance

The runtime depiction of a WIN transmitter performance contains the following information and analysis:

1. Status display / quantity display / combined display with status and quantity
2. Depiction of the statuses and quantity in the selected time interval
3. Note field
4. Job field
5. Number of occurrences in the selected time interval

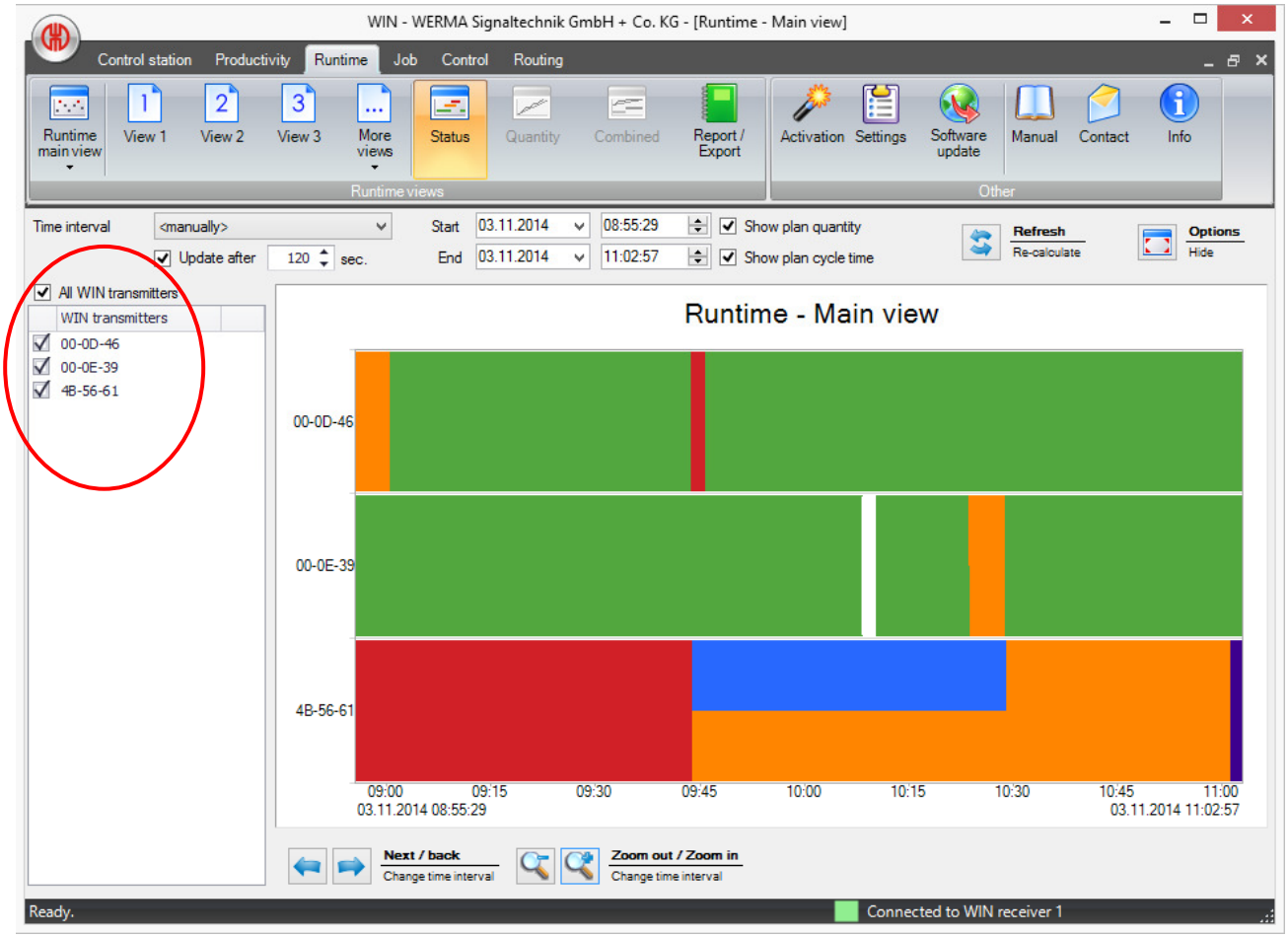



**Note:** Warning symbol "power loss" is displayed when the WIN transmitter performance is restored to power. Earlier data may incorrect!

### 7.3.2.3 Runtime depiction of several WIN transmitter

To compare the performance of a number of machines over a specific period, multiple runtimes of several WIN transmitters can be opened in the Runtime module.

In the left hand window select one, several or all WIN transmitter by clicking on them.



### 7.3.3 Note / Fault condition

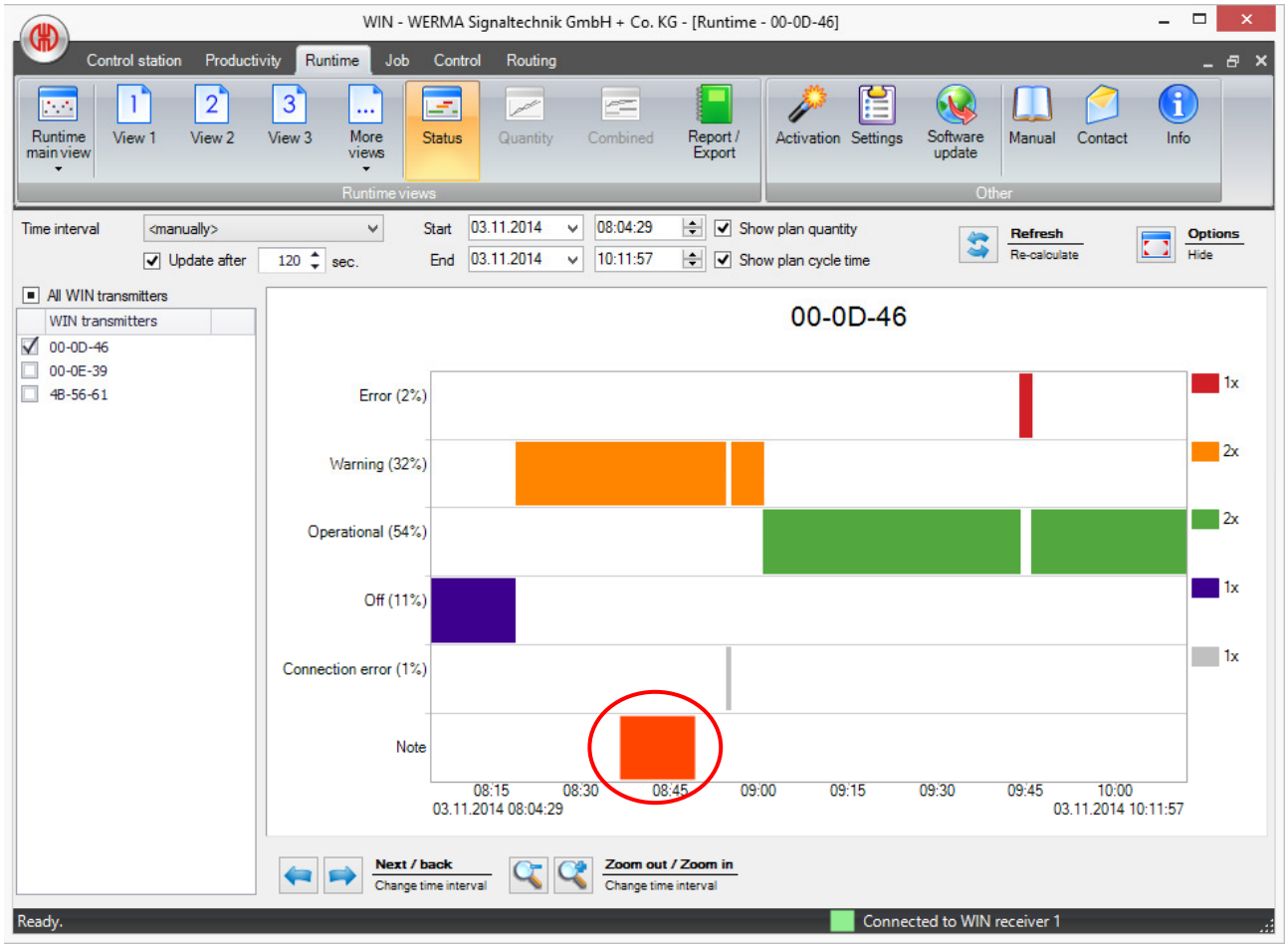
#### 7.3.3.1 Inserting a note / fault condition

In the Runtime Module you can enter different coloured notes or fault conditions for each WIN transmitter.

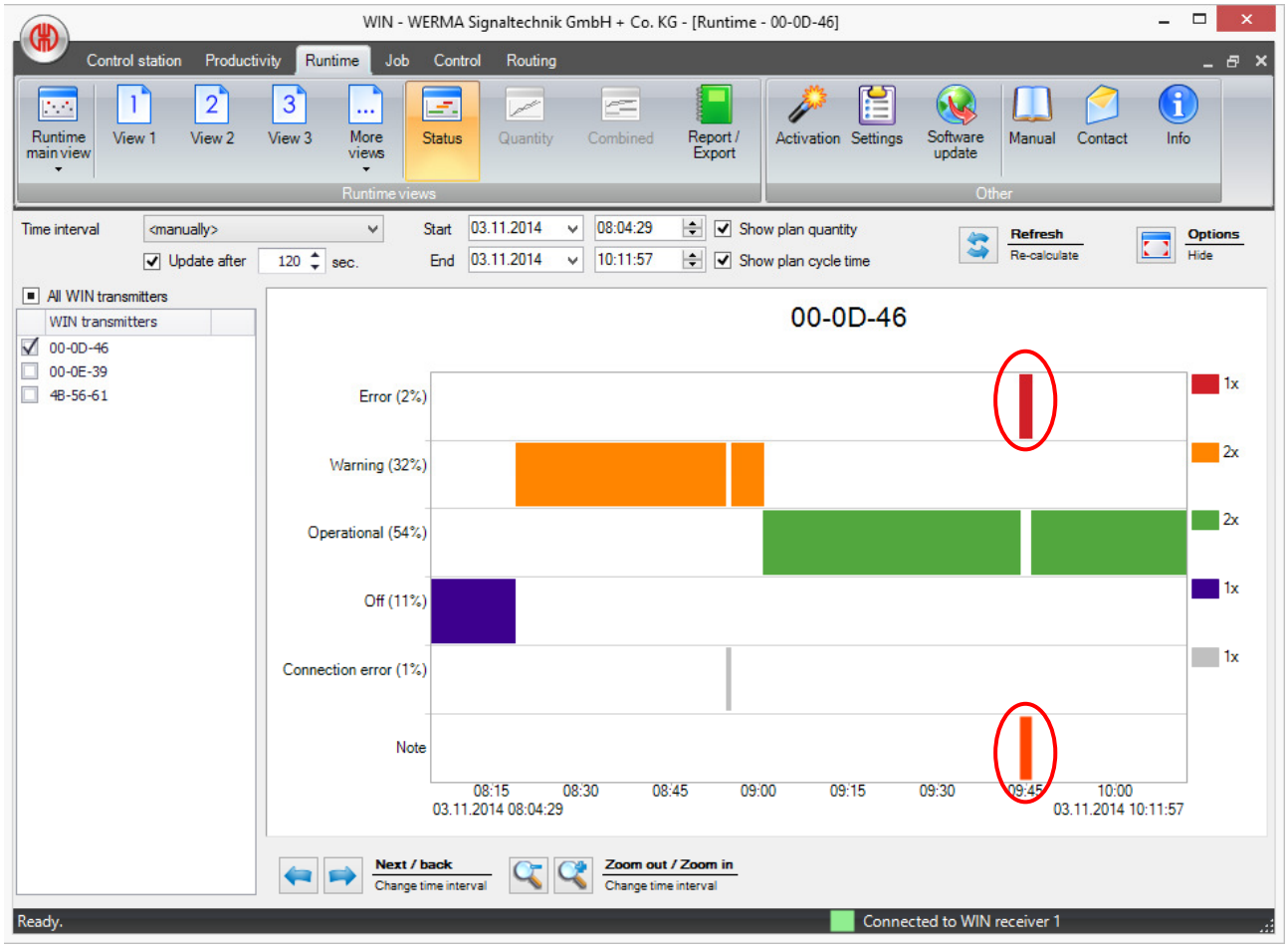
**Note:** A fault condition can be defined within Settings, see chapter 9.8. You can select these defined fault conditions in the runtime module when you create a note.

To create these, there are two options:

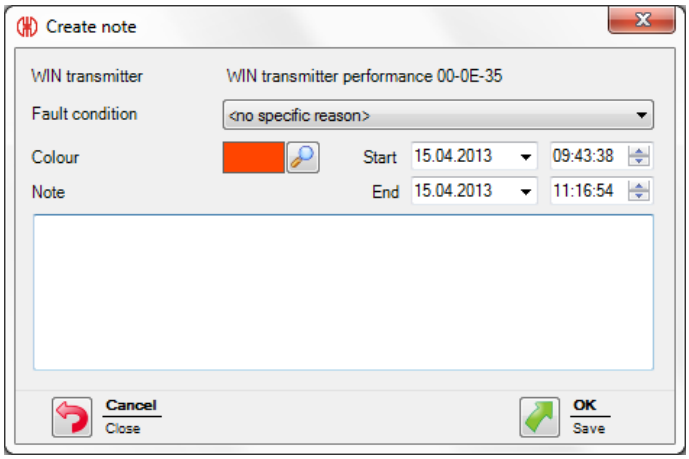
1. Use the cursor to draw a line in the note field. The length of the line corresponds to the duration of the note.



2. Double click on any status. The duration of the note corresponds to the duration of the selected status.

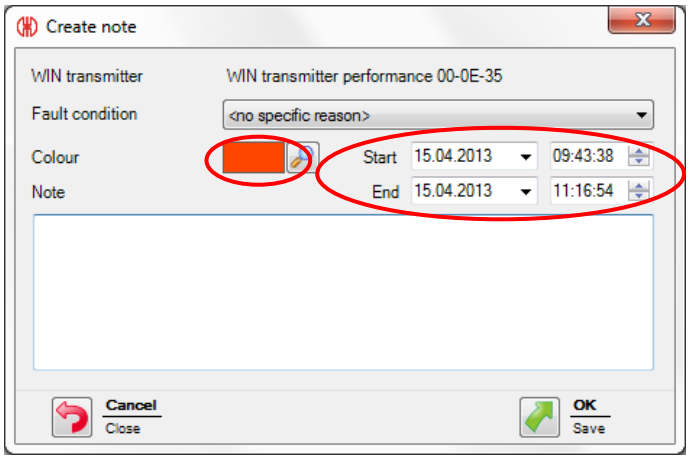



3. The following window appears.

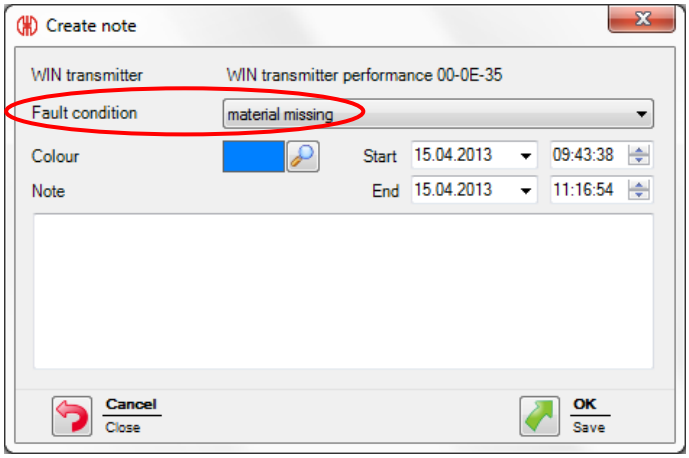



**Note:** When "Use touch interface for the entry of the fault conditions" is activated within Settings/Fault Condition, the design option for touch screen appears. No separate note creation is possible, but you can choose the pre-defined reason for the fault by a click.

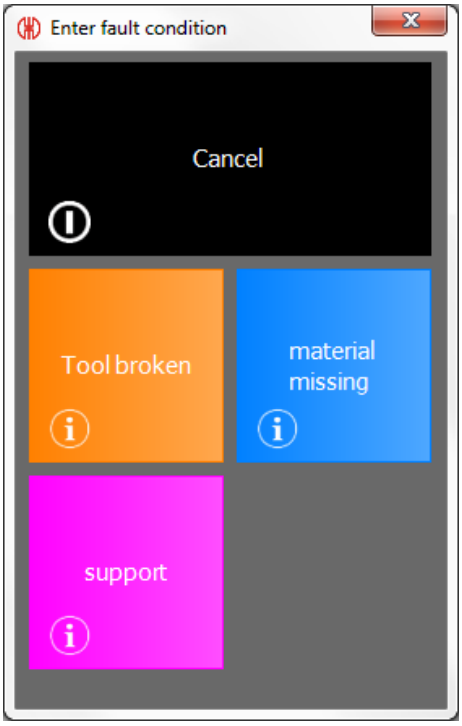
4. When creating a note you can select the note colour, enter the note text and edit the duration of the note.




5. When reporting a pre-defined fault condition you can select from the Fault condition pull-down. Fault conditions can be defined within Settings with the desired colour. See chapter 9.8.



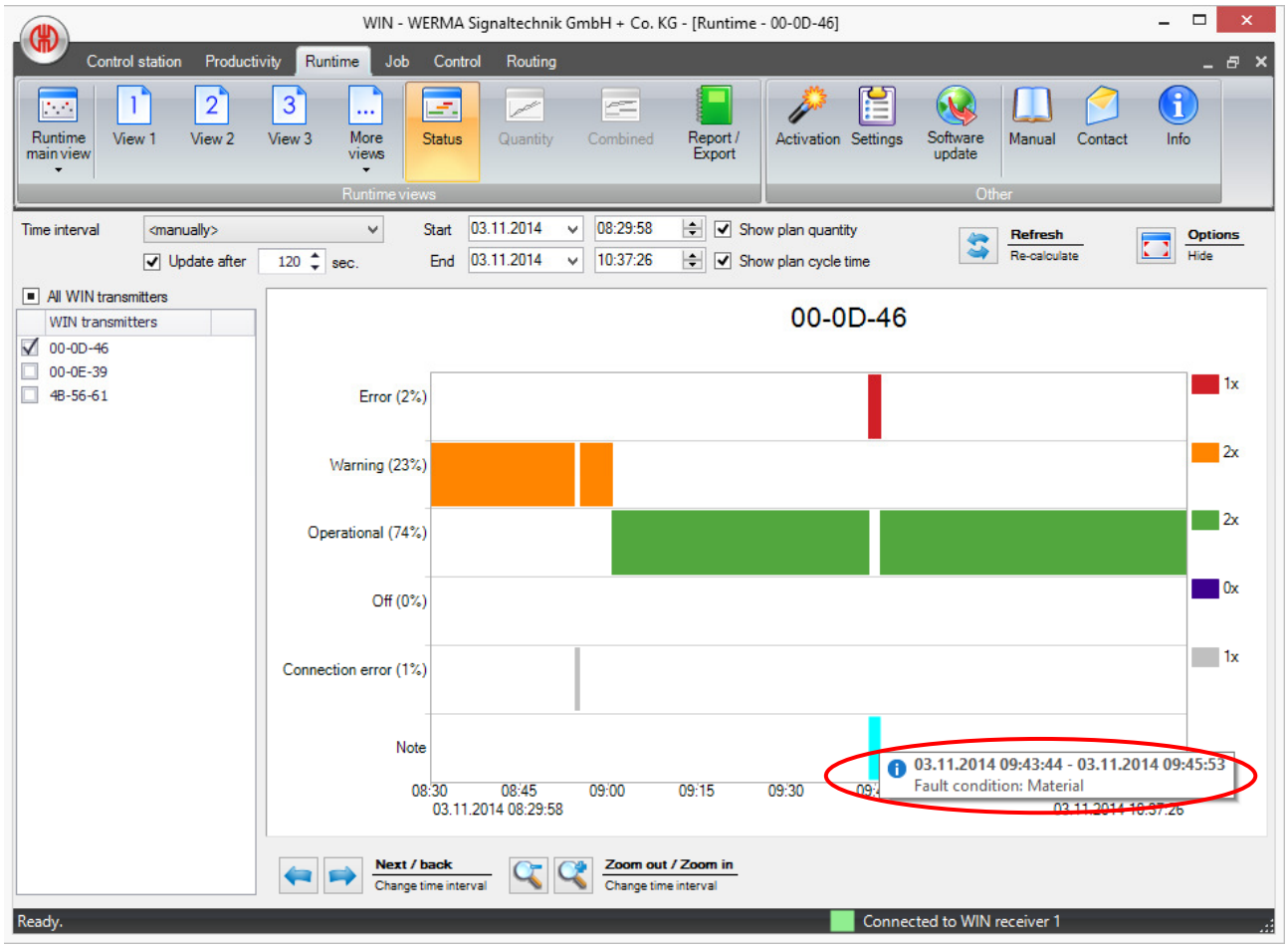
6. When reporting a fault condition you can select a pre-defined fault condition via the touch interface. Fault conditions can be defined within Settings with the desired colour. See chapter 9.8. Ensure the box "Use touch interface for the entry of the fault conditions" is activated. The following window appears.




7. To save the fault condition click on the desired fault condition.

### 7.3.3.2 Displaying the note / fault condition

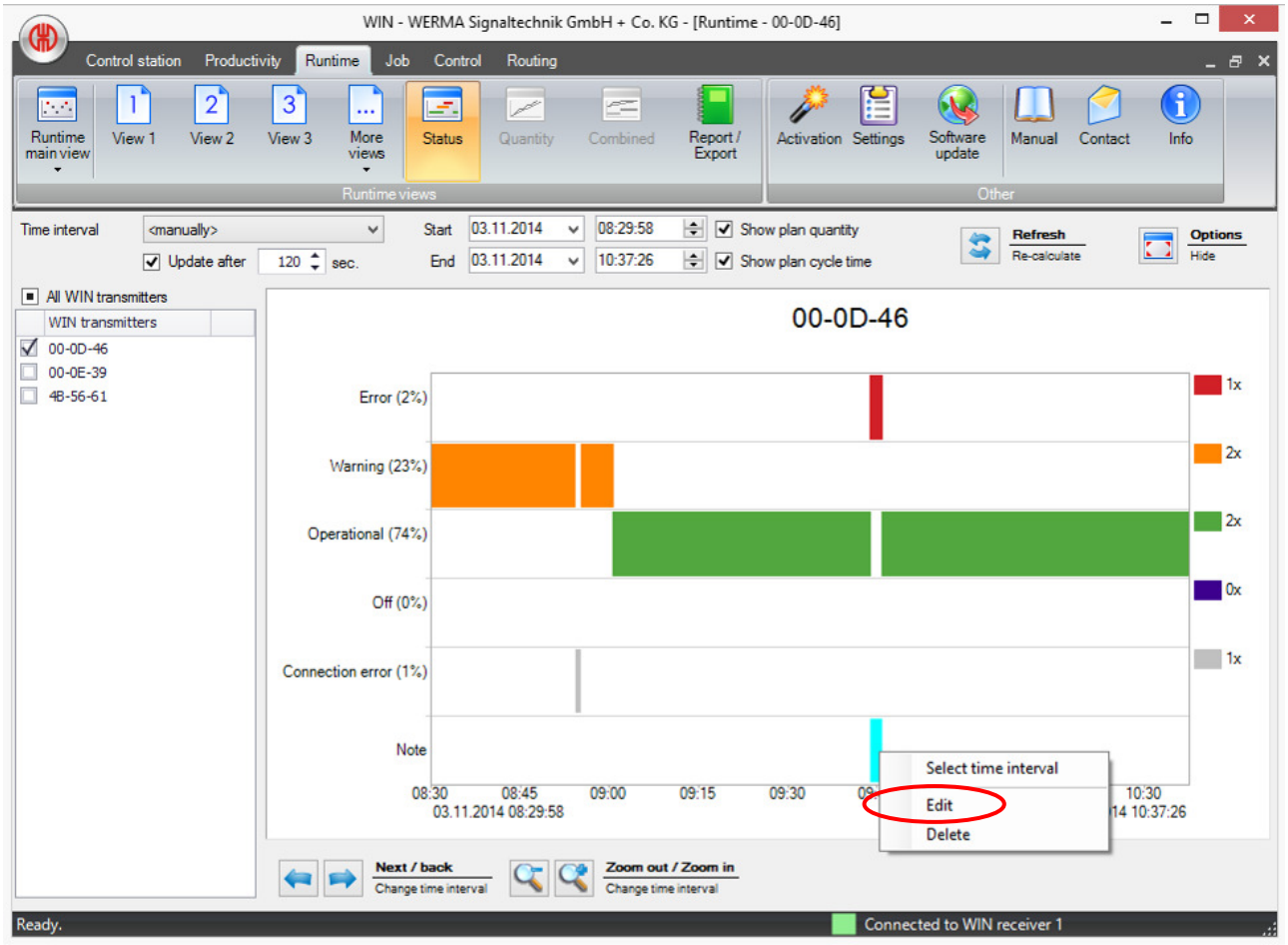
To display a note or fault condition, hover over the inserted note or the associated line. An information window opens on the screen, displaying the content of the note.



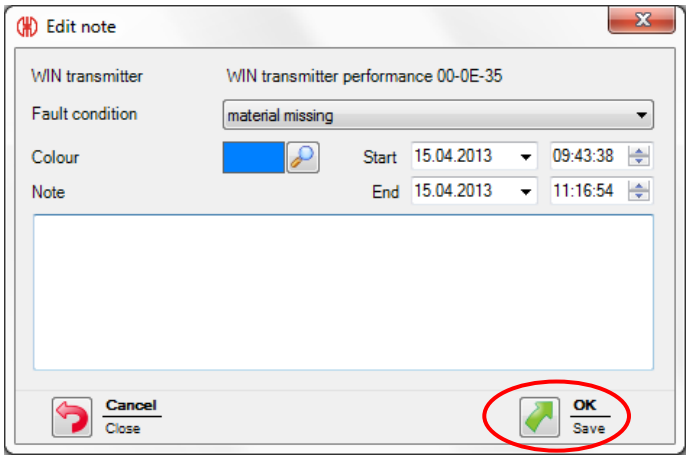
### 7.3.3.3 Editing a note / fault condition

There are two options to edit an existing note or fault condition.

Right click on the note line and choose "Edit". Alternatively you can double click on the line to open the editing window.



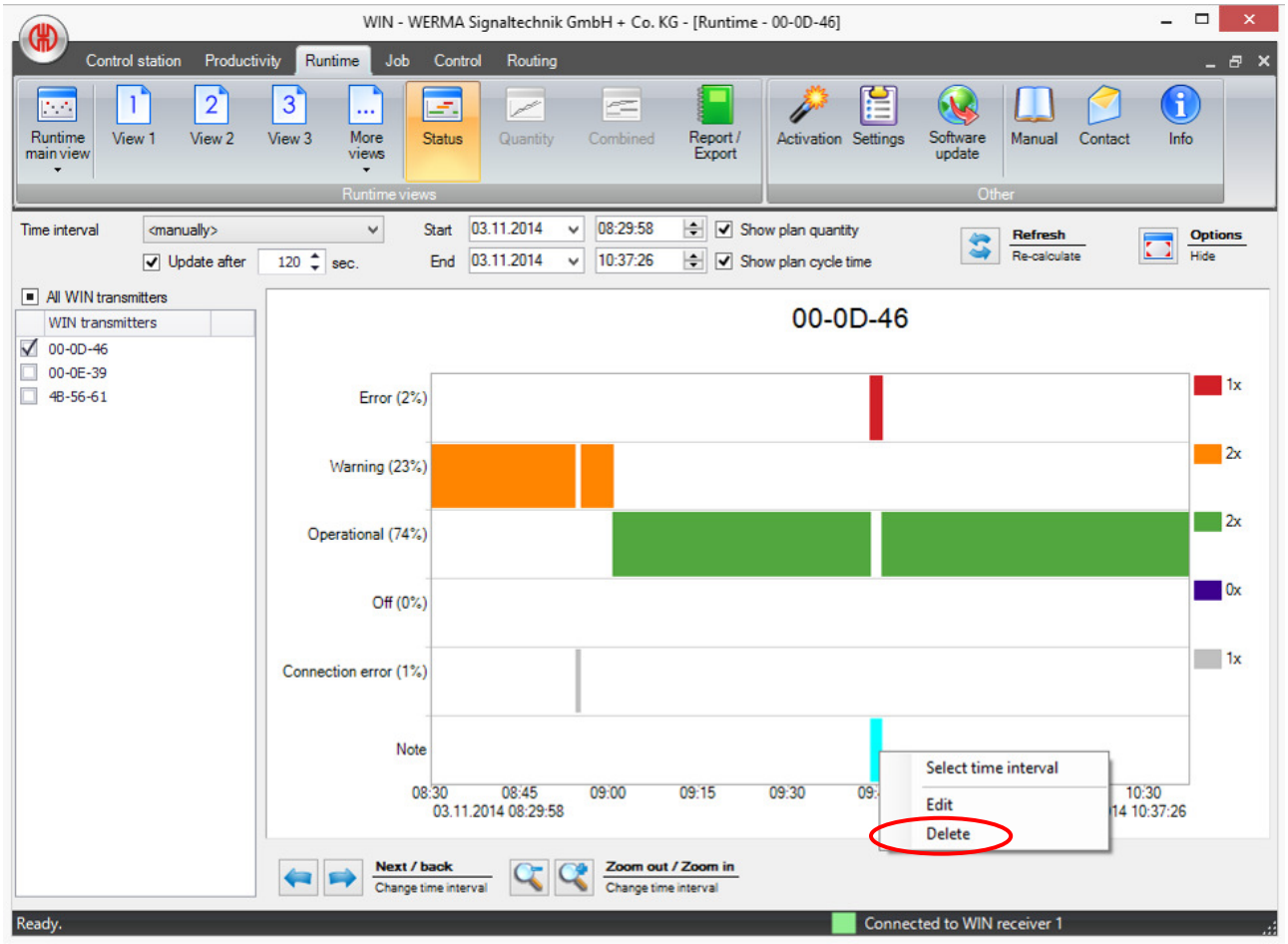

The "Edit note" window appears on the screen.



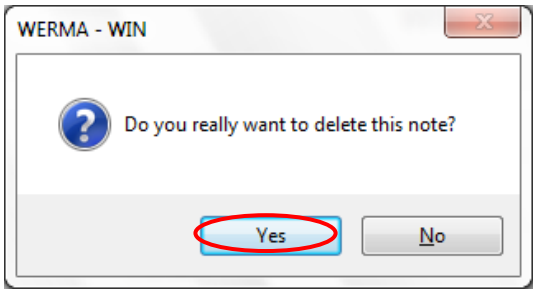

When you have finished editing, click "OK" to save your changes.

### 7.3.3.4 Deleting a note / fault condition

To delete a note or a fault condition, right click on the note line and select "Delete".

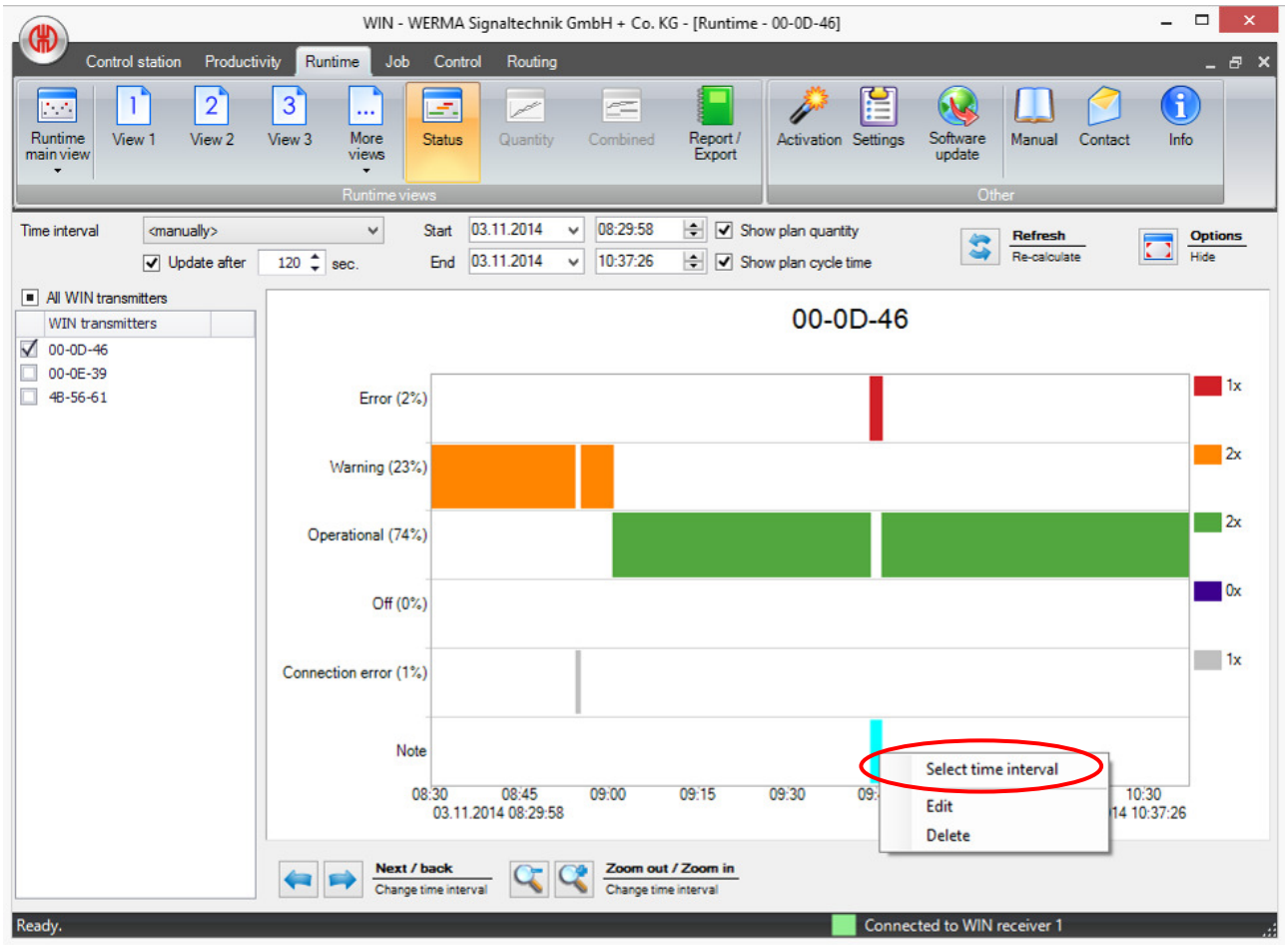



Click "Yes" to confirm.



### 7.3.3.5 Select time interval of the note / fault condition

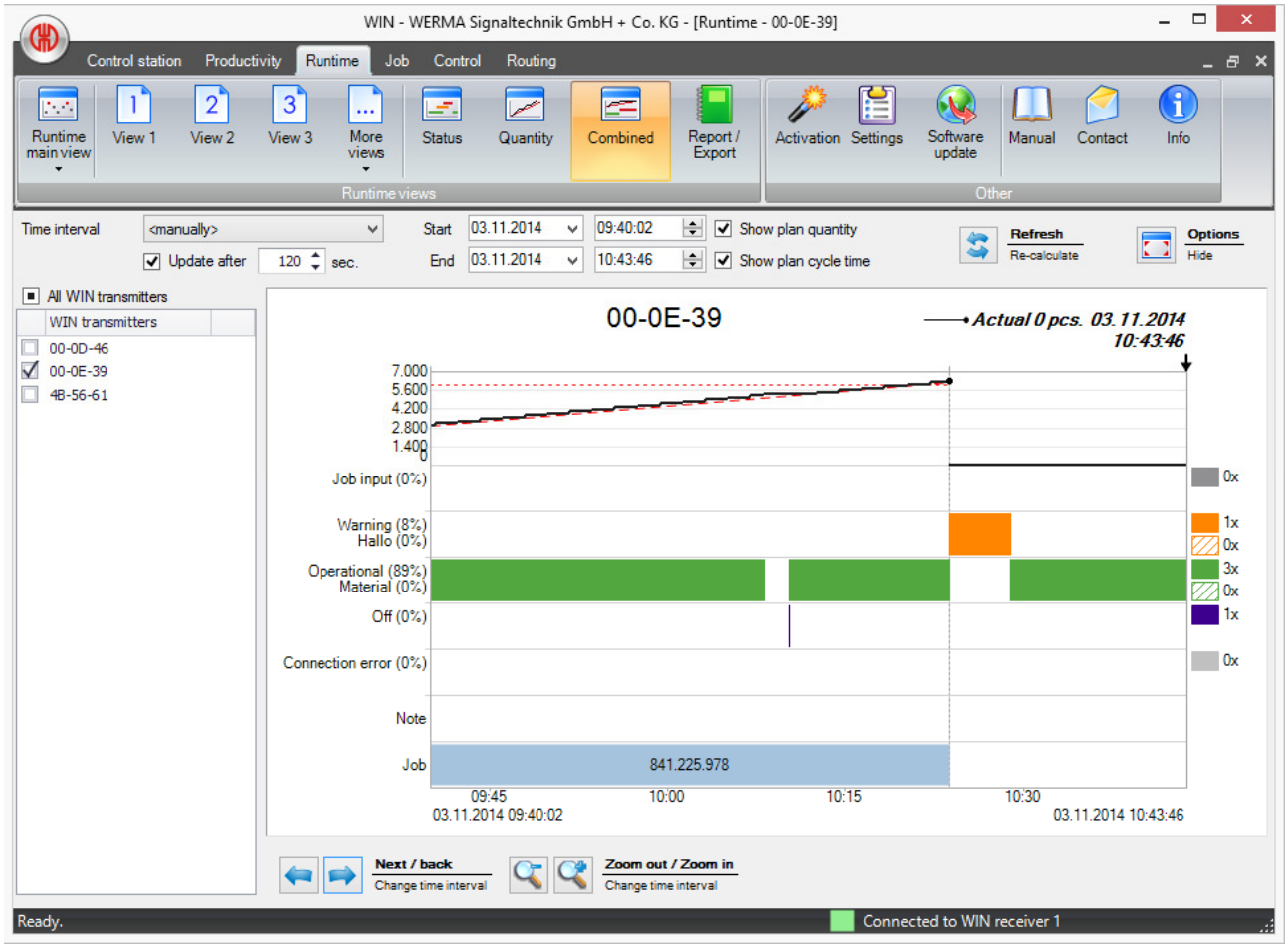
To select the time interval for the note or fault condition, right click on the line for the note and select "Select time interval".




The Runtime module will automatically jump to this time interval and enlarges the view to fit the window.

### 7.3.4 Job

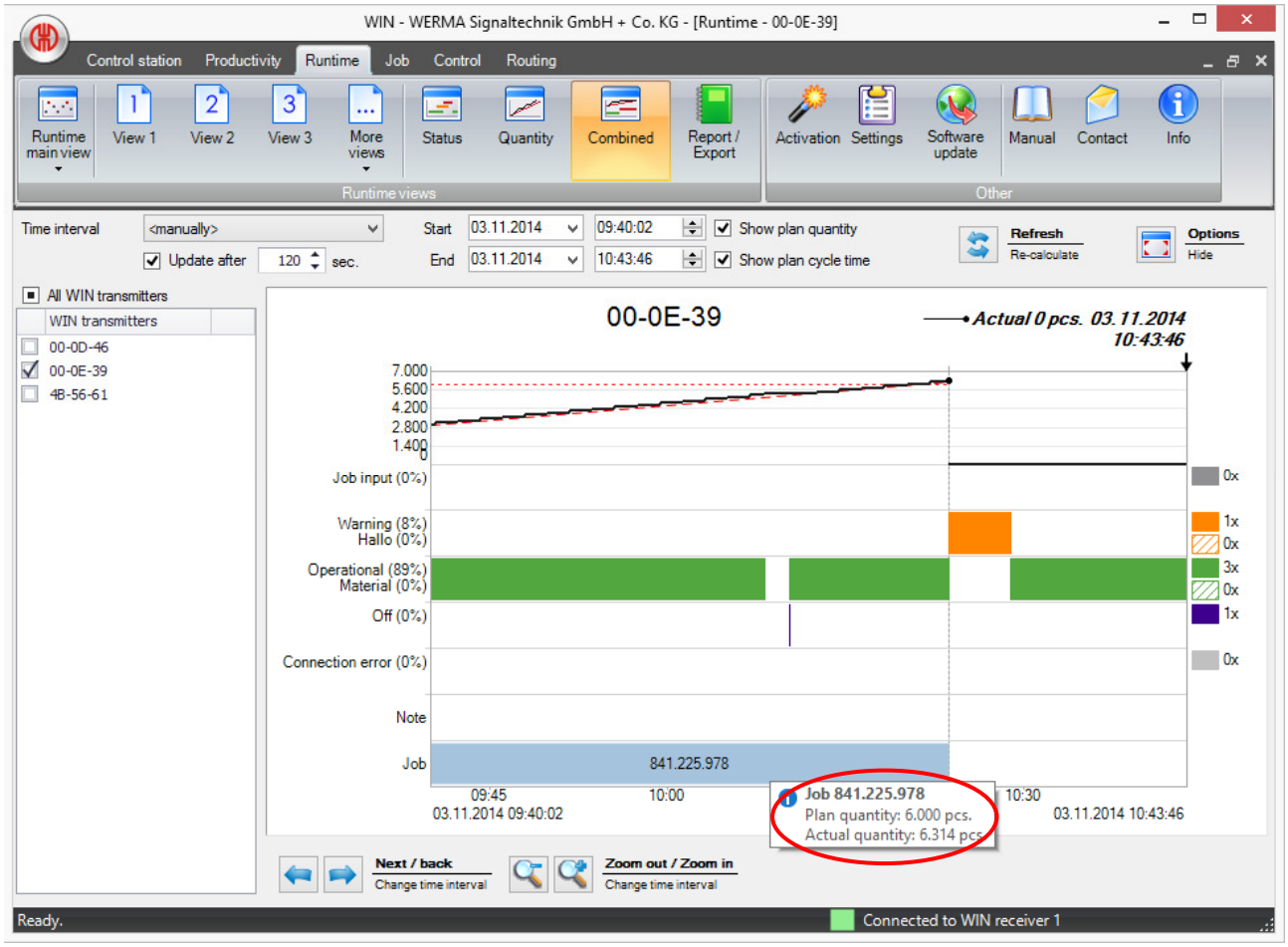
A job created in the Job Module is automatically displayed in the Job field of the Runtime Module. (See chapter 7.4.2).




**Note:** The job field is only active for the WIN transmitter performance.

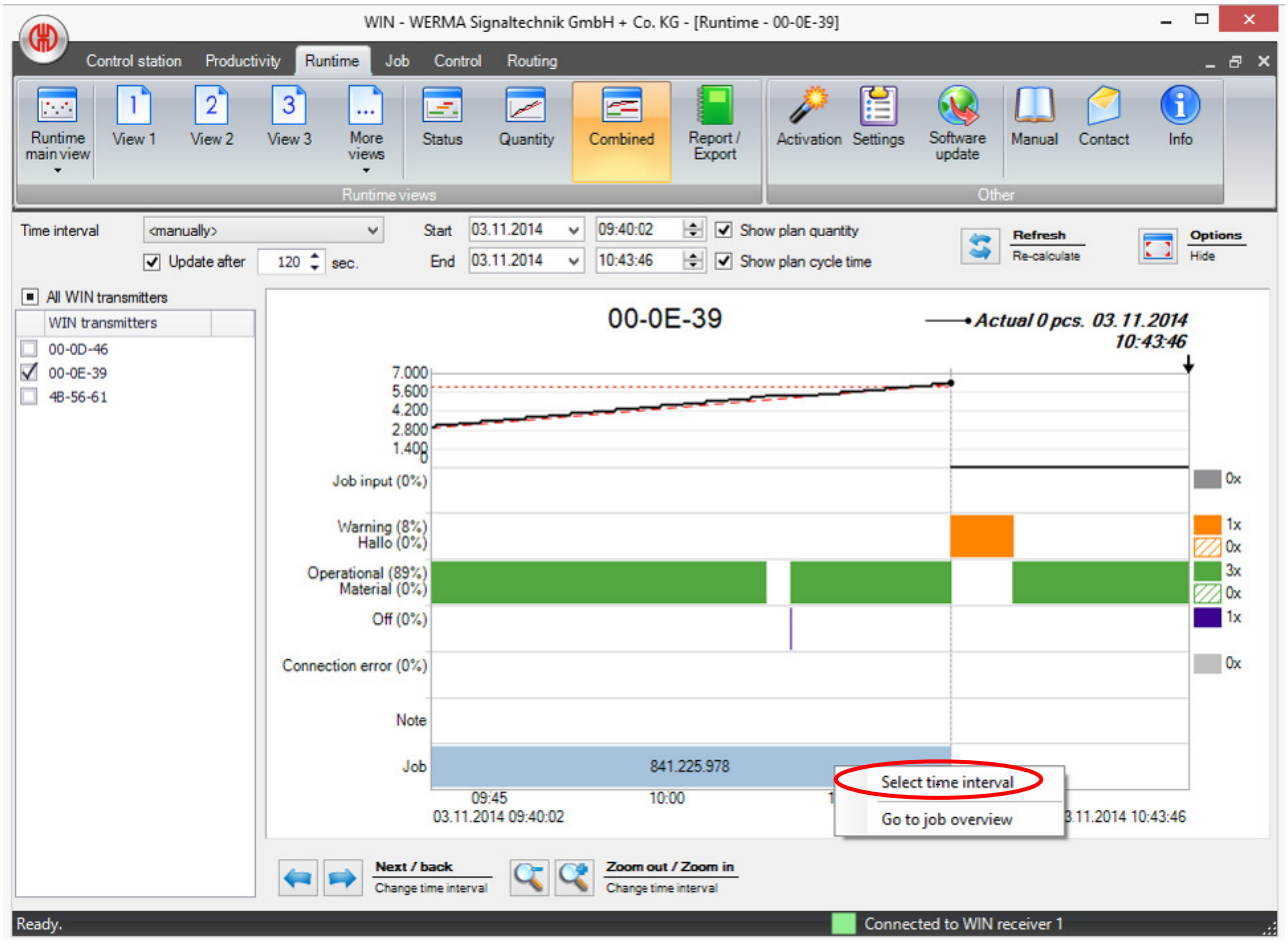
### 7.3.4.1 Displaying a job

To display a job, hover over the inserted job or the associated line. An information window opens on the screen, displaying the details of the job.



### 7.3.4.2 Select time interval of a job

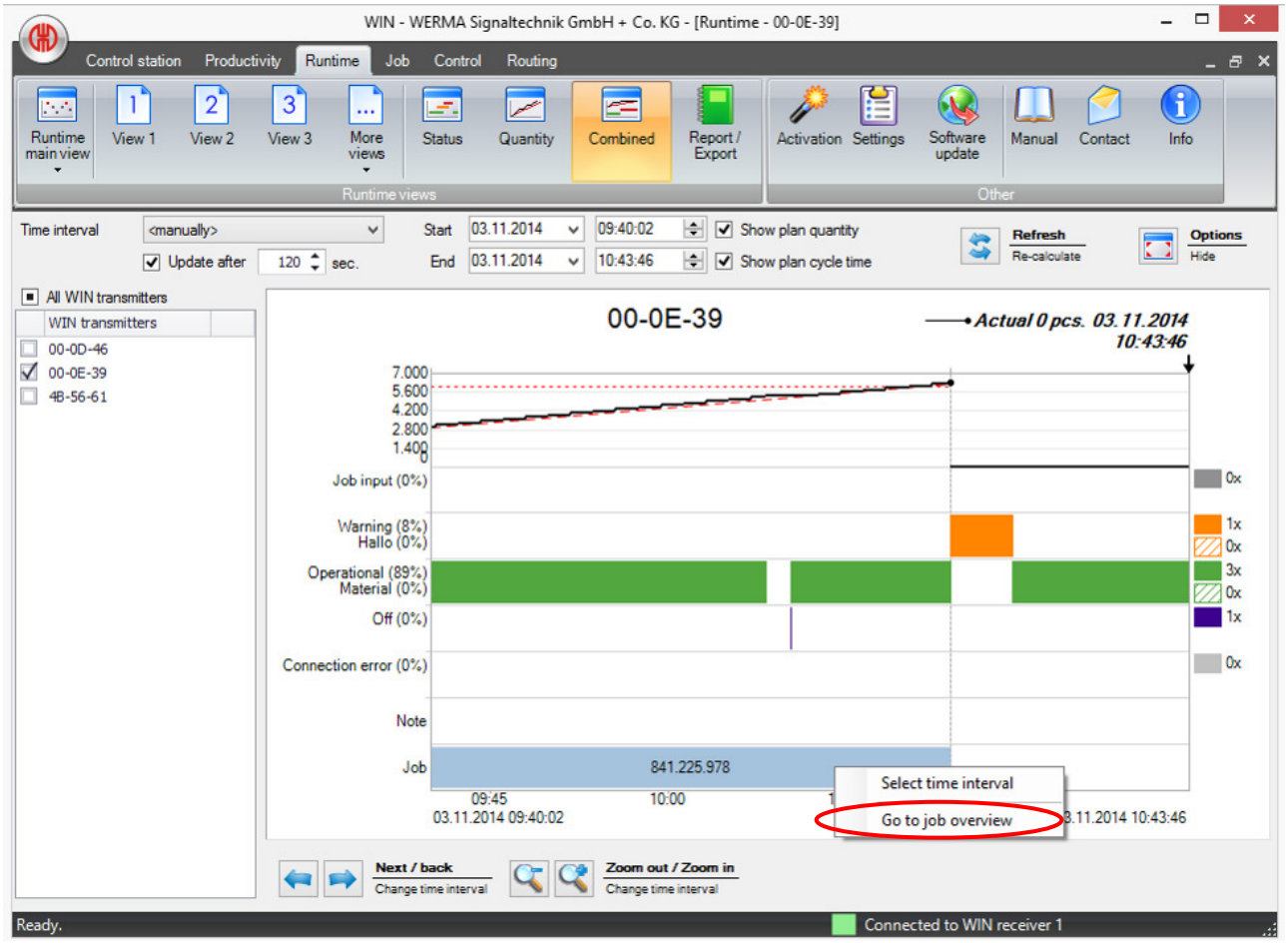
To select the time interval for a job please, right click on the line for the job and select "Select time interval".




The Runtime module will automatically jump to this time interval and enlarges the view to fit the window.

### 7.3.4.3 Jump to the job module

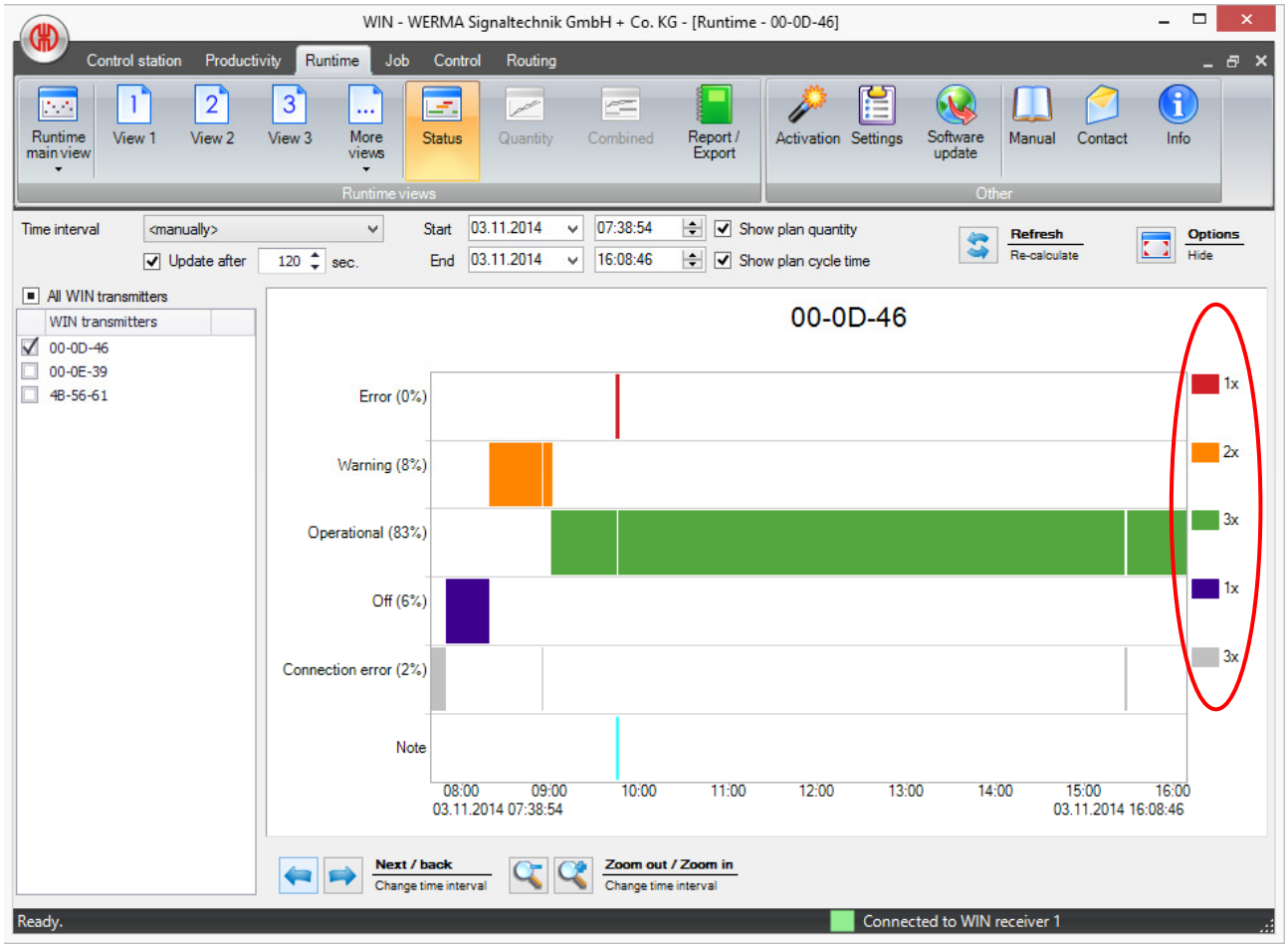
To jump to the job module, right click on the line for the job and select "Go to job overview".




You will then be taken directly to the job module with the corresponding job selected.

### 7.3.5 Number of statuses

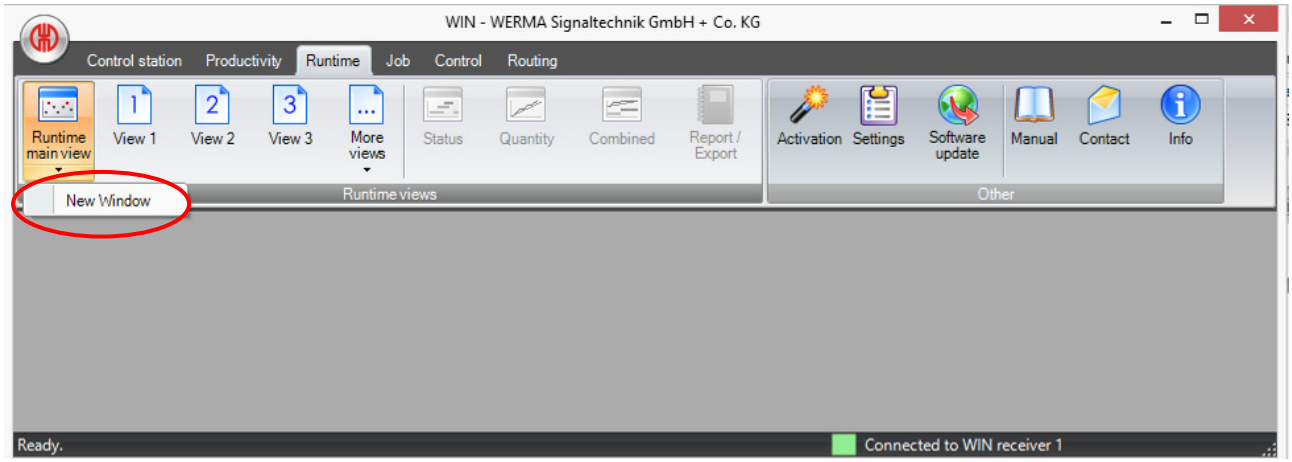
In the Runtime Module you can see how many times a status has occurred in the selected period. If you change the period, the number of occurrences of each status is automatically updated.



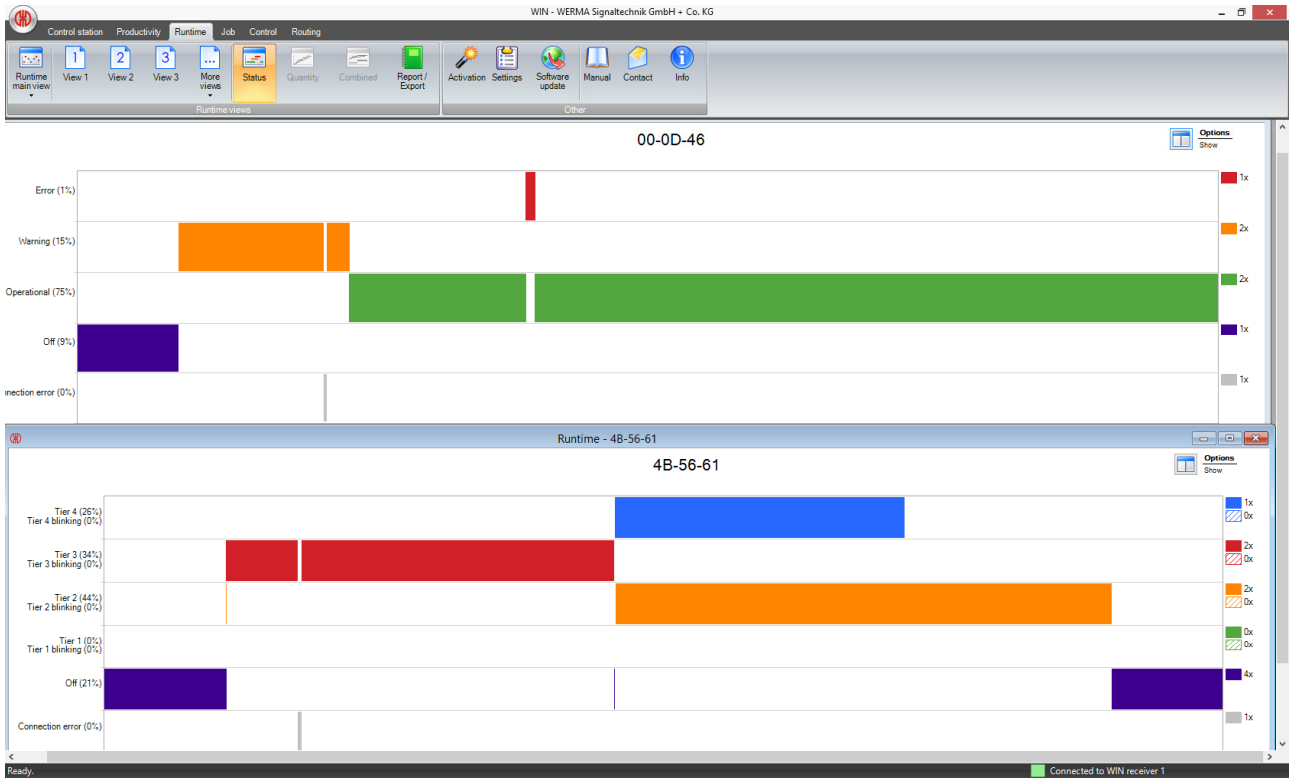
### 7.3.6 Open multiple windows

To compare the performance of a number of machines over a specific period multiple windows can be opened in the Runtime module.

1. Click on the arrow underneath the button "Runtime main view" and select the option "New Window".




2. An additional window will open which can be positioned as required.



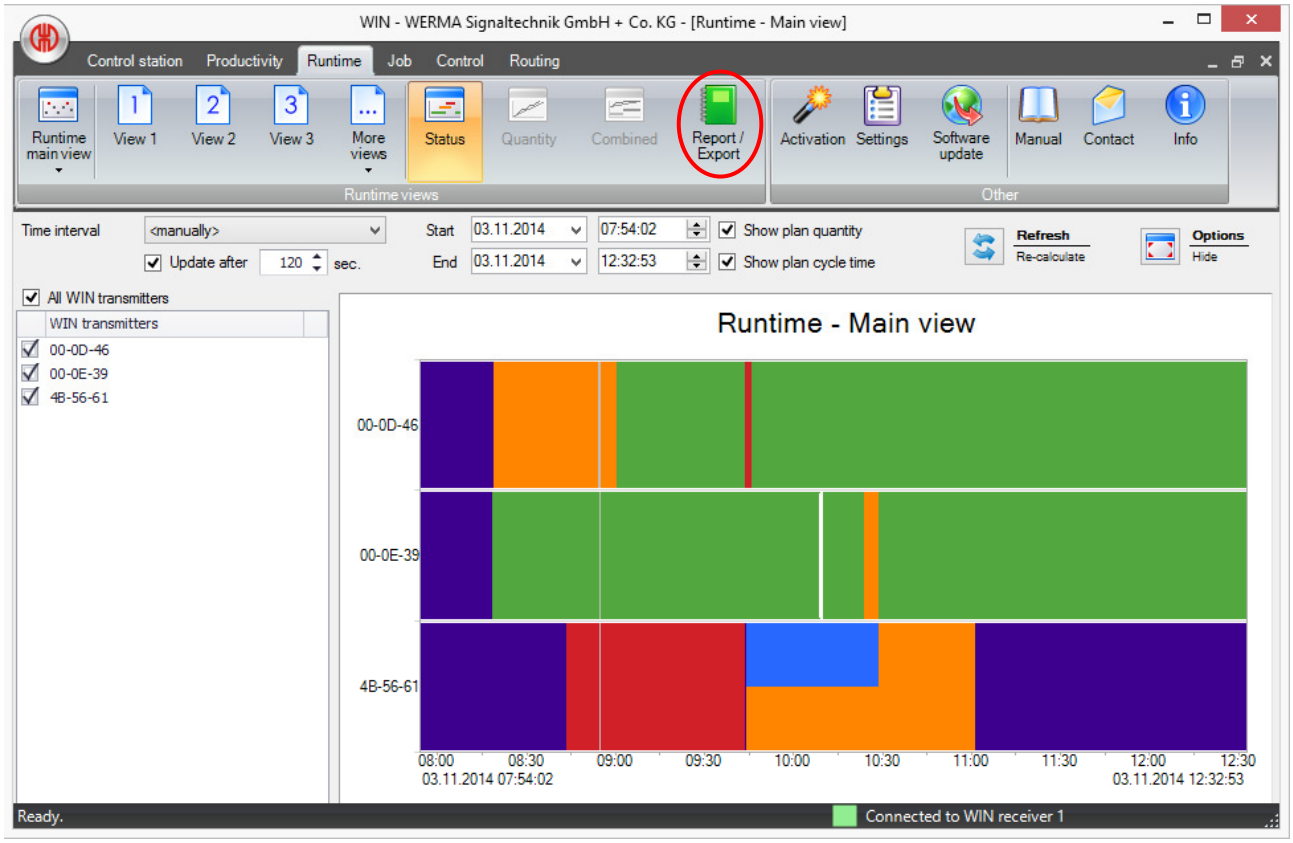
### 7.3.7 Report

**Note:** A report can only be generated from the currently selected view. By selecting the Main View, all WIN transmitters can be included. Select or create a different view to select particular WIN transmitters.

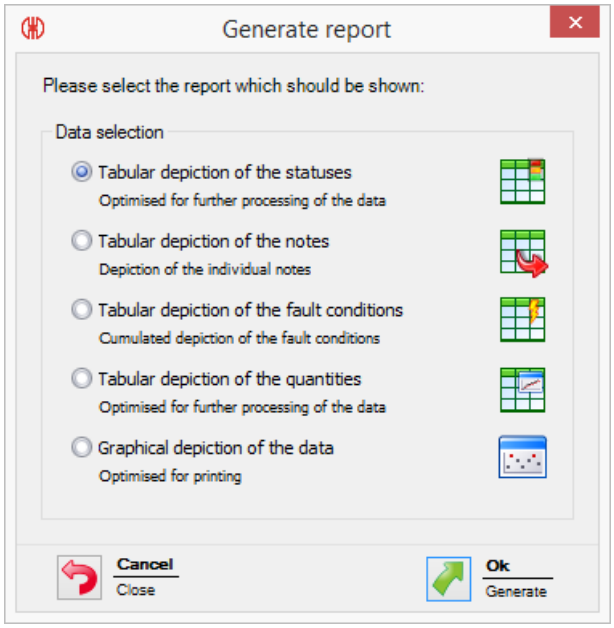
**Note:** A report can only be generated for the selected time period and the chosen analysis method.

To generate a report, proceed as follows:

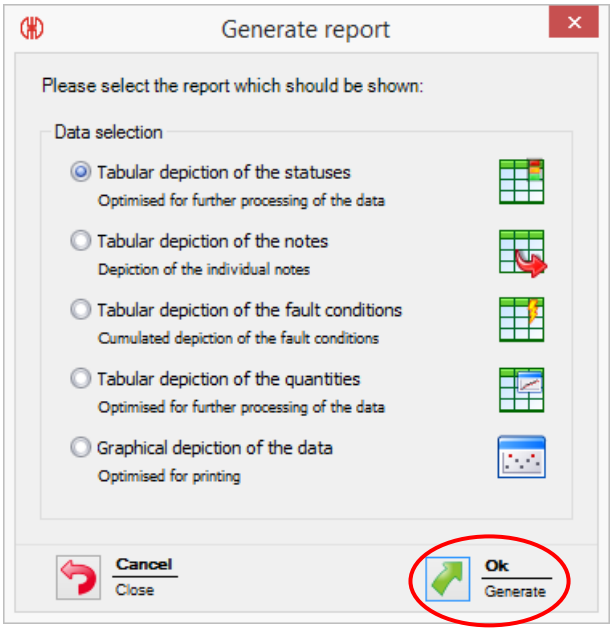
1. Click on "Report/Export".



2. Now select which report you want to generate. Choose between:
   - Tabular depiction of the statuses
   - Tabular depiction of the notes
   - Tabular depiction of the fault conditions (cumulated)
   - Tabular depiction of the quantities
   - Graphical depiction of the data




3. Confirm your selection with "OK".




4. You can now see a preview of your selected report. Additional functions are described in section 7.7, "Report and Export Functions".

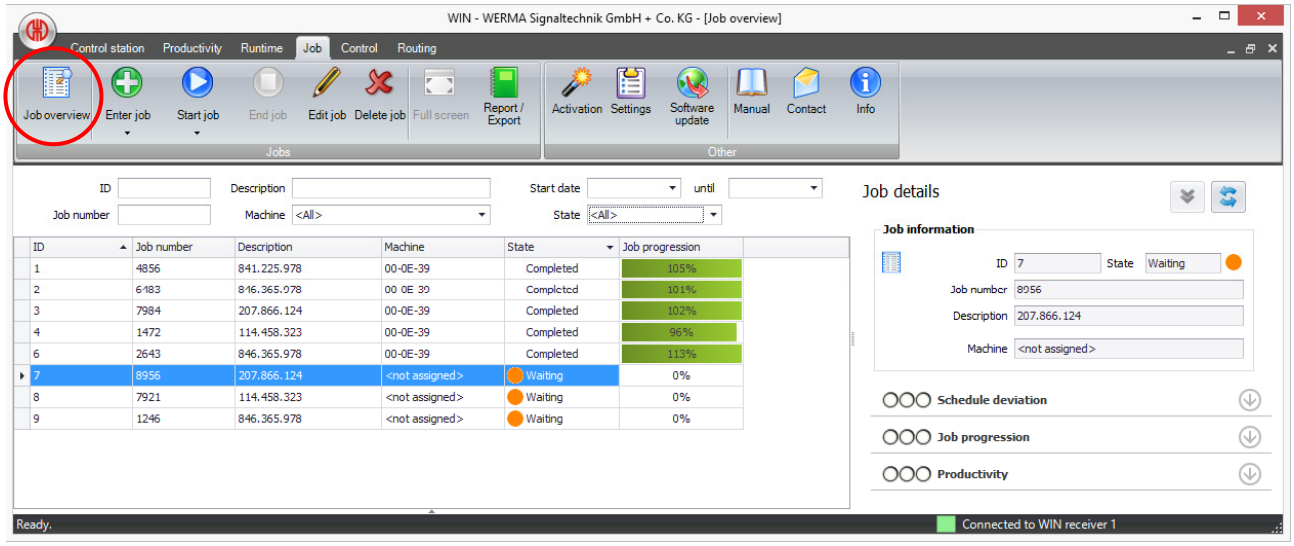
## 7.4 Job Module

The module gives you a comprehensive overview of which job is running on which machine and how the job is progressing. Future planned jobs are shown as "waiting" and can be initiated as soon as the machine required is available.

**Note:** This is applicable only to users with the hardware **WIN transmitter performance**.

### 7.4.1 Job overview

In the job overview, you see, at a glance, details of all created jobs.



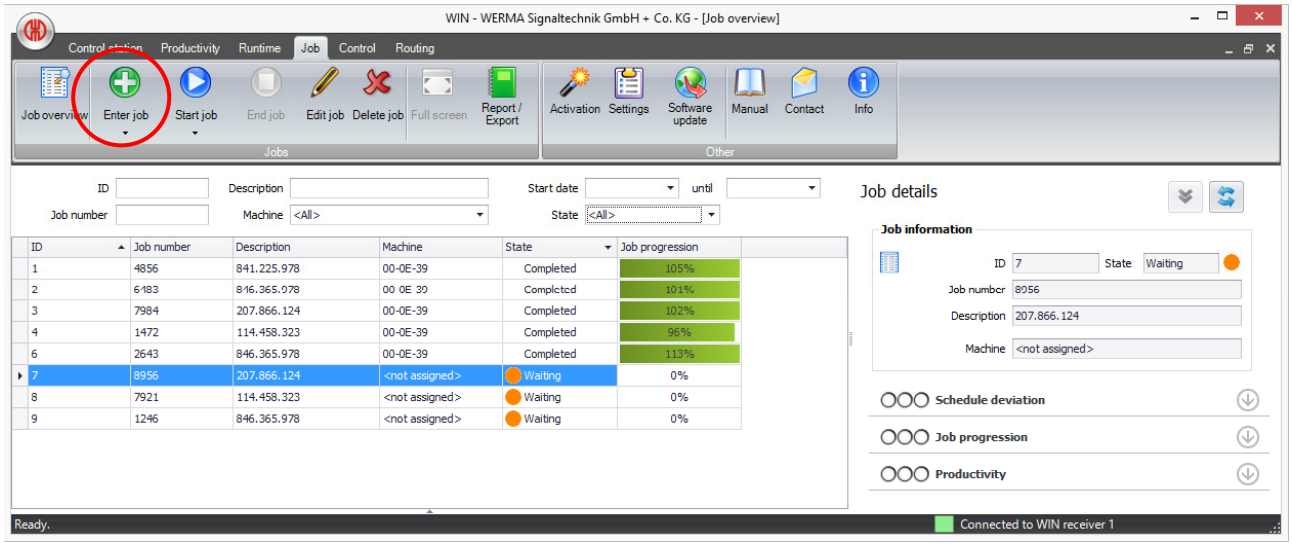
### 7.4.2 Enter a job

There are three different way to enter a job which are described in this chapter.

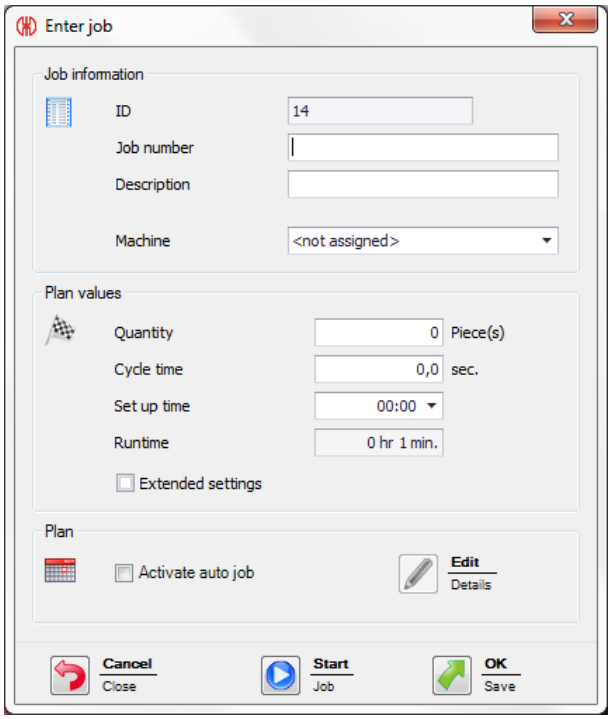
#### 7.4.2.1 Manual job entry

Proceed as follows:

1. Click on "Enter job".



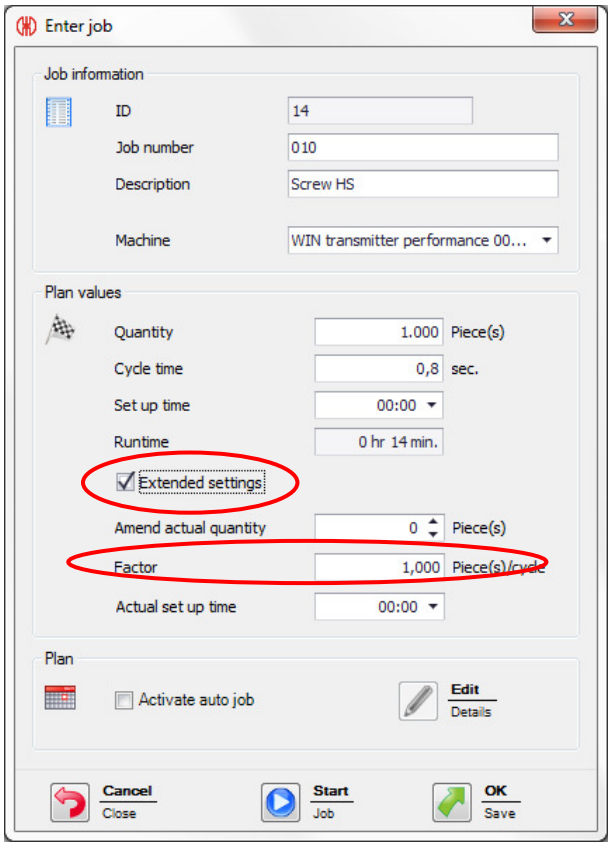
2. Enter the job number and the job title in this window. The ID is a sequential number and is created automatically by the WIN system.




3. Select a WIN transmitter performance on which the job should run.

4. Please indicate the target specifications for the job.
   - Quantity: number of pieces to be produced
   - Cycle time: time required to produce one piece
   - Set up time: If a set up time is planned for this job, enter it here. If before the end of the planned set up time a part is produced, the actual set up time will be set to this time.
   - Runtime: the total time to produce the planned quantity for this job (including set up time)

5. Within "Extended settings", you can set a factor to define how many pieces per cycle are produced.
   - Amend actual quantity: You can enter both positive and negative offset values, to compensate for reject parts.
   - Actual set up time: This time is automatically set by the WIN system and can be changed here. Win calculated it as the time from the job start to the first piece being counted.




6. You can start the job immediately or store it as a waiting job to run later.

#### 7.4.2.2 Import a job list

A job list can be imported in CSV format into WIN.

The CSV file must have the following format and rules:

Column label:

- JOBNUMBER
- DESCRIPTION
- MACHINE
- QUANTITY
- CYCLETIME
- SETUPTIME
- FACTOR

Format rules:

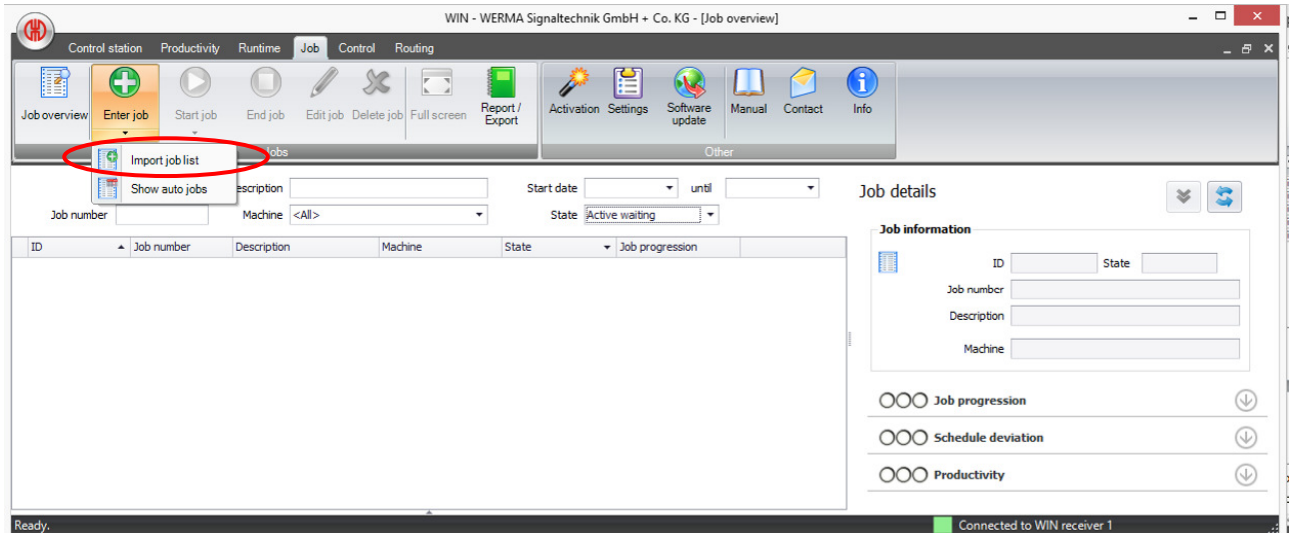
- Header / First row with column label must be specified.
- The delimiters are a semicolon (;), comma (,), tab (\t) or pipe (|). Only one delimiter is allowed per document.
- The column order is not relevant, they are identified by their headers (column labels).
- Column labels are not case dependent
- Not all of the columns (max. seven) need to be specified.
- Each data value (not the header) can be enclosed in double quotes (" "). Thus, the data value can also be text which can include a semicolon (;).
- Decimal numbers always use a point as decimal separator (no comma).
- The maximum number of decimal places after the decimal point will be checked (for the cycle time one decimal places is allowed; for the factor three decimal places are allowed)
- The maximum number of characters will be checked.
- The SET TIME is in the format [hh]h:mm, for example 0:00
- The CYCLE TIME is specified in seconds, for example 0.8

**Example:**

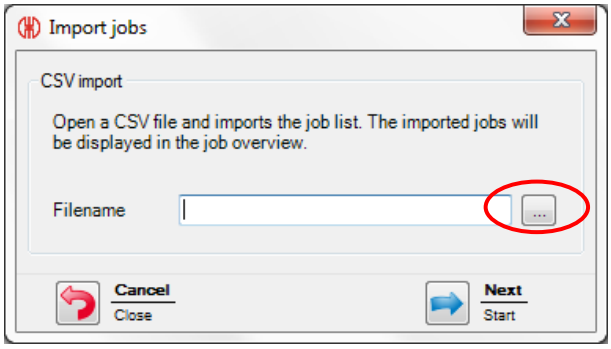
| JOBNUMBER | DESCRIPTION | MACHINE | QUANTITY | CYCLETIME | SETUPTIME | FACTOR |
|---|---|---|---|---|---|---|
| 4800 | job "screw MKL;4711" | CNC machine 5 | 10000 | 0.8 | 01:00 | 2 |
| 4801 | job "screw MXL;4201" | CNC machine 6 | 15000 | 1.0 | 05:00 | 1 |
| 4802 | job "screw MMH;4722" | CNC machine 7 | 10000 | 0.7 | 01:00 | 2 |
| 4803 | job "screw MKL;5671" | CNC machine 8 | 20000 | 0.8 | 10:00 | 5 |
| 4804 | job "screw MCD;6681" | CNC machine 9 | 5000 | 1.0 | 01:50 | 1 |
| 4805 | job "screw MXL;4221" | CNC machine 10 | 50000 | 1.0 | 03:00 | 1 |

To import a list of jobs in CSV format, proceed as follows.

1. Click on the pull-down below the button "Enter job" and select "Import job list".



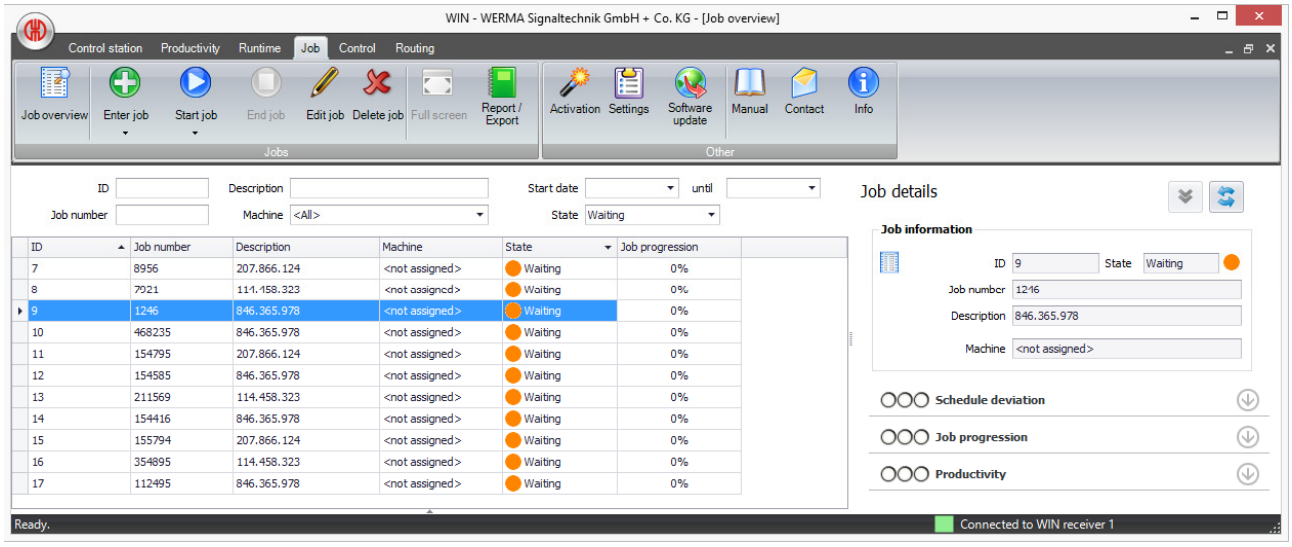

2. The following window opens. Click on "..." and open the desired CSV file. Confirm your selection with "Next".




**Note:** Follow the format rules on the previous page.

3. The data in the CSV file will be imported and displayed in the job overview. Data which isn't in the correct format or otherwise fails validation will not be imported.

## Example:


WIN - WERMA Signaltechnik GmbH + Co. KG - [Job overview]
Control station
Productivity
Runtime
Job
Control
Routing
Job overview
Enter job
Start job
End job
Edit job
Delete job
Full screen
Report / Export
Jobs
Activation
Settings
Software update
Manual
Contact
Info
Other
ID
Description
Start date
until
Job number
Machine
<All>
State
Waiting
ID
Job number
Description
State
Machine
Job progression
7 8956 207.866.124 <not assigned> Waiting 0%
8 7921 111.158.323 <not assigned> Waiting 0%
9 1246 846.365.978 <not assigned> Waiting 0%
10 468235 846.365.978 <not assigned> Waiting 0%
11 154795 207.866.124 <not assigned> Waiting 0%
12 154585 846.365.978 <not assigned> Waiting 0%
13 211569 114.458.323 <not assigned> Waiting 0%
14 154416 846.365.978 <not assigned> Waiting 0%
15 155794 207.866.124 <not assigned> Waiting 0%
16 354895 114.458.323 <not assigned> Waiting 0%
17 112495 846.365.978 <not assigned> Waiting 0%
Job details
Job information
ID 9
State Waiting
Job number 1246
Description 846.365.978
Machine <not assigned>
Schedule deviation
Job progression
Productivity
Ready.
Connected to WIN receiver 1

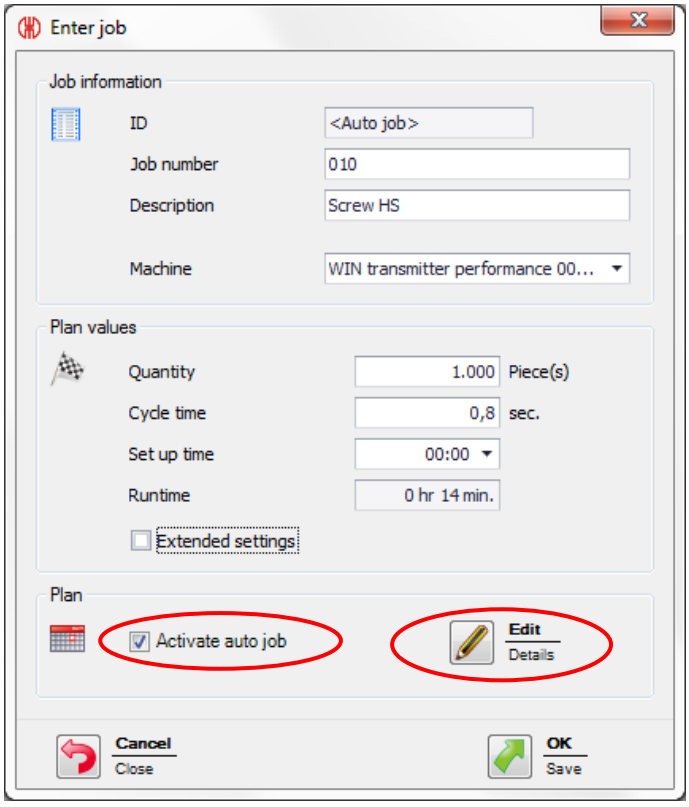
### 7.4.2.3 Enter Auto job

With the Auto job function, jobs will be started automatically at pre-defined times. It is necessary to define this unique or recurring start time.

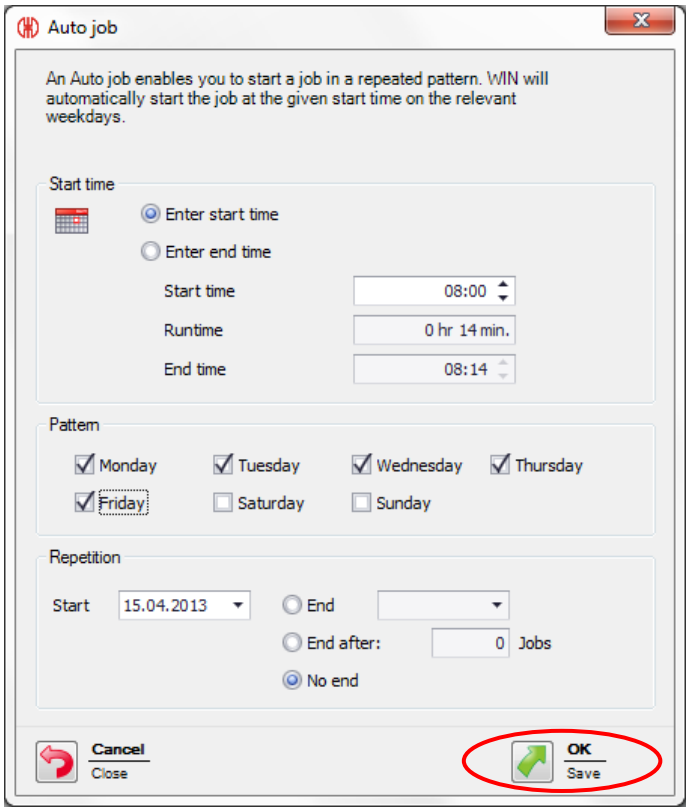
**Note:** An Auto job can only be started if no other job is running on the selected machine.

To enter an Auto job, proceed as follows:

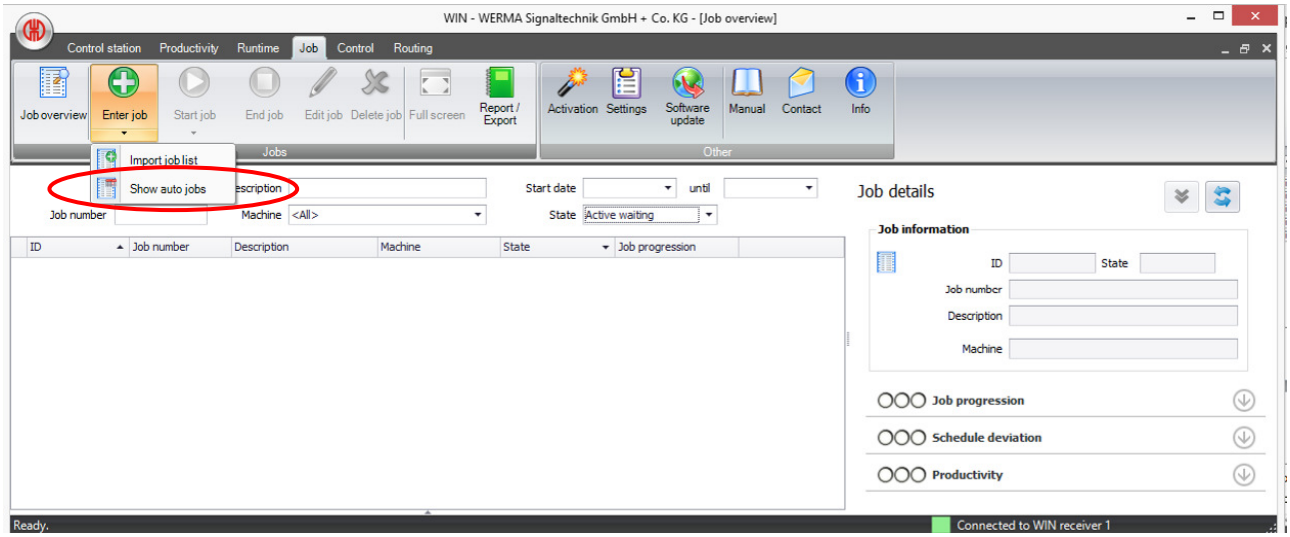
1. Proceed as before described in chapter 7.4.2.1 "Manual job entry" up to and including point 5.
2. Activate the checkbox "Activate auto job" and then please open the editor.



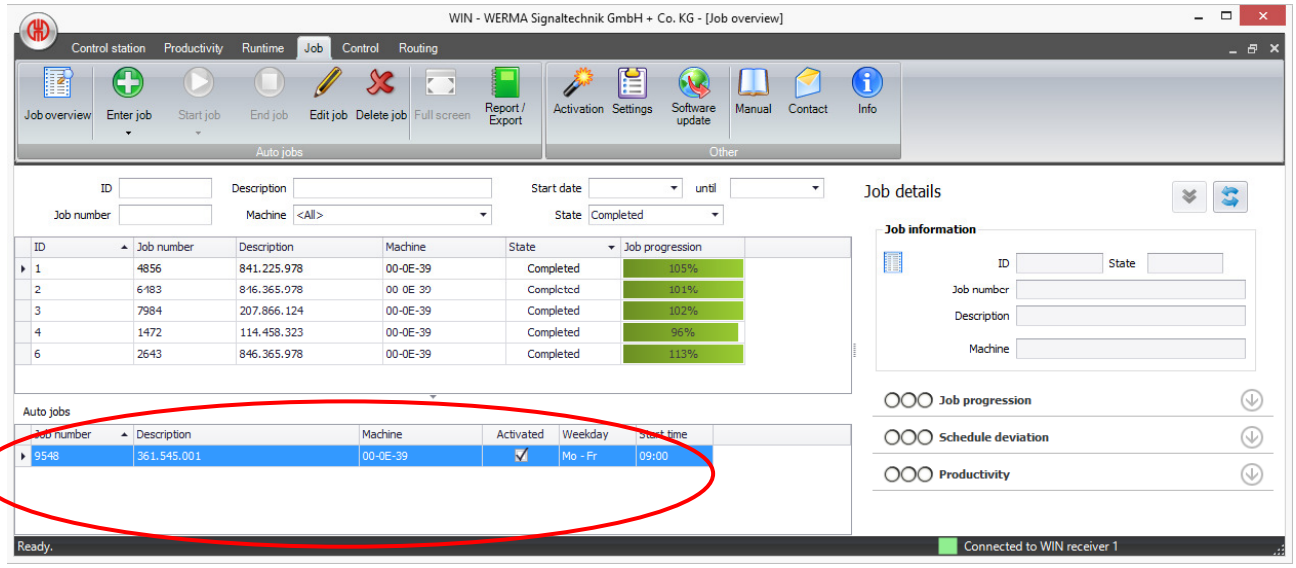
3. In the following window you can schedule the Auto job individually. Save your selection by clicking "OK."




4. To display the Auto jobs in the job overview, you can use the arrow key below the "Enter job" button.



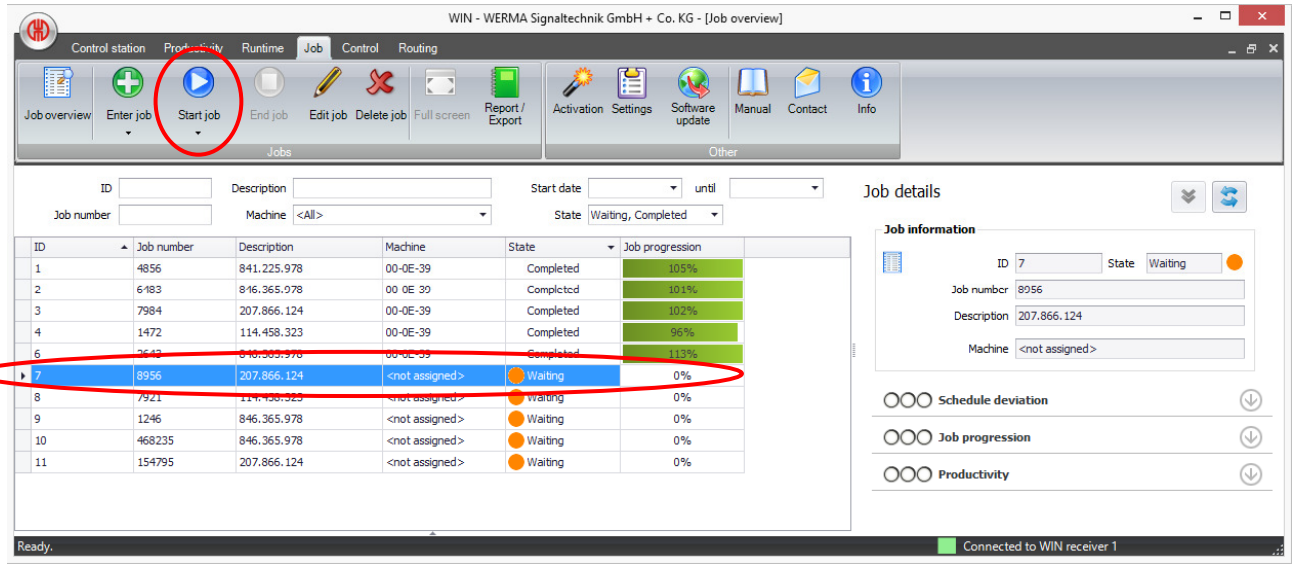
5. The Auto jobs are displayed at the bottom of the job overview.



### 7.4.3 Start job

#### 7.4.3.1 Start job manually

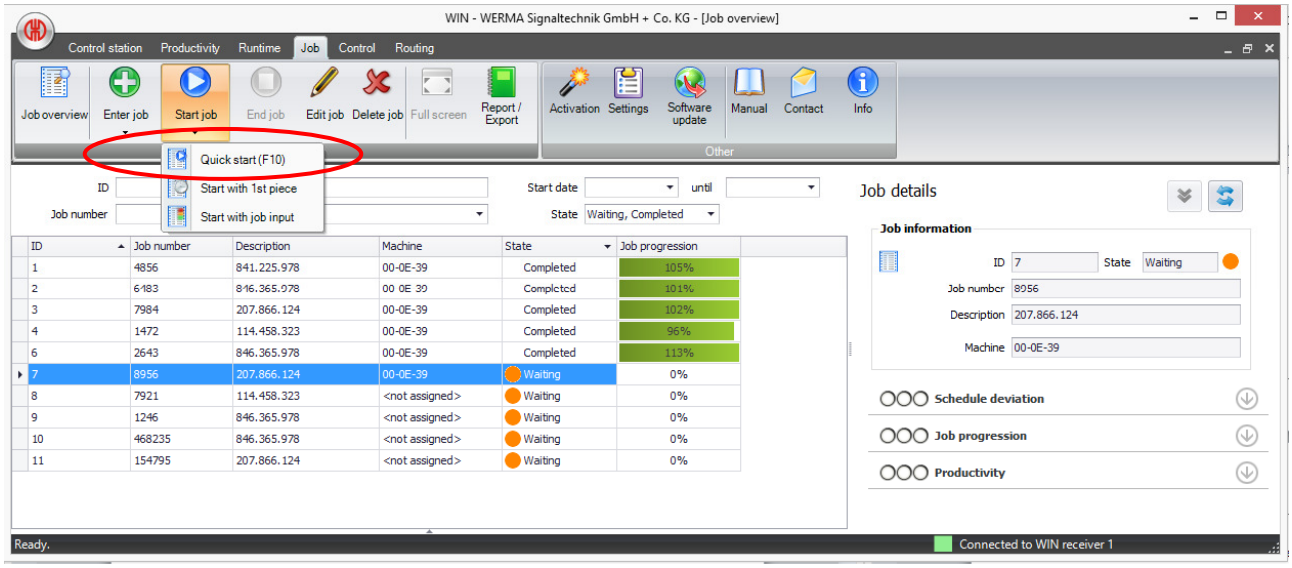
To start a job, select a waiting job in the Job overview list and click the "Start job" button. Alternatively, you can right-click on the waiting job and select “Start Job”.



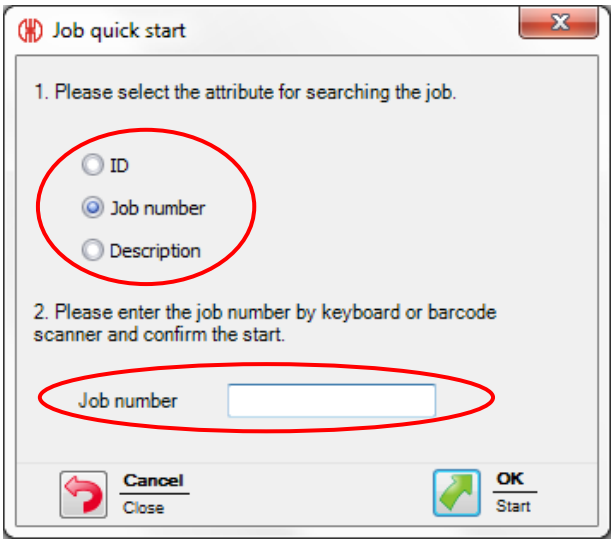

The job will be then started.

### 7.4.3.2 Job quick start

In all modules you can press the "F10" button to start a job. Alternatively, you can click on the arrow under "Start job" and select "Job quick start (F10)".



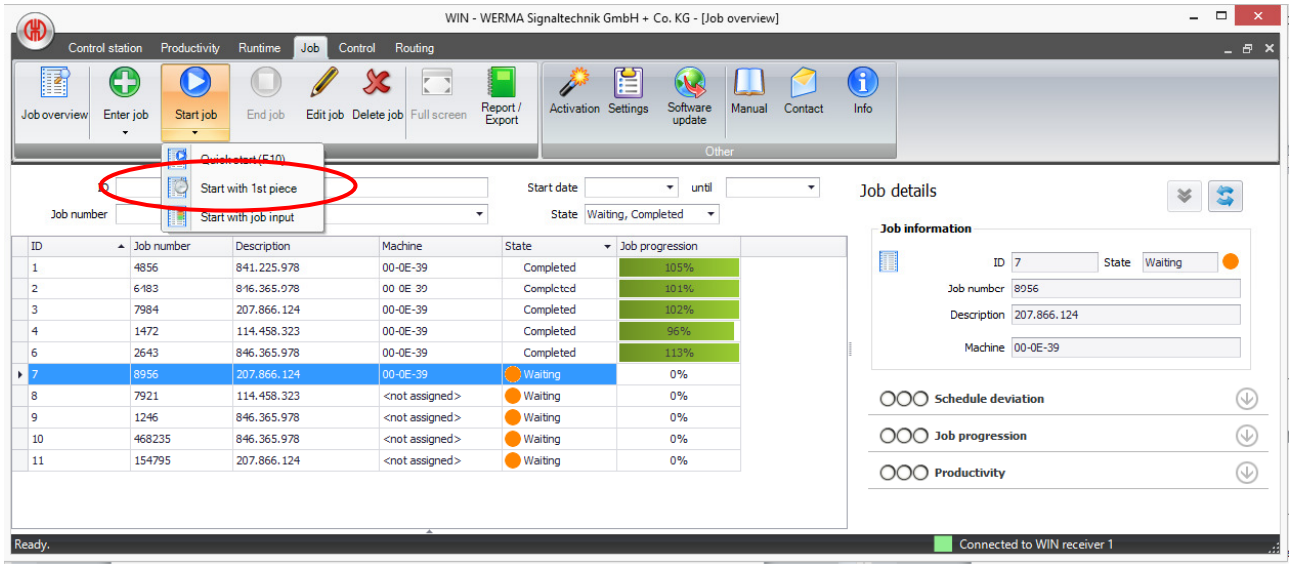

The following window opens:



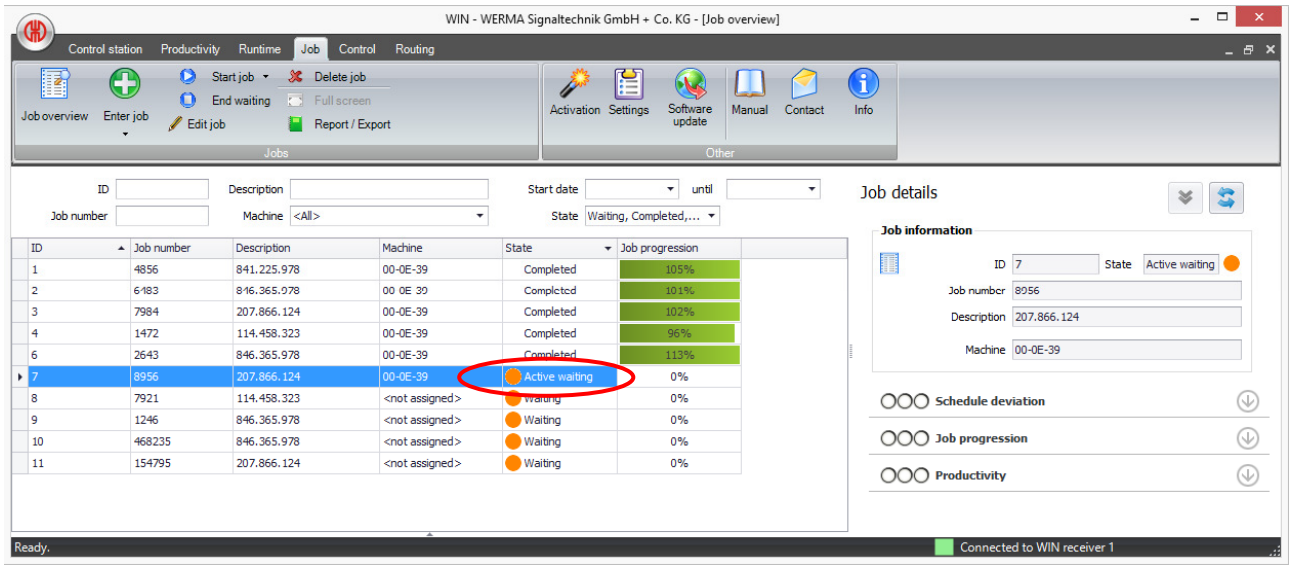

Choose one of the attributes and enter the associated value. The corresponding job is located and started.

### 7.4.3.3 Start with 1st piece

Select a "waiting job" from the Job overview list and click on the arrow under "Start job" and select "Start with 1st piece". Alternatively, right-click on the waiting job and select "Start with 1st piece".




Your job will be marked as "active waiting".

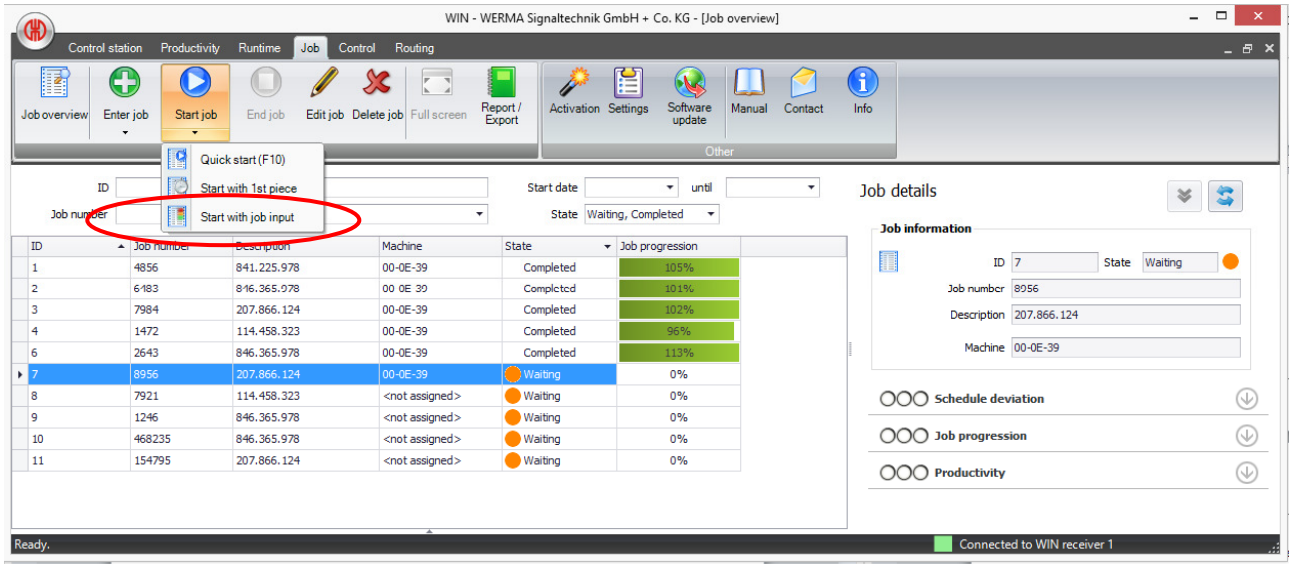



This "active waiting" job starts as soon as the first impulse on the counter input of the WIN transmitter performance is received by the WIN software.

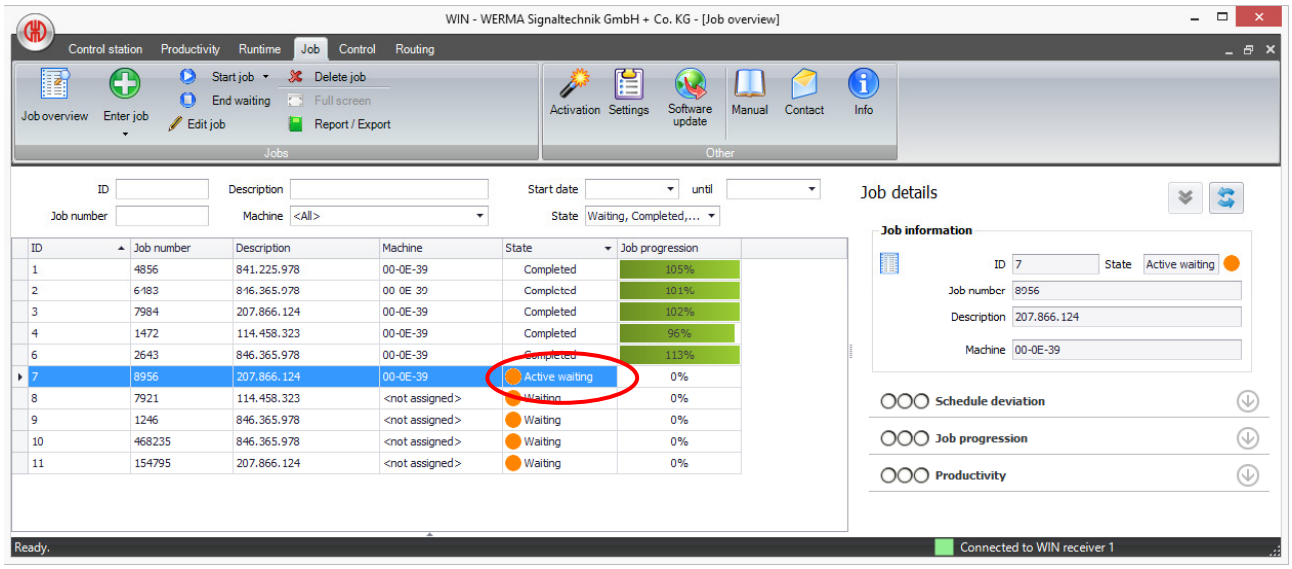
The job can then be completed with a click on "End job" or with an impulse on the job input (see chapter 7.1.3.2).

### 7.4.3.4 Start with job input

Select a "waiting job" from the Job overview list and click on the arrow under "Start job" and select "Start with job input". Alternatively, right-click on the waiting job and select "Start with job input".




Your job will be marked as "active waiting".




This "active waiting" job starts as soon as the first impulse is received on the tier of the WIN transmitter performance configured with the job input.

The job can then be completed with a click on "End job" or with a further impulse on the job input (see chapter 7.1.3.2).