

Checkbox Compact Net (CHB-C-N) mit CheckKon 4.3

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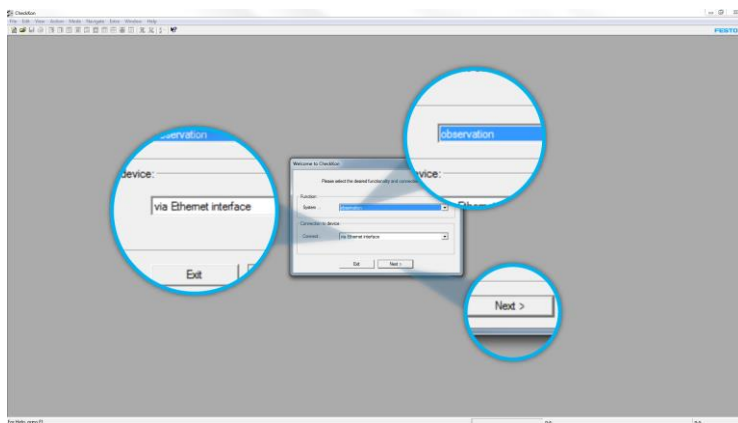
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Building Connections

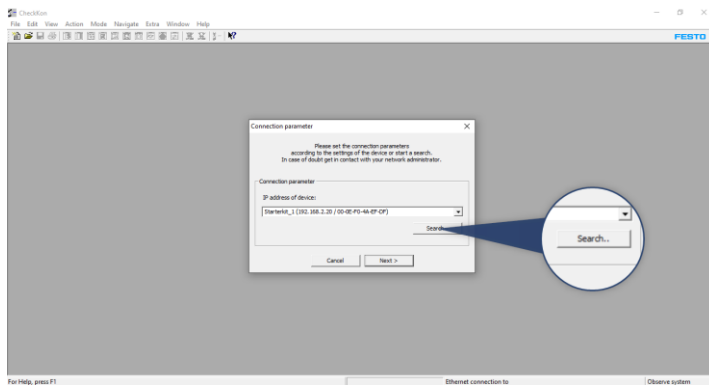
Connect diagnostic cable to camera and PC
Checkbox in stop mode
Start CheckKon



- 1.1. If you have not yet installed the CheckKon 4.3 software, you can download and install it from the Festo homepage. Please always use the latest release.

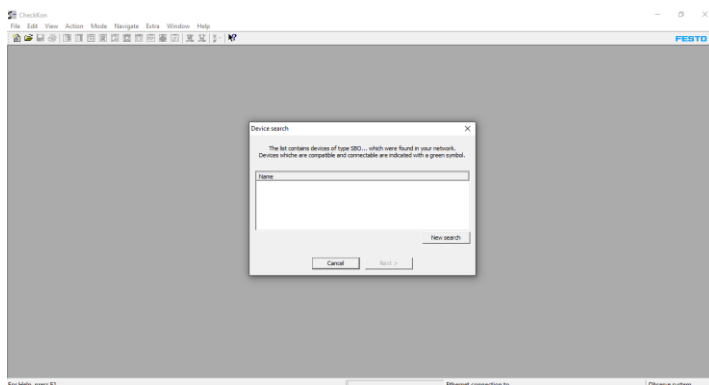
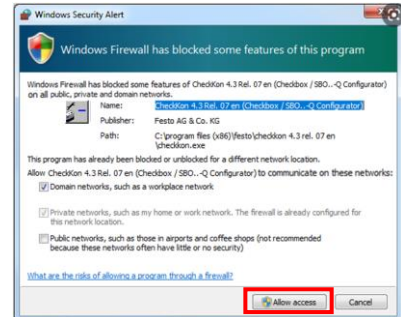


- 1.2. Set system to "observe".
- 1.3. Set the connection to "via Ethernet interface".
- 1.4. Confirm with "Next>".

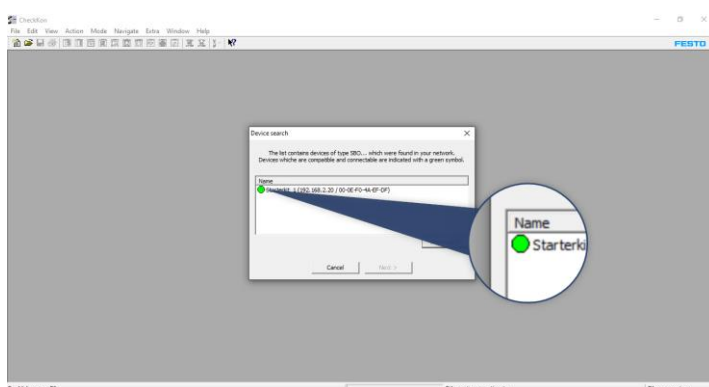


1.5. Click on „Search“.

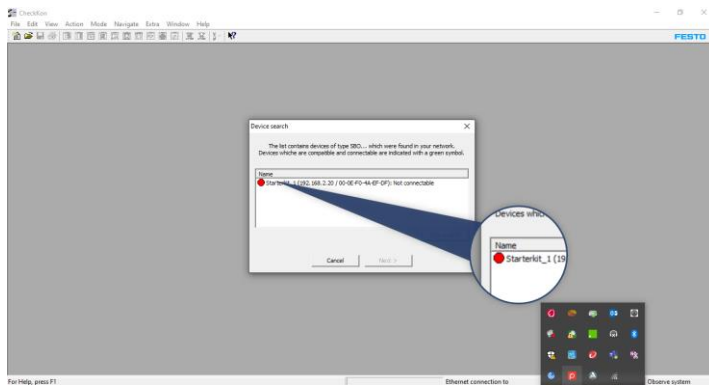
*When searching for the first time, Windows may open a message for network access. This message must be confirmed with **Allow access**! If this is not done, the CheckKon search function cannot display cameras that are not in the same address range as the laptop. If this message is aborted, CheckKon must be installed again in order to have this message window displayed*



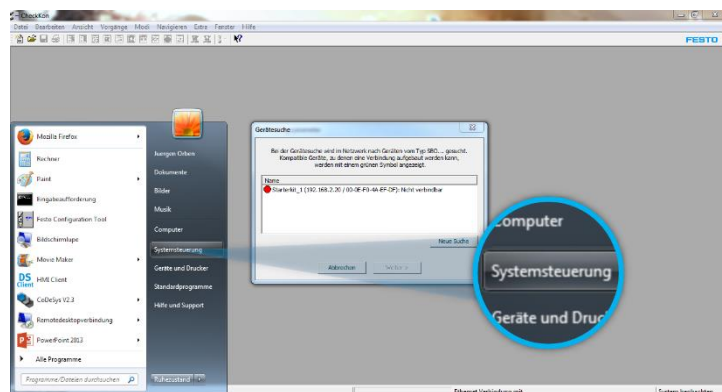
1.6. If no device is displayed after the search, please refer to the instructions/information under point 1.5.



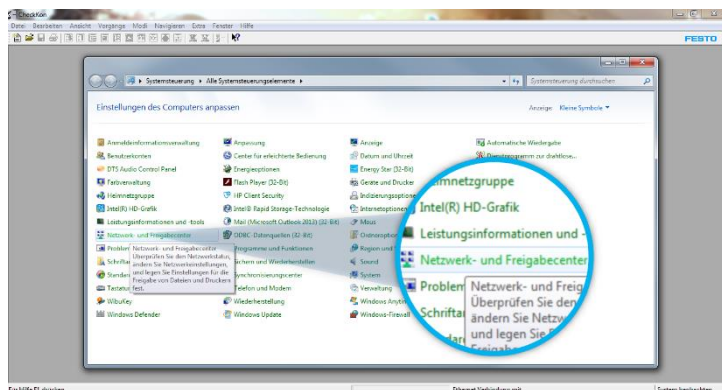
1.7. If a camera is recognized and ready for connection, this is indicated by a green dot. Now you can continue from point 1.17.



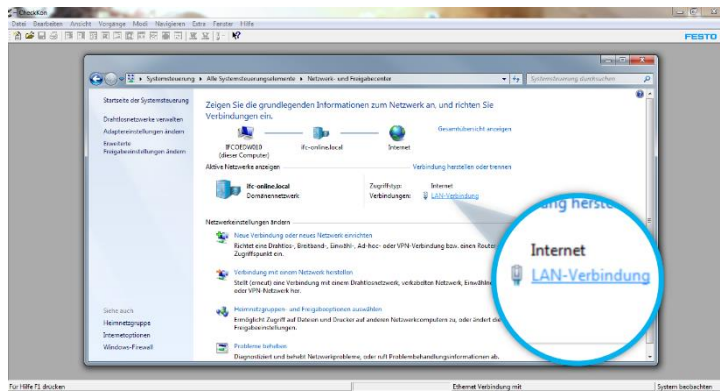
1.8. If a camera is detected and is not ready for a connection, this is indicated by a red dot. This can be because the camera is not stopped or the IP address of the network card in the PC does not match.



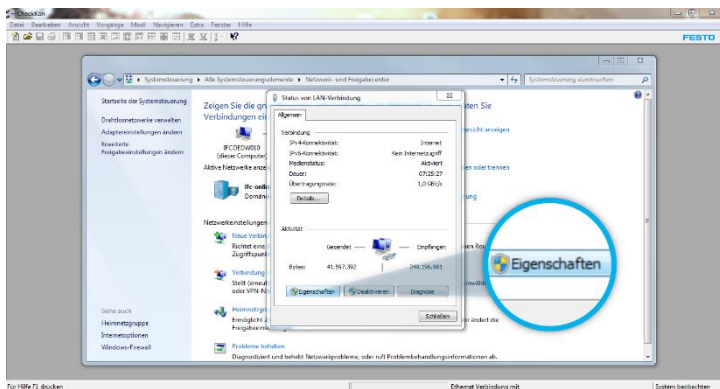
1.9. Now the IP address of the network card of the PC has to be changed. To do this, open the Windows menu and select Control Panel. (Win7)



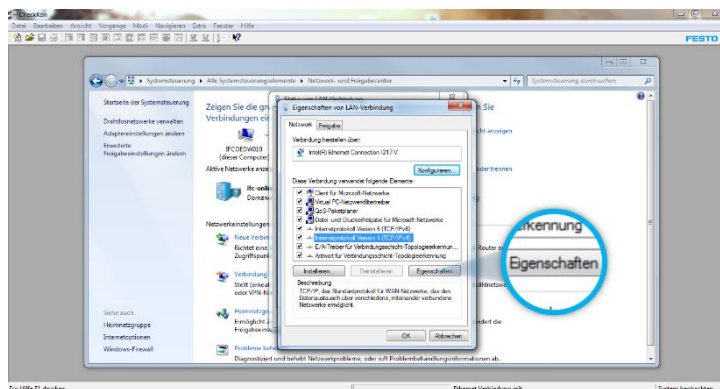
1.10. In the Control Panel window, select Network and Sharing Center.



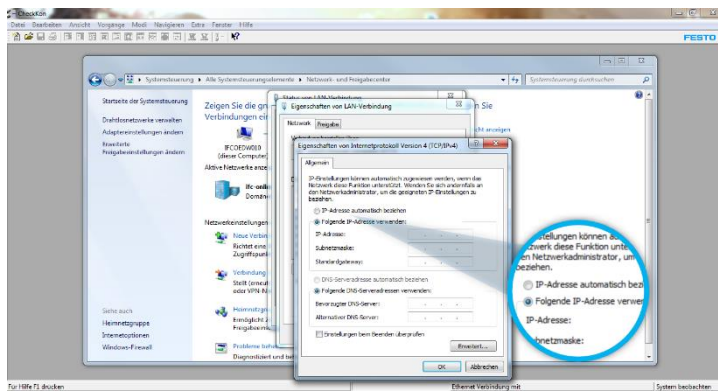
- 1.11. Now click on Local Area Connection as shown in the red frame.



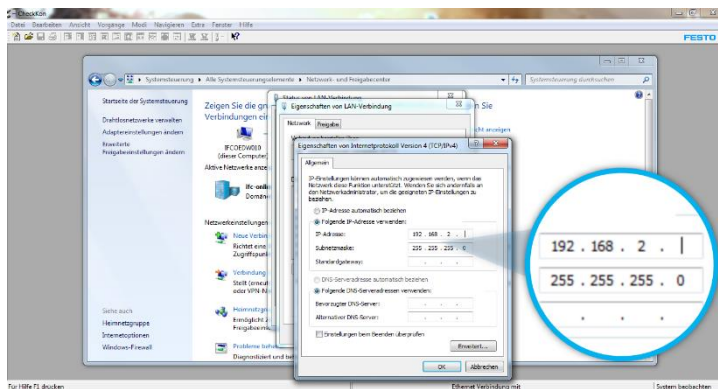
- 1.12. In the Local Area Connection Status window, click Properties. You must have administrator rights for this.



- 1.13. In the Local Area Connection Properties window, select Internet Protocol Version 4 (TCP/IPv4) and click Properties.

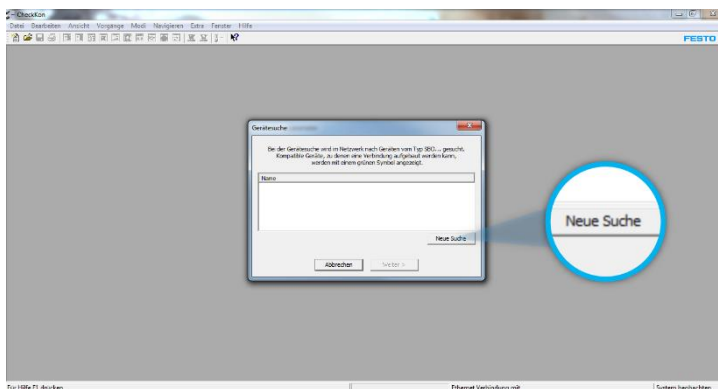


- 1.14. In the Internet Protocol Version 4 (TCP/IPv4) window, check Use the following IP address.

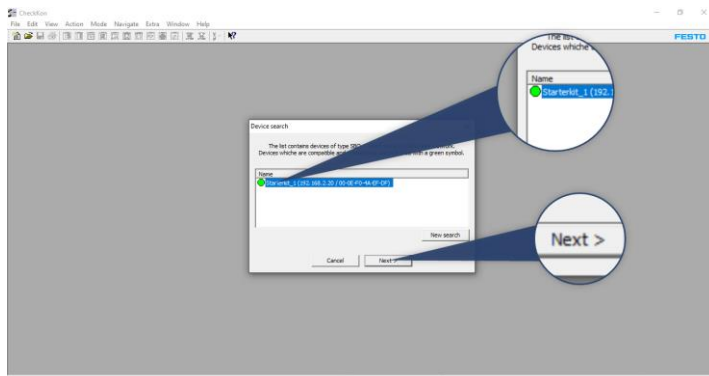


- 1.15. Now enter the numbers in the IP address field in such a way that the first three number ranges are 192.168.2. Correspond to the number ranges that were displayed in the CheckKon search mask under point 1.8 for the camera found. The last number range must be a number between 1 and 255, but not the same number that was determined for the camera under point 1.8. After that, in the subnet mask field, the first three fields must contain the number 255 and the last field must contain zero. →255.255.255.0

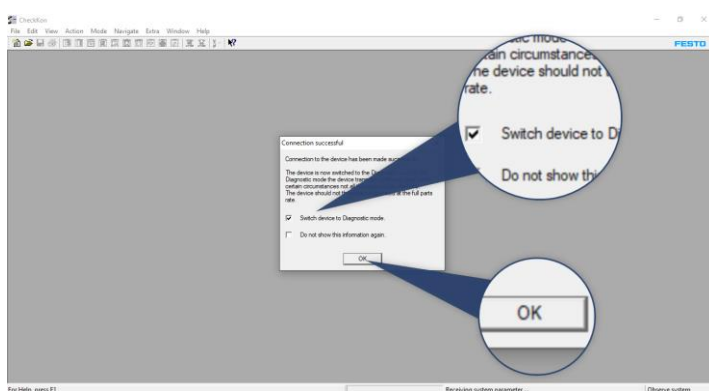
Now confirm with OK and close the windows that we opened under points 1.9 to 1.12 with OK or Close.



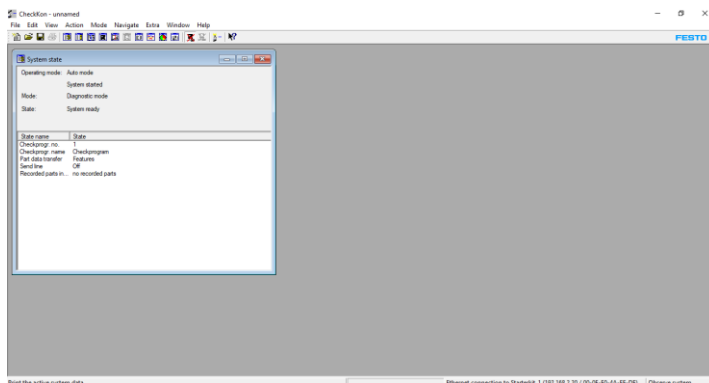
- 1.16. Now switch back to CheckKon and press New Search.



- 1.17. Now our connected camera should be visible. The green dot indicates that the camera is ready for connection. Now mark the found camera and click Next>. *If the point is red, it must be checked whether the settings under point 1.8 to 1.14 have been made correctly and whether the camera is also in the stop.*



- 1.18. Now a message appears which tells us that the camera is now in diagnostic mode. Confirm this message with OK.

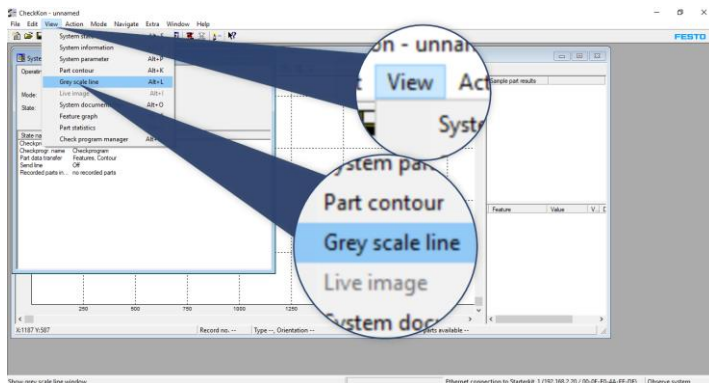


- 1.19. After successfully connecting to the camera, the System Status window opens.

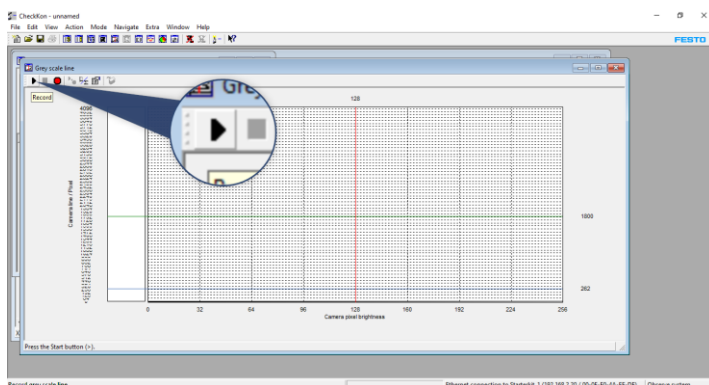
Field of view of the camera (gray scale line)

Check field of view and save

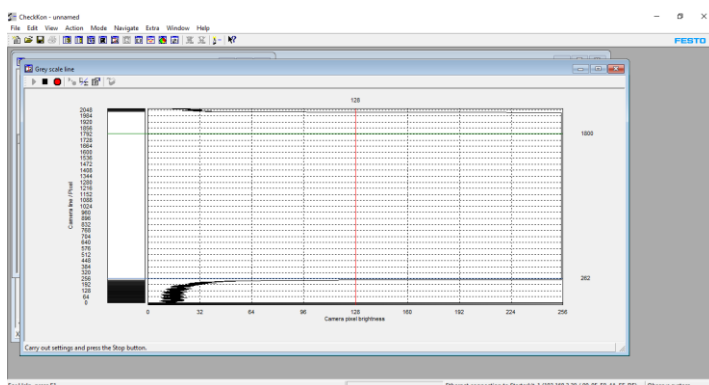
In order to check or save the field of view of the camera, the PC must first be connected to the camera. To do this, go to point 1.1 of these instructions.



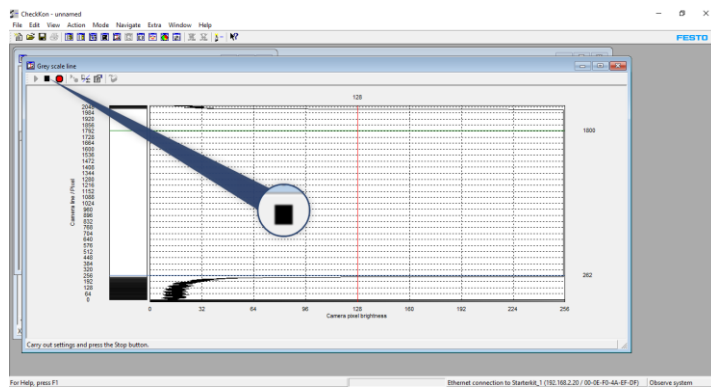
- 2.1. The gray scale line window must be opened via the View menu item.



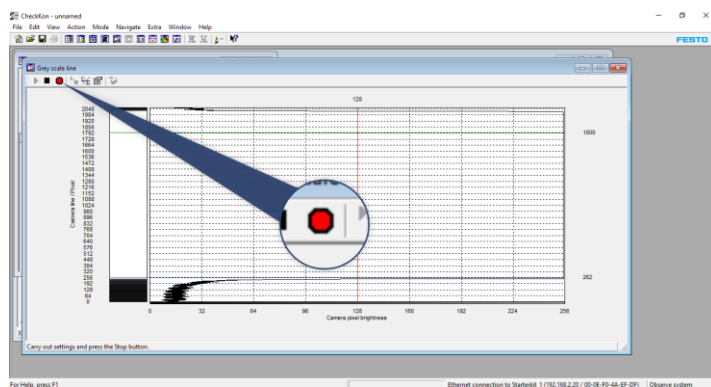
- 2.2. The camera must be in stop mode. Then first press the button with the black arrow and then start the camera.



- 2.3. Movement should now be visible in the gray scale line window.

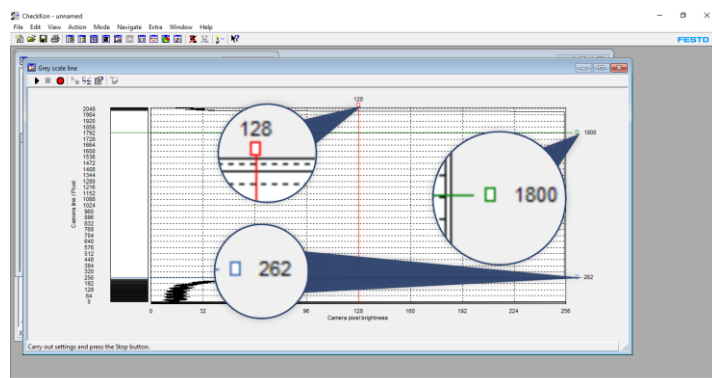


2.4. Now the camera must first be stopped and then the button with the black square pressed.

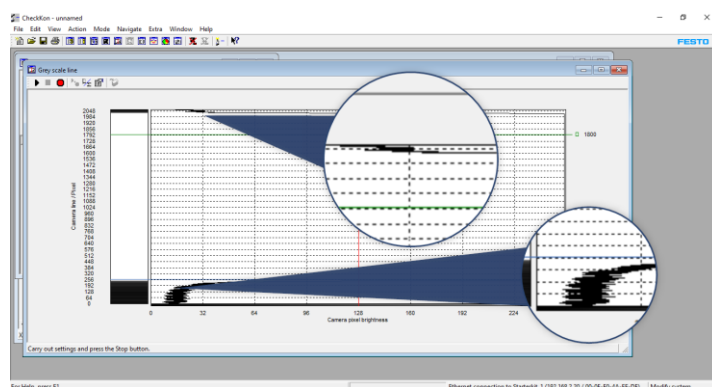


2.5. Now press the button with the red hexagon. By pressing this button, the displayed image of the CheckKon file is stored temporarily. If the CheckKon file is now saved, this image of the file is stored.

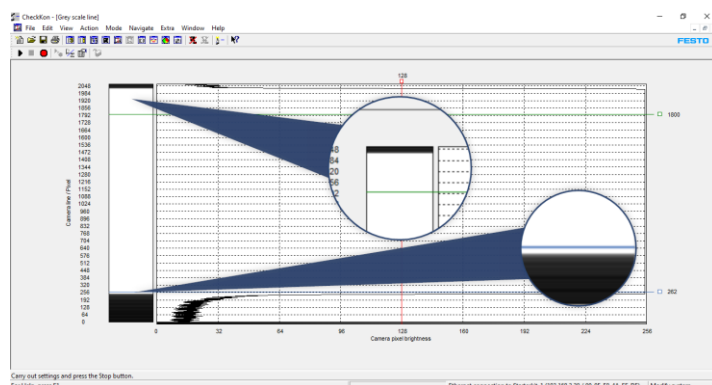
Gray scale Line Explanation



3.1. There are three sliders in the gray scale line window. The green slider represents the upper limit of the field of view. The blue slider represents the lower limit of the field of view. The red slider stands for the gray scale threshold. These sliders can only be changed if you are in the "change (password)" user level. To access this user level, please contact IFC support (Tel.: 07136/963950).

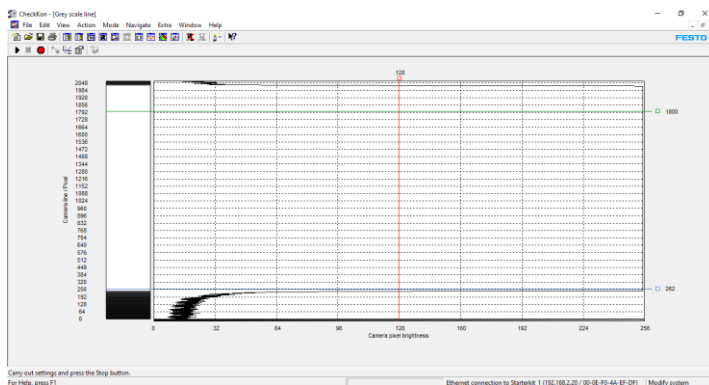


3.2. Black "spikes" can be seen in the upper and lower areas of the grid field with a clear field of view. With a completely free field of view, these are the mechanical range limits of the optics. Depending on the mechanical adjustment of the camera in relation to the conveyor belt (height), more or less black can be seen in the lower area. In IFC systems, this would be the conveyor belt.

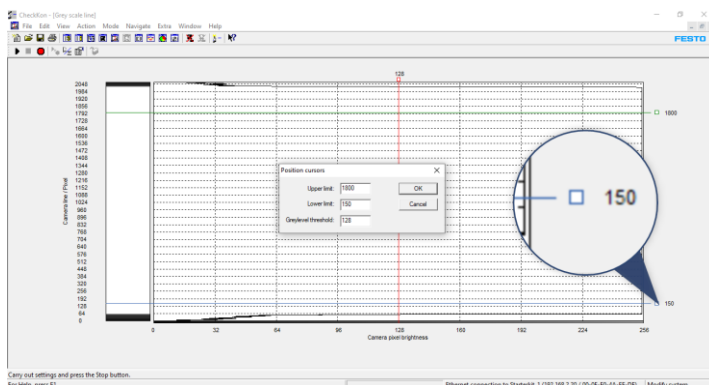


3.3. The field of view of the camera can also be seen in the white window on the left. In contrast to the grid field, a smooth transition is shown here. This corresponds to how humans perceive the field of vision and the grid is the graphic digitization of this.

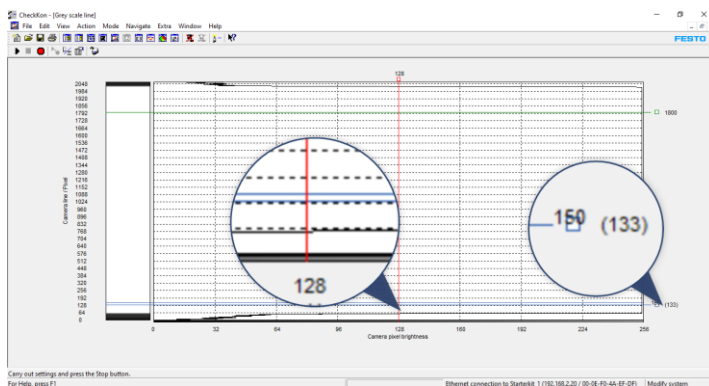
Adjust gray scale line



4.1. First the gray scale line must be started. To do this, follow point 2.1 to 2.3. The field of view must be clear. If this is not the case, the camera must be adjusted mechanically so that your field of vision is free again. It should be ensured that the camera is aligned at a 90° angle to the conveyor belt. Now the height has to be set.

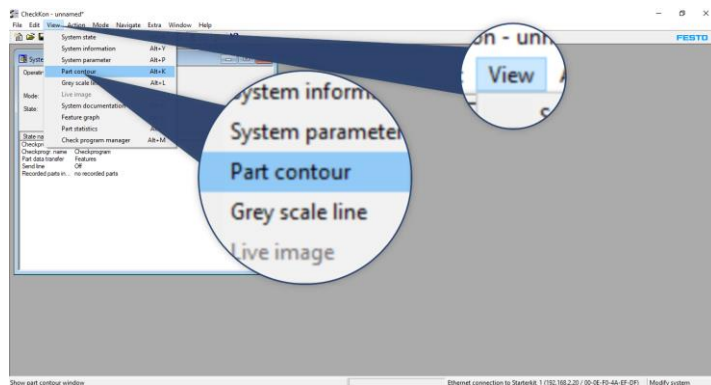


4.2. When delivered, the lower field of view limit is set to 150. This value must be set to 133. To do this, double-click the small white square in front of the value. A window will now open in which you can enter the value for the lower limit and confirm with OK.

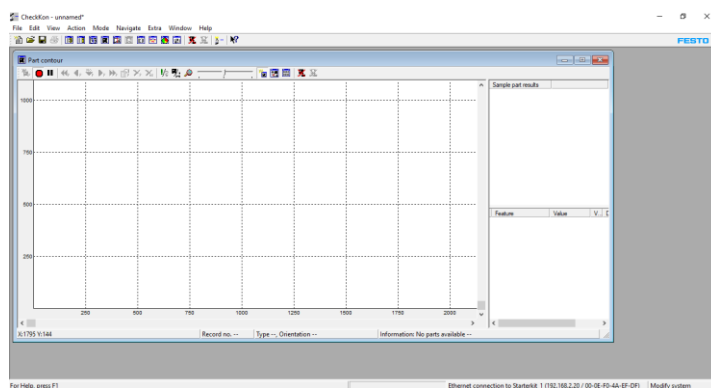


4.3. Two blue lines can now be seen. The camera must now be mechanically adjusted in height so that the black line (conveyor belt) touches the blue line with the value 133. Once this has been done, the gray scale line can be ended and saved as described in points 2.4 to 2.5.

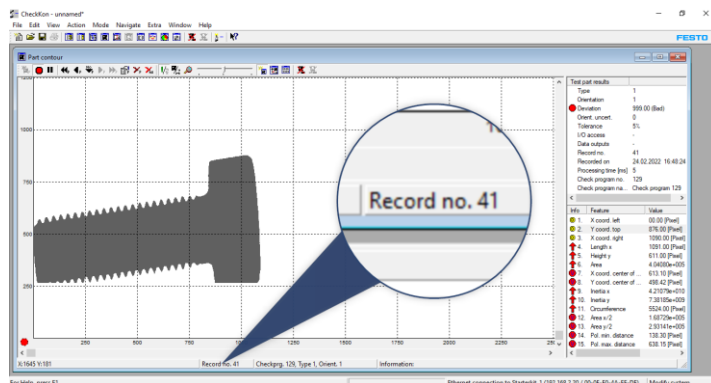
Records



- 5.1. From the top menu, select View and open the Part Contour window.



- 5.2. Now you can start the camera. Run the entire system so parts can get off the infeed and onto the conveyor. The reason for this is that any vibrations are also recorded.

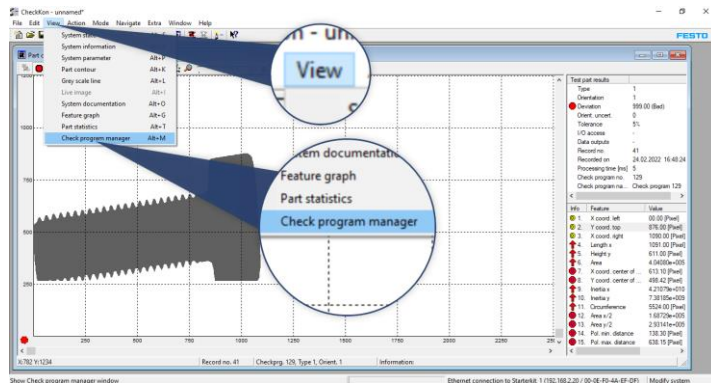


- 5.3. A contour image of each part that passes the field of view of the camera is now displayed and stored in the part contour window. You should take between 30 and 50 pictures. You can see the number of images taken at the bottom of the Part Outline window. When the desired number of shots has been taken, stop the camera again so that the camera display shows Stop.

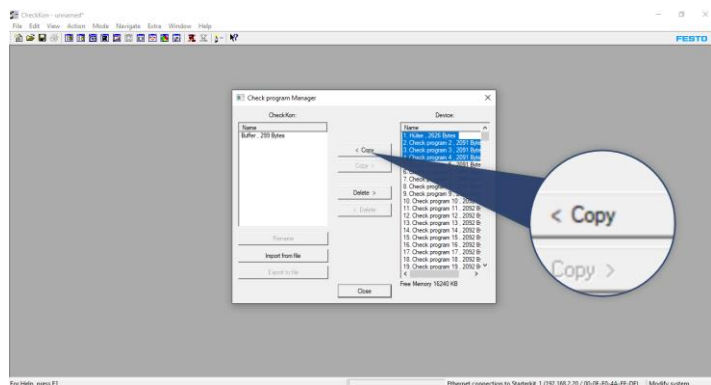
Save test programs from the camera

Backup by saving the CheckKon file

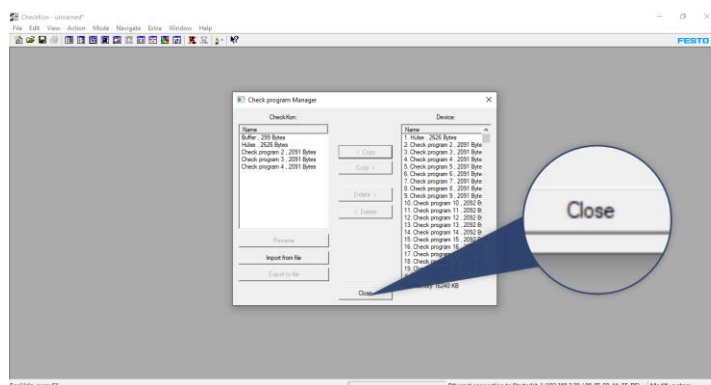
6.



6.1. In the top menu, select View and open the Check Program Manager window.

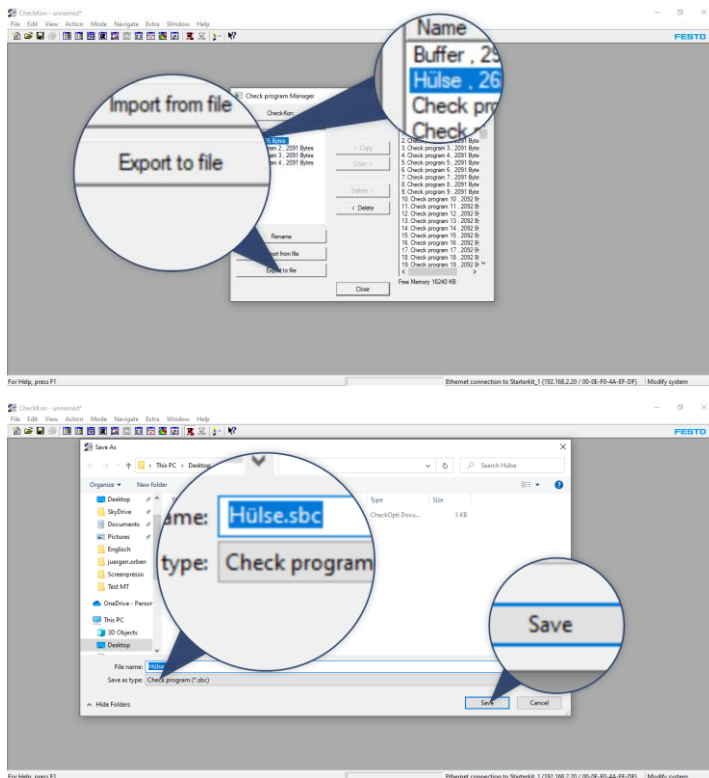


6.2. In the Check Program Manager window, select all occupied camera slots in the Device field on the right-hand side. The camera positions that are not occupied can be recognized by the designation "Checkprogram 1, 2091 bytes". When all assigned programs have a blue background, click on <Copy>.



6.3. The selected programs are now on the left side, in the CheckKon field. Now click on the Close button. If the CheckKon file is now saved, the test programs are also located in this.

Save the test programs in a folder



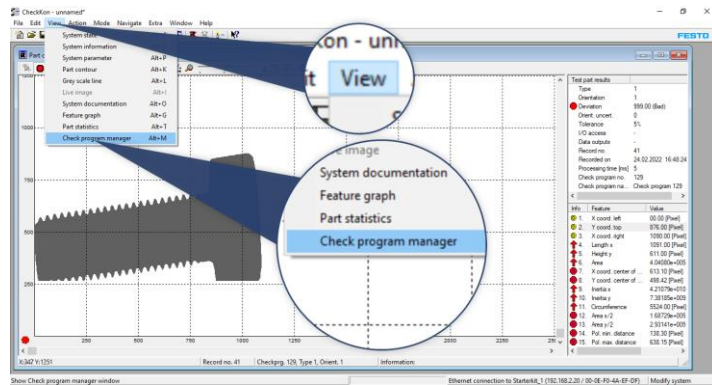
6.4. Proceed as described up to point 6.2 Now mark the test program to be saved, or all programs at once, on the left side. Now the "Export to file" button is no longer greyed out. Click

6.5. A Windows window will now open. Select the desired storage location and click on Save. The Name of the test program is automatically adopted.

Upload test programs to the camera

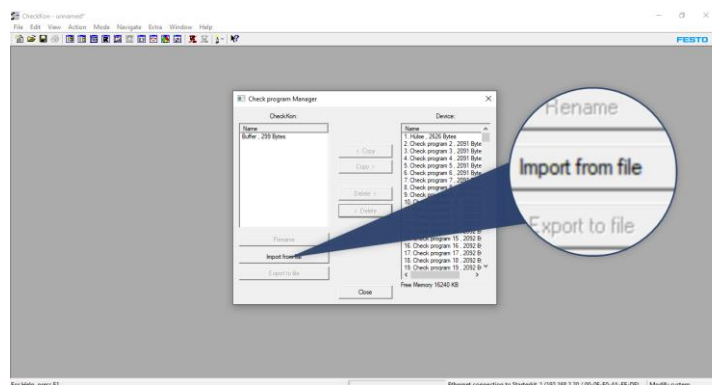
Load test program from a saved file

7.



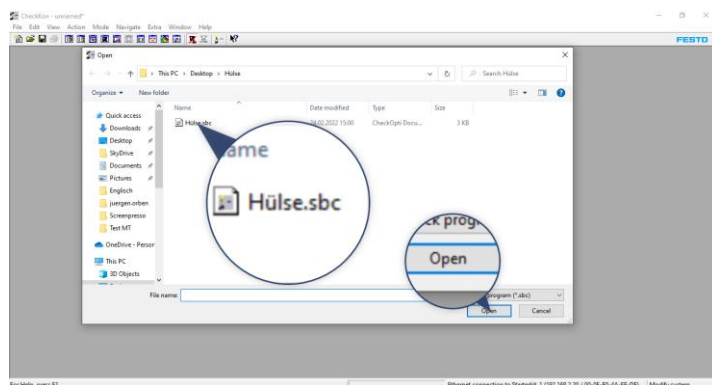
7.1.

In the top menu, select View and open the Check Program Manager window.



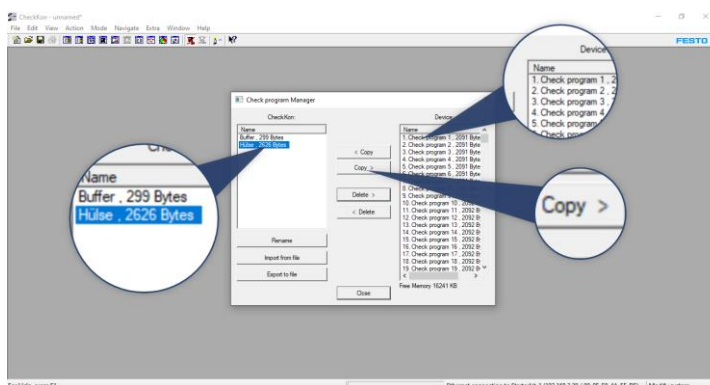
7.2.

In the Check Program Manager window, click on "Import from file" on the left side.



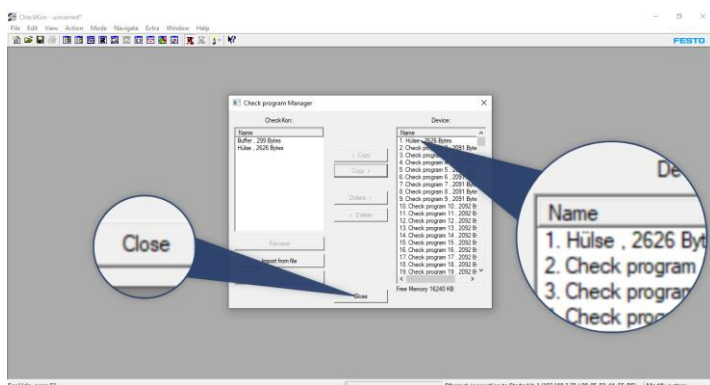
7.3.

Windows Explorer opens. Here you look for the test program that you want to load onto the camera and click on open.



7.4. The test program that you have opened should now be visible in the left field of the test program manager. To load the program onto the camera, mark the program on the left-hand side by clicking on it. This should now be highlighted in blue. Next, on the right-hand side, click on the program slot on which you would like the program to have a blue background. If you have selected a program or a program slot on both sides, the buttons in the middle turn black. By clicking on "> Copy" you transfer the program you have

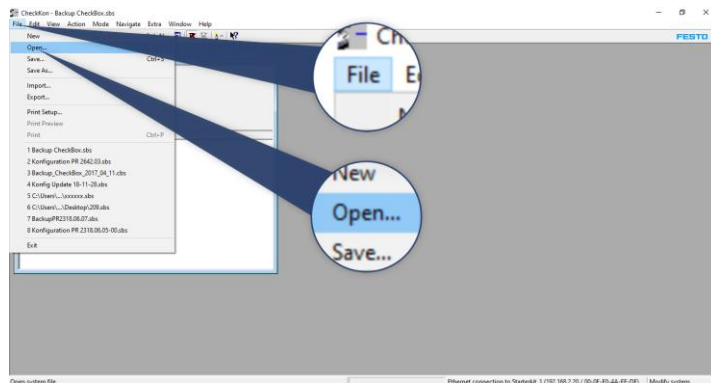
opened to the camera. Please make sure you click the right button. By clicking on "< Copy" you overwrite the program you have opened with which is on the camera.



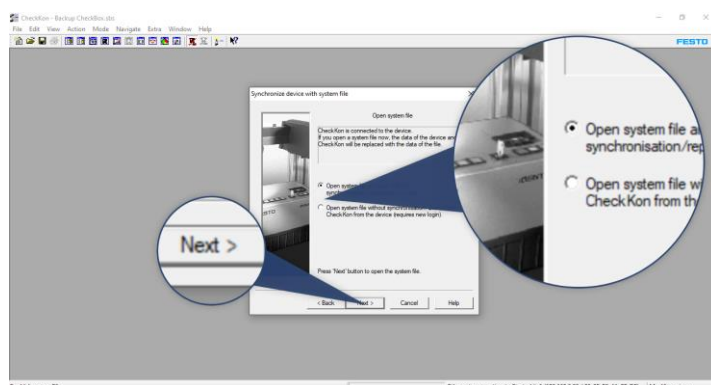
7.5. If you have done everything correctly, the program you have opened can be seen on the program slot you selected on the camera. Now click on "Close" to close the Check Program Manager.

Upload device data

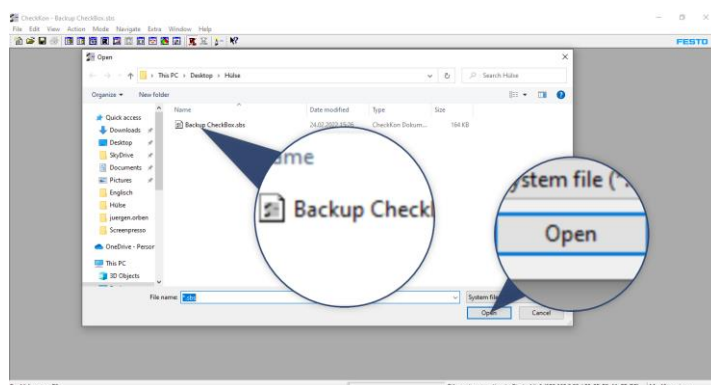
Stored device data can be uploaded to a camera. This is the case when a camera is exchanged or an indeterminate behavior occurs. The parameters do not have to be entered manually here. These are automatically imported via the device data. Likewise the settings of the gray scale line. If the teach data (test programs) were also saved, as under point 0, they can also be loaded.



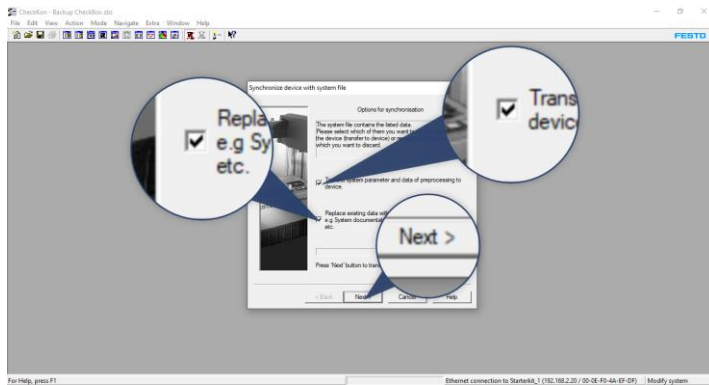
8.1. First connect to the camera as described in point 1.1. Then go to File and Open.



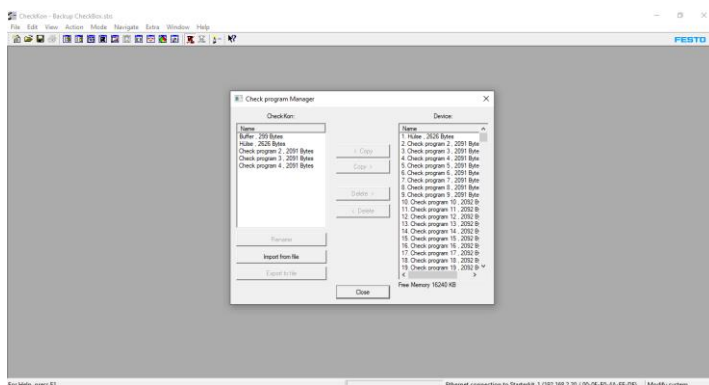
8.2. A menu will now open. Here you select "Open system file....." and click Next.



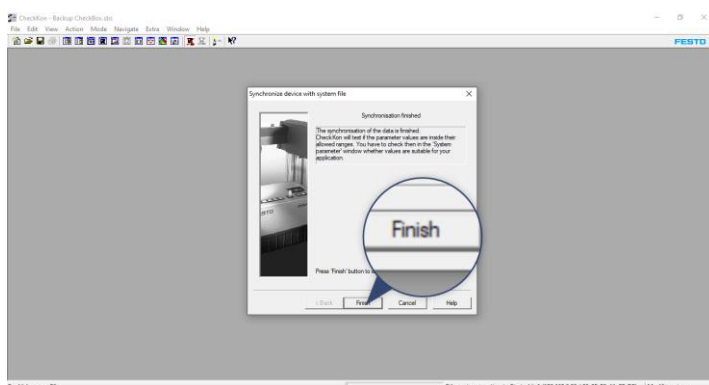
8.3. In the Windows window that opens, select the saved file and click on open.



8.4. In this window you can select what should be uploaded to the camera from this file. Both check marks are set by default. When you've selected what you want to transfer, click Next.

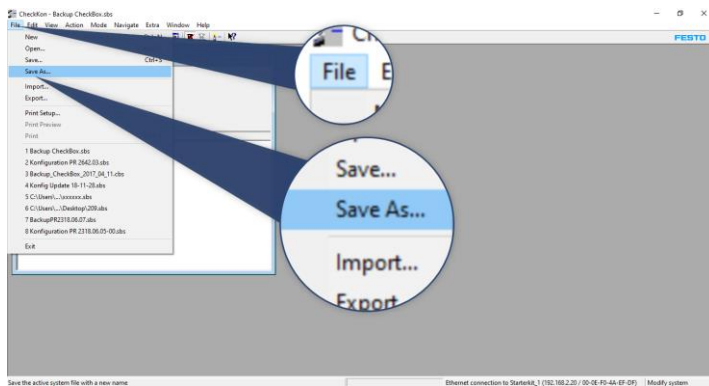


8.5. Now the test program manager opens. Here you can see the test programs from the opened file on the left-hand side. These can now be selected and played on the camera. After that click Close.

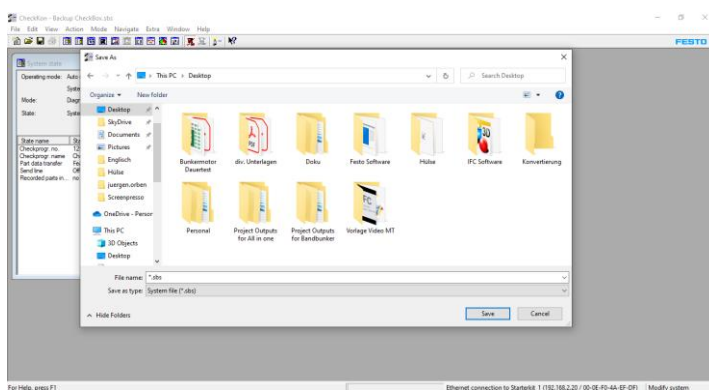


8.6. Now you have to click on "Finish". You have now reloaded the device data and are returned to the start screen as shown in point 1.19.

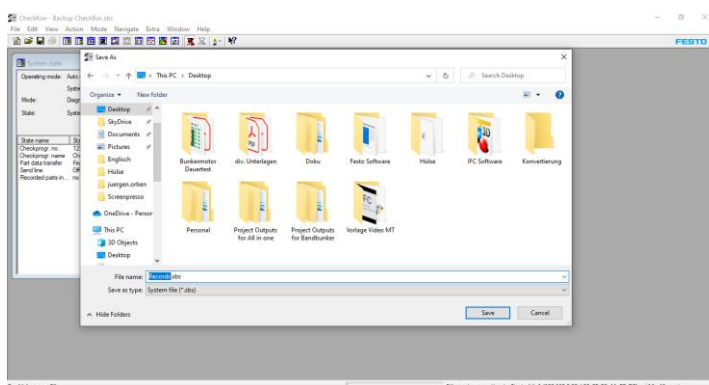
Save data



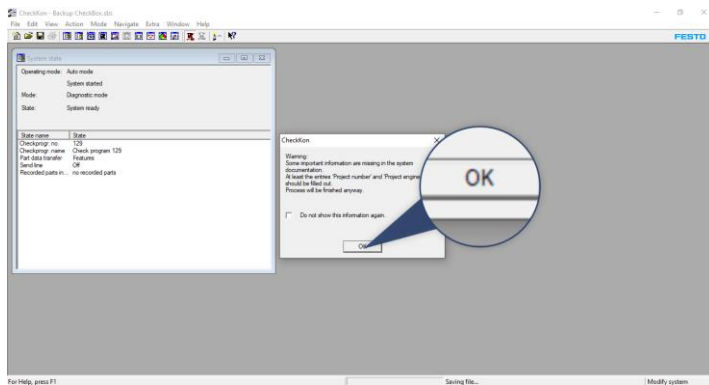
9.1. From the top menu, select File and open the Save As window.



9.2. In the Save as window, select the storage location for the CheckKon file.

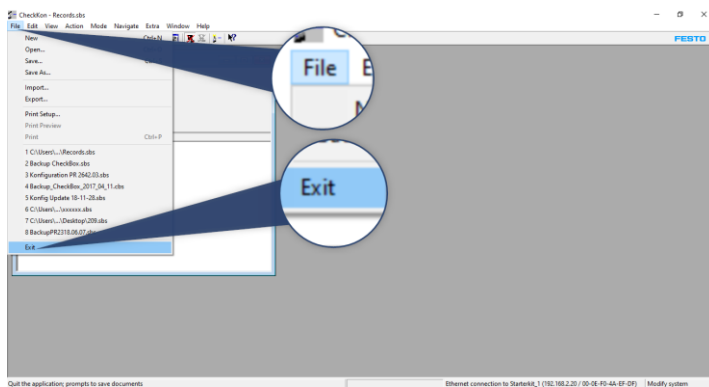


9.3. Now give the file a name and then click on **Save**. *If you do not assign a name and keep the name *.sbs, the save process cannot be completed.*



- 9.4. After saving, a window opens with the message that entries are missing in the system documentation. You can confirm this message with OK.

End



- 10.1. From the top menu, select File and click Exit.