



CR7 WITH SGC STEERING UPDATE CONTROLLERS

016-8000-XXX EN REV. A

Update manual
(English) (Original)

RAVEN

PREFACE

This installation manual is intended for persons responsible for installing a CR7 kit. The manual contains important instructions that should be complied with when commissioning, operating and servicing the CR7.

This manual has been compiled with the utmost care. Raven Europe assumes no responsibility for any errors or omissions in this document.

Any comments or questions can be sent to service-eu@ravenind.com.

Raven Europe or any of its suppliers will accept no liability for physical or material damage caused whilst using the CR7.

The installed Raven system produces less than 70dB (A) noise.

This installation guide uses a number of concepts for extra attention to a few things:

**Hint!:**

Provides recommendations on how certain activities can be performed much easier.

**Please note!:**

Indicates certain problems that the user should take note of.

**Caution!:**

Indicates that the machine can be damaged.

**Warning!:**

Indicates a risk of injury.

DISCLAIMER

WARNING!

- The safety instructions contained in the manuals of the tractor or implements must be complied with at all times.
- Always switch off the tractor before installing or repairing hydraulic and electrical components of the SBGuidance system.
- It is strictly prohibited to use the CR7 system on public roads.
- It is strictly prohibited to leave a driving vehicle unattended when the CR7 system is switched on. The driver is always responsible for the direction and course of the vehicle.
- To prevent injury or fire, replace defective fuses only with fuses of the same type and amperage.
- The SBGuidance the operating system is not able to detect and avoid obstacles. If there is an obstacle in your path, you will always need to take action for it to be avoided.
- Only allow authorized/qualified persons to operate the system. Authorized/qualified persons are defined as: persons who have read and understood the manual, have been given instructions by a product specialist, and who are both physically and mentally fit and able to operate the system.
- The system contains moving parts! Make sure the immediate environment is clear of people before operating the system.
- In case of system failure or breakdown switch of the tractor and disconnect the electrical power source to avoid further damage. Contact your dealer for further instructions on how to repair your system.
- Always wear personal protective equipment when operating/adjusting/repairing the system outside of the tractor cab.
- In order to prevent power surges from occurring, always start the machine first, before initiating the SBGuidance control system.

PAY ATTENTION!

- Only touch the touch-screen with your finger or by using a special touch-screen stylus/pen. Operating the touch-screen with sharp objects may cause permanent damage to the screen.
- Always consult your supplier as to which products are best suited first before cleaning the touch-screen with chemicals or alcohol.
- If the terminal is not used for a long period, better remove the terminal from the tractor and store in a heated environment. This will extend the life span of the electronic components.
- To prevent theft, it is better to not let the terminal and GPS-antenna unattended in the tractor on the field.

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1 INSTALL PROGRAMS ON LAPTOP

Programs needed

- CANTool 2.0.33 (or newer)
 - Download here: <http://www.raveneurope.com/download/cantool/>
- Raven Service Tool 2.7.27 (or newer)
 - Download here: <https://portal.ravenprecision.com/ProductDocumentation/Category?categoryId=181>
- If installations of this programs does not work, refer to the complete manual on the websites.

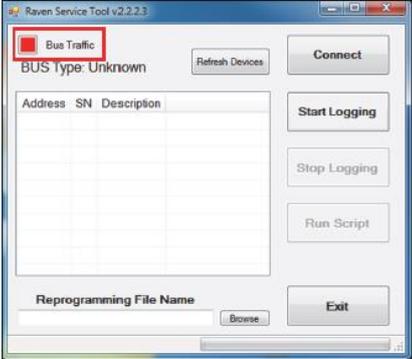
Needed hardware:

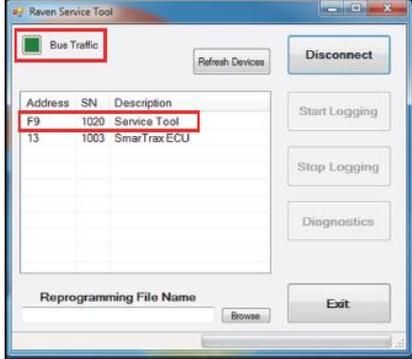
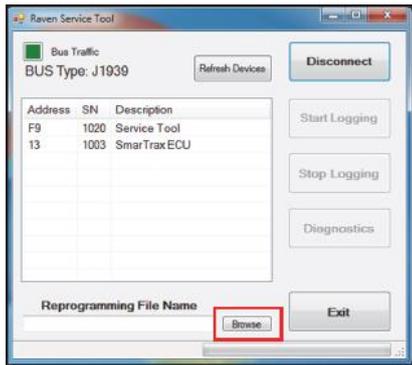
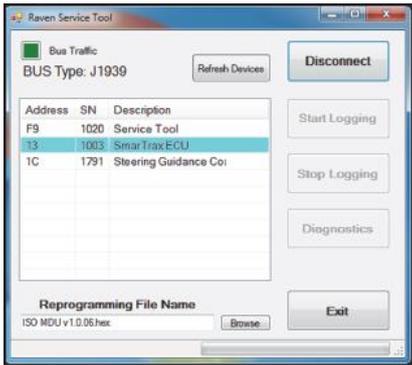
Raven Service Tool installation Kit

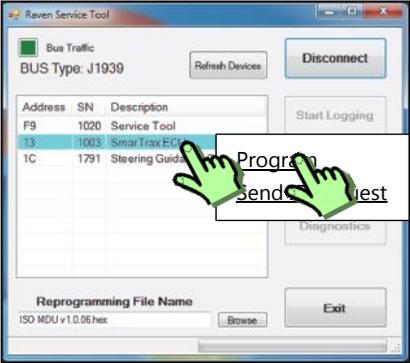
TABLE 1. Raven Service Tool Installation Kit (P/N 117-0171-464)

Picture	Item Description	Part Number	Qty.
	Converter - Systemc USB to CAN	063-0173-428	1
	Drive - USB Flash with Software	063-0173-595	1
	Cable - USB to 4-pin Deutsch CAN Adapter	115-0172-029	1

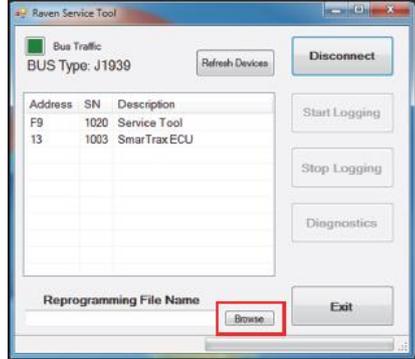
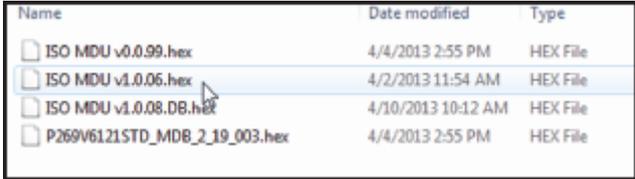
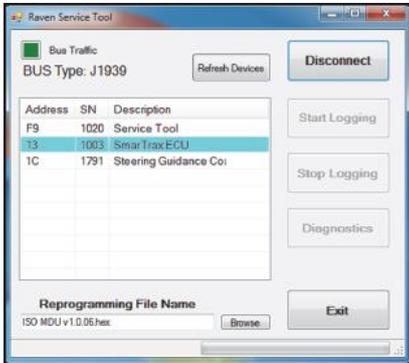
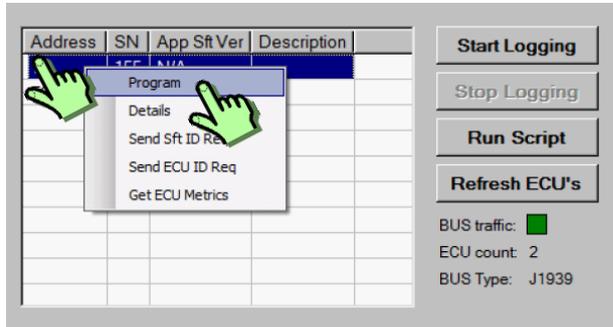
2 UPDATE SGC (RAVEN ISO STEERING CONTROLLER)

#	Description	Picture
01	Connect the USB to CAN module to the laptop	
02	Connect the 4-pin DT connector to the 4-pin DT connector in the cabling (CR7 terminal harness, 115-8000-027)	
03	Open the Raven Service Tool	
04	Press on 'Connect'	

<p>05</p>	<p>After pressing connect, the 'Bus Traffic' must be green. All the modules on the bus are shown.</p>																
<p>06</p>	<p>Press on 'Browse'.</p>																
<p>07</p>	<p>Search for the right update file SGC = P449-SGC-Standard_v1_1_1_2.hex (or higher)</p>	 <table border="1"> <thead> <tr> <th>Name</th> <th>Date modified</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>ISO MDU v0.0.99.hex</td> <td>4/4/2013 2:55 PM</td> <td>HEX File</td> </tr> <tr> <td>ISO MDU v1.0.06.hex</td> <td>4/2/2013 11:54 AM</td> <td>HEX File</td> </tr> <tr> <td>ISO MDU v1.0.08.DB.hex</td> <td>4/10/2013 10:12 AM</td> <td>HEX File</td> </tr> <tr> <td>P269V61.21STD_MDB_2_19_003.hex</td> <td>4/4/2013 2:55 PM</td> <td>HEX File</td> </tr> </tbody> </table>	Name	Date modified	Type	ISO MDU v0.0.99.hex	4/4/2013 2:55 PM	HEX File	ISO MDU v1.0.06.hex	4/2/2013 11:54 AM	HEX File	ISO MDU v1.0.08.DB.hex	4/10/2013 10:12 AM	HEX File	P269V61.21STD_MDB_2_19_003.hex	4/4/2013 2:55 PM	HEX File
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<p>08</p>	<p>Once the file is selected, the SGC should color lightblue (description is different then in picture, description is SGC).</p>																

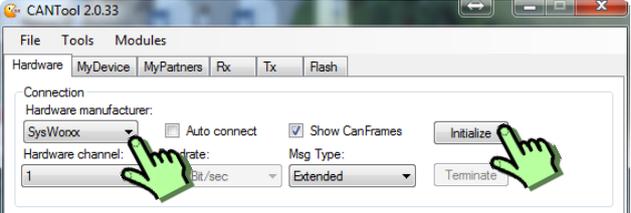
<p>09</p>	<p>Right-click on the device and select Program to start the programming.</p>	
<p>10</p>	<p>The progress of programming is shown in the service tool, the bar at the bottom. If an error message is shown, please reconnect the device again (plug the cable from the connector out and in again).</p>	

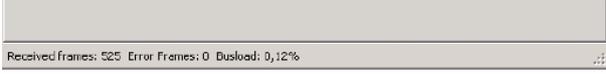
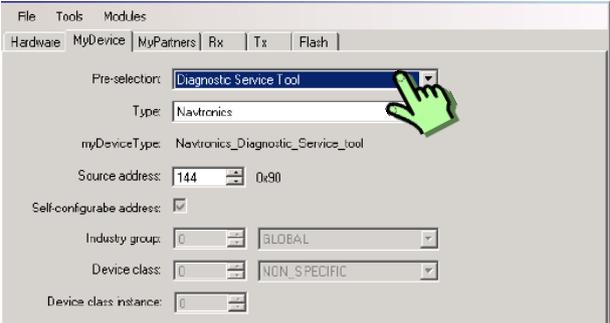
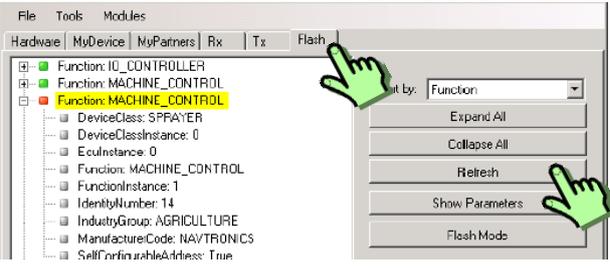
3 UPDATE MDU (ELECTRICAL STEER MOTOR UNIT)

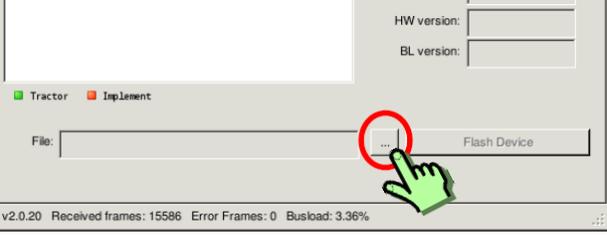
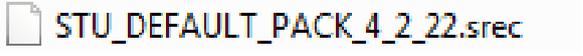
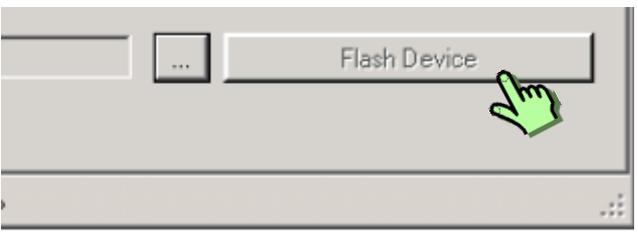
#	Description	Picture															
11	<p>Connect and open the Raven Service Tool (see step #01 to step #05).</p> <p>Press on 'Browse' to select the file for the MDU update.</p>																
12	<p>Select the .hex file for updating the MDU; MDU_P502_Standard_v2_1_0_92.hex (or higher).</p>	 <table border="1"> <thead> <tr> <th>Name</th> <th>Date modified</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>ISO MDU v0.0.99.hex</td> <td>4/4/2013 2:55 PM</td> <td>HEX File</td> </tr> <tr> <td>ISO MDU v1.0.06.hex</td> <td>4/2/2013 11:54 AM</td> <td>HEX File</td> </tr> <tr> <td>ISO MDU v1.0.08.DB.hex</td> <td>4/10/2013 10:12 AM</td> <td>HEX File</td> </tr> <tr> <td>P269V6121STD MDB_2_19_003.hex</td> <td>4/4/2013 2:55 PM</td> <td>HEX File</td> </tr> </tbody> </table>	Name	Date modified	Type	ISO MDU v0.0.99.hex	4/4/2013 2:55 PM	HEX File	ISO MDU v1.0.06.hex	4/2/2013 11:54 AM	HEX File	ISO MDU v1.0.08.DB.hex	4/10/2013 10:12 AM	HEX File	P269V6121STD MDB_2_19_003.hex	4/4/2013 2:55 PM	HEX File
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13	<p>Once the file is selected, the Smartrax MD should color lightblue (description is different then in picture, description is Smartrax MD).</p>																
14	<p>Right-click on the device and select Program to start the programming.</p>																

15	<p>The progress of programming is shown in the service tool, the bar at the bottom.</p> <p>If an error message is shown, please reconnect the device again (plug the cable from the connector out and in again).</p>	
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4 UPDATE STU (STEERING CONTROLLER, NEARBY HYDRAULIC MANIFOLD)

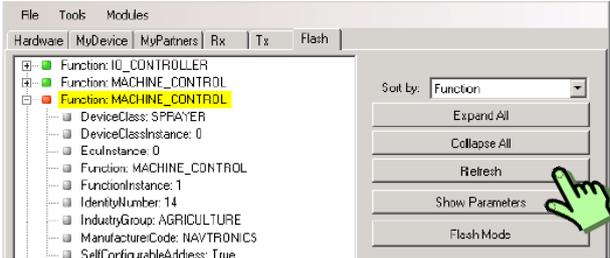
#	Description	Picture
16	Connect the USB to CAN module to the laptop	
17	Connect the 4-pin DT connector to the 4-pin DT connector in the cabling (CR7 terminal harness, 115-8000-027)	
18	Open the CANtool	
19	Select for Hardware manufacturer: SysWorxx Select for Hardware Channel: 1 Press Initialize	

<p>20</p>	<p>Check in the bottom of the screen if there is busload (connection).</p>	
<p>21</p>	<p>Go to the next tab (MyDevice) Set for Pre-selection: Diagnostic Service Tool</p>	
<p>22</p>	<p>In this tab (MyDevice), Press Connect (on the bottom of the screen).</p>	
<p>23</p>	<p>Go to the tab Flash. Press Refresh to see all the modules which are on the CANbus.</p>	

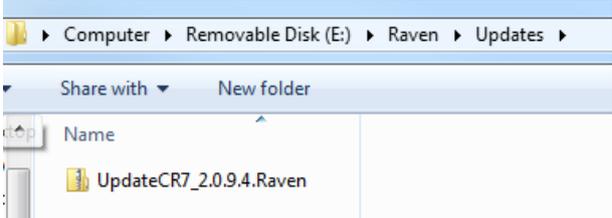
<p>24</p>	<p>The Steering controller is the device that needs to be updated. It is shown like this in the list of controllers.</p> <p>Double click on this controller.</p>	
<p>25</p>	<p>Press on the '...' to search for the update file.</p>	
<p>26</p>	<p>Select the right update file: STU_DEFAULT_PACK_4_2_22.srec</p>	
<p>27</p>	<p>After the file is selected, press Flash Device in the bottom.</p>	

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After the flash has finished, press Refresh again and the Steering Controller will appear on the CANbus again.



5 UPDATE CR7 SOFTWARE

#	Description	Picture
29	<p>Download the latest software: CR7 2.0.9.4 or higher (www.raveneurope.com).</p> <p>Copy the .zip file to a USB. Folder structure; USB</p> <ul style="list-style-type: none"> -Raven -Updates 	
30	<p>Go to the 'Software Update' in the settings of the CR7. If it is not in a shortcut like in the picture, swipe to the 2nd page of settings.</p> <p>Press on Software Update.</p>	
31	<p>The software update will occur.</p> <p>Press Update. The CR7 will automatically ask for a reboot after the update has finished.</p>	

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