1 Introduction

This publication details the procedure for installing and using the Navigator 540 transmitter software upgrade equipment. These procedures must be carried out by a trained technician only.

The contents of the software upgrade kit are shown in Table 1:

<table>
<thead>
<tr>
<th>Description</th>
<th>Part No.</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debugger assembly</td>
<td>B13179</td>
<td>1</td>
</tr>
<tr>
<td>Cable assembly – transmitter</td>
<td>CM30/0071</td>
<td>1</td>
</tr>
<tr>
<td>PCB assembly</td>
<td>CM30/0375</td>
<td>1</td>
</tr>
<tr>
<td>This publication – Installing and using software upgrade equipment</td>
<td>INF13/120-EN</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1   Software upgrade kit AW500 030

2 For more information

Further information is available from: www.abb.com/analytical

or by scanning these codes:

Sales
Service
3 Identification

The issue of the board fitted is identified in the Device Info / Hardware Version menu:

Warning.

- Isolate all high voltage supplies to the transmitter before performing these procedures.

4 Assembling the upgrade kit

4.1 Transmitter

1. Unpack the upgrade kit.

Referring to Fig. 4.1:

2. Connect transmitter ribbon cable A to PCB assembly B and debugger assembly C.

3. Connect USB cable D to debugger assembly C.

Fig. 4.1 Assembling the upgrade kit – transmitter
5 Installing the software

1. Plug the de-bugger assembly into a PC using the USB connector supplied.
2. Insert E8a emulator software CD into the PC's CD / DVD ROM drive.
3. Double-click Setup.exe to install the software.

4. When installation is complete, install the Flash Development Toolkit from the CD.
6 Connecting the programming assembly – transmitter

**Note.** Isolate all high voltage supplies to the transmitter before proceeding.

1. Connect the E8a programmer assembly to the PC using the USB cable.

Referring to Fig. 6.1:

2. Using a pozi-drive screwdriver, turn the (captive) electronics section door retaining screw **A** 1/4 turn counter-clockwise and open the door.

3. Referring to Fig. 6.1, open the transmitter door and remove the display cover **B** by unscrewing the 6 Torx (T8) screws **C**:

4. Connect the processor board to be programmed to the E8a Programmer using the red 10-way cable **A**:

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**Fig. 6.1 Removing the display cover**

**Fig. 6.2 Connecting the 10-way ribbon cable**
7 Using the software

1. From the Windows Start menu select the Flash development toolkit in the Renesas folder.

   The FDT Simple Interface dialog is displayed:

2. From the Options menu, select New Settings.

   The Choose Device and Kernel dialog is displayed:

   Select each device as follows:
   - transmitter: type R32C in the Filter field, select R5F64169 from the list of supported devices and click Next.
   - wet-section: type M16C in the Filter field, select M30260F8 from the list of supported devices and click Next.

3. Select E8a from the Select Port drop-down and click Next.

   The Communications Port dialog is displayed:

4. Set Recommended Speeds to Use Default by ticking the check-box and click Next.

   The Programming Options dialog is displayed:
5. Ensure the Automatic, Advanced and No radio buttons are selected and click Finish to exit the configuration (the board can now be programmed).

The FDT Simple Interface dialog is displayed:

6. Ensure the User / Data Area check-box is ticked and click the button to browse for the required .mot file.

7. When the .mot file has been selected, click Program Flash to begin programming the selected device.

The Target Power Settings dialog is displayed:

Select the power requirement for each device as follows:

- transmitter: click the Supply power from E8/E8a/E1 to user target board and 3.3V radio buttons and click OK.
- wet-section: click the Supply power from E8/E8a/E1 to user target board and the 5.0V radio buttons and click OK.

8. Select E8a from the list of available devices and click OK.

The FDT Simple Interface dialog is displayed and programming commences:

When programming is complete the FDT Simple Interface dialog is refreshed and the Disconnect button is enabled.
Programming commences:

9. Click **Disconnect**

The **Block Locking** dialog is displayed:

10. Select the **Do Nothing** radio button and click **OK**.

The **Protection Type** dialog is displayed:

11. Select the **Do Nothing** radio button and click **OK**.

Programming is now complete and the **FDT Simple Interface** dialog is displayed:

12. Click **Exit** to quit the FDA application.

13. Disconnect the E8A programmer and refit the PCB covers in the reverse order of removal:
   - transmitter: see Section 6, page 4.
   - wet-section: see Section 5, page 3.