

Navigator 550

Wet-sections



Installing and using software upgrade kits

Measurement made easy

Navigator 550
wet-sections

1 Introduction

This publication details the procedure for installing and using the Navigator 550 wet-section software upgrade kit. These procedures must be carried out by a trained technician only.

2 For more information

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

or by scanning these codes:



Sales



Service

3 Identification

Warning.

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

The contents of the software upgrade kit are shown in Table 3.1.

Description	Part number / link	Qty.
Debugger assembly	B13298 (FTDI TTL-232R-5V)	1
8-way ribbon cable (AW500 205 issue 3)	B13299 (Farnell: 1056213 – AMP: 1483352-1)	1
14-way ribbon cable (AW500 205 Issue 4+)	B13300 (Farnell: 1056223 – AMP: 1483355-1)	1
PCB assembly	AW500 069	1
Flash Starter application software (version 2.0.0.46)	Download from: www.renesas.eu/support/downloads/download_results/C2002701-C2002800/upgrades_m3a0806_exe.jsp	1
FTDI (TTL-232R-5V) driver installation guide	FTDI (TTL-232-R) USB to TTL cable assembly – download from: www.ftdichip.com/Support/Documents/InstallGuides.htm	1
FTDI (TTL-232R-5V) driver	FTDI (TTL-232-R) USB to TTL cable assembly – download from: www.ftdichip.com/Drivers/VCP.htm	1
Information sheet	INF13/121-EN – Installing and using software-upgrade equipment.	1

Table 3.1 Software upgrade kit AW500 035

4 Assembling the upgrade kit

1. Unpack the upgrade kit.

Referring to Fig. 4.1:

2. Connect 8-way ribbon cable (A) and 14-way ribbon cable (B) to PCB assembly (C).

Note. The 8-way ribbon cable (A) is used for programming AW500 205 issue 3 boards, the 14-way ribbon cable (B) is used for issue 4+ boards.

3. Connect black cable pin 1 connector (D) to PCB assembly (C). Ensure pin 1 (E) is orientated correctly.

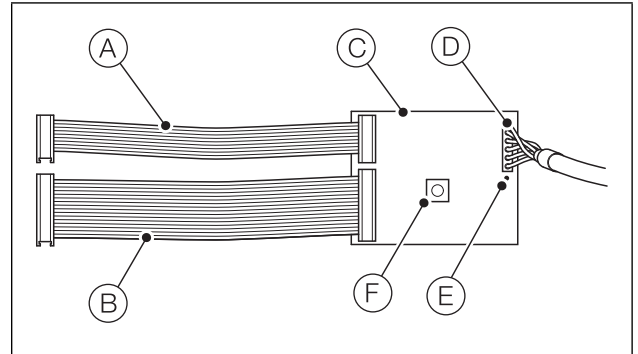


Fig. 4.1 Assembling the upgrade kit

5 Installing the software

1. Download the driver installation guide from:
www.ftdichip.com/Support/Documents/InstallGuides.htm
2. Download the driver for the debugger assembly from:
www.ftdichip.com/Drivers/VCP.htm
3. Follow the installation guide and install the driver for the debugger assembly.
4. Download the Flash Starter software (version: 2.0.0.46) from:
www.renesas.eu/support/downloads/download_results/C2002701-C2002800/upgrades_m3a0806_exe.jsp

6 Using the software

Warning.

- Isolate all high voltage supplies to the transmitter before performing replacement procedures.
- The wet-section is vulnerable to electrostatic damage. Wear an anti-static strap or dismantle the wet-section on an anti-static workbench.
- Ensure all electrical connections are kept dry at all times.

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

Referring to Fig. 6.1:

2. Open the wet-section door by releasing the 2 door locks (A)
3. Remove the 4 screws (B) and associated plastic screw retaining washers (C) holding the wet-section PCB cover in place and remove the PCB cover.

Note. When refitting the PCB cover, ensure that the O-ring seal (D) in the PCB housing is located correctly in its groove.

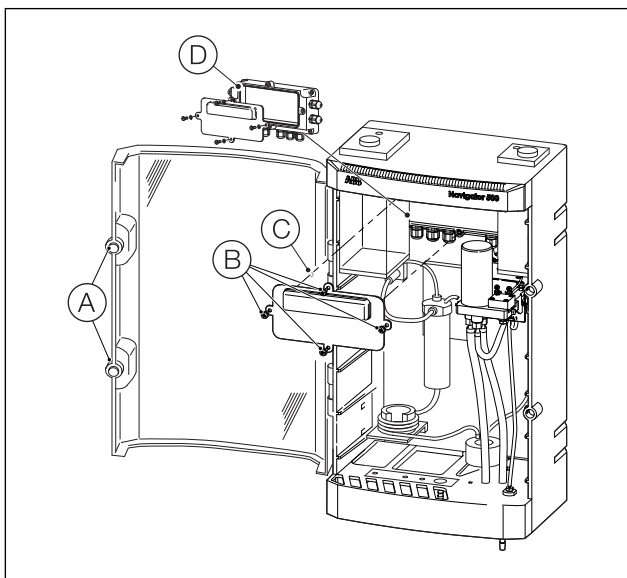


Fig. 6.1 Removing the wet-section cover (hydrazine wet-section shown)

Referring to Fig. 6.2:

4. Connect the wet-section to be programmed to the programmer assembly connector (A) (use the 14-way cable for AW500 205 issue 4+ boards or the 8-way cable for AW500 205 issue 3 boards):

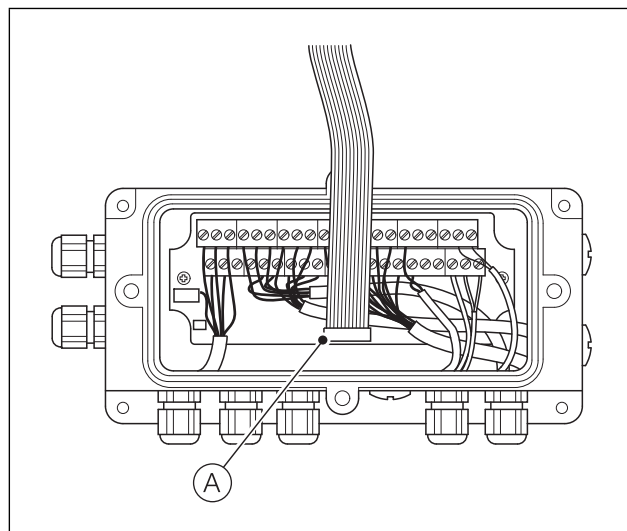
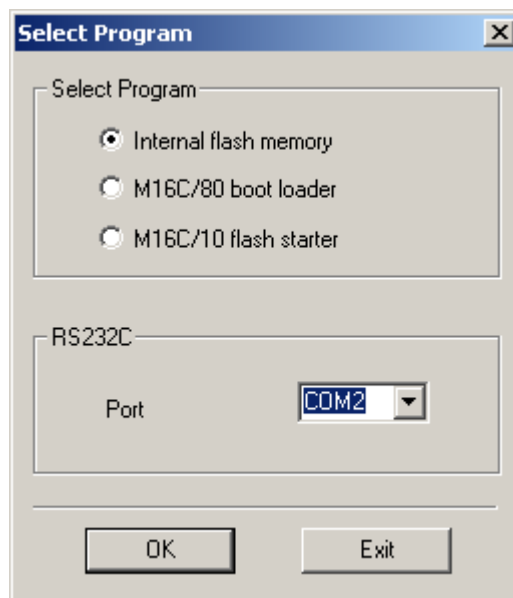


Fig. 6.2 Connecting the ribbon cable (8-way shown)

5. Press and release the 'RESET' switch 'SW2' on the programmer assembly PCB – see Fig. 2.1, page 2, item (F).
6. Click the Flash Start icon on your desktop to launch the *Flash Start* software:

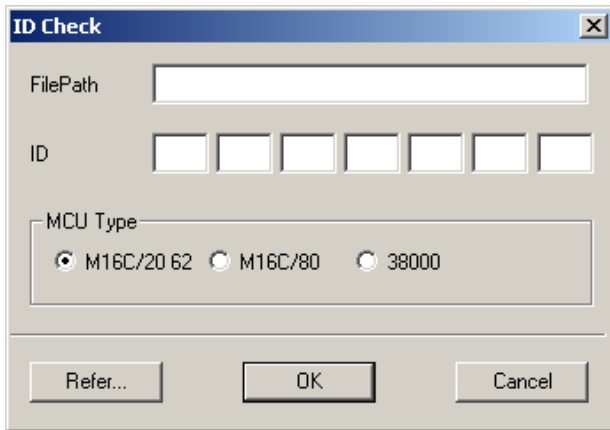


The *Select Program* dialog is displayed:

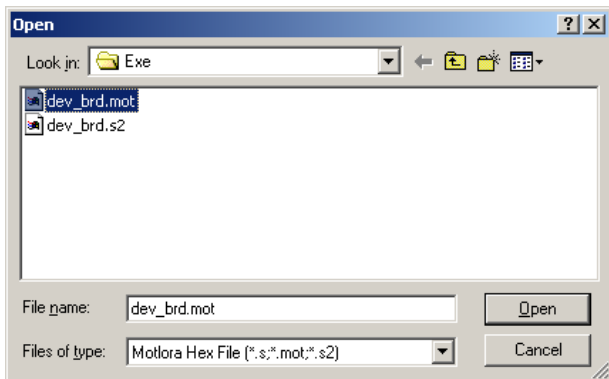


7. Click the *Internal flash memory* radio button and in the *RS232C* area, select the serial port the debugger assembly is connected to from the *Port* drop-down option.
8. Click *OK* to continue.

Communication with the wet-section PCB board is established and the *ID Check* dialog is displayed:

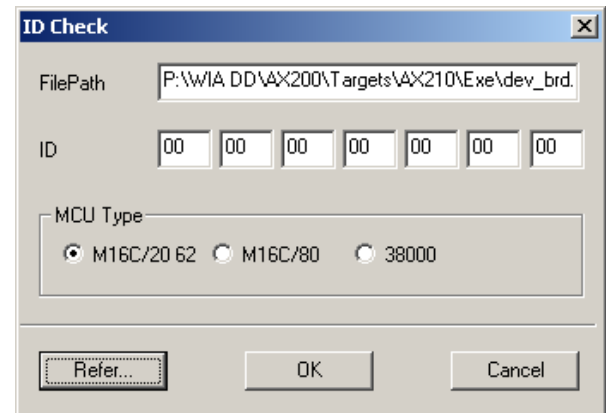


9. Click the *M16C/20 62* radio button and then click *Refer*.
The *Open* dialog is displayed:



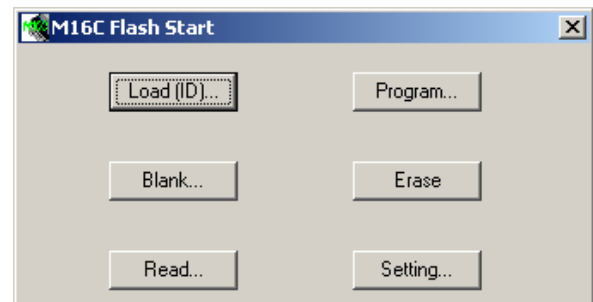
10. Navigate to and select the *.mot* file to be programmed and click *Open*.

The *ID Check* dialog is refreshed with the *FilePath* text box is populated with path of the selected file:



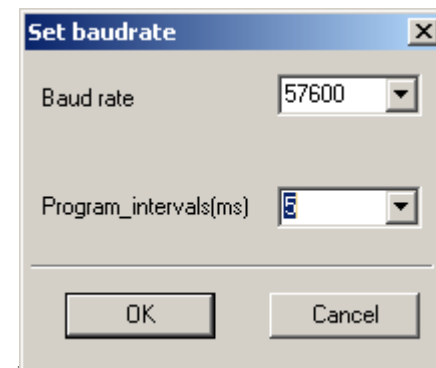
All *ID* text boxes should be populated with *00* automatically. If they are not, enter *00* in each box manually.

11. Click *OK* to continue.
12. The main programming dialog (*M16C Flash Start*) is displayed:



13. Click *Setting...* to set the communications baud rate and program interval.

The *Set baudrate* dialog is displayed:



Set the *Baud Rate* to 115200 and the *Program_intervals(ms)* value to 5 ms.

15. Click *OK* to continue.

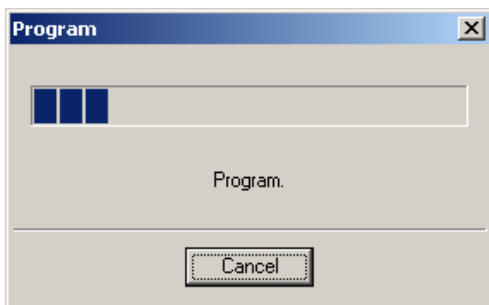
The main programming dialog (*M16C Flash Start*) is displayed:



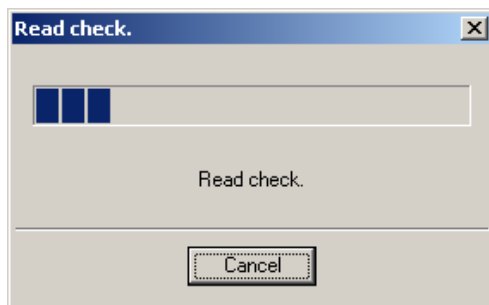
16. Click *E. P. R.* (Erase Program Read).

A prompt to erase the device is displayed.

17. Click *OK* to erase the device. When the device is erased, Flash Start commences programming and the *Program* time bar is displayed:



When programming has completed, a *Read Check* time bar is displayed while *Flash Start* verifies the contents of the device:



When verification has completed, the *M16C Flash Start Program OK* prompt is displayed:



18. Click *OK* to exit *Flash Start*.

19. Disconnect the Programmer assembly and replace the PCB cover by reversing the removal procedure from step 3, page 2.

20. Close the cubicle door and restore power to the transmitter.

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