



Test Instruction, Mechanical

Applicable for EC400

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1 General

This document describes the process used for flashing software upgrades and how to functionally test the EC400 ExpressCard.

2 Software Update

Update the EC400 with the latest software using EMMA.

2.1 Verify Software Version

To verify if an ExpressCard needs updated software, you have to check the Software Version currently in the ExpressCard. The current software version can be checked as outlined below.

1. Install the ExpressCard in a laptop with the Sony Ericsson Wireless Manager application installed.
2. Open the Sony Ericsson Wireless Manager.
3. On the tool bar click on "**View**", then "**Information**".
4. The SW version is listed under "**Mobile Broadband Modem - Version**".

2.2 Updating Software

NOTE: EMMA MUST BE INSTALLED ON YOUR COMPUTER

1. User's guides for Emma can be found at: <http://ma3.extranet.sonyericsson.com>
2. Flash the EC400 using Emma.

3 Functional Test

These functional tests verify that the ExpressCard is functioning by navigating to a website through an internet browser. The ExpressCard is considered functional if you are able to accomplish this.

3.1 Navigation Tests

1. Insert your SIM card into the slot on the back of the ExpressCard with the gold contacts on the SIM card facing towards the ExpressCard.
2. Insert the ExpressCard into the slot of the computer or the Active ExpressCard/34 Adaptor board (optional).
3. The Wireless Manager should automatically open. If not, manually open the Wireless Manager.
4. Enable the Radio by selecting the “**Radio**” tab then “**Enable Radio**”.
5. Lift the Flip Antenna and Verify that the LED illuminates.
6. After the ExpressCard finds the network, select “**Connect**” on the Wireless Test Manager.
7. Confirm data transfer via Internet Explorer.
 - a. Open Internet Explorer browser and navigate to any open site.
 - b. Ensure that the site loads properly.

NOTE: BE SURE TO CHOOSE A NEW SITE FOR EACH TEST TO AVOID FALSE INDICATIONS DUE TO CACHING OF SITES WITHIN INTERNET EXPLORER.

8. Close the Wireless Test Manager. Internet Explorer can be left open if additional units are to be tested.
9. Remove the ExpressCard from computer.

3.2 GPS Test (EC400g only)

The two methods for testing the GPS Function are described in the following sections.

3.2.1 Re-radiating GPS System

1. Make sure the power to the re-radiating system is on.
2. Place the Unit under test within range of the Radiating element.
3. Enable the Radio by selecting the “**Radio**” tab then “**Enable Radio**”.
4. Select the “**View**” tab then “**GPS**”.
5. Click on the “**GPS on**” Radio button.
6. The Longitude and Latitude will be displayed under “**Current Position**” after 2 or 3 minutes.

NOTE! *If Units continually fail to lock onto the satellites, then set the time and date on the Laptop to the current time and date. Because the Unit has an almanac of relative satellite positions, it predicts their behaviour and can fail to lock if the time and date in the Laptop are not current.*

3.2.2 Satellite Signal Simulator System

1. Make sure the power to the simulator is on.
2. Launch the SimPLEX software application.
3. Use the File, Open menu items to select the Static Scenario.
4. Select the appropriate region for the scenario and click Open.
5. Click Run on the toolbar to start the simulation.
6. Place the Unit under test within range of the Radiating element.
7. Enable the Radio by selecting the “**Radio**” tab then “**Enable Radio**”.
8. Select the “**View**” tab then “**GPS**”.
9. Click on the “**GPS on**” Radio button.
10. The Longitude and Latitude will be displayed under “**Current Position**” after 2 or 3 minutes.

NOTE! *If Units continually fail to lock onto the simulator, then reset the time and date on the Laptop to match those set in the simulator. Because the Unit has an almanac of relative satellite positions, it predicts their behaviour and can fail to lock if the time and date set in the Laptop don't match those set in the simulator.*



3.2.3 Decreasing Test Time

Up to three minutes may be required for the unit to establish a connection with the satellite signal. In order to make testing more efficient, it is recommended to test several units in series. In other words, start testing one unit, and then while it is trying to establish a connection, start a second unit. Depending on the connection time, three or more units may be under test at the same time.

NOTE! *It is important to understand the radiated signal radius coming from the transmitting antenna to make sure all units being tested are within range.*

4 Revision History

Rev.	Date	Changes / Comments
1	2008-06-18	Initial Release