

SIEMENS PROTECTION DEVICES LTD

7SR* PRODUCTS - STANDARD SOFTWARE UPGRADE INSTRUCTIONS

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1. GENERAL

Please read thoroughly all of these instructions before starting the download process.

- The following guidelines are compatible with Microsoft Windows XP SP2 or later, Windows Vista, Windows 7 and Windows 8.
- Ensure the PC you will use to install the software to the device has the necessary USB driver installed. This is installed as part of Reydisp Evolution.
- If the software was sent as an attachment to an email it may be in the form of a password protected self extracting zip file to prevent email systems discarding them or modifying them. The software should be saved with the "EX" extension renamed to be "EXE". The password that is applied to this zip file is REYROLLE in upper case (capital) letters.
- If you are upgrading firmware in a product that is already installed on site then follow the instructions in section 2, 3 and 4.
- Otherwise skip directly to section 3 to load firmware into the device.

2 UPGRADING FIRMWARE ON A PRODUCT INSTALLED ON SITE

2.1 Identify Which Software Is Currently Loaded

With the relay connected to a suitable auxiliary supply, press CANCEL several times to ensure that you are at the root of the menu system. The relay will typically display the relay model name or circuit name.

Press CANCEL and TEST buttons simultaneously to bring up the menu

SOFTWARE VERSION

The following typical information uniquely identifies a particular relay model.

2.1 Overall Software Information

Software Art No	This is the application software code used which may be common to many relay variants.
Build Date	This is the date when the software was compiled.
Build Time	This is time when the software was compiled.
Code CRC	This is the CRC check code of the software code.
Boot Block Art No	This is the boot block software code responsible for loading in new application software code.

2.2 Product Configuration Information

Product Art No	This is the Products unique configuration article number.
Product Name	This is the Products unique model name.
Release Date	This is the date when this particular configuration was released.
Release Time	This is the time when this particular configuration was released.

2.3 Things to Do Before Loading New Firmware/Software

Please make a hard copy or download all relay settings groups, communication settings and language settings prior to changing the code as all settings will be lost during the code upload process. It is possible to download the existing settings into Reydisp Evolution and then reload these settings into the relay. Reydisp will highlight any changes that it cannot automatically resolve for you to manually correct. The Communications Editor and Language Editor tools are used to download/upload those settings.

If the relay is in service then it is advisable to remove any TRIP LINKS to prevent in-advertent mal-operation due to incorrect settings being applied.

3 LOADING CODE USING FRONT USB

Note: This method is supported on the latest products. If you have an older 7SR* product, or encounter problems with this method, please refer to the previous method in section 7.

New firmware/software may be loaded via the USB port on the front Fascia.

To load the firmware, connect a USB cable between the PC and the USB port on the front of the Device.

Please familiarise yourself with the next steps BEFORE proceeding.

Step 1: APPLY AUXILLIARY POWER SUPPLY TO THE DEVICE

Wait for the device to complete its boot sequence.

Step 2: RUN THE APPROPRIATE CODE LOADER PACKAGE FOR THIS DEVICE

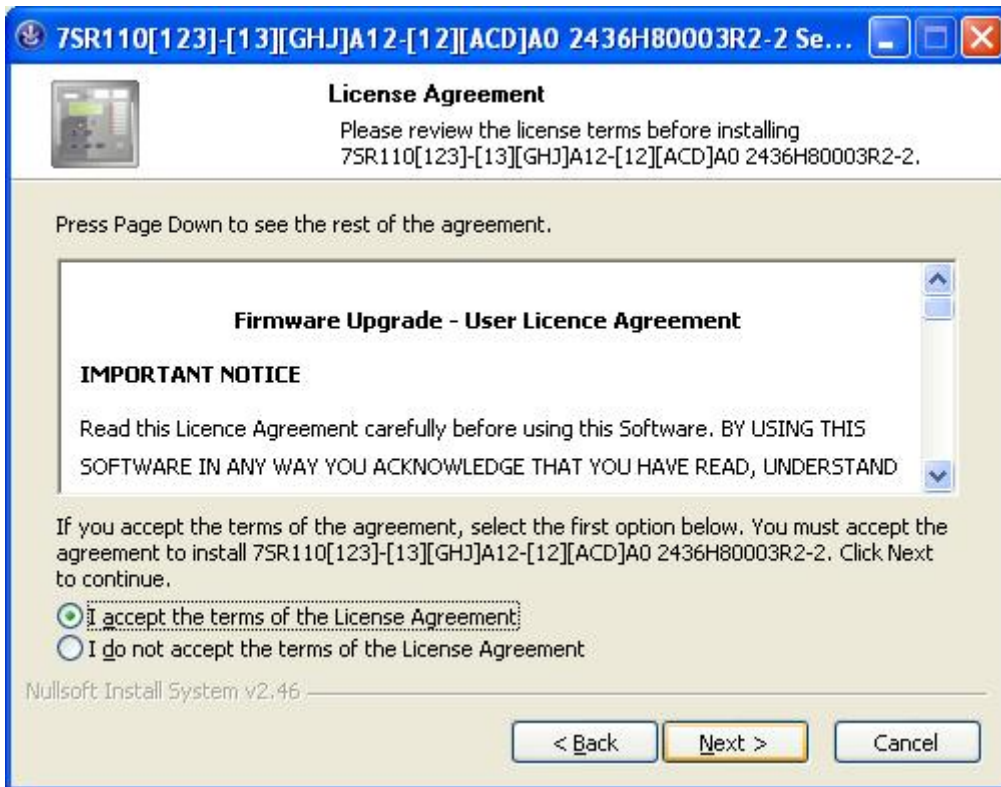


The code loader will display the box above, and detect the type of device and the software to apply.

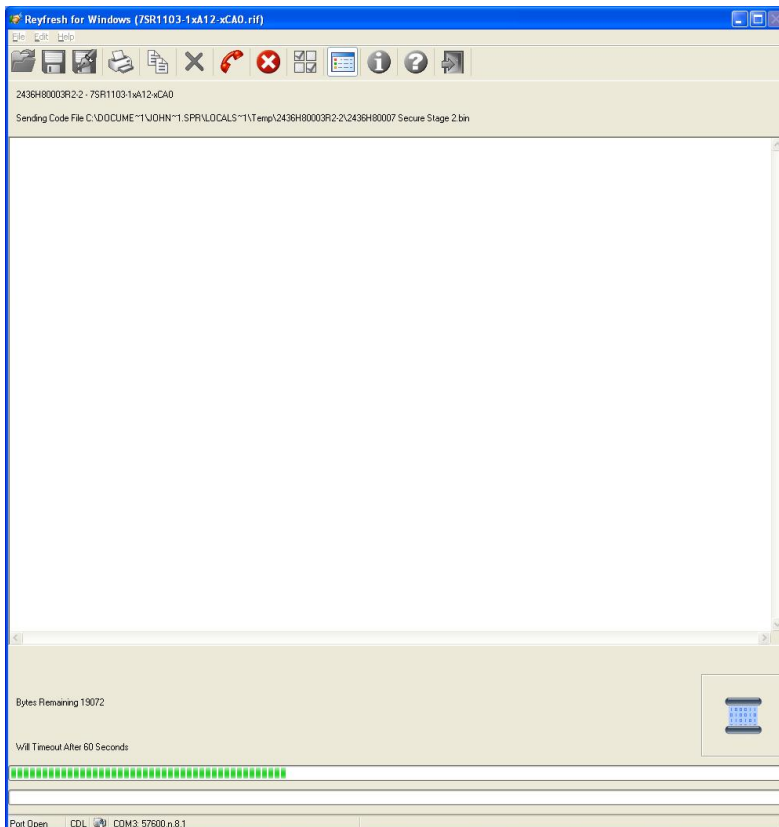


Once detected the code loader displays a title page similar to that above. Click Next.

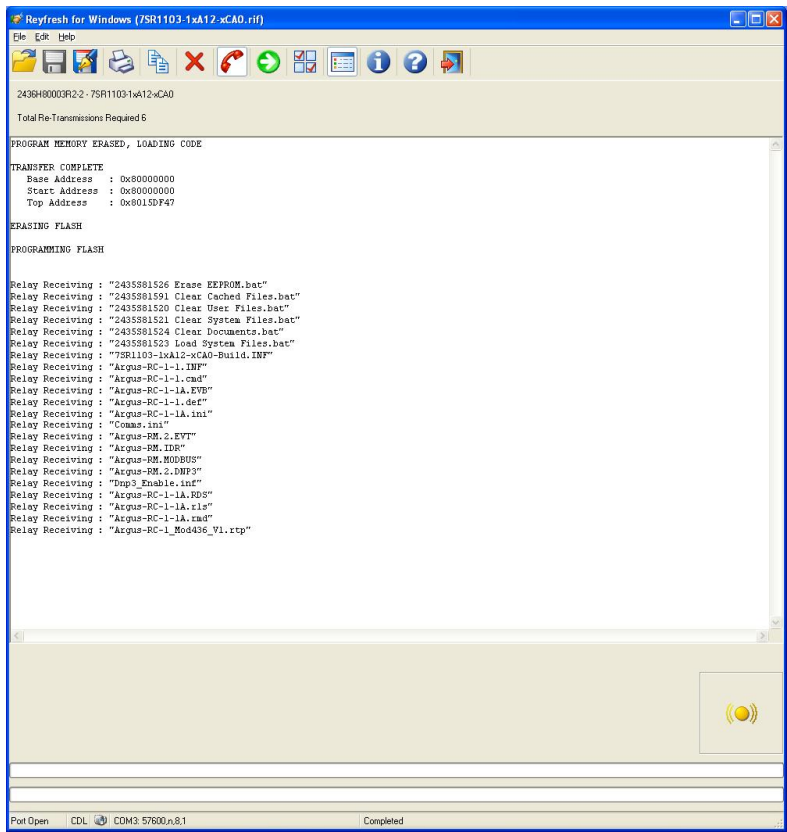
Note, if an Error box is displayed rather than the title page refer to section 6.



The license page is displayed, select **I accept the terms of the License Agreement**, then click Next.



The REYFRESH window opens and a timing bar can be seen to be counting down at the bottom of the window. After a few seconds the update will automatically begin.



The process may take several minutes to complete at which time the relay will automatically restart. Please make note of any warning or error messages that appear on the REYFRESH terminal window as the relay restarts. Please do not attempt to use the PC as the software loads as this can disrupt the code load process. Once restarted close the REYFRESH window.



Then click Finish to close the code loader, as shown above.

4 THINGS TO DO AFTER LOADING NEW FIRMWARE/SOFTWARE

If the device's communication ports are required for data communications they need to be configured for use. Go to the Device's communications menu and manually configure the communication parameters. e.g. Station Address, IEC870 port selection, Baud Rate, Parity etc

2.1 Settings

If required, reload or re-enter all customer settings, communication and language settings AND verify that they are correct.

- REYDISP EVOLUTION
- If required, use the Reydisp Evolution/Manager to reload any communications configuration files previously saved.
- COMMUNICATIONS EDITOR
 - If required, use the communications editor to reload any communications configuration files previously saved.
- LANGUAGE EDITOR
 - If required, use the language editor to reload any language files previously saved.

2.2 Trip Links

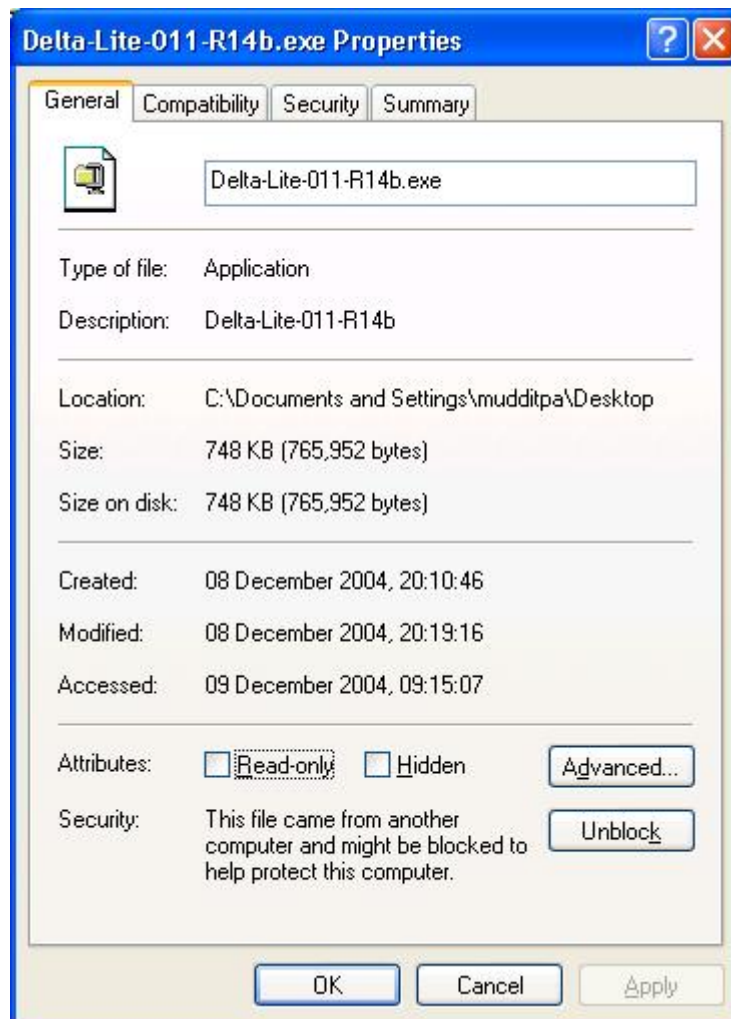
Re-insert any TRIP links that may have been removed initially.

5 KNOWN PROBLEMS AND WORK AROUND

On Windows XP systems, executable files attached to emails may be blocked from execution. If the following message occurs:-



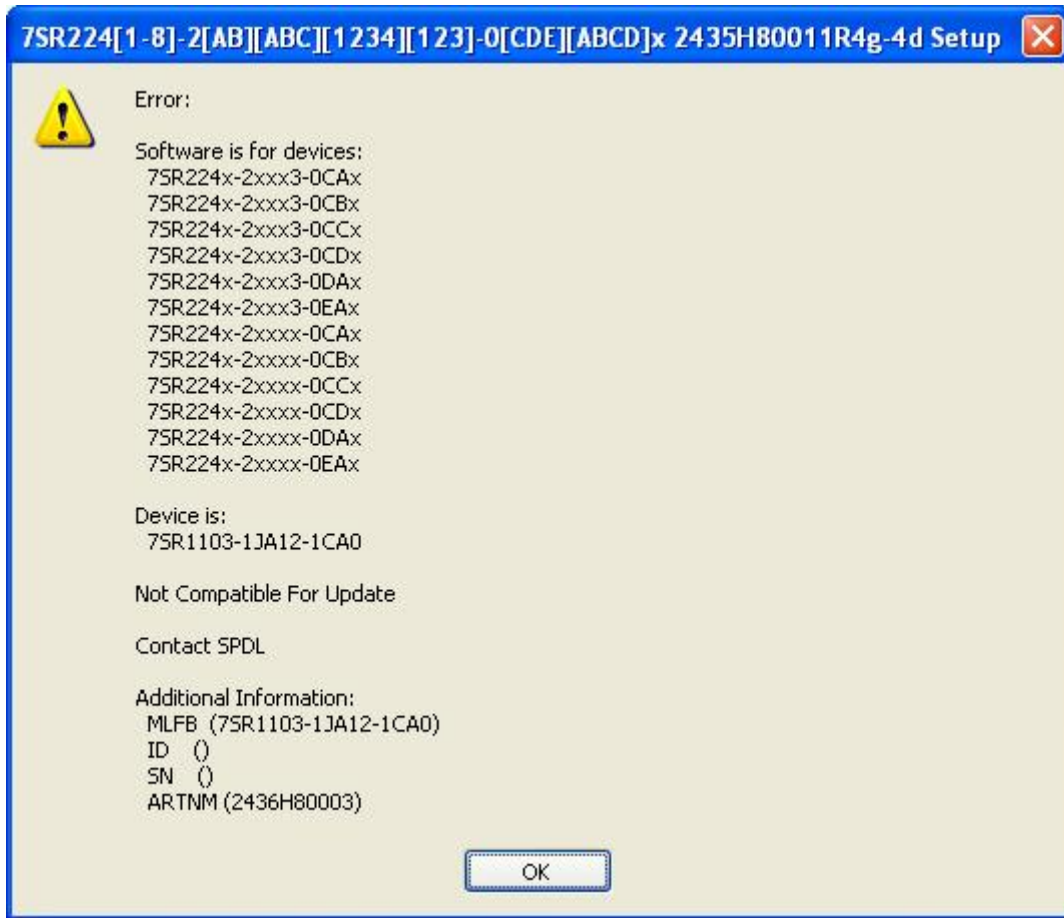
The solution is to access the files properties by right mouse clicking on file and selecting properties:-



Select Properties->General->Unblock if visible and press Apply to allow the file to be executable.

6 ERROR MESSAGES

6.1 INCOMPATIBLE MLFB ERROR BOX



The incompatible MLFB error box, example shown above, is displayed when the code loader package does not contain suitable software for the device. If this happens, please check the following points.

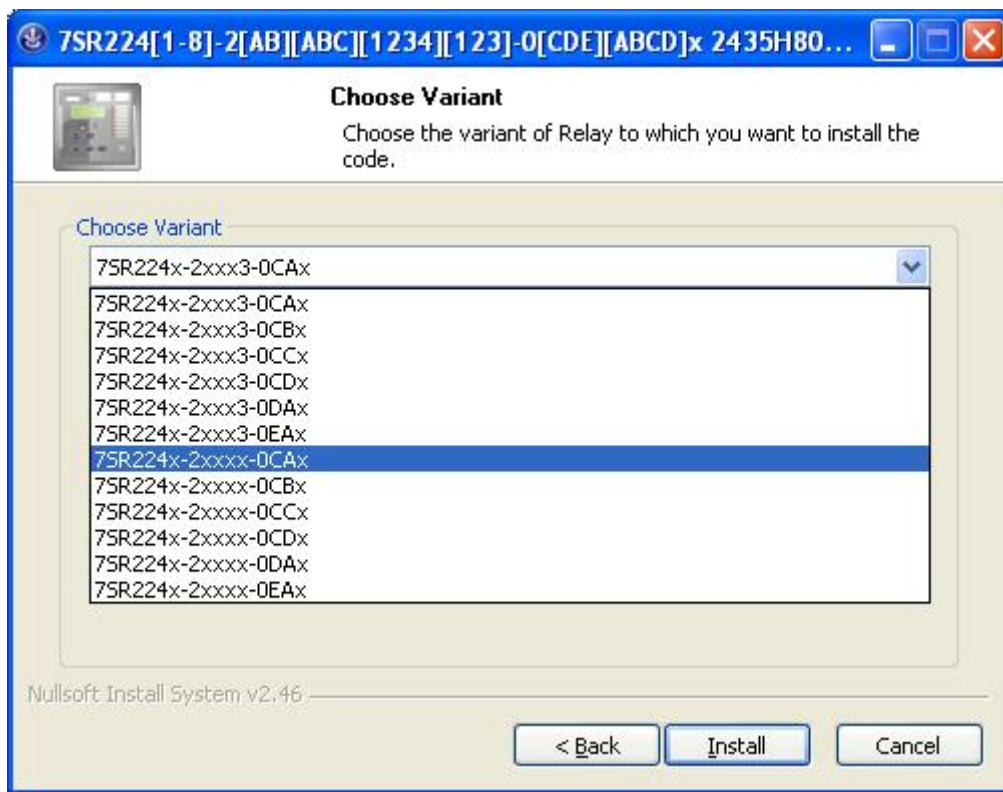
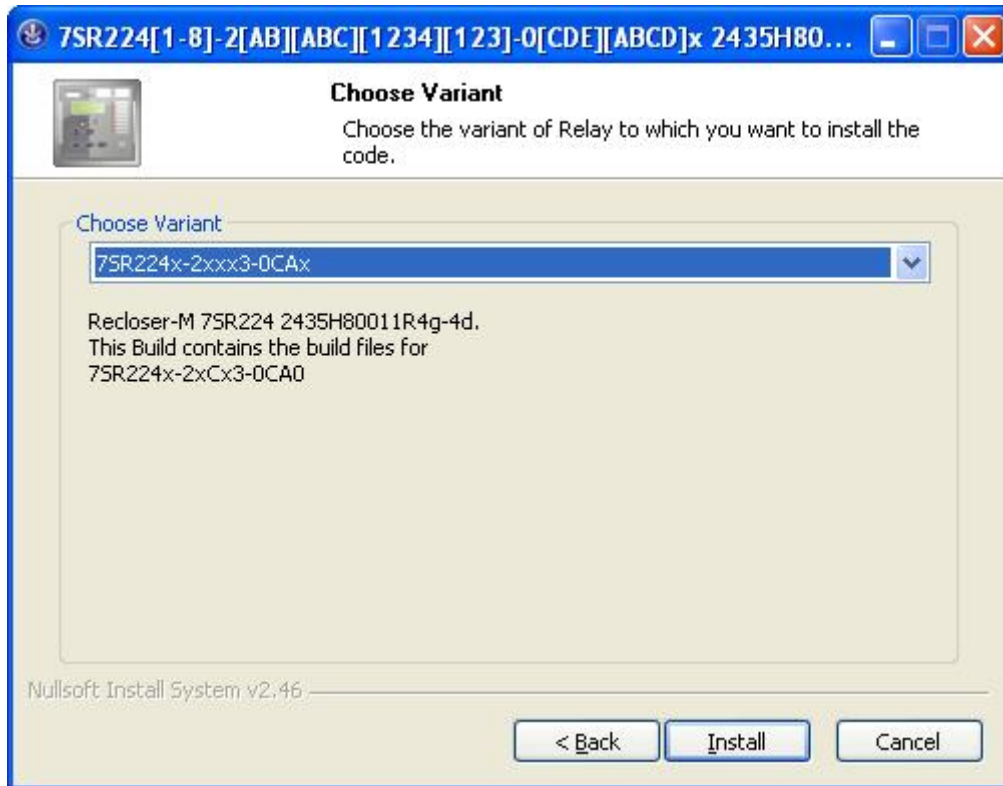
- Ensure the package is correct for the MLFB of the device. The detected MLFB of the device is shown in the MLFB field of the error box. If the package is incorrect obtain the correct code upload package for this device.
- Ensure the MLFB for the device has been detected correctly; the MLFB field in the above box should be as expected for this type of device. If it is not, or is empty, contact SPDL for advice as to why it is not set.

6.2 AUTO-DETECT MLFB FAILS (ERROR CODE = 3)



If the auto-detection of the MLFB fails, and you are presented with an error code shown above, the installation process will continue and you will be presented with a list of MLFB options available in the upload

package. YOU MUST choose the correct MLFB for your device. Failure to do this will result in the device not starting. This can be corrected by loading firmware for a correct MLFB as described above. Note, when choosing from the list fields in the MLFB number marked with an x are ignored. An example of this list is shown below.



7 LOADING CODE USING FRONT USB (OLDER 7SR* PRODUCTS)

New firmware/software may be loaded via the USB port on the front Fascia.

To load the code, connect up a PC USB to the relay front USB port.

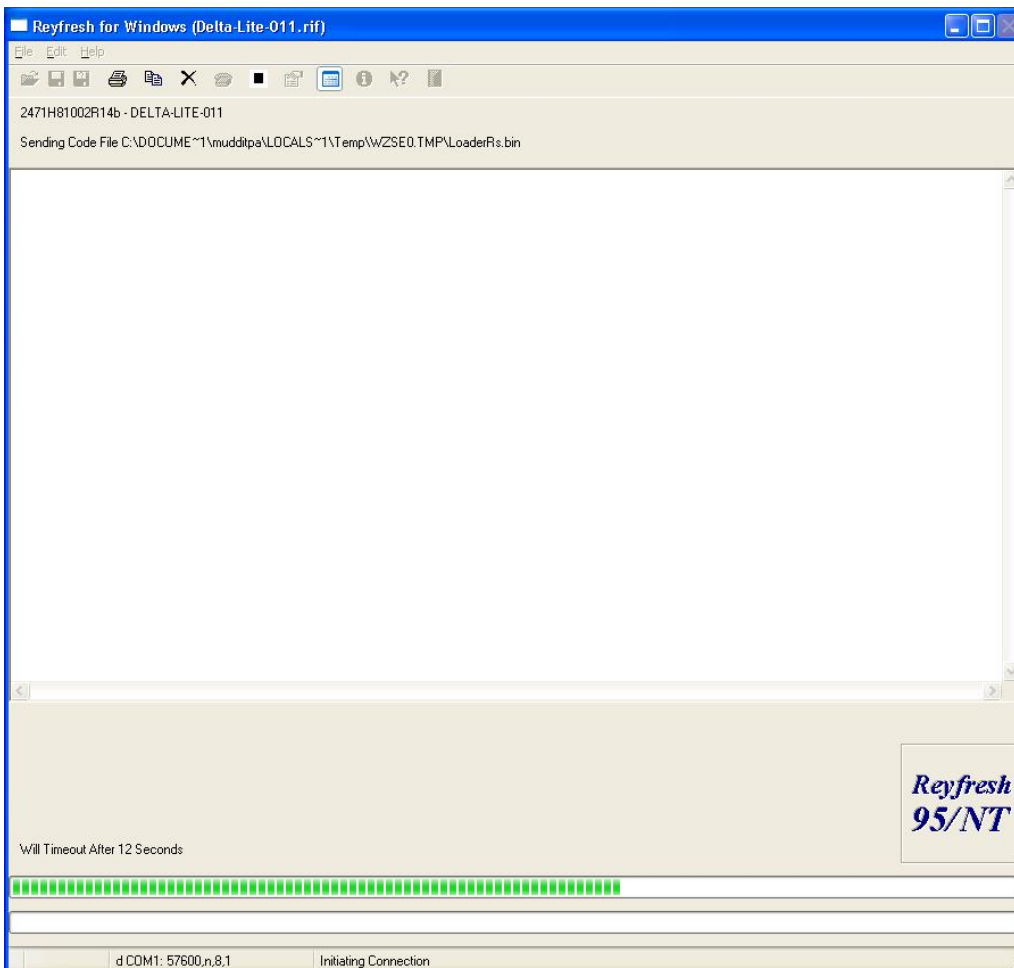
The relay will only accept new firmware during RESTART. The easiest way to do this is to firstly remove the auxiliary supply. (See below for alternative techniques if you do not wish to remove the auxiliary supply)

Please familiarise yourself with the next three steps BEFORE proceeding.

Step 1 : REMOVE AUXILIARY SUPPLY

Step 2 : RUN APPROPRIATE CODE LOADER PROGRAM FOR THIS DEVICE

Wait for the REYFRESH window to open and a timing bar can be seen to be counting down at the bottom of the window (Press the PLAY button '>' if the download does not automatically start).



Important The next step MUST occur before the green timing bar expires.

Step 3a: PRESS AND HOLD UP ARROW KEY

Step 3b: RESTART RELAY BY RE-APPLYING AUXILIARY SUPPLY

Step 3c: RELEASE ARROW KEY

The software upload process should now proceed.

The process may take several minutes to complete at which time the relay will restart.

Please make note of any warning or error messages that appear on the REYFRESH terminal window as the relay restarts.

If you failed to re-apply the auxiliary Supply quickly enough the REYFRESH will fail its initial handshake and you must repeat from **Step 1**.

7.1 SOLVING SOFTWARE UPLOAD PROBLEMS

The relay will auto detect the download baud rate and will use whatever baud rate set within REYFRESH. However the default and maximum baud rate of 460800 bits/sec is preferred

- The download procedure has been tested on Microsoft Windows XP SP2 or later, Windows Vista, Windows 7 and Windows 8.

On Windows 98 it may be necessary to add the line :-

```
shell=C:\COMMAND.COM C:\ /e:4056 /p
```

to the file C:\CONFIG.SYS to increase the environment space.

When the relay restarts, messages appear on the LCD to confirm the number of I/O modules fitted, please press the ENTER key when requested if the details displayed are correct.

Alternative methods of starting the software download process

Method 2	Withdraw slightly the relay from its case to disconnect its AUXILIARY supply. Press the UP arrow and re-insert relay into its case to prepare the relay for software download.
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