

Kramer Electronics, Ltd.



Updating the Firmware in the devices equipped with STC ICs using RS-232 connection

P/N: 2900-000722FW REV 1

Download the User Manual from our Web site: www.kramerelectronics.com

Contents

1	Overview	1
2	Downloading and Installing the STC Software	1
3	Connecting a PC to the Kramer device via RS-232	1
4	Updating the Firmware	1
5	Performing the factory reset	3

Figures

Figure 1: STC-ISP.exe Window	2
------------------------------	---

1 Overview

The Kramer devices uses a microcontroller that runs firmware located in flash memory. The latest version of firmware can be downloaded from the Kramer Web site and updated in minutes using the **STC Software**.

To update the STC IC firmware:

1. Download from the Internet and install the **STC Software** (see [Section 2](#))
2. Connect a PC to the Kramer device via a serial connection (see [Section 3](#))
3. Update the firmware using the **STC Software** (see [Section 4](#))
4. Perform the factory reset using Terminal software

Note: The model name that appears in the screenshots in this guide is an example. The actual model name and upgrade file name that appears in the software during the course of your upgrade must match your Kramer device.

2 Downloading and Installing the STC Software

To download and install the STC Software file from the Internet:

1. Using your Internet browser, go to the downloads section on the webpage of the relevant Kramer device on www.kramerelectronics.com and download the firmware upgrade package to your PC.
2. Extract all files from the package to a folder (for example, C:\Program Files\STC Software).
3. Create shortcut to the *STC_ISP_V486-english.exe* file to start the **STC Software**. There is no separate installation procedure.

3 Connecting a PC to the Kramer device via RS-232

To connect a PC to the Kramer device via RS-232, make the following connection:

- Connect a serial cable from an RS-232 9-pin D-sub rear panel port on the Kramer device to the RS-232 port on the PC

Note: A null modem is not required.

4 Updating the Firmware

To update the firmware:

1. Turn the Kramer device off.

- Run the **STC Software** by executing the *STC_ISP_V486-english.exe* file
The **STC-ISP.exe** window appears¹.

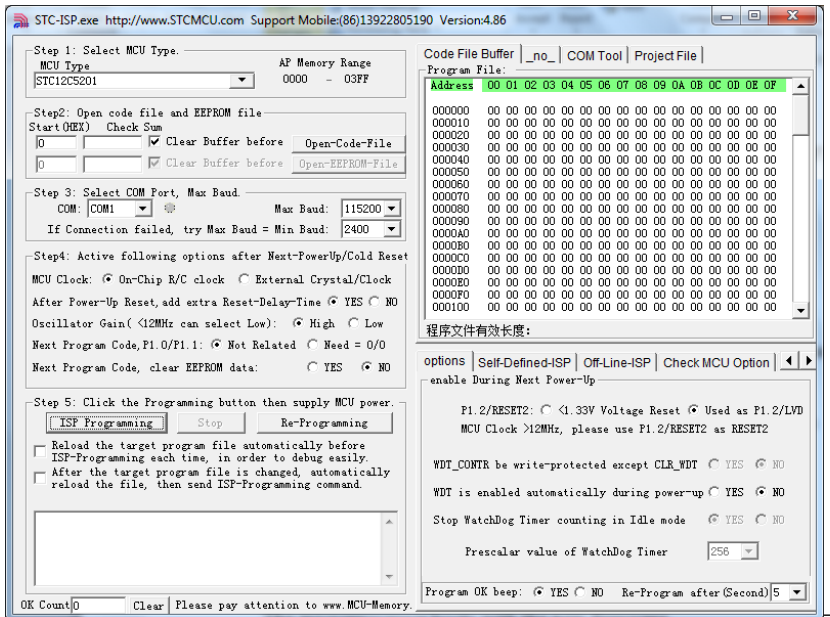


Figure 1: STC-ISP.exe Window

- From the **Step 1: Select MCU Type** drop-down list, select **STC11F32 Series > STC11F60XE**.
- In the **Step 2: Open code file and EEPROM file** box, click **Open-Code-File**.
- Browse to the directory where the firmware HEX file which you downloaded with the firmware package was saved, for example, C:\Program Files\STC Software.
- Select the correct firmware HEX file and click **Open**.
- From the **COM Port** drop-down list, select the COM port that you are using on your PC to connect to the Kramer device.
- Click **ISP Programming**.
The **STC Software** starts to program the microprocessor and status messages are displayed in the window in the **Step 5** box.

¹ The screens appearing in this manual are examples of the process. The actual screens may differ in their content

9. When the status message “please supply target MCU power” is displayed, turn the Kramer device on.
10. Wait until the status message indicates that the microprocessor has been successfully programmed. Turn the Kramer device off.
- 11.
12. Turn the Kramer device on.
The microprocessor boots with the new firmware.
13. Close the STC-ISP software window.

5 Performing the factory reset

To perform the reset:

1. Run any terminal software directed to the COM port that you are using on your PC to connect to the Kramer device.
2. Send command `#factory <CR>`. The device responds with `~01@FACTORY OK`. Below is an example screenshot sending such command using Hercules® (http://www.hw-group.com/products/hercules/index_en.html)¹.
3. Wait about 20 seconds until the front panel buttons of the device flash and the front panel display resets.

¹ The screenshot is an example. The actual screens may differ in their content depending on Terminal software used.

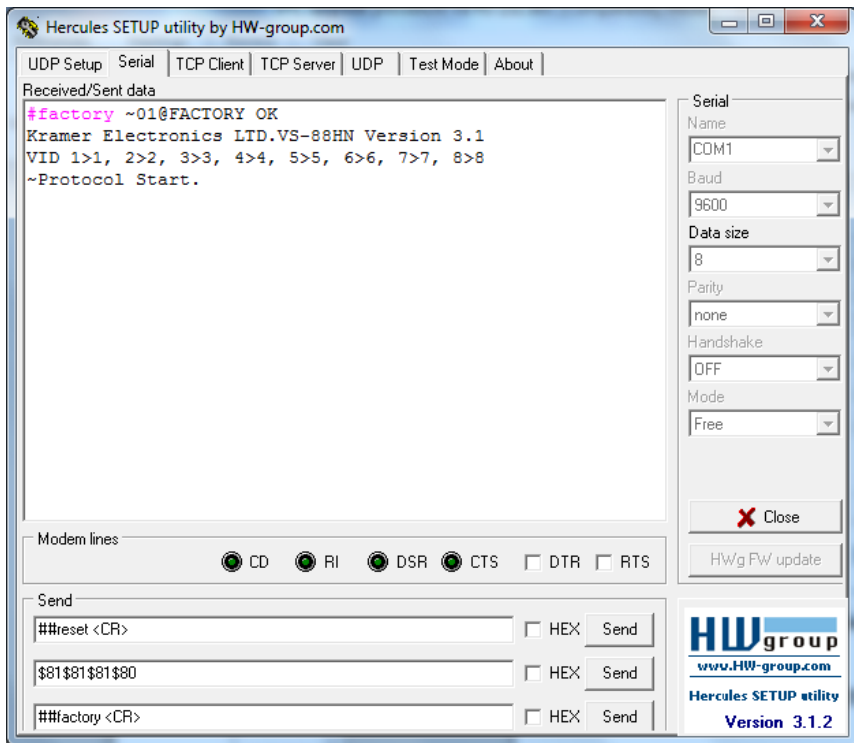


Figure 2: Reset using Hercules terminal software