

## Procedure to Upgrade Rubik's Timer to Firmware Version 2.0.

The v2.0 Rubik's Timer firmware *\*must\** be used with the new v2.0 PC software. Furthermore, you must upgrade your PC software to v2.0 first, and then upgrade your Rubik's Timer firmware afterwards. Failure to follow the correct order of upgrade will result in your Rubik's Timer not functioning correctly.

Upgrading your firmware will reset all your saved settings, and you will need to reset them manually to restore your current configuration. Also, all solve times in your solve time database will be lost during the upgrade.

1. Remove the old Rubik's Timer PC software from your computer, if installed.
  - a. Access "Start" >> "Control Panel" >> "Add or Remove Programs"
  - b. Find "Rubik's Timer" in the list and click it to select
  - c. Click the "Change/Remove" button
  - d. When asked "Are you sure you want to completely remove Rubik's Timer from your computer?", click "Ok"
2. Download the new PC software from the web site.
  - a. Download at: [http://www.mission-designs.com/timer/rubiks\\_20\\_install.exe](http://www.mission-designs.com/timer/rubiks_20_install.exe)
  - b. Save the file on your PC in a known location where you can later run it
3. Install the new PC software on your computer.
  - a. Run the downloaded file you downloaded in step #2 above to begin installation of the v2.0 PC software
  - b. The installer will ask "Do you want to install the Rubik's Timer Utility application?" Click "Yes" and the installer wizard will be prepared for installation.
  - c. The installer wizard will prompt you "Welcome to the InstallShield Wizard for Rubik's Timer". Click "Next >"
  - d. The installer wizard will prompt you for a destination folder to install to. You may choose a custom folder or simply leave the default, and click "Next >"
  - e. The installer wizard will notify you when it has completed installing files. Click "Finish" to exit the installer.
4. Some users will experience difficulty in using the new v2.0 PC software because it requires a very recent Microsoft MSVCRT80.DLL library. If you do not have this installed on your machine, the PC software will be unable to communicate with the Rubik's timer. If you find that you are having trouble communicating with the timer (or this procedure is safe even if you are not having trouble), please follow these steps:
  - a. Download at: [http://www.mission-designs.com/timer/vcredist\\_x86.exe](http://www.mission-designs.com/timer/vcredist_x86.exe).
  - b. Save the file on your PC in a known location where you can later run it.
  - c. Execute the Microsoft installer file "vcredist\_x86.exe". There is no user interaction during this installation
  - d. When the installer completes, you will have the updated MSVCRT80.DLL installed.

5. Download the new timer firmware into the Rubik's Timer. Under no circumstances should you attempt this with the old PC software v1.1! Check to be sure your PC software is v2.0 before continuing, or your timer could enter an unusable state!
  - a. To determine your current PC software version, simply launch the Rubik's Timer Utility application, and watch for the initial "splash" screen. In the lower-right corner it \*must\* say 2.0 before downloading the new firmware.
  - b. Power the timer with the AC wall adapter from the Rubik's Timer Accessory kit (battery power will not power the communications port)
  - c. Attach the Rubik's Timer to your PC with the accessory cable from the Rubik's Timer Accessory kit
  - d. From the Rubik's Timer Utility application, select the "Download Firmware" tab
  - e. In the drop-down widget for "Select COM Port", choose the port where you will connect the Rubik's Timer
  - f. Click the "Browse..." button to select the firmware to download
  - g. The firmware data files are located in the "data" subdirectory of the folder where you installed the PC software
  - h. Double-click the "rubiks\_20.hex" file to select it.
  - i. Power on your Rubik's Timer
  - j. Press the 2 white buttons of the timer simultaneously to enter "Configuration mode"
  - k. Use the white buttons to highlight the entry "Download Font/Program" in the list, and press the black button
  - l. Use the white buttons to highlight "Execute", and press the black button to enter "PC communications mode"
  - m. Click the "Download Now" button in the PC software application
  - n. A progress bar will show the download progress. **DO NOT INTERRUPT THIS PROCESS, OR THE TIMER COULD BECOME UNUSABLE!**
  - o. After the download completes, the timer will automatically power itself off
  - p. You may power it back on with the red timer button, and the upgrade will be complete.
  
6. If you have any questions or problems with this procedure, you may email for technical assistance at [rubikstimer@comcast.net](mailto:rubikstimer@comcast.net).