

# Updating Firmware in the SR86x Lock-In

The three members of the SR86x series of lock-in amplifiers (SR860, SR865A, and the SR865) are designed to permit the user to upgrade the system's firmware in the field if needed. The entire process should take under 10 minutes.

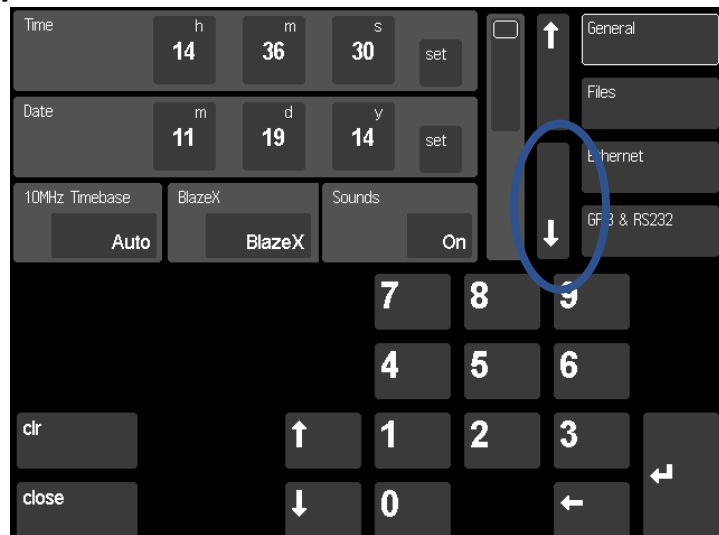
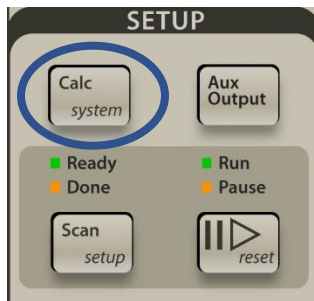
**CAUTION:** If the SR86x lock-in amplifier is turned off or loses power during the firmware update process, the instrument will become inoperable and require factory service.

## Materials

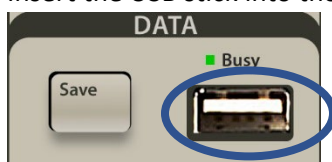
- A USB thumb drive
- Access to the internet
- **Reliable** AC wall power for the SR86x.

## Procedure

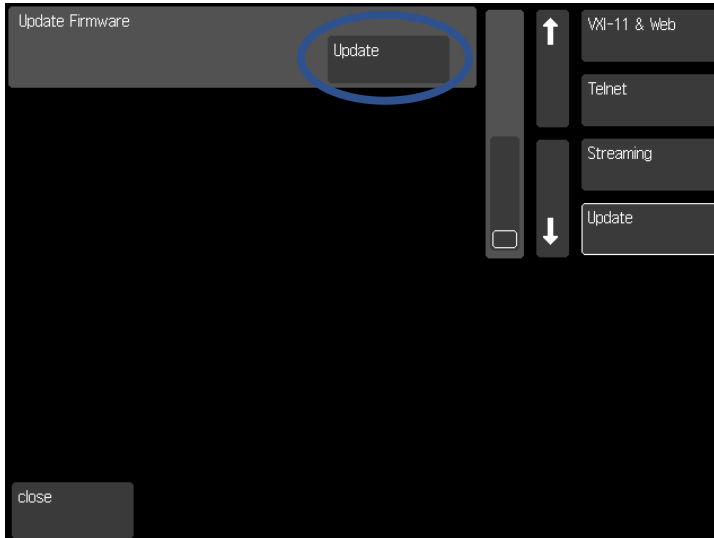
1. Using a web browser, download the file <http://thinksrs.com/downloads/programs/sr86x/V1.55/SR865IMG.BIN> (other versions will be at a similar address, with "1.55" replaced by the new version number)
2. Copy the file SR865IMG.BIN to the "top level" directory of your USB drive. Be sure to not change the name of the file.
3. Turn on your SR86x series lock-in, and once fully booted, navigate to the Update screen:
4. Press and hold the [Calc / system] button until the system menu appears. Press the down-arrow repeatedly until [Update] is selected.



5. Insert the USB stick into the front panel slot, and wait for the Busy light to stop flashing.



6. Press the [Update] tile in the box labelled “Update Firmware”:



7. When asked “Replace BASE Firmware With Version: v#.## ?”, press [OK] to proceed, or [Cancel] to abort.

At this point, if the SR86x lock-in amplifier is turned off or loses power, the instrument will become inoperable and require factory service. Only press [OK] if reliable power is present.

8. A running dialog box will show the update status in several phases. The entire upgrade should take about 6.5 minutes.
9. A final dialog box will announce “New Settings Will Take Effect After a Power Cycle” with an [OK] tile. Press [OK] to dismiss the dialog.
10. Power cycle the instrument