Manually Updating the Impero

You Will Need:

Impero!
Birger Mount (Unless you have a serial<->Lemo cable)
Lemo<->Lemo cable (Mount to Impero, unless you have a serial<->Lemo cable)
Mac/PC (with Bluetooth if using the Birger mount)
Terminal program (e.g. Hyperterm, ZTerm on Mac - http://homepage.mac.com/dalverson/zterm/)
Impero Firmware Update File

If you have a serial<->Lemo cable you can connect the Impero directly to your PC/Mac serial port or USB<->serial adapter and skip to step 7.

Steps:

1) Apply power to the Birger mount.

2) Use your computer and terminal program to connect to the Birger Mount over Bluetooth. Verify that you are connected by typing lv<CR> (that's a lowercase 'L', a lowercase 'V', and carriage-return – i.e. enter). Your Birger library version should be printed.

3) Exit to the mount's bootloader by typing ex<CR>.

4) Make sure your Impero is off. While turning on the Impero hold down both the Auto 1 and Auto 2 buttons. This will force the Impero into its bootloader. If done correctly, the bottom LED on the REC button will be the only LED lit.

5) Use the Lemo<->Lemo connector supplied with your Impero to connect the Impero to the MIDDLE Lemo connector on the Birger mount.

6) In your terminal program type rt0<CR> (that's a zero). The Birger mount should respond with:

2<->0:0

7) You should now be talking through the Birger mount to the Impero. Type vn<CR>. You should see the Impero's bootloader response:

BEI Boot Executive, v2.0
(c)2009 Birger/Viewfactor

8) You are now ready to download the firmware into the Impero. Type xe<CR> and the Impero will respond with 'OK'.

9) You can now download the firmware into the Impero using XModem. You want to use the most basic version of XModem – 128 byte blocks and simple checksumming (not CRC-16). This is supported by both Hyperterm (choose 'XModem' in the Transfer->Send File... dialog box, third item down) and ZTerm (Command-S). Navigate to the firmware file and start the download.

10) When the download is complete the Impero will print 'OK' unless there was an error. If there was an error try again from step (8). If there was no error verify that the firmware was updated by typing lv<CR>. The Impero should respond with the new firmware version, e.g.:

Impero Controller v1.4

11) At this point you can cycle power on the Birger mount or type routeesc,0<CR> to turn off port routing. Unplug the Impero and cycle power to boot with the new firmware. You are good to go!