

Here you can find a program which can be used to re-flash the firmware on the board if it gets damaged for some reason, or to upgrade firmware at a later date if I add features: [https://www.dropbox.com/s/v8f6uhiwj4q9q0c/MSP430\\_USB\\_Firmware\\_Upgrade\\_Example-1.1.4-Setup.exe](https://www.dropbox.com/s/v8f6uhiwj4q9q0c/MSP430_USB_Firmware_Upgrade_Example-1.1.4-Setup.exe) The program can also be found on TI's website here: <http://www.ti.com/tool/msp430usbdevpack>

#### Instructions on Upgrading Firmware:

1. With the board completely disconnected from power, hold down the "PUR" switch (closest to the USB port) and insert a micro USB cable. Release the button once the device is recognized by the computer.
2. The computer should install the HID driver for the device.
3. Launch "MSP430 USB Firmware Upgrade Example" from the Start menu.
4. Click Next.
5. Click "I accept the license agreement" then Next.
6. Click "Select Firmware", then Browse to rev0SD.txt
7. Under the Upgrade Firmware button, the text should read "1 device connected". Click Upgrade Firmware.
8. Unplug the board from USB when upgrade is complete.

#### Instructions on Use:

1. Plug the Female RCA Jack dongle into the furthest left position in the top row of header pins, so that "GND" is facing toward the current shunt. (See attached picture.)
2. Plug the 12V power adapter into the power jack.
3. Plug the Male RCA Cable between the Female RCA Jack and the video receiver.
4. If desired, plug a video source between pins "VD1" and "GND". The on-screen display should now be overlaid on the video source.

If you have any questions on the operation or troubleshooting, please email me. Unfortunately, in further testing, I discovered that there is a problem with the ADF7012 RF transmitter IC on this board; but since this is an extra feature and requires an amateur license to use (and requires a 2m band FM receiver to demonstrate), it shouldn't be an issue for you.