

## JSD-100 Firmware Field Update Procedure

### Introduction

Due to a change in the timing requirements during the programming of the microcontroller internal flash, some JSD-100 units cannot be updated through the normal “bootload” process. You have been provided with a Microchip PICKit™3 that is preloaded with firmware that will fix this issue.

### System Description

You have been provided with a kit containing the following:

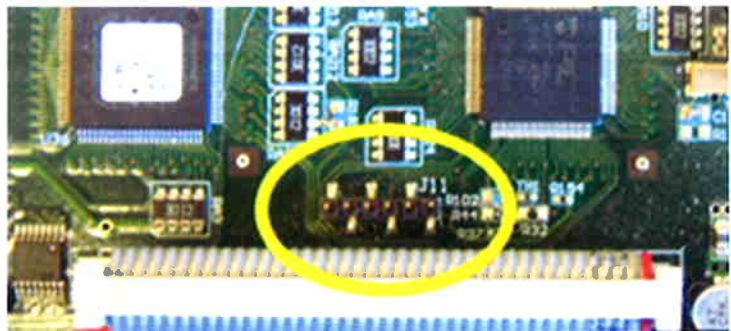
- One PICKit3 preloaded with JSD-100 firmware.
- One small adapter board plugged in to the PICKit3.
- One standard USB cable for powering the PICKit3.
- One standard USB power supply to power the PICKit3.



**Figure 1**  
PICKit3 and Adapter Board

### Update Procedure

1. Power down the JSD-100 and remove it from the equipment rack.
2. Remove the cover from the JSD-100.
3. With the small adapter board plugged into the PICKit3, plug the assembly on to J11 on the JSD-100 main circuit board, see Figure 2. Note the orientation of the adapter board to the PICKit3. The #1 marking on the adapter board should line up with the triangle near the connector on the PICKit3. Also note the orientation of the PICKit3 when plugged into the JSD-100 main board. The printed side of the PICKit3 should face the front panel of the JSD-100.



**Figure 2**  
J11 Location on JSD-100 Main Circuit Board

4. Apply power to the PICKit3 using the supplied USB cable and power supply. This step (applying power to the PICKit3) may be done earlier in this process, if desired. The PICKit3 is ready when the green power light lights and the blue active light flashes.



**Figure 3**  
**PICkit3 Assembly Plugged into J11 Location on the Main Circuit Board**

5. Apply power to the JSD-100 and turn it on.
6. With the PICkit3 and adapter plugged onto J11 on the JSD-100 main board, hold the PICkit3 vertical (insuring a good connection to the JSD-100) and press the button on the PICkit3. Release the button when the status LED on the PICkit3 changes color. It will flash red, then green, then flicker red/green. When programming is complete, the status LED will light solid green. The programming procedure takes about 20 seconds. You can program more units without removing power from the PICkit3. The status LED will be solid green from the completion of the last program. Once the PICkit3 is connected to the next powered JSD-100, press the button until the LED changes color (flashes red, then green, then flickers red/green). When the status LED is solid green again, the programming is complete.
7. Power down the JSD-100 and disconnect the PICkit3.
8. Hold down the mute button while powering up the JSD-100. Continue holding mute until the version information shows up on the display. The display text should be similar to this:

```
USL JSD-100D  
s/n 123456  
ver F 120105  
1110525 2110525
```

Additional information follows this. The letter after “ver” is the main circuit board version. The number after it (120105) is the main firmware that you just updated. The line shows the firmware in each of the DSPs. The main firmware and the DSP firmware should be as shown. If the DSP firmware does not match, use the GUI or a web browser to update to the correct DSP firmware. The GUI or web browser can be used at this point to load any desired firmware version

9. Put the cover back on the JSD-100 and reinstall it in the rack.
10. Test the normal operation of the JSD-100.