Hints for Unbricking a CS800/CS801/CS800D Radio

Finding the place to short.

All the radios have the place to short in about the same place. However due to the fact that there are different versions of the hardware for each product, the exact location might differ from the picture we have shown.

What you are looking for is two spots on the PCB that have solder on them but there is no components between the two. The spots should look like a place where one of the small surface mount resistors should be but there is no component soldered in that spot. In production they solder a zero-ohm resistor in that spot to do the initialization of the firmware and after they are finished they remove the resistor.

Shorting the spot

The application note says to use a tweezer to short the two points. The person who wrote the original application note is a few decades younger than me and had better eyesight and manual dexterity. What I found works better for me is to use a small craftsman flat blade screwdriver to short the two points. Sears probably have not sold those in 20 years so any small screwdriver will do. Make sure the screwdriver is not insulated on the blade.

How do you know the radio is bricked?

Plug your microphone where it normally goes. Press the power button on the radio for a few seconds and then let go. If the backlight on the microphone immediately turns off, the radio is bricked.

Which Hand should I hold the screwdriver with?

You should hold the screwdriver with the hand you normally operate your mouse. When you are unbricking the radio, you need to short the two points and then turn on power. As soon as you see an indication the bootloader driver is being loaded, you can remove the screwdriver and then place your hand on the mouse as that will be needed in the next steps.

What happens if the bootloader driver does not start loading?

The bootloader driver will start to load within a few seconds of the power of the radio being turned on. If it does not seem to work you probably did not short those two points together. Try again. It is not unusual to have to do it 10 times before it finally works.

Plug the Microphone into the front panel when doing this procedure

To start the boot loading procedure, you have to turn on the power to the radio. If the radio was already on, then shorting the two pins will not do anything. Monitoring the backlight of the microphone indicates if radio is already on.

What is a common mistake people do when following the procedure?

The steps for completely unbricking the radio is as follows:

Load the bootloader.dfu file

Load the bootloader.bin file

Load the RCDB.bin program

Load the final firmware.bin Program. Sometime the RCDB is the last step

After each step, you need to turn off the radio and then turn it back on holding the P1 key. The led will then flash different colors. Some people forget to turn off the power after each step.

The Instructions asks you to wait for the reset to complete.

The display will never tell you when the reset is complete. You need to watch the computer. After the program has finished loading the file, that program will indicate you lost communication and then a short time later communication has been restored. That means the reset has been completed. If you don't want to watch, sixty seconds after the file has been loaded is enough time.

Any Other irregularities?

We have found that sometimes the radio is not bricked but we still have to go through the entire unbricking procedure to get the radio working properly.