FIRST DRIVER STATION KERNEL LOADER UPDATE INSTRUCTIONS

1 Introduction

This document describes steps to change the boot-up logo on the Driver Station (DS) v1.0. The updated kernel loader (KL) is required in order to perform this procedure. The KL must be version 1.2 or later.

By this time, you should be familiar with how-to connect to the DS using the low-level serial clip. This document assumes you already have the terminal window up and running with a live connection to the DS.

1.1 Documentation

It is assumed the steps in the KL document have been completed already:
http://www.kwikbyte.com/driverstation/doc/DS_kernelLoaderv12.pdf

1.2 Equipment

You need:

1) A means of communicating with the DS at a low-level. This document uses the DS USB Adapter Clip with supplied USB extension cable.

2) A PC. The host OS can be Windows® or Linux. Other OS may work, but have not been tested.

1.3 Software

You need:

1) A host PC terminal emulator program like HyperTerm, minicom, Kermit, etc.

2) The bmpConversion utility program:
http://www.kwikbyte.com/driverstation/binary/bmpToLogo.bin

3) A Windows® formatted bitmap image for the new logo. This must be monochrome image of size 128x64. We will call this image newlogo.bmp.

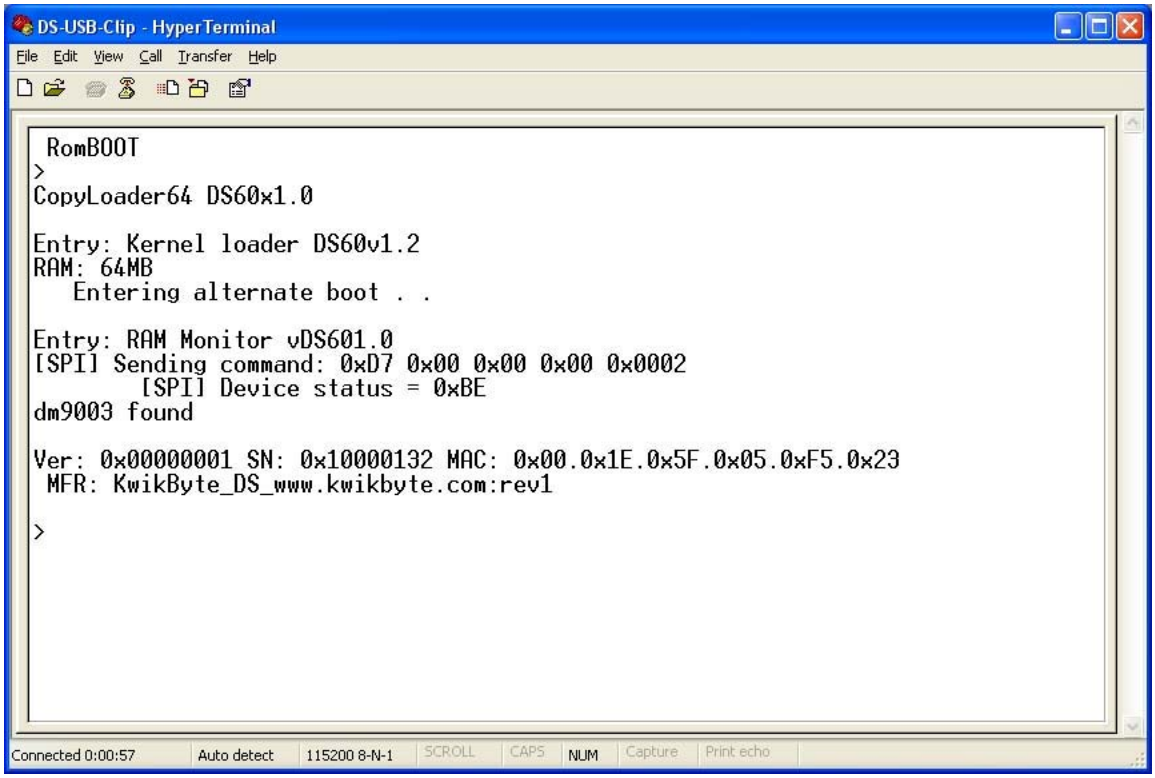
1.4 Support

Please read the instructions carefully. If you have questions or helpful comments, please send them to driverstation@kwikbyte.com.

2 Logo Update Instructions

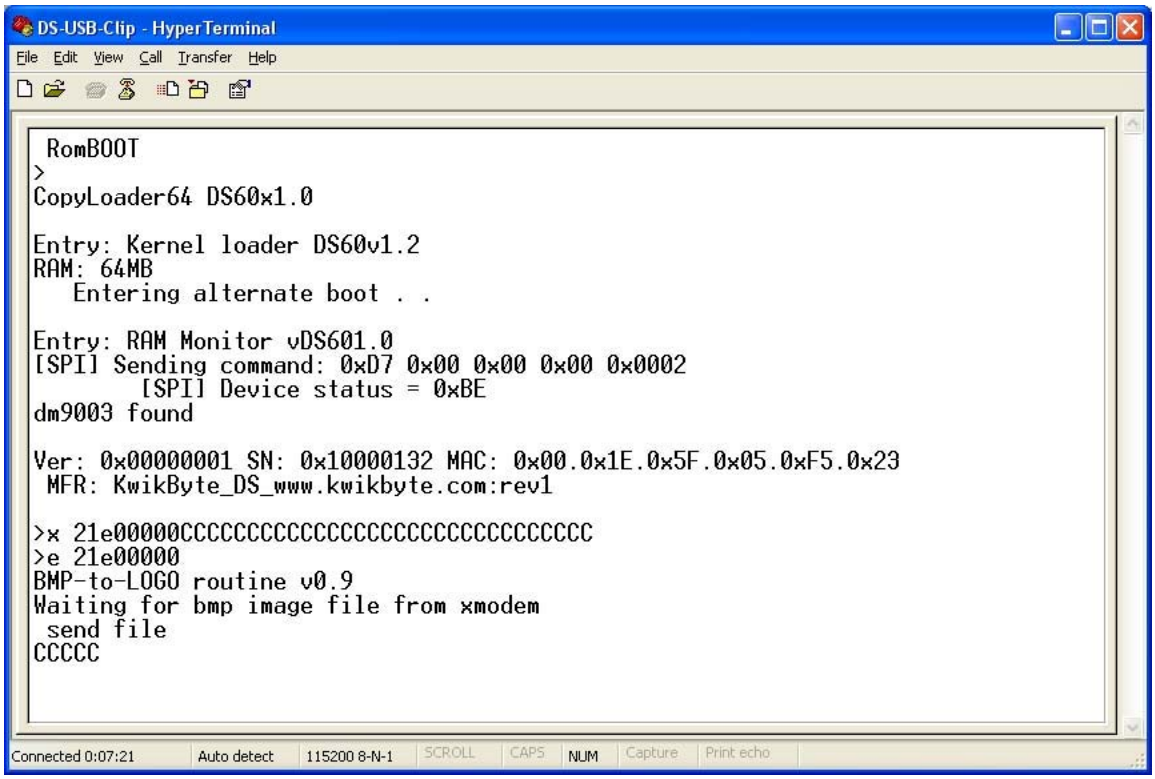
2.1 Boot the Alternate Loader

1) Hold down the 'UP Arrow' and 'SELECT' buttons while applying power (cold-boot) to the DS. You should see this screen:

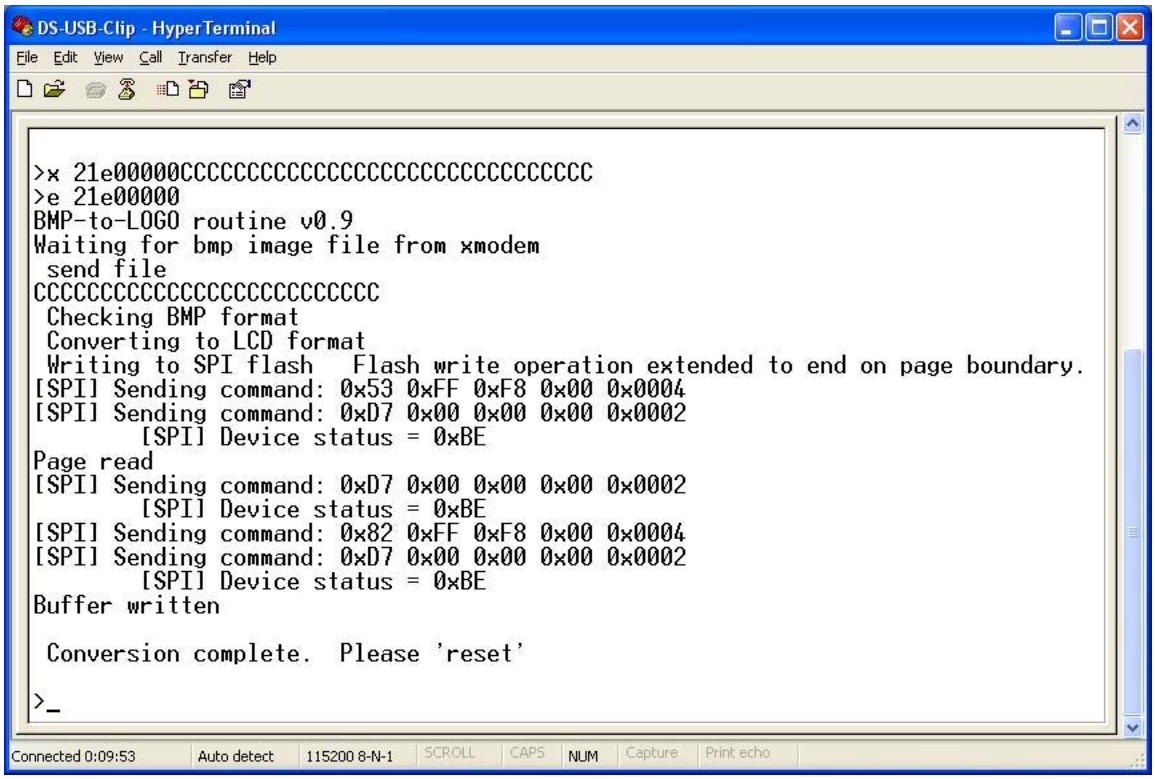


2) Start a transfer to address 0x21e00000 by typing x 21e00000 Enter. Notice the 'C' characters indicating the DS is waiting for a Xmodem transfer.

3) Send the bmpToLogo.bin file to the DS using Transfer->Send File with Xmodem protocol. This takes about 4 seconds once the transfer is started.
4) Now, execute the utility by typing e 21e00000 Enter.



5) Send the newlogo.bmp file to the DS using Transfer->Send File with Xmodem protocol (just like before). If the file is in the correct format and size, you will see this screen reporting 'Conversion complete':



6) Now type reset Enter and watch the DS boot with your new logo. You can repeat this process to update the logo again. You can change the polarity of the image with your favorite image editing software program.

3 Revisions

19JAN2009 Creation