ULS5 Platform Document

Preparing FLASH Cards for First Time Use with ULS5 Products & Additional FLASH Card Information

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REVISION BLOCK

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1 Overview

Off-the-shelf Compact FLASH cards are formatted in a way that is not completely compatible with the formatting requirements of ASLs Upward Looking Sonars Version 5 (ULS5) and IRIS instruments. This includes the following instruments IPS5, IPS5E, AWCP, MFAWPC, AZFP and IRIS products. *In the following text the use of ULS5 includes IRIS instruments.*

This incompatibility causes long delays in the ULS5 firmware detecting the FLASH on power up. Inserting an off-the-shelf FLASH card that has not previously been formatted on a ULS5 unit has the potential of making the firmware in-operable or causing some functions to fail.

The symptoms of the incompatibility include the ULS5 units taking up to 50 seconds to recognize the card from power up instead of 6 seconds for an 8 GB card or 12 seconds for a 16 GB card. This can cause issues with the Link software and firmware operation.

This document describes a couple procedures to format an off-the-shelf card for first use in ASL ULS5 products. The first procedure uses the format command on the Link interface and the second if required, is a manual operation which uses the Terminal Emulator that is provided with the Link software.

Note that the use of higher capacity FLASH for IPS5 using older firmware and software can cause timing issues so it is recommended that firmware and software be upgraded if using higher capacity FLASH cards (8 and 16 GB) on units that were purchased with lower capacity cards (1 – 4 GB).

Do not attempt to upgrade firmware with a full card or one that has not been formatted by a ULS5 unit as outlined in this document

2 Approved FLASH Cards

Manufacturers of Compact FLASH cards appear to have changed their designs and these new cards may no longer be compatible with ASL Profiler instruments.

We highly recommend that our Profiler clients not purchase third party Compact FLASH cards for their instruments as ASL cannot verify full compatibility of these cards with all the operating modes of ASL profilers.

If you wish to purchase extra FLASH cards as spares (or for re-deployment convenience) the only FLASH cards that ASL recommends are:

Western Digital SSD-C16GI-4500 ~16 GB (*)
Western Digital SSD-C08GI-4500 ~ 8 GB
Western Digital SSD-C04GI-4500 ~ 4 GB

(Available from www.avnetexpress.avnet.com and www.californiapc.com)

Note that these cards must also be formatted using ULS5 instrumentation as outlined in this document.

(*) Older versions of firmware and software may not be compatible with 8 or 16 GB cards please contact ASL.

3 Formatting a New Off-the-Shelf FLASH Card

This method of formatting a new card is with the ULS5 unit connected to the Link software. This method should work if there is no adverse effect of the new FLASH on the firmware and that the firmware can be placed in standby mode by the Link software. The key is giving the firmware enough time to boot up with the new FLASH before trying to end the deployment.

3.1 Formatting the Card Using Link Format Command.

Power the unit off.
Insert the new card and power the unit on.
Wait at least 1 minute before attempting to End Deployment.

If the End Deployment is successful go to the File tab and click on the Format Flash command (

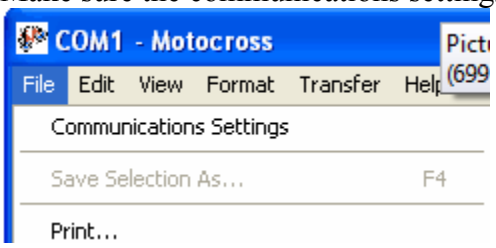
).

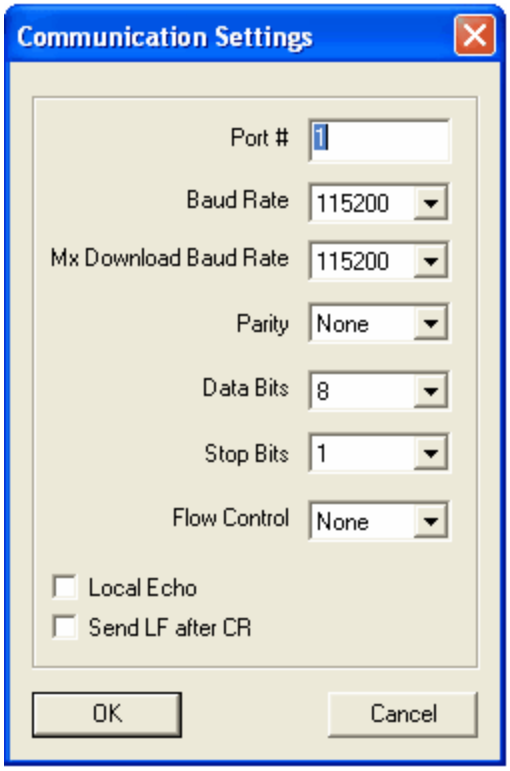
If the formatting completes with a test file written to the FLASH card then the formatting of the card was successful.

3.2 Manually Formatting the Card

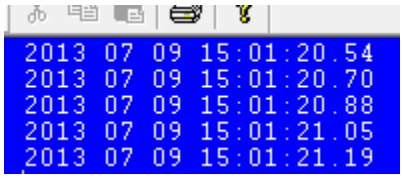
If you are unable to format the FLASH card using the method in section 3.1, then follow this procedure.

1. Place a previously formatted card into the unit and power it up.
2. End the deployment
3. Click on the Terminal Emulator button.
4. Make sure the communications settings are correct in the File menu.

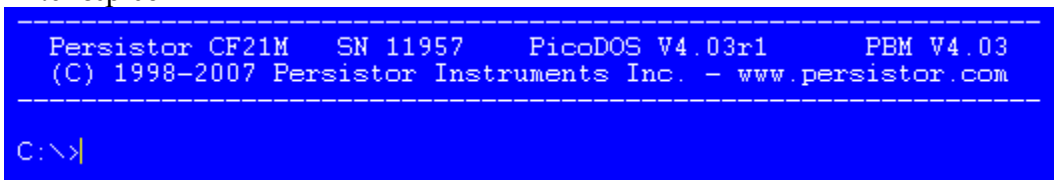




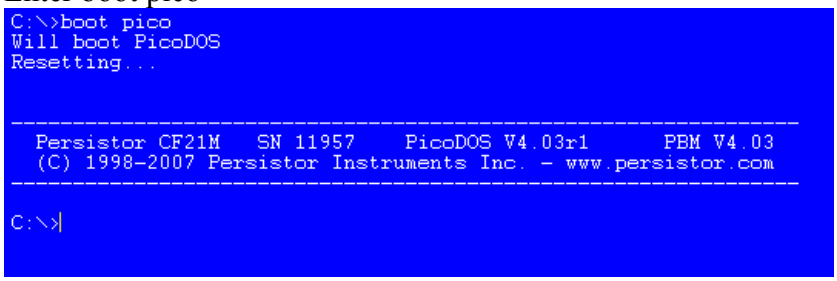
5. Press return to make sure your communicating with the unit. You should see date and time.



6. Enter &pico



7. Enter boot pico



8. Remove the FLASH
9. Insert the new FLASH. The unit will reset into PICO DOS.
10. Enter format c: and then enter y to format the FLASH.

```
---------------------------------------------------------------------
  Persistor CF21M   SN 11957    PicoDOS V4.03r1      PBM V4.03
  (C) 1998-2007 Persistor Instruments Inc. - www.persistor.com
---------------------------------------------------------------------

C:\>format c:
Formatting this drive will erase all of its data!
Are you sure ? y
Formatting C: ...
Complete

C:\>
```

11. Enter boot app

```
C:\>boot app
Will boot Application at 0xE40000
Resetting...

IPS5 Ver. 2.09 (20090916) SN: 55056 CPU: 11957
FLASH SPACE Used 32 KB Free 8001472 KB Total 8001504 KB
```

The unit is now back into the application.

12. Perform a power up and down test to make sure the unit boots up. Perform some small deployments as well as formatting the FLASH from the Link interface.