Technical Support Bulletin 2021-02	Sampler Post Firmware Upgrade Configuration Instructions	July 30, 2021

Alert Level: INFORMATIONAL

Instruments: Sediment Traps, RAS, PPS, WTS-LV with CF2 Microcontroller

Software Versions: Persistor CF2 Microcontroller Versions

Hardware Version: N/A

Subject: Sampler Post Firmware Upgrade Configuration Instructions

Summary: Instructions for Confirming sampler-specific settings after performing a firmware update with McLaneTerm.

Actions: These instructions are sampler-specific. Use the section that applies to your instrument and contact us (www.mclanelabs.com) with questions:

- WTS-LV Configuration Steps – Section 1
- Sediment Trap Configuration Steps – Section 2
- RAS Configuration Steps – Section 3
- PPS Configuration Steps – Section 4

Overview:

Confirming the Configuration settings is a best practices step to completing a firmware upgrade and/or hardware change (for example, installing a different WTS-LV pump head or adding a temperature sensor option to a Sediment Trap).

Before completing these steps, you must use McLaneTerm, (McLane's terminal emulation program) to upgrade the firmware. Instructions for upgrading the firmware are included in the McLaneTerm User Manual located on our website under Support> Utilities: https://mclanelabs.com/software-utilities/

EEPROM:

Instrument configurations are stored in non-volatile EEPROM. After a firmware installation, the EEPROM and current settings are compared. If EEPROM does not match the firmware configuration, you must accept or change the Configuration settings before proceeding.

For adaptive sampling firmware upgrades, refer to the Adaptive Sampling documentation included with your instrument. Adaptive Sampling requires a continuous RS-232 connection from the sampler to a computer. A command line interface and a set of commands are used to send and receive commands.

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1 : WTS-LV Configuration Steps

1. To use the Configuration menu, type *c* from the Main menu and type the password *con*

```
_____________________________________________________________
Configuration: LV-8M                    CF2 V2_16 of Mar 15 2021

               McLane Research Laboratories, Inc.
                      Large Volume Sampler
                           ML12345-01
               ____________________________
                           Main Menu
               ____________________________
                   Thu Jan  1 00:28:10 1970

          <1> Set Time          <5> Deploy System
          <2> Diagnostics       <6> Offload Data
          <3> Manual Operation  <7> Contacting McLane
          <4> Sleep             <C> Configure

New firmware version detected. Run Configure [C] to verify settings.

          Selection [] ? c  Password: con
```

Figure 1-1: Main Menu

```
_____________________________________________________________
Configuration: LV-8M                    CF2 V2_16 of Mar 15 2021


               ____________________________
                       Configuration Menu
               ____________________________
                   Thu Jan  1 00:28:14 1970

          <A> Integral Pressure Sensor      [No]
          <B> Pump                          [Maxon   8 L/Min.]
          <C> Pressure release protection   [Enabled]
          <D> Flow obstruction protection   [Enabled]
          <E> Rechargeable Battery          [No]
          <F> Trigger                       [Disabled]

          <X> Save & Exit       <^C> Cancel & Exit

          Selection [ ] ?
```

Figure 1-2: Configuration Menu

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2. From the Configuration menu type a value to check or change a configuration setting. An example of changing from an 8L/min to a 4L/min pump head is shown in Figure 1-3

```
Selection [ ] ? b

Current value of pump type: M
Enter pump type [Maxon|Pittman|Gearhead] [M] ? M

Current value of pump capacity: 8
Enter pump capacity [4|8|30 L/min] (4-30) [8] ? 4
Changing pump type from "Maxon  8LPM" to "Maxon  4LPM"
```

Figure 1-3: Changing the Pump Head Configuration

3. Type x at the prompt to save the changes to EEPROM. You can select not to update EEPROM by pressing [CTRL]-[C] which returns to the Main menu without saving changes.
4. The configuration parameters are now stored and configuration is complete. Parameters will remain in EEPROM when the battery is disconnected from the system.

```
_____________________________________________________________
Configuration: LV-4M                    CF2 V2_16 of Mar 15 2021


                 ________________________________
                         Configuration Menu
                 ________________________________
                     Thu Jan  1 00:28:36 1970

          <A> Integral Pressure Sensor      [No]
          <B> Pump                          [Maxon   4 L/Min.]
          <C> Pressure release protection   [Enabled]
          <D> Flow obstruction protection   [Enabled]
          <E> Rechargeable Battery          [No]
          <F> Trigger                       [Disabled]

          <X> Save & Exit       <^C> Cancel & Exit

          Selection [ ] ? x

          Configuration successfully stored
```

Figure 1-4: Saving the Configuration

The configuration must match the WTS-LV hardware. For example, setting the pump configuration for 4L/min requires the installation of a 4L/min pump head. Contact McLane if you are unsure of the hardware components you are adding.

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2 : Sediment Trap Configuration Steps

1. To use the Configuration menu, type *c* and type the password *con*.

```
_____________________________________________________________
Configuration: PST-21                                CF2 V3_16

               McLane Research Laboratories, Inc.
                     ParFlux Sediment Trap
                           ML12345-01
               ____________________________________
                           Main Menu
               ____________________________________
                   Thu Jan  1 00:40:37 1970

           <1> Set Time          --- Create Schedule
           <2> Diagnostics       --- Deploy System
           --- Fill Containers   <7> Offload Data
           <4> Sleep             <8> Contact McLane
           <C> Configure

NOTICE: Configure sampler before continuing!

                Selection [C] ? c  Password: ***
```

Figure 2-1: Main Menu

2. From the Configuration menu, type a value to check or change a configuration setting.

```
_____________________________________________________________
Configuration: PST-21                                CF2 V3_16


                ____________________________________
                        Configuration Menu
                ____________________________________
                    Thu Jan  1 00:40:41 1970

          <A> Number Of Cups                [21]
          <B> Compass Tilt                  [No]
          <C> Integral Temperature Sensor   [No]
          <D> Integral Pressure Sensor      [No]
          <E> RBR duo TD                    [No]
          <F> RBR virtuoso D                [No]
          <G> RBR Coda TD                   [No]

          <X> Save & Exit       <^C> Cancel & Exit

          Selection [ ] ? C

Is there a external temperature installed? [N] ? y
```

Figure 2-2: Configuration Menu

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Figure: 2-3: Saving the Configuration

```
Configuration: PST-21_XT                                    CF2 V3_16

                 ____________________________
                         Configuration Menu

                 ____________________________
                     Thu Jan  1 00:40:56 1970
          <A> Number Of Cups                 [21]
          <B> Compass Tilt                   [No]
          <C> Integral Temperature Sensor    [Yes]
          <D> Integral Pressure Sensor       [No]
          <E> RBR duo TD                     [No]
          <F> RBR virtuoso D                 [No]
          <G> RBR Coda TD                    [No]

          <X> Save & Exit       <^C> Cancel & Exit

          Selection [ ] ? x
          Configuration successfully stored
```

3. Type x at the prompt to save the changes to EEPROM. You can select not to update EEPROM by pressing [CTRL]-[C] which returns to the Main menu without saving changes.
4. The configuration parameters are now stored and configuration is complete. Parameters will remain in EEPROM when the battery is disconnected from the system.

The configuration must match the Sediment Trap hardware. For example, setting the number of cups to 21 is for use only with the 21 cup Sediment Trap model, and setting the number of cups to 13 is for use only with the 13 cup Sediment Trap model.

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3 : Remote Access Sampler (RAS) Configuration Steps

If new firmware is installed, the Configuration menu must be accessed and the configuration accepted or changed before selecting other options from the Main menu.

4. To use the Configuration menu, from the Main menu type *c* and type the password *con*.

```
_____________________________________________________________
Configuration: RAS-125M500              CF2 V3_12 of Jun  3 2021
               McLane Research Laboratories, Inc.
                     Remote Access Sampler
                           ML12345-01

               ___________________________________
                           Main Menu

               ___________________________________
                   Tue Jun 15 14:36:30 2021
                            Port 00
          <1> Set Time          <5> Create Schedule
          <2> Diagnostics       <6> Deploy System
          <3> Manual Operation  <7> Offload Data
          <4> Sleep             <8> Contact McLane
          <C> Configure

Selection [C] c   Password: ***
```

Figure 3-1: Main Menu

5. From the Configuration menu, type a value to check or change a configuration setting.

```
Configuration: RAS-125M100              CF2 V3_12 of Jun  3 2021

               ___________________________________
                       Configuration Menu

               ___________________________________
                   Thu Jan  1 00:35:24 1970
          <A> Pump                          [Maxon 125ml]
          <B> Sample Bag Capacity           [100]
          <C> Fixative Valve                [No]
          <D> RBR CodaT Temperature Sensor  [No]

          <X> Save & Exit
          <^C> Cancel & Exit

          Selection [ ] ? B

Current value of sample bag capacity: 100
Enter sample bag capacity [100|500|800 ml] (100-800) [100] ? 500
```

Figure 3-2: Configuration Menu

6. Type x at the prompt to save the changes to EEPROM. You can select not to update EEPROM by pressing [CTRL]-[C] which returns to the Main menu without saving changes.

7. The configuration parameters are now stored and configuration is complete. Parameters will remain in EEPROM when the battery is disconnected from the system.

The configuration must match the RAS hardware. 500mL sample bag capacity is only for the RAS-500. 100mL is for use only with the RAS-100.

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4 : Phytoplankton Sampler (PPS) Configuration Steps

If new firmware is installed, the Configuration menu must be accessed and the configuration accepted or changed before selecting other options from the Main menu.

1. To use the Configuration menu, from the Main menu type *c* and type the password *con*.

```
_____________________________________________________________
Configuration: WTS-125M                 CF2 V2_11 of Jun  3 2021
               McLane Research Laboratories, Inc.
                     Water Transfer System
                           ML12345-01
               ____________________________
                           Main Menu
               ____________________________
                   Thu Jan  1 00:47:02 1970

                            Port 99

          <1> Set Time          --- Create Schedule
          <2> Diagnostics       --- Deploy System
          --- Manual Operation  --- Offload Data
          <4> Sleep             <8> Contact McLane
          <C> Configure

NOTICE: Configure sampler before continuing!

                Selection [C] ? c  Password: ***
```

Figure 4-1: Main Menu

2. From the Configuration menu, type a value to check or change a configuration setting.

```
_____________________________________________________________
Configuration: WTS-125M                 CF2 V2_11 of Jun  3 2021
               ____________________________
                      Configuration Menu
               ____________________________
                   Thu Jan  1 00:47:05 1970
          <A> Pump                          [Maxon 125ml]
          <B> Fixative  valve               [No]
          <C> RBR CodaT temperature sensor  [No]
          <D> Antifouling fluid reservoir   [No]
          <E> Max Sample Volume Per Sample  [10000]

          <X> Save & Exit
          <^C> Cancel & Exit

          Selection [ ] ? A

Current value of pump type: M
Enter pump type [Maxon|Pittman] [M] ? M

Enter the pump head capacity [125 ml|250 ml] 250

          <^C> Cancel & Exit
<X> Save & Exit    <^C> Cancel & Exit
```

Figure 4-2: Configuration Menu

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3. Type x at the prompt to save the changes to EEPROM. You can select not to update EEPROM by pressing [CTRL]-[C] which returns to the Main menu without saving changes.

```
_____________________________________________________________
Configuration: WTS-250M                 CF2 V2_11 of Jun  3 2021


                _________________________________
                        Configuration Menu
                _________________________________
                    Thu Jan  1 00:47:15 1970


          <A> Pump                           [Maxon 250ml]
          <B> Fixative  valve                [No]
          <C> RBR CodaT temperature sensor   [No]
          <D> Antifouling fluid reservoir    [No]
          <E> Max Sample Volume Per Sample   [20000]

          <X> Save & Exit
          <^C> Cancel & Exit

          Selection [ ] ? x

          Configuration successfully stored
```

Figure 4-3: Saving the Configuration

4. The configuration parameters are now stored and configuration is complete. Parameters will remain in EEPROM when the battery is disconnected from the system.

The configuration must match the PPS hardware. For example, setting the configuration to the 50mL/min pump requires installation of a 50mL/min pump option on the PPS.

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