
Clarity Controls

Ecom


LC UNI profile

ENG

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1 Profile specification

ECOM LC UNI profile presents features for controlling the ECOM LCP4100, Alpha 10, Alpha 50, Alpha 100, Beta 10 and Beta 50 pumps.

2 Requirements

- Clarity Installation CD ROM with LC Control module (p/n A24).
- Free serial port in the PC.

Note: *Modern computers usually have only 1 (if any) serial (COM) port installed. To use more devices requiring the port, the **MultiCOM** adapter (p/n MC01) is available.*

- Serial cross DB9F-DB9F cable (p/n SK01).

Note: *Cables are not part of **Clarity** Control Module. It is strongly recommended to order required cables together with the Control Module.*

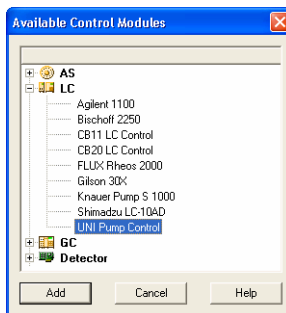
- Pump firmware depending on the pump type:

Pump Type	Firmware version
LCP 4100	3.1 or higher
Beta 10, 50	3.03 or higher

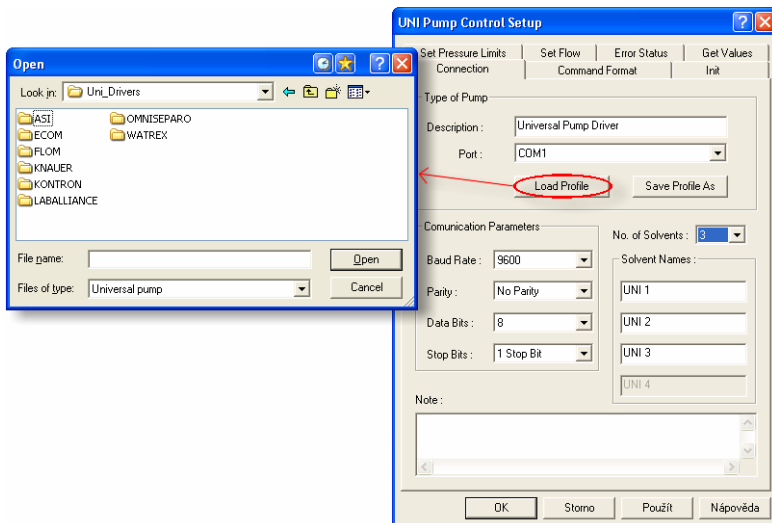
- Contact your pump supplier for eventual upgrade.

3 Profile Setup

- Invoke the **System Configuration** dialog accessible from the **Clarity** window using the **System – Configuration** command.
- Press the **Add** button to invoke the **Available Control Modules** dialog.



- Select the **Uni Pump Driver** and press the **Add** button.
- The **Setup - Connection** dialog will appear.



- Use the **Load Profile** button to load the corresponding configuration for your LC pump.

Note: Profile is stored in *.UNI file. You will find profile file for your LC Pump in the C:\CLARITY\UTILS\UNI_DRIVERS\YOURPUMP folder.

- Select the number of controlled solvents in the **No. of Solvents** field.
- Fill in the communication parameters and solvent names.

Caution!

The values from Com **Port** and **Baud Rate** fields are not stored in the profile. These values must be set according to the actual configuration. Using an incorrect **Baud Rate** may cause the program to hang-up during opening the Clarity **Instrument** window.

- Press the **OK** button.

Note: Advanced users may create a new profile or customize existing one. Detailed description can be found in the **Universal Pump Control Module** manual

- Switch to the desired instrument tab in the right part of the **System Configuration** dialog.

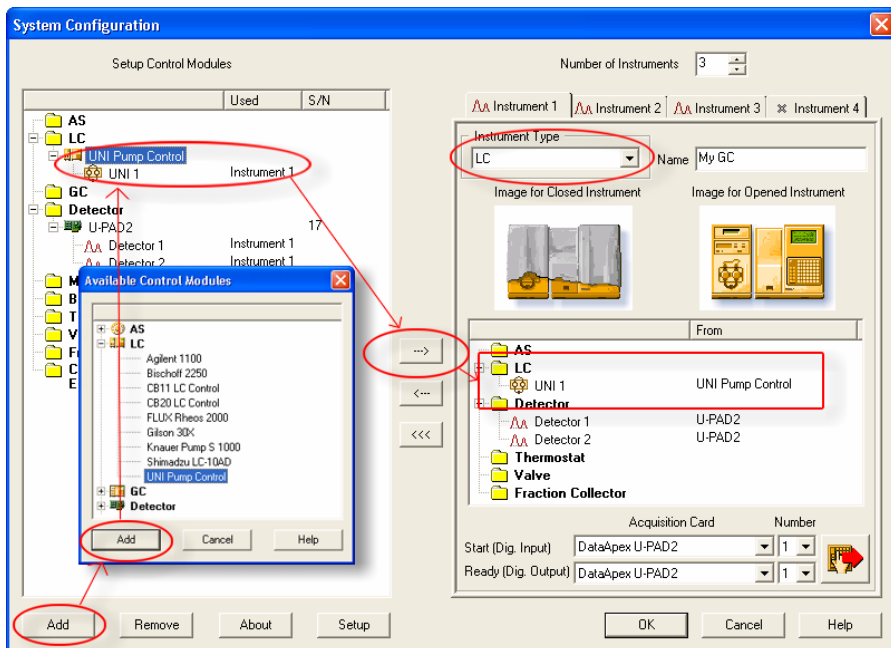


Fig. 1. System Configuration

- Drag and drop the **UNI Pump Driver** from the **Setup Control Modules** in the left to the instrument on the right.

Caution!

All defined solvents must be assigned on the same instrument.

4 Ecom pump profiles

4.1 Ecom 4100

Ecom 4100 is a low-pressure ternary gradient pump, with maximum flowrate 9,99 ml/min and pressure up to 40 MPa.

Communication parameters

Baud rate	2400
Parity	No parity
Data bits	8
Stop Bits	1 Stop bit

4.1.1 Pump Operation Mode

- The pump must be OFF-line before attempting the communication.
- If the Pump Display shows **ON-Li**, press **[ESC]** on pump keyboard to set it **OFF-L**.

Note: *When the pump does not react, power it **Off** and then **On** again*

4.1.2 LC Control Specifics and Limitations

- The Universal Pump control module uses only commands for **direct flow** and **composition settings**.
- The **Pump Display** will indicate the “*Waiting for Start*” status even during the gradient run.
- Any errors in communication are reported in **Clarity** as a “*Pump communication error*”.

Caution!

*This message will be invoked also when the pump does not accept the sent values – please check the pressure limits in **Gradient Options** dialog and flowrates in the **Method Setup - LC Control** dialog.*

- Pump error state will be reported in **Clarity** as “*Pump Error*”. Check the **Pump Display** for the specific error message.

Note: *Most commonly the exceeded pressure limits are the cause of receiving “**Pump Error**” message box.*

4.2 Ecom BETA 10

Ecom BETA 10 is a low-pressure ternary gradient pump, with maximum flowrate 9,99 ml/min and pressure up to 40 MPa.

Communication parameters

Baud rate	2400
Parity	No parity
Data bits	8
Stop Bits	1 Stop bit

4.2.1 Pump Operation Mode

- The pump must be OFF-line before attempting the communication.
- If the Pump Display shows **ON-Li**, press **[ESC]** on pump keyboard to set it **OFF-L**.

Note: *In case the pump does not react, power it **Off** and then **On** again*

4.2.2 LC Control Specifics and Limitations

- The LC control module uses only commands for **direct flow** and **composition settings**.
- The **Pump Display** will indicate the “*Waiting for Start*” status even during the gradient run.
- Any errors in communication are reported in **Clarity** as a “*Pump communication error*”.

Caution!

This message will be invoked also when the pump does not accept the sent values – please check the pressure limits and flowrates set in the Method Setup - LC Control part of the method first.

- Pump error state will be reported in **Clarity** as “*Pump Error*”. Check the **Pump Display** for the specific error message.

Note: *Most commonly the exceeded pressure limits are the cause of receiving “**Pump Error**” message box.*

4.3 Ecom BETA 50

Ecom BETA 50 is a low-pressure ternary gradient preparative pump, with maximum flow rate 50 ml/min and pressure up to 28 MPa.

Communication parameters

Baud rate	2400
Parity	No parity
Data bits	8
Stop Bits	1 Stop bit

4.3.1 Pump Operation Mode

- The pump must be OFF-line before attempting the communication.
- If the Pump Display shows **ON-Li**, press **[ESC]** on pump keyboard to set it **OFF-L**.

Note: *In case the pump does not react, power it **Off** and then **On** again*

4.3.2 LC Control Specifics and Limitations

- The LC control module uses only commands for **direct flow** and **composition settings**.
- The **Pump Display** will indicate the “*Waiting for Start*” status even during the gradient run.
- Any errors in communication are reported in **Clarity** as a “*Pump communication error*”.

Caution! *This message will be invoked also when the pump does not accept the sent values – please check the pressure limits and flowrates set in the Method Setup - LC Control part of the method first.*

- Pump error state will be reported in **Clarity** as “*Pump Error*”. Check the **Pump Display** for the specific error message.

Note: *Most commonly the exceeded pressure limits are the cause of receiving “**Pump Error**” message box.*

4.4 Ecom ALPHA 10

Ecom ALPHA 10 is an isocratic HPLC pump, with maximum flow rate 10 ml/min and pressure up to 40 MPa.

Communication parameters

Baud rate	9600
Parity	No parity
Data bits	8
Stop Bits	1 Stop bit

4.4.1 LC Control Specifics and Limitations

- The LC control module uses only commands for **direct flow**.
- Any errors in communication are reported in **Clarity** as a "Pump communication error".

Caution!

This message will be invoked also when the pump does not accept the sent values – please check the pressure limits and flowrates set in the Method Setup - LC Control part of the method first.

- Pump error state will be reported in **Clarity** as "Pump Error". Check the **Pump Display** for the specific error message.

Note: *Most commonly the exceeded pressure limits are the cause of receiving "Pump Error" message box.*