INTERFACE

Lode Ergometer – Enverdis Cardiologic Explorer 12C ERGO

STEP I Setting up the hardware

1. For controlling the ergometer by the Enverdis 12C ERGO you will need the RS-232 cable (part no. 930911) to establish the communication. The lay-out of this cable is as follows:

RS232 cable 930911		
D-con 9 pin female		D-con 9 pin male
2 RxD	----------	2 TxD
3 TxD	----------	3 RxD
5 GND	----------	5 GND

2. Connect the RS232 cable to the ergometer *(see picture 1).*
3. Connect the RS232 cable the Enverdis 12C *(see picture 2).*
   a. If you have a Blood Pressure Module, you also need to have a heart rate option installed on your ergometer.

STEP II Setting-up the ergometer

4. Switch on the ergometer

   The Lode ergometer is default shipped with the LODE RS232 communication protocol. It should be set to the “LODE prot 38K4” RS232 protocol
   You can change the RS232 protocol by following the procedure below:
   - Switch on the ergometer and press enter.
   - You will be in the "MAIN MENU"
   - Select, by using the up/down keys, the menu "SYSTEM PARAMETER" and press enter
   - Select, by using the up/down keys, the menu "SETTINGS" and press enter
   - Select, by using the up/down keys, the menu "RS232 PROTOCOL" and press enter
   - Select, by using the up/down keys, the “LODE prot 38K4” protocol and press enter.
   - Save the selected RS232 protocol .
   - Switch off the ergometer.

5. For controlling the ergometer by the Enverdis 12C,the ergometer should be set in "TERMINAL MODE" mode. The "TERMINAL MODE" mode should be selected as follows. After switching the ergometer on, press enter, select "TERMINAL MODE" and press enter again.

   NOTE: You can also let the ergometer start-up in "TERMINAL MODE" mode every time you switch on the ergometer, by using the default start menu. To set up the ergometer for starting up in “CORRECT MODE” mode proceed as follows:

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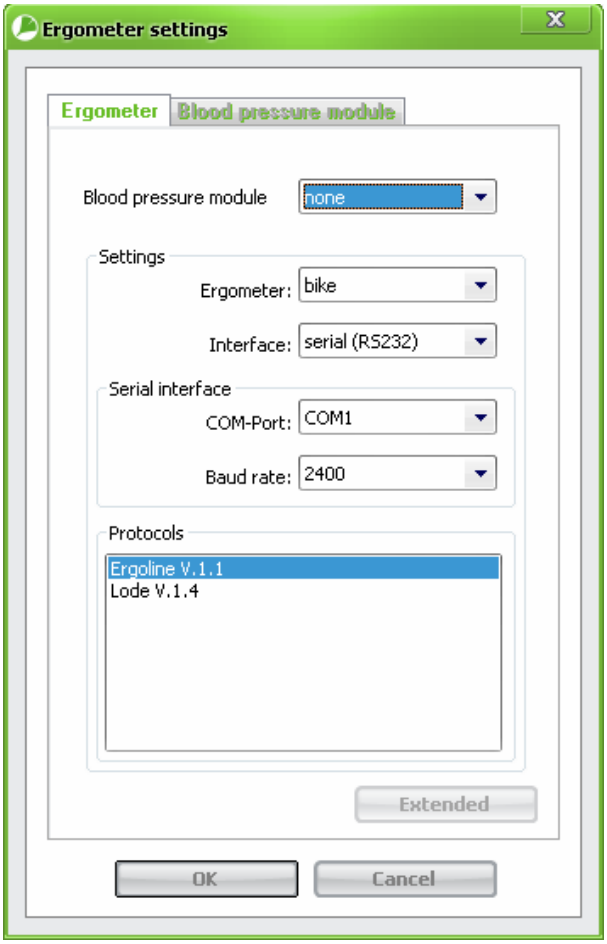
- Switch on the ergometer and press enter
- You will be in the "MAIN MENU"
- Select, by using the up/down keys, the menu "SYSTEM PARAMETER" and press enter
- Select, by using the up/down keys, the menu "SETTINGS" and press enter
- Press enter to confirm the menu “DEFAULTSTARTMENU”
- Select “CORRECT MODE “ and press enter
- You will be asked to save the changes confirm with “YES”
- If you switch off the ergometer, it will start-up in the “TERMINAL MODE” mode, every time when the ergometer is switched on again

6. The Lode ergometer is now ready for external control.

STEP III Setting up the EXTERNAL DEVICE



7. Start the Enverdis ERGO software and select the menu "Extras"->"Ergometer"

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8. The ERGO software is default shipped with Ergoline protocol to a bicycle ergometer.
9. Take the Lode V.1.4 protocol, the exact blood pressure module and the baud rate from the Lode protocol.
10. Press "OK" to apply the values.
11. For controlling the Lode ergometer by the software, you will have to make a “device configuration” in the Enverdis 12C. Take the following steps:

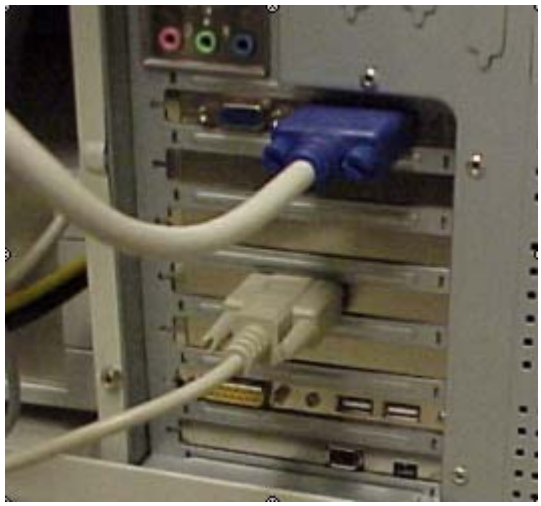
The system is ready for use.

Remarks:

- The installation procedures of the Lode ergometers Corival, Angio and Excalibur Sport are all the same. The connection of the cables may be on slightly different places.

For questions and comments, you can contact the Lode service department by e-mail at service@lode.nl or by telephone at +31 50 5712811.

Picture 1: Connection to the Ergometer



Picture 2: Connection to the Enverdis 12C

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ISO 9001:2000 and ISO 13485:2003 certified
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