INTERFACE
Lode Ergometer – PBI QRS-card ECG system

Interface sheet version V2.00 QRS-card software Version Enu 4.01

STEP I Setting up the hardware

1. For controlling the ergometer by the **QRS-CARD ECG SYSTEM** you need a **RS232** cable (part no. **930911**), The lay-out of the cable is as follows:

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

2. Connect the RS232 cable to the ergometer *(see figure 1).*
3. Connect the RS232 cable from the ergometer to the **QRS-CARD ECG SYSTEM** *(see picture 2)*

STEP II Setting up the ergometer

4. Switch on the ergometer

   The Corival ergometer is default shipped with the LODE RS232 communication protocol. It should be set to the ERGOLINE P10 protocol but when it is not set to the default protocol. You can check and/or change the RS232 by following the procedure below:
   - Switch on the ergometer and press enter.
   - You will be in the "MAINMENU"
   - 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 "ERGOLINE P10" protocol and press enter.
   - Save the selected RS232 protocol.
   - Switch off the ergometer.

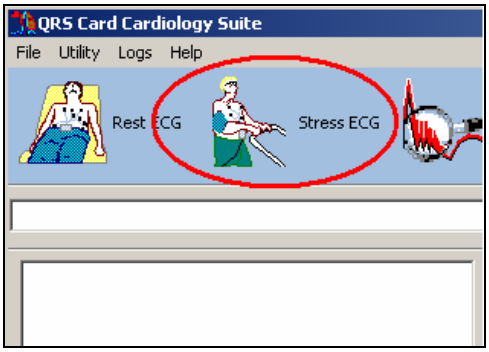
5. For controlling the ergometer by the **QRS-CARD ECG SYSTEM** the ergometer should be set in "TERMINAL" mode. The "TERMINAL" mode should be selected as follows. After switching the ergometer on press enter, and select "TERMINAL" and press enter again

   NOTE: You can also let the ergometer startup in "TERMINAL" mode every time you switch on the ergometer, by using the default start menu. To set up the ergometer for starting up in "TERMINAL" mode proceed as follows:
   - Switch on the ergometer and press enter.
   - You will be in the "MAINMENU"
   - 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" and press enter.
   - Select "TERMINAL " 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 every time when the ergometer is switched on again.

STEP III Setting up the QRS-CARD ECG SYSTEM

6. The Lode ergometer is now ready for external control

Start the QRS card Cardiology Suite and go to stress ECG



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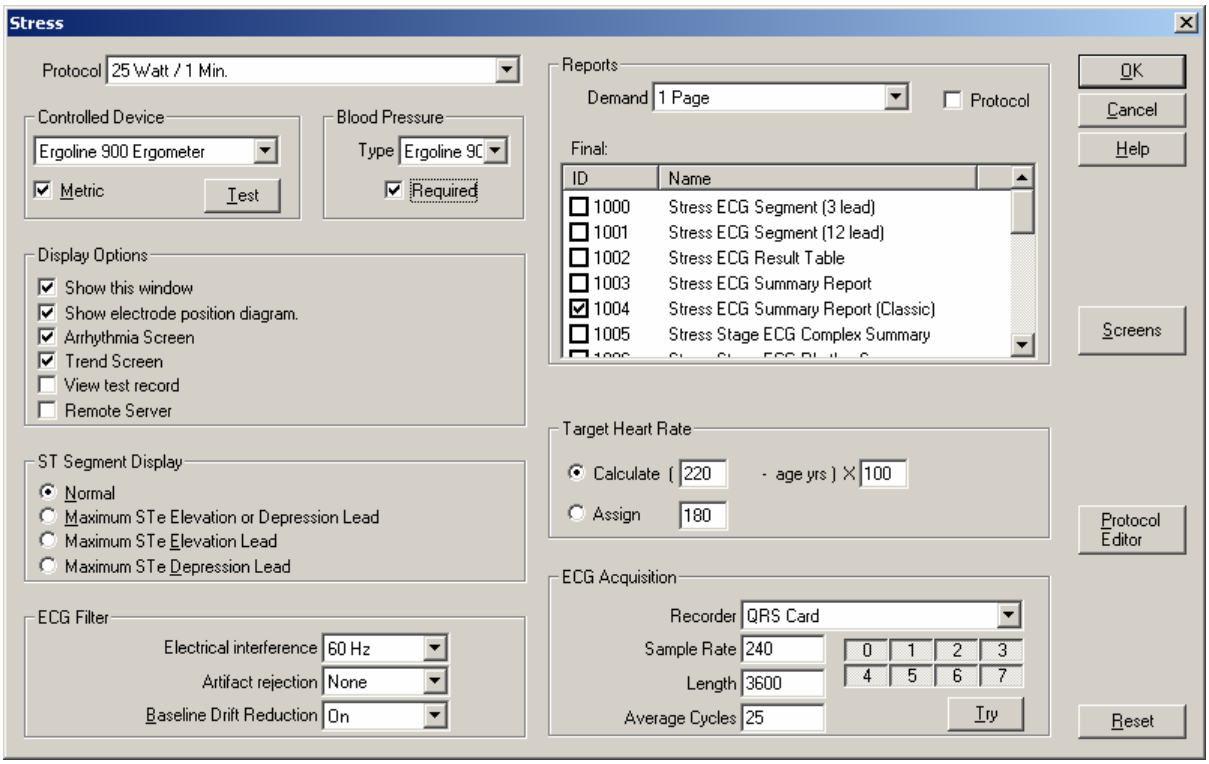
The following menu will appear,



Select the Ergoline 900 as Connected device and select for the blood pressure type the Ergoline 900 as well.
Press Ok to submit.

Restart the ergometer and ECG device and then your system is ready to be used.

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Pictures.

Picture 1

Picture 2

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.

Lode B.V.
Zernikepark 16
9747 AN Groningen
The Netherlands

Tel.: 31(0)50 5712811
Fax: 31(0)50 5716746