# INTERFACE

**Lode Ergometer –** Delmar Reynolds CardioDirect 12 Stress system
V2.00

## STEP I Setting up the hardware

1. For controlling the ergometer by the Delmar Reynolds CardioDirect 12 Stress 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 picture 1).*
3. Connect the RS232 cable to the Delmar Reynolds CardioDirect 12 Stress 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” RS232 communication protocol.
   You can 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" and press enter.
   - Save the selected RS232 protocol.
   - Switch off the ergometer.

5. For controlling the ergometer by the Delmar Reynolds CardioDirect 12 Stress 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"

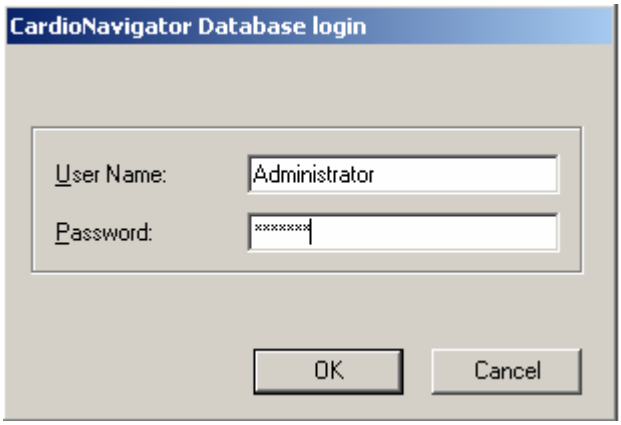
- Select, by using the up/down keys, the menu "SYSTEM PARAMETER" and press enter
- Select, by using the up/down keys, the menu "SETTINGS" and press enter
- Press enter to confirm the menu “DEFAULTSTARTMENU” and press enter

If you switch off the ergometer it will start-up in the “TERMINAL” mode every time when the ergometer is switched on again.

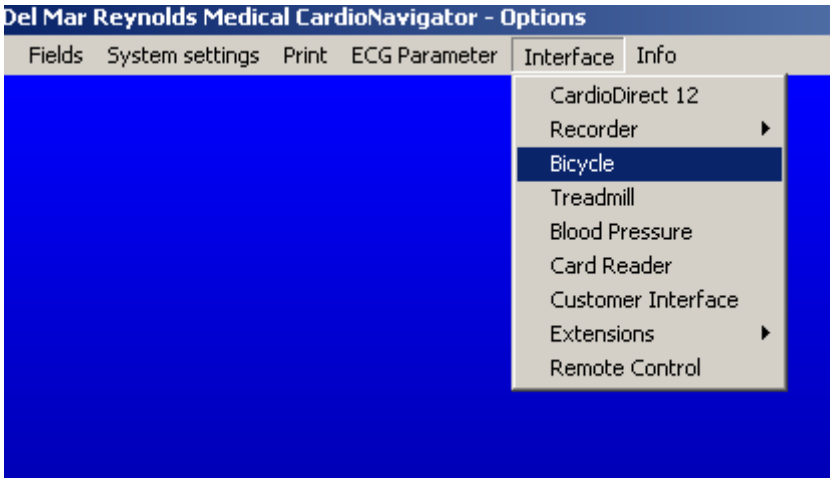
6. The Lode ergometer is now ready for external control

| **STEP III** | **Setting up the Delmar Reynolds CardioDirect 12 Stress system** |
|---|---|

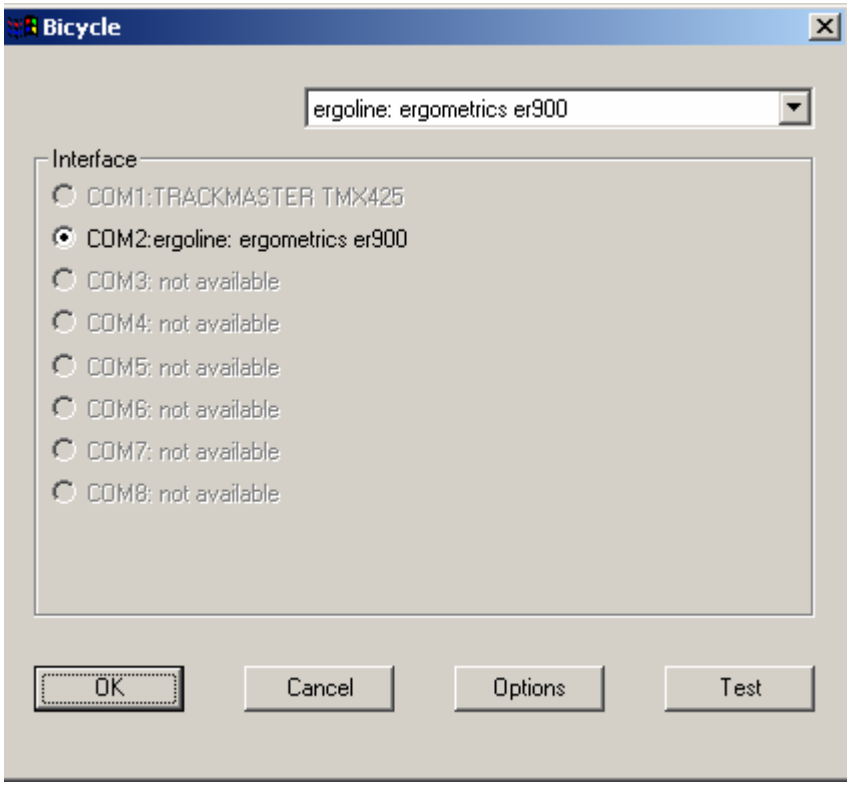
7. Go to the Cardionavigator menu and login by using your “Username” and “Password”.




8. Select INTERFACE and go to BICYCLE.



Select the Ergoline: ergometrics er900 as ergometer.




9. Now you can close the CardioNavigator program and you will automatically get back in the stress program.

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

You are now able to perform a stress test.

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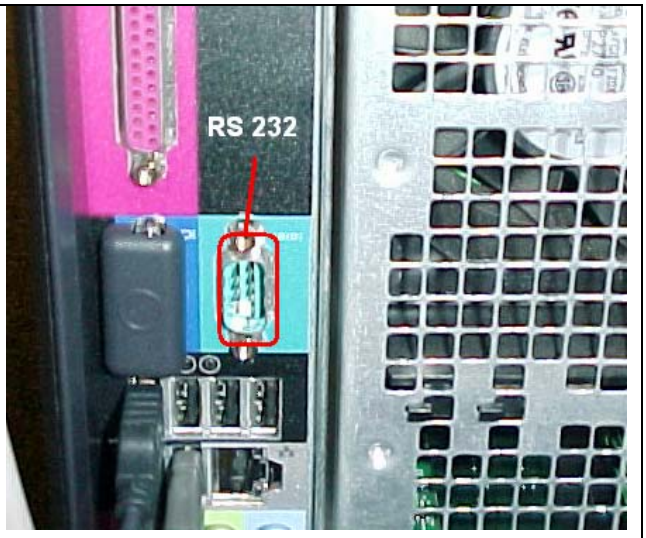
## Pictures

Picture 1: Connection to the Ergometer




Picture 2: Delmar Reynolds CardioDirect 12 Stress system

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*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.

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