

**Double-Body Ram - Settings, Inspections & Maintenance**

**1/ Settings**

All the settings about the use of the gate are shown on the manual given at the installation of the starting gate. Please find it below in small scale:

**USER'S MANUAL, PROBOX SYSTEM**

**REMOTE CONTROL**

- Emergency stop
- Manual mode
- Automatic mode

Canceling a start by pressing the MANU button before the last sentence (Before "Watch the gate")

**MANUAL MODE**

- Switch on the PROBOX
- Release the emergency stop button (Prostart welcome)
- Press the MANU button (Gate is going up)
- Press the MANU button (Attention)
- Press the MANU button (Start is coming)

**AUTOMATIC MODE**

- Switch on the PROBOX
- Release the emergency stop button
- Press the AUTO button (Stop after 15 starts)
- Automatic mode stops after pressing the AUTO button
- Does not work with programs II

**HOW TO CHOOSE A PROGRAM**

Switch on the PROBOX → Press the emergency stop button → Open the window of the PROBOX  
 Release emergency stop ← Select the wished programme through Up & Down arrows ←

**PROGRAM N°I**

- Training program
- Random start without voice (Only beeps et lamps)
- Works in Auto & Manu modes.

**PROGRAM N°0**

- Official program
- Random start - UCI conformity (Between 0,1 et 2,7 seconds)
- Works in Auto & Manu modes.

**PROGRAM N°II**

- Training program
- Short or long start (0,1 OR 2,7 seconds)
- The Auto button is a swing in order to move from short to long start.
- Works in Manu mode only.

After each switching on PROBOX, program N°0 is automatically set up.

**VOICE CARD**

In opening the starting system, you can access on voice card.  
 The volume of speakers can be adjusted from this card thanks to the black potentiometer.  
 Do not turn up to the maximum in order to avoid any overheating.  
 A jack plug with an unamplified sound output is available in order to connect the gate to a sound amp during competitions.

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**USER'S MANUAL, PROBOX SYSTEM**

**HOW TO ADJUST THE TIMING**

**4 TIMING**

- Fixed Orange (Gate will go down at the beginning of orange 2)
- Flashing Orange (Gate will go down at the end of orange 2)
- Fixed Green (Gate will go down at the beginning of green) - TIMING OFFICIEL UCI
- Flashing Green (Gate will go down at the end of green 2)

**OPERATIONS**

- Switch on the PROBOX
- Press the emergency stop
- Press the MANU button during 5 seconds
- Release / Press the MANU button until find the wished timing
- Release the emergency stop

**HOW TO ADJUST THE TIME BETWEEN TWO AUTOMATIC STARTS**

**4 TIMES**

- Red One start every 30 seconds
- Orange 1 One start every minute
- Orange 2 One start every two minutes
- Green One start every three minutes

**OPERATIONS**

- Switch on the PROBOX
- Press the emergency stop
- Press the AUTO button during 5 seconds
- Release / Press the AUTO button until find the wished timing
- Release the emergency stop

**AIR PRESSURE WARNING**

This warning is only available if the PROBOX is used with a Prostart pneumatic gate.  
 \*Air pressure is too low\* - The pressostat isn't receiving the proper air pressure.

- Check the operation of the compressor (pressure inside the compressor > = the selected pressure on the FRL)
- Check the correct pressure on the nanometer regulator. (7 bars for a 8-man gate)

**DO NOT MODIFY THE PRESSOSTAT SETTING BEFORE DOING THE CHECKS ABOVE**

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In the case your gate is giving a bounce during its drop, please find below the procedure to find back a clean gate drop:

A = Make sure pressure of the air compressor is always above the pressure needed to operate. (Example: The manometer of the FRL shows 7.0 bars (102 psi) – The compressor needs to have at minimum a pressure of 7.4 bars (108 psi) to deliver a steady pressure)

B = If the gate drops in two blocs with a half stop at ¾ of its motion, it means the break is too important. Please turn anti-clockwise a bit the adjustment screw located at the nose of the air ram. Make several tests until getting a clean gate drop.

C = If the gate drops in getting a bounce at the end of its motion, it means the break isn't enough. Please turn clockwise a bit the adjustment screw located at the nose of the air ram. Make several tests until getting a clean gate drop.

The access of this adjustment screw is possible through a long and thin flat screwdriver and in traversing the gate in upper position (You can see the nose of the ram) Otherwise you can also remove the two center grates to totally access in the ram area.

## **2/ Inspections and maintenance**

**Inspections at every use:** Quality of the gate drop needs to be always controlled. If a gate drop is unusual, stop the use of the gate and analyze the situation. Please find below the main reasons:

- The compressor isn't giving the right pressure. Make sure the compressor always supplies a pressure above the FRL fixed pressure.
- The air regulation inside the FRL is damaged and do not regulate with enough accuracy. (The device needs to be changed)
- The fixations of the ram are weakened. To check that, the two center grates need to be removed. If the fixations look good, make one or several gate drops to see if everything is correct.
- The air circuit is defective. Check if you can discover some leaks and record a video in order to share all the information to the Prostart staff.

**Maintenance at every use:** After every use of the gate, it's important to:

- Press the bottom of the FRL bloc in order to remove the humidity accumulated inside.
- Slide-off the valve in order to totally remove the air inside the FRL+Ram.
- Empty for 5 seconds the purge under the compressor to remove the main amount of water accumulated on the day.

**Inspections every 3 months:** Quality of the gate drop + no air leak.

**Maintenance every 3 months:** Greasing of the 9 gate hinges with a grease gun. 16 nipples are at disposal. You can use general grease.

Totally drain the tank of the compressor in order remove all the water and humidity inside.

**Inspection every six months or before a major competition:**

- Remove the two center grates to access in the ram area. Aim is to control that the clevis are well-fixed and well-greased.
- Check the volume of the speaker before an event. If the volume is not high enough, you can use an external speaker using the available 3.5mm jack plug inside the PROBOX.
- Check all the electronic is performing well. All the remote buttons are working and also the speaker, gate motion and two LED lights.

**Maintenance every six months or before a major competition:**

- Greasing of the 9 gate hinges with a grease gun. 16 nipples are at disposal. You can use general grease.
- Greasing of the 2 clevis brackets of the ram.
- Turn up the screws of the clevis brackets to make sure everything is well tightened.

**Maintenance during a major competition above 500 riders:**

Totally Drain the tank of the compressor twice in the day. Check the compressor always supplies the right pressure needed in several moment of the day.

**Conditions of use:**

The lowest operating temperature is given at -5°C (23°F) Below, it could damage the air circuit line. In the case the gate is used below the frost, the compressor needs to be totally drained. The Valve also needs to slide-off to remove all air inside the ram.

The highest operating temperature is given at +40°C (104°F) Above, the compressor is under stress.

If you have to use the gate within that temperature range, the whole gate system needs to be switched-off for 5 minutes every two hours so all the system can cool down a bit.

A cooler can be installed inside the control room in order to renew the air inside the room.

Commentaries: \_\_\_\_\_

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