

Possible interferences with wireless heart rate transmitters and receivers

Dear Customers,
Dear Service Engineers,

please allow to draw your attention to a special characteristics of wireless heart rate transmitters and receivers.

In all h/p/cosmos operation manuals of the h/p/cosmos running-machines we have listed possible sources of interference and we have listed a number of measurements how to check and improve the quality of transmission.

It is normal with wireless transmission, that this system does not work everywhere. We have to consider that in maybe 5 % of the cases there is no well working POLAR transmission available.

Just like mobile phones can not work in every room and can be interfered by some electric and electronic equipments or can be shielded by concrete walls or for example by metal housings of elevators, etc.

The problem in most of the cases is interference and magnetic fields in many laboratories or other rooms.

With the normal POLAR watch the problems are much less, because POLAR watches do not have cables.

Cables can work as antennas and detect lots of unwanted signals and interference and magnetic fields.

But transmission interference can even occurs in some cases with the much less sensitive POLAR watch.

If somebody is running very close under the high voltage power lines or very close to the railway tracks the POLAR watches can not work.

Also for example in most Formula 1 cars most of the time the POLAR watches can not work. And there are many cases where such interference can occur.

All h/p/cosmos running-machine systems are tested very well here in Traunstein at h/p/cosmos factory before they will be shipped to the customer.

So we can 100% guarantee that the wireless heart rate transmissions are working well under normal conditions.

On the h/p/cosmos checklist an engineer has to test also this function and has to sign for confirming that the heart rate display on the h/p/cosmos running-machine worked perfectly.

With the big h/p/cosmos running machines models h/p/cosmos venus and h/p/cosmos saturn family, we are working with 3-channel receivers and 6-channel receivers.

interferences with wireless heart rate

The system works very well and the subject is within transmission range even on the very big running surface.

But in case of interference sources, this system may be a bit more sensitive caused by the number of POLAR receivers in one running-machine.

So a special 1-channel receiver can be provided for these big running machines in case of interference.

But it may take some time and we may need some tests to try different receivers with different cables until the best solution was found.

And it is important to know there is still the possibility to fail even with such a special solution.

Just like mobile phone manufacturers can not guarantee that a mobile phone will work everywhere.

Important safety instruction: If the heart rate monitor does not work properly, or if you think that the display may not be correct, do not rely on the heart rate display, compare the heart rate display to a normal POLAR watch or an ECG.

Contact authorised service engineer and do not use the Cardio mode of the running-machine in case of any malfunction of the heart rate display.

The interference is NOT just an h/p/cosmos problem and this is not just a POLAR problem.

Based on our experience and based on our information it occurs with all running-machine manufacturers and with all wireless heart rate transmitters working approx. with 5 KHz, like POLAR does.

The h/p/cosmos treadmills have extremely little interference. If you open the control case or motor cover you can see the metal cage for the inverter and extremely well shielded cables everywhere at h/p/cosmos running-machines. And h/p/cosmos running-machines can even be used for most of the extremely sensitive EMG equipment because h/p/cosmos running-machines do not have carbon brushes and extremely little interferences.

But every treadmill needs power. And current flow through the power lines create magnetic fields. So this also can interfere a wireless heart rate monitor system already.

Please forward this information to all your sales and service staff and to customers who experienced such interference.

If we can offer any further help at this stage please do not hesitate to let us know.