

Hand Pulse Technology

Lifespan Fitness Treadmills come equipped with hand pulse sensors which are used to pick up tiny EKG/ECG signals that run through the body when your heart beats. These electrical EKG/ECG signals are very small and that they must be amplified 1000 times to make the signal useful for the computer to display your pulse.

To ensure proper operation:

- The user must maintain good, consistent contact on all four sensors
- The users skin cannot be too dry or too wet

Other factors that could affect the reading:

- Change of grip on the sensors (during slow pace walking and up to running)
- Tightening of hand muscles will produce small electrical signals
- Static electricity charges from the air or from walking on the treadmill

EKG/ECG Sensors may filter through actual EKG/ECG signals and “Noise” factors that may affect the reading. This will cause the pulse reading to be delayed and will take longer to update the display as the heart rate changes. Too much noise will create an incorrect reading. Medical conditions or having no electrical signal in the hands are other factors that may affect pulse readings as well.

These are limitations of hand pulse technology and even the most expensive systems (which can cost upwards of \$3,000) used in hospitals have the same problems. The difference is that a patient in a hospital is not running on a treadmill. Hand pulse technology works well on stationary exercise machines like bikes and even elliptical cross trainers but are not perfect on a treadmill. We offer treadmills with a wireless heart rate receiver which may be a more accurate option.

To test if your hand pulse sensors are working up to specification, hold them while standing on the side step rails, not walking, and see if the reading is more in line with what you would expect. This will eliminate the movement and static electricity factors. If your hands are dry, then wet them slightly (saliva works as a great conductor if this doesn't bother you).

For more information, please contact our Lifespan Technical Support Department

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