



Technical Bulletin

Date: May 15, 2025
To: Midmark® Digital ECG Customers
From: Midmark Customer Quality
Topic: Midmark Digital ECG Loss of Signal

Through market surveillance, Midmark was made aware of isolated customers experiencing "lead off" instances when utilizing the Midmark Digital ECG. After internal investigation and problem solving, Midmark has released a firmware update for the Midmark Digital ECG that reduces "lead off" instances during use. To receive the latest firmware update, please contact Midmark Technical Support at 844.856.1230, option 2, or email: TechSupport@midmark.com

Damage to the patient cable or USB cable may also increase the likelihood of loss of signal on the Midmark Digital ECG. Recent improvements have been made to the patient cable and USB cable to increase robustness. If you are experiencing loss of signal, please contact Midmark Technical Support to understand if damaged cables are the cause.

As written in the Midmark Digital ECG instructions for use, Midmark recommends placing the lower extremity leads at the inside calf, halfway between the knee and the ankle. This placement follows the current standard as defined by the American Heart Association.¹ However, in cases where such placement does not render a suitable diagnostic-grade ECG or such placement yields no waveforms, the recommended alternative is to move both of the lower limb leads to the lower abdomen, at least 5 cm below the umbilical line and near the iliac crests. This alternative placement should generate waveforms in all leads that are morphologically equivalent to the standard lower-leg placement.² Midmark advises symmetric leads for lower-limb lead placements, either both RL and LL on the lower extremity or both on the lower abdomen, when acquiring an ECG.



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Sources:

1. [Recommendations for the Standardization and Interpretation of the Electrocardiogram | Circulation](#)
2. <https://openheart.bmj.com/content/2/1/e000226>

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