

Application Note Rev 2.1 – Pediatric/Neonatal Usage - PCP-USB Telemedicine Stethoscope

Introduction

Providers often ask if anyone offers a small head stethoscope designed specifically for telemedical pediatric or neonatal use. Although there are many traditional stethoscopes with pediatric heads on the market, we are not aware of any FDA approved telemedicine stethoscopes marketed solely to the pediatric market.

However, while not designed specifically for pediatrics, the functionality and specifications of the PCP-USB stethoscopes from RNK Products have led to use in both general pediatric as well as neonatal settings. The chest piece design and functionality indicates usage in small area auscultation.

Pediatric Stethoscope Characteristics

The key feature of a typical pediatric stethoscope is its' smaller size. An acoustic stethoscope works best if the complete circumference of the chest piece is seated against the skin. Due to the smaller flat surfaces on a child's or infant's chest or back, a smaller chest piece head is an advantage to achieve good seating. The unfortunate side effect of a smaller chest piece head is that, for acoustic stethoscopes, smaller means less sensitivity.

A regular acoustic adult chest piece is $1\frac{7}{8}$ " in diameter, while the pediatric chest piece is $1\frac{1}{2}$ " diameter for the diaphragm side and $1\frac{1}{8}$ " diameter for the bell side.

PCP-USB Telemedicine Stethoscope Design



The PCP-USB stethoscope is a single-sided digital stethoscope with a central raised platform housing piezo sensor technology. The center, raised part of the PCP-USB chest piece that presses against the skin is about $1\frac{1}{3}$ " in diameter. This is comparable to the traditional pediatric chest piece and provides the same high sensitivity for a child as for an adult.

In addition, with its' patented piezo sensor technology, good sensitivity can be attained even if only part of the circumference of the chest piece head is fully seated against the skin.

When used with PCP-SSP software, filtering can be applied to enhance auscultations at various body sites.