oximeter probe was used on the neonates. We concluded that a vinyl
glove does not interfere with SpO₂ readings. We routinely use the
vinyl glove intraoperatively as we feel it lessens the chance of injury
as reported by Sloan.

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EKG Artifacts during Intraoperative Evoked Potential Monitoring

To the Editor—During intraoperative monitoring of somatosensory
evoked potentials (SEPs), the EKG signal displayed on the screen of
the Datascope 2000™ monitor (Datascope Corporation, Paramus, NJ)
was often obscured by large stimulus artifacts. The same artifacts
appeared on "delayed" hardcopy output produced by the Datascope (Fig.
1A), but not on "diagnostic" hardcopy output (Fig. 1B). SEPs were
recorded by a Nicolet Pathfinder I™ signal averager (Nicolet Instruments,
Madison, WI) using constant-current stimulators and stimulus
isolation units. The square pulse electrical stimuli were 200 μsec in
duration and delivered at a rate of 6.1 per second to paired stimulating
electrodes over the median or posterior tibial nerves; stimulus intensities
ranged from 15 to 30 mA.

Rigorous testing of the Pathfinder failed to demonstrate any mal-
function. Other evoked potential averagers (e.g., Lifescan®, Diatek, San
Diego, CA) produced similar artifacts. We then discovered that the
large artifacts were produced by a "pacer enhancement circuit" in the
Datascope 2000™, which modifies data sent to the screen display and
"delayed" hardcopy but not to the "diagnostic" hardcopy. This circuit
increases the visibility of small pacemaker spikes by incorporating a
high-amplitude square pulse in the EKG data when a pacemaker spike
is detected. While the electrical artifacts from the somatosensory stimuli
were not large enough to obscure the EKG by themselves, their steep
slopes led to their identification as pacemaker spikes.

The "pacer enhancement circuit" of the Datascope 2000™ can be
disabled, eliminating this problem. Other EKG monitors designed for
intraoperative use may also incorporate such circuitry. Thus, we are
reporting our findings for others who may have encountered similar
difficulties.

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FIG. 1. "Delayed" (A) and "diagnostic" (B) hardcopy EKG tracings
produced by a Datascope 2000™ monitor during one operation. Identical
somatosensory stimuli were being administered during both.