

Technical Note: Decoupler Circuit

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Since 1986



Submitted to:

In response to:

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Technical Notes

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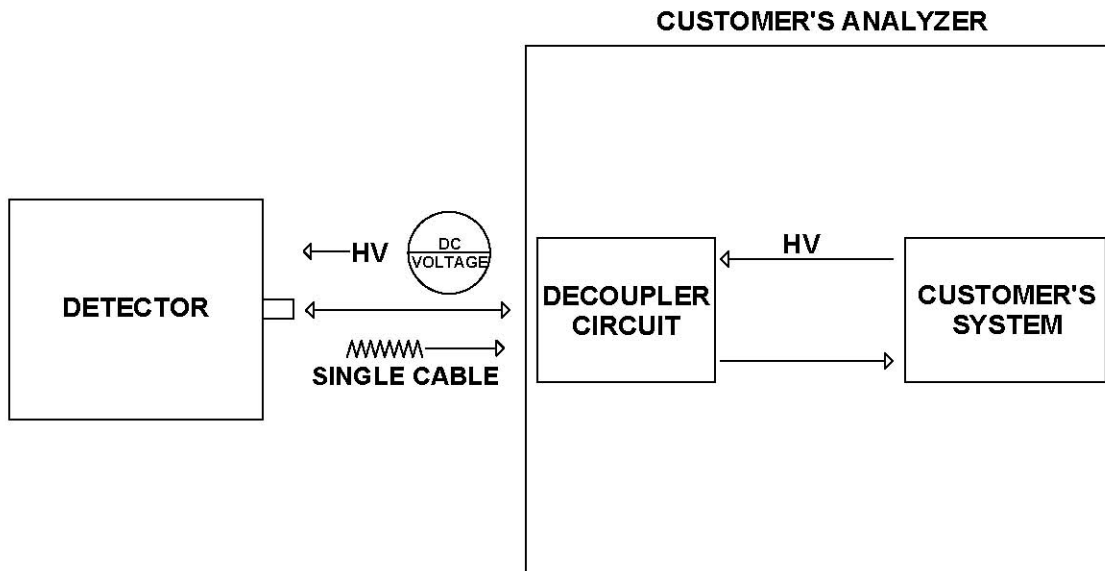
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Decoupling Circuit

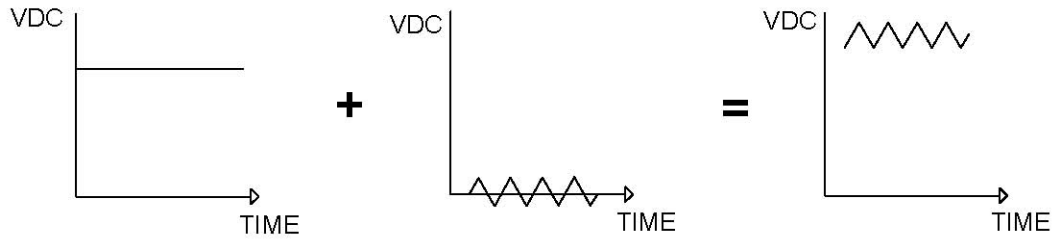
It is common place that in portable systems probe detectors are built so that the high voltage and the signal can use a single cable between the detector and the analyzer. The analyzer could be a hand held meter, a multi-detector system analyzer or a multi channel analyzer. In these systems, the high voltage that is provided to the detector is a constant DC voltage. The single cable system works since the signal that is returning from the detector to the analyzer is superimposed or “rides” on top of the DC voltage that provided by the analyzer. The accompanying circuit shows the simple decoupling circuit that must be used to separate the DC high voltage from the detector signal.

An additional common feature is that the voltage divider typically has high impedance value. This helps reduce the current draw on the battery and extends the lifetime of the battery in hand held systems.

Typical Customer Analyzer Set Up



Graphically



Decoupler Circuit

