

# Quick Start Guide for Demo Board DC414

Demonstration circuit DC414 is a step-up (Boost) DC-DC converter featuring the LTC1871 controller. The circuit is capable of providing an output voltage of 5V at 7A (10A peak) from an input supply of 3.3V. External frequency synchronization is provided, as are two modes of operation at light load conditions: Burst mode™ operation to reduce switching losses and maintain high operating efficiency, and continuous mode to provide constant operating frequency with low quiescent current. The LTC1871 is a No  $R_{SENSE}$ ™ current mode step-up controller. It eliminates the need for a current sense resistor and maximizes the efficiency of the demo circuit —up to 95%. The LTC1871 can operate up to a frequency of 1MHz, allowing for the use of small inductors and capacitors. The low shutdown quiescent current of 10 $\mu$ A makes the LTC1871 ideally suited for battery-operated systems. Applications include telecom power supplies, cellular phones, PDAs and portable electronic equipment.

## Quick Start Procedure

Refer to Figure 1 for proper measurement equipment setup and follow the procedure below:

1. Connect input power to the  $V_{IN}$  and GND terminals. The input voltage can be between 3V and 5V.
2. Connect a load between the  $V_{OUT}$  and GND terminals.
3. Connect the MODE SYNC terminal to INTV<sub>CC</sub> by setting the jumper to the upper position (CONT.) to force continuous operation at low load, or connect the MODE SYNC terminal to ground by setting the jumper to the lower position (BURST) to enable Burst Mode operation at low load.
4. To shut down the circuit, connect the RUN terminal to ground.

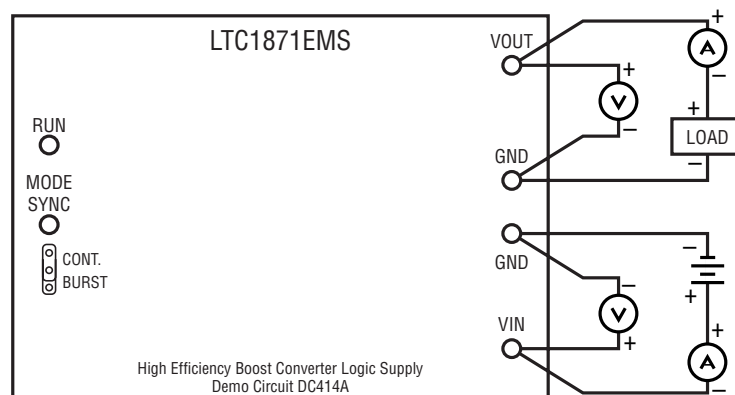


Figure 1. Proper Measurement Equipment Setup