

## DESCRIPTION

Demonstration circuit 564 is configured to easily interface the LTC4556 smart card interface to a personal computer via an RS-232 serial port. The demonstration package includes a compact disk containing a user-friendly graphical interface program. RS232 commands are interpreted by the MC68HC711E9CFN2 micro-controller and sent on to

the LTC4556. A simple interface language (ICCI56) is permanently programmed into the micro-controller and is summarized in Appendix A. The demonstration board operates on a 3V to 5.5V input supply.

**Design files for this circuit board are available. Call the LTC factory.**

## QUICK START PROCEDURE

The software must be installed on a personal computer before the demonstration board can be evaluated. Follow the software installation instructions below.

### Software Installation

- Insert the compact disk labeled *DC564 Demonstration Software* into an appropriate CD-ROM drive on the PC.
- Access the CD-ROM drive, double click the link **SETUPRT.BAT** and follow the instructions until the HP VEE RUNTIME libraries are installed.
- Access the CD-ROM drive, double click the link **SETUPIO.BAT** and follow the instructions until the HP VEE IO libraries are installed.
- From the Start Menu of the personal computer select “**Run...**”.

At the “**Open:**” prompt type: “**veerun -ioconfig**” and click the [OK] button.

When the dialog box appears click the [Add Instrument...] button.

Ensure that the settings are:

Name: SERIAL1955

Interface: Serial

Address (eg 9) 1

Click on “**Advanced IO Config...**”

On the **General** tab change the settings to:

Timeout (sec) 0.1

Live Mode: ON

Byte Ordering MSB

On the **Serial** tab ensure that the settings are:

Baud Rate: 9600

Character Size: 8

Stop Bits: 1

Parity: None

Handshake: None

Receive Buffer Size: 4096

Click [OK].

Click [OK].

Click [SAVE CONFIG]

# QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 564

## SINGLE SMART CARD INTERFACE

### Hardware Connections

- Connect the 9 pin male-female serial cable from the PC serial port (COM1) to the demonstration board.
- Ensure that Jumper JP1 is in its VBATT=DVCC position (connecting terminals E1 and E3).
- Apply +3.2V to +5.5V from “VBATT” to “GND”.

### Running the Program

- Access the CD-ROM drive and double click the program icon **LTC4556.vxe**. The demonstration program will appear on the screen (see figure below).
- Insert a credit card or smart card into the smart card socket. On the computer screen, the icon for smart card socket should indicate the presence of a card.

Using the software program, move the voltage slider to the 3V position. Measure VCC with respect to GND on the demonstration board and observe that it is at approximately 3V.

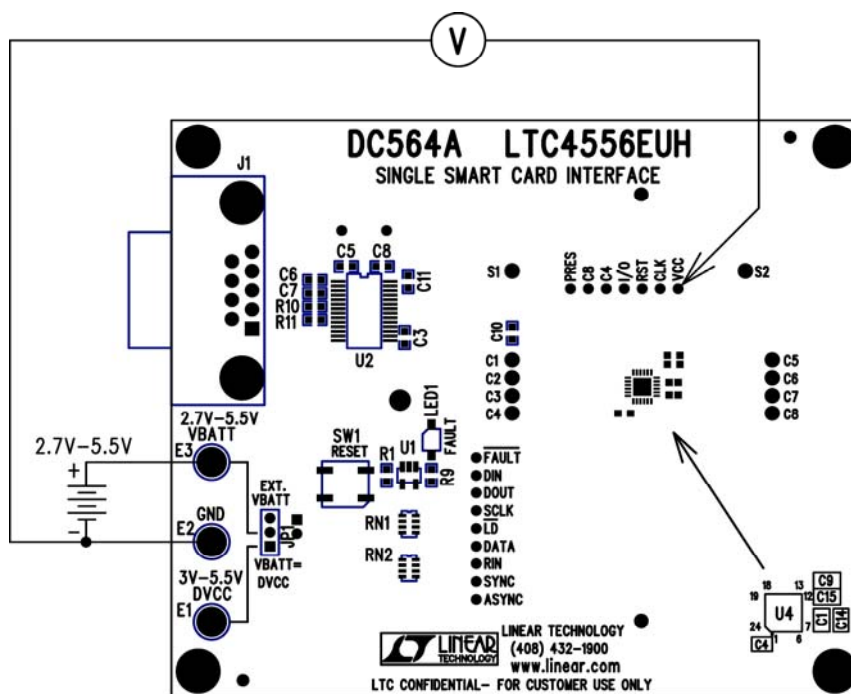
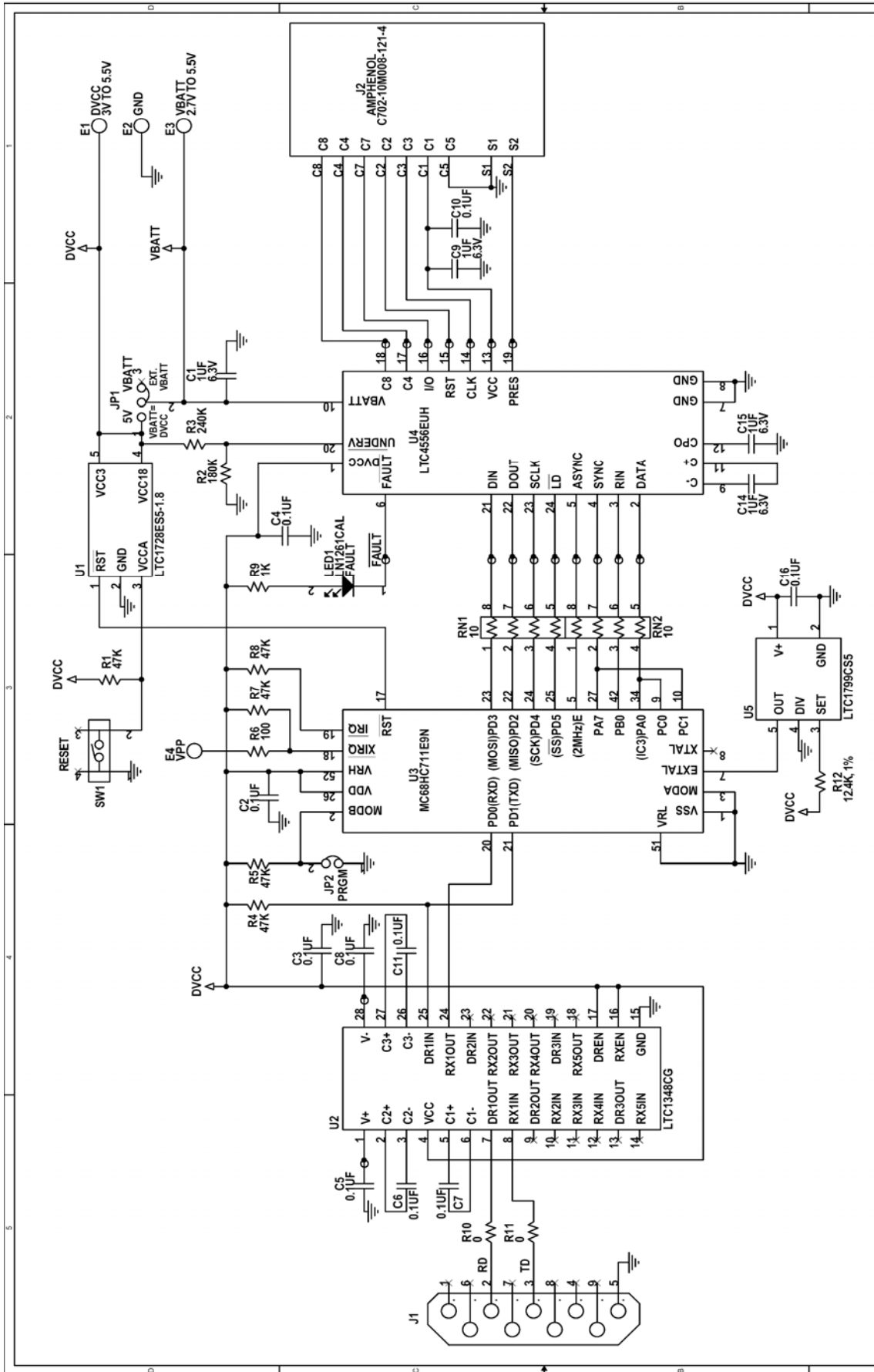


Figure 1. Proper Measurement Equipment Setup

# QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 564

## SINGLE SMART CARD INTERFACE



**CUSTOMER NOTICE**

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

**CONTRACT NO.**

**APPROVALS**

**DRAWN:** KMLT

**CHECKED:**

**APPROVED:**

**ENGINEER:** STEVM

**DESIGNER:**

**NOTES: UNLESS OTHERWISE SPECIFIED**

- ALL RESISTORS ARE IN OHMS, 0603.
- ALL CAPACITORS ARE IN MICROFARADS, 0603.
- INSTALL SHUNT ON JP1 PIN 2 AND 3, JP2 PIN 1 AND 2.

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**LINEAR TECHNOLOGY**

**TITLE:**

**SINGLE SMART CARD INTERFACE**

**SIZE:** DWG NO. **A**

**REV:** **DC564A-1\* LTC4556EUH A**

**DATE:** Tuesday, February 24, 2004

**SHEET:** 1 OF 1

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