July 10, 2002



LM4855 Evaluation Package Instructions

The LM4855 Evaluation Package includes the following:

LM4855 Demoboard SPI Card SPI Cable SPI Software

Hardware Installation Instructions:

- 1) Plug the SPI Card to the parallel port (LPT1) of the PC.
- Connect the LM4855 Demoboard to the SPI Card with the SPI Cable. Refer to the Silkscreen for the corresponding pin locations of CLOCK, ENB, DATA, V_{DD} and GND. The SPI Cable uses the following color coding scheme:

(Green – CLOCK; Blue – ENB; Orange – DATA) (White/Green – V_{DD}; White/Blue – GND)

| ſ | CLOCK | ENB | DATA |
|---|----------|-----|------|
| | V_{DD} | GND | |

| Green | Blue | Orange |
|-------------|------------|--------|
| White/Green | White/Blue | |

Silkscreen Pinout

Color Code for SPI Cable

SPI Card Instructions:

- 1) Attach the SPI Card to the PC's parallel port using the SPI Card's male DB-25 connector.
- 2) The LED indicator on the SPI card will light up when a proper connection is made.
- 3) Attach the SPI Cable to the SPI Card's corresponding 6-pin header.
- 4) The SPI Card can be powered up either through the PC's parallel port (pcVdd) or the LM4855 Demoboard's power supply (extVdd).
- 5) For pcVdd operation, the slide switch on the SPI Card must be set to the pcVdd position.
- 6) For extVdd operation, the slide switch on the SPI Card must be set to the extVdd position.



LM4855 Demoboard Instructions:

- 1) The supply pin, ground pin, inputs, and outputs are all easily accessed through the header pins of the LM4855 Demoboard. Each header pin is labeled accordingly on the Demoboard's Silkscreen layer.
- 2) Attach the SPI Cable to the LM4855 Demoboard's corresponding 6-pin header.
- 3) Connect a power supply to the Vdd and GND pin of the LM4855 Demoboard for power-up.

Software Installation Instructions:

- 1) A Windows95/98 or above operating system is required.
- 2) Insert Disk 1 and run setup.exe to begin the software installation.
- 3) Insert Disk 2 when prompted by the installation program.
- 4) After the installation is complete, view the *Readme.txt* file. Run *LM4855v5.exe* to begin the software program.

| 😥 National Semiconductor Audio: LM4855 SPI Interface Program | | | | | |
|---|---------------------------------|--|--|--|--|
| National Semiconductor The Sight & Sound of Information | Please cor | nnect SPI hardware to LPT1 | | | |
| min | max | MSB | | | |
| | 7 5 OUTPUT MODE NUMBER | Data 7 1 Data 6 0 Data 5 1 Data 4 1 Data 3 0 | | | |
| GAIN from GAIN from Rin, Lin to Phs to Rout Lout Rout Lout SPKRout Rout -1.5 dB -7.5 dB Pihf R | Lout L | Data 2 1 Data 1 0 Data 0 1 LSB | | | |

Software Instructions:

- 1) Volume control and Output Mode Select can be controlled by using the slider bars. The top slider bar controls the volume. The bottom slider bar controls the output mode.
- Individual bits can be set to 0 or 1 by clicking on an individual bit box. There are 8 individual bit boxes located on the right hand side of the screen