



STAND-ALONE/PARALLEL INTERFACE PRODUCTS

Single-Chip Board Layout Diagrams

EXAMPLE PC BOARD LAYOUT

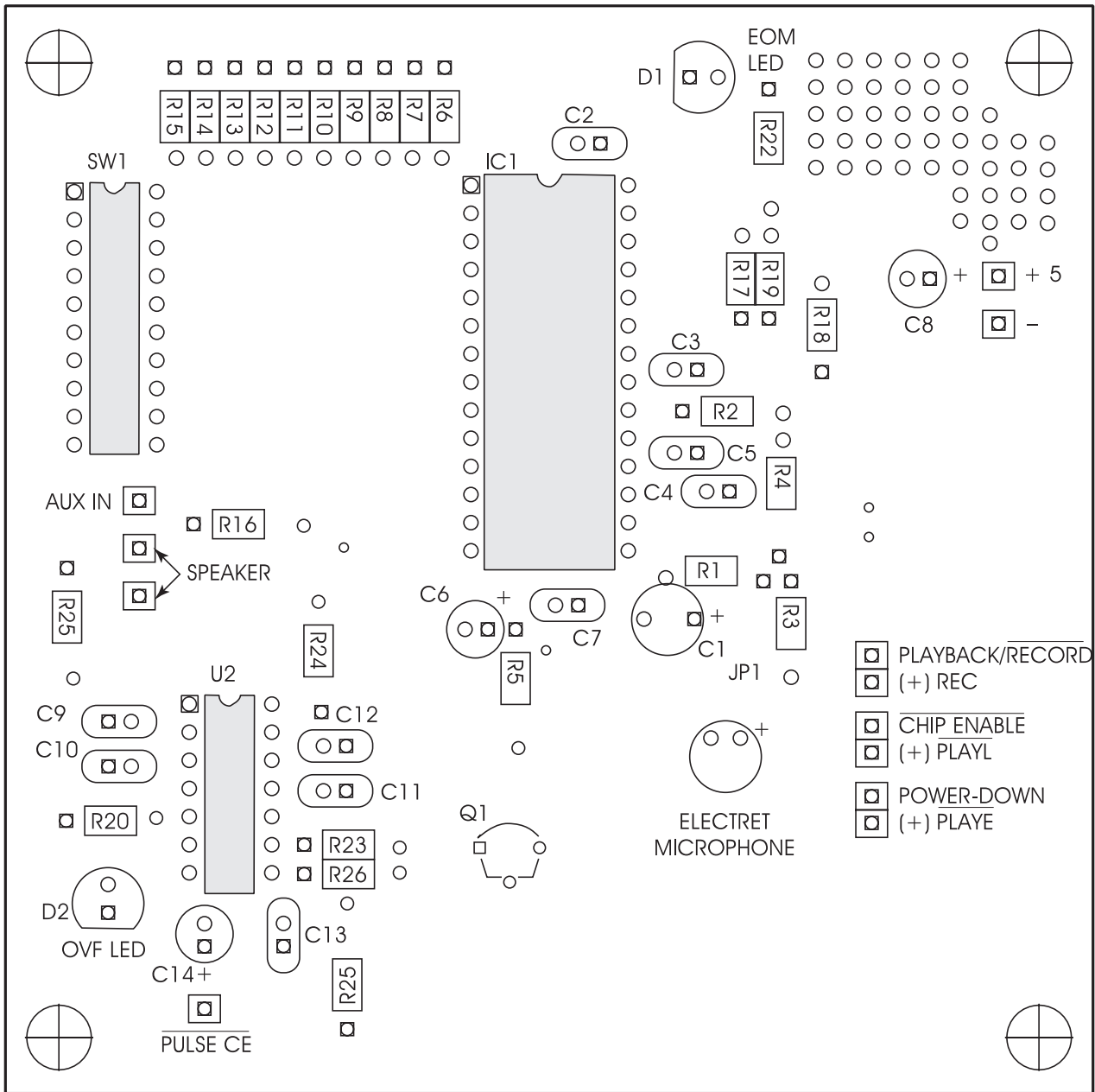
The printed circuit layout example in this chapter shows an implementation of the circuit shown in Figure 2 under the section "Circuit Examples for ISD1000A and ISD2500 Products." A dip switch (SW1) for addresses and pull-up resistors on the control inputs has been added. Additionally, two new address inputs and a pulse stretcher (U2A) for the overflow output (pin 22) have been added to the circuit so that this PC board will also work with the ISD2500 series. Also, one-shot pulse generator (U2B) adds the ability to generate short duration \overline{CE} pulses for Message Cueing experimentation. The schematic of this board is shown in Figure 4, Single Chip Demo Board.

NOTE *The following PC board drawings are not to scale.*

The PC board layout incorporates the recommendations in "Good Audio Design Practices." Power feeds from the right-hand side of the board at the two points labeled "+" and "-". C8 is physically located at the branch of the V_{CC} traces that feed V_{CCD} on the top (going to pin 28) and V_{CCA} on the bottom (going to pin 16).

High-frequency ESR decoupling capacitors C2 and C7 are located adjacent to the supply pins they serve. C2, the decoupling cap for the V_{CCD} supply pin, has its own separate ground trace going directly back to the "-" input of the board. C7 picks up its ground from the major ground plane area on the "bottom" end of the board. The major power traces are greater than 30-mils wide and as direct as possible.

Figure 1: Single-Chip Demo Board Silk Screen



NOTE: (*) = ISD2500 series devices only.
 (+) = ISD1100, ISD1200, and ISD1400 series devices only.

Figure 2: Single-Chip Demo Board Component Side PC Layout

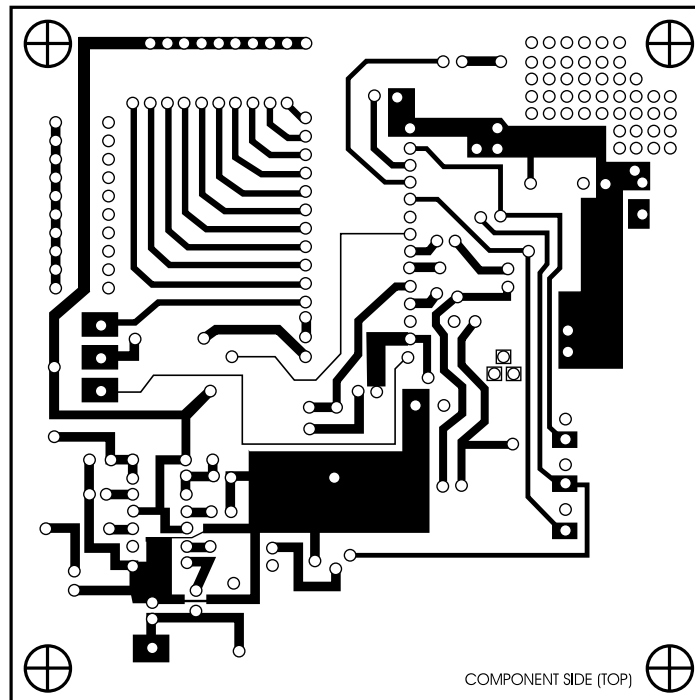


Figure not drawn to scale.

NOTE: (*) = ISD2500 series devices only.
 (+) = ISD1100, ISD1200, and ISD1400 series devices only.
 Figure not drawn to scale.

Figure 3: Single-Chip Demo Board Solder Side PC Layout

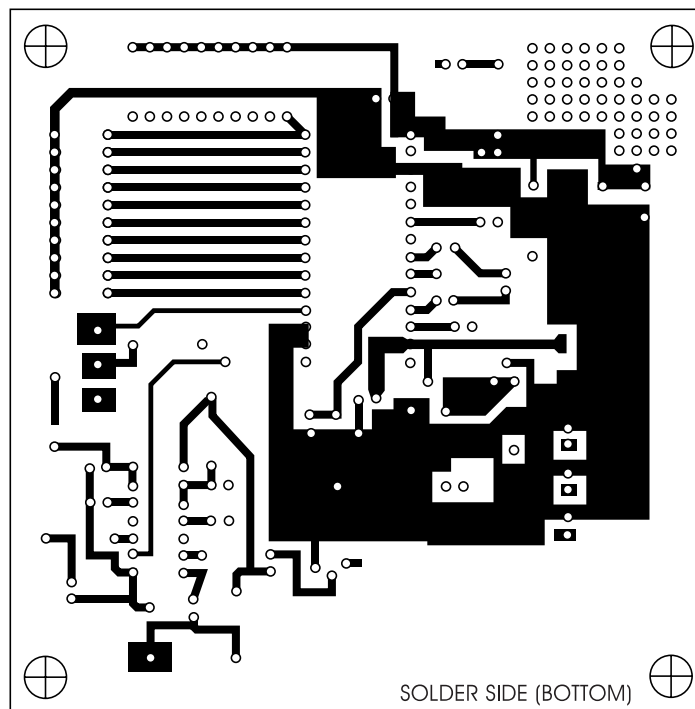


Figure not drawn to scale.

NOTE: (*) = ISD2500 series devices only.
 (+) = ISD1100, ISD1200, and ISD1400 series devices only.
 Figure not drawn to scale.

Figure 4: ISD2500 Single-Chip Demo Board Schematic

