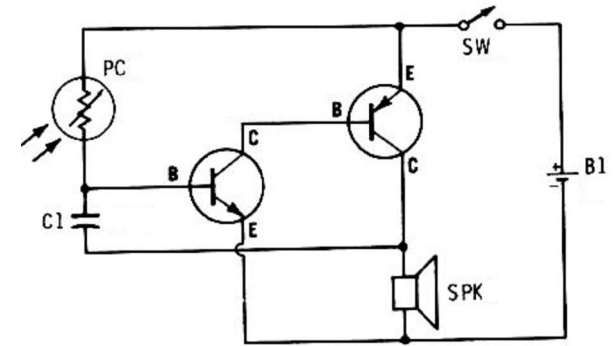


1976 PHOTO THEREMIN

two transistor synthesizer

ericarcher.net

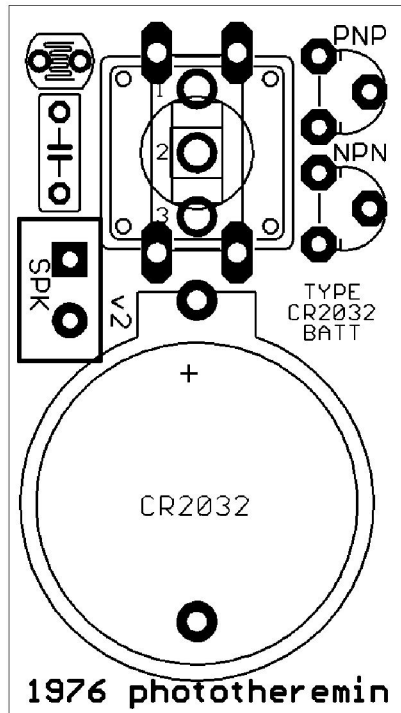
original circuit by Forrest M. Mims III,
Optoelectronic Projects Vol. 1



START HERE

Make sure the soldering iron is hot - touch the tip of the iron to some fresh solder. It should melt immediately with a puff of smoke and cling to the tip like a drop of water. Poor quality soldering irons have tips that solder won't cling to. Its difficult to make quality connections with this type.

To solder a component, first heat up the area with the tip of the iron. Then touch the hot area with solder and watch it melt. Wait until the solder flows and looks smooth, then lift the iron away. Finally, trim the extra length of wire off so it is flat with the bottom of the board.



only makes sound while you press it. The slide switch stays on for non stop sound (your choice).

1 switch

Transistors



Transistors have a black plastic body with three legs. You'll find them attached to a piece of paper tape. The PNP transistor has a red stripe on the paper. Grab the transistor in one hand and the tape in your other hand, and pull it out. Insert it into the board with all three legs thru the holes. The flat side of the transistor must match the printing on the board. Do the NPN transistor the same way.

- 1 PNP transistor (BC559) - red stripe
- 1 NPN transistor (BC549)

Photocell



The photocell is a small ceramic disc with brown stripes on it. This is the part thats sensitive to light. You can install it flat against the circuit board, or angle it outward. Photocells are also known as Cadmium Sulfide cells (CdS) or Light Dependent Resistors (LDRs).

1 photocell

Battery Holder

The Battery holder is made for a 3 volt lithium coin cell (CR2032). Its outline is printed on the board. Solder it to the board now, but wait til later to install the battery.

1 battery holder

Speaker



The speaker connects to the board with two short wires. First, use some double-sided tape to stick the speaker to the bottom of the board. Make sure you dont block the holes where the speaker wires will go. Then use two short pieces of bare copper wire to connect the speaker.

- 1 speaker
- 1 double stick tape
- 2 short wires

Now install the battery, so the positive (+) symbol is facing up.

You can build your 1976 Phototheremin with either a pushbutton or slide switch. The pushbutton

