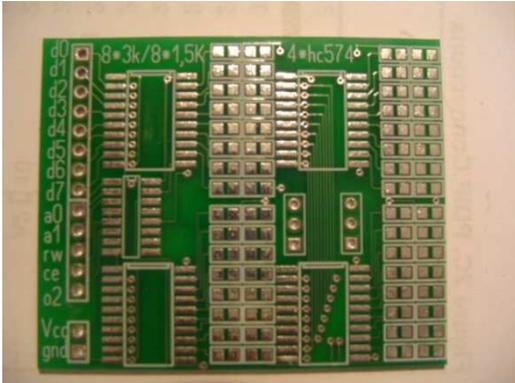
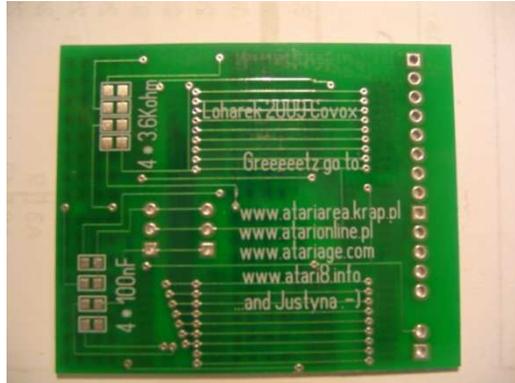


## COVOX 2008

TOP



BOTTOM



### Part LIST

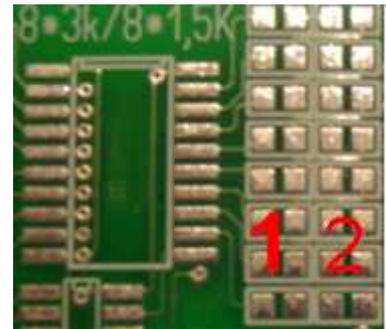
- 4\* 74HC(HCT)574 smd
- 1\*74 HC(HCT)138 smd
- SMD Resistors and Capacitors (4\*100nF- not critical value)

Few words of explanation : You need SMD 0805 size resistors. You see on top side of board printed text : 8 \* 3K/1,5 K, but those values are not critical You can use in first row (1) any resistor from 2,4 KOhm to 4,7 KOhm.

**THE MOST IMPORTANT** is the usage in second row the resistors with half of resistance of those used in first row. So:

- if You buy 36 \* 2,4 KOhm resistors, please buy also 32\*1,2 KOhm ones for row 2.
- if You buy 36 \* 3 KOhm resistors, please buy also 32\*1,5K Ohm ones for row 2
- if You buy 36 \* 3,6 KOhm resistors, please buy also 32\*1,8 KOhm ones for row 2
- etc ...

(don` t follow strictly quantity.... Buy 100 of each resistor...They`re very cheap anyway....)



**Assembly** ... is very easy but takes a while

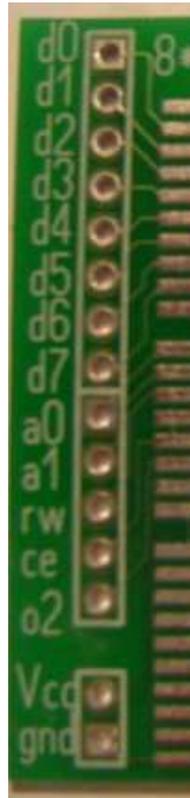
- solder logic (4\*574, 1\*138) – PLEASE TAKE CARE FOR ORIENTATION !
- solder resistors on top side – don` t forget about resistors on bottom side ! You can use resistors from row 1!
- Solder 4 capacitors on bottom side

PCB is tested and proper soldering for sure will make the covox work !

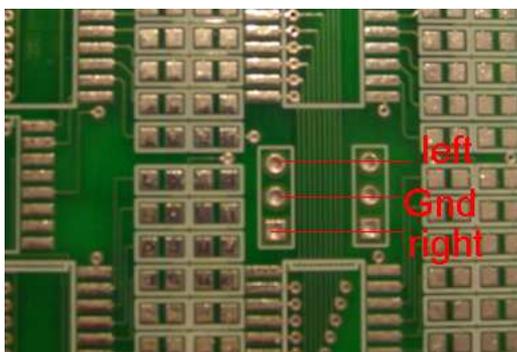
## Connecting.... Covox inside ATARI

- TURN OFF ATARI !!!
- Find CPU – CO14806
- connect covox board with proper pins of CPU with wires  
(d0 – 33 pin of CPU, d1-32 pin of cpu...)
- VCC is 5V (8 pin of CPU) , GND is ground (1 and 21 pin of cpu)
- One signal connection needs explanation : **CE** on covox board must be connected to 9 pin of 74ls138 located on board of Your ATARI

|                 |    |    |                 |
|-----------------|----|----|-----------------|
| V <sub>cc</sub> | 1  | 40 | RST             |
| RDY             | 2  | 39 | Φ2              |
| Φ1              | 3  | 38 | SO              |
| IRG             | 4  | 37 | Φ0              |
| ???             | 5  | 36 | R/W             |
| NMI             | 6  | 35 | HALT            |
| SYNC            | 7  | 34 | ???             |
| V <sub>cc</sub> | 8  | 33 | D0              |
| A0              | 9  | 32 | D1              |
| A1              | 10 | 31 | D2              |
| A2              | 11 | 30 | D3              |
| A3              | 12 | 29 | D4              |
| A4              | 13 | 28 | D5              |
| A5              | 14 | 27 | D6              |
| A6              | 15 | 26 | D7              |
| A7              | 16 | 25 | A15             |
| A8              | 17 | 24 | A14             |
| A9              | 18 | 23 | A13             |
| A10             | 19 | 22 | A12             |
| A11             | 20 | 21 | V <sub>ss</sub> |



And that`s all. Now, If You have done everything properly, Audio outout is available at these holes :



**ENJOY !!!**

For software – look here <http://epi.atari8.info/>