

# Turbo Sound (revision C)

Sound expansion device for computers with  
AY-3-8910/12 or YM2149 sound chip.

*NedoPC group. 2005*

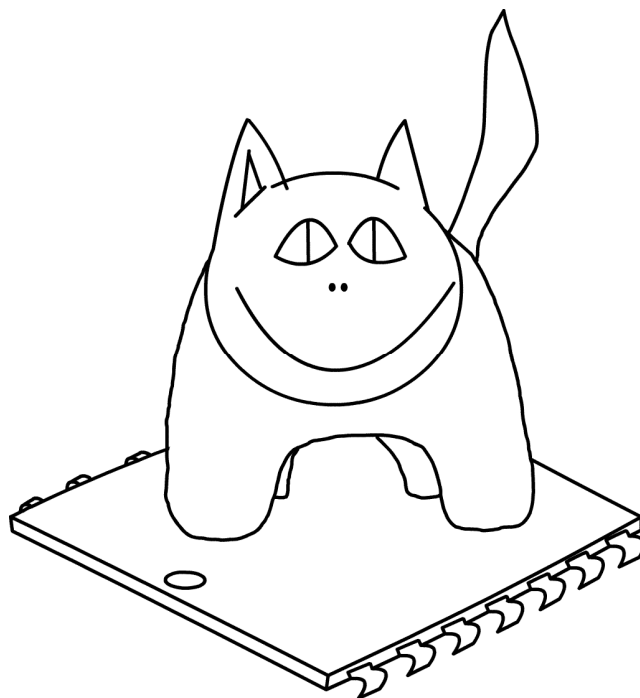


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**Attention:** cable-adapter is not compatible with the previous revisions of the device (A,B), however it is compatible with TurboSound FM device.

## About the device.

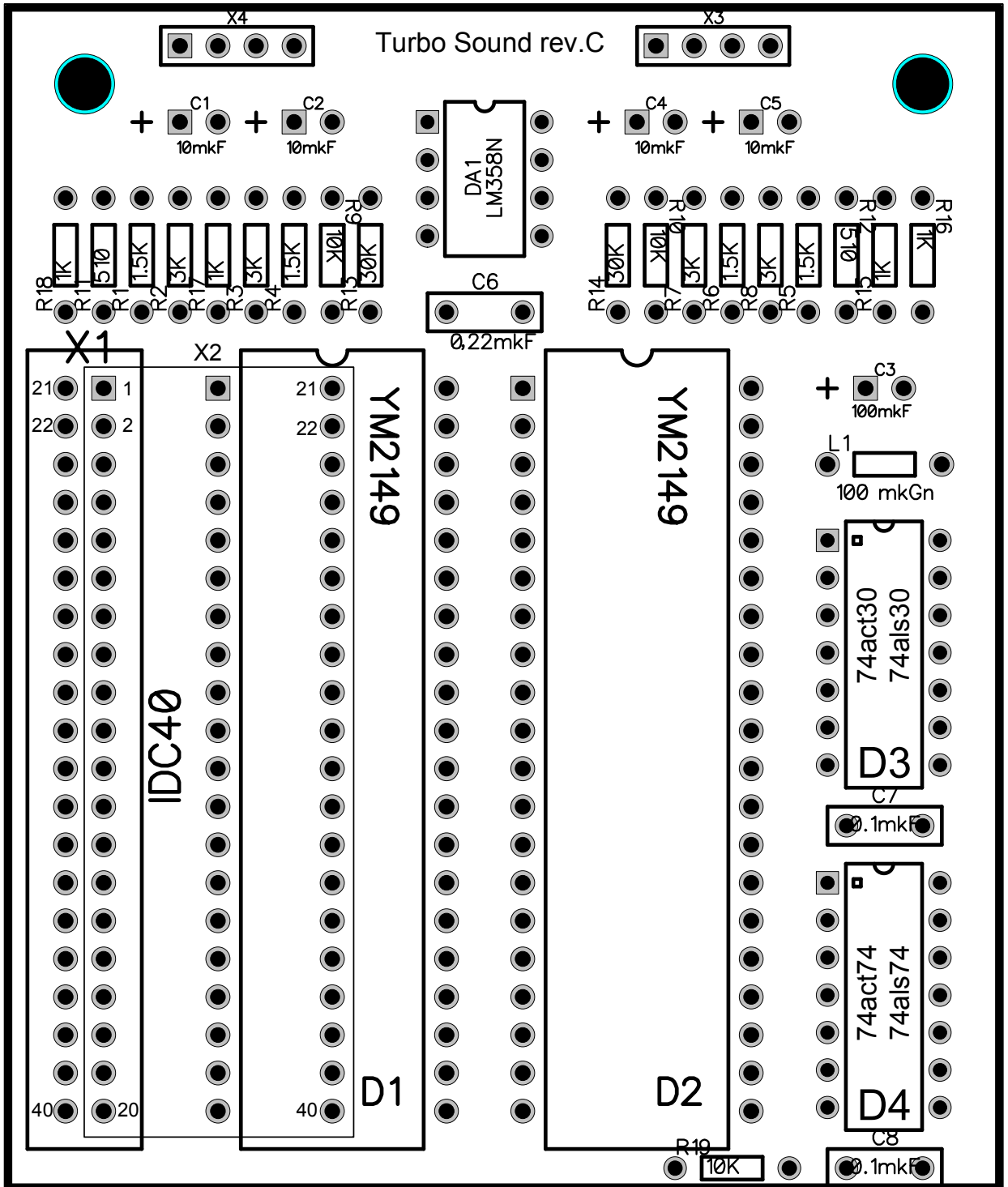
TurboSound device provides six sound channels instead of three channels of AY8910/12 or YM2149 sound chip.

The device is connected to a computer via a cable-adaptor plugged in AY-3-8910/12 sound chip socket.

Music for the Turbo Sound may be created in Turbo Sound Editor (Himik), Pro Tracker v3+698 and higher (Alone Coder), or Vortex Tracker II (Sergey Bulba) (downloads at [zx.da.ru](http://zx.da.ru)).

## Component layout.

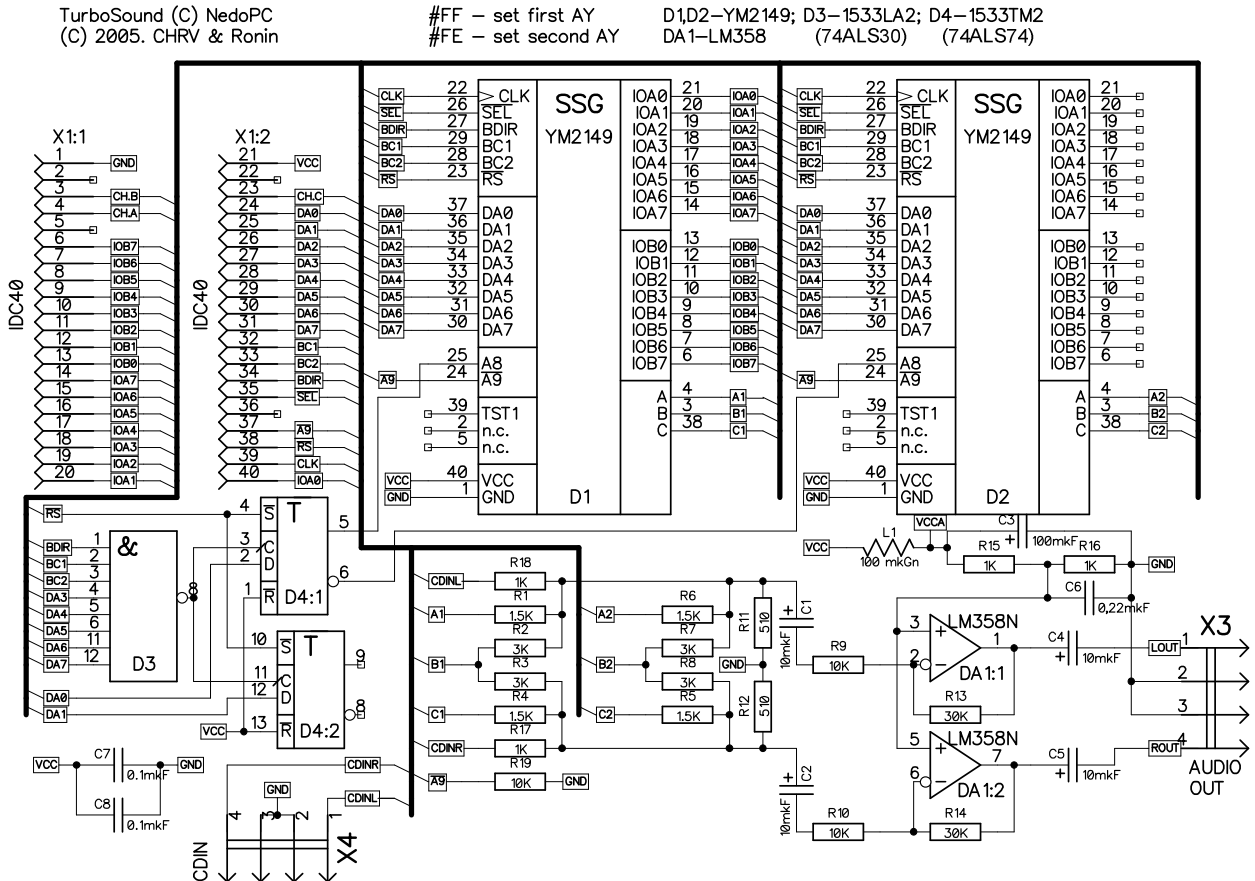
View from the component side:



# Connectors.

Name	Purpose
X1	Interface with the computer (through cable-adapter). Pins order is the same as for YM2149/AY-3-8910.
X2	Interface with the computer (through wires). Pins order is the same as for YM2149/AY-3-8910.
X3	Sound output
X4	Aux sound input (from CD drive, for example).

# Circuit diagram.



**Attention:** only YM2149 can be used in the device, it can't be replaced with AY-3-8910.

## Installing and configuration

The device is already assembled and configured. It has a built-in sound amplifier, so you can connect headphones or small speakers to it.

## How it works

Turbo Sound has two sound chips. Only one chip is active for programming at once, you can switch between the chips though selecting unused register numbers of the sound chip:

#FE – select first chip; #FF – select second chip.

Reset selects the first chip.

**Attention:** The device is compatible with 99% of all existing software for single sound chip. There are problems possible only if a piece of software tries to select unused registers of sound chip (Digital Studio has this problem).

**Attention:** Stereo layout is ABC (A left, B middle, C right).

## Versions history

### *Revision A:*

- Pilot version, no special labeling on the board.
- No soldering mask on the board.

### *Revision B:*

- Some bugs are fixed.
- Added label with revision number.
- No soldering mask on the board.

### *Revision C:*

- The device is no more compatible with cable-adapter from previous revisions, it is compatible with TurboSound FM instead.
- Additional routing to simplify connecting two devices for quadro-sound.
- Additional routing to simplify installing directly into DIP40 connector of the computer.
- Soldering mask.

## Guarantees and support

Devices are supplied in assembled and configured form.

Devices are tested with ATM-Turbo 2+ computer, Aiwa HP-A191 headphones or Genius SP-205b speakers.

## Contacts

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