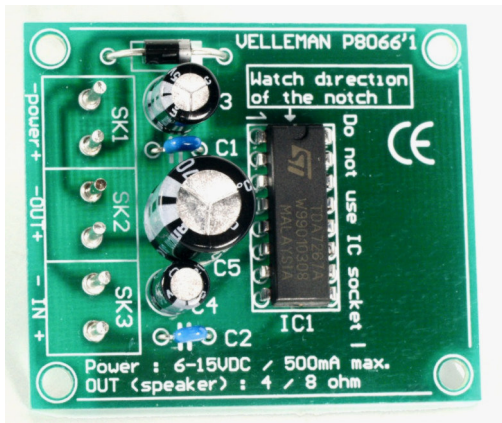


Total solder points: 34

Difficulty level: *beginner* 1 2 3 4 5 *advanced*

3W MONO AMPLIFIER



K8066

Small but powerful amplifier suits a wide range of applications.

Specifications

- Output power : 3Wrms (4-8 ohm, 15VDC, 10%THD).
- Freq. Range : 50Hz—20KHz (1W/8ohm/-3dB).
- Gain : 32dB (40x).
- Thermal protection.
- Short circuit protection.
- Dimensions : 42x50mm.



VELLEMAN NV

Legen Heirweg 33

9890 Gavere

Belgium Europe

www.velleman.be

www.velleman-kit.com

Specifications:

- ☑ Compact size.
- ☑ Low partcount.
- ☑ No additional heatsink required.
- ☑ Single supply.
- ☑ Wide supply range.
- ☑ Excellent protection

Features:

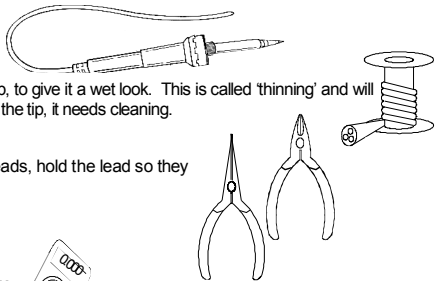
- Output power : 3Wrms (4-8 ohm, 15VDC, 10%THD).
- Freq. Range : 50Hz—20KHz (1W/8ohm/-3dB).
- Gain : 32dB (40x).
- Thermal protection.
- Short circuit protection.
- Power supply : 6..15VDC.
- Current consumption : 500mA max.
- Dimensions : 42x50mm.

1. Assembly (Skipping this can lead to troubles !)

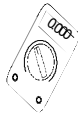
Ok, so we have your attention. These hints will help you to make this project successful. Read them carefully.

1.1 Make sure you have the right tools:

- A good quality soldering iron (25-40W) with a small tip.
- Wipe it often on a wet sponge or cloth, to keep it clean; then apply solder to the tip, to give it a wet look. This is called 'thinning' and will protect the tip, and enables you to make good connections. When solder rolls off the tip, it needs cleaning.
- Thin raisin-core solder. Do not use any flux or grease.
- A diagonal cutter to trim excess wires. To avoid injury when cutting excess leads, hold the lead so they cannot fly towards the eyes.
- Needle nose pliers, for bending leads, or to hold components in place.
- Small blade and Phillips screwdrivers. A basic range is fine.



For some projects, a basic multi-meter is required, or might be handy

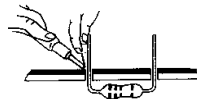


1.2 Assembly Hints :

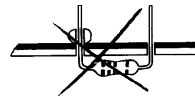
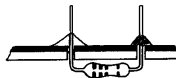
- ⇒ Make sure the skill level matches your experience, to avoid disappointments.
 - ⇒ Follow the instructions carefully. Read and understand the entire step before you perform each operation.
 - ⇒ Perform the assembly in the correct order as stated in this manual
 - ⇒ Position all parts on the PCB (Printed Circuit Board) as shown on the drawings.
 - ⇒ Values on the circuit diagram are subject to changes.
 - ⇒ Values in this assembly guide are correct*
 - ⇒ Use the check-boxes to mark your progress.
 - ⇒ Please read the included information on safety and customer service
- * Typographical inaccuracies excluded. Always look for possible last minute manual updates, indicated as 'NOTE' on a separate leaflet.

1.3 Soldering Hints :

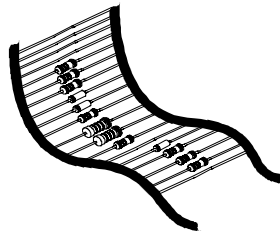
1- Mount the component against the PCB surface and carefully solder the leads



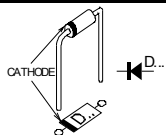
2- Make sure the solder joints are cone-shaped and shiny



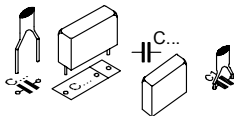
3- Trim excess leads as close as possible to the solder joint



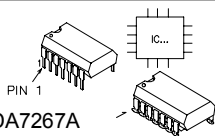
DO NOT BLINDLY FOLLOW THE ORDER OF THE COMPONENTS ONTO THE TAPE. ALWAYS CHECK THEIR VALUE ON THE PARTS LIST!

1. Diodes. Watch the polarity !

D1 : 1N4007

3. Capacitor.

- C1 : 100nF (104)
- C2 : 100nF (104)

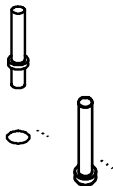
2. IC, Watch the position of the notch !

IC1 : TDA7267A

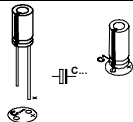
Do not use an IC socket

4. PCB tabs

- SK1 - power
- SK1 + power
- SK2 - OUT
- SK2 + OUT
- SK3 - IN
- SK3 + IN

**5. Electrolytic Capacitors. Watch the polarity !**

- C3 : 100 μ F
- C4 : 47 μ F
- C5 : 470 μ F



6. Connection with a line level signal :

Depending on your application, you can connect the unit for use with the line level signals of e.g. a CD-player, a tuner, a sound card, ... Connect a loudspeaker of 4 – 8 ohms with the connections OUT+ and OUT-. You can adjust the volume by mounting a potentiometer of e.g. 47K log. in front of the input of the K8066 (fig. 1.0). Always use shielded cable (shielding) for the connection of audio signals in order to avoid noise, hum and interference.

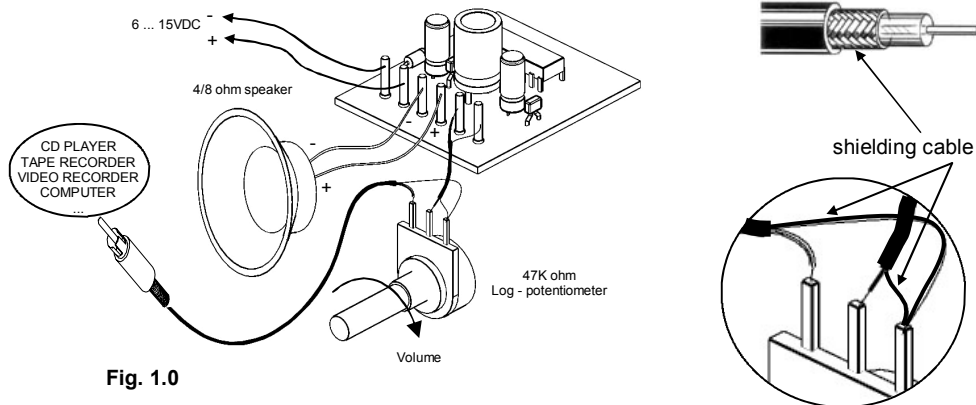


Fig. 1.0

The supply voltage is connected with the "power+" and "power-" terminals. The supply voltage can vary between 6 and 15VDC and doesn't necessarily have to be regulated.

Thanks to the wide voltage range, the circuit can operate on batteries, via a transformer (fig. 2.0) or via an adapter (fig. 3.0).

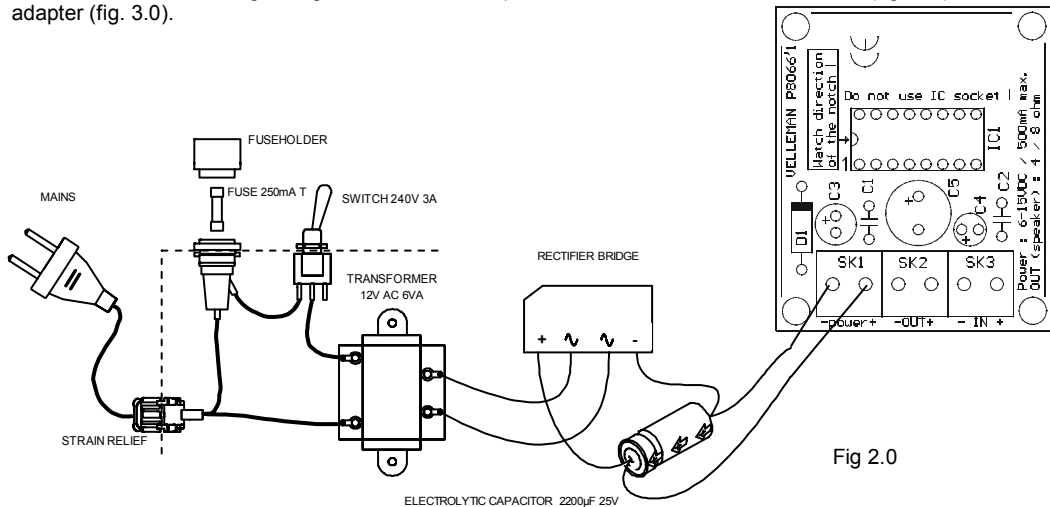


Fig 2.0

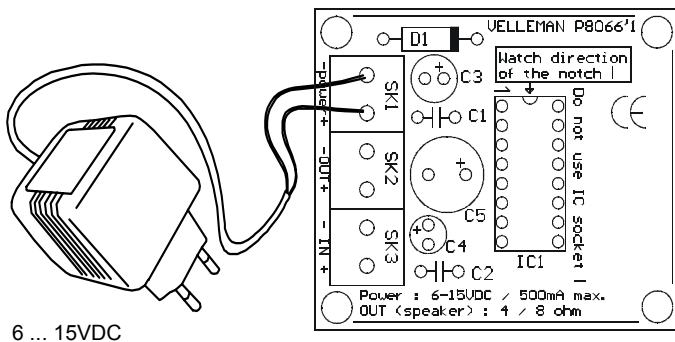
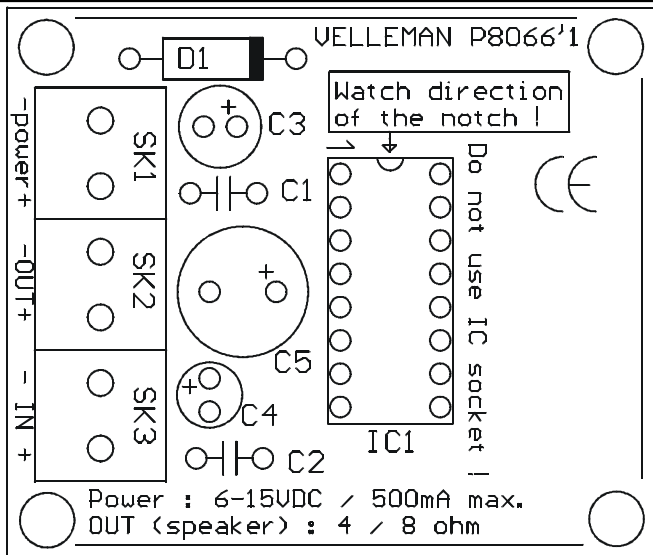


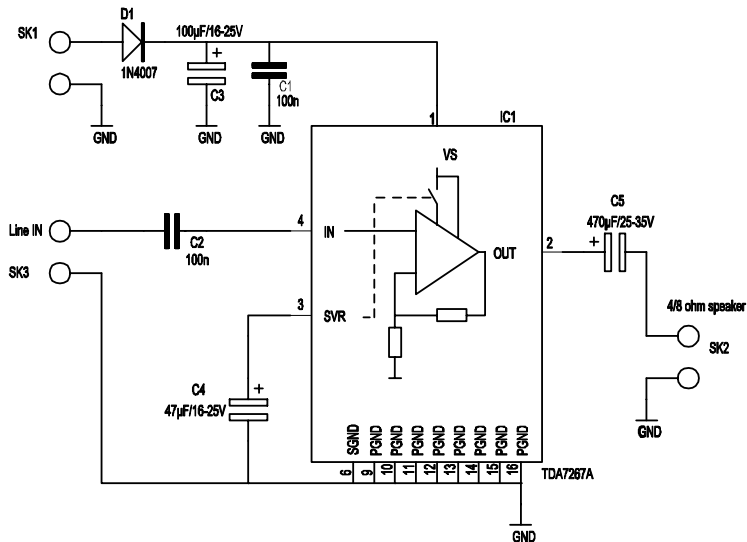
Fig 3.0

7. PCB layout.



8. Diagram

Power supply : 6-15VDC



DOMOTIC SYSTEM

