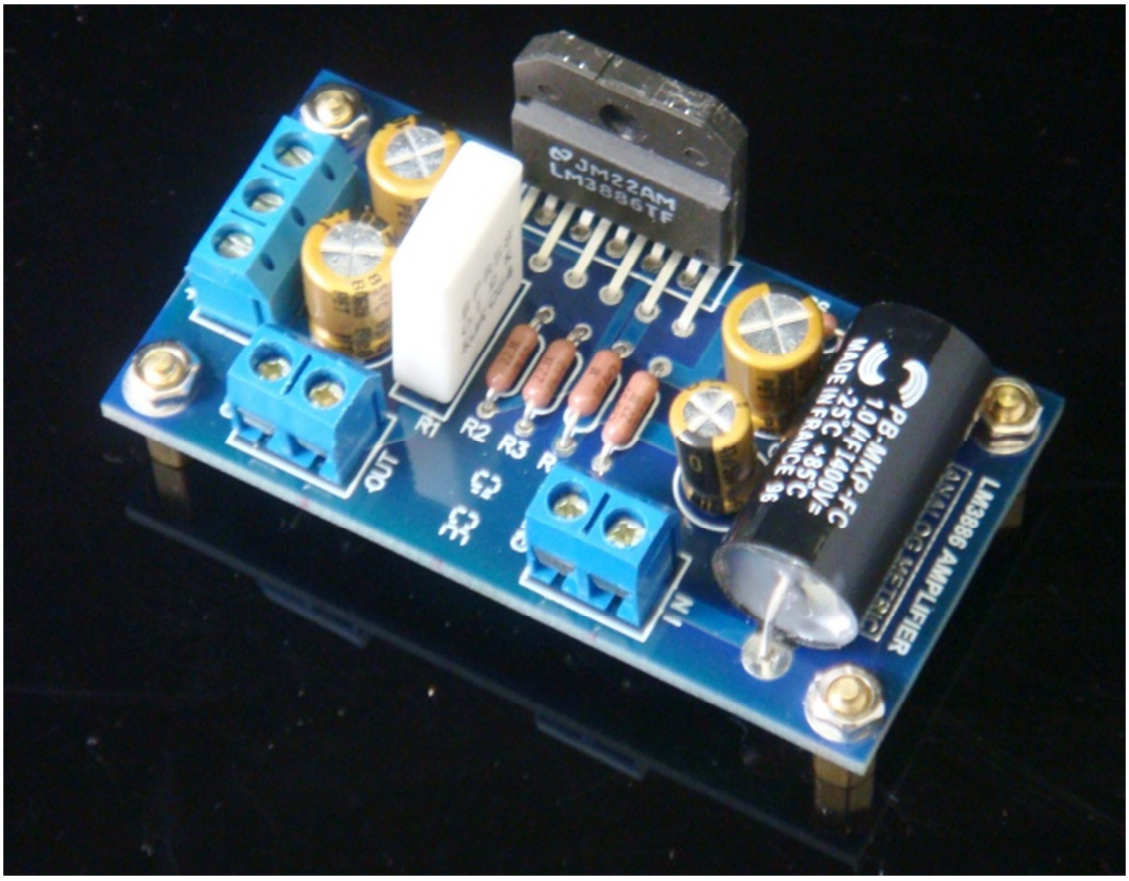
LM3886 Power Amplifier User Manual

ANALOG METRIC

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INTRODUCTION

This kit uses one LM3886 IC which high-performance audio power amplifier capable of delivering 68W of continuous average power to a 4Ω load and 38W into 8 Ω load with 0.1% THD+N from 20Hz-20kHz. Signal-to-Noise ratio is more than 92dB and ultra low noise floor which is 2uV.

FEATURES

- Use LM3886 chip which is a high-performance audio power amplifier
- Continuous Average Output Power:
  - 68W@4 Ω , Vcc=+/-28V
  - 38W@8 Ω , Vcc=+/-28V
  - 50W@8 Ω , Vcc=+/-35V
- 135W instantaneous peak output power capacity
- Voltage gain: 22dB

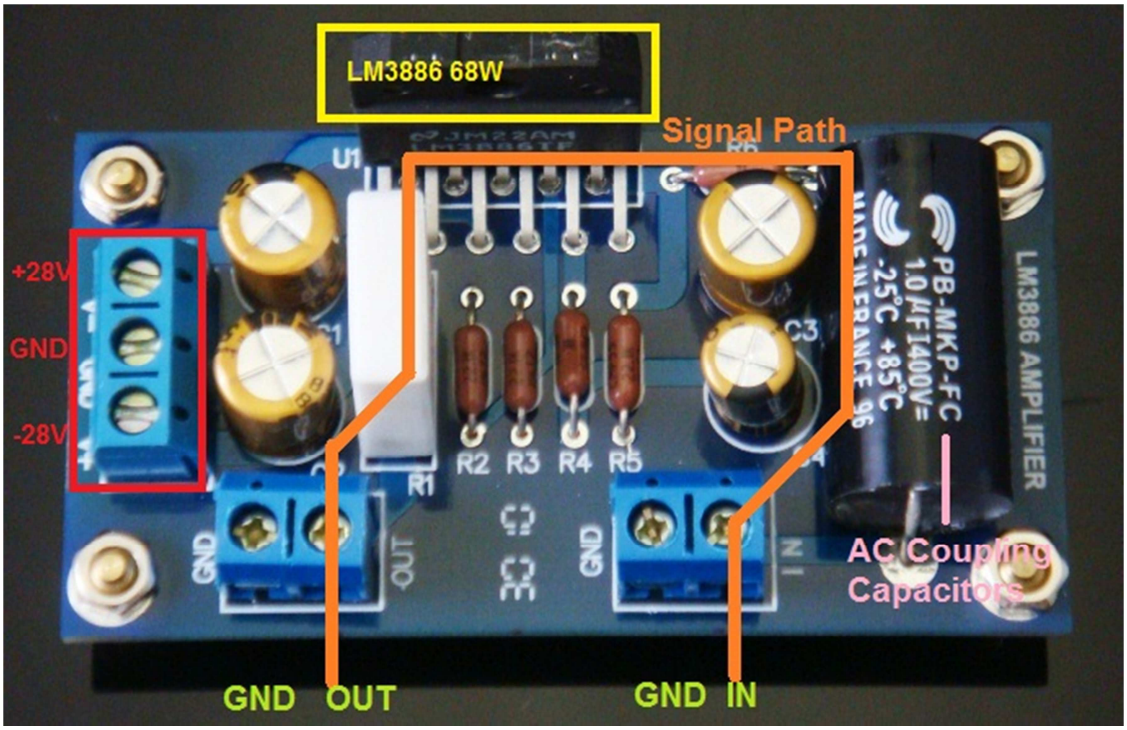
- 0.1% THD+N from 20Hz-20kHz
- Typical low noise floor 2uV.
- Signal-to-Noise Ratio >92dB
- Output protection from a short to ground or to the supplies via internal current limiting circuitry.
- Dedicated power and ground railings. Shortest signal paths with minimum parasitic.
- Power requirement: +/-20V-94V DC.
- PCB dimension: 70mm x 37mm, 2.4mm thickness and 2oz copper.

PRECAUTIONS

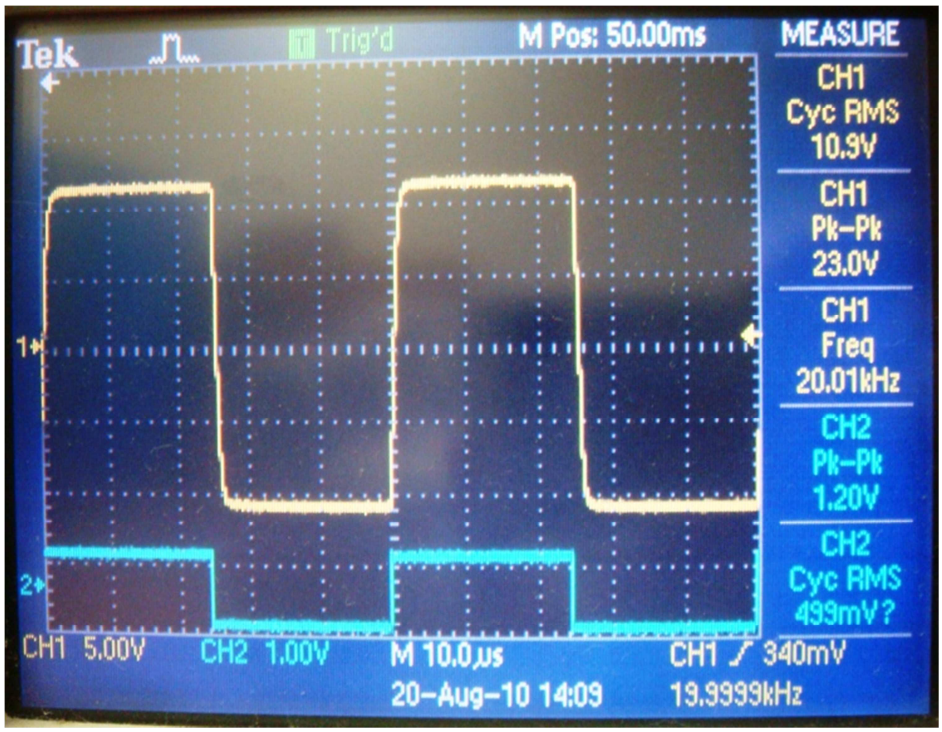
- Use a power transformer with fuse (5A) socket to limit the supply current in case of short circuit or incorrect assembly.
- Double check the assembled components with the schematics.
- Turn off the power supply if you observe any smokes or hear strange sound coming out from the transformer or board. If there is short circuit, the transformer will be getting very hot shortly.

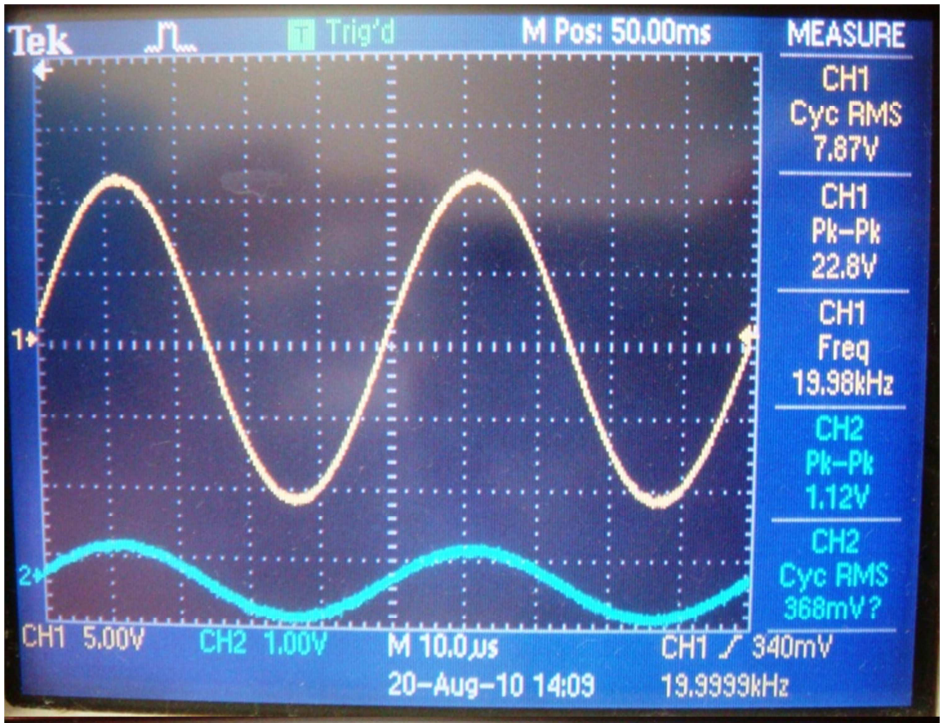
PROCEDURES

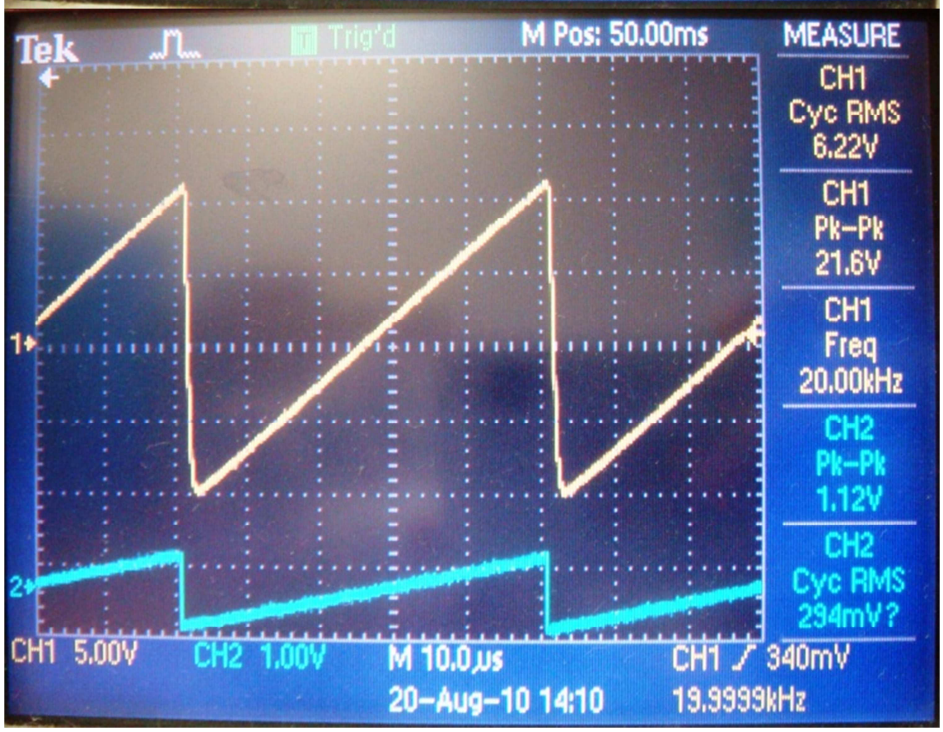
1. Solder all the components according to the schematic, BOM list, and the photo. Notice to the polarity of the capacitors C1, C2, C3, C4 and diodes D1 and D2. There is no polarity of the thin capacitor.
2. Apply power supply to the board according to the following photo. It requires one +28V DC (5A) and one -28V DC (5A). The supply voltages can be ranged from 20V up to 94V.
3. Measure the input and output voltage without any connections. The voltages should be close to 0V.
4. Apply signal to the input and en joy it.


LM3886 68W
Signal Path
+28V
GND
-28V
U1
C1
C3
R1
R2
R3
R4
R5
GND
OUT
GND
IN
PB-MKP-FC
1.0 µF1400V=
-25°C +85°C
MADE IN FRANCE 96
LM3886 AMPLIFIER
AC Coupling
Capacitors
GND OUT
GND IN

TESTING


Tek
Trig'd
M Pos: 50.00ms
MEASURE
CH1
Cyc RMS
10.9V
CH1
Pk-Pk
23.0V
CH1
Freq
20.01kHz
CH2
Pk-Pk
1.20V
CH2
Cyc RMS
499mV?
CH1 5.00V
CH2 1.00V
M 10.0µs
20-Aug-10 14:09
CH1 340mV
19.9999kHz





If you have any problem in assembly, please contact us by email to tech@analogmetric.com