



FUTURE KIT

HIGH QUALITY ELECTRONIC KITS

POWER AMP. BTL. 15+15 WATT (STEREO)

CODE 608

LEVEL 1

This power amplifier circuit is mostly applied for the audio source, cassette tape and car radio with 15+15 watt amplifying power. This circuit designed for using in the car or house too. It can be applied to use only 12 volts AC supply by connecting circuit with adaptor.

Specification:

- supply voltage : 12 VDC / more than 2A.
- music power output : 2 x 15W / 4Ω
- signal/noise ratio : 80 dBA.
- input sensitivity : 150mV / 200kΩ
- frequency response : 20Hz to 20kHz (-3dB)
- gain : 30dB. max.
- total harmonic distortion (THD) : 0.1% @ 1W, 4Ω
- overload and short-circuit protected
- dimension : 4.76 x 1.89 inches.

How it works:

Hereunder explanation is applied for both left and right sides due for both have the same function. This booster amplifier use IC power with amplifier with 2 amplifying sets. Each set can give 8 watt amplifying power. It could amplify 15 to 16 watt if connecting Bridge type. Input signal will pass R1. VR1 adjusts the signal to suit with input. C1 eliminates distortion while C5 couplings signal to pin 1 of IC which is the 1st amplifying circuit of non-inverting amplifying type. 2nd circuit is connected by inverting type, by connecting non-inverting pin to C8 to ground. C6 and R2 are receiver from 1st circuit. 1st output will pass to pin 10, 2nd output at pin 8. Both pins are connected further with speakers. This circuit is connected by bridge type so should not connect speaker with ground.

PCB assembly:

Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first. All components with axial leads should be carefully bent to fit the position on the PCB and then soldered into place. Make sure that the electrolytic capacitors are inserted the correct way around. Now check that you really did mount them all the right way round!

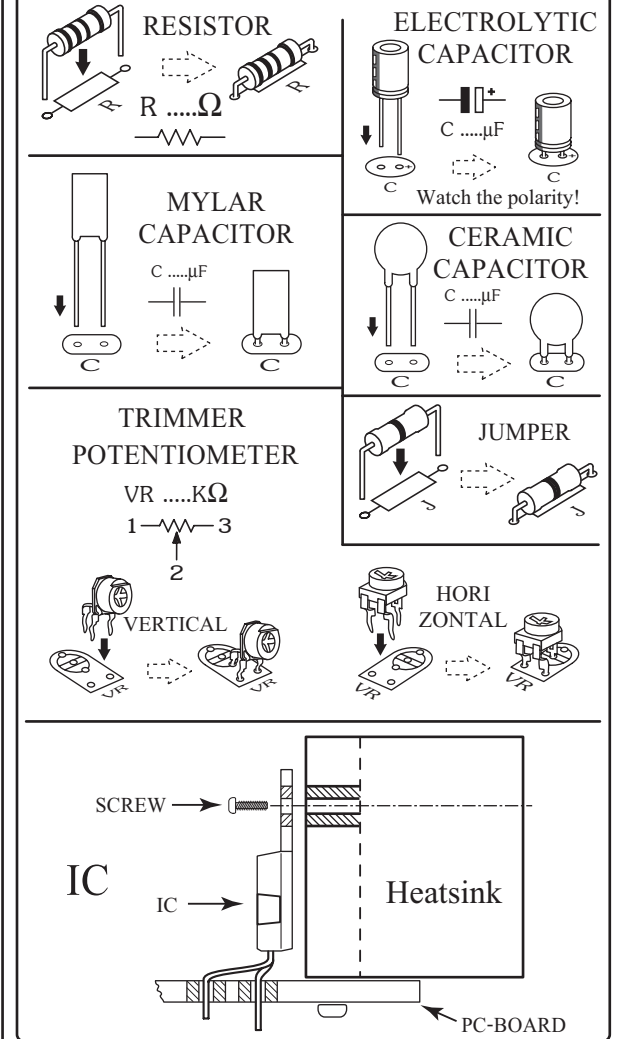
Testing:

Testing on left side as per following:

Connecting the signal from the audio source to

"IN" point and speaker at "SP" point. Adjusting VR1 to the center. Decreasing the audio source volume to zero and apply power supply 12 volts 2A to the circuit. Increasing the volume respectively. If sound is too loud, decreasing VR1. Following the above procedure for right side. Using over 2A supply to get the quality sound. This circuit is using STEREO tone controlling FK626.

Figure 1. Installing the components



Troubleshooting:

The most problem like the fault soldering. Check all the soldering joint suspicious. If you discover the short track or the short soldering joint, re-solder at that point and check other the soldering joint. Check the position of all component on the PCB. See that there are no components missing or inserted in the wrong places. Make sure that all the polarised components have been soldered the right way round.

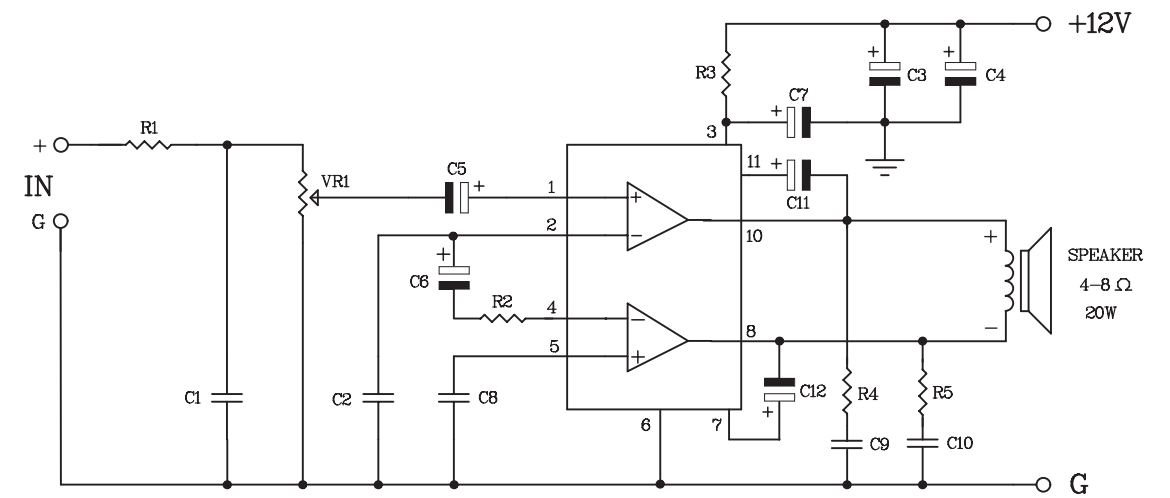


Figure 2. The power amp. BTL. 15+15 watt (stereo) circuit

Figure 3. Connections

