

PRE MIC MIXER 3 CH.
CODE 652

LEVEL 2

The pre microphone mixer circuit consists of three microphones mixing out the same position, three positions of pre mic and music point which is available for connection of music or tone. It can be applied in singing practice or conversation.

Specification:

- Supply voltage : 12 VDC
- Consumption : 5mA.max
- Dimension : 1.98 x 2.21 inches.

How it works:

MIC1, MIC2 and MIC3 are connected through VR1, VR2 and VR3. The volumes adjust the sensitivity of the microphone. The signal will be transmitted through C and R to the cathode terminal of opamp1/1, opamp1/2 and opamp1/3 to be amplified a hundred double. The amplified signal of MIC1 is transmitted through C6 and R7, that of MIC2 is transmitted through C7 and R8 and that of MIC3 is transmitted through C8 and R9. The music signal is transmitted through VR4 passed on C4 and R10. The four signals will finally be mixed at the pin 13 of IC1/4. The mixed signal is double amplified by IC1/4 and then transmitted through pin 14 passed on C9 throughout the output. The power supply is connected through R14 which consists of filter C10.

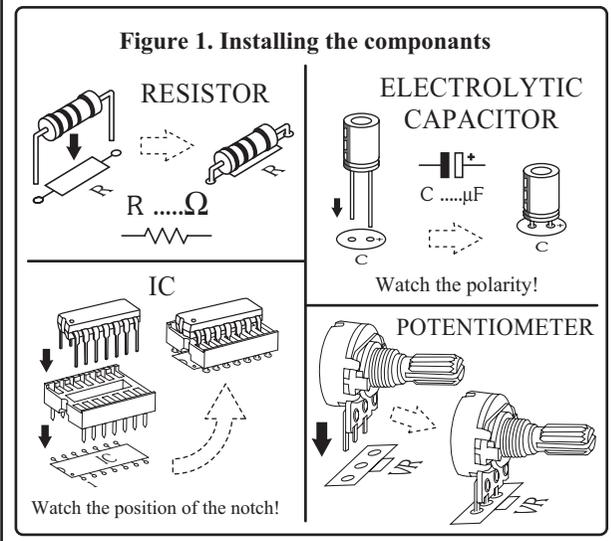
PCB assembly:

Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. If the pins will not enter the holes with ease, use a small drill to slightly enlarge the opening. 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. Some components are particularly sensitive to heat (ie: Transistors, IC's, diodes etc.) extra care

must be taken to only apply the iron for as little time as possible, using a pair of pliers to grip the leads will help conduct heat away. Trim component leads with wire cutters to prevent excess lengths causing a short circuit. Now check that you really did mount them all the right way round!

Testing:

Connect the circuit to the speaker with tone-control or equalizer. Connect the power supply into the circuit and connect the signal from tape player or radio at music position. Adjust the music volume. Therefore the sound goes throughout the speaker. Connect MIC1, MIC2 and MIC3 to microphones. Adjust VR1 to test MIC1, VR2 to test MIC2 and VR3 to test MIC3. If it is all loud this indicates the circuit is practical.



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

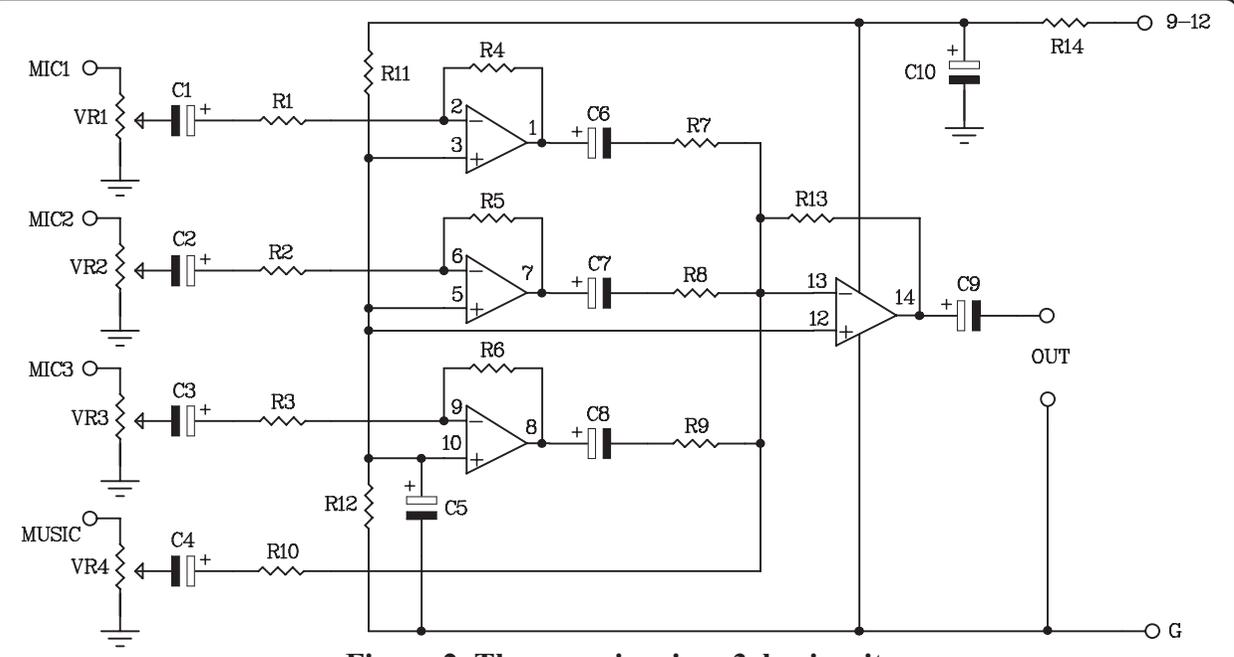


Figure 2. The pre mic mixer 3ch. circuit

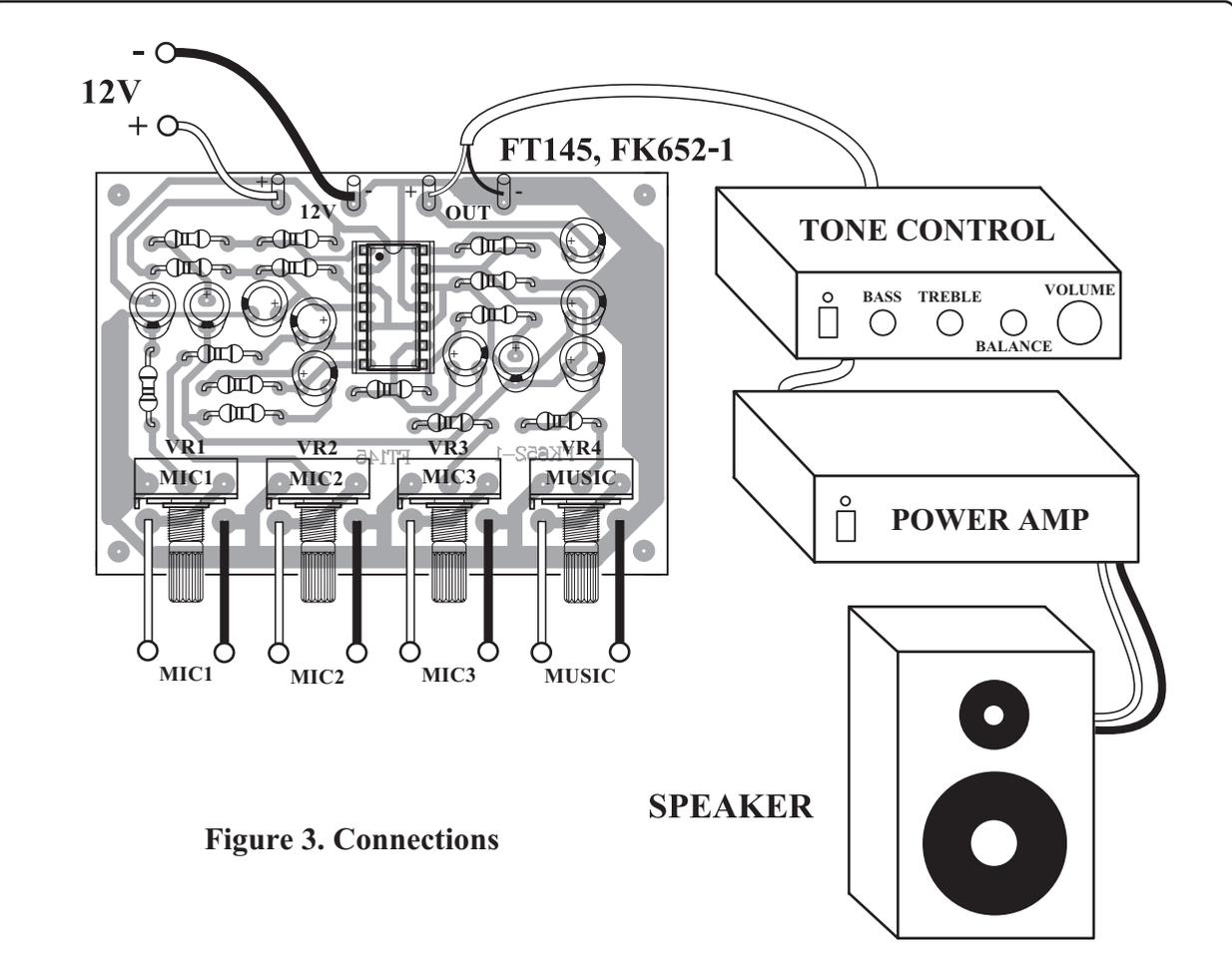


Figure 3. Connections