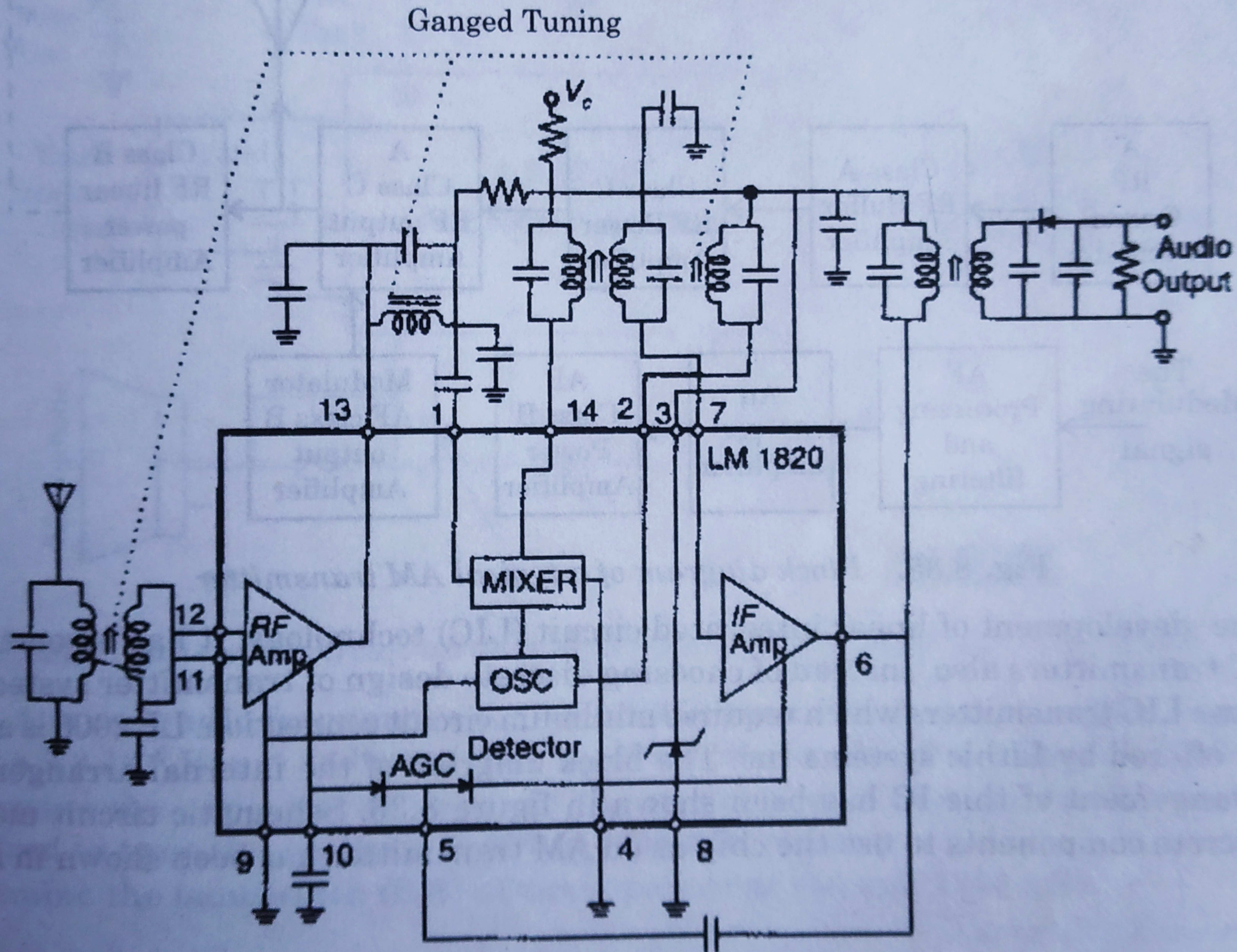


## 8.28. LIC Superheterodyne AM Receivers

A complete superheterodyne AM receiver is now available in the form of linear IC. Because the inductor cannot be fabricated in the IC form, therefore, we have to make tuning circuit arrangement externally for coupling the in-built RF amplifier, mixer and IF amplifier stages of the Linear ICs. A number of linear IC superheterodyne AM receivers are available in the market. The National Semiconductor Corporation offers LM 1820, a 14 pin IC which contains the RF amplifier, mixer



**Fig. 8.34.** Linear IC (LM 1820) superheterodyne AM receiver.



and local oscillator and IF amplifier. With proper external connections, this IC can be used as a super heterodyne AM receiver. Figure 8.34 shows a typical arrangement of IC LM 1820 superheterodyne AM receiver. These linear IC receivers are not so popular they are neither low cost nor small sized. The size and cost are found out mainly by the frequency tuning circuit. The linear IC AM radios find applications in the high quality AM receivers. However, ceramic filters may be used in place of LC tuned circuit.

These types of filters are IC compatible. Use of these ceramic filters is theoretically possible to fabricate a functional AM broadcast band receiver using just the chip and two external potentiometers (for volume control and station selection) and antenna.