YG-209M module consist of Bluetooth chip BC57E687,8MB Flash and 16MHz crystal, after external power working, IO controlling drive Bluetooth chip. The software stored in flash control the bluetooth chip transmitting or receiving data. When the device paired with other wireless devices,they could communicate with each other following the Bluetooth protocol.

The working frequency range of RF module YG-209M is setted from 2402MHz to 2480MHz, the sepeartion is 1MHz and there are 79 channels in total.

The working procedures are:

a. When power on, the Bluetooth speaker will loop scan the whole frenquency until a connection command from the transmitter is received.
b. The Bluetooth speaker transmit a response signal.
c. The transmitter receive the response signal and recognize it, then send a connection command to establish the connection.
d. After the connection establish successfully, the data transmission is beginning. At the same time, the transmitter and Bluetooth speaker will shift frequencies in synchronization per a same pseudo randomly ordered list of hopping frequencies, the hopping rate is 1600 times per second. The Bluetooth speaker conform to the criteria in FCC Public Notice DA 00-705.
e. The bandwidth of the Bluetooth speaker, which is set to a fixed width by the software, match the hopping channel bandwidth of their corresponding transmitter.