2.4GHz RF X-Box Wireless Controller Host Working Principle

1. It is a 2.4G RF product. It works at the frequency of ISM Band (2.4GHZ). There are up to 80 channels, and the frequency interval between each channel is 1M Hz.
2. Evenly Randomized Frequency Hopping Sequence method is implemented in the RF technology.
3. It works in "Master" Mode. We call it "Host."

The working procedures are:

a) When power on, the Host will do the frequency hopping according to a certain sequence, and then send the connection command.
b) If there is a Device response, the Host will judge whether it can be permitted to connect.
c) If it can be permitted to connect, then send the connection command to build up the connection.
d) The Host sends the request command to the Device to get the Buttons value.
e) The Device sends the Buttons value to the Host.
f) The Host will identify the data received and then do the data detection and data correction.
g) The Host will save the data received if there is no error.
h) The Host judges whether it is required to send Buttons value to X-Box console.
i) If it is required, then send the saved data to X-Box console.
j) Repeat Step e) to Step l)