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 Axes and Buttons value.
e) The Device sends the Axes and 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 Axes and Buttons value to PS2 console.
i) If it is required, then send the saved data to PS2 console.
j) The Host judges whether there is any Motor command and/or Motor value sent from PS2 console.
k) If there is, then the Host will save the received Motor data.
l) The Host send Motor commands to the Device, and send the Motor value to the Device.
m) Repeat Step e) to Step l)