Game Pad GP525 transmitter

1. MCU will scan the key matrix, ID/reset key and channel key. If any signal change come from above mention. It will turn convert the data package with checking the low battery status data, and prepare for modulate to the x'tal directly.
2. Buffer amplifier is to change the impedance between oscillating circuit (high impedance) to low impedance
3. (PA)Power amplifier is to support enough current to drive the antenna
4. Matching circuit is to match the impedance between PA and antenna.

GP525's receiver

1. When the PC power on, the receiver will start the PnP process.
2. When the RF signal comes, the matching circuit to change from 50ohm(antenna) to high impedance (e.g. 27MHz for game pad)
3. The adding signal to pass through mixer will generate 455KHz intermediate frequency (IF). It means that the original signal (27MHz from game pad)
4. After the IF amplifier will work for a AGC (auto gain control) function, and the signal more stable
5. A 455KHz resonator will perform the LO function.
6. When the IF (455KHz) pass through discriminator, the demodulating signal will come out. We called it base band signal of game pad
7. AF AMP will work as a data slicer, it amplify the signal to square wave digital signal.
8. This digital signal will send to MCUs. MCUs will sample the signal to check it is valid or not.
9. If the signal it valid, MCUs will convert the signal of the interface to PC.
10. MCUs also scan the reset lock key to check user has to press this key or not.