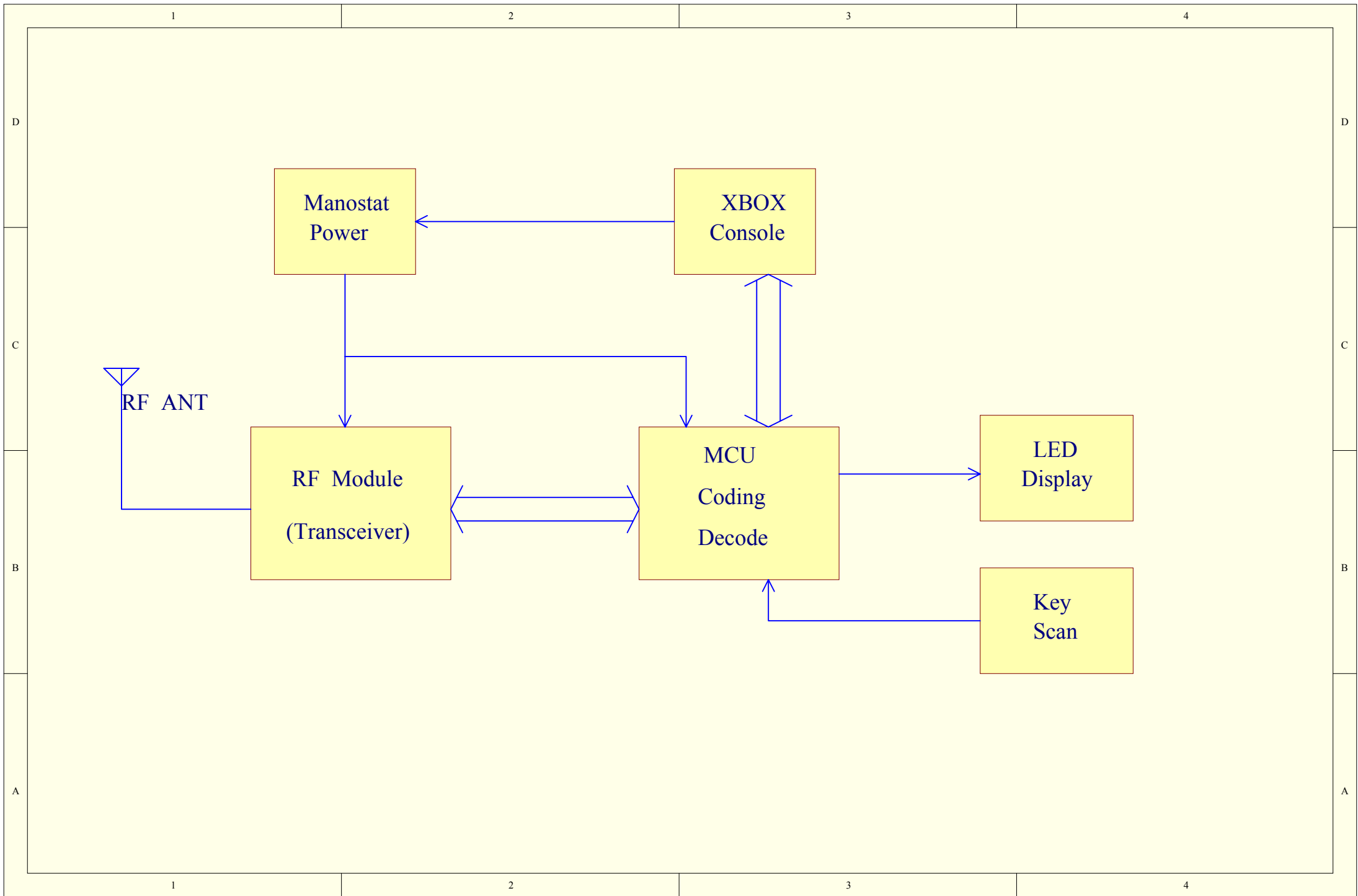# Block diagram description

1. **Transmitter block diagram**

The part is controlled mainly by MCU. Key Scan is used to detected the Keys of Gamepad, LED Display is used to indicated status of the Gamepad, MOTOR VIBRATION is used to report vibration message which come from the host, RF MODULE is used to transmit and receive RF signal, POWER MANOSTAT is used to regulate the power which is supplied by battery stably, and then output it to all circuit. The following is the principle: the MCU will encode KEY SCAN message then transmit it to RF MODULE as soon as it is detected by MCU, and then transmit it to receiver; then RF MODULE will receive vibration message of the motor and transmit it to MCU, after having decoded it, MCU will enable MOTOR VIBRATION Circuit, at same time, MCU will control the LED DISPLAY block to indicate the correspondent working status of the Gamepad.

2. **Receiver block diagram**

The part also is controlled mainly by MCU, LED Display is used to indicate RF connection, RF MODULE is used to transmit and receive RF signal, POWER MANOSTAT is used to regulate the power which is supplied by XBOX CONSOLE stably, and then output it to all circuit. Attention, the receiver doesn't include XBOX CONSOLE which is a necessary host for the receiver. The following is the principle: when RF MODULE have received the KEY SCAN message of Gamepad, it will transmit the message to MCU, MCU will decode the message, then the decoded message will be transmitted to XBOX CONSOLE. XBOX CONSOLE will transmit MOTOR VIBRATION message to MCU, the MCU will encode the message, then the encoded message will be transmitted to RF MODULE which will transmit it out at once. KEY SCAN block may control the RF connection via MCU.

	1	2	3	4

D

Manostat Power

XBOX Console

C

RF ANT

B

RF Module (Transceiver)

MCU Coding Decode

LED Display

Key Scan

A

	1	2	3	4

Transmitter block diagram

RF ANT

RF Module
(Transceiver)

MCU

Coding

Decode

Key
Scan

LED
Display

Motor
Vibration

Power
Manostat

Battery