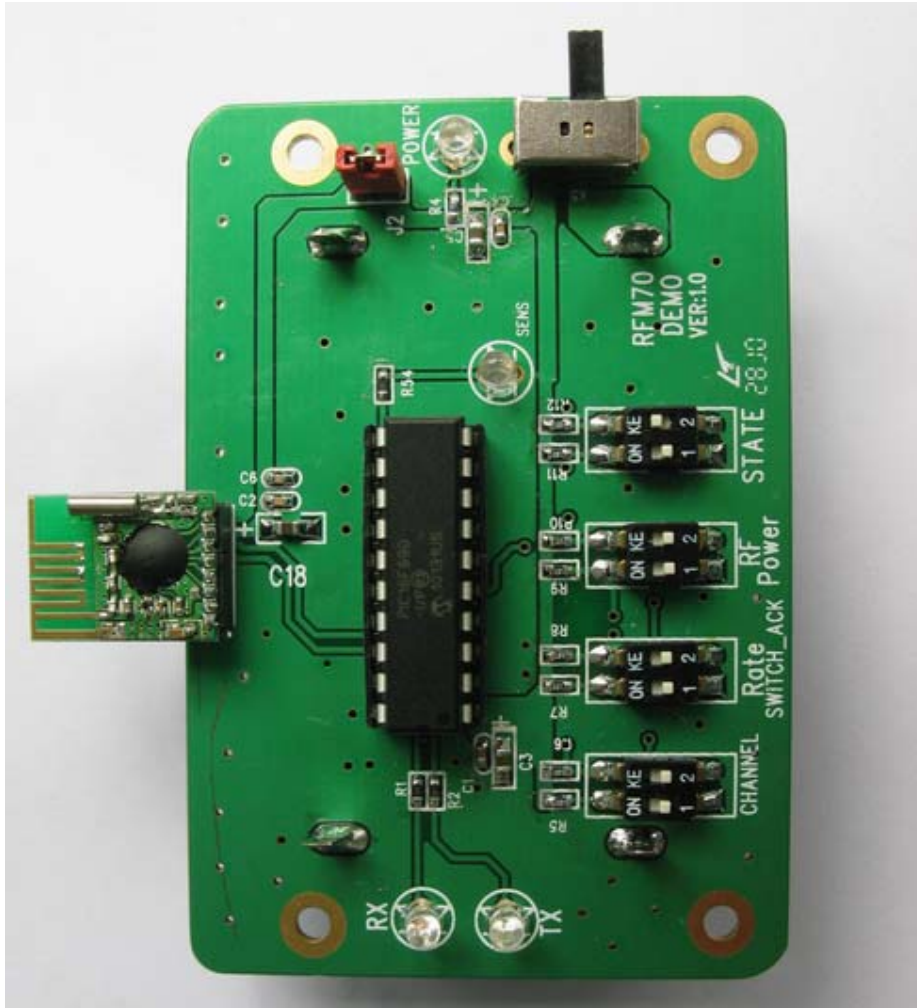# RFM70 Demo Kit User Manual

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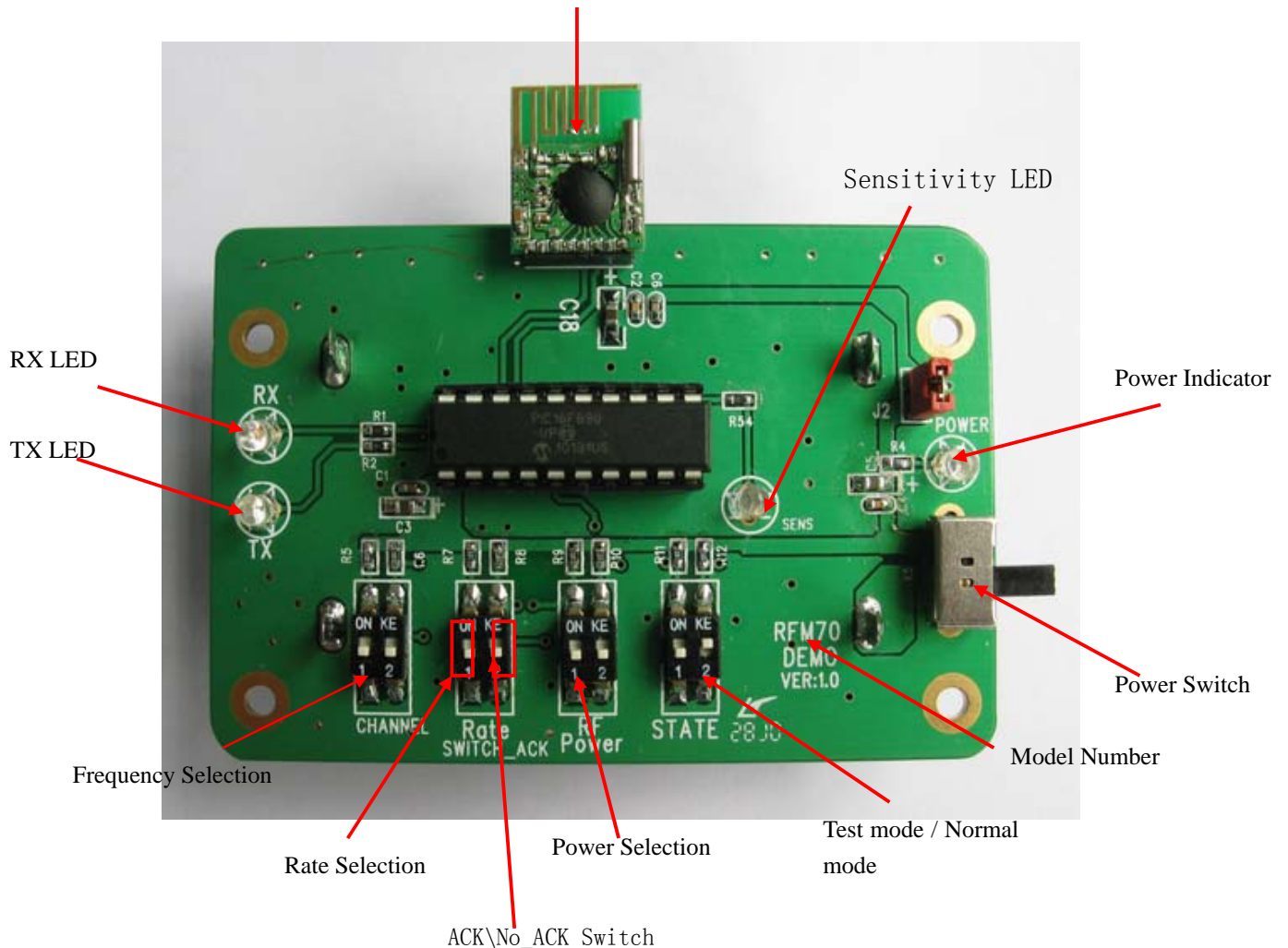
General

   RFM70 Demo Kit is used mainly to demonstrate the function of RFM70 FSK module, such as RF distance, and also useful for faster code development purpose. It consists of TX DEMO and RX DEMO.

Products Introduction:

1.   RFM70 DEMO

RFM TX and RX Module

Sensitivity LED

RX LED

TX LED

Power Indicator

Power Switch

Model Number

Frequency Selection

Test mode / Normal mode

Rate Selection

Power Selection

ACK\No_ACK Switch

Quick Start

Parameter Setting

Attention: RF DEMO setting has to be matching with each other for frequency and data rate so that RF link can be established.

1、Frequency(Channel): with Frequency select, ON=1, OFF=0

SW1	SW2	Frequency
1	1	2.483GHz
1	0	2.460GHz
0	1	2.430GHz
0	0	2.410GHZ

2、Data Rate and ACK\No_ACK switch: With Data RATE select,ACK\No_ACK switch, ON=1, OFF=0

SW1	Data Rate
1	2M
0	1M

SW2	ACK\No_ACK switch
1	ACK
0	No_ACK

3、TX Power select：ON=1，OFF=0

SW1	SW2	Power
1	1	5dB
1	0	0dB
0	1	-3dB
0	0	-7dB

4、Test Mode select： ON=1，OFF=0

SW1	SW2	Mode
1	1	TX-Test(Carrier testing)
1	0	RX-Test(sensitivity testing)
0	1	TX(Master)
0	0	RX(Slaver)

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How to operate

1. RFM70 DEMO

1. Select frequency, data rate, RF tx power and working mode through dip switch.
2. Switch on power，the microcontroller will configure the RFM module according to selected parameter.
3. RF DEMO start to send out data packets with one second interval .
4. When the Master module have one transmission, the TX LED will blink once to indicate the transmission. If the Slaver module received the data packets and verified to be correct, the led on receiver will blink once, and the Slaver will reply same packet data to the Master, The TX LED on the Slaver will blink. When the Master received the data packet and verified to be correct, the RX LED on the Master will blink.

Carrier testing:
When the test mode select 11, the module enter into carrier test mode, The working frequency and power of module can be measured by the spectrum analyzer.

Sensitivity:
When the test mode select 10, the module enter into the sensitivity test mode, the module can be directly connected signal generator, then the receiver sensitivity will measure.

Precautions:

1. Power supply range from 1.8V—3.6V
2. Dip switch setting for TX and and RX setting must be matching with each other.
3. Once a different setting is needed, make sure to re-power up the system again to make the setting valid.