Wireless Siren

1 port transmitter (battery operated) + 1 relay receiver
Transmitter model: **FBXTX2801A**
Receiver model: **FBXRX28-S01**



Transmitter

- **Battery operated**
- **Long distance 2-3Kms**
- **Handheld / wallmount**
- **Operating: 3x1.5VDC AAA batteries**

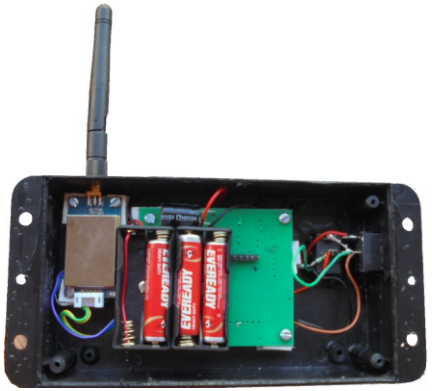
Receiver

- **Loud alarm siren output**
- **Siren 100-110dB**
- **Wallmount**
- **Operating: 12VDC**

Step1: Connect the receiver siren to 12VDC adapter. Yellow color power indicator would turn ON. Keep the transmitter and receiver close to each other (say 1-2 meters away)
Step2: Press the left side ON button on the transmitter (POWER) to ON position. It takes around 1-2 seconds for the machine to boot up
Step3: Press the front button on the transmitter (SIGNAL) to ON position. It will activate the receiver siren. Switching off the SIGNAL button stops the alarm

Alternatively, an extra relay with 2 wires output (COMMON and Normally Open wires), can also be connected along with the siren. This provides a provision to attach any external appliance, hooter, light indicators, motor pumps etc.

The receiver is having potential free relay output to handle 5A@220VAC / 10A@28VDC. These are the maximum limits



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Range of Communication:

The range of communication of the machines is 1-3Kms. Range of radio devices mostly controlled by the environmental conditions, humidity and temperature. Line of Sight communication distance is 3Kms

Precautions:

- Do not drop or apply jerk. Internal electronic circuits are fragile
- Do not open the enclosure or touch the internal electronic circuits with bare hands (electrostatic charge might damage the semiconductor components permanently)
- Do not connect adapters other than supplied by FORBIX SEMICON
- Keep in cool and dry place, away from moist climate and wet walls
- The enclosure is IP-65 but the antenna junction points are not water protected. If mounted outdoors, make sure to cover to avoid rain or thunderstorm

Wireless Transmitter Receiver

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Designed and Manufactured in INDIA by FORBIX SEMICON

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Technical details

+20dBm (100mW) constant RF output
+14dbm high efficiency PA for the transmitter
Receiver sensitivity: – 148 dbm
168 dbm is the maximum link budget

Operating voltage of the transmitter: 3x 1.5VDC = 4.5VDC (AAA batteries)
Operating voltage of the receiver: 12VDC
Operating temperature: 25 °C
CRC on data payload: Enabled
Packet Error Rate: PER (1%)
Redundancy packet feature: Enabled
fOsc = 32MHz
Radio IC used CC1100 (from Texas Instruments) [Sub-GHz frequency]

Following are the programmed parameters and vary from customer to customer:

- Operating data packet length and data format
- Internal data encryption logic
- FSK, GFSK, MSK, GMSK, OOK modulation techniques
- Operating frequency (380 – 480MHz). The transmitter hops multiple predefined frequencies for data transmission. Data packets are transmitted in all of the hopping frequencies. The receiver unit is aware of the predetermined hopping frequencies. It is thereby able to collect data from all these frequency channels and then formulate the complete packet
- Communication data rate 146/293/4688/9380 depending on range requirement
- Bandwidth (62.5 or 125KHz as per sensitivity settings)

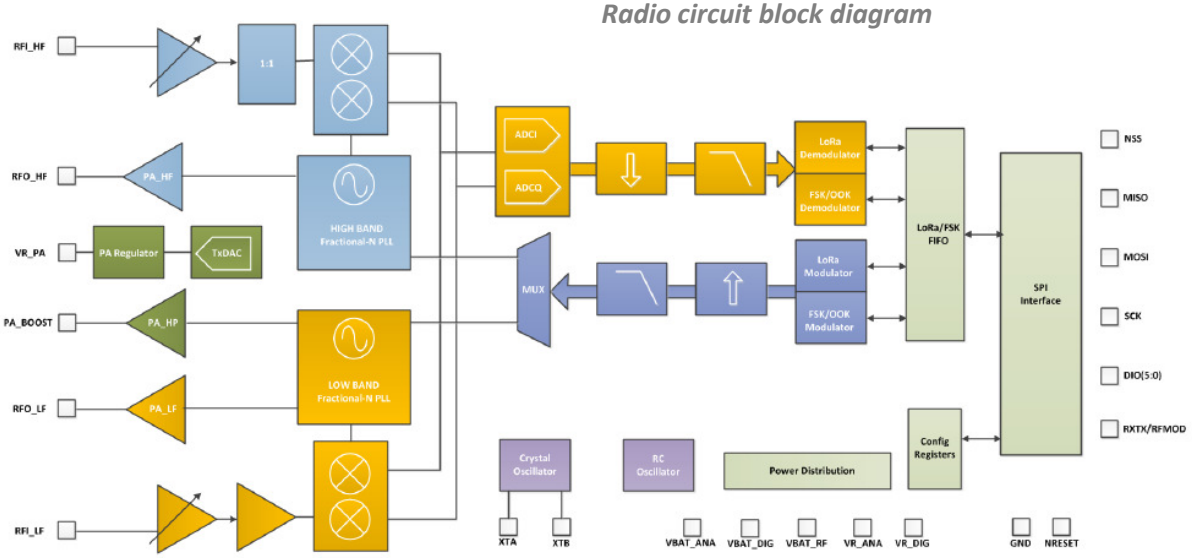
Applications:
Long range wireless alarms and security systems
Industrial monitoring and control
Motor pump, gate motor, on/off logic

Range of communication of any RF wireless machine is primarily dependent on environmental conditions, viz. temperature, humidity, interference, cross talk and multipath fading. It achieve best range of communication, it is suggested to mount the machine at a height not less than 10-12 feet and open line of sight to the receiver. In such conditions the range of communication can reach upto 3.5Kms as well.

Sub-GHz antenna provided are of 2 types:

- Fixed cylindrical type
- Long wire extended type (with magnetic base)
- Receiver contactor relay maximum load capacity 5A @ 220VAC/50Hz or 110VAC/60Hz

Radio circuit block diagram



Wireless Transmitter Receiver

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