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/*
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```
LoRa Receiver
```

Modified sketch from Tom Igoe, allows recipient to receive LoRa signal from a separate LoRa transmitter. This sketch is used with Uno (not ATtiny).

Implements a one-byte addressing scheme with 0xFF as the broadcast address and 0xB4 as the sync Word.

Uses readString() from Stream class to read payload.

Result: Recipient receives "Alert!" signal from transmitter module. Recipient's module will have LED flash ten times. Transmitter module can reissue signal.

on/off button to reset the transmitter module which also turns off the alert LED.

```
*/
```

```
#include <SPI.h>          // include libraries
```

```
#include <LoRa.h>
```

```
const int receiveLED = 5; // Designates the terminal for the receiver LED
```

```
const int csPin = 7;      // LoRa radio chip select
```

```
const int resetPin = 6;   // LoRa radio reset
```

```
const int irqPin = 2;     // change for your board; must be a hardware interrupt pin
```

```
byte syncWord = 0xB4;     // Hexadecimal for sync word (network ID)
```

```
byte spreadingFactor = 7; // spreading factor (6-12)
```

```
byte preambleLength = 13; // preamble length is 13
```

```
int x;                    // Creates integer for the LED repeat loop
```

```
void setup() {
```

```
Serial.begin(9600);  
LoRa.setPins(csPin,irqPin, resetPin); //set CS, reset, IRQ pin  
LoRa.begin(915E6); // initialize ratio at 915 MHz  
LoRa.setSyncWord(syncWord);  
LoRa.setSpreadingFactor(spreadingFactor);  
LoRa.setPreambleLength(preambleLength);  
LoRa.setTimeout(10); // set Stream timeout 10 ms  
pinMode(receiveLED, OUTPUT); // Tells ATtiny module that LED is an output  
LoRa.enableCrc(); // Enables Cyclic Redundancy Check  
}
```

```
void loop() {  
  onReceive(LoRa.parsePacket()); // LoRa module checks for incoming message  
}
```

```
void onReceive(int packetSize){  
  if (packetSize==0) return; // Checks to see if a message is received  
  int recipient=LoRa.read(); // Read packet and assign destination as recipient  
  byte msgLength=LoRa.read(); // Read packet and assign length as msgLength  
  if (recipient!=0xFF) return; // Verify recipient code is 0xFF  
  if (msgLength!=6) return; // Verfiy message lenth is 6  
  Serial.print("Message: ");  
  Serial.println(msgLength);  
  Serial.print("RSSI: ");  
  Serial.println(LoRa.packetRssi());
```

```
for (x=0;x<3;x++) // Repeat following steps 10 times  
{
```

```
digitalWrite(receiveLED,HIGH); // Turn on LED
delay(500);
digitalWrite(receiveLED,LOW); // Turn off LED
delay(500);
}
}
```