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/**                                                                    [xneb2_Rx_36_exAlti]

* Receiver module code for a 433MHz simplex RF-link from a Tx-ing variometer.
* Uses a piezo transducer for variometric audio output with tone pitch proportional to the
* received value.
*
* Connections to Arduino I/O board:
*   Piezo +   -> D9
*   Piezo -   -> GND
*   RF_Vcc    -> 5V
*   RF_GND    -> GND
*   RF_Data   -> D11
*
* Cp the schematic "RF433_Rx-Piezo_shield.pdf".
*/

#include <VirtualWire.h>

#define piezoPin 9
//#define DEBUG


int pitch;
char f;
unsigned char dura;



void setup()
{
    pinMode(piezoPin, OUTPUT);  // Vario audio out

    // Configure VirtualWire
    vw_setup(1000);   // No need for speed. (1000 b/s is enough)
    vw_set_rx_pin(11);    // Data in from the RF Rx. We use the default pin 11.
    vw_rx_start();        // Crank up the receiver
    tone(piezoPin, 300, 100); delay(150);
    tone(piezoPin, 500, 100); delay(150);
    tone(piezoPin, 900, 200); // Let'em know whe're alive
#ifdef DEBUG
    Serial.begin(9600);
    Serial.println("  Rezeeverrreadiiie..!");
#endif
}



void loop()
{
    byte buf[VW_MAX_MESSAGE_LEN];
    unsigned char buflen = VW_MAX_MESSAGE_LEN;
    if(vw_get_message(buf, &buflen)) {
    bipbip(int(buf[0]));
#ifdef DEBUG
        Serial.print(buf[0],DEC);   // Vario value received
#endif
    }
}


void bipbip(int vVal)
{
    f = 0;
    dura = 30;
    if(vVal > 1) {
    pitch = map((vVal + f), 1, 200, 150, 2000);
    tone(piezoPin, pitch, dura); // generate a noise on rise
    }
}
```