

BITX60

```
/*
BITX program for 60 M (USA allocation) Raduino
V 1.1 Don Cantrell, ND6T 25 March 2017
Compiles under etherkit Si5351 library v 2.0.1
This source file is under General Public License version 3.0
Reduced Si5351 updates
Simplified sketch. No metering.
*/
#include <si5351.h>
Si5351 si5351;
#include <LiquidCrystal.h>
LiquidCrystal lcd(8,9,10,11,12,13);

int channel = 1; //Initial channel number
unsigned long post;
float BFO = 11999045; //My BFO frequency
float LO = BFO + 5330500; //Local Oscillator for Upper sideband,CH.1
float frequency;

void setup() {

    lcd.begin(16, 2);
    si5351.init(SI5351_CRYSTAL_LOAD_8PF,25004920,0); //My actual ref osc freq.
    si5351.set_pll(SI5351_PLL_FIXED, SI5351_PLLA);
}

void loop() {

    int tune = analogRead(A7); // Read the input on analog pin 7:

    //Set switching at knob limits and increment channel selection
    if (tune>1000) {
        ++channel;
        post=millis(); //Stake a time post for channel update limit
    }
    if (channel > 5)channel = 1;

    switch (channel) {
    case 1:
        frequency = 5330500;
        break;
    case 2:
        frequency = 5346500;
        break;
    case 3:
        frequency = 5357000;
        break;
    case 4:
        frequency = 5371500;
        break;
    case 5:
        frequency = 5403500;
        break;
    }
}
```

```
if(millis()-post<100){ // Update 5351 only if under 100 ms
LO = BFO + frequency;
si5351.set_freq(LO * 100, SI5351_CLK2); //Program the synthesizer
show();
delay(1000); // Slow down tuning
}
}
void show() {
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("Ch.");
  lcd.print(channel);
  lcd.print(" ");
  lcd.print ((LO-BFO)/1e6,4);//Calculate & show frequency
  lcd.print(" MHz");
}
```