

Settings For SW1

Home Page Power Supply Local Oscillator Dividers Op Amps; BPF(s) Mixer
Comments **SW1 Settings**

The local Oscillator and the [12F683 PIC](#) (U3) - as configured in the V8.3 kit - provides for 16 switch-selectable "center" frequencies, depending upon the 16 possible settings for the dip switch, SW1 (Included in the resistor/capacitor bag in an anti-static bag holding the programmed PIC, the PIC socket, the DIP switch and the 5 volts LM7805 TO-220 cased regulator IC.

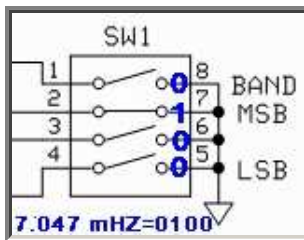
The programmed PIC, ([Tom KM5H's v2.4 code](#)), contains the following set of center frequencies for DIP switch inputs 0000 to 1111. These center frequencies were arrived at using the assumption that the sound card to be used for the RX would have a 96k Hz bandwidth.

The "Rocky Ini" column contains the settings for the Rocky.INI file to populate the Band dropdown list and dial the center frequencies into Rocky (see below).

SW1 Setting	Decimal Value	Center Frequency	Rocky Ini Setting	4x Center Frequency	Low End*	Hi End*
0000	0	1.846	1.846MHz_0000=1846000	7.384	1.798	1.894
0001	1	1.892	1.892MHz_0001=1892000	7.568	1.844	1.94
0010	2	3.546	3.546MHz_0010=3546000	14.184	3.498	3.594
0011	3	3.846	3.846MHz_0011=3846000	15.384	3.798	3.894
0100	4	7.046	7.046MHz_0100=7046000	28.184	6.998	7.094
0101	5	7.221	7.221MHz_0101=7221000	28.884	7.173	7.269
0110	6	10.146	10.146MHz_0110=10146000	40.584	10.098	10.194
0111	7	14.046	14.046MHz_0111=14046000	56.184	13.998	14.094
1000	8	14.271	14.271MHz_1000=14271000	57.084	14.223	14.319
1001	9	18.114	18.114MHz_1001=18114000	72.456	18.066	18.162
1010	10	21.046	21.046MHz_1010=21046000	84.184	20.998	21.094
1011	11	21.321	21.321MHz_1011=21321000	85.284	21.273	21.369
1100	12	24.936	24.936MHz_1100=24936000	99.744	24.888	24.984
1101	13	28.046	28.046MHz_1101=28046000	112.184	27.998	28.094
1110	14	28.092	28092MHz_1110=28092000	112.368	28.044	28.140
1111	15	28.346	28.346MHz_1111=28346000	113.384	28.298	28.394

(* predicated on 96 kHz soundcard, providing 48 kHz either side of the center frequency)

For example, the center frequency of 7.046 mHz corresponds to the binary string 0100 and would set SW1 as follows:



Using a 96 kHz soundcard, this yields a bandwidth of 7.046 +/- 48 kHz (6.998 - 7.094 mHz).

Setting Up Rocky's ".INI " file

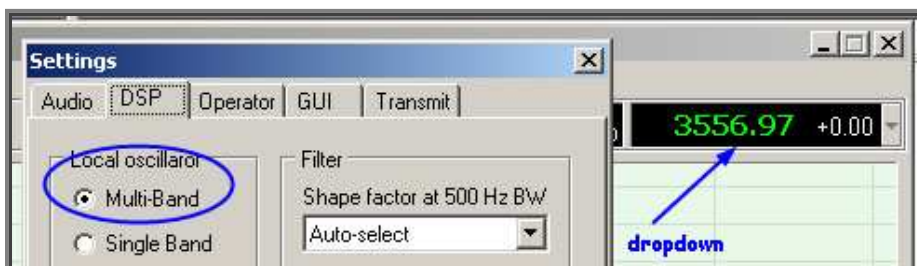
You can program Rocky so that the above settings are made available in the dropdown list that Rocky uses to "dial in" the center frequency. You do this by making entries in the "ROCKY.INI file. If you installed Rocky, using the defaults, this file is available at:

C:\Program Files\Afreet\Rocky\Rocky.INI

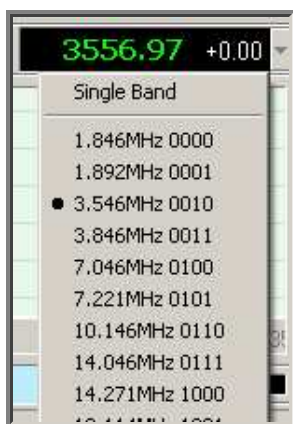
You need to edit the file using Notepad or a similar text editor, and replace the "[Band]" section with the following

```
[Bands]
1.846MHz_0000=1846000
1.892MHz_0001=1892000
3.546MHz_0010=3546000
3.846MHz_0011=3846000
7.046MHz_0100=7046000
7.221MHz_0101=7221000
10.146MHz_0110=10146000
14.046MHz_0111=14046000
14.271MHz_1000=14271000
18.114MHz_1001=18114000
21.046MHz_1010=21046000
21.321MHz_1011=21321000
24.936MHz_1100=24936000
28.046MHz_1101=28046000
28092MHz_1110=28092000
28.346MHz_1111=28346000
```

and SAVE the ini file.



You can then go into Rocky, go to the top menu and click on VIEW > SETTINGS, and then click on the DSP tab. In the DSP tab, make sure that the Local Oscillator option of "Multi-Band" is clicked (this enables the dropdown list in the upper right hand corner of the Rocky screen



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