## Setting up the Funcube Dongle with SDR-Radio and MAP65-IQ in 5 minutes!

First download the latest version from MAP65-IQ <u>http://physics.princeton.edu/pulsar/K1JT/MAP65-IQ r1116.EXE</u>

Second download SDR-Radio V1.4 from the website <u>http://www.sdr-</u>radio.com/Download/ReleaseKits/tabid/319/language/en-US/Default.aspx

Section Download – Release kits – V1.4 is now (4-11-2011) the latest version.

Run the downloaded program. All defaults during setup. Insert the Funcube Dongle into the usb-port from your computer. Start the program SDR-Radio. Be sure you use the following parameters



Then go to the Funcube tab and enter the frequency. In this case 144.125MHz.

FUNcube Dongle		▼ 7 🗆 ×			
Options 🕈 💋 Cor	nect +Track +Plot Sat (	Help			
AOS: 02:15:50	P 100	MOON	144.	125.000	
			Select Frequency		2
A2:10-EL-1.00	🖉 🛛 👹 🖉 🖄		- Add Entry	Frequency in MHz	
A BAR				_144.125000	P
E FUNcube			- Select from list		
Status	🎺 Ready			144 10000	
Firmware	FCDAPP 18.06			144.125000	î.
Frequency     Center (Set) MHz	144 124994 (144 125000)	Frea			
Band	VHF II	4			
Doppler ±	+0.0			12	
Doppler Enable	A CONTRACT OF				+
Doppler Invert			(		
and the second s		•	Select	Cancel	
FUNcube Dongle	Memories				-

You can adjust the frequency correction by changing the 'Correction' part in the Funcube Dongle tab. You can also adjust the LNA Gain to get around 0dB in MAP65IQ (see later in this document)

PLL Lock	Ves	
Correction	-13.00 ppm	
E Controls		-
Auto-Save		(III)
Bias Tee		
LNA Gain	+5,0dB	*
RF Filter	268MHz LPF	-
Mixer Gain	12dB	-
Mixer Filter	1.9MHz	
FUNcube Dongle	Memories	

Next we need to check the MAP65-IQ settings from SDR-Radio. Go to the button in the 'Windows' tab from SDR-Radio.

input Source Windows Col	SDR-RAD	IO version 1.4 build 824 (Re put Record Tools	elease) :: Realtek HD Audio Input Help	- 0 or	ons * @ Full Screen * RFSpace	e x
Console Logfile Main Views	Audio Graphic & Audio	Options Data Decoder Demodulation	st FUNcube bongle Jency - Tuning	Map Solar Data Propagation	External Antenna Radio Switch Vsrious	
FUNcube Dongle Options *  Connect +Track +Plot Sat		44.125.0		3.5 10 21	MAP65-IQ Support	

Now go to the MAP65-IQ tab (see picture) and check the settings.

Tanut Source Windows Concole	SDR-RADIO version 1.4	build 824 (Release) :: Realtek HD Audio I	nput A
Console Logfile News Feed To start forwarding	Graphic Graphic Multice Audio	sta pder Stations Dongle Frequency + Tuning Signal Lev	tory Map Sc Bi el Propagati
MAP6 Support 4 [ MAP65 - IQ + Gain * VFO * 2 Provide A Options	Program Options		
VFD freq: 144.125.000 (VFO A) Bandwidth: 95.238 kHz Address: 127.0.0.1:50024 Packets: 0	Appearance Console Defaults Scope + Waterfall	MAP65-IQ Map65 Address 127.0.0.1 Port 50024 Bandwidth 95238.095	
Status: Contrast: 20k 40k 60k 80k	Account Profiles Antenna Switch Data Decoder External Radios Filters IQ Data Files Maps Memories MIDI Devices My Information	Check settings	
FUNcube Dongle MAP65-IQ Support Memories	Navigator Recording RFspace		

When the parameters are correct, hit the button on the left to start forwarding data to MAP65-IQ.

Next we need to install MAP65-IQ. It is straight forward, next, next <sup>(2)</sup> . start MAP65-IQ and enter your call, locator etc. Be sure to enable 'Input data unicast' as you can see below.



After this we should get data into MAP65-IQ. You can see this after several minutes and there should be no RED ALERT: NO DATA. You need to adjust the RX level to be around 0dB. This can be done by changing the LNA Gain from the Funcube Dongle.

My advice is to do the Spur Reduction as described in the following document <u>http://sdr-radio.com/LinkClick.aspx?fileticket=m0q-</u> <u>Ce7DzF0%3d&tabid=480&mid=973&language=en-US</u>

This will reduce the center peak by several dB's and you can get the MAP65-IQ noiselevel to around 0dB now.

GL monitoring the EME segment on one of our HAMradio bands!

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www.livecq144.com