



VK Logger Forum

Companion discussion forum to Asia/Pacific's VK Logger: <http://www.vklogger.com> (separate registration)

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[Rubidium unit FE5680A Rev.F. Experiences?](#)

by [VK2GOM](#) » Mon Sep 12, 2011 11:44 am

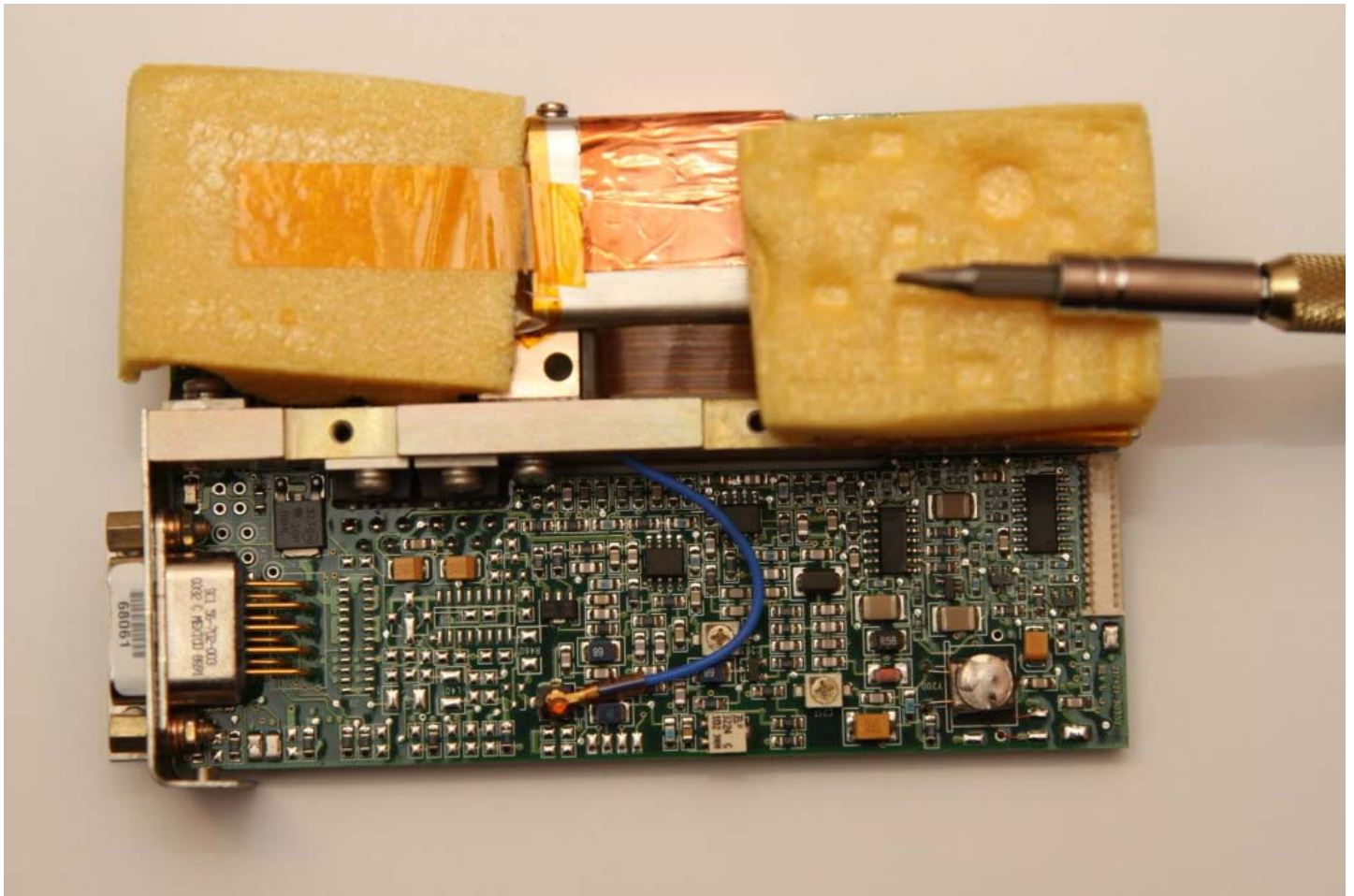
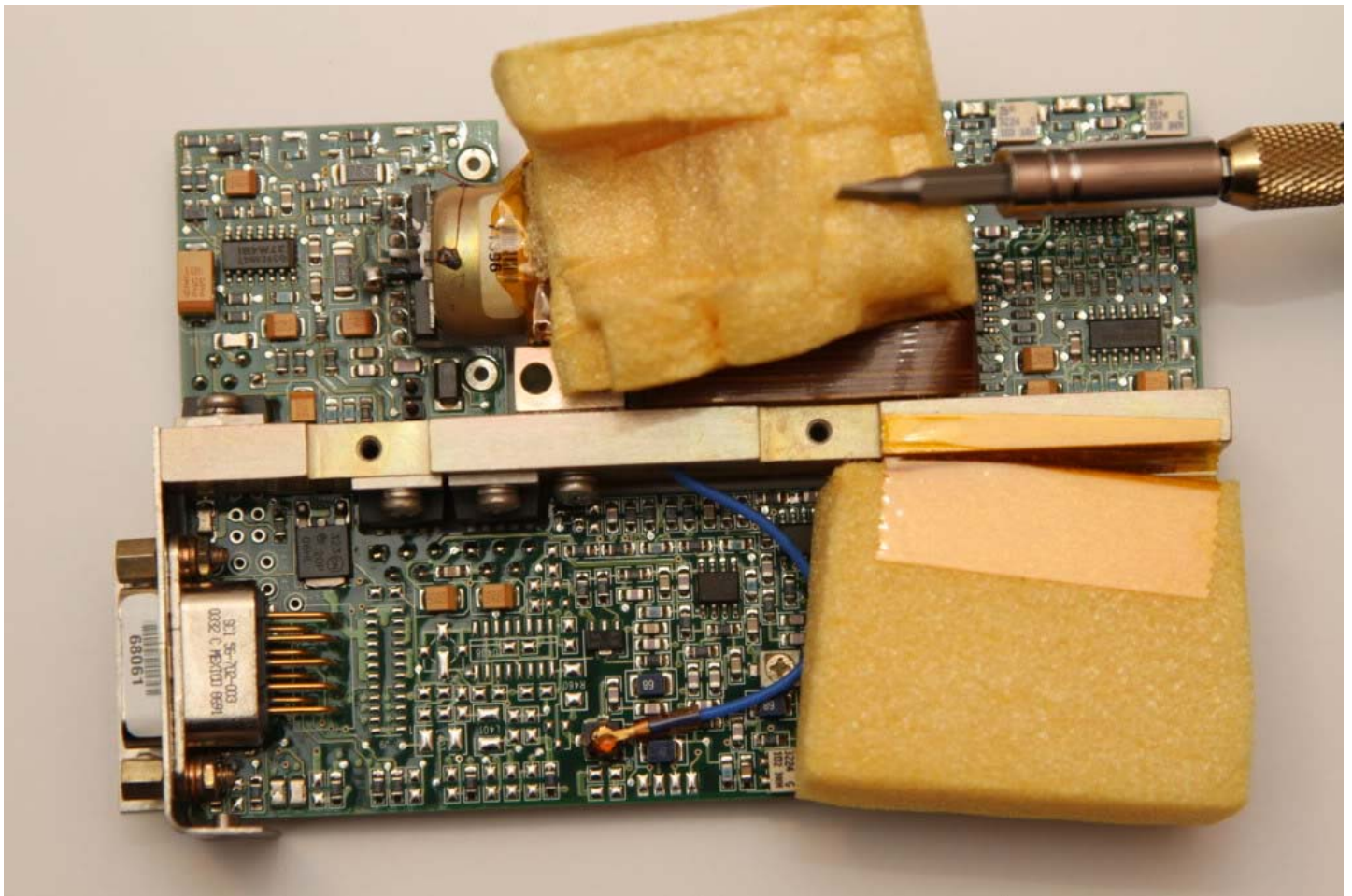
I got myself a Rb unit from eBay with the intention of reprogramming it to 10.066666MHz to triple to get me near 30.2MHz.

The seller advises it's programmable between 1 and 20 MHz output.

I opened it up. It has a MAX3232 IC in there, so the programmable part sounds reasonable, although I haven't tried yet. Powering it up with +13.8V on pin 1 and Gnd on pin 2 results in the unit getting warm, but no 10MHz (default) output appearing on either pin 7 of the DB9 or the only RF jack I can find on the PCB.

Am I missing a trick here, or are there other pins that need to be connected to something to see an output?





[VK2GOM](#)

Forum Diehard

Posts: 999


Joined: Mon Jan 19, 2009 3:16 am

Location: QF561F

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[Re: Rubidium unit FE5680A Rev.F. Experiences?](#)

 by [VK2GOM](#) » Mon Sep 12, 2011 12:52 pm

Further digging online suggests this model is adjustable by only a few Hz either side of 10MHz, so looks to be no good for my application. It needs +5V connecting to a pin to enable the output.

Anyone need a 10MHz reference? 😊

73 - Rob VK2GOM /G0MOH



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[Re: Rubidium unit FE5680A Rev.F. Experiences?](#)

 by [VK2JDS](#) » Mon Sep 12, 2011 10:07 pm

yes, 5 volts on pin 4 at low current will enable output on 10MHz. i have some of these, the one with the sma connector on it is the variable variety apparently. one produces +6dbm, the other about +4 so some sort of amp might be required to lock test equipment such as frequency counters and spectrum analysers. i have a HP5342A 18GHz counter and it would only work on external reference lock with the higher output rubidium standard, the display would just show dots and malfunction but its ok when a small amp (like a gali kit from vk5eme) is fitted inline. so, dont get rid of that one just yet, they are handy for locking up transverters and also for making precision signal sources for the higher bands using vk3xdk's pll etc

i just received one thats got the sma on it from this seller : <http://www.ebay.com/itm/Rubidium-Atomic-...3f063f8387>

so will try programming it. it comes with a made-up db9 plug , 15v 2 amp switchmode power supply and a sma cable.(and it works!)
73's from Dave



[VK2JDS](#)

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[Re: Rubidium unit FE5680A Rev.F. Experiences?](#)

 by [VK2GOM](#) » Mon Sep 12, 2011 10:40 pm

Hi Dave,

Thanks for the info. The SMA output is nice, but not a necessity it seems. Revision B boards are the ones that work too. You have to tap off from a small jack socket inside with a bit of UT141 or 085 etc., and also bring RS232 lines out to the front. The ones with SMA's on are (as you have shown) a fair bit pricier, and the sellers know why too! I will try and chase a revision B board. I have seen some that show Rev.B in the pic, but I want to hear it from the seller that they are the exact ones he has, and he's not just used a picture off the internet.

This one can probably end up locking my HP counter or something which will means I don't need to build a 10MHz distribution or keep plugging/unplugging my GPS reference to various gear...

73 - Rob VK2GOM / G0MOH



[VK2GOM](#)

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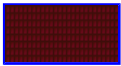
 by [VK2GOM](#) » Tue Sep 13, 2011 6:36 am

This is getting expensive. Another Rubidium unit has been ordered, that has an SMA output on it, and the listing says it's programmable...

Out of interest, I fired the other one up putting 5V on Pin 4 which indeed enables the output, and listened on another GPS locked radio tuned to 10MHz where I can hear the GPS 10MHz reference. When the Rb unit is turned on, I can hear the tone from it, and it swings about a bit until it suddenly arrives into lock, and the two tones are identical, at least to my London College of Music trained ears.

I am reading 10.0000000 MHz on my HP counter which itself is GPS locked, so the output seems correct at least down to 0.1 Hz.

73 - Rob VK2GOM / G0MOH



[VK2GOM](#)

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