

Subject: RE: finally!
From: LGrosskopf@Teledyne.com
Date: Tue, 29 Jul 2008 18:11:00 -0700
To: "Garcia Miro, Cristina" <CGMiro@mdscc.nasa.gov>
CC: kuiper@jpl.nasa.gov

Hello:

The outline drawing for your filter (1303111D1.pdf), and our internal specification (MNAS-FT2531.pdf) should help in building your harness. I have not yet been able to track down the final test report, but will continue trying the off-site archives.

Some customers object to the 360 kHz sidebands that appear when the filter is frequency locked, and for that reason we provide a hold function (controlled by pin 5 of connector P1) that turns off the 360 kHz phase locked loop oscillator, but this hold function maintains the frequency for less than a second which soon develops significant frequency drift. This may not work for you if you need to perform long exposures.

Also note that pin 4 is NOT a spare (unused) pin as shown in the outline drawing. Pin 4 is used to latch data into the internal DAC only when a pulse is applied.

Please understand that you need to supply a stable reference frequency sample that is offset 321.4 MHz below the desired main filter frequency at connector J3. This reference signal supports our fine tune and frequency lock mechanism without which the filter will probably drift too much. The power level of this reference sample should be somewhere in the range of $-17 \text{ dBm} < P_r < 0 \text{ dBm}$.

The word latched into the DAC coarse tunes the filter, and then the internal 360 kHz phase locked loop captures and frequency locks the filter 321.4 MHz above your reference sample. PIN 14 should go low when the phase locked loop has acquired.

There will be substantial current (~1.5 Amperes) drawn from the -15 Volt supply when the filter is tuned near the top of it's frequency band..

The 28 Volt supply will require a surge of about 1.2 Amperes when first turned on, and then needs only 20 mA or so.

WARNING: The magnet driver will be damaged by repeated high speed sweeping with rapid retracing. I mention this because there is a note in my file that indicates Tom's unit was damaged in this way as discovered when the postmortem failure analysis was done.

Please contact us if anything is not clear or appears not to work - we prefer that you succeed.

Happy Thoughts,
Larry

Lawrence Grosskopf
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"Garcia Miro, Cristina"
<CGMiro@mdscc.nasa.gov>

07/24/2008 06:56 AM

To LGrosskopf@Teledyne.com
cc "Garcia Miro, Cristina" <CGMiro@mdscc.nasa.gov>
Subject RE: finally!

Many thanks, Larry, I appreciate your help.

We are not so much in a hurry, actually I'll be on vacation for 2 weeks, starting tomorrow (come back on August 11th), so please take your time.

Cheers, Cristina

-----Mensaje original-----

De: LGrosskopf@Teledyne.com [mailto:LGrosskopf@Teledyne.com]

Enviado el: Thursday, July 24, 2008 1:27 AM

Para: Garcia Miro, Cristina

CC: Garcia Miro, Cristina; Moll, Esther; Calvo, Jesus; kuiper@jpl.nasa.gov; Franco, Manuel

Asunto: RE: finally!

Hello Cristina:

I hope you are well.

We built the FT 2531 filter for Dr. Kuiper so long ago that I had almost forgotten about it. There will be some small delay while I track down the documentation and scan it into electronic form, but have no fear, I am engaged. The PDF file you forwarded appears to be totally useless - sorry about that.

Tom originally wanted the filter for SAMBA, but VLBI sounds like fun too.

The outline drawing is a 11" x 17": Maybe that is why it got truncated when FAXed (or possibly when it got re-formatted into the pdf file). The MNAS is 8.5" x 11" so hopefully at least that can be transmitted successfully. The final test data is probably archived and for that reason it will likely take longer to re-acquire.

I will email you as soon as the documents are available in useable form.

Best Regards,
Larry

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"Garcia Miro, Cristina"
<CGMiro@mdscc.nasa.gov>

07/23/2008 06:52 AM

To "Grosskopf, Larry" <LGrosskopf@teledyne.com>

cc "Franco, Manuel" <Manuel.M.Franco@jpl.nasa.gov>,
kuiper@jpl.nasa.gov, "Garcia Miro, Cristina" <CGMiro@mdscc.nasa.gov>,
"Moll, Esther" <EMoll@mdscc.nasa.gov>, "Calvo, Jesus"
<JCalvo@mdscc.nasa.gov>

Subject RE: finally!

Dear Mr. Grosskopf,

We would need to know the pin-out configuration to build the filter control cable. At the documentation we have available (pdf file attached) that information is missing.

many thanks in advance for you help,

Cristina

 Cristina Garcia Miro
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-----Mensaje original-----
 De: Tom Kuiper [mailto:kuiper@jpl.nasa.gov]
 Enviado el: Thursday, July 17, 2008 9:01 PM
 Para: Grosskopf, Larry
 CC: Garcia Miro, Cristina; Franco, Manuel
 Asunto: finally!

Dear Larry,

we are finally about to put your filter to use. Cristina, who is copied on this message, will start next week. This e-mail is just to establish a communication channel between you and her, so she can ask you questions that may arise.

Alas, you will now have to go to Madrid to see the filter in action.

Hoping all is well with you,

Tom

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 [attachment "Teledyne_YIG.pdf" deleted by Larry J Grosskopf/ElecTec/Teledyne]

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