Austron GPS 2201a ops and serv manual uploaded to KO4BB site

(too old to reply)

paul swed 9 years ago

Permalink

We time nuts now have a set of manuals for the Austron 2201a GPS receiver.
Thanks to K4CLE for the ops manual and I had the service manual they have been encoded to pdfs and uploaded to Diddier's site for posting when he gets ready.
Diddier upload puts them in root???

The service manual is 600 DPI so there are 4 files approx 6 MB each. The Ops manual is at 300 DPI and is a single 4 MB file.
So the good news is that these austrons can be made to work. Even without the always missing antenna.
Couple of points.
You have to set the week and day back to 1992 or 1024 weeks ago.
Its good if its been off to use manual mode and select a sat high in the sky to reload the almanac give it an hour.
Further the memory batteries almost always dead replace it and make sure the memory draws 10 ua or less.
Otherwise you have to go back through the setup again every time you power it.

Those nasty missing down converters.

Using a Odetics down converter (Thanks Pete of time-nuts fame) a fairly reasonable 35.42 Mhz to 75.42 Mhz up converter can be built but it uses filters and multiplier tanks and not sure those are that reproducible..
This allows the receiver to work measure various offsets like an HP3801 down in the 4.5 X e-12 region after 2 days.

Thanks to Doug above I am trying two methods to use a Novatel starview receiver that also puts out a 35.42 Mhz IF. The methods have to do with trying to build the simplest of up converters. One method has worked, but you need really good eyes to connect into the circuits. Also trying an even simpler method, but its unclear its working very well. All of these methods are very inexpensive if you can find the odetics or starview receiver.
Regards
Paul
WB8TSL

b*@public.gmane.org ...o

Paul,

> *Post by paul swed*
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A small typo: Starview is the evaluation software used to run the legacy CMC (Canadian Marconi) line of receivers - Allstar, Superstar and Superstar II.

Would the Austron be compatible with the current Meinberg downconverting antenna?

http://www.meinberg.de/download/docs/manuals/english/gpsant.pdf

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Björn

Rob Kimberley 9 years ago

I forgot to add that the IF frequency used in the Austron 2201/2202 units is 75 MHz, and the Meinberg/Odetics is 35.42MHz, so they are not compatible without additional conversion.

Rob

-----Original Message-----
From: time-nuts-bounces-***@public.gmane.org [mailto:time-nuts-bounces-***@public.gmane.org] On Behalf Of bg-***@public.gmane.org
Sent: 14 March 2012 05:38
To: Discussion of precise time and frequency measurement
Subject: Re: [time-nuts] Austron GPS 2201a ops and serv manual uploaded to KO4BB site

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I know that the Meinberg works with the old Odetics units, but the IF frequencies are different on the Austron units.

Rob Kimberley

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Björn

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https://www.febo.com/cgi-bin/mailman/listinfo/time-nuts
and follow the instructions there.

paul swed 9 years ago

There seems to be a strong likelihood that the 2201 is compatable with the mienburg. Thats what I believe Doug actually has. If there some detailed info in your link I will take a look.

...

paul swed 9 years ago

OK the updates.
The issue is the 2201 is a 75.42 Mhz IF and most of these alternates are 35.42. Hmmm sounds like adding 40 Mhz gets you the answer.
Thats exactly what I did with the odetics converter from Pete L.
Took 10 Mhz from 2201 4 X to 40 mix with 35.42 buffer and send to the 2201.
Locks like a champ.
I feel the RF chain is not all that reproducible and could be improved. So though it works through Dougs support I have been trying out the novatels that also have a 35.42 IF. They have one other nice feature a derived 40 Mhz pecl signal. So first attempt uses a soic pecl to ttl converter driving a sa612 mixer and then a buffer...
However this requires a tap off of the 35.42 Mhz saw IF filter and then a lot of gain.
The Novatel also puts out a much amplified 3.90Mhz IF.
This created a 3rd converter approach. 3.9XX + 71.111 Mhz mix and deliver. this is a very nice approach but at this moment I have to use a significant lock sig gen for the 71.111 Mhz.
Last item with the 2201 there really is not a C/N ratio or signal strength to have any clue if A is better then B or C. Makes it sort of tough because B and C do work. I just suspect they are worse then A.
Regards
Paul.

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