

### **(11/3/10) a1**

- fix: issue with display arrays fixed, very rare crash possibility when resizing window when pixels > 2048. Found when prototyping dockable/draggable code**
- add: returned functionality of special display to panafall only. It will only display if a single RX is in use. Note: hover over waterfall text does not know that waterfall now starts lower down, consequently hover over scale etc will not work below half way down**

### **(11/3/10) a2**

- fix: when using PTT IN to go into transmit in CW the PTT OUT does not activate**
- fix: resolved rare crash issue with seq error snapshot**
- add: time stamp on each seq error snapshot**

### **(11/3/10) a3**

- fix: important fix to new/current display arrays. Previously a crash would happen if display mode is changed repeatedly by using mousewheel for example**

### **(11/3/10) a4**

- add: added a status bar, and moved the clock panel over. A warning triangle will appear if there are any SEQ errors. Click triangle to bring up Seq log. Click clear in the seq log to clear the warning. Any -ve seq errors will show RED surround. RED surround is an important SEQ error, please screenshot the seq log window and report on forums if this happens.**

### **(11/3/10) a5**

- add: display/screen icon added to status bar. Click for preset resolutions**
- change: added some info to seq log form**
- change: pulled try/catch from different drawing functions, and added one at overall render level**
- change: refactored initial section of timer1\_Tick in PS form. No changes to state machine**

### **(11/3/10) a5\_1**

- fix: fixed colour on PS label**

### **(11/3/10) a6**

- add: when using single RX1 and when in panafall, the splitter between panadaptor and waterfall can be dragged up and down. Right click to recenter.**
- fix: untrapped exception on shut down caused by thread time outs in power off button not waiting long enough (display\_volts\_amps\_thead)**
- change: thread time out for multimeter\_thread(s) in power off button state now based on meter delay**
- add: ErrorLog.txt created if any untrapped .NET or DirectX issues (\\Users\\<user>\\AppData\\Roaming\\OpenHPSDR\\Thetis\\ErrorLog.txt)**
- fix: rx2 waterfall bitmap resized correctly, this would only be noticeable if you switched from panafall to waterfall on rx2**
- change: grid scale numbers flip side away from passband filter for USB/LSB/DIGU/DIGL/CWU/CWL**

### **(11/3/10) a6\_1 + a6\_2**

- fix: fixes to some GDI drawing issues**

**(11/3/10) a7**

- change: caching of directX string sizes**
- change: DXGI\_ERROR\_WAS\_STILL\_DRAWING exception ignored in swapchain present**

**(11/3/10) a8**

- fix: rework of the seq log UI retrieval of data**
- change: can select up to 144fps for those with systems and screens that are able to do that**
- add: you can slide the edge of RX1 meter to resize it. The ratio between max and min is maintained when the window size is changed**

**(11/3/10) a8\_1**

- fix: btnBandHF/VHF/GEN functions were setting CTUN button when they shouldn't have been. Not only that they were basing that on the incorrect boolean. Code removed.**

**(11/19/19) b1**

- add: WireShark and specifically DumpCap support added to SeqLog window**
- add: r and l sequence numbers presented in SeqLog. r=received l=last**
- change: seqlog can be resized**

**(11/19/19) b2**

- add(\*): peak markers on the panadapter. Configure through Setup>Display>General. Note: this is a very simple algorithm and does not consider slope**
- add: experimental accurate frame timing. This will probably have a substantial impact on cpu usage**
- ~~-change: if a timed waterfall update is 'late' the next update will be made 'early'~~**
- change: now using hiperf timer in RunDisplay**
- (\*) only implemented in DirectX atm**

### **(11/19/19) b3**

- change: frame timing improvements, and removed waterfall late changes made in b2**
- add: cpu% can now show thetis/system cpu%, use the drop down on the cpu % in status bar**
- add: option in SeqLog to only show status bar warning when -ve seq errors detected (default)**
- add: rx signal history over two seconds shown on smeter. Options to turn on/off and set colour/alpha**

### **(11/19/19) b3\_1**

- add: vsync option for directx screen updates, initial pass**
- change: directX provided with fps setting during initialisation, was previously always maxed to 144**
- fix: issue with PS NeedToRecalibrate check, did not consider existing TX attenuation if the sampled signal was too low. This was an error introduced in recent refactor**
- add: peak hold delay on peak blobs, initial pass**

### **(11/19/19) b4**

- change: if wdsp.getpixels() returns no data available then data is not copied to display buffer**
- add: peak blobs added to GDI+**
- add: option to fade peak blobs when in hold mode**
- fix: cw pitch shift code changed in vfoa/b lost focus so that multiple DDSFreq's are not set, hopefully removing the artefact noticed by Chris W2PA**

### **(11/19/19) b5**

- change: waterfall draw delay removed, now entirely based off FPS**
- fix: linAuto now displays in colour in DX engine, min/max bug**
- add: duration of smeter signal history**

**(11/19/19) b5\_1**

**-fix: waterfall time at mouse pos now uses new frame interval to work out lapsed time**

**(11/19/19) b5\_2**

**-add: a PTT delay can be inserted before entering RX state (taken from PowerSdr. Requested by np2g. Default 0ms)**

**-change: can now play a recording. Bypass vox is used for the duration. There could be issues with this, please give findings. Changed for the wave file controls playback as well**

**(11/19/19) b5\_3**

**-add: option to ignore vac bypass when playing recordings. A work around that prevented gain from being applied when not using vac**

**-fix: dx and dcnp returned to previous state after quick playback ends. Previously these were turned off and left off**

**(11/19/19) b6**

**-fix: mic gain issue when no vac used, introduced with changes in b5\_3**

**(12/26/19) c1**

**-fix: disable QSK if receive and transmit antenna are not the same**

**(1/4/20) c2**

**-fix: TX profile was incorrectly being selected during saving/updating when modes use different profiles (thanks Ultimex for spotting this)**

**-add: spectral area gets surrounded in red if high swr**

**-change: statusbar clock updated once per second instead of 10 times per second**

**-add: QSO timer, left click start/stop, right click reset. When in Mox activation only mode left click is ignored. Flashing timer if elapsed, with optional sound played through default windows audio device**

**(1/4/20) c2\_1**

**-add: qso timer auto reset + flash continuation, couple of bits tidied up**

**(1/4/20) c3**

**-change: qso audio playback started from own thread**

**-fix: rx filter drag when in CTUN for panascope now works as expected (note can still drag the area with the scope, this needs fixing at some point)**

**-change: combined CW break-in control with QSK control. QSK control is now tri-state and allows user to choose between Manual Break-In, Semi Break-In, and QSK when using compatible hardware/firmware**

**-add: CAT Command 'ZZQK'. Toggles between Semi Break-In and QSK modes**

**-add: <Right-click> shortcuts to Setup Form was added to various controls on the console**

**-fix: disable PA is now working for 7000DLE and 8000DLE. Must be using Thetis v2.6.9 and firmware v2.0a**