Charlestown Amateur Radio Club

June 13, 2023 Meeting

Status of Ham Radio Office Proposal

- Met with Don Groves on Tuesday, June 6
- Don is generally supportive of our request
- Don has asked Jason Spivey and Kevin Crawford to meet with us to discuss the technical issues related to pulling coax and installing antenna – meeting scheduled for Monday, June 19 1PM
- His preference is to use in-house staff so there likely will not be any labor costs
- Will probably also have to meet with Mary Evans to gain access to the room

Questions for Jay and Kevin

1. Need estimate length of run of coax from isopole to HRO
2. Is the conduit of sufficient size to accommodate two lengths of coax 0.71” each with connectors?
3. Status of isopole – who owns it? Still in use? Can we utilize it?
4. What is the diameter and height of isopole?
5. What is the stability of isopole?
6. Can the cones be removed?
7. Is there a cable inside the mast? Can it be shortened and capped?

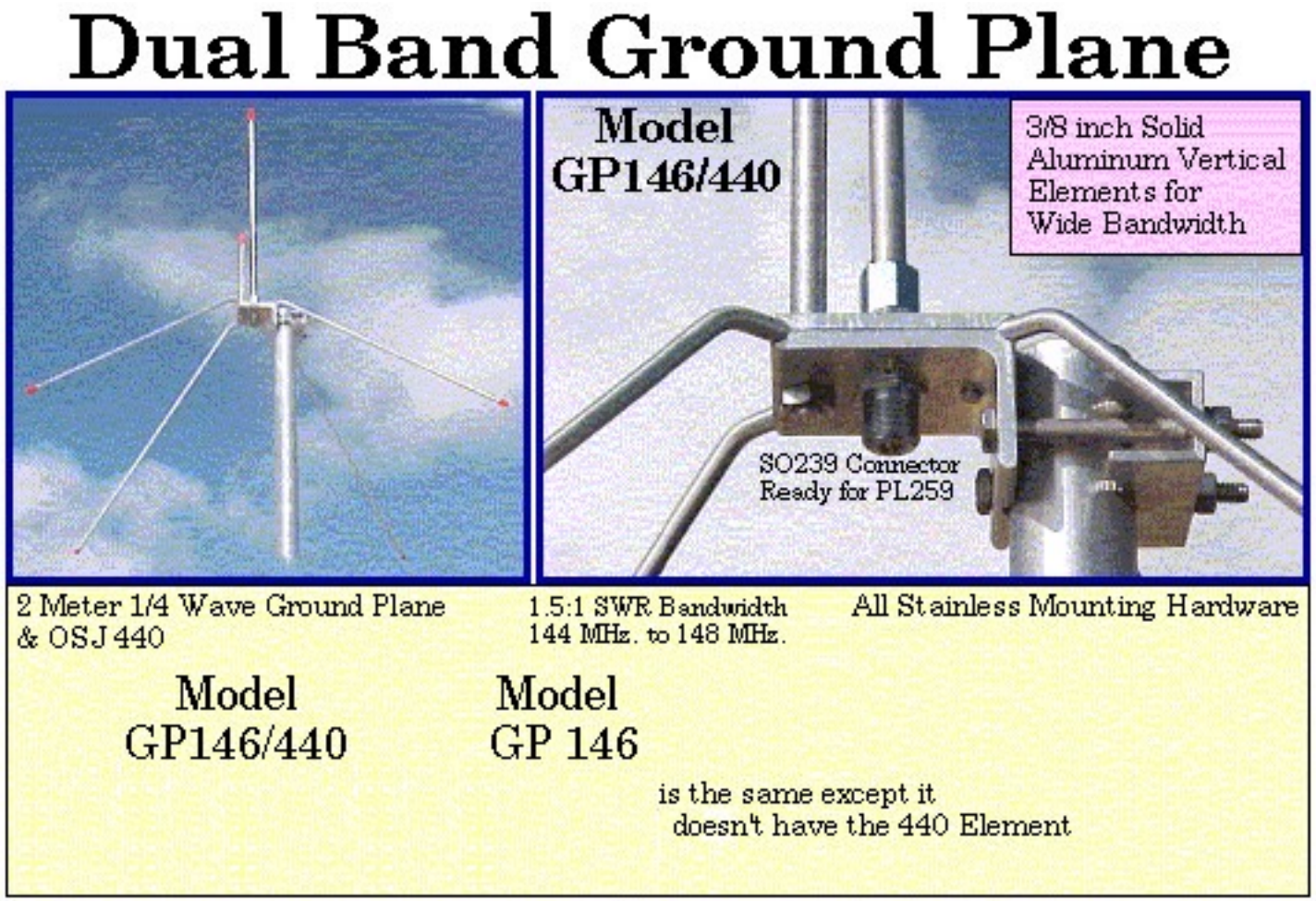
VHF Radio in Ham Radio Office

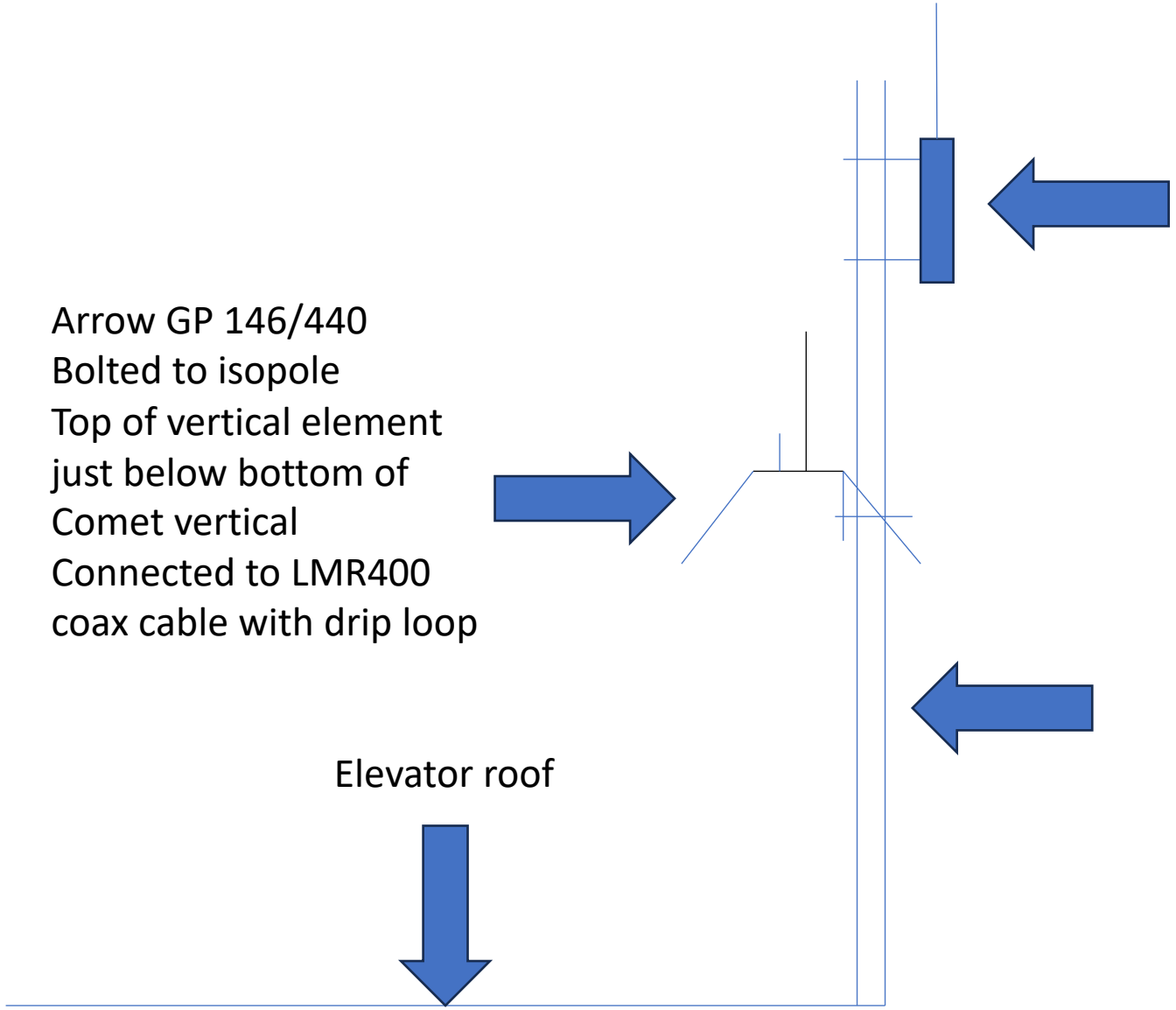
- Ed Wallace has a VHF/UHF radio that could be installed in the Ham Radio office
- Would require a second run of low loss coax
- Would require VHF/UHF antenna

Loss in LMR-400

Attenuation @ 100ft/Pwr/Efficiency
0.5dB @ 10MHz/4.83kW/90% E
0.8dB @ 30MHz/2.77kW/83% E
1.1dB @ 50MHz/2.14kW/78.5% E
1.8dB @ 150MHz/1.22kW/65.4% E
3.3dB @ 450MHz/0.69kW/47.3% E

Arrow Ground Plane 2M/440MHz





Comet CHA250HD 80-6M Vertical
Bolted to isopole
Connected to LMR400 coax cable with drip loop

Arrow GP 146/440
Bolted to isopole
Top of vertical element
just below bottom of
Comet vertical
Connected to LMR400
coax cable with drip loop

Isopole mast

Elevator roof

How I Operate HF from my Charlestown Apartment (and keep my wife happy)

Charlestown Amateur Radio Club

My Station

- Yaesu FTDX-10 HF-6M 100 watt transceiver
- Yaesu FP-1030A 25 amp linear power supply
- Cirro Mazzoni Stealth magnetic loop antenna


Automatic Tuner Unit
LOOP ANTENNA by I3VHF
YAESU
FTDX 10


YAESU
POWER SUPPLY
FP-1030A
0 5 10 15 20
V
0 10 20 30 40
A
CLASS 2.5
OVERLOAD
CONTINUOUS CURRENT 25A
6A
25A
10A
POWER
ON
OFF

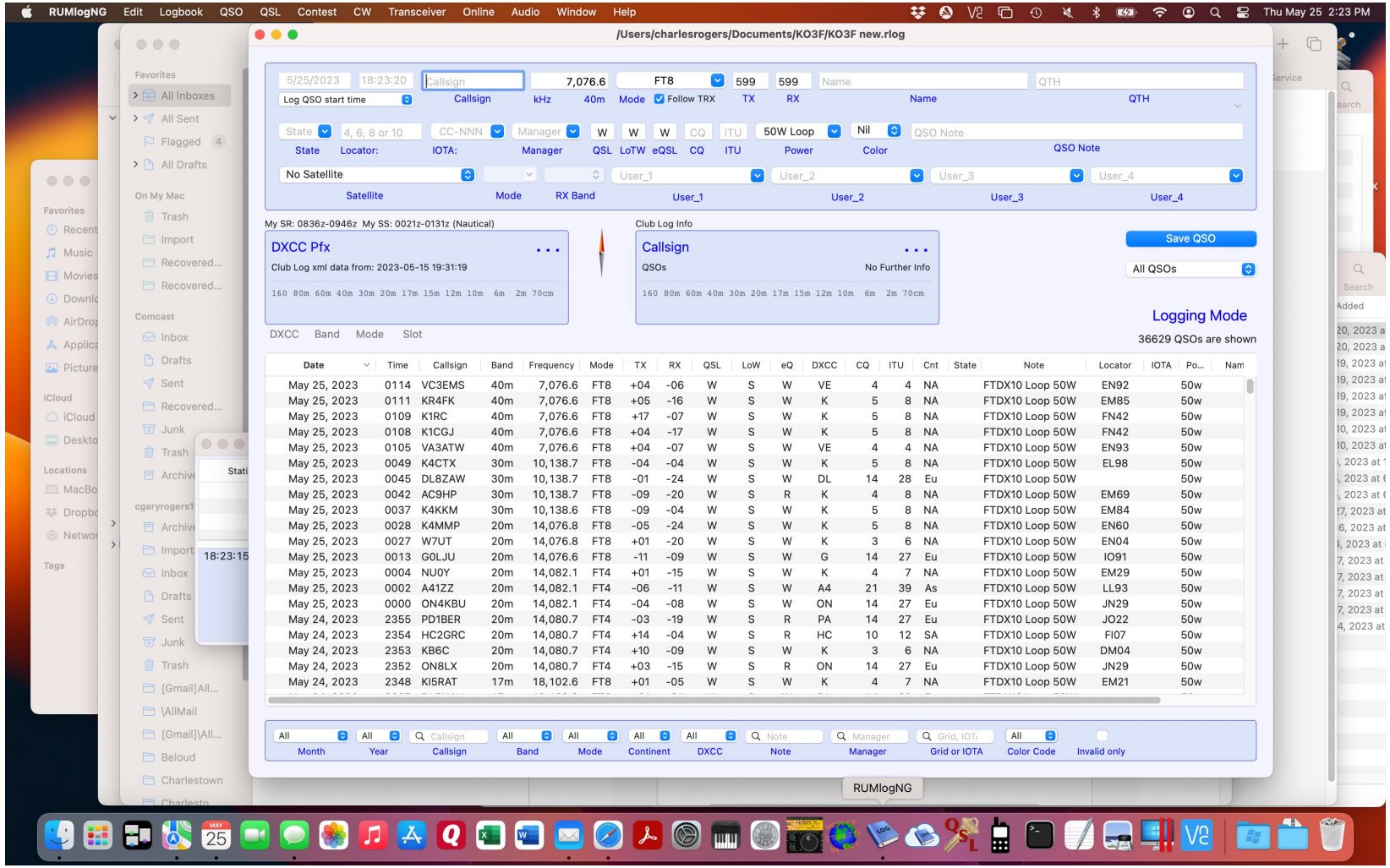

Automatic Tuner Unit
LOOP ANTENNA by I3VHF
POWER
MOTOR
TUNING
YAESU
HF/50MHz TRANSCEIVER FTDX10
ON/OFF
TUNE
VOX MOX
PHONES
MIC
FUNC
QMB
BAND
STEP /MCH
NB
DNR
AF RF/SQL
FINE
M
V/M
A/B
CLAR RX
CLAR TX
SHIFT WIDTH
SPLIT
MODE
TXW
NOTCH
CONT/APF
NOTCH CONT /APF

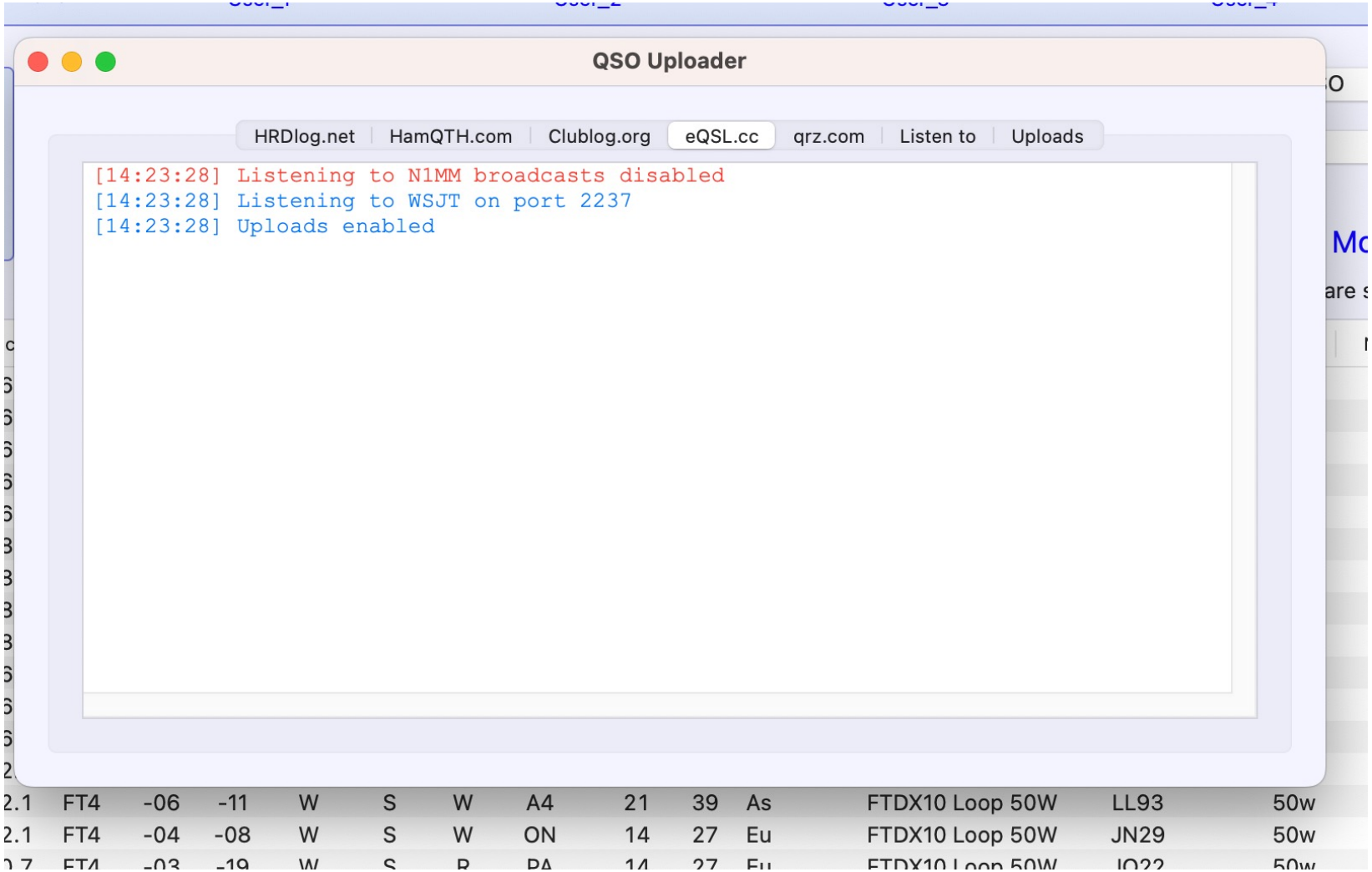
Equipment Start up

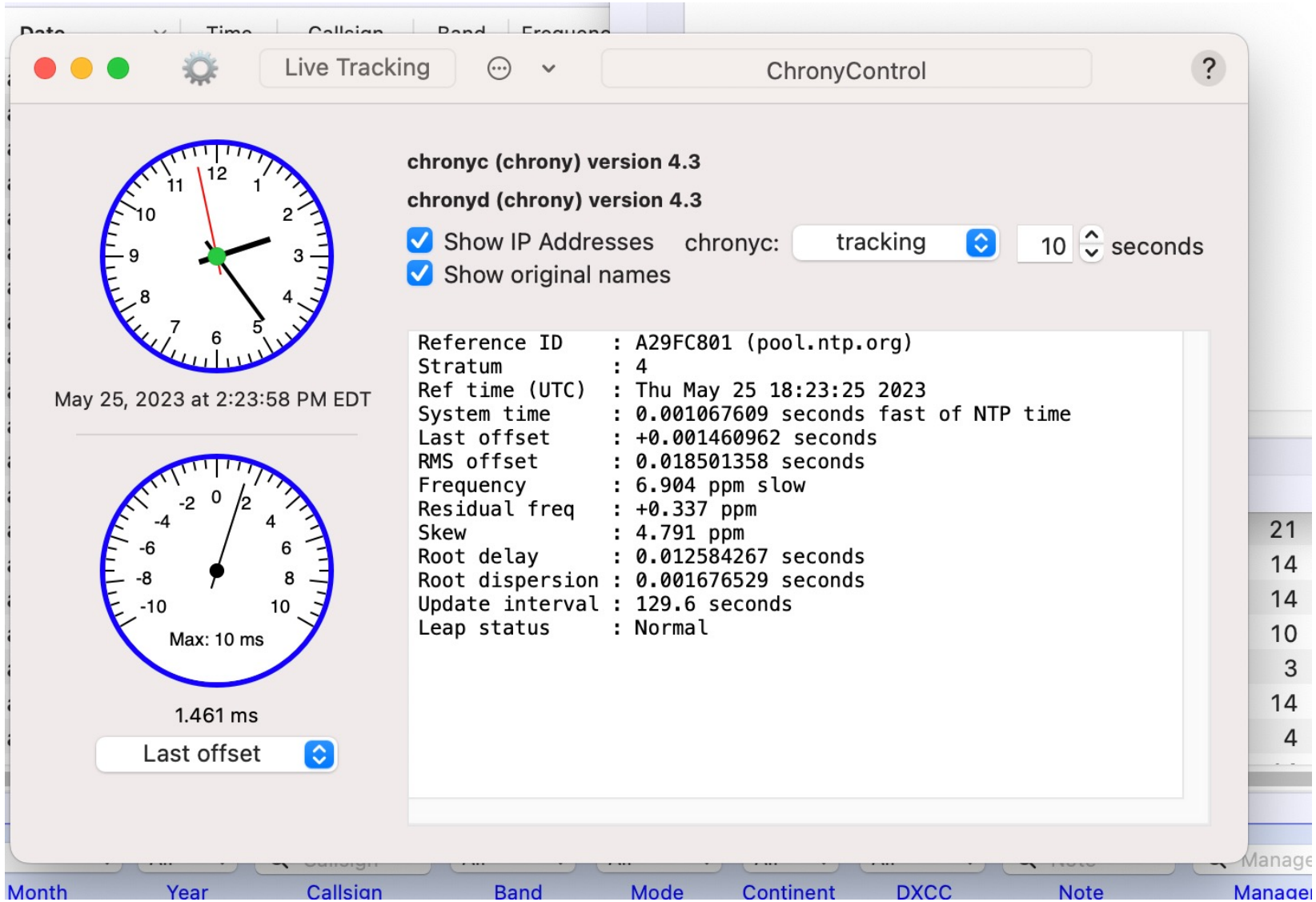

YAESU
ON/OFF
TUNE
VOX
PHONES
MIC
FUNC
M
V/M
A/B
CLAR RX
CLAR TX
SPLIT
QMB
BAND
MODE
NB
DNR
STEP
/MCH
C.S
AF-⊕-RF/SQL
FINE

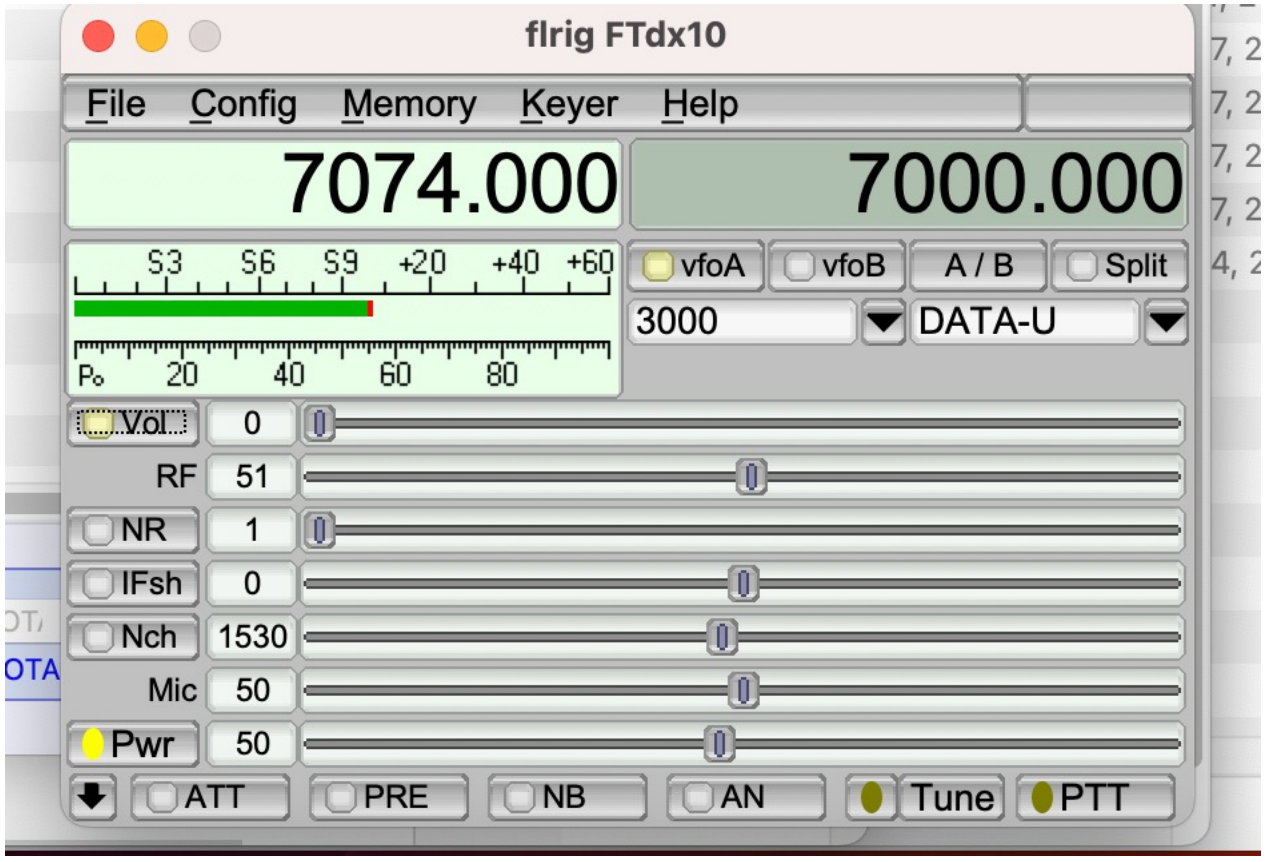
MacBook Pro software used

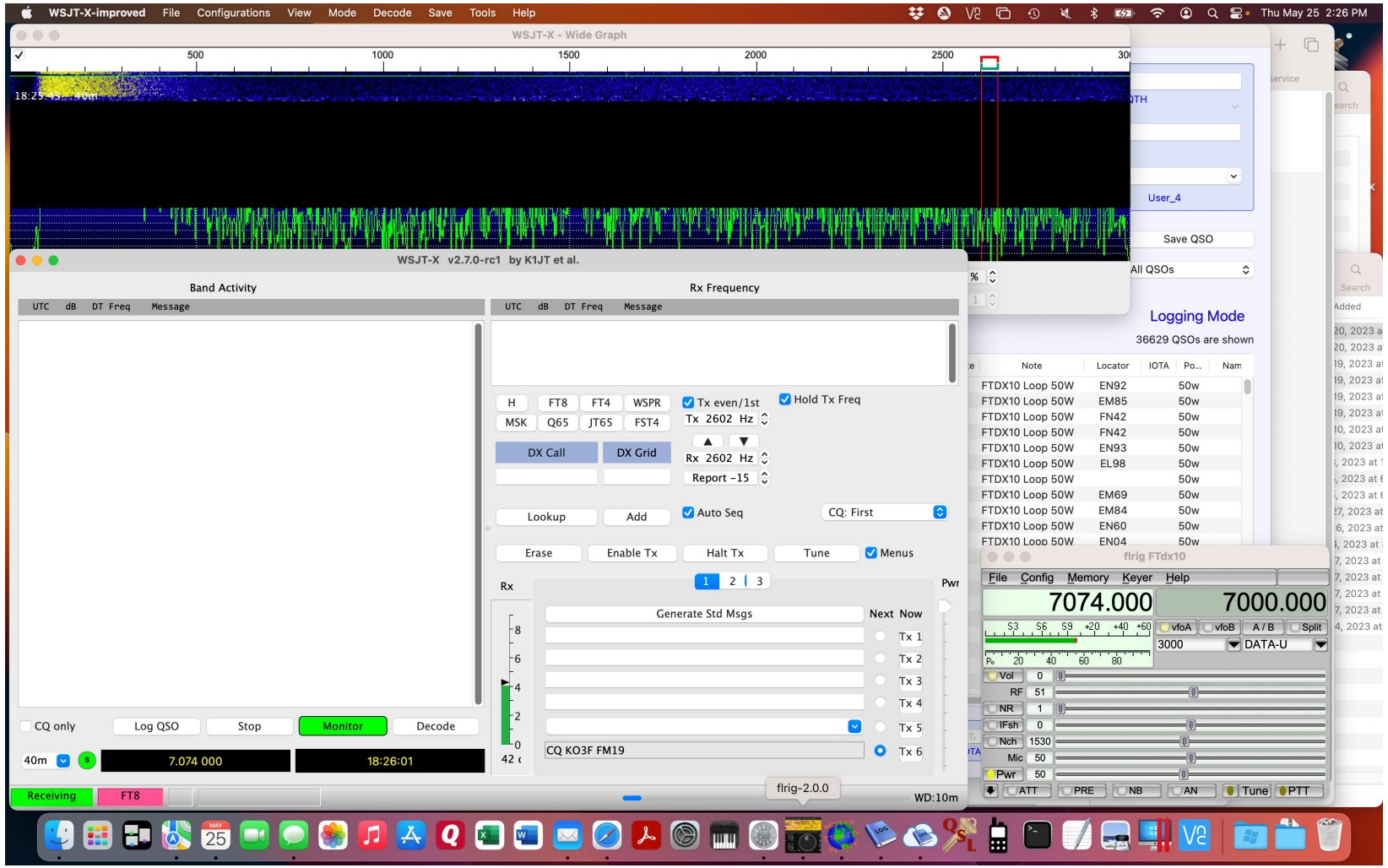
- RumlogNG – logging – receives QSO data via user datagram protocol (UDP) packets from WSJT-X
- QSO Upload Facility – immediate upload of QSLs to EQSL, QRZ and Club log – also receives user datagram protocol (UDP) packets from WSJT-X
- Chrony Control – computer time sync
- FLRig – computer aided transceiver (CAT) control and provides visibility on radio controls (which is across the living room from where I sit)
- WSJT-X – FT8/FT4 program – sends and receives FT8/FT4 to transceiver


RUMlogNG Edit Logbook QSO QSL Contest CW Transceiver Online Audio Window Help
Thu May 25 2:23 PM
/Users/charlesrogers/Documents/KO3F/KO3F new.rlog
5/25/2023 18:23:20 Callsign 7,076.6 FT8 599 599 Name QTH
Log QSO start time Callsign kHz 40m Mode Follow TRX TX RX Name QTH
State 4, 6, 8 or 10 CC-NNN Manager W W W CQ ITU 50W Loop Nil QSO Note
State Locator: IOTA: Manager QSL LoTW eQSL CQ ITU Power Color QSO Note
No Satellite User_1 User_2 User_3 User_4
Satellite Mode RX Band User_1 User_2 User_3 User_4
My SR: 0836z-0946z My SS: 0021z-0131z (Nautical)
DXCC Pfx
Club Log xml data from: 2023-05-15 19:31:19
160 80m 60m 40m 30m 20m 17m 15m 12m 10m 6m 2m 70cm
DXCC Band Mode Slot
Club Log Info
Callsign
QSOs No Further Info
160 80m 60m 40m 30m 20m 17m 15m 12m 10m 6m 2m 70cm
Save QSO
All QSOs
Logging Mode
36629 QSOs are shown
Date Time Callsign Band Frequency Mode TX RX QSL LoW eQ DXCC CQ ITU Cnt State Note Locator IOTA Po... Nam
May 25, 2023 0114 VC3EMS 40m 7,076.6 FT8 +04 -06 W S W VE 4 4 NA FTDX10 Loop 50W EN92 50w
May 25, 2023 0111 KR4FK 40m 7,076.6 FT8 +05 -16 W S W K 5 8 NA FTDX10 Loop 50W EM85 50w
May 25, 2023 0109 K1RC 40m 7,076.6 FT8 +17 -07 W S W K 5 8 NA FTDX10 Loop 50W FN42 50w
May 25, 2023 0108 K1CGJ 40m 7,076.6 FT8 +04 -17 W S W K 5 8 NA FTDX10 Loop 50W FN42 50w
May 25, 2023 0105 VA3ATW 40m 7,076.6 FT8 +04 -07 W S W VE 4 4 NA FTDX10 Loop 50W EN93 50w
May 25, 2023 0049 K4CTX 30m 10,138.7 FT8 -04 -04 W S W K 5 8 NA FTDX10 Loop 50W EL98 50w
May 25, 2023 0045 DL8ZAW 30m 10,138.7 FT8 -01 -24 W S W DL 14 28 Eu FTDX10 Loop 50W 50w
May 25, 2023 0042 AC9HP 30m 10,138.7 FT8 -09 -20 W S R K 4 8 NA FTDX10 Loop 50W EM69 50w
May 25, 2023 0037 K4KKM 30m 10,138.6 FT8 -09 -04 W S W K 5 8 NA FTDX10 Loop 50W EM84 50w
May 25, 2023 0028 K4MMP 20m 14,076.8 FT8 -05 -24 W S W K 5 8 NA FTDX10 Loop 50W EN60 50w
May 25, 2023 0027 W7UT 20m 14,076.8 FT8 +01 -20 W S W K 3 6 NA FTDX10 Loop 50W EN04 50w
May 25, 2023 0013 G0LJU 20m 14,076.6 FT8 -11 -09 W S W G 14 27 Eu FTDX10 Loop 50W IO91 50w
May 25, 2023 0004 NU0Y 20m 14,082.1 FT4 +01 -15 W S W K 4 7 NA FTDX10 Loop 50W EM29 50w
May 25, 2023 0002 A41ZZ 20m 14,082.1 FT4 -06 -11 W S W A4 21 39 As FTDX10 Loop 50W LL93 50w
May 25, 2023 0000 ON4KBU 20m 14,082.1 FT4 -04 -08 W S W ON 14 27 Eu FTDX10 Loop 50W JN29 50w
May 24, 2023 2355 PD1BER 20m 14,080.7 FT4 -03 -19 W S R PA 14 27 Eu FTDX10 Loop 50W JO22 50w
May 24, 2023 2354 HC2GRC 20m 14,080.7 FT4 +14 -04 W S R HC 10 12 SA FTDX10 Loop 50W FI07 50w
May 24, 2023 2353 KB6C 20m 14,080.7 FT4 +10 -09 W S W K 3 6 NA FTDX10 Loop 50W DM04 50w
May 24, 2023 2352 ON8LX 20m 14,080.7 FT4 +03 -15 W S R ON 14 27 Eu FTDX10 Loop 50W JN29 50w
May 24, 2023 2348 KI5RAT 17m 18,102.6 FT8 +01 -05 W S W K 4 7 NA FTDX10 Loop 50W EM21 50w
All Month All Year Callsign All Band All Mode All Continent All DXCC Note Manager Grid, IOTA All Color Code Invalid only
RUMlogNG


QSO Uploader
HRDlog.net
HamQTH.com
Clublog.org
eQSL.cc
qrz.com
Listen to
Uploads
[14:23:28] Listening to N1MM broadcasts disabled
[14:23:28] Listening to WSJT on port 2237
[14:23:28] Uploads enabled
2.1 FT4 -06 -11 W S W A4 21 39 As FTDX10 Loop 50W LL93 50w
2.1 FT4 -04 -08 W S W ON 14 27 Eu FTDX10 Loop 50W JN29 50w


Live Tracking
ChronyControl
May 25, 2023 at 2:23:58 PM EDT
Max: 10 ms
1.461 ms
Last offset
chronyc (chrony) version 4.3
chronyd (chrony) version 4.3
Show IP Addresses
chronyc:
tracking
10
seconds
Show original names
Reference ID : A29FC801 (pool.ntp.org)
Stratum : 4
Ref time (UTC) : Thu May 25 18:23:25 2023
System time : 0.001067609 seconds fast of NTP time
Last offset : +0.001460962 seconds
RMS offset : 0.018501358 seconds
Frequency : 6.904 ppm slow
Residual freq : +0.337 ppm
Skew : 4.791 ppm
Root delay : 0.012584267 seconds
Root dispersion : 0.001676529 seconds
Update interval : 129.6 seconds
Leap status : Normal
Month
Year
Callsign
Band
Mode
Continent
DXCC
Note

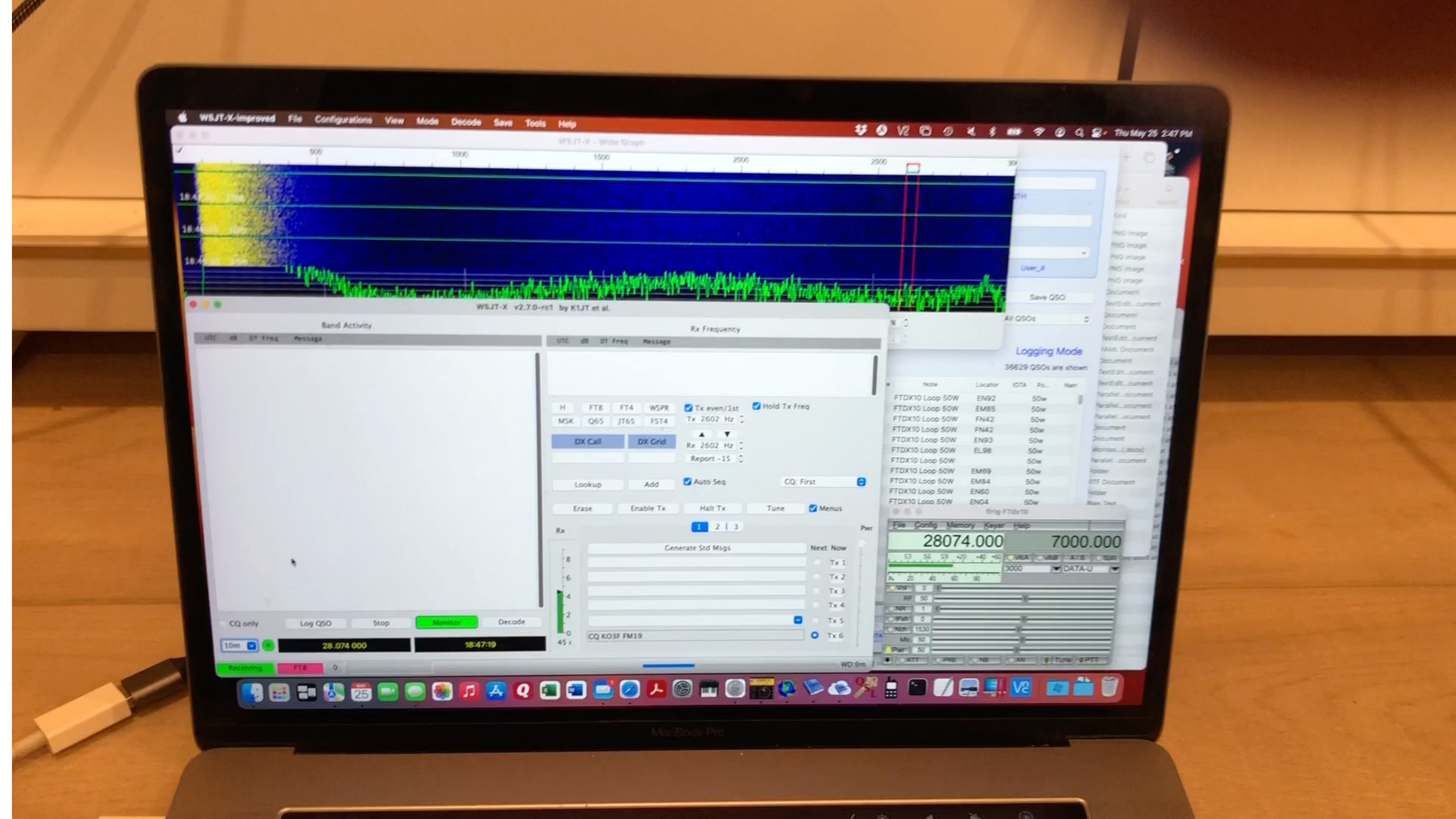

flrig FTdx10
File
Config
Memory
Keyer
Help
7074.000
7000.000
S3
S6
S9
+20
+40
+60
Po
20
40
60
80
vfoA
vfoB
A / B
Split
3000
DATA-U
Vol
0
RF
51
NR
1
IFsh
0
Nch
1530
Mic
50
Pwr
50
ATT
PRE
NB
AN
Tune
PTT


WSJT-X-improved File Configurations View Mode Decode Save Tools Help
Thu May 25 2:26 PM
WSJT-X - Wide Graph
WSJT-X v2.7.0-rc1 by K1JT et al.
Band Activity
Rx Frequency
UTC dB DT Freq Message
H FT8 FT4 WSPR
MSK Q65 JT65 FST4
Tx even/1st
Tx 2602 Hz
Hold Tx Freq
DX Call DX Grid
Rx 2602 Hz
Report -15
Lookup Add
Auto Seq
CQ: First
Erase Enable Tx Halt Tx Tune Menus
Generate Std Msgs Next Now
Tx 1
Tx 2
Tx 3
Tx 4
Tx 5
Tx 6
CQ KO3F FM19
CQ only Log QSO Stop Monitor Decode
40m
7.074 000
18:26:01
Receiving FT8
flrig-2.0.0
WD:10m
Logging Mode
36629 QSOs are shown
Save QSO
All QSOs
User_4
flrig FTdx10
File Config Memory Keyer Help
7074.000
7000.000
vfoA vfoB A / B Split
3000
DATA-U
Vol RF NR IFsh Nch Mic Pwr
ATT PRE NB AN Tune PTT

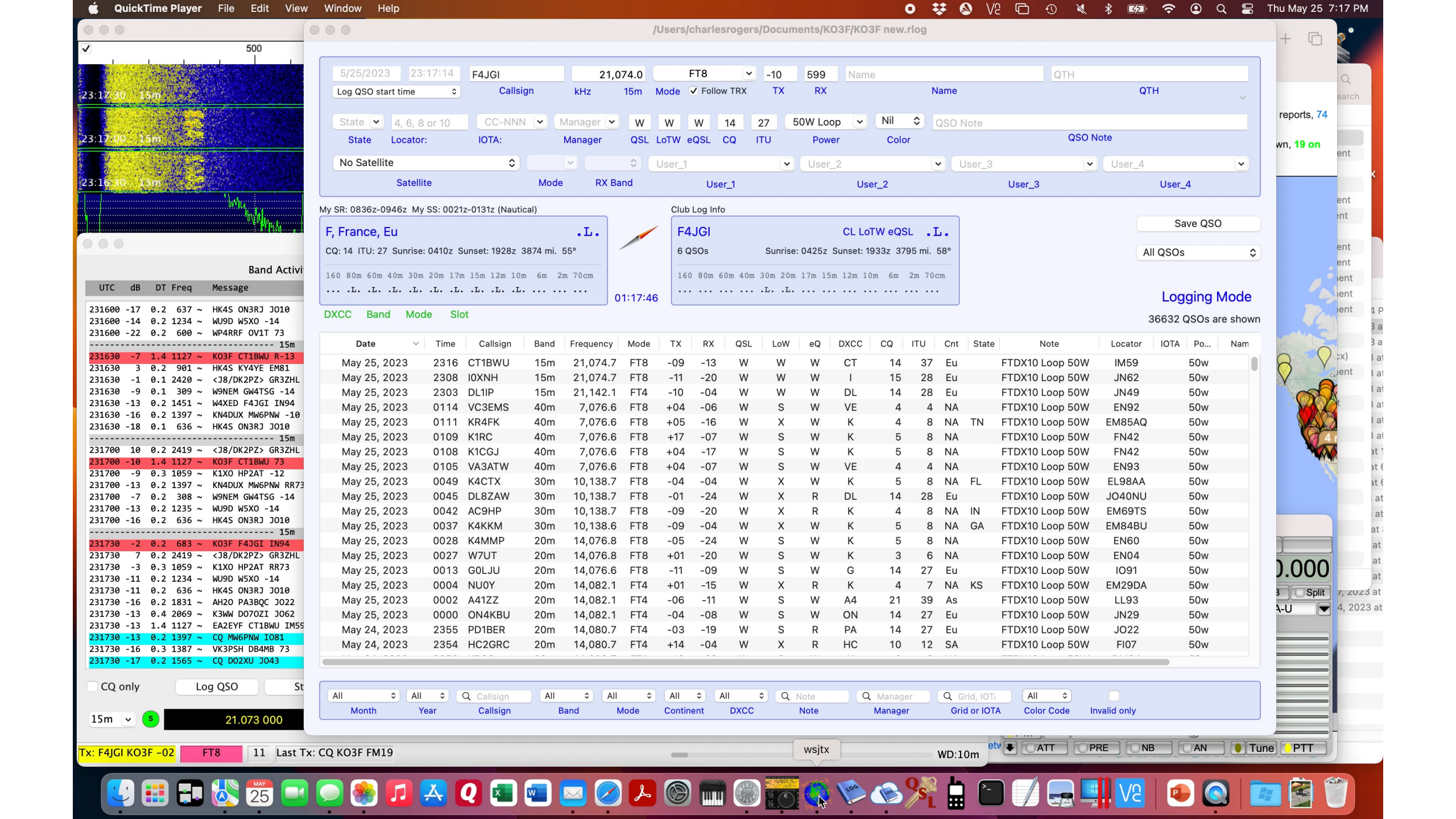
CAT control

- Change in frequency in WSJT-X:
  - Changes frequency in FLRig
  - Changes frequency in radio
  - Initiates auto tuning of magnetic loop antenna

- FLRig:
  - Can increase/decrease RF power
  - Can increase/decrease RF gain
  - Can view power out and SWR


WSJT-X-improved File Configurations View Mode Decode Save Tools Help
Thu May 25 2:47 PM
WSJT-X v2.7.0-rc1 by K1JT et al.
Band Activity
Rx Frequency
UTC dB DT Freq Message
H FT8 FT4 WSPR
MSK Q65 JT65 FST4
Tx even/1st
Hold Tx Freq
Tx 2602 Hz
Rx 2602 Hz
Report -15
DX Call
DX Grid
Lookup
Add
Auto Seq
CQ: First
Erase
Enable Tx
Halt Tx
Tune
Menus
Generate Std Msgs
Next Now
Tx 1
Tx 2
Tx 3
Tx 4
Tx 5
Tx 6
CQ KO3F FM19
CQ only
Log QSO
Stop
Monitor
Decode
10m
28.074 000
18:47:19
Receiving
FT8
Logging Mode
36629 QSOs are shown
Save QSO
All QSOs
28074.000
7000.000
DATA-U
MacBook Pro

Putting it all together


QuickTime Player File Edit View Window Help
Thu May 25 7:17 PM
/Users/charlesrogers/Documents/KO3F/KO3F new.rlog
5/25/2023 23:17:14 F4JGI 21,074.0 FT8 -10 599 Name QTH
Log QSO start time Callsign kHz 15m Mode Follow TRX TX RX Name QTH
State 4, 6, 8 or 10 CC-NNN Manager W W W 14 27 50W Loop Nil QSO Note
State Locator: IOTA: Manager QSL LoTW eQSL CQ ITU Power Color QSO Note
No Satellite User_1 User_2 User_3 User_4
Satellite Mode RX Band User_1 User_2 User_3 User_4
My SR: 0836z-0946z My SS: 0021z-0131z (Nautical)
F, France, Eu .L.
CQ: 14 ITU: 27 Sunrise: 0410z Sunset: 1928z 3874 mi. 55°
160 80m 60m 40m 30m 20m 17m 15m 12m 10m 6m 2m 70cm
... .L. .L. .L. .L. .L. .L. .L. .L. .L. ... ...
01:17:46
Club Log Info
F4JGI CL LoTW eQSL .L.
6 QSOs Sunrise: 0425z Sunset: 1933z 3795 mi. 58°
160 80m 60m 40m 30m 20m 17m 15m 12m 10m 6m 2m 70cm
... ... .L. .L. ... ...
Save QSO
All QSOs
Logging Mode
36632 QSOs are shown
DXCC Band Mode Slot
Date Time Callsign Band Frequency Mode TX RX QSL LoW eQ DXCC CQ ITU Cnt State Note Locator IOTA Po... Nam
May 25, 2023 2316 CT1BWU 15m 21,074.7 FT8 -09 -13 W W W CT 14 37 Eu FTDX10 Loop 50W IM59 50w
May 25, 2023 2308 I0XNH 15m 21,074.7 FT8 -11 -20 W W W I 15 28 Eu FTDX10 Loop 50W JN62 50w
May 25, 2023 2303 DL1IP 15m 21,142.1 FT4 -10 -04 W W W DL 14 28 Eu FTDX10 Loop 50W JN49 50w
May 25, 2023 0114 VC3EMS 40m 7,076.6 FT8 +04 -06 W S W VE 4 4 NA FTDX10 Loop 50W EN92 50w
May 25, 2023 0111 KR4FK 40m 7,076.6 FT8 +05 -16 W X W K 4 8 NA TN FTDX10 Loop 50W EM85AQ 50w
May 25, 2023 0109 K1RC 40m 7,076.6 FT8 +17 -07 W S W K 5 8 NA FTDX10 Loop 50W FN42 50w
May 25, 2023 0108 K1CGJ 40m 7,076.6 FT8 +04 -17 W S W K 5 8 NA FTDX10 Loop 50W FN42 50w
May 25, 2023 0105 VA3ATW 40m 7,076.6 FT8 +04 -07 W S W VE 4 4 NA FTDX10 Loop 50W EN93 50w
May 25, 2023 0049 K4CTX 30m 10,138.7 FT8 -04 -04 W X W K 5 8 NA FL FTDX10 Loop 50W EL98AA 50w
May 25, 2023 0045 DL8ZAW 30m 10,138.7 FT8 -01 -24 W X R DL 14 28 Eu FTDX10 Loop 50W JO40NU 50w
May 25, 2023 0042 AC9HP 30m 10,138.7 FT8 -09 -20 W X R K 4 8 NA IN FTDX10 Loop 50W EM69TS 50w
May 25, 2023 0037 K4KKM 30m 10,138.6 FT8 -09 -04 W X W K 5 8 NA GA FTDX10 Loop 50W EM84BU 50w
May 25, 2023 0028 K4MMP 20m 14,076.8 FT8 -05 -24 W S W K 5 8 NA FTDX10 Loop 50W EN60 50w
May 25, 2023 0027 W7UT 20m 14,076.8 FT8 +01 -20 W S W K 3 6 NA FTDX10 Loop 50W EN04 50w
May 25, 2023 0013 G0LJU 20m 14,076.6 FT8 -11 -09 W S W G 14 27 Eu FTDX10 Loop 50W IO91 50w
May 25, 2023 0004 NU0Y 20m 14,082.1 FT4 +01 -15 W X R K 4 7 NA KS FTDX10 Loop 50W EM29DA 50w
May 25, 2023 0002 A41ZZ 20m 14,082.1 FT4 -06 -11 W S W A4 21 39 As FTDX10 Loop 50W LL93 50w
May 25, 2023 0000 ON4KBU 20m 14,082.1 FT4 -04 -08 W S W ON 14 27 Eu FTDX10 Loop 50W JN29 50w
May 24, 2023 2355 PD1BER 20m 14,080.7 FT4 -03 -19 W S R PA 14 27 Eu FTDX10 Loop 50W JO22 50w
May 24, 2023 2354 HC2GRC 20m 14,080.7 FT4 +14 -04 W X R HC 10 12 SA FTDX10 Loop 50W FI07 50w
All Month All Year Callsign All Band All Mode All Continent All DXCC Note Manager Grid, IOTA All Color Code Invalid only
Band Activi
UTC dB DT Freq Message
231600 -17 0.2 637 ~ HK4S ON3RJ JO10
231600 -14 0.2 1234 ~ WU9D W5XO -14
231600 -22 0.2 600 ~ WP4RRF OV1T 73
231630 -7 1.4 1127 ~ KO3F CT1BWU R-13
231630 3 0.2 901 ~ HK4S KY4YE EM81
231630 -1 0.1 2420 ~ <J8/DK2PZ> GR3ZHL
231630 -9 0.1 309 ~ W9NEM GW4TSG -14
231630 -13 0.2 1451 ~ W4XED F4JGI IN94
231630 -16 0.2 1397 ~ KN4DUX MW6PNW -10
231630 -18 0.1 636 ~ HK4S ON3RJ JO10
231700 10 0.2 2419 ~ <J8/DK2PZ> GR3ZHL
231700 -10 1.4 1127 ~ KO3F CT1BWU 73
231700 -9 0.3 1059 ~ K1XO HP2AT -12
231700 -13 0.2 1397 ~ KN4DUX MW6PNW RR73
231700 -7 0.2 308 ~ W9NEM GW4TSG -14
231700 -13 0.2 1235 ~ WU9D W5XO -14
231700 -16 0.2 636 ~ HK4S ON3RJ JO10
231730 -2 0.2 683 ~ KO3F F4JGI IN94
231730 7 0.2 2419 ~ <J8/DK2PZ> GR3ZHL
231730 -3 0.3 1059 ~ K1XO HP2AT RR73
231730 -11 0.2 1234 ~ WU9D W5XO -14
231730 -11 0.2 636 ~ HK4S ON3RJ JO10
231730 -16 0.2 1831 ~ AH2O PA3BQC JO22
231730 -13 0.4 2069 ~ K3WW DO7OZI JO62
231730 -13 1.4 1127 ~ EA2EYF CT1BWU IM59
231730 -13 0.2 1397 ~ CQ MW6PNW IO81
231730 -16 0.3 1387 ~ VK3PSH DB4MB 73
231730 -17 0.2 1565 ~ CQ DO2XU JO43
CQ only Log QSO
15m 21.073 000
Tx: F4JGI KO3F -02 FT8 11 Last Tx: CQ KO3F FM19
wsjtx
WD:10m
ATT PRE NB AN Tune PTT
Split


Automatic Tuner Unit
YAESU