



CW Academy

CWA Advanced Class Notes

Joe Attili – AA2IL

September 19, 2022



Topics

CW Academy

- Contesting
 - Terminology
 - Mini-tests
 - Etiquette
 - Logging
- Chasing DX
- TBD



Session 0

CW Academy

- Meet and Greet
- Introduce selves
- Test Zoom and Sidelone
- Do first three h/w assignments before 1st class



Week 1 - Session 1

CW Academy

- Go over h/w
- Get on the air!
- Word game
 - Animals
 - Colors



CW Academy

Session 2

- Go over h/w & on the air activities
- Go over settings for MorseRunner and RufzXP
- Round Robin Short sentences
 - Something you might say in a QSO



Week 2 - Session 3

CW Academy

- Quick question on h/w & on the air activities
- Contesting Intro
- Simulated SST
 - Each gets to run and others call



Why Radio Sport?

CW Academy

- Major activity in our hobby
- Fun Competition
 - Some say its the most fun you can have with your cloths on
- Become a better operator
 - Difficult conditions
 - Emergency Comms
- Quickly rack up entities for “paper chasing”
- Dormant bands suddenly light up
- Test effectiveness of your station
- ...



CW Academy

Some Terminology

- **Runner**
 - Station Calling CQ (soliciting contacts)
 - Usually achieve a higher QSO rate, especially if you are a “big gun”
 - Need to be able to recognize calls and exchanges without too many repeats
- **Search and Pounce (S&P)**
 - Tune across band answering runners
 - Often lower rate because you are competing with other S&Pers
 - Much easier – can listen to runner until you get call and info
 - Be careful with serial numbers, not always consecutive
 - Often a better strategy for “little pistols” in larger contests
- Some mix of these is needed to work everybody



CW Academy

Some More Terminology

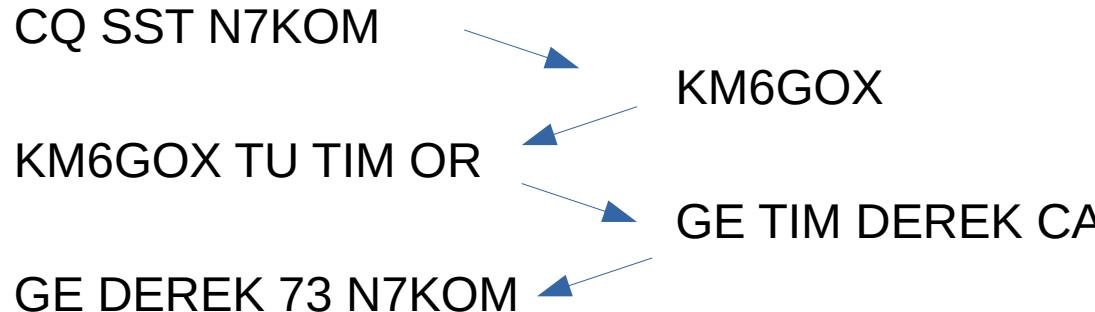
- **SO1R/SO1V** – Single Operator, One Radio/One VFO
 - Most of us mere mortals
- **SO2R** – Single Operator, Two (or more) Radios
 - Generally running on one radio and searching for multipliers on the other
- **2BSIQ** – Two-band Simultaneous Interleaved QSOs
 - Running on two bands, alternating CQ calls
- **SO2V** – Single Operator, Two VFO's
 - One transmitter and two receivers (one in each ear)
- **Multi-Operator**
 - Larger contest stations with two or more ops



SST Weekly Practice Contest

CW Academy

- “Slow” Speed Test
- Friday 2000z and Monday 0000z
- Very Relaxed Pace - Speed limit is 20 wpm
- Exchange: NAME and STATE



- Great place to get used to contesting and to try running



Session 4

CW Academy

- Go over h/w and on air activities
- Loose ends
 - WebSDR.org
 - EU Contests: MWC, NTC (Dutch) QSO Parties
 - <https://memorial-ok1wc.cz>
 - <https://pi4ntc.nl/ntcqps>
- Upcoming contests
- Round-robin word game
 - Words related to a car
 - Words related to a hardware store



UPCOMING CONTESTS

CW Academy

- **CQ WW RTTY**

- Very popular and good way to get ready for CQ WW CW in November
- This coming weekend starting at 0000z Saturday for 48-hours
- Everybody works everybody
- Condx have been good this week

- **California QSO Party**

- More competitive than most state QPs
- Oct 1 1600z through Oct 2 2200z
- Exchange:
 - CA stations send SERIAL No. and COUNTY
 - Non-CA send SERIAL No. and STATE
- CW QSOs count 1.5x Phone QSOs (no digi contacts)



Week 3 - Session 5

CW Academy

- Go over h/w and on air activities
- Loose ends
 - WebSDR.org
 - How to change files in MorseRunner and RufzXP?
- Upcoming contests
 - CQP this coming weekend
- Practice Contest
 - MST and CWT



MST Weekly Practice Contest

CW Academy

- Medium Speed Test
- Monday 1300z and 1900z, Tuesday 0300z
- Relaxed Pace - Speed limit is 25 wpm
- Exchange: NAME and SERIAL No.

CQ MST NJ7V

SV2HUD

SV2HUD TU RED 28

TU VAS 37

TU VAS 73 NJ7V



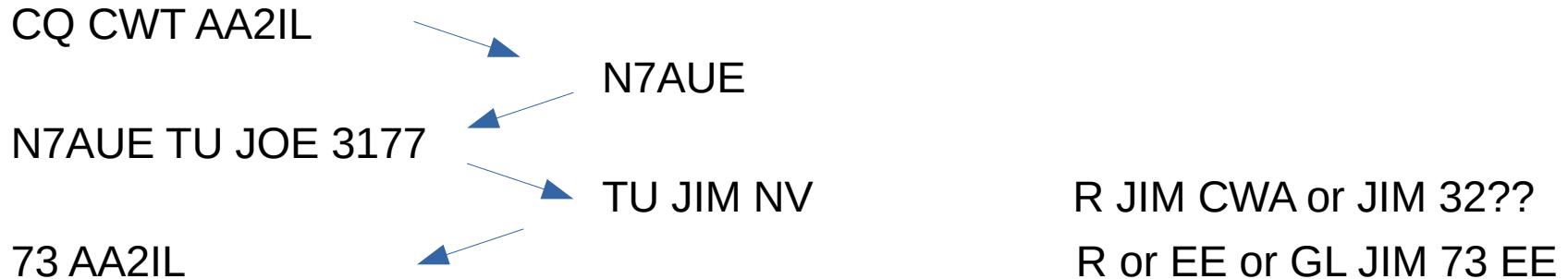
- Great place to build up confidence and skill



CW Academy

CWT Weekly Practice Contest

- Wednesday 1300z and 1900z, Thursday 0300z and 0700z
- Very popular and very fast – average speed ~39 wpm
- Exchange: NAME and MEMBER No. or STATE or “CWA”



- If you are aspiring to become a member of CWops, this is the place to get your call recognized and build up sponsorship



CW Academy

Some DOs and DON'Ts

- Do
 - Start off S&Ping until you build up skill and confidence
 - If you are running, ask for a repeat if you have any doubt about what you copied
 - If you are S&Ping and miss part of hist exchange, you can either ask for a repeat or just listen to his next QSO
 - When you ask for a repeat, ask specifically for the element that you missed
 - If the runner misses your call, send it again then give your exchange
 - Be courteous but concise
- Don't send unnecessary information
 - Runner's Call – he knows what it is (and its your problem if you get it wrong)
 - DE before your call – wastes time and can throw off timing
 - Signal report if not part of the contest exchange
 - Anything other than 5NN (or ENN) if a signal report is required
 - Long greetings/chatter – exception is SST and MST where friendly greetings are encouraged



CW Academy

More DOs and DON'Ts

- Do:
 - Upload your summary to 3830scores.com
 - Track your progress
 - Get more visibility for your call
 - Upload your log to LoTW and Clublog
 - The final courtesy of a QSO is a confirmation (QSL)
 - Call your CWA advisor and classmates for extra brownie points!!!
 - Take a look at NCJ for hints from top-tier contestants
- Don't:
 - Send “B4” to a Dupe
 - Just work him again - It's almost always faster
 - He may not have you correctly in his log
 - He may be using an old-school paper log



Cut Numbers

- In the CWTs and many of the larger contests, you will here ops use abbreviations for numbers in the exchange
 - 599 → 5NN or even ENN
 - 11 → AA
 - 100 → ATT
 - 2198 → UAND
 - 1090 → ATNT
- Other than 5NN, I don't like this practice and advise against it
 - However, others use it so you need to understand it!
- One other place where a cut number is useful is if you enter a contest late, you can send a leading "T" to alert the other station to this:
 - 4 → T4
- I advise against sending leading zeros for numbers above 9



CW Academy

Computers and Logging

- Computers are a fixture in most ham stations now and are invaluable for contesting
- N1MM logger is the most popular logging program used for contesting
 - Many useful features
 - Windoz Only
 - No comparable option for Linux
- At this point, you should be using a contest logger
 - Good idea to let computer do sending for you
 - Also use the “band map” to help with S&P (verify call sign!)
- Do not use the “call history files” and “auto-fill” until you can consistently copy exchanges
 - When you begin to use these features, you still need to verify that the information is correct



CW Academy

My Screen During a Contest

Demod Audio - AA2IL

pyKeyer by AA2IL - FTdx3000

File Call Name QTH

w6sx HANK CA

[LUUJ] AA2IL TU CLAUDE JOE CA [LOG]
AA2IL TU JIM JOE CA [LOG]

CQ	Reply	TU/QRZ?	Call?	AA2IL	S&P Reply	?	Log QSO	Name 2x	State 2x	NAME?	QTH?
		TU/QRZ?	Call?	His Call	S&P Reply	AGN?	NIL				QRL?
Macros:	SST	Speed:	20				FTdx3000				QRZ?
Satellites:	None	+2 WPM	-2 WPM								

QSOs: 24 /hr : 22 /hr : 10

DK2MU 18,084.0 14,036.5 -- VE3FP 14,033.5 -- -- -- -- 14,032.5 -- -- -- 14,039.0

RX0: 14,035.4 KHz

Force a Hop

BCB SWL Ham 1 Ham 2 Ham VHF Ham UHF VHF SWL Bands Satellites Other VHF

Pan-adaptor Mode

Pan BW:

Dynamic Range:

Min Peak Distance:

Use Peaks for Tuning
 Follow RIG Freq
 CLAR Follows SDR Freq

Mute RX1
Un-Mute RX3
Un-Mute RX5

World Clock by AA2IL

20:32:22

Band Map by AA2IL - Server W3LPL

Cluster

160m	80m	60m	40m	30m	20m	17m	15m	12m	10m	6m
CW Data	SSB	LSB	USB	Ant1	Ant2	Ant3	-1	+1	<	>
14009.0 SP2HMT	CW Poland									
14011.5 R350D	CW European Russia									
14015.0 CT1BMW	CW Portugal									
14016.0 OVIICDX	CW Denmark									
14019.1 E77EA	CW Bosnia-Herzegovina									
14023.5 RC0CD	CW Asiatic Russia									
14024.0 I09/IK6QON	CW Italy									
14025.3 GH6FL/P	CW England									
14028.0 KH6W/M	CW Mariana Islands									
14028.0 WB2KAO	CW United States									
14028.0 K0P1	CW United States									
14029.5 KE4EA	CW United States									
14030.2 DL1BUG	CW Germany									
14030.5 N5EP	CW United States									
14032.7 WT6B	CW United States									
14033.4 K1SM	CW United States									
14033.4 K1EM	CW United States									
14034.3 KN4RD	CW United States									
14035.0 N7AUE	CW United States									
14035.4 K705	CW United States									
14036.1 WA8ZNC	CW United States									
14036.3 N0TA	CW United States									
14036.9 A44CF	CW United States									
14037.8 K17VEM	CW United States									
14037.8 K17V	CW United States									
14038.5 K6NR	CW United States									
14039.0 N6EA	CW United States									
14039.4 W0NF	CW United States									
14040.0 KW2Q	CW United States									
14040.7 WB9HFK	CW United States									
14041.1 WB7T	CW United States									
14042.3 NB7O	CW United States									
14042.6 N3DXX	CW United States									
14049.7 WA4JUU	CW United States									
14050.8 HA1AH	CW Hungary									
14052.8 SA6AUT	CW Sweden									
14066.0 W6STU	CW United States									
14074.0 LIUETR	DIGITRA Argentina									
14163.0 4X6HU	LSB Israel									

AF Gain: 0

Icons: Terminal, emacs@Lut..., frig FTdx3000, pySDR by A..., Demod Audi..., pyKeyer by ..., World Clock..., Band Map b..., EN, Fri Jun 10, 13:32



CW Academy

N1MM Logger

The screenshot shows a Windows desktop environment with several open windows:

- Top Left Window:** "N1MM Logger - ham.sdb" showing a log entry for "Log: CWOPS" in database "C:\Users\joea\Documents\N1MM Logger\+Databases\ham.sdb". It states "has no QSOs yet".
- Middle Left Window:** "14034.23 CW FTDX-3000 VFO A" showing CW mode parameters: CW, K9QX, SSB 30. It displays frequency bands from 14048 to 14019 Hz.
- Bottom Left Window:** "Telnet" window connected to "NA - w3pl.net:7373 (981 / 89%)" showing a list of amateur radio stations (DX de) with their call signs, frequencies, and modes.
- Background Image:** A photograph of a beach with a wooden pier extending into the ocean under a cloudy sky.
- Taskbar:** Shows the Windows Start button, a search bar, and icons for various applications including File Explorer, Task View, Edge, Mail, Photos, and File Explorer.
- System Tray:** Shows the date and time as "9/23/2022 20:02:57Z", the temperature as "91°F Sunny", and the date again as "9/23/2022".



CW Academy

Reverse Beacon Network (RBN)

RBN - Reverse Beacon Network - Google Chrome

reversebeacon.net/main.php?zoom=42.65,-4.63,2.15&rows=100&max_age=10,hours&spot_types=1&hide=distance_km

REVERSE BEACON NETWORK

Hosted by www.dxwatch.com

SSN:99 SFI:137 A:6 K:3

DxWatch Callsign Lookup:

welcome main dx spots nodes FT8 downloads about contact us

Map showing RBN activity with many purple lines connecting various locations around the world.

Filter legend: 630m, 160m, 80m, 60m, 40m, 30m, 20m, 17m, 15m, 12m, 10m, 6m, 4m, 2m
cw, rty, psk31, psk63
 CQ DX BCN /B NCDXF

Show Elements: Unfreeze Zoom
map distance mi
distance km
free mode
seen
speed
seen
Copy URL to Clipboard

Max rows: 100 Max age: 10 (Hours)
New spots: 100
 Show Spotters Advanced Mode
CW Speed: Min Max CW seen

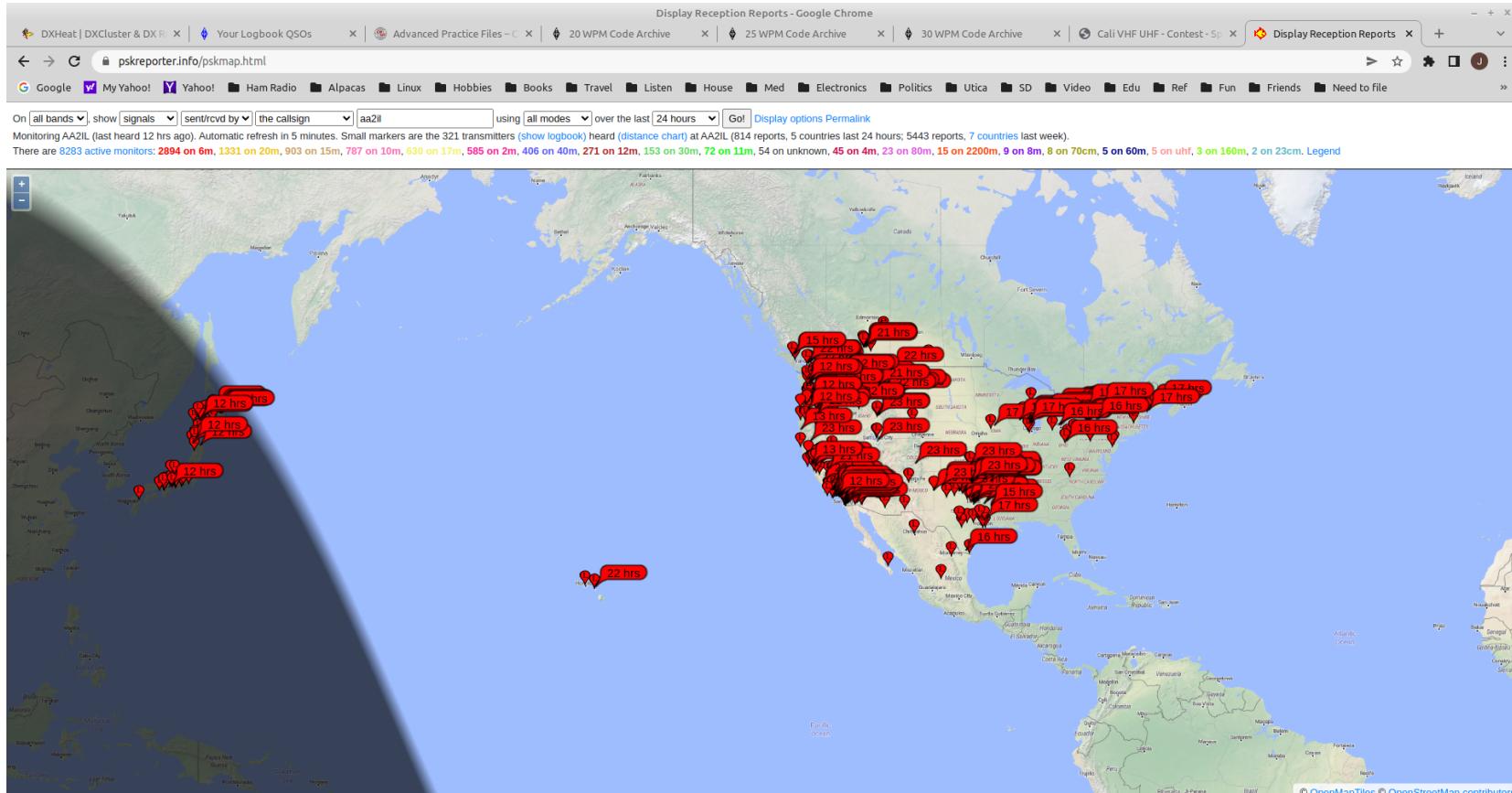
Spotted (dx)

callsign	spotter-callsign	distance mi	freq	mode	type	snr	speed	time	seen
● spotter	● spotted								
VE6JY	KV0I	1164 mi	14032.8	CW	CQ	14 dB	19 wpm	2011z 23 Sep	now
KP2RUM	ONTPQ	4320 mi	14038.7	CW	CQ	8 dB	20 wpm	2011z 23 Sep	now
KP2RUM	OH3RB	5045 mi	14022.8	CW	CQ	38 dB	23 wpm	2011z 23 Sep	now
KP2RUM	KV0I	2460 mi	14032.8	CW	CQ	12 dB	19 wpm	2011z 23 Sep	now
WC2L	F8DGY	3556 mi	14025.0	CW	CQ	19 dB	39 wpm	2011z 23 Sep	now
WC2L	NSKB	1074 mi	14030.4	CW	CQ	25 dB	21 wpm	2011z 23 Sep	now
WC2L	ONTPQ	3524 mi	14038.7	CW	CQ	11 dB	20 wpm	2011z 23 Sep	now
WC2L	KV0I	1141 mi	14032.8	CW	CQ	17 dB	19 wpm	2011z 23 Sep	now
WF7U	WB9HFK	1749 mi	14042.3	CW	CQ	17 dB	16 wpm	2011z 23 Sep	now
K3PA-1	DLSANT	4787 mi	21017.0	CW	CQ	28 dB	25 wpm	2011z 23 Sep	now
K07SS	WB9HFK	1359 mi	14042.3	CW	CQ	19 dB	16 wpm	2011z 23 Sep	now
K07SS	KV0I	1012 mi	14032.8	CW	CQ	30 dB	19 wpm	2011z 23 Sep	now
WE9V	NSKB	360 mi	14030.4	CW	CQ	17 dB	20 wpm	2011z 23 Sep	1 second ago
WE9V	CE3KWA	5371 mi	21089.6	RTTY	CQ	12 dB	45 bps	2011z 23 Sep	1 second ago
LZ3CB	RA7R	527 mi	3519.2	CW	CQ	31 dB	25 wpm	2011z 23 Sep	1 second ago



PSK Reporter

CW Academy



Statistics — Comments to Philip Gladstone — Online discussions — Reception records: 28,481,838,368 (processing delay 13 minutes) — Hosting by Fast Serv Networks, LLC

PSKREPORTER.INFO



CW Academy

Chasing (Rare) DX

- For many, this is the most exciting aspect of ham radio
- CW is the best mode for working weak stations rapidly
 - Unfortunately, much of the activity has migrated to FT8
- Your contesting skills will serve you well!
- Do:
 - Listen Listen and Listen some more!
 - Figure out his timing and where he is listening and transmit near there
 - Use QSX (full or semi-breakin)
- Don't:
 - Tune up and/or transmit on top of the DX
 - Continue to call when he is clearly calling someone else
 - Continue to use simplex when he is running split (P5XYZ UP)
 - Try to engage him in a conversation if he is running a pile-up



TBD

CW Academy

- ARRL SS
- QTCs
- SOTA/POTA
- CWops membership