First Steps in DX

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New Jersey Antique Radio Club – Technical Coordinator

31 Dec 2025

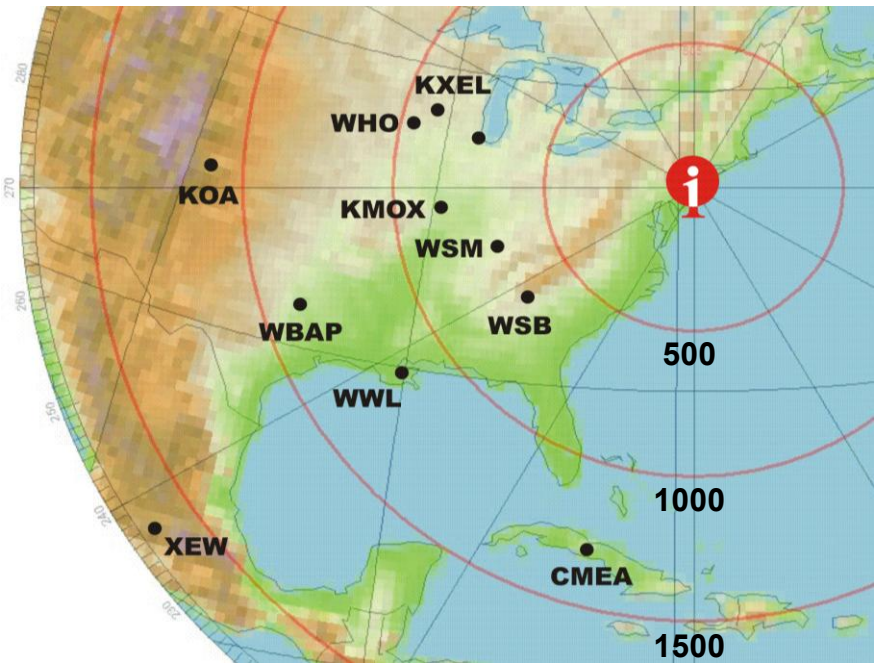
Rev. 1.4

Rationale

- This document is primarily aimed at those of you who have never engaged in organized long-distance AM-broadcast-band radio listening, a,k.a. BCB DX'ing.

The Basics

- During daylight hours, strong AM stations generally have a usable range of 50-100 miles.
- At night, skywave propagation comes into play, and station out to about 700 miles come in quite well, and DX beyond 1000 miles is not that unusual.



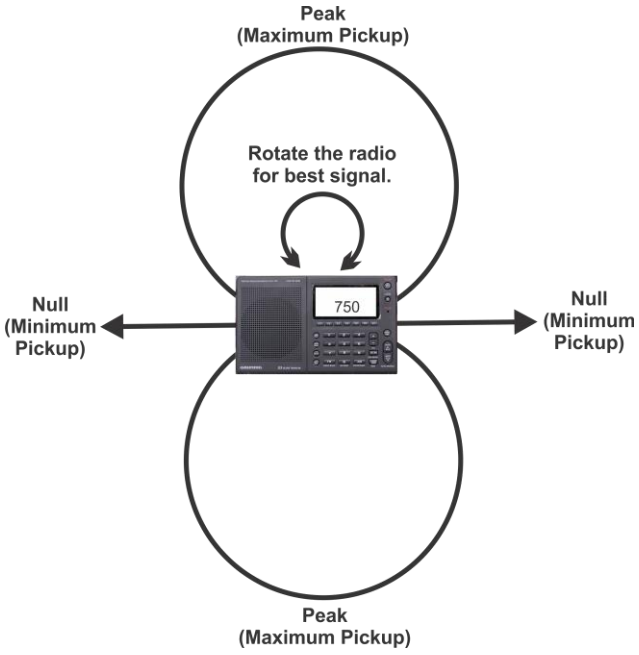
Where do I start?

- Start with a portable radio. One with a digital readout simplifies things considerably.

Survey your radio environment.

EXERCISE 1 (daytime):
Tune some local stations, 660 KHz - WFAN, 710 KHz - WOR, 770 KHz - WABC, etc. Rotate the receiver around it's vertical axis, observing the change in reception.

Modern AM radios use an internal **loop antenna** that responds to the **magnetic component** of the **electro-magnetic** wave. The antenna will have the best pickup off the "broad" side of the radio. Rotate the set for peak reception of the desired station, or to null out an unwanted station.



EXERCISE 2 (daytime):

- Tune to a weak station. Walk around the house to find a place where signals are strongest, and noise is at a minimum.
- Try in a window or near an outside wall. South or west side may be better for DX. (In my case, it's upstairs under the eaves. A shingled roof is pretty transparent to RF, and there is a minimum of wires and pipes.)
- You might also use the portable set to locate and eliminate RF noise sources in your house. In stubborn cases, pull breakers until the noise stops.

Basic DX Exercises

EXERCISE 3 (at night):
Tune to 1030 KHz. Rotate the receiver for best reception. This should be WBZ in Boston 220 miles away.

EXERCISE 4 (at night):
Tune to 770 KHz, WABC, NYC.
Now tune in the adjacent DX stations:

780 KHz, WBBM, Chicago, Il.
760 KHz, WJR, Detroit, Mi.
750 Khz, WSB, Atlanta, Ga.
740 KHZ, CFZM, Toronto, On.

Welcome to the world of DX'ing!

Now use the following page to explore further.

- With an analog radio, use the locals as frequency markers, and mine the adjacent DX stations.
- Use the "LOG" column to record dial corrections so you can tune back to a station accurately.

AM DX Station List - NYC

There are thousands of AM broadcast stations. Here are a few of the loud and interesting ones.
DIFFiculty: * = Local for reference 1 = easy, 2 = more difficult, 3 = hard **Updated: 10 DEC 2021**

DIFF.	FREQ	LOG	CALL	LOCATION	DX	Comments
*	560		WFIL	Philadelphia	49	
*	570		WMCA	NYC		Radio Reloj underneath
3	600		CMKA	San German, CU	1347	R. Rebelde // 670 Spanish
*	640		WWJZ	Mt. Holly, NJ		
2	650		WSM	Nashville	736	"Grand Ole Opry" country
*	660		WFAN	NYC		sports
3	670		CMBC	Arroyo Arena, CU	1271	R. Rebelde // 600 Spanish
2	670		WSCR	Chicago	708	"The Score" CBS
2	700		WLW	Cincinnati, OH	550	
*	710		WOR	NYC		
2	720		WGN	Chicago	720	
1	740		CFZM	Toronto	352	"Zoomer Radio" - Oldies
2	750		WSB	Atlanta	717	
1	760		WJR	Detroit	482	news/talk
*	770		WABC	NYC		
2	780		WBBM	Chicago	708	
1	800		CKLW	Windsor, ONT	473	"AM 800"
1	810		WGY	SCHENECTADY		
*	820		WNYC	NYC		
3	820		WBAP	Dallas, TX	1379	
2	840		WHAS	Louisville, KY	630	
3	850		KOA	Denver, CO	1615	"Broncos Radio" news
1	860		CJBC	Toronto	352	French
3	870		WWL	New Orleans	1128	news/talk/sports
*	880		WCBS	NYC		
2	890		WLS	Chicago	708	talk
1	900		CHML	Hamilton, ONT	354	"AM 900" Old Time Programs
2	1000		WMVP	Chicago	708	
*	1010		WINS	NYC		
1	1020		KDKA	Pittsburgh	301	The original broadcast station
1	1030		WBZ	Boston	222	
3	1040		WHO	Des Moines, IA	1014	"News Radio 1040"
*	1050		WEPN	NYC		
*	1060		KYW	Philadelphia	49	
1	1100		WTAM	Cleveland	397	news
1	1110		WBT	Charlotte, NC	501	news/talk
2	1120		KMOX	St. Louis, MO	860	news CBS
1	1170		WWVA	Wheeling, WV	340	
1	1180		WHAM	Rochester	265	
2	1190		WOWO	Ft. Wayne, IN	573	news/talk
3	1200		WOAI	San Antonio, TX	1558	news/talk
*	1210		WPHT	Philadelphia	49	
2	1510		WLAC	Nashville	736	news/talk
1	1520		WKBW	Buffalo	299	
1	1530		WCKY	Cincinnati, OH	550	
3	1540		KXEL	Waterloo, IA	950	news/talk ABC

Distances are from Freehold, NJ

Radio Reloj Cuban Time Station Frequencies 570, 610, 760, 790, 830, 930, 940, 950, 1010, 1270 KHz
Tick on the second, beep on the minute, then RR in Morse "DIT-DAH-DIT DIT-DAH-DIT"

Choosing Equipment

Choice of Radio:

Portables (probably solid-state)

- Digital readout is an advantage.
  - Accurate tuning to identify stations.
  - Can be used to calibrate other receivers.
- Analog sets
  - Look for something with good dial resolution.

Any radio with an internal loop (or rod) antenna.

- Self-contained and easily moved.
- Take advantage of the directional antenna.

Superheterodynes with external antenna connections.

- Broadcast sets.
- Communications Receivers.
- Ham transceivers with general coverage RX.

More primitive radios can be a lot of fun.

- Crystal sets
- 1920s battery sets.
- Simple homebrew

Antennas:

A tunable loop can be a real advantage.

- Commercial *a la* Kaito AN-100.
- Homemade.
- These are usually practical only on superhet receivers.

Contest Considerations

The NJARC DX Contest typically starts on the third Friday of January. See this year's rules for details.

To keep things simple and approachable, the Contest is made up of ten separate 24-hour contest periods. So, you have ten chances at success and can try different radios. During each session, only your ten most distance stations count toward your score. This is so the geek who stays up all night all week has very little advantage.

There are ten equipment categories, so you'll be competing against similar radios.

The categories for crystal sets, primitive radios, 1920s battery sets, and TRF's are lightly contended, so there are some real opportunities there.

More info and resources: Contest page
http://www.njarc.ar88.net/contest.html

Most of what you need in one .pdf: Contest Kit
http://www.njarc.ar88.net/2024%20DX%20Kit%20Completet.pdf

Contest Strategy

- Start early in the evening. Stations I.D, more frequently.
- Assuming you can hear reasonably well, start out by “harvesting” the 700-mile-plus stations.
- Except for KMOX and WLAC, these are pretty easy. They are identified in green on the following page.
- Tune in the nearest NYC local, and rotate your loop to null it as best you can. Then move up or down to your target.
- If you’re not making progress, drop back to the Difficulty-1 stations shown on the list.



*	710		WOR	NYC		News/Talk	
2	720		WGN	Chicago	720	News/Talk	
1	740		CFZM	Toronto	352	Oldies	"Zoomer Radio"
2	750		WSB	Atlanta	717	News/Talk	
1	760		WJR	Detroit	482	News/Talk	"News talk 760"
*	770		WABC	NYC		News/Talk	
2	780		WBBM	Chicago	708	News/Talk	Chicago sports

Target Priority

AM DX Station List

Harvest the Green Stations first!

There are thousands of AM broadcast stations. Here are a few of the loud and interesting ones.
DIFFiculty: * = Local for reference 1 = easy, 2 = more difficult, 3 = hard **Updated: 27 OCT 2016**
LOG = Dial reading on your radio.

DIFF.	FREQ	LOG	CALL	LOCATION	DX	FORMAT	Comments
*	560		WFIL	Philadelphia	49	Christian Talk	
*	570		WMCA	NYC		Religious	Radio Reloj underneath
3	600		CMKA	San German, CU	1347		R. Rebelde // 670 Spanish
*	640		WWJZ	Mt. Holly, NJ		Religious	
2	650		WSM	Nashville	736	Country	"Grand Ole Opry"
*	660		WFAN	NYC		Sports	sports
3	670		CMBC	Arroyo Arena, CU	1271		R. Rebelde // 600 Spanish
2	670		WSCR	Chicago	708	Sports	"The Score" CBS
2	700		WLW	Cincinnati, OH	550	News/Talk	"The Big One Newsradio"
*	710		WOR	NYC		News/Talk	
2	720		WGN	Chicago	720	News/Talk	
1	740		CFZM	Toronto	352	Oldies	"Zoomer Radio"
2	750		WSB	Atlanta	717	News/Talk	
1	760		WJR	Detroit	482	News/Talk	"News talk 760"
*	770		WABC	NYC		News/Talk	
2	780		WBBM	Chicago	708	News/Talk	Chicago sports
1	800		CKLW	Windsor, ONT	473	News/Talk	"AM 800"
1	810		WGY	SCHENECTADY		News/Talk	
*	820		WNYC	NYC		NPR	
3	820		WBAP	Dallas, TX	1379	News/Talk	
2	840		WHAS	Louisville, KY	630	News/Talk	
3	850		KOA	Denver, CO	1615	News/Talk	"Sportsradio 850"
1	860		CJBC	Toronto	352	Variety	French
3	870		WWL	New Orleans	1128	News/Talk	news/talk/sports - Radio Reloj
*	880		WCBS	NYC		News	
2	890		WLS	Chicago	708	News/Talk	talk
1	900		CHML	Hamilton, ONT	354	News/Talk	"AM 900" Old Radio after 10PM
2	1000		WMVP	Chicago	708	Sports	ESPN
*	1010		WINS	NYC		News	
1	1020		KDKA	Pittsburgh	301	News Talk	The original broadcast station
1	1030		WBZ	Boston	222	News	
3	1040		WHO	Des Moines, IA	1014	News Talk	"News Radio 1040"
*	1050		WEPN	NYC		Sports	Spanish
*	1060		KYW	Philadelphia	49	News	
1	1100		WTAM	Cleveland	397	News Talk	news
1	1110		WBT	Charlotte, NC	501	News Talk	
2	1120		KMOX	St. Louis, MO	860	News Talk	news CBS
*	1130		WBBR	NYC		News	
1	1170		WWVA	Wheeling, WV	340	News Talk	"The Big One 1170"
1	1180		WHAM	Rochester	265	News Talk	
2	1190		WOWO	Ft. Wayne, IN	573	News Talk	
3	1200		WOAI	San Antonio, TX	1558	News Talk	"News Radio 1200"
*	1210		WPHT	Philadelphia	49	Talk	
1	1500		WFED	Wheaton, MD (DC)	146	News	"Federal News Radio"
2	1510		WLAC	Nashville	736	News Talk	news/talk
1	1520		WWKB	Buffalo	299	Sports	"ESPN 1520"
1	1530		WCKY	Cincinnati, OH	550	Sports	
3	1540		KXEL	Waterloo, IA	950	News Talk	news/talk ABC

Distances are from Freehold, NJ

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Contest Logging

I like to just scratch out a log while I'm listening using a copy of the LARGE-PRINT LOG SHEET.

NJARC DX CONTEST LOG

NAME: _____ RECEIVER: _____

ADDRESS: _____ ANTENNA: _____

_____ CATEGORY: _____

PHONE _____

DATE	TIME	FREQ	LOG	CALL	LOCATION	COMMENTS

You can submit you log this way or do a fancy one in a spreadsheet like EXCEL.

NAME: Al Klase RECEIVER: Hammarlund HQ-120

ADDRESS: 110 Gifford Ave. ANTENNA: Tecsun Loop

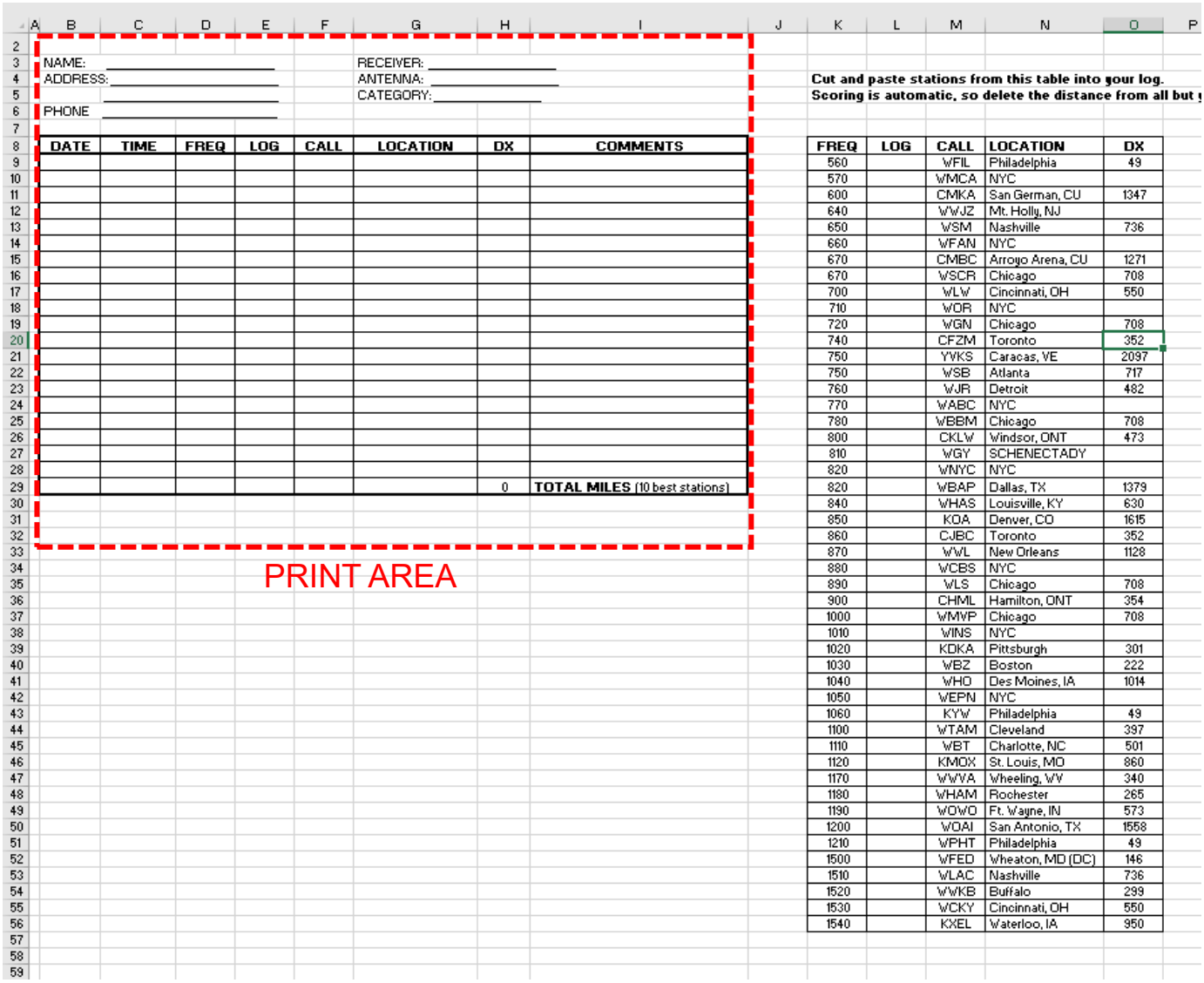
Jersey City, Nj 07304 CATEGORY: K

PHONE 908-892-5465

DATE	TIME	FREQ	LOG	CALL	LOCATION	DX	COMMENTS
1/26/2023	7:56:00 PM	670		WSCR	Chicago	708	
	7:58:00 PM	650		WSM	Nashville	736	
	8:01:00 PM	750		WSB	Atlanta	717	
	8:03:00 PM	780		WBBM	Chicago	708	
	8:04:00 PM	1120		KMOX	St. Louis, MO	860	
	8:15:00 PM	1540		KXEL	Waterloo, IA	950	
	8:19:00 PM	1510		WLAC	Nashville	736	
	8:40:00 PM	600		CMKA	San German, CU	1347	
	8:40:00 PM	670		CMBC	Arroyo Arena, CU	1271	
1/27/2023	12:35:00 AM	540		WFLF	Pine Hills, FL	905	

Contest Logging

Try using the NJARC-Easy Log in Excel.



NAME: _____ RECEIVER: _____
ADDRESS: _____ ANTENNA: _____
_____ CATEGORY: _____
PHONE _____

DATE	TIME	FREQ	LOG	CALL	LOCATION	DX	COMMENTS
						0	TOTAL MILES (10 best stations)

PRINT AREA

Cut and paste stations from this table into your log.
Scoring is automatic, so delete the distance from all but

FREQ	LOG	CALL	LOCATION	DX
560		WFIL	Philadelphia	49
570		WMCA	NYC	
600		CMKA	San German, CU	1347
640		WWJZ	Mt. Holly, NJ	
650		WSM	Nashville	736
660		WFAN	NYC	
670		CMBC	Arroyo Arena, CU	1271
670		WSCR	Chicago	708
700		WLW	Cincinnati, OH	550
710		WOR	NYC	
720		WGN	Chicago	708
740		CFZM	Toronto	352
750		YVKS	Caracas, VE	2097
750		WSB	Atlanta	717
760		WJR	Detroit	482
770		WABC	NYC	
780		WBBM	Chicago	708
800		CKLW	Windsor, ONT	473
810		WGY	SCHENECTADY	
820		WNYC	NYC	
820		WBAP	Dallas, TX	1379
840		WHAS	Louisville, KY	630
850		KOA	Denver, CO	1615
860		CJBC	Toronto	352
870		WWL	New Orleans	1128
880		WCBS	NYC	
890		WLS	Chicago	708
900		CHML	Hamilton, ONT	354
1000		WMVP	Chicago	708
1010		WINS	NYC	
1020		KDKA	Pittsburgh	301
1030		WBZ	Boston	222
1040		WHO	Des Moines, IA	1014
1050		WEPN	NYC	
1060		KYW	Philadelphia	49
1100		WTAM	Cleveland	397
1110		WBT	Charlotte, NC	501
1120		KMOX	St. Louis, MO	860
1170		WWVA	Wheeling, WV	340
1180		WHAM	Rochester	265
1190		WOWO	Ft. Wayne, IN	573
1200		WOAI	San Antonio, TX	1558
1210		WPHT	Philadelphia	49
1500		WFED	Wheaton, MD (DC)	146
1510		WLAC	Nashville	736
1520		WWKB	Buffalo	299
1530		WCKY	Cincinnati, OH	550
1540		KXEL	Waterloo, IA	950

Cut station data from the right column and paste them into the log on the left. Be sure to add date and time. Distances will be totaled automatically.

Doing a “print to pdf” will get you a clean copy of your log for submission.