

# D-STAR 2015

## at Orlando Hamcation

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# Orlando Hamcation 2015

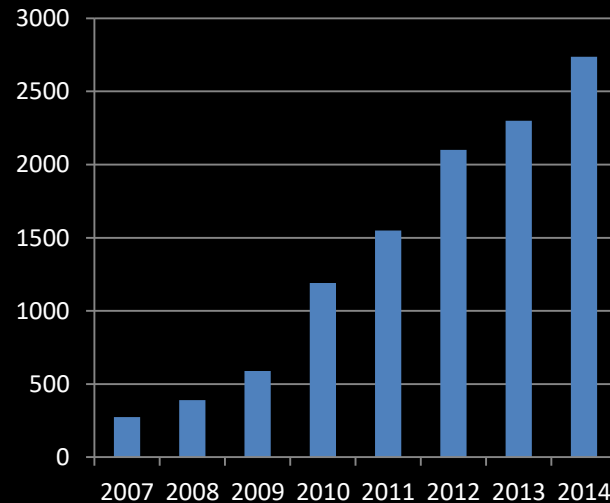
- Current Stats
- DR mode
- Updating Your Radio
- What's New



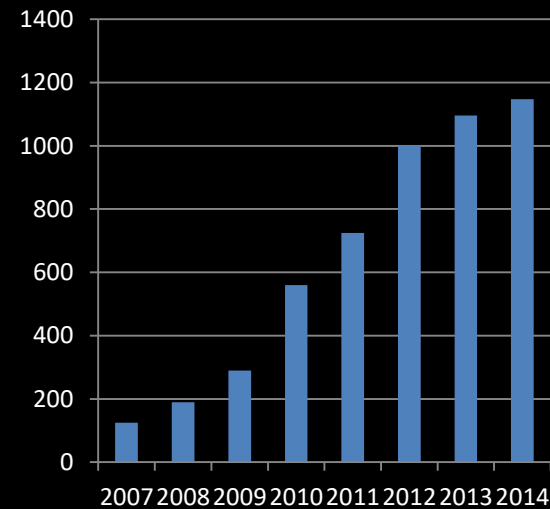
# D-STAR Continues to Grow

- *As of January 1, 2015 – 1,147 DPlus Gateways, over 2,738 Voice Repeaters, 225 Data Modules and 38,724 registered users on US Trust Server.*
- *Over 1,200 repeaters in US*
- *Does not include ircDDB repeaters*

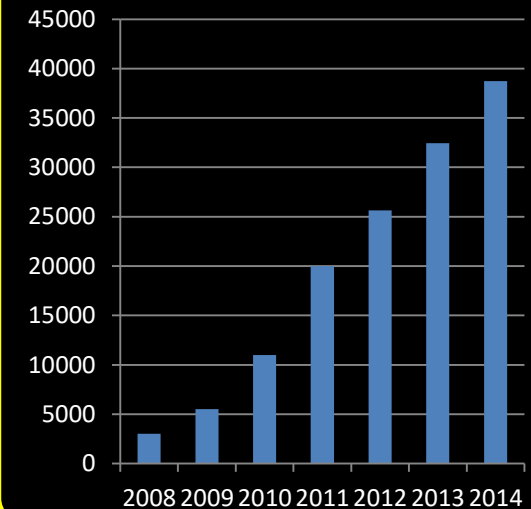
## Repeaters



## Gateways



## Users



# D-STAR Radio Generations

## 1<sup>st</sup> Generation

Utilize Standard Memories for D-STAR or FM

## 2<sup>nd</sup> Generation

First Implementation of DR Mode

## 3<sup>rd</sup> Generation

Current Implementation of DR Mode

Nearest D-STAR Repeater

## 3<sup>rd</sup> Generation Plus

Nearest FM Repeater

CSV Import from SD Card

High-Speed DV Data

	Event	Date
1 <sup>st</sup> Generation	ID-1	Aug-03
	IC2200H	Mar-04
	ID-800H	Mar-05
	RP2000, RP4000	May-06
	IC-91AD	May-06
	RP2C, RP2D, RP2V – Upgraded Repeater	Jul-06
	ID-2820	Mar-07
2 <sup>nd</sup> Generation	ID-92	Mar-08
	ID-80 / ID-880H	Apr-10
	ID-9100	Mar-11
3 <sup>rd</sup> Generation	ID-31	Apr-12
	ID-51	Apr-13
	ID-7100	Jul-13
3b Generation	ID-5100	Apr-14
	RS-MS1A Android App	Mar-14
	ID-51+ Anniversary Edition	Oct-14

# Using DR Mode



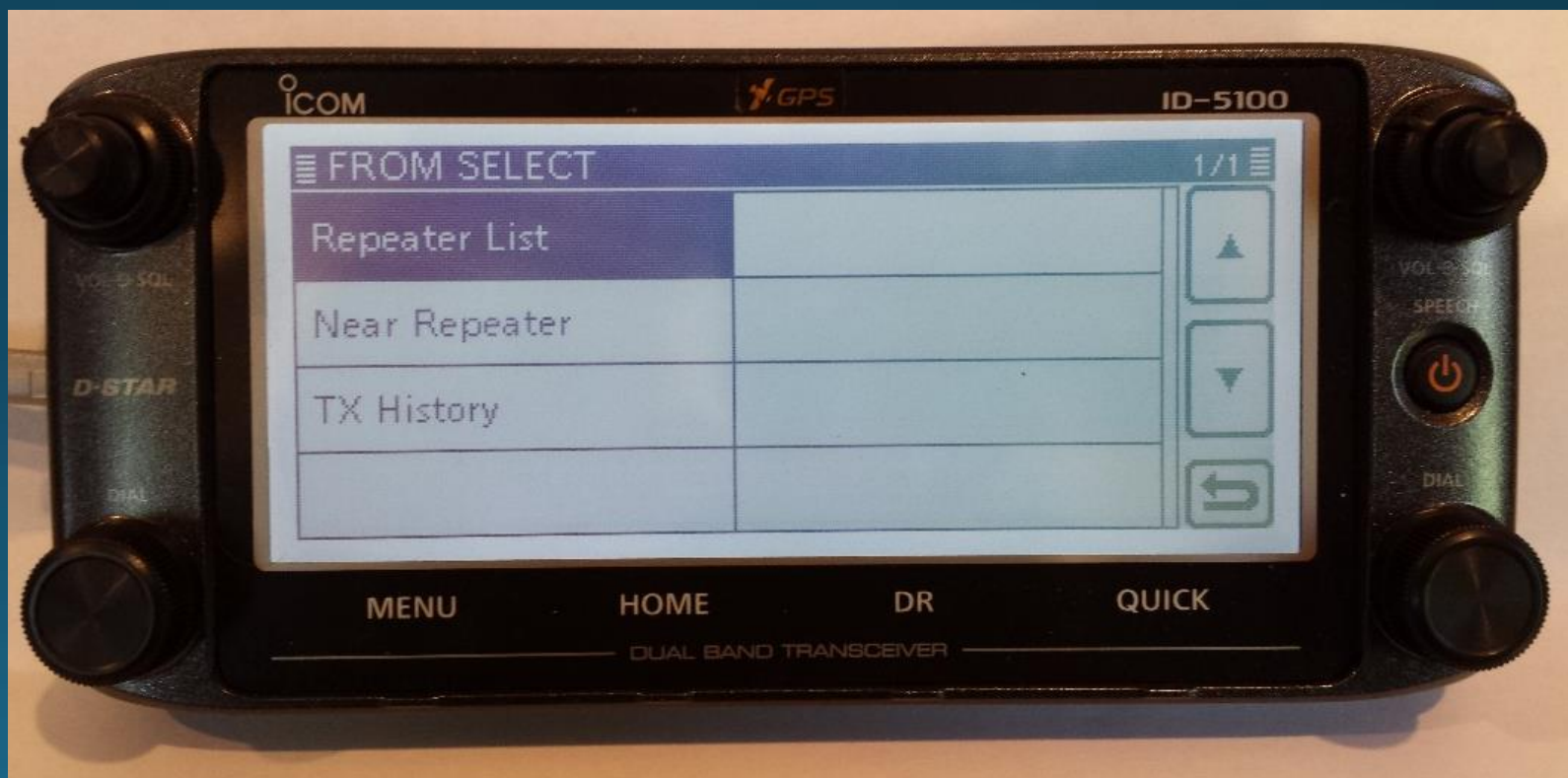
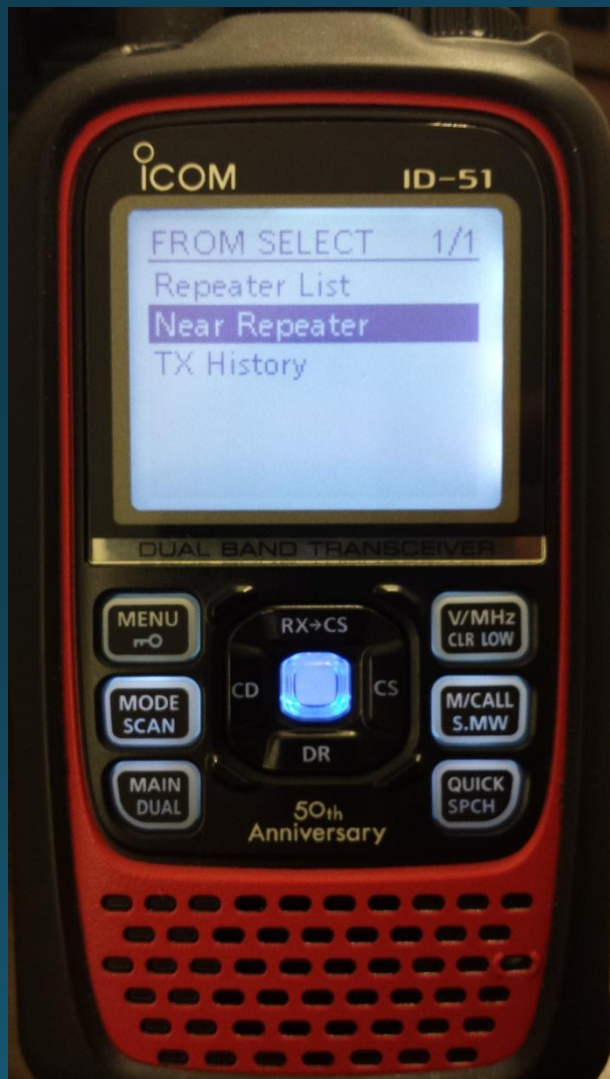
# DR Mode – Easiest to Use

- DR Mode is Digital Repeater Mode
- Current generation of radios have two sets of memories
  - Regular Memories for traditional frequency storage
  - Repeater List is geocoded for location-based lookup
- Easy to Use
  - Press DR
  - Select Source Repeater in FROM field
    - Pick by region
    - Find Nearest Repeater to current location
  - Select function in TO field
- Automatic Programming of Radio



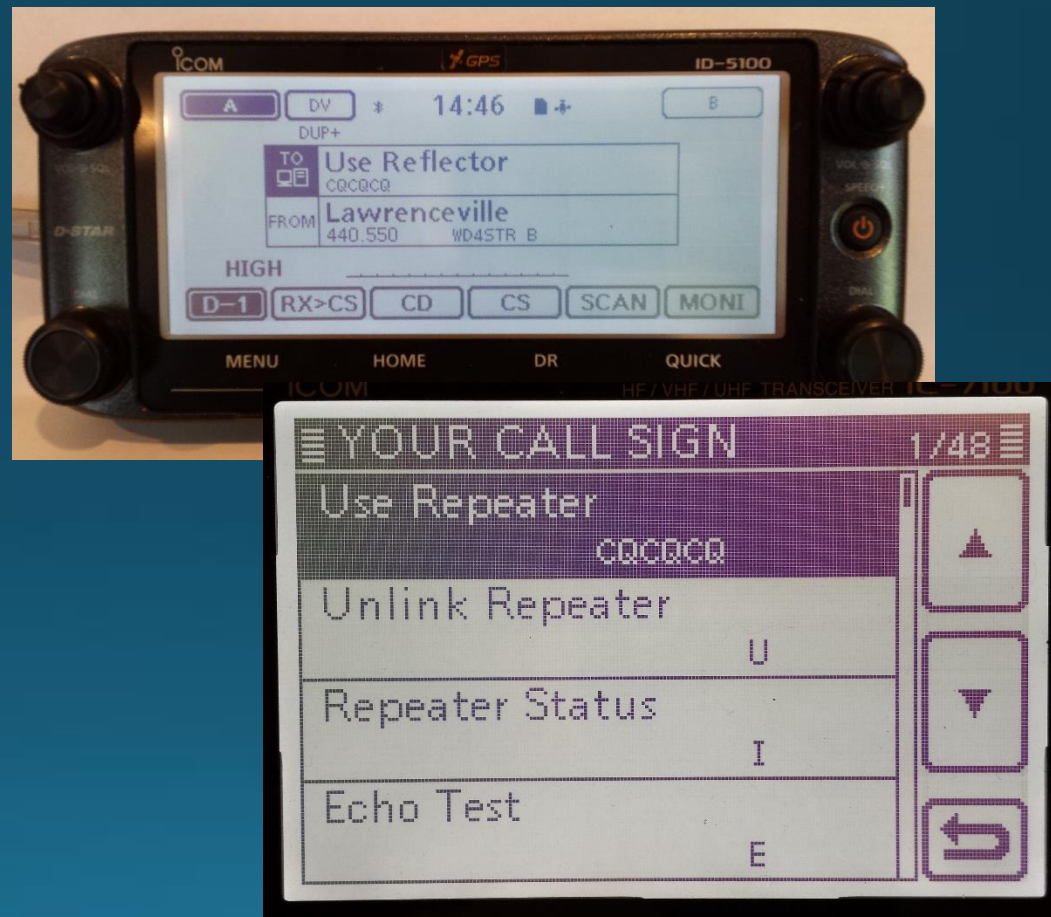
# What Repeater?

- Select FROM field:
- **Repeater List** shows region, then list of repeaters
- **Near Repeater** uses built-in GPS to show list of nearest repeaters



# Which CQ?

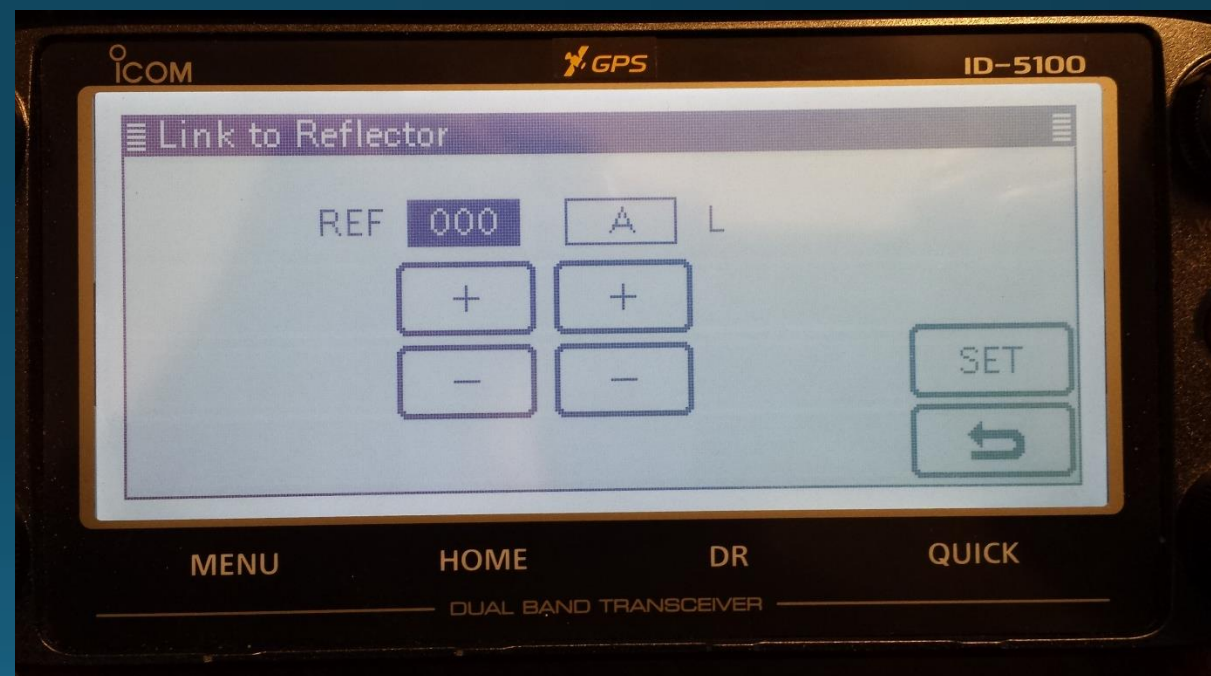
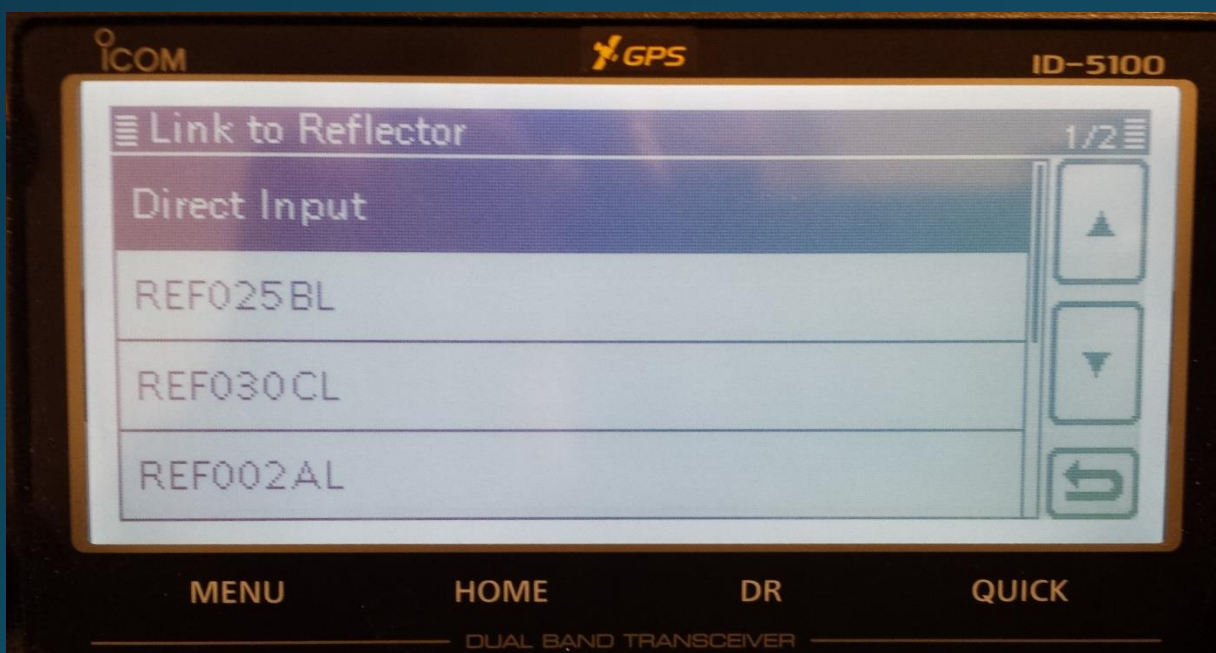
- Select TO on screen
- DO NOT USE Local CQ
  - Shows as CQCQCQ
- 3<sup>rd</sup> Generation (ID-31, ID-51, ID-7100)
  - Select “Your Call Sign”
  - Select “Use Repeater” to talk
- 3<sup>rd</sup> + Generation (ID-51+, ID-5100)
  - Select (“Reflector”)
  - Select (“Use Reflector”) to talk





# Linking to Reflectors

- To link to a Reflector, select Reflector, Link to Reflector, Direct Input, then select Reflector and Module



*Once a Reflector has been selected, it's listed for quick selection*

# D-STAR ICOM Android App

- Free app for Android phones, tablets – RS-MS1A
  - Works with ID-51A,(+) with OPC-2350LU cable
  - ID-5100 using cable or Bluetooth
- Use to display DR and radio settings
- Send/receive photos between compatible radios
- Text messaging in familiar look
- Expanded Repeater List



# Updating Your Radio



# Updating Your Radio

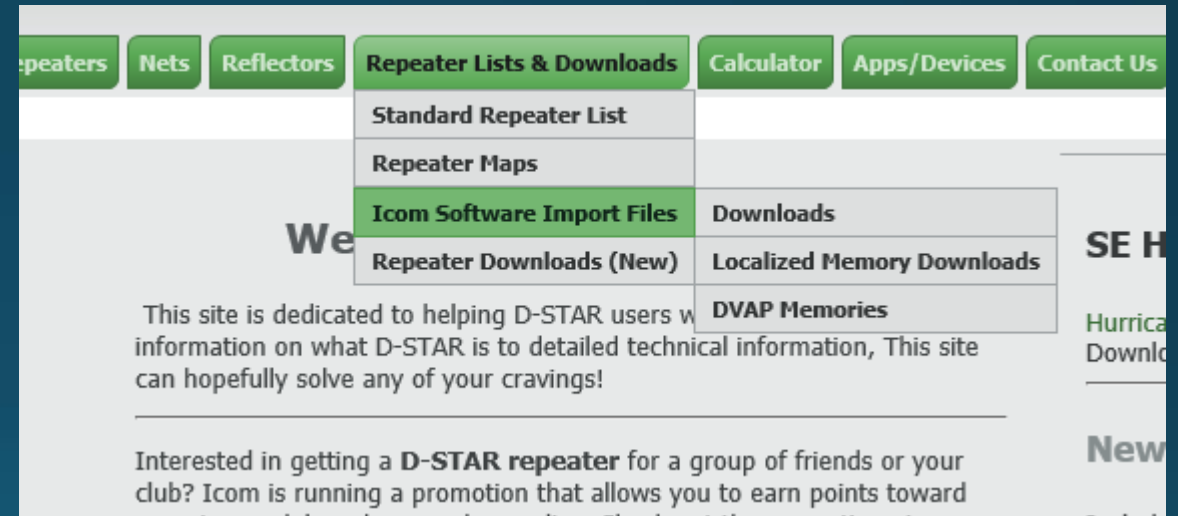
- Updated using Icom Software
- Updated information from DSTARInfo.com
  - Can import into Icom software and program radio
  - Can write to SD card and import into radio
- Updated using RT Systems software

[www.rtsystemsinc.com](http://www.rtsystemsinc.com)



# Exporting Updates from DSTARInfo.com

- Generation 1 & 2
  - Icom Software Import Files
    - Downloads
      - Memory List
      - Repeater List
      - Your Call List
    - Localized Memory Downloads
    - DVAP Memories
- Generation 3
  - Repeater Downloads (New)



# Repeater Downloads (New)



The screenshot shows the D-STAR website interface. At the top left is the D-STAR logo with the text "D-STAR INFO INFORMATION, FAQs, AND MORE". To the right is a banner for the ICOM ID-51A 50th Anniversary Edition, featuring five different colored mobile phones and the text "Which color will you choose?". Below the banner is a navigation menu with buttons for Home, FAQ, Conferences, Closest Repeaters, Nets, Reflectors, Repeater Lists & Downloads, Calculator, Apps/Devices, and Contact Us. The "Repeater Lists & Downloads" menu is expanded, showing options for Standard Repeater List, Repeater Maps, Icom Software Import Files, and Repeater Downloads (New). The main content area is divided into three columns. The left column is titled "D-STAR Expanding..." and "Newest D-STAR Repeaters", containing a table with columns for Callsign, City, and Country, State. The middle column is titled "We're Here for You!" and "D-STAR Info!", containing text about the site's purpose and a promotion for ICOM repeaters. The right column is titled "SE Hurricane Net" and "New Downloads", containing information about hurricane net forms and updated repeater downloads.

**D-STAR INFO**  
INFORMATION, FAQs, AND MORE

ICOM 50th Anniversary Edition  
ID-51A 50th Anniversary Edition  
Which color will you choose?

Home FAQ Conferences Closest Repeaters Nets Reflectors Repeater Lists & Downloads Calculator Apps/Devices Contact Us

D-STAR Expanding...

**Newest D-STAR Repeaters**

Callsign	City	Country, State
AK2H	Leesville	United States, South Carolina
ZU9KDL	Port Elizabeth	South Africa
W1NPP	Auburn	United States, Maine
W0MDT	Ramsey	United States, Minnesota
VY2DSR	Kensington	Canada, Prince Edward Island
VE3STP	Mt.St.	Canada, New

**We're Here for You!**  
**D-STAR Info!**

This site is dedicated to helping D-STAR users world wide. From basic information on what D-STAR is to detailed technical information, This site can hopefully solve any of your cravings!

Interested in getting a **D-STAR repeater** for a group of friends or your club? Icom is running a promotion that allows you to earn points toward repeater modules when you buy radios. Check out the promotion at [D-STAR Points](#).

**SE Hurricane Net**

Hurricane Net Forms (Right Click to Download form)

**New Downloads**

Includes FM repeaters for US  
D-STAR Repeater Downloads Updated

# Choose Search Values

D-STAR Repeater Downloads Version 1.0 - 29 April 2014

Enter Location

We found the following location: Aiken, SC  
United States/SC  
Latitude 33.5616416931152      Longitude -81.7221374511719  
Maidenhead Grid      EM93dn

Select Radio	Select Radio
Radio Specifications	IC-7100A
Standard Memories	IC-7100E
Repeater List Length	IC-80AD
Your Call Sign List Length	IC-E80D
Name Display Length	ID-31A
	ID-31E
	ID-5100A
	ID-5100E
	ID-51A
	ID-51A Plus
	ID-51E
	ID-51E Plus
	ID-880H
	ID-E880
	RS-MS1A

# Choose Percent FM

D-STAR Repeater Downloads Version 1.0 - 29 April 2014

Enter Location

We found the following location: Aiken, SC

United States/SC

Latitude 33.5616416931152

Longitude -81.7221374511719

Maidenhead Grid

EM93dn

Select Radio

▼

Radio Specifications

Standard Memories 500

Repeater List Length 750

Your Call Sign List Length 200

Name Display Length 16

Percent FM

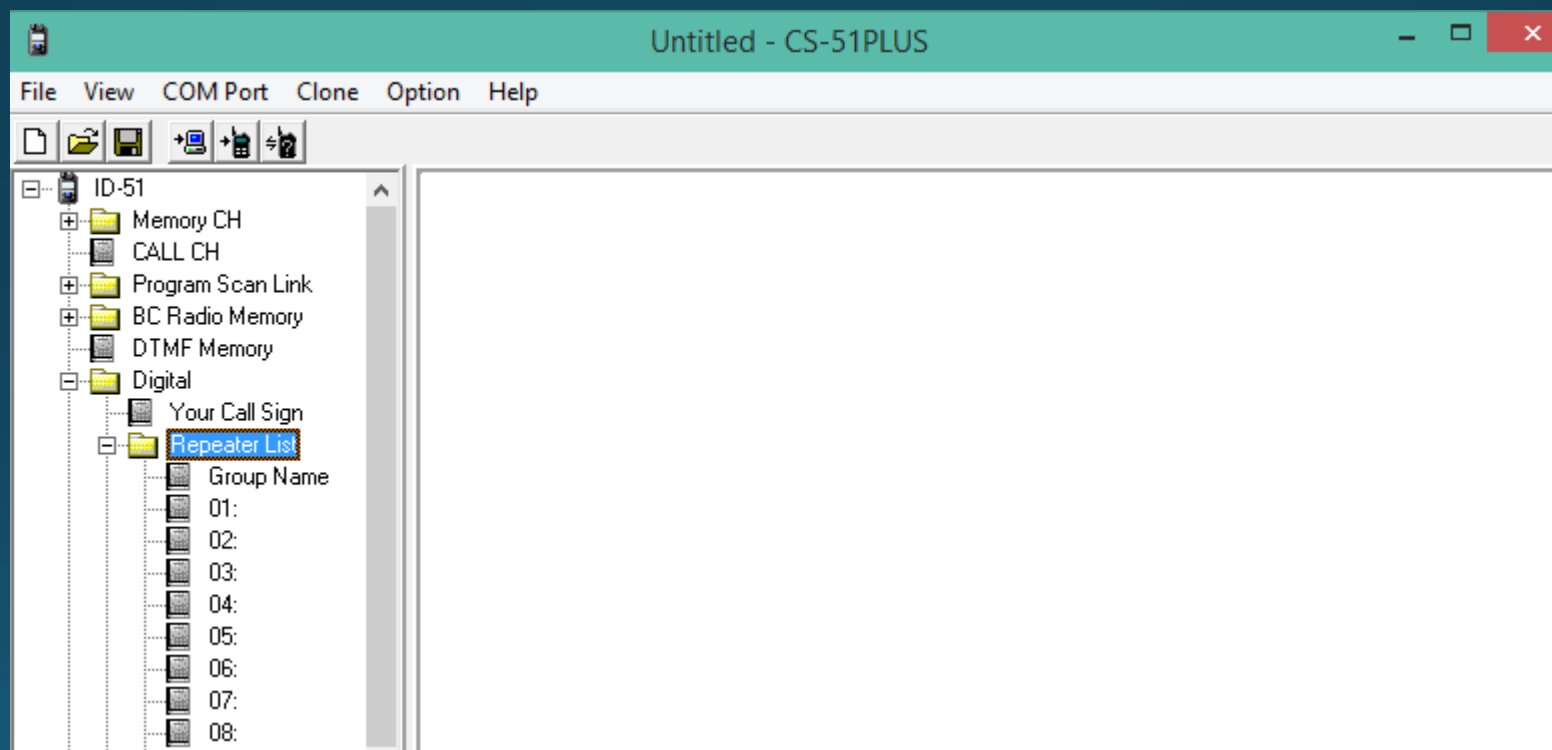




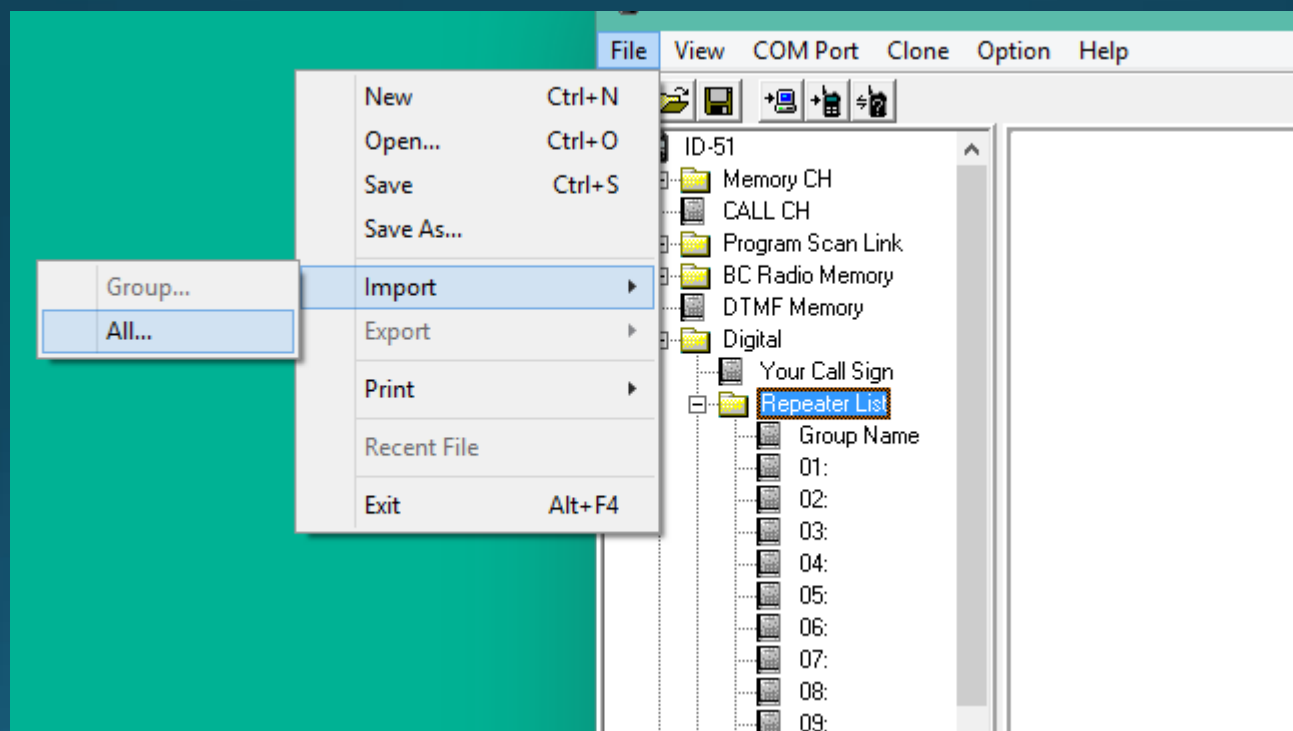
# Format of File

22	USA South	High Point	North Car	W4GSO1 C	W4GSO1 G	146.16	DUP-	0.6	DV	OFF	82.5Hz	Yes	Approxim	36	-79.8	-5:00
22	USA South	Mt. Airy	North Car	KJ4HFV B	KJ4HFV G	444.5625	DUP+	5	DV	OFF	82.5Hz	Yes	Approxim	36.26	-80.39	-5:00
22	USA South	Raleigh	North Car	KR4RAL B	KR4RAL G	442.2125	DUP+	5	DV	OFF	82.5Hz	Yes	Approxim	35.68	-78.53	-5:00
22	USA South	Shelby	North Car	W4NYR C	W4NYR G	145.08	DUP+	1.4	DV	OFF	82.5Hz	Yes	Approxim	35.27	-81.33	-5:00
22	USA South	Shelby	North Car	W4NYR B	W4NYR G	444.1875	DUP+	5	DV	OFF	82.5Hz	Yes	Approxim	35.27	-81.33	-5:00
22	USA South	Tryon	North Car	KK4LVF B	KK4LVF G	442.875	DUP+	5	DV	OFF	82.5Hz	Yes	Approxim	35.28	-82.23	-5:00
22	USA South	Wingate	North Car	W4FAN B	W4FAN G	444.8625	DUP+	5	DV	OFF	82.5Hz	Yes	Approxim	34.98	-80.46	-5:00
22	USA South	Aiken	South Car	KR4AIK B	KR4AIK G	443.4125	DUP+	5	DV	OFF	82.5Hz	Yes	Approxim	33.57	-81.72	-5:00
22	USA South	Aiken	South Car	KR4AIK C	KR4AIK G	145.16	DUP-	0.6	DV	OFF	82.5Hz	Yes	Approxim	33.57	-81.72	-5:00
22	USA South	Awendaw	South Car	KR4CHS C	KR4CHS G	145.12	DUP-	0.6	DV	OFF	82.5Hz	Yes	Approxim	32.93	-79.69	-5:00
22	USA South	Beaufort	South Car	KJ4LNJ C	KJ4LNJ G	145.48	DUP-	0.6	DV	OFF	82.5Hz	Yes	Approxim	32.43	-80.4	-5:00
22	USA South	Caesars H	South Car	KR4GSP C	KR4GSP G	145.42	DUP-	0.6	DV	OFF	82.5Hz	Yes	Approxim	35.11	-82.62	-5:00
22	USA South	Charleston	South Car	W4HRS C	W4HRS G	145.16	DUP-	0.6	DV	OFF	82.5Hz	Yes	Approxim	32.79	-79.95	-5:00
22	USA South	Charleston	South Car	W4HRS B	W4HRS G	444.1125	DUP+	5	DV	OFF	82.5Hz	Yes	Approxim	32.79	-79.95	-5:00
22	USA South	Charleston	South Car	WR4SC C	WR4SC G	145.12	DUP-	0.6	DV	OFF	82.5Hz	Yes	Approxim	33.04	-79.61	-5:00

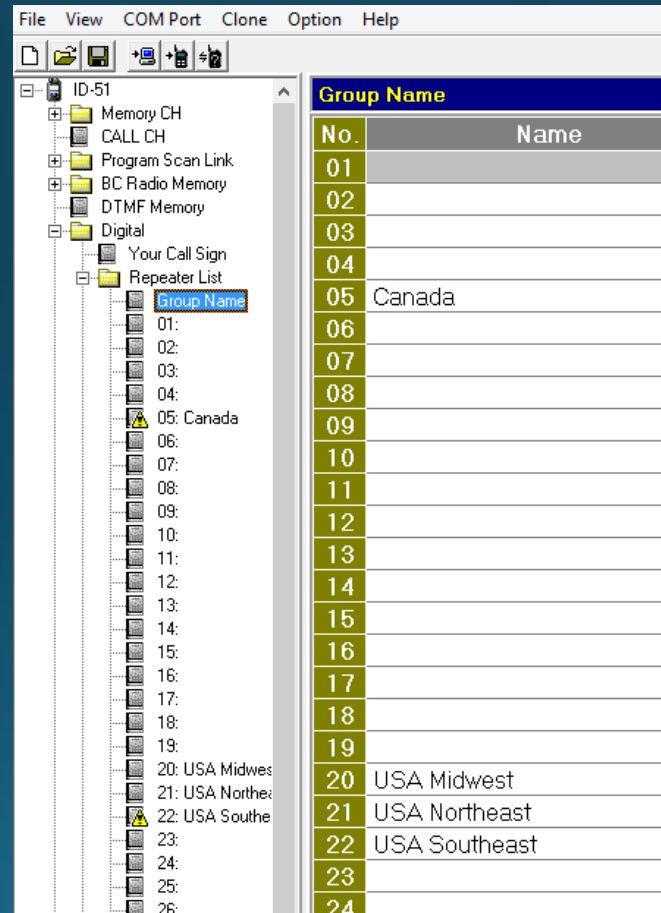
# Importing into CS-51PLUS



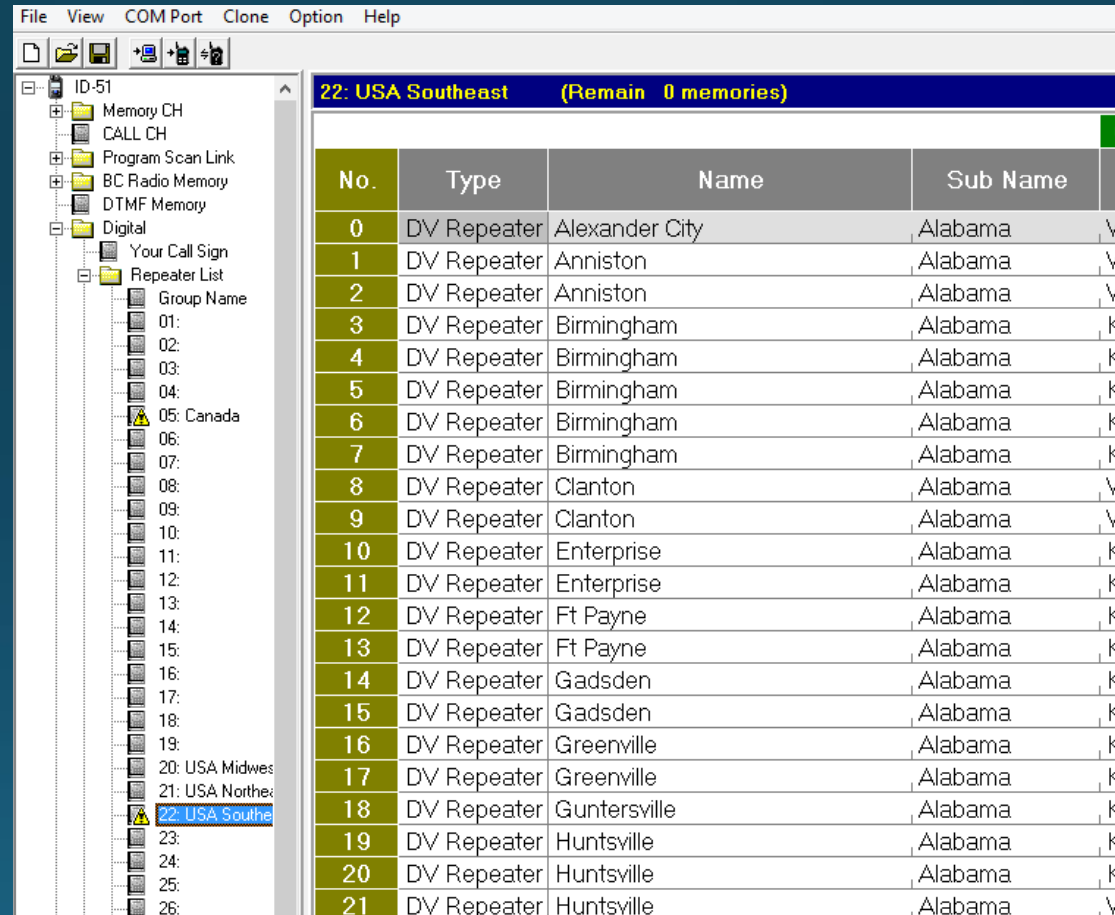
# Import All into Repeater List



# Group Names Appear



# Local Repeaters Appear



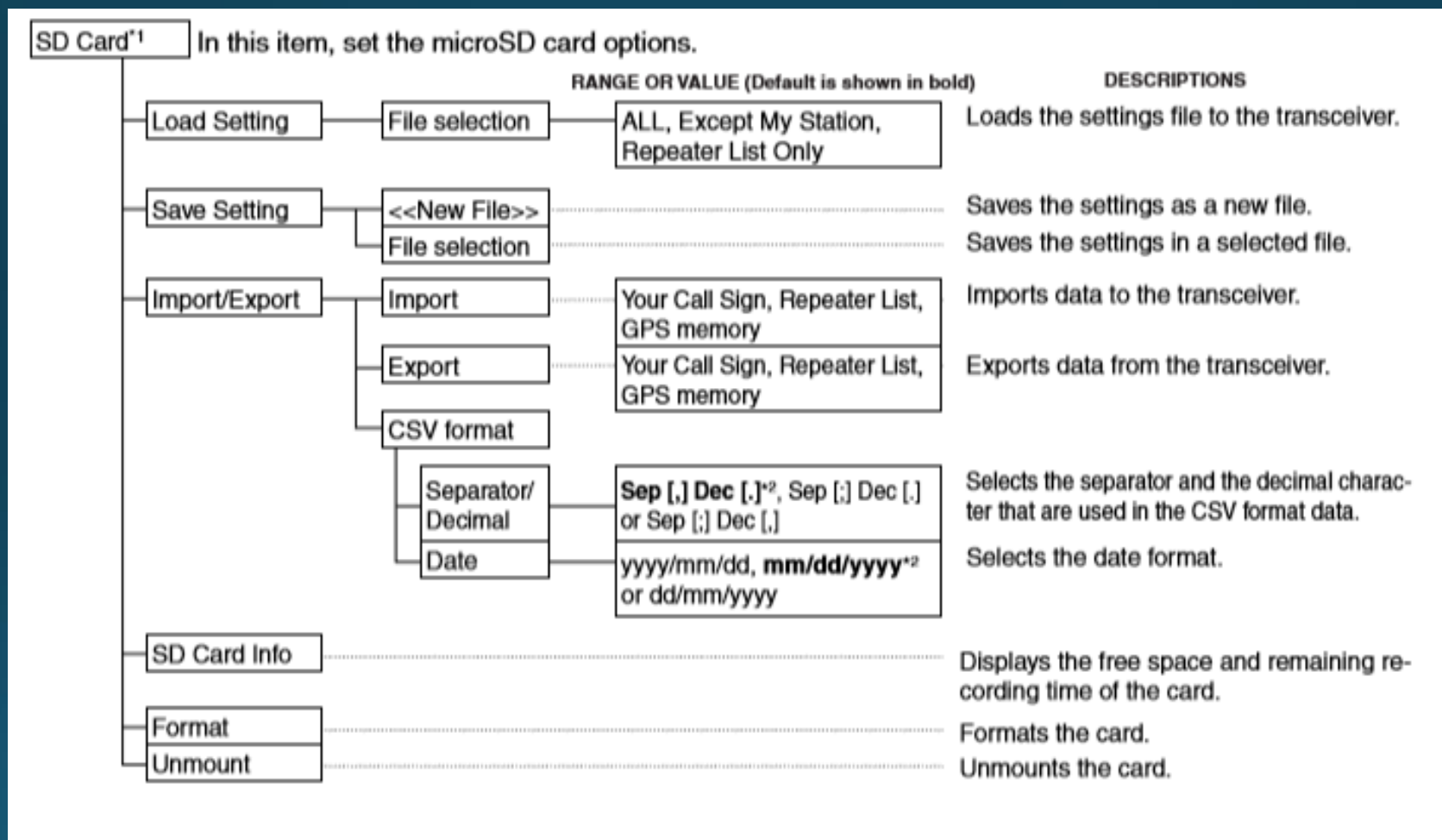
The screenshot shows a software window with a menu bar (File, View, COM Port, Clone, Option, Help) and a toolbar. On the left is a tree view under 'ID-51' containing folders like 'Memory CH', 'CALL CH', 'Program Scan Link', 'BC Radio Memory', 'DTMF Memory', 'Digital', 'Your Call Sign', and 'Repeater List'. The 'Repeater List' folder is expanded, showing a list of repeaters from 01 to 26. Repeater 22 is highlighted in blue. The main window displays a table titled '22: USA Southeast (Remain 0 memories)'. The table has columns for 'No.', 'Type', 'Name', and 'Sub Name'. The data rows show DV Repeaters with names and locations in Alabama.

No.	Type	Name	Sub Name
0	DV Repeater	Alexander City	Alabama
1	DV Repeater	Anniston	Alabama
2	DV Repeater	Anniston	Alabama
3	DV Repeater	Birmingham	Alabama
4	DV Repeater	Birmingham	Alabama
5	DV Repeater	Birmingham	Alabama
6	DV Repeater	Birmingham	Alabama
7	DV Repeater	Birmingham	Alabama
8	DV Repeater	Clanton	Alabama
9	DV Repeater	Clanton	Alabama
10	DV Repeater	Enterprise	Alabama
11	DV Repeater	Enterprise	Alabama
12	DV Repeater	Ft Payne	Alabama
13	DV Repeater	Ft Payne	Alabama
14	DV Repeater	Gadsden	Alabama
15	DV Repeater	Gadsden	Alabama
16	DV Repeater	Greenville	Alabama
17	DV Repeater	Greenville	Alabama
18	DV Repeater	Guntersville	Alabama
19	DV Repeater	Huntsville	Alabama
20	DV Repeater	Huntsville	Alabama
21	DV Repeater	Huntsville	Alabama

# Save .csv File to $\mu$ SD Card ID-5100 & ID-51+

- D:\ID-51\Csv\RptList
- Keep file name short
- Remove Non-AlphaNumeric Characters in file name
- Import CSV into Radio
- Menu – SD Card – Import/Export – Import – Repeater List – FileName
- Reboot Radio

# Import Directly to Radio



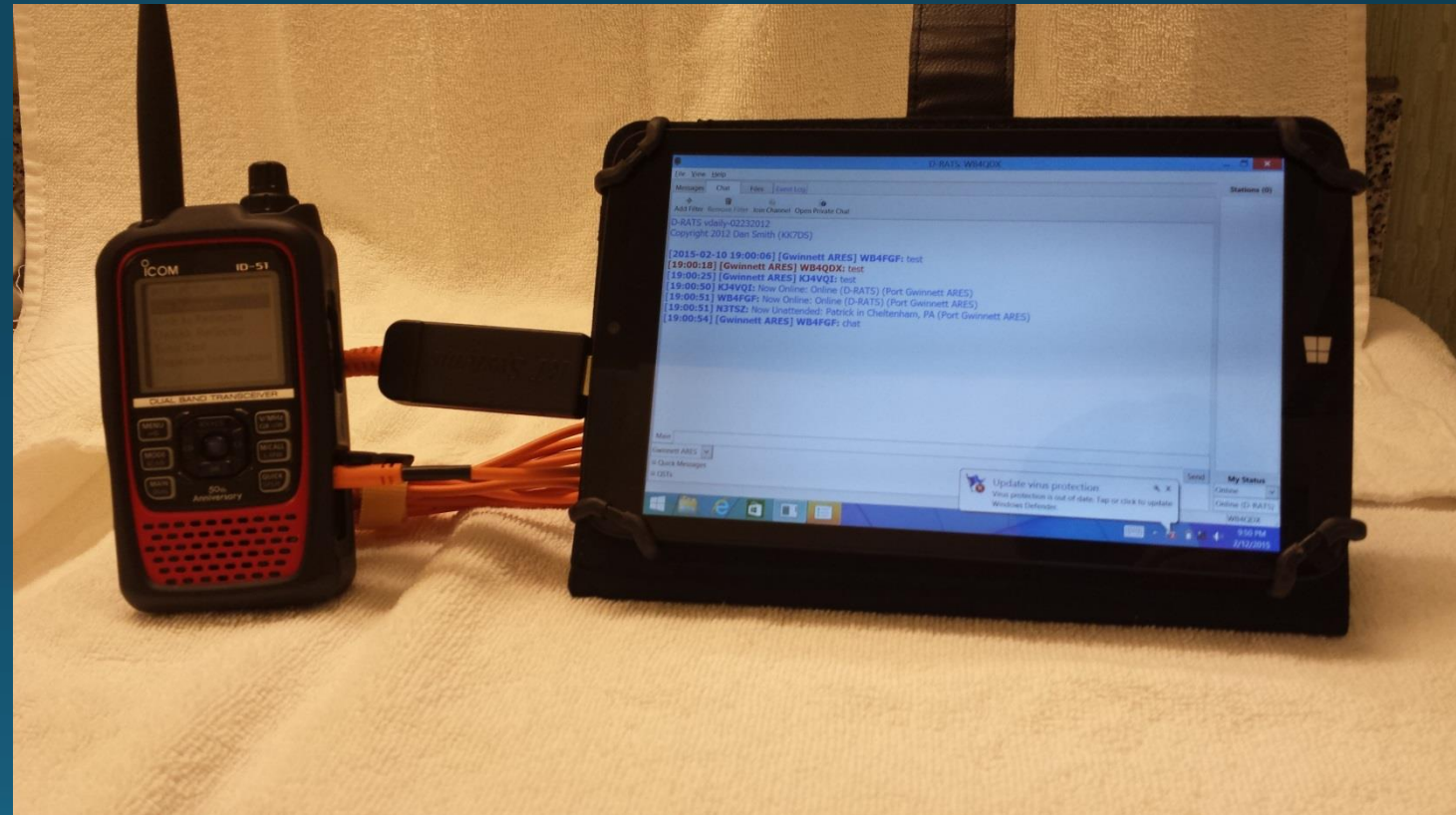
# What's New?





# Windows 8.1 Tablets

- Windows 8.1 tablets have full size USB A host port
- Supports DV Dongle, DVAP or connection to D-STAR radio data port for D-RATS
- Programming radios using current Windows-based programs
- WinBook 7" for \$59.99 from MicroCenter and Amazon
- Also available in 8" and 10" versions



# New Raspberry Pi

- Raspberry Pi 2 Model B now available
- Faster Processor – Quad core ARM 7
- More RAM – 1 GB
- Keeps 4 USB ports and micro SD as in Model B+
- Great for DV Dongle, DVAP, D-RATS applications



# New from NW Digital Radio

- **ThumbDV™** (model number DV3000U)
- Similar to DV Dongle when using G4KLX software
- Connects to Windows PC USB port to allow you to use PC speaker and mic to connect to D-STAR network
- Uses AMBE 3000 vocoder for compatibility with more digital voice standards
- <http://nwdigitalradio.com/>



# AMBE 3000 Info

- Field reports indicated better audio in devices using AMBE 3000.
- DVSI reports that improved algorithm results in better voice quality
  - AMBE 3000 to AMBE 2020
  - AMBE 3000 to AMBE 3000
- No difference in AMBE 2020 to AMBE 3000

# Update from Robin, AA4RC

- Update to Reflector Software
  - Ignores Terminal ID when DVDongle, DVAP, or HotSpot connects
  - Alleviates issues with Receive Only connections to Reflectors
  - WA4YIHA, WA4YIHB, and WA4YIH are all valid Terminal IDs
  - Terminal IDs are the things that you created when you registered
    - Only “Space” is needed
    - Others are not needed when connecting to reflectors
  - Currently updating all DPLUS REF0XX reflectors today
  - Repeater functionality is NOT changed

