

# There's an App for That

Apps for oh, so many parts of your  
Amateur Radio experience

**KA7JEV**

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# Emergency Communications



# SWLing.com

<http://swling.com/blog/2014/01/the-best-amateur-radio-and-shortwave-apps-for-ios-and-android-smart-phones/>

Giving credit where credit is due.

Originally posted in 2014, last updated Dec of 2016.



The Best Amateur Radio and Shortwave Apps for iOS, Android and Windows smart phones

Posted by Thomas



 Windows Phone

# What is an App?

Just in case there are people in here who are unfamiliar with smart devices and apps, an “app” is an application, or special feature, designed for modern electronic devices like “Smart” cell phones and Tablets. Some of these apps are preloaded on your device, others are available in the App Store appropriate for your device.

Basic apps include “Phone”, “camera”, “calculator”, “email”, and “messaging”.

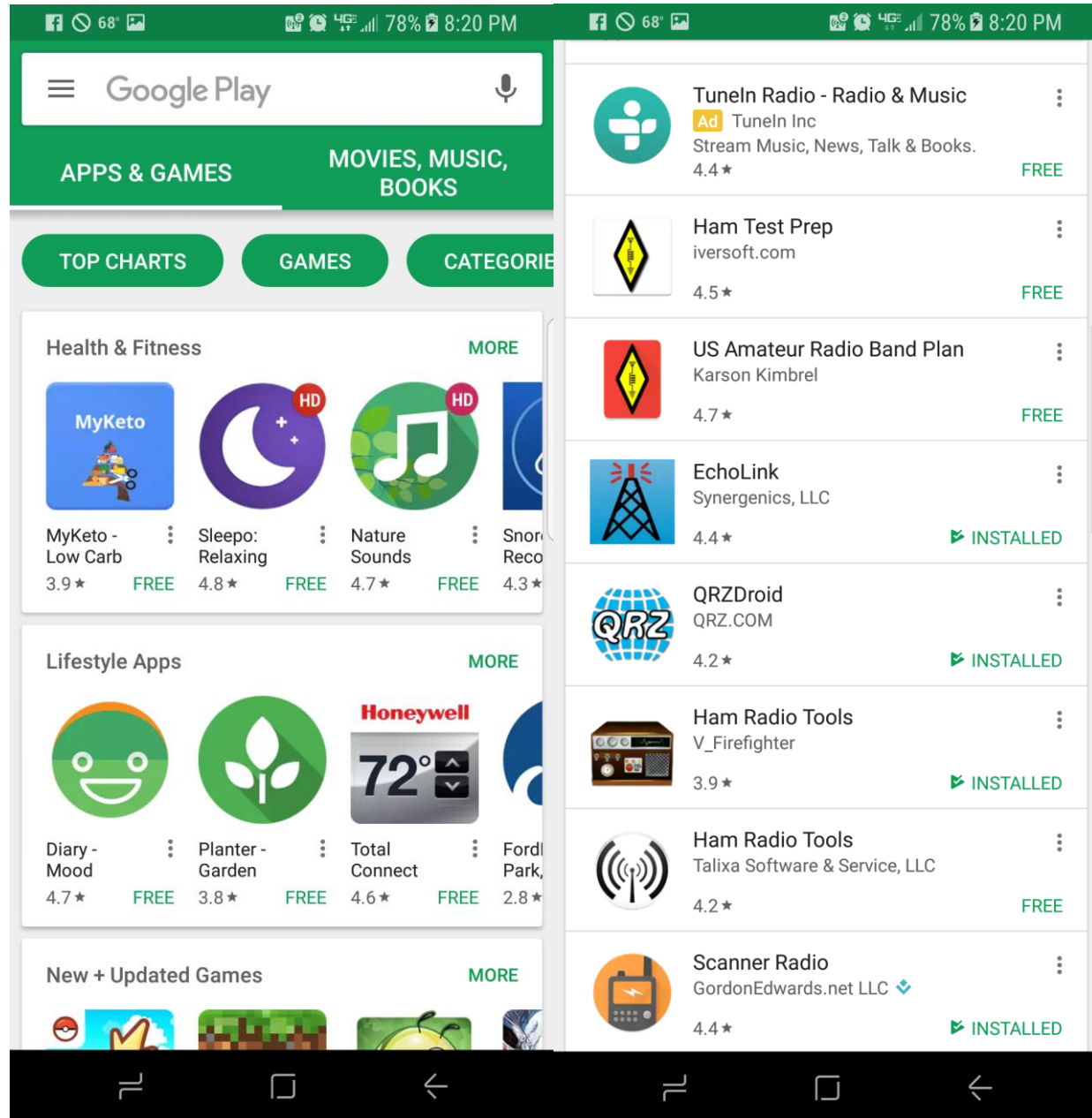
Today, I will be featuring some special, not-so-basic apps.

# Using Google, Apple (iOS), or Windows Play Store

Click on the App Store Icon

Type in the name of the app, or “Ham Radio”, or “Amateur Radio”.

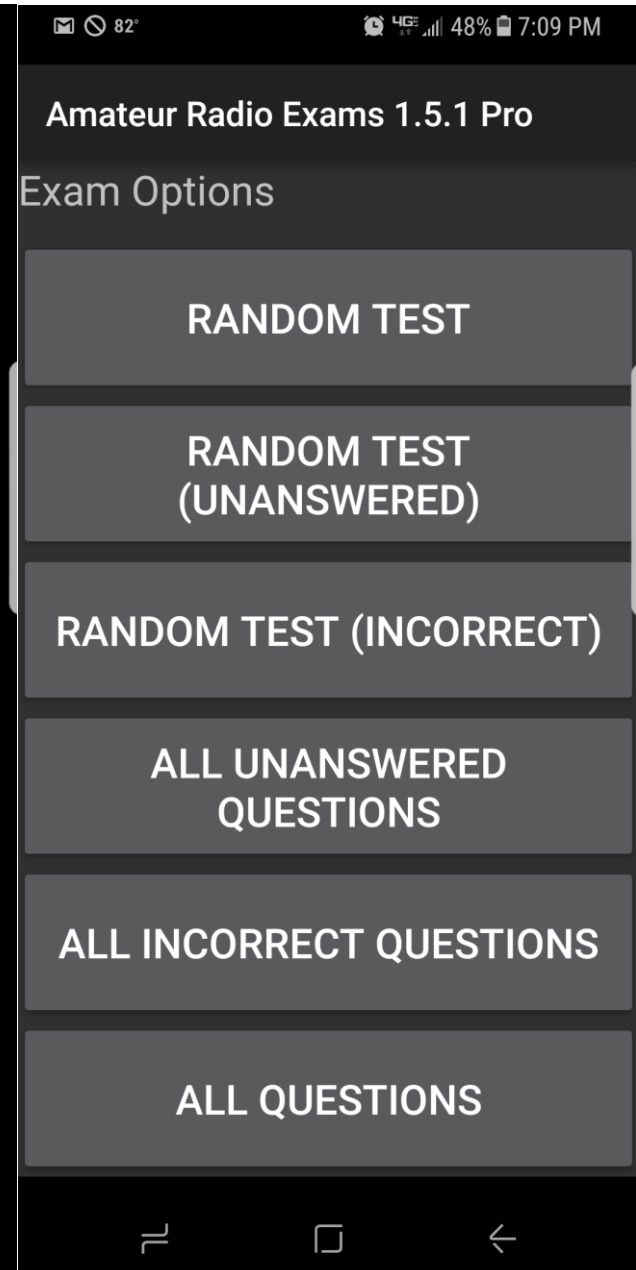
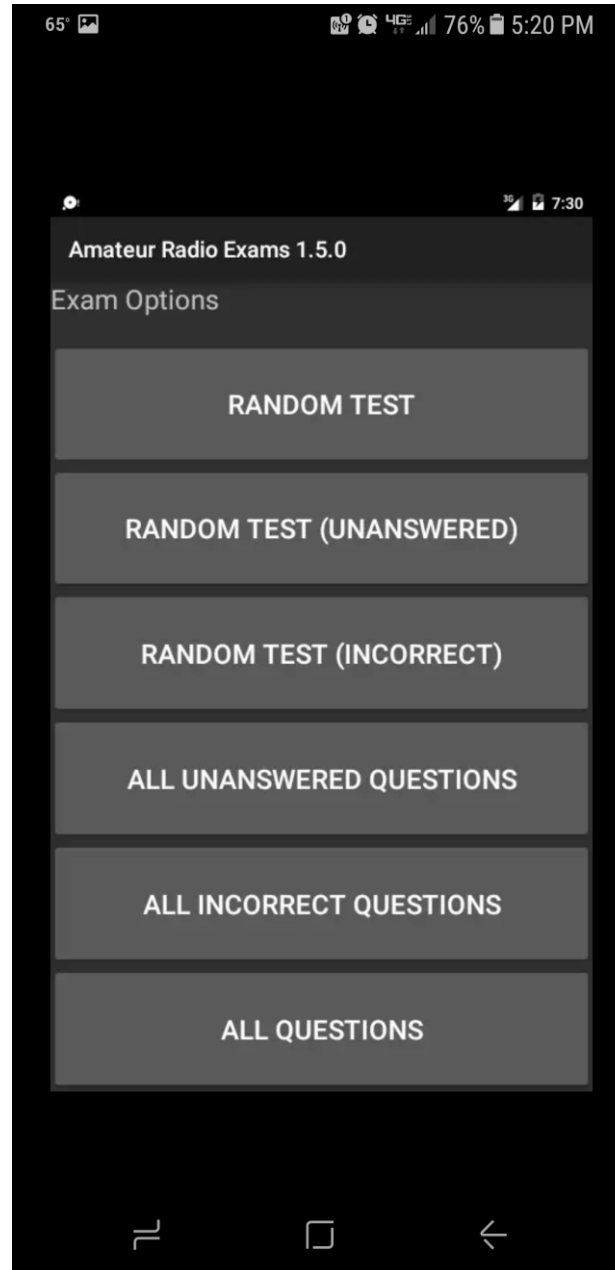
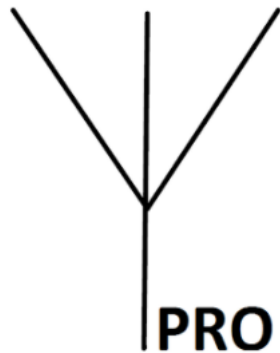
All three stores work similarly.





# Amateur Radio Exams Pro (\$2.99) Android

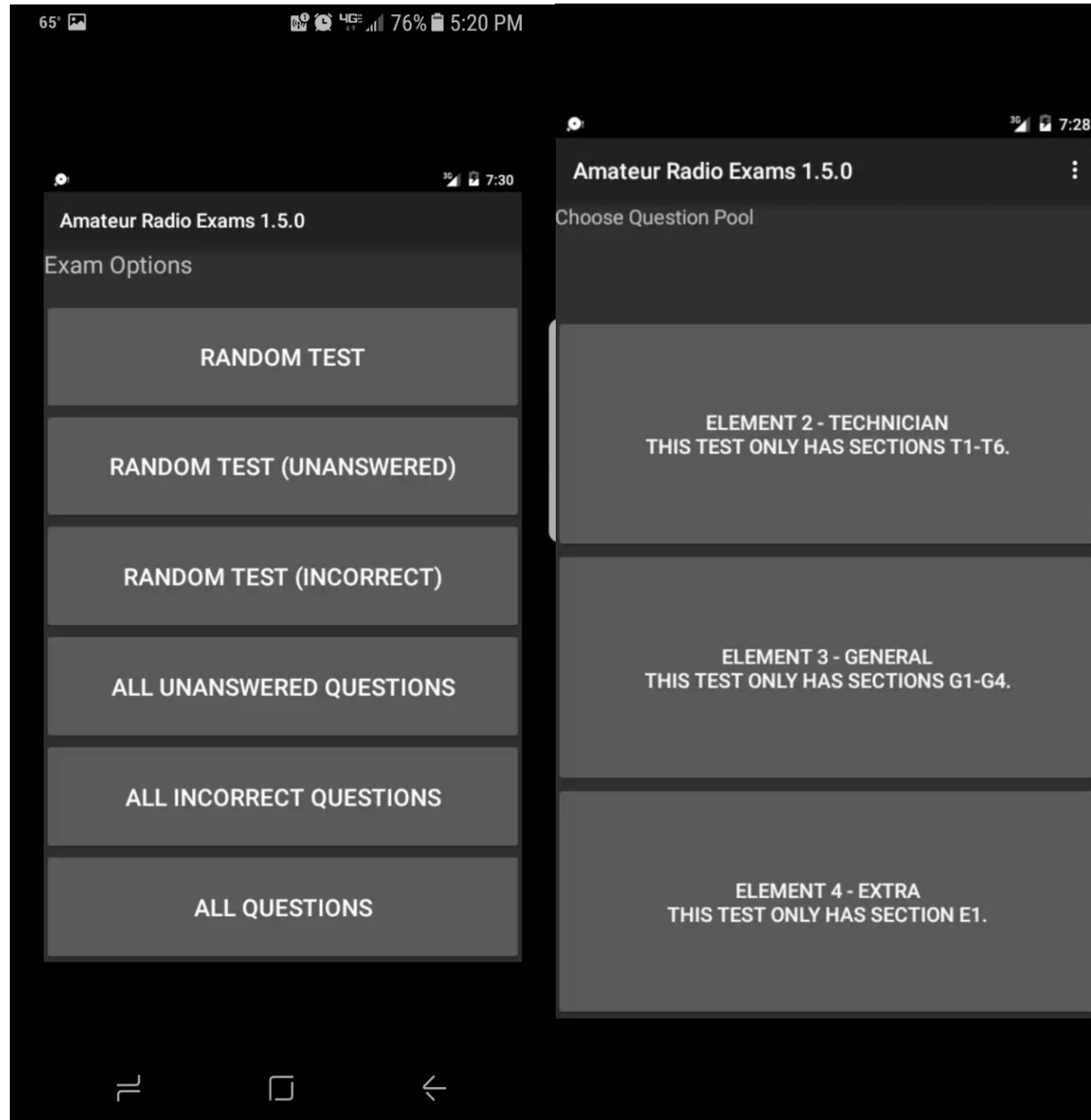
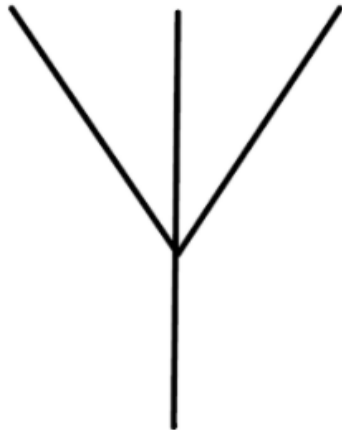
- Includes all three Question Pools with Lifetime Updates
- Keeps track of answered/unanswered questions
- Keeps track of correct/incorrect answers
- Allows random or ordered question order





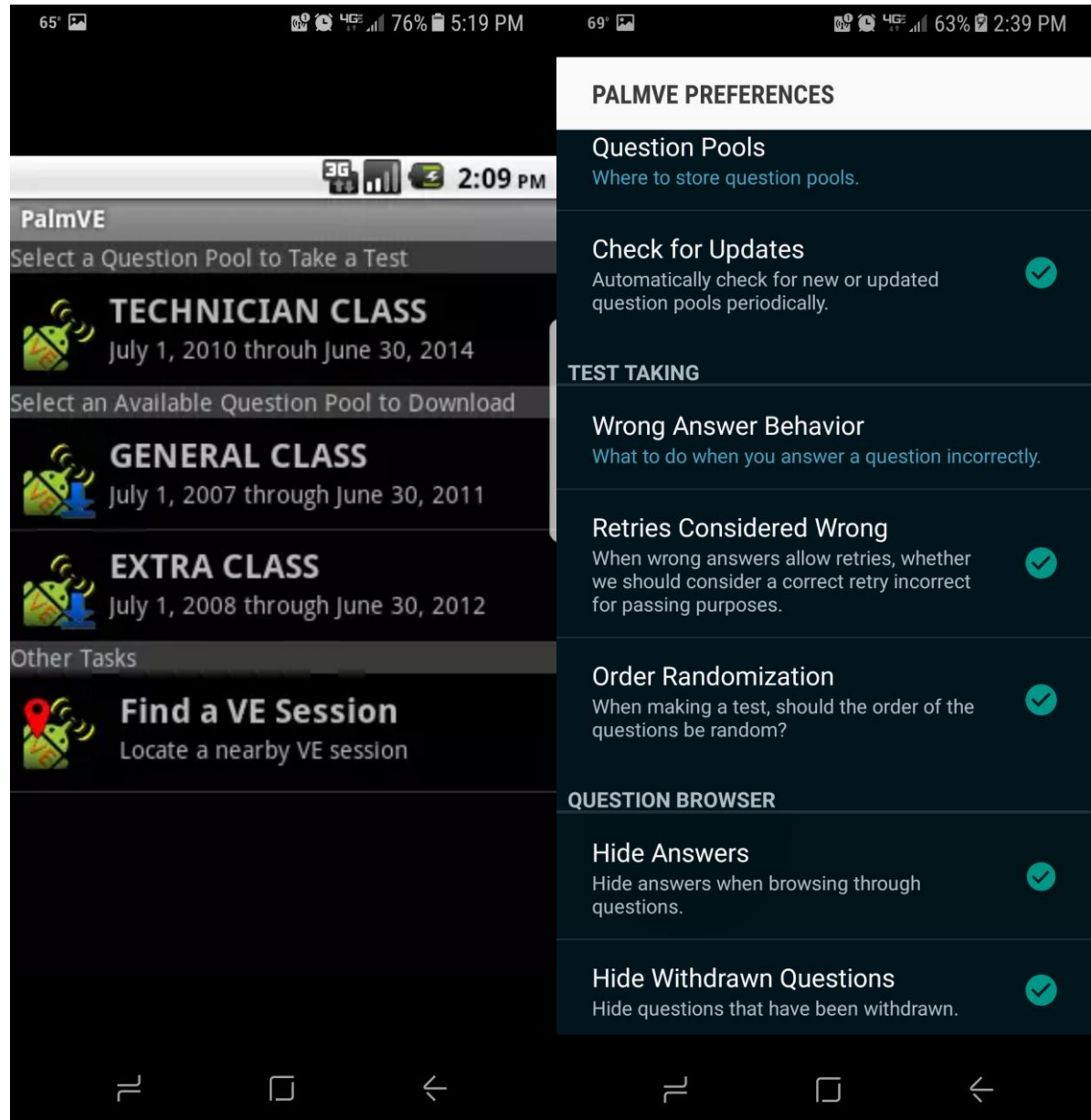
# Amateur Radio Exams (Free) Android

- Contains limited elements for all three question pools
- Has the same features as the Pro version, just with limited elements



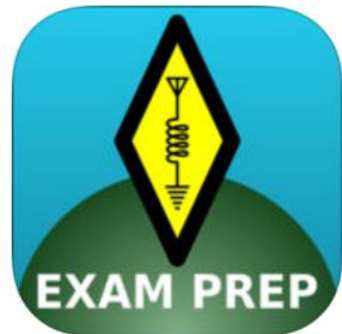
# PalmVE (Free) Android

- Track test history
- Search question pools
- Display figure images
- Find Volunteer Examinations nearby



# Amateur Radio Exam Prep (\$4.99 per exam) iOS

- Keeps track of correct/incorrect questions
- Adaptive
- There is a free version with limited elements



Carrier 12:27 AM

## Amateur Radio Exam Prep

Carrier 12:32 AM

## Question Review

TECHNICIAN CLASS (ELEMENT 2)

Review Question Pool >

Practice Question Pool >

FCC Rules & Regulations >

PRACTICE TESTS

New Test >

Test History >

Settings >

INFORMATION

About Application >

VHF/UHF operating practices: SSB phone; FM repeater; simplex; splits and shifts; CTCSS; DTMF; tone squelch; carrier squelch; phonetics; operational problem resolution; Q signals

**Group T2C:** Test Proficiency: 100.0%  
Public service: emergency and non-emergency operations; applicability of FCC rules; RACES and ARES; net and traffic procedures; emergency restrictions

Subelement T2 Test Proficiency: 100.0%

SUBELEMENT T3:  
RADIO WAVE CHARACTERISTICS: PROPERTIES OF RADIO WAVES; PROPAGATION MODES

**Group T3A:** Test Proficiency: 0.0%  
Radio wave characteristics: how a radio signal travels; fading; multipath; wavelength vs. penetration; antenna orientation

**Group T3B:** Test Proficiency: 100.0%  
Radio and electromagnetic wave properties: the electromagnetic spectrum; wavelength vs. frequency; velocity of electromagnetic waves; calculating wavelength

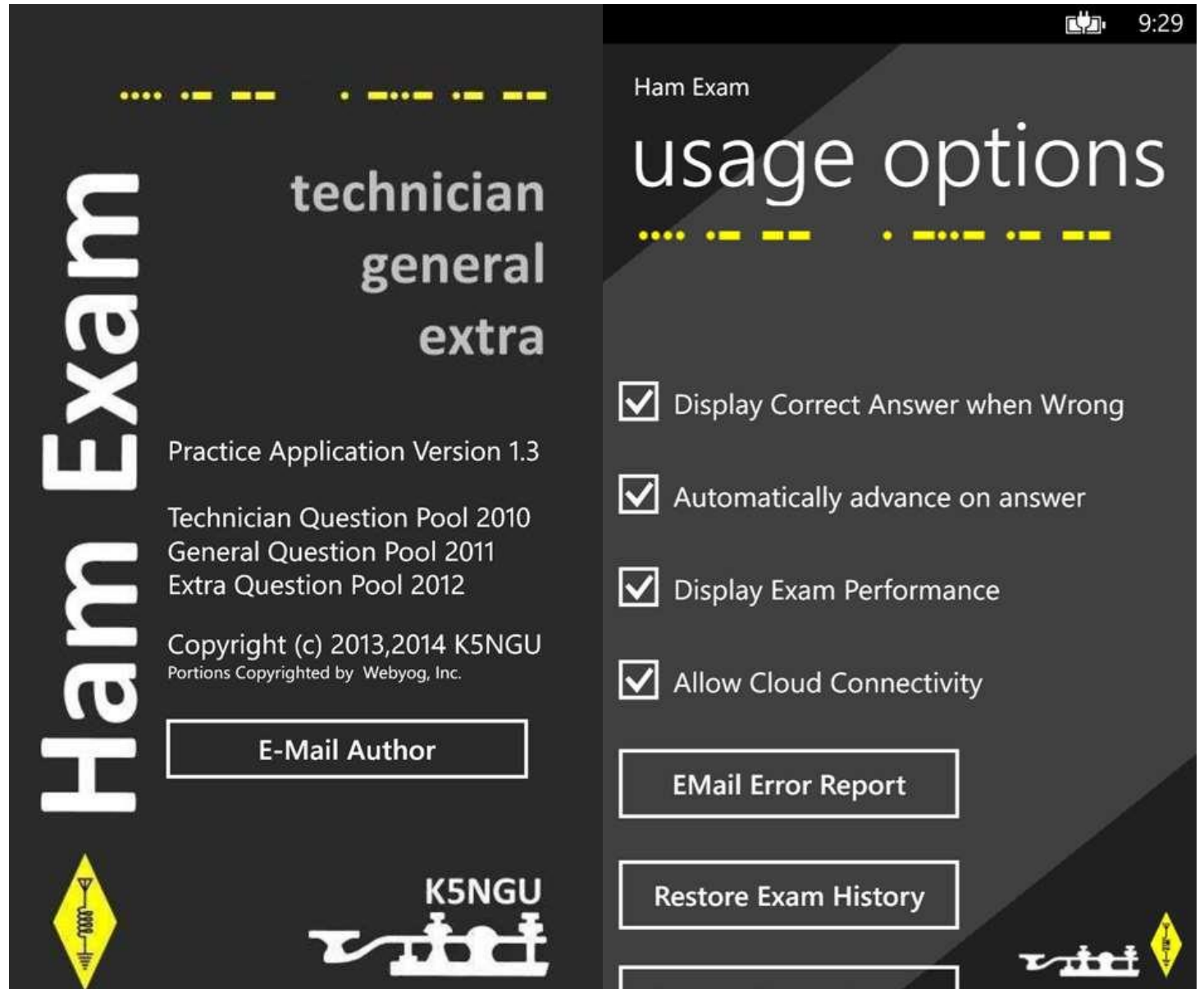
**Group T3C:** Test Proficiency: 0.0%  
Propagation modes: line of sight; sporadic E; meteor and auroral scatter and reflections; tropospheric ducting; F layer skip; radio horizon

Subelement T3 Test Proficiency: 33.3%

SUBELEMENT T4:

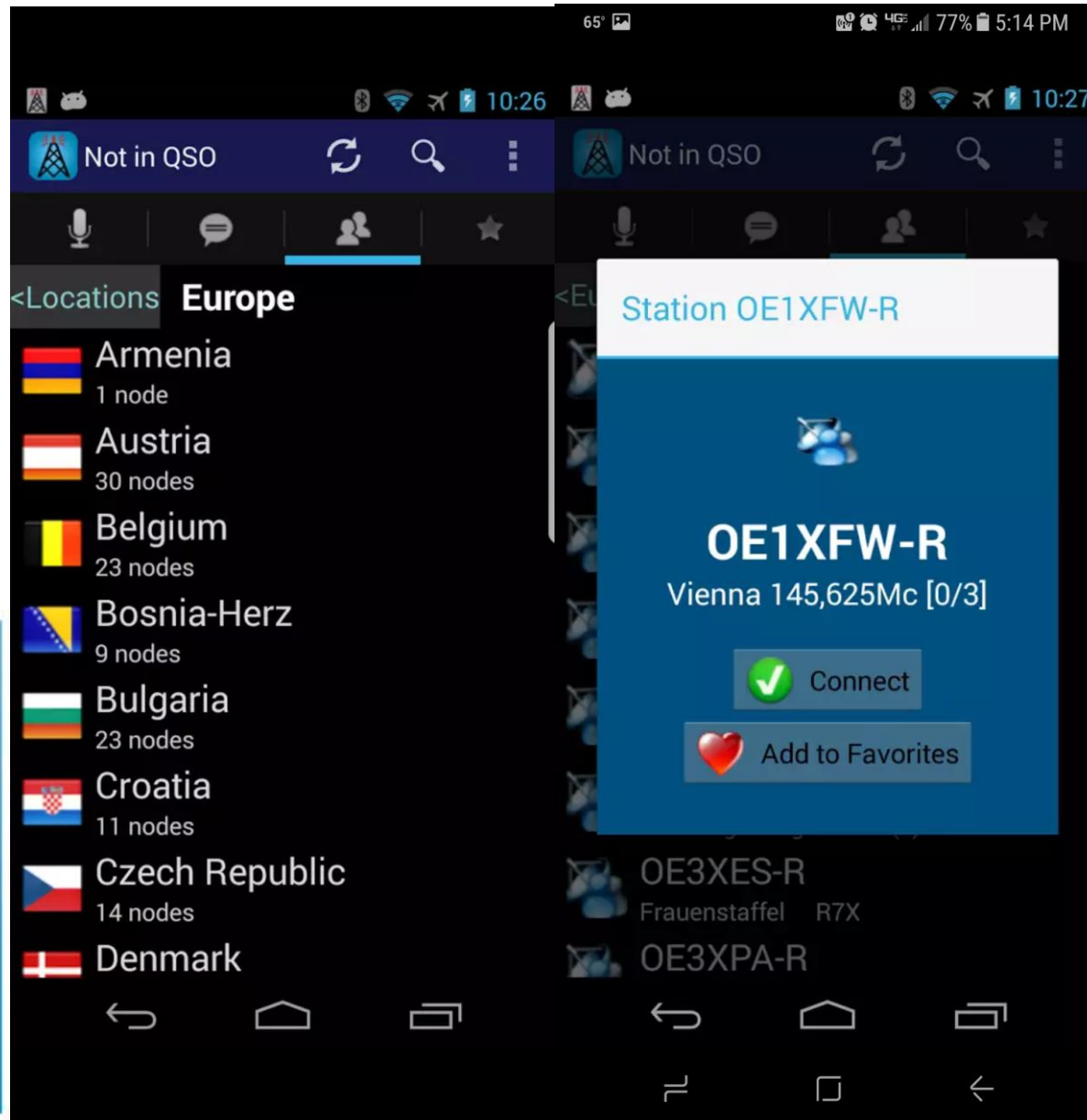
# Ham Exam (Free) Windows

- Has all three question pools
- Randomizes questions
- Keeps track of correct/incorrect answers
- Scores and graphs performance



# EchoLink (Free) Android/iOS

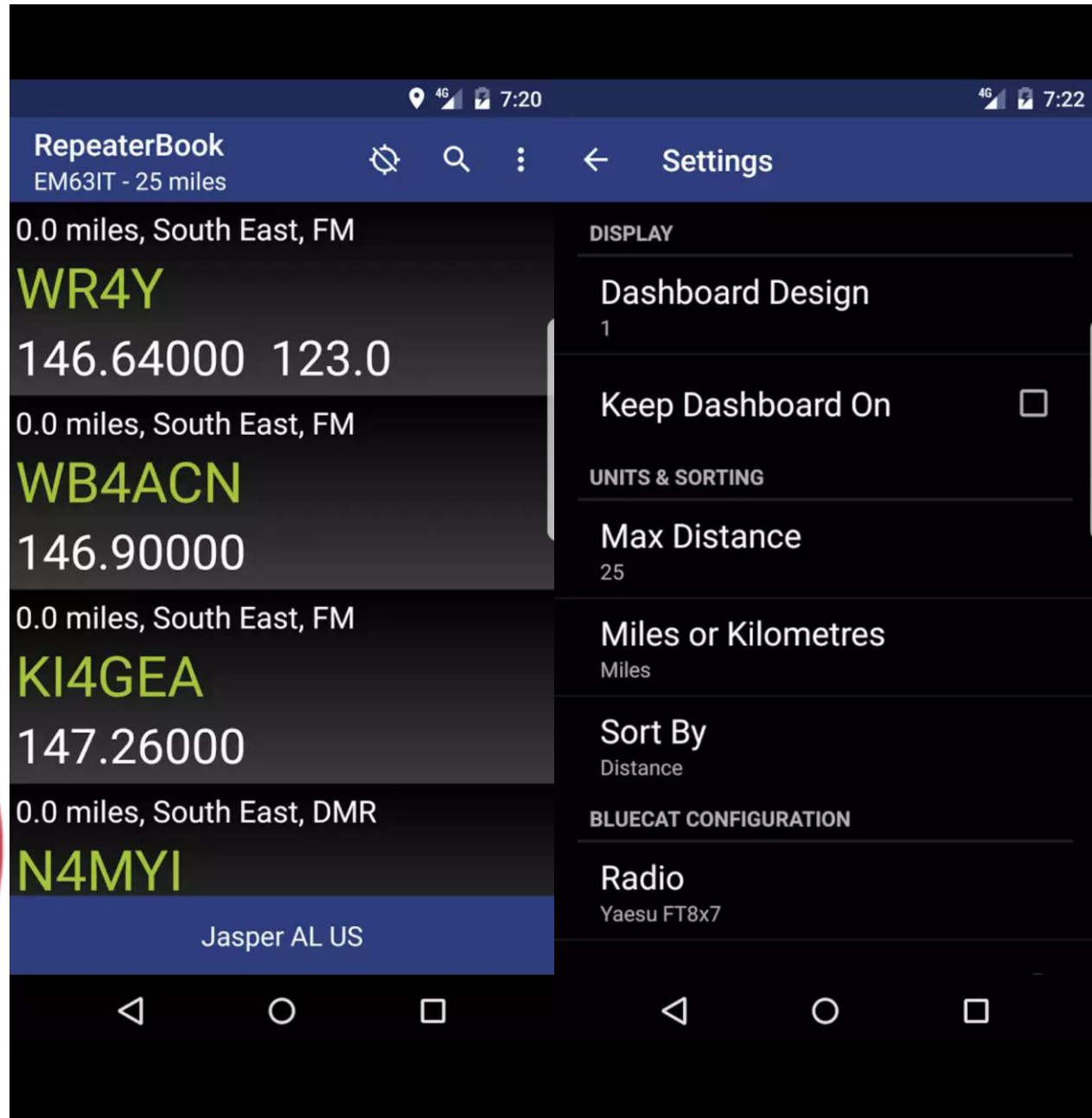
- This app is for licensed radio operators only
- Uses the internet to connect you to Hams around the world





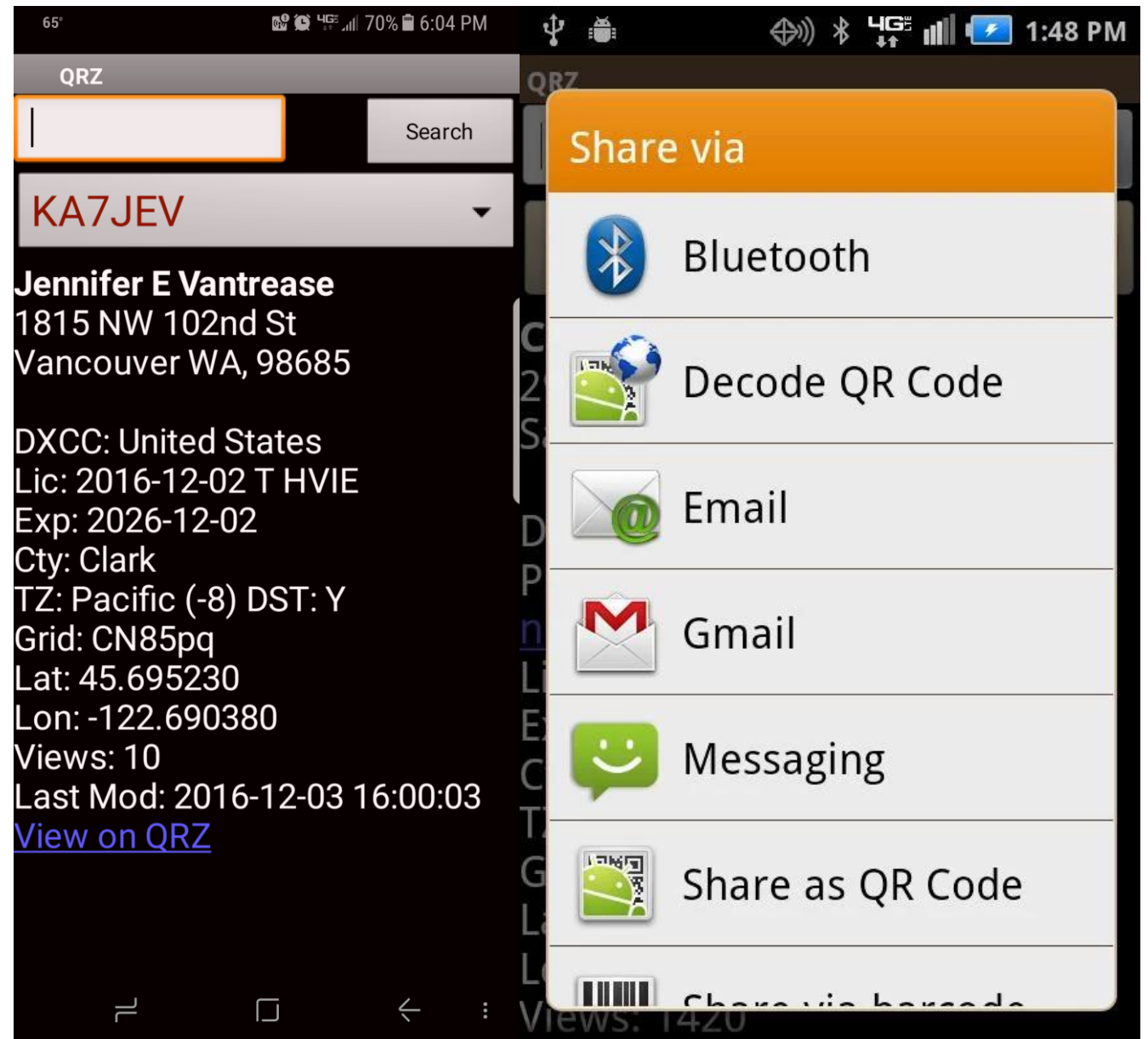
# Repeater Book (Free) Android/iOS

- Uses phones GPS to find nearby repeaters
- Any band
- Any mode
- Anywhere



# QRZ Callsign Search (Free) Android/iOS

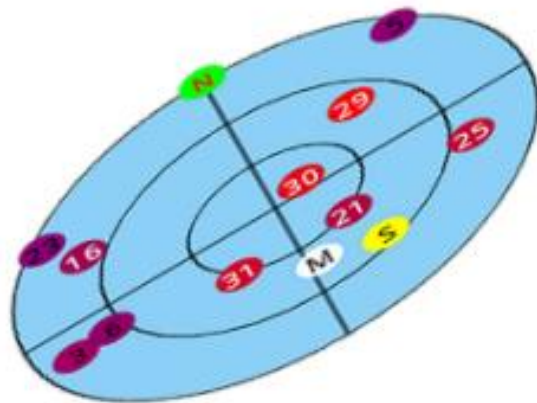
- Companion app for QRZ.com
- Search call signs anywhere
- Share call signs easily





# HamGPS (Free) Android

- Display your current Maidenhead location with 10 digit precision
- Compute bearing and distance
- Align antennas



UTC: 2016-11-04 21:29:35 Sats: 13/13  
±13 m

0.0 km/h Compass: 278.2°  
ED4YAE: 45.149 km at 303.1°

5 12 13 15 18 19 20 24 71 72 73 80 82

IN80DL67XU  
790 m

**Battery**  
Li-ion battery  
3.950 V, 27.7 °C

**Accelerometer**  
MPU6500 Accelerometer Sensor...  
9.98 m/s<sup>2</sup>, accuracy: high

**Magnetometer**  
YAS532 Magnetic field Sensor...  
44.93 μT, accuracy: high

**Luxometer**  
CM36651 Light Sensor Capella...  
11.0 lx, accuracy: high

**Barometer**  
No sensor available

**Thermometer**  
No sensor available

**Hvarometer**

# Ham Square (Free) iOS

- Displays current maidenhead location

A screenshot of an iPhone app titled "Maidenhead Locator". The status bar at the top shows "O2-UK", signal strength, Wi-Fi, time "13:44", Bluetooth, and battery "95%". The app displays the following information in a white box:

IO93ic  
53.099285° N  
1.250834° W  
+/- 100m

Below this box is a button that says "More apps at KramStuff". At the bottom of the screen is an advertisement for "Dove MEN + CARE" featuring "ALBERT PUJOLS' JOURNEY TO COMFORT" and a photo of a man. The background of the app is a photograph of a radio tower.

# ISS Detector (Free) Android

- Know when and where to look for the International Space Station and iridium flares
- In-app purchases allow tracking of Ham Radio Satellites, Planets, Comets, and famous objects like Hubble



The screenshot displays the ISS Detector app interface on an Android device. The top status bar shows the time as 15:08. The app's main header is blue and contains a notification bell, a filter icon, and a menu icon. Below the header, a blue bar displays "Next: 6h 55m 32s" and "Grid: J022ib Reeuwijk". The main content area is divided into two sections: a list of satellite passes on the left and a radar chart on the right.

The list of satellite passes includes the following entries:

Satellite	Magnitude	Time	Altitude	Visibility
Iridium 11	Mag 0.6	00:06:39	36°	Visible
ISS	Mag -3.4	00:17:19 00:23:22	36°	Visible
Iridium 58	Mag 0.0	01:33:22	55°	Visible
ISS	Mag -3.8	01:53:18 01:59:50	82°	Visible
Iridium 8	Mag 0.6	03:09:36	49°	Clouded
ISS	Mag -3.9	03:29:42 03:36:12	68°	Clouded
Iridium 54	Mag 1.0	04:37:26	30°	Clouded

The radar chart on the right shows a circular view of the sky with a grid of lines. A blue line indicates the path of the ISS, starting from the bottom left and moving towards the top right. The chart is labeled with "RADAR" and "DETAILS" at the top. The time "00:36:21" and "6m 24s" are displayed at the top of the chart. The chart also shows a moon icon and a compass rose. At the bottom of the chart, the text "Start Direction NW (311°)" and "Start elev. 10°" is visible.



# PSK31 (\$2.99)

## iOS

- Decodes PSK31 signal on the fly as long as the phone microphone is near the radio speaker



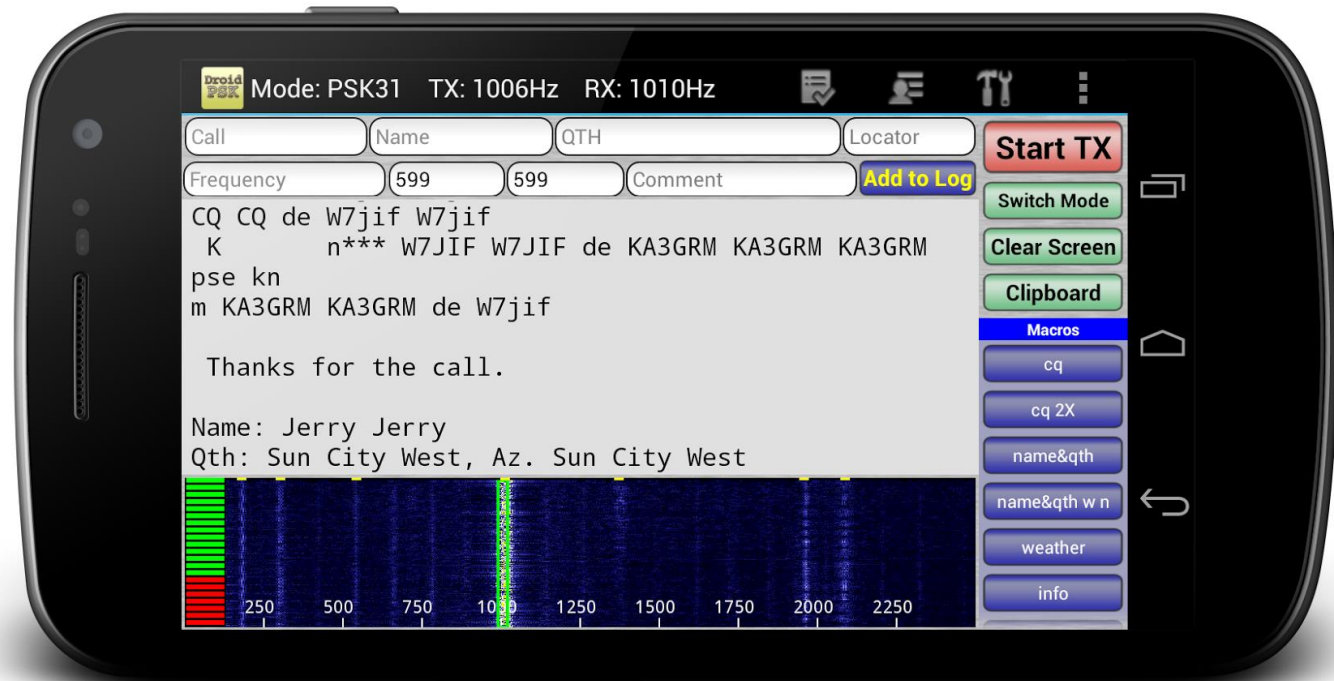
The screenshot shows the app's interface. At the top, there is a frequency display with a white box containing the number "1902". Below this is a horizontal frequency scale with red tick marks and labels at 700, 900, 1100, 1300, 1500, 1700, 1900, and 2100. The main area of the screen is a spectrogram showing a signal at the 1900 Hz mark. Below the spectrogram, there is a text area containing the following text:

```
=d  
e br  
Repos e at e9 e of-20n  
eeaQ: David O os eolee CQ dx HK3DC CQ dx HKIA/Ee3 tNT TO GO RPT DXMARTIN Ion Gse h)p  
ces  
, BGjIMJ Wellbeme to my shack.oIRST ; 599 599  
Q@ :zoberoo Stuckert Roberto Stuckert QTH : Brasilia-DF  
Loc : GH64bg para <his:Locato  
Info : qrz.com
```

At the bottom of the text area, there is a line of text: "Hov do yo o cepy? BTU BG6IMK BG6IMK de PT2GTI pse kn u e.sssee, a att Ao(e en fi

# Droid PSK (\$5.49) Android

- Decodes and encodes PSK31 signal
- Version 2.0 includes logbook



# PocketSat3 (\$24.99) Android/iOS

- Free DEMO Version is PocketSat3 LE to review software before purchase
- Predict when and where to see satellites



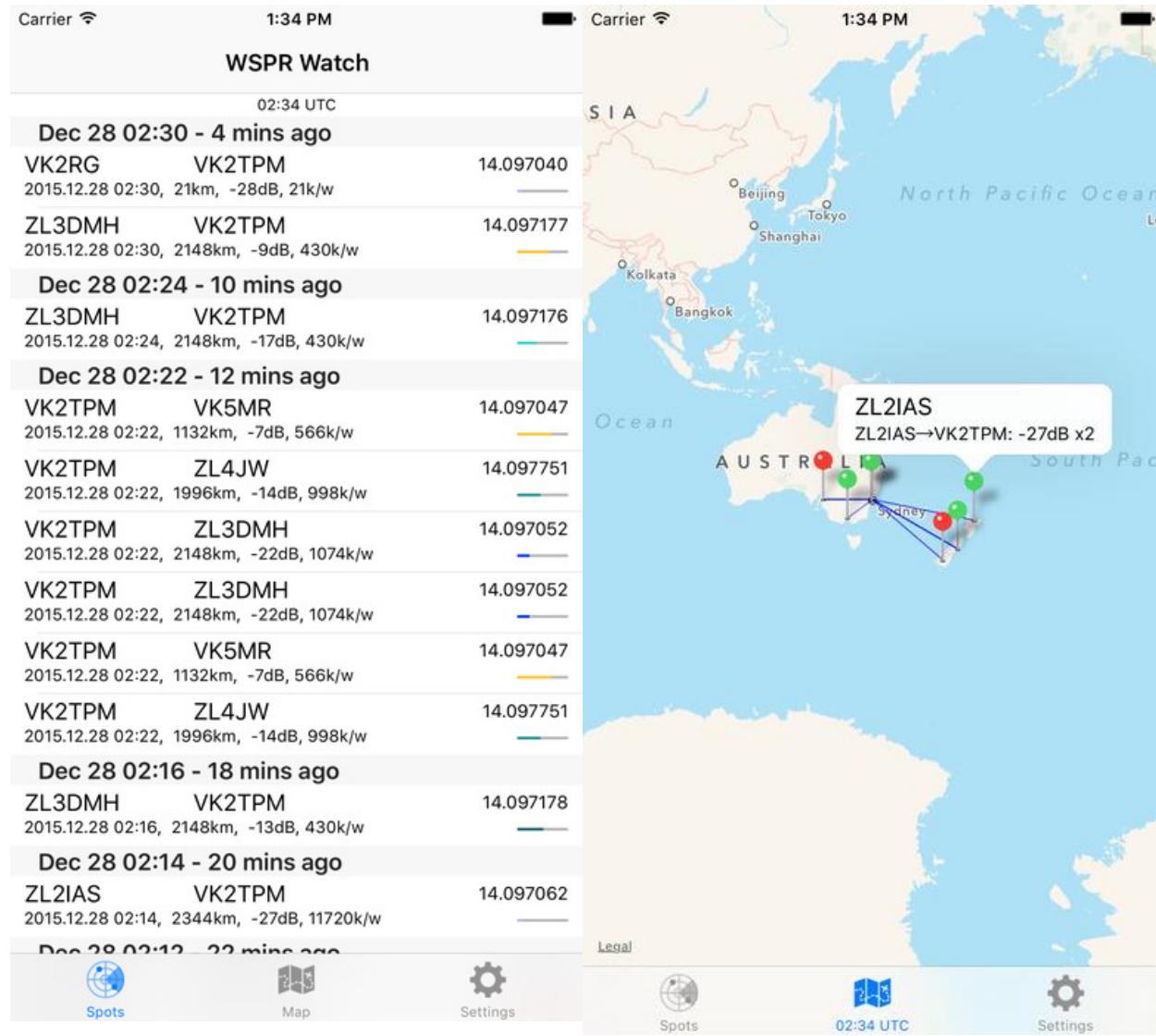
All	Satellites	Prefs	<<	>>	Cosmos 2333r ID: 24298	Prefs			
✓	Cosmos 2421 ID: 29247 Mag: 0.7 Age: 1d								
✓	Cosmos 2428r ID: 31793 Mag: 2.0 Age: 2d								
✓	HJ1A LMr ID: 33322 Mag: 1.2 Age: 1d								
✓	HST ID: 20580 Mag: 0.7 Age: 3d	>							
✓	IGS 1H2Ar ID: 27700 Mag: 0.5 Age: 2d								
✓	IGS 3A H2Ar ID: 29394 Mag: 1.3 Age: 1d								
✓	ISS ID: 25544 Mag: -3.9 Age: 2d								
✓	Koronas Fr ID: 26874 Mag: 1.6 Age: 2d								
Import Data		Select							
Sats	Map	Sky	Pass	09.11.02 15:16:58	Sats	Map	Sky	Pass	09.11.03 18:56:39

El: 30° 10'      Mag: 4.3  
 Az: 301° 37'      Alt: 864.0km  
 R: 1490.4km



# WSPR Watch (\$Free) iOS

- Shows reported beacon spots on a list, on a map, and makes graphs
- Shows who can hear you

The image shows two screenshots of the WSPR Watch app on an iPhone. The left screenshot displays a list of WSPR beacon spots. The right screenshot shows a map of the Pacific Ocean region with a callout for a specific spot.

**WSPR Watch**

02:34 UTC

Time	Spot 1	Spot 2	SNR	
Dec 28 02:30 - 4 mins ago	VK2RG	VK2TPM	14.097040	
2015.12.28 02:30	21km, -28dB	21k/w		
ZL3DMH	VK2TPM	14.097177		
2015.12.28 02:30	2148km, -9dB	430k/w		
Dec 28 02:24 - 10 mins ago	ZL3DMH	VK2TPM	14.097176	
2015.12.28 02:24	2148km, -17dB	430k/w		
Dec 28 02:22 - 12 mins ago	VK2TPM	VK5MR	14.097047	
2015.12.28 02:22	1132km, -7dB	566k/w		
VK2TPM	ZL4JW	14.097751		
2015.12.28 02:22	1996km, -14dB	998k/w		
VK2TPM	ZL3DMH	14.097052		
2015.12.28 02:22	2148km, -22dB	1074k/w		
VK2TPM	ZL3DMH	14.097052		
2015.12.28 02:22	2148km, -22dB	1074k/w		
VK2TPM	VK5MR	14.097047		
2015.12.28 02:22	1132km, -7dB	566k/w		
VK2TPM	ZL4JW	14.097751		
2015.12.28 02:22	1996km, -14dB	998k/w		
Dec 28 02:16 - 18 mins ago	ZL3DMH	VK2TPM	14.097178	
2015.12.28 02:16	2148km, -13dB	430k/w		
Dec 28 02:14 - 20 mins ago	ZL2IAS	VK2TPM	14.097062	
2015.12.28 02:14	2344km, -27dB	11720k/w		
Dec 28 02:12 - 22 mins ago				

The right screenshot shows a map of the Pacific Ocean region. A callout box for ZL2IAS is visible, showing the spot details: ZL2IAS → VK2TPM: -27dB x2. The map shows the North Pacific Ocean and South Pacific Ocean, with various cities marked like Beijing, Tokyo, Shanghai, Kolkata, and Bangkok. The WSPR Watch app interface includes a bottom navigation bar with icons for Spots, Map, and Settings.



# MacLogger DX HD (\$30.99) iOS

- Monitors spots from your favorite DX cluster for DXing, contesting, and rag-chewing
- Alerts to rare contacts and band openings



The screenshot displays the MacLogger DX HD software interface. At the top, there are navigation buttons: Look Up, Log QSO, Clear, Time On, Time Off, Log, Map, Cluster, Help, and a settings gear icon. The main area is split into two columns, each showing a log entry for the call sign VQ9KA on 2013-09-11 at 11:53:36 and 11:54:40. Each entry includes details like Local time (2013-09-11 17:53), First name (Yasuhiko), Last name (Kazeno), Street (4-2-19 Nishisunacyo), City (Tachikawa-city), Country (Japan), and Email (vq9ka@kazeno.com). Technical details include Frequency (21.27000 MHz), Mode (USB), Power, RSTS, RSTR, Grid (M62er), Locator (Net LL), ITU (30TA), and QD (10/10). A small image of a tropical beach is shown next to each log entry. Below the logs is a world map with a red grid and a red line indicating the location of VQ9KA (333°/153° 10,134 mi). On the right side, there is a 'DXCluster Commands' section with a 'Connected' status and a list of commands: VE3VRW, FSLEN, GB7CGL, GB7DJK, GB7DXA, and GB7MRO. Below this is a list of recent contacts with columns for time, call sign, country, and frequency/band/mode. The contacts include TF2MSN (Iceland), I2SGST (Italy), VU2VID (India), VE3VRW (Canada), CT9/DJ8OG (Madeira Islands), VQ9KA (Chagos Islands), CT9/DJ8OG (Madeira Islands), and OE5JKL/P (Austria). At the bottom right, there are 'Auto Connect' and 'Auto Lookup' toggle switches and a '8/13 Spots' indicator.

# HF Propagation (\$Free) Windows

- Current conditions of HF and VHF bands
- Additional solar and terrestrial propagation related data



# Ham-Friend:

## ham bands solar data

23 Sep 2012 0119 GMT

Band	Day	Night
80m-40m	Fair	Good
30m-20m	Good	Good
17m-15m	Good	Good
12m-10m	Fair	Poor

Geomag	VR QUIET
Noise Level	S0-S1

VHF Aurora	65.6
Aurora Lat	Band Closed
E-skip EU 2m	Band Closed
E-skip EU 4m	Band Closed
E-skip EU 6m	Band Closed
E-skip NA 2m	Band Closed

23 Sep 2012 0119 GMT

Solar Flux	126	
Sun Spots	74	
A-Index	4	
K-Index	1	No Report
X-Ray	B4.6	
Helium Line	161.6	
Proton Flux	2.04e-01	
Electron Flux	1.51e+02	
Aurora	3	3.06
Magnetic Field	0.1	
Solar Wind	407.6	
FoF2	8.00	

**Target Body, Neck Or Face**  
BodyWrapParties.com

**Guide to Diet Supplements**  
www.youbeauty.com/supplements

# Ham Reference (Free) Windows

- Band plans
- Resistor color codes
- Dipole antenna tuning
- Cheat sheets for new hams

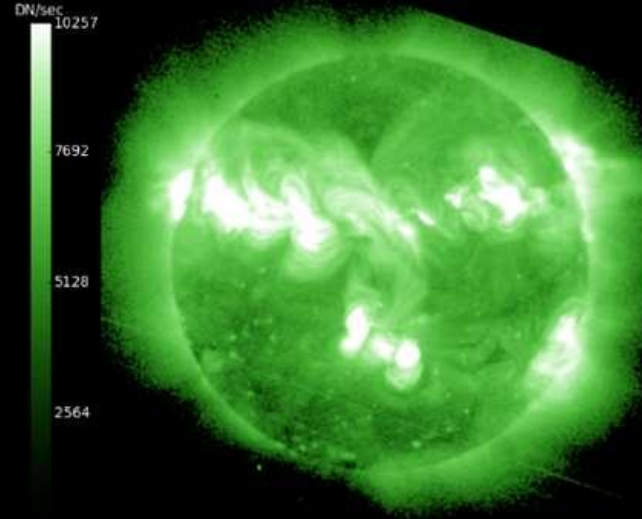


HAM RADIO REFERENCE

## conditions band

latest GOES solar x-ray image

GOES-15 SXI Level-1  
NOAA/SWPC Boulder, CO



DN/sec  
10257  
7692  
5128  
2564  
1

2011-11-22 23:24:00 UTC PTHNA 0.4 s

latest NOAA geophysical alert message

:Product: Geophysical Alert Message www.txt  
:Issued: 2011 Nov 22 2105 UTC  
# Prepared by the US Dept. of Commerce, NOAA,  
Space Weather Prediction Center

HAM RADIO REFERENCE

## 40m band

[ 7.000 - 7.300 (7 mhz) ]

40m	cw	phone	image	data
<b>tech</b>	7.025- 7.125	not allowed	not allowed	not allowed
<b>genl</b>	7.025- 7.300	7.175- 7.300	7.175- 7.300	7.025- 7.125
<b>extra</b>	7.000- 7.300	7.125- 7.300	7.125- 7.300	7.000- 7.125

**maximum output power:**

⚠ Technician - 200 W PEP  
General, Extra - 1,500 W PEP

**frequency -- mode**

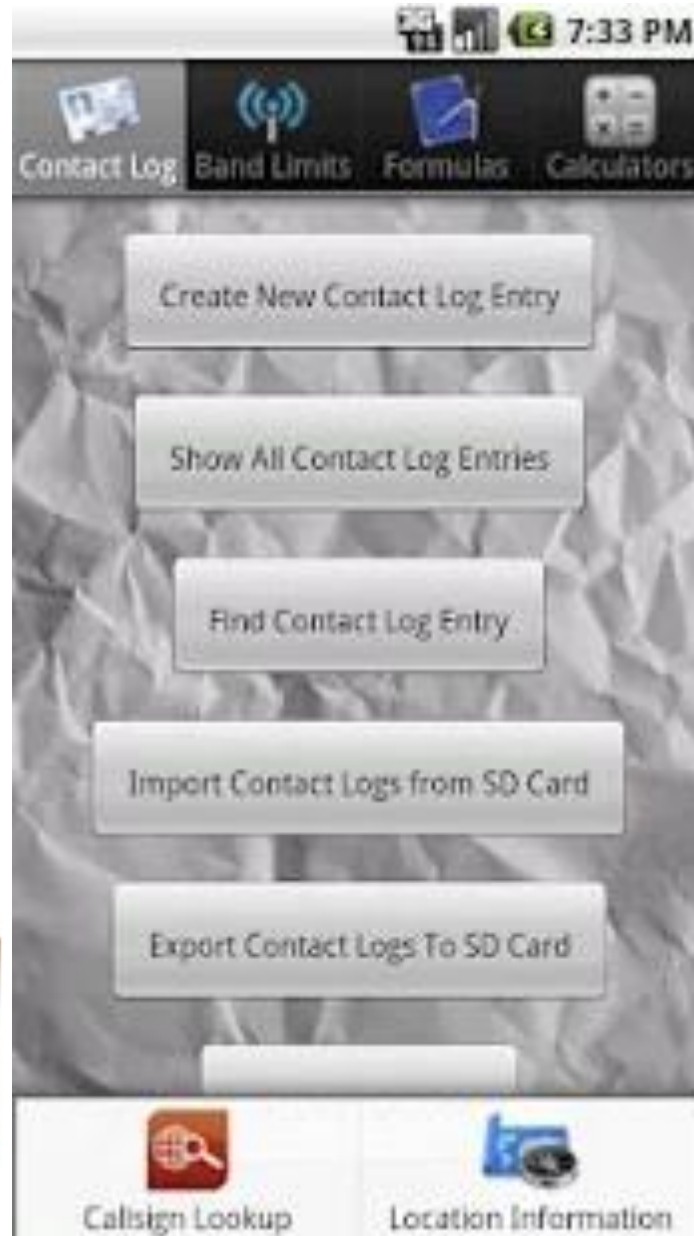
7.040 -- RTTY/Data DX (300 baud)  
7.080-7.125 -- RTTY/Data (300 baud)  
7.171 -- SSTV  
7.290 -- AM calling frequency

Note: Phone and Image modes are permitted between 7.075 and 7.100 MHz for FCC licensed stations in ITU Regions 1 and 3 and by FCC licensed stations in ITU



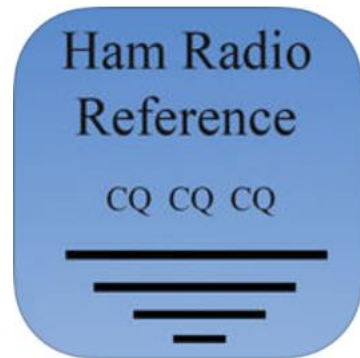
# Ham Radio Tools (Free) Android

- look up call sign information
- Current GPS location
- Log contacts
- Calculate  $\frac{1}{4}$  and  $\frac{1}{2}$  wave length antennas



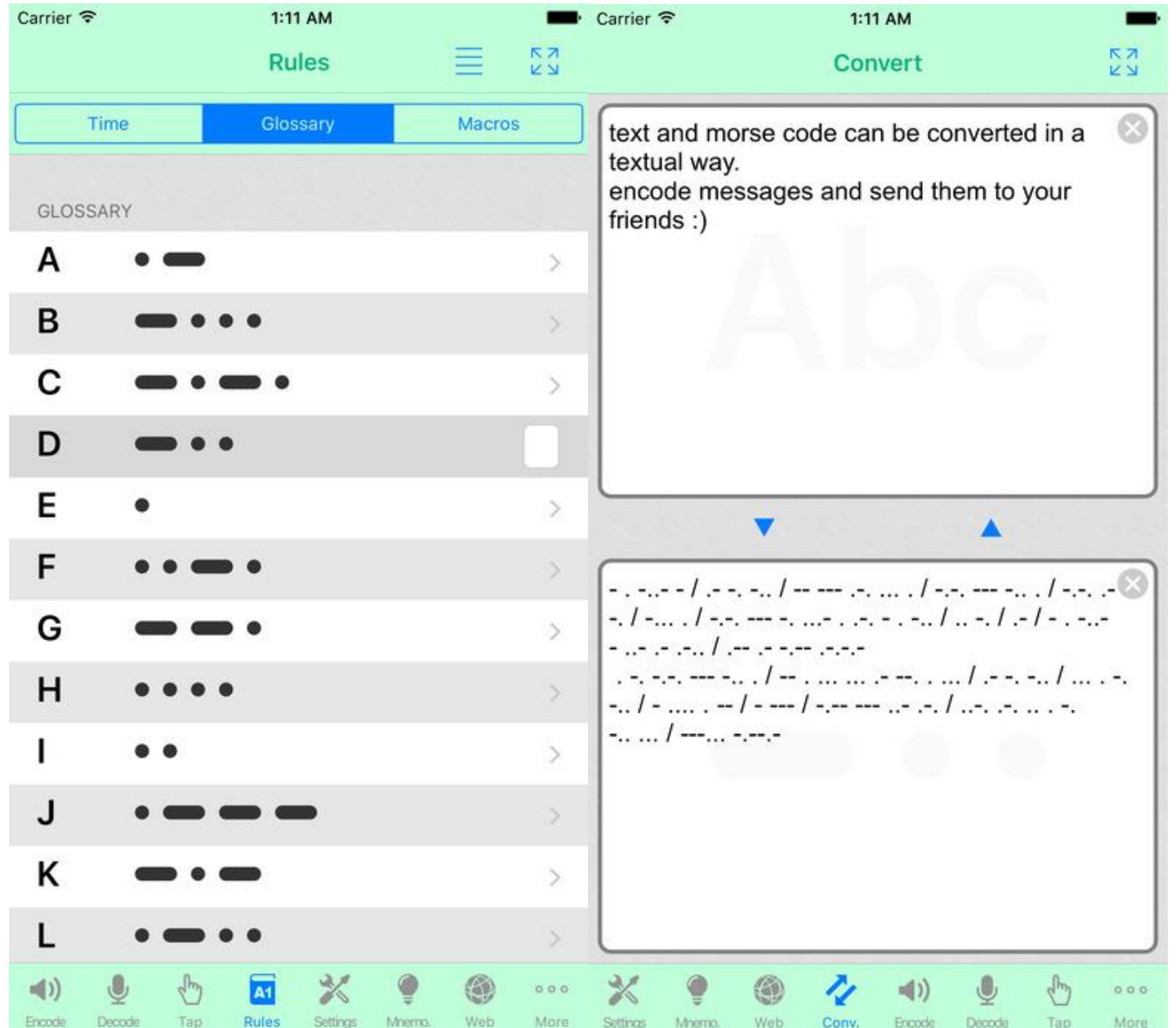
# Ham Radio Reference (\$0.99) iOS

- Band Plans
- Q Codes
- Phonetic Alphabet
- Metric Prefixes
- 



# Morse It (\$0.99) iOS

- Automatically converts typing to morse code and back
- Create audio files to train your ears to learn code



# Morse Code Trainer (Free) Android

- Letter and word training
- Adjustable speed
- Adjustable frequency
- Electronic handbook

