Repeaters

User's Guide

Introduction

Repeaters is an amateur radio repeater database that displays repeaters as pin annotations on a map. It allows you to locate nearby repeater information at a glance, and with just a few taps, navigate to any repeater in the country. The database contains most of the active amateur radio repeaters in the US.

Repeaters is a universal application and will run on the iPhone, iPod Touch or iPad. Operation on the iPad is somewhat different than the iPhone/iPod and the differences will be explained below. The app has been tested and runs on first generation iPhones running IOS 3.1.3., but iPhone 3G or better running IOS 4 or better is recommended for best performance.

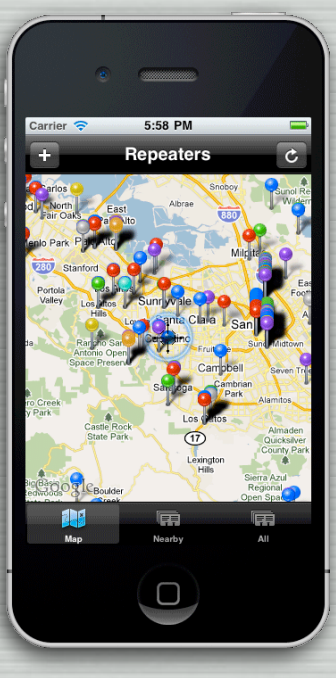
An active internet connection is required (either WiFi or Data plan). Map update performance will depend on the quality of the internet connection. Performance should be similar to the '**Maps**' app.

A CoreData managed SQL database is used to store repeater data. The data has been collected from various sources, with the vast majority coming from the K5EHX.NET repeater search engine database. The K5EHX database is community edited and supported and repeater data can be added or modified from the website. The **Repeaters** database works the same way. The repeater information can be modified or deleted, and new repeaters can be added. Whenever you add new repeaters or make changes to existing repeaters, you will be given the option of sending the data to a central database to be used for future database updates. Updating the repeaters in your area with current information, **especially latitude and longitude**, will help develop the database and give everyone more accurate repeater information. The location of each repeater pin on the map is the latitude and longitude data that has been entered for that repeater. Many of the repeaters have their location set to the latitude and longitude of their 'city' rather than the actual location of the repeater. If you know the actual latitude and longitude of a repeater, please edit the repeater and add the new information.

Operation

During startup, the app attempts to determine your current location. Once the location is known, the map will zoom to your current location with a span of approximately 30 miles. Your current location (represented by a blue dot) will be centered on the map. The tab control at the bottom of the display allows you to choose from three different views; Map, Nearby, and All.

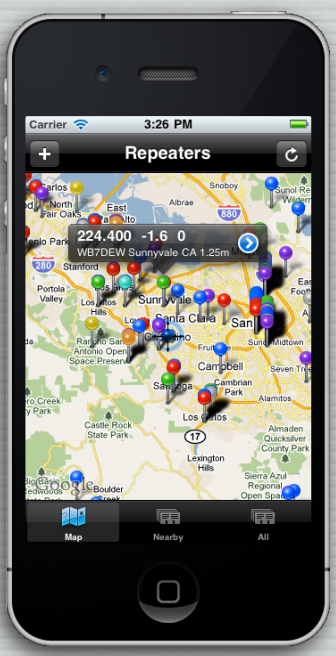
Map View



In Map View, repeaters are represented as pin annotations on a map. The color of the pin represents output frequency.

- Cyan = 10 meters (28-29.7 MHz)
- Yellow = 6 meters (50-54 MHz)
- Red = 2 meters (144-148 MHz)
- Green = 1.25 meters (222-225 MHz)
- Blue = 70 cm (420-450 MHz)
- Gray = 33 cm (902-928 MHz)
- Purple = 23 cm (1240-1300 MHz)
- Orange = 12 cm (2300-2310 and 2390-2450 MHz)

If a repeater's output frequency is set to an invalid value or to a value other than those above, the pin color will default to Cyan.



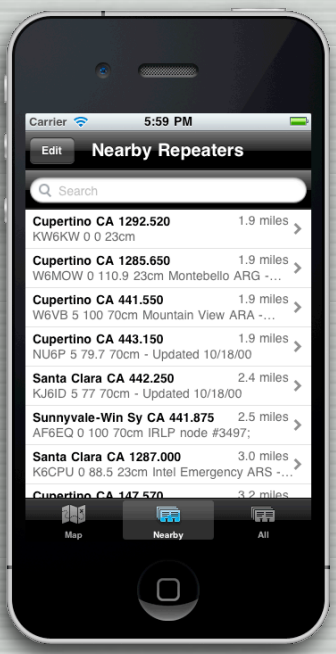
Tapping a pin opens a callout bubble that displays detailed information about the repeater. The first line displays Output Frequency, Offset, and PL Tone. The second line displays Trustee, City, State, and Band. Tapping the button (the blue circle with the white arrow) opens a Detail View that displays all information about the repeater. The Detail View will be described in more detail below.

Tap the refresh button (the circular arrow at the top right of the display) to center your current location on the map.

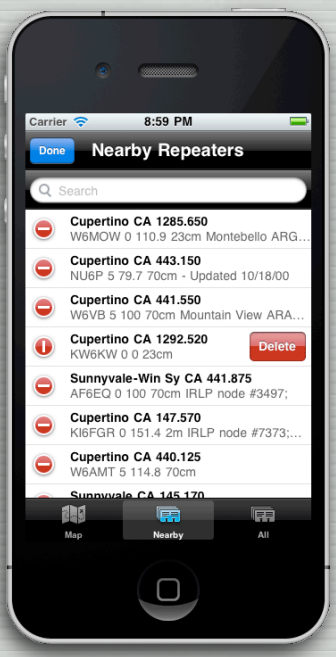
Tap the add button (the "+" at the top left of the display) to open an Add View that allows you to add a new repeater. The Add View will be described in more detail below.

The map can be scrolled and zoomed using standard finger gestures. You can center your current location at any time by tapping the refresh button.

Nearby View

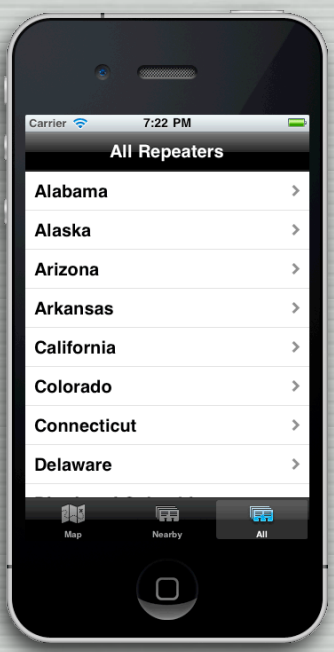


Nearby View displays a list of repeaters that are within approximately 40 miles of the map's center coordinates (crosshairs). The list is sorted by distance from the center coordinates, so the repeaters closest to the crosshairs are listed first. Each row in the list displays detailed information about a repeater. The first line in each row displays City, State, Output Frequency, and Distance. The second line displays Trustee, Offset, PL Tone and Band. Tap a repeater in the list to open a Detail View showing all information about the repeater. The Detail View also allows editing of the repeater data. The Detail View will be described in more detail below.



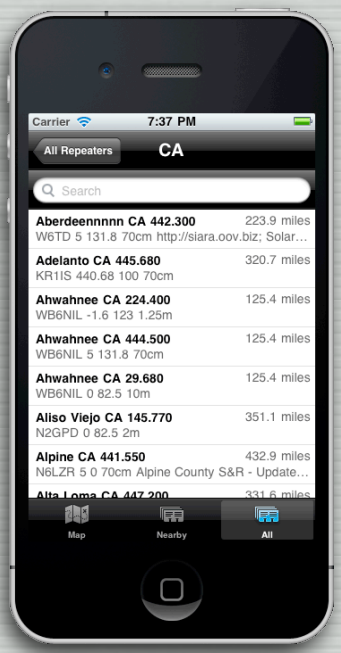
Tap the Edit button on the top left to enable deletions (a left or right swipe on a row will also enable deletion). Use this feature with care. You have the option of sending deletions to a central database. The central database will be used for future updates. Please do not delete repeaters active repeaters. All deletions must be done in Nearby View. Deletions are not enabled in All View.

All View



All View allows access to all repeaters in the database by state. Tapping a state in the state list opens a list of all repeaters in the selected state. The repeater list is sorted by City and can be searched (see Search above) or scrolled to find the desired repeater. Functionality is similar to the Nearby View described above. Deletions are not enabled in All View. All deletions must be done in Nearby View.

Tap the All Repeaters button on the top left to return to the State list.

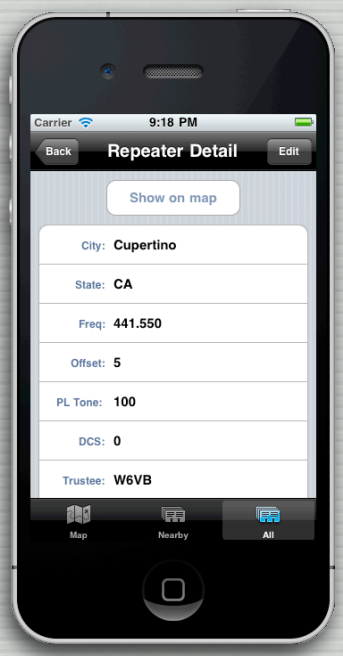


Search

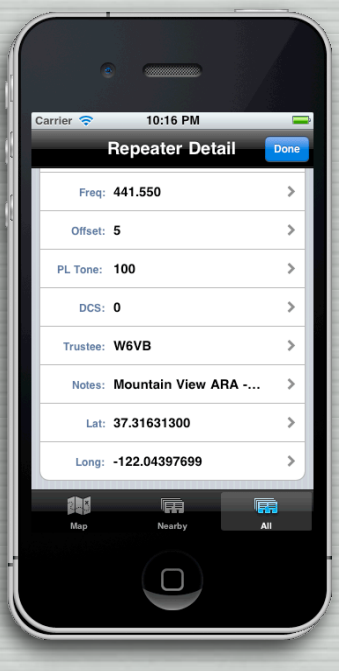
The Nearby View and All View lists can be searched by typing search criteria into the search bar at the top of the list. The data is searched by Output Frequency, Trustee, City, State and Band, in that order. So to find all 2 meter repeaters in Cupertino, you would type “cupertino ca 2m”. Search results are displayed as each letter is typed into the search bar. Searches are not case sensitive. Tap the Cancel button to exit the current search. Tapping a repeater in the Search results list opens the Detail View. Repeaters can be modified and deleted from the Search results list just as they can from the Nearby list.

Tap the status bar (where the clock and battery indicator are located) to scroll to the top of the list for easy access to the search bar.

Detail View



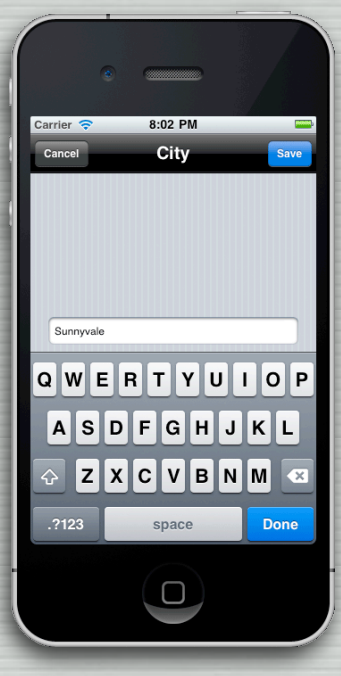
A Detail View appears whenever a repeater is selected in the Nearby list, the All list, a Search results list, or when the disclosure button is tapped in a callout bubble in Map View. The Detail View allows viewing and editing of the selected repeater's data, and provides a "Show on map" button to display the selected repeater on the map. Tapping the Edit button at the top right turns on edit mode allowing the fields to be edited. Tapping on a field while in edit mode opens an Edit View and allows editing of the field's data. The Edit View will be explained in more detail below. Tap the blue Done button when editing is complete. Then tap the Back button to return to the area where the Detail View was called.



Each repeater contains 10 fields of data. City, State, Output Frequency, Offset, PL Tone, DCS, Trustee, Notes, Latitude and Longitude.

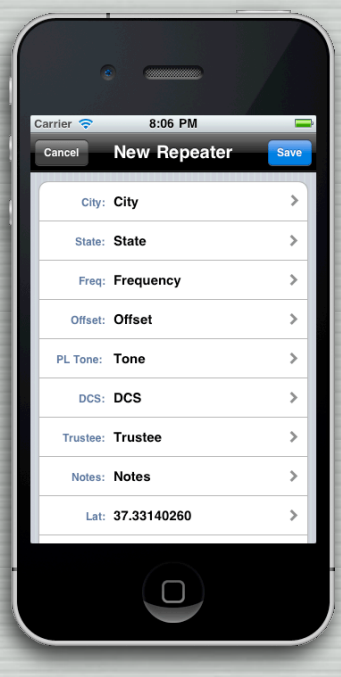
- City is limited to 30 characters and can contain any combination of letters, numbers and punctuation.
- State is limited to 2 characters and should be one of the standard state abbreviations in uppercase (ie VA).
- Freq is the Output Frequency in MHz,. It is limited to 10 characters and is entered as a decimal number with a maximum of 4 decimal places.
- Offset is the Offset frequency in MHz. For example, most 2 meter repeaters have either +600 or -600 KHz offsets. They are entered in the Offset field as 0.6 or -0.6.
- PL Tone and DCS are limited to 6 characters and should be the tone frequencies for the repeater.
- Trustee is limited to 10 characters and should be the trustee's callsign in uppercase.
- Notes is limited to 60 characters and can contain any necessary descriptive information.
- Latitude and Longitude are limited to 14 characters and are entered in decimal format with a maximum of 8 decimal places (ie 36.44689212, -81.34298830).

Edit View



Edit View appears whenever a field has been selected for editing. The name of the field is displayed in the title area and a keyboard appears to allow editing of the field. The fields are masked so that only valid data can be entered. For example, only numbers can be entered in the output frequency, offset, PL tone, DCS, latitude and longitude fields. See the field descriptions above for other limitations. Tap the blue Save button to save changes. You will be given the option of sending any changes to a central database. The central database will be used for future updates.

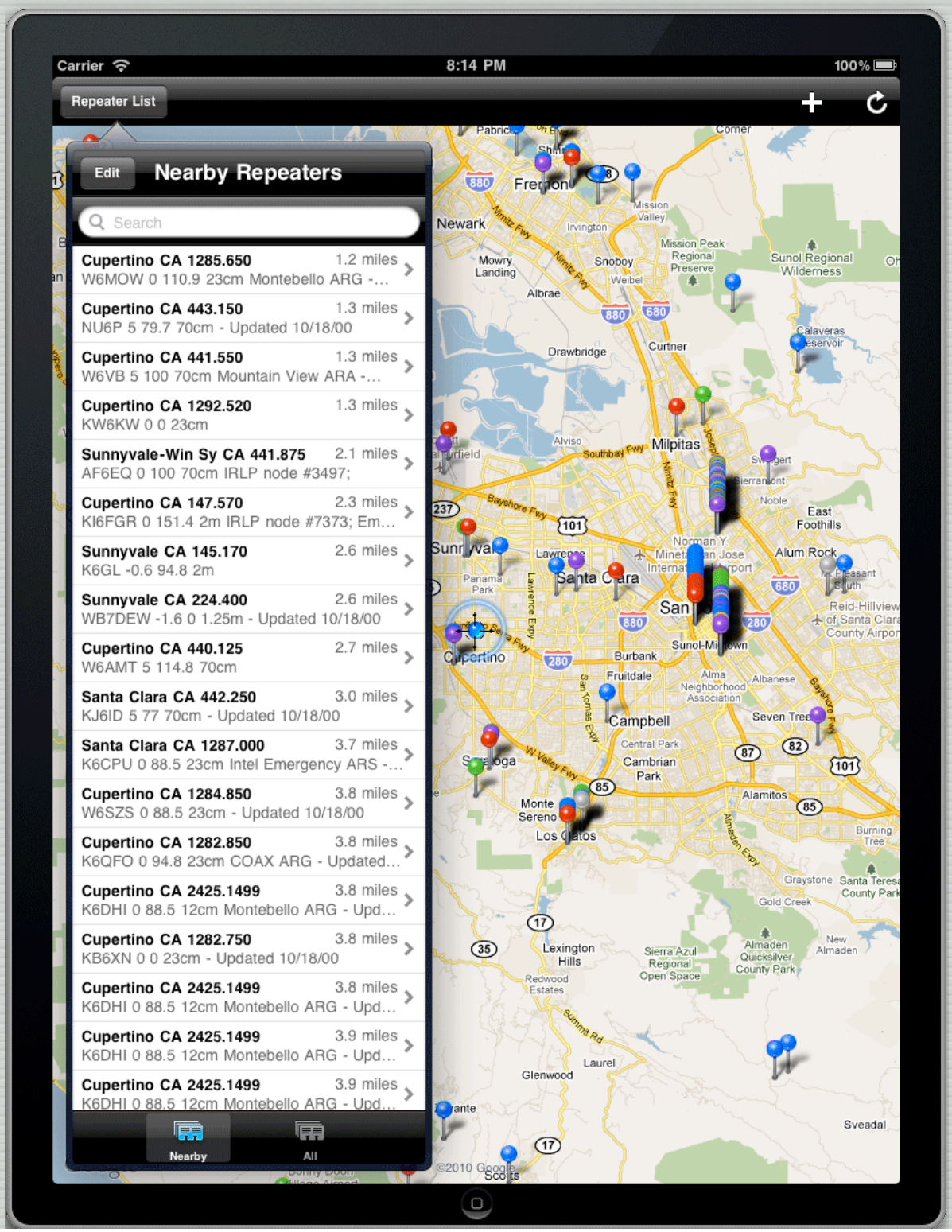
Add View



Add View is used to add new repeaters. It appears when the "+" button is tapped. Tapping a field opens an Edit View to enter information for the field. Tap the blue Save button after all fields have been entered. You will be given the option of sending the new repeater to a central database. The central database will be used for future updates.

iPad

Functionality on the iPad is very similar to the iPhone and iPod. The main difference being that the Map View is always displayed on the iPad. In landscape orientation, a split-view is displayed with the Nearby view on the left. In portrait orientation, the Nearby and All views are displayed in a pop-up window when the "Repeater List" button is tapped. Tapping a pin on the map will display a pop-up Detail view showing the repeater data. All editing must be done using the Nearby and All views.



Support

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