

Introducing APRS Welcome Center

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Overview

- **Backstory**
- **Vision**
- **Feature Overview**
- **Demo**
- **Example uses**
- **Conclusion**

Backstory

HamX Net Central presentation



Where's your APRS?

“APRS has to be more than GPS
and weather reports”

Make APRS useful where it is

Vision

- **Provide tactical content**
- **For local operators, and**
- **For operators moving in and out of an area**

Introducing APRS Welcome Center



- Interstate highway welcome centers
- Tell you where you are with more context
- Provides information about the area

APRS Welcome Center

Making your part of the world more inviting on APRS!

Introducing APRS Welcome Center

- **Open-source software**
- **Runs on Windows and Linux**
- **Web-browser based UI**
- **Supports RF-based APRS via KISS, TNC2, Kenwood native**
- **Supports Internet-based APRS**

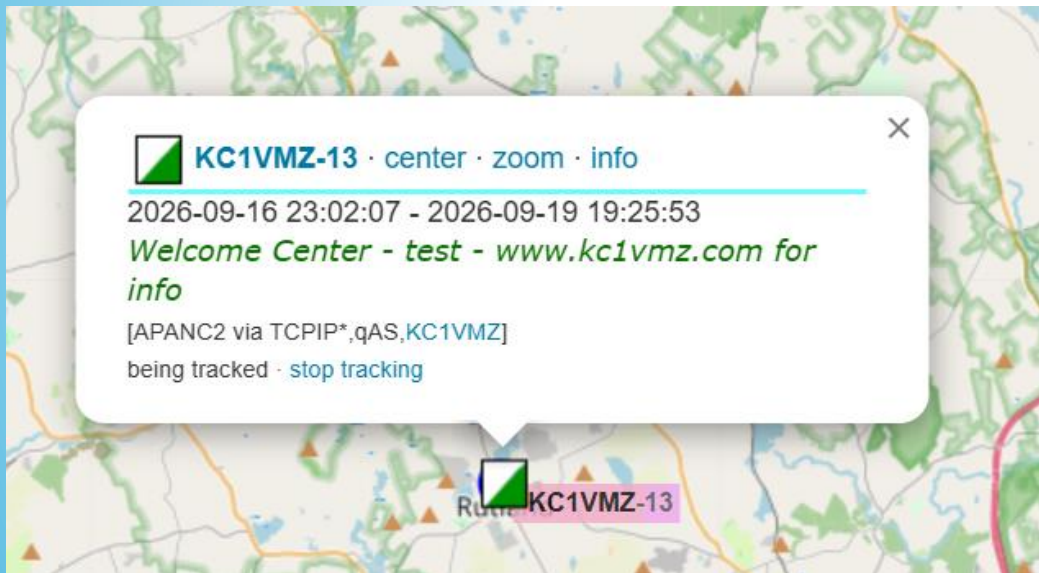
Concepts

Welcome Center

Welcome Center

- **Name and description**
- **Location**
- **Ownership information**
- **Callsign (tactical or real)**
- **One or more regions**
- **Communication plan**
- **Points of Interest**

Welcome Center



- Object (callsign, name)
- Location (lon, lat)
- Status
- Beacons the object
 - Includes callsign, name, description
- Sends messages
- Receives messages

CREATE WELCOME CENTER

Fields marked with * are required.

Name

Callsign *

APRS SYMBOL

Primary

Alternate

Symbol

Incident Command Post (/c)

Status *

Open

Description

Owner name

Owner callsign

Organization name

Organization callsign

Contact name

Contact callsign

COMMUNICATION METHODS

Use

All communication methods

Refresh methods

LOCATION

Longitude

Latitude

Select from map

Cancel

Create Welcome Center

Welcome Center

- The basics
 - Name
 - Callsign
 - APRS Symbol
 - Status (Open / Closed)
 - Description
 - Ownership
 - Communication
 - All possible or tie to one or more
 - Location

Welcome Center

- The basics
 - Name
 - Callsign
 - APRS Symbol
 - Status (Open / Closed)
 - Description
 - Ownership
 - Communication
 - All possible or tie to one or more
 - Location

CREATE WELCOME CENTER

Fields marked with * are required.

Name

Callsign *

APRS SYMBOL

Primary

Alternate

Symbol

Incident Command Post (/c)

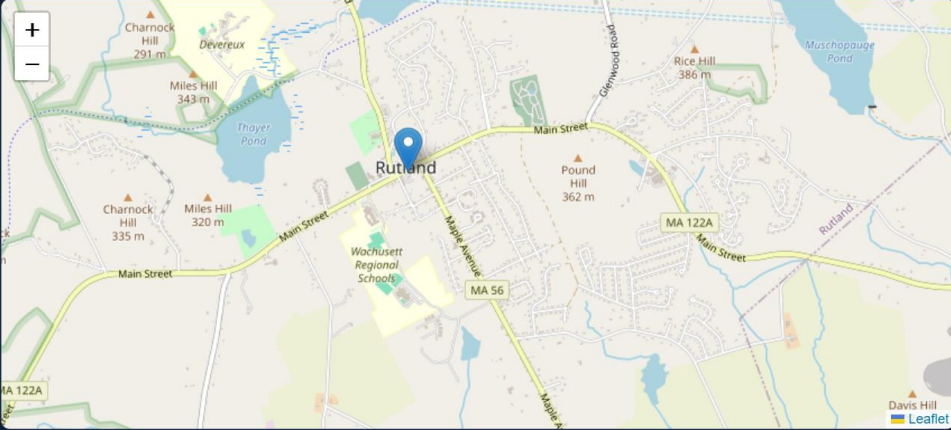
Status *

Open

Description

SELECT WELCOME CENTER LOCATION

Choose a point on the map.



Point selected. Use this location or choose another point.

Cancel

Use selected location

Cancel

Create Welcome Center

Welcome Center

- **Regions**
 - The set of “geo-fences” that establish the boundaries of the welcome center.
 - Can be rectangle, circle or polygon
 - Can be one or more

CREATE REGION

Define a rectangular or circular APRS welcome area.

Name

Center of town

Region type

Circle

Description

Define on Map

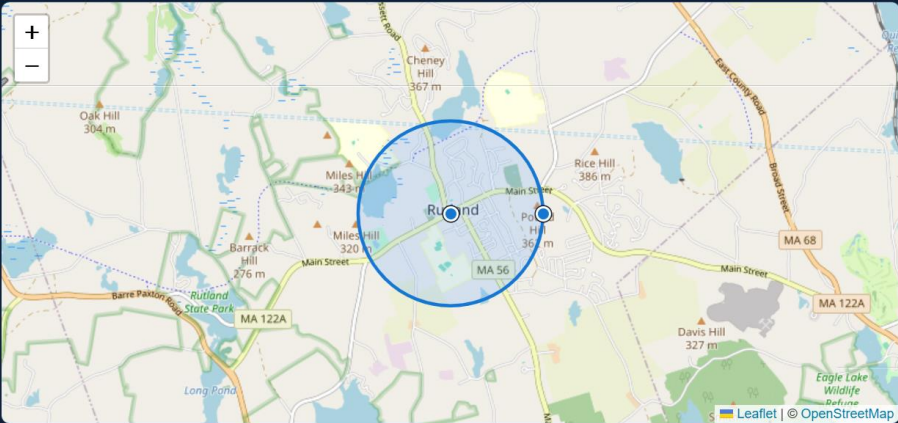
Enter Coordinates

DEFINE ON MAP

Draw or adjust the region boundary visually.

Draw Circle

Clear Map Shape

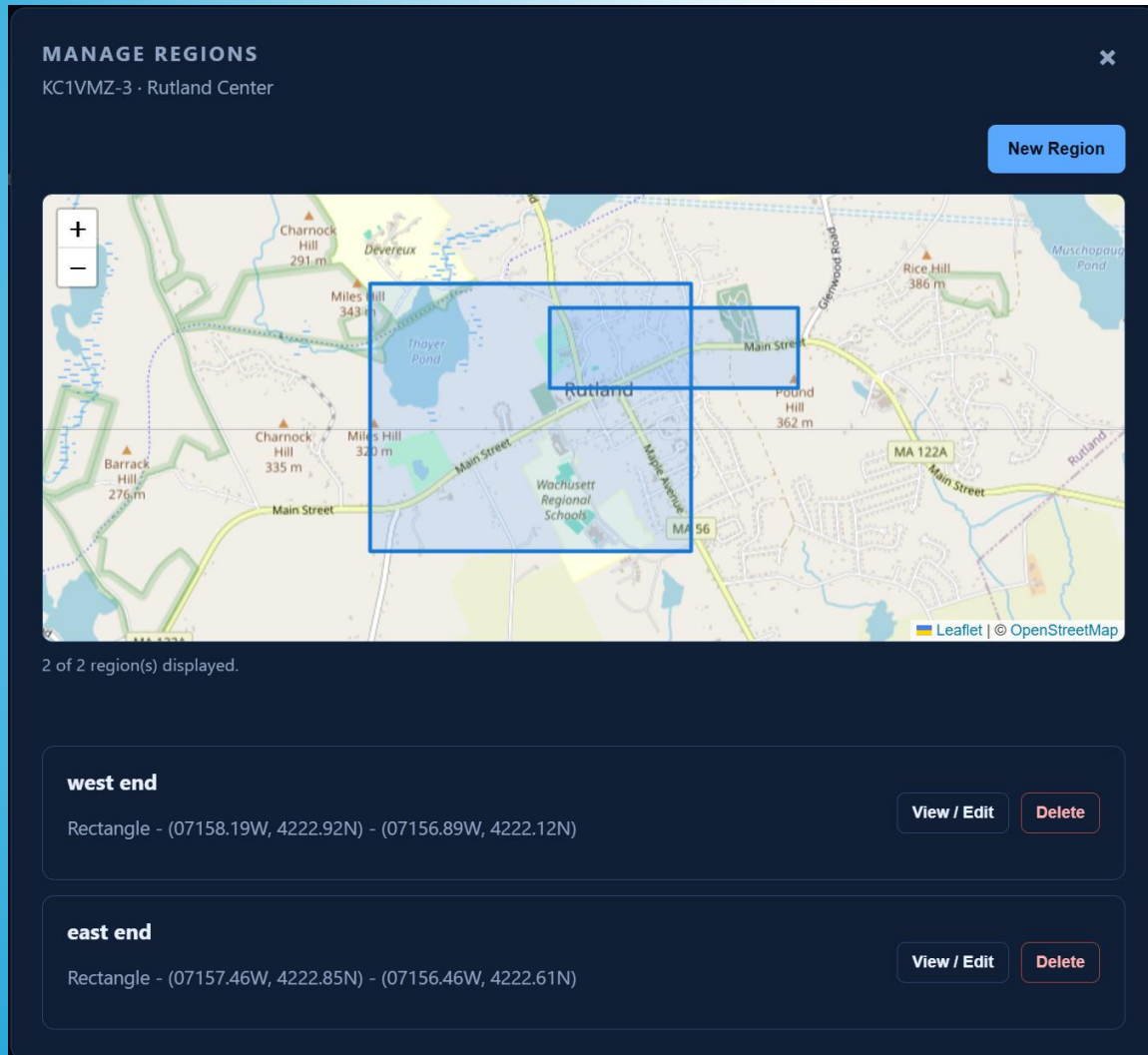


Manual coordinate values updated from the map boundary.

Cancel

Create Region

Welcome Center



- **Regions**
 - The set of “geo-fences” that establish the boundaries of the welcome center.
 - Can be rectangle, circle or polygon
 - Can be one or more

Welcome Center

CREATE REGION

×

Define a rectangular, circular, or polygonal APRS welcome area.

Name

poly test

Region type

Polygon

Description

Import Coordinates

Define on Map

Enter Coordinates

DEFINE ON MAP

Draw or adjust the region boundary visually. Drag the map's bottom-right corner to change its height; drag the dialog's bottom-right corner to widen it.

Draw Polygon

Finish boundary

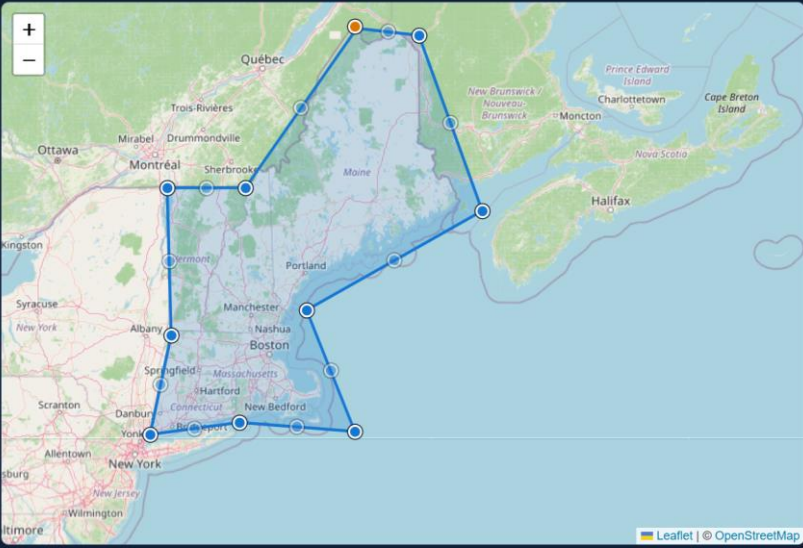
Undo point

Cancel drawing

Clear Map Shape

+

-

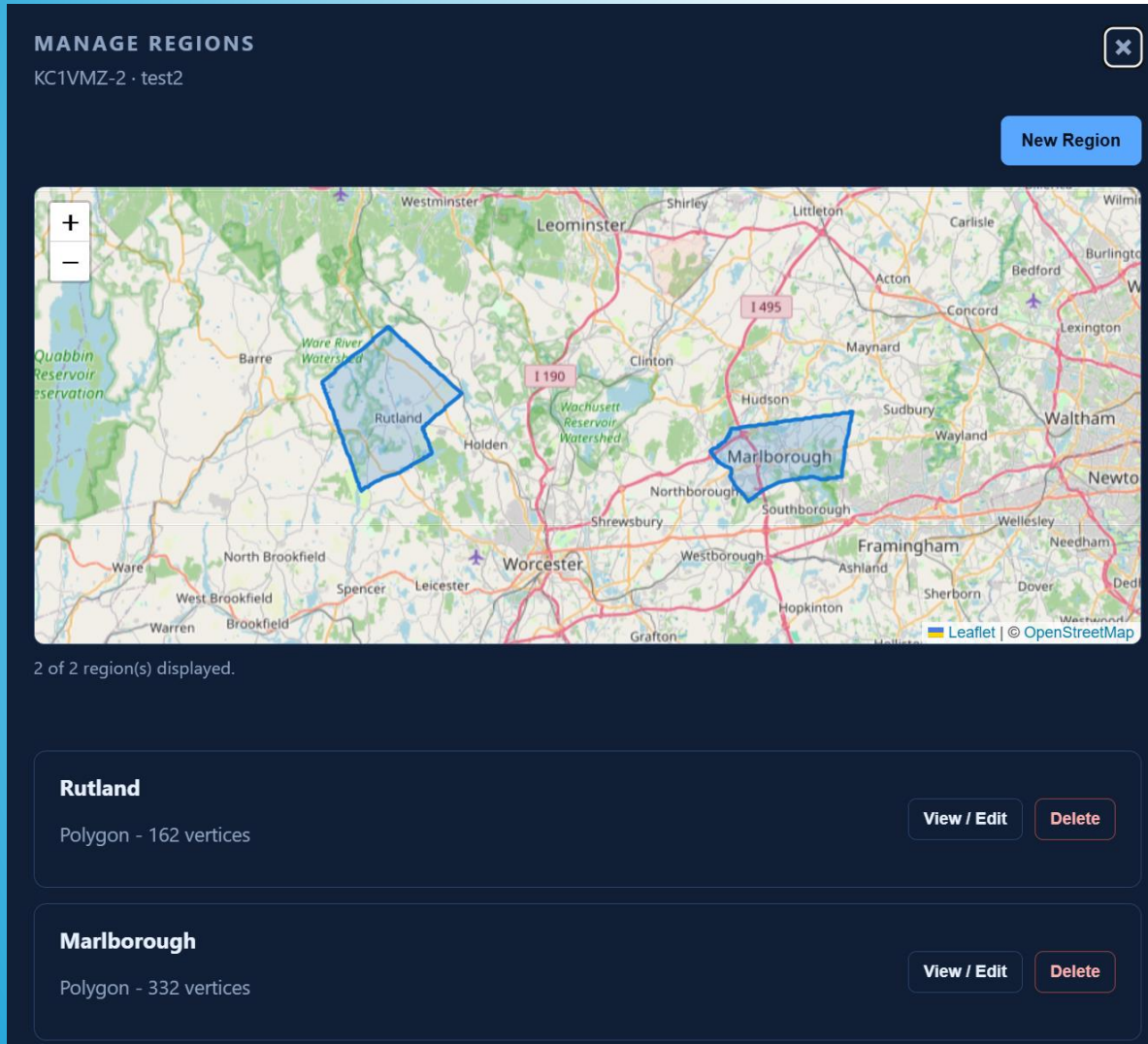


Leaflet | © OpenStreetMap

Drag vertices to adjust. Click faded midpoint handles to insert; right-click vertices or focus a vertex and press Delete to remove.

- **Regions**
 - The set of “geo-fences” that establish the boundaries of the welcome center.
 - Can be rectangle, circle or polygon
 - Can be one or more

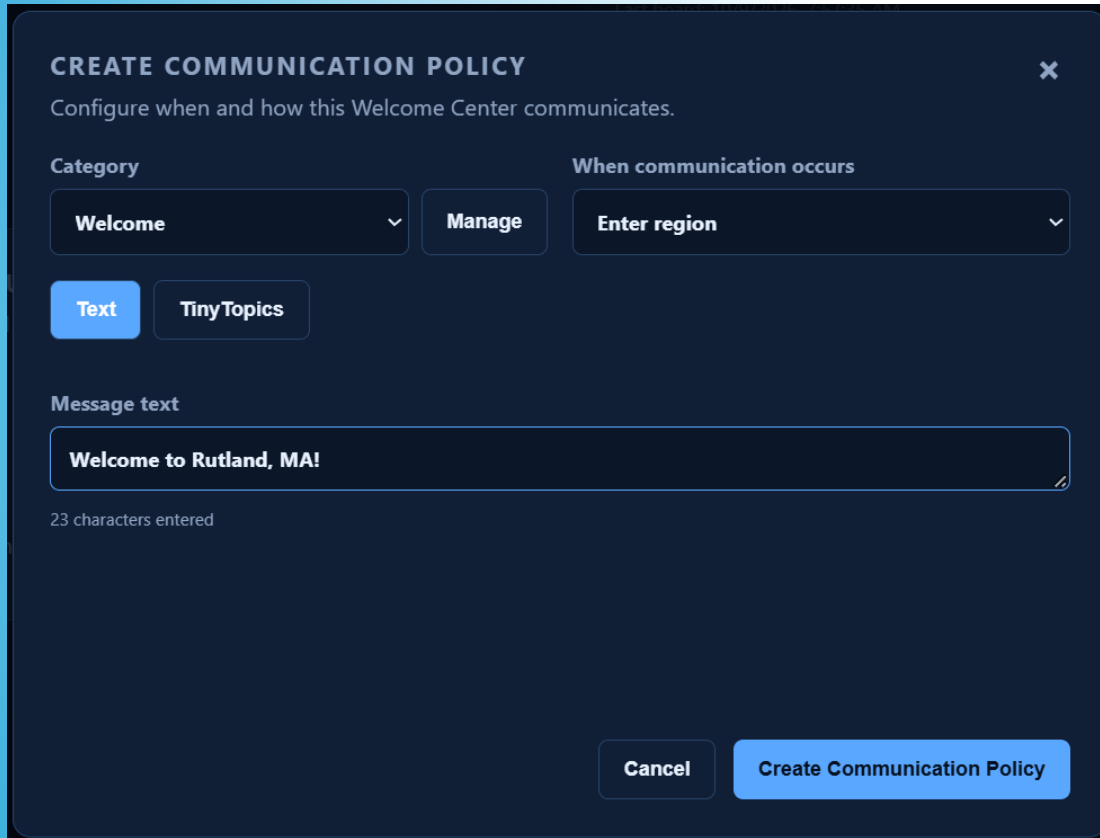
Welcome Center



- **Regions**

- **Can import Shapefile ZIP file or directory generated by GIS mapping tools**
- **Some Shapefile files are complicated and need to be reduced in complexity.**
- **Select from the known entities**

Welcome Center



The screenshot shows a dark-themed dialog box titled "CREATE COMMUNICATION POLICY" with a close button (X) in the top right corner. Below the title is a subtitle: "Configure when and how this Welcome Center communicates." The dialog is divided into two main sections. The first section, "Category", contains a dropdown menu with "Welcome" selected, a "Manage" button, and another dropdown menu labeled "When communication occurs" with "Enter region" selected. Below this are two buttons: "Text" (highlighted in blue) and "TinyTopics". The second section, "Message text", features a text input field containing "Welcome to Rutland, MA!". Below the input field, it says "23 characters entered". At the bottom of the dialog are two buttons: "Cancel" and "Create Communication Policy" (highlighted in blue).

CREATE COMMUNICATION POLICY ✕

Configure when and how this Welcome Center communicates.

Category

Welcome ▾ Manage When communication occurs ▾ Enter region

Text TinyTopics

Message text

Welcome to Rutland, MA!

23 characters entered

Cancel Create Communication Policy

- **Communication Plan**
 - What to say and when
- **Entering the region**
- **Categories of information**
 - Club info, weather, etc.

Welcome Center

CREATE COMMUNICATION POLICY

Configure when and how this Welcome Center communicates.

Category

Goodbye

Manage

When communication occurs

Exit region

Text

TinyTopics

Message text

Come back soon!

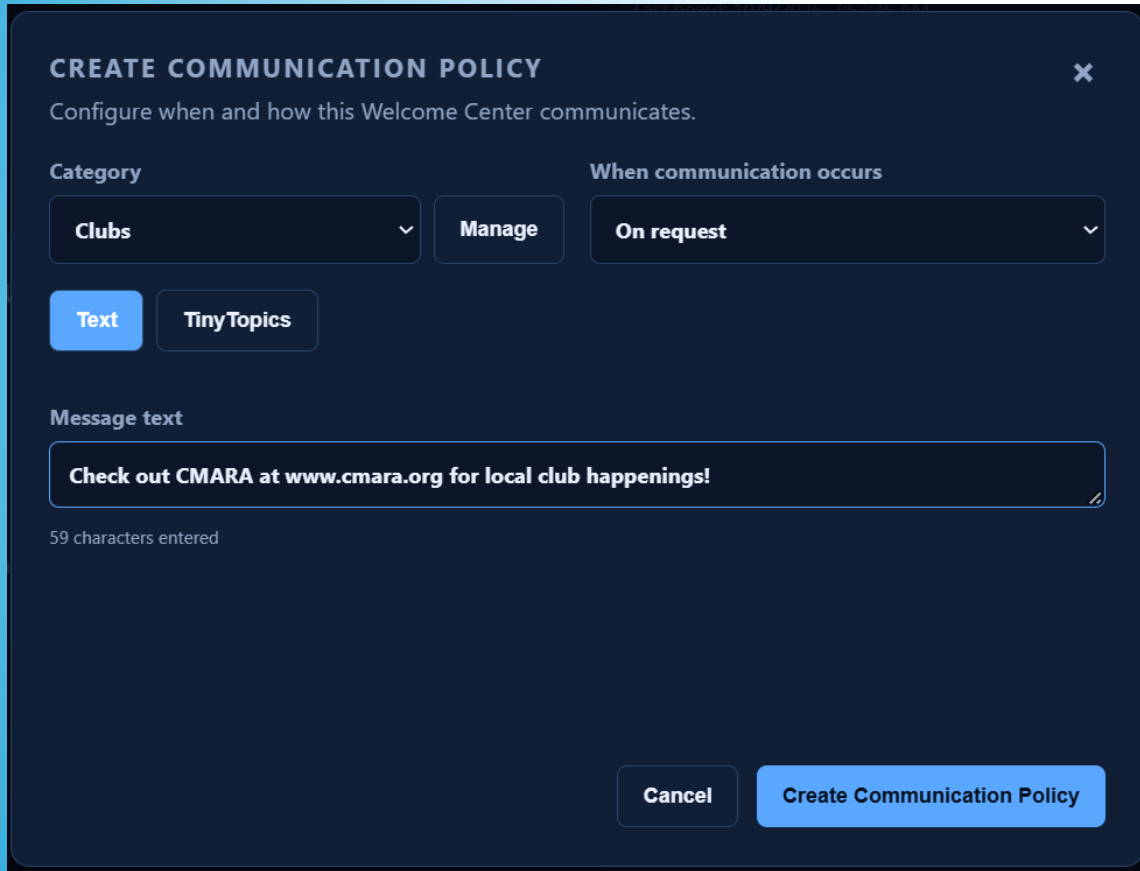
15 characters entered

Cancel

Create Communication Policy

- **Communication Plan**
 - What to say and when
- **Exiting the region**
- **Categories of information**
 - Club info, weather, etc.

Welcome Center



CREATE COMMUNICATION POLICY ×

Configure when and how this Welcome Center communicates.

Category When communication occurs

Clubs ▼ **Manage** **On request** ▼

Text **TinyTopics**

Message text

Check out CMARA at www.cmara.org for local club happenings!

59 characters entered

Cancel **Create Communication Policy**

- **Communication Plan**
 - What to say and when
- **On-demand**
- **Categories of information**
 - Club info, weather, etc.

Welcome Center

CREATE COMMUNICATION POLICY

Configure when and how this Welcome Center communicates.

Category

Testing

Manage

When communication occurs

When shriek heard

Shriek code

!JOKE!

Exact, case-sensitive match in a station status or position-report comment once a day while in Welcome Center regions.

Text

Tiny Topics

Message text

Dwarf shortage.

15 characters entered

Cancel

Create Communication Policy

- **Communication Plan**
 - What to say and when
- **On “Shriek”**
- **Categories of information**
 - Club info, weather, etc.

Welcome Center

CREATE COMMUNICATION POLICY

Configure when and how this Welcome Center communicates.

Category

Testing

Manage

When communication occurs

Scheduled (One-time)

Send at

10/15/2026 07:00 PM

Time zone

America/New_York

Send as a BLN1 bulletin on eligible connections. Missed occurrences are skipped. Closed Welcome Centers do not send.

Text

TinyTopics

Message text

CMARA monthly meeting starting.

31 characters entered

Cancel

Create Communication Policy

- **Communication Plan**
 - What to say and when
- **Scheduled Bulletins**
 - One time
- **Categories of information**
 - Club info, weather, etc.

Welcome Center

- **Communication Plan**
 - What to say and when
- **Scheduled Bulletins**
 - Hourly
 - Daily
- **Categories of information**
 - Club info, weather, etc.

CREATE COMMUNICATION POLICY

Configure when and how this Welcome Center communicates.

Category When communication occurs

Testing

Manage

Scheduled (Recurring)

Hourly

Daily

Time Time zone

08:00 AM

America/New_York

Send as a BLN1 bulletin on eligible connections. Missed occurrences are skipped. Closed Welcome Centers do not send.

Text

Tiny Topics

Message text

Good morning!

13 characters entered

Cancel

Create Communication Policy

Welcome Center

CREATE COMMUNICATION POLICY

Configure when and how this Welcome Center communicates.

Category

Testing

Manage

When communication occurs

When shriek heard

Shriek code

!GM!

Exact, case-sensitive match in a station status or position-report comment once a day while in Welcome Center regions.

Text

TinyTopics

Topic

nws-forecast

wfo

BOX

x

-71.57

y

42.222

dayOffset

Optional; blank uses the topic default

Cancel

Create Communication Policy

- Static or dynamic content via TinyTopics server
- TinyTopics include:
 - NWS Alerts (USA)
 - NWS Forecasts (USA)
 - Sunrise-sunset calculator
 - Fortune cookies
 - Magic 8 Ball guidance
- Host your own TinyTopics server or rely on internet-based server

Welcome Center

Points of interest

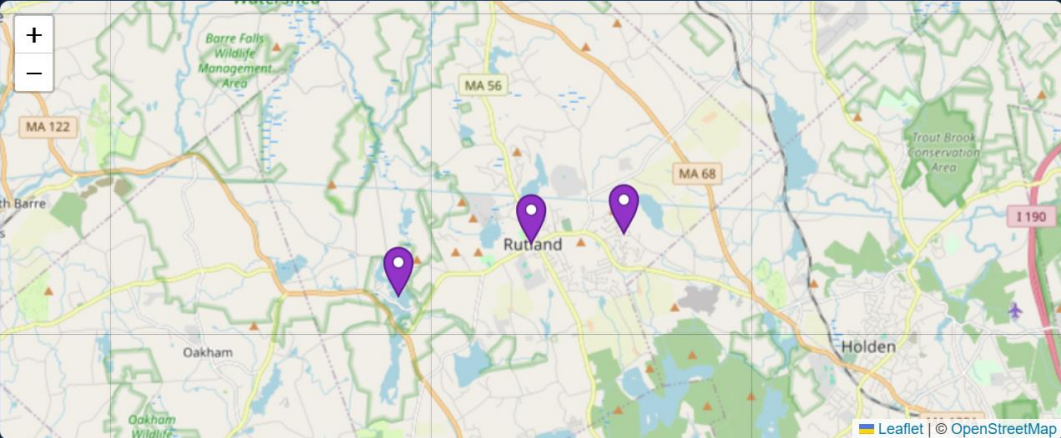
- Allows you to create APRS objects in specific locations that are related to the Welcome Center
- Open and close with the welcome center
- Advertise event locations, local landmarks

POINTS OF INTEREST

KC1VMZ-13

Create Point of Interest

Refresh

A map of the Rutland, Massachusetts area showing roads, water bodies, and green spaces. Three purple pins are placed on the map, indicating points of interest. The pins are located near Rutland, Oakham, and Holden. The map is labeled with 'MA 122', 'MA 56', 'MA 68', and '1190'. The map is powered by Leaflet and OpenStreetMap.

3 points of interest in this Welcome Center.

RUTCNTREE (UP)
Center of Massachusetts
4222.72N, 07155.78W

EditDelete

RUTCOMMON (UP)
Rutland Town Common
4222.59N, 07157.30W

EditDelete

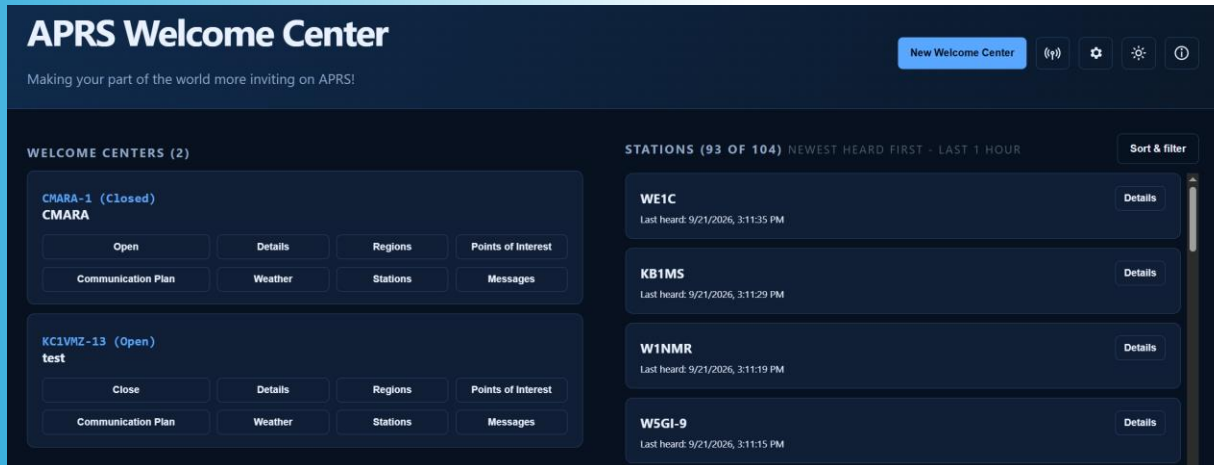
RUTSPARK (UP)
Rutland State Park
4221.96N, 07159.49W

EditDelete

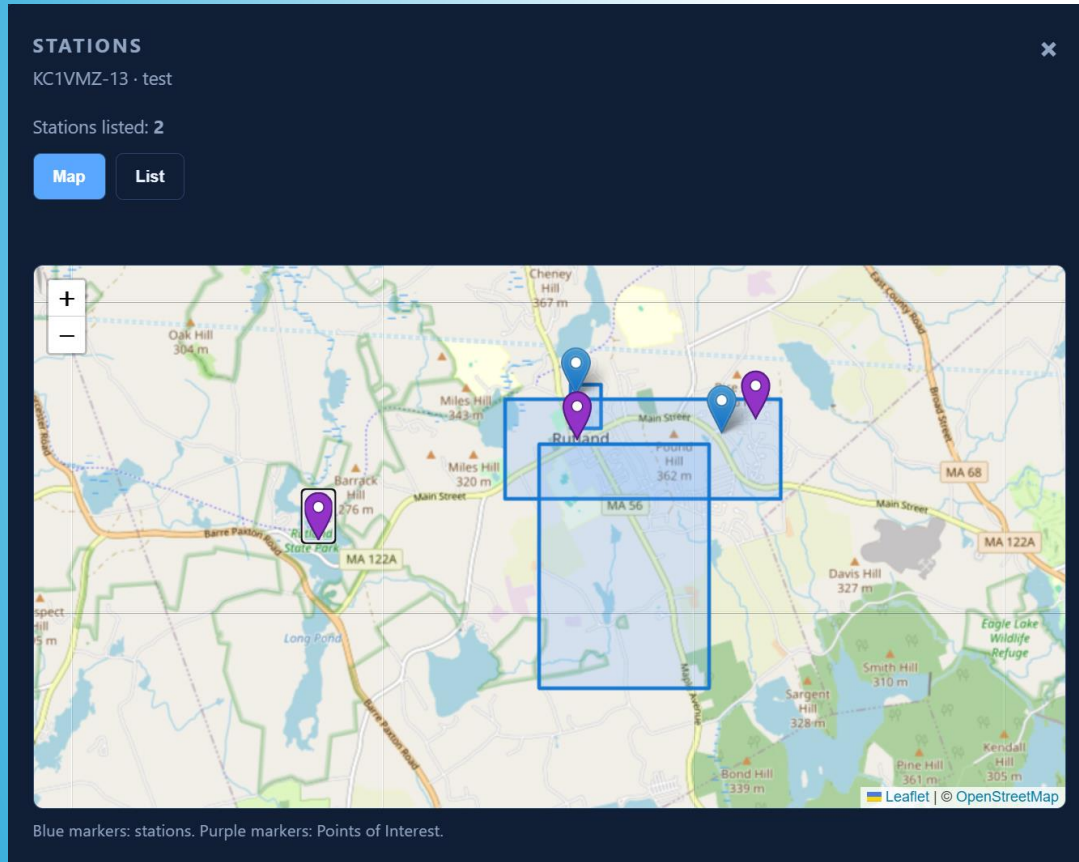
Key Features

Features

- **Manage Welcome Centers**
 - Open and close them
- **Discover stations**
 - Filter and sort
 - Ignore stations you choose
- **Send information to travelers moving in and out**
- **Provide requested information**



Features



- Define regions for welcome center
 - See who is within regions
- Visualize stations and points of interest within welcome center
- Define communication plans
 - Send information to travelers moving in and out
- Define points of interest

Features

- Static text or dynamic TinyTopics content
- Aggregate local APRS weather station reporting
- Send weather summary as part of communication plan
- Allow operator to ask for it

WEATHER					
KC1VMZ-4 · Massachusetts					
WEATHER AVERAGES AS OF 9/11/2026, 11:54:59 AM					
Temperature	71	Humidity	53		
Barometric pressure	10196	Luminosity	603		
WEATHER REPORTS (28)					Download CSV
9/11/2026, 11:52:42 AM	WE1C	Temperature	Humidity	Pressure	Luminosity
		70	61	10436	713
9/11/2026, 11:52:42 AM	KB1MS	Temperature	Humidity	Pressure	Luminosity
		70	51	10141	630
9/11/2026, 11:51:54 AM	W1LBM	Temperature	Humidity	Pressure	Luminosity
		72	59	10187	581
9/11/2026, 11:50:49 AM	K1QL	Temperature	Humidity	Pressure	Luminosity
		73	51	10144	712
9/11/2026, 11:50:38 AM	W1QED	Temperature	Humidity	Pressure	Luminosity
		70	43	10146	—

Features

- **General messaging to stations or all stations in a welcome center**

SEND MESSAGE FROM WELCOME CENTER×

Send a message to all stations in this welcome center's regions.

From

CMARA-1

Message

Hope to see you all tonight!

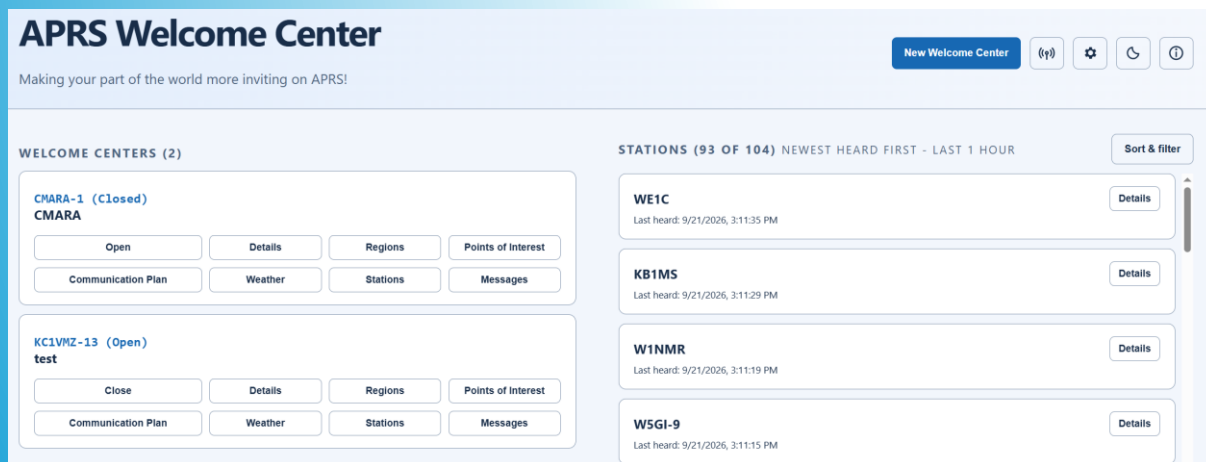
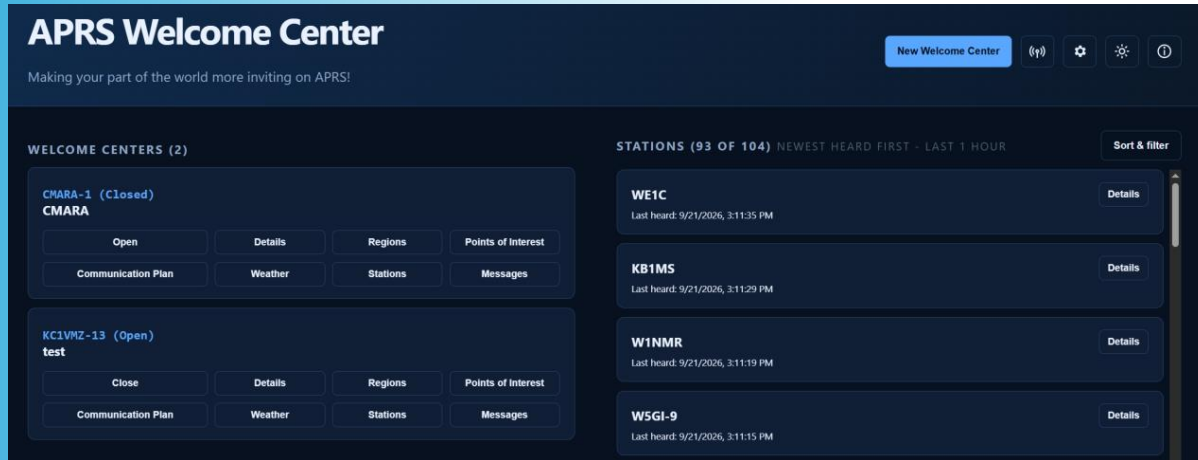
28 characters entered

Cancel

Send

Features

- Light and Dark Mode



Radio Commands

Messages can be sent to the welcome center's callsign

- I[NFO] – name and description
- WE[ATHER] or WX – aggregated weather
- V[OICE] – local repeaters
- CO[MM] – commercial radio
- CL[UBS] – club info
- E[VENTS] – events occurring
- WA[RNINGS] – specific warnings

Portions within [] are optional for easier input

Radio Commands

Messages can be sent to the welcome center's callsign

- STO[P] – add to ignore list
- STA[RT] – remove from ignore list
- O[THERS] – what other callsigns are in the welcome center
- H[ELP] – these commands

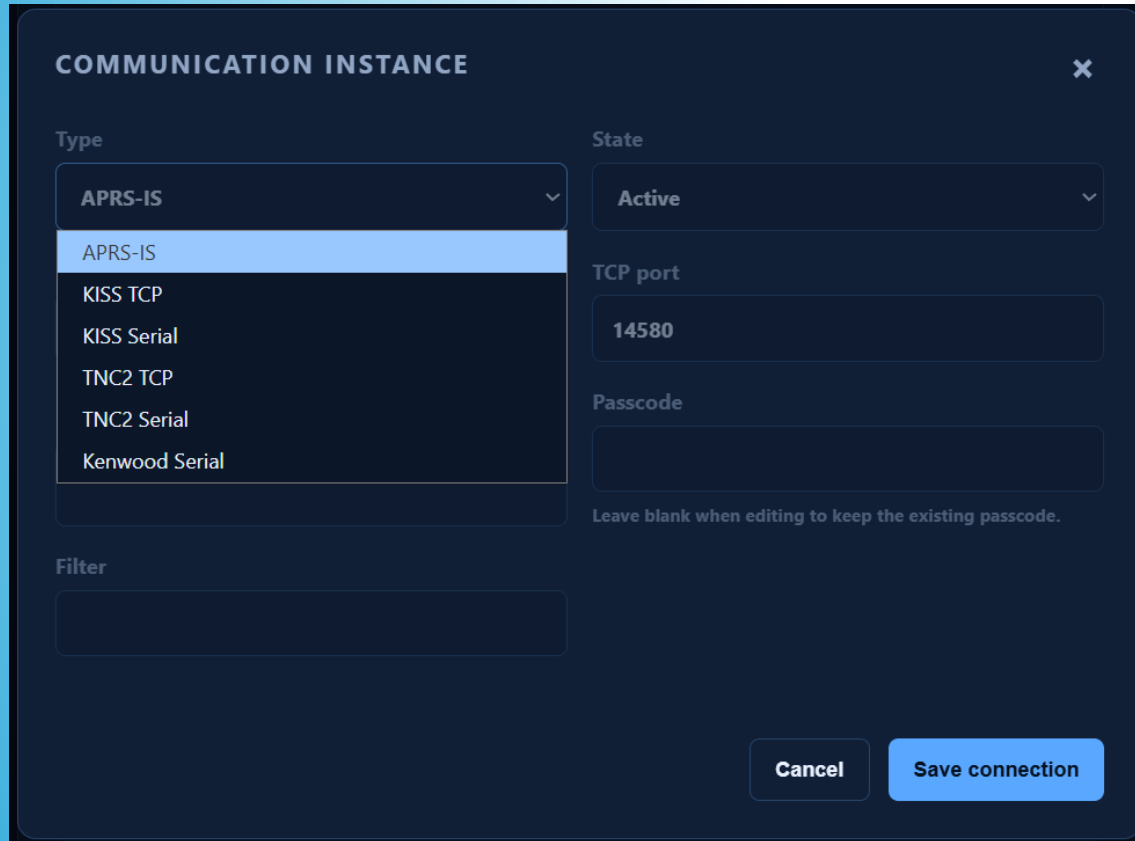
Portions within [] are optional for easier input

Features

- Packet logging

STATION PACKETS		
Latest APRS packets heard.		
RefreshDownload CSVDelete All Packets		
209 packet(s)		
9/11/2026, 11:55:39 AM	W1QED	W1QED>APRS,TCPIP*,qAC,SEVENTH:@111555z4235.84N/07146.68W_307/002g009t070r000p000P000h41b10145L...DsIP
9/11/2026, 11:55:32 AM	KZ2X-5	KZ2X-5>APDW19,TCPIP*,qAC,T2CAEAST:!4221.61NT07106.52W&PHG7220 Cambridge MA USA
9/11/2026, 11:55:32 AM	KZ2X-5	KZ2X-5>APDW19,TCPIP*,qAC,T2CAEAST:!4221.61NR07106.52W&PHG7220 Cambridge MA USA
9/11/2026, 11:55:28 AM	W1MHL	W1MHL>APN382,qAR,W1DMR-7:!4223.32N/07115.23W#PHG3640/Waltham Amateur Radio Association - N10MJ Digipeater NoW1
9/11/2026, 11:55:24 AM	K1BOS-10	K1BOS-10>APOSB4,TCPIP*,qAS,K1BOS:@111555z4221.41N/07111.92W/A=000000SharkRF openSPOT4
9/11/2026, 11:54:59 AM	KA1GG-B	KA1GG-B>APDG02,TCPIP*,qAC,KA1GG-BS:!4200.56ND07102.68W&RNG0001/A=000010 70cm Voice (D-Star) 449.98750MHz -5.0000MHz

Configuration



The screenshot shows a dark-themed configuration window titled "COMMUNICATION INSTANCE" with a close button (X) in the top right corner. The window is divided into two main sections. The left section, labeled "Type", contains a dropdown menu currently showing "APRS-IS". Below the dropdown is a list of options: "APRS-IS", "KISS TCP", "KISS Serial", "TNC2 TCP", "TNC2 Serial", and "Kenwood Serial". Below this list is a "Filter" input field. The right section, labeled "State", contains a dropdown menu currently showing "Active". Below this are two input fields: "TCP port" with the value "14580" and "Passcode" which is empty. A note below the passcode field reads "Leave blank when editing to keep the existing passcode." At the bottom right of the window are two buttons: "Cancel" and "Save connection".

COMMUNICATION INSTANCE ✕

Type

APRS-IS ▼

- APRS-IS
- KISS TCP
- KISS Serial
- TNC2 TCP
- TNC2 Serial
- Kenwood Serial

Filter

State

Active ▼

TCP port

14580

Passcode

Leave blank when editing to keep the existing passcode.

Cancel Save connection

- Multiple communication integrations
 - APRS-IS
 - KISS (serial and TCP/IP)
 - TNC2 (serial and TCP/IP)
 - Kenwood native

Comms Configuration

COMMUNICATION SETTINGS
Manage connections, stations, and packets.

COMMUNICATION METHODS

Add connection **Refresh status**

APRS-IS: noam.aprs2.net:14580 (KC1VMZ)
ACTIVE - CONNECTED - Last packet: 10/9/2026, 8:30:23 AM
Edit **Pause** **Delete**

Kenwood Serial: COM6 (9600, KC1VMZ-9)
PAUSED - STOPPED
Edit **Resume** **Delete**

STATIONS

385 total stations **Delete all**

0 ignored stations **Manage**

Packet List **Close**

- Create one or more of each connection type
- Support multiple radios on separate frequencies
- Management of stations
- Management of stations being ignored

App Configuration

- Data retention settings
- Tile server URL
- TinyTopics server URL

APPLICATION SETTINGS

Configure application settings.

INFORMATION RETENTION

Retain packets and positions for (days)

1

Retain inactive stations for (days)

10

Retain messages for (days)

10

MAP SETTINGS

Map tile URL

`https://tile.openstreetmap.org/{z}/{x}/{y}.png`

CONTENT SETTINGS

TinyTopics server URL

`http://localhost:8088`

Cancel

Save Settings

Example Uses

Examples



- **Club-hosted information**
- **Community events**
- **Radio Games – foxhunt / geocache**
- **Start of day content**
- **Emergency communications**

Conclusion

APRS Welcome Center

Making your part of the world more inviting on APRS!

Conclusion

Tactical, context rich information is what APRS was made for.

APRS Welcome Center leverages those location and weather report packets to provide information useful to where operators are.

Thank you!

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