

# Software-Defined Radio (SDR)

**PART TWO**  
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# SDRs in Amateur Radio

## Transceiver Examples

Integrated (no PC required)

Elecraft, Icom, Yaesu

Component

Apache Labs, FlexRadio, Hermes Lite 2, SunSDR



## Receiver Examples

Component

Airspy, SDRPlay, RTL-SDR Dongles

Online SDR - Networks

Airspy.com (40 sites)

Global Tuners (28 sites)

WebSDRs (141 sites)

OpenWebRX (244 sites)

KiwiSDRs (914 sites)



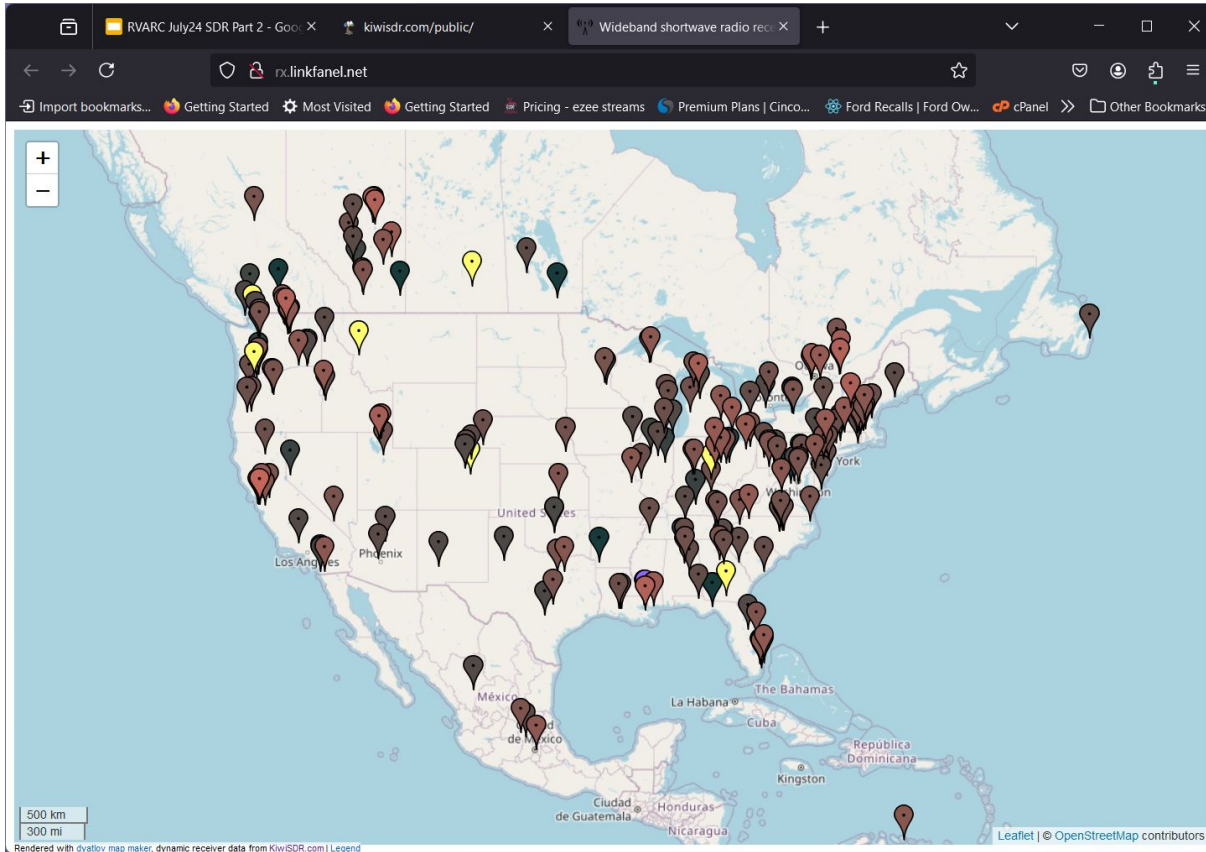
## Online SDRs...

are receivers connected to the internet, allowing many listeners to listen and tune in simultaneously. SDR technology makes it possible that all listeners tune independently, and thus listen to *different* frequencies and signals.

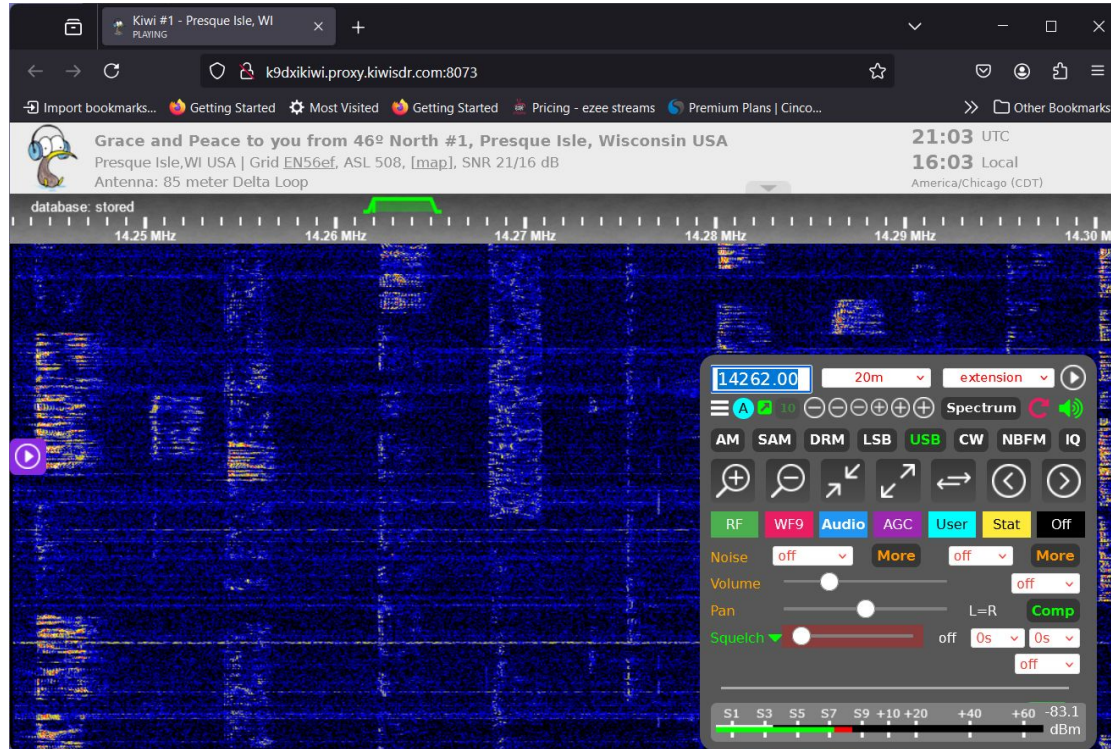
Typically consists of a PC server and SDR server software, a fast internet connection, and radio hardware to feed antenna signals into the PC.

Amateurs appreciate and benefit greatly from a global network of online SDRs made possible thanks to time, effort, and expense others make to install and maintain equipment and connectivity. Access to nearly every online SDR is made available to all without cost or subscriptions.

# KiwiSDR Map -North America



# Web Browser Access - one SDR

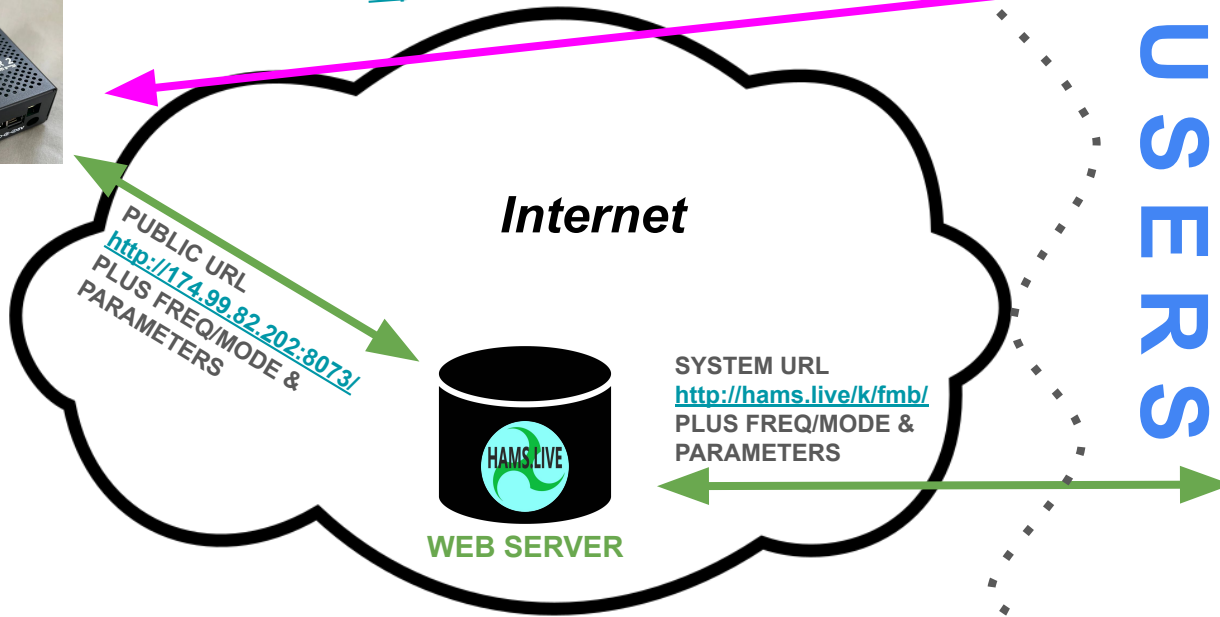


# SDR Access Comparison Browser versus hams.live

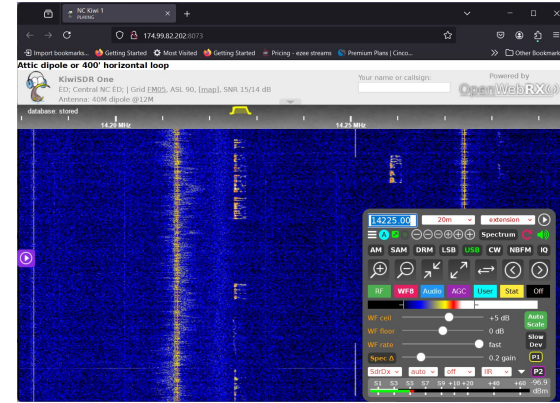
KIWISDR  
North Carolina



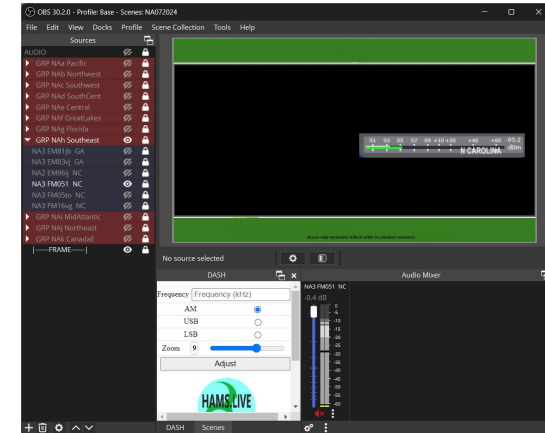
PUBLIC URL  
<http://174.99.82.202:8073/>




Web Browser  
on User's PC



OBS Studio  
on User's PC



# hams.live DASHboard

Frequency	<input type="text" value="Frequency (kHz)"/>
AM	<input checked="" type="radio"/>
USB	<input type="radio"/>
LSB	<input type="radio"/>
Zoom	<input type="text" value="9"/> 
<input type="button" value="Adjust"/>	



Callsign	<input type="text" value="w4ca"/>
<input type="button" value="Lookup"/>	

FM07ag  
W4CA  
ROANOKE VALLEY AMATEUR RADIO CLUB INC  
P.O. BOX 2002  
ROANOKE, VA 24009



# hams.live/OBS Access - one SDR

The screenshot displays the OBS Studio interface with the following components:

- Window Title:** OBS 30.2.0 - Profile: Base - Scenes: NA071724
- Menu Bar:** File, Edit, View, Docks, Profile, Scene Collection, Tools, Help
- Sources Panel:** Lists various audio sources under the 'AUDIO' category, including GRP NAX, GRP NAY, and multiple NAY stations from different states (CA, OR, WA, CO, AB, TX, TN, IN, WI, MD, CT).
- Main Preview Area:** Shows a black video frame with a vertical audio level meter on the right side. The meter is labeled 'WISCONSIN' and shows a current level of -97.9 dBm.
- Properties Panel:** Shows settings for the selected source 'NAYEN56ef1 WI', including 'DASH' and 'Audio Mixer' options.
- Audio Mixer:** Displays the frequency (14262) and modulation mode (AM selected). It also shows a zoom level of 9 and an 'Adjust' button.
- Bottom Panel:** Shows the 'DASH' scene selected, with a volume icon and a settings gear.



# OBS Browser Source - S Meter Capture

The screenshot displays the OBS Browser Source interface for a KiwiSDR One. The window title is "Interacting with 'NA3 FM051 NC'". The interface shows the following details:

- Header:** "Attic dipole or 400' horizontal loop", "KiwiSDR One", "17:55 UTC", "13:55 Local", "America/New York (EDT)".
- Metadata:** "ED: Central NC ED: | Grid FM05, ASL 90, [map], SNR 14/14 dB", "Antenna: 40M dipole @12M".
- Frequency Range:** 14.22 MHz to 14.27 MHz. A green bracket highlights the current frequency range around 14.23 MHz.
- Frequency Input:** 14228.000 MHz.
- Mode Selection:** AM, SAM, DRM, LSB, USB (selected), CW, NBFM, IQ.
- Filters:** RF, WF9, Audio, AGC, User, Stat, Off.
- WF Settings:** WF ceil (+5 dB), WF floor (0 dB), WF rate (fast), Spec Δ (0.2 gain).
- S-Meter:** A red box highlights the S-meter scale at the bottom, showing markers for S1, S3, S5, S7, S9, +10, +20, +40, +60, and -95.3 dBm.

# hams.live/OBS Access - four SDRs

OBS 30.2.0 - Profile: Base - Scenes: NA071724

File Edit View Docks Profile Scene Collection Tools Help

Sources

- AUDIO
  - GRP NAX
  - GRP NAY
    - NAYCM87j3 CA
    - NAYCM87j4 CA
    - NAYCN84jq OR
    - NAYCN85tq WA
    - NAYDN70kh CO
    - NAYDO33or1 AB
    - NAYDO33or2 AB
    - NAYDO33or3 AB
    - NAYEM12ho TX
    - NAYEM75ww2 TN
    - NAYEM79bi2 IN
    - NAYEN56ef1 WI
    - NAYEN56ef2 WI
    - NAYFM19mip1 MD
    - NAYFM19mip3 MD
    - NAYFM19mip5 MD
    - NAYFN33om1 CT
    - NAYFN33om2 CT
    - NAYFN33om3 CT
    - NAYFN33om4 CT
    - [-----FRAME-----]

Access only necessary SDRs in order to conserve resources

NAYEM75ww2 TN Properties Filters Interact Refresh

DASH x Audio Mixer

Frequency 14262

AM

USB

LSB

Zoom 9 Adjust

NAYDN70kh CO 0.0 dB

NAYEM75ww2 TN 0.0 dB

NAYEN56ef1 WI -4.3 dB

NAYFN33om1 CT -3.1 dB

DASH Scenes

## Installation Steps: [hams.live/inst/](https://hams.live/inst/)

- **Download and install OBS Studio**
- **Download and install OBS Websockets plugin**
- **Configure hams.live DASHboard in OBS**
- **Download hams.live image files on your PC**
- **Download hams.live Scene Collection/import into OBS**

# hams.live demonstration



INSTALLATION <http://hams.live/inst/>  
admin@hams.live