

Squelch Tale



CHICAGO FM CLUB • EST 1965

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SEPTEMBER 2026



President's Message

Finishing Summer Strong

It is hard to believe that another busy summer is already coming to a close. Between Field Day, POTA, club meetings, public-service activities, vacations, and everything else that fills the warmer months, the summer certainly went by quickly. I hope everyone had a chance to enjoy the season and spend some time on the air.

As we head into September, our biggest focus is Radio Expo 2026 on Sunday, September 27. A tremendous amount of work has already gone into planning the event, and I want to especially thank our Radio Expo co-chairs, John, N9SRY, and Charlie, W9CEF, for all of the time and effort they have put in behind the scenes.

Now we need the rest of the club to help bring everything together. Volunteers are needed at 7:00am Saturday morning for setup and again at 5:30am Sunday morning to assist at the front gate with ticket collection and other early event needs. Even a few hours of your time can make a big difference.

I hope to see a strong turnout at our September 23 meeting, where we will review the finalized Radio Expo plans, answer any last-minute questions, and make sure everyone knows where help is still needed. It will also be a great opportunity to purchase your ticket. Advance tickets are \$10, compared with \$12 at the gate, so please pick yours up at the meeting and encourage friends and fellow hams to attend as well.

We are also still looking for door prize donations. If you have amateur radio gear, accessories, electronics, or other related equipment that would make a good prize, please consider donating it.

Radio Expo is an important fundraiser for CFMC and helps support our repeaters, programs, operating events, and other club activities throughout the year. It is also a great opportunity to catch up with friends, meet other operators, browse equipment, and enjoy a day surrounded by amateur radio.

As summer winds down, we have one more big event ahead of us. Please purchase your ticket, consider volunteering, help spread the word, and join us in making Radio Expo 2026 another successful event for the Chicago FM Club.-----

Paul Gris | N9JZY, Chicago FM Club President

Upcoming CFMC Events

****Please check on the air for the most up-to-date info****

Fri - 9/18 | 7:00pm
Friday Night Social
D'Agostino's Pizza and Pub
3131 N Thatcher Ave
River Grove, IL 60171

Wed - 9/23 | 7:30pm
CFMC Monthly Meeting
16th District Police Station
5151 N Milwaukee Ave
Chicago, IL 60630

Sat - 9/26 - 7:00am
CFMC Radio Expo Setup
Boone County Fairgrounds
8791 Illinois Route 76
Belvidere, IL 61008

Sun - 9/27 | 6:00am-3:00pm
CFMC Radio Expo
Boone County Fairgrounds
8791 Illinois Route 76
Belvidere, IL 61008

Fri - 10/02 | 7:00pm
Friday Night Social
Gullivers Pizza & Pub
17W517 Roosevelt Rd
Oakbrook Terrace, IL 60181

Fri - 10/09 | 7:00pm
Friday Night Social
Portillo's
7308 W. Lawrence Ave.
Harwood Heights, IL 60706

Fri - 10/16 | 7:00pm
Friday Night Social
D'Agostino's Pizza and Pub
3131 N Thatcher Ave
River Grove, IL 60171

Fri - 10/23 | 7:00pm
Friday Night Social
Russell's Barbecue
1621 N Thatcher Ave
Elmwood Park, IL 60707

CFMC Repeaters

70 cm Repeater

443.750 (+5 MHz), PL 114.8

EchoLink: 62478 or WA9ORC-R

AllStar: Node 555492

Regarded as the crown jewel of the Chicago area ham community, CFMC's 443.750 MHz repeater offers exceptional coverage spanning from Northwest Indiana to Southern Wisconsin — even reaching parts of Michigan. Connected to AllStar (Node 555492) and EchoLink (Node 62478 / WA9ORC-R), this system consistently delivers impressive long-range performance. It's also home to the long-running Night Watch Net, held nightly at 10:00pm, welcoming operators from near and far for friendly check-ins and conversation.-----

2-Meter Repeater

146.760 (-0.6 MHz), PL 107.2

EchoLink: 448319 or KD9YDD-R

AllStar: Node 555491

The club's flagship 2-meter repeater operates on 146.760 MHz with a PL tone of 107.2 and is available on both AllStar (Node 555491) and EchoLink (Node 448319 / KD9YDD-R). This robust Motorola GTR-800, known for its clarity and dependability, supports nets, public service events, and daily traffic, serving as a reliable meeting point for hams across the region. The 146.760 output frequency also serves as the CFMC emergency frequency should repeaters go offline.-----

WIRES-X (System Fusion)

145.350 (-0.6 MHz), DCS 072

Located in Park Ridge with an antenna elevation of 180 feet, the CFMC System Fusion repeater on 145.350 MHz supports both C4FM digital and analog operation (DCS 072 on the analog side). Integrated with the WIRES-X network, it allows operators to connect to hundreds of rooms and repeaters worldwide at the push of a button. Whether operating locally or checking into nets across the globe, this repeater offers flexibility and reach while remaining accessible to analog users.-----

220 MHz North

224.100 (-1.6 MHz), PL 110.9

AllStar: Node 555490

CFMC proudly supports the often-overlooked 1.25-meter band with two well-placed repeaters. The northern site, located in the suburbs and operating on 224.100 MHz, runs a 15-watt DX Radio repeater and is connected to AllStar Node 555490. Though modest in power, its performance and reach are impressive, offering solid coverage across northern Chicagoland. This repeater provides a quiet, low-traffic space for ragchews and exploring a less crowded portion of the amateur spectrum.-----

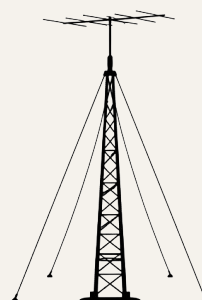
220 MHz South

224.180 (-1.6 MHz), PL 110.9

Strategically located in Worth, IL, the southern 220 repeater mirrors the performance of its northern counterpart. Operating on 224.180 MHz, it uses a DX Radio 15-watt single-site repeater. This system extends CFMC's reach into the southern suburbs and offers hams another opportunity to explore the 220 MHz band — an excellent option for clear, local communications with minimal QRM.-----

All licensed amateur radio operators are welcome to use the CFMC Repeaters for normal station-to-station calls. If you enjoy using them and like the people you hear, consider joining our club.

The Chicago FM Club is a not-for-profit amateur radio club operating the WA9ORC repeater systems. Membership is open to all licensed amateurs and is encouraged for those who use the repeaters often.-----



The Night Watch

443.750 - Every Night at 10:00pm

CFMC's most attended net offers a great mix of camaraderie, conversation, and community. Come for the knowledge, stay for the fun each and every night of the week!-----

Monday "Drive at Five"

443.750 - Monday at 5:00pm

Do you have a case of the Mondays? Kick off your week with the Drive at Five! This relaxed, mobile-friendly net is perfect for your commute or your shack.-----

Tuesday 2-Meter Info Net

146.760 - Tuesdays at 9:00pm

The 2-Meter Info Net is a casual, ragchew-style net where members and guests can hear the latest updates about club events, activities, and announcements.-----

Wednesday 220 Round Table

224.100 - Wed at 8:00pm *(Except Meeting Nights)*

Grab your 220 radio and join the 220 rebels on a social net focused on keeping the 220 band alive. Don't have a 220 radio? Don't worry, you can still join with AllStar on Node 555490.-----

Thursday 2-Meter Tech Net

146.760 - Thursdays at 8:30pm

Got a question about radios, antennas, software, or anything ham-related? The Thursday 2-Meter Tech Net is your place to learn and share. Bring your questions and join the discussion. No question is too small, and everyone is welcome!-----

Sunday

Night Watch - 10pm

Kevin E Suddoth | KD9ZDR

Monday

"Drive at Five" - 5pm

Kevin E Suddoth | KD9ZDR

Night Watch - 10pm

Paul Gris | N9JZY

Tuesday

2-Meter Info Net - 9pm

Alan Moyzis | KC9IMF

Night Watch - 10pm

John Cerza | N9SRV

Wednesday

220 Round Table - 8:00pm

Eddie Harris | KD9LQR

Night Watch - 10pm

Bill Deans | KD9TWA

Thursday

2-Meter Tech Net - 8:30pm

Eddie Harris | KD9LQR

Night Watch - 10pm

Joshua Hamlett | KD9MXV

Friday

Night Watch - 10pm

Marc Holland | AA9HM

Saturday

Night Watch - 10pm

Naeem Ahmed | N9DDD

Night Watch July Check-In Stats

	Call	Name	Check-Ins
1	W9BAZ	Mikey	29
2	KC9KXG	Jim	28
2	N9SRV	John	28
4	KD9ZDR	Kevin	26
5	WX9LAR	Larry	25
6	KD9TWA	Bill	21
7	AA9HM	Marc	19

Night Watch Monthly Check-In Stats

Month	Call Signs	Check-Ins
Feb	75	457
March	84	528
April	84	518
May	110	529
June	98	534
July	88	478
Aug	88	471

RADIO of the MONTH

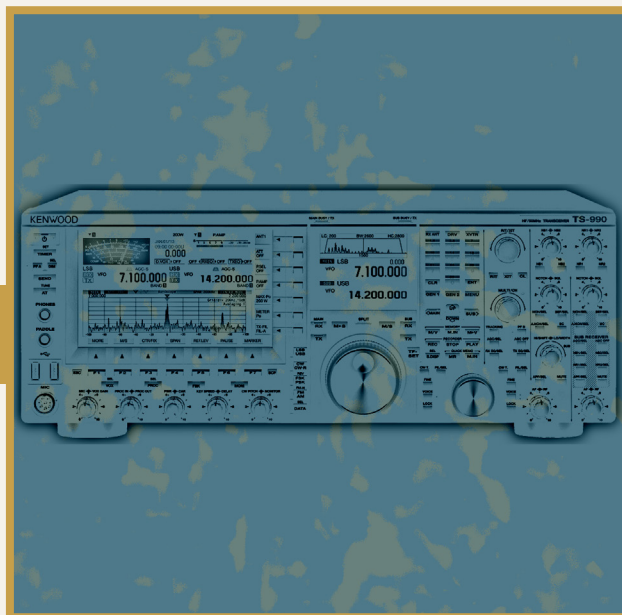
Kenwood TS-990S

This month's Radio of the Month is the Kenwood TS-990S, a 200-watt HF and 6-meter transceiver built as Kenwood's flagship amateur radio. Designed for the home station, the TS-990S combines dual independent receivers, extensive filtering, large color displays and a front panel packed with dedicated controls, giving operators immediate access to the functions they are most likely to use.

One of the TS-990S's standout features is its dual-receiver design. The main receiver uses a high-performance down-conversion architecture on key amateur bands, while the sub receiver allows operators to monitor a second frequency at the same time. That makes the radio especially appealing for contesting, DXing and split-frequency operation, where being able to listen in two places at once can be a major advantage.

With up to 200 watts of output, the TS-990S offers considerably more power than the typical 100-watt transceiver without requiring a separate amplifier for many operating situations. A built-in automatic antenna tuner adds convenience, while the radio's extensive filtering and signal-processing controls give operators plenty of room to tailor the receiver to crowded or difficult band conditions.

The TS-990S also stands out for the way it presents information. Its main display provides spectrum and waterfall information, while a second display above the main tuning dial can show additional operating data. Combined with the radio's collection of knobs, buttons and meters, the result feels more like a traditional high-end communications console than a menu-driven



compact transceiver.

The TS-990S can operate classic keyboard digital modes directly. It includes built-in support for RTTY as well as BPSK31, QPSK31 and PSK63, allowing received text to be decoded and displayed by the radio itself.

Connect a USB keyboard and the TS-990S can also transmit typed RTTY or PSK messages without requiring a computer running separate digital-mode software.

For the operator looking for a powerful, feature-rich base station with receiver performance, extensive controls and unusual standalone digital capability, the TS-990S remains one of Kenwood's most ambitious amateur transceivers.-----

Jeff Wuerth | *KD9RVJ, Squelch Tale Editor*

TS-990S

- **Transmit:** 160–6 meters
- **Receive:** 0.13–30 MHz / 50–54 MHz
- **Modes:** SSB, CW, FSK/RTTY, PSK, AM, FM
- **Power:** 200 watts
- **Antenna Tuner:** Built-in automatic
- **Power:** Built-in power supply

Meeting Minutes

Chicago FM Club (CFMC) Meeting Minutes				
Date			Wednesday, August 26, 2026	
Location			16 th District, Chicago Police Department	
Meeting Called to Order			19:48	
Officers Present			Board Members Present	
President	Paul, N9JZY	Present	Doug, KD9YFR	Present
Vice President	John, N9SRY	Present	Paul, N9ISP	Present
Secretary	Jim, KD9WNR	Present	Kevin, KD9ZDR	Present
Treasurer	Barry, K9FMB	Present	Alan, KC9IMF	Present
			Charlie, W9CEF	Present
			Joshua, KD9MXV (Trustee)	Present
Member Introductions - Recitation of Pledge of Allegiance - Roll Call of All Present - Total of 22 Members and 2 Guests were present				
Reading and Approval of Minutes Members were polled to confirm receipt of the Minutes from the previous meeting as published in the Squelch Tale. A motion was made to accept the Minutes by Kevin, KD9ZDR and seconded by Paul, N9ISP; The Minutes were accepted by voice vote.				
Treasurers Report - Barry, K9FMB presented the Treasurers Report and announced that the Treasurers Report is available for review by any Voting Member. - A motion was made to accept the Treasurers Report by Doug, KD9YFR and seconded by Joe, K9CTA; The Treasurers Report was accepted by voice vote.				
Committee Reports - Membership Report – Jim, KD9WNR - One New Member - Michael, W1RMA 162 Total Members 70 on Discord - VE Team Report – Bill, KD9TWA 1 upgrade to Extra - September 12th - Radio Expo - Tech Committee – John, N9SRY - All Repeaters working well 2m Antenna OK, still needs inspection - Net Coordinator – Kevin, KD9ZDR - All Nets currently covered - Volunteers for Backups contact Kevin. - Website and Social Media – Jim, KD9WNR - No Updates - Squelch Tale – Jeff, KD9RVJ (Not Present) - Tim commented what a great job Jeff’s been doing				

Meeting Minutes

- Radio Expo – John, N9SRY
 - Contract for Venue Sent
 - Need to Renew Insurance
 - One Food Vendor confirmed, second possible
 - Need to Sell Tickets and Tables!
 - Need Volunteers for:
 - Friday setup
 - Saturday at the Gate
 - Sunday Teardown
- Special Events: National Night Out – Paul, N9ISP
 - Paul, N9ISP commented on CFMC Participation in NNO at Norwood Park
<https://chicagofmclub.org/16th-district-cpd-national-night-out-2026/>
 - Anticipate participation next year
- Education – Charlie, W9CEF
 - Topics scheduled for next 6 months
 - If you have a topics, contact Charlie

Unfinished Business

- None

New Business

- Marc, W9QZB promoted our Friday Night Socials Schedule
 - Solicited suggestions for other locations that can accommodate
 - 10 to 15 persons
 - 7:00 PM to 11:00 PM (or later)
 - Separate Checks
 - Must have Beer!

Adjourn

- A motion was made to adjourn the meeting by Kevin, KD9ZDR and seconded by Charlie, W9CEF. The motion was passed by voice vote.
- The meeting was Adjourned at 20:22

50/50

- Tim, WD9DZV ran the 50/50; Won by Alan, KC9IMF who donated winnings to the Club.

Post Meeting Presentation

- Antenna Theory, Ed Fong (via Zoom)

RADIO EXPO 2026!



Radio Expo is almost here! On Sunday, September 27, the Chicago FM Club will once again welcome amateur radio operators, electronics enthusiasts, vendors, families, and friends to the Boone County Fairgrounds in Belvidere for Radio Expo 2026.

Held at 8791 Illinois Route 76, Belvidere, Illinois 61008, Radio Expo has long been one of CFMC's signature events and an important gathering for the amateur radio community throughout northern Illinois and beyond. Whether you are looking for your next radio, searching through the flea market for that hard-to-find piece of equipment, catching up with old friends, or simply looking for an excuse to spend a Sunday surrounded by amateur radio, we hope you will make plans to join us.

Something for Every Ham

Radio Expo offers the kind of experience that is increasingly difficult to duplicate online. You can walk through rows of equipment, inspect gear before buying it, discover things you did not know you needed, and spend time with other people who share an interest in radio, electronics, computers, antennas, and communications.



The outdoor flea market opens at 6:00am, giving the early birds plenty of time to hunt for bargains, while the indoor market runs from 8:00am until 3:00pm. Radios, electronics, computers, components, accessories, antennas, parts, and plenty of miscellaneous treasures are expected to be part of the mix. Breakfast and lunch will also be available, so there is no need to make your visit a quick one.

There will be hourly prize drawings, and Radio Expo will again offer VE amateur radio license testing from 9:00am until noon. If you know someone studying for their first license—or an existing ham ready to upgrade—encourage them to make Radio Expo part of their plans.

Buy Your Tickets Now

If you are planning to attend, there is no reason to wait until you reach the gate.

Advance admission is only \$10, compared with \$12 at the gate on Sunday. Advance tickets also include four door-prize stubs, while tickets purchased at the gate include two. Purchasing ahead of time saves a couple of dollars, gives you a few extra chances at the prizes, and helps support Radio Expo before the gates even open.

This is also a great opportunity to invite someone else along. Bring a fellow ham, someone who has recently earned a license, a friend who has been thinking about getting into amateur radio, or a family member who is curious about what this hobby is all about. Hamfests are one of the best places to see the enormous variety that exists within amateur radio.

CFMC Members: We Need Your Help

Radio Expo does not happen by itself.

A successful hamfest requires a tremendous amount of work before the first attendee ever comes through the gate, and CFMC volunteers are needed again this year.

Help will be needed on Saturday, September 26, at 7:00am as preparations are made at the fairgrounds. Vendor setup is scheduled from 9:00am until 4:00pm, and there is plenty that needs to happen as the grounds and facilities are prepared for Sunday.

If you are available Saturday, please consider giving the club some of your time. Many hands make setup considerably easier, and helping behind the scenes is also a great opportunity to spend some time with fellow club members before the crowds arrive.

Then comes the early shift.

On Sunday morning, volunteers are especially needed at 5:30am to assist with ticket collection at the front gate. The outdoor flea market begins at 6:00am, which means Radio Expo gets moving very early. For members willing to get up before sunrise and lend a hand, assistance at the gate is especially valuable.

Even if you cannot volunteer for the entire event, helping with setup Saturday or taking a shift Sunday morning makes a real difference.

Radio Expo belongs to the club, and its success depends heavily on club members being willing to pitch in.

More Than a Swap Meet

It is easy to think of a hamfest simply as a place to buy and sell radios, but Radio Expo

is much more than that.

For many of us, the best part is seeing people we may normally know only by their call signs. It is an opportunity to put faces to voices heard on the repeaters, meet operators from neighboring clubs, talk with experienced hams, welcome newcomers into the hobby, and share ideas about everything from antennas and digital modes to repeaters, portable operation, emergency communications, and restoring old equipment.

You may arrive looking for a coax connector and leave with a radio. You may arrive looking for a radio and instead spend two hours talking with someone about antennas. And, of course, there is always the possibility that the mysterious box of parts underneath someone's table contains exactly the item you have been searching for.

That is part of the fun.

See You in Belvidere!

Radio Expo 2026 takes place Sunday, September 27 at the Boone County Fairgrounds, 8791 Illinois Route 76 in Belvidere. The flea market opens at 6:00am, the indoor market runs from 8:00am to 3:00pm, and license testing will be available from 9:00am until noon.

If you are attending, purchase your \$10 advance ticket now rather than paying \$12 at the gate. If you are a CFMC member, please also consider volunteering for Saturday setup or early Sunday front-gate ticket collection.

Most importantly, come out and support the club.

Bring a friend, find a bargain, take a license exam, meet some fellow hams, and help us make Radio Expo 2026 another great day for amateur radio.-----

September Meeting

Join us for the September CFMC meeting on Wednesday, September 23, at 7:30pm at the 16th District Police Station. With Radio Expo just days away, this month's meeting will include a review of the final plans and preparations for Radio Expo 2026, including important information for members who will be attending or volunteering.

Following the meeting, Chloe W2CXE will present "What Do Radio and MRI Machines Have in Common?" Be sure to stick around for what promises to be an interesting look at the connection between radio technology and MRI machines.

The meeting will also be a great opportunity to purchase your Radio Expo ticket in advance. Tickets are \$10 in advance, compared with \$12 at the gate, so be sure to pick yours up while you're there-----

Buy Expo Tickets TODAY!

Support CFMC—get your Radio Expo tickets! Radio Expo 2026 is coming up Sunday, September 27 at the Boone County Fairgrounds in Belvidere, and this important annual fundraiser helps support our repeaters, programs, operating events, and other club activities throughout the year.

Advance tickets are just \$10 (\$12 at the gate) and will be available for purchase at our August 26 meeting. Pick yours up at the meeting and help support the club!-----

Presenters Wanted!

We're looking for presenters and topics for upcoming Chicago FM Club education programs. Presentations don't need to be overly technical or formal. If there's an aspect of amateur radio you enjoy, a project you've worked on, something you've experimented with, or simply a topic you think other members would find interesting, we'd love to hear about it.

Interested in presenting or have a topic idea? Reach out to me at charlie@askchucky.com or through the club's Discord server.-----

VE TESTING UPDATE!

Congratulations to Omar, who passed his Technician exam at the September 12 VE session. His new call is KE9GGO

September is also one of the two months each year when CFMC holds two VE testing sessions. The next session will be held at Radio Expo on Sunday, September 27, giving anyone preparing for a new license or an upgrade another opportunity to test before the month is over.-----

CFMC on the Web



Check out our website

<https://www.chicagofmclub.org/>



Chat with us on Discord



Connect with us on Groups.io

<https://groups.io/g/CFMC/>



Join us on Facebook



Follow us on X

https://x.com/CFMC_WA9ORC

Tech Talk



RTTY and PSK31: Classic Keyboard Digital Modes

Long before FT8 became one of the most recognizable digital sounds on the amateur bands, hams were already using machines and computers to communicate by radio. Two of the best-known keyboard-to-keyboard digital modes are RTTY and PSK31. Although both come from very different eras of amateur radio, they share a common idea: instead of speaking into a microphone, operators type messages that are converted into radio signals and decoded back into text at the receiving station.

For operators who have entered the hobby during the FT8 era, these modes offer a very different style of digital operating. They are less automated, more conversational, and in many ways feel closer to a traditional voice or CW contact. Instead of simply exchanging signal reports and grid squares according to a fixed sequence, operators can carry on a conversation.

RTTY: From Teleprinters to Today

RTTY, or Radio Teletype, is the older of the two and has a history that stretches back many decades. Amateur RTTY developed

from commercial and military teleprinter technology, and early stations could involve some impressive equipment. Before personal computers and sound cards became commonplace, receiving RTTY often meant using an actual mechanical teleprinter. These machines printed incoming messages onto paper while producing the distinctive clattering sound associated with old newsrooms and communications centers.

Hams adapted this technology for radio, connecting teleprinters to transmitters and receivers through specialized terminal units. Compared with today's software-defined digital stations, early RTTY installations could be large, noisy, and mechanically complicated.

Modern RTTY accomplishes the same basic task with considerably less hardware. In the most common amateur implementation, the transmitted signal uses Frequency Shift Keying. The signal rapidly switches between two frequencies traditionally known as “mark” and “space.” A receiving station detects those shifts and converts them back into characters.

RTTY remains particularly active in amateur radio contesting. During a major RTTY contest, large portions of the traditional digital segments can suddenly fill with signals. Contest exchanges are generally short and fast, allowing operators to make contacts at a rapid pace. For someone interested in combining computer-assisted operating with traditional contesting skills, RTTY can still be a very entertaining mode.

PSK31: Designed for Conversation

PSK31 came along much later and approached digital communication from a very different direction. Introduced during the personal-computer era, PSK31 was designed specifically as an efficient keyboard-to-

keyboard amateur radio mode. Rather than shifting between two audio frequencies, PSK31 uses changes in the phase of the transmitted signal to encode information.

One of its most impressive characteristics is its extremely narrow bandwidth. A typical PSK31 signal occupies only about 31 Hz. That means many separate PSK31 conversations can fit into the same amount of spectrum that might otherwise be occupied by a single voice transmission.

The “31” in PSK31 refers to its symbol rate of approximately 31 baud. That relatively slow rate was chosen deliberately because the mode was intended for normal human typing speeds rather than high-speed data transfer. An operator can type a sentence while the software continuously transmits the characters over the air.

This creates a style of operating that is noticeably different from most modern automated digital modes. With PSK31, the computer handles the encoding and decoding, but the operator remains responsible for the actual conversation. You might call CQ, receive a response, exchange signal reports and station information, and then continue chatting about antennas, radios, weather, or almost anything else.

PSK31 also became well known for its ability to make contacts with relatively modest power. Because the signal is so narrow, the receiving software can concentrate on a very small slice of spectrum. Under good conditions, stations running only a few watts can communicate over surprisingly long distances. This made PSK31 particularly attractive to QRP operators and to hams using smaller or more modest stations.

Another interesting feature of PSK31 is the way operators find signals. Rather than tuning back and forth for every station, operators typically view a waterfall display showing several PSK31 signals at once. Each

signal appears as a thin vertical line. The operator can simply click on the desired signal, and the software begins decoding it.

This waterfall-style operating technique will feel familiar to anyone who has used modern digital software. In fact, PSK31 helped popularize many of the operating practices that later became common in amateur digital communications.

Getting on the Air

Today, getting on the air with either RTTY or PSK31 is considerably easier than it was in the past. A typical modern station needs an HF transceiver, a computer, and a way to exchange audio between the radio and the computer. Many newer transceivers have built-in USB sound interfaces, allowing both audio and radio control to travel through a single USB cable. Older radios can use an external sound-card interface between the computer and the transceiver.

Software such as FLDIGI can handle both RTTY and PSK31, along with a large collection of other digital modes. The program displays received signals on a waterfall, decodes incoming text, and allows the operator to type outgoing messages. Once the radio and computer audio levels are properly configured, moving between different digital modes can be as simple as selecting a new mode from a menu.

Digital operation does require some attention to transmitter setup. Both PSK31 and sound-card-generated RTTY are often transmitted using an SSB radio carrying an audio tone generated by the computer. Because these signals depend on accurate audio information, excessive microphone gain, audio drive, compression, or ALC can distort the transmission.

This is particularly important with PSK31. A badly overdriven PSK31 signal can become much wider than necessary and create

interference to nearby operators. Running more power does not necessarily improve the contact if the resulting signal is distorted. A clean transmission at moderate power is generally far more effective than an overdriven signal at maximum output.

Two Eras of Digital Radio

RTTY and PSK31 are also interesting because they represent two different stages in the evolution of amateur digital communications. RTTY began in an era when digital communication depended on mechanical equipment and specialized electronics. PSK31 emerged when inexpensive personal computers and sound cards made sophisticated signal processing available to virtually any amateur operator.

From there, amateur digital radio continued to evolve into modes such as Olivia, MFSK, JT65, FT8, FT4, JS8Call, and many others. Each generation of modes has generally attempted to improve some combination of speed, weak-signal performance, bandwidth efficiency, or ease of use.

Yet RTTY and PSK31 continue to offer something that some newer modes do not: the feeling of actually having a conversation through a digital signal.

That distinction becomes especially noticeable when comparing PSK31 with FT8. FT8 is extraordinarily effective at decoding weak signals and making contacts under difficult propagation conditions, but its standard exchange is highly structured. PSK31, by contrast, sacrifices some weak-signal performance in exchange for flexibility. Once contact is established, the two operators can simply type back and forth.

In that sense, PSK31 operates almost like an amateur-radio version of an early internet chat room, except the connection is being made directly through the radio waves rather than through a network.

RTTY has a similar operator-controlled character, although its continued popularity in contesting gives it a somewhat different personality. It can be used for casual keyboard conversations, but many operators encounter RTTY today while participating in contests, chasing awards, or working DX.

Why Give These Classic Modes a Try?

For someone who has already experimented with FT8 or FT4, these older modes can provide a great next step into the larger world of amateur digital radio. The radio and computer setup may already be nearly identical. What changes is the way the contact takes place.

They can also be a good introduction to understanding what is actually happening inside a digital signal. Concepts such as mark and space frequencies, baud rate, phase shifting, bandwidth, audio levels, and waterfall displays become much easier to understand when you can see and hear the signals while operating.

And there is a certain appeal to using a mode that connects today's computer-controlled stations with several generations of amateur radio history. An operator running RTTY through a modern SDR and laptop is essentially accomplishing the same task that another ham might have performed decades ago using racks of equipment and a mechanical teleprinter.

For hams who have mainly explored voice, FT8, or FT4, trying RTTY or PSK31 can be a reminder that digital amateur radio is much broader than automated signal reports and grid squares. Sometimes it can still be as simple as finding a signal on the waterfall, clicking on it, typing "CQ," and seeing who answers.-----

Jeff Wuerth | *KD9RVJ, Squelch Tale Editor*

Chicago

FM Club

Club Officers

President.....*Paul Gris* | N9JZY
Vice President.....*John Cerza* | N9SRY
Secretary.....*Jim Fanning* | KD9WNR
Treasurer..... *Barry Friedman* | K9FMB

Board of Directors

Doug Harland | KD9YFR
Paul Abernathy | N9ISP
Kevin E. Suddoth | KD9ZDR
Alan Moyzis | KC9IMF
Charlie Ferreira | W9CEF

Chairs

Repeater Trustee.....*Joshua Hamlett* | KD9MXV
VE Testing.....*Bill Deans* | KD9TWA
Radio Expo.....*John Cerza* | N9SRY
Field Day.....*Paul Gris* | N9JZY
Website Administrator.....*Jim Fanning* | KD9WNR
Website Editor.....*Bill Deans* | KD9TWA
Refreshments.....*Joe Degrazia* | K9CTA
Newsletter.....*Jeff Wuerth* | KD9RVJ
Announcements.....*Kevin E Suddoth* | KD9ZDR
Net Manager..... *Kevin E Suddoth* | KD9ZDR
Education Coordinator..... *Charlie Ferreira* | W9CEF

Silent Keys

Tom Gotski | KD9YOV
Jeffrey Kohn | KC9TEW
Alvin Monroe | KD9TPL
Joe Gratchner | KC9BUF
Wanda Nagel | KC9LRZ
Thomas Wilkus | N9TWE
Arthur G. Waner | WB9DQT
Michael Moline | KD9NJC
Bruce Schrader | N9QIY
Robert F. Schiff | KA9HHH
Rich Jurgaitis | KA9GQF
Anton J Wenskus | KA9CRV
Orson H. Baker | AB9WQ
James R. Liston | N9HSH
Patrick McPherson | WW9E
Marilyn Gardner | W9LUO
Thomas J. Dykas | NV9U
Andrew J. Galiardo | WD9GCN
Robert G. Felix | KF9TB
Jerry Aagard | N9IPH
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